



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

STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES

REQUEST FOR QUOTE
RFQ NO. 30-092530

PROJECT TITLE: WALNUT VDT and VRH Sorts

QUOTE DUE DATE: April 27, 2016 12:00 PM

EXPECTED TIME PERIOD FOR CONTRACT: June 8, 2016 to April 14, 2017

CONTRACTOR ELIGIBILITY: This procurement is open to those contractors who have been pre-qualified and are listed in the Department of Natural Resources Contract Harvesting Services Eligible Bidder Pool.

TABLE OF CONTENTS

SECTION 1	INTRODUCTION.....	2
SECTION 2	GENERAL INFORMATION FOR HARVESTERS	5
SECTION 3	PROJECT SCOPE OF WORK.....	7
SECTION 4	QUOTE EVALUATION	8
SECTION 5	RFQ EXHIBITS.....	10

SECTION 1 INTRODUCTION

1.01 Project Summary

The Washington State Department of Natural Resources, (DNR) solicits Quotes from firms interested in participating on a project described below:

Defined in the Harvesting Services Contract. The selected harvester will be expected to access, cut, yard, load and haul logs from the WALNUT VDT and VRH Sorts CH Timber Sale to specified delivery points.

1.02 Purpose and Background

This Request for Quotes seeks responses from harvesters, logging firms, operators of logging equipment or any firms, businesses or individuals who have been pre-qualified for DNR's harvester bidding pool and are interested in contract harvesting approximately 2512 MBF of timber in 4 unit(s) for the Department of Natural Resources in the Northwest Region Office.

1.03 Minimum Qualifications

Candidate Harvesters must be licensed to do business in the State of Washington and must demonstrate that they are capable of performing the work and meet the requirements outlined in the attached Harvesting Services Contract and Road Plan.

Candidate Harvesters must participate in a two-part process to bid on the work defined by the Harvesting Contract (Exhibit B) and Road Plan (Exhibit C). First, a Statement of Qualifications (SOQ) must be submitted to DNR for evaluation. The Candidate Harvester must achieve 'eligible-for-bidding' status placing them in the DNR's eligible bidder pool. Second, Eligible Bidders will be requested to submit a bid for the Harvesting Services Contract along with a 'Statement of Available Resources and Work Plan' and any other materials listed as 'required' in section 2.06 of this RFQ. The State will award the contract to the eligible bidder who submits the lowest bid and has provided a 'Statement of Available Resources and Work Plan' that demonstrates to the State that the Candidate Harvester has the ability to complete the project as required.

Proposals from Candidate Harvesters who do not meet these minimum qualifications shall be rejected.

1.04 Contract Term

The period of performance of the Harvesting Service Contract resulting from this Request for Quotes (RFQ) and subsequent bidding process is tentatively scheduled for June 8, 2016 to April 14, 2017. Any amendments extending the period of performance shall be at DNR's sole discretion.

1.05 Payment for Work

The State shall make payments to the Contractor for services required and approved including log hauling and road work calculated according to the terms in the harvesting services contract. The Contractor is responsible for independently negotiating, procuring and paying for all

services provided.

Depending on the project bid structure defined in section 2.06 'Contract Harvesting Services Quote Format' of this RFQ, payment will be calculated using:

- The Contractor's On Board Truck (OBT) bid rate per mbf for logs harvested and delivered for sort(s) 01, 02, 03, 04, 05 and 06.
- The Contractor's On Board Truck (OBT) bid rate per ton for logs harvested and delivered for sort(s) 07 and 08.
- Utility volume for mbf sorts will be determined on an adjusted gross scale basis and paid for at \$20.00 per mbf.
- Payments to the Contractor for hauling services shall be based upon the tons delivered multiplied by: a base rate, 'A' and 'C mile rates', a fuel index factor and the Contractor's hauling bid factor using the following formula:

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

Base Rate = \$2.35

(based on multiple truck operation fixed cost/ton within 'Report to the Washington State Legislature, The Washington Log Trucking Industry: Costs and Safety Analysis, August 2008')

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

The Fuel Index Factor will be adjusted quarterly by the State based upon the U.S. Energy Information Administration's Weekly Retail On-Highway Diesel prices for the West Coast region posted at <http://tonto.eia.doe.gov/oog/info/wohdp/diesel.asp> using the following formula;

$$\text{Fuel Index Factor} = 1 + \frac{Q_{(x)} - Q_{(base)}}{Q_{(base)}}$$

Where; $Q_{(base)}$ = Average fuel price for quarter preceding harvesting services contract bid opening.

$Q_{(x)}$ = Average fuel price for quarter preceding log deliveries.

The fuel index factor will be calculated each;
 January and apply to loads delivered between January 1 and March 31,
 April and apply to loads delivered between April 1 and June 30,
 July and apply to loads delivered between July 1 and September 30,
 October and apply to loads delivered between October 1 and December 31.

Hauling Rate Example:

Base Rate = \$2.35

C miles = 10

A miles = 100

Fuel Index Factor = 1.000

Mileage Rate = ((\\$0.16 x 10) + (\\$0.11 x 100)) x (1.000) = \$12.60

Contractor's hauling bid factor = 1.100

Hauling Services Payment Rate per Ton

= (Base Rate + Mileage Rate) x (Contractor's hauling bid factor)

= (\$2.35 + \$12.60) x 1.100

= \$16.45

For sorts bid on an mbf basis tonnage will be calculated using the State's conversion rate unless actual tonnage is available and approved for use. For tonnage based sorts, actual tonnage shall apply.

- With prior approval by the State and toll/ferry receipt provided, reimbursement of toll/ferry costs incurred for transporting logs.
- Payment amounts for fixed-rate road construction elements are based upon the rates established by the State and listed in the Harvesting Services Contract. When applicable, payment amounts for biddable road construction elements will be in accordance with the rates listed in Contractor's road cost proposal provided as an attachment to the official bid form.

1.06 RFQ Definitions

Definitions of terms used in this Request for Statement of Qualifications.

Contractor - Individual or company selected to harvest and haul logs for the State. Contractor may also be required to perform roadwork or other services as required in the Harvesting Services Contract and Road Plan.

DNR - The State of Washington, Department of Natural Resources.

Eligible Bidder - Candidate Harvester who's Statement of Qualifications has scored a pre-determined minimum point total (as determined by the DNR). Only eligible bidders are requested to submit a bid for the work outlined in the Harvesting Services Contract.

Harvesting Services Contract - the agreement between the State and a Contractor that defines the work to be done by the Contractor. The Contractor and the State sign this contract after the timber sale auction where the Purchaser's of the log sorts has been determined.

Purchaser - Person or Company that has purchased logs to be delivered by the Contractor of a Contract Harvesting Sale. A Contract Harvesting sale usually has numerous

Purchasers.

Quote – Official bid form submitted by Eligible Bidders. A complete Quote consists of the bid rate for delivered logs, the bid rates for hauling services, and a completed ‘Statement of Available Resources and Work Plan’.

Request for Quotes (RFQ) - A formal procurement process used to solicit bids from pre-qualified firms for the right to perform the work defined in the RFQ.

Request for Statement of Qualifications (RFSOQ) - A formal procurement process used to pre-qualify firms for inclusion in the DNR’s Contract Harvesting Services Eligible Bidder Pool.

Request for Quotes Coordinator - DNR employee who oversees the Contractor Selection Process and serves as the main point of contact between the DNR and Candidate Harvesters. The Coordinator may delegate some of the duties, but is responsible for ensuring the process is properly followed and documented.

Statement of Qualifications (SOQ) – Document to be filled out by Candidate Harvesters and submitted to the DNR. Lists the Candidate Harvesters experience, qualifications, background information and references. Used by an evaluation team to determine which Candidate Harvesters are qualified to bid for the right to perform the harvesting project.

Subcontractor - Individual or company employed by the Contractor to perform a portion or all of the services required by the Harvesting Services Contract. The Contractor is responsible for independently negotiating, procuring and paying for all subcontracted services rendered.

SECTION 2 GENERAL INFORMATION FOR HARVESTERS

2.01 RFQ Coordinator

The RFQ Coordinator is the sole point of contact in the DNR for this eligible bidder selection process. All communication between the Candidate Harvester and the DNR shall be with the RFQ Coordinator.

RFQ Coordinator	Theresa Klepl
Address	919 N. Township St.
City, State, Zip Code	Sedro-Woolley, wa 98284
Phone Number	(360)856-3500
Fax Number	(360)856-2850
E-Mail Address	northewst.region@dnr.wa.gov

2.02 Estimated Project Schedule

As defined in the Project Schedule (See Exhibit A)

The DNR reserves the right to revise this schedule.

2.03 Pre-Quote Candidate Harvester Questions

Candidate Harvesters may mail, FAX, or E-mail questions about the RFQ to the RFQ Coordinator. The RFQ Coordinator will accept questions until April 13, 2016 at 12:00 PM. Questions received after this date and time will not be answered unless the RFQ Coordinator decides that it is in the DNR's best interests to answer them. A copy of the question(s) received, along with the DNR's official answer(s), will be mailed or faxed to each Candidate Harvester who received a copy of the RFQ. This copy will become an addendum to the RFQ. The DNR shall be bound only by written answers to questions. Oral responses given on the telephone will be considered unofficial.

2.04 Submitting a Quote

Candidate Harvesters must submit ONE copy of the official Harvesting Services Contract Sealed Bid Form including a 'Statement of Available Resources and Work Plan' with original signatures. The Quote, whether mailed, hand delivered, or faxed must arrive at the DNR no later than 12:00 PM, local time, on April 27, 2016.

The Quote is to be sent to the RFQ Coordinator at the address listed in Item 2.01 above. The envelope should be clearly marked "Attention RFQ Coordinator, Contract Harvesting Services Quote Enclosed, Do Not Open Until April 27, 2016."

Candidate Harvesters who mail Quotes should allow for normal mail delivery time to ensure timely delivery of their Quotes to the RFQ Coordinator. Candidate Harvesters assume the risk for the method of delivery they choose. The DNR assumes no responsibility for delays caused by a delivery service. Quotes may not be transmitted by email.

Late Quotes will not be accepted and will be automatically disqualified from further consideration. All Quotes and any accompanying documentation become the property of the DNR and will not be returned.

2.05 Proprietary Information/Public Disclosure.

Proposals are considered public records as defined in chapter 42.56 RCW. In the event a firm desires to claim portions of its proposal proprietary and exempt from public disclosure, it must clearly identify those portions. Each page of the proposal claimed to be exempt must be clearly identified as "proprietary information." If a public records request is made for the information that the consultant has marked as "proprietary information," the firm may seek to obtain a court order from a court of competent jurisdiction enjoining disclosure pursuant to chapter 42.56 RCW, or other state or federal law that provides for nondisclosure. The successful contractor's proposal generally becomes part of the contract that is subject to public disclosure.

DNR will charge for copying and shipping, as permitted by RCW 42.56.120. No fee shall be charged for inspection of contract files. Twenty-four (24) hours notice to the RFQ Coordinator is required. All requests for information should be directed to the Coordinator.

2.06 Contract Harvesting Services Quote Format

For a responsive bid, the following bid elements are required to be submitted on or attached to an official DNR Harvesting Services bid form;

OBT harvesting rate per MBF/Ton	Required
Hauling services bid factor (formatted to 3 decimals i.e. #.###)	Required
Road construction cost proposal	Required
Statement of Available Resources and Work Plan	Required
All attachments incorporated by reference	Required

2.07 Revisions to the RFQ

The DNR reserves the right to revise the RFQ and/or to issue addenda to the RFQ. The published questions and answers from the Pre-proposal meeting/questions shall be an addendum to the RFQ.

The DNR also reserves the right to cancel or to reissue the RFQ in whole or in part, prior to execution of a Harvesting Services contract. If DNR finds it necessary to revise any part of the RFQ, addenda will be provided to all those who received the RFQ.

2.08 Most Favorable Terms

The State reserves the right to determine the Successful Bidder without further discussion of the Quote submitted. Therefore, the Quote should be submitted initially on the most favorable terms, which the Candidate Harvester can propose. There will be no best and final offer procedure. The State reserves the right to contact a Candidate Harvester for clarification of a Quote.

2.09 Costs to Propose

The DNR will not be liable for any costs that the Candidate Harvester incurs in preparing a Quote related to this RFQ or any other activities related to responding to this RFQ.

SECTION 3 PROJECT SCOPE OF WORK

3.01 Project Scope of Work.

As defined in the Harvesting Services Contract, Road Plan and Timber Sale Map (**See Exhibits B, C and D**).

3.02 SPECIAL REQUIREMENTS

XXXXXXXXXX

special harvester rew.

Shows up where? This project will require the harvest and delivery of a large amount of timber in a relatively short operating window. It is imperative that the successful harvester has the ability and resources available to complete this project within the anticipated work schedule as described in section 1.04 of this RFQ.

SECTION 4 QUOTE EVALUATION

4.01 Evaluation Team.

DNR will designate an evaluation team to evaluate Quotes. The evaluation team will evaluate quotes according to the requirements outlined in this RFQ and any addenda, which are issued.

4.02 Administrative Requirements.

The RFQ Coordinator will review all Quotes to determine compliance with administrative requirements and instructions specified in the RFQ. Only Quotes meeting the minimum requirements will be forwarded to the evaluation team for further review.

4.03 Responsibleness.

When evaluating Quotes, the evaluation team will consider candidate Harvester's responsibleness. A Candidate Harvester is responsible if it:

- Has adequate financial resources to perform the contract, or the ability to obtain them;
- Is able to comply with the required delivery or performance schedule, taking into consideration all existing commercial and governmental business commitments;
- Has a satisfactory performance record. A Candidate Harvester shall not be determined responsible or non-responsible solely on the basis of a lack of relevant performance history, unless the DNR determines special standards are appropriate. A Candidate Harvester that is or recently has been seriously deficient in contract performance shall be presumed to be non-responsible, unless the DNR determines that the circumstances were properly beyond the Candidate Harvester's control, or that the Candidate Harvester has taken appropriate corrective action. Past failure to apply sufficient tenacity and perseverance to perform acceptably is strong evidence of non-responsibility. Failure to meet the quality requirements of the contract is a significant factor to consider in determining satisfactory performance. The DNR shall consider the number of contracts involved and the extent of deficient performance in each contract when making this determination.
- Any special standards will be properly identified in this solicitation and will apply to all Candidate Harvesters and their subcontractors.

4.04 Information Used for Evaluation.

Evaluators will use the information in the Candidate Harvester's Quote or bid form, their references, their previous Washington DNR performance evaluations, ability to meet special standards, and their Quote or 'Harvesting Services Contract Sealed Bid Form' including their 'Statement of Available Resources and Work Plan'.

4.05 Signatures

Quotes must be signed and dated by a person authorized to bind the Candidate Harvester to a contractual arrangement, e.g., the President or Executive Director if a corporation, the managing partner if a partnership, or the proprietor if a sole proprietorship.

4.06 Failure to Comply

If the Candidate Harvester fails to comply with any requirement of the RFQ, DNR will reject the Quote.

4.07 Rejecting Quotes

The DNR reserves the right at its sole discretion to reject any and all Quotes received without penalty and not to issue a contract from this RFQ. The DNR also reserves the right at its sole discretion to waive minor administrative irregularities contained in any Quote.

4.08 Lowest Responsible Bidder

Award of this Contract shall be to the lowest responsible bidder as determined by the DNR. In determining the lowest responsible bidder, in addition to price, the following may be considered:

- a. the ability, capacity, and skill of the bidder to perform the contract;
- b. the character, integrity, reputation, judgment, experience, and efficiency of the bidder;
- c. whether the bidder can perform the contract within the time specified;
- d. the quality of performance of previous contracts; and
- e. the previous and existing compliance by the bidder with laws relating to the contract or services. The DNR's determination that a bidder is not qualified shall result in rejection of the bid submitted.

4.09 Challenges to the Apparent Successful Bidder

- a. An unsuccessful bidder may appeal the bid award if they believe the process used to award the contract was not conducted properly. Please include the reasons why you believe the contract should not be awarded to the successful bidder.
- b. The DNR Region Manager must receive the appeal; in writing no later than 5 days from the date the letter was sent by fax or mail to the bidder notifying them that they were unsuccessful.

The Region Manager shall issue a written decision within 10 days of receipt of the appeal and cite the reasons for approving or disapproving the appeal.

- c. If the appellate is not satisfied with the decision of the Region Manager, the appellant may further appeal to the Deputy Supervisor-Uplands within 5 business days from the issuance of the Region Manger’s written decision. The Deputy Supervisor-Uplands shall consider all information provided and issue a final decision in writing, citing reasons to approve or disapprove the appellant’s appeal.

SECTION 5 RFQ EXHIBITS

- Exhibit A Estimated Harvest Project Schedule
- Exhibit B Draft Harvesting Services Contract
- Exhibit C Road Plan
- Exhibit D Timber Sale Map
- Exhibit E Harvesting Services Contract Sealed Bid Form

TIMBER NOTICE OF SALE

SALE NAME: WALNUT VDT and VRH Sorts

AGREEMENT NO: 30-93656 - 30-93663

AUCTION: May 25, 2016 starting at 10:00 a.m.
Northwest Region Office, Sedro Woolley, WA

COUNTY: Skagit

SALE LOCATION:

**PRODUCTS SOLD
AND SALE AREA:**

All delivered forest products, except trees marked with blue paint on the bole and root collar and forest products tagged out by yellow leave tree area tags, from an area bounded by white timber sale boundary tags, adjacent young stands, old grade and the BL-ML, BL-16, BL-14, BL-12, BL-3, and BL-44 roads meeting the specifications described below meeting the specifications described below; on parts of Sections 2, 3, 11, and 14 all in Township 36 North, Range 3 East W.M., containing 135 acres, more or less.

MINIMUM BID AND ESTIMATED LOG VOLUMES:

Agreement #	Sort #	Species and Sort Specifications	Average Log Length	Estimated Volume		Tons Per MBF	Minimum Bid Delivered Prices		Total Appraised Value	Bid Deposit
				Mbf	Tons		\$/mbf	\$/Ton		
30-093656	01	DF HQA 12"+ SED	28	237	1280	5.4	\$600.00		\$142,200.00	\$14,220.00
30-093657	02	DF SAWLOG 12"-19" SED	28	508	2997	5.9	\$540.00		\$274,320.00	\$27,432.00
30-093658	03	DF SAWLOG 20" + SED	28	447	2235	5	\$520.00		\$232,440.00	\$23,244.00
30-093659	04	DF SAWLOG 5"-11" SED	28	389	2762	7.1	\$475.00		\$184,775.00	\$18,477.50
30-093660	05	RC SAWLOG 5"+ SED	26	281	1714	6.1	\$1,000.00		\$281,000.00	\$28,100.00
30-093661	06	WH SAWLOG 5"+	28	650	4225	6.5	\$415.00		\$269,750.00	\$26,975.00
30-093662	07	CONIFER UTILITY		91	819	9		\$25.00	\$20,475.00	\$2,047.50
30-093663	08	HARDWOOD UTILITY		18	162	9		\$25.00	\$4,050.00	\$405.00

Totals: **2621 16194 \$1,409,010.00**

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

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

EXPIRATION DATE: January 6, 2017 **ALLOCATION:** Export Restricted

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

BIDDING

TIMBER NOTICE OF SALE

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

TIMBER EXCISE TAX:

Purchaser must pay the forest excise taxes associated with the log sorts delivered to them. The tax rate for this sale is 4.2 %. Taxable Stumpage = Total Delivered Value – (Harvest Cost + Estimated Haul Cost + ARRF). For more information contact the Department of Revenue, Forest Tax Section at 1-800-548-8829.

Use the following rates for estimating taxable stumpage:

Harvest Cost = \$0.00 per MBF for sorts 01, 02, 03, 04, 05 and 06 and \$0.00 per Ton for sorts 07 and 08.

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

Base Rate = \$2.35 per ton

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

ARRF = \$0.00 per MBF for sorts 07 and 08 and \$26.75 per MBF for sorts 01, 02, 03, 04, 05 and 06.

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

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

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

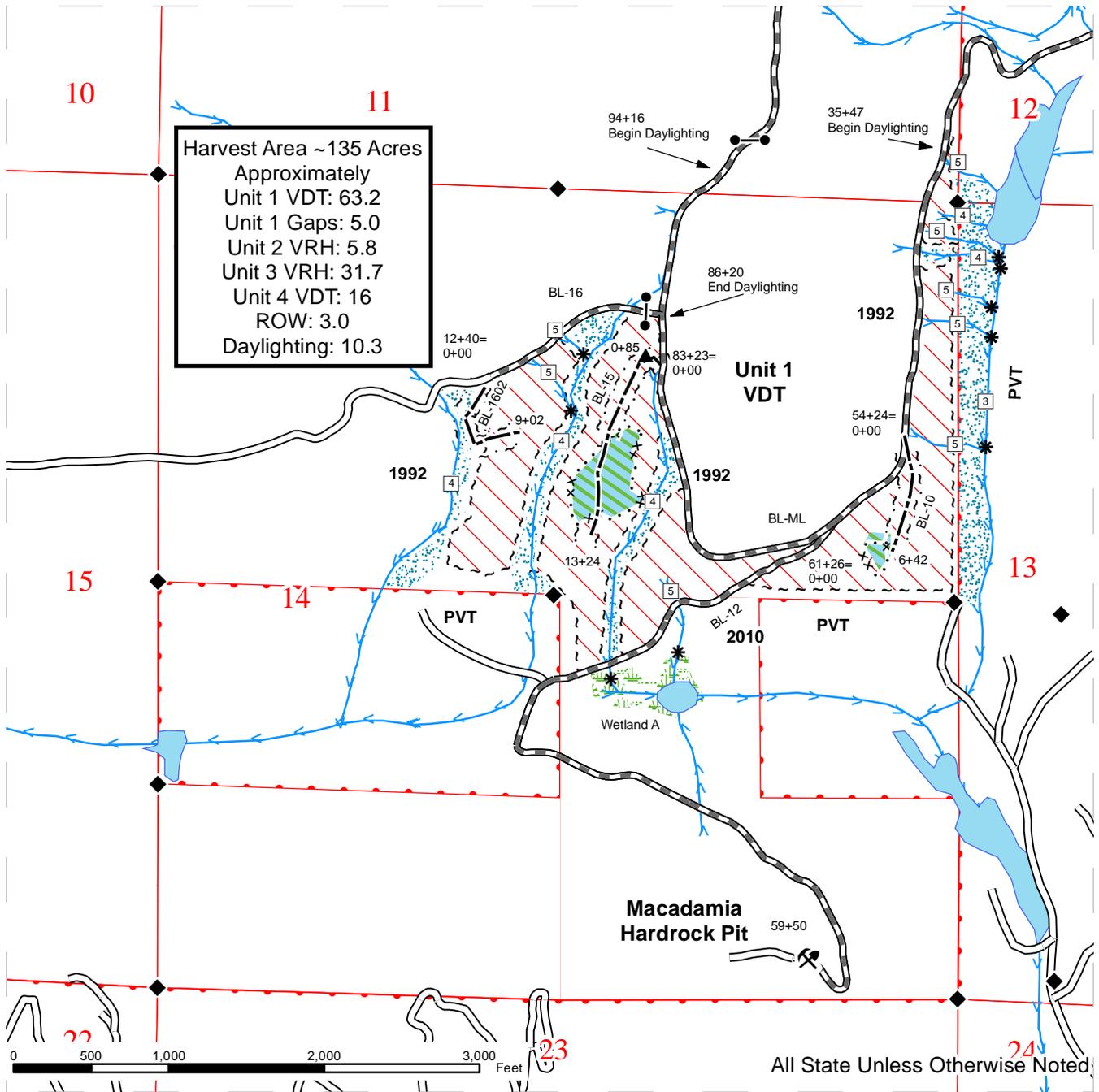
*Note: Harvesting services bid opening is tentatively scheduled for 04/27/16, which will establish the Contractor's hauling bid factor. Fuel Index Factor is indexed quarterly by the State. Log deliveries are anticipated to be from August 2016 through December 9, 2016. Variable Density Thinning area prescriptions available upon request at Region Office.

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

TIMBER SALE MAP

SALE NAME: Walnut VDT and VRH Sorts
AGREEMENT#: 92530
TOWNSHIP(S): T36R03E
TRUST(S): State Forest Transfer (1)

REGION: Northwest Region
COUNTY(S): Skagit
ELEVATION RGE: 524-1717 feet



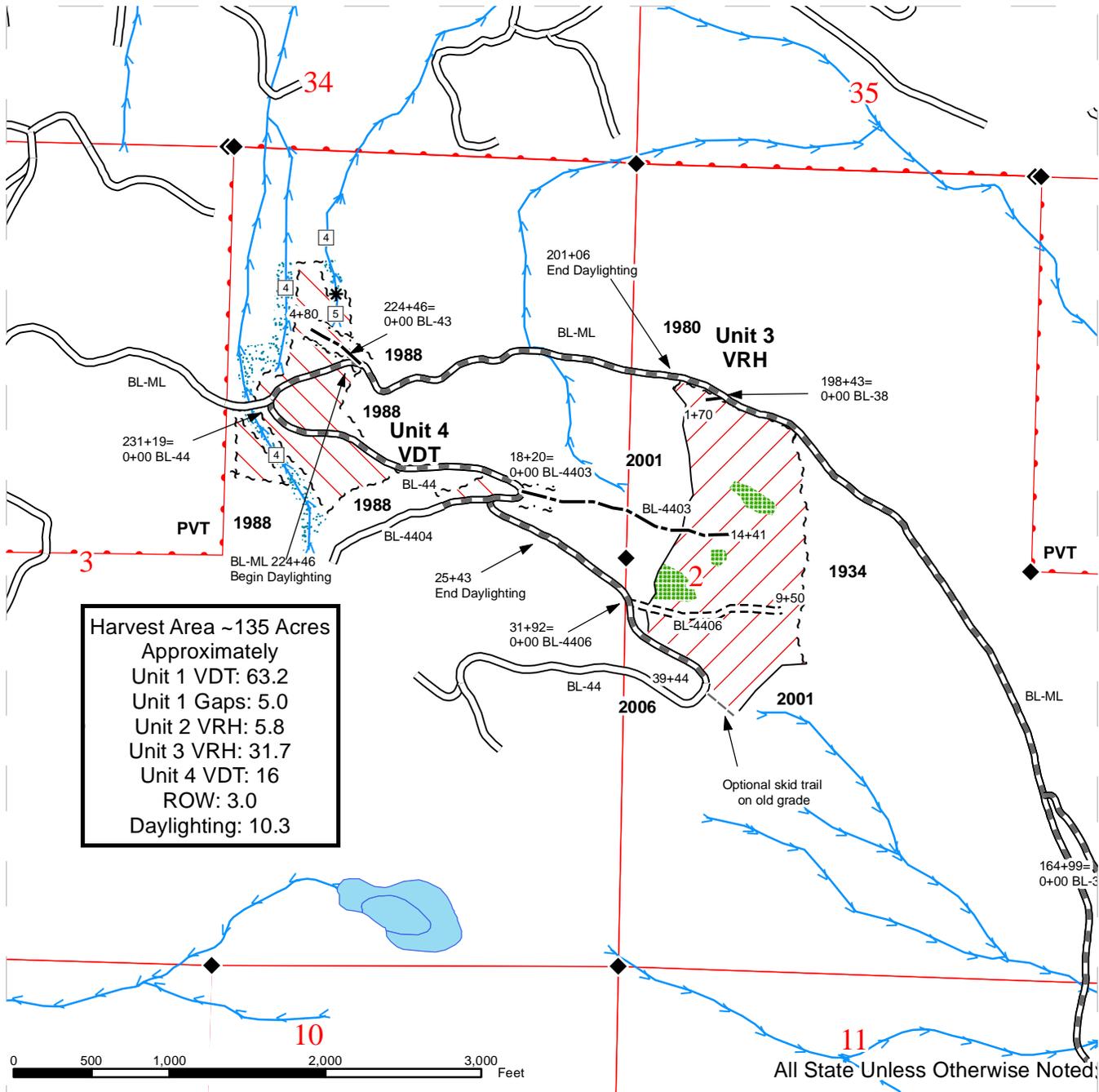
All State Unless Otherwise Noted



TIMBER SALE MAP

SALE NAME: Walnut VDT and VRH Sorts
AGREEMENT#: 92530
TOWNSHIP(S): T36R03E
TRUST(S): State Forest Transfer (1)

REGION: Northwest Region
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ELEVATION RGE: 524-1717 feet



