

TIMBER NOTICE OF SALE

SALE NAME: EAST BLOODY RUN

AGREEMENT NO: 30-092000

AUCTION: February 23, 2016 starting at 10:00 a.m., **COUNTY:** Thurston
South Puget Sound Region Office, Enumclaw, WA

SALE LOCATION: Sale located approximately 11 miles southeast of Tenino

PRODUCTS SOLD AND SALE AREA: All timber, except leave trees marked with blue paint or bounded out by yellow "Leave Tree Area" tags and down timber existing more than 5 years prior to day of sale, bounded by the following: white timber sale boundary tags, timber type change, and property lines marked with carsonite posts and pink flagging in Unit #1; white timber sale boundary tags, the 2047 road, timber type change and property lines marked with carsonite posts and pink flagging in Unit #2; all timber bounded by orange right of way tags on part(s) of Sections 4, 8 and 9 all in Township 15 North, Range 1 East, W.M., containing 56 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	MBF by Grade								
				1P	2P	3P	SM	1S	2S	3S	4S	UT
Douglas fir	24.1	5	2,195				134		1,733	240	59	29
Red alder	17.1		240						127	46	57	10
Hemlock	13.9	5	22						10	5	7	
Red cedar	18.2		14							9	5	
Grand fir	21.3		7						6		1	
Sale Total			2,478									

MINIMUM BID: \$718,000.00 **BID METHOD:** Sealed Bids

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

EXPIRATION DATE: October 31, 2017 **ALLOCATION:** Export Restricted

BID DEPOSIT: \$71,800.00 or Bid Bond. Said deposit shall constitute an opening bid at the appraised price.

HARVEST METHOD: Harvesting activities are estimated to be 70% ground-based and 30% cable. Forest products sold under this contract shall be harvested and removed using cable and tracked ground based equipment, with tracked ground based equipment limited to sustained slopes 45% and less. Use of tracked skidders shall be allowed for pole yarding only, unless authority to use other equipment is granted in writing by the State. Yarding may be restricted during wet weather if rutting becomes excessive, per clause H-017.

Cutting, yarding and timber haul will not be permitted from November 1st through April 30th, nor on weekends or state recognized holidays, unless authority to do so is granted in writing by the Contract Administrator. If permission is granted to operate from November 1st to April 30th, the purchaser shall be required to operate under a Winter Operating Plan to include further protection of water, soil, roads and other forest assets at

TIMBER NOTICE OF SALE

the Purchaser's expense. Preventive measures required in the Winter Operating Plan must be put in place prior to commencing any winter operations.

ROADS:

5.13 stations of required construction. 56.70 stations of required pre-haul maintenance. 5.13 stations of required abandonment. Purchaser maintenance on the OLC-8950 and OLC-8955 roads. Designated maintenance on all other roads used.

Rock for the proposal may be obtained from any commercial source at the Purchaser's expense, as approved in writing by the Contract Administrator.

Road construction, will not be permitted from October 1st through April 30th, unless authority to do so is granted in writing by the Contract Administrator. If permission is granted to operate from October 1st through April 30th, the purchaser shall be required to operate under a Winter Operating Plan to include further protection of water, soil, roads and other forest assets at the Purchaser's expense. Preventive measures required in the Winter Operating Plan must be put in place prior to commencing any winter operations.

ACREAGE DETERMINATION

CRUISE METHOD:

Unit acreage was determined by traversing the boundaries by GPS. Right of way acreage was determined by multiplying length times width. GPS data files are available upon request by emailing audrey.mainwaring@dnr.wa.gov. See cruise narrative for cruise method.

FEES:

\$43,985.00 is due on day of sale. \$9.00 per MBF is due upon removal. These are in addition to the bid price.

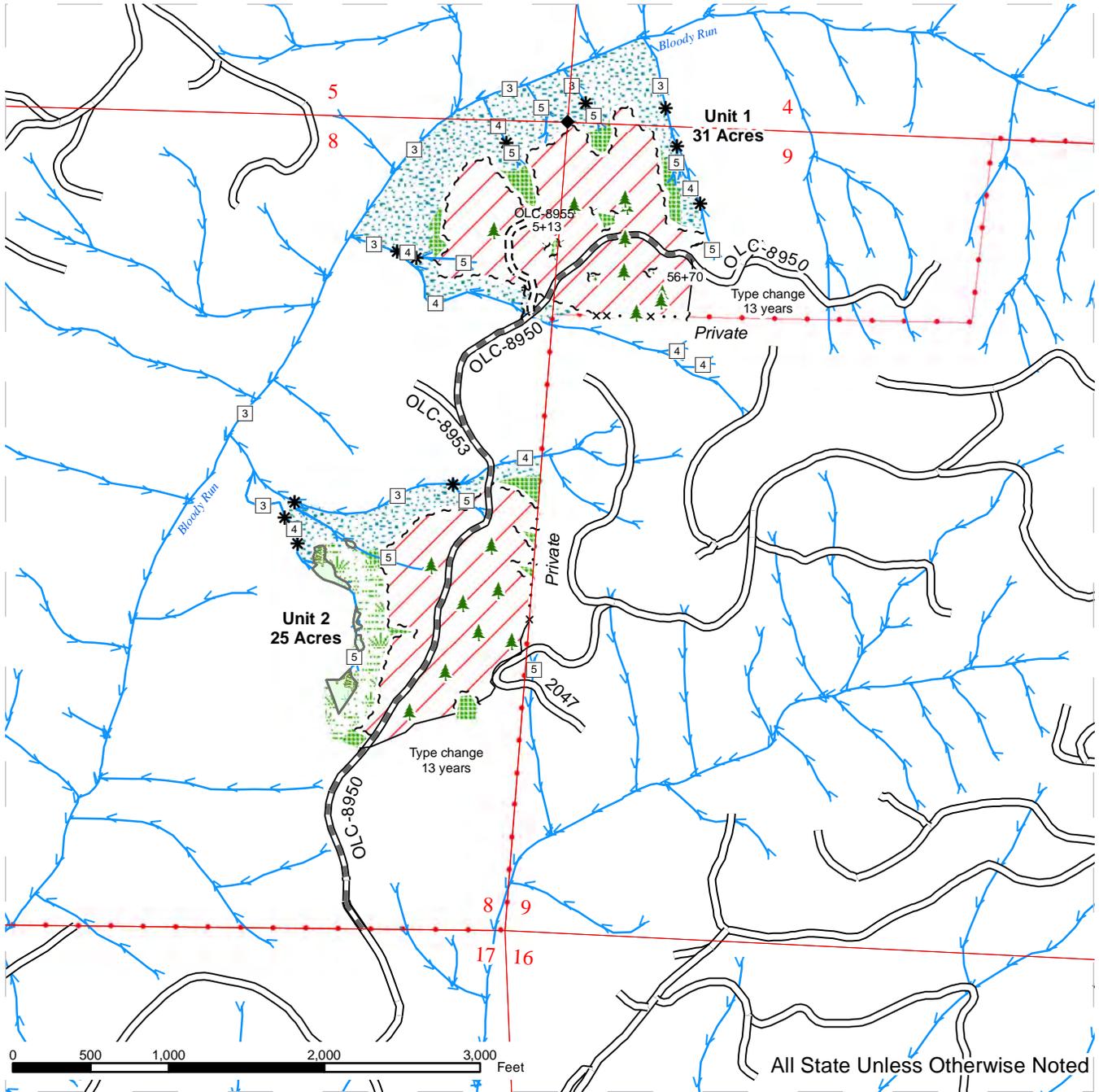
SPECIAL REMARKS:

See map for gate locations. All gates must be closed and locked per Road Plan 7-71. Gate keys may be obtained by contacting the South Puget Sound Region office at (360)825-1631 or by contacting the Tumwater work center at (360) 902-1447.

TIMBER SALE MAP

SALE NAME: EAST BLOODY RUN
AGREEMENT#: 30-092000
TOWNSHIP(S): T15R01E
TRUST(S): State Forest Transfer(1)

REGION: South Puget Sound Region
COUNTY(S): THURSTON
ELEVATION RGE: 677-1101



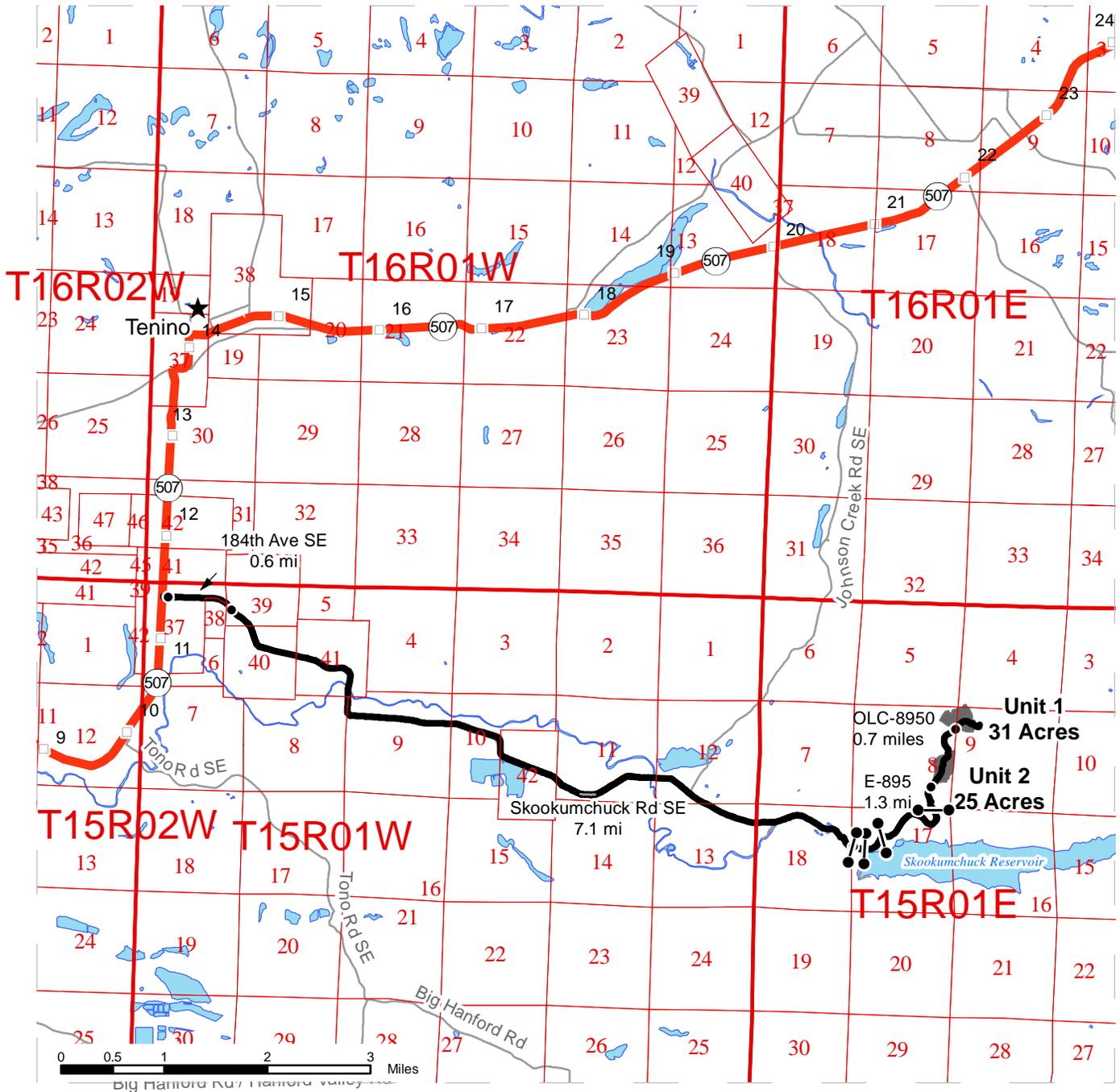
Timber Sale Area	Property Line	Streams
Leave Tree Area	Leave Tree Tags	Stream Break
Wetland Mgt Zone	Timber Type Change	Stream Type
Riparian Mgt Zone	Right of Way Tags	Monumented Corners
Forested Wetland	Existing Roads	Leave Trees
Sale Boundary Tags	Required Construction	DNR Managed Land
	Required Pre-Haul Maintenance	Public Land Survey Sections



DRIVING MAP

SALE NAME: EAST BLOODY RUN
 AGREEMENT#: 92000
 TOWNSHIP(S): T15R01E
 TRUST(S): State Forest Transfer(1)

REGION: South Puget Sound Region
 COUNTY(S): THURSTON
 ELEVATION RGE: 677-1101



- Timber Sale Unit
- Highways
- Haul Route
- Other Route
- Milepost Markers
- Distance Indicator
- Gate (Master 957)

DRIVING DIRECTIONS:

From Highway 507, turn left (Southeast) on 184th Ave for 0.6 miles. Follow the slight right and continue onto Skookumchuck Rd SE. Follow Skookumchuck Rd SE for 7.1 miles until you reach the red gate at the reservoir. Take the left through the gate and follow the E-895 to reach Gate 2. Continue down the road to Gate 3. Once through Gate 3, follow the road to the left to Gate 4. Once through Gate 4, follow the OLC-8950 for 1.3 miles to Unit 2. Continue 0.7 miles to reach Unit 1.



**STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES**

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

Export Restricted Lump Sum AGREEMENT NO. 30-092000

SALE NAME: EAST BLOODY RUN

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

Section G: General Terms

G-001 Definitions

The following definitions apply throughout this contract;

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

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

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

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

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

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

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

G-011 Right to Remove Forest Products and Contract Area

Purchaser was the successful bidder on February 23, 2016 and the sale was confirmed on _____. The State, as owner, agrees to sell to Purchaser, and Purchaser agrees to purchase as much of the following forest products as can be cut and removed during the term of this contract: All timber, except leave trees marked with blue paint or bounded out by yellow "Leave Tree Area" tags and down timber existing more than 5 years prior to day of sale, bounded by the following: white timber sale boundary tags, timber type change, and property lines marked with carsonite posts and pink flagging in Unit #1; white timber sale boundary tags, the 2047 road, timber type change and property lines marked with carsonite posts and pink flagging in Unit #2; all timber bounded by orange right of way tags, located on approximately 56 acres on part(s) of Sections 4, 8, and 9 all in Township 15 North, Range 1 East W.M. in Thurston County(s) as designated on the sale area and as shown on the attached timber sale map.

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

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

G-020 Inspection By Purchaser

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

G-031 Contract Term

Purchaser shall complete all work required by this contract prior to October 31, 2017.

G-040 Contract Term Adjustment - No Payment

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

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

G-051 Contract Term Extension - Payment

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

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

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

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

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

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

- e. Payment of \$833.00 per acre per annum for the acres on which an operating release has not been issued within the harvest area.
- f. In no event will the extension charge be less than \$200.00.
- g. Extension payments are non-refundable.

G-053 Surveys - Sensitive, Threatened, Endangered Species

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

G-060 Exclusion of Warranties

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

- a. The MERCHANTABILITY of the forest products. The use of the term "merchantable" in any document is not intended to vary the foregoing.
- b. The CONDITION of the forest products. The forest products will be conveyed "AS IS."
- c. The ACREAGE contained within any sale area. Any acreage descriptions appearing in the timber notice of sale, timber sale contract, or other documents are estimates only, provided solely for administrative and identification purposes.
- d. The VOLUME, QUALITY, OR GRADE of the forest products. The State neither warrants nor limits the amount of timber to be harvested. The descriptions of the forest products to be conveyed are estimates only, made solely for administrative and identification purposes.
- e. The CORRECTNESS OF ANY SOIL OR SURFACE CONDITIONS, PRE-SALE CONSTRUCTION APPRAISALS, INVESTIGATIONS, AND ALL OTHER PRE-BID DOCUMENTS PREPARED BY OR FOR THE STATE. These documents have been prepared for the State's appraisal purposes only.
- f. THAT THE SALE AREA IS FREE FROM THREATENED OR ENDANGERED SPECIES or their habitat. The State is not responsible for any interference with forestry operations that result from the presence of any

threatened or endangered species, or the presence of their habitat, within the sale area.

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

G-062 Habitat Conservation Plan

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

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

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

G-063 Incidental Take Permit Notification Requirements

- a. Purchaser shall immediately notify the Contract Administrator of new locations of permit species covered by the Incidental Take Permits (ITP) that are discovered within the area covered by the State's Habitat Conservation Plan (HCP), including, but not limited to: locations of occupied murrelet habitat; spotted owl nest sites; wolves; grizzly bears; nests, communal roosts, or feeding concentrations of bald eagles; peregrine falcon nests; Columbian white-tailed deer; Aleutian Canada geese; Oregon silverspot butterflies; and additional stream reaches found to contain bull trout. Purchaser is required to

notify the Contract Administrator upon discovery of any fish species found in streams or bodies of water classified as non-fish bearing. In all circumstances, notification must occur within a 24 hour time period.

- b. Upon locating any live, dead, injured, or sick specimens of any permit species covered by the ITP, Purchaser shall immediately notify the Contract Administrator. Purchaser shall notify the Contract Administrator if there is any doubt as to the identification of a discovered permit species. Purchaser may be required to take certain actions to help the Contract Administrator safeguard the well-being of any live, injured or sick specimens of any permit species discovered, until the proper disposition of such specimens can be determined by the Contract Administrator. Any such requirements will be explained to Purchaser by the Contract Administrator during the Pre-Work Conference. In all circumstances, notification must occur within a 24 hour time period.
- c. Purchaser shall refer to a specific ITP number, PRT-812521 or ITP 1168 (copies which are located in the region office) in all correspondence and reports concerning permit activities.
- d. Provisions and requirements of the ITP shall be clearly presented and explained to Purchaser by Contract Administrator during the Pre-Work Conference as per contract clause G-330. All applicable provisions of the ITP and this schedule must be presented and clearly explained by Purchaser to all authorized officers, employees, contractors, or agents of Purchaser conducting authorized activities in the timber sale area. Any questions Purchaser may have about the ITP should be directed to the Contract Administrator.

G-064 Permits

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

G-065 Regulatory Disclaimer

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

G-066 Governmental Regulatory Actions

a. Risk

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

Purchaser shall remain responsible for payment of the total contract price notwithstanding the impracticability or frustration.

b. Sale Area

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

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

c. Adjustment of Price

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

G-070 Limitation on Damage

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

G-080 Scope of State Advice

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

G-091 Sale Area Adjustment

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

G-101 Forest Products Not Designated

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

The pricing schedule has not been set for the sale.

G-106 Adding Naturally Damaged Forest Products

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

G-111 Title and Risk of Loss

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

G-116 Sustainable Forestry Initiative® (SFI) Certification

Forest products purchased under this contract are certified as being in conformance with the Sustainable Forestry Initiative 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 Purchaser's expense regardless of cost, to remedy deficiencies at any time.

G-140 Indemnity

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

G-150 Insurance

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

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

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

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

Before starting work, Purchaser shall furnish State of Washington, Department of Natural Resources with a certificate(s) of insurance, executed by a duly authorized

representative of each insurer, showing compliance with the insurance requirements specified in the contract. Insurance coverage shall be obtained by the Purchaser prior to operations commencing and continually maintained in full force until all contract obligations have been satisfied or an operating release has been signed by the State.

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

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

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

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

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

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

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

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

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

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

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

G-160 Agents

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

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

G-170 Assignment and Delegation

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

G-180 Modifications

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

G-190 Contract Complete

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

G-200 Notice

Notices required to be given under the following clauses shall be in writing and shall be delivered to Purchaser's authorized agent or sent by certified mail to Purchaser's 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; E-895, OLC-8950 and OLC-8955 roads. The State may authorize in writing the use of other roads subject to fees, restrictions, and prior rights.

G-330 Pre-work Conference

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

G-340 Preservation of Markers

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

G-360 Road Use Reservation

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

G-370 Blocking Roads

Purchaser shall not block the E-895 road, unless authority is granted in writing by the Contract Administrator.

G-380 Road Easement and Road Use Permit Requirements

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

Easement No. 50-090943, 55-090942, entered into and between the State of Washington Department of Natural Resources and Weyerhaeuser, dated June 17, 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:

To be determined approximately one month prior to the day of sale.

Section P: Payments and Securities

P-011 Initial Deposit

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

P-020 Payment for Forest Products

Purchaser agrees to pay the total, lump sum contract price of \$66,287.00. The total contract price consists of a \$0.00 contract bid price plus \$66,287.00 in fees. Fees collected shall be retained by the state unless the contract is adjusted via the G-066 clause. Purchaser shall be liable for the entire purchase price, and will not be entitled to any refunds or offsets unless expressly stated in this contract.

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

P-045 Guarantee of Payment

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

P-050 Billing Procedure

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

P-080 Payment Account Refund

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

P-090 Performance Security

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

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

P-100 Performance Security Reduction

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

Section H: Harvesting Operations

H-013 Reserve Tree Damage Definition

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

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

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

If the Contract Administrator determines that a reserve tree has been cut or damaged, the Purchaser shall provide a replacement reserve tree of like condition, size, and species within the sale 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-017 Preventing Excessive Soil Disturbance

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

H-035 Fall Trees Into Sale Area

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

H-051 Branding and Painting

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

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

H-080 Snags Not to be Felled

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

H-120 Harvesting Equipment

Forest products sold under this contract shall be harvested and removed using cable and ground based equipment. Ground based equipment shall be limited to tracked ground based equipment on sustained slopes 45 percent or less, unless authority to use other equipment is granted in writing by the State.

H-125 Log Suspension Requirements

Lead-end suspension is required for all yarding activities.

H-126 Tailholds on State Land

If Purchaser tailholds on State land, methods to minimize damage to live trees outside the sale area shall be employed and must be approved in writing by the Contract Administrator.

H-127 Tailholds on Private Land

If Purchaser chooses to tailhold on private property, Purchaser shall obtain permit(s) and assumes responsibility for all costs and damages associated with the permit(s). Purchaser must provide the State with a copy of the executed permit(s) or a letter from the landowner indicating that a satisfactory tailhold permit(s) has been consummated between Purchaser and the landowner.

H-140 Special Harvest Requirements

Purchaser shall accomplish the following during the harvest operations:

- A) Falling, yarding and timber haul will not be permitted from November 1 to April 30, unless authority to do so is granted in writing by the Contract Administrator. If permission is granted to operate from November 1 to April 30, the Purchaser shall comply with a "Winter Operating Plan" to include further protection of water, soil, roads and other forest assets at the Purchaser's expense. All preventative measures shall be in place prior to commencing any winter operations.
- B) Existing downed logs shall not be removed, except that all blowdown that has been on the ground less than 5 years can be removed.
- C) Only shovels with a low ground pressure (9 psi or less) track mounted machines with hydraulic boom and grapple will be allowed.
- D) Shovel must be large enough to pick up one end of the largest log 35 feet from the machine.
- E) No equipment shall operate outside the timber sale boundary.
- F) Equipment limitation zones are required within 30 feet of Type 5 streams.
- G) The Purchaser shall notify all employees and contractors working on this sale that any danger tree marked or unmarked may be felled. Any marked danger tree will be replaced with a suitable tree of similar size and species as approved by the Contract Administrator.
- H) Ground based yarding equipment shall not operate during saturated soil conditions.
- I) Within Ground based logging areas, the equipment operator shall break up concentrations of logging debris greater than 10.5 feet by 10.5 feet to allow exposure of natural forest soils to ensure proper reforestation.
- J) The Purchaser shall create a gate plan per Road Plan 7-71 at the Plan of Operations meeting.

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

H-141 Additional Harvest Requirements

Purchaser shall accomplish the following during the harvest operations:

A) Purchaser shall leave 2 down logs per acre. A log is defined as having a minimum diameter of 12 inches on the small end of the log and a minimum length of 20 feet or at least 100 board feet.

B) No equipment may operate within, nor logs yarded through or over, leave tree clumps marked with yellow leave tree area tags in Unit 1 or Unit 2.

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

H-190 Completion of Settings

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

H-220 Protection of Residual or Adjacent Trees

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

H-230 Tops and Limbs Outside the Sale Boundary

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

H-250 Additional Falling Requirements

Within the harvest area, all live stems over 2" in diameter, except for leave trees, shall be felled. Trees shall be severed at a stump height not to exceed 12 inches and cut completely free of the stump. Areas of young or immature timber may be excluded from this requirement by the Contract Administrator.

Section C: Construction and Maintenance

C-040 Road Plan

Road construction and associated work provisions of the Road Plan for this sale, dated 8/29/2014 are hereby made a part of this contract.

C-050 Purchaser Road Maintenance and Repair

Purchaser shall perform work at their own expense on the OLC-8950 and OLC-8955 roads. 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 all other roads used not covered in clause C-050. 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-140 Water Bars

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

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

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

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

S-010 Fire Hazardous Conditions

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

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

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

S-030 Landing Debris Clean Up

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

S-040 Noxious Weed Control

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

S-050 Cessation of Operations for Low Humidity

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

S-060 Pump Truck or Pump Trailer

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

S-100 Stream Cleanout

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

S-110 Resource Protection

No motorized equipment may operate within the Riparian or Wetland Management Zones unless authority is granted in writing by the Contract Administrator.

S-120 Stream Protection

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

S-130 Hazardous Materials**a. Hazardous Materials and Waste - Regulatory Compliance**

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

b. Hazardous Materials Spill Prevention

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

c. Hazardous Materials Spill Containment, Control and Cleanup

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

d. Hazardous Material Release Reporting

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

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

DNR Contract Administrator

ECY - Northwest Region:

1-425-649-7000

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

ECY - Southwest Region:

1-360-407-6300

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

ECY - Central Region:

1-509-575-2490

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

ECY - Eastern Region:

1-509-329-3400

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

S-131 Refuse Disposal

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

S-140 Fence Repair

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

Section D: Damages

D-013 Liquidated Damages or Failure to Perform

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

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

D-041 Reserve Tree Excessive Damage

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

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

STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES

Purchaser

Art Tasker
South Puget Sound Region Manager

Date: _____
Address: _____

Date: _____

CORPORATE ACKNOWLEDGEMENT

STATE OF _____)

COUNTY OF _____)

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

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

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

Notary Public in and for the State of

My appointment expires _____



WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES

FOREST EXCISE TAX ROAD SUMMARY SHEET

Region:

Timber Sale Name:

Application Number:

EXCISE TAX APPLICABLE ACTIVITIES

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

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

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

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

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

EXCISE TAX EXEMPT ACTIVITIES

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

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

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

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

(Revised 6/13)

PRE-CRUISE NARRATIVE

Sale Name: East Bloody Run	Region: South Puget Sound
Agreement #: 30-92000	District: Delphi
Contact Forester: Rachel Mason	Phone/ Location: (360)-480-9703 Ext: / Tumwater
Alternate Contact: Andy Ritter	Phone/ Location: (360)-791-5980 Ext: / Tumwater

Type of Sale (lump sum, mbf scale, tonnage scale or contract harvest): **Lump**
 Required or Optional removal of utility as pulp:
 Evaluated for RFRS Implementation?: **Yes**
 Percentage cable (specify downhill vs uphill): **Uphill 30%**
 Percentage ground based: **70%**
 Species Onsite: RC, DF, WH, RA, BC, BLM, NF, SF, SS, Other:(Please List)

UNIT ACREAGES AND METHOD OF DETERMINATION:

Unit #	Harvest R/W or RMZ WMZ	Legal Description Sec/Twp/Rng	Grant	Gross 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 (Unstable Slopes)		
1		Sec 09/ T 15N/ R 1 E	01	36.15	0	3.21	1.57		31.37	Garmin and Trimble
2		Sec 08/ T 15N/ R 1 E	01	29.33	0	1.97	2.69		24.66	Garmin
		Sec / T N/ R E								
TOTAL ACRES				65.47		5.18	4.26		56.03	

HARVEST PLAN AND SPECIAL CONDITIONS:

Unit #	Harvest Prescription: (Mark leave, take, etc.)	Special Management areas:	Other conditions (# leave trees, etc.)
1	Boundary-White Flagging & White "Timber Sale Boundary" Tags w/Pink Flashers and/or pink ribbon; Leave Trees-White "Timber Sale Boundary" Tags & Pink flashers/flagging and Blue paint Bands around Single Leave Tree Clumps; New Road-Orange Flagging, Yellow leave tree tags and pink flagging or pink flashers.	Some leave trees have been left in order to protect sensitive features.	8 Leave Trees per acre in clumped and dispersed design
2	Boundary-White Flagging & White "Timber Sale Boundary" Tags w/Pink Flashers; Leave Trees-White "Timber Sale Boundary" Tags & Pink flashers/flagging and Blue paint Bands around Single Leave Tree Clumps; New Road-Orange Flagging, and yellow leave tree tags with pink flashers or pink flagging.	Some leave trees have been left in order to protect sensitive features.	8 Leave Trees per acre in clumped and dispersed design

OTHER PRE-CRUISE INFORMATION:

Unit #	Estimated Volume	Access information (Gates, locks, etc.)	Photos, traverse maps required
1	1.5 mmbf	Gate #1:957; Gate #2: 957; Gate #3: 957; Gate #4: Weyerhauser	
2	1.5 mmbf	Gate #1: 957; Gate #2: 957; Gate #3: 957; Gate #4: Weyerhauser	

REMARKS:

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Prepared By: Rachel Mason
Date: 5/26/15

Title: Forester 1

CC: Andy Ritter

Revised 2/23/2007 (PSLD)

Cruise Narrative

Sale Name: East Bloody Run	Region: South Puget Sound
Agree. #: 30-92000	District: Black Hills
Lead cruiser: John Piety	Completion date: 7-9-2015
Other cruisers on sale: Aaron Coleman	

Unit acreage specifications:

Unit #	Cruised acres	Cruised acres agree with sale acres? Yes/No	If acres do not agree explain why.
1	31.37	Yes	
2	24.66	Yes	
Total	56.03		

Unit cruise specifications:

Unit #	Sample type (VP, FP, ITS,100%)	Expansion factor (BAF, full/half)	Sighting height (4.5 ft, 16 ft.)	Grid size (Plot spacing or % of area)	Plot ratio (cruise:count)	Total number of plots
1	VP	54.4 BAF	4.5	198' X 198'	1:1	33
2	VP	54.4 BAF	4.5	198' X 198'	1:1	28

Sale/Cruise Description:

Minor species cruise intensity:	100% up to 5 trees per species
Minimum cruise spec:	HA - Logs meeting the following criteria: Surface characteristics for a high quality A sort will have sound tight knots not to exceed 1 1/2" in diameter, numbering not more than an average of one per foot of log length. May include logs with not more than two larger knots. Knots and knot indicators 1/2" in diameter and smaller shall not be a determining factor. Logs will have a growth ring count of 6 or more rings per inch in the outer third top end of the log. (High Quality sort. Grades SM, 2S, 3S. Lengths 16ft-40ft, 2ft multiples min TDIB 8". Max butt 27") HB - Logs meeting the following criteria: Surface characteristics for an Intermediate B sort will have sound tight knots not to exceed 1 1/2" in diameter. May include logs with not more than two larger knots up to 2 1/2" in diameter. Logs will have a growth ring count of 6 or more rings per inch in the outer third to end of the log. (Intermediate sort. Grades 2S, 3S. .

	<p>Lengths 16ft-40ft, 2ft multiples min TDIB 8". Max butt 27").</p> <p>D - Domestic quality logs that do not meet high quality or intermediate definitions. (Domestic sort. Grades 2S, 3S, 4S and utility. Lengths 16ft-40ft, min TDIB 2in.)</p> <p>O- Logs exceeding 27" on the large end. (Oversize sort. Grade 2S. Lengths 16ft-40ft, 2ft multiples butt diameter min dia. 27 in. +)</p> <p>R - Logs meeting the following criteria: Surface characteristics for a rough log sort will not meet the requirements for a domestic 2S, but still be in limitations for a domestic 3S. Meaning logs will contain excessive knots in excess of 2 1/2" and not exceeding 3" with a recovery of less than 65% of the net scale and greater than 33% of the gross scale. (Rough oversize sort. Grade 3S. Lengths 16ft-40ft, 2ft multiples TDIB 12"+)</p>					
Avg ring count by sp:	DF =	5	WH =	5		
Leave/take tree description:	Leave trees are banded with blue paint and tagged out with yellow leave tree tags.					
Other conditions						

Field observations:

Unit 1 is large DF to the SE and South portion of the stand, the rest is RA or a mix with variable stocking levels. Species seen included DF, WH, RA, BM, GF and RC. Unit 2 is mostly large DF with a pocket of alder, fairly decent stocking levels. Grades are mostly of good quality.

Grants: 01-100%

Prepared by:

John Piety

Title:

Cruiser

CC:

TC PSTATS		PROJECT STATISTICS							PAGE	1	
		PROJECT EASTBLOO							DATE	7/9/2015	
TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt		
15N	01E	08	EAST BLOODY	0002	56.03	61	247	S	W		
15N	01E	09	EAST BLOODY	0001							
			PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES				
TOTAL			61	247	4.0						
CRUISE			36	126	3.5	4,786	2.6				
DBH COUNT											
REFOREST											
COUNT			23	101	4.4						
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	94	53.2	24.1	101	34.4	169.1	40,584	39,173	8,208	8,207	
R ALDER	24	26.5	17.1	57	10.2	42.2	4,430	4,289	1,199	1,199	
WHEMLOCK	4	3.3	13.9	53	0.9	3.5	407	399	111	111	
WR CEDAR	3	2.0	18.2	53	0.9	3.6	259	252	111	111	
GRAND F	1	.4	21.3	81	0.2	.9	123	123	35	35	
TOTAL	<i>126</i>	<i>85.4</i>	<i>21.7</i>	<i>84</i>	<i>47.1</i>	<i>219.4</i>	<i>45,803</i>	<i>44,237</i>	<i>9,664</i>	<i>9,664</i>	
CONFIDENCE LIMITS OF THE SAMPLE											
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR											
CL	68.1	COEFF	SAMPLE TREES - BF			# OF TREES REQ.		INF. POP.			
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
DOUG FIR		47.1	4.9	1,001	1,052	1,103					
R ALDER		40.1	8.4	162	176	191					
WHEMLOCK		141.8	81.0	51	268	484					
WR CEDAR		54.5	37.7	100	160	220					
GRAND F											
TOTAL		<i>68.9</i>	<i>6.1</i>	<i>782</i>	<i>833</i>	<i>885</i>	<i>189</i>	<i>97</i>	<i>47</i>		
CL	68.1	COEFF	TREES/ACRE			# OF PLOTS REQ.		INF. POP.			
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
DOUG FIR		91.1	11.7	47	53	59					
R ALDER		170.7	21.8	21	26	32					
WHEMLOCK		423.9	54.2	2	3	5					
WR CEDAR		404.7	51.8	1	2	3					
GRAND F		781.0	99.9	0	0	1					
TOTAL		<i>59.7</i>	<i>7.6</i>	<i>79</i>	<i>85</i>	<i>92</i>	<i>142</i>	<i>73</i>	<i>36</i>		
CL	68.1	COEFF	BASAL AREA/ACRE			# OF PLOTS REQ.		INF. POP.			
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
DOUG FIR		80.3	10.3	152	169	187					
R ALDER		169.6	21.7	33	42	51					
WHEMLOCK		380.9	48.7	2	3	5					
WR CEDAR		380.8	48.7	2	4	5					
GRAND F		781.0	99.9	0	1	2					
TOTAL		<i>50.3</i>	<i>6.4</i>	<i>205</i>	<i>219</i>	<i>233</i>	<i>101</i>	<i>52</i>	<i>25</i>		
CL	68.1	COEFF	NET BF/ACRE			# OF PLOTS REQ.		INF. POP.			
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
DOUG FIR		83.4	10.7	34,996	39,173	43,351					
R ALDER		173.8	22.2	3,335	4,289	5,242					
WHEMLOCK		441.6	56.5	173	399	624					
WR CEDAR		390.5	50.0	126	252	378					
GRAND F		781.0	99.9	0	123	246					
TOTAL		<i>66.5</i>	<i>8.5</i>	<i>40,474</i>	<i>44,237</i>	<i>47,999</i>	<i>177</i>	<i>90</i>	<i>44</i>		

PROJECT STATISTICS
PROJECT EASTBLOO

TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
15N	01E	08	EAST BLOODY	0002	56.03	61	247	S	W
15N	01E	09	EAST BLOODY	0001					

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT EASTBLOO				DATE	7/9/2015	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
15N	01E	09	EAST BLOODY	0001	31.37	33	119	S	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
				PLOTS	TREES	TREES	TREES			
TOTAL	33	119	3.6							
CRUISE	20	55	2.8	3,089			1.8			
DBH COUNT										
REFOREST										
COUNT	12	50	4.2							
BLANKS	1									
100 %										
STAND SUMMARY										
	SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET
	TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC
DOUG FIR	29	48.7	21.1	93	25.8	118.7	28,146	27,152	5,756	5,756
R ALDER	22	43.7	17.0	58	16.8	69.2	7,492	7,240	2,001	2,001
WR CEDAR	2	3.1	17.1	52	1.2	4.9	355	344	150	150
GRAND F	1	.7	21.3	81	0.4	1.6	220	220	62	62
WHEMLOCK	1	2.3	11.5	35	0.5	1.6	91	91	33	33
TOTAL	55	98.5	19.1	75	44.9	196.2	36,304	35,047	8,002	8,002
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL: 68.1 %	COEFF	SAMPLE TREES - BF					# OF TREES REQ.		INF. POP.	
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
DOUG FIR	53.5	10.1	782	870	958					
R ALDER	38.4	8.4	165	180	195					
WR CEDAR	76.1	71.3	37	130	223					
GRAND F										
WHEMLOCK										
TOTAL	89.9	12.1	477	542	608	323	165	81		
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	121.0	21.0	38	49	59					
R ALDER	118.7	20.6	35	44	53					
WR CEDAR	330.1	57.4	1	3	5					
GRAND F	574.5	99.9	0	1	1					
WHEMLOCK	574.5	99.9	0	2	5					
TOTAL	60.5	10.5	88	98	109	146	75	37		
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	115.4	20.1	95	119	143					
R ALDER	118.3	20.6	55	69	83					
WR CEDAR	321.1	55.9	2	5	8					
GRAND F	574.5	99.9	0	2	3					
WHEMLOCK	574.5	99.9	0	2	3					
TOTAL	59.6	10.4	176	196	217	142	72	35		
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	118.6	20.6	21,553	27,152	32,750					
R ALDER	118.6	20.6	5,747	7,240	8,733					
WR CEDAR	332.0	57.7	145	344	542					
GRAND F	574.5	99.9	0	220	439					
WHEMLOCK	574.5	99.9	0	91	183					
TOTAL	82.2	14.3	30,036	35,047	40,057	270	138	67		

T15N R01E S08 T0002										T15N R01E S08 T0002				
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt					
15N	01E	08	EAST BLOODY	0002	24.66	28	71	S	W					

Spp	S	So	Gr	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log			Logs Per /Acre		
									Log Scale Dia.				Log Length				Ln Ft	Dia In	Bd Ft		CF/ Lf	
									2-4	5-7	8-11	12+	12-20	21-30	31-35	36-99						
DF	HA	2S		1	1.4	993	979	24										40	15	355	1.82	2.8
DF	HB	2S		9	2.4	5,105	4,981	123										40	16	390	2.00	12.8
DF	HB	3S		1		249	249	6			100							40	11	180	0.94	1.4
DF	DM	2S		35	3.3	19,727	19,083	471			100		1	0	99			40	16	373	1.88	51.1
DF	DM	3S		7	.3	3,989	3,976	98			100		15	9	76			35	9	110	0.90	36.1
DF	DM	4S		2		783	783	19		45	25	30			49			26	7	50	0.55	15.5
DF	DM	UT		2	15.4	1,338	1,133	28	14	7	79				7	93		39	8	112	0.85	10.1
DF	OS	SM		4	.8	2,234	2,216	55			100					100		40	20	698	3.35	3.2
DF	OS	2S		39	4.2	21,988	21,068	520			100				2	98		40	22	823	4.03	25.6
DF	Totals			97	3.4	56,406	54,467	1,343	0	1	8	91	0	2	2	96		37	14	344	1.91	158.5
RA	DM	2S		61		329	329	8			100				100			32	13	190	1.55	1.7
RA	DM	4S		39		206	206	5		100			17		83			29	6	45	0.70	4.6
RA	Totals			1		535	535	13		39	61		6		61	32		30	8	85	0.95	6.3
WH	DM	2S		49	4.8	411	391	10			100				100			40	16	400	2.28	1.0
WH	DM	3S		28		218	218	5			100				100			40	9	120	0.76	1.8
WH	DM	4S		23		180	180	4		92	8		8		92			36	5	39	0.40	4.6
WH	Totals			1	2.4	809	790	19		21	29	50	2		98			38	8	106	0.76	7.4
RC	DM	3S		90		124	124	3			100				100			40	12	200	2.24	.6
RC	DM	4S		10		12	12	0		100			100					20	5	20	0.46	.6
RC	Totals			0		136	136	3		9	91		9		91			30	9	110	1.64	1.2
Type Totals					3.4	57,886	55,927	1,379	0	1	8	90	0	2	2	95		37	13	322	1.83	173.5

TC TSTATS		STATISTICS							PAGE	1	
		PROJECT EASTBLOO							DATE	7/9/2015	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt		
15N	01E	08	EAST BLOODY	0002	24.66	28	128	S	W		
		PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES					
TOTAL		28	128	4.6							
CRUISE		16	71	4.4	1,697	4.2					
DBH COUNT											
REFOREST											
COUNT		11	51	4.6							
BLANKS		1									
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	65	59.0	26.9	110	45.0	233.3	56,406	54,467	11,327	11,326	
R ALDER	2	4.6	17.6	46	1.9	7.8	535	535	179	179	
WHEMLOCK	3	4.6	15.2	64	1.5	5.8	809	790	212	212	
WR CEDAR	1	.6	24.0	62	0.4	1.9	136	136	61	61	
TOTAL	71	68.8	25.7	102	49.0	248.9	57,886	55,927	11,778	11,778	
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	43.3	5.4	1,073	1,133	1,194						
R ALDER	78.6	73.6	36	135	234						
WHEMLOCK	124.0	85.8	49	343	638						
WR CEDAR											
TOTAL	50.6	6.0	995	1,059	1,123	102	52	26			
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	50.1	9.6	53	59	65						
R ALDER	313.9	60.4	2	5	7						
WHEMLOCK	332.7	64.0	2	5	8						
WR CEDAR	529.2	101.8		1	1						
TOTAL	35.8	6.9	64	69	74	53	27	13			
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	47.9	9.2	212	233	255						
R ALDER	313.9	60.4	3	8	12						
WHEMLOCK	294.0	56.5	3	6	9						
WR CEDAR	529.2	101.8		2	4						
TOTAL	39.7	7.6	230	249	268	65	33	16			
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	51.7	9.9	49,055	54,467	59,879						
R ALDER	313.9	60.4	212	535	857						
WHEMLOCK	331.3	63.7	286	790	1,293						
WR CEDAR	529.2	101.8		136	275						
TOTAL	49.3	9.5	50,620	55,927	61,234	101	51	25			

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

T15N R01E S08 Ty0002	24.6
T15N R01E S09 Ty0001	31.3

Project EASTBLOO
Acres 56.03

Page No 1
Date: 7/9/2015
Time 11:29:54AM

Species	Total	Total	Total	Net Cubic Ft/		CF/ LF	Total CCF		Total MBF	
	Trees	Logs	Tons	Tree	Log		Gross	Net	Gross	Net
DOUG FIR	2,983	7,770	13,106	154.18	59.18	1.60	4,599	4,599	2,274	2,195
R ALDER	1,484	2,677	1,848	45.27	25.10	0.86	672	672	248	240
WHEMLOCK	186	255	200	33.61	24.51	0.67	62	62	23	22
WR CEDAR	113	163	146	55.02	38.02	1.07	62	62	14	14
GRAND F	21	42		93.59	46.80	1.17	20	20	7	7
Totals	4,786	10,907	15,300	113.13	49.65	1.42	5,415	5,415	2,566	2,479

Wood Type Species	Total	Total	Total	Net Cubic Ft/		CF/ LF	Total CCF		Total MBF	
	Trees	Logs	Tons	Tree	Log		Gross	Net	Gross	Net
C	3,302	8,230	13,452	143.63	57.63	1.56	4,743	4,743	2,318	2,238
H	1,484	2,677	1,848	45.27	25.10	0.86	672	672	248	240
Totals	4,786	10,907	15,300	113.13	49.65	1.42	5,415	5,415	2,566	2,479



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

FPA/N No: 2418231

Effective Date: 11/06/2016

Expiration Date: 11/06/2018

Shut Down Zone: 655

EARR Tax Credit: Eligible Non-eligible

Reference: East Bloody Run

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

Decision

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

FPA/N Classification

Number of Years Granted on Multi-Year Request

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

Conditions on Approval / Reasons for Disapproval

Issued By: Kris Knutzen

Region: South Puget Sound Region

Title: Resource Protection Forester

Date: 11/6/2015

Copies to: Landowner, Timber Owner and Operator.

Issued in person: Landowner Timber Owner Operator By: _____

Appeal Information

You have thirty (30) days to appeal this Decision and any related State Environmental Policy Act determinations to the Pollution Control Hearings Board in writing at the following addresses:

Physical address: 1111 Israel Rd. SW, Ste 301, Tumwater, WA 98501

Mailing address: P.O. BOX 40903, OLYMPIA, WA 98504-0903

Information regarding the Pollution Control Hearings Board can be found at: <http://www.eho.wa.gov/>

At the same time you file an appeal with the Pollution Control Hearings Board, also send a copy of the appeal to the Department of Natural Resources' region office and the Office of the Attorney General at the following addresses:

Office of the Attorney General
Natural Resources Division
1125 Washington Street SE
PO Box 40100
Olympia, WA 98504-0100

And

Department Of Natural Resources
South Puget Sound Region
950 Farman Avenue North
Enumclaw Wa 98022

Other Applicable Laws

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

Hydraulic Project Approval (HPA) (Chapter 77.55RCW and WAC 222-50-020(2))

The Department of Fish and Wildlife (WDFW), as the jurisdictional agency issuing HPAs, has final authority for approving water crossing structures in Type S and F waters. WDFW continues to have authority on Type N waters and may exercise that authority on some Type N waters.

Notice: The HPA water crossing requirements supersede what is indicated on the FPA. Landowners are required by law to follow the provisions as directed on the HPA.

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

Use the "Notice of Transfer of Approved Forest Practices Application/Notification" form. This form is available at region offices and on the Forest Practices website: <http://www.dnr.wa.gov/businesspermits/forestpractices>. Notify DNR of new Operators within 48 hours.

Continuing Forest Land Obligations (RCW 76.09.060, RCW 76.09.070, RCW 76.09.390, and WAC 222-20-055)

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

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

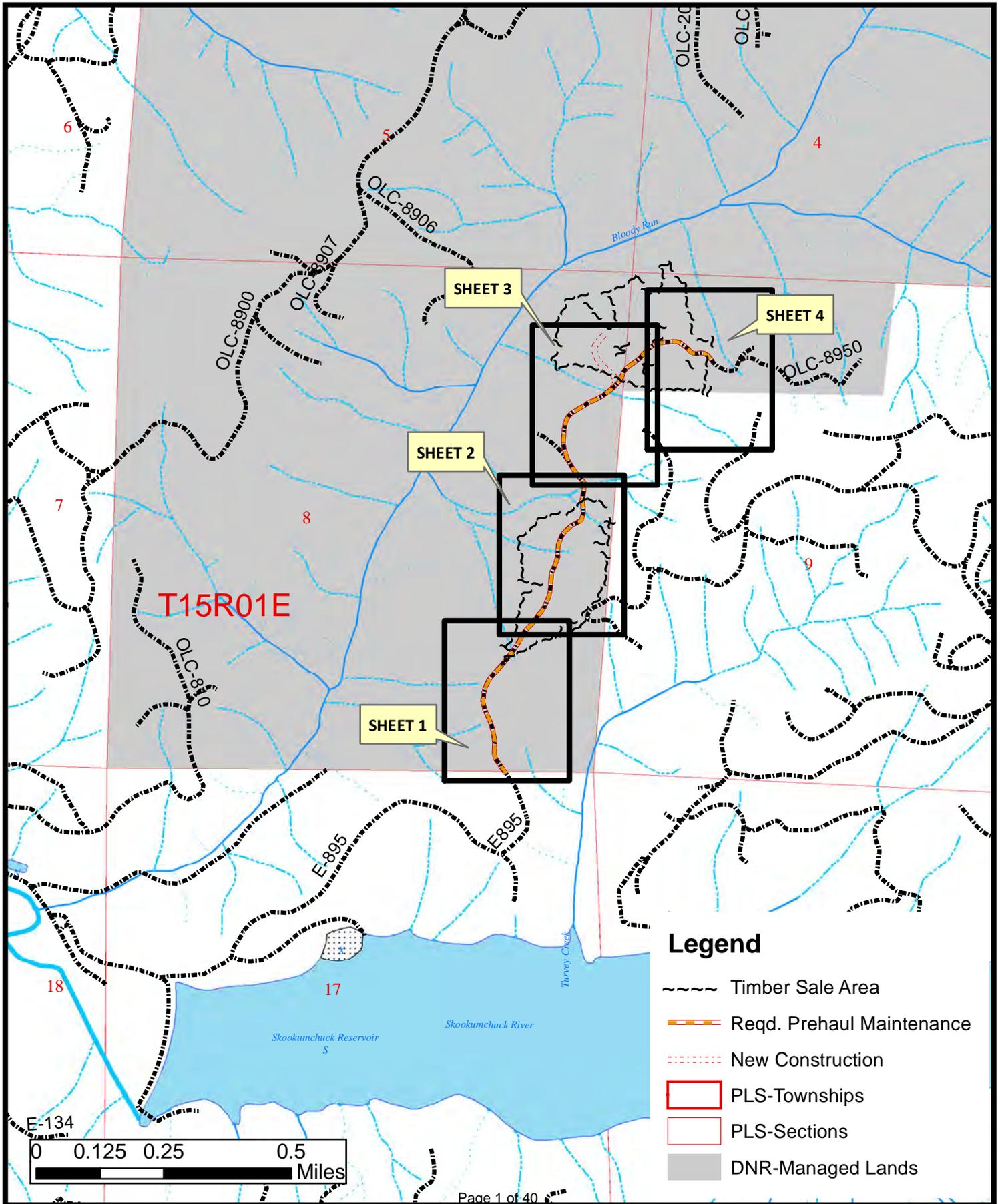
If the seller fails to notify the buyer about the continuing forest land obligation, the seller must pay the buyer's costs related to continuing forest land obligations, including all legal costs and reasonable attorneys' fees incurred by the buyer in enforcing the continuing forest land obligation against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

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

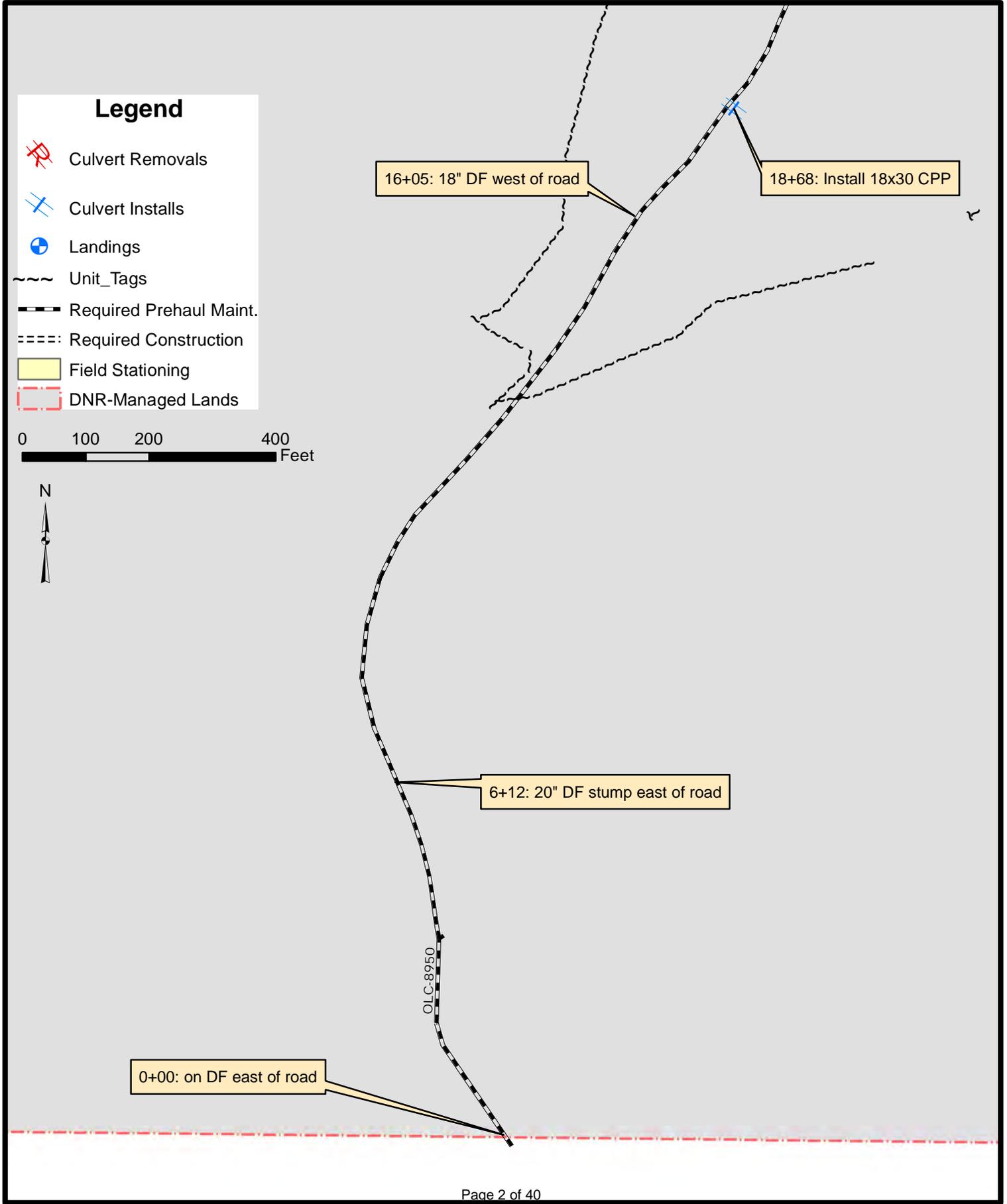
DNR affidavit of mailing:

On this day 11/06/2015, I placed in the United States mail at Enumclaw,
WA, (post office location)
postage paid, a true and accurate copy of this document. Notice of Decision FPA #2418231
Sherry Tomlinson _____
(Printed name) (Signature)

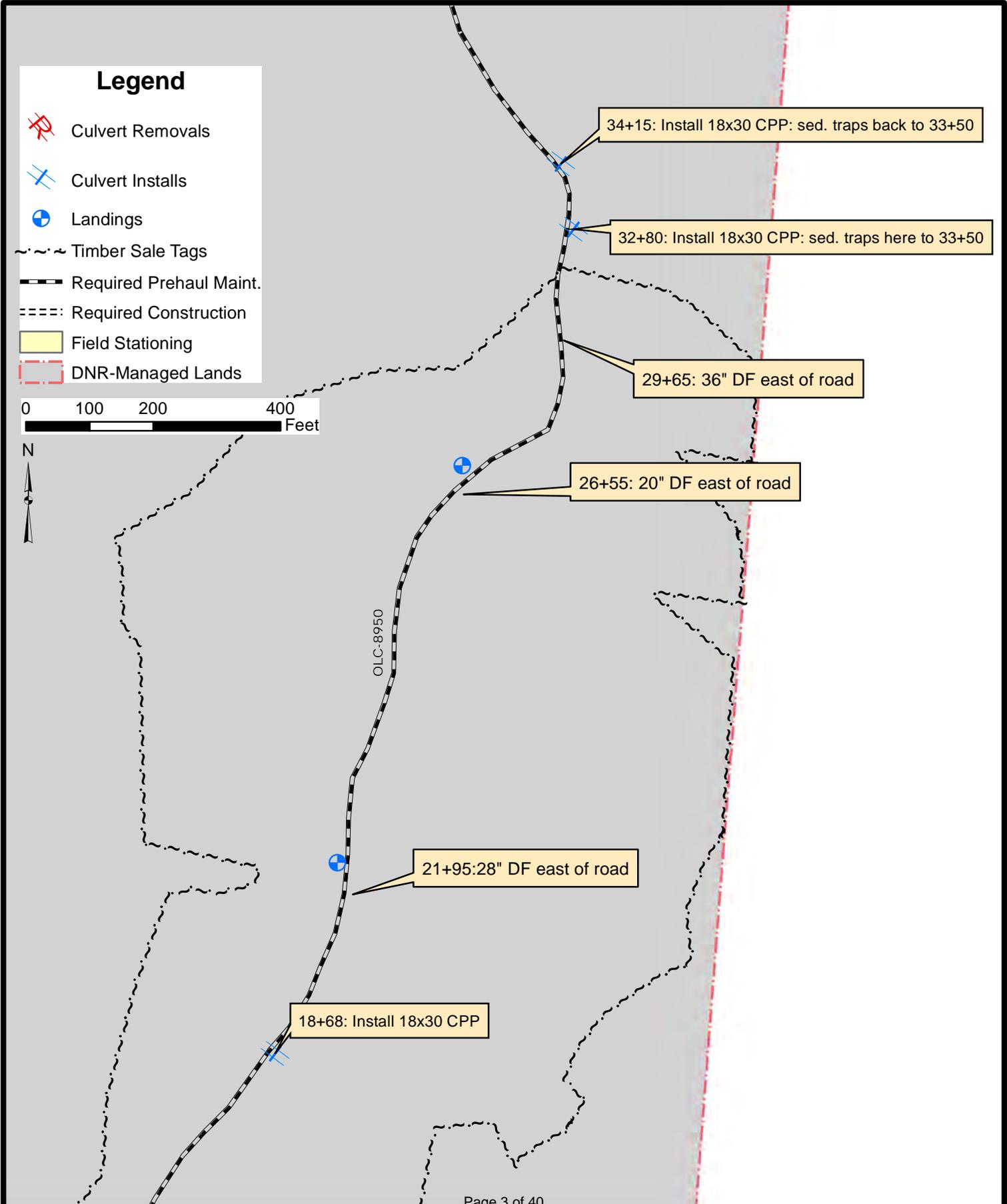
**ROAD PLAN VICINITY MAP
EAST BLOODY RUN TIMBER SALE
1 OF 1**



ROAD PLAN DETAIL MAP EAST BLOODY RUN TIMBER SALE 1 OF 4



ROAD PLAN DETAIL MAP EAST BLOODY RUN TIMBER SALE 2 OF 4



ROAD PLAN DETAIL MAP

EAST BLOODY RUN TIMBER SALE

3 OF 4

Legend

-  Culvert Removals
-  Culvert Installs
-  Landings
-  Unit_Tags
-  Required Prehaul Maint.
-  Required Construction
-  Field Stationing
-  DNR-Managed Lands



Post Harvest:
ABANDON OLC 8955

3+75: Install 18x30 CPP no skew in dip

2+68: Install 18x30 CPP no skew in dip

46+40 OLC 8950 =
0+00 OLC 8955

46+30: Install 18x30 CPP

45+60: Stake and Ribbon east of road

34+15: Install 18x30 CPP: sed. traps back to 33+50

ROAD PLAN DETAIL MAP EAST BLOODY RUN TIMBER SALE 4 OF 4

Legend

-  Culvert Removals
-  Culvert Installs
-  Landings
-  Unit_Tags
-  Required Prehaul Maint.
-  Required Construction
-  Field Stationing
-  DNR-Managed Lands



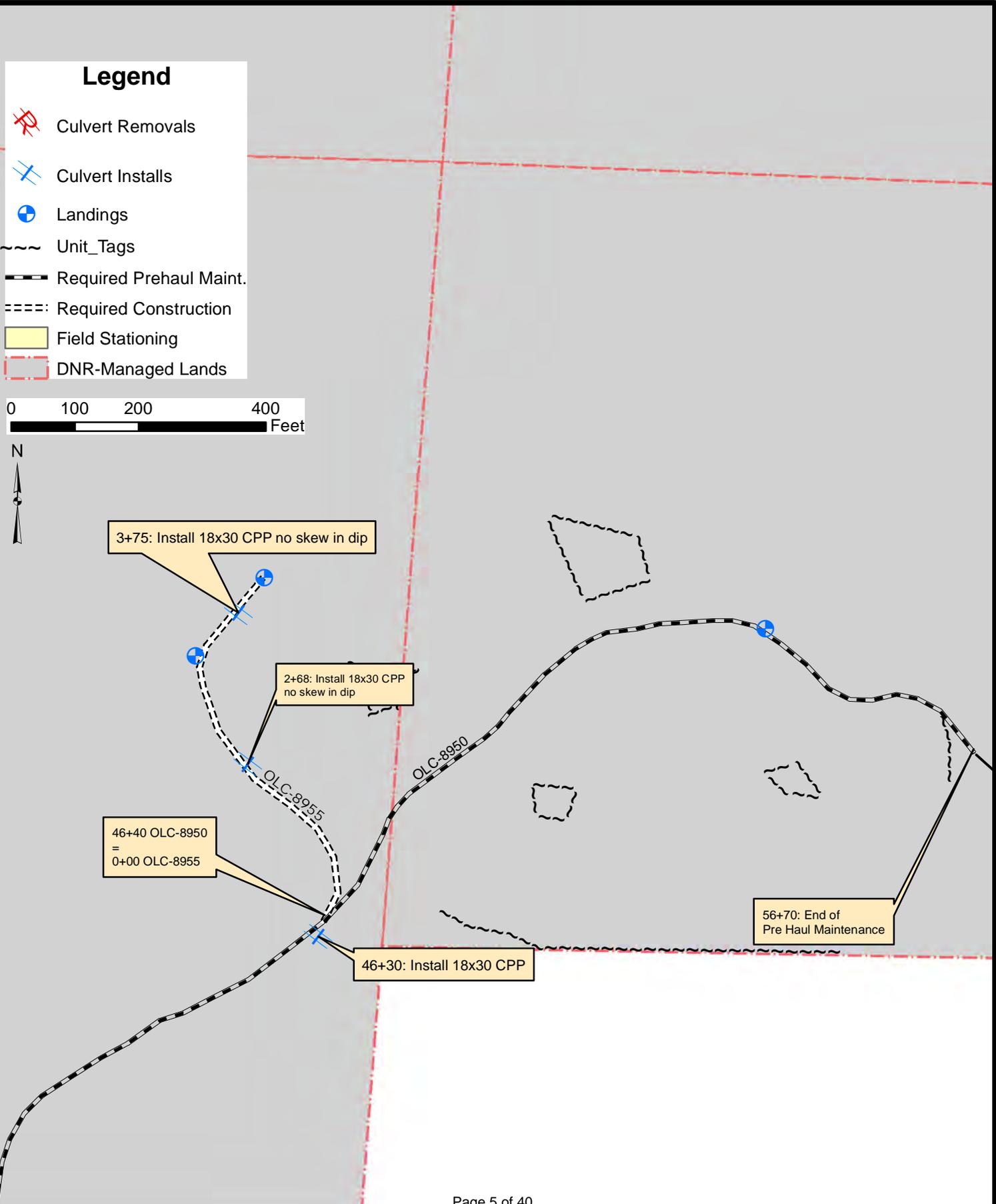
3+75: Install 18x30 CPP no skew in dip

2+68: Install 18x30 CPP no skew in dip

46+40 OLC-8950
= 0+00 OLC-8955

46+30: Install 18x30 CPP

56+70: End of Pre Haul Maintenance



STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES

EAST BLOODY TIMBER SALE ROAD PLAN
THURSTON COUNTY
DELPHI UNIT; BLACK HILLS DISTRICT

AGREEMENT NO.: 30-092000

STAFF ENGINEER: GREG JOHNSON

DATE: AUGUST 29, 2014

DRAWN & COMPILED BY: WILLIAM HOSKINS

SECTION 0 – SCOPE OF PROJECT

0-1 ROAD PLAN SCOPE

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

0-2 REQUIRED ROADS

The specified work on the following roads is required.

<u>Road</u>	<u>Stations</u>	<u>Type</u>
OLC 8950	0+00 thru 56+70	Pre-haul Maintenance
OLC 8955	0+00 thru 5+13	Construction
OLC 8955	0+00 thru 5+13	Abandonment

0-4 CONSTRUCTION

Construction includes, but is not limited to: clearing; grubbing; ROW debris disposal; excavation and embankment to subgrade; excavation and hauling of borrow material; compaction of subgrade and embankment; landing and turnout construction; acquisition and installation of road drainage structures; acquisition, application and compaction of aggregate rock.

0-6 PRE-HAUL MAINTENANCE

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

<u>Road</u>	<u>Stations</u>	<u>Requirements</u>
OLC 8950	0+00 thru 56+70	Brushing per Clause 3-1; clean ditches; clean culvert inlets and outlets; install drainage structures; desod, grade, shape and compact existing road surface; acquisition, application and compaction of rock (Optional-seasonal-See Clause 6-75)

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 abandonment listed in Clause 9-21 ROAD ABANDONMENT.

SECTION 1 – GENERAL

1-1 ROAD PLAN CHANGES

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

1-2 UNFORESEEN CONDITIONS

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

1-3 ROAD DIMENSIONS

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

1-4 ROAD TOLERANCES

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

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

1-6 ORDER OF PRECEDENCE

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

1. Addenda.
2. Designs or Plans. On designs and plans, figured dimensions shall take precedence over scaled dimensions.

3. Road Plan Clauses.
4. Typical Section Sheet.
5. Standard Lists.
6. Standard Details.

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

1-8 REPAIR OR REPLACEMENT OF DAMAGED MATERIALS

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

1-9 DAMAGED METALLIC COATING

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

1-15 ROAD MARKING

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

- Orange ribbon, orange painted stakes, orange diagonal lines on trees within 5 feet of line for construction centerline
- Three (3) orange painted reference points on trees outside clearing limits for location of new construction centerline and drainage structure installation.
- Two-foot long orange painted stakes, orange ribbon for drainage structure installation locations on existing roads.
- Orange painted stationing numbers on trees/stumps for pre-haul maintenance road stationing

1-18 REFERENCE POINT DAMAGE

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

1-20 COMPLETE BY DATE

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

1-21 HAUL APPROVAL

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

1-22 WORK NOTIFICATIONS

On the following road(s), Purchaser shall notify the Contract Administrator a minimum of 3 calendar days before work begins.

<u>Road</u>	<u>Stations</u>
OLC 8950	0+00 thru 62+50
OLC 8955	0+00 thru 5+13

1-23 ROAD WORK PHASE APPROVAL

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

- Subgrade construction
- Drainage installation
- Subgrade compaction
- Rock application, if applied. See Clause 6-75
- Rock compaction, if applied. See Clause 6-75

1-25 ACTIVITY TIMING RESTRICTION

The specified activities are not allowed during the listed closure period(s) unless authorized in writing by the Contract Administrator. Restrictions for hauling forest products are specified in Contract Clause H-130 HAULING SCHEDULE.

<u>Road</u>	<u>Stations</u>	<u>Activity</u>	<u>Closure Period</u>
OLC 8950	0+00 thru 56+70	Pre-haul Maintenance	October 1 through April 30
OLC 8955	0+00 thru 5+13	Construction	October 1 through April 30

1-26 OPERATING DURING CLOSURE PERIOD

If permission is granted to operate during a closure period listed in Clause 1-25 ACTIVITY TIMING RESTRICTION or Contract Clause H-130 HAULING SCHEDULE, Purchaser shall provide a maintenance plan to include further protection of state resources. Purchaser shall obtain written approval from the Contract Administrator for the maintenance plan, and shall put preventative measures in place before operating during the closure period. Purchaser is required to maintain all haul roads at their own expense.

1-29 SEDIMENT RESTRICTION

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

1-30 CLOSURE TO PREVENT DAMAGE

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

- Wheel track rutting exceeds 6 inches on jaw run or pit run roads.

- Wheel track rutting exceeds 4 inches on crushed rock roads.
- Wheel track rutting exceeds 6 inches on native surface roads.
- Surface or base stability problems persist.
- Weather is such that satisfactory results cannot be obtained in an area of operations.
- When, in the opinion of the Contract Administrator excessive road damage or rutting may occur.

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

2-1 GENERAL ROAD MAINTENANCE

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

2-5 MAINTENANCE GRADING – EXISTING ROAD

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

<u>Road</u>	<u>Stations</u>	<u>Requirements</u>
OLC 8950	0+00 thru 56+70	Grade and shape surface in accordance with TYPICAL SECTION SHEET

2-6 CLEANING CULVERTS

On the following road(s), Purchaser shall clean the inlets and outlets of all culverts and shall obtain written approval from the Contract Administrator before work is considered by state to be complete.

<u>Road</u>	<u>Stations</u>
OLC 8950	0+00 thru 56+70

2-7 CLEANING DITCHES, HEADWALLS, AND CATCH BASINS

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

<u>Road</u>	<u>Stations</u>
OLC 8950	0+00 thru 56+70

SECTION 3 – CLEARING, GRUBBING, AND DISPOSAL

3-1 BRUSHING

On the following road(s), Purchaser shall remove vegetative material up to 6 inches in diameter, including limbs, as shown on the BRUSHING DETAIL.

<u>Road</u>	<u>Stations</u>
OLC 8950	0+00 thru 56+70

3-5 CLEARING

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

3-8 PROHIBITED DECKING AREAS

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

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

3-10 GRUBBING

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

3-12 STUMP PLACEMENT

Purchaser shall place grubbed stumps as directed by the Contract Administrator and in compliance with all other clauses in this road plan. Stumps must be positioned on stable locations

3-14 STUMPS WITHIN DESIGNATED WASTE AREAS

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

3-20 ORGANIC DEBRIS DEFINITION

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

3-21 DISPOSAL COMPLETION

Purchaser shall remove organic debris from the road surface, ditchlines, and culvert inlets and outlets. Purchaser shall complete all disposal of organic debris, except by burning, before rock application.

3-23 PROHIBITED DISPOSAL AREAS

Purchaser shall not place organic debris in the following areas:

- Within 50 feet of a cross drain culvert.
- Within 100 feet of a live stream, or wetland.
- On road subgrades, or excavation and embankment slopes.
- On slopes greater than 40%.
- Within the operational area for cable landings where debris may shift or roll.
- On locations where brush can fall into the ditch or onto the road surface.
- Against standing timber.
- In any location or in such quantity that the debris, in the opinion of the Contract Administrator, interferes with proper road drainage.

3-24 BURYING ORGANIC DEBRIS RESTRICTED

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

3-25 SCATTERING ORGANIC DEBRIS

Purchaser shall scatter organic debris outside of the grubbing limits in natural openings on the downhill side of the road unless otherwise detailed in this road plan or as directed by the Contract Administrator. Where natural openings are unavailable or restrictive, alternate debris disposal methods are subject to the written approval of the Contract Administrator.

SECTION 4 – EXCAVATION

4-1 EXCAVATOR CONSTRUCTION

On the following roads, Purchaser shall use a track mounted hydraulic excavator for construction work.

<u>Road</u>	<u>Stations</u>
OLC 8955	0+00 thru 1+32

4-2 PIONEERING

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

- Drainage must be provided on all uncompleted construction.
- Road pioneering operations may not undercut the final cut slope or restrict drainage.

- Culverts at live stream crossings must be installed during pioneering operations prior to embankment.

4-3 ROAD GRADE AND ALIGNMENT STANDARDS

Purchaser shall follow these standards for road grade and alignment:

- Grade and alignment must have smooth continuity, without abrupt changes in direction.
- Maximum grades may not exceed 18 percent favorable and 12 percent adverse.
- Minimum curve radius is 55 feet at centerline.
- Maximum grade change for sag vertical curves is 5% in 100 feet.
- Maximum grade change for crest vertical curves is 5% in 100 feet.

4-5 CUT SLOPE RATIO

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

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

4-6 EMBANKMENT SLOPE RATIO

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

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

4-7 SHAPING CUT AND FILL SLOPE

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

4-8 CURVE WIDENING

The minimum widening placed on the inside of curves is:

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

4-9 EMBANKMENT WIDENING

The minimum embankment widening is:

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

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

4-25 DITCH CONSTRUCTION AND RECONSTRUCTION

Purchaser shall construct and as necessary reconstruct ditches into the subgrade as specified on the TYPICAL SECTION SHEET. Ditches must be constructed concurrently with construction of the subgrade.

4-27 DITCH WORK – MATERIAL USE PROHIBITED

On the following road(s), Purchaser shall not pull ditch material across the road or mix in with the road surface. Excavated material must be disposed of as specified in Clause 4-36 DISPOSAL OF WASTE MATERIAL.

<u>Road</u>	<u>Stations</u>	<u>Waste Disposal</u>
OLC 8950	0+00 thru 57+60	See Clause 4-36

4-28 DITCH DRAINAGE

Ditches must drain to cross-drain culverts or ditchouts.

4-29 DITCHOUTS

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

4-35 WASTE MATERIAL DEFINITION

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

4-36 DISPOSAL OF WASTE MATERIAL

Purchaser may sidecast waste material on side slopes up to 40% if the waste material is compacted and free of organic debris. On side slopes greater than 40%, all waste material must be end hauled or pushed to the designated embankment sites and waste areas identified in Clause 4-37 WASTE AREA LOCATION.

4-37 WASTE AREA LOCATION

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

<u>Road</u>	<u>Waste Area Location</u>	<u>Comments</u>	<u>Volume</u>
OLC 8950	20+75	In turnout left-place to allow continued use of turnout	+/- 300 cy
OLC 8955	1+00 to 1+50	Excavator-place uphill of prism outside grubbing limits	+/-50 cy

4-38 PROHIBITED WASTE DISPOSAL AREAS

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

- Within 50 feet of a cross drain culvert.
- Within 100 feet of a live stream or wetland.
- 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.
- Within the operational area for cable landings.
- Against standing timber.
- Outside the clearing limits.

4-48 BORROW MATERIAL

Borrow material may not contain more than 5% organic debris, or trash by volume.

4-49 BORROW SOURCE

Purchaser shall obtain borrow material from the listed borrow source(s) or borrow sources identified or approved by the Contract Administrator.

<u>Source</u>	<u>Location</u>	<u>Type; Yards</u>
Existing Cutslope	OLC 89+50 STA 46+40	Borrow; +/-50 cy

4-50 BORROW APPLICATION

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

<u>Road</u>	<u>Stations</u>	<u>Cubic Yards</u>	<u>Comments</u>
OLC 8955	0+00 thru 0+50	+/- 50 cy	Use to build junction OLC 8950-8955 do not undermine fill of OLC 8950

4-55 ROAD SHAPING

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

4-56 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

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

4-61 SUBGRADE COMPACTION

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

4-62 DRY WEATHER COMPACTION

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

4-63 EXISTING SURFACE COMPACTION

Purchaser shall compact maintained road surfaces in accordance with the COMPACTION LIST by routing equipment over the entire width.

SECTION 5 – DRAINAGE

5-1 REMOVAL OF SHOULDER BERMS

On the following road(s), Purchaser shall remove berms from road shoulders wherever they currently exist.

<u>Road</u>	<u>Stations</u>
OLC 8950	0+00 thru 56+70

5-5 CULVERTS

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

on unprotected soil. Culverts must be new and must meet the specifications in Clauses 10-15 through 10-23.

5-11 UNUSED MATERIALS STATE PROPERTY

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

5-15 CULVERT INSTALLATION

Culvert installation must be in accordance with the CULVERT AND DRAINAGE SPECIFICATION DETAIL and the National Corrugated Metal Pipe Association's "Installation Manual for Corrugated Steel Drainage Structures" or the Corrugated Polyethylene Pipe Association's "Recommended Installation Practices for Corrugated Polyethylene Pipe and Fittings" depending on material of culvert.

5-17 CROSS DRAIN SKEW AND SLOPE

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

5-18 CULVERT DEPTH OF COVER

Cross drain culverts must be installed with a depth of cover of not less than 18 inches of compacted subgrade over the top of the culvert at the shallowest point. This is exclusive of any surface rock applied.

5-20 ENERGY DISSIPATERS

Purchaser shall install energy dissipaters in accordance with the CULVERT AND DRAINAGE SPECIFICATION DETAIL. Energy dissipater installation is subject to approval by the Contract Administrator.

5-25 CATCH BASINS

Purchaser shall construct catch basins in accordance with CULVERT AND DRAINAGE SPECIFICATION DETAIL. Minimum dimensions of catch basins are 2 feet wide and 4 feet long unless specified otherwise on the CULVERT LIST.

5-26 HEADWALLS FOR CROSS DRAIN CULVERTS

Purchaser shall construct headwalls in accordance with the CULVERT AND DRAINAGE SPECIFICATION DETAIL at all culverts on the CULVERT LIST that specify the placement of rock. Rock used for headwalls must be in accordance to specifications set in the CULVERT LIST.

5-33 NATIVE SURFACE ROADS

If overwintered, native surface roads must be waterbarred by October 15. Purchaser shall construct waterbars according to the attached NON->DRIVABLE WATERBAR DETAIL at a maximum spacing that will produce a vertical distance of no more than 20 feet between waterbars or between natural drainage paths, and with a maximum spacing of 400 feet.

SECTION 6 – ROCK AND SURFACING

6-5 ROCK FROM COMMERCIAL SOURCE

Rock used in accordance with the quantities on the ROCK LIST shall be obtained from any commercial source at the Purchaser's expense. Rock sources are subject to written approval by the Contract Administrator before their use. Purchaser may be required to submit laboratory Los Angeles Rattler and sieve gradation analysis test(s) for the rock to be used to the Contract Administrator.

6-22 FRACTURE REQUIREMENT FOR ROCK

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

6-29 1 ½-INCH MINUS CRUSHED ROCK

% Passing 1 ½" square sieve	100%
% Passing 1" square sieve	50 - 85%
% Passing U.S. #4 sieve	30 - 50%
% Passing U.S. #40 sieve	16% maximum
% Passing U.S. #200 sieve	5%-10%

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

6-31 2-INCH CLEAN ROCK

% Passing 2" square sieve	100%
% Passing U.S. #4 sieve	20%
% Passing U.S. #200 sieve	5% maximum

The portion of aggregate retained on the No. 4 sieve may not contain more than 0.1 percent organic debris and trash. All percentages are by weight.

6-39 6-INCH JAW RUN ROCK

% Passing 6" in one dimension	100%
% Passing 2 ½" square sieve	25 - 60%
% Passing U.S. #200 sieve	8% maximum

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

6-43 QUARRY SPALLS

% Passing 8" square sieve	100%
% Passing 2" square sieve	20% maximum
% Passing U.S. #40 sieve	5% maximum

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

6-55 ROCK APPLICATION MEASURED BY COMPACTED DEPTH

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

6-70 APPROVAL BEFORE ROCK APPLICATION

Purchaser shall obtain written approval from the Contract Administrator for subgrade completion, including compaction per Clause 4-61 and ditch construction/reconstruction per Clause 4-25 before rock application.

6-71 ROCK APPLICATION

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

6-75 OPTIONAL ROCK EXCEPTION

On the following roads, if hauling takes place from May 1 to September 30, Purchaser may place less rock than shown on the ROCK LIST, when approved in writing by the Contract Administrator.

If less rock is applied, Purchaser shall submit a written plan, for approval, describing how these roads will be constructed, used, maintained, and treated post-haul. Purchaser shall meet post-haul specifications in Section 9 POST-HAUL ROAD WORK, the FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS, or other conditions of the approved plan.

<u>Road</u>	<u>Stations</u>	<u>Options</u>
OLC 8950	0+00 thru 56+70	Optional during May 1 thru September 30 only
OLC 8955	0+00 thru 5+13	Optional during May 1 thru September 30 only

7-5 STRUCTURE DEBRIS

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

8-1 SEDIMENT CONTROL STRUCTURES

On the following road(s), Purchaser shall install sediment traps in accordance with the SEDIMENT TRAP detail.

<u>Road</u>	<u>Stations</u>	<u>Comments</u>
OLC 8950	30+70, 33+10, 33+90, 46+85	All associated with stream crossing culverts. Marked in field with orange ribbon and/or orange 2' stakes

8-2 PROTECTION FOR EXPOSED SOIL

Purchaser shall provide and evenly spread a layer of straw to all exposed soils within 100 feet of a stream or wetland. Soils must be covered before the first anticipated storm event. Soils may not sit exposed during any rain event.

8-15 REVEGETATION

On the following road(s), Purchaser shall spread erosion control seed mix on all exposed soils resulting from road work activities. Cover all exposed soils using any method which achieves an even application rate of not less than 40 pounds per acre. Covering must be approved in writing by the Contract Administrator.

<u>Road</u>	<u>Location</u>	<u>Qty (lbs)*</u>	<u>Type</u>
OLC 8955	0+00 thru 5+13	35	See Clause 8-25
OLC 8950	32+80 thru 34+15	5	See Clause 8-25
OLC 8950	45+85 thru 46+30	10	See Clause 8-25
OLC 8950	59+10 thru 61+30	10	See Clause 8-25

*Quantities are estimates only. Actual quantities may vary and are the responsibility of the Purchaser.

8-16 REVEGETATION SUPPLY

The Purchaser shall provide the erosion control seed mix called for in Clause 8-25.

8-17 REVEGETATION TIMING

Purchaser shall revegetate during the first available opportunity. Soils may not be allowed to sit exposed for longer than one month without receiving revegetation treatment unless otherwise approved in writing by the Contract Administrator.

8-18 PROTECTION FOR SEED

Purchaser shall provide a protective cover for seed on all exposed soils within 50 feet of streams or wetlands if revegetation occurs between July 1 and March 31. The protective cover may consist of weed free straw or a commercially manufactured erosion control product if approved in writing by the Contract Administrator. Seed must be covered before the first anticipated storm event. The protective cover requirement may be waived in writing by the Contract Administrator if Purchaser is able to demonstrate a revegetation plan that will result in the establishment of a uniform dense crop (at least 50% coverage) of 3-inch tall grass by October 31.

8-19 ASSURANCE FOR SEEDED AREA

Purchaser shall ensure the growth of a uniform and dense crop (at least 50% coverage) of 3-inch tall grass. Purchaser shall reapply the erosion control mix in areas that have failed to germinate or have been damaged through any cause. Restore eroded or disturbed areas, clean up and properly dispose of eroded materials, and reapply the erosion control mix at no addition cost to the state.

8-25 GRASS SEED

Purchaser shall evenly spread the seed mixture listed below on all exposed soil listed in Clause 8-15. Grass seed must meet the following specifications:

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

<u>Kind and Variety of Seed in Mixture</u>	<u>% by Weight</u>
Perennial Rye	35-45
Red Fescue	30-40
White Clover	10-20

SECTION 9 – POST-HAUL ROAD WORK

9-3 CULVERT MATERIAL REMOVED FROM STATE LAND

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

9-5 POST-HAUL MAINTENANCE

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

<u>Road</u>	<u>Stations</u>	<u>Additional Requirements</u>
OLC 8950	0+00 thru 56+70	No additional requirements
E-895	0+00 to 64+14	Road shall be left in the condition that exists at the time the plan of operations is completed.

9-21 ROAD ABANDONMENT

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

<u>Road</u>	<u>Stations</u>	<u>Type</u>
OLC 8955	All	Abandonment (Clause 9-23)

9-23 ABANDONMENT

- Fill in ditches.
- Rip the surface to a minimum depth of 10 inches.
- Outslope the surface at a minimum of 20 percent or to natural ground gradient if same is less than 20 percent.
- Remove road shoulder berms.
- Construct non-drivable waterbars in accordance with the attached NON-DRIVABLE WATERBAR DETAIL at a maximum spacing that will produce a vertical drop of no more than 20 feet between waterbars or between natural drainage paths and with a maximum spacing of 200 feet, or as marked in the field.
- Skew waterbars at least 30 degrees from perpendicular to the road centerline on roads in excess of 3 percent grade.
- Key waterbars into the cut-slope to intercept the ditch. Waterbars must be outsloped to provide positive drainage. Outlets must be on stable locations.
- Remove all stream crossing culverts according to Clause 9-2.
- Remove ditch cross drain culverts and leave the resulting trench open.
- Slope all trench walls and approach embankments no steeper than 1.5:1.
- Apply grass seed concurrently with abandonment and in accordance with Section 8 EROSION CONTROL.
- Cover, concurrently with abandonment, all exposed soils within 100 feet of any live stream, with a 8-inch deep layer of straw.

- Provide and evenly spread a 6-inch layer of straw to all exposed soils associated with stream culvert and puncheon removals, as well as all waste material generated by fill removal that is within 30 feet of excavation limits.
- Scatter woody debris onto abandoned road surfaces.

SECTION 10 MATERIALS

10-6 GEOTEXTILE FOR TEMPORARY SILT FENCE

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

	<u>ASTM Test</u>	<u>Requirements</u>
Type	--	Unsupported between posts
Apparent opening size	D 4751	No. 30 max., No. 100 min.
Water permittivity	D 4491	0.02 sec ⁻¹
Grab tensile strength	D 4632	180 lb in machine direction, 100lb in cross-machine direction
Grab tensile elongation	D 4632	30% max. at 180 lb or more
Ultraviolet stability	D 4355	70% retained after 500 hours of exposure

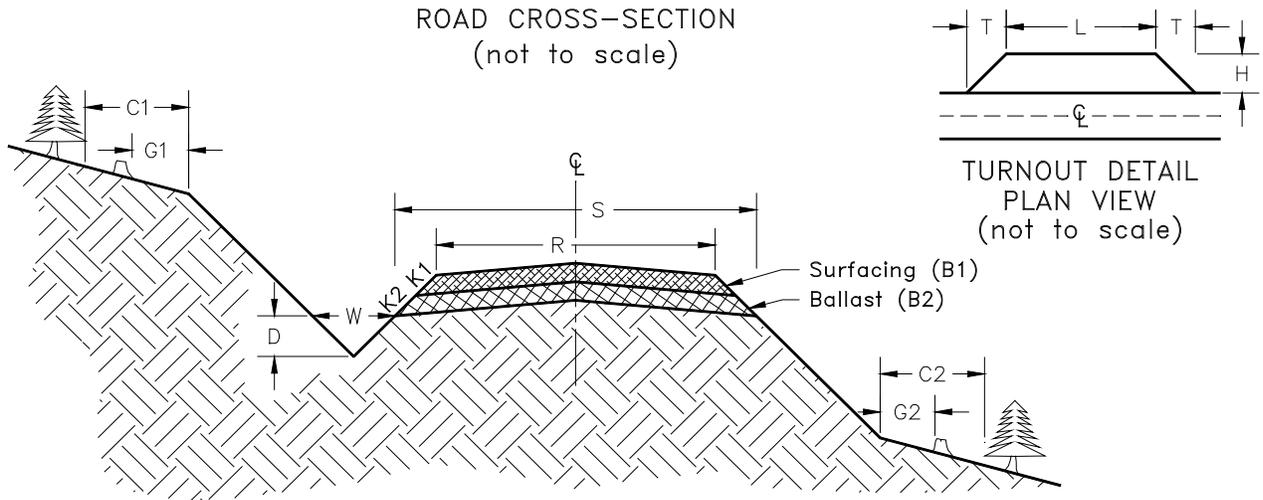
10-17 CORRUGATED PLASTIC CULVERT

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

10-22 PLASTIC BAND

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

ROCK LIST
(Page 1 of 2)



BALLAST

Road Number	From Station	To Station	Rock Slope	Compacted Rock Depth	C.Y./ Station	# of Stations	C.Y. Subtotal	Rock Source	Turnout		
									Length	Width	Taper
			K2	B2					L	H	T
					6" JAW RUN						
OLC 8950	0+00	56+70	-	-	-	-	-	Commercial	-	-	-
		LANDINGS (3)	1 ½ : 1	8"	-	-	75*				
		TURNOUTS (2)	1 ½ : 1	8"	-	-	40*		50	10	25
OLC 8955	0+00	5+13	1 ½ : 1	12"	54	5.1	275*				
		LANDINGS (2)	1 ½ : 1	12"	-	-	50*				
		TURNOUTS (1)	1 ½ : 1	12"	-	-	20*		50	10	25

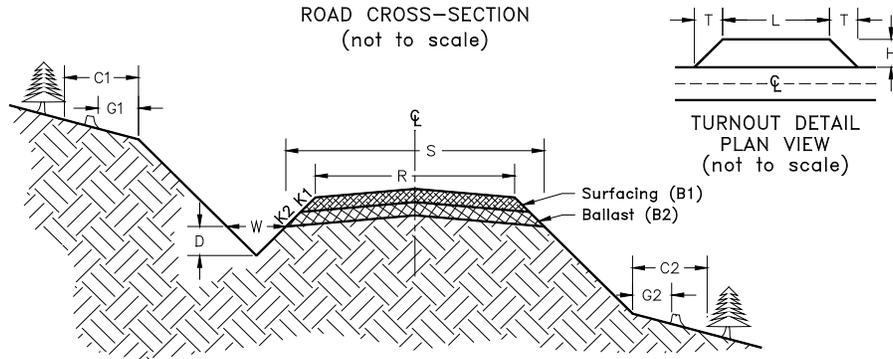
* Optional Rock

BALLAST TOTAL _460*__ Cubic Yards

Rock quantities shown are measured in compacted yards. If Purchaser desires to obtain loose (or truck) yards, Purchaser must apply an appropriate swell factor to the quantities listed above.

If Purchaser elects to haul on optional rock roads in dry weather, the depth listed above is recommended but not required.

ROCK LIST (Page 2 of 2)



SURFACE

Road Number	From Station	To Station	Rock Slope	Compacted Rock Depth	C.Y./ Station	# of Stations	C.Y. Total	Rock Source
			K1	B1				
OLC 8950	0+00	30+70	1 ½ : 1	4.0"	1 ½" MINUS CRUSHED 18	31	560*	Commercial
	30+70	34+15	1 ½ : 1	4.0"	2" CLEAN 18	3.5	64	Commercial
	34+15	45+00	1 ½ : 1	4.0"	1 ½" MINUS CRUSHED 18	11.5	210*	Commercial
	45+00	47+00	1 ½ : 1	4.0"	2" CLEAN 18	2	36	Commercial
	47+00	56+70	1 ½ : 1	4.0"	1 ½" MINUS CRUSHED 18	10	180*	Commercial
OLC 8955	0+00	5+13	1 ½ : 1	4.0"	1 ½" MINUS CRUSHED 15	5.1	75*	

*Optional Rock

SURFACE TOTAL
1 ½" MINUS _1025* Cubic Yards
2" CLEAN __100_ Cubic Yards

RIP-RAP & SELECT FILL

Road Number	From Station	To Station	Rock Slope	Compacted Rock Depth	C.Y./ Station	# of Stations	C.Y. Total	Rock Source
			K1	B1				
All		Culvert headwalls and energy dissipaters	-	-	Quarry Spalls		10	Commercial

*Optional Rock

TOTAL __10__ Cubic Yards

If Purchaser elects to haul on optional rock roads in dry weather, the depth listed above is recommended but not required.

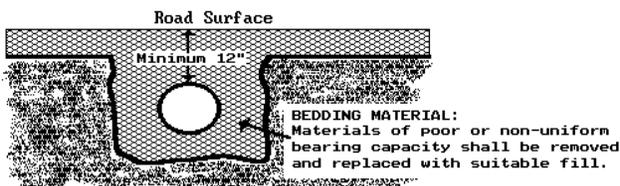
CULVERT LIST

Road Number	Location	Culvert		Length (ft)			Riprap (C.Y.)			Backfill Material	Placement Method	Const. Staked	Remarks
		Dia.	Gauge	Culvert	Downspt	Flume	Inlet	Outlet	Type				
			If										
			Steel										
OLC 8950	18+68	18"	Plastic	30	-	-	0.5	1.5	QS	NT	Machine	-	Ditch Relief
OLC 8950	32+80	18"	Plastic	30	-	-	0.5	1.5	QS	NT	Machine	-	Ditch Relief
OLC 8950	34+15	18"	Plastic	30	-	-	0.5	1.5	QS	NT	Machine	-	Ditch Relief
OLC 8950	46+30	18"	Plastic	30	-	-	0.5	1.5	QS	NT	Machine	-	Ditch Relief
OLC 8955	2+68	18"	Plastic	30	-	-	-	1.0	QS	NT	Machine	-	Cross Drain
OLC 8955	3+75	18"	Plastic	30	-	-	-	1.0	QS	NT	Machine	-	Cross Drain

Key:

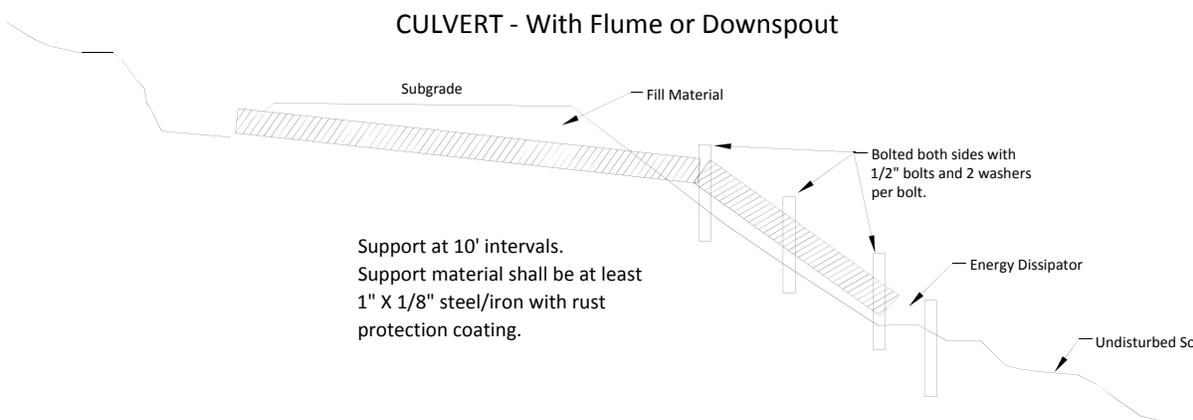
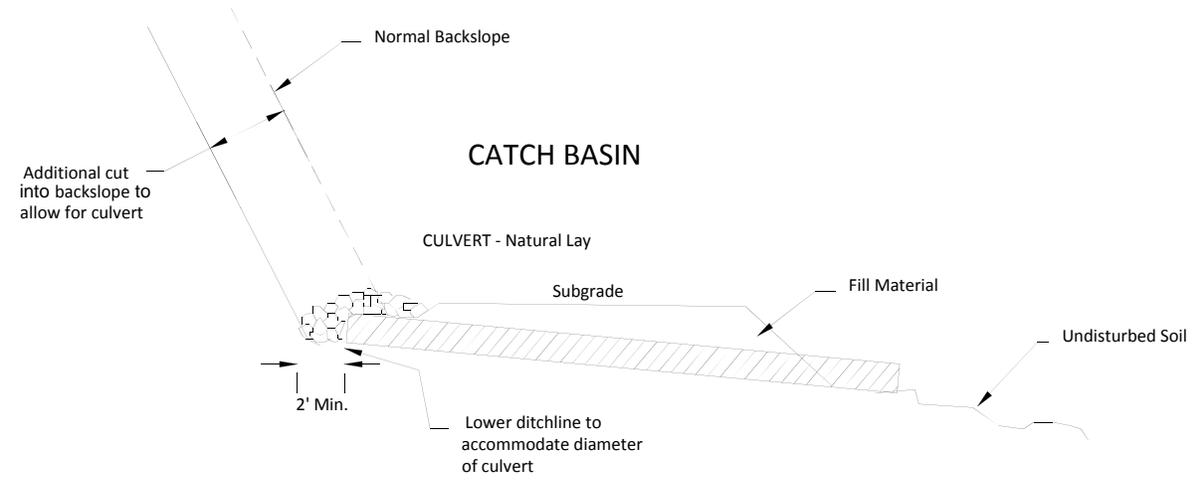
- QS - Quarry Spalls
- NT - Native (bank run)
- SL - Select Fill
- HL - Heavy Loose Riprap
- LL - Light Loose Riprap
- Flume - Half round pipe
- Downsput - Full round pipe

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



CULVERT AND DRAINAGE SPECIFICATION DETAIL

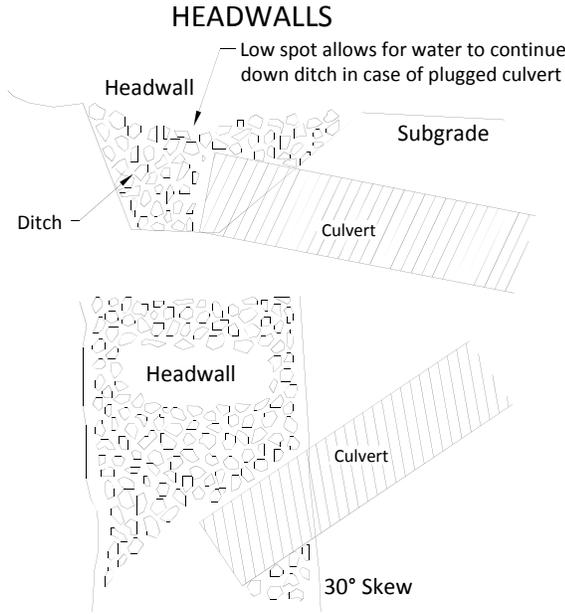
(Page 1 of 3)



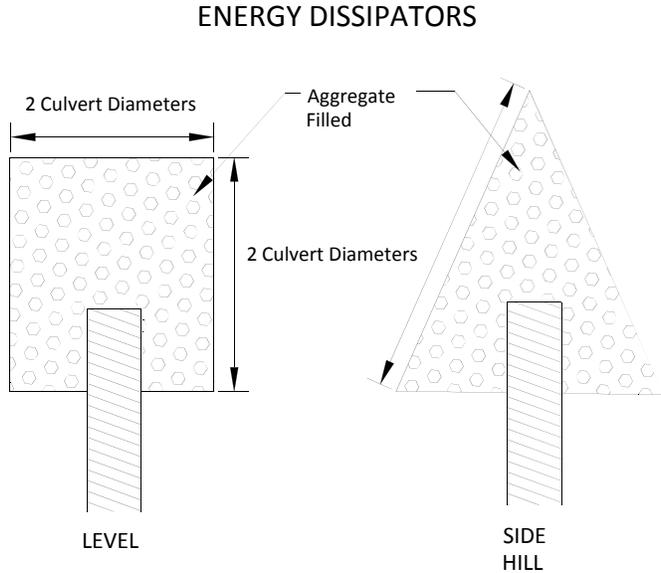
CULVERT AND DRAINAGE SPECIFICATION DETAIL

(Page 2 of 3)

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



Headwalls to be constructed of material that will resist erosion.



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

CULVERT AND DRAINAGE SPECIFICATION DETAIL

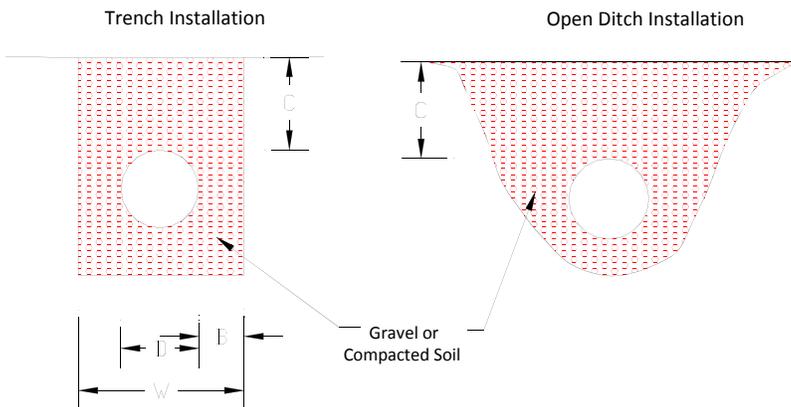
(Page 3 of 3)

POLYETHYLENE PIPE INSTALLATION

INSTALLATION REQUIREMENTS:

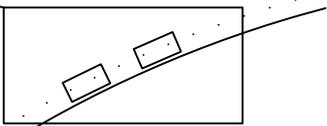
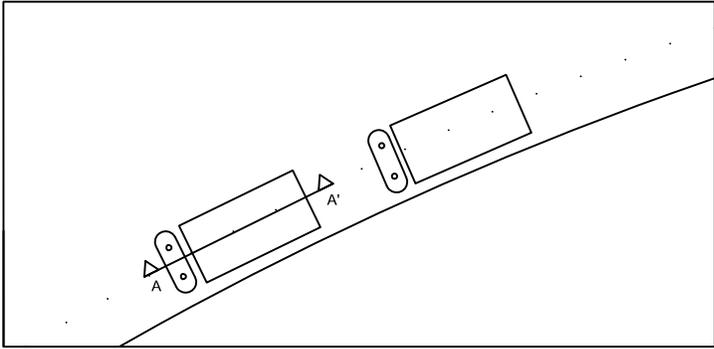
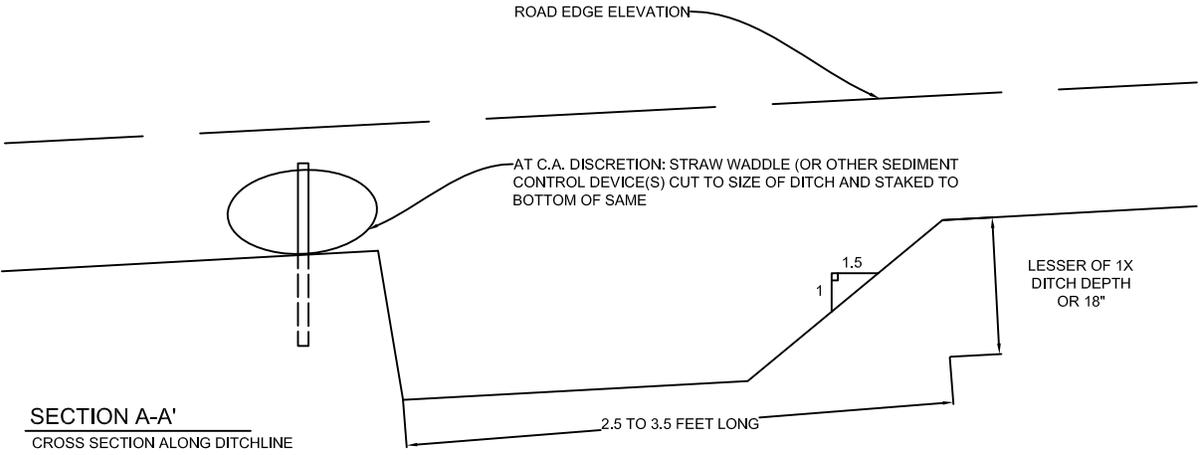
1. Crushed stone, gravel, or compacted soil backfill material shall be used as the bedding and envelope material around the culvert. The aggregate size shall not exceed 1/6 pipe diameter or 4" diameter, whichever is smaller.
2. The corrugated pipe shall be laid on grade, on a layer of bedding material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

MINIMUM DIMENSIONS Trench or Open Ditch Installation



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

SEDIMENT TRAP DETAIL



NOTES:

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

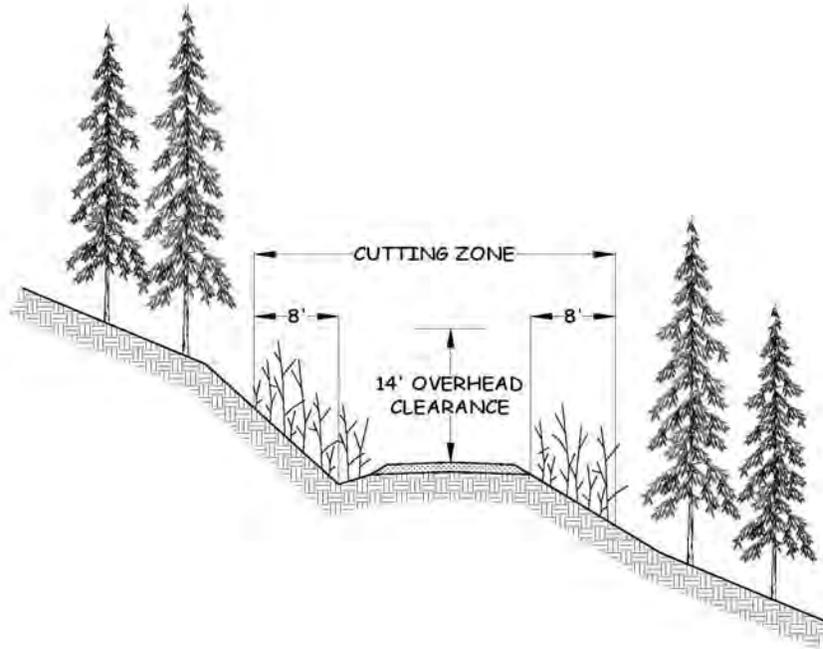
IF SEDIMENT TRAPS FILL WITH SEDIMENT DURING HAUL OPERATIONS, REMOVING SEDIMENT FROM TRAPS IS CONSIDERED ROUTINE MAINTENANCE.

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

Date: 09/16/2014
 Scale : NTS
 App#
 Drawn by: WPH
 Sheet 1 of 1

SEDIMENT TRAP DETAIL	
	WASHINGTON STATE DEPARTMENT OF Natural Resources <small>SPS Region</small>

ROAD BRUSHING DETAIL



SPECIFICATIONS

Brush shall be cut on the road surface and 8 ft. back from the back of road ditch and outside edge of running surface.

On the inside of switchbacks and tight curves, brush shall be cut back 16 ft. for visibility.

On truck turnouts or turnarounds, brush shall be cut 8 ft. back from outside edge.

Brush shall be cut to provide an overhead clearance of 14 ft. above the road running surface.

Brush shall be cut to within 6 in. of the ground.

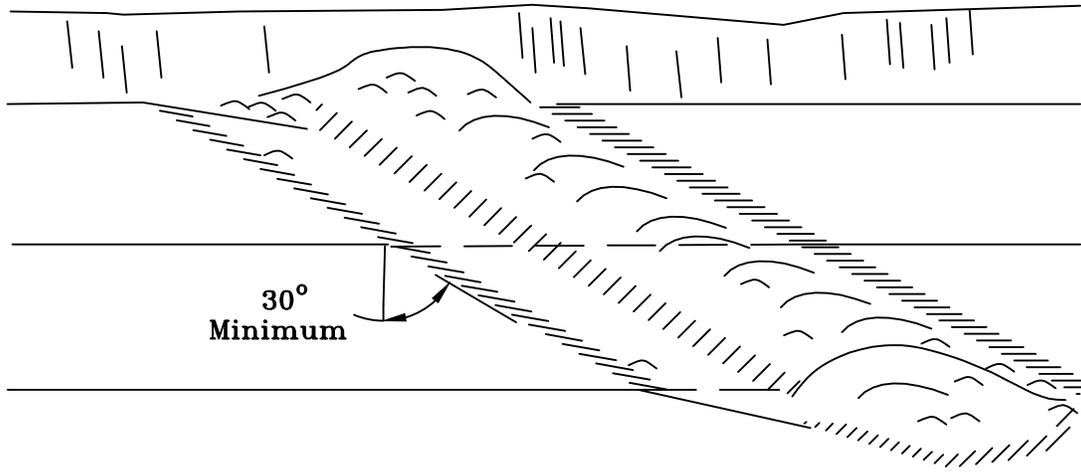
Slash shall be removed from cut slopes above the road and scattered on embankment slopes.

Ditches shall be cleared of woody debris.

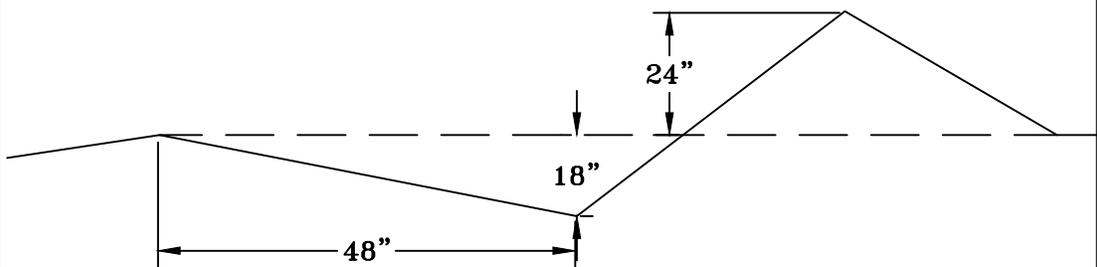
Culvert inlets and outlets shall be cleaned a minimum distance of two pipe diameters away.

Non-Drivable Water Bar Detail

Cross Ditch



Cross Section at Centerline



Date:
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App#
Drawn by: M.A.D.

Water Bar Detail	
	WASHINGTON STATE DEPARTMENT OF Natural Resources
	<small>SPS Region</small>

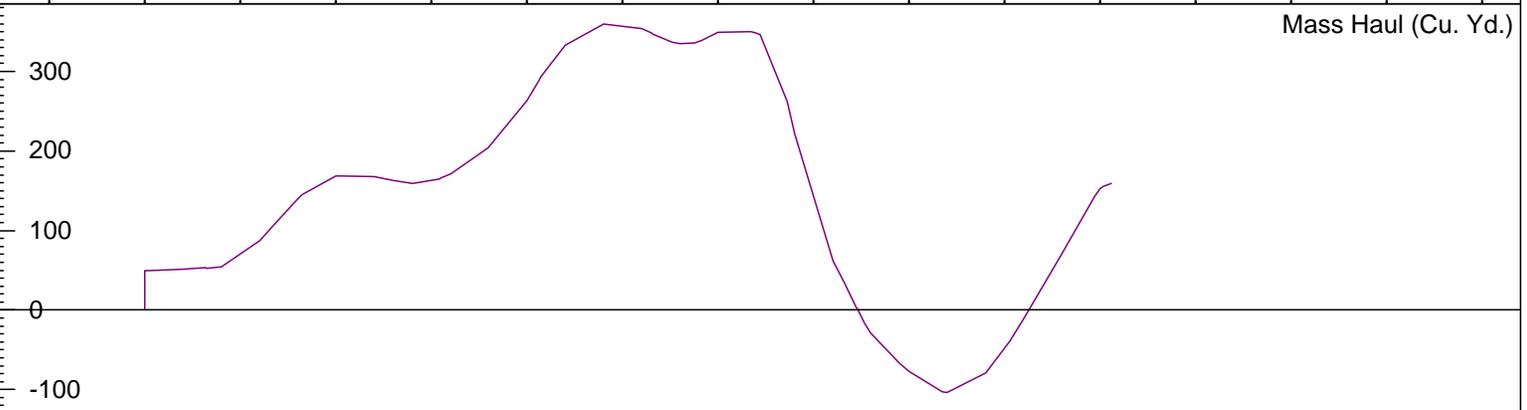
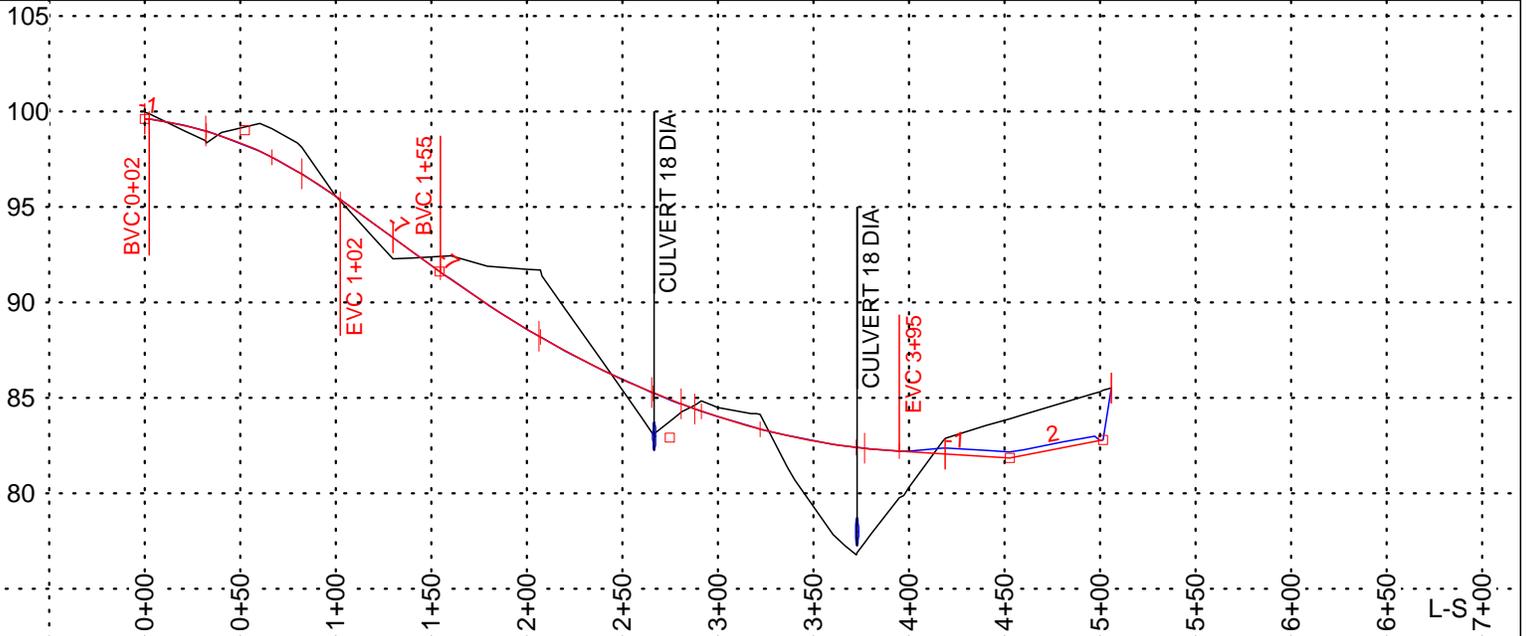
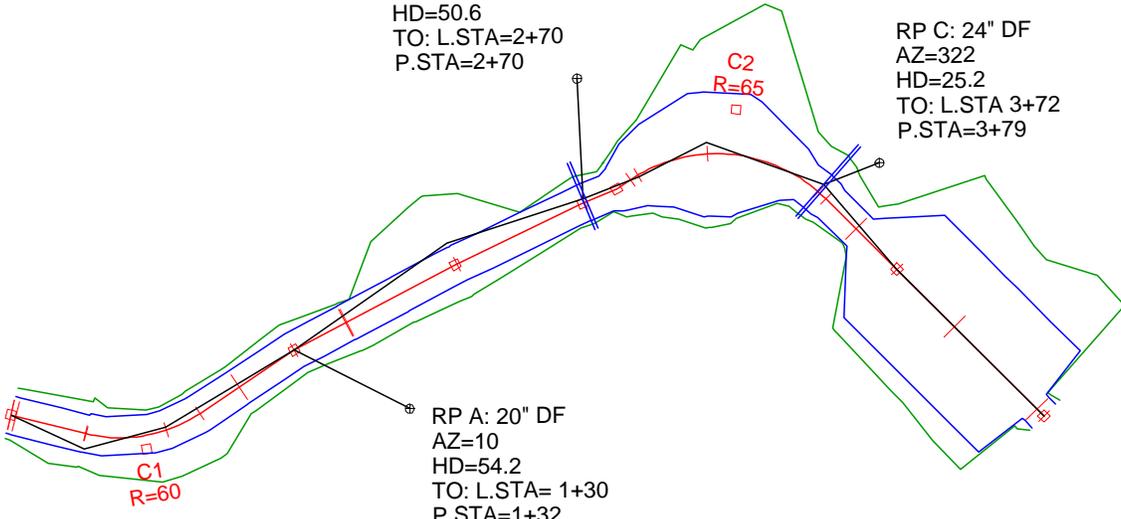
OLC 8955 ROAD DESIGN PLAN AND PROFILE EAST BLOODY TIMBER SALE



RP B: 7.5" DF
AZ=250
HD=50.6
TO: L.STA=2+70
P.STA=2+70

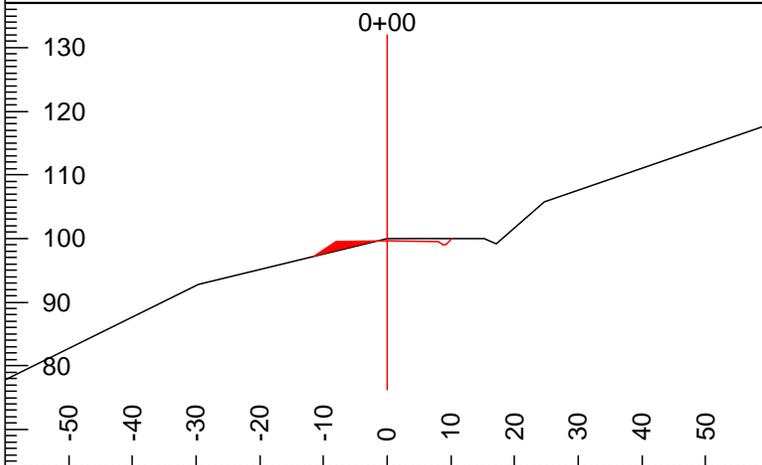
RP C: 24" DF
AZ=322
HD=25.2
TO: L.STA 3+72
P.STA=3+79

RP A: 20" DF
AZ=10
HD=54.2
TO: L.STA= 1+30
P.STA=1+32

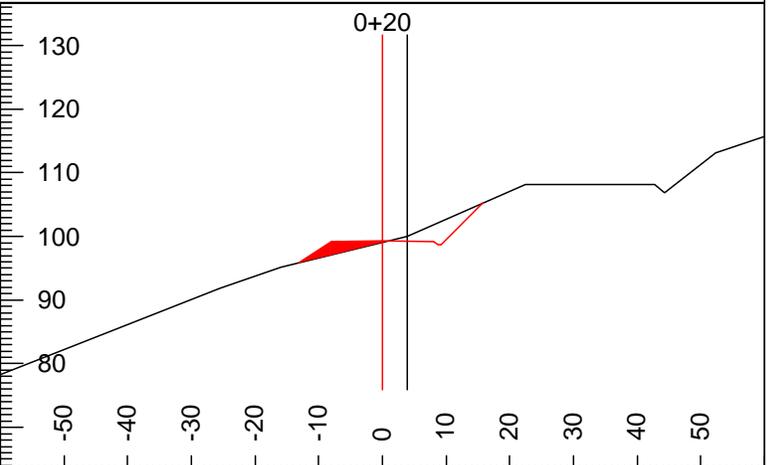


Mass Haul (Cu. Yd.)

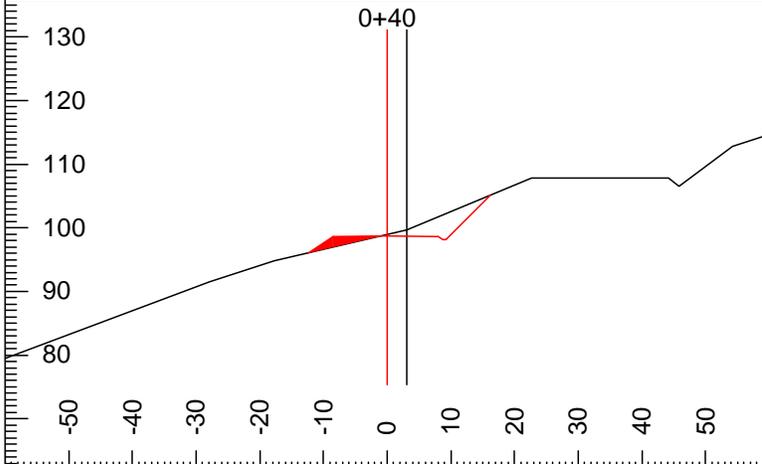
OLC 8955 ROAD DESIGN
SECTIONS
EAST BLOODY TIMBER SALE



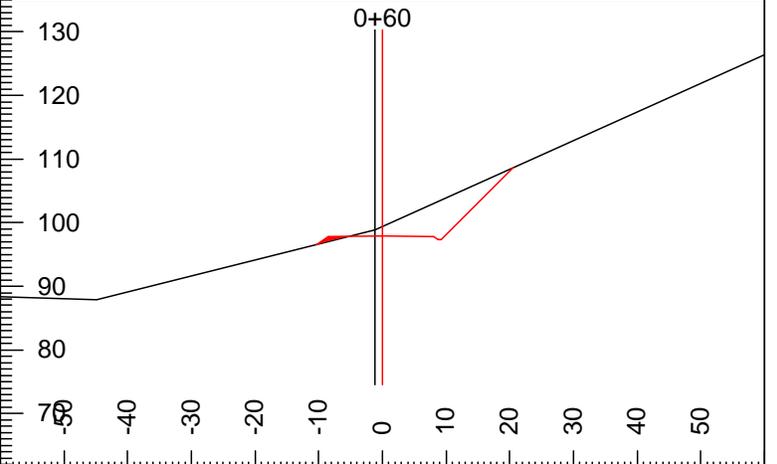
L-Stn: 0+00 Grd.Lst: n/a Super L: -1 F Slope R: 100
P-Stn: 0+00 L-Ssl: (Av) -25 Super R: -1 Cut Dp: 0
Grd.Nxt.: -1 L-Ssr: (Av) 0 F Slope L: -67 H. Offset: 0



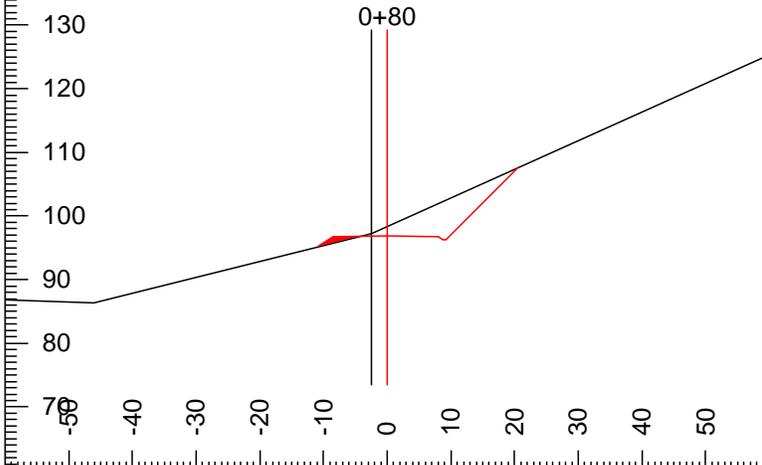
L-Stn: 0+20 Grd.Lst: -2 Super L: -1 F Slope R: 100
P-Stn: 0+20 L-Ssl: (Av) -25 Super R: -1 Cut Dp: 0
Grd.Nxt.: -2 L-Ssr: (Av) 37 F Slope L: -67 H. Offset: -4



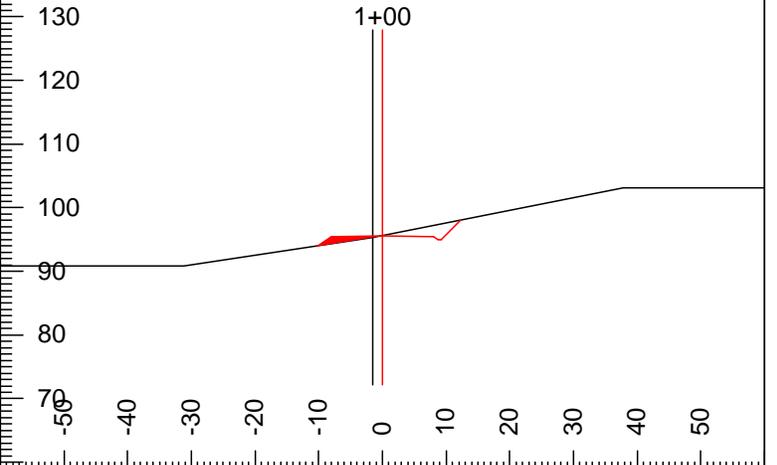
L-Stn: 0+40 Grd.Lst: -3 Super L: -1 F Slope R: 100
P-Stn: 0+43 L-Ssl: (Av) -23 Super R: -1 Cut Dp: 0
Grd.Nxt.: -3 L-Ssr: (Av) 36 F Slope L: -67 H. Offset: -3



L-Stn: 0+60 Grd.Lst: -5 Super L: -1 F Slope R: 100
P-Stn: 0+63 L-Ssl: (Av) -27 Super R: -1 Cut Dp: 1
Grd.Nxt.: -5 L-Ssr: (Av) 45 F Slope L: -67 H. Offset: 1

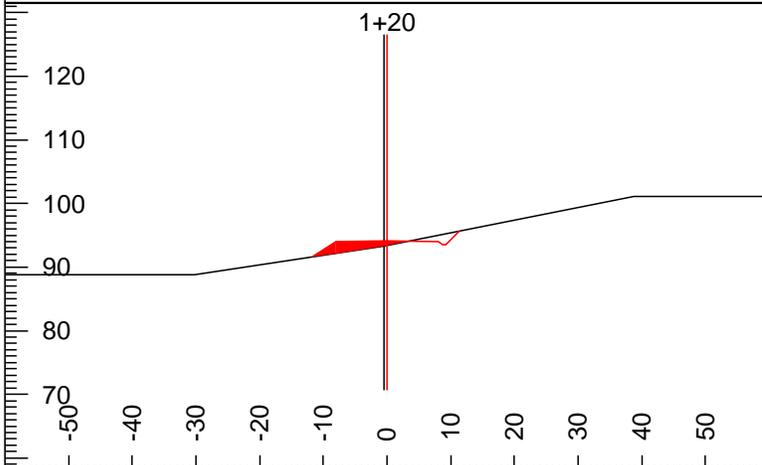


L-Stn: 0+80 Grd.Lst: -6 Super L: -1 F Slope R: 100
P-Stn: 0+82 L-Ssl: (Av) -30 Super R: -1 Cut Dp: 2
Grd.Nxt.: -6 L-Ssr: (Av) 45 F Slope L: -67 H. Offset: 2

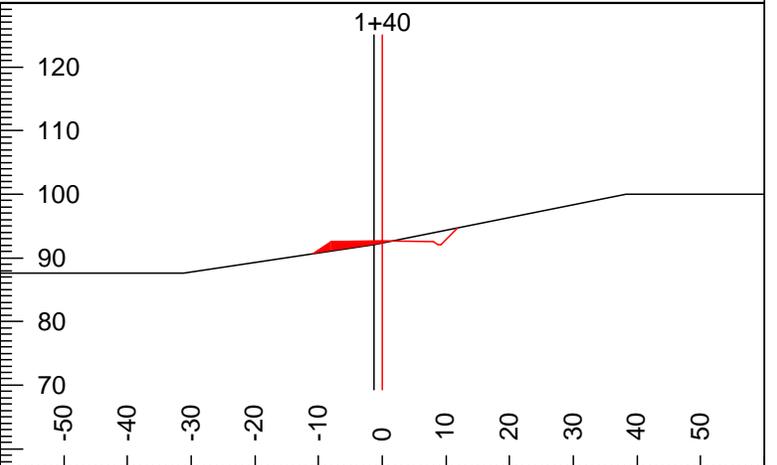


L-Stn: 1+00 Grd.Lst: -7 Super L: -1 F Slope R: 100
P-Stn: 1+02 L-Ssl: (Av) -16 Super R: -1 Cut Dp: 0
Grd.Nxt.: -7 L-Ssr: (Av) 20 F Slope L: -67 H. Offset: 1

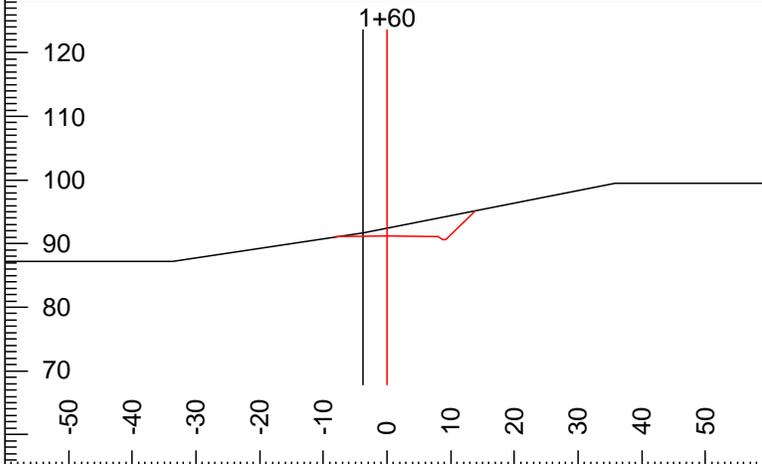
OLC 8955 ROAD DESIGN
SECTIONS
EAST BLOODY TIMBER SALE



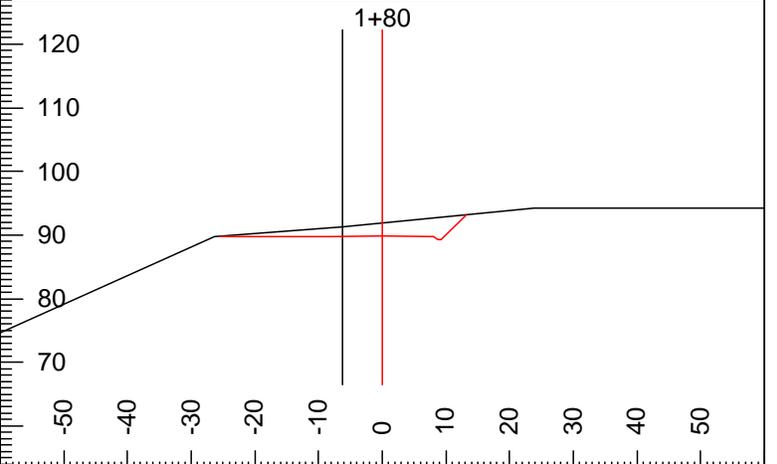
L-Stn: 1+20 Grd.Lst: -7 Super L: -1 F Slope R: 100
P-Stn: 1+22 L-Ssl: (Av) -15 Super R: -1 Cut Dp: -1
Grd.Nxt.: -7 L-Ssr: (Av) 20 F Slope L: -67 H. Offset: 0



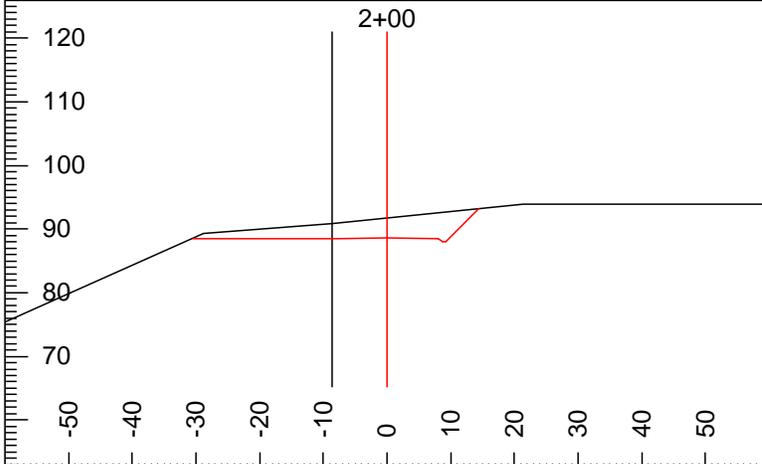
L-Stn: 1+40 Grd.Lst: -7 Super L: -1 F Slope R: 100
P-Stn: 1+42 L-Ssl: (Av) -16 Super R: -1 Cut Dp: 0
Grd.Nxt.: -7 L-Ssr: (Av) 20 F Slope L: -67 H. Offset: 1



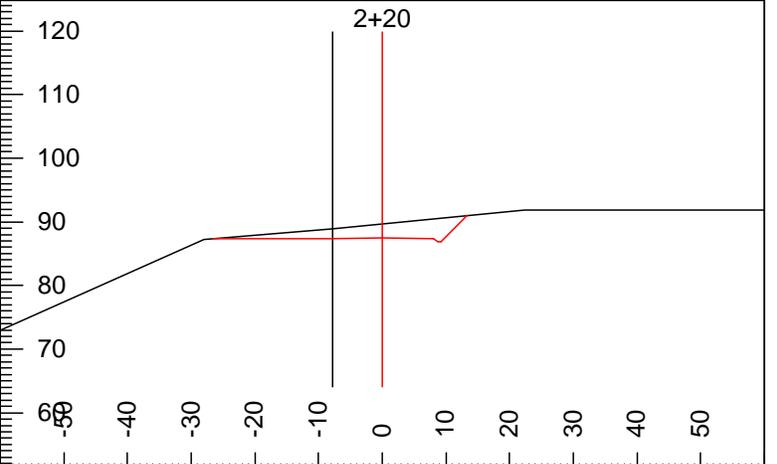
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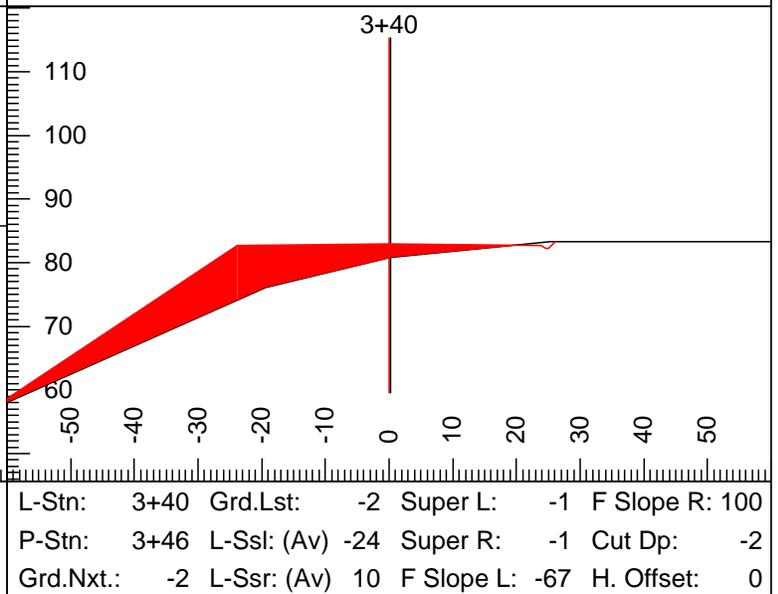
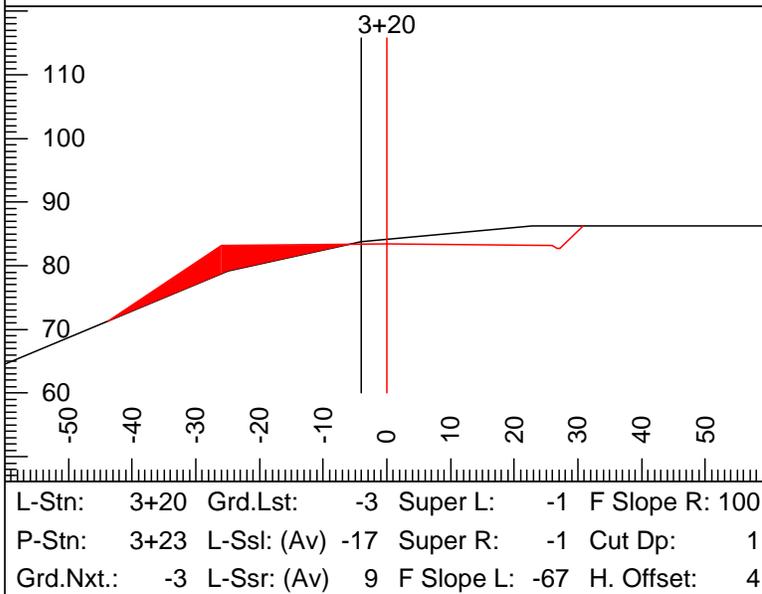
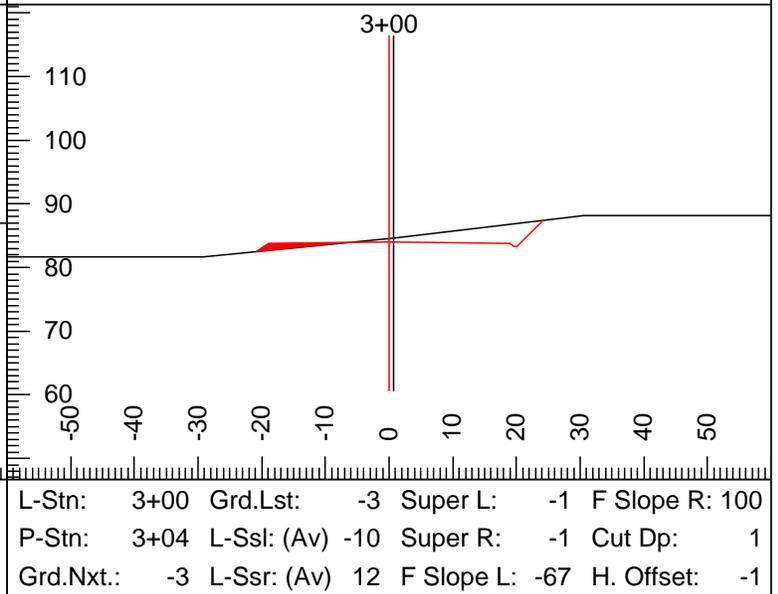
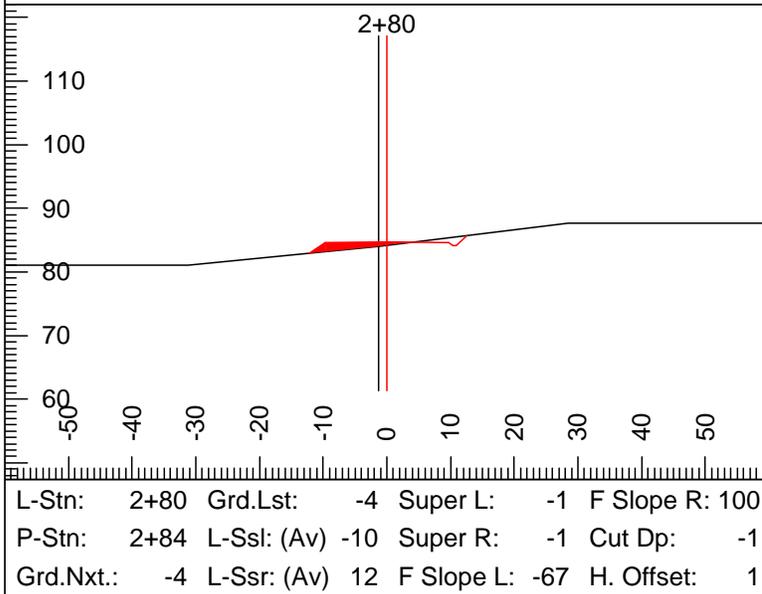
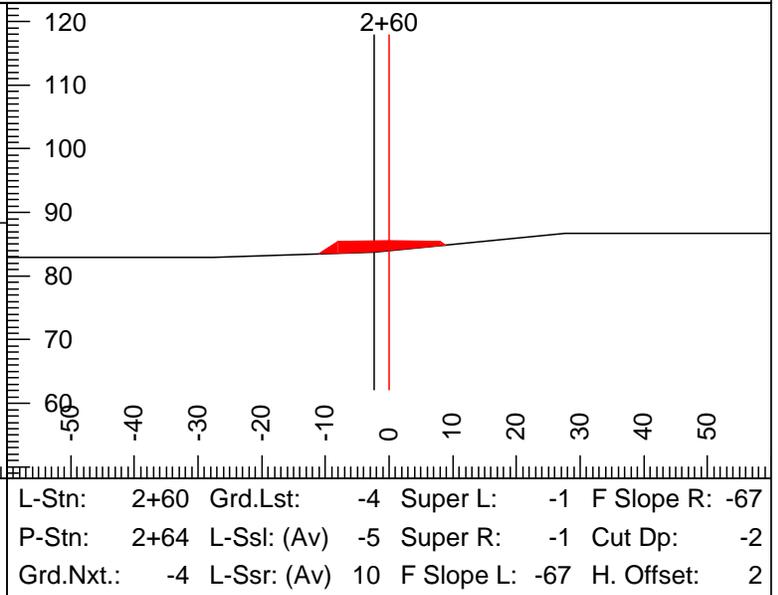
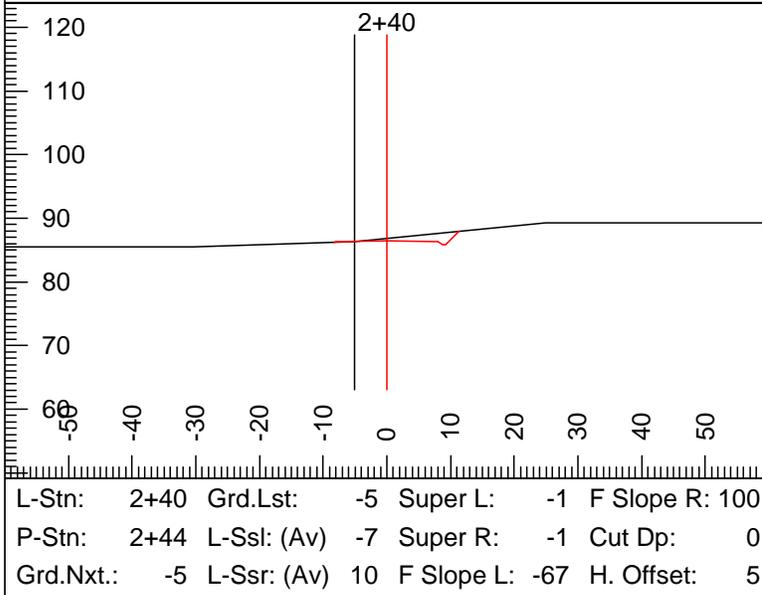


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Grd.Nxt.: -6 L-Ssr: (Av) 10 F Slope L: 0 H. Offset: 9

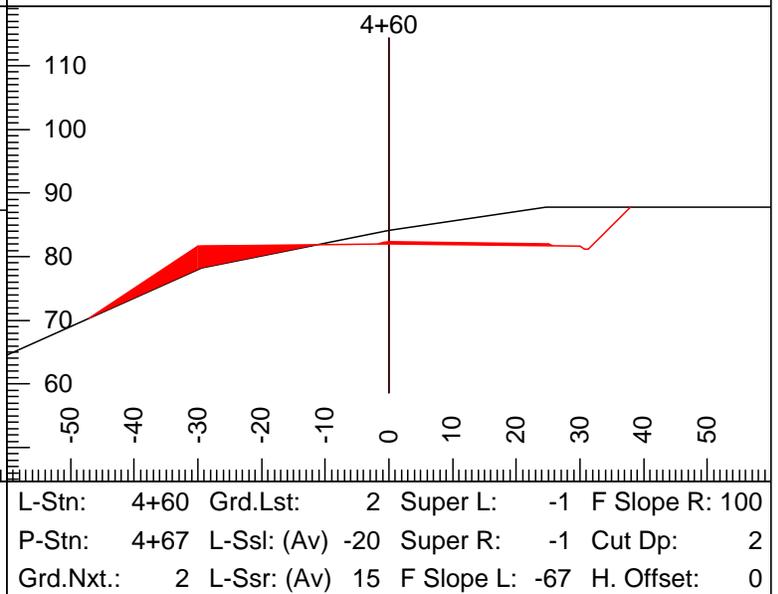
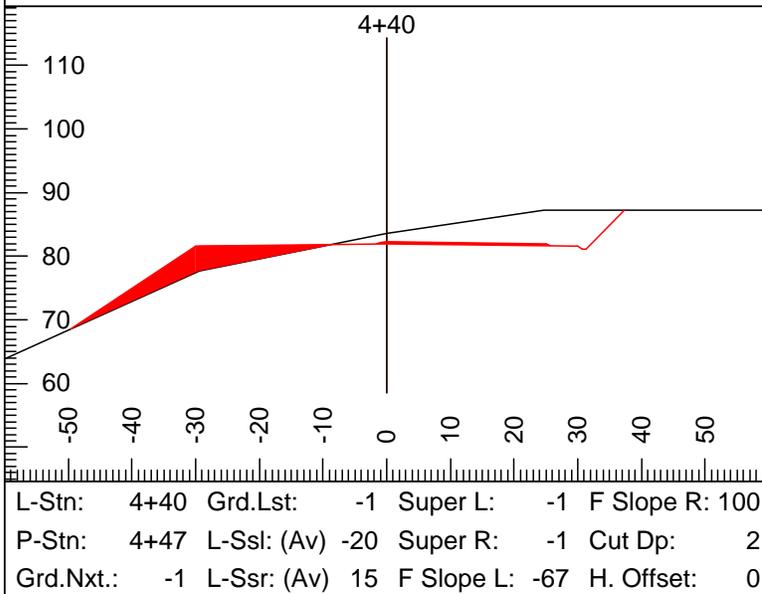
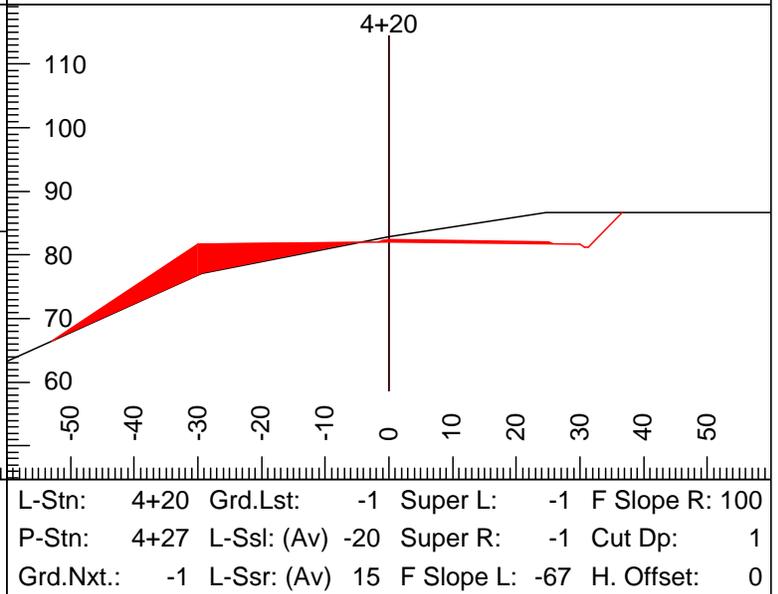
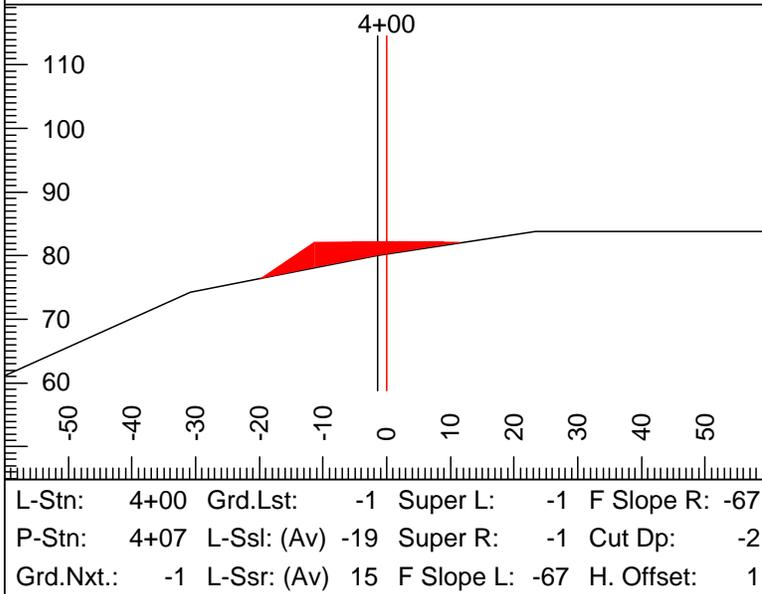
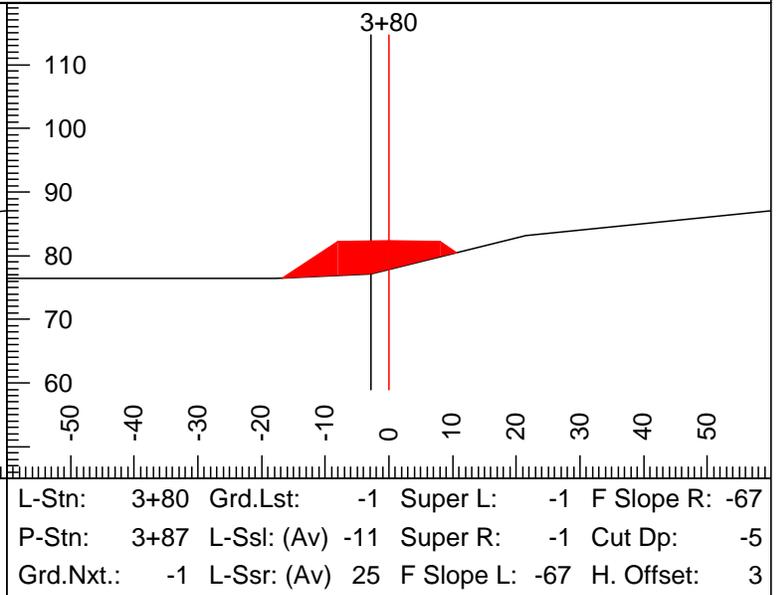
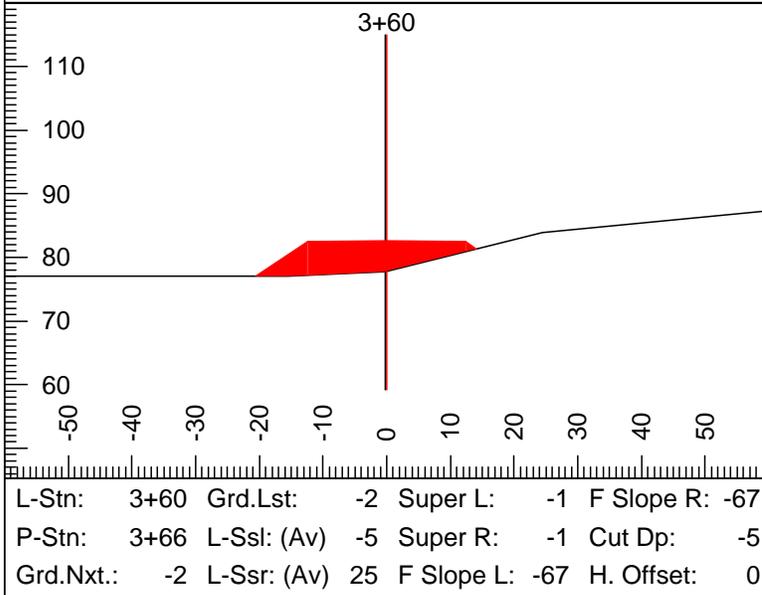


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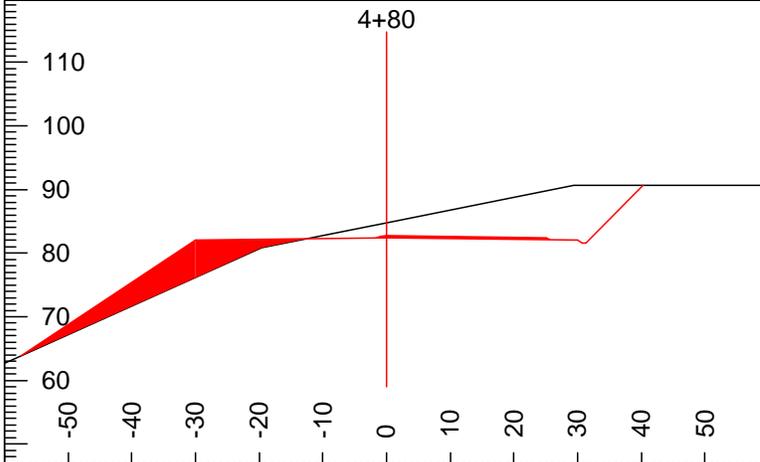
OLC 8955 ROAD DESIGN
SECTIONS
EAST BLOODY TIMBER SALE



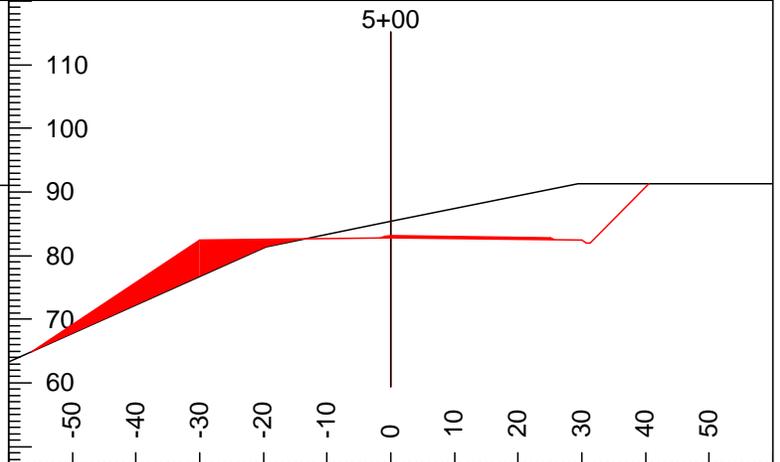
OLC 8955 ROAD DESIGN
SECTIONS
EAST BLOODY TIMBER SALE



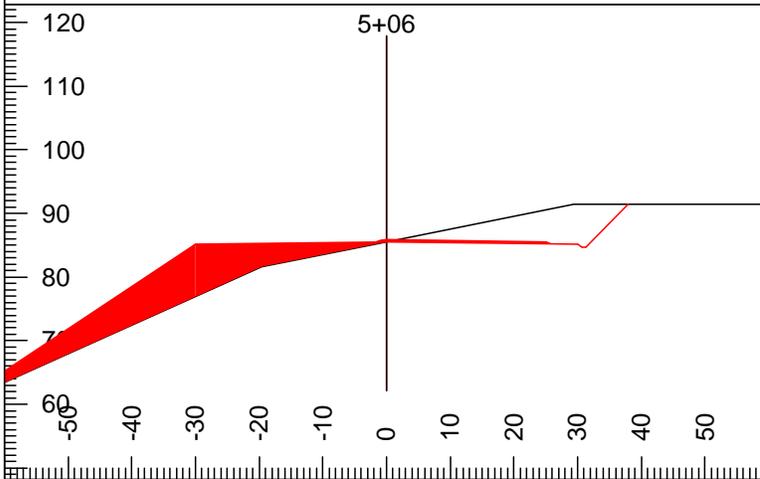
OLC 8955 ROAD DESIGN
SECTIONS
EAST BLOODY TIMBER SALE



L-Stn: 4+80 Grd.Lst: 2 Super L: -1 F Slope R: 100
P-Stn: 4+87 L-Ssl: (Av) -20 Super R: -1 Cut Dp: 2
Grd.Nxt.: 2 L-Ssr: (Av) 20 F Slope L: -67 H. Offset: 0



L-Stn: 5+00 Grd.Lst: 2 Super L: -1 F Slope R: 100
P-Stn: 5+07 L-Ssl: (Av) -20 Super R: -1 Cut Dp: 3
Grd.Nxt.: 2 L-Ssr: (Av) 20 F Slope L: -67 H. Offset: 0



L-Stn: 5+06 Grd.Lst: 65 Super L: -1 F Slope R: 100
P-Stn: 5+13 L-Ssl: (Av) -20 Super R: -1 Cut Dp: 0
Grd.Nxt.: n/a L-Ssr: (Av) 20 F Slope L: -67 H. Offset: 0

**SUMMARY - ROAD DEVELOPMENT COSTS
(FOR INTERNAL DNR USE ONLY)**

UNIT: Delphi

SALE/PROJECT NAME: **East Bloody Run TS**

CONTRACT NUMBER: **30-092000**

LEGAL DESCRIPTION: 4,5,8(15N1E)

TYPE:	CONSTRUCTION	RECONSTRUCTION	PRE-HAUL MAINT
ROAD STANDARD:	Tolerance Class C	-	Tolerance Class A
NUMBER OF STATIONS:	5.20	0.00	57.00
AVG. SIDESLOPE:	25	-	
CLEARING AND GRUBBING:	\$599	\$0	
EXCAVATION AND FILL:	\$2,880	\$0	
MISC. MAINTENANCE:			\$0
ROCK TOTALS (Cu. Yds.):			
Ballast: 870	\$11,178	\$0	\$3,753
Surface: 1370	\$2,493	\$0	\$25,464
Riprap: 10	\$59	\$0	\$103
CULVERTS AND FLUMES:	\$720	\$0	\$1,440
STRUCTURES:	\$0	\$0	\$0
GENERAL EXPENSES:	\$1,793	\$0	\$2,768
MOBILIZATION:	\$1,295	\$0	\$1,295
TOTAL COSTS:	\$21,017	\$0	\$34,823
COST PER STATION:	\$4,042	\$0	\$611
ROAD DEACTIVATION AND ABANDONMENT COSTS:		\$0	

NOTE: This appraisal has no allowance for profit and risk.

TOTAL (All Roads) =	\$55,840
SALE VOLUME MBF =	3,500
TOTAL COST PER MBF =	\$15.95

Plans to be furnished by: WPH

Compiled by: WPH

Date: 09/18/14

**ROAD COST ESTIMATE - CONSTRUCTION
(FOR INTERNAL DNR USE ONLY)**

SALE NAME: East Bloody Run TS

CONTRACT NUMBER: 30-092000

I. CLEARING AND GRUBBING:

	Flat Rate -	% Side Slope	MBF/ac	Disposal Factor	Production Factor	Cost/ Station	Width Factor	Total Stations	Sub Total
OLC 8955		25	40	1.00	2.88	\$40	1.00	5.20	\$599
0		0	40	1.00	2.88	\$32	0.80	0.00	\$0
0		0	40	1.00	2.88	\$32	0.80	0.00	\$0
0		0	40	1.00	2.88	\$32	0.80	0.00	\$0
0		0	40	1.00	#N/A	\$32	0.80	0.00	\$0

Clear and Grub TOTAL = \$599

II. EXCAVATION:

	Flat Rate -	% Side Slope	MBF/ac	Exc. Type Fact.	Production Factor	Cost/ Station	Width Factor	Total Stations	Sub Total
OLC 8955		25	40	1.0	2.88	\$88	1.00	5.20	\$1,318
0		0	40	1.0	2.88	\$66	0.50	0.00	\$0
0		0	40	1.0	2.88	\$66	0.50	0.00	\$0
0		0	40	1.0	2.88	\$66	0.50	0.00	\$0
0		0	40	1.0	#N/A	\$66	0.50	0.00	\$0

*End Haul, Over Haul, Large Fills/Cuts

	Estimated Vol. (cy)	No. of Equip. Days	Cost/day	Sub Total
End Haul/ Over Haul Large Fills/ Cuts	250	1.3	\$1,250	\$0
				\$1,563

Excavation TOTAL = \$2,880

III. BALLAST AND SURFACING :

Ballast source: Commercial
Surface source: Commercial
Riprap source: Commercial

Description	cu.yds/sta x stations = cubic yards	*Miles Hamilton Landings
Ballast (6"-)	600	2
Surfacing (1 1/2"-)	100	
Riprap(Quarry Spalls)	3	

UNIT COSTS	Ballast	Surfacing	Riprap
Drill & Shoot	\$0.00	\$0.00	\$0.00
Dig and load	\$0.00	\$0.00	\$0.00
Crushing	\$0.00	\$0.00	\$0.00
Purchase	\$6.65	\$12.95	\$7.35
Haul *	\$10.73	\$10.73	\$10.73
Spread	\$0.80	\$0.80	\$1.50
Compact	\$0.45	\$0.45	\$0.00
Strip			
Reclamation			
Use tax			
TOTAL (\$/cy)	\$18.63	\$24.93	\$19.58

* Haul Formula: (R.T.Miles/MPH+Delay)/(\$/hr / Cy/load)

R.T. Miles =	26.0				
Ave. Speed =	27	Ballast (6"-)	600	Cu. yds @	\$18.63 /cu. yd = \$11,178
Delay (Hrs.)=	0.5	Surfacing (1 1/2"-)	100	Cu. yds @	\$24.93 /cu. yd = \$2,493
Cost / Hour =	\$88.00	Riprap(Quarry Spalls)	3	Cu. yds @	\$19.58 /cu. yd = \$59
CY / Load =	12	*Truck and Pup			

Rock total = \$13,730

IV. CULVERTS AND FLUMES:

Description	Qty.	Gauge	Diameter	No/Length	Installed Cost/ft	Sub-total
Cross Drain	2	Plastic	18	30	\$12.00	\$720
			24		\$18.00	\$0
			36		\$26.00	\$0
			48		\$40.00	\$0
			72		\$96.00	\$0
Bands & Gaskets	0				\$20.00	\$0

Culvert total = \$720

V. STRUCTURES

Description	Type	Width	Length	Cost/ft.	Sub-total
					\$0
					\$0
					\$0

Structure total = \$0

Sub-TOTAL = \$17,929

VI. GENERAL EXPENSES:

Overhead & General Exp. Add **10%** \$1,793

VII. MOBILIZATION:

Description	\$ per Move	# of Moves	Sub-total
Dump Trucks	100	11	\$1,100
Grader	400	1	\$400
Compactor	400	1	\$400
Excavator	450	1	\$450
Dozer D8)	400		\$0
Front end loader	400		\$0
Rock crusher	\$1,500		\$0
Drill	\$400		\$0
Dozer (D5)	\$240	1	\$240

Total Mobilization = \$2,590 Mobilization sub-total = \$1,295

Road No. OLC 8955
Standard: C
Stations: 5.20

SHEET TOTAL = \$21,017

By: WPH

Sheet 2 of 5

Date: 09/18/14

**ROAD COST ESTIMATE - RECONSTRUCTION
(FOR INTERNAL DNR USE ONLY)**

SALE NAME: East Bloody Run TS

CONTRACT NUMBER: 30-092000

I. CLEARING AND GRUBBING:

Flat Rate -	% Side Slope	MBF/ac	Disposal Factor	Production Factor	Cost/Station	Width Factor	Total Stations	Sub Total
0	20	10	1.00	1.50	\$40	1	0.00	\$0
0			1.00	#N/A	\$40	1	0.00	\$0
0			1.00	#N/A	\$40	1	0.00	\$0
0			1.00	#N/A	\$40	1	0.00	\$0
0			1.00	#N/A	\$40	1	0.00	\$0

Clear and Grub TOTAL = \$0

II. EXCAVATION:

Flat Rate -	% Side Slope	MBF/ac	Exc. Type Fact.	Production Factor	Cost/Station	Width Factor	Total Stations	Sub Total
0	20	10	1.0	1.50	\$88	1.00	0.00	\$0
0			1.0	#N/A	\$66	1.00	0.00	\$0
0			1.0	#N/A	\$66	1.00	0.00	\$0
0			1.0	#N/A	\$66	0.50	0.00	\$0
0			1.0	#N/A	\$66	0.50	0.00	\$0

*End Haul, Over Haul, Large Fills/Cuts

End Haul/ Over Haul Large Fills/ Cuts	Estimated Vol. (cy)	No. of Equip. Days	Cost/day	Sub Total
				\$0

Excavation TOTAL = \$0

III. BALLAST AND SURFACING :

Ballast source:
Surface source: comm
Riprap source :

Description	cu.yds/sta x stations =	cubic yards
Ballast (4"-)		0
Surfacing (2 1/2"-)		0
Riprap		0

* Haul Formula: (R.T.Miles/MPH+Delay)/(\$/hr / Cy/load)

R.T. Miles =
Ave. Speed =
Delay (Hrs.)=
Cost / Hour =
CY / Load =

Ballast (4"-)	Cu. yds @	\$0.00 /cu. yd =	\$0
Surfacing (2 1/2")	0 Cu. yds @	\$0.00 /cu. yd =	\$0
Riprap	Cu. yds @	\$0.00 /cu. yd =	\$0

UNIT COSTS	Ballast	Surfacing	Riprap
Drill & Shoot			
Dig and load			
Crushing			
Purchase			
Haul *	\$0.00	\$0.00	\$0.00
Spread			
Compact			
Strip			
Reclamation			
Use tax			
TOTAL (\$/cy)	\$0.00	\$0.00	\$0.00

Rock total = \$0

IV. CULVERTS AND FLUMES:

Description	Qty.	Gauge	Diameter (in.)	No/Length (ft)	Installed Cost/ft	Sub-total
			18		\$12.00	\$0
			24		\$18.00	\$0
			36		\$26.00	\$0
			48		\$36.00	\$0
Bands & Gaskets						\$0

Culvert total = \$0

V. STRUCTURES

Description	Type	Width	Length	Cost/ft.	Sub-total
mod. steel bridge					\$0
abutments/footings					\$0
wing walls/back walls					\$0

Structure total = \$0

Sub-TOTAL = \$0

VI. GENERAL EXPENSES:

Overhead & General Exp. Add 12% \$0

VII. MOBILIZATION:

Description	\$ per Move	# of Moves	Sub-total
Dump Trucks	\$100	0	\$0
Grader	\$400	0	\$0
Compactor	\$400	0	\$0
Excavator	\$450	0	\$0
Dozer D8)	\$400	0	\$0
Front end loader	\$400	0	\$0
Rock crusher	\$1,500	0	\$0
Dozer (D5)	\$240	0	\$0

Total Mobilization = \$0 Mobilization sub-total = \$0

Road No. #REF!
Standard: #REF!
Stations: 0.00

SHEET TOTAL = \$0

By: WPH

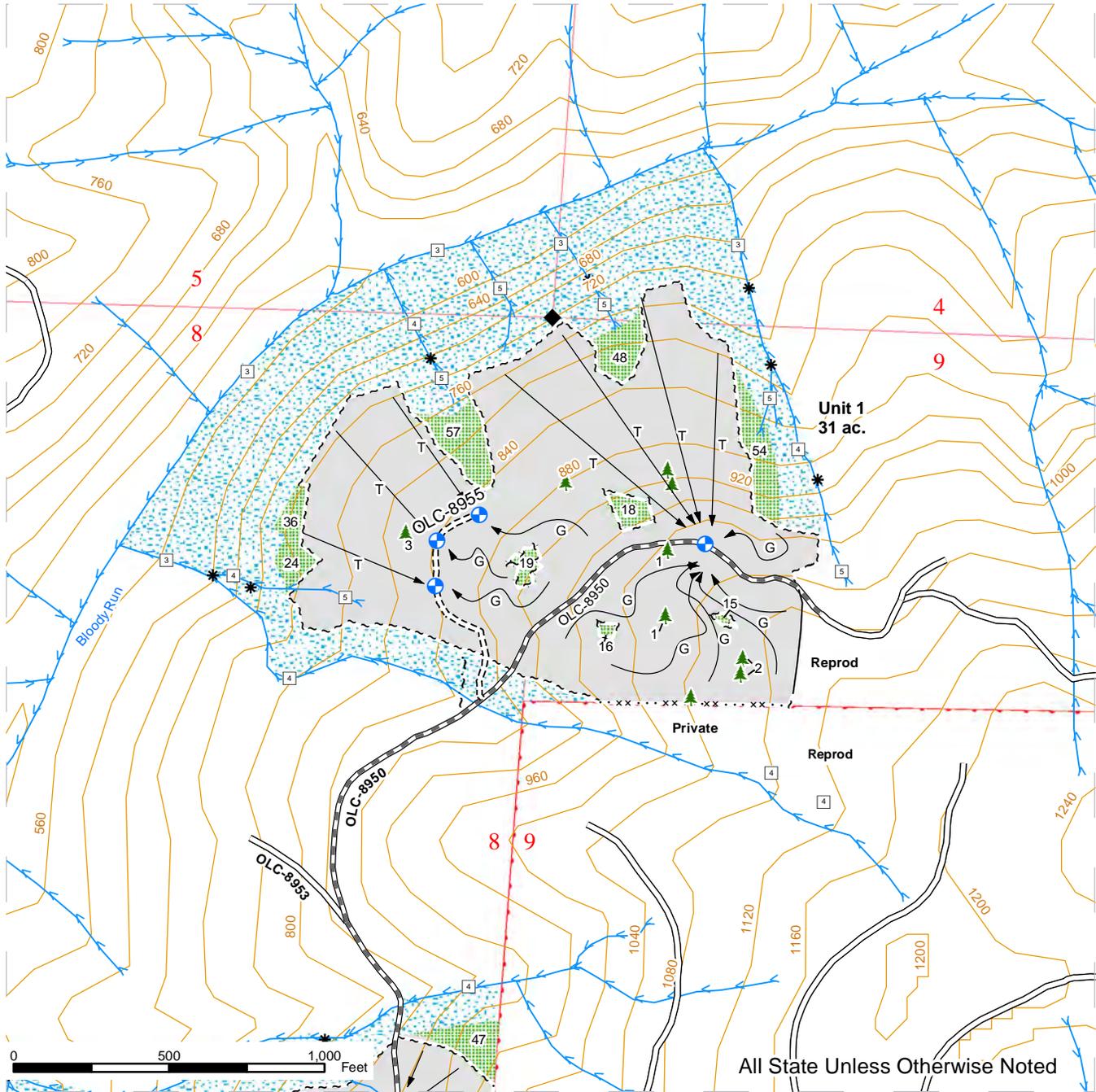
Sheet 3 of 5

Date: 09/18/14

LOGGING PLAN MAP

SALE NAME: EAST BLOODY RUN
AGREEMENT#: 30-092000
TOWNSHIP(S): T15R01E
TRUST(S): State Forest Transfer(1)

REGION: South Puget Sound Region
COUNTY(S): THURSTON
ELEVATION RGE: 677-1101



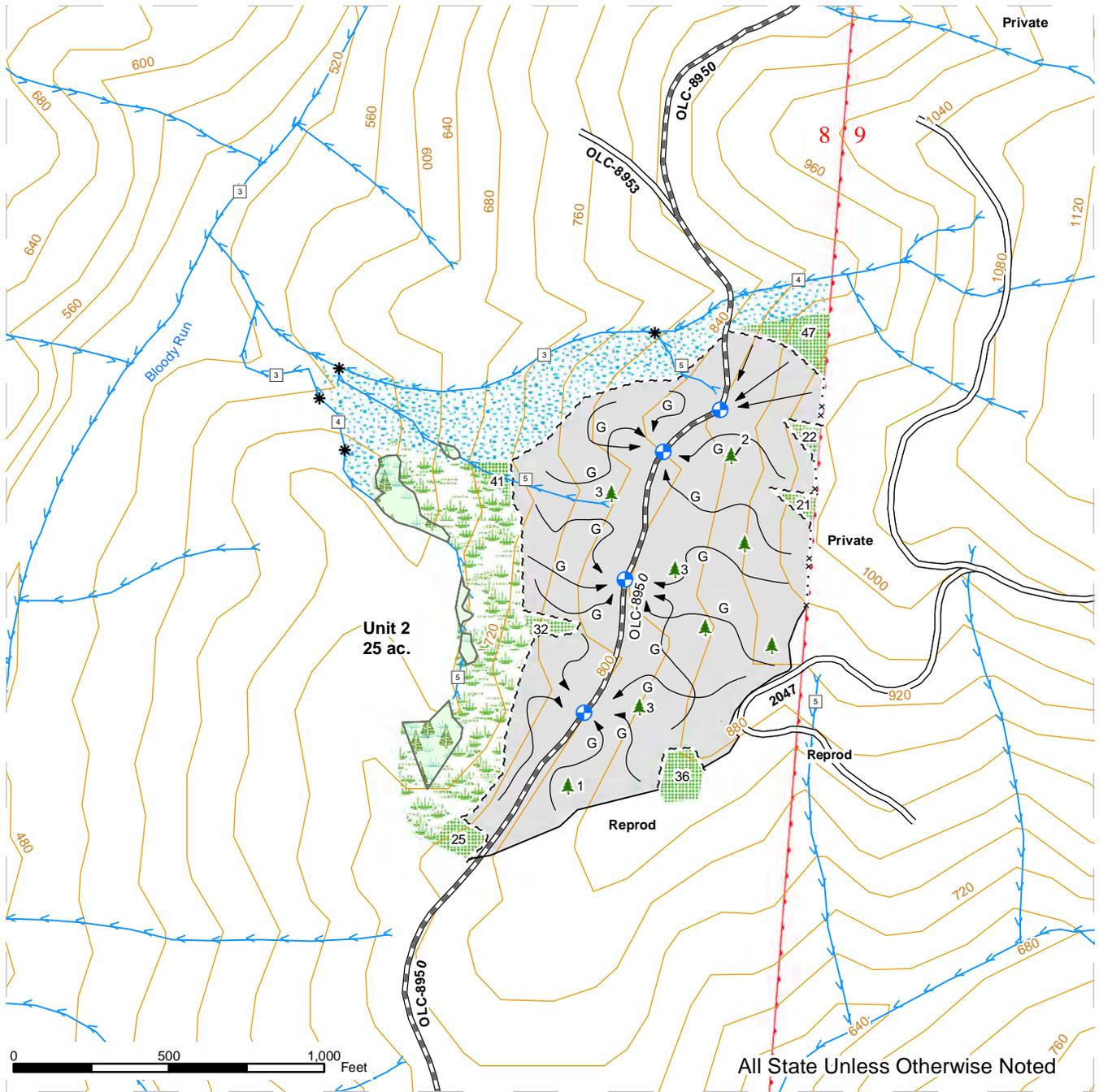
Sale Area	Contours 40-foot	Existing Roads	Landing - Proposed
Leave Tree Area	Leave Tree Tags	Required Construction	Leave Trees
Riparian Mgt Zone	Property Line	Required Pre-Haul Maintenance	Stream Break
Wetland Mgt Zone	Sale Boundary Tags	Cable	Stream Type
Forested Wetland	Right of Way Tags	Ground	Monumented Corners
DNR Managed Lands		Streams	



LOGGING PLAN MAP

SALE NAME: EAST BLOODY RUN
AGREEMENT#: 30-092000
TOWNSHIP(S): T15R01E
TRUST(S): State Forest Transfer(1)

REGION: South Puget Sound Region
COUNTY(S): THURSTON
ELEVATION RGE: 677-1101



Sale Area	Contours 40-foot	Existing Roads	Landing - Proposed
Leave Tree Area	Leave Tree Tags	Required Construction	Leave Trees
Riparian Mgt Zone	Property Line	Required Pre-Haul Maintenance	Stream Break
Wetland Mgt Zone	Sale Boundary Tags	Cable	Stream Type
Forested Wetland	Right of Way Tags	Ground	Monumented Corners
DNR Managed Lands		Streams	

