



TIMBER NOTICE OF SALE

SALE NAME: SACKIT SUMMIT

AGREEMENT NO: 30-092349

AUCTION: September 27, 2016 starting at 10:00 a.m.,
Northeast Region Office, Colville, WA

COUNTY: Stevens

SALE LOCATION: Sale located approximately 23 miles north of Kettle Falls, WA

**PRODUCTS SOLD
AND SALE AREA:**

All green conifer species (excluding ponderosa pine) 7 inches and greater in diameter at breast height not banded with blue paint; all green ponderosa pine 8 inches and greater in diameter at breast height not banded with blue paint; all down and standing dead Douglas-fir and western larch except for two down logs per acre which meet Forest Practice requirements in Units 1, 2, 3, 4, 5 and 6 bounded by white timber sale boundary tags on part(s) of Sections 35 and 36 all in Township 39 North, Range 37 East, W.M., containing 318 acres, more or less.

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

ESTIMATED SALE VOLUMES AND QUALITY:

Species	Avg Ring DBH Count	Total MBF	MBF by Grade									
			P	SM	1S	2S	3S	4S	5S	6S	UT	
Douglas fir	12.2	2,583				157	1,392	764				270
Larch	11.1	1,123				34	594	374				121
Red cedar	11.3	354					194	160				
Grand fir	8.8	268					113	118				37
Lodgepole	12.6	175					149	21				5
Spruce	8.9	89					44	40				5
Sale Total		4,592										

MINIMUM BID: \$894,000.00

BID METHOD: Sealed Bids

PERFORMANCE

SECURITY: \$100,000.00

SALE TYPE: Lump Sum

EXPIRATION DATE: December 15, 2018

ALLOCATION: Export Restricted

BID DEPOSIT: \$89,400.00 or Bid Bond. Said deposit shall constitute an opening bid at the appraised price.

HARVEST METHOD: Track skidder and Rubber tired skidder. Falling and Yarding will not be permitted from February 1 to May 1 unless authorized in writing by the Contract Administrator due to spring breakup.

ROADS: 19.65 stations of required construction. 10.35 stations of required reconstruction. 498.80 stations of required prehaul maintenance. Road construction will not be permitted from November 15 to May 31 unless authorized in writing by the Contract Administrator due to spring breakup and frozen conditions. The hauling of forest products will not be permitted from February 1 to May 1 unless authorized in writing by the Contract Administrator due to spring breakup.



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ACREAGE DETERMINATION

CRUISE METHOD: Acreage determined using GPS methods. Acreage shown above is net harvest acres in harvest units. Ponderosa pine: 8.0 - 17.5 inches dbh has a minimum top of 5.6 inch dib. Red cedar: 7.0 - 17.5 inches dbh has a minimum top of 5.6 inch dib. All other species: 7.0 - 17.5 dbh has minimum top of 4.6 inch dib. All species 17.6 inch and greater dbh measure height to 40% of dob at 16 feet or a 6 inch top whichever is greater. Utility wood: comprised of non-board foot volume and volume below the minimum top diameter of 5.0 inches or 40% of dob at 16 feet to a minimum of a 2.6 inch top. Firewood volume (214 mbf) is included in the utility wood volume on the notice of sale. Firewood volume per species is available in the cruise.

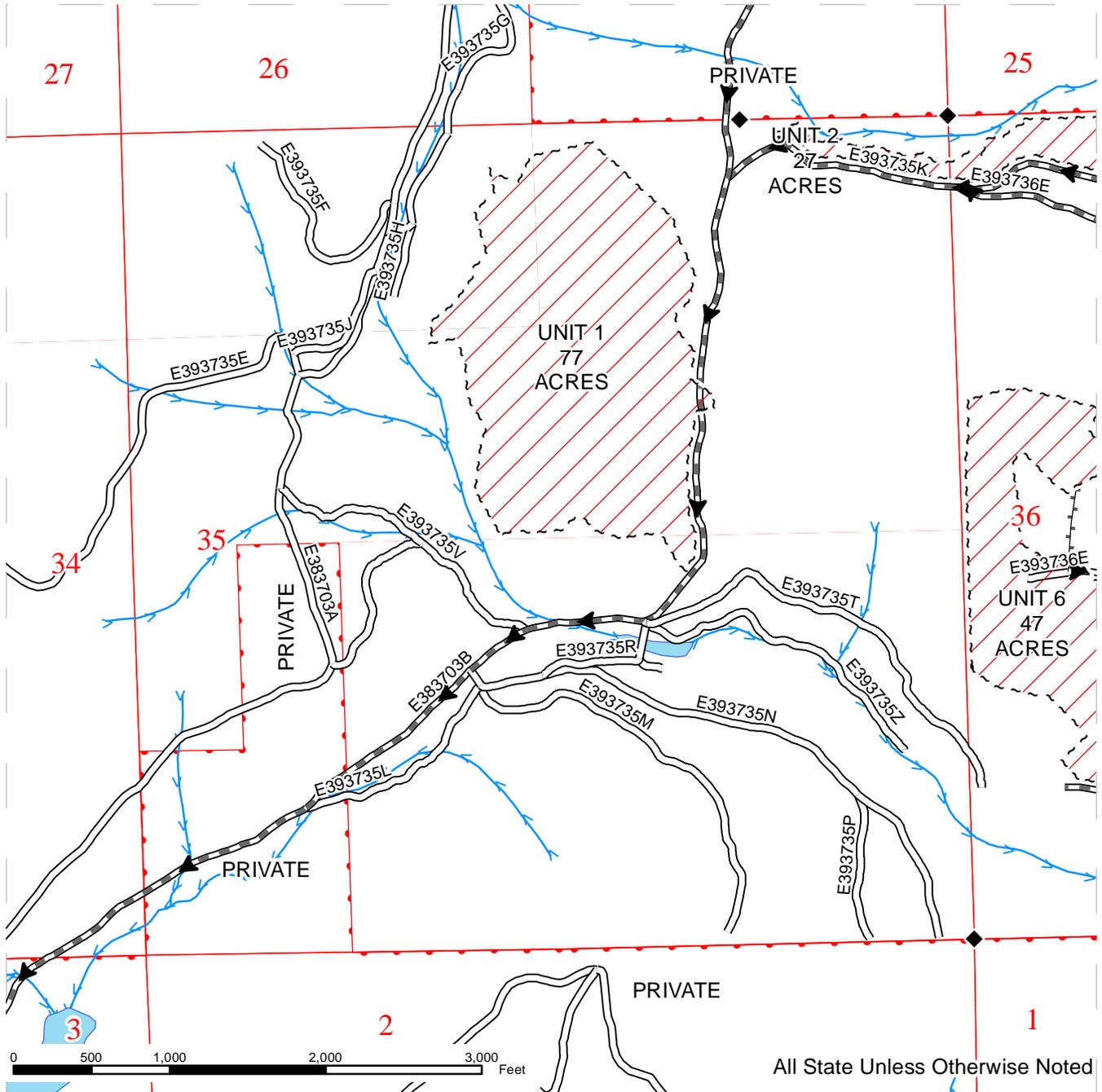
FEES: Within 10 days of day of sale, Purchaser shall provide a check payable to Golden Pond Timberlands, Inc. in the amount of \$2,537.00 for a road use permit and for 5.0 mbf of right of way timber at the purchaser's bid price. \$81,508.00 is due on day of sale. \$9.00 per MBF is due upon removal. These are in addition to the bid price.

SPECIAL REMARKS: This sale requires felling of all stems 3 inches in diameter or greater at breast height not banded with blue paint. Purchaser may pay for and remove conifer products that do not meet the definition of products sold in the G-011 Clause and as outlined in the Schedule A. An exterior optional designated skid trail is located in the upper portion of Unit 6. No timber removal is required for this skid trail.

TIMBER SALE MAP

SALE NAME: SACKIT SUMMIT
AGREEMENT#: 30-092349
TOWNSHIP(S): T39R37E
TRUST(S): Common School and Indemnity(3)

REGION: Northeast Region
COUNTY(S): STEVENS
ELEVATION RGE: 2719-3573



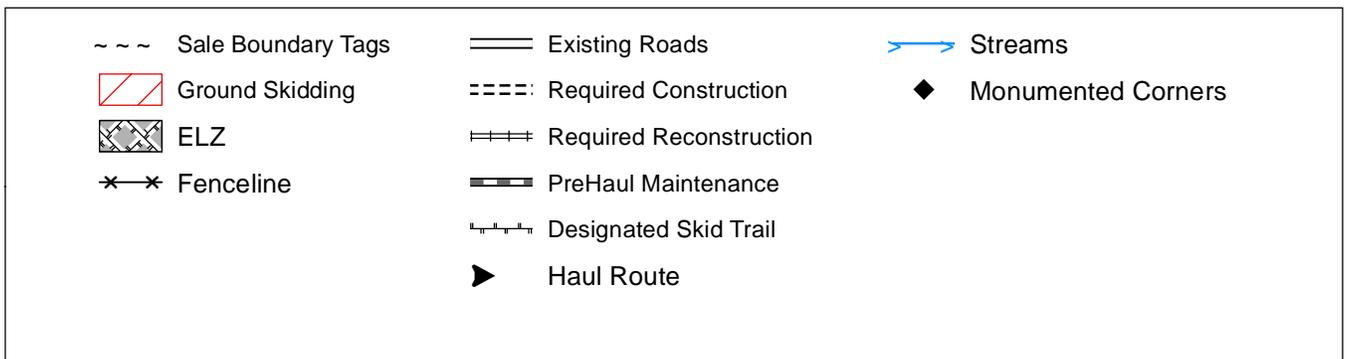
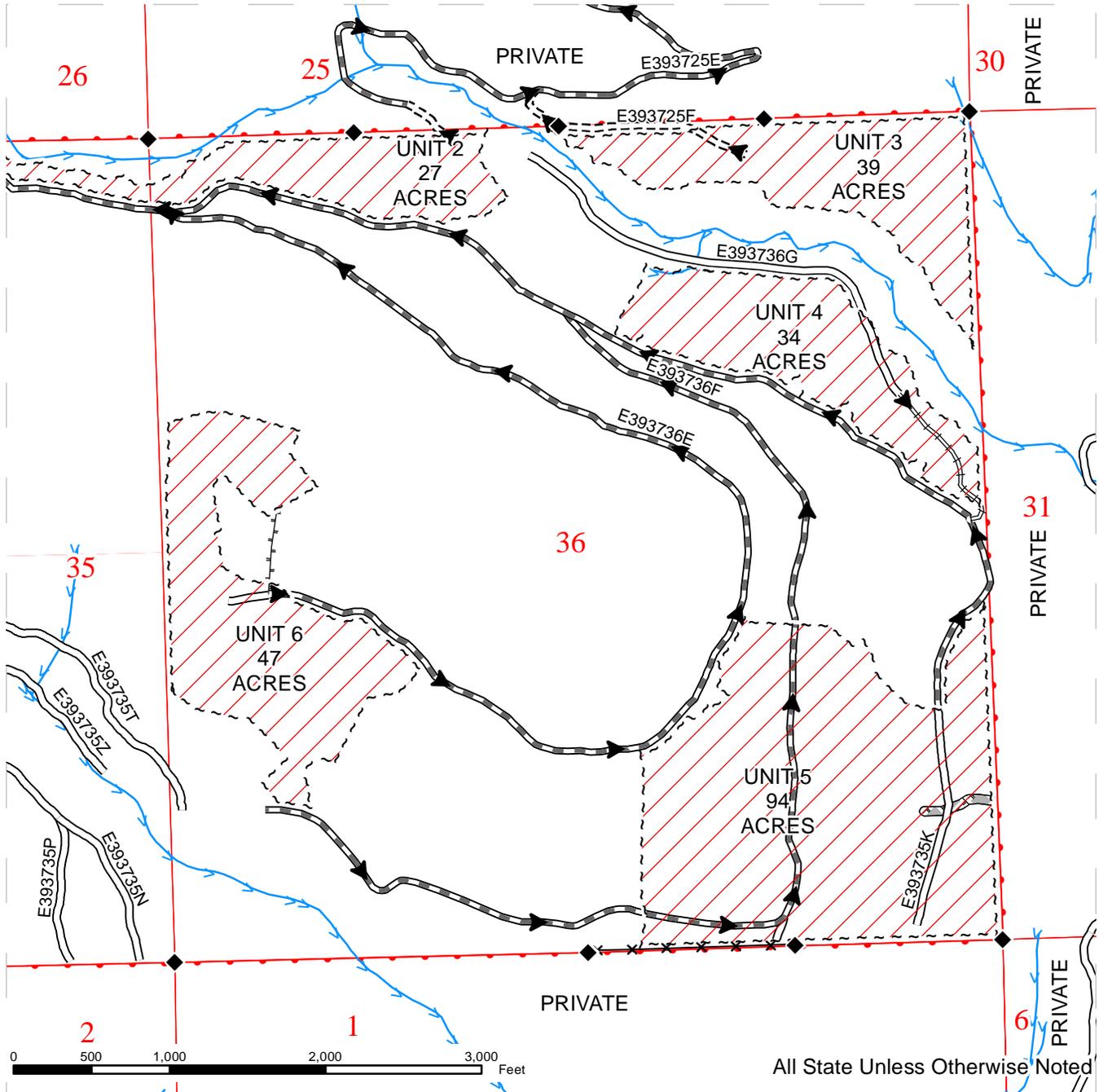
--- Sale Boundary Tags	— Existing Roads	→ Streams
▨ Ground Skidding	- - - Required Construction	◆ Monumented Corners
	≡≡≡ Required Reconstruction	
	▬ PreHaul Maintenance	
	⋈ Designated Skid Trail	
	▶ Haul Route	



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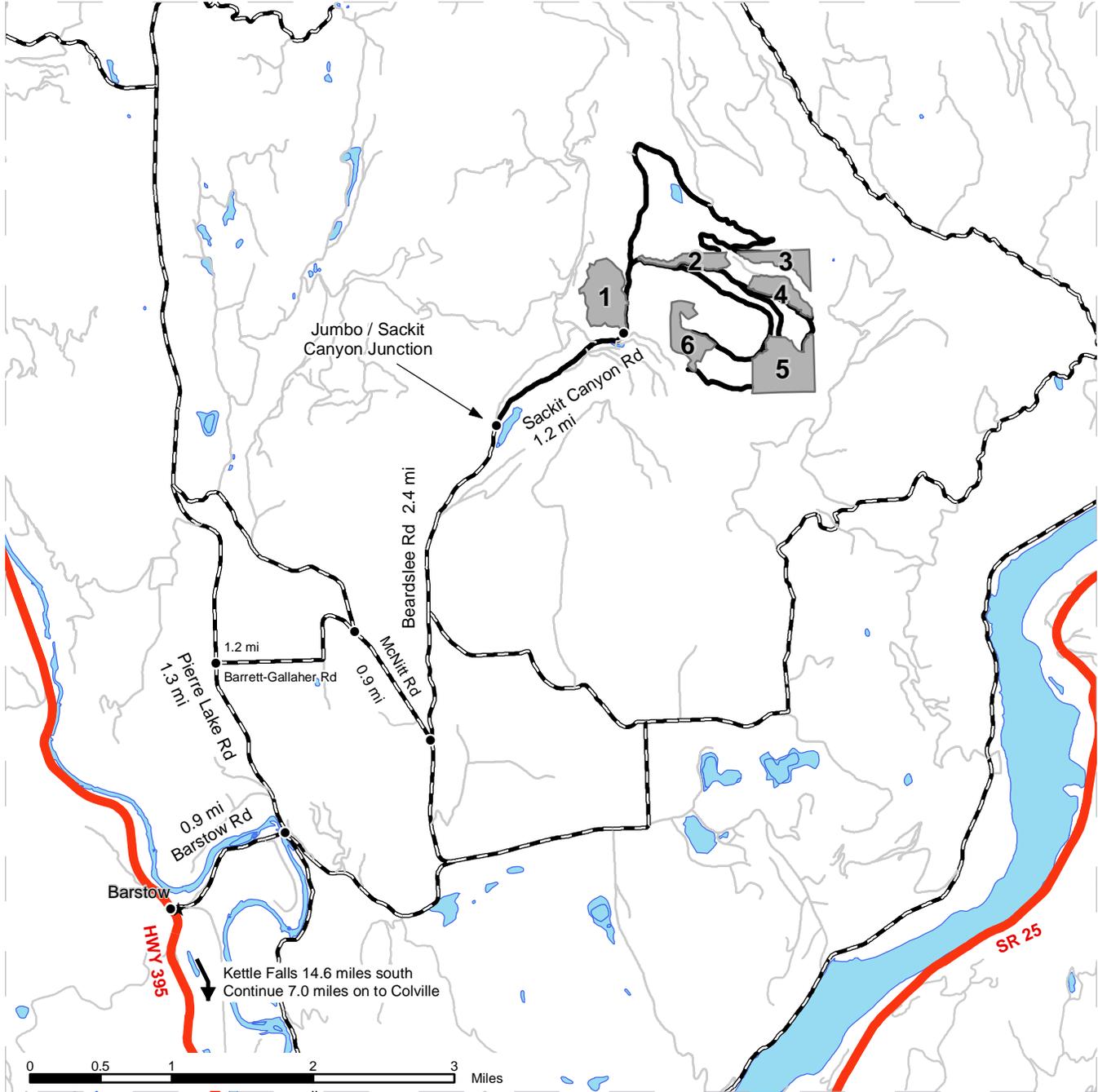
REGION: Northeast Region
COUNTY(S): STEVENS
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DRIVING MAP

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AGREEMENT#: 30-092349
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	Timber Sale Unit
	Haul Route
	Other Route
	County Road
	Highway
	Distance Locator

DRIVING DIRECTIONS:

From the town of Colville go north on Hwy 395 for 7.0 miles to Kettle Falls. Continue another 14.6 miles north on Hwy 395 to Barstow. Turn right on Barstow Road and go 0.9 miles. Turn left on Pierre Lake Road and go 1.3 miles. Turn right on Barrett / Gallaher Road and go 1.2 miles to McNitt Road. Stay right on McNitt Road and go 0.9 miles to Beardslee Road. Turn left on Beardslee Road and go 2.4 miles to the Jumbo/Sackit Canyon junction. Stay right on Sackit Canyon Road and go 1.2 miles to Unit 1. See timber sale map for access to Units 2 through Unit 6.



**STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES**

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

Export Restricted Lump Sum AGREEMENT NO. 30-092349

SALE NAME: SACKIT SUMMIT

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

Section G: General Terms

G-001 Definitions

The following definitions apply throughout this contract;

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

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

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

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

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 September 27, 2016 and the sale was confirmed on _____. The State, as owner, agrees to sell to Purchaser, and Purchaser agrees to purchase as much of the following forest products as can be cut and removed during the term of this contract: All green conifer species (excluding ponderosa pine) 7 inches and greater in diameter at breast height not banded with blue paint; all green ponderosa pine 8 inches and greater in diameter at breast height not banded with blue paint; all down and standing dead Douglas-fir and western larch except for two down logs per acre which meet Forest Practice requirements in Units 1, 2, 3, 4, 5 and 6 bounded by white timber sale boundary tags, located on approximately 318 acres on part(s) of Sections 35, and 36 all in Township 39 North, Range 37 East W.M. in Stevens 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	Removal of Non-Designated Forest Products

G-031 Contract Term

Purchaser shall complete all work required by this contract prior to December 15, 2018.

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 \$376.00 per acre per annum for the acres on which an operating release has not been issued .
- 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-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-102 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 shall become a part of this contract and the Scribner log scale volume, as defined by the National Forest Log Scaling Handbook, 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 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 Colville, Washington. The Region Manager will notify Purchaser in writing who is responsible for administering the contract. The Region Manager has sole authority to waive, modify, or amend the terms of this contract in the manner prescribed in clause G-180. No agent, employee, or representative of the State has any authority to bind the State to any affirmation, representation, or warranty concerning the forest products conveyed beyond the terms of this contract.

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

G-170 Assignment and Delegation

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

G-180 Modifications

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

G-190 Contract Complete

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

G-200 Notice

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

G-210 Violation of Contract

G-220 State Suspends Operations

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

G-210 Violation of Contract

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

G-220 State Suspends Operation

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

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

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

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

G-230 Unauthorized Activity

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

G-240 Dispute Resolution

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

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

G-250 Compliance with All Laws

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

G-260 Venue

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

G-270 Equipment Left on State Land

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

G-280 Operating Release

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

G-310 Road Use Authorization

Purchaser is authorized to use the following State roads and roads for which the State has acquired easements and road use permits; E383703B, E393725E, E393725F, E393735K, E393736E, E393736F and E393736G. The State may authorize in writing the use of other roads subject to fees, restrictions, and prior rights.

G-320 Erosion Control

Purchaser shall deliver 250 pounds of grass seed to a location designated by the Contract Administrator. Seed provided shall meet the following specifications.

40% Timothy, 10% Ladak Alfalfa, 20% Alsike Clover, 30% Hard Fescue
Seed shall be certified weed free, premixed and delivered to Northeast Region office in 50 pound bags clearly labeled with the timber sale name on each bag.

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 E383703B road, unless authority is granted in writing by the Contract Administrator.

G-380 Road Easement and Road Use Permit Requirements

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

Easement 83374 with Behrens dated June 22, 1995

Easement 1009 with Boise Cascade dated June 4, 1985

Easement 87096 with Lloyd dated August 27, 1974

Road Use Permit 92799 with Hancock Forest Management dated October 7, 2015

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:

Lease, including the terms and provisions thereof,

For: Grazing

In Favor of: Brian & Barbara Lloyd

Disclosed by Application No.: 10-085753

Granted: 11/1/2010

Expires: 4/30/2020

Easement, including the terms and provisions thereof,

For: Road

In Favor of: Boise Cascade Corporation

Disclosed by Application No.: 50-051390

Granted: 11/1/1972
Expires: Indefinite

Easement, including the terms and provisions thereof,
For: Road
In Favor of: John & Helen Behrens, et al
Disclosed by Application No.: 50-083375
Granted: 6/22/1995
Expires: Indefinite

Easement, including the terms and provisions thereof,
For: Road
In Favor of: Vaagen Bros. Lumber Inc.
Disclosed by Application No.: 50-090082
Granted: 8/11/2014
Expires: Indefinite

Easement, including the terms and provisions thereof,
For: County Road
In Favor of: Stevens County
Disclosed by Application No.: 50-CR3269
Granted: 4/9/1948
Expires: Indefinite

Easement, including the terms and provisions thereof,
For: County Road
In Favor of: Stevens County
Disclosed by Application No.: 50-CR3273
Granted: 10/22/1951
Expires: Indefinite

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 \$122,836.00. The total contract price consists of a \$0.00 contract bid price plus \$122,836.00 in fees. Fees collected shall be retained by the state unless the contract is adjusted via the G-066

clause. Purchaser shall be liable for the entire purchase price, and will not be entitled to any refunds or offsets unless expressly stated in this contract.

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

P-045 Guarantee of Payment

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

P-050 Billing Procedure

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

P-080 Payment Account Refund

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

P-090 Performance Security

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

P-100 Performance Security Reduction

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

Section H: Harvesting Operations

H-010 Cutting and Yarding Schedule

Falling and Yarding will not be permitted from February 1 to May 1 in all Units unless authorized in writing by the Contract Administrator.

H-013 Reserve Tree Damage Definition

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

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

- a. A reserve tree has one or more scars on its trunk exposing the cambium layer, which in total exceeds 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 area, as approved by the Contract Administrator. Purchaser may be required to pay liquidated damages for Excessive Reserve Tree Damage as detailed in clause D-041.

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

H-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 12 feet in width, including rub trees.

- b. Skid trails shall not cover more than 10 percent of the total acreage on one unit.
- c. 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.

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 10 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-050 Rub Trees

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

H-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-110 Stump Height

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

H-120 Harvesting Equipment

Forest products sold under this contract shall be felled by hand or mechanical means and yarded by rubber tired skidders, D6 or smaller track dozers unless authority to use other equipment is granted in writing by the State.

H-125 Log Suspension Requirements

Lead-end suspension is required for all yarding activities.

H-130 Hauling Schedule

The hauling of forest products will not be permitted on all roads from February 1 to May 1 unless authorized in writing by the Contract Administrator .

H-140 Special Harvest Requirements

Purchaser shall accomplish the following during the harvest operations:

- a. Whole tree yarding is required in all Units.

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

H-190 Completion of Settings

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

H-220 Protection of Residual or Adjacent Trees

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

H-230 Tops and Limbs Outside the Sale Boundary

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

H-250 Additional Falling Requirements

Within Units 1, 2, 3, 4, 5 and 6, all live stems greater than 3 inches in diameter at breast height not marked with blue paint, shall be felled concurrently with felling operations. Areas of young or immature timber may be excluded from this requirement by the Contract Administrator.

H-260 Fall Leaners

Trees in Units 1, 2, 3, 4, 5 and 6 within 100 feet of haul route roads that have been pushed over in falling or skidding operations shall be felled.

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

Road construction and associated work provisions of the Road Plan for this sale, dated 4/15/2015 are hereby made a part of this contract.

C-050 Purchaser Road Maintenance and Repair

Purchaser shall perform work at their own expense on E383703B, E393725E, E393725F, E393735K, E393736E, E393736F and E393736G roads. All work shall be completed to the specifications detailed in the Road Plan.

C-080 Landing Locations Approved Prior to Construction

Landings shall be marked by Purchaser and approved by the Contract Administrator prior to construction.

C-140 Water Bars

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

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

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

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

S-010 Fire Hazardous Conditions

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

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

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

S-030 Landing Debris Clean Up

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

S-040 Noxious Weed Control

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

S-060 Pump Truck or Pump Trailer

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

S-100 Stream Cleanout

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

S-110 Resource Protection

No felling and yarding equipment may operate within the Riparian Management Zones bounded out of the sale units. unless authority is granted in writing by the Contract Administrator.

S-120 Stream Protection

No timber shall be felled into, across, or yarded through any stream.

S-130 Hazardous Materials

a. Hazardous Materials and Waste - Regulatory Compliance

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

b. Hazardous Materials Spill Prevention

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

c. Hazardous Materials Spill Containment, Control and Cleanup

If safe to do so, Purchaser shall take immediate action to contain and control all hazardous material spills. Purchaser shall ensure that enough quick response spill kits capable of absorbing 4 to 6 gallons of oil, coolant, solvent or contaminated water are available on site to quickly address potential spills from any piece of equipment at all times throughout active operations. If large quantities of bulk fuel/other hazardous materials are stored on site, Purchaser must be able to effectively control a container leak and contain & recover a hazmat spill equal to the largest single on site storage container volume. (HAZWOPER reg. 29CFR 1910.120 (j) (1) (vii)).

d. Hazardous Material Release Reporting

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

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

DNR Contract Administrator

ECY - Northwest Region:

1-425-649-7000

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

ECY - Southwest Region:

1-360-407-6300

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

ECY - Central Region:

1-509-575-2490

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

ECY - Eastern Region:

1-509-329-3400

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

S-131 Refuse Disposal

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

S-140 Fence Repair

Purchaser shall immediately repair all fence damage resulting from operations on this sale to an equal or better condition than existed at the time of sale.

Section D: Damages

D-013 Liquidated Damages or Failure to Perform

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

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

D-041 Reserve Tree Excessive Damage

When Purchaser's operations exceed the damage limits set forth in clause H-013, Reserve Tree Damage Definition, and when the Contract Administrator determines that a suitable replacement for a damaged reserve tree is not possible, the damaged trees result in substantial injury to the State. The value of the damaged reserve trees at the time of the breach is not readily ascertainable. Therefore, the Purchaser agrees to pay the State as liquidated damages at the rate of \$1,000.00 per tree for all damaged reserve trees that are not replaced in Units 1, 2, 3, 4, 5 and 6.

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

STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES

Purchaser

Loren D. Torgerson
Northeast Region Manager

Date: _____
Address: _____

Date: _____

CORPORATE ACKNOWLEDGEMENT

STATE OF _____)

COUNTY OF _____)

On this _____ day of _____, 20____, before me personally appeared _____

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

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

Notary Public in and for the State of

My appointment expires _____

Schedule A
Removal of Non-Designated Forest Products

Purchaser may pay for and remove green or dead conifer products that do not meet the definition of products sold in the G-011 Clause (Right to Remove Forest Products and Contract Area). Request to do so must be made in writing by the Purchaser and approved by the State before cutting and removing these products as described below.

If the right to remove green or dead conifer and hardwood forest products is granted by the State, the following conditions shall apply:

1. All green or dead conifer products approved for removal shall be decked and hauled separately from other forest products designated in either the G-011 or G-102 clause and made available for Contract Administrator inspection. Removal is not authorized until approval to do so is granted by the Contract Administrator.
2. The Purchaser agrees to pay the State for these products removed at the following rate:
\$2.00/ton
3. The Purchaser shall ensure log weight data for each load is delivered to the Northeast Region Office in a format determined by the State. At a minimum all log data shall be delivered semimonthly to the Region Office.
4. Purchaser's Contractor shall complete and use load tickets as directed by the Contract Administrator and, if required, use other identification as directed by the State to ensure accounting of forest products removed from the sale area. A load ticket must be fixed, as designated by the Contract Administrator, to each truck and trailer load prior to leaving the landing.
Purchaser shall account for all load tickets issued by the Contract Administrator. The State may treat load tickets not accounted for as lost forest products. All costs associated with computing the billings for lost loads shall be borne by the Purchaser.
5. Removal of forest products from the sale area without adequate branding and/or valid load tickets attached to the load, weighing or scaling forest products in a location other than the facilities authorized for use for this sale, or failing to deliver load ticket to the weighing/scaling official may result in substantial injury to the State. The potential loss from not having proper branding, ticketing, weighing locations and accountability is not readily ascertainable. These contractual breaches result in a loss of load and weighting/scaling data the potential for the removal of forest products for which the State receives no payment, and cause increases in the State's administration costs associated with this contract. The actual costs of these breaches are difficult to assess.

For these reasons, Purchaser's payment for lost forest products under this contract will be billed in the following amounts, as liquidated damages, to compensate the State for these breaches: a

sum of \$100.00 each time a load of logs does not have branding as required in the contract, \$250.00 each time a load of logs does not have a load ticket as required by the contract, \$250.00 each time a load ticket has not been filled out as required by the plan of operations, \$250.00 each time a load is weighed at a facility not approved as required by the contract, and \$250.00 each time load and weight scale data is not presented to the weighing/scaling official.

6. The weighing and scaling facilities for this contract must be approved by the State. Prior to logs being hauled, the Contract Administrator must authorize in writing weighing and scaling facilities that are at or in-route to final destinations. No logs from this sale may be weighed at facilities, which are not currently approved for use by the State and are not currently authorized for this sale. The State reserves the right to verify load weights/scale with State employees and equipment at the State's own expense and revoke authorization of approved weighing and scaling locations.



WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES

FOREST EXCISE TAX ROAD SUMMARY SHEET

Region:

Timber Sale Name:

Application Number:

EXCISE TAX APPLICABLE ACTIVITIES

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

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

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

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

Pre-Haul Maintenance: **linear feet**
Existing road to receive maintenance work (specifically required by the contract) prior to haul

EXCISE TAX EXEMPT ACTIVITIES

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

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

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

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

(Revised 4/09)

PRE-CRUISE NARRATIVE

Sale Name: Sackit Summit	Region: Northeast
Agreement #: 30-092349	District: Click here to enter text.
Contact Forester: Berny Beardslee Phone / Location: (509) 675-5119	County(s): Stevens, Choose a county
Alternate Contact: Tony Flanagan Phone / Location: (509)684-7474	Other information: A 4 wheeler will be helpful to get in to 3,4,5 and 6.

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

UNIT ACREAGES AND METHOD OF DETERMINATION:

Unit # Harvest R/W or RMZ WMZ	Legal Description (Enter only one legal for each unit) Sec/Twp/Rng	Grant or Trust	Gross Proposal Acres	Deductions from Gross Acres (No harvest acres)				Net Harvest Acres	Acreage Determination (List method and error of closure if applicable)
				RMZ/WMZ Acres	Leave Tree Acres	Existing Road Acres	Other Acres (describe)		
1	35/39/37E	3	77.03	NA	NA	NA	NA	77.03	GPS (Garmin)
2	36/39/37E	3	30.25	NA	NA	NA	NA	30.25	GPS (Garmin)
3	36/39/37E	3	40.61	NA	NA	NA	NA	40.61	GPS (Garmin)
4	36/39/37E	3	34.67	NA	NA	.9	NA	33.77	GPS (Garmin)
5	36/39/37E	3	96.08	NA	NA	2.5	NA	93.58	GPS (Garmin)
6	36/39/37E	3	47.24	NA	NA	NA	NA	47.24	GPS (Garmin)
	Enter Sec / Twp								Choose an

	/ Rng								item.
TOTAL ACRE S	r		325.8 8					322 .48	

HARVEST PLAN AND SPECIAL CONDITIONS:

Unit #	Harvest Prescription: (Leave, take, paint color, tags, flagging etc.)	Special Management areas:	Other conditions (# leave trees, etc.)
1	Cut all timber not marked with blue paint and all dead standing and down timber , except for 2-2-2 (required forest practice	when possible) Leave the two largest snags per acre, preferred snags are western larch and Douglas fir	6-8
2	Cut all timber not marked with blue paint and all dead standing and down timber , except for 2-2-2 (required forest practice)	when possible) Leave the two largest snags per acre, preferred snags are western larch and Douglas fir	6-8
3	Cut all timber not marked with blue paint and all dead standing and down timber , except for 2-2-2 (required forest practice	when possible) Leave the two largest snags per acre, preferred snags are western larch and Douglas fir	7-8
4	Cut all timber not marked with blue paint and all dead standing and down timber , except for 2-2-2 (required forest practice	when possible) Leave the two largest snags per acre, preferred snags are western larch and Douglas fir	6-8
5	Cut all timber not marked with blue paint and all dead standing and down timber , except for 2-2-2 (required forest practice	when possible) Leave the two largest snags per acre, preferred snags are western larch and Douglas fir	6-7
6	Cut all timber not marked with blue paint and all dead standing and down timber , except for 2-2-2 (required forest practice	when possible) Leave the two largest snags per acre, preferred snags are western larch and Douglas fir	6-7

OTHER PRE-CRUISE INFORMATION:

Unit #	Primary,secondary Species / Estimated Volume (MBF)	Access information (Gates, locks, etc.)	Photos, traverse maps required

1	DF,WL 862	All Units access from Beardslee Road	
2	DF,WL 396		
3	DF,WL 512		
4	WL,DF,GF,WRC300		
5	DF,WL 1.4		
6	DF,WL 611		
TOTAL MBF	4.081		

REMARKS:

The south half of Unit 1 has a significant amount of down Douglas fir that was taken down from a heavy snow load 2 years ago that may still be good enough for fir wood.

Prepared By: Berny Beardslee Date: 3/31/2015	Title: NRS1	CC:
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Sackit Summit Cruise Narrative

Sale Name: Sackit Summit	Region: Northeast
Agreement Number: 30-092349	District: Sackit Summit
Lead Cruiser: Dan Griggs	Completion Date: 4/13/2015
Other Cruisers on sale: Nathan Simpkins	Legal: Sections 35 & 36, T 39 N, R 37 E; WM.

Unit Acreage Specifications:

Unit #	Gross Acres	Net Acres	Total Deletions	Existing Roads	Leave Tree Acres	Power Line	Other
1	77.03	77.03	0.00				
2	27.51	27.51	0.00				
3	38.95	38.95	0.00				
4	34.67	33.77	0.90	0.90			
5	96.08	93.58	2.50	2.50			
6	47.24	47.24	0.00				
Total	321.48	318.08	3.40	3.40	0.00	0.00	0.00

Cruise Sample Design:

This timber sale was cruised using the **variable plot** sampling method. The double basal area system was employed; a small BAF to determine Basal Area (count trees) and a large BAF to determine the Volume-Basal Area Ratio (cruise trees). Each plot was a full plot. Plot locations were created using a computer generated grid, and found using a hand held GPS unit. **In units 1 and 6 we also took a 1/10 acre fixed plot for the dead and down Douglas-fir. These trees have been down for 1 to 3 years and have been cruised as firewood and given a 30% office cull.**

Unit #	Small BAF (count)	Large BAF (cruise)	Sighting height	Grid size (plot spacing in feet)	% Cruise to count Target	% Cruise to count Actual	Total number of Plots
1	33.61	134.44	D4H	280x280	25%	58.2%	39
2	33.61	134.44	D4H	280x280	25%	20.6%	14
3	33.61	134.44	D4H	280x280	25%	28.4%	19
4	33.61	134.44	D4H	280x280	25%	22.1%	19
5	33.61	134.44	D4H	280x280	25%	25.2%	45
6	33.61	134.44	D4H	280x280	25%	41.5%	25
Total						36.4%	161

Cruise Specifications:

Minor species cruise intensity:	We grade the first tree of all minor species encountered with the smaller BAF; then followed through with the small BAF to large BAF ratio.												
Minimum top dib:	<p>Ponderosa pine and red cedar: Trees less than 17.5" DBH have a minimum top of 5.6" dib. Trees 17.6" and greater DBH have a minimum top dib of 40% of DOB at 16' or a 6" top whichever is greater.</p> <p>All other species: Trees less than 17.5" DBH have a minimum top of 4.6" dib. Trees 17.6" and greater DBH have a minimum top dib of 40% of DOB at 16' or a 6" top whichever is greater.</p>												
Minimum dbh:	Ponderosa pine: 8.0 inches DBH All other species: 7.0 inches DBH												
Log lengths:	Saw logs: 32 feet where possible, minimum of 12 feet Firewood: 40 feet where possible, minimum of 12 feet Utility: 16 feet where possible, minimum of 12 feet												
Take / Leave tree description:	Harvest all green conifers that are not banded with blue paint and all dead standing or downed Douglas-fir and western larch that meet the minimum cruise specifications. Must leave at least two dead standing and downed trees per acre, preferably Douglas-fir or western larch.												
Commercial species observed in sale area, but not in cruise:	Western Hemlock												
Utility wood:	Comprised of non-board foot volume and volume below the minimum top diameter of 5" or 40% of DOB at 16' to a minimum of a 2.6" top.												
Firewood:	Comprised of dead standing or down Douglas-fir and western larch. 4.6" is the minimum top diameter.												
Status codes used:	D - Downed firewood, S - Standing firewood												
Sort codes used	D - saw log, U - utility log, F - firewood												
Species table used:	NE 2 inch												
Grade table used:	Eastgrad												
Other tables used (cruise adjustment):	Cruise adjustment table: Sackit 1 <table border="1"> <thead> <tr> <th>Abrv.</th> <th>Status</th> <th>Min Age</th> <th>Max Age</th> <th>Bdft Adjustment</th> <th>Cuft Adjustment</th> </tr> </thead> <tbody> <tr> <td>DF</td> <td>D</td> <td>25</td> <td>99</td> <td>0.70</td> <td>0.70</td> </tr> </tbody> </table>	Abrv.	Status	Min Age	Max Age	Bdft Adjustment	Cuft Adjustment	DF	D	25	99	0.70	0.70
Abrv.	Status	Min Age	Max Age	Bdft Adjustment	Cuft Adjustment								
DF	D	25	99	0.70	0.70								

Field Observations:

Location:	Northwestern Stevens County, 22 miles north of Kettle Falls, Washington.
Aspect:	North, East, South, and West
Elevation:	2,720 to 3,560 feet
Slope:	Unit 1 – 0% to 45%, Average 25% Unit 2 – 0% to 45%, Average 30% Unit 3 – 0% to 55%, Average 30% Unit 4 – 0% to 40%, Average 30% Unit 5 – 0% to 40%, Average 30% Unit 6 – 0% to 45%, Average 30%
Harvest Methods:	100% Ground base yarding with a maximum skidding distance of 1,200 feet.
Stand Composition:	The stands are second growth Douglas-fir and western larch with larger residual trees. There is a minor component of western red cedar, lodgepole pine, grand fir, and Engelmann spruce.
Stand Health:	There is a light amount of dwarf mistletoe in the Douglas- fir. There are scattered small patches of root rot. In units 1 and 6 there are areas of heavy blow down caused by a heavy snow load.
Timber Quality:	The timber is a mix of average quality Douglas-fir (51%) and western larch (24%). There is a minor component of western red cedar (8%), grand fir (6%), Lodgepole pine (4%), and Engelmann spruce (2%). There is a minor component of dead firewood down Douglas-fir (2%), standing Douglas-fir (2%) and standing western larch (1%).
Non-board Foot Volume:	Of the total volume on this sale, 228 mbf is utility wood. There is 214 mbf of firewood which is approximately 1300 tons.
Other Considerations:	The stand density varies ranging from draws with dense stands of timber to open areas with widely spaced trees. The utility wood was given a board foot volume.

Trust: 03**County:** Stevens**Prepared by:** Dan Griggs**Title:** Check Cruiser 1**CC:** Timber Sales Document Center & File #30-092349

TC		PSPCSTGR		Species, Sort Grade - Board Foot Volumes (Project)																		
T39N R37E S35 Ty00U1 THRU T39N R37E S36 Ty00U6				Project: SACKITSU											Page 1							
				Acres 318.08											Date 2/16/2016							
Spp	S T	So rt	Gr ad	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent of Net Board Foot Volume								Average Log				Logs Per /Acre	
					Def%	Gross	Net		Log Scale Dia.				Log Length				Ln Ft	Dia In	Bd Ft	CF/ Lf		
									4-5	6-11	12-16	17+	12-20	21-32	33-55	56-99						
DF	D	2		6	1.3	499	492	157	100				100				32	13	233	1.73	2.1	
DF	D	3		58	2.9	4,513	4,381	1,394	100				100				32	8	94	0.71	46.4	
DF	D	4		32	2.4	2,463	2,403	764	57	43			24	76	25	5	35	0.31	69.6			
DF	U	UT		4		295	295	94	91	9			80	20	18	4	12	0.14	25.2			
DF Totals				52	2.6	7,770	7,571	2,408	22	72	6			11	89	26	6	53	0.47	143.3		
DF	D	F	W	100	30.2	410	286	91	34	62	4			6	20	74	33	6	43	0.37	6.6	
DF Totals				2	30.2	410	286	91	34	62	4			6	20	74	33	6	43	0.37	6.6	
DF	S	F	W	100	1.7	273	268	85	24	76			4	6	90	36	6	65	0.56	4.1		
DF Totals				2	1.7	273	268	85	24	76			4	6	90	36	6	65	0.56	4.1		
RC	D	3		54	2.8	627	610	194	100				100				32	8	96	0.89	6.3	
RC	D	4		46		503	503	160	95	5			13	87	26	5	33	0.26	15.0			
RC Totals				8	1.6	1,130	1,113	354	43	57			6	94	28	6	52	0.48	21.4			
WL	D	2		3		106	106	34	100				100				32	14	250	1.74	.4	
WL	D	3		54	3.2	1,928	1,866	594	100				100				32	8	85	0.58	22.1	
WL	D	4		35	2.1	1,202	1,176	374	59	41			1	99	29	5	37	0.26	31.4			
WL	U	UT		8		262	262	83	100			82	18	17	3	11	0.11	24.2				
WL Totals				24	2.5	3,497	3,410	1,085	28	69	3			7	93	26	6	44	0.35	78.1		
WL	S	F	W	100		120	120	38	28	50	23			16	13	71	26	6	41	0.36	2.9	
WL Totals				1		120	120	38	28	50	23			16	13	71	26	6	41	0.36	2.9	
GF	D	3		42	11.6	402	355	113	95				5	100				32	8	80	0.54	4.4
GF	D	4		44		370	370	118	100			20	80	23	5	25	0.22	14.7				
GF	U	UT		14		117	117	37	100			44	56	20	3	17	0.16	6.7				
GF Totals				6	5.2	889	842	268	58	40	2			15	85	24	5	33	0.28	25.8		
LP	D	3		85	6.6	502	469	149	100				100				32	8	89	0.60	5.2	
LP	D	4		12		66	66	21	100			100				24	5	30	0.30	2.2		
LP	U	UT		3		15	15	5	100			100				16	4	10	0.14	1.5		
LP Totals				4	5.7	583	550	175	15	85			3	97	27	7	61	0.49	9.0			
ES	D	3		48		135	135	43	100				100				32	7	70	0.44	1.9	
ES	D	4		45	4.0	132	127	40	100			30	70	25	5	27	0.24	4.7				
ES	U	UT		7		17	17	5	100			100				16	3	10	0.09	1.7		
ES Totals				2	1.9	283	278	89	52	48			20	80	25	5	34	0.28	8.3			
Totals					3.5	14,955	14,438	4,592	27	68	5			9	87	4	26	6	48	0.42	299.5	

TC PSTATS		PROJECT STATISTICS							PAGE	1	
		PROJECT SACKITSU							DATE	2/16/2016	
TWP	RGE	SC	TRACT	TYPE		ACRES	PLOTS	TREES	CuFt	BdFt	
39N	37E	35	SACKIT SUMMI	00U1	THR	318.08	161	599	S	E	
39N	37E	36	SACKIT SUMMI	00U6							
			PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES				
TOTAL			161	599	3.7						
CRUISE			108	222	2.1	49,844	.4				
DBH COUNT											
REFOREST											
COUNT			41	113	2.8						
BLANKS			12								
100 %											
STAND SUMMARY											
	SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC	
DOUG FIR	68	73.9	12.2	71	17.2	60.0	7,770	7,571	1,760	1,760	
DOUG FIR-D	80	4.9	12.2	52	1.1	4.0	410	286	113	79	
DOUG FIR-S	12	3.5	12.3	65	0.8	2.9	273	268	83	83	
W LARCH	21	31.2	11.1	86	6.3	21.1	3,497	3,410	719	719	
W LARCH-S	6	2.8	8.9	42	0.4	1.2	120	120	27	27	
WR CEDAR	14	15.8	11.3	63	3.3	10.9	1,130	1,113	283	283	
GR FIR	12	16.2	8.8	61	2.3	6.9	889	842	174	174	
LP PINE	3	3.7	12.6	86	0.9	3.2	583	550	120	120	
E SPRUCE	6	4.7	8.9	65	0.7	2.0	283	278	57	57	
TOTAL	222	156.7	11.5	71	33.2	112.3	14,955	14,438	3,335	3,301	
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		58.9	7.1	128	138	147					
DOUG FIR-D		67.0	7.6	55	59	64					
DOUG FIR-S		47.9	14.4	76	89	102					
W LARCH		61.4	13.7	123	142	162					
W LARCH-S		186.4	83.1	21	125	229					
WR CEDAR		45.9	12.7	90	104	117					
GR FIR		76.2	23.0	63	82	100					
LP PINE		14.2	9.8	132	147	161					
E SPRUCE		43.2	19.3	52	65	78					
TOTAL		78.8	5.3	95	100	106	249	127	62		
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		91.6	7.2	69	74	79					
DOUG FIR-D		293.0	23.1	4	5	6					
DOUG FIR-S		390.2	30.8	2	3	5					
W LARCH		144.4	11.4	28	31	35					
W LARCH-S		561.2	44.2	2	3	4					
WR CEDAR		244.9	19.3	13	16	19					
GR FIR		249.8	19.7	13	16	19					
LP PINE		399.3	31.5	3	4	5					
E SPRUCE		402.7	31.7	3	5	6					
TOTAL				157	157	157					
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		83.8	6.6	56	60	64					
DOUG FIR-D		319.5	25.2	3	4	5					
DOUG FIR-S		371.6	29.3	2	3	4					

TC PSTATS		PROJECT STATISTICS						PAGE 2		
		PROJECT SACKITSU						DATE 2/16/2016		
TWP	RGE	SC	TRACT	TYPE		ACRES	PLOTS	TREES	CuFt	BdFt
39N	37E	35	SACKIT SUMMI	00U1	THR	318.08	161	599	S	E
39N	37E	36	SACKIT SUMMI	00U6						
CL	68.1	COEFF		BASAL AREA/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.00	VAR.	S.E.%	LOW	AVG	HIGH	5	7	10	
W LARCH		144.2	11.4	19	21	24				
W LARCH-S		511.0	40.3	1	1	2				
WR CEDAR		193.7	15.3	9	11	13				
GR FIR		234.2	18.5	6	7	8				
LP PINE		394.9	31.1	2	3	4				
E SPRUCE		390.8	30.8	1	2	3				
TOTAL				<i>112</i>	<i>112</i>	<i>112</i>				
CL	68.1	COEFF		NET BF/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR		85.2	6.7	7,063	7,571	8,080				
DOUG FIR-D		335.4	26.4	210	286	361				
DOUG FIR-S		375.1	29.6	189	268	347				
W LARCH		148.4	11.7	3,011	3,410	3,809				
W LARCH-S		576.5	45.4	65	120	174				
WR CEDAR		191.6	15.1	945	1,113	1,281				
GR FIR		236.5	18.6	685	842	999				
LP PINE		385.2	30.4	383	550	717				
E SPRUCE		392.9	31.0	192	278	364				
TOTAL				<i>14,438</i>	<i>14,438</i>	<i>14,438</i>				
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				118	126	135				
DOUG FIR-D		294.8	23.2	52	71	90				
DOUG FIR-S		357.0	28.1	65	93	120				
W LARCH				143	162	180				
W LARCH-S		576.5	45.4	53	97	141				
WR CEDAR				87	102	117				
GR FIR		98.7	7.8	99	122	145				
LP PINE		101.7	8.0	118	170	221				
E SPRUCE		295.8	23.3	94	136	178				
TOTAL				<i>129</i>	<i>129</i>	<i>129</i>				

T39N R37E S35 T00U1 T39N R37E S35 T00U1
 Twp Rge Sec Tract Type Acres Plots Sample Trees CuFt BdFt
 39N 37E 35 SACKIT SUMMI 00U1 77.03 39 103 S E

Spp	S	So	Gr	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log			Logs Per /Acre	
									Log Scale Dia.				Log Length				Ln Ft	Dia In	Bd Ft		CF/ Lf
									4-5	6-11	12-16	17+	12-20	21-32	33-55	56-99					
DF	D	2		11	2.1	1,316	1,289	99	100				100				32	13	222	1.53	5.8
DF	D	3		51	.6	5,544	5,512	425	100				100				32	9	106	0.78	52.1
DF	D	4		34	2.1	3,785	3,704	285	44	56			14	86			27	6	42	0.34	87.4
DF	U	UT		4	.0	352	352	27	67	33			100			16	4	12	0.17	29.4	
DF	Totals			81	1.3	10,996	10,856	836	17	71	12		8	92			27	7	62	0.53	174.7
DF	D	F	WD	100	30.2	1,438	1,003	77	35	61	4		6	20	75		33	6	44	0.37	22.8
DF	D	Totals		7	30.2	1,438	1,003	77	35	61	4		6	20	75		33	6	44	0.37	22.8
DF	S	F	WD	100	3.8	515	495	38	32	68			5	13	82		36	6	62	0.59	8.0
DF	S	Totals		4	3.8	515	495	38	32	68			5	13	82		36	6	62	0.59	8.0
RC	D	3		31		123	123	10	100				100				32	9	110	0.76	1.1
RC	D	4		69	.0	263	263	20	60	40			100				30	5	46	0.37	5.7
RC	Totals			3		387	387	30	41	59			100				31	6	57	0.43	6.8
LP	D	3		78	21.4	329	259	20	100				100				32	10	110	0.89	2.4
LP	D	4		22		71	71	5	100				100				24	5	30	0.34	2.4
LP	Totals			2	17.6	400	329	25	21	79			100				28	8	70	0.65	4.7
WL	D	3		62		159	159	12	100				100				32	9	100	0.83	1.6
WL	D	4		31		79	79	6	100				100				32	6	50	0.32	1.6
WL	U	UT		7		16	16	1	100				100				16	3	10	0.12	1.6
WL	Totals			2		254	254	20	6	94			6	94			27	6	53	0.49	4.8
GF	D	3		90	32.1	187	127	10	47	53			100				32	10	95	0.79	1.3
GF	D	4		10		13	13	1	100				100				16	5	20	0.24	.7
GF	Totals			1	30.0	200	140	11	10	43	48		10	90			27	8	70	0.68	2.0
Type Totals					5.1	14,190	13,465	1,037	20	70	10		7	84	9		28	6	60	0.51	223.8

T39N R37E S36 T00U2		T39N R37E S36 T00U2
Twp Rge Sec Tract Type Acres Plots Sample Trees CuFt		BdFt
39N 37E 36 SACKIT SUMMI 00U2 27.51 14 12 S E		

Spp	S	So	Gr	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log				Logs Per /Acre
									Log Scale Dia.				Log Length				Ln Ft	Dia In	Bd Ft	CF/ Lf	
									4-5	6-11	12-16	17+	12-20	21-32	33-55	56-99					
WL	D	3		60	5.2	7,596	7,198	198	100				100				32	9	87	0.62	82.4
WL	D	4		31		3,691	3,691	102	17	83			100			30	6	45	0.30	82.4	
WL	U	UT		9		1,049	1,049	29	100				100				16	4	13	0.13	82.4
WL	Totals			64	3.2	12,336	11,938	328	14	86			9	91			26	6	48	0.40	247.2
WL	S	F	WD	100		180	180	5	100				100				24	5	20	0.20	9.0
WL	S	Totals		1		180	180	5	100				100				24	5	20	0.20	9.0
GF	D	3		59	3.2	1,494	1,446	40	100				100				32	9	104	0.69	14.0
GF	D	4		41		1,001	1,001	28	100				18	82			25	5	30	0.26	33.2
GF	Totals			13	1.9	2,495	2,447	67	41	59			8	92			27	6	52	0.41	47.2
RC	D	3		83		1,393	1,393	38	100				100				32	8	84	0.65	16.6
RC	D	4		17		281	281	8	100				39	61			19	5	17	0.25	16.6
RC	Totals			9		1,673	1,673	46	17	83			7	93			25	6	50	0.50	33.3
DF	D	3		68	.0	1,164	1,164	32	100				100				32	9	110	0.68	10.6
DF	D	4		32		529	529	15	100				100				32	5	50	0.29	10.6
DF	Totals			9		1,693	1,693	47	31	69			100				32	7	80	0.49	21.2
ES	D	3		77		559	559	15	100				100				32	7	70	0.46	8.0
ES	D	4		23		160	160	4	100				100				18	5	20	0.20	8.0
ES	Totals			4		719	719	20	22	78			22	78			25	6	45	0.37	16.0
Type	Totals				2.3	19,095	18,650	513	21	79			8	92			26	6	50	0.41	373.7

T39N R37E S36 T00U3		T39N R37E S36 T00U3
Twp Rge Sec Tract Type Acres Plots Sample Trees CuFt		BdFt
39N 37E 36 SACKIT SUMMI 00U3 38.95 19 20 S E		

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		
									Log Scale Dia.				Log Length				Ln Ft	Dia In	Bd Ft	CF/ Lf			
									4-5	6-11	12-16	17+	12-20	21-32	33-55	56-99							
DF	D	2		15		1,470	1,470	57	100				100				32	14	256	2.13	5.7		
DF	D	3		53	2.7	5,304	5,161	201	100				100				32	9	104	0.76	49.6		
DF	D	4		28		2,714	2,714	106	35	65					5	95	30	6	43	0.34	62.9		
DF	U	UT		4		384	384	15	100				100				16	3	10	0.14	38.4		
DF	Totals			53	1.5	9,872	9,728	379	14	71	15					5	95	27	6	62	0.55	156.6	
DF	S	F	WD	100		397	397	15	46	54					6	94	36	6	67	0.51	5.9		
DF	S	Totals		2		397	397	15	46	54					6	94	36	6	67	0.51	5.9		
WL	D	3		67		2,258	2,258	88	100				100				32	9	109	0.65	20.7		
WL	D	4		28	18.2	1,142	934	36	56	44					100				27	6	30	0.29	31.1
WL	U	UT		5		161	161	6	100				100				15	3	10	0.09	16.1		
WL	Totals			18	5.8	3,561	3,353	131	20	80					5	95	26	6	49	0.40	67.9		
WL	S	F	WD	100		547	547	21	59	41					100				40	7	95	0.52	5.7
WL	S	Totals		3		547	547	21	59	41					100				40	7	95	0.52	5.7
LP	D	3		94		1,993	1,993	78	100				100				32	8	80	0.50	24.9		
LP	U	UT		6		125	125	5	100				100				16	4	10	0.14	12.5		
LP	Totals			11		2,117	2,117	82	6	94					6	94	27	6	57	0.43	37.4		
GF	D	4		75		913	913	36	100				100				28	5	30	0.20	30.4		
GF	U	UT		25		304	304	12	100				100				16	3	10	0.09	30.4		
GF	Totals			7		1,217	1,217	47	100				25	75	22	4	20	0.16	60.9				
RC	D	3		75		670	670	26	100				100				32	8	90	0.79	7.4		
RC	D	4		25		223	223	9	100				100				24	5	30	0.24	7.4		
RC	Totals			5		893	893	35	25	75					100				28	7	60	0.55	14.9
ES	D	4		80	20.0	214	171	7	100				100				32	5	40	0.29	4.3		
ES	U	UT		20		43	43	2	100				100				16	3	10	0.09	4.3		
ES	Totals			1	16.7	257	214	8	100				20	80	24	4	25	0.22	8.6				
Type	Totals				2.1	18,861	18,467	719	22	69	9					6	89	5	26	6	52	0.44	357.9

T39N R37E S36 T00U4		T39N R37E S36 T00U4
Twp Rge Sec Tract Type Acres Plots Sample Trees CuFt		BdFt
39N 37E 36 SACKIT SUMMI 00U4 33.77 19 15 S		E

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		
									Log Scale Dia.				Log Length				Ln Ft	Dia In	Bd Ft		CF/ Lf	
									4-5	6-11	12-16	17+	12-20	21-32	33-55	56-99						
WL	D	2		11	1,000	1,000	34	100				100				32	14	250	1.74	4.0		
WL	D	3		44	3,721	3,721	126	100				100				32	8	75	0.53	49.6		
WL	D	4		37	3,125	3,125	106	100					3	97			30	5	35	0.23	88.6	
WL	U	UT		8	678	678	23	100					100				16	3	10	0.11	67.8	
WL	Totals			54	8,523	8,523	288	45	44	12			9	91			26	5	41	0.33	210.0	
WL	S	F	WD	100	256	256	9	64	36						36	64		23	6	29	0.30	8.7
WL	S	Totals		2	256	256	9	64	36						36	64		23	6	29	0.30	8.7
RC	D	4		100	3,086	3,086	104	100				100				29	5	39	0.24	78.3		
RC	Totals			19	3,086	3,086	104	100				100				29	5	39	0.24	78.3		
DF	D	3		80	11.1	1,267	1,126	38	100				100				32	8	80	0.64	14.1	
DF	D	4		20		282	282	10	100				100				20	5	20	0.24	14.1	
DF	Totals			9	9.1	1,548	1,408	48	20	80			20	80			26	7	50	0.48	28.2	
GF	D	3		35	14.3	668	572	19	100				100				32	7	60	0.41	9.5	
GF	D	4		56		880	880	30	100				22	78			26	5	38	0.23	23.3	
GF	U	UT		9		138	138	5	100				100				16	3	10	0.09	13.8	
GF	Totals			10	5.7	1,686	1,590	54	64	36			21	79			24	5	34	0.25	46.7	
ES	D	3		45		473	473	16	100				100				32	7	70	0.41	6.8	
ES	D	4		44		463	463	16	100				29	71			25	5	26	0.23	17.7	
ES	U	UT		11	.0	109	109	4	100				100				16	3	10	0.09	10.9	
ES	Totals			7		1,045	1,045	35	55	45			23	77			23	5	30	0.25	35.4	
Type	Totals				1.5	16,144	15,908	537	56	38	6	11	88	1	26	5	39	0.30	407.3			

Species, Sort Grade - Board Foot Volumes (Type)										Page	1												
T	TSPCSTGR									Date	2/16/2016												
Project: SACKITSU										Time	11:05:20AM												
T39N R37E S36 T00U5										T39N R37E S36 T00U5													
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt														
39N	37E	36	SACKIT SUMMI	00U5	93.58	45	38	S	E														
Spp	S	So	Gr	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log				Logs Per /Acre		
					Def%	Gross	Net		Log Scale Dia.				Log Length				Ln	Dia	Bd	CF/Lf			
								4-5	6-11	12-16	17+	12-20	21-32	33-55	56-99	Ft	In	Ft					
DF	D	3		51	4.7	4,310	4,107	384	100				100				32	8	86	0.64	47.8		
DF	D	4		42	4.0	3,459	3,320	311	67	33					34	66	24	5	31	0.28	108.4		
DF	U	UT		7	476		476	45	100				58	42	20	4	13	0.12		37.5			
DF	Totals			57	4.1	8,245	7,903	740	34	66					18	82	25	6	41	0.37	193.7		
WL	D	3		50	5.9	1,594	1,500	140	100				100				32	8	81	0.54	18.5		
WL	D	4		41	1,197		1,197	112	58	42					2	98	29	5	38	0.25	31.7		
WL	U	UT		9	257		257	24	100				38	62	21	3	10	0.10		25.7			
WL	Totals			21	3.1	3,047	2,954	276	32	68					4	96	27	5	39	0.30	75.9		
WL	S	F	WD	100	34		34	3	100				100				16	6	20	0.32	1.7		
WL S	Totals			0	34		34	3	100				100				16	6	20	0.32	1.7		
RC	D	3		86	5.6	1,070	1,009	94	100				100				32	9	96	0.96	10.5		
RC	D	4		14	161		161	15	100				100				20	5	20	0.27	8.1		
RC	Totals			8	4.9	1,231	1,171	110	14	86					14	86	27	7	63	0.74	18.6		
GF	D	3		59	11.3	532	472	44	100				100				32	8	73	0.48	6.5		
GF	D	4		33	255		255	24	100				44	56	17	5	14	0.21		18.4			
GF	U	UT		8	60		60	6	100				100				32	3	30	0.25	2.0		
GF	Totals			6	7.1	847	787	74	40	60					14	86	22	5	29	0.31	26.9		
LP	D	3		76	9.1	607	552	52	100				100				32	9	100	0.68	5.5		
LP	D	4		24	166		166	15	100				100				24	5	30	0.29	5.5		
LP	Totals			5	7.1	773	718	67	23	77					100				28	7	65	0.51	11.0
ES	D	3		45	123		123	12	100				100				32	7	70	0.46	1.8		
ES	D	4		55	145		145	14	100				24	76	25	5	27	0.23		5.4			
ES	Totals			2	268		268	25	54	46					13	87	27	5	37	0.30	7.2		
Type Totals					4.2	14,445	13,833	1,295	32	68					13	87	25	6	41	0.37	335.0		

T39N R37E S36 T00U6		T39N R37E S36 T00U6
Twp Rge Sec Tract Type Acres Plots Sample Trees CuFt		BdFt
39N 37E 36 SACKIT SUMMI 00U6	47.24 25 34	S E

Spp	S T	So rt	Gr ad	% Net BdFt	Bd. Ft. per Acre Def% Gross Net			Total Net MBF	Percent Net Board Foot Volume								Average Log				Logs Per /Acre					
									Log Scale Dia.				Log Length				Ln Ft	Dia In	Bd Ft	CF/ Lf						
									4-5	6-11	12-16	17+	12-20	21-32	33-55	56-99										
DF	D	3		87	3.1	6,852	6,641	314	100				100				32	8	88	0.68	75.7					
DF	D	4		10		814	814	38	100				66 34				17	5	19	0.24	43.4					
DF	U	UT		3		156	156	7	100				100				16	3	10	0.16	15.6					
DF	Totals			73	2.7	7,822	7,611	360	13	87					9	91					25	6	56	0.55	134.7	
DF	S	F	WD	100		669	669	32	2	98					2	98					36	7	69	0.54	9.8	
DF	S	Totals		6		669	669	32	2	98					2	98					36	7	69	0.54	9.8	
DF	D	F	WD	100	30.0	412	288	14	32	68					6	21	73					33	6	40	0.33	7.2
DF	D	Totals		3	30.0	412	288	14	32	68					6	21	73					33	6	40	0.33	7.2
WL	D	3		70		620	620	29	100				100				32	8	70	0.50	8.9					
WL	D	4		30		266	266	13	100				100				28	5	30	0.24	8.9					
WL	Totals			9		885	885	42	30	70					100				30	7	50	0.38	17.7			
RC	D	3		86		540	540	25	100				100				32	10	129	1.28	4.2					
RC	D	4		14		86	86	4	100				53 47				19	5	21	0.33	4.2					
RC	Totals			6		625	625	30	14	86					7	93					26	7	75	0.93	8.4	
GF	U	UT		100	.0	318	318	15	100				100				32	5	50	0.29	6.4					
GF	Totals			3	.0	318	318	15	100				100				32	5	50	0.29	6.4					
Type	Totals				3.1	10,732	10,397	491	17	83					7	84	8					27	6	56	0.52	184.1

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

T39N R37E S35 Ty00U1	77.0
T39N R37E S36 Ty00U2	27.5
T39N R37E S36 Ty00U	47.2

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Species	S T	Total	Total	Total	Net Cubic Ft/		CF/ LF	Total CCF		Total MBF	
		Trees	Logs	Tons	Tree	Log		Gross	Net	Gross	Net
DOUG FIR		23,505	45,586	15,950	23.81	12.28	0.48	5,597	5,597	2,471	2,408
W LARCH		9,921	24,846	5,492	23.06	9.21	0.35	2,288	2,288	1,112	1,085
WR CEDAR		5,018	6,804	2,112	17.92	13.22	0.47	899	899	360	354
GR FIR		5,149	8,212	1,582	10.74	6.73	0.28	552	553	283	268
LP PINE		1,183	2,851	915	32.22	13.37	0.49	381	381	186	175
DOUG FIR	D	1,566	2,098	1,020	15.99	11.94	0.36	358	251	130	91
E SPRUCE		1,491	2,640	475	12.25	6.92	0.28	183	183	90	89
DOUG FIR	S	1,110	1,305	748	23.65	20.11	0.56	262	262	87	85
W LARCH	S	902	923	209	9.66	9.45	0.36	87	87	38	38
Totals		49,844	95,264	28,502	21.07	11.02	0.42	10,607	10,501	4,757	4,592

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	49,844	95,264	28,502	21.07	11.02	0.42	10,607	10,501	4,757	4,592
Totals	49,844	95,264	28,502	21.07	11.02	0.42	10,607	10,501	4,757	4,592

Log Stock Table - MBF

T39N R37E S35 Ty00U1
THRU
T39N R37E S36 Ty00U6

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Spp	S T	So rt	Gr de	Log Len	Gross MBF	Def %	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches										
									2-4	5-6	7-10	11-12	13-14	15-16	17-18	19-20	21-30	31-40	41-70
RC		D	4	26	42		42	11.9		42									
RC		D	4	28	7		7	1.9		7									
RC		D	4	32	80		80	22.5		80									
RC		Totals			360	1.6	354	7.7		160	183	11							
WL		D	2	32	34		34	3.1				34							
WL		D	3	32	613	3.2	594	54.7		17	549	27							
WL		D	4	14	2		2	.2		2									
WL		D	4	20	3		3	.2		3									
WL		D	4	24	27		27	2.4		27									
WL		D	4	26	18		18	1.6		18									
WL		D	4	28	51		51	4.7		51									
WL		D	4	30	13		13	1.2		13									
WL		D	4	32	268	3.0	260	24.0		244	16								
WL		U	UT	14	2		2	.2		2									
WL		U	UT	16	66		66	6.1		54	12								
WL		U	UT	24	15		15	1.4		15									
WL		Totals			1,112	2.5	1,085	23.6		71	388	565	27	34					
WL	S	F	W	14	3		3	8.2			3								
WL	S	F	W	16	3		3	8.3		3									
WL	S	F	W	24	5		5	13.0		5									
WL	S	F	W	34	6		6	14.5		6									
WL	S	F	W	40	21		21	56.0		9	3		9						
WL		Totals			38		38	.8		23	7		9						
GF		D	3	32	128	11.6	113	42.2			108	5							
GF		D	4	12	6		6	2.4		6									
GF		D	4	14	4		4	1.6		4									
GF		D	4	16	6		6	2.3		6									
GF		D	4	18	6		6	2.4		6									
GF		D	4	24	13		13	4.9		13									
GF		D	4	28	51		51	19.2		51									
GF		D	4	32	30		30	11.1		30									
GF		U	UT	16	17		17	6.2		17									
GF		U	UT	32	21		21	7.7		6	15								
GF		Totals			283	5.2	268	5.8		22	133	108	5						

Log Stock Table - MBF

T39N R37E S35 Ty00U1
THRU
T39N R37E S36 Ty00U6

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Spp	S T	So rt	Gr de	Log Len	Gross MBF	Def %	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches										
									2-4	5-6	7-10	11-12	13-14	15-16	17-18	19-20	21-30	31-40	41-70
LP		D	3	32	160	6.6	149	85.3		24	125								
LP		D	4	24	21		21	12.0		21									
LP		U	UT	16	5		5	2.8		5									
LP		Totals			186	5.7	175	3.8		5	45	125							
ES		D	3	32	43		43	48.4			43								
ES		D	4	16	8		8	8.9		8									
ES		D	4	18	4		4	5.0		4									
ES		D	4	30	21		21	24.1		21									
ES		D	4	32	8	20.0	7	7.5		7									
ES		U	UT	16	5		5	6.1		5									
ES		Totals			90	1.9	89	1.9		5	40	43							
Total		All Species			4,757	3.5	4,592	100.0		188	1609	2375	243	168	9				

TC TSTATS		STATISTICS							PAGE	1
		PROJECT SACKITSU					DATE	2/16/2016		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
39N	37E	35	SACKIT SUMMI	00U1	77.03	39	177	S	E	
		PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES				
TOTAL		39	177	4.5						
CRUISE		32	103	3.2	9,810		1.0			
DBH COUNT										
REFOREST										
COUNT		3	6	2.0						
BLANKS		4								
100 %										
STAND SUMMARY										
	SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
DOUG FIR	28	93.8	12.7	68	23.2	82.7	10,996	10,856	2,487	2,487
DOUG FIR-D	64	16.4	12.4	49	3.9	13.8	1,438	1,003	396	277
DOUG FIR-S	5	6.8	12.7	64	1.7	6.0	515	495	168	168
WR CEDAR	3	5.7	10.5	65	1.1	3.4	387	387	91	91
LP PINE	1	2.4	14.2	74	0.7	2.6	400	329	86	86
W LARCH	1	1.6	14.1	95	0.5	1.7	254	254	62	62
GR FIR	1	.7	15.4	106	0.2	.9	200	140	36	36
TOTAL	<i>103</i>	<i>127.4</i>	<i>12.7</i>	<i>66</i>	<i>31.3</i>	<i>111.2</i>	<i>14,190</i>	<i>13,465</i>	<i>3,325</i>	<i>3,207</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	55.6	10.7	137	154	170					
DOUG FIR-D	65.6	8.3	58	63	68					
DOUG FIR-S	41.7	20.7	65	82	99					
WR CEDAR	65.0	45.0	44	80	116					
LP PINE										
W LARCH										
GR FIR										
TOTAL	<i>75.6</i>	<i>7.5</i>	<i>86</i>	<i>93</i>	<i>100</i>	<i>229</i>	<i>117</i>	<i>57</i>		
CL: 68.1 %	COEFF	TREES/ACRE				# OF PLOTS REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
DOUG FIR	55.1	8.8	86	94	102					
DOUG FIR-D	148.9	23.8	12	16	20					
DOUG FIR-S	266.4	42.7	4	7	10					
WR CEDAR	310.9	49.8	3	6	9					
LP PINE	460.5	73.7	1	2	4					
W LARCH	435.7	69.8	0	2	3					
GR FIR	624.5	100.0	0	1	1					
TOTAL			<i>127</i>	<i>127</i>	<i>127</i>					
CL: 68.1 %	COEFF	BASAL AREA/ACRE				# OF PLOTS REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
DOUG FIR	50.1	8.0	76	83	89					
DOUG FIR-D	165.7	26.5	10	14	18					
DOUG FIR-S	251.5	40.3	4	6	8					
WR CEDAR	299.7	48.0	2	3	5					
LP PINE	460.5	73.7	1	3	4					
W LARCH	435.7	69.8	1	2	3					
GR FIR	624.5	100.0	0	1	2					
TOTAL			<i>111</i>	<i>111</i>	<i>111</i>					

TC TSTATS				STATISTICS			PAGE	2		
				PROJECT	SACKITSU		DATE	2/16/2016		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
39N	37E	35	SACKIT SUMMI	00U1	77.03	39	177	S	E	
CL:	68.1 %	COEFF	NET BF/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.	S.E.%	LOW	AVG	HIGH	5	7	10	
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		52.1	8.3	9,950	10,856	11,762				
DOUG FIR-D		172.8	27.7	726	1,003	1,281				
DOUG FIR-S		261.0	41.8	288	495	702				
WR CEDAR		303.1	48.5	199	387	575				
LP PINE		460.5	73.7	86	329	572				
W LARCH		435.7	69.8	77	254	432				
GR FIR		624.5	100.0	0	140	280				
TOTAL		6.9	1.1	13,316	13,465	13,614	2	1	0	
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				120	131	142				
DOUG FIR-D		149.3	23.9	52	72	92				
DOUG FIR-S		227.6	36.4	48	82	116				
WR CEDAR		258.6	41.4	58	112	167				
LP PINE		185.0	29.6	33	127	221				
W LARCH		299.7	48.0	45	148	251				
GR FIR		624.5	100.0	0	162	325				
TOTAL		173.3	27.7	120	121	122	1,201	613	300	

TC TSTATS		STATISTICS					PAGE	1		
		PROJECT SACKITSU					DATE	2/16/2016		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
39N	37E	36	SACKIT SUMMI	00U2	27.51	14	50	S	E	
		PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES				
TOTAL		14	50	3.6						
CRUISE		10	12	1.2	4,396		.3			
DBH COUNT										
REFOREST										
COUNT		4	13	3.3						
BLANKS										
100 %										
STAND SUMMARY										
	SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
W LARCH	4	82.4	12.4	101	19.7	69.6	12,336	11,938	2,558	2,558
W LARCH-S	1	9.0	7.0	60	0.9	2.4	180	180	44	44
GR FIR	3	33.2	10.3	57	6.0	19.2	2,495	2,447	529	529
WR CEDAR	2	16.6	12.6	71	4.1	14.4	1,673	1,673	424	424
DOUG FIR	1	10.6	12.9	85	2.7	9.6	1,693	1,693	329	329
E SPRUCE	1	8.0	10.5	76	1.5	4.8	719	719	147	147
TOTAL	12	159.8	11.7	84	35.0	120.0	19,095	18,650	4,030	4,030
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		
W LARCH	21.4	12.3	127	145	163					
W LARCH-S										
GR FIR	70.4	48.7	55	107	159					
WR CEDAR	38.6	36.2	70	110	150					
DOUG FIR										
E SPRUCE										
TOTAL	46.2	13.9	100	116	132	93	47	23		
CL: 68.1 %	COEFF	TREES/ACRE				# OF PLOTS REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
W LARCH	55.1	15.3	70	82	95					
W LARCH-S	374.2	103.7		9	18					
GR FIR	140.1	38.8	20	33	46					
WR CEDAR	123.2	34.2	11	17	22					
DOUG FIR	213.9	59.3	4	11	17					
E SPRUCE	254.2	70.5	2	8	14					
TOTAL			160	160	160					
CL: 68.1 %	COEFF	BASAL AREA/ACRE				# OF PLOTS REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
W LARCH	55.1	15.3	59	70	80					
W LARCH-S	374.2	103.7		2	5					
GR FIR	132.3	36.7	12	19	26					
WR CEDAR	119.8	33.2	10	14	19					
DOUG FIR	213.9	59.3	4	10	15					
E SPRUCE	254.2	70.5	1	5	8					
TOTAL			120	120	120					
CL: 68.1 %	COEFF	NET BF/ACRE				# OF PLOTS REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
W LARCH	55.4	15.4	10,106	11,938	13,771					
W LARCH-S	374.2	103.7		180	366					
GR FIR	133.6	37.0	1,541	2,447	3,353					
WR CEDAR	119.9	33.2	1,117	1,673	2,229					
DOUG FIR	213.9	59.3	689	1,693	2,697					

TC TSTATS				STATISTICS			PAGE	2		
				PROJECT	SACKITSU		DATE	2/16/2016		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
39N	37E	36	SACKIT SUMMI	00U2	27.51	14	50	S	E	
CL: 68.1 %		COEFF		NET BF/ACRE			# OF PLOTS REQ.		INF. POP.	
SD: 1.0	VAR.	S.E.%	LOW	AVG	HIGH	5	7	10		
E SPRUCE		254.2	70.5	212	719	1,225				
TOTAL				18,650	18,650	18,650				
CL: 68.1 %		COEFF		V-BAR/ACRE			# OF PLOTS REQ.		INF. POP.	
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
W LARCH				145	171	198				
W LARCH-S		374.2	103.7		75	152				
GR FIR				80	127	175				
WR CEDAR				78	116	155				
DOUG FIR				72	176	281				
E SPRUCE		164.1	45.5	44	150	255				
TOTAL		423.1	117.3	155	155	155	7,706	3,932	1,927	

TC TSTATS		STATISTICS					PAGE	1		
		PROJECT SACKITSU					DATE	2/16/2016		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
39N	37E	36	SACKIT SUMMI	00U3	38.95	19	71	S	E	
		PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES				
TOTAL		19	71	3.7						
CRUISE		14	20	1.4	5,895		.3			
DBH COUNT										
REFOREST										
COUNT		5	19	3.8						
BLANKS										
100 %										
STAND SUMMARY										
	SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
DOUG FIR	9	66.0	14.2	83	19.2	72.5	9,872	9,728	2,324	2,324
DOUG FIR-S	2	4.8	11.6	73	1.0	3.5	397	397	110	110
W LARCH	3	20.7	12.5	108	5.0	17.7	3,561	3,353	704	704
W LARCH-S	2	5.2	11.1	51	1.1	3.5	547	547	120	120
LP PINE	1	12.5	12.5	99	3.0	10.6	2,117	2,117	427	427
GR FIR	1	30.4	7.3	62	3.3	8.8	1,217	1,217	217	217
WR CEDAR	1	7.4	13.2	81	1.9	7.1	893	893	231	231
E SPRUCE	1	4.3	8.7	62	0.6	1.8	257	214	46	46
TOTAL	20	151.3	12.3	82	35.8	125.6	18,861	18,467	4,181	4,181
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		53.7	19.0	147	181	215				
DOUG FIR-S		82.5	77.3	27	120	213				
W LARCH		55.8	38.6	119	193	268				
W LARCH-S		119.7	112.2		325	690				
LP PINE										
GR FIR										
WR CEDAR										
E SPRUCE										
TOTAL		77.9	17.9	143	174	205	256	130	64	
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		68.7	16.2	55	66	77				
DOUG FIR-S		343.6	81.0	1	5	9				
W LARCH		143.3	33.8	14	21	28				
W LARCH-S		392.6	92.6	0	5	10				
LP PINE		151.2	35.7	8	12	17				
GR FIR		213.5	50.4	15	30	46				
WR CEDAR		199.0	46.9	4	7	11				
E SPRUCE		435.9	102.8		4	9				
TOTAL				151	151	151				
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		67.8	16.0	61	73	84				
DOUG FIR-S		299.5	70.6	1	4	6				
W LARCH		146.7	34.6	12	18	24				
W LARCH-S		299.5	70.6	1	4	6				
LP PINE		151.2	35.7	7	11	14				
GR FIR		213.5	50.4	4	9	13				
WR CEDAR		199.0	46.9	4	7	10				
E SPRUCE		435.9	102.8		2	4				
TOTAL				126	126	126				

TC TSTATS				STATISTICS			PAGE	2		
				PROJECT	SACKITSU		DATE	2/16/2016		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
39N	37E	36	SACKIT SUMMI	00U3	38.95	19	71	S	E	
CL:	68.1 %	COEFF		NET BF/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.	S.E.%	LOW	AVG	HIGH	5	7	10	
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		68.1	16.1	8,166	9,728	11,290				
DOUG FIR-S		300.5	70.9	116	397	678				
W LARCH		153.0	36.1	2,143	3,353	4,564				
W LARCH-S		302.8	71.4	156	547	937				
LP PINE		151.2	35.7	1,362	2,117	2,872				
GR FIR		213.5	50.4	604	1,217	1,830				
WR CEDAR		199.0	46.9	474	893	1,313				
E SPRUCE		435.9	102.8		214	434				
TOTAL				<i>18,467</i>	<i>18,467</i>	<i>18,467</i>				
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				113	134	156				
DOUG FIR-S		300.5	70.9	33	112	192				
W LARCH		36.9	8.7	121	190	258				
W LARCH-S		302.8	71.4	44	155	265				
LP PINE				128	199	271				
GR FIR				68	138	207				
WR CEDAR		44.5	10.5	67	126	186				
E SPRUCE		435.9	102.8		121	246				
TOTAL		<i>343.2</i>	<i>80.9</i>	<i>147</i>	<i>147</i>	<i>147</i>	<i>4,979</i>	<i>2,540</i>	<i>1,245</i>	

TC TSTATS		STATISTICS					PAGE	1			
		PROJECT SACKITSU					DATE	2/16/2016			
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt		
39N	37E	36	SACKIT SUMMI	00U4	33.77	19	68	S	E		
		PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES					
TOTAL		19	68	3.6							
CRUISE		12	15	1.3	8,138		.2				
DBH COUNT											
REFOREST											
COUNT		7	17	2.4							
BLANKS											
100 %											
STAND SUMMARY											
	SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC	
W LARCH	6	98.8	10.2	71	17.7	56.6	8,523	8,523	1,774	1,774	
W LARCH-S	2	8.7	8.6	35	1.2	3.5	256	256	60	60	
WR CEDAR	2	78.3	8.1	58	9.9	28.3	3,086	3,086	548	548	
DOUG FIR	1	14.1	12.7	75	3.5	12.4	1,548	1,408	355	355	
GR FIR	2	23.3	9.1	70	3.5	10.6	1,686	1,590	286	286	
E SPRUCE	2	17.7	8.6	65	2.4	7.1	1,045	1,045	206	206	
TOTAL	15	241.0	9.5	65	38.5	118.5	16,144	15,908	3,228	3,228	
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		
W LARCH		93.9	41.8	85	147	208					
W LARCH-S		47.1	44.2	17	30	43					
WR CEDAR		35.4	33.1	27	40	53					
DOUG FIR											
GR FIR		20.2	18.9	57	70	83					
E SPRUCE		54.4	51.0	32	65	98					
TOTAL		104.0	27.8	67	93	118	464	237	116		
CL:	68.1 %	COEFF	TREES/ACRE			# OF PLOTS REQ.		INF. POP.			
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
W LARCH		29.0	6.8	92	99	106					
W LARCH-S		300.1	70.8	3	9	15					
WR CEDAR		120.5	28.4	56	78	101					
DOUG FIR		316.2	74.6	4	14	25					
GR FIR		152.4	36.0	15	23	32					
E SPRUCE		202.5	47.7	9	18	26					
TOTAL				241	241	241					
CL:	68.1 %	COEFF	BASAL AREA/ACRE			# OF PLOTS REQ.		INF. POP.			
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
W LARCH		20.3	4.8	54	57	59					
W LARCH-S		299.5	70.6	1	4	6					
WR CEDAR		120.5	28.4	20	28	36					
DOUG FIR		316.2	74.6	3	12	22					
GR FIR		151.2	35.7	7	11	14					
E SPRUCE		199.0	46.9	4	7	10					
TOTAL		5.7	1.4	117	119	120	1	1	0		
CL:	68.1 %	COEFF	NET BF/ACRE			# OF PLOTS REQ.		INF. POP.			
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
W LARCH		20.9	4.9	8,103	8,523	8,943					
W LARCH-S		312.5	73.7	67	256	444					
WR CEDAR		120.7	28.5	2,207	3,086	3,964					
DOUG FIR		316.2	74.6	358	1,408	2,457					
GR FIR		151.3	35.7	1,023	1,590	2,158					

