



TIMBER NOTICE OF SALE

SALE NAME: PUMPKIN PATCH VRH & RMZ THIN AGREEMENT NO: 30-099018

AUCTION: December 17, 2019 starting at 10:00 a.m., COUNTY: King South Puget Sound Region Office, Enumclaw, WA

SALE LOCATION: Sale located approximately 14 miles northeast of Carnation.

PRODUCTS SOLD AND SALE AREA:

All timber, except trees marked with orange paint or bounded out by yellow leave tree area tags, snags, and down timber existing more than 5 years from the day of sale, bounded by the following: white timber sale boundary tags, blue special management area tags, timber type change marked with pink flagging, and the 5000 Road in Unit #1;

All timber marked with one band of pink paint bounded by the following: white timber sale boundary tags, blue special management area tags, and the 5000 Road in Unit #2; white timber sale boundary tags, and blue special management area tags in Units #3, #4, and #5;

All forest products above located on part(s) of Sections 7 and 18 all in Township 26 North, Range 8 East, W.M., containing 70 acres, more or less.

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

ESTIMATED SALE VOLUMES AND QUALITY:

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

MINIMUM BID: \$995,000.00 BID METHOD: Sealed Bids

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

EXPIRATION DATE: October 31, 2021 ALLOCATION: Export Restricted

BID DEPOSIT: \$99,500.00 or Bid Bond. Said deposit shall constitute an opening bid at the appraised price.

HARVEST METHOD: Harvest activities are estimated to be 100 percent ground based harvest. Cable and tracked ground based equipment, with cable-tethered equipment limited to sustained slopes 75 percent or less, self-leveling equipment limited to sustained slopes 65 percent or less, and all other tracked ground based equipment limited to sustained slopes 45 percent or less.



## TIMBER NOTICE OF SALE

---

Falling, yarding, and timber haul will not be permitted from November 1 to April 30, unless authority to do so is granted, in writing, by the Contract Administrator. If permission is granted to operate from November 1 to April 30, preventative measures may be required to protect water, soil, roads and other forest assets.

**ROADS:** 29.90 stations of optional construction. 225.75 stations of required prehaul maintenance. 24.90 stations of abandonment, if constructed. Purchaser maintenance on all roads used.

Rock for this proposal may be obtained from the State owned 5050 Pit at no cost to the Purchaser or any commercial rock source at the Purchaser's expense. Rock source development work in the 5050 Pit is required according to Road Plan clauses 6-10 and 6-12.

Road construction equipment and rock haul will not be permitted from November 1 to April 30, unless authority to do so is granted, in writing, by the Contract Administrator. If permission is granted to operate from November 1 to April 30, the Purchaser shall comply with a maintenance plan per Road Plan clause 1-26.

### ACREAGE DETERMINATION

**CRUISE METHOD:** Acreage was determined by traversing boundaries by GPS. GPS data files available at DNR's website for Timber Sale Auction Packets. See cruise narrative for cruise method.

**FEES:** \$55,301.00 is due on day of sale. \$9.00 per MBF is due upon removal. These are in addition to the bid price.

**SPECIAL REMARKS:** There are residual blue painted trees from a previous sale within these units. For this sale, blue paint is to be disregarded. In the VRH unit (Unit #1) leave trees are marked with orange paint or tagged with yellow "Leave Tree Area tags". Units #2, #3, #4, and #5 are Riparian Management Zone (RMZ) thinning units. Take trees have been 100% marked with one band of pink paint. Trees marked with two bands of red paint and a "S" and trees marked with one band of red paint and a "D" are not to be removed. These are trees identified for snags or down wood to be created by the Purchaser.

This sale contains high quality Douglas fir, see Cruise for details.

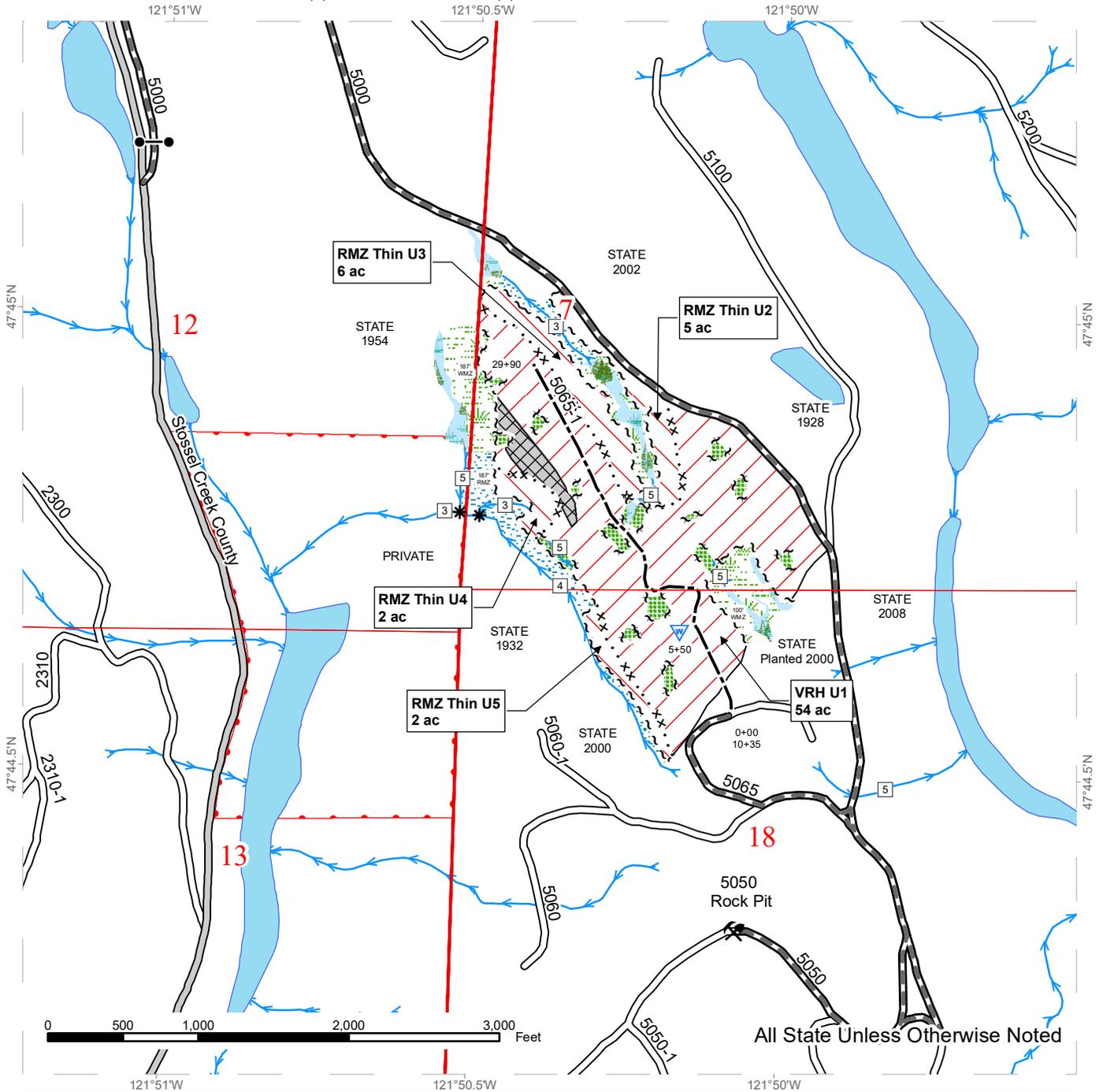
Purchaser shall cut all vine maple within Unit 1, leaving a stump no more than 12 inches in height.

See map for gate locations. Gate keys may be obtained by contacting the South Puget Sound Region Office at 360-825-1631 or by contacting Zach Beebe at 253-736-4830.

# TIMBER SALE MAP

**SALE NAME:** PUMPKIN PATCH VRH AND RMZ THIN  
**AGREEMENT #:** 30-099018  
**TOWNSHIP(S):** T26R8E  
**TRUST(S):** Normal School (8), State Forest Transfer (1)

**REGION:** South Puget Sound Region  
**COUNTY(S):** King  
**ELEVATION RGE:** 800-1160



All State Unless Otherwise Noted

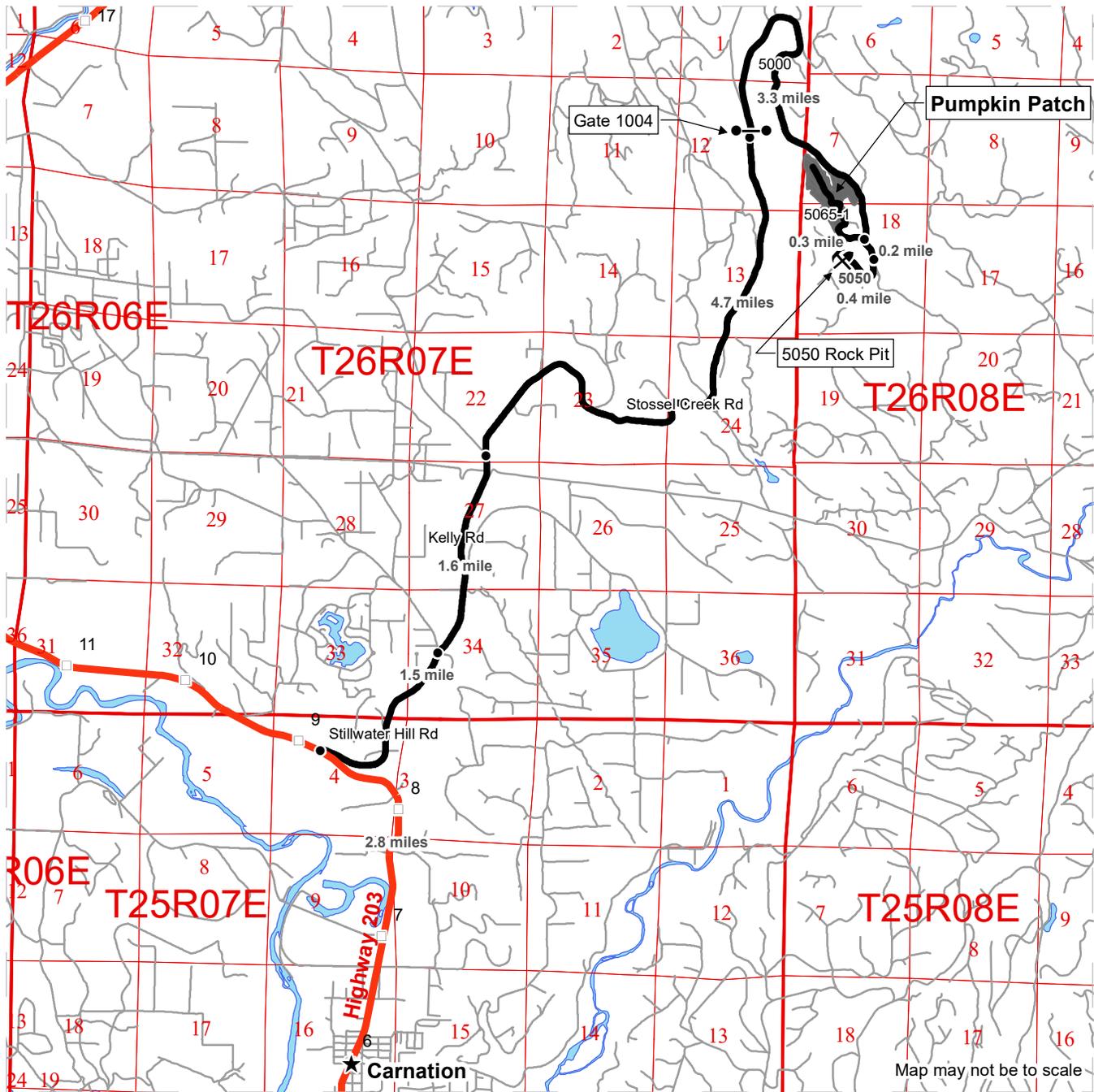
	Variable Retention Harvest		County Road		Streams
	Variable Density Thinning		Existing Roads		Stream Type
	Self-leveling/tethered/cable only		Required Pre-Haul Maintenance		Stream Type Break
	Leave Tree Area		Optional Construction		Open Water
	Riparian Mgt Zone		Sale Boundary Tags		Rock Pit
	Forested Wetland		Special Mgmt Area		Waste Area
	Wetland Mgt Zone		Leave Tree Tags		Timber Type Change
	DNR Managed Lands				



# DRIVING MAP

**SALE NAME:** PUMPKIN PATCH VRH AND RMZ THIN  
**AGREEMENT#:** 30-099018  
**TOWNSHIP(S):** T26R8E  
**TRUST(S):** Normal School (8), State Forest Transfer (1)

**REGION:** South Puget Sound Region  
**COUNTY(S):** King  
**ELEVATION RGE:** 800-1160



- Timber Sale Unit
- Haul Route
- Other Road
- Highway
- Milepost Markers
- Distance Indicator
- Gate (Master 383)
- Rock Pit
- Town
- Public Land Survey Sections

**DRIVING DIRECTIONS:**

**FROM CARNATION**

Head north on Highway 203 for 2.8 miles and take a right onto Stillwater Hill Rd. After 1.5 miles Stillwater Hill Rd turns into Kelly Rd. Continue for 1.6 miles and take a right onto Stossel Creek Rd. Continue for 4.7 miles and take a right onto the 5000 Rd, gate 1004 will be 300 feet further. Continue for 3.3 miles and take a right onto the 5060 Rd, the units can be accessed 0.4 mile further after taking a right onto the 5065 Rd. From the 5000/5060 Rd INT, continue for 0.2 mile and take a right onto the 5050 Rd, the 5050 Rock Pit will be 0.4 mile further.



**STATE OF WASHINGTON  
DEPARTMENT OF NATURAL RESOURCES**

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

**Export Restricted Lump Sum AGREEMENT NO. 30-099018**

**SALE NAME: PUMPKIN PATCH VRH & RMZ THIN**

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

Section G: General Terms

G-001 Definitions

The following definitions apply throughout this contract;

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

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

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

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

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

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

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

G-011 Right to Remove Forest Products and Contract Area

Purchaser was the successful bidder on December 17, 2019 and the sale was confirmed on \_\_\_\_\_. The State, as owner, agrees to sell to Purchaser, and Purchaser agrees to purchase as much of the following forest products as can be cut and removed during the term of this contract: All timber, except trees marked with orange paint or bounded out by yellow leave tree area tags, snags, and down timber existing more than 5 years from the day of sale, bounded by the following: white timber sale boundary tags, blue special management area tags, timber type change marked with pink flagging, and the 5000 Road in Unit #1;

All timber marked with one band of pink paint bounded by the following: white timber sale boundary tags, blue special management area tags, and the 5000 Road in Unit #2; white timber sale boundary tags, and blue special management area tags in Units #3, #4, and #5;

All forest products above located, located on approximately 70 acres on part(s) of Sections 7, and 18 all in Township 26 North, Range 8 East W.M. in King County(s) as designated on the sale area and as shown on the attached timber sale map.

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

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

G-020 Inspection By Purchaser

Purchaser hereby warrants to the State that they have had an opportunity to fully inspect the sale area and the forest products being sold. Purchaser further warrants to the State that they enter this contract based solely upon their own judgment of the value of the forest products, formed after their own examination and inspection of both the

timber sale area and the forest products being sold. Purchaser also warrants to the State that they enter this contract without any reliance upon the volume estimates, acreage estimates, appraisals, pre-bid documentation, or any other representations by the State Department of Natural Resources.

G-025 Schedules

The following attached schedules are hereby incorporated by reference:

Schedule	Title
A	Recruitment of Downed Wood and Snag Creation

G-031 Contract Term

Purchaser shall complete all work required by this contract prior to October 31, 2021.

G-040 Contract Term Adjustment - No Payment

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

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

G-051 Contract Term Extension - Payment

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

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

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

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

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

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

- e. Payment of \$953.00 per acre per annum for the acres on which an operating release has not been issued within Unit #1. Payment of \$137.00 per acre per annum for the acres on which an operating release has not been issued within Units #2 - #5
- f. In no event will the extension charge be less than \$200.00.
- g. Extension payments are non-refundable.

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

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

#### G-060 Exclusion of Warranties

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

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

descriptions of the forest products to be conveyed are estimates only, made solely for administrative and identification purposes.

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

#### G-062 Habitat Conservation Plan

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

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

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

G-063 Incidental Take Permit Notification Requirements

- a. Purchaser shall immediately notify the Contract Administrator of new locations of permit species covered by the Incidental Take Permits (ITP) that are discovered within the area covered by the State's Habitat Conservation Plan (HCP), including, but not limited to: locations of occupied murrelet habitat; spotted owl nest sites; wolves; grizzly bears; nests, communal roosts, or feeding concentrations of bald eagles; peregrine falcon nests; Columbian white-tailed deer; Aleutian Canada geese; Oregon silverspot butterflies; and additional stream reaches found to contain bull trout. Purchaser is required to notify the Contract Administrator upon discovery of any fish species found in streams or bodies of water classified as non-fish bearing. In all circumstances, notification must occur within a 24 hour time period.
- b. Upon locating any live, dead, injured, or sick specimens of any permit species covered by the ITP, Purchaser shall immediately notify the Contract Administrator. Purchaser shall notify the Contract Administrator if there is any doubt as to the identification of a discovered permit species. Purchaser may be required to take certain actions to help the Contract Administrator safeguard the well-being of any live, injured or sick specimens of any permit species discovered, until the proper disposition of such specimens can be determined by the Contract Administrator. Any such requirements will be explained to Purchaser by the Contract Administrator during the Pre-Work Conference. In all circumstances, notification must occur within a 24 hour time period.
- c. Purchaser shall refer to a specific ITP number, PRT-812521 or ITP 1168 (copies which are located in the region office) in all correspondence and reports concerning permit activities.
- d. Provisions and requirements of the ITP shall be clearly presented and explained to Purchaser by Contract Administrator during the Pre-Work Conference as per contract clause G-330. All applicable provisions of the ITP and this schedule must be presented and clearly explained by Purchaser to all authorized officers, employees, contractors, or agents of Purchaser conducting authorized activities in the timber sale area. Any questions Purchaser may have about the ITP should be directed to the Contract Administrator.

G-064 Permits

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

## G-065 Regulatory Disclaimer

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

## G-066 Governmental Regulatory Actions

## a. Risk

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

## b. Sale Area

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

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

## c. Adjustment of Price

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

## G-070 Limitation on Damage

In the event of a breach of any provision of this contract by the State, the exclusive remedy available to Purchaser will be limited to a return of the initial deposit, unapplied payments, and credit for unamortized improvements made by Purchaser.

The State shall not be liable for any damages, whether direct, incidental or consequential.

G-080 Scope of State Advice

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

G-091 Sale Area Adjustment

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

G-101 Forest Products Not Designated

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

The pricing schedule has not been set for the sale.

G-111 Title and Risk of Loss

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

G-116 Sustainable Forestry Initiative® (SFI) Certification

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

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

G-120 Responsibility for Work

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

G-121 Exceptions

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

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

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

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

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

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

Nothing contained in clauses G-120 and G-121 shall be construed as relieving Purchaser of responsibility for, or damage resulting from, Purchaser's operations or negligence, nor shall Purchaser be relieved from full responsibility for making good any defective work or materials. Authorization to haul does not warrant that Purchaser

built roads are free from material defect and the State may require additional work, at Purchasers expense regardless of cost, to remedy deficiencies at any time.

G-140 Indemnity

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

G-150 Insurance

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

#### G-160 Agents

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

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

G-170 Assignment and Delegation

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

G-180 Modifications

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

G-190 Contract Complete

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

G-200 Notice

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

G-210 Violation of Contract

G-220 State Suspends Operations

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

G-210 Violation of Contract

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

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

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

G-220 State Suspends Operation

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

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

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

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

G-230 Unauthorized Activity

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

G-240 Dispute Resolution

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

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

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

G-250 Compliance with All Laws

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

G-260 Venue

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

G-270 Equipment Left on State Land

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

G-280 Operating Release

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

G-310 Road Use Authorization

Purchaser is authorized to use the following State roads and roads for which the State has acquired easements and road use permits; on the 5000, 5050, 5060, 5065, and 5065-1 roads. The State may authorize in writing the use of other roads subject to fees, restrictions, and prior rights.

## G-330 Pre-work Conference

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

## G-340 Preservation of Markers

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

## G-360 Road Use Reservation

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

## G-370 Blocking Roads

Purchaser shall not block the 5000 Road, unless authority is granted in writing by the Contract Administrator.

## G-396 Public Hauling Permit

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

## G-430 Open Fires

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

## G-450 Encumbrances

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

Easement, including the terms and provisions thereof,  
For: Road  
In Favor of: Weyerhaeuser Company  
Disclosed by Application No.: 50-033750  
Granted: 9/20/1968  
Expires: Indefinite

Lease, including the terms and provisions thereof,  
For: Special Use  
In Favor of: University of Washington  
Disclosed by Application No.: 60-058598  
Granted: 5/1/1967  
Expires: Indefinite

Lease, including the terms and provisions thereof,  
For: Land Use License  
In Favor of: Washington Department of Fish & Wildlife  
Disclosed by Application No.: 60-095576  
Granted: 5/2/2017  
Expires: 6/30/2022

#### Region Encumbrances

Lease, including the terms and provisions thereof,  
For: Land Use License  
In Favor of: King County Explorer Search & Rescue  
Disclosed by Application No.: 60-WS1022  
Granted: 3/1/2019  
Expires: 2/28/2021

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

Located within the Point Elliott Treaty area. Intergovernmental agreements for vehicle access with Upper Skagit Indian Tribe (92-095271), Lummi Nation (92-095265), Tulalip Tribes (92-095266), Stillaguamish Indian Tribe (92-095270), Muckleshoot Tribe (92-095267), Swinomish Indian Tribal Community (92-095263), Nooksack Tribe (92-097221) Sauk – Suiattle Indian Tribe (92-097419), and Snoqualmie Tribe (92-099315).

## Section P: Payments and Securities

## P-011 Initial Deposit

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

## P-020 Payment for Forest Products

Purchaser agrees to pay the total, lump sum contract price of \$84,578.00. The total contract price consists of a \$0.00 contract bid price plus \$84,578.00 in fees. Fees collected shall be retained by the state unless the contract is adjusted via the G-066 clause. Purchaser shall be liable for the entire purchase price, and will not be entitled to any refunds or offsets unless expressly stated in this contract.

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

## P-045 Guarantee of Payment

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

## P-050 Billing Procedure

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

## P-080 Payment Account Refund

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

## P-090 Performance Security

Purchaser agrees to furnish, within 30 days of the confirmation date, security acceptable to the State in the amount of \$100,000.00. The Security provided shall

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

P-100 Performance Security Reduction

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

Section H: Harvesting Operations

H-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-012 Leave Tree Damage Definition

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

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

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

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

**H-013 Reserve Tree Damage Definition**

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

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

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

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

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

**H-015 Skid Trail Requirements**

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

Purchaser shall comply with the following during the yarding operation:

- a. Skid trails will not exceed 15 feet in width, including rub trees.
- b. Skid trails shall not cover more than 10 percent of the total acreage on one unit.
- c. Skid trail location will be pre-approved by the Contract Administrator.
- d. Except for rub trees, skid trails shall be felled and yarded prior to the felling of adjacent timber.
- e. Rub trees shall be left standing until all timber tributary to the skid trail has been removed.

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

The above requirements apply to Units #2 - #5.

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

H-017 Preventing Excessive Soil Disturbance

Operations may be suspended when soil rutting exceeds 12 inches as measured from the natural ground line. To reduce soil damage, the Contract Administrator may require water bars to be constructed, grass seed to be placed on exposed soils, or other mitigation measures. Suspended operations shall not resume unless approval to do so has been given, in writing, by the Contract Administrator.

H-035 Fall Trees Into Sale Area

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

H-051 Branding and Painting

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

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

H-080 Snags Not to be Felled

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

H-120 Harvesting Equipment

Forest products sold under this contract shall be harvested and removed using cable and tracked ground based equipment, with cable-tethered equipment limited to sustained slopes 75 percent or less, self-leveling equipment limited to sustained slopes 65 percent or less, and all other tracked ground based equipment limited to sustained slopes 45 percent or less. Only self-leveling or tethered equipment or cable yarding is permitted where shown on the Timber Sale Map due to sensitive soils. Authority to use other equipment or to operate outside the equipment specifications detailed above must be approved in writing by the State.