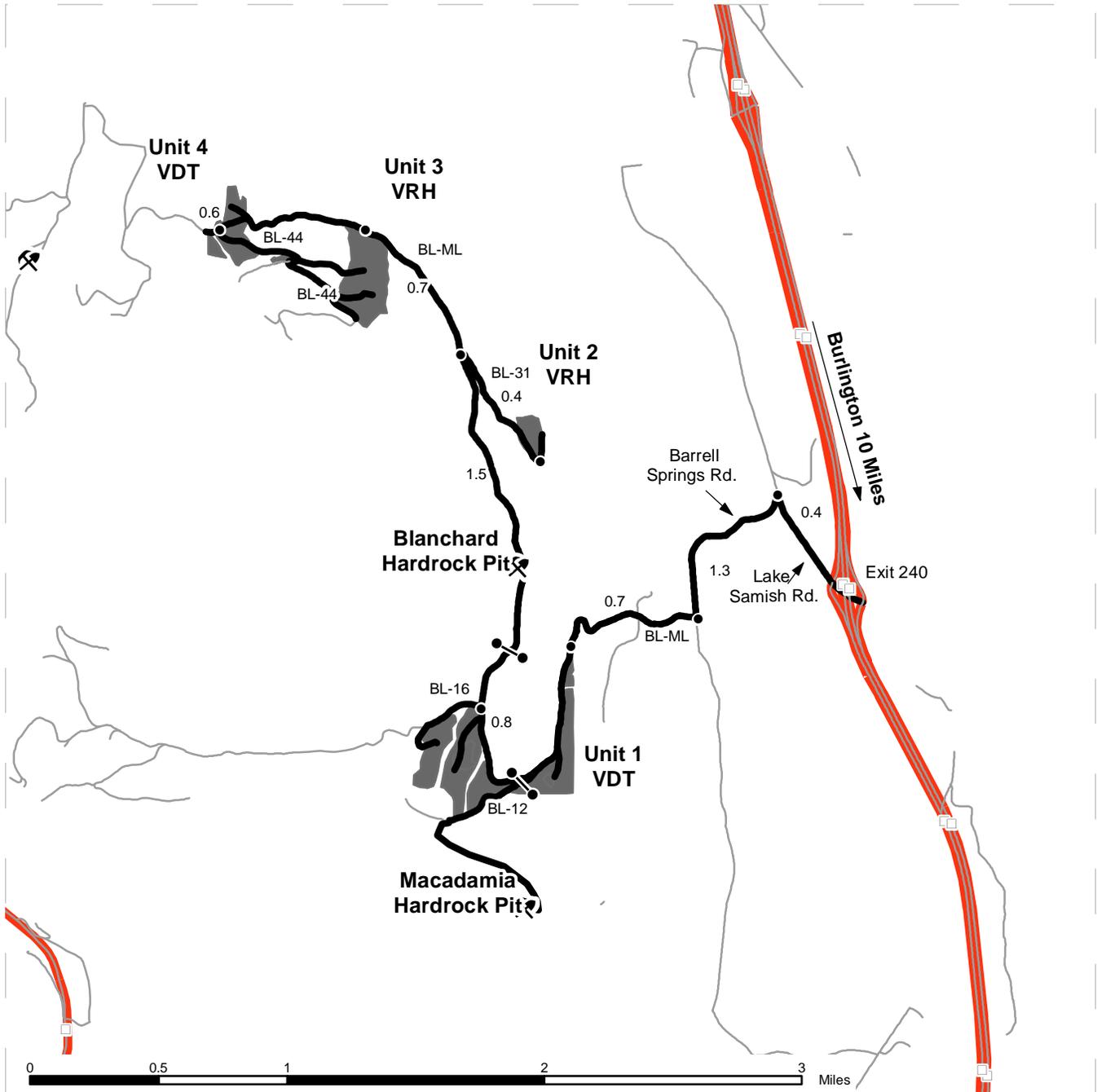
Harvest Area ~135 Acres
 Approximately
 Unit 1 VDT: 63.2
 Unit 1 Gaps: 5.0
 Unit 2 VRH: 5.8
 Unit 3 VRH: 31.7
 Unit 4 VDT: 16
 ROW: 3.0
 Daylighting: 10.3

- | | | |
|----------------------------|-------------------------------|-------------------|
| Variable Retention Harvest | Riparian Mgt Zone | Streams |
| Variable Density Thinning | Leave Tree Area | Stream Type |
| Gap Cut Area | Wetland Mgt Zone | Stream Type Break |
| Sale Boundary Tags | Existing Roads | Survey Corners |
| Sale Boundary (No Tags) | Old Grades / Trails | Gate |
| Right of Way Tags | Required Pre-Haul Maintenance | |
| Special Mgt Area Tags | Required Construction | |
| | Optional Construction | |

DRIVING MAP

SALE NAME: WALNUT VDT&VRH CH
AGREEMENT#: 92530
TOWNSHIP(S): T36R03E
TRUST(S): State Forest Transfer(1)

REGION: Northwest Region
COUNTY(S): SKAGIT
ELEVATION RGE: 524-1717



-  Timber Sale Unit
-  Highways
-  Other Route
-  Haul Route
-  Milepost Markers
-  Distance Indicator
-  Existing Rock Pit

DRIVING DIRECTIONS:

Driving Directions:
 From I-5, Take exit 240 west on Lake Samish Rd for 0.4 mile and take a left on Barrel Springs Rd. Continue for 1.3 mile and turn right on the BL-ML.

Unit 1: Continue on BL-ML for 0.7 miles to the start of unit, and an additional 0.8 to the end of the unit.
 Unit 2: Continue for an additional 1.5 miles on the BL-ML to the BL-31, turn right and follow for 0.4 mile.
 Unit 3: From the junction of the BL-ML and the BL-31, continue 0.7 mile to the unit.
 Unit 4: From Unit 3, continue 0.6 mile on the BL-ML to the unit.



**STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES**

HARVESTING SERVICES CONTRACT

AGREEMENT NO. 30-092530

SALE NAME: WALNUT VDT and VRH Sorts

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

Section G: General Terms

G-001.1 Definitions

The following definitions apply throughout this contract;

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

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

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

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

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

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

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

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

Road Construction Services: 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 logs 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 Contractor to perform a portion or all of the services required by the Harvesting Services Contract. The Contractor is responsible for independently negotiating, procuring and paying for all subcontracted services rendered.

G-015.1 Harvest Area and Location

Contractor shall harvest and deliver, All delivered forest products, except trees marked with blue paint on the bole and root collar and forest products tagged out by yellow leave tree area tags, from an area bounded by white timber sale boundary tags, adjacent young stands, old grade and the BL-ML, BL-16, BL-14, BL-12, BL-3, and BL-44 roads meeting the specifications described below located on approximately 135 acres on part(s) of Sections 2, 3, 11, and 14 all in Township 36 North, Range 3 East W.M. of Skagit County as shown on the attached timber sale map.

G-020.1 Inspection by Contractor

Contractor hereby warrants to the State that they have had an opportunity to fully inspect the sale area and the forest products to be harvested. Contractor further warrants to the State that they enter this contract based solely upon their own judgment of the harvest and road work, and condition of the forest products, formed after their own examination and inspection of both the timber sale area and the forest products to be harvested. Contractor 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.

G-022.1 Sorting Specifications

Contractor is responsible for sorting logs to the specifications listed below and hauling to the appropriate designated locations. Contractor is responsible for determining the highest value of each tree felled and the highest value destination of each log manufactured. The Contract Administrator will provide direction and guidance to Contractor with respect to highest value.

Logs produced under this contract will be manufactured by Contractor meeting the individual sort specifications and Purchaser's preferred log lengths, with a minimum length of 12 feet, unless otherwise directed by the Contract Administrator.

Contractor shall deliver log sorts to the Purchaser(s) location that meet the following specifications:

Agreement No.	Sort #	Species Diameter	Scaling Rule	Preferred Log Lengths	Destination	A Miles	C Miles
93656	1	DF HQA 12"+ SED	WS				4.0
93657	2	DF SAWLOG 12"-19" SED	WS				4.0
93658	3	DF SAWLOG 20" + SED	WS				4.0
93659	4	DF SAWLOG 5"-11" SED	WS				4.0
93660	5	RC SAWLOG 5"+ SED	WS				4.0
93661	6	WH SAWLOG 5"+	WS				4.0
93662	7	CONIFER UTILITY	WS				4.0
93663	8	HARDWOOD UTILITY	WS				4.0

Unless otherwise specified, no blue stain is allowed in Ponderosa pine.

“WS” indicates that west side scaling rules apply. Minimum trim is 10 inches per scaling segment for west side scaling rules. “ES” indicates that east side scaling rules apply. Minimum trim is 6 inches per scaling segment for east side scaling rules.

Logs delivered by Contractor that do not meet the receiving Purchaser's log sort requirements as described above that have been pre-approved for delivery by the Contract Administrator shall not be considered mis-sorts.

G-024.1 Manufacturing Standards

For sorts designated as non-utility, Contractor will manufacture and deliver logs with the following minimum specifications:

- a. Sweep will be limited to within the bole of the log as measured using a tape stretched between the centers of each end of the log.
- b. Limbs and knots shall be cut flush, with no more than 15 percent of a log having limbs or knots over 2 inches in diameter extending more than 2 inches above the surface of the log.
- c. Logs in peeler sorts shall be chuckable with no more than a 2 inch diameter area of rot within a 5 inch diameter circle located at the center of either end of the log.
- d. If poles are to be produced under this contract, they shall meet the specifications outlined in Schedule P, Pole Specifications.
- e.

G-025 Schedules

The following attached schedules are hereby incorporated by reference:

Schedule	Title
A	NW Ground-Based Equip Specifications (Rev 2/11/16)
B	Harvest Prescription
D	Damage Compartment Map
M	EQUIPMENT RATE

(Hourly Rate including Operator)

G-027.1 Log Delivery Schedule and Conditions

- a. Contractor shall deliver logs to Purchaser’s designated delivery location per G-022.1 clause. If a log delivery location is changed during this contract, the Contract Administrator shall notify the Contractor. Once notified, the Contractor shall deliver logs to the new location.
- b. The Contractor may deliver logs to the Purchaser’s delivery location during the Purchaser’s working hours, or at least between the hours of 8:00 a.m. and 5:00 p.m., Monday through Friday, except, scheduled closures and legal holidays for the contract term as described in clause G-030.1, unless permission to do otherwise is agreed upon by the State.
- c. The Contractor agrees to deliver said logs on conventional or self-loading logging trucks, properly and legally loaded, bound, branded, and ticketed. Logs in loads shall not be double-ended unless approved in writing by the Contract Administrator. It is understood and agreed that the Purchaser incurs no obligation to accept improperly or illegally loaded trucks in its facility. Any truck so loaded may be directed to vacate the yard and shall remain the responsibility of the Contractor to make the load conform to legal requirements for hauling.

- d. If a receiving Purchaser plans a scheduled closure, the Contract Administrator shall notify the Contractor at least 48 hours before the scheduled closure. Depending on the length of the scheduled closure or delays in log delivery, the Contract Administrator will decide in the best interest of the State on the disposition of the affected log sort(s) or any alternate delivery schedule or location.
- e. Contractor's daily log delivery to a Purchaser's location may be limited according to the table below, provided the Contract Administrator notifies the Contractor at least 48 hours prior to the time this truck delivery limit is established.

Sort(s)	Maximum No. Loads/day
01,02,03,04,05,06,07,08	10

- f. A truck delivery is all the wood hauled including sorts on super trucks, mule trains and pups brought to the delivery point by a single truck. Contractor shall notify the State's Contract Administrator if for any reason a Purchaser refuses truck deliveries.

G-030.1 Contract Term and Expiration Dates

To ensure the timely completion of activities under this contract, the State shall determine the project starting date. The State shall notify the Contractor no later than fourteen (14) days prior to the anticipated starting date.

All activities required under this contract are to be completed between the starting date of June 8, 2016 and the expiration date of April 14, 2017. All forest product deliveries are to be completed prior to December 9, 2016.

Contractor shall not have any right to enter the sale area to perform harvesting services after contract expiration.

G-033.1 Curtailment of Operations

Contractor shall provide the State with five days advance written notice to the Contract Administrator of its intent to commence or cease any and all operations under this contract. The commencement or cessation of operations must be approved by the Contract Administrator. Failure to comply will be considered a breach.

G-040.1 Contract Term Adjustment

A Contract Term Adjustment may be considered based on actual time lost through unforeseeable causes beyond the control and without fault or negligence of the Contractor, including, but not restricted to, acts of the State, closures by government regulatory agencies, mill closures, fires, vandals, and unusually severe weather conditions, provided that the Contractor shall, within seven (7) calendar days of the

initiation of such delay, notify the State, in writing, of the cause of delay, upon which notification the State shall ascertain the facts and extent of the delay and notify the Contractor in writing of its decision regarding contract adjustment.

G-054.1 Early Contract Termination

The State may terminate this contract prior to the expiration date listed in G-030.1 in whole or in part by giving fifteen (15) days written notice to the Contractor when it is in the best interests of the State. If this contract is so terminated, the State shall be liable to make payments to the Contractor for the sum of the estimated expenditures for road construction, felling, bucking, yarding and decking of products processed but not removed from the sale area due to termination action. Contractor may not seek any other damages from the State for early termination of this harvesting agreement.

G-060.1 Exclusion of Warranties

The following specific matters ARE NOT WARRANTED, and are EXCLUDED from this transaction:

- a. The **CONDITION** of the site or forest products. Any descriptions of the site or forest products in the notice of sale, other pre-contractual documents, or the Harvesting Services Contract are provided solely for administrative and identification purposes.
- b. The **ACREAGE** contained within any sale area. Any acreage descriptions appearing in the notice of sale, other pre-contractual documents, or the Harvesting Services Contract are estimates only, provided solely for administrative and identification purposes.
- c. The **VOLUME, WEIGHT, QUALITY, or GRADE** of the forest products to be harvested. The descriptions of the forest products to be harvested are estimates only, made solely for administrative and identification purposes.
- d. 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 informational purposes, but the information contained therein is not warranted. Contractors must make their own assessments of the site.
- e. **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.
- f. **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.

- g. Items contained in any other documents prepared for or by the State.

G-062.1 Habitat Conservation Plan

The Department 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 Department's HCP area and are subject to the terms and conditions of the HCP and the Services' Incidental Take Permit PRT- 812521 and ITP 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 Department's Region Offices and the administrative headquarters in Olympia, Washington.

By signing this contract, Contractor agrees to comply with the terms and conditions of the ITP and the HCP, which shall become terms of this contract. The Department agrees to authorize the lawful activities of the Contractor carried out pursuant to this contract, PROVIDED the Contractor 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 the Contractor to liability for violation of the Endangered Species Act.

Any modifications to the contract shall be proposed in writing by the Contractor, 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-063.1 Incidental Take Permit Notification Requirements

- a. Contractor shall immediately notify the Contract Administrator of new locations of permit species covered by the Incidental Take Permits (ITPs) 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. Contractor 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 ITPs, Contractor shall immediately notify the Contract Administrator. Contractor shall notify the Contract Administrator, if there is any doubt as to the identification of a discovered permit species. Contractor 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 Contract Administrator can determine the proper disposition of such specimens. The Contract Administrator will explain any such requirements to Contractor during the Pre-Work Conference. In all circumstances, notification must occur within a 24 hour time period.
- c. Contractor 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 ITPs shall be clearly presented and explained to Contractor by Contract Administrator during the Pre-Work Conference as per contract clause G-330.1. All applicable provisions of the ITPs and this schedule must be presented and clearly explained by Contractor to all authorized officers, employees, contractors, or agents of Purchaser conducting authorized activities in the timber sale area. Any questions Contractor may have about the ITPs should be directed to the Contract Administrator.

G-064.1 Permits

Contractor is responsible for obtaining any permits not already obtained by the State that relate to Contractor's operation. Forest Practice Application / Hydraulic Project Approval permits obtained by the State shall be transferred to Contractor. Contractor 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-066.1 Governmental Regulatory Actions

- a. Regulatory Risk

Except as provided in this clause, Contractor assumes all risks associated with governmental regulatory actions, including actions taken pursuant to the Forest Practices Act, Ch. 76.09 RCW, the Endangered Species Act, 16 U.S.C 1531-1544 and any Habitat Conservation Plan between the Department of Natural Resources and the U.S. Fish and Wildlife Service or any other agency now in place and as may be amended, or hereafter created, that may affect the operability of the timber sale.

- b. Increased Costs

Contractor 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 Contractor's failure to comply with this contract or from Contractor's acts or omissions, Contractor shall remain responsible for fulfilling contract obligations notwithstanding the impracticability or frustration.

G-070.1 Limitation on Damage

In the event of a breach of any provision of this contract by the State, the exclusive remedy available to the Contractor will be limited to a return of the Performance Security, and payment for improvements and other services rendered by the Contractor, which were required by the Harvesting Services Contract. The State shall not be liable for any damages, whether direct, incidental, or consequential.

G-092.1 Harvest Area Boundary Adjustment

The State may make adjustments in the harvest area boundaries, or may mark timber outside such boundaries. The cumulative changes to the sale area during the term of the contract shall not exceed more than five (5) percent of the original sale area. Such adjustments or marking will be accomplished by the Contract Administrator. The Contractor must remove and deliver all material so designated, prior to the expiration date of the contract. All contract services within such boundary adjustments or so marked shall be paid for at contract rates.

G-112.1 Title

All rights, title, and interest in and to any timber shall belong to the State until delivered, at which time the appropriate Purchaser assumes title.

G-116.1 Sustainable Forestry Initiative® (SFI) Certification

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

Contractor 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. Contractor 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-120.1 Responsibility for Work

All work, equipment, personnel, and materials necessary to perform the Harvesting Services Contract shall be the responsibility of the Contractor.

G-121.1 Exceptions

Exceptions to Contractor's responsibility in clause G-120.1 shall be limited exclusively to the circumstances described in this clause. These exceptions shall not apply where damages occur due to Contractor's failure to take reasonable precautions or to exercise sound forest engineering and construction practices.

The State shall bear the cost to repair any existing roadway or section of required road completed to the point that an authorization to haul has been issued where such damage was not caused by Contractor, its employees, agents, or invitees, including independent contractors. Contractor shall accomplish repairs promptly as required by the State at the rates set forth in the equipment rate schedule on file at the Region office or Engineering Division in Olympia. The State may elect to accomplish repairs by means of State provided resources.

Nothing contained in clauses G-120.1 (Responsibility for Work) and G-121.1(Exceptions) shall be construed as relieving Contractor of responsibility for, or damage resulting from, Contractor's operations or negligence, nor shall Contractor be relieved from full responsibility for making good any defective work or materials.

G-123.1 Operating Authority

The State has arranged for the Contractor to have full and free license and authority to enter upon said lands with his agents and employees and do all things necessary, within the limitations herein set forth, in harvesting said timber as described in this contract.

G-124.1 Contractor Not an Employee of State

Contractor and his or her employees or agents performing under this contract are not employees of the State. The Contractor will not hold itself out as nor claim to be an officer or employee of the State by reason hereof, nor will the Contractor make any claim or right, privilege or benefits which would accrue to an employee under chapter 41.06 RCW or Chapter 28B.16 RCW.

G-125.1 Use of Subcontractors

Contractor's use of subcontracted services shall be subject to approval in writing by the Contract Administrator. Approval of subcontracted services may be revoked in accordance with the G-220.1 'State Suspends Operations' clause when the Contract Administrator determines that the Subcontractor's work has been performed in a manner that does not meet contractual requirements, optimize value or otherwise causes damage to the state.

Contractor shall arrange with the Contract Administrator to meet on site at least once a week during active operations to review and inspect subcontractor performance. Contractor shall provide a written plan of operations detailing planned operations for the following week.

G-126.1 Disputes with Subcontractors or Material Providers

Should Contractor and its subcontractors or materials providers develop disputes affecting the completion of obligations under this contract, Contractor shall resolve any

such disputes in a timely and efficient manner that does not involve or adversely affect either the State or its Purchasers.

G-130.1 Prevention of Damage and Consequences of Contractor-Caused Damage

The Contractor agrees to exercise due care and caution at all times to avoid damage to all special resources including environmentally sensitive areas, research, demonstration, and cultural objects or areas. Additionally, the Contractor agrees to protect all improvements on State property affected by the work of this contract including, but not limited to, roads, culverts, bridges, ditches, fences, utility lines, and buildings.

If damages occur due to the Contractor's operations, the Contractor shall be responsible for damage or restoration costs, or other compensation measures as described in this contract. State may deduct damage or restoration costs from payments to the Contractor. This clause shall not relieve the Contractor from other applicable civil or criminal remedies provided by law.

G-140.1 Indemnity

To the fullest extent permitted by law, Contractor 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. Contractors' obligations to indemnify, defend, and hold harmless includes any claim by Contractors' agents, employees, representatives, or any subcontractor or its employees. Contractor expressly agrees to indemnify, defend, and hold harmless State for any claim arising out of or incident to Contractors' or any subcontractors' performance or failure to perform the contract. Contractors' 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. Contractor 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.

In addition to any other remedy authorized by law, the State may retain as much of the performance security, or any money or credits due Contractor necessary to assure indemnification.

G-150.1 Insurance

Contractor 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 also suspend Contractor operations until required insurance has been secured.

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 should

issue all insurance and surety bonds. Any exception shall be reviewed and approved by the department's risk manager before the insurance coverage is accepted. 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 Northwest region office 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, Contractor shall furnish State 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. The Contractor shall obtain insurance coverage prior to operations commencing and continually maintain it in full force until all contract obligations have been satisfied or an operating release has been signed by the State.

Contractor 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 Contractor'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. Contractor 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 Contractor and such coverage and limits shall not limit Contractor'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, shall not be less than as follows:

Commercial General Liability (CGL) Insurance. Contractor 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. Contractor 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. Contractor shall comply with all State of Washington workers' compensation statutes and regulations. Workers' compensation coverage shall be provided for all employees of Contractor 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, Contractor 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 Contractor, 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, Contractor shall indemnify State. Indemnity shall include all fines, payment of benefits to Contractor or subcontractor employees, or their heirs or legal representatives, and the cost of effecting coverage on behalf of such employees.

Business Auto Policy (BAP). Contractor 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. Contractor 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-160.1 Agents

The State's rights and duties will be exercised by the Region Manager. The Region Manager will notify Contractor 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-180.1. 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 harvested beyond the terms of this contract.

Contractor is required to have a person on site during all operations who is authorized to receive instructions and notices from the State. Contractor 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-170.1 Assignment and Delegation

Contractor shall assign no rights or interest in this contract 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. Contractor may perform any duty through a delegate, but Contractor 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 Contractor.

G-180.1 Modifications

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

G-181.1 Contract Modification for Protection of Resources and Improvements

The Harvesting Services contract may be unilaterally terminated or modified by the State upon determination that the Contractor's operations would cause serious damage to resources or improvements, or would be significantly inconsistent with State land management plans.

In the event of contract modification under this section and through no fault of Contractor operations, the Contractor shall be reimbursed for any additional operations required, provided that any work or extra protection shall be subject to prior approval of 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-200.1 Notice

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

G-030.1 Commencement Date

G-092.1 Harvest Area Boundary Adjustment

G-181.1 Contract Modification for Protection of Resources and Improvements

G-210.1 Violation of Contract

G-220.1 State Suspends Operation

D-015.1 Delivered Mis-sorted Logs and Penalties

D-016.1 Damages for Delivered Mis-manufactured Logs

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. Contractor agrees to notify the State of any change of address.

G-210.1 Violation of Contract

- a. If Contractor 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, the Contractor has fifteen (15) days after receipt of suspension notice to remedy the violation. If the violation cannot be remedied or Contractor fails to remedy the violation within fifteen (15) days after receipt of a suspension notice, the State may terminate the rights of the Contractor and collect liquidated damages under this contract associated with the breach. In the event of such a contract termination, the State may demand all or part of the Contractor's surety in order to satisfy the State's damages.
- b. The State has the right to remedy a breach if Contractor is unable, as determined by the State, to remedy the breach, or if the Contractor has not remedied the breach within 15 days of a suspension notice. Any expense incurred by the State in remedying Contractor's breach may be charged to Contractor, or State may deduct such expenses from payments to the Contractor.
- c. If the contract expires without the Contractor having performed all their duties under this contract, Contractor's rights and obligations to harvest, deliver forest products, and perform any additional contract-related requirements are

terminated. Thus, Contractor cannot remedy any breach once this contract expires. This provision shall not relieve Contractor of any financial obligations and unresolved contractual agreements, including payment to sub-contractors for work performed under this contract.

G-220.1 State Suspends Operations

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

Contractor shall be in breach of this contract if the operation continues after the suspension notice or if the operation resumes prior to approval and notice from the Contract Administrator.

Contractor may request a modification of suspension within seven (7) calendar days of the start of suspension through the dispute resolution process. If this process results in a finding that the suspension exceeded the time reasonably necessary to stop or prevent damage to the State, Contractor may request a contract term adjustment based on the number of excess days of suspension.

G-230.1 Unauthorized Activity

Any cutting, removal, or damage of forest products by Contractor, 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 Contractor 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-240.1 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, Contractor 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 Contractor's request within five business days.
- c. Within five business days of receipt of the Region Manager's decision, the contractor may make a written request for resolution to the Deputy Supervisor - Uplands of the Department of Natural Resources.
- d. Unless otherwise agreed, the Deputy Supervisor - Uplands will hold a conference within 15 calendar days of the receipt of Contractor's request for review of the Region Manager's written decision. Contractor 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-250.1 Compliance with All Laws

Contractor 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. Contractor shall provide documentation from Washington State Departments of Labor and Industries and Revenue that all obligations concerning worker compensation and safety will be met. 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-270.1 Equipment Left on State Land

All equipment owned or in the possession of Contractor, 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 30 days after the expiration of the contract period is subject to disposition as provided by law. Contractor 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-280.1 Operating Release

An operating release is a written document, signed by the State and the Contractor, indicating that the Contractor has been relieved of certain rights or responsibilities with regard to the entire or a portion of the timber sales contract. Contractor 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, Contractor's right to cut and remove forest products on the released area will terminate.

G-310.1 Road Use Authorization

The Contractor is authorized to use the following State roads, and roads for which the State has acquired easements and road use permits; BL-ML, BL-10, BL-12, BL-15, BL-16, BL-1602, BL-31, BL-38, BL-43, BL-44, BL-4403, BL-4404, and BL-4406. The State may authorize in writing the use of other roads subject to fees, restrictions, and prior rights.

G-330.1 Pre-work Conference

Contractor 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 Contractor 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 Contractor's plan of operations shall not be construed as any statement or warranty that the plan of operations is adequate for Contractor's purposes or complies with applicable laws.

Contractor shall arrange with the Contract Administrator to review this contract and work requirements with any and all subcontractors prior to receiving authorization for any subcontractor to begin operations.

G-340.1 Preservation of Markers

Any legal land subdivision survey corners and witness objects are to be preserved. If such are destroyed or disturbed, the Contractor shall, at the Contractor'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-380.1 Road Easement and Road Use Permit Requirements

The State grants Contractor the right to operate under the following rights of way:

Easements with:

Easements with:

W.O. Pearson; #55-000890; dated February 17, 1963.

The Trillium Corporation; #55-071030; dated September 14, 1999.

G-430.1 Open Fires

The Contractor its employees or its subcontractors shall not set or allow to be set any open fire at any time of the year without first obtaining permission in writing from the Contract Administrator.

G-450.1 Encumbrances

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

Easement, including the terms and provisions thereof,

For: Road

In Favor of: Scott Paper Company

Disclosed by Application No.: 50-036211

Granted: 2/7/1973

Expires: Indefinite

Easement, including the terms and provisions thereof,

For: Trail

In Favor of: WA State Dept. of Natural Resources

Disclosed by Application No.: 50-041139

Granted: 9/27/1978

Expires: 10/01/2028

Easement, including the terms and provisions thereof,
For: Road
In Favor of: The Trillium Corporation
Disclosed by Application No.: 50-071029
Granted: 10/28/1999
Expires: Indefinite

Cutline Agreement, including the terms and provisions thereof,
For: Cutline
In Favor of: Georgia-Pacific Corporation
Disclosed by Application No.: 96-071696
Granted: 5/19/1972
Expires: Indefinite

Section P: Payments and Securities

P-030.1 Payment for Harvesting and Hauling Services

The State shall pay Contractor for harvesting and hauling services at the following rates:

Payment for Harvesting Stump to Truck ('On Board Truck' or OBT): The State's payment to the Contractor for harvesting services will be in accordance with the following table;

Sort Number(s)	Unit of Measure	OBT Rate	OBT Utility Rate
01,02,03,04,05,06	MBF	\$0.00	\$20.00
07,08	Ton	\$10.00	N/A

Utility volume for mbf sorts determined on an adjusted gross scale basis.

Payment for Hauling: The State's payment to the Contractor for hauling services upon the tons delivered multiplied by: a base rate, 'A' and 'C' mile rates, the 'haul miles' listed in clause G-022.1, a fuel index factor and the Contractor's hauling bid factor using the following formula:

Hauling Services Payment Rate per Ton
= (Base Rate + Mileage Rate) x (DATA MISSING: No data found.)

Base Rate = \$2.35
(based on the multiple truck operation fixed cost/ton within 'Report to the Washington State Legislature, The Washington Log Trucking Industry: Costs and Safety Analysis, August 2008'.)

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

The Fuel Index Factor will be adjusted quarterly by the State based upon the U.S. Energy Information Administration's Weekly Retail On-Highway Diesel prices for the West Coast region posted at <http://tonto.eia.doe.gov/oog/info/wohdp/diesel.asp> using the following formula;

$$\text{Fuel Index Factor} = 1 + ((Q(x) - Q(\text{base})) / Q(\text{base}))$$

Where;

Q(base) = Average fuel price for quarter preceding harvesting services contract bid opening.

Q(x) = Average fuel price for quarter preceding log deliveries.

The fuel index factor will be calculated each;

January and apply to loads delivered between January 1 and March 31,

April and apply to loads delivered between April 1 and June 30,

July and apply to loads delivered between July 1 and September 30,

October and apply to loads delivered between October 1 and December 31.