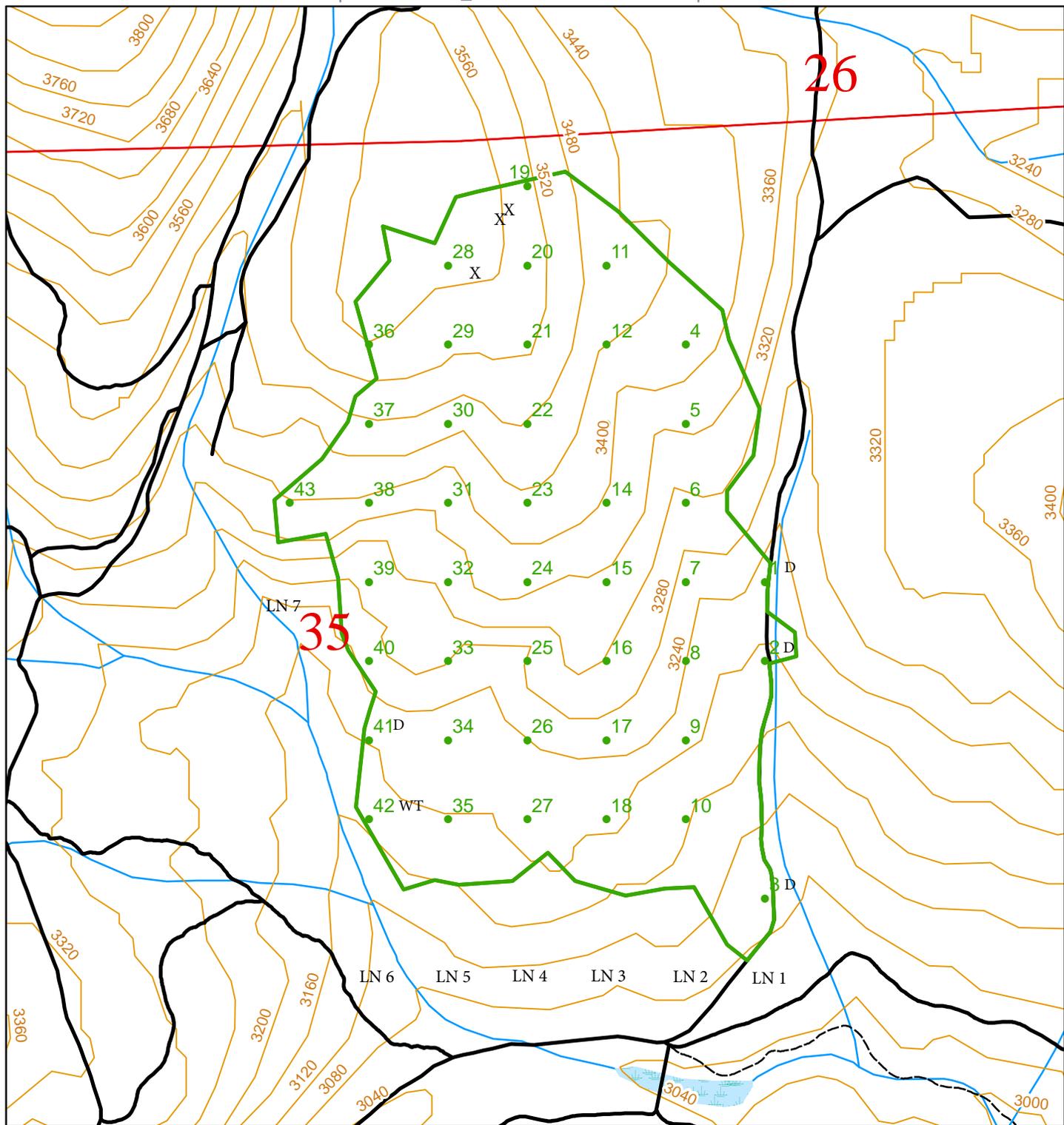
TC TSTATS				STATISTICS			PAGE	2		
				PROJECT	SACKITSU		DATE	2/16/2016		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
39N	37E	36	SACKIT SUMMI	00U4	33.77	19	68	S	E	
CL:	68.1 %	COEFF		NET BF/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.	S.E.%	LOW	AVG	HIGH	5	7	10	
E SPRUCE		200.6	47.3	551	1,045	1,540				
TOTAL				15,908	15,908	15,908				
CL:	68.1 %	COEFF		V-BAR/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
W LARCH				143	151	158				
W LARCH-S		312.5	73.7	19	72	126				
WR CEDAR				78	109	140				
DOUG FIR				29	114	198				
GR FIR		24.6	5.8	96	150	203				
E SPRUCE		123.2	29.1	78	148	218				
TOTAL		446.6	105.3	134	134	134	8,430	4,301	2,108	

TC TSTATS		STATISTICS							PAGE	1
		PROJECT SACKITSU							DATE	2/16/2016
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
39N	37E	36	SACKIT SUMMI	00U5	93.58	45	151	S	E	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
		PLOTS	TREES	PER PLOT	TREES	TREES				
TOTAL	45	151	3.4							
CRUISE	24	38	1.6	16,924			.2			
DBH COUNT										
REFOREST										
COUNT	17	45	2.6							
BLANKS	4									
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	21	105.6	10.6	69	19.9	65.0	8,245	7,903	1,793	1,793
W LARCH	6	31.7	10.4	84	5.8	18.7	3,047	2,954	607	607
W LARCH-S	1	1.7	9.0	16	0.2	.7	34	34	9	9
WR CEDAR	3	10.5	15.3	64	3.4	13.4	1,231	1,171	367	367
GR FIR	4	20.4	8.6	59	2.8	8.2	847	787	182	182
LP PINE	1	5.5	12.2	78	1.3	4.5	773	718	159	159
E SPRUCE	2	5.4	8.7	63	0.8	2.2	268	268	58	58
TOTAL	38	180.9	10.7	70	34.5	112.8	14,445	13,833	3,174	3,175
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	60.2	13.5		86	99	112				
W LARCH	51.2	22.8		89	115	141				
W LARCH-S										
WR CEDAR	9.1	6.3		103	110	117				
GR FIR	87.2	49.9		28	55	82				
LP PINE										
E SPRUCE	70.7	66.3		20	60	100				
TOTAL	59.4	9.6		85	94	104	141	72	35	
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	74.8	11.2		94	106	117				
W LARCH	148.4	22.1		25	32	39				
W LARCH-S	670.8	100.0		0	2	3				
WR CEDAR	188.3	28.1		8	11	14				
GR FIR	222.1	33.1		14	20	27				
LP PINE	378.4	56.4		2	6	9				
E SPRUCE	394.5	58.8		2	5	9				
TOTAL				181	181	181				
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	73.5	11.0		58	65	72				
W LARCH	146.4	21.8		15	19	23				
W LARCH-S	670.8	100.0		0	1	1				
WR CEDAR	187.7	28.0		10	13	17				
GR FIR	216.4	32.3		6	8	11				
LP PINE	378.4	56.4		2	4	7				
E SPRUCE	378.4	56.4		1	2	4				
TOTAL				113	113	113				
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	75.3	11.2		7,016	7,903	8,790				

TC TSTATS				STATISTICS			PAGE	2		
PROJECT				SACKITSU			DATE	2/16/2016		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
39N	37E	36	SACKIT SUMMI	00U5	93.58	45	151	S	E	
CL:	68.1 %	COEFF		NET BF/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.	S.E.%	LOW	AVG	HIGH	5	7	10	
W LARCH		147.0	21.9	2,306	2,954	3,601				
W LARCH-S		670.8	100.0	0	34	68				
WR CEDAR		188.5	28.1	842	1,171	1,500				
GR FIR		226.5	33.8	521	787	1,052				
LP PINE		378.4	56.4	313	718	1,122				
E SPRUCE		382.9	57.1	115	268	421				
TOTAL				<i>13,833</i>	<i>13,833</i>	<i>13,833</i>				
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				108	122	135				
W LARCH				124	158	193				
W LARCH-S		670.8	100.0	0	45	91				
WR CEDAR				63	87	112				
GR FIR		97.2	14.5	63	96	128				
LP PINE		50.6	7.5	70	160	250				
E SPRUCE		309.0	46.1	51	120	188				
TOTAL		<i>385.7</i>	<i>57.5</i>	<i>123</i>	<i>123</i>	<i>123</i>	<i>5,951</i>	<i>3,036</i>	<i>1,488</i>	

TC TSTATS		STATISTICS							PAGE	1
		PROJECT SACKITSU							DATE	2/16/2016
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
39N	37E	36	SACKIT SUMMI	00U6	47.24	25	82	S	E	
		PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES				
TOTAL		25	82	3.3						
CRUISE		16	34	2.1	4,681	.7				
DBH COUNT										
REFOREST										
COUNT		5	13	2.6						
BLANKS		4								
100 %										
STAND SUMMARY										
	SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
DOUG FIR	8	64.9	13.6	69	17.8	65.9	7,822	7,611	1,878	1,878
DOUG FIR-D	16	6.4	11.4	62	1.3	4.5	412	288	113	79
DOUG FIR-S	5	8.4	12.1	62	1.9	6.7	669	669	191	191
W LARCH	1	8.9	11.8	86	2.0	6.7	885	885	203	203
WR CEDAR	3	4.2	17.2	64	1.6	6.7	625	625	199	199
GR FIR	1	6.4	8.8	51	0.9	2.7	318	318	59	59
TOTAL	34	99.1	13.1	68	25.7	93.2	10,732	10,397	2,642	2,608
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		54.3	20.5	107	135	163				
DOUG FIR-D		65.9	17.0	37	45	53				
DOUG FIR-S		34.3	17.1	70	84	98				
W LARCH										
WR CEDAR		29.4	20.4	122	153	185				
GR FIR										
TOTAL		72.1	12.4	73	83	94	208	106	52	
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		68.1	13.9	56	65	74				
DOUG FIR-D		185.3	37.8	4	6	9				
DOUG FIR-S		252.4	51.5	4	8	13				
W LARCH		250.0	51.0	4	9	13				
WR CEDAR		206.4	42.1	2	4	6				
GR FIR		346.1	70.6	2	6	11				
TOTAL				99	99	99				
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		68.3	13.9	57	66	75				
DOUG FIR-D		157.6	32.2	3	5	6				
DOUG FIR-S		250.0	51.0	3	7	10				
W LARCH		250.0	51.0	3	7	10				
WR CEDAR		204.1	41.7	4	7	10				
GR FIR		346.1	70.6	1	3	5				
TOTAL				93	93	93				
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		68.8	14.0	6,542	7,611	8,679				
DOUG FIR-D		163.0	33.3	192	288	384				
DOUG FIR-S		245.2	50.0	334	669	1,004				
W LARCH		250.0	51.0	433	885	1,337				
WR CEDAR		207.4	42.3	361	625	890				

TC TSTATS				STATISTICS			PAGE	2		
				PROJECT	SACKITSU		DATE	2/16/2016		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
39N	37E	36	SACKIT SUMMI	00U6	47.24	25	82	S	E	
CL:	68.1 %	COEFF		NET BF/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.	S.E.%	LOW	AVG	HIGH	5	7	10	
GR FIR		346.1	70.6	93	318	543				
TOTAL		9.8	2.0	10,188	10,397	10,606	4	2	1	
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				99	116	132				
DOUG FIR-D		185.0	37.8	43	64	85				
DOUG FIR-S		245.2	50.0	50	100	149				
W LARCH				64	132	199				
WR CEDAR		148.9	30.4	54	93	132				
GR FIR		233.9	47.7	35	118	202				
TOTAL		266.5	54.4	109	112	114	2,959	1,510	740	



FMU POLYGON AND SAMPLE POINT INFORMATION

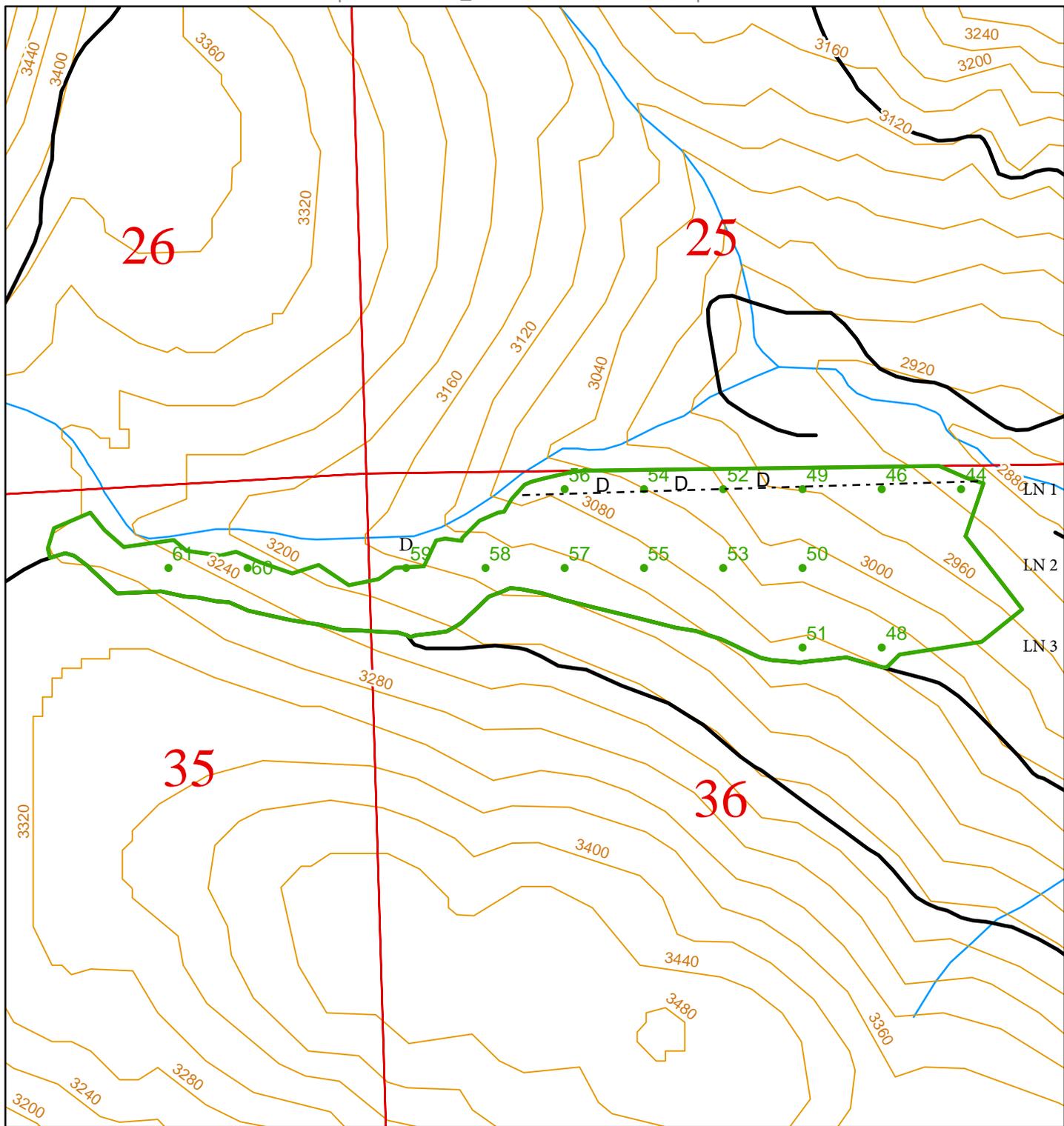
FMU_NM:	SACKIT SUMMIT U1	Township:	T39R37E
FMU_ID:	24974	DNR Region:	NORTHEAST
Acres:	77	Total Sample Points:	43
County:	STEVENS	Spacing Between Points:	Width: 280 Height: 280
Mine Shaft	X		



Scale 1:6,000

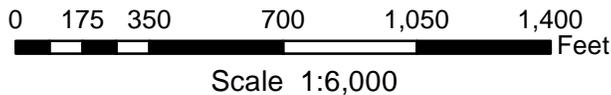
Legend

- Sample Points
- FMU polys
- Walk through Plot WT
- Deleted Plot D



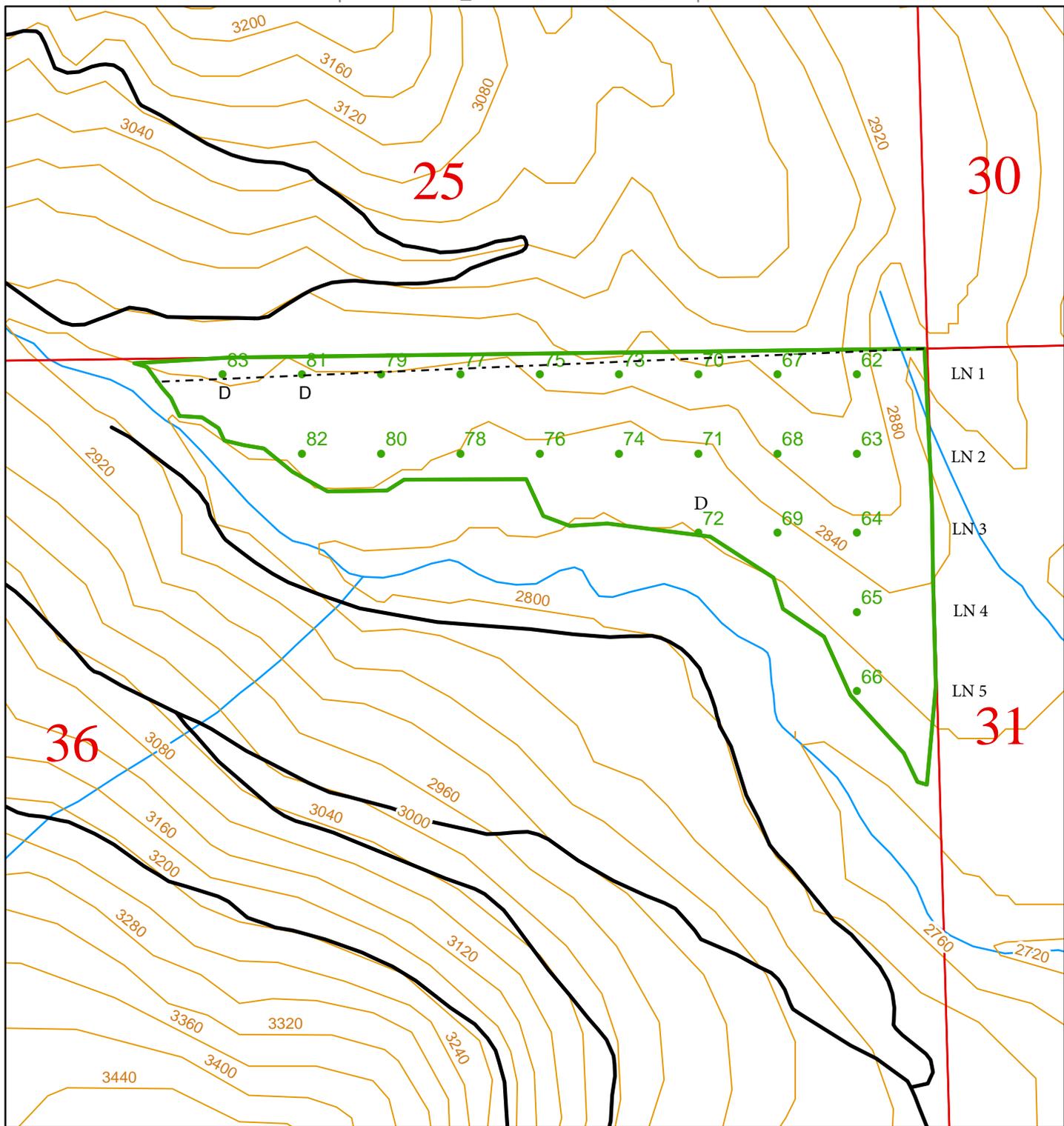
FMU POLYGON AND SAMPLE POINT INFORMATION

FMU_NM:	SACKIT SUMMIT U2	Township:	T39R37E
FMU_ID:	88067	DNR Region:	NORTHEAST
Acres:	28	Total Sample Points:	14
County:	STEVENS	Spacing Between Points:	Width: 280 Height: 280
New Boundary	-----		



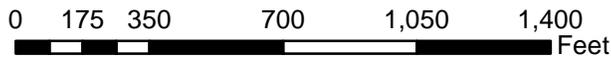
Legend

- Sample Points
- FMU polys
- D = Deleted plot



FMU POLYGON AND SAMPLE POINT INFORMATION

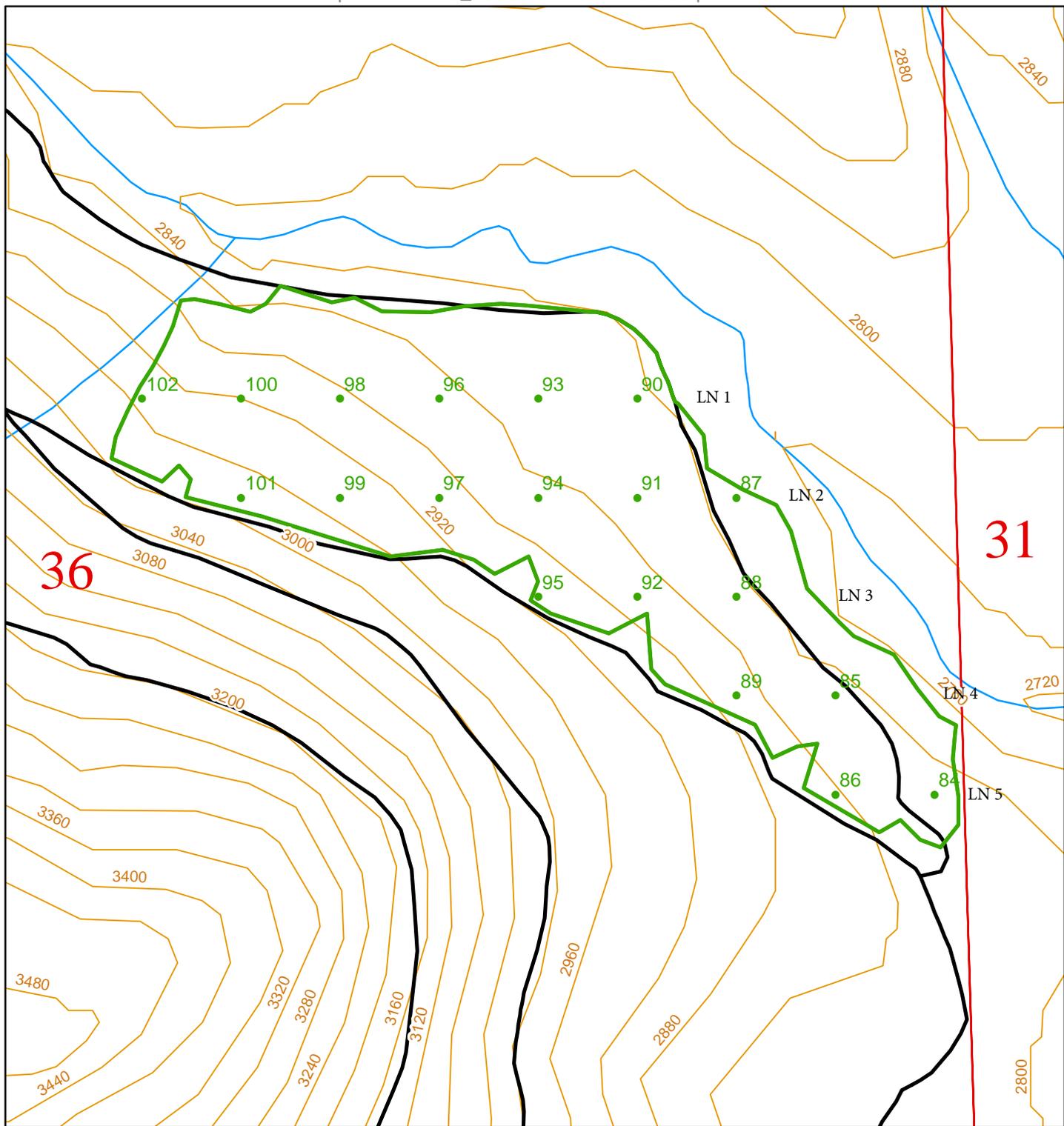
FMU_NM:	SACKIT SUMMIT U3	Township:	T39R37E
FMU_ID:	88071	DNR Region:	NORTHEAST
Acres:	40	Total Sample Points:	19
County:	STEVENS	Spacing Between Points: Width:	280
New Boundary	-----	Height:	280



Scale 1:6,000

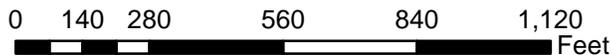
Legend

- Sample Points
- FMU polys
- D = Deleted plot



FMU POLYGON AND SAMPLE POINT INFORMATION

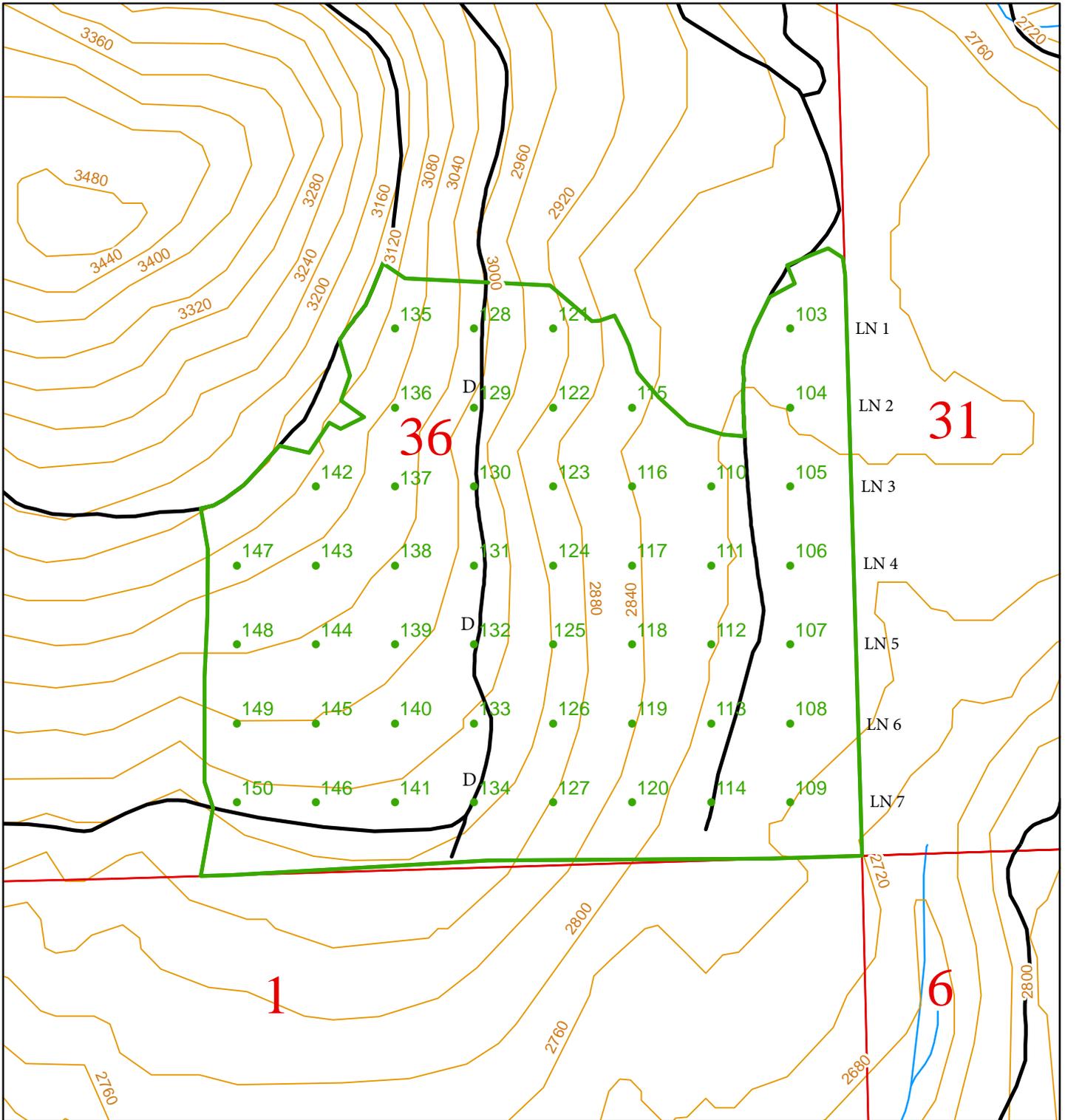
FMU_NM:	SACKIT SUMMIT U4	Township:	T39R37E
FMU_ID:	88068	DNR Region:	NORTHEAST
Acres:	35	Total Sample Points:	19
County:	STEVENS	Spacing Between Points:	Width: 280 Height: 280



