



TIMBER NOTICE OF SALE

SALE NAME: HODAG

AGREEMENT NO: 30-102173

AUCTION: June 13, 2023 starting at 10:00 a.m., COUNTY: King South Puget Sound Region Office, Enumclaw, WA

SALE LOCATION: Sale located approximately 10 miles east of Black Diamond.

PRODUCTS SOLD AND SALE AREA:

All timber, except trees marked with blue or pink paint or bounded out by yellow leave tree area tags, and down timber existing more than 5 years from the day of sale, bounded by the following: white timber sale boundary tags, property line marked with white Carsonite posts, timber type change, and the 5000, 5030, 5040, 5041, and MDP-2 roads in Unit #1; white timber sale boundary tags, and the 5000, 5053, MDP, and MDP-3 roads in Unit #2; white timber sale boundary tags, and the 5000, 5051, 5053, and 5053-4 roads in Unit #3; white timber sale boundary tags, and the 5000 Road in Unit #4; white timber sale boundary tags, and the 5000, and 5054 roads in Unit #5; white timber sale boundary tags, and the 5000, 5054, and 5060 roads in Unit #6;

All forest products above located on part(s) of Sections 7 and 8 all in Township 21 North, Range 8 East, Sections 1 and 2 all in Township 21 North, Range 7 East, Sections 35 and 36 all in Township 22 North, Range 7 East, W.M., containing 263 acres, more or less.

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

ESTIMATED SALE VOLUMES AND QUALITY:

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

MINIMUM BID: \$751,000.00 BID METHOD: Sealed Bids

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

EXPIRATION DATE: October 31, 2026 ALLOCATION: Export Restricted

BID DEPOSIT: \$75,100.00 or Bid Bond. Said deposit shall constitute an opening bid at the appraised price.

HARVEST METHOD: Harvest activities are estimated to be 44 percent uphill cable, and 56 percent ground based harvest. Cable and ground based equipment, with cable-tethered equipment limited to sustained slopes 75 percent or less, self-leveling equipment limited to sustained slopes



## TIMBER NOTICE OF SALE

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65 percent or less, and all other ground based equipment limited to sustained slopes 45 percent or less. Yarding may be restricted during wet weather if rutting becomes excessive, per clause H-017.

Timber haul will not be permitted on weekends or State recognized holidays, unless authorized in writing by the Contract Administrator.

### **ROADS:**

21.87 stations of optional construction. 57.32 stations of optional reconstruction. 330.29 stations of required prehaul maintenance. 5.15 stations of optional prehaul maintenance. 12.95 stations of abandonment, if reconstructed. 6.16 stations of abandonment, if constructed. Purchaser maintenance on all roads used.

Rock for this proposal can be obtained from the State owned PC Pit, 5000 Pit, or 5051 Pit at no cost to the Purchaser or any commercial rock source at the Purchaser's expense. Rock source development is to be completed per Section 6 in the Road Plan and according to the Rock Source Development Plan if rock is obtained from the PC Pit.

### **ACREAGE DETERMINATION**

**CRUISE METHOD:** Acreage was determined by traversing boundaries by GPS. GPS data files are available at DNR's website for timber sale packets. See cruise narrative for cruise method.

**FEES:** \$170,612.00 is due on day of sale. \$9.00 per MBF is due upon removal. These are in addition to the bid price.

**SPECIAL REMARKS:** Please note individual leave trees within Unit #1 are marked with pink paint. Blue painted trees within Unit #1 can be cut. Individual leave trees within Units #2 - #6 are marked with blue paint. Tagged leave tree clumps within all units are bounded out with yellow leave tree area tags.

This area is typically inaccessible due to snow from November through May. Contact Nick Chicano at 360-509-1079 for current road conditions.

Buried powerlines are located on the 5000, MDP, and MDP-3 roads.

Cut all vine maple greater than 6 feet in height within the harvest units, leaving a stump no more than 12 inches in height.

Timber harvest will be occurring around a communication tower. This sale includes extreme hazard abatement along the MDP-3 Road within 200 feet of the communication tower located within Unit #2. Purchaser shall provide a slash disposal plan for hazard abatement, per contract clause S-020.

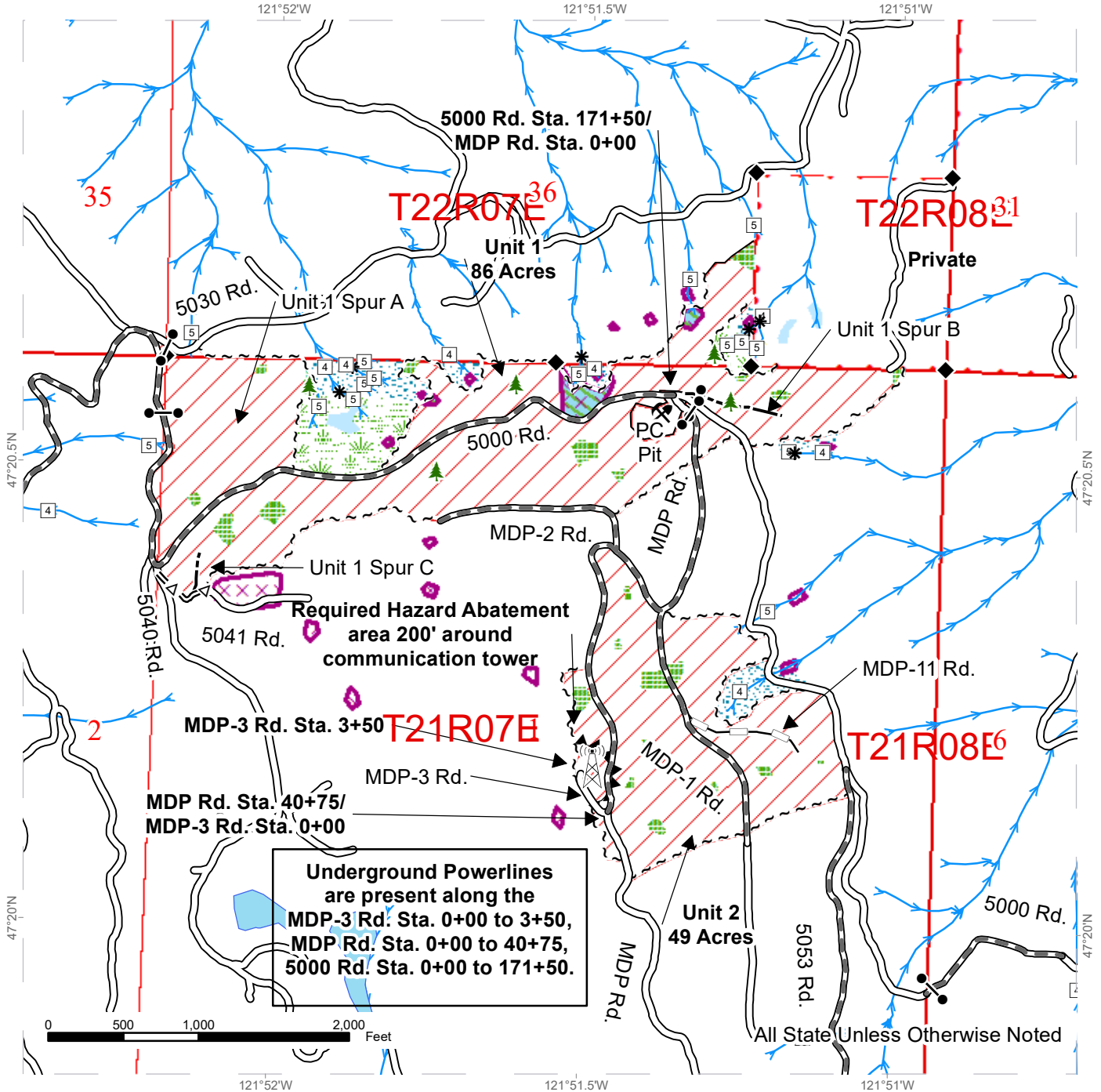
Note to cruisers and appraisers: Please refrain from leaving pink, orange or blue flagging from your cruises in or around the sale area to avoid confusion with DNR's marking. Additionally, for the safety of the public, please remove from roads all string from string boxes used during appraising or cruising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

See map for gate locations. Gate keys may be obtained by contacting the South Puget Sound Region office at 360-825-1631 or by contacting Nick Chicano at 360-509-1079.

# TIMBER SALE MAP

**SALE NAME:** HODAG  
**AGREEMENT #:** 30-102173  
**TOWNSHIP(S):** T21R7E, T21R8E, T22R7E  
**TRUST(S):** Capitol Grant (7), Common School and Indemnity (3), Normal School (8), State Forest Transfer (1)

**REGION:** South Puget Sound Region  
**COUNTY(S):** King  
**ELEVATION RGE:** 2160-3560



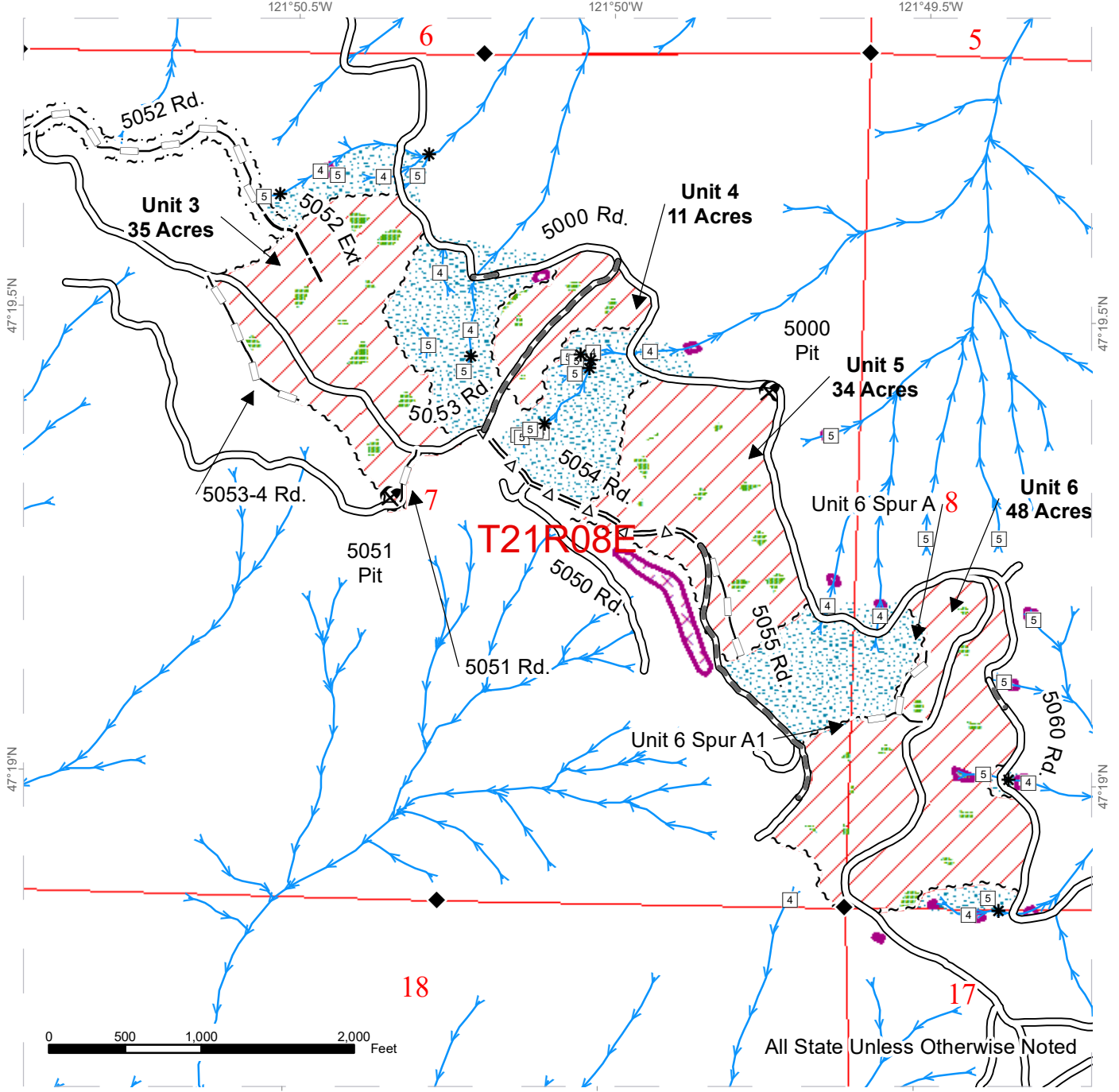
Variable Retention Harvest	Survey Monument	Communication Tower
Sale Boundary Tags	Wetlands - Non-forested	Leave Tree Area <1/4-acre
Timber Type Change	Non-Tradeable Leave Clump	Rock Pit
Hazard Abatement Area	Leave Tree Area	Existing Roads
DNR Managed Lands	Riparian Mgt Zone	Required Pre-Haul Maintenance
Streams	Wetland Mgt Zone	Optional Pre-Haul Maintenance
Stream Type	Tailhold Restriction Areas	Optional Construction
Stream Type Break		Optional Reconstruction



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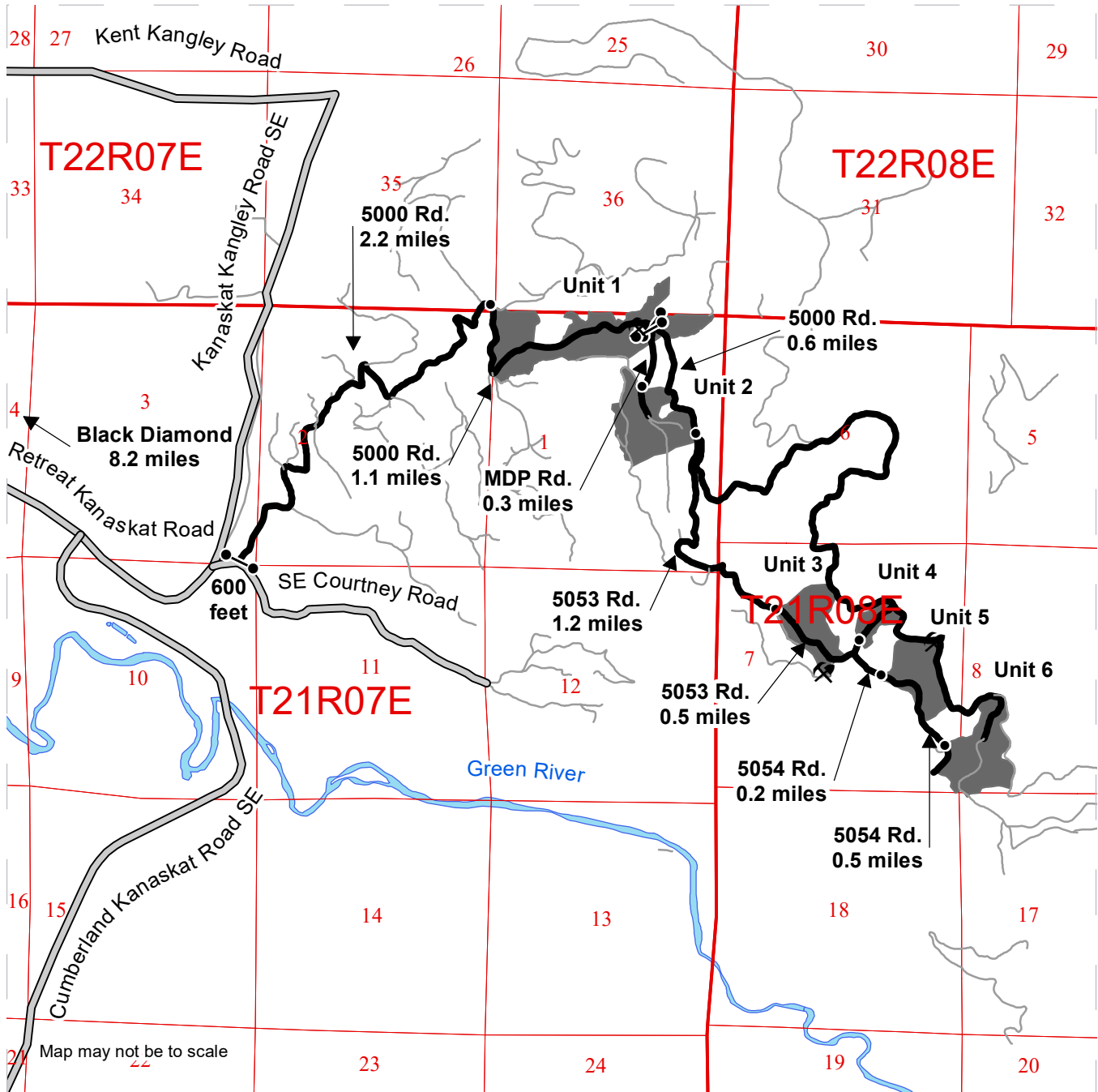
Variable Retention Harvest	Survey Monument	Rock Pit
Sale Boundary Tags	Non-Tradeable Leave Clump	Existing Roads
Right of Way Tags	Leave Tree Area	Required Pre-Haul Maintenance
DNR Managed Lands	Riparian Mgt Zone	Optional Pre-Haul Maintenance
Streams	Tailhold Restriction Areas	Optional Construction
Stream Type		Optional Reconstruction
Stream Type Break		



# DRIVING MAP

SALE NAME: HODAG  
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### Driving Directions

From Black Diamond: Go northeast for 3.5 miles on Black Diamond Ravensdale Rd. Turn right onto Kent Kangley Rd. travel for 1.0 mile. Veer right onto Retreat Kangley Rd. for 3.7 miles then turn right on SE Courtney Rd. After 600 feet turn left onto the 5000 Rd. and go through gate. Travel 2.2 miles to reach Unit 1. Remain on the 5000 Rd. for 1.1 miles then veer right onto the MDP Rd. Go through gate and travel 0.3 miles to reach Unit 2. To reach Unit 3 proceed through gate on the 5000 Rd. after the MDP Rd./5000 Rd. junction. Travel 0.6 miles then veer right onto the 5053 Rd. Travel down the 5053 Rd. for 1.2 miles to arrive at Unit 3. Continue down the 5053 Rd. for 0.5 miles to reach Unit 4. To reach Unit 5 turn right onto the 5054 Rd. and proceed for 0.2 miles. Continue down the 5054 Rd. another 0.5 miles to arrive at Unit 6.

**STATE OF WASHINGTON  
DEPARTMENT OF NATURAL RESOURCES**

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

**Export Restricted Lump Sum AGREEMENT NO. 30-0102173**

**SALE NAME: HODAG**

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

Section G: General Terms

G-001 Definitions

The following definitions apply throughout this contract;

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

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

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

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

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

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

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

G-011 Right to Remove Forest Products and Contract Area

Purchaser was the successful bidder on June 13, 2023 and the sale was confirmed on \_\_\_\_\_. The State, as owner, agrees to sell to Purchaser, and Purchaser agrees to purchase as much of the following forest products as can be cut and removed during the term of this contract: All timber, except trees marked with blue or pink paint or bounded out by yellow leave tree area tags, and down timber existing more than 5 years from the day of sale, bounded by the following: white timber sale boundary tags, property line marked with white Carsonite posts, timber type change, and the 5000, 5030, 5040, 5041, and MDP-2 roads in Unit #1; white timber sale boundary tags, and the 5000, 5053, MDP, and MDP-3 roads in Unit #2; white timber sale boundary tags, and the 5000, 5051, 5053, and 5053-4 roads in Unit #3; white timber sale boundary tags, and the 5000 Road in Unit #4; white timber sale boundary tags, and the 5000, and 5054 roads in Unit #5; white timber sale boundary tags, and the 5000, 5054, and 5060 roads in Unit #6;

All forest products above located on approximately 263 acres on part(s) of Sections 7, and 8 all in Township 21 North, Range 8 East, Sections 1, and 2 all in Township 21 North, Range 7 East, Sections 35, and 36 all in Township 22 North, Range 7 East W.M. in King County(s) as designated on the sale area and as shown on the attached timber sale map.

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

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

G-020 Inspection By Purchaser

Purchaser hereby warrants to the State that they have had an opportunity to fully inspect the sale area and the forest products being sold. Purchaser further warrants to

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

G-031 Contract Term

Purchaser shall complete all work required by this contract prior to October 31, 2026.

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 \$937.00 per acre per annum for the acres on which an operating release has not been issued in the harvest area.
- f. In no event will the extension charge be less than \$200.00.
- g. Extension payments are non-refundable.

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

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

**G-060 Exclusion of Warranties**

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

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

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

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

G-062 Habitat Conservation Plan

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

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

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

G-063 Incidental Take Permit Notification Requirements

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

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

- b. Upon locating any live, dead, injured, or sick specimens of any permit species covered by the ITP, Purchaser shall immediately notify the Contract Administrator. Purchaser shall notify the Contract Administrator if there is any doubt as to the identification of a discovered permit species. Purchaser may be required to take certain actions to help the Contract Administrator safeguard the well-being of any live, injured or sick specimens of any permit species discovered, until the proper disposition of such specimens can be determined by the Contract Administrator. Any such requirements will be explained to Purchaser by the Contract Administrator during the Pre-Work Conference. In all circumstances, notification must occur within a 24 hour time period.
- c. Purchaser shall refer to a specific ITP number, ITP TE812521-1 or ITP 1168 (copies which are located in the region office) in all correspondence and reports concerning permit activities.
- d. Provisions and requirements of the ITP shall be clearly presented and explained to Purchaser by Contract Administrator during the Pre-Work Conference as per contract clause G-330. All applicable provisions of the ITP and this schedule must be presented and clearly explained by Purchaser to all authorized officers, employees, contractors, or agents of Purchaser conducting authorized activities in the timber sale area. Any questions Purchaser may have about the ITP should be directed to the Contract Administrator.

#### G-064 Permits

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

#### G-065 Regulatory Disclaimer

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

#### G-066 Governmental Regulatory Actions

- a. Risk



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

b. Sale Area

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

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

c. Adjustment of Price

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

G-070 Limitation on Damage

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

G-080 Scope of State Advice

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

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

G-091 Sale Area Adjustment

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

G-101 Forest Products Not Designated

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

The pricing schedule has not been set for the sale.

G-106 Adding Naturally Damaged Forest Products

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

G-111 Title and Risk of Loss

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

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

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

**G-116 Sustainable Forestry Initiative® (SFI) Certification**

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

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

**G-120 Responsibility for Work**

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

**G-121 Exceptions**

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

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

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

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

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

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

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

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

G-140 Indemnity

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

G-150 Insurance

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

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

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

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

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

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

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

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

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

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

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

that include, but are not limited to, fire suppression expenses, accidental timber trespasses, and wildfire property damage with limits of not less than \$2,000,000.00 each occurrence.

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

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

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

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

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

#### G-160 Agents

The State's rights and duties will be exercised by the Region Manager at Enumclaw, Washington. The Region Manager will notify Purchaser in writing who is responsible for administering the contract. The Region Manager has sole authority to waive,

modify, or amend the terms of this contract in the manner prescribed in clause G-180. No agent, employee, or representative of the State has any authority to bind the State to any affirmation, representation, or warranty concerning the forest products conveyed beyond the terms of this contract.

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

G-170 Assignment and Delegation

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

G-180 Modifications

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

G-190 Contract Complete

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

G-200 Notice

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

G-210 Violation of Contract

G-220 State Suspends Operations

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

G-210 Violation of Contract

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



State may terminate the rights of Purchaser under this contract and collect damages.

- b. If the contract expires pursuant to clause G-030 or G-031 without Purchaser having performed all its duties under this contract, Purchaser's right to operate is terminated and Purchaser shall not have the right to remedy the breach. This provision shall not relieve Purchaser of any payment obligations.
- c. The State has the right to remedy the breach in the absence of any indicated attempt by Purchaser or if Purchaser is unable, as determined by the State, to remedy the breach. Any expense incurred by the State shall be charged to Purchaser and shall be paid within 30 days of receipt of billing.
- d. If Purchaser's violation is a result of a failure to make a payment when due, in addition to a. and b. above, interest shall accrue on the unpaid balance at 12 percent per annum, beginning the date payment was due.

#### G-220 State Suspends Operations

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

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

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

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

#### G-230 Unauthorized Activity

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

**G-240 Dispute Resolution**

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

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

**G-250 Compliance with All Laws**

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

**G-260 Venue**

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

**G-270 Equipment Left on State Land**

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

**G-280 Operating Release**

An operating release is a written document, signed by the State and Purchaser, indicating that Purchaser has been relieved of certain rights or responsibilities with regard to the entire or a portion of the timber sales contract. Purchaser and State may agree to an operating release for this sale, or portion of this sale, prior to the contract

expiration, when all contract requirements pertaining to the release area have been satisfactorily completed. Upon issuance of a release, Purchaser's right to cut and remove forest products on the released area will terminate.

G-310 Road Use Authorization

Purchaser is authorized to use the following State roads and roads for which the State has acquired easements and road use permits; on the 5000, 5030, 5040, 5041, 5051, 5052, 5052 Ext., 5053, 5053-4, 5054, 5055, 5060, MDP, MDP-1, MDP-2, MDP-3, MDP-11, Unit 1 Spur A, Unit 1 Spur B, Unit 1 Spur C, Unit 6 Spur A, and Unit 6 Spur A1 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 5000 Road, unless authority is granted in writing by the Contract Administrator.

G-380 Road Easement and Road Use Permit Requirements

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

Easement 55-002308 entered into between the State and Caesar J. Mariani, Dora Borracchini and Angelo Borracchini, dated October 24, 1960.

## G-396 Public Hauling Permit

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

## G-400 Memorandum of Understanding Requirements

Purchaser agrees to comply with the attached terms and conditions of the Memorandum of Understanding entered into between the State and City of Tacoma.

## G-430 Open Fires

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

## G-450 Encumbrances

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

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

## Section P: Payments and Securities

## P-011 Initial Deposit

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

## P-020 Payment for Forest Products

Purchaser agrees to pay the total, lump sum contract price of \$260,936.00. The total contract price consists of a \$0.00 contract bid price plus \$260,936.00 in fees. Fees collected shall be retained by the state unless the contract is adjusted via the G-066 clause. Purchaser shall be liable for the entire purchase price, and will not be entitled to any refunds or offsets unless expressly stated in this contract.

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

**P-045 Guarantee of Payment**

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

**P-050 Billing Procedure**

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

**P-080 Payment Account Refund**

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

**P-090 Performance Security**

Purchaser agrees to furnish, within 30 days of the confirmation date, security acceptable to the State in the amount of \$100,000.00. The Security provided shall guarantee performance of all provisions of this contract and payment of any damages caused by operations under this contract or resulting from Purchaser's noncompliance with any rule or law. Acceptable performance security may be in the form of a performance bond, irrevocable letter of credit, cash, savings or certificate of deposit account assignments, and must name the State as the obligee or beneficiary. A letter of credit must comply with Title 62A RCW, Article 5. Performance security must remain in full force over the duration of the contract length. Surety bonds issued shall conform to the issuance and rating requirements in clause G-150. The State shall retain the performance security pursuant to RCW 79.15.100. Purchaser shall not operate unless the performance security has been accepted by the State. If at any time the State decides that the security document or amount has become unsatisfactory, Purchaser agrees to suspend operations and, within 30 days of notification, to replace the security with one acceptable to the State or to supplement the amount of the existing security.

**P-100 Performance Security Reduction**

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

**Section H: Harvesting Operations****H-013 Reserve Tree Damage Definition**

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

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

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

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

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

H-017 Preventing Excessive Soil Disturbance

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

H-035 Fall Trees Into Sale Area

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

H-040 Purchaser Harvest Plan

Purchaser shall, as part of the plan of operations, prepare an acceptable harvest plan for the timber sale. The plan shall address the harvest requirements, which are part(s) of this contract. The harvest plan shall be approved by the Contract Administrator prior to beginning the harvest operation. Purchaser shall not deviate from the harvest plan without prior written approval by the Contract Administrator.

H-051 Branding and Painting

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

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

H-120 Harvesting Equipment

Forest products sold under this contract shall be harvested and removed using cable and ground based equipment, with cable-tethered equipment limited to sustained slopes 75 percent or less, self-leveling equipment limited to sustained slopes 65 percent or less, and all other ground based equipment limited to sustained slopes 45 percent or less. Authority to use other equipment or to operate outside the equipment specifications detailed above must be approved in writing by the State.

H-125 Log Suspension Requirements

Lead-end suspension is required for all yarding activities.

H-126 Tailholds on State Land

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

H-127 Tailholds on Private Land

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

H-140 Special Harvest Requirements

Purchaser shall accomplish the following during the harvest operations:

A. Timber haul will not be permitted on weekends or State recognized holidays, unless authorized in writing by the Contract Administrator.

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

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

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

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

F. Cut all vine maple greater than 6 feet in height within the harvest units, leaving a stump no more than 12 inches in height.



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

H. Skid trail closure shall occur immediately upon completion of yarding all tributary timber. Closure shall consist of creating plantable spots at approximately 10 foot by 10 foot spacing to facilitate reforestation and creating water bars or other methods as directed by the Contract Administrator to prevent water accumulation and sediment movement.

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

J. No operations shall occur outside the sale boundaries, as described within the contract.

K. To facilitate proper reforestation in areas of high slash concentrations, Purchaser shall, in concurrence with ground based yarding, clear plantable spots at an 10 foot by 10 foot spacing.

L. Bearing trees to surveyed monuments shall be high stumped to preserve bearing tags and information.

M. Trees adjacent to gates 704 and 709 shall be high stumped to limit access after harvest.

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

#### H-141 Additional Harvest Requirements

Purchaser shall accomplish the following during the harvest operations:

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

B. No equipment may operate within, nor logs yarded through or over, leave tree clumps indicated as non-tradable on the Timber Sale or Logging Plan Maps in Units #1 and #6.

C. Any employee or contractor planning to camp overnight in the sale area for purposes associated with this timber sale shall request permission from the Contract Administrator and obtain necessary permits from the City of Tacoma.

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

- Locations inside the sale boundary are identified as Non-Tradeable Leave Trees marked with yellow Leave Tree Area tags as shown on the Timber Sale and Logging Plan Maps in Units #1 and #6, inside which no trees may be used as tailholds and no equipment may operate within, nor logs felled into or yarded through or over.
- Locations outside the sale boundary are identified as Tailhold Restriction Areas on the Logging Plan and Timber Sale Maps. Trees within these areas shall not be used as tailholds.

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

H-190 Completion of Settings

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

H-220 Protection of Residual or Adjacent Trees

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

H-230 Tops and Limbs Outside the Sale Boundary

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

Section C: Construction and Maintenance

C-040 Road Plan

Road construction and associated work provisions of the Road Plan for this sale, dated 4/1/2022 are hereby made a part of this contract.

C-050 Purchaser Road Maintenance and Repair

Purchaser shall perform work at their own expense on all roads used. All work shall be completed to the specifications detailed in the Road Plan.

C-080 Landing Locations Approved Prior to Construction

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

C-140 Water Bars

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

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

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

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

**S-010 Fire Hazardous Conditions**

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

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

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

**S-020 Extreme Hazard Abatement**

Purchaser shall provide a written Extreme Hazard Abatement plan that meets the requirements of WAC 332-24 prior to the beginning of logging operations. The plan must be acceptable to the Contract Administrator. The plan will identify how Purchaser will accomplish abatement. Purchaser shall also provide, and keep current, a written timetable for completion of all specified work in the plan. The Contract Administrator's acceptance and approval of Purchaser's hazard abatement plan shall not be construed as any statement or warranty that the hazard abatement plan is adequate for Purchaser's purposes or complies with applicable laws.

Timber harvest will be occurring around a communication tower. Hazard abatement is required along the MDP-3 Road within 200 feet of the communication tower located within Unit #2.

**S-030 Landing Debris Clean Up**

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

**S-040 Noxious Weed Control**

Purchaser shall notify the Contract Administrator in advance of moving equipment onto State lands. Purchaser shall thoroughly clean all off road equipment prior to entry onto

State land to remove contaminated soils and noxious weed seed. If equipment is moved from one DNR project area to another, the Contract Administrator reserves the right to require the cleaning of equipment. Equipment shall be cleaned at a location approved by the Contract Administrator.

S-050 Cessation of Operations for Low Humidity

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-110 Resource Protection

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

S-130 Hazardous Materials

a. Hazardous Materials and Waste - Regulatory Compliance

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

Purchaser shall be responsible for restoring the site in the event of a spill or other releases of hazardous material/waste during operations conducted under this contract.

b. Hazardous Materials Spill Prevention

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

c. Hazardous Materials Spill Containment, Control and Cleanup

If safe to do so, Purchaser shall take immediate action to contain and control all hazardous material spills. Purchaser shall ensure that enough quick response spill kits capable of absorbing 10 gallons of oil, coolant, solvent or contaminated water are available on site to quickly address potential spills

from any piece of equipment at all times throughout active operations. If large quantities of bulk fuel/other hazardous materials are stored on site, Purchaser must be able to effectively control a container leak and contain & recover a hazmat spill equal to the largest single on site storage container volume. (HAZWOPER reg. 29CFR 1910.120 (j) (1) (vii)).

d. Hazardous Material Release Reporting

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

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

S-131 Refuse Disposal

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

Section D: Damages

D-013 Liquidated Damages or Failure to Perform

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

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

D-041 Reserve Tree Excessive Damage

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

SIGNATURES

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

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

STATE OF WASHINGTON  
DEPARTMENT OF NATURAL RESOURCES

\_\_\_\_\_  
Purchaser  
\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Scott Sargent  
South Puget Sound Region Manager

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

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

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

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

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

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

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

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

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

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





## WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES

### FOREST EXCISE TAX ROAD SUMMARY SHEET

**Region:**

**Timber Sale Name:**

**Application Number:**

#### EXCISE TAX APPLICABLE ACTIVITIES

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

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

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

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

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

#### EXCISE TAX EXEMPT ACTIVITIES

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

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

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

(Revised 9/18)

# PRE-CRUISE NARRATIVE

Sale Name: <b>Hodag</b>	Region: <b>South Puget Sound</b>
Agreement #: <b>30-102173</b>	District: <b>Rainier</b>
Contact Forester: <b>Nick Chicano</b>	Phone/ Location: <b>360-509-1079</b>
Alternate Contact: <b>Nicole Vonberckefeldt</b>	Phone/ Location: <b>360-628-3035</b>

Type of Sale (lump sum, mbf scale, tonnage scale or contract harvest): Lump Sum  
 Required or Optional removal of utility as pulp (*for scale sales only*): N/A  
 Evaluated for RFRS Implementation?: N/A

Percentage cable-uphill:44  
 Percentage cable-downhill:  
 Percentage ground based: 56

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

## UNIT ACREAGES\* AND METHOD OF DETERMINATION:

Unit #	Harvest R/W or RMZ WMZ	Legal Description Sec/Twp/Rng	Grant	Gross Traversed Acres	Deductions from Gross Acres (No harvest acres)			Net Harvest Acres	Acreage Determination  (List method, dimensions and error of closure if applicable)
					RMZ/ WMZ Acres	Leave Tree Acres	Existing Road Acres		
VRH U1		Sec 1/2/ T21N/ R 07 E, Sec 35/36/T22N/ R 07 E	1, 3	92.8		4.7	2.0	86.1	64s Garmin
VRH U2		Sec 1/ T 21N/ R 07 E	3	52.6		2.1	1.1	49.4	64s Garmin
VRH U3		Sec 7/ T 21N/ R 08 E	1	37.9		1.7	0.9	35.3	64s Garmin
VRH U4		Sec 7/ T 21N/ R 08 E	1	12.1		0.5	0.5	11.1	64s Garmin
VRH U5		Sec 7/ T 21N/ R 08 E	1	35.5		0.9	0.7	33.9	64s Garmin
VRH U6		Sec 7/ T 21N/ R 08 E	1, 7, 8	50.4		1.3	1.4	47.7	64s Garmin
<b>TOTAL ACRES</b>				281.3		11.2	6.6	263.5	

## HARVEST PLAN AND SPECIAL CONDITIONS:

Unit #	Harvest Prescription: (Mark leave, take, paint color, tags, flagging etc.)	Special Management areas:	Other conditions (# leave trees, etc.) *For all marked thinnings, include a tree count by species.
VRH U1	White "Timber Sale Boundary" Tags, Pink Flashers, Pink Flagging, 5000 Rd., 5030 Rd., 5040 Rd., 5041 Rd., MDP-2 Rd., and property line.		LTA – 768 Dispersed – 12
VRH U2	White "Timber Sale Boundary" Tags, Pink Flashers, Pink Flagging, McDonald Point Rd., 5000 Rd., 5053 Rd., and MDP-3 Rd.		LTA – 401 Dispersed - 20

VRH U3	White "Timber Sale Boundary" Tags, Pink Flashers, Pink Flagging, 5000 Rd., 5053 Rd		LTA – 294 Dispersed – 10
VRH U4	White "Timber Sale Boundary" Tags, Pink Flashers, Pink Flagging, 5000 Rd.		LTA – 103 Dispersed - 0
VRH U5	White "Timber Sale Boundary" Tags, Pink Flashers, Pink Flagging, 5000 Rd., 5054 Rd.		LTA – 269 Dispersed -15
VRH U6	White "Timber Sale Boundary" Tags, Pink Flashers, Pink Flagging, 5000 Rd., 5054 Rd., 5060 Rd.		LTA – 403 Dispersed - 2

**OTHER PRE-CRUISE INFORMATION:**

Unit #	Estimated Volume	Access information (Gates, locks, etc.)	Photos, traverse maps required
VRH U1	See Cruise	Gate 712, (Master 383)	
VRH U2		Gate 712, 704 (Master 383)	
VRH U3		Gate 712, 709 (Master 383)	
VRH U4		Gate 712, 709 (Master 383)	
VRH U5		Gate 712, 709 (Master 383)	
VRH U6		Gate 712, 709 (Master 383)	

**REMARKS:**

Acreage Determination: -Units with Road Deductions: Garmin 64s and Roads (Length * 20 / 43560)
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<b>Prepared By: Nick Chicano</b> <b>Date:</b>	<b>Title: Black Diamond Unit Manager</b>	<b>CC:</b>
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*Revised 2/23/2007 (PSLD), Revised 1/22/20 (SPS)*

## Timber Sale Cruise Report Hodag

**Sale Name:** HODAG

**Sale Type:** LUMP SUM

**Region:** SO PUGET

**District:** RAINIER

**Lead Cruiser:** Aaron Coleman

**Other Cruisers:** Matt Llobet, Alan Herrman, Blake Warnsdadt

**Cruise Narrative:**

This sale consists of 6 variable retention harvest (VRH) units located off the 5000 road on MacDonald Ridge, northwest of Cumberland.

A 383 key was needed to access the 5000 road.

The primary species for this sale is:

Western hemlock (55%) with an average diameter of 15 inches.

Silver Fir (22%) with an average diameter of 17 inches.

Noble Fir (17%) with an average diameter of 20 inches.

Douglas fir (4%) with an average diameter of 21 inches.

Whitewood dominates all units. Some units were previously thinned and there is mechanical damage on the remaining trees. Ground consists of both uphill cable and ground-based slopes. Prevalent defect: Catface, frost crack and spike knots.

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

\*\*\*Revised 10/14/2022 by AC: removed 1S NF.\*\*\*

### Timber Sale Notice Volume (MBF)

Sp	DBH	Rings/In	Age	MBF Volume by Grade				
				All	2 Saw	3 Saw	4 Saw	Utility
WH	15.4			5,552	2,004	2,741	659	149
SF	17.7			2,253	1,069	913	266	6
NF	20.0			1,747	996	634	110	7
DF	21.1			439	258	145	28	8
RC	15.5			29		29		
RA	15.2			16	8		8	
ALL	16.2			10,036	4,334	4,461	1,071	169

**Timber Sale Notice Weight (tons)**

Sp	Tons by Grade				
	All	2 Saw	3 Saw	4 Saw	Utility
WH	49,955	16,306	25,485	6,815	1,349
SF	19,057	8,150	8,143	2,715	49
NF	13,055	6,596	5,279	1,150	30
DF	3,379	1,744	1,252	274	109
RC	255		255		
RA	119	55		65	
ALL	85,819	32,852	40,413	11,018	1,537

**Timber Sale Overall Cruise Statistics (Cut + Leave Trees)**

BA (sq ft/acre)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR SE (%)	Net Vol (bf/acre)	Vol SE (%)
291.9	3.7	130.3	1.5	38,345	4.0

**Timber Sale Unit Cruise Design**

Unit	Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
HODAG U1	B2C: VR, 2 BAF (54.44, 40 for some species) Measure/Count Plots, Sighting Ht = 4.5 ft	92.8	92.8	45	22	3
HODAG U2	B1C: VR, 1 BAF (46.94) Measure/Count Plots, Sighting Ht = 4.5 ft	52.6	52.6	27	15	1
HODAG U3	B1C: VR, 1 BAF (54.44) Measure/Count Plots, Sighting Ht = 4.5 ft	37.9	37.9	20	9	1
HODAG U4	B1C: VR, 1 BAF (54.44) Measure/Count Plots, Sighting Ht = 4.5 ft	12.1	12.1	9	4	1
HODAG U5	B1C: VR, 1 BAF (54.44) Measure/Count Plots, Sighting Ht = 4.5 ft	35.5	35.5	20	11	1
HODAG U6	B1C: VR, 1 BAF (46.94) Measure/Count Plots, Sighting Ht = 4.5 ft	50.4	50.4	26	14	1
All		281.3	281.3	147	75	8

**Timber Sale Log Grade x Sort Summary**

Sp	Status	Grade	Sort	Dia	Len	BF Gross	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	Domestic	14.9	38	920	916	0.4	1,744.4	257.5
DF	LIVE	3 SAW	Domestic	9.3	37	522	516	1.2	1,251.9	145.0
DF	LIVE	4 SAW	Domestic	6.2	26	100	99	0.6	273.9	27.9

Sp	Status	Grade	Sort	Dia	Len	BF Gross	BF Net	Defect %	Tons	MBF Net
DF	LIVE	CULL	Cull	13.5	10	85	0	100.0	0.0	0.0
DF	LIVE	UTILITY	Pulp	13.3	24	29	29	0.0	108.6	8.2
NF	LIVE	2 SAW	Domestic	15.7	40	3,583	3,540	1.2	6,596.4	995.8
NF	LIVE	3 SAW	Domestic	9.0	39	2,274	2,254	0.9	5,278.7	634.2
NF	LIVE	4 SAW	Domestic	5.6	27	394	392	0.7	1,149.6	110.2
NF	LIVE	CULL	Cull	10.8	7	65	0	100.0	0.0	0.0
NF	LIVE	UTILITY	Pulp	5.0	12	24	24	0.0	29.9	6.8
RA	LIVE	2 SAW	Domestic	13.3	30	29	29	0.0	54.6	8.2
RA	LIVE	4 SAW	Domestic	6.1	25	30	29	3.8	64.7	8.1
RC	LIVE	3 SAW	Domestic	7.7	37	102	102	0.0	254.7	28.6
SF	LIVE	2 SAW	Domestic	14.5	40	4,069	3,801	6.6	8,149.9	1,069.2
SF	LIVE	3 SAW	Domestic	9.0	39	3,430	3,244	5.4	8,143.0	912.5
SF	LIVE	4 SAW	Domestic	5.6	28	972	945	2.8	2,714.6	265.7
SF	LIVE	CULL	Cull	10.1	6	159	0	100.0	0.0	0.0
SF	LIVE	UTILITY	Pulp	5.4	14	21	21	0.0	49.2	5.8
WH	LIVE	2 SAW	Domestic	14.4	38	7,332	7,123	2.9	16,306.1	2,003.8
WH	LIVE	3 SAW	Domestic	8.7	37	9,839	9,743	1.0	25,484.9	2,740.7
WH	LIVE	4 SAW	Domestic	5.4	27	2,356	2,342	0.6	6,814.8	658.9
WH	LIVE	CULL	Cull	9.4	6	201	0	100.0	0.0	0.0
WH	LIVE	UTILITY	Pulp	6.1	30	528	528	0.0	1,349.2	148.6

### Timber Sale Log Sort x Diameter Bin Summary

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	5 - 7	LIVE	Cull	5.5	10	0	100.0	0.0	0.0
DF	5 - 7	LIVE	Domestic	6.0	31	154	1.2	438.6	43.2
DF	8 - 11	LIVE	Domestic	9.8	36	461	1.1	1,087.2	129.7
DF	12 - 15	LIVE	Pulp	13.3	24	29	0.0	108.6	8.2
DF	12 - 15	LIVE	Domestic	14.1	37	602	0.7	1,211.9	169.2
DF	12 - 15	LIVE	Cull	14.5	15	0	100.0	0.0	0.0
DF	16 - 19	LIVE	Domestic	16.4	40	123	0.0	238.9	34.6
DF	16 - 19	LIVE	Cull	17.8	14	0	100.0	0.0	0.0
DF	20+	LIVE	Domestic	20.8	40	191	0.0	293.6	53.7
DF	20+	LIVE	Cull	23.5	5	0	100.0	0.0	0.0
NF	5 - 7	LIVE	Pulp	5.0	12	24	0.0	29.9	6.8
NF	5 - 7	LIVE	Domestic	6.0	31	880	1.0	2,439.2	247.6
NF	5 - 7	LIVE	Cull	6.5	6	0	100.0	0.0	0.0
NF	8 - 11	LIVE	Domestic	10.1	38	1,766	0.8	3,989.1	496.8

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
NF	12 - 15	LIVE	Domestic	14.0	40	1,683	1.1	3,443.3	473.3
NF	12 - 15	LIVE	Cull	15.5	9	0	100.0	0.0	0.0
NF	16 - 19	LIVE	Domestic	17.4	39	1,252	0.8	2,182.0	352.3
NF	20+	LIVE	Domestic	22.0	40	605	2.3	971.1	170.1
RA	5 - 7	LIVE	Domestic	5.0	24	19	0.0	39.8	5.4
RA	8 - 11	LIVE	Domestic	9.1	28	10	10.4	24.8	2.7
RA	12 - 15	LIVE	Domestic	13.3	30	29	0.0	54.6	8.2
RC	5 - 7	LIVE	Domestic	6.4	36	51	0.0	131.7	14.3
RC	12 - 15	LIVE	Domestic	12.0	40	51	0.0	123.0	14.2
SF	5 - 7	LIVE	Cull	5.2	6	0	100.0	0.0	0.0
SF	5 - 7	LIVE	Pulp	5.3	15	21	0.0	49.2	5.8
SF	5 - 7	LIVE	Domestic	5.7	30	1,338	2.7	3,932.8	376.5
SF	8 - 11	LIVE	Cull	8.3	7	0	100.0	0.0	0.0
SF	8 - 11	LIVE	Domestic	9.6	39	2,850	5.8	6,924.8	801.7
SF	12 - 15	LIVE	Domestic	13.0	40	2,508	3.8	5,631.1	705.6
SF	12 - 15	LIVE	Cull	13.8	6	0	100.0	0.0	0.0
SF	16 - 19	LIVE	Domestic	16.9	40	721	16.4	1,527.0	202.8
SF	16 - 19	LIVE	Cull	17.8	6	0	100.0	0.0	0.0
SF	20+	LIVE	Domestic	22.0	40	572	4.7	991.7	160.8
SF	20+	LIVE	Cull	29.0	10	0	100.0	0.0	0.0
WH	5 - 7	LIVE	Cull	5.2	7	0	100.0	0.0	0.0
WH	5 - 7	LIVE	Pulp	5.7	28	441	0.0	1,192.4	124.0
WH	5 - 7	LIVE	Domestic	5.8	30	4,130	0.8	12,012.5	1,161.7
WH	8 - 11	LIVE	Pulp	9.2	17	7	0.0	17.3	1.8
WH	8 - 11	LIVE	Domestic	9.6	37	7,955	0.9	20,287.2	2,237.8
WH	8 - 11	LIVE	Cull	10.9	5	0	100.0	0.0	0.0
WH	12 - 15	LIVE	Cull	13.5	6	0	100.0	0.0	0.0
WH	12 - 15	LIVE	Domestic	13.5	39	4,971	1.8	11,898.9	1,398.4
WH	16 - 19	LIVE	Cull	16.8	7	0	100.0	0.0	0.0
WH	16 - 19	LIVE	Domestic	17.4	38	1,625	3.1	3,369.1	457.0
WH	16 - 19	LIVE	Pulp	18.4	24	81	0.0	139.5	22.8
WH	20+	LIVE	Domestic	21.9	38	527	11.2	1,038.1	148.3

## Cruise Unit Report HODAG U1

### Unit Sale Notice Volume (MBF): HODAG U1

Sp	DBH	Rings/In	Age	MBF Volume by Grade				
				All	2 Saw	3 Saw	4 Saw	Utility
WH	15.0			3,086	1,154	1,519	275	139
SF	20.9			420	315	79	26	
DF	22.4			312	226	63	15	8
RC	15.5			29		29		
RA	18.3			11	8		3	
ALL	15.8			3,858	1,702	1,690	318	147

### Unit Cruise Design: HODAG U1

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B2C: VR, 2 BAF (54.44, 40 for some species) Measure/Count Plots, Sighting Ht = 4.5 ft	92.8	92.8	45	22	3

### Unit Cruise Summary: HODAG U1

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
WH	99	217	4.8	0
SF	13	28	0.6	0
DF	11	24	0.5	0
RC	2	4	0.1	0
RA	1	1	0.0	0
ALL	126	274	6.1	0

### Unit Cruise Statistics (Cut + Leave Trees): HODAG U1

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
WH	262.5	57.4	8.5	136.1	23.6	2.4	35,726	62.0	8.9
SF	33.9	191.7	28.6	162.8	21.8	6.1	5,514	192.9	29.2
DF	29.0	185.8	27.7	146.1	34.6	10.4	4,241	189.0	29.6
RC	3.6	323.8	48.3	86.6	40.5	28.6	308	326.3	56.1
RA	0.9	670.8	100.0	131.9	0.0	0.0	117	670.8	100.0
ALL	329.9	46.3	6.9	139.2	25.5	2.3	45,907	52.9	7.3



**Unit Summary: HODAG U1**

Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
DF	LIVE	CUT	11	ALL	22.4	87	110	3,541	3,358	5.2	8.4	23.0	4.9	311.6
RA	LIVE	CUT	1	ALL	18.3	74	91	121	117	2.8	0.5	0.9	0.2	10.9
RC	LIVE	CUT	1	ALL	13.0	50	61	231	231	0.0	2.9	2.7	0.7	21.4
RC	LIVE	POLE	1	ALL	20.4	80	102	77	77	0.0	0.4	0.9	0.2	7.1
SF	LIVE	CUT	13	ALL	20.9	82	104	4,791	4,530	5.5	11.7	27.8	6.1	420.3
WH	LIVE	CUT	99	ALL	15.0	69	85	33,628	33,256	1.1	199.1	244.4	63.1	3,086.2
ALL	LIVE	CUT	125	ALL	15.7	70	87	42,313	41,492	1.9	222.6	298.7	75.0	3,850.4
ALL	LIVE	POLE	1	ALL	20.4	80	102	77	77	0.0	0.4	0.9	0.2	7.1
ALL	ALL	ALL	126	ALL	15.7	70	87	42,390	41,569	1.9	223.0	299.6	75.2	3,857.6

## Cruise Unit Report HODAG U2

### Unit Sale Notice Volume (MBF): HODAG U2

Sp	DBH	Rings/In	Age	MBF Volume by Grade				Utility
				All	2 Saw	3 Saw	4 Saw	
WH	16.1			1,199	329	707	163	
SF	18.9			521	280	205	34	2
DF	20.1			24	10	12	3	
RA	9.0			5			5	
ALL	16.4			1,749	618	924	204	2

### Unit Cruise Design: HODAG U2

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B1C: VR, 1 BAF (46.94) Measure/Count Plots, Sighting Ht = 4.5 ft	52.6	52.6	27	15	1

### Unit Cruise Summary: HODAG U2

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
WH	54	115	4.3	0
SF	14	47	1.7	0
DF	2	2	0.1	0
RA	1	1	0.0	0
ALL	71	165	6.1	0

### Unit Cruise Statistics (Cut + Leave Trees): HODAG U2

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
WH	199.9	62.0	11.9	121.4	17.7	2.4	24,264	64.5	12.2
SF	81.7	109.9	21.2	138.9	17.5	4.7	11,346	111.3	21.7
DF	3.5	360.3	69.3	131.2	1.2	0.9	456	360.3	69.3
RA	1.7	519.6	100.0	58.9	0.0	0.0	102	519.6	100.0
ALL	286.9	42.4	8.2	126.1	19.0	2.3	36,169	46.5	8.5

**Unit Summary: HODAG U2**

Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
DF	LIVE	CUT	2	ALL	20.1	82	103	456	456	0.0	1.6	3.5	0.8	24.0
RA	LIVE	CUT	1	ALL	9.0	30	34	102	102	0.0	3.9	1.7	0.6	5.4
SF	LIVE	CUT	14	ALL	18.9	77	97	10,029	9,898	1.3	36.6	71.3	16.4	520.6
WH	LIVE	CUT	54	ALL	16.1	68	84	23,365	22,787	2.5	132.8	187.8	46.8	1,198.6
ALL	LIVE	CUT	71	ALL	16.6	69	86	33,952	33,244	2.1	174.9	264.3	64.5	1,748.6
ALL	ALL	ALL	71	ALL	16.6	69	86	33,952	33,244	2.1	174.9	264.3	64.5	1,748.6

## Cruise Unit Report HODAG U3

### Unit Sale Notice Volume (MBF): HODAG U3

Sp	DBH	Rings/In	Age	MBF Volume by Grade			
				All	2 Saw	3 Saw	4 Saw
NF	20.3			659	448	173	39
SF	16.4			382	134	179	68
WH	12.1			363	138	122	103
DF	18.9			49	22	22	6
ALL	15.4			1,453	742	495	217

### Unit Cruise Design: HODAG U3

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B1C: VR, 1 BAF (54.44) Measure/Count Plots, Sighting Ht = 4.5 ft	37.9	37.9	20	9	1

### Unit Cruise Summary: HODAG U3

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
NF	18	40	2.0	0
SF	9	30	1.5	0
WH	15	28	1.4	0
DF	3	3	0.2	0
ALL	45	101	5.1	0

### Unit Cruise Statistics (Cut + Leave Trees): HODAG U3

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
NF	108.9	81.1	18.1	168.2	30.9	7.3	18,309	86.8	19.5
SF	81.7	117.5	26.3	123.3	31.4	10.5	10,071	121.6	28.3
WH	76.2	90.9	20.3	130.4	33.9	8.8	9,940	97.1	22.1
DF	8.2	326.2	72.9	158.8	19.3	11.2	1,297	326.8	73.8
ALL	274.9	44.7	10.0	144.1	34.1	5.1	39,618	56.2	11.2

**Unit Summary: HODAG U3**

Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
DF	LIVE	CUT	3	ALL	18.9	95	111	1,297	1,297	0.0	4.2	8.2	1.9	49.2
NF	LIVE	CUT	18	ALL	20.3	98	113	17,485	17,394	0.5	46.0	103.4	23.0	659.2
SF	LIVE	CUT	9	ALL	16.4	73	90	11,696	10,071	13.9	55.7	81.7	20.2	381.7
WH	LIVE	CUT	15	ALL	12.1	60	72	9,585	9,585	0.0	92.0	73.5	21.1	363.3
ALL	LIVE	CUT	45	ALL	15.7	73	88	40,063	38,347	4.3	197.9	266.8	66.1	1,453.4
ALL	ALL	ALL	45	ALL	15.7	73	88	40,063	38,347	4.3	197.9	266.8	66.1	1,453.4

## Cruise Unit Report HODAG U4

### Unit Sale Notice Volume (MBF): HODAG U4

Sp	DBH	Rings/In	Age	MBF Volume by Grade			
				All	2 Saw	3 Saw	4 Saw
SF	18.7			209	138	62	9
NF	26.2			165	143	17	5
WH	16.0			163	85	53	24
DF	12.0			6		6	
ALL	18.8			543	367	138	38

### Unit Cruise Design: HODAG U4

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B1C: VR, 1 BAF (54.44) Measure/Count Plots, Sighting Ht = 4.5 ft	12.1	12.1	9	4	1

### Unit Cruise Summary: HODAG U4

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
SF	5	19	2.1	0
NF	11	13	1.4	0
WH	10	17	1.9	0
DF	1	1	0.1	0
ALL	27	50	5.6	0

### Unit Cruise Statistics (Cut + Leave Trees): HODAG U4

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
SF	114.9	107.1	35.7	150.3	24.3	10.9	17,278	109.8	37.3
NF	78.6	125.3	41.8	187.7	9.7	2.9	14,759	125.7	41.9
WH	102.8	85.5	28.5	130.9	17.9	5.7	13,456	87.4	29.1
DF	6.0	300.0	100.0	80.2	0.0	0.0	485	300.0	100.0
ALL	302.4	46.0	15.3	152.0	24.8	4.8	45,977	52.2	16.1

**Unit Summary: HODAG U4**

Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
DF	LIVE	CUT	1	ALL	12.0	70	70	485	485	0.0	7.7	6.0	1.7	5.9
NF	LIVE	CUT	11	ALL	26.2	109	127	14,086	13,623	3.3	19.4	72.6	14.2	164.8
SF	LIVE	CUT	5	ALL	18.7	98	105	18,437	17,278	6.3	60.3	114.9	26.6	209.1
WH	LIVE	CUT	10	ALL	16.0	78	88	13,557	13,456	0.7	73.6	102.8	25.7	162.8
ALL	LIVE	CUT	27	ALL	18.4	89	98	46,565	44,842	3.7	161.0	296.4	68.2	542.6
ALL	ALL	ALL	27	ALL	18.4	89	98	46,565	44,842	3.7	161.0	296.4	68.2	542.6

## Cruise Unit Report HODAG U5

### Unit Sale Notice Volume (MBF): HODAG U5

Sp	DBH	Rings/In	Age	MBF Volume by Grade				Utility
				All	2 Saw	3 Saw	4 Saw	
WH	19.6			411	253	124	32	2
SF	17.0			398	127	225	42	4
NF	23.0			361	249	101	11	
DF	18.0			7		6	1	
ALL	18.7			1,177	629	457	86	6

### Unit Cruise Design: HODAG U5

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B1C: VR, 1 BAF (54.44) Measure/Count Plots, Sighting Ht = 4.5 ft	35.5	35.5	20	11	1

### Unit Cruise Summary: HODAG U5

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
SF	22	47	2.4	0
WH	15	33	1.7	0
NF	11	21	1.1	0
DF	1	1	0.1	0
ALL	49	102	5.1	0

### Unit Cruise Statistics (Cut + Leave Trees): HODAG U5

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
SF	127.9	98.9	22.1	105.5	25.9	5.5	13,493	102.2	22.8
WH	89.8	98.9	22.1	133.0	26.9	6.9	11,946	102.4	23.2
NF	57.2	100.0	22.4	196.6	32.8	9.9	11,236	105.3	24.5
DF	2.7	447.2	100.0	73.0	0.0	0.0	199	447.2	100.0
ALL	277.6	37.6	8.4	132.8	40.5	5.8	36,874	55.3	10.2



**Unit Summary: HODAG U5**

Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
DF	LIVE	CUT	1	ALL	18.0	61	74	210	199	5.1	1.5	2.7	0.6	7.1
NF	LIVE	CUT	11	ALL	23.0	95	121	10,525	10,166	3.4	17.9	51.7	10.8	360.9
SF	LIVE	CUT	22	ALL	17.0	68	84	12,154	11,196	7.9	67.4	106.2	25.7	397.5
WH	LIVE	CUT	15	ALL	19.6	83	95	13,093	11,584	11.5	41.6	87.1	19.7	411.2
ALL	LIVE	CUT	49	ALL	18.8	76	92	35,981	33,145	7.9	128.4	247.7	56.8	1,176.7
ALL	ALL	ALL	49	ALL	18.8	76	92	35,981	33,145	7.9	128.4	247.7	56.8	1,176.7

## Cruise Unit Report HODAG U6

### Unit Sale Notice Volume (MBF): HODAG U6

Sp	DBH	Rings/In	Age	MBF Volume by Grade				
				All	2 Saw	3 Saw	4 Saw	Utility
NF	16.0			562	157	344	55	7
WH	14.0			330	45	215	62	8
SF	13.7			324	75	162	86	
DF	16.6			41		37	4	
ALL	14.4			1,257	277	758	208	15

### Unit Cruise Design: HODAG U6

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B1C: VR, 1 BAF (46.94) Measure/Count Plots, Sighting Ht = 4.5 ft	50.4	50.4	26	14	1

### Unit Cruise Summary: HODAG U6

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
NF	16	50	1.9	0
WH	26	41	1.6	0
SF	28	40	1.5	0
DF	6	6	0.2	0
ALL	76	137	5.3	0

### Unit Cruise Statistics (Cut + Leave Trees): HODAG U6

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
NF	90.3	97.5	19.1	123.5	12.4	3.1	11,150	98.3	19.4
WH	74.0	101.7	20.0	88.4	27.6	5.4	6,544	105.4	20.7
SF	72.2	109.1	21.4	89.0	30.9	5.8	6,428	113.4	22.2
DF	10.8	222.9	43.7	75.2	38.5	15.7	815	226.2	46.5
ALL	247.3	39.3	7.7	100.8	28.2	3.2	24,937	48.3	8.4

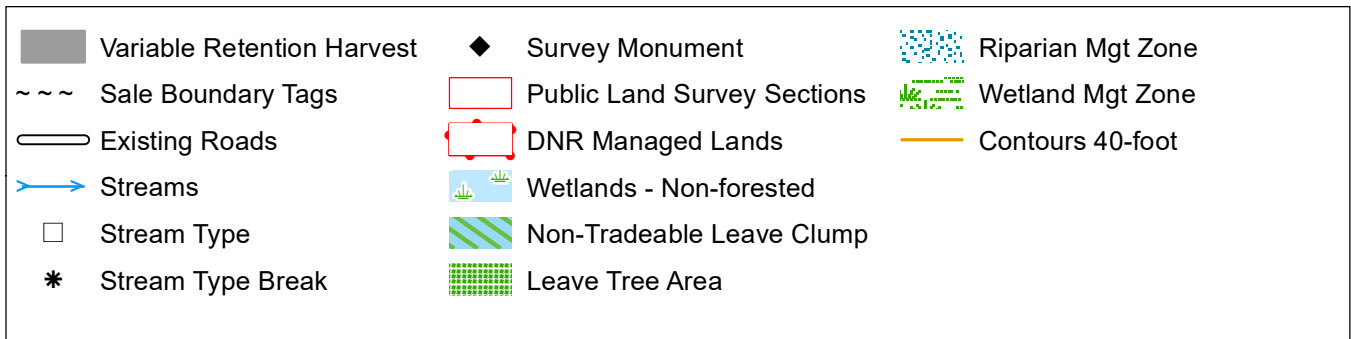
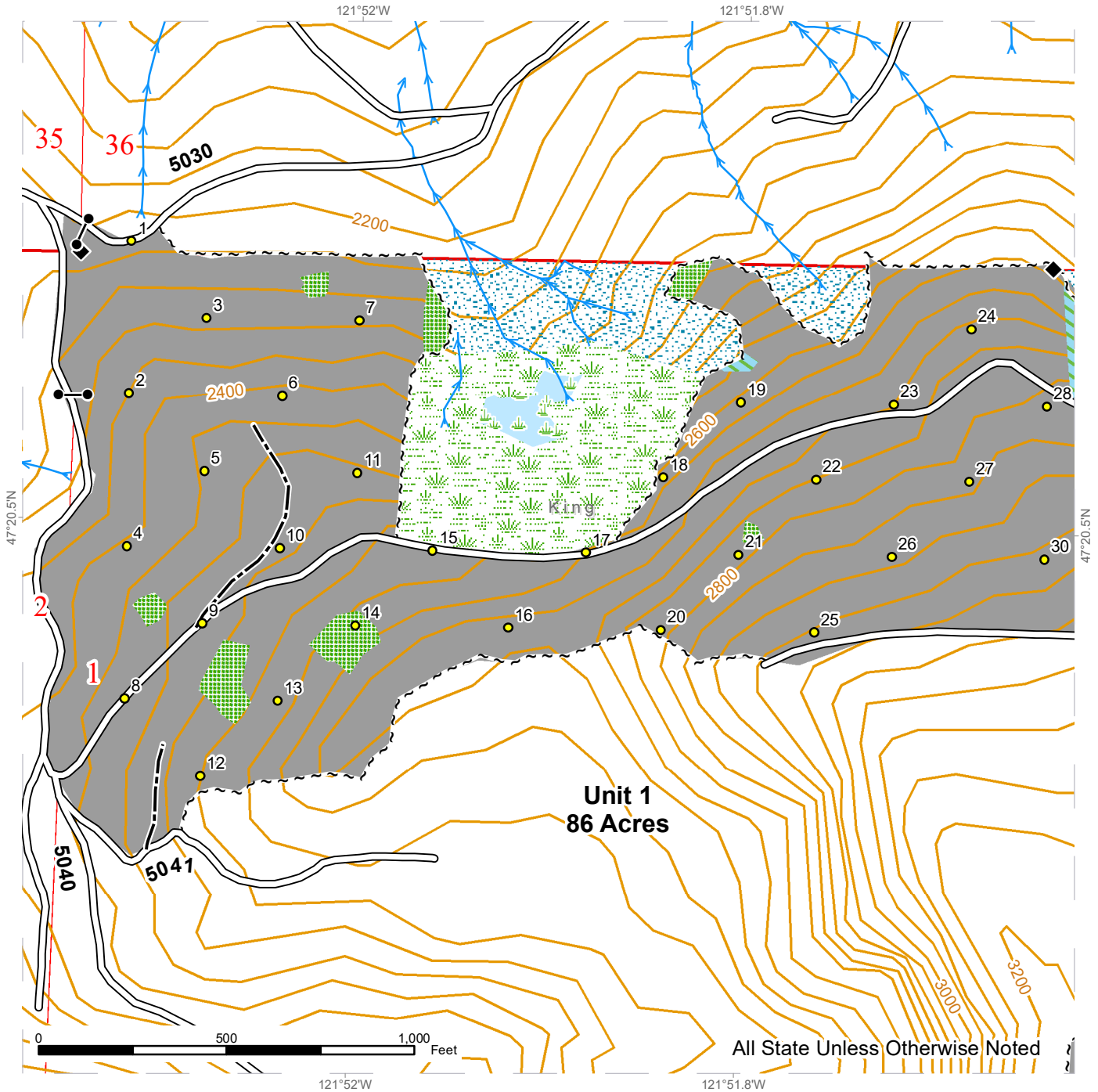
**Unit Summary: HODAG U6**

Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
DF	LIVE	CUT	6	ALL	16.6	59	77	1,004	815	18.8	7.2	10.8	2.7	41.1
NF	LIVE	CUT	16	ALL	16.0	68	91	11,444	11,150	2.6	64.7	90.3	22.6	562.0
SF	LIVE	CUT	28	ALL	13.7	50	69	7,208	6,428	10.8	70.5	72.2	19.5	324.0
WH	LIVE	CUT	26	ALL	14.0	53	70	7,069	6,544	7.4	69.2	74.0	19.8	329.8
ALL	LIVE	CUT	76	ALL	14.6	57	76	26,725	24,937	6.7	211.6	247.3	64.5	1,256.8
ALL	ALL	ALL	76	ALL	14.6	57	76	26,725	24,937	6.7	211.6	247.3	64.5	1,256.8

# CRUISE MAP

SALE NAME: HODAG  
 AGREEMENT#: 30-102173  
 TOWNSHIP(S): T21R7E, T21R8E, T22R7E  
 TRUST(S): Capitol Grant (7), Common School and Indemnity (3), Normal School (8), State Forest Transfer (1)

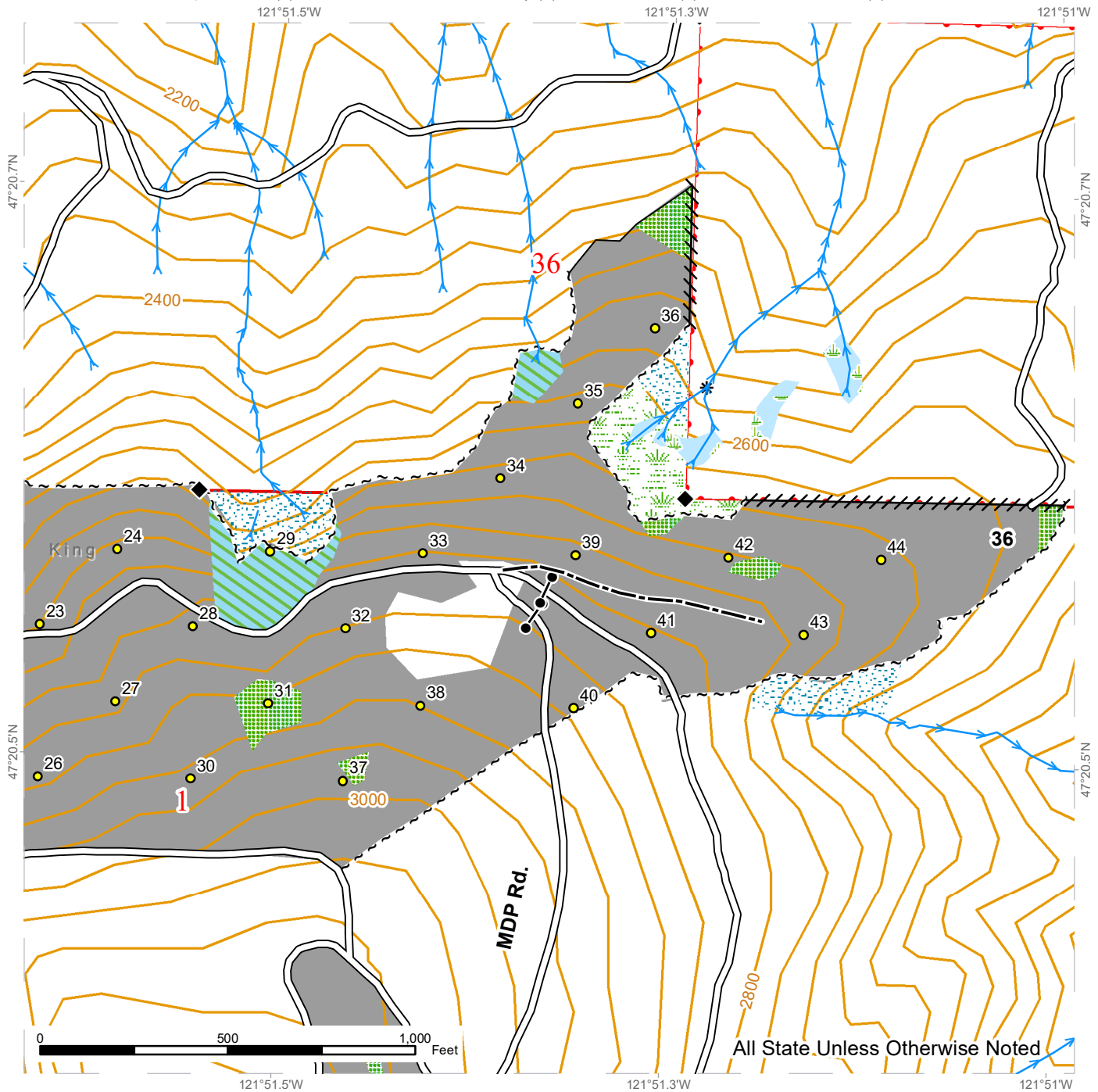
REGION: South Puget Sound Region  
 COUNTY(S): King  
 ELEVATION RGE: 2160-3560



# CRUISE MAP

**SALE NAME:** HODAG  
**AGREEMENT#:** 30-102173  
**TOWNSHIP(S):** T21R7E, T21R8E, T22R7E  
**TRUST(S):** Capitol Grant (7), Common School and Indemnity (3), Normal School (8), State Forest Transfer (1)

**REGION:** South Puget Sound Region  
**COUNTY(S):** King  
**ELEVATION RGE:** 2160-3560

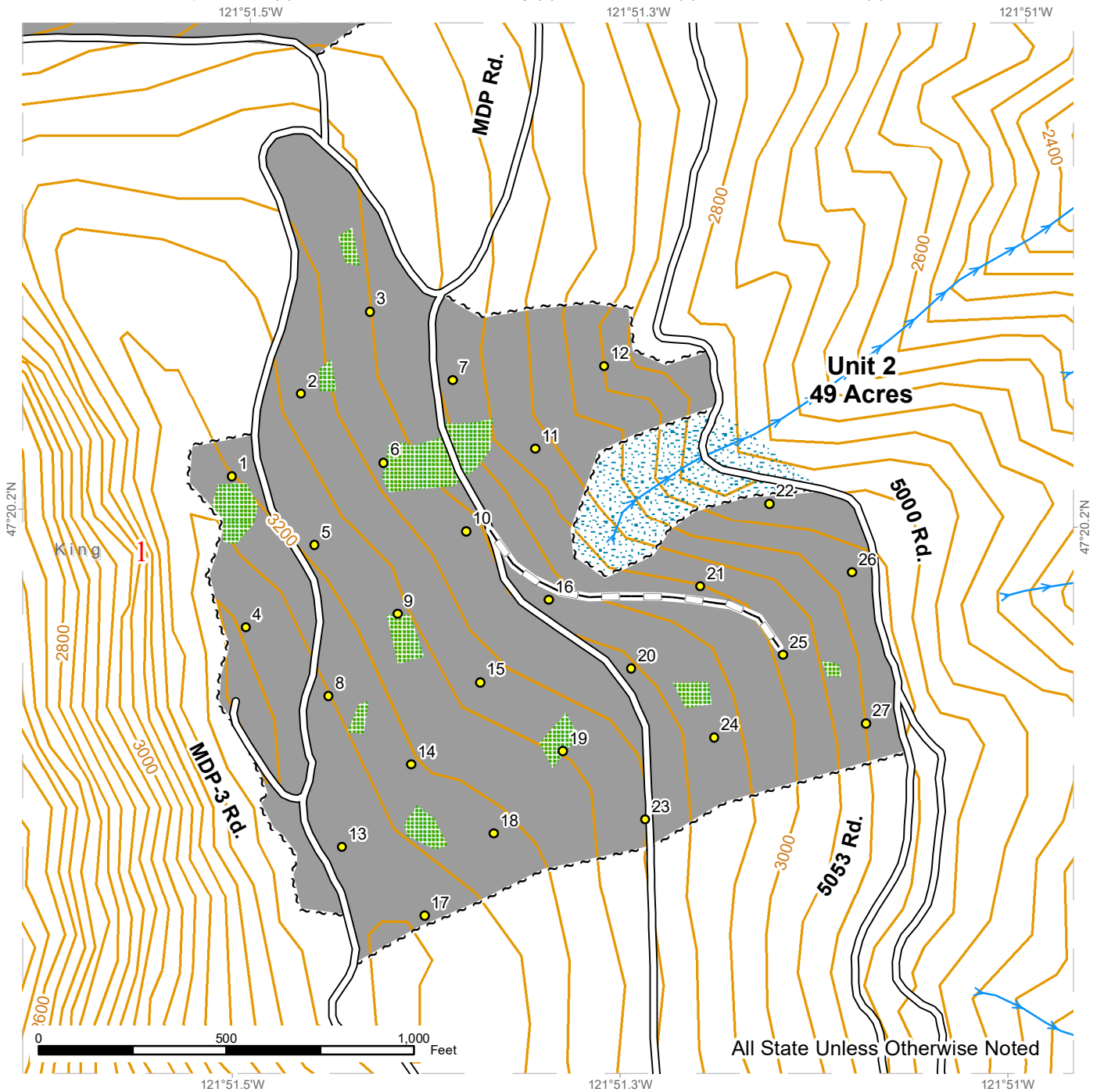


Variable Retention Harvest	Stream Type	Non-Tradeable Leave Clump
Sale Boundary Tags	Stream Type Break	Leave Tree Area
Timber Type Change	Survey Monument	Riparian Mgt Zone
Flag Line	Public Land Survey Sections	Wetland Mgt Zone
Existing Roads	DNR Managed Lands	Contours 40-foot
Streams	Wetlands - Non-forested	

# CRUISE MAP

**SALE NAME:** HODAG  
**AGREEMENT#:** 30-102173  
**TOWNSHIP(S):** T21R7E, T21R8E, T22R7E  
**TRUST(S):** Capitol Grant (7), Common School and Indemnity (3), Normal School (8), State Forest Transfer (1)

**REGION:** South Puget Sound Region  
**COUNTY(S):** King  
**ELEVATION RGE:** 2160-3560



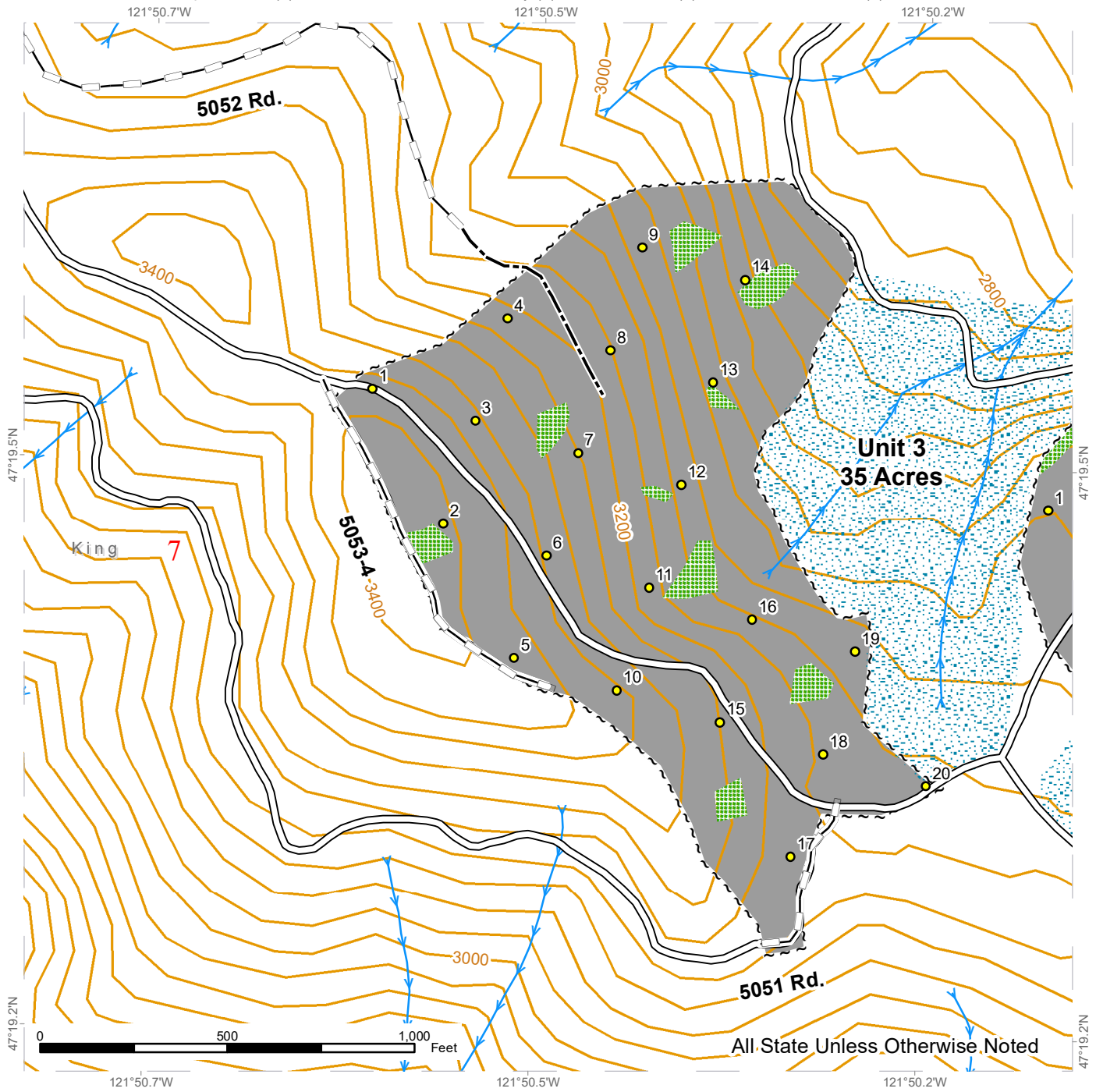
Variable Retention Harvest	Stream Type Break
Sale Boundary Tags	Public Land Survey Sections
Existing Roads	DNR Managed Lands
Optional Reconstruction	Leave Tree Area
Streams	Riparian Mgt Zone
Stream Type	Contours 40-foot



# CRUISE MAP

**SALE NAME:** HODAG  
**AGREEMENT#:** 30-102173  
**TOWNSHIP(S):** T21R7E, T21R8E, T22R7E  
**TRUST(S):** Capitol Grant (7), Common School and Indemnity (3), Normal School (8), State Forest Transfer (1)

**REGION:** South Puget Sound Region  
**COUNTY(S):** King  
**ELEVATION RGE:** 2160-3560



All State Unless Otherwise Noted

Variable Retention Harvest	Stream Type Break
Sale Boundary Tags	Public Land Survey Sections
Existing Roads	DNR Managed Lands
Optional Reconstruction	Leave Tree Area
Streams	Riparian Mgt Zone
Stream Type	Contours 40-foot

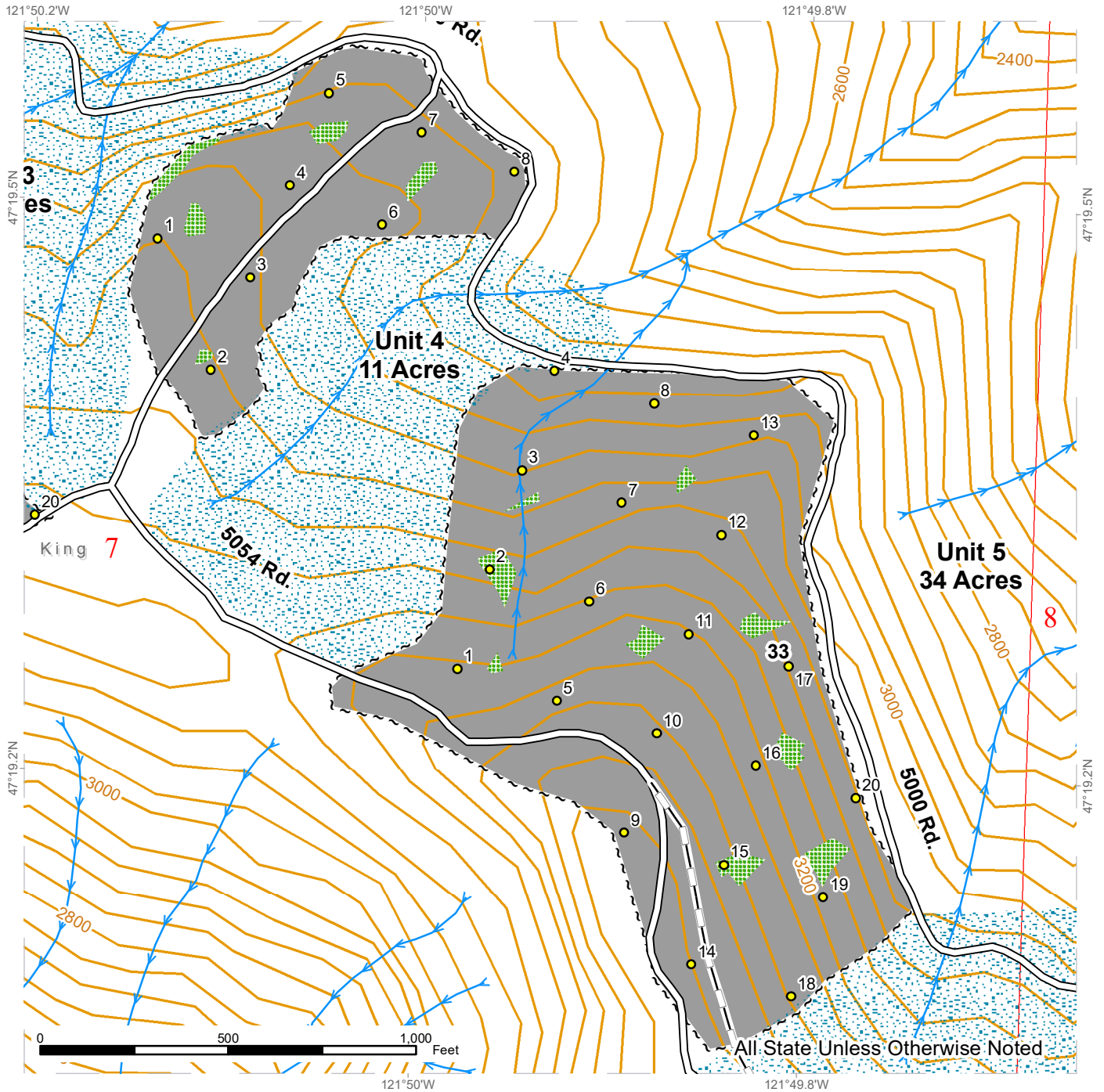




# CRUISE MAP

**SALE NAME:** HODAG  
**AGREEMENT#:** 30-102173  
**TOWNSHIP(S):** T21R7E, T21R8E, T22R7E  
**TRUST(S):** Capitol Grant (7), Common School and Indemnity (3), Normal School (8), State Forest Transfer (1)

**REGION:** South Puget Sound Region  
**COUNTY(S):** King  
**ELEVATION RGE:** 2160-3560



Variable Retention Harvest	Stream Type Break
Sale Boundary Tags	Public Land Survey Sections
Existing Roads	DNR Managed Lands
Optional Reconstruction	Leave Tree Area
Streams	Riparian Mgt Zone
Stream Type	Contours 40-foot

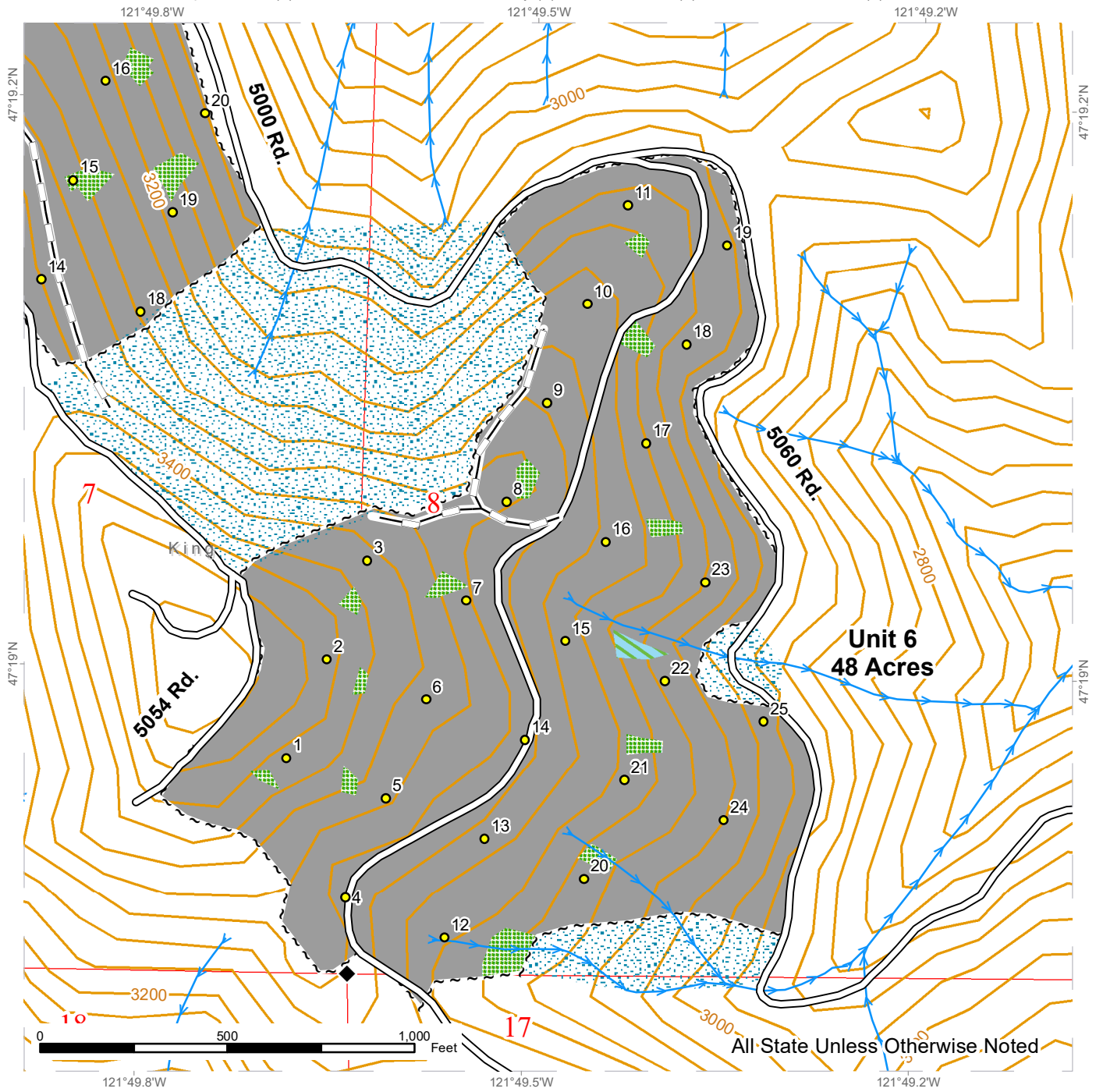




# CRUISE MAP

**SALE NAME:** HODAG  
**AGREEMENT#:** 30-102173  
**TOWNSHIP(S):** T21R7E, T21R8E, T22R7E  
**TRUST(S):** Capitol Grant (7), Common School and Indemnity (3), Normal School (8), State Forest Transfer (1)

**REGION:** South Puget Sound Region  
**COUNTY(S):** King  
**ELEVATION RGE:** 2160-3560



	Variable Retention Harvest		Stream Type Break		Riparian Mgt Zone
	Sale Boundary Tags		Survey Monument		Contours 40-foot
	Existing Roads		Public Land Survey Sections		Non-Tradeable Leave Clump
	Optional Reconstruction		DNR Managed Lands		Leave Tree Area
	Streams				
	Stream Type				





FPA/N No: 2423176

Date of Service: 3/30/2023

Reference: Hodag #30-102173

### Forest Practices Application/Notification Request to Amend Notice of Decision

**Decision**

- Approved**                      This request to amend is approved and subject to the conditions listed below.
- Disapproved**                      This request to amend is disapproved for the reasons listed below.
- Withdrawn**                      Applicant has withdrawn amendment request.

**Conditions on Approval/Reasons for Disapproval**

Issued By: Amanda Trujillo

Region: South Puget Sound

Title: Resource Protection Forester

Date: 3/30/2023

Copies to:                       Landowner, Timber Owner and Operator

Issued in person:     LO  TO  OP

By: *mi Jensen*

Date: 3/30/2023

**Appeal Information**

The landowner, timber owner, or operator has fifteen (15) calendar days from the date of service to request a Brief Adjudicative Proceeding (BAP) in the presence of the department to review this amendment, otherwise known as Notice to Comply. [RCW 76.09.090\(3\)](#), [WAC 222-46-030\(4\)](#), [WAC 332-08-215\(3\)](#)

**Appeal request must:**

- Be in writing;
- Include signature(s);
- Include the factual basis for the appeal and the issue to be adjudicated;
- Request must be sent to both of the following:

<b>Department Of Natural Resources South Puget Sound Region</b>	<b>Department of Natural Resource Forest Regulation Division</b>
950 Farman Ave N Enumclaw, WA 98022	1111 Washington Street, SE Olympia, WA 98504 -7012

**DNR Declaration of Mailing**

I, **Meredith Dessens**, caused the Notice of Decision for FPA/N No. **2421615** to be placed in the United States mail at **Olympia, WA**; postage paid. I declare under penalty of perjury of the laws of the State of Washington, that the foregoing is true and correct.

**3/30/2023**

*(Date)*

**Enumclaw, WA**

*(City & State where signed)*

*(Signature)*

Certified Mailing:

- Landowner
- Timber Owner
- Operator



# Forest Practices Application/Notification Notice of Decision

FPA/N No: 2423176

Effective Date: 11/4/2022

Expiration Date: 11/4/2025

Shut Down Zone: 659 N

EARR Tax Credit:  Eligible  Non-eligible

Reference: Hodag Timber Sale #30-102173

### Decision

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

### FPA/N Classification

- Class II  Class III  Class IVG  Class IVS

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

- 4 years  5 years

### Conditions on Approval/Reasons for Disapproval

Issued By: Jason Sharp

Region: South Puget Sound

Title: Resource Protection Forester

Date: 11/4/2022

Copies to:  Landowner, Timber Owner and Operator

Issued in person:  Landowner  Timber Owner  Operator

By: 

**Appeal Information**

You have thirty (30) days to **file** (i.e., **actually deliver**) an appeal in writing of this Decision and any related State Environmental Policy Act (SEPA) determinations to the Pollution Control Hearings Board, the Attorney General’s Office, and the Department of Natural Resources’ region office. See [RCW 76.09.205](http://www.wa.gov/rcw/default.aspx?title=76&chapter=09&section=205). The appeal period starts when the applicant receives this decision, which usually happens electronically on the date indicated below.

**You must file your appeal at all three addresses below:**

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

Information regarding the Pollution Control Hearings Board can be found at: <https://elaho.wa.gov/content/11>

**Other Applicable Laws**

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

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

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

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

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

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

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

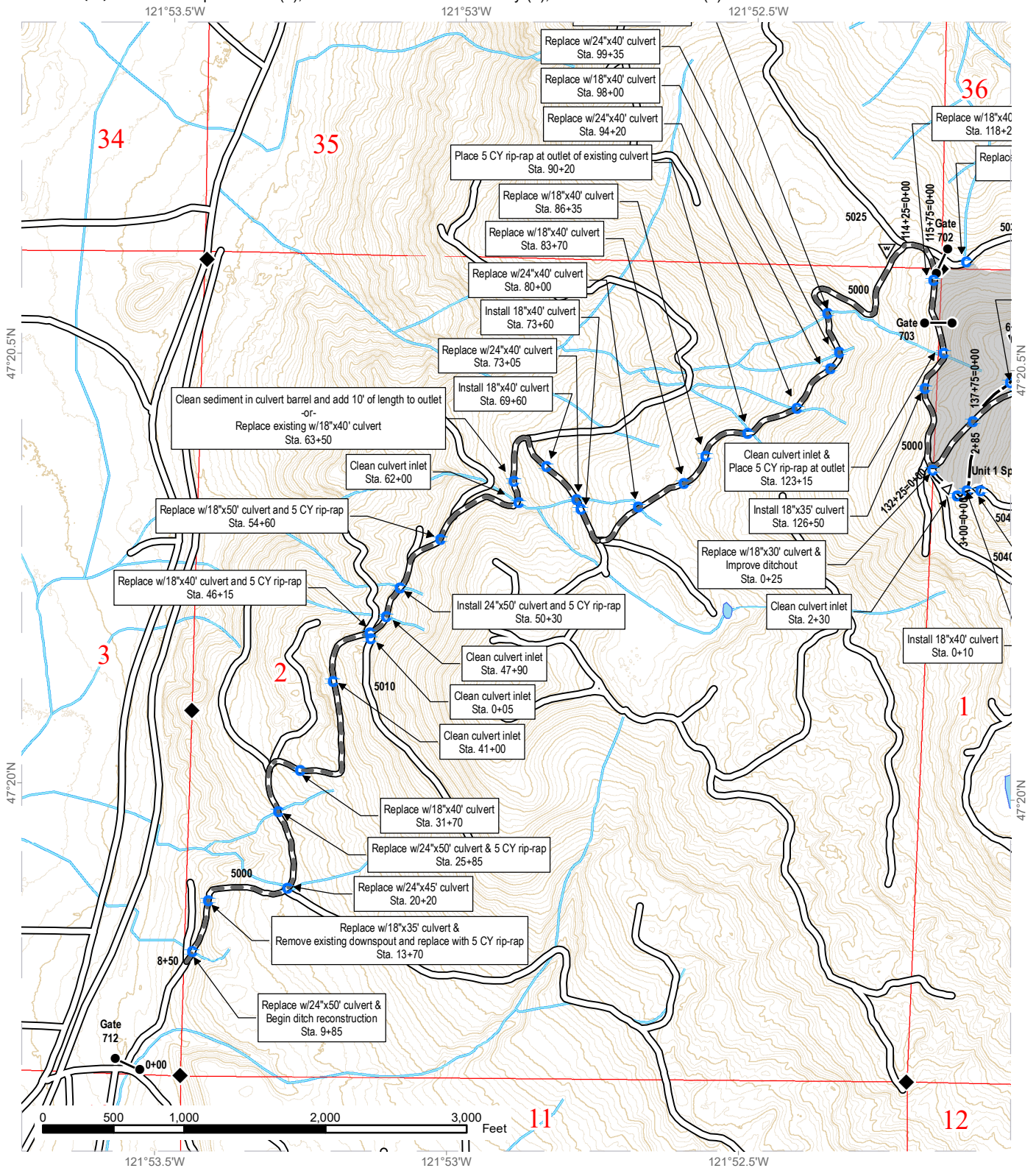
Failure by the seller to send the required notice to DNR at the time of sale will be prima facie evidence in an action by the buyer against the seller for costs related to the continuing forestland obligation prior to sale.



# ROAD WORK MAP (1 of 6)

**SALE NAME:** HODAG  
**AGREEMENT #:** 30-102173  
**TOWNSHIP(S):** T21R7E, T21R8E, T22R7E  
**TRUST(S):** Capitol Grant (7), Common School and Indemnity (3), State Forest Transfer (1)

**REGION:** South Puget Sound Region  
**COUNTY(S):** King  
**ELEVATION RGE:** 2160-3440



Existing Roads	Optional Construction	Culvert Installation	Stream
Required Pre-Haul Maintenance	Optional Reconstruction	Rock Pit	Contours 10 ft
Optional Pre-Haul Maintenance	Timber Sale Unit	Waste Area	Public Land Survey Sections
		Gate	Survey Monument



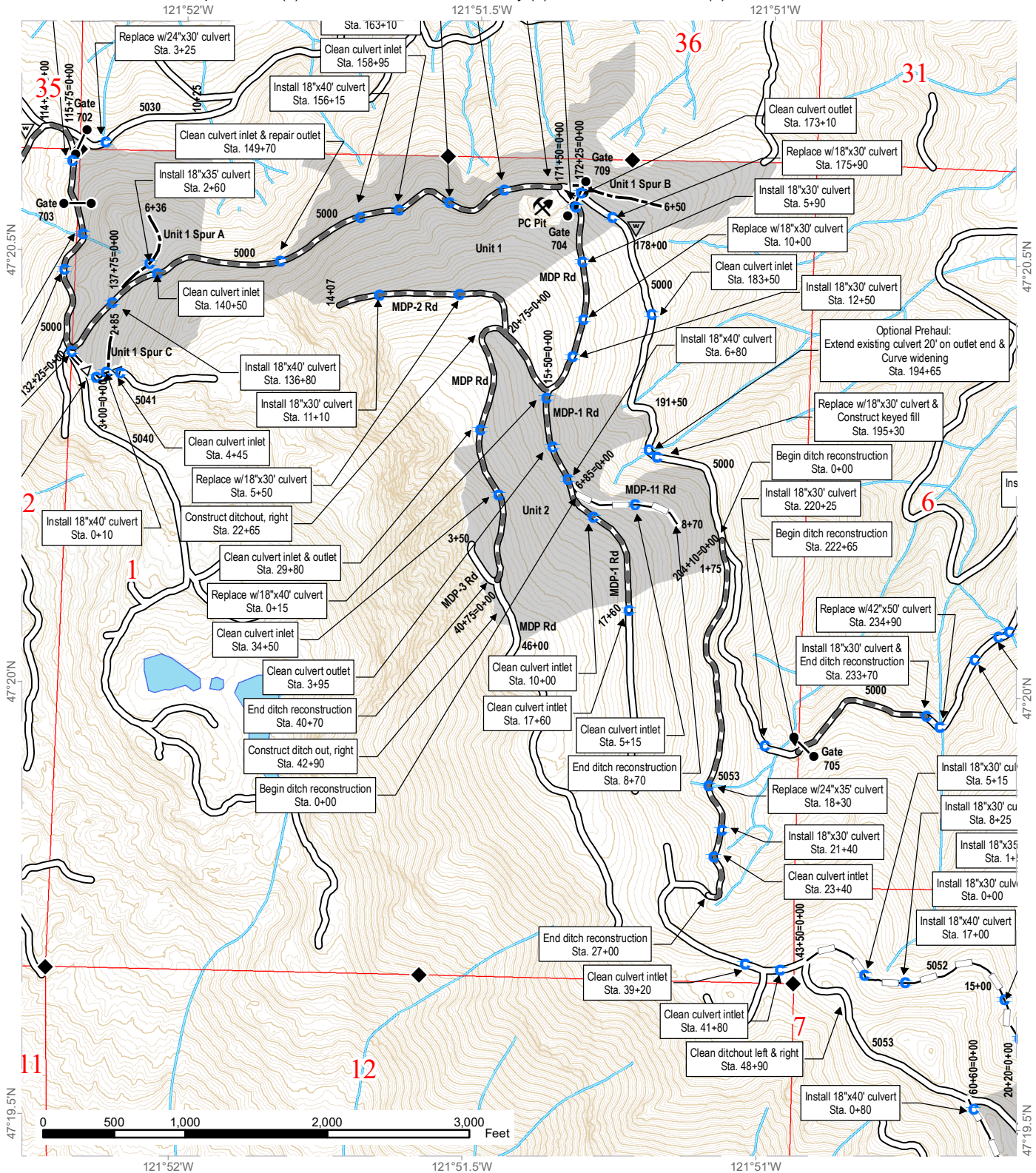




# ROAD WORK MAP (3 of 6)

**SALE NAME:** HODAG  
**AGREEMENT #:** 30-102173  
**TOWNSHIP(S):** T21R7E, T21R8E, T22R7E  
**TRUST(S):** Capital Grant (7), Common School and Indemnity (3), State Forest Transfer (1)

**REGION:** South Puget Sound Region  
**COUNTY(S):** King  
**ELEVATION RGE:** 2160-3440



Existing Roads	Optional Construction	Culvert Installation	Stream
Required Pre-Haul Maintenance	Optional Reconstruction	Rock Pit	Contours 10 ft
Optional Pre-Haul Maintenance	Timber Sale Unit	Waste Area	Public Land Survey Sections
	Gate	Survey Monument	

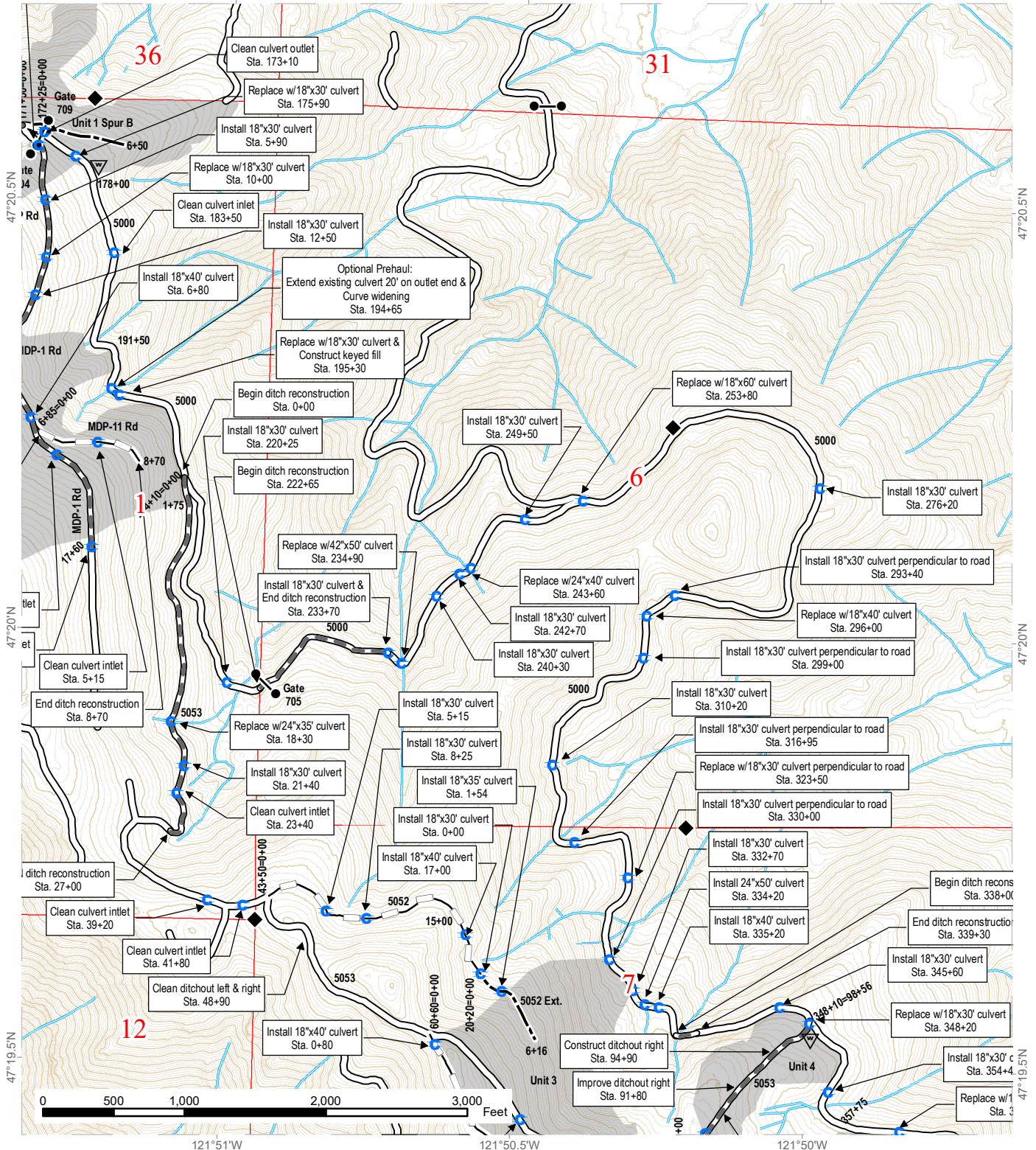


# ROAD WORK MAP ( 4 of 6 )

**SALE NAME:** HODAG  
**AGREEMENT #:** 30-102173  
**TOWNSHIP(S):** T21R7E, T21R8E, T22R7E  
**TRUST(S):** Capital Grant (7), Common School and Indemnity (3), State Forest Transfer (1)

**REGION:** South Puget Sound Region  
**COUNTY(S):** King  
**ELEVATION RGE:** 2160-3440

121°51'W 121°50.5'W 121°50'W



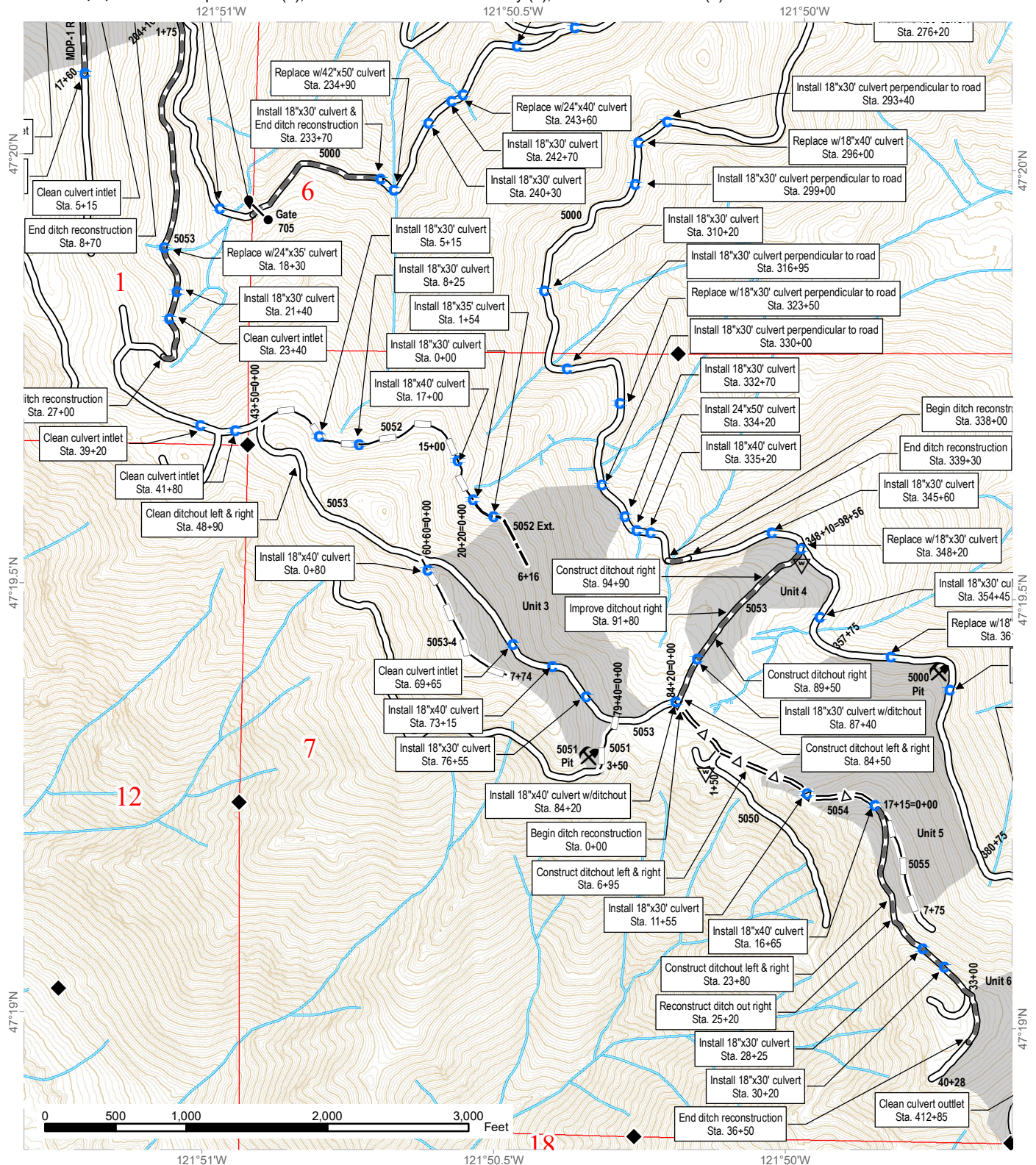
Existing Roads	Optional Construction	Culvert Installation	Stream
Required Pre-Haul Maintenance	Optional Reconstruction	Rock Pit	Contours 10 ft
Optional Pre-Haul Maintenance	Timber Sale Unit	Waste Area	Public Land Survey Sections
		Gate	Survey Monument



# ROAD WORK MAP ( 5 of 6 )

**SALE NAME:** HODAG  
**AGREEMENT #:** 30-102173  
**TOWNSHIP(S):** T21R7E, T21R8E, T22R7E  
**TRUST(S):** Capitol Grant (7), Common School and Indemnity (3), State Forest Transfer (1)

**REGION:** South Puget Sound Region  
**COUNTY(S):** King  
**ELEVATION RGE:** 2160-3440



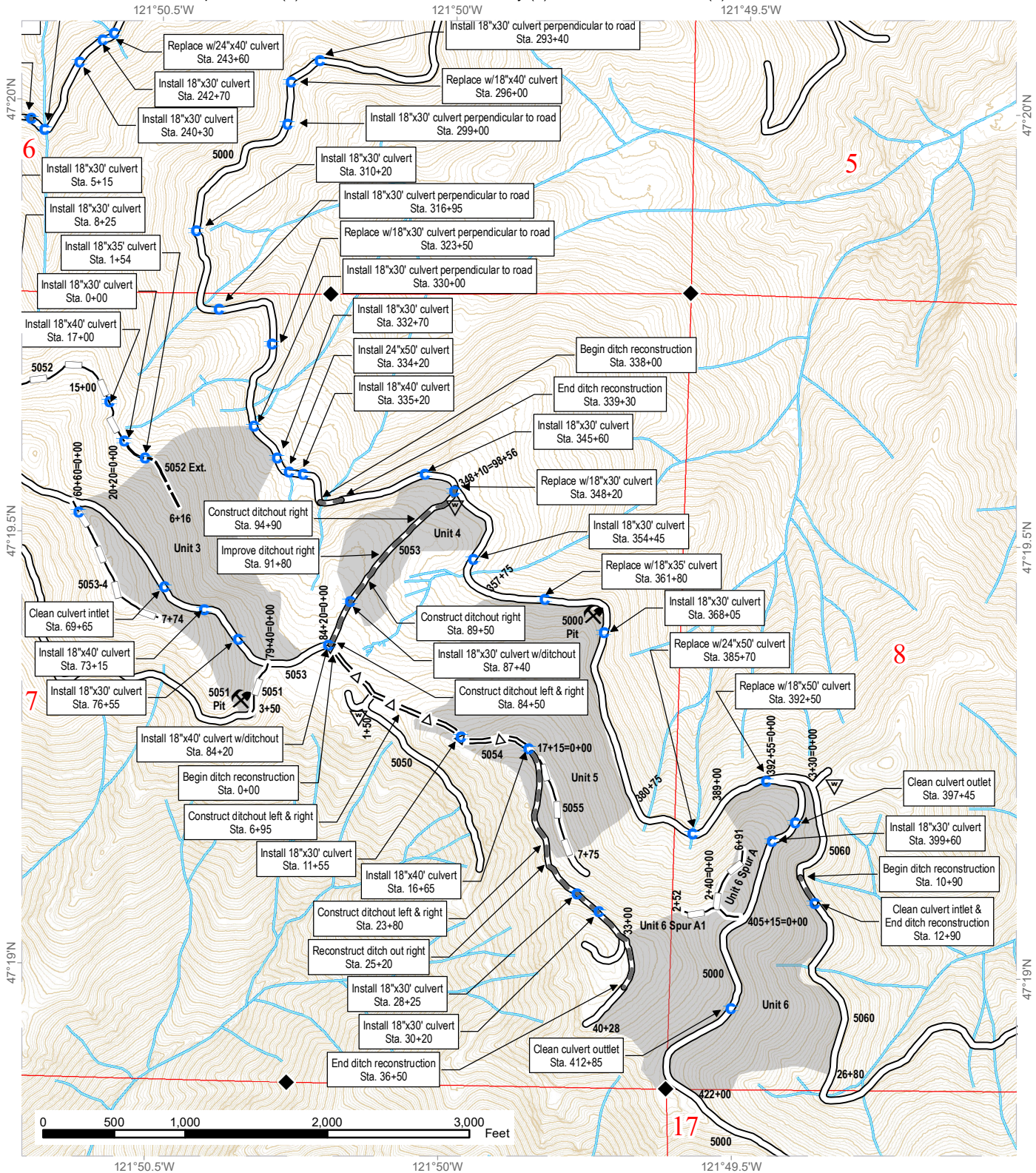
Existing Roads	Optional Construction	Culvert Installation	Stream
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# ROAD WORK MAP (6 of 6)

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Existing Roads	Optional Construction	Culvert Installation	Stream
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Optional Pre-Haul Maintenance	Timber Sale Unit	Waste Area	Public Land Survey Sections
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STATE OF WASHINGTON  
DEPARTMENT OF NATURAL RESOURCES

HODAG TIMBER SALE ROAD PLAN  
KING COUNTY  
BLACK DIAMOND UNIT  
SOUTH PUGET SOUND REGION

AGREEMENT NO.: 30-102173  
DATE: 01 APRIL 2022

STAFF ENGINEER: J. GARDNER  
DRAWN & COMPILED BY: J. GARDNER

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>
5000	9+85 to 170+90	Pre-haul maintenance
5000	173+08 to 173+12	Pre-haul maintenance
5000	175+75 to 176+05	Pre-haul maintenance
5000	183+48 to 183+52	Pre-haul maintenance
5000	195+05 to 195+55	Pre-haul maintenance
5000	220+10 to 220+40	Pre-haul maintenance
5000	222+65 to 233+70	Pre-haul maintenance
5000	234+75 to 245+05	Pre-haul maintenance
5000	240+15 to 240+45	Pre-haul maintenance
5000	242+55 to 242+85	Pre-haul maintenance
5000	243+45 to 243+75	Pre-haul maintenance
5000	249+35 to 249+65	Pre-haul maintenance
5000	253+65 to 253+95	Pre-haul maintenance
5000	276+05 to 276+35	Pre-haul maintenance
5000	293+25 to 293+55	Pre-haul maintenance
5000	295+85 to 296+15	Pre-haul maintenance
5000	298+85 to 299+15	Pre-haul maintenance
5000	310+05 to 310+35	Pre-haul maintenance
5000	316+80 to 317+10	Pre-haul maintenance
5000	323+35 to 323+65	Pre-haul maintenance
5000	329+85 to 330+15	Pre-haul maintenance
5000	332+55 to 332+85	Pre-haul maintenance

5000	334+05 to 334+35	Pre-haul maintenance
5000	335+05 to 335+35	Pre-haul maintenance
5000	338+00 to 339+30	Pre-haul maintenance
5000	345+45 to 345+75	Pre-haul maintenance
5000	348+05 to 348+35	Pre-haul maintenance
5000	354+30 to 354+60	Pre-haul maintenance
5000	361+65 to 361+95	Pre-haul maintenance
5000	367+90 to 368+20	Pre-haul maintenance
5000	385+55 to 385+85	Pre-haul maintenance
5000	392+35 to 392+65	Pre-haul maintenance
5000	399+45 to 399+75	Pre-haul maintenance
5030	3+10 to 3+40	Pre-haul maintenance
5040	0+10 to 0+40	Pre-haul maintenance
5041	2+28 to 2+32	Pre-haul maintenance
5041	4+43 to 4+47	Pre-haul maintenance
5052	15+00 to 20+20	Abandonment – if reconstructed
5052 Ext	0+00 to 6+16	Abandonment-if constructed
5053	0+00 to 27+00	Pre-haul maintenance
5053	39+18 to 39+22	Pre-haul maintenance
5053	41+78 to 41+82	Pre-haul maintenance
5053	48+88 to 48+92	Pre-haul maintenance
5053	69+63 to 69+67	Pre-haul maintenance
5053	73+00 to 73+30	Pre-haul maintenance
5053	76+40 to 76+70	Pre-haul maintenance
5053	84+05 to 84+35	Pre-haul maintenance
5053	84+48 to 84+52	Pre-haul maintenance
5053	87+25 to 87+55	Pre-haul maintenance
5053	89+48 to 89+52	Pre-haul maintenance
5053	91+78 to 91+82	Pre-haul maintenance
5053	94+88 to 94+92	Pre-haul maintenance
5054	0+00 to 36+50	Pre-haul maintenance
5055	0+00 to 7+75	Abandonment – if reconstructed
5060	10+90 to 12+90	Pre-haul maintenance
MDP Rd	1+90 to 40+70	Pre-haul maintenance
MDP RD	42+88 to 42+92	Pre-haul maintenance
MDP-1	0+00 to 17+60	Pre-haul maintenance
MDP-2	0+00 to 14+07	Pre-haul maintenance

### 0-3 OPTIONAL ROADS

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

<u>Road</u>	<u>Stations</u>	<u>Type</u>
5000	194+30 to 195+00	Pre-haul maintenance
5041	0+00 to 4+45	Pre-haul maintenance
5051	0+00 to 3+50	Reconstruction
5052	0+00 to 20+20	Reconstruction
5052 Ext	0+00 to 6+16	Construction
5053-4	0+00 to 7+74	Reconstruction
5055	0+00 to 7+75	Reconstruction
MDP-11	0+00 to 8+70	Reconstruction
Unit 1 Spur A	0+00 to 6+36	Construction
Unit 1 Spur B	0+00 to 6+50	Construction
Unit 1 Spur C	0+00 to 2+85	Construction
Unit 6 Spur A	0+00 to 6+91	Reconstruction
Unit 6 Spur A1	0+00 to 2+52	Reconstruction

**0-4 CONSTRUCTION**

Construction includes, but is not limited to.

- Clearing;
- Grubbing;
- Right-of-way debris disposal;
- Excavation and/or embankment to subgrade;
- Turnaround construction;
- Acquisition and installation of drainage structures;
- Acquisition, manufacture, and application of rock.

**0-5 RECONSTRUCTION**

Reconstruction includes, but is not limited to.

- Right-of-way debris disposal;
- Excavation and/or embankment to subgrade;
- Acquisition and installation of drainage structures;
- Acquisition, manufacture, and application of rock.

**0-6 PRE-HAUL MAINTENANCE**

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

- Road side brushing;
- Ditch construction/reconstruction;
- Keyed embankment construction;
- Acquisition and installation of drainage structures;
- Acquisition, manufacture, and application of rock.

**0-7 POST-HAUL MAINTENANCE**

This project includes post-haul road maintenance listed in Clause 9-5 POST-HAUL MAINTENANCE9-5 .



**0-10 ABANDONMENT**

This project includes abandonment listed in Clause 9-21 ROAD ABANDONMENT.

**0-12 DEVELOP ROCK SOURCE**

Purchaser may develop existing rock source(s). 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.
7. Road Work maps.

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

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

Purchaser shall repair or replace all materials, roadway infrastructure, and road components damaged during road work or operation activities. The Contract Administrator will direct repairs and replacements. Repairs to structural materials must be made in accordance with the manufacturer's recommendation.

**1-9 DAMAGED METALLIC COATING**

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

**1-15 ROAD MARKING**

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

- Construction: Orange ribbon tied at eye-height along centerline, with orange pin flags marking centerline.
- Reconstruction: Existing road centerline.

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

Purchaser shall perform work on the following road(s) in accordance with the construction stakes set in the field for grade and alignment. Reconstruction of existing road grades must conform to the original location.

<u>Road</u>	<u>Stations</u>	<u>Type</u>
5051	0+00 to 3+50	Reconstruction
5052	0+00 to 20+20	Reconstruction
5052 Ext.	0+00 to 6+16	Construction
5053-4	0+00 to 7+74	Reconstruction
5055	0+00 to 7+75	Reconstruction
MDP-11 Rd	0+00 to 8+70	Reconstruction
Unit 1 Spur A	0+00 to 6+36	Construction
Unit 1 Spur B	0+00 to 6+50	Construction
Unit 1 Spur C	0+00 to 2+85	Construction
Unit 6 Spur A	0+00 to 6+91	Reconstruction



Unit 6 Spur A1	0+00 to 2+52	Reconstruction
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**1-18 REFERENCE POINT DAMAGE**

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

**1-21 HAUL APPROVAL**

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

**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
- Haul approval

**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:

- Surface or base stability problems persist.
- Weather is such that satisfactory results cannot be obtained in an area of operations.

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.

**1-33 SNOW PLOWING RESTRICTION**

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

**1-40 ROAD APPROACHES TO COUNTY ROADS AND STATE HIGHWAYS**

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

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

**1-43 ROAD WORK AROUND UTILITIES**

Road work is in close proximity to a utility. Known utilities are listed, but it is the Purchaser’s responsibility to identify any utilities not listed. Purchaser shall work in accordance with all applicable laws or rules concerning utilities. Purchaser is responsible for all notification, including “call before you dig”, and liabilities associated with the utilities and their rights-of-way. Purchaser shall immediately notify the Contract Administrator if damage to the utility occurs.

<u>Road</u>	<u>Stations</u>	<u>Utility</u>
5000	0+00 to 171+50	Buried Power
MDP Rd	0+00 to 40+75	Buried Power
MDP-3 Rd	0+00 to 3+50	Buried Power

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.

**2-6 CLEANING CULVERTS**

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

<u>Road</u>	<u>Stations</u>
5000	41+00, 47+90, 62+00, 63+50, 123+15, 140+50, 149+70, 158+95, 167+60, 173+10, 183+50, 397+45 & 412+85
5010	0+05
5041	2+30 & 4+45
5053	23+40, 39+20, 41+80 & 69+65
5060	12+90
MDP Rd	29+80 & 34+50

MDP -1 Rd	3+95, 10+00 & 17+60
MDP-11 Rd	5+15

**2-8 MAINTAINING EROSION CONTROL STRUCTURES**

On the following road(s), Purchaser shall clean and maintain all erosion control structures. Work must be completed before timber haul. Excavated material must be scattered outside the grubbing limits.

<u>Road</u>	<u>Stations</u>	<u>Comments</u>
5000	90+20	Place 5 CY of Rip Rap at outlet
5000	123+15	Place 5 CY of Rip Rap at outlet
5000	149+70	Open crushed outlet
5040	0+25	Steepen and extend ditchout-right
5053	48+90	Reconstruct ditchout-left & right
5053	84+50	Construct ditchout-left & right
5053	89+50	Reconstruct ditchout- right
5053	91+80	Improve ditchout - right
5053	94+90	Construct ditchout- right
5054	6+95	Construct ditchout-left & right
5054	23+80	Construct ditchout-left & right
5054	25+20	Reconstruct ditchout- right
MDP Rd	22+65	Construct ditchout- right

**SECTION 3 – CLEARING, GRUBBING, AND DISPOSAL**

**3-3 BRUSHING ALTERNATIVE**

On the following road(s), Purchaser shall remove vegetative material up to 3 inches in diameter, including limbs, as shown on the BRUSHING DETAIL. Cutting, pulling, digging, pushing over, and other non-cutting methods used for vegetation removal may be used for brushing. Excavator buckets, log loaders and similar equipment may be used for. Purchaser shall remove brushing debris from the road surface, ditchlines, and culvert inlets and outlets.

<u>Road</u>	<u>Stations</u>
5041	0+00 to 4+45
5051	0+00 to 3+50
5052	0+00 to 20+20
5053-4	0+00 to 7+74
5054	0+00 to 40+28
5055	0+00 to 7+75
MDP-1 Rd	0+00 to 17+60
MDP-11 Rd	0+00 to 8+70

MDP-2 Rd	0+00 to 14+07
Unit 6 Spur A	0+00 to 6+91
Unit 6 Spur A1	0+00 to 2+52

**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.

**3-10 GRUBBING**

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

**3-20 ORGANIC DEBRIS DEFINITION**

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

**3-21 DISPOSAL COMPLETION**

Purchaser shall remove organic debris from the road surface, ditchlines, and culvert inlets and outlets. Purchaser shall complete all disposal of organic debris, before 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 50 feet of a live stream, or wetland.
- On road subgrades, or excavation and embankment slopes.
- On slopes greater than 40%.
- Within the operational area for cable landings where debris may shift or roll.
- On locations where brush can fall into the ditch or onto the road surface.
- Against standing timber.

**3-24 BURYING ORGANIC DEBRIS RESTRICTED**

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

**3-25 SCATTERING ORGANIC DEBRIS**

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

**SECTION 4 – EXCAVATION**

**4-2 PIONEERING**

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

- Drainage must be provided on all uncompleted construction.
- 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>
Common Earth (on side slopes up to 55%)	1:1	100
Common Earth (56% to 70% side slopes)	¾:1	133
Common Earth (on slopes over 70%)	½:1	200
Fractured or loose rock	½:1	200
Hardpan or solid rock	¼:1	400

**4-6 EMBANKMENT SLOPE RATIO**

Purchaser shall construct embankment slopes no steeper than shown on the following table, 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. Optional embankment widening is modified as follows:

<u>Road</u>	<u>Stations</u>	<u>Embankment Widening (ft)</u>	<u>Apply Widening to :</u>
5000	194+30 to 195+00	8	Inside of Curve

**4-11 KEYED EMBANKMENT**

On the following road(s), Purchaser shall key embankments into the native slope in accordance with the EMBANKMENT KEY DETAIL.

<u>Road</u>	<u>Stations</u>
5000	195+05 to 195+55

**4-22 TURNAROUNDS**

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

**4-25 DITCH CONSTRUCTION AND RECONSTRUCTION**

On the following road(s), Purchaser shall construct or reconstruct ditches into the subgrade as specified on the TYPICAL SECTION SHEET. Ditches must be constructed concurrently with construction of the subgrade.

<u>Road</u>	<u>Stations</u>
5000	9+85 to 171+50
5000	222+65 to 233+70
5000	338+00 to 339+30
5052	0+00 to 20+20
5052 Ext	0+00 to 6+16
5053	0+00 to 27+00
5054	0+00 to 36+50
5060	10+90 to 12+90
MDP Rd	1+90 to 40+70
MDP-11 Rd	0+00 to 8+70
Unit 1 Spur A	0+00 to 6+36
Unit 1 Spur B	0+00 to 6+50
Unit 1 Spur C	0+00 to 2+85

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

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.

**4-28 DITCH DRAINAGE**

Ditches must drain to cross-drain culverts or ditchouts.

**4-29 DITCHOUTS**

Purchaser shall construct ditchouts as identified in the table below and as needed. Ditchouts must be constructed in a manner that diverts ditch water onto the forest floor and must have excavation backslopes no steeper than a 1:1 ratio. L or R denotes ditchout left or ditchout right oriented as if facing in the direction of stationing increasing.

<u>Road</u>	<u>Stations</u>	<u>L or R</u>
5040	0+25	R
5053	48+90	L & R
5053	84+20	R
5053	84+50	L & R
5053	87+40	R
5053	89+50	R
5053	91+80	R
5053	94+90	R

5054	6+95	L & R
5054	23+80	L & R
MDP Rd	5+50	R

**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. 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.

**4-37 WASTE AREA LOCATION**

Purchaser shall deposit waste material in the listed designated areas. Additional waste areas may also be approved by the Contract Administrator.

<u>Road</u>	<u>Waste Area Location</u>
5000	At approx. sta. 114+25. West of 5000/5025 jct.
5000	At approx. sta. 177+25. Northeast of 5000 Rd
5050	At approx. sta. 1+50. 150 ft southwest of 5054/5050 jct.
5053	At approx. sta. 348+10. South of 5000/5030 jct.
5060	At approx. sta. 3+30. 150 ft west of 5060/Spur jct. Waste material in southeastern portion of saddle, over edge of flat.

**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.
- Within a wetland management zone.
- On side slopes steeper than 55%.
- In locations that interfere with the construction of the road prism.
- On road prisms or turn-arounds
- In locations that impede drainage.



- Within the operational area for cable landings.
- Against standing timber.

#### **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.

#### **4-60 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 and reconstructed subgrades in accordance with the COMPACTION LIST by routing equipment over the entire width except ditch. Purchaser shall obtain written approval from the Contract Administrator for subgrade compaction before application of rock.

#### **4-63 EXISTING SURFACE COMPACTION**

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

### **SECTION 5 – DRAINAGE**

#### **5-1 REMOVAL OF SHOULDER BERMS**

Purchaser shall remove berms from road shoulders. The construction of ditchouts is required where ponding could result from the effects of sidecast debris.

#### **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 10-24.

**5-6 CULVERT TYPE**

On the following road(s), Purchaser may install culverts made of steel, aluminum, or plastic in accordance with Clauses 10-15 through 10-24. All other culverts shall be made of plastic.

<u>Road</u>	<u>Stations</u>
5052	15+00 to 20+20
5052 Ext	0+00 to 6+16

**5-7 USED CULVERT MATERIAL**

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

<u>Road</u>	<u>Stations</u>
5052	15+00 to 20+20
5052 Ext	0+00 to 6+16

**5-12 UNUSED MATERIALS STATE PROPERTY**

On required roads, any materials listed on the CULVERT AND DRAINAGE LIST that are not installed will become the property of the state. Purchaser shall stockpile materials at the PC Pit (NW¼ NE¼ Section 01 T21R07E).

**5-13 CONTINGENCY CULVERTS**

The following culverts will be supplied by the Purchaser and are available for installation as directed by the Contract Administrator. At the conclusion of the sale, contingency culverts not installed will remain the property of the Purchaser.

<u>Road</u>	<u>Size</u>
On any portion of road used for timber or rock haul.	18" x 30' culvert
	18" x 30' culvert
	18" x 30' culvert
	18" culvert band
	18" culvert band

**5-15 CULVERT INSTALLATION**

Culvert installation must be in accordance with the CULVERT AND DRAINAGE SPECIFICATION DETAIL. Corrugated Polyethylene pipe must be installed in a manner consistent with the manufacturer's recommendations. Culverts shall be banded using lengths of no less than 10 feet, and no more than one length less than 16 feet. Shorter section of banded culvert shall be installed at the inlet end.

**5-16 APPROVAL FOR LARGER CULVERT INSTALLATION**

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

**5-17 CROSS DRAIN SKEW AND SLOPE**

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

**5-18 CULVERT DEPTH OF COVER**

All 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.

**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.

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.

**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 CULVERTS**

Purchaser shall construct headwalls in accordance with the CULVERT AND DRAINAGE SPECIFICATION DETAIL at all culverts on the CULVERT AND DRAINAGE LIST. 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.

**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 15 feet between waterbars or between natural drainage paths, and with a maximum spacing of 300 feet.

**SECTION 6 – ROCK AND SURFACING**

**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 business days before starting any operations in the listed locations.

<u>Source</u>	<u>Location</u>	<u>Rock Type</u>
PC Pit	NW¼ NE¼ Section 01 T21R07E	2-Inch Minus, 4-Inch In Place, Quarry Spalls, Light Loose Rip Rap
5000 Pit	SE¼ NE¼ Section 07 T21R08E	
5051 Pit	SE¼ NW¼ Section 07 T21R08E	

**6-5 ROCK FROM COMMERCIAL SOURCE**

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

**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 PC PIT DEVELOPMENT PLAN prepared by the state and included in this road plan. Upon completion of operations, the rock source must be left in the condition specified in the PC PIT DEVELOPMENT PLAN, and approved in writing by the Contract Administrator.

<u>Source</u>	<u>Location</u>
PC Pit	NW¼ NE¼ Section 01 T21R07E

**6-12 ROCK SOURCE SPECIFICATIONS**

If used, 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
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- 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 vegetation, including stumps shall be cleared a minimum of 20 feet beyond the top of all working faces and scattered in natural openings.
- All dirt shall be stripped for a minimum of 12 feet from working faces.
- Pit floors may not be lower than adjacent roads.
- All vegetation removed will be piled in the adjacent T.S. unit.
- Oversized material remaining in the rock source at the conclusion of the timber sale may not exceed 10% of the total volume mined in that source. Oversize material is defined as rock fragments larger than two feet in any direction.
- All operations must be carried out in compliance with all regulations of the Regulations and Standards Applicable to Metal and Nonmetal Mining and Milling Operations (30 CFR) U.S. Department of Labor, Mine Safety and Health Administration and Safety Standards for Construction Work (296-155 WAC), Washington Department of Labor and Industries.
- All vehicle access to the top of the pit faces must be blocked.

#### **6-14 DRILL AND SHOOT**

Rock drilling and shooting must meet the following specifications:

- Purchaser shall notify the Contract Administrator a minimum of 5 working days before blasting operations.
- Purchaser shall submit an informational drilling and shooting plan to the Contract Administrator 5 working days before any drilling.
- All operations must be carried out in compliance with the Regulations and Standards Applicable to Metal and Nonmetal Mining and Milling Operations (30 CFR) U.S. Department of Labor, Mine Safety and Health Administration and the Safety Standards for Construction Work (296-155 WAC), Washington Department of Labor and Industries.
- Purchaser shall block access roads and trails before blasting operations.

#### **6-20 ROCK CRUSHING OPERATIONS**

Rock crushing operations must conform to the following specifications:

- Operations and placement of oversize material must be conducted in or near the rock source site.
- Purchaser shall produce sieve analysis for crushing operations every 300 yards for 2-INCH MINUS.
- Purchaser may use a commercial testing lab to produce sieve analyses.

**6-21 IN-PLACE PROCESSING**

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

**6-22 FRACTURE REQUIREMENT FOR ROCK**

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

**6-23 ROCK GRADATION TYPES**

Purchaser shall provide or 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 prior to haul approval being issued.

**6-30 2-INCH MINUS CRUSHED ROCK**

% Passing 2" square sieve	100%
% Passing 1" square sieve	50 - 85%
% Passing U.S. #4 sieve	30 - 50%
% Passing U.S. #40 sieve	16% maximum
% Passing U.S. #200 sieve	5% maximum

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

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

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

In-place rock may not contain more than 5 percent by weight of organic debris and trash. No more than 50 percent of rock may be larger than 8 inches in any dimension and no rock may be larger than 12 inches in any dimension.

**6-41 SELECT PIT RUN ROCK**

No more than 50 percent of the rock may be larger than 8 inches in any dimension and no rock may be larger than 12 inches in any dimension. Select Pit Run rock may not contain more than 5 percent by weight of organic debris and trash. Rock may require processing to meet this specification.

**6-43 QUARRY SPALLS**

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

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

**6-50 LIGHT LOOSE RIP RAP**

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

<u>Quantity</u>	<u>Approximate Size Range</u>
20% to 90%	500 lbs. to 1 ton (18" - 28")
15% to 80%	50 lbs. to 500 lbs. (8" - 18")
10% to 20%	3 inch to 50 lbs. (3" - 8")

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

Measurement of specified rock depths, are defined as the compacted depth(s) using the compaction methods required in this road plan. Estimated quantities specified in the ROCK LIST are compacted yards. Purchaser shall apply adequate amounts of rock to meet the specified rock depths. Specified rock depths are minimum requirements and are not subject to reduction, unless otherwise stated in Clause 6-75 OPTIONAL ROCK EXCEPTION.

**6-70 APPROVAL BEFORE ROCK APPLICATION**

Purchaser shall obtain written approval from the Contract Administrator for subgrade compaction 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. Road surfaces must be compacted in accordance with the COMPACTION LIST by routing equipment over the entire width.

**6-73 ROCK FOR WIDENED PORTIONS**

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

**6-75 OPTIONAL ROCK EXCEPTION**

On the following roads, Purchaser may provide and place less rock than shown on the ROCK LIST.

<u>Road</u>	<u>Stations</u>
5052	0+00 to 19+20
5052 Ext.	1+00 to 6+16
5053-4	0+00 to 7+74

5054	0+00 to 17+50
5055	0+00 to 7+75
Unit 1 Spur A	4+00 to 6+36
Unit 1 Spur B	0+00 to 6+50
Unit 1 Spur C	0+00 to 2+85
Unit 6 Spur A	0+00 to 6+91
Unit 6 Spur A1	0+00 to 2+52

## SECTION 7 – STRUCTURES

### 7-1 SIGN INSTALLATION

Purchaser shall purchase, install, and maintain the following road signs. Signs must be installed a minimum of 3 days before operations begin in Unit 1 and/or Unit 2. Signs must be durable, weather resistant, and legible with lettering have a minimum height of 2.5 inches tall.

<u>Road</u>	<u>Station</u>	<u>Sign</u>
5000	115+50	Logging Operations. Roads and Trails Closed
5030	1+40	

### 7-5 STRUCTURE DEBRIS

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

### 7-57 CULVERT SHAPE CONTROL

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

### 7-70 GATE CLOSURE

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



<u>Road</u>	<u>Station</u>	<u>Gate No.</u>	<u>Comment</u>
5000	0+00	712	Close daily at the conclusion of operations.
5000	173+25	709	
MDP Rd	1+70	704	

## SECTION 8 – EROSION CONTROL

### 8-15 REVEGETATION

On the following road(s), Purchaser shall spread grass seed and a layer of straw on all exposed soils resulting from road work activities. Purchaser shall revegetate during the first available opportunity after road work is completed.

<u>Road</u>	<u>Location</u>	<u>Quantity</u>	<u>Type</u>
5000	9+60 to 10+10	50 lbs/acre	Pasture Mix
5000	19+95 to 20+45	50 lbs/acre	Pasture Mix
5000	25+60 to 26+10	50 lbs/acre	Pasture Mix
5000	72+80 to 73+30	50 lbs/acre	Pasture Mix
5000	79+75 to 80+25	50 lbs/acre	Pasture Mix
5000	93+95 to 94+45	50 lbs/acre	Pasture Mix
5000	99+10 to 99+60	50 lbs/acre	Pasture Mix
5000	102+05 to 102+55	50 lbs/acre	Pasture Mix
5000	194+40 to 194+90	50 lbs/acre	Pasture Mix
5000	234+65 to 235+15	50 lbs/acre	Pasture Mix
5000	243+35 to 243+85	50 lbs/acre	Pasture Mix
5000	385+45 to 385+95	50 lbs/acre	Pasture Mix
5030	3+00 to 3+50	50 lbs/acre	Pasture Mix
5053	18+05 to 18+55	50 lbs/acre	Pasture Mix

### 8-16 REVEGETATION SUPPLY

The Purchaser shall provide the Pasture Mix grass seed and straw.

## SECTION 9 – POST-HAUL ROAD WORK

### 9-1 EARTHEN BARRICADES

Purchaser shall construct barricades in accordance with the BARRICADE DETAIL.

<u>Road</u>	<u>Stations</u>
5052	15+00
5055	0+30

**9-3 CULVERT MATERIAL REMOVED FROM STATE LAND**

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

**9-5 POST-HAUL MAINTENANCE**

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

<u>Road</u>	<u>Stations</u>	<u>Additional Requirements</u>
5000	115+75 to 178+00, 191+50 to 204+10, 330+00 to 332+70, 339+30 to 354+45, 357+75 to 380+75, 389+00 to 422+00	Purchaser shall clean/reshape ditches, headwalls, and catchbasins. Work must be completed after timber haul is finished and must be done in accordance with the dimensions on the TYPICAL SECTION SHEET. All logging debris shall be removed. Pulling ditch material across the road or mixing in with the road surfaces is not allowed.
5030	0+00 to 10+25	
5051	0+00 to 3+50	
5053	0+00 to 1+75, 60+60 to 82+00, 87+40 to 98+56	
5053-4	0+00 to 7+74	
5054	6+95 to 23+80, 33+00 to 40+28	
5060	0+00 to 26+80	
MDP Rd	0+00 to 4+00, 15+50 to 46+00	
MDP-1 Rd	0+00 to 17+60	
MDP-11 Rd	0+00 to 8+70	
MDP-2 Rd	0+00 to 14+07	
MDP-3 Rd	0+00 to 3+50	

**9-10 LANDING DRAINAGE**

Purchaser shall provide for drainage of the landing surface.

**9-21 ROAD ABANDONMENT**

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

<u>Road</u>	<u>Stations</u>
5052	15+00 to 20+20
5052 Ext	0+00 to 6+16
5055	0+00 to 7+75

**9-22 ABANDONMENT**

- Remove road shoulder berms.
- Construct non-drivable waterbars according to the attached NON-DRIVABLE WATERBAR DETAIL at a maximum spacing that will produce a vertical drop of no more than 10 feet between waterbars or between natural drainage paths and with a maximum spacing of 150 feet.

- Skew waterbars at least 30 degrees from perpendicular to the road centerline on roads in excess of 3 percent grade.
- Key waterbars into the cut-slope to intercept the ditch. Waterbars must be outsloped to provide positive drainage. Outlets must be on stable locations.
- Block roads with earthen barricades in accordance with the attached BARRICADE DETAIL.
- Remove ditch cross drain culverts and leave the resulting trench open.
- Slope all trench walls and approach embankments no steeper than 1.5:1.

## SECTION 10 MATERIALS

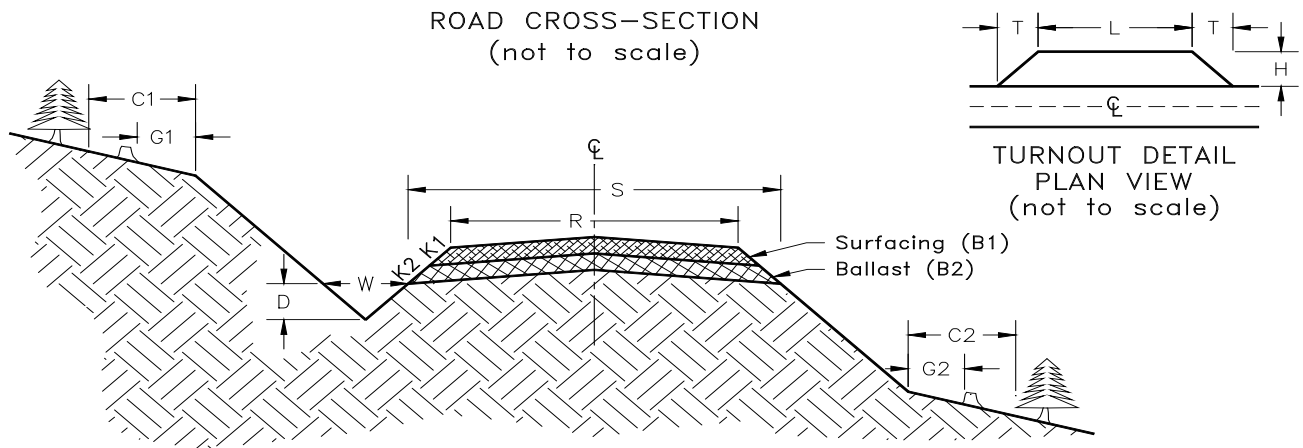
### **10-17 CORRUGATED PLASTIC CULVERT**

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**

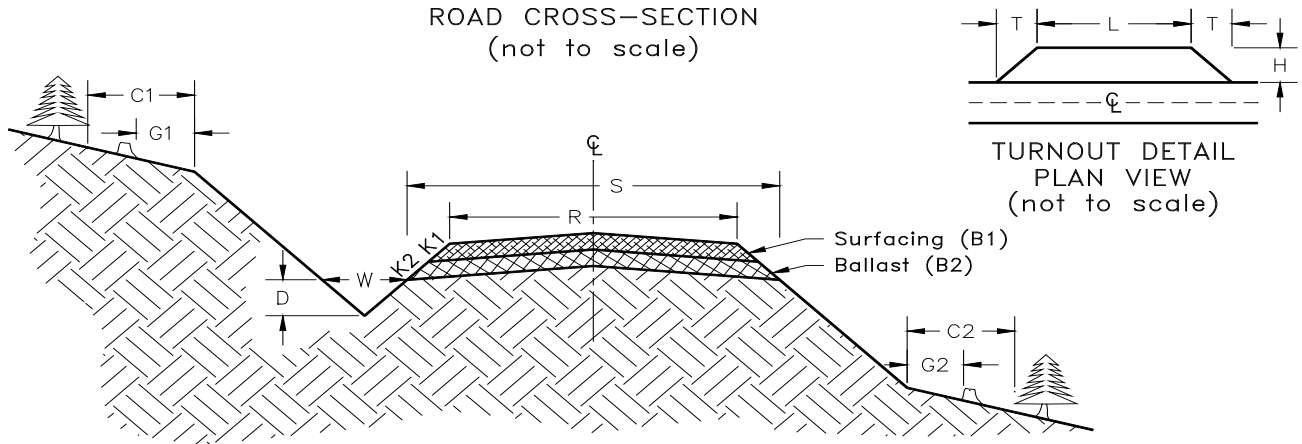
Plastic coupling and end bands must meet the AASHTO specification designated for the culvert. Only fittings supplied or recommended by the culvert manufacturer may be used. Split coupling bands must have a minimum of four corrugations, two on each side of the pipe joint.

## TYPICAL SECTION SHEET (page 1 of 2)



Road Number	From Station	To Station	Tolerance Class	Subgrade Width (feet)	Road Width (feet)	Ditch		Crown in. @ CL	Grubbing Limits (feet)		Clearing Limits (feet)		Cut Slope Ratio	Fill Slope Ratio
						Width (feet)	Depth (feet)		G1	G2	C1	C2		
				S	R	W	D		G1	G2	C1	C2	Clause	Clause
5000	0+00	422+00	C	-	16	3	1	4	-	-	-	-	4-5	4-6
5010	0+00	0+10	C	-	16	3	1	4	-	-	-	-	4-5	4-6
5030	0+00	10+25	C	-	14	3	1	4	-	-	-	-	4-5	4-6
5040	0+00	0+80	C	-	14	3	1	4	-	-	-	-	4-5	4-6
5041	0+00	4+45	C	-	14	3	1	4	-	-	-	-	4-5	4-6
5051	0+00	3+50	C	-	14	3	1	4	-	-	tags	-	4-5	4-6
5052	0+00	20+20	C	-	14	3	1	4	-	-	tags	tags	4-5	4-6
5052 Ext	0+00	2+80	C	15	12	3	1	4	2	2	tags	tags	4-5	4-6
5052 Ext	2+80	6+16	C	15	12	3	1	4	2	2	5	5	4-5	4-6
5053	0+00	98+56	C	-	12	3	1	4	-	-	-	-	4-5	4-6
5053-4	0+00	7+74	C	-	12	3	1	4	-	-	-	-	4-5	4-6
5054	0+00	40+28	C	-	12	3	1	4	-	-	-	-	4-5	4-6
5055	0+00	7+75	C	-	12	3	1	4	-	-	-	-	4-5	4-6
5060	0+00	26+80	C	-	14	3	1	4	-	-	-	-	4-5	4-6
MDP Rd	0+00	46+00	C	-	14	3	1	4	-	-	-	-	4-5	4-6
MDP-1 Rd	0+00	17+60	C	-	12	3	1	4	2	2	-	-	4-5	4-6
MDP-11 Rd	0+00	8+70	C	-	12	3	1	4	2	2	-	-	4-5	4-6
MDP-2 Rd	0+00	14+07	C	-	12	3	1	4	2	2	-	-	4-5	4-6
MDP-3 Rd	0+00	3+50	C	-	14	3	1	4	-	-	-	-	4-5	4-6

## TYPICAL SECTION SHEET (page 2 of 2)



Road Number	From Station	To Station	Tolerance Class	Subgrade Width (feet)	Road Width (feet)	Ditch		Crown in. @ CL	Grubbing Limits (feet)		Clearing Limits (feet)		Cut Slope Ratio	Fill Slope Ratio
						Width (feet)	Depth (feet)		G1	G2	C1	C2		
Unit 1 Spur A	0+00	6+36	C	15	12	3	1	4	2	2	5	5	4-5	4-6
Unit 1 Spur B	0+00	6+50	C	15	12	3	1	4	2	2	5	5	4-5	4-6
Unit 1 Spur C	0+00	2+85	C	15	12	3	1	4	2	2	5	5	4-5	4-6
Unit 6 Spur A	0+00	6+91	C	15	12	3	1	4	-	-	-	-	4+5	4-6
Unit 6 Spur A1	0+00	2+52	C	15	12	3	1	4	-	-	-	-	4-5	4-6

### ROCK LIST (page 1 of 3)

Road Number	From Station	To Station	Rock Slope	Compacted Rock Depth	C.Y./ Station	# of Stations	C.Y. Subtotal	Rock Source	Turnout		
									Length	Width	Taper
			K2	B2	<b>2-Inch Minus</b>				L	H	T
5000	9+70	10+00	1 ½:1	6"	33	0.3	10	PC Pit -and/or- 5000 Pit -and/or- 5051 Pit -and/or- Commercial			
5000	13+55	13+85	1 ½:1	6"	33	0.3	10				
5000	20+05	20+35	1 ½:1	6"	33	0.3	10				
5000	25+70	26+00	1 ½:1	6"	33	0.3	10				
5000	31+55	31+85	1 ½:1	6"	33	0.3	10				
5000	46+00	46+30	1 ½:1	6"	33	0.3	10				
5000	50+15	50+45	1 ½:1	6"	33	0.3	10				
5000	54+45	54+75	1 ½:1	6"	33	0.3	10				
5000	63+35	63+65	1 ½:1	6"	33	0.3	10				
5000	69+45	69+75	1 ½:1	6"	33	0.3	10				
5000	72+90	73+20	1 ½:1	6"	33	0.3	10				
5000	73+45	73+75	1 ½:1	6"	33	0.3	10				
5000	79+85	80+15	1 ½:1	6"	33	0.3	10				
5000	83+55	83+85	1 ½:1	6"	33	0.3	10				
5000	86+20	86+50	1 ½:1	6"	33	0.3	10				
5000	94+05	94+35	1 ½:1	6"	33	0.3	10				
5000	97+85	98+15	1 ½:1	6"	33	0.3	10				
5000	99+20	99+50	1 ½:1	6"	33	0.3	10				
5000	102+15	102+45	1 ½:1	6"	33	0.3	10				
5000	118+05	118+35	1 ½:1	6"	33	0.3	10				
5000	126+35	126+65	1 ½:1	6"	33	0.3	10				
5000	136+65	136+95	1 ½:1	6"	33	0.3	10				
5000	156+00	156+30	1 ½:1	6"	33	0.3	10				
5000	162+95	163+25	1 ½:1	6"	33	0.3	10				
5000	175+75	176+05	1 ½:1	6"	33	0.3	10				
5000	194+50	194+80	1 ½:1	6"	33	0.3	10				
5000	195+00	195+60	1 ½:1	12"	57	0.6	34				
5000	220+10	220+40	1 ½:1	6"	33	0.3	10				
5000	233+55	233+85	1 ½:1	6"	33	0.3	10				
5000	234+75	235+05	1 ½:1	6"	33	0.3	10				
5000	240+15	240+45	1 ½:1	6"	33	0.3	10				
5000	242+55	242+80	1 ½:1	6"	33	0.3	10				
5000	243+45	243+75	1 ½:1	6"	33	0.3	10				
5000	249+35	249+65	1 ½:1	6"	33	0.3	10				
5000	253+65	253+95	1 ½:1	12"	57	0.35	20				
5000	276+05	276+35	1 ½:1	6"	33	0.3	10				
5000	293+25	293+55	1 ½:1	6"	33	0.3	10				
5000	295+85	296+15	1 ½:1	6"	33	0.3	10				

### ROCK LIST (page 2 of 3)

Road Number	From Station	To Station	Rock Slope	Compacted Rock Depth	C.Y./ Station	# of Stations	C.Y. Subtotal	Rock Source	Turnout		
									Length	Width	Taper
			K2	B2	<b>2-Inch Minus</b>				L	H	T
5000	298+85	299+15	1 ½:1	6"	33	0.3	10	PC Pit -and/or- 5000 Pit -and/or- 5051 Pit -and/or- Commercial			
5000	310+05	310+35	1 ½:1	6"	33	0.3	10				
5000	316+80	317+10	1 ½:1	6"	33	0.3	10				
5000	323+35	323+65	1 ½:1	6"	33	0.3	10				
5000	329+85	330+15	1 ½:1	6"	33	0.3	10				
5000	332+55	332+85	1 ½:1	6"	33	0.3	10				
5000	334+05	334+35	1 ½:1	6"	33	0.3	10				
5000	335+05	335+35	1 ½:1	6"	33	0.3	10				
5000	345+45	345+75	1 ½:1	6"	33	0.3	10				
5000	348+05	348+35	1 ½:1	6"	33	0.3	10				
5000	354+30	354+60	1 ½:1	6"	33	0.3	10				
5000	361+65	361+95	1 ½:1	6"	33	0.3	10				
5000	367+90	368+20	1 ½:1	6"	33	0.3	10				
5000	385+55	385+85	1 ½:1	6"	33	0.3	10				
5000	392+35	392+65	1 ½:1	6"	33	0.3	10				
5000	399+45	399+75	1 ½:1	6"	33	0.3	10				
5030	3+10	3+40	1 ½:1	6"	33	0.3	10				
5040	0+10	0+40	1 ½:1	6"	33	0.3	10				
5053	18+15	18+45	1 ½:1	6"	33	0.3	10				
5053	21+25	21+55	1 ½:1	6"	33	0.3	10				
5053	73+00	73+30	1 ½:1	6"	33	0.3	10				
5053	76+40	76+70	1 ½:1	6"	33	0.3	10				
5053	84+05	84+35	1 ½:1	6"	33	0.3	10				
MDP Rd	1+75	2+05	1 ½:1	6"	33	0.3	10				
MDP Rd	5+75	6+05	1 ½:1	6"	33	0.3	10				
MDP Rd	9+85	10+15	1 ½:1	6"	33	0.3	10				
MDP Rd	12+35	12+65	1 ½:1	6"	33	0.3	10				
MDP-1 Rd	0+00	0+30	1 ½:1	6"	33	0.3	10				

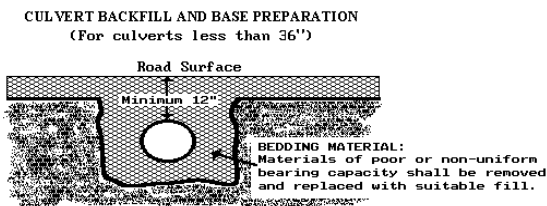




## CULVERT AND DRAINAGE LIST (page 1 of 5)

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				
5000	9+85	24	PD	50			1	1.5	QS	NT			Replace Existing T5
5000	13+70	18	PD	35			1	5	LL	NT			Replace Existing
5000	20+20	24	PD	45			1	1.5	QS	NT			Replace Existing T5
5000	25+85	24	PD	50			1	5	LL	NT			Replace Existing T5
5000	31+70	18	PD	40			1	1.5	QS	NT			Replace Existing
5000	41+00	18											Clean inlet
5000	46+15	18	PD	40			1	5	LL	NT			Replace Existing
5000	47+90	18											Clean inlet
5000	50+30	24	PD	50			1	1.5	QS	NT			T5
5000	54+60	18	PD	50			1	5	LL	NT			Replace Existing
5000	62+00	18											Clean inlet
5000	63+50	18	PD	40			1	1.5	QS	NT			-or add 10' to outlet-
5000	69+60	18	PD	40			1	1.5	QS	NT			
5000	73+05	24	PD	40			1	1.5	QS	NT			Replace Existing T4
5000	73+60	18	PD	40			1	1.5	QS	NT			
5000	80+00	24	PD	40			1	1.5	QS	NT			Replace Existing T4
5000	83+70	18	PD	40			1	1.5	QS	NT			Replace Existing
5000	86+35	18	PD	40			1	1.5	QS	NT			Replace Existing
5000	90+20	24						5	LL				Place rip-rap at outlet T4
5000	94+20	24	PD	40			1	1.5	QS	NT			Replace Existing T4
5000	98+00	18	PD	40			1	1.5	QS	NT			Replace Existing
5000	99+35	24	PD	40			1	1.5	QS	NT			Replace Existing T5
5000	102+30	24	PD	40			1	1.5	QS	NT			Replace Existing T4
5000	118+20	18	PD	40			1	1.5	QS	NT			Replace Existing
5000	123+15	18						5	LL				Clean inlet & Place rip-rap at outlet
5000	126+50	18	PD	35			1	1.5	QS	NT			
5000	136+80	18	PD	40			1	1.5	QS	NT			
5000	140+50	18											Clean inlet

- PD = Polyethylene Pipe Dual Wall AASHTO No. M294 Type S or ASTM F2648  
 AS10 = Aluminized Steel AASHTO No. M274, 10 Gauge  
 TEMP = Temporary Culvert



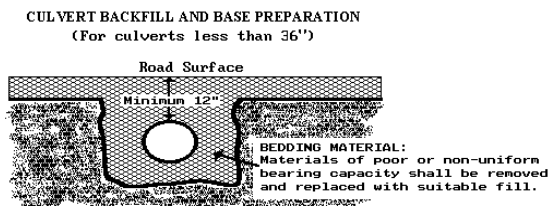
**Key:**

- QS - Quarry Spalls
- NT - Native (bank run)
- LL - Light Loose Rip Rap
- HL - Heavy Loose Riprap

## CULVERT AND DRAINAGE LIST (page 2 of 5)

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				
5000	149+70	18											Clean inlet & repair outlet
5000	156+15	18	PD	40			1	1.5	QS	NT			Clean inlet
5000	158+95	18											Clean inlet
5000	163+10	18	PD	40			1	1.5	QS	NT			Clean inlet
5000	167+60	18											Clean inlet
5000	173+10	18											Clean outlet
5000	175+90	18	PD	30			1	1.5	QS	NT			Replace existing
5000	183+50	18											Clean inlet
5000	194+65	36	PD	20									Optional – add 20' to outlet T4
5000	195+30	18	PD	30			1	1.5	QS	NT			Replace existing
5000	220+25	18	PD	30			1	1.5	QS	NT			
5000	233+70	18	PD	30			1	1.5	QS	NT			
5000	234+90	42	PD	50			5	5	LL	NT			Replace existing T4
5000	240+30	18	PD	30			1	1.5	QS	NT			
5000	242+70	18	PD	30			1	1.5	QS	NT			
5000	243+60	24	PD	40			1	1.5	QS	NT			Replace existing T5
5000	249+50	18	PD	30			1	1.5	QS	NT			
5000	253+80	18	PD	60			1	1.5	QS	NT			Replace existing
5000	276+20	18	PD	30			1	1.5	QS	NT			
5000	293+40	18	PD	30			1	1.5	QS	NT			Install perpendicular to rd
5000	296+00	18	PD	40			1	1.5	QS	NT			Replace existing
5000	299+00	18	PD	30			1	1.5	QS	NT			Install perpendicular to rd
5000	310+20	18	PD	30			1	1.5	QS	NT			
5000	316+96	18	PD	30			1	1.5	QS	NT			Install perpendicular to rd
5000	323+50	18	PD	30			1	1.5	QS	NT			Replace existing perpendicular to rd

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 TEMP = Temporary Culvert



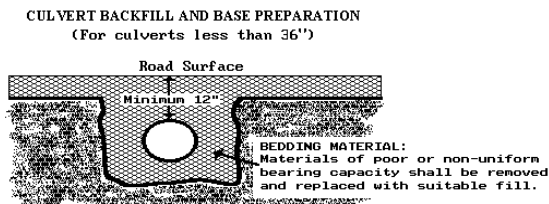
**Key:**

- QS - Quarry Spalls
- NT - Native (bank run)
- LL - Light Loose Rip Rap
- HL - Heavy Loose Riprap

## CULVERT AND DRAINAGE LIST (page 3 of 5)

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				
5000	330+00	18	PD	30			1	1.5	QS	NT			Install perpendicular to rd
5000	332+70	18	PD	30			1	1.5	QS	NT			
5000	334+20	24	PD	50			1	1.5	QS	NT			T4
5000	345+60	18	PD	30			1	1.5	QS	NT			
5000	348+20	18	PD	30			1	1.5	QS	NT			Replace existing
5000	354+45	18	PD	30			1	1.5	QS	NT			
5000	361+80	18	PD	35			1	1.5	QS	NT			Replace existing
5000	368+05	18	PD	30			1	1.5	QS	NT			
5000	385+70	24	PD	50			1	1.5	QS	NT			Replace existing T4
5000	392+50	18	PD	50			1	1.5	QS	NT			Replace existing
5000	397+45	18											Clean outlet
5000	399+60	18	PD	30			1	1.5	QS	NT			
5000	412+85	18											Clean outlet
5010	0+05	18											Clean inlet
5030	3+25	24	PD	30			1	1.5	QS	NT			Replace existing T5
5040	0+25	18	PD	30			1	1.5	QS	NT			Replace existing and improve ditchout
5041	2+30	18											Clean inlet
5041	4+45	18											Clean inlet
5052	5+15	18	PD	30			1	1.5	QS	NT			
5052	8+25	18	PD	30			1	1.5	QS	NT			
5052	17+00	18	TEMP	40			1	1.5	QS	NT			
5052 Ext	0+00	18	TEMP	30			1	1.5	QS	NT			
5052 Ext	1+54	18	TEMP	35			1	1.5	QS	NT			
5053	18+30	24	PD	35			1	1.5	QS	NT			Replace existing T5
5053	21+40	18	PD	30			1	1.5	QS	NT			
5053	23+40	18											Clean inlet
5053	39+20	18											Clean inlet
5053	41+80	18											Clean inlet
5053	48+90												Ditchout left & right

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 TEMP = Temporary Culvert



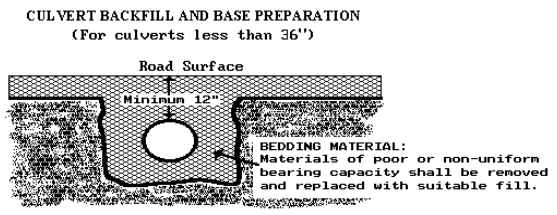
**Key:**

- QS - Quarry Spalls
- NT - Native (bank run)
- LL - Light Loose Rip Rap
- HL - Heavy Loose Riprap

## CULVERT AND DRAINAGE LIST (page 4 of 5)

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				
5053	69+65	18											Clean inlet
5053	73+15	18	PD	40			1	1.5	QS	NT			
5053	76+55	18	PD	30			1	1.5	QS	NT			
5053	84+20	18	PD	40			1	1.5	QS	NT			Ditchout right
5053	84+50												Ditchout left & right
5053	87+40	18	PD	30			1	1.5	QS	NT			Ditchout right
5053	89+50												Ditchout right
5053	91+80												Ditchout right
5053	94+90												Ditchout right
5053-4	0+80	18	PD	40			1	1.5	QS	NT			
5054	6+95												Ditchout left & right
5054	11+55	18	PD	30			1	1.5	QS	NT			
5054	16+65	18	PD	40			1	1.5	QS	NT			
5054	23+80												Ditchout left & right
5054	28+25	18	PD	30			1	1.5	QS	NT			
5054	30+20	18	PD	30			1	1.5	QS	NT			
5060	12+90	18											Clean inlet
MDP Rd	1+90	18	PD	40			1	1.5	QS	NT			Replace existing
MDP Rd	5+50												Ditchout right
MDP Rd	5+90	18	PD	30			1	1.5	QS	NT			
MDP Rd	10+00	18	PD	30			1	1.5	QS	NT			Replace existing
MDP Rd	12+50	18	PD	30			1	1.5	QS	NT			
MDP Rd	29+80	18											Clean inlet & outlet
MDP Rd	34+50	18											Clean inlet
MDP-1 Rd	0+15	18	PD	40			1	1.5	QS	NT			Replace existing
MDP-1 Rd	3+95	18											Clean outlet
MDP-1 Rd	6+80	18	PD	40			1	1.5	QS	NT			
MDP-1 Rd	10+00	18											Clean inlet
MDP-1 Rd	17+60	18											Clean inlet

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 TEMP = Temporary Culvert



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## TURNOUT & TURNAROUND LIST

Road Number	Begin L- Station	End L- Station	Turnout Width (H)	Full Width Length (L)	Taper Length (T)	Comments
5051	0+00	3+50	30	30	15	A maximum of 1 turnarounds allowed.
5052 Ext.	1+00	6+16	30	30	15	A maximum of 2 turnarounds allowed.
5053	60+60	98+56	30	30	15	A maximum of 2 turnarounds allowed.
5053-4	0+00	7+74	30	30	15	A maximum of 2 turnarounds allowed.
5054	8+25	40+28	30	30	15	A maximum of 4 turnarounds allowed.
5055	0+00	7+75	30	30	15	A maximum of 2 turnarounds allowed.
MDP Rd	0+00	46+00	30	30	15	A maximum of 3 turnarounds allowed.
MDP-1 Rd	0+00	17+60	30	30	15	A maximum of 2 turnarounds allowed.
MDP-11 Rd	0+00	8+70	30	30	15	A maximum of 2 turnarounds allowed.
MDP-2 Rd	0+00	14+07	30	30	15	A maximum of 2 turnarounds allowed.
Unit 1 Spur A	0+00	6+36	30	30	15	A maximum of 2 turnarounds allowed.
Unit 1 Spur B	0+00	6+50	30	30	15	A maximum of 2 turnarounds allowed.
Unit 1 Spur C	0+00	2+85	30	30	15	A maximum of 1 turnarounds allowed.
Unit 6 Spur A1	0+00	6+91	30	30	15	A maximum of 1 turnarounds allowed.

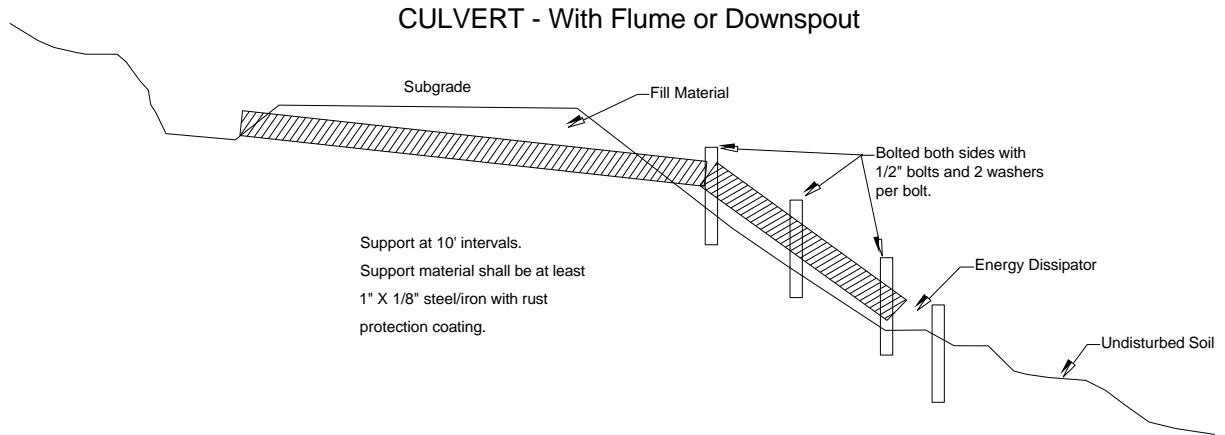
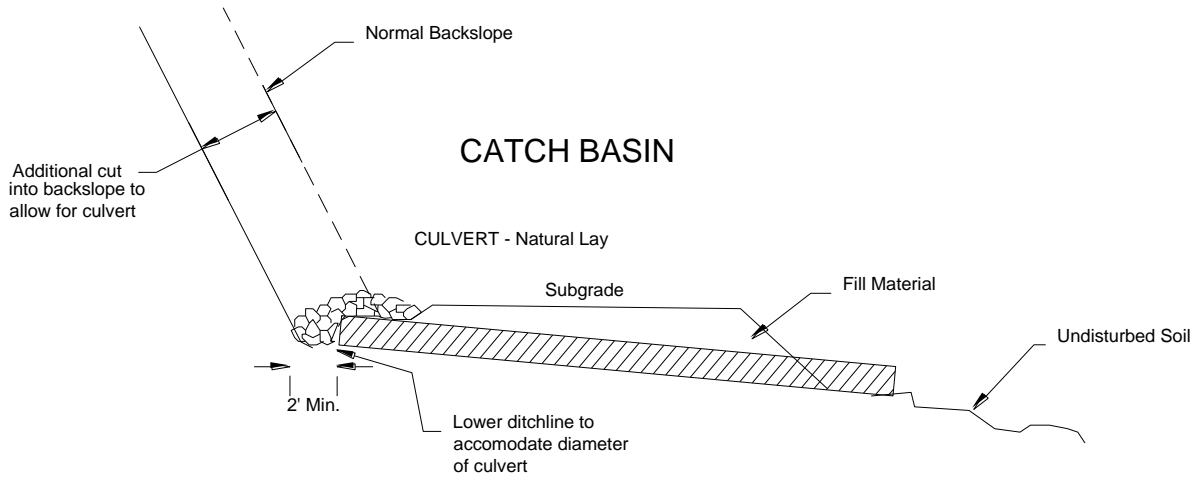
\*See Typical Section Sheet for Turnout Detail

## 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 & Reconstruction			Subgrade	12"	Smooth Drum Vibratory Roller	12,000	3 low freq. vibe on	3.5
All New Construction			Rock	8"	Smooth Drum Vibratory Roller	12,000	3 low freq. vibe on	3.5
All Prehaul Maintenance			Surfacing	6"	Smooth Drum Vibratory Roller	12,000	3 low freq. vibe on	3.5

# CULVERT AND DRAINAGE SPECIFICATION DETAIL

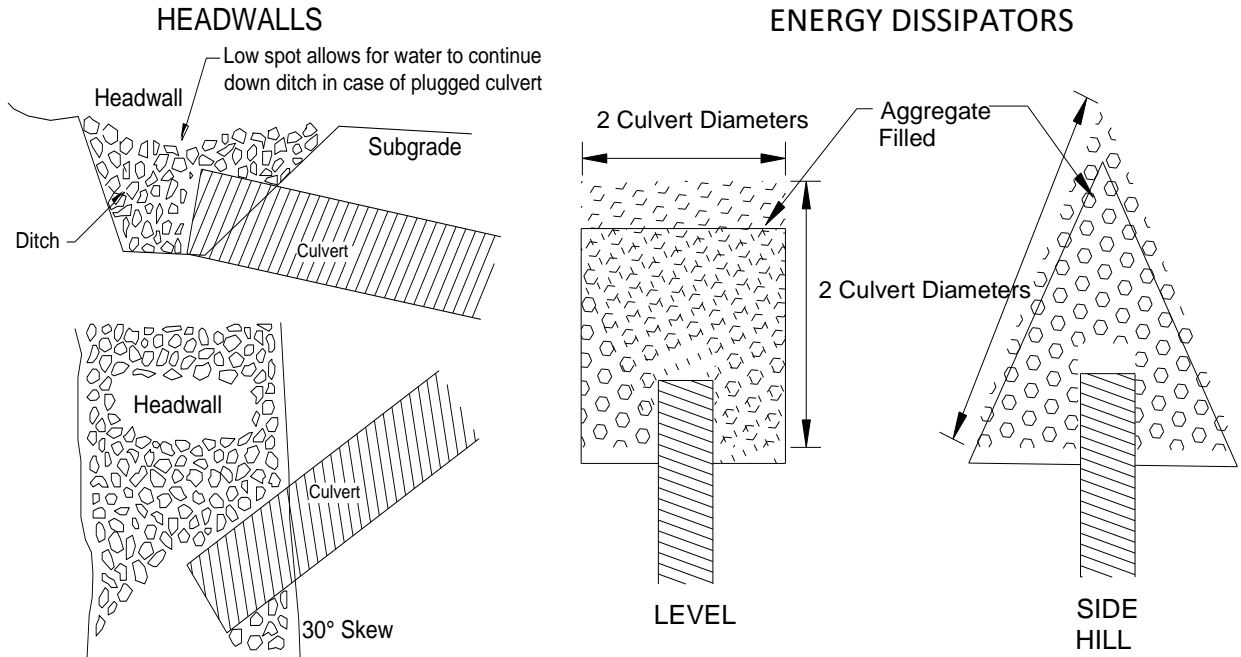
(Page 1 of 3)



## CULVERT AND DRAINAGE SPECIFICATION DETAIL

(Page 2 of 3)

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



Headwalls to be constructed of material that will resist erosion.

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



## CULVERT AND DRAINAGE SPECIFICATION DETAIL

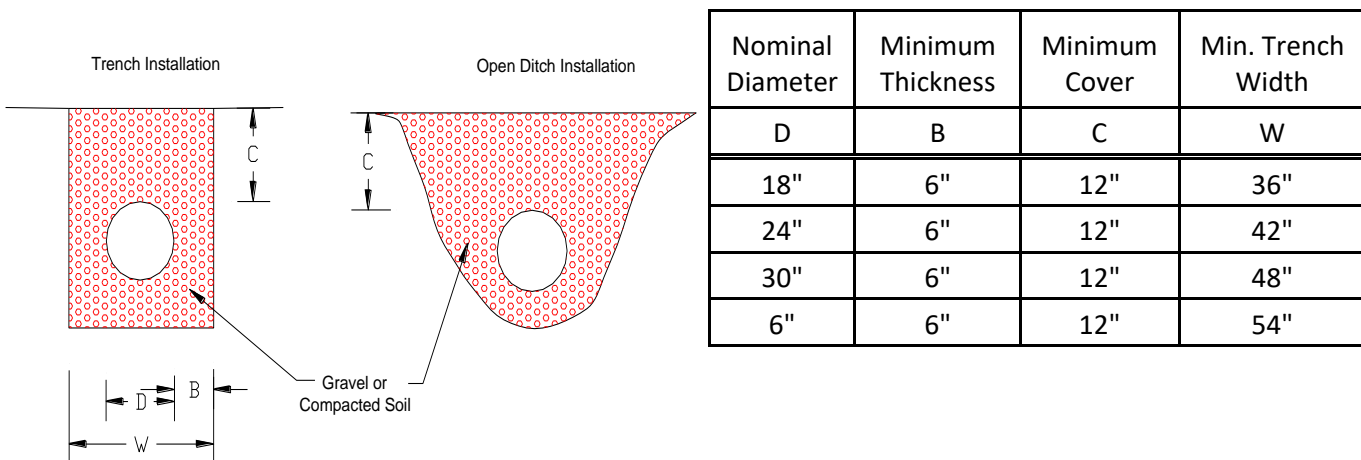
(Page 3 of 3)

### POLYETHYLENE PIPE INSTALLATION

#### INSTALLATION REQUIREMENTS:

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

#### MINIMUM DIMENSIONS Trench or Open Ditch Installation



## FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS

### Page 1 of 2

#### Cuts and Fills

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

#### Surface

- 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.

## FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS

Page 2 of 2

### Preventative Maintenance

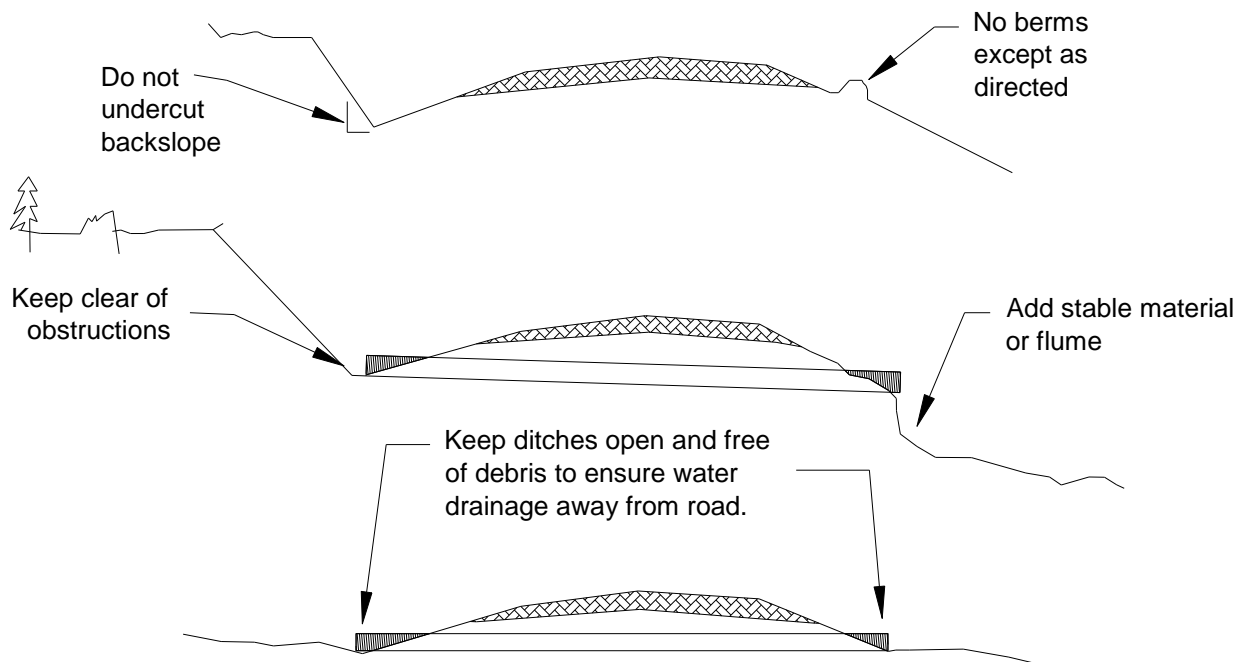
- Perform preventative maintenance work to safeguard against storm damage, such as blading to ensure correct runoff, ditch and culvert cleaning, and waterbar maintenance.

### Termination of Use or End of Season

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

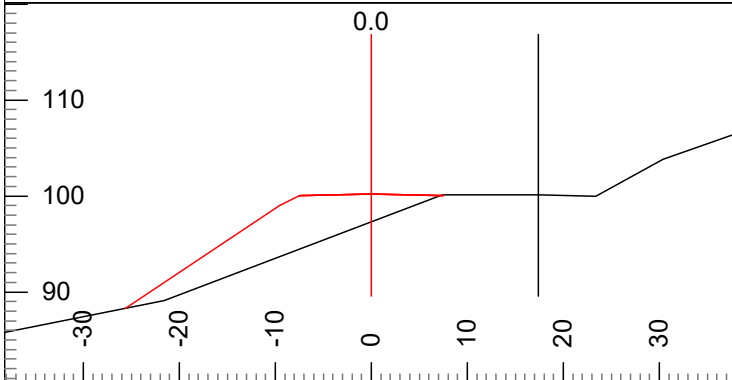
### Debris

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

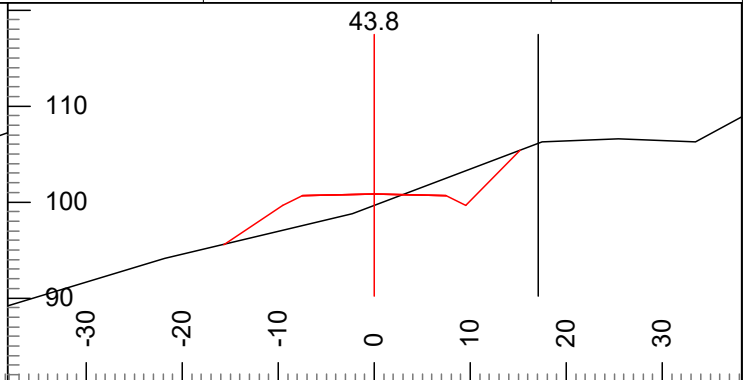




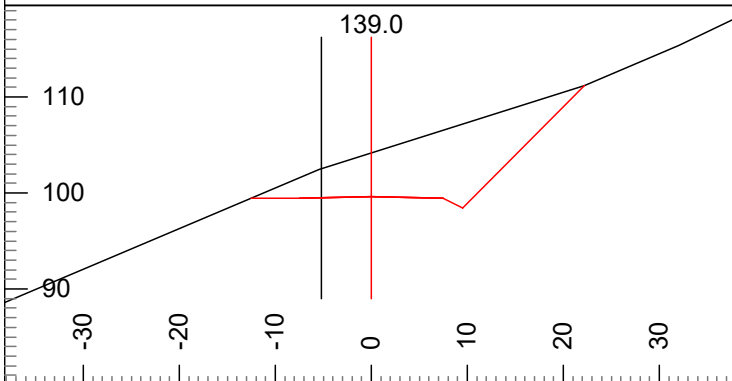
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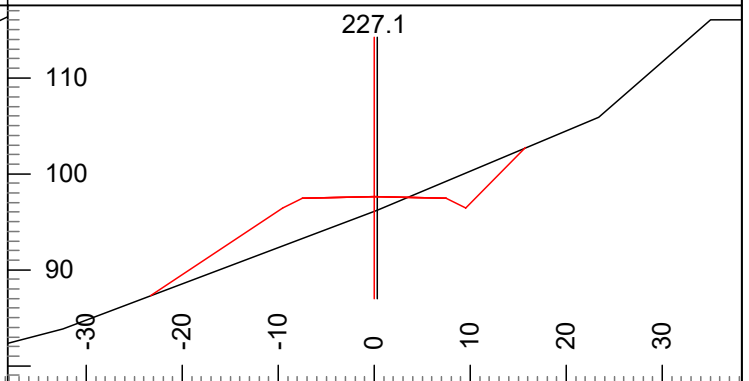
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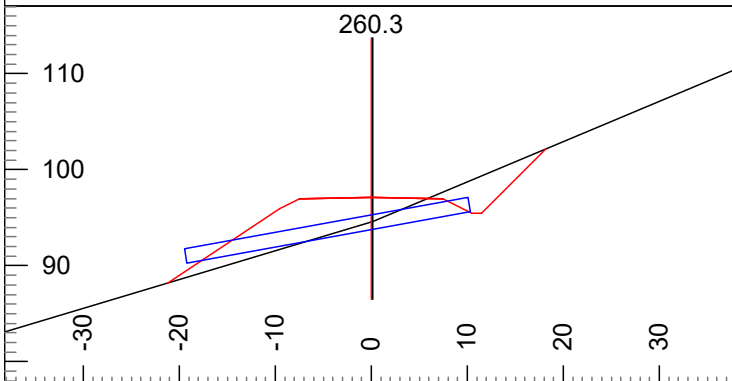
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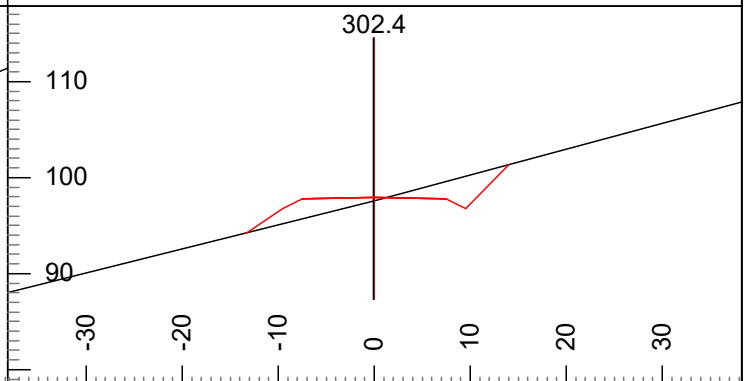
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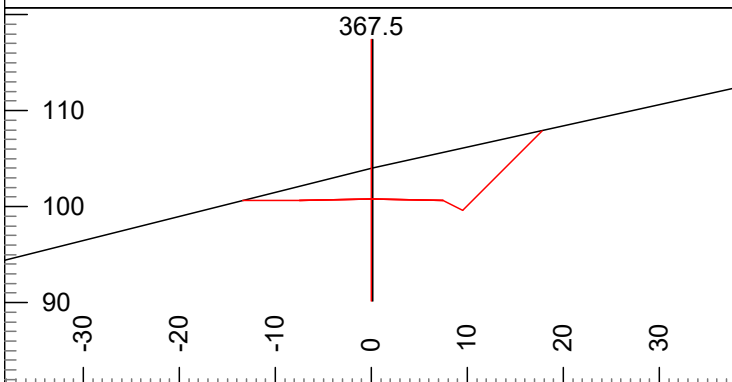
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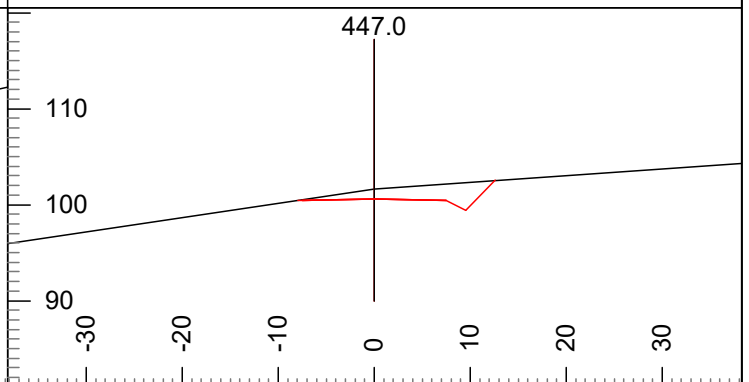
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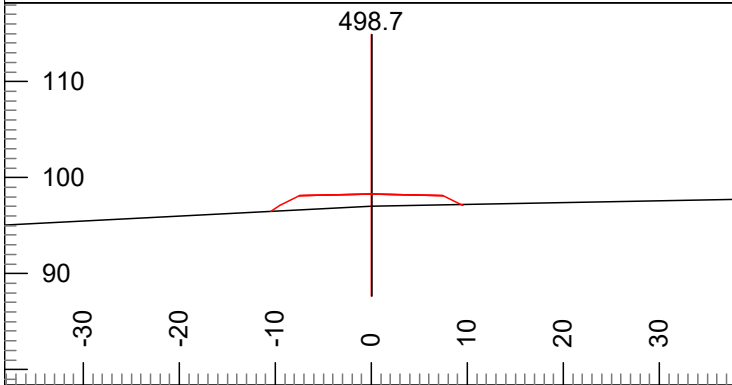


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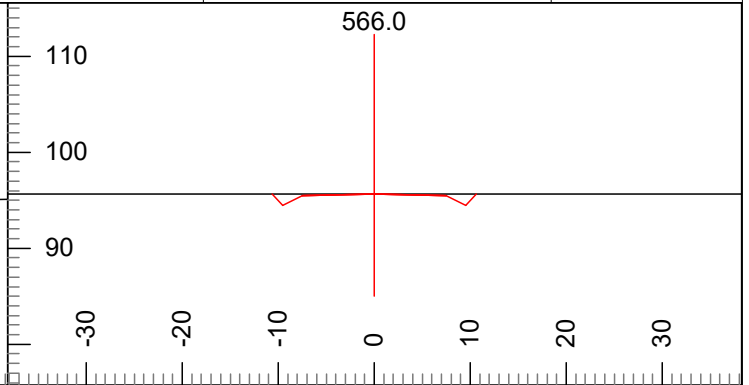


P-Stn : 451.0 H. Offset: 0.0 Cut Dp: 1.0  
 L-Stn : 447.0 V.Offset: -1.1 Index: 108

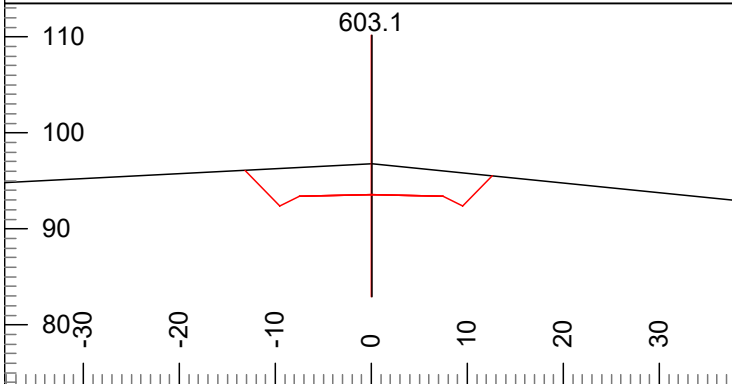
J:\SHARED\TimberSales\Black Diamond\McDONALD RIDGE\Hodag\Hodag Engineering\RoadENG\Unit 1 Spur22/01/26



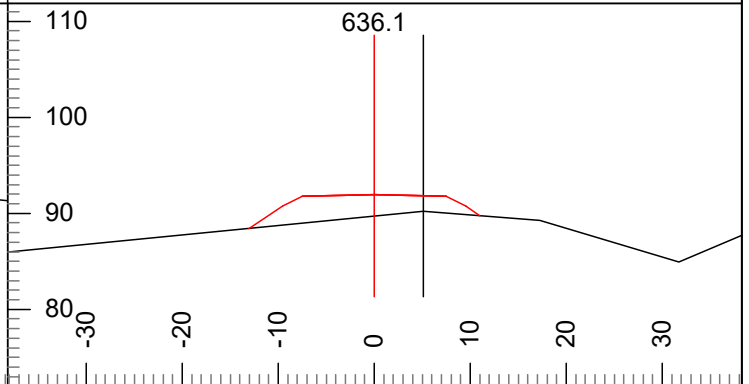
P-Stn : 502.7 H. Offset: -0.1 Cut Dp: -1.3  
 L-Stn : 498.7 V.Offset: 1.3 Index: 109



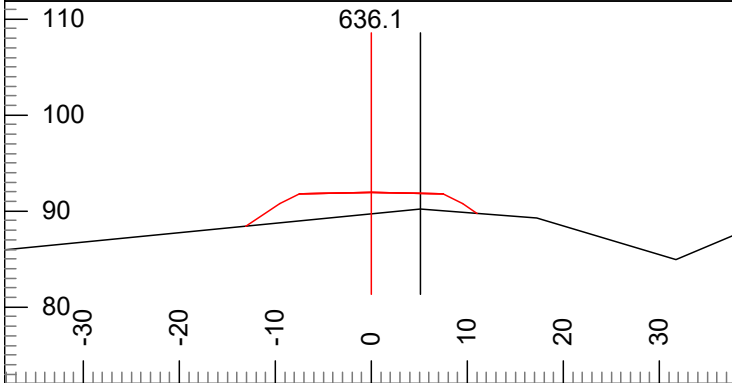
P-Stn : 570.0 H. Offset: 0.0 Cut Dp: 0.0  
 L-Stn : 566.0 V.Offset: 0.0 Index: 110



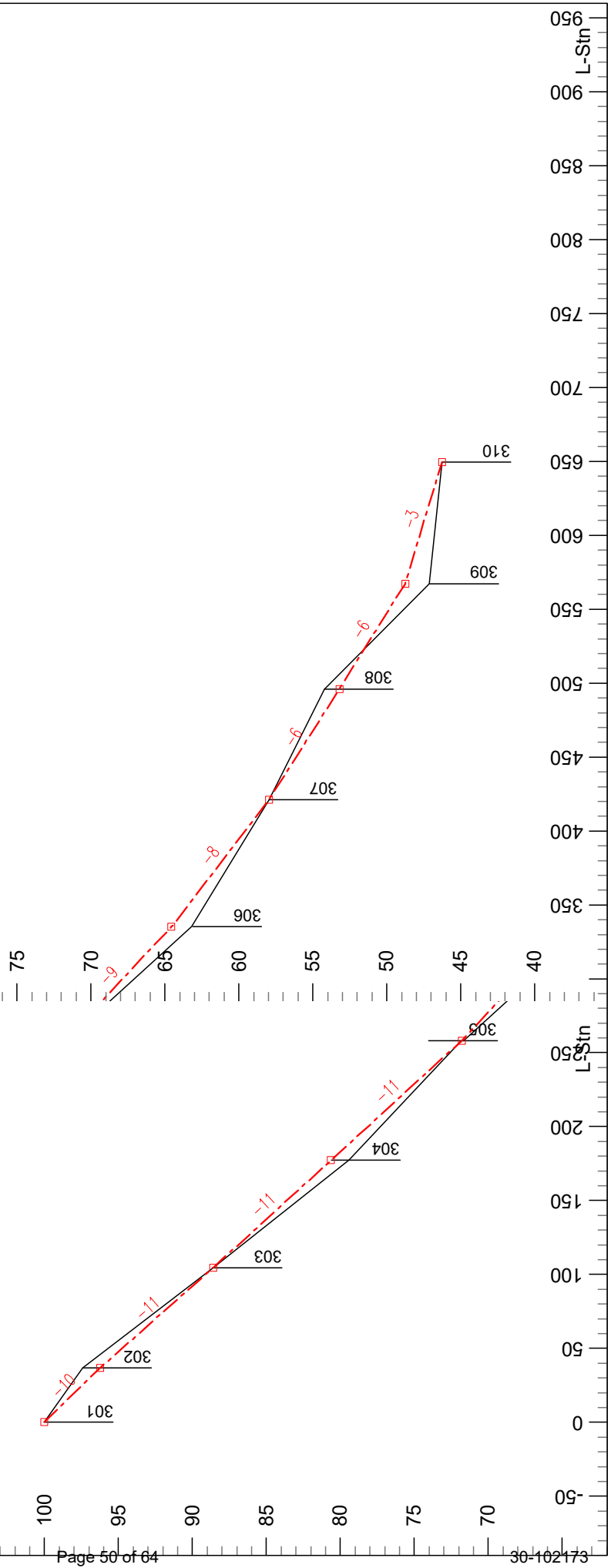
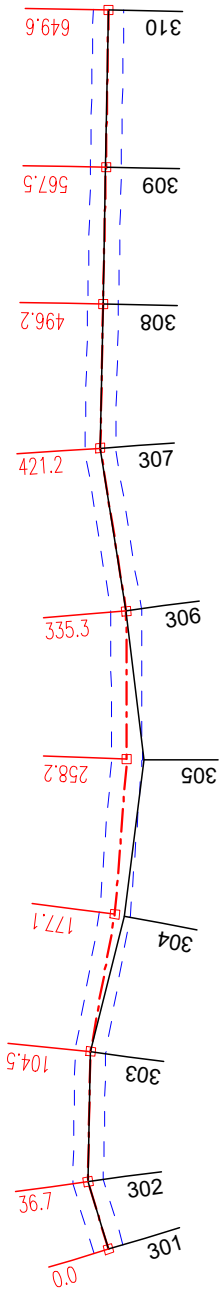
P-Stn : 607.1 H. Offset: -0.1 Cut Dp: 3.2  
 L-Stn : 603.1 V.Offset: -3.2 Index: 111



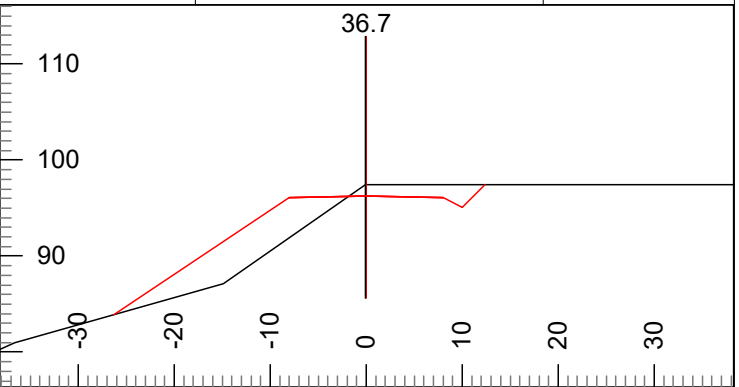
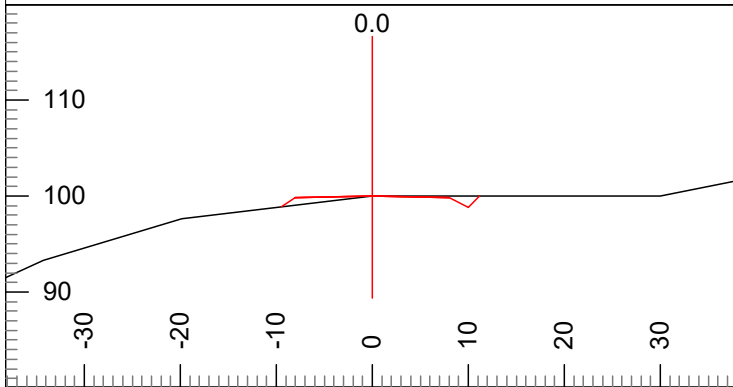
P-Stn : 639.7 H. Offset: -5.0 Cut Dp: -2.2  
 L-Stn : 636.1 V.Offset: 1.7 Index: 112



P-Stn : 639.7 H. Offset: -5.0 Cut Dp: -2.2  
 L-Stn : 636.1 V.Offset: 1.7 Index: 113

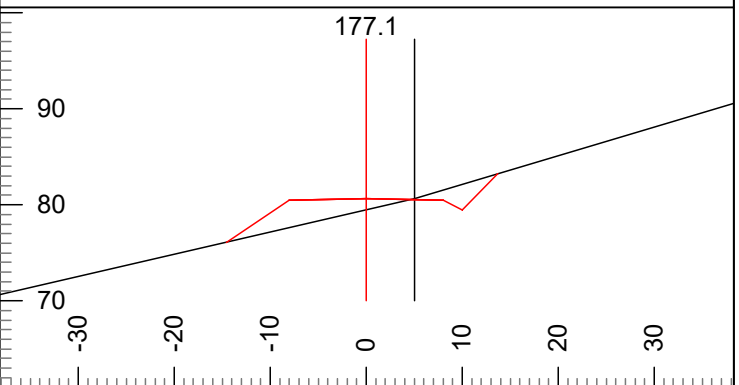
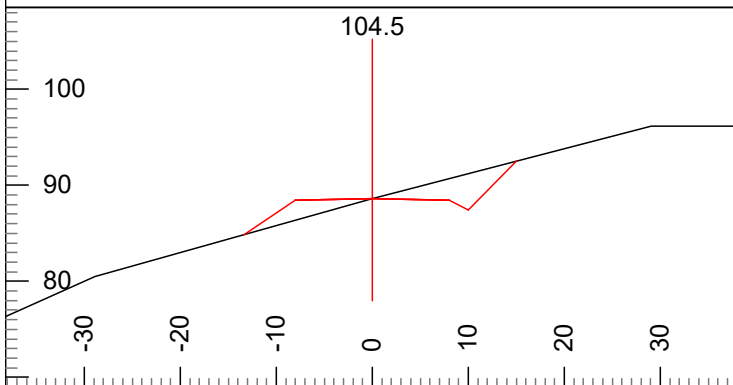


J:\SHARED\TimberSales\Black Diamond\McDONALD RIDGE\Hodag\Hodag Engineering\RoadENG\Unit 1 Spur22/01/26



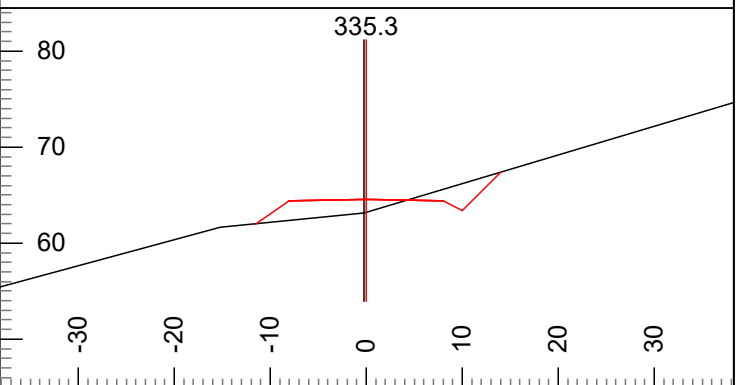
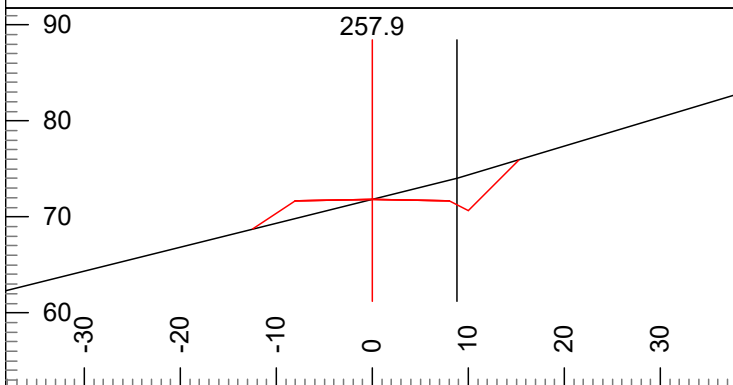
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 L-Stn : 0.0 V.Offset: 0.0 Index: 301

P-Stn : 36.7 H. Offset: 0.1 Cut Dp: 1.2  
 L-Stn : 36.7 V.Offset: -1.2 Index: 302



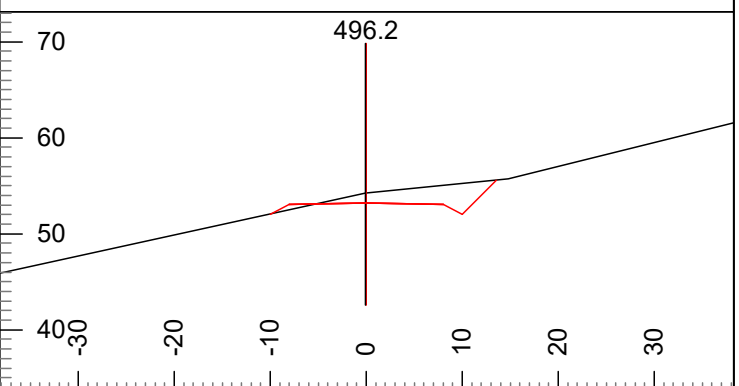
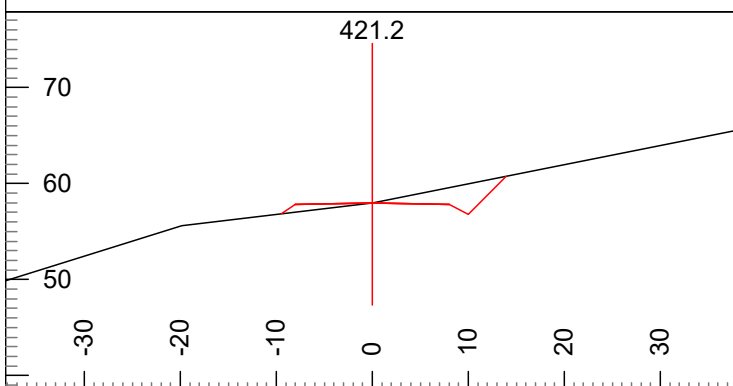
P-Stn : 104.5 H. Offset: 0.0 Cut Dp: 0.0  
 L-Stn : 104.5 V.Offset: 0.0 Index: 303

P-Stn : 177.3 H. Offset: -5.1 Cut Dp: -1.2  
 L-Stn : 177.1 V.Offset: 0.0 Index: 304



P-Stn : 259.3 H. Offset: -8.9 Cut Dp: 0.0  
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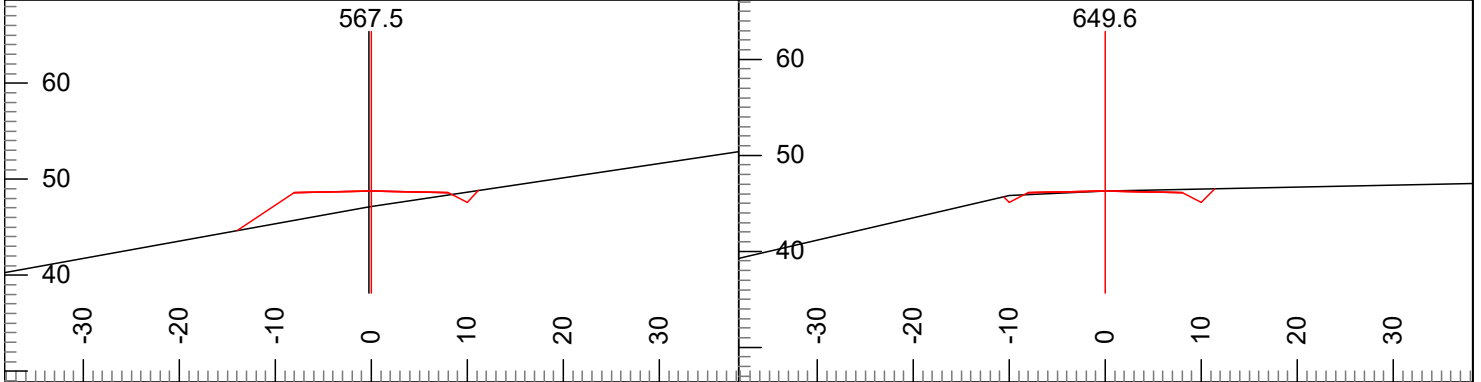
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 L-Stn : 335.3 V.Offset: 1.4 Index: 306



P-Stn : 423.2 H. Offset: 0.0 Cut Dp: 0.0  
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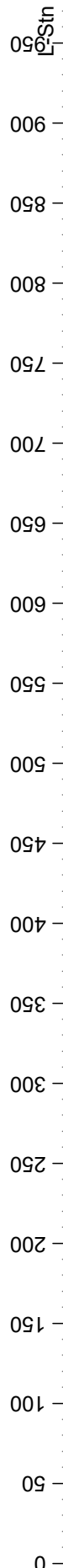
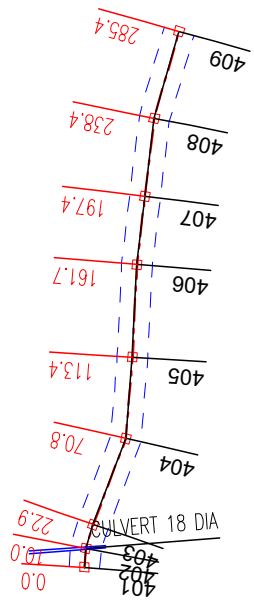
P-Stn : 498.2 H. Offset: 0.1 Cut Dp: 1.0  
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P-Stn : 569.5 H. Offset: 0.2 Cut Dp: -1.6  
L-Stn : 567.5 V.Offset: 1.7 Index: 309

P-Stn : 651.6 H. Offset: 0.0 Cut Dp: 0.0  
L-Stn : 649.6 V.Offset: 0.0 Index: 310



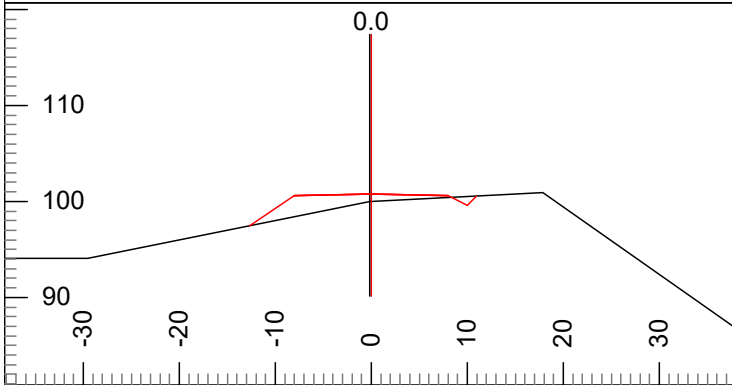
Hodag Timber Sale  
 Unit 1 Spur C  
 Contract #: 30-102173

Plan Scale 1:1200  
 Profile Vert Scale 1:120  
 Profile Horz Scale 1:1200

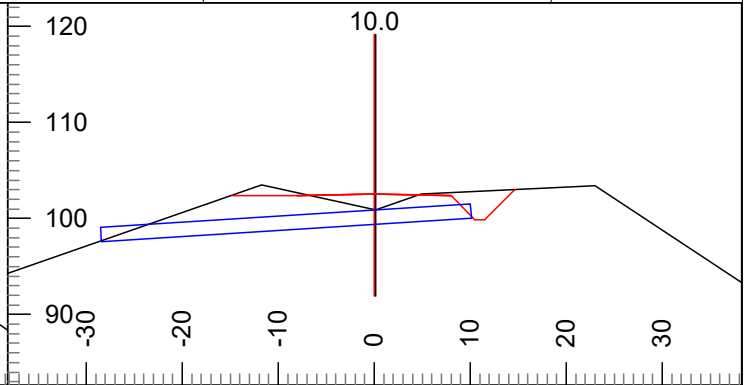


Engineer: J. Gardner  
 22/04/12

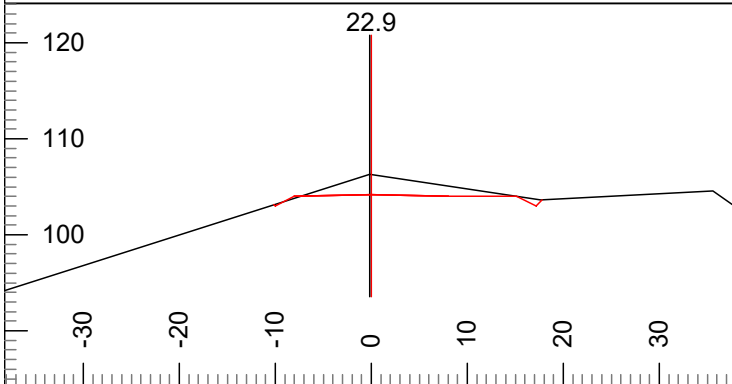
J:\SHARED\TimberSales\Black Diamond\McDONALD RIDGE\Hodag\Hodag Engineering\RoadENG\Unit 1 Spur22\04\12



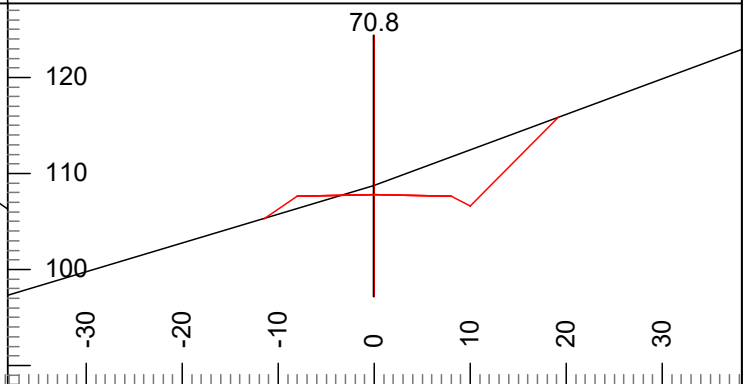
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L-Stn : 0.0 V.Offset: 0.8 Index: 401



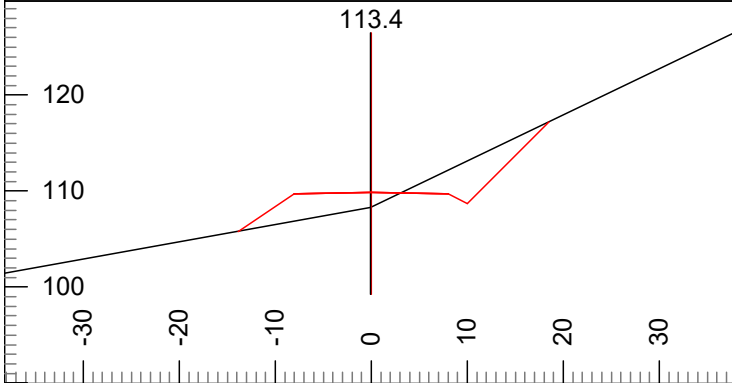
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L-Stn : 10.0 V.Offset: 1.7 Index: 402



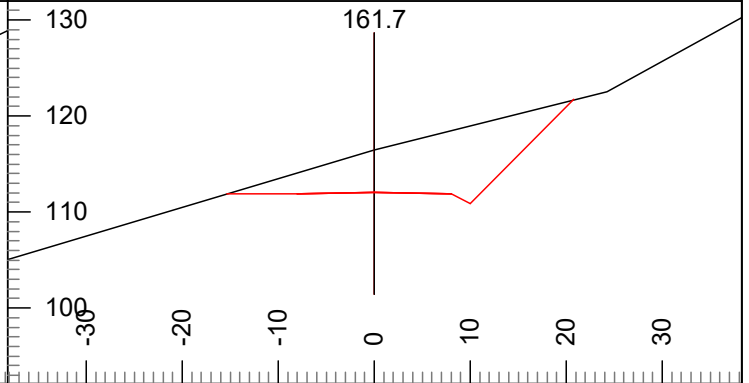
P-Stn : 22.9 H. Offset: 0.2 Cut Dp: 2.1  
L-Stn : 22.9 V.Offset: -2.1 Index: 403



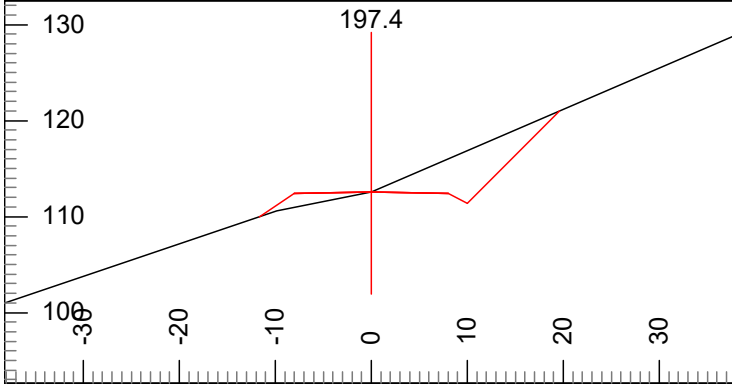
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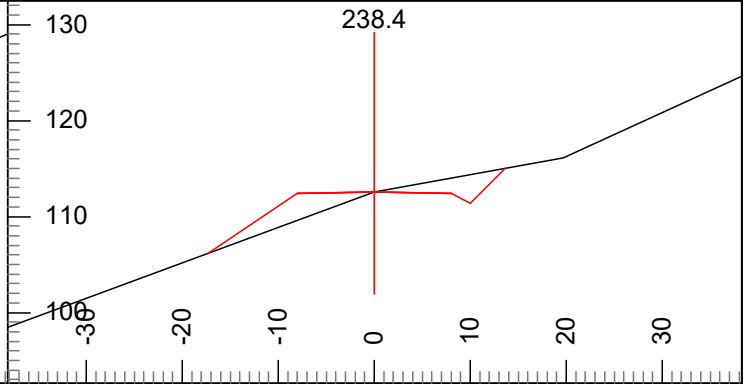
P-Stn : 113.3 H. Offset: 0.1 Cut Dp: -1.5  
L-Stn : 113.4 V.Offset: 1.6 Index: 405



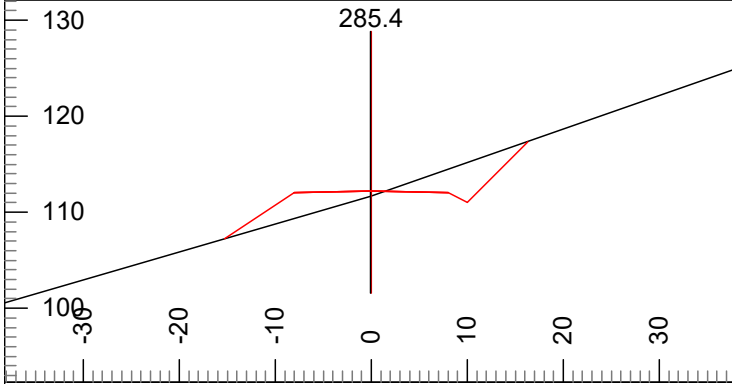
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L-Stn : 161.7 V.Offset: -4.4 Index: 406



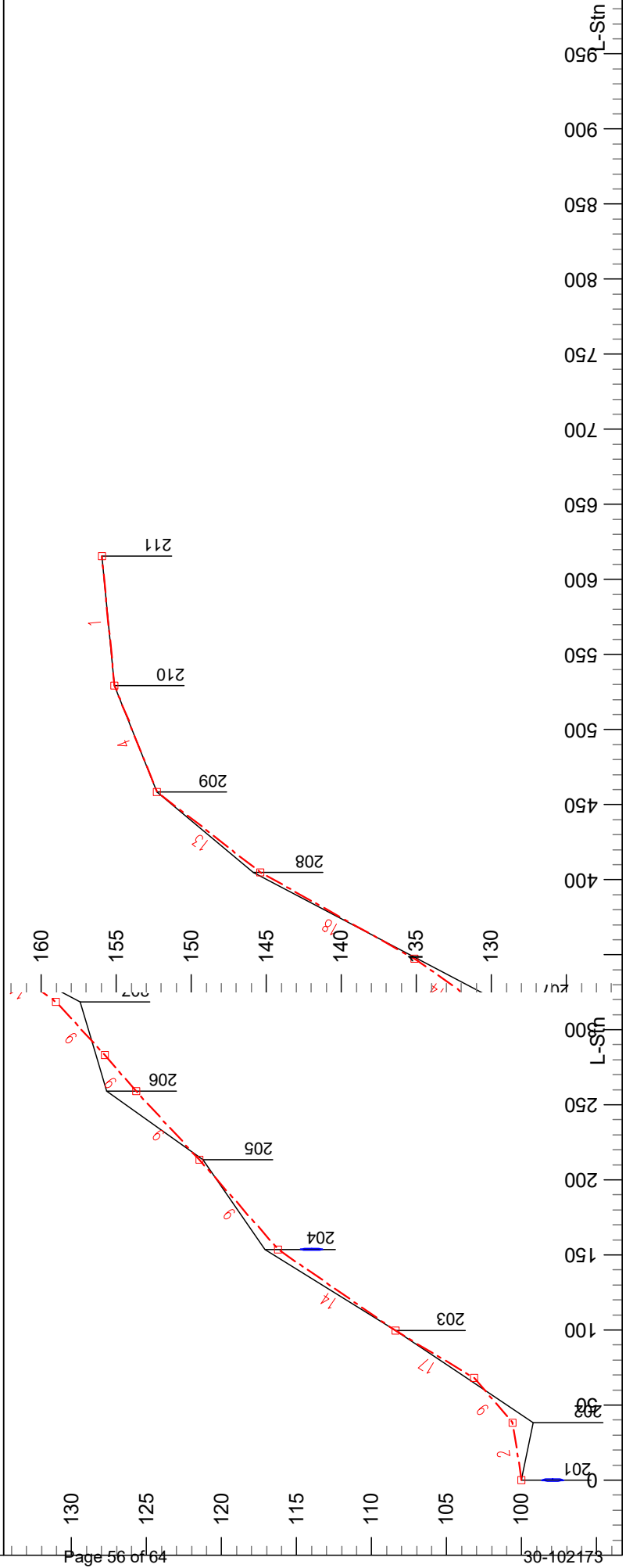
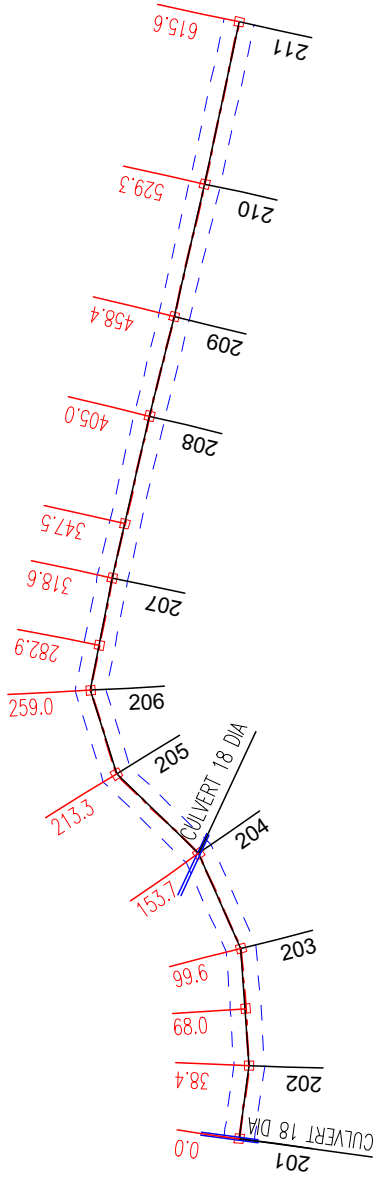
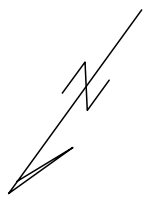
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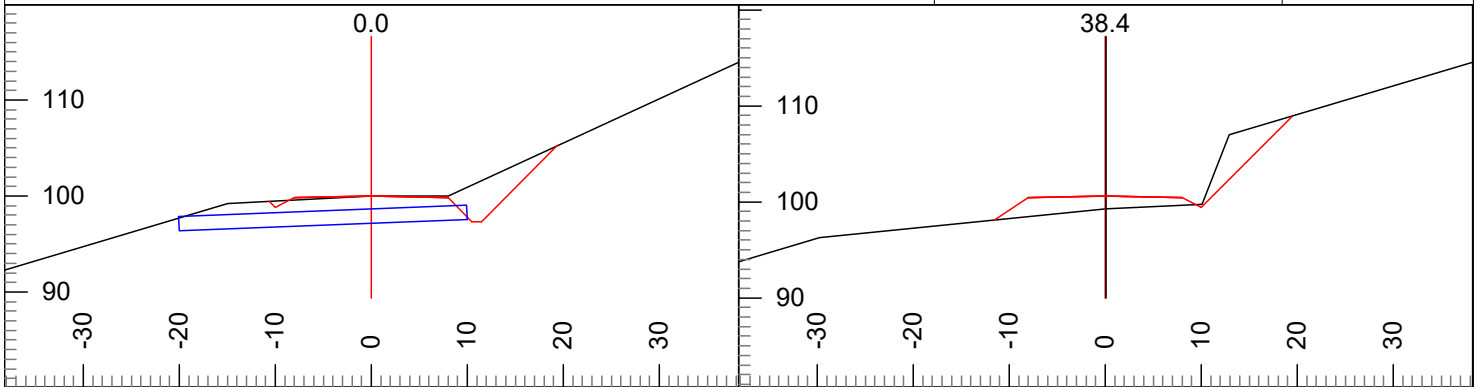


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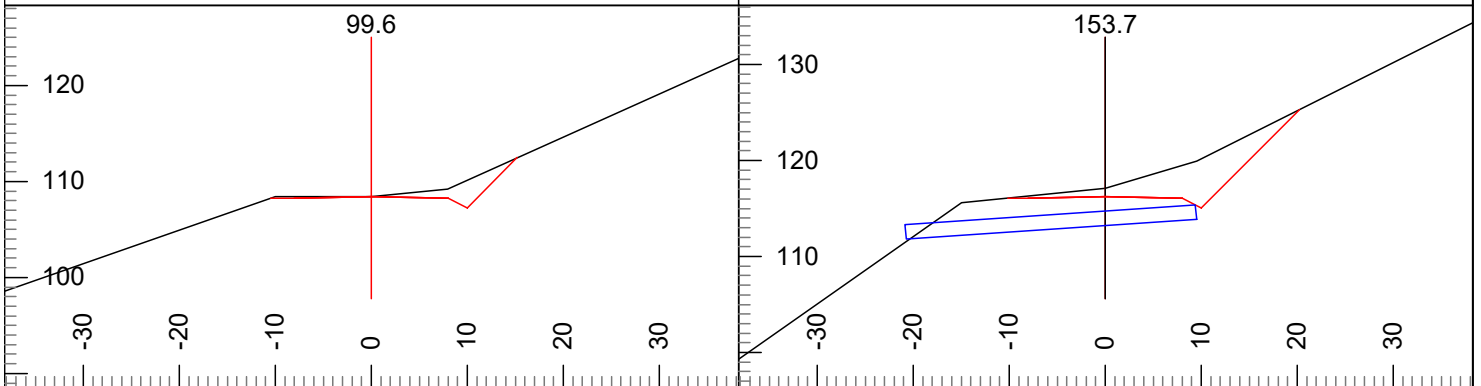
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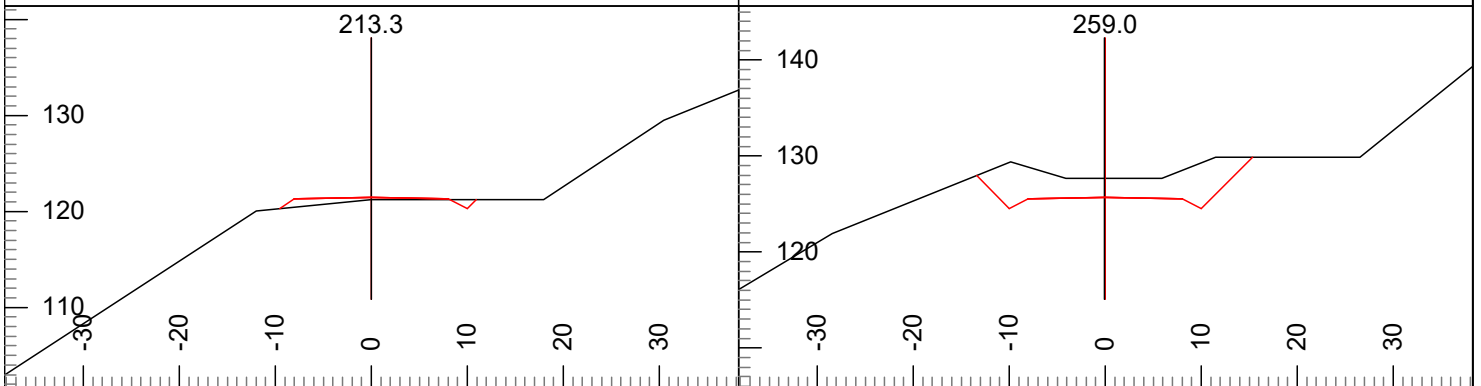
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L-Stn : 0.0 V.Offset: 0.0 Index: 201

P-Stn : 38.4 H. Offset: -0.1 Cut Dp: -1.4  
L-Stn : 38.4 V.Offset: 1.4 Index: 202



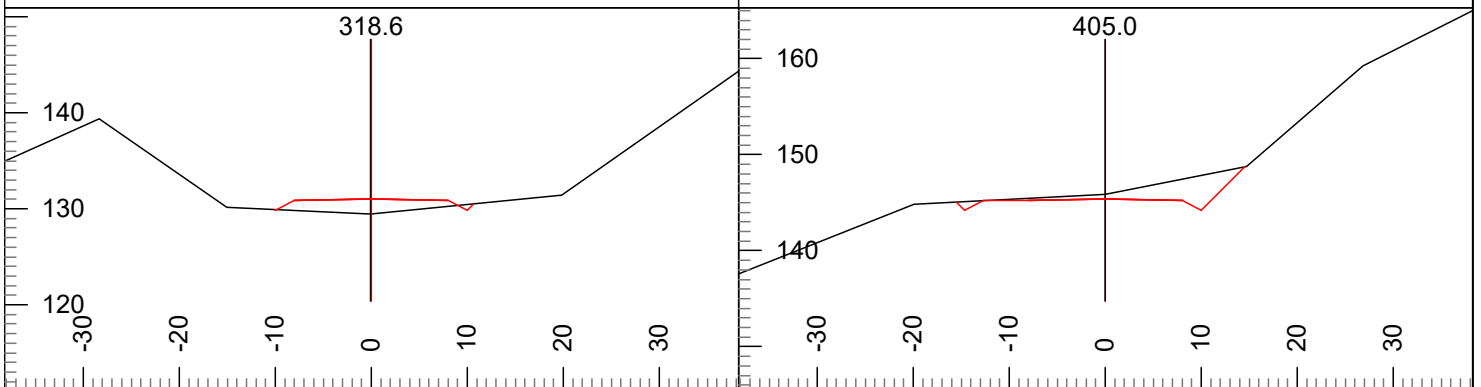
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P-Stn : 153.7 H. Offset: 0.0 Cut Dp: 0.9  
L-Stn : 153.7 V.Offset: -0.8 Index: 204



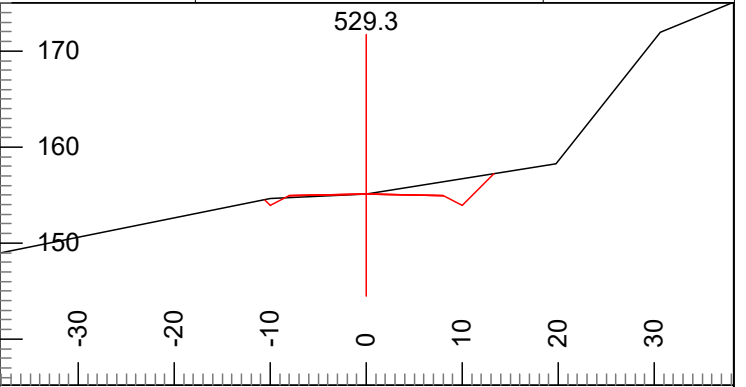
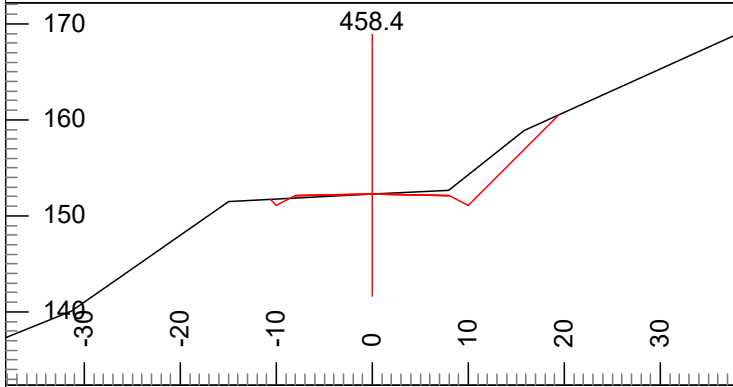
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L-Stn : 213.3 V.Offset: 0.2 Index: 205

P-Stn : 259.0 H. Offset: 0.1 Cut Dp: 2.0  
L-Stn : 259.0 V.Offset: -2.0 Index: 206



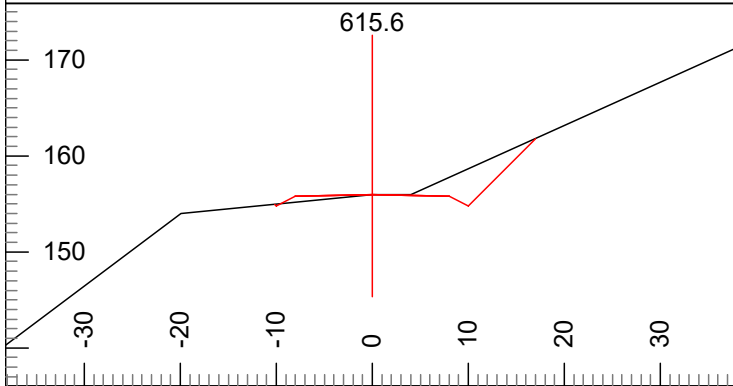
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L-Stn : 318.6 V.Offset: 1.6 Index: 207

P-Stn : 405.1 H. Offset: 0.0 Cut Dp: 0.5  
L-Stn : 405.0 V.Offset: -0.5 Index: 208



P-Stn : 458.5 H. Offset: 0.0 Cut Dp: 0.0  
L-Stn : 458.4 V.Offset: 0.0 Index: 209

P-Stn : 529.3 H. Offset: 0.0 Cut Dp: 0.0  
L-Stn : 529.3 V.Offset: 0.0 Index: 210



P-Stn : 615.6 H. Offset: 0.0 Cut Dp: 0.0  
L-Stn : 615.6 V.Offset: 0.0 Index: 211

PC PIT DEVELOPMENT PLAN  
NW ¼, NE ¼, Section 1, Township 21 North, Range 07 East, W.M.

1. All vegetation including stumps shall be cleared a minimum of 25 feet beyond the top of all working faces and piled as shown on drawing. Waste material shall be stacked over edge of flat.
2. All dirt shall be stripped for a minimum of 25 feet from working faces.
3. Quarry faces shall not have a slope steeper than 1/4(H):1(V).
4. The width of the pit benches shall be a minimum of 1.5 times the maximum length of the largest machine used.
5. Mining will begin in Work Area 1, extending the bench 150 feet southeast of current ending location. After Work Area 1 is developed according to minimum allowable dimensions, Work Area 2 may be developed.
6. The surface of the pit floors and benches shall be uniform and free-draining at a minimum 2% outslope gradient. No ponding will be allowed.
7. Oversized material remaining in the rock source at the conclusion of the timber sale may not exceed 10% of the total volume mined in that source. Oversize material is defined as rock fragments larger than two feet in any direction. Oversize material will be piled as shown on drawing.
8. At the end of operations, pit faces and walls shall be scaled and cleared of loose and overhanging material.
9. All operations shall be carried out in compliance with all regulations of:
  - a- "Regulations and Standards Applicable to Metal and Nonmetal Mining and Milling Operations" (30 CFR) U.S. Department of Labor, Mine Safety and Health Administration.
  - b- "Safety Standards for Construction Work" (296-155 WAC) Washington Department of Labor and Industries.
10. At the completion of rock source operations, Purchaser shall ask Contract Administrator for written approval of final rock source condition and compliance with the terms of this plan.
11. Upon completion of rock source operations, the quarry site shall be cleared of temporary structures, equipment and rubbish and left in a neat and presentable condition.
12. Quantity and Quality of rock is not guaranteed by the State.



**PC Pit**  
**Rock Source Development Plan**  
**NW ¼ NE ¼ Sec. 1 T21R07E**

Organic Waste

Proposed Unit 1 Spur 3 Rd

5000 Rd

Overburden Waste Area: 500'  
 At Sta. 177+25, NE of 5000 Rd

MDP Rd

5000 Rd

Access Trail

Lower Bench

Upper Bench

Work Area 2

Work Area 1

10 ft Contours

Working Area

Area to Clear & Grub

30'

60'

0'

**Profile View**

Clear and Grub Limit

Work Area 1

Work Area 2

30'

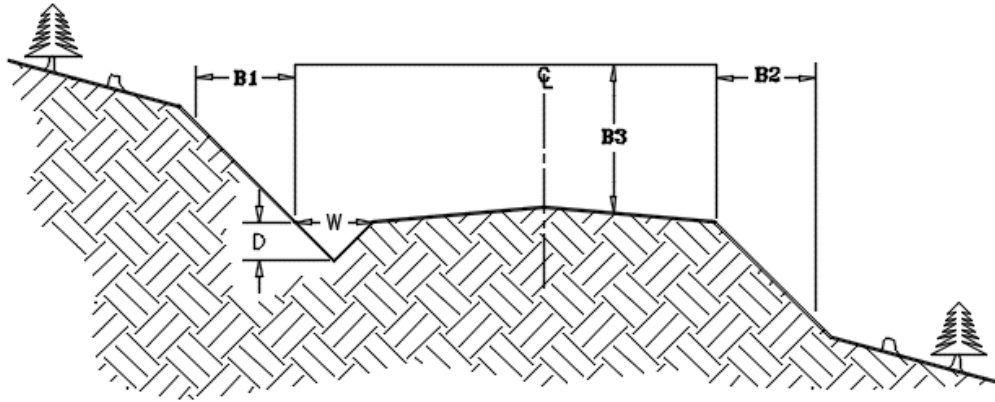
60'

0'



## BRUSHING DETAIL

(not to scale)

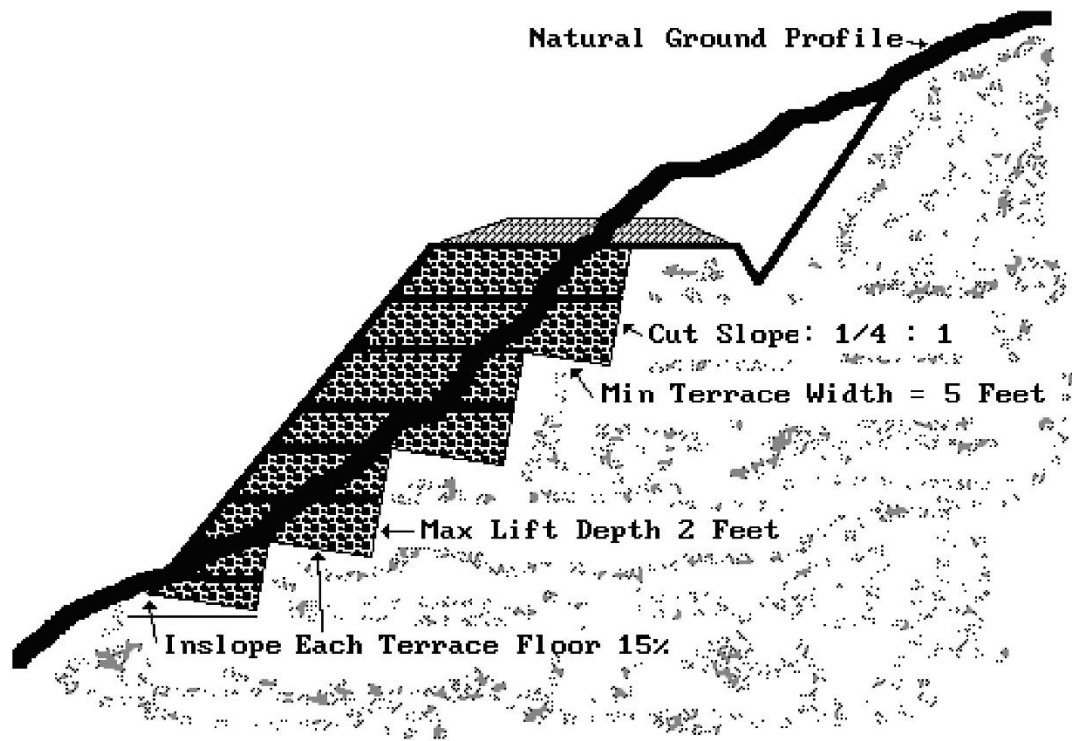


## BRUSHING LIST

Road Number	Stations	Road Width (feet)	Ditch		Brushing Limits (feet)			Remarks  <i>In addition to brushing...</i>
			Width (feet)	Depth (feet)	B1	B2	B3	
			W	D				
5041	0+00 to 4+45	variable	3	1	5	5	14	Remove brush an extra 16 feet on the inside of curves to provide extra visibility on switchbacks and curves
5051	0+00 to 3+50	variable	3	1	5	5	14	
5052	0+00 to 20+20	variable	3	1	5	5	14	
5053-4	0+00 to 7+74	variable	3	1	5	5	14	
5054	0+00 to 40+28	variable	3	1	5	5	14	
5055	0+00 to 7+75	variable	3	1	5	5	14	
MDP-1 Rd	0+00 to 17+60	variable	3	1	5	5	14	
MDP-11 Rd	0+00 to 8+70	variable	3	1	5	5	14	
MDP-2 Rd	0+00 to 14+07	variable	3	1	5	5	14	
Unit 6 Spur A	0+00 to 6+91	variable	3	1	5	5	14	
Unit 6 Spur A1	0+00 to 2+52	variable	3	1	5	5	14	

B1 extends horizontally the specified distance in feet from the back of the ditch. B2 extends horizontally the specified distance in feet from the outside edge of the running surface.

## Embankment Key Detail

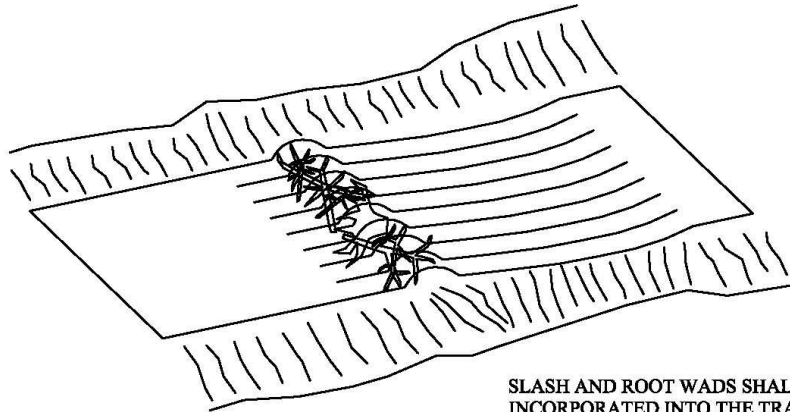


Break natural ground with terrace floors.

Embankment slope not to exceed 1 : 1

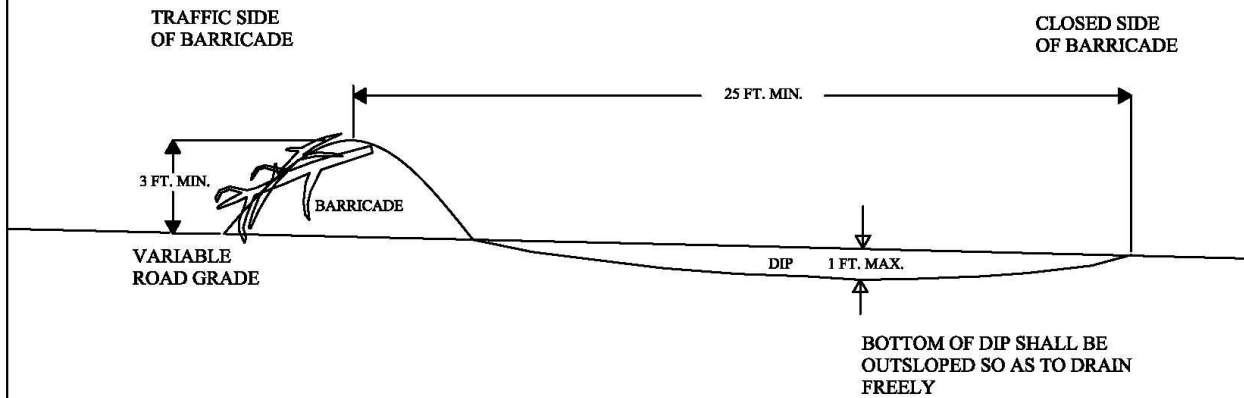
Embankment material shall be SELECT PIT RUN ROCK

# BARRICADE DETAIL



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

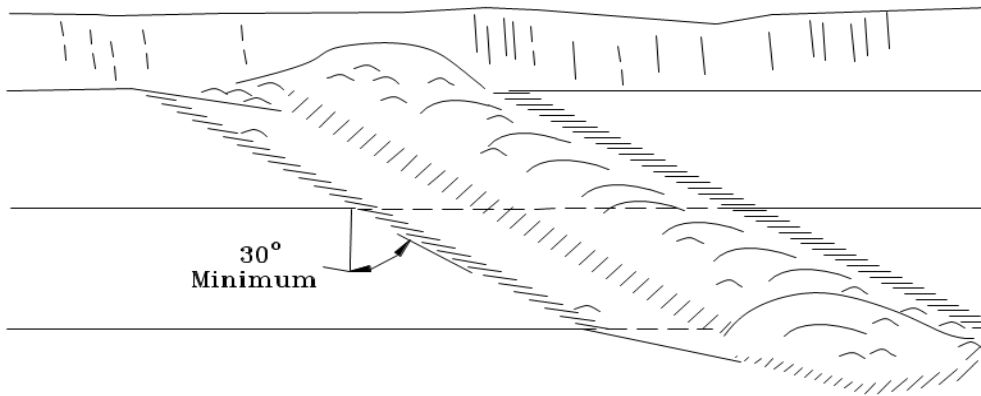
PLAN VIEW



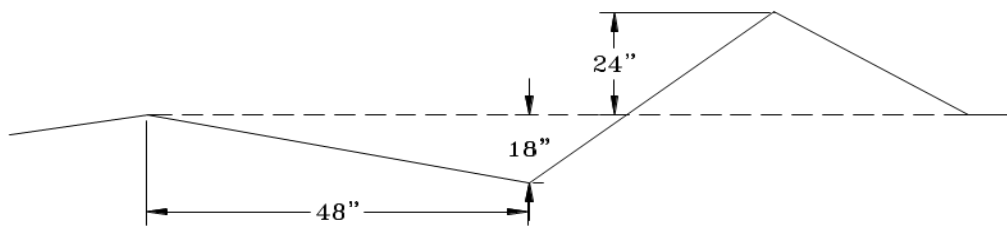
PROFILE VIEW

# Non-Drivable Water Bar Detail

## Cross Ditch



## Cross Section at Centerline



Date:  
Scale : None  
App#  
Drawn by: M.A.D.

