

Washington DNR Timber Sales Program

Updated information is being provided for **the Baler** Timber Sale #30-091808 documents as follows:

Documents amended:

Brief Description	DATE	Initials
Updates have been made to the rock list included in the Road Plan (page 26 of 57) on the 16 Road, see changes in the table below.	06/28/2016	KF
Road Cost: rock list update reflected on the road costs, shown as Ballast under pre-haul maintenance	6/29/16	KF

SURFACE

Road Number	From Station	To Station	Rock Slope	Compacted Rock Depth	C.Y. Station	# of Stations	C.Y. Total	Rock Source	Comment
			K1	B1	3 Inch Minus Ballast				
1	0+00	509+78	1.5:1				100	1 Road Shale Pit	For spot rocking. Locations as directed by CA.
16	0+00	26+50	1.5:1	6"	<del>12</del> 24	26.5	<del>318</del> 636		

SURFACE TOTAL ~~418~~ 736 Cubic Yards

Documents amended:

Brief Description	DATE	Initials
The Driving Map: A CJ-18 key is required to access the timber sale.	06/29/2016	KF
Revisions were made to the following documents to allow tethered equipment on sustained slopes greater than 45 percent and add skid trail/yarding corridor requirements: <ul style="list-style-type: none"> <li>• Notice of Sale – Harvest Method</li> <li>• Timber Sale Contract, clauses H-120 and H-140 F)</li> </ul>	7/13/2016	KF



**TIMBER NOTICE OF SALE**

**SALE NAME:** *BALER*

**AGREEMENT NO:** *30-091808*

**AUCTION:** July 26, 2016 starting at 10:00 a.m., **COUNTY:** Lewis  
South Puget Sound Region Office, Enumclaw, WA

**SALE LOCATION:** Sale located approximately 9 miles south of Ashford.

**PRODUCTS SOLD AND SALE AREA:** All timber, except leave trees marked with blue paint or bounded out by yellow leave tree area tags, snags, and downed timber existing more than 5 years from the day of sale; bounded by the following: white timber sale boundary tags with pink flashers and pink flagging and timber type change marked with pink flagging in Unit #1; all timber bounded by orange right of way tags, except five trees marked with "Do not remove" in red paint are to be cut and left on site on part(s) of Sections 22 and 27 all in Township 14 North, Range 6 East, W.M., containing 94 acres, more or less.

**CERTIFICATION:** This sale is certified under the Sustainable Forestry Initiative® program Standard (cert no: BV-SFIS-US09000572) 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	MBF by Grade								
				1P	2P	3P	SM	1S	2S	3S	4S	UT
Douglas fir	15.3	10	1,940						747	837	343	13
Hemlock	10	12	748						66	321	317	44
Red cedar	13.9		125							81	44	
Silver fir	13.3		28						6	13	9	
Noble fir	21.8		14						11	3		
White pine	16		8							6	2	
Sale Total			2,863									

**MINIMUM BID:** \$638,000.00 **BID METHOD:** Sealed Bids

**PERFORMANCE SECURITY:** \$127,000.00 **SALE TYPE:** Lump Sum

**EXPIRATION DATE:** October 31, 2018 **ALLOCATION:** Export Restricted

**BID DEPOSIT:** \$63,800.00 or Bid Bond. Said deposit shall constitute an opening bid at the appraised price.

**HARVEST METHOD:** Harvesting activities are estimated to be 85% uphill cable, 10% downhill cable, and 5% ground based harvest. Ground based equipment that is non self-leveling or non-tethered is limited to sustained slopes of 45 percent or less. Yarding may be restricted during wet weather if rutting becomes excessive, per clause H-017.

Falling, yarding and timber haul will not be permitted from November 1st to May 15th, nor at all on weekends or state recognized holidays, unless authority to do so is granted, in writing, by the Contract Administrator. If permission is granted to operate from November 1st to May 15th, the Purchaser shall comply with a Winter Operating Plan to include further protection of water, soil, roads and other forest assets at the Purchaser's



## TIMBER NOTICE OF SALE

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expense. Preventative measures must be in place prior to commencing any winter operations.

### **ROADS:**

23.30 stations of required construction. 560.95 stations of required pre-haul maintenance. 47.97 stations of required post-haul maintenance. Purchaser maintenance on the 16, 16-1 and 16-1-2 roads. Designated maintenance on all other roads used. Rock for this proposal may be obtained from the state owned 1 Road Shale Rock Pit.

Operation of road construction equipment and rock haul will not be permitted from November 1st to May 15th, nor at all on weekends or state recognized holidays, unless authority to do so is granted, in writing, by the Contract Administrator. If permission is granted to operate from November 1st to May 15th, the Purchaser shall comply with a Winter Operating Plan to include further protection of water, soil, roads and other forest assets at the Purchaser's expense. Preventative measures must be in place prior to commencing any winter operations.

### **ACREAGE DETERMINATION**

#### **CRUISE METHOD:**

Acreeage was determined by traversing boundaries by GPS. Traverse GPS data files are available upon request by emailing [rachel.mason@dnr.wa.gov](mailto:rachel.mason@dnr.wa.gov). See cruise narrative for cruise method.

### **FEES:**

\$50,818.00 is due on day of sale. \$9.00 per MBF is due upon removal. These are in addition to the bid price.

### **SPECIAL REMARKS:**

In addition to the above restrictions, no activity will be permitted between December 1st and March 31st, unless approved in writing by the Contract Administrator. The closure is to protect heavily used winter recreation facilities managed by Mount Tahoma Trails Association (MTTA) that are located in the vicinity of the proposal, as well as the haul route, which is utilized for winter recreation. The only foreseeable exception to this closure would be an unseasonably low snow pack with frozen ground, or operations in a location that would not cause conflict with any MTTA recreation facilities.

In addition to the above restrictions, wildlife timing restrictions will be in effect within a portion of the unit, as shown as the wildlife timing restriction area on the timber sale map. Falling, yarding, operation of heavy equipment and road construction activities within the restricted area will not be permitted from 1 hour before sunrise to 2 hours after sunrise and 1 hour before sunset to 1 hour after sunset from April 1 through August 31. This restriction does not apply to the hauling of timber, rock or equipment.

Purchaser shall cut vine maple and sever from the stump within the harvest area.

Tailhold locations outside the timber sale boundary are subject to restrictions. See H-141 for details.

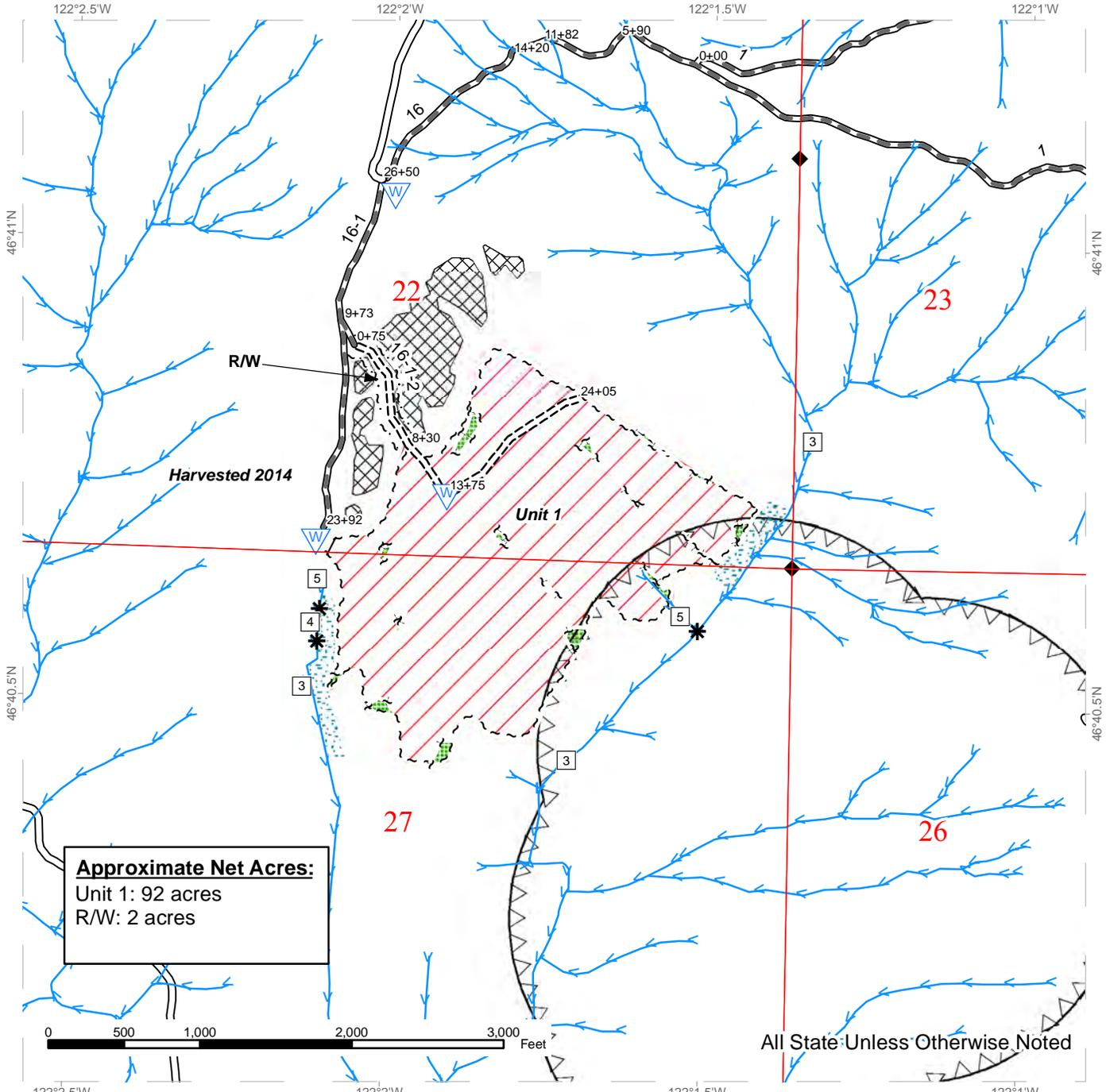
Cable profiles extrapolated from LiDAR have been run on some possible cable corridors using a 100 foot tower as well as intermediate supports in the western portion of the harvest unit. The cable profile information is available upon request by contacting Rachel Mason at (360) 802-7010.

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:** BALER  
**AGREEMENT #:** 30-091808  
**TOWNSHIP(S):** T14R06E  
**TRUST(S):** Common School and Indemnity(3)

**REGION:** South Puget Sound Region  
**COUNTY(S):** LEWIS  
**ELEVATION RGE:** 3186-4397



**Approximate Net Acres:**  
 Unit 1: 92 acres  
 R/W: 2 acres

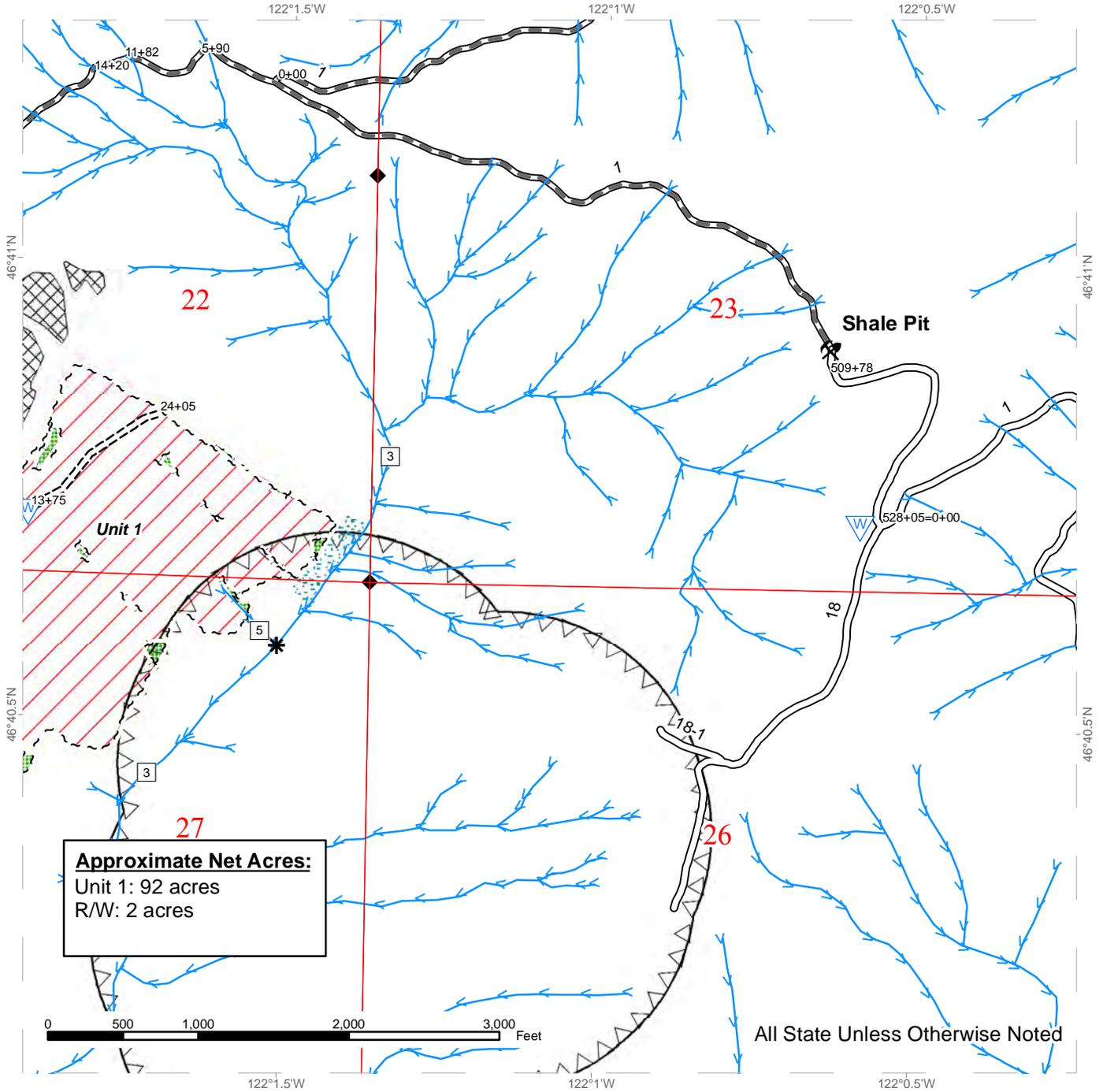
All State Unless Otherwise Noted

Sale Area	Timing Restriction Zone	Streams
Sale Boundary Tags	Leave Tree Area	Stream Type
Leave Tree Tags	Riparian Mgt Zone	Stream Type Break
Right of Way Tags	Talus	Monumented Corners
Timber Type Change	Existing Roads	Waste Area
	Required Pre-Haul Maintenance	Public Land Survey Sections
	Required Construction	DNR Managed Lands
	Road Stationing	

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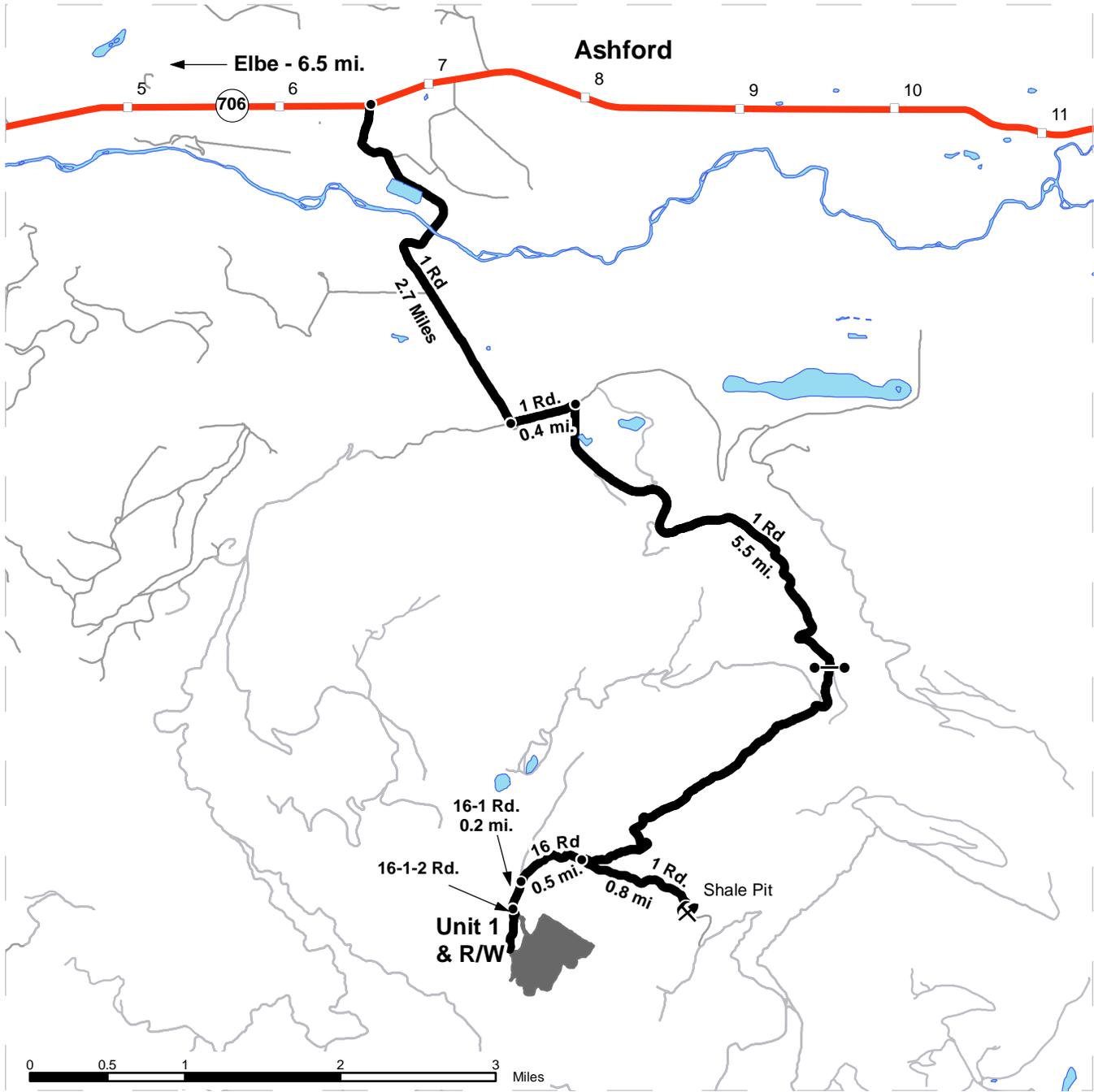
All State Unless Otherwise Noted

Sale Area	Timing Restriction Zone	Streams
Sale Boundary Tags	Leave Tree Area	Stream Type
Leave Tree Tags	Riparian Mgt Zone	Stream Type Break
	Talus	Monumented Corners
	Existing Roads	Waste Area
	Required Pre-Haul Maintenance	Existing Rock Pit
	Required Construction	Public Land Survey Sections
	0+00 Road Stationing	DNR Managed Lands

# DRIVING MAP

SALE NAME: Baler  
 AGREEMENT#: 30-091808  
 TOWNSHIP(S): T14NR06E  
 TRUST(S): Common School (3)

REGION: South Puget Sound Region  
 COUNTY(S): Lewis  
 ELEVATION RGE: 3180 - 4490 ft.



-  Timber Sale Unit
-  Haul Route
-  Other Route
-  Rock Pit
-  Distance Indicator
-  Gate
-  Milepost Markers
-  Highways

**DRIVING DIRECTIONS:**

From Elbe, drive east on SR-706 for approximately 6.5 miles. Turn right (south) on the 1 Rd. for 2.7 miles. Turn left (east) at the 1 Rd. and 2 Rd. junction to continue on the 1 Rd. for 0.4 miles. Turn right (south) to continue on the 1 Rd. for 5.5 miles. Turn right onto the 16 Rd. for 0.5 miles. Bear left onto the 16-1 Rd. for 0.2 miles. Bear left onto the 16-1-2 Rd. to reach the beginning of the Right of Way Unit.



**STATE OF WASHINGTON  
DEPARTMENT OF NATURAL RESOURCES**

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

**Export Restricted Lump Sum AGREEMENT NO. 30-091808**

**SALE NAME: BALER**

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

Section G: General Terms

G-001 Definitions

The following definitions apply throughout this contract;

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

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

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

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

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

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

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

G-011 Right to Remove Forest Products and Contract Area

Purchaser was the successful bidder on July 26, 2016 and the sale was confirmed on \_\_\_\_\_. The State, as owner, agrees to sell to Purchaser, and Purchaser agrees to purchase as much of the following forest products as can be cut and removed during the term of this contract: All timber, except leave trees marked with blue paint or bounded out by yellow leave tree area tags, snags, and downed timber existing more than 5 years from the day of sale; bounded by the following: white timber sale boundary tags with pink flashers and pink flagging and timber type change marked with pink flagging in Unit #1; all timber bounded by orange right of way tags, except five trees marked with "Do not remove" in red paint are to be cut and left on site, located on approximately 94 acres on part(s) of Sections 22, and 27 all in Township 14 North, Range 6 East W.M. in Lewis County(s) as designated on the sale area and as shown on the attached timber sale map.

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

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

G-020 Inspection By Purchaser

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

G-025 Schedules

The following attached schedules are hereby incorporated by reference:

Schedule	Title
A	Mount Tahoma Trails Recreation Area Requirements

G-031 Contract Term

Purchaser shall complete all work required by this contract prior to October 31, 2018.

G-040 Contract Term Adjustment - No Payment

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

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

G-051 Contract Term Extension - Payment

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

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

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

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

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

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

- e. Payment of \$447.00 per acre per annum for the acres on which an operating release has not been issued within the harvest area.
- f. In no event will the extension charge be less than \$200.00.
- g. Extension payments are non-refundable.

**G-053 Surveys - Sensitive, Threatened, Endangered Species**

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

**G-060 Exclusion of Warranties**

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

- a. The MERCHANTABILITY of the forest products. The use of the term "merchantable" in any document is not intended to vary the foregoing.
- b. The CONDITION of the forest products. The forest products will be conveyed "AS IS."
- c. The ACREAGE contained within any sale area. Any acreage descriptions appearing in the timber notice of sale, timber sale contract, or other documents are estimates only, provided solely for administrative and identification purposes.
- d. The VOLUME, QUALITY, OR GRADE of the forest products. The State neither warrants nor limits the amount of timber to be harvested. The descriptions of the forest products to be conveyed are estimates only, made solely for administrative and identification purposes.
- e. The CORRECTNESS OF ANY SOIL OR SURFACE CONDITIONS, PRE-SALE CONSTRUCTION APPRAISALS, INVESTIGATIONS, AND ALL

OTHER PRE-BID DOCUMENTS PREPARED BY OR FOR THE STATE. These documents have been prepared for the State's appraisal purposes only.

- f. THAT THE SALE AREA IS FREE FROM THREATENED OR ENDANGERED SPECIES or their habitat. The State is not responsible for any interference with forestry operations that result from the presence of any threatened or endangered species, or the presence of their habitat, within the sale area.
- g. THAT THE FORESTRY OPERATIONS to be performed under this contract WILL BE FREE FROM REGULATORY ACTIONS by governmental agencies. The State is not responsible for actions to enforce regulatory laws, such as the Washington Forest Practices Act (chapter 76.09 RCW), taken by the Department of Natural Resources or any other agency that may affect the operability of this timber sale.
- h. Items contained in any other documents prepared for or by the State.

G-062 Habitat Conservation Plan

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

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

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

G-063 Incidental Take Permit Notification Requirements

- a. Purchaser shall immediately notify the Contract Administrator of new locations of permit species covered by the Incidental Take Permits (ITP) that

are discovered within the area covered by the State's Habitat Conservation Plan (HCP), including, but not limited to: locations of occupied murrelet habitat; spotted owl nest sites; wolves; grizzly bears; nests, communal roosts, or feeding concentrations of bald eagles; peregrine falcon nests; Columbian white-tailed deer; Aleutian Canada geese; Oregon silverspot butterflies; and additional stream reaches found to contain bull trout. Purchaser is required to notify the Contract Administrator upon discovery of any fish species found in streams or bodies of water classified as non-fish bearing. In all circumstances, notification must occur within a 24 hour time period.

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

#### G-064 Permits

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

#### G-065 Regulatory Disclaimer

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

#### G-066 Governmental Regulatory Actions

- a. Risk

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

b. Sale Area

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

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

c. Adjustment of Price

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

G-070 Limitation on Damage

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

G-080 Scope of State Advice

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

under the contract. Purchaser retains the final responsibility for its operations under this contract and State shall not be liable for any injuries resulting from Purchaser's reliance on any State advice regarding the method or manner of performance.

G-091 Sale Area Adjustment

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

G-101 Forest Products Not Designated

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

The pricing schedule has not been set for the sale.

G-111 Title and Risk of Loss

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

G-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: BV-SFIS-US09000572.

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

**G-120 Responsibility for Work**

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

**G-121 Exceptions**

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

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

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

1. Failure of (a) required improvements or roads designated in clause C-050, or (b) required or optional construction completed to the point that authorization to haul has been issued;
2. Caused by a single event from forces beyond the control of Purchaser, its employees, agents, or invitees, including independent contractors; and
3. Includes, but is not limited to natural disasters such as earthquakes, volcanic eruptions, landslides, and floods.

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

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

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

## G-140 Indemnity

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

## G-150 Insurance

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

#### G-160 Agents

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

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

**G-170 Assignment and Delegation**

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

**G-180 Modifications**

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

**G-190 Contract Complete**

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

**G-200 Notice**

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

G-210 Violation of Contract

G-220 State Suspends Operations

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

**G-210 Violation of Contract**

- a. If Purchaser violates any provision of this contract, the Contract Administrator, by written notice, may suspend those operations in violation. If the violation is capable of being remedied, Purchaser has 30 days after receipt of a suspension notice to remedy the violation. If the violation cannot be remedied (such as a violation of WAC 240-15-015) or Purchaser fails to remedy the violation within 30 days after receipt of a suspension notice, the State may terminate the rights of Purchaser under this contract and collect damages.
- b. If the contract expires pursuant to clause G-030 or G-031 without Purchaser having performed all its duties under this contract, Purchaser's right to operate is terminated and Purchaser shall not have the right to remedy the breach. This provision shall not relieve Purchaser of any payment obligations.
- c. The State has the right to remedy the breach in the absence of any indicated attempt by Purchaser or if Purchaser is unable, as determined by the State, to

remedy the breach. Any expense incurred by the State shall be charged to Purchaser and shall be paid within 30 days of receipt of billing.

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

#### G-220 State Suspends Operation

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

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

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

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

#### G-230 Unauthorized Activity

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

#### G-240 Dispute Resolution

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

- a. In the event of a dispute, Purchaser must make a written request to the Region Manager for resolution prior to seeking other relief.
- b. The Region Manager will issue a written decision on Purchaser's request within ten business days.

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

G-250 Compliance with All Laws

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

G-260 Venue

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

G-270 Equipment Left on State Land

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

G-280 Operating Release

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

G-310 Road Use Authorization

Purchaser is authorized to use the following State roads and roads for which the State has acquired easements and road use permits; on the 1, 16, 16-1, and 16-1-2 roads. The State may authorize in writing the use of other roads subject to fees, restrictions, and prior rights.

**G-330 Pre-work Conference**

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

**G-340 Preservation of Markers**

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

**G-360 Road Use Reservation**

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

**G-370 Blocking Roads**

Purchaser shall not block the 1 and 16 roads, unless authority is granted in writing by the Contract Administrator.

**G-380 Road Easement and Road Use Permit Requirements**

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

Easement No. 55-001037, entered into between State of Washington, Department of Natural Resources and Burlington Northern, Inc., dated February 4, 1974.

**G-396 County Hauling Permit**

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

**G-430 Open Fires**

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

## G-450 Encumbrances

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

Easement, including the terms and provisions thereof,

For: Trail

In Favor of: WA State Dept. of Natural Resources

Disclosed by Application No.: 50-051688

Granted: 1/2/1998

Expires: 12/31/2019

Intergovernmental Agreement, including the terms and provisions thereof,

For: Agreement

In Favor of: Puyallup Tribe

Disclosed by Application No.: 92-092927

Granted: 7/30/2015

Expires: 7/30/2017

## Section P: Payments and Securities

## P-011 Initial Deposit

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

## P-020 Payment for Forest Products

Purchaser agrees to pay the total, lump sum contract price of \$76,585.00. The total contract price consists of a \$0.00 contract bid price plus \$76,585.00 in fees. Fees collected shall be retained by the state unless the contract is adjusted via the G-066 clause. Purchaser shall be liable for the entire purchase price, and will not be entitled to any refunds or offsets unless expressly stated in this contract.

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

## P-045 Guarantee of Payment

Purchaser will pay for forest products prior to cutting or will guarantee payment by posting an approved payment security. The amount of cash or payment security shall

be determined by the State and shall equal or exceed the value of the cutting proposed by Purchaser.

P-050 Billing Procedure

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

P-080 Payment Account Refund

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

P-090 Performance Security

Purchaser agrees to furnish, within 30 days of the confirmation date, security acceptable to the State in the amount of \$127,000.00. The Security provided shall guarantee performance of all provisions of this contract and payment of any damages caused by operations under this contract or resulting from Purchaser's noncompliance with any rule or law. Acceptable performance security may be in the form of a performance bond, irrevocable letter of credit, cash, savings or certificate of deposit account assignments, and must name the State as the obligee or beneficiary. A letter of credit must comply with Title 62A RCW, Article 5. Performance security must remain in full force over the duration of the contract length. Surety bonds issued shall conform to the issuance and rating requirements in clause G-150. The State shall retain the performance security pursuant to RCW 79.15.100. Purchaser shall not operate unless the performance security has been accepted by the State. If at any time the State decides that the security document or amount has become unsatisfactory, Purchaser agrees to suspend operations and, within 30 days of notification, to replace the security with one acceptable to the State or to supplement the amount of the existing security.

P-100 Performance Security Reduction

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

Section H: Harvesting Operations

H-013 Reserve Tree Damage Definition

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

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

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

- b. A reserve tree top is broken or the live crown ratio is reduced below 30 percent.
- c. A reserve tree has more than 1/3 of the circumference of its root system injured such that the cambium layer is exposed.

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

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

H-017 Preventing Excessive Soil Disturbance

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

H-035 Fall Trees Into Sale Area

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

H-051 Branding and Painting

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

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

H-080 Snags Not to be Felled

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

H-120 Harvesting Equipment

Forest products sold under this contract shall be harvested using cable or ground based equipment, with ground based equipment that is non self-leveling or non-tethered

limited to sustained slopes of 45 percent or less unless authority to use other equipment is granted in writing by the State.

H-125 Log Suspension Requirements

Lead-end suspension is required for all yarding activities.

H-126 Tailholds on State Land

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

H-140 Special Harvest Requirements

Purchaser shall accomplish the following during the harvest operations:

- A) Falling, yarding and timber haul will not be permitted from November 1st to May 15th, nor at all on weekends or state recognized holidays, unless authority to do so is granted, in writing, by the Contract Administrator. If permission is granted to operate from November 1st to May 15th, the Purchaser shall comply with a Winter Operating Plan to include further protection of water, soil, roads and other forest assets at the Purchaser's expense. Preventative measures must be in place prior to commencing any winter operations.
- B) No activity will be permitted between December 1st and March 31st, unless approved in writing by the Contract Administrator. The closure is to protect heavily used winter recreation facilities managed by Mount Tahoma Trails Association (MTTA) that are located in the vicinity of the proposal, as well as the haul route, which is utilized for winter recreation. The only foreseeable exception to this closure would be an unseasonably low snow pack with frozen ground, or operations in a location that would not cause conflict with any MTTA recreation facilities. See Schedule A for additional requirements.
- C) 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.
- D) Purchaser shall cut vine maple and sever from the stump within the harvest area.
- E) Purchaser shall notify all employees and contractors working on this sale that any danger tree marked or unmarked may be felled. Any marked danger tree will be replaced with a suitable tree of similar size and species as approved by the Contract Administrator.
- F) Purchaser shall take measures throughout operations to control soil erosion, water channelization, and prevent sediment delivery to streams or wetlands.

Methods may include construction or water bars, "sweeping" with logs, silt traps, or other measures on skid trails and yarding corridors.

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

H-141 Additional Harvest Requirements

Purchaser shall accomplish the following during the harvest operations:

- A) Purchaser shall leave 2 down logs per acre. A log is defined as having a minimum diameter of 12 inches on the small end of the log and a minimum length of 20 feet or at least 100 board feet.
- B) Wildlife timing restrictions will be in effect within a portion of the unit, as shown as the wildlife timing restriction area on the timber sale map. Falling, yarding, operation of heavy equipment and road construction activities within the restricted area will not be permitted from 1 hour before sunrise to 2 hours after sunrise and 1 hour before sunset to 1 hour after sunset from April 1 through August 31. This restriction does not apply to the hauling of timber, rock or equipment.
- C) Tailhold locations outside the timber sale boundary are restricted due to protection of potentially unstable slopes. Locations where trees shall not be used as tailholds due to potentially unstable slopes are identified in the attached Tailhold Restrictions Map. Tailhold locations must be identified in a harvest plan by the Purchaser and approved by the Contract Administrator prior to operations.
- D) In addition to above, due to the presence of habitat near the harvest area, certain restrictions may apply if tailhold trees are needed outside of the timber sale boundary. If sufficient suspension cannot be obtained by rigging within the timber sale boundary, the Purchaser shall work with the Contract Administrator to locate approved tailhold trees outside the timber sale boundary.

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

H-190 Completion of Settings

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

H-220 Protection of Residual or Adjacent Trees

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

**H-230** Tops and Limbs Outside the Sale Boundary

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

**Section C: Construction and Maintenance****C-040** Road Plan

Road construction and associated work provisions of the Road Plan for this sale, dated 1/12/2016 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 16, 16-1 and 16-1-2 roads. All work shall be completed to the specifications detailed in the Road Plan.

**C-060** Designated Road Maintainer

If required by the State, Purchaser shall perform maintenance and replacement work as directed by the Contract Administrator on all other roads used not covered in clause C-050. Purchaser shall furnish a statement in a form satisfactory to the State showing the costs incurred while performing this work. Costs shall be based on the rates set forth in the State current Equipment Rate Schedule on file at the region and Olympia offices. The State shall reimburse Purchaser for said costs within 30 days of receipt and approval of the statement.

**C-140** Water Bars

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

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

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

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

**S-010** Fire Hazardous Conditions

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

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

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

S-030 Landing Debris Clean Up

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

S-035 Logging Debris Clean Up

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

S-040 Noxious Weed Control

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

S-050 Cessation of Operations for Low Humidity

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

S-060 Pump Truck or Pump Trailer

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

S-100 Stream Cleanout

Slash or debris which enters any Type 5 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 equipment may operate within the Riparian 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 streams.

S-130 Hazardous Materials

- a. Hazardous Materials and Waste - Regulatory Compliance

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

b. Hazardous Materials Spill Prevention

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

c. Hazardous Materials Spill Containment, Control and Cleanup

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

d. Hazardous Material Release Reporting

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

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

DNR Contract Administrator

ECY - Northwest Region:

1-425-649-7000

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

ECY - Southwest Region:

1-360-407-6300

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

ECY - Central Region:

1-509-575-2490

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

ECY - Eastern Region:

1-509-329-3400

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

S-131 Refuse Disposal

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

Section D: Damages

D-013 Liquidated Damages or Failure to Perform

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

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

D-041 Reserve Tree Excessive Damage

When Purchaser's operations exceed the damage limits set forth in clause H-013, Reserve Tree Damage Definition, and when the Contract Administrator determines that a suitable replacement for a damaged reserve tree is not possible, the damaged trees

result in substantial injury to the State. The value of the damaged reserve trees at the time of the breach is not readily ascertainable. Therefore, the Purchaser agrees to pay the State as liquidated damages at the rate of \$1,000.00 per tree for all damaged reserve trees that are not replaced in the harvest area.

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

STATE OF WASHINGTON  
DEPARTMENT OF NATURAL RESOURCES

\_\_\_\_\_  
Purchaser

\_\_\_\_\_  
Art Tasker  
South Puget Sound Region Manager

Date: \_\_\_\_\_

Date: \_\_\_\_\_

Address:

CORPORATE ACKNOWLEDGEMENT

STATE OF \_\_\_\_\_ )

COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, before me personally appeared \_\_\_\_\_

\_\_\_\_\_ to me known to be the \_\_\_\_\_ of the corporation

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

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

\_\_\_\_\_  
Notary Public in and for the State of

\_\_\_\_\_  
My appointment expires \_\_\_\_\_

**Schedule A**  
**Mount Tahoma Trails Recreation Area Requirements**

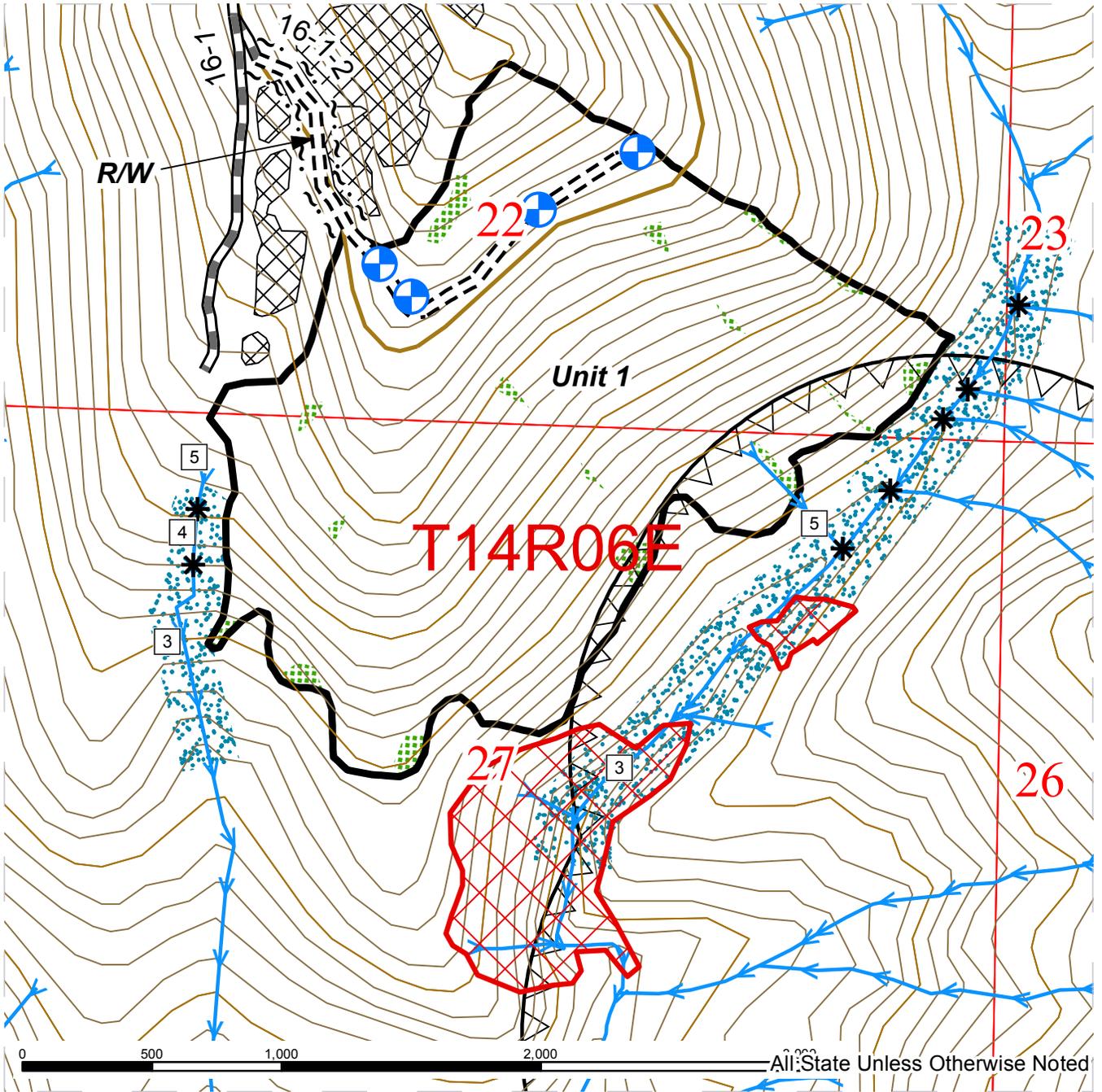
The access roads and harvest units of the Baler Timber Sale are within the Mount Tahoma Trails Recreation Area. The facilities are managed by the Mount Tahoma Trails Association (MTTA) and are most heavily used for winter recreation, but are also open for summer recreation.

- A. The use of the huts and associated resources require prior authorization from the Mount Tahoma Trails Association. Website: [www.skimtta.com](http://www.skimtta.com) Phone: (360) 569-2451.
- B. Any damage to the trail network, signage, and associated facilities shall be reported immediately to the Contract Administrator. Repairs shall be performed as soon as possible, or an alternative arranged with the Contract Administrator. Replacement or repair of recreation signage and facilities is at the Purchaser's expense.
- C. Signage shall be erected at key intersections on the 1 Road warning the public of active harvest operations.
- D. No operations are permitted between December 1 and March 31 unless approved by the Contract Administrator. The only foreseeable exception to this closure would be an unseasonably low snow pack with frozen ground, or operations in a location which would not cause conflict with the MTTA recreation facilities.
- E. The Purchaser shall repair any damage caused by their operations and restore access to the trail network at the completion of operations and prior to December 1 of each year.
- F. The site is available for recreational public use year round. Majority of the sale area is gated to restrict public access to walk-in only.
- G. Access to huts shall not be blocked outside of operating hours unless approved in writing by the Contract Administrator.

# Tailhold Restrictions Map

**SALE NAME:** BALER  
**AGREEMENT #:** 30-091808  
**TOWNSHIP(S):** T14R06E  
**TRUST(S):** Common School and Indemnity(3)

**REGION:** South Puget Sound Region  
**COUNTY(S):** LEWIS  
**ELEVATION RGE:** 3186-4397



Timber Sale Unit	Landing - Proposed	Stream Type
Right of Way Unit	Required Construction	Stream Type Break
Tailhold Exclusion Area	Required Pre-Haul Maintenance	Streams
Timing Restriction Zone	40 ft. Contours	Public Land Survey Sections
Leave Tree Area		DNR Managed Lands
Riparian Mgt Zone		
Talus		



# FOREST EXCISE TAX -- ROAD SUMMARY SHEET

Region: South Puget Sound

Timber Sale Name: Baler

Application Number: 30-091808

## Excise Tax Applicable Activities

Construction: 2330 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*

Deactivation: 0 linear feet

*Road to be made undriveable but not officially abandoned.*

Pre-Haul Maintenance: 56,095 linear feet

*Existing road to receive maintenance work (specifically required by the contract) prior to haul*

## Excise Tax Exempt Activities

Temporary Optional Construction: 0 linear feet

*Optional roads to be constructed and then abandoned*

Temporary Optional Reconstruction: 0 linear feet

*Optional roads to be reconstructed and then abandoned*

New Abandonment: 0 linear feet

*Abandonment of roads constructed or reconstructed under the contract*

All parties must make their own assessment of the taxable or non-taxable status of any work performed under the timber sale 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 7/04)

# PRE-CRUISE NARRATIVE

Sale Name: <b>Baler VRH</b>	Region: <b>South Puget Sound</b>
Agreement #: <b>30-091808</b>	District: <b>Rainier</b>
Contact Forester: <b>Mike Fowler</b>	Phone/ Location: <b>(360)-819-3406</b> Ext: / <b>Mineral WC</b>
Alternate Contact: <b>Brandon Mohler</b>	Phone/ Location: <b>(360)-492-5031</b> Ext: / <b>Mineral WC</b>

Type of Sale : Lump Sum  
 Required or Optional removal of utility as pulp:  
 Evaluated for RFRS Implementation?: We chose not to implement RFRS  
 Percentage cable (specify downhill vs uphill): 85% uphill, 10% downhill  
 Percentage ground based: 5%  
 Species Onsite: RC, DF, WH, RA, BC, BLM, NF, SF, SS,  Other:(Please List)

## UNIT ACREAGES AND METHOD OF DETERMINATION:

Unit #	Harvest R/W or RMZ WMZ	Legal Description Sec/Twp/Rng	Grant	Gross Proposal Acres	Deductions from Gross Acres (No harvest acres)				Net Harvest Acres	Acreage Determination (List method and error of closure if applicable)
					RMZ/ WMZ Acres	Leave Tree Acres	Existing Road Acres	Other Acres (describe)		
1		Sec 22/27 / T14N/ R06E	03 = 100%	94.9		3.0			91.9	Garmin 64s
R/W		Sec 22 / T14 N/ R06 E	03 = 100%	1.6					1.6	Garmin 64s
<b>TOTAL ACRES</b>				96.5					93.5	

## HARVEST PLAN AND SPECIAL CONDITIONS:

Unit #	Harvest Prescription: (Mark leave, take, etc.)	Special Management areas:	Other conditions (# leave trees, etc.)
1	Variable Retention Harvest: Unit boundaries marked with white "Timber Sale Boundary" tags and pink flashers. Tagged leave tree clumps marked with yellow "Leave Tree Area" tags and pink flashers. Scattered leave trees marked with a single band of blue paint.	N/A	8 trees per acre are leave trees
R/W	All Trees within the orange "Right-of-Way Boundary" tags will be harvested	N/A	Approx. 5 large trees marked with "do not remove" in red paint within R/W to be cut and left on site outside clearing limits

**OTHER PRE-CRUISE INFORMATION:**

Unit #	Estimated Volume	Access information (Gates, locks, etc.)	Photos, traverse maps required
1	See cruise	Access off 1 road gate 403. Gate has CJ-18 lock.	See attached maps
R/W	See Cruise		

**REMARKS:**

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<b>Prepared By: Kevin Carlsen</b> <b>Date: 11/19/2015</b>	<b>Title: Forester 1 Elbe Unit</b>	<b>CC: Brandon Mohler, Audrey Mainwaring, John Piety</b>
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*Revised 2/23/2007 (PSLD)*

# Cruise Narrative

<b>Sale Name:</b> Baler	<b>Region:</b> South Puget Sound
<b>Agree. #:</b> 30-091808	<b>District:</b> Rainier
<b>Lead cruiser:</b> John Piety	<b>Completion date:</b> 10-8-2015 revised 12-2-2015
<b>Other cruisers on sale:</b> none	

**Unit acreage specifications:**

Unit #	Cruised acres	Cruised acres agree with sale acres? Yes/No	If acres do not agree explain why.
1	91.9	Yes	
R/W	1.6	Yes	
<b>Total</b>	<b>93.5</b>		

**Unit cruise specifications:**

Unit #	Sample type (VP, FP, ITS,100%)	Expansion factor (BAF, full/half)	Sighting height (4.5 ft, 16 ft.)	Grid size (Plot spacing or % of area)	Plot ratio (cruise:count)	Total number of plots
1	VP	46.91 BAF	4.5	215' X 215'	1:1	80
2	VP	54.4 BAF	4.5	400' along centerline	1:1	3

**Sale/Cruise Description:**

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

	<p>Lengths 16ft-40ft, 2ft multiples min TDIB 8". Max butt 27").</p> <p>D - Domestic quality logs that do not meet high quality or intermediate definitions. (Domestic sort. Grades 2S, 3S, 4S and utility. Lengths 16ft-40ft, min TDIB 2in.)</p> <p>O- Logs exceeding 27" on the large end. (Oversize sort. Grade 2S. Lengths 16ft-40ft, 2ft multiples butt diameter min dia. 27 in. +)</p> <p>R - Logs meeting the following criteria: Surface characteristics for a rough log sort will not meet the requirements for a domestic 2S, but still be in limitations for a domestic 3S. Meaning logs will contain excessive knots in excess of 2 1/2" and not exceeding 3" with a recovery of less than 65% of the net scale and greater than 33% of the gross scale. (Rough oversize sort. Grade 3S. Lengths 16ft-40ft, 2ft multiples TDIB 12"+)</p>					
<b>Avg ring count by sp:</b>	<b>DF =</b>	10	<b>WH =</b>	12		
<b>Leave/take tree description:</b>	Leave trees are banded with blue paint and tagged out with yellow leave tree tags.					
<b>Other conditions</b>						

**Field observations:**

This is a fairly steep unit with areas of rocky ground. The stocking and trees sizes vary from the top of the unit to the bottom. Most of the unit is DF with an understory of WH, RC. There is a small component of SF, NF and I did see a couple WP. The south east part of the unit gets into denser stocking levels with more WH with some mistletoe. There is a fringe along the south east edge that is a younger stand of DF and WH.

**Grants: 100% -03**

**Prepared by:**

**John Piety**

**Title:**

**Cruiser**

**CC:**

TC PSPCSTGR		Species, Sort Grade - Board Foot Volumes (Project)																				
T14N R06E S22 Ty0001 91.90		Project: <b>BALER</b>		Page <b>1</b>																		
T14N R06E S22 Ty0ROW 1.60		Acres <b>93.50</b>		Date <b>12/2/2015</b>																		
				Time <b>3:12:54PM</b>																		
Spp	S T	So rt	Gr ad	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent of Net Board Foot Volume								Average Log				Logs Per /Acre	
					Def%	Gross	Net		Log Scale Dia.				Log Length				Ln Ft	Dia In	Bd Ft	CF/ Lf		
									2-4	5-7	8-11	12+	12-20	21-30	31-35	36-99						
DF	HA	2S	3		778	778	73										40	13	269	1.46	2.9	
DF	HA	3S	6		1,196	1,196	112							3		97	39	10	139	0.83	8.6	
DF	HB	2S	7		1,549	1,549	145									100	40	14	277	1.57	5.6	
DF	HB	3S	10	.5	2,033	2,022	189								5	95	39	10	135	0.81	14.9	
DF	D	2S	24	3.9	5,193	4,991	467							2	5	92	39	14	262	1.69	19.0	
DF	D	3S	28	2.7	5,904	5,744	537							1	9	90	38	9	113	0.83	50.9	
DF	D	4S	18	.5	3,689	3,671	343			100	0			11	25	15	49	30	5	34	0.36	107.3
DF	D	UT		16.8	167	139	13		25	75						35	65	27	2	4	0.16	33.0
DF	OS	2S	4		660	660	62									100	40	19	598	3.08	1.1	
<b>DF</b>	<b>Totals</b>		68	2.0	21,169	20,751	1,940		0	18	43	38		2	5	7	85	33	7	85	0.69	243.3
WH	D	2S	8		707	707	66									100	40	14	314	1.81	2.2	
WH	D	3S	43	1.4	3,470	3,422	320								1	10	89	38	9	120	0.78	28.4
WH	D	4S	43		3,391	3,391	317			100				7	35	9	50	31	5	36	0.33	93.0
WH	D	UT	6		475	475	44		61	6	34					94	31	2	6	0.12	83.5	
<b>WH</b>	<b>Totals</b>		26	.6	8,043	7,996	748		4	43	45	9		3	15	8	74	32	5	39	0.34	207.2
RC	D	3S	58		782	782	73								9	43	48	35	9	94	0.90	8.3
RC	D	4S	35	3.0	484	469	44							31	36	9	24	24	5	26	0.39	18.1
RC	OS	3S	7		86	86	8									100	36	16	360	2.99	.2	
<b>RC</b>	<b>Totals</b>		4	1.1	1,352	1,337	125			35	58	6		11	18	29	43	28	6	50	0.62	26.7
SF	D	2S	22		68	68	6									100	40	13	240	1.45	.3	
SF	D	3S	46		136	136	13									100	37	9	116	0.67	1.2	
SF	D	4S	32		94	94	9			100						84	34	5	40	0.37	2.4	
SF	D	UT															24	2		0.11	.4	
<b>SF</b>	<b>Totals</b>		1	.0	298	298	28			32	46	23			5	95	35	7	70	0.53	4.3	
NF	HA	2S	76		114	114	11									100	40	15	334	1.74	.3	
NF	D	3S	22		32	32	3									100	38	8	95	0.77	.3	
NF	D	4S	2	.0	3	3	0			100						100	16	5	20	0.29	.1	
NF	D	UT															20	2		0.19	.2	
<b>NF</b>	<b>Totals</b>		0		149	149	14			2	22	76		2		98	32	9	145	1.07	1.0	
WP	D	3S	81		74	74	7									100	40	11	180	1.03	.4	
WP	D	4S	19		17	17	2			100						100	40	5	40	0.40	.4	
<b>WP</b>	<b>Totals</b>		0		91	91	8			18	82					100	40	8	110	0.71	.8	
<b>Totals</b>				1.5	31,102	30,622	2,863		1	25	44	29		3	8	8	81	33	6	63	0.54	483.3

TC PSTATS		PROJECT STATISTICS							PAGE	1	
		PROJECT BALER							DATE	12/2/2015	
TWP	RGE	SC	TRACT	TYPE		ACRES	PLOTS	TREES	CuFt	BdFt	
14N	06E	22	BALER	0001		93.50	83	498	S	W	
14N	06E	22	BALER	0ROW							
			PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES				
TOTAL			83	498	6.0						
CRUISE			44	252	5.7	29,469	.9				
DBH COUNT											
REFOREST											
COUNT			38	229	6.0						
BLANKS			1								
100 %											
STAND SUMMARY											
	SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC	
WHEMLOCK	82	157.2	10.0	45	27.1	85.8	8,043	7,996	2,273	2,273	
DOUG FIR	143	136.7	15.3	60	44.5	173.9	21,169	20,751	5,592	5,592	
WR CEDAR	20	18.1	13.9	42	5.1	19.0	1,352	1,337	457	458	
NOBLE F	2	.3	21.8	93	0.2	.9	149	149	35	35	
PS FIR	4	2.4	13.3	61	0.6	2.3	298	298	77	77	
W PINE	1	.4	16.0	82	0.1	.6	91	91	24	24	
<b>TOTAL</b>	<b>252</b>	<b>315.2</b>	<b>12.8</b>	<b>52</b>	<b>78.9</b>	<b>282.5</b>	<b>31,102</b>	<b>30,622</b>	<b>8,459</b>	<b>8,459</b>	
CONFIDENCE LIMITS OF THE SAMPLE											
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR											
CL	68.1	COEFF		SAMPLE TREES - BF			# OF TREES REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
WHEMLOCK		100.1	11.1	99	111	123					
DOUG FIR		73.1	6.1	224	238	253					
WR CEDAR		92.4	21.2	81	103	124					
NOBLE F		1.6	1.5	428	435	442					
PS FIR		70.9	40.5	101	170	239					
W PINE											
<b>TOTAL</b>		<b>87.1</b>	<b>5.5</b>	<b>177</b>	<b>187</b>	<b>197</b>	<b>303</b>	<b>155</b>	<b>76</b>		
CL	68.1	COEFF		TREES/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
WHEMLOCK		103.7	11.4	139	157	175					
DOUG FIR		66.3	7.3	127	137	147					
WR CEDAR		177.6	19.5	15	18	22					
NOBLE F		659.6	72.3	0	0	1					
PS FIR		665.6	73.0	1	2	4					
W PINE		911.0	99.9	0	0	1					
<b>TOTAL</b>		<b>55.4</b>	<b>6.1</b>	<b>296</b>	<b>315</b>	<b>334</b>	<b>122</b>	<b>62</b>	<b>31</b>		
CL	68.1	COEFF		BASAL AREA/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
WHEMLOCK		83.0	9.1	78	86	94					
DOUG FIR		53.9	5.9	164	174	184					
WR CEDAR		170.9	18.7	15	19	23					
NOBLE F		669.1	73.4	0	1	2					
PS FIR		552.2	60.6	1	2	4					
W PINE		911.0	99.9	0	1	1					
<b>TOTAL</b>		<b>34.9</b>	<b>3.8</b>	<b>272</b>	<b>282</b>	<b>293</b>	<b>49</b>	<b>25</b>	<b>12</b>		
CL	68.1	COEFF		NET BF/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
WHEMLOCK		88.4	9.7	7,220	7,996	8,771					
DOUG FIR		58.4	6.4	19,423	20,751	22,079					
WR CEDAR		157.0	17.2	1,107	1,337	1,568					

TC PSTATS		<b>PROJECT STATISTICS</b>							PAGE	<b>2</b>
		<b>PROJECT BALER</b>							DATE	12/2/2015
<b>TWP</b>	<b>RGE</b>	<b>SC</b>	<b>TRACT</b>	<b>TYPE</b>	<b>ACRES</b>	<b>PLOTS</b>	<b>TREES</b>	<b>CuFt</b>	<b>BdFt</b>	
14N	06E	22	BALER	0001	93.50	83	498	S	W	
14N	06E	22	BALER	0ROW						
CL	68.1		COEFF	<b>NET BF/ACRE</b>			# OF PLOTS REQ.		INF. POP.	
SD:	1.00		VAR.	S.E.%	LOW	AVG	HIGH	5	7	10
NOBLE F			661.3	72.5	41	149	257			
PS FIR			522.8	57.3	127	298	469			
W PINE			911.0	99.9	0	91	182			
<b>TOTAL</b>			<b>41.6</b>	<b>4.6</b>	<b>29,227</b>	<b>30,622</b>	<b>32,018</b>	<b>69</b>	<b>35</b>	<b>17</b>



TC TSTATS				<b>STATISTICS</b>				PAGE	1	
				<b>PROJECT</b>		<b>BALER</b>		DATE	12/2/2015	
<b>TWP</b>	<b>RGE</b>	<b>SECT</b>	<b>TRACT</b>	<b>TYPE</b>	<b>ACRES</b>	<b>PLOTS</b>	<b>TREES</b>	<b>CuFt</b>	<b>BdFt</b>	
<b>14N</b>	<b>06E</b>	<b>22</b>	<b>BALER</b>	<b>0001</b>	91.90	80	481	S	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
				PLOTS	TREES	TREES	TREES			
TOTAL	80	481	6.0							
CRUISE	42	240	5.7	29,030			8			
DBH COUNT										
REFOREST										
COUNT	37	224	6.1							
BLANKS	1									
100 %										
<b>STAND SUMMARY</b>										
	SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET
	TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC
DOUG FIR	140	138.3	15.2	60	44.9	175.3	21,291	20,868	5,630	5,630
WHEMLOCK	74	156.0	9.9	45	26.6	83.9	7,821	7,775	2,206	2,206
WR CEDAR	20	18.5	13.9	42	5.2	19.4	1,376	1,361	465	466
PS FIR	4	2.4	13.3	61	0.6	2.3	303	303	79	79
NOBLE F	1	.2	22.3	90	0.1	.6	95	95	23	23
W PINE	1	.4	16.0	82	0.1	.6	92	92	24	24
<b>TOTAL</b>	<b>240</b>	<b>315.9</b>	<b>12.8</b>	<b>51</b>	<b>78.9</b>	<b>282.0</b>	<b>30,979</b>	<b>30,495</b>	<b>8,426</b>	<b>8,427</b>
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL: 68.1 %	COEFF	<b>SAMPLE TREES - BF</b>					<b># OF TREES REQ.</b>		<b>INF. POP.</b>	
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
DOUG FIR	73.8	6.2	221	236	250					
WHEMLOCK	102.5	12.0	91	103	115					
WR CEDAR	92.4	21.2	81	103	124					
PS FIR	70.9	40.5	101	170	239					
NOBLE F										
W PINE										
<b>TOTAL</b>	<b>88.4</b>	<b>5.7</b>	<b>173</b>	<b>184</b>	<b>194</b>	<b>312</b>	<b>159</b>	<b>78</b>		
CL: 68.1 %	COEFF	<b>TREES/ACRE</b>					<b># OF PLOTS REQ.</b>		<b>INF. POP.</b>	
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
DOUG FIR	63.3	7.1	129	138	148					
WHEMLOCK	104.0	11.6	138	156	174					
WR CEDAR	173.4	19.4	15	18	22					
PS FIR	653.4	73.0	1	2	4					
NOBLE F	894.4	99.9	0	0	0					
W PINE	894.4	99.9	0	0	1					
<b>TOTAL</b>	<b>54.0</b>	<b>6.0</b>	<b>297</b>	<b>316</b>	<b>335</b>	<b>116</b>	<b>59</b>	<b>29</b>		
CL: 68.1 %	COEFF	<b>BASAL AREA/ACRE</b>					<b># OF PLOTS REQ.</b>		<b>INF. POP.</b>	
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
DOUG FIR	51.2	5.7	165	175	185					
WHEMLOCK	84.8	9.5	76	84	92					
WR CEDAR	166.8	18.6	16	19	23					
PS FIR	541.9	60.5	1	2	4					
NOBLE F	894.4	99.9	0	1	1					
W PINE	894.4	99.9	0	1	1					
<b>TOTAL</b>	<b>33.5</b>	<b>3.7</b>	<b>271</b>	<b>282</b>	<b>293</b>	<b>45</b>	<b>23</b>	<b>11</b>		
CL: 68.1 %	COEFF	<b>NET BF/ACRE</b>					<b># OF PLOTS REQ.</b>		<b>INF. POP.</b>	
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
DOUG FIR	56.3	6.3	19,556	20,868	22,180					
WHEMLOCK	90.6	10.1	6,988	7,775	8,563					
WR CEDAR	153.0	17.1	1,128	1,361	1,593					

TC TSTATS				<b>STATISTICS</b>				PAGE	2	
				PROJECT		BALER		DATE	12/2/2015	
<b>TWP</b>	<b>RGE</b>	<b>SECT</b>	<b>TRACT</b>	<b>TYPE</b>	<b>ACRES</b>	<b>PLOTS</b>	<b>TREES</b>	<b>CuFt</b>	<b>BdFt</b>	
<b>14N</b>	<b>06E</b>	<b>22</b>	<b>BALER</b>	<b>0001</b>	91.90	80	481	S	W	
CL:	68.1%	COEFF		NET BF/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.	S.E.%	LOW	AVG	HIGH	5	7	10	
PS FIR		513.0	57.3	130	303	477				
NOBLE F		894.4	99.9	0	95	190				
W PINE		894.4	99.9	0	92	185				
<b>TOTAL</b>		<b>40.6</b>	<b>4.5</b>	<b>29,113</b>	<b>30,495</b>	<b>31,877</b>	<b>66</b>	<b>34</b>	<b>16</b>	

<b>T14N R06E S22 T0ROW</b>										<b>T14N R06E S22 T0ROW</b>			
<b>Twp</b>	<b>Rge</b>	<b>Sec</b>	<b>Tract</b>	<b>Type</b>	<b>Acres</b>	<b>Plots</b>	<b>Sample Trees</b>	<b>CuFt</b>	<b>BdFt</b>				
<b>14N</b>	<b>06E</b>	<b>22</b>	<b>BALER</b>	<b>0ROW</b>	<b>1.60</b>	<b>3</b>	<b>12</b>	<b>S</b>	<b>W</b>				

Spp	S T	So rt	Gr ad	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log			Logs Per /Acre		
									Log Scale Dia.				Log Length				Ln Ft	Dia In	Bd Ft		CF/ Lf	
									2-4	5-7	8-11	12+	12-20	21-30	31-35	36-99						
WH		DM	2S	42		8,871	8,871	14										40	14	270	1.63	32.8
WH		DM	3S	23	3.2	4,888	4,730	8			100							40	9	123	0.88	38.5
WH		DM	4S	14		2,846	2,846	5		100			23	17	60			35	5	40	0.46	70.4
WH		DM	UT	21		4,195	4,195	7		38	62			38		62		33	4	27	0.29	153.7
<b>WH</b>	<b>Totals</b>			54	.8	20,800	20,642	33		21	36	43		11	2	87		35	6	70	0.59	295.4
DF		HB	2S	26		3,684	3,684	6										40	13	240	1.34	15.3
DF		DM	2S	24	2.5	3,546	3,458	6						100				30	18	390	2.59	8.9
DF		DM	3S	42	.0	5,895	5,895	9			100							40	10	141	0.93	41.9
DF		DM	4S	8		1,014	1,014	2		100			30		70			29	5	31	0.36	33.0
<b>DF</b>	<b>Totals</b>			37	.6	14,140	14,051	22		7	42	51		2	25	73		35	9	142	0.97	99.2
NF		HA	2S	67		2,186	2,186	3										40	14	290	1.63	7.5
NF		DM	3S	28		905	905	1			100							40	9	120	0.76	7.5
NF		DM	4S	5	.0	151	151	0		100			100					16	5	20	0.29	7.5
<b>NF</b>	<b>Totals</b>			9		3,242	3,242	5		5	28	67		5		95		32	9	143	1.04	22.6
<b>Type Totals</b>					.6	38,181	37,934	61		15	37	48		1	15	1	82	35	7	91	0.70	417.2

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT		BALER		DATE	12/2/2015	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
14N	06E	22	BALER	ORO	1.60	3	17	S	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
				PLOTS	TREES	TREES	TREES			
TOTAL	3	17	5.7	439		2.7				
CRUISE	2	12	6.0							
DBH COUNT										
REFOREST										
COUNT	1	5	5.0							
BLANKS										
100 %										
<b>STAND SUMMARY</b>										
	SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET
	TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC
WHEMLOCK	8	225.1	12.7	51	55.9	199.5	20,800	20,642	6,134	6,134
DOUG FIR	3	41.9	19.9	89	20.3	90.7	14,140	14,051	3,412	3,412
NOBLE F	1	7.5	21.0	98	4.0	18.1	3,242	3,242	753	753
<b>TOTAL</b>	<b>12</b>	<b>274.5</b>	<b>14.3</b>	<b>58</b>	<b>81.4</b>	<b>308.3</b>	<b>38,181</b>	<b>37,934</b>	<b>10,299</b>	<b>10,299</b>
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL: 68.1 %	COEFF	<b>SAMPLE TREES - BF</b>				# OF TREES REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
WHEMLOCK	76.8	29.0	130	183	235					
DOUG FIR	43.5	30.1	259	370	481					
NOBLE F										
<b>TOTAL</b>	<b>66.2</b>	<b>19.9</b>	<b>200</b>	<b>250</b>	<b>300</b>	<b>191</b>	<b>97</b>	<b>48</b>		
CL: 68.1 %	COEFF	<b>TREES/ACRE</b>				# OF PLOTS REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
WHEMLOCK	45.5	31.5	154	225	296					
DOUG FIR	91.7	63.4	15	42	68					
NOBLE F	173.2	119.8		8	17					
<b>TOTAL</b>	<b>21.3</b>	<b>14.7</b>	<b>234</b>	<b>274</b>	<b>315</b>	<b>26</b>	<b>13</b>	<b>7</b>		
CL: 68.1 %	COEFF	<b>BASAL AREA/ACRE</b>				# OF PLOTS REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
WHEMLOCK	15.7	10.9	178	199	221					
DOUG FIR	91.7	63.4	33	91	148					
NOBLE F	173.2	119.8		18	40					
<b>TOTAL</b>	<b>36.7</b>	<b>25.4</b>	<b>230</b>	<b>308</b>	<b>387</b>	<b>78</b>	<b>40</b>	<b>19</b>		
CL: 68.1 %	COEFF	<b>NET BF/ACRE</b>				# OF PLOTS REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
WHEMLOCK	23.2	16.1	17,326	20,642	23,957					
DOUG FIR	91.7	63.4	5,141	14,051	22,961					
NOBLE F	173.2	119.8		3,242	7,126					
<b>TOTAL</b>	<b>56.3</b>	<b>38.9</b>	<b>23,170</b>	<b>37,934</b>	<b>52,698</b>	<b>182</b>	<b>93</b>	<b>45</b>		

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

T14N R06E S22 Ty0001	91.9
T14N R06E S22 Ty0RO	1.6

**Project BALER**  
**Acres 93.50**

**Page No 1**  
**Date: 12/2/2015**  
**Time 3:12:56PM**

Species	Total	Total	Total	Net Cubic Ft/		CF/	Total CCF		Total MBF	
	Trees	Logs	Tons	Tree	Log	LF	Gross	Net	Gross	Net
DOUG FIR	12,780	22,753	14,901	40.91	22.98	0.70	5,228	5,229	1,979	1,940
WHEMLOCK	14,701	19,369	6,802	14.46	10.97	0.34	2,126	2,125	752	748
WR CEDAR	1,696	2,494	1,005	25.23	17.16	0.61	428	428	126	125
PS FIR	222	398	207	32.49	18.15	0.53	72	72	28	28
NOBLE F	32	96	94	102.89	34.30	1.07	33	33	14	14
W PINE	39	77	53	57.05	28.53	0.71	22	22	8	8
<b>Totals</b>	29,469	45,186	23,062	26.84	17.50	0.54	7,909	7,909	2,908	2,863

Wood Type Species	Total	Total	Total	Net Cubic Ft/		CF/	Total CCF		Total MBF	
	Trees	Logs	Tons	Tree	Log	LF	Gross	Net	Gross	Net
C	29,469	45,186	23,062	26.84	17.50	0.54	7,909	7,909	2,908	2,863
<b>Totals</b>	29,469	45,186	23,062	26.84	17.50	0.54	7,909	7,909	2,908	2,863



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

FPA/N No: 2418500

Effective Date: 4/15/2016

Expiration Date: 4/15/2019

Shut Down Zone: 659 S

EARR Tax Credit:  Eligible  Non-eligible

Reference: **Baler 30-091808**

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

**Decision**

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

**FPA/N Classification**

**Number of Years Granted on Multi-Year Request**

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

**Conditions on Approval / Reasons for Disapproval**

Issued By: Bruce Meyer

Region: South Puget Sound

Title: Resource Protection Forester

Date: 4/15/2016

Copies to:     Landowner, Timber Owner and Operator.

Issued in person:     Landowner  Timber Owner  Operator By: \_\_\_\_\_

**Appeal Information**

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

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

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

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

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

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

And

Department Of Natural Resources  
South Puget Sound Region  
950 Farman Ave. N  
Enumclaw, WA 98022

**Other Applicable Laws**

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

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

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

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

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

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

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

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

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

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

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

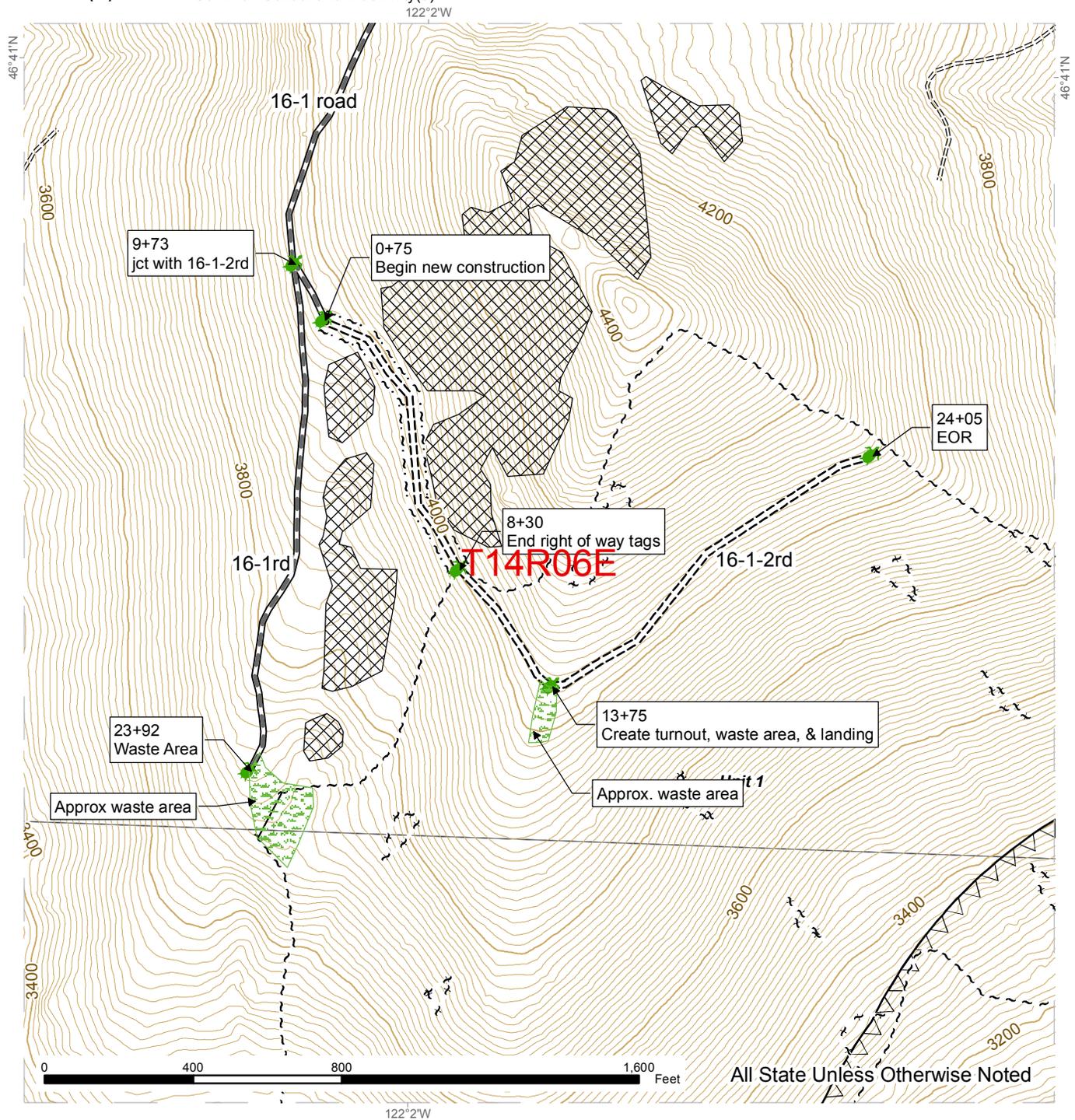
**DNR affidavit of mailing:**

On this day 4/15/2016, I placed in the United States mail at Enumclaw, WA,  
(date mm/dd/yyyy) (post office location)  
postage paid, a true and accurate copy of this document. Notice of Decision FPA #**2418500**  
Meredith Dessens \_\_\_\_\_  
(Printed name) (Signature)

# ROAD PLAN VIEWS

**SALE NAME:** BALER  
**AGREEMENT #:** 30-091808  
**TOWNSHIP(S):** T14R06E  
**TRUST(S):** Common School and Indemnity(3)

**REGION:** South Puget Sound Region  
**COUNTY(S):** LEWIS  
**ELEVATION RGE:** 3186-4397



~ ~ ~ Sale Boundary Tags	Timing Restriction Zone	Approximate Waste Area
~ ~ ~ Leave Tree Tags	Talus	
~ ~ ~ Right of Way Tags	Required Pre-Haul Maintenance	
— Reprod	Required Construction	
Road Stationing	Contours 200 ft	
	Contours 10 ft	

1 inch = 400 feet

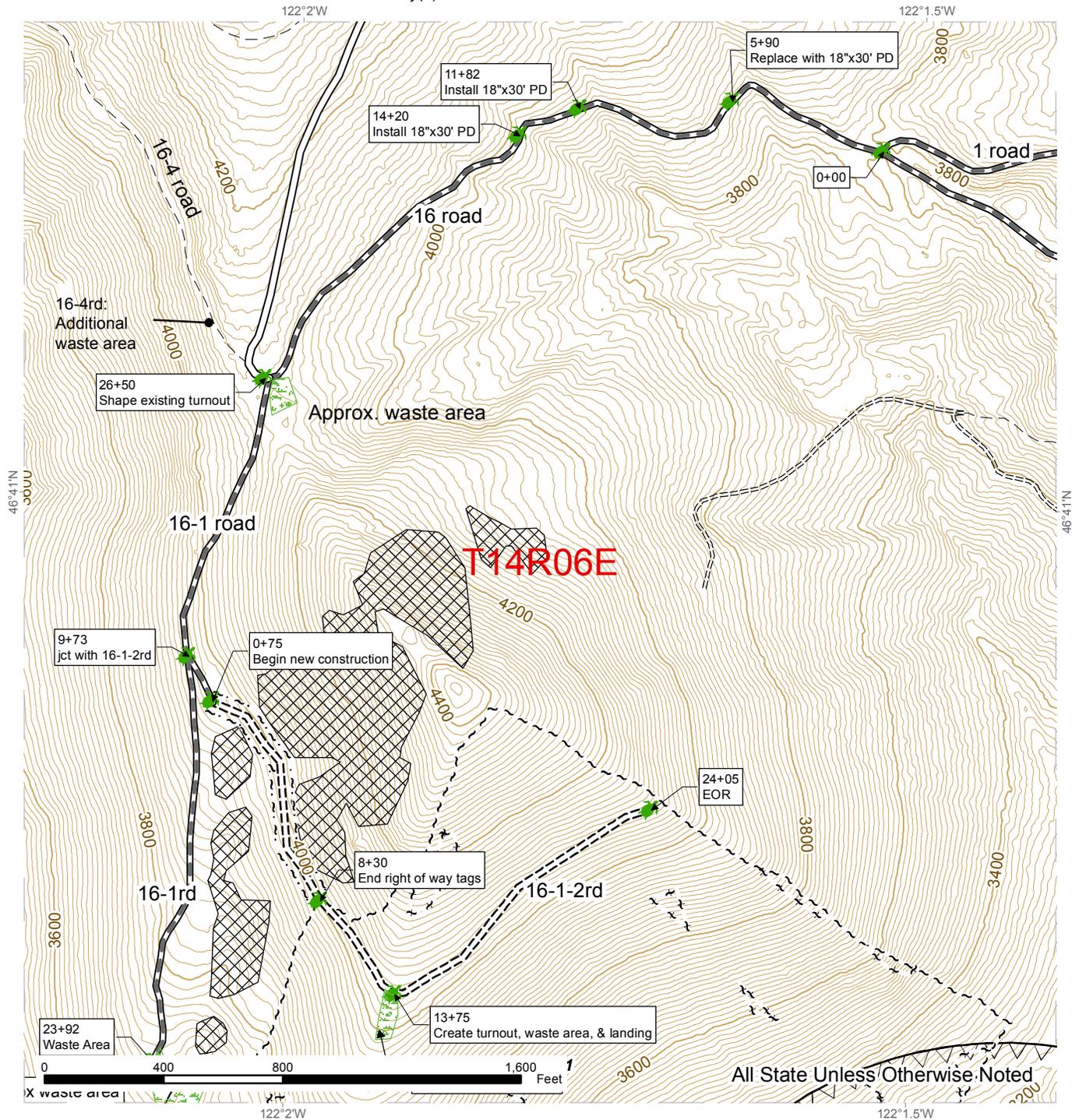
Prepared By: hadm490 01/07/2016

Modification Date: 1/27/2016

# ROAD PLAN VIEWS

**SALE NAME:** BALER  
**AGREEMENT #:** 30-091808  
**TOWNSHIP(S):** T14R06E  
**TRUST(S):** Common School and Indemnity(3)

**REGION:** South Puget Sound Region  
**COUNTY(S):** LEWIS  
**ELEVATION RGE:** 3186-4397



~ ~ ~ Sale Boundary Tags	Timing Restriction Zone	Approximate Waste Area
~ ~ Leave Tree Tags	Talus	
~ ~ ~ Right of Way Tags	Existing Roads	
— Reprod	Required Pre-Haul Maintenance	
Road Stationing	Required Construction	
	Contours 200 ft	
	Contours 10 ft	

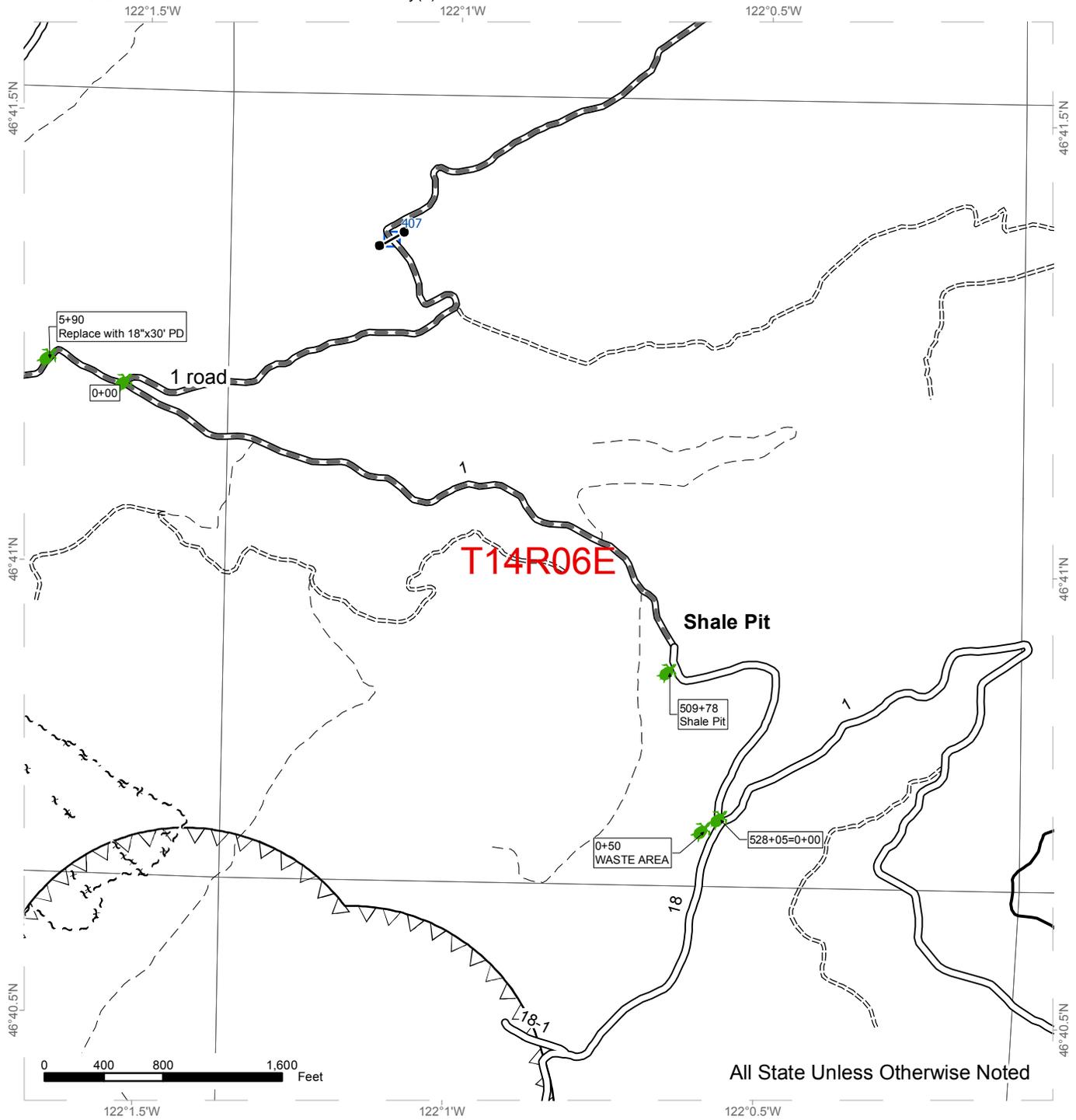
1 inch = 500 feet



# ROAD PLAN VIEWS

**SALE NAME:** BALER  
**AGREEMENT #:** 30-091808  
**TOWNSHIP(S):** T14R06E  
**TRUST(S):** Common School and Indemnity(3)

**REGION:** South Puget Sound Region  
**COUNTY(S):** LEWIS  
**ELEVATION RGE:** 3186-4397



All State Unless Otherwise Noted

~ ~ ~ Sale Boundary Tags	Timing Restriction Zone
~ ~ ~ Leave Tree Tags	Existing Roads
Road Stationing	Required Pre-Haul Maintenance

1 inch = 1,000 feet

STATE OF WASHINGTON  
DEPARTMENT OF NATURAL RESOURCES

BALER TIMBER SALE ROAD PLAN  
LEWIS COUNTY  
RAINIER DISTRICT  
ELBE UNIT

AGREEMENT NO.: 30-091808

STAFF ENGINEER: M. BELL

DATE: JANUARY 12, 2016

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>
1	0+00 to 509+78	Pre-haul maintenance
16	0+00 to 26+50	Pre-haul maintenance
16-1	0+00 to 23+92	Pre-haul maintenance
16-1-2	0+00 to 0+75	Pre-haul maintenance
16-1-2	0+75 to 24+05	Construction

**0-4 CONSTRUCTION**

Construction includes, but is not limited to:

- Clearing.
- Grubbing.
- Right of way debris disposal.
- Excavation and/or embankment to subgrade.
- Endhaul fullbench construction.
- Turnout and turnaround construction.
- Landing construction.
- Acquisition and installation of drainage structures.
- Acquisition and manufacture and application of rock.
- Acquisition and application of grass seed.

**0-6 PRE-HAUL MAINTENANCE**

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

- Grading.
- Removal of waterbars.
- Ditch cleaning and ditch reconstruction.
- Culvert cleaning and headwall reconstruction.
- Acquisition and installation of drainage structures.
- Acquisition and application of grass seed.
- Manufacture and application of rock.

**0-7 POST-HAUL MAINTENANCE**

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

**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.

**SECTION 1 – GENERAL**

**1-1 ROAD PLAN CHANGES**

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

**1-2 UNFORESEEN CONDITIONS**

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

**1-3 ROAD DIMENSIONS**

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

**1-4 ROAD TOLERANCES**

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

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

## **1-6 ORDER OF PRECEDENCE**

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

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

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

## **1-8 REPAIR OR REPLACEMENT OF DAMAGED MATERIALS**

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

## **1-9 DAMAGED METALLIC COATING**

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

## **1-10 WSDOT STANDARD SPECIFICATION REFERENCE**

References in this road plan to "WSDOT Standard Specifications" mean the Washington State Department of Transportation's Standard Specifications for Road, Bridge, and Municipal Construction 2012 (M41-10).

### SUBSECTION ROAD MARKING

## **1-15 ROAD MARKING**

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

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

## **1-16 CONSTRUCTION STAKES SET BY STATE**

Purchaser shall perform work in accordance with the reference points set in the field for grade and alignment.

## **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 approved in writing by the Contract Administrator.

### 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

Purchaser shall notify the Contract Administrator a minimum of 3 calendar days before work begins.

### 1-23 ROAD WORK PHASE APPROVAL

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

- Subgrade construction
- Drainage installation
- Subgrade compaction
- Rock application
- Rock compaction

## 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>	<u>Comment</u>
Operation of road construction equipment or rock haul	November 1 to May 15	See Timber Sale Contract Schedule A for additional restrictions

### 1-26 OPERATING DURING CLOSURE PERIOD

If permission is granted to operate during a seasonal closure period listed in Clause 1-25 ACTIVITY TIMING RESTRICTION, the Purchaser shall comply with a maintenance plan to include further protection of water, soil, roads, and other forest assets at the Purchaser's expense. Preventative measures shall be in place prior to 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 4 inches on crushed rock roads.
- Wheel track rutting exceeds 6 inches on native surface or jaw run 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 AND ASPHALT SURFACE RESTRICTION**

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

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

**1-33 SNOW PLOWING RESTRICTION**

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

**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>
1	0+00 to 509+78

**2-5 MAINTENANCE GRADING – EXISTING ROAD**

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

<u>Road</u>	<u>Stations</u>	<u>Requirements</u>
1	0+00 to 509+78	Waterbars may be removed for haul per Clause 11-1
16	0+00 to 26+50	
16-1	0+00 to 23+92	
16-1-2	0+00 to 0+75	

**2-6 CLEANING CULVERTS**

On the following road(s), Purchaser shall clean the inlets and outlets of all culverts and shall obtain written approval from the Contract Administrator before timber haul.

<u>Road</u>	<u>Stations</u>
16	0+00 to 26+50
16-1	0+00 to 23+92

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

On the following road(s), Purchaser shall clean ditches, headwalls, and catchbasins. Work must be completed before timber haul and must be done in accordance with the TYPICAL SECTION SHEET. Pulling ditch material across the road or mixing in with the road surface is not allowed.

<u>Road</u>	<u>Stations</u>
16	0+00 to 26+50
16-1	0+00 to 23+92

## SECTION 3 – CLEARING, GRUBBING, AND DISPOSAL

### SUBSECTION CLEARING

#### **3-5 CLEARING**

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

#### **3-8 PROHIBITED DECKING AREAS**

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

- Within the grubbing limits.
- Within 50 feet of any stream.
- In locations that interfere with the construction of the road prism.
- In locations that impede drainage.
- Against standing trees unless approved by the Contract Administrator.
- Within talus slopes or fields.

### 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. Purchaser shall remove stumps using a hydraulic mounted excavator unless authorized in writing by the Contract Administrator. 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 application of rock or timber haul.

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

Purchaser shall not place organic debris in the following areas:

- Within 50 feet of a cross drain culvert.
- Within 100 feet of a live stream, or wetland.
- On road subgrades, or excavation and embankment slopes.
- On slopes greater than 60%.
- 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.
- In locations that impede drainage.
- Against standing timber.
- Within talus slopes or fields.

**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. Where natural openings are unavailable or restrictive, alternate debris disposal methods are subject to the written approval of the Contract Administrator.

**SECTION 4 – EXCAVATION**

**4-1 EXCAVATOR CONSTRUCTION**

Purchaser shall use a track mounted hydraulic excavator for construction work, 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.
- Maximum grade change for sag vertical curves is 5% in 100 feet.
- Maximum grade change for crest vertical curves is 4% in 100 feet.

**4-5 CUT SLOPE RATIO**

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

<u>Material Type</u>	<u>Excavation Slope Ratio</u>	<u>Excavation Slope Percent</u>
Pumice or Sandy Soils	1½:1	67
Common Earth (on side slopes up to 55%)	1:1	100

Common Earth (56% to 70% side slopes)	¾:1	133
Fractured or loose rock	½:1	200
Hardpan or solid rock	¼:1	400

**4-6 EMBANKMENT SLOPE RATIO**

Purchaser shall construct embankment slopes no steeper than shown on the following table, 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	1½:1	67
Angular Rock	1¼:1	80

**4-7 SHAPING CUT AND FILL SLOPE**

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

**4-8 CURVE WIDENING**

The minimum widening placed on the inside of curves is:

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

**4-9 EMBANKMENT WIDENING**

The minimum embankment widening is:

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

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

**4-12 FULL BENCH CONSTRUCTION**

At the following locations or where side slopes exceed 50%, full bench construction shall be utilized for the entire subgrade width.

<u>Road</u>	<u>Stations</u>
16-1-2	4+10 to 12+46
16-1-2	15+08 to 24+05

**SUBSECTION INTERSECTIONS, TURNOUTS AND TURNAROUNDS**

**4-21 TURNOUTS**

Purchaser shall construct turnouts as designated on the TURNOUT LIST. Locations may be adjusted to fit the final subgrade alignment and sight distances. Location changes are subject to written approval by the Contract Administrator. Minimum dimensions are shown on the TYPICAL SECTION SHEET.

**4-22 TURNAROUNDS**

Purchaser shall construct turnarounds as designated on the TURNAROUND LIST. Additional turnarounds must be no larger than 30 feet long and 30 feet wide and are subject to written approval by the Contract Administrator.

SUBSECTION DITCH CONSTRUCTION

**4-25 DITCH CONSTRUCTION AND RECONSTRUCTION**

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

**4-27 DITCH WORK – MATERIAL USE PROHIBITED**

On the following road(s), Purchaser shall not pull ditch material across the road or mix in with the road surface. Excavated material must be scattered outside the grubbing limits.

<u>Road</u>
16
16-1

**4-28 DITCH DRAINAGE**

Ditches must drain to cross-drain culverts or ditchouts.

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. At the following locations or on side slopes greater than 55%, all waste material must be end hauled or pushed to the designated embankment sites and waste areas identified in Clause 4-37 WASTE AREA LOCATION.

<u>Road</u>	<u>Stations</u>
16-1-2	4+10 to 12+46
16-1-2	15+77 to 23+29

**4-37 WASTE AREA LOCATION**

Purchaser shall deposit waste material in the listed designated areas. Waste area boundary shall be delineated, and approved by the Contract Administrator, prior to use as a waste area. Additional waste areas may also be identified or approved by the Contract Administrator. The amount of material allowed in a waste area will be as allowed by the Contract Administrator.

<u>Road</u>	<u>Station</u>	<u>Waste Area Location</u>	<u>Comments</u>	<u>Approx. Maximum Volume (cy)</u>
16	26+50	East side of road		200
16-4	0+00 to 2+00	On road prism		600
16-1	23+92	See road plan view.	Waste may be deposited next to road and on 16-1 road.	16,500
16-1-2	13+75	Waste area south of 16-1-2. See road plan view.		750
1	528+05	West side of 1 road and 18 road junction		

#### **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.
- Within talus slopes or fields.

#### 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.

#### **4-56 DRY WEATHER SHAPING**

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

#### SUBSECTION COMPACTION

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

Purchaser shall compact all embankment and waste material in accordance with the COMPACTION LIST by routing equipment over the entire width of each lift. 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. On fills deeper than 5 feet at the road shoulder Purchaser shall compact fill material in lifts no greater than 18 inches. Purchaser shall obtain written approval from the Contract Administrator for subgrade compaction before rock application.

**4-62 DRY WEATHER COMPACTION**

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

**4-63 EXISTING SURFACE COMPACTION**

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

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

**5-11 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.

SUBSECTION CULVERT INSTALLATION

**5-15 CULVERT INSTALLATION**

Culvert installation must be in accordance with the CULVERT AND DRAINAGE SPECIFICATION DETAIL and the Corrugated Polyethylene Pipe Association’s “Recommended Installation Practices for Corrugated Polyethylene Pipe and Fittings”. Corrugated Polyethylene pipe must be installed in a manner consistent with the manufacturer’s recommendations.

**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.

SUBSECTION ENERGY DISSIPATERS

**5-20 ENERGY DISSIPATERS**

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

The type of energy dissipater and the amount of material must be consistent with the specifications listed on the CULVERT 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. 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.

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. Rock used for headwalls must be QUARRY SPALLS or LIGHT LOOSE RIP RAP. 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. QUARRY SPALLS and LIGHT LOOSE RIP RAP shall meet the specifications in CLAUSE 6-43 QUARRY SPALLS and CLAUSE 6-50 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 20 feet between waterbars or between natural drainage paths, and with a maximum spacing of 300 feet.

SECTION 6 – ROCK AND SURFACING

SUBSECTION ROCK SOURCE

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

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

<u>Source</u>	<u>Location</u>	<u>Rock Type</u>
1 Road Shale	W1/2 SE1/4, Section 23, T14N R06E	4-Inch In Place Quarry Spalls Light Loose Rip Rap

**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 5 calendar days before starting any operations in the rock source.

<u>Source</u>
1 Road Shale

**6-12 ROCK SOURCE SPECIFICATIONS**

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

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

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

- Pit walls must be maintained in a condition to minimize the possibility of the walls sliding or failing.
- The width of pit benches must be a minimum of 1.5 times the maximum length of the largest machine used.

- The surface of pit floors and benches must be uniform and free-draining at a minimum 2% outslope gradient.
- All operations must be carried out in compliance with all regulations of the Regulations and Standards Applicable to Metal and Nonmetal Mining and Milling Operations (30 CFR) U.S. Department of Labor, Mine Safety and Health Administration and Safety Standards for Construction Work (296-155 WAC), Washington Department of Labor and Industries.
- All vehicle access to the top of the pit faces must be blocked.

**6-14 DRILL AND SHOOT**

Rock drilling and shooting shall meet the following specifications:

- Oversize material remaining in the rock source at the conclusion of the timber sale shall not exceed 10% of the total volume mined for the sale.
- Oversize material is defined as rock fragments larger than two feet in any dimension.
- The Purchaser shall submit an informational drilling and shooting plan to the Contract Administrator 2 working days before any drilling.

SUBSECTION ROCK MANUFACTURE

**6-20 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.

**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 6-34 3-INCH MINUS BALLAST ROCK**

% Passing 3" square sieve	100%
% Passing 1 1/2" square sieve	45 - 65%

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

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.

SUBSECTION ROCK GRADATIONS

**6-34 3-INCH MINUS BALLAST ROCK**

% Passing 3" square sieve	100%
% Passing 1 1/2" square sieve	45 - 65%

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

**6-38 4-INCH IN-PLACE ROCK**

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

In-place rock may not contain more than 5 percent by weight of organic debris and trash. No more than 50 percent of rock may be larger than 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**

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

<u>At Least/Not More Than</u>	<u>Size Range</u>
20% / 90%	20" - 36"
80% / --	12" - 30"
10% / 20%	3" - 8"

SUBSECTION ROCK MEASUREMENT

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

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

SUBSECTION ROCK APPLICATION

**6-70 APPROVAL BEFORE ROCK APPLICATION**

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

**6-71 ROCK APPLICATION**

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

**6-73 ROCK FOR WIDENED PORTIONS**

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

**SECTION 8 – EROSION CONTROL**

**8-1 SEDIMENT CONTROL STRUCTURES**

On the following road(s), sediment control shall be accomplished using sediment traps, silt fences, settling ponds or other methods as approved, in writing, by the Contract Administrator.

<u>Road</u>	<u>Stations</u>	<u>Comments</u>
16	0+00 to 27+26	Install as needed during wet weather

**8-2 PROTECTION FOR EXPOSED SOIL**

Purchaser shall provide and evenly spread a layer of straw to all exposed soils within 50 feet of a stream or wetland. Soils must be covered before the first anticipated storm event. Soils may not sit exposed during any rain event.

**SUBSECTION REVEGETATION**

**8-15 REVEGETATION**

On the following road(s), Purchaser shall spread grass seed on all exposed soils resulting from road work activities. Cover all exposed soils using hand method. Other methods of covering must be approved in writing by the Contract Administrator.

<u>Road</u>	<u>Location</u>	<u>Comments</u>
16	0+00 to 16+50	At culvert installations
16-1-2	0+00 to 24+05	

**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. Soils may not be allowed to sit exposed for longer than one month without receiving revegetation treatment unless otherwise approved in writing by the Contract Administrator.

**8-18 PROTECTION FOR SEED**

Purchaser shall provide a protective cover for seed if revegetation occurs between July 1 and March 31. The protective cover may consist of an even layer of straw or Contract Administrator approved alternate. Seed may not be allowed to sit exposed during any rain event.

**8-19 ASSURANCE FOR SEEDED AREA**

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

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

SUBSECTION STRUCTURES

**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.

SUBSECTION POST-HAUL MAINTENANCE

**9-5 POST-HAUL MAINTENANCE**

Purchaser shall perform post-haul maintenance at termination of use and at the end of each operating season in accordance with the FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS and as specified below.

<u>Road</u>	<u>Stations</u>	<u>Additional Requirements</u>
16-1	0+00 to 23+92	Construct drivable waterbars in conformance with the DRIVABLE WATERBAR DETAIL at a maximum spacing which will produce a vertical drop of no more than 20 feet between waterbars or between natural drainage paths and with a maximum spacing of 400 feet
16-1-2	0+00 to 24+05	
		Construct additional drivable waterbars in conformance with the DRIVABLE WATERBAR DETAIL immediately downgrade of each ditch relief culvert.

SUBSECTION POST-HAUL LANDING MAINTENANCE

**9-10 LANDING DRAINAGE**

Purchaser shall provide for drainage of the landing surface.

SECTION 10 MATERIALS

SUBSECTION CULVERTS

**10-17 CORRUGATED PLASTIC CULVERT**

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

**10-22 PLASTIC BAND**

Plastic coupling and end bands must meet the AASHTO specification designated for the culvert. Only fittings supplied or recommended by the culvert manufacturer may be used. Couplings must be bell and spigot connector, or 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 DRIVABLE WATERBAR REMOVAL AND INSTALLATION**

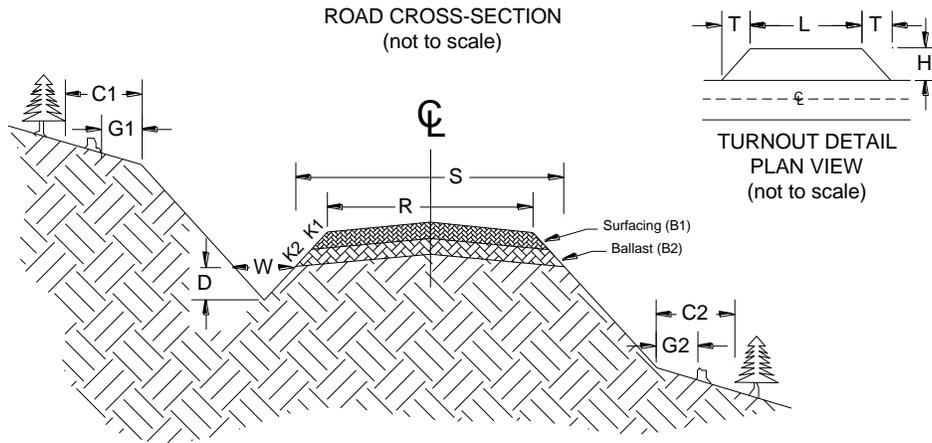
On the following roads, waterbars may be bladed out for timber haul. Driveable waterbars may need to be re-installed during haul to prevent sedimentation from entering typed water. All waterbars bladed out will be re-installed prior to termination of this contract and at the end of each operating season. Waterbars shall be constructed in accordance with the DRIVABLE WATERBAR DETAIL

<u>Road</u>	<u>Stations</u>
16	0+00 to 26+50
16-1	0+00 to 23+92

**11-2 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.

## TYPICAL SECTION SHEET



Road Number	From Station	To Station	Tolerance Class	Subgrade Width (feet)	Road Width (feet)	Ditch		Crown in. @ CL	Grubbing Limits (feet)		Clearing Limits* (feet)	
						Width (feet)	Depth (feet)		G1	G2	C1	C2
				S	R	W	D					
1	0+00	509+78	A	-	-	-	-	4	-	-	-	-
16	0+00	26+50	C	15	12	2	1	4	-	-	-	-
16-1	0+00	23+92	C	15	12	2	1	4	-	-	-	-
16-1-2	0+00	0+75	C	15	12	3	1	4	-	-	-	-
16-1-2	0+75	8+30	C	15	12	3	1	4	2	2	Tags	Tags
16-1-2	8+30	24+05	C	15	12	3	1	4	2	2	5	5

\*Tags are Right of Way Tags.

### TURNOUT LIST

Road Number	Begin L- Station	End L- Station	Turnout Width (H)	Full Width Length (L)	Taper Length (T)	Comments
16-1	0+00					Shape existing turnout.
16-1-2	13+12	14+12	12	50	25	Turnout is also a waste area and a potential landing location. At end of sale area will be shaped to included road and turnout.

### TURNAROUND LIST

Road Number	Station	Length (feet)	Width (feet)	Comments
16-1-2	0+75	30	30	Maintain existing turnaround.
16-1-2	24+05	25	25	Turnaround will be constructed at the end of the road

### 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 roads			Culvert Installations	12	Vibratory Smooth Drum	14,000	4	3
			Embankment	12				
			Fill	12				
			Subgrade	12				
			Rock	9				
			Waste Areas	12				
All pre-haul maintenance roads			After grading existing road surface.	9				
			Culvert Installations.					

## 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			
16-1-2	0+00	24+05	1.5:1				200 for landings	1 Road Shale Pit
Quarry Spalls or Light Loose Rip Rap								
Culvert Headwalls and Dissipaters. See Culvert and Drainage List for locations.							8	

4 Inch In Place BALLAST TOTAL: 200 cubic yards  
 Quarry Spalls BALLAST TOTAL: 8 cubic yards

### SURFACE

Road Number	From Station	To Station	Rock Slope	Compacted Rock Depth	C.Y. Station	# of Stations	C.Y. Total	Rock Source	Comment
			K1	B1	3 Inch Minus Ballast				
1	0+00	509+78	1.5:1				100	1 Road Shale Pit	For spot rocking. Locations as directed by CA.
16	0+00	26+50	1.5:1	6"	24	26.5	636		

SURFACE TOTAL 736 Cubic Yards

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

## CULVERT AND DRAINAGE LIST

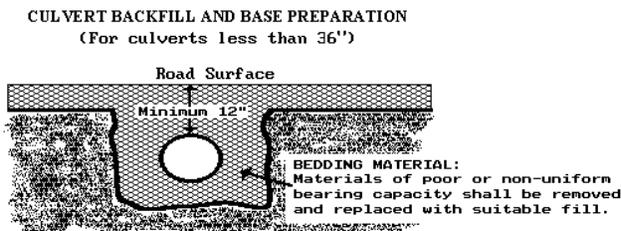
Road Number	Location	Culvert		Length (ft)			Riprap (C.Y.)			Backfill Material	Placement Method*	Const. Staked*	Remarks
		Dia. (in)	Type	Culvert	Downspt	Flume	Inlet	Outlet	Type				
16-1	5+90	18	PD	30			0.5	0.5	QS	NT			Replace existing culvert
16-1	11+82	18	PD	30			0.5	0.5	QS	NT			
16-1	14+20	18	PD	30			0.5	0.5	QS	NT			
16-1-2	2+09	18	PD	30			0.5	0.5	QS	NT			
16-1-2	7+82	18	PD	30			0.5	0.5	QS	NT			
16-1-2	11+05	18	PD	30			0.5	0.5	QS	NT			
16-1-2	15+08	18	PD	30			0.5	0.5	QS	NT			
16-1-2	19+02	18	PD	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

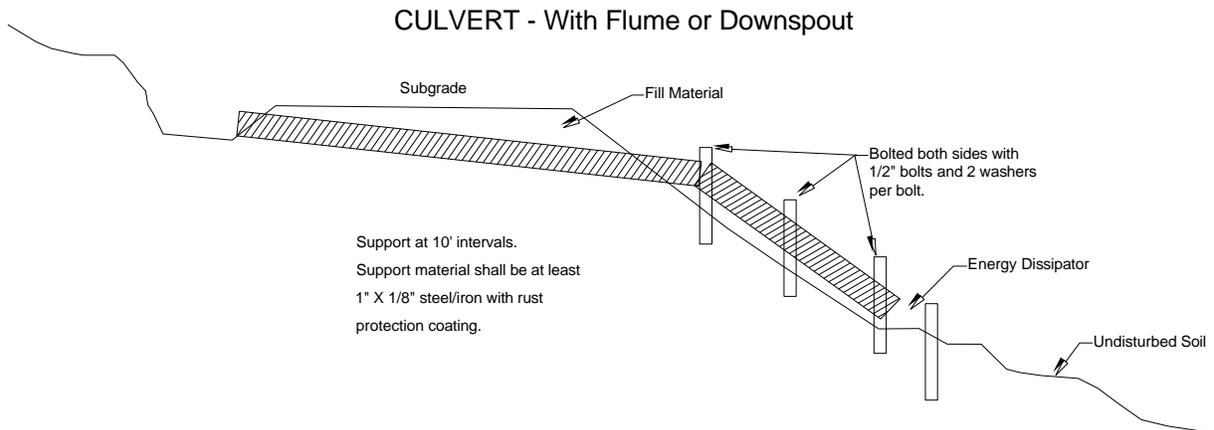
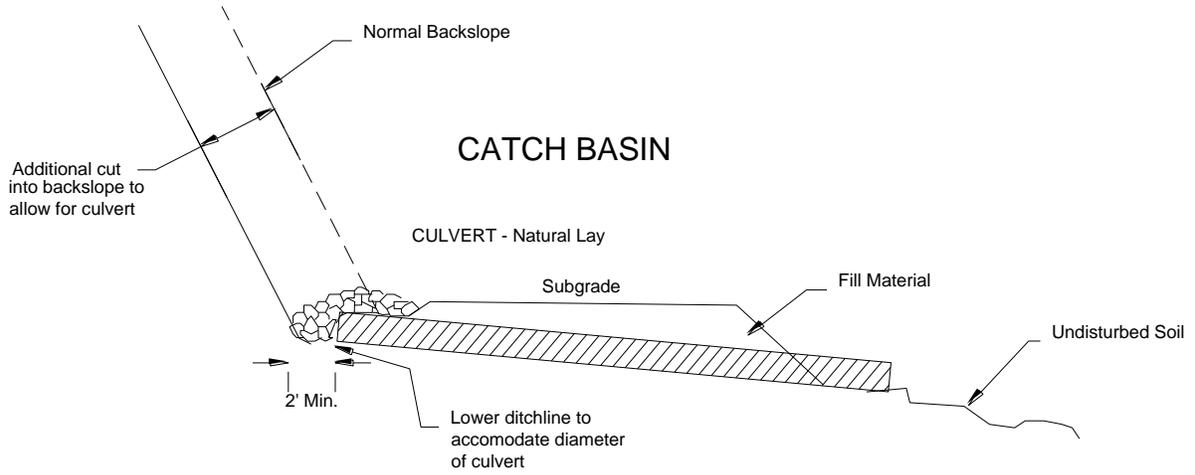
**Key:**

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



# CULVERT AND DRAINAGE SPECIFICATION DETAIL

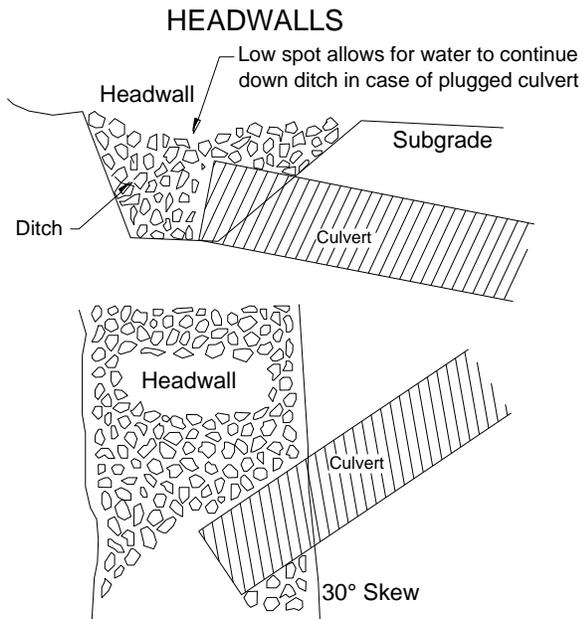
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## CULVERT AND DRAINAGE SPECIFICATION DETAIL

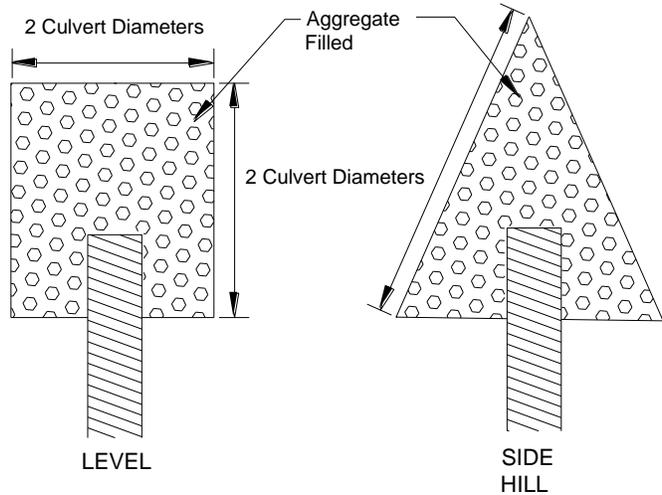
(Page 2 of 3)

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 AND DRAINAGE LIST.

## CULVERT AND DRAINAGE SPECIFICATION DETAIL

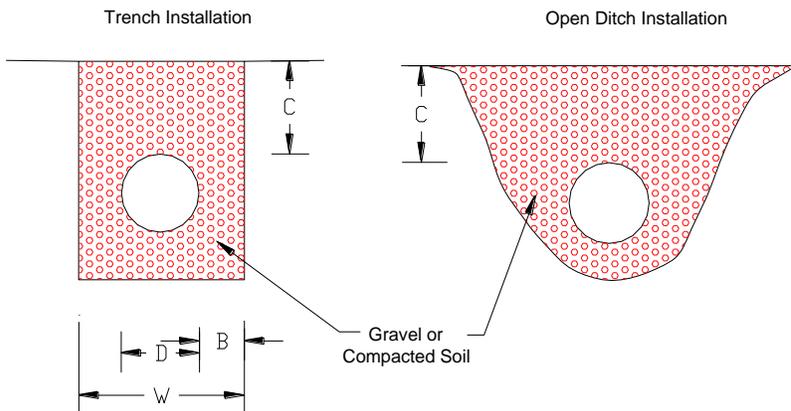
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### POLYETHYLENE PIPE INSTALLATION

#### 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.

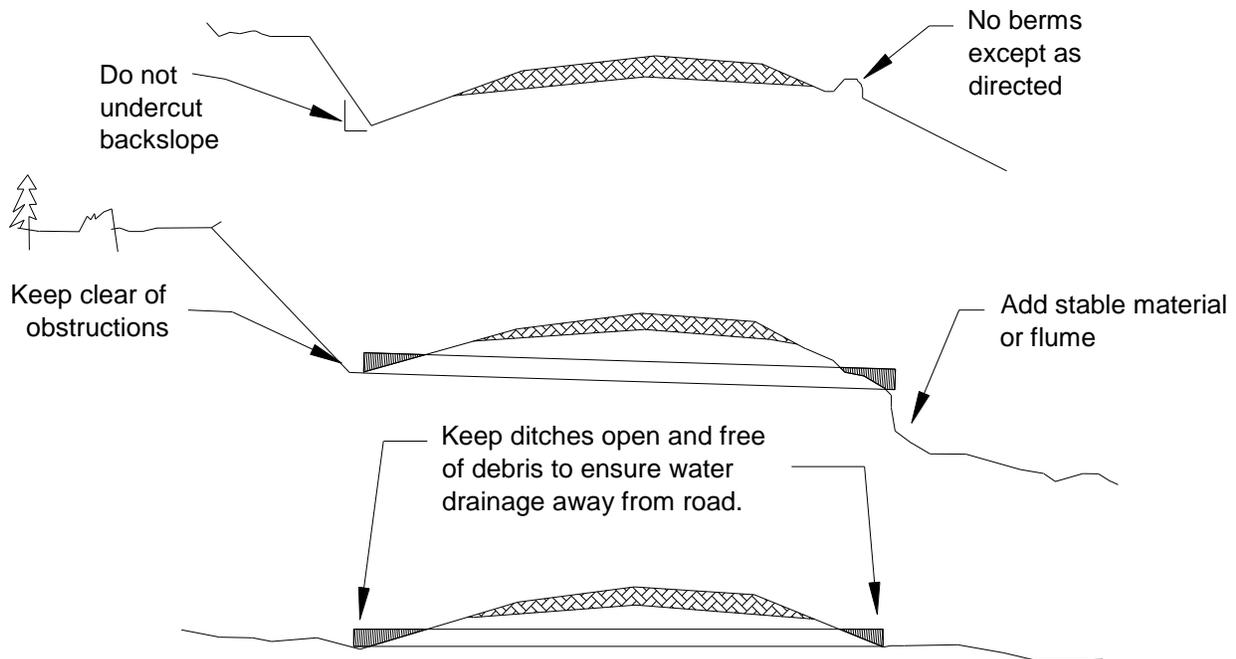
## FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS, page 2 of 2

### Termination of Use or End of Season

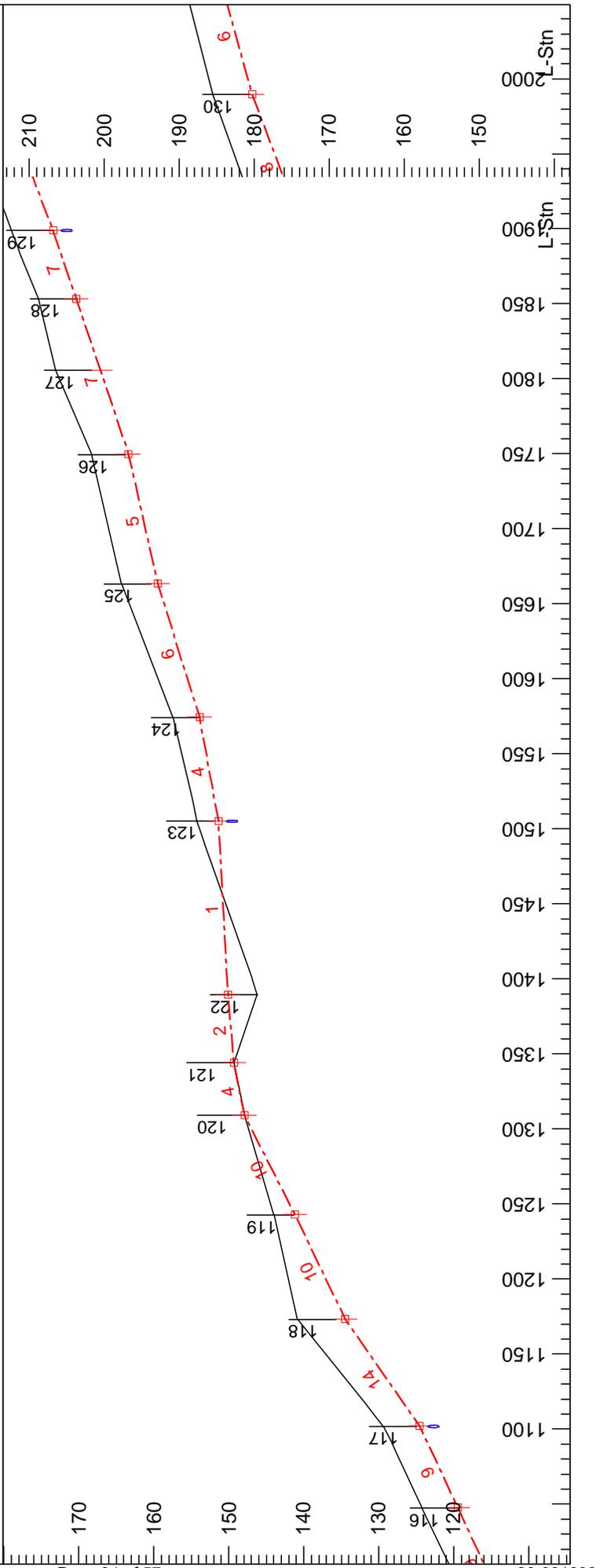
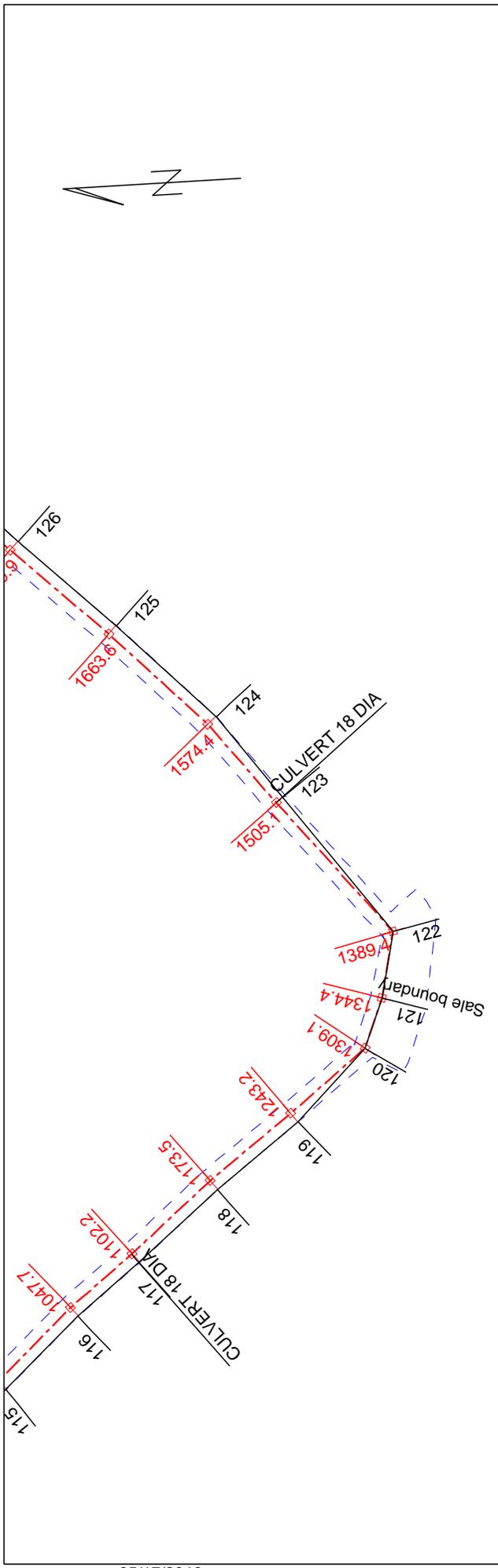
- At the conclusion of logging operations, ensure all conditions of these specifications have been met.

### Debris

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







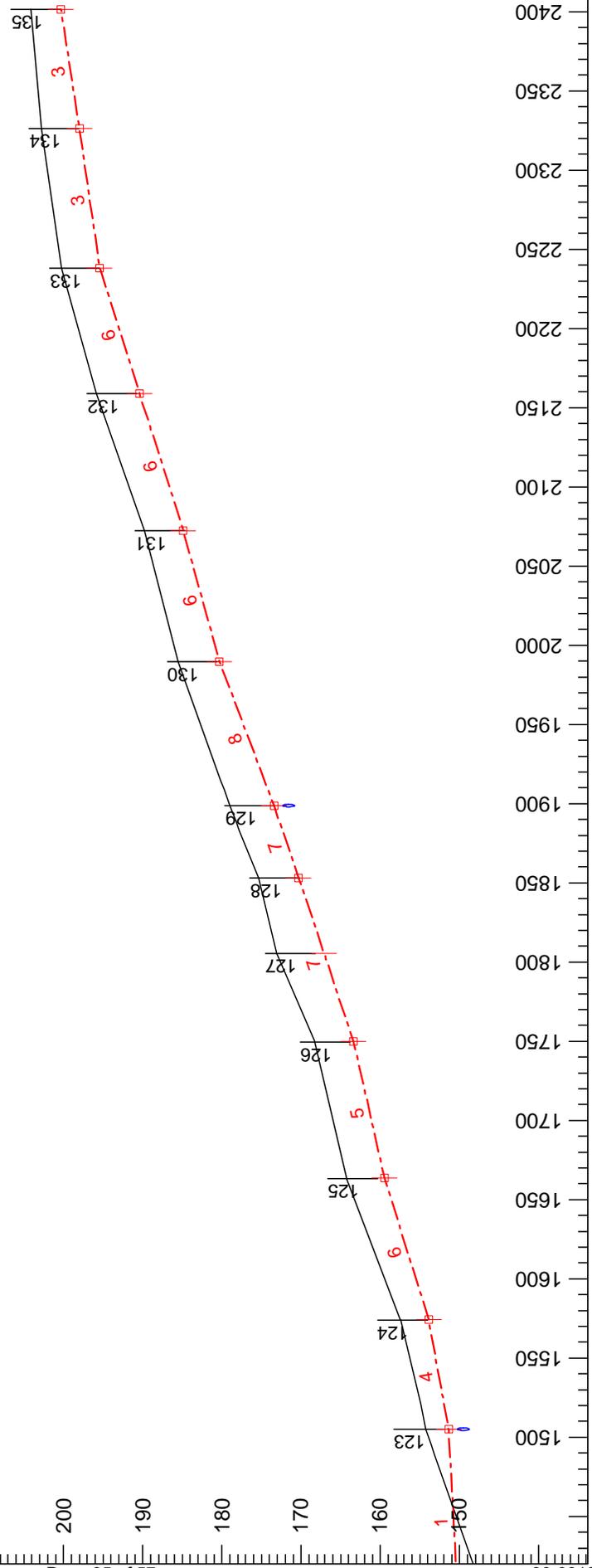
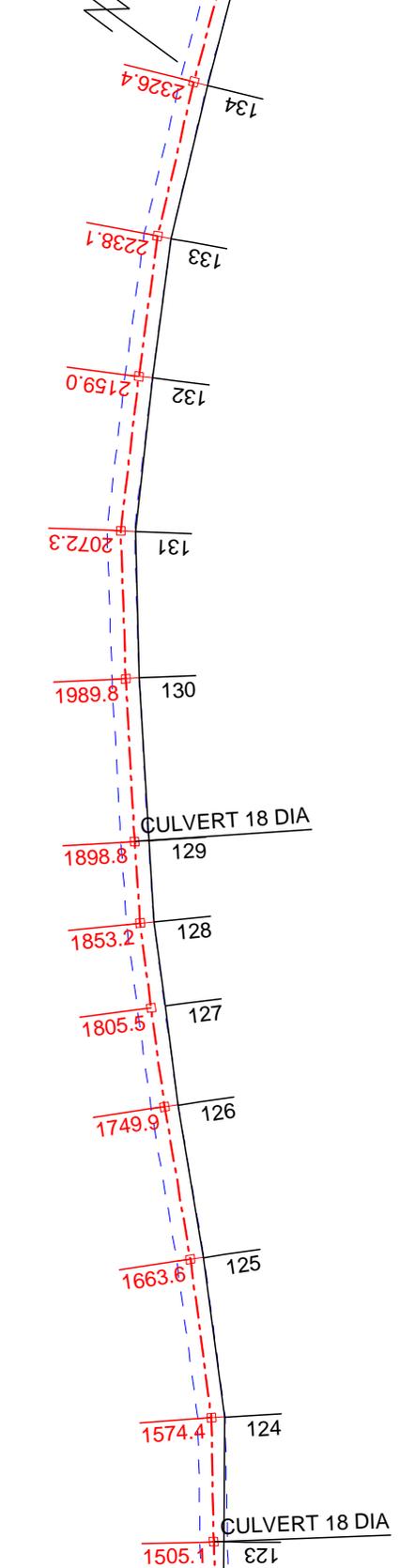
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 15/10/06  
 Page 2 of

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

Washington State Department of  
 Natural Resources  
 South Puget Sound Region

Baler Timber Sale  
 16-1-2 road  
 Contract #: 30-091808

Sale Boundary/EOR



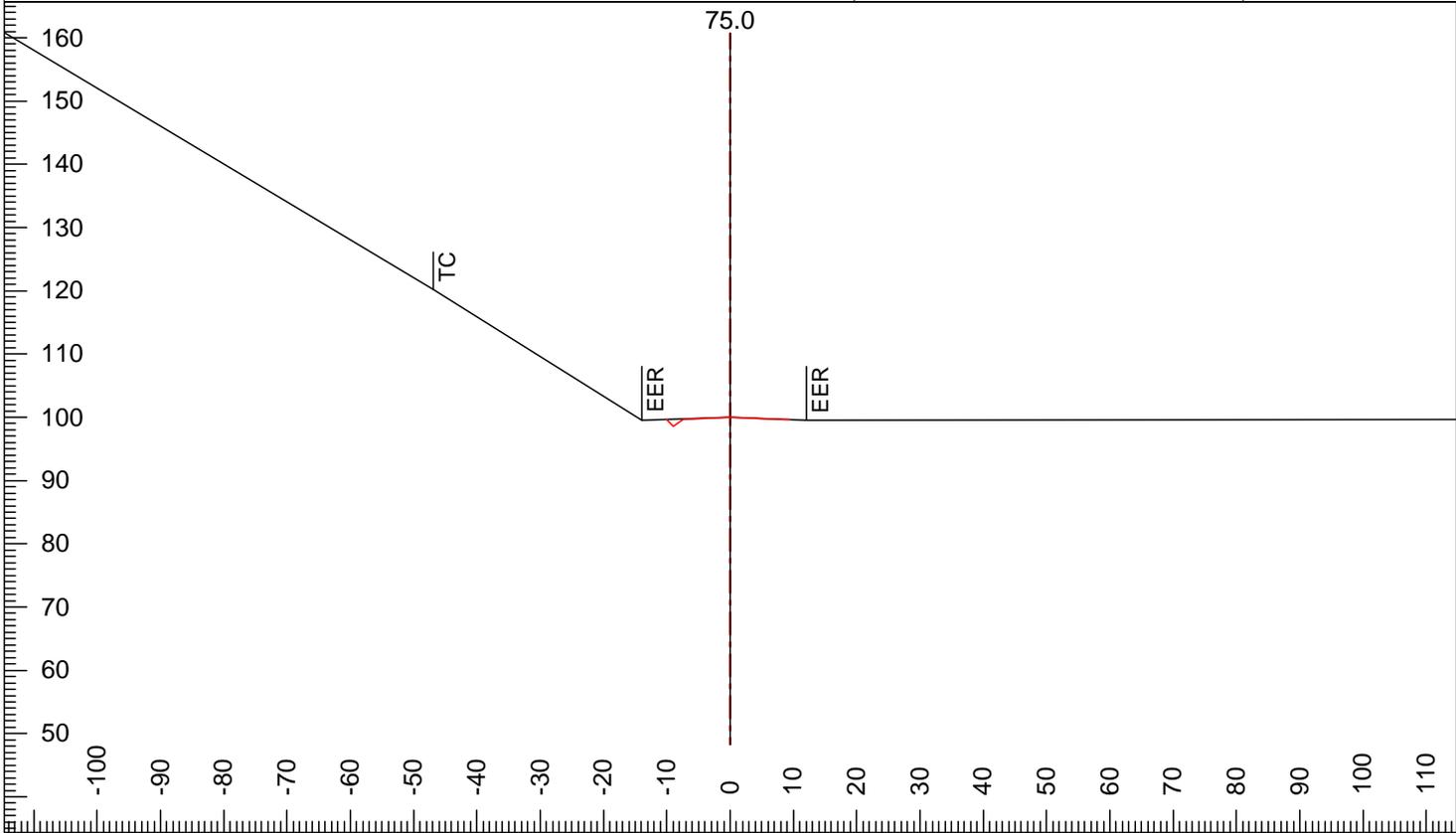
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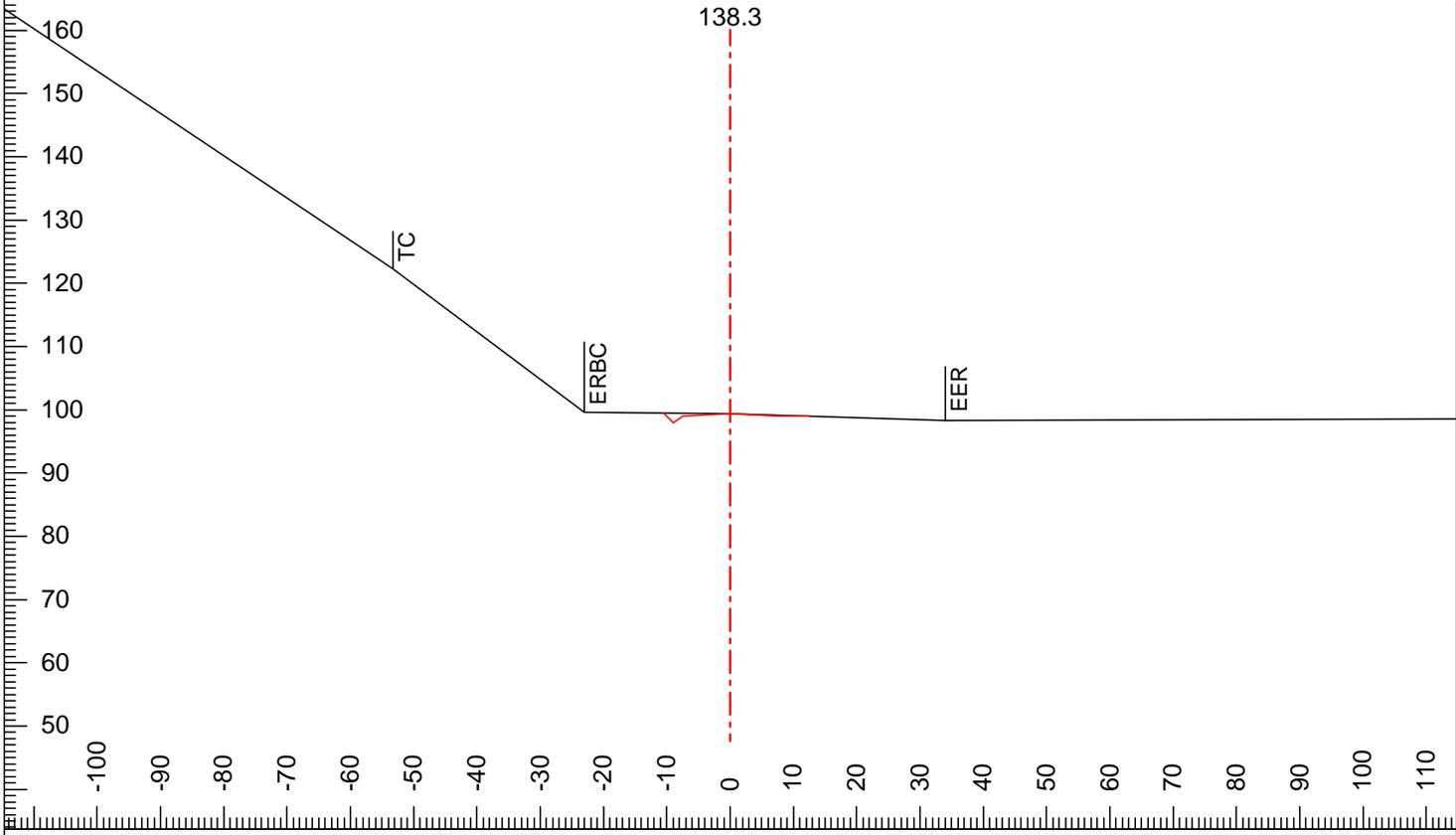
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 South Puget Sound Region



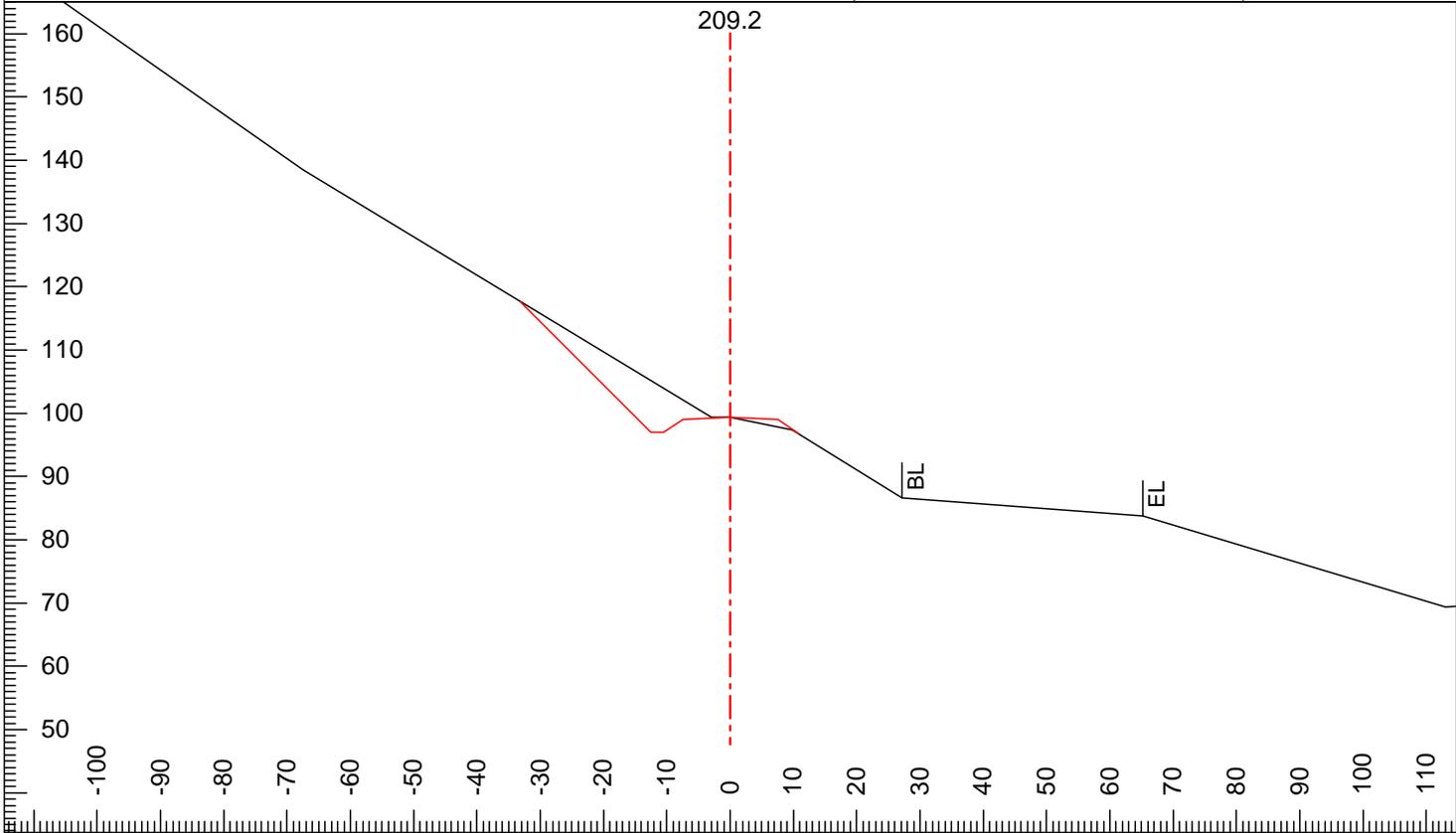
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 16-1-2 road  
 Contract #: 30-091808