Scale 1:4,800

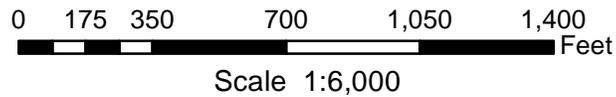
Legend

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



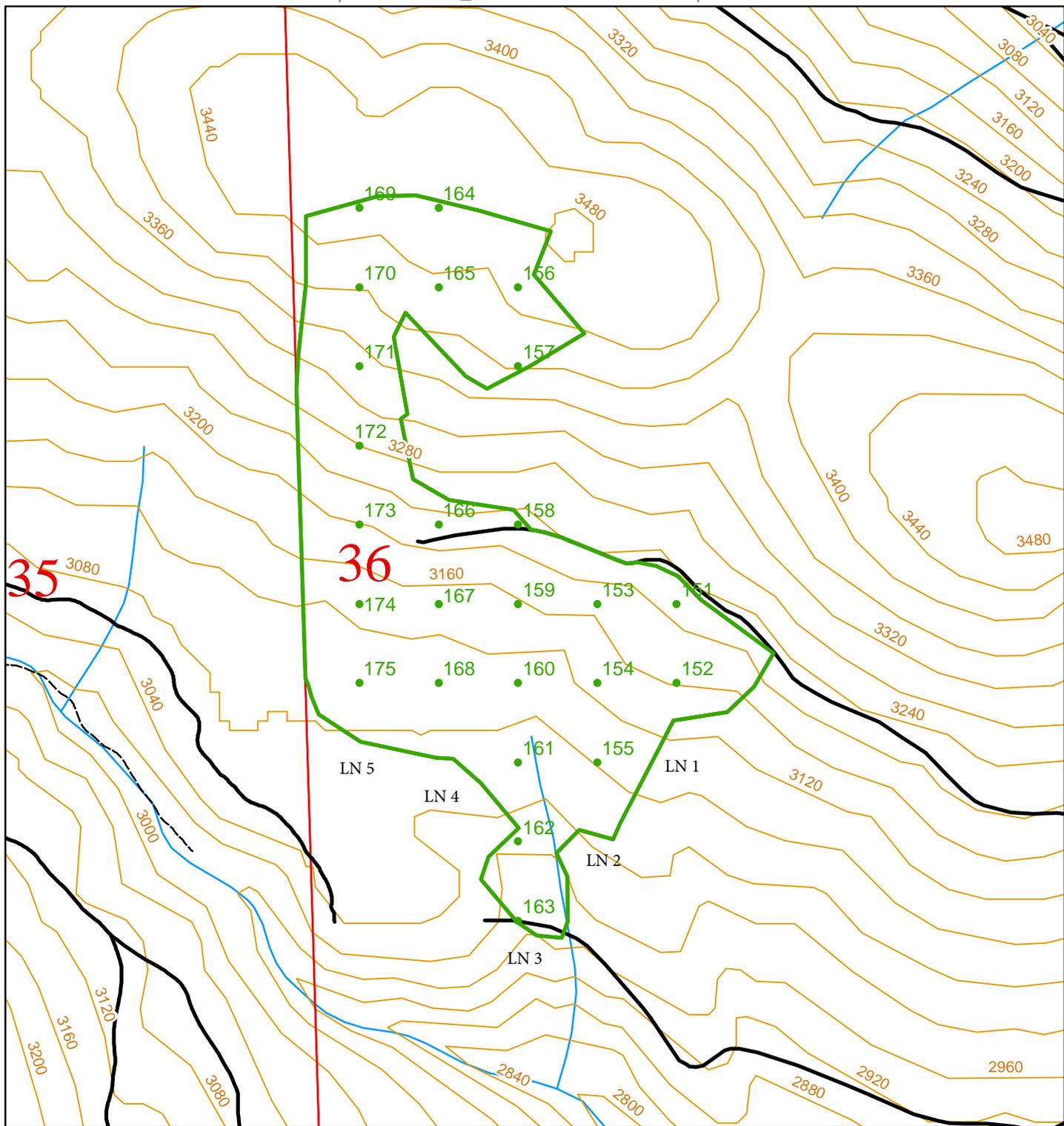
FMU POLYGON AND SAMPLE POINT INFORMATION

FMU_NM:	SACKIT SUMMIT U5	Township:	T39R37E
FMU_ID:	88069	DNR Region:	NORTHEAST
Acres:	96	Total Sample Points:	48
County:	STEVENS	Spacing Between Points:	Width: 280 Height: 280



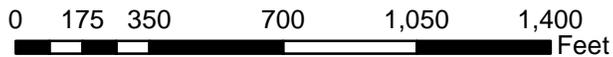
Legend

- Sample Points
- FMU polys
- D = Deleted plot



FMU POLYGON AND SAMPLE POINT INFORMATION

FMU_NM:	SACKIT SUMMIT U6	Township:	T39R37E
FMU_ID:	88070	DNR Region:	NORTHEAST
Acres:	47	Total Sample Points:	25
County:	STEVENS	Spacing Between Points:	Width: 280 Height: 280



Scale 1:6,000

Legend

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



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

FPA/N No: 3020305

Effective Date: 8/13/2015

Expiration Date: 8/13/2018

Shut Down Zone: 686

EARR Tax Credit: Eligible Non-eligible

Reference: Sackit Summit

25,35,36-39-37

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

Decision

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

FPA/N Classification

Class II Class III Class IVG Class IVS

Number of Years Granted on Multi-Year Request

4 years 5 years

Conditions on Approval / Reasons for Disapproval

No Conditions

Issued By: Doug Cox

Region: Northeast

Title: Forest Practices Forester

Date: 8/13/2015

Copies to: Landowner, Timber Owner and Operator.

Issued in person: Landowner Timber Owner Operator

By:



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

FPA/N No: 3020305

Date of Service: 03/08/2016

Request to Amend
 Forest Practices Application/Notification

Reference: DNR / SACKIT SUMMIT

DNR's Decision

Decision

- Approved** This request for an amendment is approved and subject to the conditions listed below
- Disapproved** This request for an amendment is disapproved for the reasons listed below

Conditions on Approval/Reasons for Disapproval

AMENDMENT APPROVED AS SUBMITTED.

Appeal Information (RCW 76.09.090(3), WAC 222-46-030(4), and WAC 332-08-105)

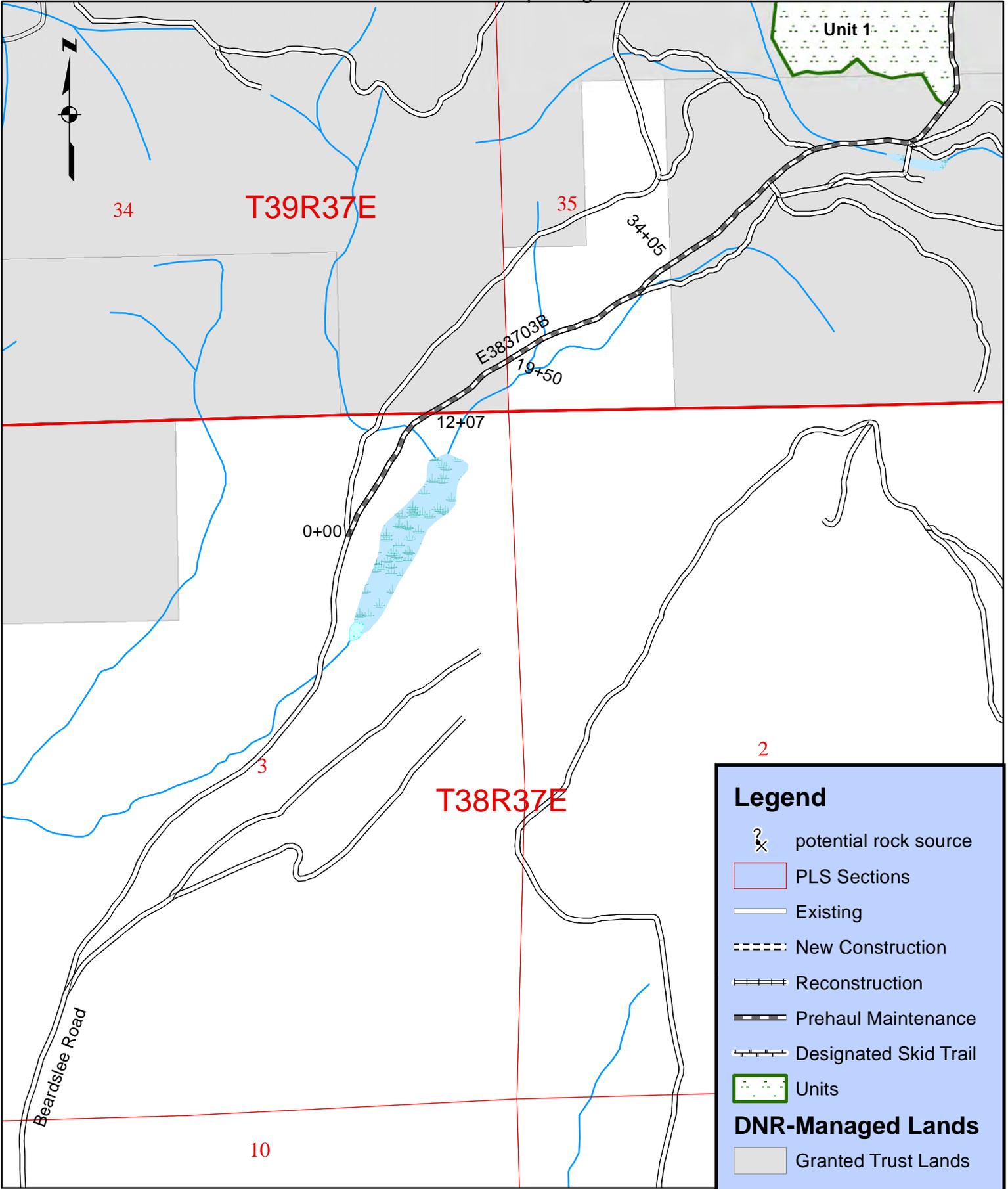
The Landowner, Timber Owner, or Operator has 15 calendar days from the Date of Service to request a Brief Adjudicative Proceeding for this amendment which is a **Notice to Comply for an authorized deviation**. Appeal requests must:

- Be in writing
- Include signature(s)
- Include the factual basis for the appeal and the issue to be adjudicated
- Sent to the Region Office at _____
- With a copy sent to the Department of Natural Resources, Forest Practices Division, PO Box 47012, Olympia, WA 98504-7012

Issued By: BOB HINDS

Title: Forest Practices Forester

Copies Sent To: Landowner (via US Mail), Timber Owner (via US Mail), Operator (via US Mail), WDFW, DOE, Affected Indian Tribes, LGE, other Copies delivered by hand to Stakeholders by Nondis Taylor.



Legend

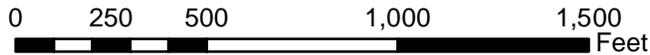
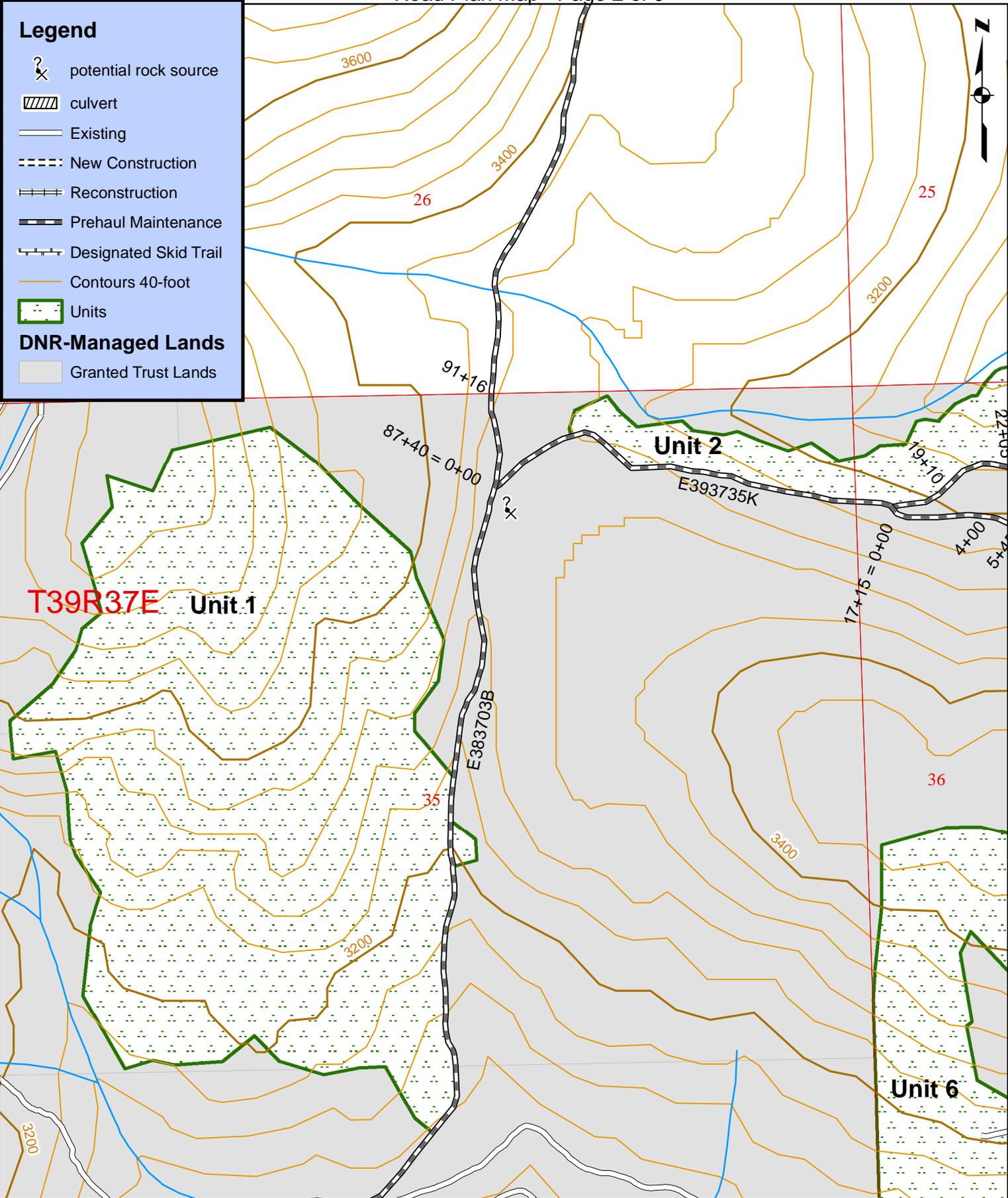
- potential rock source
- PLS Sections
- Existing
- New Construction
- Reconstruction
- Prehaul Maintenance
- Designated Skid Trail
- Units
- DNR-Managed Lands**
- Granted Trust Lands

Legend

-  potential rock source
-  culvert
-  Existing
-  New Construction
-  Reconstruction
-  Prehaul Maintenance
-  Designated Skid Trail
-  Contours 40-foot
-  Units

DNR-Managed Lands

-  Granted Trust Lands



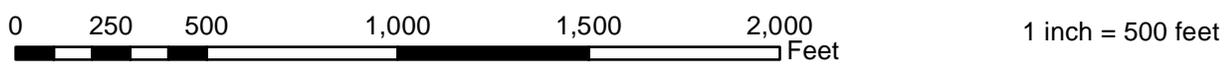
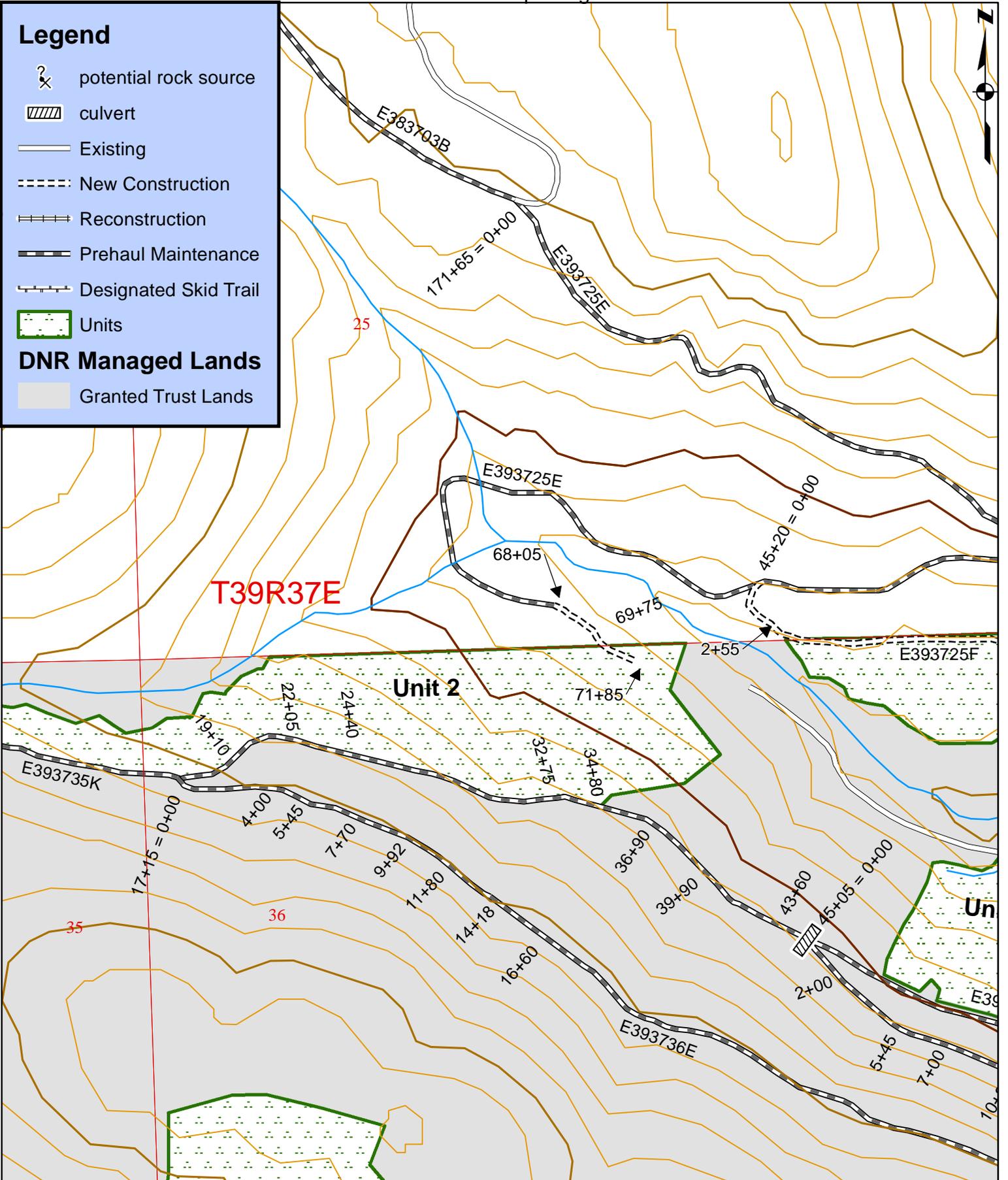
1 inch = 500 feet

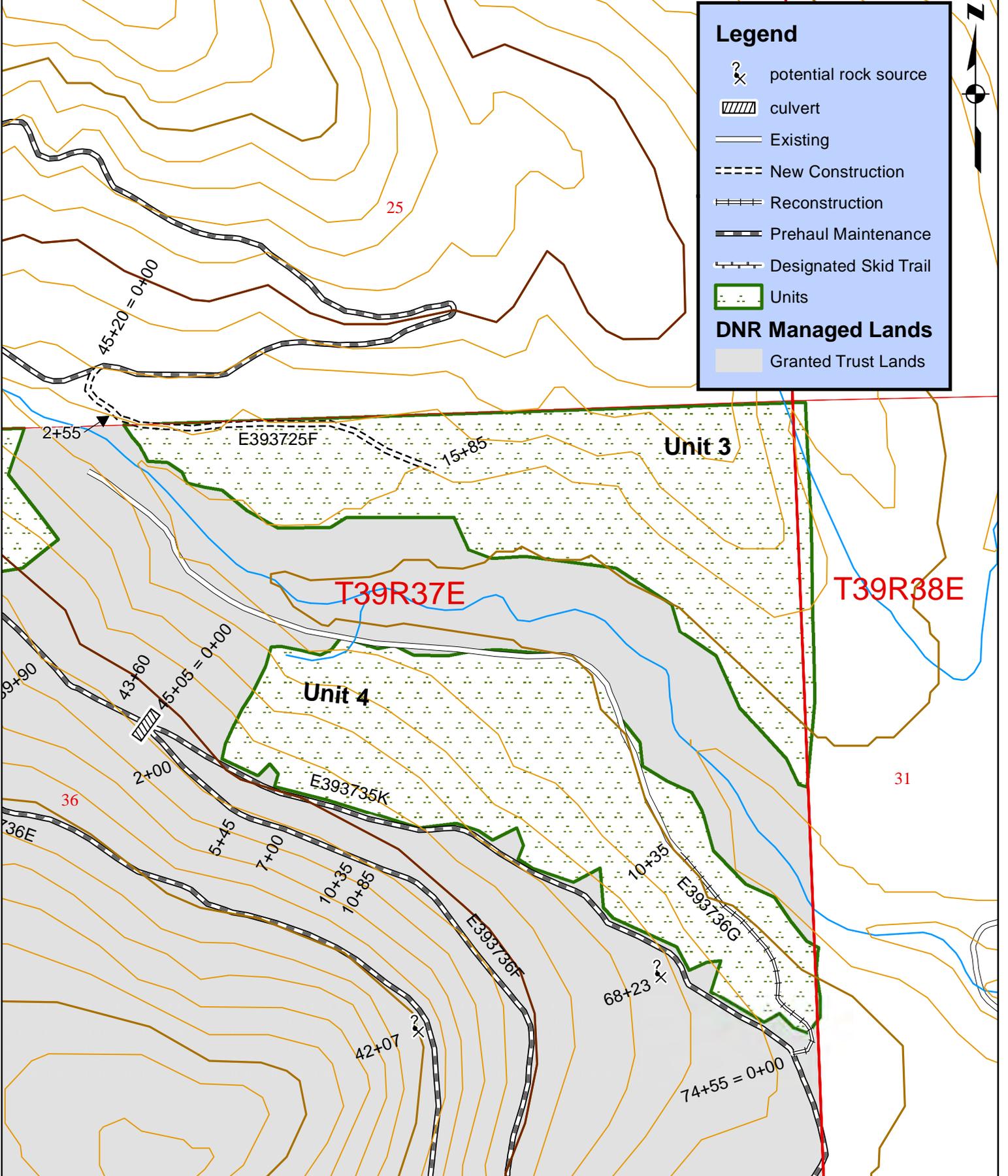
Legend

-  potential rock source
-  culvert
-  Existing
-  New Construction
-  Reconstruction
-  Prehaul Maintenance
-  Designated Skid Trail
-  Units

DNR Managed Lands

-  Granted Trust Lands



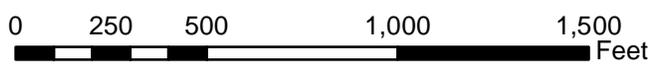


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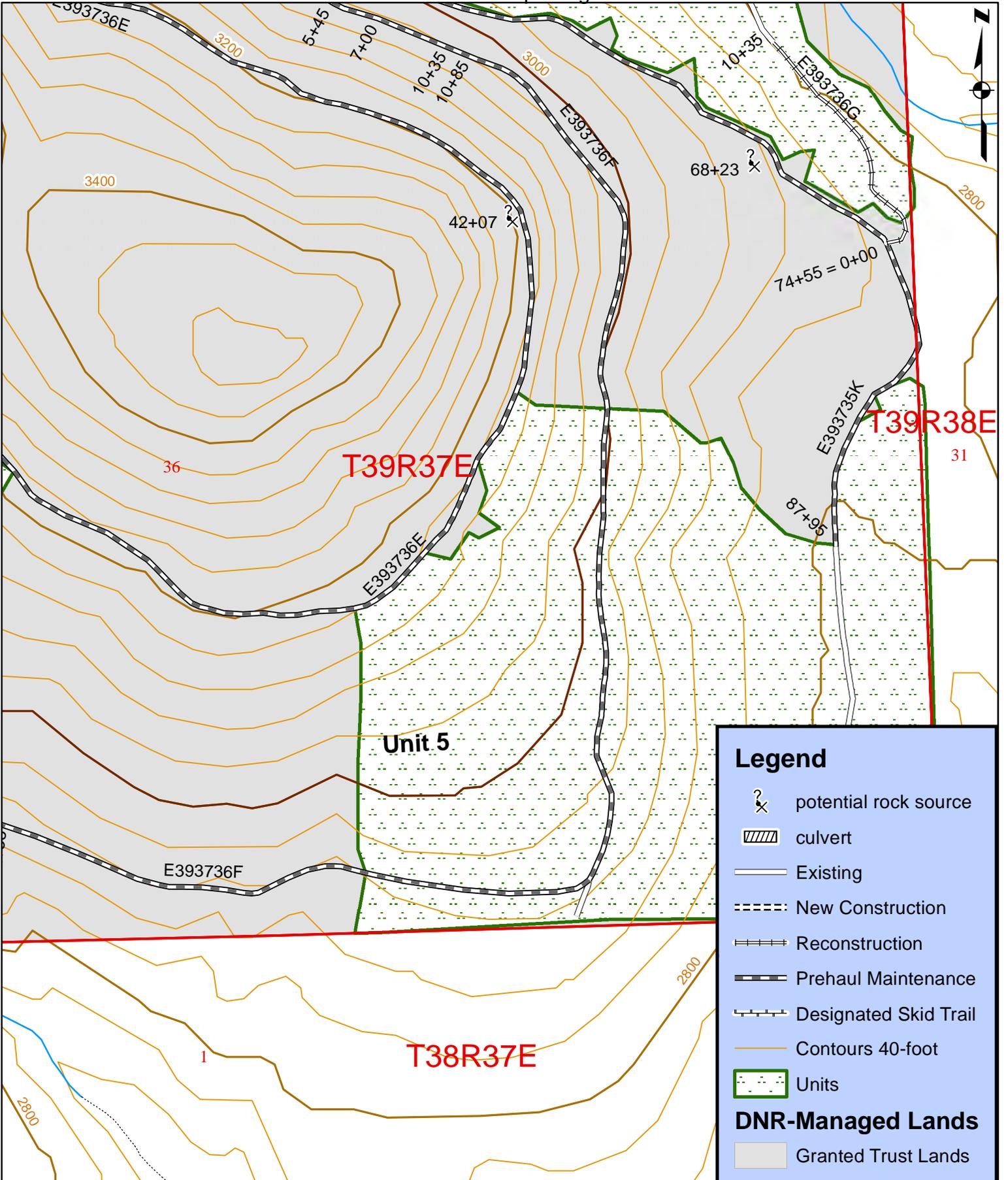
- potential rock source
- culvert
- Existing
- New Construction
- Reconstruction
- Prehaul Maintenance
- Designated Skid Trail
- Units

DNR Managed Lands

- Granted Trust Lands



1 inch = 500 feet



Legend

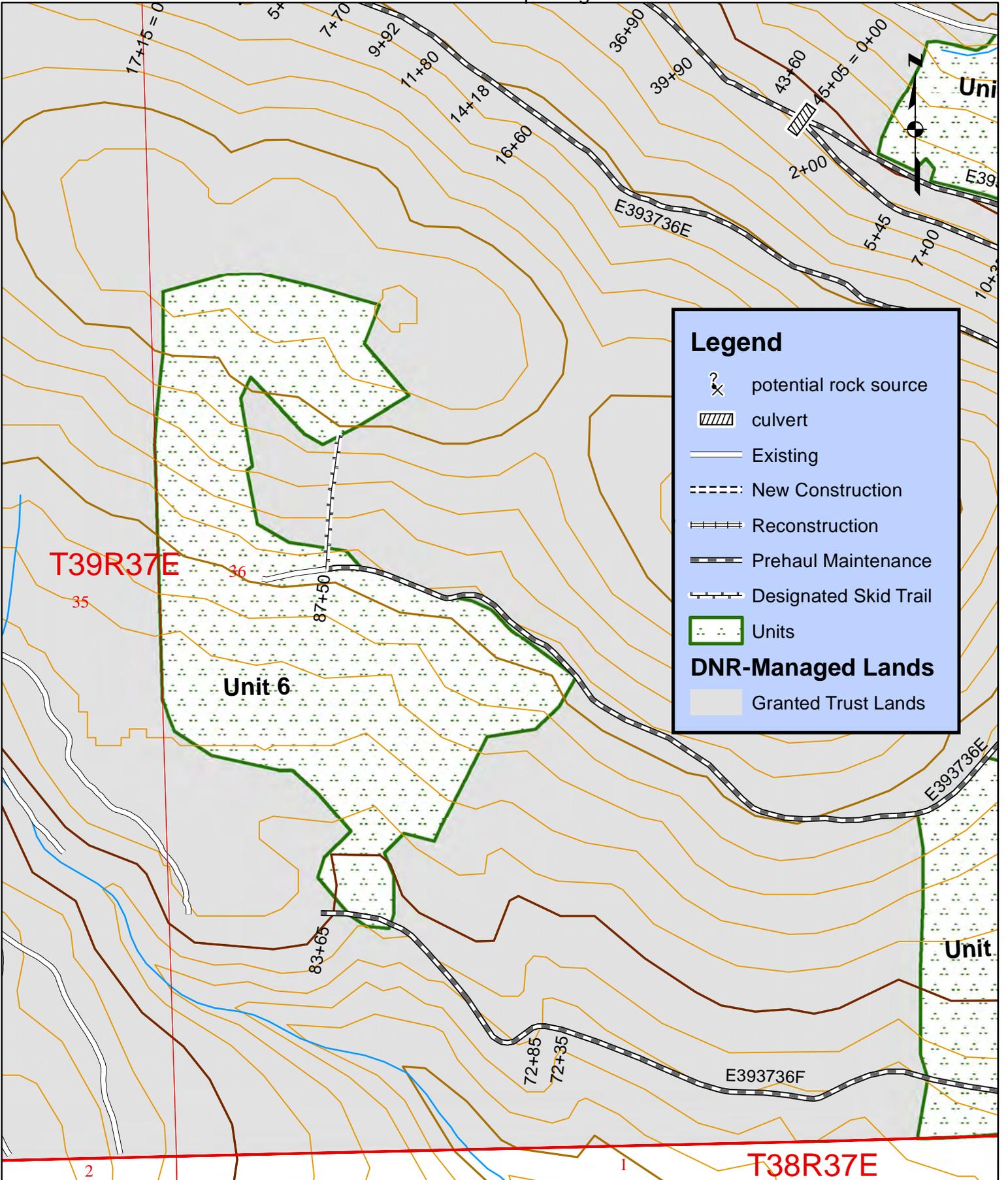
- potential rock source
- culvert
- Existing
- New Construction
- Reconstruction
- Prehaul Maintenance
- Designated Skid Trail
- Contours 40-foot
- Units

DNR-Managed Lands

- Granted Trust Lands



1 inch = 500 feet



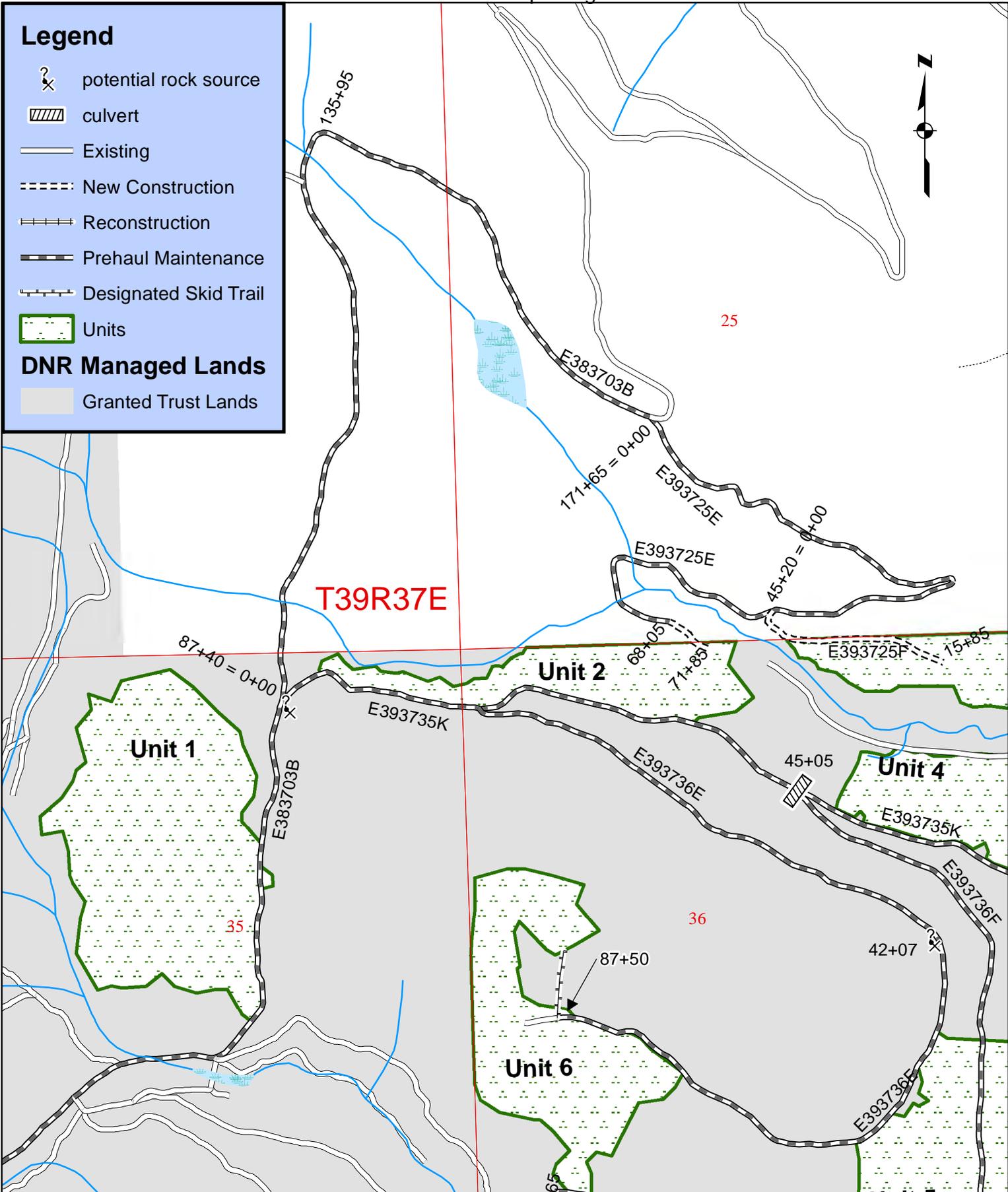
1 inch = 500 feet

Legend

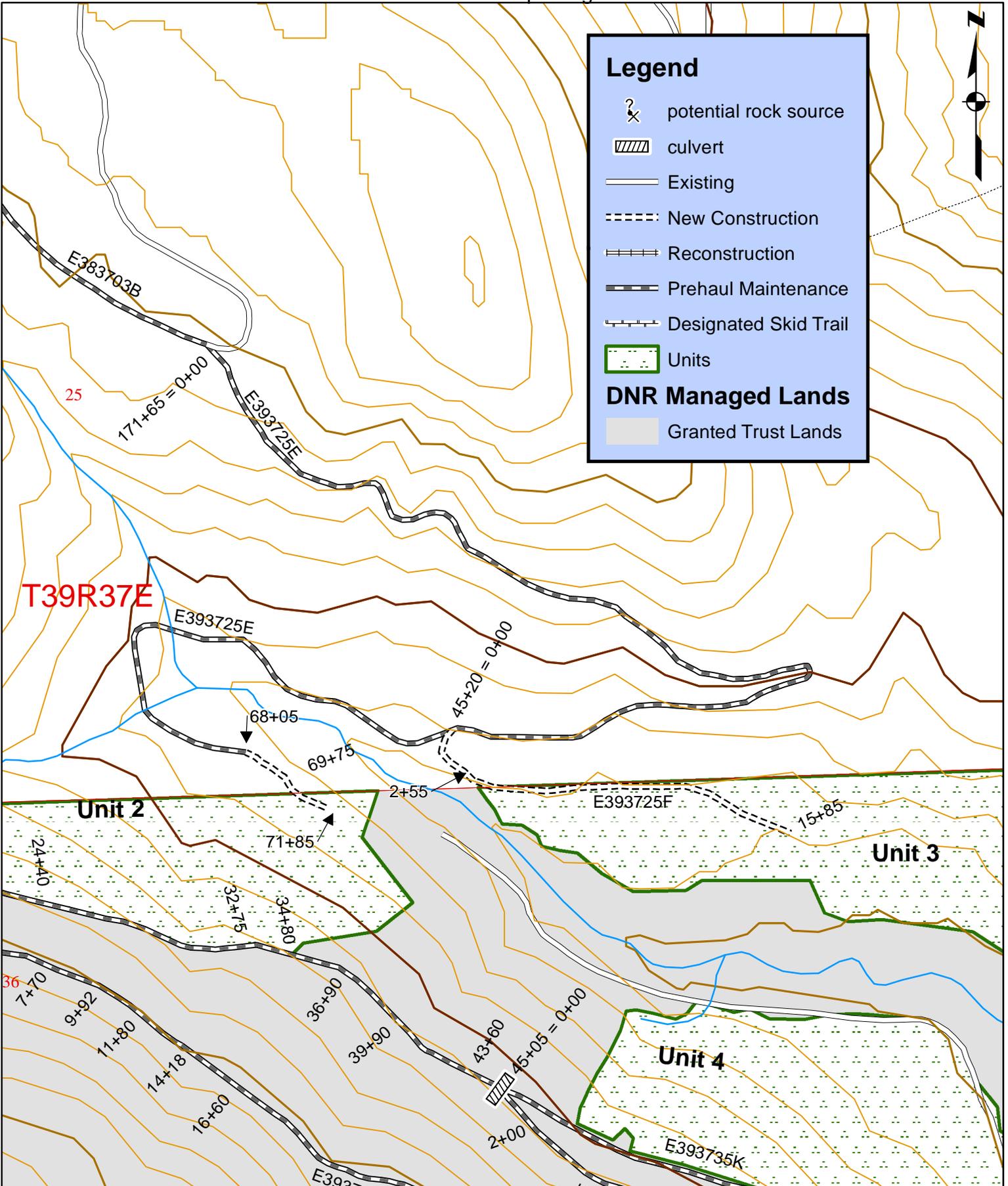
- potential rock source
- culvert
- Existing
- New Construction
- Reconstruction
- Prehaul Maintenance
- Designated Skid Trail
- Units

DNR Managed Lands

- Granted Trust Lands



1 inch = 1,000 feet



Legend

- potential rock source
- culvert
- Existing
- New Construction
- Reconstruction
- Prehaul Maintenance
- Designated Skid Trail
- Units

DNR Managed Lands

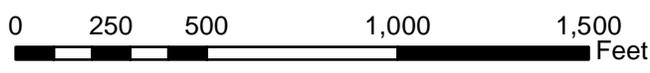
- Granted Trust Lands

T39R37E

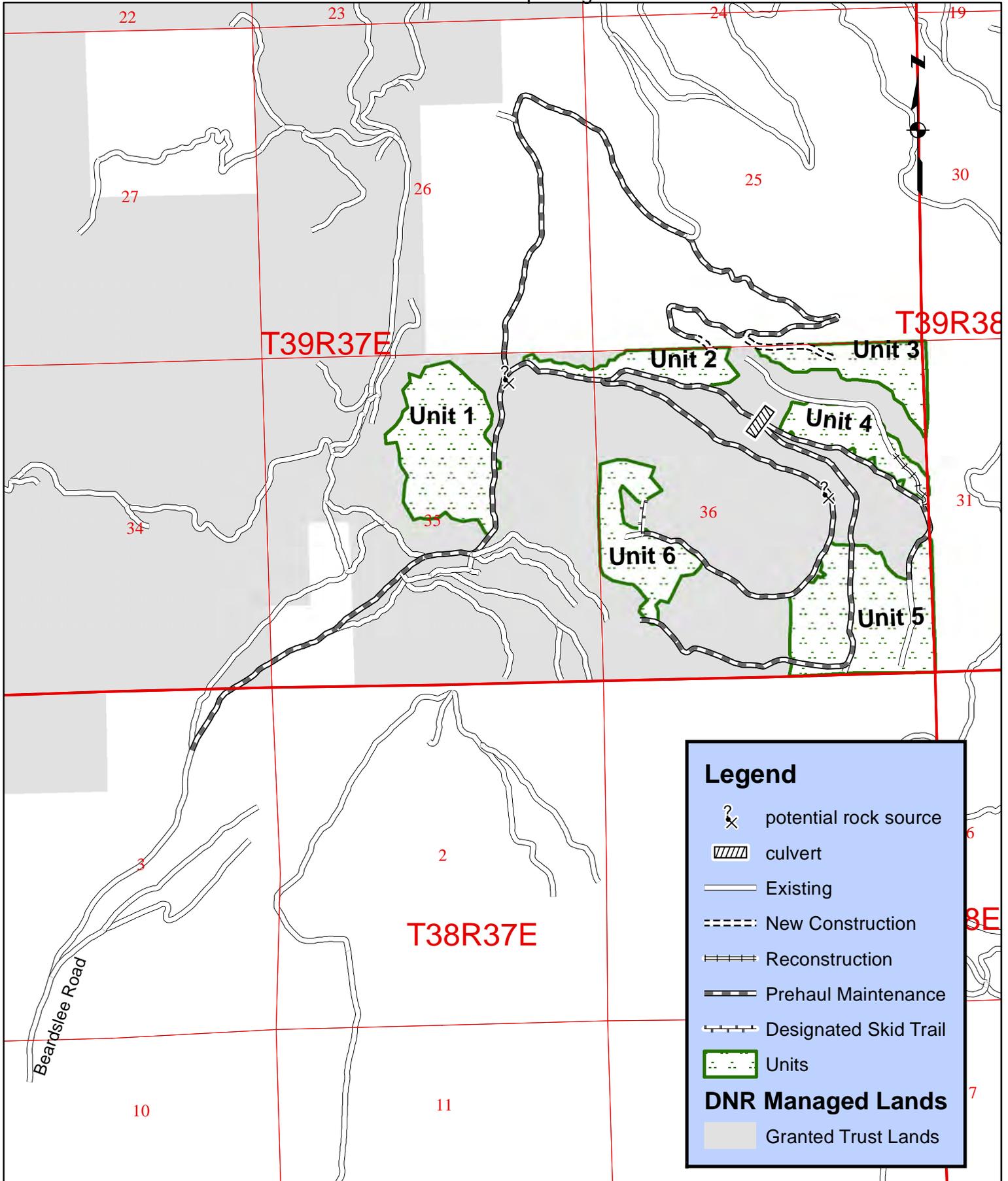
Unit 2

Unit 3

Unit 4



1 inch = 500 feet



Legend

- potential rock source
- culvert
- Existing
- New Construction
- Reconstruction
- Prehaul Maintenance
- Designated Skid Trail
- Units
- DNR Managed Lands**
- Granted Trust Lands

0 750 1,500 3,000 4,500 6,000 Feet

1 inch = 2,000 feet

STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES

SACKIT SUMMIT TIMBER SALE ROAD PLAN
STEVENS COUNTY
NORTH COLUMBIA DISTRICT

AGREEMENT NO.: 30-092349

STAFF ENGINEER: GENE GIBBS

DATE: 4/15/2015

DRAWN & COMPILED BY: GENE GIBBS

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>
E383703B	0+00 to 171+65	Prehaul Maintenance
E393725E	0+00 to 68+05	Prehaul Maintenance
E393725E	68+05 to 71+85	New Construction
E393725F	0+00 to 15+85	New Construction
E393735K	0+00 to 87+95	Prehaul Maintenance
E393736E	0+00 to 87+50	Prehaul Maintenance
E393736F	0+00 to 83+65	Prehaul Maintenance
E393736G	0+00 to 10+35	Reconstruction

0-4 CONSTRUCTION

Construction includes, but is not limited to clearing & grubbing, pioneering & decking logs, subgrade construction, rolling dip, cross drain, and culvert installation, Fish passage structure installation, cut & fill, embankment construction, riprap and rock application. Construct to the TYPICAL SECTION SHEET, ROCK LIST, and CULVERT & DRAINAGE LIST, for general specifications, unless otherwise specified in design details.

<u>Road</u>	<u>Stations</u>	<u>Requirements</u>
E393725F	0+00 to 15+85	Construct road in accordance to typical section, rock list and culvert and drainage sheet.
	0+00 to 2+55	On private, enters State at Sta 2+55.
E393725E	68+05 to 71+85	Construct road in accordance to typical section.
	69+75	Enters State Land

0-5 RECONSTRUCTION

Reconstruction includes, but is not limited to clearing & grubbing, subgrade reconstruction, rolling dip, cross drain, and culvert installation, cut & fill, embankment construction, riprap and rock application, bridge installation. Reference the TYPICAL SECTION SHEET, ROCK LIST, and CULVERT & DRAINAGE LIST, for general specifications.

<u>Road</u>	<u>Stations</u>	<u>Requirements</u>
E393736G	0+00 to 10+35	Light Reconstruction. Reconstruct road in accordance with typical section. Brush road in accordance to brushing detail.

0-6 PRE-HAUL MAINTENANCE

Maintenance includes, but is not limited to brushing, clearing, grubbing, subgrade reshaping, rolling dip, cross drain, and culvert installation, grading, riprap and rock application. Reference the TYPICAL SECTION SHEET, ROCK LIST, and CULVERT & DRAINAGE LIST, for general specifications.

<u>Road</u>	<u>Stations</u>	<u>Requirements</u>
E383703B	0+00 to 34+05	Reshape road to provide drainage as needed.
	0+00 to 12+07	On private, enters State at 12+07
	19+50 to 34+05	On private, enters State at 34+05
	34+05 to 135+95	Reshape road to provide drainage as needed. Spot brushing required. Brush road in accordance to Brushing Detail.
	135+95 to 171+65	Reshape road to provide drainage as needed.
E393725E	0+00 to 68+05	Reshape road to provide drainage as needed.
E393735K	0+00 to 87+95	Reshape road in accordance to typical section, intermittent ditching identified on typical section. Brush road in accordance to brushing detail. Install/reshape drainage as listed on culvert and drainage sheet, place rock as listed on the rock list and as directed by the contract administrator.
E393736E	0+00 to 87+50	Reshape road in accordance to typical section, intermittent ditching identified on typical section. Brush road in accordance to brushing detail. Install/reshape drainage as listed on culvert and drainage sheet, place rock as listed on the rock list and as directed by the contract administrator.
E393736F	0+00 to 83+65	Reshape road in accordance to typical section, intermittent ditching identified on typical section. Brush road in accordance to brushing detail. Install/reshape drainage as listed on culvert and drainage sheet, place rock as listed

		on the rock list and as directed by the contract administrator.

0-8 CLOSURE

This project includes, but is not limited to road closure listed in Clause 9-15 ROAD CLOSURE9-15 ROAD CLOSURE.

0-9 DECOMMISSIONING

This project includes, but is not limited to decommissioning listed in Clause 9-20 ROAD DECOMMISSIONING.

0-10 ABANDONMENT

This project includes, but is not limited to abandonment listed in Clause 9-21 ROAD ABANDONMENT.

0-12 DEVELOP ROCK SOURCE

The Purchaser *may develop *a new *an existing rock source. 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 shall be submitted, in writing, to the Contract Administrator for consideration. The State must approve the submitted plans before construction begins.

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 shall 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

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

1-4 ROAD TOLERANCES

Road work shall be performed within the tolerance 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 shall be resolved by giving the documents precedence in the following order:

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

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

1-7 TEMPORARY ROAD CLOSURE

The Purchaser shall notify the Contract Administrator a minimum of 5 calendar days before the closure of any road. Construction shall not close any road for more than 21 consecutive days.

1-8 REPAIR OR REPLACEMENT OF DAMAGED MATERIALS

The Purchaser is responsible for the repair or replacement of all materials, roadway infrastructure, and road components damaged during road work or operation activities. Repairs and replacements shall be directed by the Contract Administrator. Repairs to structural materials will be made according to the manufacturer's recommendation , and shall 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 shall be cleaned and treated with a minimum of two coats of zinc rich paint.

1-15 ROAD MARKING

Road work must be in accordance with the state's marked location. All road work is marked as follows:

- Centerline marked in orange flagging for new construction road work.
- Stationing marked with tags/stakes/paint/flagging for new construction, maintenance, reconstruction, decommissioning, and abandonment.

1-18 REFERENCE POINT DAMAGE

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

1-21 HAUL APPROVAL

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

1-22 WORK NOTIFICATIONS

the Purchaser shall notify the Contract Administrator a minimum of 14 calendar days before any road work begins.

1-23 ROAD WORK PHASE APPROVAL

Written approval by Contract Administrator must be received upon completion of the following phases of road work:

- Subgrade approval
- Drainage installation
- Subgrade compaction
- Rock application
- Rock compaction

1-25 ACTIVITY TIMING RESTRICTION

No operation of road construction equipment will be allowed on weekends or state recognized holidays, without written approval from the the Contract Administrator.

Construction restrictions apply to this contract. All construction and transportation of heavy equipment and/or trucks is prohibited between the following dates, except as may be authorized in writing by the Contract Administrator.

November 15 to May 31

1-26 OPERATING DURING CLOSURE PERIOD

If permission is granted to operate during a closure period listed in Clause 1-25 ACTIVITY TIMING RESTRICTIONS, the Purchaser shall provide a maintenance plan to include further protection of state resources. The Contract Administrator must approve the maintenance plan, in writing, before operation in the closure period. The Purchaser shall be required to maintain all haul roads including those listed in Contract Clause C-060 DESIGNATED ROAD MAINTAINER.

1-29 SEDIMENT RESTRICTION

Silt-bearing runoff shall not be permitted to go into streams.

1-30 CLOSURE TO PREVENT DAMAGE

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

- Wheel track rutting exceeds 4 inches on jaw run/pit run roads.
- Wheel track rutting exceeds 2 inches on crushed rock roads.
- Wheel track rutting exceeds 8 inches on native surface roads.
- Surface or base stability problems persist.
- Weather is such that satisfactory results cannot be obtained in an area of operations.
- In the opinion of the Contract Administrator excessive road damage or rutting may occur.

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

1-32 BRIDGE AND ASPHALT SURFACE RESTRICTION

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

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

1-33 SNOW PLOWING RESTRICTION

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

1-43 ROAD WORK AROUND UTILITIES

Road work in close proximity to a utility is the Purchaser's responsibility to identify any utilities. The Purchaser shall work in accordance with all applicable laws or rules concerning utilities. The Purchaser is responsible for all notification, including "call before you dig", and liabilities associated with the utilities and their rights-of-way. Road work shall not begin without prior notification to the utilities.

SECTION 2 – MAINTENANCE

2-1 GENERAL ROAD MAINTENANCE

All roads used under this contract shall be maintained 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 roads in a condition that will allow the passage of light administrative vehicles.

2-5 MAINTENANCE GRADING – EXISTING ROAD

A grader shall be used to shape existing surfaces. All grading shall be accomplished using a motor grader with a minimum of 175 horsepower.

SECTION 3 – CLEARING, GRUBBING, AND DISPOSAL

3-1 BRUSHING

Vegetative material up to 3 inches in diameter, including limbs, shall be cut as shown on the BRUSHING DETAIL-D2. Brushing shall be achieved by manual or mechanical cutting of brush, trees, and branches. Root systems and stumps of cut vegetation shall not be disturbed unless directed by the Contract Administrator.

3-2 BRUSHING RESTRICTION

Pulling, digging, pushing over, and other non-cutting methods used for vegetation removal shall not be used for brushing. The Purchaser is required to submit a detailed list of equipment and methods to be used during brushing, for approval by the Contract Administrator before starting work. Excavator buckets, log loaders and similar equipment shall not be used for brushing unless otherwise approved in writing by the Contract Administrator.

3-3 BRUSH REMOVAL

Remove brushing debris from the road surface, ditchlines, and culvert inlets and outlets.

3-5 CLEARING

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

3-7 RIGHT-OF-WAY DECKING

Deck all right-of-way timber. Decks shall be parallel to the road centerline and placed within the cleared right-of-way. Decks shall be free of dirt, limbs and other right-of-way debris, and removable by standard log loading equipment from the roadbed.

3-8 PROHIBITED DECKING AREAS

Right-of-way timber shall not be decked in the following areas:

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

3-10 GRUBBING

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

3-20 ORGANIC DEBRIS DEFINITION

Organic debris is defined as all vegetative material not eligible for removal by Contract Clauses 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

All disposal of organic debris, except by burning, shall be completed before approval of final maintenance.

3-22 DESIGNATED WASTE AREA FOR ORGANIC DEBRIS

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

3-23 PROHIBITED DISPOSAL AREAS

Organic debris shall not be deposited in the following areas:

- Within 50 feet of a cross drain culvert.
- Within 100 feet of a live stream, or wetland, On road subgrades road prism excavation and embankment slopes embankments as shown on the TYPICAL SECTION SHEET.
- On slopes greater than 40%.
- Within the operational area for cable landings where debris may shift or roll.
- On locations where brush will fall into the ditch or onto the road surface.

- Against standing timber.

3-24 BURYING ORGANIC DEBRIS RESTRICTED

Organic debris shall not be buried unless otherwise stated in this plan.

3-30 EXCLUSION OF DOZER BLADES

Dozer blades are not permitted for the piling of organic debris.

3-31 PILING

Organic debris shall be piled. Debris piles shall be made to be burnable, clean, tight, and free of rock or soil. Piles shall be made no closer than 20 feet from standing timber, and no higher than 10 feet. Debris piles shall be placed within the cleared right-of-way, or in natural openings, as designated by the Contract Administrator. Placement of debris piles outside of the right-of-way limits is subject to the written approval of the Contract Administrator.

SECTION 4 – EXCAVATION

4-1 EXCAVATOR CONSTRUCTION

The Purchaser shall use a track mounted hydraulic excavator for construction work , unless authorized, in writing, by the Contract Administrator.

4-2 PIONEERING

Pioneering shall not extend past construction that will be completed during the current construction season. Pioneering shall not extend more than 1000 feet beyond completed construction unless approved in writing by the Contract Administrator. In addition, the following actions shall be taken as pioneering progresses:

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

4-3 ROAD GRADE AND ALIGNMENT STANDARDS

The following road grade and alignment standards shall be followed except as designed:

- Grade and alignment shall have smooth continuity, without abrupt changes in direction.
- Maximum grade shall not exceed 18 percent favorable and 12 percent adverse.
- Minimum curve radius is 60 feet at centerline.
- Sag vertical curves shall not have a grade change greater than 5% in 100 feet.
- Crest vertical curves shall not have a grade change greater than 4% in 100 feet.

4-4 SWITCHBACK STANDARDS

A switchback is defined as a curved segment of road between a beginning and end of the same curve, where the change of traffic travel direction is greater than 90 degrees. The following standards for switchbacks shall be followed:

- Adverse grades on switchbacks shall not exceed 10%.
- Favorable grades through switchbacks shall not exceed 12%.
- Transition grades entering and leaving switchbacks shall not exceed a 5% grade change.
- Transition grades required to meet switchback grade limitations shall be constructed on the tangents preceding and departing from the switchbacks.

4-5 CUT SLOPE RATIO

Unless construction staked or designed excavation slopes shall be constructed 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

Unless construction staked or designed, embankment slopes shall be constructed 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

Excavation and embankment slopes shall be constructed to a uniform line and left rough for easier revegetation.

4-8 CURVE WIDENING

Curve widening shall be added to the inside of curves as follows:

Minimum 4 feet extra	80 to 100 foot radius curve
Minimum 6 feet extra	60 to 79 foot radius curve

4-9 EMBANKMENT WIDENING

Except as construction staked or designed, embankments shall be widened as follows:

<u>Height at Centerline</u>	<u>Subgrade Widening</u>
Less than 6 feet	2 feet
6 feet or over	4 feet

Embankment widening shall be applied equally to both sides of the road to achieve the required width.

4-12 FULL BENCH CONSTRUCTION

On roads and where side slopes exceed 45%, full bench construction shall be utilized for the entire subgrade width except as construction staked or designed. Waste material shall be end hauled to the location specified in Clause 4-37 WASTE AREA LOCATION.

4-14 ONE-FOOT EXCAVATION LIMIT

Where side slopes are 0% to 15%, the cut at centerline shall not exceed one foot unless approved by the Contract Administrator.

4-21 TURNOUTS

Turnouts shall be intervisible with maximum of 1,000 feet between turnouts, unless shown otherwise on drawings. Locations shall be adjusted to fit the final subgrade alignment and sight distances. Minimum dimensions are shown on the TYPICAL SECTION SHEET. Turnouts are subject to written approval from the contract administrator.

4-22 TURNAROUNDS

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

4-25 DITCH CONSTRUCTION AND RECONSTRUCTION

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

4-28 DITCH DRAINAGE

Ditches shall drain to cross-drain culverts and ditchouts.

4-29 DITCHOUTS

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

4-35 WASTE MATERIAL DEFINITION M

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 M

Waste material may be sidecast on side slopes up to 45% if the waste material is compacted and free of organic debris. On side slopes greater than 45%, all excavation shall be end hauled or pushed to designated embankment sites and waste areas.

4-38 PROHIBITED WASTE DISPOSAL AREAS

Waste material shall not be deposited in the following areas , except as otherwise specified in this plan:

- Within 50 feet of a cross drain culvert.
- Within 100 feet of a live stream or wetland.
- Within a riparian management zone.
- On side slopes steeper than 40%.
- In locations that interfere with the construction of the road prism.
- In locations that impede drainage.
- Against standing timber.
- Outside the clearing limits.
- Waste Disposal areas are subject to written approval from the contract administrator.

4-45 SELECT BORROW

Select borrow shall consist of granular material, either naturally occurring or processed, and shall contain no more than 5% clay, organic debris, or trash by volume.

4-46 COMMON BORROW

Common borrow shall consist of soil, and/or aggregate that is non-plastic and shall contain no more than 5% clay, organic debris, or trash by volume. The material is considered non-plastic if the fines (passes the U.S. #40 sieve) in the sample cannot be rolled, between the hand and a smooth surface, into a thread at any moisture content.

4-47 NATIVE MATERIAL

Native material shall be excavated material free of organic debris, trash, and rocks greater than 6 inches in any dimension.

4-48 BORROW MATERIAL

Borrow material shall contain no more than 5% clay, organic debris, or trash by volume.

4-49 BORROW SOURCE

Borrow may be obtained from borrow sources identified or approved by the Contract Administrator.

4-55 ROAD SHAPING

The road subgrade and surface shall be shaped as shown on the TYPICAL SECTION SHEET. The subgrade and surface shape shall ensure runoff in an even, un-concentrated manner, and shall be uniform, firm, and rut-free. All grading shall be accomplished using a motor grader with a minimum of 175 horsepower.

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.

4-60 FILL COMPACTION

All embankment and waste material shall be compacted. Minimum acceptable compaction is achieved by placing embankments in 1 foot or shallower lifts, and routing excavation equipment over the entire width of each lift.

4-61 SUBGRADE COMPACTION

Constructed or reconstructed subgrades shall be compacted full width. Subgrade compaction shall be approved, in writing, by the Contract Administrator before rock application or timber haul.

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

berms shall be removed from road shoulders to permit the escape of runoff. The construction of ditchouts will be required where ponding will result from the effects of sidecast debris.

5-5 CULVERTS

Culverts shall be installed as part of this contract. Culverts shall be installed concurrently with subgrade work and shall 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 shall be adjusted to fit as-built conditions and shall not terminate directly on unprotected soil that will erode. Culverts shall be new steel, aluminum, or polyethylene meeting the material specifications in Clauses 10-15 through 10-23. Culvert placement shall precede embankment construction.

5-11 UNUSED MATERIALS STATE PROPERTY

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

5-15 CULVERT INSTALLATION

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

5-16 APPROVAL FOR LARGER CULVERT INSTALLATION

Installation of culverts 30 inches in diameter and over shall be subject to written approval by the Engineer before making backfill.

5-17 CROSS DRAIN SKEW AND SLOPE

Cross drains, on road grades in excess of 3%, shall 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 shall not be skewed. Cross drain culverts shall be installed at a slope steeper than the incoming ditch grade, but not less than 3% or more than 10%.

5-18 CULVERT DEPTH OF COVER

Cross drain culverts shall 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 shall be installed with a depth of cover specified in the Engineer's design, or to the minimum depth recommended by the culvert manufacturer for the type of cover material over the pipe, whichever is greater.

5-20 ENERGY DISSIPATERS

Energy dissipaters shall be installed to prevent erosion and are subject to approval by the Contract Administrator. The type of energy dissipater and the amount of material shall be consistent with the specifications listed on the CULVERT AND DRAINAGE SPECIFICATION DETAIL. Energy dissipaters will be consistent with light loose rip rap specifications.

5-21 DOWNSPOUTS AND FLUMES

Downspouts and flumes longer than 5 feet shall be staked on both sides at maximum intervals of 10 feet with 6-foot heavy-duty steel posts, and fastened securely to the posts with No. 10 galvanized smooth wire or 1/2-inch bolts in accordance with the CULVERT AND DRAINAGE SPECIFICATION DETAIL.

5-25 CATCH BASINS

Catch basins shall be constructed to resist erosion in accordance with CULVERT AND DRAINAGE SPECIFICATION DETAIL. Minimum dimensions of catch basins are 4 feet wide and 4 feet long with backslopes consistent with Clause 4-5 CUT SLOPE RATIO.

5-26 HEADWALLS FOR CROSS DRAIN CULVERTS

Headwalls shall be constructed in accordance with the CULVERT AND DRAINAGE SPECIFICATION DETAIL *at all permanent cross drain culverts, that specify the placement of rock. Rock used for headwalls shall meet the specifications for Light Loose Rip Rap. Rock shall be placed on shoulders, slopes, and around culvert inlets and outlets. Minimum specifications require that rock be placed at a width of one culvert diameter on each side of the culvert opening, and to a height of one culvert diameter above the top of the culvert. Rock shall not restrict the flow of water into culvert inlets or catch basins. Placement shall be by zero-drop-height method only. No placement by end dumping or dropping of rock shall be allowed.

5-30 DRIVABLE WATERBAR CONSTRUCTION

Drivable waterbars shall be constructed in accordance with the DRIVABLE WATERBAR DETAIL and as specified on the CULVERT AND DRAINAGE LIST. Drivable waterbars shall be installed concurrently with construction of the subgrade and shall be maintained in an operable condition.

5-31 ROLLING DIP CONSTRUCTION

Rolling dips shall be constructed in accordance with the ROLLING DIP DETAIL and as specified on the CULVERT & DRAINAGE LIST. Rolling dips shall be installed concurrently with construction of the subgrade and shall be maintained in an operable condition. Minimum frequency of rolling dips shall be at a maximum spacing of 400 feet horizontal or one for every 10 feet of vertical change.

5-33 NATIVE SURFACE ROADS

If overwintered, native surface roads shall be waterbarred by November 1. Waterbars shall be constructed according to the attached 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 300 feet.

SECTION 6 – ROCK AND SURFACING

6-2 ROCK SOURCE ON STATE LAND

Rock used in accordance with the quantities on the ROCKLIST may be obtained from the following potential sources on state land at no charge to the Contractor. Use of material from any other source must have prior written approval from the Contract Administrator. If other operators are using, or desire to use the rock source(s), a joint operating plan shall be developed. All parties shall follow this plan. The Purchaser shall

notify the Contract Administrator a minimum of 5 calendar days before starting any operations in the listed locations.

<u>Source</u>	<u>Location</u>	<u>Rock Type</u>
Barrow #1	Near Sta 87+40 E383703B	shale
Barrow #2	Near Sta 42+07 E383736E	shale
Barrow #3	Near Sta 68+23 E383735K	shale

6-12 ROCK SOURCE SPECIFICATIONS

Rock sources shall be in accordance with the following unless otherwise specified in the ROCK SOURCE DEVELOPMENT AND RECLAMATION PLAN:

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

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 shall be maintained in a condition to minimize the possibility of the walls sliding or failing.
- The width of pit benches shall be a minimum of 1.5 times the maximum length of the largest machine used.
- The surface of pit floors and benches shall be uniform and free-draining at a minimum 2% outslope gradient.
- Add in additional information as needed.
- All operations shall 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.
- Block all vehicle access to the top of the pit faces.

6-20 IN-PLACE PROCESSING

The Purchaser may use in-place processing, such as a grid roller or other method, if suitable crushing can be demonstrated to meet the surfacing size restrictions specified in Clause 6-38 4-INCH IN-PLACE ROCK. The use of in-place processing methods is subject to written approval by the Contract Administrator.

6-23 ROCK GRADATION TYPES

Purchaser shall supply or manufacture rock in accordance with the types and amounts listed in the Rock List. Rock shall meet the following specifications for gradation and uniform quality. Purchaser shall supply a sieve analysis upon request from the Contract Administrator.

6-33 3-INCH MINUS CRUSHED ROCK

% Passing 3" square sieve	100%
% Passing 1½" square sieve	55 - 75%
% Passing U.S. #4 sieve	15 - 45%

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

6-38 4-INCH IN-PLACE ROCK

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

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

In-place rock shall contain no more than 5 percent by weight of organic debris and trash.

6-50 LIGHT LOOSE RIP RAP

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

<u>At Least/Not More Than</u>	<u>Weight Range</u>	<u>Size Range</u>
20% / 90%	300 lbs. to 1 ton	20" - 36"
80% / --	50 lbs. to ½ ton	12" - 30"
10% / 20%	50 lbs. max	3" - 8"

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 loose yards. Purchaser shall apply adequate amounts of rock to meet the specified rock depths. Specified rock depths are minimum requirements, and are not subject to reduction.

6-70 APPROVAL BEFORE ROCK APPLICATION

Subgrade drainage installation shall be completed and approved in writing by the Contract Administrator, before rock application.

6-71 ROCK APPLICATION

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

6-73 ROCK FOR WIDENED PORTIONS

Turnarounds, turnouts, and areas with curve widening shall have rock applied to the same depth and specifications as the traveled way.

SECTION 8 – EROSION CONTROL

8-1 SEDIMENT CONTROL

Sediment control shall be accomplished using straw bales, scattered straw, silt fence, and sediment traps or other methods as approved, in writing, by the Contract Administrator.

8-2 PROTECTION FOR EXPOSED SOIL

Purchaser shall furnish and evenly spread a 6-inch layer of straw to all exposed soils sloping towards live water at culvert installations, and within 50 feet of a stream or wetland. Soils shall be covered before the first anticipated storm event. Soils shall not be allowed to sit exposed during any rain event.

SECTION 9 – POST-HAUL ROAD WORK

9-3 REMOVAL OF CULVERT MATERIAL FROM STATE LAND

Culvert material removed from roads becomes the property of the Purchaser and must be removed from state land

9-10 LANDING DRAINAGE

Purchaser shall provide for drainage of the landing surface as approved, in writing, by the Contract Administrator.

9-11 LANDING EMBANKMENT

Landing embankments shall be sloped to original construction specifications.

SECTION 10 MATERIALS

10-1 GEOTEXTILE FOR SUBSURFACE DRAINAGE

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

	<u>ASTM Test</u>	<u>Requirements</u>
Type	--	Non-woven
Apparent opening size	D 4751	No. 80 max
Water permittivity	D 4491	0.3 sec ⁻¹
Grab tensile strength	D 4632	160 lb
Grab tensile elongation	D 4632	= 50%
Puncture strength	D 6241	310 lb
Tear strength	D 4533	50 lb
Ultraviolet stability	D 4355	50% retained after 500 hours of exposure

Unused geotextile will remain the property of the contractor/purchaser.

10-15 CORRUGATED STEEL CULVERT

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

10-16 CORRUGATED ALUMINUM CULVERT

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

10-17 CORRUGATED PLASTIC CULVERT

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

10-20 FLUME AND DOWNSPOUT

Downspouts and flumes shall meet the AASHTO specification designated for the culvert. Plastic downspouts and flumes shall be Type S – double walled with a corrugated exterior and smooth interior.

10-21 METAL BAND

Metal coupling and end bands shall meet the AASHTO specification designated for the culvert and shall have matching corrugations. On culverts 24 inches and smaller, bands shall have a minimum width of 12 inches. On culverts over 24 inches, bands shall have a minimum width of 24 inches.

10-22 PLASTIC BAND

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

10-23 GAGE AND CORRUGATION

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

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

FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS

Cuts and Fills

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

Surface

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

Drainage

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

Structures

- Repair culverts, bridges, gates, fences, cattle guards, signs, and other road structures as required because of purchaser use. Repairs shall be subject to Contract Administrator's approval.

FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS

Preventative Maintenance

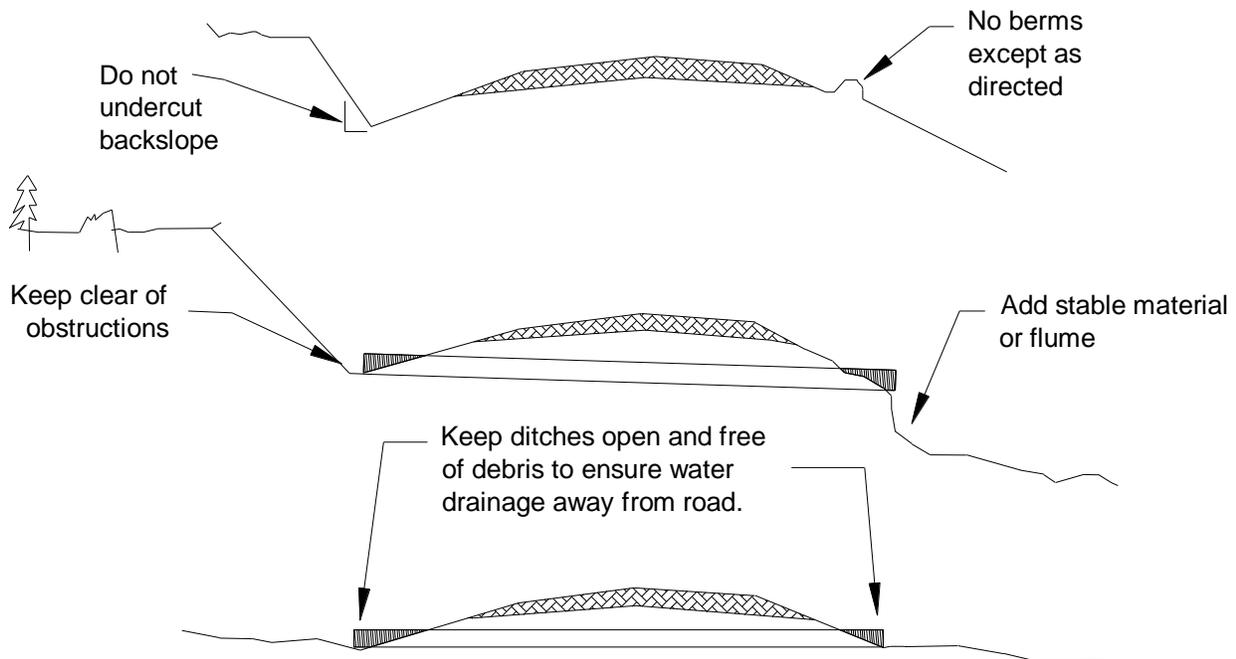
- Perform preventative maintenance work to safeguard against storm damage, such as blading to ensure correct runoff, ditch and culvert cleaning, and waterbar maintenance.

Termination of Use or End of Season

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

Debris

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

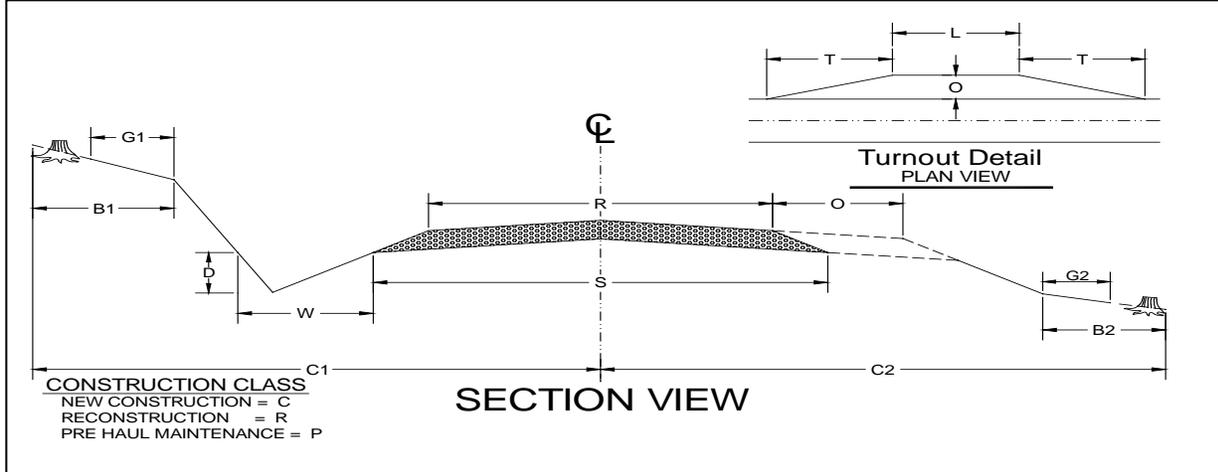


DEPARTMENT OF NATURAL RESOURCES

Application No.: 30-092349

Name of Sale: Sackit Summit

TYPICAL SECTION SHEET



ROAD NAME	START STATION	END STATION	CONSTRUCTION CLASS	CONSTRUCTION TYPE	KEYED FILL	SUBGRADE WIDTH (S)	ROAD WIDTH (R)	INSLOPE "/10'	OUTSLOPE "/10'	CROWN " AT CL	DITCH WIDTH (W)	DITCH DEPTH (D)	DITCH 2 SIDES	GRUBBING CUT BANK (G1)	GRUBBING FILL TOE (G2)	ROAD CUT CLEARING (B1)	ROAD FILL CLEARING (B2)	R/W CUT CLEARING (C1)	R/W FILL CLEARING (C2)
E383703B	0+00	171+65	c	P		subgrade shape and width varies													
E393725E	0+00	68+05	c	P		14	12		4										
	68+05	71+85	c	C		14	12		4					4	4	6	6		
E393725F	0+00	15+85	c	C		14	12		4					4	4	6	6		
E393735K	0+00	17+15	c	P		14	12		4										
	17+15	19+10	c	P		14	12			4	2	1							
	19+10	22+05	c	P		14	12		4										
	22+05	24+40	c	P		14	12			4	2	1							
	24+40	34+80	c	P		14	12		4										
	34+80	45+05	c	P		14	12			4	2	1							
	45+05	87+95	c	P		14	12		4										
E393736E	0+00	4+00	c	P		14	12		4										
	4+00	7+70	c	P		14	12			4	2	1							
	7+70	9+92	c	P		14	12		4										
	9+92	16+60	c	P		14	12			4	2	1							
	16+60	87+50	c	P		14	12		4										
E393736F	0+00	2+00	c	P		14	12			4	2	1							
	2+00	83+65	c	P		14	12		4										
E393736G	0+00	10+35	c	R		18	16		4					2	2	4	4		

STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES

Application No.: 30-092349

Name of Sale: Sackit Summit

Date: 4/17/2015

CULVERT & DRAINAGE LIST

Road Name	Station	CULVERT			LENGTH			RIPRAP			Ditch	Staked	Rolling Dip	Notes
		Diameter (in)	Gauge	Skew	Culvert (ft)	Downspout	Flume	Inlet C.Y.	Outlet C.Y.	Catchbasin				
E393735K	45+05	18	16		44			20		X				
														catchbasin will be lined with non-woven fabric
E393736E	5+45											X		rocked
	7+70											X		rocked
	11+80											X		rocked
	14+18											X		rocked
	16+60											X		rocked
2 additional		18	16		30									

STRUCTURE NOTES

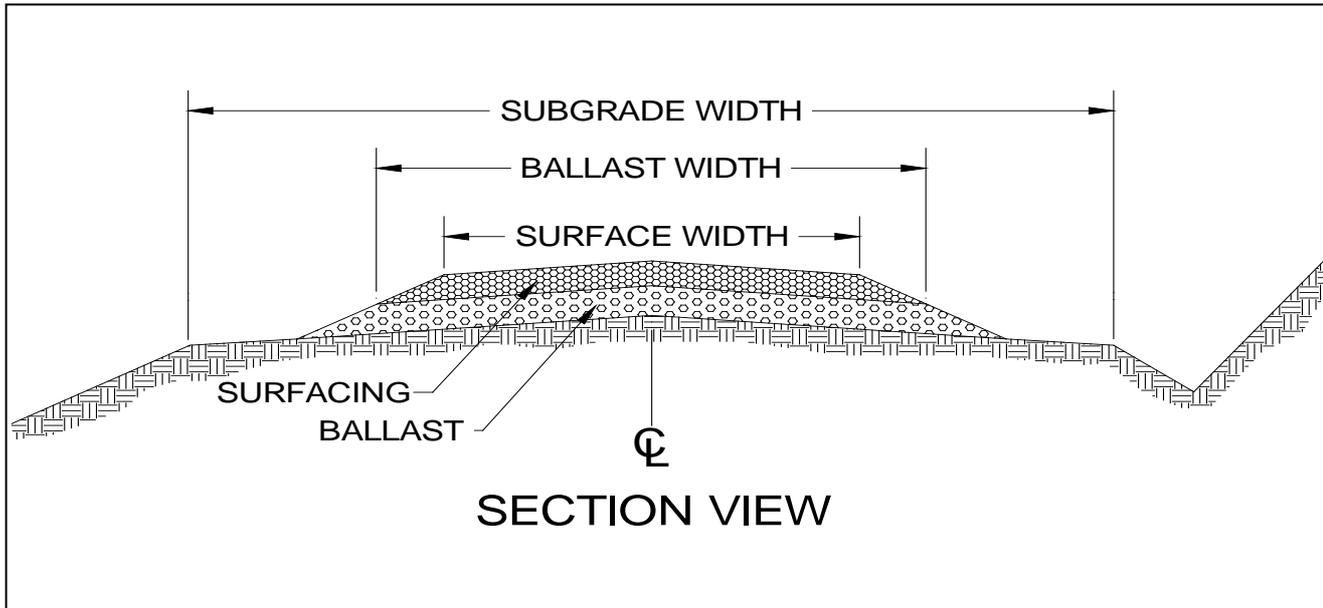
1. Install Headwall - See Detail D1
2. Install Catchbasin - See Detail D1
3. Armor Catchbasin - See Detail D1
4. Armor Ditch
5. Heavy Loose RipRap
6. Light Loose RipRap
7. Step Bevel Pipe Ends
8. Remove Existing Pipe
9. See Rolling Dip Detail D5
10. See Pipe Installation Detail D1
11. Install Energy dissipator - See D1
12. Install Ditchout
13. Reshape Rolling Dip

STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES

Application No.: 30-092349

Name of Sale: Sackit Summit

ROCK LIST



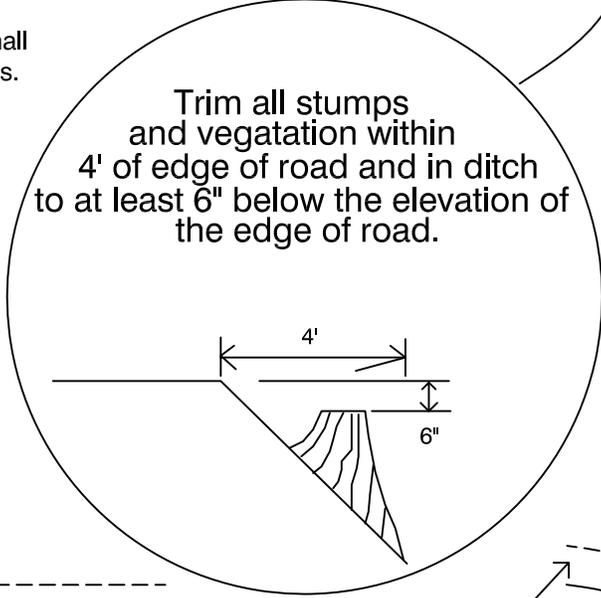
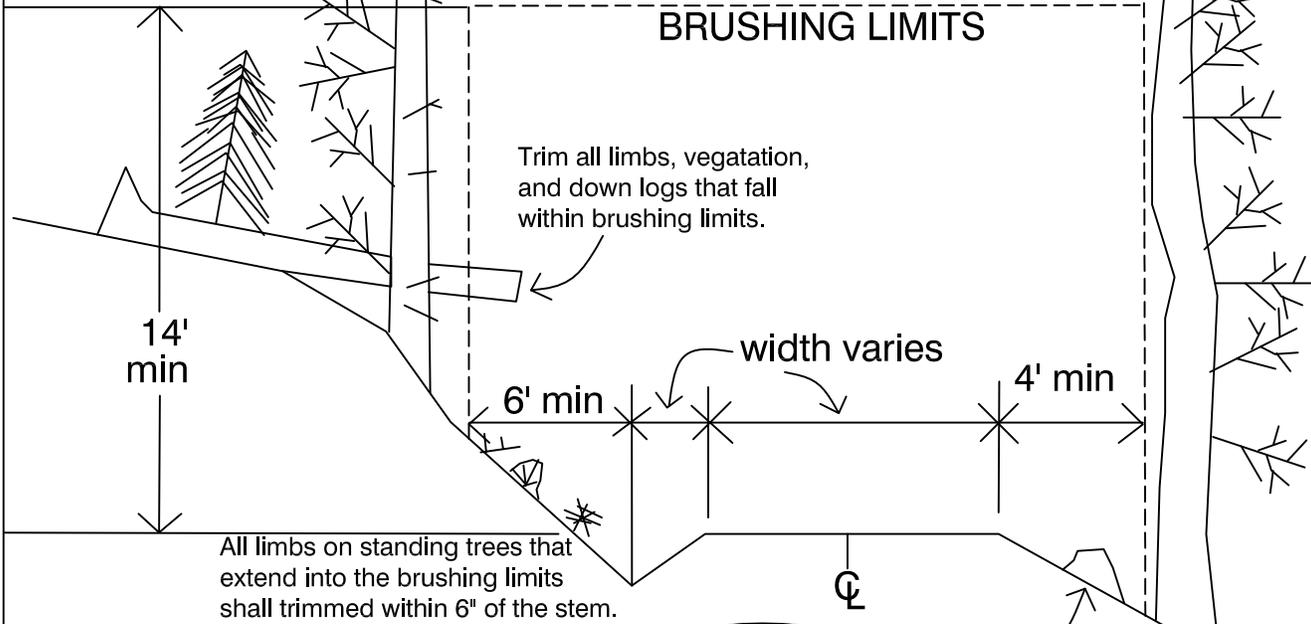
1. ROCK DEPTHS ARE DEFINED AS COMPACTED DEPTHS.
2. LOOSE YARD QUANTITIES ARE DEPENDANT ON SOURCE.
3. ROCK SLOPES SHALL BE 1.5(H) : 1(V).
4. ALL ROCK SOURCES ARE SUBJECT TO APPROVAL BY THE CONTRACT ADMINISTRATOR.
5. THE ROCK QUANTITIES SHOWN ASSUME AN EXPANSION FACTOR OF 25%

