



TIMBER NOTICE OF SALE

SALE NAME: DOC HOLLIDAY

AGREEMENT NO: 30-103767

AUCTION: August 28, 2024 starting at 10:00 a.m., Olympic Region Office, Forks, WA

COUNTY: Clallam

SALE LOCATION: Sale located approximately 22 miles west of Port Angeles, WA

PRODUCTS SOLD AND SALE AREA:

All timber, except trees marked with a band of blue paint, bounded out by leave tree area tags, any downed red cedar, or timber that has been on the ground for five years or more (five years is defined by more than 1.5 inches of sap rot); bounded by timber sale boundary tags, the PA-S-1100 road in Unit 1; timber sale boundary tags, timber type change, the PA-S-1100 and PA-S-1150 roads in Unit 2; timber sale boundary tags, timber type change in Unit 3; timber boundary tags in Unit 4, Unit 5 and Unit 6. All timber bounded by right of way boundary tags.

All forest products above located on part(s) of Sections 6 all in Township 30 North, Range 9 West, Sections 25 all in Township 31 North, Range 10 West, Sections 30 and 31 all in Township 31 North, Range 9 West, W.M., containing 75 acres, more or less.

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

ESTIMATED SALE VOLUMES AND QUALITY:

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

MINIMUM BID: \$594,000.00

BID METHOD: Sealed Bids

PERFORMANCE SECURITY: \$100,000.00

SALE TYPE: Lump Sum

EXPIRATION DATE: October 31, 2026

ALLOCATION: Export Restricted

BID DEPOSIT: \$59,400.00 or Bid Bond. Said deposit shall constitute an opening bid at the appraised price.

HARVEST METHOD: Ground based 100%

Forest products sold under this contract shall be harvested and removed using ground based equipment. Nontethered self-leveling tracked equipment is limited to sustained slopes of 65 percent and less. Other ground based equipment is limited to tracked equipment on sustained slopes that are 45 percent and less. Rubber tired skidders are restricted unless approved by the Contract Administrator. Authority to use other



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equipment or to operate outside the equipment specifications detailed above must be approved in writing by the State.

30' equipment limitation zone on all typed waters.

ROADS: 16.70 stations of required construction. 22.35 stations of required reconstruction. 33.35 stations of optional construction. 5.65 stations of optional reconstruction. 221.00 stations of required prehaul maintenance. 240.25 stations of optional prehaul maintenance. All road activities including timber haul and rock pit development will not be permitted from November 1 to April 30, on weekends, and holidays, unless authorized in writing by the Contract Administrator. Road work on the PA-I-2600, PA-I-2610 and Place Pit any timber felling, road work or operation of heavy equipment performed during the marbled murrelet nesting season (April 1 through September 23) is restricted to two hours after sunrise and two hours before sunset. This does not apply to hauling of timber, rock, or equipment.

ACREAGE DETERMINATION

CRUISE METHOD: Sale area was 100% GPS. Sale units were cruised using a variable plot sample.

FEES: \$39,253.00 is due on day of sale. \$9.00 per MBF is due upon removal. These are in addition to the bid price.

SPECIAL REMARKS: Two weeks notice shall be given prior to any work on the sale to notify recreation staff for redirection or closure of the Sadie Creek ORV and 4x4 trails located near Units 1, 2, 3, 4, 6 and 7. See S-150 clause for further details regarding the trail.

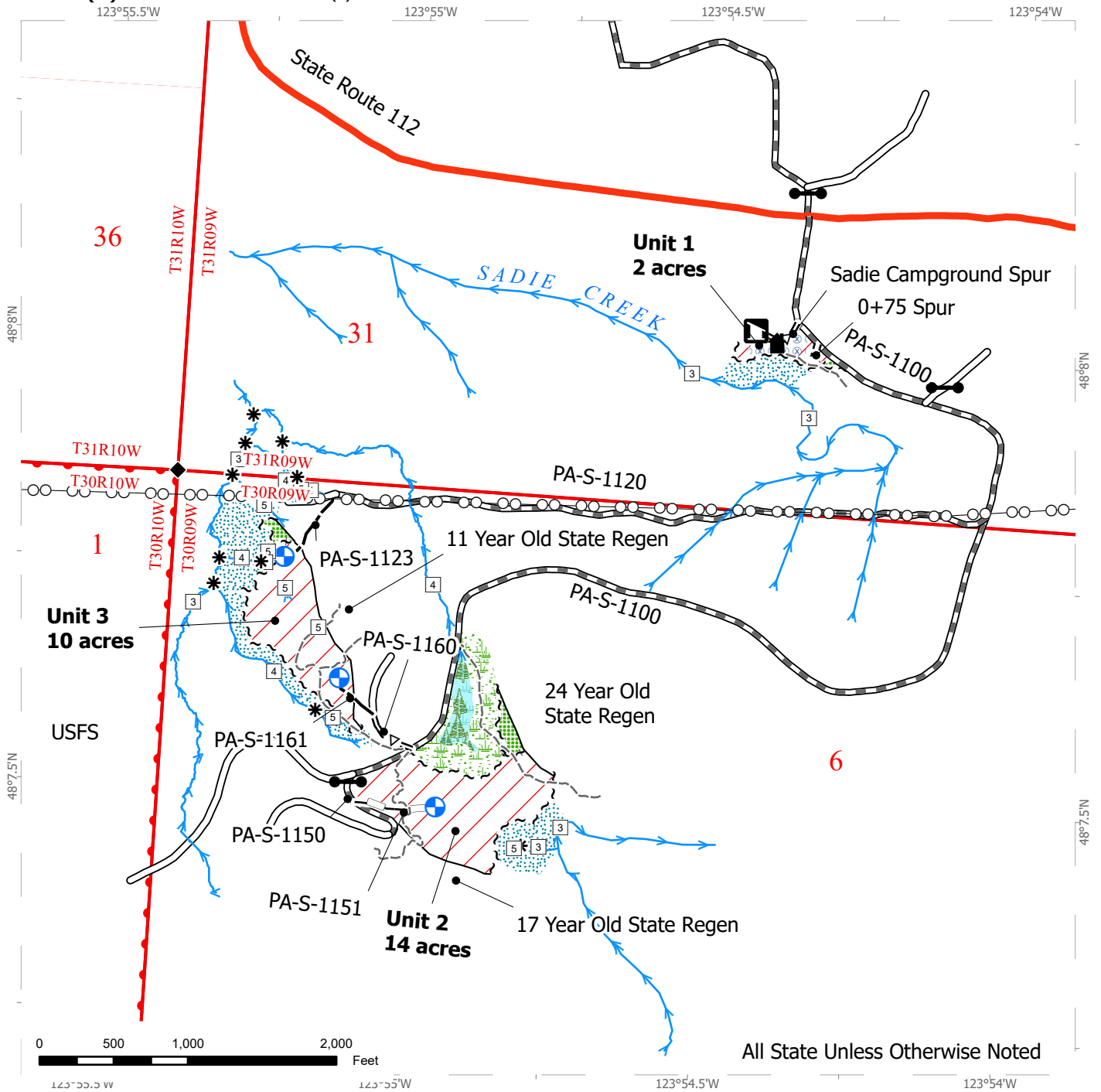
All trees 60 inches in Diameter at Breast Height (DBH) and greater shall not be felled unless for safety reasons, which must be approved by the Contract Administrator. If trees 60 inches DBH or greater need to be felled for safety reasons, trees will be left where felled.

There are locked gates on the PA-S-1000, PA-S-2600 and PA-I-2600. Contact Olympic Region Dispatch Center at 360-374-2800 to obtain a 786 key. This sale has dust and hazard abatement requirements.

TIMBER SALE MAP

SALE NAME: DOC HOLLIDAY
AGREEMENT #: 30-103767
TOWNSHIP(S): T30R9W, T31R10W, T31R9W
TRUST(S): State Forest Transfer (1)

REGION: Olympic Region
COUNTY(S): Clallam
ELEVATION RGE: 320-880



All State Unless Otherwise Noted

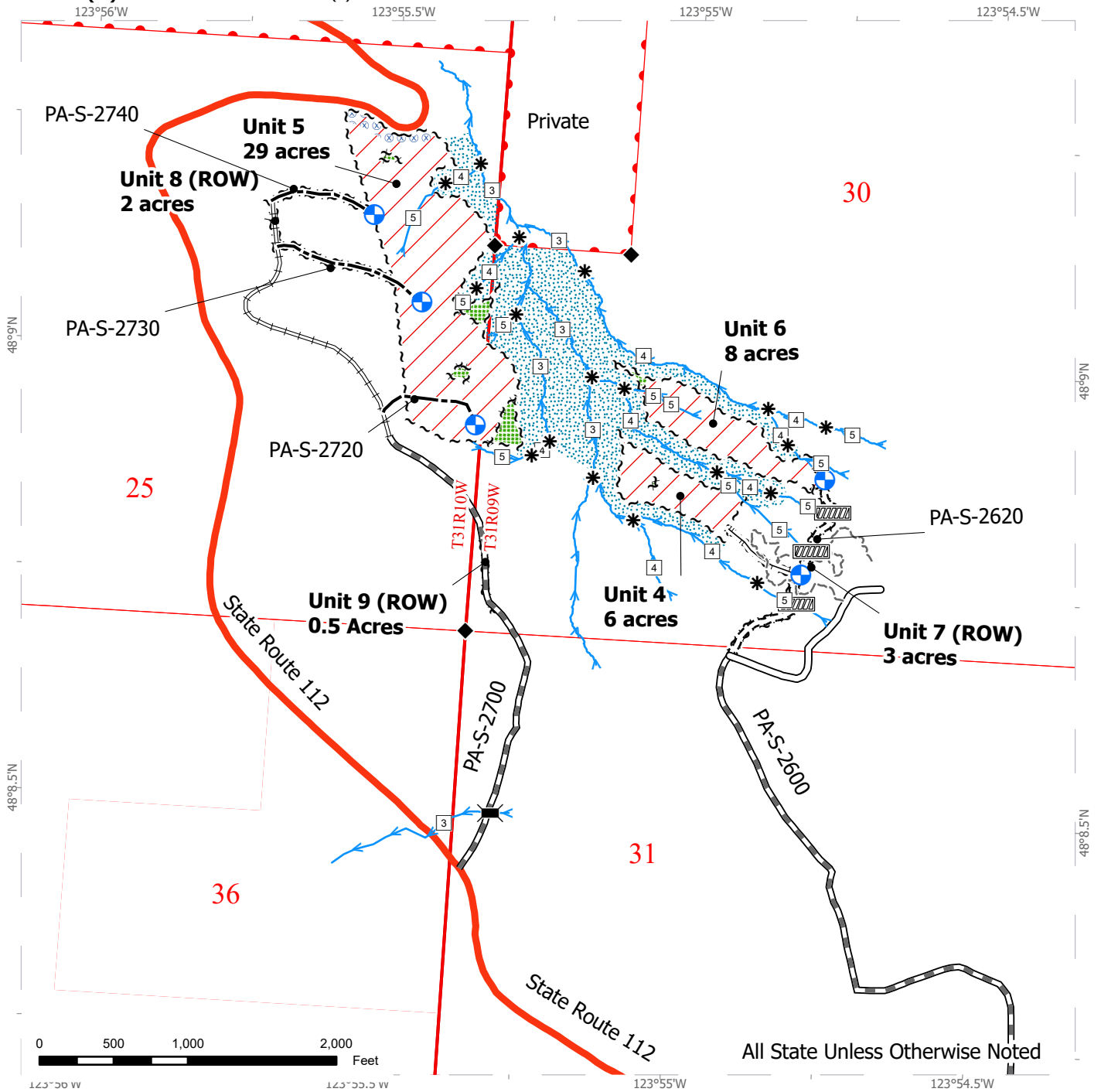
Variable Retention Harvest	Sale Boundary Tags	Power Lines
Leave Tree Area	Leave Tree Tags	Highway
Forested Wetland	Timber Type Change	Optional Construction
Wetland Mgt Zone	Gate	Optional Pre-Haul Maintenance
Riparian Mgt Zone	Landing - Proposed	Required Construction
Hazard Abatement Area	Recreation Site	Required Pre-Haul Maintenance
Streams	Structure	Existing Roads
Stream Type	Trail	Optional Reconstruction
Stream Break		Survey Monument



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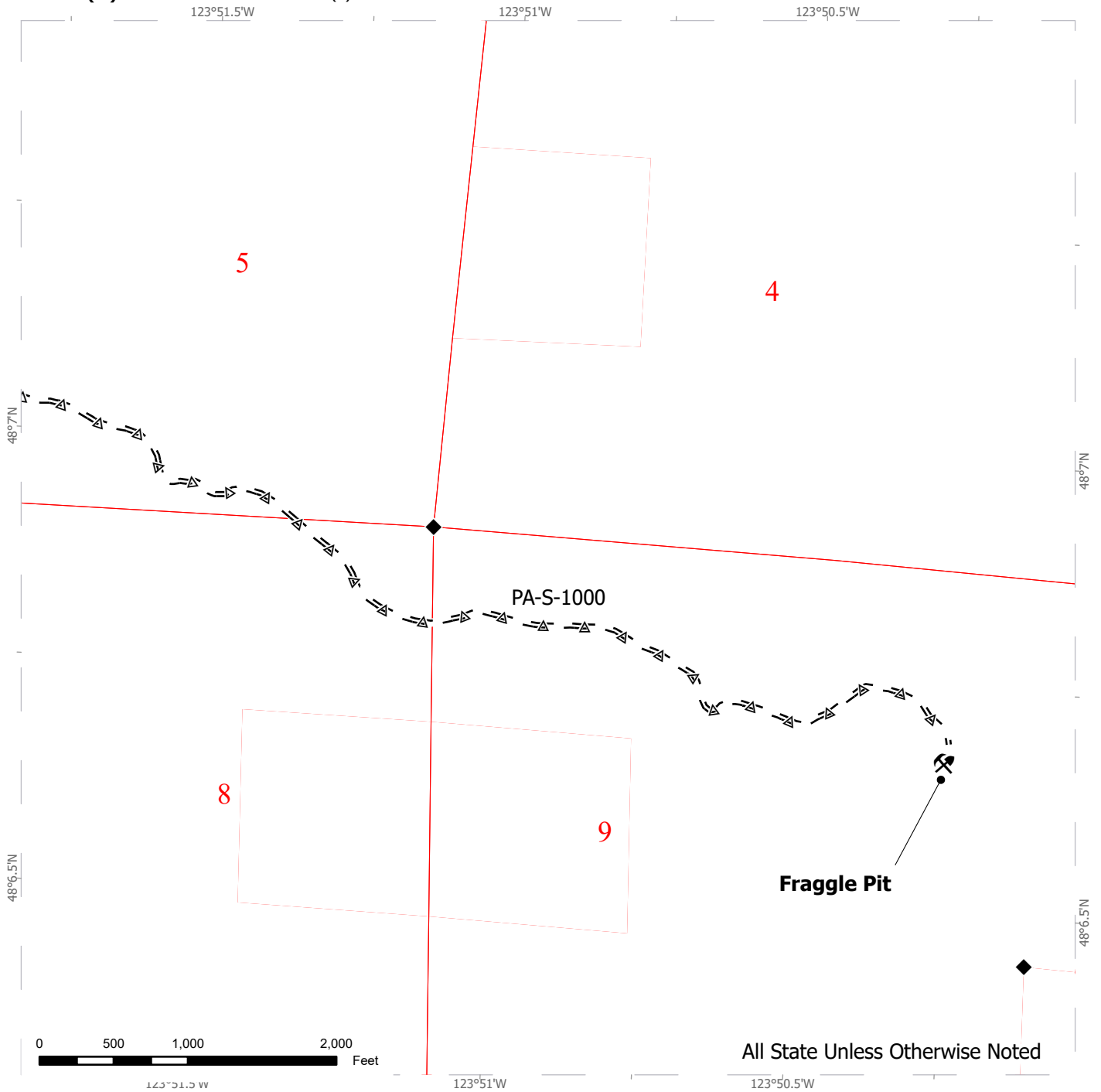
Variable Retention Harvest	Sale Boundary Tags	Highway
Leave Tree Area	Leave Tree Tags	Optional Construction
Riparian Mgt Zone	Right of Way Tags	Required Construction
Hazard Abatement Area	Bridge	Required Pre-Haul Maintenance
Streams	Culvert	Required Reconstruction
Stream Type	Landing - Proposed	Existing Roads
Stream Break	Trail	Designated Skid Trail
		Survey Monument



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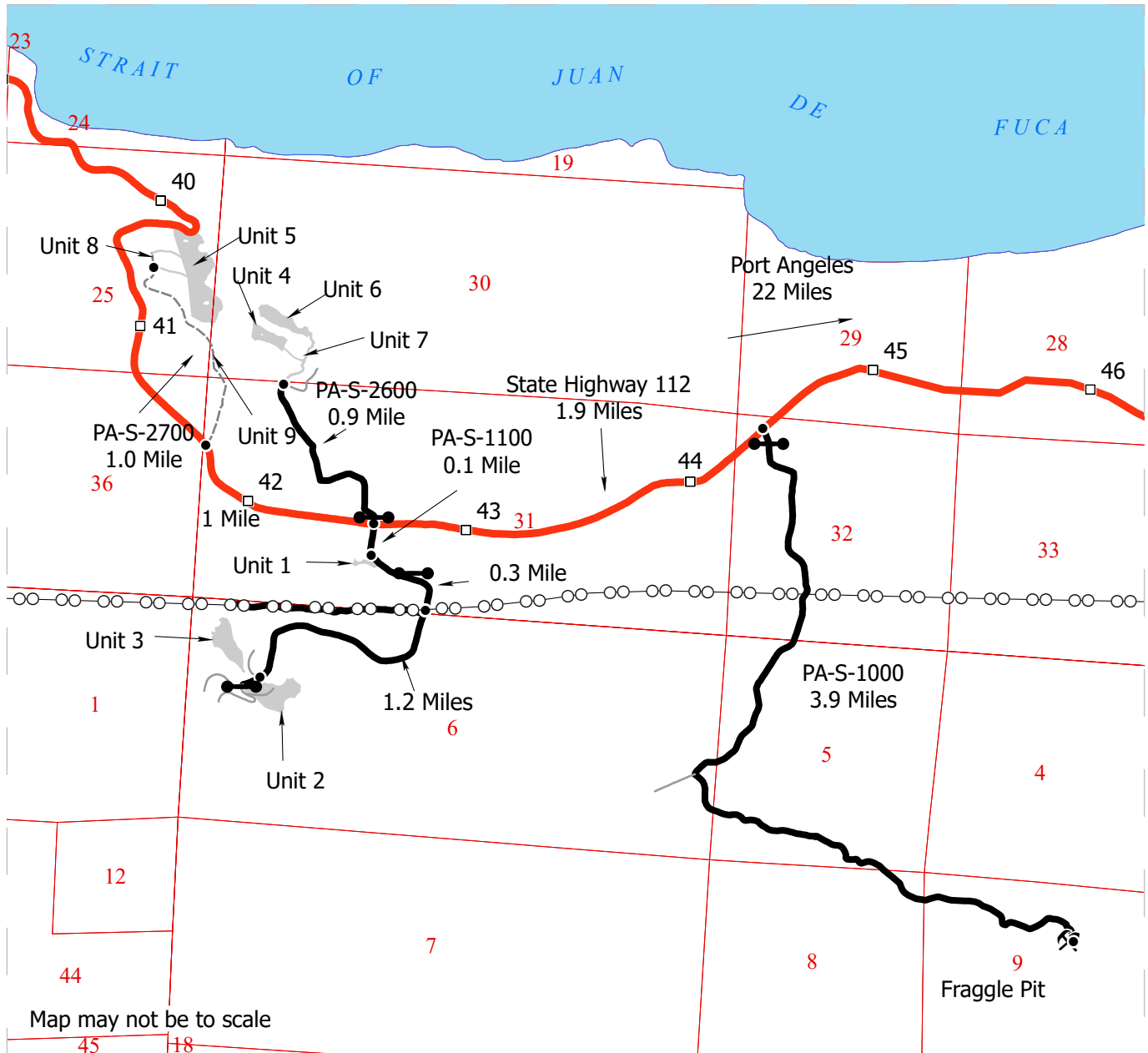
Public Land Survey Sections	Rock Pit	Optional Pre-Haul Maintenance
		Survey Monument



DRIVING MAP

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	Harvest Unit
	Haul Route
	Other Route
	View Only Route
	Power Lines
	Milepost Marker
	Distance Indicator
	Gate
	Rock Pit

DRIVING DIRECTIONS:

From downtown Port Angeles travel 5.5 miles west on US-101 and turn right on US-112, travel 16.5 miles west. Turn left on PA-S-1000, travel 3.9 miles to Fraggle Pit. Return to US-112 and turn left, travel 1.9 miles and turn left on PA-S-1100, travel 0.14 mile to the Sadie Creek Trailhead, Unit 1 is here adjacent to the trailhead. Continue 1.5 miles on PA-S-1100 to a pull out on the right side of the road. Unit 2 is adjacent to the road on the southside here, and Unit 3 is NW of here, and can be viewed along the trail heading NW from this pullout. Return to US-112, cross US-112 onto PA-S-2600, travel 0.9 mile to where right of way tags enter the woods. This right of way is Unit 7 and leads into Units 4 and 6. Return to US-112 and turn right, travel 0.95 mile to a pullout at the end of the PA-S-2700. From here hike 1 mile on PA-S-2700 passing through Units 9 and 8 before arriving at Unit 5. Unit 5 can also be viewed by parking along US-112 between milepost 40 and 41 and hiking into the woods east of US-112.



**STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES**

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

Export Restricted Lump Sum AGREEMENT NO. 30-0103767

SALE NAME: DOC HOLLIDAY

**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 August 28, 2024 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 a band of blue paint, bounded out by leave tree area tags, any downed red cedar, or timber that has been on the ground for five years or more (five years is defined by more than 1.5 inches of sap rot); bounded by timber sale boundary tags, the PA-S-1100 road in Unit 1; timber sale boundary tags, timber type change, the PA-S-1100 and PA-S-1150 roads in Unit 2; timber sale boundary tags, timber type change in Unit 3; timber boundary tags in Unit 4, Unit 5 and Unit 6. All timber bounded by right of way boundary tags.

All forest products described above located on approximately 75 acres on part(s) of Section 6 in Township 30 North, Range 9 West, Section 25 in Township 31 North, Range 10 West, Sections 30, and 31 all in Township 31 North, Range 9 West W.M. in Clallam County(s) as designated on the sale area and as shown on the attached timber sale map.

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

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

G-020 Inspection By Purchaser

Purchaser hereby warrants to the State that they have had an opportunity to fully inspect the sale area and the forest products being sold. Purchaser further warrants to the State that they enter this contract based solely upon their own judgment of the value of the forest products, formed after their own examination and inspection of both the timber sale area and the forest products being sold. Purchaser also warrants to the State

that they enter this contract without any reliance upon the volume estimates, acreage estimates, appraisals, pre-bid documentation, or any other representations by the State Department of Natural Resources.

G-025 Schedules

The following attached schedules are hereby incorporated by reference:

Schedule	Title
A	Slash Piling Specifications
B	Green Tree Retention Plan

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 \$862.00 per acre per annum for the acres on which an operating release has not been issued .
- f. In no event will the extension charge be less than \$200.00.
- g. Extension payments are non-refundable.

G-053 Surveys - Sensitive, Threatened, Endangered Species

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

G-060 Exclusion of Warranties

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

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

- e. The CORRECTNESS OF ANY SOIL OR SURFACE CONDITIONS, PRE-SALE CONSTRUCTION APPRAISALS, INVESTIGATIONS, AND ALL OTHER PRE-BID DOCUMENTS PREPARED BY OR FOR THE STATE. These documents have been prepared for the State's appraisal purposes only.
- f. THAT THE SALE AREA IS FREE FROM THREATENED OR ENDANGERED SPECIES or their habitat. The State is not responsible for any interference with forestry operations that result from the presence of any threatened or endangered species, or the presence of their habitat, within the sale area.
- g. THAT THE FORESTRY OPERATIONS to be performed under this contract WILL BE FREE FROM REGULATORY ACTIONS by governmental agencies. The State is not responsible for actions to enforce regulatory laws, such as the Washington Forest Practices Act (chapter 76.09 RCW), taken by the Department of Natural Resources or any other agency that may affect the operability of this timber sale.
- h. Items contained in any other documents prepared for or by the State.

G-061 Inadvertent Discovery of Cultural Resources

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

G-062 Habitat Conservation Plan

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

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

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

G-063 Incidental Take Permit Notification Requirements

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

authorized officers, employees, contractors, or agents of Purchaser conducting authorized activities in the timber sale area. Any questions Purchaser may have about the ITP should be directed to the Contract Administrator.

G-064 Permits

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

G-065 Regulatory Disclaimer

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

G-066 Governmental Regulatory Actions

a. Risk

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

b. Sale Area

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

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

c. Adjustment of Price

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

removing timber. A reduction in total contract price terminates all of the Purchaser's rights to purchase and remove the timber and all other interest in the affected sale area.

G-070 Limitation on Damage

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

G-080 Scope of State Advice

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

G-091 Sale Area Adjustment

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

G-101 Forest Products Not Designated

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

The pricing schedule has not been set for the sale.

G-106 Adding Naturally Damaged Forest Products

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

part of this contract and shall be paid for at the rate set forth in clause G-101, G-102 or G-103.

G-111 Title and Risk of Loss

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

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

Forest products purchased under this contract are certified as being in conformance with the Sustainable Forestry Initiative 2022 Forest Management Standard under certificate number: BVC-SFIFM-018227.

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

G-120 Responsibility for Work

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

G-121 Exceptions

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

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

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

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

1. Failure of (a) required improvements or roads designated in clause C-050, or (b) required or optional construction completed to the point that authorization to haul has been issued;

2. Caused by a single event from forces beyond the control of Purchaser, its employees, agents, or invitees, including independent contractors; and
3. Includes, but is not limited to natural disasters such as earthquakes, volcanic eruptions, landslides, and floods.

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

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

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

G-140 Indemnity

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

G-150 Insurance

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Business Auto Policy (BAP). Purchaser shall maintain business auto liability and, if necessary, commercial umbrella liability insurance with a limit not less than \$1,000,000.00 per accident. Such insurance shall cover liability arising out of "Any

Auto". Business auto coverage shall be written on ISO form CA 00 01, or substitute liability form providing equivalent coverage. If necessary the policy shall be endorsed to provide contractual liability coverage and cover a "covered pollution cost or expense" as provided in the 1990 or later editions of CA 00 01. Purchaser waives all rights against State for the recovery of damages to the extent they are covered by business auto liability or commercial umbrella liability insurance.

G-160 Agents

The State's rights and duties will be exercised by the Region Manager at Forks, 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; PA-S-1100, PA-S-1160, PA-S-1000, PA-S-2620, 0+75 Spur, PA-S-2600, PA-S-1123, PA-S-2720, PA-S-1120, PA-S-2700, PA-S-1151, PA-S-2730, PA-S-1150, PA-S-2700, PA-S-1161, PA-S-2740. 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 PA-S-1000, PA-S-1100, unless authority is granted in writing by the Contract Administrator.

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:

DATA MISSING

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 \$60,034.00. The total contract price consists of a \$0.00 contract bid price plus \$60,034.00 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 \$0.00. The Security provided shall guarantee performance of all provisions of this contract and payment of any damages caused by operations under this contract or resulting from Purchaser's noncompliance with any rule or law. Acceptable performance security may be in the form of a performance bond, irrevocable letter of credit, cash, savings or certificate of deposit account assignments, and must name the State as the obligee or beneficiary. A letter of credit must comply with Title 62A RCW, Article 5. Performance security must remain in full force over the duration of the contract length. Surety bonds issued shall conform to the issuance and rating requirements in clause G-150. The State shall retain the performance security pursuant to RCW 79.15.100. Purchaser shall not operate unless the performance security has been accepted by the State. If at any time the State decides that the security document or amount has become unsatisfactory, Purchaser agrees to suspend operations and, within 30 days of notification, to replace the security with one acceptable to the State or to supplement the amount of the existing security.

P-100 Performance Security Reduction

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

Section H: Harvesting Operations

H-010 Cutting and Yarding Schedule

Yarding will not be permitted from October 31 to April 30 unless authorized in writing by the Contract Administrator. Cutting and yarding will not be permitted on weekends, State recognized holidays unless approved by the Contract Administrator. Cutting, yarding and hauling will not be permitted from the hours of 2000-0600 unless approved by the Contract Administrator.

H-013 Reserve Tree Damage Definition

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

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

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

If the Contract Administrator determines that a reserve tree has been cut or damaged, the Purchaser shall provide a replacement reserve tree of like condition, size, and species within the sale 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 utilizing rubber tired skidders in the sale area. The plan shall address the location and timing of desired use, 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-060 Skid Trail Locations

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

H-080 Snags Not to be Felled

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

H-120 Harvesting Equipment

Forest products sold under this contract shall be harvested and removed using Ground based 100%

Forest products sold under this contract shall be harvested and removed using ground based equipment. Nontethered self-leveling tracked equipment is limited to sustained slopes of 65 percent and less. Other ground based equipment is limited to tracked equipment on sustained slopes that are 45 percent and less. Rubber tired skidders are restricted unless approved by the Contract Administrator. Authority to use other equipment or to operate outside the equipment specifications detailed above must be approved in writing by the State.

30' equipment limitation zone on all typed waters.. Authority to use other equipment or to operate outside the equipment specifications detailed above must be approved in writing by the State.

H-130 Hauling Schedule

Hauling of forest products will not be permitted October 31 to April 30. The hauling of forest products will not be permitted on weekends, State recognized holidays unless approved by the Contract Administrator. The hauling of forest products will not be permitted from the hours of 2000-0600 unless authorized in writing by the Contract Administrator.

H-140 Special Harvest Requirements

Purchaser shall accomplish the following during the harvest operations:

1. Purchaser must have utility lines located before:
 - a. Beginning operations
 - b. Beginning road construction/reconstruction
 - c. Digging next to the following road: PA-S-1000
2. Purchaser shall immediately repair all gate damage resulting from operations to an equal or better condition than existed at the time of the sale.

3. While felling timber, 2 Warning signs must be posted on the PA-S-1100 road.
4. Yarding equipment shall not cross live streams without an HPA.
5. The Purchaser shall notify all employees and contractors working on this sale that any danger tree marked or unmarked, may be felled. Any felled marked danger tree shall be replaced with suitable tree of similar size and species as approved by the Contract Administrator.
6. Two weeks notice shall be given prior to any work on the sale to notify recreation staff for redirection or closure of the Sadie Creek ORV and 4x4 trails located near Units 1, 2, 3, 4, 6 and 7. See S-150 clause for further details regarding the trail.
7. All trees 60 inches in Diameter at Breast Height (DBH) and greater shall not be felled unless for safety reasons, which must be approved by the Contract Administrator. If trees 60 inches DBH or greater needs to be felled for safety reasons, trees will be left where felled.

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

H-190 Completion of Settings

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

H-220 Protection of Residual or Adjacent Trees

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

H-230 Tops and Limbs Outside the Sale Boundary

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

H-240 Lop and Scatter

The tops of all felled trees shall be lopped and slash scattered away from leave trees.

Section C: Construction and Maintenance

C-040 Road Plan

Road construction and associated work provisions of the Road Plan for this sale, dated 1/23/2024 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 listed in the Road Plan, authorized in clause G-310, and not listed in clause C-060. All work shall be completed to the specifications detailed in the Road Plan.

C-060 Designated Road Maintainer

If required by the State, Purchaser shall perform maintenance and replacement work as directed by the Contract Administrator on PA-S-1000, PA-S-1100, PA-I-2600 and PA-I-2610 (Place Pit Roads). Purchaser shall furnish a statement in a form satisfactory to the State showing the costs incurred while performing this work. Costs shall be based on the rates set forth in the equipment rate schedule on file at the Region office or Engineering Division in Olympia. The State shall reimburse Purchaser for said costs within 30 days of receipt and approval of the statement.

C-080 Landing Locations Approved Prior to Construction

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

C-130 Dust Abatement

Purchaser shall abate dust as requested by the Contract Administrator.

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.

S-030 Landing Debris Clean Up

Landing debris shall be disposed of as described in Schedule A.

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-070 Water Supply

Purchaser shall provide, during the "closed season", a water supply with a minimum capacity of 300 gallons for rapid filling of pump trucks or trailers at a location designated by the Contract Administrator.

S-100 Stream Cleanout

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

S-110 Resource Protection

No equipment may operate within 30' of any typed waters unless authority is granted in writing by the Contract Administrator.

S-120 Stream Protection

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

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

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

personnel protection, release notification and emergency response, cleanup, and waste disposal.

Purchaser shall be responsible for restoring the site in the event of a spill 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.

S-150 Recreation Trail Cleanout

Purchaser shall repair any damage and remove all logging debris from recreation trail(s), as identified on the maps, concurrently with logging operations on each unit. Failure to do so within 30 days of the completion of yarding operations will result in a shutdown of all operations until completed.

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

William Wells

Print Name

Olympic Region Manager

Date: _____

Date: _____

Address: _____

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

STATE OF _____)

COUNTY OF _____)

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

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

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

Notary Public in and for the State of

My appointment expires _____

Schedule A
Slash Piling Specifications

The areas shall be piled by creating circular piles of slash and brush conforming to the following specifications:

- A. Piles shall be a minimum of 12 feet tall by 8 feet wide to a maximum of 30 feet tall and 16 feet wide. Piles shall be cone shaped and stable.
- B. Piles shall be free of topsoil, large rotten logs and large stumps. No material larger than 8 inches in diameter shall be piled. Any burnable material shall be well scattered.
- C. Piles shall not be placed on large stumps or logs.
- D. Piles shall be stacked a minimum of 50 feet from all unit boundaries, Riparian Management Zones, leave trees, culverts, and any standing timber; a minimum of 100 feet from any public roads and highways; and a minimum of 200 feet from any structures.
- E. Piling shall be completed using an approved hydraulic shovel and grapples.
- F. Slash and displaced soil shall be removed from swales, irrigation ditches, natural drainage channels, and access roads concurrent with yarding.
- G. Slash may be placed in skid roads, ahead of machinery, or lopped and scattered throughout the harvest area. Slash which accumulates on landings, roads, and "hazard abatement areas" shall be piled per this schedule. Any changes to the above must be approved by the Contract Administrator.
- H. Purchaser may remove slash as biofuel.

Schedule B
Green Tree Retention Plan

Leave the following:

1. All trees banded with blue paint and all leave tree area clumps shall remain standing. The perimeter of the leave tree clumps are designated by Leave Tree Area Tags. The tags face outward from the leave tree clumps.

<u>Unit #</u>	<u># of Individually Marked Trees</u>	<u># of Clumps</u>	<u># of Trees Clumped</u>	<u>Total # of Leave Trees</u>
1	3	1	14	17
2	13	1	109	122
3	20	1	62	82
4	28	1	17	45
5	20	4	224	244
6	20	1	42	62



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: Doc Holliday	Region: Olympic
Agreement #: 30-103767	District: Straits
Contact Forester: Brad Nellis Phone / Location: 360-301-2900 311 McCarver Rd. Port Angeles, WA	County(s): Clallam
Alternate Contact: Dru J Grasse Phone / Location: 360-890-1177	Other information:

Type of Sale: Lump Sum	
Harvest System: Ground based	100%

UNIT ACREAGES AND METHOD OF DETERMINATION:

Unit # Harvest R/W or RMZ WMZ	Legal Description (Enter only one legal for each unit) Sec/Twp/Rng	Grant or Trust	Gross Proposal Acres	Deductions from Gross Acres (No harvest acres)				Net Harvest Acres	Acreage Determination (List method and error of closure if applicable)
				RMZ/WMZ Acres	Leave Tree Acres	Existing Road Acres	Other Acres (describe)		
1	S31/T31/R09W	01	4.2	2.2	0.1	0	0	1.9	GPS (Garmin)
2	S6/T30/R09W	01	24.5	9.4	0.8	0	0	14.3	GPS (Garmin)
3	S6/T30/R09W	01	18.8	8.3	0.4	0	0	10.1	GPS (Garmin)
4	S30/T31/R09W	01	14.1	8.4	0.1	0	0	5.6	GPS (Garmin)
5	S25/T31/R10W	01	49.8	18.8	1.8	0	0	29.2	GPS (Garmin)
6	S30/T31/R09W	01	21.2	13.5	0.2	0	0	7.5	GPS (Garmin)
7	S30/T31/R09W	01	2.8	0	0	0		2.8	GPS (Garmin)
8	S25/T31/R09W	01	2.1	0	0	0	0	2.1	GPS (Garmin)
9	S30/T31/R09W	01	0.5	0	0	0	0	0.5	GPS (Garmin)

TOTAL ACRE S			138	54.5	3.4	0	0	74	
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HARVEST PLAN AND SPECIAL CONDITIONS:

Unit #	Harvest Prescription: (Leave, take, paint color, tags, flagging etc.)	Special Management areas:	Other conditions (# leave trees, etc.)
1	Blue Rings; Leave. White tags w/pink flagging & flashers; Timber Sale Boundary. Yellow tags w/ pink flagging & flashers; Leave tree area.	2.2 acres of RMZ, 0.1 acres LTA	3 ILTs 14 LTA 17 Total
2	Same as Unit 1	9.4 acres of RMZ, 0.8 acres LTA	13 ILTs 109 LTA 122 Total
3	Same as Unit 1	8.3 acres RMZ, 0.4 acres LTA	20 ILTs 62 LTA 82 Total
4	Same as Unit 1	8.4 acres RMZ, 0.1 acres LTA	28 ILTs 17 LTA 45 Total
5	Same as Unit 1	18.8 acres of RMZ, 1.8 acres LTA	20 ILTs 214LTAs 234 Total
6	Same as Unit 1	13.5 acres of RMZ, 0.2 acres LTA	20 ILTs 42 LTA 62 Total
7	Orange ROW tags	NA	NA
8	Same as Unit 7	NA	NA
9	Same as Unit 7	NA	NA

OTHER PRE-CRUISE INFORMATION:

Unit #	Primary,secondary Species / Estimated Volume (MBF)	Access information (Gates, locks, etc.)	Photos, traverse maps required
1	47.5 DF, WRC	Access at the Sadie Creek campground from E Twin River Rd	
2	382.5 DF, SS	Access on the PA-S- 1100 from E Twin River Rd, Gate here for easy access to the south portion.	
3	252.5 DF, WH	Access on the PA-S- 1100 from E Twin River Rd	

4	140 DF, WRC	Access from the Sadie 4x4 trails; on the PA-S-2600, there is a gate here but it is typically open	Map for all Units: J:\District_Straits\001_timber_sales\Timber Sales\FY_24\Doc Holliday\Packet\Maps\Precruise Layout
5	750 DF, SS	Access from the Sadie 4x4 trails; on the PA-S-2600, or from the nearby hairpin turn on HWY 112	
6	195 DF, WH	Access from the Sadie 4x4 trails; on the PA-S-2600	
7	30 RA, WRC	Access from the Sadie 4x4 trails; on the PA-S-2600	
8	20 RA, WRC	Access from the Sadie 4x4 trails; on the PA-S-2600, or from the nearby hairpin turn on HWY 112	
9	5 RA, WH	Access on the PA-S-2700	
TOTAL MBF	1767.5		

REMARKS:

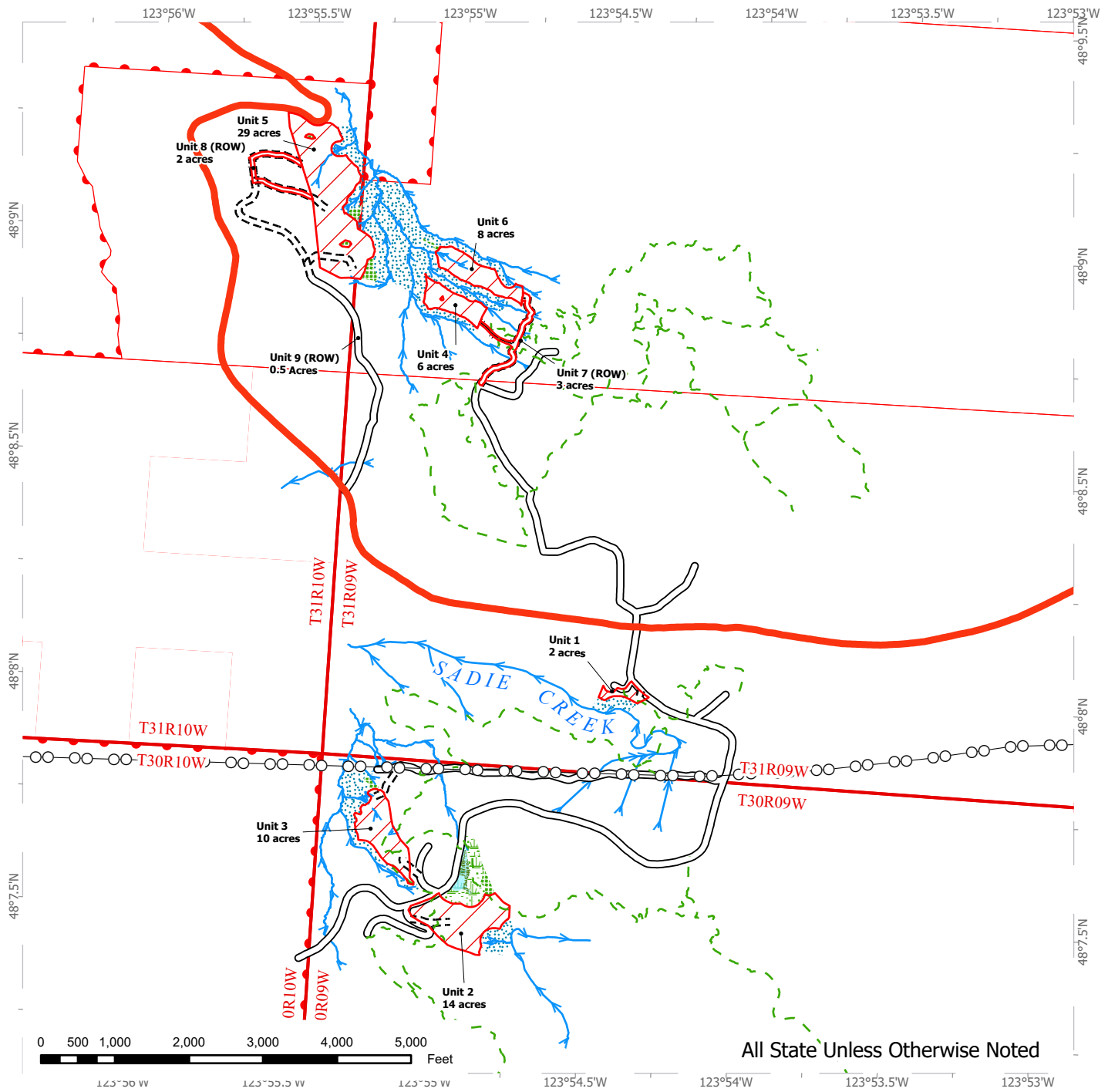
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Prepared By: Dru Grasseeth Date: 12/20/2023	Title: NRS 1	CC: Brad Nellis/ Ben Stein
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PRECRUISE MAP

SALE NAME: DOC HOLLIDAY
APPLICATION #: TBD by FP Staff

COUNTY(S): Clallam
TOWNSHIP(S): T30R9W, T31R10W, T31R9W



Variable Retention Harvest	Highway	Power Lines
Leave Tree Area	Existing Roads	Streams
Forested Wetland	New Construction	
Wetland Mgt Zone	Designated Skid Trail	
Riparian Mgt Zone	Recreation Trail	

Timber Sale Cruise Report Doc Holliday

Sale Name: DOC HOLLIDAY

Sale Type: LUMP SUM

Region: OLYMPIC

District: STRAITS

Lead Cruiser: Kevin Peterson

Other Cruisers:

Cruise Narrative:

Location:

This sale is located west of Joyce near the Sadie Creek recreation area. An AA1 key may be needed to access some units. Most units have pretty good access.

Cruise Design:

I used a few different BAF combinations on this sale, please refer to the cruise design table. Merch height was determined at 40% of diameter at 16'. All logs were cruised in 40' lengths, except RC at 36' and HQ DF at 34'.

Timber Quality:

This sale has a mixture of species throughout the sale. The dominate species is DF which ranges from plantation wood to larger mature DF, some of which is HQ. There is also large components of WH, RC, RA and SS. Unit 5 has the most complex species diversity. Common defects are sweep, forked tops, spike knots and butt rot.

Logging and Stand Conditions:

This sale is 100% ground based harvest. There is a decent slope to most units, but not enough to need cable harvest. Some of the units have patches of brush but tend to be easy walking. Unit 2 is pretty rough to get thru, but there are lots of trails to help access it.

Timber Sale Notice Volume (MBF)

Sp	DBH	Rings/In	Age	MBF Volume by Grade				
				All	2 Saw	3 Saw	4 Saw	Utility
DF	22.4	9.6		927	615	221	90	2
RA	16.3			383	127	68	164	24
WH	17.9			372	218	105	43	6
RC	20.0			330		298	32	
SS	29.4			294	262	28	1	2
MA	12.0			3				3
ALL	19.0	10.0		2,309	1,221	720	331	37

Timber Sale Notice Weight (tons)

Sp	Tons by Grade				
	All	2 Saw	3 Saw	4 Saw	Utility
DF	7,372	4,449	2,060	850	13

Sp	Tons by Grade				
	All	2 Saw	3 Saw	4 Saw	Utility
WH	3,885	2,053	1,223	530	79
RA	3,741	1,207	658	1,664	212
RC	2,889		2,596	292	
SS	1,922	1,647	245	11	19
MA	32				32
ALL	19,842	9,356	6,782	3,348	356

Timber Sale Overall Cruise Statistics

BA (sq ft/acre)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR SE (%)	Net Vol (bf/acre)	Vol SE (%)
258.6	5.5	116.9	2.7	31,201	6.2

Timber Sale Unit Cruise Design

Unit	Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
DOC HOLLIDAY U1	B2: VR, 2 BAF (54.44, 40 for some species) Measure All, Sighting Ht = 4.5 ft	1.9	2.1	2	2	0
DOC HOLLIDAY U2	B2: VR, 2 BAF (54.44, 40 for some species) Measure All, Sighting Ht = 4.5 ft	14.3	15.1	10	10	0
DOC HOLLIDAY U3	B2: VR, 2 BAF (54.44, 40 for some species) Measure All, Sighting Ht = 4.5 ft	10.1	10.6	6	6	0
DOC HOLLIDAY U4	B2: VR, 2 BAF (71.11, 40 for some species) Measure All, Sighting Ht = 4.5 ft	5.6	5.6	4	4	0
DOC HOLLIDAY U5	B2C: VR, 2 BAF (54.44, 40 for some species) Measure/Count Plots, Sighting Ht = 4.5 ft	29.0	32.1	15	14	0
DOC HOLLIDAY U6	B2: VR, 2 BAF (71.11, 40 for some species) Measure All, Sighting Ht = 4.5 ft	7.8	7.8	5	5	0
DOC HOLLIDAY U7	B1: VR, 1 BAF (40) Measure All, Sighting Ht = 4.5 ft	2.8	2.9	3	3	0
DOC HOLLIDAY U8	B1: VR, 1 BAF (20) Measure All, Sighting Ht = 4.5 ft	2.0	2.1	1	1	0
DOC HOLLIDAY U9	B1: VR, 1 BAF (20) Measure All, Sighting Ht = 4.5 ft	0.5	0.5	1	1	0
All		74.0	78.6	47	46	0

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	16.0	40	7,288	6,828	6.3	3,687.3	505.3
DF	LIVE	2 SAW	HQ-B	16.3	34	1,477	1,477	0.0	761.4	109.3
DF	LIVE	3 SAW	Domestic	8.7	39	3,091	2,984	3.4	2,060.0	220.8
DF	LIVE	4 SAW	Domestic	5.4	28	1,218	1,214	0.3	850.4	89.8
DF	LIVE	UTILITY	Pulp	8.3	16	25	25	0.0	12.8	1.8
MA	LIVE	UTILITY	Pulp	5.2	35	36	36	0.0	32.1	2.6
RA	LIVE	2 SAW	Domestic	13.5	39	1,913	1,714	10.4	1,207.1	126.9
RA	LIVE	3 SAW	Domestic	11.1	36	1,034	916	11.4	658.0	67.8
RA	LIVE	4 SAW	Domestic	7.2	32	2,371	2,215	6.6	1,664.0	163.9
RA	LIVE	CULL	Cull	6.3	15	25	0	100.0	0.0	0.0
RA	LIVE	UTILITY	Pulp	5.6	23	324	324	0.0	212.4	24.0
RC	LIVE	3 SAW	Domestic	11.7	35	4,659	4,029	13.5	2,596.1	298.2
RC	LIVE	4 SAW	Domestic	5.6	25	446	437	2.0	292.4	32.3
SS	LIVE	2 SAW	Domestic	18.9	40	3,727	3,544	4.9	1,647.1	262.3
SS	LIVE	3 SAW	Domestic	10.2	37	385	383	0.7	245.1	28.3
SS	LIVE	4 SAW	Domestic	5.7	19	16	16	0.0	10.8	1.2
SS	LIVE	UTILITY	Pulp	7.7	21	26	26	0.0	19.2	1.9
WH	LIVE	2 SAW	Domestic	15.4	40	3,219	2,940	8.7	2,052.8	217.6
WH	LIVE	3 SAW	Domestic	8.8	39	1,498	1,419	5.3	1,222.6	105.0
WH	LIVE	4 SAW	Domestic	5.6	30	591	588	0.6	530.4	43.5
WH	LIVE	UTILITY	Pulp	5.0	34	86	86	0.0	79.4	6.4

Timber Sale Log Sort x Diameter Bin Summary

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	5 - 8	LIVE	Domestic	6.0	31	2,470	1.1	1,805.9	182.8
DF	5 - 8	LIVE	Pulp	6.8	16	10	0.0	6.2	0.7
DF	9 - 11	LIVE	Domestic	10.2	39	1,422	3.8	935.9	105.2
DF	12 - 14	LIVE	Pulp	13.0	16	15	0.0	6.6	1.1
DF	12 - 14	LIVE	Domestic	13.1	40	2,525	3.7	1,422.6	186.9
DF	12 - 14	LIVE	HQ-B	13.6	34	156	0.0	93.0	11.5
DF	15 - 19	LIVE	HQ-B	16.8	34	1,321	0.0	668.3	97.7
DF	15 - 19	LIVE	Domestic	17.4	40	2,924	6.8	1,557.7	216.4
DF	20+	LIVE	Domestic	23.7	40	1,685	9.4	875.7	124.7
MA	5 - 8	LIVE	Pulp	5.2	35	36	0.0	32.1	2.6
RA	5 - 8	LIVE	Pulp	5.5	22	265	0.0	184.2	19.6
RA	5 - 8	LIVE	Domestic	6.2	33	1,530	4.4	1,153.6	113.3

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
RA	5 - 8	LIVE	Cull	6.3	15	0	100.0	0.0	0.0
RA	9 - 11	LIVE	Domestic	10.1	35	1,601	11.3	1,168.3	118.5
RA	9 - 11	LIVE	Pulp	10.5	23	21	0.0	12.3	1.6
RA	12 - 14	LIVE	Domestic	13.0	38	1,282	8.6	921.8	94.8
RA	15 - 19	LIVE	Domestic	15.4	38	433	15.1	285.4	32.0
RA	15 - 19	LIVE	Pulp	17.3	20	37	0.0	16.0	2.7
RC	5 - 8	LIVE	Domestic	5.9	28	783	2.5	577.9	57.9
RC	9 - 11	LIVE	Domestic	10.2	35	746	10.9	490.5	55.2
RC	12 - 14	LIVE	Domestic	13.2	36	979	11.9	667.1	72.4
RC	15 - 19	LIVE	Domestic	16.8	36	1,875	16.8	1,110.5	138.7
RC	20+	LIVE	Domestic	23.4	36	84	16.7	42.5	6.2
SS	5 - 8	LIVE	Domestic	6.6	29	77	0.0	56.9	5.7
SS	5 - 8	LIVE	Pulp	6.8	23	16	0.0	13.5	1.2
SS	9 - 11	LIVE	Pulp	9.5	16	11	0.0	5.7	0.8
SS	9 - 11	LIVE	Domestic	10.6	36	322	0.8	199.0	23.8
SS	12 - 14	LIVE	Domestic	12.6	40	334	0.0	215.5	24.7
SS	15 - 19	LIVE	Domestic	17.6	40	1,011	5.5	470.7	74.8
SS	20+	LIVE	Domestic	23.7	40	2,200	5.3	961.0	162.8
WH	5 - 8	LIVE	Pulp	5.0	34	86	0.0	79.4	6.4
WH	5 - 8	LIVE	Domestic	6.1	34	1,177	1.4	1,066.2	87.1
WH	9 - 11	LIVE	Domestic	10.2	39	830	7.3	686.8	61.4
WH	12 - 14	LIVE	Domestic	13.6	40	1,169	7.3	877.0	86.5
WH	15 - 19	LIVE	Domestic	17.0	40	1,615	8.4	1,073.7	119.5
WH	20+	LIVE	Domestic	21.4	40	156	20.0	102.1	11.6

Cruise Unit Report DOC HOLLIDAY U1

Unit Sale Notice Volume (MBF): DOC HOLLIDAY U1

Sp	DBH	Rings/In	Age	MBF Volume by Grade				
				All	2 Saw	3 Saw	4 Saw	Utility
DF	20.1			22	11	9	2	
WH	15.4			19	11	8	0	
RA	13.3			13	3		9	1
SS	19.0			7	5	1		
RC	20.0			4		4		
ALL	16.1			65	31	23	11	1

Unit Cruise Design: DOC HOLLIDAY U1

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B2: VR, 2 BAF (54.44, 40 for some species) Measure All, Sighting Ht = 4.5 ft	1.9	2.1	2	2	0

Unit Cruise Summary: DOC HOLLIDAY U1

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
DF	3	3	1.5	0
WH	3	3	1.5	0
RA	4	4	2.0	0
SS	1	1	0.5	0
RC	1	1	0.5	0
ALL	12	12	6.0	0

Unit Cruise Statistics: DOC HOLLIDAY U1

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
DF	81.7	141.4	100.0	144.5	13.7	7.9	11,797	142.1	100.3
WH	81.7	141.4	100.0	124.9	23.1	13.4	10,199	143.3	100.9
RA	80.0	141.4	100.0	84.7	20.3	10.2	6,775	142.9	100.5
SS	27.2	141.4	100.0	126.5	0.0	0.0	3,442	141.4	100.0
RC	20.0	141.4	100.0	103.6	0.0	0.0	2,072	141.4	100.0
ALL	290.5	17.6	12.4	118.0	25.8	7.4	34,286	31.2	14.5

Unit Summary: DOC HOLLIDAY U1

Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
DF	LIVE	CUT	3	ALL	20.1	88	112	12,373	11,797	4.7	37.1	81.7	18.2	22.4
RA	LIVE	CUT	4	ALL	13.3	58	71	7,440	6,775	8.9	82.9	80.0	21.9	12.9
RC	LIVE	CUT	1	ALL	20.0	70	88	2,072	2,072	0.0	9.2	20.0	4.5	3.9
SS	LIVE	CUT	1	ALL	19.0	76	96	3,442	3,442	0.0	13.8	27.2	6.2	6.5
WH	LIVE	CUT	3	ALL	15.4	67	82	11,017	10,199	7.4	63.1	81.7	20.8	19.4
ALL	LIVE	CUT	12	ALL	16.1	68	84	36,344	34,286	5.7	206.1	290.5	71.7	65.1
ALL	ALL	ALL	12	ALL	16.1	68	84	36,344	34,286	5.7	206.1	290.5	71.7	65.1

Cruise Unit Report DOC HOLLIDAY U2

Unit Sale Notice Volume (MBF): DOC HOLLIDAY U2

Sp	DBH	Rings/In	Age	MBF Volume by Grade				
				All	2 Saw	3 Saw	4 Saw	Utility
DF	13.2	7.5		190	30	94	65	
RA	10.1			25			24	1
WH	13.4			16		10	6	
RC	11.0			3			3	
ALL	12.6	7.5		234	30	104	99	1

Unit Cruise Design: DOC HOLLIDAY U2

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B2: VR, 2 BAF (54.44, 40 for some species) Measure All, Sighting Ht = 4.5 ft	14.3	15.1	10	10	0

Unit Cruise Summary: DOC HOLLIDAY U2

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
DF	32	32	3.2	2
RA	7	7	0.7	0
WH	3	3	0.3	0
RC	1	1	0.1	0
ALL	43	43	4.3	2

Unit Cruise Statistics: DOC HOLLIDAY 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 (%)
DF	174.2	77.7	24.6	76.1	16.0	2.8	13,257	79.3	24.7
RA	28.0	178.8	56.5	63.0	16.0	6.1	1,765	179.5	56.9
WH	16.3	225.0	71.1	69.6	12.7	7.3	1,137	225.3	71.5
RC	4.0	316.2	100.0	54.5	0.0	0.0	218	316.2	100.0
ALL	222.5	50.4	15.9	73.6	17.3	2.6	16,377	53.3	16.1

Unit Summary: DOC HOLLIDAY U2

Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
DF	LIVE	CUT	32	ALL	13.2	50	61	13,560	13,257	2.2	183.3	174.2	47.9	189.6
RA	LIVE	CUT	7	ALL	10.1	39	45	1,815	1,765	2.7	50.3	28.0	8.8	25.2
RC	LIVE	CUT	1	ALL	11.0	42	51	218	218	0.0	6.1	4.0	1.2	3.1
WH	LIVE	CUT	3	ALL	13.4	52	63	1,178	1,137	3.5	16.7	16.3	4.5	16.3
ALL	LIVE	CUT	43	ALL	12.6	48	58	16,771	16,377	2.4	256.4	222.5	62.4	234.2
ALL	ALL	ALL	43	ALL	12.6	48	58	16,771	16,377	2.4	256.4	222.5	62.4	234.2

Cruise Unit Report DOC HOLLIDAY U3

Unit Sale Notice Volume (MBF): DOC HOLLIDAY U3

Sp	DBH	Rings/In	Age	MBF Volume by Grade				Utility
				All	2 Saw	3 Saw	4 Saw	
DF	17.7			195	123	62	11	
RC	18.1			76		65	12	
WH	18.4			66	27	32	7	
RA	15.7			34	5	6	20	2
ALL	17.7			371	155	164	50	2

Unit Cruise Design: DOC HOLLIDAY U3

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B2: VR, 2 BAF (54.44, 40 for some species) Measure All, Sighting Ht = 4.5 ft	10.1	10.6	6	6	0

Unit Cruise Summary: DOC HOLLIDAY U3

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
DF	11	13	2.2	0
RC	7	12	2.0	0
WH	6	6	1.0	0
RA	5	5	0.8	0
ALL	29	36	6.0	0

Unit Cruise Statistics: DOC HOLLIDAY U3

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
DF	118.0	84.7	34.6	163.9	30.5	9.2	19,331	90.0	35.8
RC	80.0	151.7	61.9	94.6	20.6	7.8	7,567	153.1	62.4
WH	54.4	109.5	44.7	120.0	8.4	3.4	6,530	109.9	44.9
RA	33.3	118.0	48.2	99.6	4.6	2.1	3,321	118.1	48.2
ALL	285.7	25.4	10.4	128.6	33.4	6.2	36,750	42.0	12.1

Unit Summary: DOC HOLLIDAY U3

Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
DF	LIVE	CUT	11	ALL	17.7	81	102	20,351	19,331	5.0	69.0	118.0	28.0	195.2
RA	LIVE	CUT	5	ALL	15.7	65	80	3,577	3,321	7.1	24.8	33.3	8.4	33.5
RC	LIVE	CUT	7	ALL	18.1	65	81	8,537	7,567	11.4	44.8	80.0	18.8	76.4
WH	LIVE	CUT	6	ALL	18.4	74	93	6,621	6,530	1.4	29.5	54.4	12.7	66.0
ALL	LIVE	CUT	29	ALL	17.7	73	91	39,085	36,750	6.0	168.1	285.7	67.9	371.2
ALL	ALL	ALL	29	ALL	17.7	73	91	39,085	36,750	6.0	168.1	285.7	67.9	371.2

Cruise Unit Report DOC HOLLIDAY U4

Unit Sale Notice Volume (MBF): DOC HOLLIDAY U4

Sp	DBH	Rings/In	Age	MBF Volume by Grade				
				All	2 Saw	3 Saw	4 Saw	Utility
WH	18.1			125	100	12	13	
RA	17.7			39	8	12	12	7
RC	25.6			37		34	2	
SS	27.0			6	5	1		
MA	12.0			3				3
ALL	18.8			210	114	60	27	9

Unit Cruise Design: DOC HOLLIDAY U4

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B2: VR, 2 BAF (71.11, 40 for some species) Measure All, Sighting Ht = 4.5 ft	5.6	5.6	4	4	0

Unit Cruise Summary: DOC HOLLIDAY U4

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
WH	9	9	2.3	0
RA	8	8	2.0	0
RC	7	7	1.8	0
SS	1	1	0.3	0
MA	1	1	0.3	0
ALL	26	26	6.5	0

Unit Cruise Statistics: DOC HOLLIDAY 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 (%)
WH	160.0	55.9	28.0	139.8	40.0	13.3	22,370	68.7	31.0
RA	80.0	81.6	40.8	87.0	21.5	7.6	6,959	84.4	41.5
RC	70.0	164.1	82.1	93.4	20.6	7.8	6,540	165.4	82.4
SS	10.0	200.0	100.0	114.9	0.0	0.0	1,149	200.0	100.0
MA	10.0	200.0	100.0	47.1	0.0	0.0	471	200.0	100.0
ALL	330.0	24.9	12.4	113.6	38.4	7.5	37,490	45.7	14.5

Unit Summary: DOC HOLLIDAY U4

Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
MA	LIVE	CUT	1	ALL	12.0	40	47	471	471	0.0	12.7	10.0	2.9	2.6
RA	LIVE	CUT	8	ALL	17.7	62	76	7,872	6,959	11.6	46.8	80.0	19.0	39.0
RC	LIVE	CUT	7	ALL	25.6	68	86	7,602	6,540	14.0	19.6	70.0	13.8	36.6
SS	LIVE	CUT	1	ALL	27.0	82	104	1,381	1,149	16.8	2.5	10.0	1.9	6.4
WH	LIVE	CUT	9	ALL	18.1	71	88	24,122	22,370	7.3	89.5	160.0	37.6	125.3
ALL	LIVE	CUT	26	ALL	18.8	66	82	41,448	37,490	9.5	171.1	330.0	75.3	209.9
ALL	ALL	ALL	26	ALL	18.8	66	82	41,448	37,490	9.5	171.1	330.0	75.3	209.9

Cruise Unit Report DOC HOLLIDAY U5

Unit Sale Notice Volume (MBF): DOC HOLLIDAY U5

Sp	DBH	Rings/In	Age	MBF Volume by Grade				
				All	2 Saw	3 Saw	4 Saw	Utility
DF	27.5	10.5		442	387	48	6	2
SS	29.1			257	230	24	1	2
RC	20.8			164		155	9	
RA	17.4			148	76	17	49	6
WH	17.0			105	55	33	11	6
ALL	21.3	10.5		1,117	748	278	76	16

Unit Cruise Design: DOC HOLLIDAY U5

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	29.0	32.1	15	14	0

Unit Cruise Summary: DOC HOLLIDAY U5

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
DF	18	21	1.4	2
SS	12	12	0.8	0
RC	21	23	1.5	0
RA	19	19	1.3	0
WH	9	10	0.7	0
ALL	79	85	5.7	2

Unit Cruise Statistics: DOC HOLLIDAY 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 (%)
DF	76.2	113.9	29.4	200.0	14.4	3.4	15,244	114.8	29.6
SS	43.6	165.0	42.6	203.5	32.9	9.5	8,861	168.3	43.7
RC	61.3	109.9	28.4	92.4	37.3	8.1	5,668	116.0	29.5
RA	50.7	101.0	26.1	101.0	17.9	4.1	5,116	102.6	26.4
WH	36.3	176.3	45.5	100.2	34.9	11.6	3,636	179.7	47.0
ALL	268.1	32.2	8.3	143.7	43.6	4.9	38,524	54.2	9.7

Unit Summary: DOC HOLLIDAY U5

Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
DF	LIVE	CUT	18	ALL	27.5	118	152	16,017	15,244	4.8	18.5	76.2	14.5	442.1
RA	LIVE	CUT	19	ALL	17.4	68	84	5,732	5,116	10.7	30.7	50.7	12.1	148.4
RC	LIVE	CUT	21	ALL	20.8	58	72	6,540	5,668	13.3	26.0	61.3	13.4	164.4
SS	LIVE	CUT	12	ALL	29.1	95	121	9,264	8,861	4.4	9.4	43.6	8.1	257.0
WH	LIVE	CUT	9	ALL	17.0	61	75	3,985	3,636	8.8	23.0	36.3	8.8	105.4
ALL	LIVE	CUT	79	ALL	21.4	75	94	41,538	38,524	7.3	107.6	268.1	57.0	1,117.2
ALL	ALL	ALL	79	ALL	21.4	75	94	41,538	38,524	7.3	107.6	268.1	57.0	1,117.2

Cruise Unit Report DOC HOLLIDAY U6

Unit Sale Notice Volume (MBF): DOC HOLLIDAY U6

Sp	DBH	Rings/In	Age	MBF Volume by Grade				
				All	2 Saw	3 Saw	4 Saw	Utility
RA	17.0			102	32	33	32	5
DF	29.0			74	64	8	2	
RC	15.8			41		35	6	
WH	25.1			32	25	6	0	
SS	36.0			24	22	1		
ALL	18.9			273	143	84	41	5

Unit Cruise Design: DOC HOLLIDAY U6

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B2: VR, 2 BAF (71.11, 40 for some species) Measure All, Sighting Ht = 4.5 ft	7.8	7.8	5	5	0

Unit Cruise Summary: DOC HOLLIDAY U6

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
RA	16	16	3.2	0
DF	4	4	0.8	0
RC	8	8	1.6	0
WH	2	2	0.4	0
SS	1	1	0.2	0
ALL	31	31	6.2	0

Unit Cruise Statistics: DOC HOLLIDAY 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 (%)
RA	128.0	80.9	36.2	101.9	13.3	3.3	13,047	82.0	36.3
DF	56.9	163.0	72.9	166.8	2.6	1.3	9,489	163.0	72.9
RC	64.0	136.9	61.2	82.9	38.0	13.4	5,307	142.1	62.7
WH	28.4	223.6	100.0	142.2	0.7	0.5	4,044	223.6	100.0
SS	14.2	223.6	100.0	214.5	0.0	0.0	3,050	223.6	100.0
ALL	291.6	53.3	23.8	119.8	31.4	5.6	34,937	61.8	24.5

Unit Summary: DOC HOLLIDAY U6

Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
DF	LIVE	CUT	4	ALL	29.0	104	133	10,016	9,489	5.3	12.4	56.9	10.6	74.0
RA	LIVE	CUT	16	ALL	17.0	66	82	13,981	13,047	6.7	81.2	128.0	31.0	101.8
RC	LIVE	CUT	8	ALL	15.8	43	52	6,012	5,307	11.7	47.0	64.0	16.1	41.4
SS	LIVE	CUT	1	ALL	36.0	105	135	3,143	3,050	2.9	2.0	14.2	2.4	23.8
WH	LIVE	CUT	2	ALL	25.1	88	110	4,525	4,044	10.6	8.3	28.4	5.7	31.5
ALL	LIVE	CUT	31	ALL	18.8	64	79	37,678	34,937	7.3	150.9	291.6	65.8	272.5
ALL	ALL	ALL	31	ALL	18.8	64	79	37,678	34,937	7.3	150.9	291.6	65.8	272.5

Cruise Unit Report DOC HOLLIDAY U7

Unit Sale Notice Volume (MBF): DOC HOLLIDAY U7

Sp	DBH	Rings/In	Age	MBF Volume by Grade				
				All	2 Saw	3 Saw	4 Saw	Utility
RA	14.7			12	1		8	3
RC	22.4			5		5		
WH	12.5			5		3	2	
ALL	15.0			22	1	7	10	3

Unit Cruise Design: DOC HOLLIDAY U7

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B1: VR, 1 BAF (40) Measure All, Sighting Ht = 4.5 ft	2.8	2.9	3	3	0

Unit Cruise Summary: DOC HOLLIDAY U7

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
RA	6	6	2.0	0
RC	2	2	0.7	0
WH	2	2	0.7	0
ALL	10	10	3.3	0

Unit Cruise Statistics: DOC HOLLIDAY U7

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
RA	80.0	100.0	57.7	55.0	17.4	7.1	4,400	101.5	58.2
RC	26.7	173.2	100.0	61.9	80.6	57.0	1,649	191.0	115.1
WH	26.7	173.2	100.0	61.6	15.6	11.0	1,641	173.9	100.6
ALL	133.3	34.6	20.0	57.7	32.4	10.2	7,691	47.4	22.5

Unit Summary: DOC HOLLIDAY U7

Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
RA	LIVE	CUT	6	ALL	14.7	50	61	5,113	4,400	13.9	67.9	80.0	20.9	12.3
RC	LIVE	CUT	2	ALL	22.4	51	63	1,909	1,649	13.6	9.7	26.7	5.6	4.6

Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
WH	LIVE	CUT	2	ALL	12.5	50	61	1,641	1,641	0.0	31.3	26.7	7.5	4.6
ALL	LIVE	CUT	10	ALL	15.0	50	61	8,663	7,691	11.2	108.9	133.3	34.0	21.5
ALL	ALL	ALL	10	ALL	15.0	50	61	8,663	7,691	11.2	108.9	133.3	34.0	21.5

Cruise Unit Report DOC HOLLIDAY U8

Unit Sale Notice Volume (MBF): DOC HOLLIDAY U8

Sp	DBH	Rings/In	Age	MBF Volume by Grade	
				All	4 Saw
RA	9.9			8	8
WH	8.0			3	3
DF	8.0			3	3
ALL	9.0			14	14

Unit Cruise Design: DOC HOLLIDAY U8

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B1: VR, 1 BAF (20) Measure All, Sighting Ht = 4.5 ft	2.0	2.1	1	1	0

Unit Cruise Summary: DOC HOLLIDAY U8

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
RA	3	3	3.0	0
WH	1	1	1.0	0
DF	1	1	1.0	0
ALL	5	5	5.0	0

Unit Cruise Statistics: DOC HOLLIDAY U8

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
RA	60.0	0.0	0.0	63.1	14.2	8.2	3,787	14.2	8.2
WH	20.0	0.0	0.0	80.2	0.0	0.0	1,604	0.0	0.0
DF	20.0	0.0	0.0	74.5	0.0	0.0	1,490	0.0	0.0
ALL	100.0	0.0	0.0	68.8	14.9	6.7	6,881	14.9	6.7

Unit Summary: DOC HOLLIDAY U8

Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
DF	LIVE	CUT	1	ALL	8.0	40	48	1,490	1,490	0.0	57.3	20.0	7.1	3.0
RA	LIVE	CUT	3	ALL	9.9	40	47	3,787	3,787	0.0	112.2	60.0	19.1	7.6
WH	LIVE	CUT	1	ALL	8.0	40	48	1,604	1,604	0.0	57.3	20.0	7.1	3.2

Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
ALL	LIVE	CUT	5	ALL	9.0	40	48	6,881	6,881	0.0	226.8	100.0	33.2	13.8
ALL	ALL	ALL	5	ALL	9.0	40	48	6,881	6,881	0.0	226.8	100.0	33.2	13.8

Cruise Unit Report DOC HOLLIDAY U9

Unit Sale Notice Volume (MBF): DOC HOLLIDAY U9

Sp	DBH	Rings/In	Age	MBF Volume by Grade	
				All	4 Saw
RA	9.9			2	2
WH	8.0			1	1
DF	8.0			1	1
ALL	9.0			3	3

Unit Cruise Design: DOC HOLLIDAY U9

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B1: VR, 1 BAF (20) Measure All, Sighting Ht = 4.5 ft	0.5	0.5	1	1	0

Unit Cruise Summary: DOC HOLLIDAY U9

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
RA	3	3	3.0	0
WH	1	1	1.0	0
DF	1	1	1.0	0
ALL	5	5	5.0	0

Unit Cruise Statistics: DOC HOLLIDAY U9

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
RA	60.0	0.0	0.0	63.1	14.2	8.2	3,787	14.2	8.2
WH	20.0	0.0	0.0	80.2	0.0	0.0	1,604	0.0	0.0
DF	20.0	0.0	0.0	74.5	0.0	0.0	1,490	0.0	0.0
ALL	100.0	0.0	0.0	68.8	14.9	6.7	6,881	14.9	6.7

Unit Summary: DOC HOLLIDAY U9

Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
DF	LIVE	CUT	1	ALL	8.0	40	48	1,490	1,490	0.0	57.3	20.0	7.1	0.7
RA	LIVE	CUT	3	ALL	9.9	40	47	3,787	3,787	0.0	112.2	60.0	19.1	1.9
WH	LIVE	CUT	1	ALL	8.0	40	48	1,604	1,604	0.0	57.3	20.0	7.1	0.8

Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
ALL	LIVE	CUT	5	ALL	9.0	40	48	6,881	6,881	0.0	226.8	100.0	33.2	3.4
ALL	ALL	ALL	5	ALL	9.0	40	48	6,881	6,881	0.0	226.8	100.0	33.2	3.4



Forest Practices Application/Notification Notice of Decision

FPA/N No: 2618292

Effective Date: 3/23/2024

Expiration Date: 3/23/2027

Shut Down Zone: 653 S

EARR Tax Credit: Eligible Non-eligible

Reference: DNR

Doc Holiday

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

Timing Limitations on Type S and F water(s):

All work below the ordinary high water line shall only occur between July 1 and September 30.

- Other

Note: Concerning the haul routes on the PA-S-2600 and PA-S-2700, detailed steps should be taken for proactive BMP usage to prevent sediment laden road surface waters reaching typed waters. Specifically at crossing "C1" and the Murdock Ck crossing near the gate on the PA-S-2700. Hauling in wet winter conditions may not be achievable if physical BMP's are not effective.

Issued By: Erik Dukes

Region: Olympic

Title: Forest Practices Forester

Date: 3/23/2024

Copies to: Landowner, Timber Owner and Operator

Issued in person: LO TO OP

By:

Date: 03.22.24

Appeal Information

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

You must file your appeal at all three addresses below:

Pollution Control Hearings Board	Office of the Attorney General Natural Resources Division	Department Of Natural Resources Olympic Region
<u>Physical Address</u> 1111 Israel Road, SW Suite 301 Tumwater, WA 98501 <u>Mailing address</u> Post Office Box 40903 Olympia, WA 98504-0903	<u>Physical Address</u> 1125 Washington Street, SE Olympia, WA 98504 <u>Mailing Address</u> Post Office Box 40100 Olympia, WA 98504-0100	<u>Physical & Mailing Address</u> 411 Tillicum Lane Forks, WA 98331

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

Other Applicable Laws

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

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

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

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

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

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

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

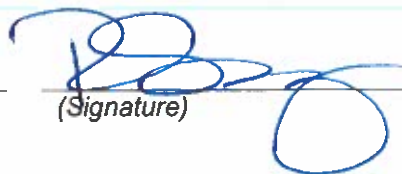
Failure by the seller to send the required notice to DNR at the time of sale will be prima facie evidence in an action by the buyer against the seller for costs related to the continuing forestland obligation prior to sale.

DNR Declaration of Mailing

I, Rosielly Sanchez, caused the Notice of Decision for FPA/N No. 2618292 to be placed in the United States mail at Forks, WA, postage paid. I declare under penalty of perjury of the laws of the State of Washington, that the foregoing is true and correct.

3/23/2024
(Date)

Forks, Washington
(City & State where signed)


(Signature)

STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES

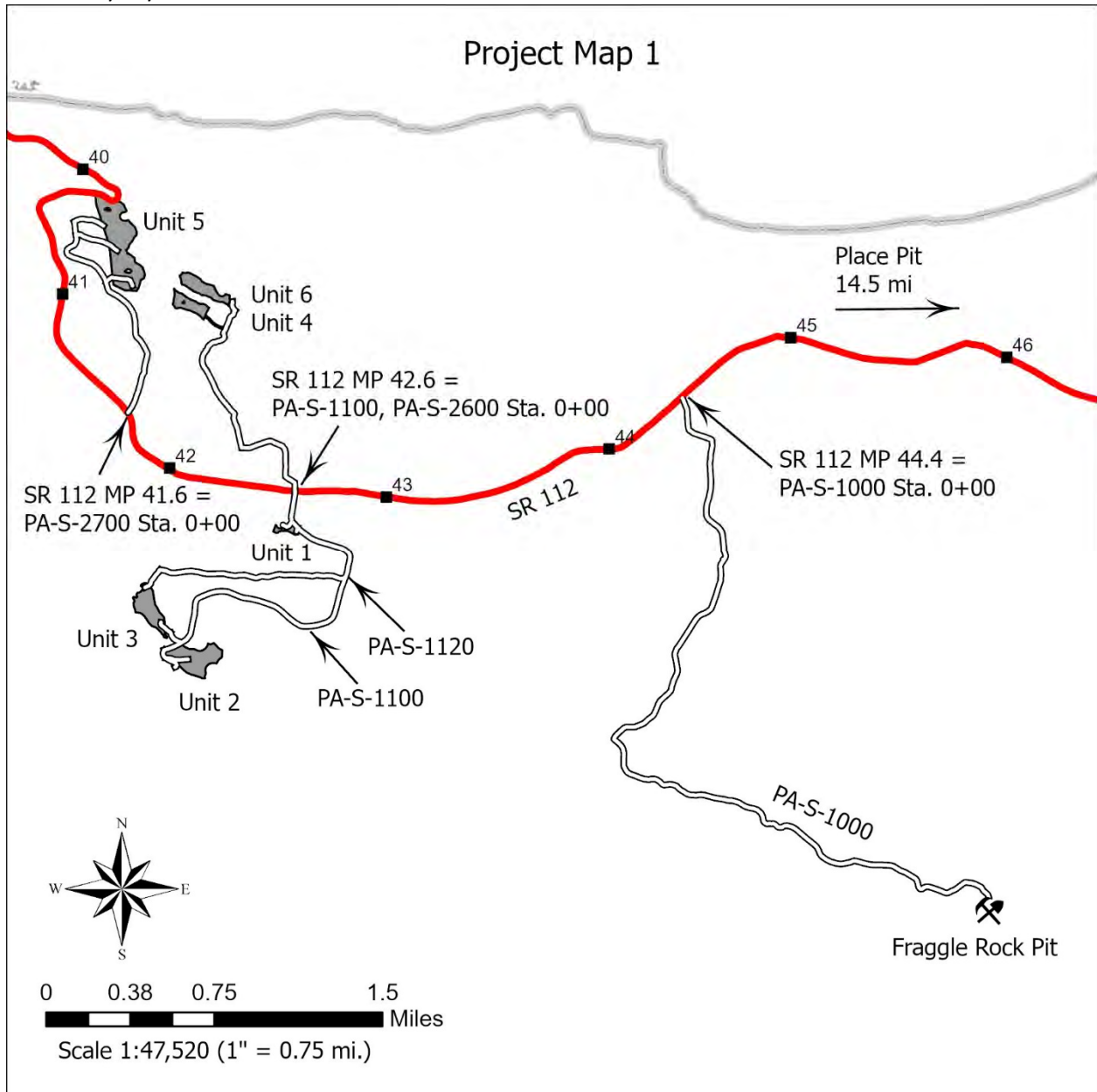
DOC HOLLIDAY TIMBER SALE ROAD PLAN
CLALLAM COUNTY
STRAITS DISTRICT
OLYMPIC REGION

AGREEMENT NO.: 30-103767

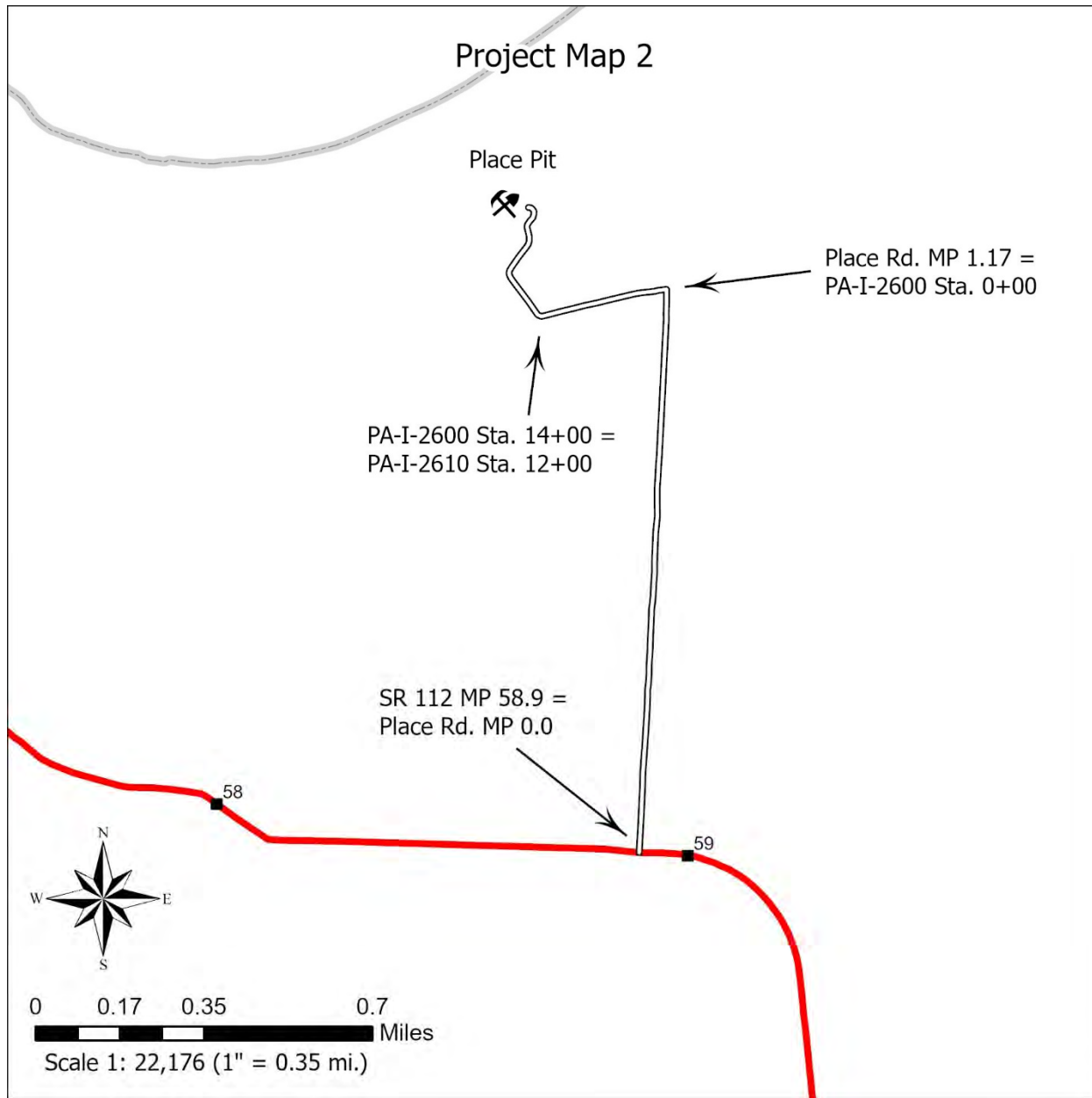
DISTRICT ENGINEER: GREG ELLIS

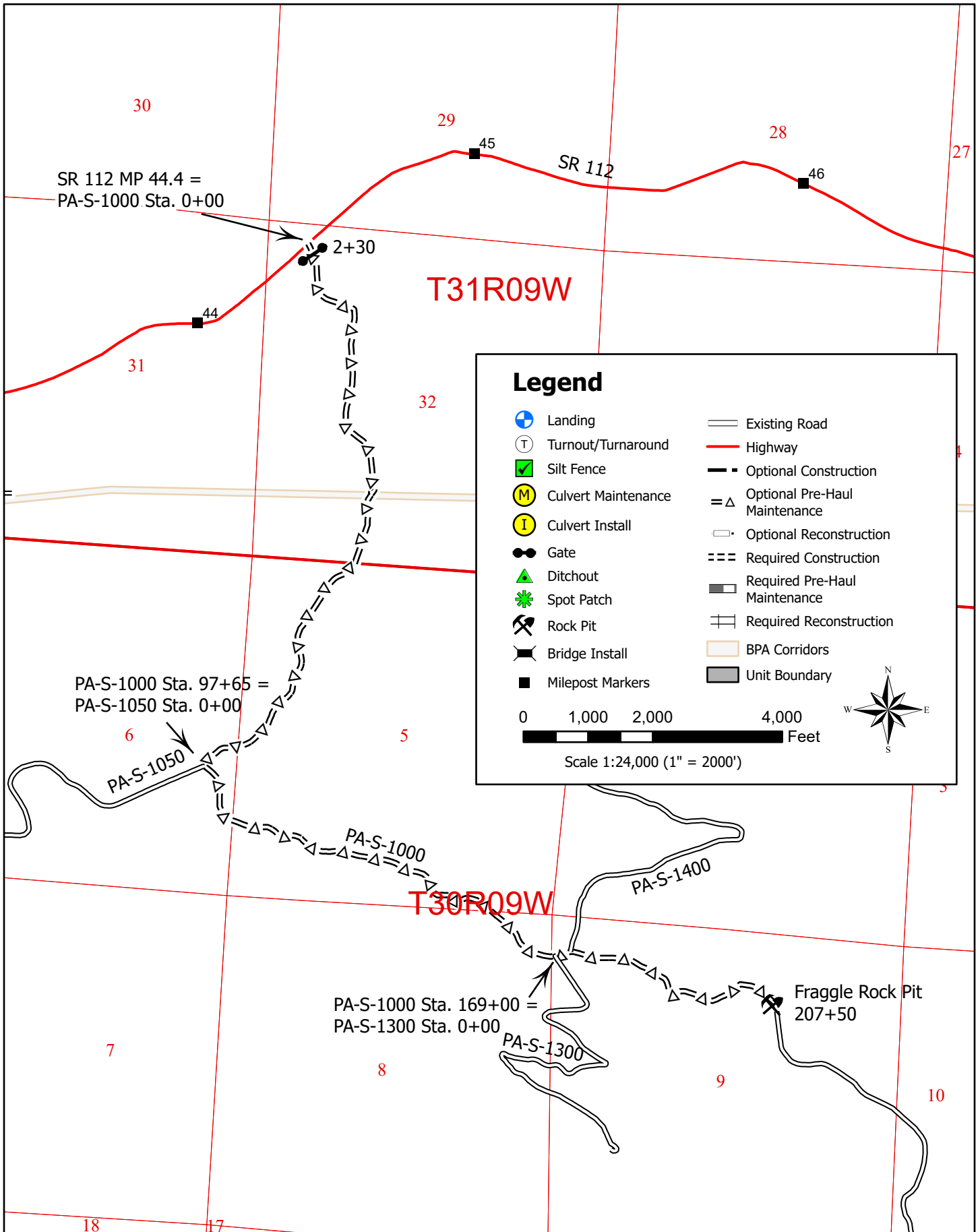
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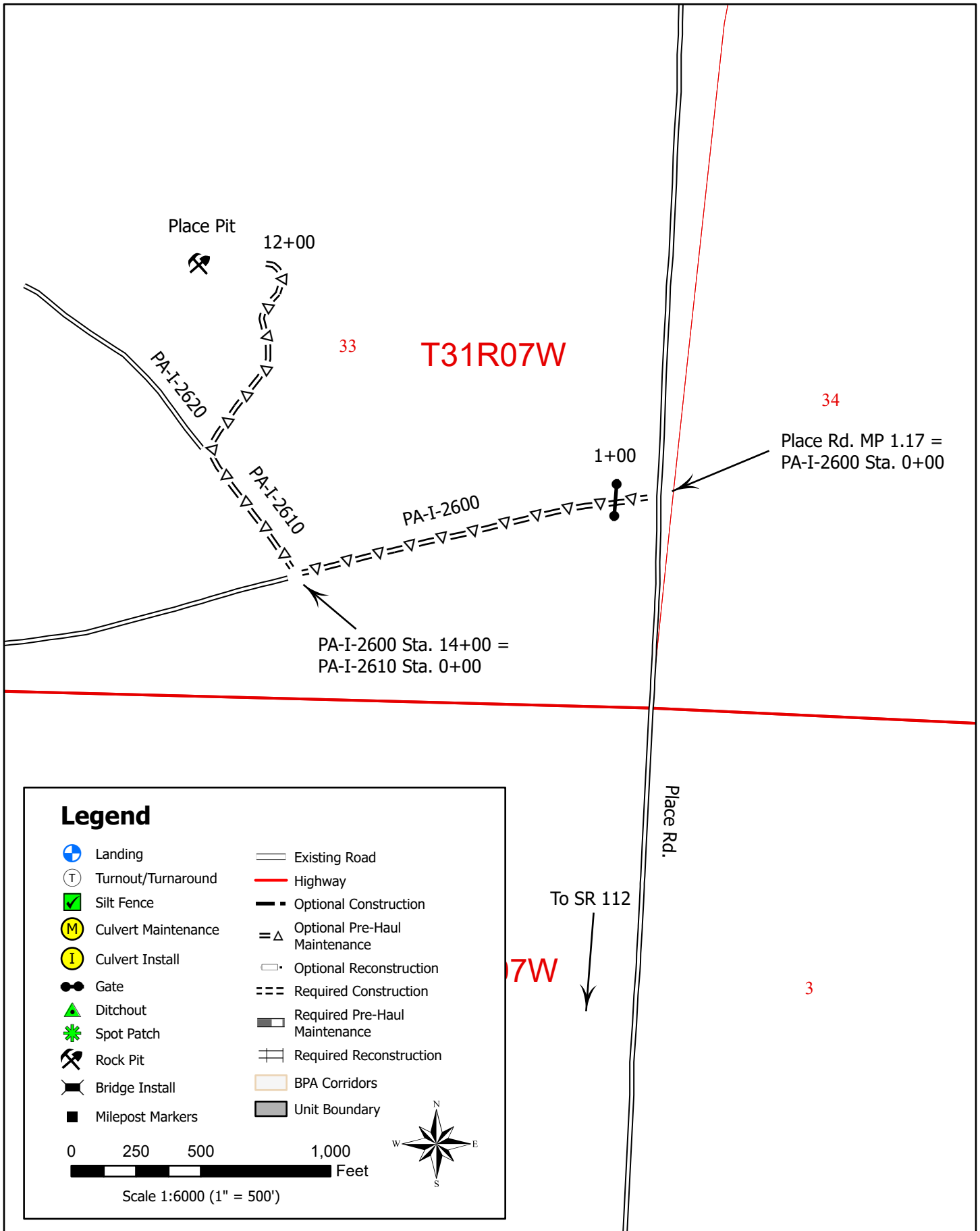
DRAWN & COMPILED BY: EMMA HEIN

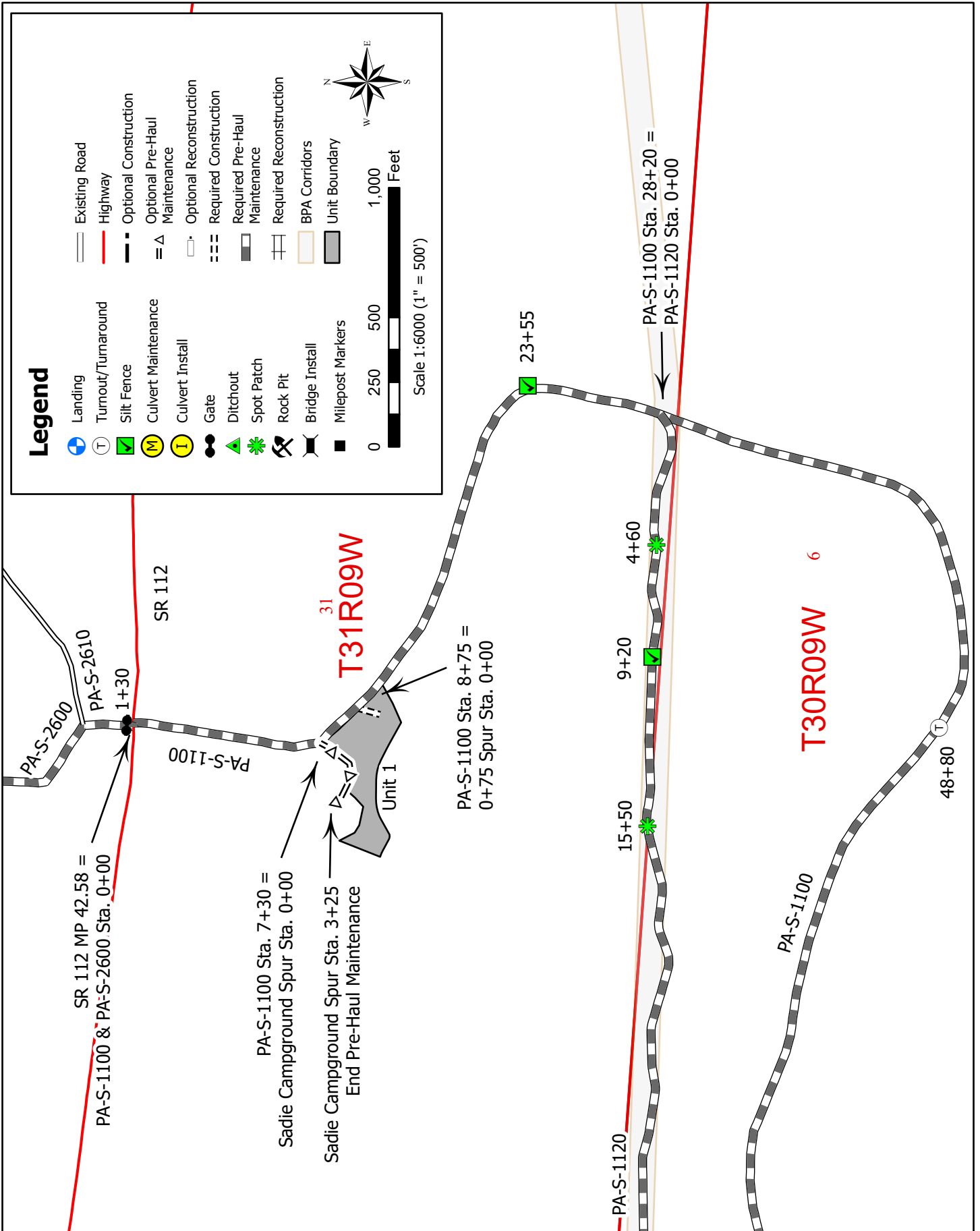


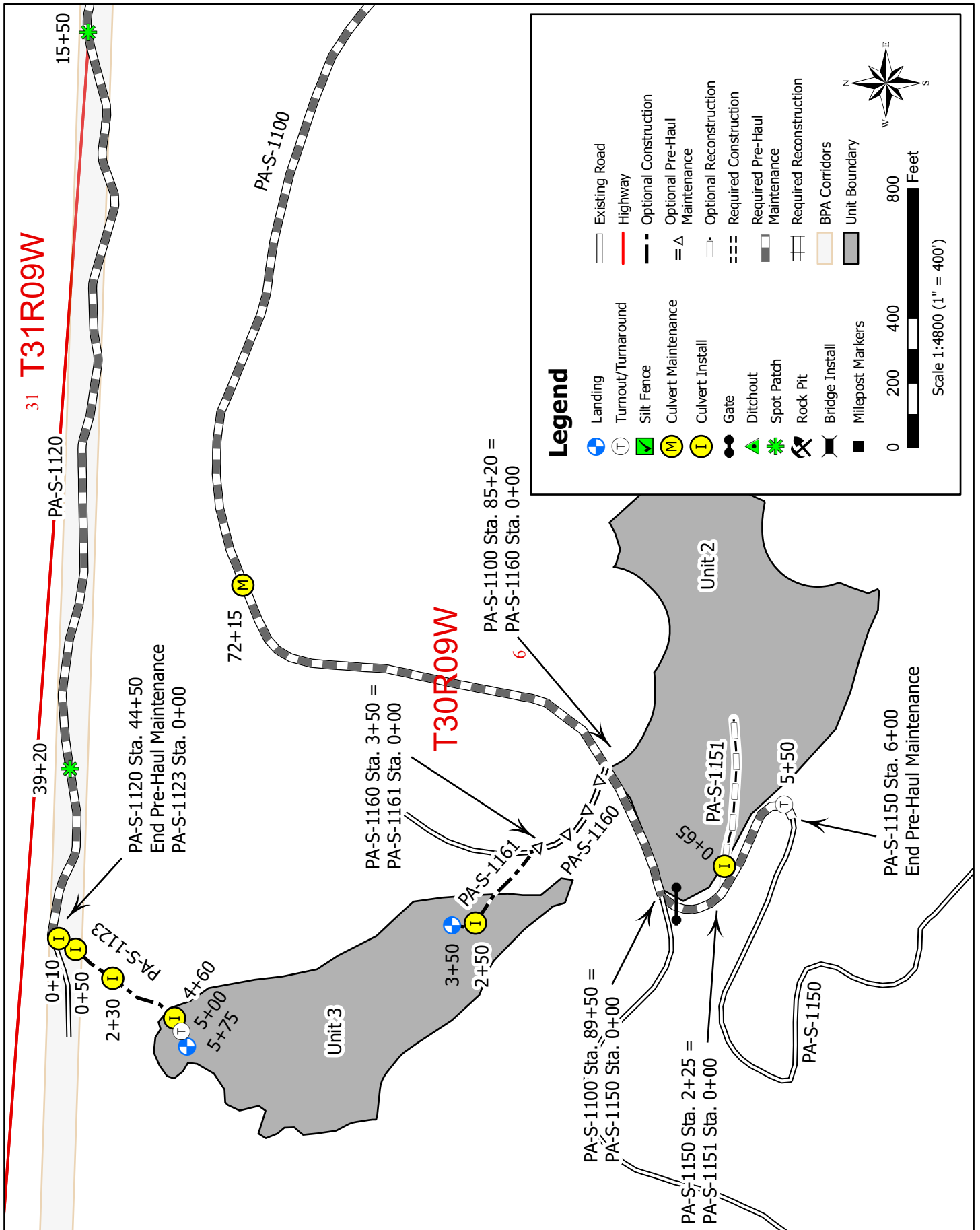
Project Map 2





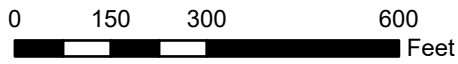




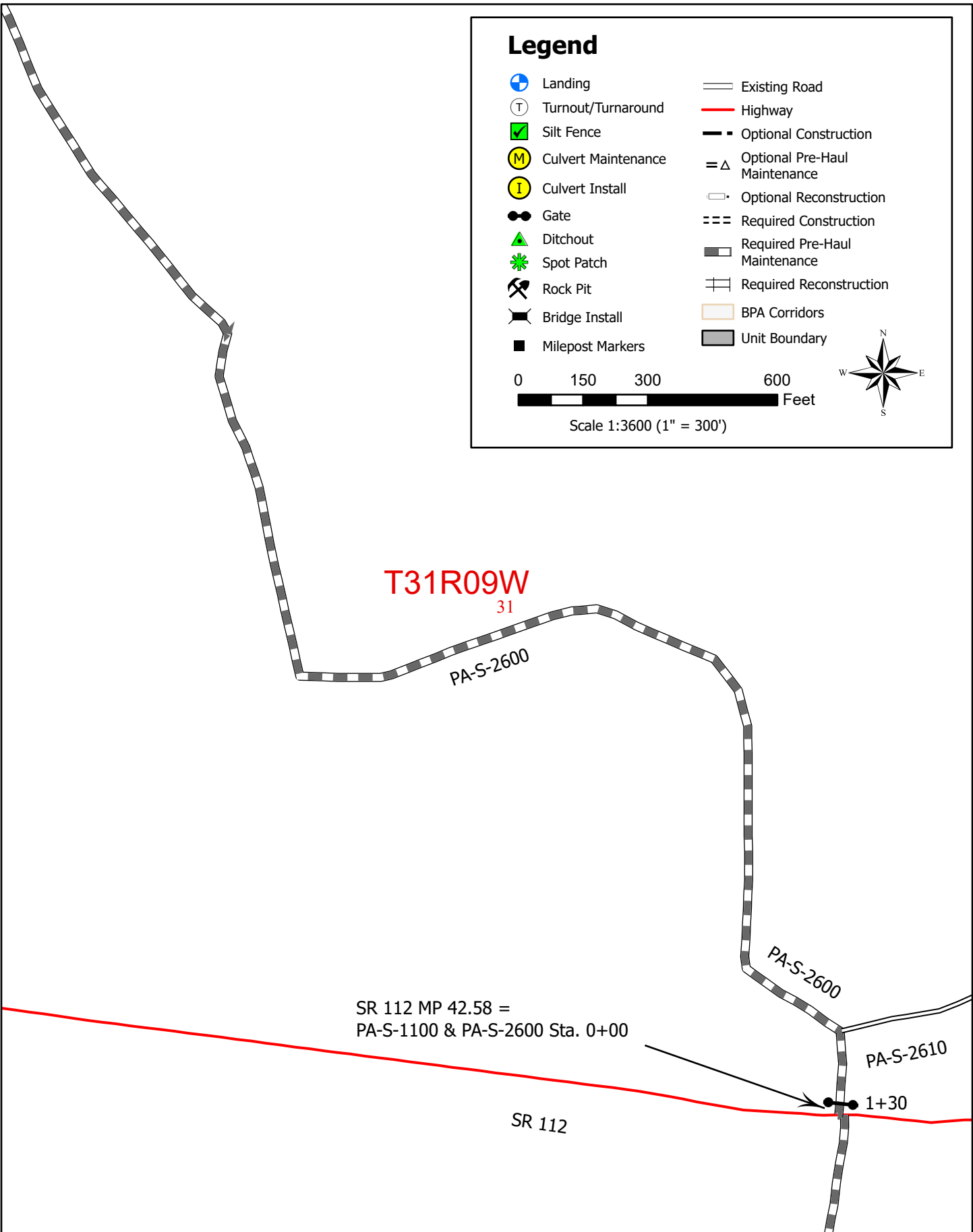
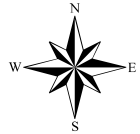


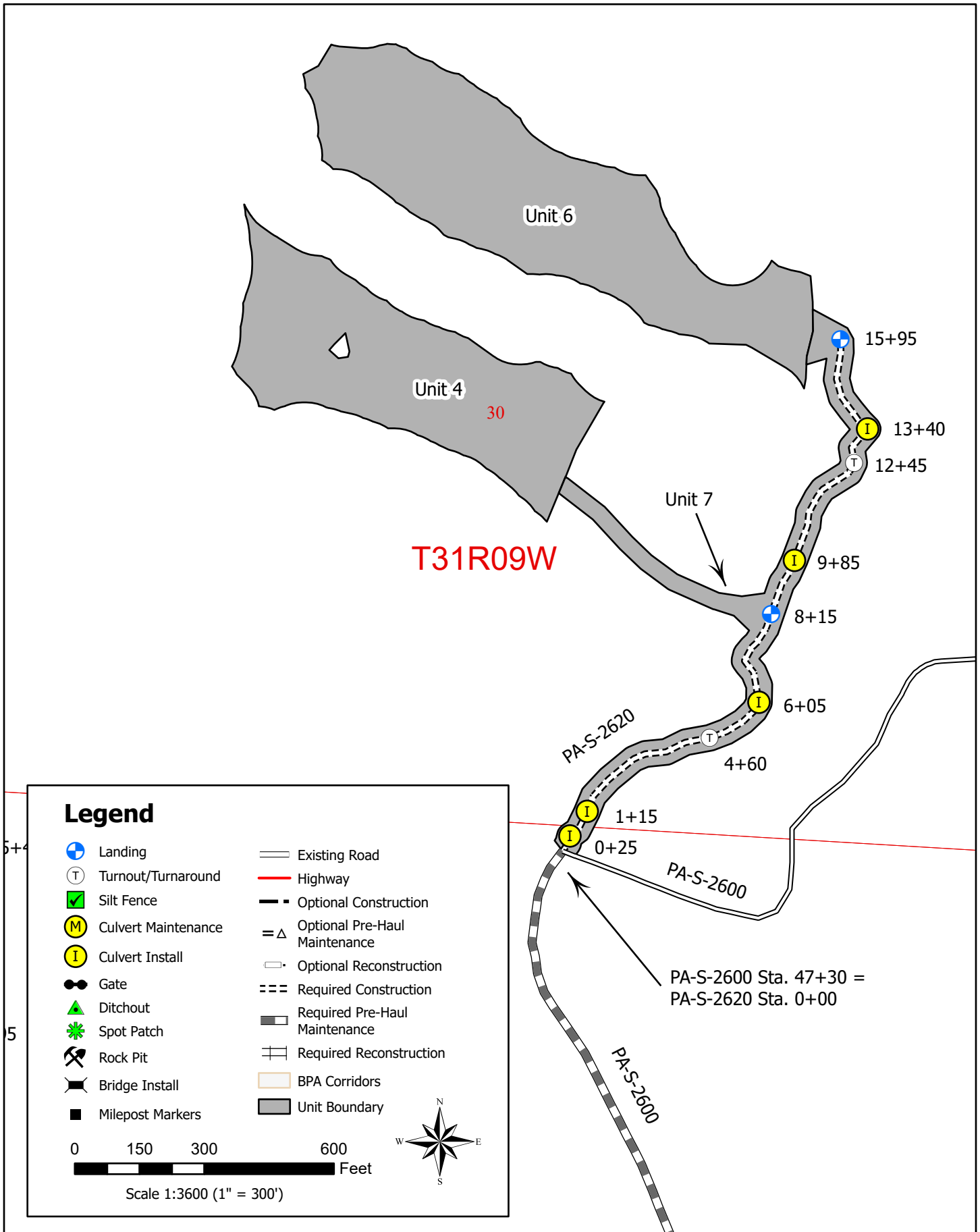
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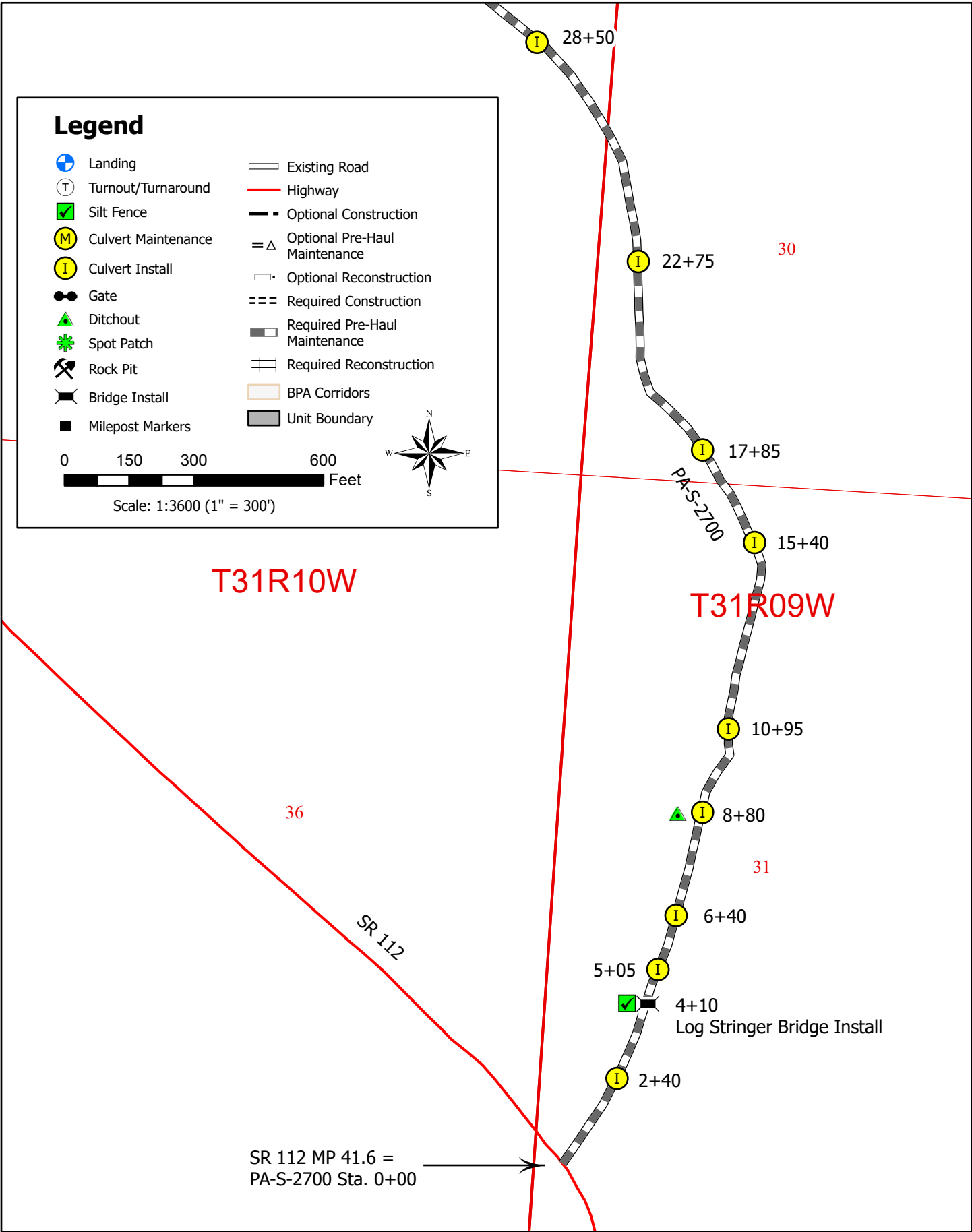
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|--|---------------------|--|-------------------------------|
| | Landing | | Existing Road |
| | Turnout/Turnaround | | Highway |
| | Silt Fence | | Optional Construction |
| | Culvert Maintenance | | Optional Pre-Haul Maintenance |
| | Culvert Install | | Optional Reconstruction |
| | Gate | | Required Construction |
| | Ditchout | | Required Pre-Haul Maintenance |
| | Spot Patch | | Required Reconstruction |
| | Rock Pit | | BPA Corridors |
| | Bridge Install | | Unit Boundary |
| | Milepost Markers | | |

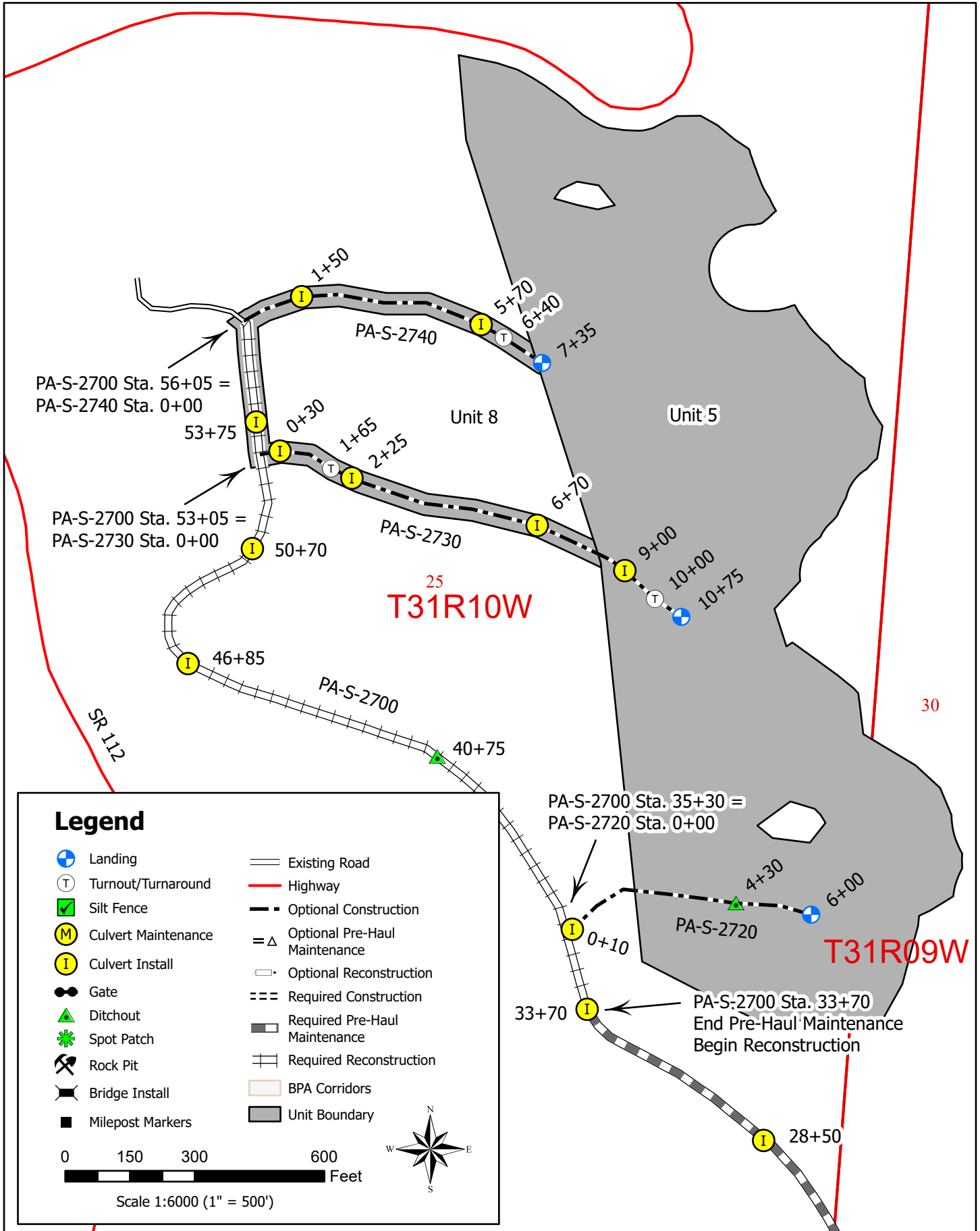


Scale 1:3600 (1" = 300')









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>
PA-S-1100	0+00 – 89+50	Pre-Haul Maintenance
0+75 Spur	0+00 – 0+75	Construction
PA-S-1120	0+00 – 44+50	Pre-Haul Maintenance
PA-S-1150	0+00 – 6+00	Pre-Haul Maintenance
PA-S-2600	0+00 – 47+30	Pre-Haul Maintenance
PA-S-2620	0+00 – 15+95	Construction
PA-S-2700	0+00 – 33+70	Pre-Haul Maintenance
PA-S-2700	33+70 – 56+05	Reconstruction

0-3 OPTIONAL ROADS

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

<u>Road</u>	<u>Stations</u>	<u>Type</u>
PA-S-1000	0+00 – 207+50	Pre-Haul Maintenance
Sadie Campground Spur	0+00 – 3+25	Pre-Haul Maintenance
PA-S-1123	0+00 – 5+75	Construction
PA-S-1151	0+00 – 5+65	Reconstruction
PA-S-1160	0+00 – 3+50	Pre-Haul Maintenance
PA-S-1161	0+00 – 3+50	Construction
PA-S-2720	0+00 – 6+00	Construction
PA-S-2730	0+00 – 10+75	Construction
PA-S-2740	0+00 – 7+35	Construction
PA-I-2600	0+00 – 14+00	Pre-Haul Maintenance
PA-I-2610	0+00 – 12+00	Pre-Haul Maintenance

0-4 CONSTRUCTION

This project includes, but is not limited to the following construction requirements:

<u>Road</u>	<u>Stations</u>	<u>Requirements</u>
0+75 Spur	0+00 – 0+75	See Below

PA-S-1123	0+00 – 5+75	
PA-S-1161	0+00 – 3+50	
PA-S-2620	0+00 – 15+95	
PA-S-2720	0+00 – 6+00	
PA-S-2730	0+00 – 10+75	
PA-S-2740	0+00 – 7+35	
Total Stations	50.05 Stations	

Construction includes, but is not limited to: Clearing, grubbing, right-of-way debris disposal, excavation and/or embankment to subgrade, end hauling material for construction, compacting road surfaces, constructing ditchlines, constructing ditchouts, constructing turnouts and turnarounds, curve widening, acquisition and installation of drainage structures, application of rock, spreading grass seed and hay.

0-5 RECONSTRUCTION

This project includes, but is not limited to the following reconstruction requirements:

<u>Road</u>	<u>Stations</u>	<u>Requirements</u>
PA-S-1151	0+00 – 5+65	See Below
PA-S-2700	33+70 – 56+05	
Total Stations	28.00 Stations	

Reconstruction includes, but is not limited to: Removal of all vegetative material with minimum loss of rock and dispose of in accordance with Clause 2-9 and Clause 3-23. Cleaning ditches and constructing ditches, constructing headwalls, cleaning culvert inlets and outlets in accordance with Clause 2-6 and Clause 2-7. Installing additional culverts and replacing culverts in accordance with the culvert list. Grading, shaping and compacting existing road surface, turnouts and turnaround in accordance with Clause 2-5, realigning road segments, spreading grass seed and hay, and the application of rock in accordance with the Rock List.

0-6 PRE-HAUL MAINTENANCE

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

<u>Road</u>	<u>Stations</u>	<u>Requirements</u>
PA-S-1000	0+00 – 207+50	Grade, shape, and compact existing running surface in accordance with Clause 2-5 and brush road in accordance with Clause 3-1. Apply rock in accordance with Rock List.

Sadie Campground Spur	0+00 – 3+25	Grade, shape, and compact existing running surface in accordance with Clause 2-5. Brush Road in accordance with Clause 3-1.
PA-S-1100	0+00 – 89+50	Grade, shape, and compact existing running surface in accordance with Clause 2-5. Clean culverts in accordance with Clause 2-6. Brush road in accordance with Clause 3-1. Install sediment control structures in accordance with Clause 8-1. Apply rock in accordance with Rock List.
PA-S-1120	0+00 – 44+50	Grade, shape, and compact existing running surface in accordance with Clause 2-5. Brush road in accordance with Clause 3-1. Install sediment control structures in accordance with Clause 8-1. Apply rock in accordance with Rock List.
PA-S-1150	0+00 – 6+00	Grade, shape, and compact existing running surface in accordance with Clause 2-5. Brush road in accordance with Clause 3-1. Apply rock in accordance with Rock List.
PA-S-1160	0+00 – 3+50	Grade, shape, and compact existing running surface in accordance with Clause 2-5. Brush road in accordance with Clause 3-1.
PA-S-2600	0+00 – 47+30	Grade, shape, and compact existing running surface in accordance with Clause 2-5. Brush road in accordance with Clause 3-1.
PA-S-2700	0+00 – 33+70	Grade, shape, and compact existing running surface in accordance with Clause 2-5. Remove vegetative material in accordance with Clause 2-9. Clean and/or construct ditches in accordance with Clause 2-7. Construct ditchouts in accordance with Clause 4-29. Brush road in accordance with Clause 3-1. Install culverts in accordance with Culvert List. Install bridge in accordance with

		Section 7 STRUCTURES and Clause 11-10. Install sediment control structures in accordance with Clause 8-1. Apply rock in accordance with Rock List.
PA-I-2600	0+00 – 14+00	Grade, shape and compact existing running surface in accordance with Clause 2-5. Brush road in accordance with Clause 3-1.
PA-I-2610	0+00 – 12+00	Grade, shape and compact existing running surface in accordance with Clause 2-5. Brush road in accordance with Clause 3-1.
Total Stations	461.25 Stations	

Pre-haul maintenance includes, but is not limited to: Brushing right-of-way, right-of-way debris disposal, cleaning ditches, constructing ditches, installing additional culverts, widening road segments, constructing headwalls, cleaning culvert inlets and outlets, cross drain culvert replacements, installing erosion control materials and sediment removal structures, spot rocking, grading and shaping existing road surface and turnouts, constructing additional turnouts, compaction of road surface, application of rock, acquisition and application of grass seed and hay.

0-7 POST-HAUL MAINTENANCE

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

0-12 DEVELOP ROCK SOURCE

Purchaser may develop an existing rock source called Fraggie Rock Pit. Rock source development will involve possible drilling and shooting to obtain a minimum of 20 yd³ of Light Loose Rip Rap and the manufacture of a minimum of 4770 yd³ of 6" Jaw Run Rock and 2000 yd³ of 3" Jaw Run Rock in accordance with Clause 6-20. Work for developing rock sources is listed in Section 6 ROCK AND SURFACING.

Purchaser may develop an existing rock source called Place Pit. Rock source development will involve digging and loading useable rock as determined by the Contract Administrator out of an existing stockpile to obtain surfacing material. Purchaser shall not remove more than 600 cubic yards of 1 ¼" minus crushed rock. Work for developing rock sources is listed in Section 6 ROCK AND SURFACING.

All rock manufactured out of rock sources listed above shall meet specifications as listed in Section 6 ROCK AND SURFACING. In the event that rock does not meet specifications, which will be determined by the Contact Administrator, a commercial source shall be used at the purchaser's expense meeting listed specifications.

0-13 STRUCTURES

Purchaser shall provide and install all structures. Requirements for these structures are listed in Section 7 STRUCTURES.

SECTION 1 – GENERAL

1-1 ROAD PLAN CHANGES

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

1-2 UNFORESEEN CONDITIONS

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

1-3 ROAD DIMENSIONS

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

1-4 ROAD TOLERANCES

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

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

1-6 ORDER OF PRECEDENCE

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

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

7. Road Plan maps.

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

1-8 REPAIR OR REPLACEMENT OF DAMAGED MATERIALS

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

1-9 DAMAGED METALLIC COATING

Any 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.

1-11 FPHP REQUIREMENTS

The following work is subject to requirements under a Forest Practice Hydraulics Project Approval issued by the State of Washington.

<u>Road</u>	<u>Station</u>	<u>Work Type</u>
PA-S-2700	4+10	Log Stringer Bridge Installation

1-12 SURVEY MONUMENTS

At no time during construction, reconstruction, or maintenance shall survey monuments, witness trees, or bearing trees be disturbed or damaged. If damaged or disturbed, Purchaser shall hire a licensed land surveyor to repair, replace, and/or reset them.

1-13 LOG LOADING

At no time shall the loading of logs occur on the PA-S-1100. In addition, no debris from harvesting operations shall be allowed on this road.

1-14 NON-SALE ASSOCIATED CLOSURE

Culvert and fill replacement work is currently scheduled to take place on the PA-S-2600 sometime during the hydraulic seasons of 2024 through 2025, which will result in the road being closed for up to 2 weeks at a time. State shall give at least 2 weeks notice to Purchaser before closure begins.

SUBSECTION ROAD MARKING

1-15 ROAD MARKING

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

- Orange ribbon and paint for construction centerlines.
- Construction stakes for everything else.

1-16 CONSTRUCTION STAKES SET BY STATE

Purchaser shall perform work on the following road(s) in accordance with the construction stakes and reference points set in the field for grade and alignment.

<u>Road</u>	<u>Stations</u>	<u>Type</u>
PA-S-2700	4+10	Bridge location stakes, reference points

1-18 REFERENCE POINT DAMAGE

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

SUBSECTION TIMING

1-20 COMPLETE BY DATE

Purchaser shall complete reconstruction, construction and pre-haul road work before the start of timber haul.

1-21 HAUL APPROVAL

Purchaser shall not use roads under this road plan without written approval from the Contract Administrator.

1-22 WORK NOTIFICATIONS

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

1-23 ROAD WORK PHASE APPROVAL

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

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

SUBSECTION RESTRICTIONS

1-25 ACTIVITY TIMING RESTRICTION

On the following road(s), are not allowed during the listed closure period(s) unless authorized in writing by the Contract Administrator.

<u>Road</u>	<u>Stations</u>	<u>Activity</u>	<u>Closure Period</u>
All	All	All	Weekends and State Recognized Holidays
All	All	All roadwork activities including Timber Haul and rock pit development.	November 1 st – April 30 th

1-26 OPERATING DURING CLOSURE PERIOD

If permission is granted to operate during a closure period listed in Clause 1-25 ACTIVITY TIMING RESTRICTION or Contract Clause H-130 HAULING SCHEDULE, Purchaser shall provide a maintenance plan to include further protection of state resources. Purchaser shall obtain written approval from the Contract Administrator for the maintenance plan, and shall put preventative measures in place before operating during the closure period. Purchaser is required to maintain all haul roads at their own expense including those listed in Contract Clause C-060 DESIGNATED ROAD MAINTAINER. If other operators are using, or desire to use these designated maintainer roads, a joint operating plan must be developed. All parties shall follow this plan.

1-27 TIMING RESTRICTION FOR MARBLED MURRELET

On the following road(s), timber felling, road work or operation of heavy equipment performed during the marbled murrelet nesting season (April 1 through September 23), is restricted to, two hours after sunrise to two hours before sunset. This does not apply to hauling timber, rock or equipment.

<u>Road</u>	<u>Stations</u>
PA-I-2600, PA-I-2610	All
Place Pit	All

1-29 SEDIMENT RESTRICTION

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

1-30 CLOSURE TO PREVENT DAMAGE

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

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

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

1-32 BRIDGE AND ASPHALT SURFACE RESTRICTION

The use of metal tracked equipment is not allowed on concrete bridge or asphalt surfaces at any time. If Purchaser must run equipment on bridge or asphalt surfaces, then rubber tired equipment must be used.

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

1-33 SNOW PLOWING RESTRICTION

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

SUBSECTION OTHER INFRASTRUCTURE

1-40 ROAD APPROACHES TO COUNTY ROADS AND STATE HIGHWAYS

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

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

The following county roads and state highways are affected by this sale:

<u>Road Name</u>
SR 112
Place Rd.

1-41 REQUIREMENTS FOR PAVED ROAD APPROACHES

Requirements for paved road approaches:

Purchaser shall build up approaches to allow a smooth grade transition between DNR roads and paved roads. The top of DNR road surfacing must be kept level with the surface of paved road at all times. The surface of the DNR road approach must slope from the edge of the paved road at the rate of 2%, unless otherwise directed by the Contract Administrator.

1-42 UTILITY ACCESS ROAD

The following road(s) intersect(s) existing utility access roads. Purchaser shall conduct road work on the intersecting roads so that the utility access roads are accessible at all times.

<u>Road</u>	<u>Stations</u>
PA-S-1000	0+00 – 44+15
PA-S-1100	0+00 – 86+50

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 notify the Bonneville Power Administration before starting road work.

<u>Road</u>	<u>Stations</u>	<u>Utility</u>	<u>Utility Contact</u>
PA-S-1000	0+00 – 207+50	Buried fiber optic/phone lines	811
PA-S-1120	0+00 – 44+50	Overhead BPA lines	811

SECTION 2 – MAINTENANCE

2-1 GENERAL ROAD MAINTENANCE

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

2-2 ROAD MAINTENANCE – PURCHASER MAINTENANCE

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

2-3 ROAD MAINTENANCE – DESIGNATED MAINTAINER

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

2-4 PASSAGE OF LIGHT VEHICLES

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

2-5 MAINTENANCE GRADING – EXISTING ROAD

On the following road(s), Purchaser shall use a grader to shape the existing surface.

<u>Road</u>	<u>Stations</u>	<u>Requirements</u>
PA-S-1000	0+00 – 207+50	Grade, shape, and compact existing running surface.
Sadie Campground Spur	0+00 – 3+25	
PA-S-1100	0+00 – 86+50	
PA-S-1120	0+00 – 44+50	
PA-S-1150	0+00 – 6+00	
PA-S-1160	0+00 – 3+50	
PA-S-2600	0+00 – 47+30	
PA-S-2700	0+00 – 33+70	
PA-I-2600	0+00 – 14+00	
PA-I-2610	0+00 – 12+00	

2-6 CLEANING CULVERTS

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

<u>Road</u>	<u>Stations</u>
PA-S-1100	72+15

2-7 CLEANING DITCHES, HEADWALLS, AND CATCH BASINS

On the following road(s), Purchaser shall clean and/or construct ditches, headwalls, and catchbasins. Work must be completed before the start of timber haul and must be done in accordance with the Typical Section Sheet. Pulling ditch material across the road or mixing in with the road surface is not allowed. Ditchlines, headwalls, and catch basins shall not encroach into the existing road.

<u>Road</u>	<u>Stations</u>	<u>Left and/or Right</u>	<u>Comments</u>
PA-S-2700	33+70 – 56+05	L,R	Ditching where ditchline is present

2-9 REMOVING VEGETATIVE MATERIAL

On the following road(s), Purchaser shall remove all vegetative material, dirt, mud and other debris on the existing road surface with a minimum loss of rock. Material must be disposed of as specified in Clauses 4-35 through 4-38.

<u>Road</u>	<u>Stations</u>
PA-S-2700	0+00 – 56+05

SECTION 3 – CLEARING, GRUBBING, AND DISPOSAL

SUBSECTION BRUSHING

3-1 BRUSHING

On the following road(s), Purchaser shall cut vegetative material up to 5 inches in diameter, including limbs, as shown on the BRUSHING DETAIL. Brushing must be achieved by mechanical cutting of brush, trees, and branches. Root systems and stumps of cut vegetation may not be disturbed unless directed by the Contract Administrator. Purchaser shall remove brushing debris from the road surface, ditchlines, and culvert inlets and outlets.

<u>Road</u>	<u>Stations</u>
PA-S-1000	0+00 – 207+50
Sadie Campground Spur	0+00 – 3+25
PA-S-1100	0+00 – 86+50
PA-S-1120	0+00 – 44+50

PA-S-1150	0+00 – 6+00
PA-S-1160	0+00 – 3+50
PA-S-2600	0+00 – 47+30
PA-S-2700	0+00 – 56+05
PA-I-2600	0+00 – 14+00
PA-I-2610	0+00 – 12+00

3-2 BRUSHING RESTRICTION

Pulling, digging, pushing over, and other non-cutting methods used for vegetation removal may not be used for brushing. Excavator buckets, log loaders and similar equipment may not be used for brushing unless otherwise approved in writing by the Contract Administrator.

3-3 BRUSH REMOVAL

Remove brushing debris from the road surface, ditchlines, and culvert inlets and outlets. Brush should be disposed of so that it will not fall back onto the road prism.

SUBSECTION CLEARING

3-5 CLEARING

Purchaser shall fall all vegetative material larger than 5 inches DBH or over 15 feet high between the marked right-of-way boundaries, or as approved by Contract Administrator. Clearing must be completed before starting excavation and embankment.

3-7 RIGHT-OF-WAY DECKING

Purchaser shall deck all right-of-way timber. Decks must be parallel to the road centerline and placed within the cleared right-of-way. Decks must be free of dirt, limbs, and other right-of-way debris, and removable by standard log loading equipment from the roadbed.

3-8 PROHIBITED DECKING AREAS

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

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

SUBSECTION GRUBBING

3-10 GRUBBING

Purchaser shall remove all stumps between the grubbing limits specified on the TYPICAL SECTION SHEET. Purchaser shall also remove stumps with undercut roots outside the grubbing limits. Purchaser shall remove stumps using a hydraulic mounted excavator unless authorized in writing by the Contract Administrator. Grubbing must be completed before starting excavation and embankment.

3-12 STUMP PLACEMENT

Purchaser shall place grubbed stumps outside of the clearing limits, as directed by the Contract Administrator and in compliance with all other clauses in this road plan. Stumps must be positioned upright, with root wads in contact with the forest floor and on stable locations.

SUBSECTION ORGANIC DEBRIS

3-20 ORGANIC DEBRIS DEFINITION

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

3-21 DISPOSAL COMPLETION

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

3-23 PROHIBITED DISPOSAL AREAS

Purchaser shall not place organic debris in the following areas:

- Within 50 feet of a cross drain culvert.
- On road subgrades, or excavation and embankment slopes.
- On slopes greater than 45%.
- 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 grubbing limits in accordance with Clause 3-23 unless otherwise detailed in this road plan and as directed by the Contract Administrator.

SUBSECTION PILE

3-31 PILING

Purchaser shall pile organic debris no closer than 20 feet from standing timber. Piles must be free of rock and soil.

SECTION 4 – EXCAVATION

4-1 EXCAVATOR CONSTRUCTION

Purchaser shall use a track mounted hydraulic excavator for construction, reconstruction and maintenance work unless stated otherwise within this Road Plan or authorized in writing by the Contract Administrator.

4-2 PIONEERING

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

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

4-3 ROAD GRADE AND ALIGNMENT STANDARDS

Purchaser shall follow these standards for road grade and alignment:

- Grade and alignment must have smooth continuity, without abrupt changes in direction.
- Maximum grades may not exceed 18 percent favorable and 16 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.

4-4 SWITCHBACK STANDARDS

A switchback is defined as a curved segment of road between a beginning and end of the same curve, where the change of traffic travel direction is greater than 90 degrees.

Purchaser shall follow these standards for switchbacks:

- Maximum adverse grades for switchbacks is 10%.
- Maximum favorable grades for switchbacks is 12%.

- Maximum transition grades entering and leaving switchbacks is a 5% grade change.
- Transition grades required to meet switchback grade limitations must be constructed on the tangents preceding and departing from the switchbacks.

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.

SUBSECTION INTERSECTIONS, TURNOUTS AND TURNAROUNDS

4-21 TURNOUTS

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

4-22 TURNAROUNDS

Turnarounds must be no larger than 50 feet long and 30 feet wide. Locations are subject to written approval by the Contract Administrator.

SUBSECTION DITCH CONSTRUCTION

4-25 DITCH CONSTRUCTION AND RECONSTRUCTION

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

4-27 DITCH WORK – MATERIAL USE PROHIBITED

Purchaser shall not pull ditch material across the road or mix in with the road surface. Excavated material must be end hauled to the location specified in Clauses 4-36 through 4-38.

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 to fit as built conditions. 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.

<u>Road</u>	<u>Stations</u>	<u>L or R</u>
PA-S-2700	8+80, 40+75 (approx. 20')	L
PA-S-2720	4+30 (approx. 20')	L,R

SUBSECTION WASTE MATERIAL (DIRT)

4-35 WASTE MATERIAL DEFINITION

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

4-36 DISPOSAL OF WASTE MATERIAL

Purchaser may sidecast waste material on side slopes up to 45% if the waste material is compacted and free of organic debris. On side slopes greater than 45%, all waste material must be end hauled or pushed to the designated embankment sites.

4-38 PROHIBITED WASTE DISPOSAL AREAS

Purchaser shall not deposit waste material in the following areas:

- Within 50 feet of a cross drain culvert.
- Within 100 feet of a live stream or wetland.
- Within a riparian management zone.
- On side slopes steeper than 45%.
- In locations that interfere with the construction of the road prism.
- In locations that impede drainage.
- Within the operational area for cable landings.
- Against standing timber.

4-39 WASTE AREA COMPACTION

Excavated material may be deposited adjacent to the road prism on side slopes up to 45% if the waste material is compacted and free of debris. On side slopes of 45% or more, all excavation shall be end hauled or pushed to designated waste areas. All waste material shall be compacted. The minimum acceptable compaction is achieved by placing embankments in 2 foot or shallower lifts and routing excavation equipment over the entire width of the lifts, with the exception of side hill embankments too narrow to accommodate excavation equipment which may be placed by end-dumping or sidecasting until sufficiently wide to support the equipment.

SUBSECTION BORROW

4-47 NATIVE MATERIAL

Native material consists of naturally occurring material that is free of organic debris, trash, and rocks greater than 12 inches in any dimension.

SUBSECTION SHAPING

4-55 ROAD SHAPING

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

4-56 DRY WEATHER SHAPING

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

SUBSECTION COMPACTION

4-60 FILL COMPACTION

Purchaser shall compact all embankment and waste material in accordance with the COMPACTION LIST by routing equipment over the entire width of each lift. A plate compactor must be used for areas specifically requiring keyed embankment construction and for embankment segments too narrow to accommodate 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 placement of rock.

4-62 DRY WEATHER COMPACTION

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

4-63 EXISTING SURFACE COMPACTION

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

4-64 WASTE MATERIAL COMPACTION

All waste material shall be compacted by running equipment over it or bucket tamping.

4-65 CULVERT BACKFILL COMPACTION

Culvert backfills shall be accomplished by using a jumping jack compactor, performing at least 2 passes per lift, in lifts not to exceed 8 inches.

4-66 COMPACTION BY METHOD

Compaction shall consist of three complete passes over the entire width of each lift with a vibratory drum roller weighing a minimum of 6,000 pounds at a maximum operating speed of 3 mph. For embankment segments too narrow to accommodate a drum roller, a plate compactor shall be used.

SECTION 5 – DRAINAGE

5-4 PUNCHEON RESTRICTED

At no time shall puncheon be used in the subgrade, unless approved by the Contract Administrator.

SUBSECTION CULVERTS

5-5 CULVERTS

Purchaser shall install culverts as part of this contract. Culverts must be installed concurrently with subgrade work and must be installed before subgrade compaction and rock application. Culvert locations and the minimum requirements for culvert length and diameter are designated on the CULVERT 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.

5-12 UNUSED MATERIALS STATE PROPERTY

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

5-13 CONTINGENCY CULVERTS

The following culverts will be supplied by the Purchaser and are available for installation as directed by the Contract Administrator. In the event that culverts are not used, culverts shall be stockpiled at Port Angeles Work Center.

<u>Road</u>	<u>Size</u>
On any portion of road used for timber or rock haul.	1 – 18" x 30' culvert 1 – 18" culvert band
On any portion of road used for timber or rock haul	1 – 24" x 30' culvert

SUBSECTION CULVERT INSTALLATION

5-15 CULVERT INSTALLATION

Culvert installation must be in accordance with the TYPICAL CROSS DRAIN CULVERT INSTALLATION DETAIL SHEET, TYPICAL TYPE NS NP CULVERT INSTALLATION DETAIL SHEET, the National Corrugated Metal Pipe Association's "Installation Manual for Corrugated Steel Drainage Structures" and the Corrugated Polyethylene Pipe Association's "Recommended Installation Practices for Corrugated Polyethylene Pipe and Fittings". Corrugated Polyethylene pipe must be installed in a manner consistent with the manufacturer's recommendations. Culverts over 15 inches diameter 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.

5-17 CROSS DRAIN SKEW AND SLOPE

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

5-18 CULVERT DEPTH OF COVER

Cross drain culverts must be installed with a depth of cover of not less than 18 inches of compacted subgrade over the top of the culvert at the shallowest point. Stream crossing culverts must be installed with a depth of cover specified in the Engineer's design, TYPICAL TYPE NS NP DETAIL SHEET, or recommended by the culvert manufacturer for the type and size of the pipe, whichever is greater.

SUBSECTION CATCH BASINS, HEADWALLS, AND ARMORING

5-25 CATCH BASINS

Purchaser shall construct catch basins to resist erosion. Minimum dimensions of catch basins are 1-2 feet wide, 1-2 feet deep and 2-4 feet long.

5-26 HEADWALLS FOR CROSS DRAIN CULVERTS

Purchaser shall construct headwalls in accordance with the TYPICAL CROSS DRAIN CULVERT INSTALLATION DETAIL at all cross drain culverts that specify the placement of rock. Rock used for headwalls must consist of oversize or quarry spall material. 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. No placement by end dumping or dropping of rock is allowed.

SECTION 6 – ROCK AND SURFACING

SUBSECTION ROCK SOURCE

6-2 ROCK SOURCE ON STATE LAND

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

<u>Source</u>	<u>Location</u>	<u>Rock Type</u>
Fraggle Rock Pit	T30N R09W Sec 9	6" Minus Jaw Run Rock, 3" Minus Jaw Run Rock, Light Loose Rip Rap
Place Pit	T31N R07W Sec 33	1 ¼" Minus Crushed Rock

6-3 ROCK SOURCE STATE LAND, EXISTING STOCKPILE

Rock used in accordance with the quantities on the ROCK LIST may be obtained from the following existing stockpile(s) on state land at no charge to the Purchaser. Purchaser shall not remove more than 550 cubic yards of 1 ¼" minus crushed rock. Purchaser shall not remove additional yardage without prior written approval from the Contract Administrator. Other stockpiles may not be used without prior written approval from the Contract Administrator.

<u>Source</u>	<u>Location</u>	<u>Rock Type</u>	<u>Quantity</u>
Place Pit	T31N R07W Sec 33	1 ¼" Minus Crushed Rock	600 yd ³

6-5 ROCK FROM COMMERCIAL SOURCE

Rock used in accordance with the quantities on the ROCK LIST may be obtained from any commercial source at the Purchaser's expense. Rock sources are subject to written approval by the Contract Administrator before their use. Rock source(s) must be a WSDOT certified source. Prior to approval, purchaser shall submit a passing sieve test performed by procedure described in WSDOT FOP for WAQTC T 27/11.

SUBSECTION ROCK SOURCE DEVELOPMENT

6-10 ROCK SOURCE DEVELOPMENT PLAN BY STATE

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

<u>Source</u>	<u>Rock Type</u>
Place Pit	1 ¼" Minus Crushed Rock

6-11 ROCK SOURCE DEVELOPMENT PLAN BY PURCHASER

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

<u>Source</u>	<u>Rock Type</u>
Fraggle Rock Pit	6" Minus Jaw Run Rock, 3" Minus Jaw Run Rock, Light Loose Rip Rap

6-12 ROCK SOURCE SPECIFICATIONS

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

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

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

Solid Rock	0:1	vertical
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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 operations must be carried out in compliance with all regulations of the Regulations and Standards Applicable to Metal and Nonmetal Mining and Milling Operations (30 CFR) U.S. Department of Labor, Mine Safety and Health Administration and Safety Standards for Construction Work (296-155 WAC), Washington Department of Labor and Industries.
- All vehicle access to the top of the pit faces must be blocked.

6-14 DRILL AND SHOOT

Rock drilling and shooting must meet the following specifications:

- Oversize material remaining in the rock source at the conclusion of the timber sale may not exceed 5% of the total volume mined in that source.
- Oversize material is defined as rock fragments larger than five feet in any dimension.
- Oversized rock that exceeds the maximum allowable amount must be shot or broken up.
- Purchaser shall notify the Contract Administrator a minimum of 3 working days before blasting operations.
- Purchaser shall submit an informational drilling and shooting plan to the Contract Administrator 10 working days before any drilling (Form #M-126PAC).
- 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 is require to inform Clallam County Dispatch (PenCom) of a day and approximate time of the pit blasting.
- Purchaser shall block access roads and trails before blasting operations.

6-16 DRILL AND SHOOT TECHNICAL SPECIFICATIONS

DRILLING

The Purchaser shall drill in accordance to an approved Shot Plan. Drill depth shall not extend more than 5 feet below existing pit floor. The District Engineer or their designee and Purchaser shall jointly measure and determine drill depths, hole spacing and pattern and must be approved prior to loading explosives. During drilling operation, drill operator shall keep a bore log which includes the depth and location of each hole drilled. The

District Engineer or their designee may ask to see the bore log during and after the drilling process has completed.

BLASTING

The Purchaser shall furnish and load appropriate explosives, detonators, and ignition sources in accordance to all State and Federal laws and in accordance to an approved Shot Plan.

DRILLING AND SHOOTING PLAN "SHOT PLAN"

The Purchaser shall submit a written drilling and shooting plan, including drawings, to the District Engineer or their designee, which must meet the approval of the District Engineer or their designee prior to the start of the drilling operation. The plan and drawing(s) shall include the following proposals: drill hole diameter, drill hole spacing, drill hole pattern, drill hole depth, any stemming depths, type and depth of explosive including amount per drill hole, detonator and ignition type, and proposed delay pattern. Any adjustment or modifications to the proposals during operations must be noted and resubmitted prior to loading of explosives.

WEATHER LIMITATIONS

When, in the opinion of the District Engineer or their designee, the weather is such that satisfactory results cannot be obtained in any phase of operation, Purchaser shall suspend operations until the weather is favorable. Before and during any suspension, Purchaser shall protect the work from damage or deterioration.

SUBSECTION ROCK MANUFACTURE

6-20 ROCK CRUSHING OPERATIONS

Rock crushing operations must conform to the following specifications:

- Operations and placement of oversize material must be conducted in or near the rock source site, as approved in writing by the Contract Administrator.
- The crushing operation must be concluded within 30 working days from the time it begins.
- All testing and operations must be performed in accordance with the attached ROCK CRUSHING COMPLIANCE PROCEDURE.
- Purchaser may use a commercial testing lab to produce sieve analyses.
- Sieve analysis for acceptance of aggregate shall be performed by procedure described in WSDOT FOP for WAQTC T 27/11.

6-23 ROCK GRADATION TYPES

Purchaser shall manufacture rock in accordance with the types and amounts listed in the Manufacturing list below. Rock must meet the following specifications for gradation and uniform quality during manufacture and placement into a stockpile. Purchaser shall provide a sieve analysis upon request from the Contract Administrator.

<u>Rock Type</u>	<u>Amount</u>
6" Jaw Run Rock	4770 yd ³
3" Jaw Run Rock	2000 yd ³

6-24 ROCK CRUSHING COMPLIANCE PROCEDURE

Phase I. Equipment Adjustment

Step 1:

At start up of crushing operations, the Purchaser will notify the Contract Administrator when the rock meets the gradation specifications in the contract. None of the rock crushed during this calibration period will be counted toward the amount required to be crushed, and this rock must be kept separate from accepted rock crushed later.

Step 2:

The Purchaser will test the rock. Two samples will be taken. If the rock meets specifications, crushing may begin. If the rock does not meet specifications, return to Step 1.

Phase II. Production

Step 3:

The Purchaser will continue periodic testing to ensure that rock stays in spec. Testing will take place according to the following schedule:

- After the first 500 yards
 - After every 2,000 yards thereafter.
- a) Any time a sample is out of spec, but is within 5%*, the Purchaser will be notified and a second sample will be taken later in the day. If the second sample meets specifications, the rock crushed during that day will be accepted. If the second sample also fails to meet spec, none of the rock crushed since the last acceptable test will be counted toward the amount to be crushed.
 - b) Any time a sample is out of spec and is more than 5% off in any category, none of the rock crushed since the last acceptable test will be accepted and that rock must be kept separate from the stockpile. Return to Step 1.
 - c) Purchaser is strongly encouraged to take their own samples regularly and keep their operations in spec to avoid unnecessary expenses.
 - The 5% will be applied only to sieve specs for 2" to ¼"; rock that is out of spec in larger sizes must be kept separate from the acceptable rock. Periodic visual inspection required for all rock gradations larger than 2". If in the opinion of the Contract Administrator gradations are not meeting specifications, Contract Administrator may require testing of material 2" or larger.

SUBSECTION ROCK GRADATIONS

6-28 1 ¼-INCH MINUS CRUSHED ROCK

- % Passing 1 ¼" square sieve 100%
- % Passing 5/8" square sieve 55 - 75%
- % Passing U.S. #4 sieve 20 - 50%

Of the fraction passing the No. 4 sieve, 40% to 60% must pass the No. 10 sieve.

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.

6-34 3-INCH JAW RUN ROCK

- % Passing 3" square sieve 100%
- % Passing 1 ½" square sieve 45 - 65%

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

6-39 6-INCH JAW RUN ROCK

- % Passing 6" in one dimension 100%
- % Passing 3" square sieve 45 - 65%

Rock may not contain more than 5 percent organic debris and 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")

SUBSECTION ROCK MEASUREMENT

6-55 ROCK APPLICATION MEASURED BY COMPACTED DEPTH

Measurement of specified rock depths, are defined as the compacted depth(s) using the compaction methods required in this road plan. Estimated quantities specified in the ROCK LIST are estimated truck yards. Purchaser shall apply adequate amounts of rock to

meet the specified rock depths. Specified rock depths are minimum requirements and are not subject to reduction.

SUBSECTION ROCK APPLICATION

6-70 APPROVAL BEFORE ROCK APPLICATION

Purchaser shall obtain written approval from the Contract Administrator for subgrade drainage installation included grading and 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 and in lifts not to exceed 6 inches.

6-72 ROCK APPLICATION AFTER HAULING

On the following road(s), upon completion of all hauling operations, Purchaser shall apply rock in accordance with the quantities shown on the ROCK LIST.

<u>Road</u>	<u>Stations</u>	<u>Rock Type</u>	<u>Amount</u>
PA-S-1000	0+00 – 207+50	1 ¼" Minus Crushed	100 yd ³
PA-S-1100	0+00 – 86+50	1 ¼" Minus Crushed	100 yd ³
PA-S-1120	0+00 – 44+50	1 ¼" Minus Crushed	100 yd ³
PA-S-1150	0+00 – 6+00	1 ¼" Minus Crushed	50 yd ³
PA-S-2600	0+00 – 47+30	1 ¼" Minus Crushed	100 yd ³

6-73 ROCK FOR WIDENED PORTIONS

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

6-76 DRY WEATHER ROCK COMPACTION

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

6-78 ROCK FOR SPOT PATCHING

Rock for spot patching shall be applied before any grading is done and before any rock lifts are applied. Once applied, spot patches shall be graded into the existing running surface.

SECTION 7 – STRUCTURES

SUBSECTION SIGNS

7-1 SIGN INSTALLATION

Purchaser shall purchase, install, and maintain the following road signs. Signs must be installed a minimum of 7 days before hauling logs and/or rock. Signs must comply with the Federal Highway Administration’s Manual on Uniform Traffic Control Devices.

<u>Road</u>	<u>Station</u>	<u>Sign</u>
SR 112	Junction of PA-S-1000 and SR 112	2 Truck Crossing Signs East and West
SR 112	Junction of PA-S-2600, PA-S-1100, and SR 112	2 Truck Crossing Signs East and West
SR 112	Junction of PA-S-2700 and SR 112	2 Truck Crossing Signs East and West

SUBSECTION STREAM CROSSING STRUCTURES GENERAL

7-5 STRUCTURE DEBRIS

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

7-6 STREAM CROSSING INSTALLATION

Purchaser shall install stream crossing structures in accordance with the manufacturer's requirements, and as directed by the District Engineer or their designee.

7-7 BANK PROTECTION FOR STREAM CROSSING STRUCTURES

Purchaser shall design and construct bank protection to prevent the undermining of the structure.

SUBSECTION ACCEPTANCE

7-17 INSTALLATION PRODUCTION SCHEDULE

Purchaser shall provide the Contract Administrator or their designee, with a production schedule showing projected completion dates for the following items before starting construction of the structure(s). Production schedule must include:

- dewatering
- excavation
- placement of sills, abutments
- backfill compaction, rock application and compaction

7-18 INSTALLATION STAGE ACCEPTANCE

Purchaser shall ensure that all materials and procedures used during construction comply with the design. Purchaser shall obtain written approval from the Contract Administrator or their designee, after verification by the District Engineer or designee for each stage of construction, listed in Clause 7-17 INSTALLATION PRODUCTION SCHEDULE, before starting construction on the next stage. Purchaser shall notify the Contract Administrator in writing when each construction stage is complete.

7-19 INSTALLATION FINAL ACCEPTANCE

Purchaser shall notify the Contract Administrator in writing when each structure is complete.

SUBSECTION BRIDGE INSTALLATION

7-45 PURCHASER SUPPLIED BRIDGE

Purchaser shall provide and construct each bridge listed below in accordance with this Road Plan. Refer to attached design sheets for details.

Road	Station	Length (ft.)	W.B.S.R. ¹ (ft.)	Loading/Deflection Ratio	Type	Vert. Clear ² (ft.)	Hor. Align ³ (ft.)
PA-S-2700	4+10	25	14	U80	Log Stringer	2.9	P.P.

¹W.B.S.R. = Width between shear rails.

²Vertical clearance shall be measured from 100 year flood level.

³Horizontal alignment: P.P. = on the attached plan/profile, C.S. = according to construction stakes on the ground.

7-47 PURCHASER SUPPLIED STRINGERS, ABUTMENTS AND CURBS

Purchaser is responsible for acquiring stringers and abutments from timber sale Unit 3. All stringers have been marked with an orange ribbon and pink paint ring. Stringers shall meet a minimum mid-span diameter of 22" and abutments shall meet a minimum

mid-span diameter of 22". Curbs shall meet a minimum small end diameter of 12". Stringers, abutments and curbs shall be constructed of Douglas fir.

7-51 EMBANKMENT RETENTION

Purchaser shall provide embankment retention to ensure that bridge approach embankments are stable, contained, and do not encroach the stream channel. Bin wall or Hilfiker systems are two pre-approved designs. Alternate designs for embankment retention must be submitted to District Engineer or designee for consideration. Reports and plans will be accepted or rejected within 10 working days of receipt.

7-54 PA-S-2700 BRIDGE DELINEATOR INSTALLATION

Purchaser shall install 2 4x4 wooden posts and 2 delineators on each side (4 in total; 2 inbound and 2 outbound) of the bridge with reflector stripes angled downward and guiding traffic towards the center of the bridge. Bridge delineators shall consist of 12" x 36" MUTCD 2 OM3-L and 2 OM3-R black and retroreflective yellow striped markers. The minimum width of the stripes shall be 3". At a minimum, the sheeting shall meet the specifications of Type III sheeting (high intensity sheeting) as per ASTM Specification D4956.

SUBSECTION GATE CLOSURE

7-70 GATE CLOSURE

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

<u>Road</u>	<u>Station</u>
PA-S-1000	2+30
PA-S-1150	1+00
PA-S-2600	1+30
PA-I-2600	1+00

SECTION 8 – EROSION CONTROL

8-1 SEDIMENT CONTROL STRUCTURES

On the following road(s), sediment control shall be accomplished as listed below or other methods as approved in writing by the Contract Administrator.

<u>Road</u>	<u>Stations</u>	<u>Left and/or Right</u>	<u>Comments</u>
PA-S-1100	23+55	Left and Right	Silt Fence in Ditch x2
PA-S-1120	9+20	Left and Right	Silt Fence in Ditch x2
PA-S-2700	4+10	Left and Right	Silt Fence in Ditch x2

8-2 PROTECTION FOR EXPOSED SOIL

Purchaser shall provide and evenly spread a 3-inch layer of straw or hay to all exposed soils at bridge and culvert installations within 100 feet of a stream or wetland. Soils must be covered before the first anticipated storm event. Soils may not sit exposed during any rain event.

SUBSECTION REVEGETATION

8-15 REVEGETATION

Purchaser shall spread grass seed and straw and/or hay mulch on all exposed soils including, but not limited to, stream culverts, waste areas, sidecast pullback areas, stream crossing removals, bridge installations, and other areas directed by the Contract Administrator. Revegetation of exposed soils shall be accomplished by manual dispersal of grass seed unless otherwise detailed in this Road Plan. Other methods of covering must be approved in writing by the Contract Administrator.

8-16 REVEGETATION SUPPLY

The Purchaser shall provide the all seed, mulch, straw and/or hay, matting etc..

8-17 REVEGETATION TIMING

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

8-18 PROTECTION FOR SEED

Purchaser shall provide a protective cover over the revegetated area. The protective cover may consist of but not be limited to, such items as dispersed hay mulch 3” thick or jute matting . Seed must be covered before the first anticipated storm event.

8-19 ASSURANCE FOR SEEDED AREA

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

SUBSECTION SEED, FERTILIZER, AND MULCH

8-25 GRASS SEED

Purchaser shall evenly spread the seed mixture listed below on all exposed soil at a rate of 60 pounds per acre of exposed soil. Grass seed must meet the following specifications:

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

<u>Kind and Variety of Seed in Mixture</u>	<u>% by Weight</u>	<u>Minimum % germination</u>
Perennial Rye	35-45	90
Red Fescue	30-40	90
Highland Bent	5-15	85
White Clover	10-20	90
Inert and Other Crop	0.5	

SECTION 9 – POST-HAUL ROAD WORK

SUBSECTION STRUCTURES

9-3 CULVERT MATERIAL REMOVED FROM STATE LAND

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

SUBSECTION POST-HAUL MAINTENANCE

9-5 POST-HAUL MAINTENANCE

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

<u>Road</u>	<u>Stations</u>	<u>Additional Requirements</u>
All	All	Clean culverts, clean ditches, grade road shape and compact as directed by the Contract Administrator.
PA-S-1000	0+00 – 207+50	Apply post haul rock per Clause 6-72.
PA-S-1100	0+00 – 86+50	
PA-S-1120	0+00 – 44+50	
PA-S-1150	0+00 – 6+00	
PA-S-2600	0+00 – 47+30	

SUBSECTION POST-HAUL LANDING MAINTENANCE

9-10 LANDING DRAINAGE

Purchaser shall provide for drainage of the landing surface as approved in writing by the Contract Administrator.

9-11 LANDING EMBANKMENT

Purchaser shall slope landing embankments to the original construction specifications.

SECTION 10 MATERIALS

SUBSECTION GEOTEXTILES

10-3 GEOTEXTILE FOR STABILIZATION

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

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

10-6 GEOTEXTILE FOR TEMPORARY SILT FENCE

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

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

SUBSECTION CULVERTS

10-15 CORRUGATED STEEL CULVERT

Metallic coated steel culverts must meet AASHTO M-36 (ASTM A-760) specifications. Culverts must be galvanized (zinc coated meeting AASHTO M-218).

10-17 CORRUGATED PLASTIC CULVERT

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

10-21 METAL BAND

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

10-22 PLASTIC BAND

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

10-23 RUBBER CULVERT GASKETS

Rubber gaskets must be continuous closed cell, synthetic expanded rubber gaskets conforming to the requirements of ASTM D 1056. Rubber gaskets must be used with all corrugated metal pipe coupling bands.

10-24 GAUGE AND CORRUGATION

Unless otherwise stated in the engineer’s design, metal culverts must conform to the following specifications for gage and corrugation as a function of diameter.

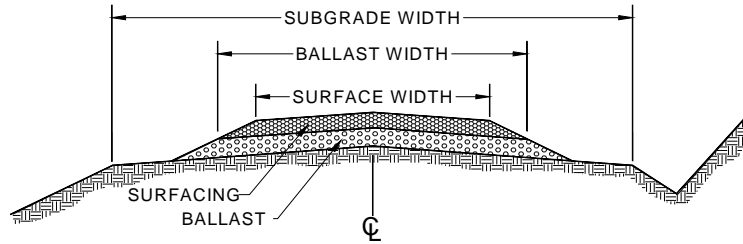
<u>Diameter</u>	<u>Gauge</u>	<u>Corrugation</u>
18"	16 (0.064")	2 2/3" X 1/2"
24" to 48"	14 (0.079")	2 2/3" X 1/2"
54" to 96"	12 (0.109")	3" X 1" or 5" x 1"

SECTION 11 SPECIAL NOTES

11-10 MISCELLANEOUS LOG STRINGER BRIDGE HARDWARE

Purchaser shall acquire hardware necessary to construct log stringer bridge including but not limited to woven geotextile, chain link fabric, wire rope, and trap staples. Hardware must meet requirements specified in Clause 10-3 GEOTEXTILE FOR STABILIZATION and BRIDGE SURFACING AND SHEAR RAIL DETAILS.

ROCK LIST SHEET

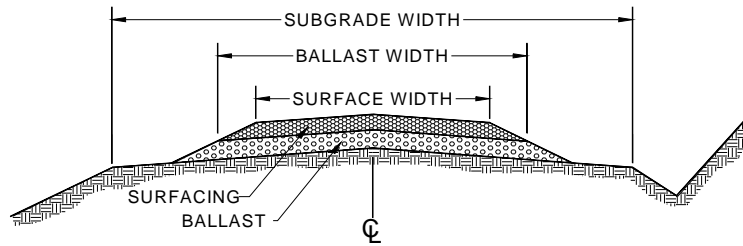


SECTION VIEW

1. Rock quantities, subtotals and totals are “truck measure” estimates. Rock shall be applied to at least the depths listed.
2. All depths are compacted depths.
3. Rock slopes shall be 1½ (H) : 1 (V).
4. All rock sources are subject to approval by the Contract Administrator.
5. Pitrun is defined as pitrun or ballast per Line 6. Crushed is defined as any crushed rock from ¼” minus to 4” minus per Line 6. Oversize is defined as oversize, quarry spalls, light loose rip rap, or heavy loose rip rap per Line 6.
6. Rock sources 1: Fraggie Rock 6” Jaw Run Rock, 2: Fraggie Rock 3” Jaw Run Rock, 3: Place Pit or Commercial 1 ¼” Minus Crushed Rock, 4: Fraggie Rock Light Loose Rip Rap

ROAD NAME	START STATION	END STATION	SUBGRADE WIDTH (ft)	Pitrun SOURCE	Pitrun WIDTH (ft)	Pitrun DEPTH (in)	Pitrun Quantity(yd ³ /sta)	Pitrun SUBTOTAL(yd ³)	Crushed SOURCE	Crushed WIDTH (ft)	Crushed DEPTH (in)	Crushed Quantity(yd ³ /sta)	Crushed Subtotal(yd ³)	Oversize/ Rip rap Source	Oversize/Rip Rap Quantity(yd ³)
PA-S-1000															
Spot Rock	0+00	207+50							3				50		
Post-Haul	0+00	207+50							3				100		
PA-S-1100															
Spot Rock	0+00	86+50							3				50		
Post-Haul	0+00	86+50							3				100		
0+75 Spur															
Lift	0+00	0+75	17	1	1	12	70	50							
PA-S-1120															
Spot Rock	0+00	44+50							3				50		
Post-Haul	0+00	44+50							3				100		
PA-S-1123															
Lift	0+00	5+75	17	1	1	12	70	400							
Culvert Install	0+10								2				20		
Culvert Install	0+50								2				20		
Culvert Install	2+30								2				20		
Culvert Install	4+60								2				20		
Turnaround	5+00			1				50							
Landing	5+75			1				50							
Totals:								1: 550					2: 80, 3: 450		

ROCK LIST SHEET CONTINUED

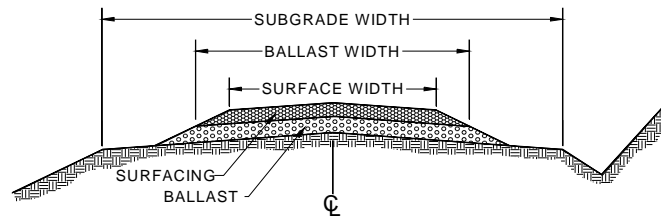


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ROAD NAME	START STATION	END STATION	SUBGRADE WIDTH (ft)	Pitrun SOURCE	Pitrun WIDTH (ft)	Pitrun DEPTH (in)	Pitrun Quantity(yd ³ /sta)	Pitrun SUBTOTAL(yd ³)	Crushed SOURCE	Crushed WIDTH (ft)	Crushed DEPTH (in)	Crushed Quantity(yd ³ /sta)	Crushed Subtotal(yd ³)	Oversize/ Rip rap Source	Oversize/Rip Rap Quantity(yd ³)
PA-S-1150															
Post-Haul	0+00	6+00							3				50		
Turnaround	6+00			1			50								
PA-S-1151															
Lift	0+00	5+65	17	1	12	12	70	400							
Culvert Install	0+65								2				20		
PA-S-1161															
Lift	0+00	3+50	17	1	12	12	70	250							
Culvert Install	2+50								2				20		
Landing	3+50			1			50								
PA-S-2600															
Post-Haul	0+00	47+30							3				100		
PA-S-2620															
Lift	0+00	15+95	17	1	12	12	70	1120							
Culvert Install	0+25								2				20		
Culvert Install	1+15								2				20		
Turnaround	4+60			1			50								
Culvert Install	6+05								2				20		
Landing	8+15			1			50								
Culvert Install	9+85								2				20		
Totals:								1: 1970					2: 120, 3: 150		

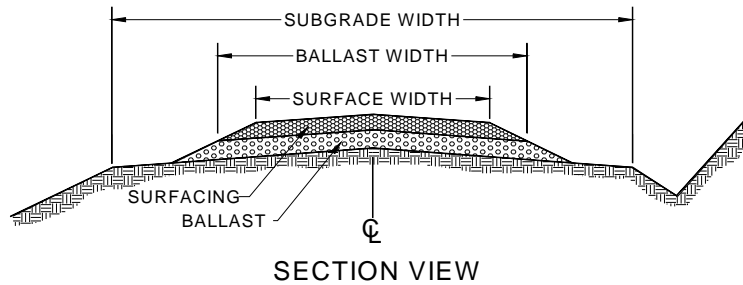
ROCK LIST SHEET CONTINUED



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ROAD NAME	START STATION	END STATION	SUBGRADE WIDTH (ft)	Pitrun SOURCE	Pitrun WIDTH (ft)	Pitrun DEPTH (in)	Pitrun Quantity(yd ³ /sta)	Pitrun SUBTOTAL(yd ³)	Crushed SOURCE	Crushed WIDTH (ft)	Crushed DEPTH (in)	Crushed Quantity(yd ³ /sta)	Crushed Subtotal(yd ³)	Oversize/ Rip rap Source	Oversize/Rip Rap Quantity(yd ³)
PA-S-2620 (cont.)															
Turnaround	12+45			1				50							
Culvert Install	13+40								2				20		
Landing	15+95			1				50							
PA-S-2700															
Lift	0+00	33+70							2	12	3	15	510		
Culvert Install	2+40								2				20		
Bridge Install	4+10			1				180	2				90	4	20
Culvert Install	5+05								2				20		
Culvert Install	6+40								2				20		
Culvert Install	8+80								2				20		
Culvert Install	10+95								2				20		
Culvert Install	15+40								2				20		
Culvert Install	17+85								2				20		
Culvert Install	22+75								2				20		
Culvert Install	28+50								2				20		
Lift	33+70	56+05							2	12	6	35	780		
Culvert Install	33+70								2				20		
Culvert Install	46+85								2				20		
Culvert install	50+70								2				20		
Culvert Install	53+75								2				20		
Totals:								1: 280					2: 1660		4: 20

ROCK LIST SHEET CONTINUED



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ROAD NAME	START STATION	END STATION	SUBGRADE WIDTH (ft)	Pitrun SOURCE	Pitrun WIDTH (ft)	Pitrun DEPTH (in)	Pitrun Quantity(yd ³ /sta)	Pitrun SUBTOTAL(yd ³)	Crushed SOURCE	Crushed WIDTH (ft)	Crushed DEPTH (in)	Crushed Quantity(yd ³ /sta)	Crushed Subtotal(yd ³)	Oversize/ Rip rap Source	Oversize/Rip Rap Quantity(yd ³)
PA-S-2720															
Lift	0+00	6+00	17	1	12	12	70	420							
Culvert Install	0+10								2				20		
Landing	6+00			1				50							
PA-S-2730															
Lift	0+00	10+75	17	1	12	12	70	750							
Culvert Install	0+30								2				20		
Turnout	1+65			1				30							
Culvert Install	2+25								2				20		
Culvert Install	6+70								2				20		
Culvert Install	9+00								2				20		
Turnaround	10+00			1				50							
Landing	10+75			1				50							
PA-S-2740															
Lift	0+00	7+35	17	1	12	12	70	520							
Culvert Install	1+50								2				20		
Culvert Install	5+70								2				20		
Turnaround	6+40			1				50							
Landing	7+35			1				50							
Totals:							1: 1970						2: 140		
Grand Totals:							1: 4770						2: 2000, 3: 600		4: 20

CULVERT LIST

ROAD NAME	STATION	CULVERT DIAMETER (in)	CULVERT LENGTH (ft)	FLUME LENGTH (ft)	RIP RAP - INLET (cy)	RIP RAP - OUTLET (cy)	BACKFILL MATERIAL	NOTES
PA-S-1100	72+15	18						Clean Inlet and Outlet
PA-S-1123	0+10	18	30				CR	Culvert Install
PA-S-1123	0+50	18	30				CR	Culvert Install
PA-S-1123	2+30	18	30				CR	Culvert Install
PA-S-1123	4+60	18	40				CR	Culvert Install
PA-S-1151	0+65	18	30				CR	Culvert Install
PA-S-1161	2+50	18	30				CR	Culvert Install
PA-S-2620	0+25	18	30				CR	Culvert Install
PA-S-2620	1+15	18	40				CR	Culvert Install
PA-S-2620	6+05	24	30				CR	Culvert Install*
PA-S-2620	9+85	24	30				CR	Culvert Install*
PA-S-2620	13+40	24	30				CR	Culvert Install*
PA-S-2700	2+40	18	30				CR	Culvert Install
PA-S-2700	5+05	18	30				CR	Culvert Install
PA-S-2700	6+40	18	30				CR	Culvert Install
PA-S-2700	8+80	18	30				CR	Culvert Install
PA-S-2700	10+95	18	30				CR	Culvert Install
PA-S-2700	15+40	18	30				CR	Culvert Install
PA-S-2700	17+85	18	30				CR	Culvert Install
PA-S-2700	22+75	18	30				CR	Culvert Install
PA-S-2700	28+50	18	30				CR	Culvert Install
PA-S-2700	33+70	18	30				CR	Culvert Install
PA-S-2700	46+85	18	30				CR	Culvert Install
PA-S-2700	50+70	18	30				CR	Culvert Install
PA-S-2700	53+75	18	30				CR	Culvert Install
PA-S-2720	0+10	18	30				CR	Culvert Install
PA-S-2730	0+30	18	30				CR	Culvert Install
PA-S-2730	2+25	18	50				CR	Culvert Install
PA-S-2730	6+70	18	30				CR	Culvert Install
PA-S-2730	9+00	18	30				CR	Culvert Install
PA-S-2740	1+50	18	30				CR	Culvert Install

FISH STREAM WORK PROVISIONS

1. TIMING LIMITATIONS: The fish culvert project may begin July 1 and shall be completed by September 30.
2. Work shall conform to plans and specifications in the road plan.
3. Prior to the commencement of in-stream work, the Purchaser shall isolate the work area in a manner that fish cannot enter the work area, capture and safely move fish and other fish life from the work area. The Purchaser shall have fish capture and transportation equipment ready and on the job site. Captured fish shall be immediately and safely transferred to free-flowing water downstream of the work area.

TEMPORARY STREAM FLOW BYPASS

4. All in-stream work shall be conducted in the dry or in isolation from the stream flow by the installation of a bypass flume/pipe or by pumping the flow around the work area, back into the stream below the work area. Waste water pumped from within the work area shall terminate on the forest floor, sufficient distance from the stream to filter sediment prior to entering the stream.
5. The temporary bypass to divert flow around the work area shall be in place prior to initiation of other work in the wetted perimeter.
6. A sandbag revetment or similar device shall be installed at the bypass inlet to divert the entire flow through the bypass.
7. The bypass shall be of sufficient size to pass all flows and debris for the duration of the project.
8. If a pump is used for diverting water from the stream where fish are present, as per RCW 77.57.010 and 77.57.070, the pump intake shall be equipped with a fish guard to prevent passage of fish into the diversion pump. The pump intake shall be screened with 1/8 inch mesh to prevent fish from entering the pump. Velocity through the screened intake shall be less than 0.4 feet per second. Screens shall be maintained to prevent injury or entrapment of juvenile fish.

WATER QUALITY

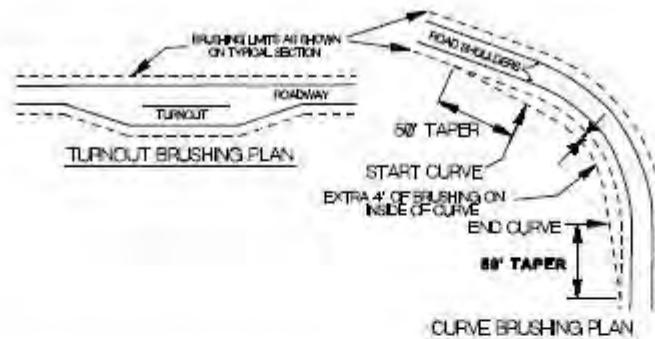
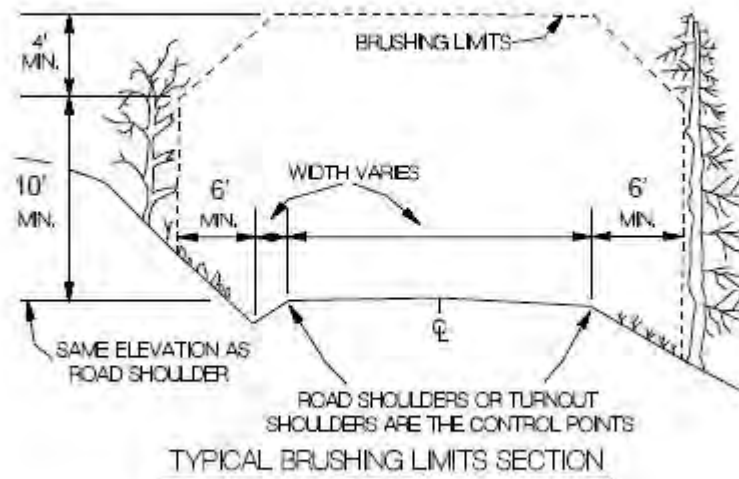
9. Extreme care shall be taken to ensure that no petroleum products, hydraulic fluid, chemicals, or any other toxic or deleterious materials are allowed to enter or leach into the stream.

COMPACTION LIST

Alternate forms/methods to using vibratory smooth drum compactor to compact the road classes listed in the table below shall be approved per District Engineer.

Road	Stations	Type	Max Depth Per Lift (inches)	Equipment Type	Minimum Equipment Weight (lbs)	Minimum Number of Passes	Maximum Operating Speed (mph)
Pre-Haul	All	Culvert Backfill	8"	Jumping Jack		3	
Pre-Haul	All	Rock Lifts	6"	Vibratory Smooth Drum	6,000	3	3
Pre-Haul	All	Pre-Haul Surface		Vibratory Smooth Drum	6,000	3	3
Construction	All	Subgrade (Except Puncheon)	6"	Vibratory Smooth Drum	6,000	2	3
Construction	All	Culvert Backfill	8"	Jumping Jack		3	
Construction	All	Rock Placement	6"	Vibratory Smooth Drum	6,000	2	3
Reconstruction	All	Subgrade (Except Puncheon)	6"	Vibratory Smooth Drum	6,000	2	3
Reconstruction	All	Culvert Backfill	8"	Jumping Jack		3	
Reconstruction	All	Rock Placement	6"	Vibratory Smooth Drum	6,000	2	3
Post-Haul Maintenance	All	Rock Placement	6"	Vibratory Smooth Drum	6,000	2	3

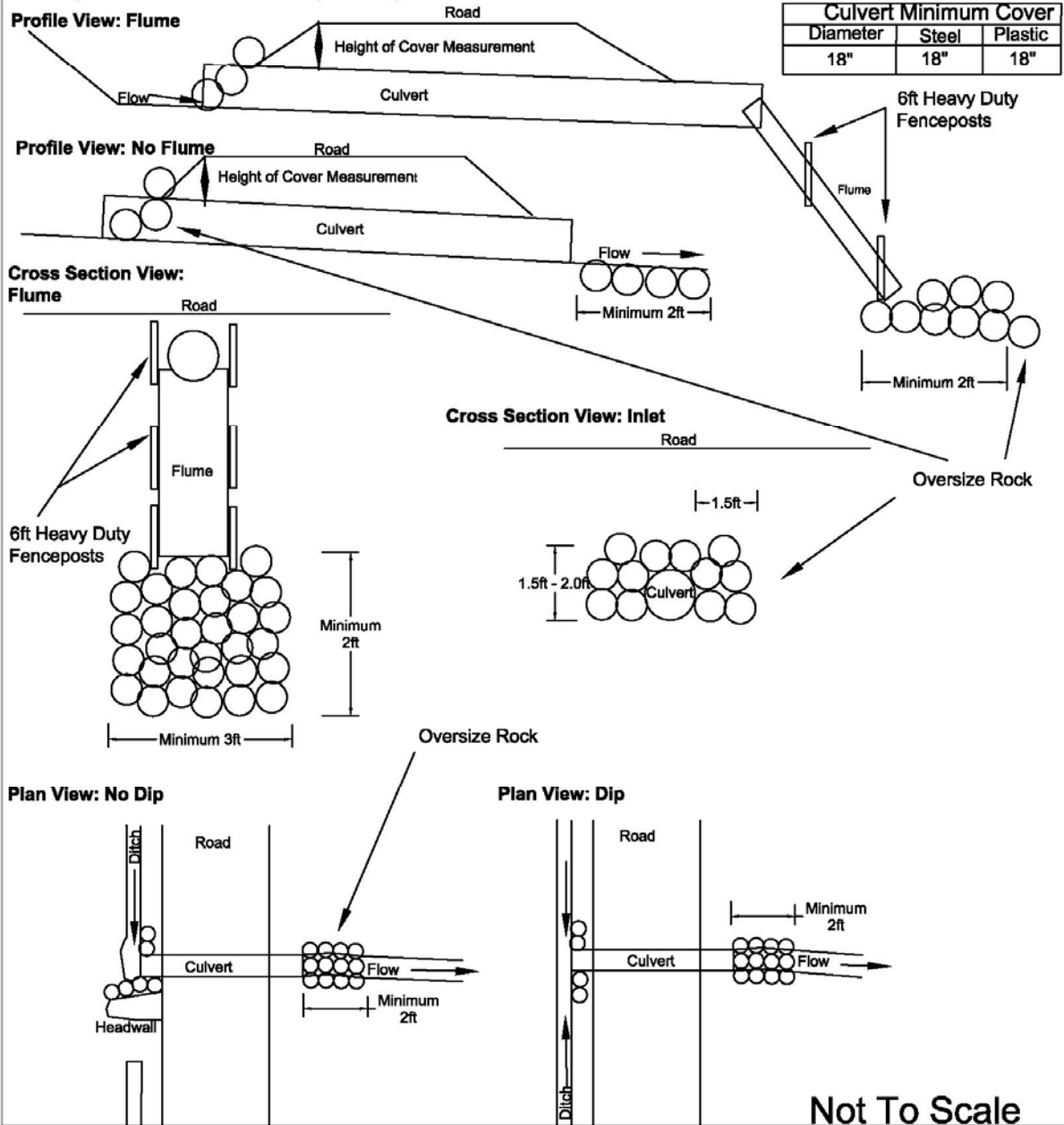
BRUSHING DETAIL



1. All vegetation within the brushing limits shall be cut to within 3 inches of the ground, unless otherwise directed by the Contract Administrator
2. All brush, trees, limbs, etc. shall be removed from the road surface, cut banks, culvert inlets/outlets, and ditch lines
3. All debris that may roll or move into the ditch line shall be removed and placed in a stable location

Typical Cross Drain Culvert Installation Detail Sheet

- Culvert lay shall not exceed 10%.
- Flumes longer than 10ft shall be staked on both sides at maximum intervals of 10ft with 6ft heavy duty steel fence posts, and fastened securely to the posts with No. 10 galvanized smooth wire or bolted to the fence posts.
- Oversize shall be placed using a "zero height drop method", and shall be set in conjunction with the culvert installation.
- Oversize shall be placed at headwalls, along the fill at the inlet, and at the end off flumes in accordance with this Detail. On culverts with no flume oversize shall be placed at the outlet as an energy dissipater as specified in this Detail. All oversize distance to be determined by the Contract Administrator.
- Backfill compaction for installations on existing roads shall be achieved using a jumping jack, or plate compactor on lifts not to exceed 8in. 3 complete passes per lift is required for compaction. Backfill shall be placed and compacted evenly on both sides of the culvert. Care shall be taken to ensure adequate compaction of backfill material under the haunches of the pipe. Excavation trench width shall be at least culvert diameter plus at least the width of the compactor footprint used.



Typical Type Ns, Np Culvert Installation Detail Sheet.

-Water shall be diverted away from the work site before any "in stream" work begins, and shall continue until culvert installation is complete.

-Culvert lay shall match stream gradient up to 5%.

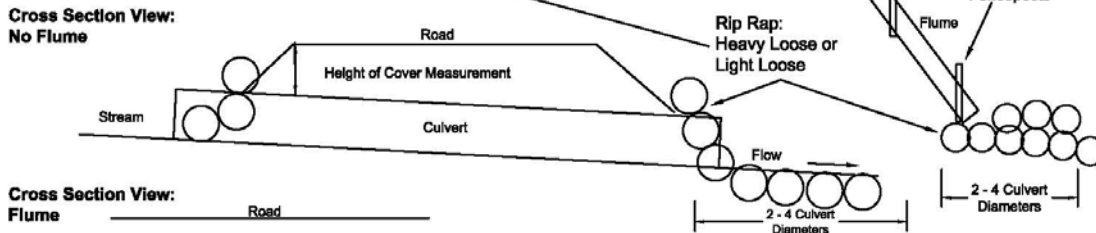
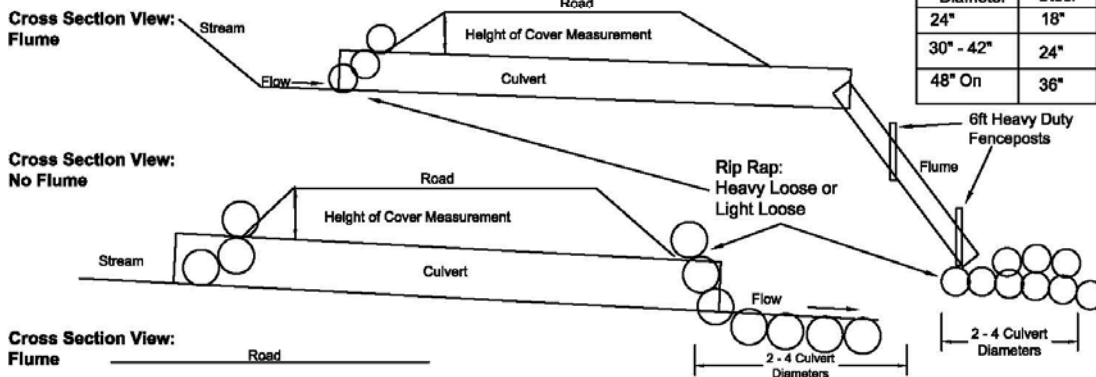
-Flumes longer than 10ft shall be staked on both sides at maximum intervals of 10ft with 6ft heavy duty steel fence posts, and fastened securely to the posts with No. 10 galvanized smooth wire or bolted to the fence posts.

-Rip rap shall be placed using a "zero height drop method", and shall be set in conjunction with the culvert installation.

-Rip rap shall be placed at headwalls, along the fill at the inlet, and at the end off flumes in accordance with this Detail. On culverts with no flume rip rap shall be placed along the fill at the outlet, unless there is stream drop or it is called for in the Road Plan, at which point it will be installed as an energy dissipater at the end of the culvert as specified in this Detail. All rip rap distance to be determined by the Contract Administrator or the District Engineer.

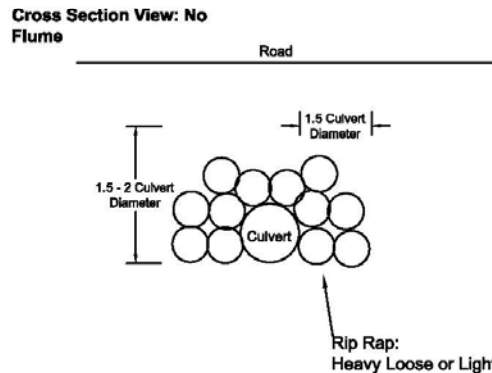
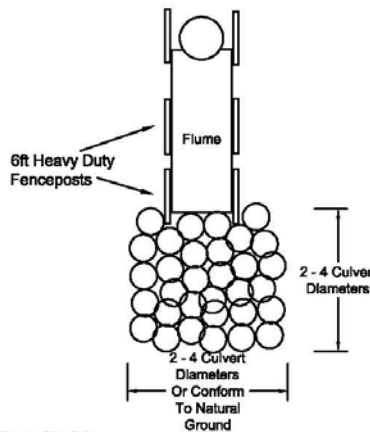
-Backfill compaction shall be achieved using a jumping jack, walk behind vibratory roller, or plate compactor on lifts not to exceed 8in. 3 complete passes per lift is required for compaction. Backfill shall be placed and compacted evenly on both sides of the culvert. Care shall be taken to ensure adequate compaction of backfill material under the haunches of the pipe. Excavation trench width shall be at least culvert diameter plus 3 times the width of the compactor footprint used.

Culvert Minimum Cover		
Diameter	Steel	Plastic
24"	18"	24"
30" - 42"	24"	24"
48" On	36"	36"

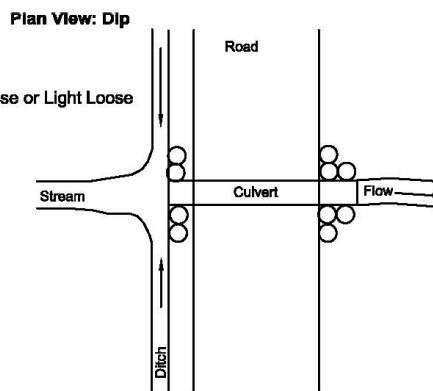
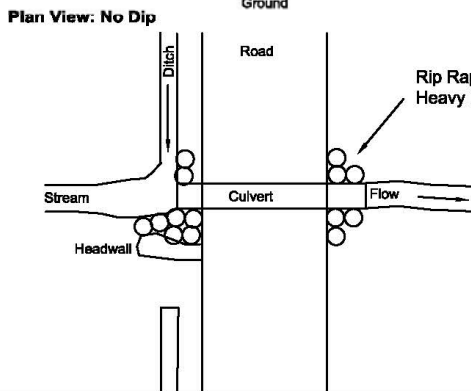


Cross Section View: Flume

Cross Section View: No Flume



Cross Section View: No Flume

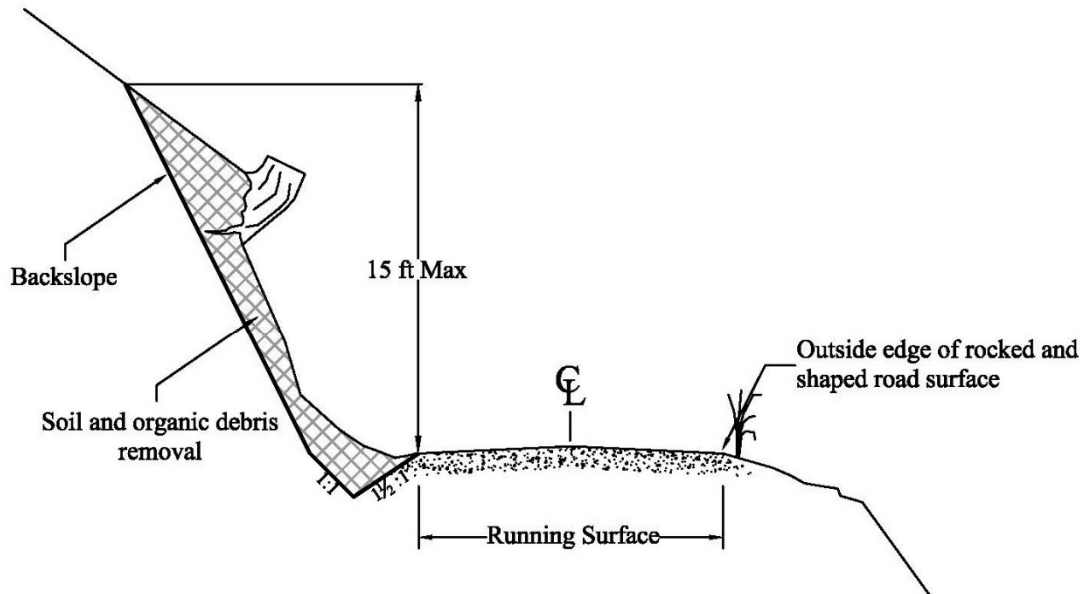


Plan View: No Dip

Plan View: Dip

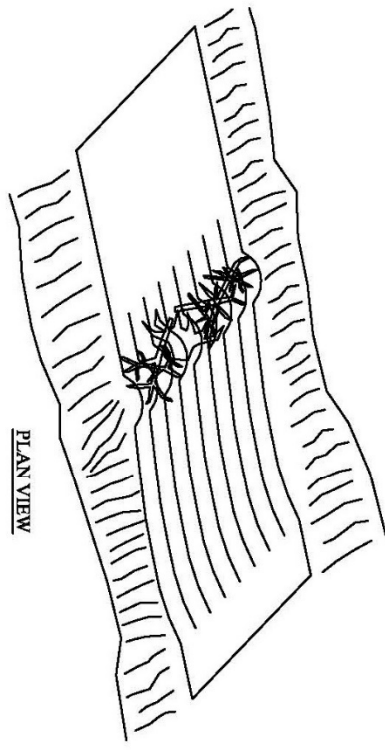
Not To Scale

Ditch Cleaning Detail

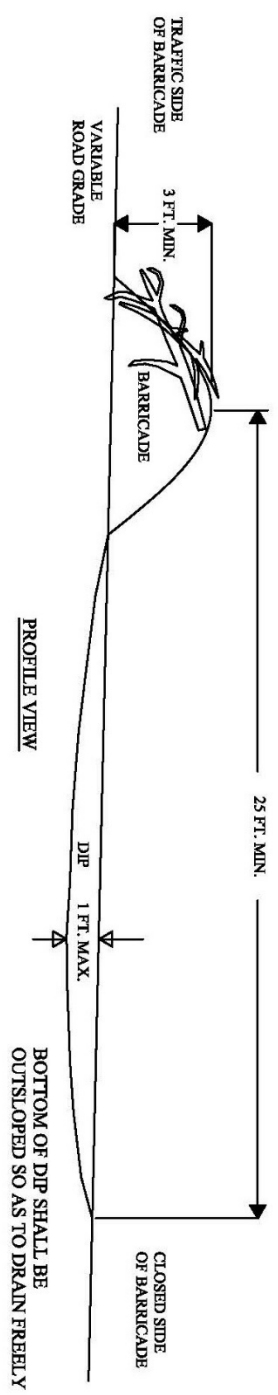


1. The backslope shall be no steeper than $\frac{1}{2}:1$, unless the material is hardpan or solid rock, in which case it may be $\frac{1}{4}:1$.
2. If there is sufficient width for the ditch without affecting the cut bank, then removing bank material is not required.
3. Bank material above the ditch shall be removed to a maximum height of 15 feet, if needed to meet the requirements of this detail.
4. If there is insufficient width to clean or construct a ditch without disturbing more than 15 vertical feet of bank, the Contract Administrator may authorize changes to this plan in order to still meet the intent of having a ditch, while staying within the excavation limits already set.
5. Ditch cleaning or construction shall not shrink the running surface of the road.

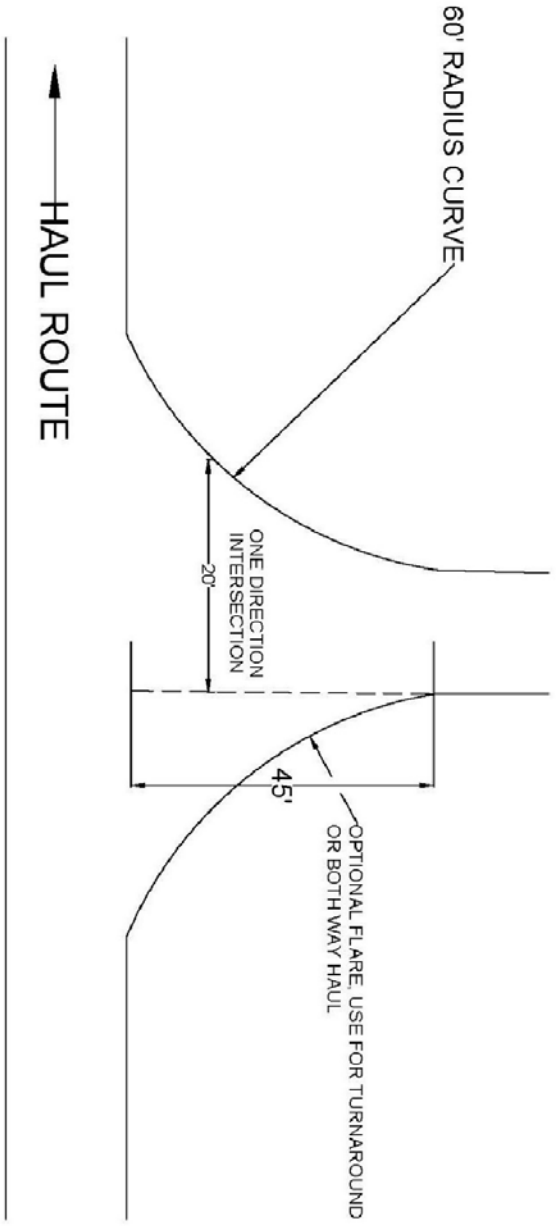
EARTHEN BARRICADE DETAIL



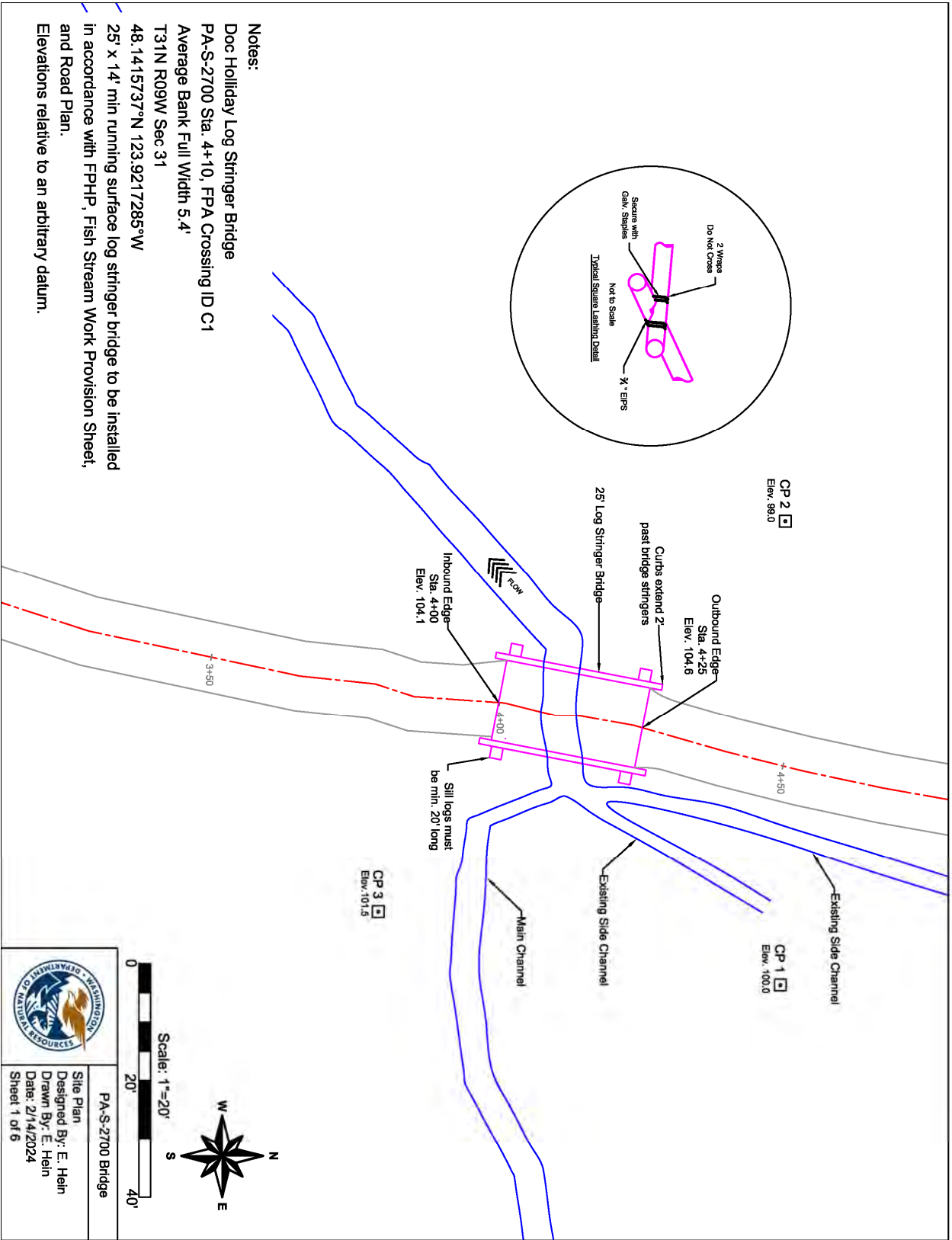
SLASH AND ROOT WADS SHALL BE INCORPORATED INTO THE TRAFFIC SIDE OF THE BARRICADE.

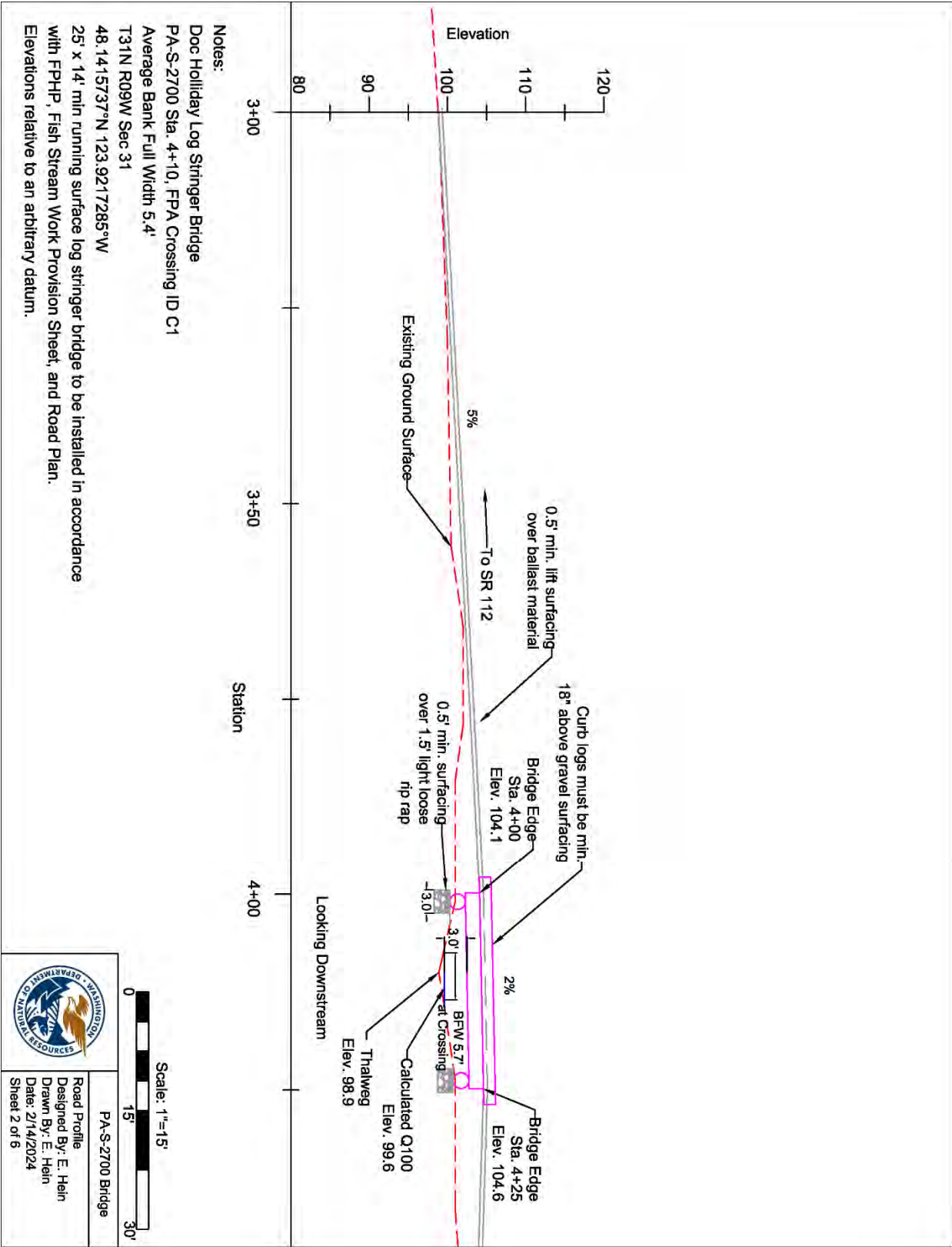


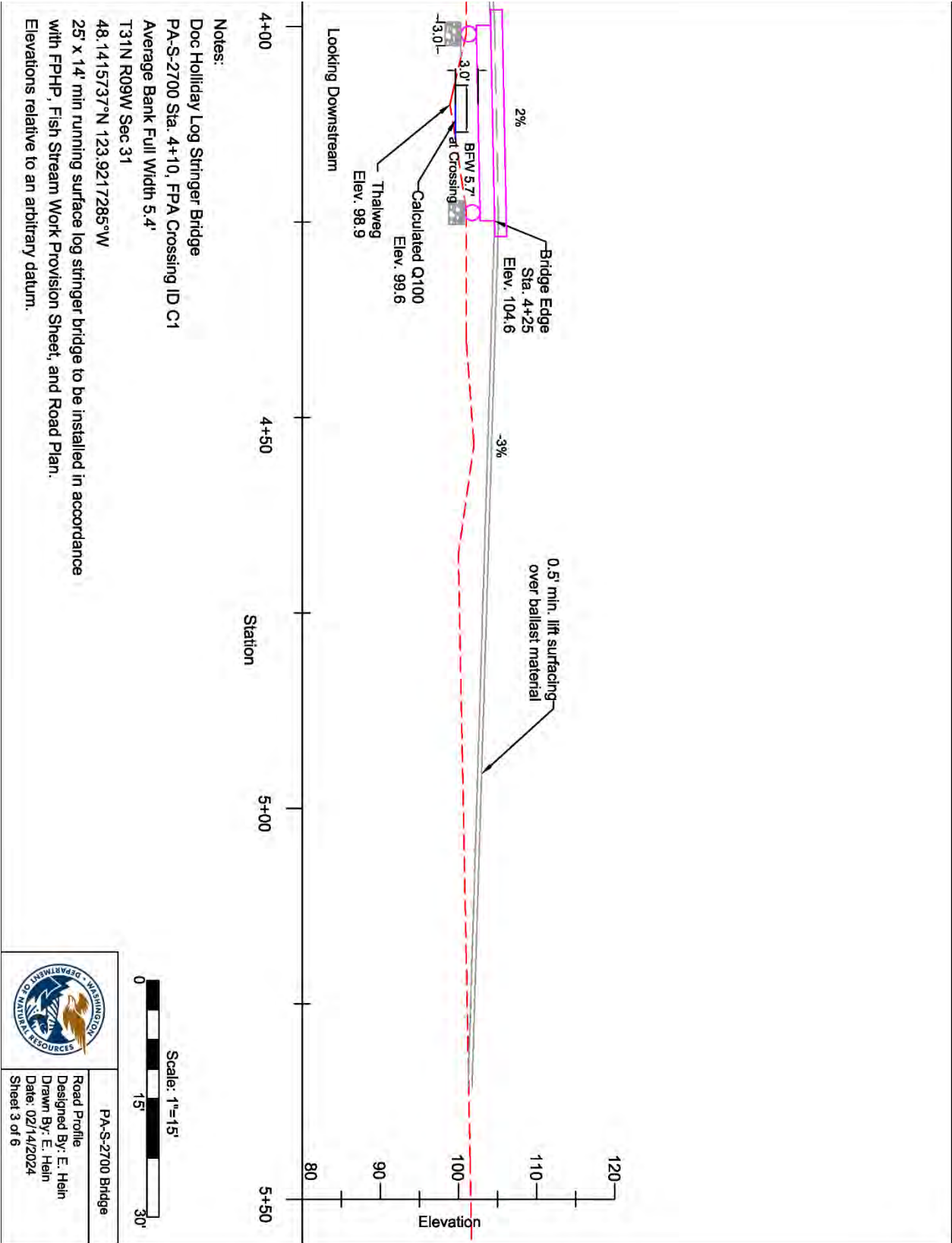
TYPICAL INTERSECTION



NOT TO SCALE





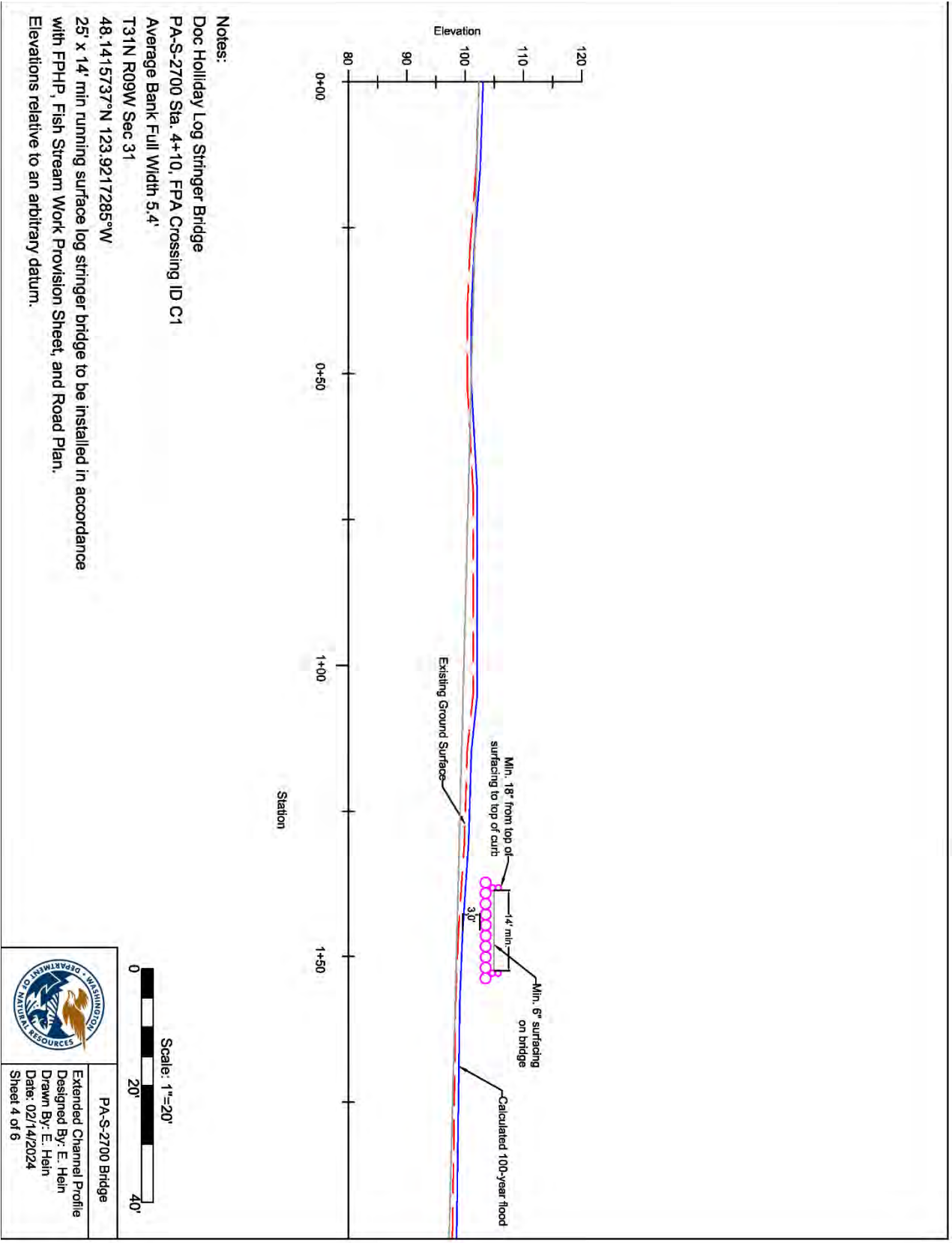


Notes:
 Doc Holliday Log Stringer Bridge
 PA-S-2700 Sta. 4+10, FPA Crossing ID C1
 Average Bank Full Width 5.4'
 T31N R09W Sec 31
 48.1415737°N 123.9217285°W
 25' x 14' min running surface log stringer bridge to be installed in accordance
 with FPHP, Fish Stream Work Provision Sheet, and Road Plan.
 Elevations relative to an arbitrary datum.



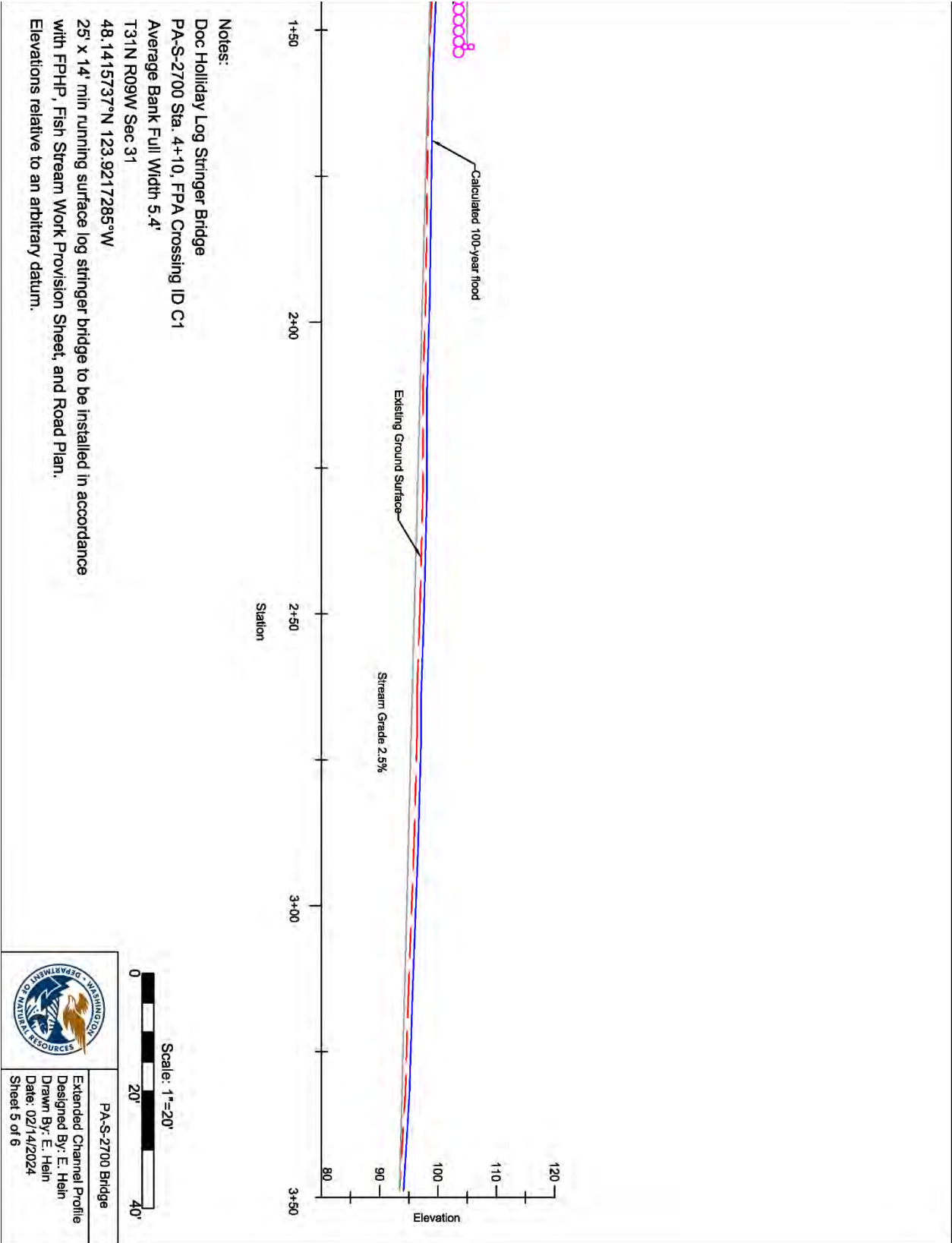
PA-S-2700 Bridge
 Road Profile
 Designed By: E. Hehn
 Drawn By: E. Hehn
 Date: 02/14/2024
 Sheet 3 of 6





Notes:
 Doc Holliday Log Stringer Bridge
 PA-S-2700 Sta. 4+10, FPA Crossing ID C1
 Average Bank Full Width 5.4'
 T31N R09W Sec 31
 48.1415737°N 123.9217285°W
 25' x 14' min running surface log stringer bridge to be installed in accordance with FPHIP, Fish Stream Work Provision Sheet, and Road Plan.
 Elevations relative to an arbitrary datum.

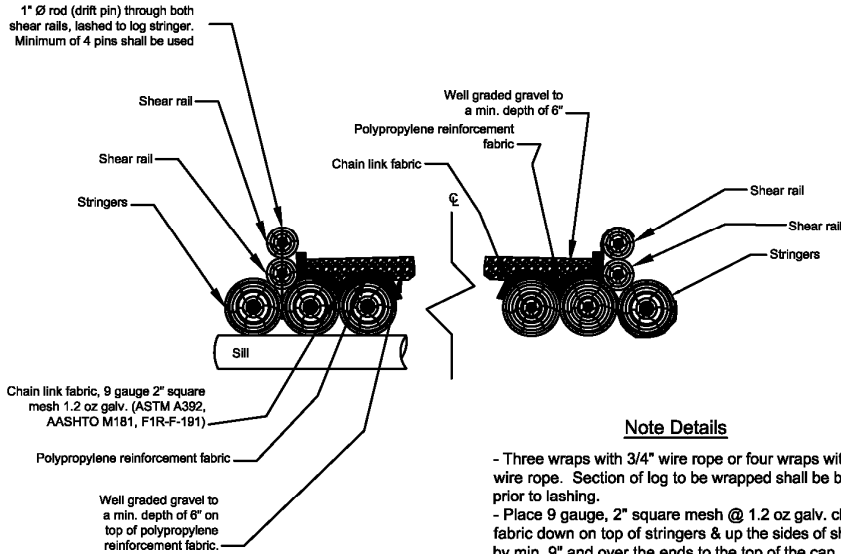
	PA-S-2700 Bridge
	Extended Channel Profile Designed By: E. Hein Drawn By: E. Hein Date: 02/14/2024 Sheet 4 of 6



Notes:
 Doc Holliday Log Stringer Bridge
 PA-S-2700 Sta. 4+10, FPA Crossing ID C1
 Average Bank Full Width 5.4'
 T31N R09W Sec 31
 48.1415737°N 123.9217285°W
 25' x 14' min running surface log stringer bridge to be installed in accordance with FPHP, Fish Stream Work Provision Sheet, and Road Plan.
 Elevations relative to an arbitrary datum.

	PA-S-2700 Bridge
	Extended Channel Profile Designed By: E. Hehn Drawn By: E. Hehn Date: 02/14/2024 Sheet 5 of 6

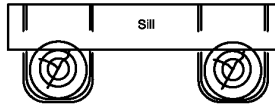
**Bridge Surfacing & Shear Rail
Details**



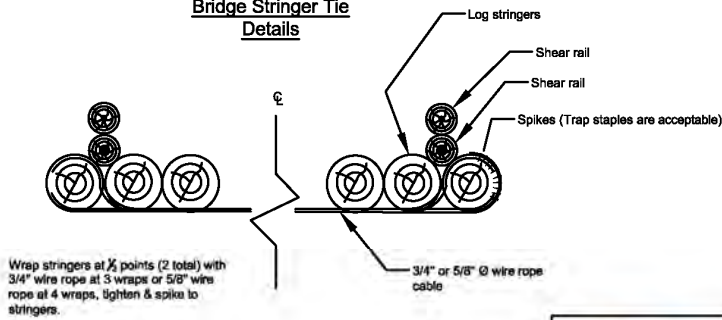
Note Details

- Three wraps with 3/4" wire rope or four wraps with 5/8" wire rope. Section of log to be wrapped shall be barked prior to lashing.
- Place 9 gauge, 2" square mesh @ 1.2 oz galv. chain link fabric down on top of stringers & up the sides of shear rails by min. 9" and over the ends to the top of the cap.
- After placement of chain link fabric, place polypropylene reinforcement fabric over the chain link fabric.
- Place well graded gravel over the polypropylene reinforcement fabric to a min. depth of 6". Finished surface elevation shall transition smoothly to road surface.
- Rail logs shall be selected and placed so that at least 15' are free and above the top of the gravel surfacing.

**Lashing
Detail**



**Bridge Stringer Tie
Details**



	PA-S-2700 Bridge
	Stringer and Rail Details Designed By: G. Ellis Drawn By: G. Ellis Date: 10/30/2019 Sheet 6 of 6

Fraggle Rock Pit
ROCK SOURCE DEVELOPMENT PLAN
T30N R09W Sec 9

PIT USE REQUIREMENTS

1. Mining shall begin in the development shown on pit plan.
2. All vegetation including stumps shall be cleared a minimum 20 feet beyond the top of all working faces. Trees shall be cleared to a minimum of $\frac{3}{4}$ of height of the tallest tree adjacent to the pit. The Contractor shall maintain a minimum of 10 foot wide stripped area from the pit face at all times.
3. Root wads and organic debris larger than one cubic foot in volume shall be separated from overburden material and piled in an area designated by the Contract Administrator.
4. All exposed soils shall be grass seeded in accordance with Road Plan clause 8-25.
5. Activity restrictions per Clause 1-25.
6. Only the quantities and sorts specified in this road plan for this sale may be used or manufactured, unless otherwise approved by the Contract Administrator in writing.
7. Maintain drainage of the pit floor and all drainage structures within the pit boundaries. The pit floor shall have continuity of slope be left in a smooth and neat condition, providing drainage to the southeast at a minimum of 2 percent. All knobs, bumps, or extrusions shall be removed to the designated floor level by excavation or drill and shoot techniques.
8. Excavated face height shall not exceed 20 feet and shall be sloped no steeper than 1/4:1.
9. Excavated slopes shall have a 1 1/2:1 back slope or less at the completion of operations unless otherwise stated in Clause 4-5.
10. A minimum 4 foot high berm shall be constructed and constantly maintained along the upper edge of excavated pit faces. No pit faces shall be left unblocked at any time.
11. All operations shall be completed prior to the end of each operating season, including but not limited to: drainage maintenance, sloping of the excavated face, and construction of berms, unless otherwise approved in writing by the Contract Administrator.
12. At the end of operations, pit faces and walls shall be scaled and cleared of loose and overhanging material, benches shall have safety berms constructed or access blocked to highway vehicles. Upon completion of operations in the pit, the area will be left in a condition that will not endanger public safety, damage property, or be hazardous to animal or human life. The contractor shall use Light Loose Rip Rap to block the drill trail.
13. All material shall remain the property of the State.
14. At the conclusion of operations, Purchaser shall ask the Contract Administrator for written approval of the final rock source condition and compliance with the terms of this plan.
15. All work shall be conducted according to relevant specifications in this Road Plan, and the Contract Administrator.
16. Purchaser shall give the Contract Administrator a minimum of 7 days' notice prior to commencing any operations.

STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES
OLYMPIC REGION

INFORMATIONAL BLASTING PLAN

Timber Sale/Project Name: _____ App./Project No.: _____

1. Blaster-in-Charge: Name: _____
Company: _____
Address: _____

Telephone: _____
2. Quarry Name/Location: _____
3. Total Estimated Cubic Yards in Blast (loose): _____
4. Hole Spacing: _____
5. Burden: _____
6. Hole Diameter: _____
7. Hole Depth: _____
8. Sub Drill: _____
9. Number of Holes: _____
10. Stemming Depth: _____
11. Explosive (mfg., name, density, %, V.O.D.): _____

12. Type and Size of Primer (if applicable): _____
13. Total Weight of Primers for Shot: _____
14. Calculated Powder Factor/Cubic Yard: _____
15. Number of Delays (in M.S.): _____

16. Number of Holes Fired on Each Delay: _____

17. Total Amount of Explosives Fired on Each Delay: _____

18. Type of Blasting Machine: _____

19. Date, Start Drilling: _____
20. Date and Time, Start Loading: _____
21. Date and Time of Blast (approx.): _____

22. Detail drawing of delay system (show hole pattern and delays in milliseconds). Attach additional sheets if required:

23. Typical cross-section of hole (show primer, main charge, sub drill, and stemming):

23. Submitted by: _____ Date: _____

24. Received by: _____ Date: _____

Note: Attach copies of manufacturer=s data sheet(s) for explosive and caps.

Place Pit
ROCK SOURCE DEVELOPMENT PLAN
T31N R07W Sec 33

PIT USE REQUIREMENTS

1. Mining shall begin in the development shown on pit plan.
2. All vegetation including stumps shall be cleared a minimum 20 feet beyond the top of all working faces. Trees shall be cleared to a minimum of $\frac{3}{4}$ of height of the tallest tree adjacent to the pit. The Contractor shall maintain a minimum of 10 foot wide stripped area from the pit face at all times.
3. Root wads and organic debris larger than one cubic foot in volume shall be separated from overburden material and piled in an area designated by the Contract Administrator.
4. All exposed soils shall be grass seeded in accordance with Road Plan clause 8-25.
5. Activity restrictions per Clause 1-25 and Clause 1-27.
6. Only the quantities and sorts specified in this road plan for this sale may be used or manufactured, unless otherwise approved by the Contract Administrator in writing.
7. Maintain drainage of the pit floor and all drainage structures within the pit boundaries. The pit floor shall have continuity of slope be left in a smooth and neat condition, providing drainage to the southeast at a minimum of 2 percent. All knobs, bumps, or extrusions shall be removed to the designated floor level by excavation or drill and shoot techniques.
8. Excavated face height shall not exceed 20 feet and shall be sloped no steeper than 1/4:1.
9. Excavated slopes shall have a 1 1/2:1 back slope or less at the completion of operations unless otherwise stated in Clause 4-5.
10. A minimum 4 foot high berm shall be constructed and constantly maintained along the upper edge of excavated pit faces. No pit faces shall be left unblocked at any time.
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12. At the end of operations, pit faces and walls shall be scaled and cleared of loose and overhanging material, benches shall have safety berms constructed or access blocked to highway vehicles. Upon completion of operations in the pit, the area will be left in a condition that will not endanger public safety, damage property, or be hazardous to animal or human life. The contractor shall use Light Loose Rip Rap to block the drill trail.
13. All material shall remain the property of the State.
14. At the conclusion of operations, Purchaser shall ask the Contract Administrator for written approval of the final rock source condition and compliance with the terms of this plan.
15. All work shall be conducted according to relevant specifications in this Road Plan, and the Contract Administrator.
16. Purchaser shall give the Contract Administrator a minimum of 7 days' notice prior to commencing any operations.

SUMMARY - Road Development Costs														
SALE NAME:	Doc Holliday	CONTRACT#:	30-103767	REGION:	Olympic	DISTRICT:	Straits							TOTAL
LEGAL DESCR PTION:	0												SHEET #2-5	
ROAD NAME:	0+75 Spur	PA-S-1123	PA-S-1161	PA-S-2620	PA-S-2720	PA-S-2730	PA-S-2740	PA-S-1151	PA-S-2700	PA-S-1000	PA-S-1100	TOTAL:		
ROAD TYPE:	Construction	Construction	Construction	Construction	Construction	Construction	Recon.	Recon.	Prehaul	Prehaul	TOTAL:			
NUMBER OF STATIONS:	0.75	5.75	3.50	15.95	6.00	10.75	7.35	5.65	22.35	207.50	89.50	375.05	651.55	
SIDESLOPE:	20%	25%	25%	30%	20%	35%	30%	20%	20%	0%	0%			
CLEARING AND GRUBBING:	\$87	\$664	\$404	\$3,158	\$693	\$2,129	\$1,455	\$653	\$2,581	\$0	\$0	\$11,824	\$0	
ROAD BRUSHING:	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$102	\$402	\$3,735	\$1,611	\$5,850	\$2,489	
EXCAVATION AND FILL:	\$197	\$1,695	\$1,032	\$5,224	\$1,572	\$4,225	\$2,407	\$1,480	\$5,856	\$0	\$0	\$33,686	\$0	
ROAD GRADING:	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$48	\$189	\$1,753	\$756	\$2,746	\$5,506	
DITCH CLEANING/CONSTRUCTION:	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$220	\$872	\$0	\$0	\$1,092	\$0	
ROCK TOTALS (Cu. yds.)/ROCK COSTS:														
Ballast:	4,767	4,770	50	500	300	1,320	470	880	620	400	0	0	4537	230
Surface:	2,600	2,600	0	80	20	100	20	80	40	20	860	50	50	1320
Over size:	20	20	0	\$2,245	\$568	\$2,764	\$568	\$2,306	\$1,154	\$347	\$11,433	\$946	\$979	\$32,453
CULVERTS AND FLUMES:	\$0	\$0	\$0	\$4,004	\$924	\$5,433	\$924	\$4,312	\$1,848	\$924	\$1,848	\$0	\$924	\$21,141
STRUCTURES:	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,500
MISC. EXPENSES:	\$6	\$45	\$28	\$126	\$67	\$85	\$58	\$45	\$177	\$1,639	\$784	\$3,060	\$5,147	\$5,147
OVERHEAD:	\$129	\$1,814	\$919	\$4,254	\$1,374	\$3,160	\$2,046	\$1,444	\$2,102	\$727	\$455	\$18,422	\$6,054	\$6,054
TOTAL COSTS:	\$1,738	\$24,483	\$12,400	\$57,430	\$18,546	\$42,663	\$27,615	\$17,483	\$25,459	\$8,800	\$5,509	\$242,126	\$71,450	\$71,450
COST PER STATION:	\$2,317	\$4,258	\$3,543	\$3,601	\$3,091	\$3,969	\$3,757	\$3,094	\$1,139	\$42	\$62	\$646	\$110	\$110
MOBILIZATION:				\$20,100										
ROAD DEACTIVATION AND ABANDONMENT COSTS:				\$890										
Pit Work				\$0										
NOTE: This appraisal has no allowance for profit and risk.														
Sheet 1 of 3														
Plans to be furnished by:														
Road Standard		Const.	Reconst.	Prehaul	Posthaul	TOTAL (All Roads) =		SALE VOLUME MBF =		TOTAL COST PER MBF =		TOTAL COST PER STATION=		Date: 01/23/24
Total Costs =		\$189,899	\$47,967	\$69,466	\$23,502	\$334,566		2,309		\$144.90		\$325.90		
Total Sta. =		50.05	28.00	461.25	513.30									
Cost per Sta. =		\$3,794	\$1,713	\$151	\$46									
Compiled by:		EHein												

SUMMARY - Road Development Costs														
SALE NAME:	Doc Holliday	CONTRACT#:	30-103767	REGION:	Olympic	DISTRICT:	Straits							
LEGAL DESCRIPTION:	0													
ROAD NAME:	PAS-1120	PAS-1150	PAS-1160	PAS-2600	PAS-2700	PAS-2700	Bridge	SC Spur	0+75 Spur	PAS-1123	PAS-1161	PAS-S-2620	PAS-S-2720	PAS-2730
ROAD TYPE:	Prehaul	Prehaul	Prehaul	Prehaul	Prehaul	Prehaul	Prehaul	Prehaul	Posthaul	Posthaul	Posthaul	Posthaul	Posthaul	Posthaul
NUMBER OF STATIONS:	44.50	6.00	3.50	47.30	33.70	0.00	3.25	0.75	5.75	3.50	15.95	6.00	10.75	
SIDE SLOPE:	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
CLEARING AND GRUBBING:	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
ROAD BRUSHING:	\$801	\$108	\$63	\$851	\$607	\$0	\$59	\$0	\$0	\$0	\$0	\$0	\$0	
EXCAVATION AND FILL:	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
ROAD GRADING:	\$376	\$51	\$30	\$400	\$285	\$0	\$27	\$6	\$49	\$30	\$135	\$51	\$91	
DITCH CLEANING/CONSTRUCTION:	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
ROCK TOTALS (Cu. Yds.)/ROCK COSTS:														
Ballast:	0	50	0	0	0	180	0	0	0	0	0	0	0	
	\$0	\$1,693	\$0	\$0	\$0	\$4,981	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Surface:	50	0	0	0	690	90	0	0	0	0	0	0	0	
	\$2,287	\$0	\$0	\$0	\$19,272	\$2,490	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Over-size:	0	0	0	0	0	20	0	0	0	0	0	0	0	
	\$0	\$0	\$0	\$0	\$0	\$388	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
CULVERTS AND FLUMES:	\$0	\$0	\$0	\$0	\$9,240	\$0	0	0	0	0	0	0	0	
STRUCTURES:	\$0	\$0	\$0	\$0	\$0	\$3,500	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
MISC. EXPENSES:	\$352	\$47	\$28	\$374	\$266	\$0	\$26	\$6	\$45	\$28	\$126	\$47	\$85	
OVERHEAD:	\$343	\$171	\$11	\$146	\$2,670	\$1,022	\$10	\$1	\$9	\$6	\$26	\$10	\$18	
TOTAL COSTS:	\$4,159	\$2,070	\$131	\$1,771	\$32,339	\$12,382	\$122	\$13	\$103	\$63	\$287	\$108	\$193	
COST PER STATION:	\$93	\$345	\$37	\$37	\$960	\$0	\$37	\$18	\$18	\$18	\$18	\$18	\$18	

SUMMARY - Road Development Costs												
SALE NAME:	Doc Holliday	CONTRACT#:	30-103767	REGION:	Olympic	DISTRICT:	Straits					
LEGAL DESCRIPTION:	0											
ROAD NAME:		PA-S-2740	PA-S-1151	PA-S-2700	PA-S-1000	PA-S-1100	PA-S-1120	PA-S-1150	PA-S-1160	PA-S-2600	PA-S-2700	SC Spur
ROAD TYPE:		Posthaul	Posthaul	Posthaul	Posthaul	Posthaul	Posthaul	Posthaul	Posthaul	Posthaul	Posthaul	Posthaul
NUMBER OF STATIONS:		7.35	5.65	22.35	207.50	89.50	44.50	6.00	3.50	47.30	33.70	3.25
SIDE SLOPE:		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
CLEARING AND GRUBBING:		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
ROAD BRUSHING:		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
EXCAVATION AND FILL:		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
ROAD GRADING:		\$62	\$48	\$189	\$1,753	\$756	\$376	\$51	\$30	\$400	\$285	\$27
DITCHING:		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
ROCK TOTALS (Cu. Yds.)/ROCK COSTS:												
Ballast:		0	0	0	0	0	0	0	0	0	0	0
		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Surface:		0	0	0	100	100	100	50	0	100	0	0
		\$0	\$0	\$0	\$1,891	\$1,958	\$1,615	\$1,011	\$0	\$1,930	\$0	\$0
Oversize:		0	0	0	0	0	0	0	0	0	0	0
		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
CULVERTS AND FUMES:		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
STRUCTURES:		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
MISC. EXPENSES:		\$58	\$45	\$177	\$1,639	\$707	\$352	\$47	\$28	\$374	\$266	\$26
OVERHEAD:		\$12	\$9	\$37	\$528	\$342	\$234	\$111	\$6	\$270	\$55	\$5
TOTAL COSTS:		\$132	\$102	\$402	\$5,812	\$3,763	\$2,577	\$1,219	\$63	\$2,974	\$606	\$58
COST PER STATION:		\$18	\$18	\$18	\$28	\$42	\$58	\$203	\$18	\$63	\$18	\$18

Forest Access Road Maintenance Specifications

Cuts and Fills

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

Surface

- Grade, shape, and compact 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

Preventative Maintenance

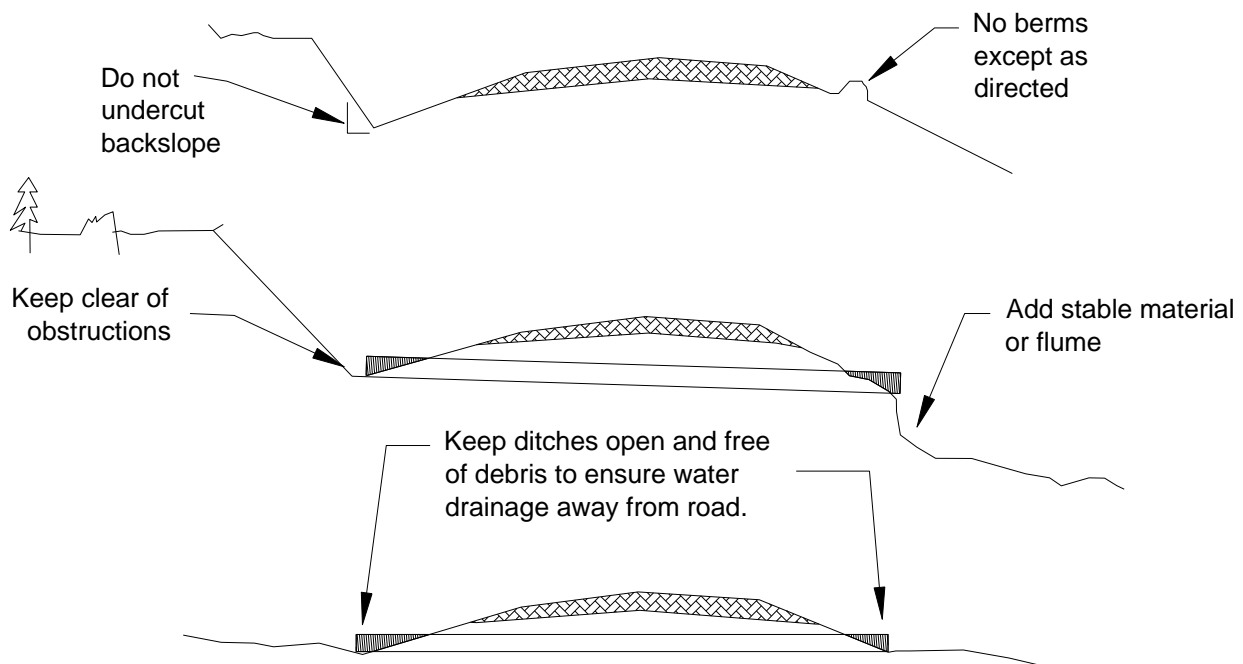
- Perform preventative maintenance work to safeguard against storm damage, such as blading to ensure correct runoff, ditch and culvert cleaning, and waterbar maintenance.

Termination of Use or End of Season

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

Debris

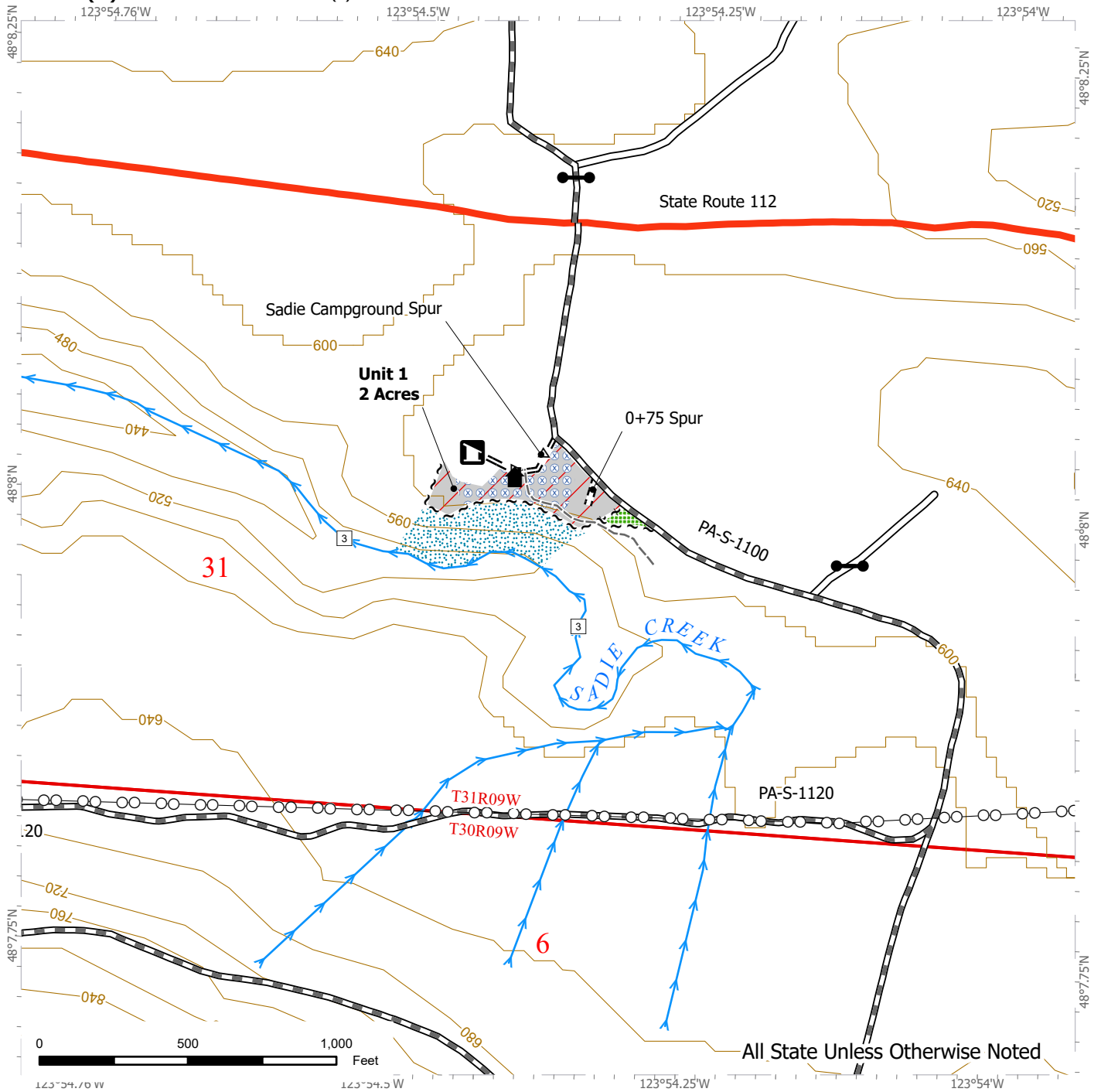
- Remove fallen timber, limbs, and stumps from the slopes, roadway, ditchlines, and culvert inlets.



LOGGING PLAN MAP

SALE NAME: DOC HOLLIDAY
AGREEMENT #: None
TOWNSHIP(S): T30R9W, T31R10W, T31R9W
TRUST(S): State Forest Transfer (1)

REGION: Olympic Region
COUNTY(S): Clallam
ELEVATION RGE: 320-880



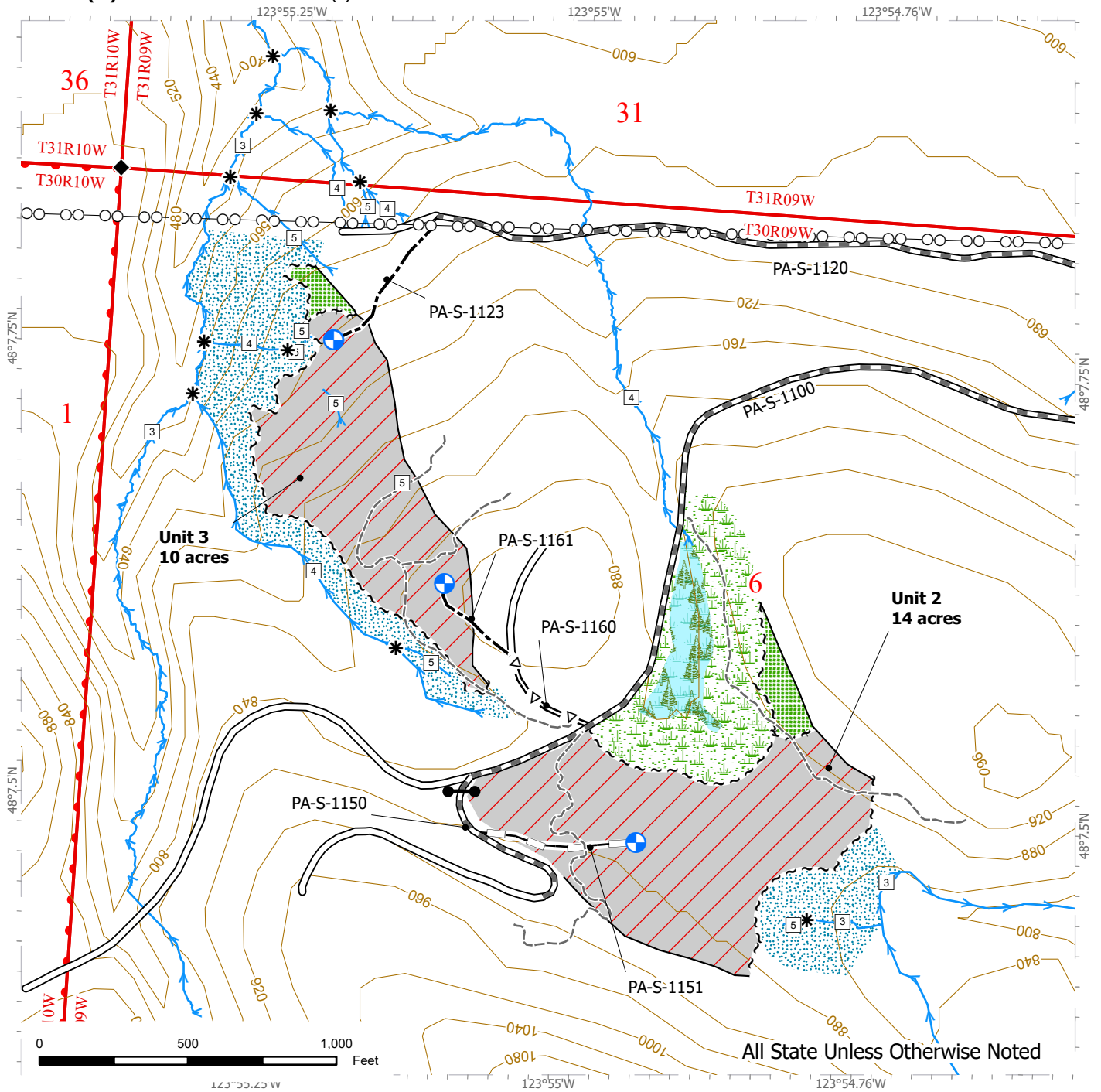
Ground	Power Lines	Streams
Variable Retention Harvest	Highway	Stream Type
Leave Tree Area	Existing Roads	Stream Break
Riparian Mgt Zone	Required Pre-Haul Maintenance	Gate
Hazard Abatement	Required Construction	Recreation Site
Sale Boundary Tags	Optional Pre-Haul Maintenance	Structure
Leave Tree Tags		
Trail		



LOGGING PLAN MAP

SALE NAME: DOC HOLLIDAY
AGREEMENT #: None
TOWNSHIP(S): T30R9W, T31R10W, T31R9W
TRUST(S): State Forest Transfer (1)

REGION: Olympic Region
COUNTY(S): Clallam
ELEVATION RGE: 320-880



All State Unless Otherwise Noted

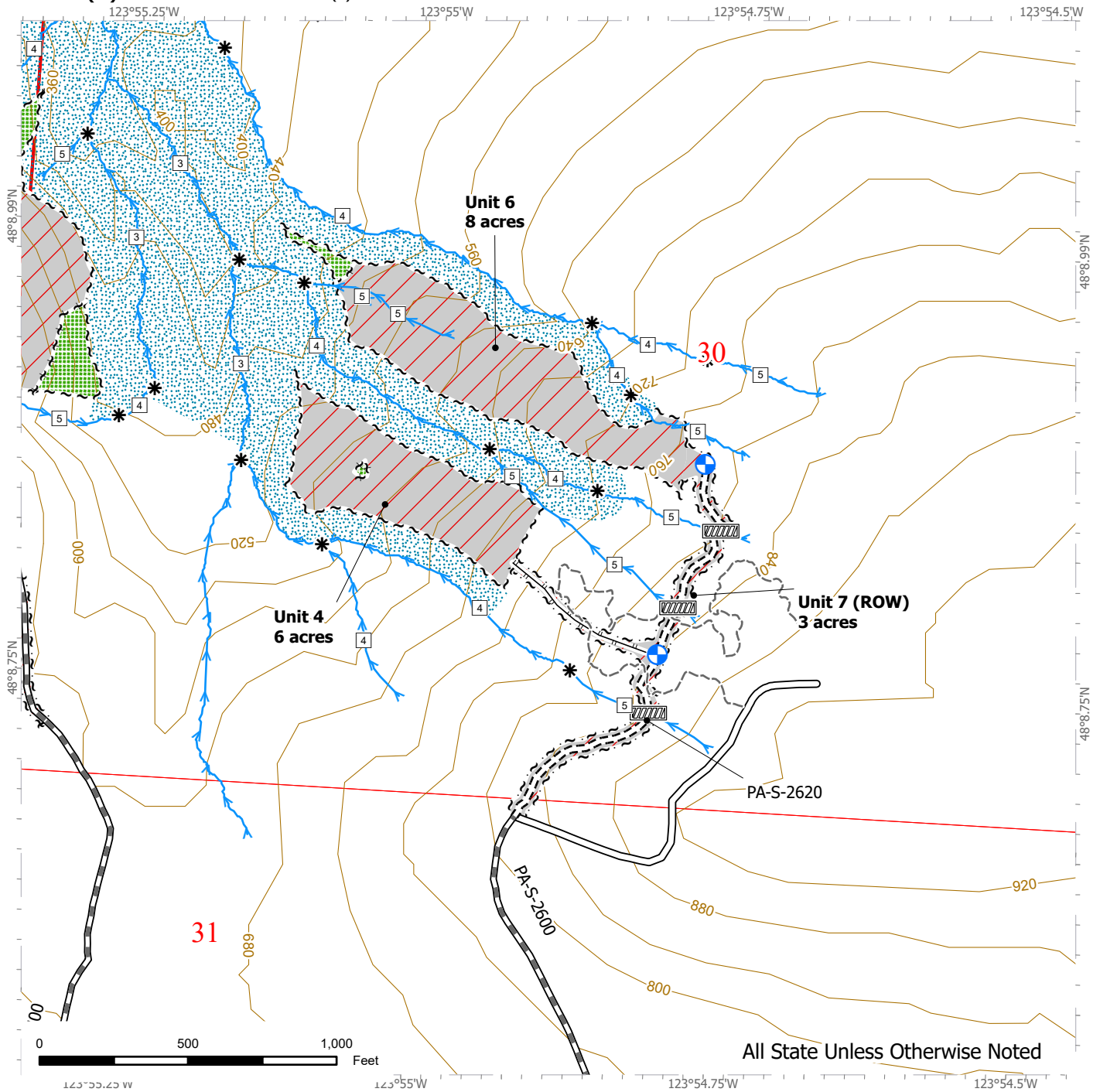
Ground	Existing Roads	Streams
Variable Retention Harvest	Required Pre-Haul Maintenance	Stream Type
Leave Tree Area	Optional Pre-Haul Maintenance	Stream Break
Forested Wetland	Optional Construction	Landing - Proposed
Wetland Mgt Zone	Optional Reconstruction	Gate
Riparian Mgt Zone	Sale Boundary Tags	Survey Monument
Trail	Leave Tree Tags	
Power Lines	Timber Type Change	



LOGGING PLAN MAP

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All State Unless Otherwise Noted

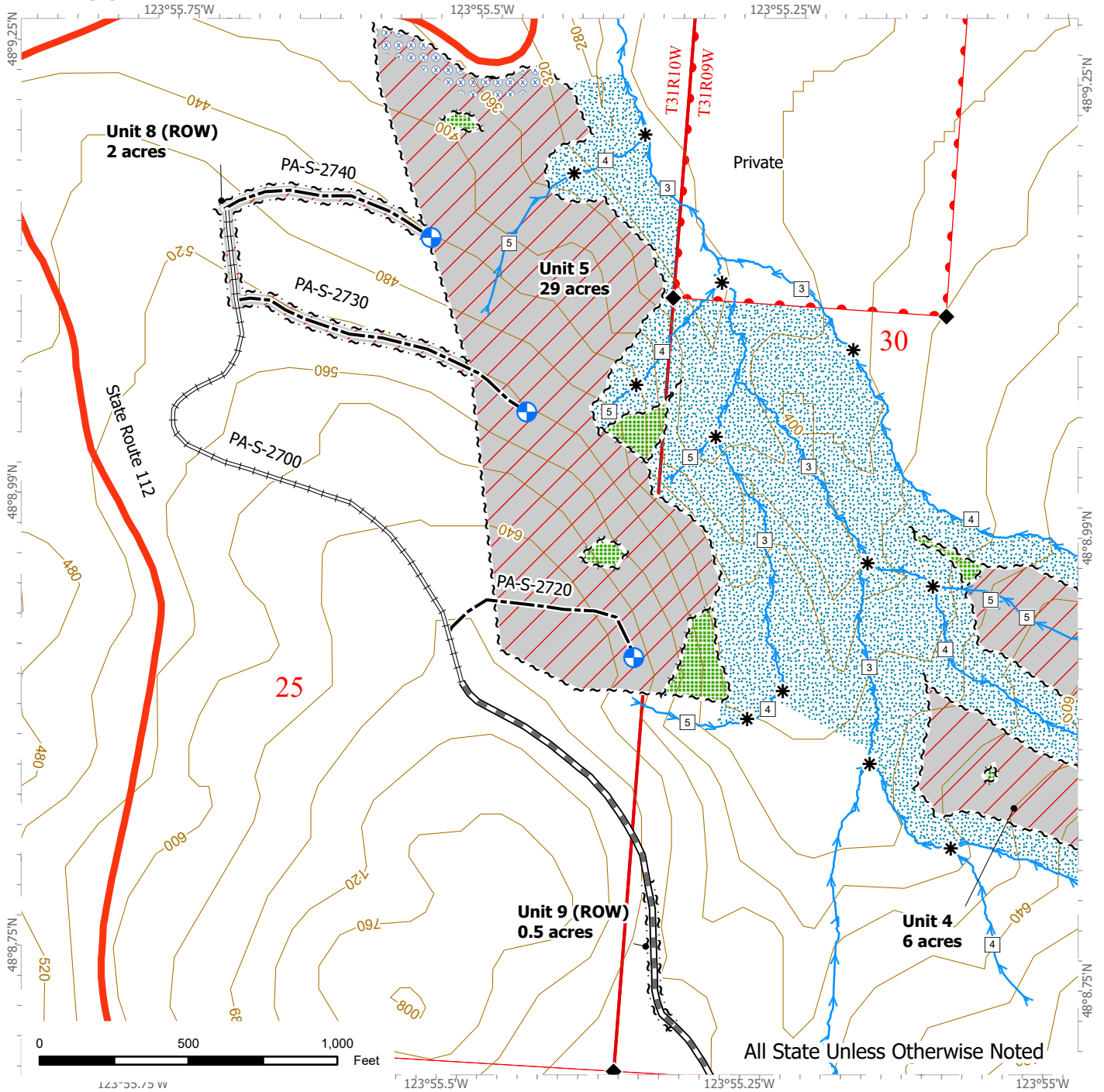
Ground	Existing Roads	Streams
Variable Retention Harvest	Required Pre-Haul Maintenance	Stream Type
Leave Tree Area	Required Construction	Stream Break
Riparian Mgt Zone	Optional Construction	Culvert
Trail	Designated Skid Trail	Landing - Proposed
	Sale Boundary Tags	Survey Monument
	Leave Tree Tags	
	Right of Way Tags	



LOGGING PLAN MAP

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TRUST(S): State Forest Transfer (1)

REGION: Olympic Region
COUNTY(S): Clallam
ELEVATION RGE: 320-880



All State Unless Otherwise Noted

Ground	Highway	Streams
Variable Retention Harvest	Required Pre-Haul Maintenance	Stream Type
Leave Tree Area	Required Reconstruction	Stream Break
Riparian Mgt Zone	Optional Construction	Landing - Proposed
Hazard Abatement	Sale Boundary Tags	Survey Monument
	Leave Tree Tags	
	Right of Way Tags	