



**TIMBER NOTICE OF SALE**

**SALE NAME:** *Q FLY BY NIGHT*

**AGREEMENT NO:** 30-106349

**AUCTION:** June 13, 2024 starting at 10:00 a.m.,  
Southeast Region Office, Ellensburg, WA

**COUNTY:** Chelan, Kittitas

**SALE LOCATION:** Sale located approximately 22 miles north of Ellensburg, WA and 20 miles south of Wenatchee, WA.

**PRODUCTS SOLD AND SALE AREA:**

All timber meets the Schedule A Cutting Prescription except for trees bounded out by yellow "Leave Tree Area" tags bounded by white "Timber Sale Boundary" tags and pink flagging.

All forest products above located on part(s) of Sections 4 and 6 all in Township 20 North, Range 20 East, Sections 32 all in Township 21 North, Range 20 East, W.M., containing 514 acres, more or less.

**CERTIFICATION:** This sale is certified under the Sustainable Forestry Initiative® program Standard (cert no: BVC-SFIFM-018227)

**ESTIMATED SALE VOLUMES AND QUALITY:**

Species	Avg Ring DBH Count	Total MBF	Total Tons	Price \$/Ton	MBF by Grade						UT		
					1P	2P	3P	SM	1S	2S		3S	4S
Larch	11.5	956	8,899	\$2.00						15	437	442	
Lodgepole	10.7	914	8,851	\$2.00							284	578	
White fir	11.4	472	4,417	\$2.00									
Grand fir	12.3	394	4,549	\$2.00						14	167	201	
Douglas fir	11.4	378	4,105	\$2.00						13	128	216	
Spruce	13.9	321	3,161	\$2.00							230	83	
Sale Total		3,435	33,982										

**MINIMUM BID:** \$2/ton (est. value \$67,000.00)

**BID METHOD:** Sealed Bids

**PERFORMANCE SECURITY:**

\$13,400.00

**SALE TYPE:** Tonnage Scale

**EXPIRATION DATE:** October 31, 2026

**ALLOCATION:** Export Restricted

**BIDDABLE SPECIES:** Bidding to be allowed on all species combined.

**BID DEPOSIT:** \$6,700.00 or Bid Bond. Said deposit shall constitute an opening bid at the appraised price.

**HARVEST METHOD:** All ground-based equipment. No harvesting is allowed from November 1 to May 1. Falling and Yarding will not be permitted from November 1 to May 1 unless authorized in writing by the Contract Administrator.



## TIMBER NOTICE OF SALE

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**ROADS:** 4.35 stations of required construction. 34.20 stations of required reconstruction. 55.65 stations of optional reconstruction. 729.10 stations of required prehaul maintenance. 76.30 stations of abandonment. The operation of road construction equipment is not allowed between November 1 to April 30, or on weekends or state recognized holidays, unless authorized in writing by the Contract Administrator. The hauling of forest products will not be permitted from November 1 to May 15 unless authorized in writing by the Contract Administrator.

### ACREAGE DETERMINATION

**CRUISE METHOD:** Approximately 13 acres were deducted from the gross acres for roads and non-tradable leave tree areas. Variable plot cruise-See narrative for details

**FEES:** \$58,395.00 is due on day of sale. \$1.00 per ton is due upon removal. This is in addition to the bid price.

**SPECIAL REMARKS:** There is an estimated 170 mbf of utility on this sale. Utility is optional removal at \$1.00 per ton. Existing down wood as defines as having at least 1-2 inches of rot in the outer sap wood are not to be removed or yarded with this sale.

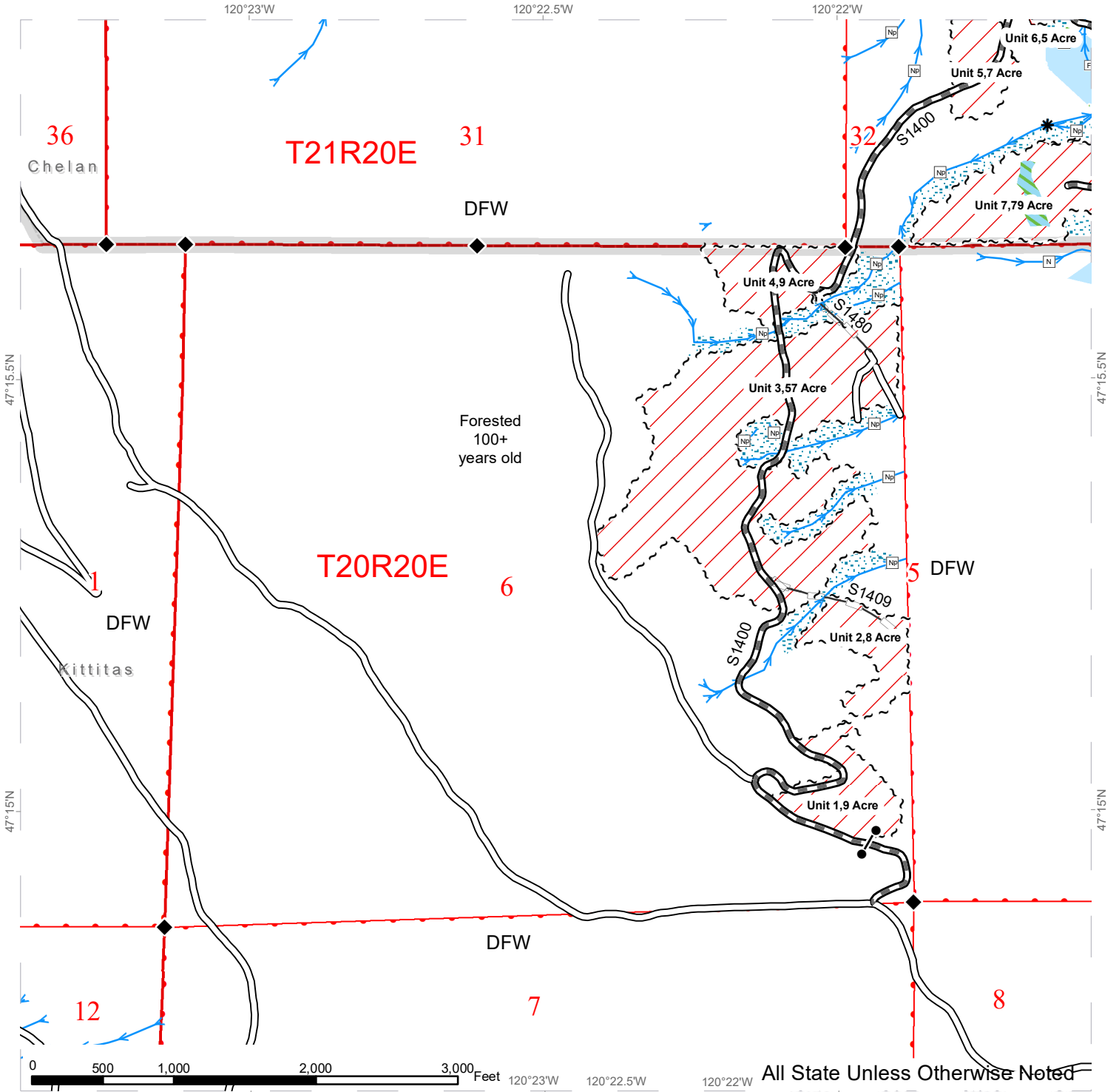
Dust abatement will be required by purchaser on all purchaser maintained roads from June 1-November 1 or as directed by the CA.

S1450: no work is to be done from 12+40 to 15+35 except abandoning.

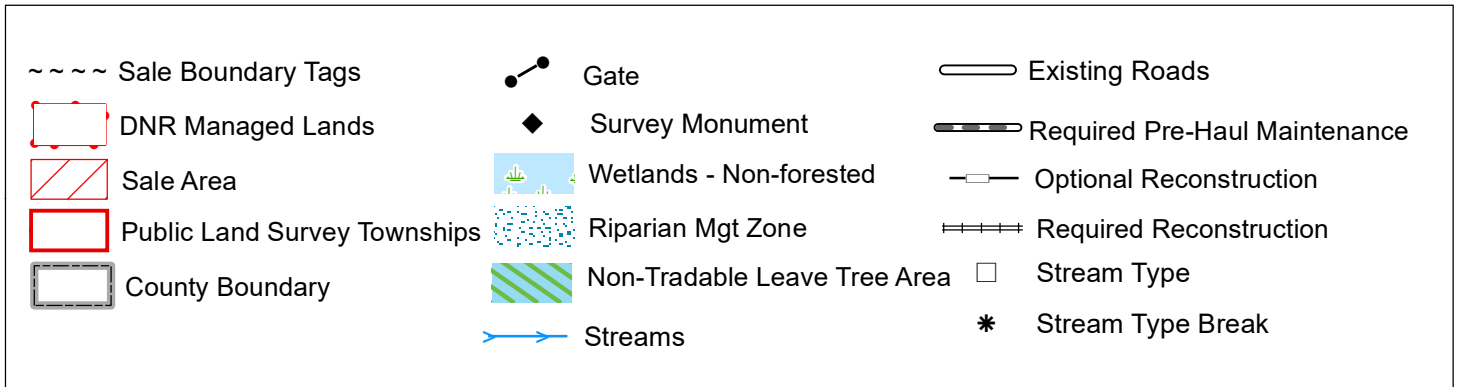
# TIMBER SALE MAP

**SALE NAME:** Q FLY BY NIGHT  
**AGREEMENT #:** 30-106349  
**TOWNSHIP(S):** T20R20E, T21R20E  
**TRUST(S):** Agricultural School (4), Common School and Indemnity (3)

**REGION:** Southeast Region  
**COUNTY(S):** Chelan, Kittitas  
**ELEVATION RGE:** 4440-6160



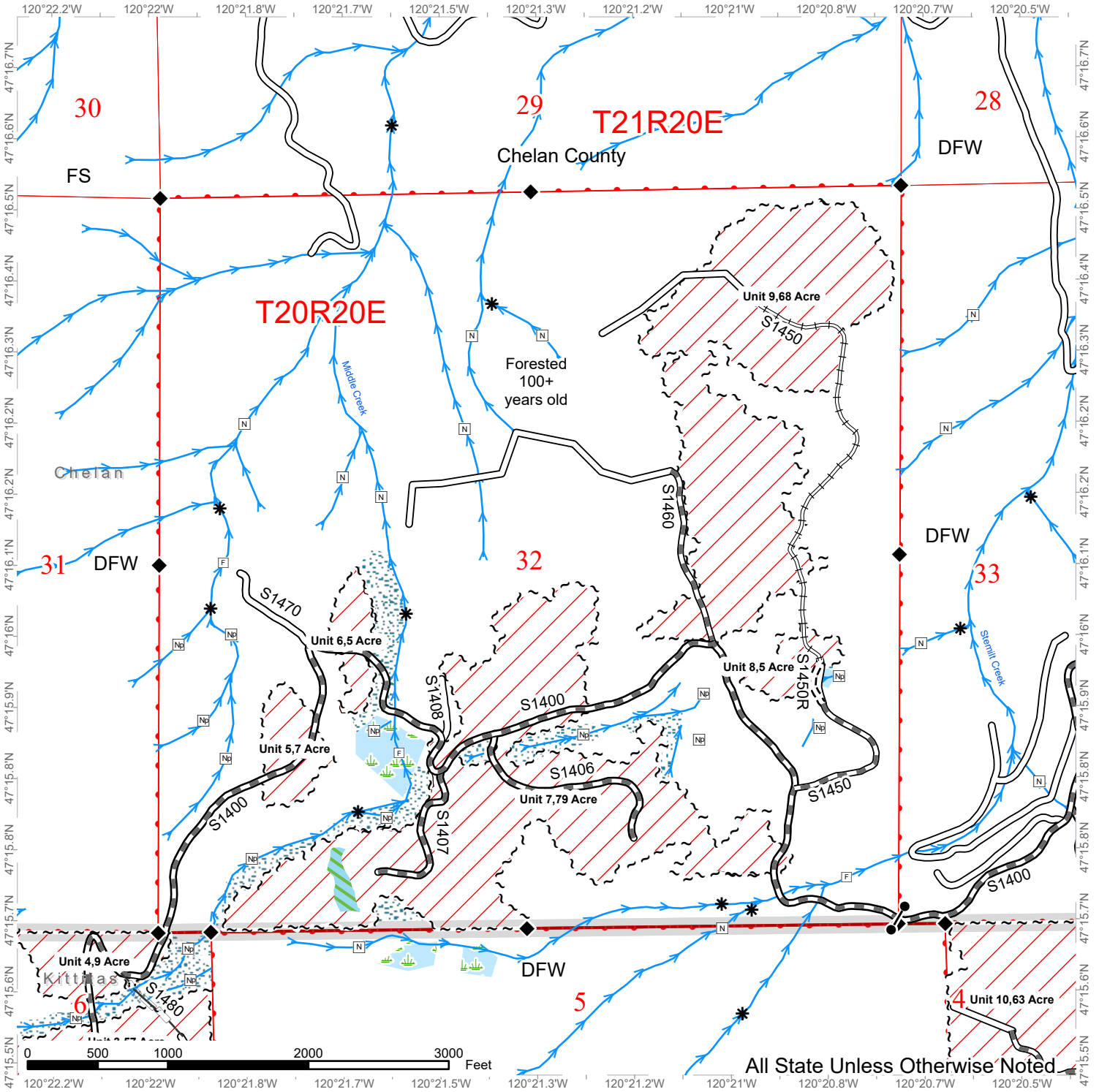
All State Unless Otherwise Noted



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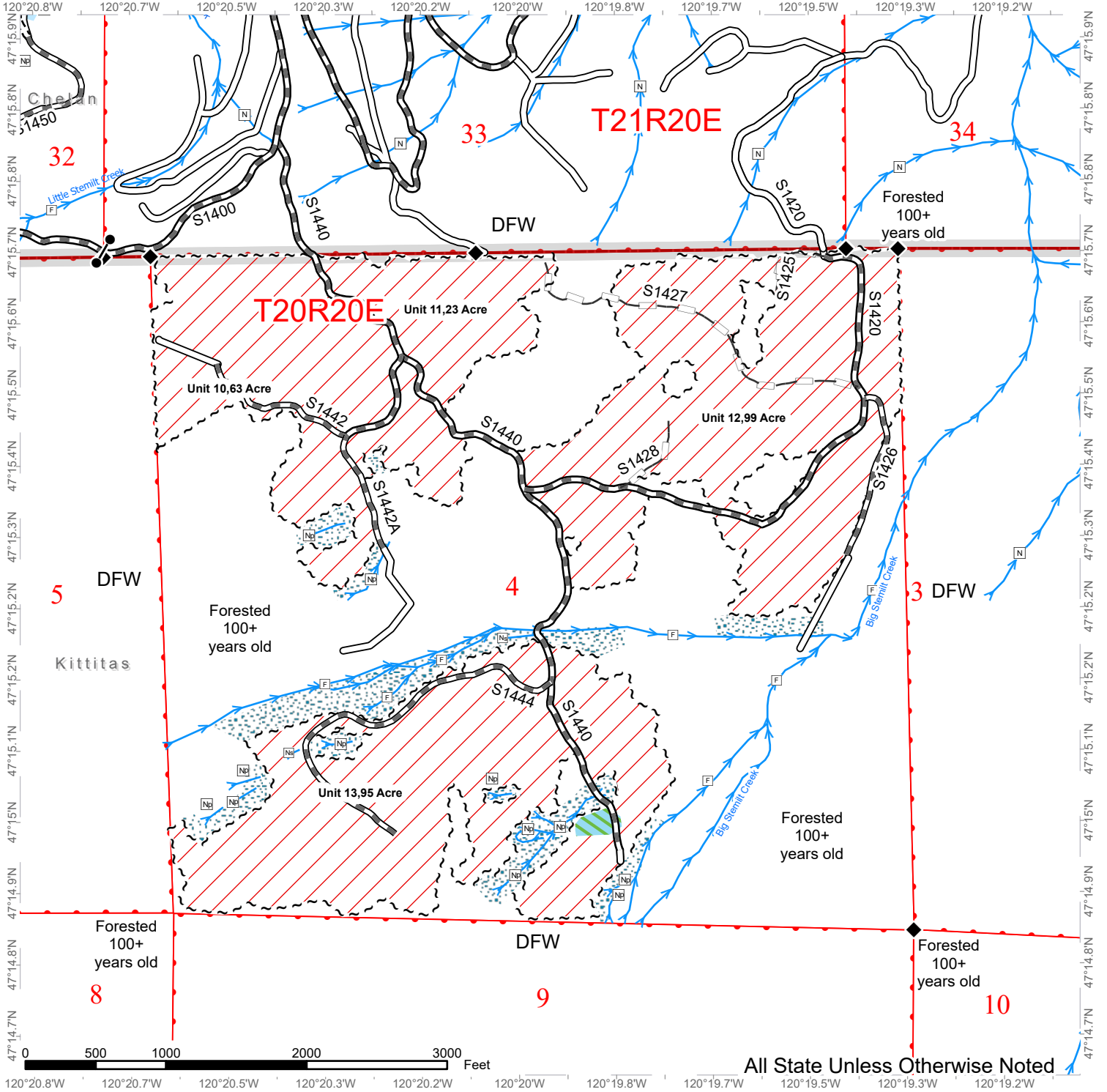
All State Unless Otherwise Noted

~ ~ ~ Sale Boundary Tags	● Gates	Existing Roads
DNR Managed Lands	◆ Survey Monument	Required Pre-Haul Maintenance
Sale Area	Wetlands - Non-forested	Optional Reconstruction
Public Land Survey Townships	Riparian Mgt Zone	Required Reconstruction
County Boundary	Non-Tradable Leave Tree Area	Stream Type
	Streams	* Stream Type Break
		- - - Required Construction

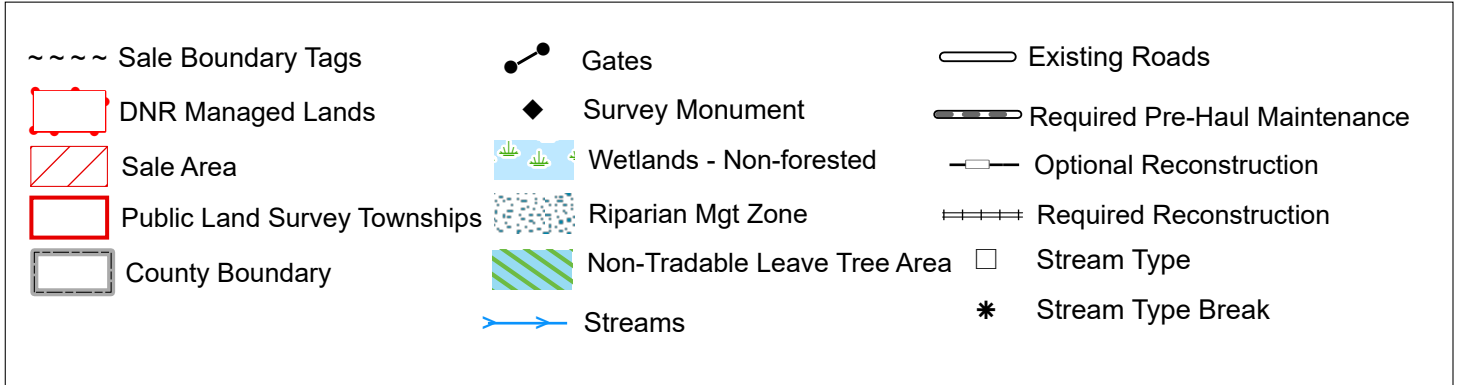
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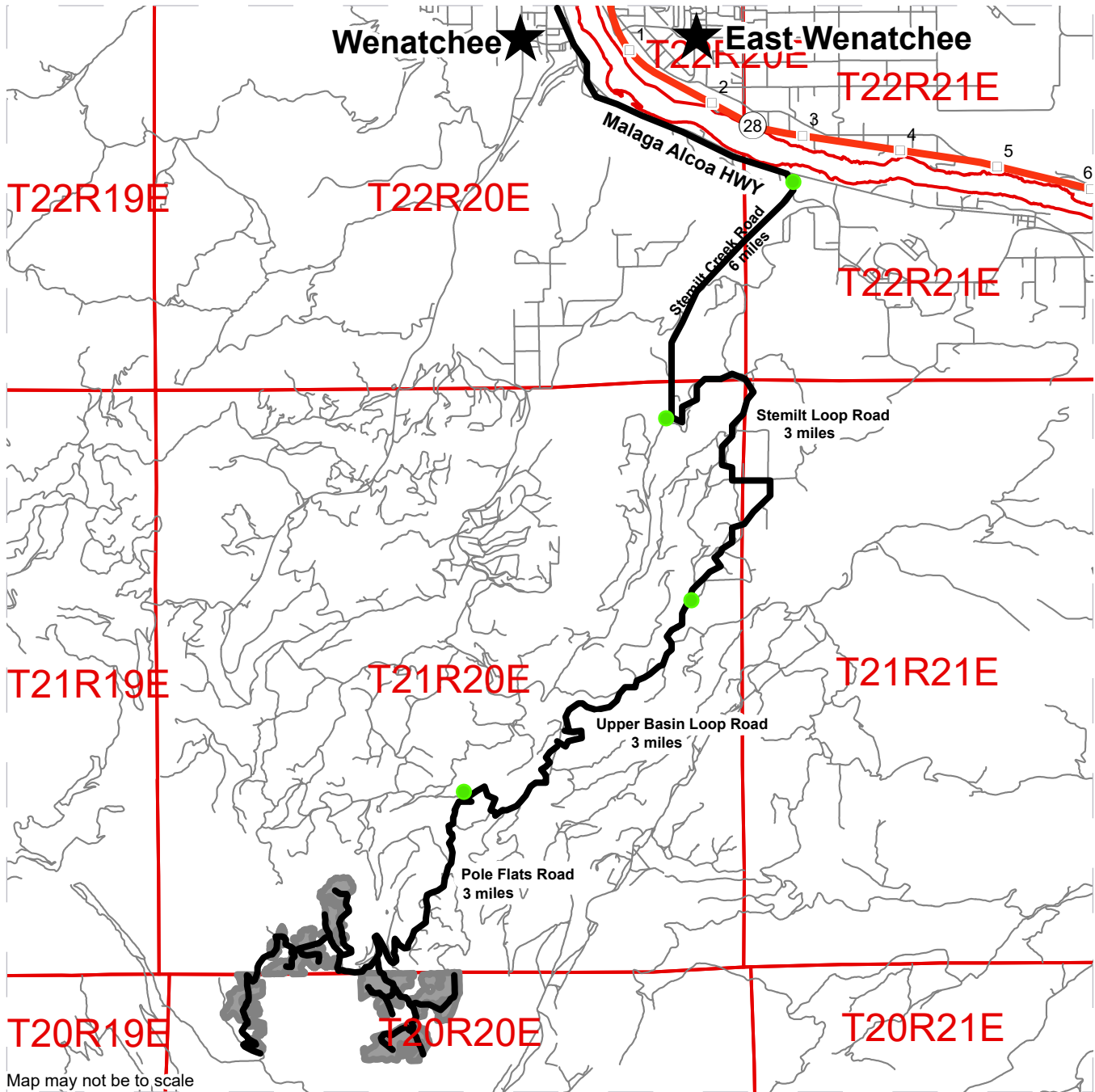
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Map may not be to scale

**Legend**

- Timber Sale Unit
- Haul Route
- Town
- Highway
- Other Road
- Milepost Markers
- Distance Indicator

**DRIVING DIRECTIONS:**

The sale area is approximately 20 miles south of Wenatchee, WA in the Naneum Ridge State Forest. From Wenatchee drive southeast to Malaga HWY. Turn right at Stemilt Creek road. In about 6 miles turn left onto Stemilt Loop road. Continue for about 3 miles. Turn onto S1200 (Upper Basin Loop road). Continue for about 3 miles and turn left onto S1400 (Pole Flats road) and continue for about 3 miles.

**U10-13 Access:**  
Turn left onto S1440. Units 10 and 11 are in 800 feet. Units 12 and 13 are about 0.5 mile along S1444.

**U1-9 Access:**  
Continue on Pole Flats road through the gate. The rest of the units are past the gate.  
U8-9: After passing the gate, in about 0.3 miles turn right on S1450. Both units are along the main road (S1400).

U1-7: Continue on the main road (S1400) for about 3 miles. Units are along the road until the second gate.

Modification Date: mman490 3/1/2024

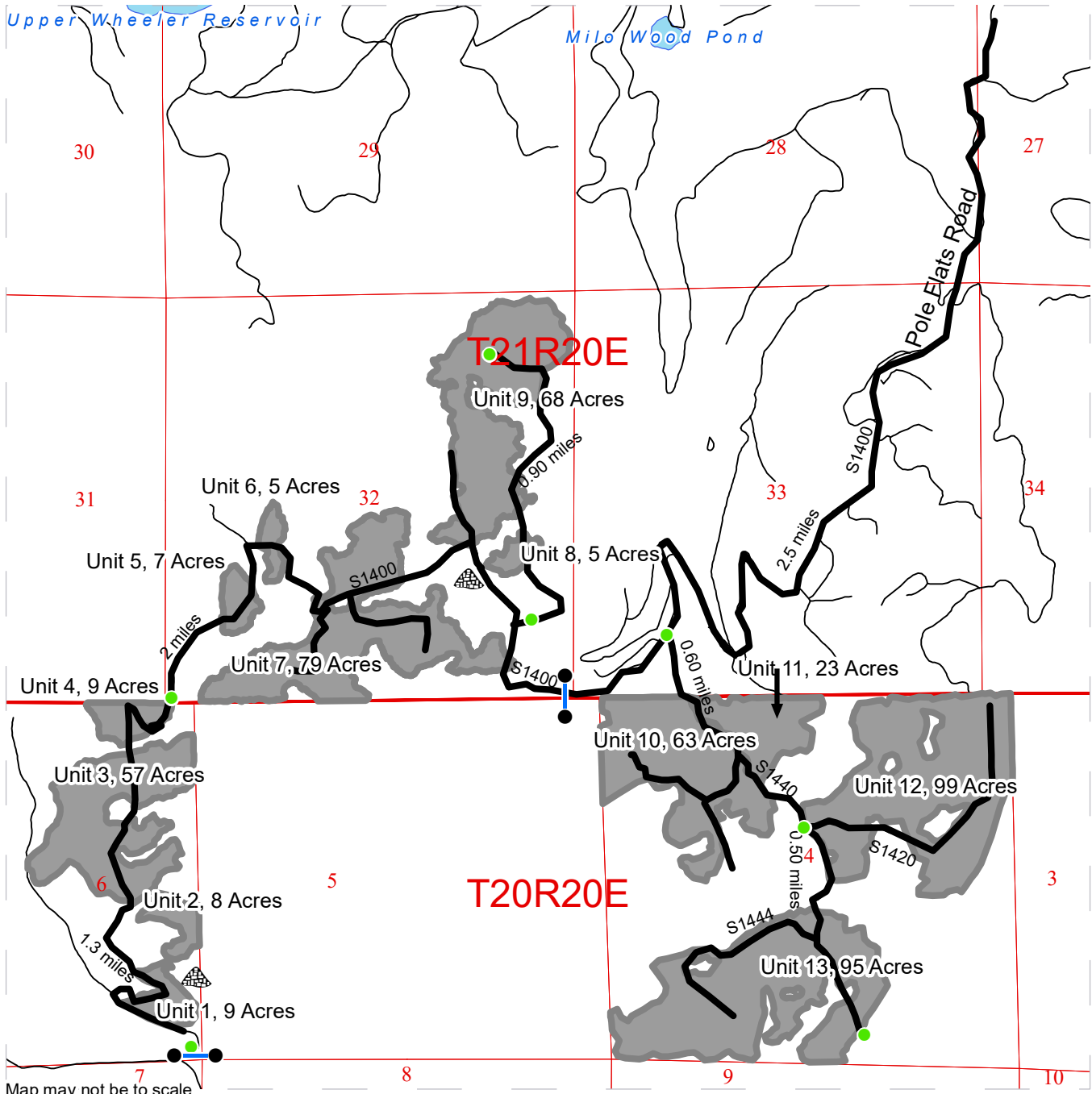




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	Timber Sale Unit
	Haul Route
	Gate
	Distance Indicator
	Other Road
	Stock Pile/Rock Source

**Driving Directions:**

The sale area is approximately 20 miles south of Wenatchee, WA in the Naneum Ridge State Forest. From Wenatchee drive southeast to Malaga HWY. Turn right at Stemilt Creek road. In about 6 miles turn left onto Stemilt Loop road. Continue for about 3 miles. Turn onto S1200 (Upper Basin Loop road). Continue for about 3 miles and turn left onto S1400 (Pole Flats rd) and continue for about 3 miles.

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**STATE OF WASHINGTON  
DEPARTMENT OF NATURAL RESOURCES**

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

**Export Restricted Tonnage Scale AGREEMENT NO. 30-0106349**

**SALE NAME: Q FLY BY NIGHT**

**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-010 Products Sold and Sale Area

Purchaser was the successful bidder on June 13, 2024 and the sale was confirmed on \_\_\_\_\_. The State, as owner, agrees to sell to Purchaser, and Purchaser agrees to purchase, cut, and remove the following forest products: All timber meets the Schedule A Cutting Prescription except for trees bounded out by yellow "Leave Tree Area" tags bounded by white "Timber Sale Boundary" tags and pink flagging.

All forest products described above located on approximately 514 acres on part(s) of Sections 4, and 6 all in Township 20 North, Range 20 East, Section 32 in Township 21 North, Range 20 East W.M. in Chelan, and Kittitas County(s) as shown on the attached timber sale map and as designated on the sale area.

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

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

#### G-020 Inspection By Purchaser

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

G-025 Schedules

The following attached schedules are hereby incorporated by reference:

Schedule	Title
A	Cutting Prescription

G-030 Contract Term

Purchaser shall remove the forest products conveyed and complete all work required by this contract prior to October 31, 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-050 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 contract value based on the contract payment rate and advertised volume.

For the second extension, not to exceed 1 year, payment of at least 90 percent of the contract value based on the contract payment rate base and advertised volume.

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 timber value of the contract.

To determine the unpaid portion of the contract, multiply the contract payment rate for each item by the remaining volume for each item based on the volumes from the Timber Notice of Sale. In addition, all cash deposits that can be used for timber payments, except the initial deposit, will be deducted from the unpaid portion of the contract.

- e. Payment of \$2.00 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-062 Habitat Conservation Plan

The State has entered into a Habitat Conservation Plan (HCP) with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service (the Services) to address state trust land management issues relating to compliance with the Federal Endangered Species Act. The activities to be carried out under this contract are located within the State's HCP area and are subject to the terms and conditions of the HCP, and the Services' Incidental Take Permit Nos. TE812521-1 and 1168 (collectively referred to as ITP), or as amended hereafter by the Services. The ITP authorizes the incidental take of certain federally listed threatened and endangered species, as specified in the ITP conditions. All HCP materials, including the ITP, are available for review at the State's Regional Offices and the administrative headquarters in Olympia, Washington.

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

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

#### G-063 Incidental Take Permit Notification Requirements

- a. Purchaser shall immediately notify the Contract Administrator of new locations of permit species covered by the Incidental Take Permits (ITP) that are discovered within the area covered by the State's Habitat Conservation Plan (HCP), including, but not limited to: locations of occupied murrelet habitat; spotted owl nest sites; wolves; grizzly bears; nests, communal roosts, or feeding concentrations of bald eagles; peregrine falcon nests; Columbian white-tailed deer; Aleutian Canada geese; Oregon silverspot butterflies; and additional stream reaches found to contain bull trout. Purchaser is required to notify the Contract Administrator upon discovery of any fish species found in streams or bodies of water classified as non-fish bearing. In all circumstances, notification must occur within a 24 hour time period.
- b. Upon locating any live, dead, injured, or sick specimens of any permit species covered by the ITP, Purchaser shall immediately notify the Contract Administrator. Purchaser shall notify the Contract Administrator if there is any doubt as to the identification of a discovered permit species. Purchaser may be required to take certain actions to help the Contract Administrator safeguard the well-being of any live, injured or sick specimens of any permit species discovered, until the proper disposition of such specimens can be determined by the Contract Administrator. Any such requirements will be explained to Purchaser by the Contract Administrator during the Pre-Work Conference. In all circumstances, notification must occur within a 24 hour time period.
- c. Purchaser shall refer to a specific ITP number, ITP TE812521-1 or ITP 1168 (copies which are located in the region office) in all correspondence and reports concerning permit activities.
- d. Provisions and requirements of the ITP shall be clearly presented and explained to Purchaser by Contract Administrator during the Pre-Work Conference as per contract clause G-330. All applicable provisions of the ITP

and this schedule must be presented and clearly explained by Purchaser to all authorized officers, employees, contractors, or agents of Purchaser conducting authorized activities in the timber sale area. Any questions Purchaser may have about the ITP should be directed to the Contract Administrator.

G-064 Permits

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

G-065 Regulatory Disclaimer

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

G-066 Governmental Regulatory Actions

a. Risk

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

b. Sale Area

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

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

c. Adjustment of Price

The State shall adjust the total contract price by subtracting from the total contract price an amount determined in the following manner: The State shall cause the timber sale area subject to governmental regulation or order to be measured. The State shall calculate the percentage of the total sale area subject to the governmental regulation or order. The State shall reduce the total contract price by that calculated percentage. However, variations in species, value, costs, or other items pertaining to the affected sale area will be analyzed and included in the adjustment if deemed appropriate by the State. The State will further reduce the total contract price by the reasonable cost of

unamortized roads Purchaser constructed but was unable to fully use for removing timber. A reduction in total contract price terminates all of the Purchaser's rights to purchase and remove the timber and all other interest in the affected sale area.

G-070 Limitation on Damage

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

G-080 Scope of State Advice

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

G-090 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, added forest products become a part of this contract and shall be paid for at the same rate and manner as other forest products under this contract.

G-100 Forest Products Not Designated

Any forest products not designated for removal, which must be removed in the course of operations authorized by the State, shall be approved and designated by the Contract Administrator. Added forest products become a part of this contract and shall be paid for at the same rate and manner as other forest products under this contract.

G-105 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 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 same rate and manner as other forest products under this contract.

G-110 Title and Risk of Loss

Title to the forest products conveyed passes at confirmation of the sale. Purchaser bears the risk of loss of or damage to and has an insurable interest in the forest products



in this contract from the time of confirmation of the sale of forest products. In the event of loss of or damage to the forest products after passage of title, whether the cause is foreseeable or unforeseeable, the forest products shall be paid for by Purchaser. Breach of this contract shall have no effect on this provision. Title to the forest products not removed from the sale area within the period specified in this contract shall revert to the State as provided in RCW 79.15.100.

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 Purchasers expense regardless of cost, to remedy deficiencies at any time.

#### G-140 Indemnity

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

#### G-150 Insurance

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

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

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

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

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

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

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

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

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

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

Commercial General Liability (CGL) Insurance. Purchaser shall maintain general liability (CGL) insurance, and, if necessary, commercial umbrella insurance with a limit of not less than \$1,000,000.00 per each occurrence. If such CGL insurance

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

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

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

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

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

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

## G-160 Agents

The State's rights and duties will be exercised by the Region Manager at Ellensburg, 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; S1200 (0+00 to 168+75), S1400, S1406 (0+00 to 16+75), S1407 (0+00 to 12+00), S1409 (0+00 to 10+00), S1420 (0+00 to 42+40), S1425 (0+00 to 5+45), S1426 (0+00 to 12+50), S1427 (0+00 to 27+25), S1428 (0+00 to 6+45), S1440 (0+00 to 64+50), S1442 (0+00 to 19+90), S1442A (0+00 to 8+50), S1444 (0+00 to 29+95), S1450 (0+00 to 12+40 and 15+35 to 49+55), S1450R (0+00 to 3+35), S1460 (0+00 to 13+05), S1480 (0+00 to 6+50), S1480S (0+00 to 1+00). The State may authorize in writing the use of other roads subject to fees, restrictions, and prior rights.

**G-330 Pre-work Conference**

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

**G-340 Preservation of Markers**

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

**G-360 Road Use Reservation**

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

G-370 Blocking Roads

Purchaser shall not block the S1440 (0+00 to 44+85) and S1400 (175+50 to 328+40), unless authority is granted in writing by the Contract Administrator.

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: Graze

In Favor of: Washington Department of Fish and Wildlife

Disclosed by Application No.: 10-B87563

Granted: 3/1/2022

Expires: 8/31/2031

Water Right, including the terms and provisions thereof,

For: Creek

In Favor of: DNR

Disclosed by Application No.: 78-003384

Granted: 3/26/1973

Expires: Indefinite

Water Right, including the terms and provisions thereof,

For: Creek

In Favor of: DNR

Disclosed by Application No.: 78-003385

Granted: 3/26/1973

Expires: Indefinite

Section P: Payments and Securities

P-010 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 the 'Payment for Forest Products' clause, 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-024 Payment for Forest Products

Purchaser agrees to weigh all loads and pay the following rate per ton for forest products conveyed plus \$89,310.00 in fees. Fees collected shall be retained by the state unless the contract is adjusted via the G-066 clause.

## DATA MISSING

Species that are conveyed but are not listed in the table above shall be paid for at a rate to be determined by the State.

## P-027 Payment for Removal of Optional Forest Products

Purchaser agrees to weigh all loads and pay the rate of \$1.00 per ton for forest products approved for removal from the sale area under clause H-157.

## P-040 Weighing and Scaling Costs

Purchaser agrees to pay for all scaling and weighing costs for logs and other products sold under this contract. Purchaser also agrees to pay for all costs associated with the transmission and reporting of scale or weight data.

## 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-052 Payment Procedure

If a third party Log and Load Reporting Service (LLRS) is required by this contract the State will compute and forward to the Purchaser statements of charges provided for in the contract. Purchaser shall deliver payment to the Southeast region office on or before the date shown on the billing statement.

If a third party LLRS is not required by this contract, Purchaser shall pay for forest products removed on a monthly basis. Payments will be submitted to the office listed above on or before the fourteenth of the month following the month in which the timber was removed or, according to an alternate payment schedule as approved by the State with at least one payment each month for timber removed. The alternate payment schedule, once approved by the State, shall become part of this contract and may be changed only with written approval of the State.

Payment will be based on the contract rate multiplied by the tons (tonnage contracts) or volume (mbf contracts) removed during the month or payment period. Included with the payment will be a summary report along with all related load tickets and the corresponding certified weight tickets for the payment period. The summary report will be generated using a computer spreadsheet and list the load tickets in ascending numerical order with the corresponding ticket number and weight or volume for each load.

P-070 Payment for Products: Damage, Theft, Loss, or Mismatch

Forest products included in this agreement which are destroyed, damaged, stolen, lost, or mismatched shall be paid for by Purchaser on demand of the State. The rates contained in clause P-024 shall apply.

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 \$13,400.00. 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 L: Log Definitions and Accountability

L-060 Load Tickets

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

Purchaser shall account for all load tickets issued by the Contract Administrator and return unused tickets at termination of the contract, or as otherwise required by the Contract Administrator. Unused tickets not returned shall be subject to liquidated damages per clause D-030.

The State may also treat load tickets either not accounted for or not returned as lost forest products per clause P-070. All costs associated with computing the billings for lost forest products shall be borne by Purchaser

L-110 State Approval of Log Scaling and Weighing Locations

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

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

Section H: Harvesting Operations

H-001 Operations Outside the Sale Boundaries

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

H-011 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-012 Leave Tree Damage Definition

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

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

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

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

#### H-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 18 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 12 inches as measured from the natural ground line. To reduce soil damage, the Contract Administrator may require water bars to be constructed, grass seed to be placed on exposed soils, or other mitigation measures. Suspended operations shall not resume unless approval to do so has been given, in writing, by the Contract Administrator.

**H-025 Timing Requirements for Timber Removal**

All timber must be removed within 30 days of being felled.

**H-030 Timber Falling**

Trees shall be felled and logs shall be bucked to obtain the greatest practicable utilization of forest products and other valuable materials conveyed.

**H-040 Purchaser Harvest Plan**

Purchaser shall, as part of the plan of operations, prepare an acceptable harvest plan for Unit 1-13. The plan shall address the logging plan, road work schedule, and the Schedule A prescription, which are part(s) of this contract. The harvest plan shall be approved by the Contract Administrator prior to beginning the harvest operation. Purchaser shall not deviate from the harvest plan without prior written approval by the Contract Administrator.

**H-052 Branding and Painting**

Forest products shall be branded with a brand furnished by the State prior to removal from the landing. All purchased timber shall be branded in a manner that meets the requirements of WAC 240-15-030(2)(a)(i). All timber purchased under a contract designated as export restricted shall also be painted in a manner that meets the requirements of WAC 240-15-030(2)(a)(ii).

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

**H-080 Snags Not to be Felled**

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

**H-110 Stump Height**

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

**H-120 Harvesting Equipment**

Forest products sold under this contract shall be harvested and removed using ground based system. 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 November 1 to May 15 unless authorized in writing by the Contract Administrator.

H-140 Special Harvest Requirements

Purchaser shall accomplish the following during the harvest operations:

1. An on-site pre-work meeting shall be scheduled with the Contract Administrator, which shall include the operator and fallers, prior to commencement of any activities on site.
2. A copy of the timber sale prospectus map and contract shall be present on-site during active operation.
3. All landings shall be separated from the road prism at completion of harvest.
4. All slash shall be pile at landings or hauled back into the units for erosion control.
5. "Logging Ahead" warning signs shall be posted at 2 locations by the gates designated by the Contract Administrator.

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

H-142 Wildlife Timing Restrictions

The following wildlife timing restrictions apply to this contract and shall be in place in the locations shown on the attached timber sale map.

If a Gray Wolf den site is discovered or suspected within 1 mile of the timber sale, a no-harvest temporary seasonal timing restriction will be enforced immediately for the duration of March 15 through July 30.

If an American Goshawk is discovered or suspected in and around the sale area, the Contract Administrator and Region Biologist must be immediately notified.

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

H-150 Required Removal of Forest Products

Purchaser shall remove from the sale area and present for scaling or weighing all forest products conveyed in the G-010 clause that meet the following minimum dimensions:

Species	Net bd ft	Log length (ft)	Log dib
All	10	12	5

The State may treat failure to remove forest products left on the sale area that meet the above specifications as a breach of this contract. At the State's option, forest products that meet the above specifications and are left on the sale area may be scaled for

volume or measured and converted to weight by the State or a third party scaling organization and billed to Purchaser at the contract payment rate. All costs associated with scaling, measuring and computing the billing will be borne by the Purchaser.

#### H-157 Optional Removal of Forest Products Not Designated

If in the course of operations, Purchaser decides to remove forest products that are below the minimum designated removal specifications per the 'Required Removal of Forest Products' (H-150), the payment rates in clause P-027 shall apply.

Forest products designated as optional shall be decked separately from forest products designated as required for removal. Prior to removal from the sale area, optional forest products as described in this clause must be inspected and approved by the Contract Administrator. Optional forest products may not be mixed with forest products that are required for removal by this contract and shall be removed from the sale area in separate truck loads using load tickets specified by the Contract Administrator.

All material removed under this clause is subject to the same log and load accountability rules as defined in the Log Definitions and Accountability section of this contract. Purchaser shall follow the payment procedures as required in the P-052 clause and will submit a separate summary report for all forest products removed from the sale area under the authority of this clause.

#### H-160 Mismatch

Mismatch is defined as forest products remaining on the sale area that would have met the specifications in clause H-150 if bucking lengths had been varied to include such products.

The State may treat mismatch as a breach of this contract. At the State's option, forest products that are left on the sale area may be scaled for volume by the State or a third party scaling organization and billed to Purchaser at the contract payment rate. All costs associated with scaling and computing the billing will be borne by Purchaser.

#### H-180 Removal of Specialized Forest Products or Firewood

Prior to the removal of conveyed specialized forest products or firewood from the sale area, Purchaser and the State shall agree in writing to the method of accounting for/and removal of such products.

#### H-190 Completion of Settings

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

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

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

H-260 Fall Leaners

Trees 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 12/21/2023 are hereby made a part of this contract.

C-050 Purchaser Road Maintenance and Repair

Purchaser shall perform work at their own expense on S1200, S1400 (174+50 to 328+40), S1406, S1407, S1409, S1420, S1425, S1426, S1427, S1428, S1440 (44+85 to 64+50), S1442, S1442A, S1444, S1450, S1450R, S1460, S1480, S1480S. All work shall be completed to the specifications detailed in the Road Plan.

C-060 Designated Road Maintainer

If required by the State, Purchaser shall perform maintenance and replacement work as directed by the Contract Administrator on S1400 (0+00 to 174+50), S1440 (0+00 to 44+85), and S1200 (0+00 to 168+75). Purchaser shall furnish a statement in a form satisfactory to the State showing the costs incurred while performing this work. Costs shall be based on the rates set forth in the equipment rate schedule on file at the Region office or Engineering Division in Olympia. The State shall reimburse Purchaser for said costs within 30 days of receipt and approval of the statement.

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 S1200, S1400 (174+50 to 328+40), S1406, S1407, S1409, S1420, S1425, S1426, S1427, S1428, S1440 (44+85 to 64+50), S1442, S1442A, S1444, S1450, S1450R, S1460, S1480, S1480S roads from June 1- November 1 or as directed by the CA.

Section S: Site Preparation and Protection

S-001 Emergency Response Plan

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

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

S-010 Fire Hazardous Conditions

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

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

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

S-030 Landing Debris Clean Up

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

S-040 Noxious Weed Control

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

S-060 Pump Truck or Pump Trailer

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

S-120 Stream Protection

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

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-131.1 Refuse Disposal

As required by RCW 70.93, All Contractor generated refuse shall be removed from state lands for proper disposal prior to termination of this contract. No refuse shall be burned, buried or abandoned on state forest lands. All refuse shall be transported in a manner such that it is in compliance with RCW 70.93 and all loads or loose materials

shall be covered/secured such that these waste materials are properly contained during transport.

Section D: Damages

D-010 Liquidated Damages

The clauses in the DAMAGES section of this contract provide for payments by Purchaser to the State for certain breaches of the terms of this contract. These payments are agreed to as liquidated damages and not as penalties. They are reasonable estimates of anticipated harm to the State 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.

D-021 Failure to Remove Forest Products

Purchaser's failure to remove all or part of the forest products sold in this agreement prior to the expiration of the contract term results in substantial injury to the State. The value of the forest products sold at the time of breach is not readily ascertainable. Purchaser's failure to perform disrupts the State's management plans, the actual cost of which is difficult to assess. A resale involves additional time and expense and is not an adequate remedy. Therefore, Purchaser agrees to pay the State as liquidated damages a sum calculated using the following formula:

$$LD = .35V - ID - P + C + A$$

Where:

LD = Liquidated Damage value.

V = The unremoved value at the date of breach of contract. The value is determined by subtracting the removal tonnage to date from the cruised tonnage multiplied by the contract bid rates.

ID = Initial Deposit paid at date of contract that has not been applied to timber payments.

P = Advance payments received but not yet applied to specific contract requirements.

C = Charges assessed for contract requirements completed prior to breach of contract but not paid for.

A = Administrative Fee = \$2,500.00.

The above formula reflects the Purchaser's forfeiture of the initial deposit in accordance with clause P-010 by deducting the initial deposit from the amount owed. In no event shall the liquidated damages be less than zero. Interest on the liquidated damage is

owed from the date of breach until final payment, calculated using the following formula:  $\text{Interest} = r \times \text{LD} \times \text{N}$ .

Where:

r = daily equivalent of an annual interest at current interest rate as established by WAC 332-100-030.

LD = Liquidated damage value.

N = Number of days from date of breach to date payment is received.

#### D-030 Inadequate Log Accountability

Removal of forest products from the sale area without adequate branding and/or valid load tickets attached to the load and scaling forest products in a location other than the facility approved by the State can result in substantial injury to the State. Failure to properly account for loads and scaling and/or weighing information can result in loss to the State. The potential loss from not having proper branding, ticketing, scaling and/or weighing location and accountability is not readily ascertainable. Purchaser's failure to perform results in a loss of log weight and scale accountability, increases the potential for unauthorized removal of forest products, and increases the State's administration costs, the actual costs of which are difficult to assess.

Enforcement actions for unauthorized removal of forest products for each improperly branded load, improperly ticketed load, lost or unaccounted for tickets, or use of a facility not authorized for this sale or improper submission of scaling data are impractical, expensive, time consuming and are not an adequate remedy. Therefore, Purchaser agrees to pay the State, as liquidated damages, a sum of \$100 each time a load of logs does not have branding as required in the contract, \$250 each time a load of logs does not have a load ticket as required by the contract, \$250 each time a load ticket has not been filled out as required by the plan of operations, \$250 each time a load is weighed or scaled at a location not approved as required under this contract, \$250 each time a log ticket summary report is not submitted properly, and if a third party Log and Load Reporting Service is required, \$250 each time scaling or weight data is not properly submitted to the Log and Load Reporting Service per clause L-071, and \$250 each unused ticket that is not returned to the State, for any reason.

#### D-040 Leave Tree Excessive Damage

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

\_\_\_\_\_  
Larry Leach. Acting  
Southeast 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 \_\_\_\_\_

**Schedule A**  
**Cutting Prescription**

Q Fly by Night Schedule A Cutting Prescription

Units 1-13 (All):

Reduce the stand density in all units (U1-13) by variable retention harvest (VRH) to remove an average 94% of the merchantable conifer species (total 3,435 MBF), 85% basal area, leaving 6 trees per acre per unit. Merchantable trees to be cut are minimum 10 inches diameter.

Leave Trees Requirement:

- Trees in the largest diameter class (leave all trees larger than 20" dbh)
- Well-formed, healthy trees. Some of the leave trees can have physical defects desirable for wildlife trees (; broken top)
- Leave all ponderosa pine trees
- Species preference: DF(most desirable), WL, ES, GF, AF, and Lp (least desirable)
- Where possible retain large trees in clumps
- Where possible retain large trees (12"+) where snags/ downed wood are present

General Harvest Instructions:

Retain all snags where operationally feasible. Those trees that pose a hazard as defined by the Washington State Department of Labor and Industries may be felled, but must be left on site.

When available, utilize stems with defect in the lower bole to create short snags. Remove merchantable top, leaving a minimum of 12 feet in height. If defect is at a height greater than 12 feet, then cut above the defect as long as no merchantable volume can be processed beneath defect.

Leave established natural regeneration clumps if operationally feasible.

Designated leave tree areas are in Units 7 and 13. These areas are bound with yellow "Leave Tree Area" tags and pink flagging. These areas are not to be entered unless written approval is obtained from the Contract Administrator.

\*Snags and leave trees smaller than 10 inches diameter not to be counted towards TPA target.



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

**Region:**

**Timber Sale Name:**

**Application Number:**

**EXCISE TAX APPLICABLE ACTIVITIES**

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

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

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

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

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

**EXCISE TAX EXEMPT ACTIVITIES**

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

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

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

(Revised 9/18)

## Timber Sale Cruise Report Q Fly By Night

**Sale Name:** Q FLY BY NIGHT

**Sale Type:** WEIGHT SCALE

**Region:** SOUTHEAST

**District:** ALPINE

**Lead Cruiser:** Brendan Cockrum

**Other Cruisers:**

**Cruise Narrative:**

**Location:** The sale area is approximately 20 miles south of Wenatchee, WA on the Naneum State Forest. The sale is located in Sec. 4 and 6 Township 20N Range 20E and Sec. 32 Township 21N Range 20E.

**Access:** From Wenatchee drive southeast to Malaga Alcoa Hwy. Turn right at Stemilt Creek road. In approximately 6 miles turn left onto Loop road. Continue for about 0.70 miles and turn onto Upper Basin Loop road. Continue for about 2.5 miles and turn right onto W Basin road. In about 0.70 miles turn left onto Pole Flats road (S1400) and continue for about 3 miles.

**Units 10-13 Access:**

Turn left onto S1440 continue 800 feet to arrive at Units 10 and 11. From Units 10 and 11, continue on the S1440 approximately 0.5 miles to junction of S1440 and S1444 to arrive at Unit 12. From junction of S1440 and S1444, turn right onto S1444 and continue 0.5 miles to arrive at Unit 13.

**Unit 1-9 Access:**

Continue on Pole Flats road until reach the gate. Once passed the gate, continue 0.3 miles and turn right onto S1450. On S1450, drive approximately 0.25 miles to arrive at Unit 8. From Unit 8, continue approximately 0.10 miles to arrive at Unit 9. For Units 1-7, continue on S1400 to access units.

**Aspect:** North, South, East, West

**Elevation:** 4440 - 6160

**Slope:** The majority of slopes within the sale area are less than 30%. Steepest pitches up to 60%.

**Cruise Design:** All plots were cruised. All units utilized a 33.61 BAF. All stems  $\geq 7$ " dbh were cruised. There are seven species present on this sale: Douglas-fir (DF), Grand fir (GF), Western Larch (WL), Lodgepole Pine (LP), Englemann Spruce (ES), Sub-Alpine fir (AF), and a minor component of Ponderosa Pine (PP). No dead trees were cruised.

**Take/Leave Prescription:** All units will be harvest by prescription. All units will retain 6 trees per acre (tpa) of the largest available greater than 10" dbh. All ponderosa pine will be left. All standing dead trees will be left unless unsafe to due so. Leave tree selection preference is as follows: DF, WL (with DMT rating of 2 or less), ES, GF, LP, AF.

**Log Length:** All species utilized 40' logs where possible, with a minimum log length of 12'. Top DIB for all species is 5" and Utility is 2".

**Cruise Acres Determination:** Road acreages and Leave Tree Areas were subtracted.

**Timber Quality:** The removal volume is composed of 27% WL, 26% LP, 14% AF, 12% GF, 11% DF, and 10% ES. Defect mainly found in LP, GF, and AF. Defect in LP and AF mainly from scarring. Defect in the GF mainly due to Dwarf Mistletoe infection as well as sweep in the lower bole. Minimal defect found in the WL.

Logging and Stand Conditions: The sale is mostly on gentle slopes and will be 100% ground-based harvest. These are all high elevation stands. Units 1-9 are extremely overstocked with a significant component of non-merchantable small diameter stems throughout. There is a significant component of standing dead and downed wood in all units. Past and present mountain pine beetle activity is evident in the lodgepole in all units. Individual and patch mortality is found in all units.

### Timber Sale Notice Volume (MBF)

Sp	DBH	Rings/In	Age	MBF Volume by Grade				Utility
				All	2 Saw	3 Saw	4 Saw	
WL	11.5			956	15	437	442	62
LP	10.7			914		284	578	53
AF	11.4			472		248	207	17
GF	12.3			394	14	167	201	12
DF	11.4			377	13	128	216	19
ES	13.9			321		230	83	8
ALL	11.4			3,435	43	1,494	1,727	170

### Timber Sale Notice Weight (tons)

Sp	Tons by Grade				
	All	2 Saw	3 Saw	4 Saw	Utility
WL	8,899	119	3,982	3,929	869
LP	8,851		2,711	5,363	777
GF	4,549	130	1,886	2,310	224
AF	4,417		2,449	1,717	252
DF	4,104	132	1,346	2,274	352
ES	3,161		2,147	869	145
ALL	33,982	380	14,522	16,462	2,618

### 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 (%)
105.5	5.5	74.1	2.0	7,860	5.8

### Timber Sale Unit Cruise Design

Unit	Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
Q FLY BY NIGHT U1	B1: VR, 1 BAF (33.61) Measure All, Sighting Ht = 4.5 ft	8.6	9.2	6	6	1
Q FLY BY	B1: VR, 1 BAF (33.61) Measure	7.3	7.5	5	5	0

Unit	Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
NIGHT U2	All, Sighting Ht = 4.5 ft					
Q FLY BY NIGHT U3	B1: VR, 1 BAF (33.61) Measure All, Sighting Ht = 4.5 ft	55.9	56.8	11	11	0
Q FLY BY NIGHT U4	B1: VR, 1 BAF (33.61) Measure All, Sighting Ht = 4.5 ft	8.7	9.2	5	5	0
Q FLY BY NIGHT U5	B1: VR, 1 BAF (33.61) Measure All, Sighting Ht = 4.5 ft	6.8	7.0	5	5	0
Q FLY BY NIGHT U6	B1: VR, 1 BAF (33.61) Measure All, Sighting Ht = 4.5 ft	4.9	5.0	6	6	0
Q FLY BY NIGHT U7	B1: VR, 1 BAF (33.61) Measure All, Sighting Ht = 4.5 ft	76.2	79.1	16	16	0
Q FLY BY NIGHT U8	B1: VR, 1 BAF (33.61) Measure All, Sighting Ht = 4.5 ft	4.4	4.5	5	5	0
Q FLY BY NIGHT U9	B1: VR, 1 BAF (33.61) Measure All, Sighting Ht = 0 ft	67.5	68.5	15	15	0
Q FLY BY NIGHT U10	B1: VR, 1 BAF (33.61) Measure All, Sighting Ht = 4.5 ft	61.2	63.0	11	11	0
Q FLY BY NIGHT U11	B1: VR, 1 BAF (33.61) Measure All, Sighting Ht = 0 ft	23.1	23.1	6	6	0
Q FLY BY NIGHT U12	B1: VR, 1 BAF (33.61) Measure All, Sighting Ht = 4.5 ft	96.7	99.0	20	20	0
Q FLY BY NIGHT U13	B1: VR, 1 BAF (33.61) Measure All, Sighting Ht = 4.5 ft	92.3	95.1	19	19	0
All		513.6	526.9	130	130	1

### Timber Sale Log Grade x Sort Summary

Sp	Status	Grade	Sort	Dia	Len	BF Gross	BF Net	Defect %	Tons	MBF Net
AF	LIVE	3 SAW	Domestic	7.5	40	511	483	5.5	2,448.8	247.9
AF	LIVE	4 SAW	Domestic	5.1	25	434	403	7.2	1,716.8	206.8
AF	LIVE	UTILITY	Pulp	2.1	16	33	33	0.0	251.6	16.9
DF	LIVE	2 SAW	Domestic	15.9	40	26	26	0.0	132.0	13.4
DF	LIVE	3 SAW	Domestic	7.6	40	262	249	4.7	1,346.4	128.1
DF	LIVE	4 SAW	Domestic	5.2	29	448	421	6.0	2,273.8	216.3
DF	LIVE	UTILITY	Pulp	2.0	20	37	37	0.0	351.9	19.1
ES	LIVE	3 SAW	Domestic	7.8	40	455	447	1.6	2,146.8	229.8
ES	LIVE	4 SAW	Domestic	5.2	25	163	162	0.3	868.9	83.2
ES	LIVE	UTILITY	Pulp	2.1	16	15	15	0.0	145.2	7.9
GF	LIVE	2 SAW	Domestic	12.2	40	30	27	7.7	129.6	14.1
GF	LIVE	3 SAW	Domestic	7.9	40	345	326	5.7	1,886.3	167.2
GF	LIVE	4 SAW	Domestic	5.2	28	409	392	4.0	2,309.6	201.5

Sp	Status	Grade	Sort	Dia	Len	BF Gross	BF Net	Defect %	Tons	MBF Net
GF	LIVE	CULL	Cull	7.6	35	46	0	100.0	0.0	0.0
GF	LIVE	UTILITY	Pulp	2.1	16	23	23	0.0	223.6	11.6
LP	LIVE	3 SAW	Domestic	7.2	40	589	553	6.0	2,711.3	284.3
LP	LIVE	4 SAW	Domestic	5.3	32	1,240	1,125	9.3	5,363.3	577.6
LP	LIVE	CULL	Cull	5.3	38	53	0	100.0	0.0	0.0
LP	LIVE	UTILITY	Pulp	2.1	19	103	102	1.2	776.7	52.5
WL	LIVE	2 SAW	Domestic	12.8	40	30	30	0.0	118.8	15.4
WL	LIVE	3 SAW	Domestic	7.8	40	871	851	2.2	3,982.4	437.1
WL	LIVE	4 SAW	Domestic	5.2	30	885	860	2.8	3,929.2	441.9
WL	LIVE	UTILITY	Pulp	2.3	19	121	121	0.6	869.0	61.9

### Timber Sale Log Sort x Diameter Bin Summary

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
AF	< 5	LIVE	Pulp	2.1	16	33	0.0	251.6	16.9
AF	5 - 8	LIVE	Domestic	5.7	30	820	5.6	3,865.1	421.1
AF	9 - 11	LIVE	Domestic	10.0	40	65	14.8	300.4	33.6
DF	< 5	LIVE	Pulp	2.0	20	37	0.0	351.9	19.1
DF	5 - 8	LIVE	Domestic	5.4	31	577	5.2	3,149.7	296.3
DF	9 - 11	LIVE	Domestic	9.9	40	74	6.7	339.5	37.9
DF	12 - 14	LIVE	Domestic	12.4	40	20	10.2	130.9	10.2
DF	15 - 19	LIVE	Domestic	15.9	40	26	0.0	132.0	13.4
ES	< 5	LIVE	Pulp	2.2	16	15	0.0	145.2	7.9
ES	5 - 8	LIVE	Domestic	5.9	31	484	0.9	2,531.5	248.6
ES	9 - 11	LIVE	Domestic	10.5	40	75	0.0	310.9	38.3
ES	12 - 14	LIVE	Domestic	12.5	40	9	0.0	38.3	4.8
ES	15 - 19	LIVE	Domestic	17.3	40	42	7.4	135.0	21.3
GF	< 5	LIVE	Pulp	2.1	16	23	0.0	223.6	11.6
GF	5 - 8	LIVE	Cull	5.0	33	0	100.0	0.0	0.0
GF	5 - 8	LIVE	Domestic	5.5	31	618	3.5	3,683.7	317.2
GF	9 - 11	LIVE	Domestic	10.3	40	100	12.0	512.2	51.5
GF	12 - 14	LIVE	Domestic	12.2	40	27	7.7	129.6	14.1
GF	12 - 14	LIVE	Cull	13.2	40	0	100.0	0.0	0.0
LP	< 5	LIVE	Pulp	2.1	19	84	1.4	723.4	43.2
LP	5 - 8	LIVE	Pulp	5.0	20	18	0.0	53.3	9.3
LP	5 - 8	LIVE	Cull	5.3	38	0	100.0	0.0	0.0
LP	5 - 8	LIVE	Domestic	5.5	33	1,535	8.5	7,373.6	788.4
LP	9 - 11	LIVE	Domestic	9.9	39	119	6.2	584.3	60.9

<b>Sp</b>	<b>Bin</b>	<b>Status</b>	<b>Sort</b>	<b>Dia</b>	<b>Len</b>	<b>BF Net</b>	<b>Defect %</b>	<b>Tons</b>	<b>MBF Net</b>
LP	12 - 14	LIVE	Domestic	13.7	40	24	0.0	116.7	12.5
WL	< 5	LIVE	Pulp	2.1	20	76	1.0	726.9	38.9
WL	5 - 8	LIVE	Pulp	5.0	21	45	0.0	142.0	23.0
WL	5 - 8	LIVE	Domestic	5.6	33	1,544	2.5	7,227.7	792.8
WL	9 - 11	LIVE	Domestic	9.9	40	168	2.4	683.9	86.2
WL	12 - 14	LIVE	Domestic	12.8	40	30	0.0	118.8	15.4



## Cruise Unit Report Q FLY BY NIGHT U1

### Unit Sale Notice Volume (MBF): Q FLY BY NIGHT U1

Sp	DBH	Rings/In	Age	MBF Volume by Grade			
				All	3 Saw	4 Saw	Utility
AF	10.6			13	4	8	1
ES	15.4			12	10	2	0
LP	12.6			10	7	3	0
WL	16.8			4	3	1	
ALL	12.5			39	24	14	1

### Unit Cruise Design: Q FLY BY NIGHT U1

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B1: VR, 1 BAF (33.61) Measure All, Sighting Ht = 4.5 ft	8.6	9.2	6	6	1

### Unit Cruise Summary: Q FLY BY NIGHT U1

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
ES	3	4	0.7	0
WL	1	3	0.5	0
AF	4	4	0.7	0
LP	3	3	0.5	0
ALL	11	14	2.3	0

### Unit Cruise Statistics: Q FLY BY NIGHT 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	22.4	122.5	50.0	85.4	49.2	28.4	1,913	132.0	57.5
WL	16.8	109.5	44.7	88.3	0.0	0.0	1,484	109.5	44.7
AF	22.4	122.5	50.0	64.7	29.4	14.7	1,450	126.0	52.1
LP	16.8	167.3	68.3	68.9	46.9	27.1	1,157	173.8	73.5
ALL	78.4	64.5	26.3	76.6	36.3	10.9	6,005	74.0	28.5

**Unit Summary: Q FLY BY NIGHT U1**

Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
AF	LIVE	CUT	4	ALL	10.6	47	57	1,480	1,450	2.1	36.6	22.4	6.9	12.5
ES	LIVE	CUT	3	ALL	15.4	57	70	1,435	1,435	0.0	13.0	16.8	4.3	12.4
LP	LIVE	CUT	3	ALL	12.6	44	52	1,184	1,157	2.2	19.4	16.8	4.7	10.0
WL	LIVE	CUT	1	ALL	16.8	66	83	517	495	4.2	3.6	5.6	1.4	4.3
ALL	LIVE	CUT	11	ALL	12.5	49	60	4,616	4,537	1.7	72.6	61.6	17.3	39.2
ALL	ALL	ALL	11	ALL	12.5	49	60	4,616	4,537	1.7	72.6	61.6	17.3	39.2

## Cruise Unit Report Q FLY BY NIGHT U2

### Unit Sale Notice Volume (MBF): Q FLY BY NIGHT U2

Sp	DBH	Rings/In	Age	MBF Volume by Grade			
				All	3 Saw	4 Saw	Utility
LP	10.3			40	14	24	2
AF	12.1			36	20	15	1
WL	10.6			29	8	20	1
ES	13.7			5	3	3	
ALL	11.1			110	46	61	4

### Unit Cruise Design: Q FLY BY NIGHT U2

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B1: VR, 1 BAF (33.61) Measure All, Sighting Ht = 4.5 ft	7.3	7.5	5	5	0

### Unit Cruise Summary: Q FLY BY NIGHT U2

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
LP	11	11	2.2	0
AF	9	9	1.8	0
WL	6	7	1.4	0
ES	2	3	0.6	0
ALL	28	30	6.0	0

### Unit Cruise Statistics: Q FLY BY NIGHT 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 (%)
LP	73.9	174.3	77.9	74.7	28.0	8.5	5,521	176.5	78.4
AF	60.5	46.5	20.8	81.5	35.9	12.0	4,932	58.7	24.0
WL	47.1	119.5	53.5	97.5	23.7	9.7	4,587	121.9	54.3
ES	20.2	149.1	66.7	52.2	20.1	14.2	1,053	150.4	68.2
ALL	201.7	71.7	32.1	79.8	32.1	6.1	16,093	78.5	32.6

**Unit Summary: Q FLY BY NIGHT U2**

Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
AF	LIVE	CUT	9	ALL	12.1	53	65	5,073	4,932	2.8	75.8	60.5	17.4	36.1
ES	LIVE	CUT	2	ALL	13.7	45	56	732	702	4.1	13.1	13.4	3.6	5.1
LP	LIVE	CUT	11	ALL	10.3	56	69	6,426	5,521	14.1	127.8	73.9	23.0	40.4
WL	LIVE	CUT	6	ALL	10.6	55	69	3,963	3,932	0.8	65.8	40.3	12.4	28.8
ALL	LIVE	CUT	28	ALL	11.1	54	67	16,194	15,086	6.8	282.5	188.2	56.5	110.4
ALL	ALL	ALL	28	ALL	11.1	54	67	16,194	15,086	6.8	282.5	188.2	56.5	110.4

## Cruise Unit Report Q FLY BY NIGHT U3

### Unit Sale Notice Volume (MBF): Q FLY BY NIGHT U3

Sp	DBH	Rings/In	Age	MBF Volume by Grade			
				All	3 Saw	4 Saw	Utility
AF	12.0			258	159	92	8
ES	13.1			181	126	50	5
LP	11.6			175	107	62	6
WL	12.1			73	59	12	2
ALL	12.1			687	451	216	20

### Unit Cruise Design: Q FLY BY NIGHT U3

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B1: VR, 1 BAF (33.61) Measure All, Sighting Ht = 4.5 ft	55.9	56.8	11	11	0

### Unit Cruise Summary: Q FLY BY NIGHT U3

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
AF	19	19	1.7	0
ES	12	13	1.2	0
LP	12	12	1.1	0
WL	4	6	0.5	0
ALL	47	50	4.5	0

### Unit Cruise Statistics: Q FLY BY NIGHT 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 (%)
AF	58.1	82.2	24.8	79.5	25.5	5.8	4,616	86.1	25.5
ES	39.7	83.1	25.0	88.5	29.2	8.4	3,514	88.0	26.4
LP	36.7	244.1	73.6	85.2	35.0	10.1	3,124	246.6	74.3
WL	18.3	150.4	45.3	107.3	12.0	6.0	1,967	150.8	45.7
ALL	152.8	57.7	17.4	86.5	28.3	4.1	13,221	64.3	17.9

**Unit Summary: Q FLY BY NIGHT U3**

Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
AF	LIVE	CUT	19	ALL	12.0	56	69	4,886	4,616	5.5	73.9	58.1	16.8	257.9
ES	LIVE	CUT	12	ALL	13.1	59	73	3,244	3,244	0.0	39.2	36.7	10.1	181.2
LP	LIVE	CUT	12	ALL	11.6	59	74	3,513	3,124	11.1	50.0	36.7	10.8	174.5
WL	LIVE	CUT	4	ALL	12.1	67	83	1,324	1,311	1.0	15.3	12.2	3.5	73.3
ALL	LIVE	CUT	47	ALL	12.2	58	72	12,967	12,295	5.2	178.4	143.6	41.2	686.9
ALL	ALL	ALL	47	ALL	12.2	58	72	12,967	12,295	5.2	178.4	143.6	41.2	686.9

## Cruise Unit Report Q FLY BY NIGHT U4

### Unit Sale Notice Volume (MBF): Q FLY BY NIGHT U4

Sp	DBH	Rings/In	Age	MBF Volume by Grade			
				All	3 Saw	4 Saw	Utility
LP	10.4			52	23	27	3
WL	10.4			40	15	24	2
AF	11.5			21	5	14	1
ES	10.6			6		6	0
ALL	10.6			120	43	71	6

### Unit Cruise Design: Q FLY BY NIGHT U4

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B1: VR, 1 BAF (33.61) Measure All, Sighting Ht = 4.5 ft	8.7	9.2	5	5	0

### Unit Cruise Summary: Q FLY BY NIGHT U4

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
LP	11	11	2.2	0
WL	7	9	1.8	0
AF	6	6	1.2	0
ES	2	2	0.4	0
ALL	26	28	5.6	0

### Unit Cruise Statistics: Q FLY BY NIGHT 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 (%)
LP	73.9	74.7	33.4	81.9	21.2	6.4	6,052	77.6	34.0
WL	60.5	91.3	40.8	98.9	24.8	9.4	5,983	94.6	41.9
AF	40.3	69.7	31.2	60.0	40.5	16.5	2,421	80.6	35.3
ES	13.4	136.9	61.2	53.9	49.4	34.9	724	145.6	70.5
ALL	188.2	20.4	9.1	80.7	31.9	6.3	15,181	37.9	11.1

**Unit Summary: Q FLY BY NIGHT U4**

Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
AF	LIVE	CUT	6	ALL	11.5	47	58	2,626	2,421	7.8	55.9	40.3	11.9	21.0
ES	LIVE	CUT	2	ALL	10.6	43	52	757	724	4.3	21.9	13.4	4.1	6.3
LP	LIVE	CUT	11	ALL	10.4	51	63	6,307	6,052	4.0	125.3	73.9	22.9	52.4
WL	LIVE	CUT	7	ALL	10.4	59	73	4,667	4,654	0.3	79.8	47.1	14.6	40.3
ALL	LIVE	CUT	26	ALL	10.6	52	64	14,357	13,851	3.5	282.9	174.8	53.5	120.0
ALL	ALL	ALL	26	ALL	10.6	52	64	14,357	13,851	3.5	282.9	174.8	53.5	120.0



## Cruise Unit Report Q FLY BY NIGHT U5

### Unit Sale Notice Volume (MBF): Q FLY BY NIGHT U5

Sp	DBH	Rings/In	Age	MBF Volume by Grade			
				All	3 Saw	4 Saw	Utility
WL	9.6			38	5	30	3
LP	9.1			35		32	2
ALL	9.4			72	5	62	5

### Unit Cruise Design: Q FLY BY NIGHT U5

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B1: VR, 1 BAF (33.61) Measure All, Sighting Ht = 4.5 ft	6.8	7.0	5	5	0

### Unit Cruise Summary: Q FLY BY NIGHT U5

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
WL	10	13	2.6	0
LP	9	9	1.8	0
ALL	19	22	4.4	0

### Unit Cruise Statistics: Q FLY BY NIGHT 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 (%)
WL	87.4	43.9	19.6	82.2	19.9	6.3	7,186	48.1	20.6
LP	60.5	91.3	40.8	85.0	15.8	5.3	5,141	92.6	41.2
ALL	147.9	41.3	18.5	83.4	17.6	4.0	12,327	44.9	18.9

### Unit Summary: Q FLY BY NIGHT U5

Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
LP	LIVE	CUT	9	ALL	9.1	53	65	5,296	5,141	2.9	134.0	60.5	20.1	34.9
WL	LIVE	CUT	10	ALL	9.6	56	69	5,755	5,528	3.9	133.7	67.2	21.7	37.5
ALL	LIVE	CUT	19	ALL	9.4	54	67	11,051	10,669	3.5	267.7	127.7	41.8	72.4
ALL	ALL	ALL	19	ALL	9.4	54	67	11,051	10,669	3.5	267.7	127.7	41.8	72.4

## Cruise Unit Report Q FLY BY NIGHT U6

### Unit Sale Notice Volume (MBF): Q FLY BY NIGHT U6

Sp	DBH	Rings/In	Age	MBF Volume by Grade		
				All	4 Saw	Utility
LP	7.8			18	17	1
WL	9.1			7	6	0
ES	7.9			2	2	0
AF	12.3			1	1	0
ALL	8.3			28	26	2

### Unit Cruise Design: Q FLY BY NIGHT U6

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B1: VR, 1 BAF (33.61) Measure All, Sighting Ht = 4.5 ft	4.9	5.0	6	6	0

### Unit Cruise Summary: Q FLY BY NIGHT U6

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
DF		1	0.2	0
LP	7	7	1.2	0
WL	3	4	0.7	0
ES	1	1	0.2	0
AF	1	1	0.2	0
ALL	12	14	2.3	0

### Unit Cruise Statistics: Q FLY BY NIGHT 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	5.6	244.9	100.0						
LP	39.2	113.9	46.5	92.6	30.3	11.4	3,630	117.9	47.9
WL	22.4	122.5	50.0	83.8	21.8	12.6	1,878	124.4	51.6
ES	5.6	244.9	100.0	70.5	0.0	0.0	395	244.9	100.0
AF	5.6	244.9	100.0	50.9	0.0	0.0	285	244.9	100.0
ALL	78.4	51.9	21.2	85.0	30.0	8.7	6,664	60.0	22.9

**Unit Summary: Q FLY BY NIGHT U6**

Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
AF	LIVE	CUT	1	ALL	12.3	50	61	305	285	6.7	6.8	5.6	1.6	1.4
ES	LIVE	CUT	1	ALL	7.9	41	49	395	395	0.0	16.5	5.6	2.0	1.9
LP	LIVE	CUT	7	ALL	7.8	45	55	3,835	3,630	5.3	118.2	39.2	14.0	17.9
WL	LIVE	CUT	3	ALL	9.1	52	64	1,409	1,409	0.0	37.2	16.8	5.6	6.9
ALL	LIVE	CUT	12	ALL	8.3	46	56	5,944	5,719	3.8	178.7	67.2	23.2	28.1
ALL	ALL	ALL	12	ALL	8.3	46	56	5,944	5,719	3.8	178.7	67.2	23.2	28.1

## Cruise Unit Report Q FLY BY NIGHT U7

### Unit Sale Notice Volume (MBF): Q FLY BY NIGHT U7

Sp	DBH	Rings/In	Age	MBF Volume by Grade			
				All	3 Saw	4 Saw	Utility
LP	11.4			231	68	151	11
WL	11.0			133	41	86	6
DF	9.9			112	41	65	6
AF	10.8			68	41	25	2
ES	11.9			34	30	3	1
ALL	11.0			578	222	329	27

### Unit Cruise Design: Q FLY BY NIGHT U7

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B1: VR, 1 BAF (33.61) Measure All, Sighting Ht = 4.5 ft	76.2	79.1	16	16	0

### Unit Cruise Summary: Q FLY BY NIGHT U7

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
LP	22	22	1.4	0
WL	10	15	0.9	0
DF	9	11	0.7	0
AF	5	5	0.3	0
ES	2	3	0.2	0
ALL	48	56	3.5	0

### Unit Cruise Statistics: Q FLY BY NIGHT U7

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 (%)
LP	46.2	135.1	33.8	65.5	42.1	9.0	3,028	141.5	34.9
WL	31.5	126.0	31.5	83.1	26.6	8.4	2,617	128.8	32.6
DF	23.1	165.6	41.4	77.6	35.3	11.8	1,793	169.3	43.0
AF	10.5	192.7	48.2	85.2	28.7	12.8	895	194.8	49.8
ES	6.3	290.1	72.5	106.5	24.5	17.3	671	291.1	74.6
ALL	117.6	48.9	12.2	76.5	35.5	5.1	9,004	60.4	13.3

**Unit Summary: Q FLY BY NIGHT U7**

Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
AF	LIVE	CUT	5	ALL	10.8	48	59	939	895	4.7	16.5	10.5	3.2	68.2
DF	LIVE	CUT	9	ALL	9.9	48	59	1,503	1,467	2.4	35.4	18.9	6.0	111.8
ES	LIVE	CUT	2	ALL	11.9	58	72	447	447	0.0	5.4	4.2	1.2	34.1
LP	LIVE	CUT	22	ALL	11.4	50	62	3,323	3,028	8.9	65.2	46.2	13.7	230.8
WL	LIVE	CUT	10	ALL	11.0	55	68	1,745	1,745	0.0	31.8	21.0	6.3	133.0
ALL	LIVE	CUT	48	ALL	10.9	51	62	7,958	7,582	4.7	154.3	100.8	30.4	578.0
ALL	ALL	ALL	48	ALL	10.9	51	62	7,958	7,582	4.7	154.3	100.8	30.4	578.0

## Cruise Unit Report Q FLY BY NIGHT U8

### Unit Sale Notice Volume (MBF): Q FLY BY NIGHT U8

Sp	DBH	Rings/In	Age	MBF Volume by Grade			
				All	3 Saw	4 Saw	Utility
GF	10.2			9		9	0
DF	10.8			8	2	5	0
WL	10.0			2		2	0
ES	10.1			2		2	0
AF	14.0			1		1	0
ALL	10.6			23	2	20	1

### Unit Cruise Design: Q FLY BY NIGHT U8

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B1: VR, 1 BAF (33.61) Measure All, Sighting Ht = 4.5 ft	4.4	4.5	5	5	0

### Unit Cruise Summary: Q FLY BY NIGHT U8

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
DF	4	5	1.0	0
GF	5	5	1.0	0
WL	1	2	0.4	0
ES	1	1	0.2	0
AF	1	1	0.2	0
ALL	12	14	2.8	0

### Unit Cruise Statistics: Q FLY BY NIGHT U8

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	33.6	173.2	77.5	70.1	18.6	9.3	2,358	174.2	78.0
GF	33.6	100.0	44.7	60.0	44.0	19.7	2,015	109.2	48.9
WL	13.4	136.9	61.2	84.3	0.0	0.0	1,134	136.9	61.2
ES	6.7	223.6	100.0	80.9	0.0	0.0	544	223.6	100.0
AF	6.7	223.6	100.0	42.1	0.0	0.0	283	223.6	100.0
ALL	94.1	111.2	49.7	67.3	30.6	8.8	6,333	115.4	50.5

**Unit Summary: Q FLY BY NIGHT U8**

Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
AF	LIVE	CUT	1	ALL	14.0	50	62	283	283	0.0	6.3	6.7	1.8	1.2
DF	LIVE	CUT	4	ALL	10.8	51	63	1,997	1,886	5.6	42.3	26.9	8.2	8.3
ES	LIVE	CUT	1	ALL	10.1	52	64	544	544	0.0	12.1	6.7	2.1	2.4
GF	LIVE	CUT	5	ALL	10.2	42	52	2,015	2,015	0.0	59.2	33.6	10.5	8.8
WL	LIVE	CUT	1	ALL	10.0	61	76	567	567	0.0	12.3	6.7	2.1	2.5
ALL	LIVE	CUT	12	ALL	10.6	48	59	5,406	5,295	2.1	132.2	80.7	24.7	23.2
ALL	ALL	ALL	12	ALL	10.6	48	59	5,406	5,295	2.1	132.2	80.7	24.7	23.2

## Cruise Unit Report Q FLY BY NIGHT U9

### Unit Sale Notice Volume (MBF): Q FLY BY NIGHT U9

Sp	DBH	Rings/In	Age	MBF Volume by Grade			
				All	3 Saw	4 Saw	Utility
WL	10.2			181	68	89	24
DF	10.6			112	29	74	9
GF	10.8			94	18	73	3
LP	10.2			82	9	66	6
ALL	10.4			469	125	302	42

### Unit Cruise Design: Q FLY BY NIGHT U9

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B1: VR, 1 BAF (33.61) Measure All, Sighting Ht = 0 ft	67.5	68.5	15	15	0

### Unit Cruise Summary: Q FLY BY NIGHT U9

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
PP		1	0.1	0
WL	17	19	1.3	0
DF	13	14	0.9	0
GF	11	11	0.7	0
LP	12	12	0.8	0
ALL	53	57	3.8	0

### Unit Cruise Statistics: Q FLY BY NIGHT U9

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 (%)
PP	2.2	387.3	100.0						
WL	42.6	150.6	38.9	70.5	32.9	8.0	3,001	154.1	39.7
DF	31.4	131.0	33.8	57.2	22.0	6.1	1,793	132.9	34.4
GF	24.6	131.1	33.8	56.4	25.6	7.7	1,391	133.5	34.7
LP	26.9	190.2	49.1	45.0	48.4	14.0	1,210	196.2	51.0
ALL	127.7	58.2	15.0	58.9	35.3	4.8	7,527	68.0	15.8



**Unit Summary: Q FLY BY NIGHT U9**

Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
DF	LIVE	CUT	13	ALL	10.6	50	62	1,833	1,665	9.2	47.5	29.1	8.9	112.4
GF	LIVE	CUT	11	ALL	10.8	42	51	1,452	1,391	4.2	38.7	24.6	7.5	93.9
LP	LIVE	CUT	12	ALL	10.2	46	56	1,624	1,210	25.5	47.4	26.9	8.4	81.7
WL	LIVE	CUT	17	ALL	10.2	51	62	2,783	2,685	3.5	67.1	38.1	11.9	181.2
ALL	LIVE	CUT	53	ALL	10.4	48	58	7,692	6,951	9.6	200.7	118.8	36.8	469.2
ALL	ALL	ALL	53	ALL	10.4	48	58	7,692	6,951	9.6	200.7	118.8	36.8	469.2

## Cruise Unit Report Q FLY BY NIGHT U10

### Unit Sale Notice Volume (MBF): Q FLY BY NIGHT U10

Sp	DBH	Rings/In	Age	MBF Volume by Grade			
				All	3 Saw	4 Saw	Utility
GF	10.6			120	42	73	6
LP	9.5			71		68	2
AF	9.6			64	18	41	4
ES	12.8			50	34	15	1
WL	10.6			35	11	10	13
DF	10.4			14		14	1
ALL	10.4			353	105	220	28

### Unit Cruise Design: Q FLY BY NIGHT U10

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B1: VR, 1 BAF (33.61) Measure All, Sighting Ht = 4.5 ft	61.2	63.0	11	11	0

### Unit Cruise Summary: Q FLY BY NIGHT U10

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
GF	11	11	1.0	0
LP	5	5	0.5	0
AF	6	6	0.5	0
DF	1	4	0.4	0
ES	4	4	0.4	0
WL	3	4	0.4	0
ALL	30	34	3.1	0

### Unit Cruise Statistics: Q FLY BY NIGHT U10

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 (%)
GF	33.6	118.3	35.7	58.4	39.7	12.0	1,964	124.8	37.6
LP	15.3	180.4	54.4	75.4	17.3	7.8	1,152	181.3	55.0
AF	18.3	222.5	67.1	56.7	35.3	14.4	1,039	225.3	68.6
DF	12.2	138.7	41.8	76.3	0.0	0.0	932	138.7	41.8
ES	12.2	185.4	55.9	67.0	14.8	7.4	819	186.0	56.4

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	12.2	254.2	76.6	61.8	7.1	4.1	756	254.3	76.8
ALL	103.9	74.4	22.4	64.1	28.8	5.3	6,661	79.8	23.0

**Unit Summary: Q FLY BY NIGHT U10**

Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
AF	LIVE	CUT	6	ALL	9.6	38	46	1,151	1,039	9.7	36.5	18.3	5.9	63.6
DF	LIVE	CUT	1	ALL	10.4	49	60	233	233	0.0	5.2	3.1	0.9	14.3
ES	LIVE	CUT	4	ALL	12.8	52	65	847	819	3.3	13.7	12.2	3.4	50.1
GF	LIVE	CUT	11	ALL	10.6	45	55	2,167	1,964	9.4	54.8	33.6	10.3	120.2
LP	LIVE	CUT	5	ALL	9.5	47	57	1,204	1,152	4.3	31.0	15.3	5.0	70.6
WL	LIVE	CUT	3	ALL	10.6	47	57	582	567	2.7	15.0	9.2	2.8	34.7
ALL	LIVE	CUT	30	ALL	10.4	45	54	6,184	5,773	6.6	156.2	91.7	28.4	353.5
ALL	ALL	ALL	30	ALL	10.4	45	54	6,184	5,773	6.6	156.2	91.7	28.4	353.5

## Cruise Unit Report Q FLY BY NIGHT U11

### Unit Sale Notice Volume (MBF): Q FLY BY NIGHT U11

Sp	DBH	Rings/In	Age	MBF Volume by Grade			
				All	3 Saw	4 Saw	Utility
LP	8.2			18		9	9
DF	18.3			12	11	1	
GF	14.7			8	4	4	
WL	10.6			6		6	
ALL	10.9			44	15	20	9

### Unit Cruise Design: Q FLY BY NIGHT U11

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B1: VR, 1 BAF (33.61) Measure All, Sighting Ht = 0 ft	23.1	23.1	6	6	0

### Unit Cruise Summary: Q FLY BY NIGHT U11

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
DF	1	2	0.3	0
GF	2	5	0.8	0
LP	2	2	0.3	0
WL	1	1	0.2	0
ALL	6	10	1.7	0

### Unit Cruise Statistics: Q FLY BY NIGHT U11

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	11.2	244.9	100.0	95.3	0.0	0.0	1,067	244.9	100.0
GF	28.0	118.0	48.2	32.0	11.3	8.0	897	118.5	48.8
LP	11.2	244.9	100.0	69.3	6.1	4.3	776	245.0	100.1
WL	5.6	244.9	100.0	45.7	0.0	0.0	256	244.9	100.0
ALL	56.0	62.0	25.3	53.5	47.1	19.2	2,996	77.8	31.8

**Unit Summary: Q FLY BY NIGHT U11**

Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
DF	LIVE	CUT	1	ALL	18.3	62	78	534	534	0.0	3.1	5.6	1.3	12.3
GF	LIVE	CUT	2	ALL	14.7	43	53	439	359	18.2	9.5	11.2	2.9	8.3
LP	LIVE	CUT	2	ALL	8.2	42	51	776	776	0.0	30.5	11.2	3.9	17.9
WL	LIVE	CUT	1	ALL	10.6	36	43	274	256	6.7	9.1	5.6	1.7	5.9
ALL	LIVE	CUT	6	ALL	10.9	42	51	2,022	1,924	4.9	52.2	33.6	9.9	44.4
ALL	ALL	ALL	6	ALL	10.9	42	51	2,022	1,924	4.9	52.2	33.6	9.9	44.4

## Cruise Unit Report Q FLY BY NIGHT U12

### Unit Sale Notice Volume (MBF): Q FLY BY NIGHT U12

Sp	DBH	Rings/In	Age	MBF Volume by Grade			
				All	3 Saw	4 Saw	Utility
WL	12.2			196	107	84	5
GF	15.1			76	57	18	1
DF	11.1			67	23	42	2
LP	9.8			64		61	4
ALL	12.0			404	187	205	12

### Unit Cruise Design: Q FLY BY NIGHT U12

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B1: VR, 1 BAF (33.61) Measure All, Sighting Ht = 4.5 ft	96.7	99.0	20	20	0

### Unit Cruise Summary: Q FLY BY NIGHT U12

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
PP		3	0.2	0
WL	15	19	1.0	0
DF	6	9	0.5	0
GF	8	9	0.5	0
LP	5	5	0.3	0
ALL	34	45	2.3	0

### Unit Cruise Statistics: Q FLY BY NIGHT U12

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 (%)
PP	5.0	326.2	72.9						
WL	31.9	79.9	17.9	80.5	29.4	7.6	2,571	85.2	19.4
DF	15.1	168.7	37.7	68.9	23.0	9.4	1,041	170.3	38.9
GF	15.1	134.4	30.1	58.4	54.1	19.1	884	144.9	35.6
LP	8.4	286.5	64.1	79.2	7.4	3.3	666	286.6	64.2
ALL	75.6	47.6	10.6	73.1	32.9	5.6	5,531	57.8	12.0

**Unit Summary: Q FLY BY NIGHT U12**

Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
DF	LIVE	CUT	6	ALL	11.1	47	57	728	694	4.7	15.0	10.1	3.0	67.1
GF	LIVE	CUT	8	ALL	15.1	51	62	968	786	18.8	10.8	13.4	3.5	75.9
LP	LIVE	CUT	5	ALL	9.8	51	63	741	666	10.1	16.0	8.4	2.7	64.4
WL	LIVE	CUT	15	ALL	12.2	57	71	2,107	2,030	3.7	31.1	25.2	7.2	196.2
ALL	LIVE	CUT	34	ALL	12.0	53	65	4,545	4,175	8.1	72.9	57.1	16.4	403.6
ALL	ALL	ALL	34	ALL	12.0	53	65	4,545	4,175	8.1	72.9	57.1	16.4	403.6

## Cruise Unit Report Q FLY BY NIGHT U13

### Unit Sale Notice Volume (MBF): Q FLY BY NIGHT U13

Sp	DBH	Rings/In	Age	MBF Volume by Grade				
				All	2 Saw	3 Saw	4 Saw	Utility
WL	13.0			212	15	119	73	5
LP	11.1			119		55	59	5
GF	13.8			87	14	47	25	2
DF	15.5			51	13	22	14	1
ES	24.5			27		27		0
AF	9.3			10			10	
ALL	12.6			506	43	270	181	12

### Unit Cruise Design: Q FLY BY NIGHT U13

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B1: VR, 1 BAF (33.61) Measure All, Sighting Ht = 4.5 ft	92.3	95.1	19	19	0

### Unit Cruise Summary: Q FLY BY NIGHT U13

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
WL	14	19	1.0	0
LP	11	11	0.6	0
DF	4	7	0.4	0
GF	6	6	0.3	0
ES	1	2	0.1	0
AF	1	1	0.1	0
ALL	37	46	2.4	0

### Unit Cruise Statistics: Q FLY BY NIGHT U13

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	33.6	94.3	21.6	92.6	20.0	5.3	3,111	96.4	22.3
LP	19.5	144.7	33.2	66.2	35.1	10.6	1,289	148.9	34.8
DF	12.4	225.5	51.7	77.6	14.1	7.1	961	225.9	52.2
GF	10.6	184.4	42.3	89.1	23.8	9.7	945	186.0	43.4
ES	3.5	299.5	68.7	167.1	0.0	0.0	591	299.5	68.7



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 (%)
AF	1.8	435.9	100.0	59.4	0.0	0.0	105	435.9	100.0
ALL	81.4	53.9	12.4	86.1	30.5	5.0	7,003	61.9	13.3

**Unit Summary: Q FLY BY NIGHT U13**

Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
AF	LIVE	CUT	1	ALL	9.3	45	54	128	105	17.6	3.8	1.8	0.6	9.7
DF	LIVE	CUT	4	ALL	15.5	58	72	573	549	4.2	5.4	7.1	1.8	50.7
ES	LIVE	CUT	1	ALL	24.5	89	114	314	296	5.9	0.5	1.8	0.4	27.3
GF	LIVE	CUT	6	ALL	13.8	56	70	1,026	945	7.8	10.2	10.6	2.9	87.3
LP	LIVE	CUT	11	ALL	11.1	51	62	1,412	1,289	8.7	29.0	19.5	5.8	119.0
WL	LIVE	CUT	14	ALL	13.0	61	76	2,346	2,293	2.3	26.9	24.8	6.9	211.7
ALL	LIVE	CUT	37	ALL	12.6	56	69	5,798	5,476	5.5	75.8	65.5	18.3	505.7
ALL	ALL	ALL	37	ALL	12.6	56	69	5,798	5,476	5.5	75.8	65.5	18.3	505.7



# Forest Practices Application/Notification Notice of Decision

FPA/N No: 2707628

Effective Date: 4/18/2024

Expiration Date: 4/18/2027

Shut Down Zone: 675

EARR Tax Credit:  Eligible  Non-eligible

Reference: 4,6-20N-20E/32-21N-20E

WADNR -= "Fly By Night"

### 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

1. Notify local DNR Forest Practices Forester at least 2 days prior to beginning any operations under this FPA.
2. For Appendix H Natural Regeneration Plan Eastern Washington, Landowner will supply local DNR Forest Practices Forester with at least one year of natural regeneration survey(s), post-harvest, showing existing seedlings in Units #12 & 13 survived the logging process and are free to grow in sufficient numbers (at least 150 seedlings/acre) to fully occupy the site. Please contact Marty Mauney at (509) 856-7054 or [martin.mauney@dnr.wa.gov](mailto:martin.mauney@dnr.wa.gov) with any questions.

Issued By: Marty Mauney

Region: Southeast

Title: Forest Practices Forester

Date: 4/17/2024

Copies to:  Landowner, Timber Owner and Operator

Issued in person:  LO  TO  OP By: Brenda Young

Date: 4/18/2024

**Appeal Information**

You have thirty (30) days to **file** (i.e., **actually deliver**) an appeal in writing of this Decision and any related State Environmental Policy Act (SEPA) determinations to the Pollution Control Hearings Board, the Attorney General’s Office, and the Department of Natural Resources’ region office. See [RCW 76.09.205](#). The appeal period starts when the applicant receives this decision, which usually happens electronically on the date indicated below.

**You must file your appeal at all three addresses below:**

<b>Pollution Control Hearings Board</b>	<b>Office of the Attorney General Natural Resources Division</b>	<b>Department Of Natural Resources Southeast Region</b>
<u>Physical Address</u> 1111 Israel Road, SW Suite 301 Tumwater, WA 98501  <u>Mailing address</u> Post Office Box 40903 Olympia, WA 98504-0903	<u>Physical Address</u> 1125 Washington Street, SE Olympia, WA 98504  <u>Mailing Address</u> Post Office Box 40100 Olympia, WA 98504-0100	713 Bowers Road Ellensburg, WA 98926-9301

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

**Other Applicable Laws**

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

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

Use the “Notice of Transfer of Approved Forest Practices Application/Notification” form. This form is available at region offices and on the Forest Practices website <https://www.dnr.wa.gov/programs-and-services/forest-practices/review-applications-fpars/forest-practices-forms-and>. Notify DNR of new Operators within 48 hours.

**Continuing Forestland Obligations (RCW 76.09.060, RCW 76.09.070, RCW 76.09.390, and WAC 222-20-055)**

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

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

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

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

**DNR Declaration of Mailing**

I, Enter Name, caused the Notice of Decision for FPA/N No. Enter FPA/N No. to be placed in the United States mail at Enter Location, WA, postage paid. I declare under penalty of perjury of the laws of the State of Washington, that the foregoing is true and correct.

\_\_\_\_\_  
(Date)

\_\_\_\_\_  
(City & State where signed)

\_\_\_\_\_  
(Signature)

STATE OF WASHINGTON  
DEPARTMENT OF NATURAL RESOURCES

Q FLY BY NIGHT TIMBER SALE ROAD PLAN  
CHELAN AND KITTITAS COUNTIES  
SOUTHEAST REGION

AGREEMENT NO.: 30-106349

STAFF ENGINEER: JOE SMITH

DATE: 12/21/2023

COMPILED BY: JOE SMITH

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>
S1200	0+00 to 168+75	Pre-haul Maintenance
S1400	0+00 to 328+40	Pre-haul Maintenance
S1406	0+00 to 16+75	Pre-haul Maintenance
S1407	0+00 to 12+00	Pre-Haul Maintenance
S1420	0+00 to 42+40	Pre-haul Maintenance
S1426	0+00 to 12+50	Pre-haul Maintenance
S1440	0+00 to 64+50	Pre-haul Maintenance
S1442	0+00 to 19+90	Pre-haul Maintenance
S1442A	0+00 to 8+50	Pre-haul Maintenance
S1444	0+00 to 29+95	Pre-haul Maintenance
S1450	0+00 to 12+40	Pre-haul Maintenance
S1450	15+35 to 49+55	Reconstruction
S1450R	0+00 to 3+35	Construction
S1460	0+00 to 13+05	Pre-haul Maintenance
S1480S	0+00 to 1+00	Construction

**0-3 OPTIONAL ROADS**

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

<u>Road</u>	<u>Stations</u>	<u>Type</u>
S1409	0+00 to 10+00	Reconstruction
S1425	0+00 to 5+45	Reconstruction
S1427	0+00 to 27+25	Reconstruction
S1428	0+00 to 6+45	Reconstruction
S1480	0+00 to 6+50	Reconstruction

**0-4 CONSTRUCTION**

Construction includes, but is not limited to:

- clearing;
- grubbing;
- right-of way debris disposal;
- excavation and/or embankment to subgrade;
- subgrade compaction;
- landing construction;
- installation of drainage structures as specified;
- acquisition and application of rock as specified.

**0-5 RECONSTRUCTION**

This project includes, but is not limited to the following reconstruction requirements:

<u>Road</u>	<u>Stations</u>	<u>Requirements</u>
S1409	0+00 to 10+00	Clear as needed; Re-establish road prism to the dimensions on the TYPICAL SECTION SHEET to facilitate haul; Install drainage as shown in the CULVERT AND DRAINAGE LIST; Apply rock as specified in the ROCK LIST; Shape and compact surface.
S1425	0+00 to 5+45	Clear as needed; Re-establish road prism to the dimensions on the TYPICAL SECTION SHEET to facilitate haul; Install drainage as shown in the CULVERT AND DRAINAGE LIST; Shape and compact surface.

**0-5 RECONSTRUCTION (CONTINUED)**

S1427	0+00 to 27+25	Clear as needed; Re-establish road prism to the dimensions on the TYPICAL SECTION SHEET to facilitate haul; Install drainage as shown in the CULVERT AND DRAINAGE LIST; Shape and compact surface.
S1428	0+00 to 6+45	Clear as needed; Re-establish road prism to the dimensions on the TYPICAL SECTION SHEET to facilitate haul; Install drainage as shown in the CULVERT AND DRAINAGE LIST; Shape and compact surface.
S1450	15+35 to 49+55	Clear as needed; Re-establish road prism to the dimensions on the TYPICAL SECTION SHEET to facilitate haul; Install drainage as shown in the CULVERT AND DRAINAGE LIST; Shape and compact surface.
S1480	0+00 to 6+50	Clear as needed; Re-establish road prism to the dimensions on the TYPICAL SECTION SHEET to facilitate haul; Install drainage as shown in the CULVERT AND DRAINAGE LIST; Shape and compact surface.

**0-6 PRE-HAUL MAINTENANCE**

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

<u>Road</u>	<u>Stations</u>	<u>Requirements</u>
S1200	0+00 to 168+75	Grade and shape to facilitate haul.
S1400	0+00 to 328+40	Brush as indicated in Clause 3-1 BRUSHING; Clean ditches as indicated in Clause 2-7 CLEANING DITCHES; Install drainage as specified in the CULVERT AND DRAINAGE LIST; Apply rock as specified in the ROCK LIST; Blade off rocks, grade, and shape as needed to facilitate haul.
S1406	0+00 to 16+75	Brush as indicated in Clause 3-1 BRUSHING; spot grade as needed; install drainage as specified in the CULVERT AND DRAINAGE LIST.

**0-6 PRE-HAUL MAINTENANCE (CONTINUED)**

S1407	0+00 to 12+00	Brush as indicated in Clause 3-1 BRUSHING; spot grade as needed; install drainage as specified in the CULVERT AND DRAINAGE LIST.
S1420	0+00 to 42+40	Brush as indicated in Clause 3-1 BRUSHING; spot grade as needed; install drainage as specified in the CULVERT AND DRAINAGE LIST.
S1426	0+00 to 12+50	Fill in non-drivable waterbars; brush as indicated in Clause 3-1 BRUSHING; spot grade as needed; install drainage as specified in the CULVERT AND DRAINAGE LIST.
S1440	0+00 to 64+50	Grade and shape to facilitate haul.
S1442	0+00 to 19+90	Brush as indicated in Clause 3-1 BRUSHING; spot grade as needed; install drainage as specified in the CULVERT AND DRAINAGE LIST.
S1442A	0+00 to 8+50	Brush as indicated in Clause 3-1 BRUSHING; spot grade as needed; install drainage as specified in the CULVERT AND DRAINAGE LIST.
S1444	0+00 to 29+95	Fill in non-drivable waterbars; brush as indicated in Clause 3-1 BRUSHING; spot grade as needed; install drainage as specified in the CULVERT AND DRAINAGE LIST.
S1450	0+00 to 12+40	Brush as indicated in Clause 3-1 BRUSHING; spot grade as needed; install drainage as specified in the CULVERT AND DRAINAGE LIST.
S1460	0+00 to 13+05	Fill in non-drivable waterbars; brush as indicated in Clause 3-1 BRUSHING; spot grade as needed; install drainage as specified in the CULVERT AND DRAINAGE LIST.

**0-7 POST-HAUL MAINTENANCE**

This project includes post-haul road maintenance listed in Clause 9-4 POST HAUL MAINTENANCE.

**0-10 ABANDONMENT**

This project includes abandonment listed in Clause 9-22 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 any submitted plan that changes the scope of work or environmental condition from the original road plan.

**1-2 UNFORESEEN CONDITIONS**

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

**1-3 ROAD DIMENSIONS**

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

**1-4 ROAD TOLERANCES**

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

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

**1-6 ORDER OF PRECEDENCE**

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

1. Addenda.
2. Designs or Plans. On designs and plans, figured dimensions shall take precedence over scaled dimensions.
3. Road Plan Clauses.
4. TYPICAL SECTION SHEET.
5. Standard Lists.
6. Standard Details.
7. Road Plan/Work maps.

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



**1-7 TEMPORARY ROAD CLOSURE**

Purchaser shall notify the Contract Administrator a minimum of 14 calendar days before the closure of any road. Green Dot roads shall remain open to recreational traffic on weekends and after 5 PM weekdays, unless otherwise approved, in writing, by the Contract Administrator.

**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.

**1-15 ROAD MARKING**

Purchaser shall perform road work in accordance with the state's marked location. Road centerline location for new construction is marked with orange flagging.

**1-21 HAUL APPROVAL**

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

**1-23 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
- Subgrade compaction
- Rock application
- Rock compaction

**1-25 ACTIVITY TIMING RESTRICTION**

The operation of road construction equipment is not allowed between November 1 to April 30, or on weekends or state recognized holidays, unless authorized in writing by the Contract Administrator.

**1-26 OPERATING DURING CLOSURE PERIOD**

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

**1-29 SEDIMENT RESTRICTION**

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 any 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.

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

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

If tracked equipment is used on bridges or asphalt surfaces, Purchaser shall immediately cease all road construction and hauling operations. Purchaser shall remove any dirt, rock, or other material tracked or spilled on the bridge or asphalt surfaces and have surfaces evaluated by the District Engineer or their designee for any damage caused by equipment. Any damage to the surfaces will be repaired, at the Purchaser's expense, as directed by the Contract Administrator.

If damage has occurred from Purchaser activity, Purchaser shall have asphalt surfaces reviewed by a third party, specializing in asphalt construction and repair. The third party's scope of the damage and repairs must be agreed upon between the Purchaser and the Contract Administrator. Damage to the asphalt will be repaired at the Purchaser's expense.

**1-33 SNOW PLOWING RESTRICTION**

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

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

Purchaser shall immediately remove any mud, dirt, rock, or other material tracked or spilled on to paved roads, 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 road controller, county or WSDOT.

## SECTION 2 – MAINTENANCE

### 2-1 GENERAL ROAD MAINTENANCE

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

### 2-2 ROAD MAINTENANCE – PURCHASER MAINTENANCE

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

### 2-3 ROAD MAINTENANCE – DESIGNATED MAINTAINER

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

### 2-4 PASSAGE OF LIGHT VEHICLES

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

### 2-5 MAINTENANCE GRADING – EXISTING ROAD

On the following roads, Purchaser shall use a grader or dozer to shape the existing surface before timber haul.

<u>Road</u>	<u>Stations</u>	<u>Requirements</u>
S1200	0+00 to 168+75	Spot grade/blade as needed for haul.
S1400	0+00 to 328+40	Spot grade/blade as needed for haul.
S1406	0+00 to 16+75	Spot grade/blade as needed for haul.
S1407	0+00 to 12+00	Spot grade/blade as needed for haul.
S1420	0+00 to 42+40	Spot grade/blade as needed for haul.
S1426	0+00 to 12+50	Fill in existing earthen berms and spot grade/blade as needed for haul.
S1440	0+00 to 64+50	Grade, shape, and compact road.
S1442	0+00 to 19+90	Spot grade/blade as needed for haul.
S1442A	0+00 to 8+50	Spot grade/blade as needed for haul.
S1444	0+00 to 29+95	Fill in existing earthen berms and spot grade/blade as needed for haul.
S1450	0+00 to 12+40	Spot grade/blade as needed for haul.
S1460	0+00 to 13+05	Fill in existing earthen berms and spot grade/blade as needed for haul.

**2-6 CLEANING CULVERTS, HEADWALLS AND CATCH BASINS**

On the following roads, Purchaser shall clean the inlets and outlets, headwalls, and catch basins of culverts in conjunction with the CULVERT AND DRAINAGE LIST. Work must be completed before timber haul on each road respectively. Live stream culverts shall be dewatered, as approved by the Contract Administrator, prior to cleaning.

<u>Road</u>	<u>Stations</u>	<u>Water Type</u>
S1400	179+10	Seep
	233+75	F
	282+80	Np
	291+55	Np
	311+25	Np
S1427	24+00	XD
S1450	24+00	XD

\*XD = cross drain

**2-7 CLEANING DITCHES**

On the following road, Purchaser shall clean the ditch. Pulling ditch material across the road or mixing in with the road surface is not allowed.

<u>Road</u>	<u>Stations</u>
S1400	233+85 to 234+40

SECTION 3 – CLEARING, GRUBBING, AND DISPOSAL

**3-1 BRUSHING**

On the following roads, Purchaser shall cut vegetative material up to 5 inches in diameter, including limbs, as shown on the BRUSHING DETAIL. Brushing must be achieved by manual or mechanical cutting, pulling, or breaking of brush, trees, and branches. Root systems and stumps of cut vegetation may not be disturbed unless directed by the Contract Administrator. Purchaser shall remove brushing debris from the road surface, ditchlines, and culvert inlets and outlets.

<u>Road</u>	<u>Stations</u>
S1400	174+50 to 328+40
S1406	0+00 to 16+75
S1407	0+00 to 12+00
S1420	0+00 to 42+40
S1426	0+00 to 12+50
S1442	0+00 to 19+90
S1442A	0+00 to 8+50
S1444	0+00 to 29+95
S1450	0+00 to 12+40
S1460	0+00 to 13+05

**3-5 CLEARING**

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

**3-7 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 100 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 live 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. Stumps over 24 inches in 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 and in compliance with all other clauses in this road plan. Stumps must be positioned upright, with root wads in contact with the forest floor on stable locations.

### **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 clearing brushing area limits as shown on the TYPICAL SECTION SHEET or BRUSHING DETAIL.

### **3-21 DISPOSAL COMPLETION**

Purchaser shall remove organic debris from the road surface, ditchlines, and drainage inlets and outlets. Purchaser shall complete all disposal of organic debris, before timber haul.

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

Purchaser shall not place organic debris in the following areas:

- Within 50 feet of a cross drain culvert.
- Within 100 feet of a live stream, or wetland.
- On road subgrades, or excavation and embankment slopes.
- On slopes greater than 50%.
- Within the operational area for 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 outside of the clearing limits 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.

## SECTION 4 – EXCAVATION

### 4-2 PIONEERING

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

- Drainage must be provided on all uncompleted construction.
- 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 adhere to the following standards for road grade and alignment:

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

### 4-5 CUT SLOPE RATIO

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

<u>Material Type</u>	<u>Excavation Slope Ratio</u>	<u>Excavation Slope Percent</u>
Common Earth (on side slopes up to 50%)	1:1	100
Common Earth (50% 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.

#### **4-22 TURNAROUNDS**

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

#### **4-28 DITCH DRAINAGE**

Ditches must drain to cross drain culverts or ditchouts.

#### **4-29 DITCHOUTS**

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

#### **4-35 WASTE MATERIAL DEFINITION**

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

#### **4-36 DISPOSAL OF WASTE MATERIAL**

Purchaser may sidecast waste material on side slopes up to 45% if the waste material is compacted and free of organic debris and meets the conditions of Clause 4-38 PROHIBITED WASTE DISPOSAL AREAS. Other areas for waste material require approval, in writing, prior to use by the Contract Administrator.

#### **4-38 PROHIBITED WASTE DISPOSAL AREAS**

Purchaser shall not deposit waste material in the following areas:

- Within 50 feet of a cross drain culvert.
- Within 100 feet of a live stream or wetland unless otherwise specified herein.
- 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 landings.
- Against standing timber.

#### **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.

#### **4-48 NATIVE MATERIAL**

Native material consists of naturally occurring material that is free of organic debris and trash.

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

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

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

Purchaser shall compact all embankment and waste material in accordance with the COMPACTION LIST by routing construction equipment over the entire width of each lift.

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

Purchaser shall compact constructed and reconstructed subgrades in accordance with the COMPACTION LIST by routing construction equipment over the entire width. Purchaser shall obtain written approval from the Contract Administrator for subgrade compaction before timber haul.

SECTION 5 – DRAINAGE

**5-1 REMOVAL OF SHOULDER BERMS**

Purchaser shall remove berms from road shoulders as shown in the FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS. The construction of ditchouts, as described in Clause 4-29 DITCHOUTS, is required where ponding could result from the effects of sidecast debris.

**5-5 CULVERTS**

Purchaser shall supply and install culverts as part of this contract. Culverts must be installed concurrently with subgrade work and must be installed before subgrade compaction and rock application. Culvert locations and the minimum requirements for culvert length and diameter are designated on the CULVERT AND DRAINAGE LIST. Culvert, downspout, and flume lengths may be adjusted to fit as-built conditions and may not terminate directly on unprotected soil. Culverts may be new or used material as indicated in 5-7 USED CULVERT MATERIAL and must meet the specifications in Clauses 10-15 through 10-24.

**5-6 CULVERT TYPE**

On the following roads, Purchaser shall install metal or plastic culverts in accordance with Clauses 10-15 through 10-24.

<u>Road</u>	<u>Station</u>
S1409	4+80
S1440	59+50
S1450R	1+40
S1480	1+55

**5-7 USED CULVERT MATERIAL**

On the following 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.

<u>Road</u>	<u>Station</u>
S1409	4+80
S1440	59+50
S1480	1+55

**5-8 TEMPORARY STREAM CULVERT INSTALLATION**

Purchaser shall install temporary culverts as shown in the TEMPORARY CULVERT DETAIL. Temporary stream culverts must be located in the natural channel of the stream. Temporary culverts must be removed as indicated below. Geotextile fabric must meet the specifications in Clause 10-2 GEOTEXTILE FOR SEPARATION.

<u>Road</u>	<u>Stations</u>	<u>Comments</u>
S1409	4+80	Install temporary culvert in existing stream channel.
S1440	59+50	Install temporary culvert in existing stream channel. Create short outlet channel/lead out to maintain positive drainage downslope.
S1480	1+55	Install temporary culvert in existing stream channel.

**5-12 UNUSED MATERIALS STATE PROPERTY**

On required roads, any unused materials listed on the CULVERT AND DRAINAGE LIST that are not installed will become the property of the state. Purchaser shall stockpile materials at 713 Bowers Road, Ellensburg, WA 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" or the Corrugated Polyethylene Pipe Association’s “Recommended Installation Practices for Corrugated Polyethylene Pipe and Fittings”. Corrugated Polyethylene pipe must be installed in a manner consistent with the manufacturer’s recommendations. Culverts over 15 inches in diameter shall be banded using segments of no less than 10 feet, and no more than one segment less than 16 feet unless otherwise specified herein. The shorter segment 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 over 36 inches in diameter before backfilling.

**5-18 CULVERT DEPTH OF COVER**

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

#### **5-20 ENERGY DISSIPATERS**

Purchaser shall install energy dissipaters in accordance with the CULVERT AND DRAINAGE SPECIFICATION DETAIL at all culverts. 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 ROCK LIST. Energy dissipaters must extend a minimum of 1 foot to each side of the culvert at the outlet and a minimum of 2 feet beyond the outlet. Placement must be with a zero-drop-height only. No placement by end dumping or dropping of rock is allowed.

#### **5-25 CATCH BASINS**

Purchaser shall construct catch basins in accordance with CULVERT AND DRAINAGE SPECIFICATION DETAIL. Minimum dimensions of catch basins are 2 feet wide and 5 feet long.

#### **5-26 HEADWALLS FOR CULVERTS**

Purchaser shall construct headwalls in accordance with the CULVERT AND DRAINAGE SPECIFICATION DETAIL at all culverts on the CULVERT AND DRAINAGE LIST that specify the placement of rock. Rock used for headwalls must meet the specifications of clause 6-43 QUARRY SPALLS. 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 inlet, 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-drop-height only.

#### **5-27 ARMORING FOR CULVERTS**

Purchaser shall place quarry spalls in conjunction with or immediately following construction of the embankment. Rock must be placed on shoulders, slopes, and around culvert inlets and outlets as designated on the CULVERT AND DRAINAGE LIST. Rock may not restrict the flow of water into culvert inlets or catch basins. Placement must be with a zero-drop-height only. No placement by end dumping or dropping of rock is allowed.

#### **5-30 DRIVABLE WATERBAR CONSTRUCTION**

Purchaser shall construct drivable waterbars in accordance with the DRIVABLE WATERBAR DETAIL and as specified on the CULVERT AND DRAINAGE LIST. Drivable waterbars must be installed concurrently with construction of the subgrade and must be maintained in an operable condition. Purchaser shall install drivable waterbars using a crawler tractor. Use of any other equipment is not allowed without written approval from the Contract Administrator.

**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. Purchaser shall install rolling dips using a crawler tractor. Use of other equipment is not allowed without written approval of the Contract Administrator.

**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

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

Rock used in accordance with the quantities on the ROCK LIST may be obtained from the following borrow source on state land at no charge to the Purchaser. Purchaser shall obtain written approval from the Contract Administrator for the use of material from any other source. If other operators are using, or desire to use the borrow source, a joint operating plan must be developed. All parties shall follow this plan. Purchaser shall notify the Contract Administrator a minimum of 7 calendar days before starting any operations in the listed locations.

<u>Road</u>	<u>Locations</u>	<u>Type</u>
S1400	201+70	Select Pit Run, Quarry Spalls

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

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

<u>Source</u>	<u>Location</u>	<u>Rock Type</u>
S1400	320+00	Select Pit Run, Quarry Spalls

**6-23 ROCK GRADATION TYPES**

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

**6-41 SELECT PIT RUN ROCK**

No more than 20 percent of the rock may be larger than 4 inches in any dimension and no rock may be larger than 8 inches in any dimension. Select Pit Run rock may not contain more than 5 percent by weight of organic debris, dirt, and trash. Rock may require processing to meet this specification.

**6-43 QUARRY SPALLS**

% Passing 8" square sieve	100%
% Passing 3" square sieve	20% maximum
% Passing 3/4" square sieve	5% maximum

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

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

Measurement of specified rock depths, are defined as the compacted depths using the compaction methods required in this road plan. Estimated quantities specified in the 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 for subgrade before rock application.

**6-71 ROCK APPLICATION**

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

**6-80 DUST ABATEMENT**

Purchaser shall use water for dust abatement directed by the Contract Administrator from the source shown below. Contract Administrator shall provide written approval for use of source from water owner to Purchaser prior to any withdrawals. Other sources or methods of dust abatement shall be approved in writing by the Contract Administrator prior to use.

<u>Water Source</u>
Clear Lake, Stemilt Irrigation District. (509) 663-4696



SECTION 7 – STRUCTURES

**7-1 SIGN INSTALLATION**

Purchaser shall supply, install, and maintain the following road signs. Signs must be installed a minimum of 7 days before work begins. Signs must comply with the Federal Highway Administration’s Manual on Uniform Traffic Control Devices. Sign wording other than as specified below must be approved, in writing, by the Contract Administrator prior to installation.

<u>Road</u>	<u>Station</u>	<u>Sign</u>
S1200	Station 0+00/168+75	Caution Logging Activity Ahead
S1200/S1400 Jct.	0+00	Caution Logging Activity Ahead
S1440	0+00/328+40	Caution Logging Activity Ahead

SECTION 8 – EROSION CONTROL

**8-15 REVEGETATION**

On the following roads, Purchaser shall supply and spread grass seed as indicated in CLAUSE 10-14 GRASS SEED at a rate of 50 pounds per acre, and a 3-inch-deep layer of straw as indicated in CLAUSE 10-13 STRAW FOR EROSION CONTROL, on all exposed soils resulting from road work activities that are within 50 feet of live water. Other methods of covering must be approved in writing by the Contract Administrator. Required seed not spread by the termination of this contract will become the property of the state.

<u>Road</u>	<u>Location</u>	<u>Grass Seed Qty</u>	<u>Straw Qty</u>
S1409	4+30 to 5+30	5 lbs	2 bales
S1426	20+35 to 21+35	10 lbs	6 bales
S1440	45+80 to 47+10	10 lbs	10 bales
	59+00 to 60+00	6 lbs	3 bales
	61+60 to 62+60	5 lbs	2 bales
S1444	15+30 to 16+30	5 lbs	2 bales
	21+10 to 22+10	5 lbs	2 bales
	27+75 to 28+75	5 lbs	2 bales
S1444 Ditch	4+25	2 lbs	1 bale
S1480	1+05 to 2+05	10 lbs	5 bales

Quantities are minimum acceptable values. Actual quantities may vary and are the responsibility of the Purchaser.

**8-17 REVEGETATION TIMING**

Purchaser shall revegetate between April 15 and June 1 or September 15 and November 15. Soils may not be allowed to sit exposed for longer than one month, or during storm events, without receiving revegetation treatment or other protection unless otherwise approved in writing by the Contract Administrator.

SECTION 9 – POST-HAUL ROAD WORK

**9-1 EARTHEN BARRICADES**

On the following roads at the specified locations, Purchaser shall construct barricades in accordance with the EARTHEN BARRICADE DETAIL.

<u>Road</u>	<u>Stations</u>	<u>Complete By/Comments</u>
S1409	0+50	Termination of Contract
S1420	42+40	Termination of Contract
S1426	12+50, 21+50	Concurrent with Culvert Abandonment
S1440	44+85, 46+85	Concurrent with Culvert Abandonment
S1450	12+30, 15+25	Install concurrently with construction of the S1450R
S1480	1+25	Termination of Contract

**9-2 CULVERT REMOVAL**

On the following roads, Purchaser shall remove existing culverts from roads and leave the resulting channel open with excavation slopes and excavated channel widths as specified. Slopes and channels widths are minimum acceptable values. Natural ground contour where noted may not be less than slope ratio noted unless otherwise approved in writing by Contract Administrator. Culvert removals must be in accordance with the associated Forest Practice Hydraulic Permit (FPH), the STREAM CROSSING AND CROSS DRAIN REMOVAL DETAIL, the CULVERT REMOVAL PROCEDURE, and as applicable the S1426 20+85 and S1440 46+30 AND 46+60 CULVERT REMOVAL PLAN VIEW DETAIL.

<u>Road</u>	<u>Station</u>	<u>Excavated Channel Width</u>	<u>Average Fill Depth</u>	<u>Water Type</u>	<u>Excavation Slope Ratio/Comments</u>
S1409	4+80	3'	2'	Np	2:1, natural ground contour
S1426	20+85	8'	8'	F	2:1, natural ground contour
S1440	46+30	8'	5'	F	3:1, natural ground contour
S1440	46+60	2'	3'	Ns	3:1, natural ground contour
S1440	59+50	2'	1'	Np	2:1, natural ground contour
S1440	62+10	2'	3'	U	2:1, natural ground contour
S1444	15+80	2'	3'	Ns	2:1, natural ground contour
S1444	21+60	2'	3'	Np	2:1, natural ground contour
S1444	28+25	2'	3'	U	2:1, natural ground contour
S1480	1+55	4'	2'	Np	2:1, natural ground contour

F – Fish Bearing  
 Np – Perennial  
 Ns – Seasonal  
 U – Untyped

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

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

**9-4 POST-HAUL MAINTENANCE**

Purchaser shall perform post-haul maintenance in accordance with the FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS on all roads, and as specified below.

<u>Road</u>	<u>Stations</u>	<u>Additional Requirements</u>
S1400	174+50 to 328+40	Grade, shape, and compact surface.
S1406	0+00 to 16+75	Perform additional maintenance as specified in Clause 9-5 ADDITIONAL POST HAUL MAINTENANCE SPECIFICATIONS.
S1407	0+00 to 12+00	
S1420	0+00 to 42+40	
S1425	0+00 to 5+45	
S1426	0+00 to 12+50	
S1427	0+00 to 27+25	
S1428	0+00 to 6+45	
S1442	0+00 to 19+90	
S1442A	0+00 to 8+50	
S1450	0+00 to 12+40, 15+35 to 49+55	
S1450R	0+00 to 3+35	
S1460	0+00 to 13+05	
S1480	0+00 to 1+50	
S1480S	0+00 to 1+00	

**9-5 ADDITIONAL POST-HAUL MAINTENANCE SPECIFICATIONS**

Purchaser shall perform additional maintenance on roads as specified below.

- Construct DRIVABLE WATERBARS in accordance with 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 200 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. Waterbars must be outsloped to provide positive drainage. Outlets must drain onto stable locations.
- Block roads with earthen barricades in accordance with Clause 9-1 EARTHEN BARRICADES and the attached EARTHEN BARRICADE DETAIL.

**9-10 LANDING DRAINAGE**

Purchaser shall provide drainage of all landing surfaces.

**9-11 LANDING EMBANKMENT**

Purchaser shall slope landing embankments to the original construction specifications.

## 9-22 ROAD ABANDONMENT

Purchaser shall abandon the following roads as indicated below.

<u>Road</u>	<u>Stations</u>	<u>Type</u>	<u>Complete By/Comments</u>
S1409	0+50 to 10+00	Light	Contract Termination
S1426	12+50 to 21+50	Light	Contract Termination
S1440	44+85 to 64+50	Light	Contract Termination
S1444	0+00 to 29+95	Light	Contract Termination
S1450	12+40 to 15+35	Light	Concurrent with construction of S1450R. Only block ends, do not disturb prism.
S1480	1+25 to 6+50	Light	Contract Termination

## 9-23 LIGHT ABANDONMENT

- Remove road shoulder berms except as directed.
- Outslope roads at a minimum of 10% or natural ground.
- 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 300 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.
- Remove culverts in accordance with Clause 9-2 CULVERT REMOVAL.
  - Culverts removed from live streams shall follow the Live Stream Culvert Removal Procedure.
  - Type "F" culvert removals shall only be removed between August 1 and September 30 of any calendar year, unless otherwise approved, in writing, by the Contract Administrator.
  - Type "F" streams shall have a minimum of 5 pieces of woody debris with a small end diameter of 6" and a length of not less than 15' evenly distributed along channel. Larger rocks found during fill excavation shall be placed in channels as available.
  - Type "N" culvert removals shall have slash, woody debris, and rocks placed in channel as available on site.
  - Excavate stream channels to match existing stream profile.
  - Excavate backslopes to the specification in CLAUSE 9-2 CULVERT REMOVAL.
  - Cover, concurrently with abandonment, all exposed soils created from excavation work within 50 feet of any live stream, with grass seed, then straw, then slash and woody debris.
- Apply grass seed and straw concurrently with abandonment and in accordance with Section 8 EROSION CONTROL.
- Scatter woody debris onto at least 25 percent of abandoned road surfaces.
- Block roads with earthen barricades in accordance with the attached EARTHEN BARRICADE DETAIL and Clause 9-1 EARTHEN BARRICADES.

SECTION 10 MATERIALS

**10-2 GEOTEXTILE FOR SEPARATION**

Geotextiles must meet the following minimum requirements for strength and property qualities, and must be designed by the manufacturer to be used for separation. Material must be free of defects, cuts, and tears.

	<u>ASTM Test</u>	<u>Requirements</u>
Type	--	Non-woven
Apparent opening size	D 4751	No. 30 max
Water permittivity	D 4491	0.02 sec <sup>-1</sup>
Grab tensile strength	D 4632	160 lb
Grab tensile elongation	D 4632	>= 50%
Puncture strength	D 6241	310 lb
Tear strength	D 4533	50 lb
Ultraviolet stability	D 4355	50% retained after 500 hours of exposure

**10-13 STRAW FOR EROSION CONTROL**

Straw used for erosion control shall be certified weed free.

**10-14 GRASS SEED**

Grass seed must meet the following specifications:

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

<u>Kind and Variety of Seed in Mixture</u>	<u>% by Weight</u>	<u>Minimum % pure seed</u>	<u>Minimum % germination</u>
Perennial Rye	35-45	95	90
Red Fescue	30-40	95	90
Highland Bent	5-15	95	90
White Clover	10-20	95	90
Inert and Other Crop	0.5		NA

**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).

**10-17 CORRUGATED PLASTIC CULVERT**

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

**10-20 FLUME AND DOWNSPOUT**

Downspouts and flumes must meet the AASHTO specification designated for the culvert.

**10-21 METAL BAND**

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

**10-22 PLASTIC BAND**

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

**10-24 GAUGE AND CORRUGATION**

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"	16 (0.064")	2 2/3" X 1/2"
24" to 48"	14 (0.079")	2 2/3" X 1/2"

SECTION 11 SPECIAL NOTES

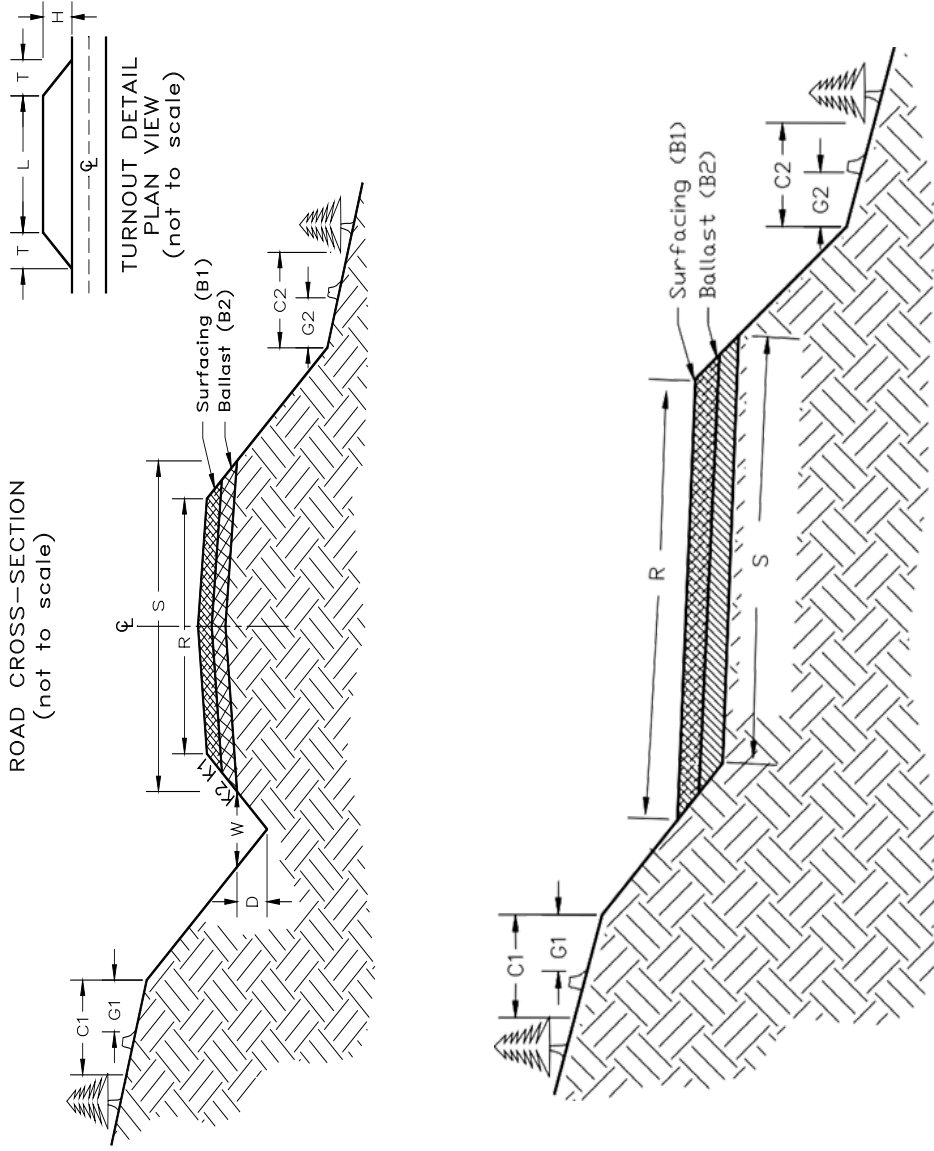
**11-1 DITCH ABANDONMENT**

Adjacent to the following road, Purchaser shall abandon existing ditchline. All work shall be in accordance with this clause, or as directed by the Contract Administrator. Abandonment shall consist of pulling ditch berm back into cut and smoothing the ground surface to match the existing slope and contour of the ground so that water will flow over the area in an even unconcentrated manner. Where ditchline intercepts stream channel to the South of the road, Purchaser shall reshape ground to allow stream channel to flow naturally downhill. Excavated channel shall be covered with grass seed and a 2 inch layer of straw.

<u>Road</u>	<u>Location</u>	<u>Approximate Length (ft)</u>
S1444	4+25	525



# TYPICAL SECTION SHEET



## TYPICAL SECTION SHEET

ROAD	PRE-HAUL, RECONSTRUCTION, CONSTRUCTION	FROM STATION	TO STATION	TOL. CLASS	SUBGRADE WIDTH S	CROWN INCHES AT CENTER LINE	INSLOPE/OUT SLOPE INCHES IN 10 FEET	ROAD WIDTH R	DITCH WIDTH/DEPTH		GRUBBING LIMITS G1 G2	CLEARING LIMITS C1 C2
									W	D		
S1200	Pre-haul	0+00	168+75	C	14'	4"	4"	12'	2'	1'	-	-
S1400	Pre-haul	0+00	328+40	C	14'	4"	4"	12'	2'	1'	-	-
S1406	Pre-haul	0+00	16+75	C	12'	-	4"	12'	-	-	-	-
S1407	Pre-haul	0+00	12+00	C	12'	-	4"	12'	-	-	-	-
S1409	Reconstruction	0+00	10+00	C	12'	-	4"	12'	-	-	See Note	See Note
S1420	Pre-haul	0+00	42+40	C	12'	-	4"	12'	-	-	-	-
S1425	Reconstruction	0+00	5+45	C	12'	-	4"	12'	-	-	See Note	See Note
S1426	Pre-haul	0+00	12+50	C	12'	-	4"	14'	-	-	-	-
S1427	Reconstruction	0+00	27+25	C	12'	-	4"	12'	-	-	See Note	See Note
S1428	Reconstruction	0+00	6+45	C	12'	-	4"	12'	-	-	See Note	See Note
S1440	Pre-haul	0+00	64+50	C	12'	-	4"	12'	-	-	-	-
S1442	Pre-haul	0+00	19+90	C	12'	-	4"	12'	-	-	-	-
S1442A	Pre-haul	0+00	8+50	C	12'	-	4"	12'	-	-	-	-
S1444	Pre-haul	0+00	29+95	C	12'	-	4"	12'	-	-	-	-
S1450	Pre-haul	0+00	12+40	C	12'	-	4"	12'	-	-	-	-
	Abandon *	12+40	15+35	C	12'	-	-	-	-	-	-	-
	Reconstruction	15+35	49+55	C	12'	-	4"	12'	-	-	See Note	See Note
S1450R	Construction	0+00	3+35	C	12'	-	4"	12'	-	-	See Note	See Note
S1460	Pre-haul	0+00	13+05	C	12'	-	4"	12'	-	-	-	-
S1480	Reconstruction	0+00	6+50	C	12'	-	4"	12'	-	-	See Note	See Note
S1480S	Construction	0+00	1+00	C	12'	-	4"	12'	-	-	See Note	See Note

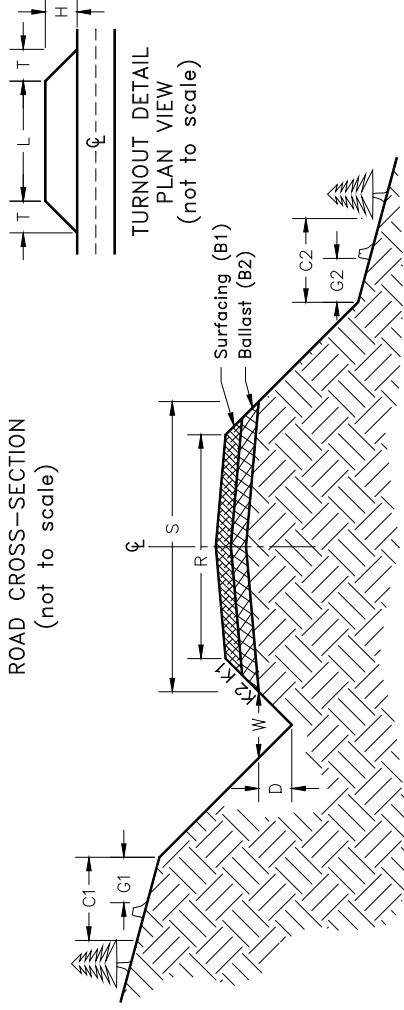
NOTE: GRUBBING LIMITS FOR CONSTRUCTION/RECONSTRUCTION ARE 1' BEYOND EDGE OF ROAD. CLEARING LIMITS, SEE RIGHT-OF-WAY SPECIFICATION SHEET.

\*See Clause 9-22 ROAD ABANDONMENT

## POST HAUL TYPICAL SECTION SHEET

ROAD	MAINTENANCE, DECOMMISSION, ABANDON	FROM STATION	TO STATION	CROWN INCHES @ CL	OUT/IN SLOPE INCHES IN 10 FEET	ROAD WIDTH R	DITCH DEPTH		NOTES
							WIDTH W	D	
S1400	Maintenance	174+50	328+40	4	4	14'	2'	1'	Road varies from outslopped to crowned w/ ditch
S1406	Maintenance	0+00	16+75	4	4	12'	2'	1'	Road varies from outslopped to crowned w/ ditch
S1407	Maintenance	0+00	12+00	-	4	12'	-	-	
S1409	Abandon	0+50	10+00	-	4	12'	-	-	
S1420	Maintenance	0+00	42+40	-	4	14'	-	-	
S1425	Maintenance	0+00	5+45	-	4	14'	-	-	
S1426	Maintenance	0+00	12+50	-	4	12'	-	-	
	Abandon	12+50	21+50	-	-	-	-	-	
S1427	Maintenance	0+00	27+25	-	4	12'	-	-	
S1428	Maintenance	0+00	6+45	-	4	12'	-	-	
S1440	Abandon	44+85	64+50	-	4	12'	-	-	
S1442	Maintenance	0+00	19+90	-	4	12'	-	-	
S1442A	Maintenance	0+00	8+50	-	4	12'	-	-	
S1444	Abandon	0+00	29+95	-	4	12'	-	-	
S1450	Maintenance	0+00	12+40	-	4	12'	-	-	
	Maintenance	15+35	49+55	-	4	12'	-	-	
S1450R	Maintenance	0+00	3+35	-	4	12'	-	-	
S1460	Maintenance	0+00	13+05	-	4	12'	-	-	
S1480	Maintenance	0+00	1+25	-	4	12'	-	-	
	Abandon	1+25	6+50	-	4	12'	-	-	
S1480S	Maintenance	0+00	1+00	-	4	12'	-	-	

ROAD CROSS-SECTION  
(not to scale)



ROCK LIST

Road Number	From Station	To Station	Rock Slope	Compacted Rock Depth	Type	CY/ Station	# of Stations	CY Subtotal	Rock Source/ Comment
			K2	B2					
S1400	233+40	234+40	1 1/2:1	8"	SPR	50	1.00	50	S1400 320+00 (stockpile)
S1409	4+30	5+30	1 1/2:1	6"	SPR	30	1.00	30	S1400 320+00 (stockpile)
		4+80	-	-	QS	-	-	1	S1400 320+00 or on site if available/ headwall, dissipater
S1440	59+00	60+00	1 1/2:1	6"	SPR	30	1.00	30	S1400 201+70
		59+50	-	-	QS	-	-	.5	S1400 201+70/headwall, dissipater
S1450R	0+40	2+40	1 1/2:1	6"	SPR	30	2.00	60	S1400 201+70
		1+40	-	-	QS	-	-	.5	S1400 201+70/headwall, dissipater
S1480	1+05	2+05	1 1/2:1	6"	SPR	30	1.00	30	S1400 320+00 (stockpile)
		1+55	-	-	QS	-	-	1	S1400 320+00 or on site if available/ headwall, dissipater

SPR - Select Pit Run Rock TOTAL 200 CY  
 QS - Quarry Spalls TOTAL 3 CY

## COMPACTION LIST

Road	From Station	To Station	Type	Max Depth Per Lift (inches)	Equipment Type	Equipment Weight (lbs)	Minimum Number of Passes	Maximum Operating Speed (mph)
S1400	174+50	328+40	Existing Surface (Post Haul)	-	Vibratory Roller	16,000	3	3
	233+40	244+40	Rock	4	Excavation	25,000	3	3
S1409	0+00	10+00	Subgrade/Rock	12/6	Excavation	25,000	3	3
S1425	0+00	5+45	Subgrade	12	Excavation	25,000	3	3
S1427	0+00	27+25	Subgrade	12	Excavation	25,000	3	3
S1428	0+00	6+45	Subgrade	12	Excavation	25,000	3	3
S1450R	0+00	3+35	Subgrade/Rock	12/6	Excavation	25,000	3	3
S1480	0+00	6+50	Subgrade/Rock	12/6	Excavation	25,000	3	3
S1480S	0+00	1+00	Subgrade	12	Excavation	25,000	3	3

### CULVERT AND DRAINAGE LIST

Road	Station	Type	Diam. (Inches)	Length (Feet)	Comment
S1400	176+25	Rolling Dip	-	-	Install
	178+80	Rolling Dip	-	-	Install
	179+10	Culvert	-	-	Clean CMP, Seep
	180+15	Rolling Dip	-	-	Install
	181+80	Rolling Dip	-	-	Install
	184+10	Rolling Dip	-	-	Install
	187+20	Rolling Dip	-	-	Install
	194+15	Rolling Dip	-	-	Install
	203+35	Rolling Dip	-	-	Install
	205+10	Rolling Dip	-	-	Install
	210+40	Rolling Dip	-	-	Install
	213+80	Rolling Dip	-	-	Install
	218+40	Rolling Dip	-	-	Install
	221+35	Rolling Dip	-	-	Install
	233+40	Rolling Dip	-	-	Install
	233+75	Culvert	-	-	Clean CMP, F Live Water
	234+40	Rolling Dip	-	-	Install
	236+35	Rolling Dip	-	-	Install
	245+95	Rolling Dip	-	-	Install
	252+85	Rolling Dip	-	-	Install
	256+30	Rolling Dip	-	-	Install
	259+75	Rolling Dip	-	-	Install
	267+25	Rolling Dip	-	-	Install
	271+55	Rolling Dip	-	-	Install
	274+05	Rolling Dip	-	-	Install
	279+65	Rolling Dip	-	-	Install
	282+80	Culvert	-	-	Clean CMP, Np Live Water
	284+40	Rolling Dip	-	-	Install
	288+00	Rolling Dip	-	-	Install
	291+35	Rolling Dip	-	-	Install
	291+55	Culvert	-	-	Clean CMP, Np Live Water
	292+30	Rolling Dip	-	-	Install
	294+45	Rolling Dip	-	-	Install
	298+85	Rolling Dip	-	-	Install
	301+40	Rolling Dip	-	-	Install
	303+85	Rolling Dip	-	-	Install
	306+30	Rolling Dip	-	-	Install
	309+50	Rolling Dip	-	-	Install
	311+25	Culvert	-	-	Clean CMP, Np Live Water
	311+65	Rolling Dip	-	-	Install
	315+30	Rolling Dip	-	-	Install
	318+35	Rolling Dip	-	-	Install
	325+85	Rolling Dip	-	-	Install

Road	Station	Type	Diam. (Inches)	Length (Feet)	Comment
S1400	331+35	Rolling Dip	-	-	Install
	335+25	Rolling Dip	-	-	Install
	339+80	Rolling Dip	-	-	Install
	342+30	Rolling Dip	-	-	Install
			-	-	
S1406	1+85	Water Bar	-	-	Install
	8+40	Water Bar	-	-	Install
	11+25	Water Bar	-	-	Install
	13+40	Water Bar	-	-	Install
	15+40	Water Bar	-	-	Install
			-	-	
S1407	0+60	Water Bar	-	-	Install
	3+10	Water Bar	-	-	Install
	5+20	Water Bar	-	-	Install
	8+30	Water Bar	-	-	Install
			-	-	
S1409	1+85	Water Bar	-	-	Install
	4+30	Water Bar	-	-	Install
	4+80	Culvert, Np	24	30	Install Temp Culvert, Remove Post Harvest
	5+25	Water Bar	-	-	Install
	8+00	Water Bar	-	-	Install
S1425	0+70	Water Bar	-	-	Install
	2+10	Water Bar	-	-	Install
	4+05	Water Bar	-	-	Install
S1426	0+35	Water Bar	-	-	Install
	3+90	Water Bar	-	-	Install
	6+70	Water Bar	-	-	Install
	9+60	Water Bar	-	-	Install
	11+90	Water Bar	-	-	Install
	20+85	Culvert (F)	36	30	Remove Post Harvest
S1427	0+50	Water Bar	-	-	Install
	1+50	Water Bar	-	-	Install
	6+65	Water Bar	-	-	Install
	9+15	Water Bar	-	-	Install
	12+40	Water Bar	-	-	Install
	16+45	Water Bar	-	-	Install
	19+15	Water Bar	-	-	Install
	20+60	Rolling Dip	-	-	Maintain
	24+00	Culvert	24	30	Clean Inlet/Outlet
S1428	4+00	Water Bar	-	-	Install

Road	Station	Type	Diam. (Inches)	Length (Feet)	Comment
S1440	46+30	Culvert (F)	36	40	Remove Post Harvest
	46+60	Culvert (Ns)	24	40	Remove Post Harvest
	59+50	Culvert (Np)	24	30	Install Temp Culvert, Remove Post Harvest
	62+10	Culvert	30	30	Remove Post Harvest
S1442	3+35	Rolling Dip	-	-	Install
	8+55	Water Bar	-	-	Install
	11+40	Rolling Dip	-	-	Install
	15+00	Rolling Dip	-	-	Install
	16+00	Rolling Dip	-	-	Install
	18+35	Rolling Dip	-	-	Install
S1442A	1+60	Water Bar	-	-	Install
	6+80	Water Bar	-	-	Install
S1444	8+60	Water Bar	-	-	Install
	15+15	Rolling Dip	-	-	Maintain
	15+80	Culvert (Ns)	24	30	Remove Post Harvest
	16+95	Water Bar	-	-	Install
	21+00	Rolling Dip	-	-	Maintain
	21+60	Culvert (Np)	24	30	Remove Post Harvest
	22+00	Rolling Dip	-	-	Maintain
	23+40	Water Bar	-	-	Install
	28+25	Culvert	24	30	Remove Post Harvest
S1450	2+35	Water Bar	-	-	Install
	5+90	Water Bar	-	-	Install
	7+20	Water Bar	-	-	Install
	10+15	Water Bar	-	-	Install
	12+25	Water Bar	-	-	Install
	15+40	Water Bar	-	-	Install
	17+20	Water Bar	-	-	Install
	19+20	Water Bar	-	-	Install
	21+15	Water Bar	-	-	Install
	24+00	Culvert (XD)	-	-	Clean Inlet/Outlet
	25+35	Water Bar	-	-	Install
	27+15	Water Bar	-	-	Install
	29+85	Water Bar	-	-	Install
	33+10	Water Bar	-	-	Install
	36+10	Water Bar	-	-	Install
	38+20	Water Bar	-	-	Install
44+00	Water Bar	-	-	Install	
46+15	Water Bar	-	-	Install	
48+20	Water Bar	-	-	Install	



Road	Station	Type	Diam. (Inches)	Length (Feet)	Comment
S1450R	1+40	Culvert	24	30	Install in dry swale, may intercept flow during excavation.
S1460	2+65	Water Bar	-	-	Install
	3+70	Rolling Dip	-	-	Maintain
	7+20	Rolling Dip	-	-	Maintain
	10+60	Water Bar	-	-	Install
S1480	1+00	Water Bar	-	-	Install
	1+55	Culvert (Np)	36	30	Install Temp Culvert, Remove Post Harvest
	2+10	Water Bar	-	-	Install
	5+60	Water Bar	-	-	Install

F – Fish bearing stream  
Np – Perennial Stream  
Ns – Seasonal Stream  
XD – Cross Drain

## RIGHT-OF-WAY SPECIFICATION SHEET

Based on a 12' road width. All clearing distances are measured horizontally from the centerline of the road. All ditches are 1' deep. Ditched roads are crowned 4" at the centerline. Roads with no ditch are outsloped 4" in 10'.

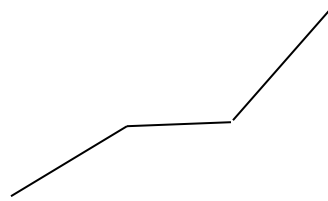
### CROWNED ROAD WITH DITCH RIGHT

<u>Sideslope</u>	<u>Clearing Left</u>	<u>Clearing Right</u>
0-10%	16'	14'
10-20%	17'	15'
20-30%	19'	17'
30-40%	22'	18'
40-50%	27'	22'



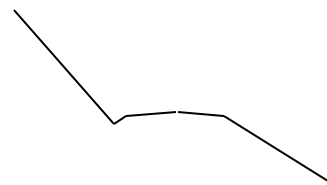
### OUTSLOPE LEFT ROAD

<u>Sideslope</u>	<u>Clearing Left</u>	<u>Clearing Right</u>
0-10%	16'	11'
10-20%	17'	12'
20-30%	19'	13'
30-40%	22'	15'
40-50%	27'	17'



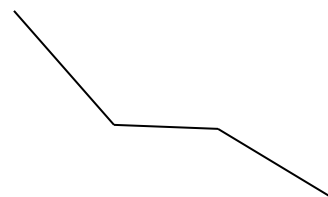
### CROWNED ROAD WITH DITCH LEFT

<u>Sideslope</u>	<u>Clearing Left</u>	<u>Clearing Right</u>
0-10%	14'	16'
10-20%	15'	17'
20-30%	17'	19'
30-40%	18'	22'
40-50%	22'	27'



### OUTSLOPE RIGHT ROAD

<u>Sideslope</u>	<u>Clearing Left</u>	<u>Clearing Right</u>
0-10%	11'	16'
10-20%	12'	17'
20-30%	13'	19'
30-40%	15'	22'
40-50%	17'	27'



## FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS

### Cuts and Fills

- Maintain slope lines as constructed. 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 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.
- Remove shoulder berms 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 and culverts clear of obstructions and functioning as intended.
- Inspect and clean culverts at least monthly, with additional inspections during storms and periods of high runoff. This shall be done even during periods of inactivity.

### Structures

- Repair culverts, bridges, gates, fences, cattle guards, signs, and other road structures as required because of purchaser use.

### Preventative Maintenance

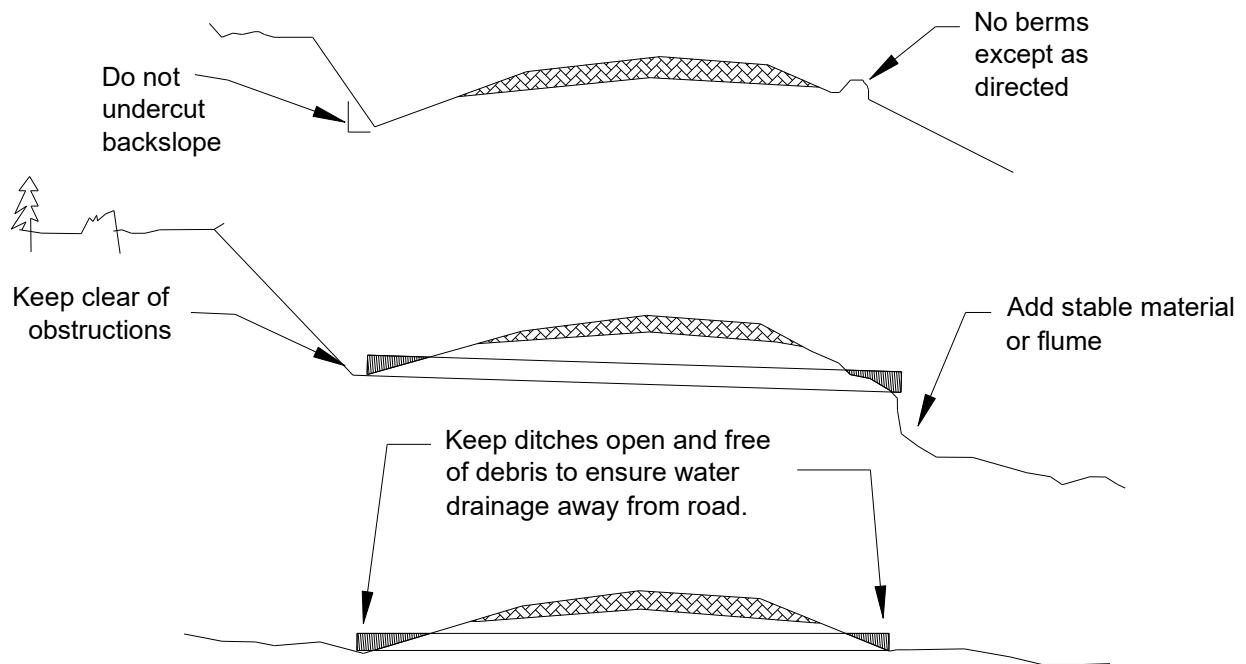
- Perform preventative maintenance work to safeguard against storm damage, such as blading to ensure correct runoff, ditch and culvert cleaning, and waterbar maintenance.

### 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.



## CULVERT REMOVAL PROCEDURE

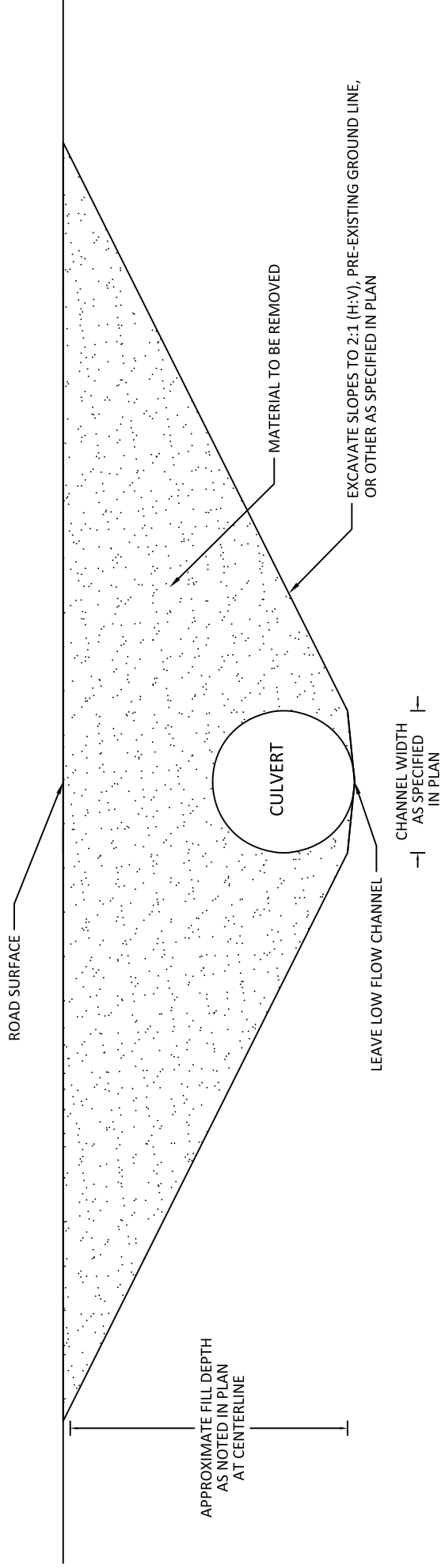
Order of work is as follows, deviations from this procedure require approval from Contract Administrator, in writing, before work commences.

1. Purchaser shall notify the State of intent to start project, and a pre-work conference shall be held before move in of equipment.
2. Culvert removal should not start during rain or threat of rain. Remove 95% of fill (see STREAM CROSSING AND CROSSDRAIN REMOVAL DETAIL) and place in road prism either side of the culvert in stable locations where there is no potential for sediment delivery or as otherwise specified herein.
3. For culverts with live water:
  - a. Assemble the items on the Estimated Materials List onsite before proceeding.
  - b. Set up pumps.
  - c. Dam up stream with sandbags and line floor of dam with plastic (to prevent sub-surface water flow), place rock on plastic to hold in place, and key leading edge of plastic into channel bottom. Build a settling pond at culvert outlet. Fill may need to be removed before the settling pond installation due to space limitations. Pump clean water at catch basin around work site and back into stream. Dirty water shall be pumped away from site and onto a stable location on the forest floor where no potential for sediment delivery can occur.
4. Remove remainder of fill and culvert.
5. Restore channel as indicated in 9-2 CULVERT REMOVAL.
6. Backfill settling pond and compact surfaces to prevent erosion.

### Estimated Materials List:

1. 2 pumps, (dam at culvert catch basin) pumps shall have a minimum capacity to adequately remove all water from stream,
  - a. For type "F" stream, pump intake shall be screened to prevent fish intake. Screen shall be woven wire with a maximum opening in the shortest direction of .087 inches (2.38 mm, 6-14 mesh);
2. Plastic sheeting as needed;
3. Grass seed;
4. Weed free straw bales;
5. Woody Debris, slash etc., as otherwise noted in this plan.

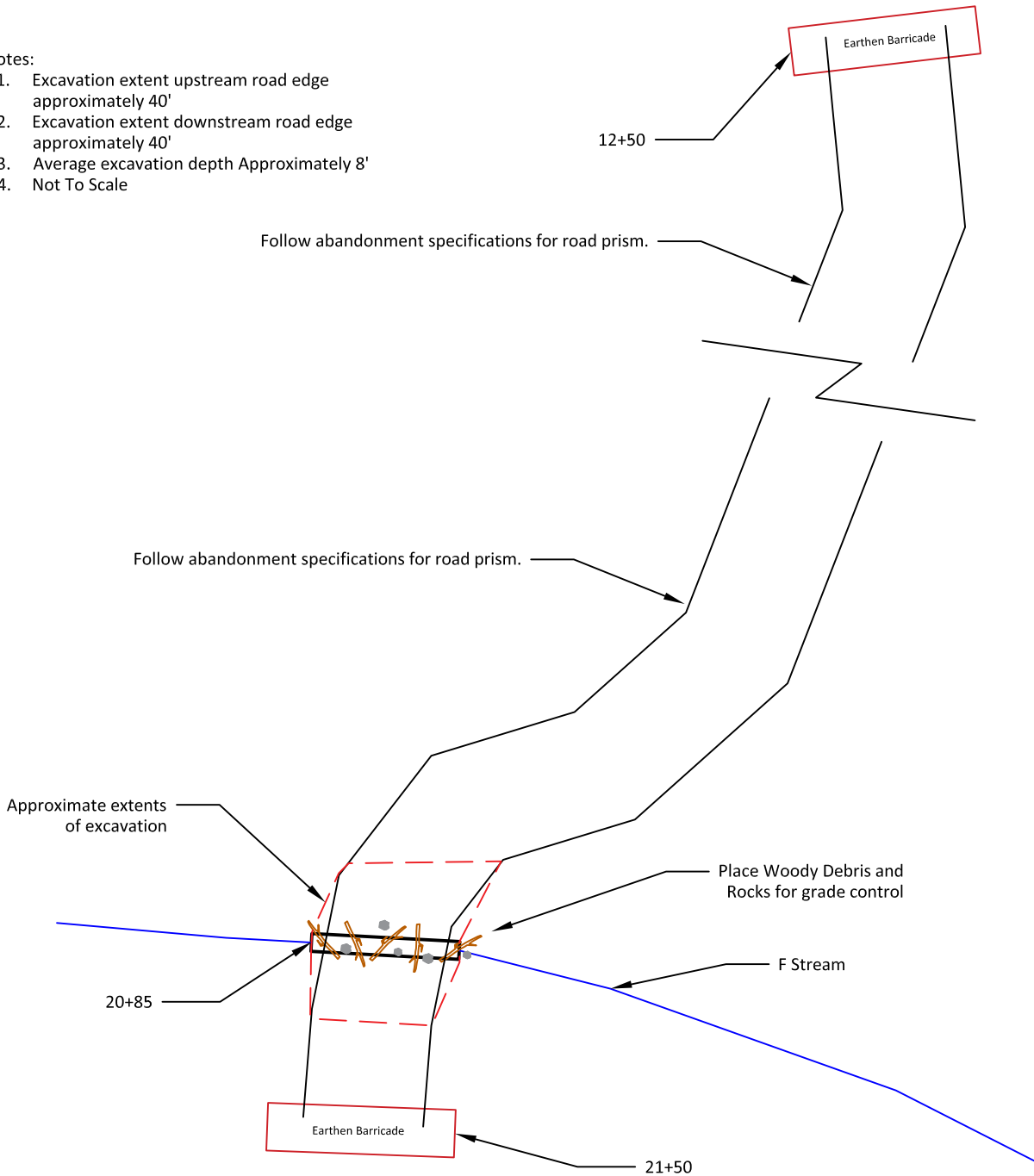
# STREAM CROSSING AND CROSS DRAIN REMOVAL DETAIL



# S1426 20+85 Culvert Removal Plan View

Notes:

1. Excavation extent upstream road edge approximately 40'
2. Excavation extent downstream road edge approximately 40'
3. Average excavation depth Approximately 8'
4. Not To Scale



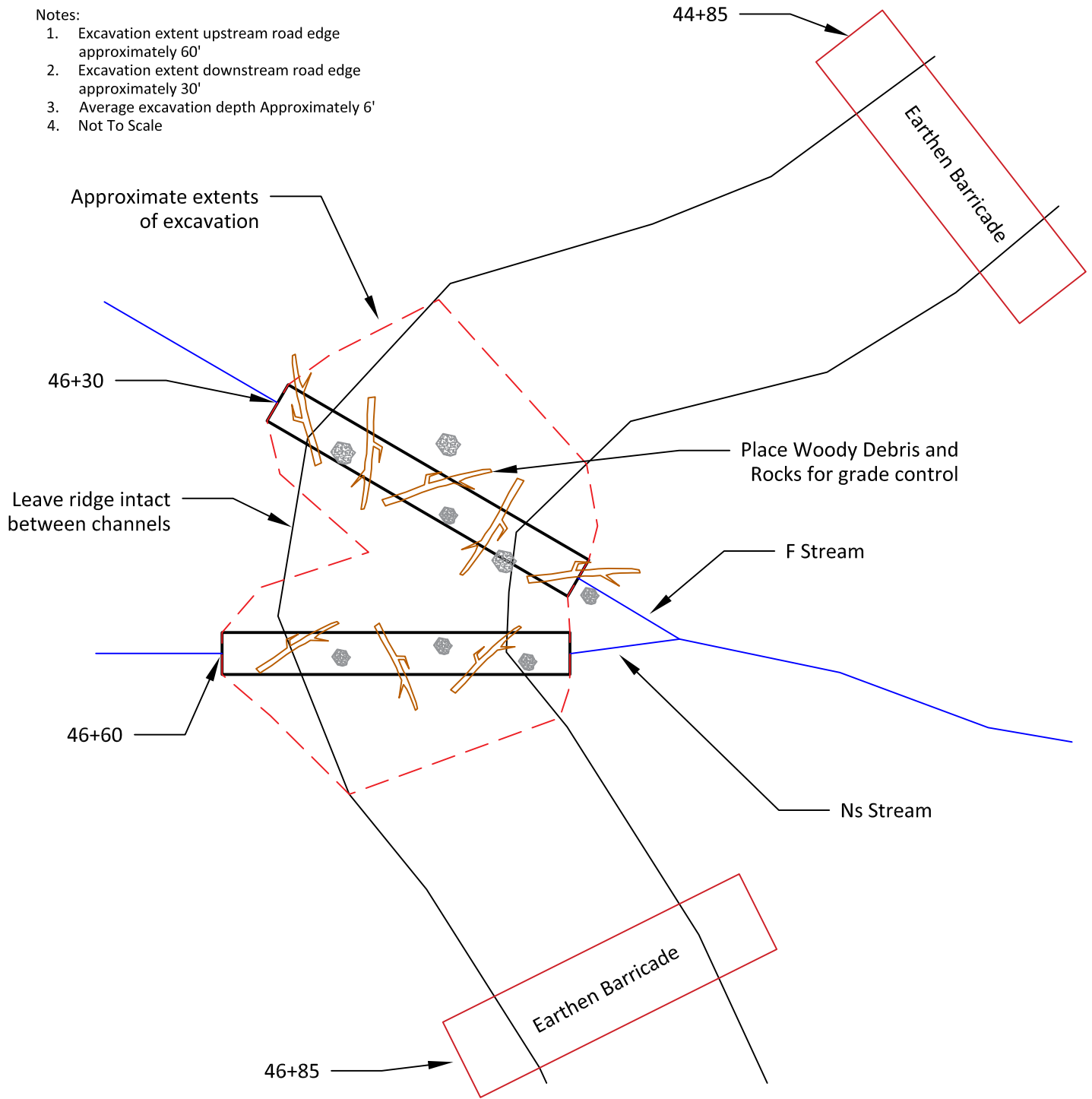
**Live Stream Culvert Removals**

1. Culverts removed from live streams shall follow the Live Stream Culvert Removal Procedure.
  - 1.1. Type "F" culvert removals shall only be allowed between August 1 and September 30 of any calendar year, unless otherwise approved, in writing, by a WDFW Habitat Biologist.
  - 1.2. Type "F" streams shall have a minimum of 5 pieces of woody debris with a small end diameter of 6" and a length of not less than 15', evenly distributed along channel.
2. Larger rocks found during fill excavation shall be placed in channel as available.
3. Excavation backslopes shall be no less than 2:1 horizontal to vertical slope or shall match existing contours.
4. Excavate stream channel to match the existing stream profile.
5. Cover, concurrently with abandonment, all exposed soils created from excavation work within 50 feet of any live stream, with grass seed, then straw, then slash and woody debris.

# S1440 46+30 and 46+60 Culvert Removal Plan View

Notes:

1. Excavation extent upstream road edge approximately 60'
2. Excavation extent downstream road edge approximately 30'
3. Average excavation depth Approximately 6'
4. Not To Scale

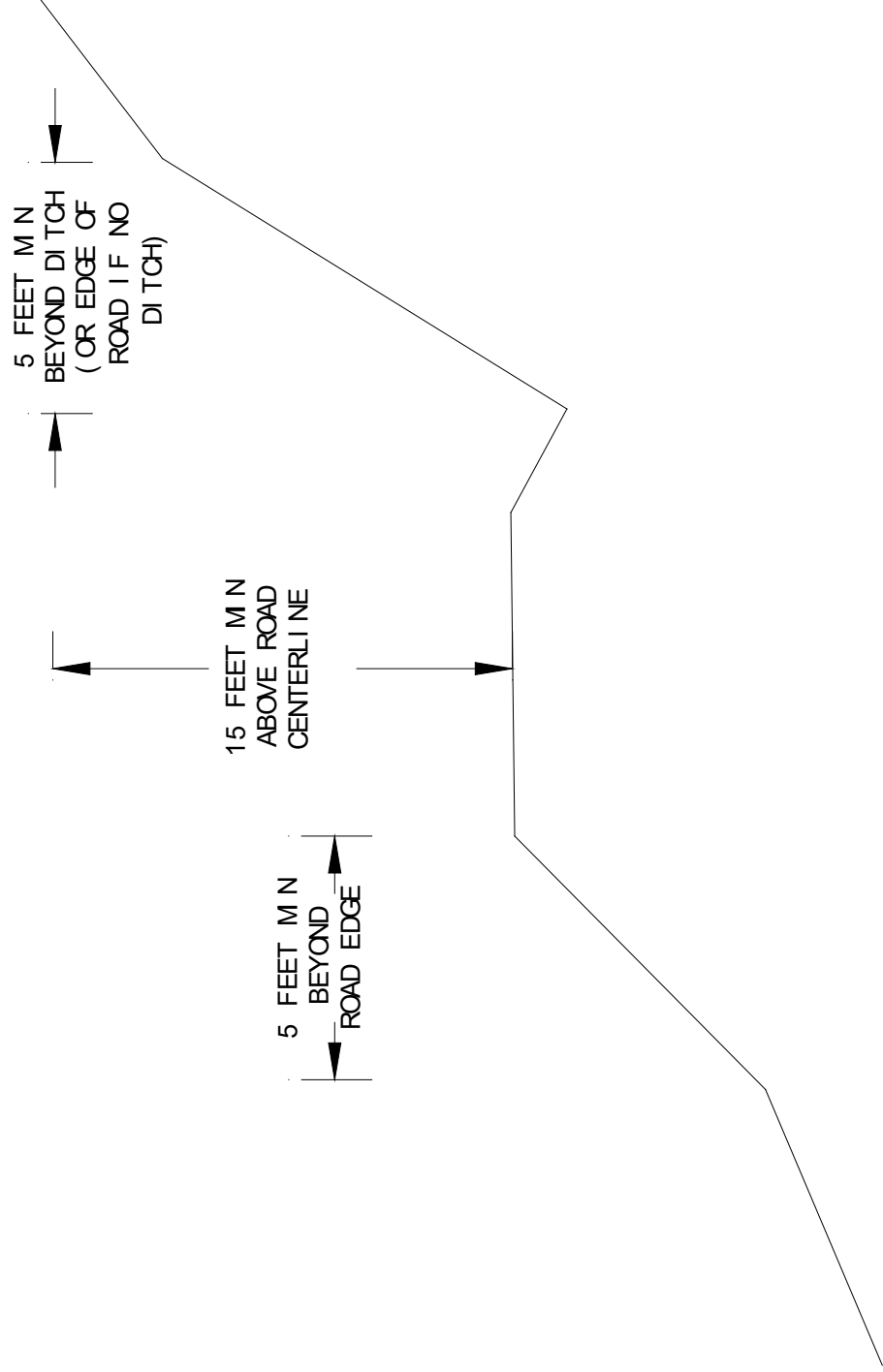


**Live Stream Culvert Removals**

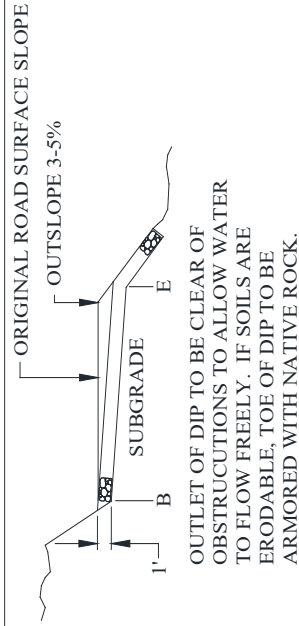
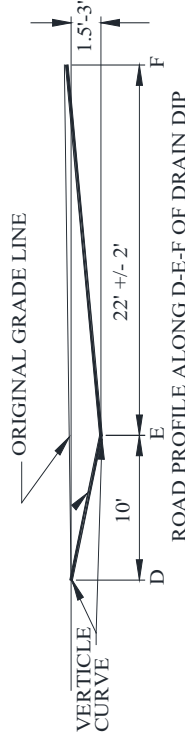
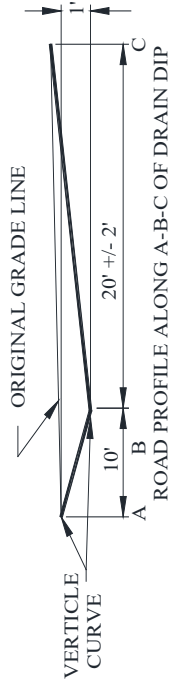
1. Culverts removed from live streams shall follow the Live Stream Culvert Removal Procedure.
  - 1.1. Type "F" culvert removals shall only be allowed between August 1 and September 30 of any calendar year, unless otherwise approved, in writing, by a WDFW Habitat Biologist.
  - 1.2. Type "F" streams shall have a minimum of 5 pieces of woody debris with a small end diameter of 6" and a length of not less than 15', evenly distributed along channel.
2. Type "N" culvert removals shall have slash, woody debris, and rocks placed in channel as available on site.
3. Larger rocks found during fill excavation shall be placed in channel as available.
4. Excavation backslopes shall be no less than 2:1 horizontal to vertical slope or shall match existing contours.
4. Excavate stream channel to match the existing stream profile.
5. Cover, concurrently with abandonment, all exposed soils created from excavation work within 50 feet of any live stream, with grass seed, then straw, then slash and woody debris.



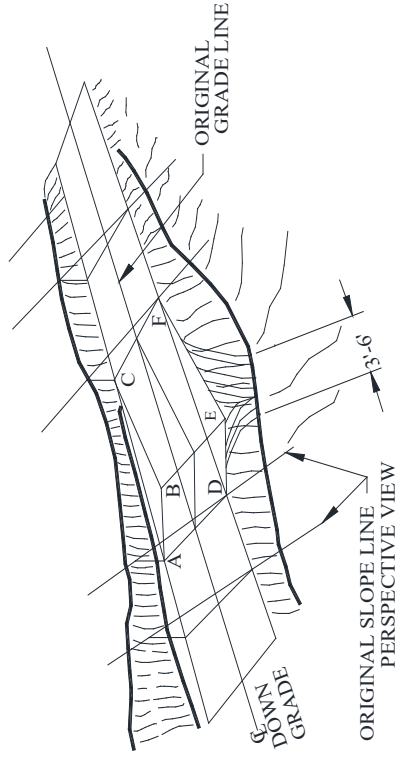
# BRUSHING DETAIL



# ROLLING DIP DETAIL

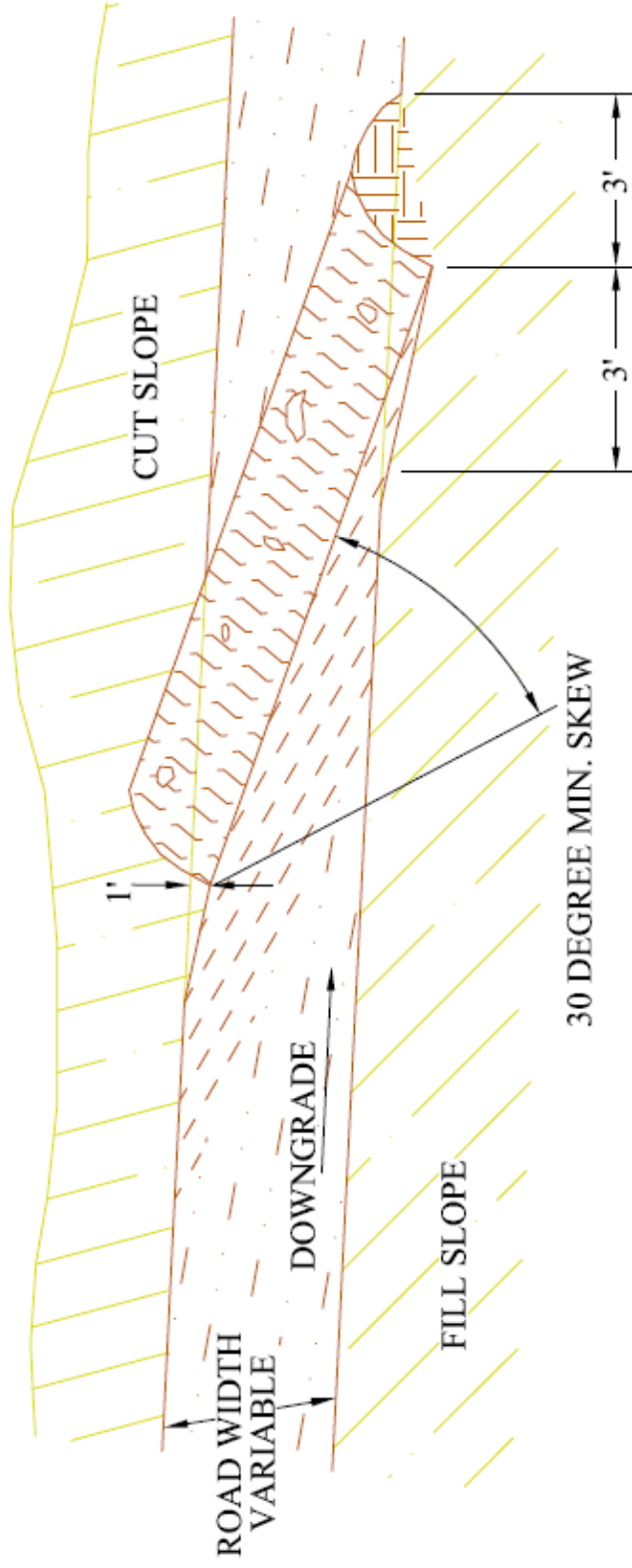


NOTE: PLAN OF DIP SHOWN IS FOR OUTSLOPED ROLLING DIP; DIPS MAY BE EITHER INSLOPED OR OUTSLOPED. WHEN INSLOPED, DIPS SHALL DRAIN FREELY INTO DITCHES OR CULVERT INLETS. WHEN OUTSLOPED, THEY SHALL DRAIN FREELY ONTO NATURAL GROUND. WHERE SOILS ARE ERODABLE, OUTLET SHALL BE ARMORED WITH NATIVE ROCK. THE MINIMUM CROSS GRADE FROM "B" TO "E" IS 4% GREATER THAN THE ROAD SURFACE SLOPE. SKEW LINE B-E TO FIT LOW POINT IN DRAW, IF LOCATED IN NATURAL DRAIN.



# DRIVABLE WATER BAR DETAIL

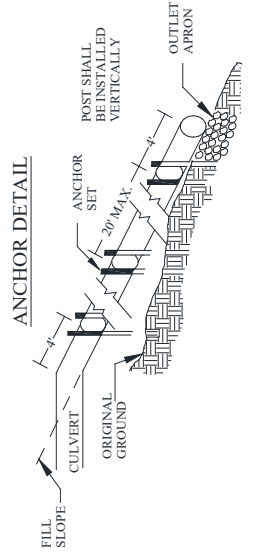
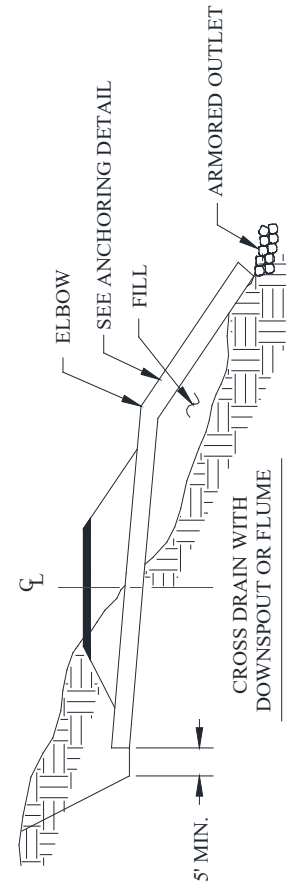
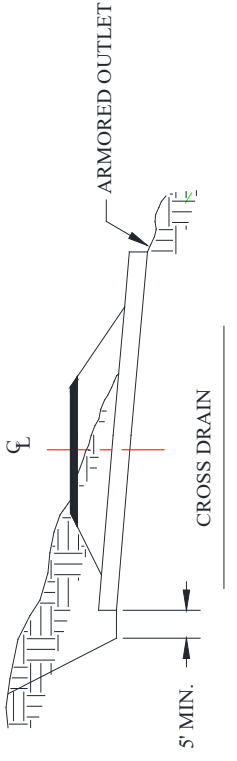
SCALE: NTS



## NOTES:

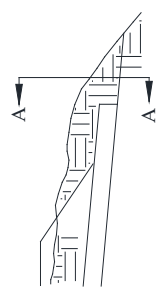
1. ALL WATER BARS SHALL BEGIN AT THE INTERSECTION OF THE ROADBED AND CUT SLOPE AND RUN ACROSS THE ENTIRE WIDTH OF THE ROADBED.
2. ALL WATER BARS SHALL HAVE FREE FLOWING OUTLETS.

# CULVERT AND DRAINAGE SPECIFICATION DETAIL

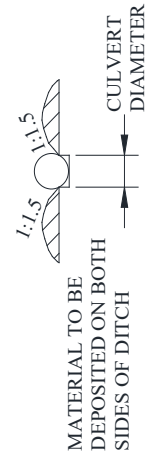


NOTE: MINIMUM COVER OVER CULVERT AT SHOULDER AT INLET SHALL BE 18" OR 1/2 THE CULVERT DIAMETER, WHICHEVER IS GREATER.  
 CATCH BASINS SHALL BE MINIMUM 5' WIDE BY 6' LONG.  
 CUT SLOPES AT CATCH BASINS SHALL BE AS SPECIFIED IN CLAUSE 5.25.

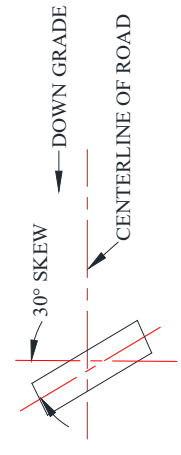
## OUTLET DITCH



## SECTION A-A



## SKEW DIAGRAM



# TEMPORARY CULVERT DETAIL

FILL - TO BE  
REMOVED  
AFTER  
PROJECT  
COMPLETION

ROAD SURFACE

Return to pre-existing condition

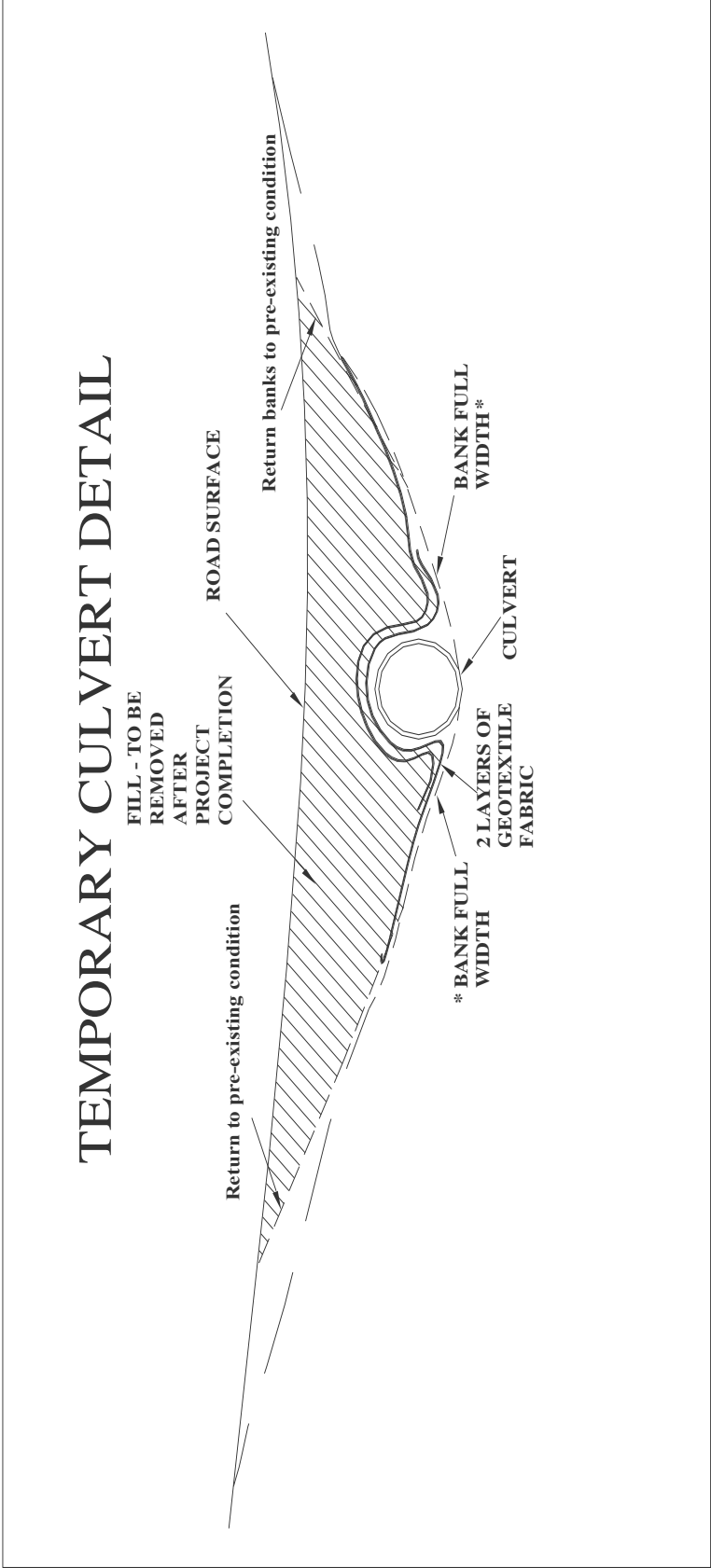
Return banks to pre-existing condition

\* BANK FULL  
WIDTH

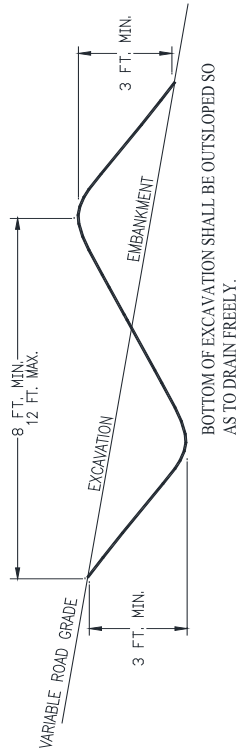
2 LAYERS OF  
GEOTEXTILE  
FABRIC

BANK FULL  
WIDTH \*

CULVERT

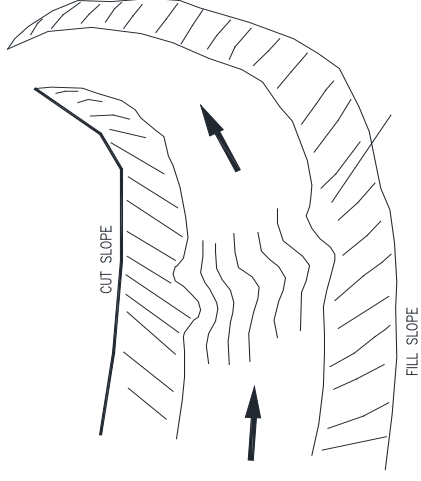


# NON-DRIVABLE WATER BAR DETAIL



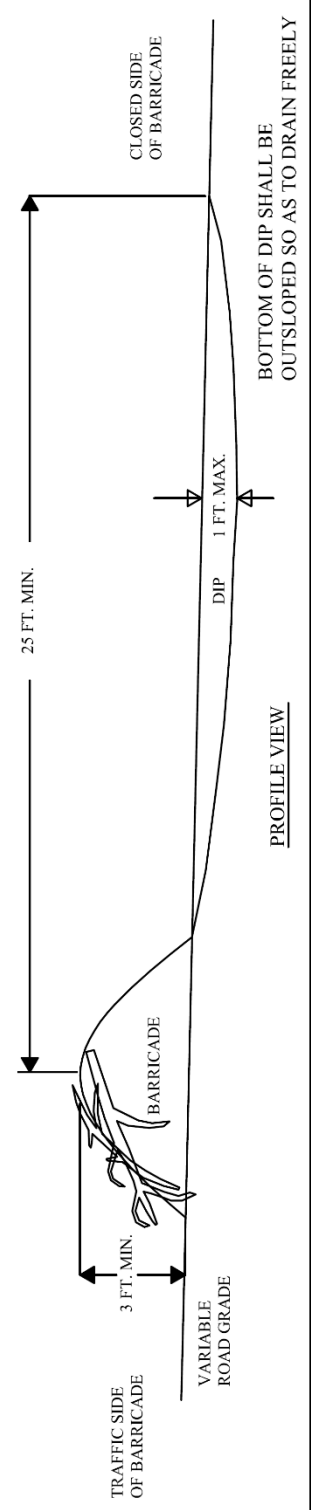
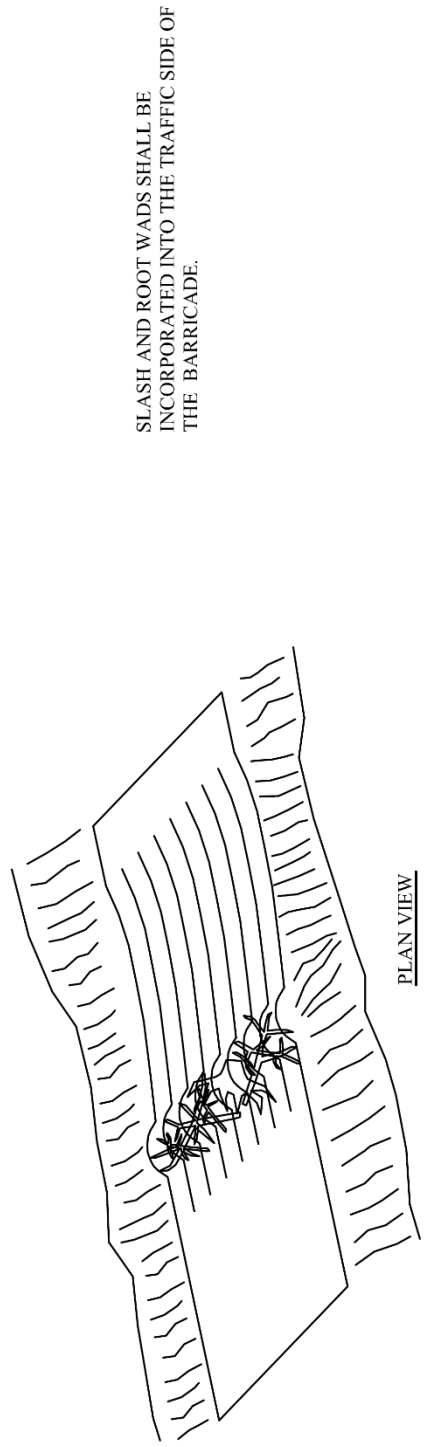
PROFILE VIEW

NOTE: EMBANKMENT SIDE OF UNDRIVABLE WATER BAR SHALL BE PLACED IN ON SIDE VEHICLE TRAFFIC WILL BE COMING FROM.



METHOD OF INSTALLATION

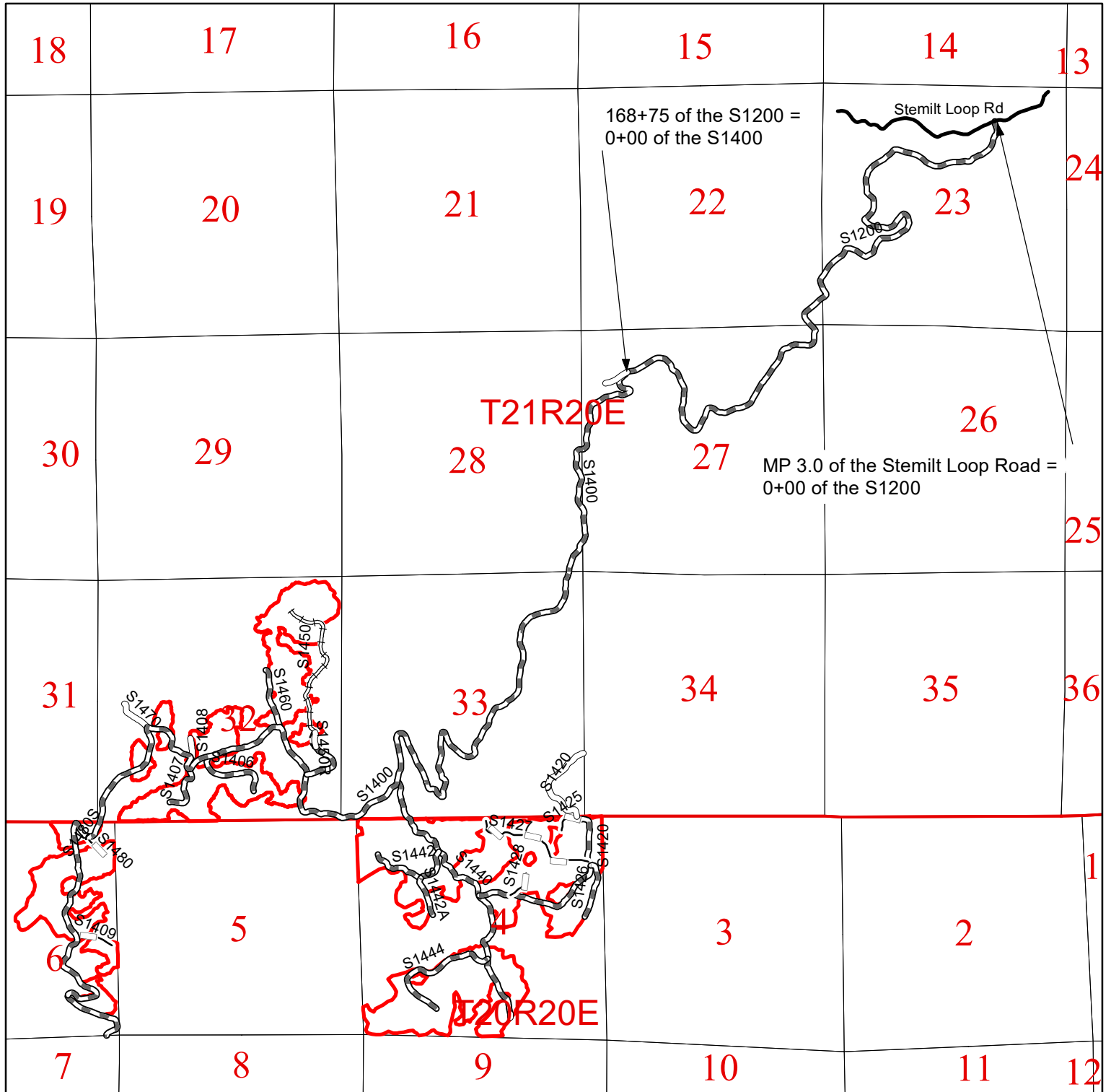
# EARTHEN BARRICADE DETAIL



# ROAD PLAN MAP 1 OF 5

SALE NAME: Q FLY BY NIGHT  
 AGREEMENT #: 30-106349  
 TOWNSHIP/RANGE: T20N R20E W.M., T21N R20E

REGION: Southeast  
 COUNTY: Kittitas, Chelan  
 ELEVATION: 4,000' to 5,500'



- Timber Harvest Unit
- Paved
- Existing
- Required Construction
- Required Reconstruction
- Optional Reconstruction
- Pre-Haul Maintenance

0 1,250 2,500 5,000 Feet

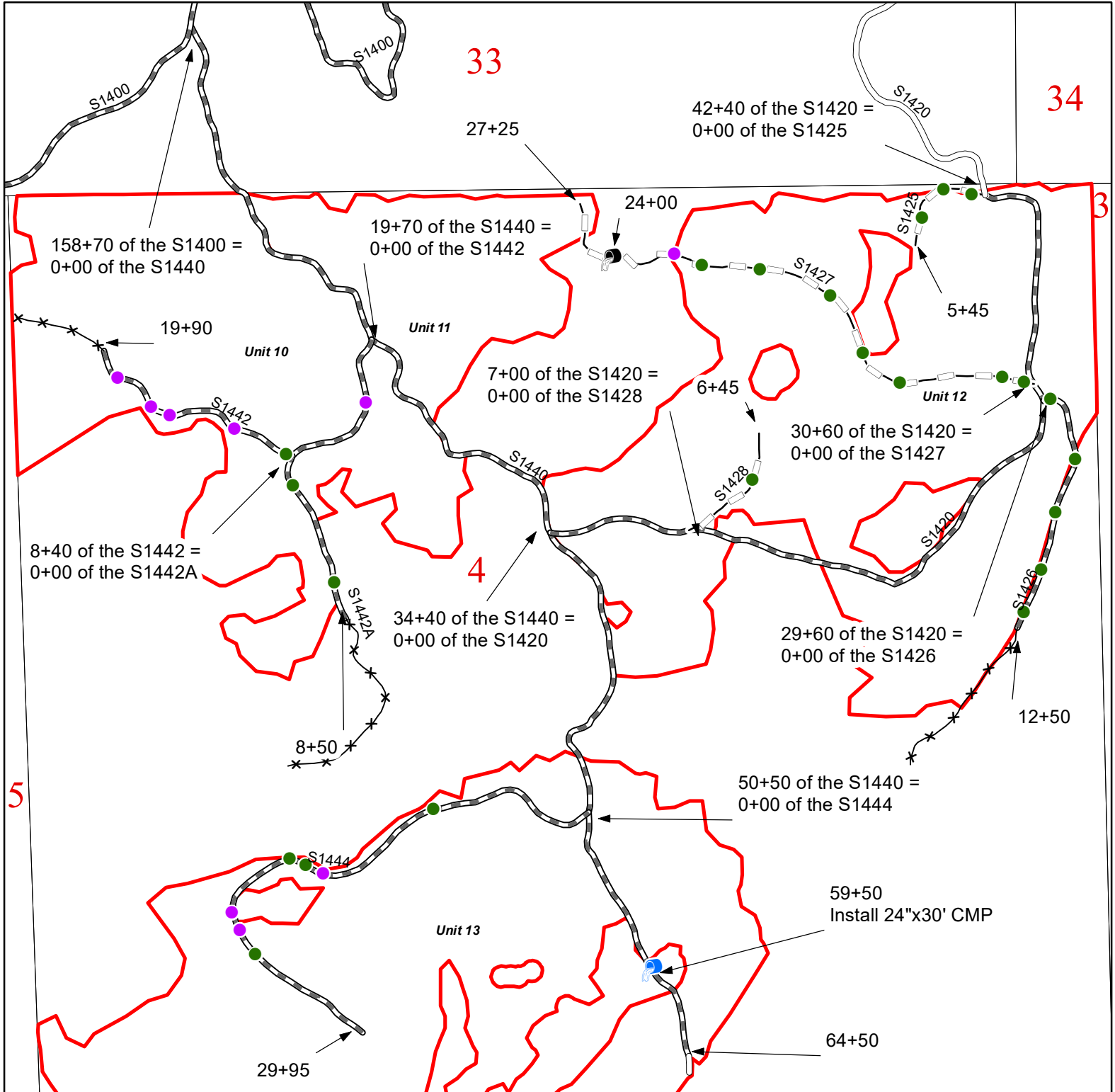




# ROAD PLAN MAP 2 OF 5

**SALE NAME:** Q FLY BY NIGHT  
**AGREEMENT #:** 30-106349  
**TOWNSHIP/RANGE:** T20N R20E W.M., T21N R20E

**REGION:** Southeast  
**COUNTY:** Kittitas, Chelan  
**ELEVATION:** 4,000' to 5,500'



Timber Harvest Unit	Required Construction	Install/Maintain Live Stream Culvert
Paved	Required Reconstruction	Install/Maintain Culvert
Existing	Optional Reconstruction	Install/Maintain Rolling Dip
Existing Decommissioned	Pre-Haul Maintenance	Install/Maintain Drivable Waterbar
		Stockpile/Rock Source

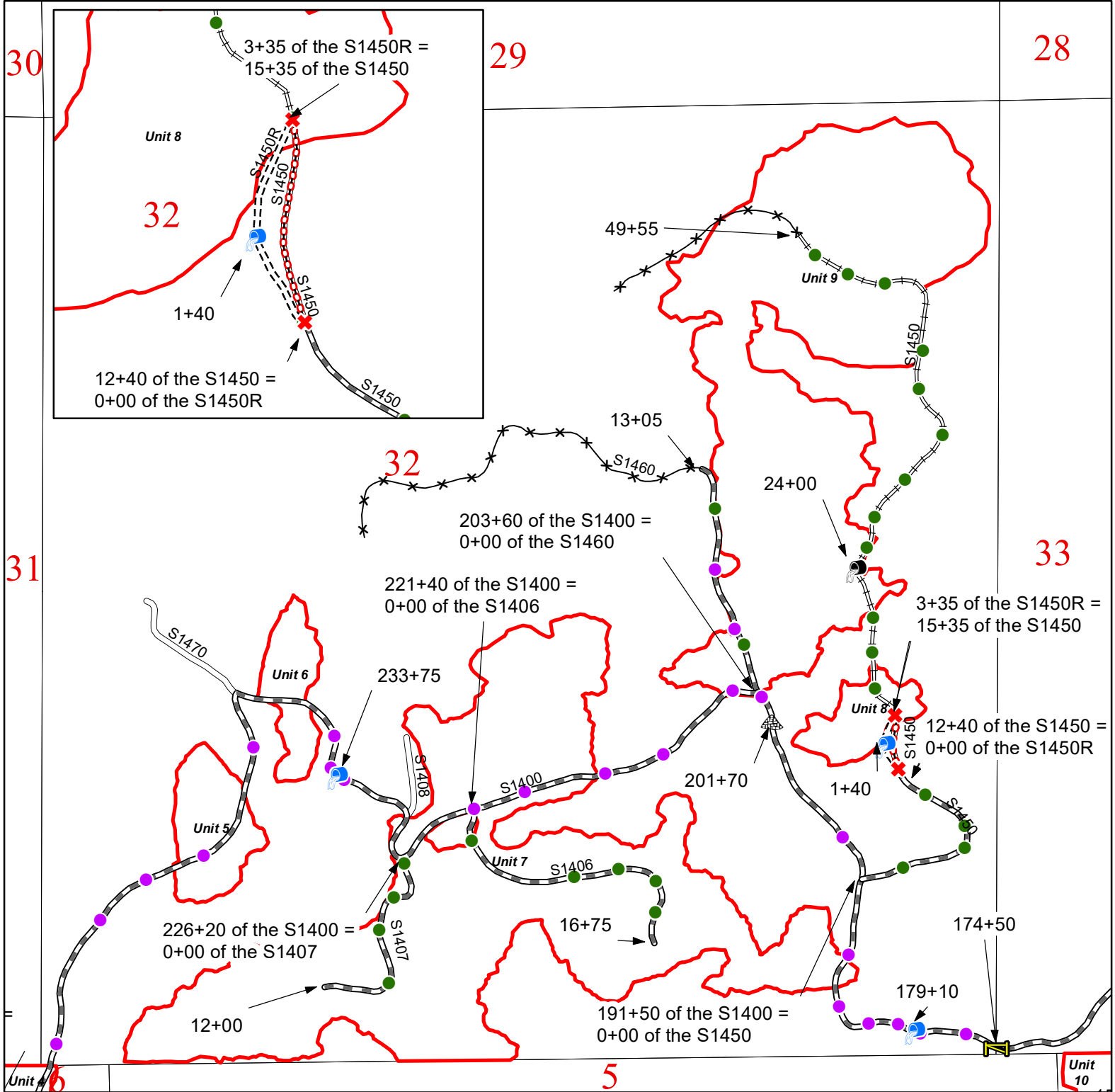
0 300 600 1,200 Feet

N

# ROAD PLAN MAP 3 OF 5

SALE NAME: Q FLY BY NIGHT  
 AGREEMENT #: 30-106349  
 TOWNSHIP/RANGE: T20N R20E W.M., T21N R20E

REGION: Southeast  
 COUNTY: Kittitas, Chelan  
 ELEVATION: 4,000' to 5,500'



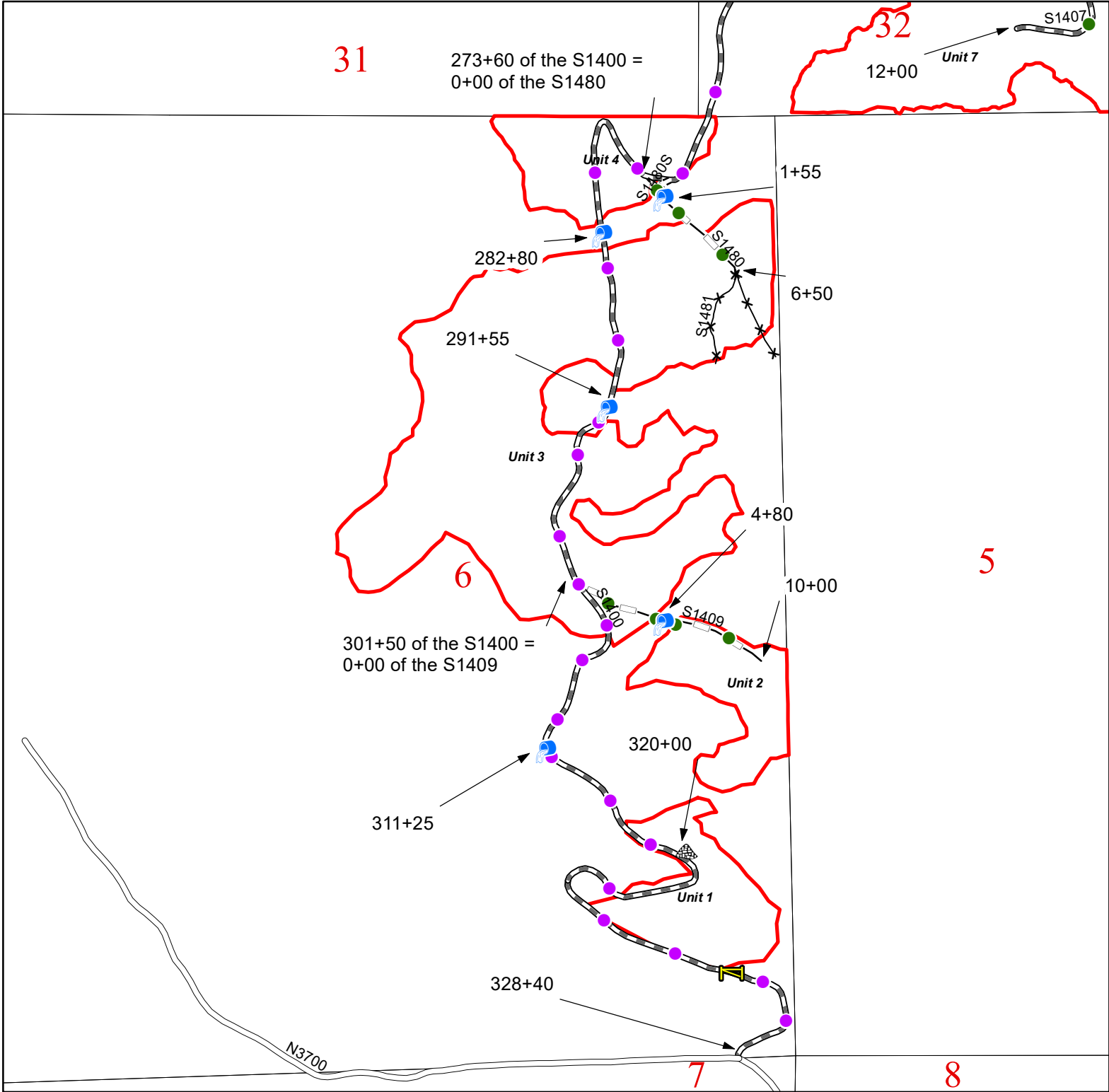
Timber Harvest Unit	Required Construction	Install/Maintain Live Stream Culvert
Paved	Required Reconstruction	Install/Maintain Culvert
Existing	Optional Reconstruction	Install/Maintain Rolling Dip
Existing Decommissioned	Pre-Haul Maintenance	Install/Maintain Drivable Waterbar
	Abandonment	Stockpile/Rock Source
		Earthen Barricade

N

# ROAD PLAN MAP 4 OF 5

SALE NAME: Q FLY BY NIGHT  
 AGREEMENT #: 30-106349  
 TOWNSHIP/RANGE: T20N R20E W.M., T21N R20E

REGION: Southeast  
 COUNTY: Kittitas, Chelan  
 ELEVATION: 4,000' to 5,500'



Timber Harvest Unit	Required Construction	Install/Maintain Live Stream Culvert
Paved	Required Reconstruction	Install/Maintain Culvert
Existing	Optional Reconstruction	Install/Maintain Rolling Dip
Existing Decommissioned	Pre-Haul Maintenance	Install/Maintain Drivable Waterbar
Abandonment	Stockpile/Rock Source	Earthen Barricade

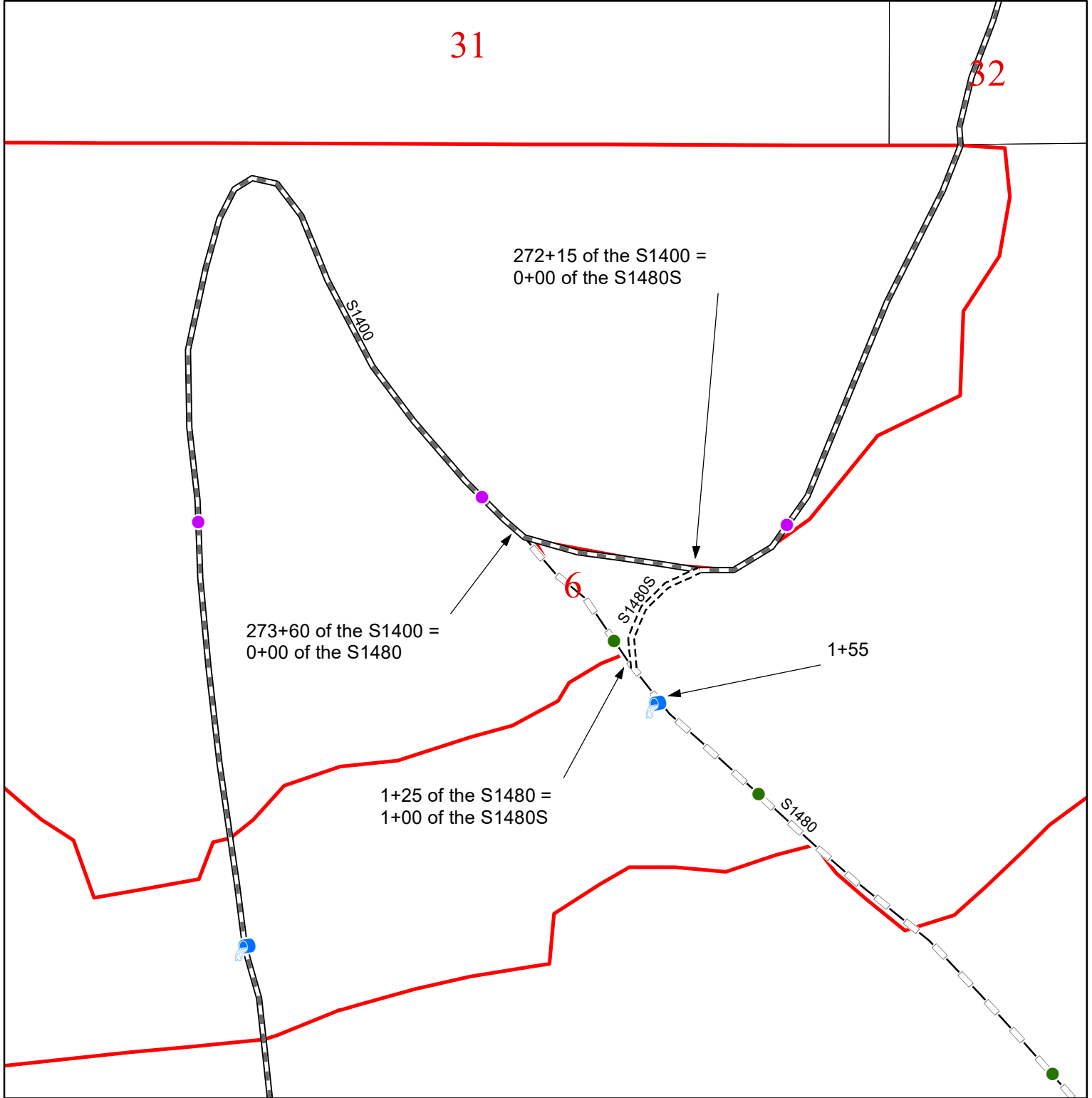
0 300 600 1,200 Feet

N

# ROAD PLAN MAP 5 OF 5

SALE NAME: Q FLY BY NIGHT  
 AGREEMENT #: 30-106349  
 TOWNSHIP/RANGE: T20N R20E W.M., T21N R20E

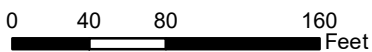
REGION: Southeast  
 COUNTY: Kittitas, Chelan  
 ELEVATION: 4,000' to 5,500'



- Timber Harvest Unit
- Paved
- Existing

- Required Construction
- Required Reconstruction
- Optional Reconstruction
- Pre-Haul Maintenance

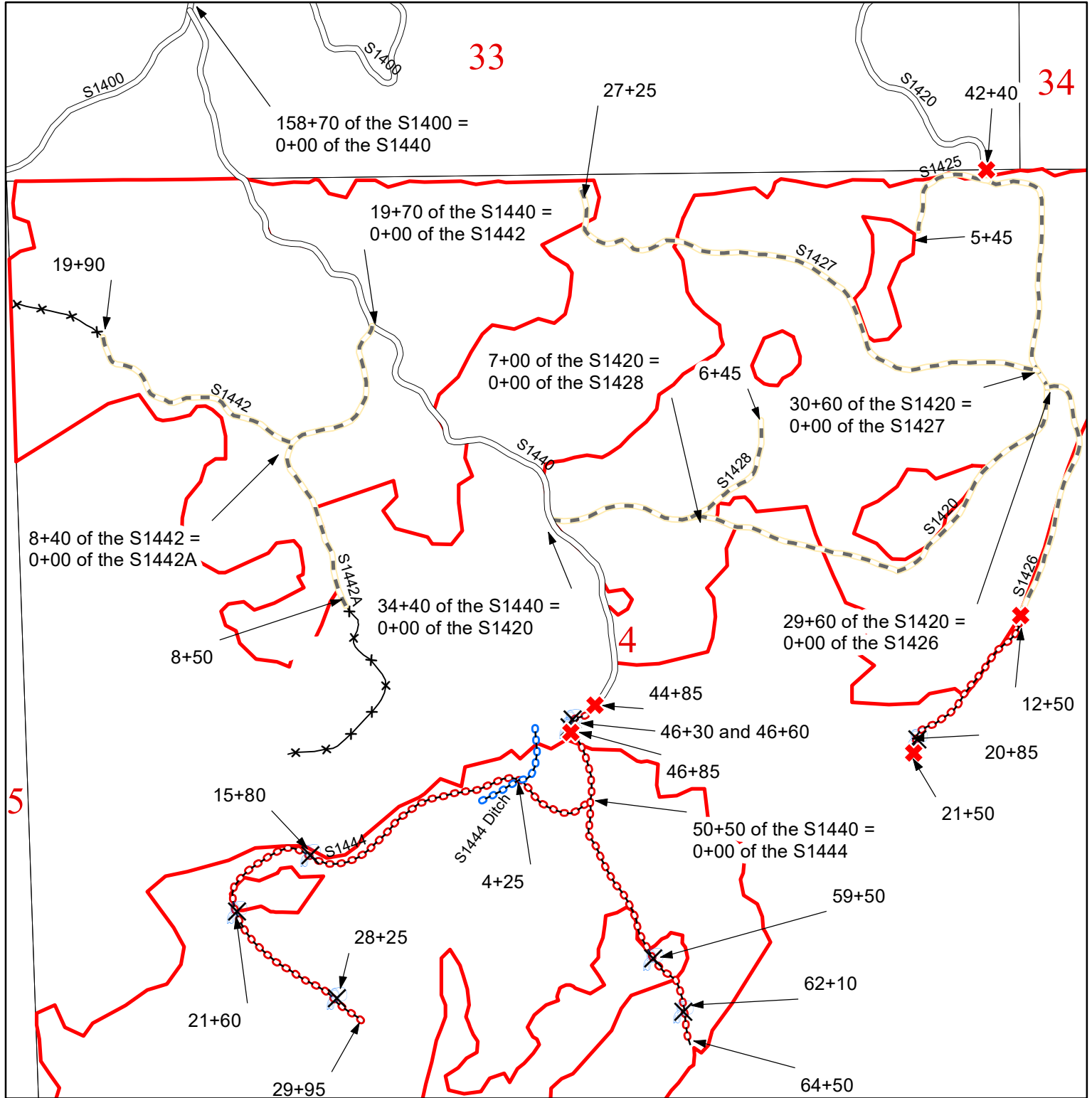
- ⦿ Install/Maintain Live Stream Culvert
- ⦿ Install/Maintain Culvert
- Install/Maintain Rolling Dip
- Install/Maintain Drivable Waterbar
- ⚠ Stockpile/Rock Source



# ROAD PLAN POST HAUL MAP 1 OF 3

SALE NAME: Q FLY BY NIGHT  
 AGREEMENT #: 30-106349  
 TOWNSHIP/RANGE: T20N R20E W.M., T21N R20E

REGION: Southeast  
 COUNTY: Kittitas, Chelan  
 ELEVATION: 4,000' to 5,500'



Timber Harvest Unit	Remove Culvert
Required Abandonment	Install Earthen Barricade
Ditch Abandonment	Existing
Post-Haul Maintenance	Existing Decommissioned
	Gate

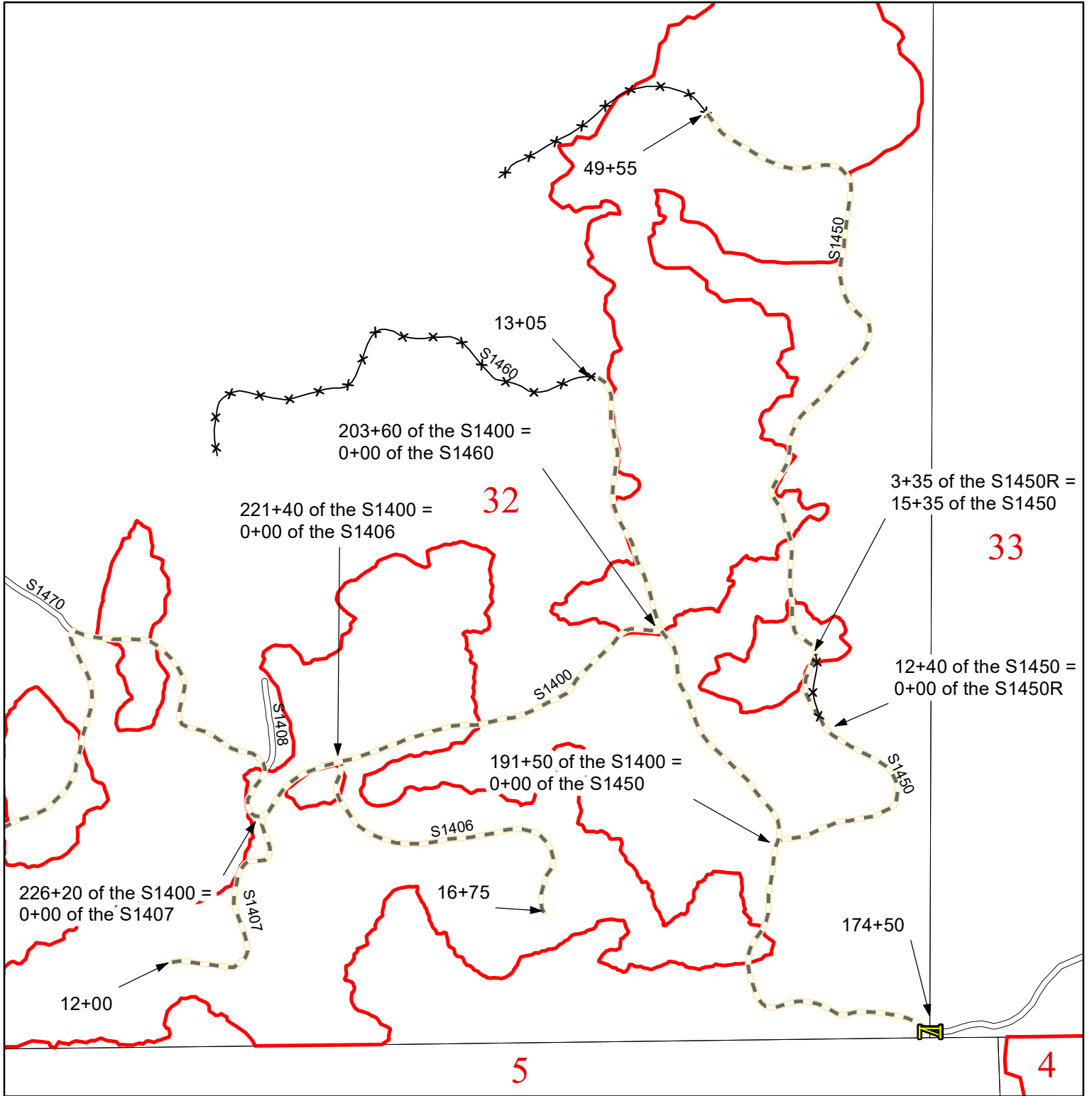
0 300 600 1,200 Feet

N

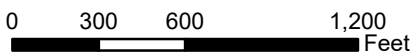
# ROAD PLAN POST HAUL MAP 2 OF 3

SALE NAME: Q FLY BY NIGHT  
 AGREEMENT #: 30-106349  
 TOWNSHIP/RANGE: T20N R20E W.M., T21N R20E

REGION: Southeast  
 COUNTY: Kittitas, Chelan  
 ELEVATION: 4,000' to 5,500'



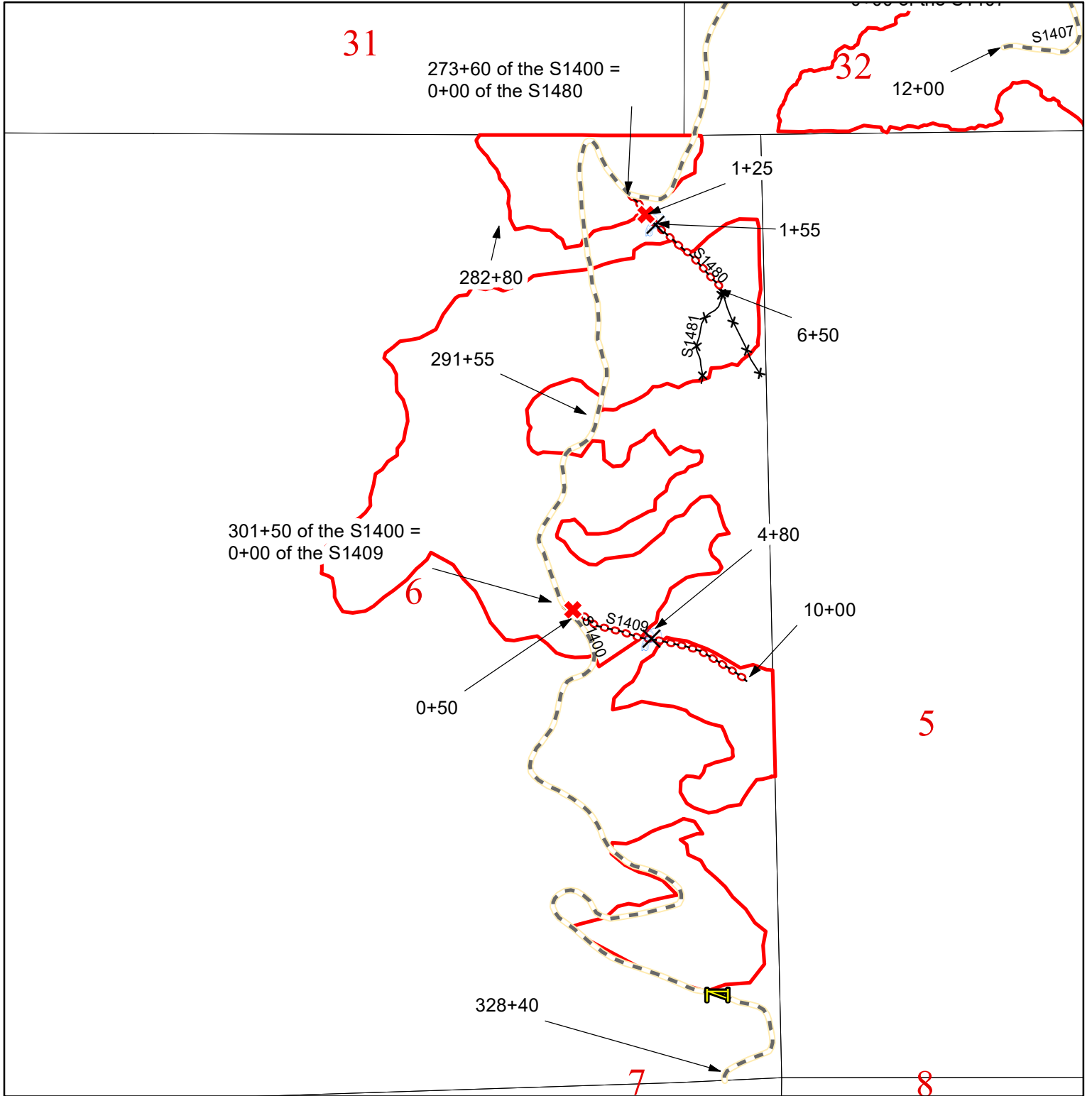
- |                       |                           |
|-----------------------|---------------------------|
| Timber Harvest Unit   | Remove Culvert            |
| Required Abandonment  | Install Earthen Barricade |
| Ditch Abandonment     | Existing                  |
| Post-Haul Maintenance | Existing Decommissioned   |
|                       | Gate                      |












# ROAD PLAN POST HAUL MAP 3 OF 3


SALE NAME: Q FLY BY NIGHT  
 AGREEMENT #: 30-106349  
 TOWNSHIP/RANGE: T20N R20E W.M., T21N R20E

REGION: Southeast  
 COUNTY: Kittitas, Chelan  
 ELEVATION: 4,000' to 5,500'



 Timber Harvest Unit	 Remove Culvert
 Required Abandonment	 Install Earthen Barricade
 Ditch Abandonment	 Existing
 Post-Haul Maintenance	 Existing Decommissioned
	 Gate

0 300 600 1,200 Feet



## SUMMARY - Road Development Costs

SALE/PROJECT NAME: FLY BY NIGHT

Region: Southeast

District: Alpine

Agreement #: 30-106349

ROAD STANDARD:	Construction	Reconstruction	Maintenance
NUMBER OF STATIONS:	4.35	89.85	729.10
CLEARING & GRUBBING:	\$350	\$6,259	-
EXCAVATION AND FILL:	\$1,219	\$11,903	-
MISC. MAINTENANCE:	-	-	\$20,886
ROAD ROCK:	\$1,008	\$978	\$1,310
CULVERTS AND FLUMES:	\$1,424	\$4,871	\$1,233
MOBILIZATION:	\$555	\$1,295	\$1,850
TOTAL COSTS:	\$4,555	\$25,305	\$25,279
COST PER STATION:	\$1,047	\$282	\$35
		POST HAUL MAINTENANCE COSTS:	\$8,680
		ROAD DEACTIVATION & ABANDONMENT COSTS:	\$14,113
		SUBTOTAL	\$77,932
		OVERHEAD AND GENERAL EXPENSES:	\$7,793
		<b>TOTAL (All Roads) =</b>	<b>\$85,725</b>
		<b>SALE VOLUME MBF =</b>	<b>3,434</b>
		<b>TOTAL \$/MBF =</b>	<b>\$24.96</b>