ROAD NAME	START STATION	END STATION	SUBGRADE WIDTH (ft)	BALLAST SOURCE	BALLAST WIDTH (ft)	BALLAST DEPTH (in)	BALLAST QUANTITY (cu.yd./sta)	SURFACE SOURCE	SURFACE WIDTH (ft)	SURFACE DEPTH (in)	SURFACE QUANTITY (cu.yd./sta)	FABRIC WIDTH (ft)
E393735K	18+90	19+20	14				0		12	12	63	
	24+20	24+50	14				0		12	12	63	
	32+55	32+85	14				0		12	12	63	
	36+70	37+00	14				0		12	12	63	
	39+70	40+00	14				0		12	12	63	
	43+40	43+70	14				0		12	12	63	
20 CY Rip Rap	45+05						0				0	
E393736E	5+35	5+65	14				0		12	12	63	
	7+60	7+90	14				0		12	12	63	
	11+70	12+00	14				0		12	12	63	
	14+10	14+40	14				0		12	12	63	
	16+50	16+80	14				0		12	12	63	
E393736F	5+45	5+95	14				0		12	12	63	
	6+50	7+00	14				0		12	12	63	
	10+35	10+85	14				0		12	12	63	
	72+35	72+85	14				0		12	12	63	
							0				0	
200 Cy additional rock to be placed as directed by the contract administrator							0				0	
							0				0	

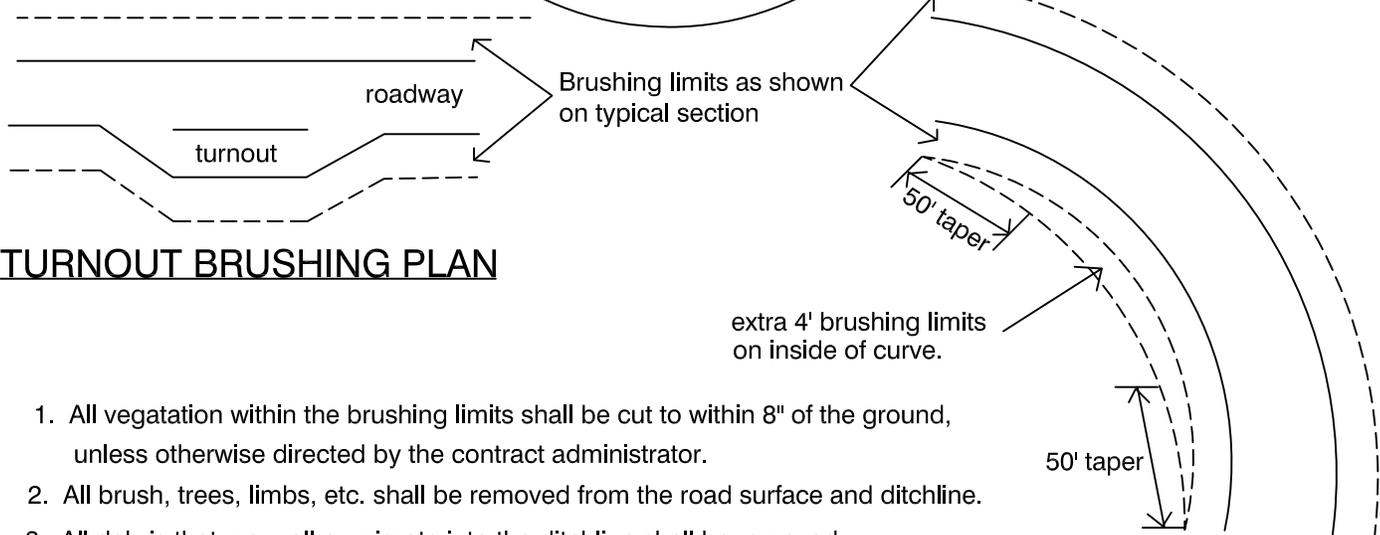
DATE: 4/17/2015

BRUSHING DETAIL - D2

TYPICAL BRUSHING LIMITS SECTION



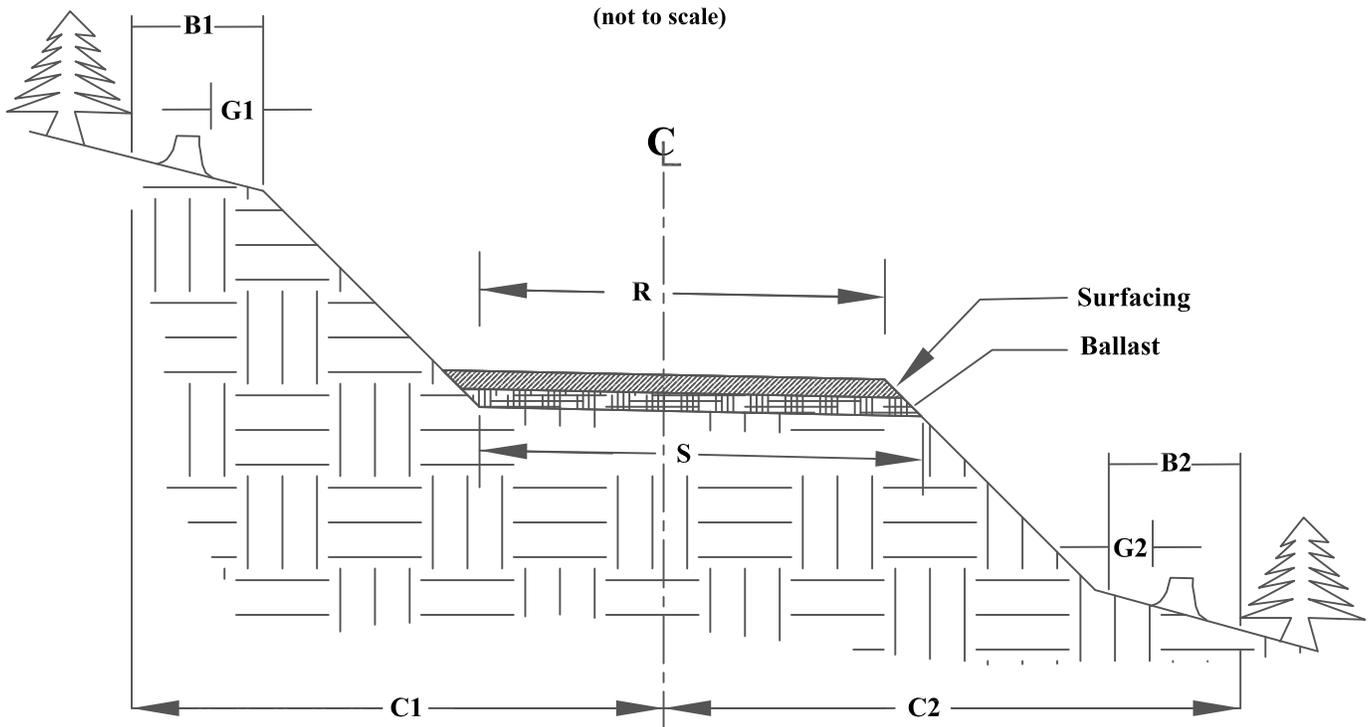
CURVE BRUSHING PLAN



TURNOUT BRUSHING PLAN

1. All vegetation within the brushing limits shall be cut to within 8" of the ground, unless otherwise directed by the contract administrator.
2. All brush, trees, limbs, etc. shall be removed from the road surface and ditchline.
3. All debris that may roll or migrate into the ditchline shall be removed.

OUTSLOPED ROAD CROSS-SECTION DETAIL D7

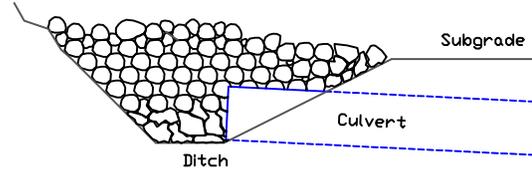
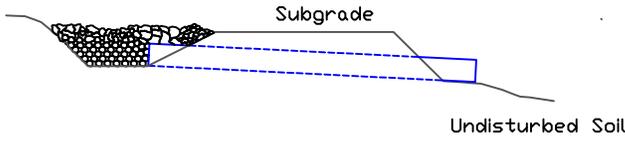


Drawn by: JBB 2/18/03

Revised: JE 12/20/2012

CULVERT AND DRAINAGE SPECIFICATIONS DETAIL - D1

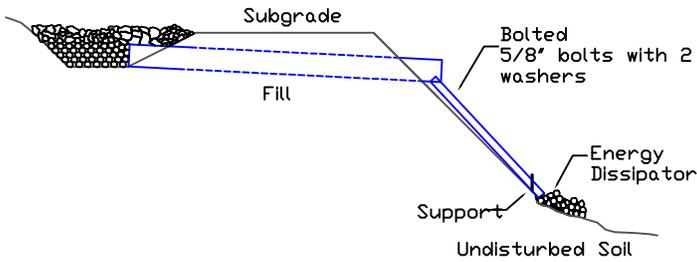
HEADWALLS



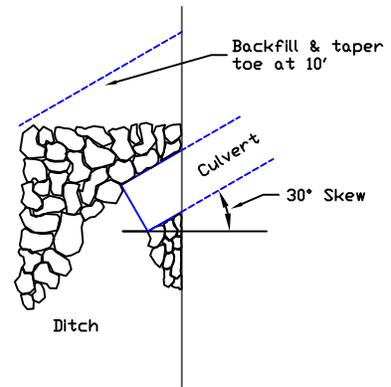
Headwall to be constructed of material that will resist erosion

FLUME

Use where ground conditions are uniform, providing for stability of flume.

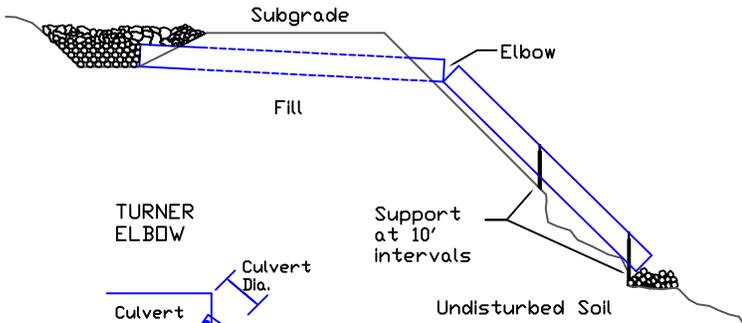


PLAN VIEW



DOWNSPOUT

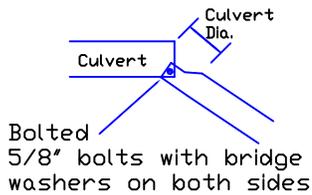
Use where ground conditions are irregular.



CULVERT BACKFILL & BASE PREPARATION (For Culverts Less Than 36")

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

TURNER ELBOW

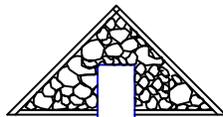


DISSIPATOR SPEC'S Size In Culvert Diameters

Area 2 X 2
Depth 1
Aggregate 1/3



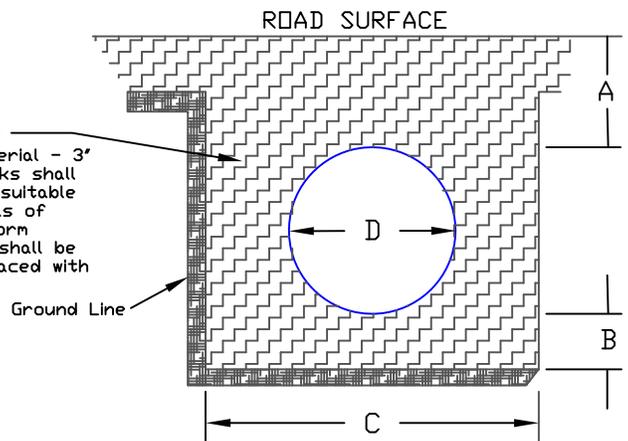
Level



Side Hill

BEDDING MATERIAL:

Use granular material - 3" minus. Large rocks shall be replaced with suitable material. Materials of poor or non-uniform bearing capacity shall be removed and replaced with suitable fill.



STANDARD 45° ROLLING DIP - D5

Note: Plan of dip shown is for an outsloped rolling dip. Dips may be either insloped or outsloped. When insloped, dips shall discharge into a culvert, drop inlet, overside drain, or drainage ditch. When outsloped, they shall discharge into an overside drain or on to natural ground.

The minum cross grade from "B" to "E" is 1% greater than the original road grade.

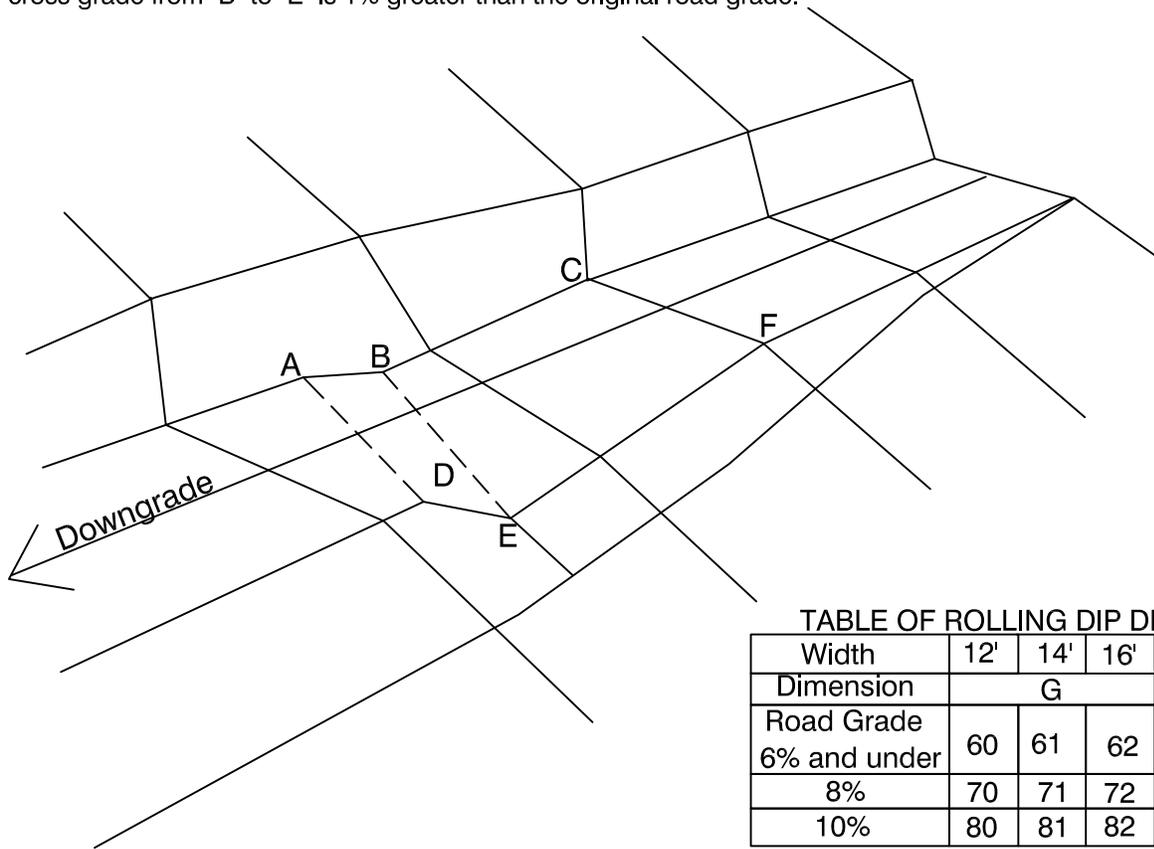
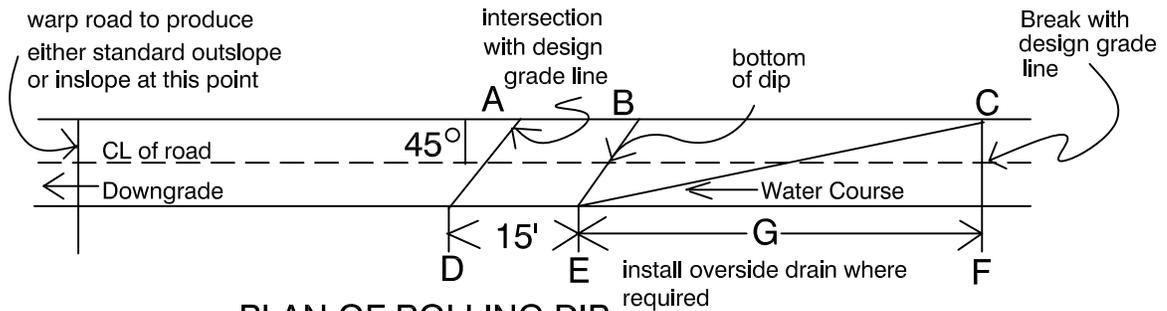
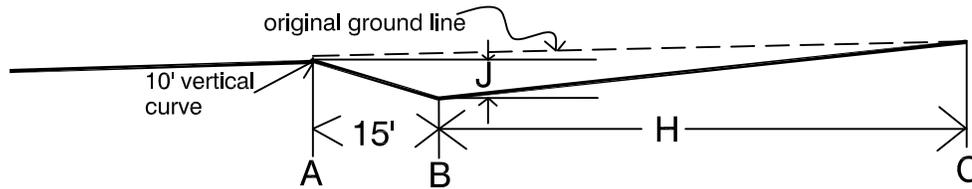


TABLE OF ROLLING DIP DEMENSIONS

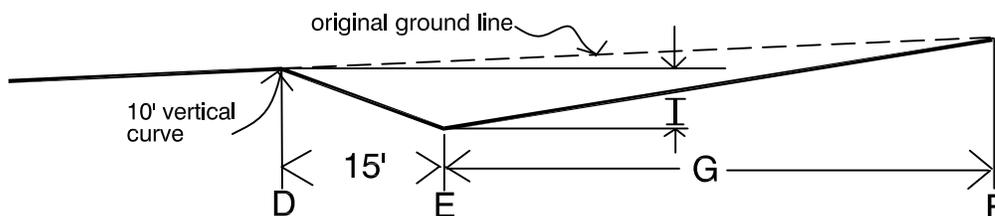
Width	12'	14'	16'	ALL		
Dimension	G			H	I	J
Road Grade 6% and under	60	61	62	52	.8	0.3
8%	70	71	72	62	1.0	0.2
10%	80	81	82	72	1.1	0.1



PLAN OF ROLLING DIP



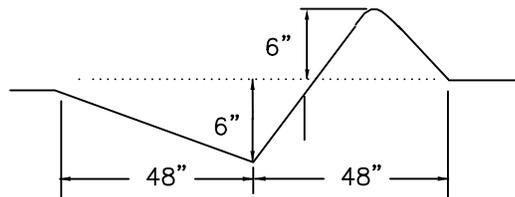
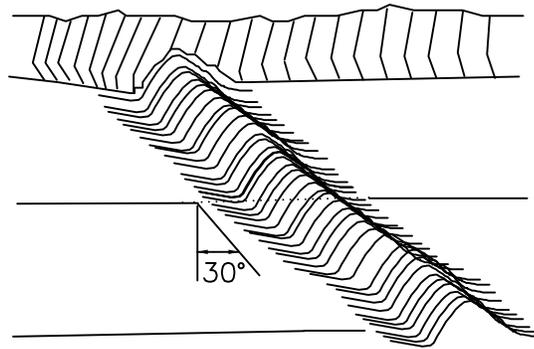
ROAD PROFILE ALONG A-B-C OF ROLLING DIP



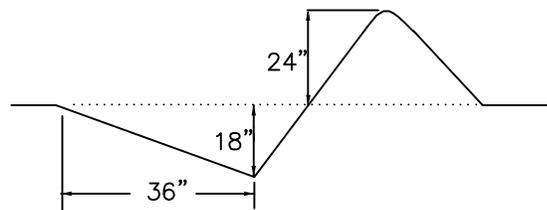
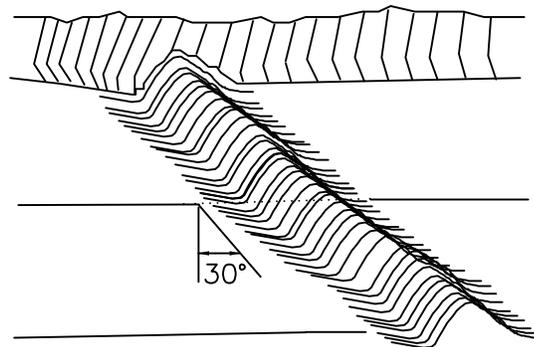
ROAD PROFILE ALONG D-E-F OF ROLLING DIP

WATERBAR DETAIL—D6

DRIVABLE WATERBAR



NON DRIVABLE WATERBAR

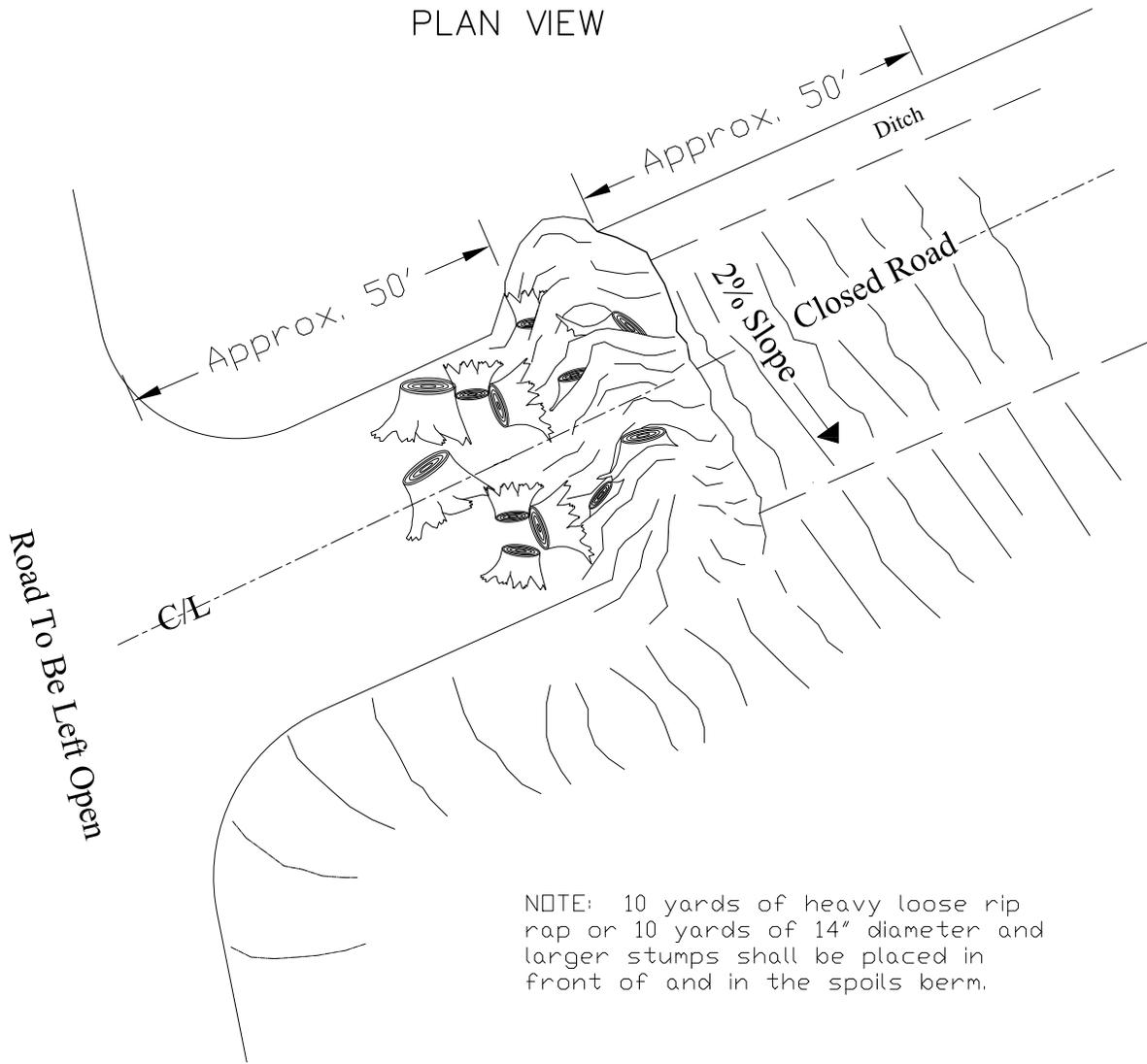


1. Waterbar construction for forest roads Specifications are average and may be adjusted to conditions.
2. Waterbar shall keyed into the bank.
3. The waterbar shall be outsloped for proper drainage.
4. Rock outlet if fill slope is present.

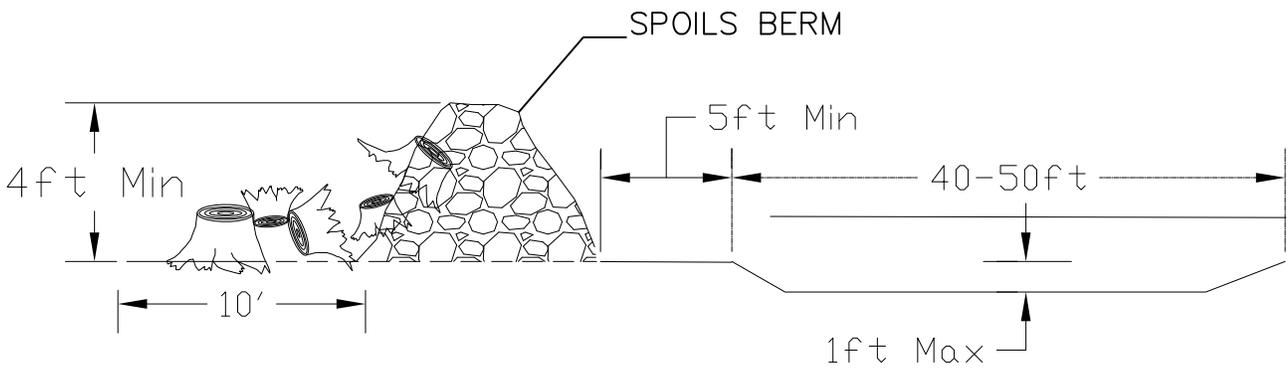
Revised: 05/21/2012

SPOILS BERM DETAIL-D8

PLAN VIEW



NOTE: 10 yards of heavy loose rip rap or 10 yards of 14" diameter and larger stumps shall be placed in front of and in the spoils berm.



Note: $\frac{1}{3}$ of stumps or rip rap shall be partially buried in the spoils berm and/or road surface.

Sale Name Sackit Summit SUMMARY - Road Development Costs

REGION: Northeast

CONTRACT #: 30-092349

ENGINEER: Gene Gibbs

DISTRICT: North Columbia

DATE:

4/20/2015

	<i>Construction</i>	<i>Reconstruction</i>	<i>Maintenance</i>	<i>Deactivation</i>	
ROAD NUMBERS:	E393725F E393725E	E393736G	E383703B, E393725E, E393735K, E393736E, E393736F		Additional Items
ROAD STANDARD:	<i>Construction</i>	<i>Reconstruction</i>	<i>Maintenance</i>	<i>Deactivation</i>	<i>Additional Items</i>
NUMBER OF STATIONS:	19.65	10.35	498.80		
CLEARING & GRUBBING:	\$688	\$362			
EXCAVATION AND FILL:	\$5,643	\$932			
MISC. MAINTENANCE:	\$128	\$467	\$14,596		
ROAD ROCK:			\$5,180		\$2,800
ADDITIONAL ROCK:					
CULVERTS AND FLUMES:			\$924		\$1,260
STRUCTURES/MATERIALS:					

TOTAL COSTS:	\$6,458	\$1,761	\$20,700	\$0	\$4,060
<i>COST PER STATION:</i>	\$329	\$170	\$42	\$0	\$0

	\$/per move	# of moves	Total
MOBILIZATION:	\$300	4	\$1,200

TOTAL (All Roads) = \$34,179
SALE VOLUME mbf = 4,592
TOTAL \$/MBF = \$7

Engineer's Notes: