



TIMBER NOTICE OF SALE

SALE NAME: GREMLIN

AGREEMENT NO: 30-103594

AUCTION: October 24, 2023 starting at 10:00 a.m., COUNTY: Grays Harbor South Puget Sound Region Office, Enumclaw, WA

SALE LOCATION: Sale located approximately 5 miles northeast of Malone, WA.

PRODUCTS SOLD AND SALE AREA:

All timber, except leave trees bounded out by yellow leave tree area tags, snags, and down timber existing more than 5 years from the day of sale, bounded by the following: white Timber Sale Boundary tags, the A-1600 Road, and BPA right-of-way in Unit #1; white Timber Sale Boundary tags and the BPA right-of-way in Unit #2; white Timber Sale Boundary tags and the A-0600 Road in Unit #3;

All timber, except logs required per Road Plan 11-1, bounded by orange right of way tags in Unit #4, except title to the timber within the right of way boundary tags is not conveyed to the Purchaser unless the associated B-0050 Road is actually reconstructed.

All forest products above located on part(s) of Sections 1, 2 and 11 all in Township 17 North, Range 5 West, Sections 35 and 36 all in Township 18 North, Range 5 West, W.M., containing 140 acres, more or less.

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

ESTIMATED SALE VOLUMES AND QUALITY:

Table with columns: Species, Avg DBH, Ring Count, Total MBF, and MBF by Grade (1P, 2P, 3P, SM, 1S, 2S, 3S, 4S, UT). Rows include Douglas fir, Hemlock, Redcedar, Red alder, Maple, Spruce, Cottonwood, Grand fir, and Sale Total.

MINIMUM BID: \$2,672,000.00 BID METHOD: Sealed Bids

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

EXPIRATION DATE: October 31, 2025 ALLOCATION: Export Restricted

BID DEPOSIT: \$267,200.00 or Bid Bond. Said deposit shall constitute an opening bid at the appraised price.

HARVEST METHOD: Harvesting activities are estimated to be 42 percent cable and 58 percent ground based harvest. Cable and cable-tethered equipment allowed on all slopes. Ground based equipment is limited to non-tethered self-leveling equipment on sustained slopes of 55



TIMBER NOTICE OF SALE

percent or less, and tracked equipment and 6-wheeled rubber tired skidders with over-the-tire tracks spanning both sets of rear tires limited to sustained slopes of 45 percent or less. Yarding may be restricted during wet weather if rutting becomes excessive, per clause H-017.

Falling and Yarding will not be permitted from November 1 to April 30 in Units #3 and #4, nor on weekends or State recognized holidays in all units, unless authorized in writing by the Contract Administrator.

ROADS:

51.61 stations of optional construction. 15.94 stations of optional reconstruction. 594.02 stations of required prehaul maintenance. 31.16 stations of abandonment, if constructed. Purchaser maintenance on the A-1585, A-1600, A-0600, A-0600 Ext., A-0609, BPA-2638, BPA-2638 SF, Old A-Line (from A-Line junction to BPA-2638 SF junction), B-0050, and B-0050 Ext. roads. Designated maintenance on all other roads used.

Rock for this proposal may be obtained from the State owned North Rim Quarry at no cost to the Purchaser, or any commercial rock source at the Purchaser's expense.

All road work activities (except for the B-0050 Ext. as noted below) will not be permitted from November 1 to April 30, 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 1 to April 30, a maintenance plan may be required per Road Plan clause 1-26. Construction and abandonment on the B-0050 Ext. will not be permitted from October 1 to June 30, unless authority is granted, in writing, by the **State**.

The hauling of forest products will not be permitted from November 1 to April 30, nor on weekends or State recognized holidays, unless authorized in writing by the Contract Administrator. If permission is granted to operate from November 1 to April 30, preventative measures may be required to protect water, soil, roads and other forest assets.

ACREAGE DETERMINATION

CRUISE METHOD: Unit acreage was determined by traversing boundaries by GPS in all units. GPS data files are available at DNR's website for timber sale auction packets. See cruise narrative for cruise method.

FEES: \$118,065.00 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. Gate keys may be obtained by contacting the South Puget Sound Region office at (360) 825-1631 or by contacting Sam Lake at (360) 628-3868.

This sale contains Douglas-fir poles and high quality logs. See cruise.

Purchaser shall cut all hardwood stems greater than 6 feet tall within all harvest units, leaving a stump no more than 12 inches in height, per clause H-250.

Unit #3 contains an approximately 4-acre patch of 20-year-old cascara and no merchantable timber in the center of the unit.

A portion of Unit #4 (R/W) and the B-0050 Ext. road crosses through a Wetland Management Zone and requires mitigation (see Road Plan clauses 1-25, 1-26, 4-70, 8-15, 8-25, 9-23, 10-3, and 11-1). Due to this sensitivity, the roadwork, including



TIMBER NOTICE OF SALE

abandonment, has a longer closure period and authority to allow activities during the closure period is by State approval only. The temporary pipe installed at the Type 4 stream crossing is allowed to overwinter for the life of the contract.

If cables need to be strung across Porter Falls trail while yarding Unit #3, Purchaser is responsible for trail closure and must notify Contract Administrator a minimum of 5 calendar days before closure.

Purchaser must notify BPA and Contract Administrator a minimum of 5 calendar days prior to any timber harvest in Units #1 and #2 and any road work activities on the BPA-2638 SF.

There is a large sinkhole (approximately 20 feet x 10 feet) located in Unit #3 at the bottom of the hanging Type 5 stream in the center of the unit. The sinkhole is surrounded with blue flagging.

Trees may not be used for tailholds within tailhold restriction areas adjacent to units or within nontradeable leave tree areas inside the units to protect areas of potentially unstable slopes per clause H-141.

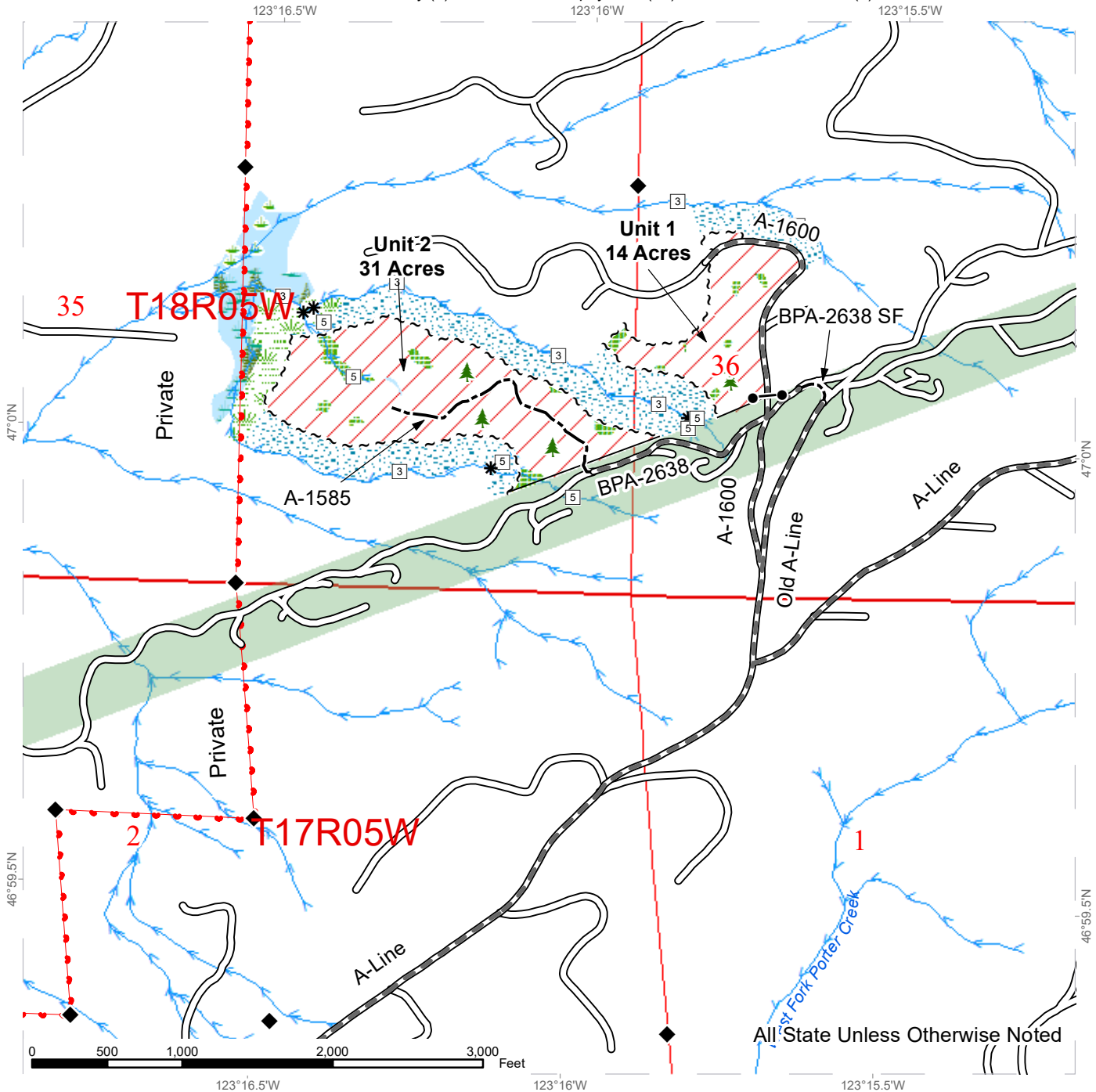
The A-1600 gate (Master H-957) is to remain locked at all times except during periods of active haul.

Note to cruisers and appraisers: Please refrain from leaving pink, orange or blue flagging from your cruises in or around the sale area to avoid confusion with DNR's marking. Additionally, for the safety of the public, please remove from roads and trails all string from string boxes used during appraising or cruising this sale.

TIMBER SALE MAP

SALE NAME: GREMLIN
AGREEMENT #: 30-103594
TOWNSHIP(S): T17R5W, T18R5W
TRUST(S): Common School and Indemnity (3), Forest Board Repayment (42), State Forest Purchase (2)

REGION: South Puget Sound Region
COUNTY(S): Grays Harbor
ELEVATION RGE: 200-920

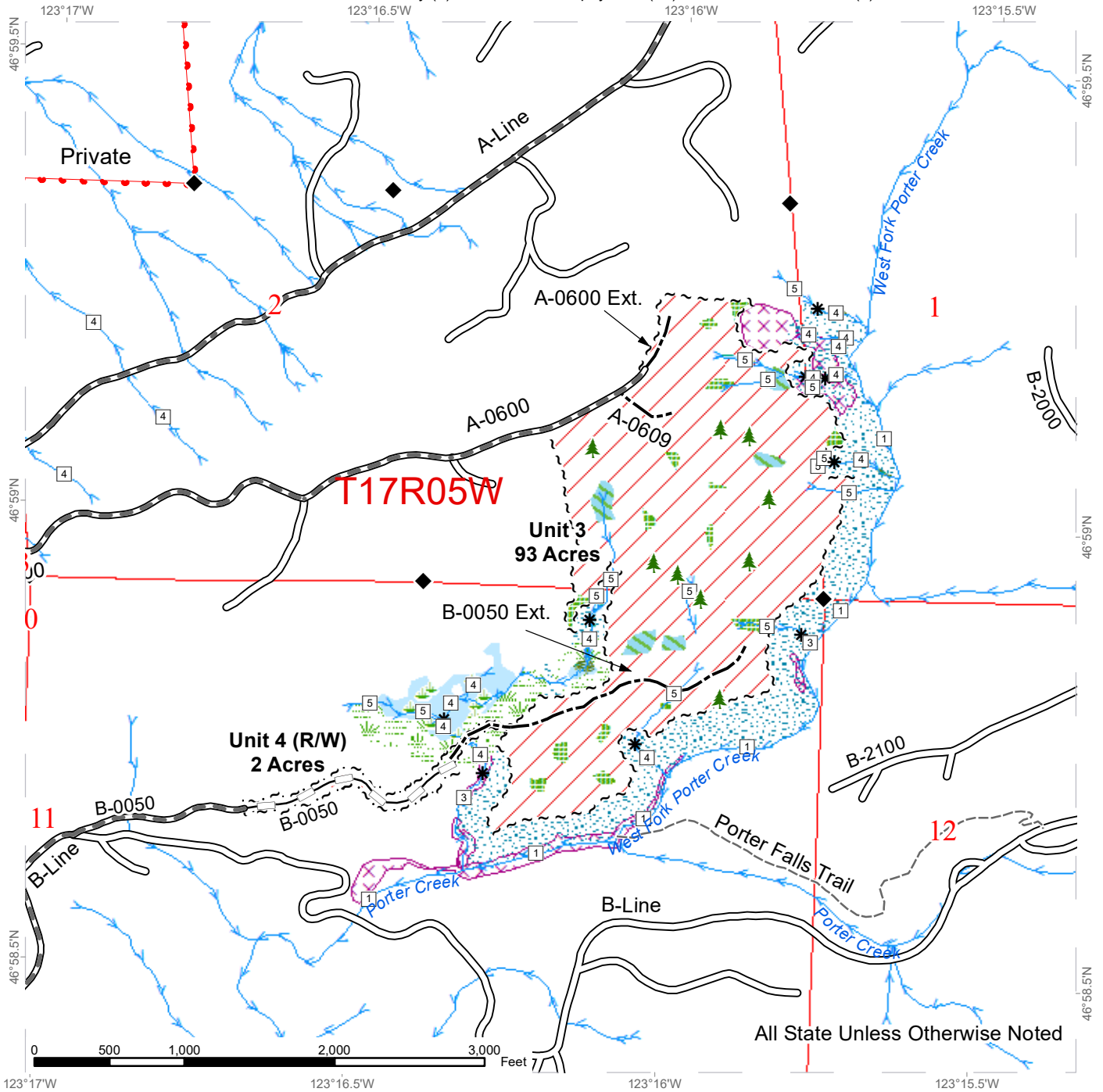


Variable Retention Harvest	Streams	Wetlands - Non-forested
Sale Boundary Tags	Stream Type	Leave Tree Area
Property Line	Stream Type Break	Riparian Mgt Zone
Timber Type Change	Survey Monument	Forested Wetland
Existing Roads	Gate (Master H-957)	Wetland Mgt Zone
Required Pre-Haul Maintenance	Leave Tree Area <1/4-acre	
Optional Construction	BPA Corridors	

TIMBER SALE MAP

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Variable Retention Harvest	Optional Reconstruction	Non-Tradeable Leave Clump
Sale Boundary Tags	Streams	Leave Tree Area
Right of Way Tags	Stream Type	Riparian Mgt Zone
Property Line	Stream Type Break	Forested Wetland
Existing Roads	Survey Monument	Wetland Mgt Zone
Required Pre-Haul Maintenance	Leave Tree Area <1/4-acre	Tailhold Restriction Area
Optional Construction	Wetlands - Non-forested	Recreation Trails

DRIVING MAP

SALE NAME: GREMLIN
AGREEMENT#: 30-103594
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	Timber Sale Unit
	Haul Route
	Other Road
	Milepost Markers
	Distance Indicator
	Gate (Master H-957)
	Rock Pit
	Town

DRIVING DIRECTIONS:

See attached driving directions.



DRIVING DIRECTIONS:

From Highway 12 in Malone:

Turn east onto Mox Chehalis Rd, and continue for 1.4 miles.

Turn right (east) onto Ray Rd, and continue for 0.2 miles to the A-Line.

For Unit 4 (R/W), continue on the A-Line for 1.9 miles, then turn right (east) onto the B-Line. Travel 0.1 miles on the B-Line, then take a slight left turn onto the B-0050. Travel 0.2 miles to the unit.

For Unit 3, continue 0.5 miles on the A-Line from the A-Line/B-Line intersection. Then turn right onto the A-0600 road and travel 1.1 miles to the unit.

For Units 1 and 2, continue northeast on the A-Line for 1.6 miles from the A-line/A-0600 intersection, then turn left onto the Old A-line. Continue straight onto the A-1600 in 0.1 miles. Travel 0.2 miles on the A-1600, then turn left onto the BPA-2638 for Unit 2, or continue straight through the gate on the A-1600 for 0.5 miles for Unit 1.

For North Rim Quarry, continue for 2.5 miles on the A-Line from the A-Line/Old A-Line intersection, then turn right (east) onto the A-4000. Continue 2.0 miles, then turn right (west) onto the A-4080.

**STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES**

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

Export Restricted Lump Sum AGREEMENT NO. 30-103594

SALE NAME: GREMLIN

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

Section G: General Terms

G-001 Definitions

The following definitions apply throughout this contract;

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

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

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

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

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

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

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

G-011 Right to Remove Forest Products and Contract Area

Purchaser was the successful bidder on October 24, 2023 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 bounded out by yellow leave tree area tags, snags, and down timber existing more than 5 years from the day of sale, bounded by the following: white Timber Sale Boundary tags, the A-1600 Road, and BPA right-of-way in Unit #1; white Timber Sale Boundary tags and the BPA right-of-way in Unit #2; white Timber Sale Boundary tags and the A-0600 Road in Unit #3;

All timber, except logs required per Road Plan 11-1, bounded by orange right of way tags in Unit #4, except title to the timber within the right of way boundary tags is not conveyed to the Purchaser unless the associated B-0050 Road is actually reconstructed.

All forest products above located on approximately 140 acres on part(s) of Sections 1, 2, and 11 all in Township 17 North, Range 5 West, Sections 35, and 36 all in Township 18 North, Range 5 West W.M. in Grays Harbor 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, 2025.

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 \$1,099.00 per acre per annum for the acres on which an operating release has not been issued in 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-061 Inadvertent Discovery of Cultural Resources

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

G-062 Habitat Conservation Plan

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

By signing this contract, Purchaser agrees to comply with the terms and conditions of the ITP, and the HCP, which shall become terms of this contract. The State agrees to authorize the lawful activities of the Purchaser carried out pursuant to this contract, PROVIDED the Purchaser remains in compliance with the terms and conditions of both the HCP and ITP. The requirements set forth in this contract are intended to comply with the terms and conditions of the HCP and ITP. Accordingly, non-compliance with

the terms and conditions of the HCP and ITP will render the authorization provided in this paragraph void, be deemed a breach of the contract and may subject Purchaser to liability for violation of the Endangered Species Act.

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

G-063 Incidental Take Permit Notification Requirements

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

G-064 Permits

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

G-065 Regulatory Disclaimer

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

G-066 Governmental Regulatory Actions

a. Risk

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

b. Sale Area

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

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

c. Adjustment of Price

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

G-070 Limitation on Damage

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

G-080 Scope of State Advice

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

G-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 2022 Forest Management Standard under certificate number: BVC-SFIFM-018227.

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

G-120 Responsibility for Work

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

G-121 Exceptions

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

The State will bear the cost to repair damages caused by a third party. In all other cases, the Purchaser shall bear responsibility for the costs as described below.

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

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

1. Failure of (a) required improvements or roads designated in clause C-050, or (b) required or optional construction completed to the point that authorization to haul has been issued;
2. Caused by a single event from forces beyond the control of Purchaser, its employees, agents, or invitees, including independent contractors; and

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

The repair work identified by the State shall be promptly completed by Purchaser at an agreed price. The State may elect to accomplish repairs by means of State-provided resources.

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

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

G-140 Indemnity

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

G-150 Insurance

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

All insurance and surety bonds should be issued by companies admitted to do business within the State of Washington and have a rating of A-, Class VII or better in the most recently published edition of Best's Reports. If an insurer is not admitted, all insurance

policies and procedures for issuing the insurance policies must comply with Chapter 48.15 RCW and 284-15 WAC.

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

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

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

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

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

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

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

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

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

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

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

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

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

Business Auto Policy (BAP). Purchaser shall maintain business auto liability and, if necessary, commercial umbrella liability insurance with a limit not less than \$1,000,000.00 per accident. Such insurance shall cover liability arising out of "Any Auto". Business auto coverage shall be written on ISO form CA 00 01, or substitute liability form providing equivalent coverage. If necessary the policy shall be endorsed to provide contractual liability coverage and cover a "covered pollution cost or

expense" as provided in the 1990 or later editions of CA 00 01. Purchaser waives all rights against State for the recovery of damages to the extent they are covered by business auto liability or commercial umbrella liability insurance.

G-160 Agents

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

G-210 Violation of Contract

G-220 State Suspends Operations

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

G-210 Violation of Contract

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

G-220 State Suspends Operations

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

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

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

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

G-230 Unauthorized Activity

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

G-240 Dispute Resolution

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

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

G-250 Compliance with All Laws

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

G-260 Venue

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

G-270 Equipment Left on State Land

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

damages to or loss of the equipment or damage caused by the moving, storing or disposal of the equipment.

G-280 Operating Release

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

G-310 Road Use Authorization

Purchaser is authorized to use the following State roads and roads for which the State has acquired easements and road use permits; the A-Line, B-Line (from A-Line junction to B-2000 junction), A-1585, A-1600, BPA-2638, BPA-2638 SF, Old A-Line (from A-Line junction to BPA-2638 SF junction), A-0600, A-0600 Ext., A-0609, B-0050, B-0050 Ext., A-4000 (from A-Line junction to A-4080 junction), A-4080, B-2000, and B-2100 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 A-Line, Old A-Line, or B-Line, unless authority is granted in writing by the Contract Administrator.

G-396 Public Hauling Permit

The hauling of forest products, rock or equipment may require a state, county, or city hauling permit. Purchaser is responsible for obtaining any necessary permit and any costs associated with extra maintenance or repair levied by the permitting agency. Purchaser must provide the Contract Administrator with a copy of the executed permit.

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:

Easement, including the terms and provisions thereof,

For: Overhead Transmission Lines

In Favor of: Bonneville Power Administration

Disclosed by Application No.: 50-020038

Granted: 4/22/1952

Expires: Indefinite

Easement, including the terms and provisions thereof,

For: Overhead Transmission Lines

In Favor of: Bonneville Power Administration

Disclosed by Application No.: 50-024741

Granted: 4/16/1958

Expires: Indefinite

Easement, including the terms and provisions thereof,

For: Road

In Favor of: Bonneville Power Administration

Disclosed by Application No.: 50-024742

Granted: 3/27/1958

Expires: Indefinite

Easement, including the terms and provisions thereof,

For: Overhead Transmission Lines

In Favor of: Bonneville Power Administration

Disclosed by Application No.: 50-029047

Granted: 7/1/1964

Expires: Indefinite

Easement, including the terms and provisions thereof,
For: Overhead Transmission Lines
In Favor of: Bonneville Power Administration
Disclosed by Application No.: 50-036770
Granted: 9/25/1973
Expires: Indefinite

Easement, including the terms and provisions thereof,
For: Overhead Transmission Lines
In Favor of: Bonneville Power Administration
Disclosed by Application No.: 50-043481
Granted: 4/15/1981
Expires: Indefinite

Easement, including the terms and provisions thereof,
For: Road
In Favor of: Mason County Logging Company
Disclosed by Application No.: 50-041372
Granted: 11/17/1933
Expires: Indefinite

Easement, including the terms and provisions thereof,
For: Overhead Transmission Lines
In Favor of: Bonneville Power Administration
Disclosed by Application No.: 50-050067
Granted: 7/1/1964
Expires: Indefinite

Easement, including the terms and provisions thereof,
For: Trail
In Favor of: DNR
Disclosed by Application No.: 50-070357
Granted: 4/13/1998
Expires: 1/31/2047

Region Encumbrances

Lease, including the terms and provisions thereof,
For: Land Use License
In Favor of: The Mountaineers
Disclosed by Application No.: 60-WS1023
Granted: 2/15/2019
Expires: 12/31/2028

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 \$180,570.00. The total contract price consists of a \$0.00 contract bid price plus \$180,570.00 in fees. Fees collected shall be retained by the state unless the contract is adjusted via the G-066 clause. Purchaser shall be liable for the entire purchase price, and will not be entitled to any refunds or offsets unless expressly stated in this contract.

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

P-045 Guarantee of Payment

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

P-050 Billing Procedure

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

P-080 Payment Account Refund

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

P-090 Performance Security

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

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

P-100 Performance Security Reduction

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

Section H: Harvesting Operations

H-010 Cutting and Yarding Schedule

Falling and Yarding will not be permitted from November 1 to April 30 in Units #3 and #4, nor on weekends or State recognized holidays in all units, unless authorized in writing by the Contract Administrator.

H-013 Reserve Tree Damage Definition

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

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

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

If the Contract Administrator determines that a reserve tree has been cut or damaged, the Purchaser shall provide a replacement reserve tree of like condition, size, and species within the sale unit containing the damaged leave tree, as approved by the

Contract Administrator. Purchaser may be required to pay liquidated damages for Excessive Reserve Tree Damage as detailed in clause D-041.

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

H-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-040 Purchaser Harvest Plan

Purchaser shall, as part of the plan of operations, prepare an acceptable harvest plan for all harvest units. The plan shall address the harvest operations, including tailhold and cable corridor locations, logging debris cleanup, safety, and landing locations if different from map, which are part(s) of this contract. The harvest plan shall be approved by the Contract Administrator prior to beginning the harvest operation. Purchaser shall not deviate from the harvest plan without prior written approval by the Contract Administrator.

H-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, cable-tethered, and ground based equipment. Cable and cable-tethered equipment allowed on all slopes. Ground based equipment is limited to non-tethered self-leveling equipment on sustained slopes of 55 percent or less, and tracked equipment and 6-

wheeled rubber tired skidders with over-the-tire tracks spanning both sets of rear tires limited to sustained slopes of 45 percent or less. Authority to use other equipment or to operate outside the equipment specifications detailed above must be approved 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-130 Hauling Schedule

The hauling of forest products will not be permitted from November 1 to April 30, nor on weekends or State recognized holidays, unless authorized in writing by the Contract Administrator.

H-140 Special Harvest Requirements

Purchaser shall accomplish the following during the harvest operations:

a. Equipment limitation zones are required within 30 feet of Type 5 streams.

b. In the event that cables are strung across Porter Falls trail while cable yarding Unit #3, Purchaser shall close the trail while cables are present. Purchaser is responsible for closing the trail with orange construction barricade netting and posting trail closure signs provided by DNR, at designated locations provided by the Contract Administrator. Purchaser shall give five (5) calendar days' notice to the Contract Administrator before closing the trail.

c. Crossings of Type 5 streams may be allowed at locations approved in writing by the Contract Administrator. Purchaser shall place a culvert or log puncheon at crossing locations (when water is present) to protect the stream bank and prevent sedimentation. All materials placed in and/or over the stream at these crossings shall be removed immediately upon completion of yarding on that skid trail.

d. Any and all operations associated with this sale may be temporarily suspended when, in the opinion of the Contract Administrator, there is the potential for delivery to typed water.

e. No equipment shall operate, or trees felled or damaged, outside the timber sale boundary.

f. 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.

g. Purchaser shall take measures throughout operations to control soil erosion, water channelization, and prevent sediment delivery to streams or wetlands. Methods may include construction of water bars, “sweeping” with logs, silt traps, or other measures on skid trails, yarding corridors and haul roads.

h. In the event operations become inactive for long periods of time, skid trails shall be water barred prior to completion of yarding tributary timber to prevent water accumulation and sediment movement, if required by the Contract Administrator.

i. To facilitate proper reforestation in areas of high slash concentration, purchaser shall, in concurrence with ground based yarding, clear plantable spots at an 11.5 foot by 11.5 foot spacing.

j. Purchaser shall notify BPA regional representative a minimum of five (5) calendar days before road construction or logging operations under or immediately adjacent to BPA powerlines commence. Purchaser shall review guidelines for logging activities on or near BPA rights-of-way with all employees and contractors. BPA regional representative is Jason Hunt (253) 880-4112.

k. Trees are to be felled away from the BPA powerlines.

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. Areas restricting operations due to protection of potentially unstable slopes are located within and outside the sale boundary.

- Locations inside the sale boundary are identified as Non-Tradeable Leave Trees marked with yellow Leave Tree Area tags as shown on the Timber Sale and Logging Plan Maps inside which no trees may be used as tailholds and no equipment may operate within, nor logs felled into or yarded through or over.
- Locations outside the sale boundary are identified as Tailhold Restriction Areas on the Logging Plan and Timber Sale Maps. Trees within these areas shall not be used as tailholds.

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 all harvest units, all hardwood stems greater than 6 feet tall, shall be felled concurrently with felling operations. Remaining stump shall be no more than 12 inches in height. 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 2/1/2023 are hereby made a part of this contract.

C-050 Purchaser Road Maintenance and Repair

Purchaser shall perform work at their own expense on the A-0600, A-0600 Ext., A-0609, A-1585, A-1600, BPA-2638, BPA-2638 SF, Old A-Line (from A-Line junction to BPA-2638 SF junction), B-0050, and B-0050 Ext. 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 equipment rate schedule on file at the Region office or Engineering Division in Olympia. The State shall reimburse Purchaser for said costs within 30 days of receipt and approval of the statement.

C-080 Landing Locations Approved Prior to Construction

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

C-090 Landing Location

Landings shall be built a minimum of 50 feet off the A-1585, A-1600, and A-0600 road(s).

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-050 Cessation of Operations for Low Humidity

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 Type 5 streams 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 yarding equipment may operate within Riparian or Wetland Management Zones except associated within Unit #4 unless authority is granted in writing by the Contract Administrator.

S-120 Stream Protection

No timber shall be felled into, across, or yarded through Type 3 or Type 4 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 or other releases of hazardous material/waste during operations conducted under this contract.

b. Hazardous Materials Spill Prevention

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

c. Hazardous Materials Spill Containment, Control and Cleanup

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

d. Hazardous Material Release Reporting

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

the event of a spill covered in part a., the Purchaser is responsible for immediately notifying all the following:

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

S-131 Refuse Disposal

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

Section D: Damages

D-013 Liquidated Damages or Failure to Perform

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

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

D-041 Reserve Tree Excessive Damage

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

SIGNATURES

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

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

STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES

Purchaser

Don Melton, Acting

Print Name

South Puget Sound Region Manager

Date: _____

Date: _____

Address: _____

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

STATE OF _____)

COUNTY OF _____)

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

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

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

Notary Public in and for the State of

My appointment expires _____



WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES

FOREST EXCISE TAX ROAD SUMMARY SHEET

Region: South Puget Sound

Timber Sale Name: Gremlin

Application Number: 30- 103594

EXCISE TAX APPLICABLE ACTIVITIES

Construction: 2,045 linear feet
Road to be constructed (optional and required) but not abandoned

Reconstruction: 1,594 linear feet
Road to be reconstructed (optional and required) but not abandoned

Abandonment: 0 linear feet
Abandonment of existing roads not reconstructed under the contract

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

Pre-Haul Maintenance: 59,402 linear feet
Existing road to receive maintenance work (optional and required) prior to haul

EXCISE TAX EXEMPT ACTIVITIES

Temporary Construction: 3,116 linear feet
Roads to be constructed (optional and required) and then abandoned

0 linear feet

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

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

(Revised 9/18)

PRE-CRUISE NARRATIVE

Sale Name: Gremlin	Region: South Puget Sound
Agreement #: 30-103594	District: Black Hills
Contact Forester: Megan Hire	Phone/ Location: (253)-380-8907 Ext: /
Alternate Contact: Sam Lake	Phone/ Location: (360)-628-3868 Ext: /

Type of Sale (lump sum, mbf scale, tonnage scale or contract harvest): Lump sum Required or Optional removal of utility as pulp (<i>for scale sales only</i>): Evaluated for RFRS Implementation?: Yes
Percentage cable-uphill: 42% Percentage cable-downhill: Percentage ground based: 58%
Species Onsite: <input checked="" type="checkbox"/> RC, <input checked="" type="checkbox"/> DF, <input checked="" type="checkbox"/> WH, <input checked="" type="checkbox"/> RA, <input checked="" type="checkbox"/> BC, <input checked="" type="checkbox"/> BLM, <input type="checkbox"/> NF, <input type="checkbox"/> SF, <input checked="" type="checkbox"/> SS, <input type="checkbox"/> Other:(Please List)

UNIT ACREAGES* AND METHOD OF DETERMINATION:

Unit #	Harvest R/W or RMZ WMZ	Legal Description Sec/Twp/Rng	Grant	Gross Traversed Acres	Deductions from Gross Acres (No harvest acres)			Net Harvest Acres	Acreage Determination (List method, dimensions and error of closure if applicable)	
					RMZ/WMZ Acres	Leave Tree Acres	Existing Road Acres			Other Acres (describe)
1		Sec 35/ T 18N/ R 05 W Sec 36/ T 18N/ R 05 W	03	14.8	0	0.8	0	N/A	14.0	Garmin GPS and Trimble
2		Sec 35/ T 18N/ R 05 W Sec 36/ T 18N/ R 05 W	03	33.1	0	2.0	0	N/A	31.1	Garmin GPS and Trimble
3		Sec 1/ T 17N/ R 05 W Sec 2/ T 17N/ R 05 W Sec 11/ T 17N/ R 05W	01, 03	99.1	0	5.8	0.1	*see Remarks	93.2	Garmin GPS and Trimble
R/W 4		Sec 11/ T 17N/ R 05 W	01, 03	2.3	0	0	0	N/A	2.3	Garmin GPS
TOTAL ACRES				150.0	0			N/A	140.6	

HARVEST PLAN AND SPECIAL CONDITIONS:

Unit #	Harvest Prescription: (Mark leave, take, paint color, tags, flagging etc.)	Special Management areas:	Other conditions (# leave trees, etc.) *For all marked thinnings, include a tree count by species.
1	Variable Retention Harvest: Boundaries are marked with white "Timber Sale Boundary" tags, pink flagging, and the A-1600 Rd. Clumped leave tree areas and individual leave trees are marked with yellow "Leave Tree Area" tags and pink flagging.		8 Leave Trees per acre.
2	Variable Retention Harvest: Boundaries are marked with white "Timber Sale Boundary" tags and pink flagging. BPA right-of-way edge is		8 Leave Trees per acre.

	marked with pink flagging. Clumped leave tree areas are marked with yellow "Leave Tree Area" tags and pink flagging.		
3	Variable Retention Harvest: Boundaries are marked with white "Timber Sale Boundary" tags, pink flagging, and the A-0600 Rd. Timber type change is marked with pink flagging. Clumped leave tree areas are marked with yellow "Leave Tree Area" tags and pink flagging.		8 Leave Trees per acre.
4 R/W	Right-of-Way units marked with orange "Right-of-Way Boundary" tags and orange flagging.		N/A

OTHER PRE-CRUISE INFORMATION:

Unit #	Estimated Volume	Access information (Gates, locks, etc.)	Photos, traverse maps required
1	See Cruise	A-1600 Gate: Master (H-957)	Traverse map with contours, roads, and leave trees.
2	See Cruise		Traverse map with contours, roads, and leave trees.
3	See Cruise		Traverse map with contours, roads, and leave trees.
4 R/W	See Cruise		Traverse map with contours, roads, and leave trees.

REMARKS:

Units 1 through 3 are VRH units. Units 1 and 2 are 100% ground-based, and Unit 3 is 37% ground-based and 63% cable. These three units consist of Douglas-fir, red alder, western red cedar, bigleaf maple, black cottonwood, western hemlock, and Sitka spruce. *Unit 3 contains an approximately 4 acre area consisting only of 20-year-old cascara and a few mature Sitka spruce marked as leave trees in the center of the unit. This area was not deducted from the Unit 3 acreage-see cruise narrative for how this area was cruised. There is also a sinkhole in Unit 3 at the bottom of the hanging Type 5 stream in the center of the unit (marked with blue flagging). Unit 4 R/W is partially through the WMZ of a fen and contains mature red alder, Douglas-fir, western hemlock, western red cedar, and bigleaf maple.

Prepared By: Megan Hire Date: 12/1/2022	Title: Forester 1	CC:
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Revised 2/23/2007 (PSLD), Revised 1/22/20 (SPS)

Timber Sale Cruise Report Gremlin

Sale Name: GREMLIN

Sale Type: LUMP SUM

Region: SO PUGET

District: BLACK HILLS

Lead Cruiser: Aaron Coleman

Other Cruisers: Mike Sly, Phil Kirner

Cruise Narrative:

This sale consists of 3 variable retention harvest (VRH) units, and 1 right-of-way (ROW) unit located off the A-0600 & A-1600 roads in the Capitol State Forest. A 957 key is needed to access unit 1. All roads are in good condition.

The primary species for this sale is as follows:

Douglas-fir (73%) with an average diameter of 27 inches.

Western hemlock (9%) with an average diameter of 18 inches.

Western red cedar (8%) with an average diameter of 24 inches.

Red alder (7%) with an average diameter of 14 inches

Unit 1 contains a fair amount of blowdown on the western edge. Unit 2 contains the majority of the RC and contains a small-diameter RA pocket. Unit 3 contains many holes and hardwood pockets, as well as a 4 acre cascara stand. This stand was "cruised through" and void plots, rather than an acreage deduction, reflects the variability. Unit 4 cruise acres differ from the precruise; I removed .3 acres to account for the existing road. Voids and hardwood pockets affect stocking levels and log quality in all units.

This is a mix of shovel and uphill cable with favorable logging conditions. Poles present, especially in unit 3, but may be tricky to remove on the steeper portions of the unit.

Most commonly observed defect was broken/forked tops, spike knots, sweep, butt rot.

** NET acres were used as cruise acres. Plots that fell within or next to leave tree clumps and roads were NOT sampled. **

Timber Sale Notice Volume (MBF)

Sp	DBH	Rings/In	Age	MBF Volume by Grade						
				All	Peeler	Spec Mill	2 Saw	3 Saw	4 Saw	Utility
DF	27.9	8.7		5,058	187	623	3,705	501	41	1
WH	18.8			631			453	143	35	1
RC	24.6			576				559	17	
RA	14.0			504			120	125	259	
MA	17.7			101			38	19	44	
SS	22.8			31			26	4		
BC	35.0			23			23			
GF	45.0			23			23			
ALL	20.7	8.7		6,945	187	623	4,388	1,350	395	2

Timber Sale Notice Weight (tons)

Sp	Tons by Grade						
	All	Peeler	Spec Mill	2 Saw	3 Saw	4 Saw	Utility
DF	30,964	1,029	3,392	21,965	4,209	363	8
WH	5,397			3,535	1,375	476	11
RC	4,981				4,847	134	
RA	4,751			1,103	1,076	2,572	
MA	1,028			360	175	493	
SS	206			152	54		
BC	140			140			
GF	120			120			
ALL	47,586	1,029	3,392	27,373	11,736	4,038	19

Timber Sale Overall Cruise Statistics (Cut + Leave Trees)

BA (sq ft/acre)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR SE (%)	Net Vol (bf/acre)	Vol SE (%)
273.4	4.7	181.5	2.8	49,501	5.6

Timber Sale Unit Cruise Design

Unit	Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
GREMLIN U1	B2C: VR, 2 BAF (54.44, 40 for some species) Measure/Count Plots, Sighting Ht = 0 ft	14.0	14.8	12	5	0
GREMLIN U2	B1C: VR, 1 BAF (54.44) Measure/Count Plots, Sighting Ht = 4.5 ft	31.1	33.1	24	14	0
GREMLIN U3	B1C: VR, 1 BAF (54.44) Measure/Count Plots, Sighting Ht = 4.5 ft	93.2	99.1	67	38	5
GREMLIN U4 RW	B1: VR, 1 BAF (33.61) Measure All, Sighting Ht = 4.5 ft	2.0	2.4	4	4	0
All		140.3	149.3	107	61	5

Timber Sale Log Grade x Sort Summary

Sp	Status	Grade	Sort	Dia	Len	BF Gross	BF Net	Defect %	Tons	MBF Net
BC	LIVE	2 SAW	Domestic	22.9	30	219	164	25.0	140.0	23.0
DF	LIVE	2 SAW	Domestic	19.2	36	17,976	16,966	5.6	14,010.1	2,380.3
DF	LIVE	2 SAW	HQ-A	22.8	32	166	166	0.0	119.2	23.3
DF	LIVE	2 SAW	HQ-B	16.5	40	9,481	9,274	2.2	7,835.5	1,301.1
DF	LIVE	3 PEELER	Domestic	26.6	40	1,354	1,335	1.4	1,028.8	187.3

Sp	Status	Grade	Sort	Dia	Len	BF Gross	BF Net	Defect %	Tons	MBF Net
DF	LIVE	3 SAW	Domestic	9.2	36	2,448	2,359	3.6	2,948.8	331.0
DF	LIVE	3 SAW	HQ-B	10.1	40	1,212	1,212	0.0	1,259.8	170.1
DF	LIVE	4 SAW	Domestic	6.1	26	301	290	3.7	362.8	40.7
DF	LIVE	CULL	Cull	23.3	8	211	0	100.0	0.0	0.0
DF	LIVE	SPECIAL MILL	HQ-A	19.6	38	4,470	4,439	0.7	3,391.7	622.8
DF	LIVE	UTILITY	Pulp	11.4	12	8	8	0.0	7.6	1.1
GF	LIVE	2 SAW	Domestic	25.3	40	162	162	0.0	119.5	22.7
MA	LIVE	2 SAW	Domestic	14.2	24	308	272	11.6	359.6	38.2
MA	LIVE	3 SAW	Domestic	11.4	28	143	134	6.2	175.1	18.8
MA	LIVE	4 SAW	Domestic	8.9	28	358	311	13.1	493.1	43.6
MA	LIVE	UTILITY	Pulp	10.2	12	2	0	100.0	0.0	0.0
RA	LIVE	2 SAW	Domestic	13.4	32	941	857	8.9	1,102.7	120.2
RA	LIVE	3 SAW	Domestic	10.9	31	925	889	3.9	1,076.0	124.8
RA	LIVE	4 SAW	Domestic	6.7	28	1,953	1,844	5.6	2,571.8	258.7
RA	LIVE	CULL	Cull	9.9	5	7	0	100.0	0.0	0.0
RC	LIVE	3 SAW	Domestic	12.9	34	4,592	3,983	13.3	4,846.9	558.8
RC	LIVE	4 SAW	Domestic	6.5	26	120	120	0.0	134.0	16.9
SS	LIVE	2 SAW	Domestic	19.0	31	207	186	10.2	152.0	26.1
SS	LIVE	3 SAW	Domestic	9.3	30	39	31	21.6	54.4	4.3
WH	LIVE	2 SAW	Domestic	15.0	39	3,442	3,227	6.2	3,534.7	452.7
WH	LIVE	3 SAW	Domestic	8.8	38	1,041	1,015	2.4	1,374.8	142.5
WH	LIVE	4 SAW	Domestic	5.8	28	258	249	3.4	476.3	35.0
WH	LIVE	CULL	Cull	13.9	4	19	0	100.0	0.0	0.0
WH	LIVE	UTILITY	Pulp	6.9	12	7	7	0.0	11.1	1.0

Timber Sale Log Sort x Diameter Bin Summary

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
BC	20+	LIVE	Domestic	22.9	30	164	25.0	140.0	23.0
DF	5 - 7	LIVE	Domestic	6.4	32	611	2.0	761.8	85.7
DF	8 - 11	LIVE	Domestic	9.6	36	1,730	3.4	2,218.3	242.8
DF	8 - 11	LIVE	HQ-B	9.9	40	1,122	0.0	1,176.7	157.4
DF	8 - 11	LIVE	Cull	10.3	12	0	100.0	0.0	0.0
DF	8 - 11	LIVE	Pulp	11.4	12	8	0.0	7.6	1.1
DF	12 - 15	LIVE	Cull	12.1	6	0	100.0	0.0	0.0
DF	12 - 15	LIVE	Domestic	13.6	37	2,482	4.2	2,642.6	348.2
DF	12 - 15	LIVE	HQ-B	13.9	40	3,003	1.7	2,817.4	421.3
DF	16 - 19	LIVE	HQ-B	17.5	39	2,349	1.3	1,986.9	329.6

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	16 - 19	LIVE	Domestic	17.8	38	3,578	5.9	3,054.5	501.9
DF	16 - 19	LIVE	HQ-A	17.9	38	1,865	1.1	1,520.0	261.7
DF	16 - 19	LIVE	Cull	18.7	3	0	100.0	0.0	0.0
DF	20+	LIVE	HQ-A	22.4	37	2,740	0.4	1,990.9	384.4
DF	20+	LIVE	HQ-B	23.0	39	4,012	3.0	3,114.3	562.9
DF	20+	LIVE	Domestic	24.5	36	12,550	5.5	9,673.3	1,760.8
DF	20+	LIVE	Cull	29.1	9	0	100.0	0.0	0.0
GF	16 - 19	LIVE	Domestic	18.1	40	24	0.0	20.1	3.4
GF	20+	LIVE	Domestic	28.9	40	138	0.0	99.4	19.3
MA	5 - 7	LIVE	Domestic	7.1	27	82	7.3	135.1	11.5
MA	8 - 11	LIVE	Domestic	9.9	30	272	13.1	429.8	38.1
MA	8 - 11	LIVE	Pulp	10.2	12	0	100.0	0.0	0.0
MA	12 - 15	LIVE	Domestic	13.6	23	341	9.8	408.2	47.8
MA	16 - 19	LIVE	Domestic	19.5	36	23	25.0	54.7	3.2
RA	5 - 7	LIVE	Cull	5.0	12	0	100.0	0.0	0.0
RA	5 - 7	LIVE	Domestic	6.2	26	1,115	5.0	1,532.7	156.5
RA	8 - 11	LIVE	Domestic	9.8	31	1,617	5.1	2,115.1	226.9
RA	8 - 11	LIVE	Cull	11.7	2	0	100.0	0.0	0.0
RA	12 - 15	LIVE	Domestic	13.0	32	790	9.1	1,030.2	110.9
RA	16 - 19	LIVE	Domestic	16.4	30	67	6.7	72.5	9.3
RC	5 - 7	LIVE	Domestic	6.7	30	316	1.4	461.9	44.3
RC	8 - 11	LIVE	Domestic	9.7	32	560	4.2	695.0	78.6
RC	12 - 15	LIVE	Domestic	13.7	34	1,053	9.6	1,229.5	147.7
RC	16 - 19	LIVE	Domestic	17.8	34	994	11.5	986.5	139.5
RC	20+	LIVE	Domestic	22.2	36	1,181	22.3	1,608.0	165.6
SS	8 - 11	LIVE	Domestic	9.3	30	31	21.6	54.4	4.3
SS	12 - 15	LIVE	Domestic	15.0	40	40	5.1	30.9	5.6
SS	16 - 19	LIVE	Domestic	19.0	20	26	20.0	18.0	3.7
SS	20+	LIVE	Domestic	21.1	32	120	9.4	103.0	16.9
WH	5 - 7	LIVE	Domestic	6.0	28	391	3.4	690.8	54.8
WH	5 - 7	LIVE	Pulp	6.9	12	7	0.0	11.1	1.0
WH	8 - 11	LIVE	Domestic	9.4	38	874	2.3	1,160.3	122.6
WH	12 - 15	LIVE	Cull	13.2	5	0	100.0	0.0	0.0
WH	12 - 15	LIVE	Domestic	13.8	39	1,868	2.7	2,125.7	262.1
WH	16 - 19	LIVE	Domestic	17.3	40	788	4.1	787.7	110.6
WH	20+	LIVE	Domestic	22.2	40	570	18.5	621.3	80.0

Cruise Unit Report GREMLIN U1

Unit Sale Notice Volume (MBF): GREMLIN U1

Sp	DBH	Rings/In	Age	MBF Volume by Grade					
				All	Spec Mill	2 Saw	3 Saw	4 Saw	Utility
DF	34.8			450	52	372	22	3	1
WH	20.1			279		216	45	18	
RC	17.0			15			15		
RA	12.4			10		2		8	
ALL	21.4			753	52	590	82	28	1

Unit Cruise Design: GREMLIN U1

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B2C: VR, 2 BAF (54.44, 40 for some species) Measure/Count Plots, Sighting Ht = 0 ft	14.0	14.8	12	5	0

Unit Cruise Summary: GREMLIN U1

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
DF	10	30	2.5	0
WH	11	27	2.3	0
RC	1	7	0.6	0
RA	3	3	0.3	0
ALL	25	67	5.6	0

Unit Cruise Statistics (Cut + Leave Trees): GREMLIN U1

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
DF	136.1	75.3	21.7	235.9	18.5	5.9	32,104	77.6	22.5
WH	122.5	71.2	20.6	162.5	41.8	12.6	19,908	82.6	24.1
RC	23.3	199.6	57.6	45.7	0.0	0.0	1,066	199.6	57.6
RA	10.0	180.9	52.2	70.8	23.8	13.7	708	182.5	54.0
ALL	291.9	40.1	11.6	184.2	43.2	8.6	53,786	58.9	14.4

Unit Summary: GREMLIN U1

Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
DF	LIVE	CUT	10	ALL	34.8	124	159	33,787	32,104	5.0	20.6	136.1	23.1	449.5
RA	LIVE	CUT	3	ALL	12.4	47	56	1,051	708	32.6	11.9	10.0	2.8	9.9
RC	LIVE	CUT	1	ALL	17.0	48	59	1,066	1,066	0.0	14.8	23.3	5.7	14.9
WH	LIVE	CUT	11	ALL	20.1	74	92	21,291	19,908	6.5	55.6	122.5	27.3	278.7
ALL	LIVE	CUT	25	ALL	22.8	77	97	57,196	53,786	6.0	102.9	291.9	58.9	753.0
ALL	ALL	ALL	25	ALL	22.8	77	97	57,196	53,786	6.0	102.9	291.9	58.9	753.0

Cruise Unit Report GREMLIN U2

Unit Sale Notice Volume (MBF): GREMLIN U2

Sp	DBH	Rings/In	Age	MBF Volume by Grade					
				All	Peeler	Spec Mill	2 Saw	3 Saw	4 Saw
RC	25.0			501				487	15
DF	33.2			351	22	50	267	11	
RA	13.7			250			35	69	146
WH	16.2			138			82	47	9
GF	45.0			23			23		
ALL	18.6			1,263	22	50	407	615	169

Unit Cruise Design: GREMLIN U2

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B1C: VR, 1 BAF (54.44) Measure/Count Plots, Sighting Ht = 4.5 ft	31.1	33.1	24	14	0

Unit Cruise Summary: GREMLIN U2

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
RC	35	62	2.6	0
DF	9	18	0.8	0
RA	22	36	1.5	0
WH	11	13	0.5	0
GF	1	1	0.0	0
ALL	78	130	5.4	0

Unit Cruise Statistics (Cut + Leave Trees): GREMLIN U2

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
RC	140.6	113.5	23.2	114.6	29.9	5.1	16,118	117.4	23.7
DF	40.8	148.4	30.3	276.4	19.7	6.6	11,287	149.7	31.0
RA	81.7	92.2	18.8	98.4	16.4	3.5	8,038	93.6	19.1
WH	29.5	188.4	38.5	150.7	38.6	11.6	4,443	192.3	40.2
GF	2.3	489.9	100.0	322.1	0.0	0.0	731	489.9	100.0
ALL	294.9	46.2	9.4	137.7	49.7	5.6	40,615	67.8	11.0

Unit Summary: GREMLIN U2

Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
DF	LIVE	CUT	9	ALL	33.2	119	151	11,651	11,287	3.1	6.8	40.8	7.1	351.0
GF	LIVE	CUT	1	ALL	45.0	140	182	731	731	0.0	0.2	2.3	0.3	22.7
RA	LIVE	CUT	22	ALL	13.7	60	82	8,459	8,038	5.0	79.8	81.7	22.1	250.0
RC	LIVE	CUT	35	ALL	25.0	78	98	18,455	16,118	12.7	41.3	140.6	28.1	501.3
WH	LIVE	CUT	11	ALL	16.2	69	87	4,681	4,443	5.1	20.6	29.5	7.3	138.2
ALL	LIVE	CUT	78	ALL	19.1	69	90	43,976	40,615	7.6	148.7	294.9	64.9	1,263.1
ALL	ALL	ALL	78	ALL	19.1	69	90	43,976	40,615	7.6	148.7	294.9	64.9	1,263.1

Cruise Unit Report GREMLIN U3

Unit Sale Notice Volume (MBF): GREMLIN U3

Sp	DBH	Rings/In	Age	MBF Volume by Grade						
				All	Peeler	Spec Mill	2 Saw	3 Saw	4 Saw	Utility
DF	26.8	8.7		4,235	165	521	3,054	459	36	
RA	14.3			236			83	51	102	
WH	18.8			214			155	50	8	1
MA	17.7			101			38	19	44	0
RC	23.1			60				57	2	
SS	22.8			31			26	4		
BC	35.0			23			23			
ALL	21.1	8.7		4,899	165	521	3,379	640	193	1

Unit Cruise Design: GREMLIN U3

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B1C: VR, 1 BAF (54.44) Measure/Count Plots, Sighting Ht = 4.5 ft	93.2	99.1	67	38	5

Unit Cruise Summary: GREMLIN U3

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
DF	104	235	3.5	3
RA	26	36	0.5	0
WH	9	18	0.3	0
MA	23	23	0.3	0
RC	7	11	0.2	0
SS	3	3	0.0	0
BC	2	2	0.0	0
ALL	174	328	4.9	3

Unit Cruise Statistics (Cut + Leave Trees): GREMLIN U3

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
DF	190.9	73.0	8.9	238.0	22.2	2.2	45,439	76.3	9.2
RA	29.3	166.2	20.3	86.5	35.5	7.0	2,529	170.0	21.5
WH	14.6	238.8	29.2	157.2	34.9	11.6	2,299	241.3	31.4

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
MA	18.7	212.4	26.0	57.8	33.2	6.9	1,080	215.0	26.9
RC	8.9	272.3	33.3	71.5	35.2	13.3	639	274.6	35.8
SS	2.4	606.4	74.1	134.0	60.9	35.2	327	609.4	82.0
BC	1.6	818.5	100.0	152.0	0.4	0.3	247	818.5	100.0
ALL	266.5	50.2	6.1	197.2	45.2	3.4	52,559	67.5	7.0

Unit Summary: GREMLIN U3

Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
BC	LIVE	CUT	2	ALL	35.0	115	145	329	247	25.0	0.2	1.6	0.3	23.0
DF	LIVE	CUT	104	ALL	26.8	111	142	47,428	45,439	4.2	48.7	190.9	36.9	4,235.0
MA	LIVE	CUT	23	ALL	17.7	49	65	1,221	1,080	11.6	10.9	18.7	4.4	100.6
RA	LIVE	CUT	26	ALL	14.3	49	73	2,687	2,529	5.9	26.2	29.3	7.7	235.7
RC	LIVE	CUT	7	ALL	23.1	77	91	776	639	17.7	3.1	8.9	1.9	59.5
SS	LIVE	CUT	3	ALL	22.8	69	86	371	327	12.0	0.9	2.4	0.5	30.5
WH	LIVE	CUT	9	ALL	18.8	84	98	2,415	2,299	4.8	7.6	14.6	3.4	214.2
ALL	LIVE	CUT	174	ALL	22.4	84	109	55,228	52,559	4.8	97.6	266.5	55.1	4,898.5
ALL	ALL	ALL	174	ALL	22.4	84	109	55,228	52,559	4.8	97.6	266.5	55.1	4,898.5

Cruise Unit Report GREMLIN U4 RW

Unit Sale Notice Volume (MBF): GREMLIN U4 RW

Sp	DBH	Rings/In	Age	MBF Volume by Grade			
				All	2 Saw	3 Saw	4 Saw
DF	19.0			22	12	9	2
RA	15.6			8		5	3
ALL	17.5			30	12	14	5

Unit Cruise Design: GREMLIN U4 RW

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B1: VR, 1 BAF (33.61) Measure All, Sighting Ht = 4.5 ft	2.0	2.4	4	4	0

Unit Cruise Summary: GREMLIN U4 RW

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
DF	10	10	2.5	0
RA	6	6	1.5	0
ALL	16	16	4.0	0

Unit Cruise Statistics (Cut + Leave Trees): GREMLIN U4 RW

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
DF	84.0	23.1	11.5	132.8	23.2	7.3	11,157	32.7	13.7
RA	50.4	200.0	100.0	80.0	25.7	10.5	4,034	201.6	100.5
ALL	134.4	67.7	33.9	113.0	33.2	8.3	15,190	75.4	34.9

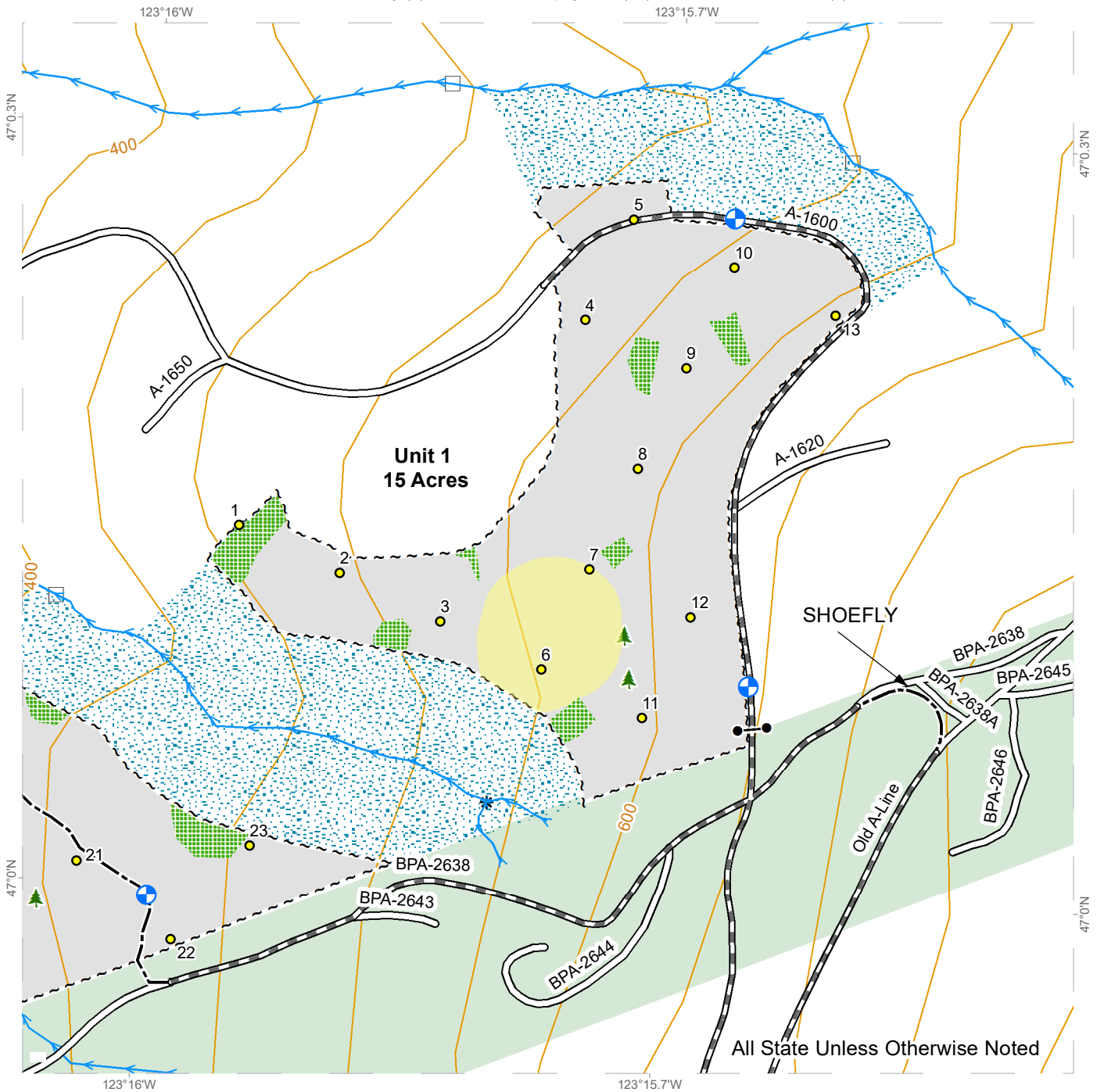
Unit Summary: GREMLIN U4 RW

Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
DF	LIVE	CUT	10	ALL	19.0	99	107	11,792	11,157	5.4	42.7	84.0	19.3	22.3
RA	LIVE	CUT	6	ALL	15.6	61	74	4,317	4,034	6.6	38.0	50.4	12.8	8.1
ALL	LIVE	CUT	16	ALL	17.5	81	92	16,109	15,190	5.7	80.7	134.4	32.0	30.4
ALL	ALL	ALL	16	ALL	17.5	81	92	16,109	15,190	5.7	80.7	134.4	32.0	30.4

CRUISE MAP

SALE NAME: GREMLIN
AGREEMENT#: 30-103594
TOWNSHIP(S): T17R5W, T18R5W
TRUST(S): Common School and Indemnity (3), Forest Board Repayment (42), State Forest Purchase (2)

REGION: South Puget Sound Region
COUNTY(S): Grays Harbor
ELEVATION RGE: 200-920



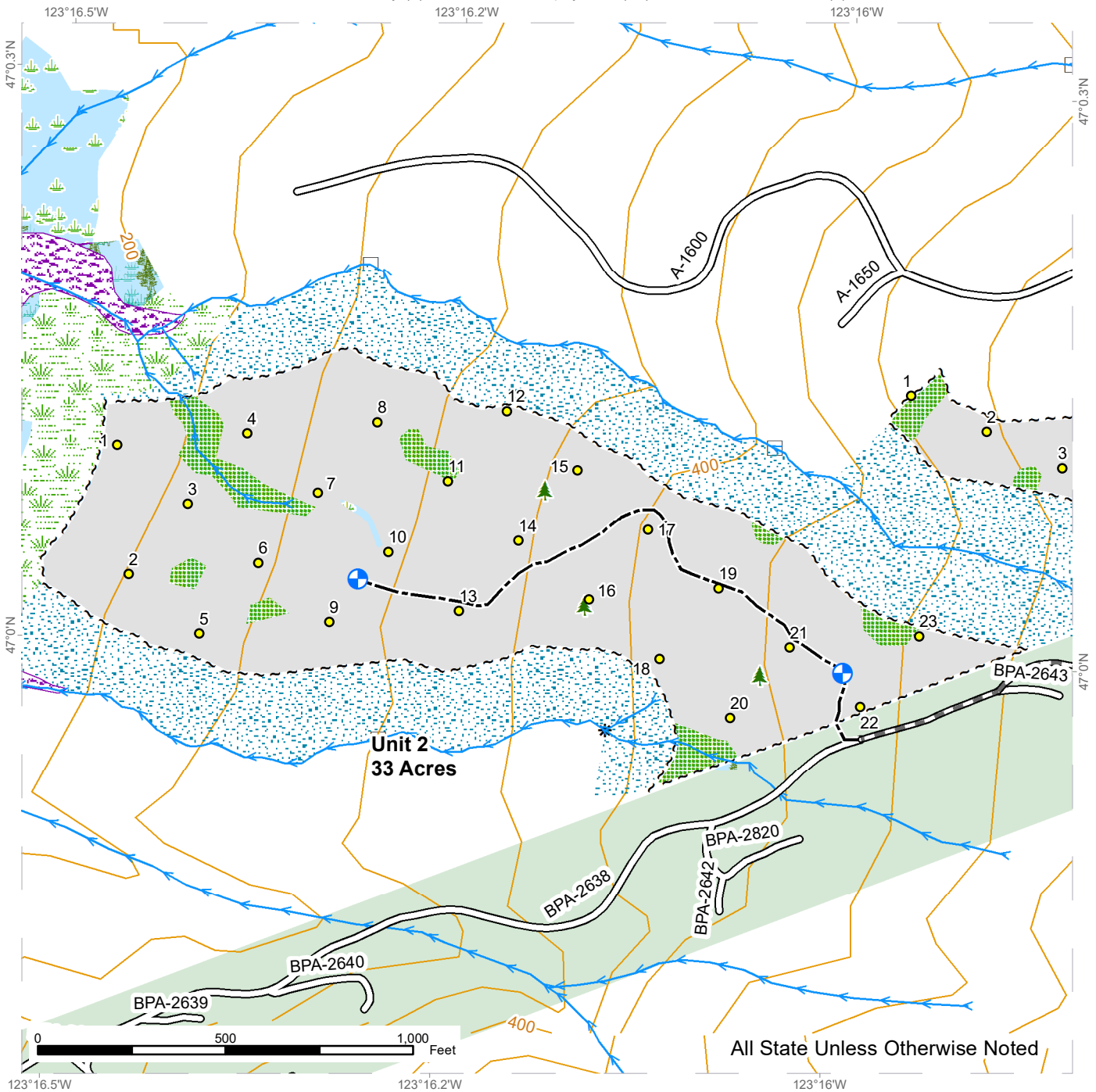
Variable Retention Harvest	Riparian Mgt Zone
BPA Corridors	Gate (Master H-957)
Existing Roads	Landing - Proposed
Required Pre-Haul Maintenance	Leave Tree Area <1/4-acre
Optional Construction	Sale Boundary Tags
Streams	Stream Type
Leave Tree Area	Stream Type Break



CRUISE MAP

SALE NAME: GREMLIN
AGREEMENT#: 30-103594
TOWNSHIP(S): T17R5W, T18R5W
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REGION: South Puget Sound Region
COUNTY(S): Grays Harbor
ELEVATION RGE: 200-920



All State Unless Otherwise Noted

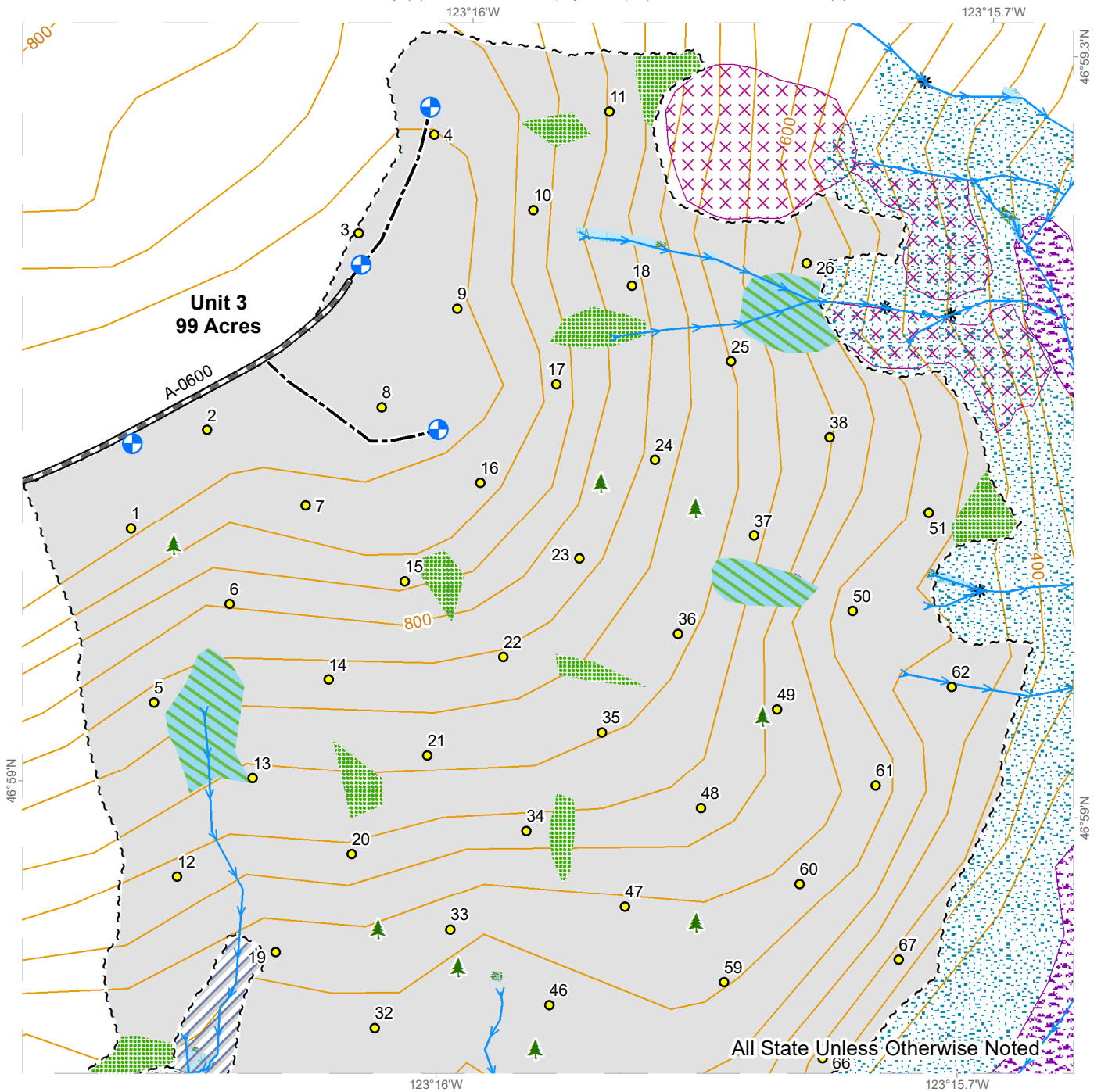
Variable Retention Harvest	Channel Migration Zone	Landing - Proposed
BPA Corridors	Wetlands - Non-forested	Leave Tree Area <1/4-acre
Existing Roads	Leave Tree Area	Sale Boundary Tags
Required Pre-Haul Maintenance	Riparian Mgt Zone	Stream Type
Optional Construction	Forested Wetland	Stream Type Break
Streams	Wetland Mgt Zone	



CRUISE MAP

SALE NAME: GREMLIN
AGREEMENT#: 30-103594
TOWNSHIP(S): T17R5W, T18R5W
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REGION: South Puget Sound Region
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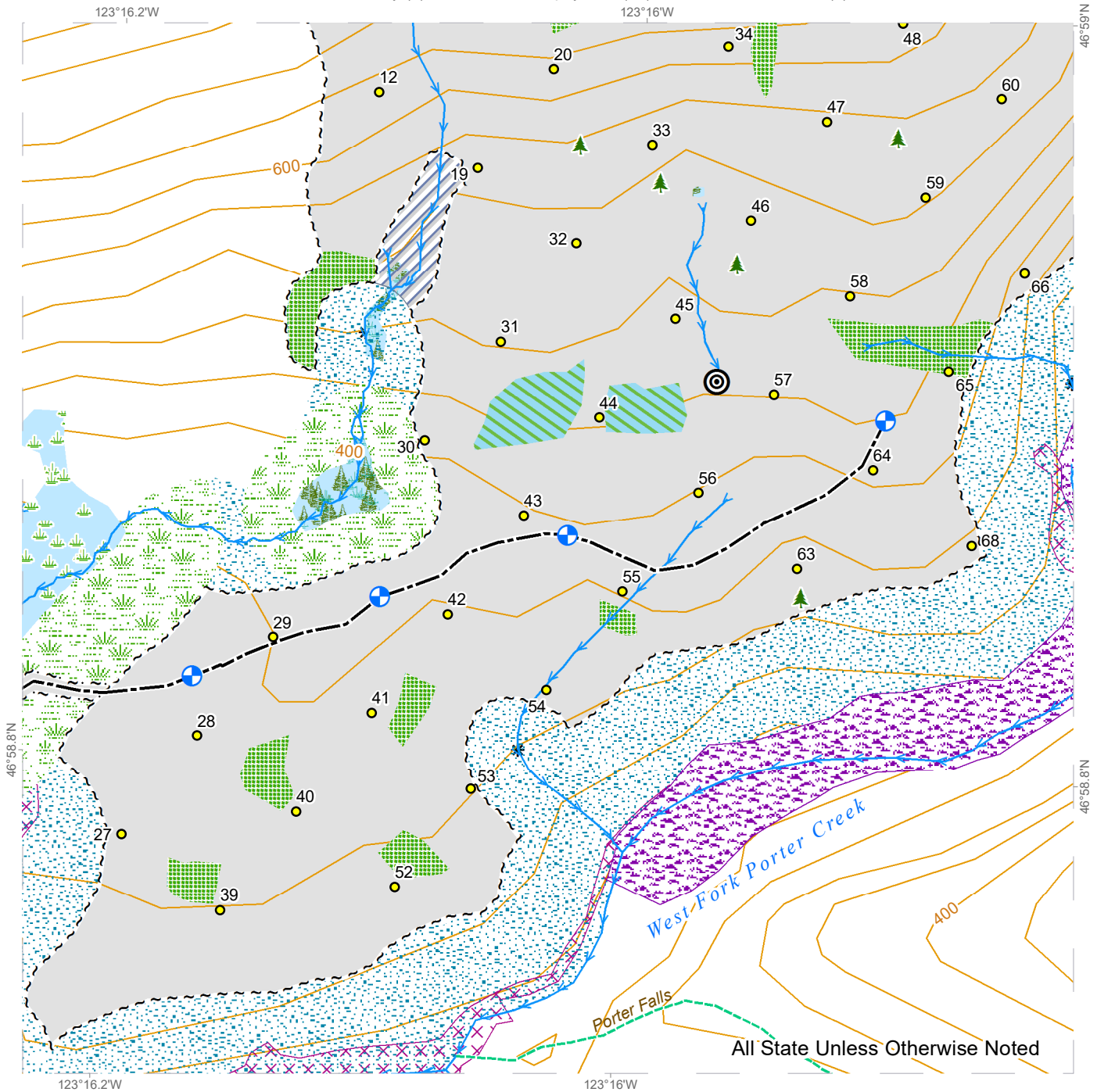
Variable Retention Harvest	Non-Tradeable Leave Clump	Leave Tree Area <1/4-acre
Required Pre-Haul Maintenance	Leave Tree Area	Sale Boundary Tags
Optional Construction	Tailhold Restriction Area	Stream Type Break
Streams	Riparian Mgt Zone	
Wetland Mitigation Area	Forested Wetland	
Channel Migration Zone	Landing - Proposed	



CRUISE MAP

SALE NAME: GREMLIN
AGREEMENT#: 30-103594
TOWNSHIP(S): T17R5W, T18R5W
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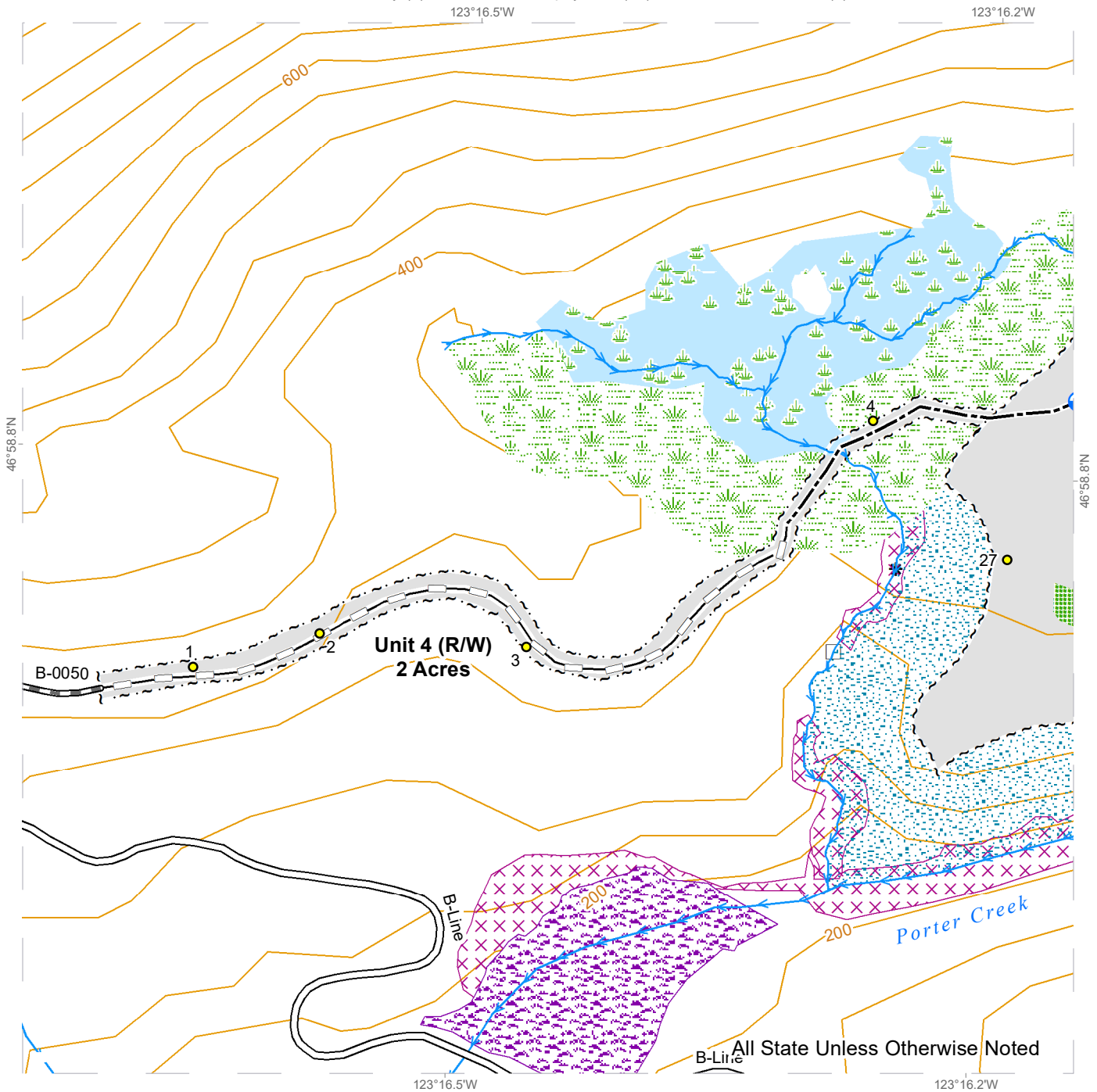
Variable Retention Harvest	Non-Tradeable Leave Clump	Leave Tree Area <1/4-acre
Optional Construction	Leave Tree Area	Sinkhole
Hiker	Tailhold Restriction Area	Sale Boundary Tags
Streams	Riparian Mgt Zone	Right of Way Tags
Wetland Mitigation Area	Forested Wetland	Stream Type Break
Channel Migration Zone	Wetland Mgt Zone	
Wetlands - Non-forested	Landing - Proposed	



CRUISE MAP

SALE NAME: GREMLIN
AGREEMENT#: 30-103594
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COUNTY(S): Grays Harbor
ELEVATION RGE: 200-920



Variable Retention Harvest	Channel Migration Zone	Landing - Proposed
Existing Roads	Wetlands - Non-forested	Sale Boundary Tags
Required Pre-Haul Maintenance	Leave Tree Area	Right of Way Tags
Optional Construction	Tailhold Restriction Area	Stream Type
Optional Reconstruction	Riparian Mgt Zone	Stream Type Break
Streams	Wetland Mgt Zone	





Forest Practices Application/Notification Notice of Decision

FPA/N No: 2423552

Effective Date: 8/10/2023

Expiration Date: 8/10/2026

Shut Down Zone: 651 N

EARR Tax Credit: Eligible Non-eligible

Reference: **Gremlin #30-103594**

Decision

- Notification Accepted** Operations shall not begin before the effective date.
- Approved** This Forest Practices Application is subject to the conditions listed below.
- Disapproved** This Forest Practices Application is disapproved for the reasons listed below.
- Withdrawn** Applicant has withdrawn the Forest Practices Application/Notification (FPA/N).
- Closed** All forest practices obligations are met.

FPA/N Classification

- Class II
- Class III
- Class IVG
- Class IVS

Number of Years Granted on Multi-Year Request

- 4 years
- 5 years

Conditions on Approval/Reasons for Disapproval

Issued By: Matt Brady

Region: South Puget Sound Region

Title: Resource Protection Forester

Date: 8/10/2023

Copies to: Landowner, Timber Owner and Operator

Issued in person: LO TO OP By: *M. Jensen* Date: 8/10/2023

Appeal Information

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

You must file your appeal at all three addresses below:

Pollution Control Hearings Board	Office of the Attorney General Natural Resources Division	Department Of Natural Resources South Puget Sound Region
<u>Physical Address</u> 1111 Israel Road SW Suite 301 Tumwater, WA 98501 <u>Mailing address</u> Post Office Box 40903 Olympia, WA 98504-0903	<u>Physical Address</u> 1125 Washington Street, SE Olympia, WA 98504 <u>Mailing Address</u> Post Office Box 40100 Olympia, WA 98504-0100	<u>Physical Address</u> 950 Farman Ave N Enumclaw, WA 98022 <u>Mailing Address</u> 950 Farman Ave N Enumclaw, WA 98022

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

Other Applicable Laws

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

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

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

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

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

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

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

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

DNR Declaration of Mailing

I, **Meredith Dessens**, caused the Notice of Decision for FPA/N No. **2423552** to be placed in the United States mail at **Olympia, WA**; postage paid. I declare under penalty of perjury of the laws of the State of Washington, that the foregoing is true and correct.

8/10/2023
(Date)

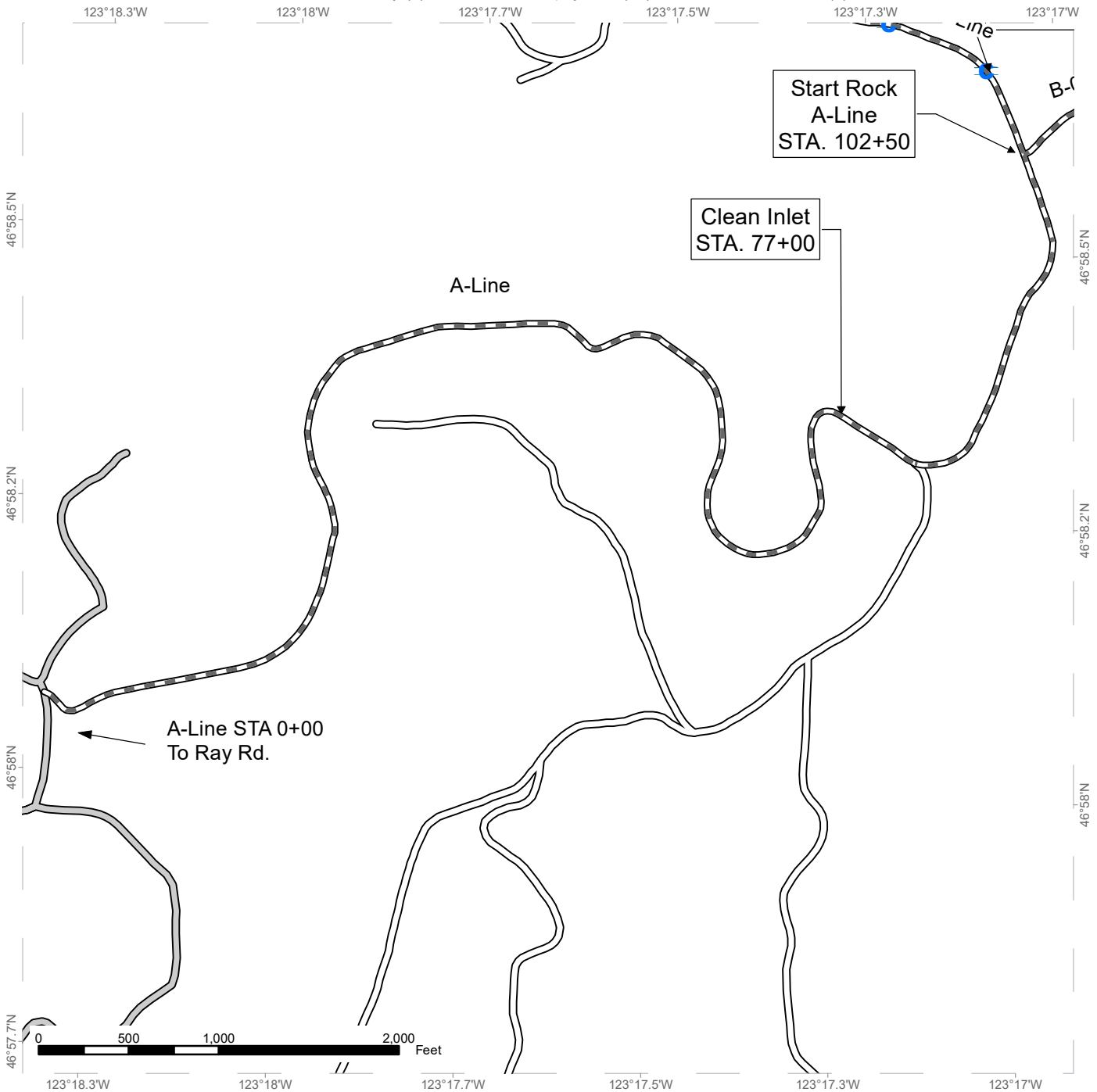
Enumclaw, WA
(City & State where signed)

(Signature)

Road Work Map 1 of 10

SALE NAME: GREMLIN
AGREEMENT#: 30-103594
TOWNSHIP(S): T17R5W, T18R5W
TRUST(S): Common School and Indemnity (3), Forest Board Repayment (42), State Forest Purchase (2)

REGION: South Puget Sound Region
COUNTY(S): Grays Harbor
ELEVATION RGE: 200-920



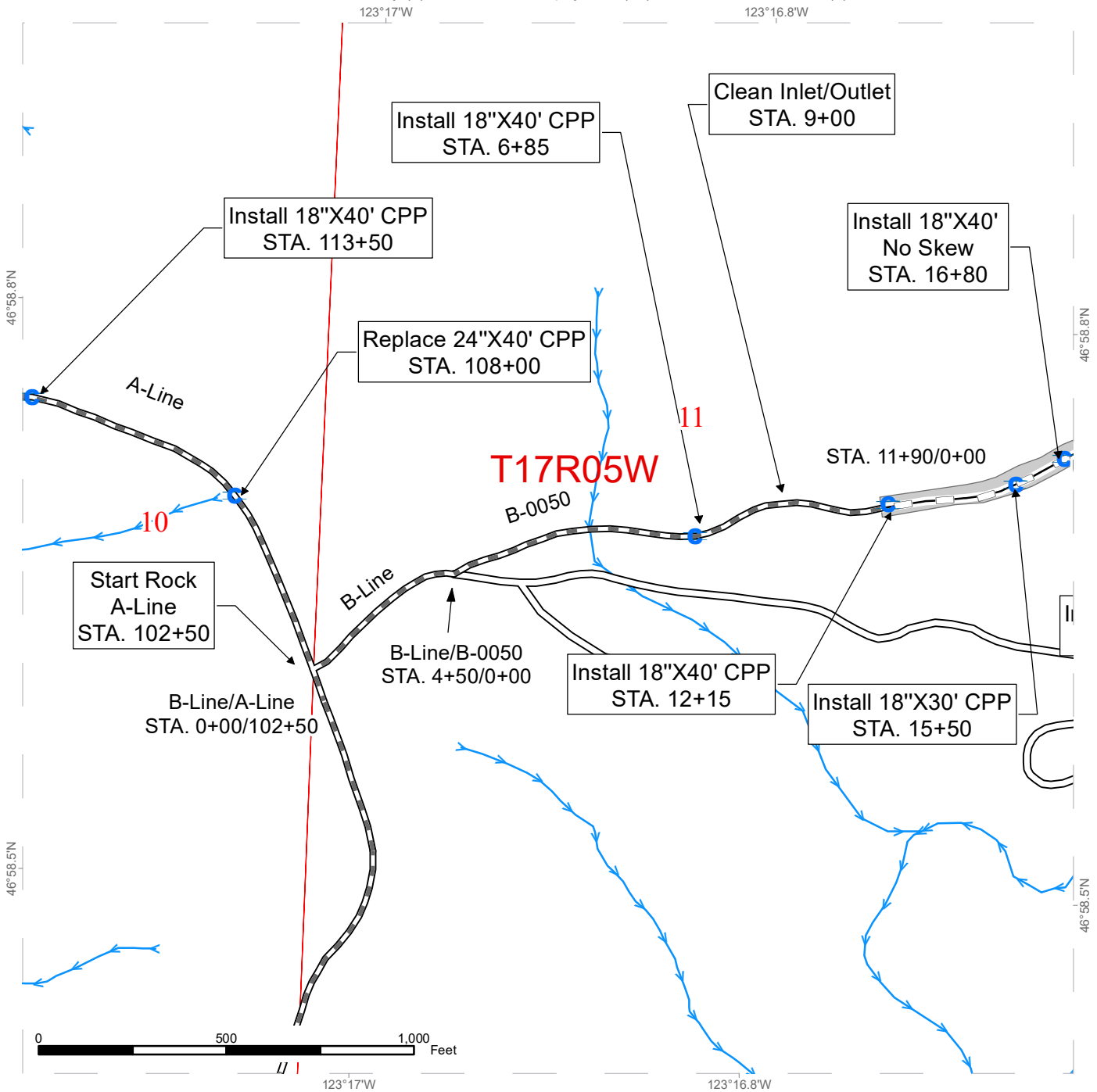
	County Road
	Existing Roads
	Required Pre-Haul Maintenance
	Culverts



Road Work Map 2 of 10

SALE NAME: GREMLIN
AGREEMENT#: 30-103594
TOWNSHIP(S): T17R5W, T18R5W
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REGION: South Puget Sound Region
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ELEVATION RGE: 200-920



	Timber Sale Unit		Streams
	Existing Roads		
	Required Pre-Haul Maintenance		
	Optional Reconstruction		
	Culverts		