## H-140 Special Harvest Requirements

Purchaser shall accomplish the following during the harvest operations:

- a. Falling, yarding, and timber haul will not be permitted from November 1 to April 30, unless authority to do so is granted, in writing, by the Contract Administrator. If permission is granted to operate from November 1 to April 30, preventative measures may be required to protect water, soil, roads and other forest assets.
- b. Equipment limitation zones are required within 30 feet of Type 5 streams and within 50 feet of Type 3 and 4 streams.
- c. Crossing of Type 5 streams may be allowed at locations approved in writing by the Contract Administrator. Purchaser shall place a culvert or log puncheon at crossing locations, when water is present, to protect the stream bank and prevent sedimentation. All materials placed in and/or over the stream at these crossings shall be removed immediately upon completion of yarding on that skid trail.
- d. Any and all operations associated with this sale may be temporarily suspended when, in the opinion of the Contract Administrator, there is the potential for delivery to typed water.
- e. Notify all employees and contractors working on this sale that any danger tree marked or unmarked may be felled. Any marked danger tree will be replaced with a suitable tree of similar size and species as approved by the Contract Administrator.
- f. Within shovel logging areas, and when yarding and loading operations are occurring simultaneously, an additional shovel will be required for loading to avoid extra trips to the landing. No more than one round trip per shovel road is allowed.
- g. Take measures throughout operations to control soil erosion, water channelization, and prevent sediment delivery to streams or wetlands. Methods may include construction of water bars, "sweeping" with logs, silt traps, or other measures on skid trails, yarding corridors and haul roads.
- h. No more than two skid trails open to active skidding at any one time is allowed.
- i. Skid trail closure will occur immediately upon completion of yarding all tributary timber. Closure shall consist of creating water bars or other methods as directed by the Contract Administrator to prevent water accumulation and sediment movement.

- j. To facilitate proper reforestation in areas of high slash concentrations, Purchaser shall, in concurrence with ground based yarding, clear plantable spots at a 11.5 foot by 11.5 foot spacing within Unit #1.
- k. In the event operations become inactive for long periods of time, skid trails shall be water barred prior to completion of yarding tributary timber to prevent water accumulation and sediment movement, if required by the Contract Administrator.
- l. Once a skid trail is closed, the Purchaser shall not reopen a skid trail unless approved in writing by the Contract Administrator.
- m. Units #2, #3, #4, and #5 are Riparian Management Zone (RMZ) thinning units. Take trees have been 100% marked with one band of pink paint. Trees marked with two bands of red paint and a "S" and trees marked with one band of red paint and a "D" are not to be removed. These are trees identified for snags or down wood to be created by the Purchaser as described in Schedule A.
- n. Existing downed trees or logs dead for more than 5 years yarded to the landing shall be returned to their original locations.

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

H-141 Additional Harvest Requirements

Purchaser shall accomplish the following during the harvest operations:

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

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

H-190 Completion of Settings

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

H-220 Protection of Residual or Adjacent Trees

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

H-230 Tops and Limbs Outside the Sale Boundary

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

**H-250 Additional Felling Requirements**

Within Unit #1, all vine maple stems [4], shall be felled leaving a stem no more than 12 inches in height. [6] Areas of young or immature timber may be excluded from this requirement by the Contract Administrator.[7]

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

Road construction and associated work provisions of the Road Plan for this sale, dated 4/19/2019 are hereby made a part of this contract.

**C-050 Purchaser Road Maintenance and Repair**

Purchaser shall perform work at their own expense on all roads used. All work shall be completed to the specifications detailed in the Road Plan.

**C-090 Landing Location**

Landings shall be built within Unit #1 at least 50 feet off the 5000 road(s).

**Section S: Site Preparation and Protection****S-001 Emergency Response Plan**

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

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

**S-010 Fire Hazardous Conditions**

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

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

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

**S-050 Cessation of Operations for Low Humidity**

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

## S-060 Pump Truck or Pump Trailer

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

## S-130 Hazardous Materials

## a. Hazardous Materials and Waste - Regulatory Compliance

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

## b. Hazardous Materials Spill Prevention

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

## c. Hazardous Materials Spill Containment, Control and Cleanup

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

## d. Hazardous Material Release Reporting

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

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

DNR Contract Administrator

ECY - Northwest Region:

1-425-649-7000

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

ECY - Southwest Region:

1-360-407-6300

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

ECY - Central Region:

1-509-575-2490

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

ECY - Eastern Region:

1-509-329-3400

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

#### S-131 Refuse Disposal

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

#### Section D: Damages

##### D-013 Liquidated Damages or Failure to Perform

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

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

D-040 Leave Tree Excessive Damage

When Purchaser's operations exceed the damage limits set forth in clause H-012, Leave Tree Damage Definition, the trees damaged result in substantial injury to the State. The value of the damaged leave trees at the time of the breach is not readily ascertainable. Therefore, Purchaser agrees to pay the State as liquidated damages at the rate of \$1,000.00 per tree for all damaged trees in Units #2 - #5.

D-041 Reserve Tree Excessive Damage

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

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

STATE OF WASHINGTON  
DEPARTMENT OF NATURAL RESOURCES

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

\_\_\_\_\_  
Scott Sargent  
South Puget Sound Region Manager

Date: \_\_\_\_\_  
Address:

Date: \_\_\_\_\_

CORPORATE ACKNOWLEDGEMENT  
(Required for both LLC and Inc. Entities)

STATE OF \_\_\_\_\_ )

COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, before me personally appeared \_\_\_\_\_

\_\_\_\_\_ to me known to be the \_\_\_\_\_ of the corporation that executed the within and foregoing instrument and acknowledged said instrument to be the free and voluntary act and deed of the corporation, for the uses and purposes therein mentioned, and on oath stated that (he/she was) (they were) authorized to execute said instrument.

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

\_\_\_\_\_  
Notary Public in and for the State of

\_\_\_\_\_  
My appointment expires \_\_\_\_\_

**Schedule A**  
**Recruitment of Downed Wood and Snag Creation**

In RMZ Thin Units #2 - #5, the Purchaser shall create downed wood and snags as part of DNR's Riparian Forest Restoration Strategy (RFRS). Downed wood and snag creation is marked at a combined rate of five (5) trees per thinned RMZ acre.

Trees designated for down wood creation are marked with 1 band of red paint and the letter "D". Hand falling will be required on any tree designated for down wood creation. These trees are to be felled towards the stream, into the stream where feasible.

Equipment Restriction: No equipment shall operate within 30 feet of Type 5 streams, or within 50 feet of the 100 year floodplain or ordinary high water mark of the Type 3 or 4 streams.

The cutter has the authority to make the below modifications for safety. If any modifications for safety are made, the Purchaser shall notify the Contract Administrator.

- i. If unsafe to fall the tree, the tree may be traded for another nearby tree of similar species and size for falling as down wood towards stream.
- ii. If unsafe to fall the tree towards the stream, the tree may be felled another safer direction.
- iii. If unsafe to fall the tree, the cutter may create a snag instead by completely girdling the bole of the tree through the cambium layer.
- iv. Contract clause H-110 does not apply to down wood in these units; trees may be felled using any stump height that accommodates safe falling practices.

Trees designated for snag creation are marked with 2 bands of red paint and the letter "S". Snags shall be created by completely girdling the bole of the tree in a manner approved by the Contract Administrator.



**WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES**  
**FOREST EXCISE TAX ROAD SUMMARY SHEET**

**Region:**

**Timber Sale Name:**

**Application Number:**

**EXCISE TAX APPLICABLE ACTIVITIES**

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

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

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

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

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

**EXCISE TAX EXEMPT ACTIVITIES**

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

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

All parties must make their own assessment of the taxable or non-taxable status of any work performed under the timber sale contract. The Department of Revenue bears responsibility for determining forest road excise taxes. The Department of Natural Resources developed this form to help estimate the impact of forest excise taxes. However, the information provided may not precisely calculate the actual amount of taxes due. The Department of Revenue is available for consultation by calling 1.800.548.8829.

(Revised 9/18)

# Cruise Narrative

<b>Sale Name: Pumpkin Patch VRH &amp; RMZ Thin</b>	<b>Region: South Puget Sound</b>
<b>App. #: 30-099018</b>	<b>District: Rainier</b>
<b>Lead Cruiser: Aaron Coleman</b>	<b>Completion Date: 6/25/2019</b>
<b>Other Cruisers: n/a</b>	

**Unit acreage specifications:**

Unit #	Cruised acres	Cruised acres agree with sale acres? Yes/No	If acres do not agree explain why.
VRH U1	53.88	Yes	
VDT U2	4.98	Yes	
VDT U3	6.24	Yes	
VDT U4	2.29	Yes	
VDT U5	2.20	Yes	
<b>Total</b>	<b>69.59</b>	<b>Yes</b>	

**Unit cruise specifications:**

Unit #	Sample type (VP, FP, ITS, 100%)	Expansion factor (BAF, full/half)	Sighting height (4.5 ft, 16 ft.)	Grid size (Plot spacing or % of area)	Plot ratio (Cru./Tally)	Total number of plots
VRH U1	VP	54.44 – Majors 40.00 – Minors	4.5 ft	208' x 208'	32:21	53
VDT U2	ITS	DF – 1:10 WH – 1:9.5 RC – 1:3.67 BM – 1:2.5	n/a	n/a	n/a	n/a
VDT U3	ITS	DF – 1:10 WH – 1:10 RC – 1:5 BM – 1:2.42	n/a	n/a	n/a	n/a
VDT U4	ITS	DF – 1:5.5 WH – 1:4.67 RC – 1:2.33 BM – 1:5	n/a	n/a	n/a	n/a
VDT U4	ITS	DF – 1:11 WH – 1:3.5 RC – 1:2	n/a	n/a	n/a	n/a

**Sale/Cruise Description:**

<b>Minor species cruise intensity:</b>	Cruised on appropriate plots.						
<b>Minimum cruise spec:</b>	40% of Form-Factor at 16 feet D.O.B or 5 inch Top, and merchantable top.						
<b>Avg. ring count by sp:</b>	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;"><b>DF =</b></td> <td style="width: 15%; text-align: center;">6</td> <td style="width: 15%;"><b>WH =</b></td> <td style="width: 15%; text-align: center;">7</td> <td style="width: 15%;"></td> <td style="width: 15%;"></td> </tr> </table>	<b>DF =</b>	6	<b>WH =</b>	7		
<b>DF =</b>	6	<b>WH =</b>	7				
	VRH units contain leave tree areas bound with yellow "Leave Tree Area" tags						

<b>Leave/take tree description:</b>	and pink flashers/flagging and single bands of <b>ORANGE</b> paint. VDT unit take trees are 100% marked with pink paint.
<b>Sort Description:</b>	<p><b>HA</b> - Logs meeting the following criteria: Surface characteristics for a high quality A sort will have sound tight knots not to exceed 1 1/2" in diameter, numbering not more than an average of one per foot of log length. May include logs with not more than two larger knots. Knots and knot indicators 1/2" in diameter and smaller shall not be a determining factor. Logs will have a growth ring count of 6 or more rings per inch in the outer third top end of the log. (High Quality sort. Grades SM, 2S, 3S. Lengths 16ft-40ft, 2ft multiples min TDIB 8". Max butt 27")</p> <p><b>HB</b> - Logs meeting the following criteria: Surface characteristics for an Intermediate B sort will have sound tight knots not to exceed 1 1/2" in diameter. May include logs with not more than two larger knots up to 2 1/2" in diameter. Logs will have a growth ring count of 6 or more rings per inch in the outer third to end of the log. (Intermediate sort. Grades 2S, 3S. Lengths 16ft-40ft, 2ft multiples min TDIB 8". Max butt 27").</p> <p><b>D</b> - Domestic quality logs that do not meet high quality or intermediate definitions. (Domestic sort. Grades 2S, 3S, 4S and utility. Lengths 16ft-40ft, min TDIB 5".)</p> <p><b>R</b> - Logs meeting the following criteria: Surface characteristics for a rough log sort will not meet the requirements for a domestic 2S, but still be in limitations for a domestic 3S. Meaning logs will contain excessive knots in excess of 2 1/2" and not exceeding 3" with a recovery of less than 65% of the net scale and greater than 33% of the gross scale. (Rough oversize sort. Grade 3S. Lengths 16ft-40ft, 2ft multiples TDIB 12"+)</p>

**Field observations:**

This sale consists of 1 variable retention harvest (VRH) units and 4 variable density thinning (VDT) units off the 5000rd within the Marckworth State Forest. There is residual blue paint from a previous sale. See Leave/take tree description above pertaining to Pumpkin Patch.

The primary species breakdown for this sale is as follows:  
Douglas-fir (DF): **85%**  
Western Hemlock (WH): **7%**  
Western redcedar (RC): **5%**  
Bigleaf Maple (BM): **3%**

The DF throughout this sale averages 26" diameter with 124' bole height, the WH throughout this sale averages 17" diameter with 99' bole height and the RC throughout this sale averages 18" diameter with 74' bole height. Defect observed consisted of spike knots (consistently around 70-80ft), broken/forked tops, butt rot, and sweep.

All roads to this sale are in good condition and there are good access points into all units. A 383 key is needed to access the units through gate #1004.

**Grant(s):01, 08**

**Prepared by: Aaron Coleman**

**Title: Timber Cruiser**

TC PSPCSTGR **Species, Sort Grade - Board Foot Volumes (Project)**

T26N R08E S07 Ty00U1 THRU T26N R08E S07 Ty00U5	<b>Project: PUMPKIN</b> <b>Acres 69.59</b>	<b>Page 1</b> <b>Date 6/25/2019</b> <b>Time 1:39:20PM</b>
--	---	---

S Spp	So T	Gr rt	ad	% Net BdFt	Bd. Ft. per Acre Def% Gross Net			Total Net MBF	Percent of Net Board Foot Volume								Average Log				Logs Per /Acre	
									Log Scale Dia.				Log Length				Ln Ft	Dia In	Bd Ft	CF/ Lf		
									5-7	8-11	12-15	16+	12-20	21-30	31-35	36-99						
WH	CU	CU			100.0	44											8	6		0.00	5.3	
WH	D	2S		62	9.0	2,138	1,946	135			61	39		1		99	38	15	302	1.79	6.4	
WH	D	3S		32	4.9	1,036	986	69	17	83					5	95	39	8	99	0.68	9.9	
WH	D	4S		5		139	139	10	100				22	47	30		28	5	30	0.32	4.7	
WH	D	UT		1		29	29	2	100				100				13	5	12	0.22	2.4	
<b>WH</b>	<b>Totals</b>			7	8.5	3,387	3,099	216	11	27	39	24	2	3	2	93	29	8	108	0.90	28.7	
DF	CU	CU			100.0	188											5	9		0.00	26.0	
DF	HA	SM		1	2.4	763	745	52				100				100	40	18	520	2.74	1.4	
DF	HA	2S		2		564	564	39			100					100	40	14	283	1.49	2.0	
DF	HA	3S				101	101	7		100						100	40	10	150	0.73	.7	
DF	HB	2S		35	3.4	14,365	13,879	966			23	77	1		99		40	17	458	2.32	30.3	
DF	HB	3S		3	1.3	1,267	1,250	87		98	2				100		40	10	147	0.86	8.5	
DF	D	2S		50	5.2	20,911	19,818	1,379			22	78	0	1	3	96	39	17	484	2.51	40.9	
DF	D	3S		7	.7	2,844	2,824	196	17	83					6	6	88	38	9	105	0.74	27.0
DF	D	4S		1	.8	375	372	26	90	10			2	26	17	55	33	6	40	0.37	9.3	
DF	D	UT		1	1.7	404	398	28	2	50		48	85	15			17	10	74	0.97	5.4	
<b>DF</b>	<b>Totals</b>			85	4.4	41,783	39,951	2,780	2	10	20	68	1	1	2	96	32	13	264	1.72	151.6	
RC	CU	CU			100.0	1											1	9		0.00	2.6	
RC	D	3S		88	13.8	2,473	2,131	148	7	8	14	71		5	95		35	13	252	1.97	8.5	
RC	D	4S		7	1.6	177	174	12	98	2			16	43	41		26	5	27	0.33	6.4	
RC	D	UT		5	.9	118	117	8	23	3		74	52		48		16	7	72	0.73	1.6	
<b>RC</b>	<b>Totals</b>			5	12.5	2,768	2,422	169	14	7	12	66	4	7	89		26	9	127	1.34	19.1	
BM	CU	CU			100.0	160											4	8		0.00	4.2	
BM	D	2S		15	19.2	229	185	13			100			6	94		39	13	188	1.65	1.0	
BM	D	3S		44	2.3	539	527	37		85	15		16	23	29	32	28	10	97	0.83	5.4	
BM	D	4S		30	2.4	366	357	25	88	12			21	10	1	69	31	6	36	0.39	9.8	
BM	D	UT		11		128	128	9		33	67		100				12	13	71	1.27	1.8	
<b>BM</b>	<b>Totals</b>			3	15.8	1,422	1,197	83	26	45	29		24	14	13	49	24	8	54	0.63	22.3	
CW	CU	CU															9	24		0.00	.1	
CW	D	1S		100	25.2	95	71	5			100				100		40	25	860	5.65	.1	
<b>CW</b>	<b>Totals</b>			0	25.2	95	71	5			100				100		25	25	430	4.61	.2	
<b>Totals</b>					5.5	49,455	46,741	3,253	4	12	21	63	2	2	2	94	30	11	211	1.50	221.8	

TC PSTATS						<b>PROJECT STATISTICS</b>				PAGE	1
						<b>PROJECT</b>		<b>PUMPKINP</b>		DATE	6/25/2019
TWP	RGE	SC	TRACT	TYPE		ACRES	PLOTS	TREES	CuFt	BdFt	
26N	08E	07	PUMPKINPAT	00U1	THR	69.59	57	319	S	W	
26N	08E	07	PUMPKINPAT	00U5							
			PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES				
TOTAL			57	319	5.6						
CRUISE			36	217	6.0	5,057	4.3				
DBH COUNT REFOREST COUNT			21	102	4.9						
BLANKS 100 %											
<b>STAND SUMMARY</b>											
SAMPLE TREES		TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC	
DOUG FIR	134	41.0	26.5	124	30.5	157.2	41,783	39,951	8,364	8,319	
WHEMLOCK	26	9.9	17.6	99	4.0	16.9	3,387	3,099	765	755	
WR CEDAR	37	9.2	18.2	74	3.9	16.5	2,768	2,422	657	657	
BL MAPLE	19	12.5	14.1	45	3.6	13.6	1,422	1,197	373	340	
COTWOOD	1	.1	36.0	50	0.1	.6	95	71	19	19	
<b>TOTAL</b>	<b>217</b>	<b>72.7</b>	<b>22.7</b>	<b>101</b>	<b>42.9</b>	<b>204.7</b>	<b>49,455</b>	<b>46,741</b>	<b>10,178</b>	<b>10,089</b>	
CONFIDENCE LIMITS OF THE SAMPLE											
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR											
CL	68.1	COEFF	SAMPLE TREES - BF			# OF TREES REQ.		INF. POP.			
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
DOUG FIR		44.4	3.9	1,172	1,219	1,267					
WHEMLOCK		57.2	11.7	386	437	488					
WR CEDAR		97.5	16.0	491	585	679					
BL MAPLE		54.3	12.8	132	151	170					
COTWOOD											
<b>TOTAL</b>		<b>68.8</b>	<b>4.7</b>	<b>874</b>	<b>918</b>	<b>961</b>	<b>189</b>	<b>96</b>	<b>47</b>		
CL	68.1	COEFF	SAMPLE TREES - CF			# OF TREES REQ.		INF. POP.			
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
DOUG FIR		39.8	3.5	241	250	259					
WHEMLOCK		54.9	11.2	93	105	116					
WR CEDAR		93.7	15.4	133	157	181					
BL MAPLE		47.5	11.2	38	43	48					
COTWOOD											
<b>TOTAL</b>		<b>62.6</b>	<b>4.3</b>	<b>189</b>	<b>198</b>	<b>206</b>	<b>156</b>	<b>80</b>	<b>39</b>		
CL	68.1	COEFF	TREES/ACRE			# OF PLOTS REQ.		INF. POP.			
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
DOUG FIR		66.4	8.8	37	41	45					
WHEMLOCK		167.0	22.1	8	10	12					
WR CEDAR		253.6	33.6	6	9	12					
BL MAPLE		376.2	49.8	6	13	19					
COTWOOD		755.0	99.9	0	0	0					
<b>TOTAL</b>		<b>82.7</b>	<b>10.9</b>	<b>65</b>	<b>73</b>	<b>81</b>	<b>273</b>	<b>139</b>	<b>68</b>		
CL	68.1	COEFF	BASAL AREA/ACRE			# OF PLOTS REQ.		INF. POP.			
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
DOUG FIR		55.3	7.3	146	157	169					
WHEMLOCK		150.6	19.9	14	17	20					
WR CEDAR		184.1	24.4	12	17	21					
BL MAPLE		366.9	48.6	7	14	20					
COTWOOD		755.0	99.9	0	1	1					
<b>TOTAL</b>		<b>48.6</b>	<b>6.4</b>	<b>192</b>	<b>205</b>	<b>218</b>	<b>94</b>	<b>48</b>	<b>24</b>		

**PROJECT STATISTICS****PROJECT PUMPKINP**

TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
26N	08E	07	PUMPKINPAT	00U1	THR	69.59	57	319	S	W
26N	08E	07	PUMPKINPAT	00U5						
CL	68.1	COEFF	NET BF/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR		54.7	7.2	37,061	39,951	42,842				
WHEMLOCK		157.7	20.9	2,453	3,099	3,746				
WR CEDAR		190.4	25.2	1,811	2,422	3,032				
BL MAPLE		365.4	48.4	618	1,197	1,776				
COTWOOD		755.0	99.9	0	71	142				
<b>TOTAL</b>		<b>45.6</b>	<b>6.0</b>	<b>43,918</b>	<b>46,741</b>	<b>49,564</b>	<b>83</b>	<b>42</b>	<b>21</b>	
CL	68.1	COEFF	NET CUFT FT/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR		54.7	7.2	7,717	8,319	8,921				
WHEMLOCK		154.8	20.5	601	755	910				
WR CEDAR		191.3	25.3	490	657	823				
BL MAPLE		363.8	48.1	176	340	503				
COTWOOD		755.0	99.9	0	19	37				
<b>TOTAL</b>		<b>45.2</b>	<b>6.0</b>	<b>9,485</b>	<b>10,089</b>	<b>10,692</b>	<b>82</b>	<b>42</b>	<b>20</b>	
CL	68.1	COEFF	V_BAR/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR				236	254	273				
WHEMLOCK		188.2	24.9	145	184	222				
WR CEDAR		184.0	24.4	110	147	184				
BL MAPLE		192.5	25.5	46	88	131				
COTWOOD		755.0	99.9	0	122	243				
<b>TOTAL</b>		<b>67.0</b>	<b>8.9</b>	<b>215</b>	<b>228</b>	<b>242</b>	<b>179</b>	<b>91</b>	<b>45</b>	

T26N R08E S07 T00U1 T26N R08E S07 T00U1  
 Twp Rge Sec Tract Type Acres Plots Sample Trees CuFt BdFt  
 26N 08E 07 PUMPKINPAT 00U1 53.88 53 178 S W

Spp	S T	So rt	Gr ad	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log				Logs Per /Acre	
					Def%	Gross	Net		Log Scale Dia.				Log Length				Ln Ft	Dia In	Bd Ft	CF/ Lf		
									5-7	8-11	12-15	16+	12-20	21-30	31-35	36-99						
DF		CU	CU		100.0	222												5	9		0.00	31.4
DF		HA	SM	2	2.4	985	962	52				100				100		40	18	520	2.74	1.8
DF		HA	2S	1		729	729	39			100					100		40	14	283	1.49	2.6
DF		HA	3S			131	131	7			100					100		40	10	150	0.73	.9
DF		HB	2S	34	3.4	16,789	16,220	874			22	78	1			99		39	17	461	2.34	35.1
DF		HB	3S	4	1.5	1,493	1,471	79			100					100		40	10	147	0.86	10.0
DF		DM	2S	50	5.2	25,145	23,830	1,284			22	78	0	1	3	96		39	17	480	2.49	49.6
DF		DM	3S	7	.7	3,309	3,285	177	16	84				7	6	87		38	9	105	0.75	31.4
DF		DM	4S			448	448	24	89	11						58		34	6	41	0.37	10.9
DF		DM	UT	2	1.7	500	491	26	2	48		50	84	16				17	10	77	1.00	6.4
<b>DF</b>	<b>Totals</b>			87	4.4	49,751	47,567	2,563	2	10	20	68	1	1	2	95		32	13	264	1.72	180.2
RC		CU	CU															0	11		0.00	2.0
RC		DM	3S	87	14.2	2,696	2,314	125	8	6	9	77			4	96		35	13	263	2.07	8.8
RC		DM	4S	7	1.2	188	185	10	100				17	46		37		26	5	26	0.32	7.1
RC		DM	UT	6	.9	152	151	8	23	3		74	52			48		16	7	72	0.73	2.1
<b>RC</b>	<b>Totals</b>			5	12.7	3,036	2,650	143	15	6	8	71	4	7		89		26	9	132	1.37	20.1
WH		CU	CU		100.0	52												8	5		0.00	5.4
WH		DM	2S	62	9.6	2,176	1,967	106			58	42				100		38	15	309	1.82	6.4
WH		DM	3S	32	5.1	1,069	1,015	55	17	83					6	94		39	8	96	0.67	10.6
WH		DM	4S	4		137	137	7	100				23	39		38		28	5	29	0.30	4.6
WH		DM	UT	2		37	37	2	100				100					13	5	12	0.22	3.1
<b>WH</b>	<b>Totals</b>			6	9.1	3,471	3,155	170	11	27	36	26	2	2	2	94		29	8	105	0.88	30.1
BM		CU	CU		100.0	207												4	8		0.00	5.4
BM		DM	2S	14	20.8	261	207	11			100					100		40	13	190	1.67	1.1
BM		DM	3S	44	1.9	649	636	34		84	16		16	21	31	32		28	10	97	0.82	6.5
BM		DM	4S	30	2.0	455	446	24	89	11			21	8		71		32	6	36	0.39	12.3
BM		DM	UT	12		163	163	9		33	67		100					12	13	71	1.27	2.3
<b>BM</b>	<b>Totals</b>			3	16.3	1,734	1,452	78	27	44	29		24	12	14	50		24	8	53	0.62	27.6
CW		CU	CU															9	24		0.00	.1
CW		DM	1S	100	25.2	123	92	5			100					100		40	25	860	5.65	.1
<b>CW</b>	<b>Totals</b>			0	25.2	123	92	5			100					100		25	25	430	4.61	.2
<b>Type Totals</b>					5.5	58,114	54,916	2,959	4	11	21	64	2	2	2	94		30	11	213	1.51	258.1

**T26N R08E S07 T00U2** **T26N R08E S07 T00U2**  
 Twp Rge Sec Tract Type Acres Plots Sample Trees CuFt BdFt  
 26N 08E 07 PUMPKINPAT 00U2 4.98 1 20 S W

S T	So rt	Gr ad	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log				Logs Per /Acre	
								Log Scale Dia.				Log Length				Ln Ft	Dia In	Bd Ft	CF/ Lf		
								5-7	8-11	12-15	16+	12-20	21-30	31-35	36-99						
DF	CU	CU		100.0	80												8	10		0.00	6.0
DF	HB	2S	9		1,064	1,064	5			100						100	40	14	265	1.54	4.0
DF	HB	3S	8	.0	823	823	4		100						100	39	10	137	0.79	6.0	
DF	DM	2S	78	6.0	8,996	8,454	42			19	81				100	40	18	526	2.68	16.1	
DF	DM	3S	4		462	462	2	48	52					22	78	37	7	77	0.57	6.0	
DF	DM	4S	1		80	80	0	100					100			17	6	20	0.24	4.0	
<b>DF</b>	<b>Totals</b>		73	5.4	11,506	10,884	54	3	10	24	63		1		1	98	33	12	258	1.67	42.2
WH	CU	CU															5	8		0.00	7.6
WH	DM	2S	70	4.5	2,117	2,022	10			58	42			20	80	36	14	265	1.62	7.6	
WH	DM	3S	26	9.3	820	744	4	18	82						100	40	9	98	0.70	7.6	
WH	DM	4S	4		95	95	0	100					40	60		25	6	25	0.30	3.8	
<b>WH</b>	<b>Totals</b>		19	5.7	3,033	2,861	14	8	21	41	29		1	16	83	27	10	107	0.96	26.7	
RC	CU	CU		100.0	15												3	5		0.00	3.7
RC	DM	3S	88	8.6	943	862	4	5	42	53					100	36	11	146	1.21	5.9	
RC	DM	4S	12		111	111	1	100					27	20	53	28	5	30	0.34	3.7	
<b>RC</b>	<b>Totals</b>		6	9.0	1,069	973	5	16	37	47			3	2	95	25	8	73	0.89	13.3	
BM	DM	2S	25	6.7	75	70	0			100				100		30	12	140	1.18	.5	
BM	DM	3S	35	5.0	100	95	0		100				37	63		25	11	95	0.94	1.0	
BM	DM	4S	29	15.8	95	80	0	25	75					56	44	28	8	53	0.68	1.5	
BM	DM	UT	11		30	30	0			100			100			12	12	60	1.28	.5	
<b>BM</b>	<b>Totals</b>		2	8.3	301	276	1	7	56	36			24	64	13	25	10	79	0.88	3.5	
<b>Type Totals</b>				5.8	15,909	14,994	75	5	15	29	52		1	4	1	93	29	11	175	1.34	85.7

T26N R08E S07 T00U3										T26N R08E S07 T00U3				
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt					
26N	08E	07	PUMPKINPAT	00U3	6.24	1	32	S	W					

Spp	S T	So rt	Gr ad	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log				Logs Per /Acre	
					Def%	Gross	Net		Log Scale Dia.				Log Length				Ln Ft	Dia In	Bd Ft	CF/ Lf		
									5-7	8-11	12-15	16+	12-20	21-30	31-35	36-99						
DF		CU	CU		100.0	112												6	9		0.00	9.6
DF		HB	2S	59	4.2	10,946	10,481	65			26	74				100		40	17	467	2.36	22.4
DF		HB	3S	2		321	321	2			100					100		40	12	200	1.01	1.6
DF		DM	2S	26	3.1	4,696	4,551	28			31	69				100		40	18	568	2.72	8.0
DF		DM	3S	12	.8	2,051	2,035	13	14	86				5	95		38	9	106	0.74	19.2	
DF		DM	4S			96	96	1	100							67		32	5	30	0.27	3.2
DF		DM	UT	1	.0	80	80	0	20	80			100					13	8	25	0.40	3.2
<b>DF</b>	<b>Totals</b>			74	4.0	18,301	17,564	110	2	10	26	62	0	0	1	99	33	12	261	1.64	67.3	
WH		CU	CU		100.0	48												16	5		0.00	4.8
WH		DM	2S	62	8.4	2,484	2,276	14			71	29				100		40	14	284	1.72	8.0
WH		DM	3S	32	1.4	1,170	1,154	7	18	82						100		40	9	120	0.68	9.6
WH		DM	4S	6		208	208	1	100				15	85				24	6	32	0.42	6.4
<b>WH</b>	<b>Totals</b>			15	7.0	3,910	3,638	23	11	26	44	18	1	5		94	32	9	126	0.94	28.8	
RC		CU	CU															3	6		0.00	5.6
RC		DM	3S	92	10.3	2,260	2,027	13		18	47	35			2	98		36	12	195	1.50	10.4
RC		DM	4S	8	4.8	168	160	1	100				10	40		50		28	6	33	0.36	4.8
<b>RC</b>	<b>Totals</b>			9	9.9	2,428	2,188	14	7	17	43	33	1	5		94	25	9	105	1.16	20.8	
BM		CU	CU															1	11		0.00	.8
BM		DM	2S	45	6.6	237	221	1			100				28	72		36	13	190	1.53	1.2
BM		DM	3S	44	8.5	229	209	1		100			15	24		61		33	9	90	0.85	2.3
BM		DM	4S	11	13.3	58	50	0	38	62			23	77				21	7	32	0.43	1.6
<b>BM</b>	<b>Totals</b>			2	8.1	524	481	3	4	50	46		9	31		60	26	10	83	0.94	5.8	
<b>Type Totals</b>					5.1	25,163	23,870	149	4	14	31	51	1	2	0	97	31	11	194	1.38	122.8	

T26N R08E S07 T00U4										T26N R08E S07 T00U4				
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt					
26N	08E	07	PUMPKINPAT	00U4	2.29	1	10	S	W					

S T	So rt	Gr ad	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log				Logs Per /Acre				
								Log Scale Dia.				Log Length				Ln	Dia	Bd	CF/ Lf					
								5-7	8-11	12-15	16+	12-20	21-30	31-35	36-99	Ft	In	Ft	Lf					
DF	CU	CU																						
DF	DM	2S	93	6.3	11,480	10,760	25			10	90				100			10	9			0.00		2.4
DF	DM	3S	4		432	432	1		100						100			40	19		560	2.77		19.2
DF	DM	UT	3		312	312	1		100					100				40	11		180	1.12		2.4
DF																		18	10		65	0.73		4.8
<b>DF</b>	<b>Totals</b>		66	5.9	12,225	11,504	26		6	9	84			3		97		34	16		399	2.37		28.8
RC	CU	CU																4	11			0.00		4.1
RC	DM	3S	96	17.1	3,388	2,808	6			20	80			22		78		34	17		394	2.97		7.1
RC	DM	4S	4	8.3	122	112	0	36	64						100			36	7		55	0.62		2.0
<b>RC</b>	<b>Totals</b>		17	16.8	3,510	2,920	7	1	2	19	77			22		78		25	14		221	2.32		13.2
WH	CU	CU																10				0.00		2.0
WH	DM	2S	65	7.3	1,958	1,815	4			100					100			40	14		297	1.66		6.1
WH	DM	3S	30	4.8	857	816	2		100						100			40	10		133	0.82		6.1
WH	DM	4S	5	.0	122	122	0	100						33	67			24	6		30	0.36		4.1
<b>WH</b>	<b>Totals</b>		16	6.2	2,937	2,753	6	4	30	66				1	3	96		32	10		150	1.10		18.4
BM	DM	3S	85	7.7	284	262	1		100						100			30	11		120	1.21		2.2
BM	DM	4S	15		44	44	0	100						100				20	6		20	0.43		2.2
<b>BM</b>	<b>Totals</b>		2	6.7	328	306	1	14	86					14	86			25	9		70	0.90		4.4
<b>Type Totals</b>				8.0	18,999	17,483	40	1	11	20	68			2	6	92		31	13		270	1.91		64.8





TC TSTATS				STATISTICS				PAGE	2	
				PROJECT	PUMPKINP			DATE	6/25/2019	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
26N	08E	07	PUMPKINPAT	00U1	53.88	53	246	S	W	
CL:	68.1 %	COEFF	NET BF/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR		53.7	7.4	44,059	47,567	51,074				
WR CEDAR		208.1	28.6	1,893	2,650	3,407				
WHEMLOCK		167.4	23.0	2,430	3,155	3,881				
BL MAPLE		374.8	51.4	705	1,452	2,199				
COTWOOD		728.0	99.9	0	92	184				
<b>TOTAL</b>		<b>41.7</b>	<b>5.7</b>	<b>51,776</b>	<b>54,916</b>	<b>58,056</b>	<b>69</b>	<b>35</b>	<b>17</b>	
CL:	68.1 %	COEFF	NET CUFT FT/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR		53.8	7.4	9,168	9,899	10,630				
WR CEDAR		209.6	28.8	510	716	921				
WHEMLOCK		163.5	22.4	599	772	946				
BL MAPLE		374.2	51.4	200	411	622				
COTWOOD		728.0	99.9	0	24	48				
<b>TOTAL</b>		<b>40.7</b>	<b>5.6</b>	<b>11,161</b>	<b>11,822</b>	<b>12,483</b>	<b>66</b>	<b>34</b>	<b>17</b>	
CL:	68.1 %	COEFF	V-BAR/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR				236	254	273				
WR CEDAR		168.2	23.1	105	146	188				
WHEMLOCK		129.7	17.8	139	181	222				
BL MAPLE				42	87	132				
COTWOOD		728.0	99.9	0	122	243				
<b>TOTAL</b>		<b>151.6</b>	<b>20.8</b>	<b>216</b>	<b>229</b>	<b>242</b>	<b>918</b>	<b>468</b>	<b>229</b>	

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT	PUMPKINP			DATE	6/25/2019	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
26N	08E	07	PUMPKINPAT	00U2	4.98	1	20	S	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
					TREES	TREES				
TOTAL		1	20	20.0						
CRUISE		1	20	20.0	130		15.4			
DBH COUNT										
REFOREST										
COUNT										
BLANKS										
100 %										
<b>STAND SUMMARY</b>										
	SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET
	TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC
DOUG FIR	6	12.0	26.0	118	8.7	44.4	11,506	10,884	2,313	2,293
WHEMLOCK	4	7.6	18.9	101	3.4	14.8	3,033	2,861	687	686
WR CEDAR	6	4.4	17.9	92	1.8	7.7	1,069	973	295	292
BL MAPLE	4	2.0	16.5	46	0.7	3.0	301	276	78	78
<b>TOTAL</b>	<b>20</b>	<b>26.1</b>	<b>22.2</b>	<b>103</b>	<b>14.9</b>	<b>69.9</b>	<b>15,909</b>	<b>14,994</b>	<b>3,373</b>	<b>3,349</b>
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL:	68.1 %	COEFF	<b>SAMPLE TREES - BF</b>				# OF TREES REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	71.4	31.8		616	903	1,190				
WHEMLOCK	67.5	38.6		230	375	520				
WR CEDAR	69.7	31.0		152	220	288				
BL MAPLE	46.5	26.6		101	138	174				
<b>TOTAL</b>	<b>109.0</b>	<b>25.0</b>		<b>330</b>	<b>440</b>	<b>549</b>	<b>500</b>	<b>255</b>	<b>125</b>	
CL:	68.1 %	COEFF	<b>SAMPLE TREES - CF</b>				# OF TREES REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	65.8	29.3		135	190	246				
WHEMLOCK	57.9	33.1		60	90	120				
WR CEDAR	66.0	29.4		47	66	86				
BL MAPLE	25.5	14.6		33	39	44				
<b>TOTAL</b>	<b>91.4</b>	<b>21.0</b>		<b>81</b>	<b>103</b>	<b>124</b>	<b>352</b>	<b>179</b>	<b>88</b>	

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT	PUMPKINP			DATE	6/25/2019	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
26N	08E	07	PUMPKINPAT	00U3	6.24	1	32	S	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
				PLOTS	TREES	TREES	TREES			
TOTAL	1		32	32.0						
CRUISE	1		32	32.0		232	13.8			
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	12	19.2	25.6	125	13.6	68.7	18,301	17,564	3,673	3,647
WHEMLOCK	6	9.6	18.8	111	4.3	18.5	3,910	3,638	889	877
WR CEDAR	7	5.6	21.5	111	3.1	14.2	2,428	2,188	603	603
BL MAPLE	7	2.7	16.8	58	1.0	4.2	524	481	143	143
<b>TOTAL</b>	<b>32</b>	<b>37.2</b>	<b>22.8</b>	<b>114</b>	<b>22.1</b>	<b>105.5</b>	<b>25,163</b>	<b>23,870</b>	<b>5,307</b>	<b>5,269</b>
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL:	68.1 %	COEFF	SAMPLE TREES - BF				# OF TREES REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	70.0	21.1		721	913	1,106				
WHEMLOCK	56.3	25.1		283	378	473				
WR CEDAR	60.0	24.4		295	390	485				
BL MAPLE	45.2	18.4		145	177	210				
<b>TOTAL</b>	<b>94.5</b>	<b>16.7</b>		<b>448</b>	<b>538</b>	<b>627</b>	<b>357</b>	<b>182</b>	<b>89</b>	
CL:	68.1 %	COEFF	SAMPLE TREES - CF				# OF TREES REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	61.3	18.5		155	190	225				
WHEMLOCK	58.1	25.9		68	91	115				
WR CEDAR	63.0	25.6		80	107	135				
BL MAPLE	38.0	15.5		44	53	61				
<b>TOTAL</b>	<b>78.3</b>	<b>13.8</b>		<b>106</b>	<b>123</b>	<b>140</b>	<b>245</b>	<b>125</b>	<b>61</b>	

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT	PUMPKINP			DATE	6/25/2019	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
26N	08E	07	PUMPKINPAT	00U4	2.29	1	10	S	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
				PLOTS	TREES	TREES	TREES			
TOTAL		1	10	10.0						
CRUISE		1	10	10.0	43		23.5			
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	3	7.2	32.0	139	7.1	40.3	12,225	11,504	2,302	2,301
WR CEDAR	3	3.1	31.7	124	3.0	16.7	3,510	2,920	771	770
WHEMLOCK	3	6.1	20.1	100	3.0	13.4	2,937	2,753	641	641
BL MAPLE	1	2.2	18.0	52	0.9	3.9	328	306	98	98
<b>TOTAL</b>	<i>10</i>	<i>18.6</i>	<i>27.1</i>	<i>113</i>	<i>14.3</i>	<i>74.3</i>	<i>18,999</i>	<i>17,483</i>	<i>3,813</i>	<i>3,811</i>
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL:	68.1 %	COEFF	SAMPLE TREES - BF				# OF TREES REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	13.4	9.3		1,448	1,597	1,745				
WR CEDAR	49.1	34.0		632	957	1,282				
WHEMLOCK	22.6	15.6		380	450	520				
BL MAPLE										
<b>TOTAL</b>	<i>65.2</i>	<i>21.7</i>		<i>716</i>	<i>915</i>	<i>1,114</i>	<i>188</i>	<i>96</i>	<i>47</i>	
CL:	68.1 %	COEFF	SAMPLE TREES - CF				# OF TREES REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	11.4	7.9		294	319	345				
WR CEDAR	50.5	35.0		164	252	341				
WHEMLOCK	18.9	13.1		91	105	119				
BL MAPLE										
<b>TOTAL</b>	<i>59.6</i>	<i>19.8</i>		<i>166</i>	<i>207</i>	<i>249</i>	<i>157</i>	<i>80</i>	<i>39</i>	

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT	PUMPKINP			DATE	6/25/2019	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
26N	08E	07	PUMPKINPAT	00U5	2.20	1	11	S	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
				PLOTS	TREES	TREES	TREES			
TOTAL		1	11	11.0						
CRUISE		1	11	11.0	61		18.0			
DBH COUNT										
REFOREST										
COUNT										
BLANKS										
100 %										
<b>STAND SUMMARY</b>										
	SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET
	TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC
DOUG FIR	4	20.0	22.9	115	11.9	57.1	12,550	12,350	2,777	2,779
WHEMLOCK	2	3.2	18.6	106	1.4	6.0	1,098	1,098	265	265
WR CEDAR	5	4.5	11.3	61	0.9	3.2	255	255	74	74
<b>TOTAL</b>	<b>11</b>	<b>27.7</b>	<b>20.9</b>	<b>105</b>	<b>14.5</b>	<b>66.2</b>	<b>13,902</b>	<b>13,702</b>	<b>3,116</b>	<b>3,118</b>
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL:	68.1 %	COEFF	<b>SAMPLE TREES - BF</b>				# OF TREES REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	50.7	29.0		439	618	796				
WHEMLOCK	51.2	48.0		179	345	511				
WR CEDAR	29.9	14.8		48	56	64				
<b>TOTAL</b>	<b>102.6</b>	<b>32.4</b>		<b>211</b>	<b>313</b>	<b>414</b>	<b>462</b>	<b>236</b>	<b>116</b>	
CL:	68.1 %	COEFF	<b>SAMPLE TREES - CF</b>				# OF TREES REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	47.1	26.9		102	139	176				
WHEMLOCK	38.4	35.9		53	83	113				
WR CEDAR	34.0	16.9		13	16	19				
<b>TOTAL</b>	<b>94.6</b>	<b>29.9</b>		<b>51</b>	<b>73</b>	<b>95</b>	<b>393</b>	<b>201</b>	<b>98</b>	

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

T26N R08E S07 Ty00U1	53.8
T26N R08E S07 Ty00U2	4.9
T26N R08E S07 Ty00U	2.2

**Project PUMPKINP**  
**Acres 69.59**

**Page No 1**  
**Date: 6/25/2019**  
**Time 1:39:21PM**

Species	Total	Total	Total	Net Cubic Ft/		CF/ LF	Total CCF		Total MBF	
	Trees	Logs	Tons	Tree	Log		Gross	Net	Gross	Net
DOUG FIR	2,852	8,737	16,589	202.96	66.26	1.79	5,821	5,789	2,908	2,780
WHEMLOCK	691	1,630	1,704	76.09	32.24	0.94	532	526	236	216
WR CEDAR	637	1,148	1,074	71.69	39.81	1.34	457	457	193	169
BL MAPLE	871	1,254	689	27.13	18.84	0.65	260	236	99	83
COTWOOD	6	6	32	226.00	226.00	5.65	13	13	7	5
<b>Totals</b>	<b>5,057</b>	<b>12,775</b>	<b>20,087</b>	<b>138.83</b>	<b>54.96</b>	<b>1.56</b>	<b>7,083</b>	<b>7,021</b>	<b>3,442</b>	<b>3,253</b>

Wood Type Species	Total	Total	Total	Net Cubic Ft/		CF/ LF	Total CCF		Total MBF	
	Trees	Logs	Tons	Tree	Log		Gross	Net	Gross	Net
C	4,180	11,515	19,366	161.98	58.81	1.64	6,810	6,772	3,336	3,164
H	877	1,260	720	28.44	19.79	0.68	273	249	106	88
<b>Totals</b>	<b>5,057</b>	<b>12,775</b>	<b>20,087</b>	<b>138.83</b>	<b>54.96</b>	<b>1.56</b>	<b>7,083</b>	<b>7,021</b>	<b>3,442</b>	<b>3,253</b>

## PRE-CRUISE NARRATIVE

Sale Name: <b>Pumpkin Patch VRH and RMZ Thin</b>	Region: <b>South Puget Sound</b>
Agreement #: <b>30-099018</b>	District: <b>Rainier</b>
Contact Forester: <b>Zach Beebe</b>	Phone/ Location: <b>(253)-736-4830 Ext: /</b>
Alternate Contact: <b>Paul Footen</b>	Phone/ Location: <b>(425)-736-1708 Ext: /</b>

Type of Sale (lump sum, mbf scale, tonnage scale or contract harvest): **Lump Sum**  
 Required or Optional removal of utility as pulp: **Optional**  
 Evaluated for RFRS Implementation?: **Yes, implementing RFRS**  
 Percentage cable (specify downhill vs uphill): **0% Cable**  
 Percentage ground based: **100 % Ground based (95% Ground based / 5% Self-Leveling)**  
 Species Onsite: RC, DF, WH, RA, BC, BLM, NF, SF, SS,  Other:(Please List)

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

Unit #	Harvest R/W or RMZ WMZ	Legal Description Sec/Twp/Rng	Grant	Gross Traversed Acres	Deductions from Gross Acres (No harvest acres)				Net Harvest Acres	Acreage Determination (List method, dimensions and error of closure if applicable)
					RMZ/WMZ Acres	Leave Tree Acres	Existing Road Acres	Other Acres (describe)		
VRH U1		Sec 07/18/ T26N/ R08 E	01/08	58.76	0.00	4.73	0.15	0.00	53.88	Garmin 64s Road 537'L x 12'W / 43560
VDT U2		Sec 07/ T26N/ R08 E	01	4.98	0.00	0.00	0.00	0.00	4.98	Garmin 64s
VDT U3		Sec 07/ T26N/ R08 E	01	6.24	0.00	0.00	0.00	0.00	6.24	Garmin 64s
VDT U4		Sec 07/ T26N/ R08 E	01	2.29	0.00	0.00	0.00	0.00	2.29	Garmin 64s
VDT U5		Sec 18/ T26N/ R08 E	01/08	2.20	0.00	0.00	0.00	0.00	2.20	Garmin 64s
<b>TOTAL ACRES</b>				<b>74.47</b>	<b>0.00</b>	<b>4.73</b>	<b>0.15</b>	<b>0.00</b>	<b>69.59</b>	

### HARVEST PLAN AND SPECIAL CONDITIONS:

Unit #	Harvest Prescription: (Mark leave, take, paint color, tags, flagging etc.)	Special Management areas:	Other conditions (# leave trees, etc.)
VRH U1	<b>Boundary</b> – White “Timber Sale Boundary” Tags, Blue “Special Management Area” Tags, Pink Flashers, Pink Flagging, 5000 Rd. <b>Leave Trees</b> – Yellow “Leave Tree Area” Tags, Pink Flashers, Pink Flagging, Orange Paint.	None	LTA Trees – 434 Dispersed Trees – 38
VDT U2	<b>Boundary</b> – Blue “Special Management Area” Tags, White “Timber Sale Boundary” Tags, Pink Flashers, Pink Flagging, 5000 Rd. <b>Take Trees</b> – 100% Mark Pink Paint <b>Snag/DWD Designates</b> – Red Paint	None	Take Trees DF – 60 trees WH – 38 trees RC – 22 trees BLM – 10 trees

VDT U3	<b>Boundary</b> – Blue “Special Management Area” Tags, White “Timber Sale Boundary” Tags, Pink Flashers, Pink Flagging. <b>Take Trees</b> – 100% Mark Pink Paint <b>Snag/DWD Designates</b> – Red Paint	None	Take Trees DF – 120 trees WH – 60 trees RC – 35 trees BLM – 17 trees
VDT U4	<b>Boundary</b> – Blue “Special Management Area” Tags, White “Timber Sale Boundary” Tags, Pink Flashers, Pink Flagging. <b>Take Trees</b> – 100% Mark Pink Paint <b>Snag/DWD Designates</b> – Red Paint	None	Take Trees DF – 22 trees WH – 14 trees RC – 7 trees BLM – 5 trees
VDT U5	<b>Boundary</b> – Blue “Special Management Area” Tags, White “Timber Sale Boundary” Tags, Pink Flashers, Pink Flagging. <b>Take Trees</b> – 100% Mark Pink Paint <b>Snag/DWD Designates</b> – Red Paint	None	Take Trees DF – 44 trees WH – 7 trees RC – 10 trees

**OTHER PRE-CRUISE INFORMATION:**

Unit #	Estimated Volume	Access information (Gates, locks, etc.)	Photos, traverse maps required
VRH U1	See Cruise	Gate 1004 – Master 383	
VDT U2		Gate 1004 – Master 383	
VDT U3		Gate 1004 – Master 383	
VDT U4		Gate 1004 – Master 383	
VDT U5		Gate 1004 – Master 383	

**REMARKS:**

Evaluate for Poles  
Dispersed Leave Trees in Unit 1 are marked with Orange Paint due to residual blue paint from a previous sale.