Travel distances to each log sort destination will be determined by the State and represents the one-way travel distance from the sale area to the purchaser's delivery point.

The state must approve all haul routes and will determine travel distances prior to contractor delivery of logs to each specified destination. The State may determine alternate haul routes and delivery destinations during the course of this contract. Upon notification by the State, the Contractor is required to deliver logs: using the alternative route, or to State approved alternative delivery locations. Payment rates for approved alternate routes and delivery destinations shall be set forth by amending this clause in accordance with clause G-180.1.

For sorts bid on an mbf basis tonnage will be calculated using the State's conversion rates in the table below unless actual tonnage is available and approved for use. For tonnage sorts, actual tonnage shall apply.

MBF Sort(s)	MBF/Tons Conversion Factor
01	5.4
02	5.9
03	5
04	7.1
05	6.1
06	6.5

Contractor is responsible for billing the State for harvesting and hauling services performed using load data collected by State approved third party scaling organizations and reported by the State designated Log and Load Reporting Service. The billing statement shall include itemized accounts and summaries of harvesting tonnage and hauling mileage charges in a format approved by the State.

The billing schedule shall be the 1st and the 16th of each month with payment due by State within fourteen (14) days. Reporting periods end on the 15th and the end of each month.

No certificate given or payment made shall be evidence of the satisfactory performance of the Contract, either wholly or in part, against the claim of the State to the contrary, and no payment shall be construed to be an acceptance of any defective work, which may before or afterwards appear.

P-031.1 Payment for Hauling Across Ferries and Other Miscellaneous Tolls

Prior approval is required for payment of any additional transportation charges incurred by Contractor, including ferries, toll bridges, and other miscellaneous tolls.

If the Contract Administrator authorizes hauling across ferries, toll bridges, or other miscellaneous tolls, the Contractor’s billing statement must include an itemized list of loads by ticket number and date of crossing(s) with receipts for each ferry crossing and/or number of toll bridge crossings attached. ‘Good to Go’ regulated bridge tolls will be reimbursed at a fixed rate of per toll crossing. Miscellaneous tolls controlled by the Washington State Transportation Commission (WSTC), or other government agencies, will be reimbursed at their posted rates or the actual cost with receipts, whichever is less.

Requests for payment of additional transportation charges must be received by the State prior to contract termination. Contractor shall only be reimbursed for the amount of toll approved by the Contract Administrator.

Payment for tolls incurred for backhauling loaded trucks shall be the responsibility of the Contractor and will not be reimbursed by the State.

Convenience tolling will not be reimbursed.

P-032.1 Payment for Road Construction

The Contractor is responsible for independently negotiating, procuring and paying for road construction services provided.

The State shall pay Contractor for roadwork completed at the following rates:

Roads or Structures	Number of Stations	Dollars per Station
Pre-Haul Maintenance - Required		
BL-ML (0+00 to 231+19)	231.19	\$17.05

BL-12 (0+00 to 59+50)	59.50	\$39.76
BL-16 (0+00 to 12+40)	12.40	\$17.02
BL-31 (0+00 to 33+78)	33.78	\$510.19
BL-44 (0+00 to 39+44)	39.44	\$671.45
BL-4404 (0+00 to 3+29)	3.29	\$42.55
Construction - Required		
BL-4406 (0+00 to 9+50)	9.50	\$2,608.02
Construction - Optional		
BL-10 (0+00 to 6+42)	6.42	\$2,182.81
BL-15(0+00 to 13+24)	13.24	\$2,510.45
BL-1602 (0+00 to 4+71)	4.71	\$1,211.13
BL-1602 (4+71 to 9+02)	4.31	\$2687.47
BL-38 (0+00 to 1+70)	1.70	\$1,831.91
BL-43 (0+00 to 4+80)	4.80	\$2,529.12
BL-4403 (0+00 to 6+94)	6.94	\$720.74
BL-4403 (6+94 to 14+41)	7.47	\$2,421.41
Abandonment – Required if segment built		
BL-10 (0+00 to 6+42)	6.42	\$71
BL-15 (0+00 to 13+24)	13.24	\$71
BL-1602 (0+00 to 9+02)	9.02	\$71
BL-38 0+00 to 1+70)	1.70	\$71

One station of road construction is 100 feet. All materials, equipment time, labor, and equipment mobilization costs are included in the total price.

Upon completion of road construction, the Contractor shall submit a report identifying the road(s), and the number of stations that have been completed to the Contract Administrator. Once the Contract Administrator has approved the roadwork in writing, the Contractor is responsible for billing the State for road construction services performed. The billing statement shall include an itemized account of the road(s), the number of stations and which stations have been completed. The Contract Administrator will verify that road construction described on the billing statement is complete prior to State making payment to Contractor.

The billing schedule shall be the 1st and the 15th of each month with payment due by State within fourteen (14) days. Reporting periods end on the 14th and the end of each month.

No certificate given or payment made shall be evidence of the satisfactory performance of the Contract, either wholly or in part, against the claim of the State to the contrary, and no payment shall be construed to be an acceptance of any defective work, which may before or afterwards appear.

P-033.1 Payment for Additional Road Maintenance Work

The Contractor is responsible for independently negotiating, procuring and paying for additional road maintenance services provided.

During the course of operations, the State may identify and require additional road maintenance work to be completed by the Contractor. The amount of payment for this additional road maintenance work deemed necessary by the State will be calculated and paid for using the equipment rates in Schedule M 'Additional Road Maintenance Payment Rates'.

Upon completion of any additional road maintenance work, the Contractor shall submit a report identifying the road(s), and the number of stations that have been completed to the Contract Administrator. Once the Contract Administrator has approved the additional road maintenance work in writing, the Contractor is responsible for billing the State for additional road maintenance services performed. The billing statement shall include an itemized account of the road(s), the number of stations and which stations have been completed. The Contractor Administrator will verify that road maintenance described on the billing statement is complete prior to State making payment to Contractor. The billing schedule shall be the 1st and the 15th of each month with payment due by State within fourteen (14) days. Reporting periods end on the 14th and the end of each month.

No certificate given or payment made shall be evidence of the satisfactory performance of the Contract, either wholly or in part, against the claim of the State to the contrary, and no payment shall be construed to be an acceptance of any defective work, which may before or afterwards appear.

P-034.1 Payment for Additional Miscellaneous Work

During the course of operations, the State may identify and require additional miscellaneous work to be completed by the Contractor.

A plan for the additional work deemed necessary by the State shall be provided by the Contractor and must be approved in writing by the State prior to commencement of work by the Contractor. After the Contract Administrator has inspected and approved the work in writing, the Contractor is responsible for billing the State for work performed. The billing statement shall include an itemized account of the equipment, labor and materials necessary for the additional work that has been completed and approved.

The State shall reimburse the Contractor for approved costs within thirty (30) days of State's approval of the statement.

No certificate given or payment made shall be evidence of the satisfactory performance of the Contract, either wholly or in part, against the claim of the State to the contrary, and no payment shall be construed to be an acceptance of any defective work, which may before or afterwards appear.

P-090.1 Performance Security

Prior to start of any operations Contractor agrees to provide one or more of the following State approved performance securities; cash, savings account assignment, certificate of deposit assignment, irrevocable standby letter of credit, or a Miller Act bond, for the amount of \$50,000.00. At least 50% must be in a form other than a bond, unless otherwise agreed to by the State.

Security provided shall guarantee performance of all provisions of this contract and payment of any damages caused by Contractor's operations, failure to perform, or noncompliance with any rule or law. In addition, said security may be used by the State to satisfy any claims or liens made by Contractor's subcontractors, material providers, or other individuals against the State or its Purchasers, which arise from this Harvesting Services Contract.

If at any time the State decides that this security has become unsatisfactory, the Contractor agrees to suspend operations and, within fifteen (15) days of notification, replace the security with one acceptable to the State. The State may also require increases to the existing performance security at any time.

Unapplied performance security will be returned to Contractor after the State issues an operating release and completes the financial closeout.

P-100.1 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 Contractor. Prior to any reduction of the performance security amount, the Contractor must submit a written reduction request. No reduction will be allowed by the State unless such reduction can be made while fully protecting the State's interests.

P-120.1 Contractor Responsibility for Subcontractor Services

Contractor is responsible for negotiating, procuring, and paying for all services rendered by any subcontractor. Subcontractor services may include, but are not limited to, harvesting logs, hauling logs, and building roads.

Section L: Log Definitions and Accountability

L-010.1 Forest Products Conveyed

Forest products conveyed are logs or parts of logs delivered meeting the sorting criteria defined by clauses G-022.1 and G-024.1 of this contract.

L-013.1 Log Sorts Delivered to Incorrect Destination

Purchasers have agreed to purchase the log sort (s) as described in the G-022.1 clause. In the event a load of logs from an incorrect sort is delivered to a Purchaser, the Purchaser may reject the load. If Purchaser receives an incorrectly delivered load, Contractor shall notify the State within 24 hours. The Contractor will maintain responsibility for proper disposition and delivery of incorrectly delivered loads.

L-060.1 Load Tickets

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

Contractor shall account for all load tickets issued by the Contract Administrator. The State may treat load tickets not accounted for as lost forest products. All costs associated with computing the billings for lost loads shall be borne by Contractor.

L-080 Scaling Rules

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

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

L-110 State Approval of Log Scaling and Weighing Locations

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

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

L-114.1 State Approval of Haul Route

Contractor shall file with the Contract Administrator and Contract Administrator shall approve a map showing the haul route, which unscaled and unweighed logs will travel from the harvest area to the weighing/scaling location and approved destinations. The Contractor must notify Contract Administrator within 24 hours of any deviation from the haul route. The route of haul may be changed by prior agreement of the State and the Contractor. The Contract administrator must be notified by the Contractor of any overnight stays of an unscaled or unweighed load of logs.

L-130.1 Conversion Factors

Forest products harvested and delivered from the sale area that are not measured in units specified in the P-030.1 'Payment for Harvesting and Hauling Services' clause of this contract shall be converted to the contract specified payment units using Department of Natural Resources conversion factors unless a plan to do otherwise has been pre-approved by the State.

Section H: Harvesting Operations**H-001 Operations Outside the Sale Boundaries**

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

H-011.1 Certification of Fallers and Log Manufacturers

All persons engaged in the felling of timber and manufacturing of logs or poles must receive certification in writing from the Contract Administrator. Certification may be revoked when the Contract Administrator determines that log utilization or manufacturing has been performed in a manner that does not optimize value or otherwise causes damage to the state.

H-012.1 Leave Tree Damage Definition

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

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

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

If the Contract Administrator determines that a leave tree has been cut or damaged, the Contractor may be required to pay liquidated damages for Excessive Leave Tree Damage as detailed in clause D-040.1.

H-013.1 Reserve Tree Damage Definition

Reserve trees are trees required and designated for retention within the sale boundary. Contractor 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 Contractor'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 200 square inches.
- b. A reserve tree's 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 Contractor shall provide a replacement reserve tree of like condition, size, and species within the sale area, as approved by the Contract Administrator. Contractor may be required to pay liquidated damages for Excessive Reserve Tree Damage as detailed in clause D-041.1.

Removal of designated reserve trees from the sale area is unauthorized, and may invoke the use of the G-230.1 'Trespass and Unauthorized Activity' clause. Contractor is required to leave all cut or damaged reserve trees on site.

H-015.1 Skid Trail Requirements

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

- a. Skid trail will not exceed 14 feet in width, including rub trees.
- b. Skid trails shall not cover more than 15 percent of the total acreage on each unit.
- c. Skid trails will be pre-approved by the Contract Administrator.
- d. Except for rub trees, skid trails shall be felled and yarded prior to falling adjacent timber.
- e. Rub trees shall be left standing until all timber tributary to the skid trail has been removed.

- f. Excessive soil damage is not permitted. Excessive soil damage is described in clause H-017.
- g. Skid trails will be water barred at the time of completion of yarding, if required by the Contract Administrator.

Violation of any part of this clause will be cause to revoke the Contractor's rights to harvest and to enter the sale area.

H-017 Preventing Excessive Soil Disturbance

Operations may be suspended when soil rutting exceeds 4 inches as measured from the natural ground line. To reduce soil damage, the Contract Administrator may require water bars to be constructed, grass seed to be placed on exposed soils, or other mitigation measures. Suspended operations shall not resume unless approval to do so has been given, in writing, by the Contract Administrator.

H-030.1 Timber Falling

Trees shall be felled and logs shall be bucked to obtain the greatest practicable utilization and value of forest products.

H-050 Rub Trees

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

H-052.1 Branding and Painting

The State shall provide a State of Washington registered log brand. Contractor must brand and paint all logs removed from the harvest area in a manner that meets the requirements of WAC 240-15-030(2)(a)(i). All logs removed from the harvest area 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, Contractor shall brand at least 3 logs with legible brands at one end. Also, 10 logs shall be painted at one end with durable red paint.

H-060.1 Skid Trail Locations

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

H-080 Snags Not to be Felled

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

H-110 Stump Height

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

H-120.1 Harvesting Equipment

Forest products harvested under this contract shall be removed using felled by chainsaw and yarded by cable; felled by chainsaw or feller-buncher and yarded by forwarder or cable or shovel on sustained slopes 35% or less in VDT units; felled by chainsaw or feller-buncher and yarded by cable or shovel on sustained slopes 35% or less in VRH units,, unless authority to use other methods or equipment is granted in writing by the State.

H-125 Log Suspension Requirements

Lead-end suspension is required for all yarding activities.

H-140.1 Special Harvest Requirements

Contractor shall accomplish the following during the harvest operations:

- A. An on-site pre-work meeting shall be scheduled with the Contract Administrator, which shall include the operator and fallers, prior to commencement of any activities on site.
- B. A copy of the timber sale map and contract shall be present on site during active operations.
- C. No operations on weekends or federal holidays.
- D. Trees must be felled away from stream channels and any standing water or wet swales when feasible.
- E. Temporary log crossings that protect stream bank integrity are required for type 5 water crossings during yarding operations and must be approved in writing by the Contract Administrator. Structures shall be limited to crossing points approved in writing by the Contract Administrator. Streambeds and banks shall be protected by the use of log puncheon or other approved structures at these crossing points and removed upon the completion of yarding activities.
- F. All ground-based equipment must operate on a mat of slash. Tops of trees shall be cut and scattered where trees are felled and/or placed on skid trails to create a mat for equipment to operate on in the VDT units.
- G. Harvester will be required to provide a written plan outlining mitigation measures for falling and yarding during the bark slippage season in the VDT

areas. This season is estimated to run from April 1 to July 15, but will vary depending on weather conditions.

- H. There are eight damage unit compartments in the VDT units of this sale (Four in Unit 1 and four in Unit 4), which are delineated on the damage compartment map (see Schedule D).
- I. Timber must be removed from the site and scaled within 8 weeks of felling operations. No tops or limbs will be allowed to accumulate on any landings in the VDT Units. Tops and limbs will be redistributed in the unit to the satisfaction of the Contract Administrator.
- J. Exposed mineral soils created by falling or yarding operations that have the potential to deliver sediment to typed waters must be mulched, water barred and/or grass seeded prior to October 1 or concurrent with operations between October 1 and May 1.
- K. The BL-ML from the lower parking lot to the gate and the BL-16 shall not be blocked for more than 15 minutes, without 2 weeks advanced notice to the Contract Administrator. In the event that a road does need to be closed to traffic, it cannot be closed for more than 8 hours at a time, and no more than 2 consecutive 8-hour days.
- L. A minimum of 2 weeks notice must be given to the Contract Administrator prior to any activity regarding road construction, falling, yarding, or hauling.
- M. During road construction, "Road Closed" signs must be posted on the BL-10, BL-15, and BL-1602 roads at the intersection of these roads with the BL-ML and BL-16. These signs must be provided by the Harvester.
- N. Yarding corridors will be parallel to one another wherever possible.
- O. Location of yarding corridors must be pre-marked by Harvester and approved by the Contract Administrator.
- P. Timber in yarding corridor must be felled and yarded prior to felling adjacent timber.
- Q. Harvester will not have more than two yarding corridors open to active yarding at any one time. All other yarding corridors will not be active.
- R. All type 5 streams will have a 30 foot equipment limitation zone measured from each bank.

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

H-141.1 Additional Harvest Requirements

Contractor shall accomplish the following during the harvest operations:

- A. Individually marked leave trees (Single blue-ring painted leave trees only) in the VRH portion of the sale area may be exchanged for unmarked trees of similar size, species and wildlife characteristics for operational purposes with prior written approval from the Contract Administrator.
- B. Operations shall only occur between Monday and Friday from 06:00 a.m. to 5:30 p.m.
- C. Make a consistent flow of deliveries throughout the delivery period without unnecessary delay. No unauthorized shut downs or gaps in deliveries of logs will be allowed.
- D. Must have all documentation (performance security, certification of insurance, proof of successful completion of an approved training program per clause G-116.1, etc.) in place and be ready to begin operations upon approval to commence activity on site as per the project start date. Road reconstruction must begin as soon as possible upon approval by Contract Administrator.
- E. Provide an alternative plan or demonstrate the capability to increase production (if needed) in case of weather and/or regulatory related shut down(s) to meet target completion date.

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

H-150.1 Required Removal of Forest Products

Contractor shall remove from the sale area, present for scaling and deliver to the designated purchaser locations specified in the G-022.1 clause all forest products conveyed that meet the following minimum dimensions unless directed otherwise by the Contract Administrator:

Species	Net Bd Ft	Log Length (ft)	Log dib (in)
Conifer	10	12	5
Hardwood	20	16	5

The State may treat failure to remove forest products left in the sale area that meet the above specifications as a breach of this contract. The Contractor shall be responsible for forest products not removed. At the State's option, the State or a third party scaling organization may scale forest products, for volume, that meet the above specifications and are left in the sale area. State may deduct the value of forest products not removed from payments to the Contractor for harvesting services rendered. All costs associated

with scaling and computing the billing for forest products left in the sale area will be borne by Contractor.

If Contractor's failure to remove all the forest products specified under the contract is due to circumstances beyond the control and without fault or negligence of the Contractor including, but not restricted to, acts of the State, closures by government regulatory agencies, mill closures, fires, vandals, and unusually severe weather conditions, the State may elect to modify the required removal requirements. Contractor is required to request contract removal requirement modifications in writing. The State shall consider such requests and may grant them in part or entirety only when Contractor has demonstrated that they have been endeavoring to complete the project and are otherwise performing with due diligence.

H-161.1 Excessive Timber Breakage

The Contractor shall be responsible for felling and yarding timber in a manner that shall minimize breakage and maintain stump heights within contract specifications, unless permission to do otherwise is agreed to by the Contract Administrator.

The State may treat excessive timber breakage, as determined by the Contract Administrator as a breach of this contract. At the State's option, the State or a third party scaling organization may scale forest products, for volume. State may deduct the value of forest products damaged through excessive breakage from payments to the Contractor for harvesting services rendered. All costs associated with scaling and computing the billing for forest products damaged through excessive breakage will be borne by Contractor.

H-170 Utility Log Removal

All utility logs shall be yarded concurrently with the yarding of other logs and shall be removed from the sale area.

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.

Section C: Construction and Maintenance

C-040.1 Road Plan

Road construction and associated work provisions of the Road Plan for this project, dated October 13, 2015 are hereby made a part of this contract.

The State may make modifications to the Road Plan made necessary by unforeseen conditions. Any modifications that create additional work for the Contractor shall be paid in accordance with the payment terms set forth in this contract.

C-050.1 Contractor Road Maintenance and Repair

Contractor shall perform work at their own expense on the BL-ML (99+49 to 231+19), BL-10, BL-12, BL-15, BL-1602, BL-31, BL-38, BL-43, BL-44, BL-4403, BL-4404,

BL-4406 road(s). All work shall be completed to the specifications detailed in the Road Plan.

C-060.1 Designated Road Maintainer

If required by the State, the Contractor shall perform maintenance and replacement work as directed by the State on the BL-ML (0+00 to 99+49) and BL-16 (0+00 to 12+40) roads. The Contractor shall furnish a statement, in a form satisfactory to the State showing the costs incurred while performing this work. Costs shall be based on the rates set forth in the equipment rate schedule on file at the Region office or Engineering Division in Olympia. The State shall reimburse the Contractor for said costs within thirty (30) days of receipt and approval of the statement.

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-010.1 Fire Hazardous Conditions

Contractor acknowledges that operations under this Contract may increase the risk of fire. Contractor 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, Contractor agrees to provide equipment and personnel working at the site to safely and effectively engage in first response fire suppression activity.

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

S-030 Landing Debris Clean Up

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

S-035 Logging Debris Clean Up

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

S-050 Cessation of Operations for Low Humidity

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-060.1 Pump Truck or Pump Trailer

Contractor 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-130.1 Hazardous Materials**a. Hazardous Materials and Waste - Regulatory Compliance**

Contractor 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. Contractor 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 Material Spill Containment, Control and Cleanup

If safe to do so, Contractor shall take immediate action to contain and control all hazardous material spills. Contractor 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, Contractor 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 Contractor 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 Contractor 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-131.1 Refuse Disposal

As required by RCW 70.93, All Contractor 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-010.1 Liquidated Damages

The clauses in the DAMAGES section of this contract provide for the State's payments to the Contractor to be reduced for certain breaches of the terms of this contract. These offsets are agreed to as liquidated damages for the Contractor's breach, and are not penalties. They are reasonable estimates of anticipated harm to the State caused by the Contractor's breach. The State and Contractor agree to these liquidated damages provisions 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 Contractor by allowing the Contractor to better assess its responsibilities under the contract.

D-015.1 Damages for Delivered Mis-sorted Logs

Logs delivered by Contractor that do not meet the receiving Purchaser's log sort specifications as described in clause G-022.1, where species are mixed, or are over 1" out of tolerance of scaling diameter, and logs not meeting the minimum length requirements as designated for this contract, and unless otherwise indicated, logs containing blue stain are considered mis-sorts.

Mis-sorted log volume will be considered on a per load basis. When mis-sorts amount to more than 5% of a load's total volume, as determined by a third party scaling organization, the State is harmed and an adjustment to the Contractor's harvesting payment may be made. For the improper delivery of mis-sorted logs, the State may reduce the harvesting payment by \$100.00 for each load delivered which contained mis-sorted volume in excess of 5%, as documented by third party scaling ticket.

D-016.1 Damages for Delivered Mis-manufactured Logs or Poles

Logs or Poles delivered by Contractor that do not meet the receiving Purchaser's preferred log length specifications as described in clause G-022.1, and logs not meeting minimum log quality specifications for sweep, peeler sorts, untrimmed limbs and knots as described in the G-024.1 clause are considered mis-manufactured logs or poles.

Mis-manufactured log or pole volume will be considered on a per load basis. When mis-manufactured logs or poles amount to more than 5% of a loads total volume, as determined by a third party scaling organization, the State is harmed and an adjustment to the harvesting payment may be made. For the delivery of mis-manufactured logs or poles, the State may reduce the harvesting payment due to the Contractor by an amount of \$100.00 for each load of logs or \$300 for each load of poles delivered which has been determined to contain mis-manufactured volume in excess of 5% as documented by third party scaling ticket.

D-023.1 Damages for Failure to Remove Forest Products

Contractor's failure to remove all of the forest products specified prior to the expiration of the contract operating authority results in substantial injury to the State. The value of the forest products sold at the time of breach is not readily ascertainable. The Contractor's failure to perform disrupts the State's management plans in the project area, the actual cost of which is difficult to assess. A re-offering of the contract involves additional time and expense and is not an adequate remedy. Therefore, the Contractor agrees to accept a reduction of the amount due for harvesting services from the State in the amount calculated according to the following guidelines:

- a. Full stumpage value will be assessed for felled trees, individual or scattered standing trees, or clumps of standing trees less than three acres in size, plus all costs associated with scaling and computing the stumpage value of the forest products left.

- b. 35% of full stumpage value will be assessed for clumps of standing trees greater than three acres in size, plus all costs associated with scaling and computing the stumpage value of the forest products left.

The stumpage value of forest products left shall be determined by the State or a third party scaling organization utilizing whatever method(s) best suited for accurate volume and acreage measurement as determined by the State.

D-024.1 Damages for Excessive Timber Breakage

Excessive breakage of timber results in substantial injury to the State. The value of the forest products sold at the time of breach is not readily ascertainable. Therefore, the Contractor agrees to accept a reduction of the amount due for harvesting services from the State at an amount calculated according to the following:

The value for excessive timber breakage will be determined at a rate, which reflects the log sort price that the Purchasers would have paid for unbroken logs minus the cost of delivery, plus all costs associated with scaling and computing the stumpage value of the forest products excessively broken.

The stumpage value of forest products excessively broken shall be determined by the State or a third party scaling organization utilizing whatever method(s) best suited for accurate volume measurement as determined by the State.

D-030.1 Inadequate Log Accountability

Removal of forest products from the sale area without adequate branding and/or valid load tickets attached to the load, weighing or scaling forest products in a location other than the facilities authorized for use for this sale, and failing to deliver load ticket to the weighing/scaling official all result in substantial injury to the State. The potential loss from not having proper branding, ticketing, weighing locations and accountability is not readily ascertainable. These contractual breaches result in a loss of load and weighting/scaling data the potential for the removal of forest products for which the State receives no payment, and cause increases in the State's administration costs associated with this contract. The actual costs of these breaches are difficult to assess.

For these reasons, Contractor's payments for harvesting under this contract will be reduced in the following amounts, as liquidated damages, to compensate the State for these breaches: a sum of \$100.00 each time a load of logs does not have branding as required in the contract, \$250.00 each time a load of logs does not have a load ticket as required by the contract, \$250.00 each time a load ticket has not been filled out as required by the plan of operations, \$250.00 each time a load is weighed or scaled at a facility not approved as required by the contract, and \$250.00 each time load and weight scale data is not presented to the weighing/scaling official.

D-040.1 Leave Tree Excessive Damage

When Contractor's operations exceed the damage limits set forth in clause H-012.1, Leave Tree Damage Definition, the trees damaged result in substantial injury to the State. The value of the damaged leave trees at the time of the breach is not readily

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ascertainable. Therefore, Contractor agrees to pay the State as liquidated damages at the rate of \$50.00 per tree for all damaged trees in the Variable Density Thinning areas.

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

STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES

Purchaser

Jean Fike
Northwest 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 _____

Schedule A
NW Ground-Based Equip Specifications (Rev 2/11/16)

The following types of equipment are considered ground-based equipment: feller-buncher, processor, forwarder, skidder and shovel.

SHOVEL is defined as a low ground pressure track-mounted machine with hydraulic boom and grapple capable of picking up one end of the largest log 25 feet from the center of the machine.

LOG PROCESSOR/DE-LIMBER is defined as a mobile machine with a hydraulic boom capable of simultaneously bucking, delimiting and/or debarking and chipping whole trees while sitting stationary at the landing.

FELLER-BUNCHER/HARVESTER is defined as a track mounted machine with hydraulic boom and cutter head capable of felling, bucking, limbing, and decking logs in one operation.

FORWARDER is defined as a track or rubber tire machine used for transporting logs to a landing by use of a bunk with self loading boom in which logs are carried free of the ground.

RUBBER-TIRED SKIDDER is defined as a skidder mounted on rubber tires used to drag logs to a landing. Logs are generally pulled in groups of six or less, with one end on the ground.

TRACKED SKIDDER is defined as any tracked tractor or skidder, fixed or articulated, used to drag logs to landings. Logs are generally pulled in groups of six or less, with one end on the ground.

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

FOR ALL YARDING:

Equipment will remain at least 30 feet from all water courses or areas of wet/soft soils, except as necessary to cross at approved locations. Water course crossing structures must be approved by the Contract Administrator.

Logging debris created by the operation will be removed from water courses concurrently with yarding.

WHEN SHOVEL YARDING IS AUTHORIZED:

S1. When yarding and loading operations are occurring simultaneously, an additional shovel will be required for loading to avoid extra trips to the landing.

S2. Shovel yarding will not be allowed to create ruts or soil puddling. Shovel routes should be dispersed to prevent creation of definable trails.

S3. Within shovel logged areas, to facilitate proper reforestation, logging debris will be dispersed as necessary to create clear, plantable spots at approximately a 11 foot x 11 foot spacing. Planting spots will be created concurrently with yarding.

LOG PROCESSORS will be allowed within the sale area only under one of the following conditions:

1. No tops or limbs will be allowed to accumulate on any landings, and all tops and limbs will be re-distributed into the unit, to the satisfaction of the Contract Administrator, and will provide for plantable spots every 11 feet by 11 feet.
2. Harvester must provide a written slash treatment plan, acceptable to the Contract Administrator, to address the additional slash accumulation. The Slash Treatment Plan will be a part of the Plan of Operations.

Schedule B
Harvest Prescription

Variable Retention Harvest Areas (Units 2 and 3)

All timber within the unit except trees marked with blue paint on the bole and root collar, forest products tagged out by yellow leave tree area tags, and cedar snags, preexisting dead and down cedar trees and cedar logs in Unit.

Right of Way and Road Daylighting

All timber within right of ways, except that if the road segment is not actually constructed, then only harvest to the thinning prescription for the associated unit in which the right of way is located.

All timber in designated areas (as indicated on the timber sale map, Daylighting the BL-ML and BL-44 is to occur between stations BL-ML 35+47 – 86+20, BL-ML 94+16 – BL-ML 201+06, and BL-ML 224+46 - BL-44 25+43. These are marked with reference points in the field) along the BL-ML and BL-44 roads within 30 feet from the centerline on the road on the uphill side and 20 feet from the centerline on the downhill side of the road. This shall be measured from the centerline to the front of the tree. In addition, cut all orange painted trees in these designated areas. However, no trees shall be harvested within 50 feet of any typed water unless the tree is marked with orange paint. In addition, no trees marked with blue paint shall be harvested along the mainline.

Thinning Prescription

Unit 1: Thinning from below, leave the “best” 120 trees per acre across entire unit (approximately 19x19 foot spacing), including yarding corridors. The residual stand must have a basal area greater than or equal to 140.

To accomplish these criteria, the take tree preference is as follows:

1. Cut all hardwoods
2. Cut all hemlock
3. Cut Douglas-fir up to 13 inches DBH, unless there is severe deformity as defined below or need to be removed for corridors.

4. Western redcedar shall only be cut for the purpose of yarding corridors.

Unit 4: Thinning from below, leave the “best” 130-140 trees per acre across entire unit (approximately 18x18 foot spacing), including yarding corridors. The residual stand must have a basal area greater than or equal to 140.

To accomplish these criteria, the take tree preference is as follows:

1. Cut all hardwoods
2. Cut Douglas-fir up to 12 inches DBH and western hemlock up to 14 inches DBH, unless there is severe deformity as defined below or need to be removed for corridors.
3. Western redcedar shall only be cut for the purpose of yarding corridors.

Best tree definition is having the following characteristics:

1. Free of disease, major defect, and damage
2. Fullest and most vigorous crowns
3. Best form: tallest tree, straightest boles, and smallest limb diameters
4. DBH of 6.5 inches or greater

SPECIAL THINNING CONDITIONS

Openings created by felling trees shall not exceed 30 feet between leave trees. In areas where thinning is not necessary, i.e., prescription is met already; do not put in corridors. If natural openings in the stand exceed this distance, sufficient trees shall be left on the perimeter of the opening to maintain the appropriate trees per acre and basal area as determined by compliance plots described in compliance methods.

Gaps -Harvesting

In Unit 1, “gaps” have been designated in the unit. “Gaps” are patch cuts, where the boundary trees are marked with blue special management tags and orange paint on the root collar. All trees marked with blue special management tags and all trees bounded by these trees are to be harvested.

RIPARIAN MANAGEMENT ZONES

Five conifer trees per thinned RMZ acre from the largest diameter class of thinned trees shall be felled and left as down woody debris. These trees are in addition to the residual stocking targets mentioned above. Trees shall be cut within 25 feet of the white timber sale boundary tags in the RMZ thinning area. Trees shall be felled toward the stream channel and shall be proportionally distributed across the RMZ. The Contract Administrator shall review and approve trees marked by the Purchaser (with yellow paint), 57 trees in Unit 1 and 21 trees in Unit 4, from the largest thinned DBH class in the RMZ.

Ground-based Yarding Corridors

Corridors are limited to 14 feet wide (including rub trees) and no less than 70 feet apart as measured from the center of the corridor. Where possible corridors should be located in a manner that minimizes the chance of damaging or needing to remove any leave trees. No yarding will take place on sustained slopes greater than 35%.

Compliance

A 1/20 acre fixed radius plot (26.3 feet) will be measured to determine trees per acre. The number of trees in a plot will be multiplied by 20 to determine the trees per acre for that plot. The average of all plots in a unit will determine the trees per acre for that unit. Only trees greater than or equal to 6.5 inches DBH will be measured.

In addition, from plot center a 40 BAF prism will be used to determine average basal area. Each tree captured in the plot will represent 40 basal area, needing an average of 3-4 trees per plot to meet the prescription of 140.

Certification of fallers and yarder operators (additional requirements beyond those outlined in the H-011)

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

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

Definitions

Leave tree - Leave trees in the unit will be selected by comparing their characteristics with other trees in the stand. Leave trees will be the best trees from the largest diameter classes available and evenly distributed over the landscape, and have a minimum diameter of 6.5 inches at DBH.

Diseased tree - A tree that is infested with Dwarf Mistletoe or other pathogen to the point that at least 2/3 of its crown contains if affected.

Deformed tree - A tree that has forked tops, broken tops, sinuosity, or severe cat faces (bark removed on more than half of the circumference of the tree).

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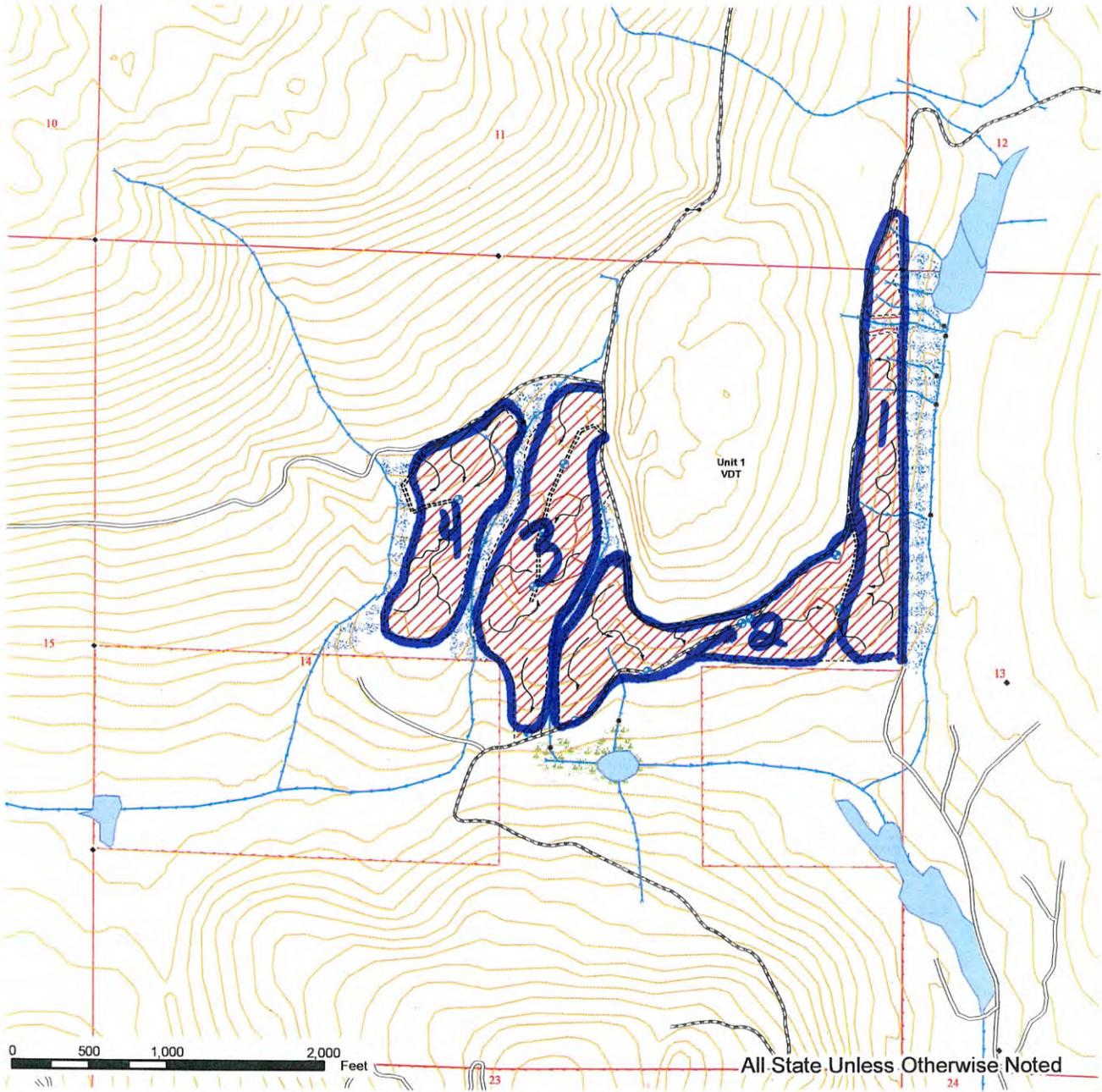
Schedule D
Damage Compartment Map

LOGGING PLAN MAP

Damage Compartment Maps

SALE NAME: WALNUT VDT&VRH CH
AGREEMENT#: 92530
TOWNSHIP(S): T36R03E
TRUST(S): State Forest Transfer(1)

REGION: Northwest Region
COUNTY(S): SKAGIT
ELEVATION RGE: 524-1717



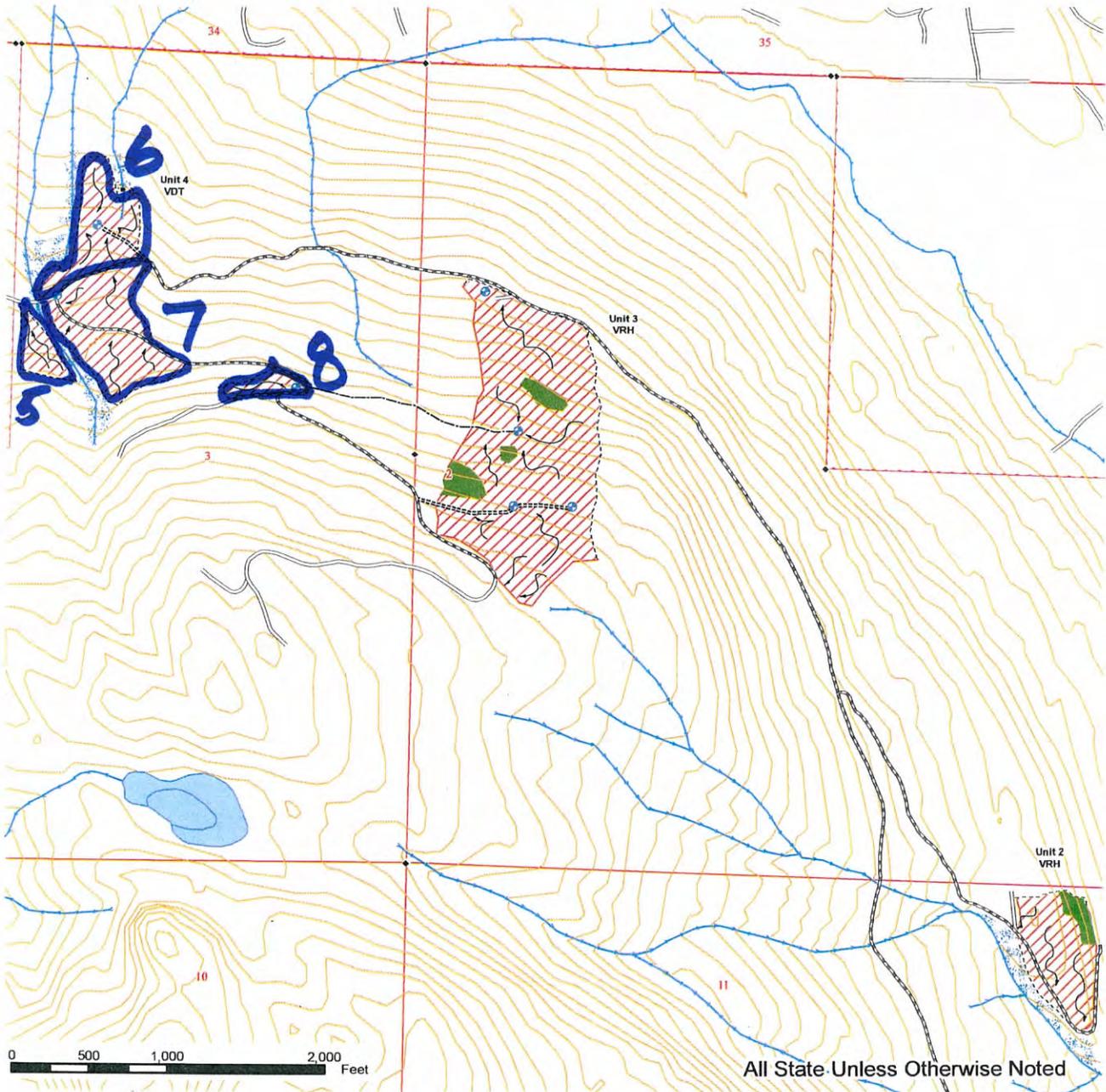
Ground	Sale Boundary Tags	Streams
Leave Tree Area	Existing Road	Stream Type
Riparian Mgt Zone	Optional Construction	Stream Type Break
Wetland Mgt Zone	Required Construction	Survey Corners
	Required Reconstruction	Landing - Proposed
	Required Pre-Haul Maintenance	Gate

LOGGING PLAN MAP

DAMAGE Compartment MAPS

SALE NAME: WALNUT VDT&VRH CH
AGREEMENT#: 92530
TOWNSHIP(S): T36R03E
TRUST(S): State Forest Transfer(1)

REGION: Northwest Region
COUNTY(S): SKAGIT
ELEVATION RGE: 524-1717



Ground	Sale Boundary Tags	Streams
Leave Tree Area	Existing Road	Stream Type
Riparian Mgt Zone	Optional Construction	Stream Type Break
Wetland Mgt Zone	Required Construction	Survey Corners
	Required Reconstruction	Landing - Proposed
	Required Pre-Haul Maintenance	Gate



Schedule M
EQUIPMENT RATE
(Hourly Rate including Operator)

(rev.8/1/2015)

Make - Model - \$/hour

MOTOR GRADER

To 140 HP -Cat 120H, 120M -\$128.00

To 175 HP -John Deere 670D, 670G, 672D, G & Cat 12M & Volvo G930 &
Komatsu GD-655-3 - \$139.00

To 200 HP - John Deere 772 & Cat 140M & Volvo G940 & Komatsu GD675-3 \$162.00

Over 200 HP - Cat 160M, 14M, 16H & Komatsu GD-825A-2 - \$216.00

Ripper/Scarifier Use

To 140 HP - \$4.00

To 175 HP - \$6.00

Over 175 HP - \$10.00

FRONT END LOADER & LOADER/BACKHOE

To 75 HP - Cat 416D, Cat 416E & Komatsu WB142-2 - \$79.00

To 110 HP - Cat 420E & Case 580, 590 & Cat 908H, 914G & John Deere 344J - \$91.00

To 160 HP - Cat 450E, Cat 924H, 930H & Hyundai HL730-9 & John Deere 524K - \$111.00

Over 160 HP - John Deere 624K & Case 621E & Cat 938H, 950H, 966K - \$136.00

Addition for special attachment use: compactor, clam, extendaboom, etc. - \$6.50

GRAVEL TRUCKS

Dual Rear Axle - \$98.00

5-axle Combination End Dump & End Dump Trailer - \$115.00

5-axle Tractor & Belly Dump Trailer - \$115.00

DOZERS

To 75 HP - Case 650 K, & Cat D3K XL - \$105.00

To 105 HP - Cat D4K, D5K, & Case 750K, 850K, & John Deere 450J, 550J, 650J,
& Komatsu D37EX-22 - \$114.00

To 135 HP - Cat D6K, & Case 1150K, John Deere 700J, & Komatsu D51EX-2 -\$139.00

To 185 HP - John Deere 750J, & Case 1650, 1850, & Cat D6N,
& Komatsu D61EX -15 - \$168.00

To 240 HP - Cat D6T, D7E, & John Deere 850J, & Komatsu D65EX-15 \$201.00

Over 240 HP - Cat D8T, & John Deere 950J - \$280.00

Ripper Use

To 180 HP - \$7.50

To 235 HP - \$12.50

Over 235 HP - \$20.00

TRACTOR BRUSH CUTTERS

To 67 PTO HP - \$65.00

To 80 PTO HP - \$80.00

Over 80 PTO HP - JD 6200, 6300, 6400 - \$95.00

EXCAVATORS

To 60 HP - Kubota U45, U55, & John Deere 50D, & Hitachi 50U, & Cat 307D - \$75.00

To 95 HP - Cat 312D, 314D, & Doosan 140LCV, & Hitachi 120-3, 135US-3,
& Link-Belt 135, & Komatsu PC 120-6, PC130-8, & John Deere 120D, 135D - \$120.00

To 120 HP - Cat 315D, & John Deere 160LC, & Doosan 175LCV, & Komatsu PC160LC-8,
& Link-Belt 160 LX, & Volvo EC160C L - \$132.00

To 140 HP - Cat 319D L, 320C, & Hitachi 160LC-3, & Link-Belt 210LX - \$157.00

To 170 HP - Cat 320D, & Hitachi 200LC-3, 225LCV, & Link-Belt 240 LX,
& Komatsu PC200-8, PC220LC-8, & John Deere 225D LC, & Volvo EC240C - \$182.00

To 230 HP Cat 324D, 324E, 328D, 329D, & John Deere 240D, 270D, 290G,
& Hitachi 240LC-3 270LC- 3, & Link-Belt 290 LX RB, & Volvo EC 290C,
& Komatsu PC270LC-8 - \$252.00

Over 230 HP Cat 330D, 336D, & Volvo EC330C, John Deere 330C, 330D,
& Komatsu PC300LC-8, PC350LC-8, & Link-Belt 330 LX, 350 X2,
& Hitachi 330LC, 350LC-3 - \$284.00

Add Excavator Attachment Rate to Excavator - \$30.00

SELF PROPELLED VIBRATORY COMPACTORS -

To 80 HP - Bomag BW145DH-40, BW177D-40 & Dynapac CA150D & Sakai SV 201D
& Ing Rand SD45F TF - \$88.00

To 125 HP - Bomag BW177PDBH-40 & Cat CP-433E & Sakai SV400D-II
& Dynapac CA152D - - \$103.00

Over 125 HP - Bomag BW211PD-40 & Dynapac CA262D & Ing Rand SD105DA TF
& Sakai SV505D-I - \$115.00

TRACK MOUNTED ROCK DRILLS (with one operator)

To 3.5 inch diameter hole - \$200.00

Over 3.5 inch diameter hole - \$235.00

HEAVY EQUIPMENT HAULING

Truck & Tilt Trailer - \$110.00

Tractor and Lowbed Trailer to 55,000 lb payload - \$123.00

Tractor and Lowbed Trailer Over 55,000 lb payload \$145.00

WATER TRUCKS

To 3,000 gallons - \$90.00

To 4,000 gallons - \$100.00

Over 4,000 gallons- \$105.00

POWER SAWS & PUMPS - \$10.00

LABOR WAGES (woods rate before loading) - \$25.00

INSTRUCTIONS

HP taken at the Flywheel unless stated otherwise.

Sales Tax - Add sales tax only if an activity is not directly tied to a state timber sale. Sales tax on purchased material will be reimbursed.

Hourly rates include operator, owning, and operating costs. Rates include all costs of service and support vehicles.

Specification data such as weight and flywheel HP can be determined upon request by providing equipment make and model information.

Rates for equipment not included in this schedule can be determined upon request.



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)

DNR Timber Sale Trust Distribution Form

Sale Name
WALNUT VDT and VRH Sorts

Agreement Number
C 30-000 92530

Region
Northwest

District
14

Unit
Hamilton

Legal Location

Section(s)	2, 3, 11, 14	Township	36	Range	3	E/W	E
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Auction Date
5/25/2016

Contract Expiration Date
4/14/2017

Sale Acres
135

Sale Class
Board

Sale Method
Scale

Stand Origin Year
1963

FPA Number
2814947

FPA Renewal Date
1/19/2019

Sale Volume Ratio

Conifer		
Red cedar	281	10.70%
Other	109	4.20%
Hemlock	650	24.80%
Douglas fir	1581	60.30%
Totals For Conifer	2621	100.00%
Total	2621	100.00%

Harvest Type

Harvest Type	% of Sale
Variable Density Thinning	62.40%
Variable Retention Harvest	37.60%
Total	100.00%

Trust Distribution Table

County	1	Totals							
29 - Skagit	100.00%	100.00%							
		100.00%							

DNR Timber Sale Trust Distribution Form

Trust Levy Codes

29 - Skagit	
1115	51.60%
1117	48.40%
TOTAL:	100.00%

Instructions:

To ensure proper distribution of funds to the trust beneficiaries of this sale, the State Lands Assistant must review the data in NatureE and sign in the space provided below.

NatureE Data Reviewed by:

X

(Print Name)

(Signature)

Date:

DNR Timber Sale Trust Distribution Form

Trust Distribution Details

Cruise Narrative

Sale Name: Walnut CH VDT & VRH	Region: Northwest
App. Number: 30-092530	District: Baker
Lead cruiser: Ken McGee Completion date: 01/05/16	
Other cruisers on sale: N/A	

Unit acreage specifications:

Unit #	Cruised acres	Cruised acres agree with sale acres? Yes/No	If acres do not agree explain why.
1	56.9	Yes	
2	5.8	Yes	
3	31.7	Yes	
4	14.4	Yes	
1 Gaps	5.0	Yes	
Corr 1,4	7.9	Yes	Corridor acres in unit 1; 6.3 ac and in unit 4; 1.6 ac
R/W 1	3.0	Yes	
R/W 2	10.3	Yes	
	135.0		

Unit cruise specifications:

Unit #	Sample type (VP, FP, ITS,100%)	Expansion factor (BAF, full/half)	Sighting height (4.5 ft, 16 ft.)	Grid size (Plot spacing or % of area)	Plot ratio (cruise:co unt)	Total number of plots
1	V.P.	Full 27.78	4.5	300 x 300	All Cruise	25
2	V.P.	Full 54.45 Full 40.00	4.5	150 x 150	All Cruise	10
3	V.P.	Full 62.50 Full 40.00	4.5	300 x 300	All Cruise	14
4	V.P.	Full 27.78	4.5	200 x 200	All Cruise	19
1 GAPS	V.P.	Full 27.78	4.5	300 x 300	All Cruise	4

Corr 1,4	V.P.	Full 27.78	4.5	300 x 300	All Cruise	4
R/W 1	V.P.	Full 27.78	4.5	300 x 300	All Cruise	2
R/W 2	V.P.	Full 20.00	4.5	Every 2,112 ft	All Cruise	9
						87

Sale/Cruise Description:

Minor species cruise intensity:	In units 2 and 3 the hardwoods were cruised with a 40 factor prism utilizing the same plot centers.					
Minimum cruise spec:	5 inch top or 40% of form point. 8 inch DBH minimum. Not less than 10 board feet. Pulp logs are 6 and 7 inch DBH holding 16 feet to a three inch top.					
Avg ring count by sp:	DF =	8.0	WH =		SS =	
Leave/take tree description:	Leave trees are tagged out in clumps or banded with blue paint and are scattered through-out the sale area.					
Other conditions	GPS points are marked on the ground with pink and white flagging. Some sample points were dropped due to the sale boundary and leave tree clumps. The average volume per acre in unit 1 was applied to the R/W in unit 1.					

Field observations:

<p>This contract harvest sale is located a few miles west of Alger, WA. on Blanchard Mountain. It consists of two VDT units and two VRH units with one mainline road daylighting project. The entire sale is said to be ground based logging methods. The grant appears to be 01- State Forest Board Transfer.</p>
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GRANTS: 01.....100%

PREPARED BY: Ken McGee / P. Kirner FCC1

TITLE: Special Forest Products Forester

TC		PSPCSTGR		Species, Sort Grade - Board Foot Volumes (Project)																			
T36N R03E S02 TyUNT3 THRU T36N R03E S14 TyUNT1				Project: WALNUTCH										Page 1									
				Acres 135.00										Date 1/5/2016									
														Time 1:19:45PM									
Spp	S	So	Gr	% 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			
									4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99							
DF	T	D	2S	58	3.9	7,379	7,092	957		1	29	71		1	1	9	89	36	17	449	2.53	15.8	
DF	T	D	3S	18	8.6	2,449	2,238	302			99	1		0	4	2	93	39	8	89	0.76	25.0	
DF	T	D	4S	6	12.0	710	625	84		59	41			9	11		80	33	6	35	0.40	17.8	
DF	T	D	UT	3	2.9	445	432	58		96	3	1		47	38	7	8	10	5	11	0.25	40.5	
DF	T	HASM		14		1,654	1,654	223				9	91			35	65	37	20	663	3.26	2.5	
DF	T	HA2S		1		94	94	13				61	39			100		40	16	393	2.11	.2	
DF Totals				49	4.7	12,731	12,135	1,638		6	21	19	54	3	3	11	83	26	8	119	1.07	101.8	
DF		D	2S		18.8	11	9	1								100		32	12	130	1.47	.1	
DF		D	3S	70	5.2	3,680	3,491	471			100					0	100	40	7	78	0.69	44.8	
DF		D	4S	16	2.8	853	830	112		69	31			6	5	3	85	34	5	37	0.37	22.4	
DF		D	UT	14	2.2	680	666	90		100				60	8	15	17	10	5	10	0.26	66.7	
DF Totals				20	4.4	5,225	4,995	674		25	75	0		9	2	3	86	24	6	37	0.53	134.0	
RC	T	D	3S	77	12.0	1,840	1,620	219			26	9	65	1		1	98	35	13	237	2.23	6.8	
RC	T	D	4S	23	4.4	480	459	62		97	3			16	57	15	11	21	5	22	0.33	21.1	
RC Totals				8	10.4	2,321	2,080	281		21	21	7	51	4	13	4	79	24	7	74	0.99	27.9	
RC		D	3S	100	50.0	14	7	1			100					100		36	15	160	2.61	.0	
RC Totals				0	50.0	14	7	1			100						100	36	15	160	2.61	.0	
WH	T	D	2S	61	7.9	3,393	3,126	422				62	38			100		40	15	335	1.82	9.3	
WH	T	D	3S	30	2.8	1,524	1,482	200			95	5			1	2	97	40	8	107	0.68	13.9	
WH	T	D	4S	3	2.5	199	194	26		34	66			38	25	2	35	19	6	23	0.41	8.4	
WH	T	D	UT	6		261	261	35		98	2			20	36	39	4	18	5	19	0.24	14.1	
WH Totals				20	5.8	5,377	5,063	684		6	30	40	24	2	3	3	92	29	8	111	0.88	45.7	
WH		D	2S	10		44	44	6				100				32	68	37	12	185	1.38	.2	
WH		D	3S	60	3.4	266	257	35			100					100		40	7	78	0.68	3.3	
WH		D	4S	21		91	91	12		19	81			2	9	5	84	30	6	41	0.44	2.2	
WH		D	UT	9		38	38	5		100				70		30		8	5	9	0.25	4.4	
WH Totals				2	2.0	440	431	58		13	77	10		7	2	7	85	24	6	42	0.58	10.2	
RA	T	D	3S	34		27	27	4			100					100		30	10	118	1.06	.2	
RA	T	D	4S	34	13.9	31	26	4		22	78					100		29	7	44	0.67	.6	
RA	T	D	UT	32		24	24	3		100				87	13			15	5	14	0.18	1.7	
RA Totals				0	5.2	82	77	10		39	61			27	73			20	6	31	0.47	2.5	
BM	T	D	UT	100	26.6	85	63	8		100				86	14			19	5	15	0.22	4.0	
BM Totals				0	26.6	85	63	8		100				86	14				19	5	15	0.22	4.0
Totals					5.4	26,274	24,850	3,355		12	35	18	35	4	4	7	85	25	7	76	0.80	326.2	

DF 1,638
RC 281
WH 684
RA 10
BM 8
Total Take = 2,621

TC PSTATS		PROJECT STATISTICS							PAGE	1	
		PROJECT WALNUTC							DATE	1/5/2016	
TWP	RGE	SC	TRACT	TYPE		ACRES	PLOTS	TREES	CuFt	BdFt	
36N	03E	02	WALNUT CH	UNT3	THR	135.00	131	735	S	W	
36N	03E	14	WALNUT CH	UNT1							
			PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES				
TOTAL			131	735	5.6						
CRUISE			131	735	5.6	22,834	3.2				
DBH COUNT											
REFOREST											
COUNT											
BLANKS											
100 %											
STAND SUMMARY											
		SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
DOUG FIR		190	68.1	13.5	54	18.4	67.7	5,225	4,995	1,687	1,687
DOUG FIR-T		421	48.7	16.7	63	18.2	74.5	12,731	12,135	2,856	2,856
WHEMLOCK		35	5.2	13.8	53	1.5	5.5	440	431	141	141
WHEMLOCK-T		50	21.2	15.6	72	7.1	28.2	5,377	5,063	1,182	1,182
WR CEDAR		1	.0	26.0	60	0.0	.2	14	7	4	4
WR CEDAR-T		25	19.8	14.6	42	6.0	22.9	2,321	2,080	672	672
R ALDER-T		6	2.0	11.7	43	0.4	1.5	82	77	23	24
BL MAPLE-T		7	4.0	7.6	30	0.5	1.3	85	63	16	17
TOTAL		735	169.1	14.8	57	52.5	201.7	26,274	24,850	6,580	6,582
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		43.6	3.2	79	81	84					
DOUG FIR-T		193.2	9.4	218	241	263					
WHEMLOCK		53.4	9.0	85	93	102					
WHEMLOCK-T		115.5	16.3	241	288	335					
WR CEDAR											
WR CEDAR-T		108.3	22.1	262	336	410					
R ALDER-T		79.4	35.4	48	75	102					
BL MAPLE-T		34.0	13.8	14	16	18					
TOTAL		193.3	7.1	181	195	209	1,493	373	166		
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		191.2	16.7	57	68	79					
DOUG FIR-T		118.3	10.3	44	49	54					
WHEMLOCK		365.5	31.9	4	5	7					
WHEMLOCK-T		318.0	27.8	15	21	27					
WR CEDAR		1144.6	99.9	0	0	0					
WR CEDAR-T		460.9	40.2	12	20	28					
R ALDER-T		598.8	52.3	1	2	3					
BL MAPLE-T		618.0	53.9	2	4	6					
TOTAL		114.8	10.0	152	169	186	527	132	59		
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		186.2	16.3	57	68	79					
DOUG FIR-T		154.4	13.5	64	74	85					
WHEMLOCK		376.7	32.9	4	5	7					
WHEMLOCK-T		334.2	29.2	20	28	36					
WR CEDAR		1144.6	99.9	0	0	0					
WR CEDAR-T		392.2	34.2	15	23	31					