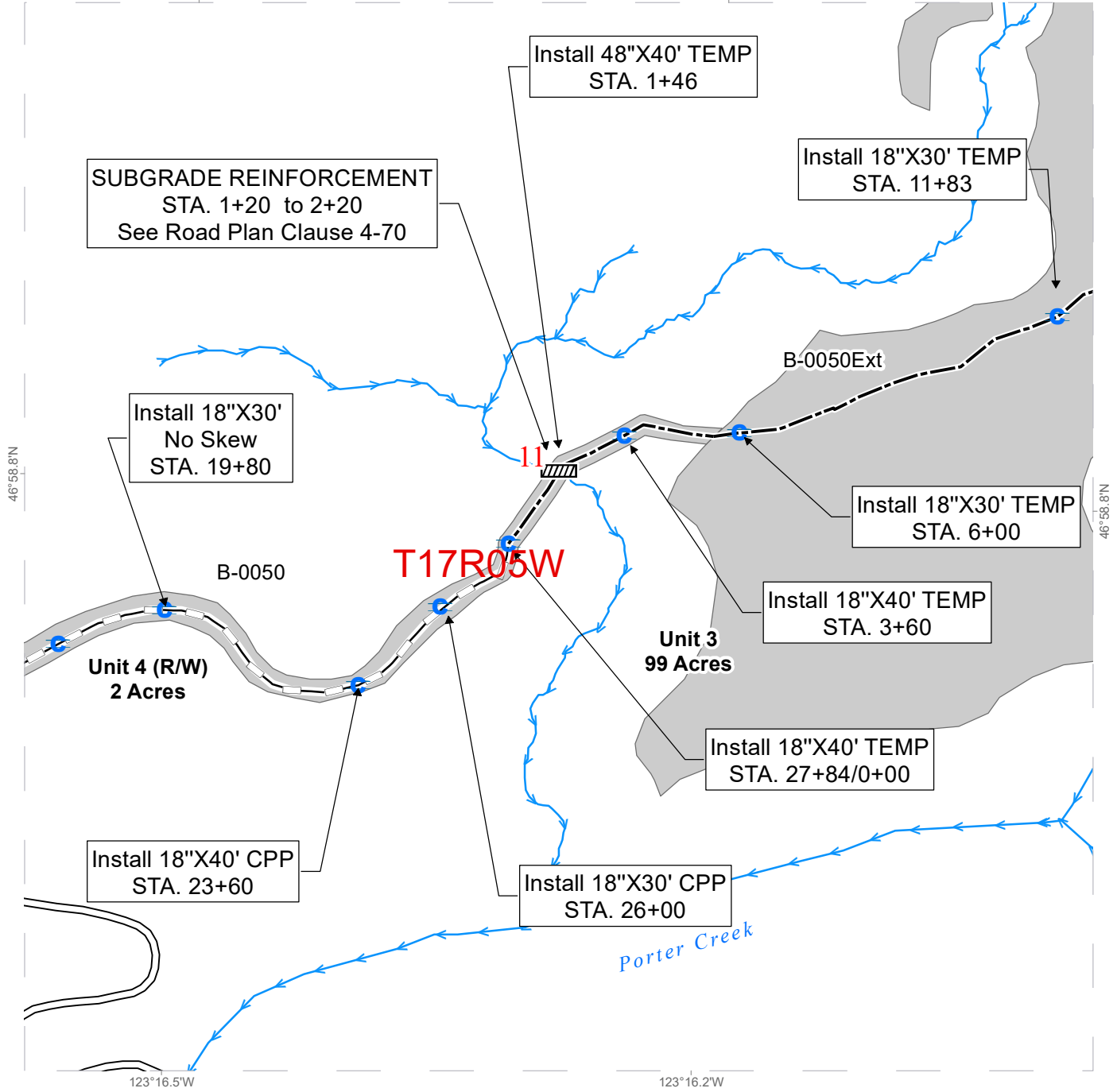


Road Work Map 3 of 10

SALE NAME: GREMLIN
AGREEMENT#: 30-103594
TOWNSHIP(S): T17R5W, T18R5W
TRUST(S): Common School and Indemnity (3), Forest Board Repayment (42), State Forest Purchase (2)

REGION: South Puget Sound Region
COUNTY(S): Grays Harbor
ELEVATION RGE: 200-920

123°16.5'W 123°16.2'W



SUBGRADE REINFORCEMENT
 STA. 1+20 to 2+20
 See Road Plan Clause 4-70

Install 48"X40' TEMP
 STA. 1+46

Install 18"X30' TEMP
 STA. 11+83

Install 18"X30'
 No Skew
 STA. 19+80

Install 18"X30' TEMP
 STA. 6+00

Install 18"X40' TEMP
 STA. 3+60

Install 18"X40' CPP
 STA. 23+60

Install 18"X30' CPP
 STA. 26+00

Install 18"X40' TEMP
 STA. 27+84/0+00

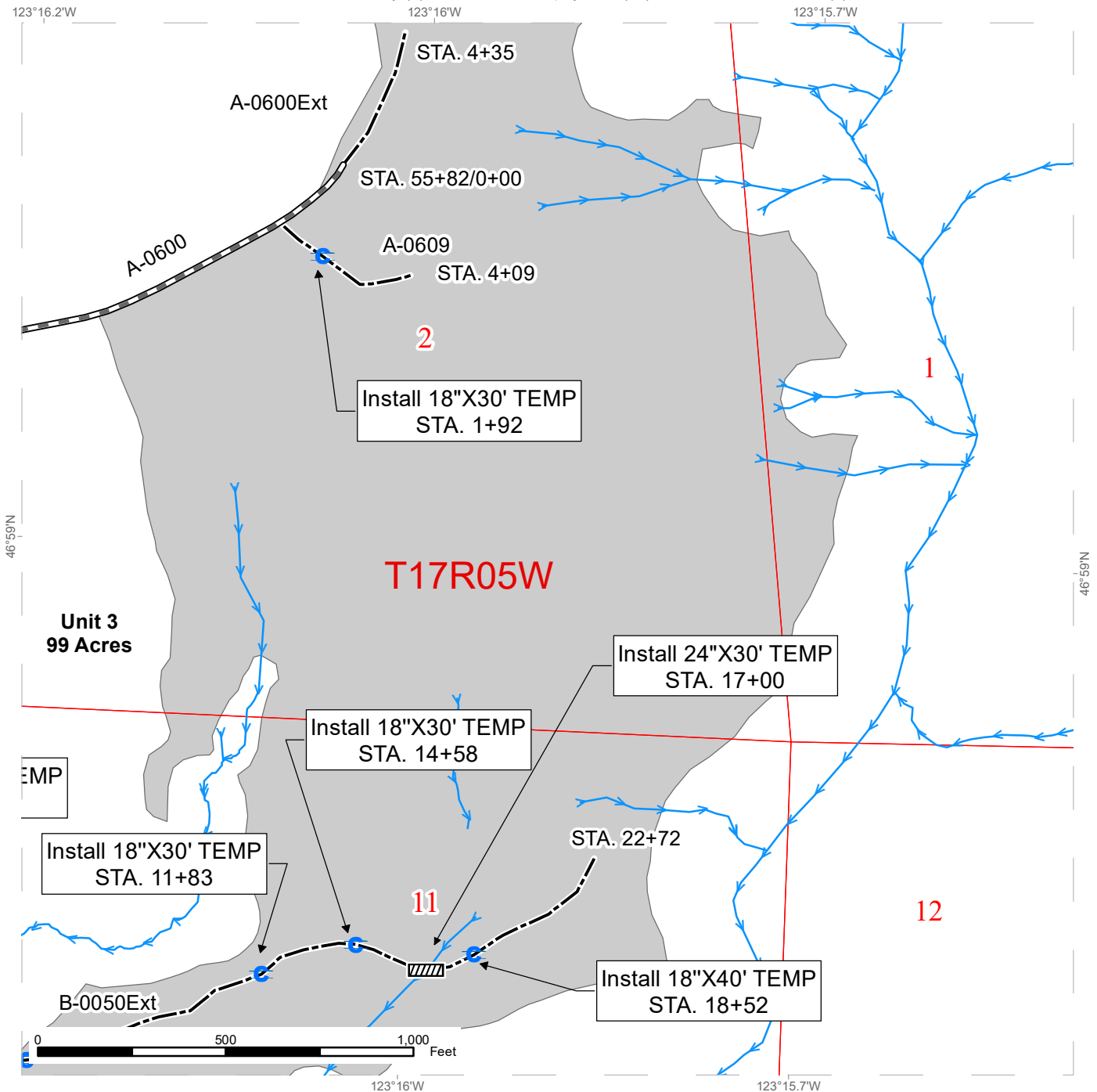
- Timber Sale Unit
- Existing Roads
- Optional Construction
- Optional Reconstruction
- Culverts
- Stream Culverts
- Streams



Road Work Map 4 of 10

SALE NAME: GREMLIN
AGREEMENT#: 30-103594
TOWNSHIP(S): T17R5W, T18R5W
TRUST(S): Common School and Indemnity (3), Forest Board Repayment (42), State Forest Purchase (2)

REGION: South Puget Sound Region
COUNTY(S): Grays Harbor
ELEVATION RGE: 200-920



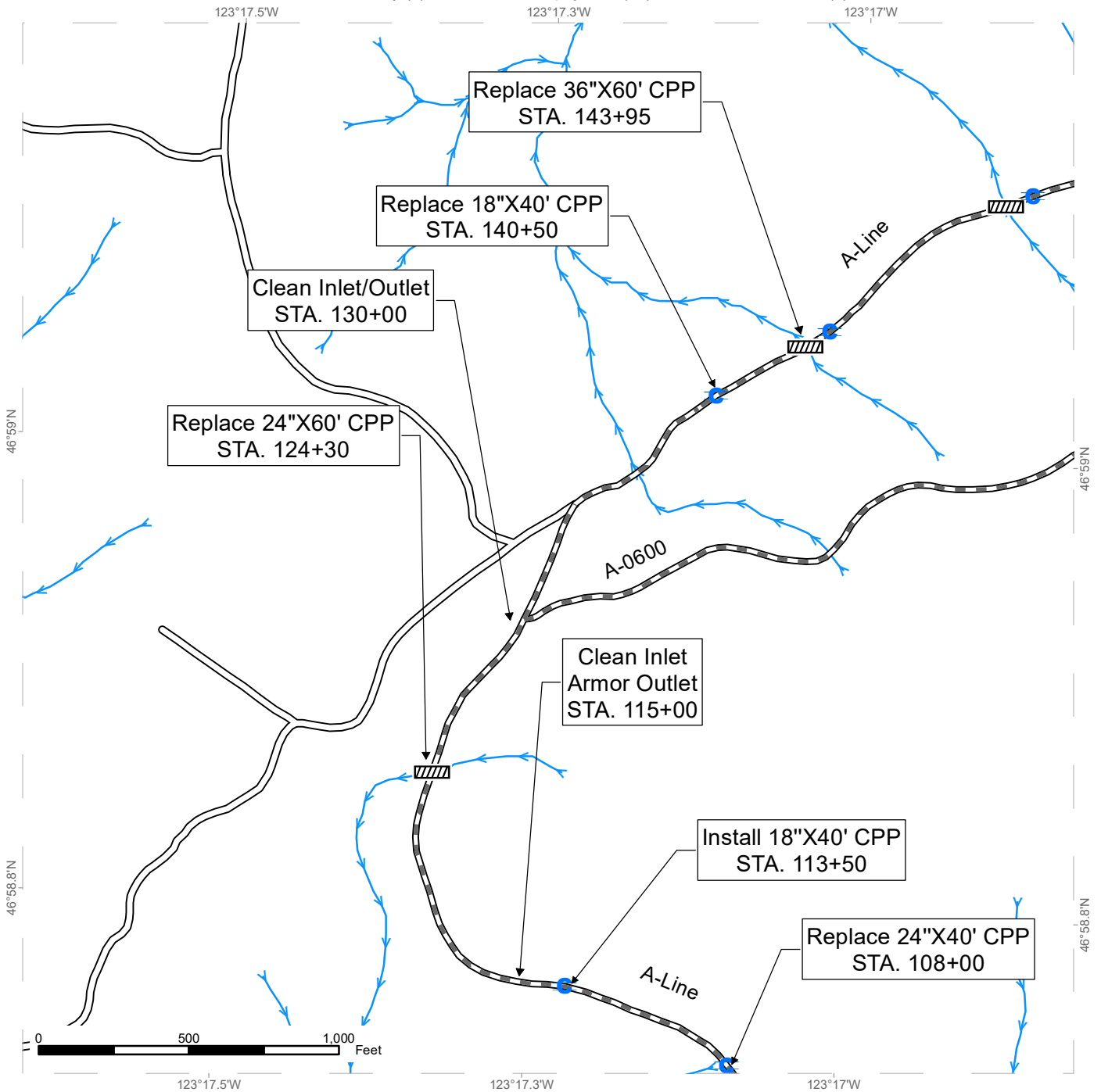
	Timber Sale Unit		Streams
	Required Pre-Haul Maintenance		
	Optional Construction		
	Culverts		
	Stream Culverts		



Road Work Map 5 of 10

SALE NAME: GREMLIN
 AGREEMENT#: 30-103594
 TOWNSHIP(S): T17R5W, T18R5W
 TRUST(S): Common School and Indemnity (3), Forest Board Repayment (42), State Forest Purchase (2)

REGION: South Puget Sound Region
 COUNTY(S): Grays Harbor
 ELEVATION RGE: 200-920



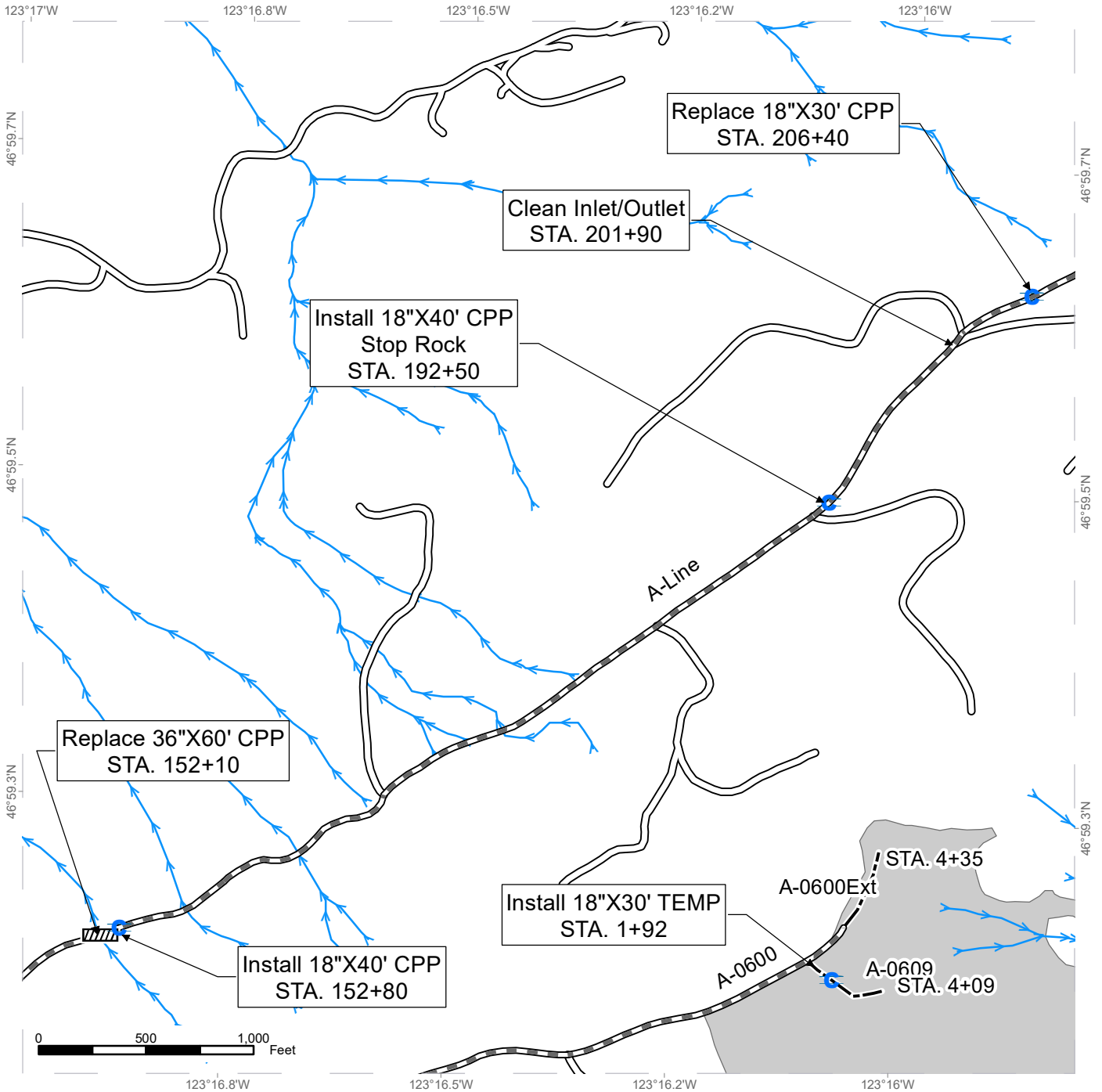
	Existing Roads
	Required Pre-Haul Maintenance
	Culverts
	Stream Culverts
	Streams



Road Work Map 6 of 10

SALE NAME: GREMLIN
AGREEMENT#: 30-103594
TOWNSHIP(S): T17R5W, T18R5W
TRUST(S): Common School and Indemnity (3), Forest Board Repayment (42), State Forest Purchase (2)

REGION: South Puget Sound Region
COUNTY(S): Grays Harbor
ELEVATION RGE: 200-920



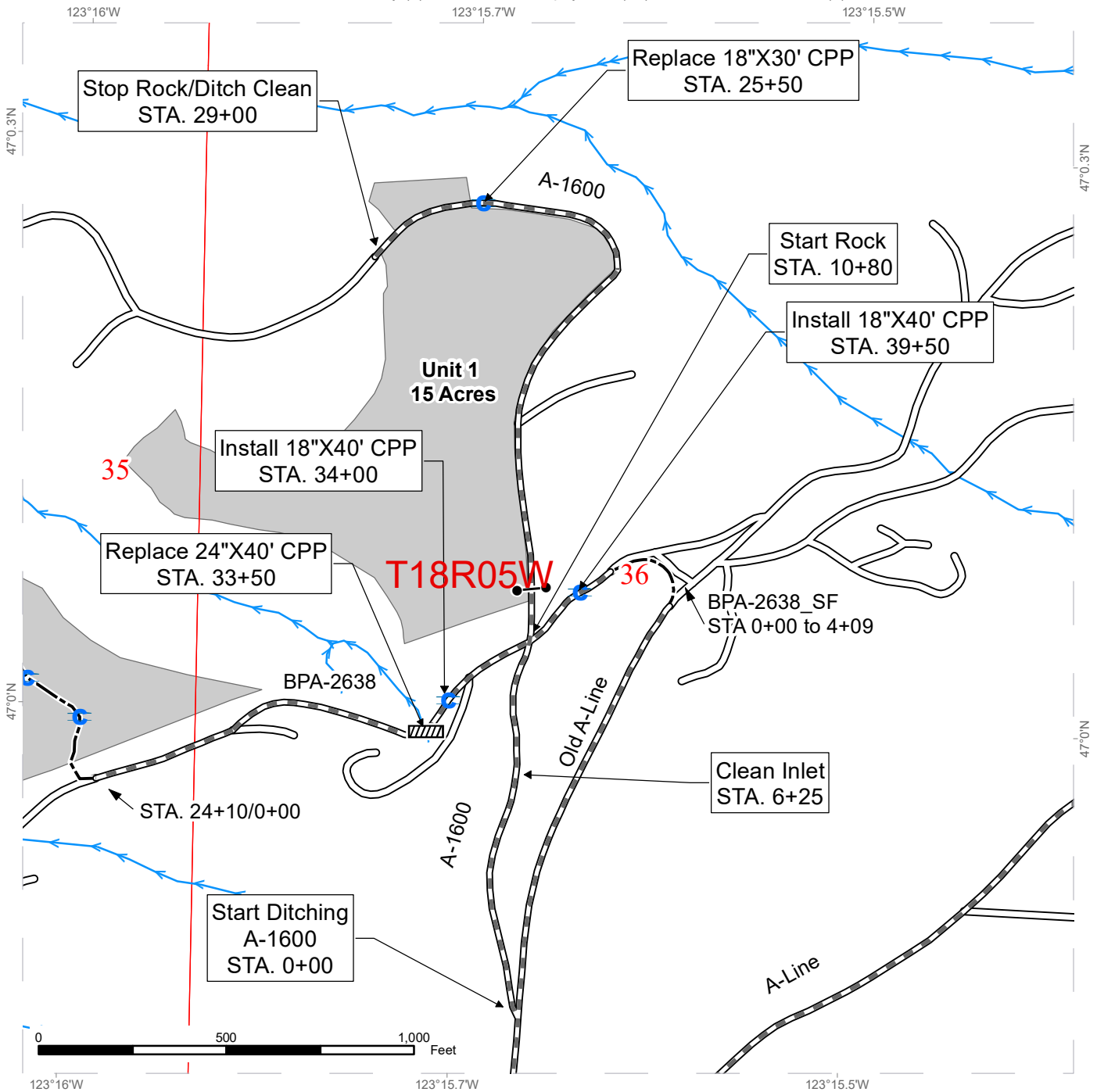
Timber Sale Unit	Stream Culverts
Existing Roads	Streams
Required Pre-Haul Maintenance	Culverts
Optional Construction	



Road Work Map 7 of 10

SALE NAME: GREMLIN
AGREEMENT#: 30-103594
TOWNSHIP(S): T17R5W, T18R5W
TRUST(S): Common School and Indemnity (3), Forest Board Repayment (42), State Forest Purchase (2)

REGION: South Puget Sound Region
COUNTY(S): Grays Harbor
ELEVATION RGE: 200-920



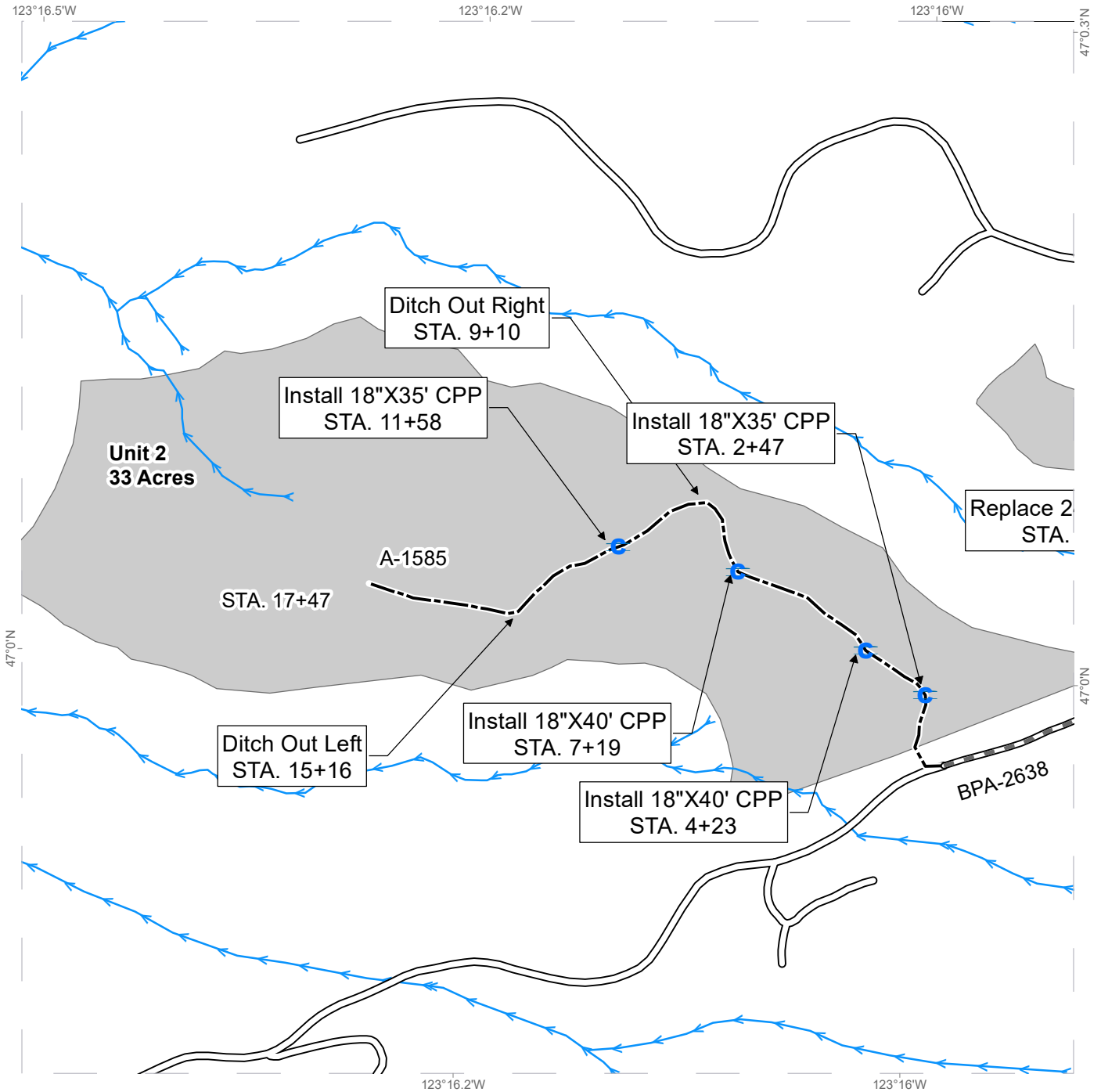
Timber Sale Unit	Stream Culverts
Existing Roads	Streams
Required Pre-Haul Maintenance	Gate
Optional Construction	Culverts



Road Work Map 8 of 10

SALE NAME: GREMLIN
AGREEMENT#: 30-103594
TOWNSHIP(S): T17R5W, T18R5W
TRUST(S): Common School and Indemnity (3), Forest Board Repayment (42), State Forest Purchase (2)

REGION: South Puget Sound Region
COUNTY(S): Grays Harbor
ELEVATION RGE: 200-920



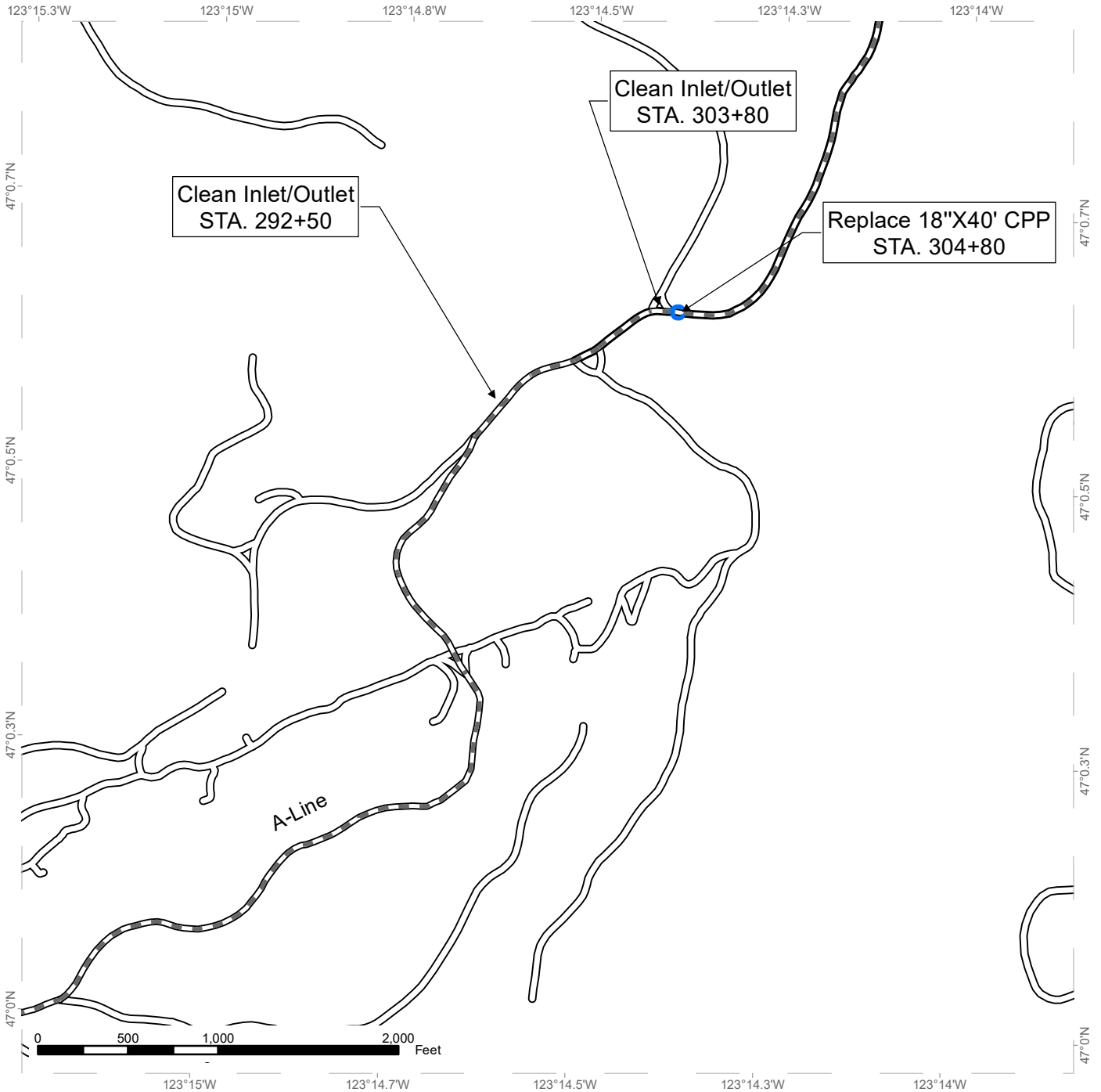
	Timber Sale Unit
	Existing Roads
	Required Pre-Haul Maintenance
	Optional Construction
	Culverts
	Streams






Road Work Map 9 of 10

SALE NAME: GREMLIN
AGREEMENT#: 30-103594
TOWNSHIP(S): T17R5W, T18R5W
TRUST(S): Common School and Indemnity (3), Forest Board Repayment (42), State Forest Purchase (2)

REGION: South Puget Sound Region
COUNTY(S): Grays Harbor
ELEVATION RGE: 200-920



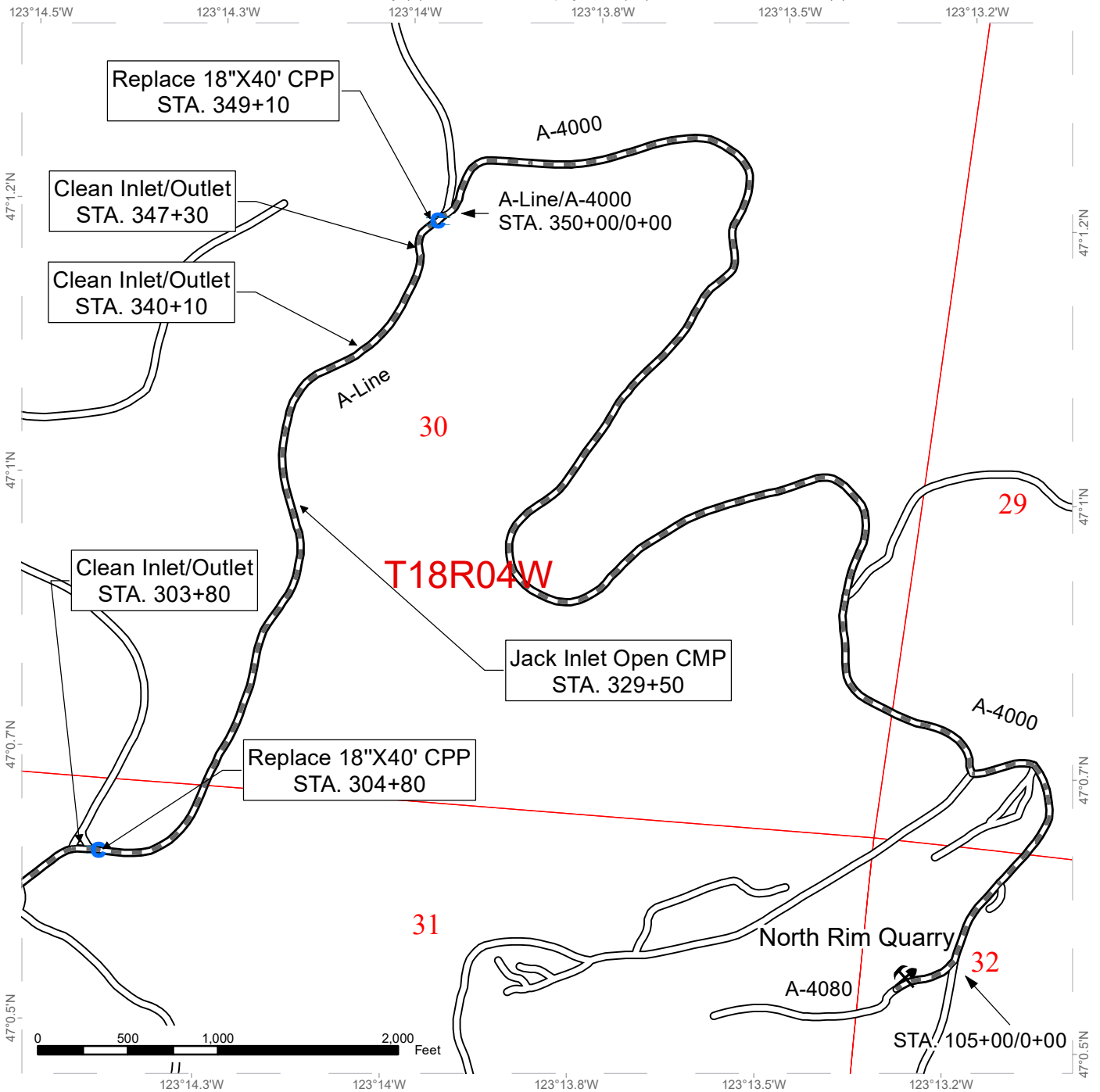
	Existing Roads
	Required Pre-Haul Maintenance
	Culverts



Road Work Map 10 of 10

SALE NAME: GREMLIN
AGREEMENT#: 30-103594
TOWNSHIP(S): T17R5W, T18R5W
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REGION: South Puget Sound Region
COUNTY(S): Grays Harbor
ELEVATION RGE: 200-920



	Existing Roads
	Required Pre-Haul Maintenance
	Culverts



STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES

GREMLIN TIMBER SALE ROAD PLAN
GRAYS HARBOR COUNTY
DELPHI UNIT
BLACK HILLS DISTRICT

AGREEMENT NO.: 30-103594

STAFF ENGINEER: JACOB GROSS

DATE: FEBRUARY 1, 2023

DRAWN & COMPILED BY: JACOB GROSS

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>
A-Line	0+00 to 350+00	Pre-Haul Maintenance
A-0600	0+00 to 55+82	Pre-Haul Maintenance
A-0600Ext	0+00 to 4+35	Abandonment, if constructed
A-0609	0+00 to 4+09	Abandonment, if constructed
A-4000	0+00 to 105+00	Pre-Haul Maintenance
A-4080	0+00 to 3+50	Pre-Haul Maintenance
A-1600	0+00 to 29+00	Pre-Haul Maintenance
B-Line	0+00 to 4+50	Pre-Haul Maintenance
B-0050	0+00 to 11+90	Pre-Haul Maintenance
B-0050Ext	0+00 to 22+72	Abandonment, if constructed
BPA-2638	24+10 to 40+20	Pre-Haul Maintenance
Old A-Line	0+00 to 18+20	Pre-Haul Maintenance

0-3 OPTIONAL ROADS

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

<u>Road</u>	<u>Stations</u>	<u>Type</u>
A-0600Ext	0+00 to 4+35	Construction
A-0609	0+00 to 4+09	Construction
A-1585	0+00 to 17+47	Construction
B-0050	11+90 to 27+84	Reconstruction
B-0050Ext	0+00 to 22+72	Construction
BPA-2638_SF	0+00 to 2+98	Construction

0-4 CONSTRUCTION

Construction includes, but is not limited to:

- Clearing
- Grubbing
- Right-of-way debris disposal
- Excavation and/or embankment to subgrade
- Turnout and turnaround construction
- Landing construction
- Acquisition and installation of drainage structures
- Stream culvert installation
- Acquisition, manufacture, and application of rock

0-6 PRE-HAUL MAINTENANCE

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

- Cleaning ditches
- Cleaning culverts, and catchbasins
- Ditch reconstruction
- Reconstructing headwalls
- Constructing catchbasin and headwall
- Acquisition, manufacture and application of rock
- Cross drain culvert replacement/installation
- Stream culvert installation
- Grading and shaping existing road surface and turnouts

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.

0-12 DEVELOP ROCK SOURCE

Purchaser may develop an existing rock source. Rock source development may involve, Clearing, Stripping, Drilling, and blasting. Work for developing rock sources is listed in Section 6 ROCK AND SURFACING.

SECTION 1 – GENERAL

1-1 ROAD PLAN CHANGES

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

1-2 UNFORESEEN CONDITIONS

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

1-3 ROAD DIMENSIONS

Purchaser shall perform road work in accordance with the dimensions shown on the TYPICAL SECTION SHEET and the specifications within this road plan, 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.
- 7. Road Plan Maps.

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

1-8 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.

SUBSECTION ROAD MARKING

1-15 ROAD MARKING

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

- Pre-haul activities: 2 in. x 48 in. wooden lath with station and activity
- Construction: Orange ribbon tied eye-height along centerline, w/orange pin flags or wooden lath marking centerline

1-16 CONSTRUCTION STAKES SET BY STATE

Purchaser shall perform work in accordance with the construction stakes and/or reference points set in the field for grade and alignment. Reconstruction of existing road grades must conform to the original location except where construction staked or designed.

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.

SUBSECTION TIMING

1-20 COMPLETE BY DATE

On the following road(s), Purchaser shall complete road work before the start of timber haul.

<u>Road</u>	<u>Comments</u>
All pre-haul maintenance	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/location, Purchaser shall notify the Contract Administrator a minimum of five (5) calendar days' before work begins.

<u>Road/Location</u>	<u>Activity</u>	<u>Comments</u>
A-Line sta 296+50 to 305+00	Any operations	For cultural resource monitoring by CRT or archaeologist
B-0050Ext	Construction and abandonment	
North Rim Quarry	Any operations, blasting	
BPA-2638 and Units 1 & 2	Any operations under or near BPA lines	Notify CA and BPA Jason Hunt (253) 880-4112

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:

- Drainage installation
- Subgrade compaction
- Rock compaction

SUBSECTION RESTRICTIONS

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.

<u>Roads</u>	<u>Activity</u>	<u>Closure Period</u>
All roads, except B-0050 Ext.	All road work activities	November 1 to April 30
B-0050 Ext	All road work activities	Weekends and state recognized holidays

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

<u>Road</u>	<u>Stations</u>	<u>Activity</u>	<u>Closure Period</u>
B-0050 Ext	0+00 to 22+72	Road Construction and Abandonment	October 1 to June 30

1-26 OPERATING DURING CLOSURE PERIOD

If permission is granted to operate during a seasonal closure period listed in Clause 1-25 ACTIVITY TIMING RESTRICTION and Contract Clause H-130, the Purchaser shall comply with a maintenance plan, when a plan is determined necessary by the Contract Administrator, 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 including those listed in Contract Clause C-060 DESIGNATED ROAD MAINTAINER. If other operators are using, or desire to use these roads, a joint operating plan must be developed. All parties shall follow this plan.

1-29 SEDIMENT RESTRICTION

Purchaser shall not allow silt-bearing runoff to enter any streams. Purchaser shall accomplish sediment removal through silt traps, silt fences, settling ponds, or other methods as approved, in writing by the Contract Administrator.

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 roads.
- Wheel track rutting exceeds 4 inches on crushed rock roads.
- Surface or base stability problems persist.

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.

1-32 BRIDGE AND ASPHALT SURFACE RESTRICTION

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

Purchaser shall remove any dirt, rock, or other material tracked or spilled on the bridge or asphalt surface(s) and have surface(s) evaluated for any damage caused by transporting equipment. Any damage to the surface(s) will be repaired, at the Purchaser's expense, as directed by the Contract Administrator.

1-33 SNOW PLOWING RESTRICTION

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

SUBSECTION OTHER INFRASTRUCTURE

1-40 ROAD APPROACHES TO COUNTY ROADS AND STATE HIGHWAYS

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

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

SECTION 2 – MAINTENANCE

2-1 GENERAL ROAD MAINTENANCE

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

2-2 ROAD MAINTENANCE – PURCHASER MAINTENANCE

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

2-3 ROAD MAINTENANCE – DESIGNATED MAINTAINER

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

2-5 MAINTENANCE GRADING – EXISTING ROAD

On the following roads, Purchaser shall use a grader to shape the existing surface before rock application and/or timber haul.

<u>Road</u>	<u>Stations</u>
A-Line	0+00 to 350+00
A-0600	0+00 to 55+82
A-4000	0+00 to 105+00
A-4080	0+00 to 3+50
A-1600	0+00 to 29+00
B-Line	0+00 to 4+50
B-0050	0+00 to 11+90
BPA-2638	24+10 to 40+20
Old A-Line	0+00 to 18+20

2-6 CLEANING CULVERTS

On the following roads, Purchaser shall clean the inlets and outlets of all culverts :

<u>Road</u>	<u>Stations</u>	<u>Comments</u>
A-Line	77+00, 115+00, 130+00, 201+90, 292+50, 303+80, 340+10, 347+30	Clean Inlet & Outlet, Organic Debris/Soil
A-Line	329+50	Clean Inlet & Outlet, Jack Open Inlet
A-1600	All, Marked in Field	Clean Inlet & Outlet, Organic Debris/Soil
B-0050	9+00	Clean Inlet & Outlet, Organic Debris/Soil

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 timber haul and must be done in accordance with the TYPICAL SECTION SHEET. Pulling ditch material across the road or mixing in with the road surface is not allowed.

<u>Road</u>	<u>Stations</u>
A-1600	0+00 to 29+00
B-0050	0+00 to 12+15
Old A-Line	0+00 to 18+20

SECTION 3 – CLEARING, GRUBBING, AND DISPOSAL

SUBSECTION CLEARING

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 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.
- Against state owned standing trees.

SUBSECTION GRUBBING

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.

SUBSECTION ORGANIC DEBRIS

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, before the application of rock and/or timber haul.

3-23 PROHIBITED DISPOSAL AREAS

Purchaser shall not place organic debris in the following areas:

- Within 50 feet of a cross drain culvert.
- Within 100 feet of a live stream, or wetland.
- On road subgrades, or excavation and embankment slopes.
- On slopes greater than 55%.
- 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 State owned standing timber.

3-24 BURYING ORGANIC DEBRIS RESTRICTED

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

3-25 SCATTERING ORGANIC DEBRIS

Purchaser shall scatter organic debris outside of the clearing limits in natural openings. Where natural openings are unavailable or restrictive, alternate debris disposal methods are subject to the written approval of the Contract Administrator.

SECTION 4 – EXCAVATION

4-2 PIONEERING

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

- Drainage must be provided on all uncompleted construction as approved, in writing, by the Contract Administrator.

- Road pioneering operations may not undercut the final cut slope, deposit excavated material outside the grubbing limits, or restrict drainage.
- Culverts at live stream crossings must be installed during pioneering operations

4-3 ROAD GRADE AND ALIGNMENT STANDARDS

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

- Grade and alignment must have smooth continuity, without abrupt changes in direction.
- Maximum grades may not exceed 18 percent favorable and 15 percent adverse.
- Minimum curve radius is 60 feet at centerline.
- Maximum grade change for sag vertical curves is 6% in 100 feet.
- Maximum grade change for crest vertical curves is 4% in 100 feet.

4-5 CUT SLOPE RATIO

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

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

4-6 EMBANKMENT SLOPE RATIO

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

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

4-7 SHAPING CUT AND FILL SLOPE

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

4-8 CURVE WIDENING

The minimum widening placed on the inside of curves is:

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

4-9 EMBANKMENT WIDENING

The minimum embankment widening is:

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

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

SUBSECTION DITCH CONSTRUCTION

4-25 DITCH CONSTRUCTION AND RECONSTRUCTION

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

4-28 DITCH DRAINAGE

Ditches shall be constructed concurrently with construction of the subgrade. Ditches must drain to cross-drain culverts or ditchouts.

4-29 DITCHOUTS

Purchaser shall construct ditchouts as identified in maps, in field, and 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.

SUBSECTION WASTE MATERIAL (DIRT)

4-35 WASTE MATERIAL DEFINITION

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

4-36 DISPOSAL OF WASTE MATERIAL

Purchaser may sidecast waste material on side slopes up to 45% if the waste material is compacted and free of organic debris.

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>
A-4080	See Quarry Plan	North Rim Quarry	1000 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 25 feet of a cross drain culvert outlet.
- Within 100 feet of a live stream or wetland.
- On side slopes steeper than 45%.
- In locations that interfere with the construction of the road prism.
- In locations that impede drainage.
- Within the operational area for cable landings.
- Against standing timber.

SUBSECTION SHAPING

4-55 ROAD SHAPING

Purchaser shall shape each lift of 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.

SUBSECTION COMPACTION

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. Waste material may be placed by end-dumping or sidecasting until sufficiently wide enough to support the equipment.

4-61 SUBGRADE COMPACTION

Purchaser shall compact constructed subgrades in accordance with the COMPACTION LIST by routing equipment over the entire width except ditch. On fills deeper than 5 feet at the road shoulder Purchaser shall compact fill material in lifts no greater than 18 inches. 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.

4-70 SUBGRADE REINFORCEMENT

On the following road, Purchaser shall provide and install geotextile fabric with chainlink fence, geotextile fabric and rock on top. Subgrade reinforcement must be installed to a width that is 2 feet more than the subgrade width, including turnouts. Geotextile fabric must overlap by a minimum of 2 feet at all joints. The geotextile fabric must be covered with a minimum of 12 inches of truck compacted 4-inch jaw run ROCK. Purchaser shall apply rock in one-foot lift(s) over the geotextile in accordance with the manufacturer’s specifications. Geotextile fabric must meet the specifications in Clause10-3 GEOTEXTILE FOR STABILIZATION.

<u>Road</u>	<u>Stations</u>
B-0050Ext	1+20 to 2+20

SECTION 5 – DRAINAGE

5-1 REMOVAL OF SHOULDER BERMS

Purchaser shall remove berms from road shoulders to permit escape of runoff.

SUBSECTION CULVERTS

5-5 CULVERTS

Purchaser shall install culverts as part of this contract. Culverts must be installed concurrently with subgrade work and must be installed before subgrade compaction and rock application. Culvert locations and the minimum requirements for culvert length and diameter are designated on the CULVERT AND DRAINAGE LIST. Culvert, downspout, and flume lengths may be adjusted to fit as-built conditions and may not terminate directly on unprotected soil. Culverts must be new material and meet the specifications in Clauses 10-15 through 10-23.

5-7 USED CULVERT MATERIAL

On temporary roads, Purchaser may install used culverts. All other roads must have new culverts installed. Culverts must meet the specifications in Clauses 10-15 through 10-24.

5-12 UNUSED MATERIALS STATE PROPERTY

On required roads, any materials listed on the CULVERT AND DRAINAGE LIST and materials listed in Clause 5-13 CONTINGENCY CULVERTS that are not installed will become the property of the state. Purchaser shall stockpile materials at Mima Mound Pit, located at 46.888952N, 123.054728W.

5-13 CONTINGENCY CULVERTS

The following culverts will be supplied by the Purchaser and are available for installation as directed by the Contract Administrator.

<u>Road</u>	<u>Size</u>
On any portion of road used for timber or rock haul.	Quantity 3 - 18”X30’ Culvert Quantity 2 - 18” Culvert band

SUBSECTION CULVERT INSTALLATION

5-15 CULVERT INSTALLATION

Culvert, downspout, flume and energy dissipater installation must be in accordance with the CULVERT AND DRAINAGE SPECIFICATION DETAIL and the Corrugated Polyethylene Pipe Association's "Recommended Installation Practices for Corrugated Polyethylene Pipe and Fittings". Culverts shall be banded using lengths of no less than 10 feet, and no more than one length less than 16 feet. Shorter section of banded culvert shall be installed at the inlet end.

5-16 APPROVAL FOR LARGER CULVERT INSTALLATION

Purchaser shall obtain written approval from the Contract Administrator for the installation of culverts 36 inches in diameter and over before backfilling.

5-17 CROSS DRAIN SKEW AND SLOPE

Cross drains, on road grades in excess of 3%, must be skewed at least 30 degrees from perpendicular to the road centerline, except where the cross drain is at the low point in the road culverts will not be skewed. Cross drain culverts must be installed at a slope steeper than the incoming ditch grade, but not less than 3% or more than 12%.

5-18 CULVERT DEPTH OF COVER

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

SUBSECTION ENERGY DISSIPATERS

5-20 ENERGY DISSIPATERS

Purchaser shall install energy dissipaters in accordance with the CULVERT AND DRAINAGE SPECIFICATION DETAIL at all culverts on the CULVERT LIST that specify the placement of rock. Energy dissipater installation is subject to approval by the Contract Administrator.

The type of energy dissipater and the amount of material must be consistent with the specifications listed on the CULVERT LIST. Placement must be by zero-drop-height method only. No placement by end dumping or dropping of rock is allowed. QUARRY SPALLS shall meet the specifications in Clause 6-43.

SUBSECTION CATCH BASINS, HEADWALLS, AND ARMORING

5-25 CATCH BASINS

Purchaser shall construct catch basins to resist erosion in accordance with CULVERT AND DRAINAGE SPECIFICATION DETAIL. Minimum dimensions of catch basins are 2 feet wide and 4 feet long.

5-26 HEADWALLS FOR CULVERTS

Purchaser shall construct headwalls in accordance with the CULVERT AND DRAINAGE SPECIFICATION DETAIL at all culverts on the CULVERT LIST that specify the placement of rock.

5-27 ARMORING FOR STREAM CROSSING CULVERTS

Purchaser shall place inlet and outlet protection in conjunction with or immediately following construction of the embankment. Rock must be placed on shoulders, slopes, and around culvert inlets and outlets as designated on CULVERT LIST. Rock may not restrict the flow of water into culvert inlets or catch basins. Rock must be set in place by machine. Placement must be by zero-drop-height method only.

5-33 NATIVE SURFACE ROADS

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

SECTION 6 – ROCK AND SURFACING

SUBSECTION ROCK SOURCE

6-2 ROCK SOURCE ON STATE LAND

Rock used in accordance with the quantities on the ROCK LIST may be obtained from the following source(s) on state land at no charge to the Purchaser. Purchaser shall obtain written approval from the Contract Administrator for the use of material from any other source. If other operators are using, or desire to use the rock source(s), a joint operating plan must be developed. All parties shall follow this plan. Purchaser shall notify the Contract Administrator a minimum of 5 calendar days before starting any operations in the listed locations.

<u>Source</u>	<u>Location</u>	<u>Rock Type</u>
North Rim Quarry	NW ¼, NW ¼, Section 32, Township 18 North, Range 4 West	2 Inch Crushed, 4 Inch Jaw, 4 Inch In-Place, Select Pit Run, Quarry Spalls.

6-5 ROCK FROM COMMERCIAL SOURCE

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

SUBSECTION ROCK SOURCE DEVELOPMENT

6-10 ROCK SOURCE DEVELOPMENT PLAN BY STATE

Purchaser shall conduct rock source development and use at the following sources, in accordance with the written ROCK SOURCE DEVELOPMENT PLAN prepared by the state and included in this road plan. Upon completion of operations, the rock source must be left in the condition specified in the ROCK SOURCE DEVELOPMENT PLAN, and approved in writing by the Contract Administrator. Purchaser shall notify the Contract Administrator a minimum of 5 calendar days before starting any operations in the rock source.

<u>Source</u>	<u>Location</u>
North Rim Quarry	NW ¼, NW ¼, Section 32, Township 18 North, Range 4 West

6-12 ROCK SOURCE SPECIFICATIONS

Rock sources must be in accordance with the following specifications, unless otherwise specified in the ROCK SOURCE DEVELOPMENT PLAN:

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

Material	Maximum Slope Ratio (Horiz. :Vert.)	Maximum Slope Percent
Sand	2:1	50
Gravel	1.5:1	67
Common Earth	1:1	100
Fractured Rock	0.5:1	200
Solid Rock	0:1	vertical

- Pit walls must be maintained in a condition to minimize the possibility of the walls sliding or failing.
- The width of pit benches must be a minimum of 1.5 times the maximum length of the largest machine used.
- The surface of pit floors and benches must be uniform and free-draining at a minimum 2% outslope gradient.
- All operations must be carried out in compliance with all regulations of the Regulations and Standards Applicable to Metal and Nonmetal Mining and Milling Operations (30 CFR) U.S. Department of Labor, Mine Safety and Health Administration and Safety Standards for Construction Work (296-155 WAC), Washington Department of Labor and Industries.
- All vehicle access to the top of the pit faces must be blocked at the end of operations.

6-14 DRILL AND SHOOT

Rock drilling and shooting must meet the following specifications:

- Oversize material remaining in the rock source at the conclusion of the timber sale may not exceed 200 cubic yards.
- Oversize material is defined as rock fragments larger than two feet in any dimension.
- Oversized rock that exceeds the maximum allowable amount must be reduced to a smaller size within the rock source.
- Purchaser shall notify the Contract Administrator a minimum of 5 calendar days before blasting operations.
- Purchaser shall submit an informational drilling and shooting plan to the Contract Administrator 5 calendar days before any drilling. The drilling and shooting plan must include, at a minimum, the mapped location and spacing of all holes to be loaded, the type of blasting agent used, the powder factor calculated and the units of same, stem amount held per hole. After drilling, the type of rock encountered while drilling e.g. hard black, soft brown, etc shall be amended to submitted plan.
- All operations must be carried out in compliance with the Regulations and Standards Applicable to Metal and Nonmetal Mining and Milling Operations (30 CFR) U.S. Department of Labor, Mine Safety and Health Administration and the Safety Standards for Construction Work (296-155 WAC), Washington Department of Labor and Industries.
- Purchaser shall block access roads before blasting operations.

SUBSECTION ROCK MANUFACTURE

6-20 ROCK CRUSHING OPERATIONS

Rock crushing operations must conform to the following specifications:

- Operations and placement of oversize material must be conducted in or near the rock source site, as approved in writing by the Contract Administrator.
- The crushing operation must be concluded within 30 working days from the time it begins.

6-21 IN-PLACE PROCESSING

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

<u>Road</u>	<u>Stations</u>
A-0600Ext	0+00 to 4+35
A-0609	0+00 to 4+09
B-0050Ext	2+20 to 22+72

6-23 ROCK GRADATION TYPES

Purchaser shall manufacture rock in accordance with the types and amounts listed in the ROCK LIST. Rock must meet the following specifications for gradation and uniform quality when placed in hauling vehicles. Purchaser shall provide a sieve analysis upon request from the Contract Administrator.

SUBSECTION ROCK GRADATIONS

6-32 2 INCH MINUS CRUSHED ROCK

% Passing 2" 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	8% maximum

6-37 4-INCH JAW RUN ROCK

% Passing 4" square sieve	95%
% Passing U.S. #40 sieve	16% maximum
% Passing U.S. #200 sieve	5% maximum

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.

6-38 4-INCH IN-PLACE ROCK

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

In-place rock may not contain more than 5 percent by weight of organic debris and trash. No more than 50 percent of rock may be larger than 6 inches in any dimension and no rock may be larger than 8 inches in any dimension.

6-41 SELECT PIT RUN ROCK

No more than 50 percent of the rock may be larger than 6 inches in any dimension and no rock may be larger than 10 inches in any dimension. Pit Run rock may not contain more than 5 percent by weight of organic debris, and trash. Rock may require processing to meet this specification.

6-43 QUARRY SPALLS

% Passing 8" square sieve	100%
% Passing 3" square sieve	40% maximum
% Passing 3/4" square sieve	10% maximum

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

SUBSECTION ROCK MEASUREMENT

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.

SUBSECTION ROCK APPLICATION

6-70 APPROVAL BEFORE ROCK APPLICATION

Purchaser shall obtain written approval from the Contract Administrator for subgrade including: ditches, headwalls, catch basins, culverts, energy dissipaters, ditch-outs, subgrade shaping and compacting 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.

6-73 ROCK FOR WIDENED PORTIONS

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

6-75 OPTIONAL ROCK EXCEPTION

On the following roads, the Purchaser may place less rock than shown on the ROCK LIST. The Purchaser shall meet post-haul specifications in Section 9 POST-HAUL ROAD WORK.

<u>Road</u>	<u>Stations</u>
A-0600Ext	0+00 to 4+35
A-0609	0+00 to 4+09

SUBSECTION - GATE CLOSURE

7-71 GATE CLOSURE DURING HAUL

On the following road(s), Purchaser shall keep gates closed and locked except for passing vehicles.

<u>Road</u>	<u>Station</u>	<u>Gate No.</u>
A-1600	11+70	1222

SECTION 8 – EROSION CONTROL

8-2 PROTECTION FOR EXPOSED SOIL

Purchaser shall provide and evenly spread a 6-inch layer of straw to all exposed soils within 50 feet of a stream or wetland. Soils must be covered before the first anticipated storm event.

<u>Road</u>	<u>Location</u>	<u>Coverage</u>	<u>Type</u>	<u>Comments</u>
B-0050Ext	0+00 to 6+00	70%	Weed Free Straw	Straw exposed soils concurrently with native plant mixture.

SUBSECTION REVEGETATION

8-15 REVEGETATION

On the following road(s), Purchaser shall spread seed on all exposed soils within the grubbing limits.

<u>Road</u>	<u>Location</u>	<u>Type</u>	<u>Comments</u>
B-0050Ext	0+00 to 6+00	Native seed mix per Clause 8-25	Seed Wetland crossing

8-17 REVEGETATION TIMING

On the following road, Purchaser shall revegetate immediately following the completion of the activity listed below.

<u>Road</u>	<u>Revegetation Type</u>	<u>Activity</u>
B-0050Ext	Seed Mixture (clause 8-25) and Straw Mulch (clause 8-18)	Abandonment; see Clause 9-23

8-18 PROTECTION FOR SEED

Purchaser shall provide a protective cover for seed. The protective cover may consist of weed free straw mulch. Seed must be covered before the first anticipated storm event.

SUBSECTION SEED, FERTILIZER, AND MULCH

8-25 SEED MIXTURE

Purchaser shall evenly spread the seed mixture listed below on all exposed soil at a rate of 50-70 pounds per acre of exposed soil. Grass seed must meet the following specifications:

1. Weed seed may not exceed 0% 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 composition based on soil moisture conditions.

Drought to Moist Conditions	
<u>Kind and Variety of Seed in Mixture</u>	<u>% by Weight</u>
Annual Ryegrass	50
Oats	30
Perennial Ryegrass	10
Austrian Winter Pea	10

Saturated in Midsummer Conditions	
<u>Kind and Variety of Seed in Mixture</u>	<u>% by Weight</u>
Annual Ryegrass	50
Oats	30
Barley	15
Austrian Winter Pea	5

SECTION 9 – POST-HAUL ROAD WORK

SUBSECTION STRUCTURES

9-1 BARRICADES

Purchaser shall construct barricades in accordance with the BARRICADE DETAIL.

<u>Road</u>	<u>Stations</u>
A-0600Ext	0+00
A-0609	0+00
B-0050Ext	0+00

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.

SUBSECTION POST-HAUL LANDING MAINTENANCE

9-10 LANDING DRAINAGE

Purchaser shall provide for drainage of the landing surface.

SUBSECTION DECOMMISSIONING AND ABANDONMENT

9-21 ROAD ABANDONMENT

If constructed/reconstructed, Purchaser shall abandon the following roads before the termination of this contract.

<u>Road</u>	<u>Stations</u>	<u>Type</u>
A-0600Ext	0+00 to 4+35	Abandonment Clause 9-22
A-0609	0+00 to 4+09	Abandonment Clause 9-22
B-0050Ext	0+00 to 22+72	Forested Wetland Abandonment Clause 9-23

9-22 ABANDONMENT

- Remove road shoulder berms except as directed.
- Construct non-drivable waterbars according to the attached NON-DRIVABLE WATERBAR DETAIL at a maximum spacing that will produce a vertical drop of no more than 10 feet between waterbars or between natural drainage paths and with a maximum spacing of 100 feet, or as marked in the field.
- Skew waterbars at least 30 degrees from perpendicular to the road centerline on roads in excess of 3 per cent 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 ditch cross drain culverts and leave the resulting trench open.
- Remove used culvert material from State Land.
- Construct earth barricade as per clause 9-1 BARRICADES

9-23 FORESTED WETLAND ABANDONMENT

- Construct non-drivable waterbars according to the attached NON-DRIVABLE WATERBAR DETAIL at a maximum spacing that will produce a vertical drop of no more than 10 feet between waterbars or between natural drainage paths and with a maximum spacing of 100 feet, or as marked in the field.
- Skew waterbars at least 30 degrees from perpendicular to the road centerline on roads in excess of 3 per cent 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.
- DO NOT APPLY NORMAL GRASS SEED, see site specific clause 8-25 SEED MIXTURE
- Silt barriers shall be installed as a failsafe to protect area from sediment delivery until vegetation is established.
- Remove all geotextile and chainlink from state land.
- Rock shall be pulled back out of the wetland area.
- Placement of 6 logs; 3 conifer and 3 hardwood, 20 inches in diameter (large end) by 20 feet long on the abandoned road prism.
- Rootwads removed from the right-of-way during construction shall be retained and placed on the abandoned road prism.

SECTION 10 MATERIALS

SUBSECTION GEOTEXTILES

10-3 GEOTEXTILE FOR STABILIZATION

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

	<u>ASTM Test</u>	<u>Requirements</u>
Type	--	Woven
Apparent opening size	D 4751	No. 40 max
Water permittivity	D 4491	0.10 sec ⁻¹
Grab tensile strength	D 4632	315 lb
Grab tensile elongation	D 4632	<50%
Puncture strength	D 6241	620 lb
Tear strength	D 4533	112 lb
Ultraviolet stability	D 4355	50% retained after 500 hours of exposure

SUBSECTION CULVERTS

10-17 CORRUGATED PLASTIC CULVERT

Polyethylene culverts must meet AASHTO M-294 specifications, or ASTM F-2648 specifications for recycled polyethylene. Culvert segments not specifically labeled as downspouts 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.

SECTION 11 SPECIAL NOTES

11-1 WETLAND MANAGEMENT AREA CROSSING

On the following road(s), Purchaser shall flush cut vegetation with the ground, install geotextile fabric, chainlink fencing, tree tops, geotextile fabric and rock, in that order, using the specifications directed in clause 4-70 SUBGRADE REINFORCEMENT.

This subgrade reinforcement is to cover the culvert and stream crossing and should be installed after the placement of the stream culvert.

Before completion of contract, Purchaser shall remove all materials placed, and place downed woody debris. Woody debris shall consist of 6 logs; 3 conifer and 3 hardwood, 20 inches in diameter (large end) by 20 feet long. Removed materials must comply with clause 9-23 FORESTED WETLAND ABANDONMENT. Purchaser shall minimize disturbance to Wetland Management Area crossing.

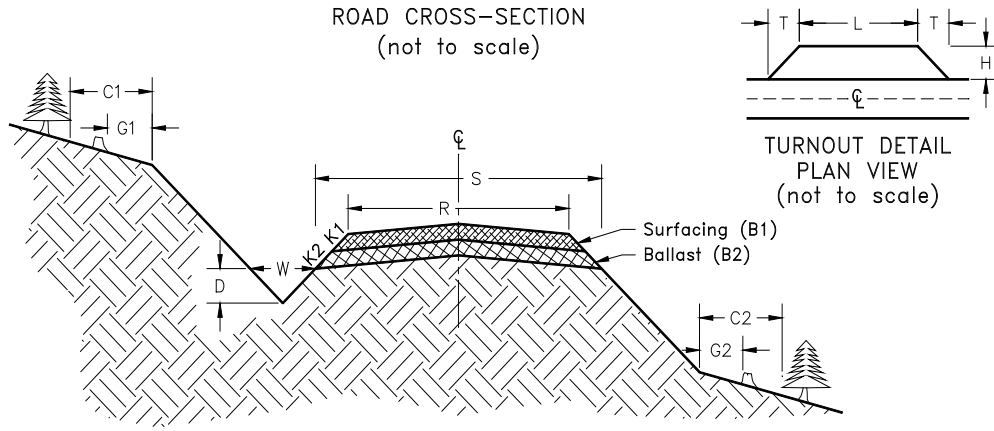
<u>Road</u>	<u>Stations</u>
B-0050Ext	0+00 to 6+00

11-2 CULTURAL RESOURCE PROTECTION

On the following road, Purchaser shall only conduct work during presence of a cultural resource technician (CRT) or archaeologist. All work must remain within the footprint of the existing road.

<u>Road</u>	<u>Stations</u>
A-Line	296+50 to 305+00

TYPICAL SECTION SHEET (pg 1 of 1)



Road Number	From Station	To Station	Tolerance Class	Subgrade Width (feet)	Road Width (feet)	Ditch		Crown in. @ CL	Grubbing Limits (feet)		Clearing Limits (feet)		Cut Slope Ratio	Fill Slope Ratio
						Width (feet)	Depth (feet)		G1	G2	C1	C2		
				S	R	W	D						Clause	Clause
A-Line	0+00	350+00	A		14	3	1	4	-	-	-	-	4-5	4-6
A-0600	0+00	55+82	B		12	3	1	4	-	-	-	-	4-5	4-6
A-0600Ext	0+00	4+35	C	16	12	3	1	4	0	0	0	0	4-5	4-6
A-0609	0+00	4+09	C	16	12	3	1	4	0	0	0	0	4-5	4-6
A-4000	0+00	105+00	B		12	3	1	4	-	-	-	-	4-5	4-6
A-4080	0+00	3+50	B	16	12	3	1	4	-	-	-	-	4-5	4-6
A-1585	0+00	17+47	C	16	12	3	1	4	3	3	5	5	4-5	4-6
A-1600	0+00	29+00	B	16	12	3	1	4	3	3	5	5	4-5	4-6
B-Line	0+00	4+50	A		14	3	1	4	-	-	-	-	4-5	4-6
B-0050	0+00	11+90	B	16	12	3	1	4	-	-	-	-	4-5	4-6
B-0050	11+90	27+84	B	16	12	3	1	4	3	3	TAGS	TAGS	4-5	4-6
B-0050Ext	0+00	6+00	C	16	12	3	1	4	0	0	TAGS	TAGS	4-5	4-6
B-0050Ext	6+00	22+72	C	16	12	3	1	4	0	0	0	0	4-5	4-6
BPA-2638	24+10	40+20	B		12	3	1	4	-	-	-	-	4-5	4-6
BPA-2638_SF	0+00	2+98	C	16	12	3	1	4	3	3	5	5	4-5	4-6
Old A-Line	0+00	18+20	B	16	12	3	1	4	-	-	-	-	4-5	4-6

ROCK LIST

BALLAST

Road Number	From Station	To Station	Rock Slope	Compacted Rock Depth (inches)	C.Y./ Station	# of Stations	C.Y. Subtotal	Rock Source	Comments		
									CW	TO	TA
			K2	B2	4 Inch Jaw						
A-1585	0+00	17+47	1 ½ :1	12	56	17.47	979	North Rim Quarry, Commercial Source			
B-0050	11+90	27+84	1 ½ :1	12	56	15.94	893				
B—0050Ext	0+00	2+50	1 ½ :1	12	56	2.50	140				Stream/WMZ Crossing, see Road Plan for Additional Details
					4 Inch In Place/4 Inch Jaw						
A-0600Ext*	0+00	4+35	1 ½ :1	12	56	4.35	244				
A-0609*	0+00	4+09	1 ½ :1	12	56	4.09	230				
B-0050Ext	2+50	22+72	1 ½ :1	12	56	20.22	1133				
					4 Inch In Place/Select Pit Run						
Landing Rock*							750				
					Quarry Spalls						
Culvert Headwalls and Dissapaters							114				See CULVERT AND DRAINAGE LIST

4 Inch In Place/4 Inch Jaw Total__4,369__Cubic Yards
 Quarry Spalls Total__114__Cubic Yards
 Ballast Total__4,480__Cubic Yards

Included in C.Y. Subtotal

CW – Curve Widening
 TO – Turn Out
 TA – Turn Around

*Optional Rock: If Purchaser elects to haul on optional rock roads in wet weather, the depth listed above is recommended but not required.

SURFACE

Road Number	From Station	To Station	Rock Slope	Compacted Rock Depth (inches)	C.Y. Station	# of Stations	C.Y. Subtotal	Rock Source	Comments		
									CW	TO	TA
			K1	B1	2 1/2 Inch Crushed						
A-Line	102+50	192+00	1 1/2 :1	6	24	92.00	2208	North Rim Quarry/Stockpile, Commercial Source			
A-1600	10+80	29+00	1 1/2 :1	6	24	18.20	437		Spot rock to be used as needed		
BPA-2638	24+10	40+20	1 1/2 :1	6	24	16.10	387				
BPA-2638_SF	0+00	2+98	1 1/2 :1	6	24	2.98	97		Includes CW Rock		

2 1/2 Inch Minus Crushed Total 3,129 Cubic Yards
Surface Total 3,129 Cubic Yards

*Optional Rock: If Purchaser elects to haul on optional rock roads in wet weather, the depth listed above is recommended but not required.

NOTE: Yardages are estimated on a compacted (In-Place) basis. Compliance of required rock will be based on compacted depth measurement. **Apply appropriate factors to determine loose amounts for estimating purposes.** Roads and rock quantities are designed for dry weather use. If Purchaser elects to haul in wet weather additional rock may be obtained from the rock pits listed in Section 6 at the Purchaser's expense and with prior written approval from the Contract Administrator.

COMPACTION LIST

Road	From Station	To Station	Type	Max Depth of Lift (inches)	Equipment Type	Equipment Weight (lbs)	Minimum Number of Passes	Maximum Operating Speed (mph)
			Pre/Post-haul rock	6	Smooth Drum Vibratory Roller	14,000	2 low freq. vibrate on	3.5
			Subgrade, rock	12, 6	Smooth Drum Vibratory Roller	14,000	2 low freq. vibrate on	3.5
			After pre-haul grading	6	Smooth Drum Vibratory Roller	14,000	2 low freq. vibrate on	3.5

CULVERT AND DRAINAGE LIST, pg 1 of 2

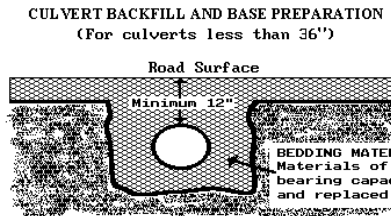
Road Number	Location	Culvert		Length (ft)			Armoring (C.Y.)			Backfill Material*	Placement Method*	Const. Staked*	Remarks
		Dia. (in)	Type	Culvert	Downspt	Flume	Inlet	Outlet	Type				
A-Line	108+00	24	PD	40	-	-	2	2.5	QS	NT		Replace Seep	
	113+50	18	PD	40	-	-	1	1.5	QS	NT		Replace Cross Drain	
	115+00	18	PD	30	-	-	1	3	QS	NT		Armor Outlet	
	124+30	24	PD	40	-	-	2	2.5	QS	NT		Replace NS Stream	
	140+50	18	PD	40	-	-	1	1.5	QS	NT		Replace Cross Drain	
	143+95	36	PD	60	-	-	3	5	QS	NT		Replace NS Stream	
	144+80	18	PD	40	-	-	1	1.5	QS	NT		Install Cross Drain	
	152+10	36	PD	60	-	-	3	5	QS	NT		Replace NS Stream	
	152+80	18	PD	40	-	-	1	1.5	QS	NT		Install Cross Drain	
	192+50	18	PD	40	-	-	1	1.5	QS	NT		Install Cross Drain	
	206+40	18	PD	30	-	-	1	1.5	QS	NT		Replace Cross Drain	
	304+80	18	PD	40	-	-	1	1.5	QS	NT		Replace Cross Drain	
	349+10	18	PD	40	-	-	1	1.5	QS	NT		Replace Cross Drain	
	A-0609	1+92	18	TEMP	30	-	-	1	1.5	QS	NT		Install Cross Drain
A-1585	2+47	18	PD	35	-	-	1	1.5	QS	NT		Install Cross Drain	
	4+23	18	PD	40	-	-	1	1.5	QS	NT		Install Cross Drain	
	7+19	18	PD	40	-	-	1	1.5	QS	NT		Install Cross Drain	
	11+58	18	PD	35	-	-	1	1.5	QS	NT		Install Cross Drain	
	25+50	18	PD	30	-	-	1	1.5	QS	NT		Replace Cross Drain	
A-1600	6+85	18	PD	40	-	-	1	1.5	QS	NT		Install Cross Drain	
	12+15	18	PD	40	-	-	1	1.5	QS	NT		Install Cross Drain	
B-0050	15+50	18	PD	30	-	-	1	1.5	QS	NT		Install Cross Drain	
	16+80	18	PD	40	-	-	1	1.5	QS	NT		Install Cross Drain No Skew	
	19+80	18	PD	30	-	-	1	1.5	QS	NT		Install Cross Drain No Skew	
	23+60	18	PD	40	-	-	1	1.5	QS	NT		Install Cross Drain	
	26+00	18	PD	30	-	-	1	1.5	QS	NT		Install Cross Drain	
B-0050Ext	0+00	18	TEMP	40	-	-	1	1.5	QS	NT		Install Cross Drain	
	1+76	48	TEMP	40	-	-	-	-	QS	NT		Wetland Management Area Crossing	
	3+60	18	TEMP	40	-	-	1	1.5	QS	NT		Install Cross Drain	
	6+00	18	TEMP	30	-	-	1	1.5	QS	NT		Install Cross Drain	
	11+83	18	TEMP	30	-	-	1	1.5	QS	NT		Install Cross Drain	
	14+58	18	TEMP	30	-	-	1	1.5	QS	NT		Install Cross Drain	
	17+00	24	TEMP	30	-	-	2	2.5	QS	NT		Install Stream Crossing	
	18+52	18	TEMP	40	-	-	1	1.5	QS	NT		Install Cross Drain	
BPA-2638	33+50	24	PD	40	-	-	1	2	QS	NT		Install Stream Crossing	
	34+00	18	PD	40	-	-	1	1.5	QS	NT		Install Cross Drain	
As Directed by C.A.		18	PD	30	-	-	1	1.5	QS	NT		Contingency	
		18	PD	30	-	-	1	1.5	QS	NT		Contingency	
		18	PD	30	-	-	1	1.5	QS	NT		Contingency	
		18	PD	BAND	-	-						Contingency	
		18	PD	BAND	-	-						Contingency	

CULVERT AND DRAINAGE LIST, pg 2 of 2

* SEE CULVERT AND DRAINAGE SPECIFICATION DETAIL

PD = Polyethylene Pipe Dual Wall AASHTO No. M294 Type S or ASTM F2648

TEMP = Temporary Culvert

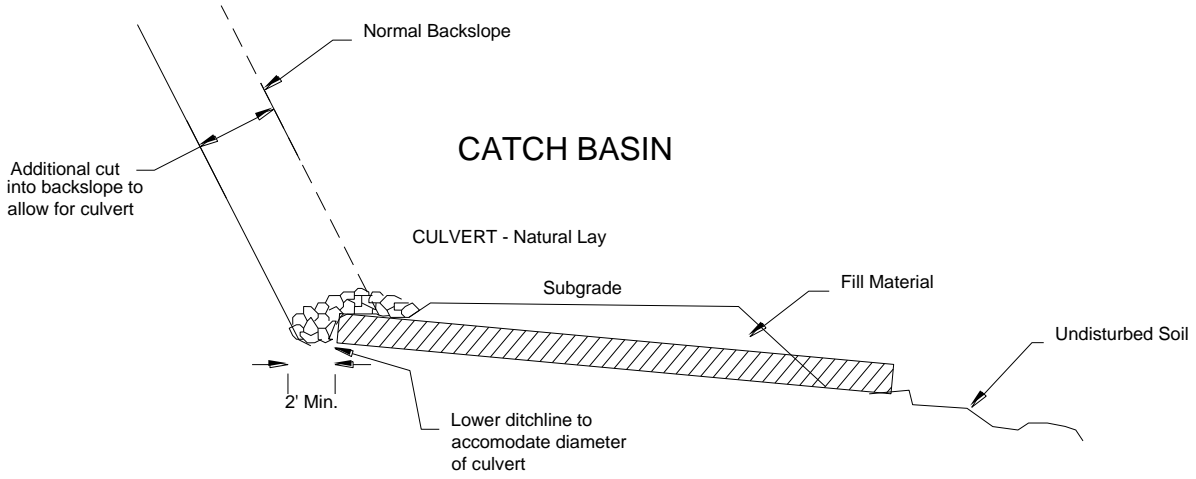


Key:

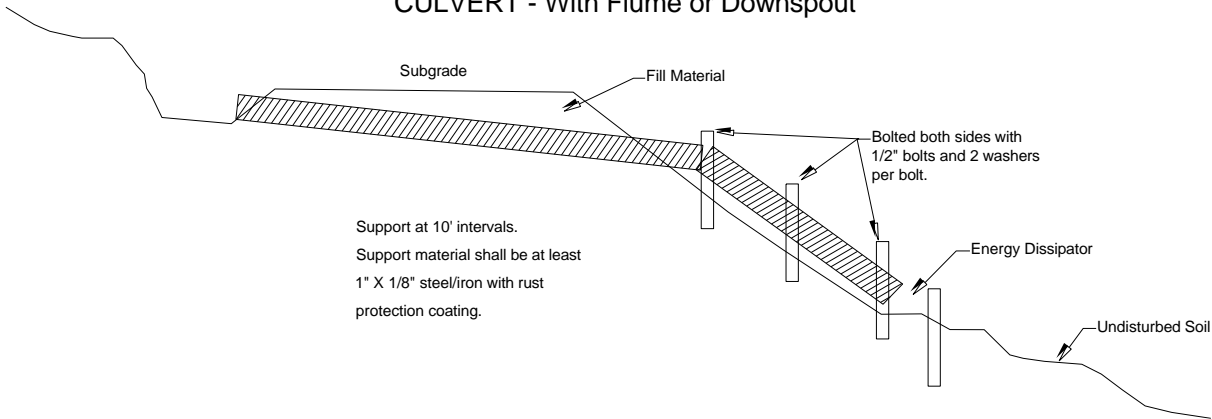
- QS - Quarry Spalls
- LL - Light Loose Riprap
- SR - Shot Crushed Rock
- NT - Native (bank run)
- SL - Select Fill
- Flume - Half round pipe
- Downspout - Full round pipe

CULVERT AND DRAINAGE SPECIFICATION DETAIL

(Page 1 of 3)



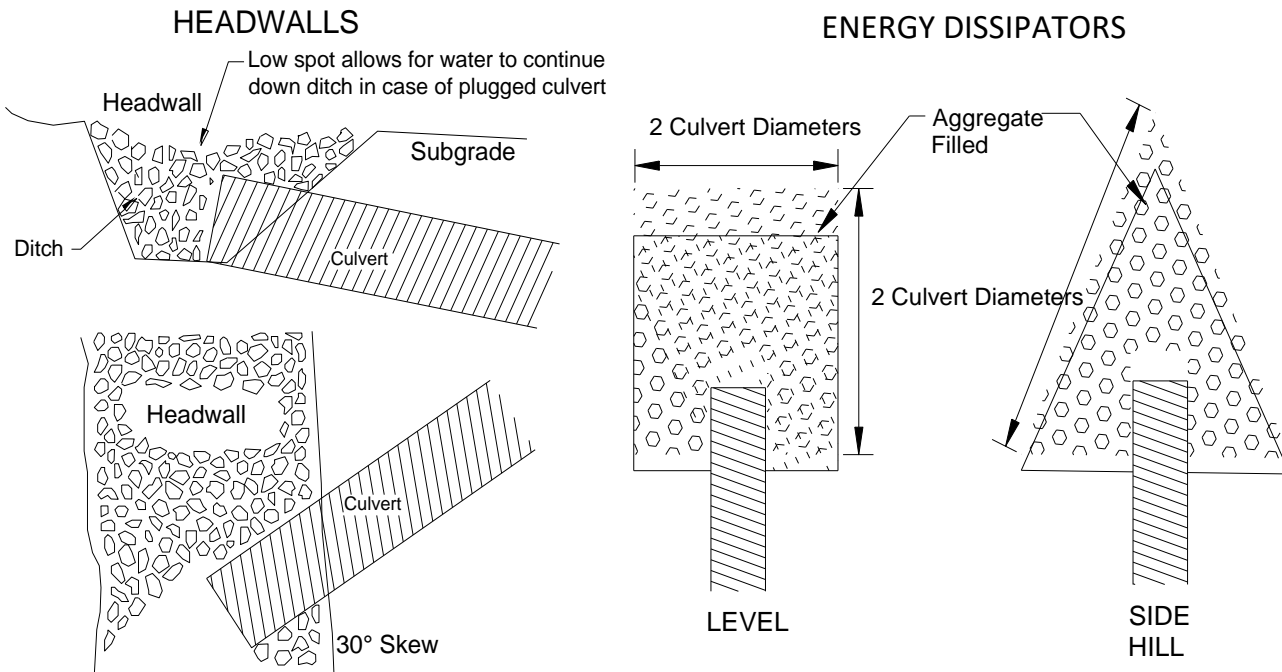
CULVERT - With Flume or Downspout



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.

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

CULVERT AND DRAINAGE SPECIFICATION DETAIL

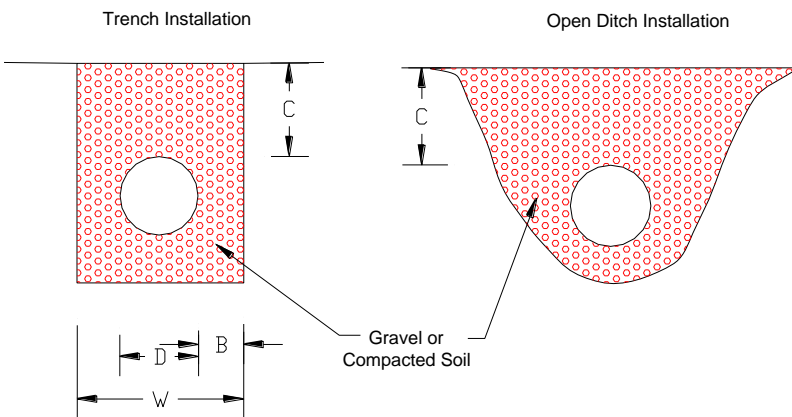
(Page 3 of 3)

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"
6"	6"	12"	54"

FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS

(Sheet 1 of 2)

Cuts and Fills

- Maintain slope lines to a stable gradient compatible with the cut slope/fill slope ratios. Remove slides up to 100 cubic yards in volume from ditches and the roadway. Repair fill-failures with selected material or material approved by the Contract Administrator. Remove overhanging material from the top of cut slopes.
- Waste material from slides or other sources shall be placed and compacted in stable locations identified in the road plan or approved by the Contract Administrator, so that sediment will not deliver to any streams or wetlands.
- Slide material and debris shall not be mixed into the road surface materials, unless approved by the Contract Administrator.

Surface

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

Drainage

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

Preventative Maintenance

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

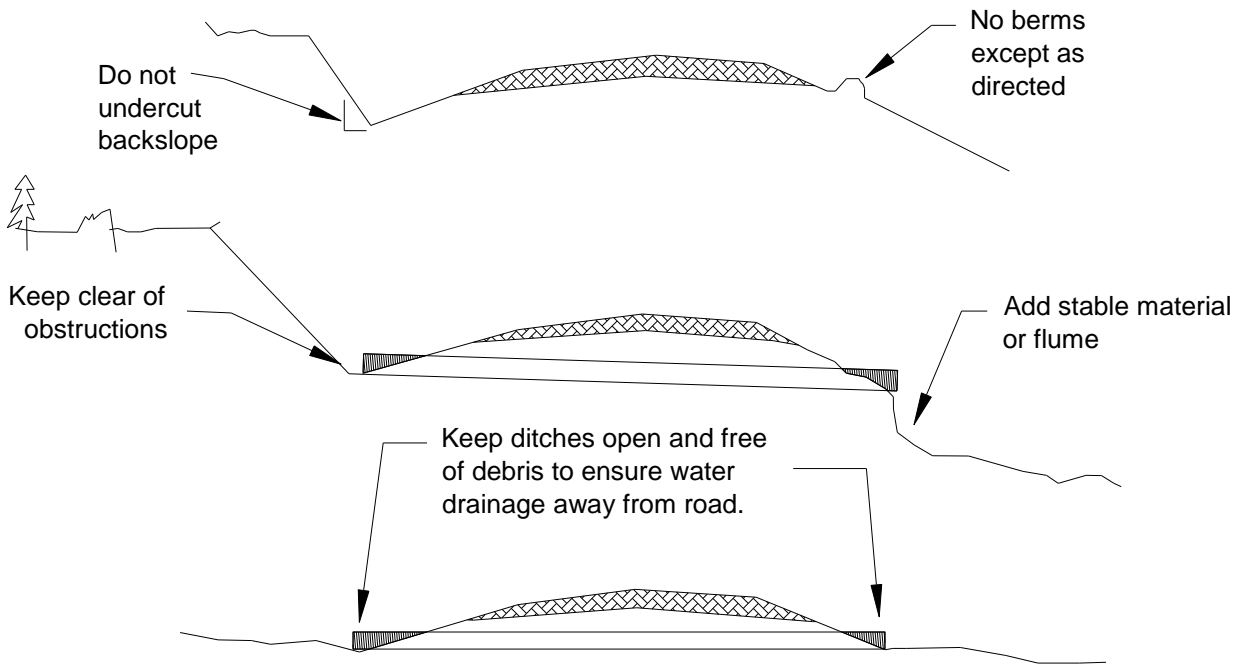
FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS (Sheet 2 of 2)

Termination of Use or End of Season

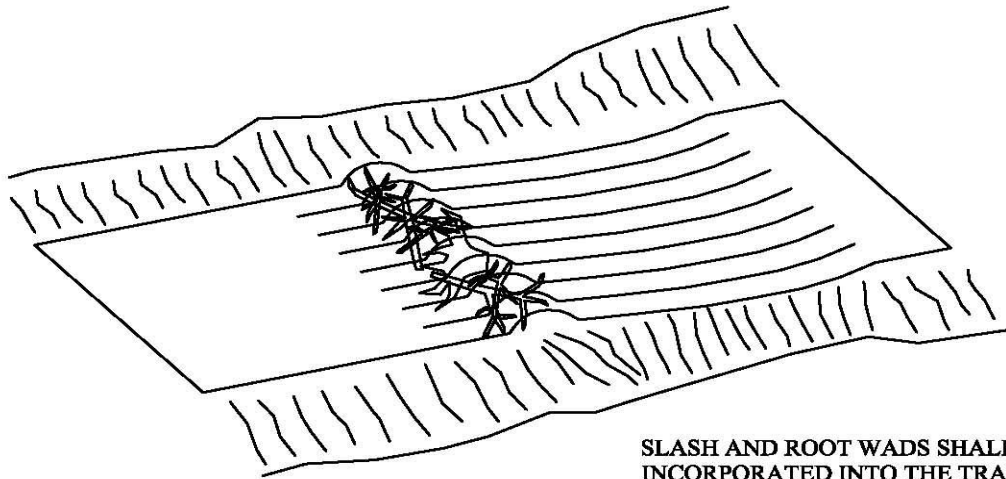
- At the conclusion of logging operations, ensure all conditions of these specifications have been met.

Debris

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

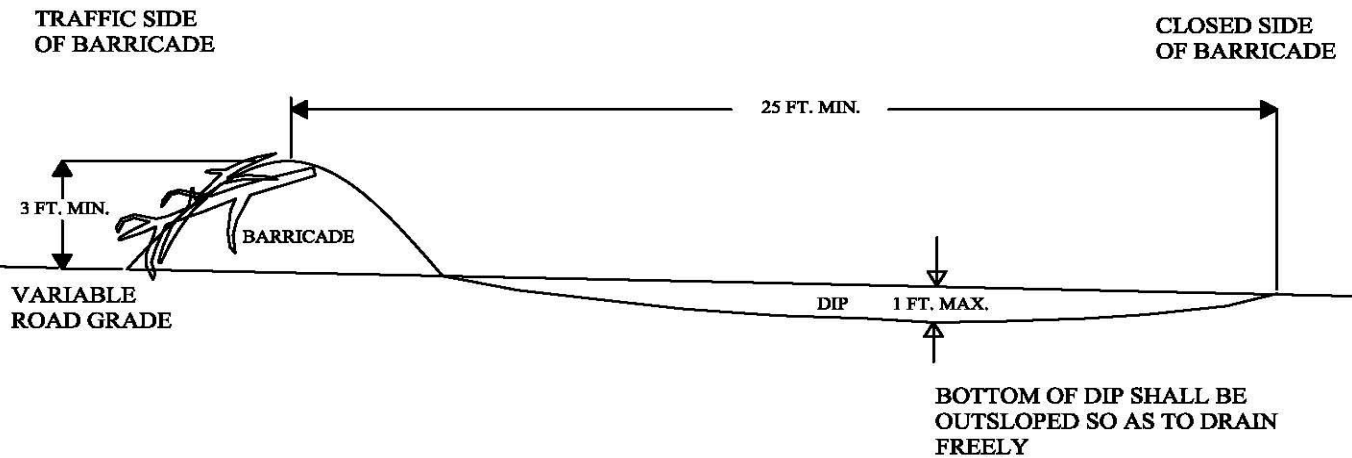


BARRICADE DETAIL



SLASH AND ROOT WADS SHALL BE INCORPORATED INTO THE TRAFFIC SIDE OF THE BARRICADE.

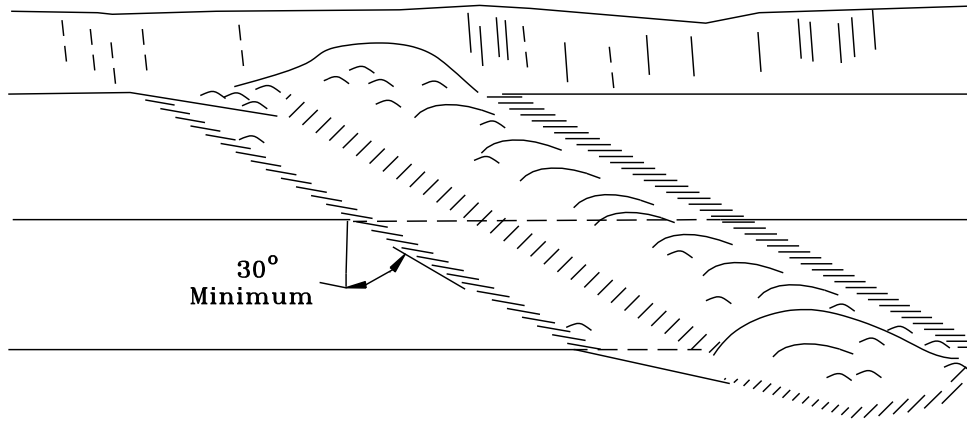
PLAN VIEW



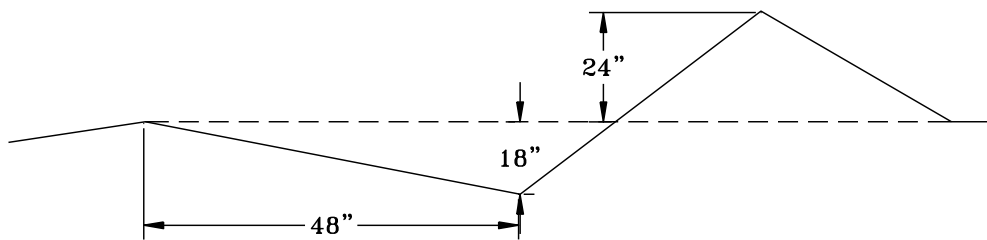
PROFILE VIEW

Non-Drivable Water Bar Detail

Cross Ditch



Cross Section at Centerline



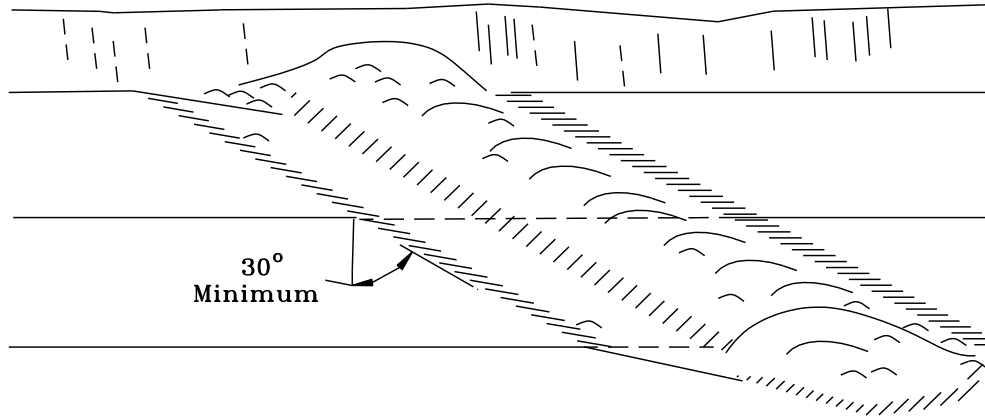
Water Bar Detail

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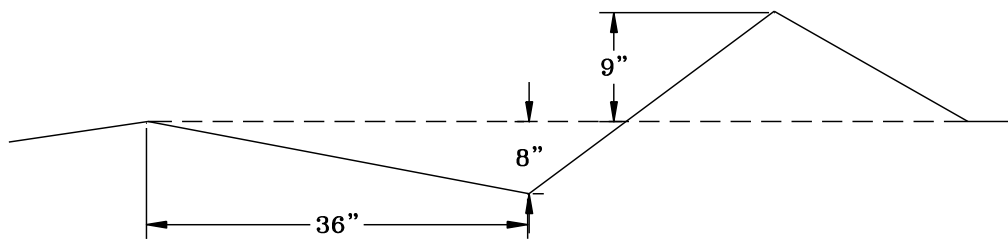


Drivable Water Bar Detail

Cross Ditch



Cross Section at Centerline



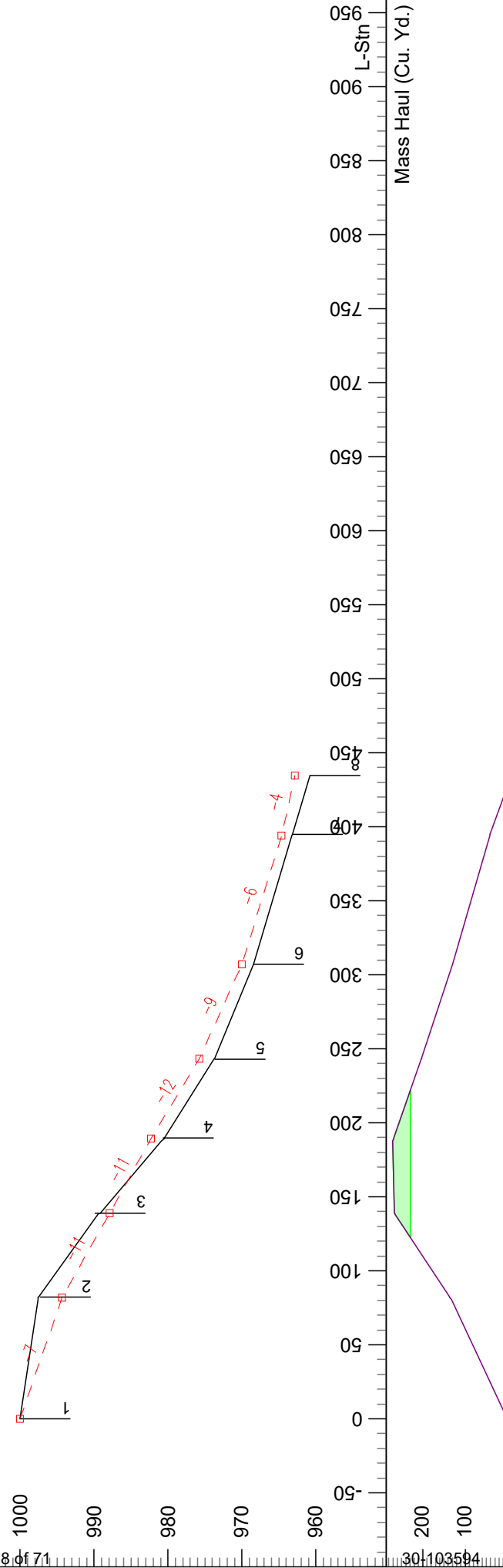
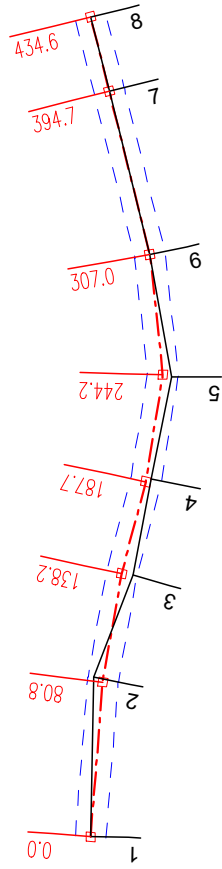
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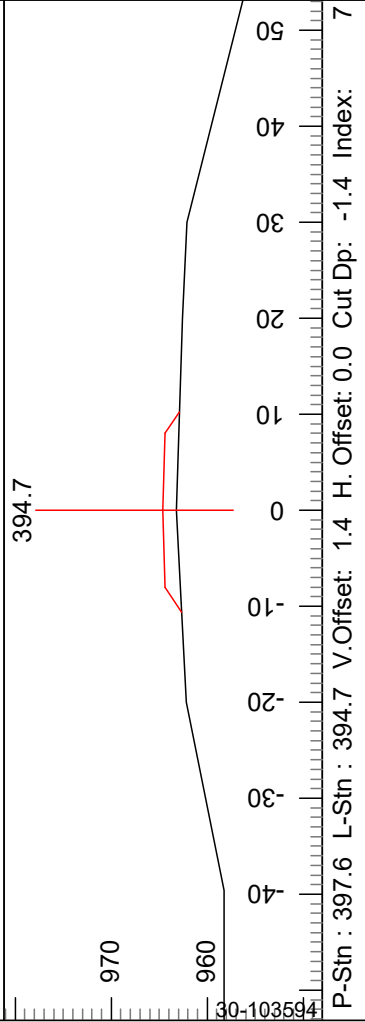
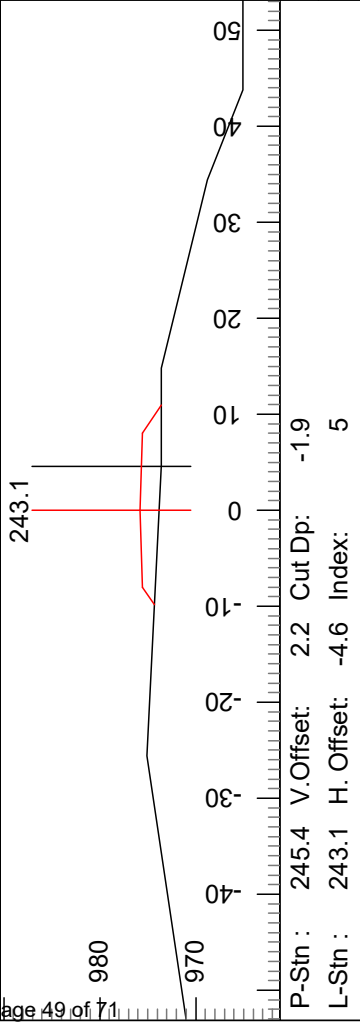
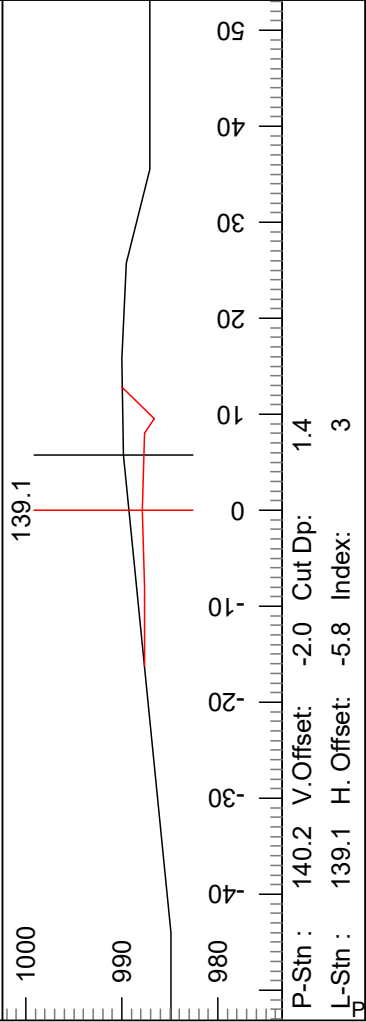
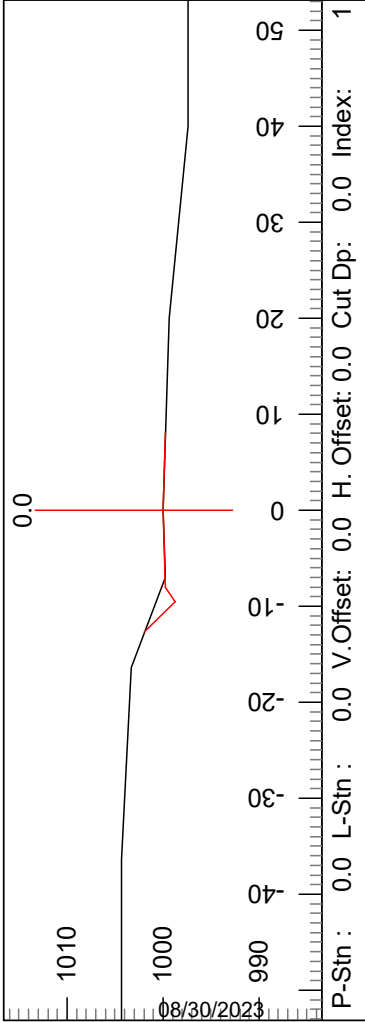
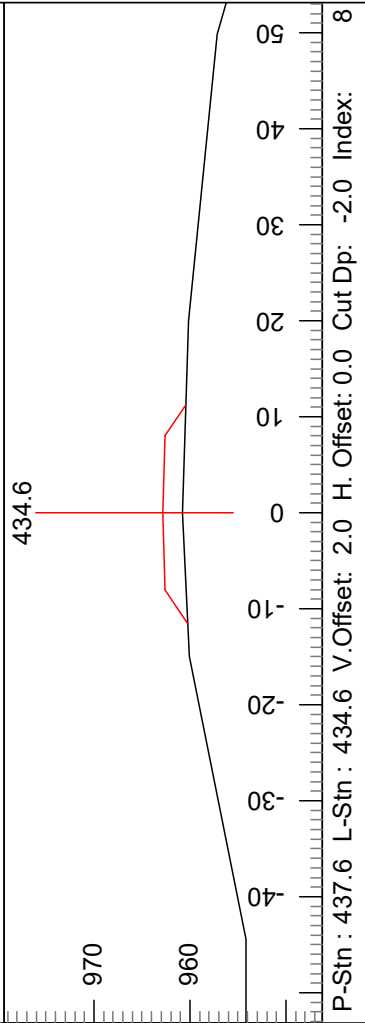
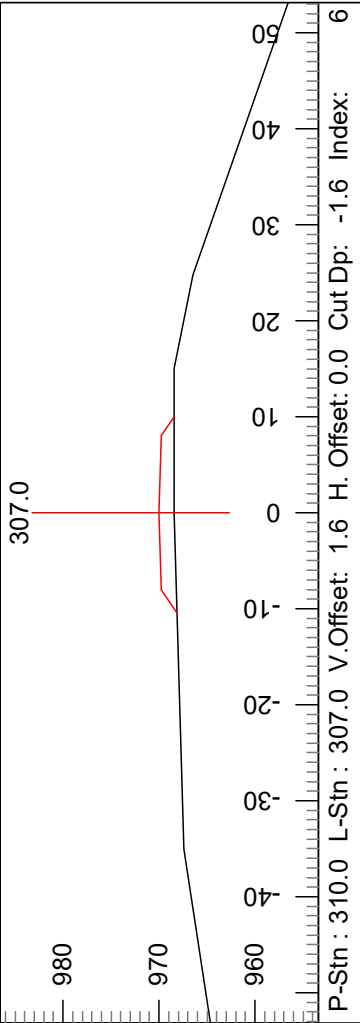
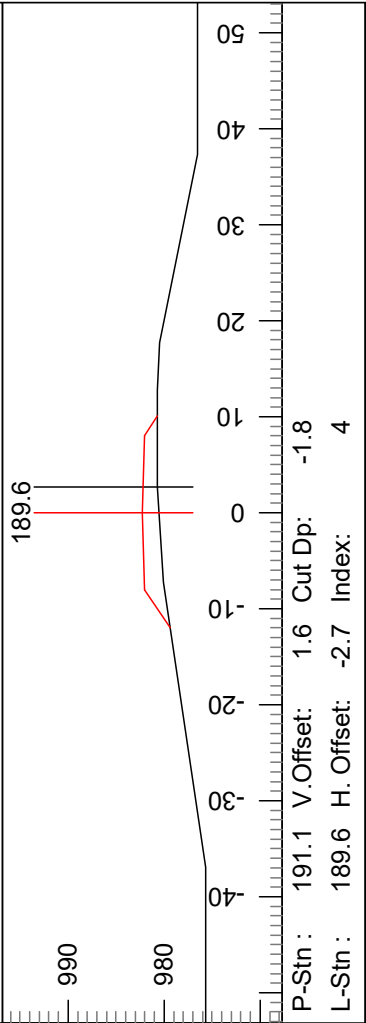
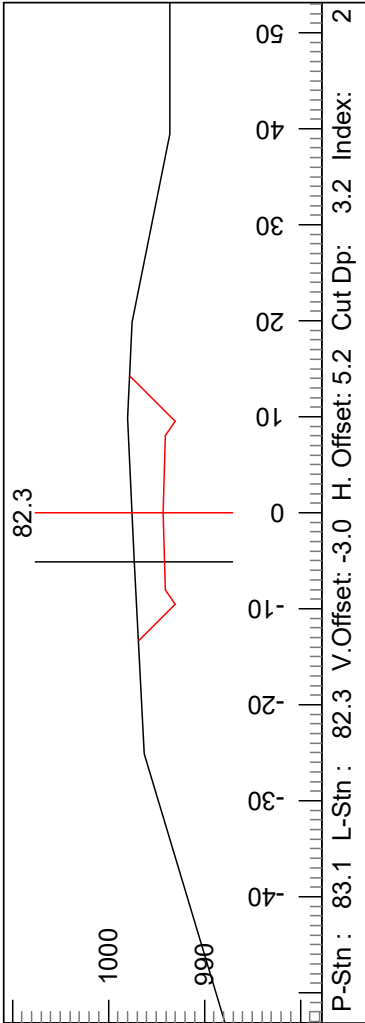
Gremlin Timber Sale
 A-0600Ext Road
 Contract#: 30-103594

Washington State Department of Natural Resources
 South Puget Sound Region



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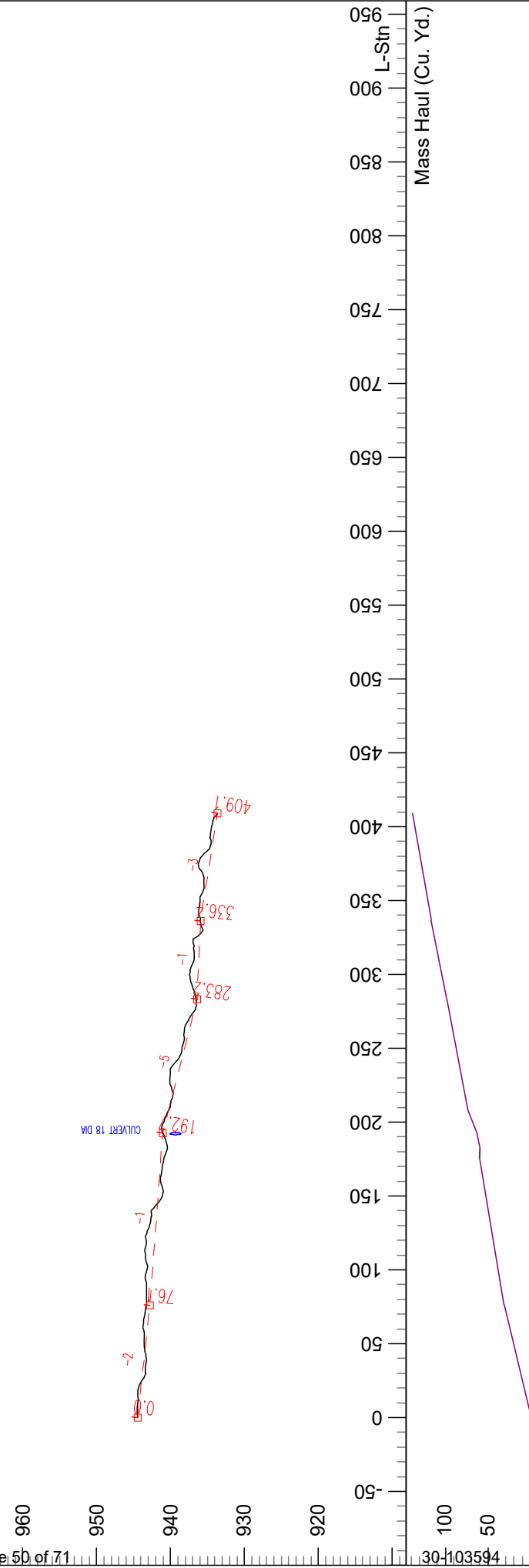
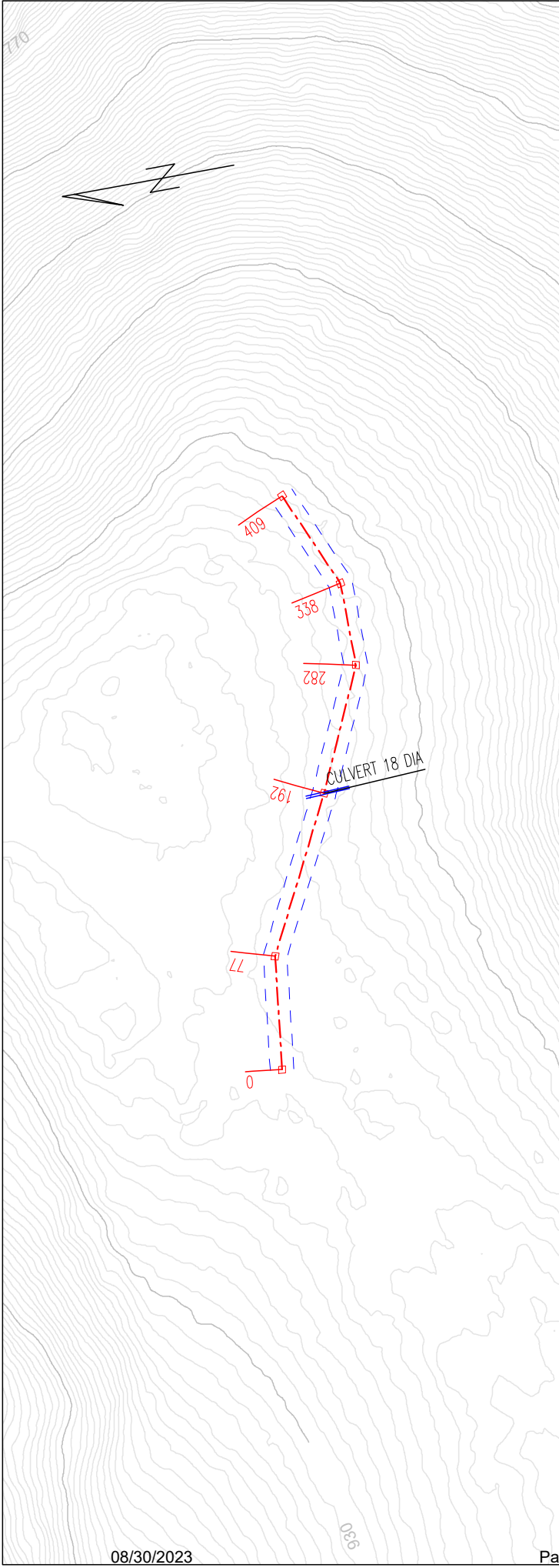
Engineer: J. Gross
 23/02/15



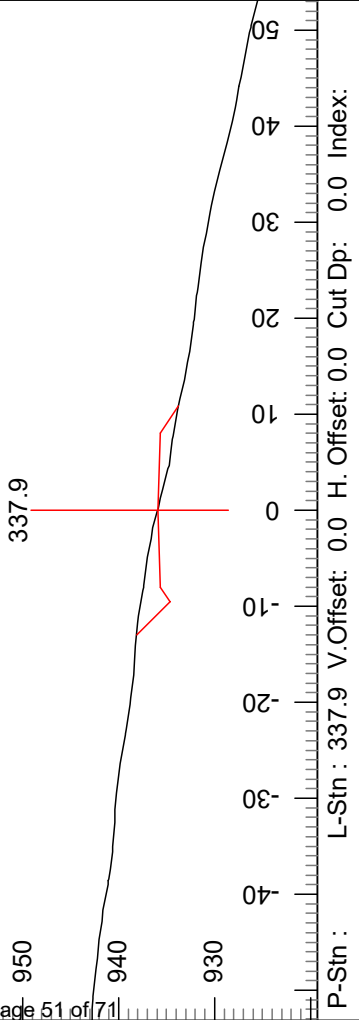
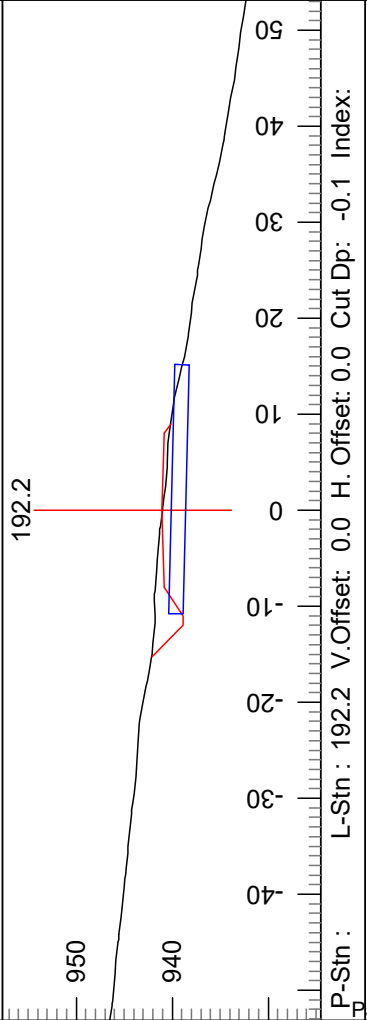
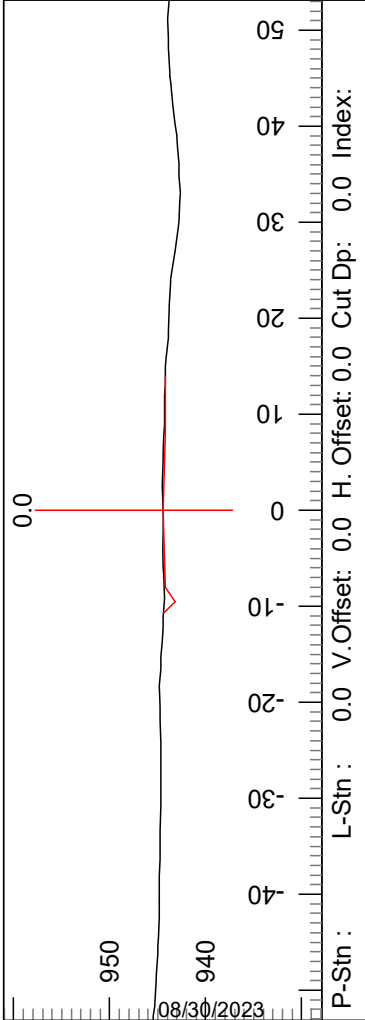
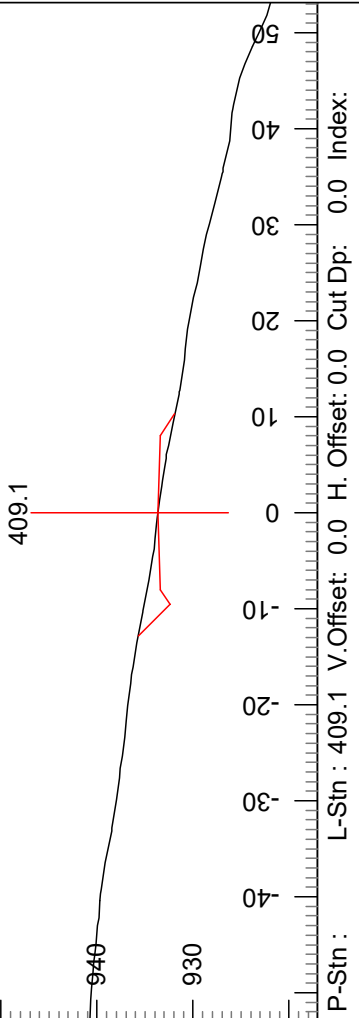
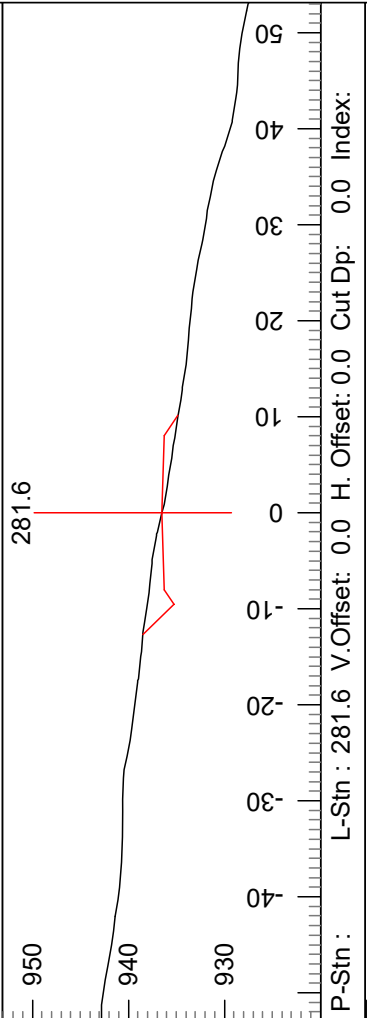
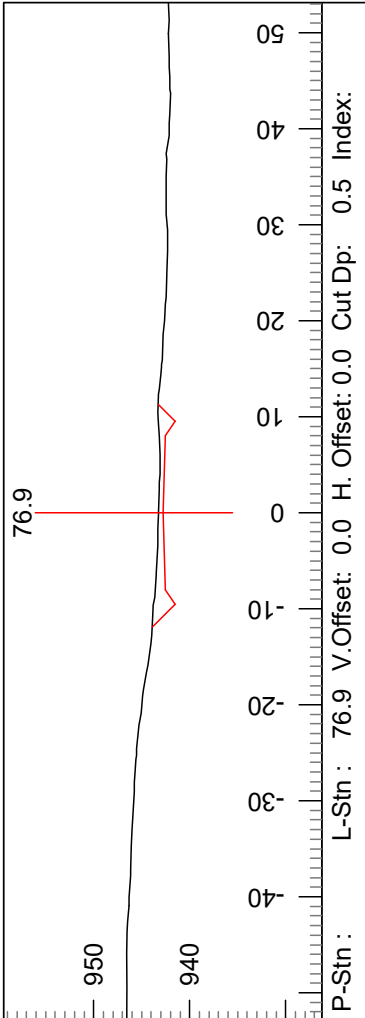
08/30/2023

30-103594

Gremlin Timber Sale A-0600Ext Road Contract#: 30-103594	Washington State Department of Natural Resources South Puget Sound Region	Section Scale 1:240	23/02/15	Engineer: J. Gross
		Page 2 of 2		



Gremlin Timber Sale A-0609 Road Contract# 30-103594	 Washington State Department of Natural Resources South Puget Sound Region	Plan Scale 1:1200 Profile Vert Scale 1:240 Profile Horz Scale 1:1200	Engineer: J. Gross 23/02/15	Page 1 of 2
		Mass Haul (Cu. Yd.)		



08/30/2023

Page 51 of 71

30-103594

Gremlin Timber Sale
A-0609 Road
Contract#:30-103594

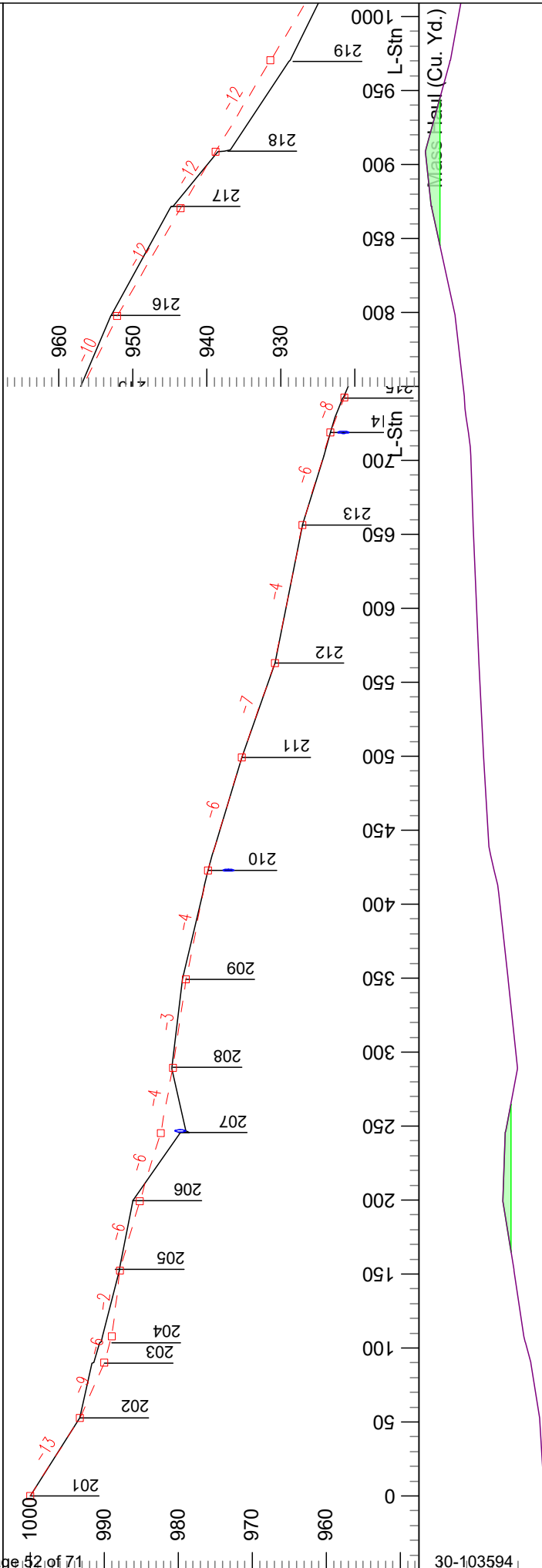
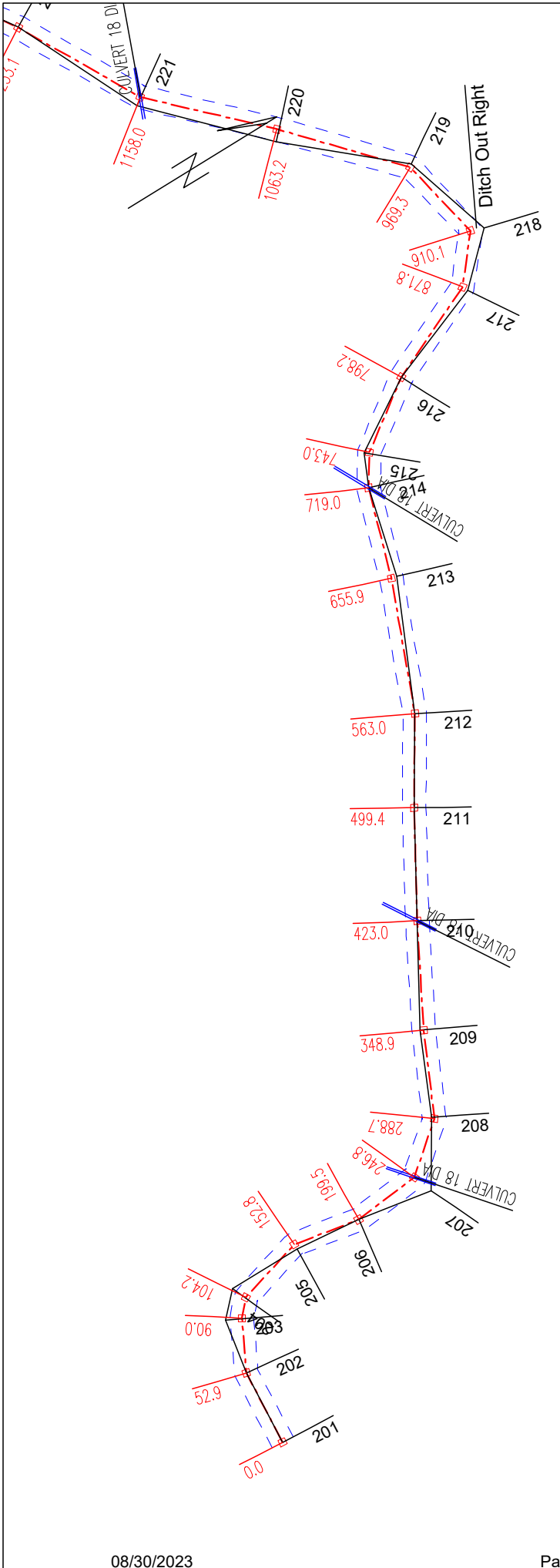
Washington State Department of Natural Resources
South Puget Sound Region



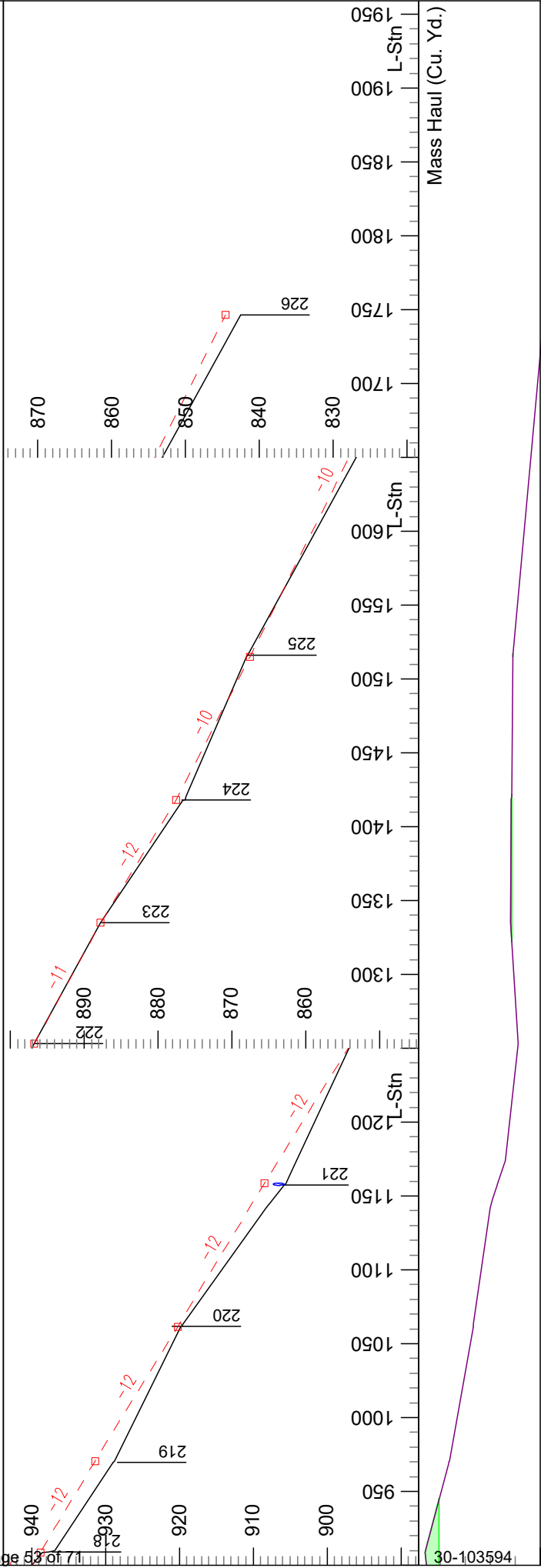
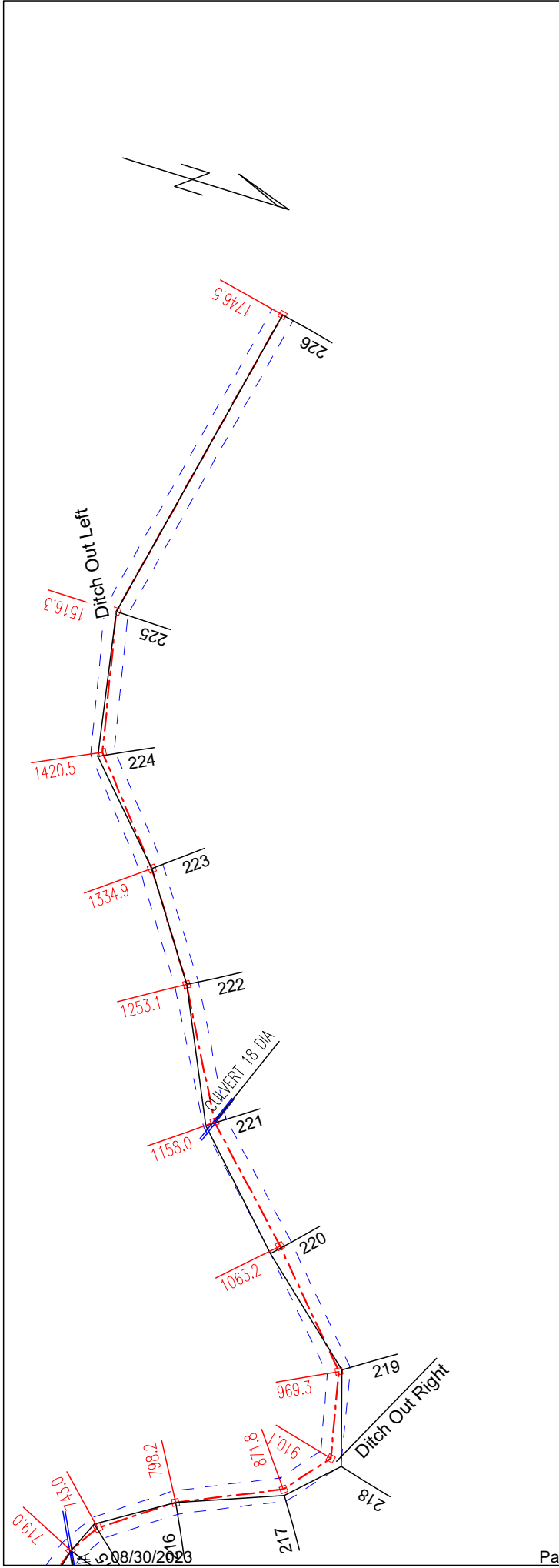
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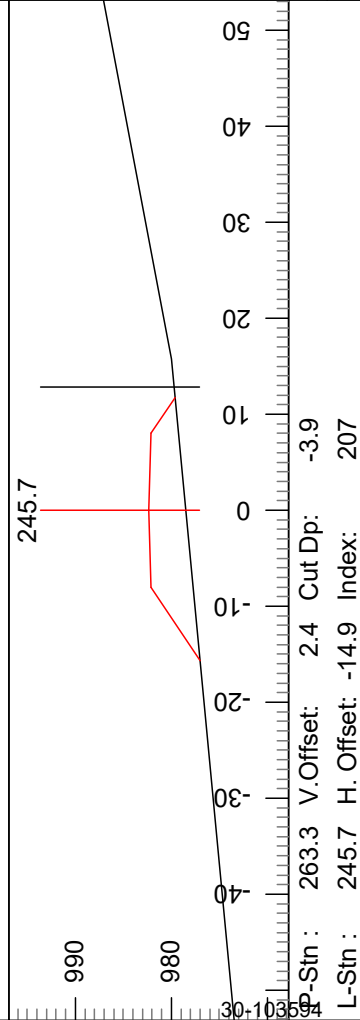
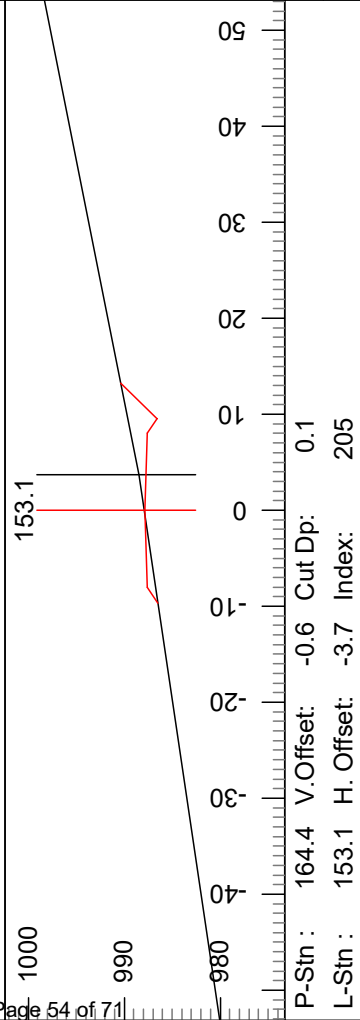
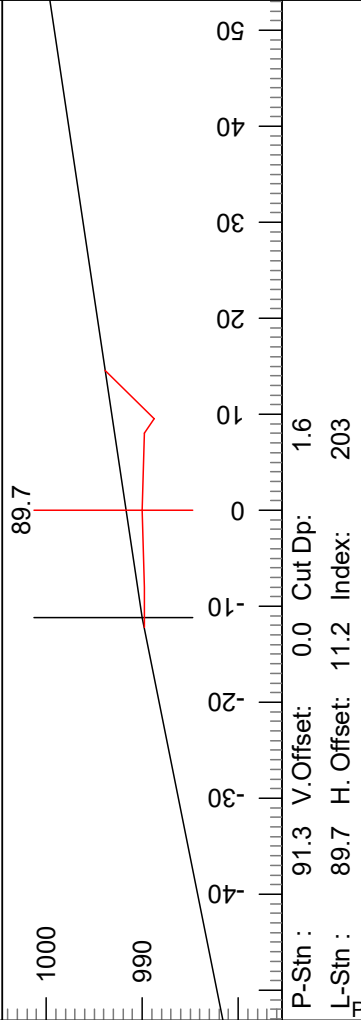
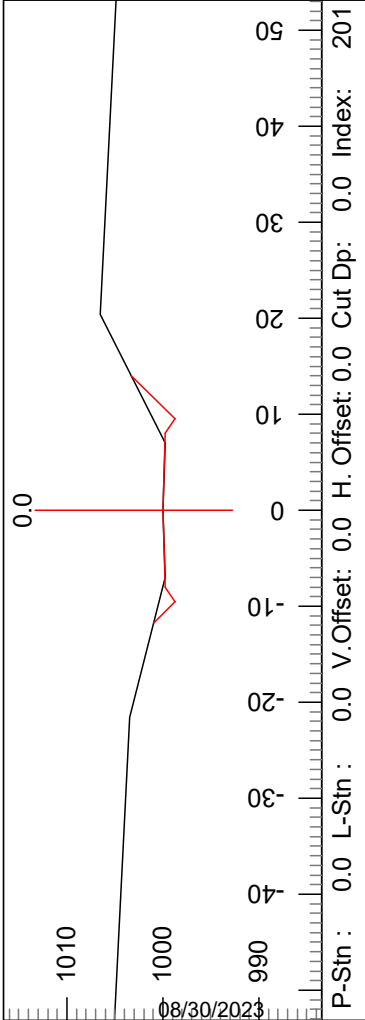
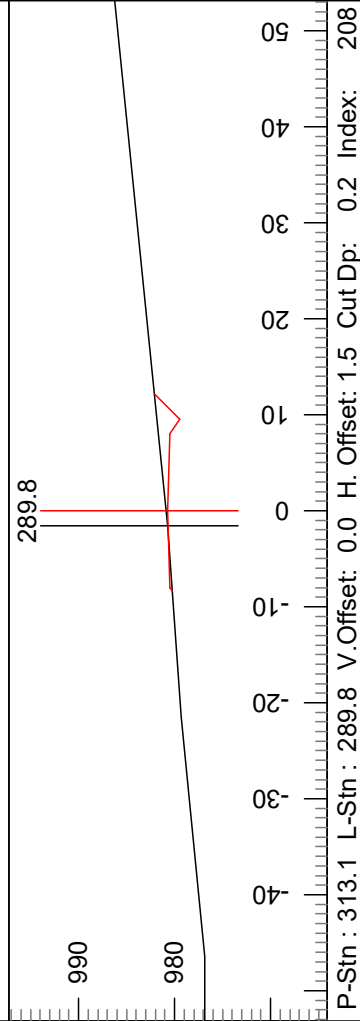
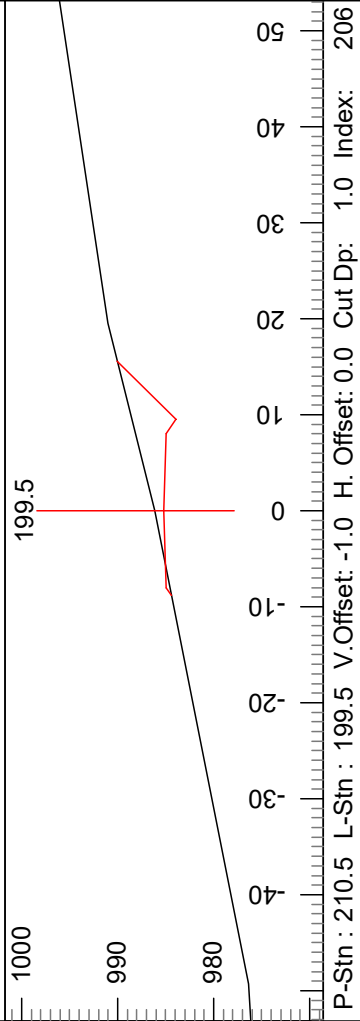
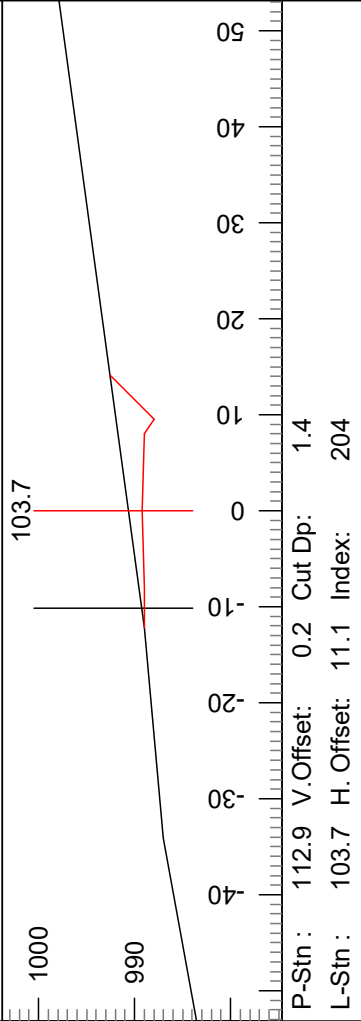
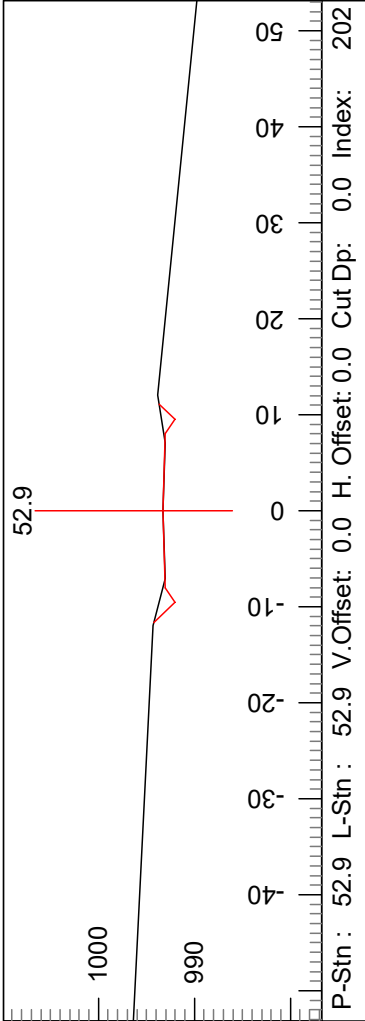
Engineer: J. Gross

Page 2 of 2



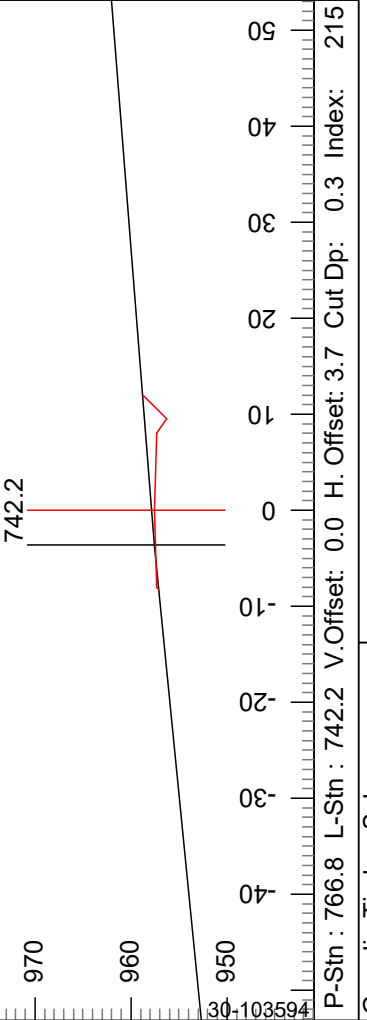
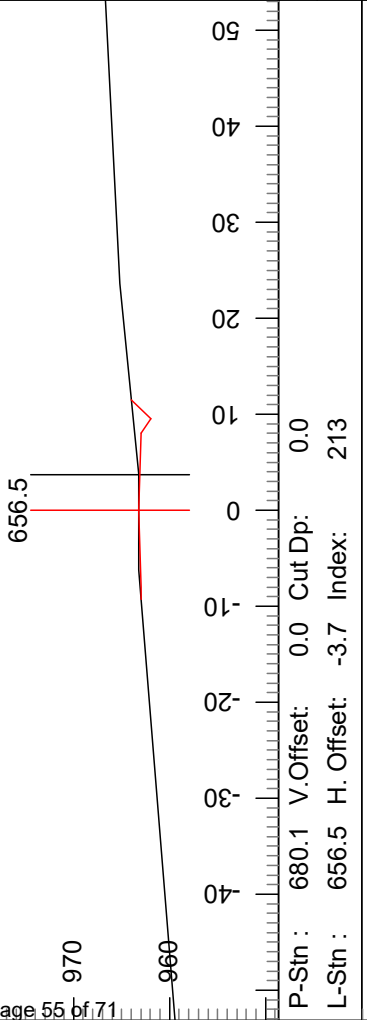
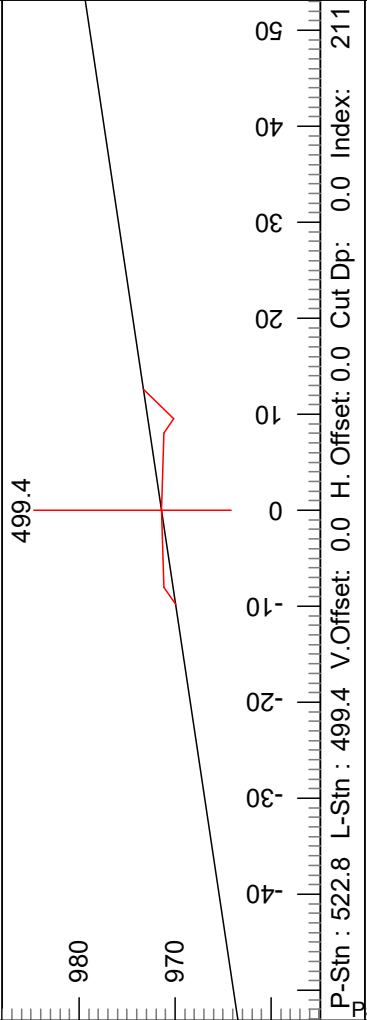
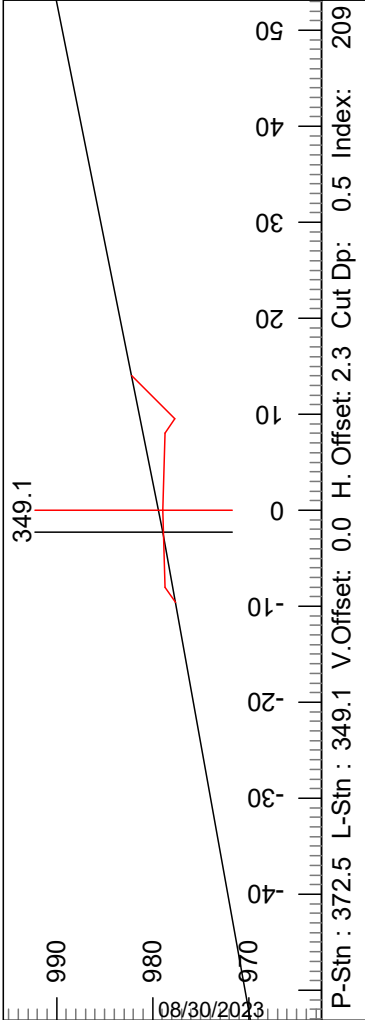
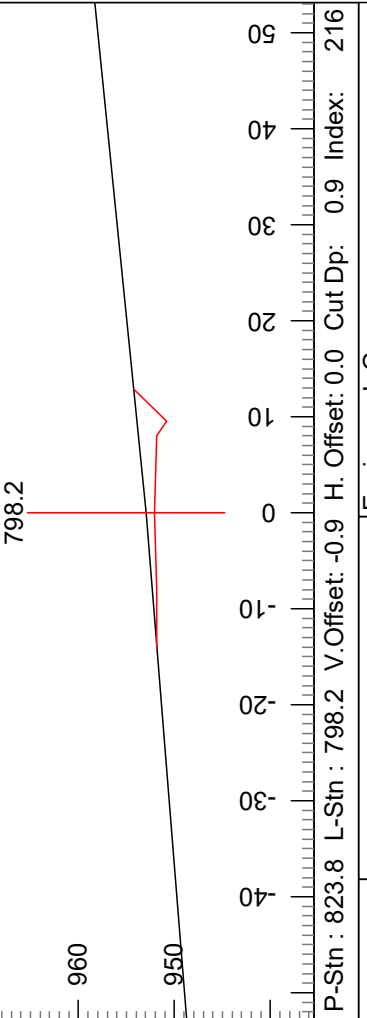
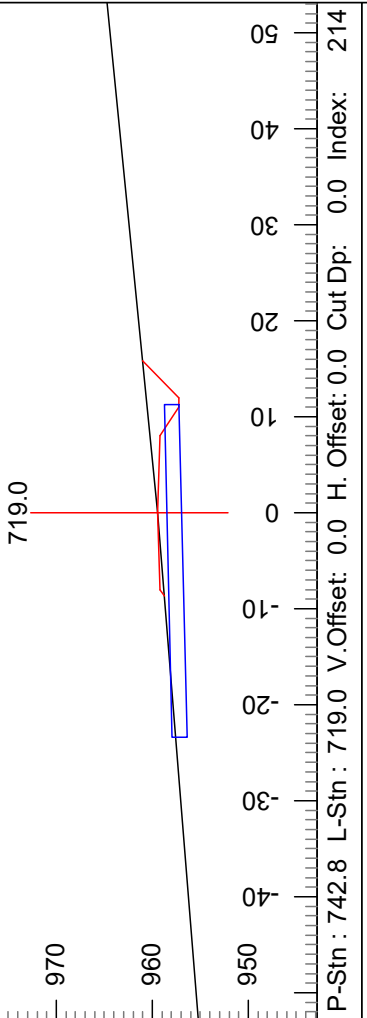
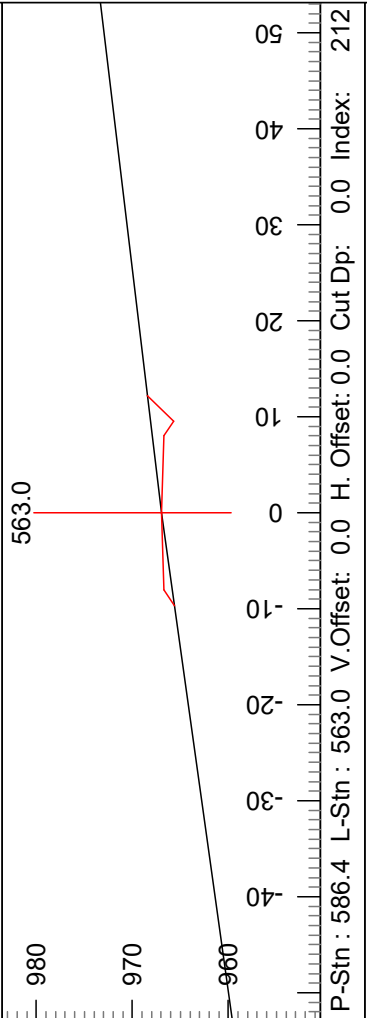
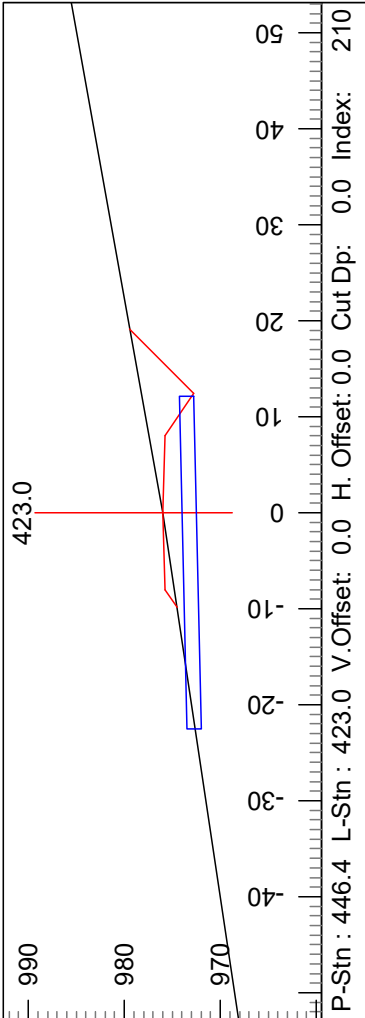
 Washington State Department of Natural Resources South Puget Sound Region	Engineer: J. Gross 23/02/15	Page 1 of 6
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Gremlin Timber Sale A-1585 Road Contract#: 30-103594		





08/30/2023

	Washington State Department of Natural Resources South Puget Sound Region	Engineer: J. Gross 23/02/15	Page 3 of 6
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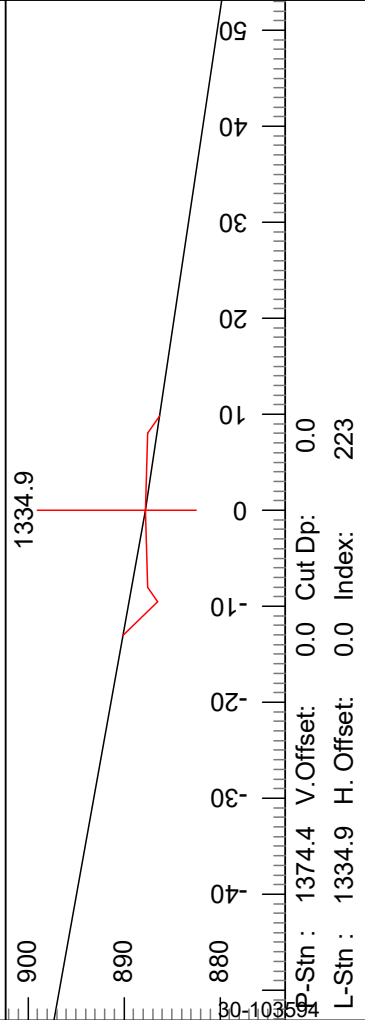
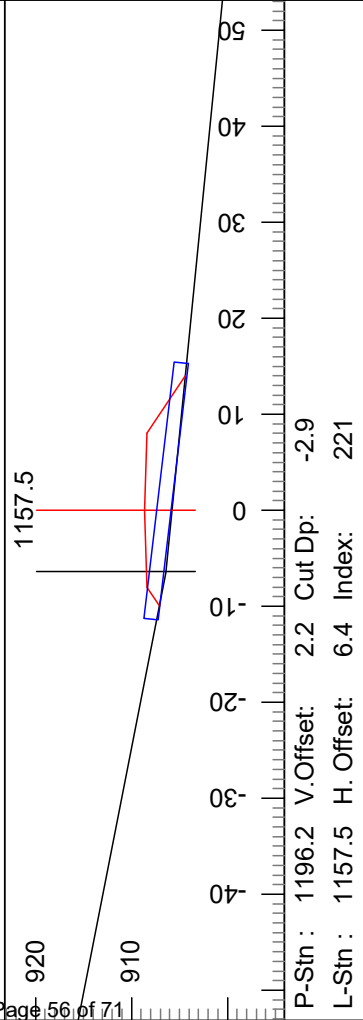
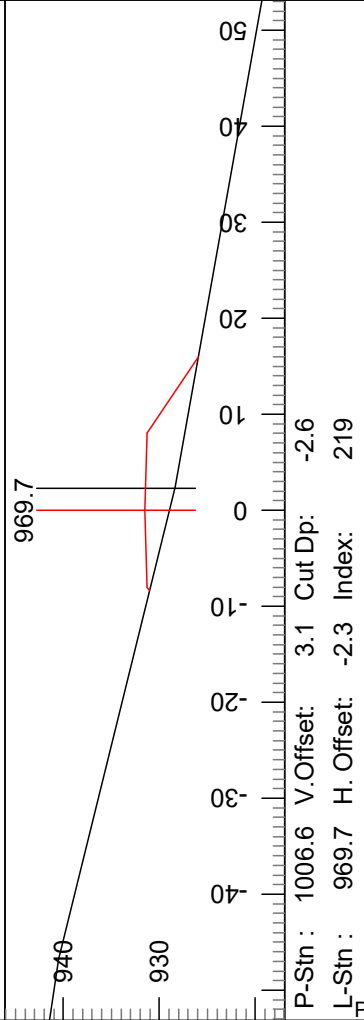
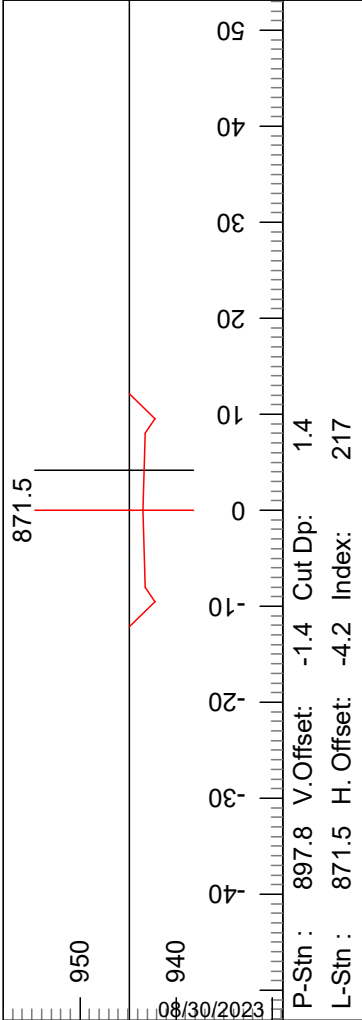
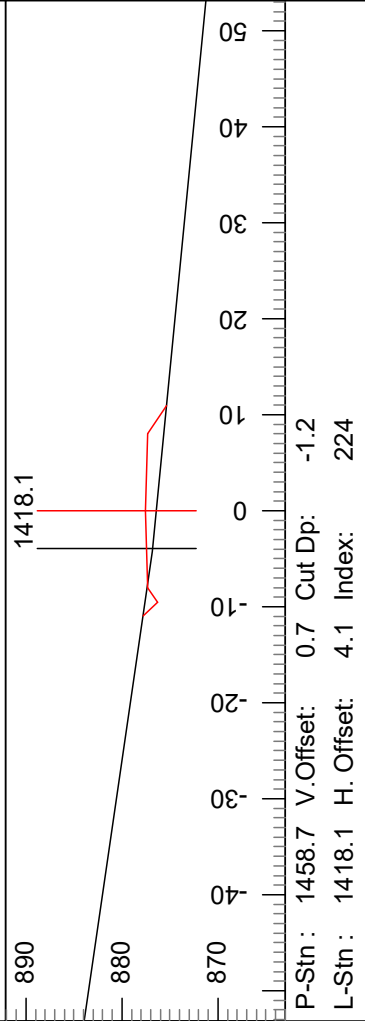
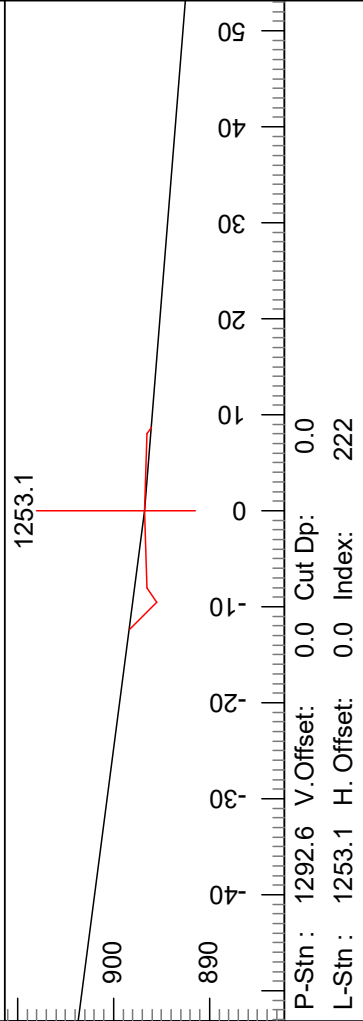
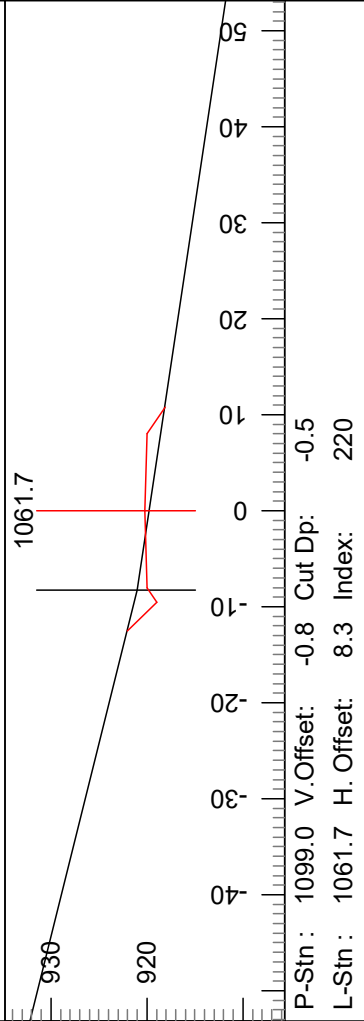
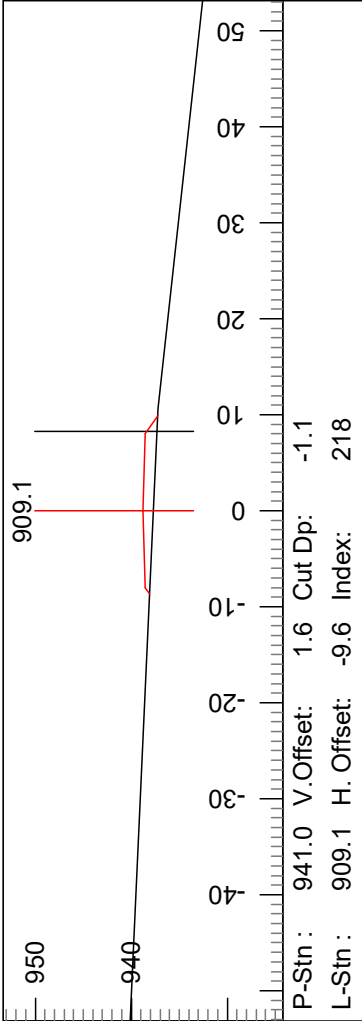


08/30/2023

Page 55 of 71

30-103594

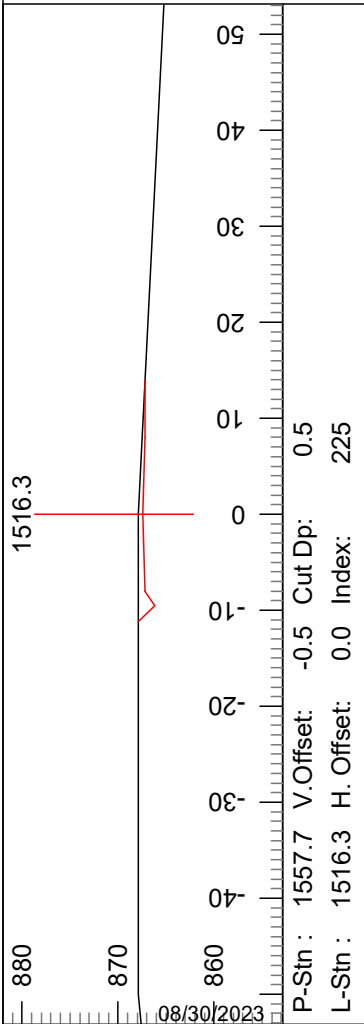
 Washington State Department of Natural Resources South Puget Sound Region	Section Scale 1:240	Engineer: J. Gross
	23/02/15	Page 4 of 6



04/30/2023

Page 56 of 71

 <p>Washington State Department of Natural Resources South Puget Sound Region</p>	<p>Section Scale 1:240</p>	<p>23/02/15</p>	<p>Page 5 of 6</p>
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08/30/2023

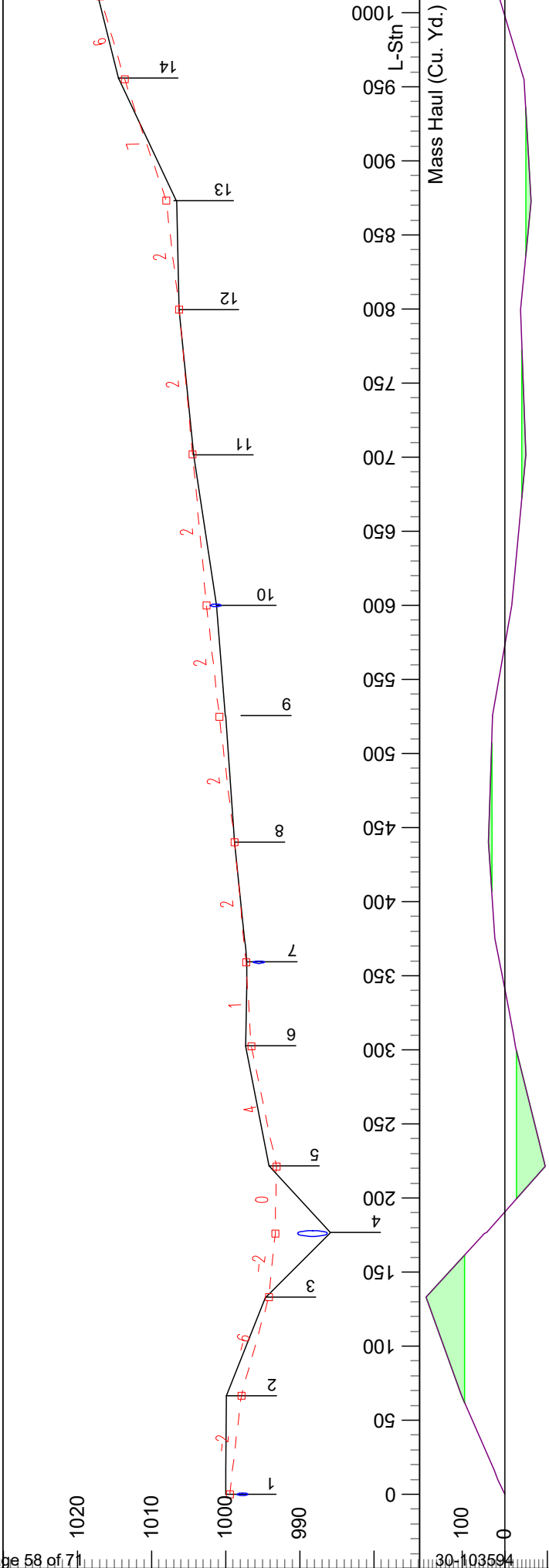
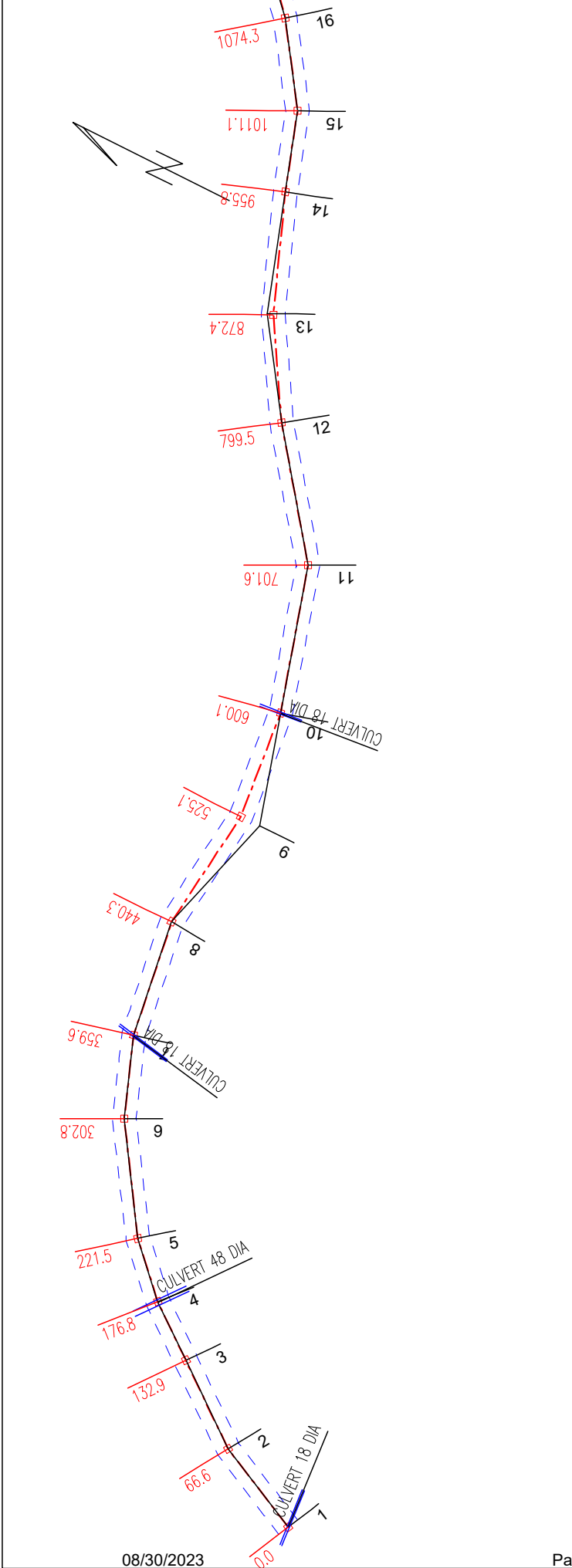
Gremlin Timber Sale
 A-1585 Road
 Contract#: 30-103594


 Washington State Department of Natural Resources
 South Puget Sound Region

Section Scale 1:240

Engineer: J. Gross

23/02/15



08/30/2023

Page 58 of 71

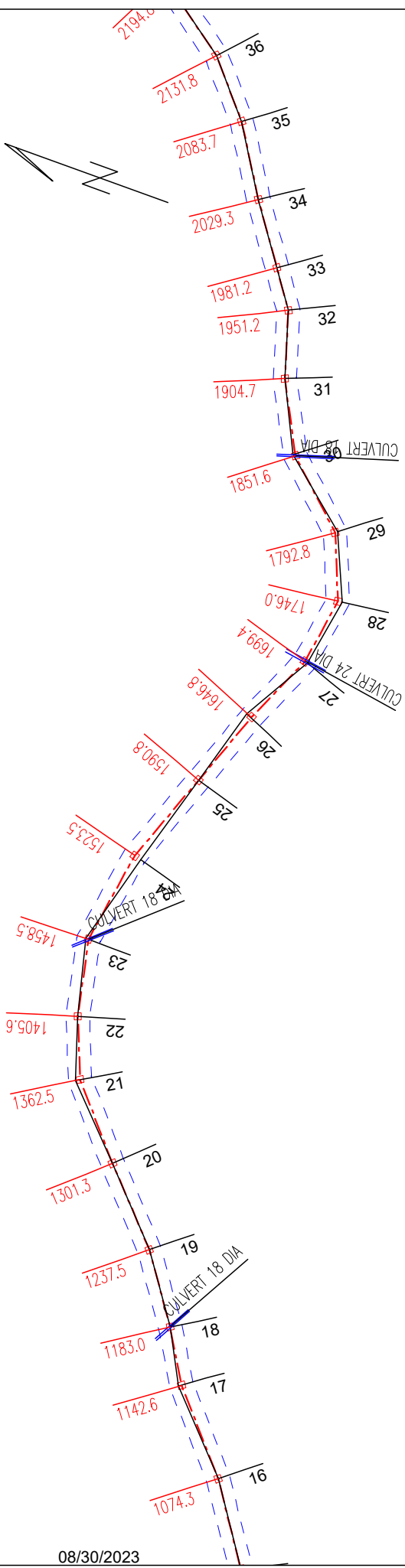
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Washington State Department of Natural Resources
South Puget Sound Region

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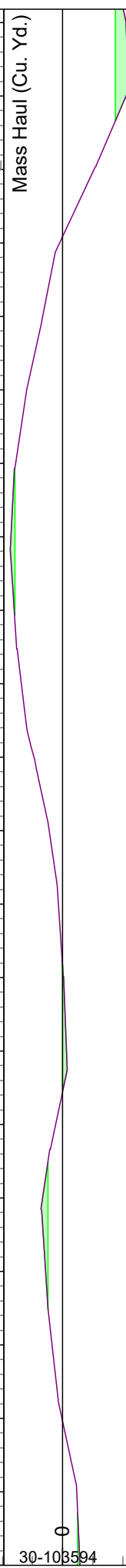
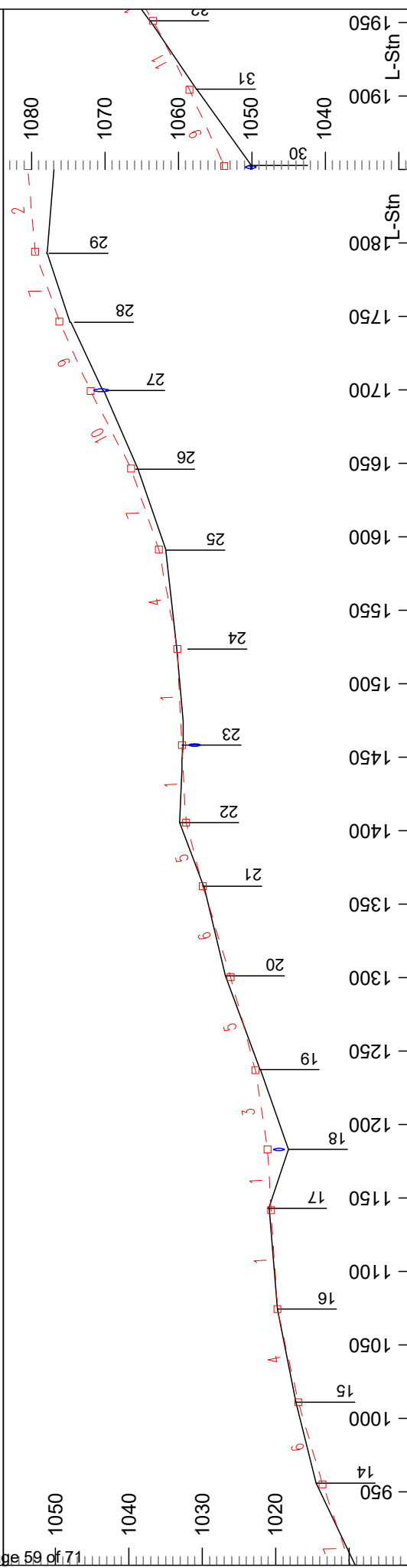
Engineer: J. Gross
23/02/15

Page 1 of 8

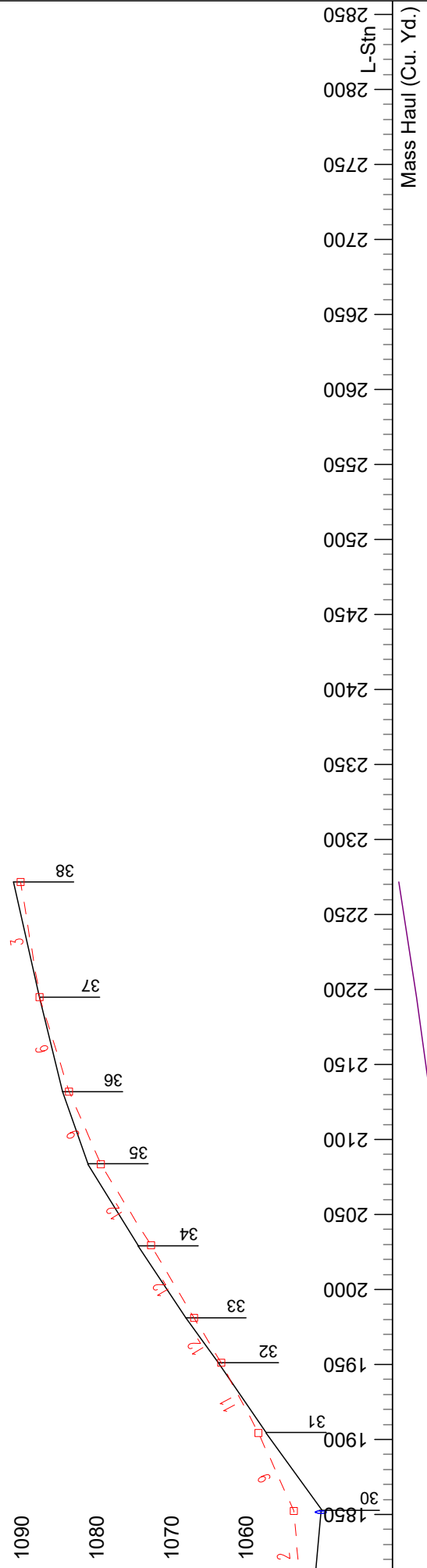
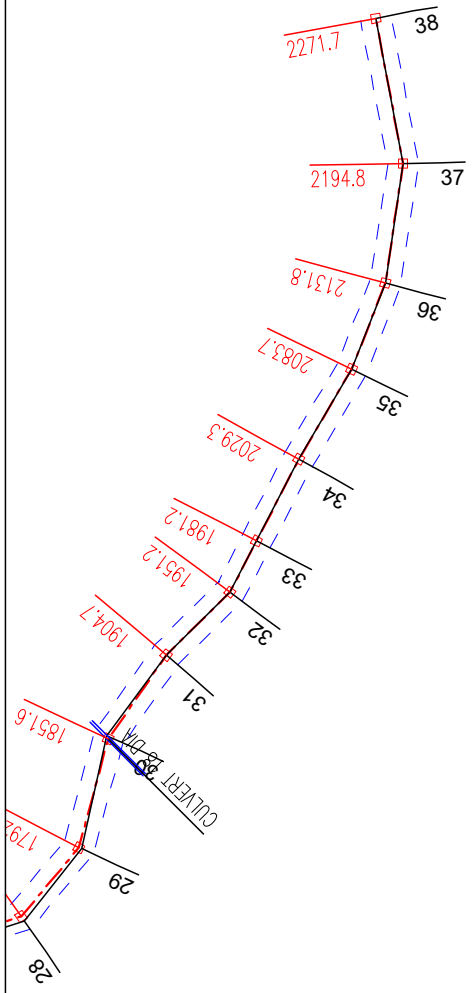


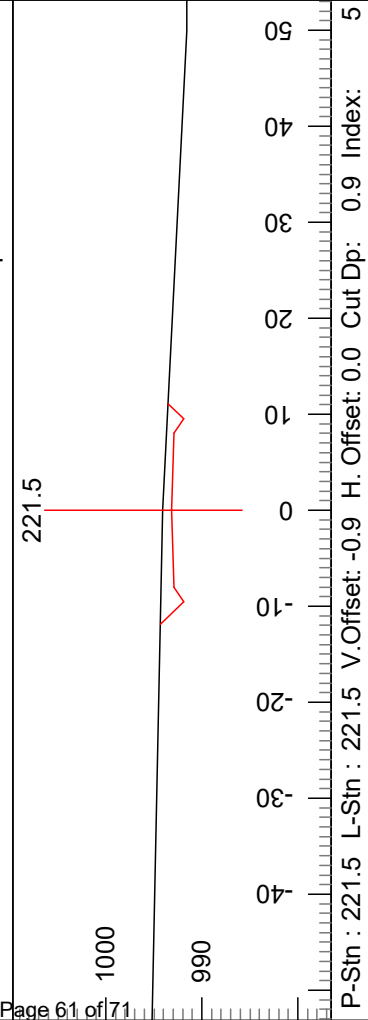
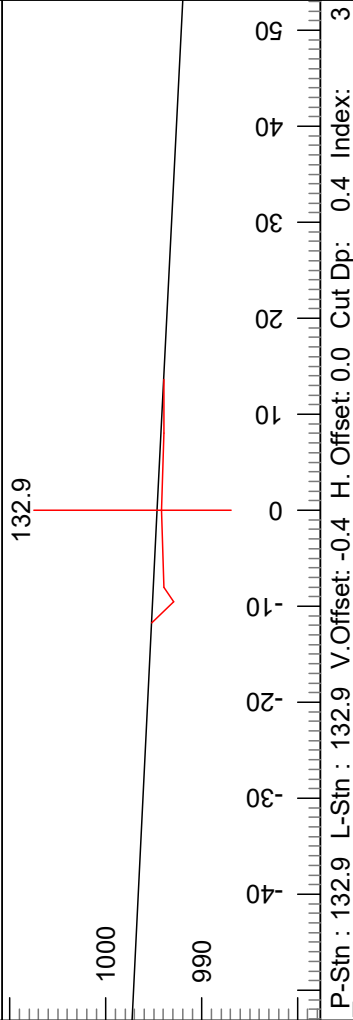
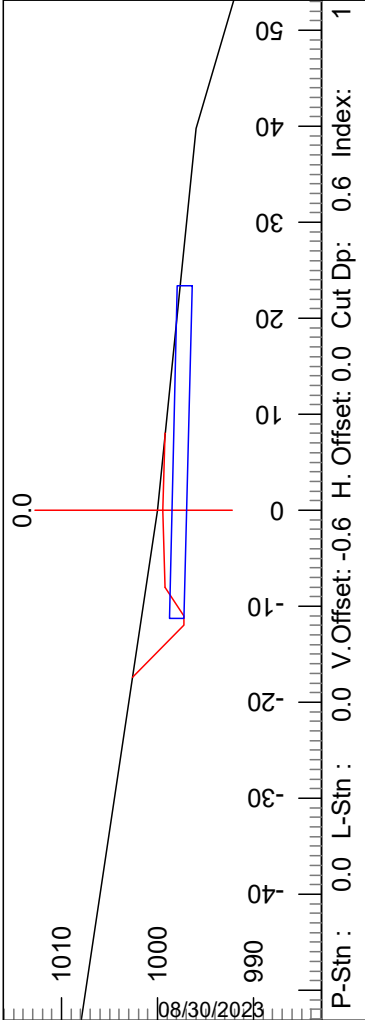
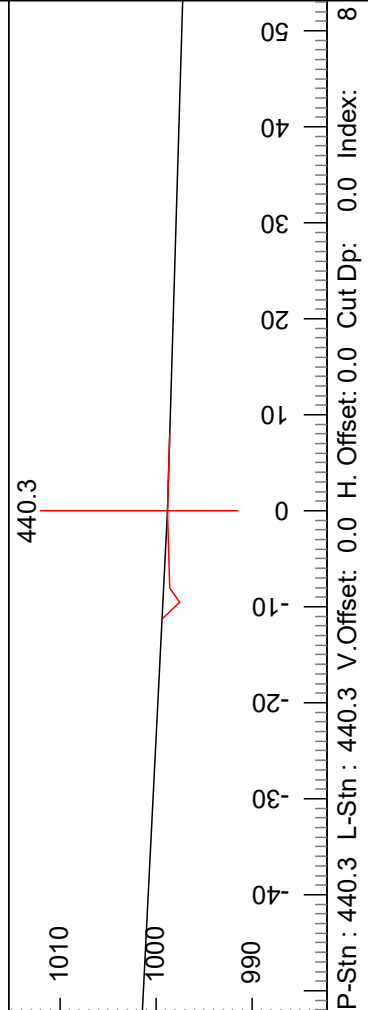
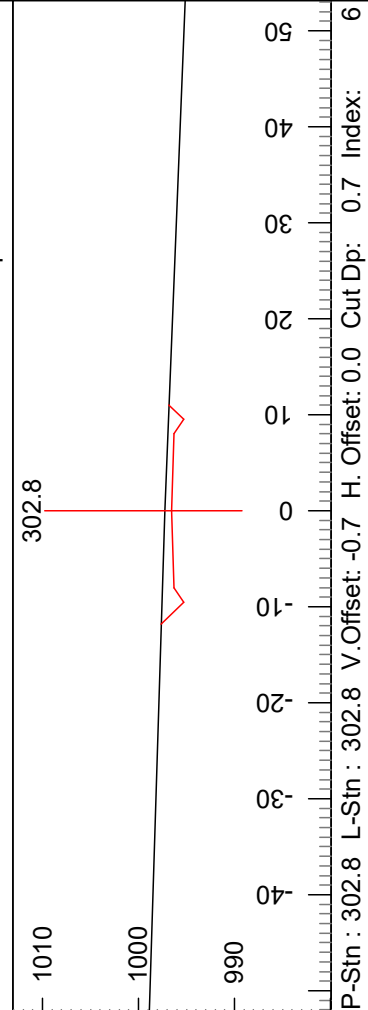
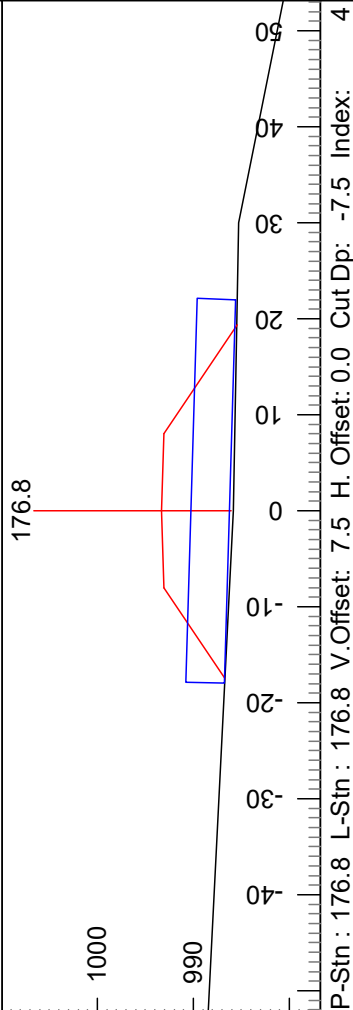
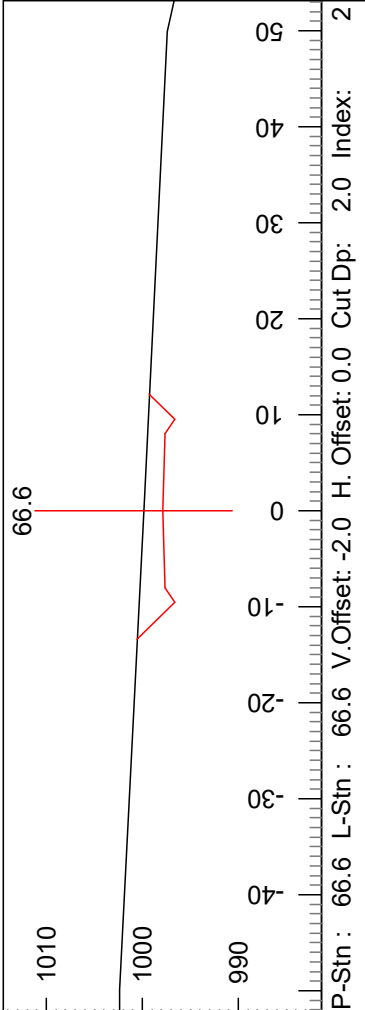
08/30/2023

Page 59 of 71



<p>Washington State Department of Natural Resources South Puget Sound Region</p>	<p>Engineer: J. Gross</p>
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<p>Gremlin Timber Sale B-0050Ext Road Contract#: 30-103594</p>	<p>23/02/15</p>
<p>Page 2 of 8</p>	





Gremlin Timber Sale
 B-0050Ext Road
 Contract#: 30-103594

Washington State Department of Natural Resources
 South Puget Sound Region

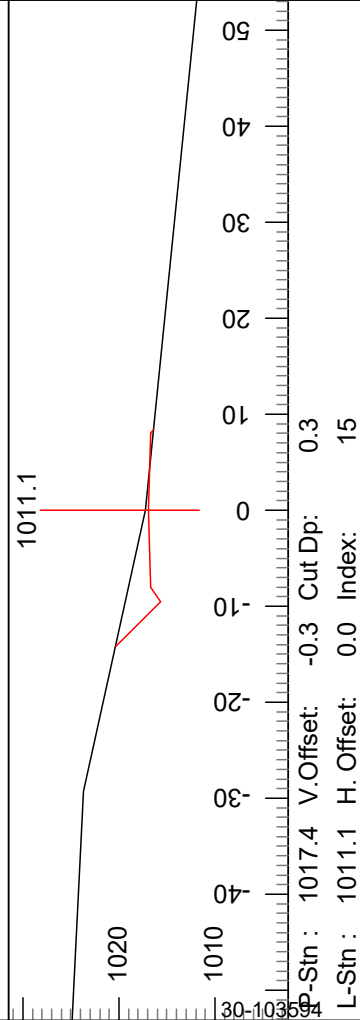
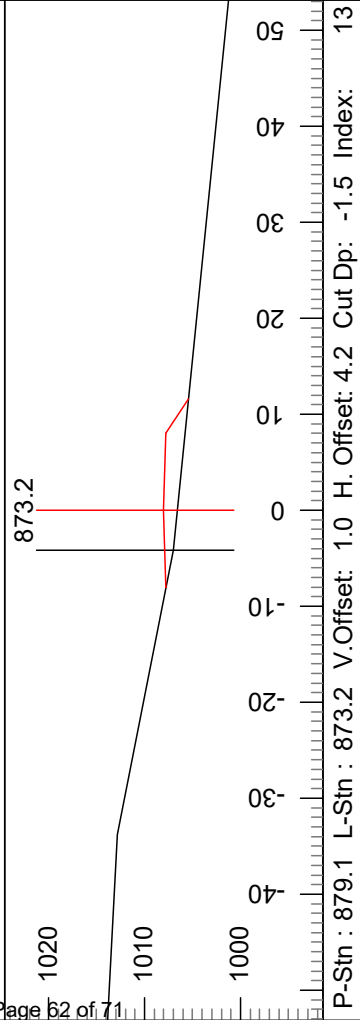
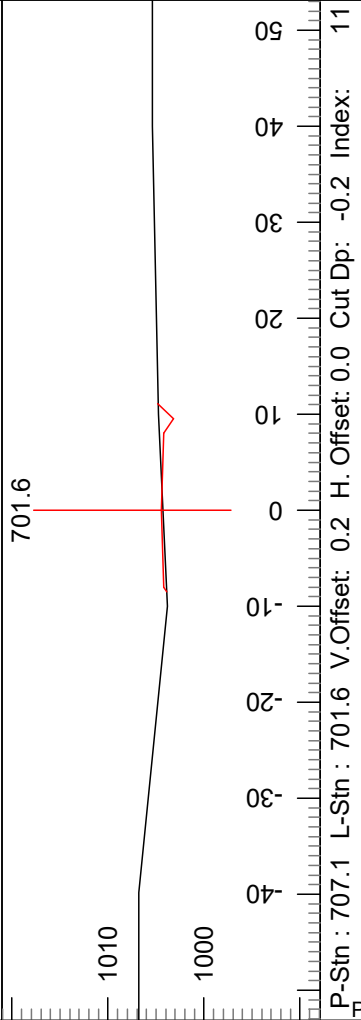
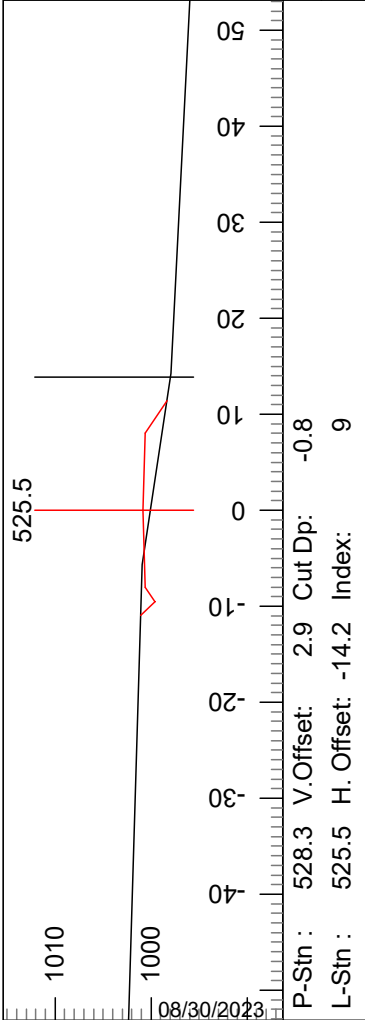
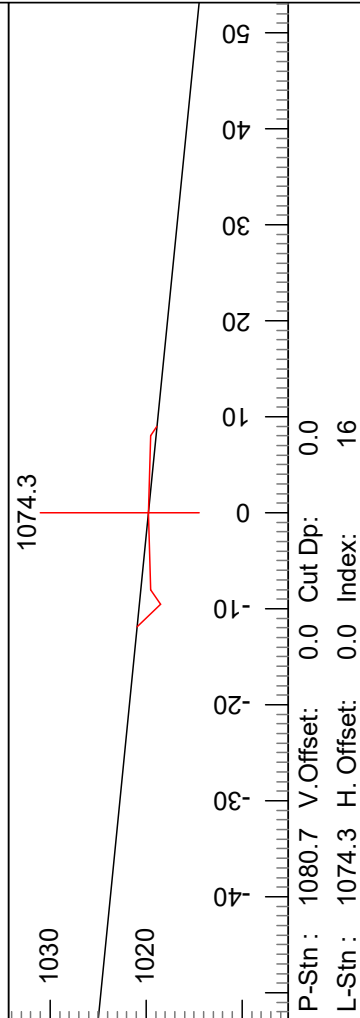
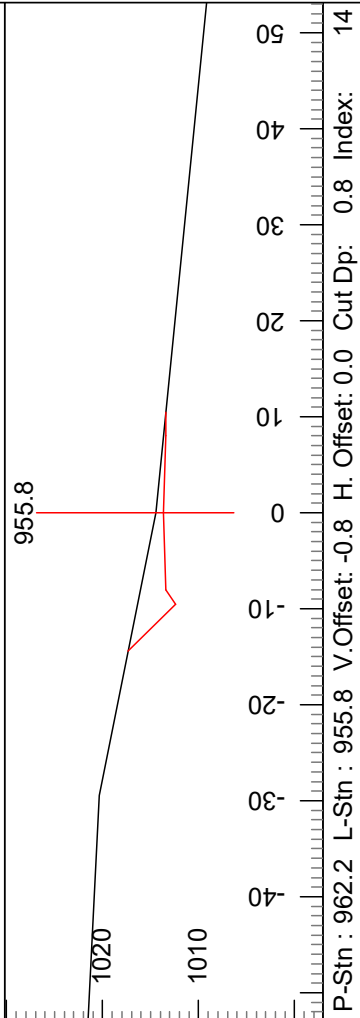
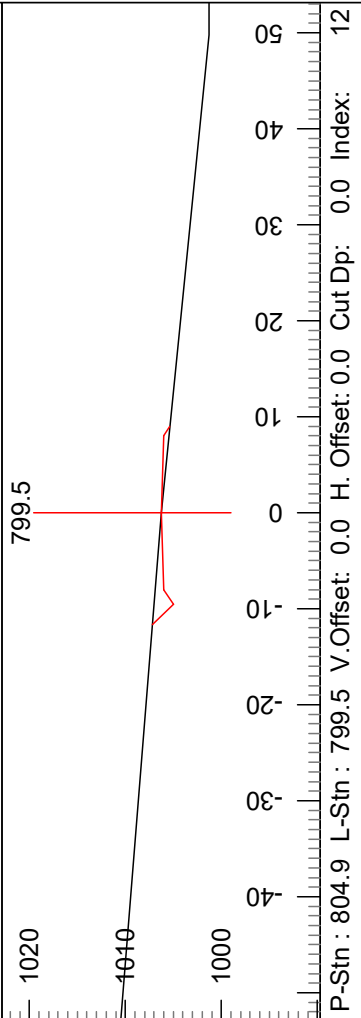
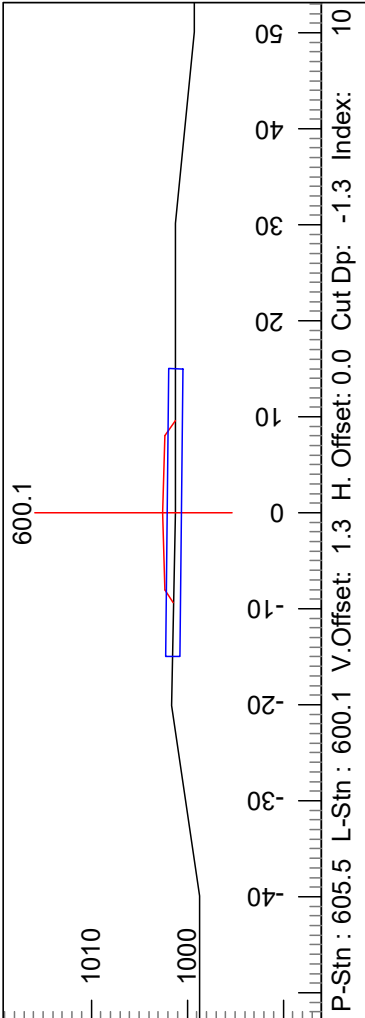
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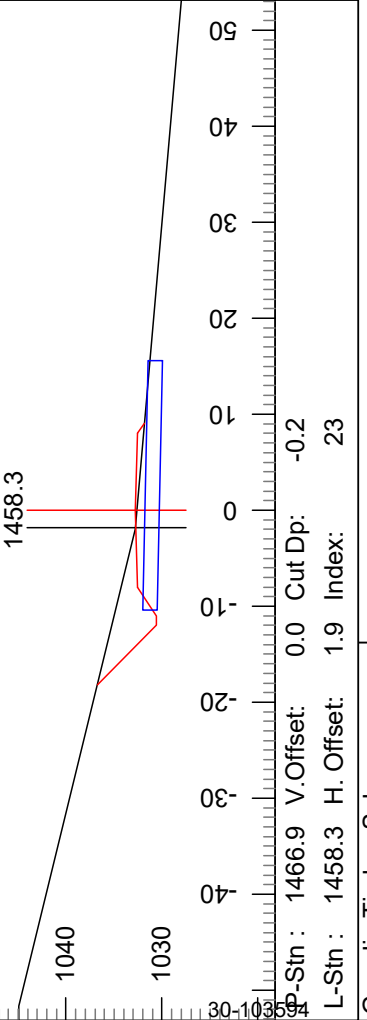
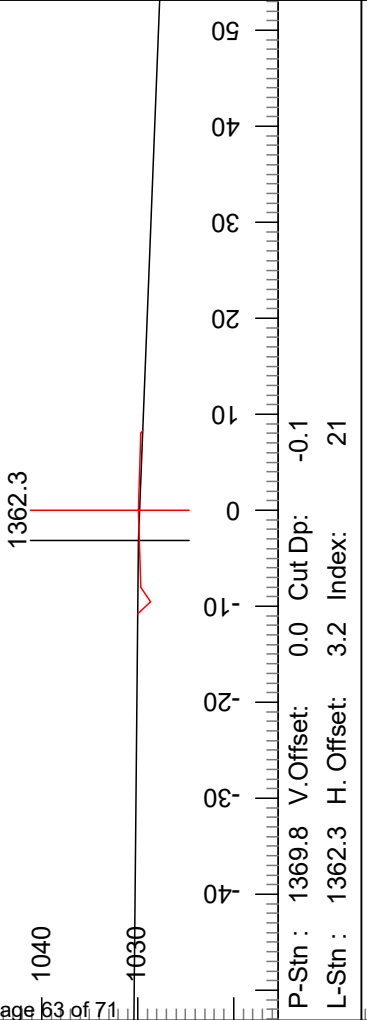
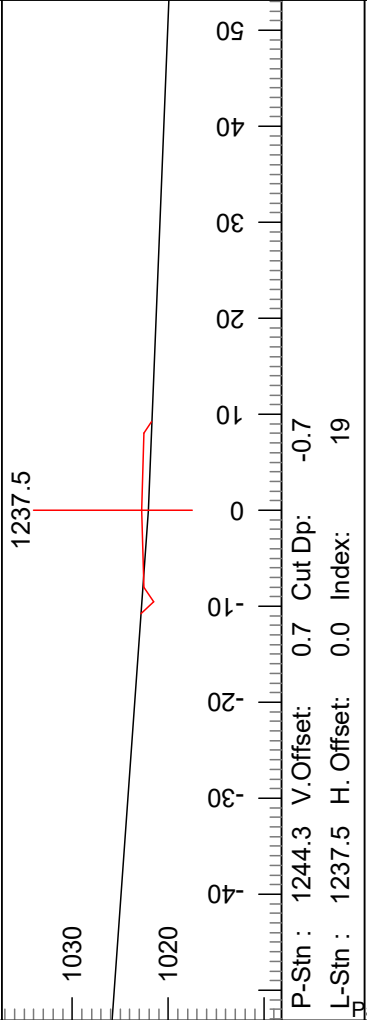
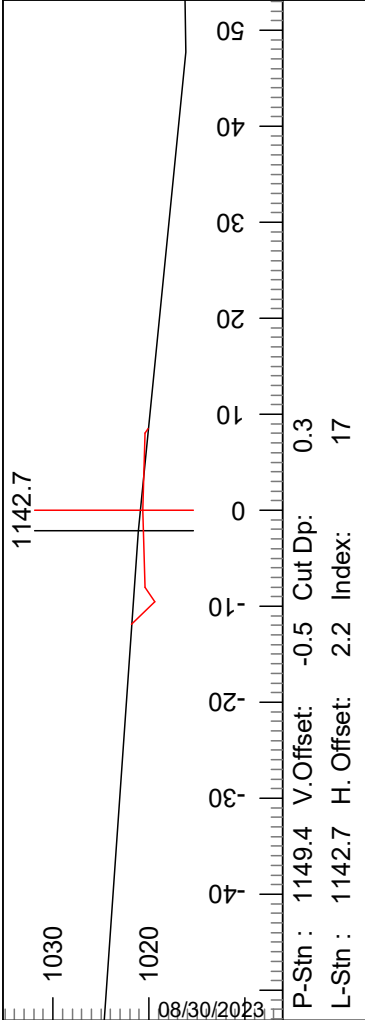
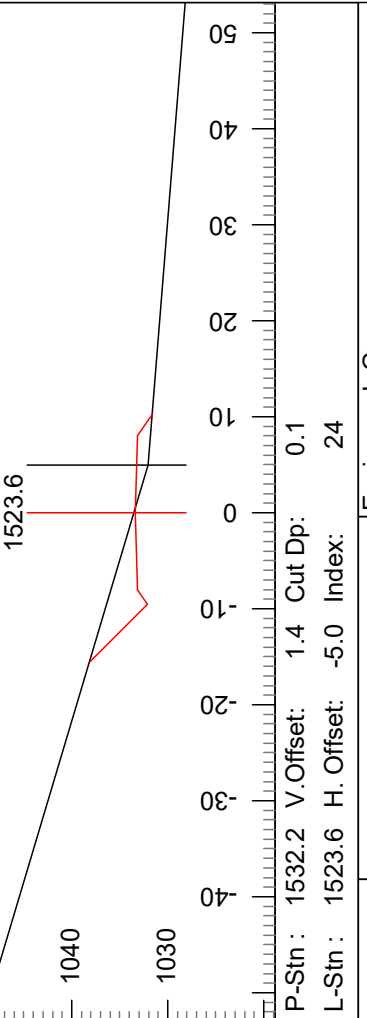
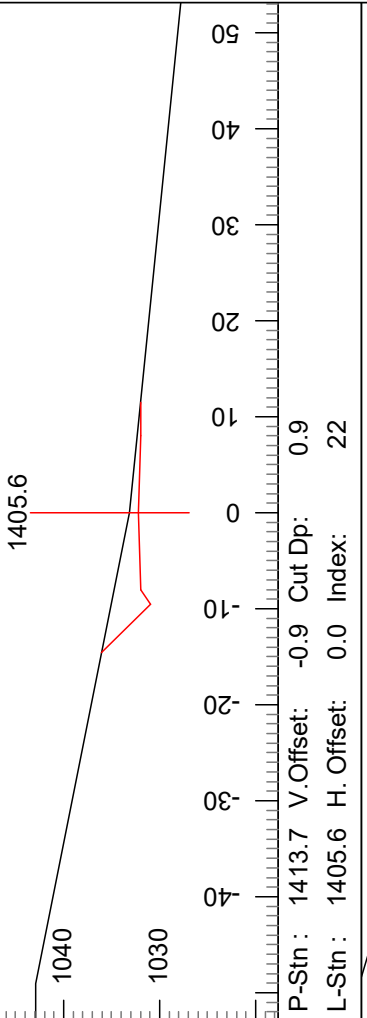
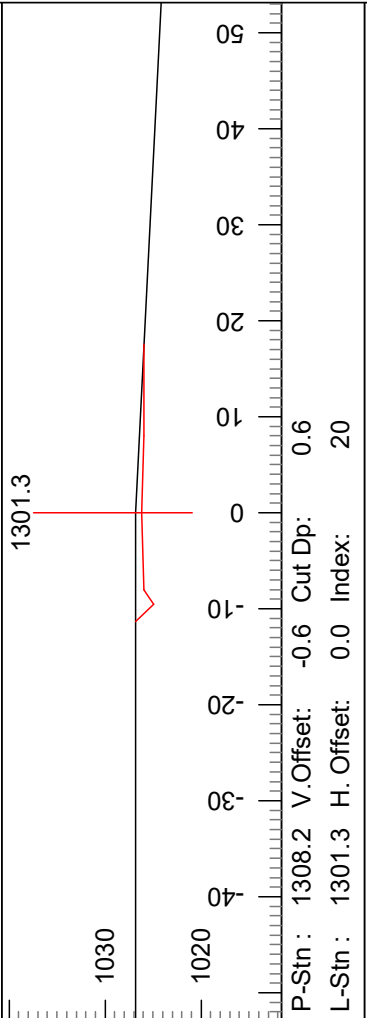
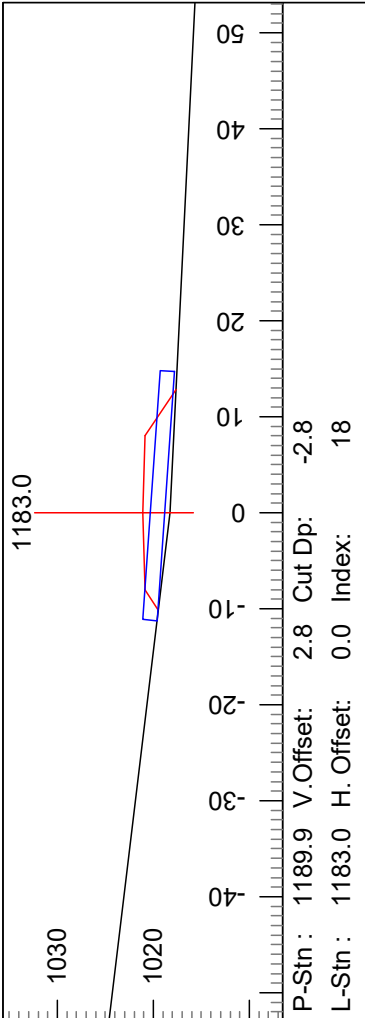
Engineer: J. Gross

Page 4 of 8





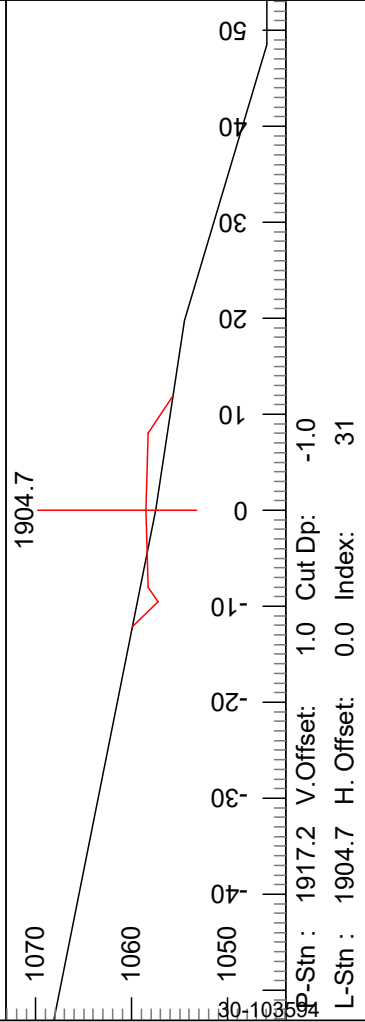
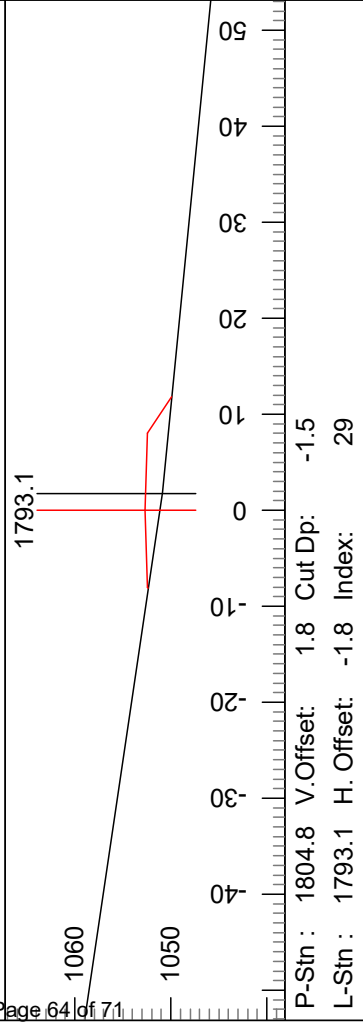
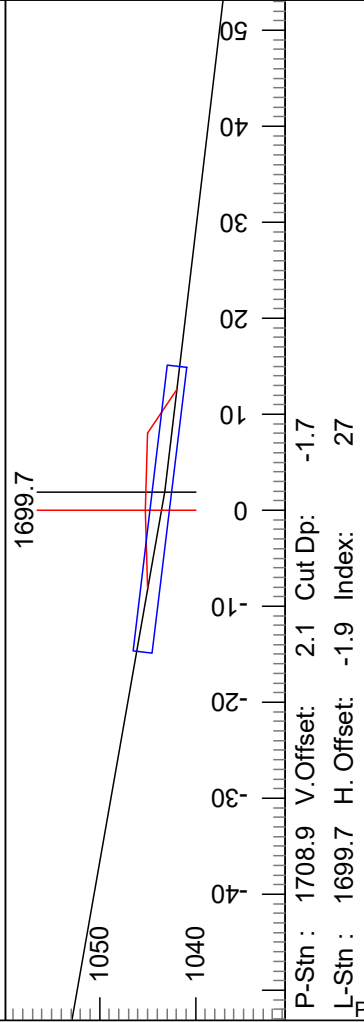
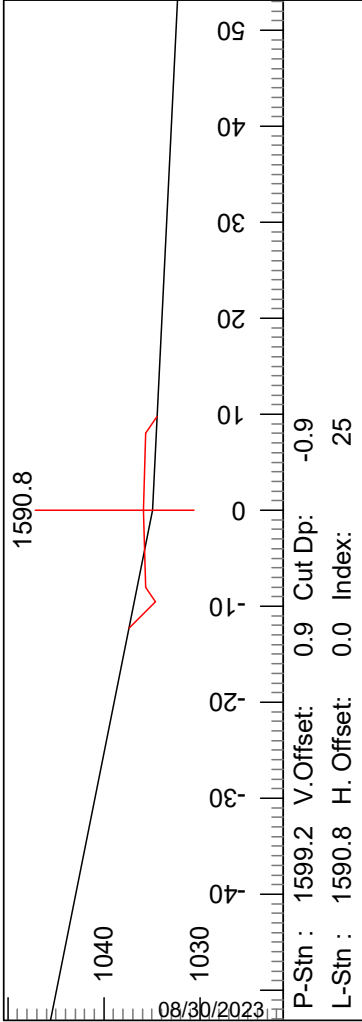
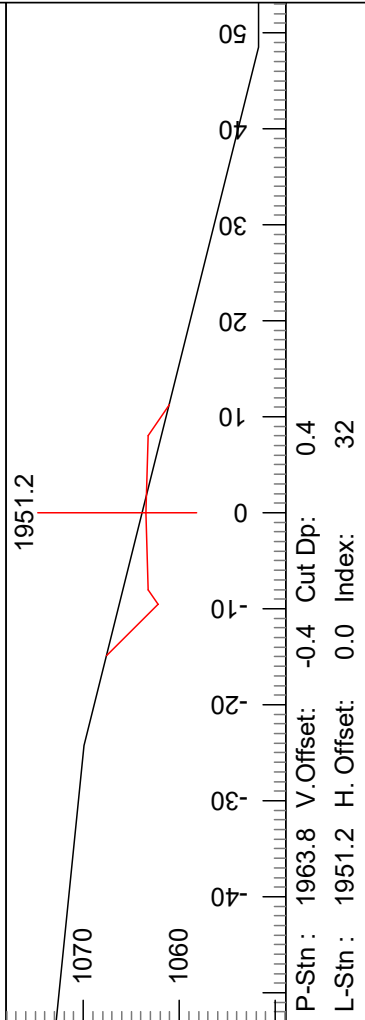
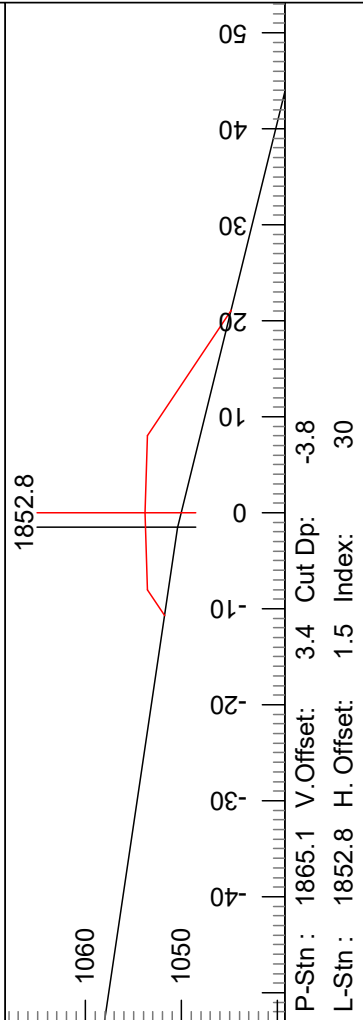
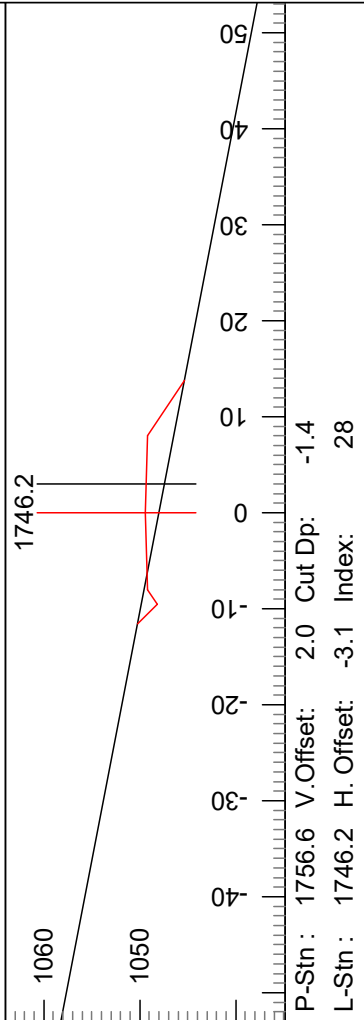
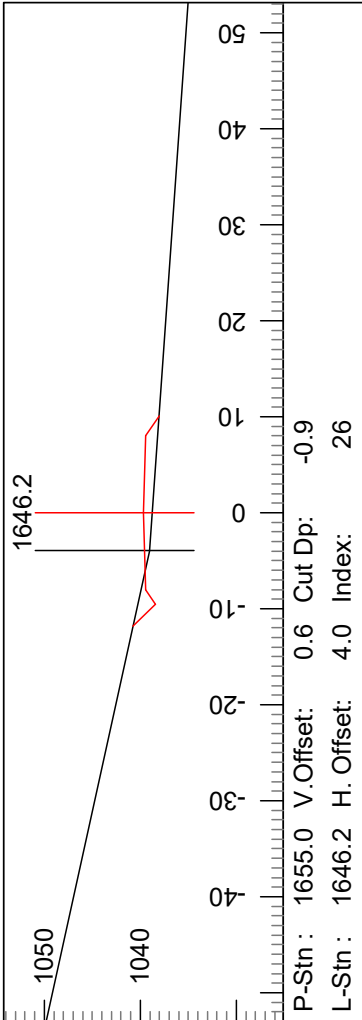
	Gremlin Timber Sale B-0050Ext Road Contract#: 30-103594	Washington State Department of Natural Resources South Puget Sound Region	Engineer: J. Gross 23/02/15	Section Scale 1:240	Page 5 of 8
	Section Scale 1:240				



08/30/2023

Page 63 of 71

 Gremlin Timber Sale B-0050Ext Road Contract#: 30-103594	 Washington State Department of Natural Resources South Puget Sound Region	Section Scale 1:240	Engineer: J. Gross 23/02/15
		Page 6 of 8	

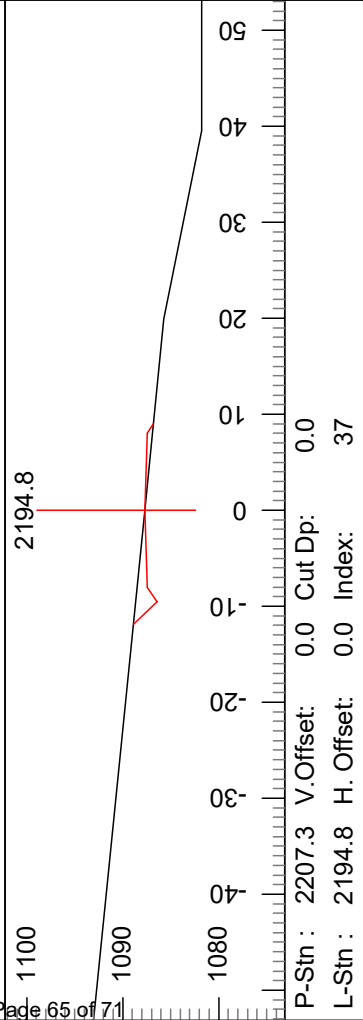
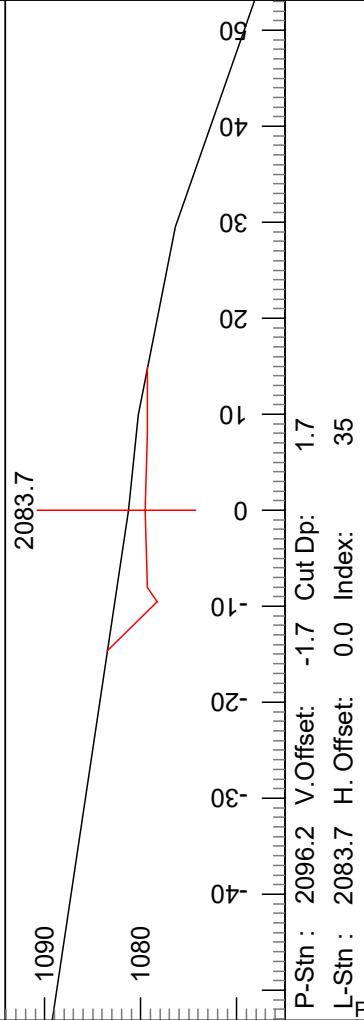
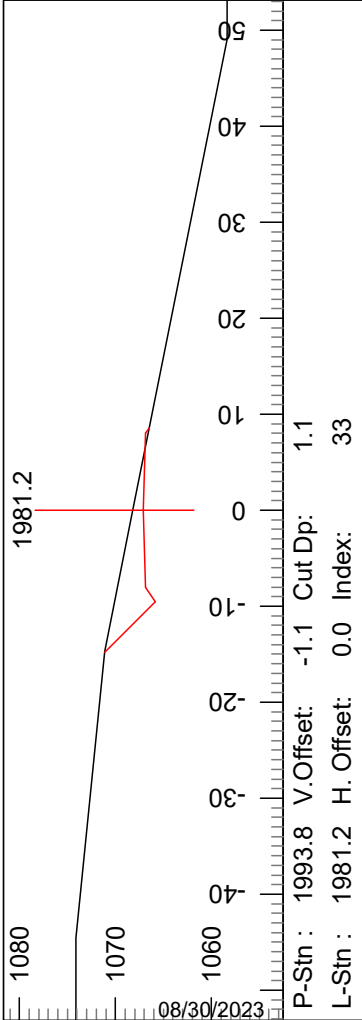
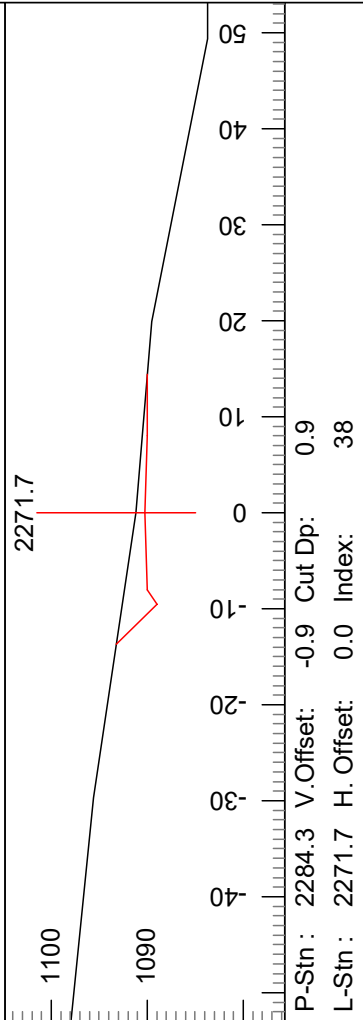
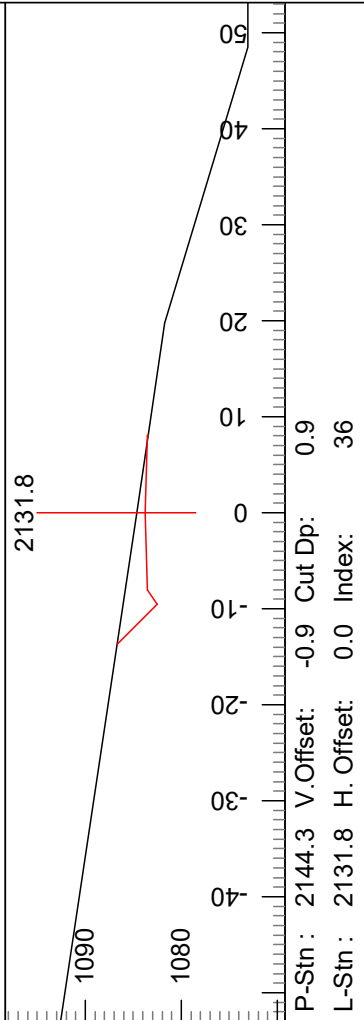
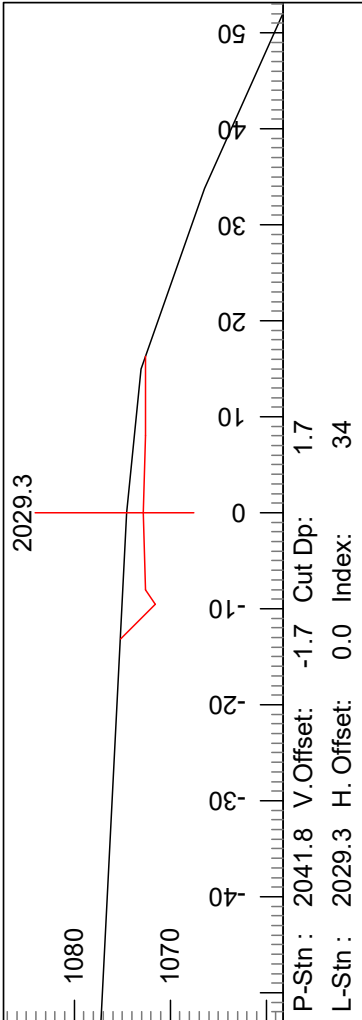


08/30/2023

Page 64 of 71

 <p>Washington State Department of Natural Resources South Puget Sound Region</p>	<p>Section Scale 1:240</p>	<p>23/02/15</p>	<p>Page 7 of 8</p>
	<p>Engineer: J. Gross</p>		

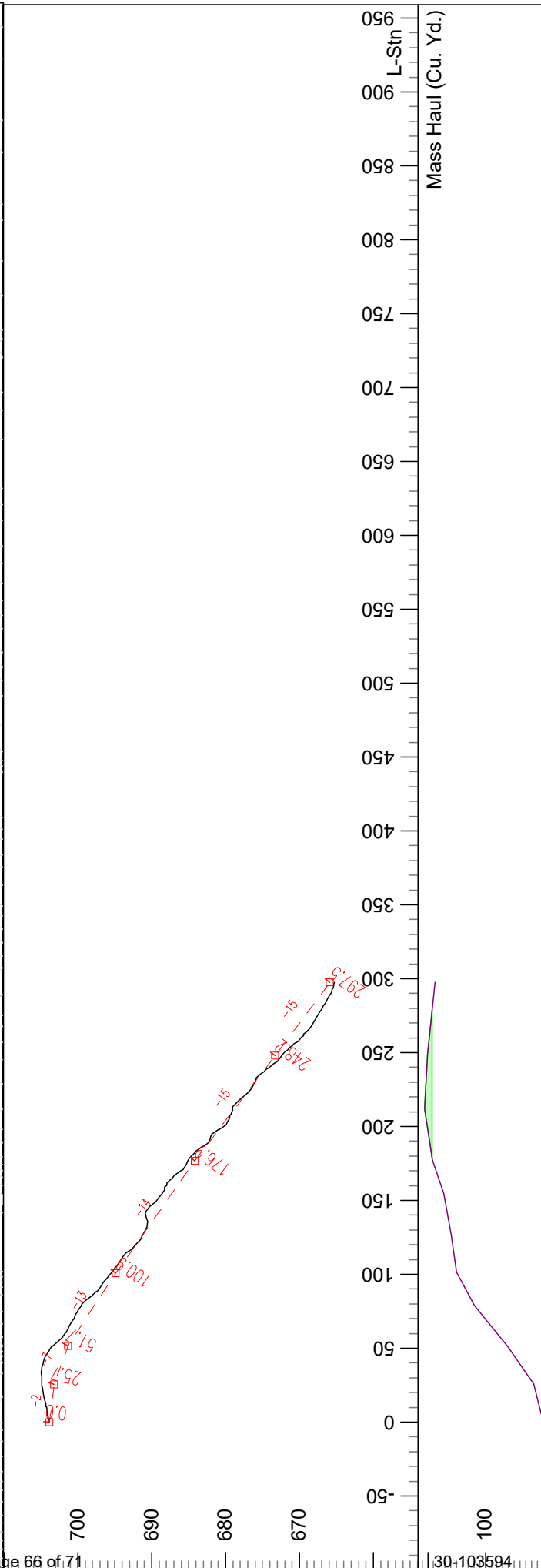
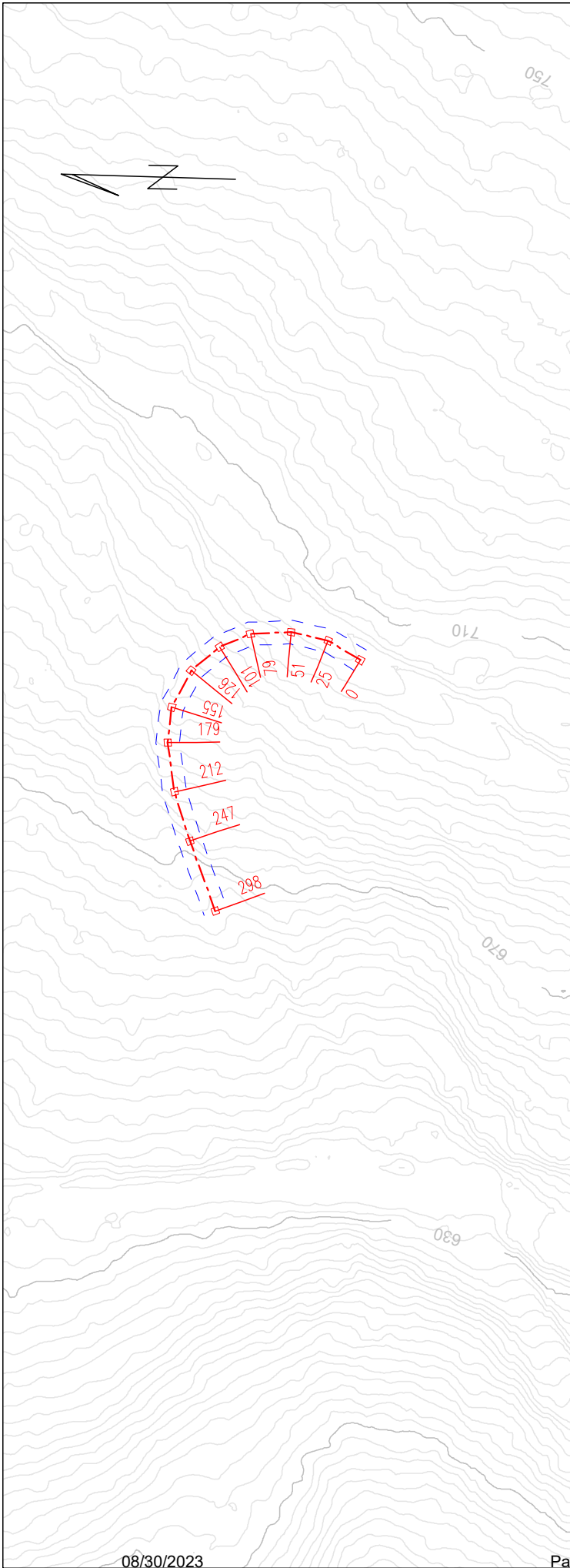
Gremlin Timber Sale
B-0050Ext Road
Contract#: 30-103594



08/30/2023

Page 65 of 71

30-103594



08/30/2023

Page 66 of 71

30-103594

Gremlin Timber Sale
 BPA-2638_SF Road
 Contract#: 30-103594

Washington State Department of Natural Resources
 South Puget Sound Region

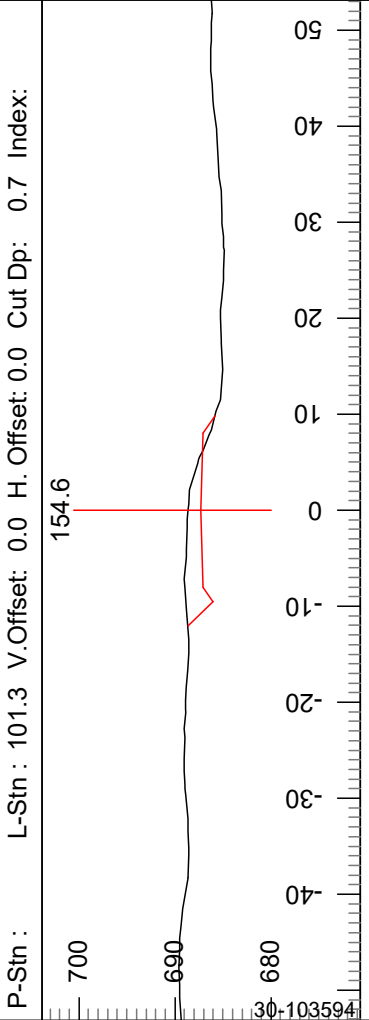
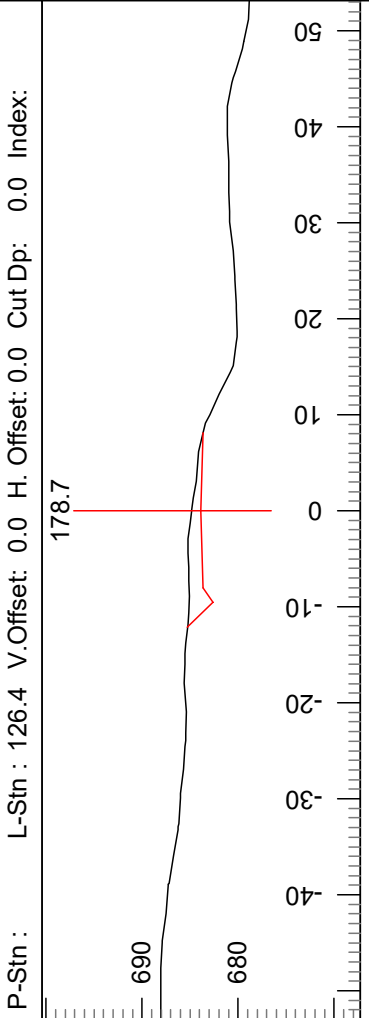
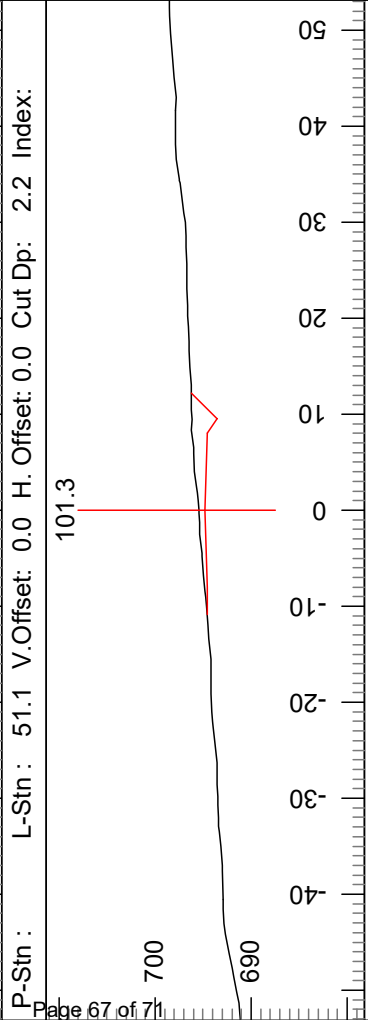
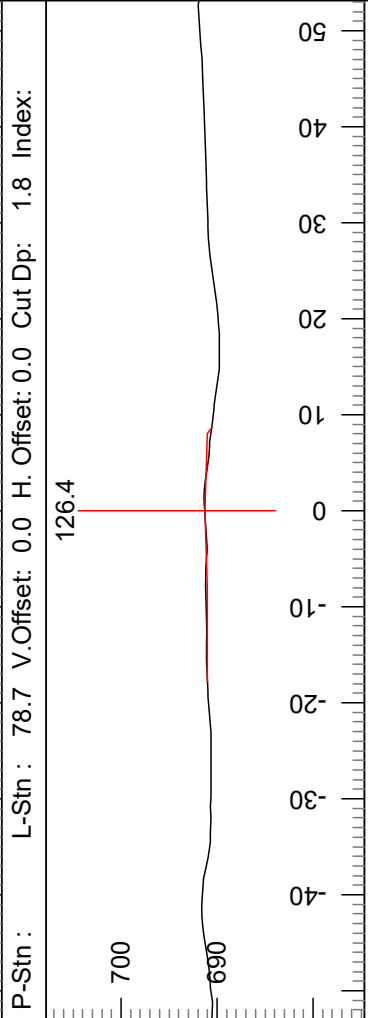
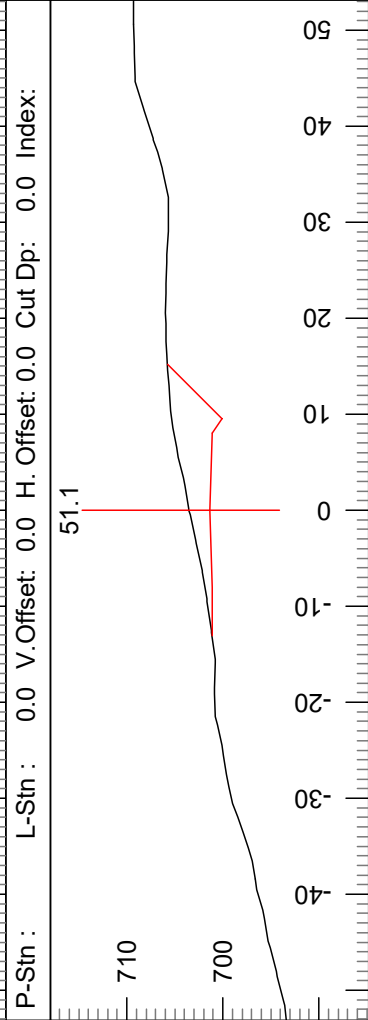
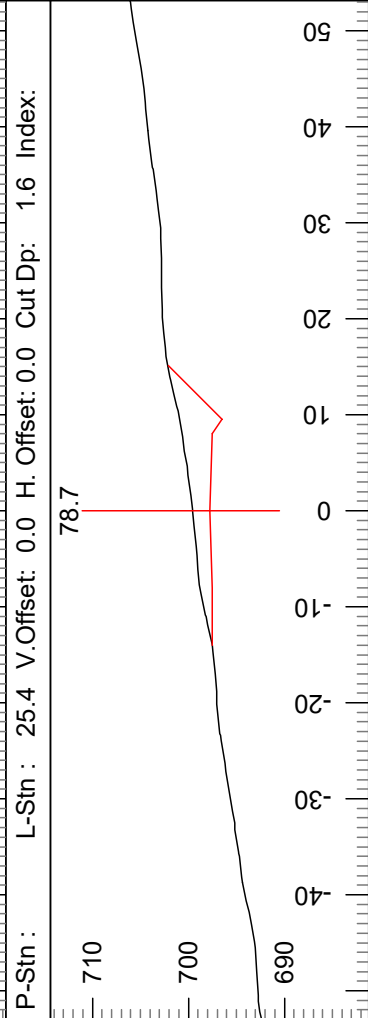
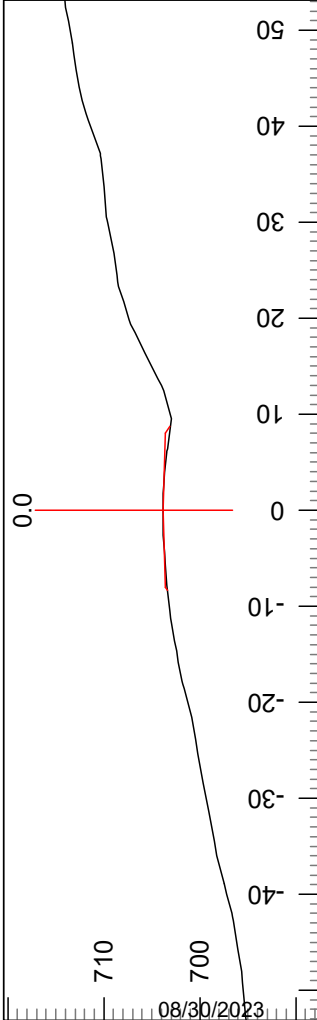
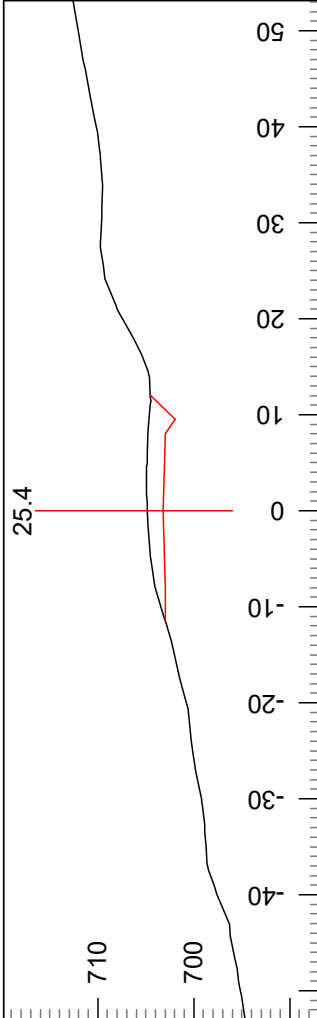


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 Profile Vert Scale 1:240
 Profile Horz Scale 1:1200

Engineer: J. Gross

23/02/15

Page 1 of 3

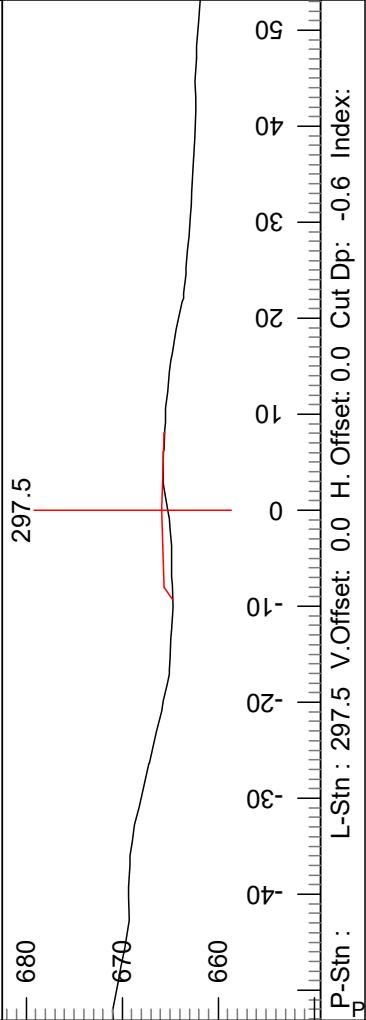
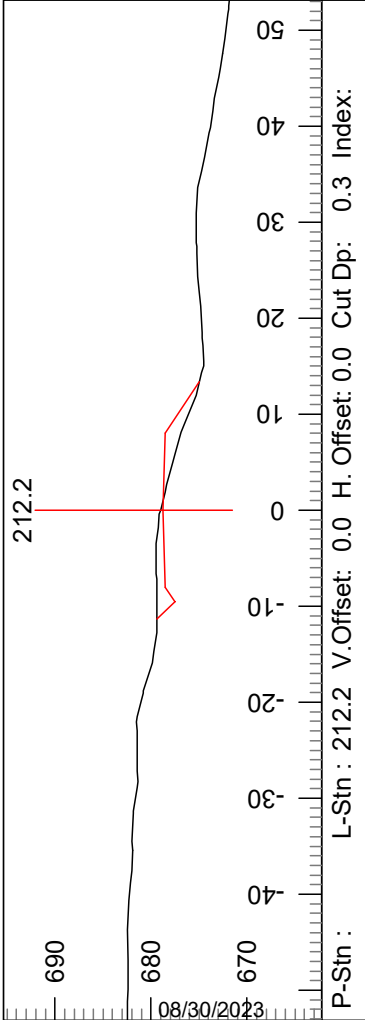
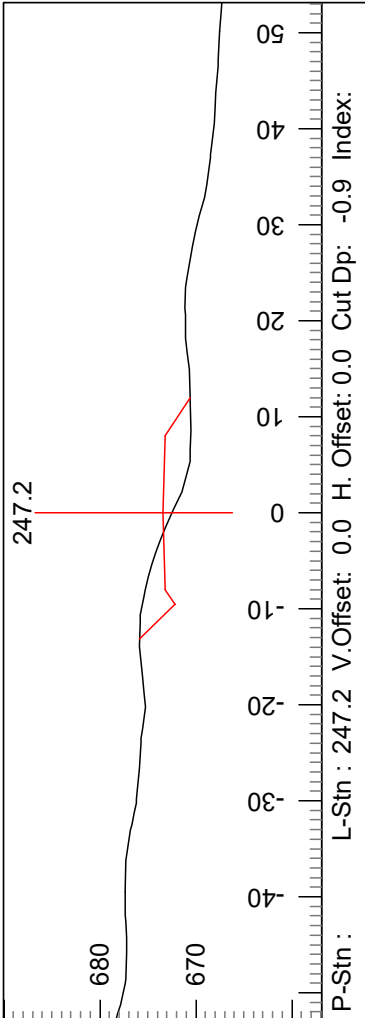


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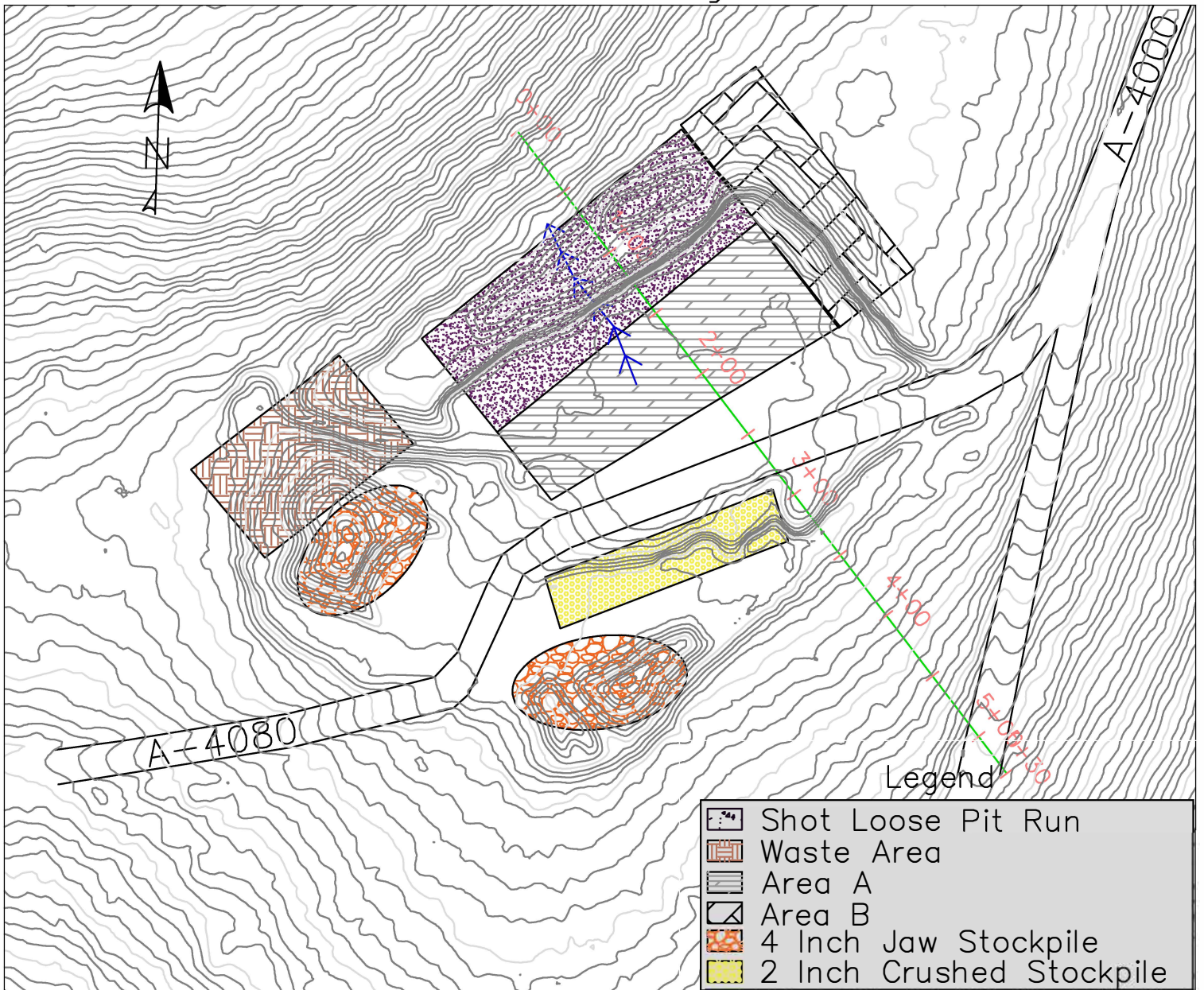
Page 67 of 71

30-103594

	Washington State Department of Natural Resources South Puget Sound Region		Engineer: J. Gross
	Gremlin Timber Sale BPA-2638_SF Road Contract#: 30-103594	Section Scale 1:240	23/02/15

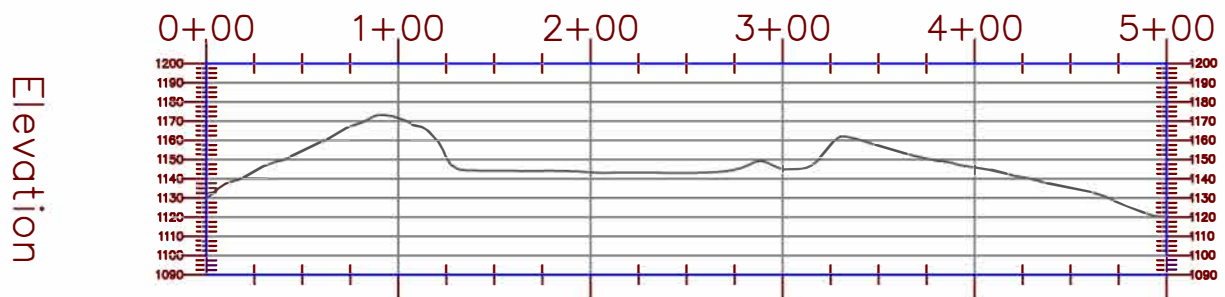


North Rim Quarry Pit Plan



CROSS SECTION PROFILE VIEW

Station



DRAWN BY: J. Gross

STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES
SOUTH PUGET SOUND REGION

NORTH RIM QUARRY DEVELOPMENT PLAN

NW ¼, NW ¼, Section 32, Township 18 North, Range 3 West, W.M.

(Page 2 of 3)

1. Mining shall begin in Area A and development shall continue into Area B.
2. All vegetation including stumps shall be cleared a minimum of 30 feet beyond the top of all working faces. Trees shall be cleared to a minimum of ¾ of the height of the tallest tree adjacent to the pit.
3. Overburden shall be pushed to the designated waste area and compacted. Minimal acceptable compaction is achieved by placing waste material in 2 foot or shallower lifts and routing excavation equipment over entire width of the lifts.
4. Root wads and organic debris larger than one cubic foot in volume shall be separated from overburden material and piled in the designated waste area.
5. Quarry faces shall not exceed 30 feet in height and shall be sloped no steeper than 1/2:1.
6. Working bench width shall be a minimum of 25 feet.
7. The quarry floor shall have continuity of slope be left in a smooth and neat condition, providing drainage to the southwest at a minimum of 2 percent. All knobs, bumps, or extrusions shall be removed to the designated floor level by excavation or drill and shoot techniques.
8. Oversize material remaining in the rock source at the conclusion of use shall not exceed 5 percent of the total volume mined during that operation. Oversize material is defined as rock fragments larger than two feet in any direction. At the conclusion of operations, oversize material shall be placed as directed by the Contract Administrator. All existing oversize material shall be utilized prior to the development of that area.
9. At the end of operations, quarry faces and walls shall be scaled and cleared of loose and overhanging material, benches shall have safety berms constructed or access blocked to highway vehicles. Berms shall be at least mid-axle height of the largest self-propelled mobile equipment which usually travels adjacent to benches. Upon completion of operations in the pit, the area will be left in a condition that will not endanger public safety, damage property, or be hazardous to animal or human life.

10. All operations shall be carried out in compliance with all regulations of:
 - a. Regulations and Standards Applicable to Metal and Nonmetal Mining and Milling Operations@ (30 CFR) U.S. Department of Labor, Mine Safety and Health Administration.
 - b. "Safety Standards for Construction Work" (296-155 WAC), Washington Department of Labor and Industries.

11. The Purchaser shall submit an informational drilling and shooting plan to the Contract Administrator 5 calendar days prior to any drilling.

12. At the completion of rock source operations, Purchaser shall ask Contract Administrator for written approval of final rock source condition and compliance with the terms of this plan.

13. The pit area shall be worked and left in a condition that future operations may proceed in an orderly manner.

14. Upon completion of operations, the site shall be cleared of all temporary structures, equipment and rubbish, and shall be left in a neat and presentable condition.

DEPARTMENT OF NATURAL RESOURCES - SOUTH PUGET SOUND REGION

FORM 9-87(Rev. 01-09)

Road Development Cost Estimate

(For internal DNR use only. Costs are estimates only & are not guaranteed by the State or part of the Road Plan.)

REGION: SPS

UNIT: Delphi

SALE/PROJECT NAME: Gremlin Timber Sale

CONTRACT NUMBER: 30-103594

LEGAL DESCRIPTION: T17R5W, T18R4W, T18R5W

ROAD NUMBER:	A-0600Ext, A-0609, A-1585, B-0050Ext, BPA-2638_SF	B-0050	A-Line, A-0600, A-4000, A-4080, A-1600, B-Line, B-0050, BPA-2638, Old A-Line
ROAD STANDARD:	Construction	Reconstruction	Pre-haul maintenance
NUMBER OF STATIONS:	51.61	15.94	594.02
SIDESLOPE:	20-60%	30%	0%
CLEARING AND GRUBBING:	\$11,710	\$2,123	
EXCAVATION AND FILL:	\$17,603	\$3,507	
MISC. MAINTENANCE:			\$21,251
ROCK TOTALS (Cu. Yds.):			
Ballast	5824 \$106,049	\$18,032	\$0
Crushed Rock	4068 \$0	\$0	\$45,566
CULVERTS AND FLUMES:	\$15,600	\$4,990	\$16,852
STRUCTURES:	\$0	\$0	\$0
GENERAL EXPENSES:	\$12,077	\$2,579	\$6,694
MOBILIZATION:	\$4,427	\$4,427	\$4,427
TOTAL COSTS:	\$167,465	\$35,657	\$94,790
COST PER STATION:	\$3,245	\$2,237	\$160

ROAD DEACTIVATION AND ABANDONMENT COSTS: \$8,771

NOTE¹: This appraisal has no allowance for profit and risk.

TOTAL (All Roads) = \$306,682

SALE VOLUME MBF = 6,945

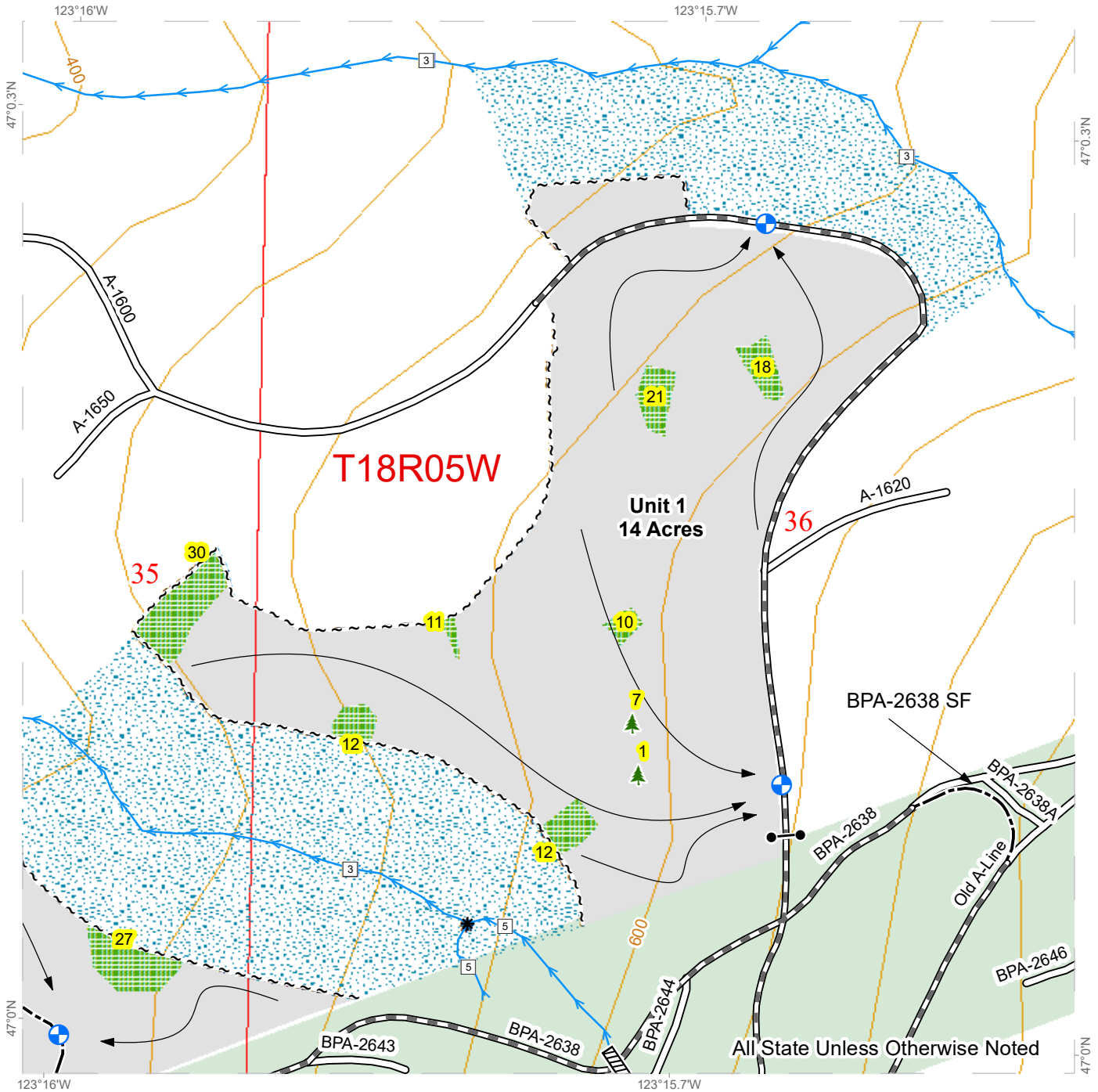
TOTAL COST PER MBF = \$44.16

Date: 03/23/23

LOGGING PLAN MAP

SALE NAME: GREMLIN
AGREEMENT#: 30-103594
TOWNSHIP(S): T17R5W, T18R5W
TRUST(S): Common School and Indemnity (3), Forest Board Repayment (42), State Forest Purchase (2)

REGION: South Puget Sound Region
COUNTY(S): Grays Harbor
ELEVATION RGE: 200-920



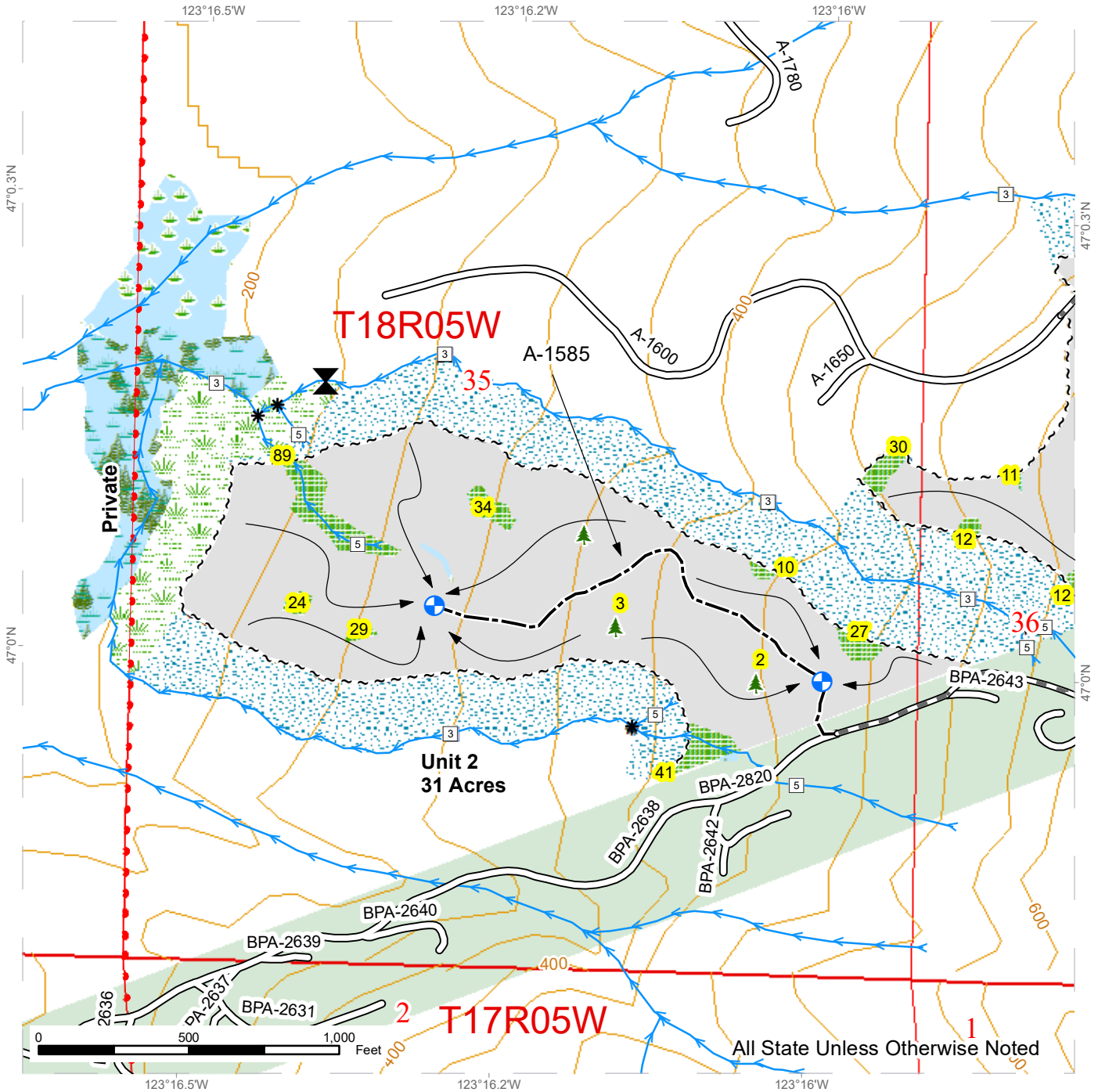
Variable Retention Harvest	Leave Tree Area	Riparian Mgt Zone	Stream Type
BPA Corridors	Riparian Mgt Zone	Stream Type Break	
Ground Harvest	Culvert		
Existing Roads	Gate (Master H-957)		
Required Pre-Haul Maintenance	Landing - Proposed		
Optional Construction	Leave Tree Area <1/4-acre		
Streams	Sale Boundary Tags		



LOGGING PLAN MAP

SALE NAME: GREMLIN
AGREEMENT#: 30-103594
TOWNSHIP(S): T17R5W, T18R5W
TRUST(S): Common School and Indemnity (3), Forest Board Repayment (42), State Forest Purchase (2)

REGION: South Puget Sound Region
COUNTY(S): Grays Harbor
ELEVATION RGE: 200-920

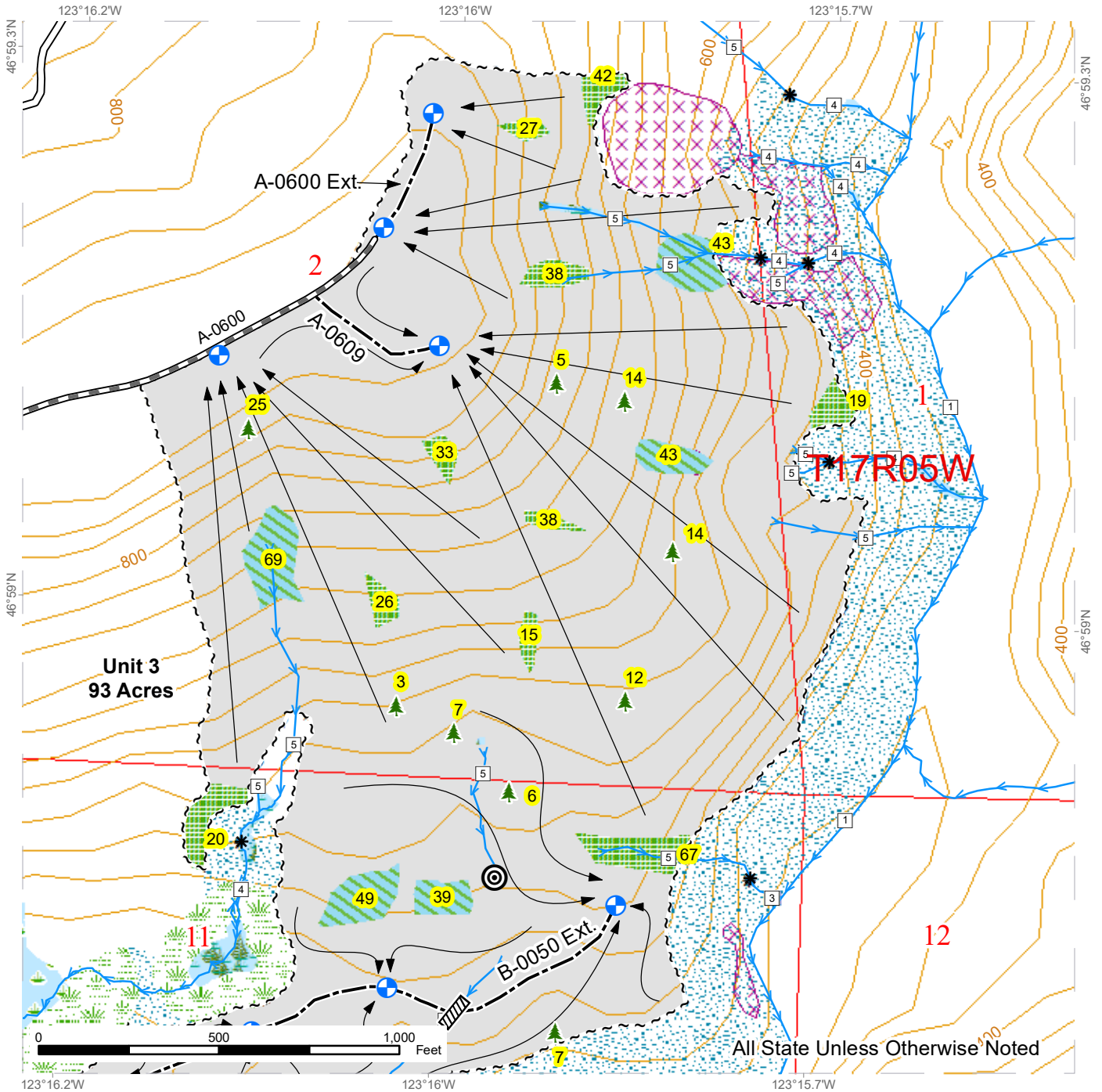


Variable Retention Harvest	Wetlands - Non-forested	Potentially Unstable Slopes
BPA Corridors	Leave Tree Area	Sale Boundary Tags
Ground Harvest	Riparian Mgt Zone	Property Line
Existing Roads	Forested Wetland	Stream Type
Required Pre-Haul Maintenance	Wetland Mgt Zone	Stream Type Break
Optional Construction	Landing - Proposed	
Streams	Leave Tree Area <1/4-acre	

LOGGING PLAN MAP

SALE NAME: GREMLIN
AGREEMENT#: 30-103594
TOWNSHIP(S): T17R5W, T18R5W
TRUST(S): Common School and Indemnity (3), Forest Board Repayment (42), State Forest Purchase (2)

REGION: South Puget Sound Region
COUNTY(S): Grays Harbor
ELEVATION RGE: 200-920



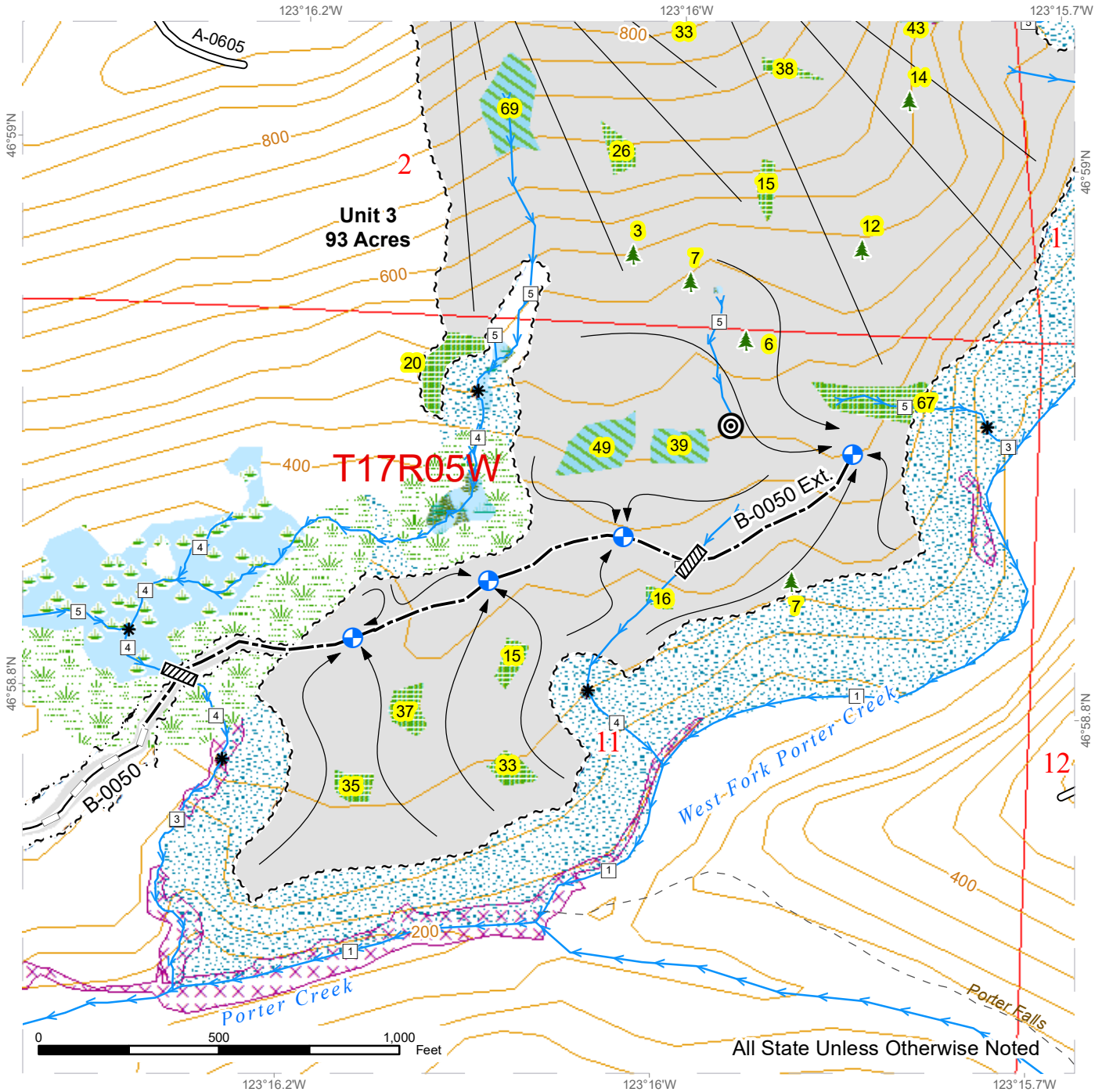
Variable Retention Harvest	Wetlands - Non-forested	Culvert
Ground Harvest	Non-Tradeable Leave Clump	Landing - Proposed
Cable Harvest	Leave Tree Area	Leave Tree Area <1/4-acre
Existing Roads	Tailhold Restriction Area	Sinkhole
Required Pre-Haul Maintenance	Riparian Mgt Zone	Sale Boundary Tags
Optional Construction	Forested Wetland	Stream Type
Streams	Wetland Mgt Zone	Stream Type Break



LOGGING PLAN MAP

SALE NAME: GREMLIN
 AGREEMENT#: 30-103594
 TOWNSHIP(S): T17R5W, T18R5W
 TRUST(S): Common School and Indemnity (3), Forest Board Repayment (42), State Forest Purchase (2)

REGION: South Puget Sound Region
 COUNTY(S): Grays Harbor
 ELEVATION RGE: 200-920

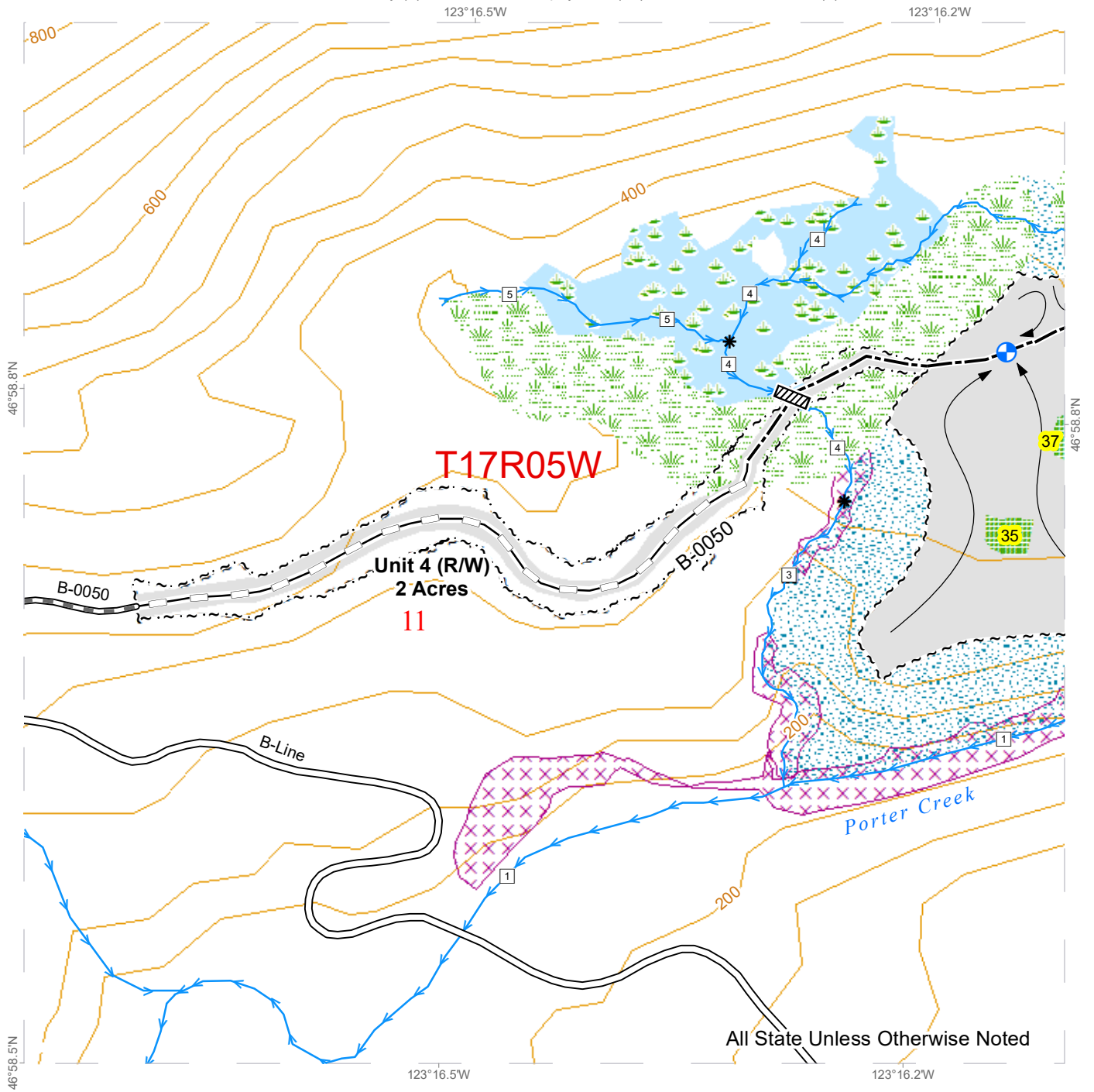


Variable Retention Harvest	Wetlands - Non-forested	Landing - Proposed
Ground Harvest	Non-Tradeable Leave Clump	Leave Tree Area <1/4-acre
Cable Harvest	Leave Tree Area	Sinkhole
Existing Roads	Tailhold Restriction Area	Sale Boundary Tags
Optional Construction	Riparian Mgt Zone	Right of Way Tags
Optional Reconstruction	Forested Wetland	Stream Type
Recreation Trails	Wetland Mgt Zone	Stream Type Break
Streams	Culvert	

LOGGING PLAN MAP

SALE NAME: GREMLIN
 AGREEMENT#: 30-103594
 TOWNSHIP(S): T17R5W, T18R5W
 TRUST(S): Common School and Indemnity (3), Forest Board Repayment (42), State Forest Purchase (2)

REGION: South Puget Sound Region
 COUNTY(S): Grays Harbor
 ELEVATION RGE: 200-920



All State Unless Otherwise Noted

Variable Retention Harvest	Streams	Culvert
Ground Harvest	Wetlands - Non-forested	Landing - Proposed
Existing Roads	Leave Tree Area	Sale Boundary Tags
Required Pre-Haul Maintenance	Tailhold Restriction Area	Right of Way Tags
Optional Construction	Riparian Mgt Zone	Stream Type
Optional Reconstruction	Wetland Mgt Zone	Stream Type Break