Prepared By: Zach Beebe Date: 05/16/2019	Title: Forester	CC:
---	-----------------	-----

*Revised 2/23/2007 (PSLD)*



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

FPA/N No: 2421223

Effective Date: 9/26/2019

Expiration Date: 9/26/2022

Shut Down Zone: 657

EARR Tax Credit:  Eligible  Non-eligible

Reference: Pumpkin Patch #30-099018

Decision

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

FPA/N Classification

Number of Years Granted on Multi-Year Request

- Class II
- Class III
- Class IVG
- Class IVS
- 4 yrs
- 5 yrs

Conditions on Approval / Reasons for Disapproval

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

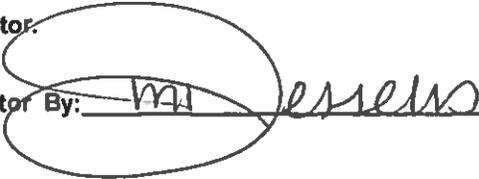
Issued By: Eric Dasso

Region: South Puget Sound

Title: Resource Protection Forester

Date: 9/26/2019

Copies to:  Landowner, Timber Owner and Operator.

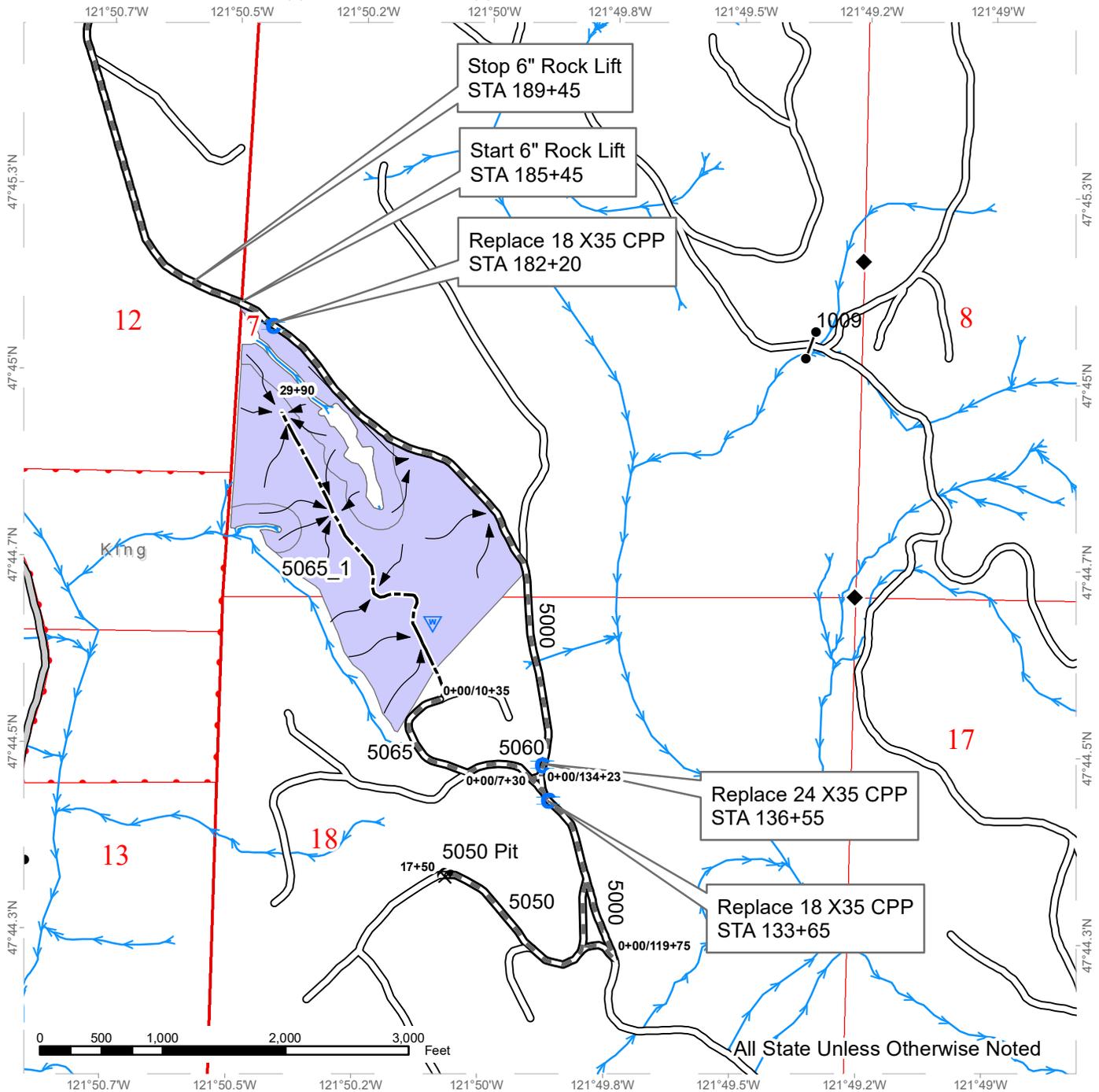
Issued in person:  Landowner  Timber Owner  Operator By: 

AEM 0 27.19

# ROAD WORK MAP 1

**SALE NAME:** PUMPKIN PATCH VRH AND RMZ THIN  
**AGREEMENT#:** 30-099018  
**TOWNSHIP(S):** T26R8E  
**TRUST(S):** Normal School (8), State Forest Transfer (1)

**REGION:** South Puget Sound Region  
**COUNTY(S):** King  
**ELEVATION RGE:** 800-1160



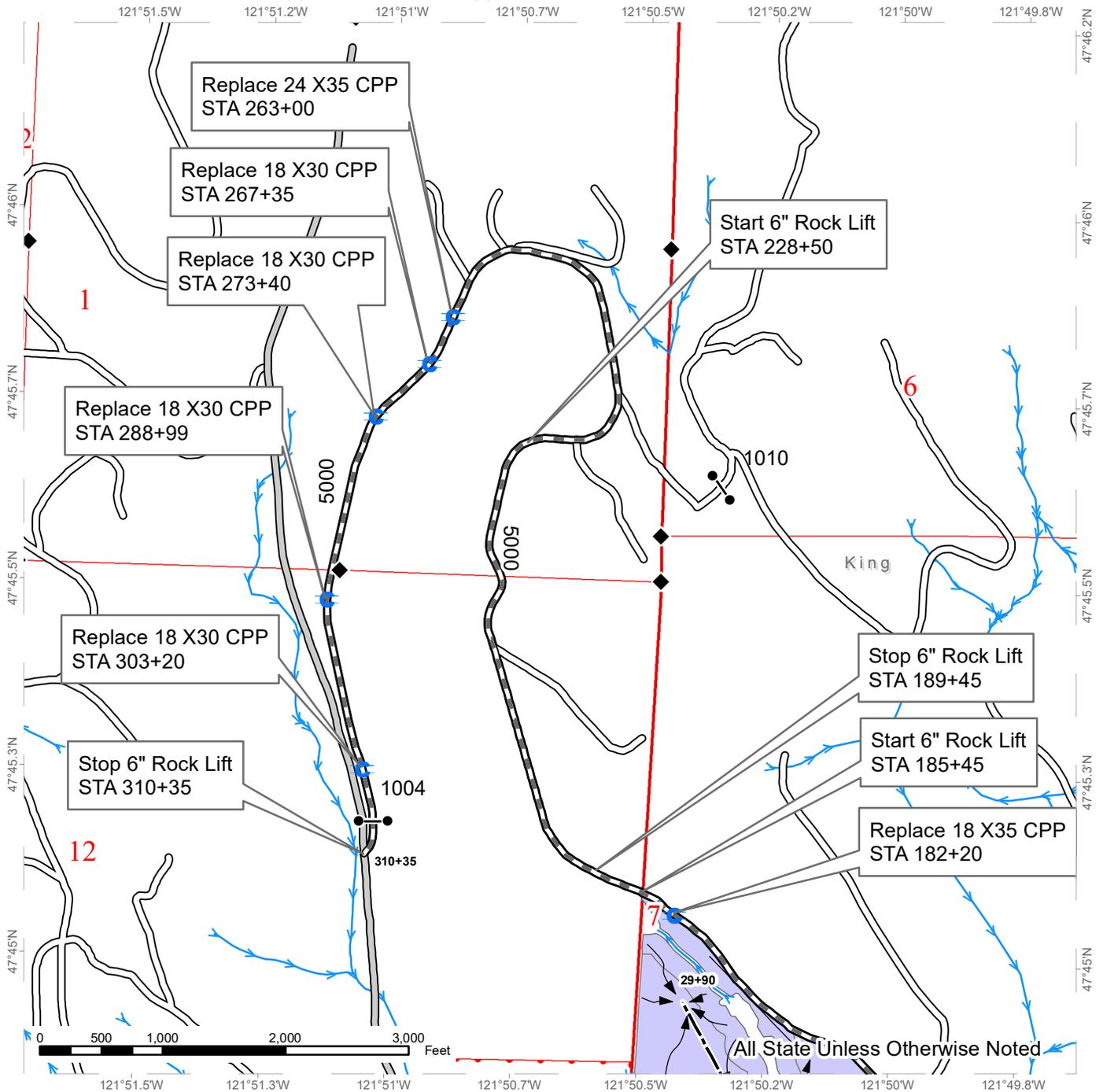
Culvert	County Road
Waste Area	Existing Roads
Rock Pit	Required Pre-Haul Maintenance
Gates (Corporate)	Optional Construction
Survey Monument	Unit



# ROAD WORK MAP 2

**SALE NAME:** PUMPKIN PATCH VRH AND RMZ THIN  
**AGREEMENT#:** 30-099018  
**TOWNSHIP(S):** T26R8E  
**TRUST(S):** Normal School (8), State Forest Transfer (1)

**REGION:** South Puget Sound Region  
**COUNTY(S):** King  
**ELEVATION RGE:** 800-1160



	Culvert		County Road
	Gates (Corporate)		Existing Roads
	Survey Monument		Required Pre-Haul Maintenance
			Optional Construction
			Unit



STATE OF WASHINGTON  
DEPARTMENT OF NATURAL RESOURCES

PUMPKIN PATCH TIMBER SALE ROAD PLAN  
KING COUNTY  
SNOQUALMIE UNIT  
RAINIER DISTRICT

AGREEMENT NO.: 30-099018

STAFF ENGINEER: ERIC BAUER

DATE: 04/19/2019

DRAWN & COMPILED BY: ERIC BAUER

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>
5000	119+75 to 310+35	Pre-Haul Maintenance
5050	0+00 to 17+50	Pre-Haul Maintenance
5060	0+00 to 7+30	Pre-Haul Maintenance
5065	0+00 to 10+35	Pre-Haul Maintenance
5065_1	5+00 to 29+90	Abandon if Built

**0-3 OPTIONAL ROADS**

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

<u>Road</u>	<u>Stations</u>	<u>Type</u>
5065_1	0+00 to 29+90	Construction

**0-4 CONSTRUCTION**

Construction includes, but is not limited to:

- Clearing
- Grubbing
- Right-of-way debris disposal
- Excavation and/or embankment to subgrade
- Abandonment of roads
- Turnout and turnaround construction
- Landing construction
- Acquisition and installation of drainage structures
- Acquisition, manufacture, and application of rock

## **0-6 PRE-HAUL MAINTENANCE**

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

- Cleaning ditches
- Cleaning culverts, and catchbasins
- Ditch reconstruction
- Reconstructing headwalls
- Constructing catchbasin and headwall
- Cross drain culvert replacement
- Live stream culvert replacement
- Grading and shaping existing road surface and turnouts
- Acquisition, manufacture, and application of rock
- Manufacture of stockpile

## **0-10 ABANDONMENT**

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

## **0-12 DEVELOP ROCK SOURCE**

Purchaser may develop an existing rock source. Rock source development will involve reducing oversize material, Clearing, Stripping and Crushing. Work for developing rock sources is listed in Section 6 ROCK AND SURFACING.

# SECTION 1 – GENERAL

## **1-1 ROAD PLAN CHANGES**

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

## **1-2 UNFORESEEN CONDITIONS**

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

## **1-3 ROAD DIMENSIONS**

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

## **1-4 ROAD TOLERANCES**

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

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

**1-6 ORDER OF PRECEDENCE**

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

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

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

**1-8 REPAIR OR REPLACEMENT OF DAMAGED MATERIALS**

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

**1-9 DAMAGED METALLIC COATING**

Any 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.

**SUBSECTION ROAD MARKING**

**1-15 ROAD MARKING**

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

- Pre-haul activities: 2 in. x 48 in. wooden lath with station and activity
- Construction: Orange ribbon tied eye-height along centerline, w/orange pin flags or wooden lath marking centerline

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

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

**1-18 REFERENCE POINT DAMAGE**

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

SUBSECTION TIMING

**1-20 COMPLETE BY DATE**

Purchaser shall complete pre-haul road work before the start of timber haul.

**1-21 HAUL APPROVAL**

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

**1-22 WORK NOTIFICATIONS**

On the following roads, Purchaser shall notify the Contract Administrator a minimum of 3 calendar days before work begins.

<u>Road</u>	<u>Stations</u>
All Pit Locations	Drilling and Blasting

**1-23 ROAD WORK PHASE APPROVAL**

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

- Drainage installation
- Subgrade compaction
- Rock compaction

SUBSECTION RESTRICTIONS

**1-25 ACTIVITY TIMING RESTRICTION**

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

<u>Activity</u>	<u>Closure Period</u>
Operation of road construction equipment or rock haul	November 1 to April 30

**1-26 OPERATING DURING CLOSURE PERIOD**

If permission is granted to operate during a seasonal closure period listed in Clause 1-25 ACTIVITY TIMING RESTRICTION, the Purchaser shall comply with a maintenance plan to include further protection of water, soil, roads, and other forest assets at the Purchaser’s expense. Preventative measures shall be in place prior to operating during the closure period.

**1-29 SEDIMENT RESTRICTION**

Purchaser shall not allow silt-bearing runoff to enter any streams. Purchaser shall accomplish sediment removal through silt traps, silt fences, settling ponds, or other methods as approved, in writing by the Contract Administrator.

**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.

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

**1-32 BRIDGE AND ASPHALT SURFACE RESTRICTION**

The use of metal tracked equipment is not allowed on bridge or asphalt surfaces at any time. If Purchaser must run equipment on bridge or asphalt surfaces, then rubber tired equipment or other methods, approved in writing by Contract Administrator, must be used.

Purchaser shall remove any dirt, rock, or other material tracked or spilled on the bridge or asphalt surface(s) and have surface(s) evaluated for any damage caused by transporting equipment. Any damage to the surface(s) will be repaired, at the Purchaser’s expense, as directed by the Contract Administrator.

**1-33 SNOW PLOWING RESTRICTION**

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

SUBSECTION OTHER INFRASTRUCTURE

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

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

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

SECTION 2 – MAINTENANCE

**2-1 GENERAL ROAD MAINTENANCE**

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

**2-2 ROAD MAINTENANCE – PURCHASER MAINTENANCE**

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

**2-4 PASSAGE OF LIGHT VEHICLES**

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

<u>Road</u>	<u>Stations</u>
5000	119+75 to 310+35

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

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

<u>Road</u>	<u>Stations</u>
5000	119+75 to 310+35
5050	0+00 to 17+50
5060	0+00 to 7+30
5065	0+00 to 10+35

**2-6 CLEANING CULVERTS**

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

<u>Road</u>	<u>Stations</u>
5000	159+20, 165+00, 176+80, 263+95
5060	6+30
5065	5+60, 9+20

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

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

<u>Road</u>	<u>Stations</u>
5000	119+75 to 228+50
5060	0+00 to 7+30
5065	0+00 to 10+35

## SECTION 3 – CLEARING, GRUBBING, AND DISPOSAL

### SUBSECTION CLEARING

#### 3-5 CLEARING

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

#### 3-8 PROHIBITED DECKING AREAS

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

- Within the grubbing limits.
- Within 50 feet of any stream.
- In locations that interfere with the construction of the road prism.
- In locations that impede drainage.
- Against state owned standing trees.

### SUBSECTION GRUBBING

#### 3-10 GRUBBING

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

### SUBSECTION ORGANIC DEBRIS

#### 3-20 ORGANIC DEBRIS DEFINITION

Organic debris is defined as all vegetative material not eligible for removal by Contract Clause G-010 PRODUCTS SOLD AND SALE AREA or G-011 RIGHT TO REMOVE FOREST PRODUCTS AND CONTRACT AREA, that is larger than one cubic foot in volume within the grubbing limits as shown on the TYPICAL SECTION SHEET.

#### 3-21 DISPOSAL COMPLETION

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

#### 3-23 PROHIBITED DISPOSAL AREAS

Purchaser shall not place organic debris in the following areas:

- Within 50 feet of a cross drain culvert.
- Within 100 feet of a live stream, or wetland.
- On road subgrades, or excavation and embankment slopes.
- On slopes greater than 55%.
- On locations where brush can fall into the ditch or onto the road surface.
- Against State owned standing timber.

**3-24 BURYING ORGANIC DEBRIS RESTRICTED**

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

**3-25 SCATTERING ORGANIC DEBRIS**

Purchaser shall scatter organic debris outside of the clearing limits in natural openings. Where natural openings are unavailable or restrictive, alternate debris disposal methods are subject to the written approval of the Contract Administrator.

**SECTION 4 – EXCAVATION**

**4-2 PIONEERING**

Pioneering may not extend past construction that will be completed during the current construction season. In addition, the following actions must be taken as pioneering progresses:

- Drainage must be provided on all uncompleted construction as approved, in writing, by the Contract Administrator.
- Road pioneering operations may not undercut the final cut slope, deposit excavated material outside the grubbing limits, or restrict drainage.
- Culverts at live stream crossings must be installed during pioneering operations

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

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

- Grade and alignment must have smooth continuity, without abrupt changes in direction.
- Maximum grades may not exceed 18 percent favorable and 15 percent adverse.
- Minimum curve radius is 60 feet at centerline.
- Maximum grade change for sag vertical curves is 6% in 100 feet.
- Maximum grade change for crest vertical curves is 4% in 100 feet.

**4-5 CUT SLOPE RATIO**

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

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

**4-6 EMBANKMENT SLOPE RATIO**

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

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

**4-7 SHAPING CUT AND FILL SLOPE**

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

**4-8 CURVE WIDENING**

The minimum widening placed on the inside of curves is:

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

**4-9 EMBANKMENT WIDENING**

The minimum embankment widening is:

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

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

**4-12 FULL BENCH CONSTRUCTION**

Where side slopes exceed 45%, Purchaser shall use full bench construction for the entire subgrade width except as construction staked or designed.

**SUBSECTION DITCH CONSTRUCTION**

**4-21 TURNOUTS**

Purchaser shall construct turnouts as designated on the TURN OUT AND TURNAROUND LIST. Locations may be adjusted to fit the final subgrade alignment and sight distances. Locations changes are subject to written approval by the Contract Administrator. Minimum dimensions are shown on the TYPICAL SECTION SHEET.

**4-22 TURNAROUNDS**

Purchaser shall construct turnarounds as designated on the TURN OUT AND TURNAROUND LIST. Optional Turnarounds must be no larger than 30 feet long and 30 feet wide.

**4-25 DITCH CONSTRUCTION AND RECONSTRUCTION**

Purchaser 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 shall be constructed concurrently with construction of the subgrade. Ditches must drain to cross-drain culverts or ditchouts.

**4-29 DITCHOUTS**

Purchaser shall construct ditchouts as identified in the table below and as directed by the Contract Administrator. Ditchouts must be constructed in a manner that diverts ditch water onto the forest floor and must have excavation backslopes no steeper than a 1:1 ratio. L or R denotes ditchout left or ditchout right.

<u>Road</u>	<u>Stations</u>	<u>&lt;L or R&gt;</u>
5065_1	1+66	Right
5065_1	2+87	Left

**SUBSECTION WASTE MATERIAL (DIRT)**

**4-35 WASTE MATERIAL DEFINITION**

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

**4-36 DISPOSAL OF WASTE MATERIAL**

Purchaser may sidecast waste material on side slopes up to 45% if the waste material is compacted and free of organic debris.

**4-37 WASTE AREA LOCATION**

Purchaser shall deposit waste material in the listed designated areas. Additional waste areas may also be identified or approved by the Contract Administrator. The amount of material allowed in a waste area is at the discretion of the Contract Administrator.

<u>Road</u>	<u>Waste Area Location</u>	<u>Comments</u>
5065_1	5+50	

**4-38 PROHIBITED WASTE DISPOSAL AREAS**

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

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

## SUBSECTION SHAPING

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

Purchaser shall shape each lift of 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.

### **4-56 DRY WEATHER SHAPING**

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

## SUBSECTION COMPACTION

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

Purchaser shall compact all embankment and waste material in accordance with the COMPACTION LIST by routing equipment over the entire width of each lift. Waste material may be placed by end-dumping or sidecasting until sufficiently wide enough to support the equipment.

### **4-61 SUBGRADE COMPACTION**

Purchaser shall compact constructed subgrades in accordance with the COMPACTION LIST by routing equipment over the entire width except ditch. On fills deeper than 5 feet at the road shoulder Purchaser shall compact fill material in lifts no greater than 18 inches. Purchaser shall obtain written approval from the Contract Administrator for subgrade compaction before rock application.

### **4-62 DRY WEATHER COMPACTION**

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

## SECTION 5 – DRAINAGE

### **5-1 REMOVAL OF SHOULDER BERMS**

Purchaser shall remove berms from road shoulders to permit escape of runoff.

## SUBSECTION CULVERTS

### **5-5 CULVERTS**

Purchaser shall install culverts as part of this contract. Culverts must be installed concurrently with subgrade work and must be installed before subgrade compaction and rock application. Culvert locations and the minimum requirements for culvert length and diameter are designated on the CULVERT AND DRAINAGE LIST. Culvert, downspout, and flume lengths may be adjusted to fit as-built conditions and may not terminate directly on unprotected soil. Culverts must meet the specifications in Clauses 10-15 through 10-23.

**5-7 USED CULVERT MATERIAL**

The Purchaser may install used culverts on the following roads. All other roads shall have new culverts installed.

<u>Road</u>	<u>Stations</u>
5065_1	5+00 to 29+90

**5-12 UNUSED MATERIALS STATE PROPERTY**

On required roads, any materials listed on the CULVERT AND DRAINAGE SPECIFICATION DETAIL and materials listed in Clause 5-13 CONTINGENCY CULVERTS that are not installed shall become the property of the state. Purchaser shall stockpile materials as directed by the Contract Administrator.

**5-13 CONTINGENCY CULVERTS**

The following culverts will be supplied by the Purchaser and are available for installation as directed by the Contract Administrator.

<u>Road</u>	<u>Size</u>
On any portion of road used for timber or rock haul	<ul style="list-style-type: none"> <li>• 18"x30' culvert</li> <li>• 18"x30' culvert</li> <li>• 18" culvert band</li> </ul>

**SUBSECTION CULVERT INSTALLATION**

**5-15 CULVERT INSTALLATION**

Culvert, downspout, flume and energy dissipator installation must be in accordance with the CULVERT AND DRAINAGE SPECIFICATION DETAIL and the Corrugated Polyethylene Pipe Association's "Recommended Installation Practices for Corrugated Polyethylene Pipe and Fittings". Culverts over 15 inches diameter shall be banded using lengths of no less than 10 feet, and no more than one length less than 16 feet. Shorter section of banded culvert shall be installed at the inlet end.

**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 12%.

**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.

**SUBSECTION ENERGY DISSIPATERS**

**5-20 ENERGY DISSIPATERS**

Purchaser shall install energy dissipaters in accordance with the CULVERT AND DRAINAGE SPECIFICATION DETAIL at all culverts on the CULVERT LIST that specify the placement of rock. Energy dissipater installation is subject to approval by the Contract Administrator.

The type of energy dissipater and the amount of material must be consistent with the specifications listed on the CULVERT LIST. Placement must be by zero-drop-height method only. No placement by end dumping or dropping of rock is allowed. QUARRY SPALLS shall meet the specifications in Clause 6-43.

SUBSECTION CATCH BASINS, HEADWALLS, AND ARMORING

**5-25 CATCH BASINS**

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

**5-26 HEADWALLS FOR CULVERTS**

Purchaser shall construct headwalls in accordance with the CULVERT AND DRAINAGE SPECIFICATION DETAIL at all culverts on the CULVERT LIST that specify the placement of rock.

**5-33 NATIVE SURFACE ROADS**

If overwintered, native surface roads must be waterbarred by November 1. Purchaser shall construct waterbars according to the attached DRIVABLE WATERBAR DETAIL at a maximum spacing that will produce a vertical distance of no more than 10 feet between waterbars or between natural drainage paths, and with a maximum spacing of 300 feet.

SECTION 6 – ROCK AND SURFACING

SUBSECTION ROCK SOURCE

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

Rock used in accordance with the quantities on the ROCK LIST may be obtained from the following source(s) on state land at no charge to the Purchaser. Purchaser shall obtain written approval from the Contract Administrator for the use of material from any other source. If other operators are using, or desire to use the rock source(s), a joint operating plan must be developed. All parties shall follow this plan. Purchaser shall notify the Contract Administrator a minimum of 3 calendar days before starting any operations in the listed locations.

<u>Source</u>	<u>Location</u>	<u>Rock Type</u>
5050 pit	SE ¼ NW ¼ of Sec 18 T26NR08E W.M.	4 Inch Jaw Run Quarry Spalls

**6-3 ROCK SOURCE STATE LAND, EXISTING STOCKPILE**

Rock used in accordance with the quantities on the ROCK LIST may be obtained from the following existing stockpile(s) on state land at no charge to the Purchaser. Purchaser shall not remove additional yardage without prior written approval from the Contract Administrator.

<u>Source</u>	<u>Location</u>	<u>Rock Type</u>	<u>Quantity</u>
5050 Pit	SE ¼ NW ¼ of Sec 18 T26NR08E W.M.	2 Inch Minus	2504

**6-5 ROCK FROM COMMERCIAL SOURCE**

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

SUBSECTION ROCK SOURCE DEVELOPMENT

**6-10 ROCK SOURCE DEVELOPMENT PLAN BY STATE**

Purchaser shall conduct rock source development and use at the following sources, in accordance with the written ROCK SOURCE DEVELOPMENT PLAN prepared by the state and included in this road plan. Upon completion of operations, the rock source must be left in the condition specified in the ROCK SOURCE DEVELOPMENT PLAN, and approved in writing by the Contract Administrator. Purchaser shall notify the Contract Administrator a minimum of 3 calendar days before starting any operations in the rock source.

<u>Source</u>	<u>Location</u>	<u>Rock Type</u>
5050 Pit	SE ¼ NW ¼ of Sec 18 T26NR08E W.M.	4 Inch Jaw Run Quarry Spalls

**6-12 ROCK SOURCE SPECIFICATIONS**

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

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

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

- Pit walls must be maintained in a condition to minimize the possibility of the walls sliding or failing.
- The width of pit benches must be a minimum of 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.

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

Rock drilling and shooting must meet the following specifications:

- Oversize material remaining in the rock source at the conclusion of the timber sale may not exceed 600 cubic yards.
- Oversize material is defined as rock fragments larger than two feet in any dimension.
- Oversized rock that exceeds the maximum allowable amount must be reduced to a smaller size within the rock source.
- Purchaser shall notify the Contract Administrator a minimum of 3 working days before blasting operations.
- Purchaser shall submit an informational drilling and shooting plan to the Contract Administrator 3 working days before any drilling. The drilling and shooting plan must include, at a minimum, the mapped location and spacing of all holes to be loaded, the type of blasting agent used, the powder factor calculated and the units of same, stem amount held per hole. After drilling, the type of rock encountered while drilling e.g. hard black, soft brown, etc shall be amended to submitted plan.
- All operations must be carried out in compliance with the Regulations and Standards Applicable to Metal and Nonmetal Mining and Milling Operations (30 CFR) U.S. Department of Labor, Mine Safety and Health Administration and the Safety Standards for Construction Work (296-155 WAC), Washington Department of Labor and Industries.
- Purchaser shall block access roads before blasting operations.

### SUBSECTION ROCK MANUFACTURE

#### **6-20 ROCK GRADATION TYPES**

Purchaser shall manufacture rock in accordance with the types and amounts listed in the ROCK LIST. Rock must meet the following specifications for gradation and uniform quality when placed in hauling vehicles. Purchaser shall provide a sieve analysis upon request from the Contract Administrator.

#### **6-23 ROCK CRUSHING OPERATIONS**

Rock crushing operations must conform to the following specifications:

- Operations and placement of oversize material must be conducted in or near the rock source site, as approved in writing by the Contract Administrator.
- The crushing operation must be concluded within 30 working days from the time it begins.

## SUBSECTION ROCK GRADATIONS

### 6-30 2-INCH MINUS CRUSHED ROCK

% Passing 2" square sieve	100%
% Passing 1" square sieve	55 - 75%
% Passing U.S. #4 sieve	20 - 45%

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

### 6-37 4-INCH JAW RUN ROCK

% Passing 4" square sieve	95%
% Passing U.S. #40 sieve	16% maximum
% Passing U.S. #200 sieve	5% maximum

### 6-43 QUARRY SPALLS

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

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

## SUBSECTION ROCK MEASUREMENT

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

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

## SUBSECTION ROCK STOCKPILE

### 6-65 ROCK STOCKPILE LOCATION

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

<u>Rock Source</u>	<u>Rock Type</u>	<u>Quantity (c.y.)</u>	<u>Stockpile Location</u>
5050 Pit	4 Inch Jaw	4000	5050 Pit

### 6-67 ROCK STOCKPILE SPECIFICATIONS

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

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

When completed, the stockpile must be neat and regular in shape. The stockpile height is limited to a maximum of 30 feet. Stockpiles in excess of 200 cubic yards must be built up in layers of not more than 4 feet deep. Stockpile layers must be constructed by trucks, clamshells, or other methods approved in writing by the Contract Administrator. Each layer must be completed over the entire area of the pile before depositing aggregates in the next layer. The aggregates may not be dumped so that they run down and over the lower layers in the stockpile.

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

### SUBSECTION ROCK APPLICATION

**6-70 APPROVAL BEFORE ROCK APPLICATION**

Purchaser shall obtain written approval from the Contract Administrator for subgrade including: ditches, headwalls, catch basins, culverts, energy dissipaters, ditch-outs, subgrade shaping and compacting before rock application.

**6-71 ROCK APPLICATION**

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

**6-73 ROCK FOR WIDENED PORTIONS**

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

**6-75 OPTIONAL ROCK EXCEPTION**

On the following roads, if hauling takes place from May 1 to October 31 the Purchaser may place less rock than shown on the ROCK LIST, as approved in writing by the Contract Administrator. If less rock is applied, the Purchaser shall submit a written plan, for approval, describing how these roads shall be constructed, used and maintained.

<u>Road</u>	<u>Stations</u>
5065_1	0+00 to 29+90

**6-76 PREHAUL ROCK APPLICATION**

On the following road(s), prior to timber haul, Purchaser shall apply rock in accordance with the quantities shown on the ROCK LIST. After rock has been applied and shaped, Purchaser shall compact maintained road surfaces in accordance with the COMPACTION LIST by routing equipment over the entire width. Rock shall be compacted prior to timber haul.

<u>Road</u>	<u>Stations</u>
5000	185+45 to 189+45
5000	228+80 to 310+35
5065	0+00 to 10+35

## SECTION 7 – STRUCTURES

### SUBSECTION STREAM CROSSING STRUCTURES GENERAL

#### 7-5 STRUCTURE DEBRIS

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

#### 7-6 STREAM CROSSING INSTALLATION

Purchaser shall install stream crossing structures in accordance with the manufacturer's requirements and according to Forest Practice Permit.

#### 7-7 BANK PROTECTION FOR STREAM CROSSING STRUCTURES

Purchaser shall design and construct bank protection to prevent the undermining of the structure.

### SUBSECTION GATES AND FENCES

#### 7-71 GATE CLOSURE DURING HAUL

On the following road(s), Purchaser shall keep gates closed and locked except during active haul, and then gates may be just closed during active haul except for passing vehicles. If the Purchaser elects to use an alternative plan for gate security, the Purchaser must submit a detailed plan to the Contract Administrator for written approval.

<u>Road</u>	<u>Station</u>	<u>Gate No.</u>
5000	307+45	1004

## SECTION 8 – EROSION CONTROL

#### 8-2 PROTECTION FOR EXPOSED SOIL

Purchaser shall provide and evenly spread a layer of straw to all exposed soils that have potential to deliver to typed water.

### SUBSECTION REVEGETATION

**8-15 REVEGETATION**

On the following road(s), Purchaser shall spread grass seed on all exposed soils that have the potential to deliver to typed water. Seed shall be covered within 3 days of application. Alternative methods of seeding and mulching must be approved in writing by the Contract Administrator.

<u>Road</u>	<u>Location</u>	<u>Qty (lbs)*</u>	<u>Type</u>	<u>Comments</u>
5000	136+65	50 lb/acre	Pasture Mix	Apply when constructed
5000	263+00	50 lb/acre	Pasture Mix	Apply when constructed

\*Quantities are estimates only.

**8-16 REVEGETATION SUPPLY**

The Purchaser shall provide the seed Pasture mix seed and straw.

**8-17 REVEGETATION TIMING**

Purchaser shall revegetate immediately after road work is completed unless alternative plan approved in writing by the Contract Administrator. 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.

SECTION 9 – POST-HAUL ROAD WORK

SUBSECTION STRUCTURES

**9-1 EARTHEN BARRICADES**

Purchaser shall construct barricades in accordance with the BARRICADE DETAIL.

<u>Road</u>	<u>Stations</u>
5065_1	5+00

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

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

SUBSECTION POST-HAUL MAINTENANCE

SUBSECTION POST-HAUL LANDING MAINTENANCE

**9-10 LANDING DRAINAGE**

Purchaser shall provide for drainage of the landing surface.

SUBSECTION DECOMMISSIONING AND ABANDONMENT

**9-21 ROAD ABANDONMENT**

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

<u>Road</u>	<u>Stations</u>	<u>Type</u>
5065_1	5+00 to 29+90	Abandonment

## 9-22 ABANDONMENT

- Remove road shoulder berms except as directed.
- Construct non-drivable waterbars according to the attached NON-DRIVABLE WATERBAR DETAIL at a maximum spacing that will produce a vertical drop of no more than 10 feet between waterbars or between natural drainage paths and with a maximum spacing of 100 feet, or as marked in the field.
- Skew waterbars at least 30 degrees from perpendicular to the road centerline on roads in excess of 3 per cent grade.
- Key waterbars into the cut-slope to intercept the ditch. Waterbars must be outsloped to provide positive drainage. Outlets must be on stable locations.
- Remove ditch cross drain culverts and leave the resulting trench open.
- Remove culverts from State Land.
- Slope all trench walls and approach embankments no steeper than 1.5:1.
- Pull back unstable fill that has potential of failing and entering Type 1 through 5 waters or wetlands. Place removed material in a stable location.
- Construct earthen barricade as per clause 9-1 EARTHEN BARRICADES.

## SECTION 10 MATERIALS

### SUBSECTION CULVERTS

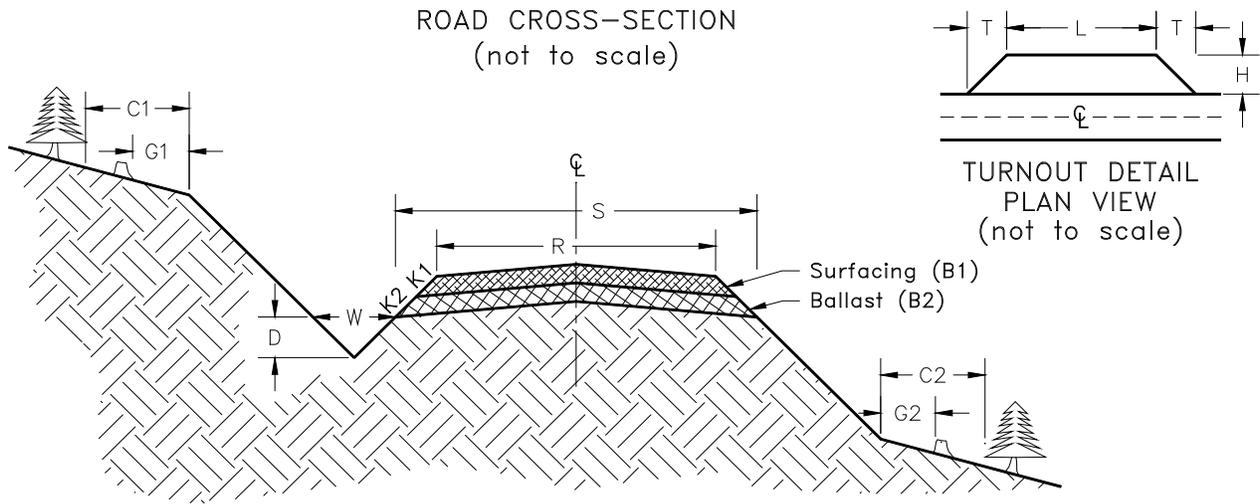
#### 10-17 CORRUGATED PLASTIC CULVERT

Polyethylene culverts must meet AASHTO M-294 specifications, or ASTM F-2648 specifications for recycled polyethylene. Culvert segments not specifically labeled as downspouts must be Type S – double walled with a corrugated exterior and smooth interior.

#### 10-22 PLASTIC BAND

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

# TYPICAL SECTION SHEET



Road Number	From Station	To Station	Tolerance Class	Subgrade Width (feet)	Road Width (feet)	Ditch		Crown in. @ CL	Grubbing Limits (feet)		Clearing Limits (feet)		Cut Slope Ratio	Fill Slope Ratio
						Width (feet)	Depth (feet)		G1	G2	C1	C2		
				S	R	W	D		G1	G2	C1	C2	Clause	Clause
5000	119+00	310+35	C	16	12	3	1	4					4-5	4-6
5050	0+00	17+50	C	16	12	3	1	4					4-5	4-6
5060	0+00	7+30	C	16	12	3	1	4					4-5	4-6
5065	0+00	10+35	C	16	12	3	1	4					4-5	4-6
5065_1	0+00	29+90	C	16	12	3	1	4	0	0	0	0	4-5	4-6

## ROCK LIST

### BALLAST

Road Number	From Station	To Station	Rock Slope	Compacted Rock Depth	C.Y./ Station	# of Stations	C.Y. Subtotal	Rock Source	Turnout		
									Length	Width	Taper
			K2	B2	<b>4 Inch Jaw</b>				L	H	T
5065_1*	0+00	29+90	1 ½ :1	12 Inches	52	29.9	1555	5050 Pit or Commercial	50	12	25
Stockpile							4000				
Landings and Turnouts							300				
Culvert Headwalls and Dissapators							24				

4 Inch Total 5855 Cubic Yards  
 Quarry Spalls Total 24 Cubic Yards  
 Ballast Total 4879 Cubic Yards

\*Optional Rock: If Purchaser elects to haul on optional rock roads in wet weather, the depth listed above is recommended but not required.

### SURFACE

Road Number	From Station	To Station	Rock Slope	Compacted Rock Depth	C.Y./ Station	# of Stations	C.Y. Subtotal	Rock Source	Turnout		
									Length	Width	Taper
			K1	B1	<b>2 Inch Minus</b>				L	H	T
5000	185+45	189+45	1 ½ :1	6 inches	26	4	104	5050 Pit Stockpile or Commercial	50	12	25
	228+50	310.35	1 ½ :1	6 inches	26	81.9	2130		50	12	25
5065	0+00	10+35	1 ½ :1	6 inches	26	10.35	270		50	12	25
									50	12	25
									50	12	25

2 Inch Minus Total 2504 Cubic Yards

NOTE: Yardages are estimated on a compacted (In-Place) basis. Compliance of required rock will be based on compacted depth measurement. **Apply appropriate factors to determine loose amounts for estimating purposes.** Roads and rock quantities are designed for dry weather use. If Purchaser elects to haul in wet weather additional rock may be obtained from the rock pits listed in Section 6 at the Purchaser's expense and with prior written approval from the Contract Administrator.

### COMPACTION LIST

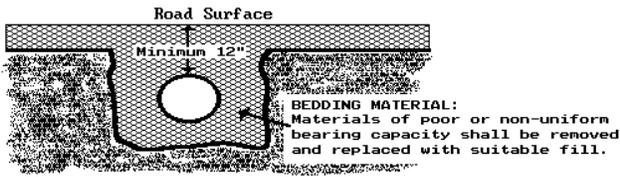
Road	From Station	To Station	Type	Max Depth Per Lift (inches)	Equipment Type	Equipment Weight (lbs)	Minimum Number of Passes	Maximum Operating Speed (mph)
All New Construction			Subgrade,rock	12	Smooth Drum Vibratory Roller	12,000	4 low freq. vibe on	3
All Reconstruction			Subgrade,rock	6	Smooth Drum Vibratory Roller	12,000	4 low freq. vibe on	3
All Pre-Haul maintenance			After pre-haul grading	6	Smooth Drum Vibratory Roller	12,000	2 low freq. vibe on	3
Culvert Backfill			Backfill material	6	Walk behind plate compactor	175	-	-

### TURNOUT AND TURNAROUND LIST

Road Number	Begin L-Station	END L-STATION	TURNOUT WIDTH (H)	FULL WIDTH LENGTH (L)	TAPER LEGNTH (T)	COMMENTS
5065_1	4+20	5+00	30	30	25	TURNAROUND
5065_1	21+50	22+50	12	50	25	TURNOUT RIGHT



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

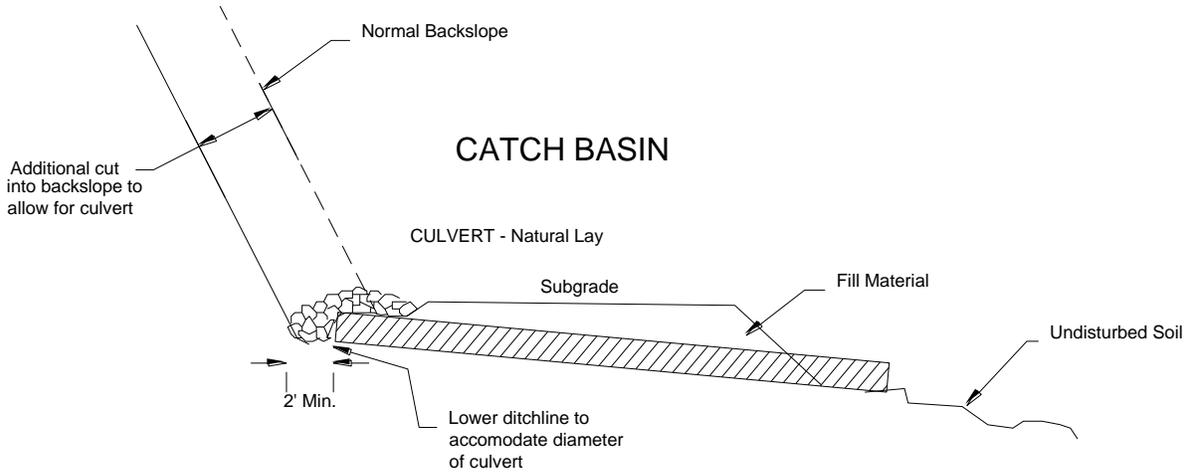


**Key:**

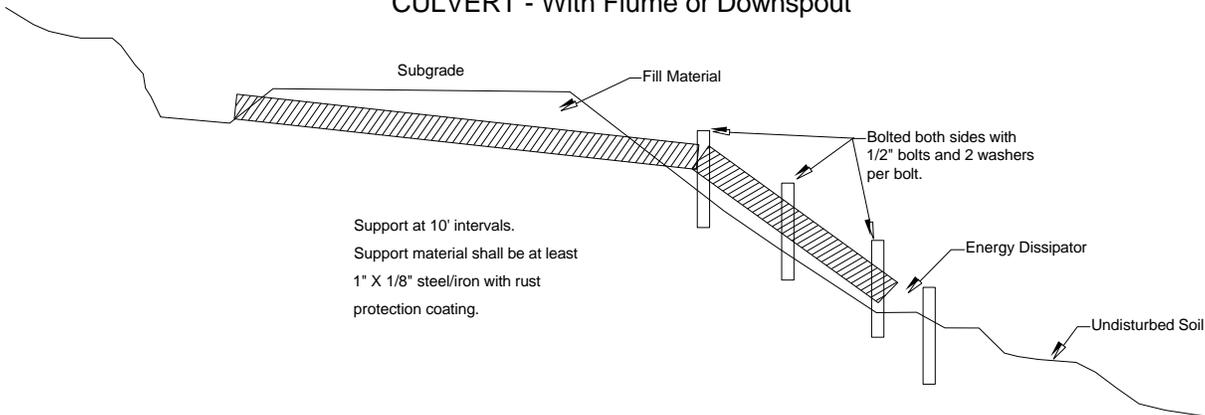
- QS - Quarry Spalls
- LL - Light Loose Riprap
- SR - Shot Rock
- NT - Native (bank run)
- SL - Select Fill
- Flume - Half round pipe
- Downspout - Full round pipe

# CULVERT AND DRAINAGE SPECIFICATION DETAIL

(Page 1 of 3)



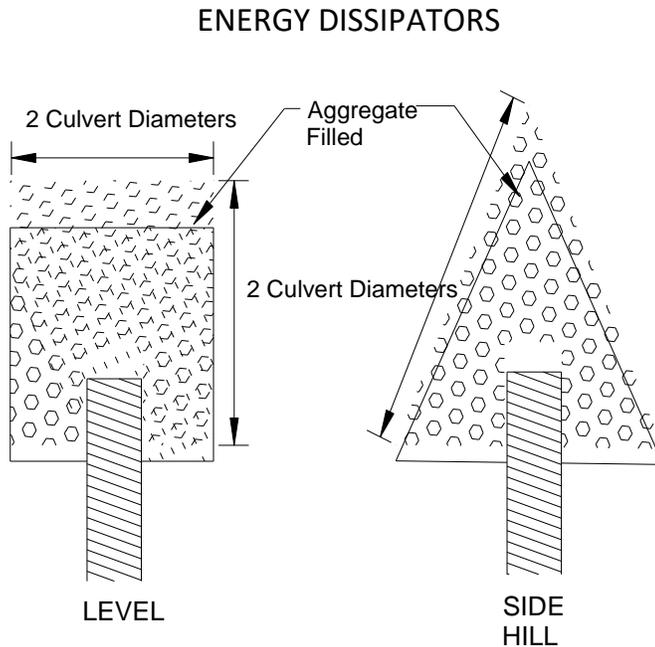
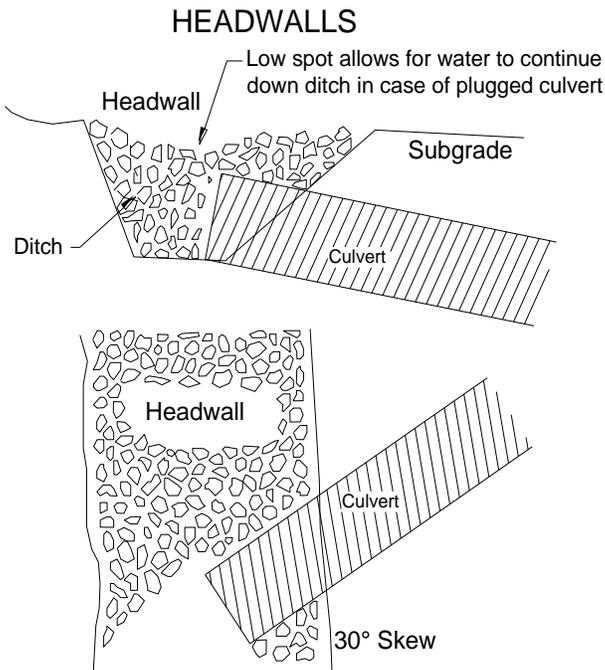
## CULVERT - With Flume or Downspout



## CULVERT AND DRAINAGE SPECIFICATION DETAIL

(Page 2 of 3)

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



Headwalls to be constructed of material that will resist erosion.

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

## CULVERT AND DRAINAGE SPECIFICATION DETAIL

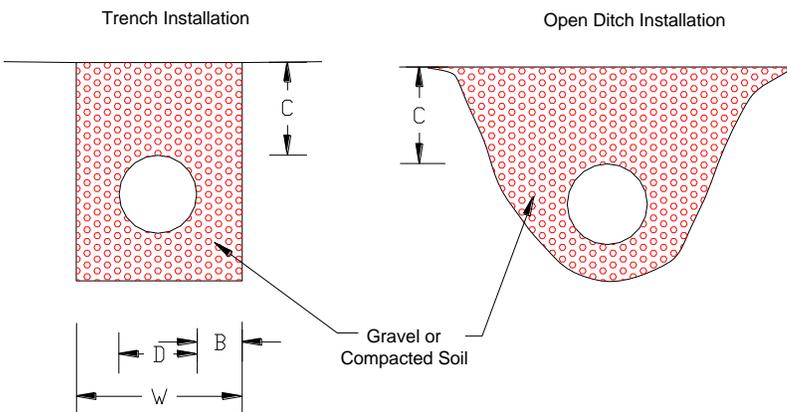
(Page 3 of 3)

### POLYETHYLENE PIPE INSTALLATION

#### INSTALLATION REQUIREMENTS:

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

#### MINIMUM DIMENSIONS Trench or Open Ditch Installation



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

## **FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS (Sheet 1 of 2)**

### **Cuts and Fills**

- Maintain slope lines to a stable gradient compatible with the cut slope/fill slope ratios. Remove slides up to 100 cubic yards in volume from ditches and the roadway. Repair fill-failures 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**

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

### **Drainage**

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

### **Preventative Maintenance**

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

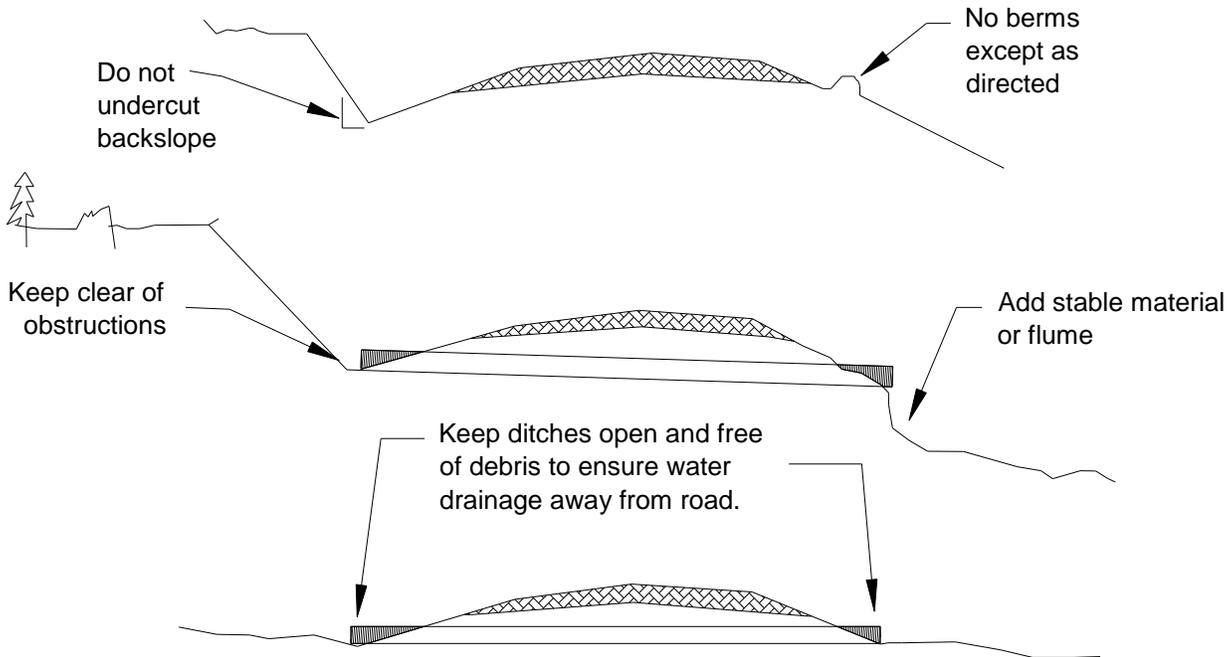
## FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS (Sheet 2 of 2)

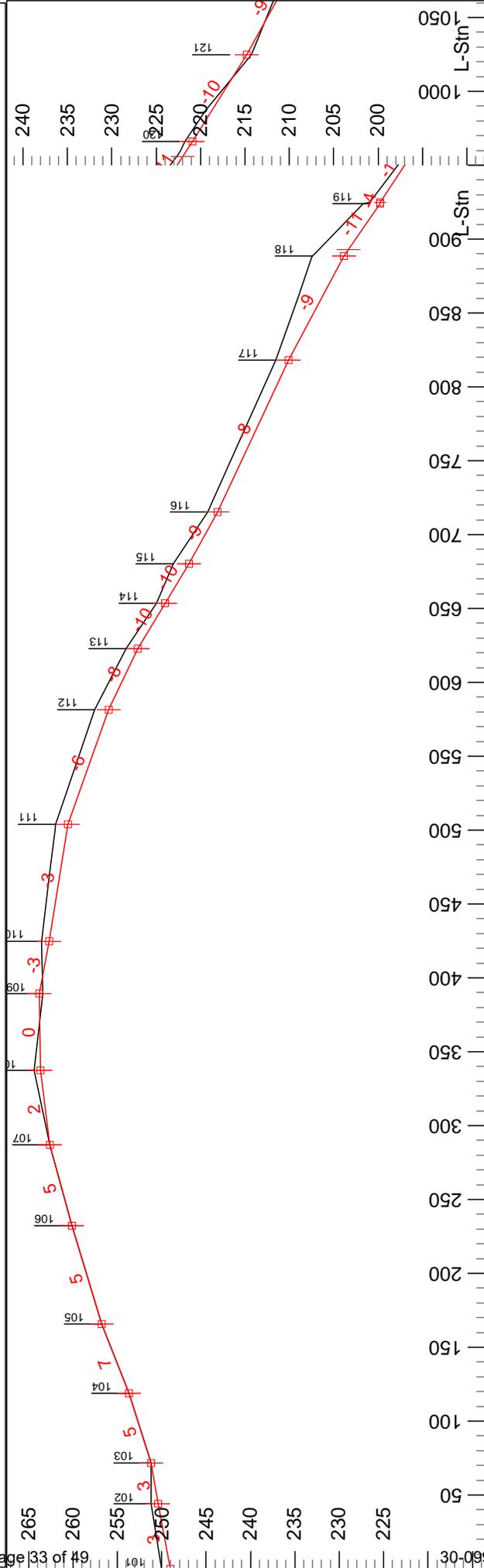
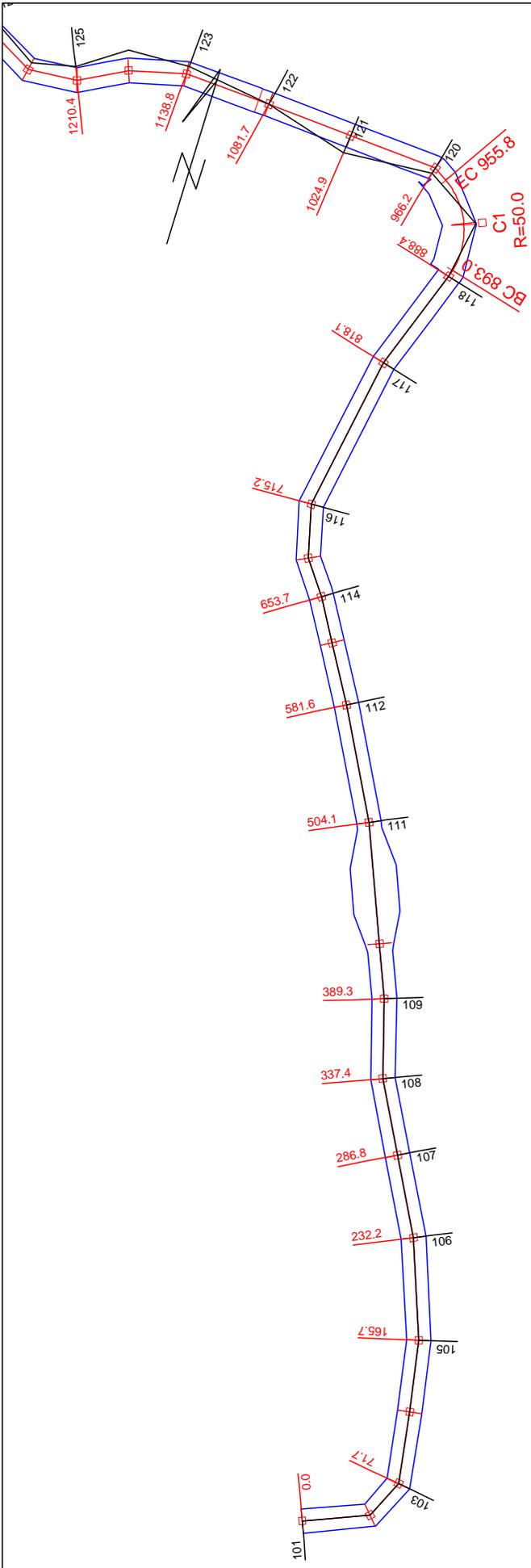
### Termination of Use or End of Season

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

### Debris

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





08.08.2019

Page 33 of 49

Engineer: Eric Bauer  
 19/04/14  
 Page 1 of 4

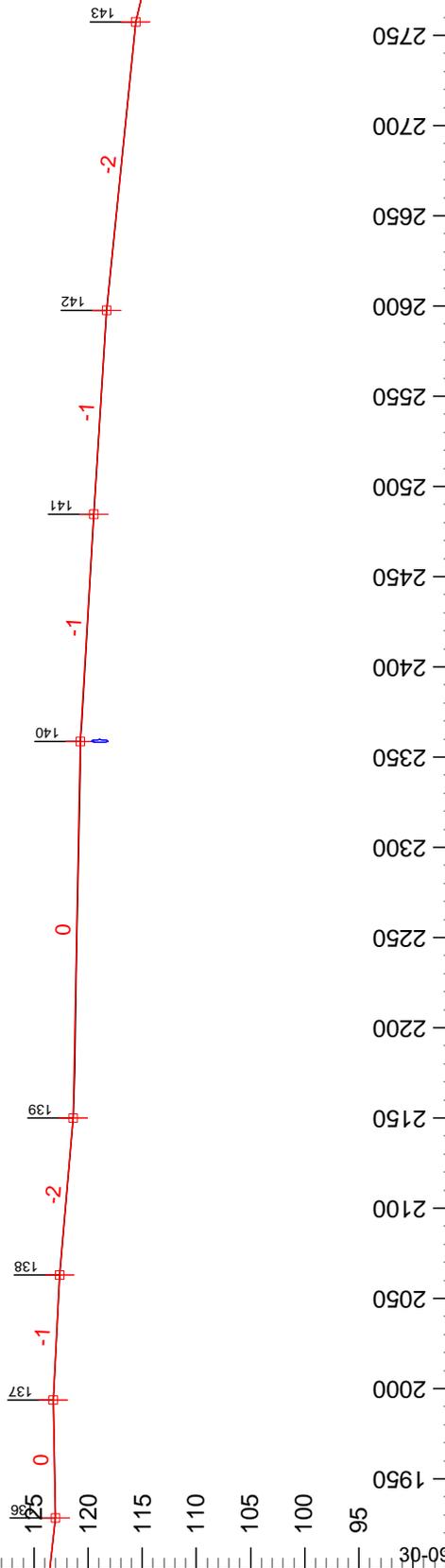
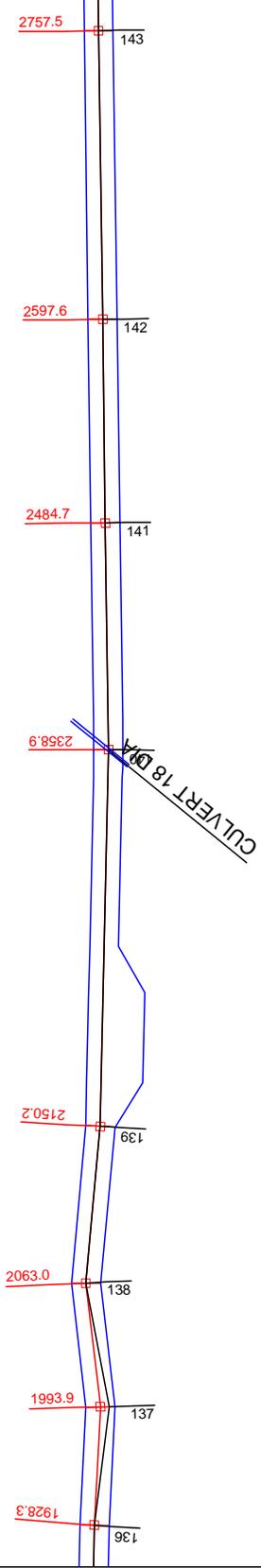
Plan Scale 1:1200  
 Profile Vert Scale 1:200  
 Profile Horz Scale 1:1200

Washington State Department of Natural Resources  
 South Puget Sound Region

Pumpkin Patch Timber Sale  
 5065\_1  
 Contract #: 30-099018

30-099018





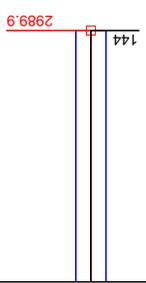
Pumpkin Patch Timber Sale  
 5065\_1  
 Contract #: 30-099018

Washington State Department of Natural Resources  
 South Puget Sound Region

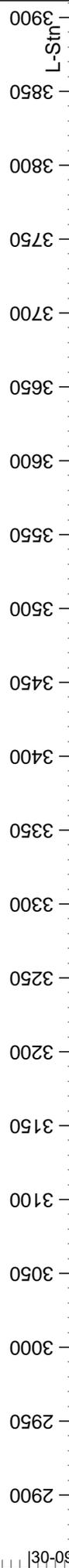
Plan Scale 1:1200  
 Profile Vert Scale 1:200  
 Profile Horz Scale 1:1200

Engineer: Eric Bauer  
 19/04/14

30-099018  
 1950 2000 2050 2100 2150 2200 2250 2300 2350 2400 2450 2500 2550 2600 2650 2700 2750 2800 2850 2900 2950  
 L-Station



130  
125  
120  
115  
110  
105  
100  
95  
90

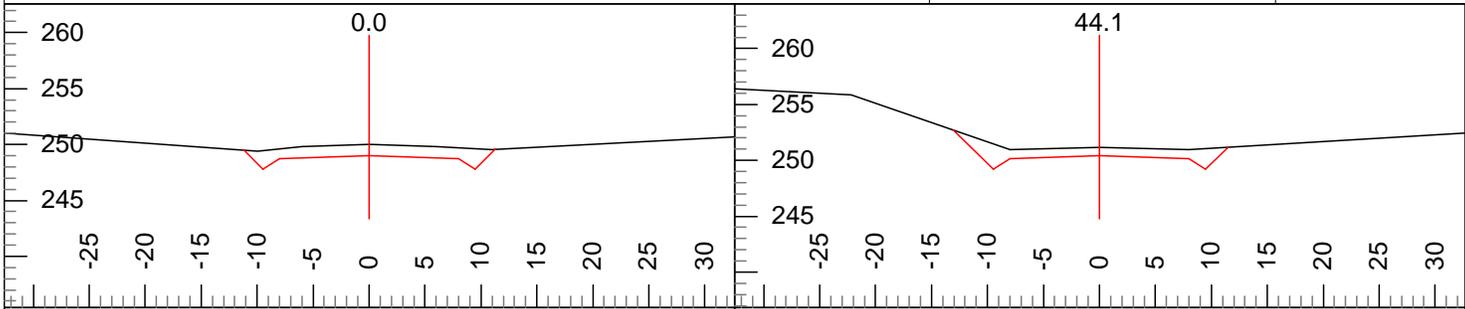


Pumpkin Patch Timber Sale  
5065\_1  
Contract #: 30-099018

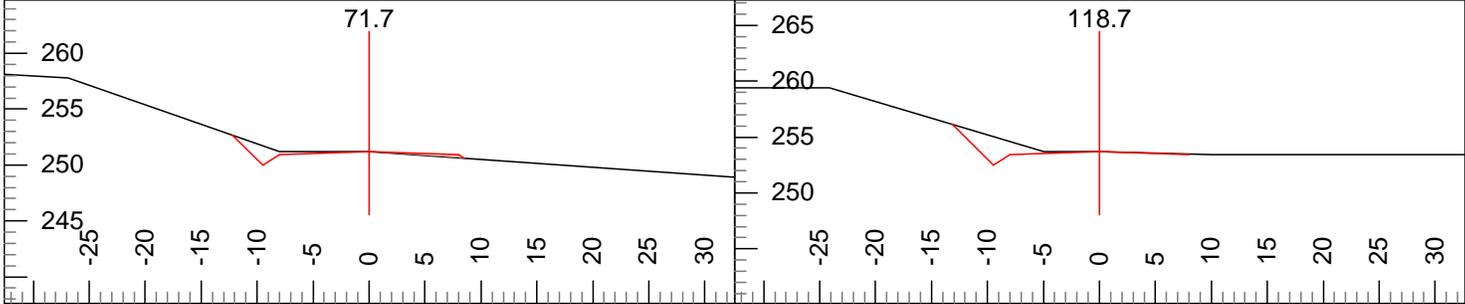
Washington State Department of Natural Resources  
South Puget Sound Region

Plan Scale 1:1200  
Profile Vert Scale 1:200  
Profile Horz Scale 1:1200

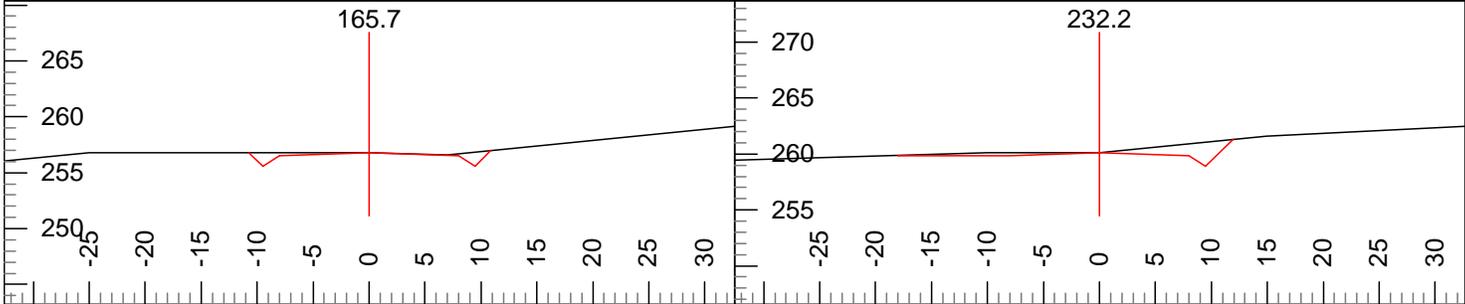
Engineer: Eric Bauer  
19/04/14



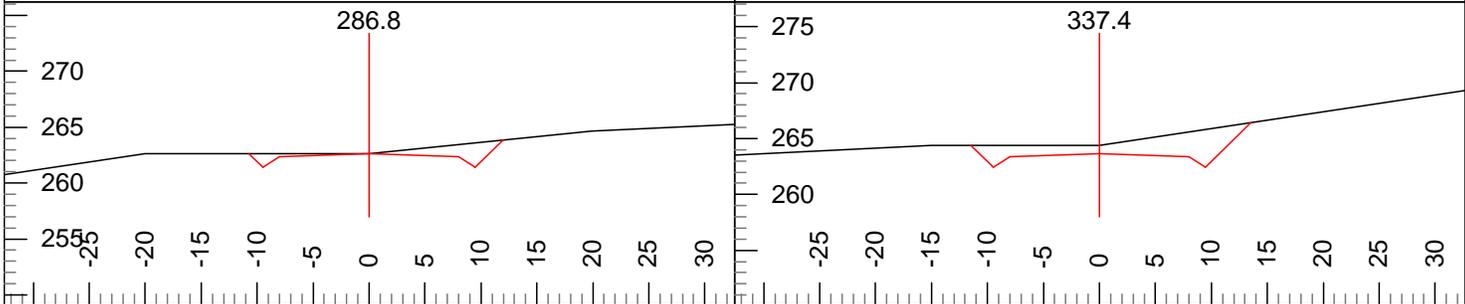
L-Stn:	0.0	L-Ssl:	-3.0	F Slope L:	100.00	L-Stn:	44.1	L-Ssl:	-3.0	F Slope L:	100.00
P-Stn:	0.0	L-Ssr:	-3.0	F Slope R:	100.00	P-Stn:	44.1	L-Ssr:	-3.0	F Slope R:	100.00
Grd.Nxt.:	3.2	Super L:	-3.0	Cut Dp:	1.0	Grd.Nxt.:	2.8	Super L:	-3.0	Cut Dp:	0.8
Grd.Lst:	n/a	Super R:	-3.0			Grd.Lst:	3.2	Super R:	-3.0		



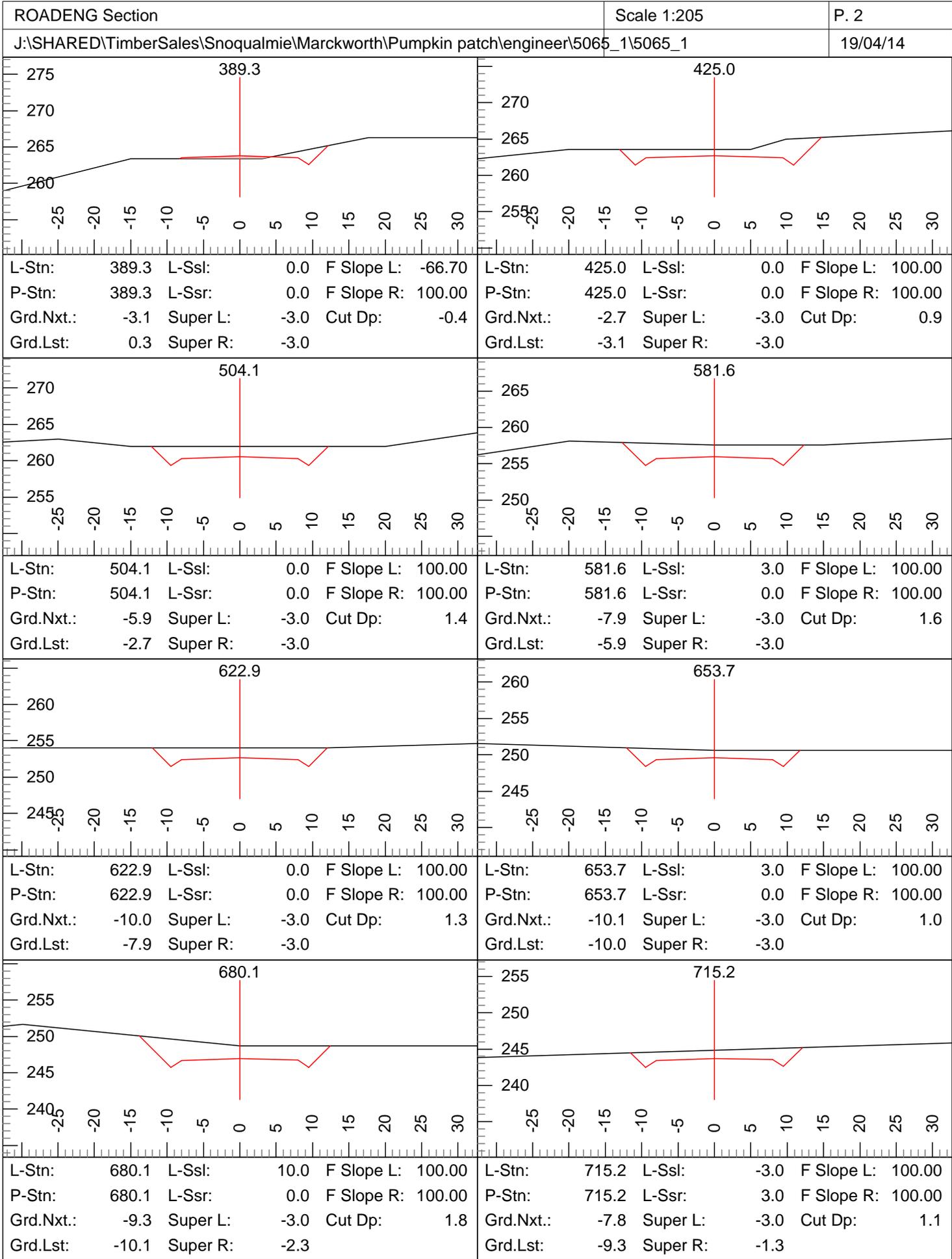
L-Stn:	71.7	L-Ssl:	0.0	F Slope L:	100.00	L-Stn:	118.7	L-Ssl:	0.0	F Slope L:	100.00
P-Stn:	71.7	L-Ssr:	-7.0	F Slope R:	-66.70	P-Stn:	118.7	L-Ssr:	-3.0	F Slope R:	-3.00
Grd.Nxt.:	5.3	Super L:	-3.0	Cut Dp:	0.0	Grd.Nxt.:	6.6	Super L:	-3.0	Cut Dp:	0.0
Grd.Lst:	2.8	Super R:	-3.0			Grd.Lst:	5.3	Super R:	-3.0		

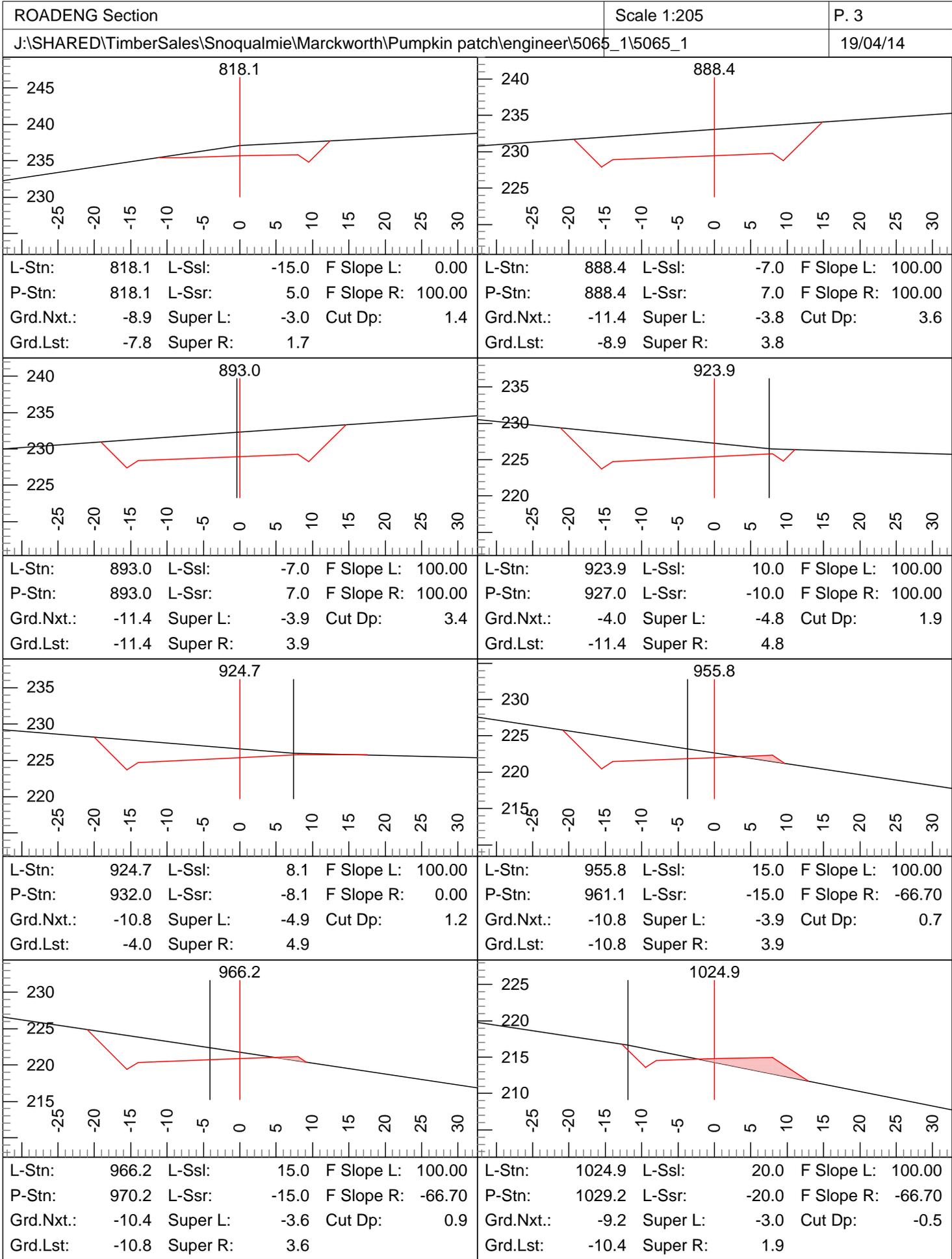


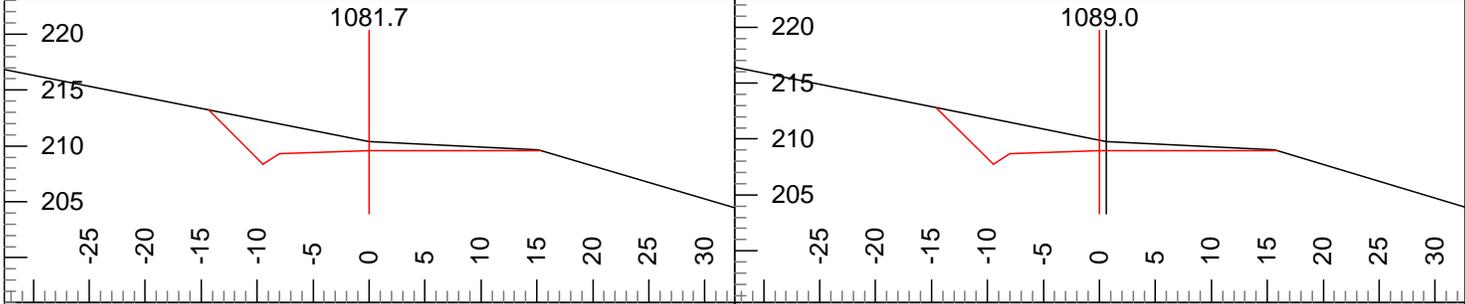
L-Stn:	165.7	L-Ssl:	0.0	F Slope L:	100.00	L-Stn:	232.2	L-Ssl:	0.0	F Slope L:	0.00
P-Stn:	165.7	L-Ssr:	-3.0	F Slope R:	100.00	P-Stn:	232.2	L-Ssr:	10.0	F Slope R:	100.00
Grd.Nxt.:	5.0	Super L:	-3.0	Cut Dp:	0.0	Grd.Nxt.:	4.6	Super L:	-3.0	Cut Dp:	0.0
Grd.Lst:	6.6	Super R:	-3.0			Grd.Lst:	5.0	Super R:	-3.0		



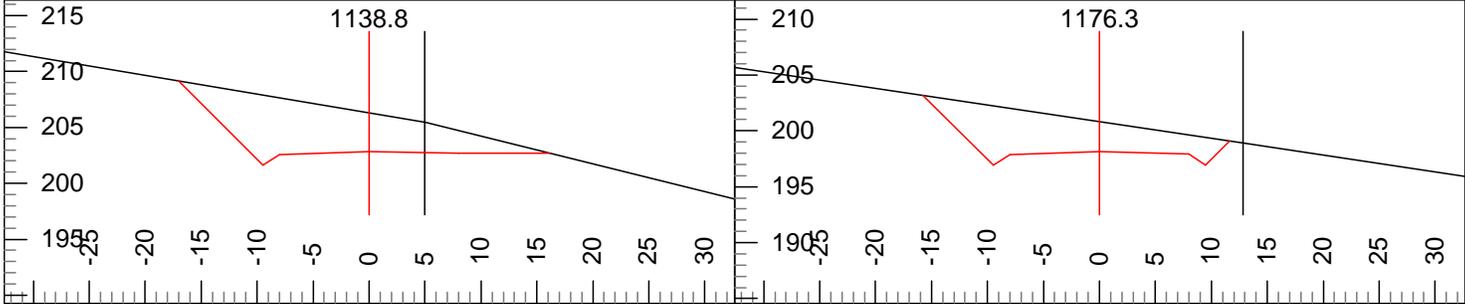
L-Stn:	286.8	L-Ssl:	0.0	F Slope L:	100.00	L-Stn:	337.4	L-Ssl:	0.0	F Slope L:	100.00
P-Stn:	286.8	L-Ssr:	10.0	F Slope R:	100.00	P-Stn:	337.4	L-Ssr:	15.0	F Slope R:	100.00
Grd.Nxt.:	2.0	Super L:	-3.0	Cut Dp:	0.0	Grd.Nxt.:	0.3	Super L:	-3.0	Cut Dp:	0.8
Grd.Lst:	4.6	Super R:	-3.0			Grd.Lst:	2.0	Super R:	-3.0		



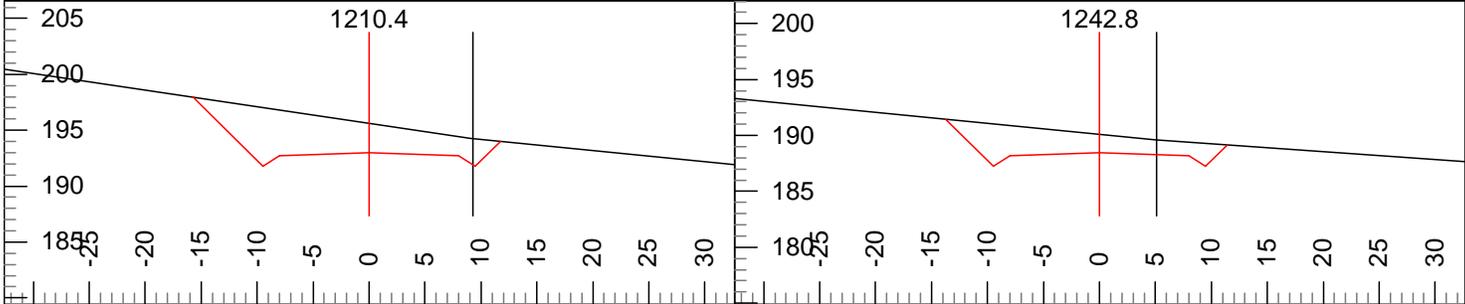




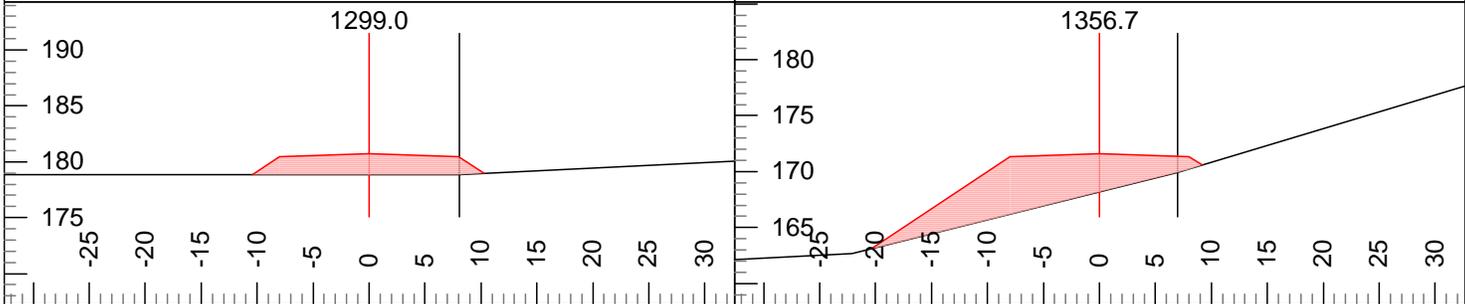
L-Stn:	1081.7	L-Ssl:	19.8	F Slope L:	100.00	L-Stn:	1089.0	L-Ssl:	19.9	F Slope L:	100.00
P-Stn:	1086.9	L-Ssr:	-4.9	F Slope R:	0.00	P-Stn:	1094.1	L-Ssr:	-19.9	F Slope R:	0.00
Grd.Nxt.:	-8.5	Super L:	-3.0	Cut Dp:	0.8	Grd.Nxt.:	-12.3	Super L:	-3.0	Cut Dp:	0.9
Grd.Lst:	-9.2	Super R:	0.2			Grd.Lst:	-8.5	Super R:	0.0		



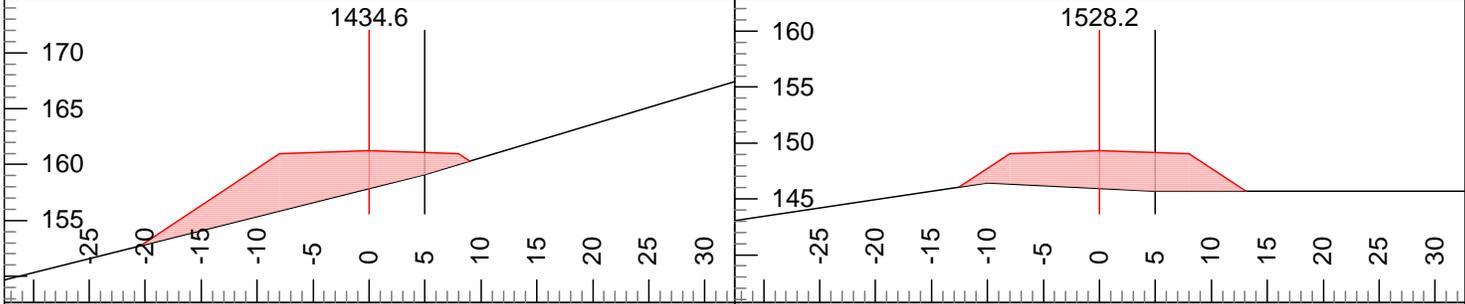
L-Stn:	1138.8	L-Ssl:	16.8	F Slope L:	100.00	L-Stn:	1176.3	L-Ssl:	15.0	F Slope L:	100.00
P-Stn:	1144.1	L-Ssr:	-16.8	F Slope R:	0.00	P-Stn:	1184.9	L-Ssr:	-15.0	F Slope R:	100.00
Grd.Nxt.:	-12.5	Super L:	-3.0	Cut Dp:	3.5	Grd.Nxt.:	-15.1	Super L:	-3.0	Cut Dp:	2.7
Grd.Lst:	-12.3	Super R:	-1.5			Grd.Lst:	-12.5	Super R:	-2.6		



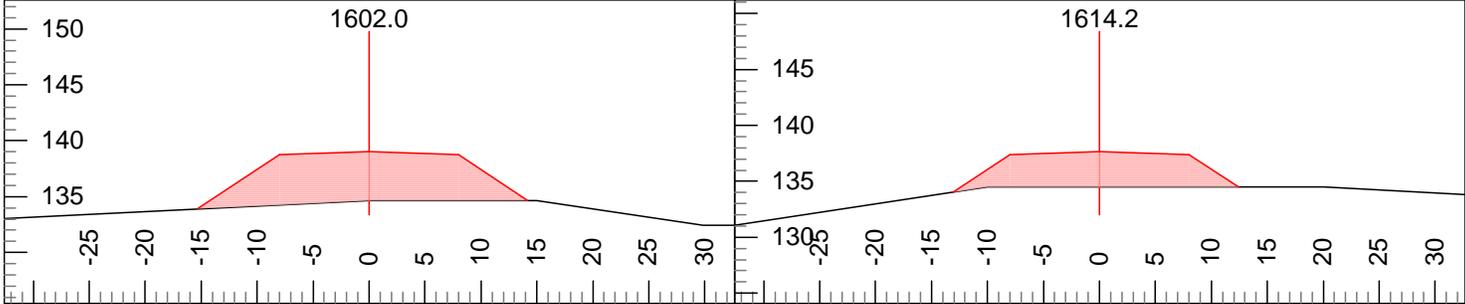
L-Stn:	1210.4	L-Ssl:	14.9	F Slope L:	100.00	L-Stn:	1242.8	L-Ssl:	10.0	F Slope L:	100.00
P-Stn:	1220.7	L-Ssr:	-14.9	F Slope R:	100.00	P-Stn:	1249.2	L-Ssr:	-10.0	F Slope R:	100.00
Grd.Nxt.:	-14.0	Super L:	-3.0	Cut Dp:	2.6	Grd.Nxt.:	-13.8	Super L:	-3.0	Cut Dp:	1.6
Grd.Lst:	-15.1	Super R:	-3.0			Grd.Lst:	-14.0	Super R:	-3.0		



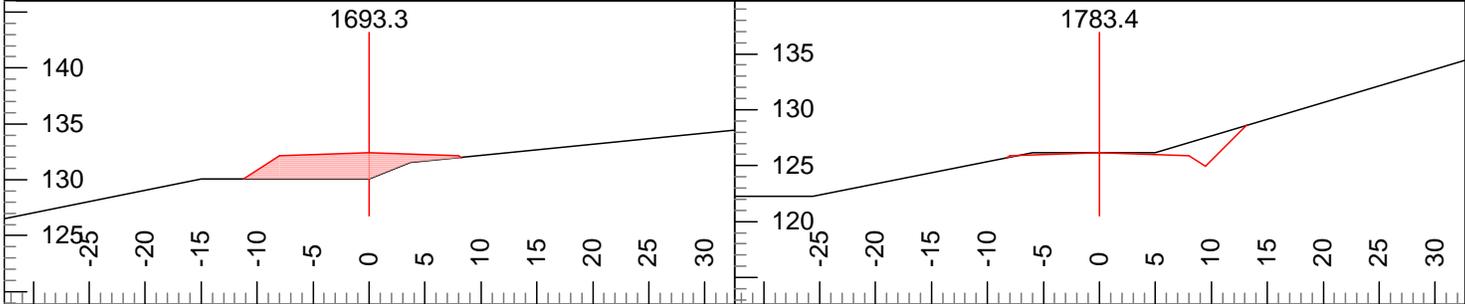
L-Stn:	1299.0	L-Ssl:	0.0	F Slope L:	-66.70	L-Stn:	1356.7	L-Ssl:	-25.0	F Slope L:	-66.70
P-Stn:	1300.5	L-Ssr:	0.0	F Slope R:	-66.70	P-Stn:	1354.0	L-Ssr:	25.0	F Slope R:	-66.70
Grd.Nxt.:	-15.8	Super L:	-3.0	Cut Dp:	-1.9	Grd.Nxt.:	-13.3	Super L:	-3.0	Cut Dp:	-3.4
Grd.Lst:	-13.8	Super R:	-3.0			Grd.Lst:	-15.8	Super R:	-3.0		



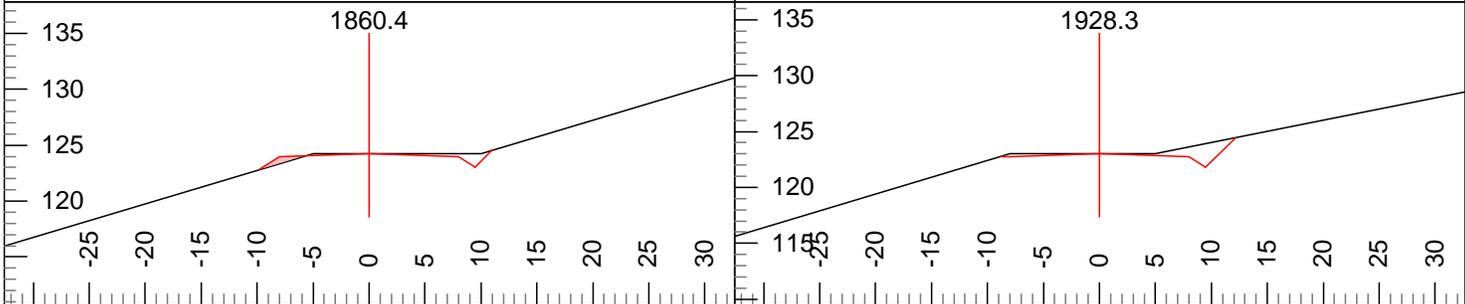
L-Stn: 1434.6 L-Ssl: -25.0 F Slope L: -66.70 P-Stn: 1431.3 L-Ssr: 25.0 F Slope R: -66.70 Grd.Nxt.: -12.7 Super L: -3.0 Cut Dp: -3.4 Grd.Lst: -13.3 Super R: -3.0	L-Stn: 1528.2 L-Ssl: 5.0 F Slope L: -66.70 P-Stn: 1527.1 L-Ssr: -5.0 F Slope R: -66.70 Grd.Nxt.: -13.9 Super L: -3.0 Cut Dp: -3.4 Grd.Lst: -12.7 Super R: -3.0
---	---



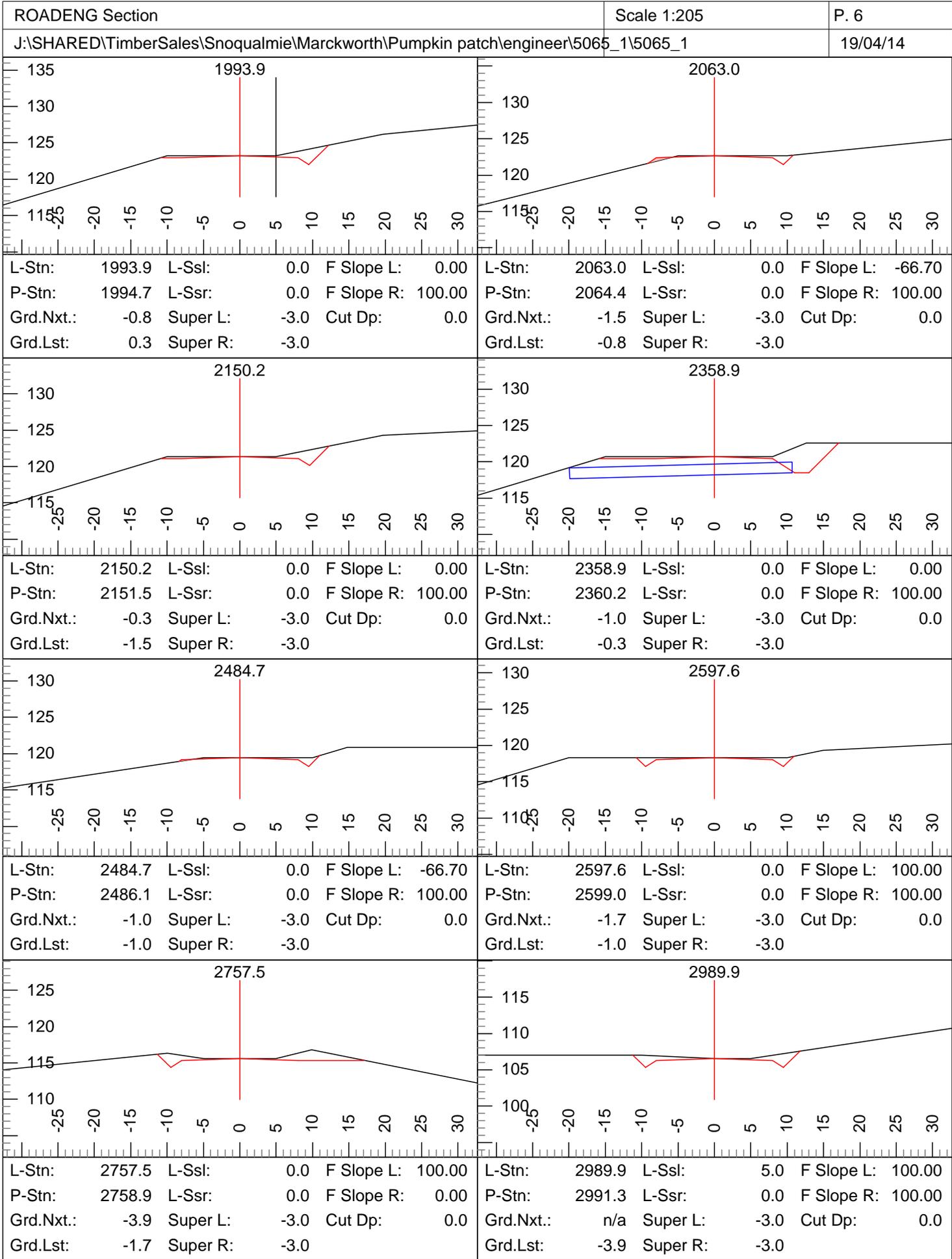
L-Stn: 1602.0 L-Ssl: -5.0 F Slope L: -66.70 P-Stn: 1602.2 L-Ssr: 0.0 F Slope R: -66.70 Grd.Nxt.: -11.2 Super L: -3.0 Cut Dp: -4.4 Grd.Lst: -13.9 Super R: -3.0	L-Stn: 1614.2 L-Ssl: 0.0 F Slope L: -66.70 P-Stn: 1614.4 L-Ssr: 0.0 F Slope R: -66.70 Grd.Nxt.: -6.6 Super L: -3.0 Cut Dp: -3.2 Grd.Lst: -11.2 Super R: -3.0
---	---

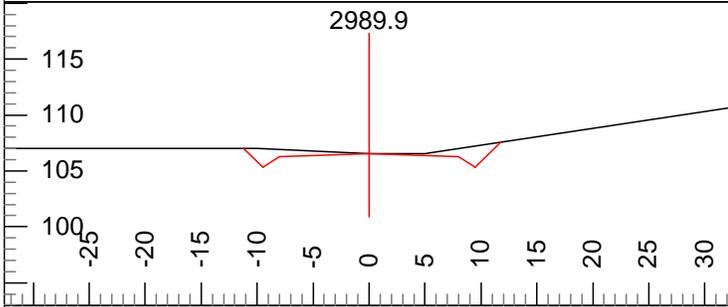


L-Stn: 1693.3 L-Ssl: 0.0 F Slope L: -66.70 P-Stn: 1693.5 L-Ssr: 40.0 F Slope R: -66.70 Grd.Nxt.: -6.9 Super L: -3.0 Cut Dp: -2.4 Grd.Lst: -6.6 Super R: -3.0	L-Stn: 1783.4 L-Ssl: 0.0 F Slope L: -66.70 P-Stn: 1783.6 L-Ssr: 0.0 F Slope R: 100.00 Grd.Nxt.: -2.5 Super L: -3.0 Cut Dp: 0.0 Grd.Lst: -6.9 Super R: -3.0
---	---



L-Stn: 1860.4 L-Ssl: 0.0 F Slope L: -66.70 P-Stn: 1860.6 L-Ssr: 0.0 F Slope R: 100.00 Grd.Nxt.: -1.8 Super L: -3.0 Cut Dp: 0.0 Grd.Lst: -2.5 Super R: -3.0	L-Stn: 1928.3 L-Ssl: 0.0 F Slope L: 0.00 P-Stn: 1928.5 L-Ssr: 0.0 F Slope R: 100.00 Grd.Nxt.: 0.3 Super L: -3.0 Cut Dp: 0.0 Grd.Lst: -1.8 Super R: -3.0
---	--





L-Stn:	2989.9	L-Ssl:	5.0	F Slope L:	100.00
P-Stn:	2991.3	L-Ssr:	0.0	F Slope R:	100.00
Grd.Nxt.:	n/a	Super L:	-3.0	Cut Dp:	0.0
Grd.Lst:	-3.9	Super R:	-3.0		

## 5050 PIT DEVELOPMENT PLAN

Legal Description: SE1/4 NW 1/4 Section 18, T26NR08E W.M.

Rock Pit Name: 5050 Pit

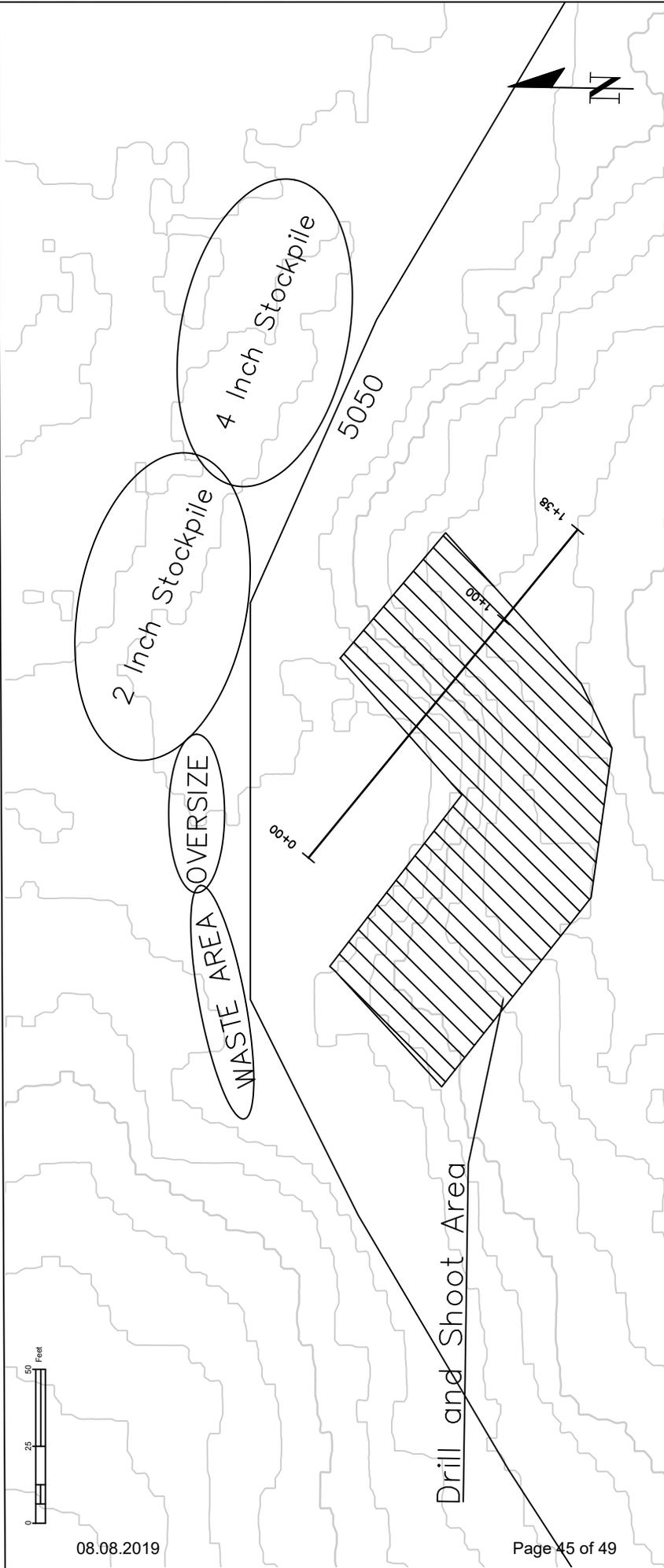
1. All overburden and vegetation, including stumps, shall be cleared a minimum of 20 feet beyond the top of all working faces. Trees shall be cleared to a minimum of 3/4 of the height of the tallest tree adjacent to the pit face.
2. Root wads and organic debris larger than one cubic foot in volume shall be separated from overburden and piled in the designated waste area.
3. Overburden shall be pushed or end hauled to the designated waste area and compacted. Minimal acceptable compaction is achieved by placing material in 2 foot or shallower lifts and routing excavation equipment over entire width of the lifts. A minimum stripping width of 20 feet must be maintained from all pit faces.
4. Pit faces and walls shall not exceed 30 feet in height and shall be sloped no steeper than 1/4H: 1V.
5. Working bench width shall be a minimum of 20 feet.
6. The pit floor shall have smooth continuity of slope, providing drainage. No ponding will be allowed.
7. At the end of operations, faces shall be scaled and cleared of loose and overhanging material, including overburden pushed over the face.
8. Oversize material remaining in the pit at the conclusion of operations shall not exceed 5 percent of the total volume mined during the operation. Oversize material is defined as rock or rock fragments larger than two feet in any dimension. Oversize shall be piled in designated area.
9. Quantity and Quality of ballast pit is not guaranteed by the State.



08.08.2019

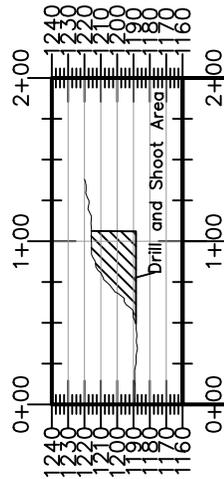
Page 45 of 49

30-0990 18



# 5050 pit Tray PROFILE

Station



DESIGN BY: E. Bauer  
 DRAWN BY: E. Bauer  
 CHECKED BY:  
 DATE: 4/17/2019

5050 Pit Plan  
 Pumpkin Patch T.S.  
 Plan View

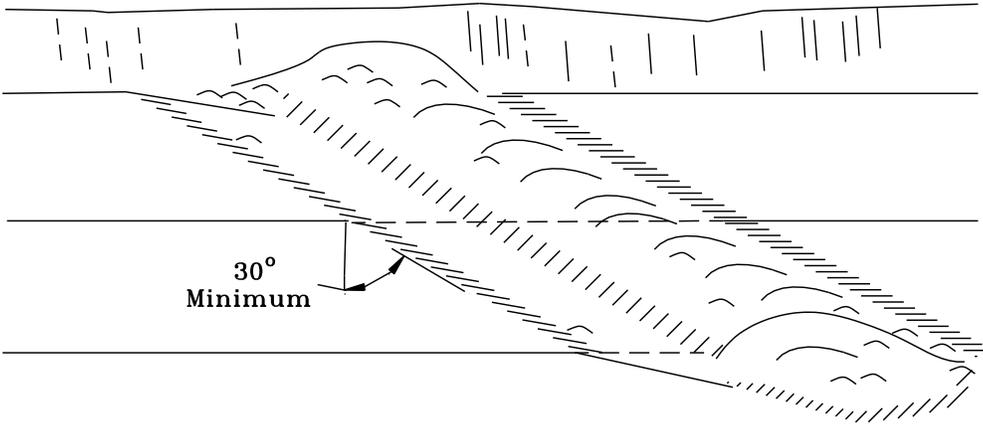
WASHINGTON STATE DEPARTMENT OF  
**NATURAL RESOURCES**



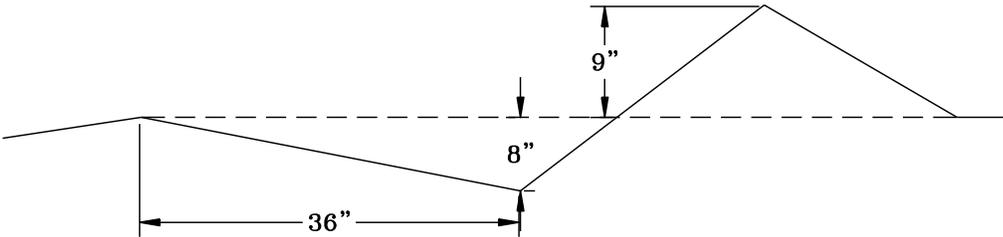
SHEET  
 1 OF 1

# Drivable Water Bar Detail

## Cross Ditch



## Cross Section at Centerline

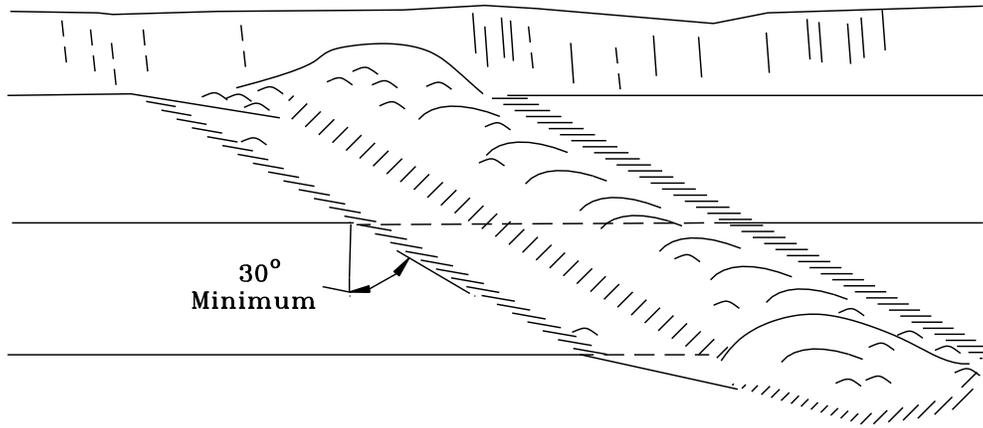


Date:  
Scale : None  
App#  
Drawn by: M.A.D.

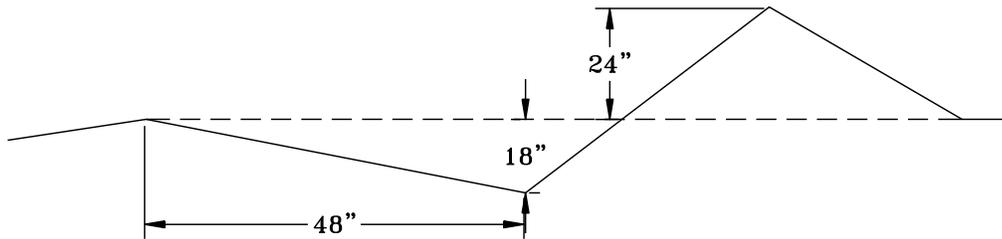
Water Bar Detail	
	WASHINGTON STATE DEPARTMENT OF <b>NATURAL RESOURCES</b>
<small>SPS REGION</small>	

# Non-Drivable Water Bar Detail

## Cross Ditch



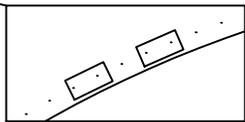
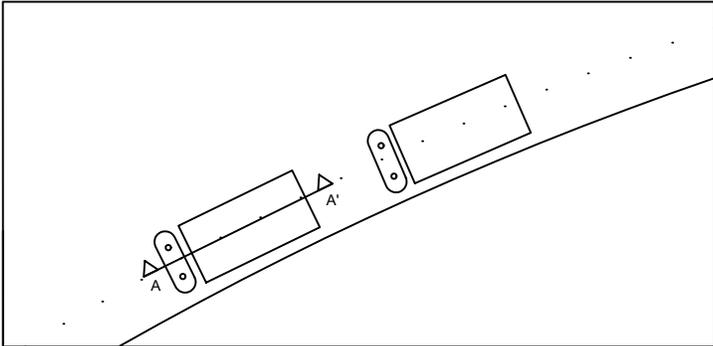
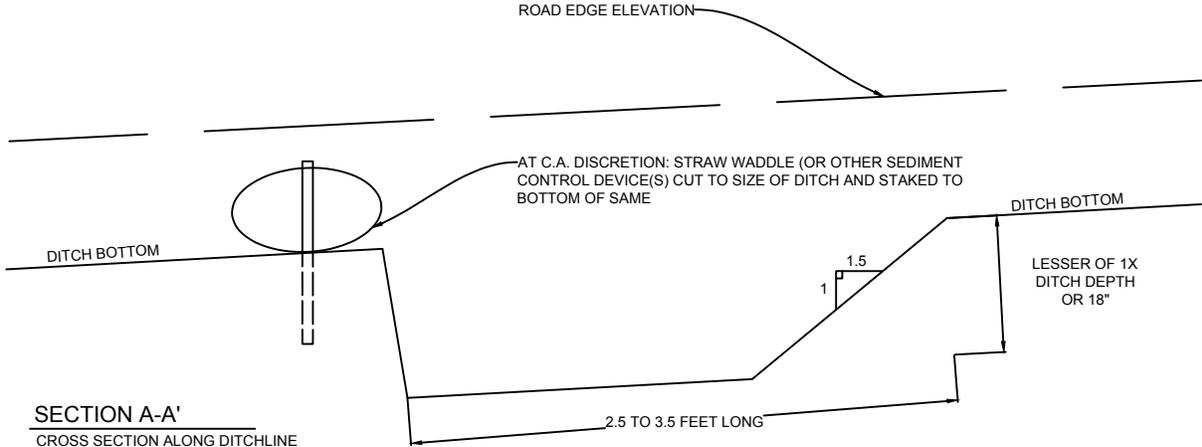
## Cross Section at Centerline



Date:  
Scale : None  
App#  
Drawn by: M.A.D.

Water Bar Detail	
	WASHINGTON STATE DEPARTMENT OF <b>NATURAL RESOURCES</b>
<small>SPS REGION</small>	

# SEDIMENT TRAP DETAIL



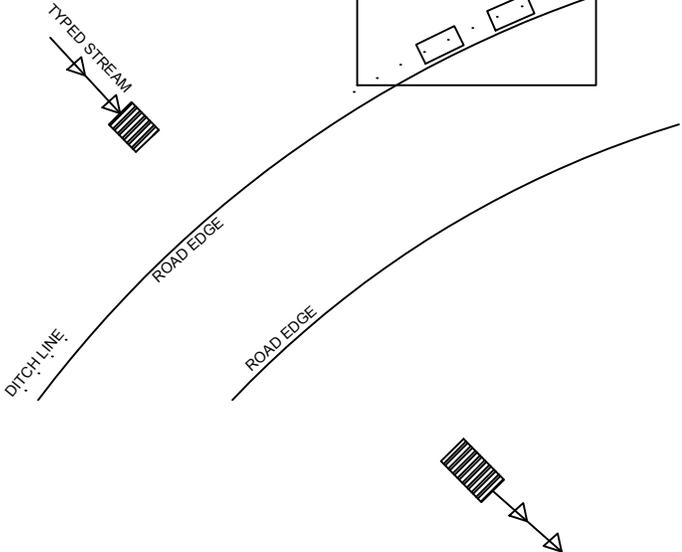
**NOTES:**

CONSTRUCT SEDIMENT TRAPS IN SETS GREATER THAN ONE, WHENEVER POSSIBLE.

SEDIMENT TRAPS SHOULD BE PLACED AS CLOSE AS PRACTICABLE TO STREAM CROSSING.

IF SEDIMENT TRAPS FILL WITH SEDIMENT DURING HAUL OPERATIONS, REMOVING SEDIMENT FROM TRAPS IS CONSIDERED ROUTINE MAINTENANCE.

ADDITIONAL SEDIMENT CONTROL DEVICES, SUCH AS HAY BALES, STRAW WADDLES OR OTHERS MAY BE REQUIRED AS SHOWN IF IN THE OPINION OF THE CONTRACT ADMINISTRATOR, SEDIMENT TRAP ALONE DOES NOT APPEAR TO BE EFFECTIVE.

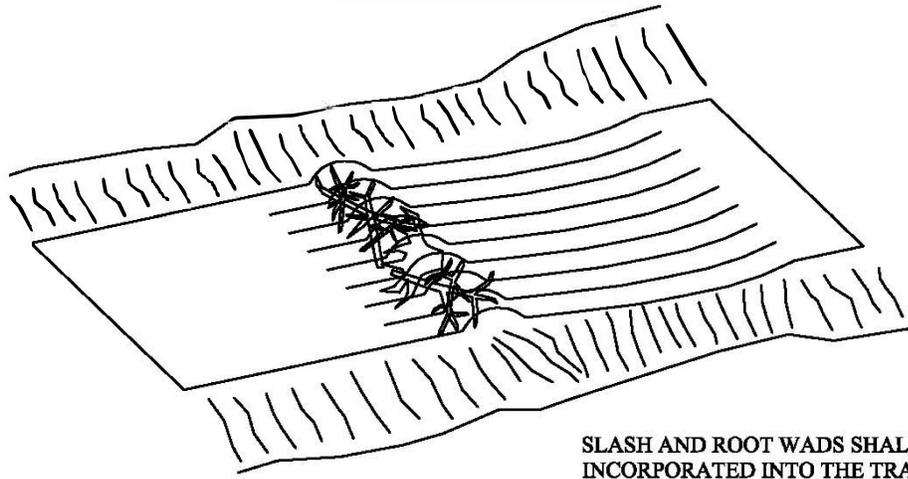


**SEDIMENT TRAP DETAIL**

WASHINGTON STATE DEPARTMENT OF  
**NATURAL RESOURCES**

Date: 07/24/2018  
 Scale : NTS  
 App#  
 Drawn by: WPH  
 Sheet 1 of 1

# BARRICADE DETAIL

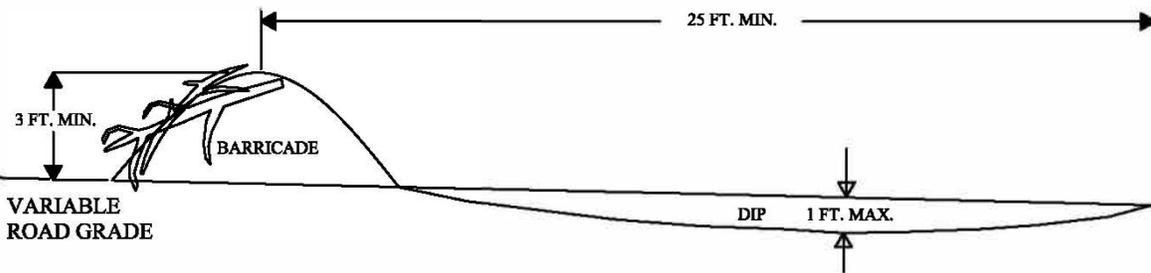


SLASH AND ROOT WADS SHALL BE INCORPORATED INTO THE TRAFFIC SIDE OF THE BARRICADE.

PLAN VIEW

TRAFFIC SIDE OF BARRICADE

CLOSED SIDE OF BARRICADE



BOTTOM OF DIP SHALL BE OUTSLOPED SO AS TO DRAIN FREELY

PROFILE VIEW

Barricade Detail



WASHINGTON STATE DEPARTMENT OF  
**NATURAL RESOURCES**

SPS REGION

DEPARTMENT OF NATURAL RESOURCES - SOUTH PUGET SOUND REGION

FORM 9-87(Rev. 01-09)

Road Development Cost Estimate

(For internal DNR use only. Costs are estimates only & are not guaranteed by the State or part of the Road Plan.)

REGION: SPS

UNIT: Snoquilmie

SALE/PROJECT NAME: Pumpkin Patch

CONTRACT NUMBER: 30-099018

LEGAL DESCRIPTION: Sec 7,18 T26R08E

		Construction	Reconstruction	5000, 5050, 5060, 5065 Pre-haul maintenance
ROAD NUMBER:	5065_1			
ROAD STANDARD:				
NUMBER OF STATIONS:	29.90		0.00	226.50
SIDESLOPE:	20%		0%	0%
CLEARING AND GRUBBING:	\$4,306		\$0	
EXCAVATION AND FILL:	\$5,980		\$0	
MISC. MAINTENANCE:				\$2,852
ROCK TOTALS (Cu. Yds.):				
4 Inch Jaw	2321	\$31,728	\$0	
StockPile	4000	\$39,240	\$0	
Quarry Spalls	24			\$667
2 Inch Minus	3,252			\$18,217
CULVERTS AND FLUMES:	\$720		\$0	\$6,053
STRUCTURES:	\$0		\$0	\$0
GENERAL EXPENSES:	\$6,558		\$0	\$2,501
MOBILIZATION:	\$5,565		\$0	\$5,565
TOTAL COSTS:	\$94,096		\$0	\$35,855
COST PER STATION:	\$3,147		\$0	\$158
ROAD DEACTIVATION AND ABANDONMENT COSTS:			\$5,350	

NOTE<sup>1</sup>: This appraisal has no allowance for profit and risk.

TOTAL (All Roads) = \$135,301

SALE VOLUME MBF = 3,253

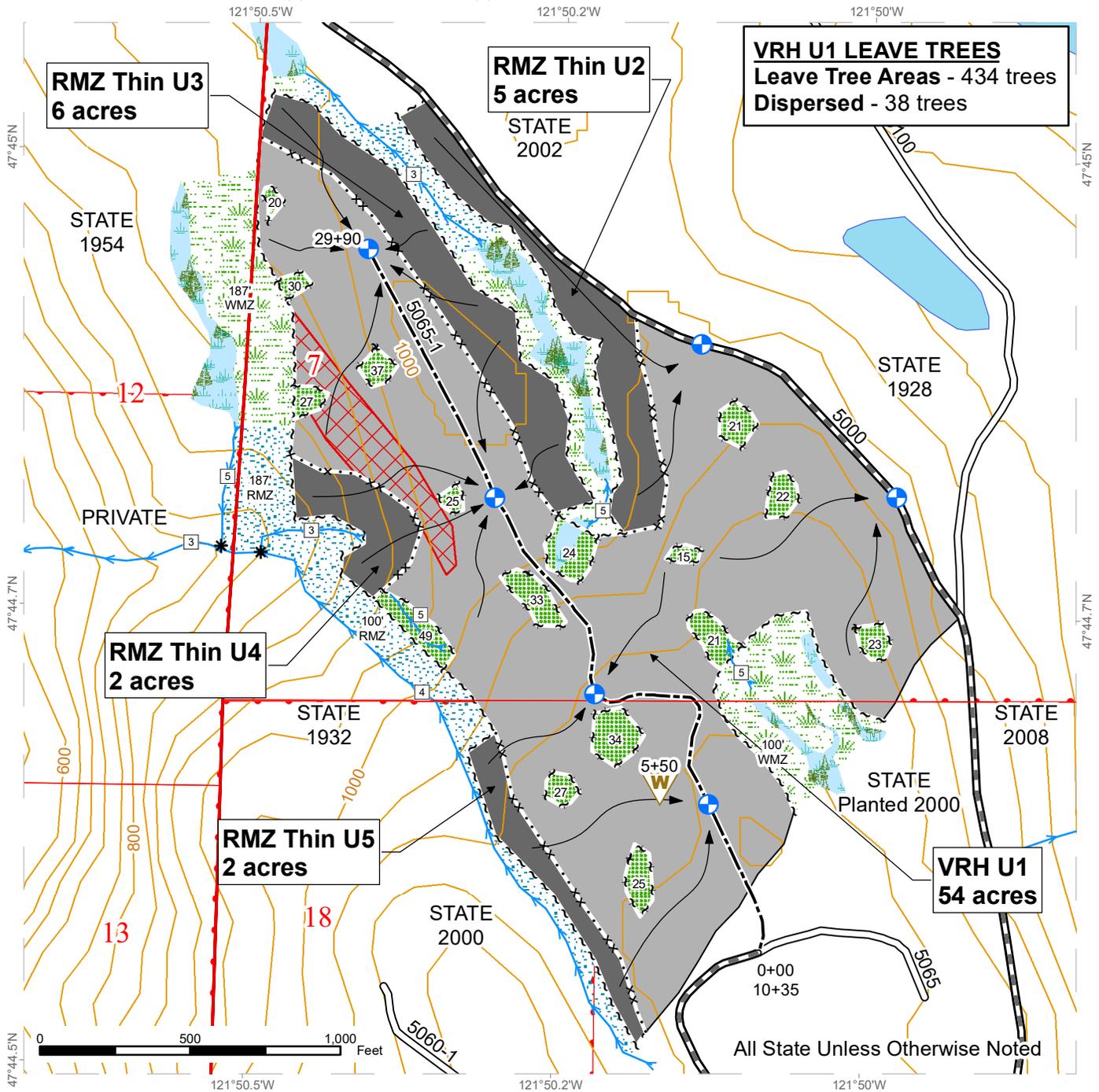
TOTAL COST PER MBF = \$41.59

Date: 04/13/19

# LOGGING PLAN MAP

**SALE NAME:** PUMPKIN PATCH VRH AND RMZ THIN  
**AGREEMENT#:** 30-099018  
**TOWNSHIP(S):** T26R8E  
**TRUST(S):** Normal School (8), State Forest Transfer (1)

**REGION:** South Puget Sound Region  
**COUNTY(S):** King  
**ELEVATION RGE:** 800-1160



	Ground Harvest		Existing Roads		Streams
	Self-leveling/tethered/cable only		Required Pre-Haul Maintenance		Stream Type
	Variable Retention Harvest		Optional Construction		Stream Type Break
	Variable Density Thinning		Sale Boundary Tags		Contours 40-foot
	Leave Tree Area		Timber Type Change		Landing - Proposed
	Riparian Mgt Zone		Special Mgmt Area		Waste Area
	Forested Wetland		Leave Tree Tags		
	Wetland Mgt Zone		DNR Managed Lands		