

Washington DNR Timber Sales Program

Updated information is being provided for **Q VULCAN** timber sale documents as follows:

**Documents amended:**

<b>Brief Description</b>	<b>DATE</b>
H-0140 update: A temporary Type F stream crossing is required to access Unit 1, located on E403315E road at station 4+41. Installation and removal must take place between July 1 and September 30 in a single operating season. See road plan for details.	2/26/2024 RN





## TIMBER NOTICE OF SALE

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**CRUISE METHOD:** Acreage determined using GPS methods. Acreage shown above is net harvest acres in harvest units. Western redcedar: 8.0 - 17.5 inches dbh has a minimum top of 4.6 inch dib. All other species: 7.0 - 17.5 inches dbh has minimum top of 4.6 inch dib. All species 17.6 inches and greater dbh have a minimum top dib of 40% of dob at 16 feet or a 6 inch top whichever is greater.

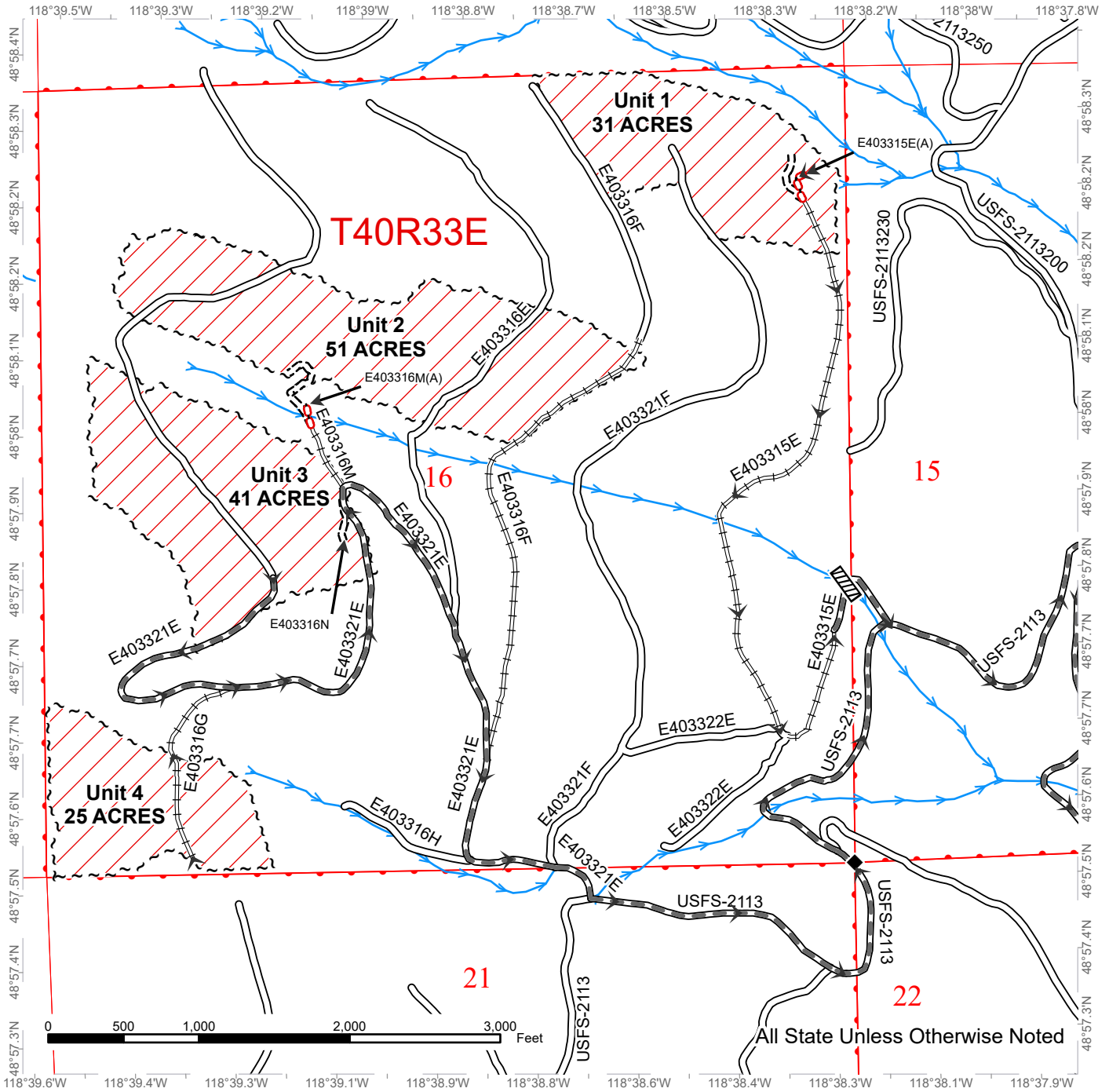
**FEES:** \$65,484.00 is due on day of sale. \$9.00 per MBF is due upon removal. These are in addition to the bid price.

**SPECIAL REMARKS:** Locked gate restricts access to the sale. Contact the Northeast Region Office at (509) 684-7474 for access. A temporary Type F stream crossing is required on E403315E road. Installation and removal must take place between July 1 and September 30 in a single operating season. See road plan for details.

# TIMBER SALE MAP

**SALE NAME:** Q VULCAN  
**AGREEMENT #:** 30-105823  
**TOWNSHIP(S):** T40R33E  
**TRUST(S):** Common School and Indemnity (3)

**REGION:** Northeast Region  
**COUNTY(S):** Ferry  
**ELEVATION RGE:** 2800-4880



All State Unless Otherwise Noted

Public Land Survey Townships	Existing Roads	Culvert - Temporary Type F Crossing
Public Land Survey Sections	Required Pre-Haul Maintenance	Survey Monument
DNR Managed Lands	Required Construction	Streams
Ground	Required Reconstruction	
Sale Boundary Tags	Required Abandonment	
Right of Way Tags = 1 acre	Haul Route	

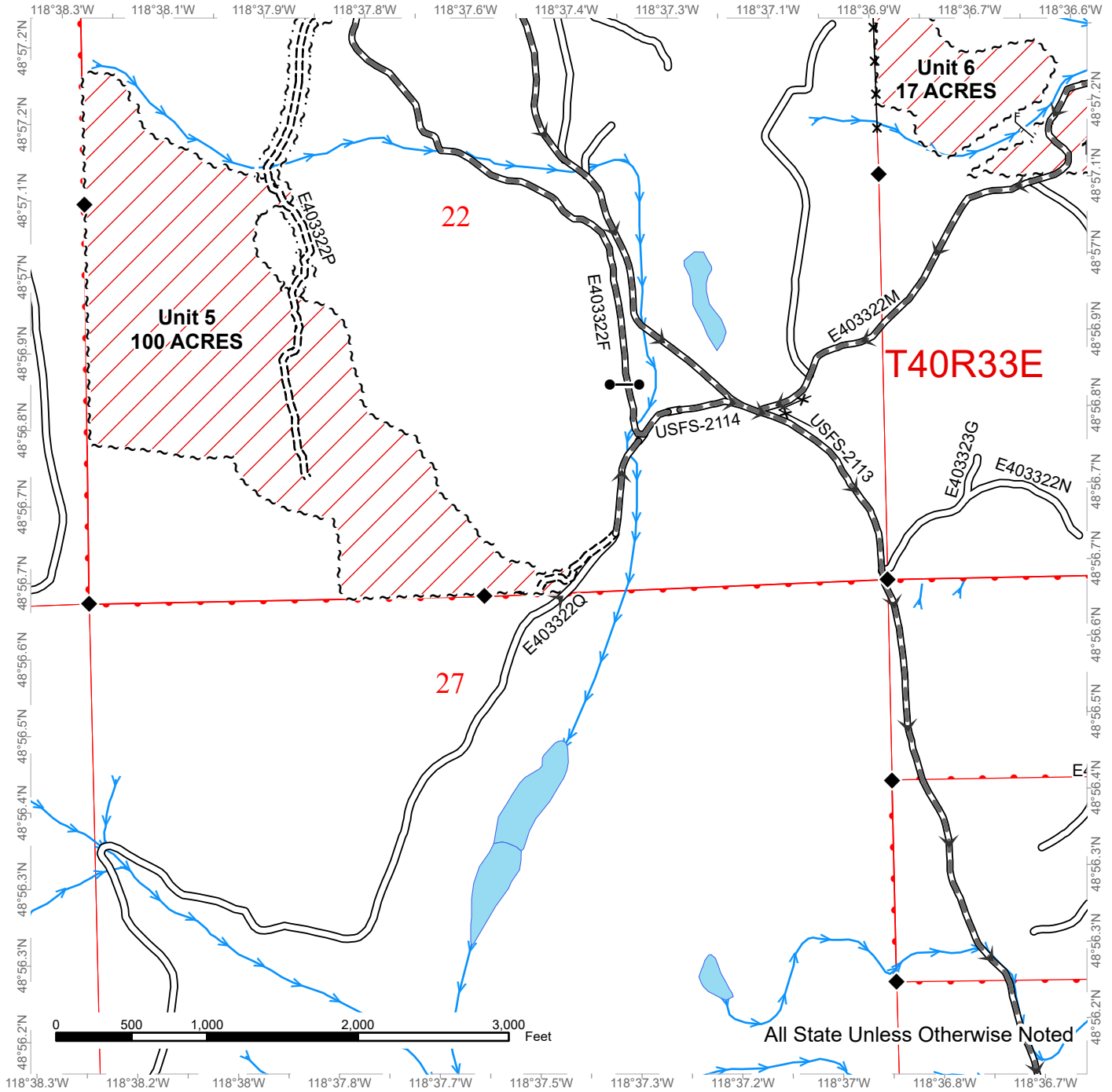




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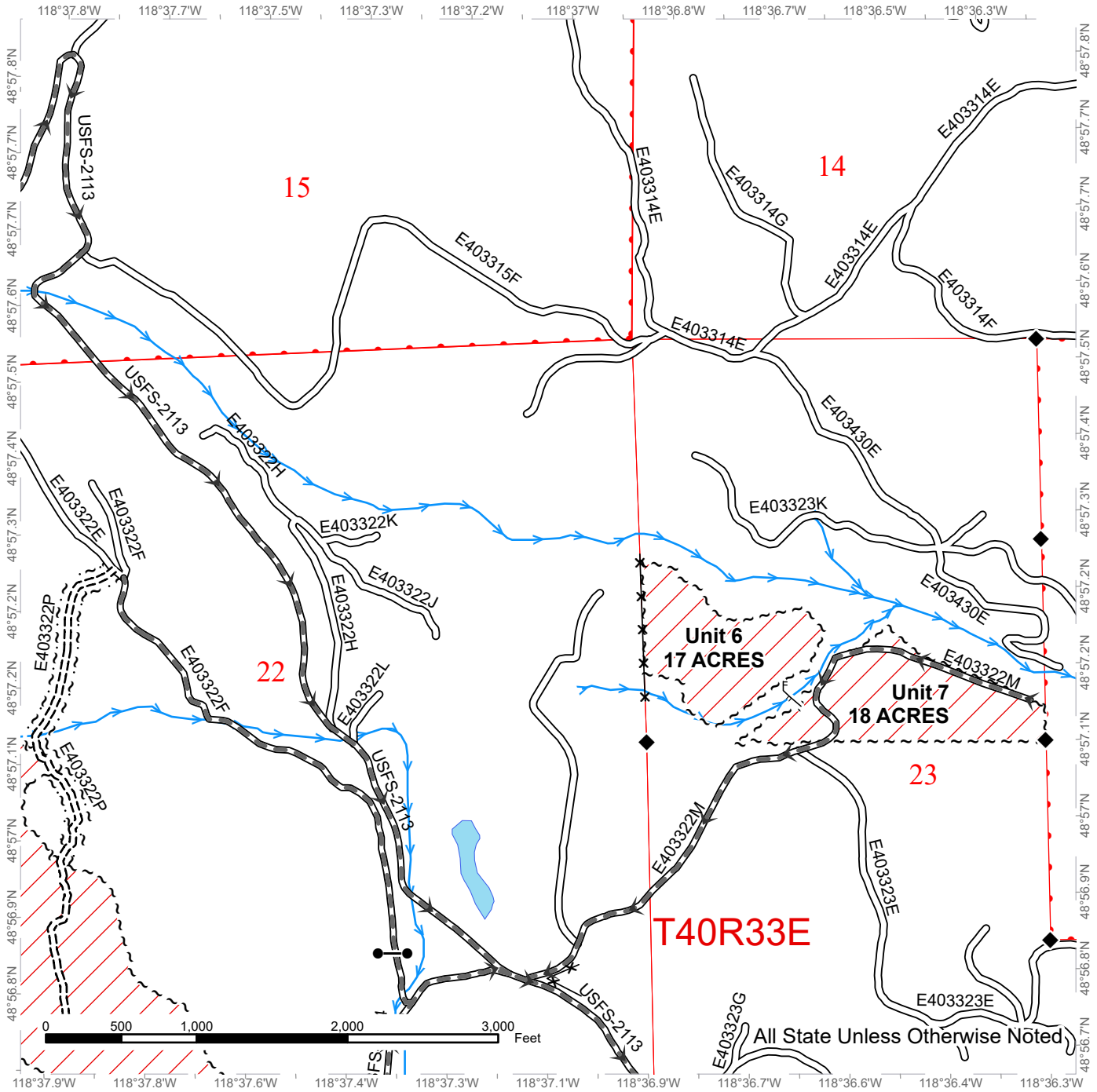
Public Land Survey Townships	Right of Way Tags = 1 acre	Haul Route
Public Land Survey Sections	Existing Roads	Gates
DNR Managed Lands	Required Pre-Haul Maintenance	Survey Monument
Ground	Required Construction	Fence
Sale Boundary Tags	Designated Skid Trail	Streams



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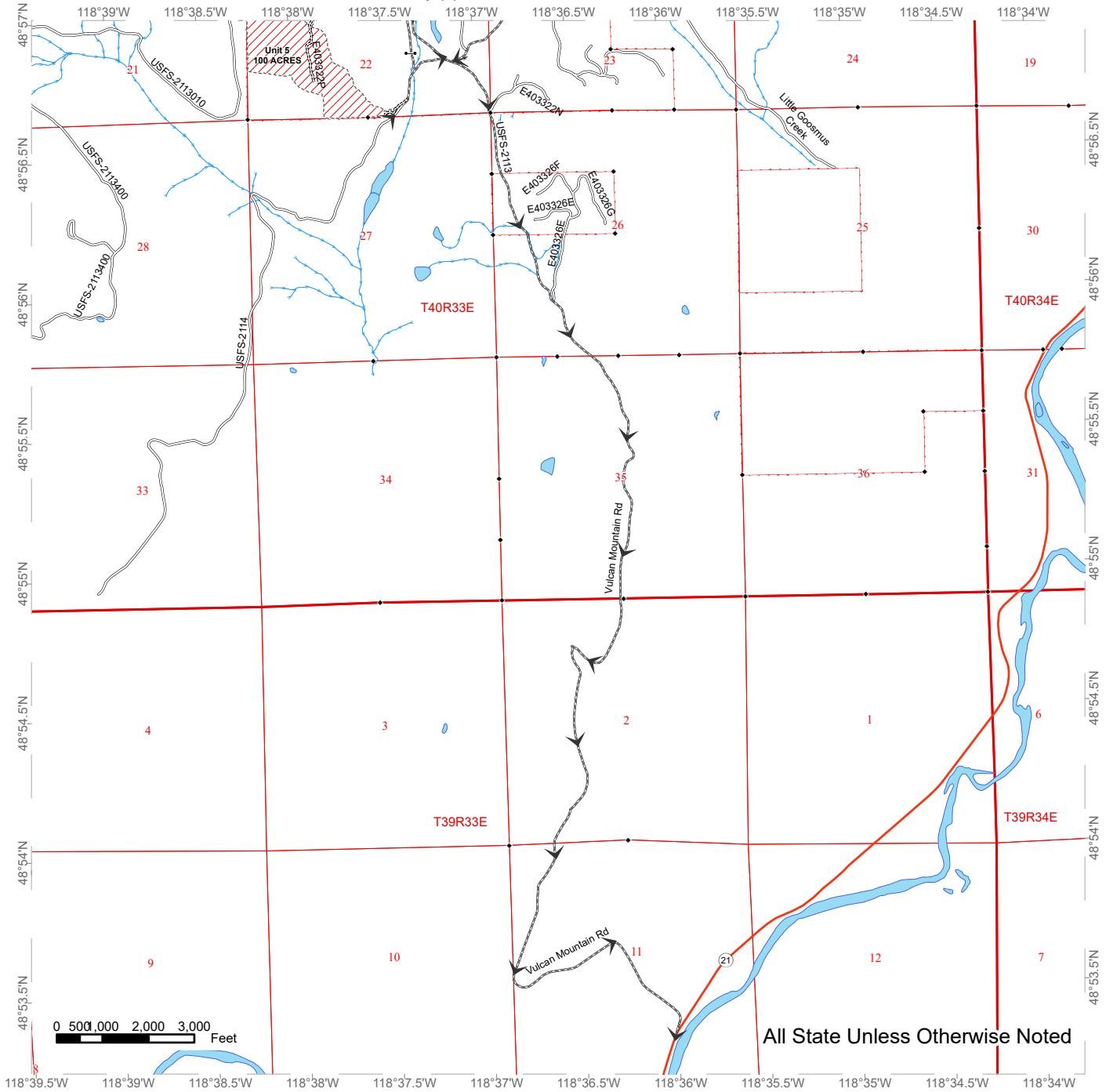
Public Land Survey Townships	Right of Way Tags = 1 acre	Haul Route
Public Land Survey Sections	Existing Roads	Gates
DNR Managed Lands	Required Pre-Haul Maintenance	Survey Monument
Ground	Required Construction	Fence
Sale Boundary Tags	Designated Skid Trail	Streams



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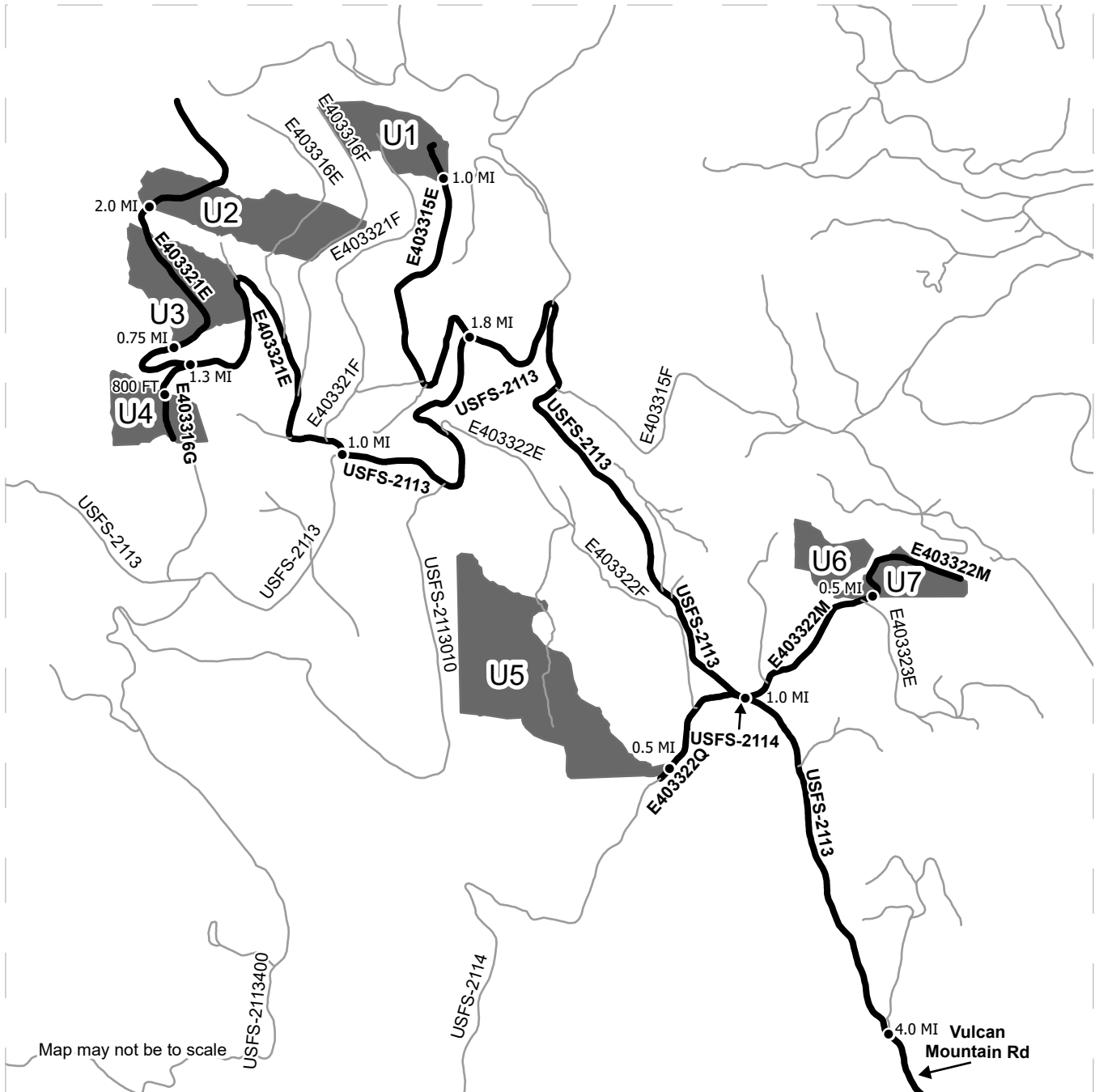
All State Unless Otherwise Noted

Public Land Survey Townships	Right of Way Tags = 1 acre	Gates
Public Land Survey Sections	Existing Roads	Survey Monument
DNR Managed Lands	Required Pre-Haul Maintenance	Fence
Ground	Required Construction	Highway
Sale Boundary Tags	Haul Route	Streams

# DRIVING MAP

**SALE NAME:** Q VULCAN  
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- Timber Sale Unit
- Haul Route
- Other Route
- Distance Indicator

**DRIVING DIRECTIONS:**

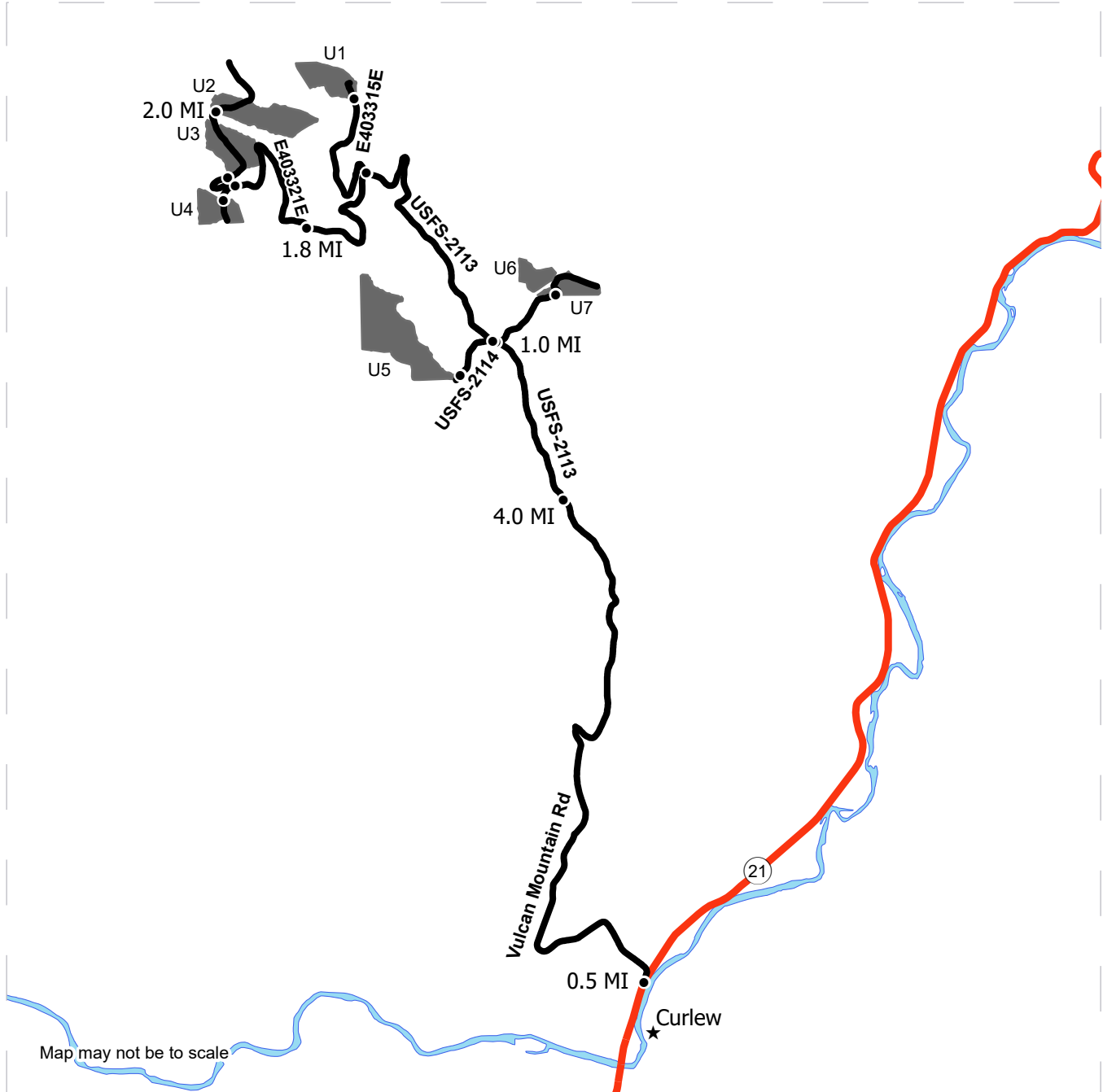
From Curlew head north on Highway 21 for about ½ a mile then turn left onto Vulcan Mountain Rd. Drive on Vulcan Mountain Rd for about 4 miles then it turns into USFS-2113. Continue on USFS-2113 for about 1 mile and turn right on E403322M. Take E403322M for about ½ mile and you have reached Unit 6 and 7. For Unit 5, on USFS-2113 take a left onto USFS-2214 and drive for less than ½ a mile and you have reached the southern tip of Unit 5. For all other units continue on USFS-2113. At about 1.8 miles, turn right onto E403315E, drive for about 1 mile and you have reached Unit 1. For units 2, 3 and 4 continue on USFS-2113 for about 1 mile then turn right onto E403321E. Drive for about ¾ of a mile you have reached Unit 3. For Unit 4 drive for about 1.3 miles on E403321E then turn left onto E403316G and drive for about 800 to reach the unit. For Unit 2 drive for about 2 miles on E403321E and you have reached the unit.



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**REGION:** Northeast Region  
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- Timber Sale Unit
- Haul Route
- Highway
- Distance Indicator
- ★ Town

**DRIVING DIRECTIONS:**

From Curlew head north on Highway 21 for about ½ a mile then turn left onto Vulcan Mountain Rd. Drive on Vulcan Mountain Rd for about 4 miles then it turns into USFS-2113. Continue on USFS-2113 for about 1 mile and turn right on E403322M. Take E403322M for about ½ mile and you have reached Unit 6 and 7. For Unit 5, on USFS-2113 take a left onto USFS-2214 and drive for less than ½ a mile and you have reached the southern tip of Unit 5. For all other units continue on USFS-2113. At about 1.8 miles, turn right onto E403315E, drive for about 1 mile and you have reached Unit 1. For units 2, 3 and 4 continue on USFS-2113 for about 1 mile then turn right onto E403321E. Drive for about ¾ of a mile you have reached Unit 3. For Unit 4 drive for about 1.3 miles on E403321E then turn left onto E403316G and drive for about 800 to reach the unit. For Unit 2 drive for about 2 miles on E403321E and you have reached the unit.



**STATE OF WASHINGTON  
DEPARTMENT OF NATURAL RESOURCES**

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

**Export Restricted Lump Sum AGREEMENT NO. 30-0105823**

**SALE NAME: Q VULCAN**

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

Section G: General Terms

G-001 Definitions

The following definitions apply throughout this contract;

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

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

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

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

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

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

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

G-011 Right to Remove Forest Products and Contract Area

Purchaser was the successful bidder on April 23, 2024 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 conifer species except for leave trees banded with blue paint, two standing snags per acre in Units 1, 2, 3, 4, 5, 6 and 7 bounded by white timber sale boundary tags; and all right of way timber bounded by orange right of way tags.

All forest products described above located on approximately 284 acres on part(s) of Sections 16, 22, and 23 all in Township 40 North, Range 33 East W.M. in Ferry County(s) as designated on the sale area and as shown on the attached timber sale map.

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

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

G-020 Inspection By Purchaser

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

## G-031 Contract Term

Purchaser shall complete all work required by this contract prior to November 30, 2026.

## 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 \$285.00 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-061 Inadvertent Discovery of Cultural Resources

Purchaser acknowledges that cultural resources as defined in WAC 222-16-010 may exist within the timber sale area and that the existence and location of such resources may be unknown at the time this contract is executed. Purchaser has a duty to exercise due care in its operations and in the event any human skeletal remains are discovered by the Purchaser or the State during the course of operations Purchaser shall immediately halt operations and notify local law enforcement in the most expeditious manner possible then notifying the Contract Administrator. In the event cultural resources are discovered by the Purchaser or the State during the course of operations Purchaser shall immediately halt operations and notify the Contract Administrator. Any potential resources shall not be removed or disturbed. Purchaser shall resume operations as directed in writing by the Contract Administrator.

G-064 Permits

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

G-065 Regulatory Disclaimer

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

G-066 Governmental Regulatory Actions

- a. Risk

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

b. Sale Area

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

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

c. Adjustment of Price

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

G-070 Limitation on Damage

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

G-080 Scope of State Advice

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

G-091 Sale Area Adjustment

The Parties may agree to adjustments in the sale area boundary. The cumulative changes to the sale area during the term of the contract shall not exceed more than four percent of the original sale area. If the sale area is increased, the added forest products become a part of this contract. The State shall determine the volume added and shall

calculate the increase to the total contract price using the rates set forth in clause G-101, G-102, or G-103. If the sale area is reduced, the State shall determine the volume to be reduced. The State shall calculate the reduction to the total contract price using the rates set forth in clause G-101, G-102, or G-103.

G-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 Northwest Log Rules Eastside, shall be determined by the Contract Administrator. Added forest products shall be paid for at the following contract payment rates per MBF Scribner log scale.

The pricing schedule has not been set for the sale.

G-106 Adding Naturally Damaged Forest Products

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

G-111 Title and Risk of Loss

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

G-116 Sustainable Forestry Initiative® (SFI®) Certification

Forest products purchased under this contract are certified as being in conformance with the Sustainable Forestry Initiative 2022 Forest Management Standard under certificate number: BVC-SFIFM-018227.

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 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.

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.

Road is defined as the road bed, including but not limited to its component parts, such as cut and fill slopes, 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.

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

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

#### G-140 Indemnity

To the fullest extent permitted by law, Purchaser shall indemnify, defend and hold harmless State, agencies of State and all officials, agents and employees of State, from and against all claims arising out of or resulting from the performance of the contract.

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

#### G-150 Insurance

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

#### G-160 Agents

The State's rights and duties will be exercised by the Region Manager at 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 address of record:

G-210 Violation of Contract

G-220 State Suspends Operations

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

G-210 Violation of Contract

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

**G-220 State Suspends Operations**

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; E403315E, E403315E(A), E403316F, E403316G, E403316M, E403316M(A), E403316N, E403321E, E403322F, E403322M, E403322P, E403322Q, USFS 2113, USFS 2114 and Vulcan Mountain. 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 450 pounds of grass seed to a location designated by the Contract Administrator. Seed provided shall meet the following specifications.

40% Mountain Brome, 30% Sherman Big Bluegrass, 30% Idaho Fescue  
Seed shall be certified weed free, premixed and delivered to Highlands Fire Camp 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 USFS 2113, USFS 2114 and Vulcan Mountain roads,  
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 2175 with USFS dated March 24, 1975

Easement 95829 with USFS dated May 16, 1986

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: Dugualla Bay LLC  
Disclosed by Application No.: 10-089633  
Granted: 6/1/2016  
Expires: 5/31/2026

Lease, including the terms and provisions thereof,  
For: Grazing  
In Favor of: Dugualla Bay Company LLC  
Disclosed by Application No.: 10-F59295  
Granted: 7/1/2019  
Expires: 6/30/2029

Easement, including the terms and provisions thereof,  
For: Road  
In Favor of: United States of America  
Disclosed by Application No.: 50-047891  
Granted: 3/7/1986  
Expires: Indefinite

Water Right, including the terms and provisions thereof,  
For: Spring  
In Favor of: Washington State Department of Natural Resources  
Disclosed by Application No.: 78-004761  
Granted: 6/18/1974  
Expires: Indefinite

Water Right, including the terms and provisions thereof,  
For: Stream  
In Favor of: Washington State Department of Natural Resources  
Disclosed by Application No.: 78-004762  
Granted: 6/18/1974  
Expires: Indefinite

Water Right, including the terms and provisions thereof,  
For: Stream  
In Favor of: Washington State Department of Natural Resources  
Disclosed by Application No.: 78-004763  
Granted: 6/18/1974  
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 \$100,152.00. The total contract price consists of a \$0.00 contract bid price plus \$100,152.00 in fees. Fees collected shall be retained by the state unless the contract is adjusted via the G-066 clause. Purchaser shall be liable for the entire purchase price, and will not be entitled to any refunds or offsets unless expressly stated in this contract.

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

## P-045 Guarantee of Payment

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

## P-050 Billing Procedure

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

## P-080 Payment Account Refund

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

## P-090 Performance Security

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

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

P-100 Performance Security Reduction

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

Section H: Harvesting Operations

H-001 Operations Outside the Sale Boundaries

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

H-010 Cutting and Yarding Schedule

Felling and Yarding will not be permitted from March 15 to June 1 in all units unless authorized in writing by the Contract Administrator.

H-011 Certification of Fallers and Yarder Operators

All persons engaged in the felling and yarding of timber must receive certification in writing from the Contract Administrator. Certification may be revoked when the Contract Administrator determines that non-compliance of leave tree selection criteria or cut tree selection criteria is occurring, or excessive damage to leave trees or skid trails is occurring.

Excessive damage for leave trees is defined in clause H-012.  
Excessive damage for reserve trees is defined in clause H-013.

Excessive skid trail damage is defined in clause H-015 or H-016.

When leave tree damage exceeds the limits set forth in clause H-012,  
Purchaser shall be subject to liquidated damages (clause D-040)  
When reserve tree damage exceeds the limits set forth in clause H-013,  
Purchaser shall be subject to liquidated damages (clause D-041).

**H-013 Reserve Tree Damage Definition**

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

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

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

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

Removal of designated reserve trees from the sale area is unauthorized, and may invoke the use of the G-230 '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 16 feet in width, including rub trees.
- b. Skid trails shall not cover more than 20 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-018 Temporary Stream Crossings

A temporary stream crossing is required to access Unit 6.

Purchaser shall comply with the following during the yarding operation:

- a. Adhere to the approved Hydraulic Permit Application (HPA) or Forest Practice Application (FPA) with approved hydraulic project work, if required, amend a current FPA or obtain a new FPA prior to commencing any new stream crossing construction.
- b. Location of the temporary stream crossing must be approved by the Contract Administrator.
- c. A temporary stream crossing shall not exceed 30 feet in width, including rub trees.
- d. Purchaser shall suspend operations during periods of wet weather when a high potential for sediment delivery into typed waters may occur.
- e. Temporary stream crossings shall be removed at the time of completion of yarding as 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-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-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 harvested and removed using D6 equivalent or smaller ground skidding equipment and ground based harvesting equipment. Authority to use other equipment or to operate outside the equipment specifications detailed above must be approved in writing by the State.

H-130 Hauling Schedule

The hauling of forest products will not be permitted from March 15 to June 1 unless authorized in writing by the Contract Administrator.

H-140 Special Harvest Requirements

Purchaser shall accomplish the following during the harvest operations:

- a. Hand felling of trees and retrieval with bull line and chokers may be required in isolated areas of units.
- b. Road salts shall not be applied to roads for dust abatement or removing of ice from road surfaces.
- c. All slash shall piled at landings or hauled back into the unit for erosion control where designated by the Contract Administrator.

- d. Slash that is piled at landings shall be separated from the road prism at completion of harvest.
- e. Appropriate warning signs shall be posted at locations designated by the Contract Administrator.
- f. If snow plowing occurs, snow berms shall be removed at locations designated by the Contract Administrator to allow surface water to drain from roads.
- g. No operations associated with timber harvest, hauling or road work will be permitted within 1/2 mile of an active American goshawk nest from March 1 to August 1 or later if young are still on the nest.
- h. If the standing dead trees are removed, Purchaser shall leave two standing snags per acre from the larger diameter classes when safe to do so.
- i. A temporary Type F stream crossing is required to access Unit 1, located on E403315E road at station 4+41.  
Installation and removal must take place between July 1 and September 30 in a single operating season.  
See road plan for details.

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-210 Log Length Hauling Restrictions

The maximum log length hauled from the sale area shall not exceed 45 feet unless otherwise approved in writing by the Contract Administrator.

#### H-220 Protection of Residual or Adjacent Trees

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

#### H-230 Tops and Limbs Outside the Sale Boundary

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

#### H-250 Additional Falling Requirements

Within all units, all non-merchantable live stems greater than 2 inches in diameter or 3 feet in height not banded with blue paint excluding ponderosa pine, 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 within all units 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 9/25/2023 are hereby made a part of this contract.

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

Purchaser shall perform work at their own expense on E403315E, E403315E(A), E403316F, E403316G, E403316M, E403316M(A), E403316N, E403321E, E403322F, E403322M, E403322P, E403322Q, USFS 2113, USFS 2114 and Vulcan Mountain 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-130 Dust Abatement**

Purchaser shall abate dust on the E403315E, E403316F, E403316G, E403316M, E403316N, E403321E, E403322F, E403322M, E403322P, E403322Q, USFS 2113, USFS 2114 and Vulcan Mountain roads used for hauling from June 1 to November 1.

**C-140 Water Bars**

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

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

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

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

**S-010 Fire Hazardous Conditions**

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

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

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

S-030 Landing Debris Clean Up

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

S-035 Logging Debris Clean Up

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

S-040 Noxious Weed Control

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

S-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-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 or other releases of hazardous material/waste during operations conducted under this contract.

b. Hazardous Materials Spill Prevention

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

c. Hazardous Materials Spill Containment, Control and Cleanup

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

d. Hazardous Material Release Reporting

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

- Department of Emergency Management at 1-800-258-5990
- National Response Center at 1-800-424-8802
- Appropriate Department of Ecology (ECY) at 1-800-645-7911
- DNR Contract Administrator

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 all the units.

SIGNATURES

This agreement may be executed in any number of counterparts (including by electronic mail in portable document format (.pdf), or by facsimile) each of which shall be deemed an original but all of which, when taken together, shall constitute one and the same Agreement binding on all parties.

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

STATE OF WASHINGTON  
DEPARTMENT OF NATURAL RESOURCES

\_\_\_\_\_  
Purchaser

\_\_\_\_\_  
Patrick Ryan  
Northeast Region Manager

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

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

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

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



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

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

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

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

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

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

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

\_\_\_\_\_

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



## WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES

### FOREST EXCISE TAX ROAD SUMMARY SHEET

Region: Northeast

Timber Sale Name: Q VULCAN

Application Number: 30- 105823

#### EXCISE TAX APPLICABLE ACTIVITIES

**Construction:** 5,660 linear feet  
*Road to be constructed (optional and required) but not abandoned*

**Reconstruction:** 9,635 linear feet  
*Road to be reconstructed (optional and required) but not abandoned*

**Abandonment:** 425 linear feet  
*Abandonment of existing roads not reconstructed under the contract*

**Decommission:** 14,503 linear feet  
*Road to be made undriveable but not officially abandoned.*

**Pre-Haul Maintenance:** 41,352 linear feet  
*Existing road to receive maintenance work (optional and required) prior to haul*

#### EXCISE TAX EXEMPT ACTIVITIES

**Temporary Construction:** 0 linear feet  
*Roads to be constructed (optional and required) and then abandoned*

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

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

(Revised 9/18)

## PRE-CRUISE NARRATIVE

Sale Name: <b>Q Vulcan</b>	Region: <b>Northeast</b>
Agreement #: <b>105823</b>	District: <b>Highlands</b>
Contact Forester: <b>Chelsea Schaefer</b> Phone / Location: <b>5096400550</b>	County(s): <b>Choose a county, Ferry</b>
Alternate Contact: <b>Matt Smith</b> Phone / Location: <b>5099957698</b>	Other information: <a href="#">Click here to enter text.</a>

Type of Sale: <b>Lump Sum</b>	
Harvest System: <b>Ground based</b> <a href="#">Click here to enter text.</a>	100%
Harvest System: <b>Select harvest system</b> <a href="#">Click here to enter text.</a>	<a href="#">Click here to enter percent sale acres.</a>
Enter % of sale acres	
Harvest System: <b>Select harvest system</b> <a href="#">Click here to enter text.</a>	<a href="#">Click here to enter percent sale acres.</a>

### UNIT ACREAGES AND METHOD OF DETERMINATION:

Unit # Harvest R/W or RMZ WMZ	Legal Description (Enter only one legal for each unit) Sec/Twp/Rng	Grant or Trust	Gross Proposal Acres	Deductions from Gross Acres (No harvest acres)				Net Harvest Acres	Acreage Determination  (List method and error of closure if applicable)
				RMZ/ WMZ Acres	Leave Tree Acres	Existing Road Acres	Other Acres (describe)		
1	T40N R33E S16		33			1.5		31.5	GPS (Garmin)
2	T40N R33E S16		54.6			3.7		50.9	GPS (Garmin)
3	T40N R33E S16		45			3.9		41.1	GPS (Garmin)
4	T40N R33E S16		26			1.0		25	GPS (Garmin)
5	T40N R33E S22		99.8					99.8	GPS (Garmin)
6	T40N R33E S23		16.6					16.6	GPS (Garmin)
7	T40N R33E S23		19.6			2.1		17.5	GPS (Garmin)
ROW	T40N R33E S22, S16		2.7					2.7	
<b>TOTAL ACRES</b>			<b>297.3</b>			<b>12.2</b>		<b>285.1</b>	

### HARVEST PLAN AND SPECIAL CONDITIONS:

Unit #	Harvest Prescription: (Leave, take, paint color, tags, flagging etc.)	Special Management areas:	Other conditions (# leave trees, etc.)
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1	Boundaries marked with white "Timber Sale Boundary" tags, orange flashers, and pink flagging. Leave trees painted in blue; remove all trees unmarked while leaving 2 of the largest snags per acre.		Minimum 6 trees per acre
2	Boundaries marked with white "Timber Sale Boundary" tags, orange flashers, and pink flagging. Leave trees painted in blue; remove all trees unmarked while leaving 2 of the largest snags per acre.		Minimum 6 trees per acre
3	Boundaries marked with white "Timber Sale Boundary" tags, orange flashers, and pink flagging. Leave trees painted in blue; remove all trees unmarked while leaving 2 of the largest snags per acre.		Minimum 6 trees per acre
4	Boundaries marked with white "Timber Sale Boundary" tags, orange flashers, and pink flagging. Leave trees painted in blue; remove all trees unmarked while leaving 2 of the largest snags per acre.		Minimum 6 trees per acre
5	Boundaries marked with white "Timber Sale Boundary" tags, orange flashers, and pink flagging. Leave trees painted in blue; remove all trees unmarked while leaving 2 of the largest snags per acre.		Minimum 6 trees per acre
6	Boundaries marked with white "Timber Sale Boundary" tags, orange flashers, and pink flagging. Leave trees painted in blue; remove all trees unmarked while leaving 2 of the largest snags per acre.		Minimum 6 trees per acre
7	Boundaries marked with white "Timber Sale Boundary" tags, orange flashers, and pink flagging. Leave trees painted in blue; remove all trees unmarked while leaving 2 of the largest snags per acre.		Minimum 6 trees per acre

**OTHER PRE-CRUISE INFORMATION:**

Unit #	Primary,secondary Species / Estimated Volume (MBF)	Access information (Gates, locks, etc.)	Photos, traverse maps required
1	DF/AF-291 MBF	Accessed from E403321E off Vulcan Mountain Road (turns into USFS-2113). Drive 400 feet and turn right on E403321F. Drive 1.2 miles to access middle of the unit.	Region provided maps
2	DF/WL-593 MBF	Accessed from E403321E off Vulcan Mountain Road (turns into USFS-2113). Drive 2 miles to top of unit.	Region provided maps
3	DF/WL-622 MBF	Accessed from E403321E off Vulcan Mountain Road (turns into USFS-2113). Drive 1.5 miles to access the unit.	Region provided maps
4	ES/AF- 307 MBF	Accessed from E403321E off Vulcan Mountain Road (turns into USFS-2113). Drive 1.1 miles and turn right on E403316G. Drive for 850 feet to access the unit.	Region provided maps

5	DF/WL-1296 MBF	Access from E403322F off USFS-2114. Use DNR master key for gate. Hike west to reach unit. The southern end of the unit is accessible from USFS-2114.	Region provided maps
6	DF/WL- 230 MBF	Access from E403322M off Vulcan Mountain Road (turns into USFS-2113). Drive for ½ a mile then hike into unit.	Region provided maps
7	DF/WL- 483	Access from E40322M off Vulcan Mountain Road (turns into USFS-2113). Drive for ½ a mile.	Region provided maps
TOTAL MBF	3,862 MBF		

**REMARKS:**

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<b>Prepared By:</b> Chelsea Schaefer <b>Date:</b> 08/28/2023	<b>Title:</b> Forester	<b>CC:</b>
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## Timber Sale Cruise Report Vulcan

**Sale Name:** Q VULCAN

**Sale Type:** LUMP SUM

**Region:** NORTHEAST

**District:** HIGHLANDS

**Lead Cruiser:** Jake Culp

**Other Cruisers:** Hailey Howard

**Cruise Narrative:**

Location:

Legal – Sections 16, 22, and 23 of T40N R33E WM.

General – Approx. 5 miles NW of Curlew, WA in Ferry County.

Access – All units are accessed from Vulcan Mountain Rd.

Cruise Design:

-This sale was cruised using variable radius plots, utilizing the cruise-count method. Plot locations found using a Garmin handheld GPS unit. The walk-through method was used on plots near boundaries.

-Minor species cruise intensity: We grade the first tree of all minor species encountered; then follow the set cruise design.

-Min. DBH: 8" DBH for PP and RC, 7" DBH for all other species

-Log Length and grades: 32' logs where possible, minimum of 12' lengths. Trees are graded using Eastside Scaling Rules.

-Top DIB: Trees less than 17.5" DBH have a minimum top of 4.6" DIB for all species; Trees 17.6" and greater DBH have a minimum top DOB of 40% of DOB at 16' or a 6" top, whichever is greater.

Take/Leave Prescription:

Cut all trees not marked with blue paint. Leave all hardwoods.

Cruise Acres determination:

Net harvest unit acreages are used for cruise acreages.

Stand composition:

The stands are second growth, even aged Douglas-fir, Engelmann spruce, and western larch with minor components of subalpine fir, western red cedar, and lodgepole pine. Stands are generally well stocked with consistent stocking. U5 has the most inconsistent stocking of all the units. Large residuals and Legacy trees found throughout the sale.

Timber quality:

Timber to be harvested is comprised of domestic quality Douglas fir (61%), Engelmann spruce (17%), western larch (17%), subalpine fir (3%), western red cedar (1%), and lodgepole pine (1%).

Stand health/defect:

Defect is generally low throughout the sale. Most comes in the form of physical damage (forks, sweep, and crooks). Some small root rot pockets were observed throughout the sale. Dwarf mistletoe can be found in much of the western larch and Douglas-fir. Small amounts of pini rot was seen in western larch.

Aspect:

East, Southeast, Northeast

Elevation:

2800'-4900'

## Harvesting methods:

100% ground based

## Slope:

Unit 1- Max 30%, Avg. 10%

Unit 2- Max 45%, Avg. 18%

Unit 3- Max 40 %, Avg. 18%

Unit 4- Max 20%, Avg. 6%

Unit 5- Max 40%, Avg. 10%

Unit 6- Max 20%, Avg. 6%

Unit 7- Max 40%, Avg. 14%

## Other considerations/remarks:

Units are generally mellow with minimal brush making for good operator ground.

Trust: This sale is 100% Trust #3.

**Timber Sale Notice Volume (MBF)**

Sp	DBH	Rings/In	Age	MBF Volume by Grade			
				All	2 Saw	3 Saw	4 Saw
DF	14.2			2,358	502	1,460	395
ES	12.3			674	71	434	169
WL	12.7			644	21	462	162
AF	12.1			97	9	61	27
RC	19.2			46		44	2
LP	11.6			32		20	12
ALL	13.4			3,852	603	2,481	768

**Timber Sale Notice Weight (tons)**

Sp	Tons by Grade			
	All	2 Saw	3 Saw	4 Saw
DF	16,784	2,935	10,949	2,900
ES	4,597	370	2,883	1,344
WL	4,567	131	3,372	1,063
AF	669	46	413	210
RC	289		274	15
LP	221		138	83
ALL	27,127	3,483	18,028	5,616

**Timber Sale Overall Cruise Statistics**

BA (sq ft/acre)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR SE (%)	Net Vol (bf/acre)	Vol SE (%)
116.8	2.8	114.9	2.1	13,570	3.6

**Timber Sale Unit Cruise Design**

Unit	Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
Q VULCAN U1	B1C: VR, 1 BAF (25.15) Measure/ Count Plots, Sighting Ht = 4.5 ft	31.5	33.0	27	9	0
Q VULCAN U2	B1C: VR, 1 BAF (25.15) Measure/ Count Plots, Sighting Ht = 4.5 ft	50.9	54.6	40	10	0
Q VULCAN U3	B1C: VR, 1 BAF (25.15) Measure/ Count Plots, Sighting Ht = 4.5 ft	41.1	45.0	45	12	1
Q VULCAN U4	B1C: VR, 1 BAF (25.15) Measure/ Count Plots, Sighting Ht = 4.5 ft	25.0	26.0	26	9	1
Q VULCAN U5	B1C: VR, 1 BAF (25.15) Measure/ Count Plots, Sighting Ht = 4.5 ft	99.8	99.8	60	14	1
Q VULCAN U6	B1C: VR, 1 BAF (33.61) Measure/ Count Plots, Sighting Ht = 4.5 ft	16.6	16.6	18	10	0
Q VULCANU7	B1C: VR, 1 BAF (25.15) Measure/ Count Plots, Sighting Ht = 4.5 ft	17.5	19.6	17	9	0
Q VULCAN ROW	B1: VR, 1 BAF (25.15) Measure All, Sighting Ht = 4.5 ft	1.5	1.5	6	6	3
All		283.9	296.2	239	79	6

**Timber Sale Log Grade x Sort Summary**

Sp	Status	Grade	Sort	Dia	Len	BF Gross	BF Net	Defect %	Tons	MBF Net
AF	LIVE	2 SAW	Domestic	14.6	32	33	33	0.0	45.8	9.4
AF	LIVE	3 SAW	Domestic	8.4	32	221	216	2.2	413.2	61.2
AF	LIVE	4 SAW	Domestic	5.1	21	94	94	0.0	209.9	26.7
DF	LIVE	2 SAW	Domestic	13.5	32	1,795	1,769	1.4	2,934.9	502.2
DF	LIVE	3 SAW	Domestic	8.0	32	5,186	5,145	0.8	10,948.7	1,460.4
DF	LIVE	4 SAW	Domestic	5.2	23	1,397	1,393	0.3	2,899.9	395.3
ES	LIVE	2 SAW	Domestic	12.1	32	249	249	0.0	370.3	70.7
ES	LIVE	3 SAW	Domestic	8.0	32	1,536	1,528	0.5	2,882.5	433.8
ES	LIVE	4 SAW	Domestic	5.1	24	610	597	2.2	1,344.4	169.5
LP	LIVE	3 SAW	Domestic	8.0	32	69	69	0.0	138.0	19.5
LP	LIVE	4 SAW	Domestic	5.2	26	43	43	0.0	83.2	12.3
RC	LIVE	3 SAW	Domestic	9.9	32	156	156	0.0	273.8	44.3



Sp	Status	Grade	Sort	Dia	Len	BF Gross	BF Net	Defect %	Tons	MBF Net
RC	LIVE	4 SAW	Domestic	6.1	18	8	8	0.0	15.4	2.2
WL	LIVE	2 SAW	Domestic	12.1	32	72	72	0.0	131.4	20.5
WL	LIVE	3 SAW	Domestic	7.8	32	1,714	1,626	5.1	3,372.4	461.7
WL	LIVE	4 SAW	Domestic	5.1	25	574	571	0.6	1,062.8	162.1

### Timber Sale Log Sort x Diameter Bin Summary

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
AF	5 - 8	LIVE	Domestic	5.5	23	181	0.0	378.5	51.3
AF	9 - 11	LIVE	Domestic	9.9	32	129	3.7	244.7	36.7
AF	15 - 19	LIVE	Domestic	14.6	32	33	0.0	45.8	9.4
DF	5 - 8	LIVE	Domestic	5.9	27	3,635	0.8	7,988.5	1,032.0
DF	9 - 11	LIVE	Domestic	9.9	32	2,902	0.5	5,860.1	823.8
DF	12 - 14	LIVE	Domestic	12.8	32	1,110	1.8	1,950.6	315.0
DF	15 - 19	LIVE	Domestic	15.8	32	542	1.0	835.9	154.0
DF	20+	LIVE	Domestic	19.6	32	117	0.0	148.4	33.3
ES	5 - 8	LIVE	Domestic	5.7	27	1,261	1.1	2,637.4	358.0
ES	9 - 11	LIVE	Domestic	10.0	32	985	0.6	1,774.5	279.5
ES	12 - 14	LIVE	Domestic	13.1	32	66	0.0	97.8	18.6
ES	15 - 19	LIVE	Domestic	14.6	32	60	0.0	83.3	16.9
ES	20+	LIVE	Domestic	19.7	32	3	0.0	4.2	1.0
LP	5 - 8	LIVE	Domestic	6.0	29	99	0.0	194.4	28.1
LP	9 - 11	LIVE	Domestic	8.7	32	13	0.0	26.8	3.8
RC	5 - 8	LIVE	Domestic	6.9	27	46	0.0	94.2	12.9
RC	9 - 11	LIVE	Domestic	10.2	32	33	0.0	62.3	9.2
RC	12 - 14	LIVE	Domestic	13.1	32	52	0.0	86.0	14.7
RC	15 - 19	LIVE	Domestic	15.6	32	16	0.0	23.3	4.6
RC	20+	LIVE	Domestic	20.7	32	18	0.0	23.3	5.0
WL	< 5	LIVE	Domestic	4.5	32	11	0.0	42.4	3.2
WL	5 - 8	LIVE	Domestic	5.9	28	1,451	2.0	3,010.0	411.9
WL	9 - 11	LIVE	Domestic	9.7	32	735	7.6	1,382.8	208.7
WL	12 - 14	LIVE	Domestic	12.1	32	72	0.0	131.4	20.5

## Cruise Unit Report Q VULCAN U1

### Unit Sale Notice Volume (MBF): Q VULCAN U1

Sp	DBH	Rings/In	Age	MBF Volume by Grade			
				All	2 Saw	3 Saw	4 Saw
ES	12.3			237	30	154	53
DF	13.2			102	22	59	21
WL	11.1			15		7	8
ALL	12.2			354	52	221	81

### Unit Cruise Design: Q VULCAN U1

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B1C: VR, 1 BAF (25.15) Measure/Count Plots, Sighting Ht = 4.5 ft	31.5	33.0	27	9	0

### Unit Cruise Summary: Q VULCAN U1

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
ES	17	70	2.6	0
DF	6	36	1.3	0
WL	5	6	0.2	0
ALL	28	112	4.1	0

### Unit Cruise Statistics: Q VULCAN U1

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
ES	65.2	81.7	15.7	115.6	35.3	8.6	7,538	89.0	17.9
DF	33.5	106.1	20.4	96.4	39.4	16.1	3,231	113.2	26.0
WL	5.6	190.6	36.7	85.2	29.5	13.2	476	192.9	39.0
ALL	104.3	49.9	9.6	107.8	36.0	6.8	11,246	61.5	11.8

### Unit Summary: Q VULCAN U1

Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
DF	LIVE	CUT	6	ALL	13.2	57	70	3,268	3,231	1.1	35.3	33.5	9.2	101.8
ES	LIVE	CUT	17	ALL	12.3	58	73	7,593	7,538	0.7	79.0	65.2	18.6	237.4

Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
WL	LIVE	CUT	5	ALL	11.1	59	74	496	476	4.0	8.3	5.6	1.7	15.0
ALL	LIVE	CUT	28	ALL	12.5	58	72	11,357	11,246	1.0	122.6	104.3	29.5	354.2
ALL	ALL	ALL	28	ALL	12.5	58	72	11,357	11,246	1.0	122.6	104.3	29.5	354.2

## Cruise Unit Report Q VULCAN U2

### Unit Sale Notice Volume (MBF): Q VULCAN U2

Sp	DBH	Rings/In	Age	MBF Volume by Grade			
				All	2 Saw	3 Saw	4 Saw
DF	12.2			369	18	255	96
ES	13.9			80		55	24
WL	11.6			75		44	31
ALL	12.2			524	18	355	151

### Unit Cruise Design: Q VULCAN U2

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B1C: VR, 1 BAF (25.15) Measure/Count Plots, Sighting Ht = 4.5 ft	50.9	54.6	40	10	0

### Unit Cruise Summary: Q VULCAN U2

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
DF	23	121	3.0	0
ES	3	24	0.6	0
WL	9	26	0.7	0
ALL	35	171	4.3	0

### Unit Cruise Statistics: Q VULCAN U2

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
DF	76.1	62.9	9.9	95.3	32.3	6.7	7,250	70.7	12.0
ES	15.1	281.9	44.6	103.5	54.7	31.6	1,562	287.2	54.6
WL	16.3	165.4	26.2	90.2	28.2	9.4	1,474	167.8	27.8
ALL	107.5	37.1	5.9	95.7	32.5	5.5	10,287	49.3	8.0

### Unit Summary: Q VULCAN U2

Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
DF	LIVE	CUT	23	ALL	12.2	53	65	7,330	7,250	1.1	93.7	76.1	21.8	369.0
ES	LIVE	CUT	3	ALL	13.9	52	64	1,562	1,562	0.0	14.3	15.1	4.0	79.5

Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
WL	LIVE	CUT	9	ALL	11.6	61	76	1,474	1,474	0.0	22.3	16.3	4.8	75.0
ALL	LIVE	CUT	35	ALL	12.3	54	67	10,366	10,287	0.8	130.3	107.5	30.6	523.6
ALL	ALL	ALL	35	ALL	12.3	54	67	10,366	10,287	0.8	130.3	107.5	30.6	523.6

## Cruise Unit Report Q VULCAN U3

### Unit Sale Notice Volume (MBF): Q VULCAN U3

Sp	DBH	Rings/In	Age	MBF Volume by Grade			
				All	2 Saw	3 Saw	4 Saw
WL	12.6			176	15	116	44
DF	12.1			141	15	90	35
ES	10.8			82		45	37
AF	11.7			16		12	4
ALL	12.0			415	31	263	121

### Unit Cruise Design: Q VULCAN U3

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B1C: VR, 1 BAF (25.15) Measure/Count Plots, Sighting Ht = 4.5 ft	41.1	45.0	45	12	1

### Unit Cruise Summary: Q VULCAN U3

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
WL	22	77	1.7	0
DF	10	64	1.4	0
ES	10	42	0.9	0
AF	4	8	0.2	0
ALL	46	191	4.2	0

### Unit Cruise Statistics: Q VULCAN U3

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
WL	43.0	114.6	17.1	99.4	32.8	7.0	4,276	119.2	18.5
DF	35.8	118.5	17.7	95.7	51.3	16.2	3,422	129.1	24.0
ES	23.5	150.5	22.4	85.0	42.5	13.4	1,995	156.4	26.1
AF	4.5	300.7	44.8	89.5	50.5	25.3	400	305.0	51.5
ALL	106.7	47.2	7.0	94.6	39.7	5.9	10,094	61.7	9.1

**Unit Summary: Q VULCAN U3**

Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
AF	LIVE	CUT	4	ALL	11.7	47	58	400	400	0.0	6.0	4.5	1.3	16.5
DF	LIVE	CUT	10	ALL	12.1	47	58	3,422	3,422	0.0	44.8	35.8	10.3	140.7
ES	LIVE	CUT	10	ALL	10.8	53	65	1,995	1,995	0.0	36.9	23.5	7.1	82.0
WL	LIVE	CUT	22	ALL	12.6	61	76	4,330	4,276	1.2	49.7	43.0	12.1	175.8
ALL	LIVE	CUT	46	ALL	11.9	54	66	10,148	10,094	0.5	137.4	106.7	30.9	414.9
ALL	ALL	ALL	46	ALL	11.9	54	66	10,148	10,094	0.5	137.4	106.7	30.9	414.9

## Cruise Unit Report Q VULCAN U4

### Unit Sale Notice Volume (MBF): Q VULCAN U4

Sp	DBH	Rings/In	Age	MBF Volume by Grade			
				All	2 Saw	3 Saw	4 Saw
ES	13.0			111	18	76	17
WL	12.8			108		77	31
AF	11.8			73	9	43	20
DF	15.9			44		37	7
LP	12.3			6		5	1
ALL	12.9			342	27	237	77

### Unit Cruise Design: Q VULCAN U4

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B1C: VR, 1 BAF (25.15) Measure/Count Plots, Sighting Ht = 4.5 ft	25.0	26.0	26	9	1

### Unit Cruise Summary: Q VULCAN U4

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
ES	12	36	1.4	0
WL	5	32	1.2	0
AF	10	31	1.2	0
DF	5	15	0.6	0
LP	1	2	0.1	0
ALL	33	116	4.5	0

### Unit Cruise Statistics: Q VULCAN U4

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
ES	34.8	115.7	22.7	127.7	31.9	9.2	4,447	120.0	24.5
WL	31.0	134.6	26.4	139.3	19.9	8.9	4,312	136.1	27.9
AF	30.0	111.3	21.8	96.8	45.0	14.2	2,902	120.1	26.1
DF	14.5	220.2	43.2	122.3	28.5	12.7	1,775	222.0	45.0
LP	1.9	353.3	69.3	129.7	0.0	0.0	251	353.3	69.3
ALL	112.2	44.0	8.6	122.0	32.8	5.7	13,687	54.9	10.4



**Unit Summary: Q VULCAN U4**

Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
AF	LIVE	CUT	10	ALL	11.8	59	73	2,915	2,902	0.4	39.5	30.0	8.7	72.6
DF	LIVE	CUT	5	ALL	15.9	63	78	1,775	1,775	0.0	10.5	14.5	3.6	44.4
ES	LIVE	CUT	12	ALL	13.0	61	77	4,493	4,447	1.0	37.8	34.8	9.7	111.2
LP	LIVE	CUT	1	ALL	12.3	60	75	251	251	0.0	2.3	1.9	0.6	6.3
WL	LIVE	CUT	5	ALL	12.8	69	86	4,312	4,312	0.0	34.6	31.0	8.7	107.8
ALL	LIVE	CUT	33	ALL	12.8	63	78	13,745	13,687	0.4	124.7	112.2	31.2	342.2
ALL	ALL	ALL	33	ALL	12.8	63	78	13,745	13,687	0.4	124.7	112.2	31.2	342.2

## Cruise Unit Report Q VULCAN U5

### Unit Sale Notice Volume (MBF): Q VULCAN U5

Sp	DBH	Rings/In	Age	MBF Volume by Grade			
				All	2 Saw	3 Saw	4 Saw
DF	14.8			1,154	333	659	162
WL	13.1			250		207	43
ES	11.8			161	21	104	36
AF	15.0			8		6	2
LP	14.6			5		4	1
ALL	14.1			1,578	354	979	245

### Unit Cruise Design: Q VULCAN U5

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B1C: VR, 1 BAF (25.15) Measure/Count Plots, Sighting Ht = 4.5 ft	99.8	99.8	60	14	1

### Unit Cruise Summary: Q VULCAN U5

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
DF	42	215	3.6	0
WL	6	47	0.8	0
ES	8	29	0.5	0
AF	1	2	0.0	0
LP	1	1	0.0	0
ALL	58	294	4.9	0

### Unit Cruise Statistics: Q VULCAN U5

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
DF	90.1	60.6	7.8	128.3	30.3	4.7	11,564	67.8	9.1
WL	19.7	124.6	16.1	127.0	28.1	11.5	2,502	127.7	19.7
ES	12.2	245.4	31.7	132.7	32.8	11.6	1,613	247.6	33.7
AF	0.8	543.1	70.1	99.4	0.0	0.0	83	543.1	70.1
LP	0.4	774.6	100.0	117.8	0.0	0.0	49	774.6	100.0
ALL	123.2	41.1	5.3	128.3	29.7	3.9	15,812	50.7	6.6

**Unit Summary: Q VULCAN U5**

Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
AF	LIVE	CUT	1	ALL	15.0	64	81	94	83	11.6	0.7	0.8	0.2	8.3
DF	LIVE	CUT	42	ALL	14.8	68	85	11,634	11,564	0.6	75.4	90.1	23.4	1,154.1
ES	LIVE	CUT	8	ALL	11.8	62	78	1,642	1,613	1.8	16.0	12.2	3.5	161.0
LP	LIVE	CUT	1	ALL	14.6	66	82	49	49	0.0	0.4	0.4	0.1	4.9
WL	LIVE	CUT	6	ALL	13.1	77	97	2,728	2,502	8.3	21.0	19.7	5.4	249.7
ALL	LIVE	CUT	58	ALL	14.1	69	86	16,148	15,812	2.1	113.5	123.2	32.7	1,578.0
ALL	ALL	ALL	58	ALL	14.1	69	86	16,148	15,812	2.1	113.5	123.2	32.7	1,578.0

## Cruise Unit Report Q VULCAN U6

### Unit Sale Notice Volume (MBF): Q VULCAN U6

Sp	DBH	Rings/In	Age	MBF Volume by Grade			
				All	2 Saw	3 Saw	4 Saw
DF	14.0			248	36	176	36
LP	10.3			17		8	9
RC	15.8			16		15	1
WL	10.1			6		3	3
ES	11.2			1			1
ALL	13.4			288	36	202	50

### Unit Cruise Design: Q VULCAN U6

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B1C: VR, 1 BAF (33.61) Measure/Count Plots, Sighting Ht = 4.5 ft	16.6	16.6	18	10	0

### Unit Cruise Summary: Q VULCAN U6

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
DF	30	62	3.4	0
LP	2	7	0.4	0
RC	3	5	0.3	0
WL	2	3	0.2	0
ES	1	1	0.1	0
ALL	38	78	4.3	0

### Unit Cruise Statistics: Q VULCAN U6

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
DF	115.8	44.8	10.6	128.9	29.2	5.3	14,920	53.5	11.8
LP	13.1	218.5	51.5	79.8	7.1	5.0	1,043	218.6	51.8
RC	9.3	206.8	48.7	100.4	30.3	17.5	937	209.0	51.8
WL	5.6	230.1	54.2	64.3	55.6	39.3	360	236.7	67.0
ES	1.9	424.3	100.0	42.4	0.0	0.0	79	424.3	100.0
ALL	145.6	26.3	6.2	119.1	34.7	5.6	17,339	43.5	8.4

**Unit Summary: Q VULCAN U6**

Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
DF	LIVE	CUT	30	ALL	14.0	70	87	15,089	14,920	1.1	108.3	115.8	30.9	247.7
ES	LIVE	CUT	1	ALL	11.2	35	41	79	79	0.0	2.7	1.9	0.6	1.3
LP	LIVE	CUT	2	ALL	10.3	56	70	1,043	1,043	0.0	22.6	13.1	4.1	17.3
RC	LIVE	CUT	3	ALL	15.8	63	79	937	937	0.0	6.9	9.3	2.3	15.6
WL	LIVE	CUT	2	ALL	10.1	56	70	360	360	0.0	10.1	5.6	1.8	6.0
ALL	LIVE	CUT	38	ALL	13.3	66	82	17,508	17,339	1.0	150.6	145.6	39.7	287.8
ALL	ALL	ALL	38	ALL	13.3	66	82	17,508	17,339	1.0	150.6	145.6	39.7	287.8

## Cruise Unit Report Q VULCANU7

### Unit Sale Notice Volume (MBF): Q VULCANU7

Sp	DBH	Rings/In	Age	MBF Volume by Grade			
				All	2 Saw	3 Saw	4 Saw
DF	15.3			297	79	182	36
RC	20.9			31		30	1
WL	15.7			14	5	7	2
LP	12.8			3		2	1
ALL	15.7			345	84	221	41

### Unit Cruise Design: Q VULCANU7

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B1C: VR, 1 BAF (25.15) Measure/Count Plots, Sighting Ht = 4.5 ft	17.5	19.6	17	9	0

### Unit Cruise Summary: Q VULCANU7

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
DF	37	81	4.8	0
RC	6	9	0.5	0
WL	2	4	0.2	0
LP	1	1	0.1	0
ALL	46	95	5.6	0

### Unit Cruise Statistics: Q VULCANU7

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
DF	119.8	59.1	14.3	141.5	25.9	4.3	16,957	64.6	15.0
RC	13.3	299.5	72.6	132.7	29.5	12.0	1,767	301.0	73.6
WL	5.9	239.0	58.0	137.3	20.6	14.6	813	239.9	59.8
LP	1.5	412.3	100.0	129.8	0.0	0.0	192	412.3	100.0
ALL	140.5	39.0	9.5	140.4	25.4	3.7	19,728	46.6	10.2

**Unit Summary: Q VULCANU7**

Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
DF	LIVE	CUT	37	ALL	15.3	72	91	17,230	16,957	1.6	93.9	119.8	30.6	296.8
LP	LIVE	CUT	1	ALL	12.8	67	84	192	192	0.0	1.7	1.5	0.4	3.4
RC	LIVE	CUT	6	ALL	20.9	65	81	1,767	1,767	0.0	5.6	13.3	2.9	30.9
WL	LIVE	CUT	2	ALL	15.7	76	96	837	813	2.9	4.4	5.9	1.5	14.2
ALL	LIVE	CUT	46	ALL	15.6	72	91	20,026	19,728	1.5	105.6	140.5	35.5	345.2
ALL	ALL	ALL	46	ALL	15.6	72	91	20,026	19,728	1.5	105.6	140.5	35.5	345.2

## Cruise Unit Report Q VULCAN ROW

### Unit Sale Notice Volume (MBF): Q VULCAN ROW

Sp	DBH	Rings/In	Age	MBF Volume by Grade			
				All	2 Saw	3 Saw	4 Saw
DF	12.5			4		2	1
ES	26.8			2	1	0	
WL	12.3			1		1	0
ALL	13.1			6	1	3	1

### Unit Cruise Design: Q VULCAN ROW

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B1: VR, 1 BAF (25.15) Measure All, Sighting Ht = 4.5 ft	1.5	1.5	6	6	3

### Unit Cruise Summary: Q VULCAN ROW

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
DF	6	6	1.0	0
ES	1	1	0.2	0
WL	1	1	0.2	0
ALL	8	8	1.3	0

### Unit Cruise Statistics: Q VULCAN ROW

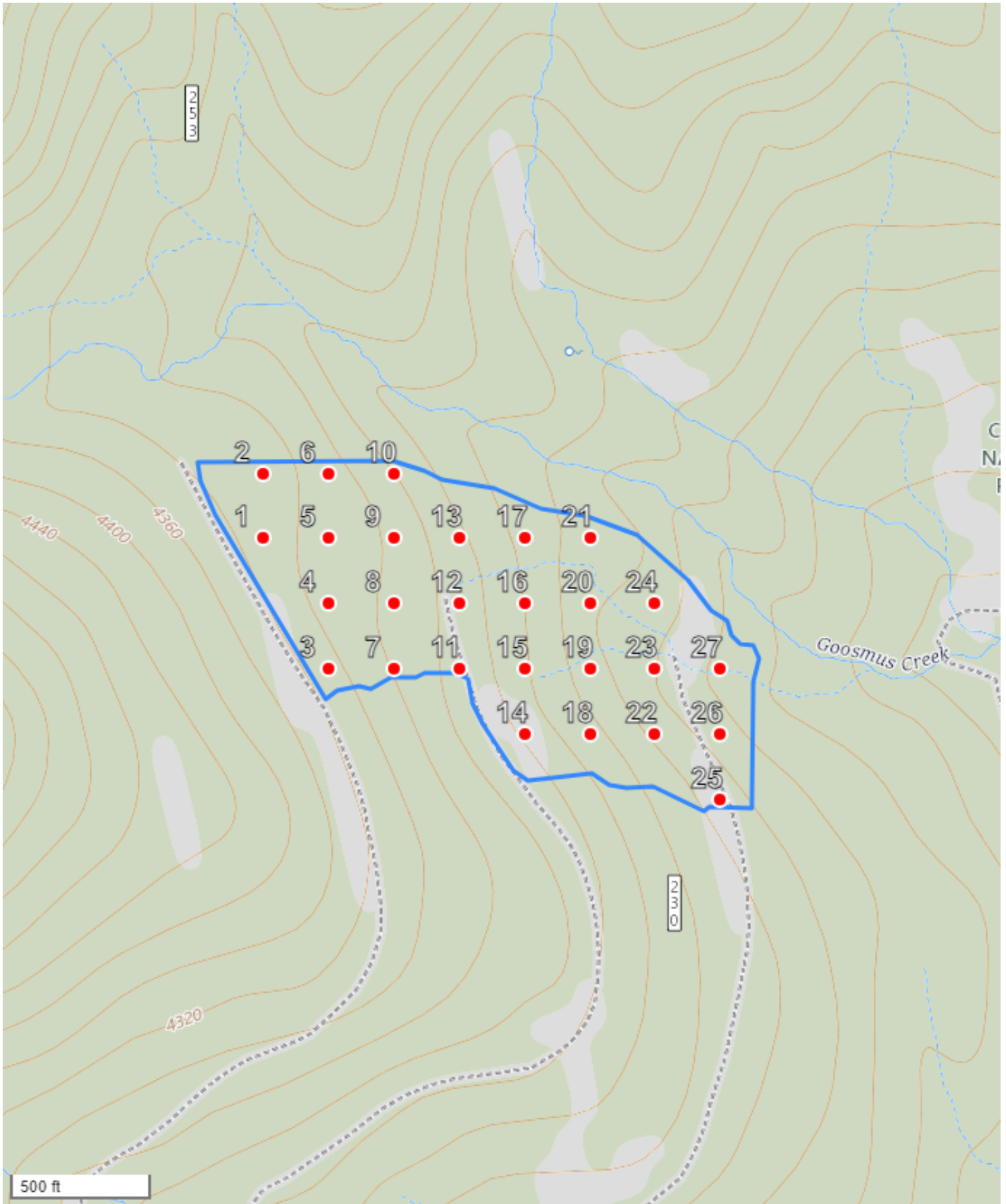
Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
DF	25.2	154.9	63.2	100.0	41.7	17.0	2,514	160.4	65.5
ES	4.2	244.9	100.0	261.7	0.0	0.0	1,097	244.9	100.0
WL	4.2	244.9	100.0	121.2	0.0	0.0	508	244.9	100.0
ALL	33.5	122.5	50.0	122.8	54.3	19.2	4,119	134.0	53.6

### Unit Summary: Q VULCAN ROW

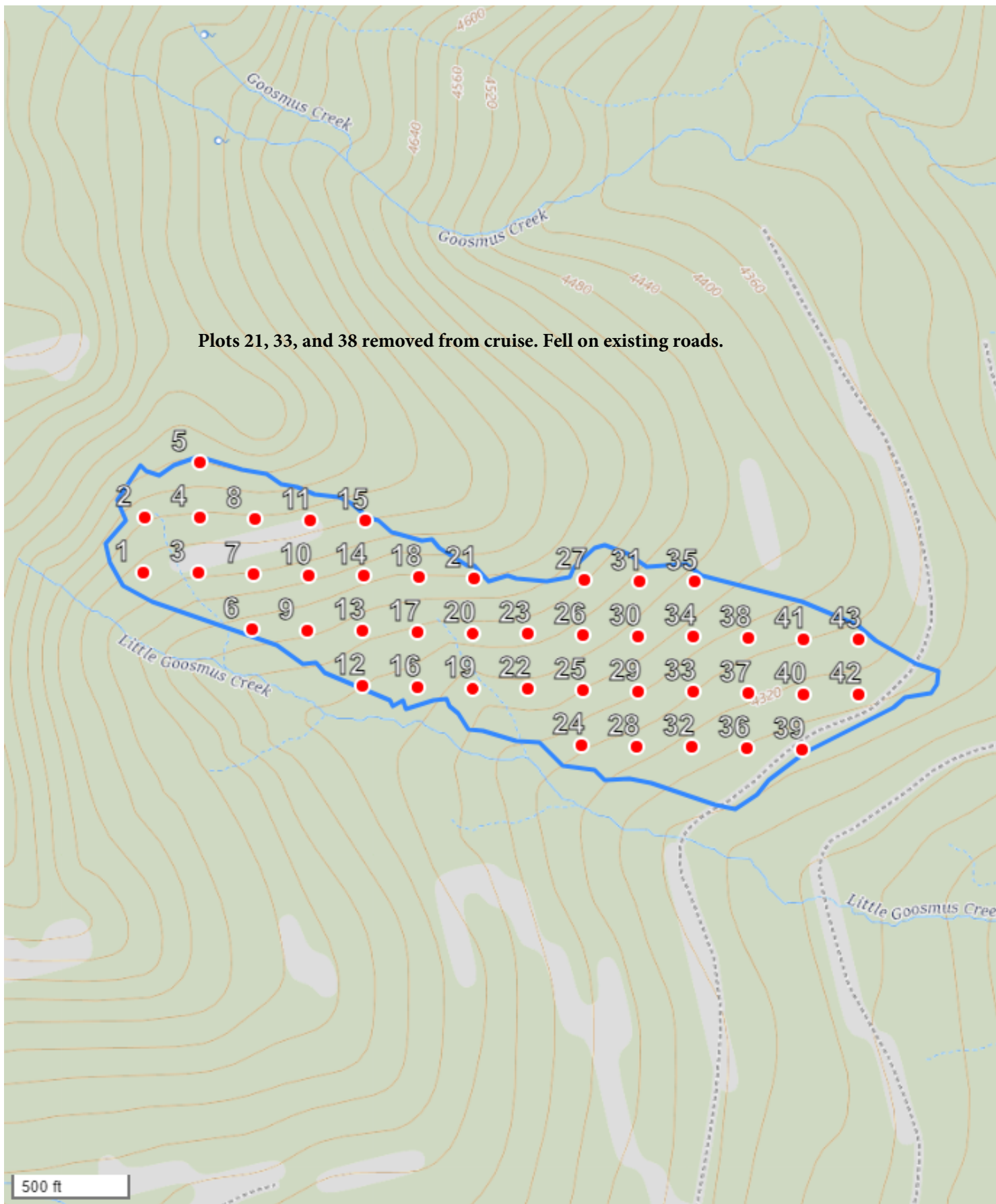
Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
DF	LIVE	CUT	6	ALL	12.5	54	66	2,605	2,514	3.5	29.5	25.1	7.1	3.7
ES	LIVE	CUT	1	ALL	26.8	92	118	1,097	1,097	0.0	1.1	4.2	0.8	1.6
WL	LIVE	CUT	1	ALL	12.3	69	86	508	508	0.0	5.1	4.2	1.2	0.7



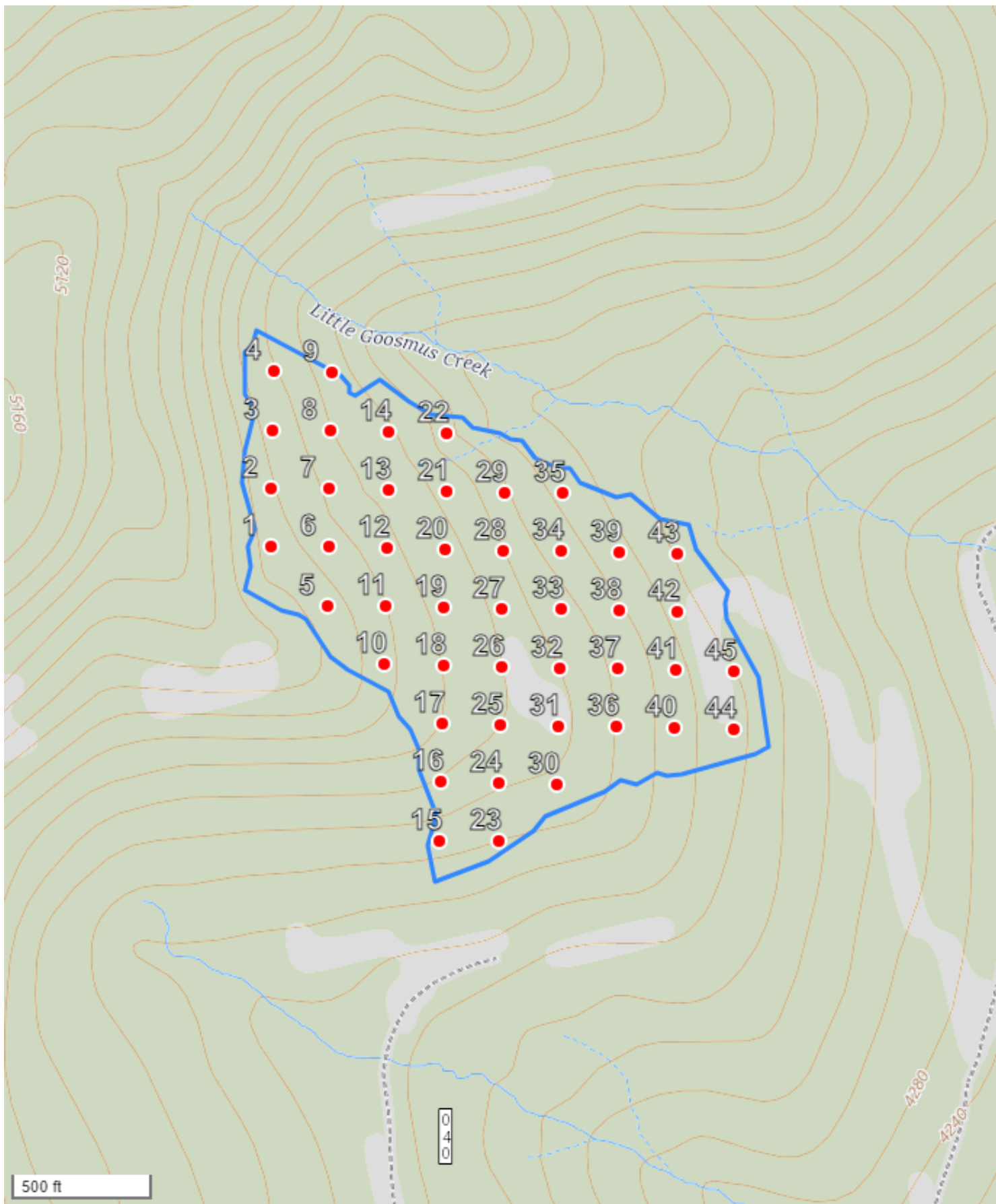
Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
ALL	LIVE	CUT	8	ALL	13.1	57	70	4,210	4,119	2.2	35.7	33.5	9.1	6.0
ALL	ALL	ALL	8	ALL	13.1	57	70	4,210	4,119	2.2	35.7	33.5	9.1	6.0



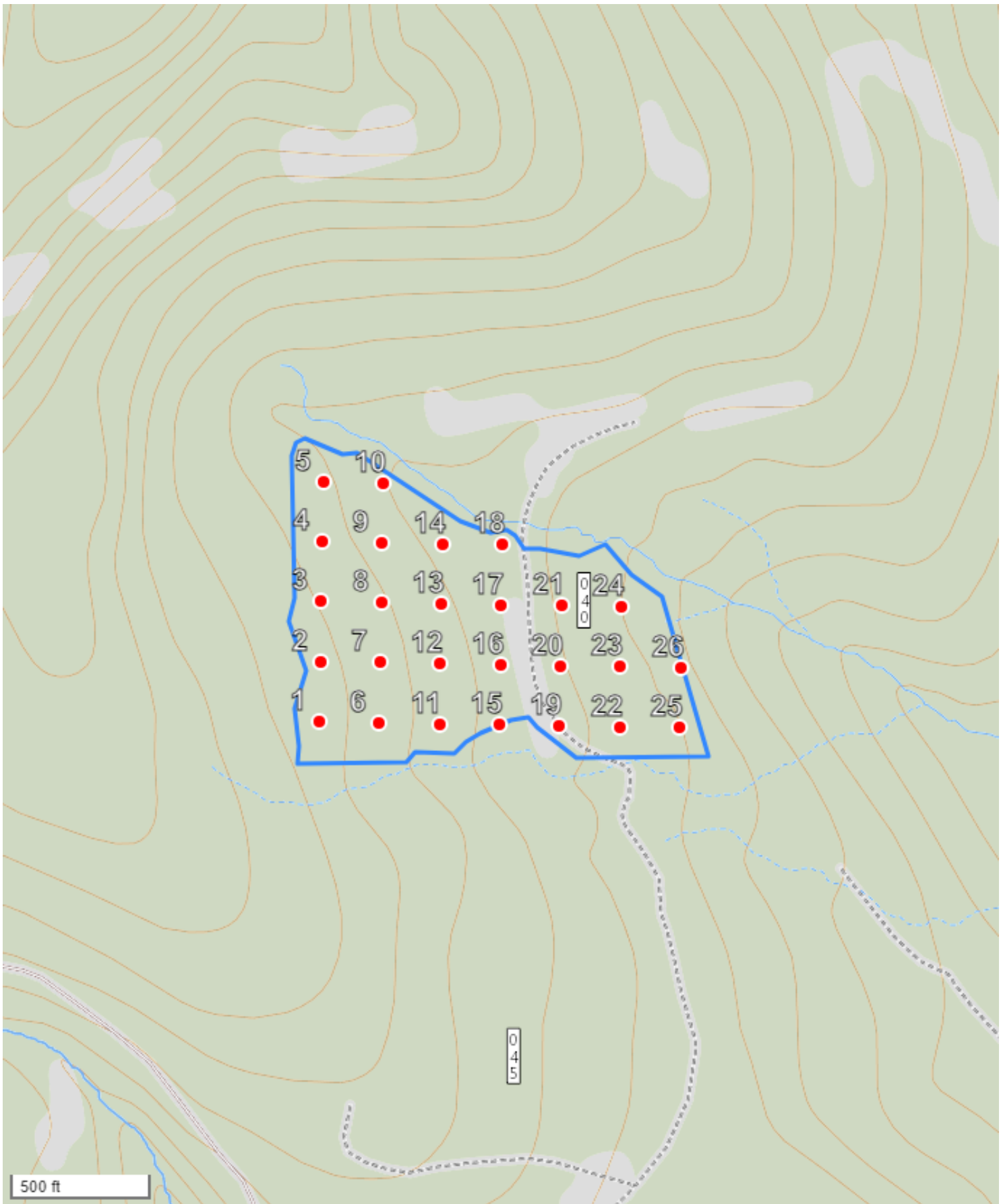
FMA Name: Q VULCAN U1	N Plots: 27	Plot Spacing: 230.5 ft
Grid Name: Q VULCAN U1 - 1	Acres Treated: 31.5	Main Azimuth: 0 deg



FMA Name: Q VULCAN U2	N Plots: 43	Plot Spacing: 232.2 ft
Grid Name: Q VULCAN U2 - 1	Acres Treated: 50.9	Main Azimuth: 1 deg

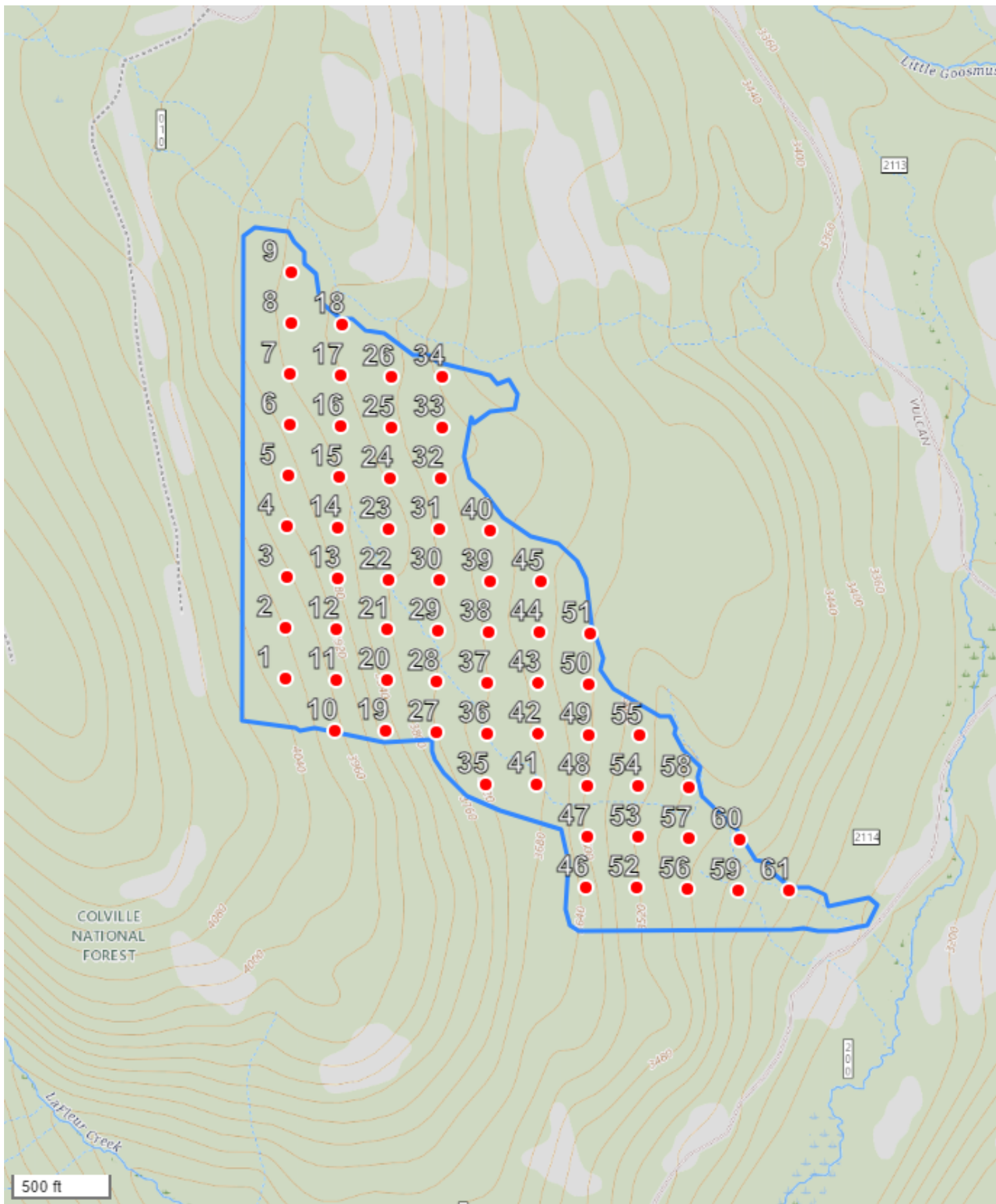


FMA Name: Q VULCAN U3	N Plots: 45	Plot Spacing: 206.2 ft
Grid Name: Q VULCAN U3 - 1	Acres Treated: 41.1	Main Azimuth: 1 deg

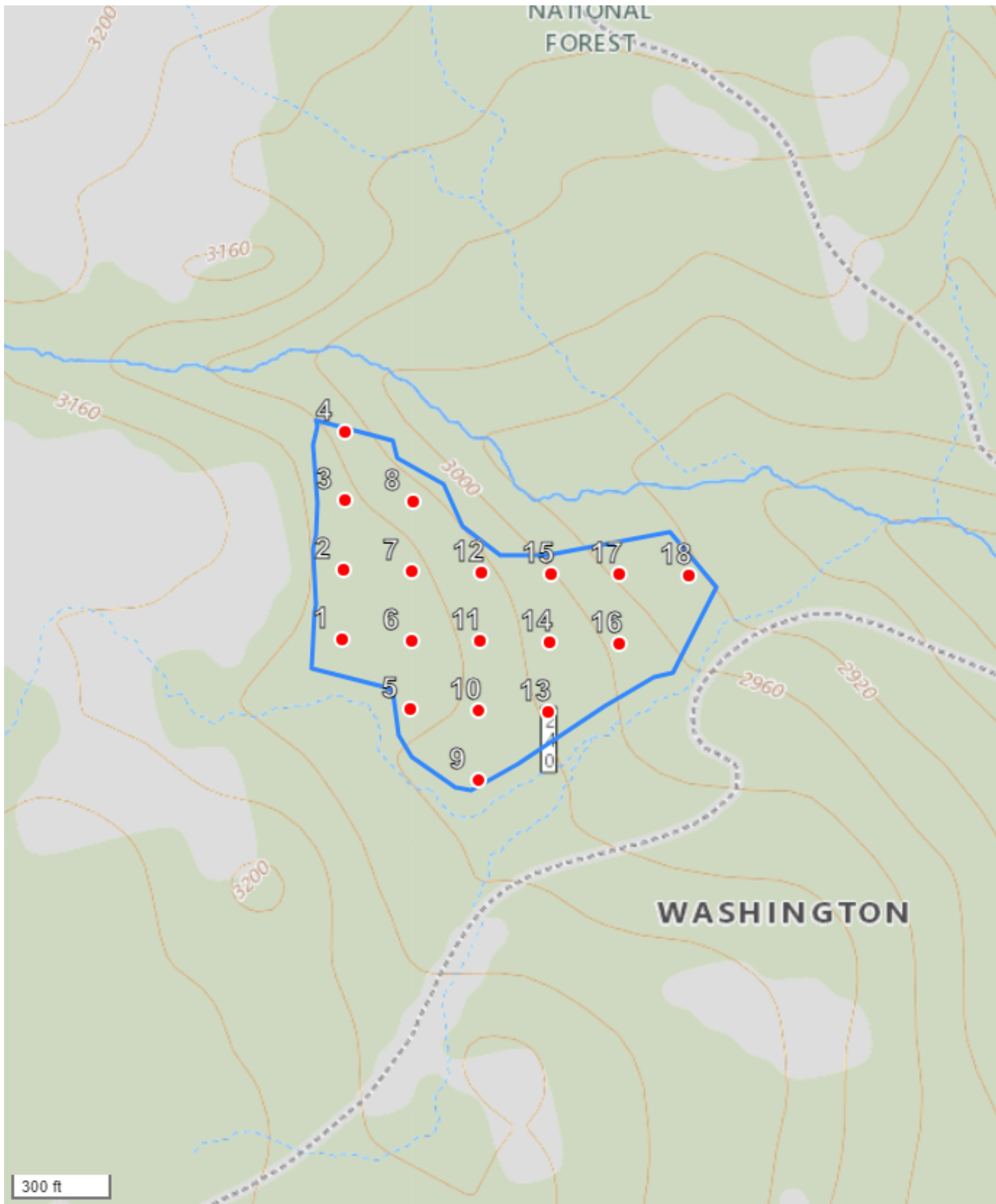


FMA Name: Q VULCAN U4	N Plots: 26	Plot Spacing: 212.4 ft
Grid Name: Q VULCAN U4 - 1	Acres Treated: 25	Main Azimuth: 1 deg

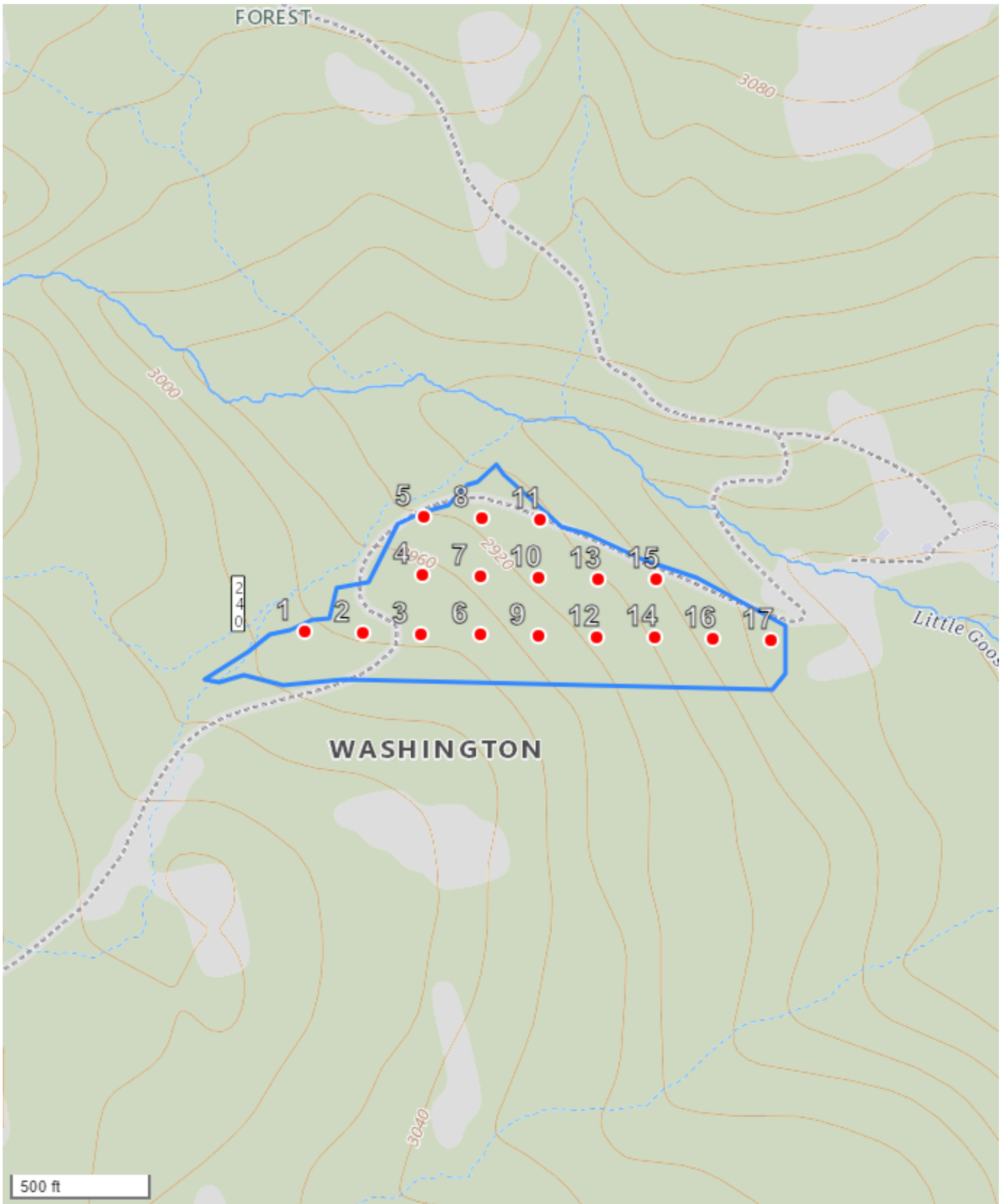




FMA Name: Q VULCAN U5	N Plots: 61	Plot Spacing: 254.3 ft
Grid Name: Q VULCAN U5 - 1	Acres Treated: 99.8	Main Azimuth: 1 deg

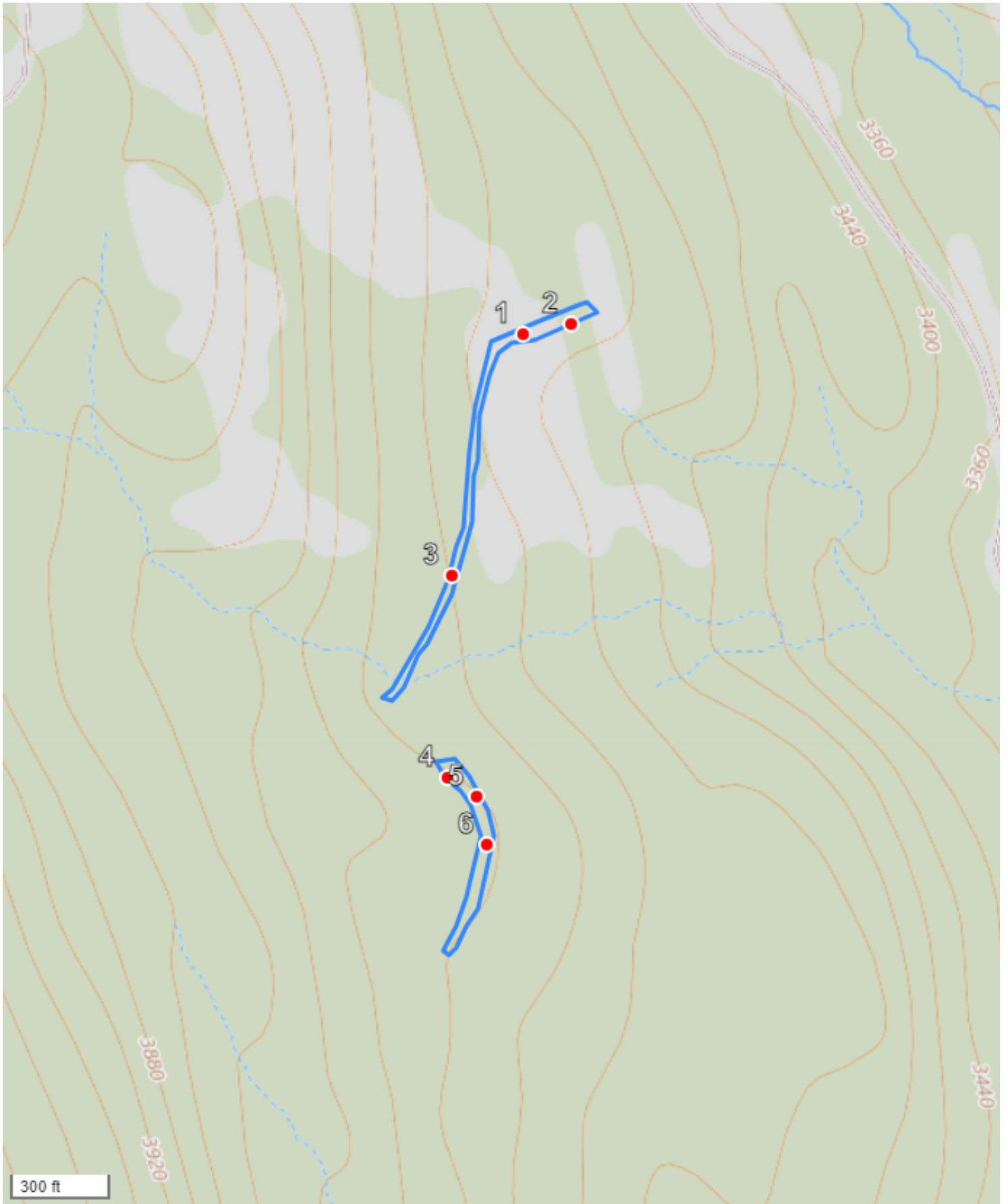


FMA Name: Q VULCAN U6	N Plots: 18	Plot Spacing: 206.1 ft
Grid Name: Q VULCAN U6 - 1	Acres Treated: 16.6	Main Azimuth: 1 deg



FMA Name: Q VULCANU7	N Plots: 17	Plot Spacing: 206.5 ft
Grid Name: Q VULCANU7 - 1	Acres Treated: 17.5	Main Azimuth: 1 deg





FMA Name: Q VULCAN ROW	N Plots: 6	Plot Spacing: 102.9 ft
Grid Name: Q VULCAN ROW - 1	Acres Treated: 2.7	Main Azimuth: 32.4 deg



# Forest Practices Application/Notification Notice of Decision

FPA/N No: 3026612

Effective Date: 11/27/2023

Expiration Date: 11/27/2026

Shut Down Zone: 678 E

EARR Tax Credit:  Eligible  Non-eligible

Reference: Q Vulcan

16,22,23-40-33

### Decision

- Notification Accepted** 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.
- Withdrawn** Applicant has withdrawn the Forest Practices Application/Notification (FPA/N).
- Closed** All forest practices obligations are met.

### 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

All work below the ordinary high water line shall only occur between July 1 and September 30.

Notify the Department of Natural Resources Forest Practices Forester at least two (2) business days before beginning work in Type S or F water(s). Provide the application number and legal description for your activity.

Note: Apply grass seed and mulch to exposed soils adjacent to stream crossings immediately after construction. See WAC 222-24-030 (4)

Issued By: Kyle Buckmiller

Region: Northeast

Title: Forest Practices Forester

Date: 11/27/2023

Copies to:  Landowner, Timber Owner and Operator

Issued in person:  LO  TO  OP By: Saladina Hook

Date: 11/27/23



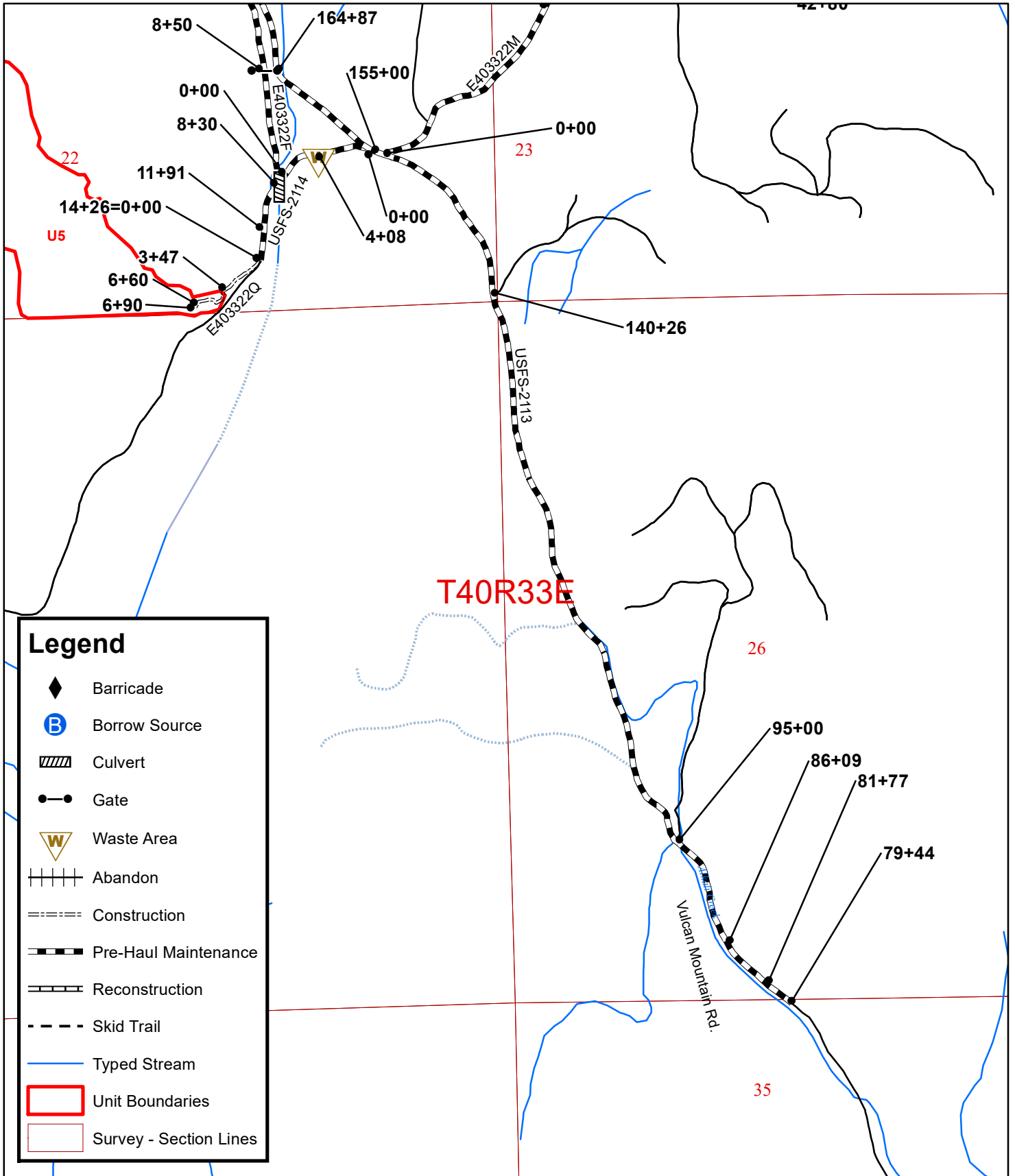


# Washington State Department of Natural Resources

Sale Name: QVulcan  
 Contract No.: 30-105823

Road Plan Map  
 Page 1 of 7

Region: Northeast  
 County: Ferry



**Legend**

- ◆ Barricade
- ⓑ Borrow Source
- ▨ Culvert
- Gate
- ⚠ Waste Area
- ⊕⊕⊕⊕ Abandon
- ⋯ Construction
- ▬ Pre-Haul Maintenance
- ▬ Reconstruction
- - - Skid Trail
- Typed Stream
- ▭ Unit Boundaries
- ▭ Survey - Section Lines

Drawn By: M. Karnstein

1 inch = 1,000 feet

0 500 1,000 2,000 Feet

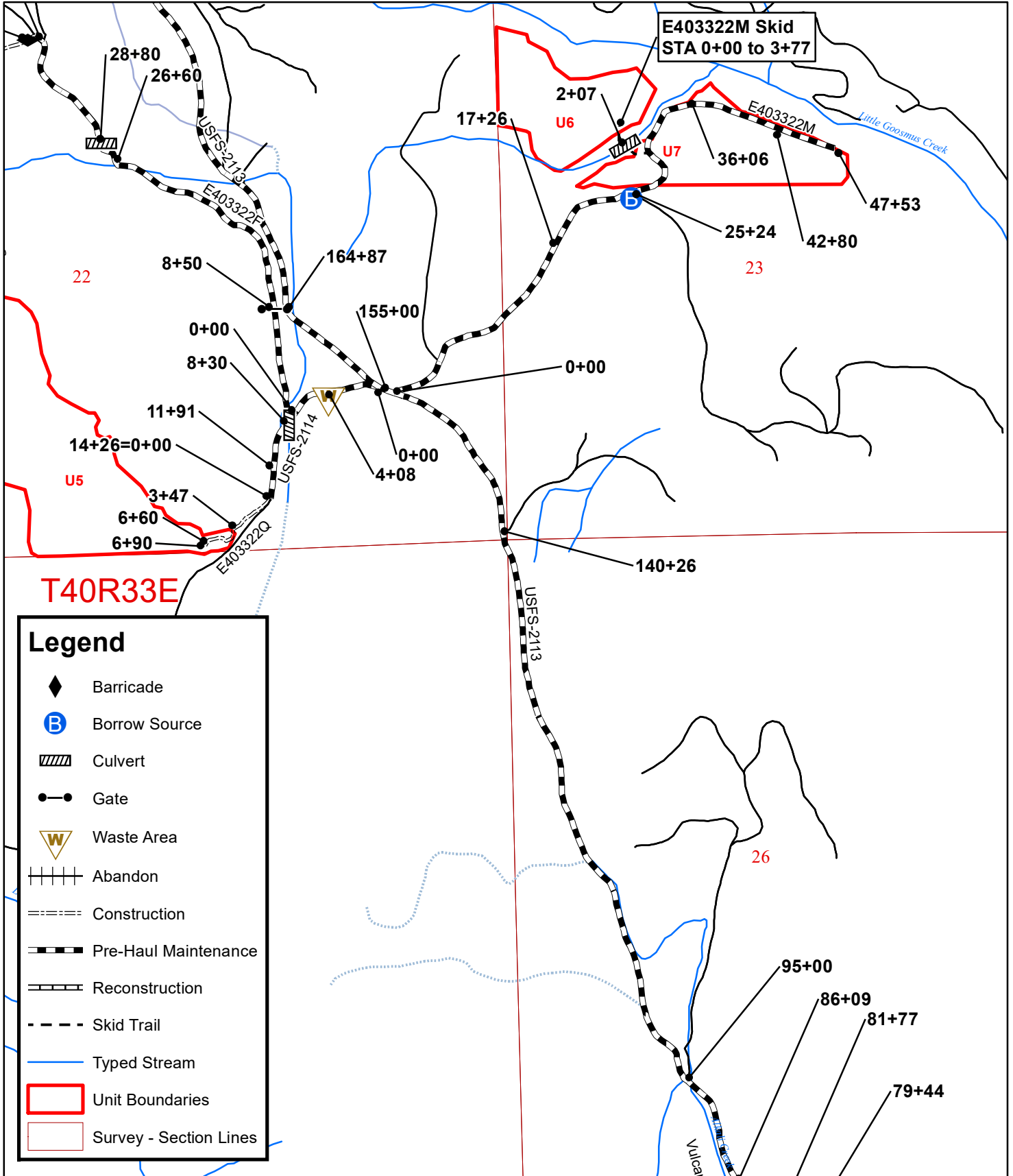


# Washington State Department of Natural Resources

Sale Name: QVulcan  
 Contract No.: 30-105823

Road Plan Map  
 Page 2 of 7

Region: Northeast  
 County: Ferry

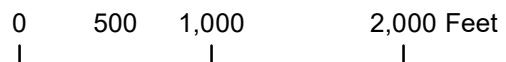


**Legend**

- Barricade
- Borrow Source
- Culvert
- Gate
- Waste Area
- Abandon
- Construction
- Pre-Haul Maintenance
- Reconstruction
- Skid Trail
- Typed Stream
- Unit Boundaries
- Survey - Section Lines

Drawn By: M. Karnstein

1 inch = 1,000 feet



# Washington State Department of Natural Resources

Sale Name: QVulcan

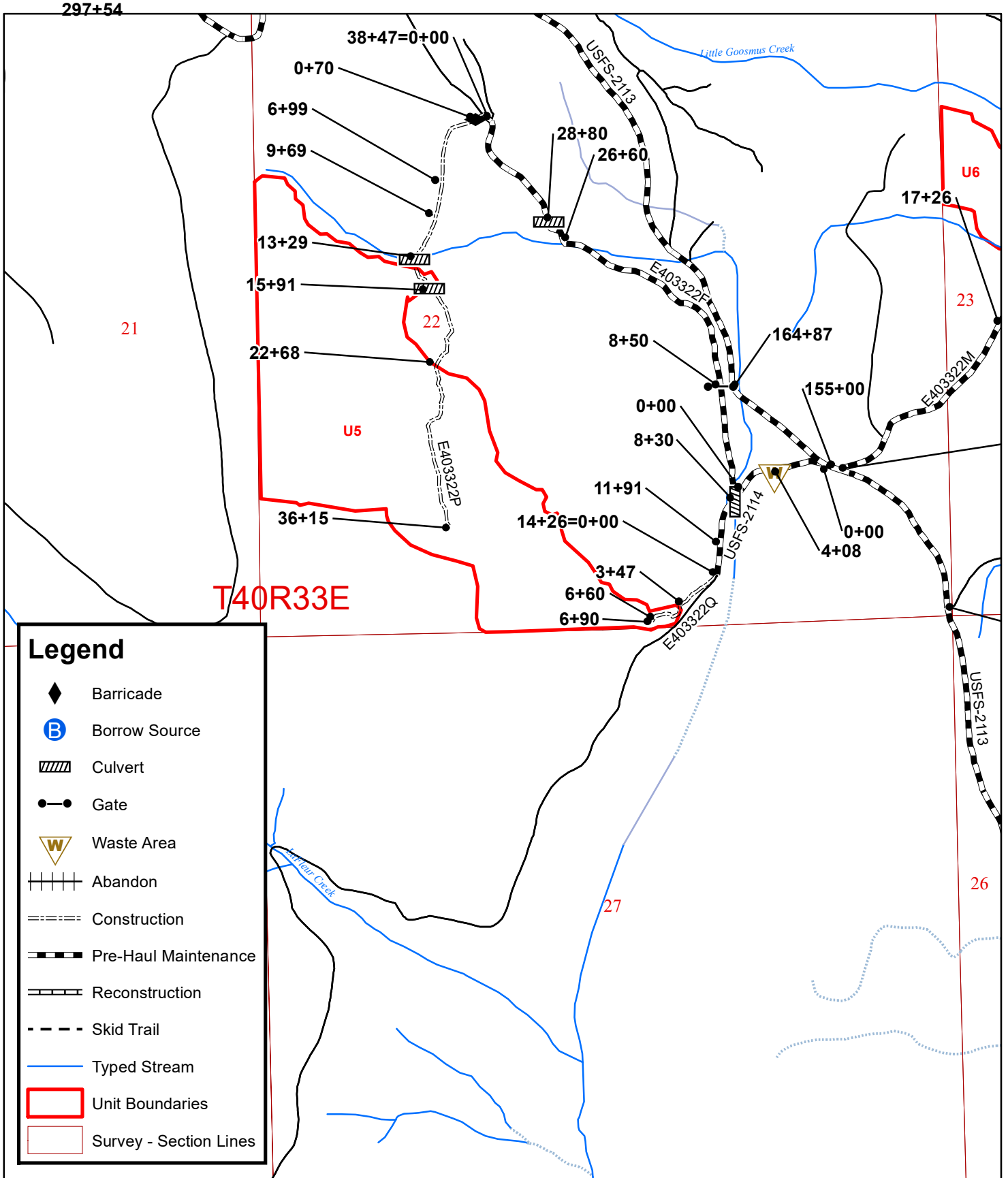
Road Plan Map

Region: Northeast

Contract No.: 30-105823

Page 3 of 7

County: Ferry



## Legend

- Barricade
- Borrow Source
- Culvert
- Gate
- Waste Area
- Abandon
- Construction
- Pre-Haul Maintenance
- Reconstruction
- Skid Trail
- Typed Stream
- Unit Boundaries
- Survey - Section Lines

Drawn By: M. Karnstein

1 inch = 1,000 feet

0 500 1,000 2,000 Feet



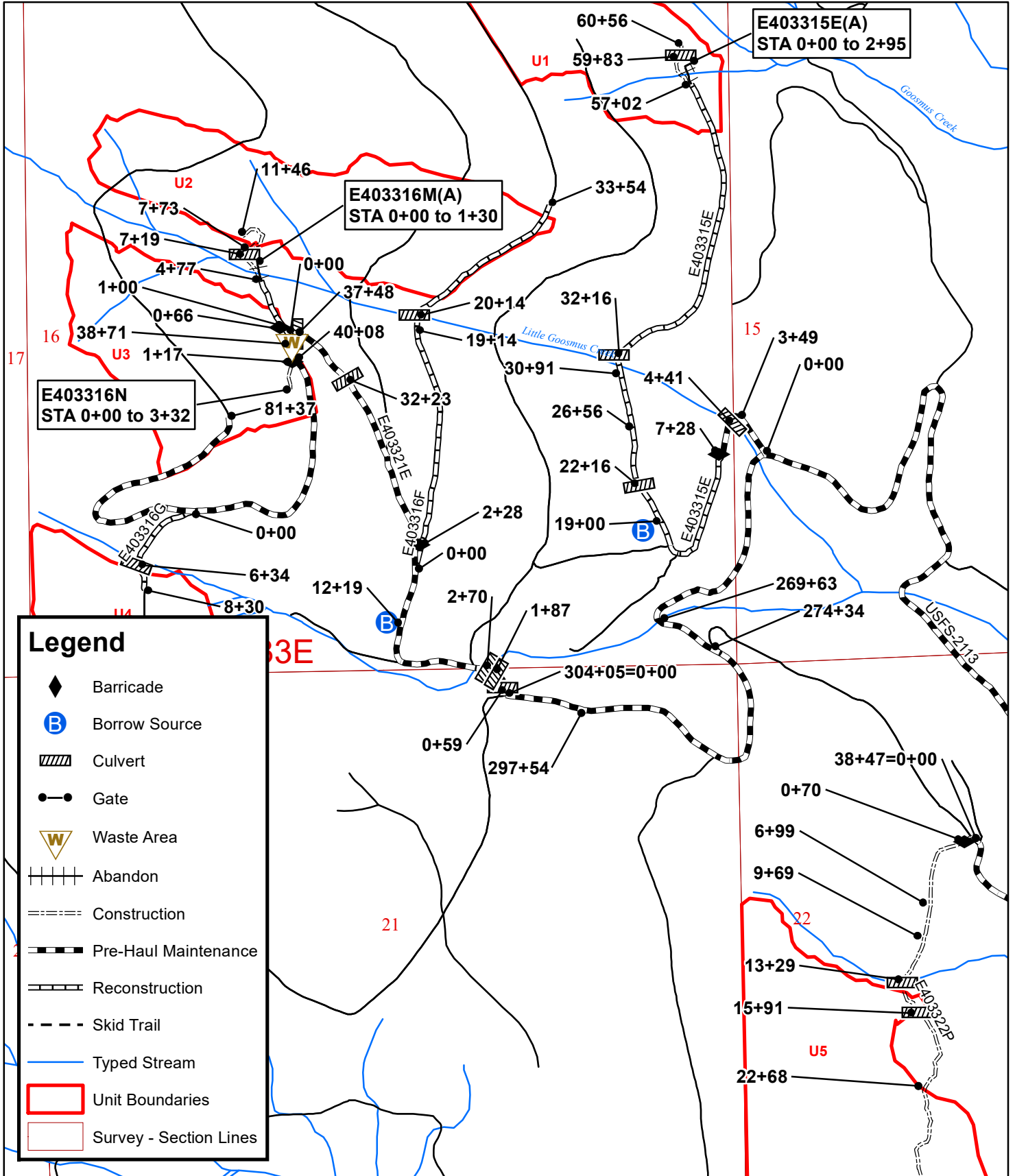


# Washington State Department of Natural Resources

Sale Name: QVulcan  
 Contract No.: 30-105823

Road Plan Map  
 Page 4 of 7

Region: Northeast  
 County: Ferry

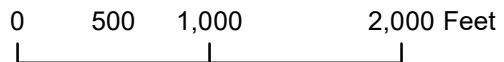


**Legend**

- ◆ Barricade
- ⓑ Borrow Source
- ▨ Culvert
- Gate
- ⚠ Waste Area
- ⊘ Abandon
- - - Construction
- - - Pre-Haul Maintenance
- - - Reconstruction
- - - Skid Trail
- Typed Stream
- ▭ Unit Boundaries
- ▭ Survey - Section Lines

Drawn By: M. Karnstein

1 inch = 1,000 feet

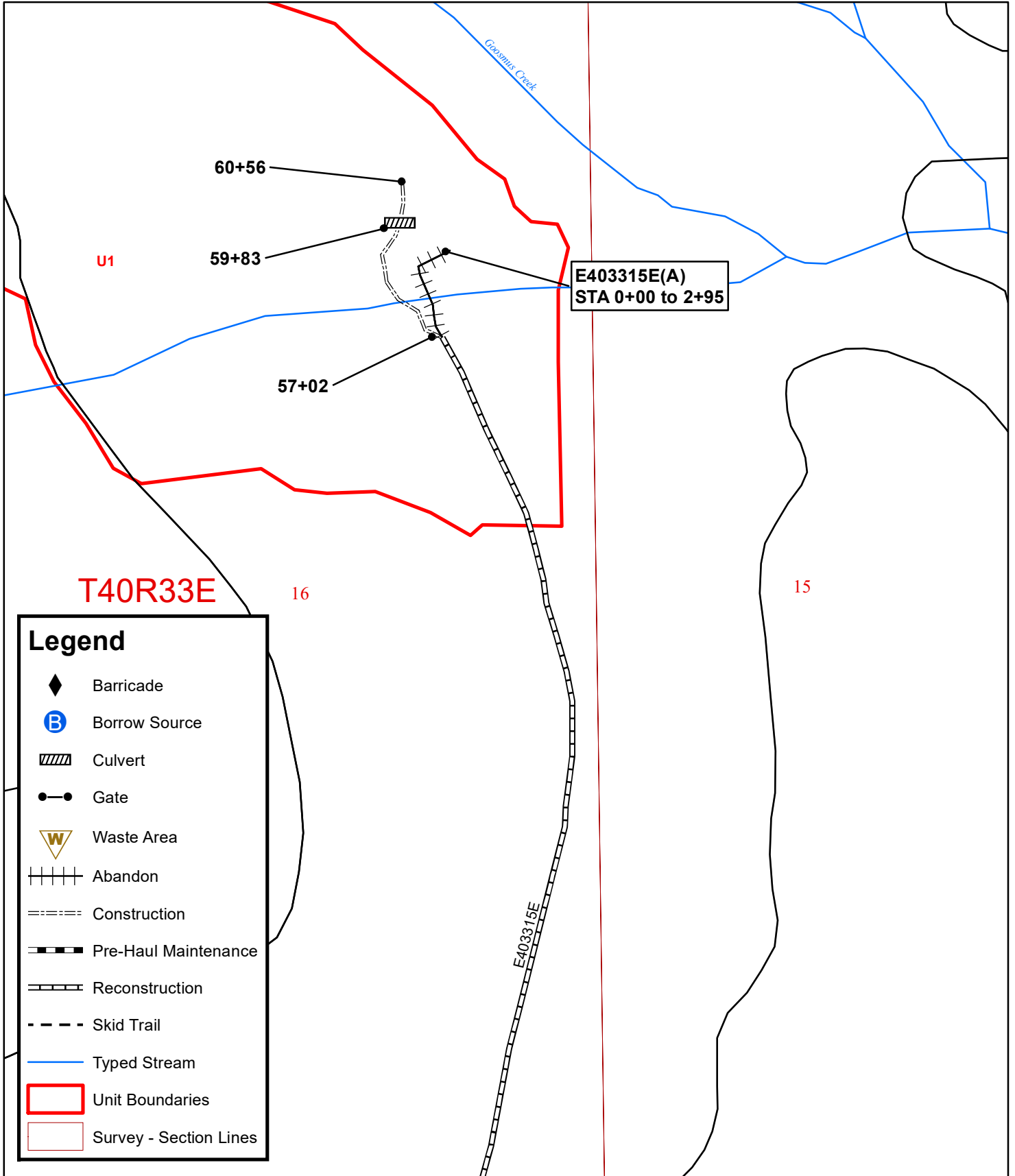


# Washington State Department of Natural Resources

Sale Name: QVulcan  
Contract No.: 30-105823

Road Plan Map  
Page 5 of 7

Region: Northeast  
County: Ferry



Drawn By: M. Karnstein

1 inch = 250 feet

0 125 250 500 Feet



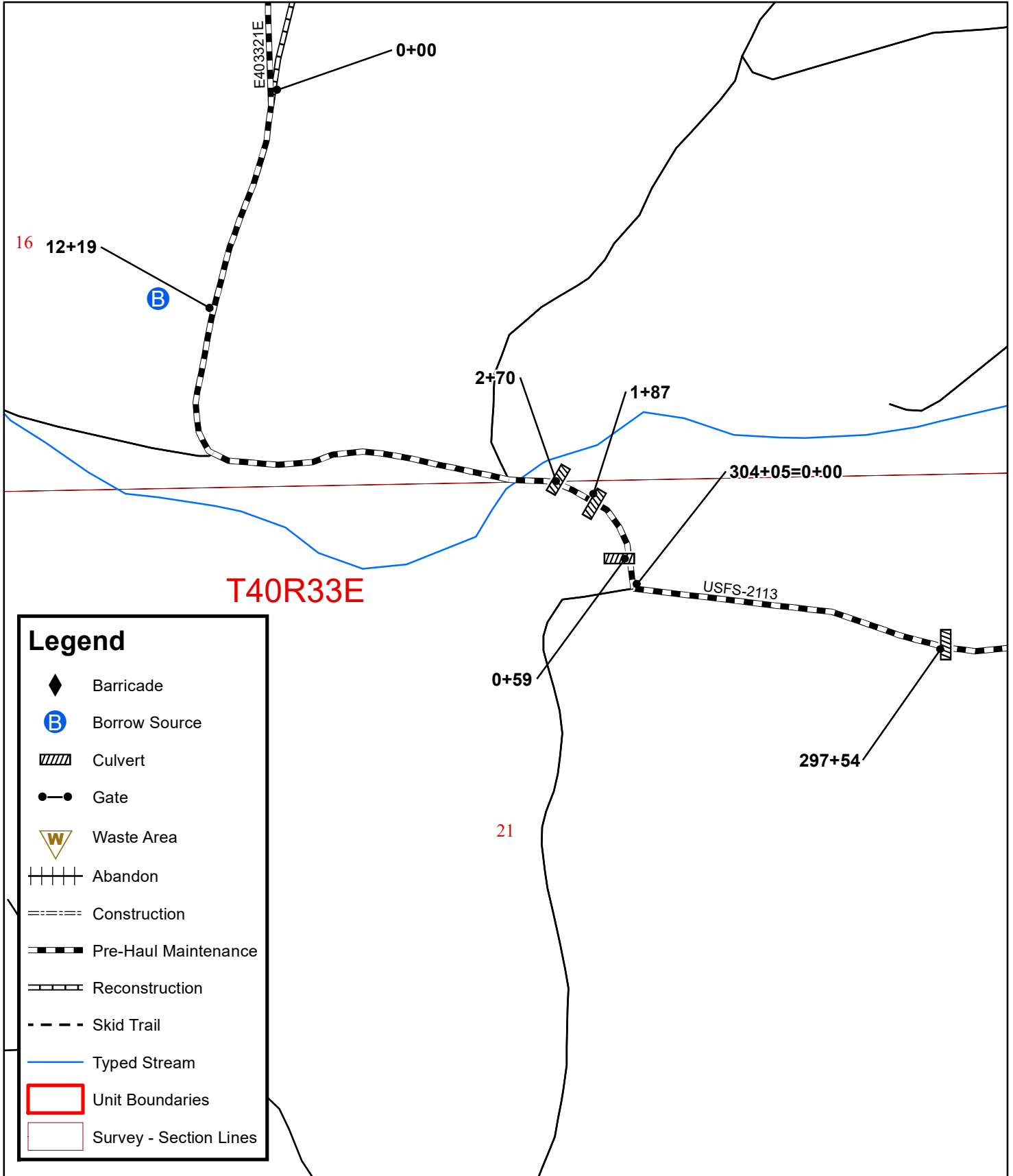


# Washington State Department of Natural Resources

Sale Name: QVulcan  
 Contract No.: 30-105823

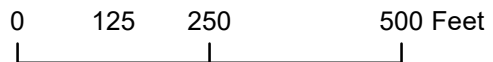
Road Plan Map  
 Page 6 of 7

Region: Northeast  
 County: Ferry



Drawn By: M. Karnstein

1 inch = 250 feet

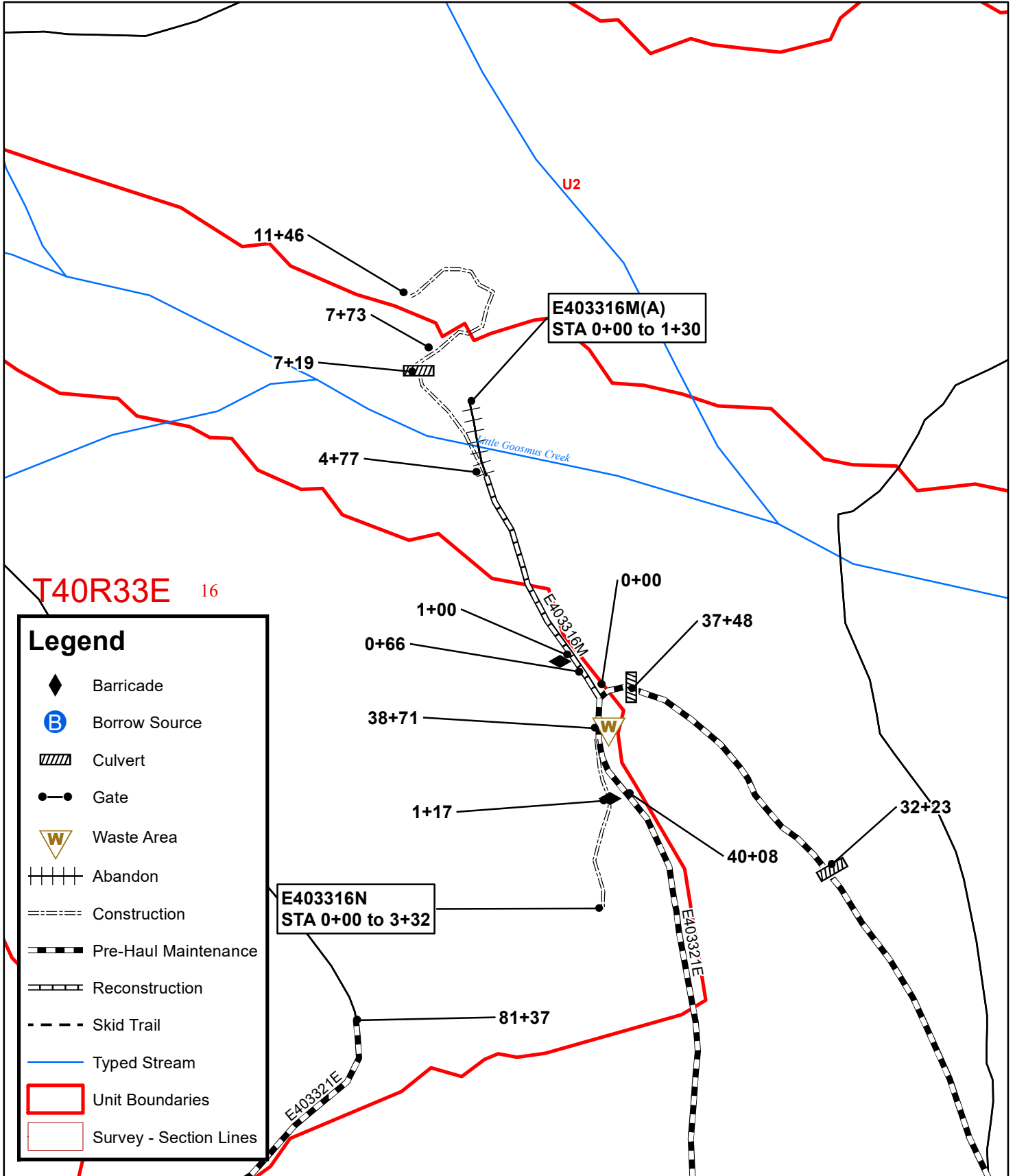


# Washington State Department of Natural Resources

Sale Name: QVulcan  
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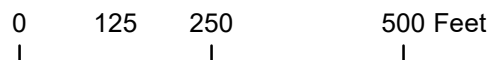
Road Plan Map  
 Page 7 of 7

Region: Northeast  
 County: Ferry



Drawn By: M. Karnstein

1 inch = 250 feet



STATE OF WASHINGTON  
DEPARTMENT OF NATURAL RESOURCES

VULCAN TIMBER SALE ROAD PLAN  
FERRY COUNTY  
HIGHLANDS DISTRICT  
NORTHEAST REGION

AGREEMENT NO.: 30-105823

STAFF ENGINEER: MACKENZIE KARNSTEIN

DATE: 09-25-2023

DRAWN & COMPILED BY: MACKENZIE KARNSTEIN

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>
E403315E	7.28	Pre-Haul Maintenance
E403315E	49.74	Reconstruction
E403315E	3.54	Construction
E403315E(A)	2.95	Abandonment
E403316F	33.54	Reconstruction
E403316G	8.30	Reconstruction
E403316M	4.77	Reconstruction
E403316M	6.69	Construction
E403316M(A)	1.30	Abandonment
E403316N	3.32	Construction
E403321E	81.37	Pre-Haul Maintenance
E403322F	38.47	Pre-Haul Maintenance
E403322M	47.53	Pre-Haul Maintenance
E403322P	36.15	Construction
E403322Q	6.90	Construction
USFS-2113	209.05	Pre-Haul Maintenance
USFS-2114	14.26	Pre-Haul Maintenance
Vulcan Mountain Road	15.56	Pre-Haul Maintenance

#### 0-4 CONSTRUCTION

Construction includes, but is not limited to clearing & grubbing, pioneering & decking logs, subgrade construction, rolling dip, cross drain, and culvert 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. Construction requirements are further described in 3, 4, and 5.

<u>Road</u>	<u>Stations</u>	<u>Requirements</u>
E403315E	57+02 to 60+56	See sections 3, 4 and 5.
E403316M	4+77 to 11+46	See sections 3, 4 and 5.
E403316N	0+00 to 3+32	See sections 3, 4 and 5.
E403322P	0+00 to 36+15	See sections 3, 4 and 5.
E403322Q	0+00 to 6+90	See sections 3, 4 and 5.

#### 0-5 RECONSTRUCTION

Reconstruction includes, but is not limited to clearing & grubbing, pioneering & decking logs, subgrade construction, rolling dip, cross drain, and culvert installation, cut & fill, embankment construction, riprap and rock application. Reconstruct to the TYPICAL SECTION SHEET, ROCK LIST, and CULVERT & DRAINAGE LIST, for general specifications, unless otherwise specified in design details. Reconstruction requirements are further described in 3, 4, and 5.

<u>Road</u>	<u>Stations</u>	<u>Requirements</u>
E403315E	7+28 to 57+02	See sections 3, 4 and 5.
E403316F	0+00 to 33+54	See sections 3, 4 and 5.
E403316G	0+00 to 8+30	See sections 3, 4 and 5.
E403316M	0+00 to 4+77	See sections 3, 4 and 5.

#### 0-6 PRE-HAUL MAINTENANCE

Maintenance includes, but is not limited to brushing, subgrade reshaping, subgrade lifting, rolling dip, and culvert installation, grading, riprap and rock application. Reference the TYPICAL SECTION SHEET, ROCK LIST, and CULVERT & DRAINAGE LIST, for general specifications. Maintenance requirements are further described in sections 3, 4, and 5.

<u>Road</u>	<u>Stations</u>	<u>Requirements</u>
E-403315E	0+00 to 7+28	See sections 3, 4 and 5.
E403321E	0+00 to 81+37	See sections 3, 4 and 5.
E403322F	0+00 to 38+47	See sections 3, 4 and 5.
E403322M	0+00 to 47+53	See sections 3, 4 and 5.
USFS-2113	95+00 to 304+05	See sections 3, 4 and 5.
USFS-2114	0+00 to 14+26	See sections 3, 4 and 5.

Vulcan Mountain Road	79+44 to 95+00	See sections 3, 4 and 5.
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**0-7 POST-HAUL MAINTENANCE**

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

**0-9 DECOMMISSIONING**

This project includes decommissioning listed in Clause 9-20 ROAD DECOMMISSIONING.

**0-10 ABANDONMENT**

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

**SECTION 1 – GENERAL**

**1-1 ROAD PLAN CHANGES**

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

**1-2 UNFORESEEN CONDITIONS**

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

**1-3 ROAD DIMENSIONS**

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

**1-4 ROAD TOLERANCES**

Purchaser shall perform road work within the tolerances listed below. The tolerance class for each road is listed on the TYPICAL SECTION SHEET. These tolerances do not supersede clauses 1-6, 4-3, and 4-4.

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

**1-6 ORDER OF PRECEDENCE**

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

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

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

**1-7 TEMPORARY ROAD CLOSURE**

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

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

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

**1-9 DAMAGED METALLIC COATING**

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

**1-10 WSDOT STANDARD SPECIFICATION REFERENCE**

References in this road plan to "WSDOT Standard Specifications" mean the Washington State Department of Transportation's Standard Specifications for Road, Bridge, and Municipal Construction 2012 (M41-10).

**1-15 ROAD MARKING**

Purchaser shall perform road work in accordance with the state's marked location. All road work and maintenance is marked with orange flagging.

**1-20 COMPLETE BY DATE**

Purchaser shall complete road work, except decommissioning and abandonment, before the start of timber haul.

**1-21 HAUL APPROVAL**

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

**1-22 WORK NOTIFICATIONS**

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

**1-23 ROAD WORK PHASE APPROVAL**

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

- Subgrade construction
- Drainage installation

**1-25 ACTIVITY TIMING RESTRICTION**

The operation of road construction equipment is not allowed on weekends or state recognized holidays, unless authorized in writing by the Contract Administrator.

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

<u>Road</u>	<u>Activity</u>	<u>Closure Period</u>
All roads	Transporation of heavy equipment	March 15 to June 1
All Construction	Construction	December 1 to June 1

**1-26 OPERATING DURING CLOSURE PERIOD**

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

**1-29 SEDIMENT RESTRICTION**

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

### **1-30 CLOSURE TO PREVENT DAMAGE**

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

- Wheel track rutting exceeds 4 inches on jaw run/ pit run roads.
- Wheel track rutting exceeds 4 inches on crushed rock roads.
- Wheel track rutting exceeds 6 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.
- When, in the opinion of the Contract Administrator excessive road damage or rutting may occur.

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

### **1-33 SNOW PLOWING RESTRICTION**

Snowplowing will be allowed after the execution of a written SNOW PLOWING AGREEMENT to be prepared by the Purchaser. The plan is subject to written approval by the Contract Administrator before any snow plowing operations. If damage occurs while plowing, further permission to plow may be revoked by the Contract Administrator.

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

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

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

## **SECTION 2 – MAINTENANCE**

### **2-1 GENERAL ROAD MAINTENANCE**

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

### **2-4 PASSAGE OF LIGHT VEHICLES**

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



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

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

**2-6 CLEANING CULVERTS**

All inlets and outlets of culverts shall be cleaned before the haul of timber and shall be subject to the written approval of the Contract Administrator.

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

Purchaser shall clean ditches, headwalls, and catchbasins. Work must be completed before haul of timber.

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

**3-1 BRUSHING**

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

**3-2 BRUSHING RESTRICTION**

Pulling, digging, pushing over, and other non-cutting methods used for vegetation removal may not be used for brushing. Purchaser shall 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 may not be used for brushing unless otherwise approved in writing by the Contract Administrator.

**3-5 CLEARING**

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

**3-7 RIGHT-OF-WAY DECKING**

Purchaser shall deck all right-of-way timber. Decks must be parallel to the road centerline and placed within the cleared right-of-way. Decks must 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**

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

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

**3-10 GRUBBING**

Purchaser shall remove all stumps between the grubbing limits specified on the TYPICAL SECTION SHEET. Purchaser shall also remove stumps with undercut roots outside the grubbing limits. Purchaser shall remove stumps using a hydraulic mounted excavator unless authorized in writing by the Contract Administrator. Stumps over 22 inches diameter must be split. Stumps over 40 inches must be quartered. Grubbing must be completed before starting excavation and embankment.

**3-12 STUMP PLACEMENT**

Purchaser shall place grubbed stumps outside of the clearing limits as directed by the Contract Administrator and in compliance with all other clauses in this road plan. Stumps shall be piled. Piles shall be dirt free and piled with a hydraulic excavator.

**3-14 STUMPS WITHIN DESIGNATED WASTE AREAS**

Purchaser is not required to remove stumps within waste areas if they are cut flush with the ground.

<u>Road</u>	<u>Waste Area Location</u>	<u>Notes</u>
E403321E	38+71	Left side
USFS-2114	4+08	Left Side

**3-20 ORGANIC DEBRIS DEFINITION**

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

**3-21 DISPOSAL COMPLETION**

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

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

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

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

Purchaser shall not place organic debris in the following areas:

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

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

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

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

Purchaser shall scatter organic debris in natural openings unless otherwise detailed in this road plan. Where natural openings are unavailable or restrictive, alternate debris disposal methods are subject to the written approval of the Contract Administrator.

### **3-30 EXCLUSION OF DOZER BLADES**

Purchaser shall not use dozer blades for the piling of organic debris.

### **3-31 PILING**

Purchaser shall pile organic debris no closer than 20 feet from standing timber and no higher than 10 feet in areas specified in Clause 4-37 WASTE AREA LOCATION, within the cleared right-of-way, or in natural openings, as designated by the Contract Administrator. Piles must be free of rock and soil. Debris piles shall be made to be burnable, clean, tight, and free of rock or soil.

### **3-32 END HAULING ORGANIC DEBRIS**

On slopes greater than 45%, Purchaser shall end haul or push organic debris to the designated waste areas specified in Clause 4-37 WASTE AREA LOCATION or to a waste area designated by the Contract Administrator.

## **SECTION 4 – EXCAVATION**

### **4-1 EXCAVATOR CONSTRUCTION**

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 may not extend more than 1000 feet beyond completed construction unless approved in writing by the Contract Administrator. In addition, the following actions must be taken as pioneering progresses:

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

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

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

- Grade and alignment must have smooth continuity, without abrupt changes in direction.
- Maximum grades may not exceed 18 percent favorable and 12 percent adverse.
- Minimum curve radius is 60 feet at centerline.
- Maximum grade change for sag vertical curves is 6% in 100 feet.
- Maximum grade change for crest vertical curves is 6% 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.

Purchaser shall follow these standards for switchbacks:

- Maximum adverse grades for switchbacks is 10%.
- Maximum favorable grades for switchbacks is 12%.
- Maximum transition grades entering and leaving switchbacks is a 5% grade change.
- Transition grades required to meet switchback grade limitations must be constructed on the tangents preceding and departing from the switchbacks.

**4-5 CUT SLOPE RATIO**

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

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

**4-6 EMBANKMENT SLOPE RATIO**

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

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

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

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

**4-8 CURVE WIDENING**

The minimum widening placed on the inside of curves is:

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

**4-9 EMBANKMENT WIDENING**

The minimum embankment widening is:

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

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

**4-12 FULL BENCH CONSTRUCTION**

Where side slopes exceed 50%, Purchaser shall use full bench construction for the entire subgrade width. Purchaser shall end haul waste material to the location specified in Clause 4-37 WASTE AREA LOCATION.

**4-16 ROAD PRISM AND DITCH REPAIR**

At the following location(s), Purchaser shall use borrow material from the locations identified in this contract to build back the road prism and ditch to meet the requirements of the TYPICAL SECTION SHEET. The road subgrade should be compacted using a hand vibratory compactor at minimum. Completion of repair work shall be subject to the written approval of the Contract Administrator.

Road	Stations
E403321E	0+00 to 1+87

**4-20 SUBGRADE DIMENSIONS FOR INTERSECTIONS**

On the following road(s), Purchaser shall construct the subgrade to the dimensions shown on the INTERSECTION DETAIL.

<u>Road</u>	<u>Stations</u>
E403316N	0+00 to 0+50
E403322Q	0+00 to 0+50

**4-21 TURNOUTS**

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

**4-22 TURNAROUNDS**

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

**4-25 DITCH CONSTRUCTION AND RECONSTRUCTION**

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

**4-27 DITCH WORK – MATERIAL USE PROHIBITED**

Purchaser shall not pull ditch material across the rocked roads or mix in with the road surface. Excavated material must be scattered outside the grubbing limits where side slopes are less than 45%. On side slopes greater than 45%, excavated material must be end hauled to the location specified in Clause 4-37 WASTE AREA LOCATION.

**4-28 DITCH DRAINAGE**

Ditches must drain to cross-drain culverts or ditchouts. Ditches shall not drain into streams or stream culverts.

**4-29 DITCHOUTS**

The Purchaser shall construct ditch outs as identified on the CULVERT & DRAINAGE LIST, as needed, and as directed by the Contract Administrator. Ditch outs shall be constructed in a manner that diverts ditch water onto the forest floor, and prevents sediment delivery into streams. Ditch outs shall have excavation back slopes no steeper than a 1:1 ratio.

**4-35 WASTE MATERIAL DEFINITION**

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

**4-36 DISPOSAL OF WASTE MATERIAL**

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

**4-37 WASTE AREA LOCATION**

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

<u>Road</u>	<u>Waste Area Location</u>	<u>Notes</u>
E403321E	38+71	Left side
USFS-2114	4+08	Left Side

**4-38 PROHIBITED WASTE DISPOSAL AREAS**

Purchaser shall not deposit waste material in the following areas:

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

**4-46 COMMON BORROW**

Common borrow consists of soil, and/or aggregate that is non-plastic and contains no more than 5% clay, organic debris, or trash by volume. The material is considered non-plastic if the fines in the sample cannot be rolled, between the hand and a smooth surface, into a thread at any moisture content. Common borrow material must be free of rocks greater than 6 inches in any dimension.

**4-49 BORROW SOURCE**

Purchaser shall obtain borrow material from the listed borrow source(s) or borrow sources identified or approved by the Contract Administrator. Development of the borrow source must be in accordance with a written BORROW SOURCE DEVELOPMENT PLAN to be submitted by the Purchaser and approved in writing by the Contract Administrator.

<u>Source</u>	<u>Location</u>	<u>Notes</u>
E403315E	19+00	Left side
E403316N	0+00 to 0+50	Common borrow* can be obtained from excess excavation material during construction of road intersection.
E403321E	12+19	Left side
E403322Q	0+00 to 0+50	Common borrow* can be obtained from excess excavation material during construction of road intersection.
E403322M	25+24	Right side

\*See Clause 4-46 COMMON BORROW for specific requirements of common borrow.

#### 4-50 BORROW APPLICATION

Purchaser shall apply borrow in accordance with quantities shown below. Borrow must be spread, shaped, and compacted full width concurrent with hauling operations.

<u>Road</u>	<u>Stations</u>	<u>Cubic Yards (Compacted)</u>	<u>Notes</u>
E403315E	3+53 to 5+95	Not to Exceed 600 CY	See Vulcan Timber Sale E-403315E Temporary Culvert Design
E403321E	0+00 to 1+87	Not to exceed 200 CY	Repair left side ditch and road prism
E403322F	17+26	10	Apply to road surface to improve gradability
E403322M Skid	1+07 to 3+07	Not to Exceed 300 CY	Apply borrow material for culvert embankment

#### 4-55 ROAD SHAPING

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



manner, and must be uniform, firm, and rut-free. Purchaser shall accomplish all shaping 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. Except as otherwise specified in this plan, a vibratory plate compactor or tamper shall be used for areas specifically requiring keyed embankment construction, and for embankment segments too narrow to accommodate equipment. Compaction with a plate compactor shall be made by a minimum of three full coverages; each lift shall not exceed 6 inches in depth.

**4-61 SUBGRADE COMPACTION**

Purchaser shall compact constructed and reconstructed subgrades by routing equipment over the entire width except ditch. Purchaser shall obtain written approval from the Contract Administrator for subgrade compaction 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**

Purchaser shall remove berms from road shoulders to permit the escape of runoff. The construction of ditchouts is required where ponding could result from the effects of sidecast debris.

**5-2 PUNCHEON REPLACEMENT**

On the following road(s), Purchaser shall remove puncheons and replace them with a culvert as specified on the CULVERT & DRAINAGE LIST.

<u>Road</u>	<u>Stations</u>
E403316G	6+34

**5-5 CULVERTS**

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

**5-6 CULVERT TYPE**

Purchaser shall install culverts made of new steel material in accordance with Clauses 10-15 through 10-24.

**5-7 USED CULVERT MATERIAL**

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

**5-8 TEMPORARY STREAM CULVERT INSTALLATION**

Purchaser shall install temporary culverts as shown in the CULVERT & DRAINAGE LIST. Temporary stream culverts must be located in the natural channel of the stream. Temporary culverts must be removed as indicated in Clause 9-21 ROAD ABANDONMENT.

<u>Road</u>	<u>Stations</u>
E403315E	4+41

**5-12 UNUSED MATERIALS STATE PROPERTY**

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

**5-15 CULVERT INSTALLATION**

Culvert installation must be in accordance with the CULVERT AND DRAINAGE SPECIFICATION DETAIL and the National Corrugated Metal Pipe Association's "Installation Manual for Corrugated Steel Drainage Structures". Culverts 18 inch diameter and over shall be banded using lengths of no less than 10 feet, and no more than one length less than 16 feet. Shorter section of banded culvert shall be installed at the inlet end.

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

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

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

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

**5-18 CULVERT DEPTH OF COVER**

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

**5-20 ENERGY DISSIPATERS**

Purchaser shall install energy dissipaters in accordance with the CULVERT AND DRAINAGE SPECIFICATION DETAIL. Energy dissipater installation is subject to approval by the Contract Administrator. The type of energy dissipater and the amount of material must be consistent with the specifications listed on the CULVERT AND DRAINAGE SPECIFICATION DETAIL. Rock used for energy dissipaters must be light loose rip rap. Placement must with a zero-drop-height only. No placement by end dumping or dropping of rock is allowed. Light loose rip rap shall meet the specifications in Clause 6-50 LIGHT LOOSE RIP RAP.

**5-25 CATCH BASINS**

Purchaser shall construct catch basins in accordance with CULVERT AND DRAINAGE SPECIFICATION DETAIL. Minimum dimensions of catch basins are 4 feet wide and 4 feet long with back slopes consistent with Clause 4-5 CUT SLOPE RATIO.

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

Purchaser shall construct headwalls in accordance with the CULVERT AND DRAINAGE SPECIFICATION DETAIL at all permanent cross drain culverts. Rock used for headwalls must meet the specifications for Light Loose Rip Rap. Rock must be placed on shoulders, slopes, and around culvert inlets and outlets. Minimum specifications require that rock be placed at a width of one culvert diameter on each side of the culvert opening, and to a height of one culvert diameter above the top of the culvert. Rock may not restrict the flow of water into culvert inlets or catch basins. Placement must be with a zero-dropheight only. No placement by end dumping or dropping of rock is allowed. Light loose rip rap shall meet the specifications in Clause 6-50 LIGHT LOOSE RIP RAP.

**5-27 ARMORING FOR CULVERTS**

Purchaser shall armor stream crossing culverts and cross-drain culverts in accordance with the CULVERT & DRAINAGE LIST.

**5-30 DRIVABLE WATERBAR CONSTRUCTION**

Purchaser shall construct drivable waterbars in accordance with the DRIVABLE WATERBAR DETAIL. Minimum frequency of drivable waterbars shall be at a maximum spacing of 300 feet horizontal or one for every 10 feet of vertical change. Where grade exceeds 15% slope, minimum frequency of drivable waterbars shall be at a maximum spacing of 150 feet horizontal.

**5-31 ROLLING DIP CONSTRUCTION**

Purchaser shall construct rolling dips in accordance with the ROLLING DIP DETAIL and as specified on the CULVERT AND DRAINAGE LIST. Rolling dips must be installed concurrently with construction of the subgrade and must be maintained in an operable condition.

**5-33 NATIVE SURFACE ROADS**

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

**SECTION 6 – ROCK AND SURFACING**

**6-5 ROCK FROM COMMERCIAL SOURCE**

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

<u>Possible Source</u>	<u>Location</u>
Stotts Construction, Inc.	17814 N. Highway 21 Curlew, WA 99118

**6-22 FRACTURE REQUIREMENT FOR ROCK**

A minimum of 50% by visual inspection of coarse aggregate must have at least one fractured face. Coarse aggregate is the material retained on each specification sieve sized 1/4-inch and above, if that sieve retains more than 5% of the total sample.

**6-23 ROCK GRADATION TYPES**

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

**6-28 1 ¼-INCH MINUS CRUSHED ROCK**

% Passing 1 ¼" square sieve	100%
% Passing 5/8" square sieve	50 - 80%
% Passing U.S. #4 sieve	30 - 50%
% Passing U.S. #40 sieve	3 - 18%
% Passing U.S. #200 sieve	5%

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

**6-50 LIGHT LOOSE RIP RAP**

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

<u>Quantity</u>	<u>Approximate Size Range</u>
20% to 90%	500 lbs. to 1 ton (18" - 28")
15% to 80%	50 lbs. to 500 lbs. (8" - 18")
10% to 20%	3 inch to 50 lbs. (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 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**

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

**6-71 ROCK APPLICATION**

Purchaser shall apply rock in accordance with the specifications and quantities shown on the ROCK LIST. Rock must be spread, shaped, and compacted full width concurrent with rock hauling operations.

**6-73 ROCK FOR WIDENED PORTIONS**

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

**6-76 DRY WEATHER ROCK COMPACTION**

The Contract Administrator may require the application of water to facilitate compaction of the rock surfacing. The method of water application is subject to approval by the Contract Administrator.

**6-80 WATERING FOR DUST ABATEMENT**

Purchaser shall use water for dust abatement as directed by the Contract Administrator.

**SECTION 7 – STRUCTURES**

**7-5 STRUCTURE DEBRIS**

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

**7-6 STREAM CROSSING INSTALLATION**

Purchaser shall install stream crossing structures in accordance with the manufacturer's requirements.

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

Purchaser must construct bank protection in accordance with the stream crossing, design, specifications, and details.

**7-56 STEEL PIPE, PIPE ARCH, AND STRUCTURAL PLATE INSTALLATION**

Purchaser shall install steel pipe, pipe arches, and structural plate culverts in accordance with the National Corrugated Steel Pipe Association "Installation Manual for Corrugated Steel Pipe, Pipe Arches, and Structural Plate." Installation is subject to the inspection and approval of the Contract Administrator before placement and backfill. The latest edition of the NCSA Installation Manual can be found at [www.ncspa.org](http://www.ncspa.org).

**7-57 CULVERT SHAPE CONTROL**

Purchaser shall monitor the culvert shape during backfill and compaction. Special attention must be paid to maintaining the structure's rise dimensions, concentricity, and smooth uniform curvature. If compaction methods are resulting in peaking or deflection of the culvert, Purchaser shall modify the compaction method to achieve the appropriate end result.

**7-60 BRUSH MAT FOR SEDIMENT CONTROL**

At the following location(s), Purchaser shall construct a temporary brush mat at the stream crossing to stabilize the skid trail and retain sediment. Brush mat shall be a

minimum of 12” in depth, and placed on top of culvert backfill (bedding material). Culvert backfill shall meet a minimum cover of 18”, which shall supercede the minimum cover requirements for culverts outlined in the CULVERT AND DRAINAGE SPECIFICATIONS DETAIL and recommended by the culvert manufacturer for the type and size of the pipe.

Brush material shall not contribute to the 1.5 feet minimum cover requirement for the culvert outlined above and shall not contribute to the minimum cover recommended by the culvert manufacturer for the type and size of the pipe.

Location	Station
E403322M Skid	2+07

**7-70 GATE CLOSURE**

Purchaser shall keep metal gates closed and locked except during periods of haul. Purchaser shall keep 4-wire gates closed during periods of haul except for passing vehicles, unless approved by the Contract Administrator. All gates that remain open during haul must be locked or securely fastened in the open position. All gates must be closed at termination of use.

<u>Road</u>	<u>Station</u>	<u>Type</u>
E403322F	8+50	Metal

**SECTION 9 – POST-HAUL ROAD WORK**

**9-1 EARTHEN BARRICADES**

Purchaser shall construct barricades in accordance with the SPOILS BERM DETAIL. Barricades shall be constructed on the following roads after the completion of timber haul and before the termination of this contract.

<u>Road</u>	<u>Stations</u>
E403315E	7+28
E403316F	2+28
E403316M	1+00
E403316N	1+17
E403322P	0+70

**9-2 CULVERT REMOVAL FROM LIVE STREAM**

On the following road(s), Purchaser shall remove existing culverts from live streams and leave the resulting channel open with excavation slope and excavated channel width as specified. Place excavated material in a waste area approved in writing by the Contract Administrator. Culvert removal from live stream must be in accordance with the Vulcan Timber Sale E-40331E Temporary Culvert Plans.

<u>Road</u>	<u>Station</u>	<u>Excavated Channel Width</u>	<u>Slope Ratio</u>
E403315E	4+41	4 feet	2H:1V

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

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

At the following location, Purchaser shall remove culvert structure debris that exists adjacent to the roadway, present from previous culvert removal. Components of the culvert(s) must be removed from state land. Purchaser shall not bury culvert debris, and shall ensure that none of the materials enter streams.

<u>Road</u>	<u>Station</u>
E403322F	26+60

**9-5 POST-HAUL MAINTENANCE**

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

**9-10 LANDING DRAINAGE**

Purchaser shall provide for drainage of the landing surface, to the approval, in writing, of the Contract Administrator.

**9-11 LANDING EMBANKMENT**

Purchaser shall slope landing embankments to the original construction specifications.

**9-20 ROAD DECOMMISSIONING**

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

<u>Road</u>	<u>Stations</u>	<u>Type</u>
E403315E	0+00 to 60+56	Light Decommissioning
E403316F	0+00 to 33+54	Light Decommissioning
E403316M	0+00 to 11+46	Light Decommissioning
E403316N	0+00 to 3+32	Light Decommissioning
E403322P	0+00 to 36+15	Light Decommissioning



**9-21 ROAD ABANDONMENT**

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

<u>Road</u>	<u>Stations</u>	<u>Type</u>
E403315E(A)	0+00 to 2+95	Light Abandonment
E403316M(A)	0+00 to 1+30	Light Abandonment

**9-22 LIGHT ABANDONMENT**

- Remove road shoulder berms except as directed.
- Construct non-drivable waterbars according to the attached NON-DRIVABLE WATERBAR DETAIL at a maximum spacing that will produce a vertical drop of no more than 10 feet between waterbars or between natural drainage paths and with a maximum spacing of 100 feet, or as marked in the field.
- Skew waterbars at least 30 degrees from perpendicular to the road centerline on roads in excess of 3 percent grade.
- Key waterbars into the cut-slope to intercept the ditch. Waterbars must be outsloped to provide positive drainage. Outlets must be on stable locations.
- Block roads with earthen barricades in accordance with the attached SPOILS BERM DETAIL.
- Remove culverts.
- Scatter woody debris onto abandoned road surfaces.
- Fill all ditches.
- Outslope the road surface to 4%.

**9-23 LIGHT DECOMMISSIONING**

- Remove road shoulder berms except as directed.
- Construct drivable waterbars 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 100 feet, or as marked in the field.
- Skew waterbars at least 30 degrees from perpendicular to the road centerline on roads in excess of 3 percent grade.
- Key waterbars into the cut-slope to intercept the ditch. Waterbars must be outsloped to provide positive drainage. Outlets must be on stable locations.
- Block roads with earthen barricades in accordance with the attached SPOILS BERM DETAIL.

**9-25 DITCH CONSTRUCTION AFTER HAUL**

Purchaser shall construct a ditch across the following roads before the termination of this contract.

<u>Road</u>	<u>Stations</u>	<u>Notes</u>
E403316M	0+66	Install ditch across road.
USFS-2113	140+26	Install ditch across spur road (on right side of road).

## SECTION 10 MATERIALS

### 10-15 CORRUGATED STEEL CULVERT

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

### 10-21 METAL BAND

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

### 10-24 GAUGE AND CORRUGATION

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

<u>Diameter</u>	<u>Gauge</u>	<u>Corrugation</u>
18" - 36"	16 (0.064")	2 <sup>2</sup> / <sub>3</sub> " X 1 <sup>1</sup> / <sub>2</sub> "
48"	14 (0.079")	2 <sup>2</sup> / <sub>3</sub> " X 1 <sup>1</sup> / <sub>2</sub> "
54" to 96"	12 (0.109")	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.

### **Sturctures**

- 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

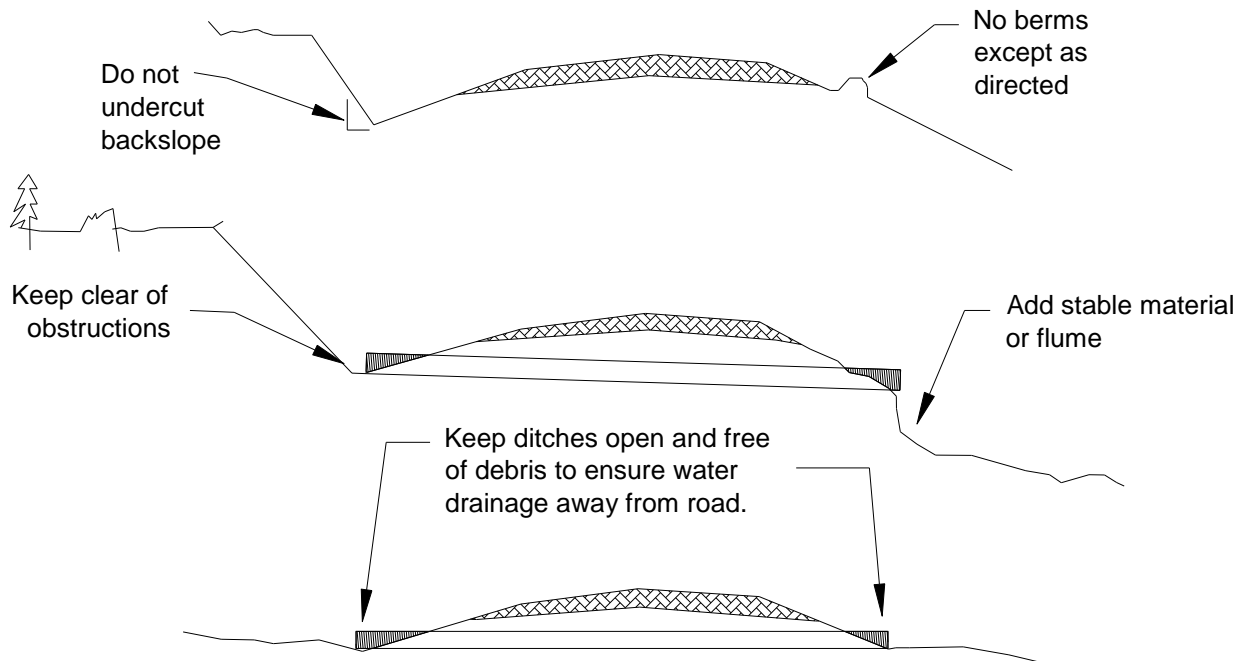
- Perform preventative maintenance work to safeguard against storm damage, such as blading to ensure correct runoff, ditch and culvert cleaning, and waterbar maintenance.

### 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.



STATE OF WASHINGTON  
DEPARTMENT OF NATURAL RESOURCES

Application No.: 30-105823

Name of Sale: Vulcan

Date: 09-21-2023

# 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				
E-403315E	3+49												1	12
E-403315E	4+41	36	16		44									12,3,6,10,11,15
E-403315E	22+16	18	16		28			1	1					12,3,6,10,11
E-403315E	26+56												1	12
E-403315E	30+91												1	12
E-403315E	32+16	30	16		48			1	1					12,3,6,10,11
E-403315E	59+83	18	16		46			1	1					12,3,6,10,11
E-403316F	19+14												1	
E-403316F	20+14	30	16		36			1	1					12,3,6,10,11
E-403316G	6+34	24	16		56			1	1					12,3,6,8,10,11
E-403316M	7+19	24	16		40			1	1					12,3,6,10,11
E-403316M	7+73												1	12
E-403321E	0+59	18	16		44			1	1					12,3,6,8,10,11
E-403321E	1+87	30	16		36			1	1					12,3,6,10,11
E-403321E	2+70	18	16		36			1	1					12,3,6,10,11
E-403321E	32+23	18	16		28			1	1					12,3,6,10,11
E-403321E	37+48	18	16		50			1	1					12,3,6,10,11
E-403321E	40+08												1	12,13
E-403322F	28+80	18	16		28			1	1					12,3,6,10,11
E-403322M	36+06												1	12
E-403322M	42+80												1	12
E-403322M Skid#	2+07	24			30			1	1					12,3,6,10,11
E-403322P	6+99												1	12
E-403322P	9+69												1	12
E-403322P	13+29	24	16		40			1	1					12,3,6,10,11
E-403322P	15+91	18	16		40			1	1					12,3,6,10,11
E-403322P	22+68												1	12
E-403322Q	3+47												1	12
E-403322Q	6+60												1	12
USFS-2113	269+63												1	11
USFS-2114	8+30	30	16		40			1	1					12,3,6,8,10,11

## 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 or Puncture
9. See Rolling Dip Detail D5
10. See Pipe Installation Detail D1
11. Install Energy dissipator - See D1
12. See Standard 45 Rolling Dip Detail
13. Construct ditch out on left side of road
14. Construct ditch out on right side of road
15. Temporary Culvert

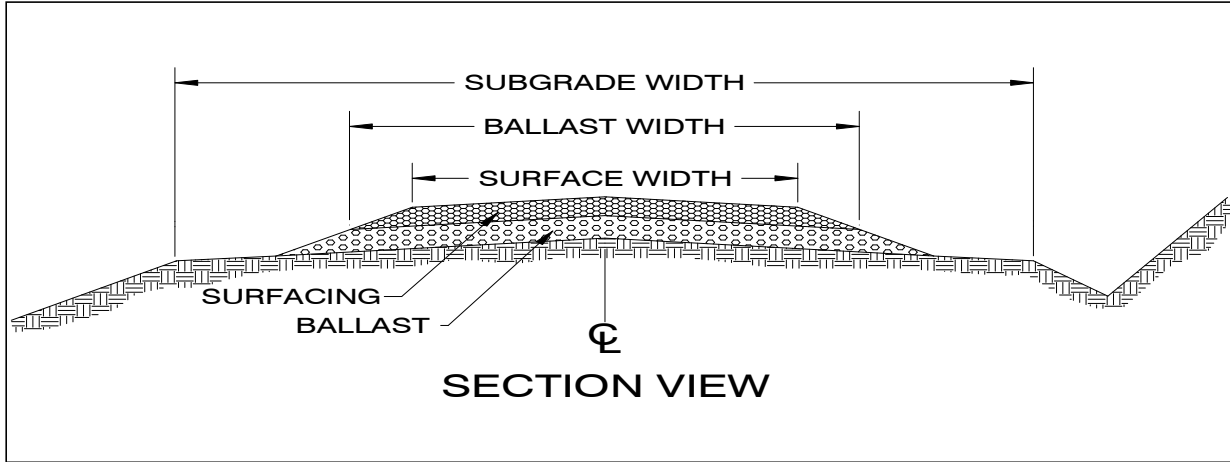
\*Not a road

STATE OF WASHINGTON  
DEPARTMENT OF NATURAL RESOURCES

Application No.: 30-105823

Name of Sale: Vulcan

# 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.

ROAD NAME	START STATION	END STATION	SUBGRADE WIDTH (ft)	BALLAST SOURCE	BALLAST WIDTH (ft)	BALLAST DEPTH (in)	BALLAST QTY (cu.yd./sta)	SURFACE SOURCE	SURFACE WIDTH (ft)	SURFACE DEPTH (in)	SURFACE QTY (cu.yd./sta)	SURFACE QTY (cu. yd total)	FABRIC WIDTH (ft)
E-403315E	03+91	04+91					0		20	4	25	25.3	
E-403315E	31+66	32+66					0		12	4	15	15.4	
E-403315E	59+33	60+33					0		12	4	15	15.4	
E-403316F	19+64	20+64					0		12	4	15	15.4	
E-403316G	05+84	06+84					0		12	4	15	15.4	
E-403316M	06+69	07+69					0		12	4	15	15.4	
E-403321E	01+37	02+37					0		12	4	15	15.4	
E-403322F	28+30	29+30					0		12	4	15	15.4	
E403322P	12+79	13+79					0		12	4	15	15.4	
E403322P	15+41	16+41					0		12	4	15	15.4	
USFS-2113	154+68	155+33					0		12	4	15	10.0	
USFS-2113	164+55	165+20					0		12	4	15	10.0	
USFS-2113	297+04	298+04					0		12	4	15	15.4	
USFS-2114	07+80	08+80					0		12	4	15	15.4	
USFS-2114	11+59	12+24					0		12	4	15	10.0	
Vulcan Mountain Road	81+45	82+10					0		12	4	15	10.0	
Vulcan Mountain Road	85+77	86+42					0		12	4	15	10.0	

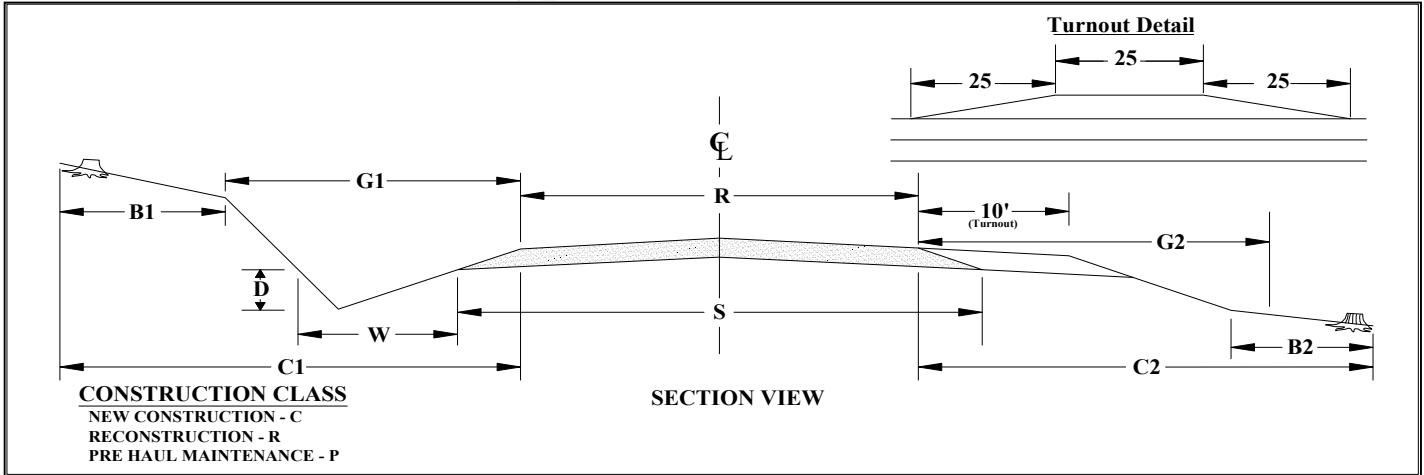
DATE: 08-28-2023

State of Washington  
Department of Natural Resources

Application No. : 30-105823

Name of Sale: Vulcan

## Typical Section Sheet



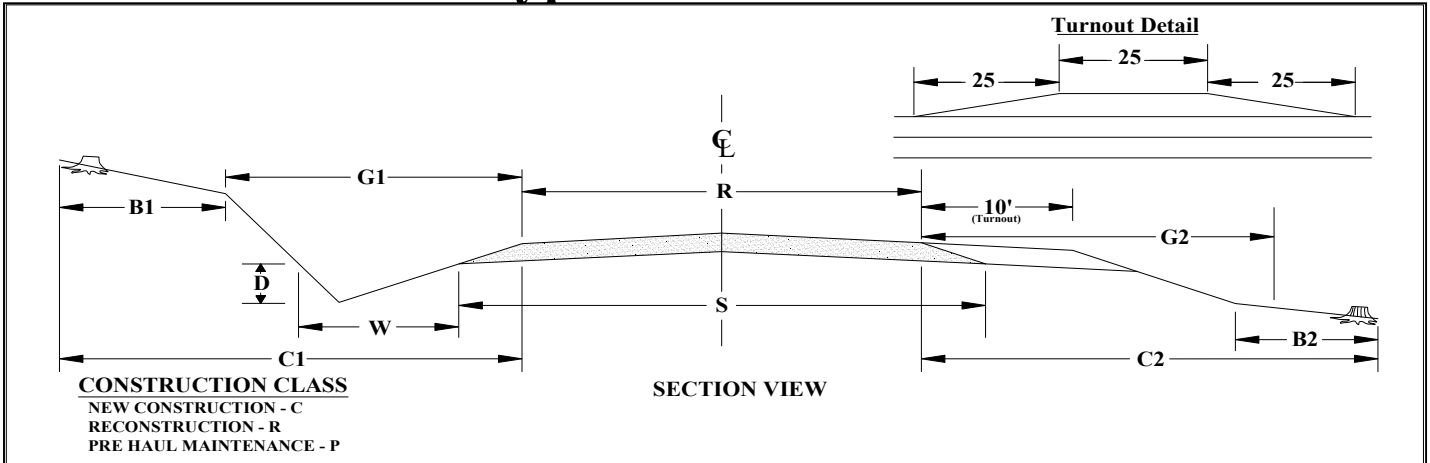
ROAD NAME	START STATION	END STATION	CONSTRUCTION CLASS	SUBGRADE WIDTH (S)	ROAD WIDTH (R)	INSLOPE "/>10'	OUTSLOPE "/>10'	CROWN " AT CL	DITCH WIDTH (W)	DITCH DEPTH (D)	DITCH 2 SIDES			GRUBBING CUT BANK (G1)	GRUBBING FILL TOE (G2)	ROAD CUT CLEARING (B1)	ROAD FILL CLEARING (B2)	R/W CUT CLEARING (C1)	R/W FILL CLEARING (C2)
E403315E	0+00	3+91	P		12	4								3	3			6	6
E403315E	3+91	4+91	P		12			3	3	1				3	3			6	6
E403315E	4+91	7+78	P		12		4							3	3			6	6
E403315E	7+28	31+66	R		12		4							3	3			6	6
E403315E	31+66	32+66	R		12			3	3	1				3	3			6	6
E403315E	32+66	57+02	R		12		4							3	3			6	6
E403315E	57+02	59+33	C	14			4									6	6		
E403315E	59+33	60+33	C	14				3	3	1						6	6		
E403315E	60+33	60+56	C	14			4									6	6		
E403315E(A)	0+00	2+95	A		12		4												
E403316F	0+00	19+64	R		12		4							3	3			6	6
E403316F	19+64	20+64	R		12			3	3	1				3	3			6	6
E403316F	20+64	33+54	R		12		4							3	3			6	6
E403316G	0+00	5+84	R		12		4							3	3			6	6
E403316G	5+84	6+84	R		12			3	3	1				3	3			6	6
E403316G	6+84	8+30	R		12		4							3	3			6	6
E403316M	0+00	4+77	R		12		4							3	3			6	6
E403316M	4+77	6+69	C	14			4							3	3			6	6
E403316M	6+69	7+69	C	14				3	3	1				3	3			6	6
E403316M	7+69	11+46	C	14			4							3	3			6	6
E403316M(A)	0+00	1+30	A		12		4												
E403316N	0+00	3+32	C	14			4									6	6		
E403321E	0+00	28+91	P		12			3	3	1				3	3			6	6

State of Washington  
Department of Natural Resources

Application No. : 30-105823

Name of Sale: Vulcan

## Typical Section Sheet

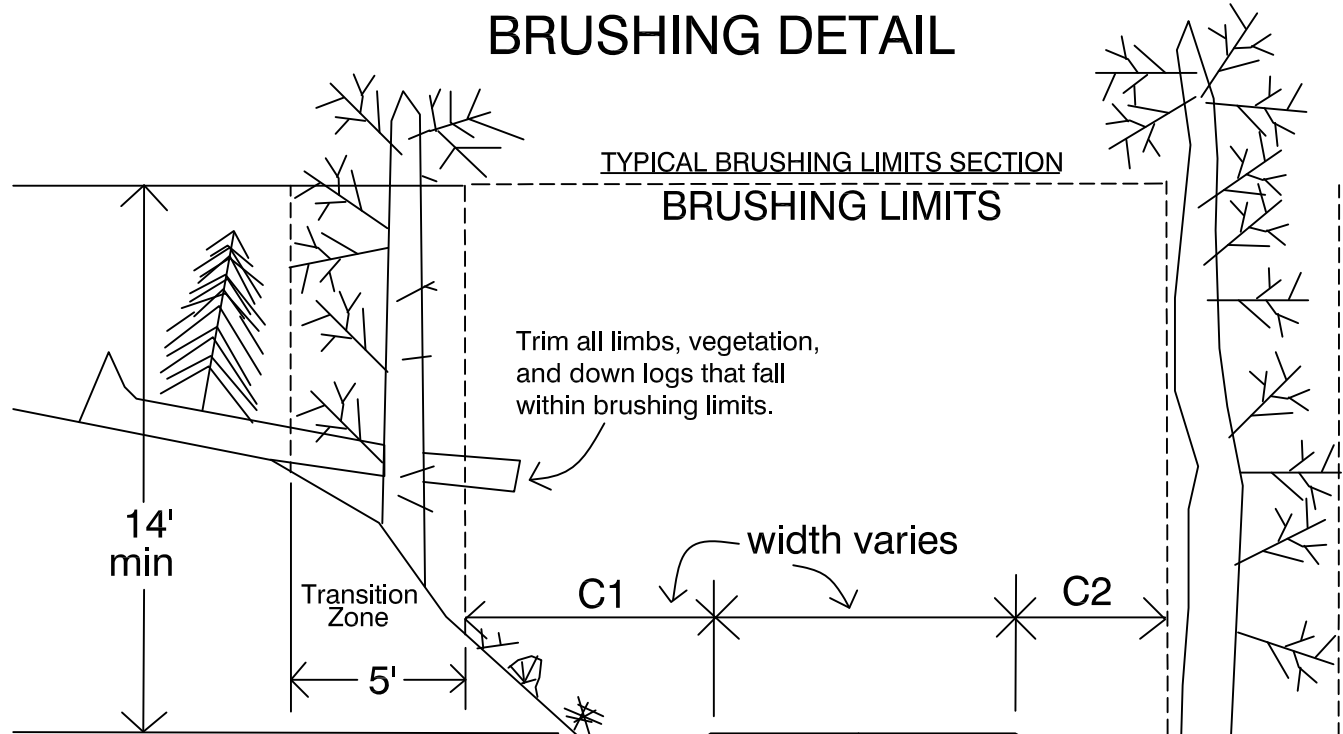


ROAD NAME	START STATION	END STATION	CONSTRUCTION CLASS	SUBGRADE WIDTH (S)	ROAD WIDTH (R)	INSLOPE "/10'	OUTSLOPE "/10'	CROWN " AT CL	DITCH WIDTH (W)	DITCH DEPTH (D)	DITCH 2 SIDES			GRUBBING CUT BANK (G)	GRUBBING FILL TOE (G2)	ROAD CUT CLEARING (B)	ROAD FILL CLEARING (B)	R/W CUT CLEARING (C1)	R/W FILL CLEARING (C2)
E403321E	28+91	81+37	P		12		4							3	3			6	6
E403322F	0+00	38+47	P		12		4							3	3			6	6
E403322M	0+00	47+53	P		12		4							3	3			6	6
E403322P	0+00	12+79	C	14			4									6	6		
E403322P	12+79	13+79	C	14				3	3	1						6	6		
E403322P	13+79	36+15	C	14			4									6	6		
E403322Q	0+00	6+90	C	14			4									6	6		
USFS-2113	95+00	304+05	P		12			3	3	1				3	3			6	6
USFS-2114	0+00	14+26	P		12			3	3	1				3	3			6	6
Vulcan Mountain Road	79+44	95+00	P		12			3	3	1				3	3			6	6

Date: 10-05-2023



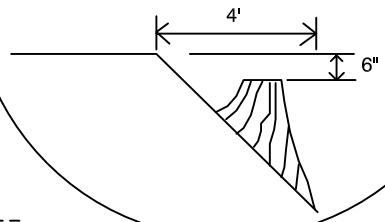
# BRUSHING DETAIL



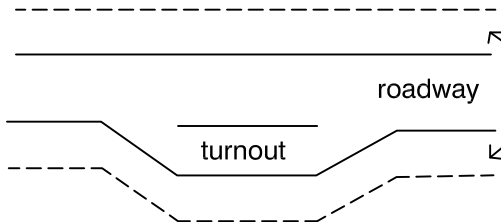
All limbs on standing trees that extend into the brushing limits shall be trimmed within 6" of the stem

Any trees less than 6" in diameter shall be cleared within the transition zones.

Trim all stumps and vegetation within 4' of edge of road and in ditch to at least 6" below the elevation of the edge of road.

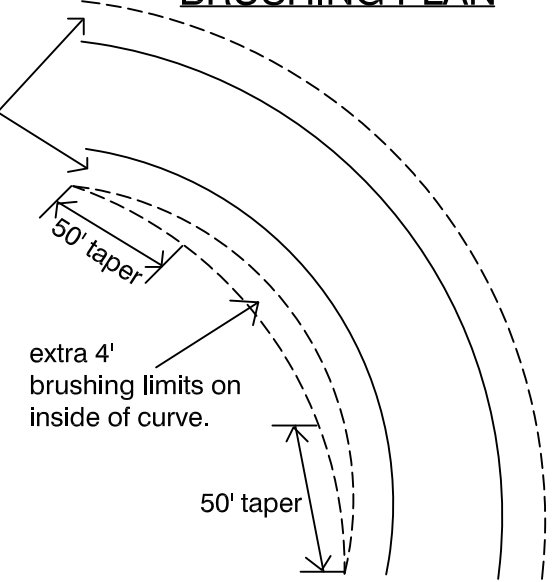


## CURVE BRUSHING PLAN



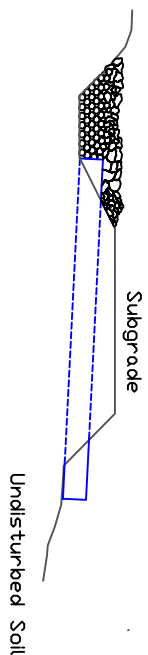
## TURNOUT BRUSHING PLAN

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.

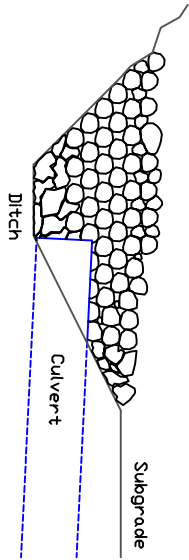


Brushing limits as shown on typical section

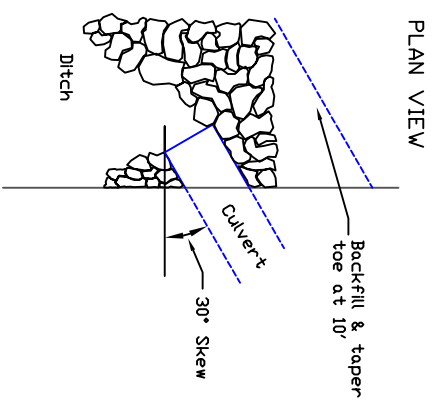
# CULVERT AND DRAINAGE SPECIFICATIONS DETAIL - D1



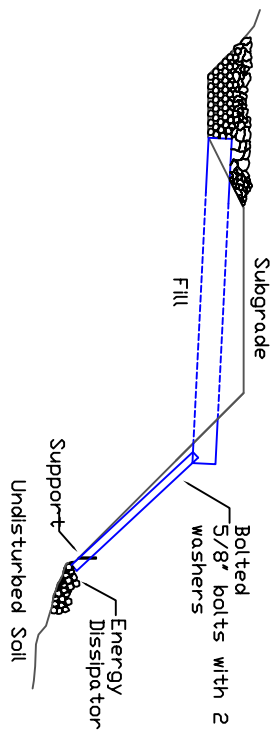
**FLUME**  
Use where ground conditions are uniform, providing for stability of flume.



**HEADWALLS**  
Headwall to be constructed of material that will resist erosion



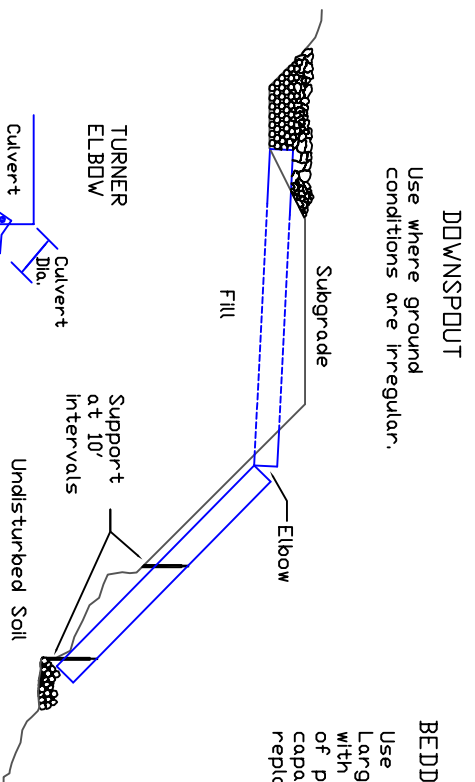
**PLAN VIEW**



**DOWNSPOUT**  
Use where ground conditions are irregular.

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"

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

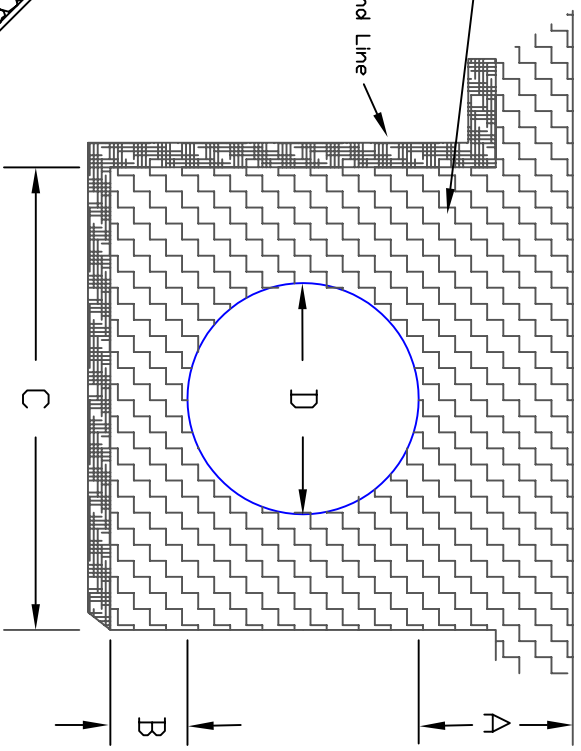
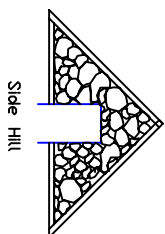
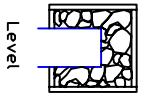


**TURNER ELBOW**  
Bolted 5/8" bolts with bridge washers on both sides

**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.

**DISSIPATOR SPEC'S**

Size in Culvert	Diameters
Area	2 X 2
Depth	1
Agg. Progate	1/3



**ROAD SURFACE**

A

B

C

D

Level

Side Hill

Ground Line

Ditch

Culvert

Subgrade

Ditch

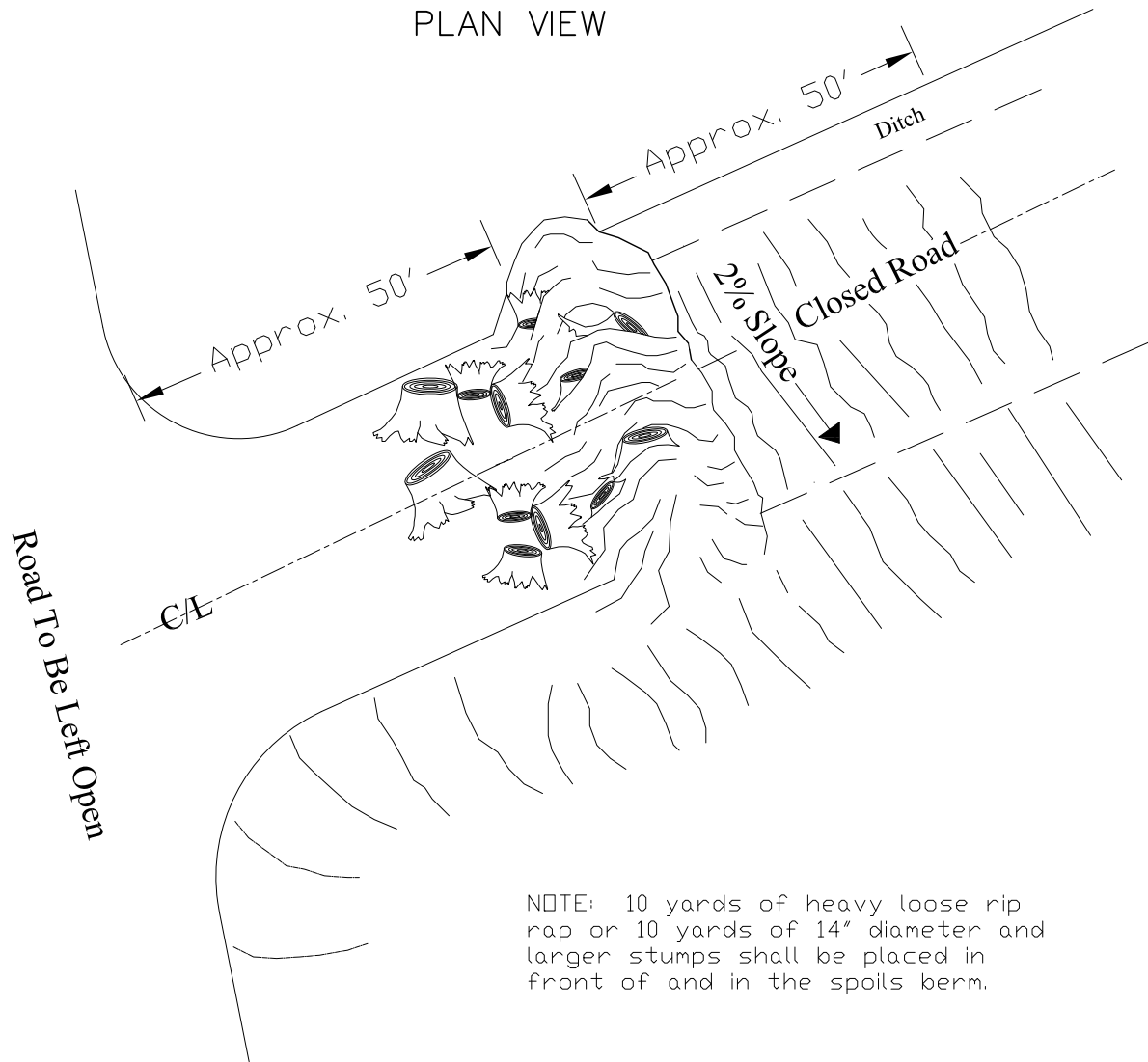
Culvert

30° Skew

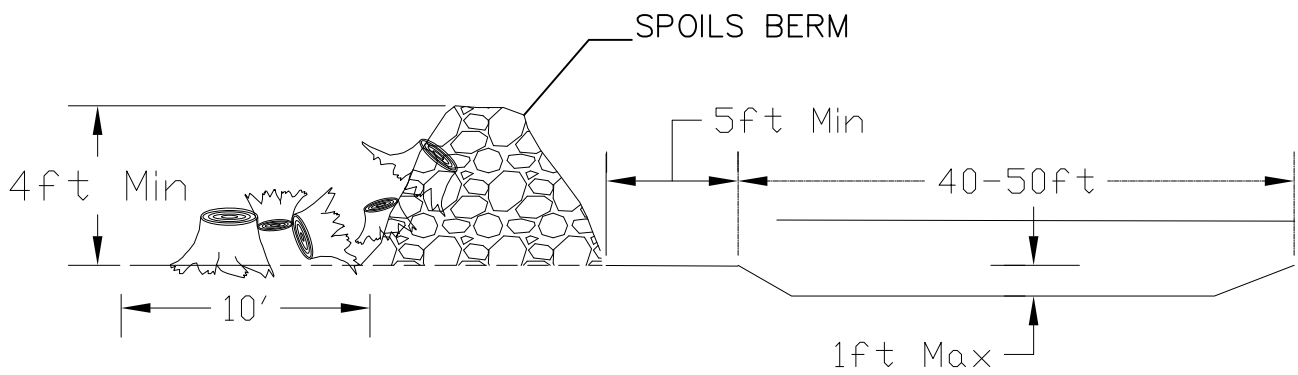
Backfill & taper toe at 10°

# SPOILS BERM DETAIL-D8

## PLAN VIEW

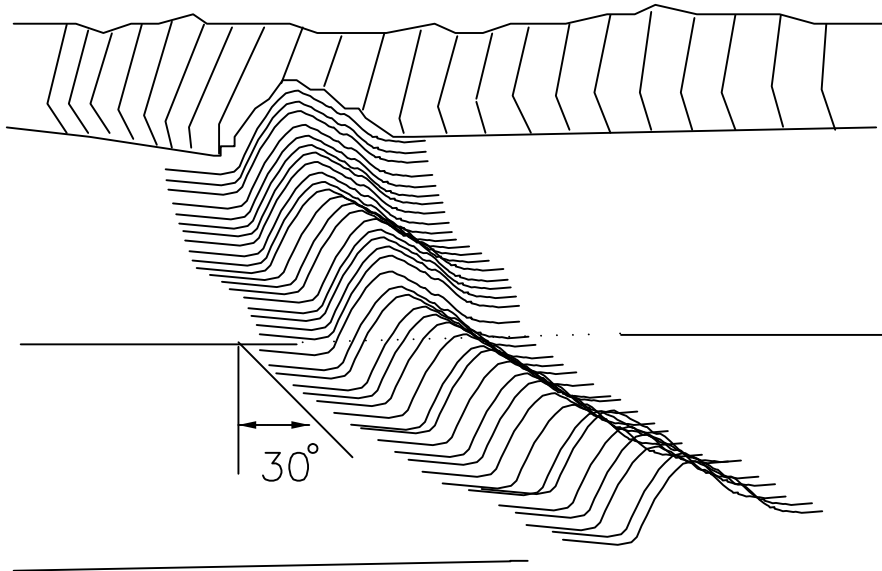


NOTE: 10 yards of heavy loose rip rap or 10 yards of 14" diameter and larger stumps shall be placed in front of and in the spoils berm.

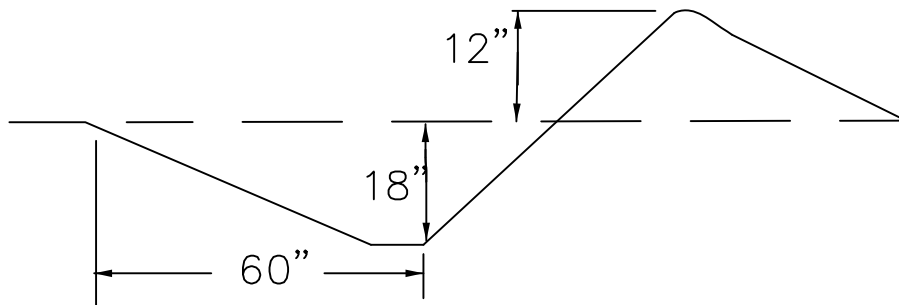


Note:  $\frac{1}{3}$  of stumps or rip rap shall be partially buried in the spoils berm and/or road surface.

Top View

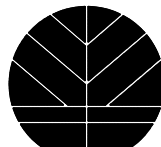


Side View



1. Waterbar construction for forest roads with little or no traffic.
2. Specifications are average and may be adjusted to conditions.
3. Bottom of waterbar must be outsloped to ensure proper drainage.
4. Rock outlet if steep fill slope is present.

## Driveable Waterbar Detail



WASHINGTON STATE DEPARTMENT OF  
**Natural Resources**

Northeast Region  
Colville, Washington

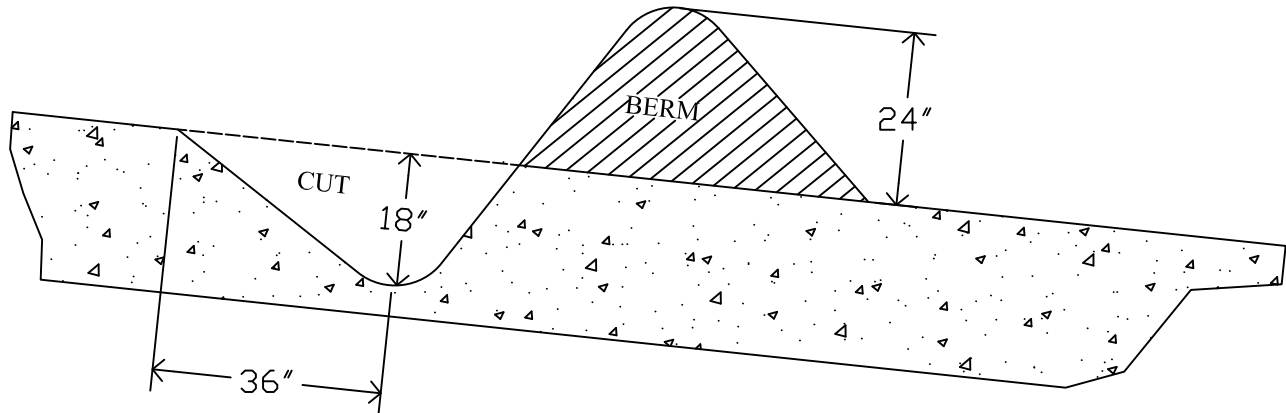
Designed By: Stash Slabinski 9/06/05

Drawn By: Stash Slabinski 9/06/05

Revised:

1 OF 1

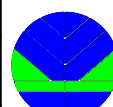
# Non-Driveable Water Bar Detail



**Notes:**

1. WATERBAR CONSTRUCTION FOR FOREST ROADS WITH NO TRAFFIC. SPECIFICATIONS ARE AVERAGE AND MAY BE ADJUSTED TO CONDITIONS.
2. TIE BERM INTO BANK. IF DITCH EXISTS, TIE CUT INTO DITCH.
3. CONSTRUCT CROSS DRAIN BERM APPROXIMATELY 24 IN. HIGH.
4. CUT WATERBAR A MINIMUM OF 18 IN.
5. ENSURE PROPER DRAINAGE AT OUTLET.
6. SKEW WATERBAR 30 DEGREES DOWNGRADE WITH ROAD CENTERLINE.

**Non-Driveable Waterbar  
Detail**

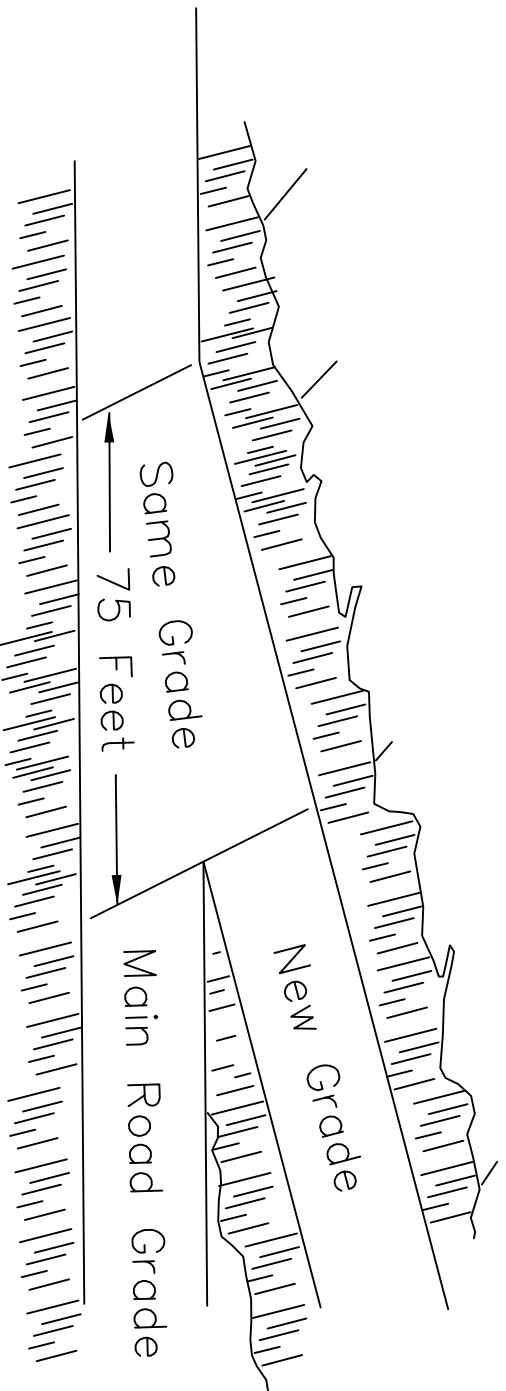


WASHINGTON STATE DEPARTMENT OF  
**Natural Resources**

Northeast Region Colville, Washington		
Designed By:	Stash Slabinski	4/21/05
Drawn By:	Stash Slabinski	4/21/05

Revised:

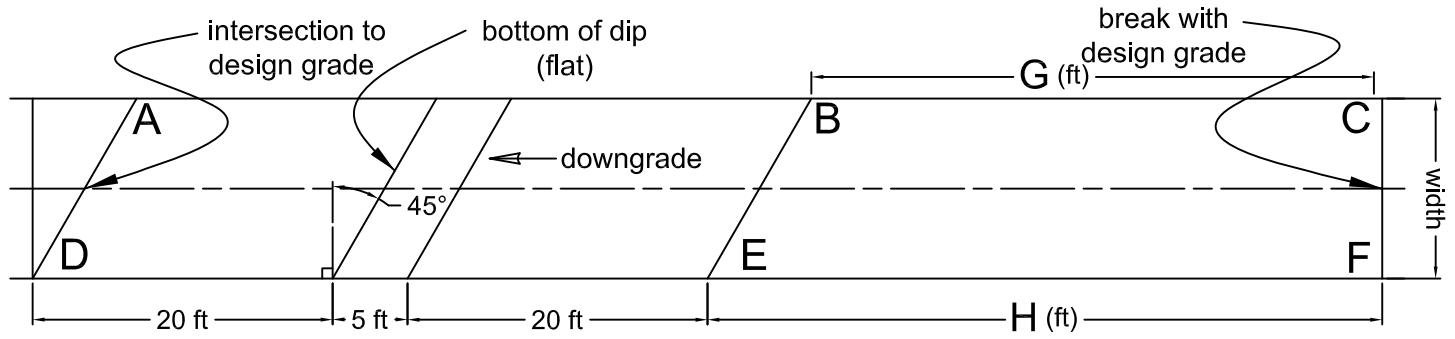
# Intersection Detail



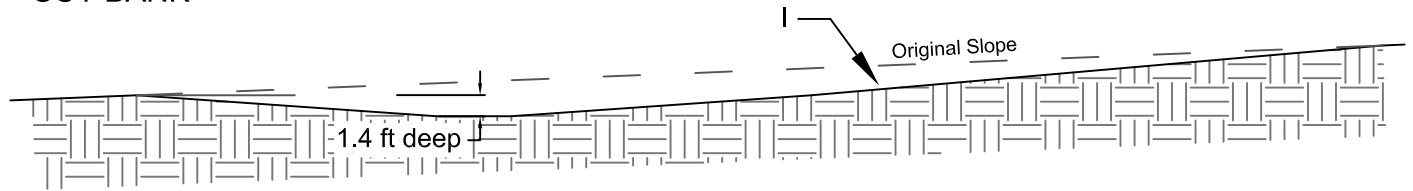
Main road and spur must have the same grade until there is horizontal separation from each other.

# STANDARD 45° ROLLING DIP

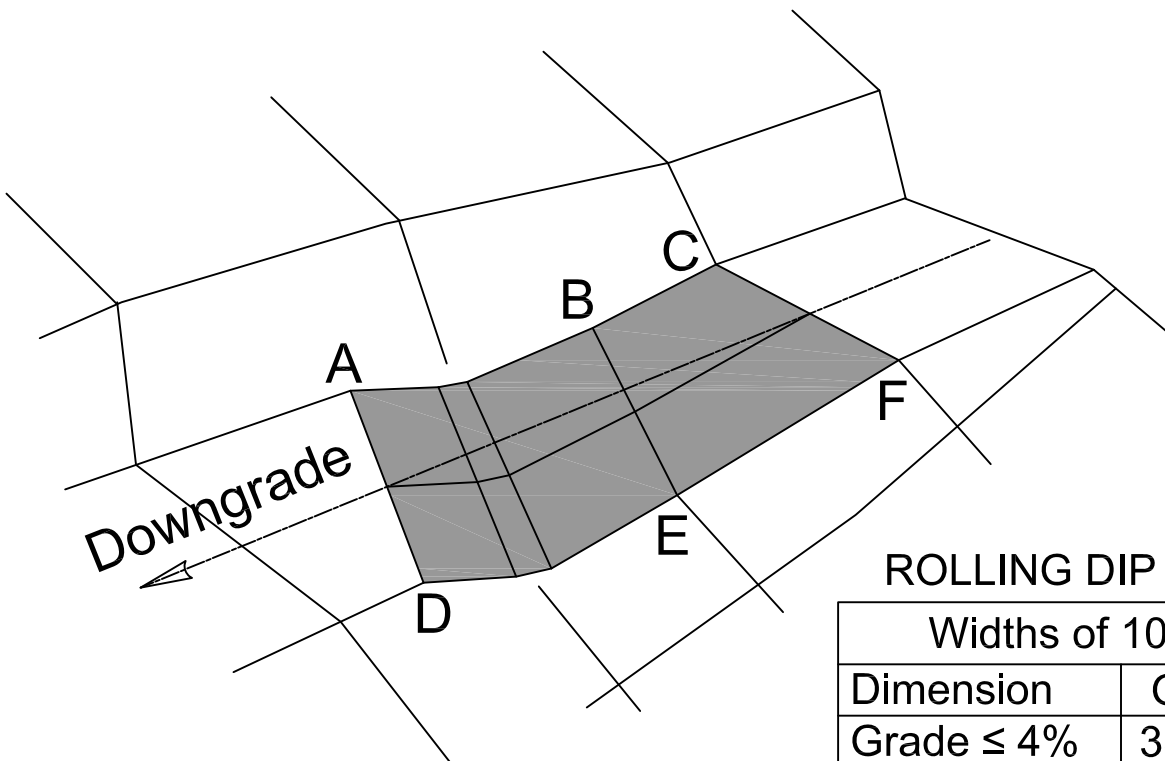
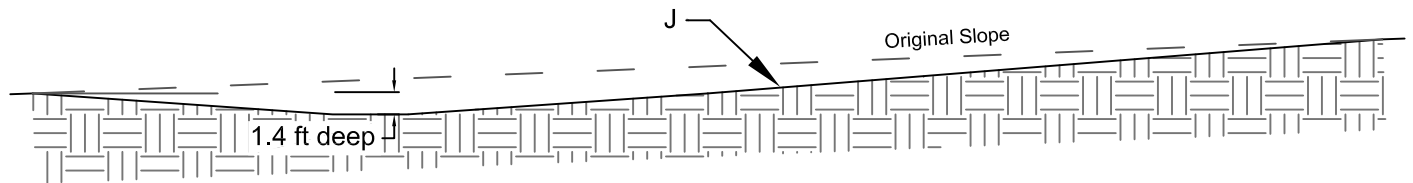
## PLAN OF ROLLING DIP



## CUT BANK



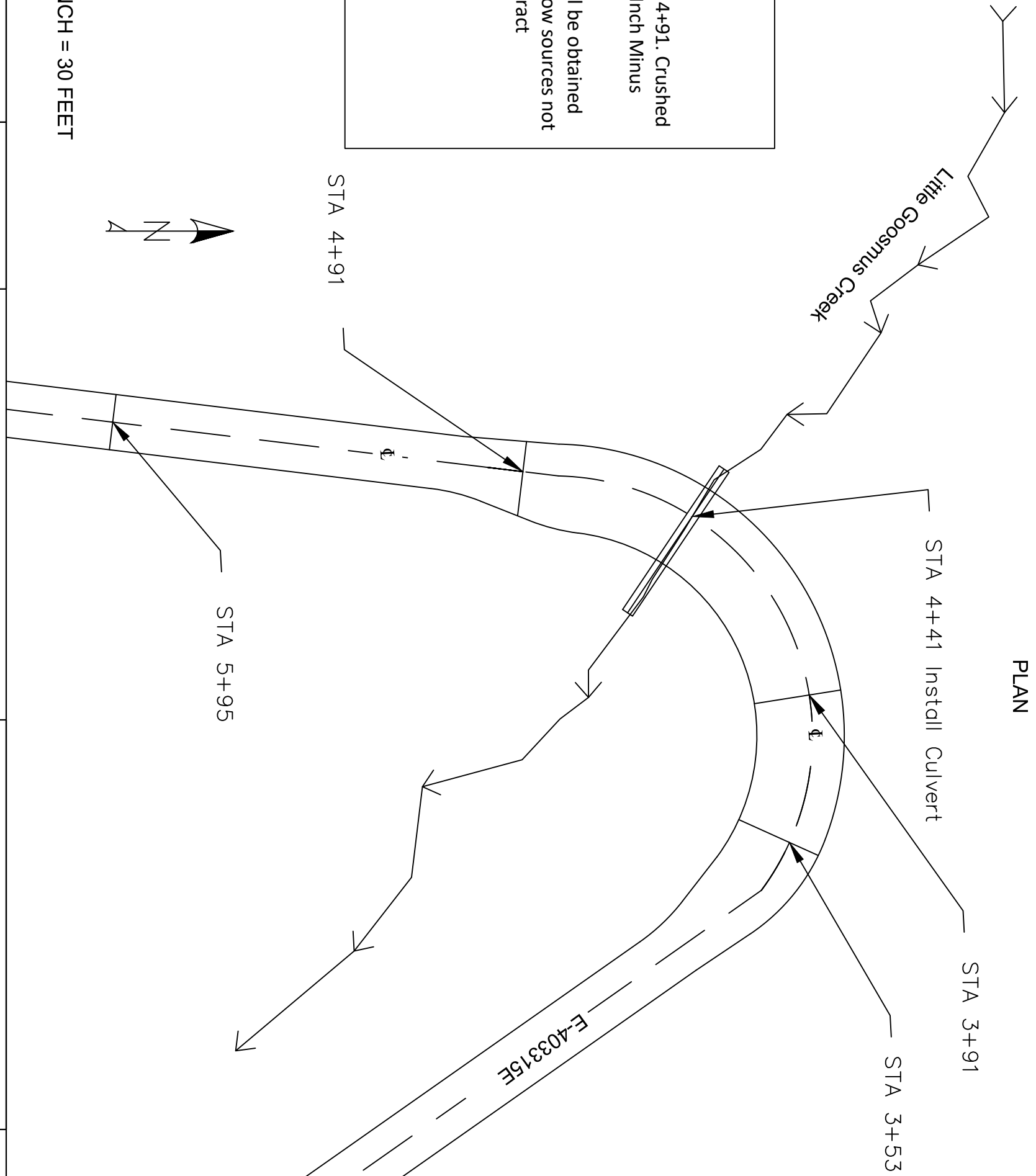
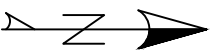
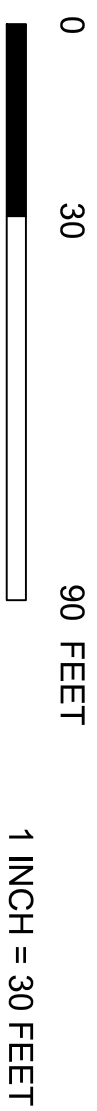
## FILL SLOPE



## ROLLING DIP DEMENSIONS

Widths of 10' through 14'				
Dimension	G	H	I	J
Grade ≤ 4%	38'	45'	9%	8%
Grade = 6%	48'	55'	11%	11%
Grade = 8%	58'	65'	14%	14%

- Notes:**
- Install 36"x44' culvert at STA 4+41.
  - Lift road grade from STA 3+53 to STA 5+95.
  - Apply 1 1/4"-minus crushed surface rock from STA 3+91 to STA 4+91. Crushed surface rock must meet the specifications of Clause 6-28 1 1/4"-Inch Minus Crushed Rock.
  - Common borrow shall be used to lift the road grade, and shall be obtained from approved borrow source on State land. Alternative borrow sources not listed in this contract shall be approved in writing by the Contract Administrator before use.
  - Stream type is F.
  - Compass declination is 14d 23'.
  - The hydraulic flow of 100-year flood is 14.9 ft<sup>3</sup>/s.



PLAN

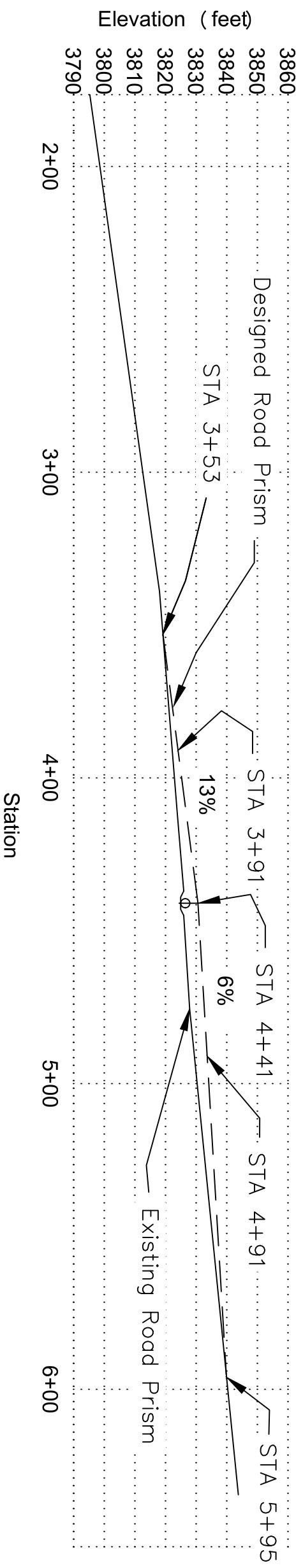
DESIGN BY: M. KARNSTEIN	NO.	REVISION DESCRIPTION	DATE	BY
DRAWN BY: M. KARNSTEIN				
CHECKED BY: M. KARNSTEIN				
DATE: 28 AUGUST 2023				

 <p>WASHINGTON STATE DEPARTMENT OF <b>NATURAL RESOURCES</b></p>	Vulcan Timber Sale E-403315E Temporary Culvert Plan	SHEET
		1 OF 3



ROAD PROFILE



Notes:

- Install 36"x44' culvert at STA 4+41.
- At STA 4+41, excavate 7 feet wide at a 1.5J:1V slope to daylight to place culvert.
- Purchaser shall install and remove culvert between July 1st and September 30th in a single operating season. In conjunction with culvert removal, Purchaser shall install a 4-foot wide channel with 2H:1V slope to daylight. Average bankfull width is 3.38 feet.
- Install 4 inches of 1 ¼"-Minus crushed rock on road prism from STA 3+91 to STA 4+91. Crushed surface rock must meet the specifications of Clause 6-28 1 ¼-Inch Minus Crushed Rock.
- Lift road grade from STA 3+53 to STA 5+95.
- At STA 4+41, grade of road shall change from 13% to 6%.




NO.	REVISION DESCRIPTION	DATE	BY

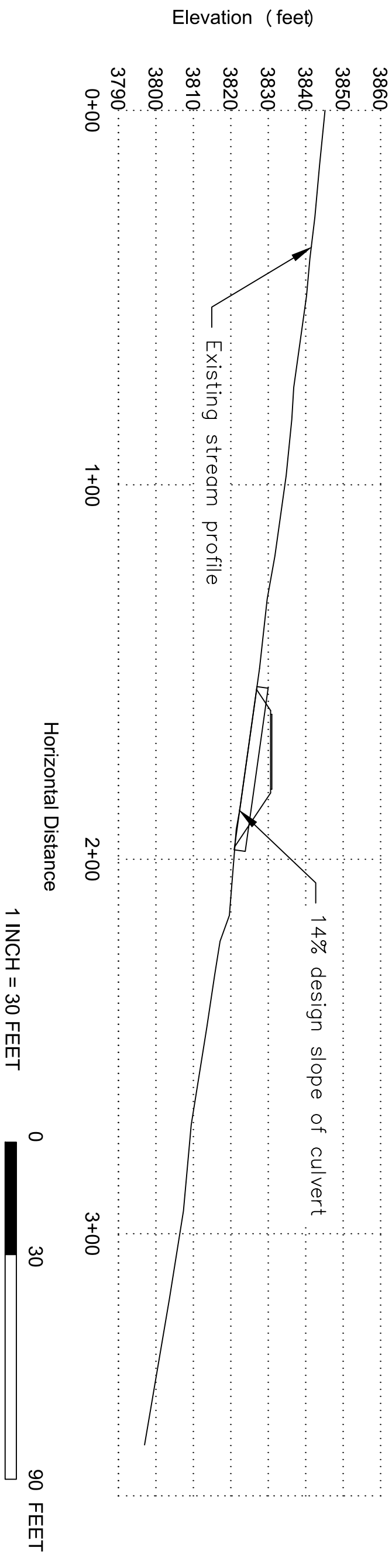
  

DESIGN BY: M. KARNSTEIN	
DRAWN BY: M. KARNSTEIN	
CHECKED BY: M. KARNSTEIN	
DATE: 28 AUGUST 2023	

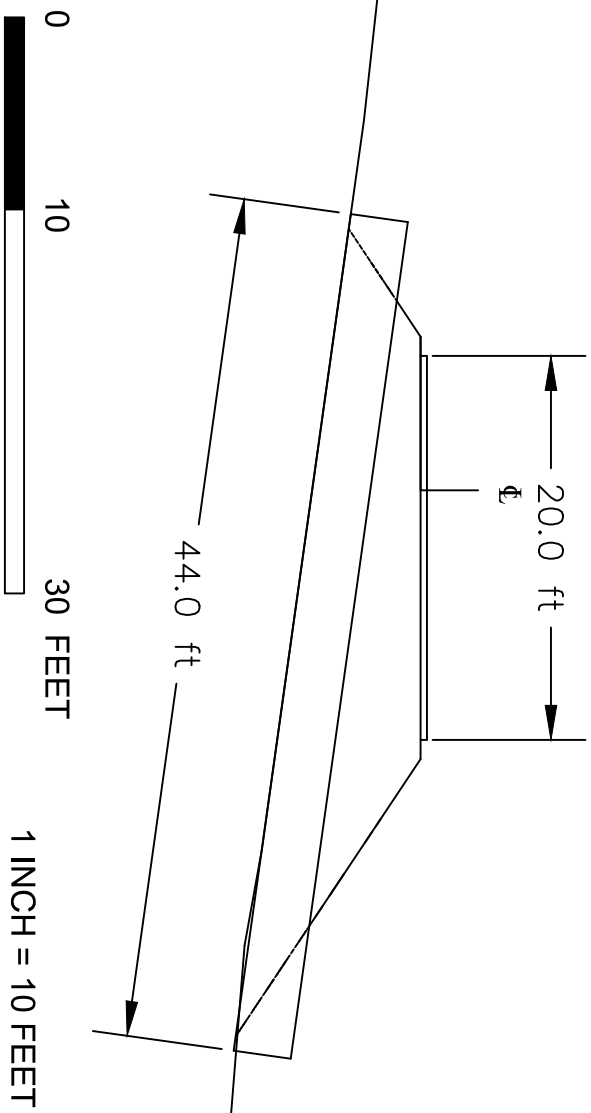
 <p>WASHINGTON STATE DEPARTMENT OF <b>NATURAL RESOURCES</b></p>	Vulcan Timber Sale E-403315E Temporary Culvert Road Profile
	SHEET 2 OF 3

CHANNEL PROFILE



Notes:

- Road cut slopes are 1H:1V. Road fill slopes are 1.5H:1V.
- Culvert must be 44' long and 36" in diameter.
- Culvert must meet a minimum of 18" depth of cover.
- Culvert slope is 14%.
- Road width shall be approximately 20' at the crossing.



DESIGN BY:	M. KARNSTEIN	NO.	REVISION DESCRIPTION	DATE	BY
DRAWN BY:	M. KARNSTEIN				
CHECKED BY:	M. KARNSTEIN				
DATE:	28 AUGUST 2023				



WASHINGTON STATE DEPARTMENT OF  
**NATURAL RESOURCES**

Vulcan Timber Sale  
E-403315E Temporary Culvert  
Channel Profile

## APPENDIX A

### Live Stream Project Bypass - Pumping

Order of work is as follows; deviations shall be approved in writing by the Contract Administrator.

- 1) Contractor shall notify the State of intent to start project, and a pre-work conference shall be held before move in of equipment. State will designate a representative that will remain on site at all times when work is being performed in creek channel.
- 2) Assemble the items on the "Materials List" onsite before proceeding.
- 3) Set up pumps (1 at inlet, 1 at outlet, and 1 as backup).
- 4) At the inlet of the project, dam up the stream with sandbags and line the sandbags and the floor of dam with plastic (to prevent sub-surface water flow). Place clean rock on plastic to hold in place, and key leading edge of plastic into channel bottom.
- 5) Route clean water, at the inlet, around work site and back into stream (dissipate flow from pump outlet).
- 6) Start pump and monitor for presence of fish. If fish are found, move them to an appropriate location that will ensure survival.
- 7) Build a settling pond at the culvert outlet. Pump dirty water a minimum of 100' from stream and onto the forest floor (ensure the silt laden water does not reenter the stream).
- 8) Prepare site for new culvert.
- 9) Install crossing according to the plan.
- 10) Backfill settling pond with clean rock approved by State.
- 11) Grass seed and cover exposed soils within 25' of all live streams with straw (minimum depth of 1").

Materials List (quantities below are minimums and may require more to achieve specified results listed above):

- 1) 3 pumps with approved screens for intakes
  - a. Clean water pump at the inlet shall have a minimum capacity equal to or greater than the stream's capacity at seasonal high flow. This pump must have a fish approved screen on its intake.
  - b. Dirty water pump at outlet shall have a minimum capacity of 300 gallons per minute.
  - c. Backup pump shall have a minimum capacity of 400 gallons per minute.
- 2) 10 CY of clean rock for filling sump.
- 3) 1000 square feet of plastic sheet (5 mil or thicker).
- 4) 10 bales of weed free straw.

## Appendix B

### Live Stream Project Bypass - Gravity (Plastic Lined Channel)

Order of work is as follows; deviations shall be approved in writing by the Contract Administrator.

- 1) Contractor shall notify the State of intent to start project, and a pre-work conference shall be held before move in of equipment. State will designate a representative that will remain on site at all times when work is being performed in creek channel.
- 2) Assemble the items on the "Materials List" onsite before proceeding.
- 3) Set up pump (1 at outlet, and 1 as backup).
- 4) Prepare a temporary channel around the work site and line it with the plastic. Ensure it drains back to stream.
- 5) At the inlet of the project, divert flow into plastic lined channel and dam up the original channel. Place clean rock on plastic to hold in place, and key leading edge of plastic into channel bottom.
- 6) Route clean water, at the inlet, around work site and back into stream.
- 7) Monitor for presence of fish. If fish are found, move them to an appropriate location that will ensure survival (downstream of the project).
- 8) Build a settling pond at the project outlet. Pump silty water a minimum of 100' from stream and onto the forest floor (ensure the silt laden water does not reenter the stream).
- 9) Prepare site for new culvert.
- 10) Install crossing according to the plan.
- 11) Backfill settling pond with clean rock approved by State.
- 12) Grass seed and cover exposed soils within 25' of all live streams with straw (minimum depth of 1").

Materials List (quantities below are minimums and may require more to achieve specified results listed above):

- 1) 2 pumps.
  - a. Dirty water pump at outlet shall have a minimum capacity of 300 gallons per minute.
  - b. Backup pump shall have a minimum capacity of 300 gallons per minute.
- 2) Appropriate amount of plastic sheeting to cover the entire bypass channel (5 mil or thicker).
- 3) 10 bales of weed free straw.

## Appendix C Live Stream Project Bypass - Gravity (Culvert)

Order of work is as follows; deviations shall be approved in writing by the Contract Administrator.

- 1) Contractor shall notify the State of intent to start project, and a pre-work conference shall be held before move in of equipment. State will designate a representative that will remain on site at all times when work is being performed in creek channel.
- 2) Assemble the items on the "Materials List" onsite before proceeding.
- 3) Set up pump (1 at outlet, and 1 as backup).
- 4) Prepare a temporary culvert lay around the work site and install the temporary culvert. Ensure it drains back to stream or onto plastic that drains directly into the stream.
- 5) At the inlet of the project, divert flow into the culvert and dam up the original channel. Secure the culvert to ensure it does not move and break.
- 6) Route clean water, at the inlet, around work site and back into stream.
- 7) Monitor for presence of fish. If fish are found, move them to an appropriate location that will ensure survival (downstream of the project).
- 8) Build a settling pond at the project outlet. Pump silty water a minimum of 100' from stream and onto the forest floor (ensure the silt laden water does not reenter the stream).
- 9) Prepare site for new culvert.
- 10) Install crossing according to the plan.
- 11) Backfill settling pond with clean rock approved by State.
- 12) Grass seed and cover exposed soils within 25' of all live streams with straw (minimum depth of 1").

Materials List (quantities below are minimums and may require more to achieve specified results listed above):

- 1) 2 pumps.
  - a. Dirty water pump at outlet shall have a minimum capacity of 300 gallons per minute.
  - b. Backup pump shall have a minimum capacity of 300 gallons per minute.
- 2) Appropriate amount of plastic sheeting to cover exposed soils (5 mil or thicker).
- 3) 10 bales of weed free straw.

# VULCAN - Road Development Costs

REGION: Northeast  
DISTRICT: Highlands

CONTRACT: Vulcan

ENGINEER: Mackenzie Karnstein

DATE:

Sep-23

	<i>Construction</i>	<i>Reconstruction</i>	<i>Maintenance</i>	<i>Abandonment</i>	<i>Decommission</i>
<b>ROAD NUMBERS:</b>	E403315E E403316M E403316N E403322P E403322Q	E403315E E403316F E403316G E403316M	E403315E E403321E E403322F E403322M USFS-2113 USFS-2114 Vulcan Mountain Rd.	E403315E(A) E403316M(A)	E403315E E403316F E403316M E403316N E403322P
<b>ROAD STANDARD:</b>	<i>Construction</i>	<i>Reconstruction</i>	<i>Maintenance</i>	<i>Deactivation</i>	<i>Decommission</i>
<b>NUMBER OF STATIONS:</b>	<b>56.60</b>	<b>96.35</b>	<b>413.52</b>	<b>4.25</b>	<b>145.03</b>
<b>CLEARING &amp; GRUBBING:</b>	\$0.00	\$ 14,229.54	\$ 14,093.94		
<b>EXCAVATION AND FILL:</b>	\$ 24,627.42	\$ 3,316.67	\$ 11,513.52		
<b>MISC. MAINTENANCE:</b>	\$ 2,214.00	\$ 1,902.33	\$ 5,162.33	\$ 212.50	\$ 750.00
<b>ROAD ROCK:</b>	\$ 3,172.80	\$ 4,795.37	\$ 6,958.59		
<b>ADDITIONAL ROCK:</b>					
<b>CULVERTS AND FLUMES:</b>	\$9,216	\$10,731	\$27,783		
<b>STRUCTURES/MATERIALS:</b>	\$ -	\$0	\$0		

<b>TOTAL COSTS:</b>	\$39,230	\$34,975	\$65,512	\$ 212.50	\$ 750.00
<i>COST PER STATION:</i>	\$693	\$363	\$158	\$50	\$5

	\$/per move	# of moves	Total
<b>MOBILIZATION:</b>			\$5,000

**TOTAL (All Roads) =** \$145,679  
**SALE VOLUME mbf =** 3,852.00  
**TOTAL \$/MBF =** \$38

Engineer's Notes:

ROAD RIGHT-OF-WAY CONSTRUCTION  
AND USE AGREEMENT

THIS AGREEMENT is entered into this 24<sup>th</sup> day of March 19 75, by and between the STATE OF WASHINGTON, DEPARTMENT OF NATURAL RESOURCES (DNR), hereinafter referred to as Cooperator, and the UNITED STATES OF AMERICA, by and through the Acting Regional Forester, Forest Service, Department of Agriculture, hereinafter referred to as Government.

WHEREAS, there is an area within and adjacent to the Colville National Forest and situated in the Counties of Ferry, Stevens and Pend Oreille, State of Washington, hereinafter called the Agreement Area, and to be known as the DNR - Colville Agreement Area, the parties have need for establishing access roads to their intermingled land ownerships for managing, protecting, and utilizing resources therefrom; and

WHEREAS, Government and Cooperator desire to join in developing and maintaining such roads serving their ownerships and to share costs thereof:



✓ NOW, THEREFORE, in consideration of the mutual benefits to be derived, the parties agree as hereinafter set forth.

Section 1 - Agreement Supplement Prerequisite to Joint Financing of Roads

✓ In order for roads which are constructed hereafter or which are already constructed within the Agreement Area to be jointly financed, there must be mutual agreement, prior to construction or prior to use by the other party of roads already constructed by one party, on each of the elements set forth in Section 2 hereof, which agreement will be expressed in a consecutively numbered supplement substantially in the form of Exhibit B attached hereto.

Section 2 - Necessary Elements of Agreement Supplement

The elements to be agreed upon for a road to be jointly financed are:

- ✓ a. Identification by name or number of road or roads to be included, along with a map or plat showing as accurately as necessary for the road involved its location and length, all in accordance with procedures prescribed in Section 3 hereof.
- ✓ b. Plans and specifications for roads to be constructed, or reconstructed.
- ✓ c. Scheduling of construction or reconstruction, if any, and designation of party to perform such construction or reconstruction.



d. Estimated costs of construction or reconstruction based on engineering appraisals, both for roads built and to be built, but subject always to the limitation expressed in Section 4 hereof; if the project is to be accomplished by contract, the costs may be determined on the basis of the lowest acceptable bid.

e. Proportion of estimated costs to be borne by each party determined by application of the principles stated in Section 5 hereof.

f. Provision for each party's meeting its share of the cost, based upon methods provided in Section 6 hereof.

### Section 3 - Road Construction Plans

When either party is considering the construction of a road within the Agreement Area, it will give notice in writing to the other party accompanied by a map showing the approximate location of the proposed road. Within no more than thirty (30) days after receiving such notice, the other party will inform the initiating party whether it is interested in having the road constructed as a jointly financed road.

If the road is not to be a jointly financed road, the initiating party may proceed as provided in Section 13 hereof.

If the road is to be jointly financed, the initiating party will tentatively locate the road or cause it to be located and plainly marked on the ground. When a location has been so marked, notification in writing will be given to the other party. Promptly thereafter, the route will be jointly inspected and agreed upon and arrangements made for submission by the initiating party to the other party of such surveys, plans, and construction details as the parties agree are necessary. Agreement on location shall not be unreasonably withheld nor conditioned by the other party upon either a relocation or incorporation of features which add substantially to construction costs without a substantial and demonstrable benefit being preserved or created in return.

Final approval of surveys, construction plans, right-of-way description and estimated construction costs shall be made in writing by the other party promptly after such submission, or if approval is withheld for reasonable cause, the parties shall attempt to achieve agreement. Once the plans and estimated construction costs are agreed upon, the basis for cost sharing, if not previously agreed to, and the method of paying shared costs shall be negotiated and the agreement supplement referred to in Section 1 shall be executed.



Section 4 - Limitation on Cost Sharing for Roads

A party's right to participate in joint financing of a road within the Agreement Area and to enjoy the benefits of this agreement with respect thereto shall not be conditioned upon assumption of any more than that party's proportionate share of the estimated costs for constructing roads needed to serve the anticipated uses in the area tributary to the roads.

Section 5 - Basis for Cost Sharing

For all roads to be jointly financed within the Agreement Area the basis for sharing will be determined in each supplement by application of the following principles:

a. Anticipated use of the roads by the public for non-commercial purposes and for public service traffic will be allocated to Government.

b. Anticipated use of the roads for commercial purposes will be allocated to the parties in proportion to the resources expected to generate such use which are owned or controlled by each party; provided, that commercial use attributable to non-participating parties will be allocated to Government unless otherwise agreed.

c. Anticipated use of the roads by each party for protection and administration; provided, that use for protection and administration attributable to nonparticipating parties will be allocated to Government.

d. Anticipated use of the roads attributable to use and operation of commercial recreation activities will be allocated to the parties in accordance with the principle in item b.

#### Section 6 - Methods of Sharing Costs

The share of estimated construction costs to be borne by each party for each jointly financed road under this Agreement, whether the road is already constructed or is to be constructed, may be amortized by any one or a combination of the following methods:

a. By a party's performing or having performed construction or reconstruction on the jointly financed road to the extent of its share.

b. By a party's performing or having performed construction or reconstruction on another jointly financed road within an agreement area in excess of its share for that other road.

c. By a party's depositing funds with the constructing party either at the outset or as construction or reconstruction progresses or upon completion of construction, as the parties agree.



d. By haulers paying, at rates mutually agreed upon, as timber or other products from Government lands are transported over the roads constructed or reconstructed by Cooperator. Such payments shall be collected by Government and paid to Cooperator.

e. By Cooperator paying, at rates mutually agreed upon, as timber or other products from Cooperator's lands are transported over the roads constructed or reconstructed by Government.

#### Section 7 - Right-of-Way Conveyances

As soon as the roads are located and the agreement supplement has been executed as above provided, each party will grant easements to the other for such roads and concomitant rights-of-way across lands or interests in lands each may own. Easements will be in substantially the form attached hereto as Exhibits C and D.

Either party will issue when requested a permit in lieu of an easement.

#### Section 8 - Road Construction, Inspection, and Acceptance

The parties agree that written acceptance of road work by both parties is essential to the accomplishment of the cooperative objective. Each party will keep the other informed of construction progress, and the

other will make periodic inspection as it deems necessary and will currently raise in writing any objections to the work performed. Right-of-way timber shall be disposed of as provided in the easements or permits unless otherwise agreed:

Ten days prior to the expected completion of any construction, the constructing party will give written notice as to the completion date of a project, and the other party will, within thirty days after receipt of the notice, make a final inspection and give written notice of rejection or acceptance of the project. If weather or other conditions prevent inspection within said thirty-day period, the time during which such conditions prevail will be excluded in determining the thirty-day period. Rejection may only be based upon failure to comply with the stated plans and specifications. A rejection notice will identify the items of work to complete the project in accordance with the stated plans and specifications. Acceptance shall not be unreasonably withheld. In case of rejection, the items of work identified in the notice will be promptly done; thereupon the road shall be deemed accepted.

#### Section 9 - Maintenance

Maintenance shall be performed on jointly financed roads in accordance with the easements or permits granted in accordance with Section 7 herein and pursuant to a maintenance plan made at the annual



meeting as provided for in Section 12 hereof, or pursuant to the provisions of a road maintenance agreement separately entered into. Use by a party's licensee will be the maintenance responsibility of that party. Maintenance shall be performed so as to preserve the road to standards of original construction or reconstruction.

→ Section 10 - Additional Capital Expenditures

If exhaustion or severe damage or destruction occurs to any portion of a road jointly financed under this agreement so that additional capital expenditures will be required, the parties will endeavor to agree upon (1) the work to be performed and (2) the share of the cost to be borne by each.

It is intended that the share of the cost to be borne by each shall be the same percentage as used in the supplement covering the road. In the event there have been substantial changes in the anticipated uses of the parties, the principles stated in Section 5 shall be applied in determining the share of the cost of the new capital expenditure to be borne by each party. Payment of shares shall be by any one or a combination of the methods stated in Section 6.

See  
Amendment  
dated  
Jan. 10, 1984

Section 11 - Annual Accounting

A mutual accounting by the parties to this agreement shall be made as of each December 31.

The accounting will determine the debits and credits accrued by each party in the year just completed with respect to their obligations under this agreement for new construction, reconstruction, and restoration involving capital expenditures.

The accounting will also determine the debits and credits accrued by each party during the year just completed with respect to their agreed maintenance obligations for roads in the Agreement Area and will achieve a net balance for the year between the parties with respect to maintenance matters.

Section 12 - Annual Meeting

On or before the 1st day of April of each year, the parties shall meet to apprise each other of their logging and use plans and of anticipated road construction or reconstruction needs for the coming year toward the objective of efficiently developing the Agreement Area.

At such annual meeting, the parties will also agree on maintenance arrangements for the coming season. These arrangements will include the following:

See  
Amendment  
dated  
Jan 10, 1984

See  
Amendment  
dated  
Jan 10, 1984



- a. Maintenance plan for the coming season which will include the work to be performed and estimated cost of doing it.
- b. The method of measuring total use and the means of apportioning such total use to each party in order to comply with the easements or permits covering jointly financed roads within the Agreement Area.
- c. Designation of the maintainer and roads, road segments, or classes of work for which he is responsible.
- d. How the planned program is to be financed.

#### Section 13 - Roads Not Jointly Financed

When a party desiring to construct a particular road or road segment is informed by the other party that it has no need for the road and will not share construction costs, the initiating party may proceed alone. It will prepare maps showing the proposed location of the road or road segment on the land of the other party and will furnish such maps to the other party along with construction specifications and a description of the proposed location. The other party will promptly issue a permanent easement in the appropriate form attached hereto marked Exhibits E and F for a road considered permanent by the initiating party, or will issue a permit in the form attached hereto marked Exhibits G and H for a road considered temporary by the initiating party. The other party may refuse to

issue the easement or permit for the proposed location only if the proposed location would unreasonably conflict with existing or planned facilities or improvements, or would unduly interfere with logging of the said party's timber, or if the proposed construction specifications are not adequate to prevent undue damage to adjacent resources or values. In the case of a refusal for such reasons, the parties will endeavor to agree upon a reasonable and practicable alternative route or change in specifications.

Section 14 - No Rights of Use Without Cost Sharing

Except as provided in the easement, permit, or other title document a party who has not shared in costs of constructing a road or road segment on lands of either party within the Agreement Area, in accordance with Section 4 and Section 5 herein, shall make no use of the road or road segment until it pays or makes arrangements acceptable to the other party to pay its share in accordance with Section 6. A party shall at all times have the right to acquire rights of use in a road or road segment within the Agreement Area in accordance with the principles for sharing costs stated in Section 5 and by one or more of the methods of payment prescribed in Section 6.



Section 15 - Rights of Entry Upon Land of Other Party

Either party, upon giving notice in writing to the other party, shall have the right to go and be upon the lands of the other party within the Agreement Area to the extent necessary for purposes related to or connected with this agreement.

Section 16 - Termination

This agreement may be terminated by either party upon at least ninety (90) days prior written notice, except that such termination shall in no way affect any permit, right-of-way grant, or easement deed that may have been executed by either party hereto prior to such notice, or any other operations dependent upon its continuance, which are in progress at time of notice; provided, that such termination shall in no way affect the agreement of the parties hereto with respect to any obligations incurred under this agreement until a full settlement has been made.

Section 17 - Federal Requirements

No resident commissioner nor member of or delegate to Congress shall be admitted to any share or part of this agreement or to any benefits that may arise therefrom unless this agreement is made with a corporation for its general benefit.

Where applicable any contract, agreement, or understanding entered into pursuant to this agreement providing for work to be performed shall include the requirements of Federal laws, Executive Orders, and regulations except that no present or future administrative rules or regulations shall reduce the rights herein.

Section 18 - Notices and Payments

Until notice is given by either party to change the address for delivery of notices and payments, all notices and payments to Cooperator shall be delivered to Northeast Area Manager, Department of Natural Resources, Colville, Washington 99114, and all notices to Government shall be delivered to Supervisor, Colville National Forest, Colville, Washington 99114, and all payments to Government shall be delivered to the Collection Officer at the same address.

IN WITNESS WHEREOF, the parties hereto have caused this Road Right-of-Way Construction and Use Agreement to be properly executed by their authorized representatives on the day and year first above written.

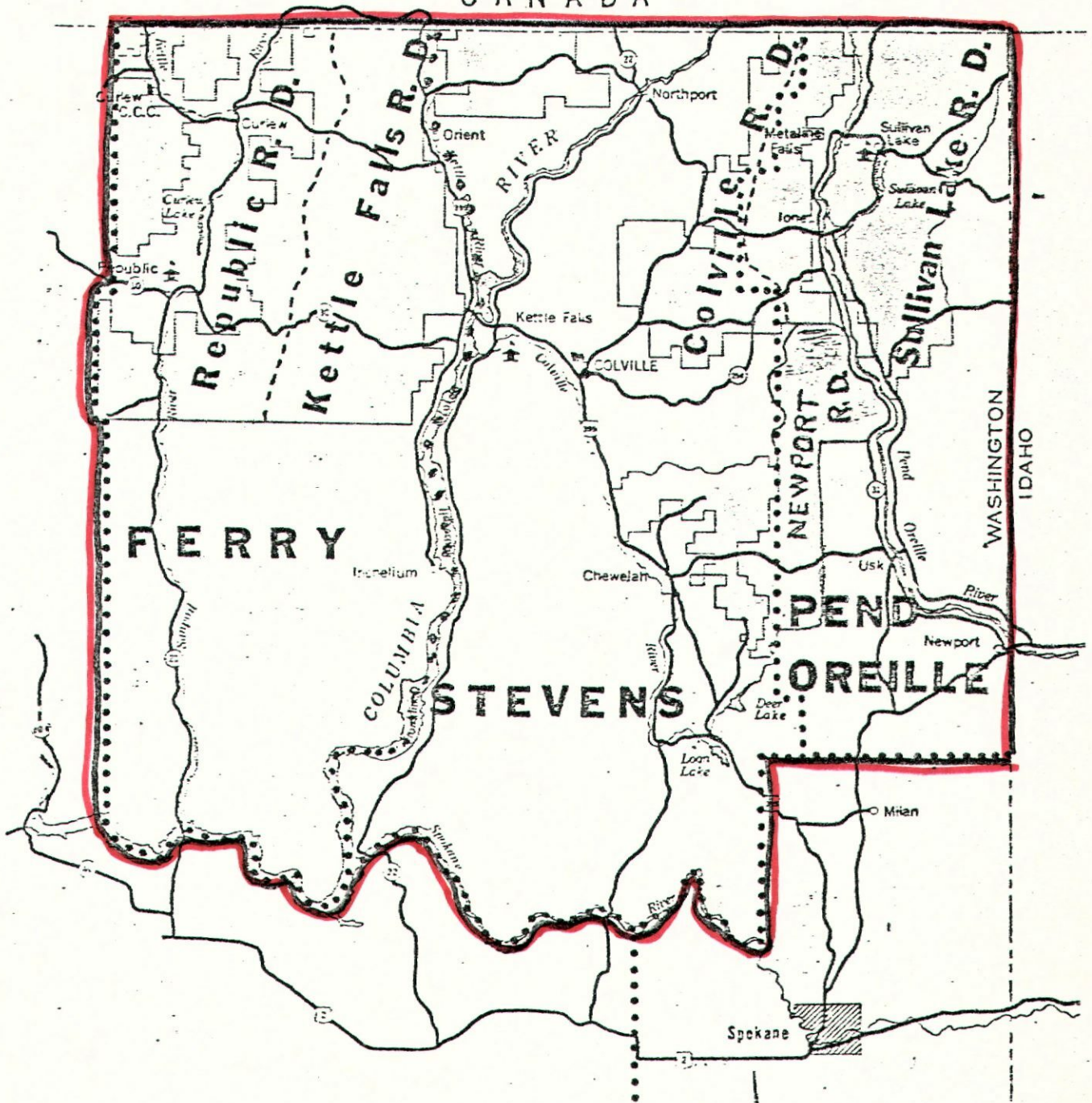
UNITED STATES OF AMERICA

By C. M. Hopper  
Acting Regional Forester  
Forest Service  
Department of Agriculture

By Bert L. Cole  
Bert L. Cole  
Title Commissioner of Public Lands

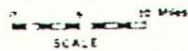


CANADA



COLVILLE National Forest

United States Department of Agriculture  
Forest Service



COST SHARE BOUNDARY

EXHIBIT A



WASHINGTON STATE DEPARTMENT OF  
**NATURAL RESOURCES**

**DOCUMENT INFORMATION**  
**Road Easement – Cost Share Road**

**Application No:** 55-095829  
**Region:** Northeast  
**County:** Ferry  
**Grantee:** WA State Department of Natural Resources  
**Grantor:** US Forest Service

**Description**

<b>Portions of:</b>	<b>Sec</b>	<b>Twp</b>	<b>Rge</b>	<b>Trust</b>		<b>GIS Parcel #</b>
SW1/4	15	40	33E	Private	(00)	0000
N1/2NE1/4	21	40	33E	Private	(00)	0000
NW1/4SE1/4*	22	40	33E	Common School	(03)	11199
SW1/4SW1/4*	23	40	33E	Common School	(03)	11200
NW1/4NW1/4, W1/2SW1/4, SE1/4SW1/4	26	40	33E	Private	(00)	0000
NE1/4NE1/4	27	40	33E	Private	(00)	0000

**Special Notations**

Easement granted under Cost Share Agreement between DNR and the USFS under 92-084237.

\*Property acquired after the fact. Merged in title.

**Title Examiner:** Beth Hughes

**Date:** June 8, 2017

Proofread by \_\_\_\_\_ Date \_\_\_\_\_

201854

EASEMENT

THIS EASEMENT, dated this 16<sup>th</sup> day of May, 1986, from the UNITED STATES OF AMERICA, acting by and through the Forest Service, Department of Agriculture, hereinafter called Grantor, to DEPARTMENT OF NATURAL RESOURCES, an agency of the State of Washington, hereinafter called "Grantee."

WITNESSETH:

WHEREAS, Grantee has applied for a grant of an easement under the Act of October 13, 1964 (78 Stat. 1089; 16 U.S.C. 532-538), for a road over certain lands or assignable easements owned by the United States in the County of Ferry, State of Washington, and administered by the Forest Service, Department of Agriculture.

NOW THEREFORE, Grantor, for and in consideration of reciprocal rights-of-way received by Grantor, does hereby grant to Grantee, its successors and assigns, and to successors in interest to any lands now owned or hereafter acquired by Grantee (hereinafter collectively referred to as Grantee), subject to existing easements and valid rights, a perpetual easement for a road along and across a strip of land, hereinafter defined as the "premises", over and across the following described lands in the County of Ferry, State of Washington:

Vulcan Mountain Road, No. 2113000, beginning at its junction with the end of Ferry County Road, No. 615, at a point on the south line of the SE1/4SW1/4 of Section 26, T.40N., R.33E., W.M., crossing lands of the Grantor in the SW1/4 of Section 15; N1/2NE1/4 of Section 21; NW1/4SE1/4 of Section 22; SW1/4SW1/4 of Section 23; NW1/4NW1/4, W1/2SW1/4 of Section 26; and the NE1/4NE1/4 of Section 27; all within T.40N., R.33E., W.M., and ending at a point in the NW1/4NE1/4 of Section 21, T.40N., R.33E., W.M.

The Grantor does also grant and convey unto the Grantee an easement along and across road rights of way acquired from Carl E. Lindsey and Avis Lindsey, and Ted E. Stickler and Mary E. Stickler by easement deed dated April 30, 1962, recorded under Auditor's File No. 139023 in records of Ferry County, State of Washington, 100 feet in width, over and across the SE1/4SW1/4 of Section 26, T.40N., R.33E., W.M.

Vulcan Mountain Spur, No. 2113190, beginning at its junction with the Vulcan Mountain Road, No. 2113000, at a point in the NW1/4SW1/4 of Section 15, T.40N., R.33E., W.M., crossing land of the Grantor in said NW1/4SW1/4 of Section 15, T.40N., R.33E., W.M., and ending in the NE1/4SE1/4 of Section 16, T.40N., R.33E., W.M.

Vulcan Mountain Spur, No. 2113012, beginning at its junction with the Vulcan Mountain Road, No. 2113000, at a point in the NW1/4NE1/4 of Section 21, T.40N., R.33E., W.M., crossing land of the Grantor in said NW1/4NE1/4 of Section 21, T.40N., R.33E., W.M., and ending in the SW1/4SE1/4 of Section 16, T.40N., R.33E., W.M.

CERTIFIED CORRECT AS TO CONSIDERATION,  
DESCRIPTION AND CONDITIONS  
By Richard R. Rasmussen Date 3/12/86

The word "premises" when used herein means said strip of land whether or not there is an existing road located thereon. Except where it is defined more specifically, the word "road" shall mean roads now existing or hereafter constructed on the premises or any segments of such roads.

The location of said premises is shown approximately on Exhibit A attached hereto.

Said premises shall be 33 feet in width on each side of the centerline with such additional width as required for accommodation and protection of cuts and fills, except that the width acquired from Ted E. Stickler, et al, shall be the full width acquired by Grantor. If the road is located substantially as described herein, the centerline of said road as constructed is hereby deemed accepted by Grantor and Grantee as the true centerline of the premises granted. If any subsequent survey of the road shows that any portion of the road, although located substantially as described, crosses lands of the Grantor not described herein, the easement shall be amended to include the additional lands traversed; if any land described herein is not traversed by the road as constructed, the easement traversing the same shall be terminated in the manner hereinafter provided.

This grant is made subject to the following terms, provisions, and conditions applicable to Grantee, its permittees, contractors, assignees, and successors in interest:

- A. Except as hereinafter limited, Grantee shall have the right to use the road on the premises without cost for all purposes deemed necessary or desirable by Grantee in connection with the protection, administration, management, and utilization of Grantee's lands or resources, now or hereafter owned or controlled, subject to such traffic-control regulations and rules as Grantor may reasonably impose upon or require of other users of the road without reducing the rights herein granted. Grantee shall have the right to construct, reconstruct, and maintain roads within the premises.

Grantee's right to use the road shall include, but shall not be limited to, use for the purpose of operating and moving specialized logging vehicles and other equipment subject to the following limitations:

Subject to compliance with legal maximum dimensions and weights of motor vehicles imposed by State law on comparable public roads or highways: Provided, That gross weights of equipment or vehicles shall not exceed the capacity of bridges and other structures, and Provided Further, That cleated equipment shall not be used on surfaced roads.

- B. Grantee shall comply with all applicable State and Federal laws, Executive orders, and Federal rules and regulations, except that no present or future administrative rules or regulations shall reduce the rights herein expressly granted.
- C. Grantee shall have the right to charge and to enforce collections from purchasers of timber or other materials when removed from Grantor's lands over the road at such rate per unit of material hauled, or at



such higher rate as may be approved by the Regional Forester, as set forth in the State of Washington, Department of Natural Resources and Forest Service Road Right-of-Way Construction and Use Agreement dated March 24, 1975, until such time as the amounts paid by such means or by credits received from Grantor shall total the amount set forth in said agreement. Timber or other materials hauled by Grantee from lands of the Grantor shall be regarded as though hauled by someone else.

- D. Grantee shall have the right to cut timber upon the premises to the extent necessary for constructing, reconstructing, and maintaining the road. Timber so cut shall, unless otherwise agreed to, be cut into logs of lengths specified by the timber owner and decked along the road for disposal by the owner of such timber.
- E. The costs of road maintenance shall be allocated on the basis of respective uses of the road.

During the periods when either party uses the road or Grantor permits use of the road by others for hauling of timber or other materials, the party so using or permitting such use will perform or cause to be performed, or contribute or cause to be contributed that share of maintenance occasioned by such use of the road.

On any road maintained by Grantee, Grantee shall have the right to charge purchasers of National Forest timber and other commercial haulers, or to recover from available deposits held by the Grantor for such purchasers or haulers, reasonable maintenance charges based on the ratio that said hauling bears to the total hauling on such road. Grantor shall prohibit noncommercial use unless provision is made by Grantor or by the noncommercial users to bear proportionate maintenance costs.

- F. Grantee shall have the right to require any user of the road for commercial or heavy hauling purposes to post security guaranteeing performance of such user's obligations with respect to maintenance of the road and with respect to payments of any charges hereinabove stated as payable to Grantee for use of the road: Provided, the amount of such security shall be limited to the amount reasonably necessary to secure such payment as approved by the Regional Forester.
- G. If it is customary in the industry in this locality to require liability insurance at the time commercial users are allowed to use the road, the Grantee shall have the right to require any user of the road for commercial hauling to procure, to maintain, and to furnish satisfactory evidence of liability insurance in a form generally acceptable in the trade and customary in this area, insuring said party against liability arising out of its operation on the premises. The amount of the insurance that may be required shall be established by the Grantor based on the amount customarily carried by commercial haulers in this area.
- H. The Grantee shall maintain the right-of-way clearing by means of chemicals only after specific written approval has been given by the

Regional Forester. Application for such approval must be in writing and specify the time, method, chemicals, and the exact portion of the right-of-way to be chemically treated.

This easement is granted subject to the following reservations by Grantor, for itself, its permittees, contractors, and assignees:

1. The right to use the road for all purposes deemed necessary or desirable by Grantor in connection with the protection, administration, management and utilization of Grantor's lands or resources, now or hereafter owned or controlled, subject to the limitations herein contained, and subject to such traffic-control regulations and rules as Grantor may reasonably impose upon or require of other users of the road without reducing the rights herein granted to Grantee: Provided, That all use by the public for purposes of access to or from Grantor's lands shall be controlled by Grantor so as not unreasonably to interfere with the use of the road by Grantee or to cause the Grantee to bear a share of the cost of maintenance greater than Grantee's use bears to all use of the road.
2. The right alone to extend rights and privileges for use of the premises to other Government departments and agencies, States, and local subdivisions thereof, and to other users including members of the public except users of lands or resources owned or controlled by Grantee or its successors: Provided, That such additional use also shall be controlled by Grantor so as not unreasonably to interfere with use of the road by grantee or to cause Grantee to bear a share of the cost of maintenance greater than Grantee's use bears to all use of the road.
3. The right to cross and recross the premises and road at any place by any reasonable means and for any purpose in such manner as will not unreasonably interfere with use of the road.
4. The right to all timber now or hereafter growing on the premises, subject to Grantee's right to cut such timber as hereinbefore provided.

Provided that so long as the State of Washington, Department of Natural Resources and Forest Service Road Right-of-Way Construction and Use Agreement dated March 24, 1975, remains in full force and effect, the terms and conditions thereof shall govern all aspects of use of the premises, including, but not limited to construction, reconstruction, and maintenance of the road and the allocation and payment of costs thereof.

The Chief, Forest Service, may terminate this easement, or any segment thereof, (1) by consent of the Grantee, (2) by condemnation, or (3) after a five (5) year period of nonuse, by a determination to cancel after notification and opportunity for hearing as prescribed by law; provided the easement, or segment thereof, shall not be terminated for nonuse so long as the road, or segment thereof, is being preserved for prospective future use.

IN WITNESS WHEREOF, the Grantor, by its Director of Lands, Pacific Northwest Region, Forest Service has executed this easement pursuant to the delegation of authority to the Chief, Forest Service, 7 CFR 2.60, and delegation of authority by the Chief, Forest Service, dated August 22, 1984 (49 FR 34283), on the day and year first above written.

UNITED STATES OF AMERICA

STATE OF WASH. COUNTY OF FERRY, SS  
FILED OR RECORDED  
VOL. MF OF O. R. PAGE 201854  
REQUEST OF State of Wa. DNR  
ON Jun 20 (1:10pm) 19 86  
LILLIAN E. MONTAGUE  
COUNTY AUDITOR  
BY \_\_\_\_\_ DEPUTY  
MAIL TO State of Wa. DNR  
Olympia, Wa. 98504

By Carlin B. Jackson  
CARLIN B. JACKSON  
Director of Lands & Minerals  
Pacific Northwest Region  
Forest Service

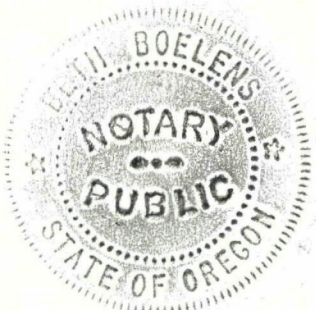
Indexed ✓✓  
Recorded ✓  
Compared ✓  
Paged Out ✓

ACKNOWLEDGEMENT

State of Oregon )  
County of Multnomah ) ss.

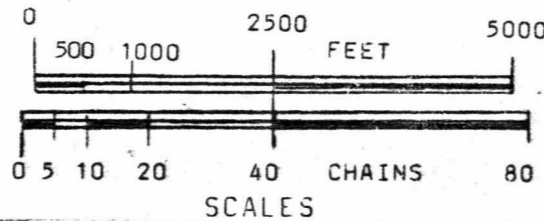
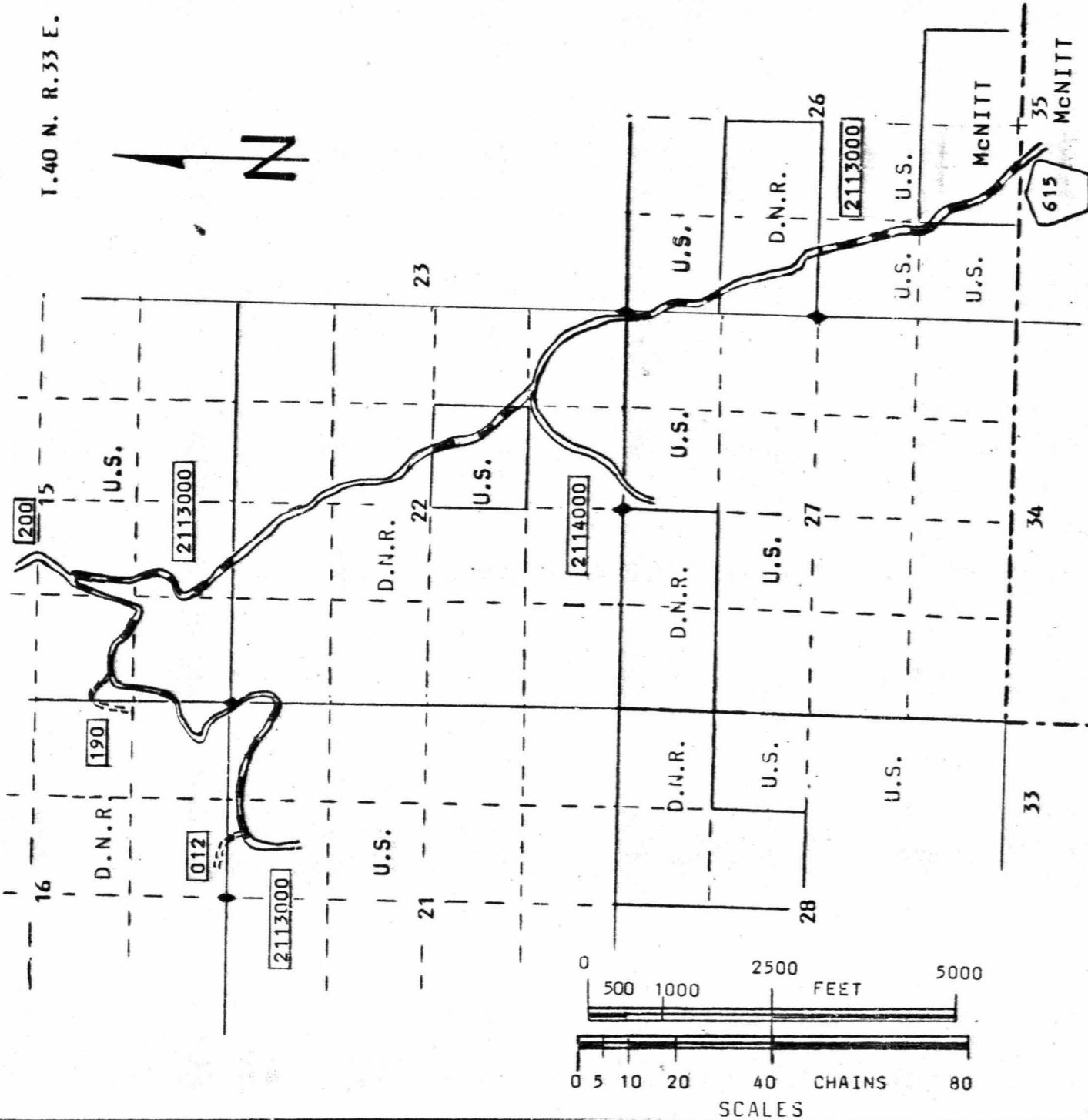
On this 16th day of May, 1986, before me the undersigned a Notary Public within and for said State, personally appeared Carlin B. Jackson, Director of Lands, Pacific Northwest Region, Forest Service, the same person who executed the within and foregoing instrument, who being by me duly sworn according to law, did say that he is the Director of Lands, Pacific Northwest Region, Forest Service, and that said instrument was signed in behalf of the United States of America by its authority duly given and by him delivered as and for its act and deed. And he did further acknowledge that he executed said instrument as the free act and deed of the United States of America, for the purposes and consideration herein mentioned and set forth, and I do hereby certify.

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



Beth Boelens  
Notary Public in and for said  
State of Oregon  
Residing at Portland  
My Commission expires 4/26/88

T.40 N. R.33 E.



### 2730 RIGHTS OF WAY GRANTS

D.N.R. - U.S.F.S. ROAD RIGHT OF WAY CONSTRUCTION AND USE AGREEMENT SUPPLEMENT #13

COLVILLE NATIONAL FOREST FERRY COUNTY, WASHINGTON  
 COST SHARE EASEMENTS GRANTED TO:  
 WASHINGTON DEPT. OF NATURAL RESOURCES  
 T.40 N., R.33 E., WM.  
 SECS. 15, 21, 22, 23, 26, & 27

ROAD No. 2113000	ROAD No. 2113012
LENGTH 2.49 mi.	LENGTH .05 mi.
ROW ACRES 21.05	ROW ACRES .40
ROW WIDTH 66'	ROW WIDTH 66'

ROAD No. 2113190	NOTE: ROW WIDTH ACROSS
LENGTH .08 mi.	McNITT PROPERTY IS 100
ROW ACRES .64	FEET, AS IN ORIGINAL
ROW WIDTH 66'	ROW DEED.

ROAD AND TIE SURVEYS BY U.S.F.S. TRANSIT AND CHAIN, AND COMPASS AND CHAIN METHODS.  
 ALL ROADS ARE CONSTRUCTED.

#### LEGEND

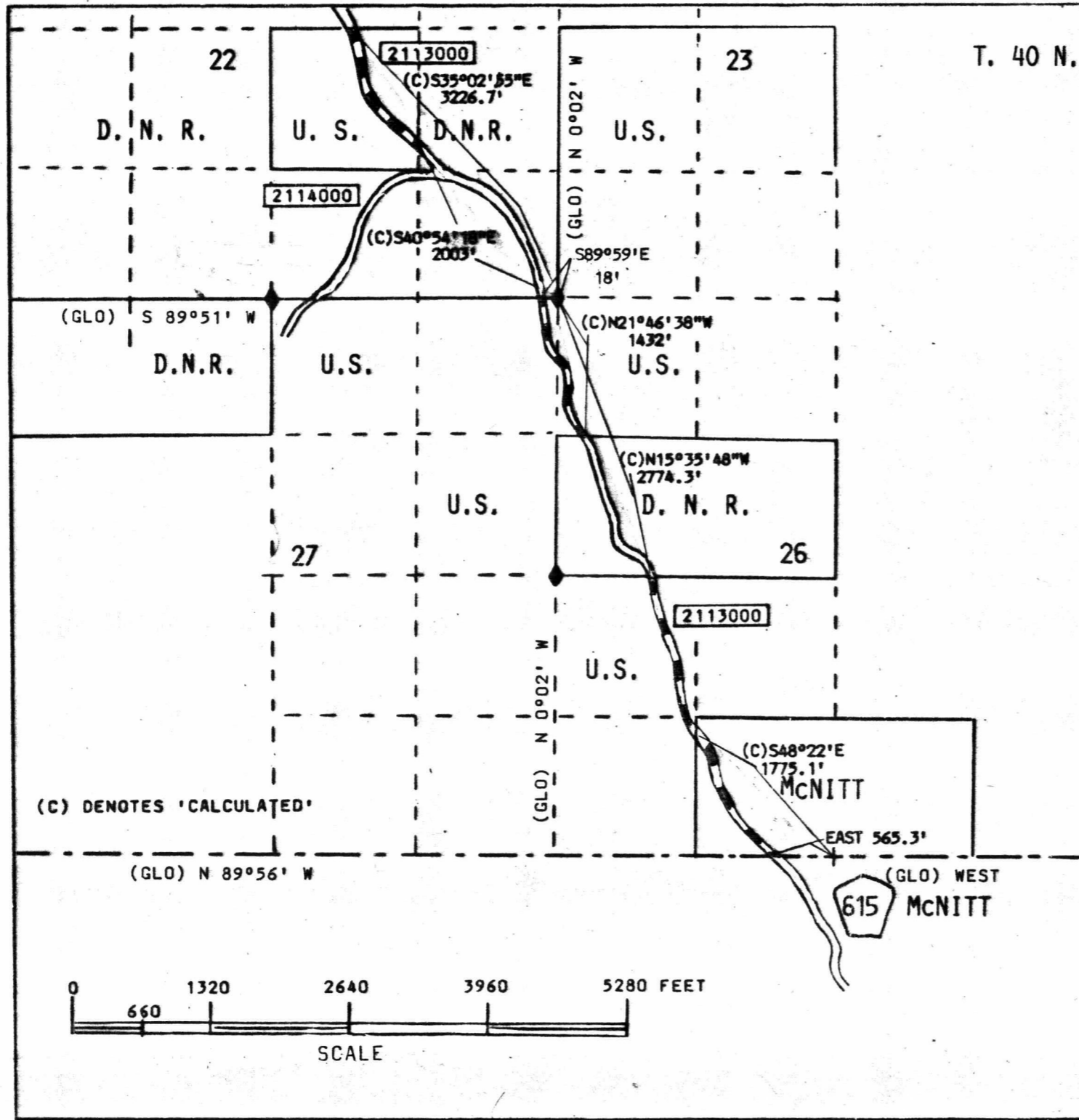
NAT'L. FOR. PROCLAMATION BDRY.	-----
EASEMENT GRANTED	=====
WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES LANDS	D.N.R.
NATIONAL FOREST SYSTEM LANDS	U.S.
FOUND AND TIED BRASS CAP	◆
FENCE CORNER & 1 BT., FIELD TIED	+

SURVEYED BY <i>F E England</i>	DATE <i>8/85</i>
DRAWN BY <i>F E England</i>	DATE <i>1/86</i>
REVIEWED BY <i>P J Bell</i>	DATE <i>2/10/86</i>
APPROVED BY <i>William D Shuck</i>	DATE <i>2/10/86</i>
FOREST ENGINEER	FOREST SUPERVISOR



TRO 9/6/2017

201854



T. 40 N., R. 33 E., WM.

EXHIBIT " A "

Sheet 2 of 3 Sheets

2730  
 RIGHTS OF WAY GRANTS  
 D.N.R. - U.S.F.S. ROAD RIGHT OF WAY  
 CONSTRUCTION AND USE AGREEMENT  
 SUPPLEMENT #13

COLVILLE NATIONAL FOREST  
 FERRY COUNTY, WASHINGTON

COST SHARE EASEMENT GRANTED TO:  
 WASHINGTON DEPT. OF NATURAL RESOURCES  
 T.40 N., R.33 E., Secs. 22,23,26, & 27

ROAD No. 2113000  
 LENGTH 1.11 mi.  
 ROW ACRES 10.02  
 ROW WIDTH 66'

NOTE: ROW WIDTH ACCROSS McNITT PROPERTY  
 IS 100 FEET, AS IN THE ORIGINAL ROW DEED.

ROAD AND TIE SURVEYS BY U.S.F.S. TRANSIT  
 AND CHAIN, AND COMPASS AND CHAIN METHODS.  
 ROADS ARE CONSTRUCTED.

LEGEND

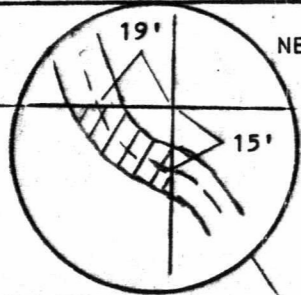
FENCE CORNER + 1 BT, FIELD TIED +  
 EASEMENT GRANTED

WASHINGTON STATE DEPARTMENT OF  
 NATURAL RESOURCES LANDS D. N. R.  
 NATIONAL FOREST SYSTEM LANDS U. S.  
 FOUND & TIED BRASS CAP

SURVEYED BY	<i>F. E. England</i>	DATE	9/85
DRAWN BY	<i>F. E. England</i>	DATE	1/86
REVIEWED BY	<i>P. J. [Signature]</i>	DATE	2/10/86
	FOREST ENGINEER		
APPROVED BY	<i>William [Signature]</i>	DATE	2/10/86
	FOREST SUPERVISOR		

TRO 9/6/2817

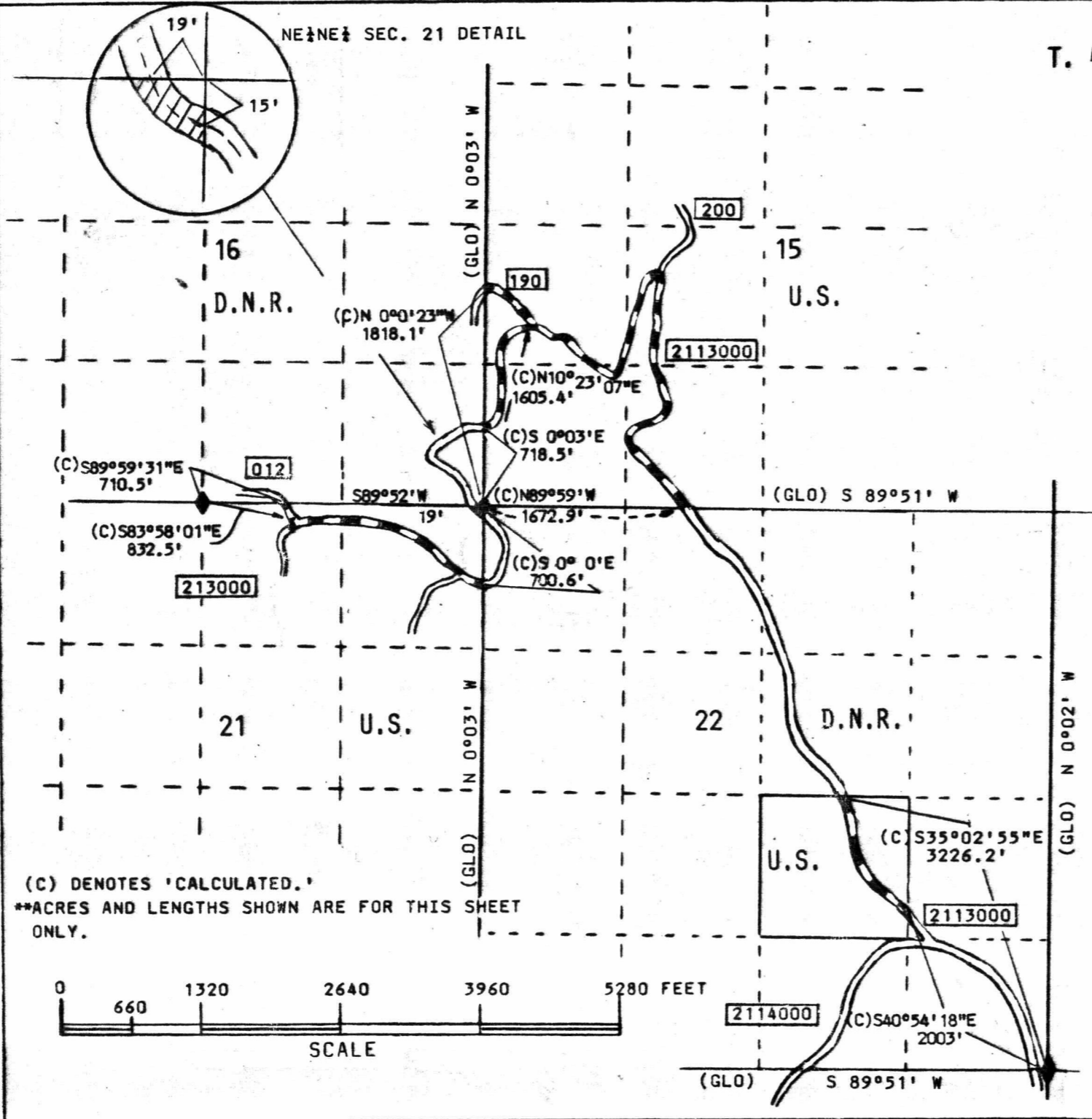
201854



T. 40 N., R 33 E., WM.

EXHIBIT "A"  
Sheet 3 of 3 Sheets

2730  
 RIGHTS OF WAY GRANTS  
 D.N.R. - U.S.F.S. ROAD RIGHT OF WAY  
 CONSTRUCTION AND USE AGREEMENT  
 SUPPLEMENT #13  
 COLVILLE NATIONAL FOREST  
 FERRY COUNTY, WASHINGTON  
 COST SHARE EASEMENT GRANTED TO  
 WASHINGTON DEPT. OF NATURAL RESOURCES  
 T.40 N., R.33 E., WM.  
 SECS. 15, 21, 22, & 23



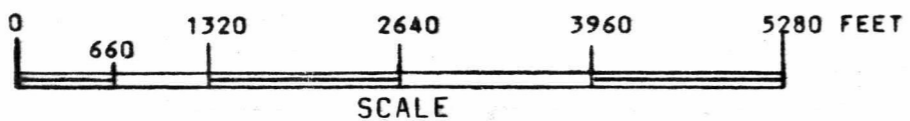
ROAD No.	2113000	ROAD No.	2113190
LENGTH	1.85 mi.	LENGTH	.08 mi.
ROW ACRES	15.31	ROW ACRES	.64
ROW WIDTH	66'	ROW WIDTH	66'

ROAD AND TIE SURVEYS BY U.S.F.S. TRANSIT AND CHAIN, AND COMPASS AND CHAIN METHODS. ROADS ARE CONSTRUCTED.

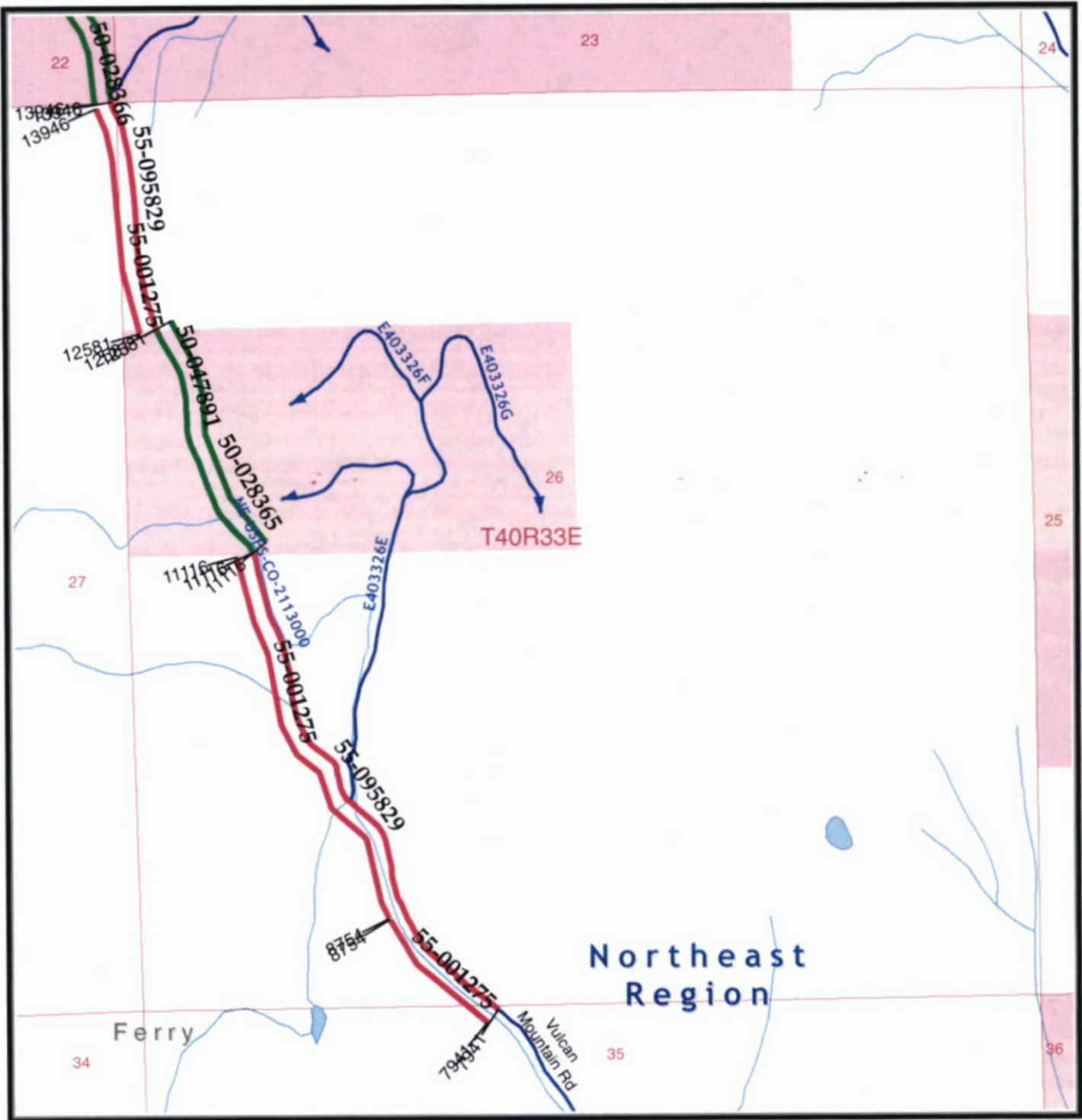
LEGEND

EASEMENT GRANTED	
WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES LANDS	D. N. R.
NATIONAL FOREST SYSTEM LANDS	U. S.
FOUND & TIED BRASS CAP	

(C) DENOTES 'CALCULATED.'  
 \*\*ACRES AND LENGTHS SHOWN ARE FOR THIS SHEET ONLY.



SURVEYED BY	<i>F E England</i>	DATE	8/85
DRAWN BY	<i>F E England</i>	DATE	1/86
REVIEWED BY	<i>[Signature]</i>	DATE	2/10/86
APPROVED BY	<i>William D. Shunk</i>	DATE	2/10/86
	FOREST SUPERVISOR		



**REGIS Right of Way Events  
Grant Codes**

- 1: Acquired by DNR
- 2: Granted to Other
- 3: Merged in Title

**DNR Routes**

- ➔ Route Direction

**Roads by USGS Class**

- 1: Primary Highway/All-Weather/Hard Surface
- 2: Secondary Highway/All-Weather/Hard Surface
- 3: Light-Duty Road/All-Weather/Improved
- 4: Unimproved Road/Fair or Dry Weather
- - - 5: 4 wheel drive

**DNR-Managed Lands**

- Granted Trust Lands
- Forest Board Trust Lands
- NAP / NRCA
- Other DNR-Managed Lands





