Special Auction Note:

DNR's decision to approve harvest of the West Fork Fire Salvage timber sale has been challenged in Okanogan County Superior Court by Conservation Northwest, Cause No. 16-2-00054-3. Prospective bidders may contact DNR to obtain information about the legal action. Auction is still scheduled for March 9, 2016. (Dated March 1, 2016)

TIMBER NOTICE OF SALE

***SALE NAME**: WEST FORK FIRE SALVAGE* ***AGREEMENT NO**: 30-093223*

AUCTION: March 9, 2016 starting at 10:00 a.m., Northeast Region Office, Colville, WA **COUNTY:** Okanogan

SALE LOCATION: Sale located approximately 14 miles northwest of Okanogan, WA

PRODUCTS SOLD AND SALE AREA: All dead and dying ponderosa pine 8 inches and greater in diameter at breast height and all other dead and dying conifer species 7 inches and greater in diameter at breast height, except leave trees bounded by red flagging and as described in the Schedule A in Units 1, 2, 3 and 4 bounded by white timber sale boundary tags on part(s) of Sections 19, 20, 29 and 30 all in Township 34 North, Range 25 East, Sections 13, 22, 23, 24, 25, 26 and 27 all in Township 34 North, Range 24 East, W.M., containing 1195 acres, more or less.

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

ESTIMATED SALE VOLUMES AND QUALITY:

Species	Avg DBH	Ring Count	Total MBF	Total Tons	Price $/Ton	MBF by Grade P	SM	1S	2S	3S	4S	5S	6S	UT
Douglas fir	14.6		3,446	31,224	$4.03				1,058	1,649	739			
Ponderosa pine	18.1		2,878	24,267	$4.03						1,790	1,088		
Larch	14.7		775	5,036	$4.03				349	316	100			
Lodgepole	10.3		78	1,131	$4.03					22	56			
Alpine fir	16.3		33	394	$4.03				15	15	3			
Sale Total			7,210	62,052										

MINIMUM BID: $4.03/ton (est. value $250,000.00) **BID METHOD:** Sealed Bids

PERFORMANCE SECURITY: $50,000.00 **SALE TYPE:** Tonnage Scale

EXPIRATION DATE: October 31, 2016 **ALLOCATION:** Export Restricted

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

BID DEPOSIT: $25,000.00 or Bid Bond. Said deposit shall constitute an opening bid at the appraised price.

HARVEST METHOD: Forwarder, Rubber tired skidder and Track skidder. Falling and Yarding will not be permitted from March 1 to April 30 unless authorized in writing by the Contract Administrator due to spring breakup.

ROADS: 1068.28 stations of required prehaul maintenance. 17.94 stations of required abandonment. Road construction will not be permitted from November 15 to April 30 unless authorized in writing by the Contract Administrator due to frozen conditions and spring breakup. The hauling of forest products will not be permitted from March 1 to April 30 unless authorized in writing by the Contract Administrator due to spring breakup.

ACREAGE DETERMINATION

TIMBER NOTICE OF SALE

CRUISE METHOD: Acreage determined using GPS methods. Acreage shown above is net harvest acres in harvest units. Ponderosa pine: 8.0 - 17.5 inches dbh has a minimum top of 5.6 inch dib. All other species: 7.0 - 17.5 inches dbh has minimum top of 5.6 inch dib. All species 17.6 inch and greater dbh measure height to 40% of dob at 16 feet or a 6 inch top whichever is greater.

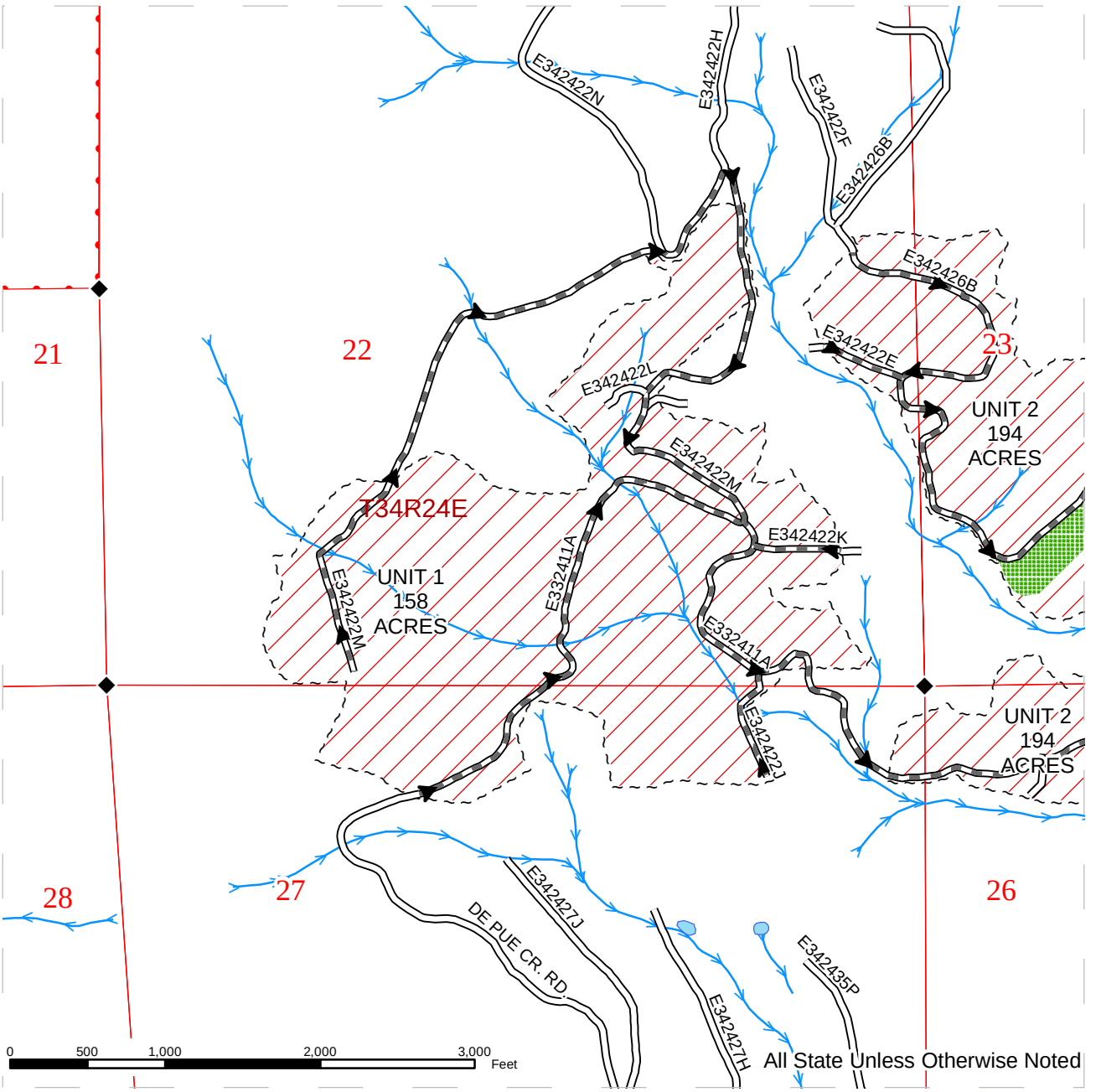
FEES: $127,978.00 is due on day of sale. $1.05 per ton is due upon removal. These are in addition to the bid price.

SPECIAL REMARKS: Locked gates restricts access to Unit 4. Contact the Northeast Region Office at (509) 684-7474 to access. Purchaser may be required to install a temporary cattle guard on private easement. This timber sale requires the use of a third party Log and Load Reporting Service (LLRS) as required in contract clause L-071. Blue stain ponderosa pine will be optional removal at $2.00 per ton.

TIMBER SALE MAP

SALE NAME: WEST FORK FIRE SALVAGE
AGREEMENT#: 30-093223
TOWNSHIP(S): T34R24E, T34R25E
TRUST(S): Common School and Indemnity(3)

REGION: Northeast Region
COUNTY(S): OKANOGAN
ELEVATION RGE: 2627-4921



~ ~ ~ Sale Boundary Tags
Ground Skidding
Leave Tree Area (bounded by red flagging)
Existing Road
PreHaul Maintenance
Abandonment
County Road
Haul Route
Streams
Fence
Monumented Corners

N

Prepared By: dzei490
Creation Date: 10/28/2015
Modification Date: 12/18/2015

TIMBER SALE MAP

SALE NAME: WEST FORK FIRE SALVAGE
AGREEMENT#: 30-093223
TOWNSHIP(S): T34R24E, T34R25E
TRUST(S): Common School and Indemnity(3)

REGION: Northeast Region
COUNTY(S): OKANOGAN
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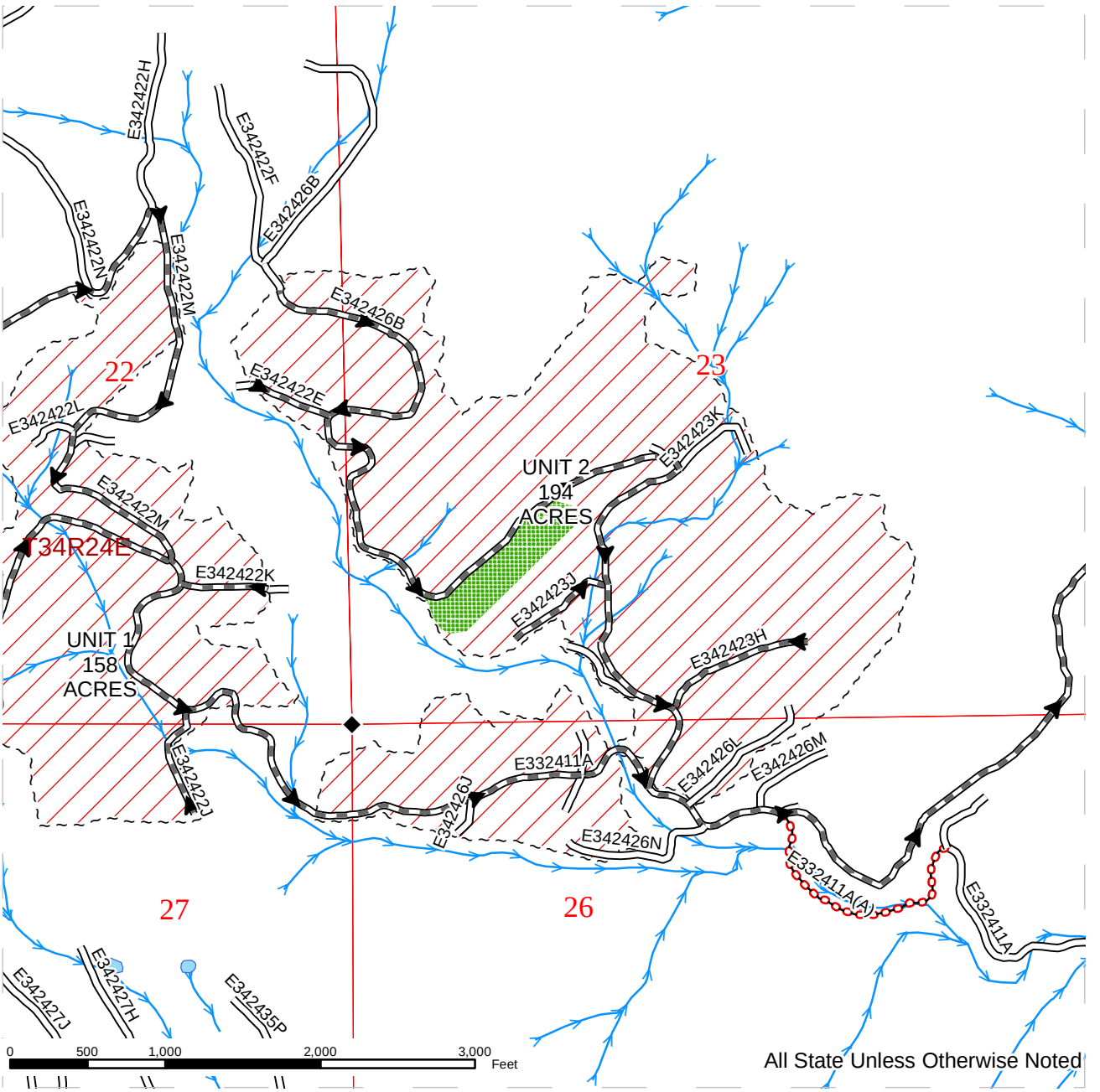

~ ~ ~ Sale Boundary Tags	Existing Road	Streams
Ground Skidding	PreHaul Maintenance	Fence
Leave Tree Area (bounded by red flagging)	Abandonment	Monumented Corners
	County Road	
	Haul Route	

N

Prepared By: dzei490 Creation Date: 10/28/2015 Modification Date: 12/18/2015

TIMBER SALE MAP

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AGREEMENT#: 30-093223
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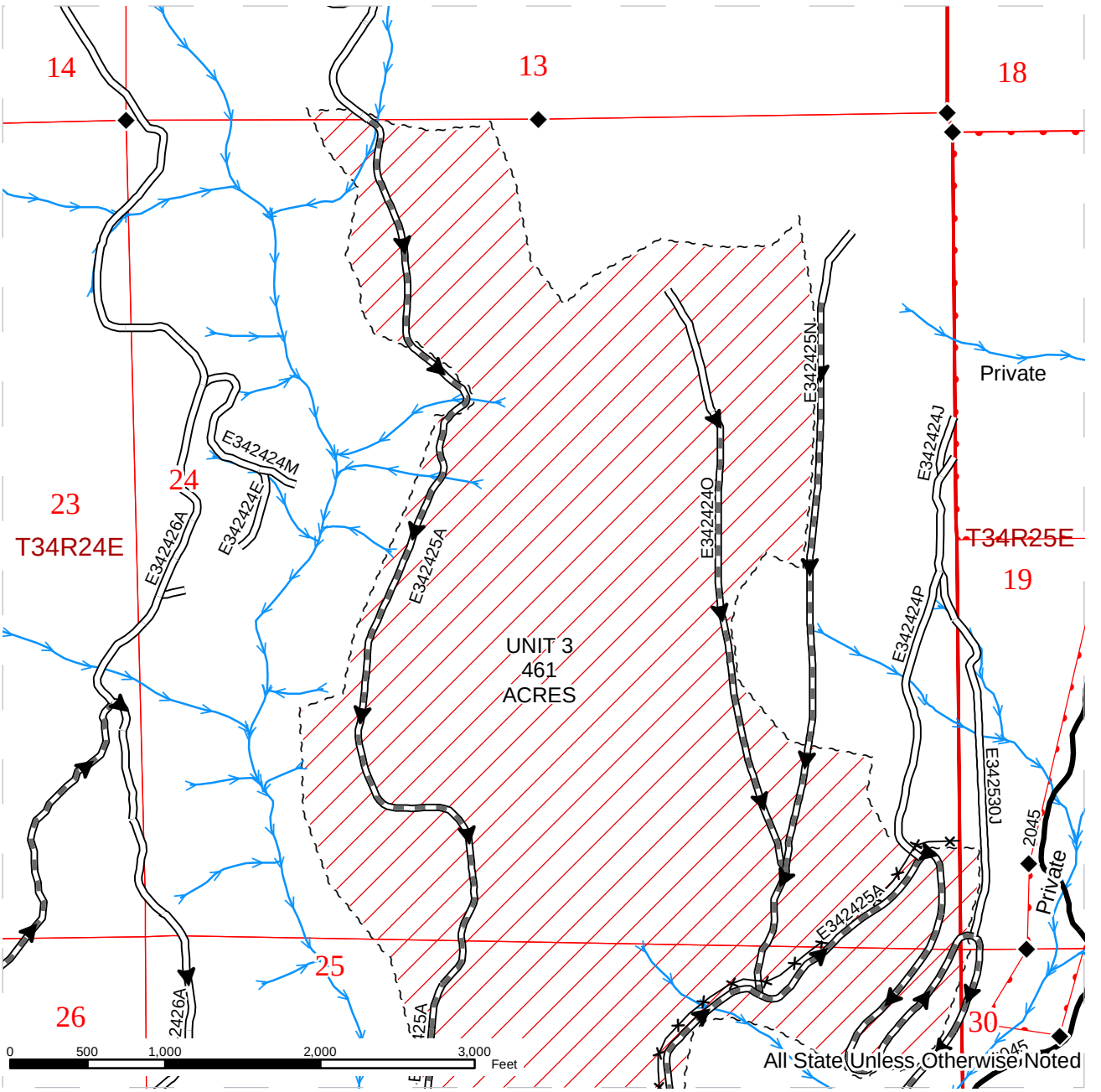

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Ground Skidding
Leave Tree Area (bounded by red flagging)
Existing Road
PreHaul Maintenance
Abandonment
County Road
Haul Route
Streams
Fence
Monumented Corners

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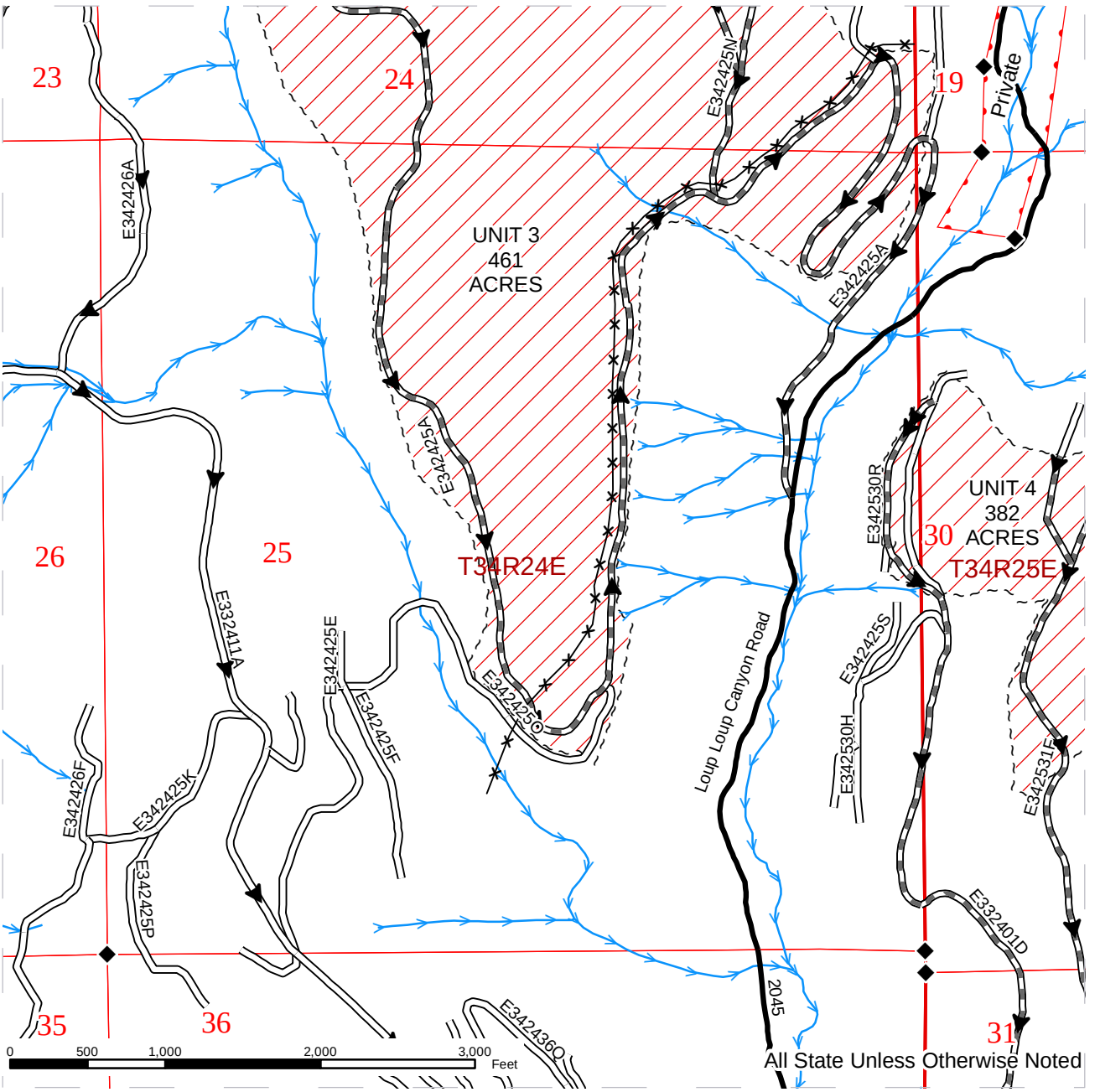

~ ~ ~ Sale Boundary Tags
Ground Skidding
Leave Tree Area (bounded by red flagging)
Existing Road
PreHaul Maintenance
Abandonment
County Road
Haul Route
Streams
Fence
Monumented Corners

N

Prepared By: dzei490
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TIMBER SALE MAP

SALE NAME: WEST FORK FIRE SALVAGE
AGREEMENT#: 30-093223
TOWNSHIP(S): T34R24E, T34R25E
TRUST(S): Common School and Indemnity(3)

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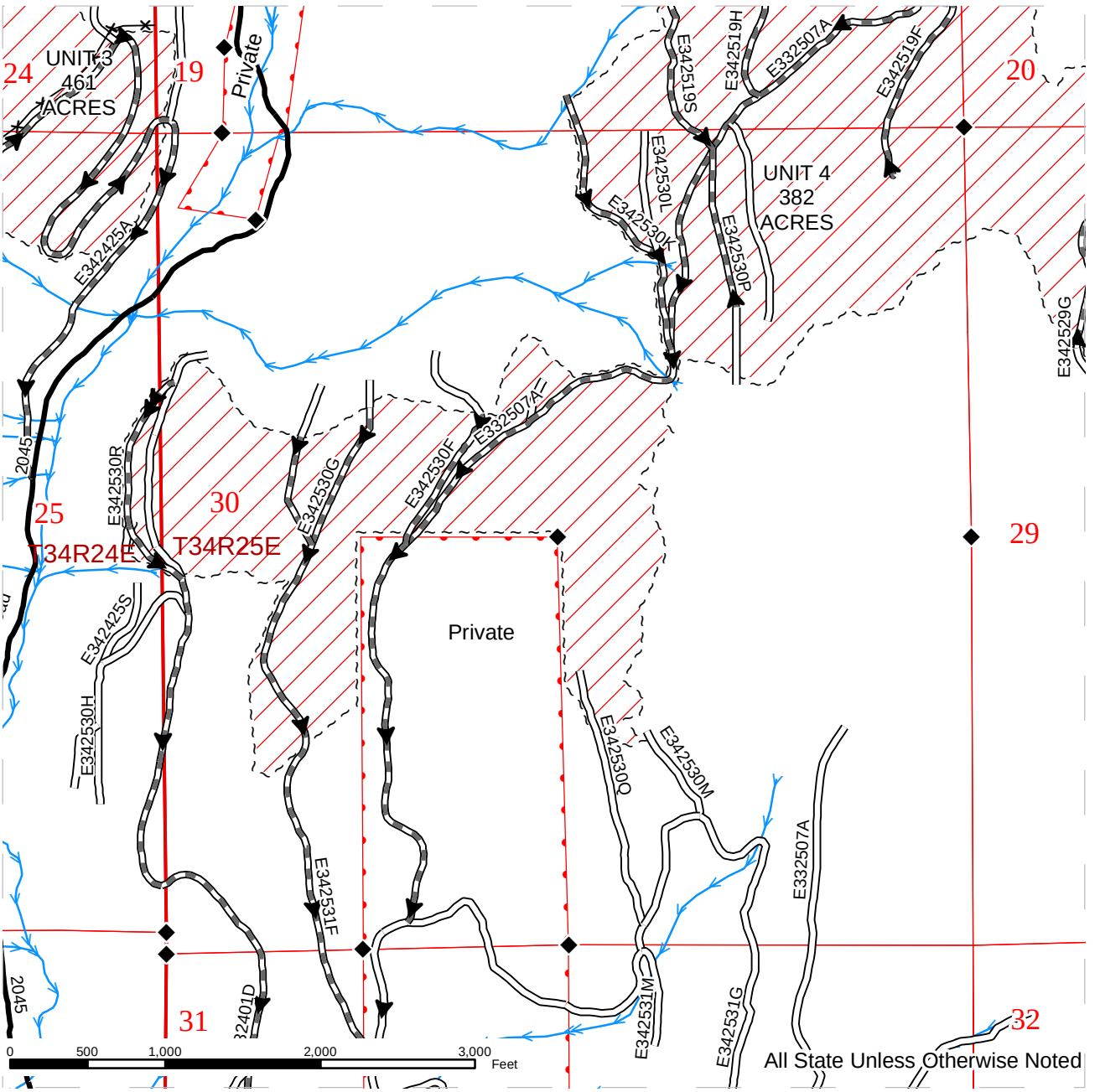

~ ~ ~ Sale Boundary Tags
Ground Skidding
Leave Tree Area (bounded by red flagging)
Existing Road
PreHaul Maintenance
Abandonment
County Road
Haul Route
Streams
Fence
Monumented Corners

N

Prepared By: dzei490
Creation Date: 10/28/2015
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TIMBER SALE MAP

SALE NAME: WEST FORK FIRE SALVAGE
AGREEMENT#: 30-093223
TOWNSHIP(S): T34R24E, T34R25E
TRUST(S): Common School and Indemnity(3)

REGION: Northeast Region
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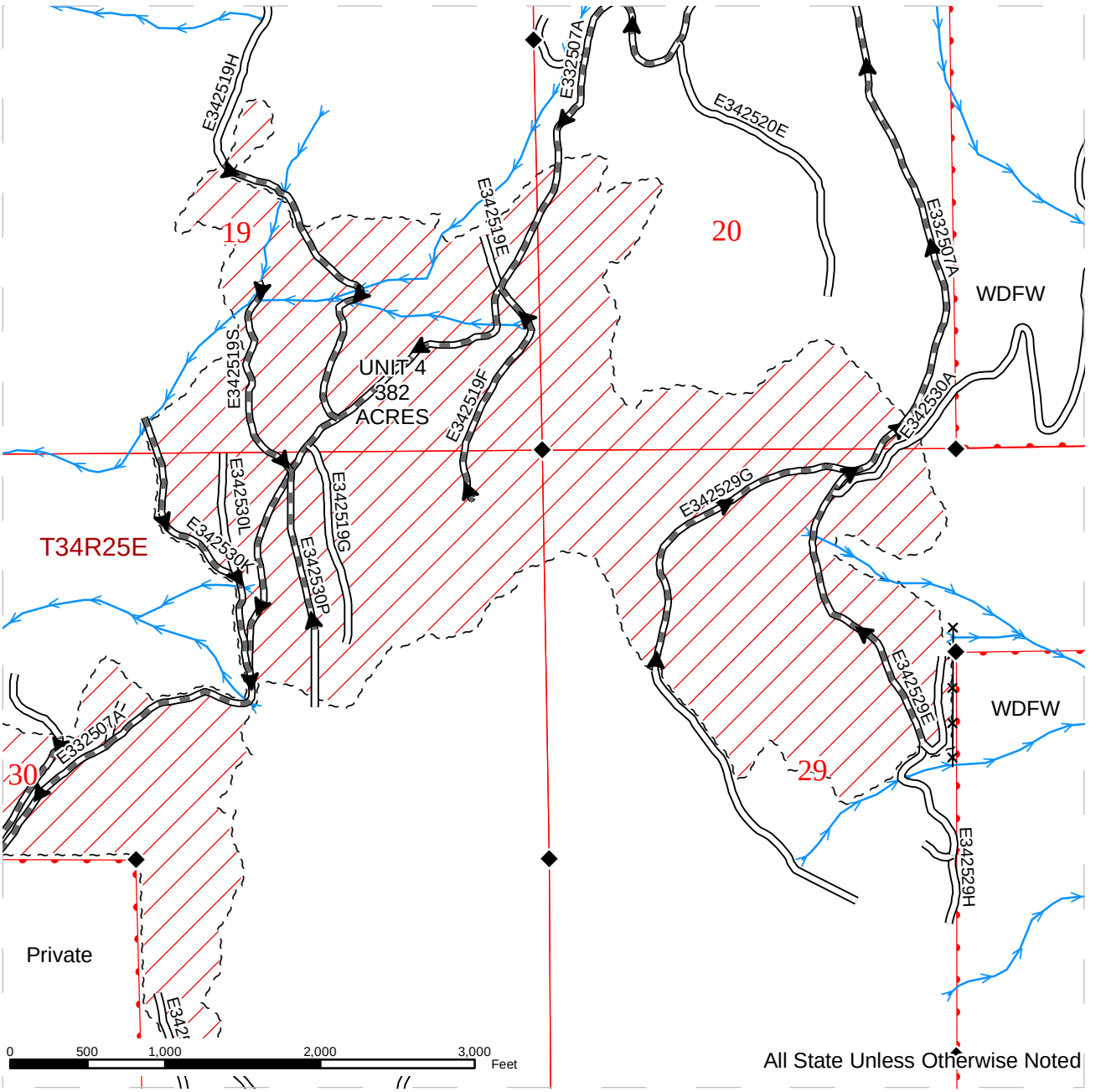
ELEVATION RGE: 2627-4921



~ ~ ~ Sale Boundary Tags	Existing Road	Streams
Ground Skidding	PreHaul Maintenance	Fence
Leave Tree Area (bounded by red flagging)	Abandonment	Monumented Corners
	County Road	
	Haul Route	

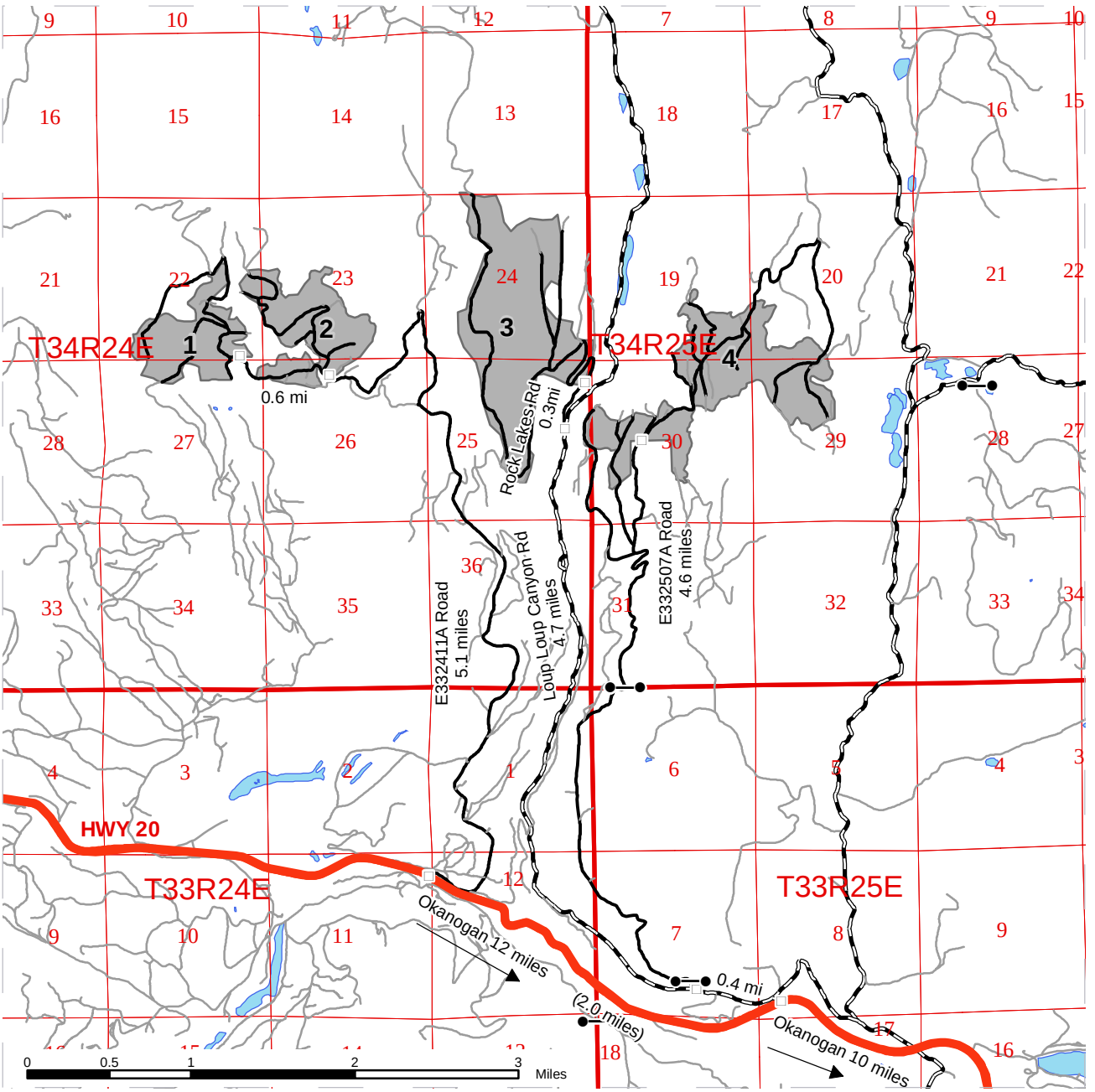
N

Prepared By: dzei490 Creation Date: 10/28/2015 Modification Date: 12/18/2015

DRIVING MAP

SALE NAME: WEST FORK FIRE SALVAGE
AGREEMENT#: 30-093223
TOWNSHIP(S): T34R24E, T34R25E
TRUST(S): Common School and Indemnity(3)

REGION: Northeast Region
COUNTY(S): OKANOGAN
ELEVATION RGE: 2627-4921



Timber Sale Unit
Haul Route
Other Route
County Road
Highway
Milepost Markers
Gate

DRIVING DIRECTIONS:

Unit 1 and Unit 2
Go west from Okanogan, WA for 12 miles and turn north onto West Fork Rock Creek Rd. (E332411A) Continue for 5.1 miles and Unit 2 will be north of the road. Unit 1 will be another 0.6 miles.
Unit 3
From Okanogan, WA travel 10 miles and turn north onto Loup Loup Canyon Rd. Travel for 4.7 miles and turn west onto Rock Lakes Rd. Continue for 0.3 miles to access Unit 3.
Unit 4
From Okanogan, WA travel 10 miles and turn north onto Loup Loup Canyon Rd. Travel for 0.4 miles and turn north onto the E332507A Road. (Proceed through the first locked gate and travel approx. 3.0 miles to the second locked gate.) Continue for a total of 4.6 miles to access Unit 4.

N

Prepared By: dzei490 Creation Date: 10/28/2015 Modification Date: 12/18/2015

STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES

BILL OF SALE AND CONTRACT FOR FOREST PRODUCTS

Export Restricted Tonnage Scale AGREEMENT NO. 30-093223

SALE NAME: WEST FORK FIRE SALVAGE

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

Section G: General Terms

G-001 Definitions

The following definitions apply throughout this contract;

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

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

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

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

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

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

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

G-010 Products Sold and Sale Area

Purchaser was the successful bidder on March 9, 2016 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 dead and dying ponderosa pine 8 inches and greater in diameter at breast height and all other dead and dying conifer species 7 inches and greater in diameter at breast height, except leave trees bounded by red flagging and as described in the Schedule A in Units 1, 2, 3 and 4 bounded by white timber sale boundary tags, located on approximately 1,195 acres on part(s) of Sections 19, 20, 29, and 30 all in Township 34 North, Range 25 East, Sections 13, 22, 23, 24, 25, 26, and 27 all in Township 34 North, Range 24 East W.M. in Okanogan 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	Leave Tree Requirements

G-030 Contract Term

Purchaser shall remove the forest products conveyed and complete all work required by this contract prior to October 31, 2016.

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-053 Surveys - Sensitive, Threatened, Endangered Species

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

G-060 Exclusion of Warranties

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

a. The MERCHANTABILITY of the forest products. The use of the term "merchantable" in any document is not intended to vary the foregoing.

b. The CONDITION of the forest products. The forest products will be conveyed "AS IS."

c. The ACREAGE contained within any sale area. Any acreage descriptions appearing in the timber notice of sale, timber sale contract, or other documents are estimates only, provided solely for administrative and identification purposes.

d. The VOLUME, QUALITY, OR GRADE of the forest products. The State neither warrants nor limits the amount of timber to be harvested. The descriptions of the forest products to be conveyed are estimates only, made solely for administrative and identification purposes.

e. The CORRECTNESS OF ANY SOIL OR SURFACE CONDITIONS, PRE-SALE CONSTRUCTION APPRAISALS, INVESTIGATIONS, AND ALL OTHER PRE-BID DOCUMENTS PREPARED BY OR FOR THE STATE. These documents have been prepared for the State's appraisal purposes only.

f. THAT THE SALE AREA IS FREE FROM THREATENED OR ENDANGERED SPECIES or their habitat. The State is not responsible for any interference with forestry operations that result from the presence of any threatened or endangered species, or the presence of their habitat, within the sale area.

g. THAT THE FORESTRY OPERATIONS to be performed under this contract WILL BE FREE FROM REGULATORY ACTIONS by governmental agencies. The State is not responsible for actions to enforce regulatory laws, such as the Washington Forest Practices Act (chapter 76.09 RCW), taken by the Department of Natural Resources or any other agency that may affect the operability of this timber sale.

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

G-064 Permits

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

G-065 Regulatory Disclaimer

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

G-066 Governmental Regulatory Actions

a. Risk

Purchaser shall be responsible for any increased operational costs arising from any applicable foreign or domestic governmental regulation or order that does not cause contract performance to become commercially impracticable or that

does not substantially frustrate the purpose of the contract. If impracticability or frustration results from Purchaser's failure to comply with this contract, Purchaser shall remain responsible for payment of the total contract price notwithstanding the impracticability or frustration.

b. Sale Area

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

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

c. Adjustment of Price

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

G-070 Limitation on Damage

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

G-080 Scope of State Advice

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

G-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-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 program Standard under certificate number: BV-SFIS-US09000572.

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

G-120 Responsibility for Work

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

G-121 Exceptions

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

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

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

1. Failure of (a) required improvements or roads designated in clause C-050, or (b) required or optional construction completed to the point that authorization to haul has been issued;

2. Caused by a single event from forces beyond the control of Purchaser, its employees, agents, or invitees, including independent contractors; and

3. Includes, but is not limited to natural disasters such as earthquakes, volcanic eruptions, landslides, and floods.

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

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

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

G-140 Indemnity

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

required to indemnify, defend and hold harmless State and its agencies, officials, agents or employees.

G-150 Insurance

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

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

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

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

2. Insurers subject to Chapter 48.15 RCW (surplus lines): The State shall be given 20 days advance notice of cancellation. If cancellation is due to non-payment of premium, the State shall be given 10 days advance notice of cancellation.

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

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

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

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

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

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

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

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

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

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

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

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

G-160 Agents

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

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

G-170 Assignment and Delegation

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

G-180 Modifications

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

G-190 Contract Complete

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

G-200 Notice

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

G-210 Violation of Contract
G-220 State Suspends Operations

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

G-210 Violation of Contract

a. If Purchaser violates any provision of this contract, the Contract Administrator, by written notice, may suspend those operations in violation. If the violation is capable of being remedied, Purchaser has 30 days after receipt of a suspension notice to remedy the violation. If the violation cannot be remedied (such as a violation of WAC 240-15-015) or Purchaser fails to remedy the violation within 30 days after receipt of a suspension notice, the State may terminate the rights of Purchaser under this contract and collect damages.

b. If the contract expires pursuant to clause G-030 or G-031 without Purchaser having performed all its duties under this contract, Purchaser's right to operate is terminated and Purchaser shall not have the right to remedy the breach. This provision shall not relieve Purchaser of any payment obligations.

c. The State has the right to remedy the breach in the absence of any indicated attempt by Purchaser or if Purchaser is unable, as determined by the State, to remedy the breach. Any expense incurred by the State shall be charged to Purchaser and shall be paid within 30 days of receipt of billing.

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

G-220 State Suspends Operation

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

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

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

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

G-230 Unauthorized Activity

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

G-240 Dispute Resolution

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

a. In the event of a dispute, Purchaser must make a written request to the Region Manager for resolution prior to seeking other relief.

b. The Region Manager will issue a written decision on Purchaser's request within ten business days.

c. Within ten business days of receipt of the Region Manager's decision, Purchaser may make a written request for resolution to the Deputy Supervisor - Uplands of the Department of Natural Resources.

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

G-250 Compliance with All Laws

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

G-260 Venue

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

G-270 Equipment Left on State Land

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

G-280 Operating Release

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

G-310 Road Use Authorization

Purchaser is authorized to use the following State roads and roads for which the State has acquired easements and road use permits; E342425A, E342530R, E332401D, E342529G, E342531F, E342531N, E342530F, E342530K, E342530P, E342425N, E342424O, E342529E, E342519F, E342519H, E342519S, E342422M, E342422E, E332411A, E342422K, E332411A(A), E342423H, E342423J, E342426B, E342530G, E332507A, E342422J, and E342422L. The State may authorize in writing the use of other roads subject to fees, restrictions, and prior rights.

G-320 Erosion Control

Purchaser shall deliver 950 pounds of grass seed to a location designated by the Contract Administrator. Seed provided shall meet the following specifications.

40% Sherman Big Bluegrass, 40% Hard Fescue, 20% Intermediate Wheatgrass
Seed shall be certified weed free, premixed and delivered to Omak Work Center in 50 pound bags clearly labeled with the timber sale name on each bag.

G-330 Pre-work Conference

Purchaser shall arrange with the Contract Administrator to review this contract and to examine the sale area before beginning any operations. A plan of operations shall be developed and agreed upon by the Contract Administrator and Purchaser before beginning any operations. To the extent that the plan of operations is inconsistent with the contract, the terms of the contract shall prevail. State's acceptance and approval of

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

G-340 Preservation of Markers

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

G-360 Road Use Reservation

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

G-380 Road Easement and Road Use Permit Requirements

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

Easement 2479 with Boslaugh dated September 7, 1993
Easement 665 with Fancher dated April 14, 1972
Easement 666 with Bawlf dated October 21, 1969
Road Use Permit 93272 with Boslaugh dated December 11, 2015

G-430 Open Fires

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

G-450 Encumbrances

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

Lease, including the terms and provisions thereof,
For: Range Permit
In Favor of: Dan Gebbers
Disclosed by Application No.: 11-B69461
Granted: 1/1/2013
Expires: 12/31/2022

Lease, including the terms and provisions thereof,
For: Range Permit
In Favor of: Dan Gebbers
Disclosed by Application No.: 11-B69462

Granted: 1/1/2013
Expires: 12/31/2022

Lease, including the terms and provisions thereof,
For: Range Permit
In Favor of: Ruby Range LLC
Disclosed by Application No.: 11-B69472
Granted: 1/1/2013
Expires: 12/31/2022

Lease, including the terms and provisions thereof,
For: Range Permit
In Favor of: Sonya Gebbers Taylor
Disclosed by Application No.: 11-C69470
Granted: 1/1/2013
Expires: 12/31/2022

Lease, including the terms and provisions thereof,
For: Range Permit
In Favor of: Ruby Range LLC
Disclosed by Application No.: 11-C69471
Granted: 1/1/2013
Expires: 12/31/2022

Easement, including the terms and provisions thereof,
For: County Road
In Favor of: Okanogan County
Disclosed by Application No.: 50-CR3087
Granted: 3/4/1977
Expires: Indefinite

Water Right, including the terms and provisions thereof,
For: Creek
In Favor of: DNR from Department of Ecology
Disclosed by Application No.: 78-002683
Granted: 11/21/1972
Expires: Indefinite

Water Right, including the terms and provisions thereof,
For: Creek
In Favor of: DNR from Department of Ecology
Disclosed by Application No.: 78-002684
Granted: 11/21/1972
Expires: Indefinite

Water Right, including the terms and provisions thereof,

For: Creek
In Favor of: DNR from Department of Ecology
Disclosed by Application No.: 78-002685
Granted: 11/21/1972
Expires: Indefinite

Water Right, including the terms and provisions thereof,
For: Creek
In Favor of: DNR from Department of Ecology
Disclosed by Application No.: 78-002686
Granted: 11/21/1972
Expires: Indefinite

Water Right, including the terms and provisions thereof,
For: Spring
In Favor of: DNR from Department of Ecology
Disclosed by Application No.: 78-003466
Granted: 3/28/1973
Expires: Indefinite

Water Right, including the terms and provisions thereof,
For: Spring
In Favor of: DNR from Department of Ecology
Disclosed by Application No.: 78-003468
Granted: 3/28/1973
Expires: Indefinite

Water Right, including the terms and provisions thereof,
For: Spring
In Favor of: DNR from Department of Ecology
Disclosed by Application No.: 78-003469
Granted: 3/28/1973
Expires: Indefinite

Water Right, including the terms and provisions thereof,
For: Spring
In Favor of: DNR from Department of Ecology
Disclosed by Application No.: 78-003470
Granted: 3/28/1973
Expires: Indefinite

Water Right, including the terms and provisions thereof,
For: Spring
In Favor of: DNR from Department of Ecology
Disclosed by Application No.: 78-003471
Granted: 3/28/1973

Expires: Indefinite

Water Right, including the terms and provisions thereof,
For: Spring
In Favor of: DNR from Department of Ecology
Disclosed by Application No.: 78-003500
Granted: 3/28/1973
Expires: Indefinite

Water Right, including the terms and provisions thereof,
For: Spring
In Favor of: DNR from Department of Ecology
Disclosed by Application No.: 78-003501
Granted: 3/28/1973
Expires: Indefinite

Water Right, including the terms and provisions thereof,
For: Spring
In Favor of: DNR from Department of Ecology
Disclosed by Application No.: 78-003503
Granted: 3/28/1973
Expires: Indefinite

Water Right, including the terms and provisions thereof,
For: Creek
In Favor of: DNR from Department of Ecology
Disclosed by Application No.: 78-003738
Granted: 10/17/1973
Expires: Indefinite

Water Right, including the terms and provisions thereof,
For: Creek
In Favor of: DNR from Department of Ecology
Disclosed by Application No.: 78-003739
Granted: 10/17/1973
Expires: Indefinite

Water Right, including the terms and provisions thereof,
For: Creek
In Favor of: DNR from Department of Ecology
Disclosed by Application No.: 78-003740
Granted: 10/17/1973
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 pay the following rate per ton for forest products conveyed plus $127,978.00 on day of sale and $1.05 per ton upon removal 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 pay the rate of $2.00 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 Northeast 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 Northeast region office 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 Mismanufacture

Forest products included in this agreement which are destroyed, damaged, stolen, lost, or mismanufactured 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 $50,000.00. The Security provided shall guarantee performance of all provisions of this contract and payment of any damages caused by operations under this contract or resulting from Purchaser's noncompliance with any rule or law. Acceptable performance security may be in the form of a performance bond, irrevocable letter of credit, cash, savings or certificate of deposit account assignments, and must name the State as the obligee or beneficiary. A letter of credit must comply with Title 62A RCW, Article 5. Performance security must remain in full force over the duration of the contract length. Surety bonds issued shall conform to the issuance and rating requirements in clause G-150. The State shall retain the performance security pursuant to RCW 79.15.100. Purchaser shall not operate unless the performance security has been accepted by the State. If at any time the State decides that the security document or amount has become unsatisfactory, Purchaser agrees to suspend operations and, within 30 days of notification, to replace the security with one acceptable to the State or to supplement the amount of the existing security.

P-100 Performance Security Reduction

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

Section 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. The State may treat load tickets not accounted for as lost forest products. All costs associated with computing the billings for lost loads shall be borne by Purchaser.

L-071 Log and Load Reporting Service

This contract requires the use of a State approved third party Log and Load Reporting Service (LLRS). Purchaser shall ensure log volume measurement data and/or load and weight data is received by the LLRS within 2 business day of logs being measured or weighed. Purchaser agrees to pay the LLRS for log and load data supplied to the State.

If during the term of this contract, the State discontinues use of the LLRS, the State will notify the Purchaser in writing and the Purchaser will then be responsible to send log scale and/or weight information to the State.

L-110 State Approval of Log Scaling and Weighing Locations

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

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

Section H: Harvesting Operations

H-010 Cutting and Yarding Schedule

Falling and Yarding will not be permitted from March 1 to April 30 in Units 1, 2, 3, and 4 unless authorized in writing by the Contract Administrator.

H-013 Reserve Tree Damage Definition

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

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

a. A reserve tree has one or more scars on its trunk exposing the cambium layer, which in total exceeds 144 square inches.

b. A reserve tree top is broken or the live crown ratio is reduced below 30 percent.

c. A reserve tree has more than 1/3 of the circumference of its root system injured such that the cambium layer is exposed.

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

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

H-015 Skid Trail Requirements

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

Purchaser shall comply with the following during the yarding operation:

a. Skid trails will not exceed 12 feet in width, including rub trees.

b. Skid trails shall not cover more than 15 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 6 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-035 Fall Trees Into Sale Area

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

H-040 Purchaser Harvest Plan

Purchaser shall, as part of the plan of operations, prepare an acceptable harvest plan for Units 1, 2, 3 and 4. The plan shall address the harvest operations and be incorporated at the prework conference, 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-060 Skid Trail Locations

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

H-110 Stump Height

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

H-120 Harvesting Equipment

Forest products sold under this contract shall be felled by hand or mechanical means and yarded by ground based equipment no larger than D-6 or equivelent unless authority to use other equipment is granted in writing by the State.

H-130 Hauling Schedule

The hauling of forest products will not be permitted on any roads from March 1 to April 30 unless authorized in writing by the Contract Administrator .

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
PP non blue stain	10	12	5.6
All other species	10	12	5.6

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 Mismanufacture

Mismanufacture 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 mismanufacture 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-210 Log Length Hauling Restrictions

The maximum log length hauled from the sale area shall not exceed 42 feet unless otherwise approved in writing by the Contract Administrator.

H-220 Protection of Residual or Adjacent Trees

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

H-230 Tops and Limbs Outside the Sale Boundary

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

H-260 Fall Leaners

Trees in Units 1, 2, 3 and 4 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 11/3/2015 are hereby made a part of this contract.

C-050 Purchaser Road Maintenance and Repair

Purchaser shall perform work at their own expense on E342425A, E342530R, E332401D, E342529G, E342531F, E342531N, E342530F, E342530K, E342530P, E342425N, E342424O, E342529E, E342519F, E342519H, E342519S, E342422M, E342422E, E332411A (from station 0+00 to station 142+21), E342422K, E332411A(A), E342423H, E342423J, E342426B, E342530G, E332507A, E342422J, E342422L. 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 West Fork Rock Creek Road (E332411A prior to station 0+00). 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 State current Equipment Rate Schedule on file at the region and Olympia offices. 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 E342425A, E342530R, E332401D, E342529G, E342531F, E342531N, E342530F, E342530K, E342530P, E342425N, E342424O, E342529E, E342519F, E342519H, E342519S, E342422M, E342422E, E332411A, E342422K, E342423H, E342423J, E342426B, E342530G, E332507A, E342422J, and E342422L roads used for hauling from April 30 to November 30 or as directed by the Contract Administrator.

C-140 Water Bars

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

Section S: Site Preparation and Protection

S-001 Emergency Response Plan

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

the State shall be promptly notified whenever an incident occurs requiring an emergency response.

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

S-010 Fire Hazardous Conditions

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

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

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

S-030 Landing Debris Clean Up

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

S-035 Logging Debris Clean Up

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

S-040 Noxious Weed Control

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

S-060 Pump Truck or Pump Trailer

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

S-070 Water Supply

Purchaser shall provide, during the "closed season", a water supply with a minimum capacity of 1000 gallons for rapid filling of pump trucks or trailers at a location designated by the Contract Administrator.

S-100 Stream Cleanout

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

S-120 Stream Protection

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

S-130 Hazardous Materials

a. Hazardous Materials and Waste - Regulatory Compliance

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

b. Hazardous Materials Spill Prevention

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

c. Hazardous Materials Spill Containment, Control and Cleanup

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

d. Hazardous Material Release Reporting

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

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

ECY - Northwest Region:
1-425-649-7000
(Island, King, Kitsap, San Juan, Skagit, Snohomish, and Whatcom counties)

ECY - Southwest Region:
1-360-407-6300
(Clallam, Clark, Cowlitz, Grays Harbor, Jefferson, Mason, Lewis, Pacific, Pierce, Skamania, Thurston, and Wahkiakum counties)

ECY - Central Region:
1-509-575-2490
(Benton, Chelan, Douglas, Kittitas, Klickitat, Okanogan, and Yakima counties)

ECY - Eastern Region:
1-509-329-3400
(Adams, Asotin, Columbia, Ferry, Franklin, Garfield, Grant, Lincoln, Pend Oreille, Spokane, Stevens, Walla Walla, and Whitman counties)

S-131 Refuse Disposal

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

S-140 Fence Repair

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

Section D: Damages

D-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: Interest = r x LD x 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 within 24 hours of log removal, and $250 each time a ticket is either lost or otherwise unaccounted for.

D-041 Reserve Tree Excessive Damage

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

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

	STATE OF WASHINGTON DEPARTMENT OF NATURAL RESOURCES
_____	_____
Purchaser	Loren D. Torgerson Northeast Region Manager
Date: _____	Date: _____
Address:	

CORPORATE ACKNOWLEDGEMENT

STATE OF _____)
)
COUNTY OF _____)

On this _____ day of _____, 20___, before me personally appeared _____
_____ to me known to be the _____ of the corporation that executed the within and foregoing instrument and acknowledged said instrument to be the free and voluntary act and deed of the corporation, for the uses and purposes therein mentioned, and on oath stated that (he/she was) (they were) authorized to execute said instrument.

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

_____
Notary Public in and for the State of

_____

My appointment expires _____

Schedule A
Leave Tree Requirements

Leave all trees (except ponderosa pine) with at least a 50% live crown.

Leave all ponderosa pine with at least a 30% live crown.

Leave at least 6 trees or snags per acre greater than 10 inches diameter at breast height. When available, retain live trees. When live trees are not available, retain the 2 largest ponderosa pine snags available, and 4 additional ponderosa pine snags from among the largest diameter class. Do not retain Douglas-fir snags unless no other species is available.

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

WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES

FOREST EXCISE TAX ROAD SUMMARY SHEET

Region: Northeast

Timber Sale Name: West Fork Fire Salvage

Application Number: 30- 093223

EXCISE TAX APPLICABLE ACTIVITIES

Construction: 0 **linear feet**
Road to be constructed (optional and required) but not abandoned

Reconstruction: 0 **linear feet**
Road to be reconstructed (optional and required) but not abandoned

Abandonment: 1,794 **linear feet**
Abandonment of existing roads not reconstructed under the contract

Decommission: 0 **linear feet**
Road to be made undriveable but not officially abandoned.

Pre-Haul Maintenance: 106,828 **linear feet**
Existing road to receive maintenance work (specifically required by the contract) prior to haul

EXCISE TAX EXEMPT ACTIVITIES

Temporary Optional Construction: 0 **linear feet**
Optional roads to be constructed and then abandoned

Temporary Optional Reconstruction: 0 **linear feet**
Optional roads to be reconstructed and then abandoned

New Abandonment: 0 **linear feet**
Abandonment of roads constructed or reconstructed under the contract

All parties must make their own assessment of the taxable or non-taxable status of any work performed under the timber sale contact. The Department of Revenue bears responsibility for determining forest road excise taxes. The Department of Natural Resources developed this form to help estimate the impact of forest excise taxes. However, the information provided may not precisely calculate the actual amount of taxes due. The Department of Revenue is available for consultation by calling 1.800.548.8829.
(Revised 4/09)

PRE-CRUISE NARRATIVE

Sale Name: West Fork Fire Salvage	Region: **Northeast**
Agreement #: 30-093223	District: South Okanogan
Contact Forester:Jake Townsend Phone / Location: 5098267316	County(s): Choose a county, Okanogan
Alternate Contact:Eric Dawson Phone / Location: 509-826-7316	Other information: Click here to enter text.

Type of Sale: Weight Scale	
Harvest System: Ground based Click here to enter text.	Click here to enter percent sale acres.
Harvest System: Select harvest system Click here to enter text.	Click here to enter percent sale acres.
Harvest System: Select harvest system Click here to enter text.	Click here to enter percent sale acres.

UNIT ACREAGES AND METHOD OF DETERMINATION:

Unit # **Harvest R/W or RMZ WMZ**	**Legal Description** (Enter only one legal for each unit) **Sec/Twp/Rng**	**Grant or Trust**	**Gross Proposal Acres**	**Deductions from Gross Acres (No harvest acres)**				**Net Harvest Acres**	**Acreage Determination** (List method and error of closure if applicable)
				RMZ/ WMZ Acres	**Leave Tree Acres**	**Existing Road Acres**	**Other Acres (describe)**		
1	S22,23,27 T34R24	03	169.1	7.5		4		157.5	GPS (Garmin)
2	S22,23,26, 27 T34R24	03	207		7	6		194	GPS (Garmin)
3	S24,25 T34R24	03	472.3			11		461	GPS (Garmin)
4	S19,20,29,30 T34R25	03	397.1	4.3		10.8		382	GPS (Garmin)
	Enter Sec / Twp / Rng								Choose an item.
TOTAL ACRES			1245.5	11.8	7	31.8		1194.9	

Revised 03/15/2010 (FRCD)

HARVEST PLAN AND SPECIAL CONDITIONS:

Unit #	Harvest Prescription: (Leave, take, paint color, tags, flagging etc.)	Special Management areas:	Other conditions (# leave trees, etc.)
1	Sched. A-leave 6TPA @ ave 85' spacing		
2	Sched. A-leave 6TPA @ ave 85' spacing		Leave tree area marked with red ribbon
3	Sched. A-leave 6TPA @ ave 85' spacing		
4	Sched. A-leave 6TPA @ ave 85' spacing		Leave tree area marked with red ribbon

OTHER PRE-CRUISE INFORMATION:

Unit #	Primary,secondary Species / Estimated Volume (MBF)	Access information (Gates, locks, etc.)	Photos, traverse maps required
1	WL, DF 1400MBF		
2	PP/DF 1100 MBF		
3	PP,DF 2500 MBF		
4	DF,PP 2100 MBF	Two locked gates. Hurd keys req.	
TOTAL MBF	Est. 7100 MBF		

REMARKS:

Prepared By: Eric Dawson Date: 11/06/15	Title: NRS 1	CC:

Cruise Narrative

Sale Name: West Fork Fire Salvage	**Region:** Northeast
Agreement Number: 30-093223	**District:** South Okanogan
Lead Cruiser: Dan Griggs	**Completion Date:** 11/4/2015
Other Cruisers on sale: Jim Putnam, Nathan Simpkins, Matt Stonich and Joe Hoagland	**Legal:** Sections 13, 22, 23, 24, 25, 26 & 27, T 34 N, R 24 E; Sections 19, 20, 29 & 30, T 34 N, R 25 E WM.

Unit Acreage Specifications:

Unit #	Gross Acres	Net Acres	Total Deletions	Existing Roads	Leave Tree Acres	RMZ / WMZ Acres	Other
1	169.11	157.61	11.50	4.00		7.50	
2	207.01	194.01	13.00	6.00	7.00		
3	472.31	461.31	11.00	11.00			
4	397.10	382.00	15.10	10.80		4.30	
Total	1245.53	1194.93	50.60	31.80	7.00	11.80	0.00

Cruise Sample Design:

This timber sale was cruised using the **variable plot** sampling method. The double basal area system was employed; a small BAF to determine Basal Area (count trees) and a large BAF to determine the Volume-Basal Area Ratio (cruise trees). Each plot was a full plot. Plot locations were created using a computer generated grid, and found using a hand held GPS unit.

Unit #	Small BAF (count)	Large BAF (cruise)	Sighting height	Grid size (plot spacing in feet)	% Cruise to count Target	% Cruise to count Actual	Total number of Plots
1	27.78	80.28	D4H	510 x 510	35%	38.8%	26
2	27.78	111.11	D4H	510 x 510	25%	25.3%	37
3	27.78	111.11	D4H	510 x 510	25%	26.0%	82
4	27.78	111.11	D4H	510 x 510	25%	26.8%	64
Total							209

Cruise Specifications:

Minor species cruise intensity:	We grade the first tree of all minor species encountered with the smaller BAF; then followed through with the small BAF to large BAF ratio.
Minimum top dib:	**Ponderosa pine:** Trees less than 17.5" DBH have a minimum top of 5.6" dib. Trees 17.6" and greater DBH have a minimum top dib of 40% of DOB at 16'or a 6" top whichever is greater. **All other species:** Trees less than 17.5" DBH have a minimum top of 5.6" dib. Trees 17.6" and greater DBH have a minimum top dib of 40% of DOB at 16'or a 6" top whichever is greater.
Minimum dbh:	Ponderosa pine: 8.0 inches DBH All other species: 7.0 inches DBH
Log lengths:	Saw logs: 32 feet where possible, minimum of 12 feet
Take / Leave tree description:	Harvest all fire damaged Ponderosa Pine with less than 30% live crown and all other species with less than 50% live crown remaining that meet the minimum cruise specifications. Leave 6 trees per acre among the largest trees.
Commercial species observed in sale area, but not in cruise:	None
Utility wood:	None
Status codes used:	None
Sort codes used	D – saw log
Species table used:	NE 2 inch
Grade table used:	Eastgrad
Other tables used (cruise adjustment):	Cruise adjustment table WEST U1
Volume Reductions	The sale's volume was reduced by 24.9% to account for the leave trees, hidden cull and further wood quality degradation. Volume Reduction by species: Douglas-fir – 15% Western larch – 15% Ponderosa pine – 35% Lodgepole pine – 50% Sub-alpine fir – 50%

Field Observations:

Location:	Southwestern Okanogan County, 15 miles west of Okanogan, Washington.
Aspect:	North, East, South and West
Elevation:	2700 to 4400
Slope:	Unit 1 – 0% to 40%, Average 20% Unit 2 – 0% to 45%, Average 25% Unit 3 – 0% to 55%, Average 30% Unit 4 – 0% to 70%, Average 40% There are small cliffs in some of the units.
Harvest Methods:	100% Ground base yarding with the longest skidding of 1400 feet.
Stand Composition:	The stands are fire killed, second growth ponderosa pine and Douglas-fir with larger residual trees. There is a minor component of western larch, lodgepole pine and sub-alpine fir.
Stand Health:	The trees in this sale have been killed by the Okanogan Complex Fire which burned in late August. Bark beetles are active and the woodpeckers are working on those trees.
Timber Quality:	The timber is a mix of poor quality Douglas-fir (48%), ponderosa pine (40%) western larch (11%), lodgepole pine (1%) and sub-alpine fir (0.5%).
Non-board Foot Volume:	
Other Considerations:	This sale will be sold on the tons of logs removed from the sale area.

Trust and Counties:

Trust 03 located in Okanogan County

Prepared by: Dan Griggs

Title: Forest Check Cruiser 1

CC: Timber Sales Document Center & File #30-093223

TC PSPCSTGR

Species, Sort Grade - Board Foot Volumes (Project)

T34N R24E S22 Ty00U1
THRU
T34N R25E S09 Ty00U4

Project: **WESTFKFS**

Acres **1,194.93**

Page **1**
Date **11/5/2015**
Time **7:31:41AM**

Spp	S T	So rt	Gr ad	% Net BdFt	Bd. Ft. per Acre Def%	Gross	Net	Total Net MBF	Percent of Net Board Foot Volume: Log Scale Dia. 4-5	6-11	12-16	17+	Log Length 12-20	21-32	33-55	56-99	Average Log Ln Ft	Dia In	Bd Ft	CF/ Lf	Logs Per /Acre
PP	D	4		62	38.7	2,442	1,498	1,790			59	41		100			32	15	209	1.37	7.2
PP	D	5		38	38.0	1,467	910	1,088		85	15		11	86	3		26	7	44	0.43	20.8
PP	**Totals**			40	38.4	3,909	2,408	2,877		32	43	25	4	95	1		28	9	86	0.71	28.0
LP	D	3		28	50.0	37	19	22		100				100			30	8	30	0.32	.6
LP	D	4		72	55.6	106	47	56		100			68	32			20	7	14	0.21	3.2
LP	**Totals**			1	54.2	143	66	78		100			49	51			21	7	17	0.24	3.9
DF	D	2		30	25.1	1,183	886	1,058			58	42		100			32	15	266	2.04	3.3
DF	D	3		48	21.2	1,750	1,380	1,649		83	14	3	0	100			32	9	89	0.76	15.4
DF	D	4		22	19.6	769	619	739		100			40	60			22	6	27	0.36	23.2
DF	**Totals**			48	22.1	3,702	2,884	3,446		61	24	14	9	91			26	8	69	0.70	41.9
WL	D	2		45	24.9	389	293	350			54	46		100			32	15	249	1.61	1.2
WL	D	3		40	18.8	325	264	316		84	16		1	99			32	8	78	0.62	3.4
WL	D	4		15	18.0	112	92	110		100			45	55			21	6	25	0.28	3.7
WL	**Totals**			11	21.5	827	649	775		48	31	21	7	93			27	8	78	0.66	8.3
AF	D	2		46	60.7	33	13	16				100		100			32	17	165	1.00	.1
AF	D	3		46	58.4	30	13	15		100				100			32	8	43	0.40	.3
AF	D	4		8	50.0	4	2	3		100			100				14	6	10	0.14	.2
AF	**Totals**			0	59.0	67	28	33		53		47	8	92			25	9	47	0.45	.6
Totals					30.2	8,649	6,034	7,210		49	32	19	7	92	1		27	8	73	0.68	82.7

TC PSTATS

PROJECT STATISTICS

PROJECT WESTFKFS

DATE 11/5/2015

TWP	RGE	SC	TRACT	TYPE		ACRES	PLOTS	TREES	CuFt	BdFt
34N	24E	22	WEST FORK FS	00U1	THR	1,194.93	209	573	S	E
34N	25E	09	WEST FORK FS	00U4						

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	209	573	2.7		
CRUISE	109	161	1.5	68,679	.2
DBH COUNT					
REFOREST COUNT	67	155	2.3		
BLANKS	33				
100 %					

STAND SUMMARY

	SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
DOUG FIR	77	30.0	14.6	57	9.1	34.9	3,702	2,884	917	769
P PINE	61	18.3	18.1	50	7.7	32.7	3,881	2,380	842	545
P PINE-L	1	.0	33.7	77	0.0	.1	28	28	5	5
W LARCH	16	4.9	14.7	69	1.5	5.8	827	649	176	148
LP PINE	4	3.9	10.3	45	0.7	2.2	143	66	39	19
ALP FIR	2	.3	16.3	71	0.1	.4	67	28	13	7
TOTAL	*161*	*57.5*	*15.6*	*55*	*19.3*	*76.3*	*8,649*	*6,034*	*1,991*	*1,492*

CONFIDENCE LIMITS OF THE SAMPLE

68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR

CL 68.1	COEFF		**SAMPLE TREES - BF**			# OF TREES REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10
DOUG FIR	126.7	14.4	176	206	235			
P PINE	77.7	10.3	225	251	277			
P PINE-L								
W LARCH	106.3	27.5	190	262	334			
LP PINE	45.6	26.1	15	20	25			
ALP FIR	95.1	89.2	15	138	260			
TOTAL	*109.3*	*8.7*	*209*	*229*	*249*	*478*	*244*	*119*

CL 68.1	COEFF		**TREES/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10
DOUG FIR	118.3	8.2	28	30	32			
P PINE	116.8	8.1	17	18	20			
P PINE-L	1445.7	100.0	0	0	0			
W LARCH	310.6	21.5	4	5	6			
LP PINE	494.6	34.2	3	4	5			
ALP FIR	888.1	61.4	0	0	0			
TOTAL	*56.1*	*3.9*	*55*	*57*	*60*	*126*	*64*	*31*

CL 68.1	COEFF		**BASAL AREA/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10
DOUG FIR	117.2	8.1	32	35	38			
P PINE	95.5	6.6	31	33	35			
P PINE-L	1445.7	100.0	0	0	0			
W LARCH	320.8	22.2	5	6	7			
LP PINE	503.1	34.8	1	2	3			
ALP FIR	830.6	57.5	0	0	1			
TOTAL	*42.9*	*3.0*	*74*	*76*	*79*	*73*	*37*	*18*

CL 68.1	COEFF		**NET BF/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10
DOUG FIR	123.9	8.6	2,637	2,884	3,131			
P PINE	96.0	6.6	2,222	2,380	2,538			
P PINE-L	1445.7	100.0	0	28	56			

TC PSTATS

PROJECT STATISTICS

PROJECT WESTFKFS

DATE 11/5/2015

TWP	RGE	SC	TRACT	TYPE		ACRES	PLOTS	TREES	CuFt	BdFt
34N	24E	22	WEST FORK FS	00U1	THR	1,194.93	209	573	S	E
34N	25E	09	WEST FORK FS	00U4						

CL 68.1	COEFF		**NET BF/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.00	VAR.	S.E.%	LOW	AVG	HIGH	5	7	10
W LARCH	357.5	24.7	488	649	809			
LP PINE	513.5	35.5	42	66	89			
ALP FIR	856.9	59.3	11	28	44			
TOTAL	*55.1*	*3.8*	*5,804*	*6,034*	*6,264*	*121*	*62*	*30*

CL 68.1	COEFF		**V BAR/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10
DOUG FIR			75	83	90			
P PINE			68	73	78			
P PINE-L	1445.7	100.0	0	199	397			
W LARCH	126.8	8.8	84	112	139			
LP PINE	141.8	9.8	19	30	40			
ALP FIR	707.7	49.0	27	65	104			
TOTAL	*55.1*	*3.8*	*76*	*79*	*82*	*121*	*62*	*30*

T TSPCSTGR

Species, Sort Grade - Board Foot Volumes (Type)

Project: WESTFKFS

Date 11/5/2015

Time 7:31:41AM

T34N R24E S22 T00U1

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt
34N	24E	22	WEST FORK FS	00U1	157.61	26	35	S	E

T34N R24E S22 T00U1

Spp	ST	Sort	Grade	% Net BdFt	Bd. Ft. per Acre Def%	Gross	Net	Total Net MBF	Percent Net Board Foot Volume: Log Scale Dia. 4-5	6-11	12-16	17+	Log Length 12-20	21-32	33-55	56-99	Average Log Ln Ft	Dia In	Bd Ft	CF/ Lf	Logs Per /Acre
DF		D	2	49	26.3	2,101	1,549	244			44	56		100			32	16	321	2.32	4.8
DF		D	3	31	24.5	1,289	973	153		71	29			100			31	9	98	0.82	10.0
DF		D	4	20	23.5	778	595	94		100			9	91			28	6	36	0.41	16.8
DF	**Totals**			34	25.2	4,168	3,117	491		41	31	28	2	98			30	9	99	0.86	31.6
WL		D	2	55	24.9	2,838	2,131	336			52	48		100			32	15	258	1.60	8.3
WL		D	3	37	16.7	1,679	1,399	221		87	13			100			32	8	83	0.59	16.9
WL		D	4	8	22.1	364	284	45		100			58	42			19	7	25	0.29	11.2
WL	**Totals**			41	21.9	4,882	3,814	601		40	34	27	4	96			28	9	105	0.79	36.3
PP		D	4	68	40.7	2,176	1,289	203			13	87		100			32	18	314	2.04	4.1
PP		D	5	32	42.9	1,034	591	93		51	49		38	62			21	7	29	0.30	20.4
PP	**Totals**			20	41.4	3,210	1,880	296		16	24	60	12	88			23	9	77	0.71	24.5
LP		D	3	52	50.0	283	141	22		100				100			30	8	30	0.32	4.7
LP		D	4	48	50.0	255	128	20		100			100				18	7	15	0.20	8.5
LP	**Totals**			3	50.0	538	269	42		100			47	53			22	7	20	0.26	13.2
AF		D	2	46	60.7	250	98	16				100		100			32	17	165	1.00	.6
AF		D	3	46	58.4	229	95	15		100				100			32	8	43	0.40	2.2
AF		D	4	8	50.0	32	16	3		100			100				14	6	10	0.14	1.6
AF	**Totals**			2	59.0	511	210	33		53		47	8	92			25	9	47	0.45	4.4
Type Totals					30.2	13,309	9,290	1,464		37	29	33	6	94			27	9	84	0.73	110.0

T TSPCSTGR

Species, Sort Grade - Board Foot Volumes (Type)

Project: WESTFKFS

Date 11/5/2015

Time 7:31:41AM

T34N R25E S08 T00U2

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt
34N	25E	08	WEST FORK FS	00U2	194.01	37	24	S	E

T34N R25E S08 T00U2

Spp	ST	Sort	Grade	% Net BdFt	Bd. Ft. per Acre Def%	Gross	Net	Total Net MBF	Percent Net Board Foot Volume: Log Scale Dia. 4-5	6-11	12-16	17+	Log Length 12-20	21-32	33-55	56-99	Average Log Ln Ft	Dia In	Bd Ft	CF/ Lf	Logs Per /Acre
PP		D	4	62	39.7	3,015	1,817	353			41	59		100			31	16	228	1.46	8.0
PP		D	5	38	36.1	1,690	1,080	209		76	24		11	89			24	8	55	0.55	19.5
PP	**Totals**			52	38.4	4,705	2,897	562		28	35	37	4	96			26	10	105	0.87	27.5
DF		D	2	11	26.5	313	230	45			100			100			32	16	272	2.28	.8
DF		D	3	65	16.5	1,500	1,253	243		59	41			100			32	10	126	0.92	9.9
DF		D	4	24	15.0	546	464	90		100			51	49			23	7	31	0.41	15.0
DF	**Totals**			35	17.5	2,359	1,947	378		62	38		12	88			27	8	76	0.72	25.8
WL		D	2	12	24.4	93	70	14			100			100			32	12	136	1.67	.5
WL		D	3	49	15.0	331	281	55		60	40		3	97			30	7	70	0.59	4.0
WL		D	4	39	15.0	257	219	42		100			2	98			25	6	31	0.28	7.1
WL	**Totals**			10	16.3	681	570	111		68	32		2	98			27	7	49	0.47	11.6
LP		D	4	100	58.2	445	186	36		100			51	49			20	6	14	0.22	13.1
LP	**Totals**			3	58.2	445	186	36		100			51	49			20	6	14	0.22	13.1
Type Totals					31.6	8,191	5,600	1,086		46	35	19	8	92			25	8	72	0.67	78.0

T TSPCSTGR

Species, Sort Grade - Board Foot Volumes (Type)

Project: WESTFKFS

Date 11/5/2015

Time 7:31:41AM

T34N R25E S08 T00U3

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt
34N	25E	08	WEST FORK FS	00U3	461.31	82	62	S	E

T34N R25E S08 T00U3

Spp	ST	Sort	Grade	% Net BdFt	Bd. Ft. per Acre Def%	Gross	Net	Total Net MBF	Percent Net Board Foot Volume: Log Scale Dia. 4-5	6-11	12-16	17+	Log Length 12-20	21-32	33-55	56-99	Average Log Ln Ft	Dia In	Bd Ft	CF/ Lf	Logs Per /Acre
PP		D	4	59	38.6	2,871	1,764	814			65	35		100			32	15	201	1.28	8.8
PP		D	5	41	36.8	1,912	1,208	557		100			7	86	7		28	7	41	0.41	29.3
PP	**Totals**			54	37.9	4,783	2,972	1,371		41	39	21	3	94	3		29	9	78	0.63	38.1
DF		D	2	18	24.0	583	443	204			41	59		100			32	15	283	1.90	1.6
DF		D	3	56	21.6	1,711	1,341	619		100				100			32	8	73	0.66	18.4
DF		D	4	26	16.7	745	621	286		100			42	58			21	6	25	0.32	24.8
DF	**Totals**			44	20.9	3,039	2,405	1,109		82	8	11	11	89			26	7	54	0.56	44.7
WL		D	3	80	32.0	129	88	41		100				100			32	9	68	0.78	1.3
WL		D	4	20	15.0	26	22	10		100			100				20	6	17	0.27	1.3
WL	**Totals**			2	29.2	155	110	51		100			20	80			26	8	43	0.59	2.6
Type Totals					31.2	7,978	5,487	2,531		60	24	16	7	92	1		27	8	64	0.59	85.4

T TSPCSTGR

Species, Sort Grade - Board Foot Volumes (Type)

Project: WESTFKFS

Date 11/5/2015

Time 7:31:41AM

T34N R25E S09 T00U4

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt
34N	25E	09	WEST FORK FS	00U4	382.00	64	42	S	E

T34N R25E S09 T00U4

Spp	ST	Sort	Grade	% Net BdFt	Bd. Ft. per Acre Def%	Gross	Net	Total Net MBF	Percent Net Board Foot Volume: Log Scale Dia. 4-5	6-11	12-16	17+	Log Length 12-20	21-32	33-55	56-99	Average Log Ln Ft	Dia In	Bd Ft	CF/ Lf	Logs Per /Acre
DF		D	2	38	24.9	1,970	1,479	565			66	34		100			32	15	243	1.97	6.1
DF		D	3	43	21.5	2,115	1,659	634		79	13	8	1	99			32	9	98	0.82	16.9
DF		D	4	19	22.5	908	704	269		100			46	54			21	6	25	0.38	28.1
DF	**Totals**			69	23.0	4,993	3,843	1,468		53	31	16	9	91			26	8	75	0.79	51.1
PP		D	4	64	36.8	1,742	1,101	421			86	14		100			32	14	182	1.29	6.0
PP		D	5	36	40.1	995	596	228		70	30		8	92			26	8	52	0.49	11.5
PP	**Totals**			30	38.0	2,737	1,697	648		24	66	9	3	97			28	10	97	0.80	17.5
WL		D	4	100	15.0	38	33	12		100			100				20	6	17	0.25	1.9
WL	**Totals**			1	15.0	38	33	12		100			100				20	6	17	0.25	1.9
Type Totals					28.3	7,768	5,572	2,129		44	42	14	7	93			26	9	79	0.78	70.5

TC PSPCTLTCM

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

T34N R24E S22 Ty00U1	157.6
T34N R25E S08 Ty00U2	194.0
T34N R25E S09 Ty00U	382.0

Project **WESTFKFS**
Acres **1,194.93**

Page No **1**
Date: **11/5/2015**
Time **7:31:42AM**

Species	S T	Total Trees	Total Logs	Total Tons	Net Cubic Ft/ Tree	Net Cubic Ft/ Log	CF/ LF	Total CCF Gross	Total CCF Net	Total MBF Gross	Total MBF Net
DOUG FIR		35,892	50,112	31,224	25.59	18.33	0.70	10,956	9,184	4,424	3,446
P PINE		21,946	33,459	24,267	29.92	19.63	0.71	10,111	6,566	4,671	2,877
W LARCH		5,869	9,904	5,036	30.17	17.88	0.66	2,098	1,771	988	775
LP PINE		4,625	4,625	1,131	5.02	5.02	0.24	471	232	171	78
ALP FIR		348	696	394	22.70	11.35	0.45	158	79	81	33
Totals		68,679	98,795	62,053	25.96	18.05	0.68	23,795	17,832	10,334	7,210

Wood Type Species	Total Trees	Total Logs	Total Tons	Net Cubic Ft/ Tree	Net Cubic Ft/ Log	CF/ LF	Total CCF Gross	Total CCF Net	Total MBF Gross	Total MBF Net
C	68,679	98,795	62,053	25.96	18.05	0.68	23,795	17,832	10,334	7,210
Totals	68,679	98,795	62,053	25.96	18.05	0.68	23,795	17,832	10,334	7,210

TC PLOGSTVB

Log Stock Table - MBF

T34N R24E S22 Ty00U1
THRU
T34N R25E S09 Ty00U4

Project: WESTFKFS
Acres 1,194.93

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Spp	ST	Sort	Grade	Log Len	Gross MBF	Def %	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches 2-4	5-6	7-10	11-12	13-14	15-16	17-18	19-20	21-23	24-29	30-39	40+
PP		D	4	24	44	44.6	24	.8						24						
PP		D	4	32	2,874	38.6	1,766	61.4				162	526	350	331	159	182	55		
PP		D	5	12	25	33.5	17	.6		1	1		14							
PP		D	5	14	28	35.0	18	.6		14	4									
PP		D	5	16	35	35.0	23	.8		12	11									
PP		D	5	18	27	39.5	16	.6		14	2									
PP		D	5	20	79	46.3	42	1.5			42									
PP		D	5	24	197	43.0	112	3.9		62	51									
PP		D	5	26	15	35.0	9	.3		9										
PP		D	5	30	186	36.8	118	4.1		82	35									
PP		D	5	32	1,105	37.1	695	24.1		65	386	162	82							
PP		D	5	36	20	35.0	13	.4		13										
PP		D	5	38	37	35.0	24	.8		24										
PP		Totals			4,671	38.4	2,877	39.9		296	534	324	622	374	331	159	182	55		
LP		D	3	30	45	50.0	22	28.4			22									
LP		D	4	16	37	50.0	18	23.3		18										
LP		D	4	18	40	50.0	20	25.6			20									
LP		D	4	32	50	64.3	18	22.7			18									
LP		Totals			171	54.2	78	1.1		18	60									
DF		D	2	32	1,413	25.1	1,058	30.7				144	189	277	87	151	160	49		
DF		D	3	16	32	100.0														
DF		D	3	20	5	15.0	5	.1			5									
DF		D	3	24	10	24.4	8	.2				8								
DF		D	3	28	23	15.0	19	.6		19										
DF		D	3	32	2,021	20.0	1,617	46.9		56	1100	291	120		51					
DF		D	4	12	7	38.0	4	.1		2	3									
DF		D	4	14	46	40.2	27	.8		27										
DF		D	4	16	154	15.0	130	3.8		86	40	4								
DF		D	4	18	69	15.0	58	1.7		58										
DF		D	4	20	89	15.0	76	2.2		32	44									
DF		D	4	24	119	15.0	101	2.9		68	34									
DF		D	4	28	46	15.0	39	1.1		39										
DF		D	4	30	137	19.4	111	3.2		111										
DF		D	4	32	253	24.1	192	5.6		112	80									
DF		Totals			4,424	22.1	3,446	47.8		609	1305	447	309	277	138	151	160	49		

TC PLOGSTVB

Log Stock Table - MBF

T34N R24E S22 Ty00U1
THRU
T34N R25E S09 Ty00U4

Project: WESTFKFS
Acres 1,194.93

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Spp	ST	Sort	Grade	Log Len	Gross MBF	Def %	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches 2-4	5-6	7-10	11-12	13-14	15-16	17-18	19-20	21-23	24-29	30-39	40+
WL		D	2	32	465	24.9	350	45.1				40	70	80		110		50		
WL		D	3	16	2	15.0	2	.2		2										
WL		D	3	32	386	18.8	314	40.5		34	201	57	22							
WL		D	4	12	1	15.0	1	.1		1										
WL		D	4	14	7	15.0	6	.8		4	2									
WL		D	4	16	23	32.7	15	2.0		15										
WL		D	4	20	32	15.0	27	3.5		23	5									
WL		D	4	22	22	15.0	18	2.4		18										
WL		D	4	32	49	15.0	42	5.4		23	19									
WL		Totals			988	21.5	775	10.7		120	227	96	92	80		110		50		
AF		D	2	32	39	60.7	16	46.9							16					
AF		D	3	32	36	58.4	15	45.4			15									
AF		D	4	14	5	50.0	3	7.7		3										
AF		Totals			81	59.0	33	.5		3	15				16					
Total		All Species			10,334	30.2	7,210	100.0		1047	2141	867	1023	732	485	421	342	153		

TC PLOGSTVT_SED

Project Log Stock Table - TONS(SED)

T34N R24E S22 Ty00U1
THRU
T34N R25E S09 Ty00U4

Project: WESTFKFS
Acres 1,194.93

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Date 11/5/2015
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Spp	ST	Sort	Grade	Log Len	SED	TONS	Tons by Scaling Diameter in Inches 2-4	5-6	7-10	11-12	13-14	15-16	17-18	19-20	21-23	24-29	30-39	40+
PP		D	4	24	15.0	158						158						
PP		D	4	32	15.5	13,588				1463	4546	2684	2170	1193	1078	454		
PP		D	5	12	11.9	119		21	6		91							
PP		D	5	14	6.1	210		152	58									
PP		D	5	16	6.8	240		113	128									
PP		D	5	18	6.3	177		126	51									
PP		D	5	20	7.7	607			607									
PP		D	5	24	6.4	1,157		570	587									
PP		D	5	26	6.0	115		115										
PP		D	5	30	6.3	1,082		750	333									
PP		D	5	32	9.2	6,197		641	3698	1308	550							
PP		D	5	36	6.0	303		303										
PP		D	5	38	6.0	314		314										
Graded						24267		3104	5467	2772	5188	2843	2170	1193	1078	454		
PP		Totals			9.5	24,267		3104	5467	2772	5188	2843	2170	1193	1078	454		
LP		D	3	30	8.0	340			340									
LP		D	4	16	6.0	192		192										
LP		D	4	18	7.0	235			235									
LP		D	4	32	7.0	365			365									
Graded						1131		192	940									
LP		Totals			6.8	1,131		192	940									
DF		D	2	32	15.5	8,689				1342	1782	2413	622	1164	1086	280		
DF		D	3	16	16.0	218						218						
DF		D	3	20	8.0	61			61									
DF		D	3	24	12.0	53				53								
DF		D	3	28	6.0	172		172										
DF		D	3	32	9.0	14,482		685	10140	2376	923		357					
DF		D	4	12	6.7	71		32	40									
DF		D	4	14	6.0	419		419										
DF		D	4	16	6.5	1,035		666	338	31								
DF		D	4	18	6.0	521		521										
DF		D	4	20	6.6	965		491	474									
DF		D	4	24	6.4	973		714	259									
DF		D	4	28	6.0	392		392										
DF		D	4	30	6.0	1,036		1036										
DF		D	4	32	6.3	2,137		1285	853									

TC PLOGSTVT_SED

Project Log Stock Table - TONS(SED)

T34N R24E S22 Ty00U1
THRU
T34N R25E S09 Ty00U4

Project: WESTFKFS
Acres 1,194.93

Date 11/5/2015
Time 7:31:41AM

Spp	ST	Sort	Grade	Log Len	SED	TONS	Tons by Scaling Diameter in Inches 2-4	5-6	7-10	11-12	13-14	15-16	17-18	19-20	21-23	24-29	30-39	40+
Graded						31224		6412	12164	3803	2705	2632	980	1164	1086	280		
DF		Totals			8.1	31,224		6412	12164	3803	2705	2632	980	1164	1086	280		
WL		D	2	32	15.1	2,033				403	400	414		547		268		
WL		D	3	16	6.0	19		19										
WL		D	3	32	8.2	2,210		261	1384	407	157							
WL		D	4	12	6.0	10		10										
WL		D	4	14	6.8	52		26	26									
WL		D	4	16	6.3	111		81	30									
WL		D	4	20	6.5	245		204	41									
WL		D	4	22	6.0	104		104										
WL		D	4	32	6.4	253		155	97									
Graded						5036		860	1578	810	558	414		547		268		
WL		Totals			8.6	5,036		860	1578	810	558	414		547		268		
AF		D	2	32	17.0	150							150					
AF		D	3	32	8.3	220			220									
AF		D	4	14	6.0	24		24										
Graded						394		24	220				150					
AF		Totals			8.6	394		24	220				150					
Total		All Species				62,053		10592	20369	7385	8450	5889	3299	2904	2163	1002		

TC TSTATS

STATISTICS

PROJECT WESTFKFS

DATE 11/5/2015

TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
34N	24E	22	WEST FORK FS	00U1	157.61	26	90	S	E

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	26	90	3.5		
CRUISE	20	35	1.8	11,314	.3
DBH COUNT					
REFOREST COUNT	4	10	2.5		
BLANKS	2				
100 %					

STAND SUMMARY

	SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
DOUG FIR	13	22.3	16.5	60	8.2	33.1	4,168	3,117	955	809
W LARCH	9	16.4	17.6	83	6.6	27.8	4,882	3,814	951	802
P PINE	8	17.5	15.3	36	5.7	22.4	2,998	1,668	584	364
P PINE-L	1	.2	33.7	77	0.2	1.1	212	212	35	35
LP PINE	2	13.2	10.9	52	2.6	8.5	538	269	152	76
ALP FIR	2	2.2	16.3	71	0.8	3.2	511	210	100	50
TOTAL	*35*	*71.8*	*15.7*	*58*	*24.3*	*96.2*	*13,309*	*9,290*	*2,778*	*2,136*

CONFIDENCE LIMITS OF THE SAMPLE

68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR

CL: 68.1 %	COEFF		SAMPLE TREES - BF			# OF TREES REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10
DOUG FIR	124.7	36.0	212	331	450			
W LARCH	79.1	27.9	281	390	499			
P PINE	63.1	28.1	338	470	602			
P PINE-L								
LP PINE	47.1	44.2	13	23	32			
ALP FIR	95.1	89.2	15	138	260			
TOTAL	*100.8*	*17.6*	*304*	*369*	*434*	*407*	*208*	*102*

CL: 68.1 %	COEFF		TREES/ACRE			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10
DOUG FIR	109.5	21.9	17	22	27			
W LARCH	134.0	26.8	12	16	21			
P PINE	168.9	33.8	12	17	23			
P PINE-L	509.9	102.1		0	0			
LP PINE	273.5	54.7	6	13	20			
ALP FIR	304.1	60.9	1	2	4			
TOTAL	*15.2*	*3.0*	*70*	*72*	*74*	*10*	*5*	*2*

CL: 68.1 %	COEFF		BASAL AREA/ACRE			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10
DOUG FIR	138.4	27.7	24	33	42			
W LARCH	126.5	25.3	21	28	35			
P PINE	121.4	24.3	17	22	28			
P PINE-L	509.9	102.1		1	2			
LP PINE	272.2	54.5	4	9	13			
ALP FIR	282.4	56.5	1	3	5			
TOTAL			*96*	*96*	*96*			

CL: 68.1 %	COEFF		NET BF/ACRE			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10
DOUG FIR	159.0	31.8	2,125	3,117	4,109			
W LARCH	128.8	25.8	2,831	3,814	4,798			
P PINE	132.8	26.6	1,225	1,668	2,112			

TC TSTATS

STATISTICS

PAGE 2

PROJECT **WESTFKFS**

DATE 11/5/2015

TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
34N	**24E**	**22**	**WEST FORK FS**	**00U1**	157.61	26	90	S	E

CL: 68.1 %	COEFF		**NET BF/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.	S.E.%	LOW	AVG	HIGH	5	7	10
P PINE-L	509.9	102.1		212	429			
LP PINE	272.3	54.5	122	269	415			
ALP FIR	292.3	58.5	87	210	332			
TOTAL	*43.0*	*8.6*	*8,490*	*9,290*	*10,090*	*77*	*39*	*19*

CL: 68.1 %	COEFF		**V-BAR/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10
DOUG FIR	123.1	24.6	64	94	124			
W LARCH			102	137	173			
P PINE	33.0	6.6	55	74	94			
P PINE-L	509.9	102.1		199	401			
LP PINE			14	31	49			
ALP FIR	235.3	47.1	27	65	104			
TOTAL	*260.0*	*52.0*	*88*	*97*	*105*	*2,816*	*1,437*	*704*

TC TSTATS

STATISTICS

PROJECT WESTFKFS

DATE 11/5/2015

TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
34N	**25E**	**08**	**WEST FORK FS**	**00U2**	194.01	37	95	S	E

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	37	95	2.6		
CRUISE	18	24	1.3	11,068	.2
DBH COUNT					
REFOREST COUNT	15	38	2.5		
BLANKS	4				
100 %					

STAND SUMMARY

	SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
P PINE	10	16.1	20.2	49	8.0	36.0	4,705	2,897	953	619
DOUG FIR	7	17.8	14.7	62	5.5	21.0	2,359	1,947	579	492
W LARCH	5	10.0	11.7	57	2.2	7.5	681	570	174	148
LP PINE	2	13.1	9.7	40	2.2	6.8	445	186	120	58
TOTAL	*24*	*57.0*	*15.1*	*53*	*18.3*	*71.3*	*8,191*	*5,600*	*1,826*	*1,318*

CONFIDENCE LIMITS OF THE SAMPLE

68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR

CL: 68.1 %	COEFF		**SAMPLE TREES - BF**			# OF TREES REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10
P PINE	73.2	24.4	232	307	382			
DOUG FIR	73.5	29.9	125	179	232			
W LARCH	107.2	53.3	55	117	180			
LP PINE	60.6	56.8	8	18	27			
TOTAL	*92.8*	*19.4*	*166*	*206*	*246*	*360*	*183*	*90*

CL: 68.1 %	COEFF		**TREES/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10
P PINE	84.4	13.9	14	16	18			
DOUG FIR	88.6	14.6	15	18	20			
W LARCH	207.6	34.1	7	10	13			
LP PINE	248.9	40.9	8	13	18			
TOTAL	*40.2*	*6.6*	*53*	*57*	*61*	*65*	*33*	*16*

CL: 68.1 %	COEFF		**BASAL AREA/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10
P PINE	78.9	13.0	31	36	41			
DOUG FIR	84.8	13.9	18	21	24			
W LARCH	188.0	30.9	5	8	10			
LP PINE	245.2	40.3	4	7	9			
TOTAL			*71*	*71*	*71*			

CL: 68.1 %	COEFF		**NET BF/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10
P PINE	81.8	13.4	2,507	2,897	3,286			
DOUG FIR	92.5	15.2	1,651	1,947	2,244			
W LARCH	192.0	31.6	390	570	750			
LP PINE	245.2	40.3	111	186	261			
TOTAL	*6.8*	*1.1*	*5,537*	*5,600*	*5,663*	*2*	*1*	*0*

CL: 68.1 %	COEFF		**V-BAR/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10
P PINE			70	80	91			
DOUG FIR			79	93	107			
W LARCH	101.2	16.6	52	76	100			
LP PINE			16	28	39			
TOTAL	*388.7*	*63.9*	*78*	*79*	*79*	*6,042*	*3,083*	*1,511*

TC TSTATS

STATISTICS

PROJECT WESTFKFS

DATE 11/5/2015

TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
34N	25E	08	WEST FORK FS	00U3	461.31	82	231	S	E

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	82	231	2.8		
CRUISE	44	60	1.4	29,747	.2
DBH COUNT					
REFOREST COUNT	24	63	2.6		
BLANKS	14				
100 %					

STAND SUMMARY

	SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
P PINE	35	28.5	17.0	49	10.9	45.1	4,783	2,972	1,073	697
DOUG FIR	24	34.7	12.9	56	8.8	31.5	3,039	2,405	770	640
W LARCH	1	1.3	15.5	58	0.4	1.7	155	110	46	39
TOTAL	*60*	*64.5*	*14.9*	*53*	*20.3*	*78.3*	*7,978*	*5,487*	*1,889*	*1,377*

CONFIDENCE LIMITS OF THE SAMPLE

68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR

CL: 68.1 %	COEFF		**SAMPLE TREES - BF**			# OF TREES REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10
P PINE	76.9	13.4	169	195	221			
DOUG FIR	175.4	36.6	83	131	179			
W LARCH								
TOTAL	*112.4*	*14.8*	*142*	*166*	*191*	*505*	*258*	*126*

CL: 68.1 %	COEFF		**TREES/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10
P PINE	83.2	9.2	26	28	31			
DOUG FIR	124.8	13.8	30	35	40			
W LARCH	744.6	82.2	0	1	2			
TOTAL	*56.2*	*6.2*	*60*	*64*	*68*	*126*	*64*	*32*

CL: 68.1 %	COEFF		**BASAL AREA/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10
P PINE	76.1	8.4	41	45	49			
DOUG FIR	123.0	13.6	27	32	36			
W LARCH	744.6	82.2	0	2	3			
TOTAL	*42.9*	*4.7*	*75*	*78*	*82*	*74*	*38*	*18*

CL: 68.1 %	COEFF		**NET BF/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10
P PINE	76.7	8.5	2,720	2,972	3,224			
DOUG FIR	127.4	14.1	2,067	2,405	2,744			
W LARCH	744.6	82.2	20	110	200			
TOTAL	*47.0*	*5.2*	*5,202*	*5,487*	*5,772*	*88*	*45*	*22*

CL: 68.1 %	COEFF		**V-BAR/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10
P PINE			60	66	72			
DOUG FIR			66	76	87			
W LARCH	151.9	16.8	12	65	118			
TOTAL	*415.7*	*45.9*	*66*	*70*	*74*	*6,911*	*3,526*	*1,728*

TC TSTATS

STATISTICS

PROJECT WESTFKFS

DATE 11/5/2015

TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
34N	25E	09	WEST FORK FS	00U4	382.00	64	157	S	E

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	64	157	2.5		
CRUISE	27	42	1.6	16,550	.3
DBH COUNT					
REFOREST COUNT	24	44	1.8		
BLANKS	13				
100 %					

STAND SUMMARY

	SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
DOUG FIR	33	33.8	15.9	55	11.7	46.9	4,993	3,843	1,250	1,047
P PINE	8	7.6	22.2	70	4.3	20.4	2,737	1,697	612	398
W LARCH	1	1.9	9.1	56	0.3	.9	38	33	12	10
TOTAL	*42*	*43.3*	*17.0*	*58*	*16.5*	*68.1*	*7,768*	*5,572*	*1,874*	*1,455*

CONFIDENCE LIMITS OF THE SAMPLE

68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR

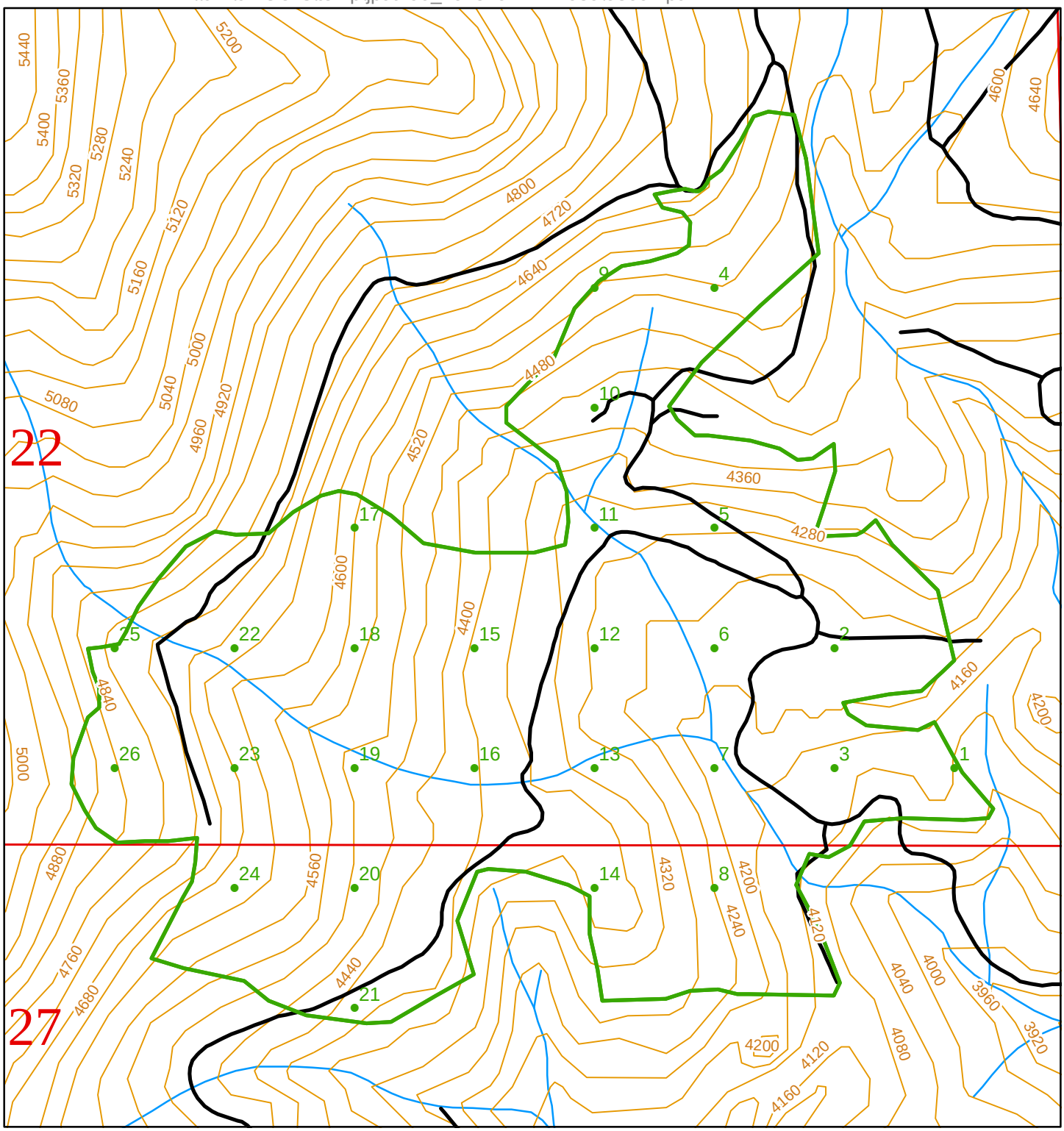
CL: 68.1 %	COEFF		**SAMPLE TREES - BF**			# OF TREES REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10
DOUG FIR	98.4	17.1	180	217	254			
P PINE	47.1	17.8	205	249	294			
W LARCH								
TOTAL	*90.6*	*14.0*	*188*	*218*	*249*	*328*	*167*	*82*

CL: 68.1 %	COEFF		**TREES/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10
DOUG FIR	100.8	12.6	30	34	38			
P PINE	124.5	15.6	6	8	9			
W LARCH	561.2	70.1	1	2	3			
TOTAL	*74.3*	*9.3*	*39*	*43*	*47*	*221*	*113*	*55*

CL: 68.1 %	COEFF		**BASAL AREA/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10
DOUG FIR	96.1	12.0	41	47	53			
P PINE	124.3	15.5	17	20	24			
W LARCH	561.2	70.1	0	1	1			
TOTAL	*62.9*	*7.9*	*63*	*68*	*74*	*158*	*81*	*40*

CL: 68.1 %	COEFF		**NET BF/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10
DOUG FIR	98.3	12.3	3,371	3,843	4,315			
P PINE	125.0	15.6	1,432	1,697	1,962			
W LARCH	561.2	70.1	10	33	56			
TOTAL	*64.2*	*8.0*	*5,125*	*5,572*	*6,019*	*165*	*84*	*41*

CL: 68.1 %	COEFF		**V-BAR/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10
DOUG FIR			72	82	92			
P PINE			70	83	96			
W LARCH	390.4	48.8	11	38	64			
TOTAL	*438.8*	*54.8*	*75*	*82*	*88*	*7,701*	*3,929*	*1,925*



FMU POLYGON AND SAMPLE POINT INFORMATION

FMU_NM:	WEST FORK F SALV U1	Township:	T34R24E
FMU_ID:	93694	DNR Region:	NORTHEAST
Acres:	169	Total Sample Points:	26
County:	OKANOGAN	Spacing Between Points:	Width: 510 Height: 510
		Point Rotation Degrees:	0

N

0 210 420 840 1,260 1,680 Feet

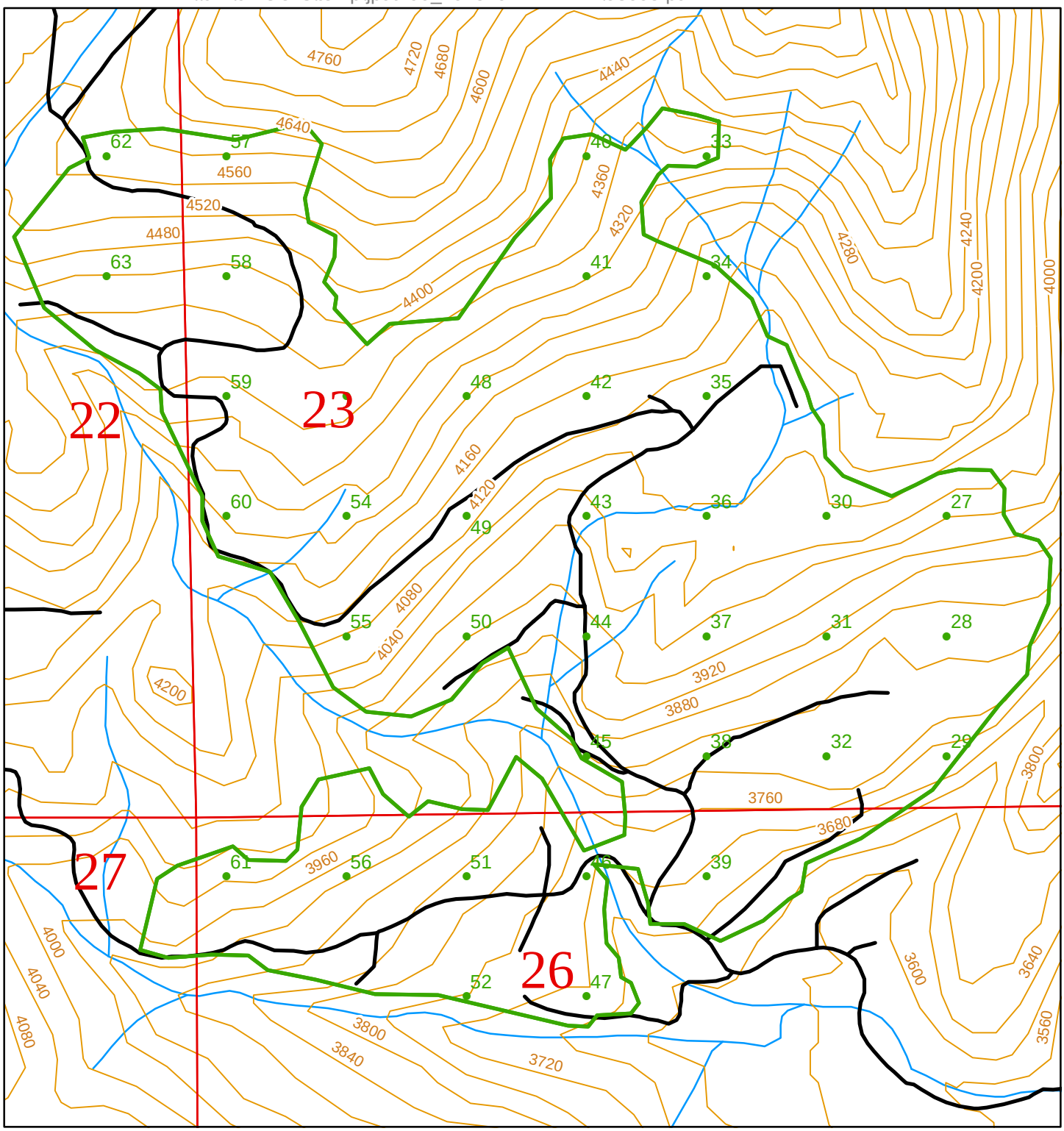
Scale 1:7,200

Legend

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

Washington State Department of Natural Resources
Peter Goldmark, Commissioner of Public Lands

Oct 27, 2015 02:22 PM



FMU POLYGON AND SAMPLE POINT INFORMATION

FMU_NM:	WEST FORK F SALV U2	Township:	T34R24E
FMU_ID:	93695	DNR Region:	NORTHEAST
Acres:	207	Total Sample Points:	37
County:	OKANOGAN	Spacing Between Points:	Width: 510 Height: 510
		Point Rotation Degrees:	0

N

0 210 420 840 1,260 1,680 Feet

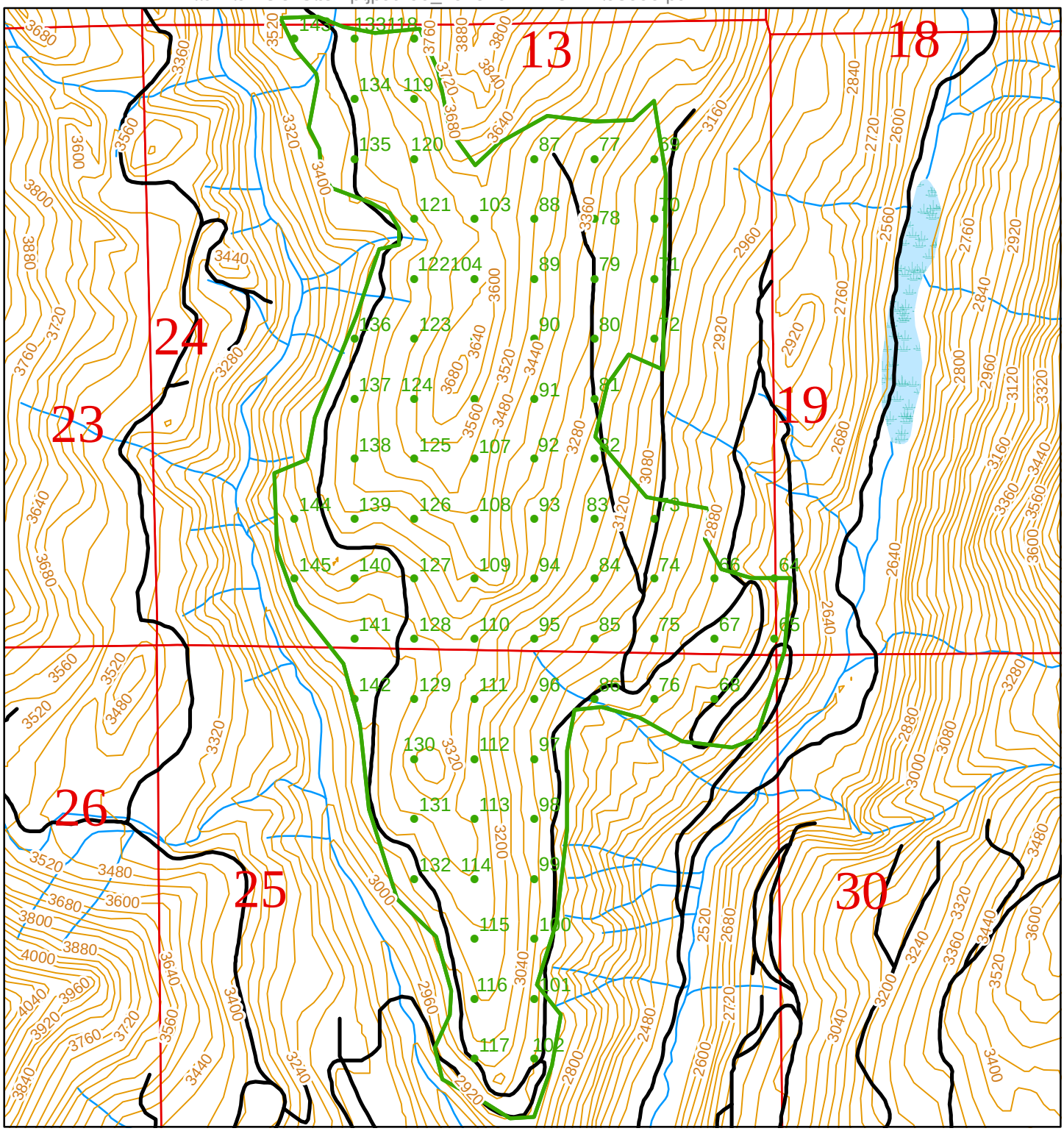
Scale 1:7,200

Legend

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

Washington State Department of Natural Resources
Peter Goldmark, Commissioner of Public Lands

Oct 27, 2015 02:30 PM



FMU POLYGON AND SAMPLE POINT INFORMATION

FMU_NM:	WEST FORK F SALV U3	Township:	T34R25E, T34R24E
FMU_ID:	93696	DNR Region:	NORTHEAST
Acres:	472	Total Sample Points:	82
County:	OKANOGAN	Spacing Between Points:	Width: 510 Height: 510
		Point Rotation Degrees:	0

N

0 420 840 1,680 2,520 3,360 Feet

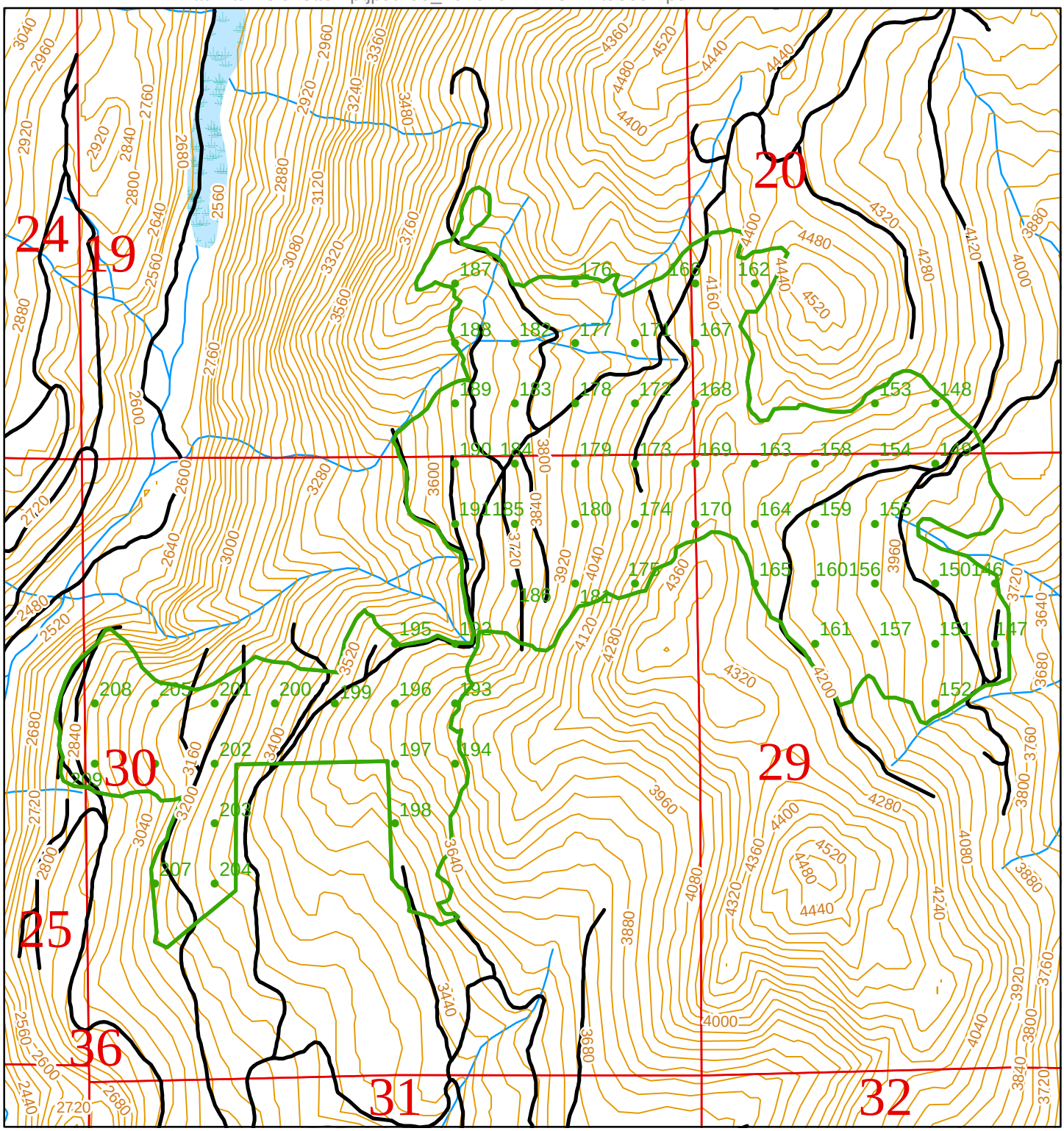
Scale 1:14,400

Legend

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

Washington State Department of Natural Resources
Peter Goldmark, Commissioner of Public Lands

Oct 27, 2015 02:35 PM



FMU POLYGON AND SAMPLE POINT INFORMATION

FMU_NM:	WEST FORK F SALV U4	Township:	T34R25E, T34R24E
FMU_ID:	93697	DNR Region:	NORTHEAST
Acres:	397	Total Sample Points:	64
County:	OKANOGAN	Spacing Between Points:	Width: 510 Height: 510
		Point Rotation Degrees:	0

N

0 420 840 1,680 2,520 3,360 Feet

Scale 1:14,400

Legend

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

Washington State Department of Natural Resources
Peter Goldmark, Commissioner of Public Lands

Oct 27, 2015 02:40 PM

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

FPA/N No: 3020612
Effective Date: 12/18/2015
Expiration Date: 12/18/2018
Shut Down Zone: 678 W
EARR Tax Credit: [X] Eligible [ ] Non-eligible
Reference: DNR
WEST FORK SALVAGE

Forest Practices Application/Notification
Notice of Decision

Decision

[ ] Notification Operations shall not begin before the effective date.

[X] Approved This Forest Practices Application is subject to the conditions listed below.

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

[ ] Closed Applicant has withdrawn FPA/N.

FPA/N Classification

[ ] Class II [X] Class III [ ] Class IVG [ ] Class IVS

Number of Years Granted on Multi-Year Request

[ ] 4 years [ ] 5 years

Conditions on Approval / Reasons for Disapproval

Conditions:

Conditions:

1. Water courses and wetland management areas have been identified within this permit. If changes occur to water courses or wetlands during the timeframe of this permit, notify the forest practice forester immediately for correct protection measures.

2. Where harvesting operations occur on slopes or near draws that have the potential to deliver sediment to a public resource, it is required that measures be taken to minimize that potential. These would include: progressive waterbarring of skid trails, slash placement or grass seeding. Falling and leaving small trees or logs that are perpendicular to the slope can also be helpful in minimizing erosion to slopes and delivery of sediment to a public resource.

Reminder:

3. 2 green recruitment trees and 2 wildlife reserve trees are required to be left, per acre, following harvest. These trees may be scattered throughout the harvest unit(s) or may be clumped, depending on the landowners option. If clumped, the forest practice permit (fpa) must be amended and the clumps shown on the harvest map. Where grts do not exist due to fire severity, only 2 wrts are required per acre. Wrts must be the 2 largest trees per acre for cavity nesters.

Issued By: SHANE KNOWLTON **Region:** Northeast

Title: Forest Practices Forester **Date:** ~~12/12/2015~~ 12/18/15

Copies to: [ ] Landowner, Timber Owner and Operator.

Issued in person: [X] Landowner [X]Timber Owner [X] Operator **By:** NONDIS TAYLOR

Conditions on Approval / Reasons for Disapproval (continued from page 2 of 3)

4. For every acre harvested, reforestation is required. If green trees suitable for seed production exist and will be thinned and left on site, then natural reforestation is adequate where the green seed source exists. If no seed source exists due to fire severity, then artificial reforestation is required by means of hand planting and must be accomplished 3 years following harvest at an acceptable stocking level suitable for the specific site that's harvested. It is suggested you work closely with the forest practice forester to determine adequate reforestation numbers for seedlings per acre.

STATE OF WASHINGTON

DEPARTMENT OF NATURAL RESOURCES

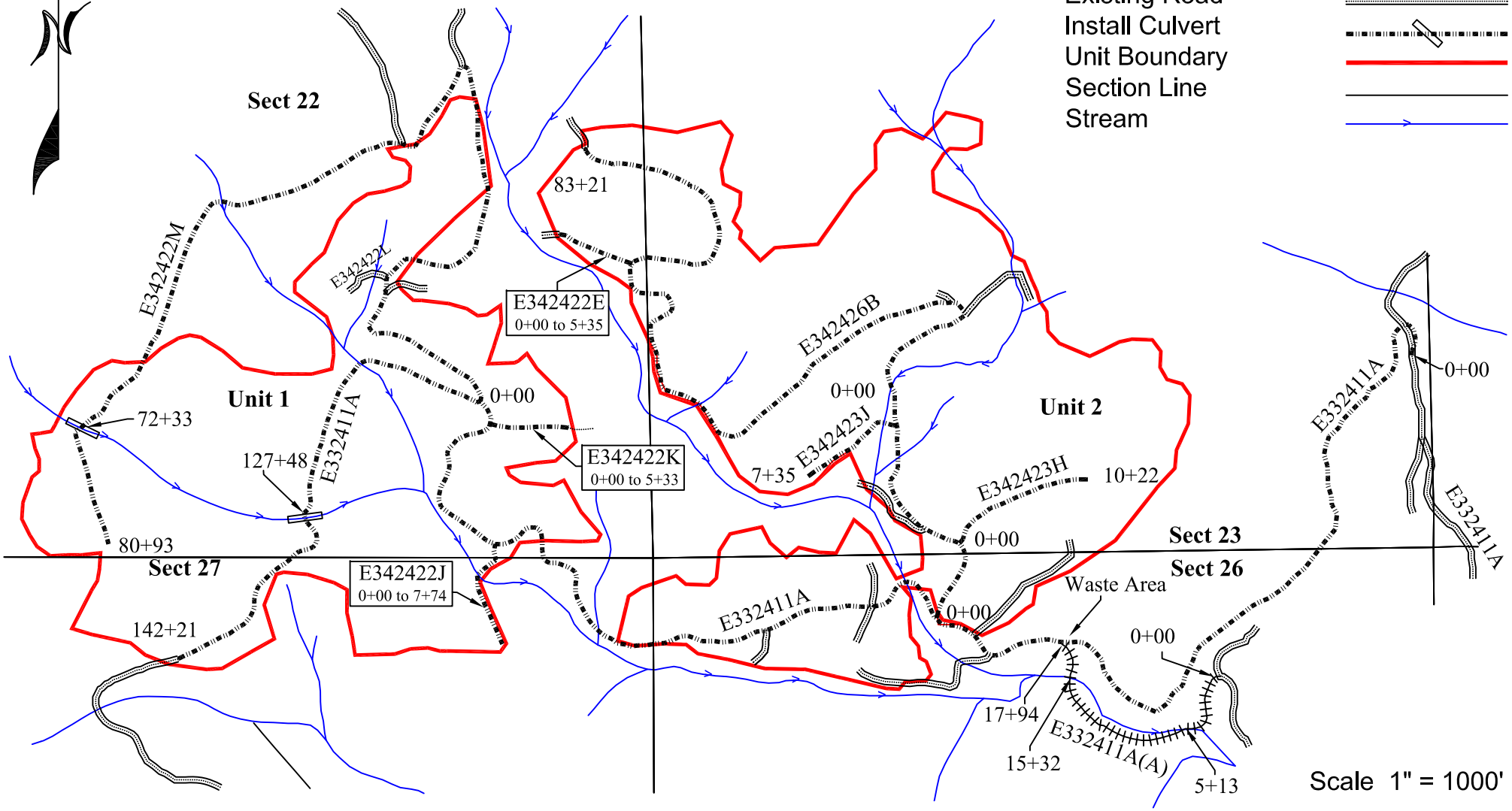
Agreement No.: 30-093223
Name of Sale: West Fork Fire Salvage
Trust: 03

Region: Northeast
County: Okanogan

TOWNSHIP 34 N, RANGE 24 E, W.M.

ROAD PLAN

Prehaul Maintenance
Abandonment
Existing Road
Install Culvert
Unit Boundary
Section Line
Stream



Scale 1" = 1000'

Map 1 of 4

Jason Bauer 11-03-15

STATE OF WASHINGTON

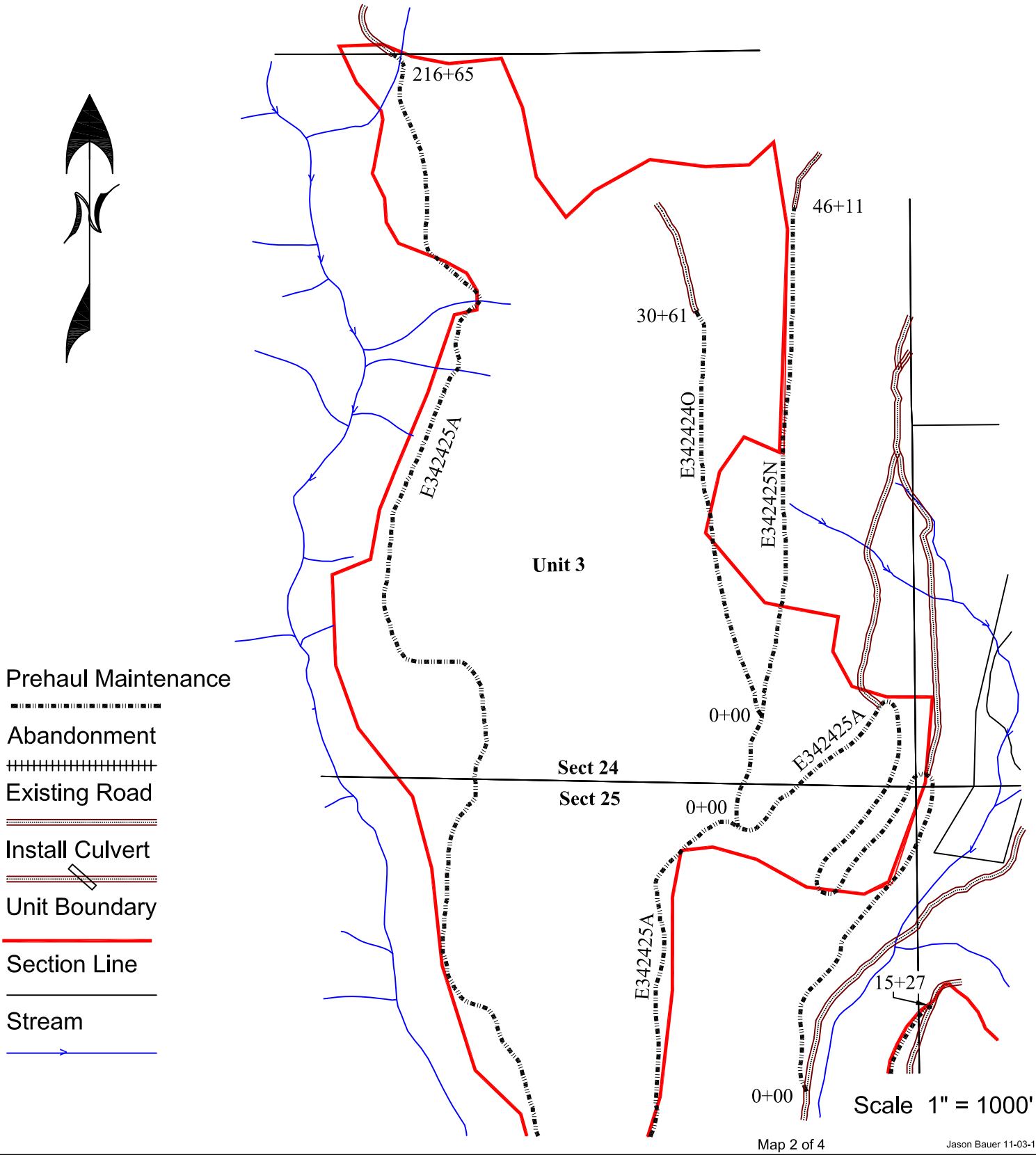
DEPARTMENT OF NATURAL RESOURCES

Agreement No.: 30-093223
Name of Sale: West Fork Fire Salvage
Trust: 03

Region: Northeast
County: Okanogan

TOWNSHIP 34 N, RANGE 24 AND 25 E, W.M.

ROAD PLAN



Jason Bauer 11-03-15

STATE OF WASHINGTON

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Agreement No.: 30-093223
Name of Sale: West Fork Fire Salvage
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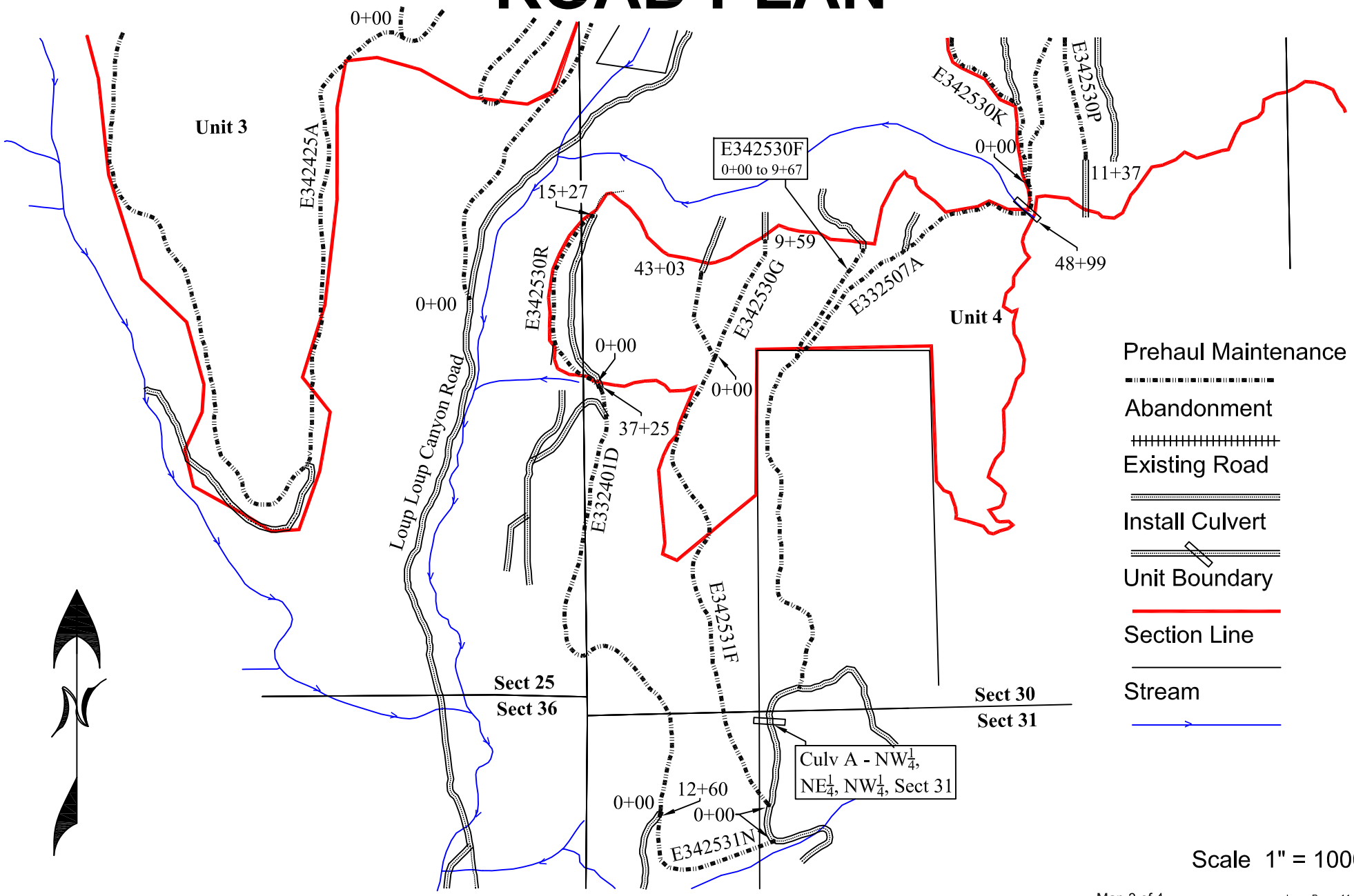
TOWNSHIP 34 N, RANGE 24 AND 25 E, W.M.

Region: Northeast
County: Okanogan

ROAD PLAN



Scale 1" = 1000'

Jason Bauer 11-03-15

STATE OF WASHINGTON

DEPARTMENT OF NATURAL RESOURCES

Agreement No.: 30-093223
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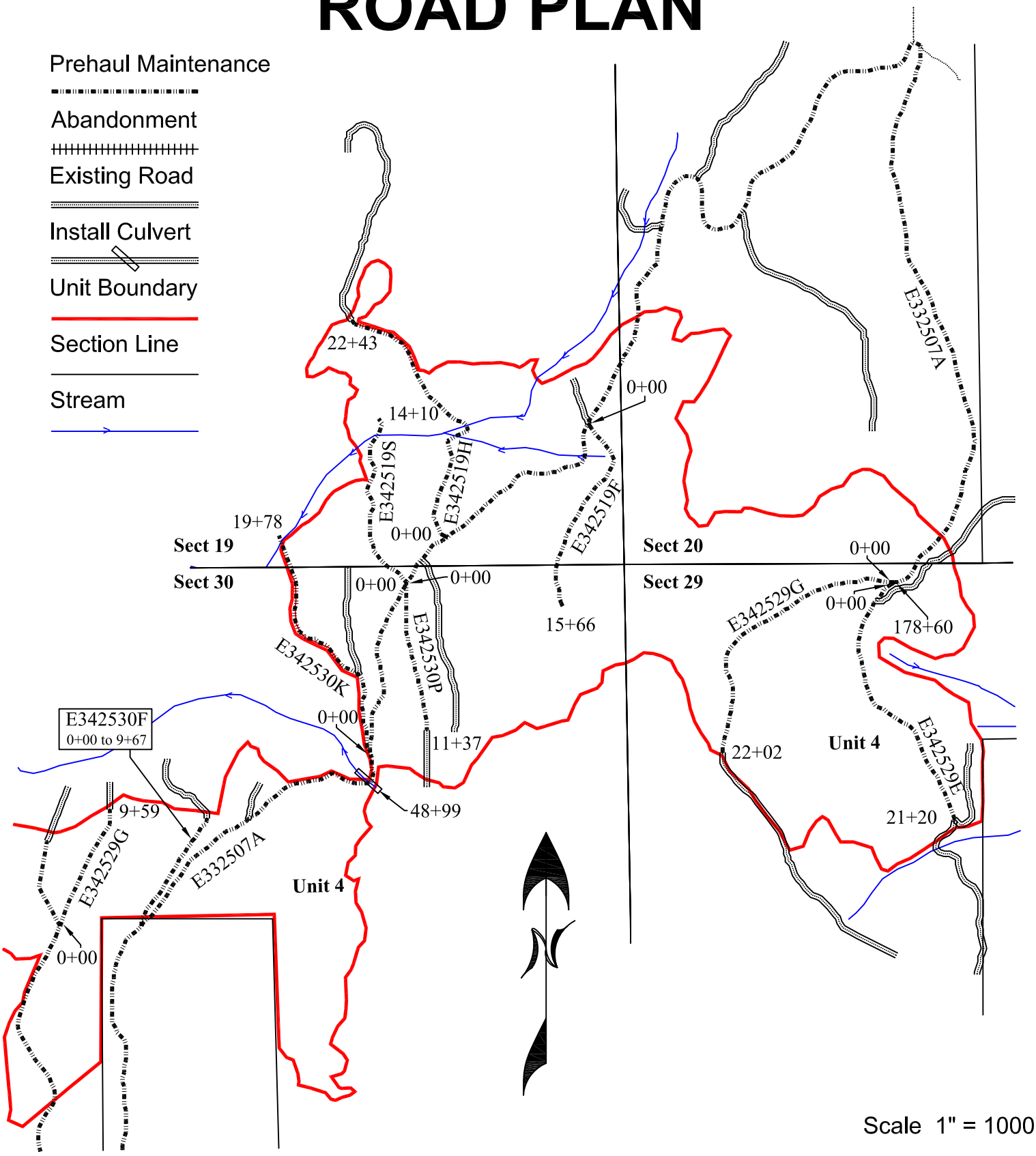
County: Okanogan

TOWNSHIP 34 N, RANGE 25 E, W.M.

ROAD PLAN



Scale 1" = 1000'

Jason Bauer 11-03-15

STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES

WEST FORK FIRE SALVAGE TIMBER SALE ROAD PLAN
OKANOGAN COUNTY
SOUTH OKANOGAN DISTRICT

AGREEMENT NO.: 30-093223 STAFF ENGINEER: JASON BAUER

DATE: 11/03/2015 DRAWN & COMPILED BY: JASON BAUER

SECTION 0 – SCOPE OF PROJECT

0-1 ROAD PLAN SCOPE

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

0-2 REQUIRED ROADS

The specified work on the following roads is required.

Road	Stations	Type
E332401D	37.25	Pre-haul Maintenance
E332411A	142.21	Pre-haul Maintenance
E332411A(A)	17.94	Abandonment
E332507A	178.60	Pre-haul Maintenance
E342422E	5.35	Pre-haul Maintenance
E342422J	7.74	Pre-haul Maintenance
E342422K	5.33	Pre-haul Maintenance
E342422M	80.93	Pre-haul Maintenance
E342423H	10.22	Pre-haul Maintenance
E342423J	7.35	Pre-haul Maintenance
E342424O	30.61	Pre-haul Maintenance
E342425A	216.65	Pre-haul Maintenance
E342425N	46.11	Pre-haul Maintenance
E342426B	83.21	Pre-haul Maintenance
E342519F	15.66	Pre-haul Maintenance
E342519H	22.43	Pre-haul Maintenance
E342519S	14.10	Pre-haul Maintenance
E342529E	21.20	Pre-haul Maintenance
E342529G	22.02	Pre-haul Maintenance
E342530F	9.67	Pre-haul Maintenance
E342530G	9.59	Pre-haul Maintenance
E342530K	19.78	Pre-haul Maintenance

E342530P	11.37	Pre-haul Maintenance
E342530R	15.27	Pre-haul Maintenance
E342531F	43.03	Pre-haul Maintenance
E342531N	12.60	Pre-haul Maintenance

0-6 PRE-HAUL MAINTENANCE

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

Road	Stations	Requirements
E332401D	0+00 to 37+25	Brush, Shape, add and improve drainage
E332411A	0+00 to 142+21	Brush, Shape, add and improve drainage
E332507A	0+00 to 178+60	Brush, Shape, add and improve drainage
E342422E	0+00 to 5+35	Brush, Shape, add and improve drainage
E342422J	0+00 to 7+74	Brush, Shape, add and improve drainage
E342422K	0+00 to 5+33	Brush, Shape, add and improve drainage
E342422M	0+00 to 80+93	Brush, Shape, add and improve drainage
E342423H	0+00 to 10+22	Brush, Shape, add and improve drainage
E342423J	0+00 to 7+35	Brush, Shape, add and improve drainage
E342424O	0+00 to 30+61	Brush, Shape, add and improve drainage
E342425A	0+00 to 216+65	Brush, Shape, add and improve drainage
E342425N	0+00 to 46+11	Brush, Shape, add and improve drainage
E342426B	0+00 to 83+21	Brush, Shape, add and improve drainage
E342519F	0+00 to 15+66	Brush, Shape, add and improve drainage
E342519H	0+00 to 22+43	Brush, Shape, add and improve drainage
E342519S	0+00 to 14+10	Brush, Shape, add and improve drainage

E342529E	0+00 to 21+20	Brush, Shape, add and improve drainage
E342529G	0+00 to 22+02	Brush, Shape, add and improve drainage
E342530F	0+00 to 9+67	Brush, Shape, add and improve drainage
E342530G	0+00 to 9+59	Brush, Shape, add and improve drainage
E342530K	0+00 to 19+78	Brush, Shape, add and improve drainage
E342530P	0+00 to 11+37	Brush, Shape, add and improve drainage
E342530R	0+00 to 15+27	Brush, Shape, add and improve drainage
E342531F	0+00 to 43+03	Brush, Shape, add and improve drainage
E342531N	0+00 to 12+60	Brush, Shape, add and improve drainage

0-7 POST-HAUL MAINTENANCE

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

0-10 ABANDONMENT

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

SECTION 1 – GENERAL

1-1 ROAD PLAN CHANGES

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

1-2 UNFORESEEN CONDITIONS

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

1-3 ROAD DIMENSIONS

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

1-4 ROAD TOLERANCES

Road work shall be performed within the tolerance listed below. The tolerance class for each road is listed on the TYPICAL SECTION SHEET.

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

1-6 ORDER OF PRECEDENCE

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

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

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

1-7 TEMPORARY ROAD CLOSURE

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

1-8 REPAIR OR REPLACEMENT OF DAMAGED MATERIALS

The Purchaser is responsible for the repair or replacement of all materials, roadway infrastructure, and road components damaged during road work or operation activities. Repairs and replacements shall be directed by the Contract Administrator. Repairs to structural materials will be made according to the manufacturer's recommendation , and shall not begin without written approval from the Contract Administrator.

1-9 DAMAGED METALLIC COATING

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

1-15 ROAD MARKING

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

- Centerline marked in orange flagging for new construction road work.

1-18 REFERENCE POINT DAMAGE

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

1-21 HAUL APPROVAL

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

1-22 WORK NOTIFICATIONS

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

1-25 ACTIVITY TIMING RESTRICTION

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

<u>November 15 to April 30</u>

1-26 OPERATING DURING CLOSURE PERIOD

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

1-29 SEDIMENT RESTRICTION

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

1-30 CLOSURE TO PREVENT DAMAGE

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

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

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

1-32 BRIDGE AND ASPHALT SURFACE RESTRICTION

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

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

1-33 SNOW PLOWING RESTRICTION

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

1-40 ROAD APPROACHES TO COUNTY ROADS AND STATE HIGHWAYS

At existing road approaches to county roads and state highways; any mud, dirt, rock or other material tracked or spilled on the asphalt/chip seal surface shall be removed immediately by the Purchaser.

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

1-42 UTILITY ACCESS ROAD

Construction of the following road(s) intersect(s) existing utility access roads. The Purchaser shall construct intersecting roads so that the utility access roads are accessible at all times.

1-43 ROAD WORK AROUND UTILITIES

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

SECTION 2 – MAINTENANCE

2-1 GENERAL ROAD MAINTENANCE

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

2-4 PASSAGE OF LIGHT VEHICLES

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

2-5 MAINTENANCE GRADING – EXISTING ROAD

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

2-6 CLEANING CULVERTS

All inlets and outlets of culverts shall be cleaned before the haul of timber.

2-7 CLEANING DITCHES, HEADWALLS, AND CATCH BASINS

Purchaser shall ensure all ditches are clean before the haul of timber.

SECTION 3 – CLEARING, GRUBBING, AND DISPOSAL

3-1 BRUSHING

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

3-2 BRUSHING RESTRICTION

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

3-3 BRUSH REMOVAL

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

3-5 CLEARING

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

3-7 RIGHT-OF-WAY DECKING

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

3-8 PROHIBITED DECKING AREAS

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

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

3-10 GRUBBING

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

3-14 STUMPS WITHIN DESIGNATED WASTE AREAS

The removal of stumps is not required within waste areas if they are cut flush with the ground.

3-20 ORGANIC DEBRIS DEFINITION

Organic debris is defined as all vegetative material not eligible for removal by Contract Clauses G-010 PRODUCTS SOLD AND SALE AREA or G-011 RIGHT TO REMOVE FOREST

PRODUCTS AND CONTRACT AREA, that is larger than one cubic foot in volume within the grubbing limits as shown on the TYPICAL SECTION SHEET.

3-21 DISPOSAL COMPLETION

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

3-22 DESIGNATED WASTE AREA FOR ORGANIC DEBRIS

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

3-23 PROHIBITED DISPOSAL AREAS

Organic debris shall not be deposited in the following areas:

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

3-24 BURYING ORGANIC DEBRIS RESTRICTED

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

3-25 SCATTERING ORGANIC DEBRIS

Organic debris shall be scattered outside of the grubbing limits or in natural openings unless otherwise directed by the Contract Administrator. Where natural openings are unavailable or restrictive, alternative debris disposal methods shall be subject to the written approval of the Contract Administrator.

3-30 EXCLUSION OF DOZER BLADES

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

3-31 PILING

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

SECTION 4 – EXCAVATION

4-1 EXCAVATOR CONSTRUCTION

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

4-2 PIONEERING

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

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

4-3 ROAD GRADE AND ALIGNMENT STANDARDS

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

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

Note: only use 18% if you have to 14-16% favorable would be better.

4-4 SWITCHBACK STANDARDS

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

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

4-5 CUT SLOPE RATIO

Unless construction staked or designed excavation slopes shall be constructed no steeper than shown on the following table:

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

4-6 EMBANKMENT SLOPE RATIO

Unless construction staked or designed, embankment slopes shall be constructed no steeper than shown on the following table:

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

4-7 SHAPING CUT AND FILL SLOPE

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

4-8 CURVE WIDENING

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

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

4-9 EMBANKMENT WIDENING

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

Height at Centerline	Subgrade Widening
Less than 6 feet	2 feet
6 feet or over	4 feet

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

4-12 FULL BENCH CONSTRUCTION

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

4-14 ONE-FOOT EXCAVATION LIMIT

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

4-21 TURNOUTS

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

4-22 TURNAROUNDS

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

4-25 DITCH CONSTRUCTION AND RECONSTRUCTION

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

4-28 DITCH DRAINAGE

Ditches shall drain to cross-drain culverts and ditchouts.

4-29 DITCHOUTS

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

4-35 WASTE MATERIAL DEFINITION

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

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

4-37 WASTE AREA LOCATION

Waste material shall be deposited in areas approved by the Contract Administrator. The amount of material to be contained in a waste area shall be at the discretion of the Contract Administrator**.**

4-38 PROHIBITED WASTE DISPOSAL AREAS

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

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

4-46 COMMON BORROW

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

4-47 NATIVE MATERIAL

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

4-48 BORROW MATERIAL

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

4-49 BORROW SOURCE

Borrow may be obtained from the State. Development of the borrow source shall be in accordance with a written BORROW SOURCE DEVELOPMENT PLAN to be submitted by the Purchaser and approved by the Contract Administrator.

4-50 BORROW APPLICATION

Borrow shall be spread, shaped and compacted full width concurrent with hauling operations.

4-55 ROAD SHAPING

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

4-56 DRY WEATHER SHAPING

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

4-60 FILL COMPACTION

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

4-61 SUBGRADE COMPACTION

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

4-62 DRY WEATHER COMPACTION

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

SECTION 5 – DRAINAGE

5-1 REMOVAL OF SHOULDER BERMS

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

5-5 CULVERTS

Culverts shall be installed as part of this contract. Culverts shall be installed concurrently with subgrade work and shall be installed before subgrade compaction and rock application. Culvert locations and the minimum requirements for culvert length and diameter are designated on the CULVERT AND DRAINAGE LIST. Culvert, downspout, and flume lengths shall be adjusted to fit as-built conditions and shall not terminate directly on unprotected soil that will erode. Culverts shall be new steel, aluminum, or polyethylene meeting the material specifications in Clauses 10-15 through 10-23. Culvert placement shall precede embankment construction.

5-10 STATE SUPPLIED CULVERTS

The following culverts will be supplied by the state and are available at the Omak Work Center located at the Omak Airport. Airport address is 102 Omak Airport Rd, Omak, WA 98858. Contact the Contract Adminstrator for further details.

Road	Size	Location
E332507A	24" x 30'	Culvert A – NW ¼ , NE ¼, NW ¼, Sect 31

5-11 UNUSED MATERIALS STATE PROPERTY

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

5-15 CULVERT INSTALLATION

Installation shall be in accordance with the CULVERT AND DRAINAGE SPECIFICATION DETAIL and the National Corrugated Metal Pipe Association's "Installation Manual for Corrugated Steel Drainage Structures". **C**orrugated Polyethylene Pipes are not permitted.

5-16 APPROVAL FOR LARGER CULVERT INSTALLATION

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

5-17 CROSS DRAIN SKEW AND SLOPE

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

5-18 CULVERT DEPTH OF COVER

Cross drain culverts shall be installed with a depth of cover of not less than 1 foot of compacted subgrade over the top of the culvert at the shallowest point. Stream crossing culverts shall be installed with a depth of cover specified in the Engineer's design, or to the minimum depth recommended by the culvert manufacturer for the type of cover material over the pipe, whichever is greater.

5-20 ENERGY DISSIPATERS

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

5-21 DOWNSPOUTS AND FLUMES

Downspouts and flumes longer than 5 feet shall be staked on both sides at maximum intervals of 10 feet with 6-foot heavy-duty steel posts, and fastened securely to the posts

with No. 10 galvanized smooth wire or 1/2-inch bolts in accordance with the CULVERT AND DRAINAGE SPECIFICATION DETAIL.

5-25 CATCH BASINS

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

5-26 HEADWALLS FOR CROSS DRAIN CULVERTS

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

5-27 ARMORING FOR STREAM CROSSING CULVERTS

At the following culvert(s), light loose riprap shall be set in place in conjunction with construction of the embankment. Rock shall be placed on shoulders, slopes, and around culvert inlets and outlets. Rock shall not restrict the flow of water into culvert inlets or catch basins. Rock shall be set in place by machine. Placement shall be by zero-drop-height method only. No placement by end dumping or dropping of rock shall be allowed.

Road	Stations	Rock Type
E332411A	127+48	Light Loose Riprap
E332507A	48+99	Light Loose Riprap
E342422M	72+33	Light Loose Riprap

5-30 DRIVABLE WATERBAR CONSTRUCTION

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

5-31 ROLLING DIP CONSTRUCTION

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

5-33 NATIVE SURFACE ROADS

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

SECTION 6 – ROCK AND SURFACING

6-5 ROCK FROM COMMERCIAL SOURCE

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

6-20 IN-PLACE PROCESSING

The Purchaser may use in-place processing, such as a grid roller or other method, if suitable crushing can be demonstrated to meet the surfacing size restrictions specified in Clause **Error! Reference source not found.**. The use of in-place processing methods is subject to written approval by the Contract Administrator.

6-21 FRACTURE REQUIREMENT FOR ROCK

A minimum of 50% by weight of coarse aggregate shall have at least one fractured face. Coarse aggregate is the material greater than 1/4-inch in size.

6-23 ROCK GRADATION TYPES

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

6-33 3-INCH MINUS CRUSHED ROCK

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

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

% Passing 3” square sieve	100%
% Passing 2” square sieve	65 - 95%
% Passing 3/4” square sieve	28 - 70%
% Passing U.S. #4 sieve	10 - 35%
% Passing U.S. #200 sieve	0 - 10%

% passing 3” square sieve	100%
% passing 2” square sieve	65 - 95%

% passing 3/4” square sieve	28 - 70%
% Passing U.S. #4 sieve	10 - 35%
% passing U.S. #200 sieve	0 - 10%

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

6-34 3-INCH JAW RUN MINUS BALLAST ROCK

% Passing 3” square sieve	100%
% Passing 1 ½” square sieve	45 - 65%

% Passing 3" square sieve	100%

A minimum of 35% shall have a fractured surface.

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

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

6-41 PIT RUN ROCK

Pit Run rock shall contain no more than 5 percent by weight of organic debris , dirt, and trash. Pit Run will meet the following specifications for rock gradation when placed on the subgrade:

No more than 10 percent of the rock shall be larger than 8 inches in any dimension and no rock shall be larger than 12 inches in any dimension. Rock may require processing to meet this specification.

6-50 LIGHT LOOSE RIP RAP

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

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

6-51 HEAVY LOOSE RIP RAP

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

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

6-55 ROCK APPLICATION MEASURED BY COMPACTED DEPTH

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

6-70 APPROVAL BEFORE ROCK APPLICATION

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

6-71 ROCK APPLICATION

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

6-73 ROCK FOR WIDENED PORTIONS

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

SECTION 8 – EROSION CONTROL

8-1 SEDIMENT CONTROL

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

8-2 PROTECTION FOR EXPOSED SOIL

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

SECTION 9 – POST-HAUL ROAD WORK

9-1 EARTHEN BARRICADES

On the following road(s), barricades shall be constructed in accordance with the SPOILS BERM DETAIL.

Road	Stations
E332411A(A)	0+00 to 17+94

9-2 CULVERT REMOVAL FROM LIVE STREAM

On the following road(s), Purchaser shall remove existing culverts from live streams and leave the resulting channel open with excavation slope and excavated channel width as specified. *Excavated material shall be placed in a designated in Clause 4-37 WASTE AREA LOCATION*. Culvert removal from live streams shall be in accordance with the Forest Practices Rules and Regulations, Best Management Practices and any stipulations attached to governing FPA.

Road	Stations	Excavated Channel Width	Slope Ratio	Comments
E332411A	5+13	4 feet	3:1	Divert flow before culvert removal.
E332411A	15+32	4 feet	3:1	Divert flow before culvert removal

9-3 REMOVAL OF CULVERT MATERIAL FROM STATE LAND

Culvert material removed from roads becomes the property of the Purchaser and must be removed from state land. *If required by the Contract Administrator, specific culvert materials shall be salvaged and delivered to a specified location.*

9-5 POST-HAUL MAINTENANCE

Post-haul maintenance shall be performed in accordance with the FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS.

9-10 LANDING DRAINAGE

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

9-11 LANDING EMBANKMENT

Landing embankments shall be sloped to original construction specifications.

9-21 ROAD ABANDONMENT

The following road shall be abandoned by the Purchaser ***before the termination of this contract.***

Road	Stations	Type	Date
E332411A(A)	0+00 to 17+94	Medium	**N/A**

9-23 MEDIUM ABANDONMENT

- Fill in ditches.
- Rip the surface to a minimum depth of 10 inches.
- Remove road shoulder berms except as directed.
- Construct non-drivable waterbars according to the attached NON-DRIVABLE WATERBAR DETAIL at a maximum spacing which will produce a vertical drop of no more than 10 feet between waterbars or between natural drainage paths and with a maximum spacing of 100 feet, or as marked in the field.
- Skew waterbars at least 30 degrees from perpendicular to the road centerline on roads in excess of 3 percent grade.
- Key waterbars into the cut-slope to intercept the ditch. Waterbars shall be outsloped to provide positive drainage. Outlets shall be on stable locations.
- Block roads with earthen barricades according to the attached NE SPOILS BERM DETAIL.
- Remove culverts.
- Remove 2 culverts and fill from live streams.
- Slope all trench walls and approach embankments no steeper than 3:1.
- Apply grass seed concurrently with abandonment.
- Cover, concurrently with abandonment, all exposed soils within 50 feet of any live stream, with a 6-inch deep layer of straw.
- Furnish and evenly spread a 6-inch layer of straw to all exposed soils associated with stream culvert removals, as well as all waste material generated by fill removal that are within 30 feet of excavation limits.
- Scatter woody debris onto abandoned road surfaces.

SECTION 10 MATERIALS

10-15 CORRUGATED STEEL CULVERT

Metallic coated steel culverts shall meet AASHTO M-36 (ASTM A-760) specifications. Culverts shall be galvanized (zinc coated meeting AASHTO M-218) except culverts over 24 inches shall be aluminized (aluminum type 2 coated meeting AASHTO M-274.

10-16 CORRUGATED ALUMINUM CULVERT

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

10-17 CORRUGATED PLASTIC CULVERT

Polyethylene culverts shall not be used on this timber sale.

10-20 FLUME AND DOWNSPOUT

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

10-21 METAL BAND

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

10-23 GAGE AND CORRUGATION

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

Diameter	Gage	Corrugation
18"	16 (0.064")	2 $^{2}/_{3}$" X $^{1}/_{2}$"
24" to 48"	16 (0.079")	2 $^{2}/_{3}$" X $^{1}/_{2}$"
54" to 96"	14 (0.079")	3" X 1"

FOREST ROAD ACCESS

Road Maintenance Specifications

Prior to Acceptance of Contract or Acceptance on Timber Sale

A. Cuts and Fills

(1) Maintain slope lines as constructed. Remove slides from the ditches and roadway. Replace fills to 1 ½:1 slopes with selected material or as directed. Remove overhanging material from cut slopes.

(2) Material from slides or other sources requiring removal must not be deposited in streams or at locations where it will erode into streams or water courses.

(3) Undesirable slide materials and debris must not be allowed to contaminate or mix with surface material.

B. Roadway Surfaces

(1) Grade and shape road surface, turnouts and shoulder to original crown, inslope or outslope as directed to provide suitable traveled surface and surface water runoff in an even, unconcentrated manner.

(2) Blading must not undercut backslopes at bottom of cut slopes.

(3) Watering may be required to control dust and to retain fine surface rock.

(4) Desirable surface material shall not be bladed off roadway.

(5) Replace surface material lost or worn away.

(6) Remove berms except as otherwise directed by the State.

C. Drainage

(1) Keep ditches and drainage channels at outlets and inlets of culverts clear of obstructions.

(2) Inspect and clean culverts at least monthly, with additional inspection during storms and periods of high runoff. This must be done even during periods of inactivity.

(3) Place non erodable material or rock at drainage outfalls.

(4) Keep silt bearing surface runoff from contaminating live streams.

D. Structures

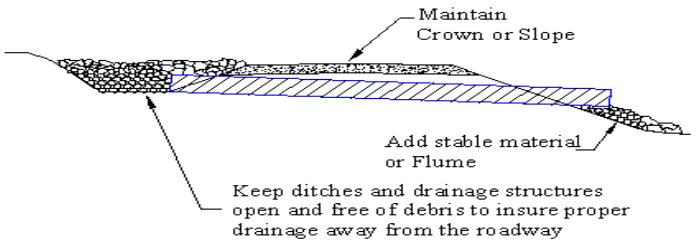
(1) Repair bridges, culverts, cattle guards, fences and other road structures to conditions required by construction specifications.

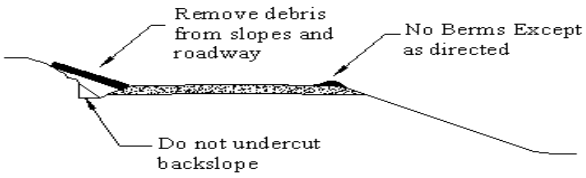
E. Termination of Use, or End of Season

(1) Do maintenance work to minimize damage from the elements such as blading to insure correct runoff, ditch and culvert clearing and water bars.

F. Debris

(1) Remove fallen timber, limbs, stumps from slopes and roadway, ditchlines and culvert inlets.



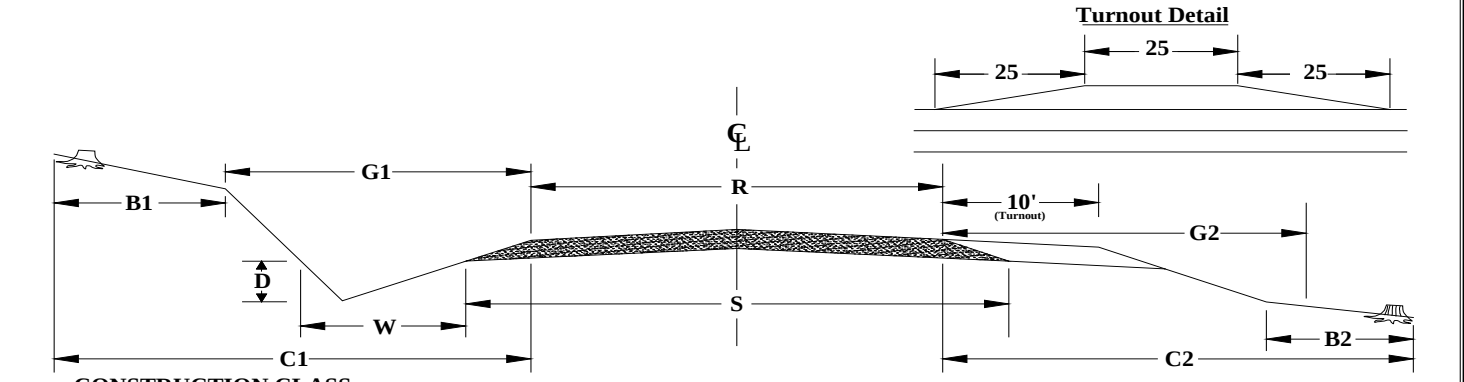


State of Washington

Department of Natural Resources

Application No. : 30-093223 **Name of Sale: West Fork Fire Salvage**

Typical Section Sheet



CONSTRUCTION CLASS
NEW CONSTRUCTION - C
RECONSTRUCTION - R
PRE HAUL MAINTENANCE - P

ROAD NAME	START STATION	END STATION	CONSTRUCTION CLASS	SUBGRADE WIDTH (S)	ROAD WIDTH (R)	INSLOPE "/10'	OUTSLOPE "/10'	CROWN " AT CL	DITCH WIDTH (W)	DITCH DEPTH (D)	DITCH 2 SIDES	TOLERANCE CLASS		GRUBBING CUT BANK (G	GRUBBING FILL TOE (G2)	ROAD CUT CLEARING (B1	ROAD FILL CLEARING (B	R/W CUT CLEARING (C1)	R/W FILL CLEARING (C2)
E332401D	0+00	37+25	P		12		4					C						6	6
E332411A	0+00	142+21	P		12		4					C						6	6
E332411A(A)	0+00	17+94	A																
E332507A	0+00	178+60	P		12		4					C						6	6
E342422E	0+00	5+35	P		12		4					C						6	6
E342422J	0+00	7+74	P		12		4					C						6	6
E342422K	0+00	5+33	P		12		4					C						6	6
E342422M	0+00	80+93	P		12		4					C						6	6
E342423H	0+00	10+22	P		12		4					C						6	6
E342423J	0+00	7+35	P		12		4					C						6	6
E342424O	0+00	30+61	P		12		4					C						6	6
E342425A	0+00	216+65	P		14			3	3	1		C						6	6
E342425N	0+00	46+11	P		12		4					C						6	6
E342426B	0+00	83+21	P		12		4					C						6	6
E342519F	0+00	15+66	P		12		4					C						6	6
E342519H	0+00	22+43	P		12		4					C						6	6
E342519S	0+00	14+10	P		12		4					C						6	6
E342529E	0+00	21+20	P		12		4					C						6	6
E342529G	0+00	22+02	P		12		4					C						6	6
E342530F	0+00	9+67	P		12		4					C						6	6
E342530G	0+00	9+59	P		12		4					C						6	6
E342530K	0+00	19+78	P		12		4					C						6	6
E342530P	0+00	11+37	P		12		4					C						6	6

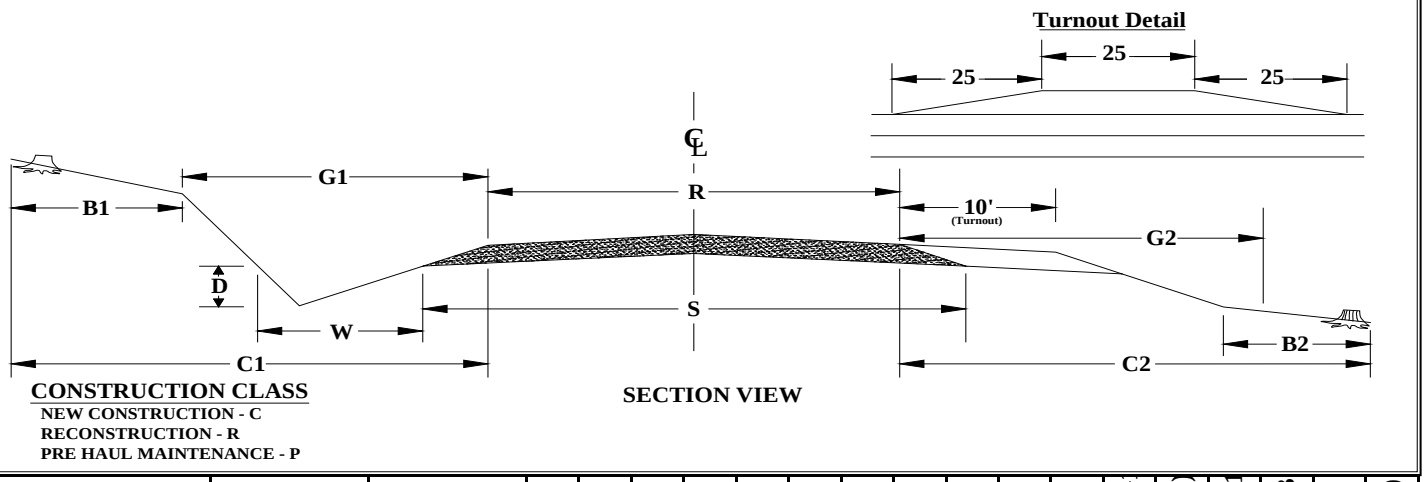
Date: 11-03-2015

State of Washington

Department of Natural Resources

Application No. : 30-093223 **Name of Sale: West Fork Fire Salvage**

Typical Section Sheet



ROAD NAME	START STATION	END STATION	CONSTRUCTION CLASS	SUBGRADE WIDTH (S)	ROAD WIDTH (R)	INSLOPE "/10'	OUTSLOPE "/10'	CROWN " AT CL	DITCH WIDTH (W)	DITCH DEPTH (D)	DITCH 2 SIDES	TOLERANCE CLASS		GRUBBING CUT BANK (G	GRUBBING FILL TOE (G2)	ROAD CUT CLEARING (B1	ROAD FILL CLEARING (B	R/W CUT CLEARING (C1)	R/W FILL CLEARING (C2)
E342530R	0+00	15+27	P		12		4					C						6	6
E342531F	0+00	43+03	P		12		4					C						6	6
E342531N	0+00	12+60	P		12		4					C						6	6

Date: 11-03-2015

STATE OF WASHINGTON

DEPARTMENT OF NATURAL RESOURCES

Application No.: 30-093223 **Name of Sale: West Fork Fire Salvage** **Date: 11/03/15**

CULVERT & DRAINAGE LIST

Road Name	Station	CULVERT			LENGTH			RIPRAP			Ditch	Staked	Rolling Dip	Notes
		Diameter (in)	Gauge	Skew	Culvert (ft)	Downspout	Flume	Inlet C.Y.	Outlet C.Y.	Catchbasin				
E332411A	127+48	48	16		42			1	1					1, 6, 8, 10, 11
E332507A	Culvert A*	24	16		30			1	1					1,6,8,10,11,12,13
E332507A	48+99	36	16		30		10	1	1					1, 6, 8, 10, 11
E342422M	72+33	48	16		42			1	1					1, 6, 8, 10, 11

Culvert A* is in the NW 1/4, NE 1/4, NW 1/4, Sect 31 (See map 3)

STRUCTURE NOTES

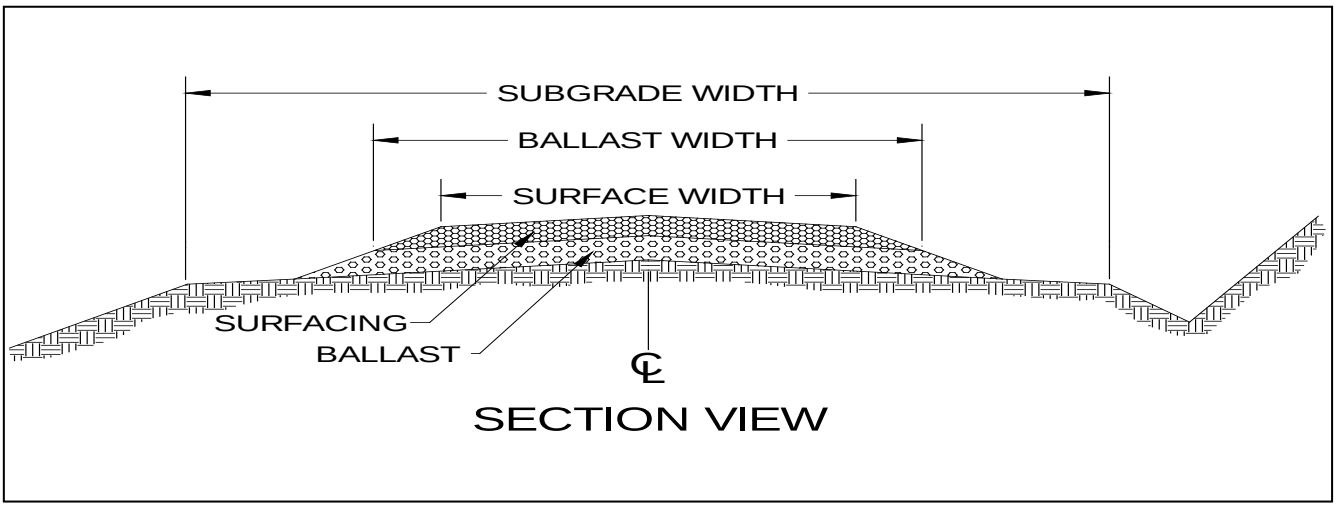
1. Install Headwall - See Detail D1
2. Install Catchbasin - See Detail D1
3. Armor Catchbasin - See Detail D1
4. Armor Ditch
5. Heavy Loose RipRap
6. Light Loose RipRap
7. Step Bevel Pipe Ends
8. Remove Existing Pipe
9. See Rolling Dip Detail D5
10. See Pipe Installation Detail D1
11. Install Energy dissipator - See D1
12. Location is NW1/4, NE1/4, NW1/4, Sect 31
13. Culvert supplied by State

STATE OF WASHINGTON

DEPARTMENT OF NATURAL RESOURCES

Application No.: 30-093223 **Name of Sale: West Fork Fire Salvage**

ROCK LIST



1. ROCK DEPTHS ARE DEFINED AS COMPACTED DEPTHS.
2. LOOSE YARD QUANTITIES ARE DEPENDANT ON SOURCE.
3. ROCK SLOPES SHALL BE 1.5(H) : 1(V).
4. ALL ROCK SOURCES ARE SUBJECT TO APPROVAL BY THE CONTRACT ADMINISTRATOR.

ROAD NAME	START STATION	END STATION	SUBGRADE WIDTH (ft)	BALLAST SOURCE	BALLAST WIDTH (ft)	BALLAST DEPTH (in)	BALLAST QTY (cu.yd./sta)	SURFACE SOURCE	SURFACE WIDTH (ft)	SURFACE DEPTH (in)	SURFACE QTY (cu.yd./sta)	FABRIC WIDTH (ft)
E332411A	126+98	127+98					0		14	6	27	
E332507A	48+49	49+49					0		14	6	27	
E342422M	71+83	71+83					0		14	6	27	
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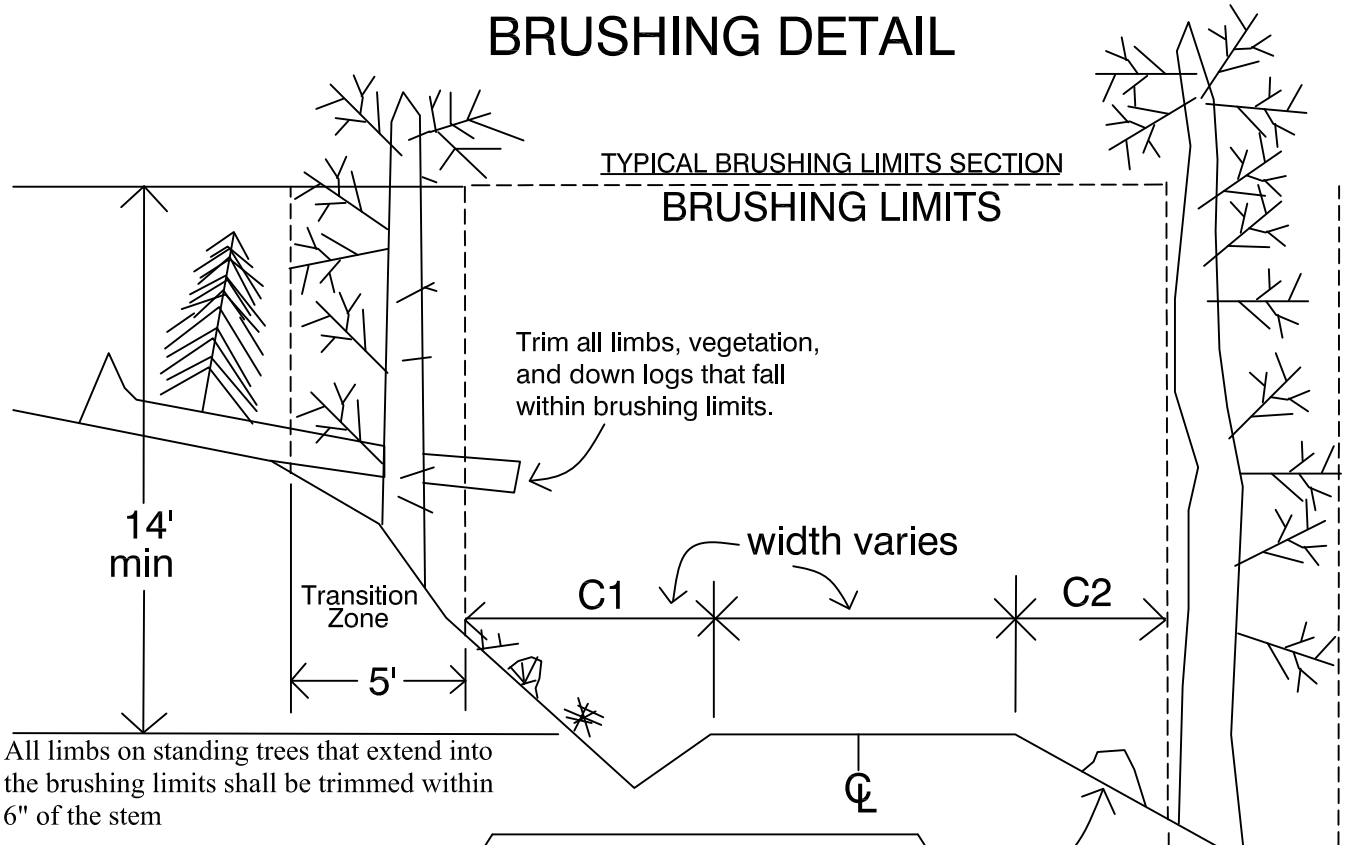
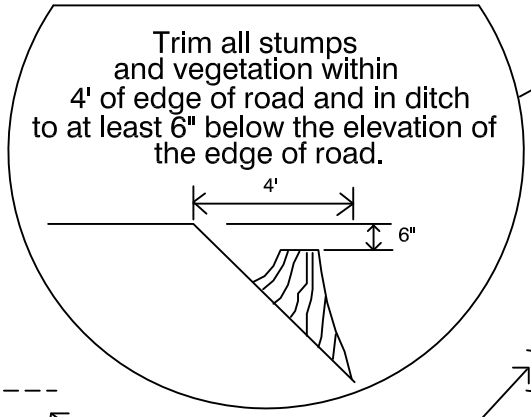
DATE: 11-03-2015

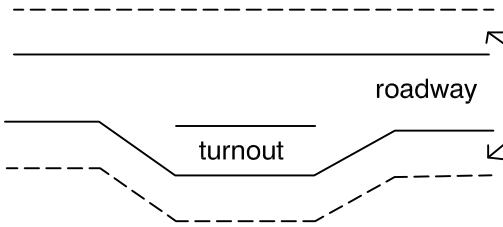
BRUSHING DETAIL



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

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

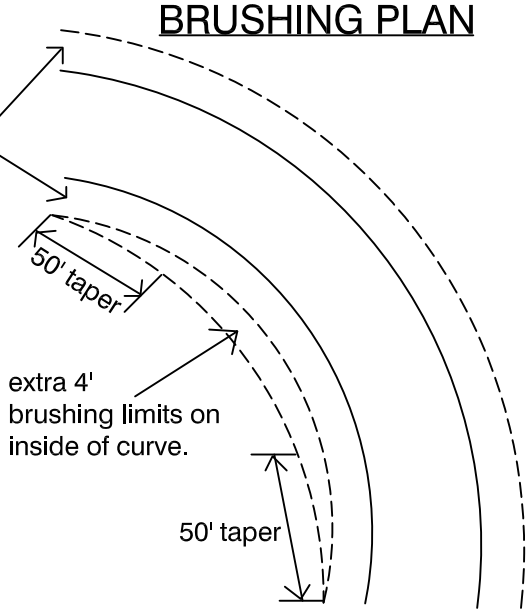




Brushing limits as shown on typical section

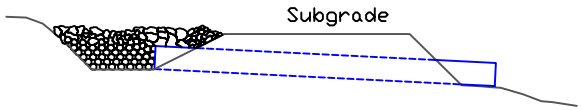
TURNOUT BRUSHING PLAN

CURVE BRUSHING PLAN

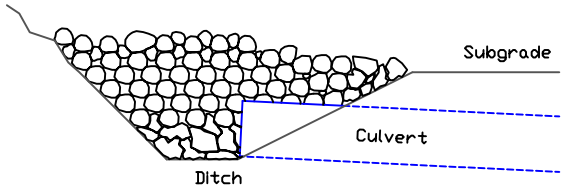


1. All vegetation within the brushing limits shall be cut to within 8" of the ground unless otherwise directed by the contract administrator.
2. All brush, trees limbs, etc. shall be removed from the road surface and ditchline.
3. All debris that may roll or migrate into the ditchline shall be removed.

CULVERT AND DRAINAGE SPECIFICATIONS DETAIL - D1

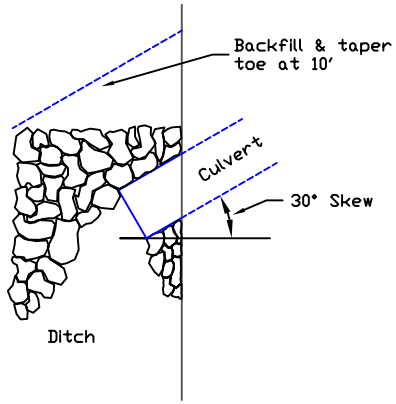


HEADWALLS



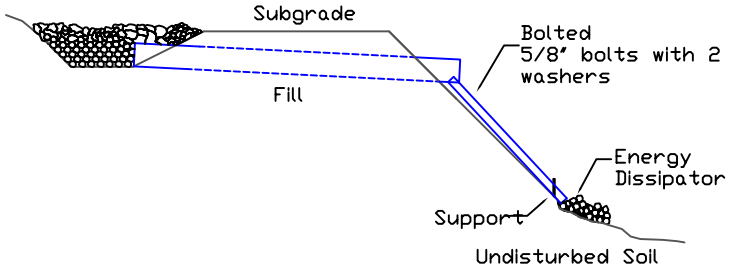
Headwall to be constructed of material that will resist erosion

PLAN VIEW



FLUME

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

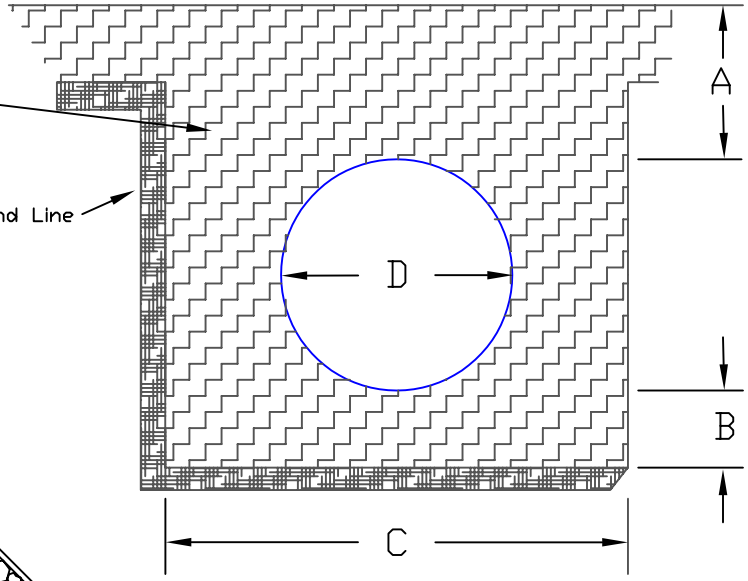


Minimum Cover	Minimum Bed Depth	Min. Trench Width	Nominal Diameter
A	B	C	D
12"	6"	36"	18"
12"	6"	42"	24"
12"	6"	48"	30"
12"	6"	54"	36"

CULVERT BACKFILL & BASE PREPARATION

(For Culverts Less Than 36")

ROAD SURFACE



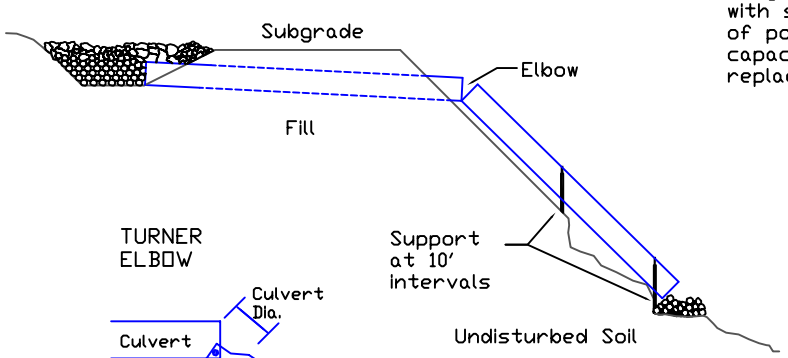
BEDDING MATERIAL:

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

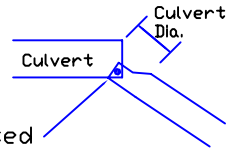
Ground Line

DOWNSPOUT

Use where ground conditions are irregular.



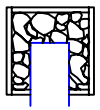
TURNER ELBOW



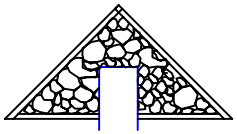
Bolted 5/8" bolts with bridge washers on both sides

DISSIPATOR SPEC'S
Size in Culvert Diameters

Area	2 X 2
Depth	1
Aggragate	1/3



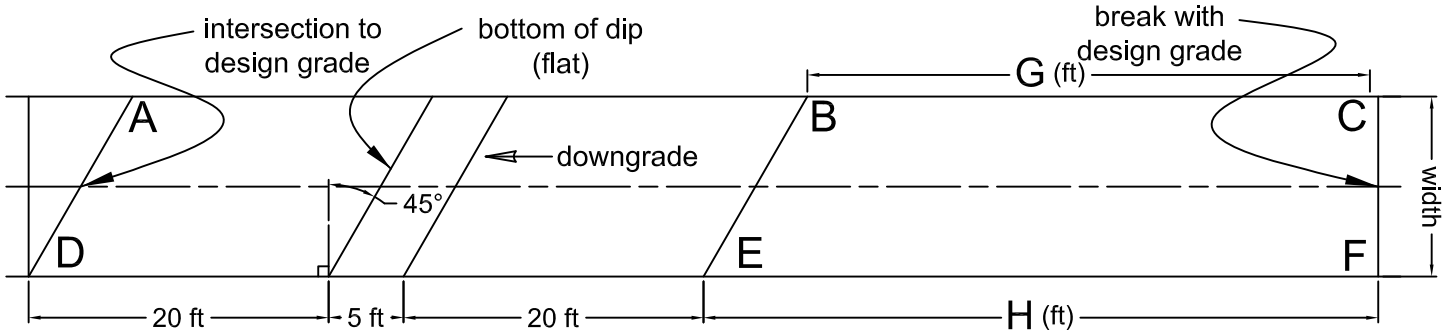
Level



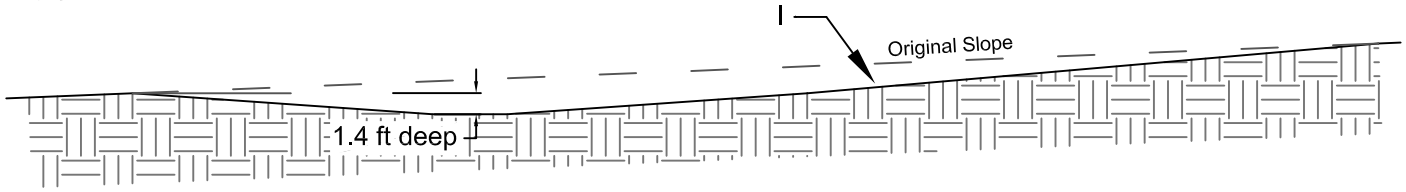
Side Hill

STANDARD 45° ROLLING DIP

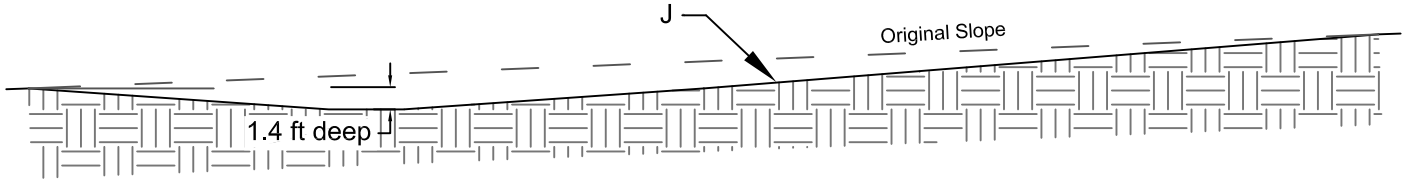
PLAN OF ROLLING DIP

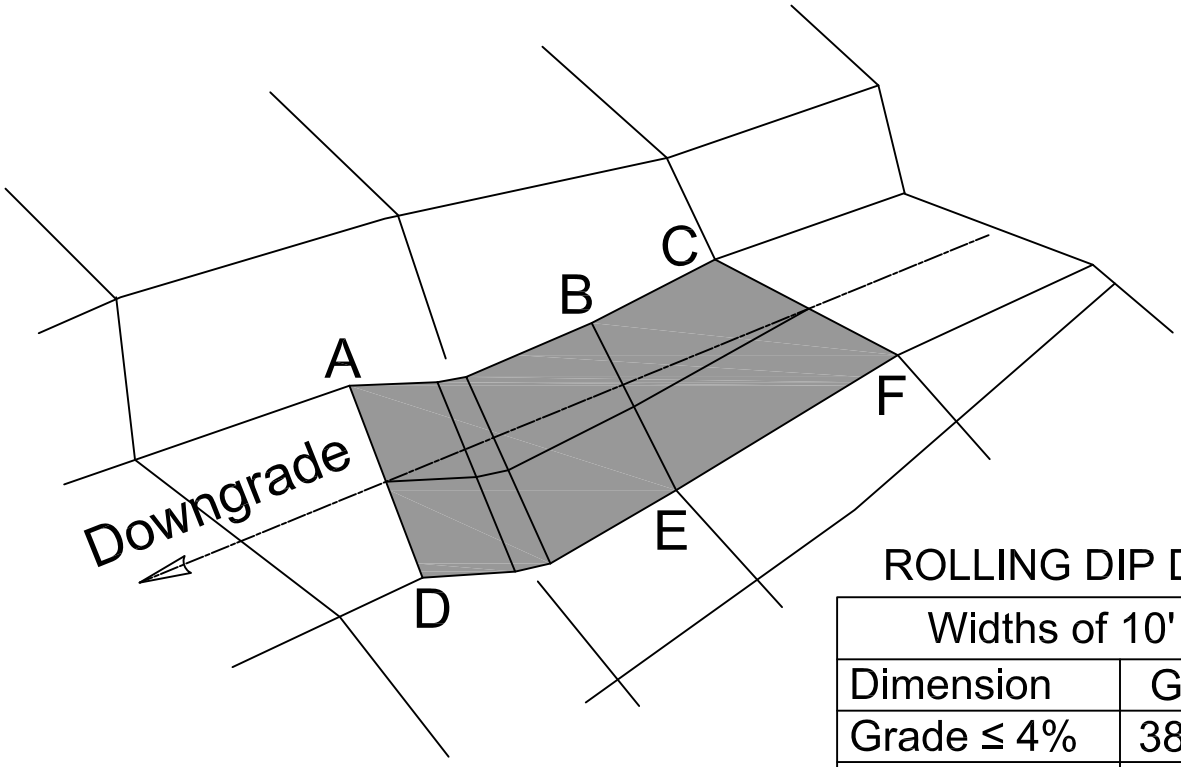


CUT BANK



FILL SLOPE



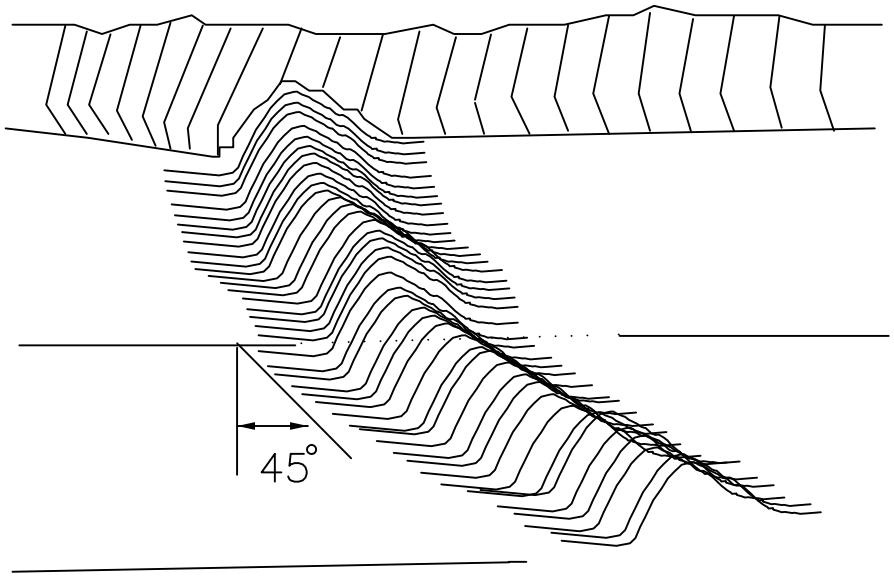


ROLLING DIP DEMENSIONS

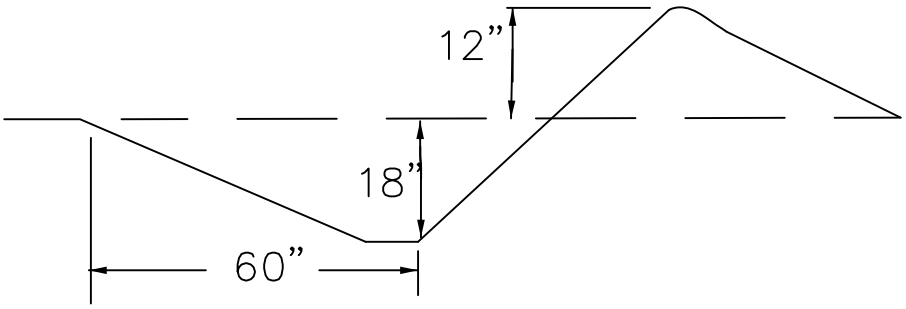
Widths of 10' through 14'				
Dimension	G	H	I	J
Grade ≤ 4%	38'	45'	9%	8%
Grade = 6%	48'	55'	11%	11%
Grade = 8%	58'	65'	14%	14%

Erica Kemp 05/2008

Top View



Side View



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

Driveable Waterbar Detail

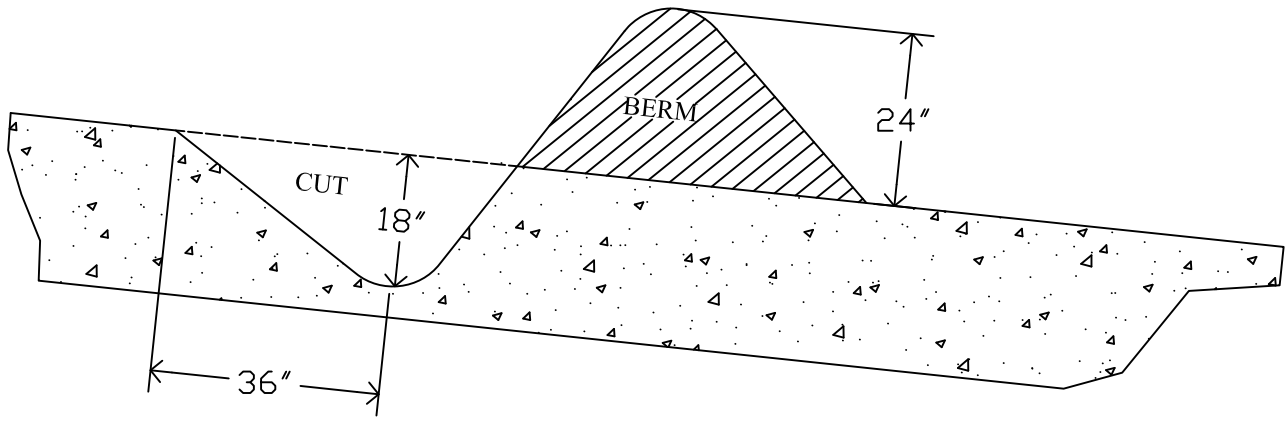
WASHINGTON STATE DEPARTMENT OF
Natural Resources

Northeast Region
Colville, Washington

Designed By:	Stash Slabinski	9/06/05
Drawn By:	Stash Slabinski	9/06/05

Revised:

Non-Driveable Water Bar Detail



Notes:

1. WATERBAR CONSTRUCTION FOR FOREST ROADS WITH NO TRAFFIC. SPECIFICATIONS ARE AVERAGE AND MAY BE ADJUSTED TO CONDITIONS.

2. TIE BERM INTO BANK. IF DITCH EXISTS, TIE CUT INTO DITCH.

3. CONSTRUCT CROSS DRAIN BERM APPROXIMATELY 24 IN. HIGH.

4. CUT WATERBAR A MINIMUM OF 18 IN.

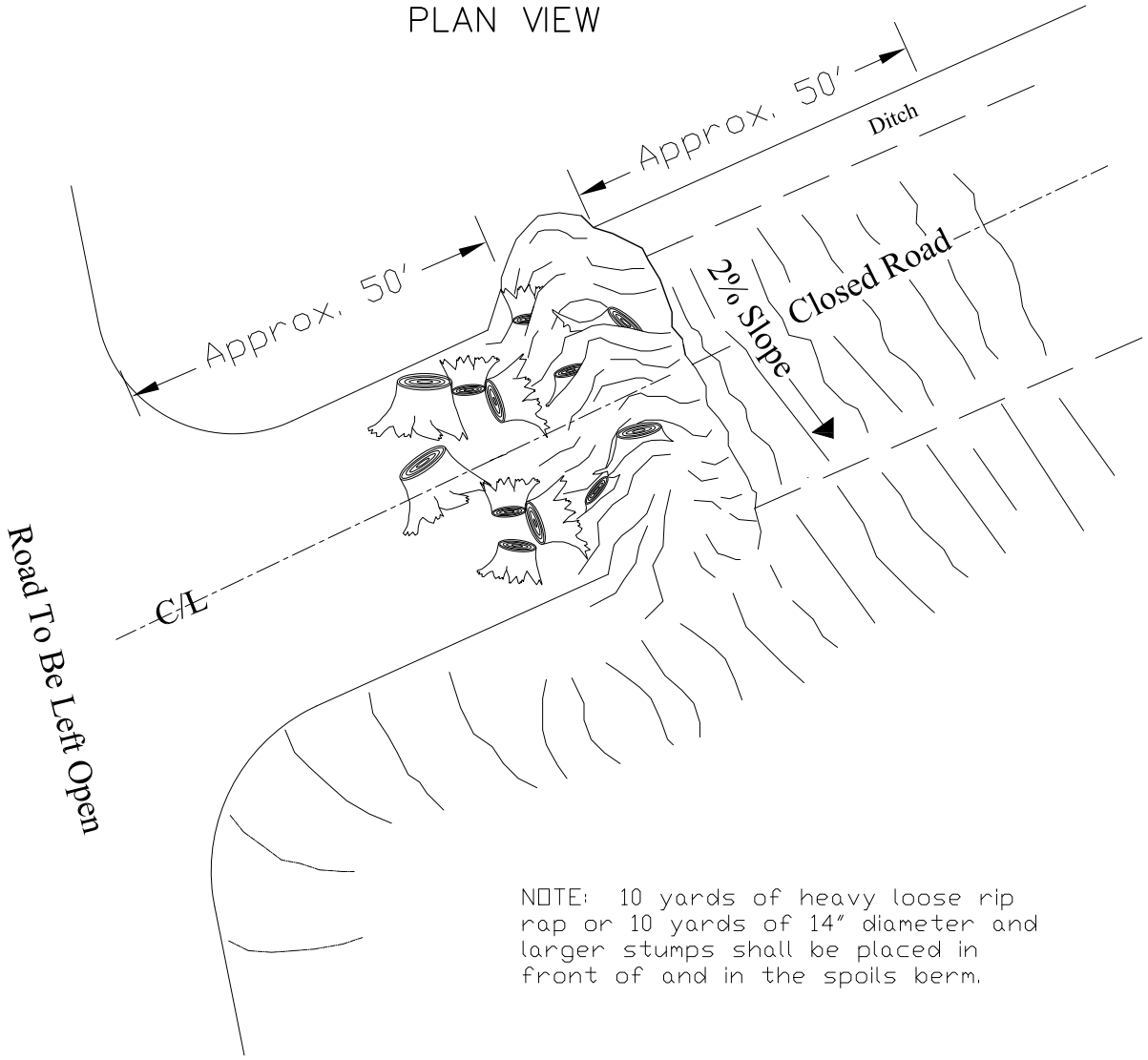
5. ENSURE PROPER DRAINAGE AT OUTLET.

6. SKEW WATERBAR 45 DEGREES DOWNGRADE WITH ROAD CENTERLINE.

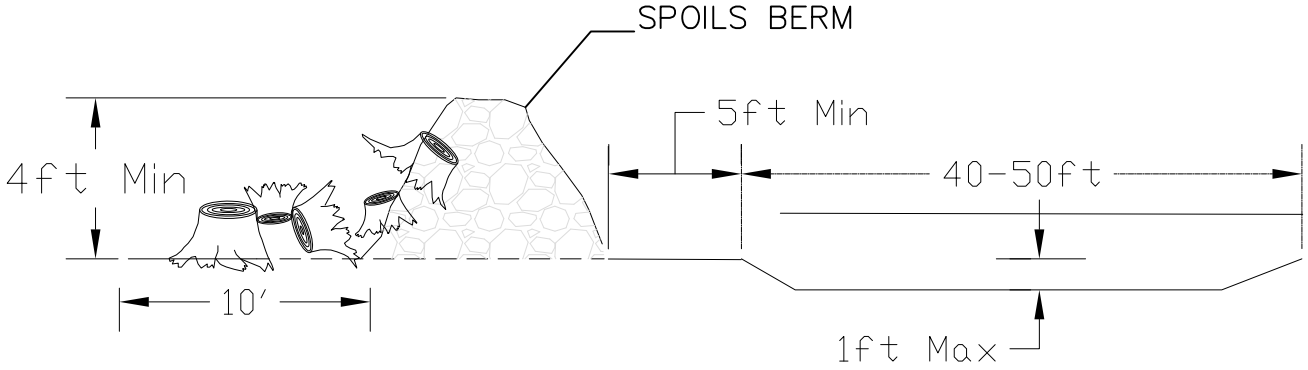
Non-Driveable Waterbar Detail			
Northeast Region Colville, Washington			WASHINGTON STATE DEPARTMENT OF Natural Resources
Designed By:	Stash Slabinski	4/21/05	
Drawn By:	Stash Slabinski	4/21/05	Revised: 1 OF 1

SPOILS BERM DETAIL

PLAN VIEW



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



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

Revised 8-29-2008

Sale Name - West Fork Fire Salvage

REGION: Northeast CONTRACT #: 30-093223 ENGINEER: Jason Bauer

DISTRICT: South Okanogan DATE: 11-03-2015

	Construction	Reconstruction	Maintenance	Deactivation	Abandonment
ROAD NUMBERS:			E332401D E332411A E332507A E342422E E342422J E342422K E342422M E342423H E342423J E342424O E342425A E342425N E342426B E342519F E342519H E342519S E342529E E342529G E342530F E342530G E342530K E342530P E342530R E342531F E342531N		E332511A(A)
Comments:					
ROAD STANDARD:	*Construction*	*Reconstruction*	*Maintenance*	*Deactivation*	*Abandonment*
NUMBER OF STATIONS:	***0.00***	***0.00***	***1068.28***		***17.94***
CLEARING & GRUBBING:	$0	$0	$21,594		0
EXCAVATION AND FILL:	$0	$0	$25,469	$0	$10,300
MISC. MAINTENANCE:	$0	$0	$6,763		$0
ROAD ROCK:	$0	$0	$4,650		$0
ADDITIONAL ROCK:			$0		$0
CULVERTS AND FLUMES:	$0	$0	$20,907		$0
STRUCTURES/MATERIALS:					$0

TOTAL COSTS:	$0	$0	$79,383	$0	$10,300
COST PER STATION:	*$0*	*$0*	*$74*	*$0*	*$574*

	$/per move	# of moves	Total
MOBILIZATION:	$300	6	$1,800
Extra Grading			$0
Extra Rock			$0
Extra 18X34 culvert			$0
Total for Extras			$0

TOTAL (All Roads) = $91,483 Extras are not in

SALE VOLUME mbf = 7,210

TOTAL $/MBF = $13

Engineer's Notes: