



TIMBER NOTICE OF SALE

SALE NAME: FERDA VRH & VDT

AGREEMENT NO: 30-102171

AUCTION: May 23, 2023 starting at 10:00 a.m., **COUNTY:** Pierce
South Puget Sound Region Office, Enumclaw, WA

SALE LOCATION: Sale located approximately 12 miles northeast of Elbe.

PRODUCTS SOLD AND SALE AREA:

All timber as described in Schedule A, except snags, and down timber existing more than 5 years from the day of sale, bounded by the following: white timber sale boundary tags, and the 9-11 Road in Unit #1;

All timber, except trees marked with blue paint or 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, and the 9 Road in Unit #2;

All timber bounded with orange right of way tags, except that title to timber within the right of way tags is not conveyed to the Purchaser unless the road segment is actually constructed in Unit #3;

All trees marked with orange paint, except that title to timber within the right of way tags is not conveyed to the Purchaser unless the road segment is actually constructed in Unit #4;

All forest products above located on part(s) of Sections 6 and 7 all in Township 15 North, Range 6 East, Sections 36 all in Township 16 North, Range 5 East, W.M., containing 124 acres, more or less.

CERTIFICATION: This sale is certified under the Sustainable Forestry Initiative® program Standard (cert no: PwC-SFIFM-513) and FSC 100% raw materials under the Forest Stewardship Council® Standard (cert no: BV-FM/COC-080501).

ESTIMATED SALE VOLUMES AND QUALITY:

Species	Avg DBH	Ring Count	Total MBF	Total \$/MBF	MBF by Grade								
					1P	2P	3P	SM	1S	2S	3S	4S	UT
Douglas fir	23.3	8	3,964	\$271.00				19		3,325	545	75	
Hemlock	14.8		1,401	\$57.00						630	591	177	3
Red alder	14.5		106	\$81.00						37	6	57	6
Cottonwood	26.6		56	\$20.00					54	1			1
Noble fir	24.5		11	\$57.00						8	3		
Redcedar	13.8		6	\$758.00							2	4	
Other Hardwood				\$20.00									
Other Conifer				\$55.00									
Sale Total			5,544										

MINIMUM BID: \$271/MBF (est. value \$1,161,000.00) **BID METHOD:** Sealed Bids

PERFORMANCE SECURITY: \$100,000.00 **SALE TYPE:** MBF Scale

EXPIRATION DATE: October 31, 2025 **ALLOCATION:** Export Restricted



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BIDDABLE SPECIES: Douglas fir

BID DEPOSIT: \$116,100.00 or Bid Bond. Said deposit shall constitute an opening bid at the appraised price.

HARVEST METHOD: Harvest activities are estimated to be 14 percent ground based harvest and 86 percent uphill cable. Cable and ground based equipment, with cable-tethered equipment limited to sustained slopes 75 percent or less, self-leveling equipment limited to sustained slopes 65 percent or less, and all other ground based equipment limited to sustained slopes 45 percent or less. Yarding may be restricted during wet weather if rutting becomes excessive, per clause H-017.

Falling, yarding, and timber haul will not be permitted on weekends or State recognized holidays, unless approved in writing by the Contract Administrator.

ROADS: 44.91 stations of optional construction. 406.94 stations of required prehaul maintenance. 44.91 stations of abandonment, if constructed. Purchaser maintenance on the 9, 9-11, 9-11-2, 9-16, 9-16-1, and 9-20 roads. Designated maintenance on all other roads used.

Rock for this proposal may be obtained from the State owned Primo and Rotten Beaver Pits at no cost to the Purchaser or any commercial rock source at the Purchaser's expense. Rock source development is to be completed per Section 6 for the Primo and Rotten Beaver Pits, if used.

Operation of road construction equipment, and rock haul will not be permitted from November 1 to May 15, 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 May 15, the Purchaser shall comply with a maintenance plan per Road Plan clause 1-26.

ACREAGE DETERMINATION

CRUISE METHOD: Units #1, and #2 acreage was determined by traversing boundaries by GPS. Units #3, and #4 acreage was determined by multiplying length times width. GPS data files are available at DNR's website for timber sale packets. See cruise narrative for cruise method.

FEES: \$94,248.00 is due on day of sale. \$9.00 per MBF is due upon removal. These are in addition to the bid price.

SPECIAL REMARKS: This sale consists of one variable density thinning unit (Unit #1), one variable retention harvest unit (Unit #2) and two right of way units.

This is a high elevation sale and may be inaccessible during winter months due to snow.

Unit #2 may require tailholds on private property. If needed, the Purchaser will be required to obtain written permission from the Landowner and provide a copy to the State as required in contract clause H-127.

Operational restrictions for protection of potentially unstable slopes apply to the non-tradeable leave tree areas within Unit #2 and tailhold restriction areas outside Unit #2 per contract clause H-141.



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Purchaser will be required to furnish and install a temporary steel gate on the 9 Road at station 174+78 prior to operations beginning in Unit #2. Gate shall remain closed and locked except for passing vehicles while operating in Unit #2. Gate will be removed from State Land and road needs to be in pre-gate condition prior to the termination of the contract. See Road Plan for details.

A stream culvert is to be replaced between July 1 and September 30 on the 9 Road at station 152+80. Hauling from Unit #1 may be allowed prior to the stream culvert installation with approval by the Contract Administrator. See Road Plan for additional information.

Take trees in Unit #4 right of way are marked with single band of orange paint.

Purchaser is required to provide 14 calendar days' notification prior to closure of the 9 or 9-20 Roads and trails per Road Plan clause 1-22 and contract Schedule C, Recreation Trail Clean Out and Repair.

Cut all vine maple greater than 6 feet in height within Unit #2, leaving a stump no more than 12 inches in height.

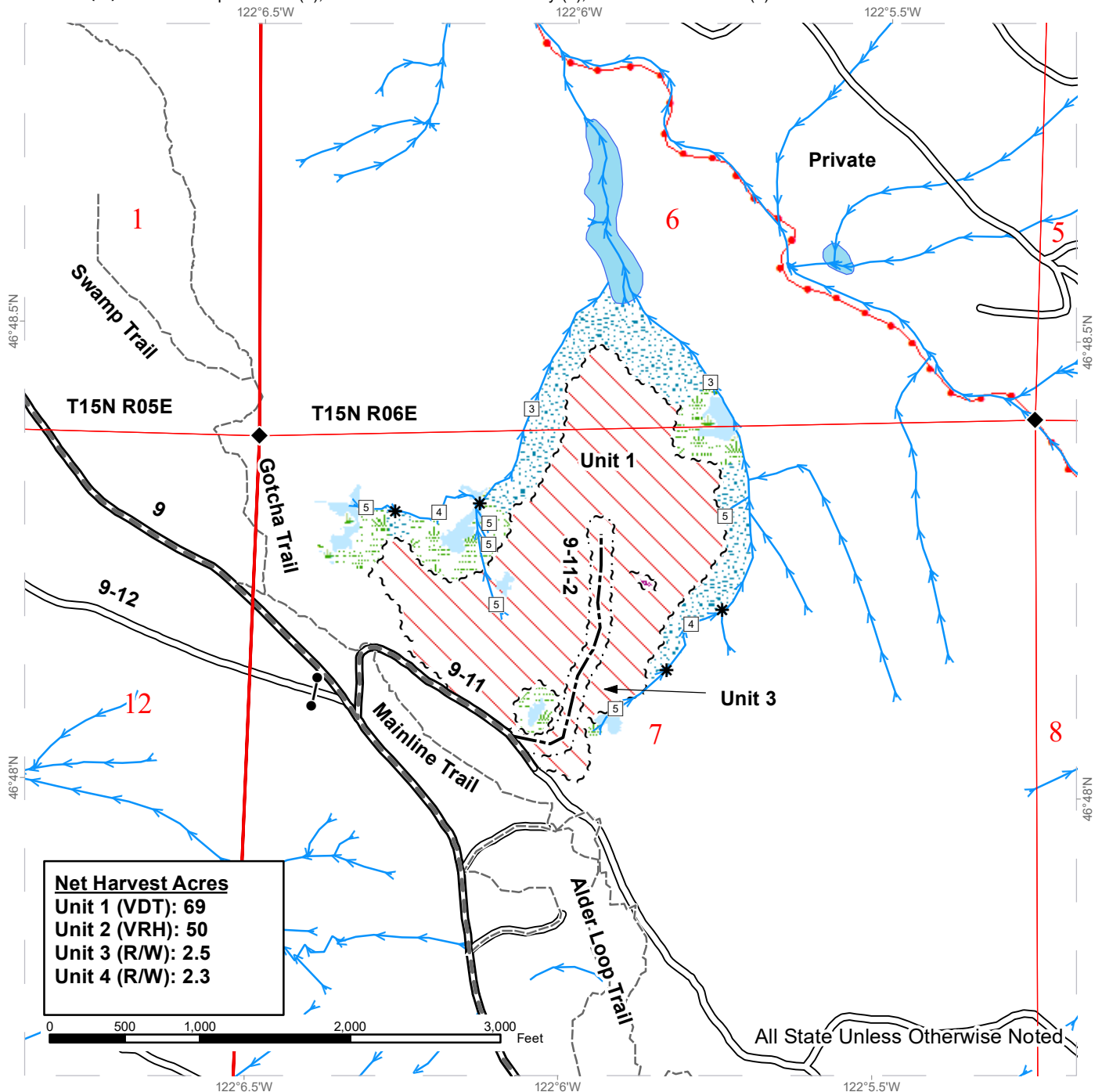
Note to cruisers and appraisers: Please refrain from leaving pink, orange or blue flagging from your cruises in or around the sale area to avoid confusion with DNR's marking. Additionally, for the safety of the public, please remove from roads and trails all string from string boxes used during appraising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

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 Mike Fowler at 360-819-3406.

TIMBER SALE MAP

SALE NAME: FERDA VRH VDT
AGREEMENT #: 30-102171
TOWNSHIP(S): T15R6E, T16R5E
TRUST(S): Capitol Grant (7), Common School and Indemnity (3), State Forest Transfer (1)

REGION: South Puget Sound Region
COUNTY(S): Pierce
ELEVATION RGE: 1840-2637



Net Harvest Acres

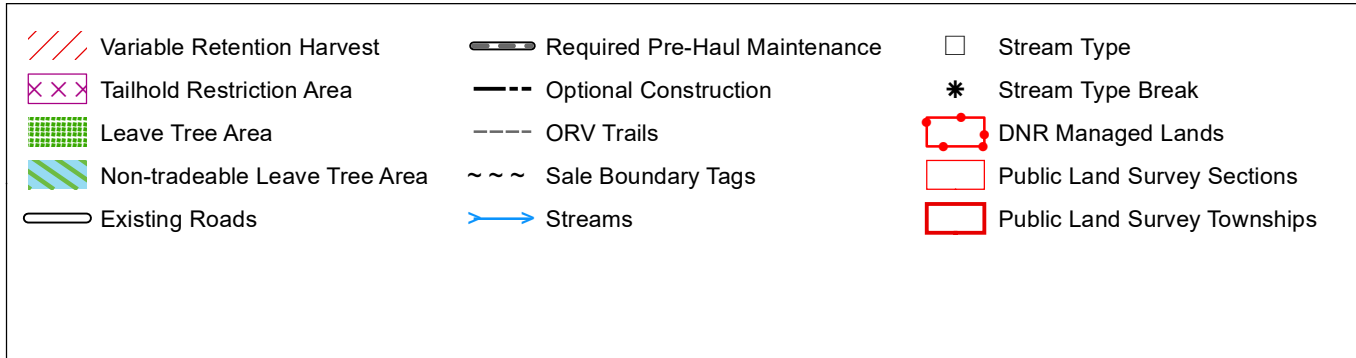
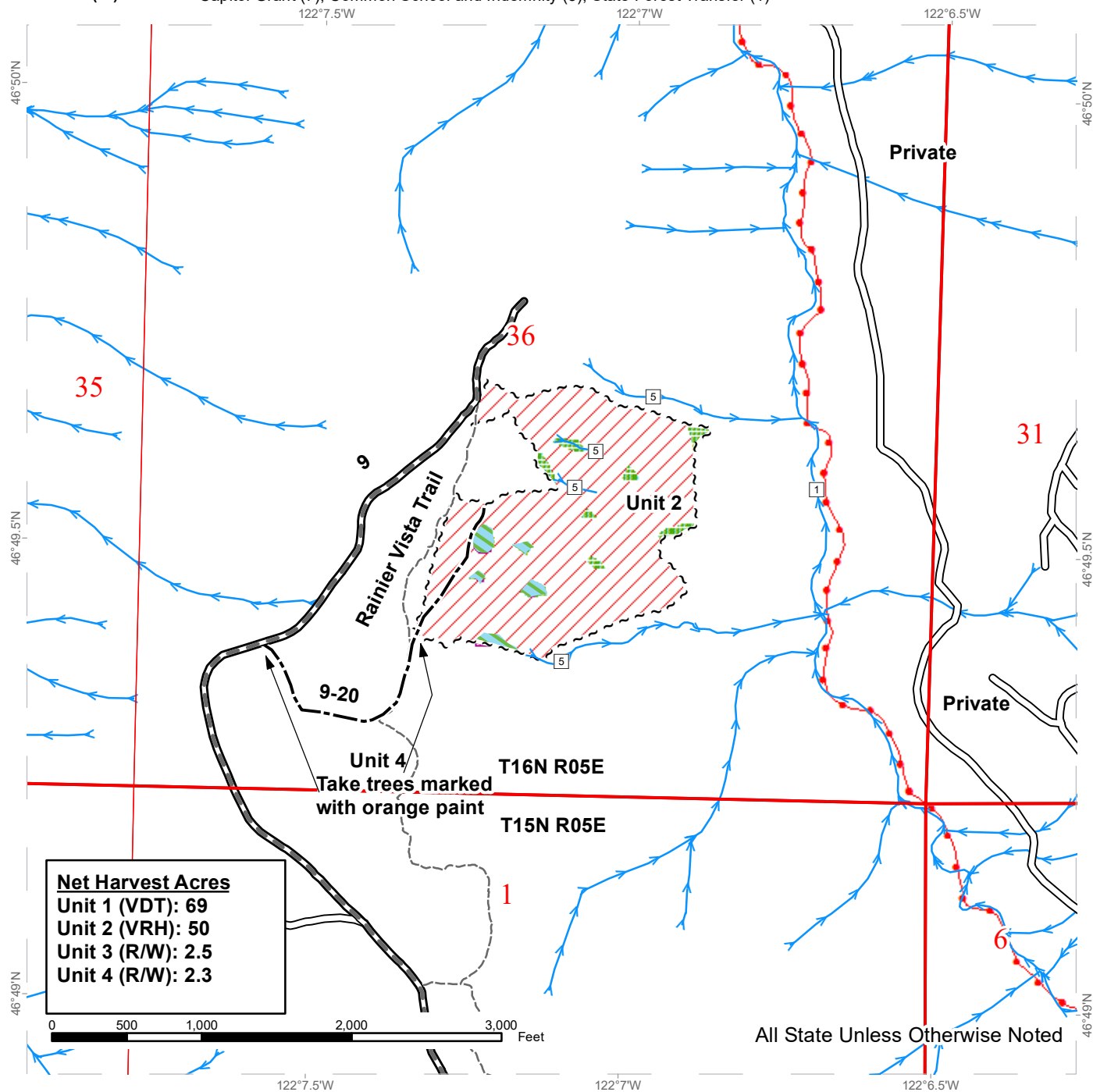
Unit 1 (VDT): 69
 Unit 2 (VRH): 50
 Unit 3 (R/W): 2.5
 Unit 4 (R/W): 2.3

- | | | |
|-------------------------------|-----------------------|------------------------------|
| Variable Density Thinning | Optional Construction | Survey Monument |
| Tailhold Restriction Area | ORV Trails | Gate |
| Riparian Mgt Zone | Sale Boundary Tags | DNR Managed Lands |
| Wetlands - Non-forested | Right of Way Tags | Public Land Survey Sections |
| Wetland Mgt Zone | Streams | Public Land Survey Townships |
| Existing Roads | Stream Type | |
| Required Pre-Haul Maintenance | Stream Type Break | |

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DRIVING MAP

SALE NAME: FERDA VRH VDT

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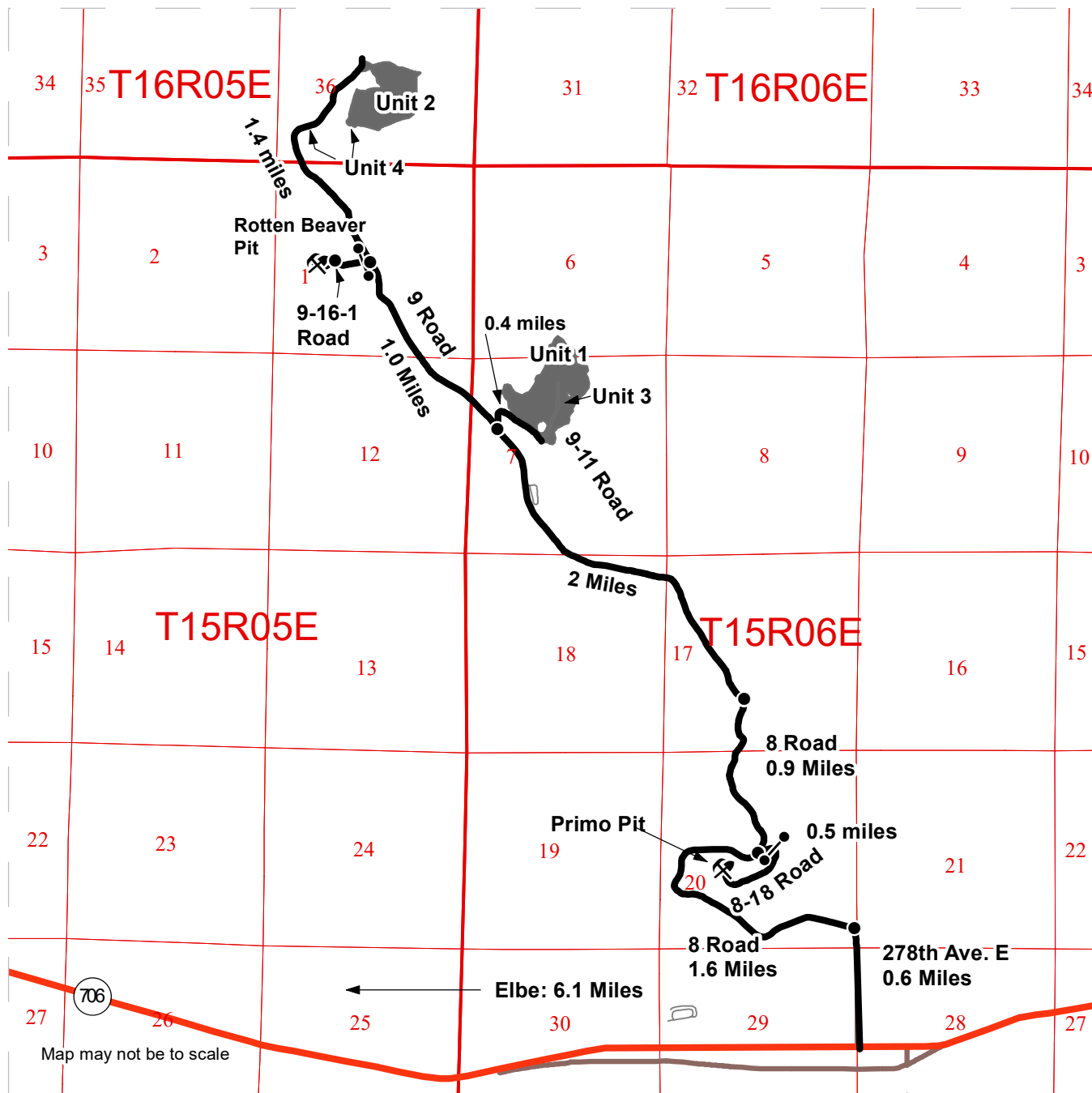
TOWNSHIP(S): T15R06E, T16R05E

TRUST(S): Capitol Grant (7), Common School and Indemnity (3), State Forest Transfer (1)

REGION: South Puget Sound Region

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- Timber Sale Unit
- Distance Indicator
- Gate (383)
- Rock Pit
- Haul Route
- State Route

DRIVING DIRECTIONS:

Follow SR-706 from Elbe east for 6.1 miles. Turn left onto 278th Ave. E and follow for 0.6 miles. Turn left onto the DNR 8 Road and follow for 2.5 miles. Turn right onto the DNR 9 Road and follow for 2 miles and turn right onto the 9-11 Road. Follow the 9-11 Road for 0.4 miles to reach Units 1 and 3. From the 9 Road continue straight for 2.4 miles to reach Units 2 and 4.

To reach Primo Pit: From 278th Ave. E turn left onto the 8 Road and follow for 1.6 miles. Turn right onto the 8-18 Road and follow for 0.5 miles to the pit

To reach Rotten Beaver Pit: After 3.0 miles on the 9 road, turn left onto the 9-16 road and follow for 0.2 miles. Turn left onto the 9-16-1 road and follow for 0.1 miles to reach Rotten Beaver Pit.



**STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES**

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

Export Restricted MBF Scale AGREEMENT NO. 30-0102171

SALE NAME: FERDA VRH & VDT

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

Section G: General Terms

G-001 Definitions

The following definitions apply throughout this contract;

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

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

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

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

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

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

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

G-010 Products Sold and Sale Area

Purchaser was the successful bidder on May 23, 2023 and the sale was confirmed on _____. The State, as owner, agrees to sell to Purchaser, and Purchaser agrees to purchase, cut, and remove the following forest products: All timber as described in Schedule A, except snags, and down timber existing more than 5 years from the day of sale, bounded by the following: white timber sale boundary tags, and the 9-11 Road in Unit #1;

All timber, except trees marked with blue paint or 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, and the 9 Road in Unit #2;

All timber bounded with orange right of way tags, except that title to timber within the right of way tags is not conveyed to the Purchaser unless the road segment is actually constructed in Unit #3;

All trees marked with orange paint, except that title to timber within the right of way tags is not conveyed to the Purchaser unless the road segment is actually constructed in Unit #4;, located on approximately 124 acres on part(s) of Sections 6, and 7 all in Township 15 North, Range 6 East, Section 36 in Township 16 North, Range 5 East W.M. in Pierce County(s) as shown on the attached timber sale map and as designated on the sale area.

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

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

G-020 Inspection By Purchaser

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

G-025 Schedules

The following attached schedules are hereby incorporated by reference:

Schedule	Title
A	Unit #1 Harvest Prescription and Compliance
B	Unit #1 Cable Corridor Requirements
C	Recreation Trail Clean Out and Repair

G-030 Contract Term

Purchaser shall remove the forest products conveyed and 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-050 Contract Term Extension - Payment

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

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

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

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

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

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

- e. Payment of \$3.00 per acre per annum for the acres on which an operating release has not been issued within Unit #1. Payment of \$30.00 per acre per annum for the acres on which an operating release has not been issued within Unit #2.
- f. In no event will the extension charge be less than \$200.00.
- g. Extension payments are non-refundable.

G-053 Surveys - Sensitive, Threatened, Endangered Species

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

G-060 Exclusion of Warranties

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

- a. The MERCHANTABILITY of the forest products. The use of the term "merchantable" in any document is not intended to vary the foregoing.
- b. The CONDITION of the forest products. The forest products will be conveyed "AS IS."
- c. The ACREAGE contained within any sale area. Any acreage descriptions appearing in the timber notice of sale, timber sale contract, or other documents are estimates only, provided solely for administrative and identification purposes.
- d. The VOLUME, QUALITY, OR GRADE of the forest products. The State neither warrants nor limits the amount of timber to be harvested. The descriptions of the forest products to be conveyed are estimates only, made solely for administrative and identification purposes.
- e. The CORRECTNESS OF ANY SOIL OR SURFACE CONDITIONS, PRE-SALE CONSTRUCTION APPRAISALS, INVESTIGATIONS, AND ALL OTHER PRE-BID DOCUMENTS PREPARED BY OR FOR THE STATE. These documents have been prepared for the State's appraisal purposes only.
- f. THAT THE SALE AREA IS FREE FROM THREATENED OR ENDANGERED SPECIES or their habitat. The State is not responsible for any interference with forestry operations that result from the presence of any threatened or endangered species, or the presence of their habitat, within the sale area.
- g. THAT THE FORESTRY OPERATIONS to be performed under this contract WILL BE FREE FROM REGULATORY ACTIONS by governmental agencies. The State is not responsible for actions to enforce regulatory laws, such as the Washington Forest Practices Act (chapter 76.09 RCW), taken by the Department of Natural Resources or any other agency that may affect the operability of this timber sale.
- h. Items contained in any other documents prepared for or by the State.

G-062 Habitat Conservation Plan

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

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

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

G-063 Incidental Take Permit Notification Requirements

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

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

G-064 Permits

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

G-065 Regulatory Disclaimer

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

G-066 Governmental Regulatory Actions

a. Risk

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

b. Sale Area

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

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

c. Adjustment of Price

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

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

G-070 Limitation on Damage

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

G-080 Scope of State Advice

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

G-090 Sale Area Adjustment

The Parties may agree to adjustments in the sale area boundary. The cumulative changes to the sale area during the term of the contract shall not exceed more than four percent of the original sale area. If the sale area is increased, added forest products become a part of this contract and shall be paid for at the same rate and manner as other forest products under this contract.

G-100 Forest Products Not Designated

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

G-105 Adding Naturally Damaged Forest Products

Any forest products not designated for removal that are seriously damaged by disease, insects or wind, or that may contribute seriously to the spread of insect or disease damage may be added to this sale by the Contract Administrator. Additions must be in unlogged areas of the sale and added volume shall not exceed an amount equal to 10 percent of the original advertised volume. Added forest products become a part of this contract and shall be paid for at the same rate and manner as other forest products under this contract.

G-110 Title and Risk of Loss

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

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

G-115 Forest Stewardship Council® (FSC®) Certification

Forest products purchased under this contract are FSC 100% certified as being in conformance with the Forest Stewardship Council Standard under certificate number: BV-FM/COC-080501.

G-116 Sustainable Forestry Initiative® (SFI) Certification

Forest products purchased under this contract are certified as being in conformance with the Sustainable Forestry Initiative program Standard under certificate number: PwC-SFIFM-513.

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

G-120 Responsibility for Work

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

G-121 Exceptions

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

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; on the 8, 8-18, 9, 9-11, 9-11-2, 9-12, 9-16, 9-16-1, and 9-20 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-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:

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

Section P: Payments and Securities**P-010 Initial Deposit**

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

P-021 Payment for Forest Products

Purchaser agrees to pay the following rates per MBF Scribner net log scale for forest products conveyed and cut or removed from the sale area plus \$94,248.00 on day of sale and \$9.00 per MBF upon removal in fees. Fees collected shall be retained by the state unless the contract is adjusted via the G-066 clause.

DATA MISSING

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

Utility logs, special cull and peelable cull logs of all species, included on loads of logs that are required to be removed and scaled per clause H-150 will be paid for on an adjusted gross scale basis at the rate of \$20.00 per MBF plus fees.

P-027 Payment for Removal of Optional Forest Products

Purchaser agrees to weigh all loads and pay the rate of \$2.00 per ton for forest products approved for removal from the sale area under clause H-157.

P-040 Weighing and Scaling Costs

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

P-045 Guarantee of Payment

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

P-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-052 Payment Procedure

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

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

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

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

Forest products included in this agreement which are destroyed, damaged, stolen, lost, or mismatched shall be paid for by Purchaser on demand of the State. The rates contained in clause P-021 shall apply.

P-080 Payment Account Refund

Advance payments made under P-045 or P-045.2 remaining on account above the value for the charges shall be returned to Purchaser within 30 days following the final report

of charges. Refunds not made within the 30 day period will accrue interest at the interest rate, as established by WAC 332-100-030, computed on a daily basis until paid.

P-090 Performance Security

Purchaser agrees to furnish, within 30 days of the confirmation date, security acceptable to the State in the amount of \$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 L: Log Definitions and Accountability

L-010 Forest Products Conveyed

Forest products conveyed are all logs or parts of logs described by the 'Products Sold and Sale Area' (G-010) clause meeting the removal requirements listed in the 'Required Removal of Forest Products' (H-150) clause.

L-020 Short Logs - Peeler Blocks

Logs or parts of logs which are removed from the sale area that fail to meet the minimum gross length requirements shall be scaled and graded as short logs or peeler blocks. Such material shall be paid for at the forest products rates specified in this contract.

L-040 Utility Logs

Utility logs are logs that meet the minimum utility log standards as described by the log scaling rules applicable for this contract.

L-060 Load Tickets

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

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

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

L-071 Log and Load Reporting Service

This contract requires the use of a State approved third party Log and Load Reporting Service (LLRS). Purchaser shall ensure log volume measurement data and/or load and weight data is received by the LLRS within 1 business day of logs being measured or weighed. Purchaser agrees to pay the LLRS for log and load data supplied to the State.

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

L-080 Scaling Rules

Determination of volume and grade of any forest products shall be conducted by a state approved third party scaling organization and in accordance with the Westside log scaling and grading rules and Scribner Volume Table, revised July 1, 1972, contained in the Northwest Log Rules Eastside and Westside Log Scaling Handbook (developed and produced by the Northwest Log Rules Advisory Group) and in effect on the date of confirmation of this contract.

Special scaling specifications shall be noted on the State's Brand Designation form which is hereby incorporated to this contract by reference.

L-110 State Approval of Log Scaling and Weighing Locations

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

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

L-120 Long Log Taper Distribution

Forest products over 40 feet long plus trim shall be segment scaled and the lower segment diameters shall be determined using actual taper. In order to utilize taper rules for determining segment diameters for poles and pilings greater than 40 feet in length plus trim, Purchaser must request use of a Pole and Piling Scaling Specification Agreement on file in the region office. Approval for usage of a special Pole and Piling Scaling Specification Agreement may be granted at the sole discretion of the State.

Following State approval for usage of the Pole and Piling Scaling Specification Agreement, the Brand Designation form shall be amended to incorporate the long log taper rules. The volume reported by the scaling organization for forest products over 40 feet plus trim will be expanded by 5 percent and the additional 5 percent volume shall be billed to the purchaser at the contract rate.

L-130 Conversion Factors

Forest products removed from the sale area that are not measured in units specified in the 'Payment for Forest Products' clause of this contract shall be converted to board feet using Department of Natural Resources' standard conversion factors.

Section H: Harvesting Operations**H-011 Certification of Fallers and Yarder Operators**

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

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

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

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

When leave tree damage exceeds the limits set forth in clause H-012,

Purchaser shall be subject to liquidated damages (clause D-040)

When reserve tree damage exceeds the limits set forth in clause H-013,

Purchaser shall be subject to liquidated damages (clause D-041).

H-012 Leave Tree Damage Definition

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

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

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

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

H-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-025 Timing Requirements for Timber Removal

All timber must be removed within 60 days of being felled.

H-030 Timber Falling

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

H-035 Fall Trees Into Sale Area

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

H-040 Purchaser Harvest Plan

Purchaser shall, as part of the plan of operations, prepare an acceptable harvest plan for Units #1 and #2. The plan shall address the thinning prescription, recreation trail clean out, and tailhold locations, 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-050 Rub Trees

Trees designated for cutting along skid trails and cable corridors shall be left standing as rub trees until all timber that is tributary to the skid trail or cable corridor has been removed.

H-052 Branding and Painting

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

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

H-060 Skid Trail Locations

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

H-080 Snags Not to be Felled

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

H-110 Stump Height

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

H-120 Harvesting Equipment

Forest products sold under this contract shall be harvested and removed using cable and ground based equipment, with cable-tethered equipment limited to sustained slopes 75 percent or less, self-leveling equipment limited to sustained slopes 65 percent or less, and all other ground based equipment limited to sustained slopes 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-127 Tailholds on Private Land

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

H-140 Special Harvest Requirements

Purchaser shall accomplish the following during the harvest operations:

A. Existing downed trees or logs dead for more than 5 years yarded to the landing shall be returned to their original locations.

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

C. Crossing 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. Cut all vine maple within Unit #2, leaving a stump no more than 12 inches in height.

G. Falling, yarding, and timber haul will not be permitted on weekends or State recognized holidays, unless approved in writing by the Contract Administrator.

H. Within shovel logging areas, and when yarding and loading operations are occurring simultaneously, an additional shovel will be required for loading to avoid extra trips to the landing. No more than one round trip per shovel road is allowed.

I. 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.

J. No more than two skid trails open to active skidding at any one time.

K. Skid trail closure shall occur immediately upon completion of yarding all tributary timber. Closure shall consist of creating plantable spots at approximately 11.5 foot by 11.5 foot spacing to facilitate reforestation and creating water bars or other methods as directed by the Contract Administrator to prevent water accumulation and sediment movement.

L. 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.

M. Once a skid trail is closed, the Purchaser shall not reopen a skid trail unless approved in writing by the Contract Administrator.

N. Skid trails will not exceed 12 feet in width, including rub trees, and shall not over more than 10 percent of the total acreage in Unit #1.

O. Purchaser is responsible for closing the 9 Road with a temporary gate see road plan clause 11-1 and posting orange road closure signs and active logging ahead while operating in Unit #2.

P. 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.

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. 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 in Unit 2.

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-150 Required Removal of Forest Products

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

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

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

H-157 Optional Removal of Forest Products Not Designated

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

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

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

H-160 Mismanufacture

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

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

H-180 Removal of Specialized Forest Products or Firewood

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

H-190 Completion of Settings

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

H-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 Unit #2, all vine maple stems greater than 6 feet in height, shall be felled . Remaining stumps 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 1/12/2022 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 9, 9-11, 9-11-2, 9-16, 9-16-1, and 9-20 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-140 Water Bars

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

Section S: Site Preparation and Protection

S-001 Emergency Response Plan

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

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

S-010 Fire Hazardous Conditions

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

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

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

S-030 Landing Debris Clean Up

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

S-035 Logging Debris Clean Up

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

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

S-110 Resource Protection

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

S-120 Stream Protection

No timber shall be felled into, across, or yarded through any Type 5 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-010 Liquidated Damages

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

D-020 Failure to Remove Forest Products

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

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

Where:

LD = Liquidated Damage value.

V = The unremoved value at the date of breach of contract. The value is determined by subtracting the removal volume to date from the State's cruise volume multiplied by the contract bid rates.

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

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

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

A = Administrative Fee = \$2,500.00.

The above formula reflects the Purchaser's forfeiture of the initial deposit in accordance with clause P-010 by deducting the initial deposit from the amount owed. In no event shall the liquidated damages be less than zero. Interest on the liquidated damage is owed from the date of breach until final payment, calculated using the following formula: Interest = $r \times LD \times N$.

Where:

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

LD = Liquidated damage value.

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

D-030 Inadequate Log Accountability

Removal of forest products from the sale area without adequate branding and/or valid load tickets attached to the load and scaling forest products in a location other than the facility approved by the State can result in substantial injury to the State. Failure to

properly account for loads and scaling and/or weighing information can result in loss to the State. The potential loss from not having proper branding, ticketing, scaling and/or weighing location and accountability is not readily ascertainable. Purchaser's failure to perform results in a loss of log weight and scale accountability, increases the potential for unauthorized removal of forest products, and increases the State's administration costs, the actual costs of which are difficult to assess.

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

D-040 Leave Tree Excessive Damage

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

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 Unit #2.

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

Print Name

Date: _____

Address: _____

Scott Sargent

South Puget Sound Region Manager

Date: _____

DRAFT

DRAFT

DRAFT

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

STATE OF _____)

COUNTY OF _____)

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

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

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

Notary Public in and for the State of

My appointment expires _____

Schedule A
Unit #1 Harvest Prescription and Compliance

Harvest Prescription:

This harvest is to enhance habitat by a variable density thinning to achieve the relative density (RD) target below. To accomplish this prescription, trees may be harvested that are six (6) to thirty-five (35) inches in diameter at breast height (DBH). No trees that are thirty-six (36) inches or larger in DBH shall be felled, with the exception of those trees which pose safety hazards.

Unit #	Residual Target RD
1	48

- Only live trees 6 inches or greater in DBH will be used to calculate RD. Trees that are less than 6 inches in DBH are to be protected during harvest operations where possible, with special attention given to western red cedar.
- The RD target is an average at the unit level.
- In any given area, the residual RD shall not vary by more than five (5) points above or below the unit target.
- The RD listed is required; Purchaser shall leave sufficient trees and basal area per acre in the unit to achieve the RD following harvest.
- Leave trees shall be thoroughly distributed across the harvest unit on an acre by acre basis. Leave trees shall be selected using the Leave Tree Selection Criteria.
- Relative Density (RD) will be calculated using the following formula

$$RD = BA / \sqrt{QMD}$$

Leave Tree Selection Criteria:

Purchaser shall select leave trees from the dominant and co-dominant canopy by comparing with other trees in the stand, first by using species preference, then by form preference listed below.

Species preference (in descending order of priority):

- 1) western red cedar
- 2) Douglas-fir
- 3) western hemlock
- 4) Pacific silver fir/noble fir/Sitka spruce
- 5) big leaf maple
- 6) red alder

Form preference (in descending order of priority):

- 1) Free of disease, major defect and damage*
 - 2) Largest diameter
 - 3) Tallest height
 - 4) Fullest and most vigorous crown
- *Four trees per acre with defect, damage or decay are to be left as wildlife trees

Purchaser shall comply with the reserve tree selection guidelines listed in “Guidelines for Selecting Reserve Trees” published by the Washington Department of Labor and Industries. Purchaser is not required to leave any unsafe tree.

Compliance:

To ensure that the Purchaser is in compliance with Unit #1 prescription, the Purchaser shall measure sample plots across the landscape concurrently while harvesting in Unit #1. These plots shall be pre-determined, with approval by the Contract Administrator (CA), on a 400 foot by 400 foot grid covering each unit to ensure random and unbiased plot locations. If a 400 foot x 400 foot grid is not possible due to configuration of the unit, another unbiased grid will be agreed upon by the CA.

At each plot location, stand conditions will be measured using a fixed plot of 1/10 acre and a variable plot with a 20 BAF prism. (A different BAF may be used if approved by CA).

All compliance plots, as described above, will be marked in the field. The perimeter of the plot will be marked with fluorescent pink flagging. On each plot, the count trees will be marked with one yellow band of paint, and BA trees with two yellow bands of paint. Purchaser shall demonstrate, to the satisfaction of the CA, a working knowledge and ability to accurately measure and calculate Relative Density. Purchaser shall submit compliance plot data to the CA at the following intervals:

Unit #1 after 10% of the unit has been cut and every 20% of the total unit acreage thereafter.

The following tables include residual trees per acre (TPA) and basal area (BA) averages that are recommended based on cruise information and modeling to achieve the RD prescription for Unit #1. These are estimates only. Compliance of the RD achieved in Unit #1 will be based on actual plot data.

Unit	Average TPA Recommended	Average Basal Area per Acre
1	119	207

If a plot indicates that the RD is more than five (5) points above or below the unit target, the CA must be notified immediately. The CA shall determine if this deviation will require recertification of the fallers.

Purchaser shall not deviate from the requirements set forth in the Compliance portion of this schedule without prior written approval by the CA.

Schedule B
Unit #1 Cable Corridor Requirements

- A. Location of corridors must be marked by Purchaser and approved by the Contract Administrator.
 - B. A corridor will not exceed 12 feet in width, including the rub trees.
 - C. Total corridor acreage within the cable thinning unit will not exceed 10 percent of the total acres in the unit.
 - D. Excessive soil damage is not permitted in the corridor. Excessive soil damage within the corridor will be as defined by the Contract Administrator.
 - E. Corridors shall be water barred at the time of completion of yarding, if required by the Contract Administrator.
- Purchaser shall not deviate from the requirements set forth in this schedule without prior written approval by the Contract Administrator.

Schedule C
Recreation Trail Clean Out and Repair

This schedule applies to Rainier Vista ORV trail in and adjacent to harvest Unit #2.

Purchaser is responsible for closing trails with orange construction barricade netting and posting trail closure signs provided by DNR, anywhere that timber harvest boundaries intersect a trail as well as at designated locations provided by the Contract Administrator (CA). Purchaser is required to provide fourteen (14) calendar days' notice before closing the trail.

Purchaser is responsible for locating and marking the Rainier Vista ORV recreation trail within the sale boundary on the ground prior to harvest as approved by the CA.

- If needed upon completion of harvest activities, Purchaser shall locate the original recreation trail with pink fluorescent flagging. The CA will then approve the trail location in writing and repair/clean out can begin.

Rainier Vista ORV recreation trail repair/clean out shall occur within two (2) weeks of completion of harvest activity within 200 feet of the trail and shall consist of the following:

- Remove all logging debris from the recreation trail and the area on each side of the trail within five (5) feet of the travel path.
- Trail will be repaired where holes or ruts resulted due to logging damage. The trail will be returned to its original width on mineral soils and free of organic debris.
- Existing drainage control measures shall be returned to pre-harvest condition.

All work described above shall be done as determined by the CA. The logging release for the unit will not be issued until repair and clean out is completed and approved in writing by the CA.



WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES

FOREST EXCISE TAX ROAD SUMMARY SHEET

Region: South Puget Sound

Timber Sale Name: Ferda

Application Number: 30- 102171

EXCISE TAX APPLICABLE ACTIVITIES

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

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

Abandonment: 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: 40,694 linear feet
Existing road to receive maintenance work (optional and required) prior to haul

EXCISE TAX EXEMPT ACTIVITIES

Temporary Construction: 4491 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: Ferda VRH & VDT	Region: South Puget Sound
Agreement #: 30-0102717	District: Rainier
Contact Forester: Mike Fowler	Phone/ Location: (360) 819-3406 Ext: /
Alternate Contact: Michelle Bell	Phone/ Location: (360) 918-3328 Ext: /

Type of Sale (lump sum, mbf scale, tonnage scale or contract harvest): MBF Scale

Required or Optional removal of utility as pulp (*for scale sales only*): Optional

Evaluated for RFRS Implementation?: Yes, not implementing

Percentage cable-uphill: 86

Percentage cable-downhill: 0

Percentage ground based: 14

Species Onsite: ☒RC, ☒DF, ☒WH, ☒RA, ☒BC, ☐BLM, ☐NF, ☒SF, ☐SS, ☐ Other:(Please List)

UNIT ACREAGES* AND METHOD OF DETERMINATION:

Unit # Harvest R/W or RMZ WMZ	Legal Description Sec/Twp/Rng	Grant	Gross 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 6,7/ T 15N/ R 06 E	01, 07	69.3					69.3	Garmin 64s
2	Sec 36/ T 16N/ R 05 E	03	52.4		2.9			49.5	Garmin 64s
3	Sec 7/ T 15N/ R 06 E	01	2.5					2.5	Length X Width
4	Sec 36/ T 16N/ R 05 E	03	2.3					2.3	Length X Width
	Sec / T N/ R E								
	Sec / T N/ R E								
TOTAL ACRES			126.5		2.9			123.6	

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.
Unit 1	Variable Density Thinning white "Timber Sale Boundary" tags and pink flashers with the following exception the southern boundary marked by the 911 road.		
Unit 2	Variable Density Harvest white "Timber Sale Boundary" tags and pink flashers with the following exception a portion of the western boundary marked by the 9 road.		8 leave trees per acre all marked with yellow "Leave Tree Area" tags
Unit 3	Boundary marked by orange "Right-of-Way		

R/W	Boundary" tags and orange flashers		
Unit 4	Take trees marked by a single band of Orange paint.		100% marked take trees. Tree county by species is Red Alder 51, western hemlock 8, and Douglas fir 3

OTHER PRE-CRUISE INFORMATION:

Unit #	Estimated Volume	Access information (Gates, locks, etc.)	Photos, traverse maps required
Unit 1	See Cruise		
Unit 2			
Unit 3			
Unit 4			

REMARKS:

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Prepared By: Kevin Carlsen Date:	Title: State Lands Forester	CC:
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Revised 2/23/2007 (PSLD), Revised 1/22/20 (SPS)

Timber Sale Cruise Report Ferda

Sale Name: FERDA VRH VDT

Sale Type: LUMP SUM

Region: SO PUGET

District: RAINIER

Lead Cruiser: Aaron Coleman

Other Cruisers: Phil Kirner, Dave Richards

Cruise Narrative:

This sale consists of 1 variable retention harvest (VRH) unit, 1 variable density thinning (VDT) unit, and 2 right-of-way (R/W) units located off the 9 road in the Elbe Hills State Forest.

No keys were need needed to access the 9 road, which was in good condition.

The primary species for this sale is as follows:

Douglas-fir (72%) with an average diameter of 23 inches.

Western hemlock (25%) with an average diameter of 14 inches.

Unit 1 VDT is well stocked WH and DF, thinning throughout the diameter range down to RD 48. Unit 2 is steep and rocky and contains well-stocked, low-defect DF.

Overall defect was low, but the most commonly observed as broken/forked tops, spike knots, and sweep.

This is mostly uphill cable ground with small portions of shovel logging.

** FMA acres were used as cruise acres. Plots that fell within or next to leave tree clumps were sampled. Leave trees contribute to the overall statistics of the sale, but do not contribute to the overall sale volume. **

Timber Sale Notice Volume (MBF)

Sp	DBH	Rings/In	Age	MBF Volume by Grade						
				All	Spec Mill	1 Saw	2 Saw	3 Saw	4 Saw	Utility
DF	23.3	8.3		3,964	19		3,325	545	75	0
WH	14.8			1,401			630	591	177	3
RA	14.5			106			37	6	57	6
BC	26.6			56		54	1			1
NF	24.5			11			7	3	0	
RC	13.8			6				2	4	
ALL	18.6	8.3		5,544	19	54	4,000	1,148	314	10

Timber Sale Notice Weight (tons)

Sp	Tons by Grade						
	All	Spec Mill	1 Saw	2 Saw	3 Saw	4 Saw	Utility
DF	24,161	109		19,219	4,169	653	10

Sp	Tons by Grade						
	All	Spec Mill	1 Saw	2 Saw	3 Saw	4 Saw	Utility
WH	11,239			4,537	4,980	1,666	56
RA	829			239	48	499	43
BC	326		308	10			8
RC	72				37	35	
NF	72			46	23	3	
ALL	36,698	109	308	24,051	9,257	2,856	117

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 (%)
322.6	3.1	219.6	2.3	71,409	3.9

Timber Sale Unit Cruise Design

Unit	Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
FERDA U1	B1C: VR, 1 BAF (54.44) Measure/Count Plots, Sighting Ht = 4.5 ft	69.3	69.3	70	38	0
FERDA U2	B1C: VR, 1 BAF (54.44) Measure/Count Plots, Sighting Ht = 4.5 ft	52.4	52.4	37	20	0
FERDA U3	B1: VR, 1 BAF (54.44) Measure All, Sighting Ht = 4.5 ft	2.5	2.5	2	2	0
Unit 4 R/ W	ST: Strip/Percent Sample (1 tree expansion)	2.3		1	1	0
All		126.5	124.2	110	61	0

Timber Sale Log Grade x Sort Summary

Sp	Status	Grade	Sort	Dia	Len	BF Gross	BF Net	Defect %	Tons	MBF Net
BC	LIVE	1 SAW	Domestic	16.6	33	488	428	12.3	308.2	54.1
BC	LIVE	2 SAW	Domestic	9.3	32	9	6	32.3	9.5	0.7
BC	LIVE	UTILITY	Pulp	5.8	22	8	8	0.0	8.2	1.1
DF	LIVE	2 SAW	Domestic	17.3	36	20,267	19,668	3.0	14,025.4	2,488.0
DF	LIVE	2 SAW	HQ-B	15.4	37	6,704	6,615	1.3	5,193.8	836.7
DF	LIVE	3 SAW	Domestic	8.9	35	3,035	3,002	1.1	3,083.8	379.8
DF	LIVE	3 SAW	HQ-B	10.0	36	1,315	1,307	0.6	1,085.3	165.3
DF	LIVE	4 SAW	Domestic	6.2	24	610	596	2.4	653.0	75.4
DF	LIVE	CULL	Cull	13.0	6	20	0	100.0	0.0	0.0
DF	LIVE	SPECIAL MILL	HQ-A	18.0	40	147	147	0.0	109.4	18.6

Sp	Status	Grade	Sort	Dia	Len	BF Gross	BF Net	Defect %	Tons	MBF Net
DF	LIVE	UTILITY	Pulp	2.1	28	2	2	0.0	10.1	0.2
NF	LIVE	2 SAW	Domestic	17.7	40	60	57	5.0	45.8	7.2
NF	LIVE	3 SAW	Domestic	11.3	40	23	23	0.0	22.6	3.0
NF	LIVE	4 SAW	Domestic	8.1	14	3	3	0.0	3.3	0.3
RA	LIVE	2 SAW	Domestic	13.3	26	317	293	7.5	239.1	37.1
RA	LIVE	3 SAW	Domestic	10.7	30	53	48	9.4	48.4	6.0
RA	LIVE	4 SAW	Domestic	7.9	30	472	453	4.1	498.7	57.3
RA	LIVE	UTILITY	Pulp	5.1	28	47	47	0.0	42.8	5.9
RC	LIVE	3 SAW	Domestic	12.7	36	22	18	16.5	36.5	2.3
RC	LIVE	4 SAW	Domestic	5.3	34	30	30	0.0	35.4	3.9
WH	LIVE	2 SAW	Domestic	14.5	40	4,963	4,862	2.0	4,426.6	615.0
WH	LIVE	2 SAW	HQ-B	15.5	40	120	120	0.0	110.8	15.2
WH	LIVE	3 SAW	Domestic	8.9	40	4,708	4,673	0.7	4,980.1	591.2
WH	LIVE	4 SAW	Domestic	5.4	25	1,432	1,402	2.1	1,665.7	177.3
WH	LIVE	CULL	Cull	5.6	5	2	0	100.0	0.0	0.0
WH	LIVE	UTILITY	Pulp	2.1	20	20	20	0.0	55.5	2.6

Timber Sale Log Sort x Diameter Bin Summary

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
BC	5 - 8	LIVE	Pulp	5.8	22	8	0.0	8.2	1.1
BC	9 - 11	LIVE	Domestic	10.3	31	24	23.2	26.9	3.1
BC	12 - 14	LIVE	Domestic	14.2	30	46	0.0	31.5	5.9
BC	15 - 19	LIVE	Domestic	18.0	37	148	10.9	103.0	18.8
BC	20+	LIVE	Domestic	21.6	35	215	14.7	156.2	27.2
DF	< 5	LIVE	Pulp	2.1	28	2	0.0	10.1	0.2
DF	5 - 8	LIVE	Domestic	6.7	30	1,714	1.3	1,883.0	216.8
DF	5 - 8	LIVE	Cull	7.7	11	0	100.0	0.0	0.0
DF	5 - 8	LIVE	HQ-B	8.0	36	142	0.0	116.9	18.0
DF	9 - 11	LIVE	Domestic	10.0	32	1,884	1.3	1,853.9	238.3
DF	9 - 11	LIVE	HQ-B	10.4	36	1,165	0.7	968.4	147.3
DF	12 - 14	LIVE	HQ-B	13.4	37	2,642	0.5	2,175.6	334.2
DF	12 - 14	LIVE	Domestic	13.6	36	3,241	0.6	2,657.5	410.0
DF	12 - 14	LIVE	Cull	14.2	2	0	100.0	0.0	0.0
DF	15 - 19	LIVE	Domestic	17.5	37	8,094	2.1	5,653.8	1,023.9
DF	15 - 19	LIVE	HQ-B	17.5	38	3,662	1.8	2,790.4	463.3
DF	15 - 19	LIVE	HQ-A	18.0	40	147	0.0	109.4	18.6
DF	20+	LIVE	HQ-B	20.8	38	311	3.0	227.8	39.3

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	20+	LIVE	Domestic	22.3	36	8,333	4.7	5,714.0	1,054.1
DF	20+	LIVE	Cull	24.1	2	0	100.0	0.0	0.0
NF	5 - 8	LIVE	Domestic	8.1	14	3	0.0	3.3	0.3
NF	9 - 11	LIVE	Domestic	11.3	40	23	0.0	22.6	3.0
NF	15 - 19	LIVE	Domestic	17.7	40	57	5.0	45.8	7.2
RA	5 - 8	LIVE	Pulp	5.1	28	47	0.0	42.8	5.9
RA	5 - 8	LIVE	Domestic	6.7	28	194	5.5	221.8	24.5
RA	9 - 11	LIVE	Domestic	9.6	31	307	4.0	325.3	38.8
RA	12 - 14	LIVE	Domestic	12.9	26	224	7.8	187.6	28.3
RA	15 - 19	LIVE	Domestic	15.1	30	70	6.4	51.5	8.8
RC	5 - 8	LIVE	Domestic	5.3	34	30	0.0	35.4	3.9
RC	12 - 14	LIVE	Domestic	12.7	36	18	16.5	36.5	2.3
WH	< 5	LIVE	Pulp	2.1	20	20	0.0	55.5	2.6
WH	5 - 8	LIVE	Cull	5.6	5	0	100.0	0.0	0.0
WH	5 - 8	LIVE	Domestic	6.2	31	3,162	1.5	3,750.5	400.0
WH	9 - 11	LIVE	Domestic	10.4	40	2,913	0.6	2,895.4	368.5
WH	12 - 14	LIVE	Domestic	13.3	40	2,388	0.9	2,372.9	302.0
WH	15 - 19	LIVE	HQ-B	15.5	40	120	0.0	110.8	15.2
WH	15 - 19	LIVE	Domestic	16.2	40	2,000	3.1	1,667.3	252.9
WH	20+	LIVE	Domestic	22.0	40	474	3.0	386.3	60.0

Cruise Unit Report FERDA U1

Unit Sale Notice Volume (MBF): FERDA U1

Sp	DBH	Rings/In	Age	MBF Volume by Grade						
				All	Spec Mill	1 Saw	2 Saw	3 Saw	4 Saw	Utility
DF	25.2			878	19		753	91	15	0
WH	15.6			765			322	364	76	2
RA	12.7			40					35	6
BC	23.9			33		31	1			1
NF	24.5			11			7	3	0	
RC	13.8			6				2	4	
ALL	17.7			1,733	19	31	1,083	460	130	9

Unit Cruise Design: FERDA U1

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	69.3	69.3	70	38	0

Unit Cruise Summary: FERDA U1

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
DF	26	178	2.5	0
WH	37	210	3.0	0
BC	3	12	0.2	0
RA	4	8	0.1	0
NF	1	2	0.0	0
RC	2	4	0.1	0
ALL	73	414	5.9	0

Unit Cruise Statistics (Cut + Leave Trees): FERDA 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	138.4	69.2	8.3	262.8	15.2	3.0	36,383	70.8	8.8
WH	163.3	65.9	7.9	191.7	28.2	4.6	31,311	71.7	9.1
BC	9.3	384.3	45.9	204.5	18.6	10.8	1,908	384.7	47.2
RA	6.2	317.5	38.0	124.9	13.8	6.9	777	317.8	38.6
NF	1.6	587.3	70.2	195.2	0.0	0.0	304	587.3	70.2

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	3.1	409.1	48.9	57.1	16.1	11.4	178	409.5	50.2
ALL	322.0	31.8	3.8	220.1	29.7	3.5	70,860	43.5	5.2

Unit Summary: FERDA U1

Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
BC	LIVE	CUT	3	ALL	23.9	93	143	537	477	11.2	0.7	2.3	0.5	33.1
BC	LIVE	LEA	8	ALL	30.0	101	154	1,611	1,431	11.2	1.4	7.0	1.3	99.2
DF	LIVE	CUT	26	ALL	24.5	124	160	12,799	12,673	1.0	14.7	48.2	9.7	878.2
DF	LIVE	LEA	62	ALL	23.4	122	153	23,946	23,710	1.0	30.2	90.2	18.6	1,643.1
NF	LIVE	CUT	1	ALL	24.5	97	124	157	152	3.5	0.2	0.8	0.2	10.5
NF	LIVE	LEA	1	ALL	31.4	133	173	157	152	3.5	0.1	0.8	0.1	10.5
RA	LIVE	CUT	4	ALL	13.9	73	93	589	583	1.0	4.4	4.7	1.3	40.4
RA	LIVE	LEA	2	ALL	15.1	78	97	196	194	1.0	1.3	1.6	0.4	13.5
RC	LIVE	CUT	2	ALL	13.8	56	58	95	89	6.9	1.5	1.6	0.4	6.2
RC	LIVE	LEA	1	ALL	11.4	70	70	95	89	6.9	2.2	1.6	0.5	6.2
WH	LIVE	CUT	37	ALL	15.5	90	112	11,123	11,033	0.8	43.9	57.6	14.6	764.6
WH	LIVE	LEA	55	ALL	15.2	93	111	20,443	20,277	0.8	83.9	105.8	27.1	1,405.2
ALL	LIVE	LEA	129	ALL	17.8	100	122	46,449	45,854	1.3	119.1	206.9	48.1	3,177.7
ALL	LIVE	CUT	73	ALL	17.9	95	120	25,301	25,007	1.2	65.4	115.1	26.7	1,733.0
ALL	ALL	ALL	202	ALL	17.9	98	121	71,750	70,860	1.2	184.5	322.0	74.7	4,910.6

Cruise Unit Report FERDA U2

Unit Sale Notice Volume (MBF): FERDA U2

Sp	DBH	Rings/In	Age	MBF Volume by Grade				
				All	1 Saw	2 Saw	3 Saw	4 Saw
DF	22.7	8.3		3,013		2,513	442	58
WH	13.2			519		248	183	88
RA	15.8			64		37	6	21
BC	30.5			23	23			
ALL	19.1	8.3		3,618	23	2,798	631	166

Unit Cruise Design: FERDA 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	52.4	52.4	37	20	0

Unit Cruise Summary: FERDA U2

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
RC		1	1.0	0
DF	81	171	4.6	3
WH	20	45	1.2	0
RA	7	8	0.2	0
BC	2	2	0.1	0
ALL	110	227	6.1	3

Unit Cruise Statistics (Cut + Leave Trees): FERDA 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	54.4	0.0	0.0						
DF	251.6	53.8	8.8	247.3	20.9	2.3	62,233	57.7	9.1
WH	66.2	124.3	20.4	160.2	42.6	9.5	10,604	131.4	22.5
RA	11.8	347.0	57.1	117.9	19.8	7.5	1,388	347.6	57.5
BC	2.9	424.1	69.7	148.5	30.1	21.3	437	425.2	72.9
ALL	334.0	32.2	5.3	224.5	30.8	2.9	74,993	44.6	6.1

Unit Summary: FERDA U2

Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
BC	LIVE	CUT	2	ALL	30.5	101	132	509	437	14.1	0.6	2.9	0.5	22.9
DF	LIVE	CUT	81	ALL	22.7	111	149	59,162	57,502	2.8	82.7	232.5	48.8	3,013.1
DF	LIVE	LEA	13	ALL	23.4	94	120	4,868	4,731	2.8	6.4	19.1	4.0	247.9
RA	LIVE	CUT	7	ALL	15.8	59	83	1,320	1,215	8.0	7.6	10.3	2.6	63.6
RA	LIVE	LEA	1	ALL	18.0	75	93	189	174	8.0	0.8	1.5	0.3	9.1
RC	LIVE	LEA	1	ALL	20.0	68	86				0.7	1.5	0.3	
WH	LIVE	CUT	20	ALL	13.2	65	80	10,176	9,897	2.7	65.0	61.8	17.0	518.6
WH	LIVE	LEA	3	ALL	19.3	84	105	727	707	2.7	2.2	4.4	1.0	37.0
ALL	LIVE	CUT	110	ALL	19.0	90	117	71,166	69,051	3.0	155.9	307.5	68.9	3,618.3
ALL	LIVE	LEA	18	ALL	21.9	89	112	5,783	5,612	3.0	10.1	26.5	5.6	294.1
ALL	ALL	ALL	128	ALL	19.2	90	117	76,949	74,663	3.0	166.0	334.0	74.6	3,912.3

Cruise Unit Report FERDA U3

Unit Sale Notice Volume (MBF): FERDA U3

Sp	DBH	Rings/In	Age	MBF Volume by Grade				
				All	2 Saw	3 Saw	4 Saw	Utility
WH	16.4			117	60	44	13	0
DF	25.1			72	59	12	2	
ALL	18.4			189	119	55	15	0

Unit Cruise Design: FERDA U3

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B1: VR, 1 BAF (54.44) Measure All, Sighting Ht = 4.5 ft	2.5	2.5	2	2	0

Unit Cruise Summary: FERDA U3

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
WH	9	9	4.5	0
DF	5	5	2.5	0
ALL	14	14	7.0	0

Unit Cruise Statistics (Cut + Leave Trees): FERDA 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 (%)
WH	245.0	47.1	33.3	190.9	19.4	6.5	46,765	51.0	34.0
DF	136.1	28.3	20.0	212.4	13.3	5.9	28,905	31.3	20.9
ALL	381.1	20.2	14.3	198.6	17.4	4.7	75,670	26.7	15.0

Unit Summary: FERDA U3

Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
DF	LIVE	CUT	5	ALL	25.1	114	146	29,310	28,905	1.4	39.6	136.1	27.2	72.3
WH	LIVE	CUT	9	ALL	16.4	94	118	46,963	46,765	0.4	167.0	245.0	60.5	116.9
ALL	LIVE	CUT	14	ALL	18.4	98	123	76,273	75,670	0.8	206.6	381.1	87.7	189.2
ALL	ALL	ALL	14	ALL	18.4	98	123	76,273	75,670	0.8	206.6	381.1	87.7	189.2

Cruise Unit Report Unit 4 R/W

Unit Sale Notice Volume (MBF): Unit 4 R/W

Sp	DBH	Rings/In	Age	MBF Volume by Grade		
				All	3 Saw	4 Saw
RA	9.0			2		2
WH	14.0			1	1	0
DF	14.0			0	0	0
ALL	10.0			4	1	3

Unit Cruise Design: Unit 4 R/W

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
ST: Strip/Percent Sample (1 tree expansion)	2.3		1	1	0

Unit Cruise Summary: Unit 4 R/W

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
RA	2	51	51.0	0
WH	1	8	8.0	0
DF	1	3	3.0	0
ALL	4	62	62.0	0

Unit Cruise Statistics (Cut + Leave Trees): Unit 4 R/W

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 (%)
RA	9.7	0.0	0.0	106.2	12.1	8.5	1,032	12.1	8.5
WH	3.7	0.0	0.0	129.9	0.0	0.0	478	0.0	0.0
DF	1.4	0.0	0.0	121.5	0.0	0.0	168	0.0	0.0
ALL	14.8	0.0	0.0	113.6	12.2	6.1	1,678	12.2	6.1

Unit Summary: Unit 4 R/W

Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
DF	LIVE	CUT	1	ALL	14.0	67	87	174	168	3.7	1.3	1.4	0.4	0.4
RA	LIVE	CUT	2	ALL	9.0	41	66	1,086	1,032	4.9	22.0	9.7	3.2	2.4
WH	LIVE	CUT	1	ALL	14.0	69	87	499	478	4.1	3.4	3.7	1.0	1.1

Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
ALL	LIVE	CUT	4	ALL	10.1	46	69	1,759	1,678	4.6	26.7	14.8	4.6	3.9
ALL	ALL	ALL	4	ALL	10.1	46	69	1,759	1,678	4.6	26.7	14.8	4.6	3.9

Cruise Map

SALE NAME: FERDA VRH VDT

AGREEMENT#: 30-102171

TOWNSHIP(S): T15R6E, T16R5E

TRUST(S): Capitol Grant (7), Common School and Indemnity (3), State Forest Transfer (1)

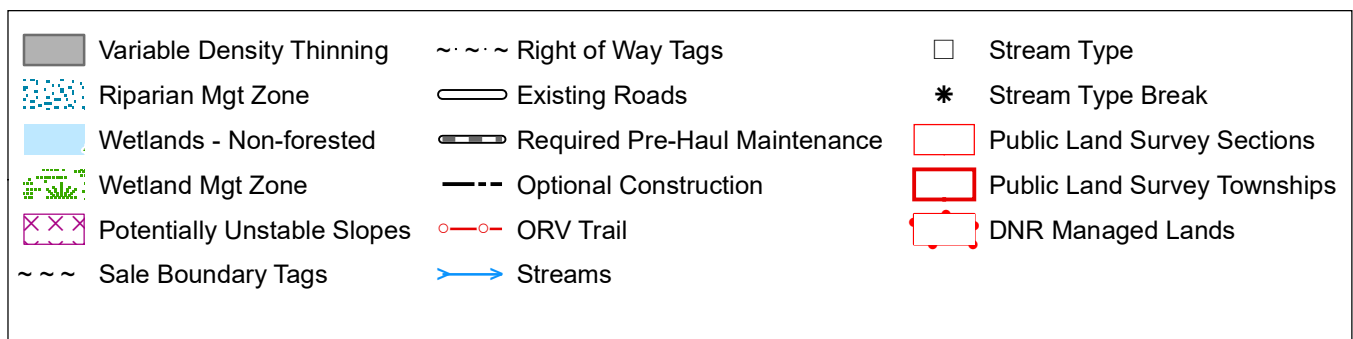
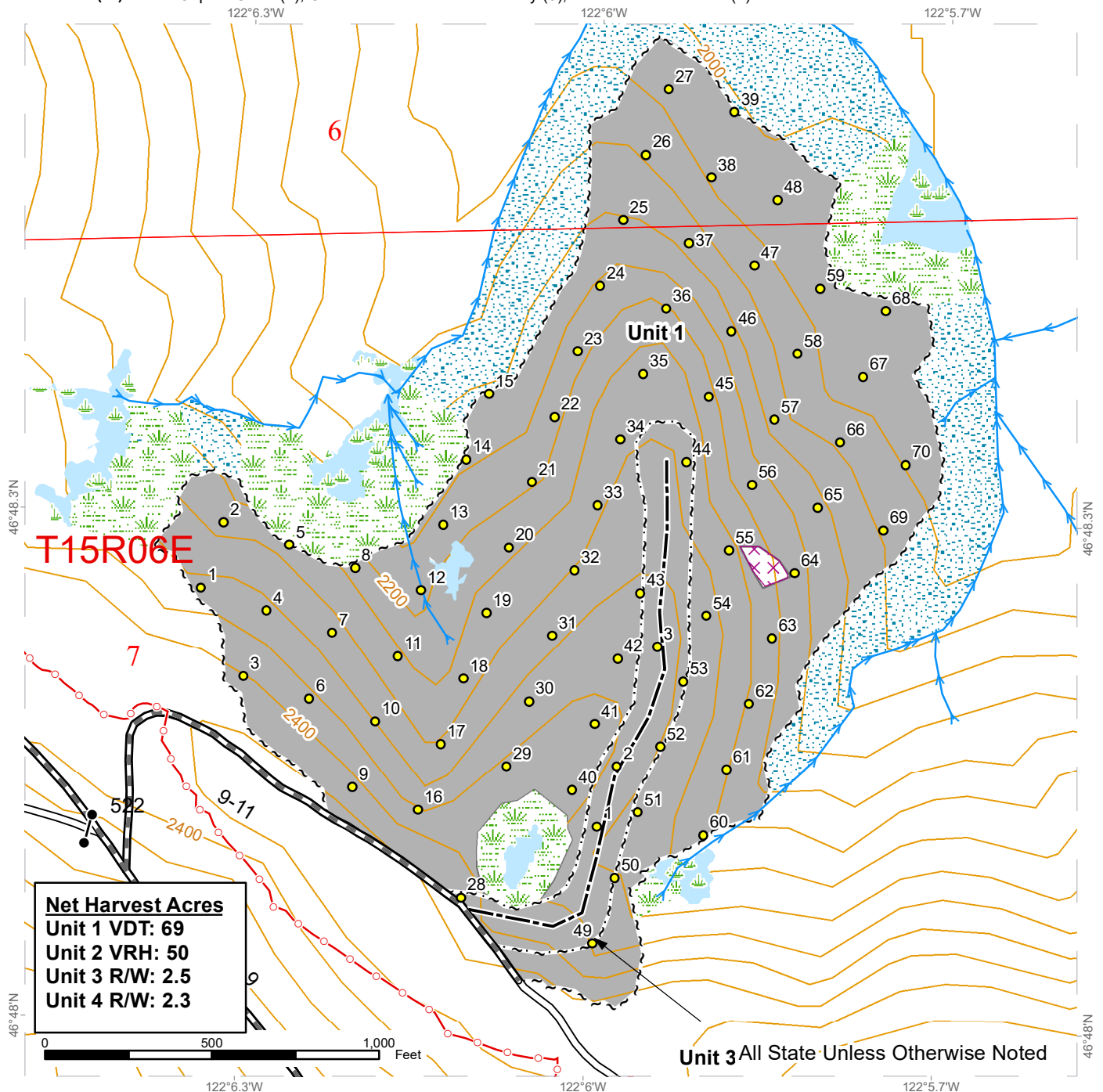
REGION:

South Puget Sound Region

COUNTY(S):

Pierce

ELEVATION RGE: 1840-2637



Cruise Map

SALE NAME: FERDA VRH VDT

AGREEMENT#: 30-102171

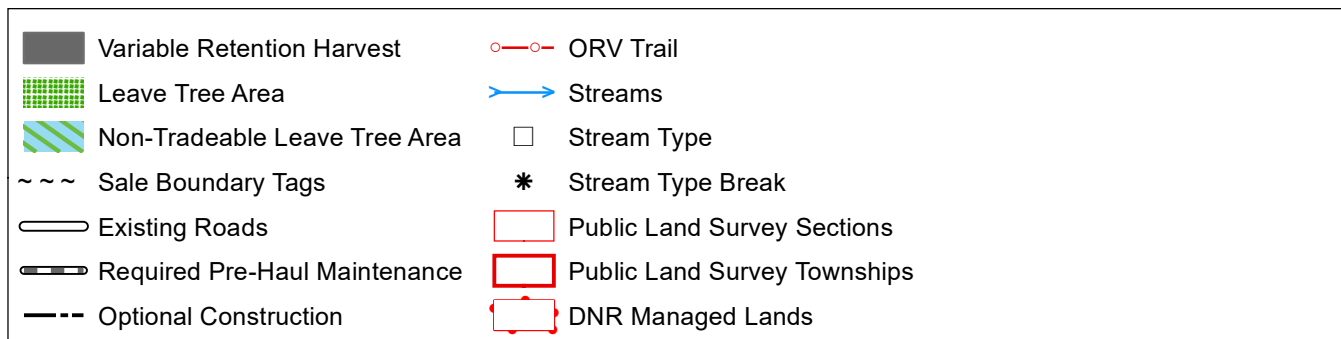
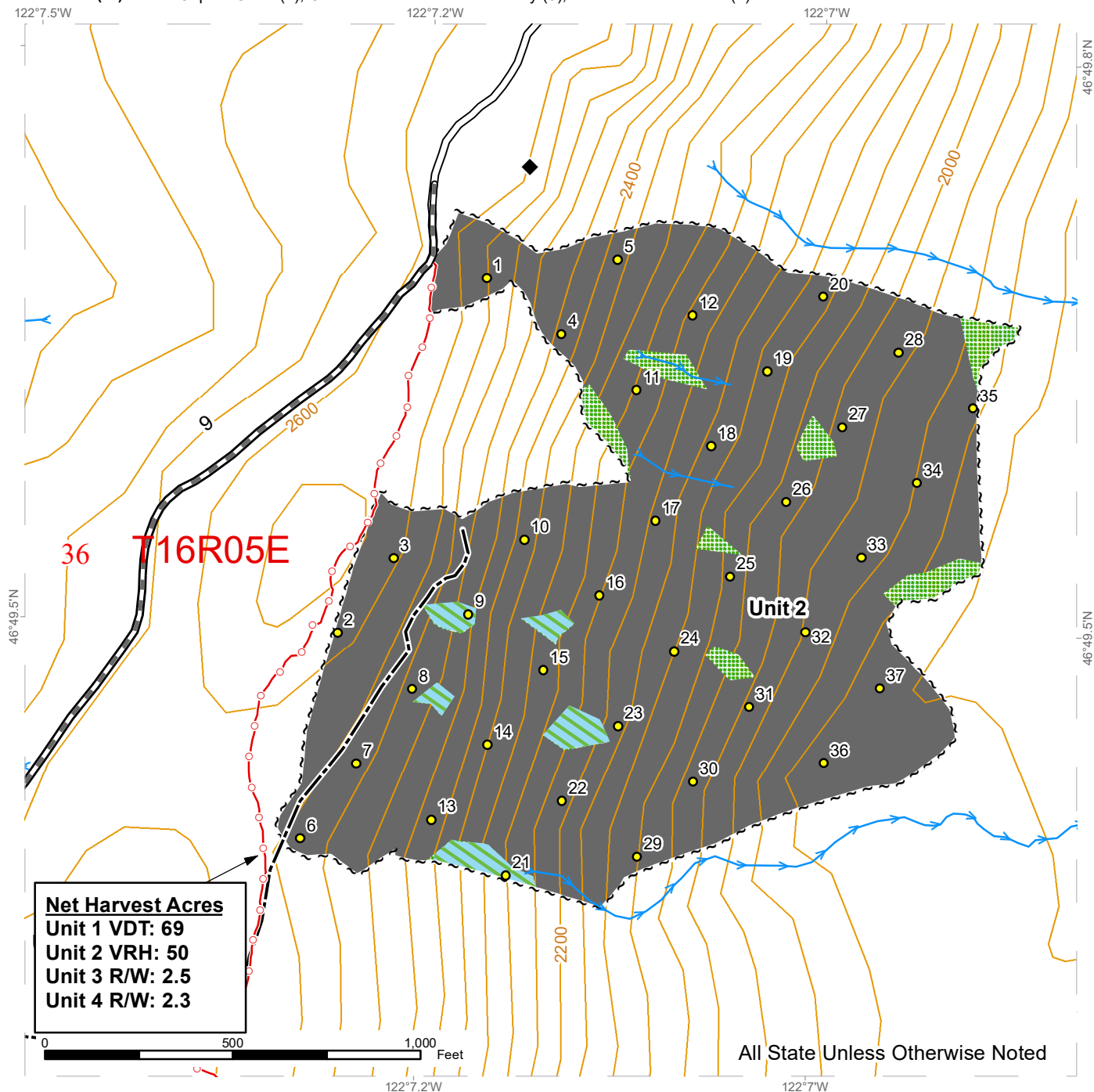
TOWNSHIP(S): T15R6E, T16R5E

TRUST(S): Capitol Grant (7), Common School and Indemnity (3), State Forest Transfer (1)

REGION: South Puget Sound Region

COUNTY(S): Pierce

ELEVATION RGE: 1840-2637





Forest Practices Application/Notification Notice of Decision

FPA/N No: 2423108

Effective Date: 9/29/2022

Expiration Date: 9/29/2025

Shut Down Zone: 657

EARR Tax Credit: ☒ Eligible ☐ Non-eligible

Reference: Ferda VRH & VDT #30-102171

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: Bruce Meyer

Region: South Puget Sound

Title: Forest Practices District Manager

Date: 9/29/2022

Copies to: ☒ Landowner, Timber Owner and Operator

Issued in person: ☒ Landowner ☒ Timber Owner ☒ Operator

By: 

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](http://www.wa.gov/RCW76.09.205). 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>Physical Address</u> 1125 Washington Street, SE Olympia, WA 98504	<u>Physical Address</u> 950 Farman Ave N Enumclaw, WA 98022
<u>Mailing address</u> Post Office Box 40903 Olympia, WA 98504-0903	<u>Mailing Address</u> Post Office Box 40100 Olympia, WA 98504-0100	<u>Mailing Address</u> 950 Farman Ave N Enumclaw, WA 98022

Information regarding the Pollution Control Hearings Board can be found at: <http://www.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 Affidavit of Mailing

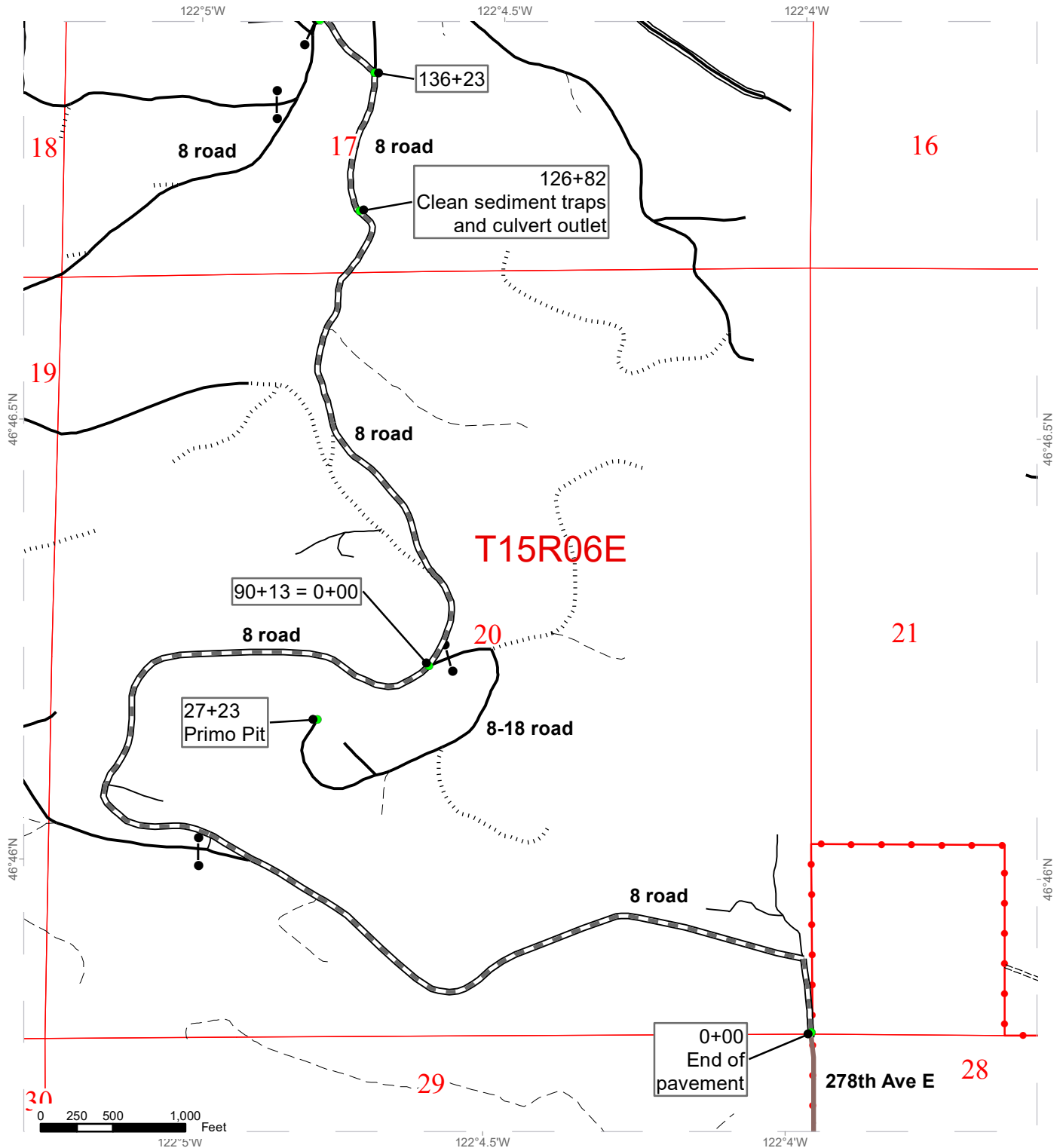
On this day 9/29/2022, I placed in the United States mail at Olympia, WA, postage paid, a true and accurate copy of this document. Notice of Decision FPA #2423108.

Meredith Dessens

(Printed Name)

(Signature)

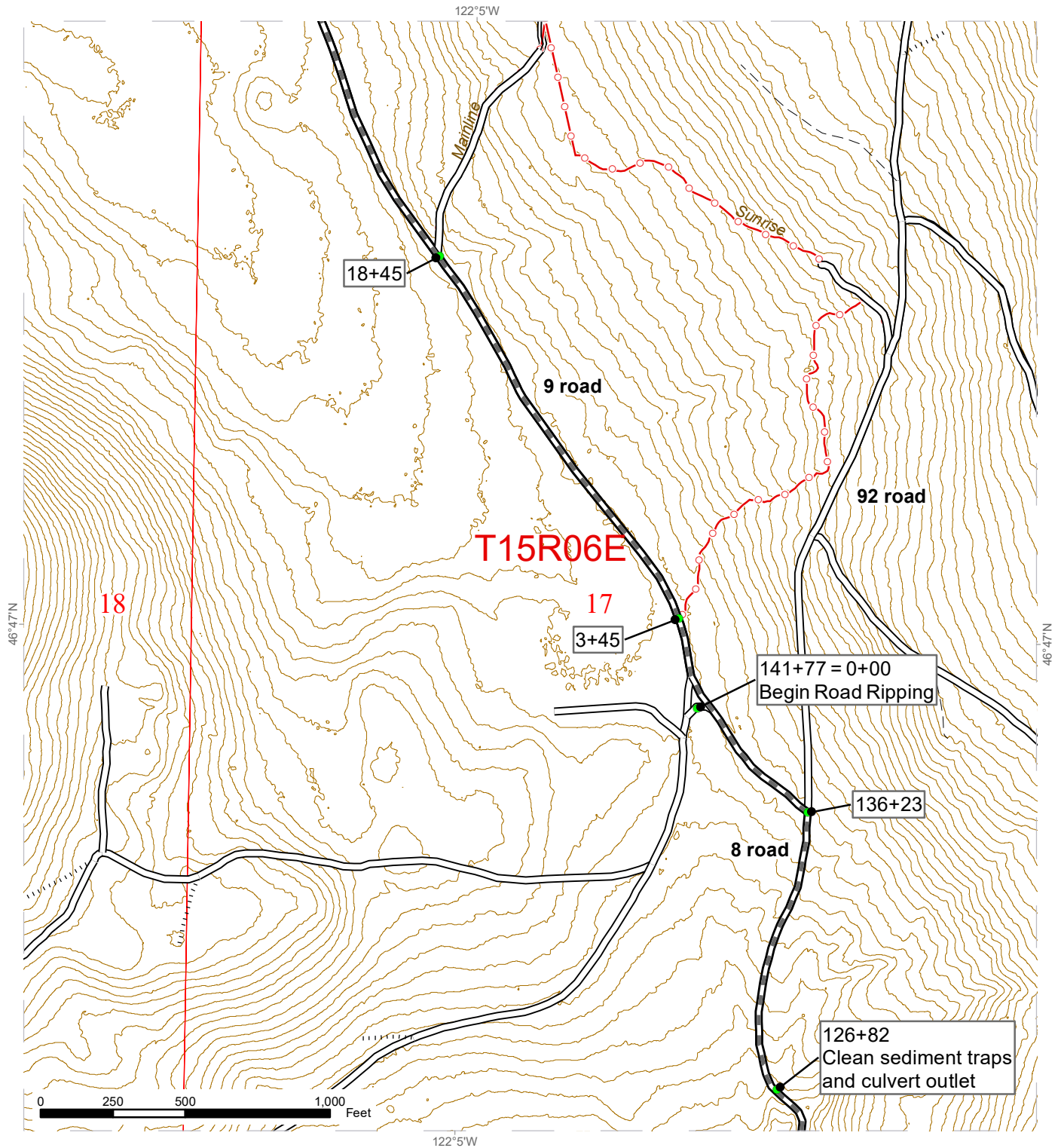
FERDA TIMBER SALE ROAD WORK MAP, pg 1 of 8



Legend	
● Road Stationing	 Public Land Survey Sections
 Pre-haul Maintenance	 Gates (Corporate)
 Active/driveable Road	
 Non-driveable Road	
 Orphaned Road	
 FP Abandoned Road	
 Decommissioned Road	



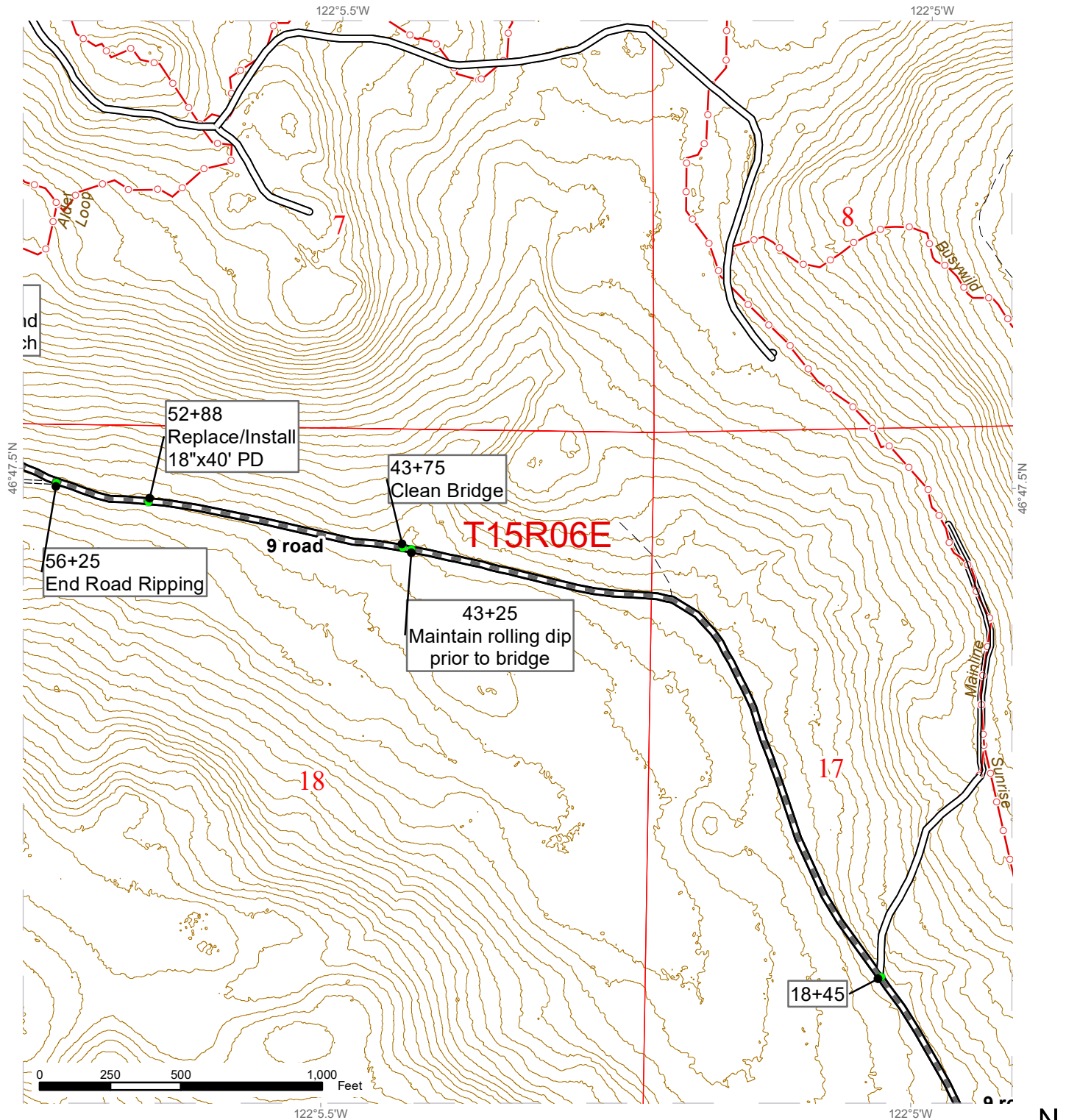
FERDA TIMBER SALE ROAD WORK MAP, pg 2 of 8



Legend

- | | | | |
|-------------------------|-----------------------------|----------------|------------------|
| ● Road Stationing | == Active/driveable Road | DNR SPS Trails | — Contours 10 ft |
| == Pre-haul Maintenance | — Non-driveable Road | ○ ORV | |
| FP Abandoned Road | Public Land Survey Sections | | |
| - - Decommissioned Road | | | |

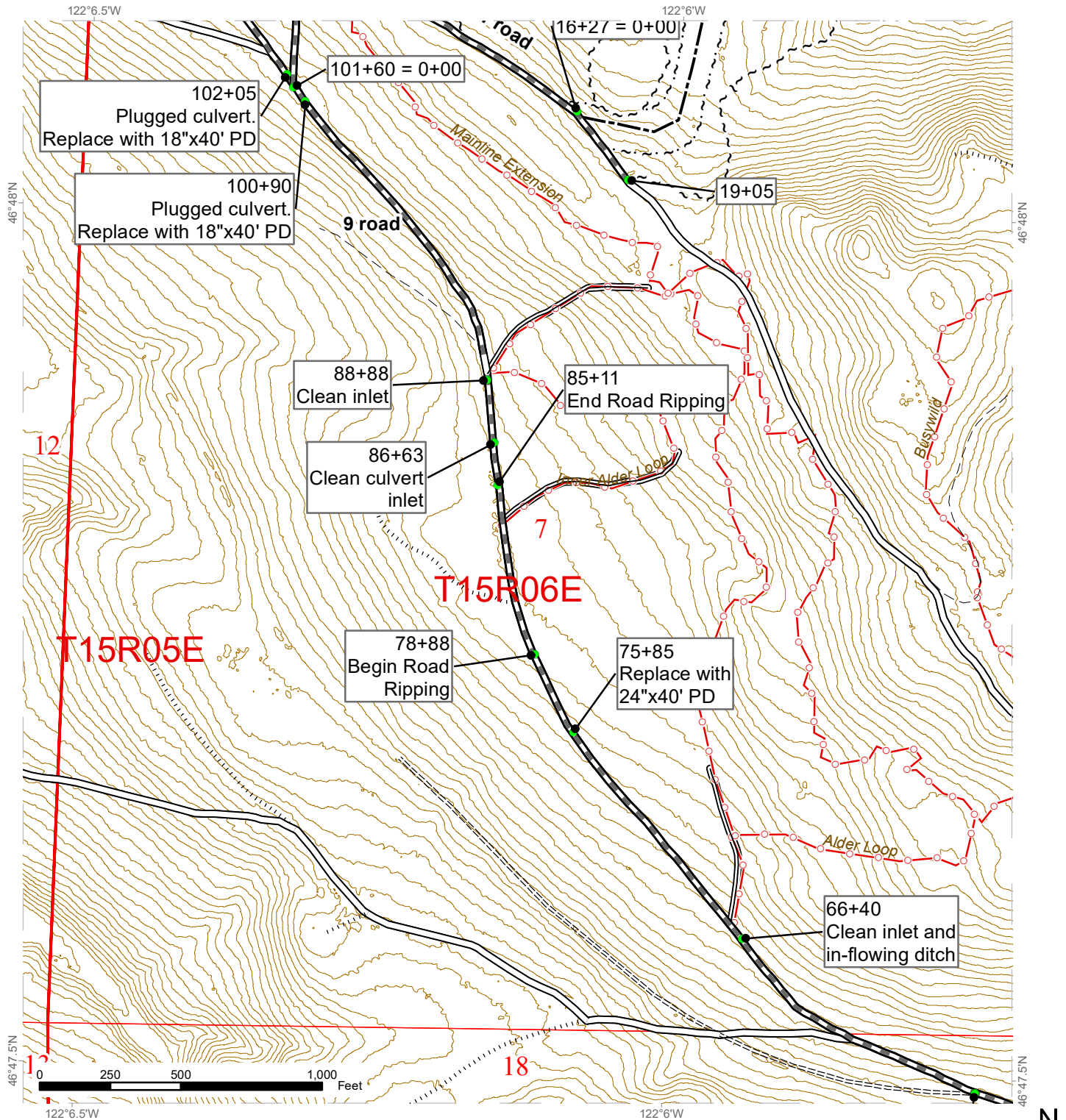
FERDA TIMBER SALE ROAD WORK MAP, pg 3 of 8



Legend			
● Road Stationing	Active/driveable Road	DNR SPS Trails	Contours 10 ft
Pre-haul Maintenance	Non-driveable Road	ORV	
Orphaned Road	Public Land Survey Sections		
Decommissioned Road			



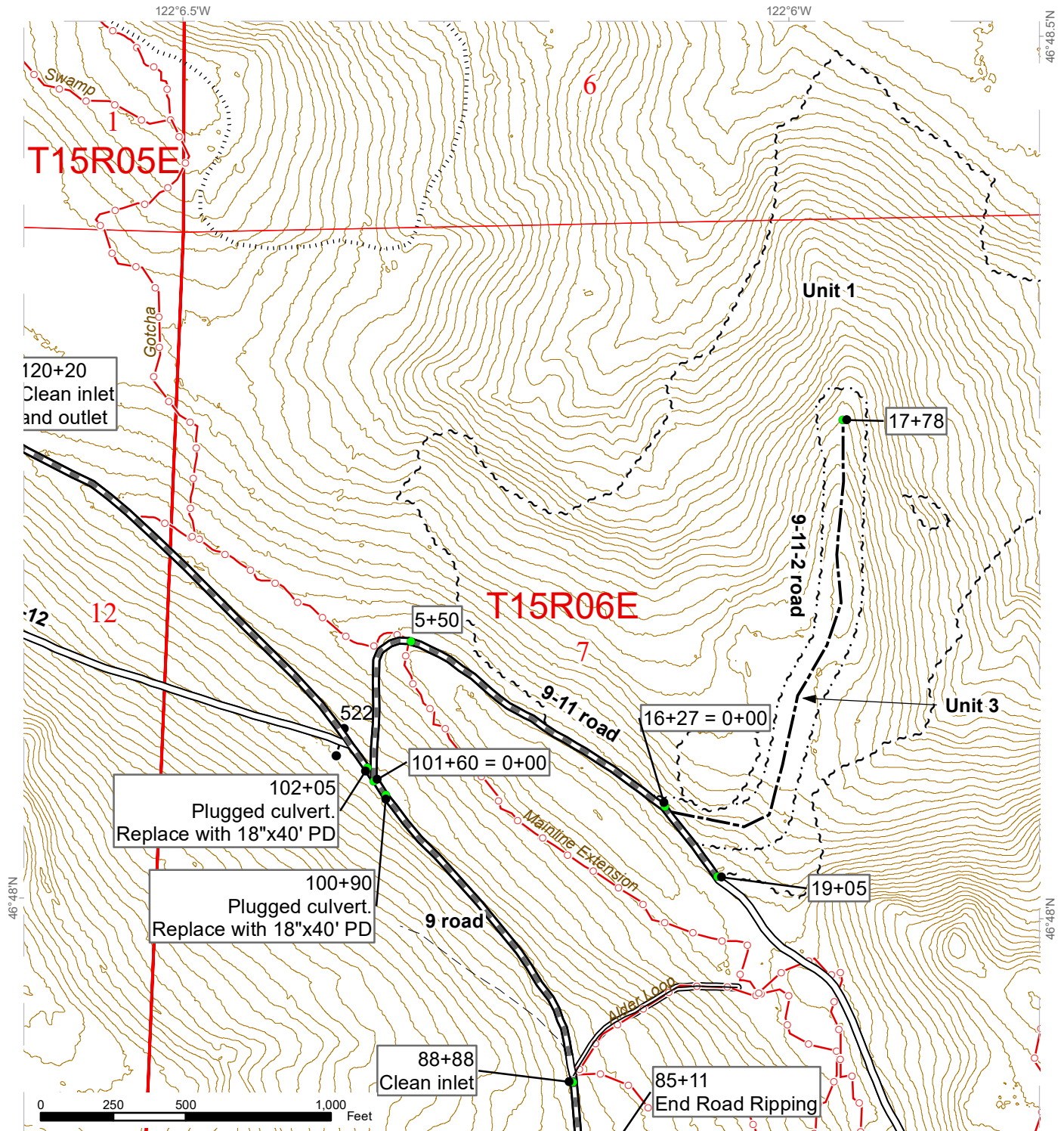
FERDA TIMBER SALE ROAD WORK MAP, pg 4 of 8



Legend

- | | | | |
|---------------------------|-------------------------------|----------------|------------------|
| ● Road Stationing | == Active/driveable Road | DNR SPS Trails | — Contours 10 ft |
| ▬ Pre-haul Maintenance | — Non-driveable Road | ○ ORV | |
| === Orphaned Road | □ Public Land Survey Sections | | |
| FP Abandoned Road | ~ ~ ~ Sale Boundary Tags | | |
| - - - Decommissioned Road | ~ ~ ~ Right of Way Tags | | |

FERDA TIMBER SALE ROAD WORK MAP, pg 5 of 8

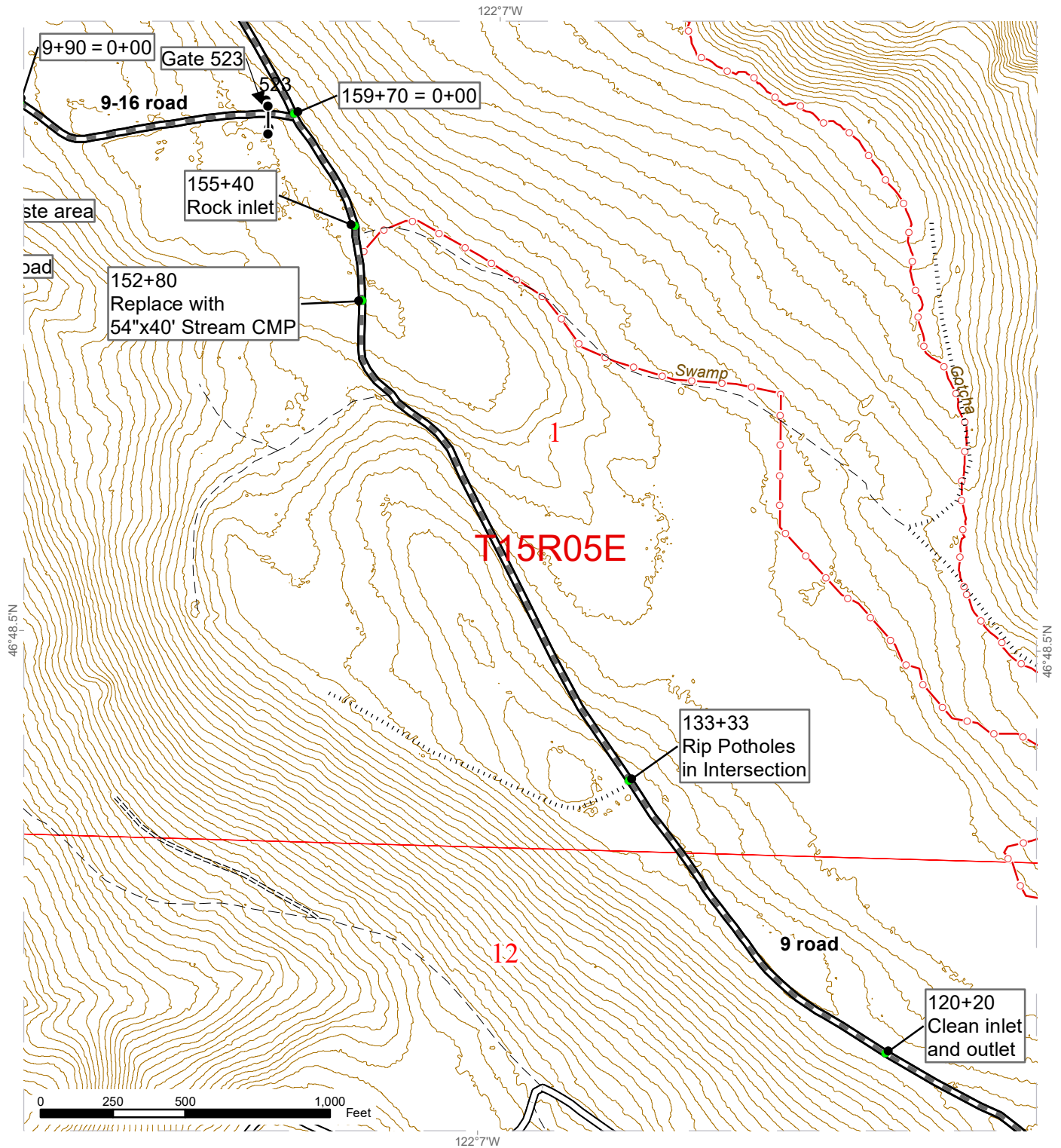


Legend

- | | | | |
|---------------------------|-------------------------------|----------------|------------------|
| ● Road Stationing | == Active/Driveable Road | DNR SPS Trails | — Contours 10 ft |
| == Pre-haul Maintenance | — Non-driveable Road | ○ ORV | |
| FP Abandoned Road | □ Public Land Survey Sections | | |
| - - - Decommissioned Road | ● Gates (Corporate) | | |
| | ~ ~ ~ Sale Boundary Tags | | |
| | ~ ~ ~ Right of Way Tags | | |