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

DEPARTMENT OF NATURAL RESOURCES - SOUTH PUGET SOUND REGION

FORM 9-87(Rev. 01-09)

Road Development Cost Estimate

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

REGION: SPS

UNIT: Black Diamond

SALE/PROJECT NAME: Hodag

CONTRACT NUMBER: 30-102173

LEGAL DESCRIPTION: Sects 1&2 T21R07E, Sect 6,7&8 T21R08E, Sects 35&36 T22R07E

ROAD NUMBER:	5052Ext,U1SpurA,U1SpurB, U1SpurC	5051,5052,5053-4,5055,MDP-11,U6SpurA, U6SpurA1	5000,5030,5040,5041,5052,5053,5054, MDP,MDP-1,MDP-2
ROAD STANDARD:	Construction	Reconstruction	Pre-haul maintenance
NUMBER OF STATIONS:	21.87	57.32	336.04
SIDESLOPE:	0-50%	0-50%	0-70%
CLEARING AND GRUBBING:	\$3,437	\$4,073	
EXCAVATION AND FILL:	\$8,199	\$14,655	
MISC. MAINTENANCE:			\$31,359
ROCK TOTALS (Cu. Yds.):			
2" Minus	704	\$0	\$20,420
4" In-Place	4240	\$14,408	\$10,642
RipRap/QS	234	\$263	\$6,765
Landing Rock	5,400	\$41,320	
CULVERTS AND FLUMES:	\$2,794	\$2,794	\$64,874
STRUCTURES:	\$0	\$0	\$0
GENERAL EXPENSES:	\$6,338	\$3,912	\$10,725
MOBILIZATION:	\$5,800	\$5,800	\$5,800
TOTAL COSTS:	\$82,559	\$53,173	\$150,585
COST PER STATION:	\$3,775	\$928	\$448

POST HAUL COSTS: \$20,299

NOTE<sup>1</sup>: This appraisal has no allowance for profit and risk.

TOTAL (All Roads) = \$306,616

SALE VOLUME MBF = 10,036

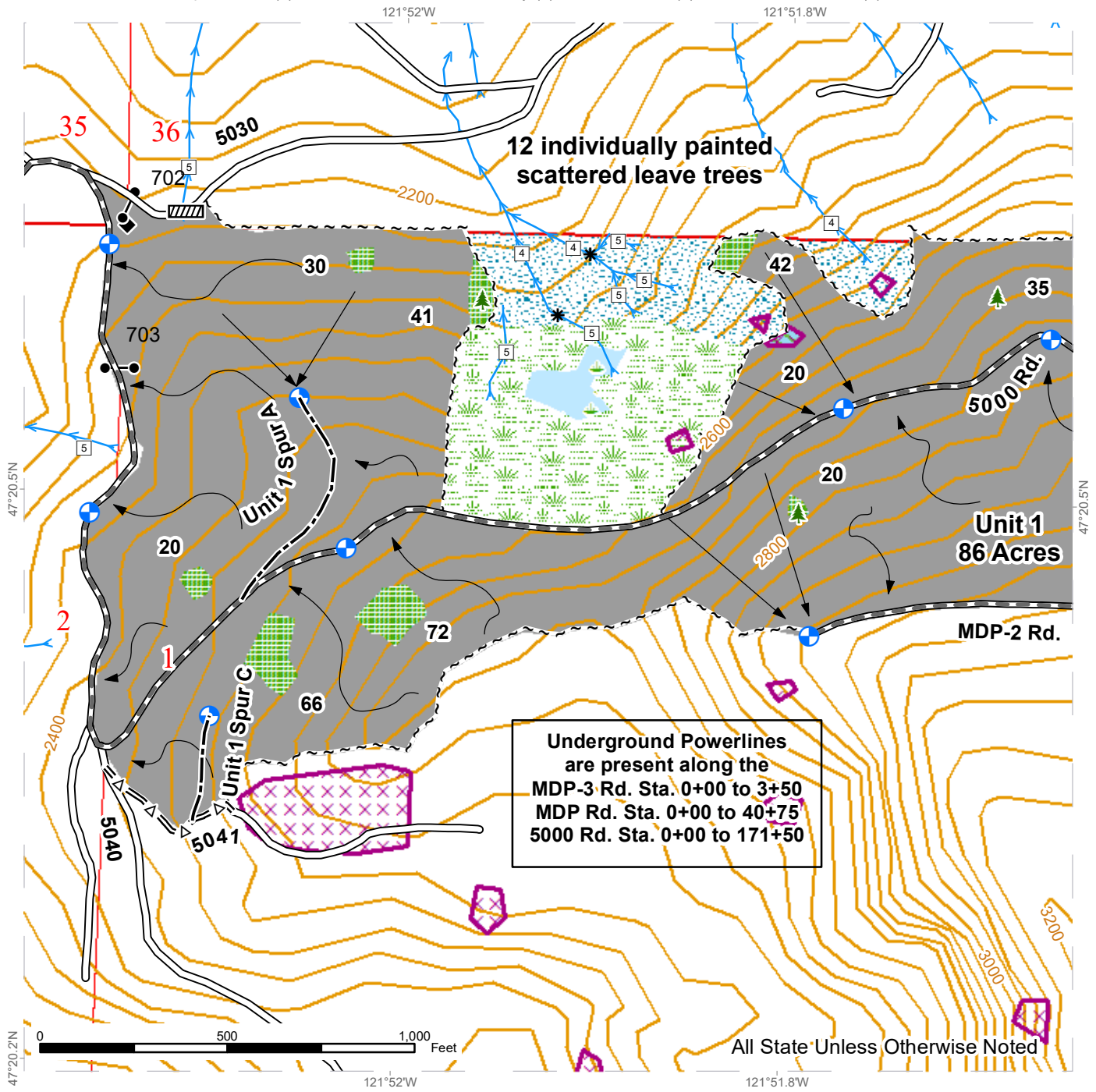
TOTAL COST PER MBF = \$30.55

Date: 03/21/22

# LOGGING PLAN MAP

SALE NAME: HODAG  
 AGREEMENT#: 30-102173  
 TOWNSHIP(S): T21R7E, T21R8E, T22R7E  
 TRUST(S): Capitol Grant (7), Common School and Indemnity (3), Normal School (8), State Forest Transfer (1)

REGION: South Puget Sound Region  
 COUNTY(S): King  
 ELEVATION RGE: 2160-3560



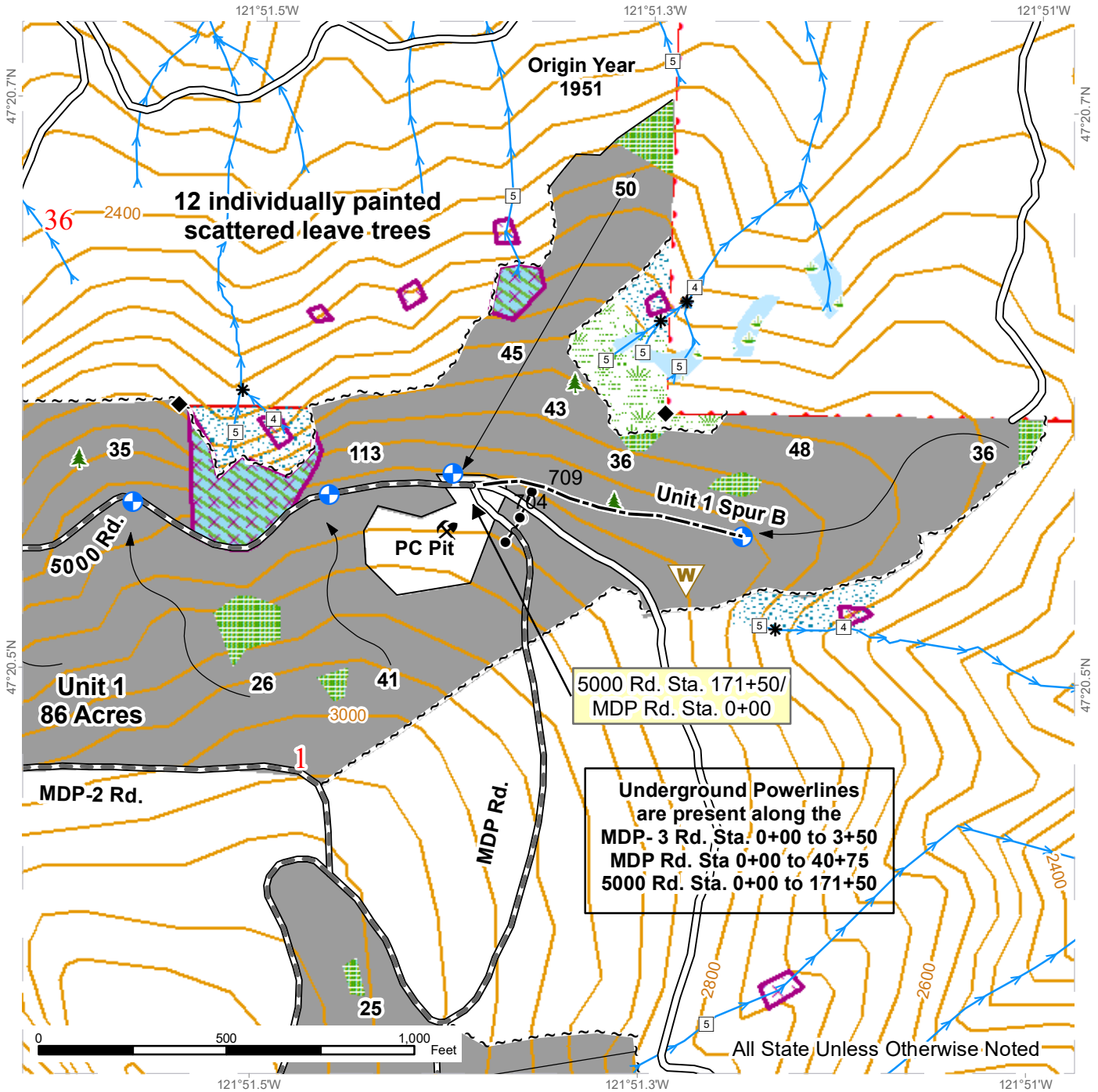
Variable Retention Harvest	DNR Managed Lands	Tailhold Restriction Area
Ground Harvest	Culvert	Contours 40-foot
Cable Harvest	Landing - Proposed	Gates (Corporate)
Sale Boundary Tags	Leave Tree Area <1/4-acre	Existing Roads
Streams	Wetlands - Non-forested	Required Pre-Haul Maintenance
Stream Type	Non-Tradeable Leave Clump	Optional Pre-Haul Maintenance
Stream Type Break	Leave Tree Area	Optional Construction
Survey Monument	Riparian Mgt Zone	
Public Land Survey Sections	Wetland Mgt Zone	



# LOGGING PLAN MAP

SALE NAME: HODAG  
 AGREEMENT#: 30-102173  
 TOWNSHIP(S): T21R7E, T21R8E, T22R7E  
 TRUST(S): Capitol Grant (7), Common School and Indemnity (3), Normal School (8), State Forest Transfer (1)

REGION: South Puget Sound Region  
 COUNTY(S): King  
 ELEVATION RGE: 2160-3560



5000 Rd. Sta. 171+50/  
 MDP Rd. Sta. 0+00

Underground Powerlines  
 are present along the  
 MDP- 3 Rd. Sta. 0+00 to 3+50  
 MDP Rd. Sta 0+00 to 40+75  
 5000 Rd. Sta. 0+00 to 171+50

All State Unless Otherwise Noted

Variable Retention Harvest	Public Land Survey Sections	Leave Tree Area
Ground Harvest	DNR Managed Lands	Riparian Mgt Zone
Cable Harvest	Landing - Proposed	Wetland Mgt Zone
Sale Boundary Tags	Leave Tree Area <1/4-acre	Tailhold Restriction Area
Timber Type Change	Rock Pit	Contours 40-foot
Streams	Waste Area	Gates (Corporate)
Stream Type	Wetlands - Non-forested	Existing Roads
Stream Type Break	Non-Tradeable Leave Clump	Required Pre-Haul Maintenance
Survey Monument		Optional Construction

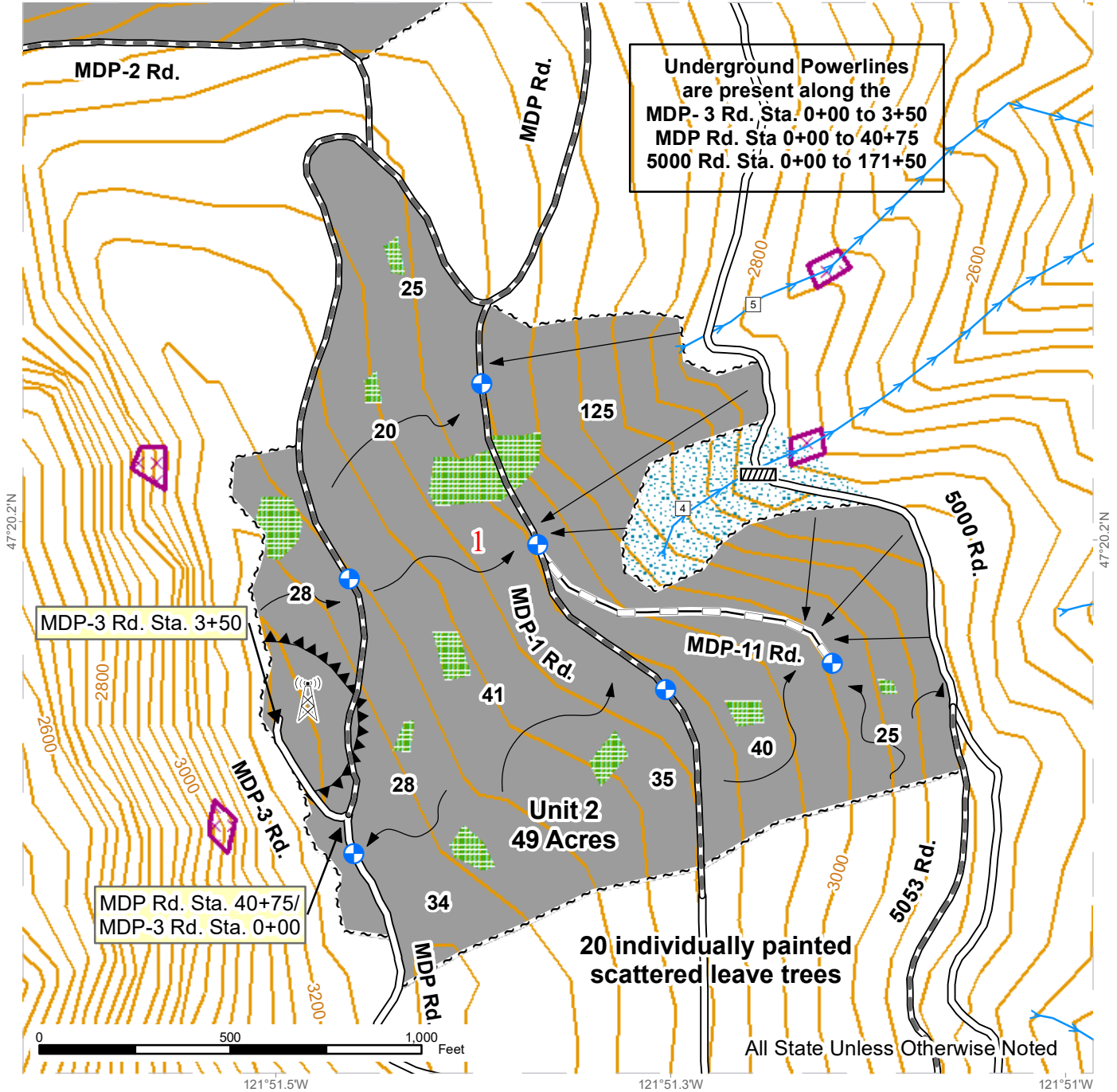


# LOGGING PLAN MAP

SALE NAME: HODAG  
 AGREEMENT#: 30-102173  
 TOWNSHIP(S): T21R7E, T21R8E, T22R7E  
 TRUST(S): Capitol Grant (7), Common School and Indemnity (3), Normal School (8), State Forest Transfer (1)

REGION: South Puget Sound Region  
 COUNTY(S): King  
 ELEVATION RGE: 2160-3560

121°51.5'W 121°51.3'W 121°51'W



Variable Retention Harvest	Public Land Survey Sections	Riparian Mgt Zone
Ground Harvest	DNR Managed Lands	Tailhold Restriction Area
Cable Harvest	Communication Tower	Contours 40-foot
Sale Boundary Tags	Culvert	Hazard Abatement Area
Streams	Landing - Proposed	Existing Roads
Stream Type	Leave Tree Area	Required Pre-Haul Maintenance
Stream Type Break		Optional Reconstruction

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**SALE NAME:** HODAG  
**AGREEMENT#:** 30-102173

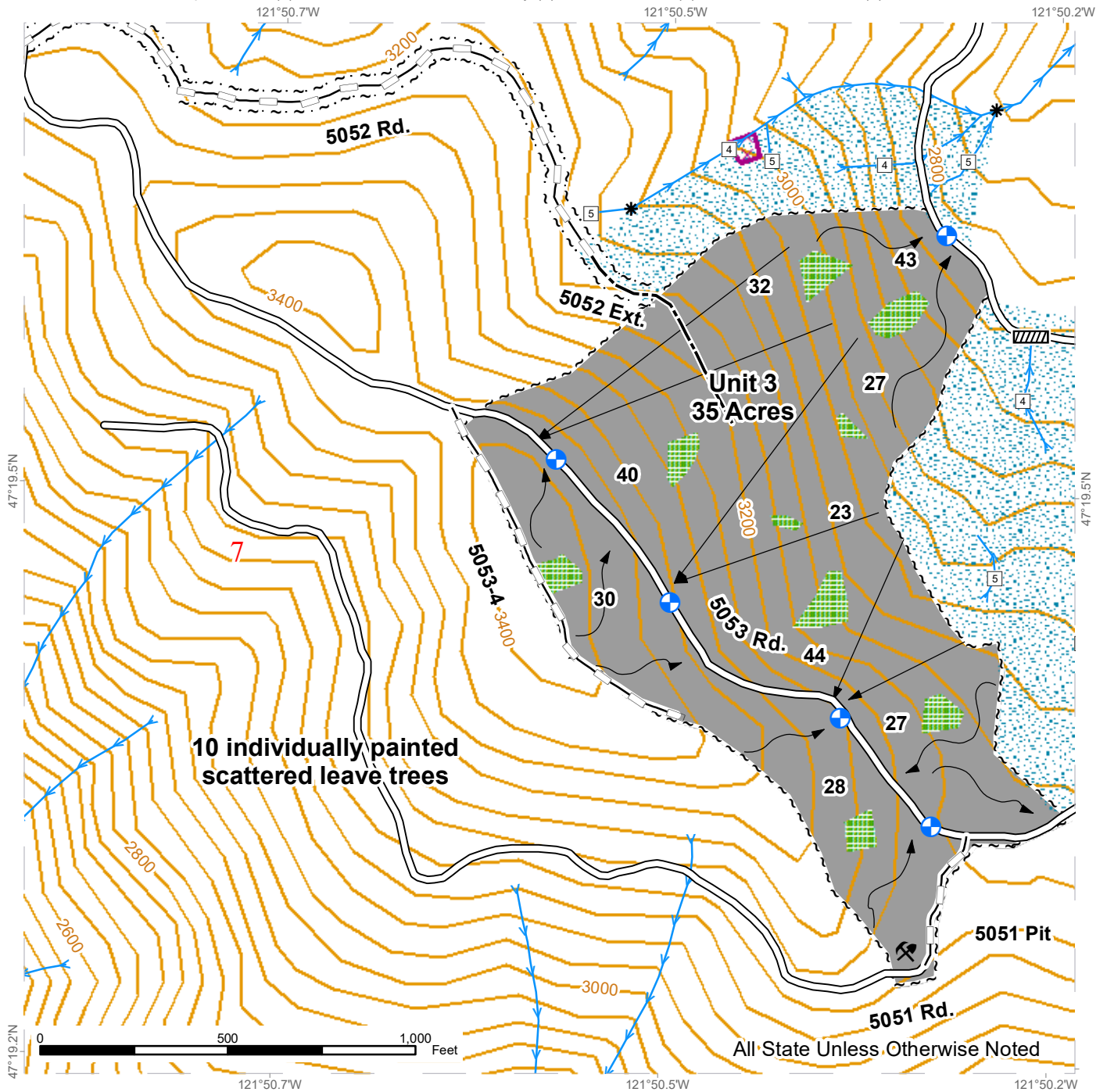
**TOWNSHIP(S):** T21R7E, T21R8E, T22R7E

**TRUST(S):** Capitol Grant (7), Common School and Indemnity (3), Normal School (8), State Forest Transfer (1)

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Variable Retention Harvest	Stream Type	Leaf Tree Area
Ground Harvest	Stream Type Break	Riparian Mgt Zone
Cable Harvest	Public Land Survey Sections	Tailhold Restriction Area
Sale Boundary Tags	DNR Managed Lands	Contours 40-foot
Right of Way Tags	Culvert	Existing Roads
Streams	Landing - Proposed	Optional Construction
	Rock Pit	Optional Reconstruction



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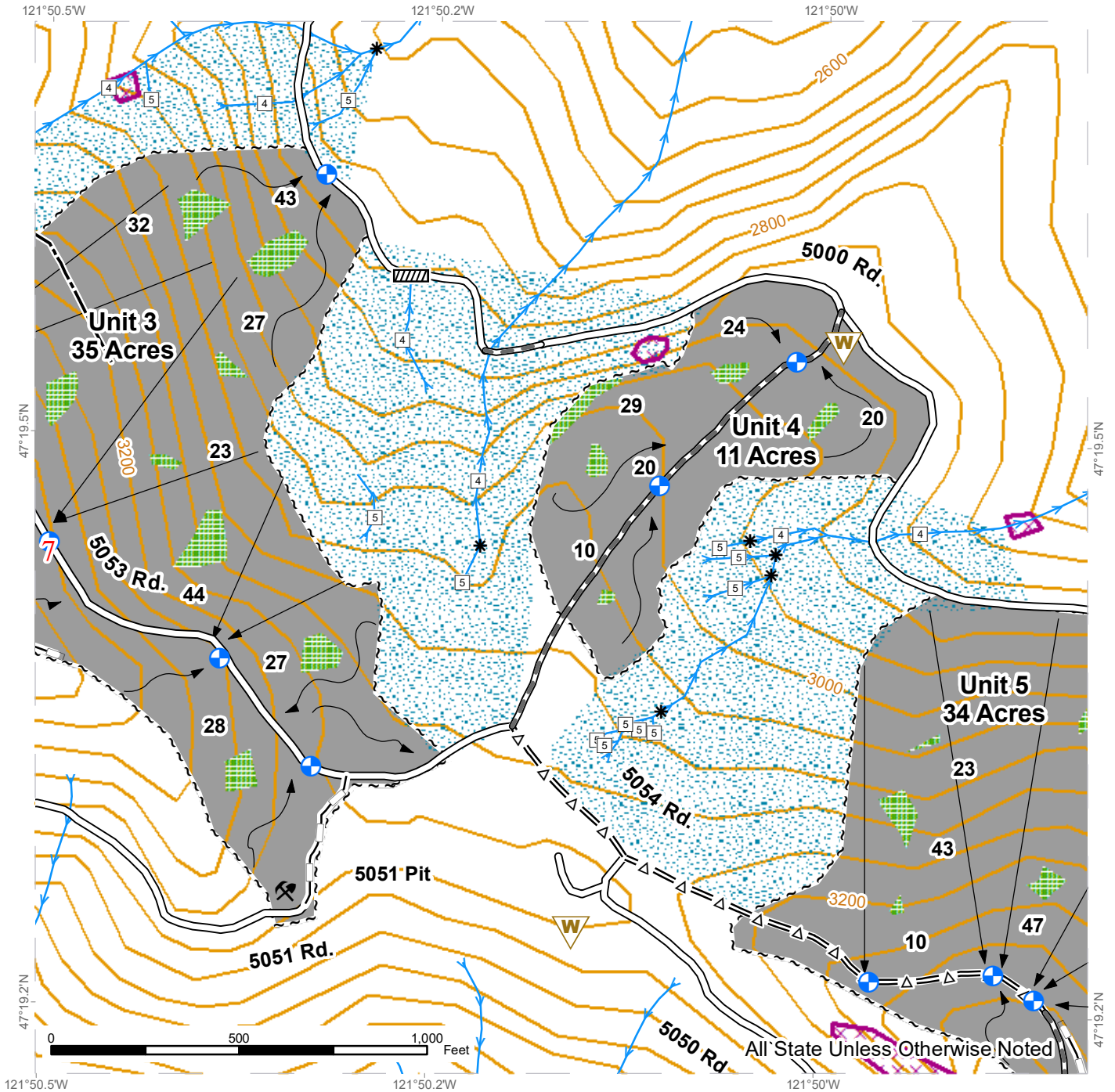
**TOWNSHIP(S):** T21R7E, T21R8E, T22R7E

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Variable Retention Harvest	Public Land Survey Sections	Tailhold Restriction Area
Ground Harvest	DNR Managed Lands	Contours 40-foot
Cable Harvest	Culvert	Existing Roads
Sale Boundary Tags	Landing - Proposed	Required Pre-Haul Maintenance
Right of Way Tags	Rock Pit	Optional Pre-Haul Maintenance
Streams	Waste Area	Optional Construction
Stream Type	Leave Tree Area	Optional Reconstruction
Stream Type Break	Riparian Mgt Zone	

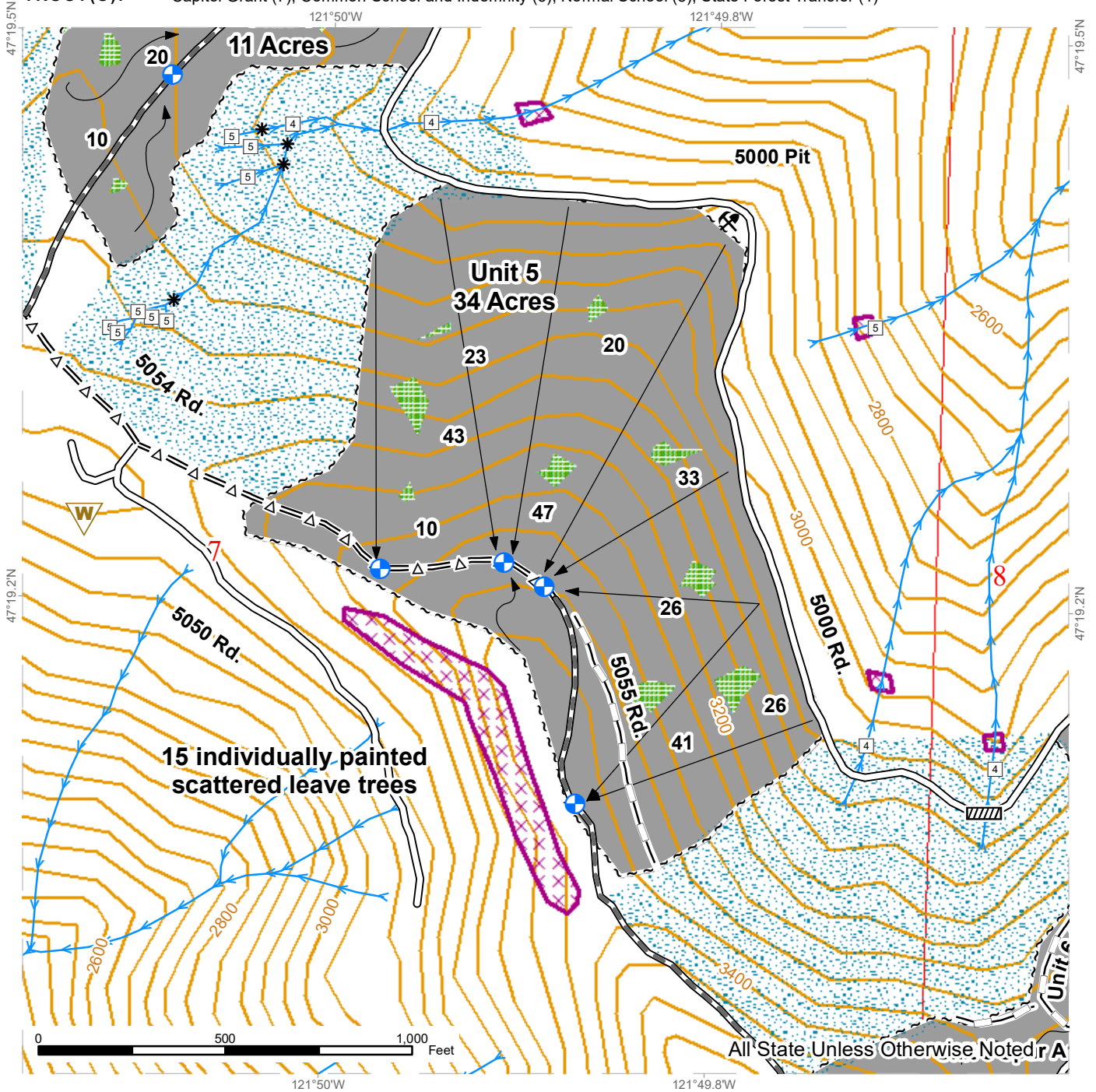




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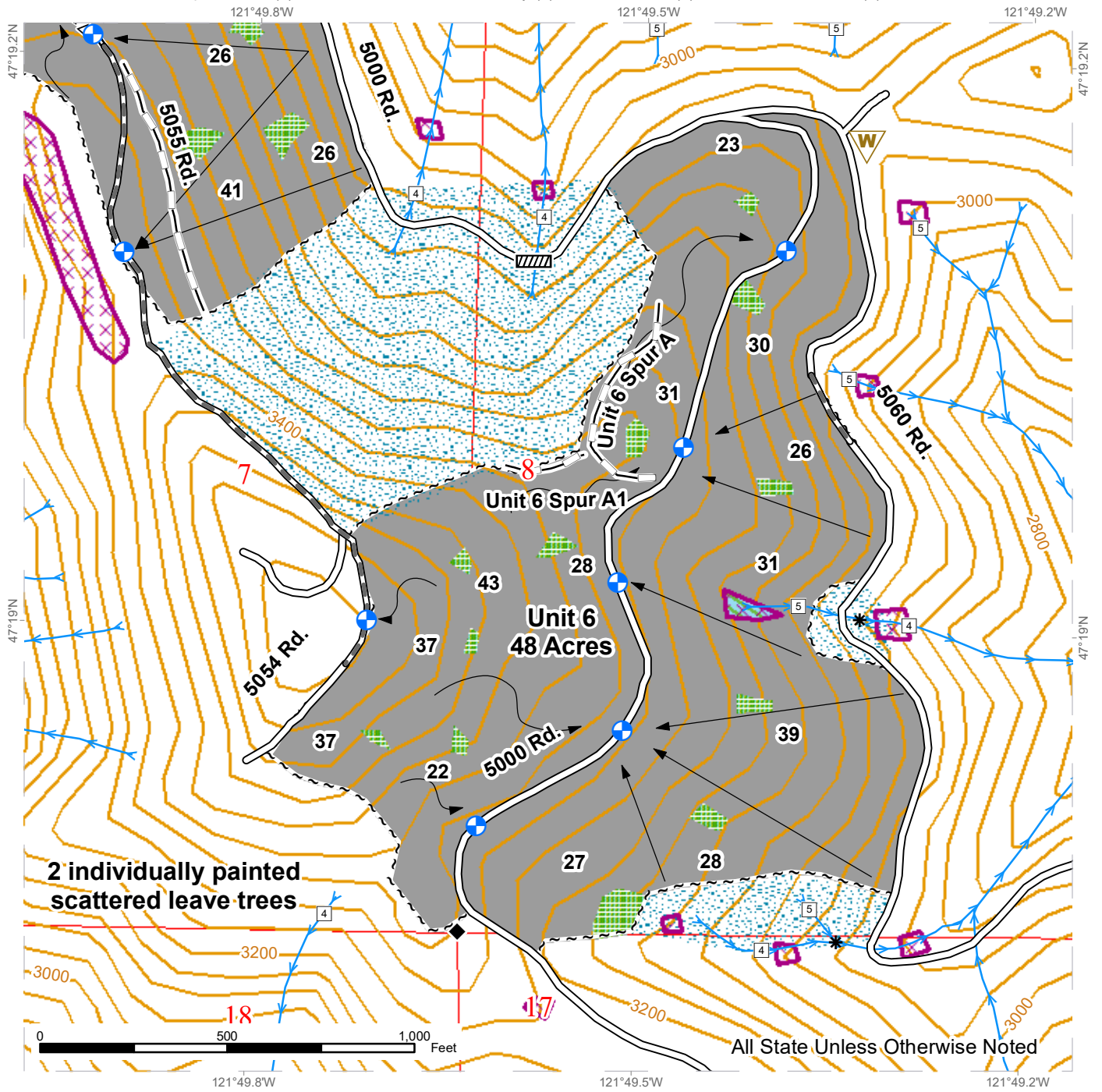


Variable Retention Harvest	Public Land Survey Sections	Riparian Mgt Zone
Ground Harvest	DNR Managed Lands	Tailhold Restriction Area
Cable Harvest	Culvert	Contours 40-foot
Sale Boundary Tags	Landing - Proposed	Existing Roads
Streams	Rock Pit	Required Pre-Haul Maintenance
Stream Type	Waste Area	Optional Pre-Haul Maintenance
Stream Type Break	Leave Tree Area	Optional Reconstruction

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**2 individually painted scattered leaf trees**

All State Unless Otherwise Noted

Variable Retention Harvest	Public Land Survey Sections	Tailhold Restriction Area
Ground Harvest	DNR Managed Lands	Contours 40-foot
Cable Harvest	Culvert	Existing Roads
Sale Boundary Tags	Landing - Proposed	Required Pre-Haul Maintenance
Streams	Waste Area	Optional Pre-Haul Maintenance
Stream Type	Non-Tradeable Leave Clump	Optional Reconstruction
Stream Type Break	Leave Tree Area	
Survey Monument	Riparian Mgt Zone	