TC PSTATS		PROJECT STATISTICS							PAGE	2
		PROJECT WALNUTC							DATE	1/5/2016
TWP	RGE	SC	TRACT	TYPE		ACRES	PLOTS	TREES	CuFt	BdFt
36N	03E	02	WALNUT CH	UNT3	THR	135.00	131	735	S	W
36N	03E	14	WALNUT CH	UNT1						
CL	68.1	COEFF		BASAL AREA/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.00	VAR.	S.E.%	LOW	AVG	HIGH	5	10	15	
R ALDER-T		609.3	53.2	1	1	2				
BL MAPLE-T		612.8	53.5	1	1	2				
TOTAL		<i>118.8</i>	<i>10.4</i>	<i>181</i>	<i>202</i>	<i>223</i>	<i>563</i>	<i>141</i>	<i>63</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		194.8	17.0	4,146	4,995	5,844				
DOUG FIR-T		239.6	20.9	9,597	12,135	14,674				
WHEMLOCK		384.8	33.6	286	431	575				
WHEMLOCK-T		369.5	32.3	3,430	5,063	6,696				
WR CEDAR		1144.6	99.9	0	7	14				
WR CEDAR-T		388.6	33.9	1,374	2,080	2,785				
R ALDER-T		579.0	50.5	38	77	117				
BL MAPLE-T		634.1	55.3	28	63	97				
TOTAL		<i>177.9</i>	<i>15.5</i>	<i>20,991</i>	<i>24,850</i>	<i>28,710</i>	<i>1,264</i>	<i>316</i>	<i>140</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		194.8	17.0	61	74	86				
DOUG FIR-T		189.1	16.5	129	163	197				
WHEMLOCK		384.8	33.6	52	79	105				
WHEMLOCK-T		349.3	30.5	122	179	237				
WR CEDAR		1144.6	99.9	0	43	87				
WR CEDAR-T		385.9	33.7	60	91	122				
R ALDER-T		633.2	55.3	26	52	78				
BL MAPLE-T		634.1	55.3	22	49	76				
TOTAL		<i>128.8</i>	<i>11.2</i>	<i>104</i>	<i>123</i>	<i>142</i>	<i>663</i>	<i>166</i>	<i>74</i>	

T36N R03E S14 TUNT1									T36N R03E S14 TUNT1					
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt					
36N	03E	14	WALNUT CH	UNT1	56.90	25	147	S	W					

S Twp	So Rge	Gr ad	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log				Logs Per /Acre	
								Log Scale Dia.				Log Length				Ln	Dia	Bd	CF/ Lf		
				Def%	Gross	Net		4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99	Ft	In	Ft	Lf		
DF	DM	3S	71	4.9	7,721	7,342	418	100				100				40	7	78	0.67	94.7	
DF	DM	4S	14	2.1	1,496	1,464	83	74	26			5	6	5	84	35	5	38	0.36	39.0	
DF	DM	UT	15	2.2	1,486	1,453	83	100				61	9	16	14	10	5	10	0.26	139.9	
DF	Totals		87	4.1	10,703	10,260	584	25	75			9	2	3	85	24	6	38	0.52	273.5	
DF	T DM	2S	5	21.1	97	76	4	100				100				32	13	150	1.56	.5	
DF	T DM	3S	24	32.3	515	348	20	100				100				40	8	58	0.66	6.0	
DF	T DM	4S	44	18.9	775	628	36	73	27			2		98		40	5	37	0.42	17.1	
DF	T DM	UT	27	2.4	385	376	21	100				30	70				10	5	10	0.23	38.4
DF	T Totals		12	19.3	1,771	1,429	81	58	36	5		8	20	5	67	21	5	23	0.42	62.0	
BM	T DM	UT	100	25.3	143	107	6	100				100				18	5	15	0.22	7.1	
BM	T Totals		1	25.3	143	107	6	100				100				18	5	15	0.22	7.1	
WH	T DM	UT	100		45	45	3	100				100				23	5	20	0.29	2.3	
WH	T Totals		0		45	45	3	100				100				23	5	20	0.29	2.3	
Type Totals					6.5	12,662	11,840	674	30	70	1		10	5	3	82	23	6	34	0.50	344.9

T36N R03E S11 TUNT2										T36N R03E S11 TUNT2				
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt					
36N	03E	11	WALNUT CH	UNT2	5.80	10	46	S	W					

Spp	Sp	So	Gr	ad	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log			Logs Per /Acre	
										Log Scale Dia.				Log Length				Ln	Dia	Bd		CF/ Lf
										4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99	Ft	In	Ft		Lf
DF	T	DM	2S		74	2.0	27,935	27,388	159		44	56				100	40	16	409	2.25	67.0	
DF	T	DM	3S		12	1.6	4,570	4,497	26	100				19	5	77	36	9	107	0.84	42.0	
DF	T	DM	4S		3		1,095	1,095	6	100			53	23		24	18	7	33	0.49	33.6	
DF	T	HA	SM		5		1,717	1,717	10			100				100	40	19	645	3.00	2.7	
DF	T	HA	2S		6		2,196	2,196	13		61	39				100	40	16	393	2.11	5.6	
DF	T	Totals			83	1.7	37,513	36,894	214		15	36	49	2	3	1	95	34	12	245	1.64	150.9
WH	T	DM	2S		20	9.9	1,506	1,356	8		100					100	40	13	236	1.41	5.8	
WH	T	DM	3S		64	13.8	4,840	4,173	24		100					100	40	9	114	0.83	36.5	
WH	T	DM	4S		9	12.1	628	551	3	85	15			15		18	26	5	23	0.39	23.9	
WH	T	DM	UT		7		429	429	2	100				12	43	45	24	5	26	0.28	16.2	
WH	T	Totals			15	12.1	7,402	6,509	38	14	65	21		2	3	5	91	33	8	79	0.70	82.3
RC	T	DM	3S		62		637	637	4		100					100	36	8	78	0.91	8.1	
RC	T	DM	4S		38	10.2	419	376	2	43	57			43		57	17	6	23	0.57	16.7	
RC	T	Totals			2	4.0	1,056	1,014	6	16	84			16		84	23	6	41	0.75	24.8	
Type Totals						3.4	45,972	44,417	258	2	24	33	40	2	3	1	94	32	10	172	1.28	258.0

T36N R03E S02 TUNT3										T36N R03E S02 TUNT3			
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt				
36N	03E	02	WALNUT CH	UNT3	31.70	14	77	S	W				

Spp	S	So	Gr	%	Bd. Ft. per Acre			Total	Percent Net Board Foot Volume								Average Log			Logs Per /Acre						
									Net BdFt	Def%	Gross	Net	Net MBF	Log Scale Dia.				Log Length				Ln Ft	Dia In	Bd Ft	CF/Lf	
														4-5	6-11	12-16	17+	12-20	21-30		31-35					36-99
DF	T	DM	2S	69	4.1	25,998	24,928	790			1	25	74		1	1	10	88	36	17	467	2.63	53.3			
DF	T	DM	3S	10	5.7	3,975	3,749	119			98	2			1	5	4	90	38	9	113	0.84	33.1			
DF	T	DM	4S	1	3.7	403	388	12			100			16	28		56	25	7	37	0.42	10.6				
DF	T	DM	UT	1		99	99	3	37	38	26			100				4	7	8	0.41	12.5				
DF	T	HA	SM	19		6,732	6,732	213			9	91				36	64	37	20	664	3.28	10.1				
DF	T	Totals		56	3.5	37,207	35,896	1,138	0	12	19	69		2	2	14	83	32	13	300	1.93	119.6				
WH	T	DM	2S	66	7.8	14,114	13,018	413			61	39					100	40	15	339	1.84	38.4				
WH	T	DM	3S	29	.8	5,564	5,519	175			94	6				1	2	97	40	8	106	0.66	52.0			
WH	T	DM	4S	2	.0	499	499	16	6	94				59	41			13	7	19	0.43	26.0				
WH	T	DM	UT	3		397	397	13	94	6				28	38	34		19	5	19	0.26	20.6				
WH	T	Totals		30	5.5	20,574	19,434	616	2	29	43	26		2	2	1	94	32	9	142	1.02	137.0				
RC	T	DM	3S	78	12.1	7,721	6,784	215			25	9	66	1		1	98	35	13	246	2.30	27.6				
RC	T	DM	4S	22	4.2	1,953	1,871	59	99	1				16	59	15	10	21	5	22	0.31	86.4				
RC	T	Totals		14	10.5	9,674	8,655	274	21	20	7	52		4	13	4	79	24	7	76	1.00	114.0				
RA	T	DM	4S	100	28.6	64	45	1			100							30	9	50	0.93	.9				
RA	T	Totals		0	28.6	64	45	1			100							30	9	50	0.93	.9				
Type Totals					5.2	67,519	64,030	2,030	4	18	25	53		2	3	9	86	30	10	172	1.33	371.5				

T36N R03E S03 TUNT4
 Twp Rge Sec Tract Type Acres Plots Sample Trees CuFt BdFt
 36N 03E 03 WALNUT CH UNT4 14.40 19 133 S W

Spp	So	Gr	% 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
								4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99					
DF	DM	2S	1	18.8	107	87	1	100				100				32	12	130	1.47	.7
DF	DM	3S	59	7.0	3,993	3,713	53	100				2 98				40	8	81	0.80	45.9
DF	DM	4S	32	4.6	2,087	1,991	29	56	44	9 2 88				31	5	35	0.42	56.3		
DF	DM	UT	8	1.3	504	497	7	100				47 3 51				7	5	7	0.32	72.2
DF	Totals		47	6.0	6,691	6,289	91	26	73	1	7	1	3	90	23	6	36	0.58	175.1	
DF	T DM	2S	11	18.7	116	95	1	100				100				32	12	130	1.28	.7
DF	T DM	3S	23	42.7	335	192	3	100				28 72				38	9	64	1.21	3.0
DF	T DM	4S	19	4.6	159	152	2	90	10	17 10 74				26	5	26	0.32	5.8		
DF	T DM	UT	47	12.4	437	383	6	98	2	2 33 28 37				20	5	19	0.29	19.9		
DF	T Totals		6	21.6	1,048	821	12	62	26	12	4	17	31	48	23	6	28	0.48	29.4	
WH	DM	2S	10		413	413	6	100				32 68				37	12	185	1.38	2.2
WH	DM	3S	60	3.4	2,497	2,413	35	100				100				40	7	78	0.68	31.1
WH	DM	4S	21		854	854	12	19	81	2 9 5 84				30	6	41	0.44	20.9		
WH	DM	UT	9		357	357	5	100				70 30				8	5	9	0.25	40.9
WH	Totals		30	2.0	4,122	4,038	58	13	77	10	7	2	7	85	24	6	42	0.58	95.2	
WH	T DM	2S	5	20.0	134	107	2	100				100				40	12	160	1.47	.7
WH	T DM	3S	4	33.3	92	61	1	100				100				40	8	60	0.87	1.0
WH	T DM	4S	26	3.2	512	496	7	72	28	3 97				39	5	42	0.38	11.9		
WH	T DM	UT	65		1,187	1,187	17	100				20 23 49 9				16	5	17	0.21	69.7
WH	T Totals		14	3.8	1,925	1,851	27	83	11	6	13	15	32	41	20	5	22	0.29	83.3	
RA	T DM	UT	100		196	196	3	100				100				16	5	15	0.17	13.1
RA	T Totals		1		196	196	3	100				100				16	5	15	0.17	13.1
BM	T DM	UT	100	33.3	126	84	1	100				100				25	5	20	0.24	4.2
BM	T Totals		1	33.3	126	84	1	100				100				25	5	20	0.24	4.2
RC	DM	3S	100	50.0	127	63	1	100				100				36	15	160	2.61	.4
RC	Totals		0	50.0	127	63	1	100				100				36	15	160	2.61	.4
Type Totals				6.3	14,234	13,342	192	33	61	6	9	5	10	77	23	6	33	0.51	400.6	

T36N R03E S14 TGAP1										T36N R03E S14 TGAP1				
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt					
36N	03E	14	WALNUT CH	GAP1	5.00	4	16	S	W					

S Spp	So T	Gr rt	Gr ad	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log				Logs Per /Acre
									Log Scale Dia.				Log Length				Ln Ft	Dia In	Bd Ft	CF/ Lf	
									4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99					
DF	T	DM	3S	79	7.0	7,033	6,542	33	100				100				40	8	83	0.73	78.9
DF	T	DM	4S	11	4.4	965	922	5	100	22	27	51	28	5	27	0.32	34.1				
DF	T	DM	UT	10		812	812	4	100	100				10	5	10	0.22	80.8			
DF	T	Totals		100	6.1	8,810	8,277	41	21	79	12	3	85	25	6	43	0.57	193.8			
Type	Totals				6.1	8,810	8,277	41	21	79	12	3	85	25	6	43	0.57	193.8			

T36N R03E S14 TCORR										T36N R03E S14 TCORR			
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt				
36N	03E	14	WALNUT CH	CORR	7.90	25	147	S	W				

Spp	S	So	Gr	T	rt	ad	%	Bd. Ft. per Acre			Total	Percent Net Board Foot Volume								Average Log			Logs									
												Net	BdFt	Def%	Gross	Net	Net MBF	Log Scale Dia.				Log Length				Ln	Dia	Bd	CF/	Lf	Per	
																		4-5	6-11	12-16	17+	12-20		21-30	31-35							36-99
DF	T	DM	2S					21.1	97	76	1	100				100				32	13	150	1.56	.5								
DF	T	DM	3S	66			6.6	8,235	7,690	61		100				100				40	7	76	0.67	100.7								
DF	T	DM	4S	17			8.1	2,202	2,024	16	76	24			4	5		91	36	5	37	0.38	54.6									
DF	T	DM	UT	17			2.2	1,926	1,884	15	100				53	21	13	13	10	5	10	0.26	179.7									
DF	T	Totals		99			6.3	12,460	11,674	92	29	70	1		9	4	3	84	24	6	35	0.50	335.5									
BM	T	DM	UT	100			25.3	143	107	1	100				100				18	5	15	0.22	7.1									
BM	T	Totals		1			25.3	143	107	1	100				100				18	5	15	0.22	7.1									
WH	T	DM	UT	100				45	45	0	100				100				23	5	20	0.29	2.3									
WH	T	Totals		0				45	45	0	100				100				23	5	20	0.29	2.3									
Type Totals							6.5	12,649	11,826	93	30	69	1		10	5	3	83	23	6	34	0.50	344.9									

T36N R03E S14 TROW1									T36N R03E S14 TROW1				
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt				
36N	03E	14	WALNUT CH	ROW1	3.00	25	147	S	W				

Spp	S	So	Gr	T	rt	ad	%	Percent Net Board Foot Volume										Average Log			Logs Per /Acre			
								Bd. Ft. per Acre			Total Net MBF	Log Scale Dia.				Log Length				Ln Ft		Dia In	Bd Ft	CF/ Lf
								Def%	Gross	Net		4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99					
DF	T	DM	2S					21.1	97	76	0	100				100				32	13	150	1.56	.5
DF	T	DM	3S				66	6.6	8,235	7,690	23	100				100				40	7	76	0.67	100.7
DF	T	DM	4S				17	8.1	2,202	2,024	6	76	24			4	5		91	36	5	37	0.38	54.6
DF	T	DM	UT				17	2.2	1,926	1,884	6	100				53 21 13 13				10	5	10	0.26	179.7
DF	T	Totals					99	6.3	12,460	11,674	35	29	70	1		9	4	3	84	24	6	35	0.50	335.5
BM	T	DM	UT				100	25.3	143	107	0	100				100				18	5	15	0.22	7.1
BM	T	Totals					1	25.3	143	107	0	100				100				18	5	15	0.22	7.1
WH	T	DM	UT				100		45	45	0	100				100				23	5	20	0.29	2.3
WH	T	Totals					0		45	45	0	100				100				23	5	20	0.29	2.3
Type Totals								6.5	12,649	11,826	35	30	69	1		10	5	3	83	23	6	34	0.50	344.9

T36N R03E S11 TROW2										T36N R03E S11 TROW2			
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt				
36N	03E	11	WALNUT CH	ROW2	10.30	9	22	S	W				

Spp	S	So	Gr	%	Bd. Ft. per Acre			Total	Percent Net Board Foot Volume								Average Log			Logs Per /Acre						
									Net BdFt	Def%	Gross	Net	Net MBF	Log Scale Dia.				Log Length				Ln Ft	Dia In	Bd Ft	CF/ Lf	
														4-5	6-11	12-16	17+	12-20	21-30		31-35					36-99
DF	T	DM	2S	7		176	176	2	100				100				32	13	190	1.66	.9					
DF	T	DM	3S	73	4.9	1,847	1,756	18	100				14 86				38	8	85	0.89	20.5					
DF	T	DM	4S	5	25.7	143	107	1	55	45					75	25	27	5	22	0.55	4.9					
DF	T	DM	UT	15		352	352	4	94	6					72	28	14	5	16	0.26	22.4					
DF	T	Totals		79	5.1	2,517	2,389	25	16	76	7					11	18	7	64	26	6	49	0.72	48.7		
RA	T	DM	3S	58		352	352	4	100				100				30	10	118	1.06	3.0					
RA	T	DM	4S	34		206	206	2	38	62					100				28	6	40	0.51	5.1			
RA	T	DM	UT	8		43	43	0	100				100				12	5	11	0.24	3.9					
RA	T	Totals		20		601	601	6	20	80					100				23	7	50	0.64	12.0			
RC	T	DM	4S	100		50	50	1	100				100				33	5	40	1.06	1.3					
RC	T	Totals		2		50	50	1	100				100				33	5	40	1.06	1.3					
Type Totals					4.0	3,168	3,040	31	18	76	6					8	34	7	50	26	7	49	0.71	62.0		

TC TSTATS		STATISTICS							PAGE	1
		PROJECT WALNUTC							DATE	1/5/2016
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
36N	03E	02	WALNUT CH	UNT3	31.70	14	77	S	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
		PLOTS	TREES	PER PLOT	TREES	TREES				
TOTAL		14	77	5.5						
CRUISE		14	77	5.5	5,467		1.4			
DBH COUNT										
REFOREST										
COUNT										
BLANKS										
100 %										
STAND SUMMARY										
	SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET
	TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC
DOUG FIR-T	33	36.4	27.3	110	28.2	147.3	37,207	35,896	7,392	7,390
WHEMLOCK-T	22	53.6	18.3	88	22.9	98.2	20,574	19,434	4,431	4,432
WR CEDAR-T	21	81.6	14.5	41	24.6	93.8	9,674	8,655	2,771	2,769
R ALDER-T	1	.9	24.0	70	0.6	2.9	64	45	25	25
TOTAL	77	172.5	19.1	70	78.3	342.1	67,519	64,030	14,619	14,617
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-T		57.0	9.9	1,268	1,407	1,547				
WHEMLOCK-T		67.0	14.6	460	538	617				
WR CEDAR-T		97.6	21.8	302	386	470				
R ALDER-T										
TOTAL		87.9	10.0	777	863	949	308	77	34	
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-T		96.7	26.8	27	36	46				
WHEMLOCK-T		111.5	30.9	37	54	70				
WR CEDAR-T		127.7	35.4	53	82	111				
R ALDER-T		374.2	103.6	1	2					
TOTAL		70.2	19.4	139	172	206	212	53	24	
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-T		63.6	17.6	121	147	173				
WHEMLOCK-T		95.7	26.5	72	98	124				
WR CEDAR-T		97.0	26.9	69	94	119				
R ALDER-T		374.2	103.6	3	6					
TOTAL		25.8	7.2	318	342	367	29	7	3	
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-T		66.6	18.4	29,274	35,896	42,519				
WHEMLOCK-T		97.7	27.1	14,174	19,434	24,693				
WR CEDAR-T		92.1	25.5	6,448	8,655	10,862				
R ALDER-T		374.2	103.6		45	93				
TOTAL		33.4	9.2	58,111	64,030	69,949	48	12	5	
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-T		66.6	18.4	199	244	289				
WHEMLOCK-T		97.7	27.1	144	198	251				
WR CEDAR-T		92.1	25.5	69	92	116				

TC TSTATS				STATISTICS				PAGE	2	
				PROJECT WALNUTC				DATE	1/5/2016	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
36N	03E	02	WALNUT CH	UNT3	31.70	14	77	S	W	
CL:	68.1 %	COEFF		V-BAR/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.	S.E. %	LOW	AVG	HIGH	5	10	15	
R ALDER-T		374.2	103.6		16	32				
TOTAL		33.3	9.2	170	187	204	48	12	5	

TC TSTATS				STATISTICS				PAGE	1	
PROJECT				WALNUTC				DATE	1/5/2016	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
36N	03E	03	WALNUT CH	UNT4	14.40	19	133	S	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
				PLOTS	TREES	TREES	TREES			
TOTAL	19	133	7.0							
CRUISE	19	133	7.0	3,333		4.0				
DBH COUNT										
REFOREST										
COUNT										
BLANKS										
100 %										
STAND SUMMARY										
	SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET
	TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC
DOUG FIR	68	90.8	14.2	52	26.4	99.4	6,691	6,289	2,366	2,370
DOUG FIR-T	10	18.1	12.2	47	4.2	14.6	1,048	821	327	328
WHEMLOCK	35	48.9	13.8	53	13.8	51.2	4,122	4,038	1,320	1,318
WHEMLOCK-T	16	55.9	8.8	46	7.9	23.4	1,925	1,851	493	493
R ALDER-T	2	13.1	6.4	34	1.2	2.9	196	196	35	35
BL MAPLE-T	1	4.2	8.0	38	0.5	1.5	126	84	25	25
WR CEDAR	1	.4	26.0	60	0.3	1.5	127	63	37	37
TOTAL	<i>133</i>	<i>231.5</i>	<i>12.4</i>	<i>49</i>	<i>55.2</i>	<i>194.5</i>	<i>14,234</i>	<i>13,342</i>	<i>4,604</i>	<i>4,606</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	46.8	5.7	74	78	83					
DOUG FIR-T	61.2	20.4	49	62	75					
WHEMLOCK	53.4	9.0	85	93	102					
WHEMLOCK-T	84.3	21.7	36	46	56					
R ALDER-T	47.1	44.1	8	15	22					
BL MAPLE-T										
WR CEDAR										
TOTAL	<i>57.5</i>	<i>5.0</i>	<i>73</i>	<i>76</i>	<i>80</i>	<i>132</i>	<i>33</i>	<i>15</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	51.0	12.0	80	91	102					
DOUG FIR-T	146.4	34.5	12	18	24					
WHEMLOCK	106.2	25.0	37	49	61					
WHEMLOCK-T	235.6	55.5	25	56	87					
R ALDER-T	299.5	70.6	4	13	22					
BL MAPLE-T	435.9	102.7		4	8					
WR CEDAR	435.9	102.7		0	1					
TOTAL	<i>74.0</i>	<i>17.4</i>	<i>191</i>	<i>231</i>	<i>272</i>	<i>231</i>	<i>58</i>	<i>26</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	50.4	11.9	88	99	111					
DOUG FIR-T	132.4	31.2	10	15	19					
WHEMLOCK	111.9	26.4	38	51	65					
WHEMLOCK-T	169.2	39.9	14	23	33					
R ALDER-T	299.5	70.6	1	3	5					
BL MAPLE-T	435.9	102.7		1	3					
WR CEDAR	435.9	102.7		1	3					
TOTAL	<i>40.1</i>	<i>9.5</i>	<i>176</i>	<i>194</i>	<i>213</i>	<i>68</i>	<i>17</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	57.0	13.4	5,444	6,289	7,134					

TC TSTATS				STATISTICS			PAGE	2		
				PROJECT WALNUTC			DATE	1/5/2016		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
36N	03E	03	WALNUT CH	UNT4	14.40	19	133	S	W	
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-T		137.6	32.4	555	821	1,087				
WHEMLOCK		116.0	27.3	2,934	4,038	5,142				
WHEMLOCK-T		191.9	45.2	1,014	1,851	2,688				
R ALDER-T		317.6	74.8	49	196	343				
BL MAPLE-T		435.9	102.7		84	170				
WR CEDAR		435.9	102.7		63	129				
TOTAL		<i>52.1</i>	<i>12.3</i>	<i>11,705</i>	<i>13,342</i>	<i>14,980</i>	<i>114</i>	<i>29</i>	<i>13</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		57.0	13.4	55	63	72				
DOUG FIR-T		137.6	32.4	38	56	74				
WHEMLOCK		116.0	27.3	57	79	100				
WHEMLOCK-T		191.9	45.2	43	79	115				
R ALDER-T		317.6	74.8	17	67	117				
BL MAPLE-T		435.9	102.7		57	116				
WR CEDAR		435.9	102.7		43	88				
TOTAL		<i>52.1</i>	<i>12.3</i>	<i>60</i>	<i>69</i>	<i>77</i>	<i>114</i>	<i>29</i>	<i>13</i>	

TC TSTATS				STATISTICS				PAGE	1	
PROJECT				WALNUTC				DATE	1/5/2016	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
36N	03E	11	WALNUT CH	ROW	10.30	9	22	S	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
				PLOTS	TREES	TREES	TREES			
TOTAL	9	22	2.4							
CRUISE	9	22	2.4	420	5.2					
DBH COUNT										
REFOREST										
COUNT										
BLANKS										
100 %										
STAND SUMMARY										
	SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET
	TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC
DOUG FIR-T	18	34.4	14.6	43	10.5	40.0	2,517	2,389	906	905
R ALDER-T	3	5.1	15.5	60	1.7	6.7	601	601	181	181
WR CEDAR-T	1	1.3	18.0	35	0.5	2.2	50	50	44	44
TOTAL	22	40.8	14.8	45	12.7	48.9	3,168	3,040	1,131	1,130
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-T	63.7	15.4		78	93	107				
R ALDER-T	30.7	21.2		97	123	150				
WR CEDAR-T										
TOTAL	60.1	13.1		82	95	107	151	38	17	
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-T	62.6	22.1		27	34	42				
R ALDER-T	230.9	81.5		1	5	9				
WR CEDAR-T	300.0	105.9			1	3				
TOTAL	45.8	16.2		34	41	47	94	24	10	
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-T	55.9	19.7		32	40	48				
R ALDER-T	212.1	74.9		2	7	12				
WR CEDAR-T	300.0	105.9			2	5				
TOTAL	46.2	16.3		41	49	57	96	24	11	
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-T	76.9	27.1		1,741	2,389	3,037				
R ALDER-T	217.2	76.6		140	601	1,061				
WR CEDAR-T	300.0	105.9			50	104				
TOTAL	74.1	26.2		2,245	3,040	3,836	246	62	27	
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-T	76.9	27.1		44	60	76				
R ALDER-T	217.2	76.6		21	90	159				
WR CEDAR-T	300.0	105.9			23	47				
TOTAL	74.1	26.2		46	62	78	246	62	27	

TC TSTATS				STATISTICS				PAGE	1	
PROJECT				WALNUTC				DATE	1/5/2016	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
36N	03E	11	WALNUT CH	UNT2	5.80	10	46	S	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
				PLOTS	TREES	TREES	TREES			
TOTAL	10	46	4.6							
CRUISE	10	46	4.6	579		7.9				
DBH COUNT										
REFOREST										
COUNT										
BLANKS										
100 %										
STAND SUMMARY										
	SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET
	TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC
DOUG FIR-T	34	51.0	25.8	103	36.5	185.1	37,513	36,894	8,386	8,385
WHEMLOCK-T	9	36.5	15.7	77	12.4	49.0	7,402	6,509	1,881	1,886
WR CEDAR-T	3	12.4	15.5	52	4.1	16.3	1,056	1,014	425	425
TOTAL	46	99.9	21.4	87	54.1	250.5	45,972	44,417	10,692	10,697
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-T	44.7	7.7	748	810	872					
WHEMLOCK-T	51.5	18.2	162	198	234					
WR CEDAR-T	42.1	29.2	59	83	108					
TOTAL	65.9	9.7	580	643	705	173	43	19		
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-T	27.4	9.1	46	51	56					
WHEMLOCK-T	187.3	62.3	14	36	59					
WR CEDAR-T	161.7	53.8	6	12	19					
TOTAL	60.9	20.3	80	100	120	165	41	18		
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-T	24.8	8.3	170	185	200					
WHEMLOCK-T	177.2	59.0	20	49	78					
WR CEDAR-T	161.0	53.6	8	16	25					
TOTAL	27.5	9.2	228	250	273	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-T	32.9	10.9	32,860	36,894	40,927					
WHEMLOCK-T	184.5	61.4	2,514	6,509	10,505					
WR CEDAR-T	170.0	56.6	440	1,014	1,587					
TOTAL	24.8	8.2	40,752	44,417	48,081	27	7	3		
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-T	32.9	10.9	177	199	221					
WHEMLOCK-T	184.5	61.4	51	133	214					
WR CEDAR-T	170.0	56.6	27	62	97					
TOTAL	24.8	8.2	163	177	192	27	7	3		

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT WALNUTC				DATE	1/5/2016	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
36N	03E	14	WALNUT CH	CORR	7.90	25	147	S	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
				PLOTS	TREES	TREES	TREES			
TOTAL	25	147	5.9							
CRUISE	25	147	5.9		1,456		10.1			
DBH COUNT										
REFOREST										
COUNT										
BLANKS										
100 %										
STAND SUMMARY										
	SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET
	TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC
DOUG FIR-T	144	174.9	13.0	53	44.5	160.0	12,460	11,674	3,957	3,959
BL MAPLE-T	2	7.1	7.5	29	0.8	2.2	143	107	26	29
WHEMLOCK-T	1	2.3	9.5	30	0.4	1.1	45	45	15	15
TOTAL	147	184.3	12.7	52	45.8	163.3	12,649	11,826	3,998	4,003
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-T	46.9	3.9	75	78	81					
BL MAPLE-T	47.1	44.1	8	15	22					
WHEMLOCK-T							94	24	10	
TOTAL	48.5	4.0	74	77	80					
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-T	43.2	8.8	159	175	190					
BL MAPLE-T	346.1	70.6	2	7	12					
WHEMLOCK-T	500.0	102.0	2		5					
TOTAL	35.1	7.2	171	184	198	51	13	6		
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-T	34.8	7.1	149	160	171					
BL MAPLE-T	346.1	70.6	1	2	4					
WHEMLOCK-T	500.0	102.0	1		2					
TOTAL	30.0	6.1	153	163	173	37	9	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-T	39.8	8.1	10,728	11,674	12,621					
BL MAPLE-T	365.0	74.4	27	107	186					
WHEMLOCK-T	500.0	102.0	45		91					
TOTAL	36.7	7.5	10,942	11,826	12,711	56	14	6		
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-T	39.8	8.1	67	73	79					
BL MAPLE-T	365.0	74.4	12	48	84					
WHEMLOCK-T	500.0	102.0	41		82					
TOTAL	36.7	7.5	67	72	78	56	14	6		

TC TSTATS				STATISTICS				PAGE	1	
PROJECT				WALNUTC				DATE	1/5/2016	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
36N	03E	14	WALNUT CH	GAP1	5.00	4	16	S	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
					TREES	TREES				
TOTAL	4	16	4.0							
CRUISE	4	16	4.0	539			3.0			
DBH COUNT										
REFOREST										
COUNT										
BLANKS										
100 %										
STAND SUMMARY										
	SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET
	TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC
DOUG FIR-T	16	107.9	13.7	53	29.9	111.0	8,810	8,277	2,783	2,784
TOTAL	16	107.9	13.7	53	29.9	111.0	8,810	8,277	2,783	2,784
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-T	46.0	11.9	81	92	103					
TOTAL	46.0	11.9	81	92	103	90	23	10		
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-T	59.4	33.9	71	108	144					
TOTAL	59.4	33.9	71	108	144	184	46	20		
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-T	54.0	30.9	77	111	145					
TOTAL	54.0	30.9	77	111	145	152	38	17		
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-T	70.7	40.4	4,933	8,277	11,620					
TOTAL	70.7	40.4	4,933	8,277	11,620	261	65	29		
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-T	70.7	40.4	44	75	105					
TOTAL	70.7	40.4	44	75	105	261	65	29		

TC TSTATS		STATISTICS					PAGE	1		
		PROJECT WALNUTC					DATE	1/5/2016		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
36N	03E	14	WALNUT CH	ROW	3.00	25	147	S	W	
		PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES				
TOTAL		25	147	5.9						
CRUISE		25	147	5.9	553	26.6				
DBH COUNT										
REFOREST COUNT										
BLANKS										
100 %										
STAND SUMMARY										
	SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
DOUG FIR-T	144	174.9	13.0	53	44.5	160.0	12,460	11,674	3,957	3,959
BL MAPLE-T	2	7.1	7.5	29	0.8	2.2	143	107	26	29
WHEMLOCK-T	1	2.3	9.5	30	0.4	1.1	45	45	15	15
TOTAL	<i>147</i>	<i>184.3</i>	<i>12.7</i>	<i>52</i>	<i>45.8</i>	<i>163.3</i>	<i>12,649</i>	<i>11,826</i>	<i>3,998</i>	<i>4,003</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-T	46.9	3.9	75	78	81					
BL MAPLE-T	47.1	44.1	8	15	22					
WHEMLOCK-T							94	24	10	
TOTAL	<i>48.5</i>	<i>4.0</i>	<i>74</i>	<i>77</i>	<i>80</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-T	43.2	8.8	159	175	190					
BL MAPLE-T	346.1	70.6	2	7	12					
WHEMLOCK-T	500.0	102.0	2		5					
TOTAL	<i>35.1</i>	<i>7.2</i>	<i>171</i>	<i>184</i>	<i>198</i>	51	13	6		
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-T	34.8	7.1	149	160	171					
BL MAPLE-T	346.1	70.6	1	2	4					
WHEMLOCK-T	500.0	102.0	1		2					
TOTAL	<i>30.0</i>	<i>6.1</i>	<i>153</i>	<i>163</i>	<i>173</i>	37	9	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-T	39.8	8.1	10,728	11,674	12,621					
BL MAPLE-T	365.0	74.4	27	107	186					
WHEMLOCK-T	500.0	102.0	45		91					
TOTAL	<i>36.7</i>	<i>7.5</i>	<i>10,942</i>	<i>11,826</i>	<i>12,711</i>	56	14	6		
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-T	39.8	8.1	67	73	79					
BL MAPLE-T	365.0	74.4	12	48	84					
WHEMLOCK-T	500.0	102.0	41		82					
TOTAL	<i>36.7</i>	<i>7.5</i>	<i>67</i>	<i>72</i>	<i>78</i>	56	14	6		

TC TSTATS		STATISTICS						PAGE	1	
		PROJECT WALNUTC						DATE	1/5/2016	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
36N	03E	14	WALNUT CH	UNT1	56.90	25	147	S	W	
		PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES				
TOTAL		25	147	5.9						
CRUISE		25	147	5.9	10,487	1.4				
DBH COUNT										
REFOREST COUNT										
BLANKS										
100 %										
STAND SUMMARY										
	SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
DOUG FIR	122	138.6	13.4	55	37.0	135.6	10,703	10,260	3,403	3,402
DOUG FIR-T	22	36.3	11.1	47	7.3	24.4	1,771	1,429	553	556
BL MAPLE-T	2	7.1	7.5	29	0.8	2.2	143	107	26	29
WHEMLOCK-T	1	2.3	9.5	30	0.4	1.1	45	45	15	15
TOTAL	<i>147</i>	<i>184.3</i>	<i>12.7</i>	<i>52</i>	<i>45.8</i>	<i>163.3</i>	<i>12,662</i>	<i>11,840</i>	<i>3,997</i>	<i>4,002</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		42.0	3.8	80	83	86				
DOUG FIR-T		67.5	14.7	43	51	58				
BL MAPLE-T		47.1	44.1	8	15	22				
WHEMLOCK-T										
TOTAL		<i>48.4</i>	<i>4.0</i>	<i>74</i>	<i>77</i>	<i>80</i>	<i>94</i>	<i>23</i>	<i>10</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		40.2	8.2	127	139	150				
DOUG FIR-T		112.3	22.9	28	36	45				
BL MAPLE-T		346.1	70.6	2	7	12				
WHEMLOCK-T		500.0	102.0	2	2	5				
TOTAL		<i>35.1</i>	<i>7.2</i>	<i>171</i>	<i>184</i>	<i>198</i>	<i>51</i>	<i>13</i>	<i>6</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		37.6	7.7	125	136	146				
DOUG FIR-T		82.5	16.8	20	24	29				
BL MAPLE-T		346.1	70.6	1	2	4				
WHEMLOCK-T		500.0	102.0	1	1	2				
TOTAL		<i>30.0</i>	<i>6.1</i>	<i>153</i>	<i>163</i>	<i>173</i>	<i>37</i>	<i>9</i>	<i>4</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		42.4	8.6	9,373	10,260	11,146				
DOUG FIR-T		86.2	17.6	1,177	1,429	1,680				
BL MAPLE-T		365.0	74.4	27	107	186				
WHEMLOCK-T		500.0	102.0	45	45	91				
TOTAL		<i>36.4</i>	<i>7.4</i>	<i>10,961</i>	<i>11,840</i>	<i>12,719</i>	<i>55</i>	<i>14</i>	<i>6</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		42.4	8.6	69	76	82				
DOUG FIR-T		86.2	17.6	48	58	69				
BL MAPLE-T		365.0	74.4	12	48	84				
WHEMLOCK-T		500.0	102.0	41	41	82				
TOTAL		<i>36.4</i>	<i>7.4</i>	<i>67</i>	<i>72</i>	<i>78</i>	<i>55</i>	<i>14</i>	<i>6</i>	

Log Stock Table - MBF

5 inch top

T36N R03E S02 TyUNT3
THRU
T36N R03E S14 TyUNT1

Project: WALNUTCH
Acres 135.00

Page 2
Date 1/5/2016
Time 1:19:48PM

Spp	S T	So Gr rt de	Log Len	Gross MBF	Def %	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches											
								2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+
DF	T	DM	4S	25	3		3	.2			3								
DF	T	DM	4S	26	0	33.3	0	.0			0								
DF	T	DM	4S	30	1	25.0	1	.1			1								
DF	T	DM	4S	40	78	13.0	68	4.1		45	21		2						
DF	T	DM	UT	8	3		3	.2		3									
DF	T	DM	UT	9	1		1	.1		1									
DF	T	DM	UT	10	2		2	.1		2									
DF	T	DM	UT	11	8		8	.5		7		1	1						
DF	T	DM	UT	12	2		2	.1		2									
DF	T	DM	UT	13	1		1	.1		1									
DF	T	DM	UT	14	1	10.2	1	.1		1	0								
DF	T	DM	UT	15	3		3	.2		3									
DF	T	DM	UT	16	0		0	.0		0									
DF	T	DM	UT	17	1	11.8	1	.0		1									
DF	T	DM	UT	18	2		2	.1		1	0								
DF	T	DM	UT	19	4	17.6	3	.2		3									
DF	T	DM	UT	20	0		0	.0		0									
DF	T	DM	UT	21	1		1	.1		1									
DF	T	DM	UT	23	0		0	.0		0									
DF	T	DM	UT	24	0		0	.0		0									
DF	T	DM	UT	26	6		6	.4		6									
DF	T	DM	UT	27	2		2	.1		2									
DF	T	DM	UT	28	1		1	.1		1									
DF	T	DM	UT	29	5		5	.3		5									
DF	T	DM	UT	30	6		6	.4		6									
DF	T	DM	UT	33	1		1	.1		1									
DF	T	DM	UT	34	2		2	.1		2									
DF	T	DM	UT	35	2		2	.1		2									
DF	T	DM	UT	36	2	17.3	2	.1		2									
DF	T	DM	UT	37	1	25.0	1	.1		1									
DF	T	DM	UT	39	2	8.7	2	.1		2									
DF	T	HA	SM	32	78		78	4.7						21	19	38			
DF	T	HA	SM	40	146		146	8.9						72	26	21	27		
DF	T	HA	2S	40	13		13	.8						4	9				
DF		Totals			1,719	4.7	1,638	48.8		106	114	111	115	101	108	405	258	274	46
DF		DM	2S	32	2	18.8	1	.2					1						

Log Stock Table - MBF

5 inch top

T36N R03E S02 TyUNT3
THRU
T36N R03E S14 TyUNT1

Project: WALNUTCH
Acres 135.00

Page 6
Date 1/5/2016
Time 1:19:48PM

Spp	S T	So rt	Gr de	Log Len	Gross MBF	Def %	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches										
									2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39
WH		DM	UT	10	0		0	.6		0									
WH		DM	UT	11	0		0	.3		0									
WH		DM	UT	12	1		1	1.0		1									
WH		DM	UT	14	0		0	.2		0									
WH		DM	UT	17	0		0	.6		0									
WH		DM	UT	33	2		2	2.7		2									
WH		Totals			59	2.0	58	1.7		7	29	14	2	6					
RA	T	DM	3S	30	4		4	34.7					4						
RA	T	DM	4S	23	0		0	2.4		0									
RA	T	DM	4S	30	4	14.8	3	31.6		1		3							
RA	T	DM	UT	13	1		1	9.0		1									
RA	T	DM	UT	19	2		2	18.0		2									
RA	T	DM	UT	22	0		0	4.2		0									
RA		Totals			11	5.2	10	.3		4		3	4						
BM	T	DM	UT	18	10	25.3	7	85.7		7									
BM	T	DM	UT	25	2	33.3	1	14.3		1									
BM		Totals			12	26.6	8	.3		8									
Total		All Species			3,547	5.4	3,355	100.0		397	449	453	262	225	222	661	334	308	46

T36N R03E S02 TyUNT3
THRU
T36N R03E S14 TyUNT1

Project: WALNUTCH
Acres 135.00

Page 4
Date 1/5/2016
Time 1:30:50PM

Spp	S T	So Gr rt de	Log Len	Gross MBF	Def %	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches									
								2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29
RC	T	DM 4S	32	9		9	3.6		9								
RC	T	DM 4S	34	3		3	1.2	3	0								
RC	T	DM 4S	36	7	3.4	7	2.8		6	1							
RC		Totals		280	10.7	250	7.6	8	21	4	20	35	14	6	91	35	16
RC		DM 3S	36	2	50.0	1	100.0						1				
RC		Totals		2	50.0	1	.0						1				
WH	T	DM 2S	40	458	7.9	422	62.9					92	107	165	41	18	
WH	T	DM 3S	25	2		2	.3				2						
WH	T	DM 3S	35	4		4	.6				4						
WH	T	DM 3S	40	200	2.9	194	28.9		33	83	68	11					
WH	T	DM 4S	11	1		1	.1			1							
WH	T	DM 4S	12	4		4	.6			3	1						
WH	T	DM 4S	13	2		2	.3		1		1						
WH	T	DM 4S	15	0		0	.0			0							
WH	T	DM 4S	16	1		1	.2			1							
WH	T	DM 4S	19	2		2	.2				2						
WH	T	DM 4S	23	2		2	.3			2							
WH	T	DM 4S	25	4		4	.6			4							
WH	T	DM 4S	28	0	33.3	0	.0			0							
WH	T	DM 4S	32	1		1	.1		1								
WH	T	DM 4S	36	1		1	.1		1								
WH	T	DM 4S	40	9	4.2	8	1.2		6	2							
WH	T	DM UT	9	1		1	.1			1							
WH	T	DM UT	10	0		0	.0		0								
WH	T	DM UT	14	0		0	.0	0									
WH	T	DM UT	16	0		0	.0		0								
WH	T	DM UT	23	3		3	.4	3									
WH	T	DM UT	30	1		1	.1		1								
WH	T	DM UT	31	3		3	.5		3								
WH	T	DM UT	33	3		3	.4		3								
WH	T	DM UT	36	1		1	.1		1								
WH	T	DM UT	38	1		1	.2		1								
WH	T	DM UT	40	10		10	1.5	4	6								
WH		Totals		714	5.9	671	20.5	9	22	47	87	73	103	107	165	41	18
WH		DM 2S	32	2		2	3.2					2					

T36N R03E S02 TyUNT3
THRU
T36N R03E S14 TyUNT1

Project: **WALNUTCH**
Acres **135.00**

Page **5**
Date **1/5/2016**
Time **1:30:50PM**

Spp	S T	So rt	Gr de	Log Len	Gross MBF	Def %	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches										
									2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39
WH		DM	2S	40	4		4	7.0				4							
WH		DM	3S	40	36	3.4	35	59.4		19	14	2							
WH		DM	4S	8	0		0	.7		0									
WH		DM	4S	12	0		0	.2		0									
WH		DM	4S	14	0		0	.3		0									
WH		DM	4S	21	0		0	.6		0									
WH		DM	4S	24	0		0	.5		0									
WH		DM	4S	30	0		0	.7		0									
WH		DM	4S	34	1		1	1.0		1									
WH		DM	4S	40	10		10	17.7		2	8								
WH		DM	UT	8	1		1	1.2		1									
WH		DM	UT	10	1		1	.9		1									
WH		DM	UT	11	1		1	1.2		1									
WH		DM	UT	12	1		1	1.9		1									
WH		DM	UT	13	0		0	.8	0	0									
WH		DM	UT	14	0		0	.6		0									
WH		DM	UT	15	0		0	.4		0									
WH		DM	UT	18	0		0	.3		0									
WH		DM	UT	40	1		1	1.3	1										
WH		Totals			60	2.0	58	1.8	1	7	29	14	2	6					
RA	T	DM	3S	30	4		4	42.3				4							
RA	T	DM	4S	23	0		0	2.9		0									
RA	T	DM	4S	30	4	14.8	3	38.6		1		3							
RA	T	DM	UT	26	0		0	5.1		0									
RA	T	DM	UT	41	1		1	11.0	1										
RA		Totals			9	6.3	9	.3	1	1	3	4							
BM	T	DM	UT	37	1		1	100.0	1										
BM		Totals			1		1	.0	1										
Total		All Species			3,455	5.4	3,270	100.0	51	261	449	453	262	225	222	661	334	308	46

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

T36N R03E S02 TyUNT	31.7
T36N R03E S03 TyUNT	14.4
T36N R03E S14 TyUNT	56.9

Project WALNUTC
Acres 135.00

Page No 1
Date: 1/5/2016
Time 1:19:47PM

Species	S T	Total	Total	Total	Net Cubic Ft/		CF/	Total CCF		Total MBF	
		Trees	Logs	Tons	Tree	Log	LF	Gross	Net	Gross	Net
DOUG FIR	T	6,573	13,747	10,988	58.67	28.05	1.10	3,855	3,856	1,719	1,638
WHEMLOCK	T	2,868	6,172	5,104	55.64	25.85	0.86	1,595	1,596	726	684
DOUG FIR		9,196	18,084	6,489	24.76	12.59	0.53	2,277	2,277	705	674
WR CEDAR	T	2,673	3,772	2,133	33.93	24.05	1.00	907	907	313	281
WHEMLOCK		705	1,371	608	26.94	13.85	0.60	190	190	59	58
R ALDER	T	270	341	87	11.75	9.31	0.46	32	32	11	10
BL MAPLE	T	545	545	56	4.22	4.22	0.22	21	23	12	8
WR CEDAR		6	6	13	94.00	94.00	2.61	5	5	2	1
Totals		22,834	44,037	25,478	38.91	20.18	0.80	8,883	8,886	3,547	3,355

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	22,019	43,151	25,334	40.11	20.47	0.81	8,830	8,831	3,524	3,336
H	815	886	143	6.72	6.18	0.32	53	55	23	19
Totals	22,834	44,037	25,478	38.91	20.18	0.80	8,883	8,886	3,547	3,355

PRE-CRUISE NARRATIVE

Sale Name: Walnut VDT & VRH	Region: Northwest
Agreement #: 30-092530	District: Baker
Contact Forester: Joel Dryden Phone / Location: 360-391-5374	County(s): Skagit, Choose a county
Alternate Contact: Chris Hankey Phone / Location: 360-854-8310	Other information: Click here to enter text.

Type of Sale: Log Sort (Contract harvest)	
Harvest System: Ground based VRH	70
Harvest System: Ground based Cut-to-length Thinning	30

UNIT ACREAGES AND METHOD OF DETERMINATION:

Unit # Harvest R/W or RMZ WMZ	Legal Description (Enter only one legal for each unit) Sec/Twp/Rng	Grant or Trust	Gross Proposal Acres	Deductions from Gross Acres (No harvest acres)				Net Harvest Acres	Acreage Determination (List method and error of closure if applicable)
				RMZ/ WMZ Acres	Leave Tree Acres	Existing Road Acres	Other Acres (describe)		
1	S14T36R3E	01	71.5			1	2.3 ROW 5.0 Voids	63.2	GPS (Garmin)
1GAPS	S14T36R3E	01	5.0					5.0	GPS (Garmin)
2	S11T36R3E	01	7.7		0.9	1		5.8	GPS (Garmin)
3	S2T36R3E	01	33.7		2			31.7	GPS (Garmin)
4	S3T36R3E	01	19.3			2	0.7 ROW 0.6 Voids	16.0	GPS (Garmin)
RW1	S3,14 T36R3E	01	3.0					3.0	Combination
*RW2	S2,3,11,14 T36R3E	01	10.3					10.3	Combination
TOTAL ACRES			150.5		2.9	4	3.0 ROW 5.6 Voids	135.0	

HARVEST PLAN AND SPECIAL CONDITIONS:

Unit #	Harvest Prescription: (Leave, take, paint color, tags, flagging etc.)	Special Management areas:	Other conditions (# leave trees, etc.)
1	Variable Density Thinning. (VDT) Leave 120 TPA (19x19 Spacing) 1. Cut all hardwoods	Included in net acres: 6.3 acres for corridors	See attached Schedule B for prescription.

	2. Cut all hemlock 3. Cut Douglas-fir up to 13 inches DBH.		
1 GAPS	Remove all timber within Blue "Special Management Area" tags.	N/A	
2	Variable Retention Harvest (VRH). Leave tree clumps marked with yellow "Leave Tree Area" Tags.	N/A	68 total leave trees (all clumped) are marked with yellow leave tree area tags and/or blue paint.
3	Variable Retention Harvest (VRH). Dispersed single leave trees marked with blue paint on bole and root collar. Leave tree clumps marked with yellow "Leave Tree Area" Tags.	N/A	278 total leave trees (250 clumped, 28 dispersed) are marked with yellow leave tree area tags and/or blue paint.
4	Variable Density Thinning. (VDT) Leave 130-140 TPA (18x18 Spacing) 1. Cut all hardwoods 2. Cut Douglas-fir up to 12 inches DBH. 3. Cut western hemlock up to 14 inches DBH.	Included in net acres: 1.6 acres for corridors	See attached Schedule B for prescription.
RW1	Harvest all trees within orange right-of-way tags.	N/A	
RW2	Road Daylighting - Cut all trees within 30' of uphill side of centerline and 20' of downhill side of described areas of BL-ML and BL-44, as well as any orange-painted trees. Cut no blue-painted trees.	N/A	See Road Plan and H-140 for more details.

OTHER PRE-CRUISE INFORMATION:

Unit #	Primary,secondary Species / Estimated Volume (MBF)	Access information (Gates, locks, etc.)	Photos, traverse maps required
1	DF – 4mbf/acre (250mbf)	BM-ML gate, F1-3 lock.	See attached driving and traverse maps
2	DF, WH – 42mbf/acre (240mbf)	BM-ML gate, F1-3 lock.	See attached driving and traverse maps
3	DF, WH – 60 mbf/acre (1.9mmbf)	BM-ML gate, F1-3 lock.	See attached driving and traverse maps
4	WH, DF – 4mbf/acre (64mbf)	BM-ML gate, F1-3 lock.	See attached driving and traverse maps
RW1	DF, WH – 12mbf/acre (36mbf)	BM-ML gate, F1-3 lock.	See attached driving and traverse maps
RW2*	RA, DF – 50mbf	BM-ML gate, F1-3 lock.	See attached driving and traverse maps
Corridors**	DF, WH – 95mbf	BM-ML gate, F1-3 lock.	See attached driving and traverse maps

TOTAL MBF	2600 mmbf		
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REMARKS:

This sale is on Blanchard Mountain. Unit 1 is an almost entirely Douglas-fir plantation with a small mix of western hemlock and hardwoods, and will be thinned according to the schedule B. Units 2 and 3 are VRH units containing sorts of Douglas-fir, western hemlock, and western redcedar. Unit 4 is a mix plantation of western hemlock and Douglas-fir, and will be thinned according to the schedule B.

Existing Roads - Acreage deducted from gross acres was determined by the following equation: ((Road LxW)/43,560)). Length was determined by GIS measure tool, and width being 60'.

ROW 1 – This contains all merchantable timber within new road construction going through Units 1 and 4 (VDT), and a small portion at the beginning of the middle road going into Unit 3 (BL-4403). Acreage was determined by the following equation: ((New Road LxW)/43,560)). Length was determined by GIS measure tool (2,200'), and width being 60'.

***ROW 2** – This includes all timber along the BL-ML and BL-44 to be daylighted. 15,000' of road with merchantable timber x 30' harvestable ROW (Existing 60' ROW minus road prism and ditches = 20' uphill, 10' downhill) / 43,560 = 10.3 acres. 10.3x10mbf/acre = 103mbf.

****Corridors** – 7.9 total acres (10 % of harvest area) were estimated for corridors in Units 1 and 4, with an estimated volume for 95 mbf (12mbf/acre). Unit 1 – 6.3 acres, Unit 2 – 1.6 acres.

Traverse points on the unit edge are marked with pink and green flagging and labeled with the traverse point number.

Driving Directions:

From I-5, Take exit 240 west on Lake Samish Rd for 0.4 mile and take a left on Barrel Springs Rd. Continue for 0.3 mile and turn right on the BL-ML.

Unit 1: Continue on BL-ML for 1.5 miles to the unit.

Unit 2: Continue for an additional 1.5 miles on the BL-ML to the BL-31, turn right and follow for 0.4 mile.

Unit 3: From the junction of the BL-ML and the BL-31, continue 0.7 mile to the unit.

Unit 4: From Unit 3, continue 0.6 mile on the BL-ML to the unit.

Prepared By: Joel Dryden	Title: NRS2	CC:
Date: 10/15/2015		



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

FPA/N No: 2814947

Effective Date: 1/19/2016

Expiration Date: 1/19/2019

Shut Down Zone: 656

EARR Tax Credit: Eligible Non-eligible

Reference: Walnut

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

DECISION:

NOTIFICATION

Operations shall not begin before the effective date.

APPROVED

This Forest Practices Application is subject to the conditions listed below.

DISAPPROVED

This Forest Practices Application is disapproved for the reasons listed below.

CLOSED

Applicant has withdrawn FPA/N.

FPA/N CLASSIFICATION

Number of Years Granted on Multi-Year Request

Class II

Class III

Class IVG

Class IVS

4yrs

5 yrs

Conditions on Approval / Reasons for Disapproval

[Empty box for conditions on approval / reasons for disapproval]

Issued By: Dave Klingbiel *DK*

Region: Northwest

Title: Chuckanut Forest Practice Forester

Date: 1/19/2016

Copies to: Landowner, Timber Owner and Operator

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

Appeal Information

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

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

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

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

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

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

And

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

Other Applicable Laws

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

Hydraulic Project Approval (HPA) (Chapter 77.55RCW and WAC 222-50-020(2))

The Department of Fish and Wildlife (WDFW), as the jurisdictional agency issuing HPAs, has final authority for approving water crossing structures in Type S and F waters. WDFW continues to have authority on Type N waters and may exercise that authority on some Type N waters.

Notice: The HPA water crossing requirements supersede what is indicated on the FPA. Landowners are required by law to follow the provisions as directed on the HPA.

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

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

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

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

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

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

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

DNR affidavit of mailing:

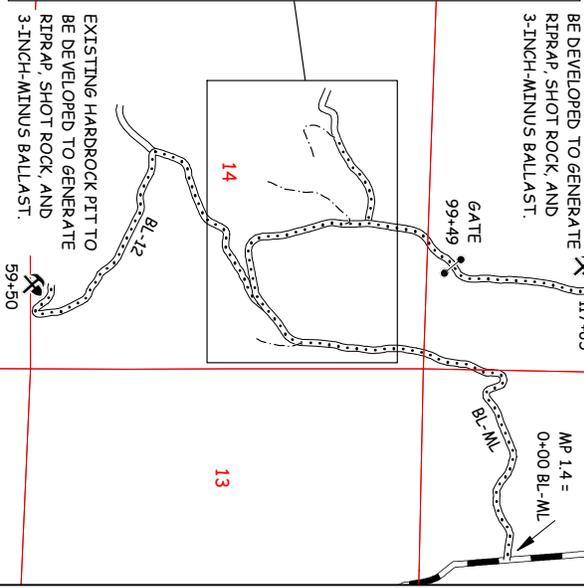
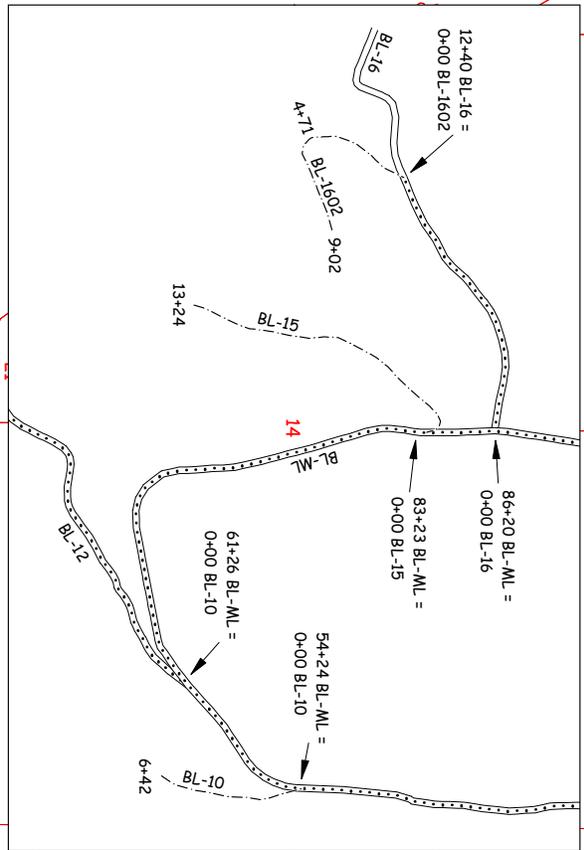
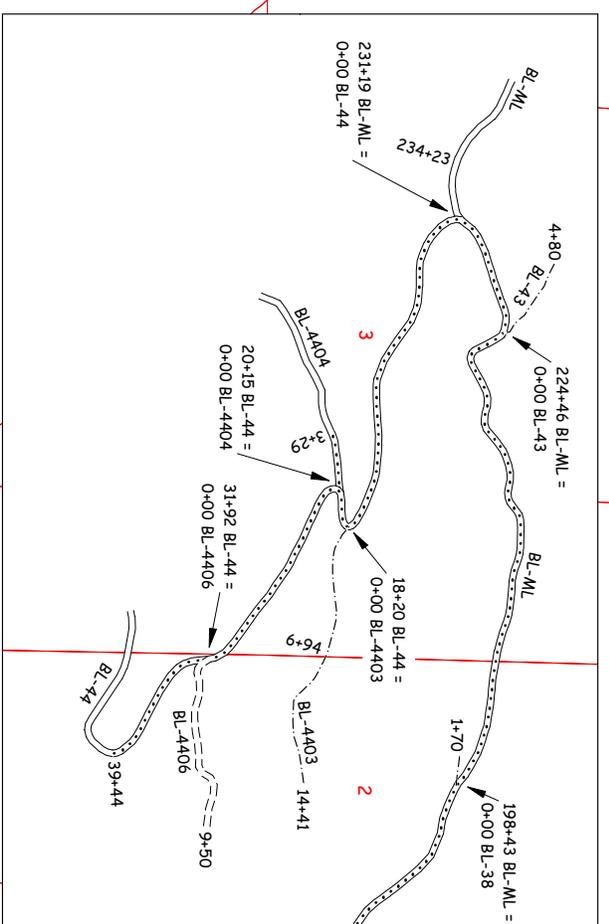
On this day _____, I placed in the United States mail at Sedro-Woolley, WA, postage paid, a true and accurate copy of the attached document. Notice of Decision FPA # __2814947_____
____Braelyn Hamilton_____
(Printed name) (Signature)



ROAD PLAN AND SPECIFICATIONS

#30-092530 WALNUT CH

35 T3703E 36



SHEET INDEX

PROJECT MAP	1
ROAD CLAUSES	2-19
TYPICAL SECTION	20-22
MATERIAL LIST	23-24
FARMS	25-26
SPECIAL DETAILS	27
STANDARD DETAILS	28

LEGEND

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

DESIGNED BY	REVIEWED BY	APPROVED BY	PLAN DATE	SHEET
CARLSON	ZYLSTRA	FIKE	10/13/2015	1 OF 28
	11/16/15	11/16/15		

EXISTING HARDROCK PIT TO BE DEVELOPED TO GENERATE RIPRAP, SHOT ROCK, AND 3-INCH-MINUS BALLAST.

EXISTING HARDROCK PIT TO BE DEVELOPED TO GENERATE RIPRAP, SHOT ROCK, AND 3-INCH-MINUS BALLAST.

BLANCHARD M.T. MAINLINE (BL-ML)

BARRELL SPRINGS RD.

GATE 99+49

MP 1.4 = 0+00 BL-ML

117+65

33+78

164+99 BL-ML = 0+00 BL-31

11

12

13

14

10

2

3

35 T3703E 36

T3603E

SCALE 0 1,000

1

N

STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES

WALNUT CH TIMBER SALE ROAD PLAN
SKAGIT COUNTY
HAMILTON UNIT BAKER DISTRICT

AGREEMENT NO.: 30-092530

STAFF ENGINEER: CARLSON

DATE: OCT. 13, 2015

SECTION 0 – SCOPE OF PROJECT

0-1 ROAD PLAN SCOPE

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

0-2 REQUIRED ROADS

The specified work on the following roads is required.

<u>Road</u>	<u>Stations</u>	<u>Type</u>
BL-ML	0+00 to 231+19	PRE-HAUL MAINTENANCE
BL-12	0+00 to 59+50	PRE-HAUL MAINTENANCE
BL-16	0+00 to 12+40	PRE-HAUL MAINTENANCE
BL-31	0+00 to 33+78	PRE-HAUL MAINTENANCE
BL-44	0+00 to 39+44	PRE-HAUL MAINTENANCE
BL-4404	0+00 to 3+29	PRE-HAUL MAINTENANCE
BL-4406	0+00 to 9+50	CONSTRUCTION

0-3 OPTIONAL ROADS

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

<u>Road</u>	<u>Stations</u>	<u>Type</u>
BL-10	0+00 to 6+42	CONSTRUCTION
BL-15	0+00 to 13+24	CONSTRUCTION
BL-1602	0+00 to 9+02*	CONSTRUCTION
BL-38	0+00 to 1+70	CONSTRUCTION
BL-43	0+00 to 4+80	CONSTRUCTION
BL-4403	0+00 to 14+41**	CONSTRUCTION

* Construction from 0+00 to 4+71 is on an abandoned grade.

** Construction from 0+00 to 6+94 is on an abandoned grade.

0-4 CONSTRUCTION

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

0-5 RECONSTRUCTION

Reconstruction includes, but is not limited to blading, shaping, and ditching the road surface, brushing, existing culvert clean out, and application of 3-inch-minus ballast rock.

0-6 PRE-HAUL MAINTENANCE

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

<u>Road</u>	<u>Stations</u>	<u>Requirements</u>
BL-ML	0+00 to 231+19	grading
BL-12	0+00 to 59+50	brushing, grading
BL-16	0+00 to 12+40	grading
BL-31	0+00 to 33+78	blading, shaping, and ditching the road surface, brushing, and rock application.
BL-44	0+00 to 39+44	blading, shaping, and ditching the road surface, brushing, and rock application.
BL-4404	0+00 to 3+29	brushing, grading

0-7 POST-HAUL MAINTENANCE

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

0-10 ABANDONMENT

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

0-12 DEVELOP ROCK SOURCE

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

SECTION 1 – GENERAL

1-1 ROAD PLAN CHANGES

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

1-2 NON-COMPLIANCE WITH STATE ROAD PLAN

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

1-3 ROAD DIMENSIONS

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

1-4 ROAD TOLERANCES

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

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

1-6 ORDER OF PRECEDENCE

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

1. Addenda.
2. Road Plan Clauses.
3. Typical Section Sheet.
4. Standard Lists.
5. Standard Details.

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

1-8 REPAIR OR REPLACEMENT OF DAMAGED MATERIALS

Contractor shall repair or replace all materials, roadway infrastructure, and road components damaged during road work or operation activities. The Contract Administrator will direct repairs and replacements. Repairs to structural materials must be made in accordance with the manufacturer’s recommendation.

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.

1-18 REFERENCE POINT DAMAGE

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

1-21 HAUL APPROVAL

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

1-25 ACTIVITY TIMING RESTRICTION

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

<u>Activity</u>	<u>Closure Period</u>
All activities	November 1 to March 31

1-26 OPERATING DURING CLOSURE PERIOD

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

1-29 SEDIMENT RESTRICTION

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

1-30 CLOSURE TO PREVENT DAMAGE

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

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

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

1-33 SNOW PLOWING RESTRICTION

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

SECTION 2 – MAINTENANCE

2-1 GENERAL ROAD MAINTENANCE

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

2-2 ROAD MAINTENANCE – CONTRACTOR MAINTENANCE

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

2-3 ROAD MAINTENANCE – DESIGNATED MAINTAINER

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

2-5 MAINTENANCE GRADING – EXISTING ROAD

Contractor shall use a grader to shape the existing surface before any haul. Contractor shall accomplish all grading using a motor grader with a minimum of 175 horsepower.

2-7 CLEANING DITCHES, HEADWALLS, AND CATCH BASINS

Contractor shall clean ditches, headwalls, and catchbasins. Work must be completed before application of rock and must be done in accordance with the TYPICAL SECTION.

SECTION 3 – CLEARING, GRUBBING, AND DISPOSAL

3-1 BRUSHING

On the following roads, Contractor shall cut vegetative material up to 3 inches in diameter, including limbs, as shown on the BRUSHING DETAIL. Brushing must be achieved by mechanical cutting of brush, trees, and branches. Root systems and stumps of cut vegetation may not be disturbed unless directed by the Contract Administrator. Contractor shall remove brushing debris from the road surface, ditchlines, and culvert inlets and outlets.

<u>Road</u>	<u>Stations</u>
BL-12	0+00 to 59+50
BL-31	0+00 to 33+78
BL-44	0+00 to 39+44
BL-4404	0+00 to 3+29

3-5 CLEARING

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

3-8 PROHIBITED DECKING AREAS

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

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

3-10 GRUBBING

Contractor shall remove all stumps between the grubbing limits specified on the TYPICAL SECTION SHEET. Contractor shall also remove stumps with undercut roots outside the grubbing limits. Grubbing must be completed before starting excavation and embankment.

3-20 ORGANIC DEBRIS DEFINITION

Organic debris is defined as all components of a tree that remain as by-products after the manufacture of logs, including but not limited to tree tops, branches, limbs, needles, leaves, and stumps that are larger than one cubic foot in volume within the clearing limits as shown on the TYPICAL SECTION SHEET.

3-21 DISPOSAL COMPLETION

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

3-23 PROHIBITED DISPOSAL AREAS

Contractor shall not place organic debris in the following areas:

- Within 50 feet of a cross drain culvert.
- Within 100 feet of a live stream, or wetland..
- On road subgrades, or excavation and embankment slopes.
- On slopes greater than 40%.
- Within the operational area for cable landings where debris may shift or roll.
- On locations where brush can fall into the ditch or onto the road surface.
- Against standing timber.

3-24 BURYING ORGANIC DEBRIS RESTRICTED

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

3-25 SCATTERING ORGANIC DEBRIS

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

SECTION 4 – EXCAVATION

4-2 PIONEERING

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

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

4-3 ROAD GRADE AND ALIGNMENT STANDARDS

Contractor shall follow these standards for road grade and alignment:

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

4-5 CUT SLOPE RATIO

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

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

4-6 EMBANKMENT SLOPE RATIO

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

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

4-7 SHAPING CUT AND FILL SLOPE

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

4-8 CURVE WIDENING

The minimum widening placed on the inside of curves is:

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

4-9 EMBANKMENT WIDENING

The minimum embankment widening is:

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

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

4-21 TURNOUTS

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

4-25 DITCH CONSTRUCTION AND RECONSTRUCTION

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

4-28 DITCH DRAINAGE

Ditches must drain to cross-drain culverts or ditchouts.

4-35 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.

4-38 PROHIBITED WASTE DISPOSAL AREAS

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

- Within 50 feet of a cross drain culvert.
- Within 100 feet of a live stream or wetland.
- Within a riparian management zone.
- In locations that interfere with the construction of the road prism.
- In locations that impede drainage.
- Against standing timber.
- Outside the clearing limits.

4-55 ROAD SHAPING

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

4-60 FILL COMPACTION

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

4-61 SUBGRADE COMPACTION

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

SECTION 5 – DRAINAGE

5-5 CULVERTS

Contractor shall install culverts as part of this contract. Culverts must be installed concurrently with subgrade work and must be installed before subgrade compaction and rock application. Culvert locations and the minimum requirements for culvert length and diameter are designated on MATERIALS LIST. Culvert, downspout, and flume lengths may be adjusted to fit as-built conditions and may not terminate directly on unprotected soil. Culverts may be new or used material and must meet the specifications in Clauses 10-15 through 10-23. Contractor 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 MATERIALS LIST that are not installed will become the property of the state. Contractor shall stockpile materials as directed by the Contract Administrator.

5-15 CULVERT INSTALLATION

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

5-16 APPROVAL FOR LARGER CULVERT INSTALLATION

Contractor shall obtain written approval from the Contract Administrator for the installation of culverts 36 inches in diameter and over before backfilling.

5-17 CROSS DRAIN SKEW AND SLOPE

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

5-18 CULVERT DEPTH OF COVER

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

5-25 CATCH BASINS

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

5-26 HEADWALLS FOR CROSS DRAIN CULVERTS

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

5-27 ARMORING FOR STREAM CROSSING CULVERTS

At the following culverts, Contractor shall place heavy loose riprap in conjunction with construction of the embankment. Rock must be placed on shoulders, slopes, and around culvert inlets and outlets or as directed by the Contract Administrator. Rock may not restrict the flow of water into culvert inlets or catch basins. Placement must be by zero-drop-height method only. No placement by end dumping or dropping of rock is allowed. Heavy loose riprap must meet the specifications in Clause 6-51 HEAVY LOOSE RIP RAP.

<u>Road</u>	<u>Station</u>
BL-15	0+85
BL-43	2+45

SECTION 6 – ROCK AND SURFACING

6-2 ROCK SOURCE ON STATE LAND

Rock used in accordance with the quantities on the TYPICAL SECTION and MATERIALS LIST may be obtained from the following sources on state land at no charge to the Contractor. Contractor shall obtain written approval from the Contract Administrator for the use of material from any other source. If other operators are using, or desire to use the rock sources, a joint operating plan must be developed. All parties shall follow this plan.

<u>Source</u>	<u>Location</u>	<u>Rock Type</u>
Blanchard Pit	Sta. 117+65 of the BL-ML road	Riprap, shot rock, 3-inch-minus ballast
Macadamia Pit	Sta. 59+50 of the BL-12 road	Riprap, shot rock, 3-inch-minus ballast

6-5 ROCK FROM COMMERCIAL SOURCE

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

6-11 ROCK SOURCE DEVELOPMENT PLAN BY CONTRACTOR

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

<u>Source</u>
Blanchard Pit
Macadamia Pit

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

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

6-12 ROCK SOURCE SPECIFICATIONS

Rock sources must be in accordance with the following specifications :

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

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

- Pit walls must be maintained in a condition to minimize the possibility of the walls sliding or failing.
- The width of pit benches must be a minimum of 1.5 times the maximum length of the largest machine used.
- The surface of pit floors and benches must be uniform and free-draining at a minimum 2% outslope gradient.
- All operations must be carried out in compliance with all regulations of the Regulations and Standards Applicable to Metal and Nonmetal Mining and Milling Operations (30 CFR) U.S. Department of Labor, Mine Safety and Health Administration and Safety Standards for Construction Work (296-155 WAC), Washington Department of Labor and Industries.
- All vehicle access to the top of the pit faces must be blocked.

6-20 ROCK GRADATION TYPES

Contractor shall provide rock in accordance with the types and amounts listed in the TYPICAL SECTION and MATERIALS LIST. Rock must meet the following specifications for gradation and uniform quality when placed in hauling vehicles or during manufacture and placement into a stockpile. The exact point of evaluation for conformance to specifications will be determined by the Contract Administrator.

6-34 3-INCH MINUS BALLAST ROCK

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

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

6-50 LIGHT LOOSE RIP RAP

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

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

6-51 HEAVY LOOSE RIP RAP

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

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

6-55 ROCK APPLICATION MEASURED BY COMPACTED DEPTH

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

6-70 APPROVAL BEFORE ROCK APPLICATION

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

6-71 ROCK APPLICATION

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

6-73 ROCK FOR WIDENED PORTIONS

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

SECTION 8 – EROSION CONTROL

8-15 REVEGETATION

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

8-17 REVEGETATION TIMING

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

8-18 PROTECTION FOR SEED

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

8-19 ASSURANCE FOR SEEDED AREA

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

8-25 GRASS SEED

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

1. Weed seed may not exceed 0.5% by weight.
2. All seed species must have a minimum 90% germination rate, unless otherwise specified.
3. Seed must be certified.

4. Seed must be furnished in standard containers showing the following information:
 - a. Common name of seed
 - b. Net weight
 - c. Percent of purity
 - d. Percentage of germination
 - e. Percentage of weed seed and inert material
5. Seed must conform to the following mixture.

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

8-27 FERTILIZER

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

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

SECTION 9 – POST-HAUL ROAD WORK

9-3 CULVERT MATERIAL REMOVED FROM STATE LAND

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

9-5 POST-HAUL MAINTENANCE

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

9-10 LANDING DRAINAGE

Contractor shall provide for drainage of the landing surface.

9-12 LANDING EMBANKMENT REMOVAL

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

9-21 ROAD ABANDONMENT

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

<u>Road</u>	<u>Stations</u>
BL-10	Sta. 0+00 to 6+42
BL-15	Sta. 0+00 to 13+24
BL-1602	Sta. 0+00 to 9+02
BL-38	Sta. 0+00 to 1+70

9-22 ABANDONMENT

- Remove all ditch relief culverts. The resulting slopes must be 1:1 or flatter. Place and compact the removed fill material in a location that will not erode into any Type 1 through 5 waters or wetlands.
- Remove all culverts in natural drainages. The resulting slopes must be 1:1 or flatter. Strive to match the existing native stream bank gradient. The natural streambed width must be re-established. Place and compact the removed fill material in a location that will not erode into any Type 1 through 5 waters or wetlands.
- Transport all removed culverts off site. All removed culverts are the property of the Contractor.
- Construct non-drivable waterbars at natural drainage points and at a spacing that will produce a vertical drop of no more than 20 feet between waterbars and with a maximum horizontal spacing of 400 feet.
- Skew waterbars at least 30 degrees from perpendicular to the road centerline on roads in excess of 3 percent grade.
- Key waterbars into the cut-slope to intercept the ditch. Waterbars must be outsloped to provide positive drainage. Outlets must be on stable locations.
- Inslope or outslope the road as appropriate.
- Remove bridges and other structures.
- Pull back unstable fill that has potential of failing and entering any Type 1 through 5 waters or wetlands. Place and compact removed material in a stable location.
- Remove berms except as designed.
- Block the road by constructing an aggressive barrier of dense interlocked large woody debris (logs, stumps, root wads, etc.) so that four wheel highway vehicles cannot pass the point of abandonment. Typical barrier dimensions are 10 feet high by 20 feet deep, spanning the entire road prism from top of cutslope to toe of fillslope. Long term effectiveness is the primary objective. If necessary construct a vehicular turn-around near the point of abandonment.
- Apply grass seed to all exposed soils resulting from the abandonment work and in accordance with Section 8 EROSION CONTROL

SECTION 10 MATERIALS

10-15 CORRUGATED STEEL CULVERT

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

10-16 CORRUGATED ALUMINUM CULVERT

Aluminum culverts must meet AASHTO M-196 (ASTM A-745) specifications.

10-17 CORRUGATED PLASTIC CULVERT

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

10-21 METAL BAND

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

10-22 PLASTIC BAND

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

10-24 GAGE AND CORRUGATION

Unless otherwise stated in the engineer's design, metal culverts must conform to the following specifications for gage and corrugation as a function of diameter.

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

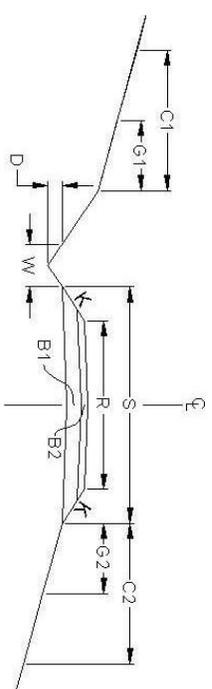
SECTION 11 SPECIAL NOTES

11.1 ROAD INTERSECTIONS

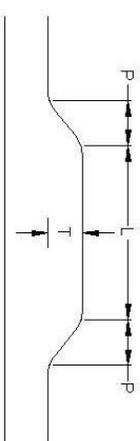
Contractor may use shot rock from the sources specified in Clause 6-2 ROCK SOURCE ON STATE LAND to facilitate construction of road intersections with the BL-ML.

ROAD #	BL-ML	BL-10	BL-12	BL-15
REQUIRED / OPTIONAL	REQUIRED	OPTIONAL	REQUIRED	OPTIONAL
CONSTRUCT / RECONSTRUCT	PRE-HAUL	CONSTRUCT	PRE-HAUL	CONSTRUCT
TOLERANCE CLASS (A/B/C)	--	C	--	C
STATION / MP TO	0+00	0+00	0+00	0+00
STATION / MP	231+19	6+42	59+50	13+24
ROAD WIDTH	12	12	12	12
CROWN (INCHES @ C/L)	3	3	3	3
DITCH WIDTH	3	2	3	2
DITCH DEPTH	1	1	1	1
TURNOUT LENGTH	L	25	--	25
TURNOUT WIDTH	T	10	--	10
TURNOUT TAPER	P	25	--	25
GRUBBING	G1	5	--	5
	G2	5	--	5
CLEARING	C1	10	--	10
	C2	10	--	10
ROCK FILL SLOPE	K:1	1½	--	1½
❖ BALLAST DEPTH	B1	18	--	18
CUBIC YARDS / STATION	--	114	--	114
➤ TOTAL CY BALLAST	--	730	--	1510
❖ SURFACING DEPTH	B2	--	--	--
CUBIC YARDS / STATION	--	--	--	--
➤ TOTAL CY SURFACING	--	--	--	--
➤ TOTAL CUBIC YARDS	--	730	--	1510
SUBGRADE WIDTH	S	16.5	--	16.5
BRUSH CUT (Y/N)	N	N	Y	N
BLADE, SHAPE, & DITCH (Y/N)	Y	N	Y	N

TYPICAL SECTION



TURNOUT DETAIL (PLAN VIEW)



SYMBOL NOTES

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

* Construction from 0+00 to 4+71 is on an abandoned grade.
 ** Construction from 0+00 to 6+94 is on an abandoned grade.
 A Ballast from Macadamia Pit only.

TOTAL BALLAST = 8395 cy
 TOTAL RIPRAP = 133 cy

ROAD #	BL-16	BL-1602*	BL-1602	BL-31	BL-38	BL-43	BL-44A
REQUIRED / OPTIONAL	REQUIRED	OPTIONAL	OPTIONAL	REQUIRED	OPTIONAL	OPTIONAL	REQUIRED
CONSTRUCT / RECONSTRUCT	PRE-HAUL	CONSTRUCT	CONSTRUCT	PRE-HAUL	CONSTRUCT	CONSTRUCT	PRE-HAUL
TOLERANCE CLASS (A/B/C)	--	C	C	C	C	C	C
STATION / MP TO	0+00	0+00	4+71	0+00	0+00	0+00	0+00
STATION / MP	12+40	4+71	9+02	33+78	1+70	4+80	39+44
ROAD WIDTH	R 12	12	12	12	12	12	12
CROWN (INCHES @ C/L)	3	3	3	3	3	3	3
DITCH WIDTH	W 3	2	2	3	2	3	3
DITCH DEPTH	D 1	1	1	1	1	1	1
TURNOUT LENGTH	L --	25	25	50	25	50	50
TURNOUT WIDTH	T --	10	10	10	10	10	10
TURNOUT TAPER	P --	25	25	25	25	25	25
GRUBBING	G1 --	5	5	--	5	5	5
	G2 --	5	5	--	5	5	5
CLEARING	C1 --	10	10	--	10	10	10
	C2 --	10	10	--	10	10	10
ROCK FILLSLOPE	K:1 --	1½	1½	1½	1½	1½	1½
❖ BALLAST DEPTH	B1 --	12	18	6	12	18	6
CUBIC YARDS / STATION	--	72	114	34	72	114	34
➤ TOTAL CY BALLAST	--	340	490	1150	120	545	1340
❖ SURFACING DEPTH	B2 --	--	--	--	--	--	--
CUBIC YARDS / STATION	--	--	--	--	--	--	--
➤ TOTAL CY SURFACING	--	--	--	--	--	--	--
➤ TOTAL CUBIC YARDS	--	340	490	1150	120	545	1340
SUBGRADE WIDTH	S --	15.0	16.5	13.5	15.0	16.5	13.5
BRUSHCUT (Y/N)	N	N	N	Y	N	N	Y
BLADE, SHAPE, & DITCH (Y/N)	Y	N	N	Y	N	N	Y

ROAD #	BL-4403**		BL-4403	BL-4404	BL-4406			
REQUIRED / OPTIONAL	OPTIONAL		OPTIONAL	REQUIRED	REQUIRED			
CONSTRUCT / RECONSTRUCT	CONSTRUCT		CONSTRUCT	PRE-HAUL	CONSTRUCT			
TOLERANCE CLASS (A/B/C)	C		C	--	C			
STATION / MP TO	0+00		6+94	0+00	0+00			
STATION / MP	6+94		14+41	3+29	9+50			
ROAD WIDTH	R	12	12	12	12			
CROWN (INCHES @ C/L)		3	3	3	3			
DITCH WIDTH	W	3	3	3	3			
DITCH DEPTH	D	1	1	1	1			
TURNOUT LENGTH	L	50	50	--	50			
TURNOUT WIDTH	T	10	10	--	10			
TURNOUT TAPER	P	25	25	--	25			
GRUBBING	G1	--	5	--	5			
	G2	--	5	--	5			
CLEARING	C1	--	10	--	10			
	C2	--	10	--	10			
ROCK FILL SLOPE	K:1	1½	1½	--	1½			
❖ BALLAST DEPTH	B1	6	18	--	18			
CUBIC YARDS / STATION		34	114	--	114			
➤ TOTAL CY BALLAST		235	850	--	1085			
❖ SURFACING DEPTH	B2	--	--	--	--			
CUBIC YARDS / STATION		--	--	--	--			
➤ TOTAL CY SURFACING		--	--	--	--			
➤ TOTAL CUBIC YARDS		235	850	--	1085			
SUBGRADE WIDTH	S	13.5	16.5	--	16.5			
BRUSH CUT (Y/N)		N	N	Y	N			
BLADE, SHAPE, & DITCH (Y/N)		N	N	Y	N			

MATERIALS LIST

LOCATION	STATION	CULVERT			DWNSPT		RIPRAP			FILL TYPE	TOLERANCE	REMARKS												
		DIAMETER	LENGTH	TYPE	LENGTH	TYPE	INLET	OUTLET	TYPE															
BL-10	5+74	18	30	XX			2	3	L	NT	C	<p style="text-align: center;">Note: Galvanized metal culverts shall conform to the following specifications for gage and corrugation as a function of the diameter:</p> <table style="width: 100%; border: none;"> <tr> <td style="text-align: center;">Diameter</td> <td style="text-align: center;">Gage</td> <td style="text-align: center;">Corrugation</td> </tr> <tr> <td style="text-align: center;">18"</td> <td style="text-align: center;">16</td> <td style="text-align: center;">2 2/3" x 1 1/2"</td> </tr> <tr> <td style="text-align: center;">24" - 48"</td> <td style="text-align: center;">14</td> <td style="text-align: center;">2 2/3" x 1 1/2"</td> </tr> <tr> <td style="text-align: center;">54" - 96"</td> <td style="text-align: center;">14</td> <td style="text-align: center;">3" x 1"</td> </tr> </table>	Diameter	Gage	Corrugation	18"	16	2 2/3" x 1 1/2"	24" - 48"	14	2 2/3" x 1 1/2"	54" - 96"	14	3" x 1"
Diameter	Gage	Corrugation																						
18"	16	2 2/3" x 1 1/2"																						
24" - 48"	14	2 2/3" x 1 1/2"																						
54" - 96"	14	3" x 1"																						
BL-15	0+85	24	50	XX			10	15	H/L	NT	C													
BL-15	2+94	18	30	XX			2	3	L	NT	C													
BL-15	6+71	18	30	XX			2	3	L	NT	C													
BL-15	9+79	18	30	XX			2	3	L	NT	C													
BL-15	12+82	18	30	XX			2	3	L	NT	C													
BL-1602	5+96	18	50	XX			3	5	L	NT	C													
BL-1602	8+27	18	30	XX			2	3	L	NT	C													
BL-38	0+40	18	50	XX			2	3	L	NT	C													
BL-43	2+45	24	36	PD			5	10	H/L	NT	C													
BL-4403	0+50	18	30	PD			2	3	L	NT	C													
BL-4403	5+30	18	30	PD			2	3	L	NT	C													
BL-4403	8+42	18	30	PD			2	3	L	NT	C													
BL-4403	10+04	18	30	PD			2	3	L	NT	C													
BL-4403	13+94	18	30	PD			2	3	L	NT	C													

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

FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS

Cuts and Fills

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

Surface

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

Drainage

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

Preventative Maintenance

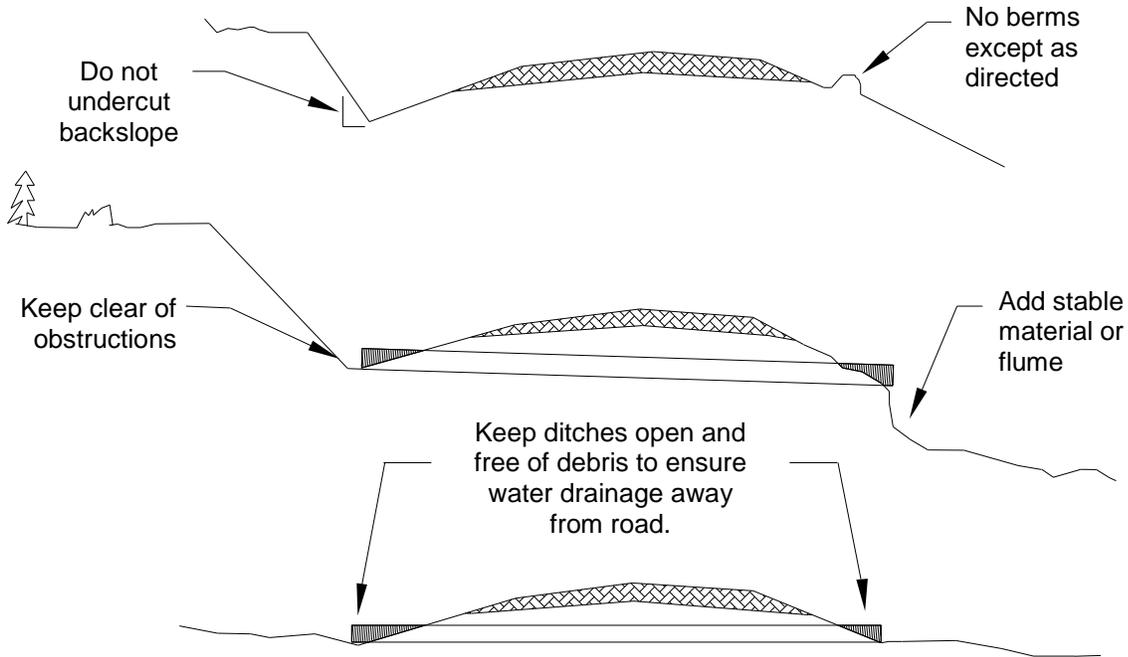
- Perform preventative maintenance work to safeguard against storm damage, such as blading to ensure correct runoff, ditch and culvert cleaning, and waterbar maintenance.

Termination of Use or End of Season

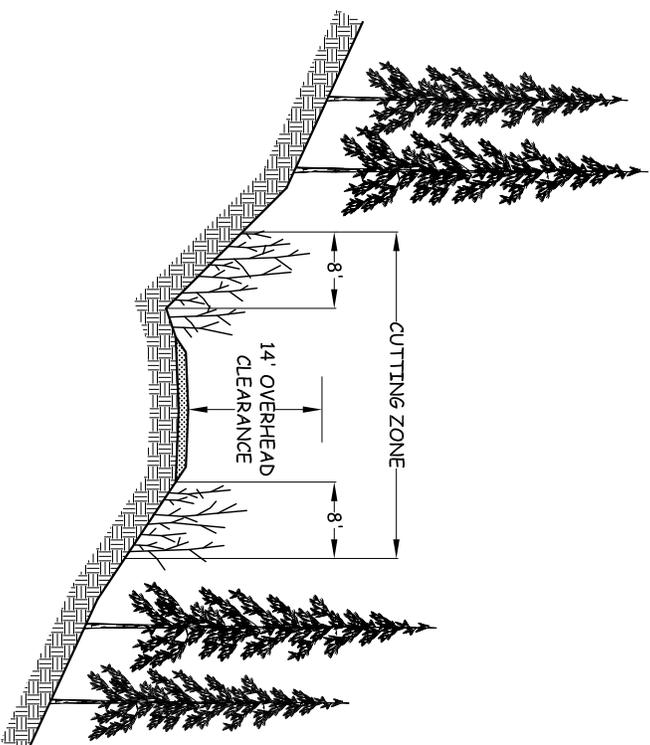
- At the conclusion of logging operations, ensure all conditions of these specifications have been met.

Debris

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



ROAD BRUSHING DETAILS



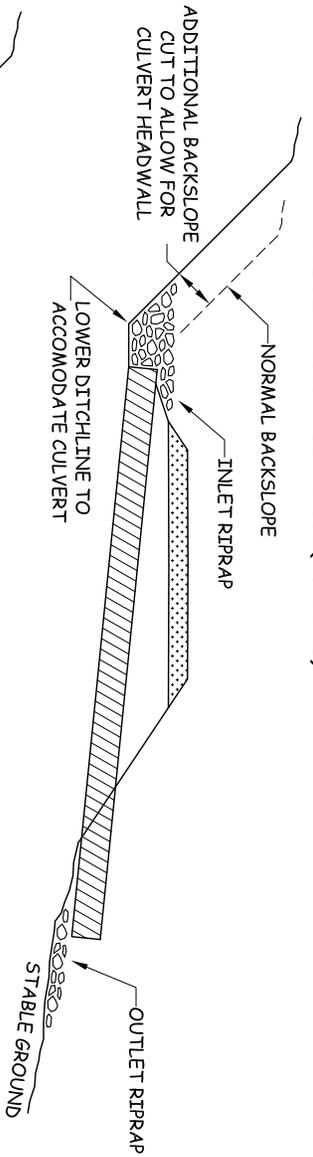
SPECIFICATIONS

- BRUSH SHALL BE CUT ON THE ROAD SURFACE AND 8 ft. BACK FROM ROAD DITCH AND OUTSIDE EDGE OF RUNNING SURFACE.
- ON THE INSIDE OF SWITCHBACKS AND TIGHT CURVES, BRUSH SHALL BE CUT BACK 16 ft. FOR VISIBILITY.
- ON TRUCK TURNOUTS, BRUSH SHALL BE CUT 8 ft. BACK FROM OUTSIDE EDGE.
- BRUSH SHALL BE CUT TO PROVIDE AN OVERHEAD CLEARANCE OF 14 ft. ABOVE THE ROAD RUNNING SURFACE.
- BRUSH SHALL BE CUT TO WITHIN 6 in. OF THE GROUND.
- SLASH SHALL BE REMOVED FROM CUT SLOPES ABOVE THE ROAD AND SCATTERED ON EMBANKMENT SLOPES.
- DITCHES SHALL BE CLEARED OF WOODY DEBRIS.
- CULVERT INLETS AND OUTLETS SHALL BE CLEANED A MINIMUM DISTANCE OF TWO PIPE DIAMETERS AWAY.

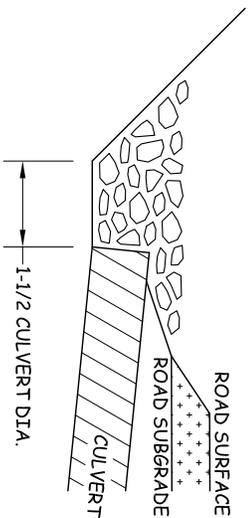
CONTRACT #	PROJECT	SHEET
30-092530	WALNUT CH	27 OF 28

CULVERT AND DRAINAGE SPECIFICATIONS

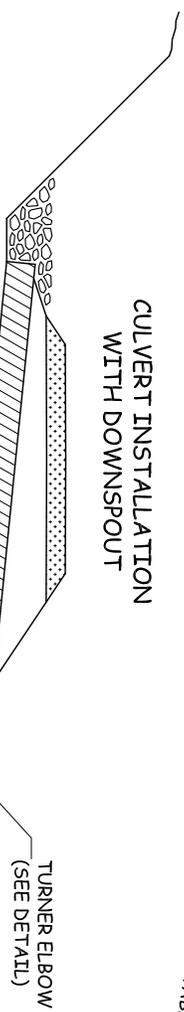
CULVERT INSTALLATION (TYPICAL)



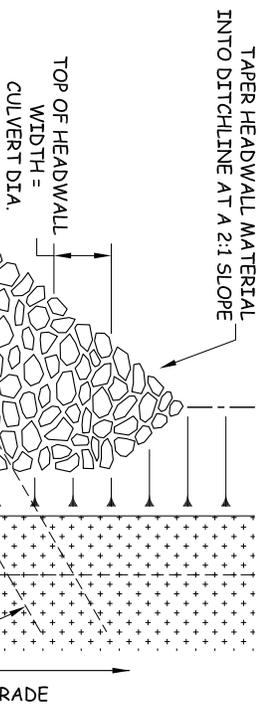
CULVERT HEADWALL - SECTION VIEW



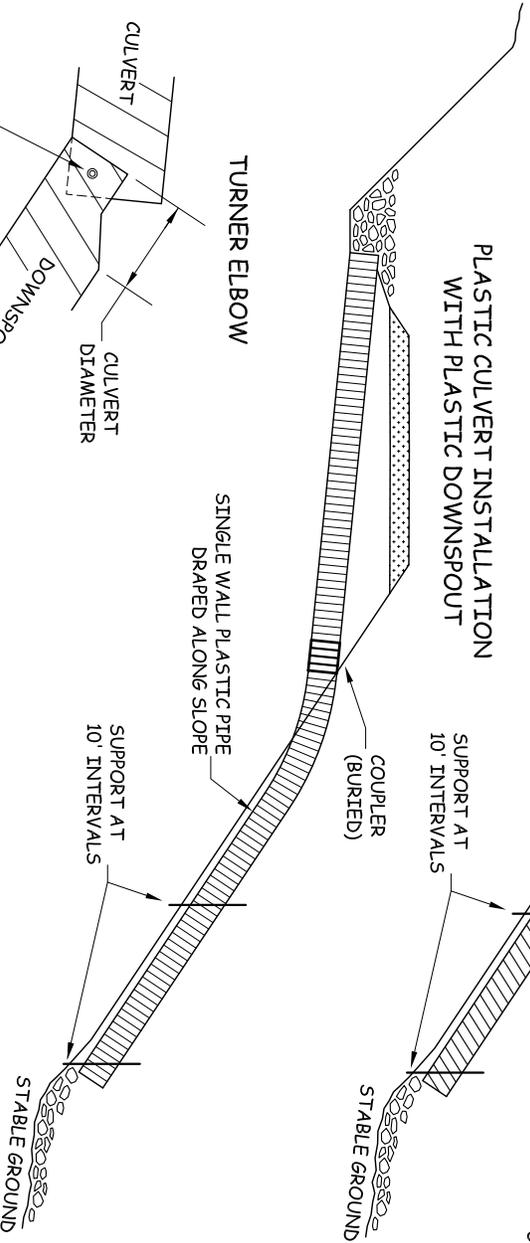
CULVERT INSTALLATION WITH DOWNSPOUT



CULVERT HEADWALL - PLAN VIEW

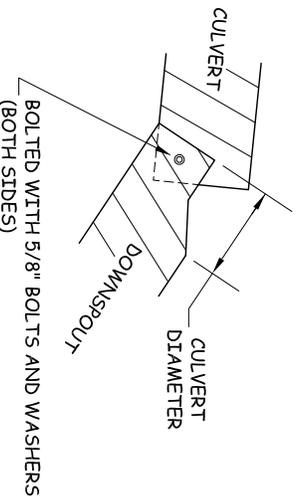


PLASTIC CULVERT INSTALLATION WITH PLASTIC DOWNSPOUT



HEADWALL NOTE:

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



CONTRACT #
30-092530

PROJECT
WALNUT CH

SHEET
28 OF 28

SUMMARY - Road Development Costs

REGION: NW
DISTRICT: Baker

SALE/PROJECT NAME: Walnut CH

CONTRACT #: 30-092530

ROAD NUMBERS:	BL-10, BL-15, BL-1602, BL-38, BL-43, BL-4403, BL-4406	BL-ML, BL-12, BL-16, BL- 31, BL-44, BL-4404	-
ROAD STANDARD:	Construction	Pre-Haul Maintenance	
NUMBER OF STATIONS:	59.09	376.31	
CLEARING & GRUBBING:	-	-	
EXCAVATION AND FILL:	\$31,558	\$11,836	All other costs
MISC. MAINTENANCE:			
ROAD ROCK:	\$86,568	\$38,536	
ROCK STOCKPILE PROD:	-	-	
CULVERTS AND FLUMES:	\$7,378	\$0	
STRUCTURES:	-	-	
MOBILIZATION:	-	-	Amortized into other c
TOTAL COSTS:	\$125,504	\$50,372	
COST PER STATION:	\$2,124	\$134	
ROAD DEACTIVATION & ABANDONMENT COSTS:		\$2,156	

TOTAL (All Roads) = \$178,032
SALE VOLUME MBF = 2800
TOTAL \$/MBF = \$64

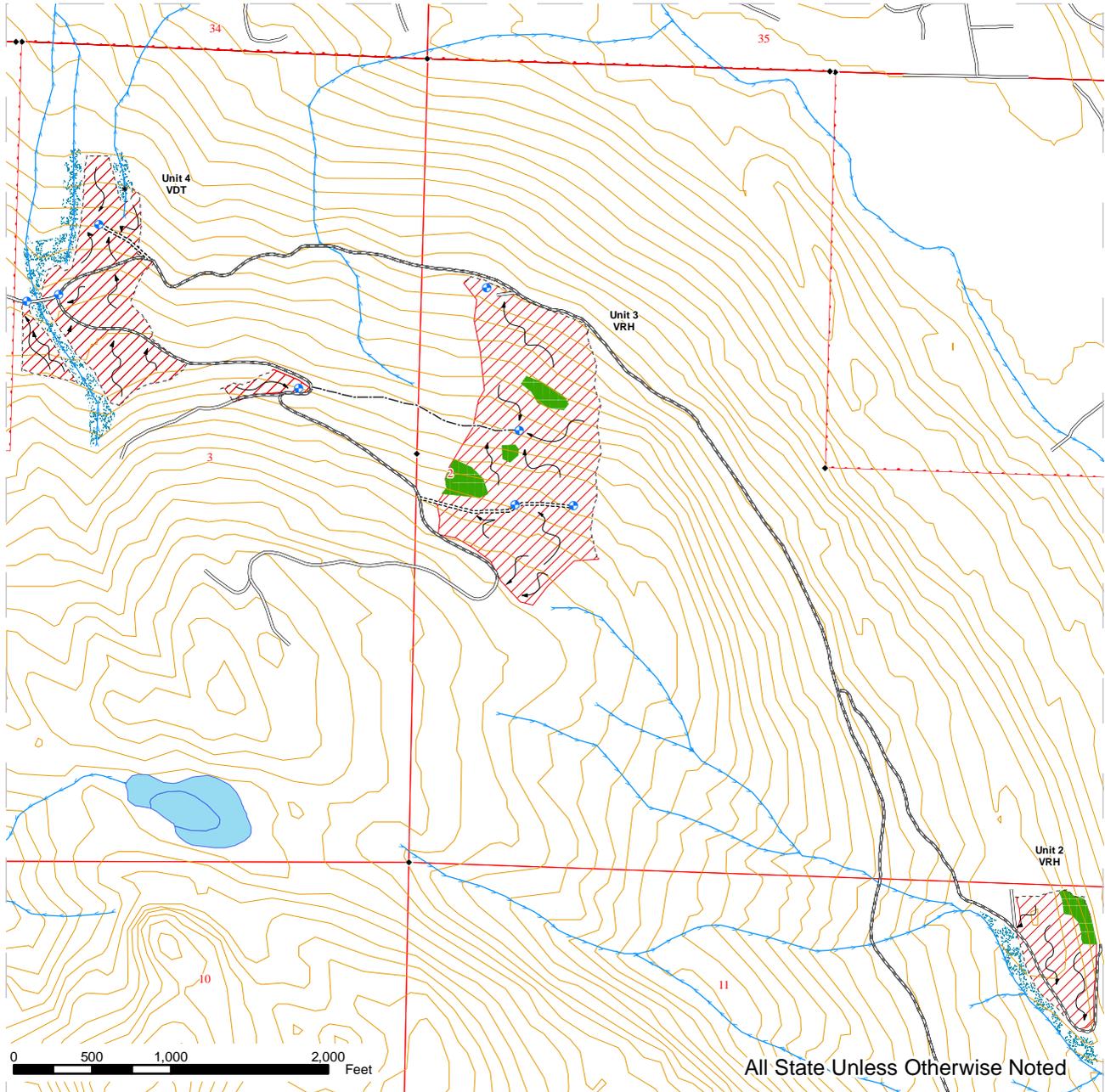
Compiled by: Carlson

Date: 11/3/15

LOGGING PLAN MAP

SALE NAME: WALNUT VDT&VRH CH
AGREEMENT#: 92530
TOWNSHIP(S): T36R03E
TRUST(S): State Forest Transfer(1)

REGION: Northwest Region
COUNTY(S): SKAGIT
ELEVATION RGE: 524-1717



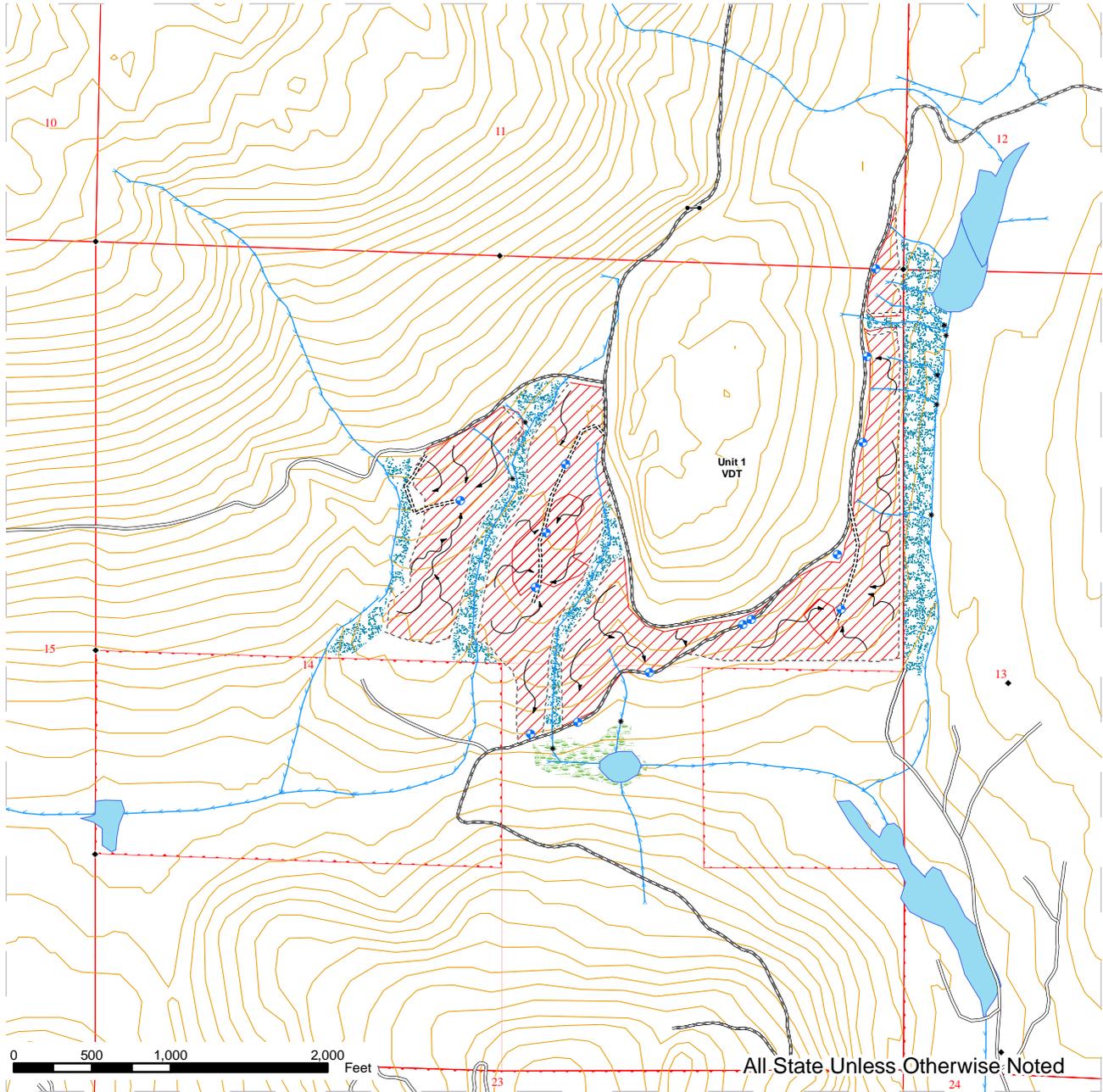
Ground	Sale Boundary Tags	Streams
Leave Tree Area	Existing Road	Stream Type
Riparian Mgt Zone	Optional Construction	Stream Type Break
Wetland Mgt Zone	Required Construction	Survey Corners
	Required Reconstruction	Landing - Proposed
	Required Pre-Haul Maintenance	Gate



LOGGING PLAN MAP

SALE NAME: WALNUT VDT&VRH CH
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Ground	Sale Boundary Tags	Streams
Leave Tree Area	Existing Road	Stream Type
Riparian Mgt Zone	Optional Construction	Stream Type Break
Wetland Mgt Zone	Required Construction	Survey Corners
	Required Reconstruction	Landing - Proposed
	Required Pre-Haul Maintenance	Gate



STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES
PETER GOLDMARK
COMMISSIONER OF PUBLIC LANDS

**HARVESTING SERVICES CONTRACT
SEALED BID FORM**

_____ Walnut VDT & VRH Sorts _____
(Print Project Name)

_____ 92530 _____
(Agreement No.)

(Print Company Name)

(Street Address)

(Business Telephone Number)

(City, State and Zip Code)

(email address)

To meet Harvesting obligations, I bid the following On Board Truck (OBT) rate:

(check box for appropriate project payment method. RFQ section 2.06)

- \$/Ton of timber harvested and delivered.
 \$/mbf of timber harvested and delivered.

And to meet pole sort Harvesting obligations, I bid the following OBT rate:

(check box for appropriate project payment method. RFQ section 2.06)

- \$/Ton of poles harvested and delivered.
 \$/mbf of poles harvested and delivered.

“Does Not Apply” to projects with no pole sorts identified. Refer to RFQ section 2.06.

To meet Hauling obligations, I bid:

Hauling Bid Factor
(format to 3 decimal places ie 0.000)

Hauling Services Payment calculation explained in RFQ section 1.05.
Actual “live-load” weights used to determine payment for hauling sorts designated as “tonnage”. Sorts designated as “MBF” will use calculated tonnage based on the DNR’s advertised “tons/mbf conversion factor specific for each sort unless actual tonnage is available and approved for use.

If awarded this contract, I am responsible for independently negotiating, procuring and paying for any and all subcontracted services provided.

Attached is my completed 'Statement of Available Resources and Work Plan' which I understand will be evaluated by the Department of Natural Resources in conjunction with my bid to determine my ability to complete the project.

BY SUBMISSION OF THIS BID THE BIDDER WARRANTS AND AGREES TO THE FOLLOWING:

1. The bid price has been determined independently, without consultation, communication, or agreement with others for the purpose of restricting competition.
2. The bid is a firm offer for a period of 90 days from the bid submission deadline, and it may be accepted by the State without further negotiation at any time within the 90-day period.
3. In preparing this proposal or bid, the Bidder was not assisted by any current or former employee of the DNR whose duties relate (or did relate) to this prospective contract and who was assisting in other than his or her official, public capacity. Neither does such a person or any member of his or her immediate family have any financial interest in the outcome of this proposal.
4. Acceptance of the Harvesting Services Contract general terms and conditions.
5. Acceptance of the Harvesting Services Contract estimated road payment values as shown fixed by terms in contract clause P-027.
6. The Bidder has had an opportunity to fully inspect the sale area and the timber to be harvested.
7. The Bidder enters this bid based solely upon their own judgment of the costs associated with harvesting, hauling, and any additional required work formed after their own examination and inspection of both the timber sale area and the forest products to be harvested.
8. The Bidder enters this bid without any reliance upon the volume estimates, acreage estimates, appraisals, pre-bid documentation, or any other representation by the State Department of Natural Resources.
9. The Bidder, if successful, will furnish the necessary labor, equipment, and services needed to complete the work as specified by the harvesting contract including commencing and completing the operations in the times specified.

10. The Bidder agrees to execute the harvesting contract for the said project and agrees to furnish surety and insurance as required in the specifications.
11. The Bidder assumes the risk of liabilities related to any regulatory actions by any government agency that may affect the operability of these harvesting contracts. Such regulatory actions include, but are not limited to, actions taken pursuant to the Forest Practices Act, chapter 76.09 RCW, and the Endangered Species Act, 16 U.S.C. §§ 1531-1544. Please see the Harvesting Services Contract for further information.
12. The DNR cannot verify the presence or absence of northern spotted owls, marbled murrelets or any other threatened or endangered species that may affect the operability of the timber sale. The Bidder relies solely on his/her own assessments.
13. Acreage estimates and volume estimates contained within the harvesting services contract are made only for administrative and identification purposes. Except as expressly provided by the harvesting contract, the Apparent Successful Contractor shall be responsible to harvest the sale, even if the actual acreage or timber volume varies from the estimated quantity or volume shown.
14. The DNR will not reimburse the Bidder for any costs incurred in the preparation of this proposal. All proposals become the property of the DNR and I/we claim no proprietary rights to the ideas or writings contained in them.
15. The Bidder will be required to comply with the Department's Nondiscrimination Plan and federal and state laws on which it is based. If requested by the DNR, the Bidder/Harvester will submit additional information about the nondiscrimination and affirmative action policies and plans of their organization in advance of or after the contract award.

By signing and submitting this bid the Bidder agrees to all of the preceding requirements. The Bidder further warrants to the State that they enter this bid based upon their own judgments of the value of the harvesting services to be provided through the Harvesting Services Contract, formed after their own examination and inspection of both the timber sale area and the forest products to be harvested.

 (Signature of authorized representative submitting this bid)

 (Date)

 (Print name and title of authorized representative signing bid)

STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES
PETER GOLDMARK
COMMISSIONER OF PUBLIC LANDS

**HARVESTING SERVICES CONTRACT
ROAD PROPOSAL COST PROPOSAL FORM**

(Print Company Name)

(Street Address)

(Business Telephone Number)

(City, State and Zip Code)

(email address)

(Per RFQ section 2.06)

Road/Structure	Description	Req./Opt.	Stations/ Qty.	Min \$/Sta	Number of Stations to perform	Bid \$/Unit (Sta.)	Total
BL-ML (0+00 to 231+19)	Pre-Haul Maint.	Required	231.19	\$17.05	231.19		
BL-12 (0+00 to 59+50)	Pre-Haul Maint.	Required	59.5	\$39.76	59.5		
BL-16 (0+00 to 12+40)	Pre-Haul Maint.	Required	12.4	\$17.02	12.4		
BL-31 (0+00 to 33+78)	Pre-Haul Maint.	Required	33.78	\$510.19	33.78		
BL-44 (0+00 to 39+44)	Pre-Haul Maint.	Required	39.44	\$671.45	39.44		
BL-4404 (0+00 to 3+29)	Pre-Haul Maint.	Required	3.29	\$42.55	3.29		
BL-4406 (0+00 to 9+50)	Construction	Required	9.5	\$2,608.02	9.5		
<i>BL-10 (0+00 to 6+42)</i>	<i>Construction</i>	<i>Optional</i>	<i>6.42</i>	<i>\$2,182.81</i>			
<i>BL-15 (0+00 to 13+24)</i>	<i>Construction</i>	<i>Optional</i>	<i>13.24</i>	<i>\$2,510.45</i>			
<i>BL-1602 (0+00 to 4+71)</i>	<i>Construction</i>	<i>Optional</i>	<i>4.71</i>	<i>\$1,211.13</i>			
<i>BL-1602 (4+71 to 9+02)</i>	<i>Construction</i>	<i>Optional</i>	<i>4.31</i>	<i>\$2,687.47</i>			
<i>BL-38 (0+00 to 1+70)</i>	<i>Construction</i>	<i>Optional</i>	<i>1.7</i>	<i>\$1,831.91</i>			
<i>BL-43 (0+00 to 4+80)</i>	<i>Construction</i>	<i>Optional</i>	<i>4.8</i>	<i>\$2,529.12</i>			
<i>BL-4403 (0+00 to 6+94)</i>	<i>Construction</i>	<i>Optional</i>	<i>6.94</i>	<i>\$720.74</i>			
<i>BL-4403 (6+94 to 14+41)</i>	<i>Construction</i>	<i>Optional</i>	<i>7.47</i>	<i>\$2,421.41</i>			
<i>BL-10 (0+00 to 6+42)</i>	<i>Abandonment</i>	<i>Required, if built</i>	<i>6.42</i>	<i>\$71.00</i>			
<i>BL-15 (0+00 to 13+24)</i>	<i>Abandonment</i>	<i>Required, if built</i>	<i>13.24</i>	<i>\$71.00</i>			
<i>BL-1602 (0+00 to 9+02)</i>	<i>Abandonment</i>	<i>Required, if built</i>	<i>9.02</i>	<i>\$71.00</i>			
<i>BL-38 0+00 to 1+70)</i>	<i>Abandonment</i>	<i>Required, if built</i>	<i>1.7</i>	<i>\$71.00</i>			
Total							

Road Work is paid on a per station basis.