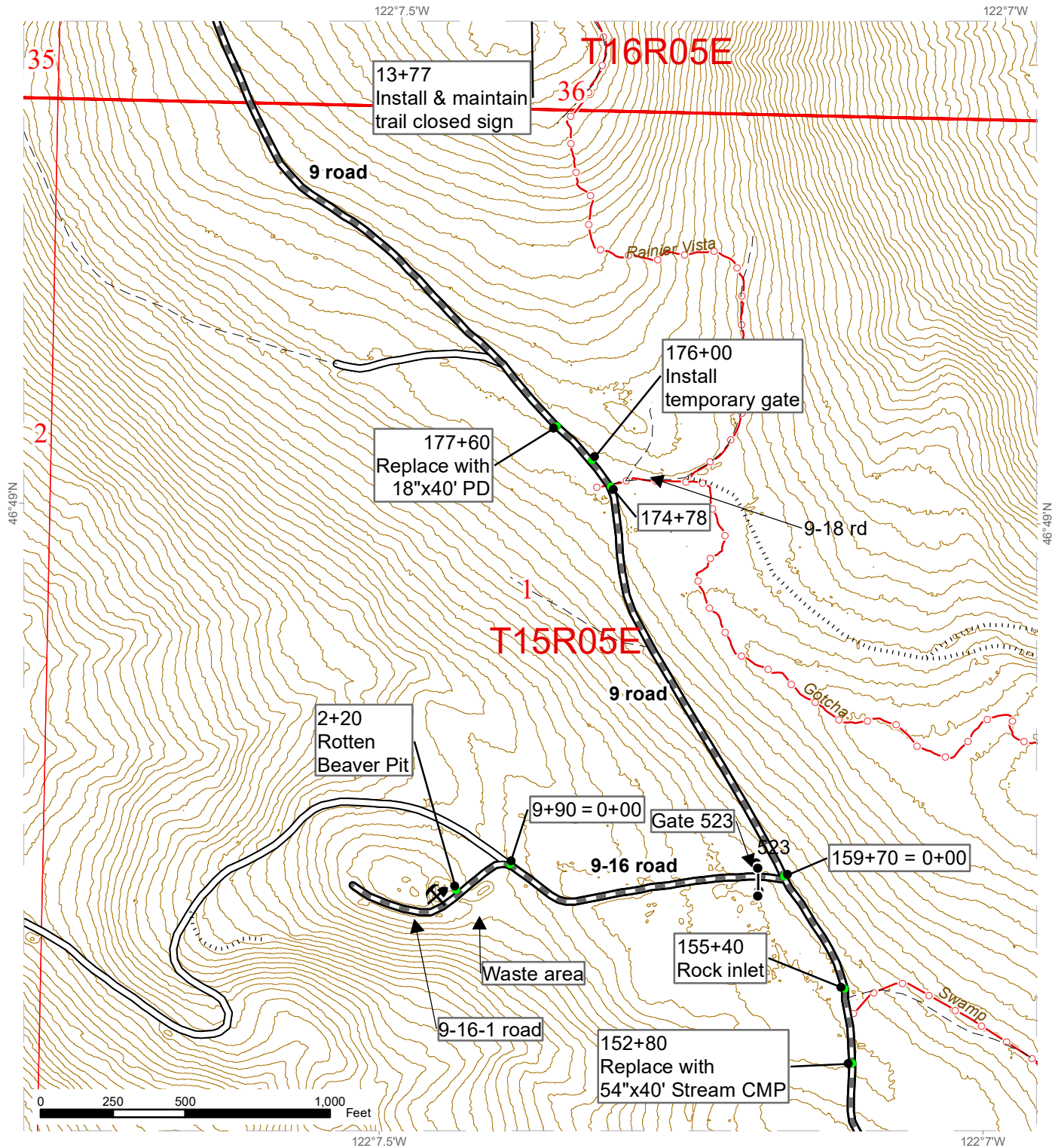
FERDA TIMBER SALE ROAD WORK MAP, pg 6 of 8



Legend			
● Road Stationing	— Active/driveable Road	DNR SPS Trails	— Contours 10 ft
— Pre-haul Maintenance	=== Orphaned Road	○ ORV	
 FP Abandoned Road	Public Land Survey Sections	
— Decommissioned Road	● Gates (Corporate)		

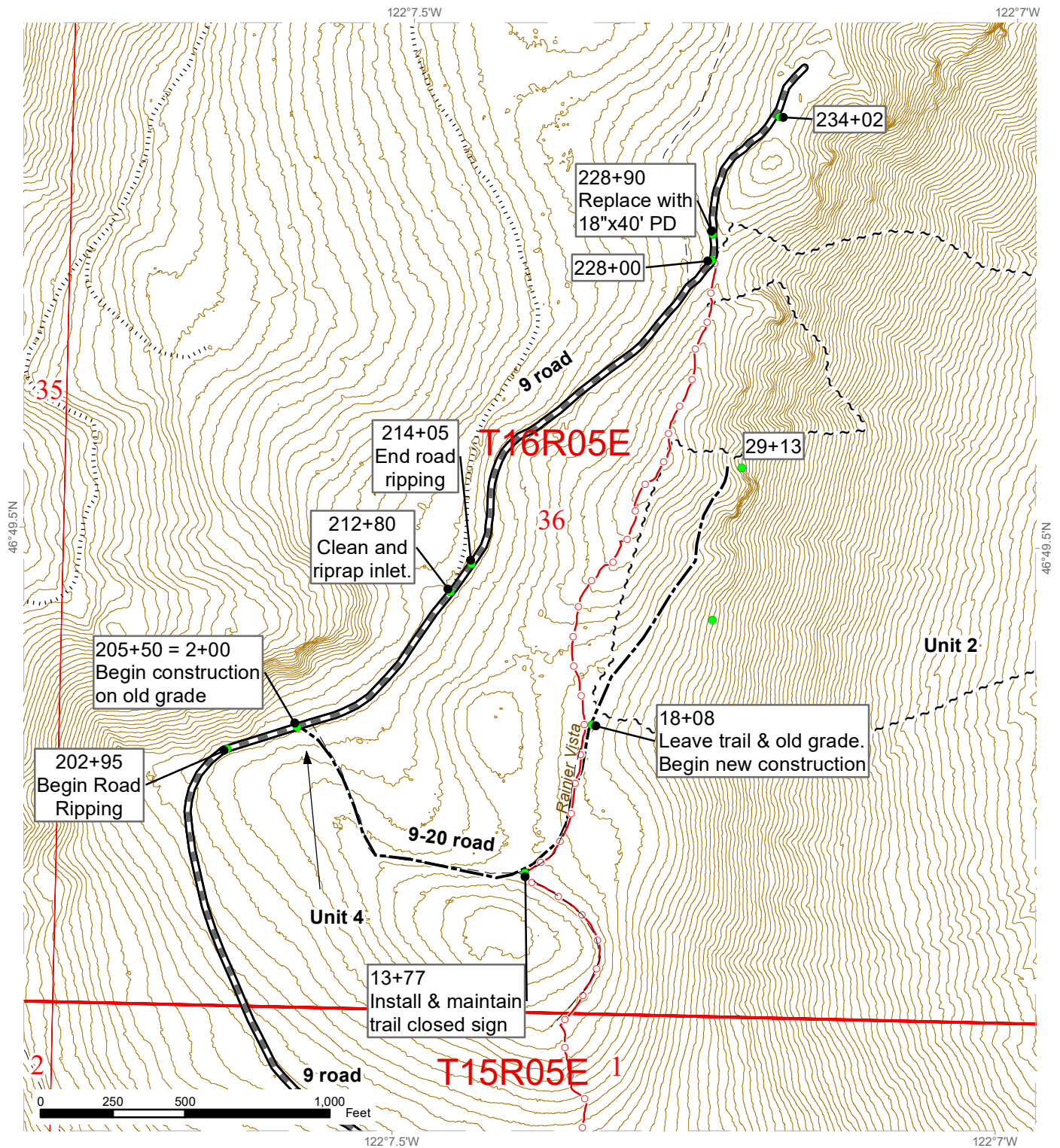


FERDA TIMBER SALE ROAD WORK MAP, pg 7 of 8



Legend			
● Road Stationing	— Active/driveable Road	DNR SPS Trails	— Contours 10 ft
— Pre-haul Maintenance FP Abandoned Road	○ ORV	
— Decommissioned Road	Public Land Survey Sections	● Gates (Corporate)	

FERDA TIMBER SALE ROAD WORK MAP, pg 8 of 8



Legend

- Road Stationing
- Active/driveable Road
- DNR SPS Trails
- Contours 10 ft
- Pre-haul Maintenance
- FP Abandoned Road
- ORV
- Decommissioned Road
- Public Land Survey Sections
- Sale Boundary Tags

STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES

FERDA TIMBER SALE ROAD PLAN
PIERCE COUNTY
RAINIER DISTRICT

AGREEMENT NO.: 30-102171

STAFF ENGINEER: M. BELL

DATE: 1-12-2022

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>
8	0+00 to 141+77	Pre-haul maintenance
9	0+00 to 234+02	Pre-haul maintenance
9-11	0+00 to 19+05	Pre-haul maintenance
9-16	0+00 to 9+90	Pre-haul maintenance
9-16-1	0+00 to 2+20	Pre-haul maintenance
9-11-2	0+00 to 17+78	Abandonment, if built
9-20	2+00 to 29+13	Abandonment, if built

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>
9-11-2	0+00 to 17+78	Construction
9-20	2+00 to 29+13	Construction

0-4 CONSTRUCTION

Construction includes, but is not limited to:

- Clearing.
- Grubbing.
- Right of way debris disposal.
- Excavation and/or embankment to subgrade.
- Road widening.
- Landing construction.

- Acquisition and installation of drainage structures.
- Manufacture and application of rock.
- Road abandonment.

0-6 PRE-HAUL MAINTENANCE

Pre-haul maintenance includes, but is not limited to:

- Brushing right-of-way.
- Clean bridge deck.
- Ditch cleaning and reconstruction
- Acquisition and installation of drainage structures.
- Acquisition and installation of a stream structure.
- Culvert cleaning and headwall reconstruction.
- Ripping, shaping, grading, and compaction of road surface.
- Acquisition, manufacture, and application of rock.
- Acquisition and installation of temporary steel gate
- Acquisition and application of grass seed and straw.

0-7 POST-HAUL MAINTENANCE

This project includes, but is not limited to 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. Work for developing rock sources is listed in Section 6 ROCK AND SURFACING.

0-13 STRUCTURES

Purchaser shall provide and install one temporary steel gate and shall provide and install 54 inch diameter by 40 foot long Aluminized Steel 12 gauge culvert. Requirements for this structure are listed in Section 7 STRUCTURES.

SECTION 1 – GENERAL

1-1 ROAD PLAN CHANGES

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

1-2 UNFORESEEN CONDITIONS

Quantities established in this road plan are minimum acceptable values. Additional quantities required by the state due to unforeseen conditions, or Purchaser's choice of construction season or techniques,

will be at the Purchaser's expense. Unforeseen conditions include, but are not limited to, solid subsurface rock, subsurface springs, saturated ground, and unstable soils.

1-3 ROAD DIMENSIONS

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

1-4 ROAD TOLERANCES

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

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

1-6 ORDER OF PRECEDENCE

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

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

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

1-8 REPAIR OR REPLACEMENT OF DAMAGED MATERIALS

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

1-9 DAMAGED METALLIC COATING

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

SUBSECTION ROAD MARKING

1-15 ROAD MARKING

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

- Construction is marked with orange pin flags and orange flagging.

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**

Purchaser shall complete pre-haul road work before the start of timber haul, unless authorized in writing by the Contract Administrator.

On the following road(s), Purchaser shall complete road work within the specified period.

<u>Road</u>	<u>Stations</u>	<u>Date</u>
9	152+80	The stream culvert replacement shall occur between July 1 and September 30.

1-21 HAUL APPROVAL

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

1-22 WORK NOTIFICATIONS

On the following road(s), Purchaser shall notify the Contract Administrator a minimum of 14 calendar days before work begins or roads/trails are closed.

<u>Road</u>
9
9-20 and ORV trails

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

No operation of road construction equipment or rock haul will be allowed on weekends or state recognized holidays, unless authorized in writing by the Contract Administrator.

The specified activities are not permitted during the listed closure periods unless authorized in writing by the Contract Administrator.

<u>Activity</u>	<u>Closure Period</u>
Operation of road construction equipment or rock haul	November 1 to May 15

1-26 OPERATING DURING CLOSURE PERIOD

IF PERMISSION IS GRANTED TO OPERATE DURING A CLOSURE PERIOD LISTED IN CLAUSE

1-25 ACTIVITY TIMING RESTRICTION or Contract Clause H-140 SPECIAL HARVEST REQUIREMENTS, 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.

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 new construction rocked roads.
- Wheel track rutting exceeds 3 inches on crushed rock roads.
- Surface or base stability problems persist.
- Weather is such that satisfactory results cannot be obtained in an area of operations.
- When, in the opinion of the Contract Administrator, excessive road damage or rutting may occur.

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

1-32 BRIDGE SURFACE RESTRICTION

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

If tracked equipment is used on bridge surfaces, Purchaser shall immediately cease all operations. Purchaser shall remove any dirt, rock, or other material tracked or spilled on the bridge surface(s) and have surface(s) evaluated by the District Engineer or their designee 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.

SECTION 2 – MAINTENANCE

2-1 GENERAL ROAD MAINTENANCE

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

2-2 ROAD MAINTENANCE – PURCHASER MAINTENANCE

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

2-3 ROAD MAINTENANCE – DESIGNATED MAINTAINER

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

2-4 PASSAGE OF LIGHT VEHICLES

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

<u>Road</u>	<u>Stations</u>
8	0+00 to 141+77
9	0+00 to 234+02

2-5 MAINTENANCE GRADING – EXISTING ROAD

On the following road(s), Purchaser shall use a grader to shape the existing surface before rocking and/or timber haul. Purchaser shall accomplish all grading using a motor grader with a minimum of 175 horsepower.

<u>Road</u>	<u>Stations</u>	<u>Comment</u>
8	0+00 to 141+77	
9	0+00 to 234+02	See Clause 4-57 EXISTING ROAD RIPPING AND BLADING
9-11	0+00 to 5+50	See Clause 4-57 EXISTING ROAD RIPPING AND BLADING
9-11	5+50 to 19+05	
9-16	0+00 to 9+90	
9-16-1	0+00 to 2+00	

2-6 CLEANING CULVERTS

On the following road(s), Purchaser shall clean the inlets and outlets of all culverts before timber haul.

<u>Road</u>	<u>Stations</u>
9	0+00 to 234+02
9-11	0+00 to 19+05
9-16	0+00 to 9+90
9-16-1	0+00 to 2+00

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

On the following road(s), Purchaser shall clean ditches, headwalls, and catchbasins. Work must be completed before grading, rock application and/or 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. Excavated material must be scattered outside the clearing limits.

<u>Road</u>	<u>Stations</u>
9	0+00 to 234+02
9-11	0+00 to 19+05
9-16	0+00 to 9+90
9-16-1	0+00 to 2+00

2-8 MAINTAINING EROSION CONTROL STRUCTURES

On the following road(s), Contractor shall clean and maintain all erosion control devices including but not limited to rock berms.

<u>Road</u>	<u>Stations</u>	<u>Comments</u>
8	126+82	Clean inlet and outlet of 18" culvert. Clean and maintain sediment traps.

SECTION 3 – CLEARING, GRUBBING, AND DISPOSAL

SUBSECTION BRUSHING

3-1 BRUSHING

On the following road(s), Purchaser shall cut vegetative material up to 3 inches in diameter, including limbs, as shown on the BRUSHING SECTION DETAIL. Brushing must be achieved by manual or mechanical cutting of brush, trees, and branches. Purchaser shall remove brushing debris from the road surface, ditchlines, and culvert inlets and outlets.

<u>Road</u>	<u>Stations</u>
8	126+00 to 136+23
9	0+00 to 234+02
9-11	0+00 to 19+05
9-16	0+00 to 9+90
9-16-1	0+00 to 2+00

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 50 feet of any stream.
- In locations that interfere with the construction of the road prism.
- In locations that impede drainage.
- Against standing trees unless approved by the Contract Administrator.

SUBSECTION GRUBBING

3-10 GRUBBING

Purchaser shall remove all stumps between the grubbing limits specified on the TYPICAL SECTION SHEET. Purchaser shall also remove stumps with undercut roots outside the grubbing limits. 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 clearing 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 subgrade compaction, application of rock and/or timber haul.

3-23 PROHIBITED DISPOSAL AREAS

Purchaser shall not place organic debris in the following areas:

- Within 20 feet of a cross drain culvert.
- Within 100 feet of a live stream or wetland.
- On road subgrades, or excavation and embankment slopes.
- Within the operational area for cable landings where debris may shift or roll.
- On locations where brush can fall into the ditch or onto the road surface.
- Against standing timber.
- In location that would impede drainage.

3-24 BURYING ORGANIC DEBRIS RESTRICTED

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

3-25 SCATTERING ORGANIC DEBRIS

Purchaser shall scatter organic debris outside the clearing limits.

SECTION 4 – EXCAVATION

4-1 EXCAVATOR CONSTRUCTION

Purchaser shall use a track mounted hydraulic excavator for construction work involving pioneering, clearing and grubbing, unless authorized in writing by the Contract Administrator.

4-2 PIONEERING

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

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

4-3 ROAD GRADE AND ALIGNMENT STANDARDS

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

- Grade and alignment must have smooth continuity, without abrupt changes in direction.
- Maximum grades may not exceed 18 percent favorable and 12 percent adverse.
- Minimum curve radius is 60 feet at centerline.

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)	$\frac{3}{4}$:1	133
Common Earth (on slopes over 70%)	$\frac{1}{2}$:1	200
Fractured or loose rock	$\frac{1}{2}$:1	200
Hardpan or solid rock	$\frac{1}{4}$:1	400

4-6 EMBANKMENT SLOPE RATIO

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

<u>Material Type</u>	<u>Embankment Slope Ratio</u>	<u>Embankment Slope Percent</u>
Sandy Soils	2:1	50
Common Earth and Rounded Gravel	$1\frac{1}{2}$:1	67
Angular Rock	$1\frac{1}{4}$:1	80

4-7 SHAPING CUT AND FILL SLOPE

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

4-8 CURVE WIDENING

The minimum widening placed on the inside of curves is:

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

4-9 EMBANKMENT WIDENING

The minimum embankment widening is:

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

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

4-12 FULL BENCH CONSTRUCTION

On the following road where side slopes exceed 45%, Purchaser shall use full bench construction for the entire subgrade width except as construction staked or designed.

<u>Road</u>	<u>Stations</u>
9-20	25+23 to 29+13

SUBSECTION INTERSECTIONS, TURNOUTS AND TURNAROUNDS

4-21 TURNOUTS

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

4-22 TURNAROUNDS

Purchaser shall construct turnouts as designated on the TURNAROUND LIST. Turnarounds shall be minimum 30 feet long and 30 feet wide. Location changes are subject to written approval by the Contract Administrator.

SUBSECTION DITCH CONSTRUCTION

4-25 DITCH CONSTRUCTION AND RECONSTRUCTION

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

4-28 DITCH DRAINAGE

Ditches must drain to cross-drain culverts or ditchouts.

4-29 DITCHOUTS

Purchaser shall construct ditchouts as identified and as needed. 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 55% 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>
9-16-1	East of the Rotten Beaver Pit	

4-38 PROHIBITED WASTE DISPOSAL AREAS

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

- Within 50 feet of a cross drain culvert.
- Within 100 feet of a live stream or wetland.
- Within a riparian management zone.
- On side slopes steeper than 55%.
- 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.

4-45 SELECT BORROW

Select borrow consists of granular material, either naturally occurring or processed, and contains no more than 5% clay, organic debris, or trash by volume. Select borrow material must be free of rocks greater than 6 inches in any dimension.

4-47 BORROW MATERIAL

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

4-48 NATIVE MATERIAL

Native material consists of naturally occurring material that is free of organic debris, trash, and rocks greater than 6 inches in any dimension.

4-49 BORROW SOURCE

Purchaser shall obtain borrow material from the listed borrow source(s). Development of the borrow source must be in accordance with Pit Plan.

<u>Source(s)</u>
Rotten Beaver Pit Primo Pit

4-50 BORROW APPLICATION

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

<u>Road</u>	<u>Stations</u>	<u>Cubic Yards</u>	<u>Type</u>
9	151+80 (stream culvert installation)	Up to 54	Select Borrow

SUBSECTION SHAPING

4-55 ROAD SHAPING

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

4-57 EXISTING ROAD RIPPING AND BLADING

On the following road(s), Purchaser shall rip the surface to a depth of 6 inches and reshape prior to grading and rocking. During the reshaping process, rocks over 4 inches in diameter must be sidecast. Purchaser shall obtain written approval from the Contract Administrator prior to rocking.

<u>Road</u>	<u>Stations</u>	<u>Comments</u>
9	0+00 to 56+25	
9	78+88 to 85+11	
9	133+33	Rip all potholes in intersection (roughly 50 foot stretch)
9	202+95 to 214+05	
9-11	0+00 to 5+50	

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. A plate compactor must be used for areas specifically requiring keyed embankment construction and for embankment and waste area segments too narrow to accommodate equipment. 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. Purchaser shall obtain written approval from the Contract Administrator for subgrade compaction before rock application and/or timber haul.

4-63 EXISTING SURFACE COMPACTION

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

SECTION 5 – DRAINAGE

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 and meet the specifications in Clauses 10-15 through 10-23.

5-7 USED CULVERT MATERIAL

On the following road(s), Purchaser may install used culverts. All other roads must have new culverts installed.

<u>Road</u>	<u>Stations</u>
9-11-2	0+00 to 17+78
9-20	2+00 to 29+13

5-12 UNUSED MATERIALS STATE PROPERTY

On required roads, any materials listed on the CULVERT AND DRAINAGE LIST that are not installed will become the property of the state. Purchaser shall stockpile materials at the Ashford Cooler Compound at the start of the 8 road.

SUBSECTION CULVERT INSTALLATION

5-15 CULVERT INSTALLATION

Culvert installation must be in accordance with the CULVERT AND DRAINAGE SPECIFICATION DETAIL and the National Corrugated Metal Pipe Association's "Installation Manual for Corrugated Steel Drainage Structures" and the Corrugated Polyethylene Pipe Association's "Recommended Installation Practices for Corrugated Polyethylene Pipe and Fittings". Corrugated Polyethylene pipe must be installed in a manner consistent with the manufacturer's recommendations. Culverts shall be banded using lengths of no less than 10 feet, and no more than one length less than 16 feet. Shorter section of banded culvert shall be installed at the inlet end.

5-16 APPROVAL FOR LARGER CULVERT INSTALLATION

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

5-17 CROSS DRAIN SKEW AND SLOPE

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

5-18 CULVERT DEPTH OF COVER

Cross drain culverts must be installed with a depth of cover of not less than 1 foot of compacted subgrade over the top of the culvert at the shallowest point. Stream crossing culverts must be installed with a depth of cover recommended specified in the Engineer's design.

SUBSECTION ENERGY DISSIPATERS

5-20 ENERGY DISSIPATERS

Purchaser shall install energy dissipaters in accordance with the CULVERT AND DRAINAGE SPECIFICATION DETAIL at all cross drain culverts, except for temporary culverts. Energy dissipater installation is subject to approval by the Contract Administrator.

The type of energy dissipater and the amount of material must be consistent with the specifications listed on the CULVERT AND DRAINAGE LIST. Energy dissipaters must extend a minimum of 1 foot to each side of the culvert at the outlet and a minimum of 2 feet beyond the outlet. Placement must with a zero-drop-height only. No placement by end dumping or dropping of rock is allowed.

SUBSECTION CATCH BASINS, HEADWALLS, AND ARMORING

5-25 CATCH BASINS

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

5-26 HEADWALLS FOR CROSS DRAIN CULVERTS

Purchaser shall construct headwalls in accordance with the CULVERT AND DRAINAGE SPECIFICATION DETAIL at all cross drain culverts, except temporary culverts. Rock must be placed on shoulders, slopes, and around culvert inlets and outlets. Minimum specifications require that rock be placed at a width of one culvert diameter on each side of the culvert opening, and to a height of one culvert diameter above the top of the culvert. Rock may not restrict the flow of water into culvert inlets or catch basins. Placement must be by zero-drop-height method only. No placement by end dumping or dropping of rock is allowed.

5-27 ARMORING FOR STREAM CROSSING CULVERTS

At the following culvert(s), Purchaser shall place LIGHT LOOSE RIP RAP in conjunction with or immediately following construction of the embankment. Rock must be placed on shoulders, slopes, and around culvert inlets and outlets as designated on the CULVERT LIST and attached culvert design(s). 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. No placement by end dumping or dropping of rock is allowed. Quarry Spalls must meet the specification in Clause 6-50 LIGHT LOOSE RIP RAP.

<u>Road</u>	<u>Stations</u>	<u>Rock Type</u>
9	152+80	LIGHT LOOSE RIP RAP

SUBSECTION SURFACE DRAINAGE

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 3 calendar days before starting any operations in the listed locations.

<u>Source</u>	<u>Location</u>	<u>Rock Type</u>
Primo Pit	NE ¼ SW ¼ NE ¼ SW ¼, Section 20, T15N, R6E, W.M.	2 Inch Minus Crushed Quarry Spalls Light Loose Rip Rap
Rotten Beaver Pit	NE ¼ SW ¼ Section 1, T15N R5E, W.M.	4 Inch In Place Quarry Spalls Light Loose Rip Rap

6-3 ROCK SOURCE STATE LAND, EXISTING STOCKPILE

Rock used in accordance with the Primo Pit Development Plan may be obtained from the following existing stockpile(s) on state land at no charge to the Purchaser. Purchaser shall not remove additional yardage without prior written approval from the Contract Administrator. Other stockpiles may not be used without prior written approval from the Contract Administrator.

<u>Source</u>	<u>Location</u>	<u>Rock Type</u>	<u>Quantity</u>
Primo Pit	NE ¼ SW ¼ NE ¼ SW ¼, Section 20, T15N, R6E, W.M.	2 Inch Minus Crushed	8350 cubic truck yards

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 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 3 calendar days before starting any operations in the rock source.

<u>Source</u>
Primo Pit

6-11 ROCK SOURCE DEVELOPMENT PLAN BY PURCHASER

Purchaser shall conduct rock source development and use at the following sources, in accordance with a written ROCK SOURCE DEVELOPMENT PLAN to be prepared by the Purchaser. The plan is subject to written approval by the Contract Administrator before any rock source operations. 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 3 calendar days before starting any operations in the rock source.

<u>Source</u>
Rotten Beaver Pit

Rock source development plans prepared by the Purchaser must show the following information:

- Rock source location.
- Rock source overview showing access roads, development areas, stockpile locations, waste areas, and floor drainage.
- Rock source profiles showing development areas, bench locations including widths, and wall faces including heights.

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 25 feet.
- The surface of pit floors and benches must be uniform and free-draining at a minimum 2% outslope gradient except as approved by the Contract Administrator.
- 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.

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 5% of the total volume mined in that source.
- 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 3 working days before blasting operations.
- Purchaser shall submit an informational drilling and shooting plan to the Contract Administrator 3 working days before any drilling.
- 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

6-21 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.

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 or during manufacture and placement into a stockpile. Purchaser shall provide a sieve analysis upon request from the Contract Administrator.

SUBSECTION ROCK GRADATIONS

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 8 inches in any dimension and no rock may be larger than 12 inches in any dimension.

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.

6-50 LIGHT LOOSE RIP RAP

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

<u>Quantity</u>	<u>Approximate Size Range</u>
20% to 90%	18" - 28"
15% to 80%	8" - 18"
10% to 20%	3" - 8"

SUBSECTION ROCK MEASUREMENT

6-55 ROCK APPLICATION MEASURED BY COMPACTED DEPTH

Measurement of 4 INCH IN PLACE specified rock depths, are defined as the compacted depth(s) using the compaction methods required in this road plan. Estimated quantities specified in the ROCK LIST are compacted yards. Purchaser shall apply adequate amounts of rock to meet the specified rock depths. Specified rock depths are minimum requirements and are not subject to reduction.

6-56 ROCK MEASUREMENT BY TRUCK VOLUME

Measurement of 2 INCH MINUS CRUSHED, QUARRY SPALLS and LIGHT LOOSE RIP RAP rock is on a cubic yard truck measure basis. The Contract Administrator will measure each truck box before rock hauling. An average of such volumes for each truck will be used to tally the volume hauled. The Contract Administrator may periodically require that a load be flattened off and its volume calculated. Purchaser shall maintain load tally sheets for each truck as shown in ROCK ACCOUNTABILITY DETAIL and shall give them to the Contract Administrator on a weekly basis during rocking operations.

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.

6-76 DRY WEATHER ROCK COMPACTION

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

<u>Road</u>	<u>Stations</u>
9	0+00 to 234+02
9-11	0+00 to 5+50

SECTION 7 – STRUCTURES

SUBSECTION SIGNS

7-1 SIGN INSTALLATION

Purchaser shall acquire, install, and maintain the following road signs prior to road closure. Purchaser shall remove signs from State Land at end of road closures and prior to the termination of this contract. Signs must comply with the Federal Highway Administration's Manual on Uniform Traffic Control Devices.

<u>Road</u>	<u>Station</u>	<u>Sign</u>	<u>Comments</u>
9	173+50	Gate Ahead.	
9	176+00	Road Closed. Active logging.	Post sign at temporary gate
9-11	11+09	Road Closed	Post sign at west edge of sale facing west
9-11	19+05	Road Closed	Post sign at east edge of sale facing east
9-20	13+77	Road and Trail Closed	

SUBSECTION STREAM CROSSING STRUCTURES GENERAL

7-5 STRUCTURE DEBRIS

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

7-6 STREAM CROSSING INSTALLATION

Purchaser shall install stream crossing structures in accordance with the manufacturer's requirements, Designs, Specifications and/or DETAILS.

7-30 BRIDGE MAINTENANCE

Purchaser shall conduct bridge maintenance as listed.

<u>Road</u>	<u>Station</u>	<u>Requirements</u>
9	43+75	Clean deck prior to haul. Maintain clean bridge deck during haul. Clean bridge deck after haul is complete.

7-55 LARGE CULVERT INSTALLATION

Purchaser shall provide and install large culverts in accordance with the DESIGN or DETAIL. Culvert designs must meet or exceed the following specifications:

<u>Road</u>	9
<u>Station</u>	152+80
<u>Type</u>	CMP
<u>Material and Coating Type*</u>	Aluminized Steel Type 2
<u>Diameter (in.)</u>	54"
<u>Length (ft.)</u>	40
<u>Depth of Cover Material (ft.)</u>	Per Design
<u>Corrugations</u>	5"x1"
<u>Gauge</u>	12

* See Clause 10-15 CORRUGATED STEEL CULVERT for culvert specifications.

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

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

7-57 CULVERT SHAPE CONTROL

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

SUBSECTION GATE CLOSURE

7-70 GATE CLOSURE

On the following road(s), Purchaser shall keep gates closed and locked except during periods of haul. All gates that remain open during haul must be locked or securely fastened in the open position. All gates must be closed at termination of use.

<u>Road</u>	<u>Station</u>	<u>Gate No.</u>	<u>Comment</u>
8-18	1+50	507	To Primo Pit
9-16	0+95	523	To Rotten Beaver Pit

7-71 GATE CLOSURE DURING HAUL

On the following road(s), Purchaser shall keep gates closed and locked except for passing vehicles. If Purchaser elects to use an alternate plan for gate security, Purchaser shall submit a detailed plan to the Contract Administrator for written approval.

<u>Road</u>	<u>Station</u>	<u>Gate No.</u>	<u>Closure Period</u>	<u>Comment</u>
9	176+00	-	Closed during operations in Unit 2	Temporary gate installed by Purchaser per Clause 11-1 Temporary Gate Installation

SECTION 8 – EROSION CONTROL

SUBSECTION REVEGETATION

8-15 REVEGETATION

On the following road(s), Purchaser shall spread grass seed and straw on all exposed soils resulting from road work activities within 50 feet of culvert installation.

<u>Road</u>	<u>Location</u>	<u>Type</u>
9	152+80	Pasture Mix (Specification listed in Clause 8-25)

8-16 REVEGETATION SUPPLY

The Purchaser shall provide the seed and straw.

8-17 REVEGETATION TIMING

Purchaser shall revegetate immediately after road work is completed unless alternative plan approved in writing by the Contract Administrator.

SUBSECTION SEED AND MULCH

8-25 GRASS SEED

Purchaser shall evenly spread the seed mixture listed below on all soil specified in CLAUSE 8-15 REVEGETATION at a rate of 50 pounds per acre of exposed soil. Grass seed must meet the following specifications:

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

5. Seed must conform to the following mixture unless a comparable mix is approved in writing by the Contract Administrator.

<u>Kind and Variety of Seed in Mixture</u>	<u>% by Weight</u>
Perennial Rye	35-45
Red Fescue	35-45
Highland Bent	5-15
White Clover	5-15
Inert and Other Crop	0.5

SECTION 9 – POST-HAUL ROAD WORK

9-1 EARTHEN BARRICADES

Purchaser shall construct barricades in accordance with the EARTHEN BARRICADE DETAIL.

<u>Road</u>	<u>Stations</u>
9-11-2	0+00
9-20	2+00
9-20	13+77
9-20	18+08

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 and as specified below.

<u>Road</u>	<u>Stations</u>	<u>Additional Requirements</u>
9	43+75	Clean bridge deck

9-10 LANDING DRAINAGE

Purchaser shall provide for drainage of the landing surface.

9-21 ROAD ABANDONMENT

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

<u>Road</u>	<u>Stations</u>
9-11-2	0+00 to 17+78
9-20	2+00 to 29+13

9-22 ABANDONMENT

- Remove road shoulder berms.
- On the 9-20 road from station 13+77 to 18+08, abandon as follows:
 - Notify Contract Administrator 2 working days prior to working in this stretch.
 - Return road to previous ORV trail.
 - Install 2 large rolling dips at locations directed by Contract Administrator.
- 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.
- Skew waterbars at least 30 degrees from perpendicular to the road centerline on roads in excess of 3 percent grade.
- Key waterbars into the cut-slope to intercept the ditch. Waterbars must be outsloped to provide positive drainage. Outlets must be on stable locations.
- Block roads with earthen barricades in accordance with the attached EARTHEN BARRICADE DETAIL.
- Remove culverts.
- Remove ditch cross drain culverts and leave the resulting trench open.
- Slope all trench walls and approach embankments no steeper than 1.5:1.

SECTION 10 MATERIALS

10-15 CORRUGATED STEEL CULVERT

Metallic coated steel culverts must meet AASHTO M-36 (ASTM A-760) specifications. Culverts must be aluminized (aluminum type 2 coated meeting AASHTO M-274).

10-17 CORRUGATED PLASTIC CULVERT

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

10-21 METAL BAND

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

10-22 PLASTIC BAND

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

SECTION 11 SPECIAL NOTES

11-1 TEMPORARY GATE INSTALLATION

Purchaser shall install a temporary gate on the 9 road just north of the 9-18 road. Gate shall be installed prior to working in Unit 2. Rip rap and/or stumps shall be used to prevent vehicles from driving around the gate. Gate shall not interfere with the traffic flow. Contract Administrator will supply a lock for the gate. Purchaser shall keep gate closed and locked except for passing vehicles while operating in Unit 2.

Gate shall be removed from state land and road put in pre-gate condition prior to the termination of this contract.

<u>Road</u>	<u>Station</u>	<u>Type*</u>	<u>Provided by</u>
9	176+00 (just north of 9-18 road)	Min. 14 foot Steel Gate	Purchaser

11-2 END OF THE 9RD – ORV FACILITY

The Purchaser may use the 9 road at station 234+02 for a turnaround and staging area but is not authorized to modify the current ORV structures.

11-3 OUTSLOPED 9 ROAD MAINTENANCE

On the following road(s), the Purchase shall clean and maintain rolling dips prior to rocking and /or timber haul.

<u>Road</u>	<u>Station</u>	<u>Comment</u>
9	3+45 to 18+45	Rolling dip locations are shown in the 9rd Reconstruction Dip Installations Design.
9	43+25	Rolling dips at concrete bridge. See 9 Road Bridge Approach Design for more information.

11-4 LANDING DEBRIS

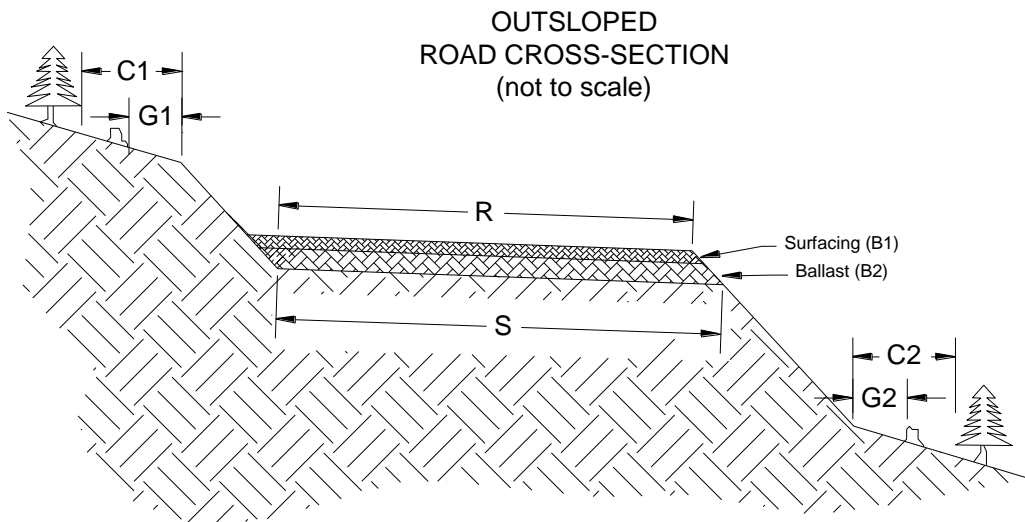
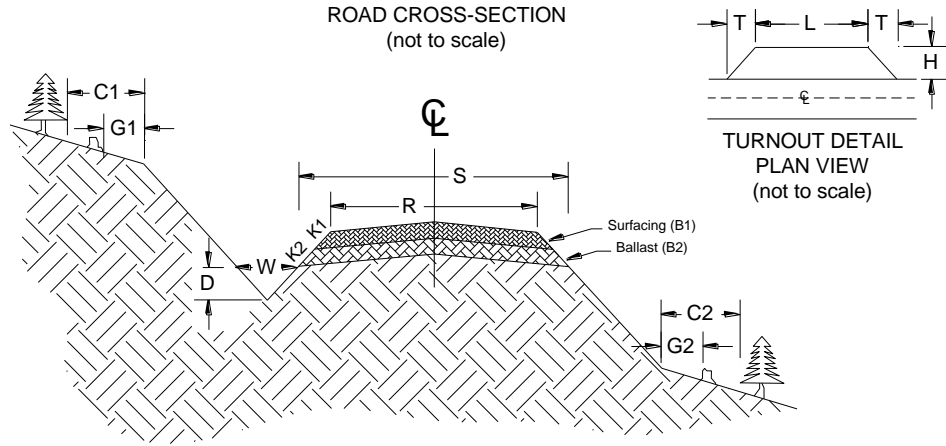
Purchaser shall reduce or relocate debris generated by road and landing construction, in a manner approved, in writing, by the Contract Administrator, to avoid landing failures and potential debris slides.

11-5 EXISTING ROAD CLEAN-UP

The following roads shall be cleaned of all organic debris resulting from harvest operations, all lost or worn away surface material from harvest operations will be replaced, and all ditches and drainage channels at culvert outlet and inlets shall be cleaned and cleared of obstructions.

<u>Road</u>	<u>Stations</u>
9-11	16+27 to 19+05

TYPICAL SECTION SHEET, page 1 of 2



TYPICAL SECTION SHEET, page 2 of 2

Road Number	From Station	To Station	Tolerance Class	Subgrade Width (feet)	Road Width (feet)	Ditch**		Crown in. @ CL	Grubbing Limits (feet)		Clearing Limits* (feet)	
				S	R	W	D		G1	G2	C1	C2
8	0+00	141+77	A	-	14	4	2	4	-	-	5	5
9	0+00	234+02	A	-	14	4	2	4	-	-	5	5
9-11	0+00	5+50	C	15	12	4	2	4	2	2	5	5
9-11	5+50	19+05	C	15	12	-	-	Outslope 3-5%	2	2	5	5
9-11-2	0+00	17+78	C	15	12	2	1	4	0	0	tags	tags
9-16	0+00	9+90	C	15	12	4	2	4	2	2	5	5
9-16-1	0+00	2+20	C	15	12	4	2	4	2	2	5	5
9-20	2+00	29+13	C	15	12	2	1	4	0	0	0	0

*Tags are Right of Way Tags

**On pre-haul maintenance roads: Ditch depth will be measured vertically from the bottom of the ditch to the edge of the road surface. Ditch width will be measured horizontally from the closest edge of the road surface to the cut slope.

COMPACTION LIST

Road	From Station	To Station	Type	Max Depth Per Lift (inches)	Equipment Type	Equipment Weight (lbs)	Minimum Number of Passes	Maximum Operating Speed (mph)
All new construction and reconstruction			Culvert Installations	12	Smooth Drum Vibratory Roller	14,000	4 low freq. with Vibe on	3
			Embankment	12				
			Fill & select borrow	12				
			Subgrade					
			Rock	12				
			Waste Area	12				
All pre-haul and post haul			After grading existing road surface and prior to rocking					
			Culvert Installations	12				
			Rock	6				

ROCK LIST

BALLAST

Road Number	From Station	To Station	Rock Slope	Compacted Rock Depth	C.Y. Station	# of Stations	C.Y. Subtotal	Rock Source
			K2	B2	4 Inch In Place			
9-11-2*	0+00	17+78	1.5:1	12"	50	17.78	889	Rotten Beaver
9-20*	2+00	29+13	1.5:1	12"	50	27.13	1357	
9	152+60	153+00	1.5:1	12"	50	0.4	20	
Quarry spalls or light loose rip rap for culvert installations. See Culvert List for locations							32	Rotten Beaver or Primo Pit

*Optional Rock

BALLAST TOTAL: 2298 Cubic Yards

SURFACE

Road Number	From Station	To Station	Rock Slope	Compacted Rock Depth	Truck C.Y. Station	# of Stations	Truck C.Y. Subtotal	Comments Rock Source
			K2	B2	2 Inch Minus Crushed			
9	0+00	234+02	1.5:1	6"	35	234.02	8190	Primo Pit Stockpile
9-11	0+00	5+50	1.5:1	4"	23	5.5	127	Primo Pit Stockpile
9	151+80			6"			6	Stream Culvert Bedding Primo Pit Stockpile
					Select Borrow			
9	151+80						54	Select Borrow from Primo Pit or Rotten Beaver Pit

SURFACE TOTAL: 8377 Truck Cubic Yards

NOTE: Except for rock types listed in Clause 6-56, yardages are estimated on a compacted (In-Place) basis. **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. Factor of 1.3 was applied to estimate truck yardage for surfacing rock.

CULVERT AND DRAINAGE LIST

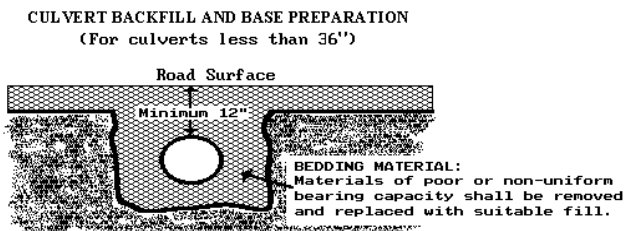
Road Number	Location	Culvert		Length (ft)			Riprap (C.Y.)			Backfill	Placement	Const.	Remarks
		Dia. (in)	Type	Culvert	Downspt	Flume	Inlet	Outlet	Type	Material*	Method*	Staked*	
9	52+88	18	PD	40			0.5	0.5	QS	NT			
	66+40	-											Clean culvert inlet
	75+85	24	PD	40			0.5	0.5	QS	NT			
	86+63	-											Clean culvert inlet
	88+88	-											Clean culvert inlet
	100+90	18	PD	40			0.5	0.5	QS	NT			
	102+05	18	PD	40			0.5	0.5	QS	NT			
	120+20	-											Clean inlet & outlet
	152+80	54	AS12	40			10	10	LL	SL			Stream culvert replacement
	155+40	-					0.5	-	QS				Rock inlet
	177+60	18	PD	40			0.5	0.5	QS	NT			
	212+80	-					0.5	-	QS				Clean & riprap inlet
	228+90	18	PD	40			0.5	0.5	QS	NT			
9-11-2	1+28	18	TEMP	30			0.5	0.5	QS	NT			
9-20	7+85	18	TEMP	30			0.5	0.5	QS	NT			
	18+58	18	TEMP	30			0.5	0.5	QS	NT			
	23+64	18	TEMP	30			0.5	0.5	QS	NT			
	26+26	18	TEMP	30			0.5	0.5	QS	NT			

* SEE CULVERT AND DRAINAGE SPECIFICATION DETAIL

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

AS12 = Aluminized Steel AASHTO No. M274, 12 Gauge

TEMP = Temporary Culvert

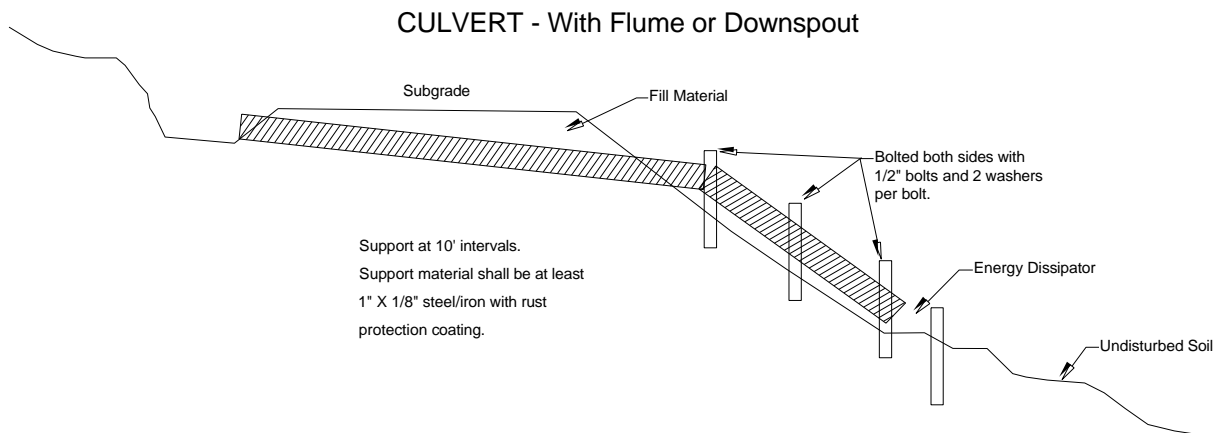
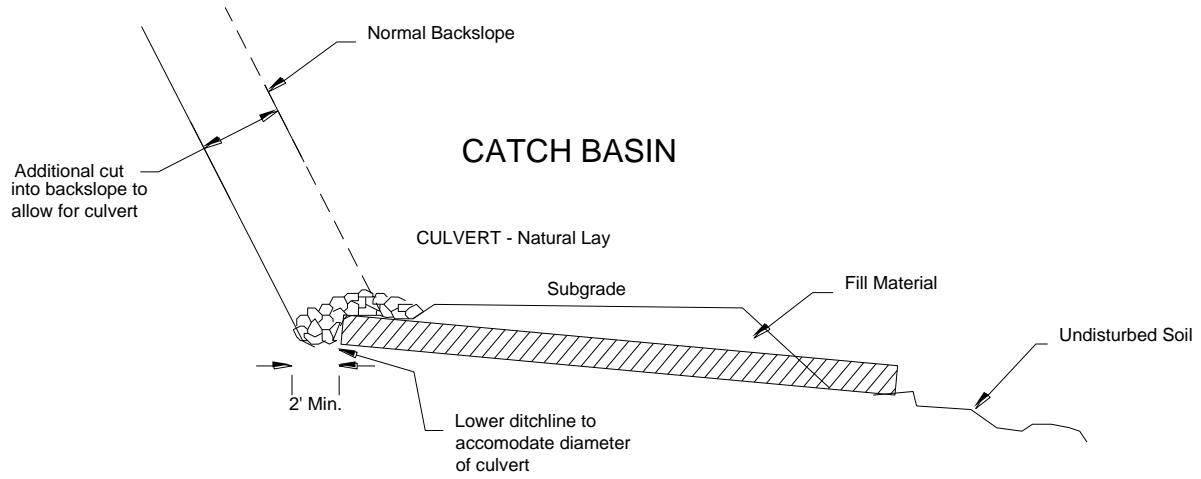


Key:

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

CULVERT AND DRAINAGE SPECIFICATION DETAIL

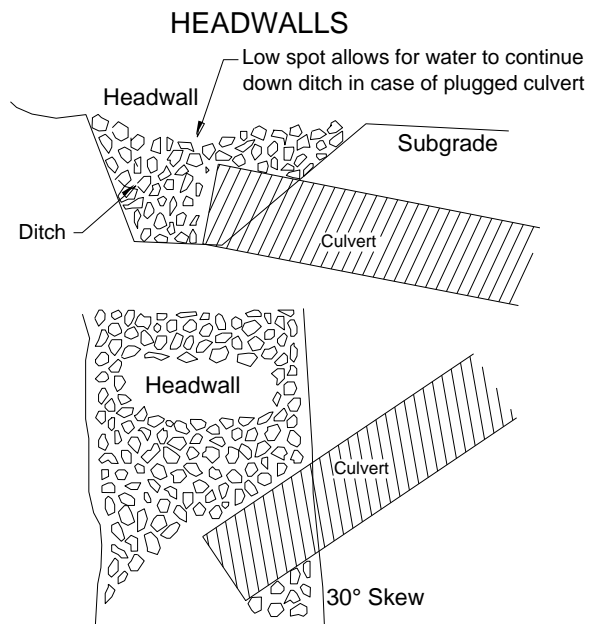
(Page 1 of 3)



CULVERT AND DRAINAGE SPECIFICATION DETAIL

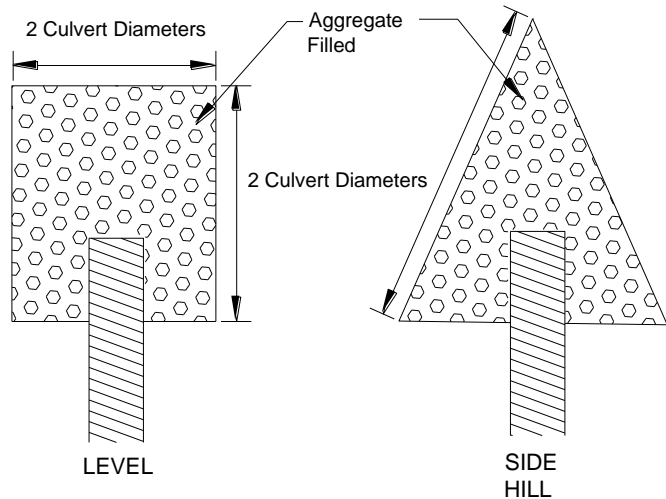
(Page 2 of 3)

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



Headwalls to be constructed of material that will resist erosion.

ENERGY DISSIPATORS



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

CULVERT AND DRAINAGE SPECIFICATION DETAIL

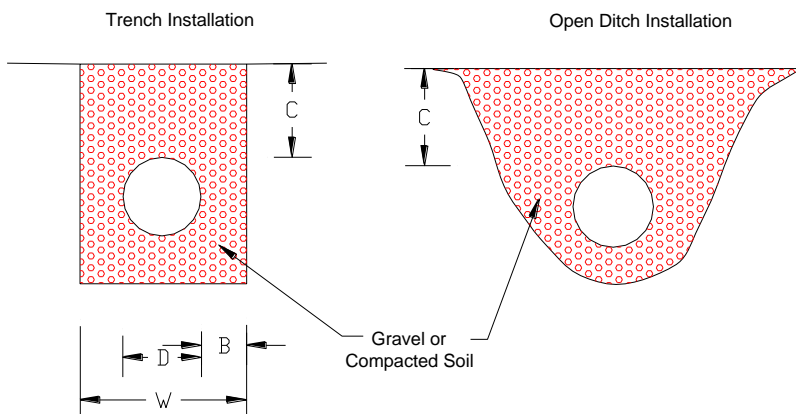
(Page 3 of 3)

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"
36"	6"	12"	54"

FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS, page 1 of 2

Cuts and Fills

- Maintain slope lines to a stable gradient compatible with the cut slope/fill slope ratios. Remove slides from ditches and the roadway. Repair fill-failures, in accordance with Clause 4-6 EMBANKMENT SLOPE RATIO, with selected material or material approved by the Contract Administrator. Remove overhanging material from the top of cut slopes.
- Waste material from slides or other sources shall be placed and compacted in stable locations identified in the road plan or approved by the Contract Administrator, so that sediment will not deliver to any streams or wetlands.
- Slide material and debris shall not be mixed into the road surface materials, unless approved by the Contract Administrator.

Surface

- Grade and shape the road surface, turnouts, and shoulders to the original shape on the 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, or as directed by the Contract Administrator.
- Remove shoulder berms, created by grading, to facilitate drainage, except as marked or directed by the Contract Administrator.
- For roads with geotextile fabric: spread surface aggregate to fill in soft spots and wheel ruts (barrel spread) to prevent damage to the geotextile fabric.

Drainage

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

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.

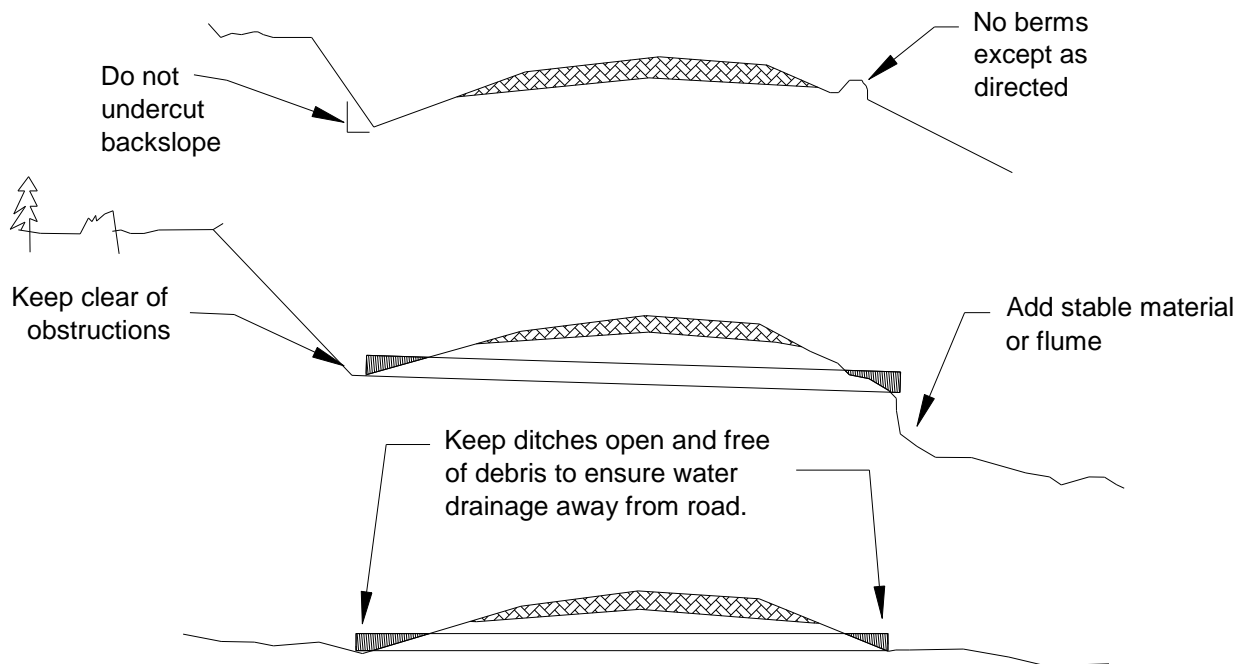
FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS, page 2 of 2

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.



LIVE STREAM CULVERT REMOVAL DETAIL, pg 1 of 2
Project: 9 Road Station 152+80

Controlling sediment and erosion

BMPs will be applied throughout all phases of this project to minimize the delivery of sediment to the stream.

Fill material that does not meet the specification for reuse as road fill will be placed in a stable location to prevent delivery to any water course and will be controlled from erosion by straw or available slash material or isolated by topography and/or waterbars.

Prior to starting work in areas where the bank will be disturbed, install temporary erosion control measures such as a filter fabric fence or straw wattles to prevent sediment from entering the stream. Keep in place during construction and add erosion control measures as needed to exposed soil.

After completion of work, but before removing the temporary erosion control measures, remove sediment accumulated during the project from behind the erosion control measures and deposit it in a location where it cannot enter typed water.

Stop work if high flow conditions that may cause sedimentation are encountered during the project. Do not re-start work until the flow subsides.

All exposed or disturbed areas resulting from this project with the potential to deliver sediment to any typed water shall be protected from erosion using grass seed and/or straw upon completion of the project.

Prior to releasing the water flow to the project area, all bank protection or armoring shall be completed to minimize sediment delivery to the stream or stream channel.

Clearing vegetation, minimizing disturbance

Vegetation removal will be limited to operational needs only within the extents of construction. Trees removed from within 25 feet of either side of the stream channel will be placed in the channel or along the stream banks downstream of the replacement project.

New culvert inlet elevations and locations shall be established with reference points (RPs) and clearly benchmarked prior to commencing work on this project. The RPs shall be protected to serve as post project reference.

Operating and staging heavy equipment

Limit equipment use near the stream to minimize disturbance to stream banks and vegetation.

Where possible, operate equipment from the road, road shoulder, top of the bank, or similar out-of-water location.

Operate equipment in the stream channel only when the work area is dry or within an area where the stream flow is bypassed.

LIVE STREAM CULVERT REMOVAL DETAIL, pg 2 of 2
Project: 9 Road Station 152+80

Petroleum leaks and/or spills

Spill kits shall be available at all times during active operations capable of absorbing at least 10 gallons of oil, coolant, solvent or contaminated water or potential spills from each piece of equipment.

All operations shall be conducted in a manner that avoids the release of hazardous materials, including petroleum products, while working around the stream.

Equipment crossings of the stream are to be minimized.

Service, refuel, and maintain equipment in an upland area where there is no potential for hazardous materials to enter water or stream channel.

Bypass methods for flowing water

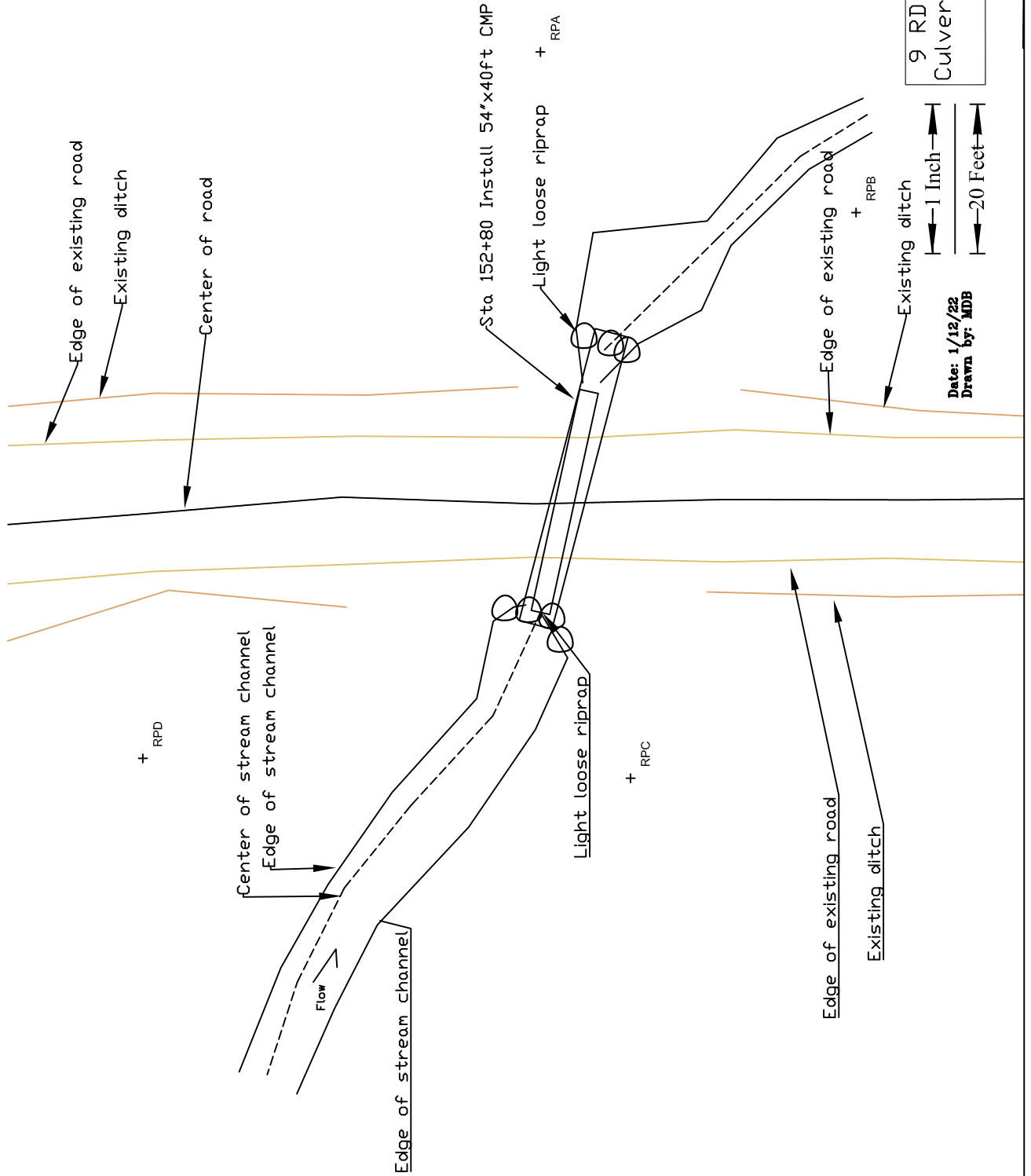
The new culvert shall be installed in the dry or in isolation from the streamflow, if flowing, by the installation of a bypass flume or culvert, or pumping the stream flow around the work area. If channel is dry and weather conditions are forecasted to remain that way throughout the duration of the project, the following bypass requirements do not apply.

Upon completion of the project, all material used in the temporary bypass shall be removed from the site and the channel bed, bank and shoreline areas restored similar to pre-project natural condition or better.

The bypass shall be sufficient size to pass all flows for the duration of the project.

Wastewater from project activities and dewatering shall be routed to an area outside the ordinary high water line to allow removal of fine sediment and contaminants prior to being discharged to the stream.

Plan View 9 Road Sta 152+80 Culvert Install

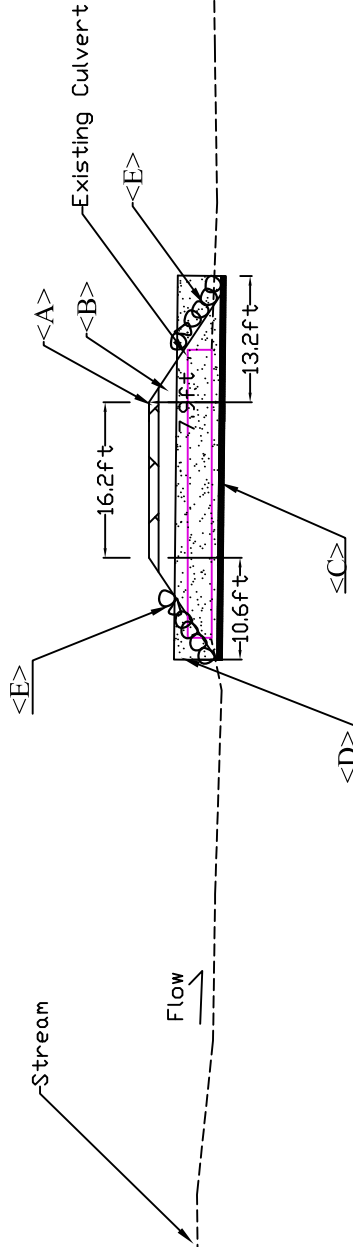


9 RD Sta 152+80 Stream
Culvert Installation Detail,
pg 1 of 2

PROFILE at Centerline of culvert 9 Road Sta 152+80

Note:

- 1) Crown road 5% (Not shown)
- 2) Culvert Dimensions:
54 inch dia x 40 ft long,
- 3) Culvert lay = 1%
- 4) Build inlet fill slope @ 1.5H:1V
- 5) Build outlet fill slope @ 1.5H:1V

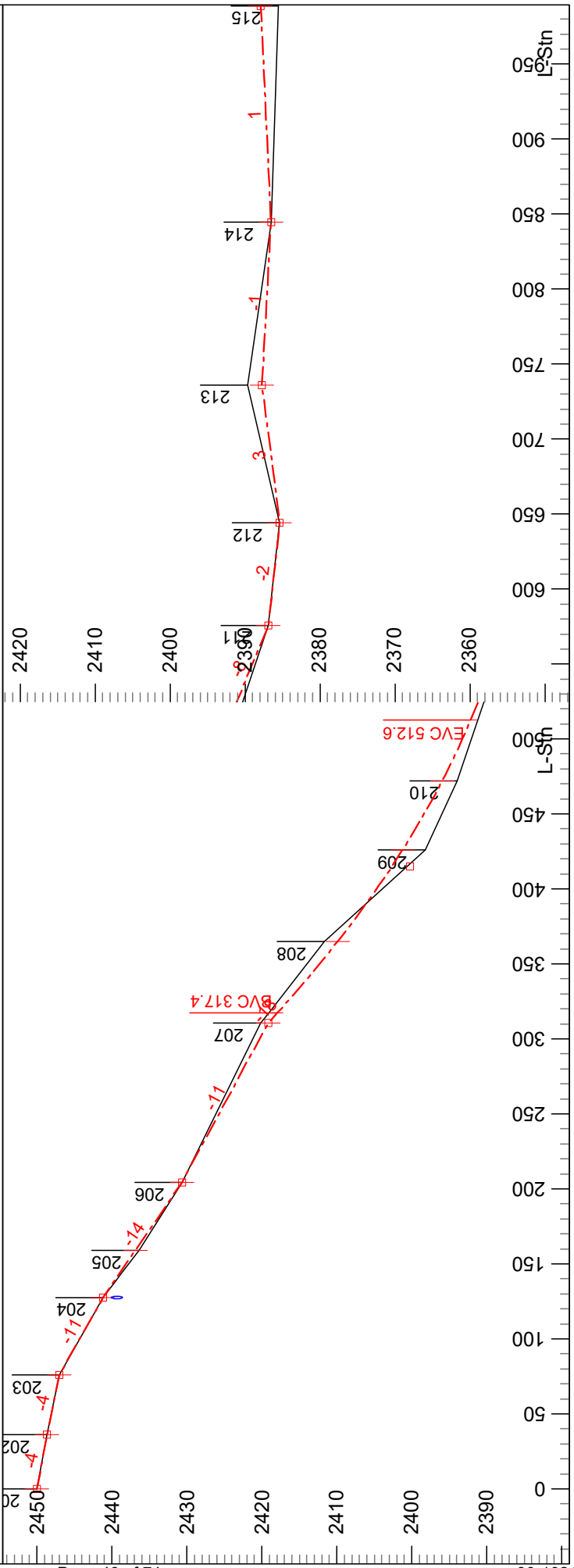
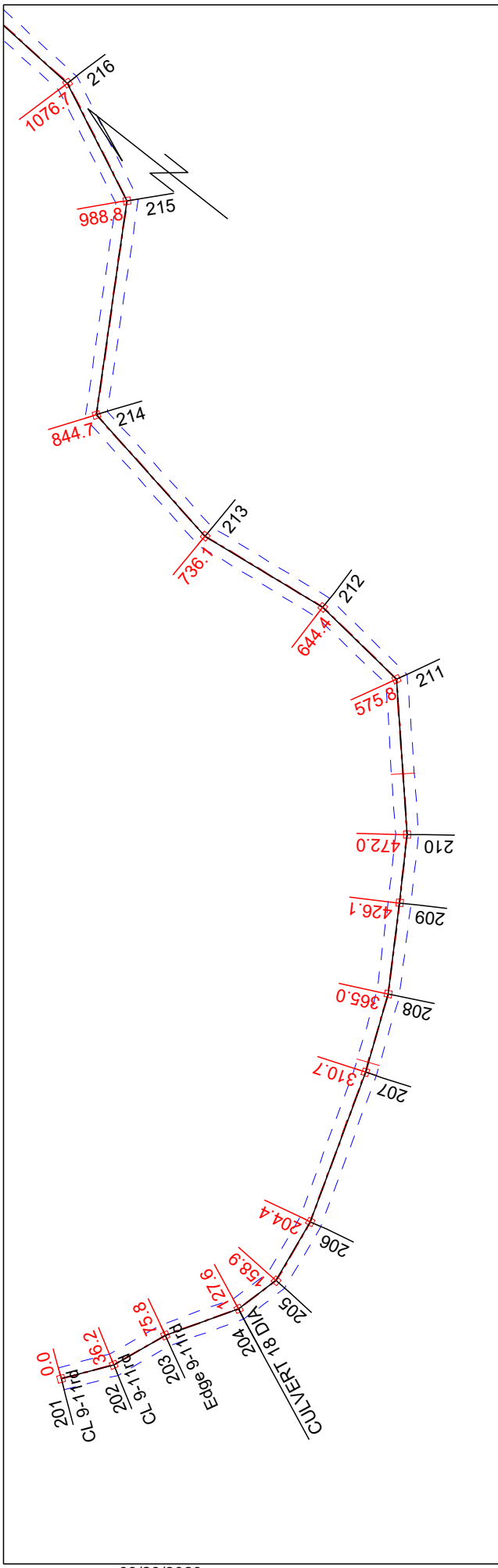


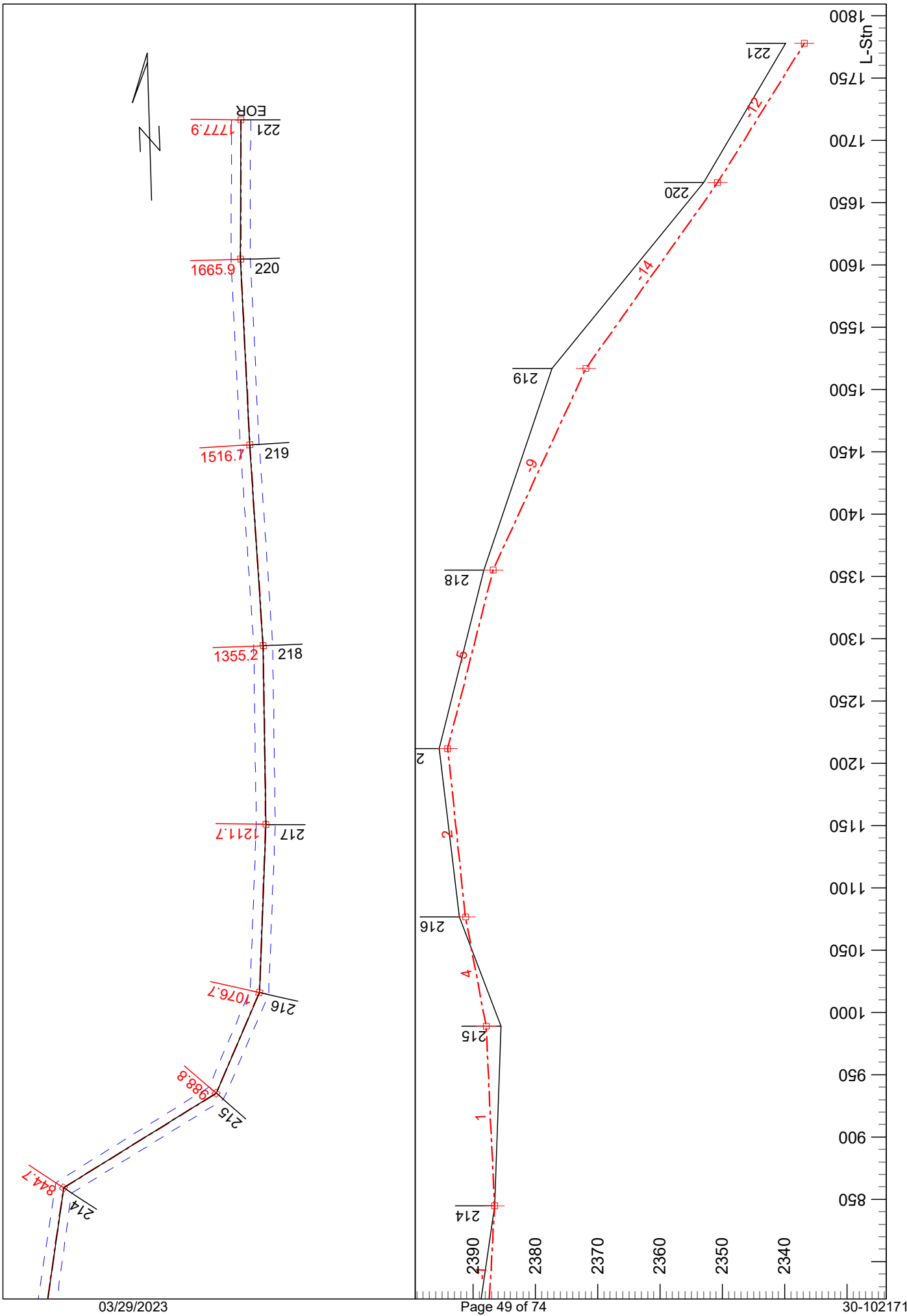
- <A> Rock per rock list compacted to a minimum depth of 12 inches over excavation extents.
- Select Borrow Material.
- <C> Bedding material of 2 inch minus crushed compacted to a minimum depth of 6 inches.
- <D> New 54 inch x 40 ft culvert
- <E> Light Loose Rip rap.

Date: 1/12/22
Drawn by: MDS

1 Inch
20 Feet

9 RD Sta 152+80 Stream
Culvert Installation Detail,
pg 2 of 2





03/29/2023

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30-102171

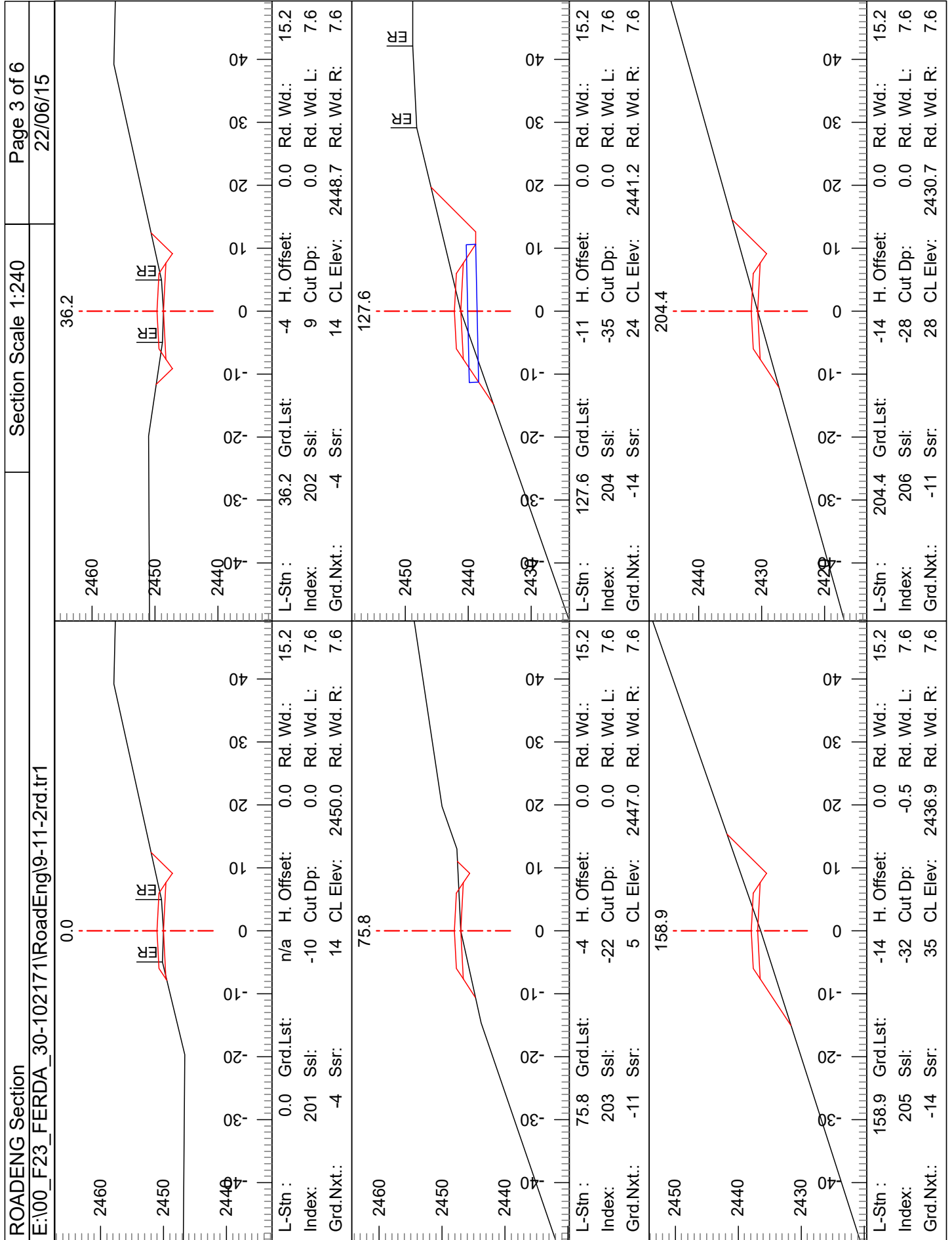
Engineer: M. Bell
22/06/15
Page 2 of 6

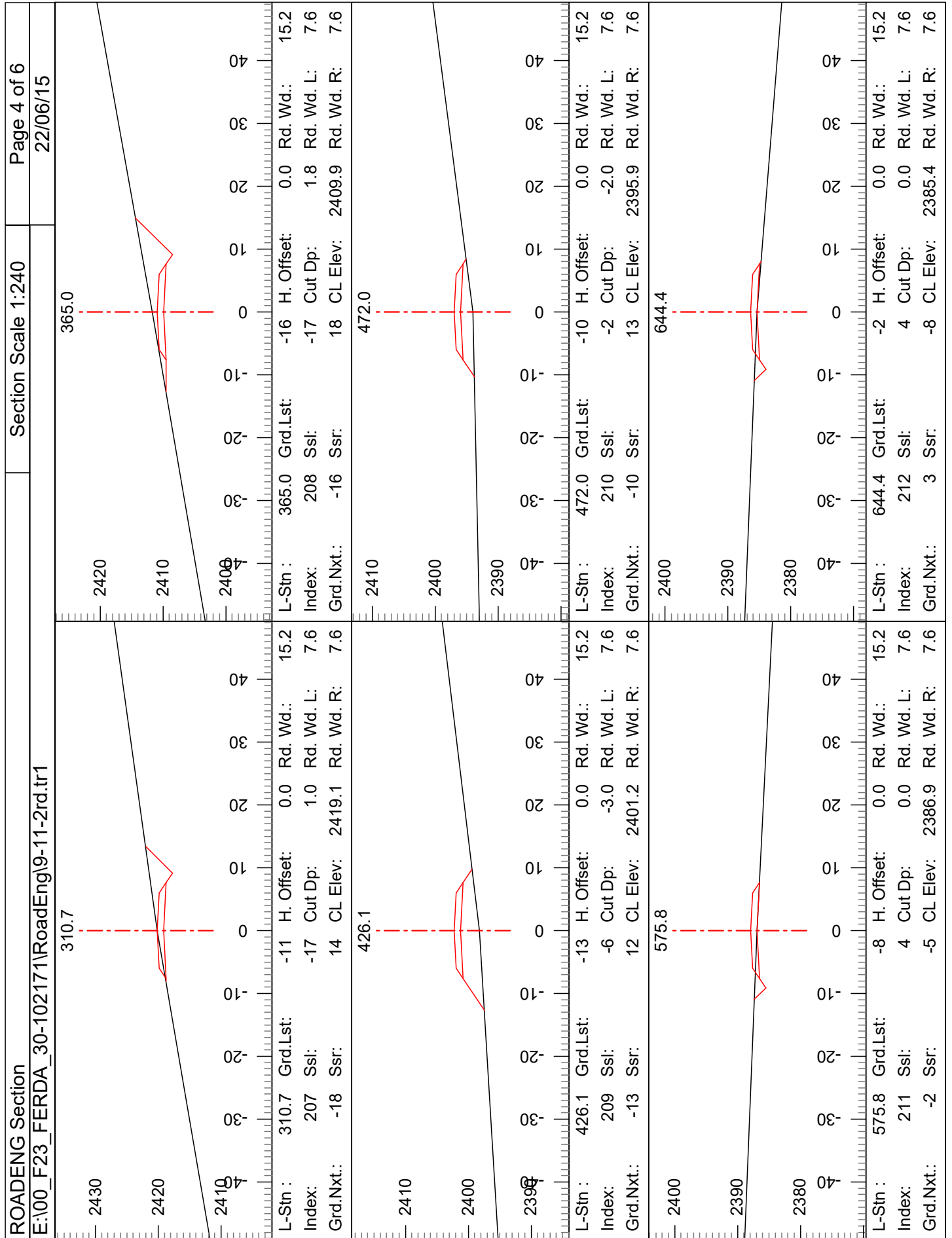
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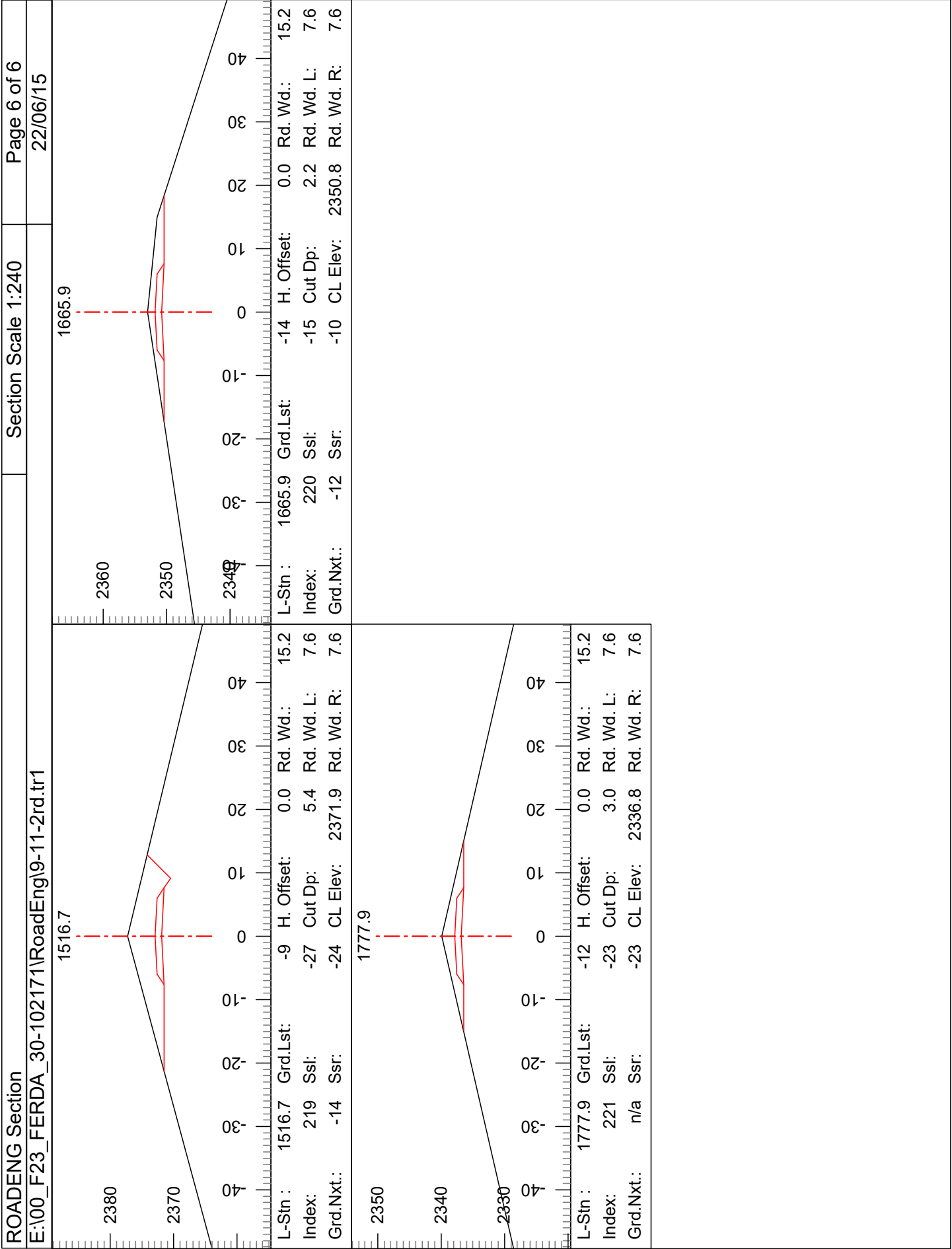
Washington State Department of
Natural Resources
South Puget Sound Region

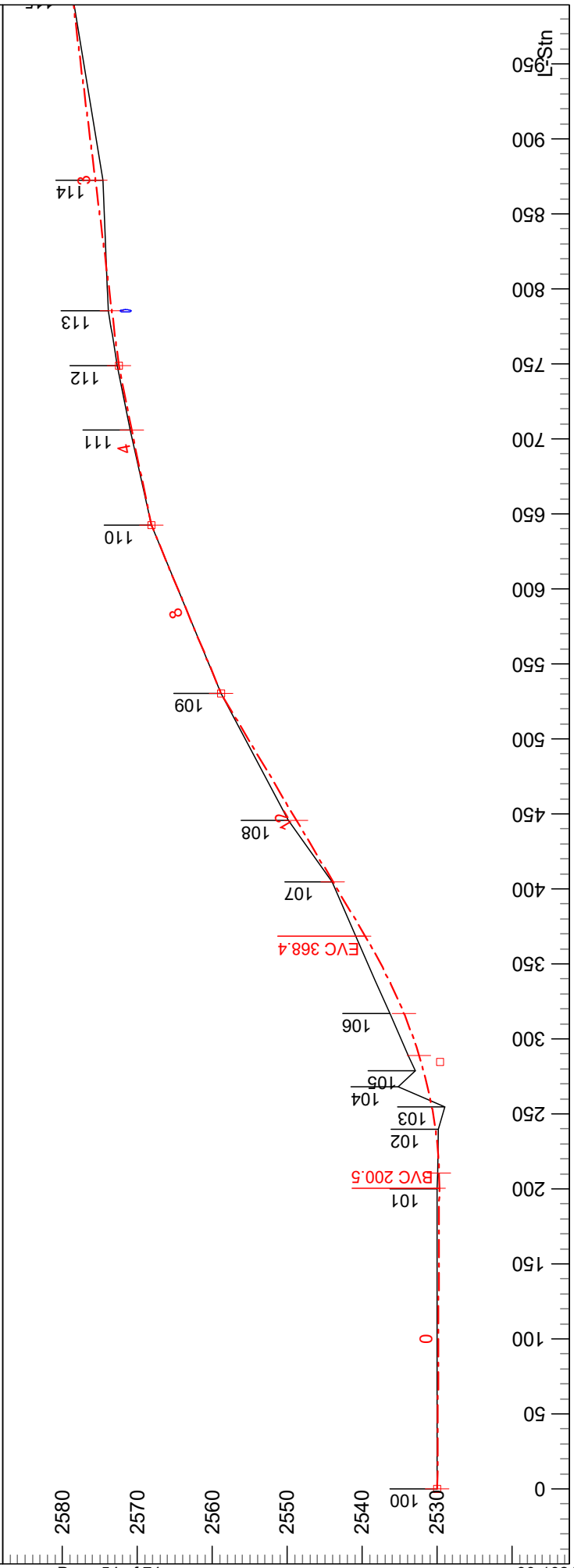
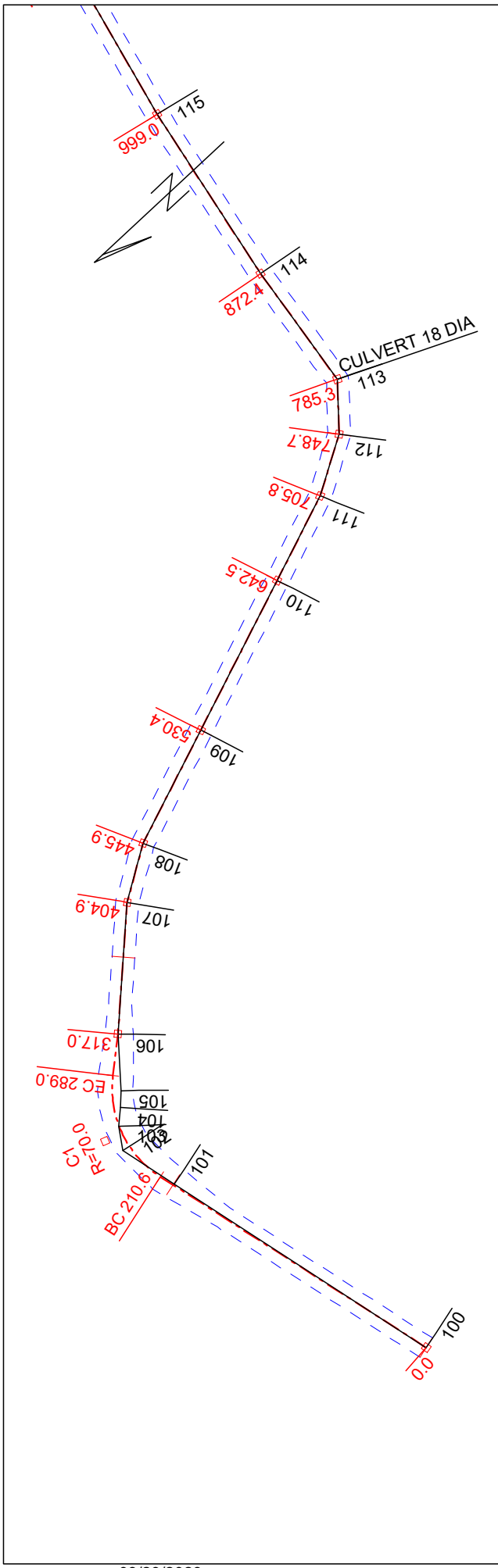


Ferda Timber Sale
9-11-2 Road January 12, 2022
Contract #: 30-102171

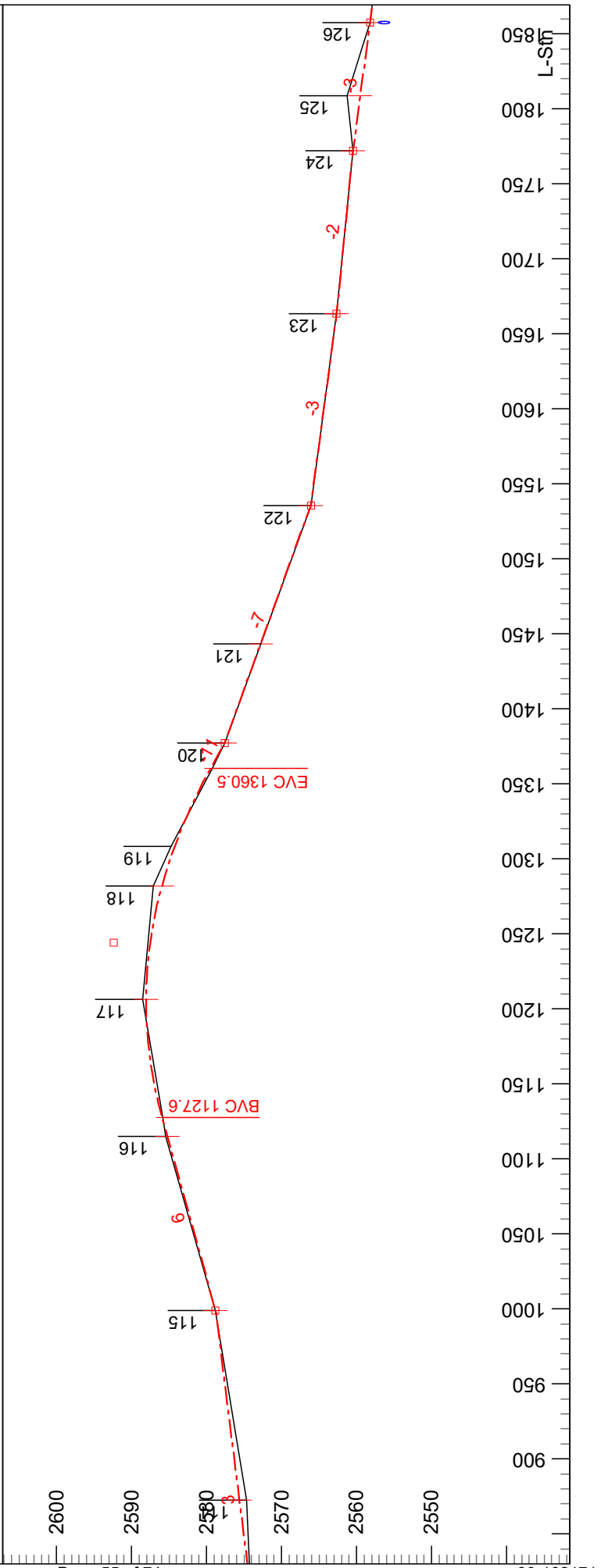
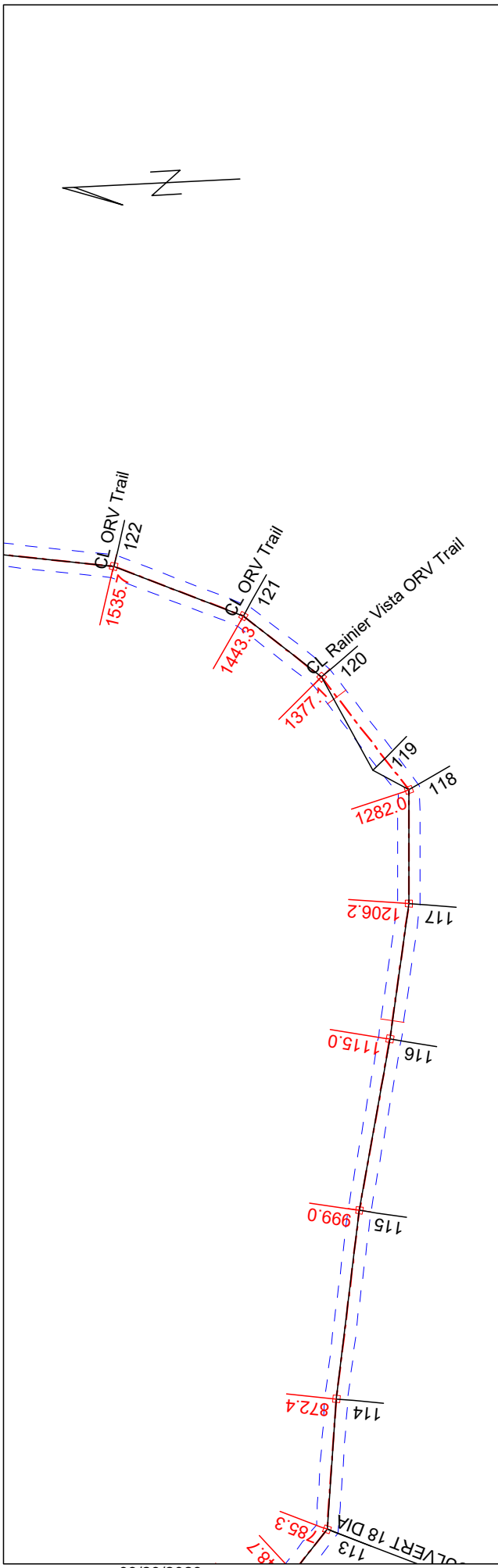


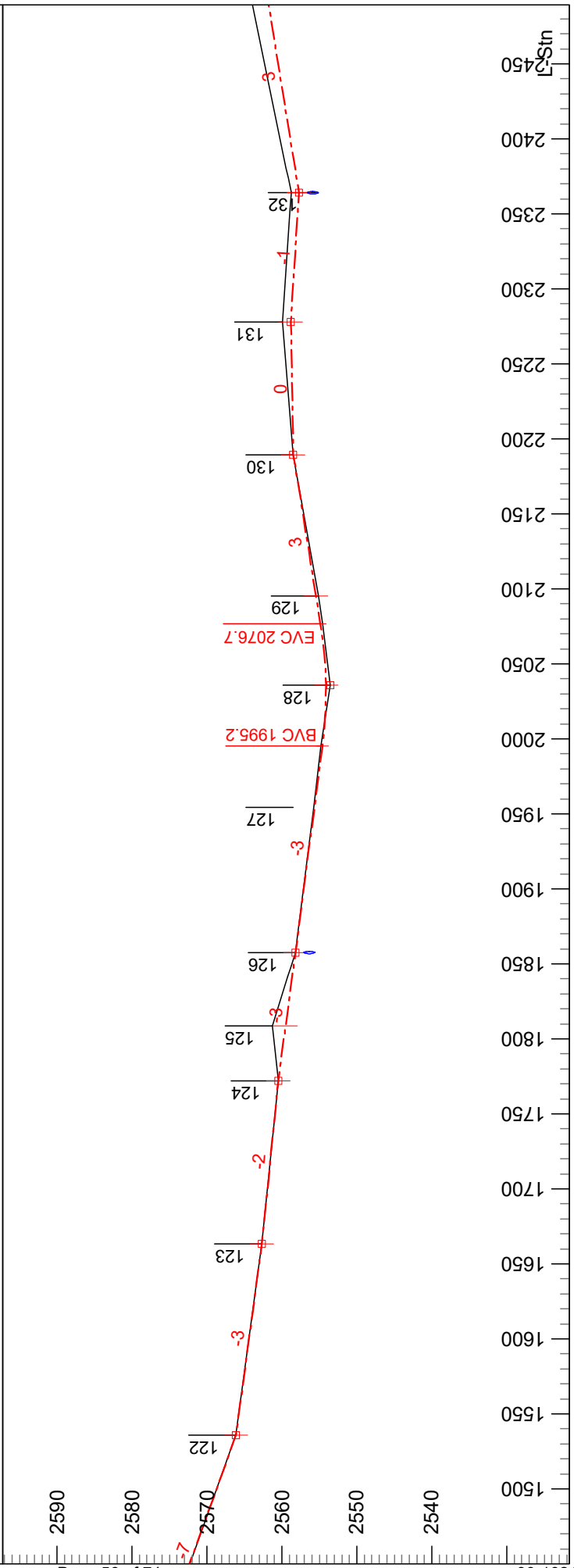
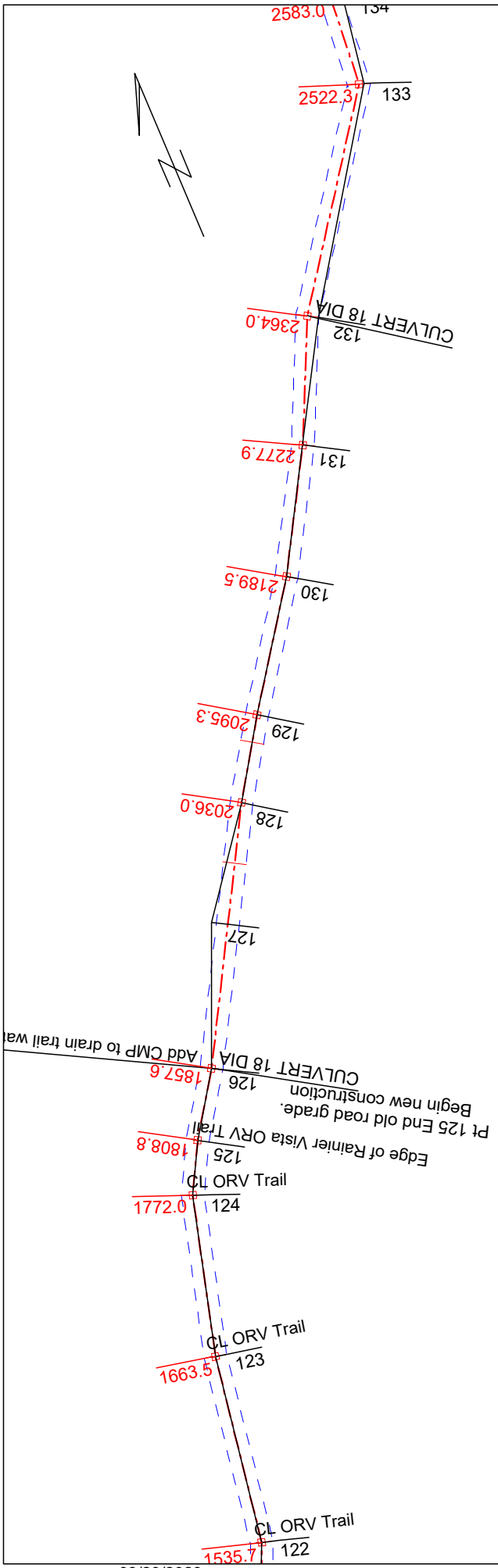




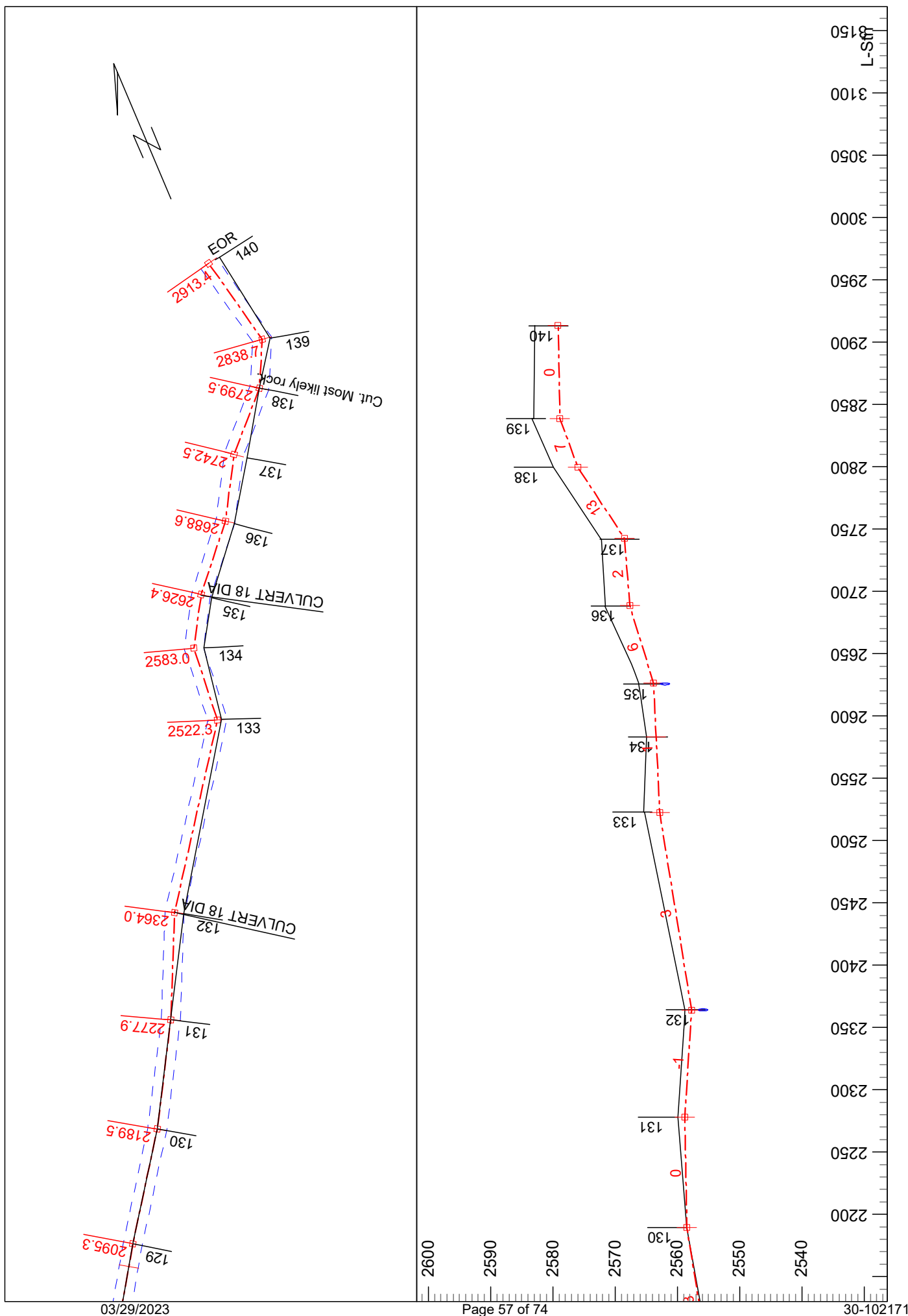


<p>Engineer: M. Bell</p> <p>22/06/15</p>	<p>Plan Scale 1:1200</p> <p>Profile Vert Scale 1:240</p> <p>Profile Horz Scale 1:1200</p>	<p>Washington State Department of Natural Resources</p> <p>South Puget Sound Region</p>		<p>Ferda Timber Sale</p> <p>9-20 Road January 12, 2022</p> <p>Contract #: 30-102171</p>






<p>Engineer: M. Bell</p> <p>22/06/15</p>	<p>Plan Scale 1:1200</p> <p>Profile Vert Scale 1:240</p> <p>Profile Horz Scale 1:1200</p>	<p>Washington State Department of Natural Resources</p> <p>South Puget Sound Region</p>		<p>Ferda Timber Sale</p> <p>9-20 Road January 12, 2022</p> <p>Contract #: 30-102171</p>



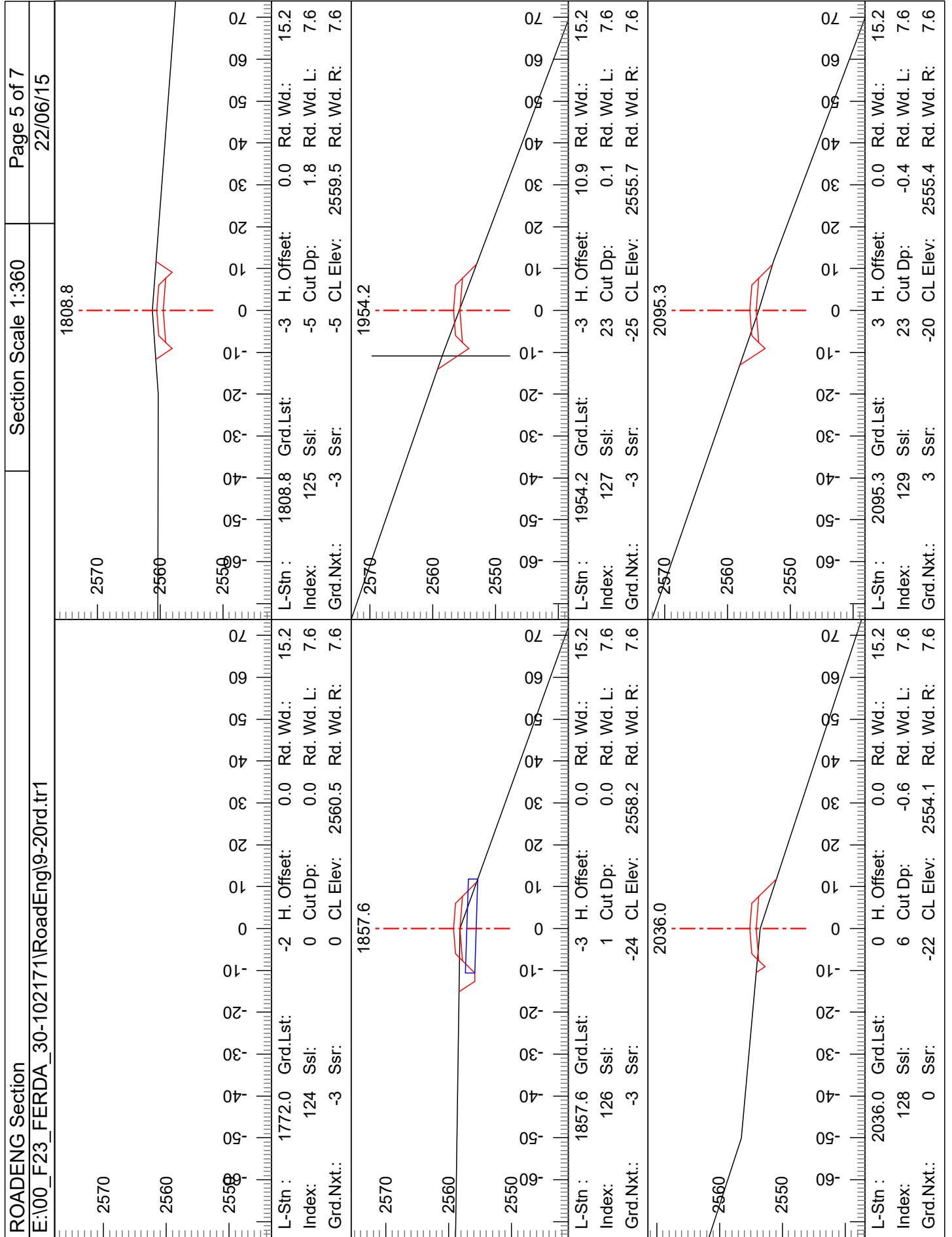
Engineer: M. Bell
22/06/15
Page 4 of 7

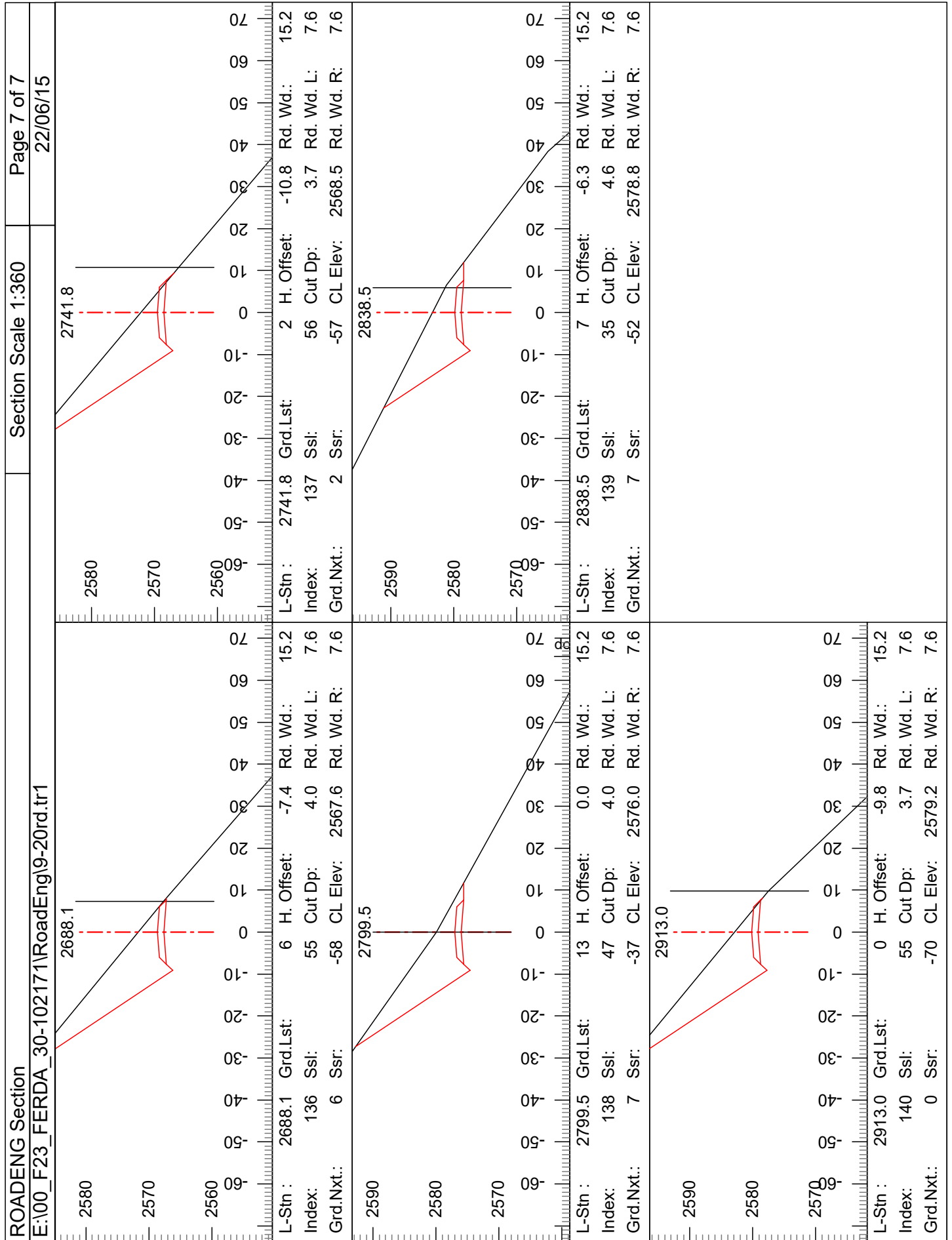
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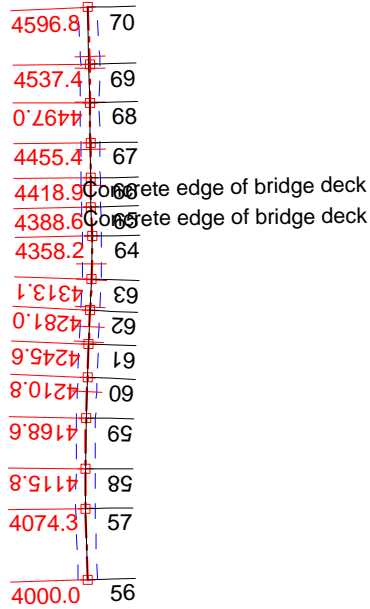


Washington State Department of
Natural Resources
South Puget Sound Region

Ferda Timber Sale
9-20 Road January 12, 2022
Contract #: 30-102171







120

110

100

90

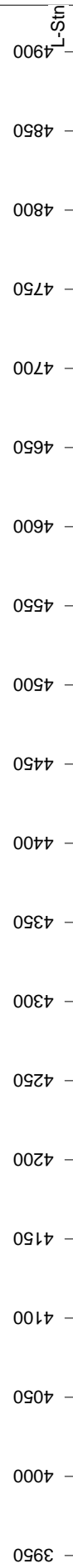
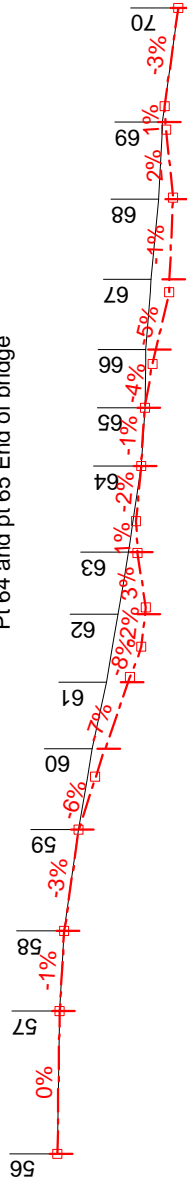
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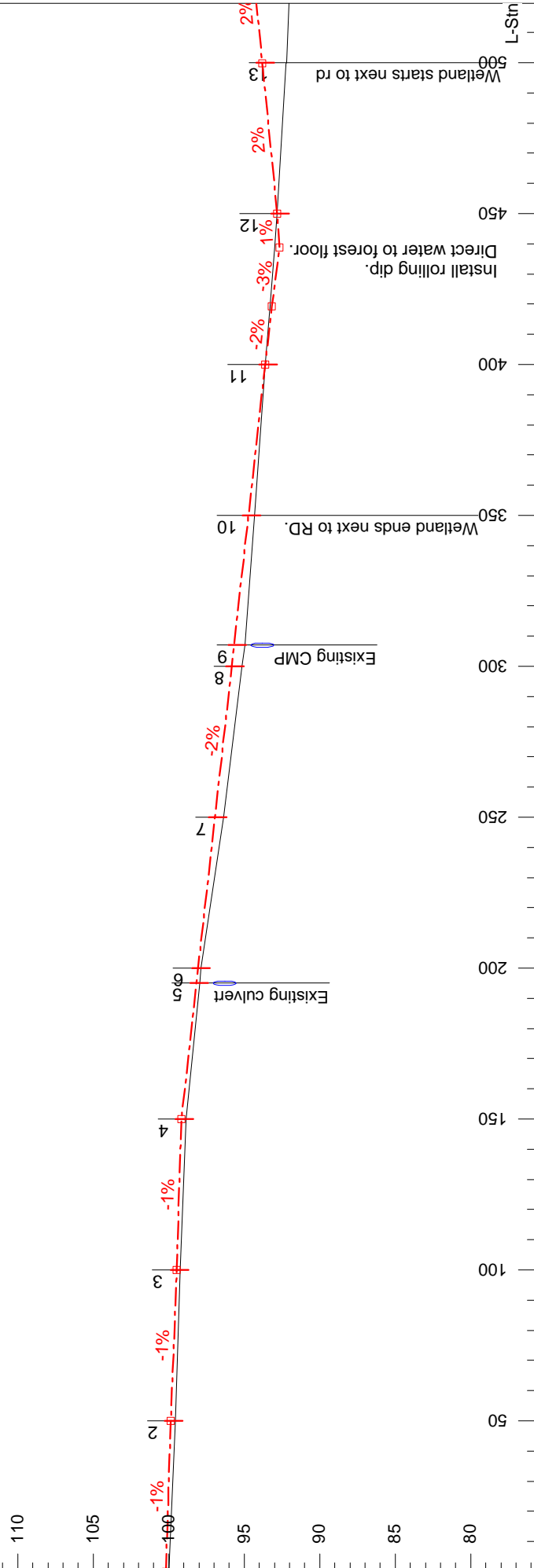
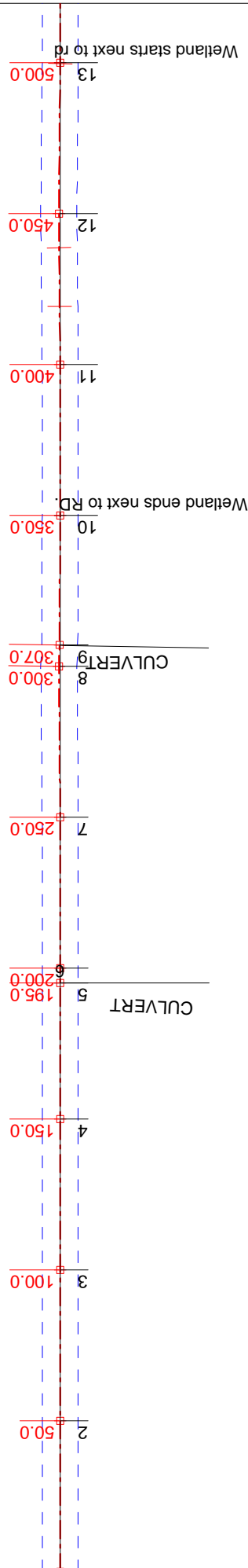
70


Red dashed line is final road surface grade at centerline.

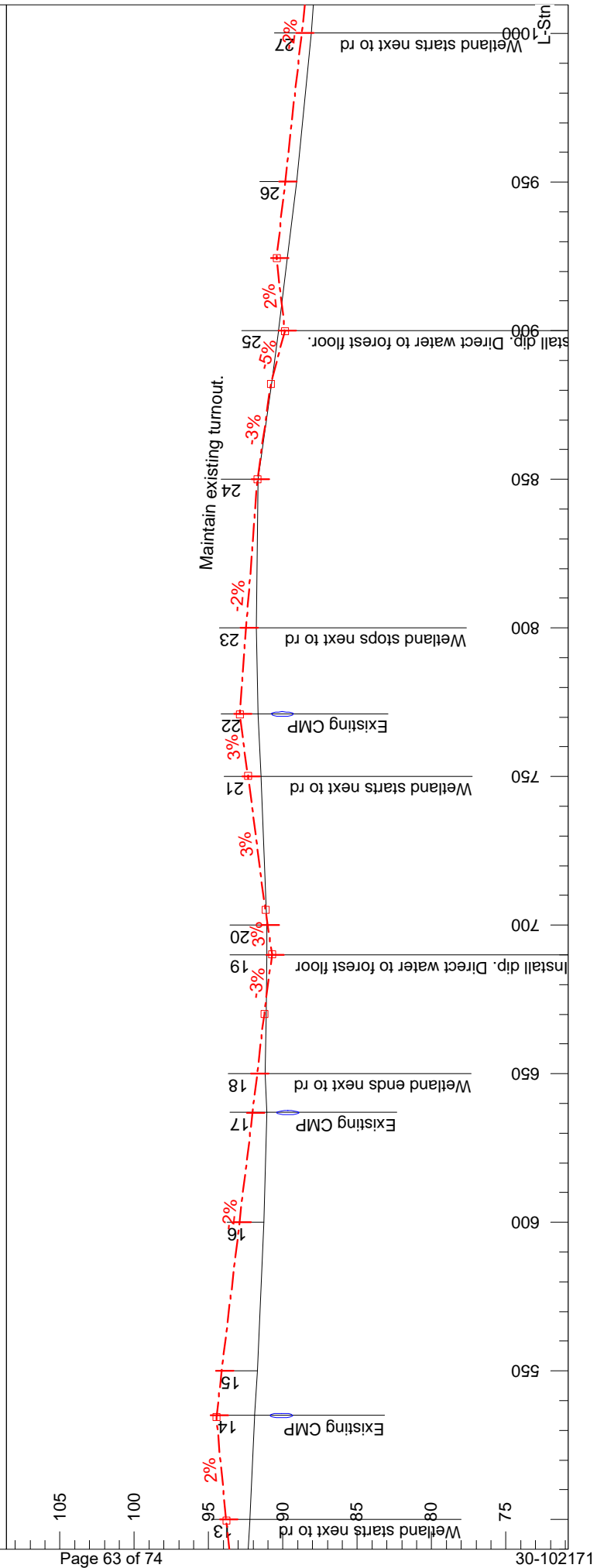
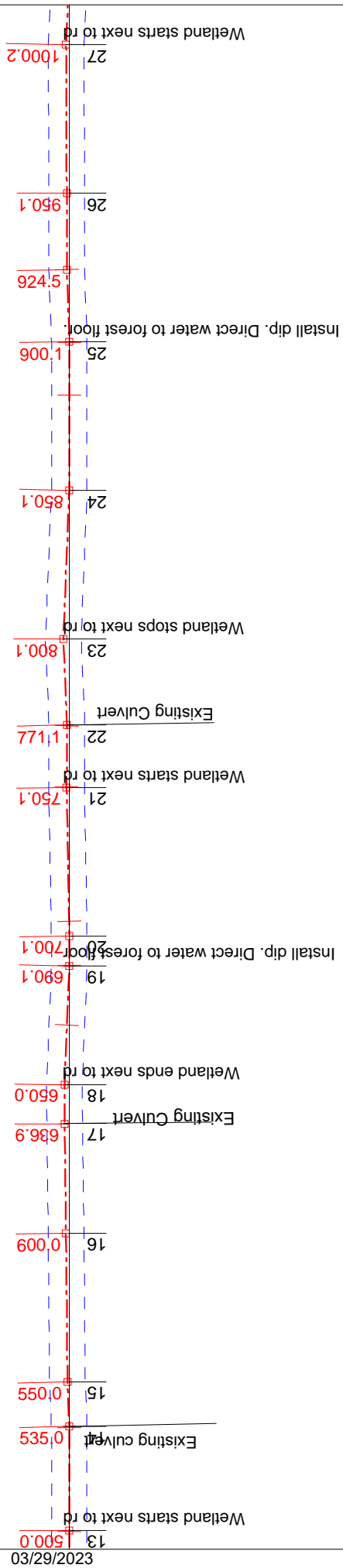
Outslopes rolling dips to the left (south side of road) at 5%.

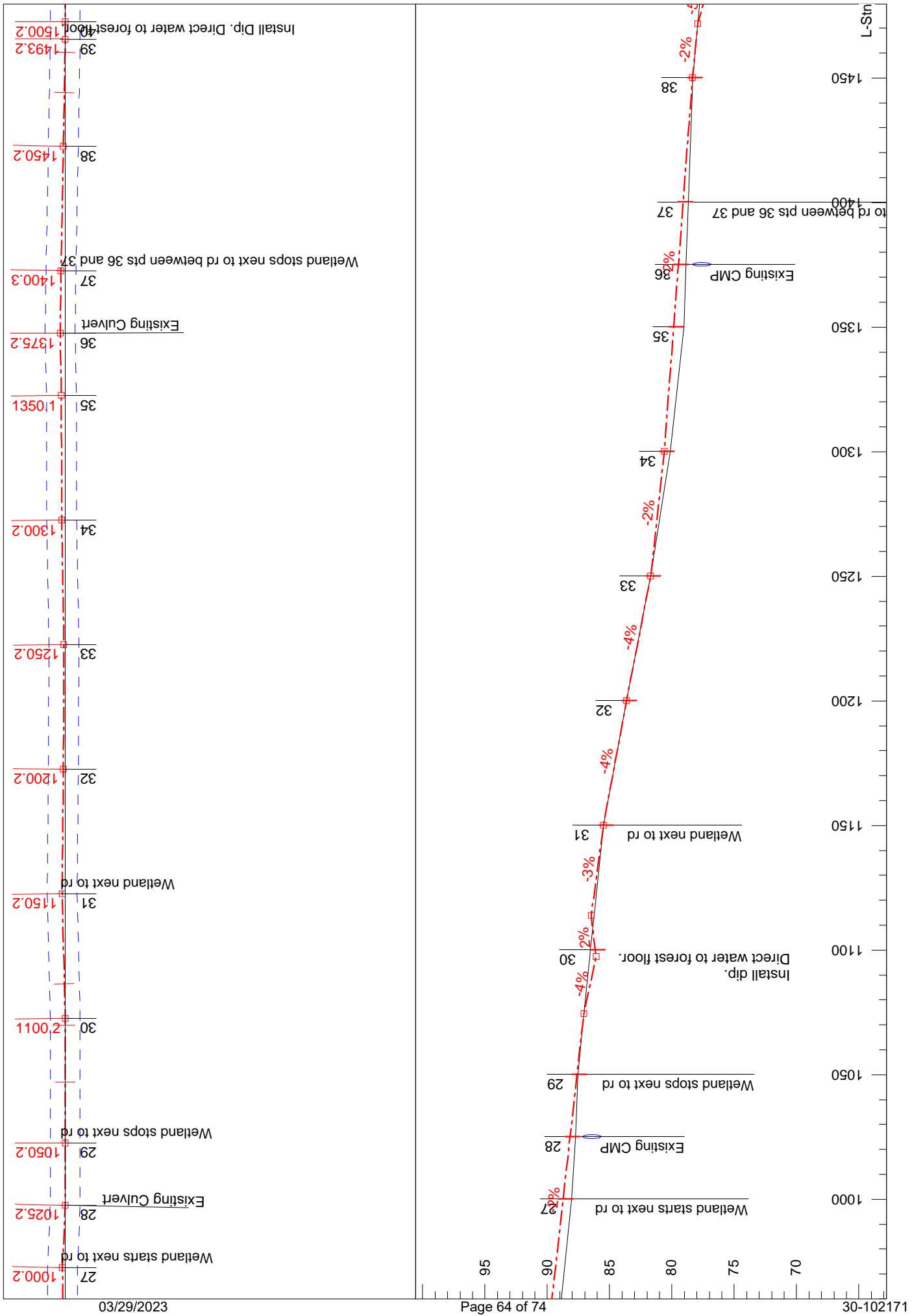
Pt 64 and pt 65 End of bridge

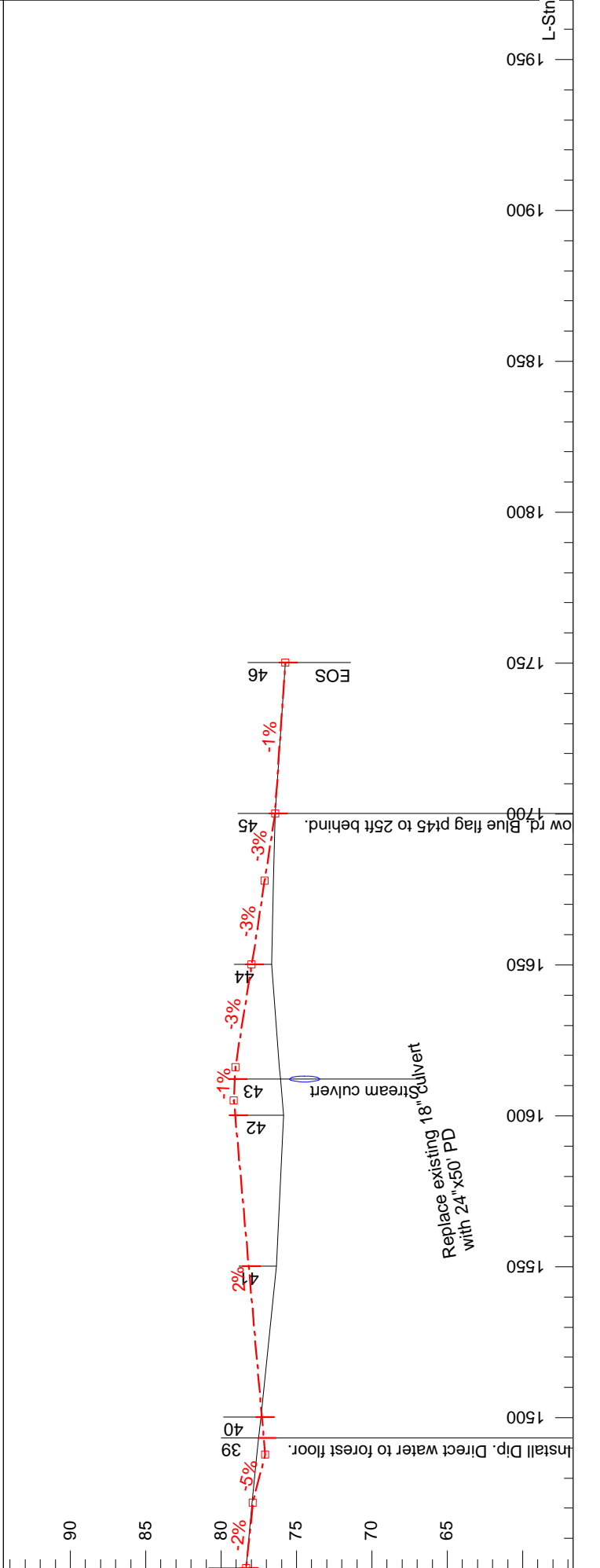
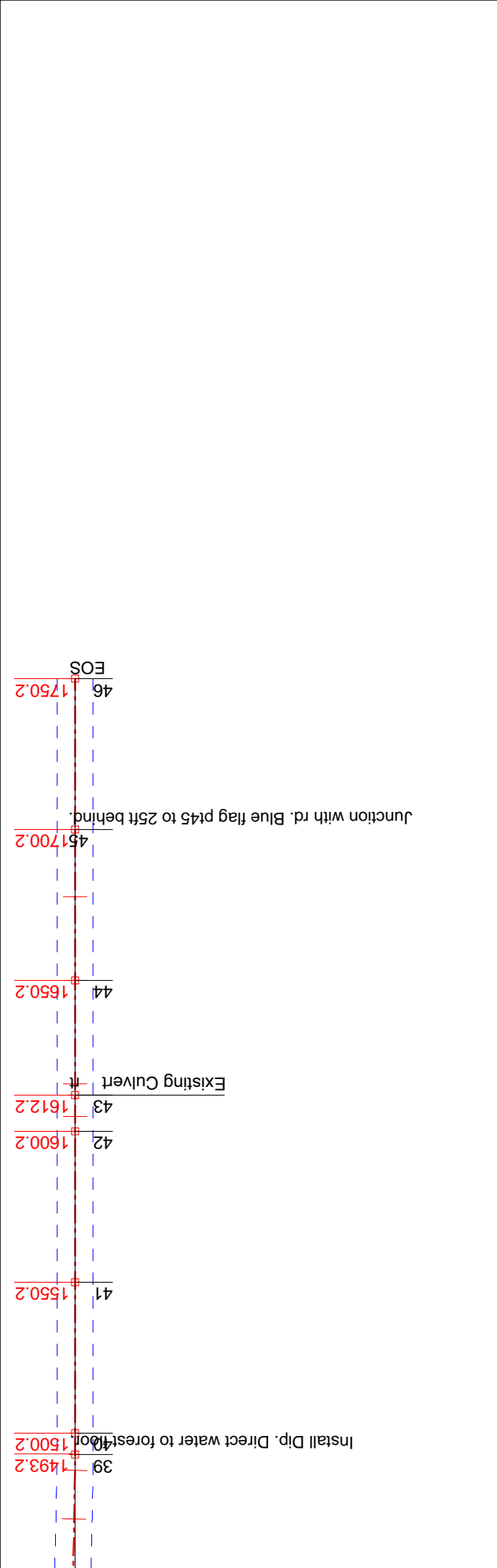





Ferda TBS 9rd Reconstruction Dip Installations		Washington State Department of Natural Resources South Puget Sound Region	Plan Scale 1:600 Profile Vert Scale 1:120 Profile Horz Scale 1:600	Engineer: M. Bell
				Page 1 of 4 10/10/28







Ferda TBS
9rd Reconstruction Dip Installations



Washington State Department of
Natural Resources
South Puget Sound Region

Plan Scale 1:600

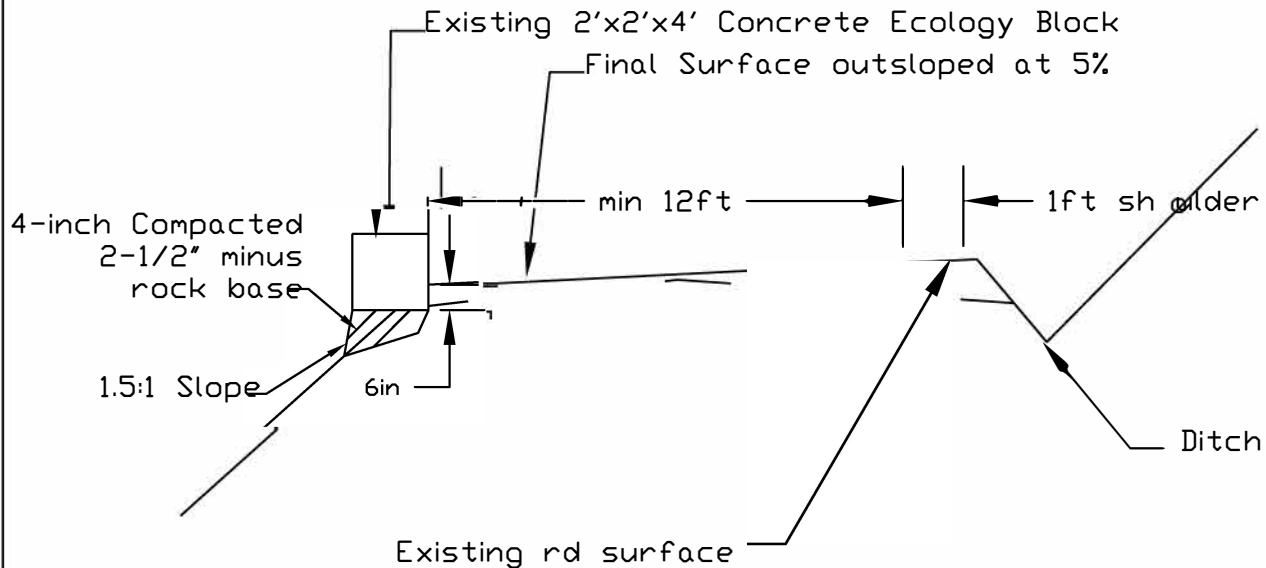
Profile Vert Scale 1:120
Profile Horz Scale 1:600

Engineer: M. Bell

Page 4 of 4
10/10/28

9rd Design for Dip Maintenance

Typical Section Detail



Notes: All dips and outsloping shall slope to the fill side of the road (NW side).

On x-sections where the 12 ft running surface is short of the existing rd edges, continue road surface outsloping and rocking to the existing road edge.

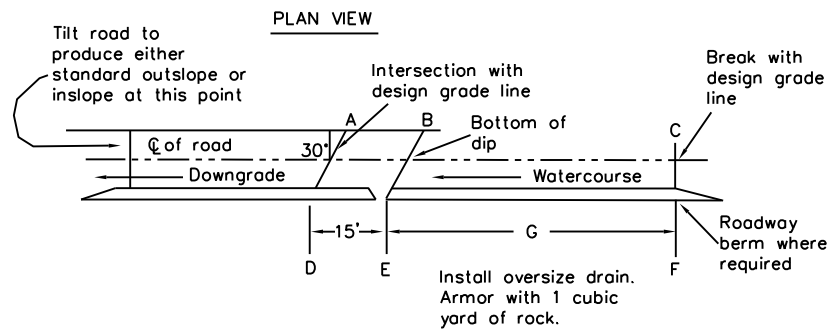
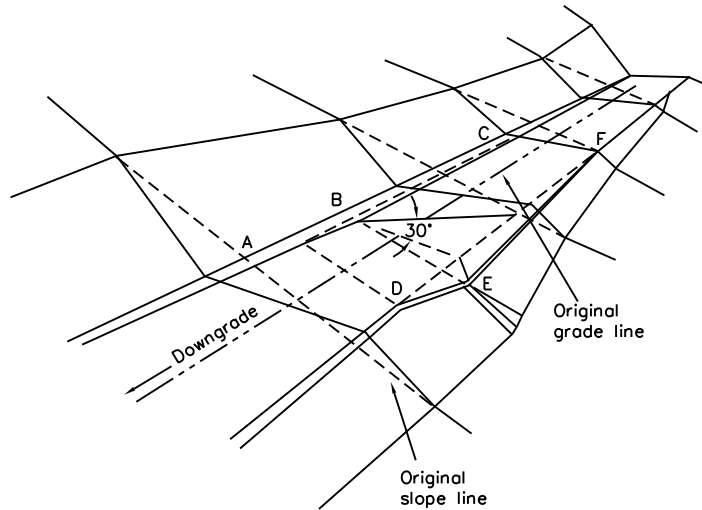
Ecology blocks shall be lined up if they are out of place or knocked over. Ecology blocks that are moved shall be re-installed 6 inches below road surface.

Drawings not to scale

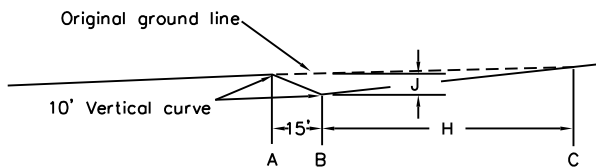
ROLLING DIP DETAIL

NOTE: Plan of dip shown is for an outsloped rolling dip. Dips may be either insloped or outsloped. When insloped, dips shall discharge into a culvert, drop inlet, oversize drain, or drainage ditch. When outsloped, they shall discharge into an oversize drain or on to natural ground.

The minimum cross grade from "B" to "E" is 1% greater than the original road grade.



ROAD PROFILE ALONG A-B-C OF ROLLING DIP



ROAD PROFILE ALONG D-E-F OF ROLLING DIP

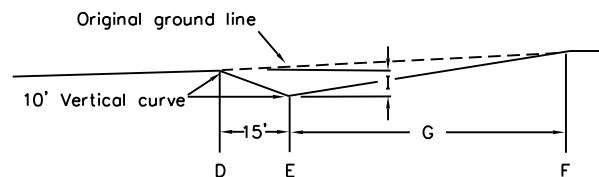


TABLE OF ROLLING DIP DIMENSIONS

WIDTH	10' or 12'	14'	16'	ALL		
DIMENSION	G			H	I	J
ROAD GRADE 6% AND UNDER	60	61	62	52	0.9	0.3
8%	70	71	72	62	1.0	0.2
10%	80	81	82	72	1.1	0.1

ROCK ACCOUNTABILITY DETAIL

SALE NAME: _____

Purchaser: _____

Agreement #: _____

Contractor: _____

Rock Quarry/Pit: Truck No: _____

Truck No: _____

[illegible]

Truck Driver Signature

SIGNATURE

DATE _____

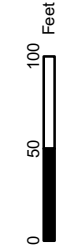
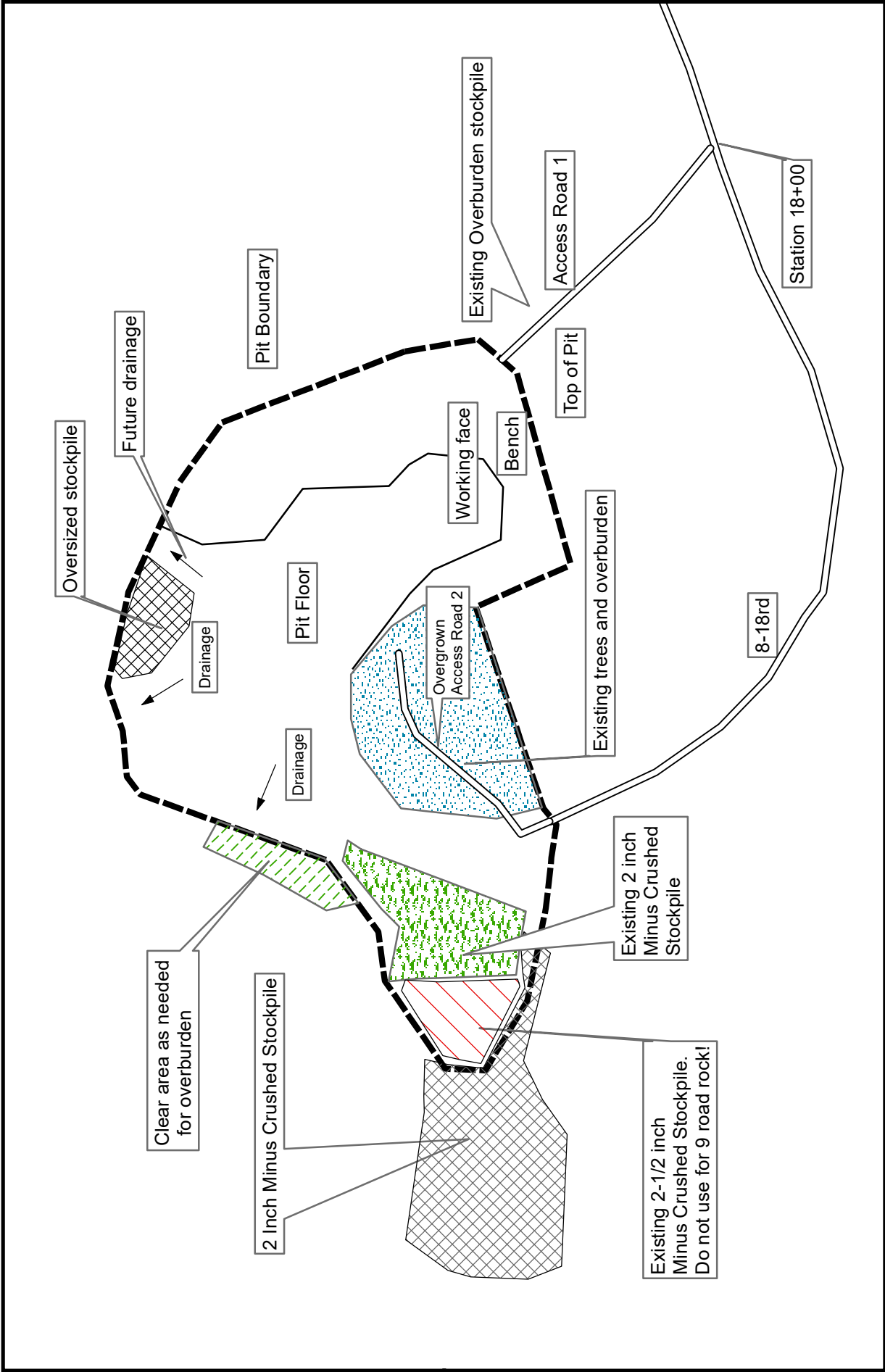
Legal Description: NE1/4 SW1/4, Section 20, T15N, R6E, W.M.
Rock Pit Name: Primo Pit

PIT DEVELOPMENT PLAN, pg 1 of 2

In additional to Clause 6-12 ROCK SOURCE SPECIFICATIONS, the following apply:

- 1) Pit floor shall be sloped to allow drainage as shown. No ponding will be allowed.
- 2) Do not mix rock stockpiles. Rock shall not be used from any stockpile unless it is specified in the road plan.
- 3) At the termination of use, all overburden shall have a maximum backslope of 1:1.
- 4) At the termination of use, both access roads shall be blocked to all motorized traffic.
- 5) At the completion of operations, Contractor shall request written approval from the Contract Administrator for final rock source condition and compliance with the terms of this plan.
- 6) Quantity and Quality of ballast pit is not guaranteed by the State.
- 7) See "Primo Pit Plan View, pg 2 of 2" drawing for additional information.

Primo Pit Plan View, pg 2 of 2



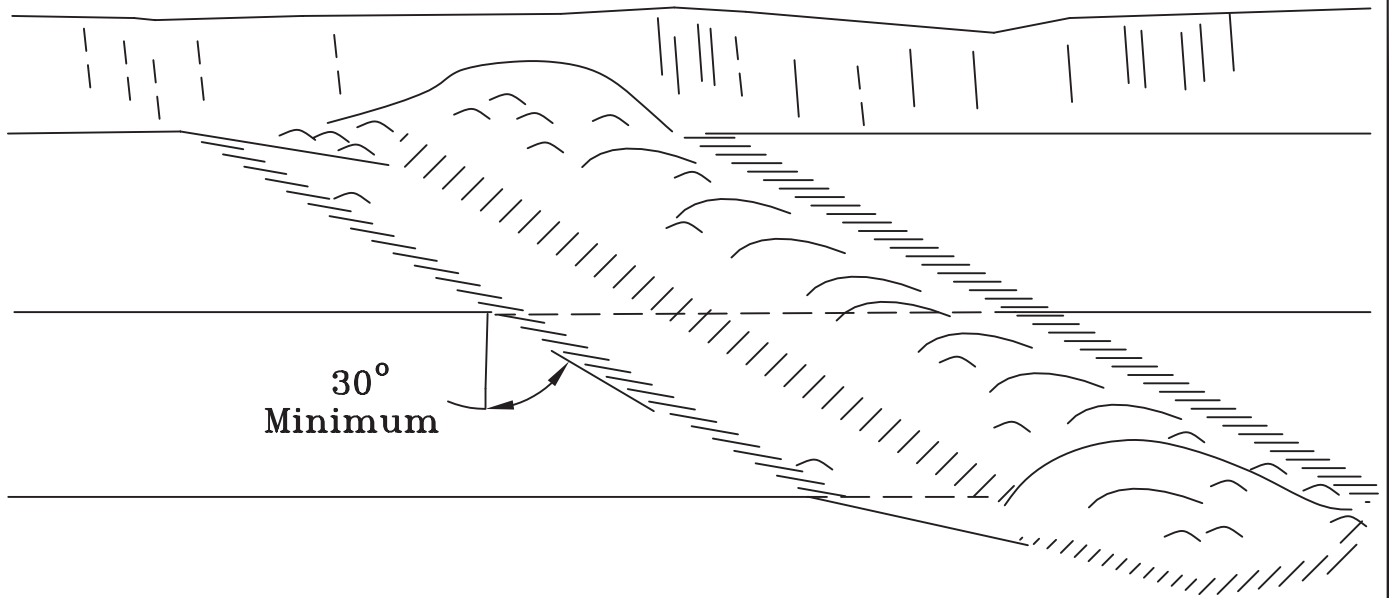
Note: Scale is approximate.
Plan View drawn from aerial
photo.



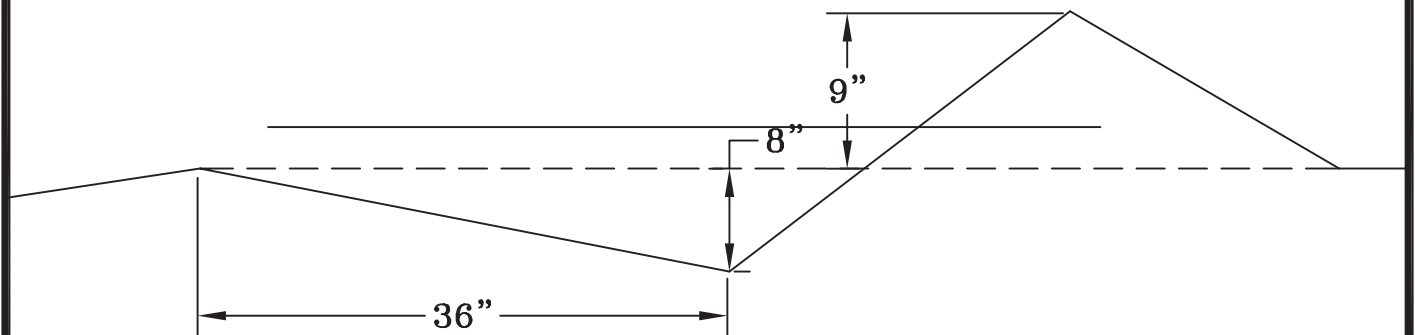
Prepared By: hadm490 5/3/2021
Modification Date: hadm490 7/26/2021

Drivable Water Bar Detail

Cross Ditch



Cross Section at Centerline

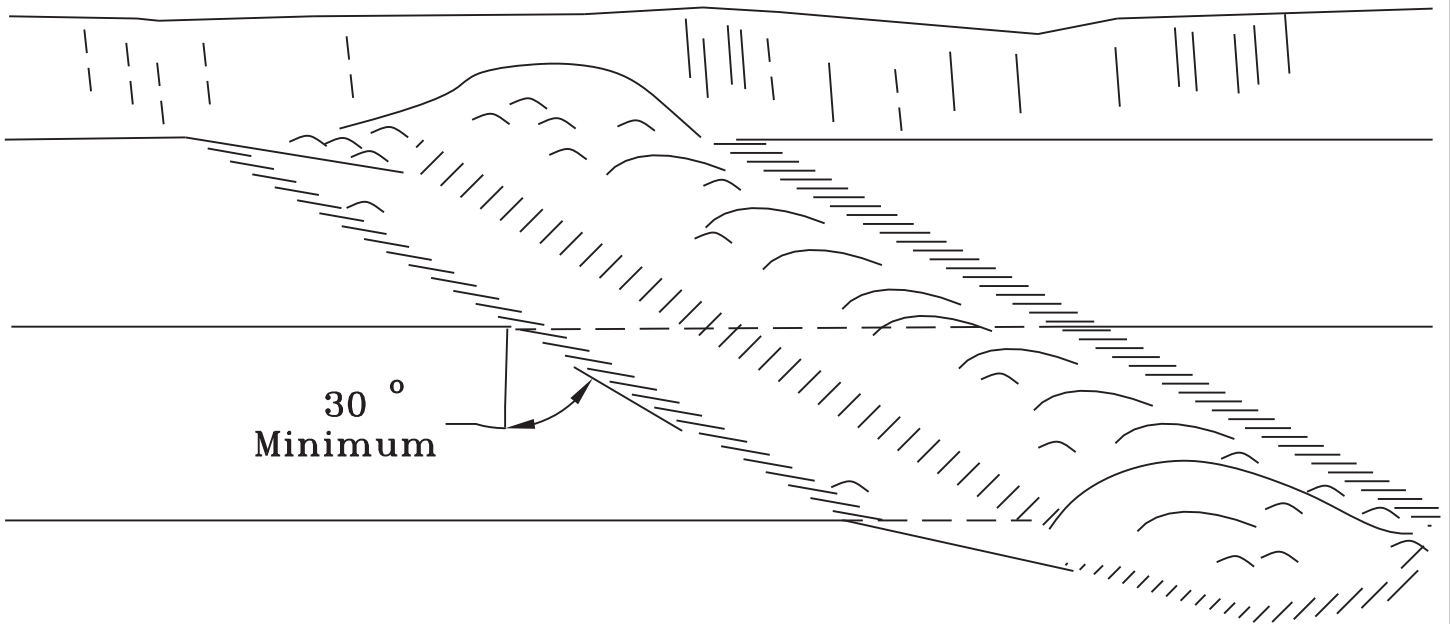


Scale : None
Drawn by: M.A.D.

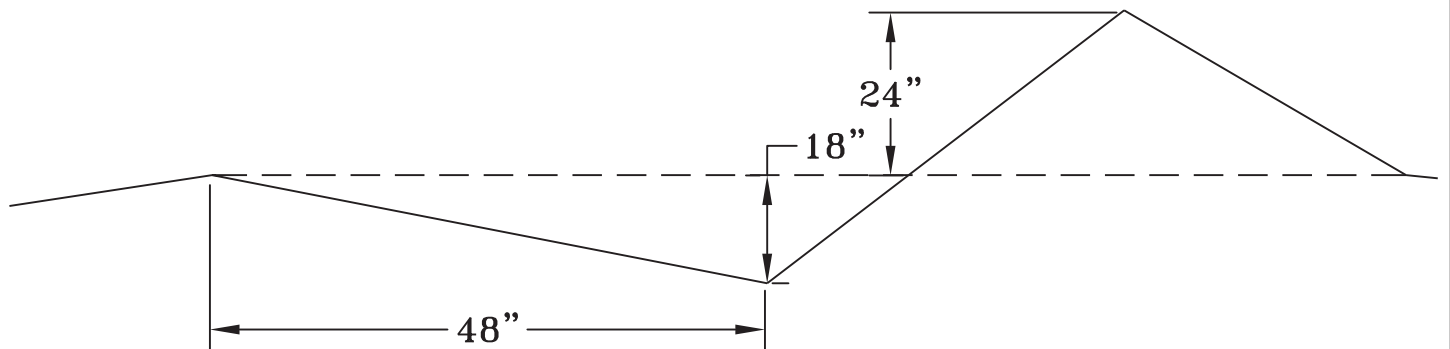
Drivable Water Bar Detail

Non-Drivable Water Bar Detail

Cross Ditch



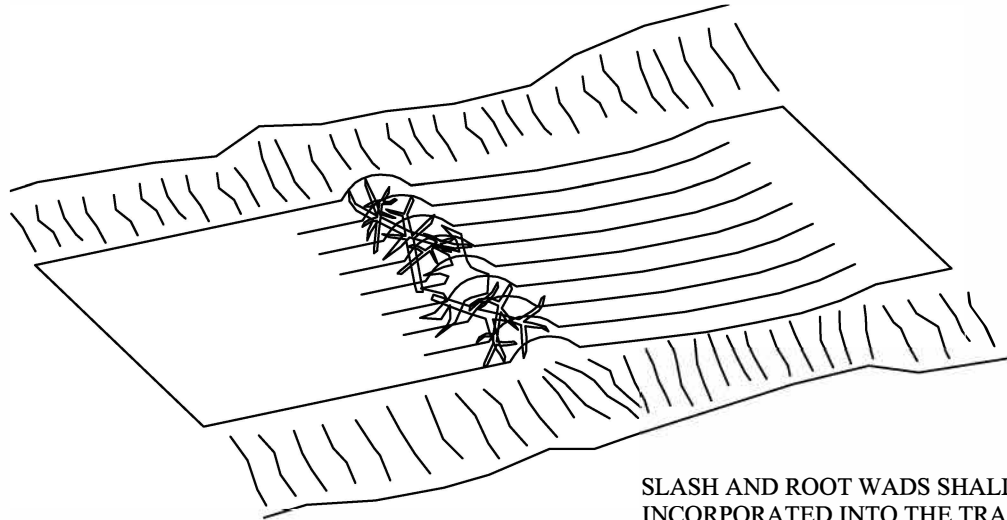
Cross Section at Centerline



Non-Drivable Water Bar Detail

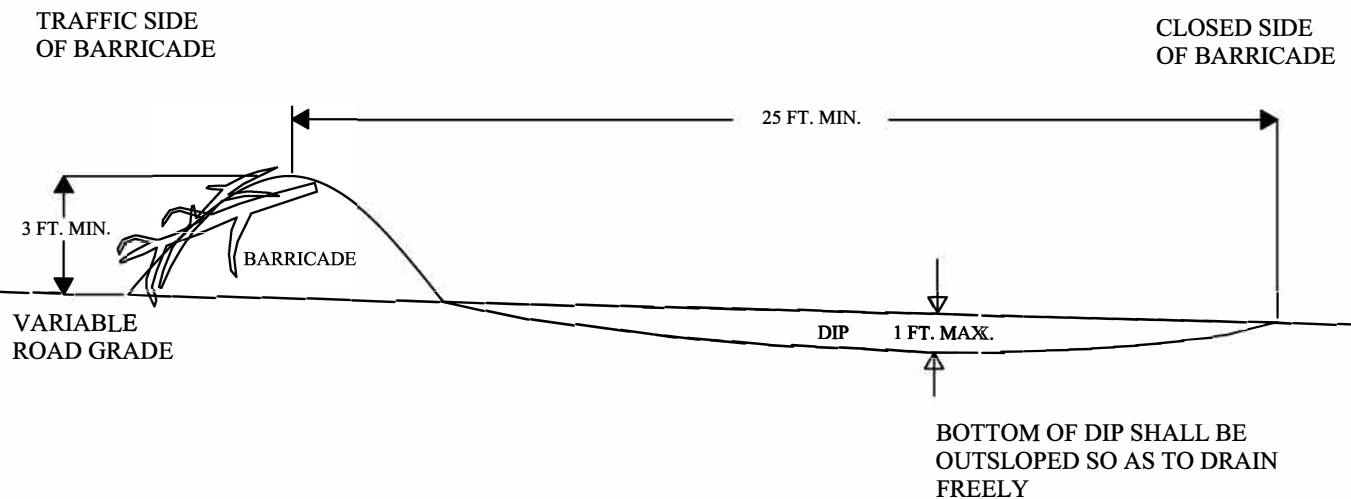
Scale : None
Drawn by: M.A.D.

EARTHEN BARRICADE DETAIL



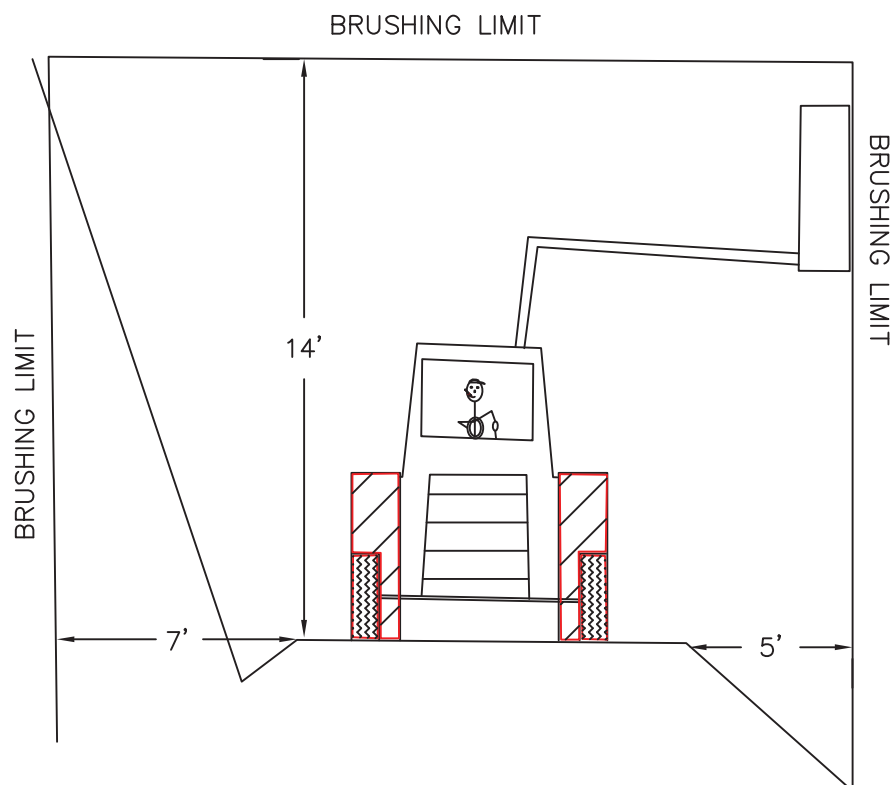
SLASH AND ROOT WADS SHALL BE INCORPORATED INTO THE TRAFFIC SIDE OF THE BARRICADE.

PLAN VIEW



PROFILE VIEW

Brushing Section Detail



Notes: Stumps shall not be greater than 3 inches tall after brushing.

Scale : None
Drawn by: M.A.D.

Brushing Section Detail

DEPARTMENT OF NATURAL RESOURCES - SOUTH PUGET SOUND REGION

SUMMARY - ROAD DEVELOPMENT COSTS

(COSTS ARE ESTIMATES ONLY & ARE NOT GUARANTEED BY THE STATE OR PART OF THE ROAD PLAN.)

SALE/PROJECT NAME: **Ferda**

CONTRACT NUMBER: **30-102171**

TYPE:	Construction	Reconstruction	Pre-Haul Maintenance
NUMBER OF STATIONS:	44.91	0.00	406.94
AVG. SIDESLOPE:	33	0	
CLEARING AND GRUBBING:	\$4,500	\$0	
EXCAVATION AND FILL:	\$18,740	\$0	
MISC. MAINTENANCE:			\$15,473
ROCK TOTALS:			
Ballast:	\$29,023	\$0	Surface: \$56,735
Surfacing:	\$0	\$0	Riprap: \$170
Riprap/Quarry Spalls:	\$30	0	
Stockpile:			\$0
CULVERTS AND FLUMES:	\$3,012	\$0	\$7,970
STRUCTURES:	\$0	\$0	\$0
GENERAL EXPENSES:	\$4,977	\$0	\$6,428
MOBILIZATION:	\$2,408	\$0	\$2,408
TOTAL COSTS:	\$62,691	\$0	\$89,184
COST PER STATION:	\$1,396	#DIV/0!	\$219
POST HAUL COSTS:		\$5,457	

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

TOTAL (All Roads) =	\$157,332
SALE VOLUME MBF =	5,544
TOTAL COST PER MBF =	\$28.38

Compiled by:

M. Bell

Date: 06/14/22

LOGGING PLAN MAP

SALE NAME: FERDA VRH VDT

AGREEMENT#: 30-102171

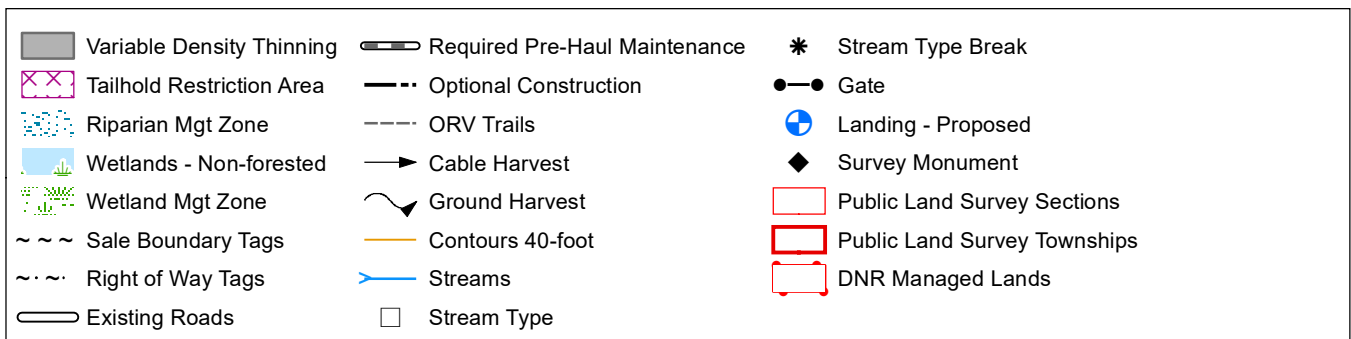
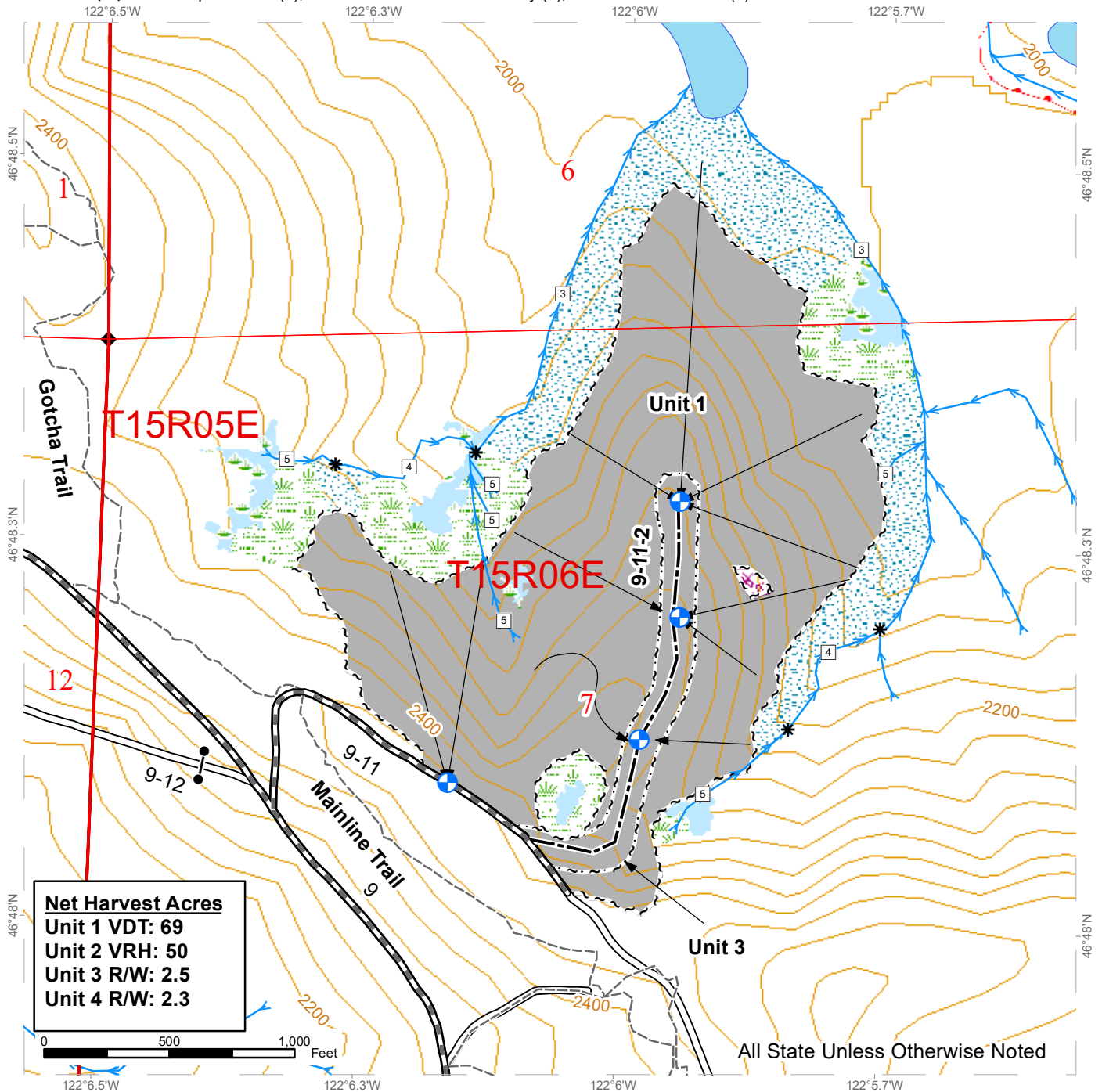
TOWNSHIP(S): T15R06E, T16R5E

TRUST(S): Capitol Grant (7), Common School and Indemnity (3), State Forest Transfer (1)

REGION: South Puget Sound Region

COUNTY(S): Pierce

ELEVATION RGE: 1840-2637



LOGGING PLAN MAP

SALE NAME: FERDA VRH VDT

AGREEMENT#: 30-102171

TOWNSHIP(S): T15R6E, T16R5E

TRUST(S): Capitol Grant (7), Common School and Indemnity (3), State Forest Transfer (1)

REGION:

South Puget Sound Region

COUNTY(S):

Pierce

ELEVATION RGE: 1840-2637