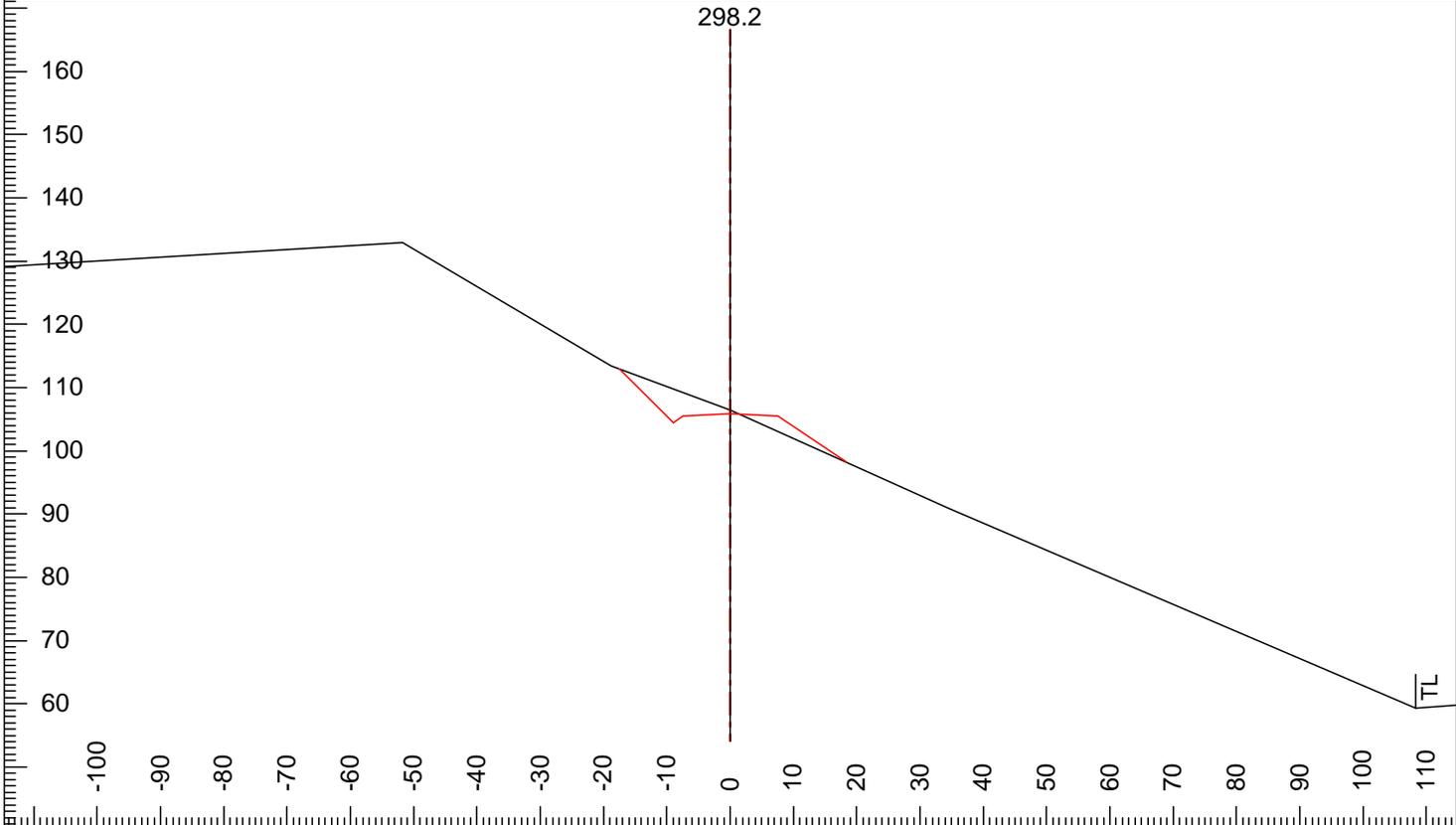
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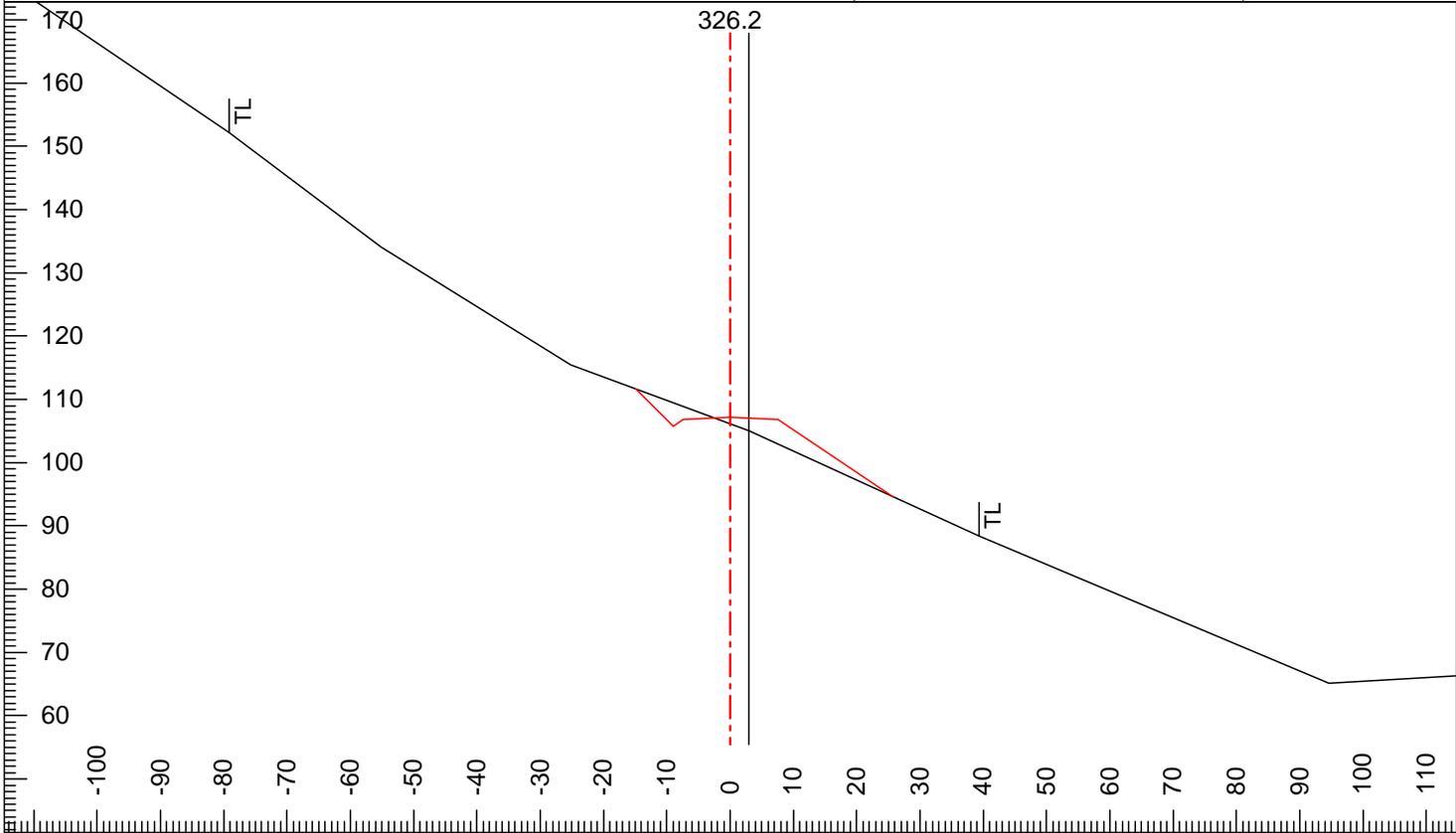
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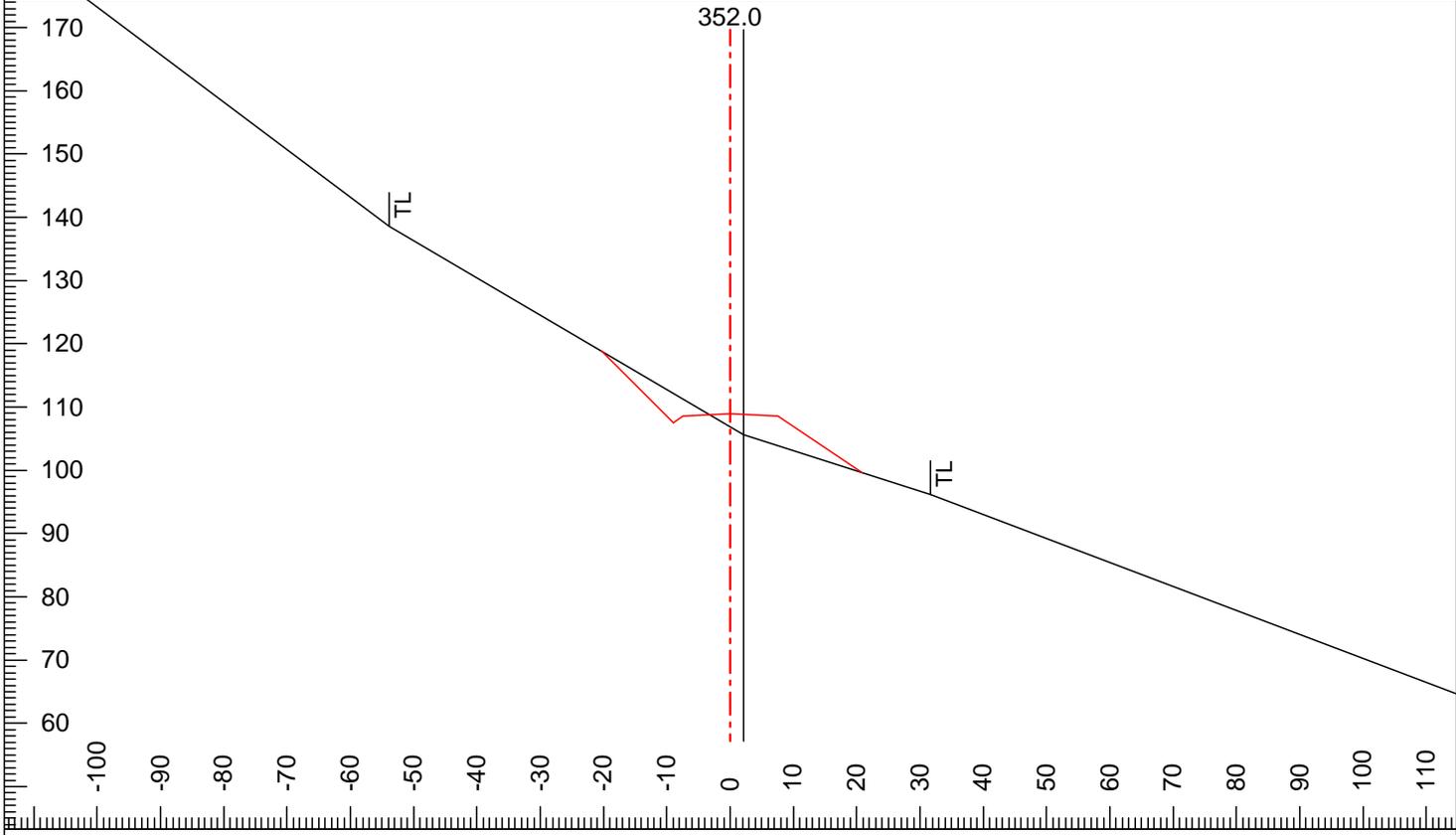
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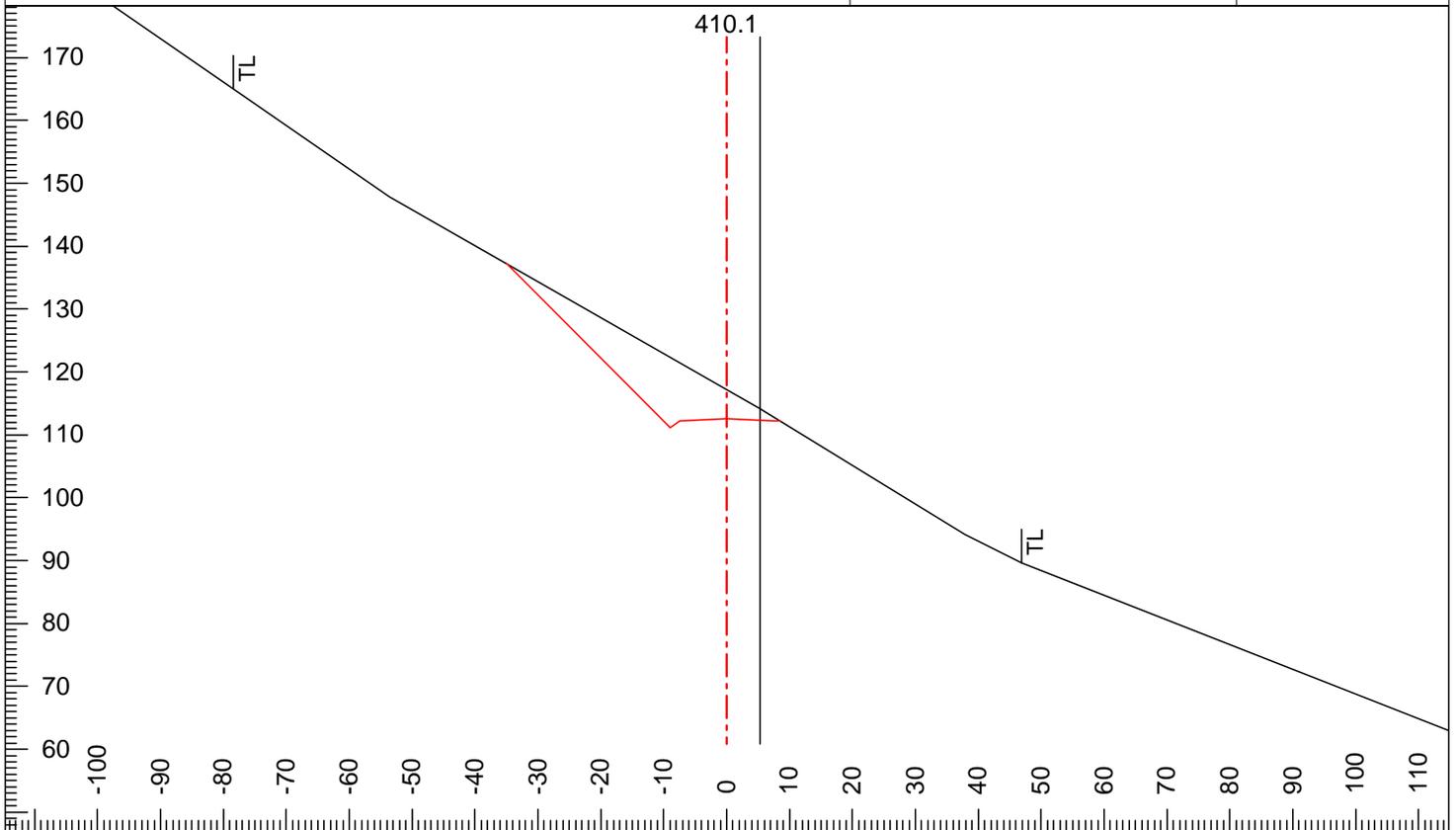
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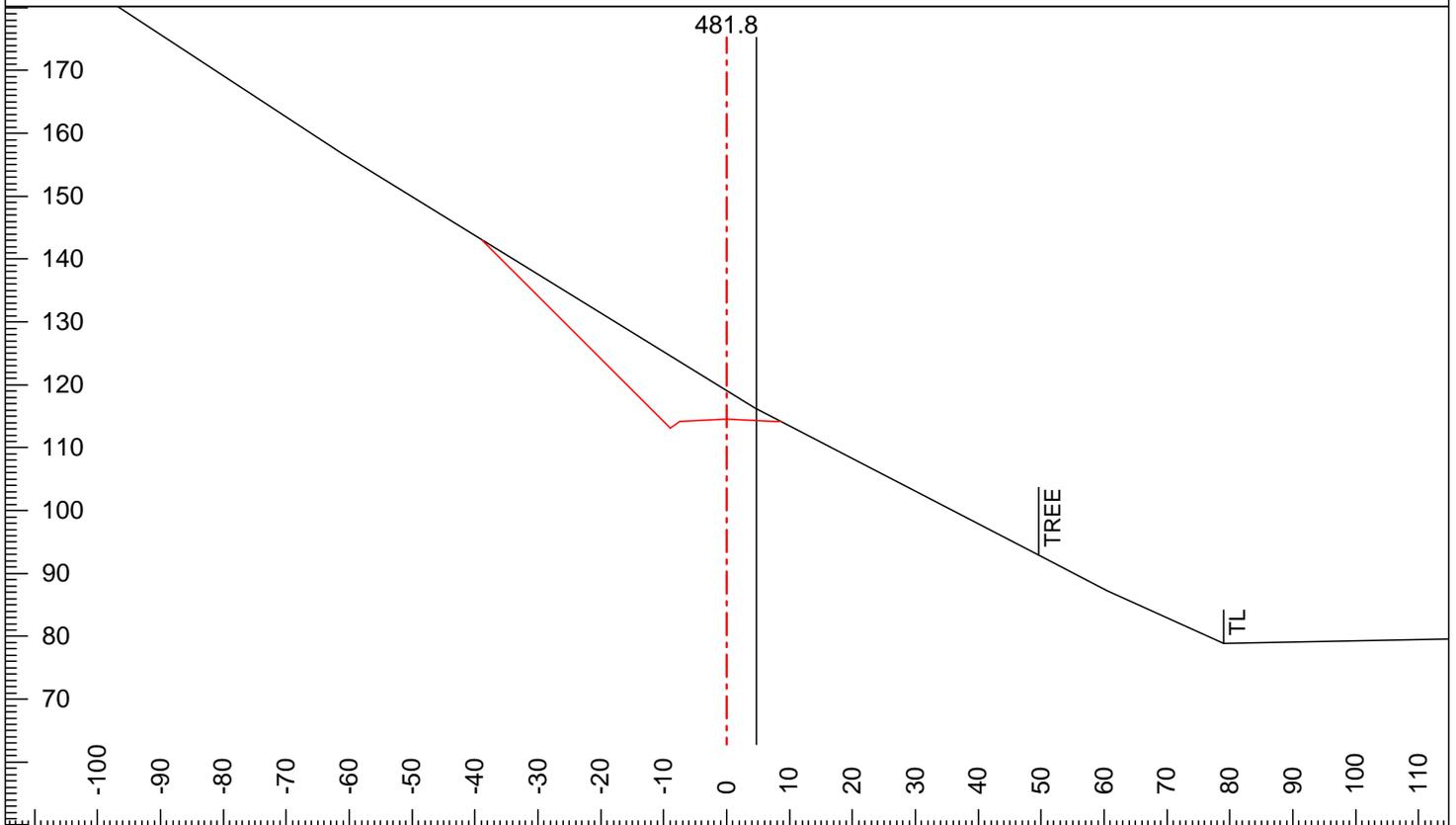
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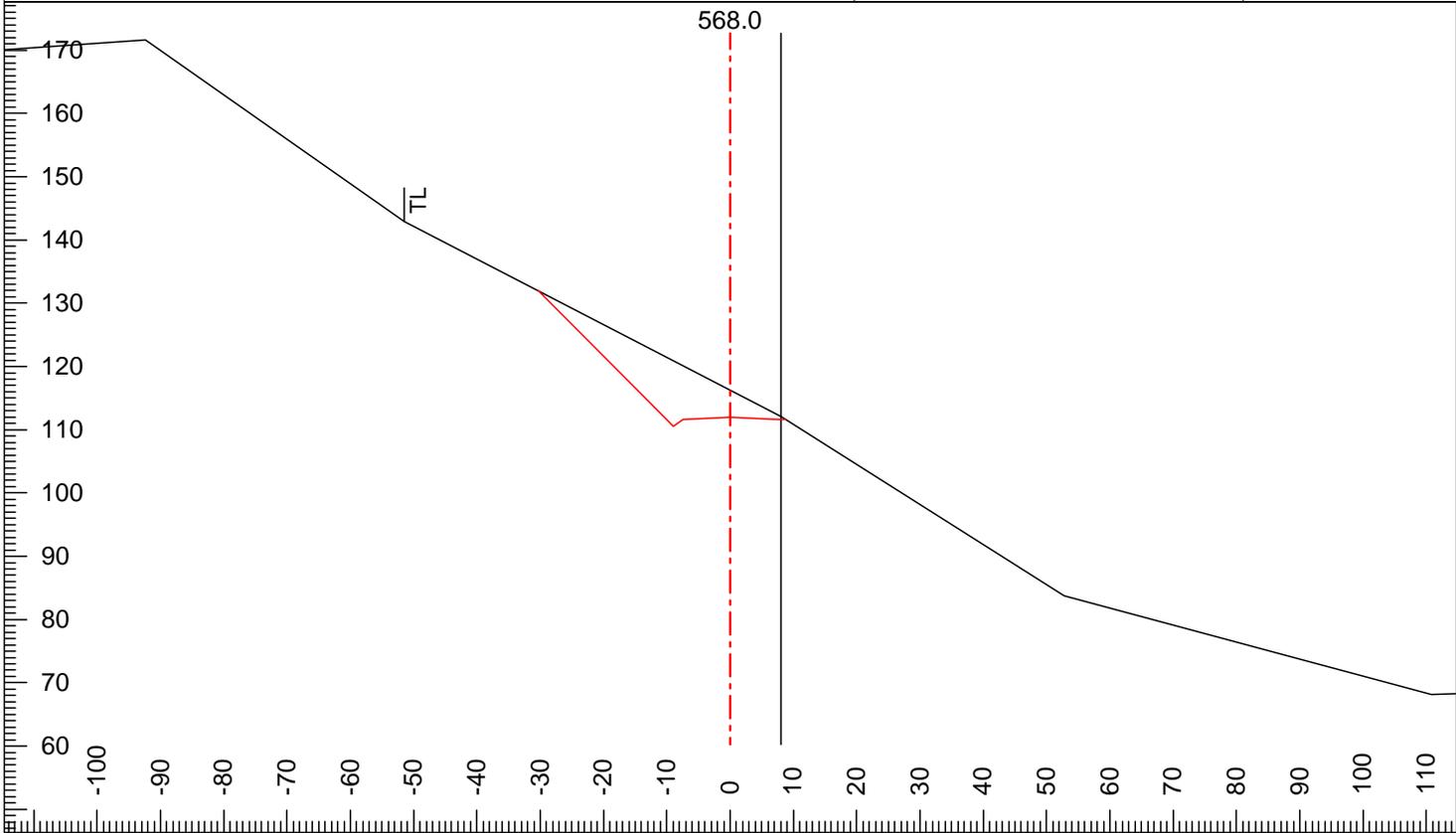
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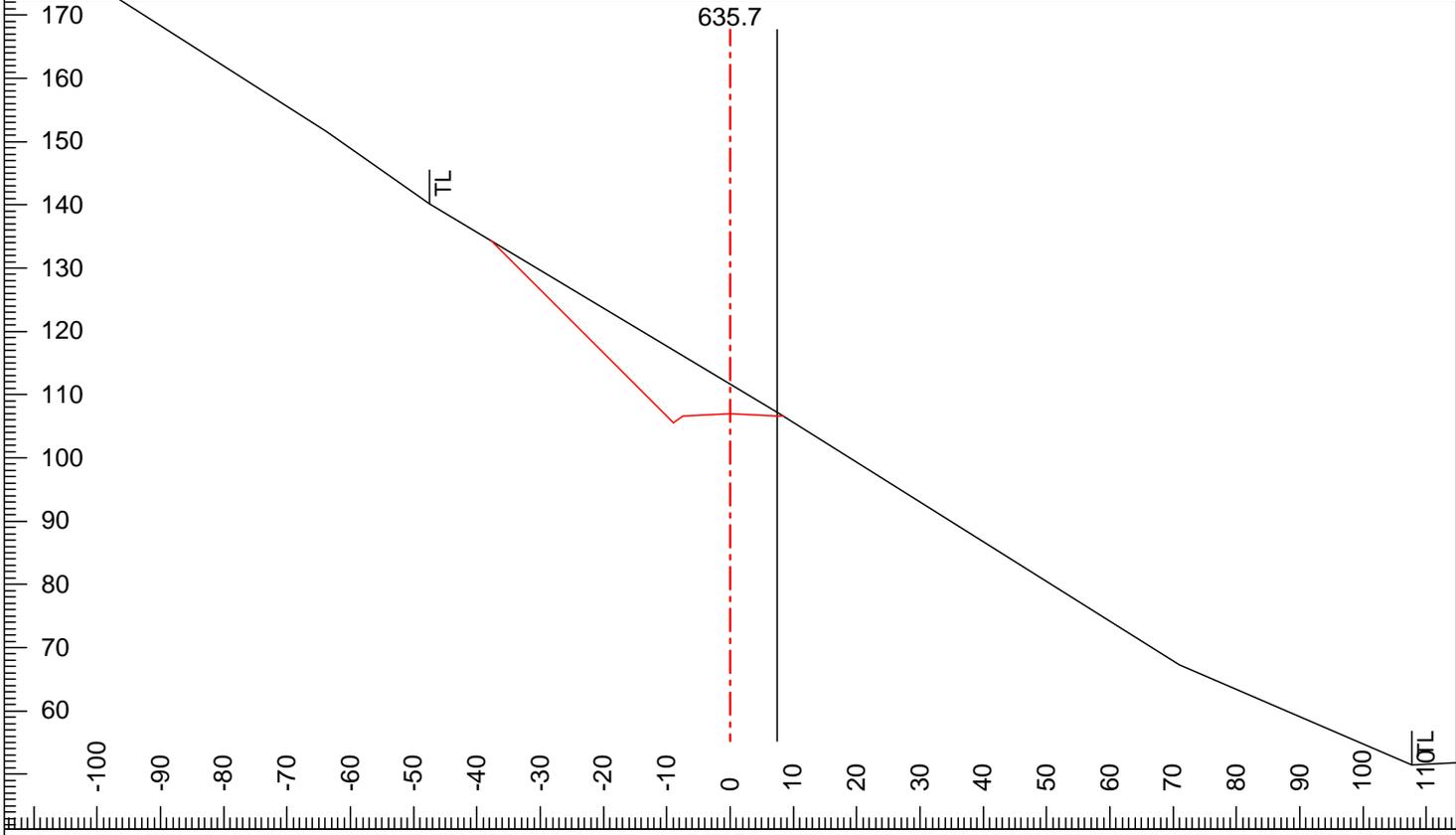
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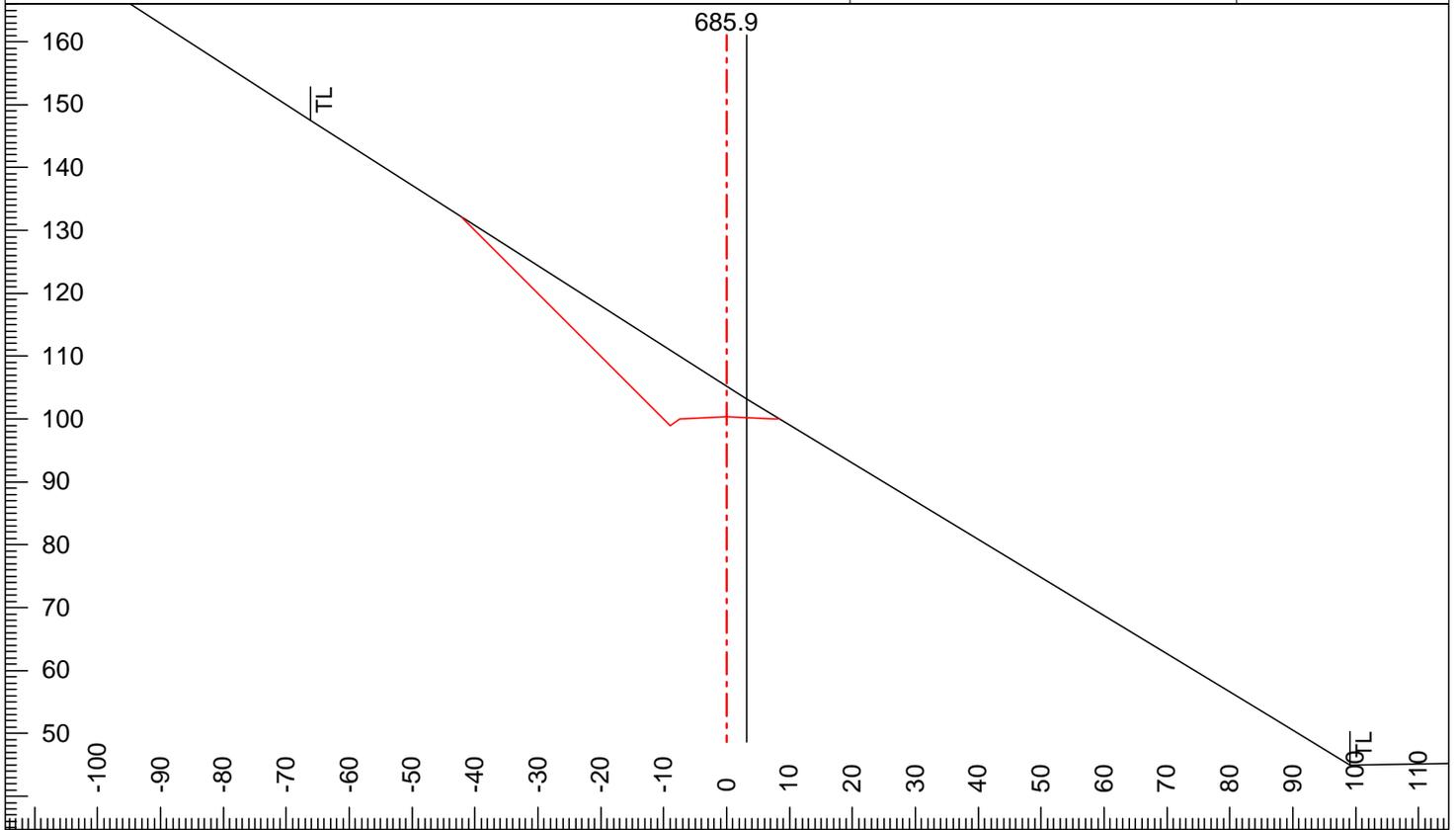
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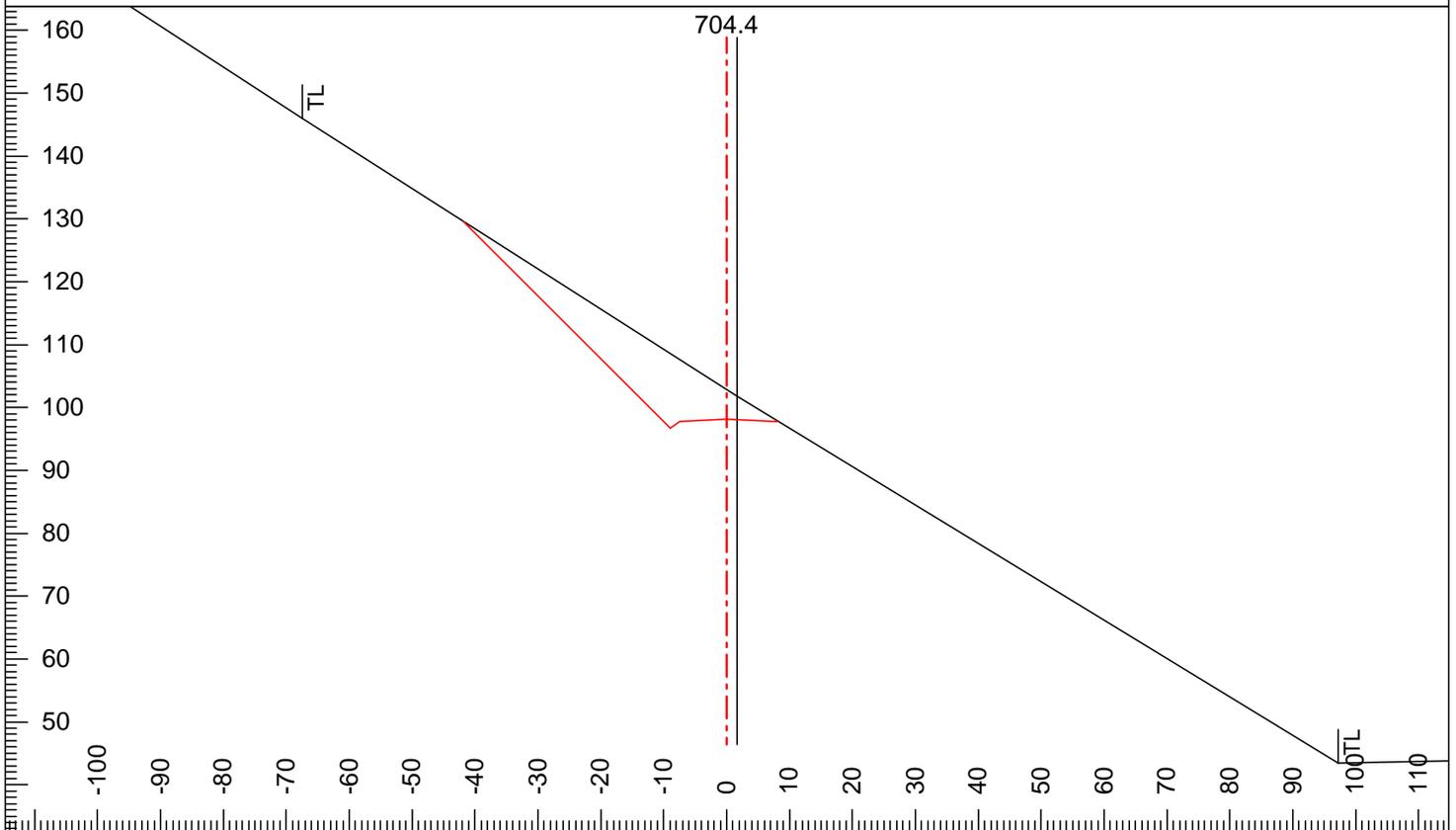
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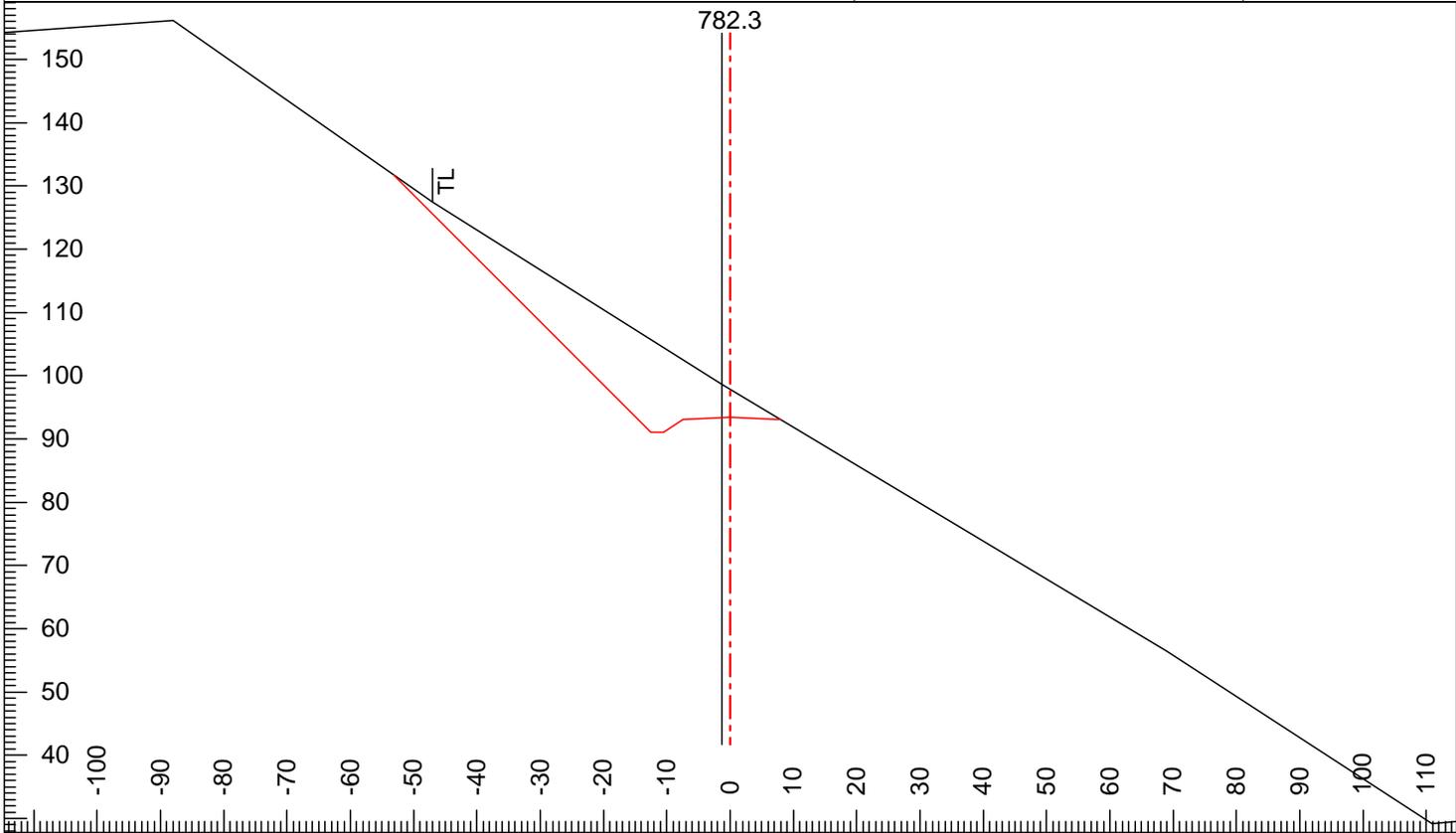
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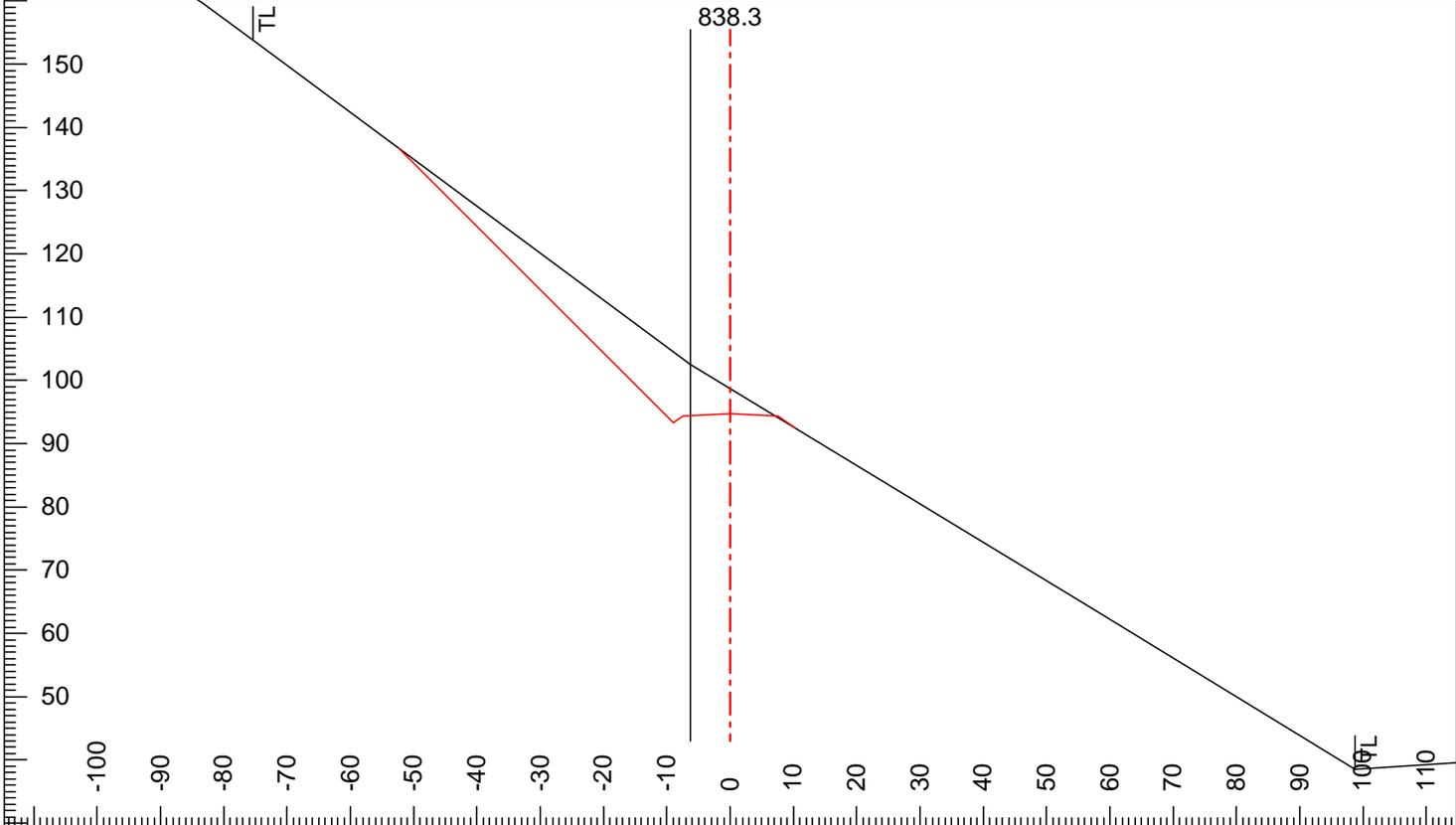
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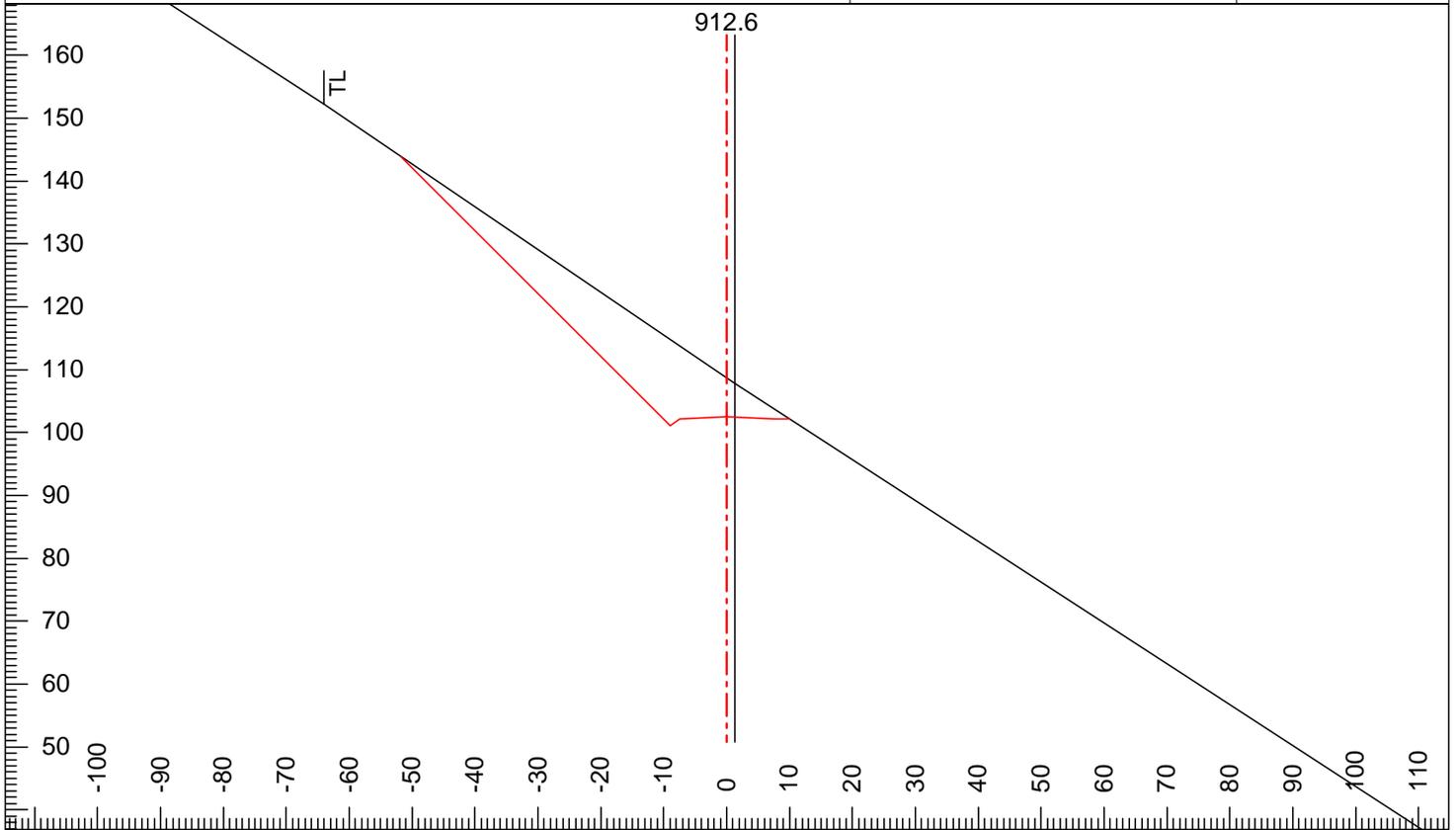
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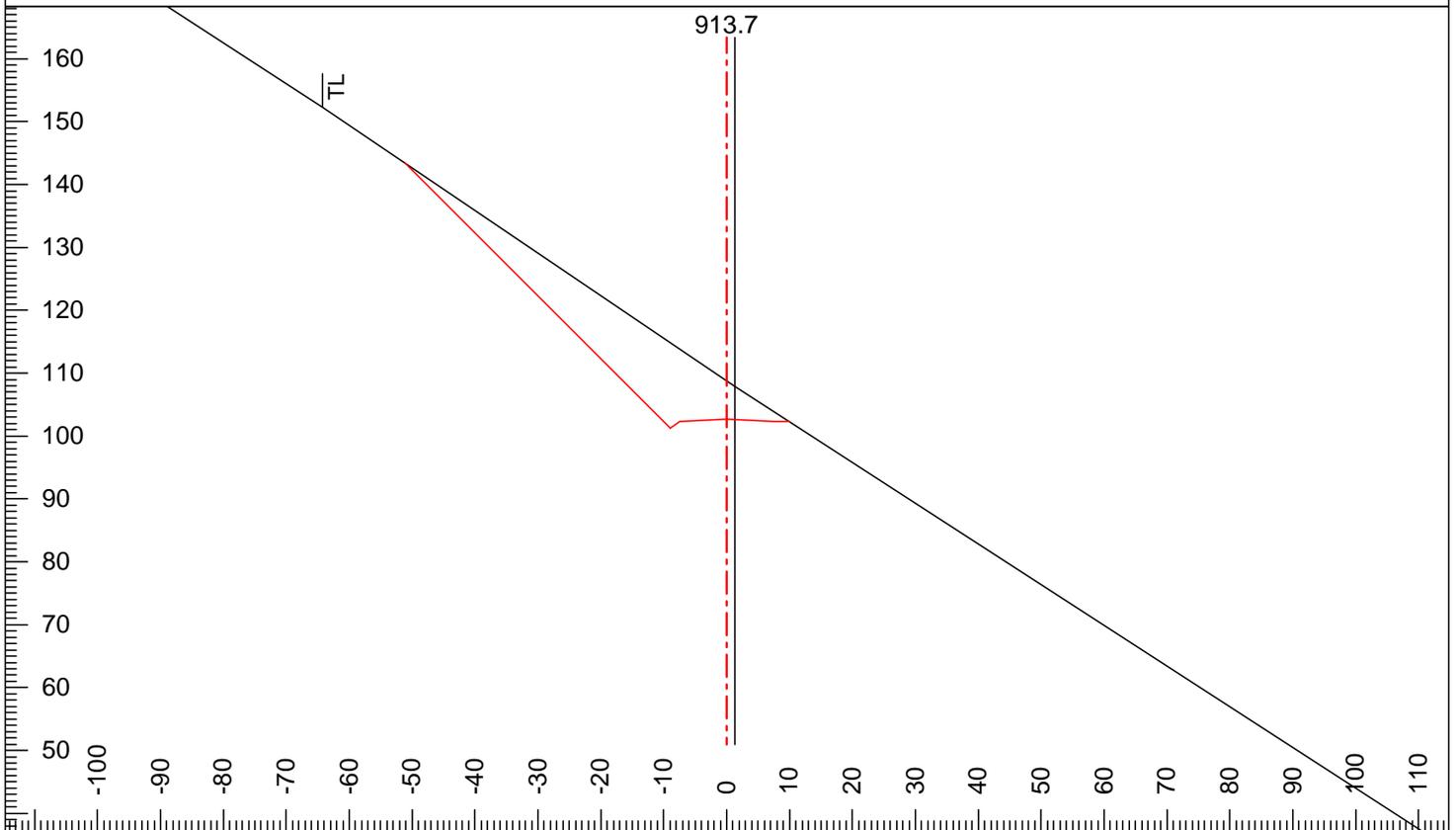
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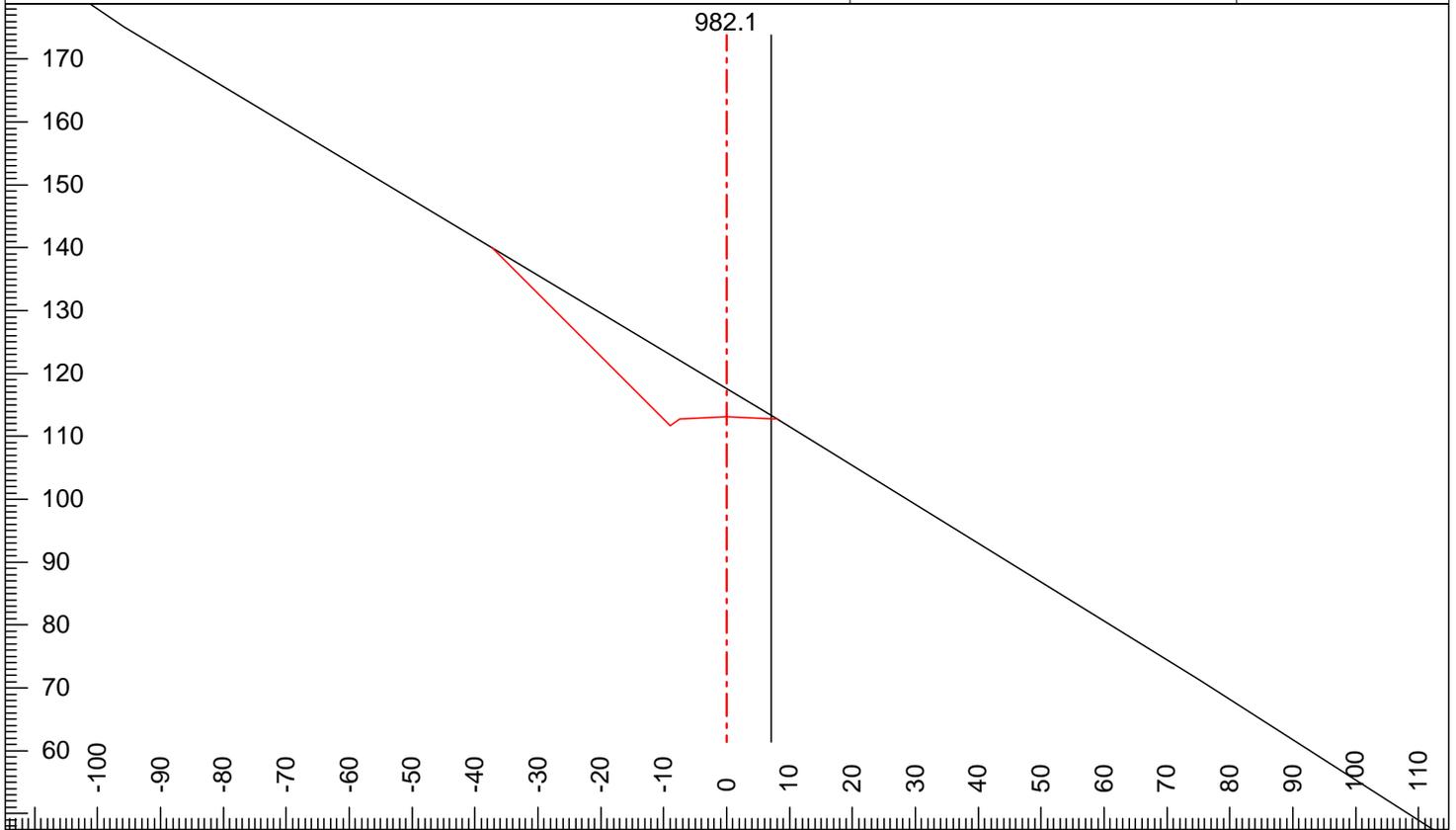
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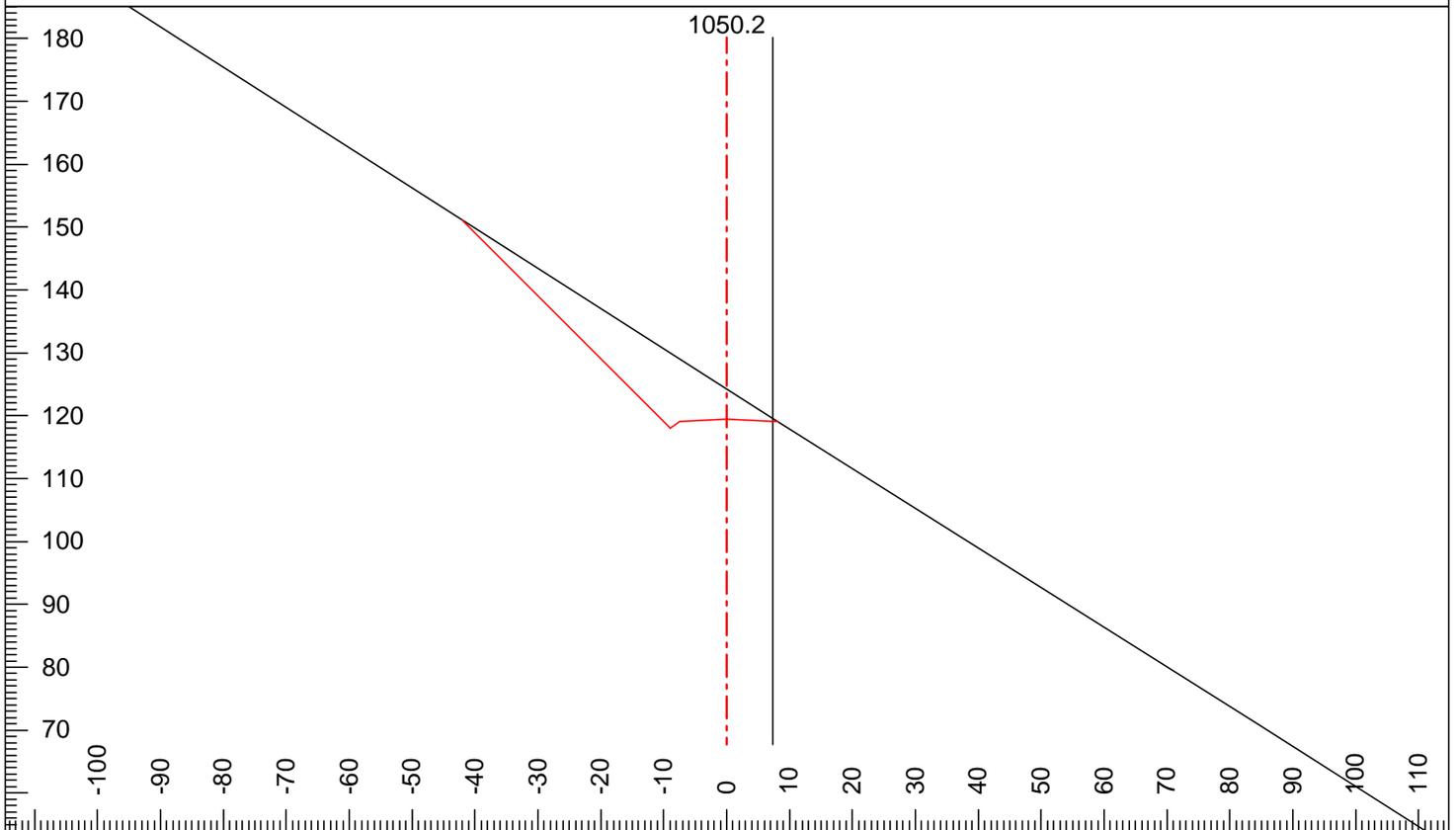
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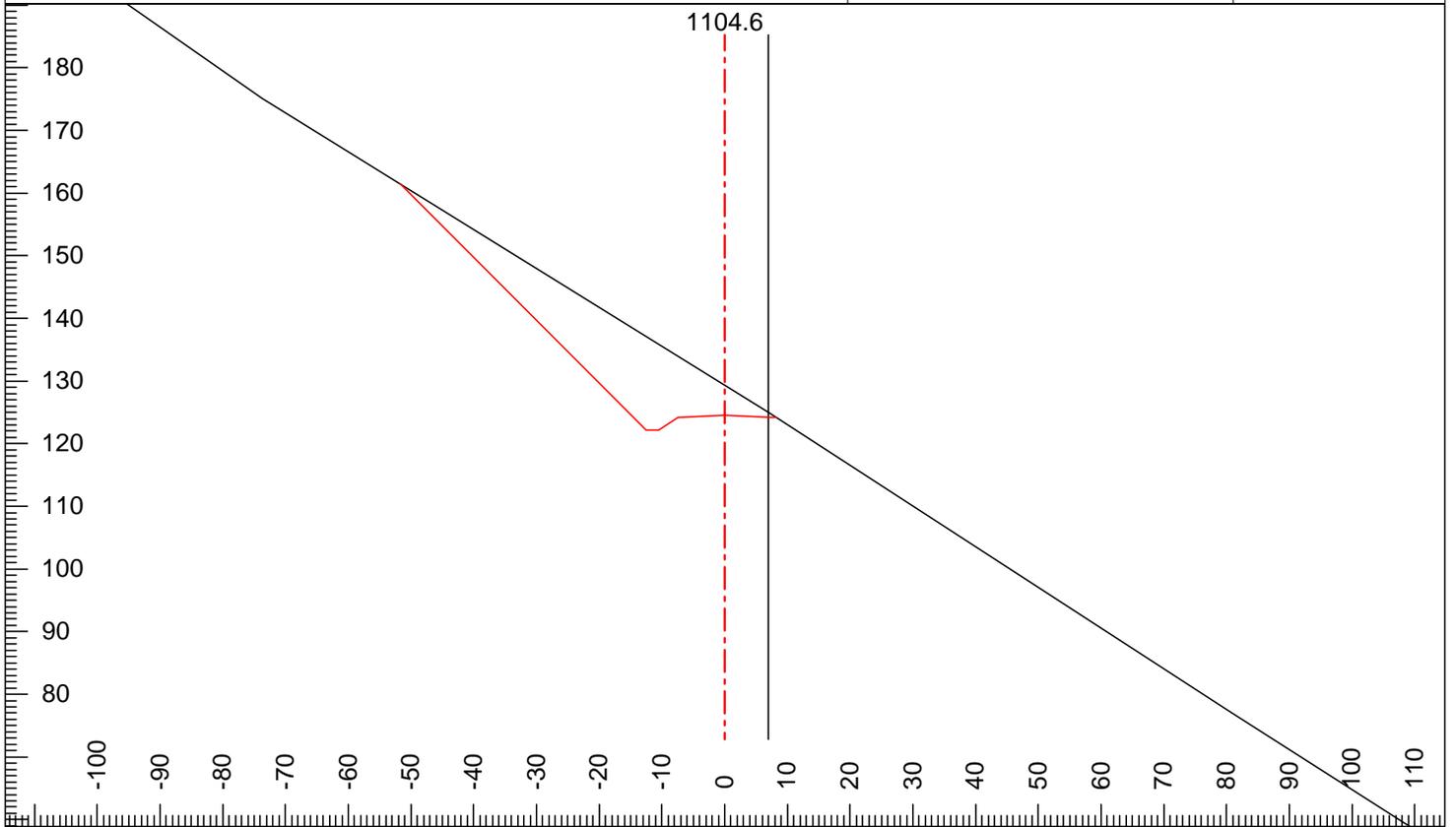
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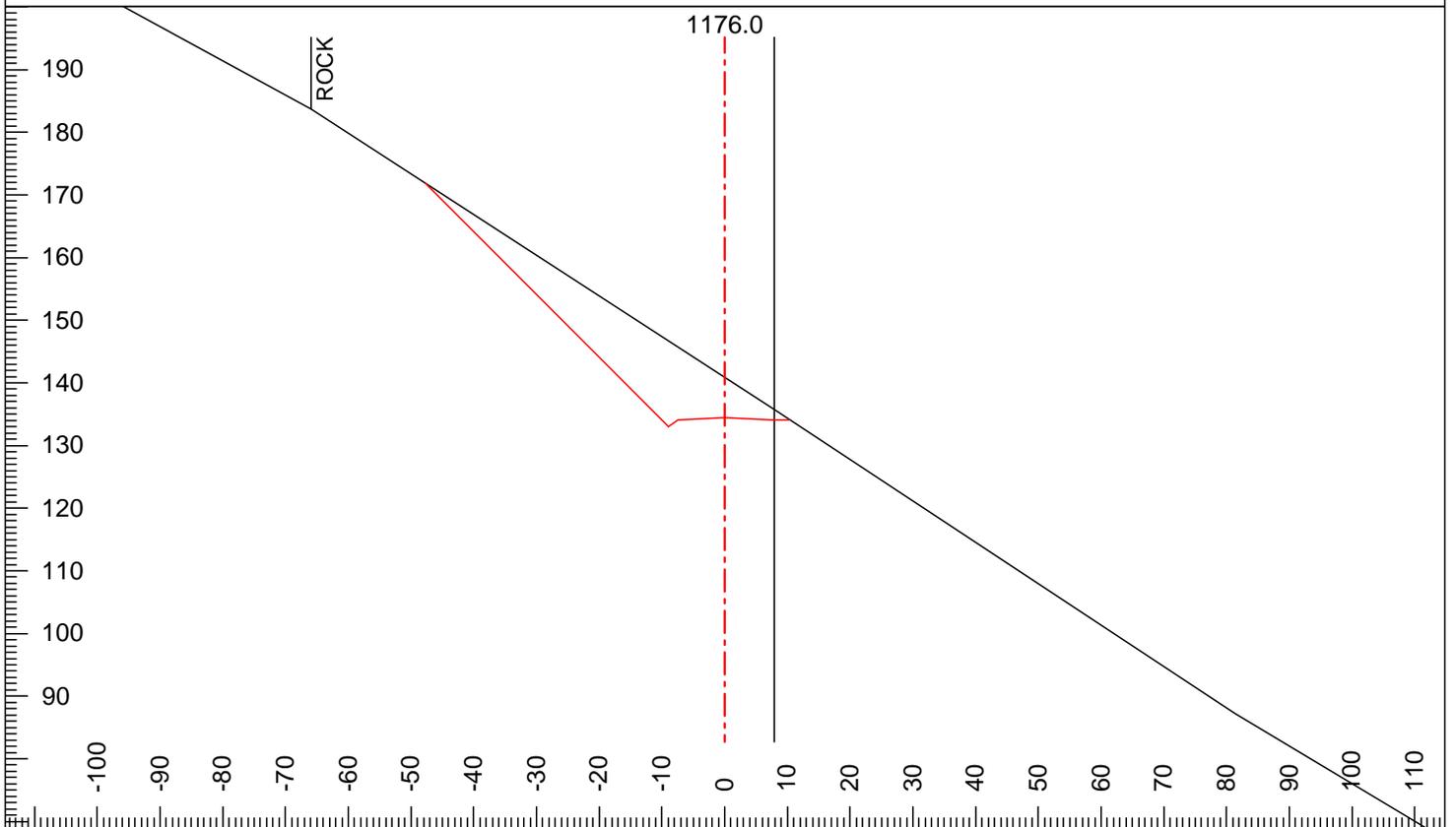
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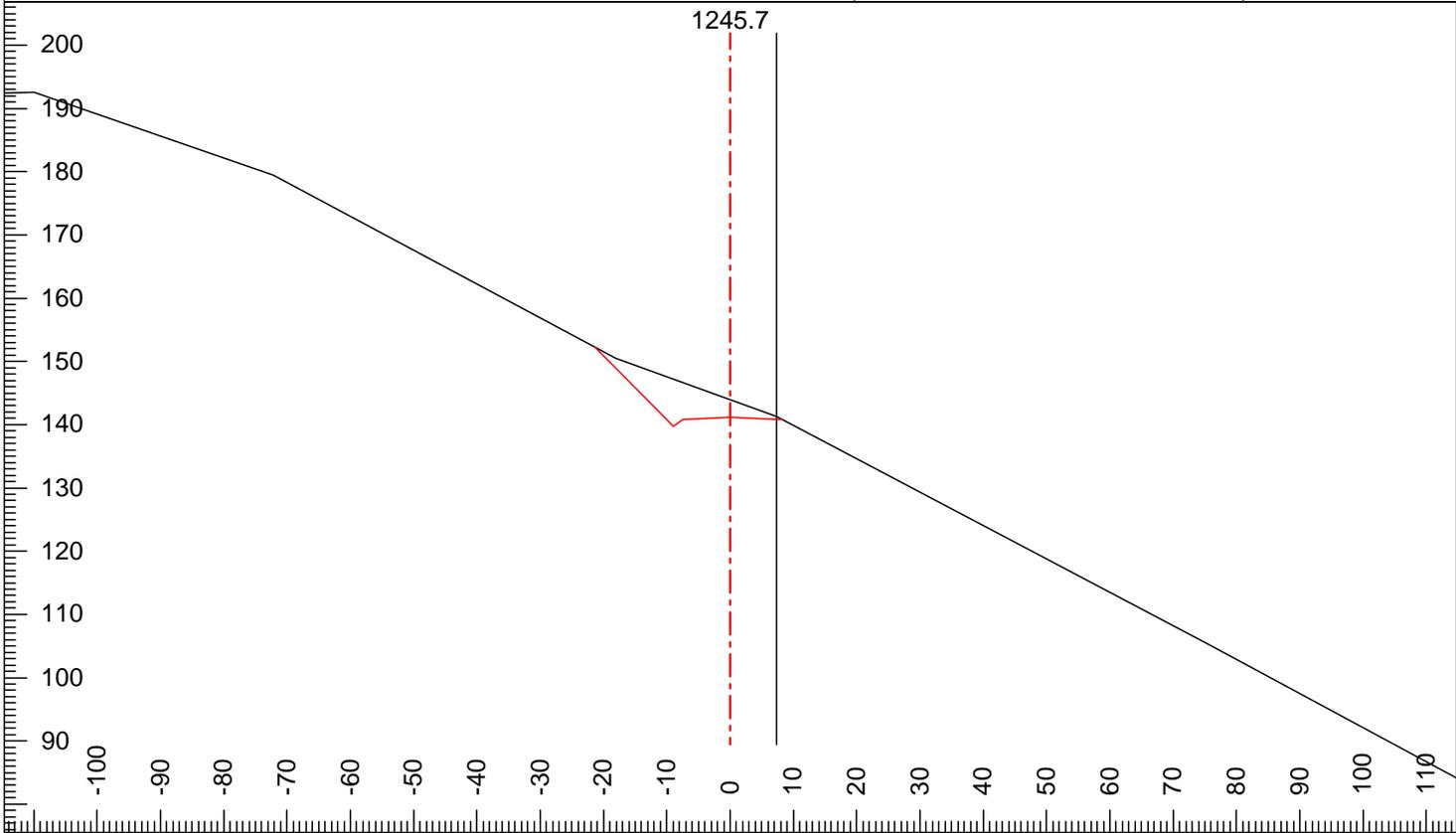
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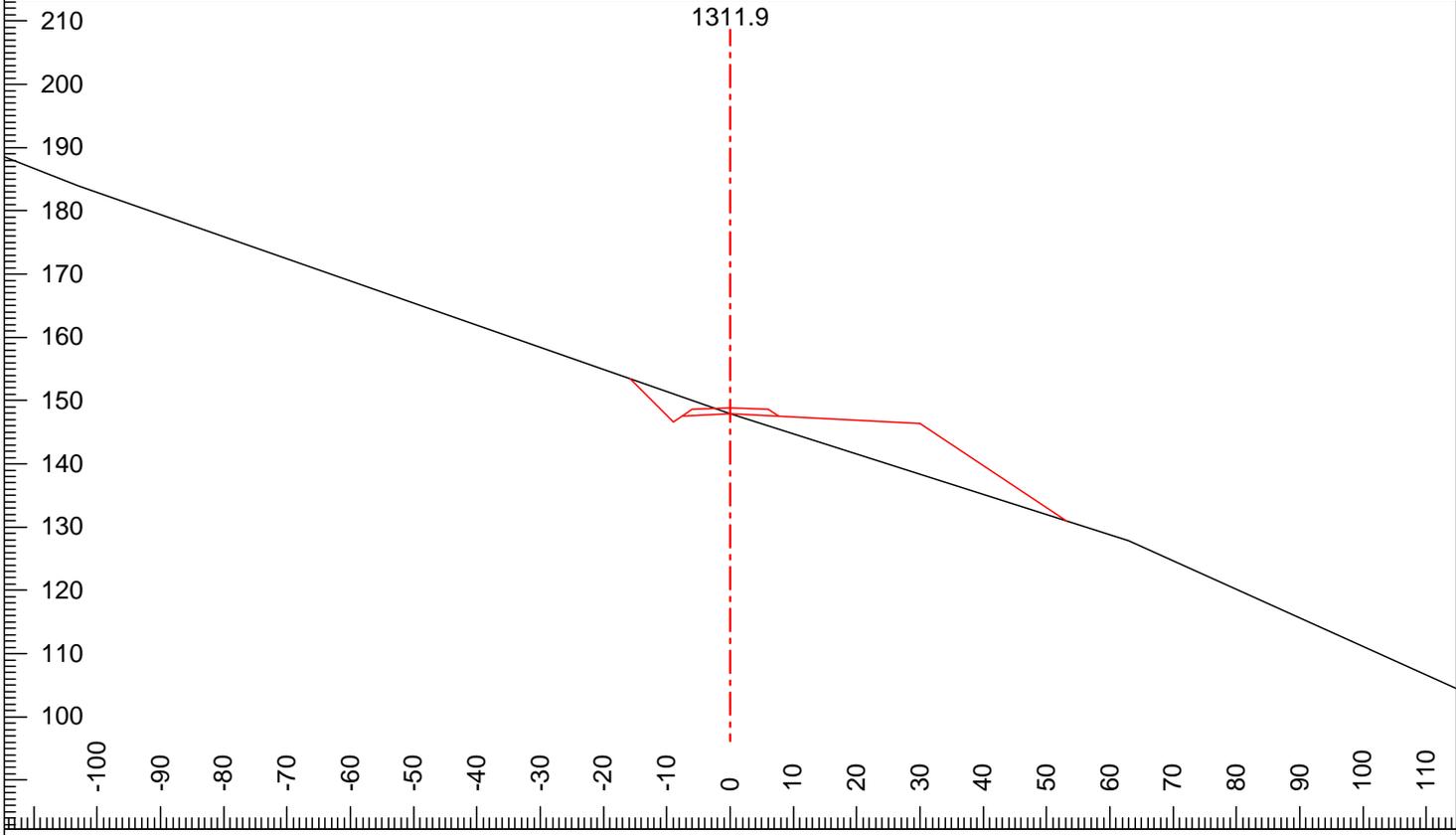
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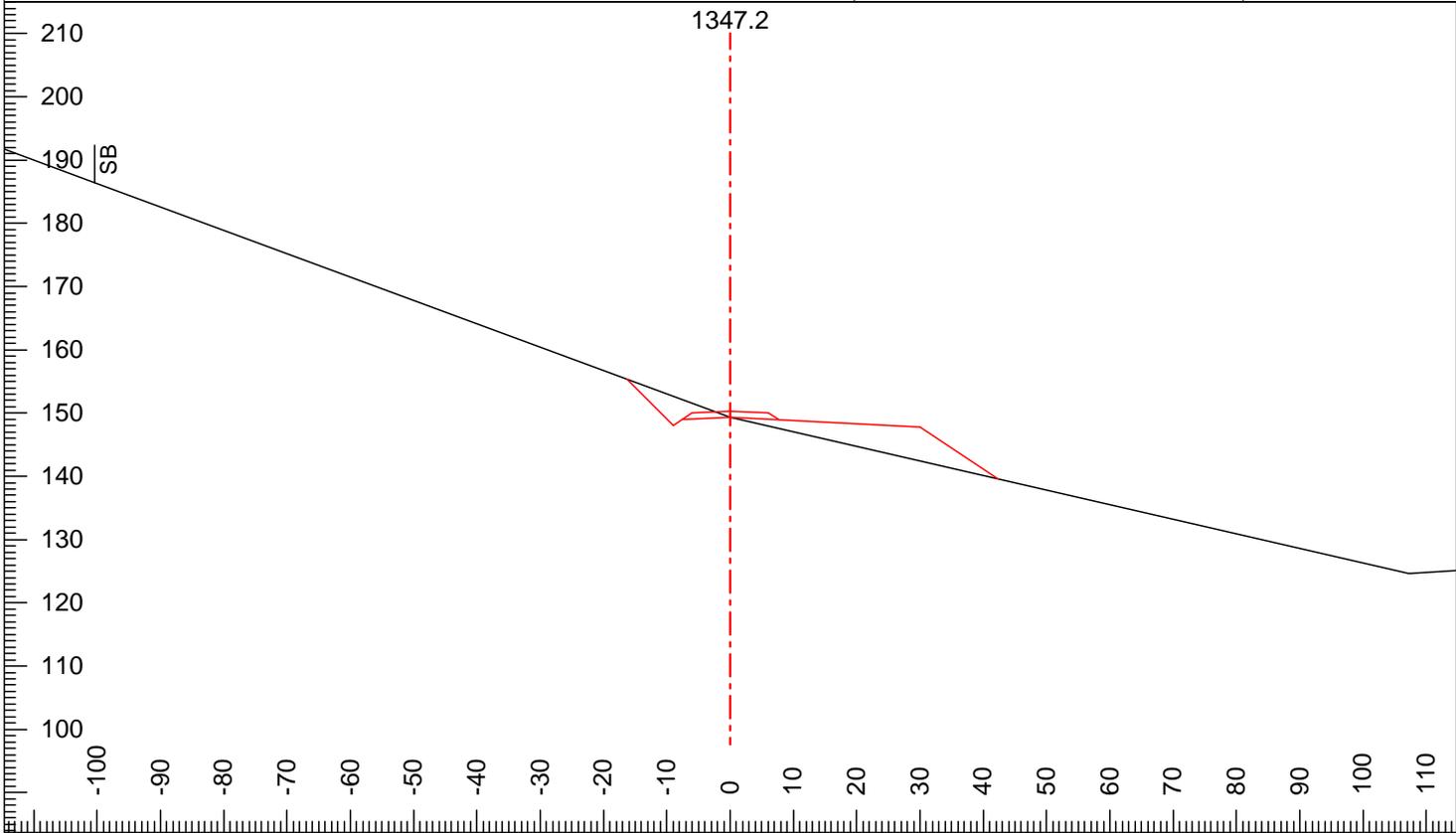
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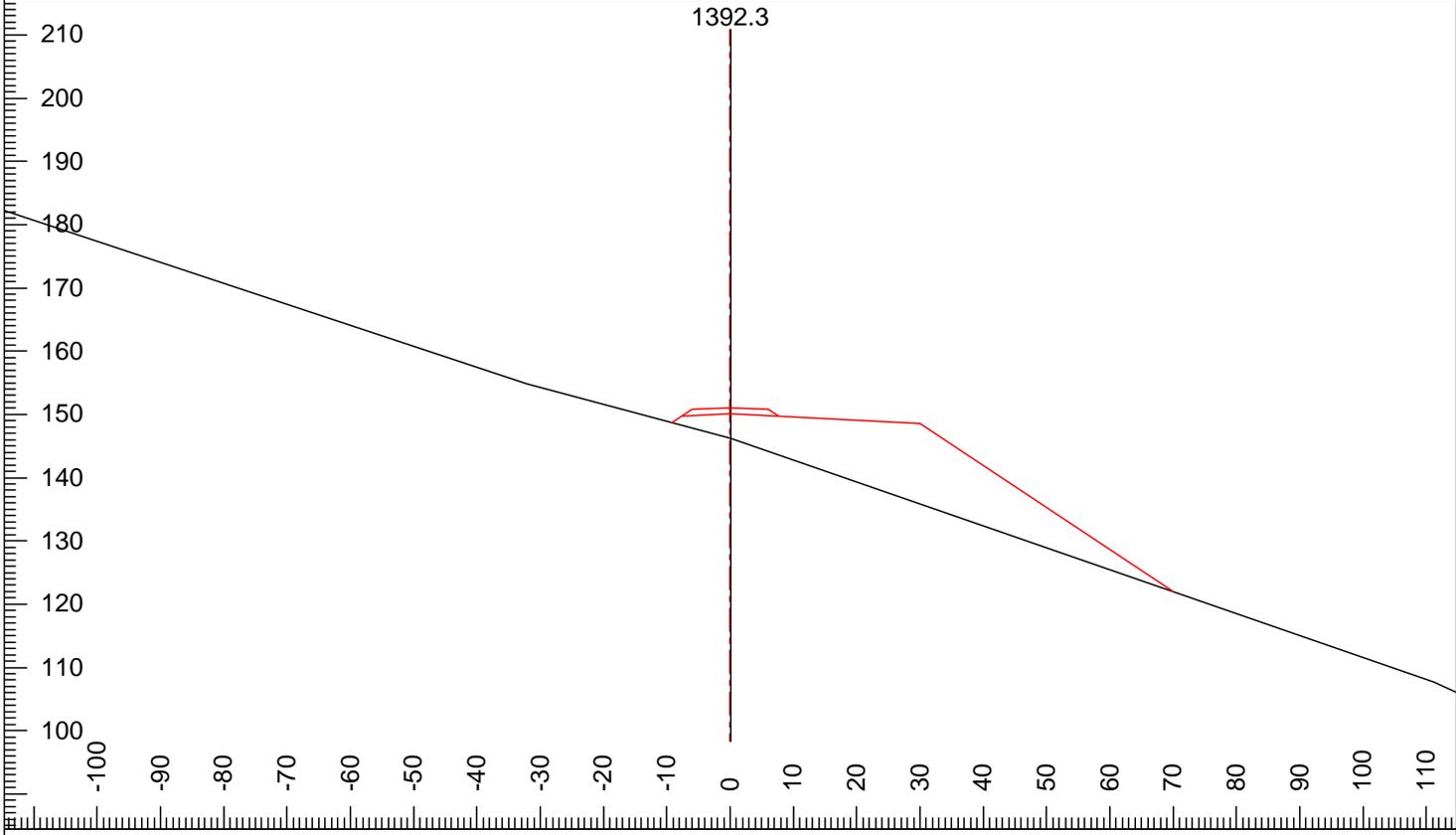
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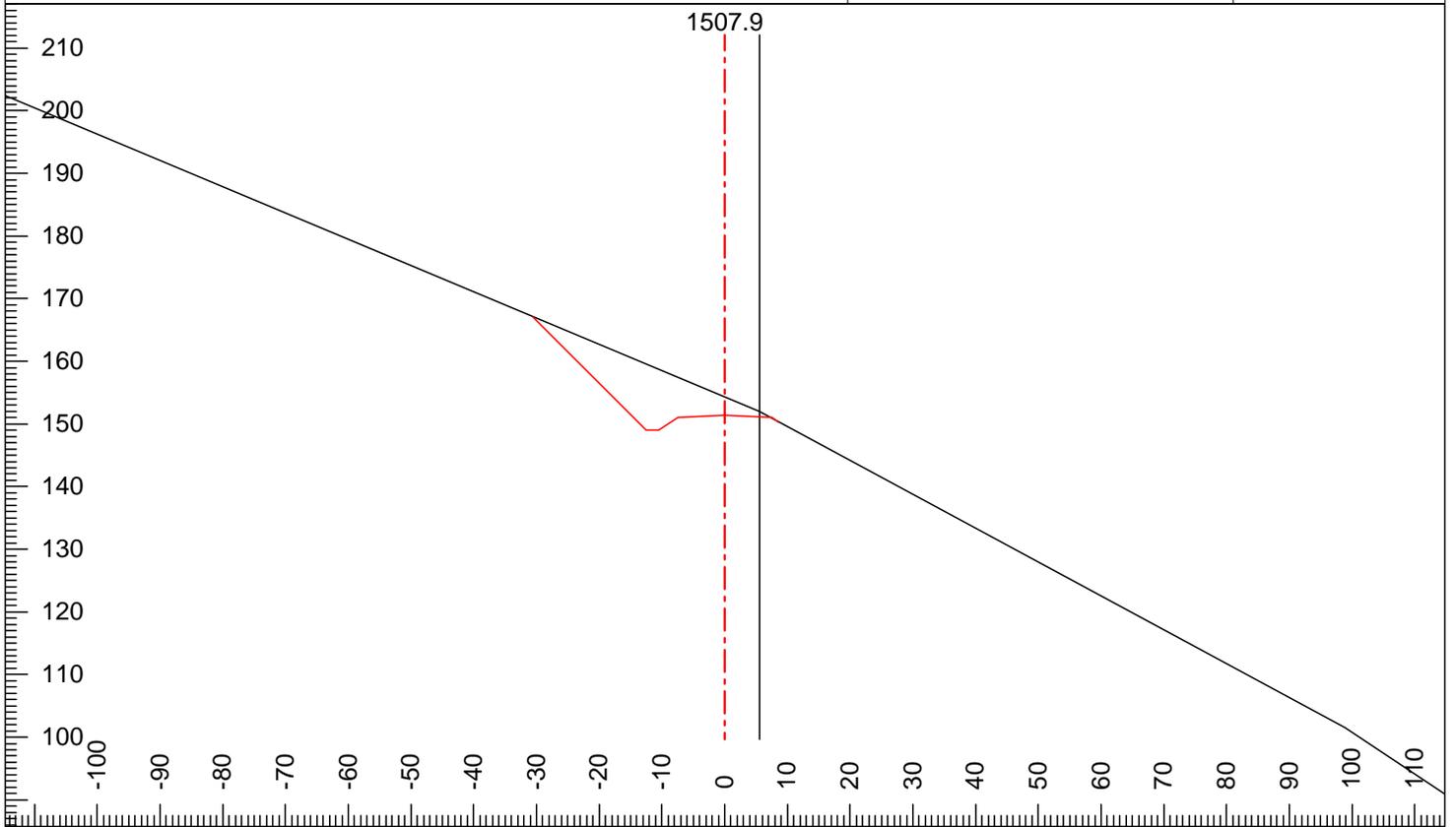
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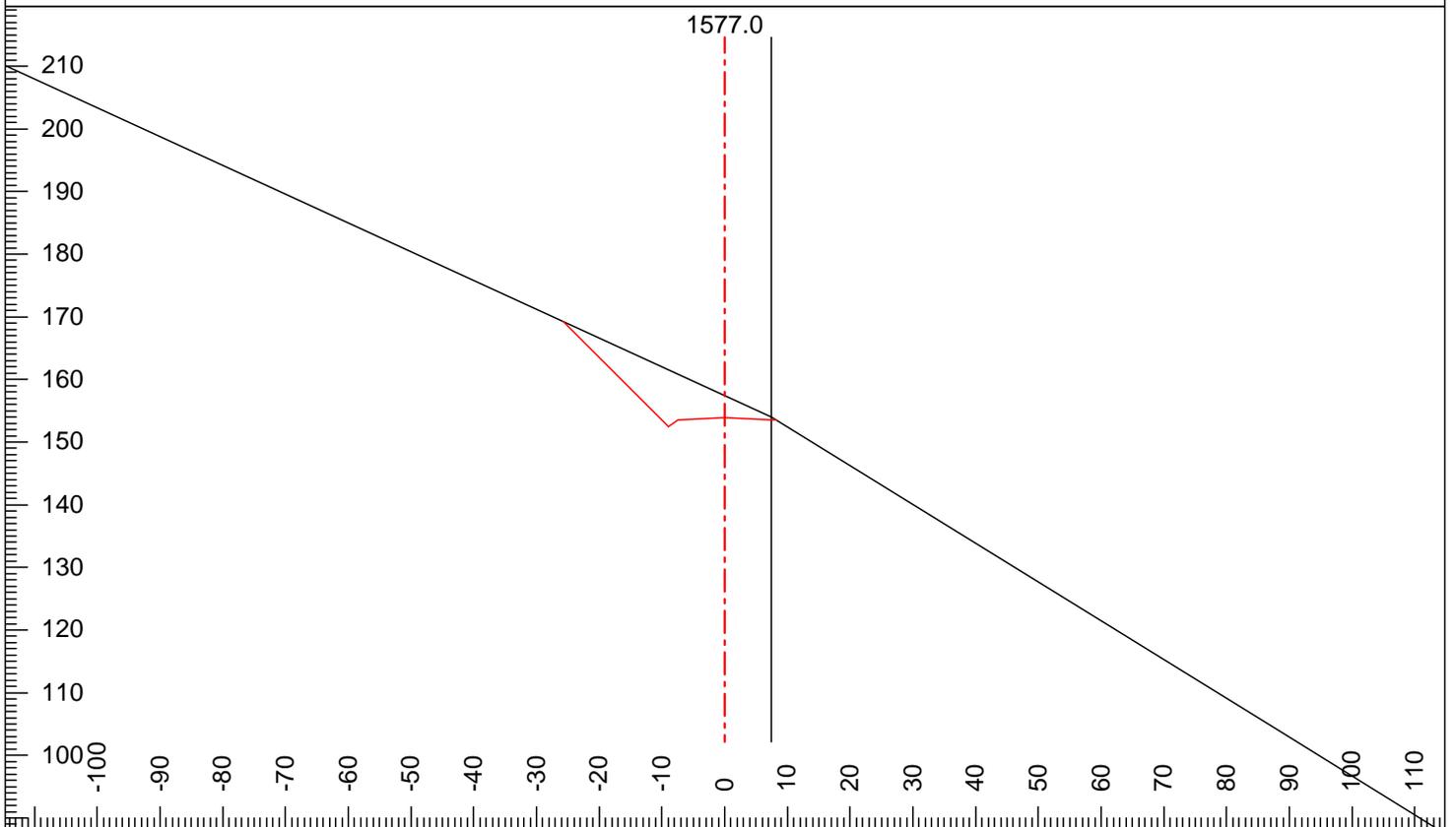
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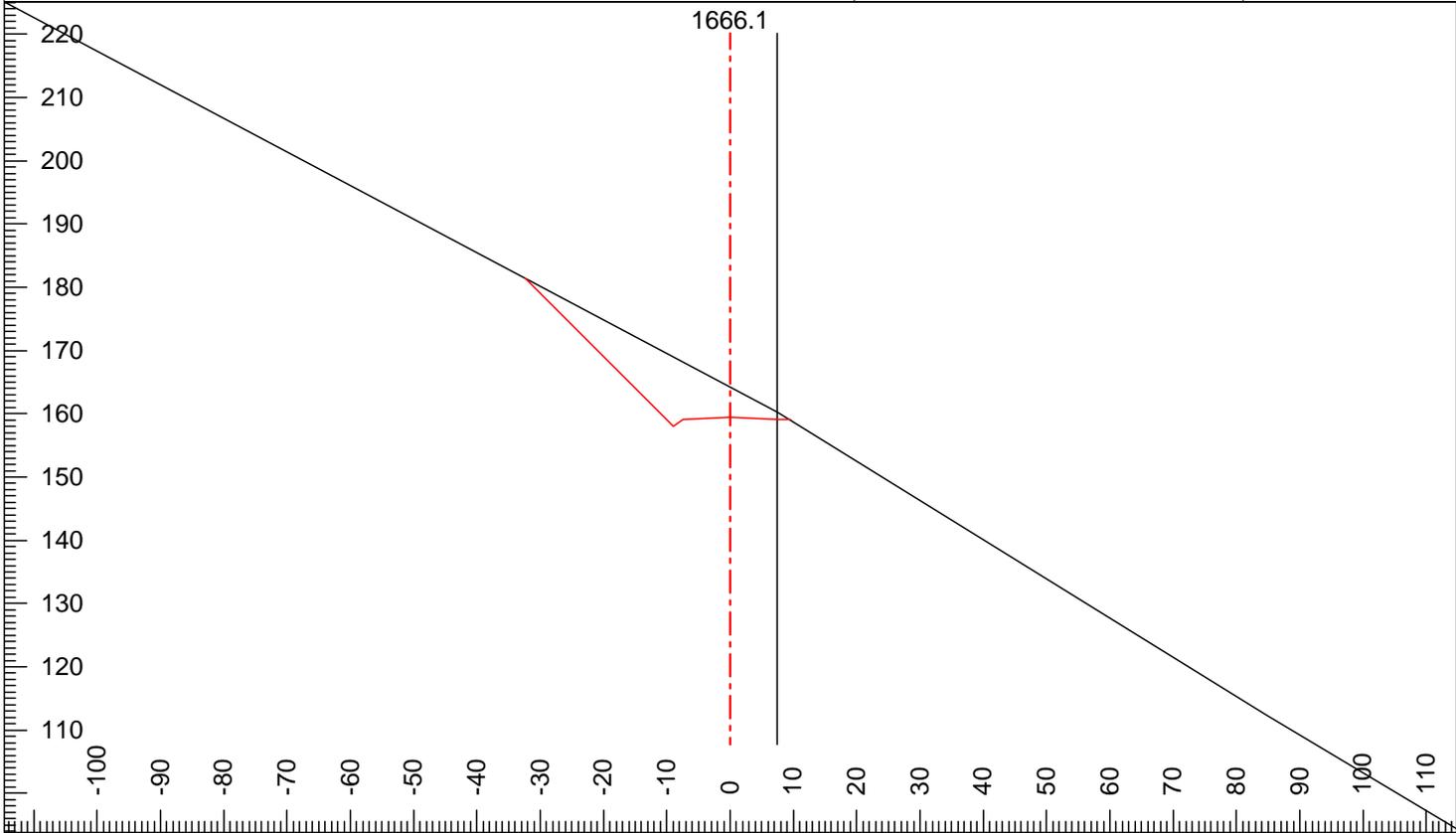
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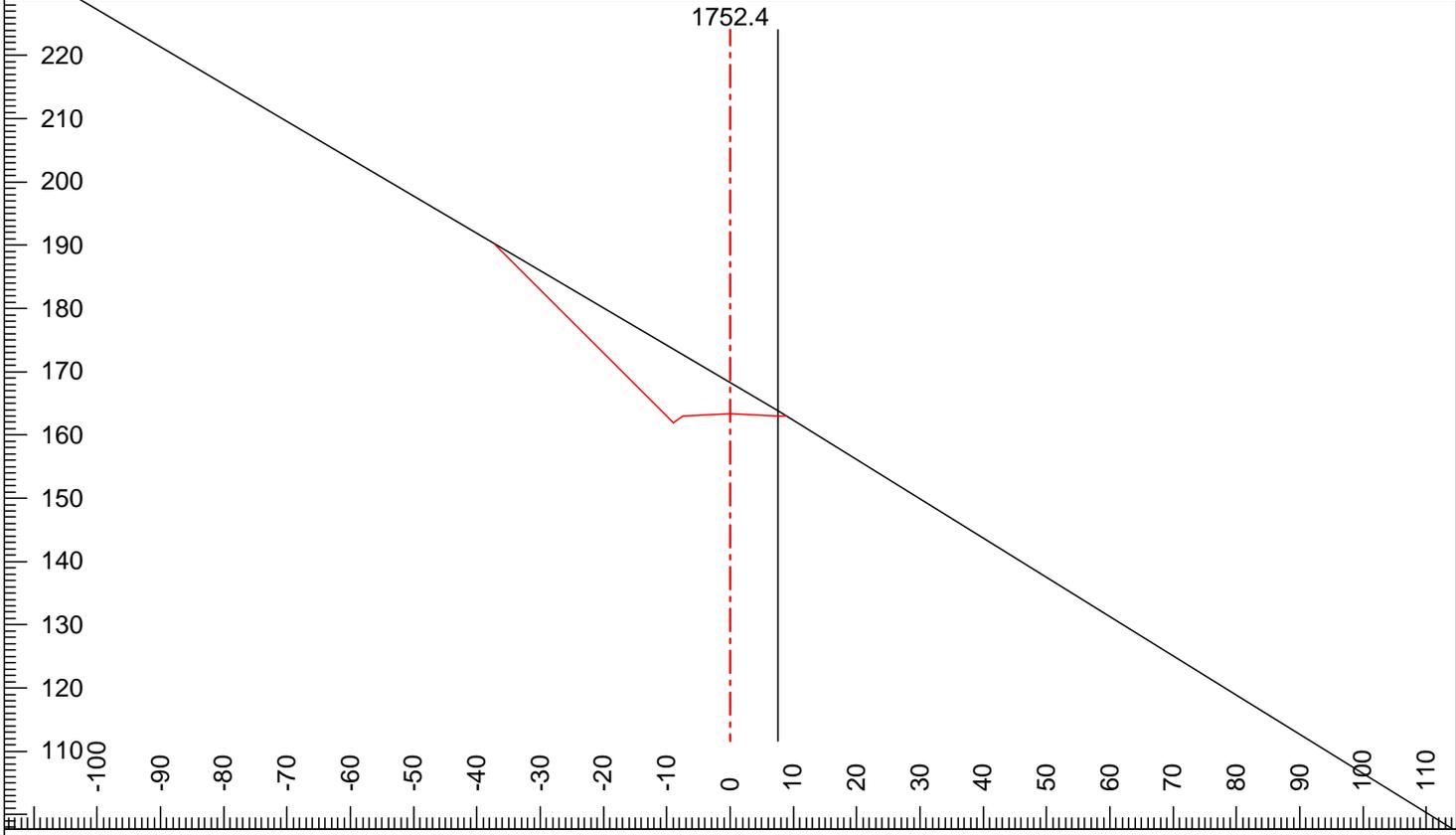
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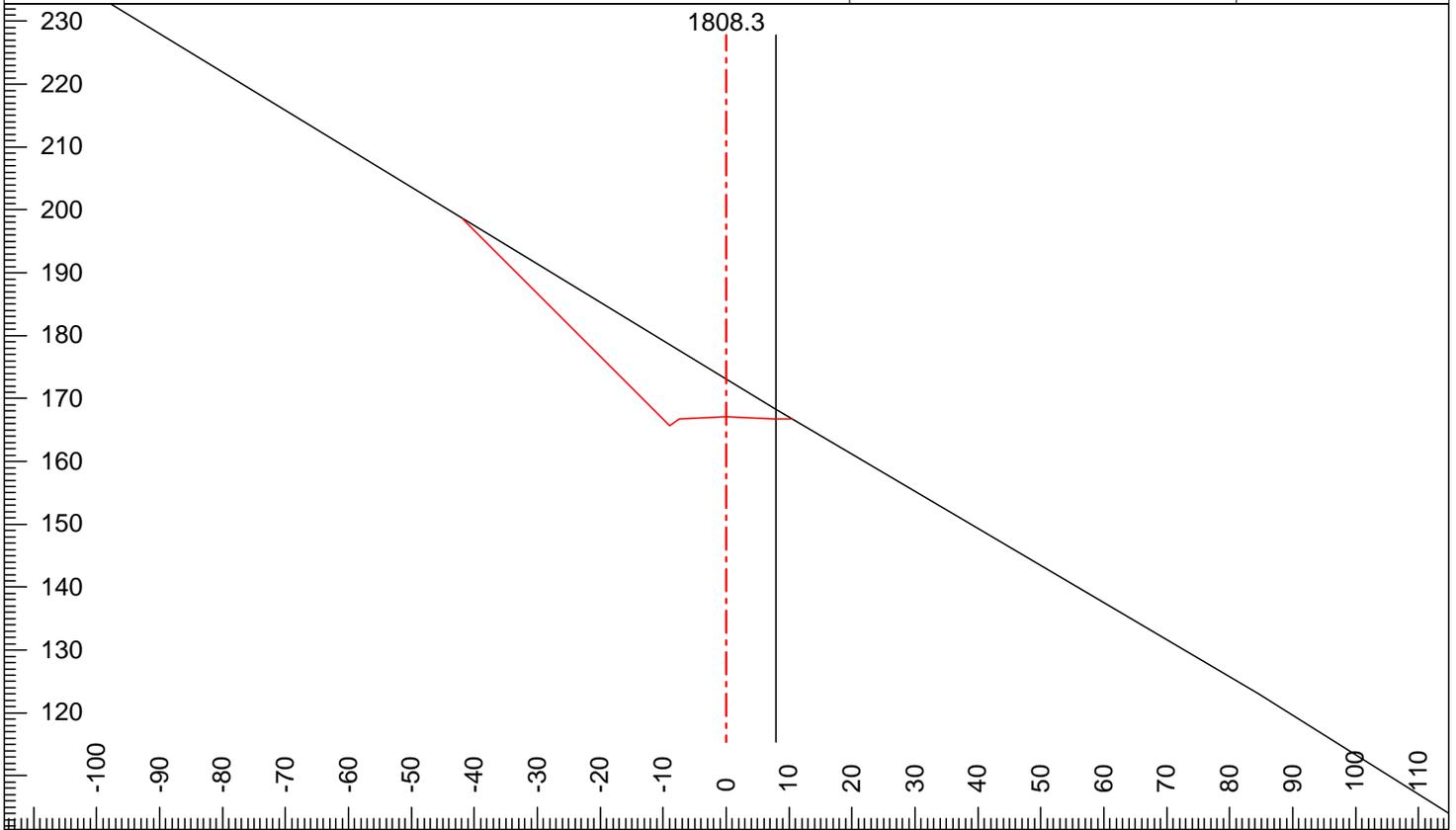
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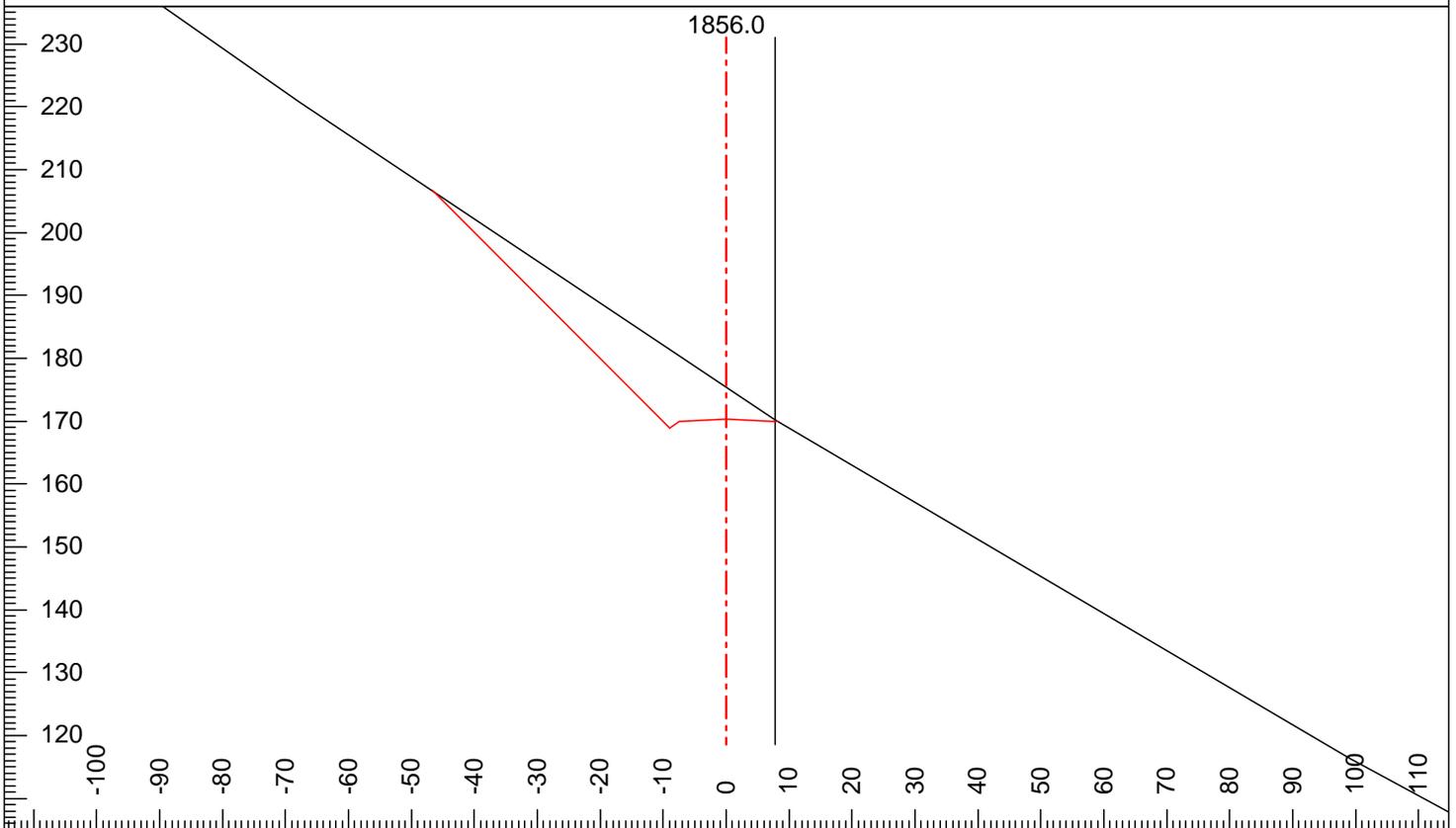
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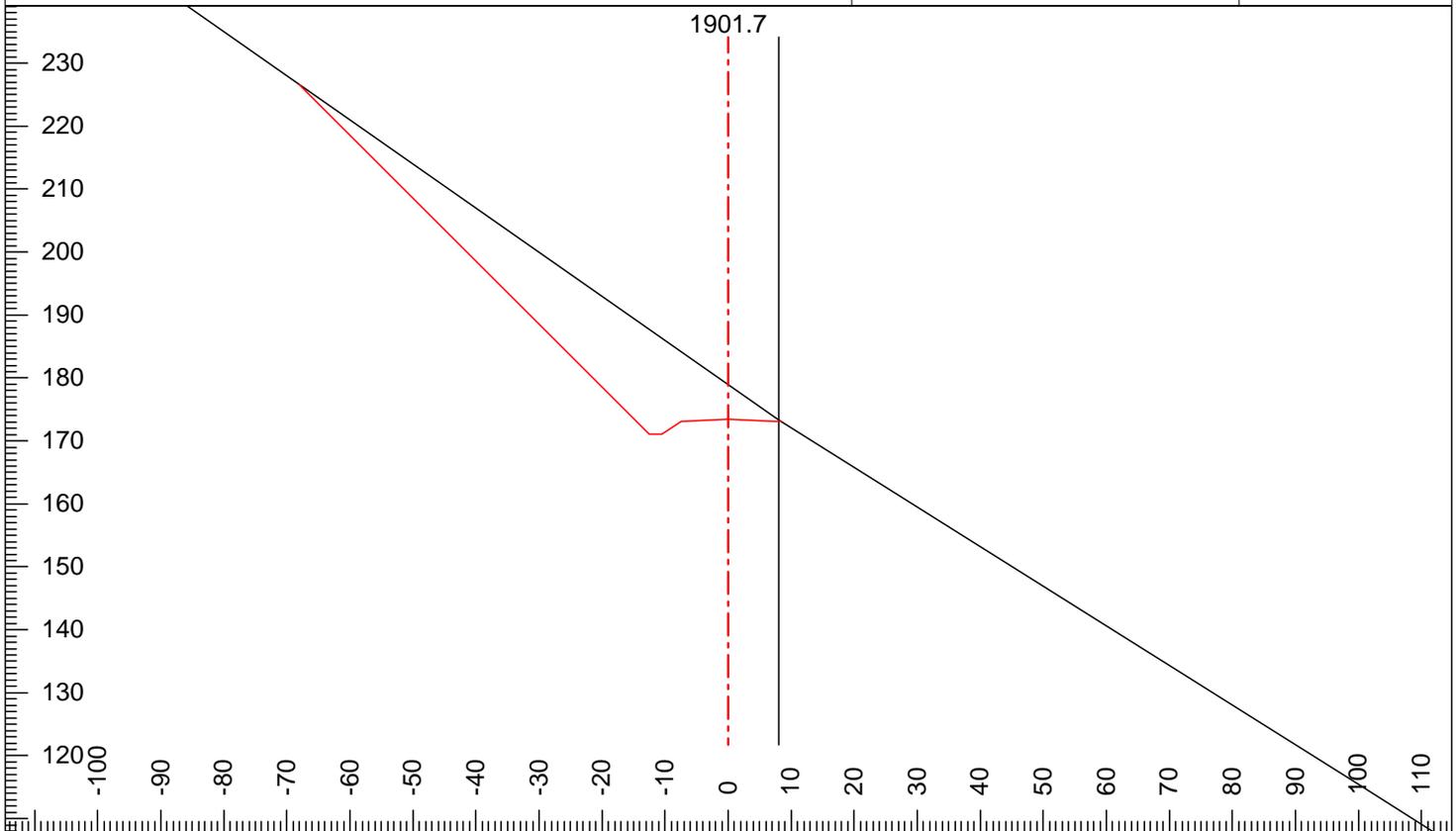
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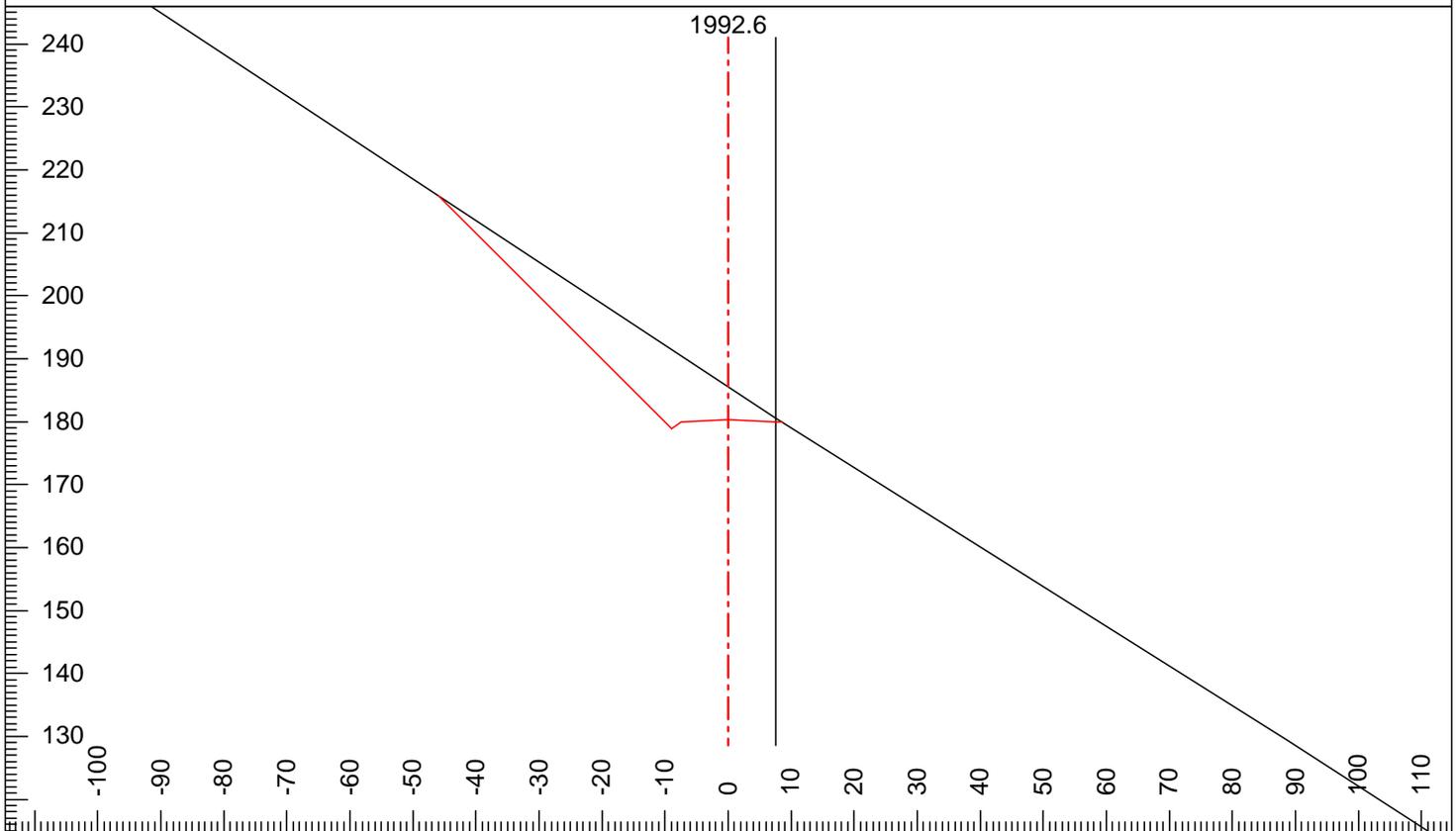
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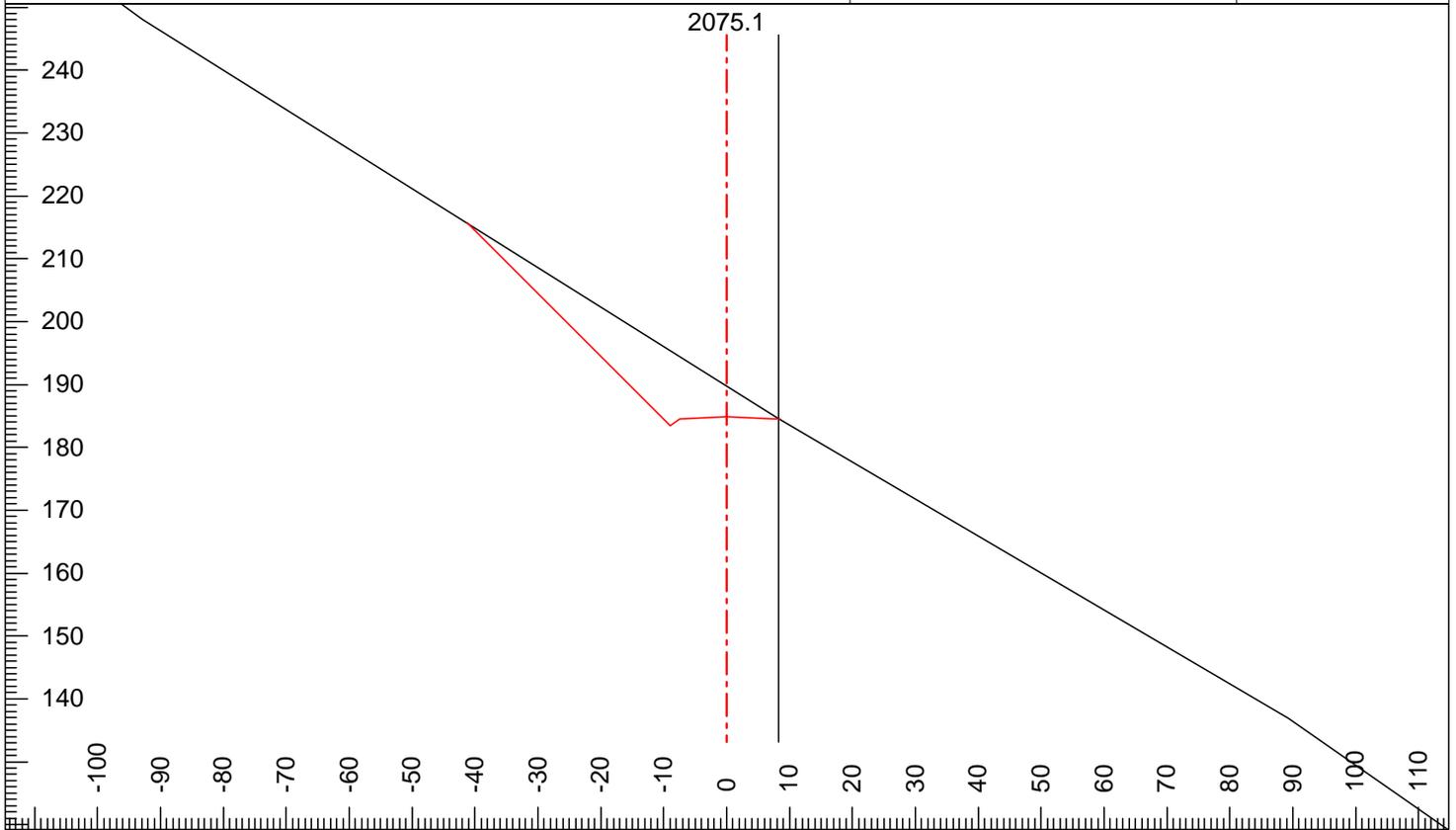
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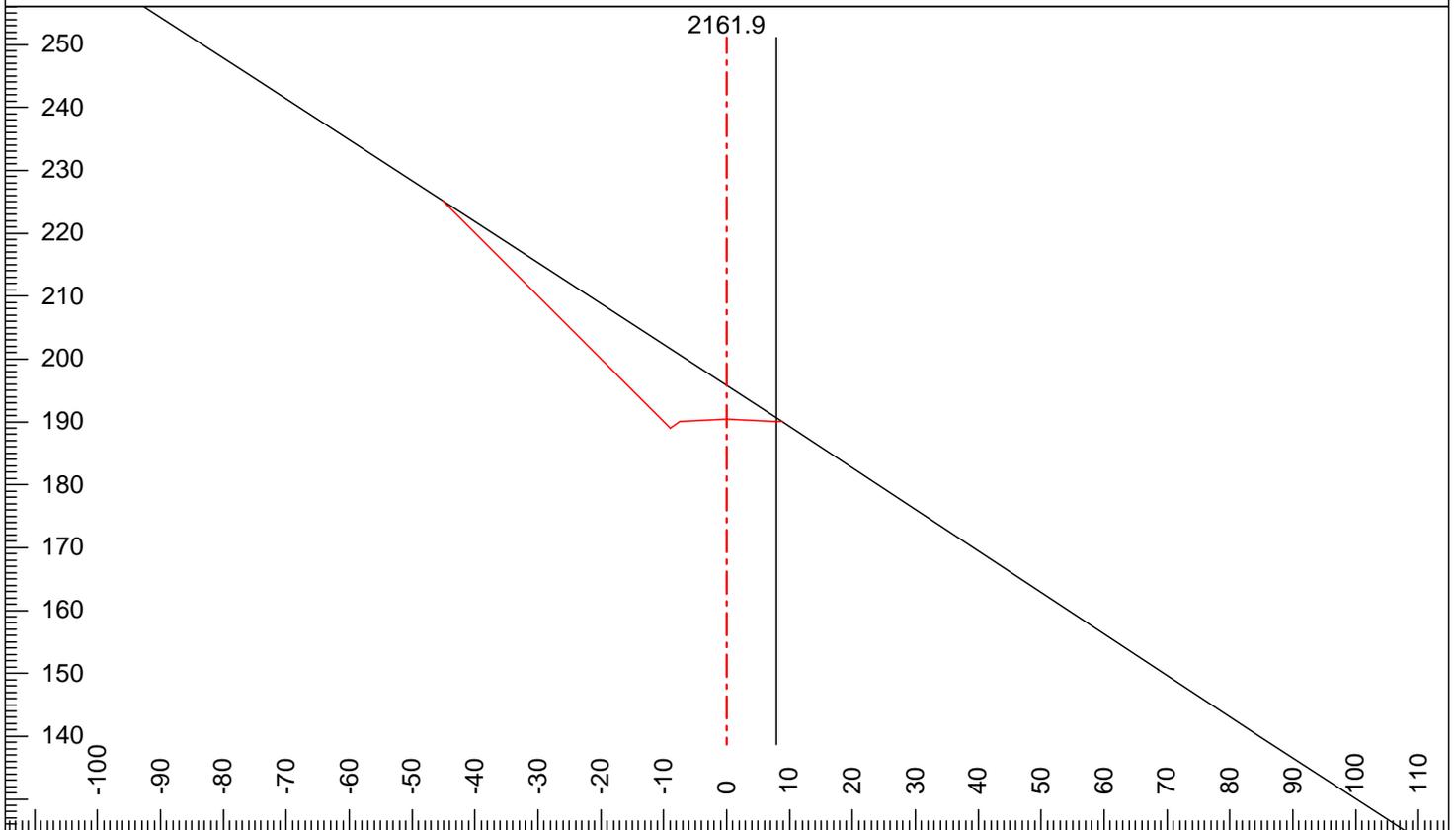
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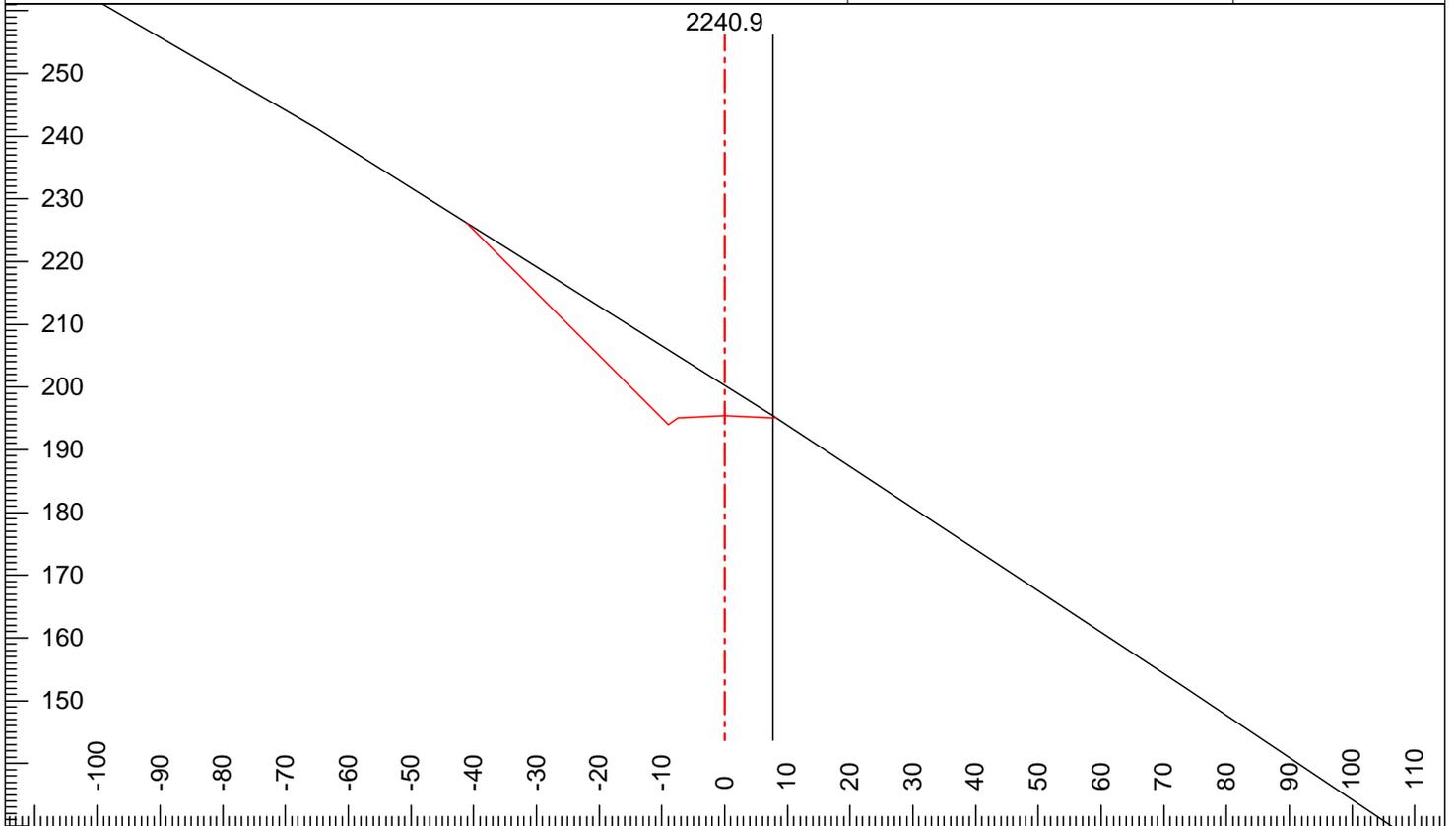
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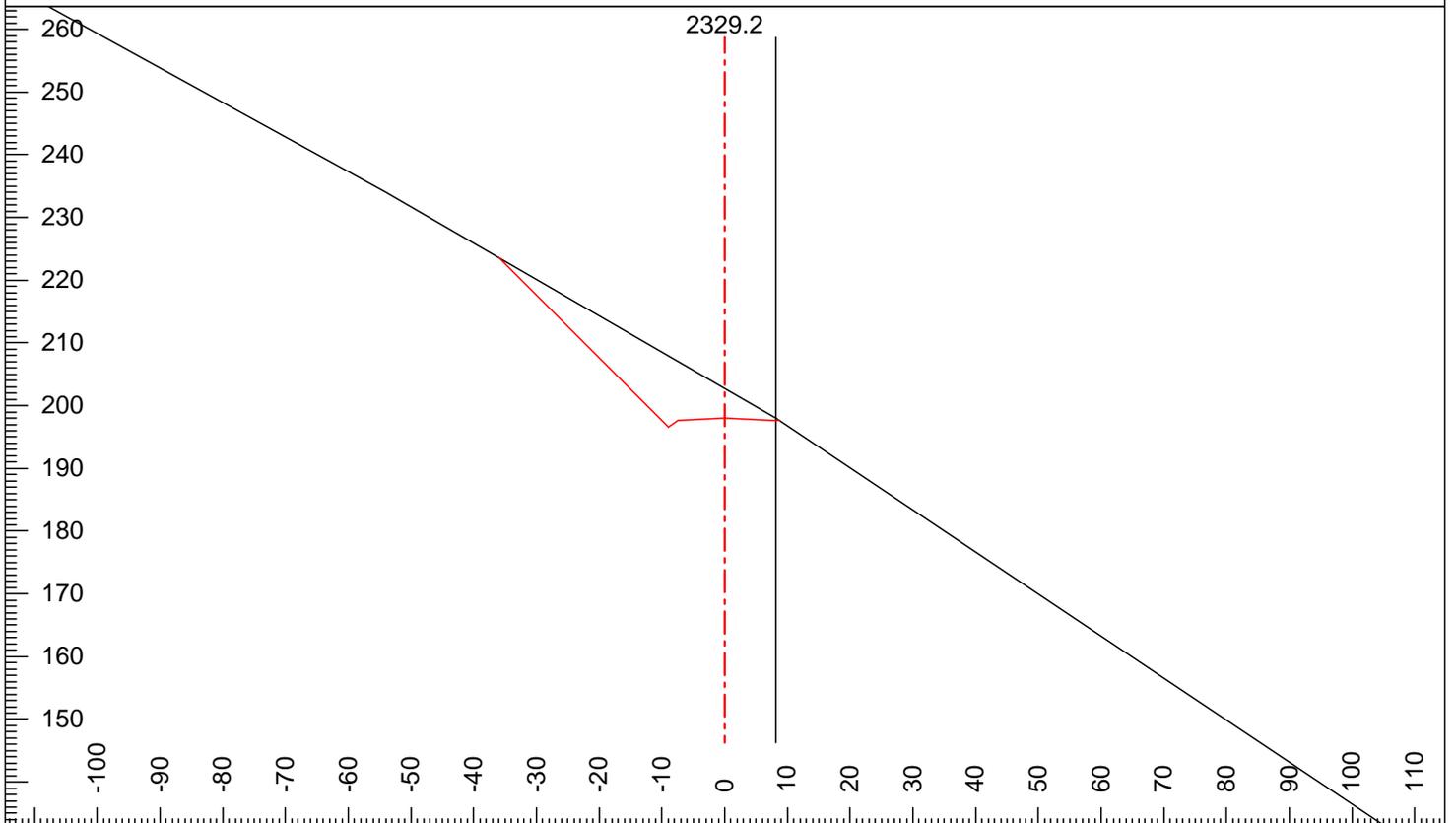
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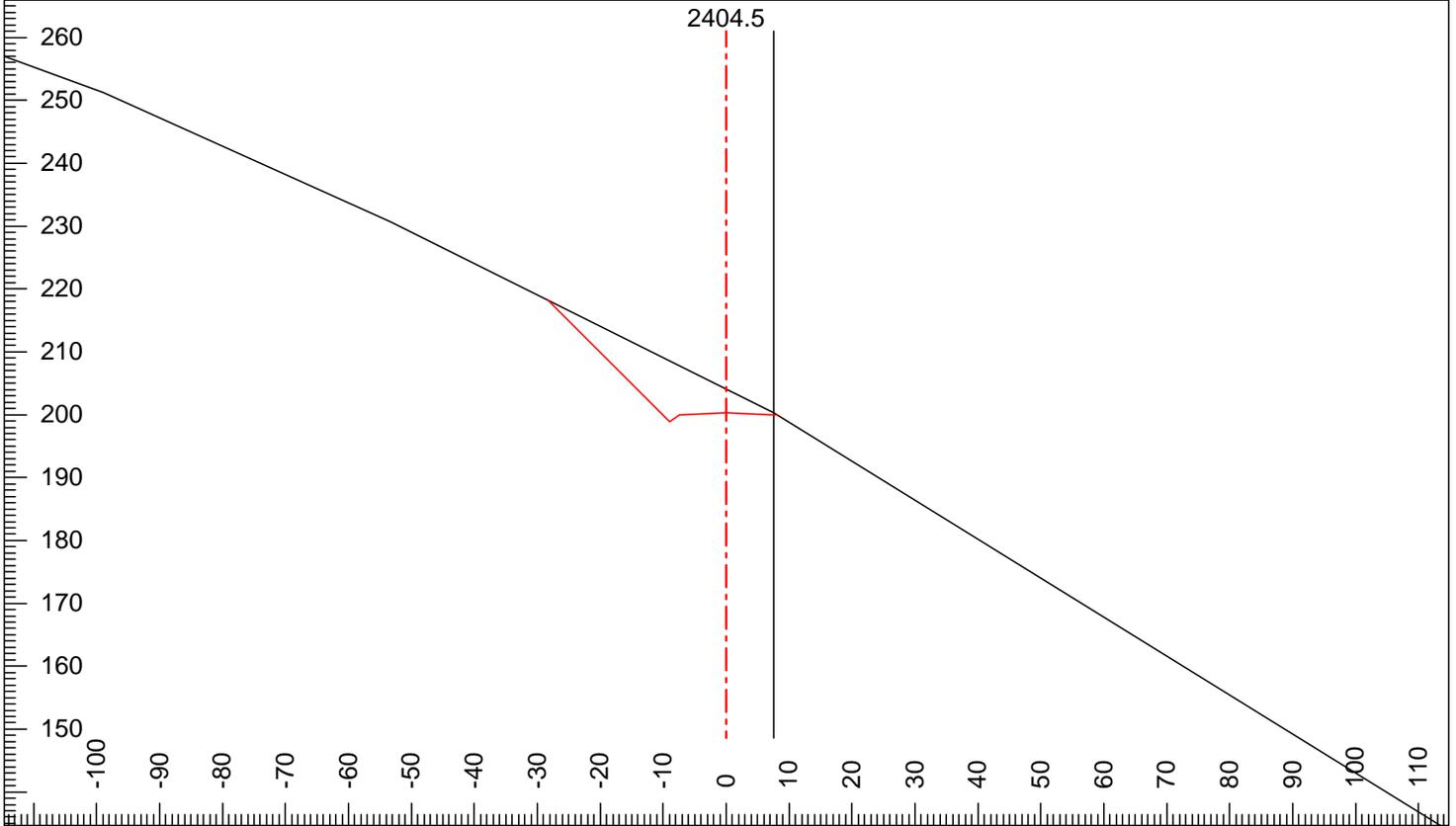
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L-Strn:	2329.2	Grd.Nxt.:	3	Ssl: (Av)	58	H. Offset:	-8.1	CL Elev:	198.0	Rd. Wd. L:	7.5
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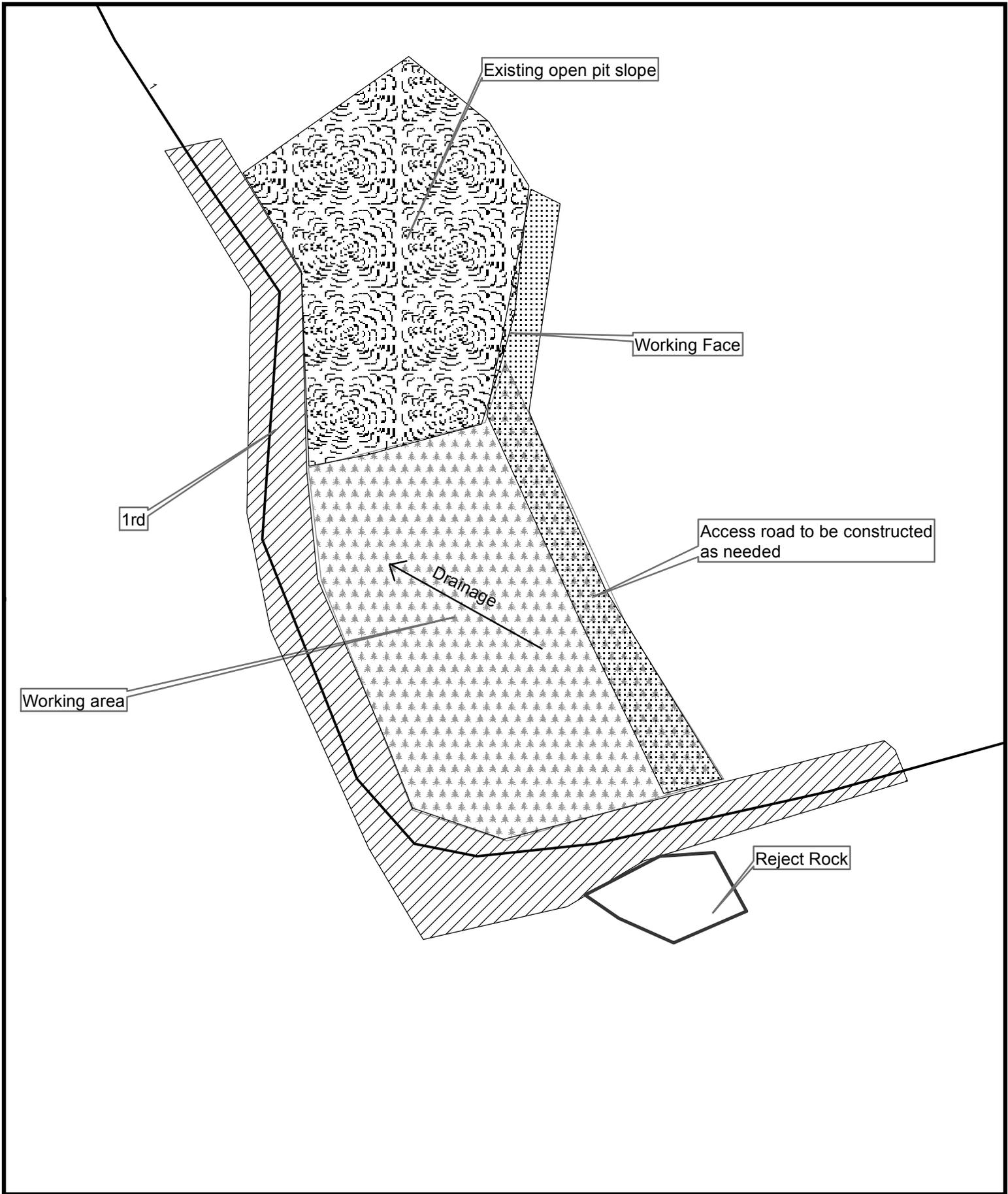
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**Legal Description: W1/2 SE1/4 Section 23 Township 14 North Range 6 East, W.M.**

**Rock Pit Name: 1Rd Shale Pit**

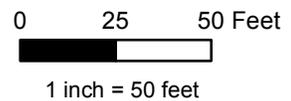
**PIT DEVELOPMENT PLAN, pg 1of 2**

1. Pile debris in clean, burnable piles as directed by the Contract Administrator.
2. A minimum stripping width of 20 feet must be maintained from all pit faces and at the termination of operations pit shall be left in said condition. No undercutting shall be permitted.
3. Endhaul overburden to waste area at station 0+50 on the 18rd. The waste area is located on the west side of the road.
4. Pile all reject rock and overburden away from pit working area as shown on pit drawing.
5. Oversize material shall not exceed 10% of the total mined for the sale. Oversize material is defined as rock fragments larger than 1.5 feet in any dimension.
6. Maximum face height shall be 20 feet.
7. The minimum width of benches shall be 15 feet, unless specified otherwise, in writing by the Contract Administrator.
8. Pit floor shall be sloped to allow drainage as shown. No ponding will be allowed.
9. At the completion of operations, Purchaser shall request written approval from the Contract Administrator for final rock source condition and compliance with the terms of this plan.
10. Quantity and quality of ballast pit are not guaranteed by the State.
11. See "1Rd Shale Pit Plan View, pg 2 of 2" drawing for additional information.



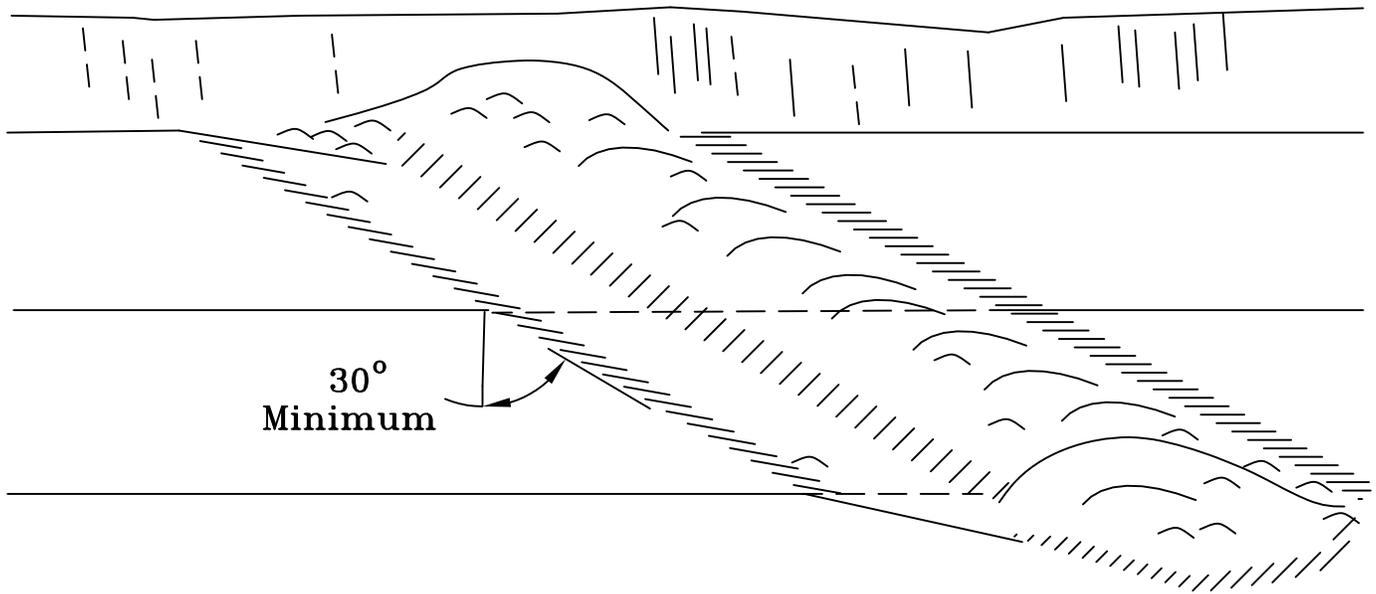
# 1Rd Shale Pit Plan

## pg 2 of 2

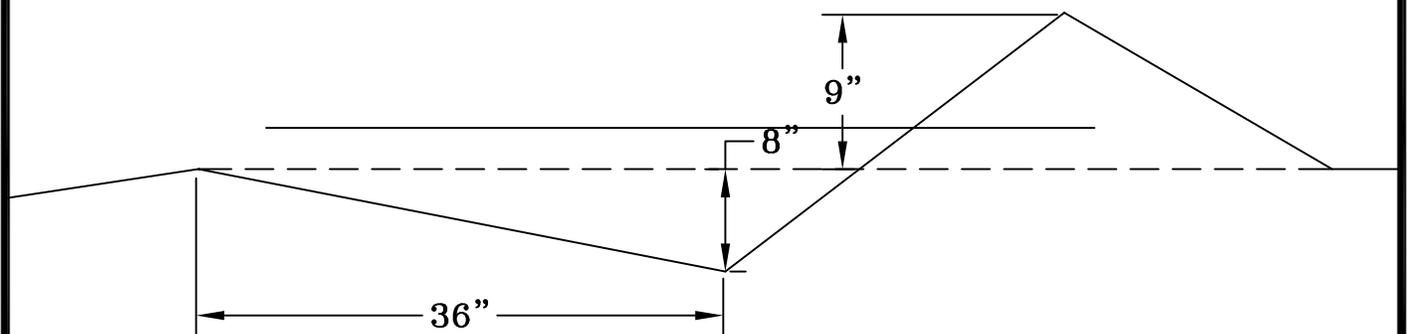


# Drivable Water Bar Detail

## Cross Ditch



## Cross Section at Centerline



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

Drivable Water Bar Detail	
	WASHINGTON STATE DEPARTMENT OF Natural Resources
SPS Region	

**SUMMARY - ROAD DEVELOPMENT COSTS**

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

SALE/PROJECT NAME: **Baler**

CONTRACT NUMBER: **30-091808**

TYPE:	Construction	Pre-Haul Maintenance
NUMBER OF STATIONS:	23.30	560.95 pre-haul
AVG. SIDESLOPE:	65	
CLEARING AND GRUBBING:	\$6,524	
EXCAVATION AND FILL:	\$92,268	
MISC. MAINTENANCE:		\$4,540
ROCK TOTALS (Cu. Yds.):		
Ballast:	\$1,651	\$3,451
Surfacing:	\$0	\$0
Riprap/Quarry Spalls:	\$29	\$17
Stockpiles:		\$0
CULVERTS AND FLUMES:	\$3,012	\$1,807
STRUCTURES:	\$0	\$0
GENERAL EXPENSES:	\$8,279	\$1,080
MOBILIZATION:	\$2,350	\$2,350
TOTAL COSTS:	\$114,113	\$13,245
COST PER STATION:	\$4,898	\$24
ROAD DEACTIVATION AND ABANDONMENT COSTS:		\$0

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

TOTAL (All Roads) =	\$127,357
SALE VOLUME MBF =	2,863
TOTAL COST PER MBF =	\$44.48

Plans to be furnished by:

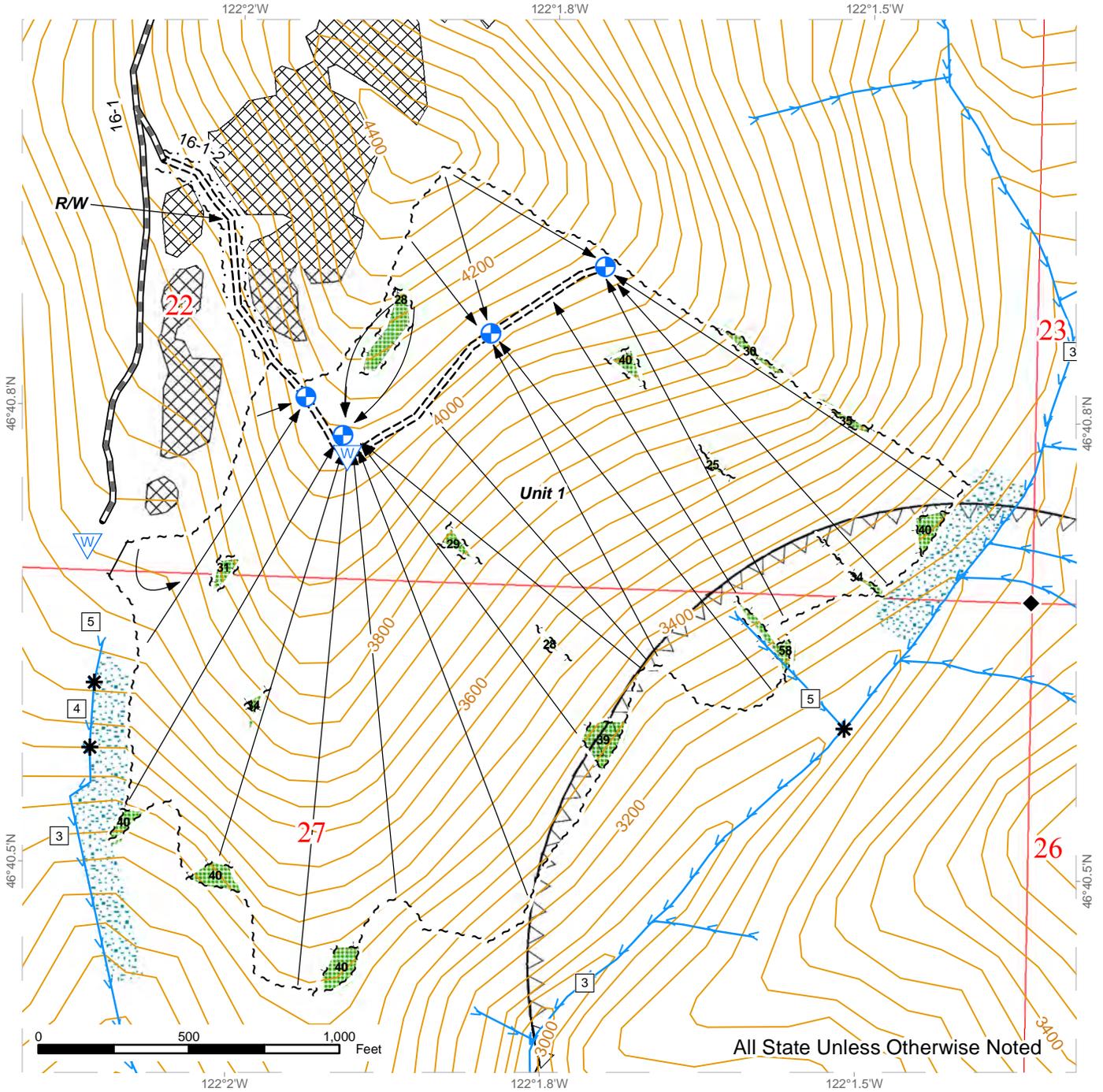
Compiled by:     M. Bell    

Date:     01/12/16

# LOGGING PLAN MAP

**SALE NAME:** BALER  
**AGREEMENT#:** 30-091808  
**TOWNSHIP(S):** T14R06E  
**TRUST(S):** Common School and Indemnity(3)

**REGION:** South Puget Sound Region  
**COUNTY(S):** LEWIS  
**ELEVATION RGE:** 3186-4397



All State Unless Otherwise Noted

Ground Harvest	Timing Restriction Zone	Stream Type
Cable Harvest	Leave Tree Area	Stream Type Break
Sale Boundary Tags	Riparian Mgt Zone	Contours 40-foot
Leave Tree Tags	Talus	Monumented Corners
Right of Way Tags	Required Pre-Haul Maintenance	Public Land Survey Sections
Reprod	Required Construction	DNR Managed Lands
	Streams	