



TIMBER NOTICE OF SALE

SALE NAME: CITY SKIDDER

AGREEMENT NO: 30-99253

AUCTION: May 27, 2020 starting at 10:00 a.m.,
Olympic Region Office, Forks, WA

COUNTY: Jefferson

SALE LOCATION: Sale located approximately 18 miles Northeast of Quilcene, WA

**PRODUCTS SOLD
AND SALE AREA:**

All timber, except trees banded with blue paint or bounded out by yellow leave tree area tags, and all downed red cedar, or any timber that has been on the ground for 5 years or more (five years is defined by more than 1.5 inches of sap rot) bounded by timber sale boundary tags and special management tags in Units 1 and 2; timber sale boundary tags, special management unit boundary tags, and timber type change in Unit 3; timber sale boundary tags, timber type change PT-S-5000 and the PT-S-5100.1 roads in Unit 4; timber sale boundary tags, timber type change, PT-S-5120 and the PT-S-5125 in Unit 5; timber sale boundary tags, timber type change, PT-S-5700, PT-S-5100, PT-S-5120 roads, in Unit 6, all timber marked with orange paint and bounded by timber sale boundary tags and special management unit boundary tags in Unit 7 and timber sale boundary tags, special management unit boundary tags and timber type change in Unit 8; on part(s) of Sections 2, 3, 4, 9 and 10 all in Township 28 North, Range 2 West, W.M., containing 177 acres, more or less.

CERTIFICATION: This sale is certified under the Sustainable Forestry Initiative® program Standard (cert no: PwC-SFIFM-513)

ESTIMATED SALE VOLUMES AND QUALITY:

Species	Avg DBH	Ring Count	Total MBF	MBF by Grade								
				1P	2P	3P	SM	1S	2S	3S	4S	UT
Douglas fir	18.1	8	5,325						3,630	1,307	372	16
Hemlock	16	8	1,095						406	492	142	55
Red cedar	16		278							224	54	
Red alder	12.1		135							23	88	24
Maple	10.1		92								50	42
Sale Total			6,925									

MINIMUM BID: \$1,751,000.00

BID METHOD: Sealed Bids

**PERFORMANCE
SECURITY:**

\$100,000.00

SALE TYPE: Lump Sum

EXPIRATION DATE: October 31, 2022

ALLOCATION: Export Restricted

BID DEPOSIT: \$175,100.00 or Bid Bond. Said deposit shall constitute an opening bid at the appraised price.

HARVEST METHOD: 52% Cable 38% Ground Based, 10% Cable or Seasonal Shovel

The use of tracked or rubber tired skidders are restricted from November 1st to April 30th.



TIMBER NOTICE OF SALE

Use of shovels and feller-bunchers are restricted from November 1st to April 30th in the cable or seasonal shovel area of Unit 6 shown on the Logging Plan Maps and only cable with hand falling methods are allowed in this area during that time.

For more information see Logging Plan Maps and Clauses H-010 and H-120.

ROADS: 25.25 stations of required construction. 24.90 stations of optional construction. 518.60 stations of required prehaul maintenance. 36.70 stations of optional prehaul maintenance. All Road activity, including timber haul is restricted from November 1 to April 30, on weekends and State recognized holidays in all units unless authorized in writing by the Contract Administrator.

ACREAGE DETERMINATION

CRUISE METHOD: Timber sale acreage was 100% GPS'd. Sale units were cruised using a variable plot sample.

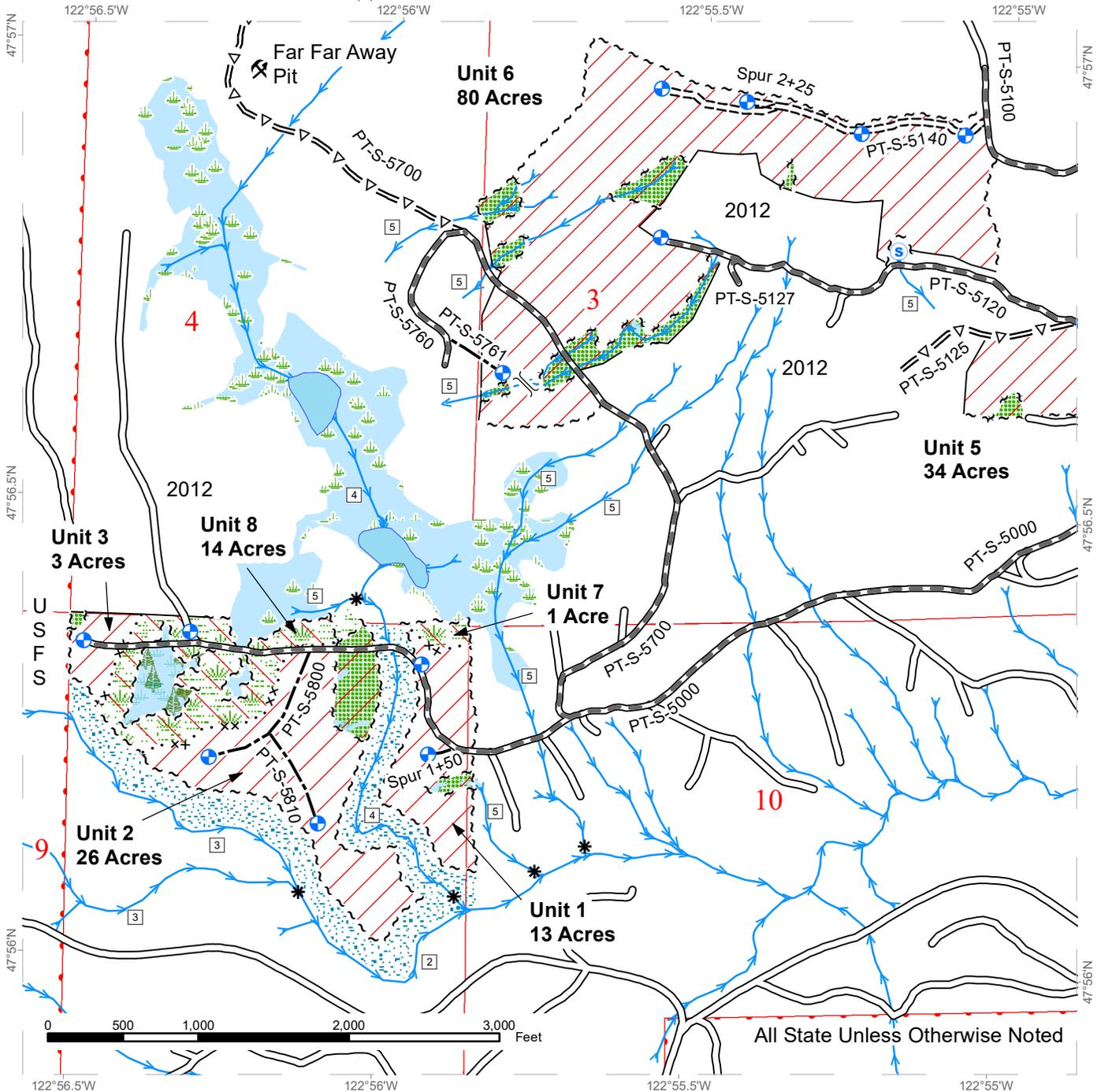
FEES: \$117,725.00 is due on day of sale. \$9.00 per MBF is due upon removal. These are in addition to the bid price.

SPECIAL REMARKS: There are locked gates on the PT-S-5000 road system-contact the Olympic Region Dispatch Center at 360-374-2811 to obtain a AA-1 key.

TIMBER SALE MAP

SALE NAME: CITY SKIDDER
AGREEMENT #: 30-099253
TOWNSHIP(S): T28R2W
TRUST(S): State Forest Transfer (1)

REGION: Olympic Region
COUNTY(S): Jefferson
ELEVATION RGE: 880-1920



All State Unless Otherwise Noted

Legend

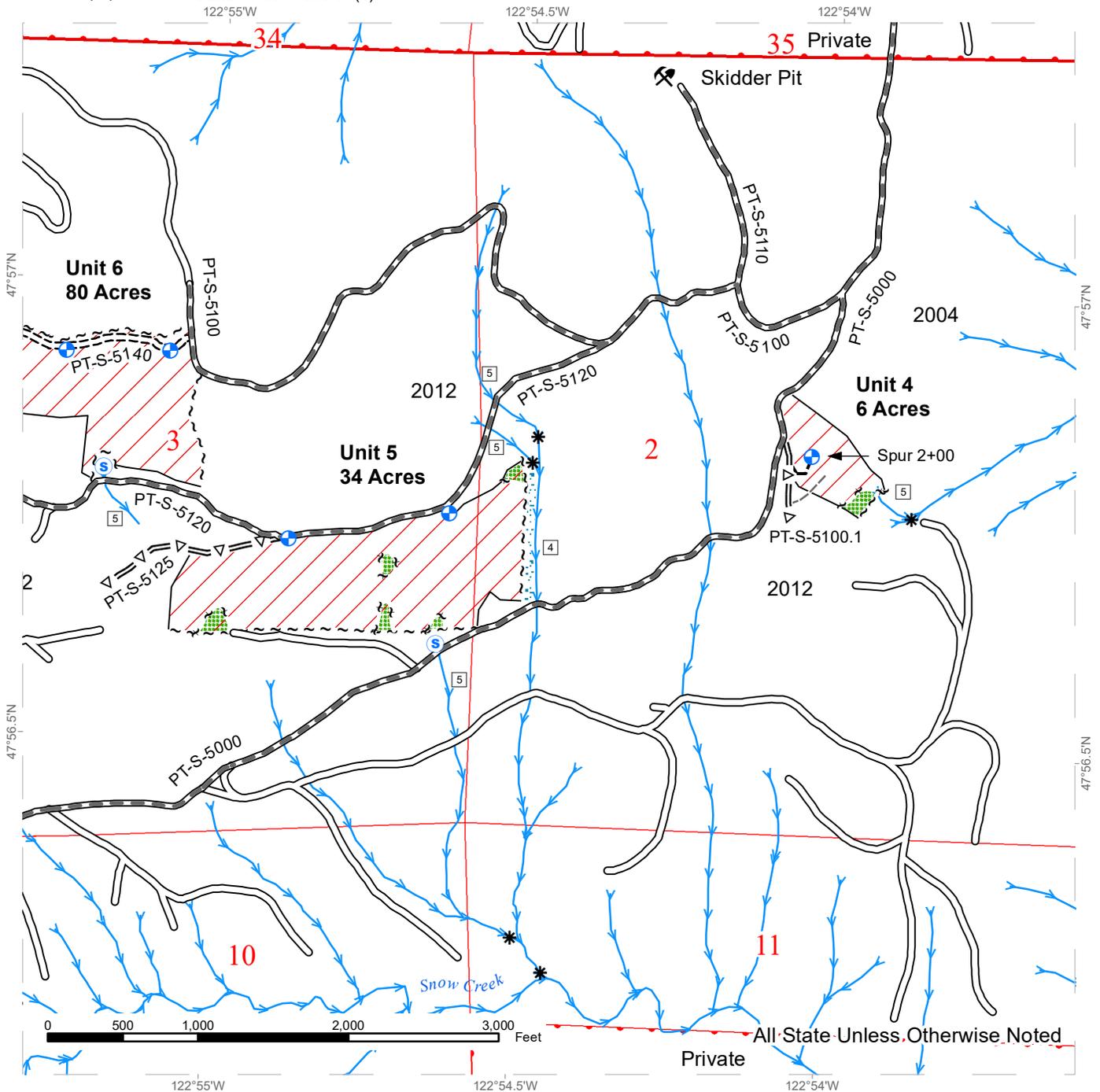
Variable Retention Harvest	Open Water	Existing Roads	Streams
WMZ Thinning	Sale Boundary Tags	Required Pre-Haul Maintenance	Stream Type
Leave Tree Area	Special Mgmt Area	Required Construction	Stream Type Break
Riparian Mgt Zone	Leave Tree Tags	Optional Pre-Haul Maintenance	Designated Crossing
Wetland Mgt Zone	Timber Type Change	Optional Construction	Rock Pit
Wetlands - Non-forested	Property Line	Optional Yarder Trail	Seep
Forested Wetland	Proposed Landing		



TIMBER SALE MAP

SALE NAME: CITY SKIDDER
AGREEMENT #: 30-099253
TOWNSHIP(S): T28R2W
TRUST(S): State Forest Transfer (1)

REGION: Olympic Region
COUNTY(S): Jefferson
ELEVATION RGE: 880-1920



Legend

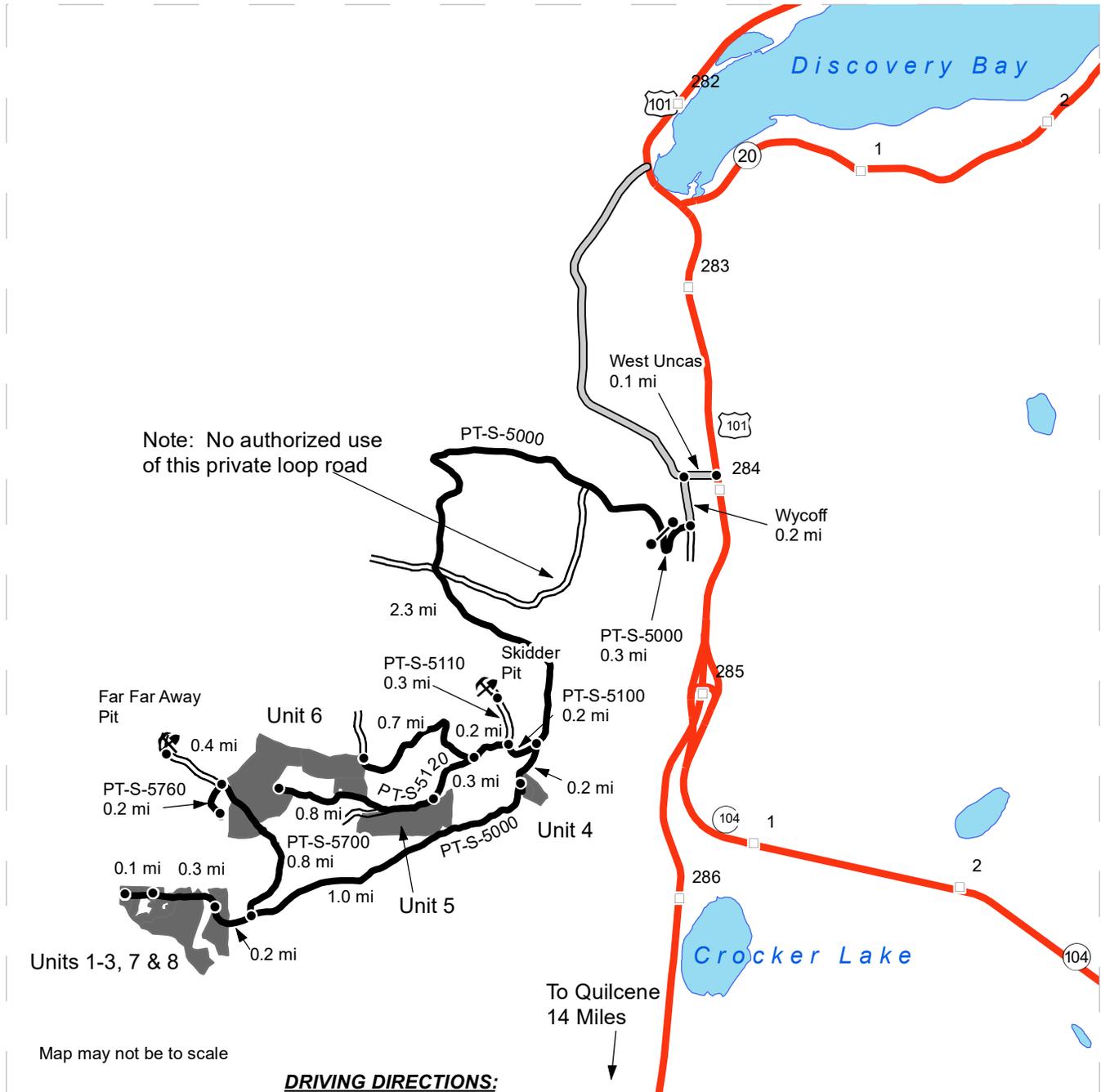
Variable Retention Harvest	Open Water	Existing Roads	Streams
WMZ Thinning	Sale Boundary Tags	Required Pre-Haul Maintenance	Stream Type
Leave Tree Area	Special Mgmt Area	Required Construction	Stream Type Break
Riparian Mgt Zone	Leave Tree Tags	Optional Pre-Haul Maintenance	Designated Crossing
Wetland Mgt Zone	Timber Type Change	Optional Construction	Rock Pit
Wetlands - Non-forested	Property Line	Optional Yarder Trail	Seep
Forested Wetland	Proposed Landing		



DRIVING MAP

SALE NAME: CITY SKIDDER
AGREEMENT#: 30-099253
TOWNSHIP(S): T28R2W
TRUST(S): State Forest Transfer (1)

REGION: Olympic Region
COUNTY(S): Jefferson
ELEVATION RGE: 880-1920



Map may not be to scale

DRIVING DIRECTIONS:

From Highway 101 just north of mile post 284 turn west onto West Uncas road. Travel 0.1 mile and turn south onto Wycoff. Go 0.2 mile and turn west onto the PT-S-5000 mainline. In 0.3 mile go through the gate and continue 2.3 miles further up the hill to the PT-S-5100 junction. Take a right and go 0.2 mile to the PT-S-5110. Follow this road north 0.3 mile to the Skidder Pit. Staying on the S-5100 for another 0.2 mile leads to the PT-S-5120 junction. Turn left on the S-5120 and go 0.3 mile to Unit 5, or continue 0.8 mile further to the mid slope landing on Unit 6. Staying right on the S-5100 for an additional 0.7 mile leads to the east end of Unit 6. Back at the S-5100 junction, staying left (south) on the S-5000 you will reach Unit 4 in 0.2 mile. Continue 1.0 mile further to the PT-S-5700 junction. Turn north onto this road and travel 0.8 mile to the PT-S-5760 junction. Taking this spur to the left for 0.2 leads to the bottom of Unit 6. Stay straight on the S-5700 for another 0.4 mile to reach the Far Far Away Pit. Back at the S-5700 junction stay straight on the S-5000 heading west for 0.2 mile to Units 1, 2, and 7. Drive 0.3 mile further to the Unit 8 landing or 0.4 mile to the end of the road in Unit 3.

Legend

- Timber Sale Unit
- Highway
- Milepost Markers
- County Road
- Existing Roads
- Haul Route
- Distance Indicator
- Gate (AA-1)
- Rock Pit



**STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES**

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

Export Restricted Lump Sum AGREEMENT NO. 30-099253

SALE NAME: CITY SKIDDER

**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 May 27, 2020 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 banded with blue paint or bounded out by yellow leave tree area tags, and all downed red cedar, or any timber that has been on the ground for 5 years or more (five years is defined by more than 1.5 inches of sap rot) bounded by timber sale boundary tags and special management tags in Units 1 and 2; timber sale boundary tags, special management unit boundary tags, and timber type change in Unit 3; timber sale boundary tags, timber type change PT-S-5000 and the PT-S-5100.1 roads in Unit 4; timber sale boundary tags, timber type change, PT-S-5120 and the PT-S-5125 in Unit 5; timber sale boundary tags, timber type change, PT-S-5700, PT-S-5100, PT-S-5120 roads, in Unit 6, all timber marked with orange paint and bounded by timber sale boundary tags and special management unit boundary tags in Unit 7 and timber sale boundary tags, special management unit boundary tags and timber type change in Unit 8; located on approximately 177 acres on part(s) of Sections 2, 3, 4, 9, and 10 all in Township 28 North, Range 2 West W.M. in Jefferson 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 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
C	LOG FILL DETAIL SHEET

G-031 Contract Term

Purchaser shall complete all work required by this contract prior to October 31, 2022.

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 \$730.00 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-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-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 program Standard under certificate number: PwC-SFIFM-513.

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

G-120 Responsibility for Work

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

G-121 Exceptions

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

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

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

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

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

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

Nothing contained in clauses G-120 and G-121 shall be construed as relieving Purchaser of responsibility for, or damage resulting from, Purchaser's operations or negligence, nor shall Purchaser be relieved from full responsibility for making good any defective work or materials. Authorization to haul does not warrant that Purchaser

built roads are free from material defect and the State may require additional work, at 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 Operation

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

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

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

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

G-230 Unauthorized Activity

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

G-240 Dispute Resolution

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

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

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

G-250 Compliance with All Laws

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

G-260 Venue

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

G-270 Equipment Left on State Land

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

G-280 Operating Release

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

G-310 Road Use Authorization

Purchaser is authorized to use the following State roads and roads for which the State has acquired easements and road use permits; PT-S-5000, PT-S-5100, PT-S-5100.1, PT-S-5110, PT-S-5120, PT-S- 5125, PT-S-5127, PT-S-5140, PT-S-5700, PT-S-5760, PT-S-5761, PT-S-5800, PT-S-5810, Spur 1+50, Spur 2+00, and Spur 2+25. 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 PT-S-5000 or PT-S-5100 roads, unless authority is granted in writing by the Contract Administrator.

G-380 Road Easement and Road Use Permit Requirements

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

Easement 55-089578 - Pope Resources

G-396 Public Hauling Permit

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

G-430 Open Fires

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

Section P: Payments and Securities

P-011 Initial Deposit

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

P-020 Payment for Forest Products

Purchaser agrees to pay the total, lump sum contract price of \$180,050.00. The total contract price consists of a \$0.00 contract bid price plus \$180,050.00 in fees. Fees collected shall be retained by the state unless the contract is adjusted via the G-066 clause. Purchaser shall be liable for the entire purchase price, and will not be entitled to any refunds or offsets unless expressly stated in this contract.

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

P-045 Guarantee of Payment

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

P-050 Billing Procedure

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

P-080 Payment Account Refund

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

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

P-090 Performance Security

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

P-100 Performance Security Reduction

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

Section H: Harvesting Operations

H-001 Operations Outside the Sale Boundaries

No operations shall occur outside the sale boundaries, as described within the contract, unless approved in writing by the State.

H-010 Cutting and Yarding Schedule

The use of tracked or rubber tired skidders in designated ground based areas, and the use of shovels or feller-bunchers in the seasonal shovel area of Unit 6 will not be permitted from November 1st to April 30th (only cable with hand falling methods are allowed in the seasonal shovel area during that time) unless authorized in writing by the Contract Administrator.

H-012 Leave Tree Damage Definition

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

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

- a. A leave tree has one or more scars on its trunk exposing the cambium layer, which in total exceeds 100 square inches.

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

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

H-013 Reserve Tree Damage Definition

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

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

- a. A reserve tree has one or more scars on its trunk exposing the cambium layer, which in total exceeds 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 'Trespass and Unauthorized Activity' clause. Purchaser is required to leave all cut or damaged reserve trees on site.

H-017 Preventing Excessive Soil Disturbance

Operations may be suspended when soil rutting exceeds 18 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-018 Temporary Stream Crossings

A temporary stream crossing is required to access the southernmost section of Unit 6.

Purchaser shall comply with the following during the yarding operation:

- a. Adhere to the approved Hydraulic Permit Application (HPA) or Forest Practice Application (FPA) with approved hydraulic project work, if required, amend a current FPA or obtain a new FPA prior to commencing any new stream crossing construction.
- b. Location of the temporary stream crossing must be approved by the Contract Administrator.
- c. A temporary stream crossing shall not exceed 25 feet in width, including rub trees.
- d. Purchaser shall suspend operations during periods of wet weather when a high potential for sediment delivery into typed waters may occur.
- e. Temporary stream crossings shall be removed at the time of completion of yarding as required by the Contract Administrator.

Purchaser shall not deviate from the requirements set forth in this clause without prior written approval from the Contract Administrator.

H-035 Fall Trees Into Sale Area

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

H-051 Branding and Painting

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

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

H-120 Harvesting Equipment

Forest products sold under this contract shall be harvested and removed using ground based methods, shovel methods or cable and hand falling methods as shown on the Logging Plan Maps. Authority to use other equipment or to operate outside the equipment specifications detailed above must be approved in writing by the State.

H-125 Log Suspension Requirements

Lead-end suspension is required for all yarding activities.

H-130 Hauling Schedule

The hauling of forest products will not be permitted on weekends, and State recognized holidays from November 1 to April 30 in all units unless authorized in writing by the Contract Administrator.

H-140 Special Harvest Requirements

Purchaser shall accomplish the following during the harvest operations:

1. Purchaser shall immediately repair all gate damage resulting from operations to an equal or better condition than existed at the time of the sale.
2. Two warning signs must be posted at the junction of Wycoff road and the PT-S-5000 road while hauling commercial rock or timber.
3. The CB channel used for rock and timber hauling operations shall be posted at all kiosks or at the beginning of all haul roads during active haul.
4. Purchaser shall perform abandonment on all skid trails in the sale area. Abandonment shall consist of re-establishing natural drainage and natural slopes, fluffing compacted soil to an 18-inch depth using shovel grapples, placing stumps and debris back into the trail, and installing water bars as directed by the Contract Administrator.
5. A crossing of a Type 5 stream in Unit 6 will be allowed. The designated crossing will be limited to the State's location, as shown on the timber sale map. Logs shall be placed in the stream channel up to the level of the stream banks with a shovel as per the attached log fill detail in Schedule C. The temporary crossings shall be approved by the Contract Administrator prior to use. Immediately upon completion of yarding, the logs will be removed with a shovel. Water bars will be installed on the trail in and out of the crossing as directed by the Contract Administrator.
6. Designated leave trees shall not be used as tailholds or guy line anchors.
7. Purchaser shall identify and mark tailhold and guy line trees prior to falling timber.
8. 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 a suitable tree of similar size and species as approved by the Contract Administrator.

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

H-190 Completion of Settings

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

H-220 Protection of Residual or Adjacent Trees

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

H-230 Tops and Limbs Outside the Sale Boundary

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

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

Road construction and associated work provisions of the Road Plan for this sale, dated 12/20/2019 are hereby made a part of this contract.

C-050 Purchaser Road Maintenance and Repair

Purchaser shall perform work at their own expense on PT-S-5000, PT-S-5100, PT-S-5100.1, PT-S-5110, PT-S-5120, PT-S-5125, PT-S-5127, PT-S-5140, PT-S-5700, PT-S-5760, PT-S-5761, PT-S-5800, PT-S-5810, Spur 1+50, Spur 2+00, and Spur 2+25. All work shall be completed to the specifications detailed in the Road Plan.

C-060 Designated Road Maintainer

If required by the State, Purchaser shall perform maintenance and replacement work as directed by the Contract Administrator on all other roads not listed in clause C-050. Purchaser shall furnish a statement in a form satisfactory to the State showing the costs incurred while performing this work. Costs shall be based on the rates set forth in the equipment rate schedule on file at the Region office or Engineering Division in Olympia. The State shall reimburse Purchaser for said costs within 30 days of receipt and approval of the statement.

C-100 Landing Location Restricted

Landing locations are restricted to those shown on the timber sale map unless otherwise authorized in writing 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-050 Cessation of Operations for Low Humidity

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

S-060 Pump Truck or Pump Trailer

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

S-110 Resource Protection

No equipment may operate within Leave Tree Areas or wetlands, or within 30 feet of streams (except at designated crossings or for culvert installations/maintenance) 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 Leave Tree Area or wetland.

S-130 Hazardous Materials

- a. Hazardous Materials and Waste - Regulatory Compliance

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

b. Hazardous Materials Spill Prevention

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

c. Hazardous Materials Spill Containment, Control and Cleanup

If safe to do so, Purchaser shall take immediate action to contain and control all hazardous material spills. Purchaser shall ensure that enough quick response spill kits capable of absorbing 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, the Purchaser is responsible for notifying the following:

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

DNR Contract Administrator

ECY - Northwest Region:

1-425-649-7000

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

ECY - Southwest Region:

1-360-407-6300

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

ECY - Central Region:

1-509-575-2490

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

ECY - Eastern Region:

1-509-329-3400

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

S-131 Refuse Disposal

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

Section D: Damages

D-013 Liquidated Damages or Failure to Perform

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

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

D-040 Leave Tree Excessive Damage

When Purchaser's operations exceed the damage limits set forth in clause H-012, Leave Tree Damage Definition, the trees damaged result in substantial injury to the State. The value of the damaged leave trees at the time of the breach is not readily ascertainable. Therefore, Purchaser agrees to pay the State as liquidated damages at the rate of \$100.00 per tree for all damaged trees in in Units 7 and 8.

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 Units 1-6.

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

STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES

Purchaser

Mona Griswold

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

All landing slash and concentrations of processor slash shall be piled by creating circular piles of slash and brush conforming to the following specifications, or be removed from State Land:

A. Piles shall be a minimum of 12 feet tall by 8 feet wide to a maximum of 30 feet tall and 30 feet wide. Piles shall be cone shaped and stable.

B. Piles shall be free of topsoil, large rotten logs and large stumps. Any unburnable material shall be well scattered.

C. Piles shall not be placed on large stumps, logs, or against standing snags.

D. Piles shall be stacked a minimum of 50 feet from all unit boundaries, Riparian Management Zones, leave trees, standing timber, and culverts; 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 and natural drainage channels concurrent with yarding.

Schedule B
GREEN TREE RETENTION PLAN

Leave the following as directed by the Contract Administrator:

1. All trees marked with a blue band of 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.

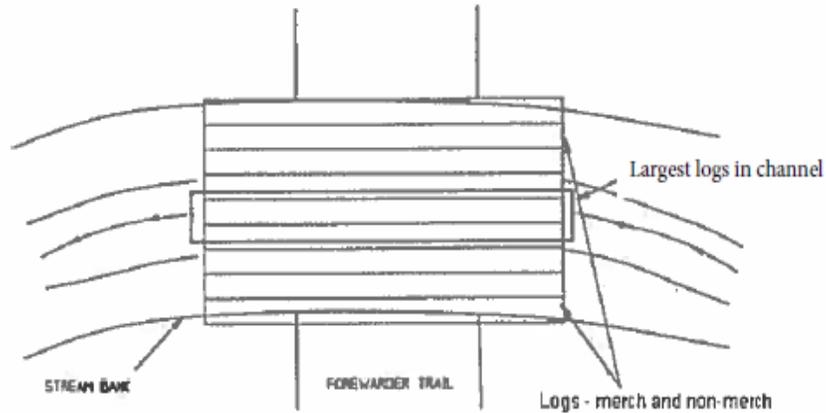
<u>Unit #</u>	<u># of Individually Marked Trees</u>	<u># of Clumps</u>	<u># of Trees Clumped</u>	<u>Total # of Leave Trees</u>
1	2	1	115	117
2	8	1	289	297
3	0	1	45	45
4	5	1	51	56
5	18	5	279	297
6	34	6	680	714

2. All trees that are not marked with orange paint as take trees in Units 3, 5, and 7 are defined as leave trees.

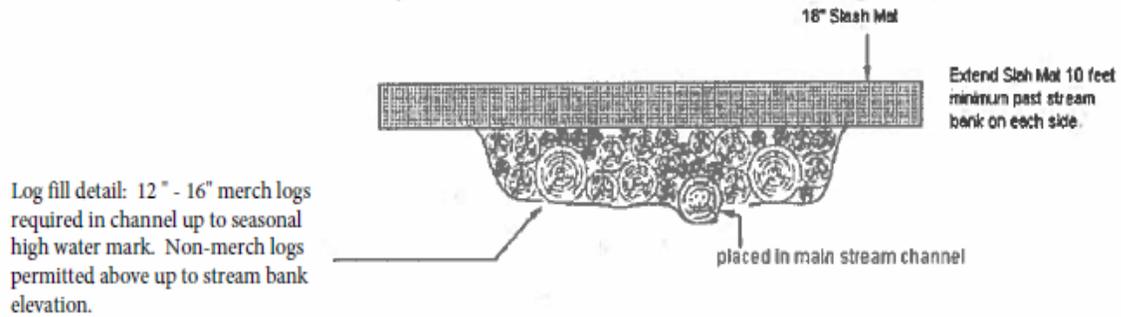
3. Leave trees are non-exchangeable unless approved in writing by the Contract Administrator.

Schedule C

LOG FILL DETAIL SHEET



TEMPORARY FOREWARDER STREAM CROSSING



Installation and removal shall conform to Forest Practices standards and best management practices.



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: City Skidder	Region: Olympic
Agreement #: 30-099253	District: Straits
Contact Forester: Mark Benner Phone / Location: 360-732-6848/Center	County(s): Jefferson
Alternate Contact: Phone / Location:	Other information: Cell 360-708-1989

Type of Sale: Lump Sum	
Harvest System: Ground based 74 Acres.	38%
Harvest System: Other(Specify) 19 Acres of Cable or Seasonal Shovel.	10%
Harvest System: Uphill Cable 100 Acres.	52%

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 Traverse Acres	Deductions from Gross Acres (No harvest acres)				Net Harvest Acres	Acreage Determination (List method and error of closure if applicable)
				RMZ/WMZ Acres	Leave Tree Acres	Existing Road Acres	Other Acres (describe)		
1	Sec 9, and Sec 10; T28N R02W	01,	14.3	0	0.7	0.7	0	12.9	GPS (Garmin)
2	Sec 9; T28N R02W	01	30.2	0	4.2	0.5	0	25.5	GPS (Garmin)
3	Sec 9; T28N R02W	01	4.0	0	0.2	0.4	0	3.4	GPS (Garmin)
4	Sec 2; T28N R02W	01	6.5	0	0.5	0	0	6.0	GPS (Garmin)
5	Sec 2, and Sec 3; T28N R02W	01	35.2	0	1.5	0	0	33.7	GPS (Garmin)
6	Sec 3; T28N R02W	01	88.6	0	7.7	0.9	0	80.0	GPS (Garmin)
7	Sec 9; T28N R02W	01	1.3	0	0	0	0	1.3	GPS (Garmin)
8	Sec 9; T28N R02W	01	14.7	0	0	0.9	0	13.8	
TOTAL ACRES			194.8	0	14.8	3.4	0	176.6	

HARVEST PLAN AND SPECIAL CONDITIONS:

Unit #	Harvest Prescription: (Leave, take, paint color, tags, flagging etc.)	Special Management areas:	Other conditions (# leave trees, etc.)
1-6	Variable retention harvest, dispersed leave trees marked with blue paint & clumps marked by leave tree area tags	None	67 dispersed leave trees, and 1,459 clumped in 15 LTAs
7 & 8	WMZ thinning harvest, take trees marked with orange paint	Wetlands are tagged out and outer perimeter tagged with SMUBs	Take trees are dispersed throughout. 100% marked

OTHER PRE-CRUISE INFORMATION:

Unit #	Primary, secondary Species / Estimated Volume (MBF)	Access information (Gates, locks, etc.)	Photos, traverse maps required
1	1 DF, 2 WH/ 526 MBF	All units are accessed through gate on the PT-S-5000 road system with an AA-1 key. Can drive to all units.	Traverse maps enclosed for all units
2	1 DF, 2 WH/ 1,175 MBF		
3	1 DF, 2 WH/ 144 MBF		
4	1 DF, 2 WH/189 MBF		
5	1 DF, 2 WH/1,332 MBF		
6	1 DF, 2 WH/3,010 MBF		
7	1 DF, 2 WH/15 MBF		
8	1 DF, 2 WH/70MBF		
TOTAL MBF	6,461		

REMARKS:

Acreage shown on timber sale maps are the rounded net harvest acres as they will appear on the advertised documents. Precise acreage to the nearest tenth are given in the traverse maps and table above. See enclosed notes for leave tree breakouts by unit.
 Sale is all 01 in Jefferson County.
 Let me know if you have any trouble finding the units. I've provided an old map, as

the driving map has not been created yet.

Prepared By: Mark Benner Date: 10/18/2019	Title: Unit Coordinator	CC:
--	--------------------------------	------------

Cruise Narrative

Sale Name: City Skidder	Region: Olympic
Agreement #: 30-099253	District: Strait
Lead Cruiser: Kevin Peterson	Completion Date: 11/6/19
Other Cruisers: none	

Unit acreage specifications:

Unit #	Cruised Acres	Cruised acres agree with sale acres? Y/N	If acres do not agree explain why.
1	12.9	Y	
2	25.5	Y	
3	3.4	Y	
4	6	Y	
5	33.7	Y	
6	80	Y	
7	1.3	Y	
8	13.8	Y	
Total	176.6	Y	

Unit cruise specifications:

Unit #	Sample Type (VP,FP,ITS,100%)	Expansion Factor (baf,full/half)	Sighting Height (4.5', 16')	Grid Size (plot spacing)	Plot Ratio (cruise/count)	Number of plots
1	VP	71.11/40	4.5'	290 X 290	5:2	7
2	VP	71.11/40	4.5'	290 X 290	1:1	13
3	VP	71.11/40	4.5'	290 X 290	All	2
4	VP	54.44/40	4.5'	290 X 290	All	3
5	VP	71.11/40	4.5'	290 X 290	1:1	17
6	VP	71.11/40	4.5'	290 X 290	1:2	40
7	ITS	1:5				
8	ITS	1:10				

Sale/Cruise Description:

Minor species cruise intensity	Minor species sampled using same cruise plots. Red Cedar, Bigleaf Maple and Red Alder were cruised at a 40 BAF					
Minimum cruise spec:	40% of Form Factor at 16 ft. D.O.B or 5 inch top.					
Average ring count:	DF =	8	WH =	8	SS =	
Leave/take tree description:	Leave tree clumps are bounded out with yellow tags, pink flashers and blue paint. Individual leave trees are marked with blue bands and two blue butt marks.					
Other conditions:	Exterior boundaries are marked with white tags and pink flashers					

<p>Sort Description:</p>	<p>HA– Logs meeting the following criteria: Surface characteristics for a high quality A sort will have sound tight knots not to exceed 1 ½” in diameter, numbering not more than an average of one per foot of log length. May include logs with not more than two larger knots. Knots and knot indicators ½” in diameter and smaller shall not be a determining factor. Logs will have a growth ring count of 6 or more rings per inch in the outer third top end of the log. (minimum diameter 8”.)</p> <p>R – Logs meeting the following criteria: Gross diameter of 12 inches or greater, excessive knots greater than 2 ½ inches with recovery less than 65% of the net scale.</p>
---------------------------------	--

Field Observations:

City Skidder is an eight unit sale located in Discover Bay off of the PT-S-5000 road system and there is good access to all units. Six units of the sale are VRH and two units are preselected thinnings.

The total volume is 6,925 MBF and is comprised of 77% Douglas-fir, 16% Western Hemlock, 4% Western Red Cedar, 2% Red Alder and 1% Bigleaf Maple. The average DF on the sale has a DBH of 18.1” and a bole height of 72’. The average WH has a DBH of 16” and bole height of 76’. Common defects were sweep and forked tops.

An AA1 key is needed to access the PT-S-5000 road system.

Grants: 01

Prepared By: Kevin Peterson – Check Cruiser 1

TC		PSPCSTGR		Species, Sort Grade - Board Foot Volumes (Project)																		
T000 R000 S00 TyU1 THRU T000 R000 S00 TyU8				Project:		CITY											Page		1			
				Acres		176.60											Date		11/6/2019			
																	Time		2:04:32PM			
Spp	S T	So rt	Gr ad	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent of Net Board Foot Volume								Average Log				Logs Per /Acre	
					Def%	Gross	Net		Log Scale Dia.				Log Length				Ln Ft	Dia In	Bd Ft	CF/ Lf		
									4-7	8-11	12-15	16+	12-20	21-30	31-35	36-99						
DF	CU	CU			100.0	29											4	7		0.00	7.9	
DF	D	2S		68	7.5	22,233	20,557	3,630			41	59				100	40	16	375	2.36	54.8	
DF	D	3S		24	3.9	7,706	7,401	1,307	36	64				4	20	76	37	8	86	0.70	86.2	
DF	D	4S		7	2.7	2,168	2,109	372	92	8			23	36	32	8	24	5	28	0.31	76.2	
DF	D	UT		1		93	93	16	100							100	10	5	4	0.09	23.7	
DF Totals				77	6.4	32,228	30,160	5,326	16	16	28	40	2	4	7	87	30	9	121	1.07	248.8	
WH	CU	CU															1	5		0.00	11.2	
WH	D	2S		37	8.4	2,510	2,299	406			66	34				100	40	14	290	1.85	7.9	
WH	D	3S		45	4.8	2,923	2,784	492	8	92				1	1	98	40	9	107	0.77	26.1	
WH	D	4S		13	1.2	815	805	142	99	1			18	18	4	61	30	5	33	0.31	24.4	
WH	D	UT		5	.0	309	309	55	31	22	47		24	7	69		20	6	42	0.63	7.3	
WH Totals				16	5.5	6,557	6,196	1,094	18	43	27	13	4	3	1	93	29	7	80	0.75	77.0	
RC	CU	CU															4	6		0.00	3.0	
RC	D	3S		80	15.5	1,498	1,266	224	15	31	21	33				1	99	36	10	138	1.42	9.1
RC	D	4S		20	5.9	323	304	54	98	2			28	35	27	9	25	5	27	0.41	11.4	
RC Totals				4	13.8	1,821	1,570	277	31	25	17	27	5	7	6	82	27	7	67	0.94	23.5	
RA	D	3S		17	15.8	155	131	23		100				100			30	10	98	0.99	1.3	
RA	D	4S		65	5.4	526	498	88	88	12			2	61	37		32	7	47	0.49	10.5	
RA	D	UT		18		134	134	24	97	3			97	2	1		15	5	16	0.21	8.3	
RA Totals				2	6.5	815	763	135	74	26			18	57	0	24	25	6	38	0.46	20.2	
BM	D	4S		54	11.6	323	285	50	52	48			12	57	13	18	29	7	41	0.47	7.0	
BM	D	UT		46		239	239	42	100				9	75	16		24	5	27	0.26	9.0	
BM Totals				1	6.7	561	524	93	74	26			11	65	14	10	26	6	33	0.36	16.0	
Totals					6.6	41,983	39,212	6,925	18	21	26	34	3	5	6	86	29	8	102	0.95	385.6	

TC PSTATS										PROJECT STATISTICS		PAGE	1
										PROJECT	CITY	DATE	11/6/2019
TWP	RGE	SC	TRACT	TYPE		ACRES	PLOTS	TREES	CuFt	BdFt			
000	000	00	SKIDDER	U1	THR	176.60	84	445	S	W			
000	000	00	SKIDDER	U8									
			PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES						
TOTAL			84	445	5.3								
CRUISE			41	235	5.7	32,808	.7						
DBH COUNT REFOREST COUNT			43	203	4.7								
BLANKS 100 %													
STAND SUMMARY													
SAMPLE TREES		TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC			
DOUG FIR		132	116.0	18.1	72	48.6	206.4	32,228	30,160	8,001	7,996		
WHEMLOCK		47	32.1	16.0	76	11.2	44.6	6,557	6,196	1,703	1,702		
WR CEDAR		35	14.3	16.0	50	5.0	20.1	1,821	1,570	586	586		
R ALDER		11	11.2	12.1	53	2.6	8.9	815	763	229	229		
BL MAPLE		10	12.2	10.1	45	2.1	6.8	561	524	153	154		
TOTAL		235	185.8	16.8	68	69.9	286.7	41,983	39,212	10,672	10,666		
CONFIDENCE LIMITS OF THE SAMPLE													
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR													
CL	68.1	COEFF	TREES/ACRE			# OF PLOTS REQ.		INF. POP.					
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10				
DOUG FIR		91.6	10.0	104	116	128							
WHEMLOCK		166.0	18.1	26	32	38							
WR CEDAR		228.0	24.9	11	14	18							
R ALDER		312.7	34.1	7	11	15							
BL MAPLE		645.6	70.4	4	12	21							
TOTAL		60.9	6.6	173	186	198	149	76	37				
CL	68.1	COEFF	BASAL AREA/ACRE			# OF PLOTS REQ.		INF. POP.					
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10				
DOUG FIR		56.0	6.1	194	206	219							
WHEMLOCK		161.4	17.6	37	45	52							
WR CEDAR		191.7	20.9	16	20	24							
R ALDER		292.3	31.9	6	9	12							
BL MAPLE		645.6	70.4	2	7	12							
TOTAL		35.7	3.9	276	287	298	51	26	13				
CL	68.1	COEFF	NET BF/ACRE			# OF PLOTS REQ.		INF. POP.					
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10				
DOUG FIR		55.6	6.1	28,331	30,160	31,988							
WHEMLOCK		171.1	18.7	5,040	6,196	7,353							
WR CEDAR		200.8	21.9	1,226	1,570	1,914							
R ALDER		302.7	33.0	511	763	1,014							
BL MAPLE		645.6	70.4	155	524	893							
TOTAL		42.4	4.6	37,397	39,212	41,028	72	37	18				
CL	68.1	COEFF	V_BAR/ACRE			# OF PLOTS REQ.		INF. POP.					
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10				
DOUG FIR				137	146	155							
WHEMLOCK		134.4	14.7	113	139	165							
WR CEDAR		162.0	17.7	61	78	95							
R ALDER		146.5	16.0	58	86	114							
BL MAPLE		606.4	66.2	23	77	131							
TOTAL		49.3	5.4	130	137	143	97	50	24				

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT	CITY		DATE	11/6/2019		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
000	000	00	SKIDDER	U1	12.90	7	38	S	W	
		PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES				
TOTAL		7	38	5.4						
CRUISE		5	28	5.6	2,010	1.4				
DBH COUNT REFOREST COUNT		2	10	5.0						
BLANKS 100 %										
STAND SUMMARY										
	SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
DOUG FIR	12	49.7	25.2	108	34.4	172.7	35,216	32,065	8,082	8,081
WHEMLOCK	11	91.0	18.1	78	38.2	162.5	24,912	21,589	6,352	6,345
WR CEDAR	5	15.0	18.7	75	6.6	28.6	3,672	3,146	1,018	1,017
TOTAL	28	155.8	20.7	87	80.0	363.8	63,801	56,800	15,452	15,444
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL:	68.1 %	COEFF	TREES/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	72.4	29.5		35	50	64				
WHEMLOCK	52.8	21.5		71	91	111				
WR CEDAR	194.0	79.0		3	15	27				
TOTAL	20.2	8.2		143	156	169	19	10	5	
CL:	68.1 %	COEFF	BASAL AREA/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	62.3	25.4		129	173	216				
WHEMLOCK	60.4	24.6		123	163	203				
WR CEDAR	209.4	85.3		4	29	53				
TOTAL	14.7	6.0		342	364	386	10	5	3	
CL:	68.1 %	COEFF	NET BF/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	62.9	25.6		23,847	32,065	40,283				
WHEMLOCK	67.7	27.6		15,639	21,589	27,538				
WR CEDAR	201.8	82.2		561	3,146	5,732				
TOTAL	11.8	4.8		54,079	56,800	59,521	6	3	2	
CL:	68.1 %	COEFF	V-BAR/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR				138	186	233				
WHEMLOCK				96	133	169				
WR CEDAR	201.8	82.2		20	110	201				
TOTAL	103.4	42.1		149	156	164	497	253	124	

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT	CITY		DATE	11/6/2019		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
000	000	00	SKIDDER	U2	25.50	13	71	S	W	
		PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES				
TOTAL		13	71	5.5						
CRUISE		6	30	5.0	4,976	.6				
DBH COUNT										
REFOREST										
COUNT		7	41	5.9						
BLANKS										
100 %										
STAND SUMMARY										
	SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
DOUG FIR	10	58.1	23.1	101	35.3	169.6	32,856	31,295	7,608	7,608
WHEMLOCK	8	84.9	16.1	90	30.0	120.3	19,904	19,390	4,974	4,974
WR CEDAR	11	49.9	13.9	48	14.0	52.3	4,660	4,199	1,477	1,477
R ALDER	1	2.2	16.0	74	0.8	3.1	419	375	101	101
TOTAL	30	195.1	18.0	83	81.4	345.3	57,838	55,258	14,160	14,160
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL:	68.1 %	COEFF	TREES/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	65.3	18.9		47	58	69				
WHEMLOCK	78.9	22.8		66	85	104				
WR CEDAR	127.1	36.7		32	50	68				
R ALDER	360.6	104.0			2	4				
TOTAL	34.8	10.0		176	195	215	52	27	13	
CL:	68.1 %	COEFF	BASAL AREA/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	60.6	17.5		140	170	199				
WHEMLOCK	73.9	21.3		95	120	146				
WR CEDAR	114.2	33.0		35	52	70				
R ALDER	360.6	104.0			3	6				
TOTAL	25.4	7.3		320	345	371	28	14	7	
CL:	68.1 %	COEFF	NET BF/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	63.6	18.4		25,549	31,295	37,040				
WHEMLOCK	78.9	22.8		14,977	19,390	23,803				
WR CEDAR	120.5	34.8		2,739	4,199	5,659				
R ALDER	360.6	104.0			375	764				
TOTAL	35.6	10.3		49,589	55,258	60,928	55	28	14	
CL:	68.1 %	COEFF	V-BAR/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR				151	185	218				
WHEMLOCK				124	161	198				
WR CEDAR	75.8	21.9		52	80	108				
R ALDER	360.6	104.0			122	248				
TOTAL	262.2	75.7		144	160	176	2,976	1,518	744	

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT	CITY		DATE	11/6/2019		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
000	000	00	SKIDDER	U3	3.40	2	12	S	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
				PLOTS	TREES	TREES	TREES			
TOTAL		2	12	6.0						
CRUISE		2	12	6.0	1,632		.7			
DBH COUNT										
REFOREST										
COUNT										
BLANKS										
100 %										
STAND SUMMARY										
	SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET
	TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC
DOUG FIR	9	375.0	12.5	55	90.5	320.0	33,008	32,234	8,983	8,983
WHEMLOCK	3	105.1	13.6	91	28.9	106.7	15,658	15,272	4,134	4,134
TOTAL	<i>12</i>	<i>480.1</i>	<i>12.8</i>	<i>63</i>	<i>119.4</i>	<i>426.7</i>	<i>48,665</i>	<i>47,506</i>	<i>13,117</i>	<i>13,117</i>
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL:	68.1 %	COEFF	TREES/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	106.5	99.8		1	375	749				
WHEMLOCK	141.4	132.6			105	244				
TOTAL	<i>52.2</i>	<i>48.9</i>		<i>245</i>	<i>480</i>	<i>715</i>	<i>192</i>	<i>98</i>	<i>48</i>	
CL:	68.1 %	COEFF	BASAL AREA/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	78.6	73.6		84	320	556				
WHEMLOCK	141.4	132.6			107	248				
TOTAL	<i>23.6</i>	<i>22.1</i>		<i>332</i>	<i>427</i>	<i>521</i>	<i>39</i>	<i>20</i>	<i>10</i>	
CL:	68.1 %	COEFF	NET BF/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	44.4	41.6		18,832	32,234	45,637				
WHEMLOCK	141.4	132.6			15,272	35,518				
TOTAL	<i>15.4</i>	<i>14.4</i>		<i>40,663</i>	<i>47,506</i>	<i>54,350</i>	<i>17</i>	<i>8</i>	<i>4</i>	
CL:	68.1 %	COEFF	V-BAR/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	44.4	41.6		59	101	143				
WHEMLOCK	141.4	132.6			143	333				
TOTAL	<i>15.4</i>	<i>14.4</i>		<i>95</i>	<i>111</i>	<i>127</i>	<i>17</i>	<i>8</i>	<i>4</i>	

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT	CITY		DATE	11/6/2019		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
000	000	00	SKIDDER	U4	6.00	3	13	S	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
					TREES	TREES				
TOTAL		3	13	4.3						
CRUISE		3	13	4.3	754		1.7			
DBH COUNT										
REFOREST										
COUNT										
BLANKS										
100 %										
STAND SUMMARY										
	SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET
	TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC
DOUG FIR	13	125.7	18.6	75	54.8	235.9	32,262	29,892	8,788	8,758
TOTAL	<i>13</i>	<i>125.7</i>	<i>18.6</i>	<i>75</i>	<i>54.8</i>	<i>235.9</i>	<i>32,262</i>	<i>29,892</i>	<i>8,788</i>	<i>8,758</i>
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL:	68.1 %	COEFF	TREES/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	46.9	32.5		85	126	167				
TOTAL	<i>46.9</i>	<i>32.5</i>		<i>85</i>	<i>126</i>	<i>167</i>	<i>127</i>	<i>65</i>	<i>32</i>	
CL:	68.1 %	COEFF	BASAL AREA/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	26.6	18.5		192	236	279				
TOTAL	<i>26.6</i>	<i>18.5</i>		<i>192</i>	<i>236</i>	<i>279</i>	<i>41</i>	<i>21</i>	<i>10</i>	
CL:	68.1 %	COEFF	NET BF/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	34.7	24.0		22,712	29,892	37,072				
TOTAL	<i>34.7</i>	<i>24.0</i>		<i>22,712</i>	<i>29,892</i>	<i>37,072</i>	<i>69</i>	<i>35</i>	<i>17</i>	
CL:	68.1 %	COEFF	V-BAR/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	34.7	24.0		96	127	157				
TOTAL	<i>34.7</i>	<i>24.0</i>		<i>96</i>	<i>127</i>	<i>157</i>	<i>69</i>	<i>35</i>	<i>17</i>	

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT	CITY		DATE	11/6/2019		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
000	000	00	SKIDDER	U5	33.70	17	84	S	W	
		PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES				
TOTAL		17	84	4.9						
CRUISE		9	40	4.4	7,055	.6				
DBH COUNT										
REFOREST										
COUNT		8	37	4.6						
BLANKS										
100 %										
STAND SUMMARY										
	SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
DOUG FIR	30	161.8	17.6	68	64.9	271.9	39,668	38,353	10,074	10,074
WR CEDAR	7	23.4	14.9	45	7.3	28.2	1,908	1,751	734	734
R ALDER	1	17.8	11.0	56	3.5	11.8	1,248	1,248	302	302
WHEMLOCK	2	6.3	15.6	69	2.1	8.4	1,030	983	294	294
TOTAL	40	209.4	16.7	64	78.3	320.3	43,854	42,335	11,404	11,404
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL:	68.1 %	COEFF	TREES/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	92.3	23.1		124	162	199				
WR CEDAR	158.4	39.6		14	23	33				
R ALDER	335.0	83.7		3	18	33				
WHEMLOCK	291.8	73.0		2	6	11				
TOTAL	65.6	16.4		175	209	244	183	93	46	
CL:	68.1 %	COEFF	BASAL AREA/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	48.3	12.1		239	272	305				
WR CEDAR	156.5	39.1		17	28	39				
R ALDER	335.0	83.7		2	12	22				
WHEMLOCK	282.3	70.6		2	8	14				
TOTAL	33.5	8.4		293	320	347	48	24	12	
CL:	68.1 %	COEFF	NET BF/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	47.9	12.0		33,756	38,353	42,950				
WR CEDAR	149.2	37.3		1,098	1,751	2,404				
R ALDER	335.0	83.7		203	1,248	2,293				
WHEMLOCK	288.9	72.2		273	983	1,693				
TOTAL	36.5	9.1		38,475	42,335	46,195	57	29	14	
CL:	68.1 %	COEFF	V-BAR/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR				124	141	158				
WR CEDAR	116.1	29.0		39	62	85				
R ALDER				17	106	195				
WHEMLOCK	288.9	72.2		33	118	202				
TOTAL	208.6	52.1		120	132	144	1,849	943	462	

T000 R000 S00 TU6 T000 R000 S00 TU6
 Twp Rge Sec Tract Type Acres Plots Sample Trees CuFt BdFt
 000 000 00 SKIDDER U6 80.00 40 62 S W

Spp	S T	So rt	Gr ad	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log				Logs Per /Acre	
					Def%	Gross	Net		Log Scale Dia.				Log Length				Ln Ft	Dia In	Bd Ft	CF/ Lf		
									4-7	8-11	12-15	16+	12-20	21-30	31-35	36-99						
DF	CU	CU			100.0	53												4	7		0.00	8.9
DF	D	2S	65	10.0	22,373	20,131	1,610				39	61					100	40	16	376	2.46	53.5
DF	D	3S	26	4.0	8,429	8,089	647	43	57					4	17	79		37	8	84	0.70	95.8
DF	D	4S	8	4.8	2,440	2,324	186	95	5				22	32	34	12		25	5	28	0.31	82.8
DF	D	UT	1		162	162	13	100						100				11	5	4	0.10	39.7
DF	Totals		85	8.2	33,456	30,705	2,456	19	15	25	40			2	4	7	87	29	8	109	1.03	280.6
WH	CU	CU																8	6		0.00	1.3
WH	D	2S	28		726	726	58			100							100	40	13	263	1.81	2.8
WH	D	3S	43	2.2	1,135	1,110	89	35	65								100	40	8	94	0.71	11.8
WH	D	4S	8	9.4	222	201	16	100					42	27	31			22	5	22	0.28	9.0
WH	D	UT	21		517	517	41	38		62			29	9		62		22	6	56	0.75	9.3
WH	Totals		7	1.8	2,599	2,553	204	31	28	41			9	4	2	85		29	7	75	0.75	34.0
BM	D	4S	54	11.6	712	630	50	52	48				12	57	13	18		29	7	41	0.47	15.5
BM	D	UT	46		527	527	42	100					9	75	16			24	5	27	0.26	19.8
BM	Totals		3	6.7	1,239	1,156	93	74	26				11	65	14	10		26	6	33	0.36	35.3
RA	D	3S	17	18.2	205	168	13		100					100				30	10	90	0.97	1.9
RA	D	4S	70	7.4	733	679	54	84	16					42		58		34	6	48	0.51	14.1
RA	D	UT	13		125	125	10	100					100					15	5	12	0.20	10.1
RA	Totals		3	8.6	1,062	971	78	72	28				13	46		41		26	6	37	0.48	26.1
RC	CU	CU																11			0.00	.9
RC	D	3S	97	21.5	965	757	61		6	27	67						100	36	16	314	3.14	2.4
RC	D	4S	3	66.6	57	19	2	100						100				26	6	10	0.79	1.9
RC	Totals		2	24.1	1,022	776	62	2	6	27	65			2		98		26	11	149	2.28	5.2
Type Totals				8.2	39,378	36,161	2,893	23	17	25	36			3	7	7	83	29	8	95	0.93	381.3

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT	CITY		DATE	11/6/2019		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
000	000	00	SKIDDER	U6	80.00	40	177	S	W	
		PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES				
TOTAL		40	177	4.4						
CRUISE		14	62	4.4	15,975	.4				
DBH COUNT										
REFOREST										
COUNT		26	115	4.4						
BLANKS										
100 %										
STAND SUMMARY										
	SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
DOUG FIR	35	133.9	17.5	69	53.2	222.4	33,456	30,705	8,408	8,397
WHEMLOCK	7	20.1	14.5	54	6.1	23.1	2,599	2,553	745	744
BL MAPLE	10	26.9	10.1	45	4.7	15.0	1,239	1,156	339	339
R ALDER	5	16.0	12.2	51	3.7	13.0	1,062	971	326	326
WR CEDAR	5	2.8	25.6	52	2.0	10.0	1,022	776	312	312
TOTAL	62	199.7	16.1	63	70.6	283.6	39,378	36,161	10,128	10,118
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL:	68.1 %	COEFF	TREES/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	67.9	10.7		120	134	148				
WHEMLOCK	243.0	38.4		12	20	28				
BL MAPLE	442.5	70.0		8	27	46				
R ALDER	226.5	35.8		10	16	22				
WR CEDAR	270.1	42.7		2	3	4				
TOTAL	62.6	9.9		180	200	219	157	80	39	
CL:	68.1 %	COEFF	BASAL AREA/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	54.6	8.6		203	222	242				
WHEMLOCK	224.6	35.5		15	23	31				
BL MAPLE	442.5	70.0		5	15	25				
R ALDER	224.6	35.5		8	13	18				
WR CEDAR	252.2	39.9		6	10	14				
TOTAL	41.0	6.5		265	284	302	67	34	17	
CL:	68.1 %	COEFF	NET BF/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	57.2	9.0		27,929	30,705	33,482				
WHEMLOCK	224.6	35.5		1,646	2,553	3,459				
BL MAPLE	442.5	70.0		347	1,156	1,965				
R ALDER	217.7	34.4		637	971	1,305				
WR CEDAR	261.2	41.3		456	776	1,096				
TOTAL	46.3	7.3		33,513	36,161	38,810	86	44	21	
CL:	68.1 %	COEFF	V-BAR/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR				126	138	151				
WHEMLOCK	189.4	29.9		71	110	150				
BL MAPLE	414.8	65.6		23	77	131				
R ALDER	115.9	18.3		49	75	100				
WR CEDAR	176.9	28.0		46	78	110				
TOTAL	317.6	50.2		118	128	137	4,036	2,059	1,009	

TC TSTATS				STATISTICS				PAGE	1		
				PROJECT	CITY			DATE	11/6/2019		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt		
000	000	00	SKIDDER	U7	1.30	1	13	S	W		
				TREES	ESTIMATED			PERCENT			
				PER PLOT	TOTAL			SAMPLE			
				PLOTS	TREES			TREES			
TOTAL			1	13	13.0						
CRUISE			1	13	13.0	35		37.1			
DBH COUNT											
REFOREST											
COUNT											
BLANKS											
100 %											
STAND SUMMARY											
	SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET	
	TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC	
DOUG FIR	9	20.8	23.5	104	12.9	62.6	11,585	11,123	2,844	2,844	
WR CEDAR	2	3.1	13.0	46	0.8	2.9	154	154	65	65	
WHEMLOCK	2	3.1	11.4	46	0.6	2.2	215	215	59	59	
TOTAL	<i>13</i>	<i>26.9</i>	<i>21.5</i>	<i>91</i>	<i>14.6</i>	<i>67.7</i>	<i>11,954</i>	<i>11,492</i>	<i>2,968</i>	<i>2,968</i>	
CONFIDENCE LIMITS OF THE SAMPLE											
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR											

TC TSTATS				STATISTICS				PAGE	1		
				PROJECT	CITY			DATE	11/6/2019		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt		
000	000	00	SKIDDER	U8	13.80	1	37	S	W		
				TREES	ESTIMATED			PERCENT			
				PER PLOT	TOTAL			SAMPLE			
				PLOTS	TREES			TREES			
TOTAL			1	37			37.0				
CRUISE			1	37			37.0	370	10.0		
DBH COUNT											
REFOREST											
COUNT											
BLANKS											
100 %											
STAND SUMMARY											
	SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET	
	TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC	
DOUG FIR	14	10.1	21.8	97	5.6	26.2	4,725	4,507	1,139	1,139	
WHEMLOCK	14	10.1	16.4	81	3.7	14.9	2,384	2,304	604	604	
WR CEDAR	5	3.6	18.0	66	1.5	6.4	667	601	210	210	
R ALDER	4	2.9	15.3	70	0.9	3.7	457	391	118	118	
TOTAL	37	26.8	18.7	84	11.8	51.2	8,232	7,804	2,070	2,070	
CONFIDENCE LIMITS OF THE SAMPLE											
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR											

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

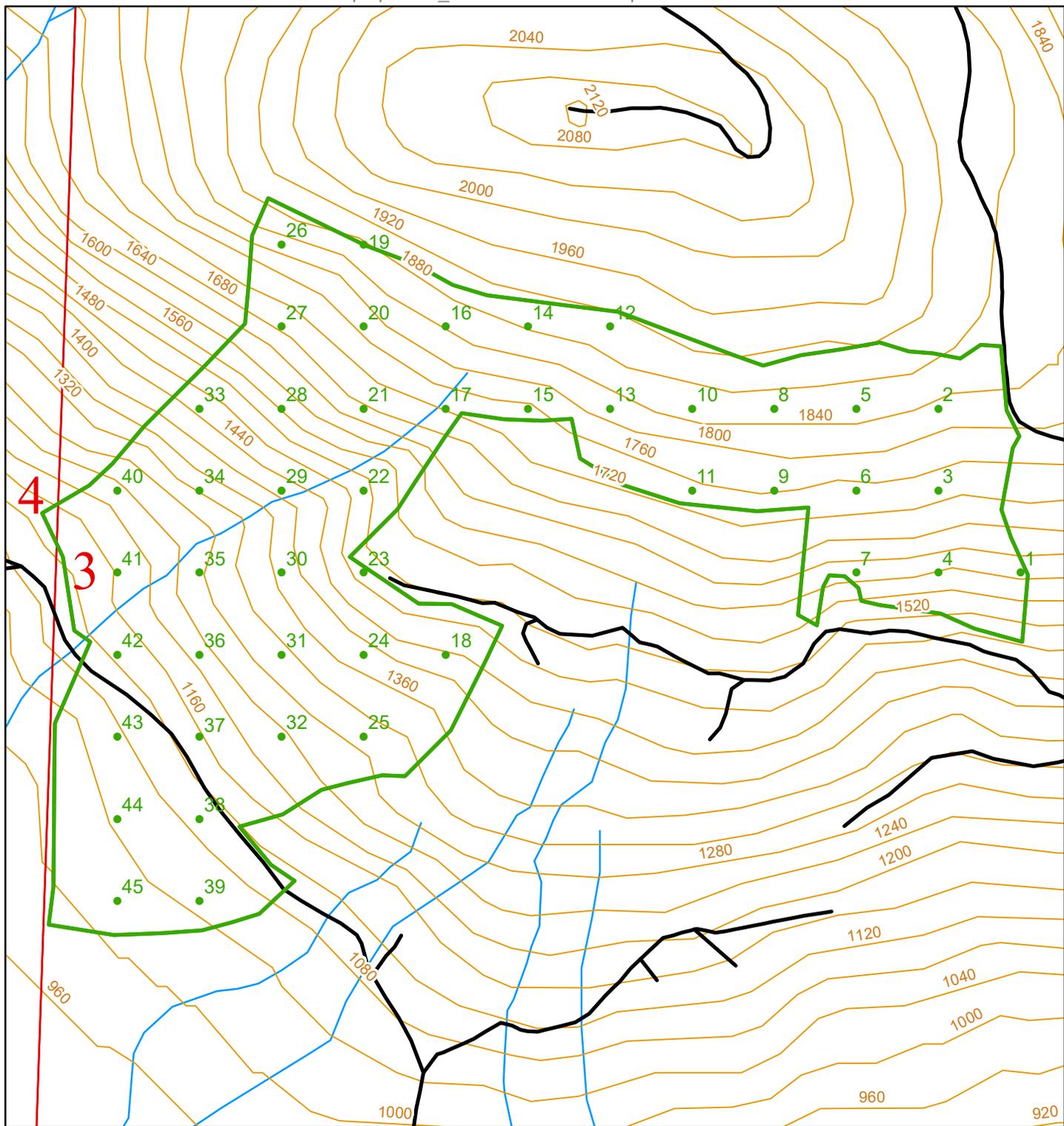
T000 R000 S00 TyU1	12.9
T000 R000 S00 TyU2	25.5
T000 R000 S00 TyU8	13.8

Project CITY
Acres 176.60

Page No 1
Date: 11/6/2019
Time 2:04:33PM

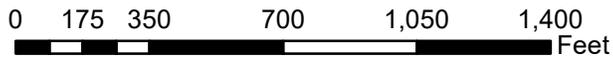
Species	Total	Total	Total	Net Cubic Ft/		CF/	Total CCF		Total MBF	
	Trees	Logs	Tons	Tree	Log	LF	Gross	Net	Gross	Net
DOUG FIR	20,486	42,549	40,272	68.92	33.19	1.09	14,131	14,120	5,692	5,326
WHEMLOCK	5,661	11,621	9,623	53.09	25.87	0.77	3,007	3,006	1,158	1,094
WR CEDAR	2,533	3,628	2,431	40.84	28.52	0.96	1,035	1,035	322	277
R ALDER	1,977	3,559	1,112	20.45	11.36	0.45	404	404	144	135
BL MAPLE	2,150	2,828	718	12.62	9.59	0.37	271	271	99	93
Totals	32,808	64,184	54,156	57.41	29.35	0.96	18,848	18,836	7,414	6,925

Wood Type Species	Total	Total	Total	Net Cubic Ft/		CF/	Total CCF		Total MBF	
	Trees	Logs	Tons	Tree	Log	LF	Gross	Net	Gross	Net
C	28,681	57,798	52,326	63.32	31.42	1.01	18,172	18,161	7,171	6,698
H	4,126	6,387	1,830	16.37	10.58	0.41	675	676	243	227
Totals	32,808	64,184	54,156	57.41	29.35	0.96	18,848	18,836	7,414	6,925



Cruiser Sample Point Locations

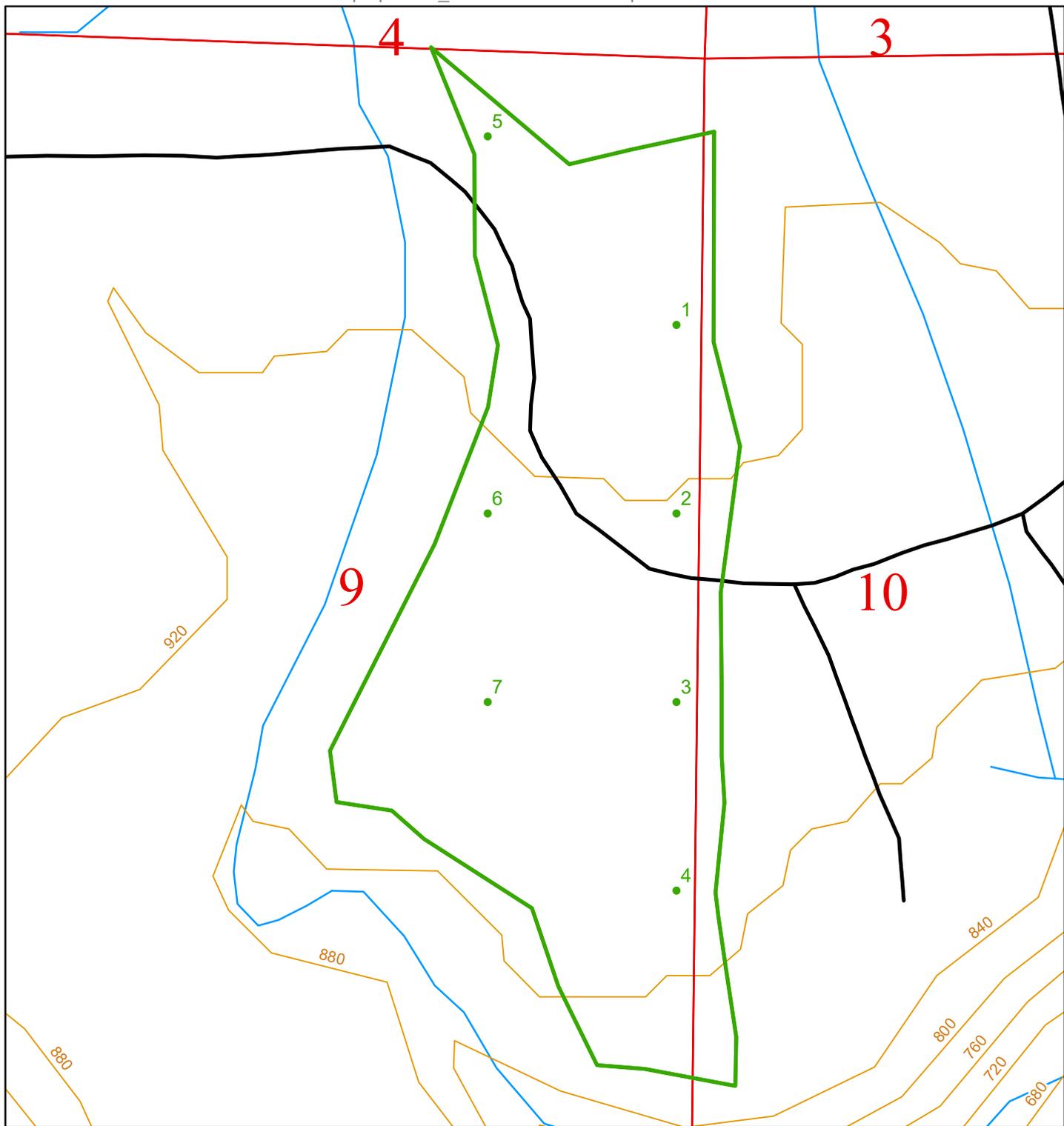
LAYER NAME:	city_skidder_u6	Township:	T28R02W
POLY ID:	1	Total Sample Points:	45
Acres:	89	Spacing Between Points:	Width: 290 Height: 290
		Point Rotation Degrees:	0



Scale 1:6,000

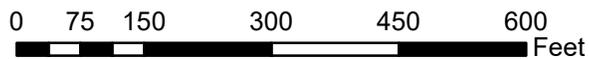
Legend

- Sample Points
- Unit
- Public Land Survey Sections
- Contours 40-foot



Cruiser Sample Point Locations

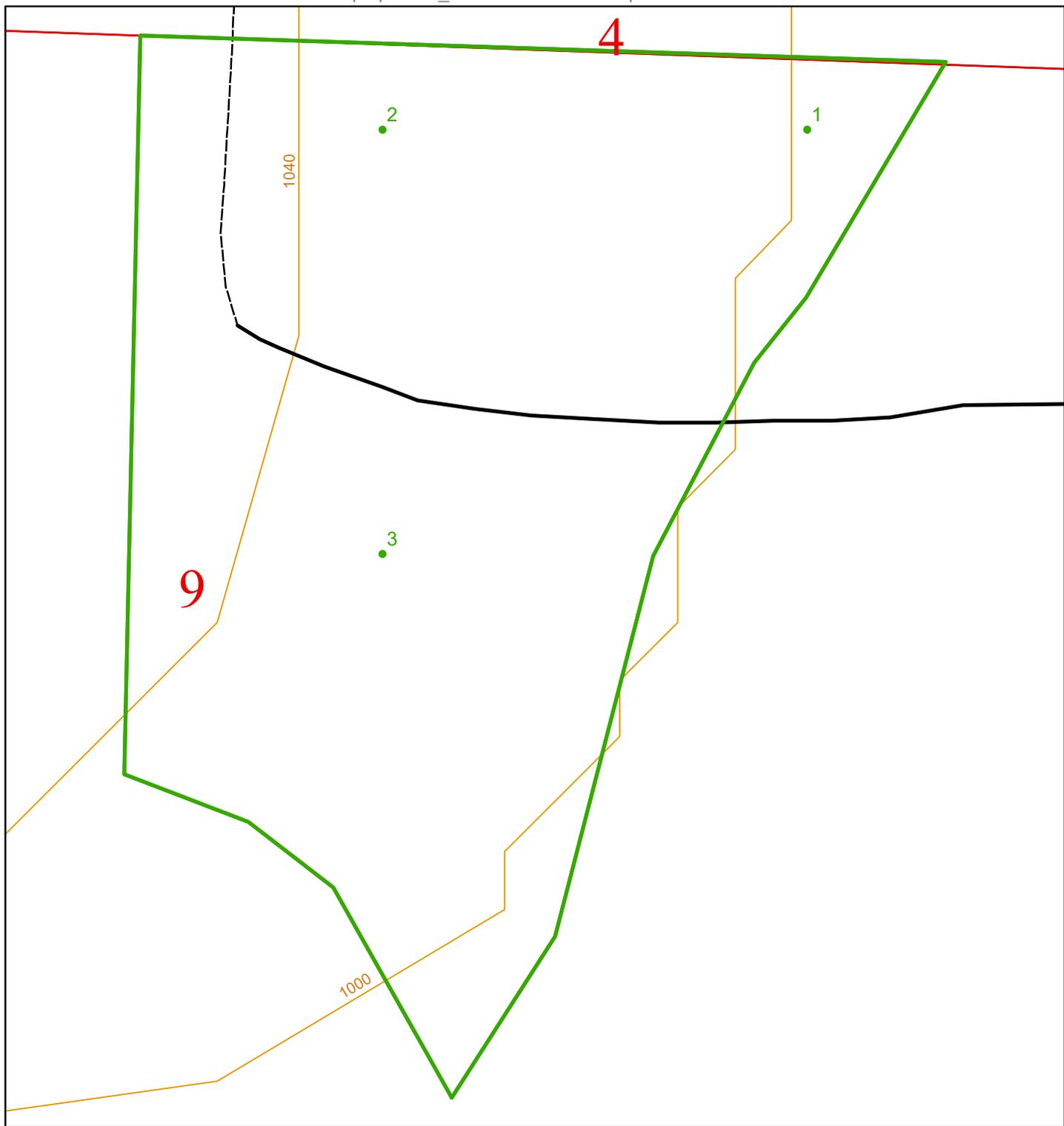
LAYER NAME:	city_skidder_u1	Township:	T28R02W
POLY ID:	1	Total Sample Points:	7
Acres:	14	Spacing Between Points:	300
		Point Rotation Degrees:	0



Scale 1:2,700

Legend

- Sample Points
- Unit
- Public Land Survey Sections
- Contours 40-foot



Cruiser Sample Point Locations

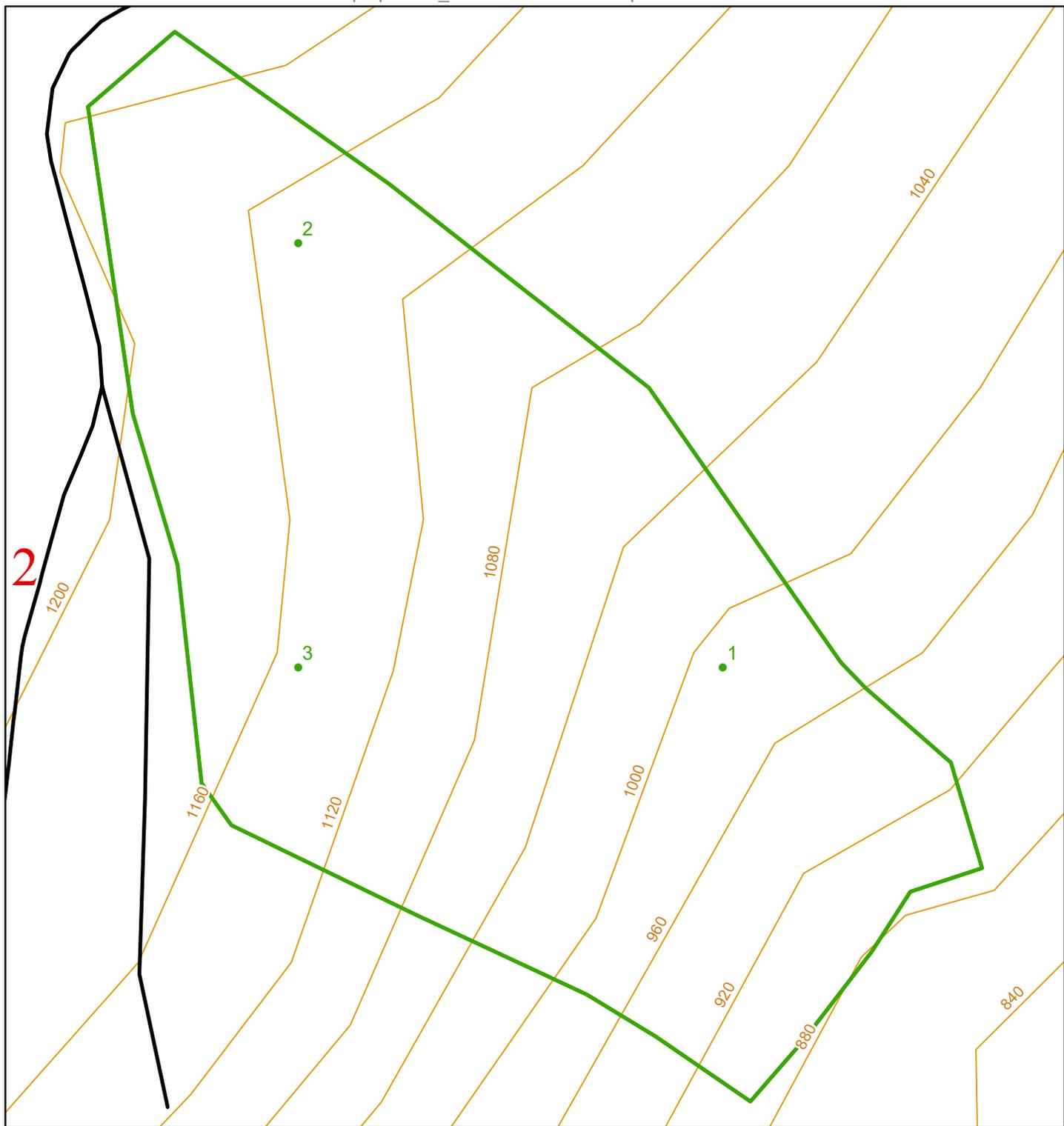
LAYER NAME:	city_skidder_u3	Township:	T28R02W
POLY ID:	1	Total Sample Points:	3
Acres:	4	Spacing Between Points:	250
		Point Rotation Degrees:	0



Scale 1:1,000

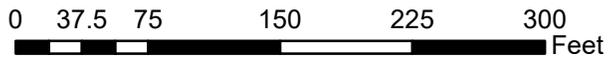
Legend

- Sample Points
- Unit
- Public Land Survey Sections
- Contours 40-foot



Cruiser Sample Point Locations

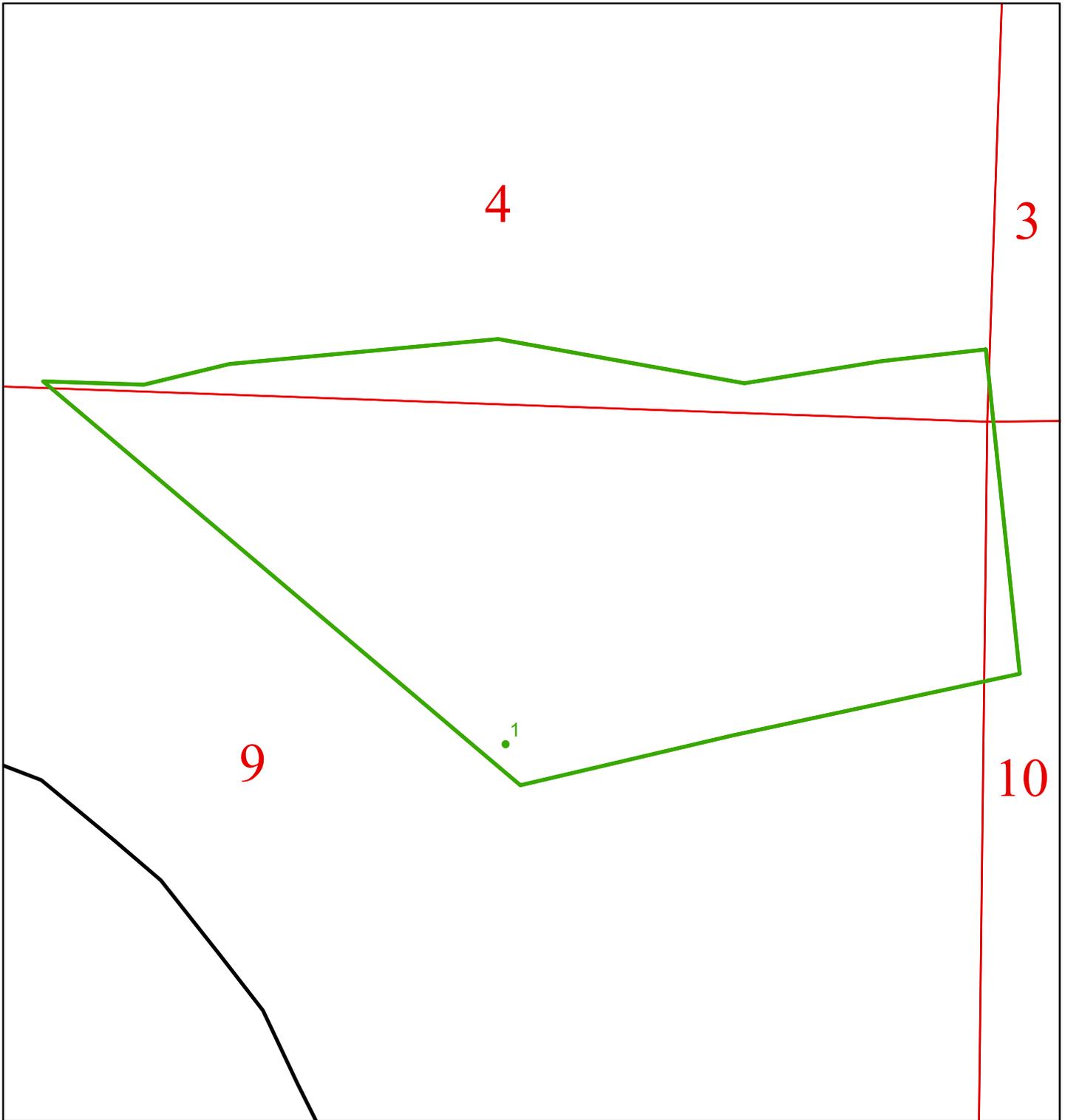
LAYER NAME:	city_skidder_u4	Township:	T28R02W
POLY ID:	1	Total Sample Points:	3
Acres:	7	Spacing Between Points:	325
		Point Rotation Degrees:	0



Scale 1:1,300

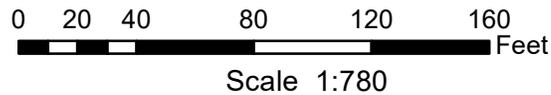
Legend

- Sample Points
- Unit
- Public Land Survey Sections
- Contours 40-foot



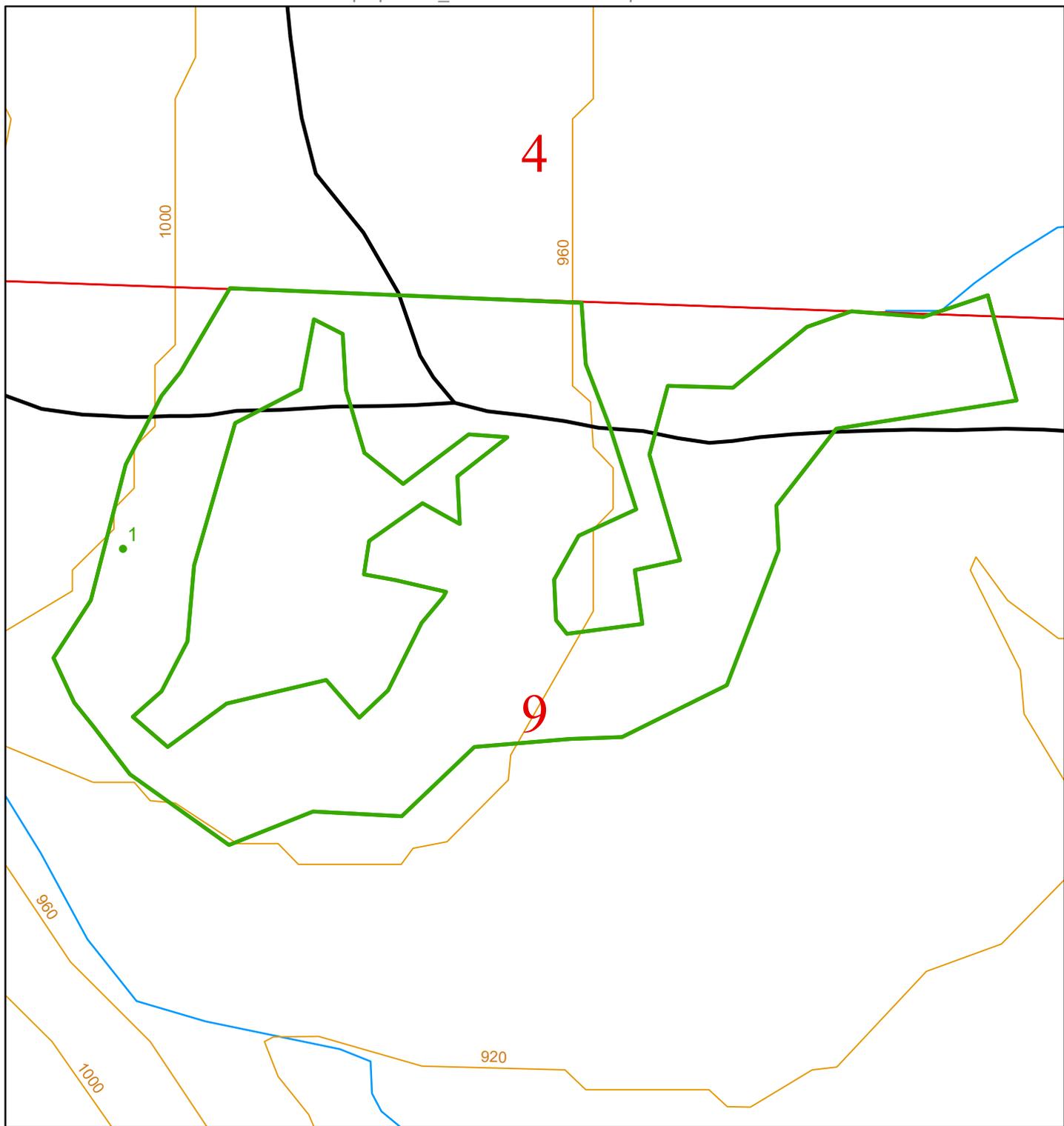
Cruiser Sample Point Locations

LAYER NAME:	city_skidder_u7	Township:	T28R02W
POLY ID:	1	Total Sample Points:	1
Acres:	acres	Spacing Between Points:	225
		Point Rotation Degrees:	0



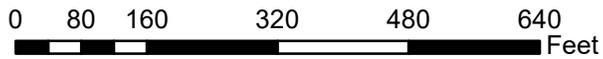
Legend

- Sample Points
- Unit
- Public Land Survey Sections
- Contours 40-foot



Cruiser Sample Point Locations

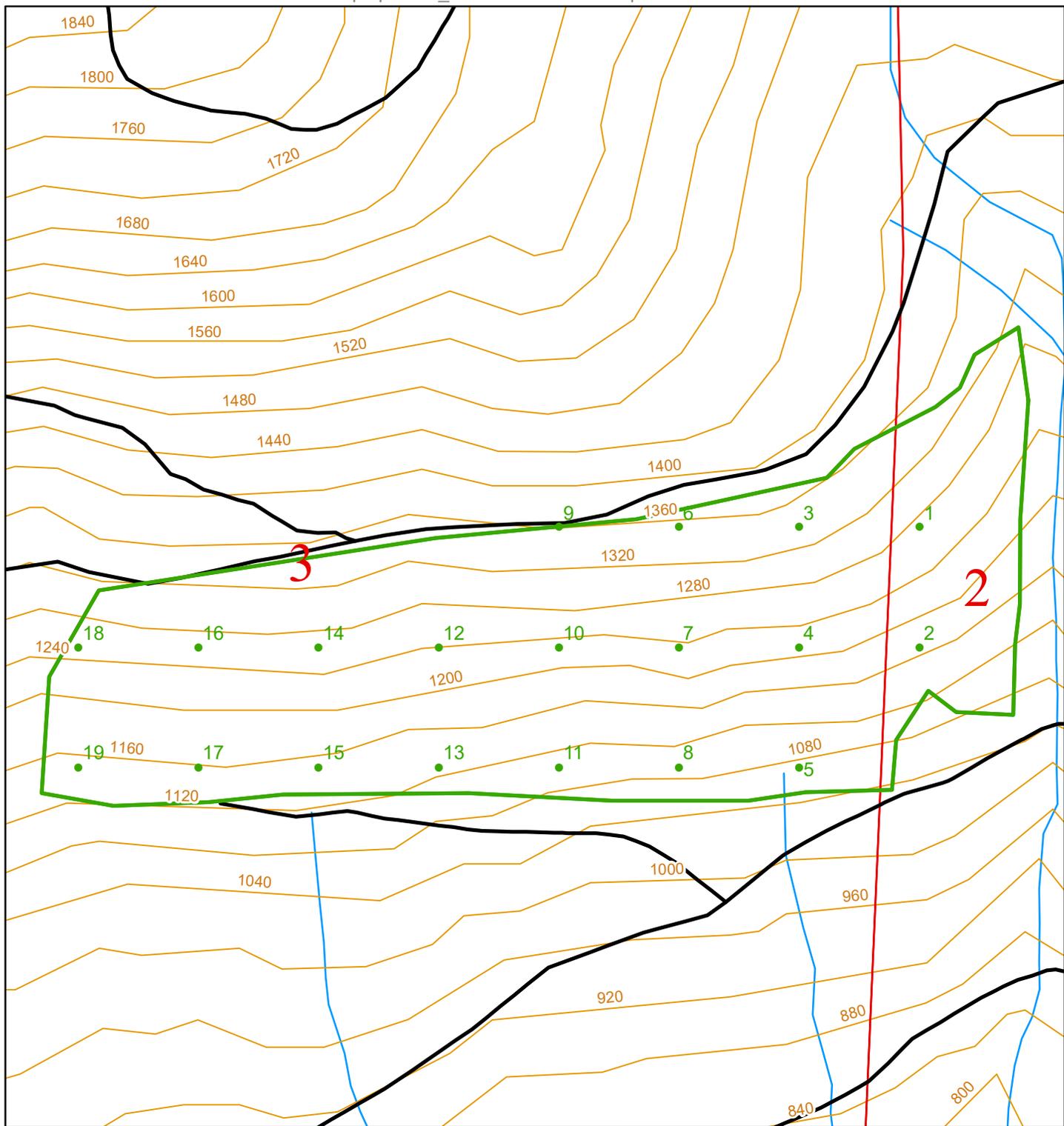
LAYER NAME:	city_skidder_u8	Township:	T28R02W
POLY ID:	1	Total Sample Points:	1
Acres:	15	Spacing Between Points:	800
		Point Rotation Degrees:	0



Scale 1:2,800

Legend

- Sample Points
- Unit
- Public Land Survey Sections
- Contours 40-foot



Cruiser Sample Point Locations

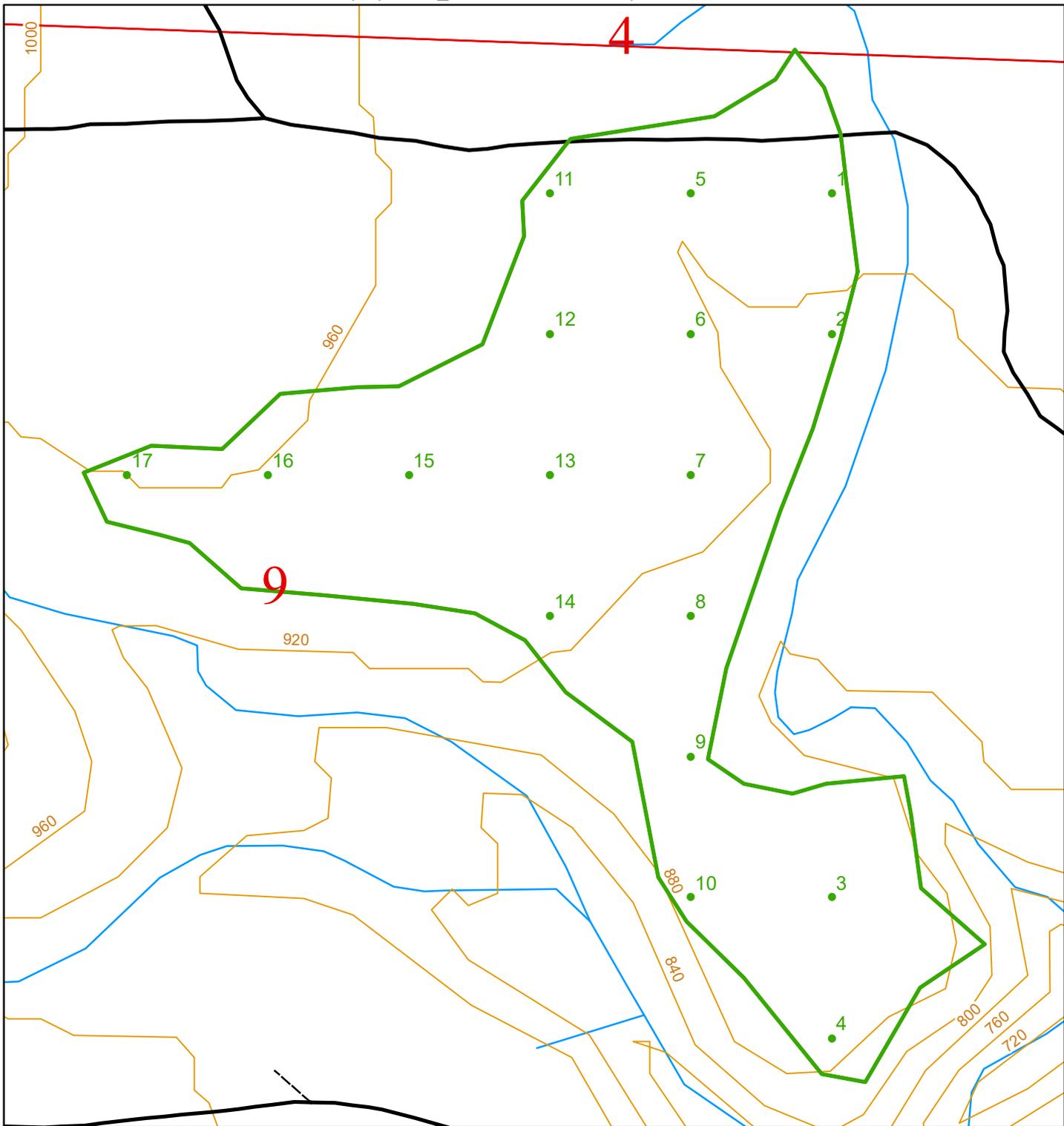
LAYER NAME:	city_skidder_u5	Township:	T28R02W
POLY ID:	1	Total Sample Points:	19
Acres:	35	Spacing Between Points:	Width: 290 Height: 290
		Point Rotation Degrees:	0



Scale 1:4,100

Legend

- Sample Points
- Unit
- Public Land Survey Sections
- Contours 40-foot



Cruiser Sample Point Locations

LAYER NAME:	city_skidder_u2	Township:	T28R02W
POLY ID:	1	Total Sample Points:	17
Acres:	30	Spacing Between Points:	Width: 290 Height: 290
		Point Rotation Degrees:	0



Scale 1:3,500

Legend

- Sample Points
- Unit
- Public Land Survey Sections
- Contours 40-foot

Appeal Information

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

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

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

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

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

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

And

Department Of Natural Resources
Olympic Region
411 Tillicum Lane
Forks, WA 98331

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: <http://www.dnr.wa.gov/businesspermits/forestpractices>. Notify DNR of new Operators within 48 hours.

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

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

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

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

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

DNR affidavit of mailing:

On this day _____,	I placed in the United States mail at _____	Forks	_____	WA,
(date)		(post office location)		
postage paid, a true and accurate copy of this document. Notice of Decision FPA # 2616337				
_____		_____		
(Printed name)		(Signature)		

STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES

CITY SKIDDER TIMBER SALE ROAD PLAN
JEFFERSON COUNTY
STRAITS DISTRICT
OLYMPIC REGION

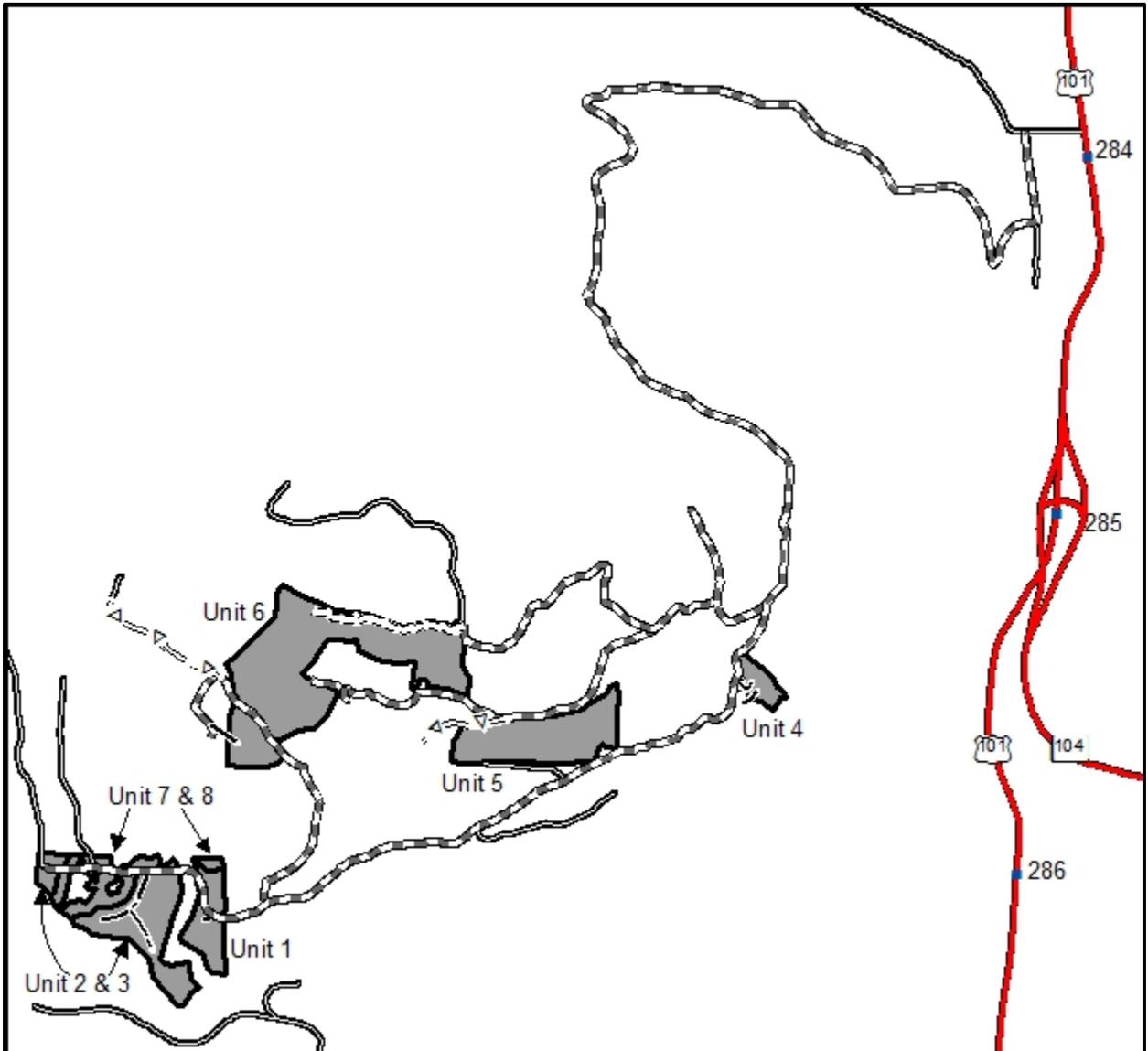
AGREEMENT NO.: 30-099253

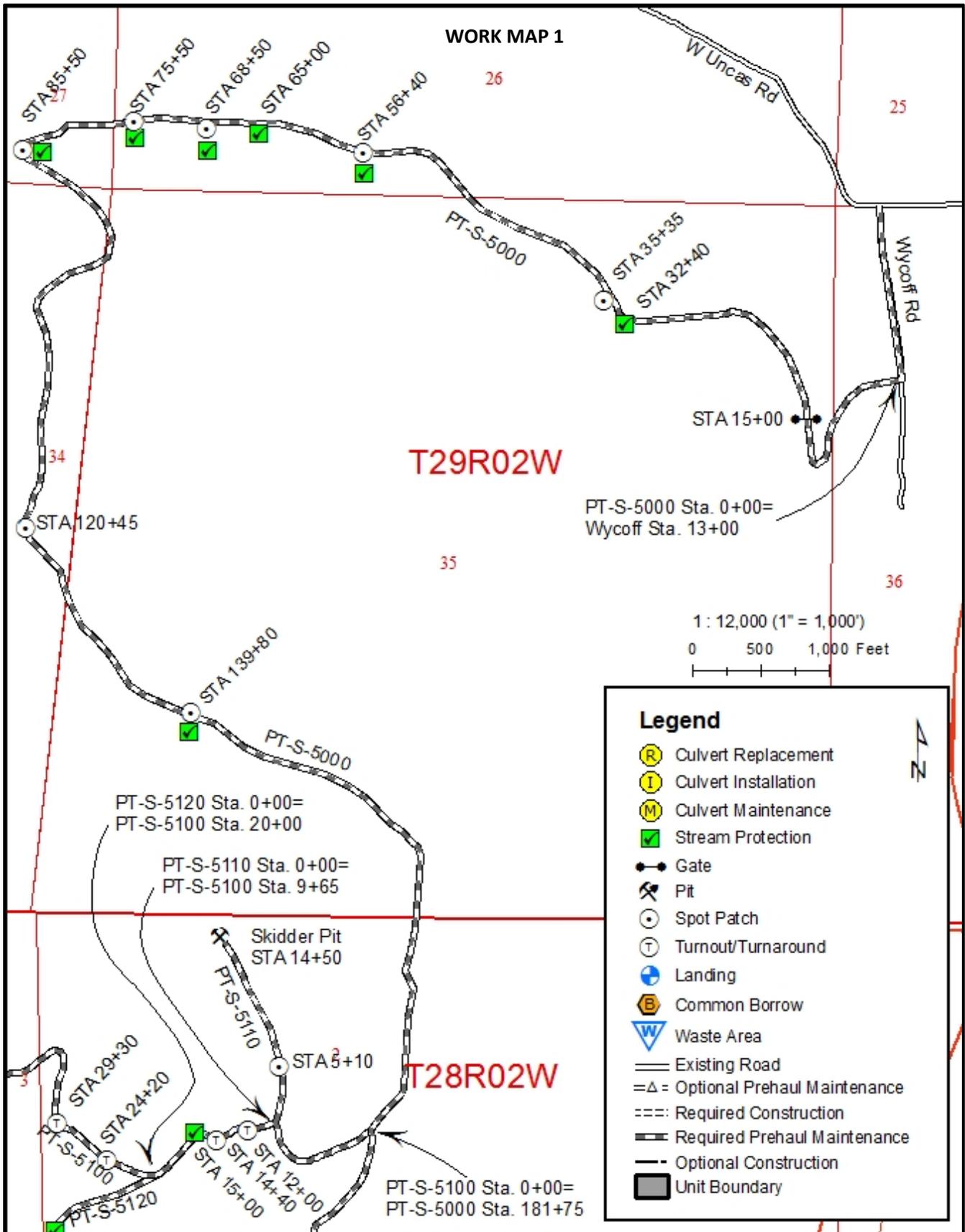
DISTRICT ENGINEER: GREG ELLIS

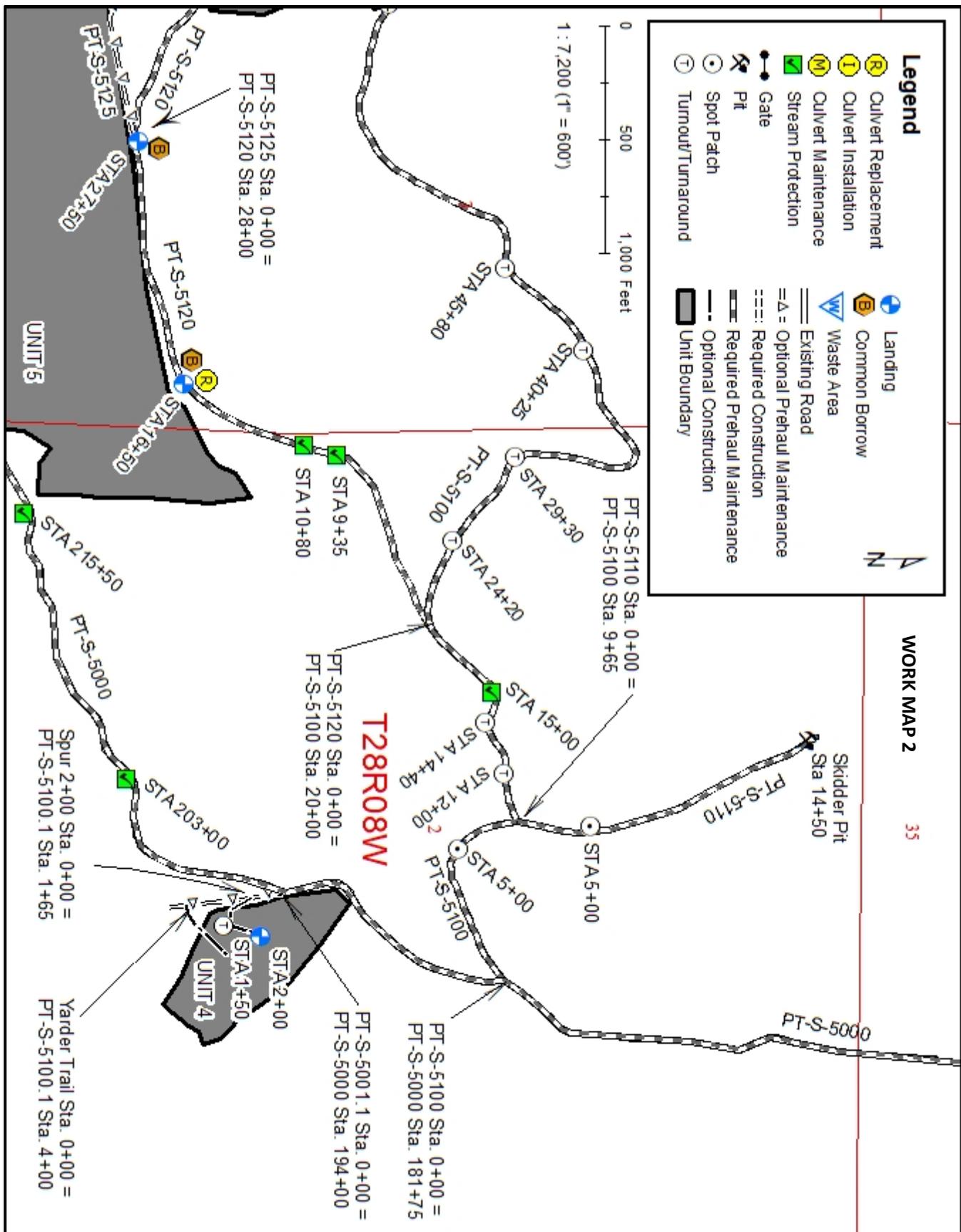
DATE: 12/20/2019

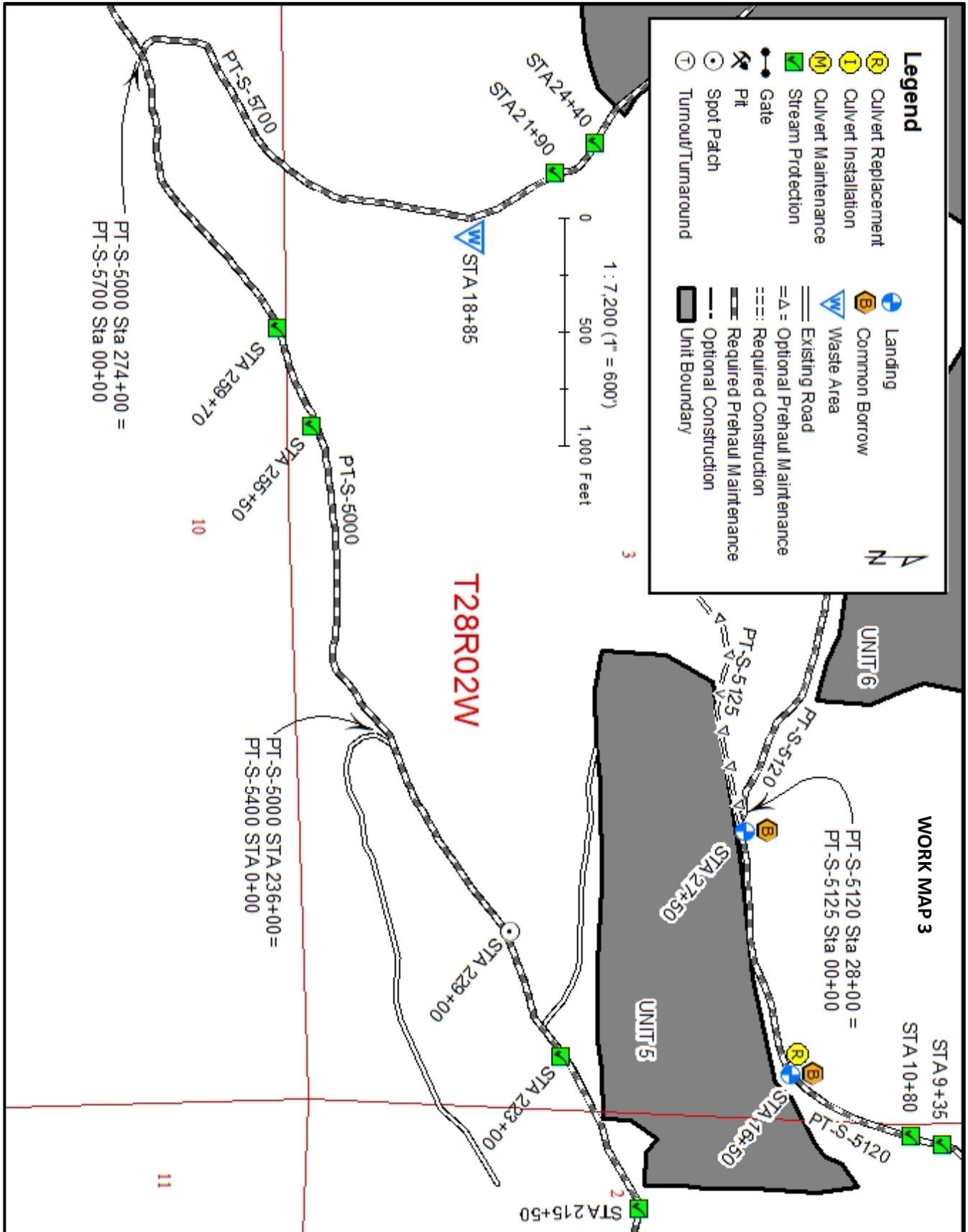
DRAWN & COMPILED BY: JONATHAN MASON &
SCOTT ROSE

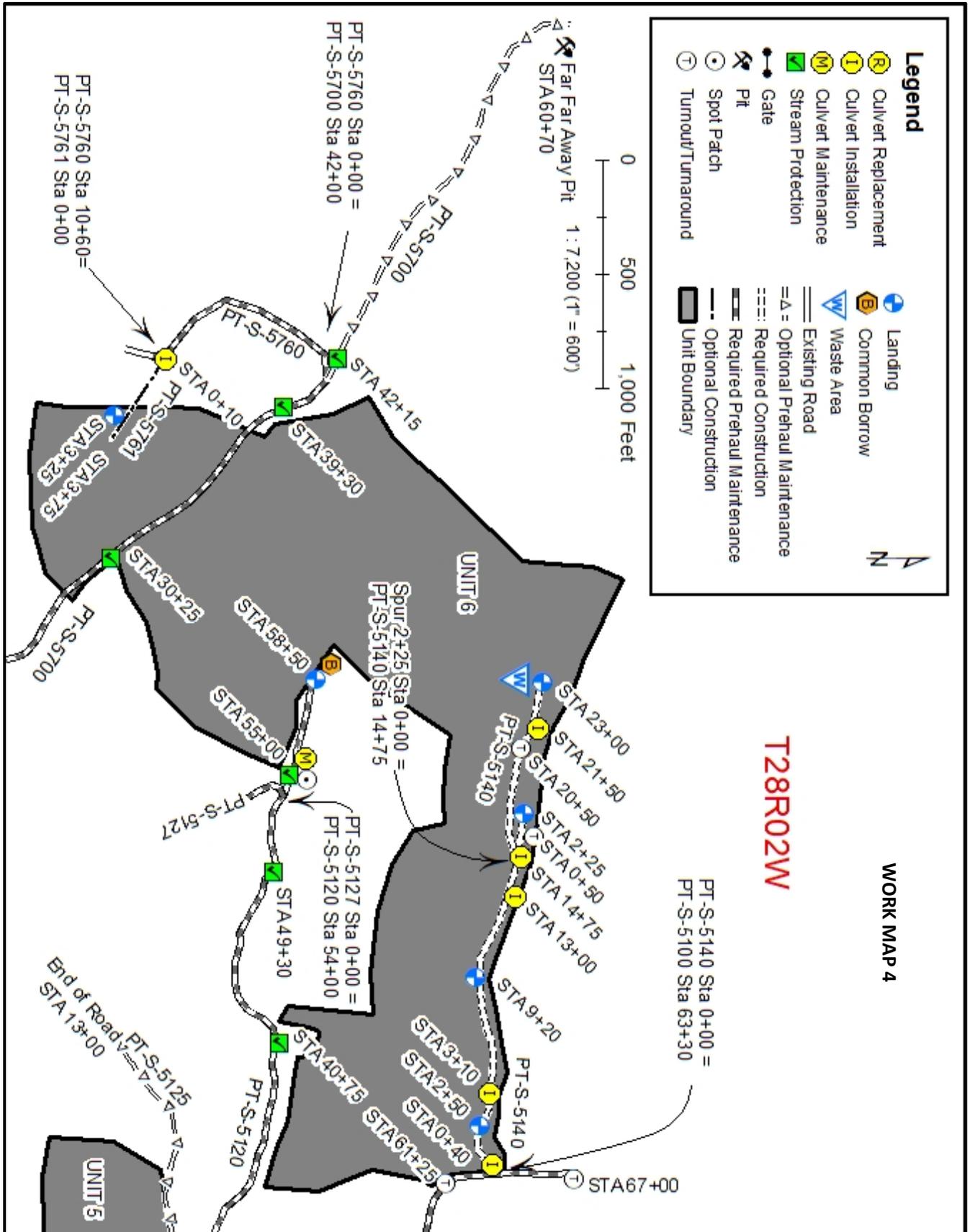
VICINITY MAP

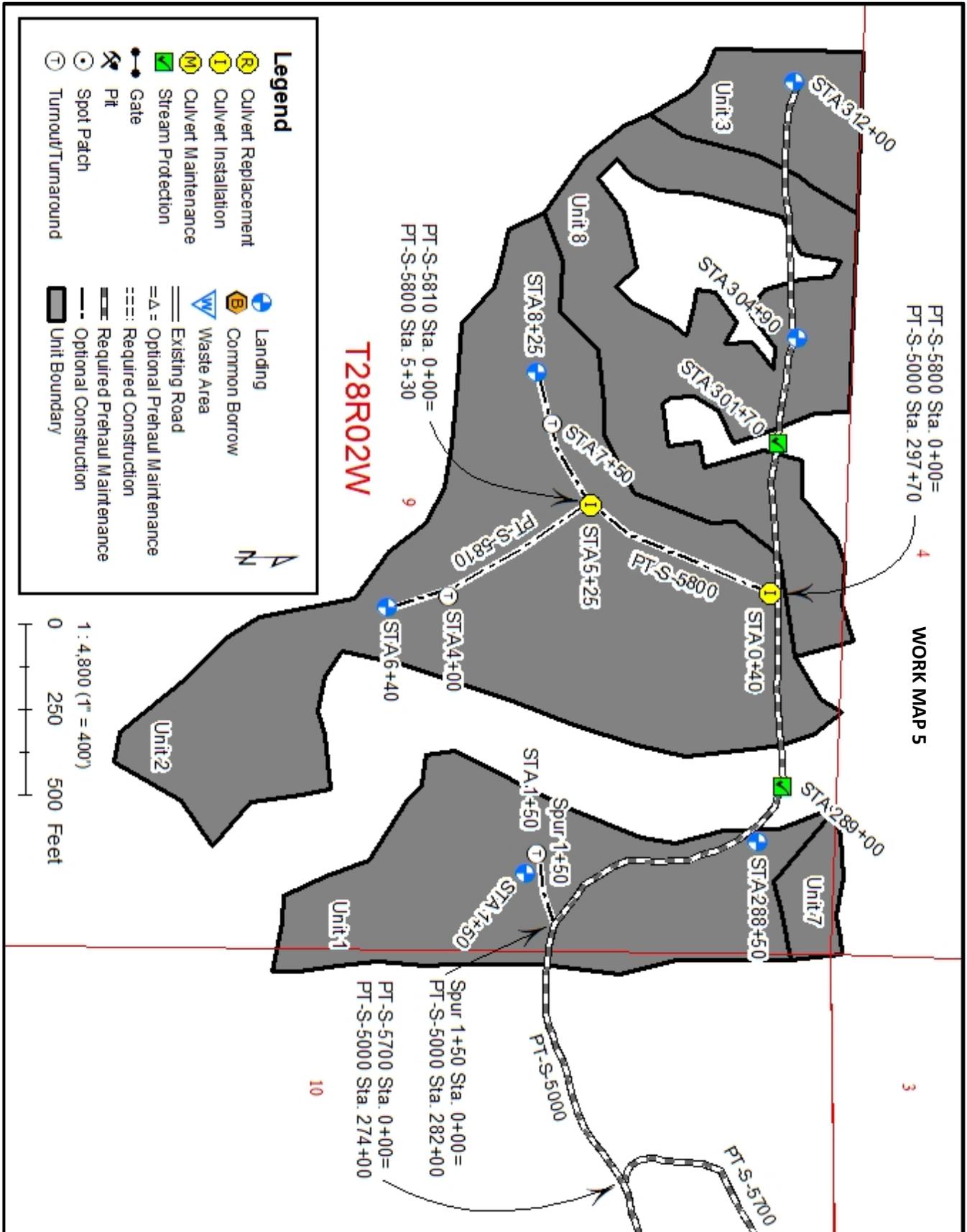












SECTION 0 – SCOPE OF PROJECT

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>
Wycoff Rd	0+00 to 13+00	Maintenance
PT-S-5000	0+00 to 312+00	Maintenance
PT-S-5100	0+00 to 67+00	Maintenance
PT-S-5110	0+00 to 14+50	Maintenance
PT-S-5120	0+00 to 58+50	Maintenance
PT-S-5127	0+00 to 1+00	Maintenance
PT-S-5140	0+00 to 23+00	Construction
Spur 2+25	0+00 to 2+25	Construction
PT-S-5700	0+00 to 42+00	Maintenance
PT-S-5760	0+00 to 10+60	Maintenance

0-3 OPTIONAL ROADS

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

<u>Road</u>	<u>Stations</u>	<u>Type</u>
PT-S-5100.1	0+00 to 5+00	Maintenance
Spur 2+00	0+00 to 2+00	Construction
Yarder Trail	0+00 to 3+00	Construction
PT-S-5125	0+00 to 13+00	Maintenance
PT-S-5761	0+00 to 3+75	Construction
Spur 1+50	0+00 to 1+50	Construction
PT-S-5700	42+00 to 60+70	Maintenance
PT-S-5800	0+00 to 8+25	Construction
PT-S-5810	0+00 to 6+40	Construction

0-4 CONSTRUCTION

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

<u>Road</u>	<u>Stations</u>	<u>Requirements</u>
Spur 2+00	0+00 to 2+00	See below.
Yarder Trail*	0+00 to 3+00	Construct trail for Yarder.
PT-S-5140	0+00 to 23+00	See below.

Spur 2+25	0+00 to 2+25	See below.
PT-S-5761	0+00 to 3+75	See below.
Spur 1+50	0+00 to 1+50	See below.
PT-S-5800	0+00 to 8+25	See below.
PT-S-5810	0+00 to 6+40	See below.
Total Stations	47.15 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.

* Yarder Trail stations are not included in the Total Stations.

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>
Wycoff Rd	0+00 to 13+00	Perform maintenance grading in accordance with clause 2-5 Maintenance Grading. Perform brushing where requested by the Contract Administrator in accordance with clause 3-1 Brushing.
PT-S-5000	0+00 to 312+00	Apply Rock in accordance with clauses 6-71 Rock Application, clause 6-73 Rock for Widened Portions, clause 6-78 Rock for Spot Patching, and the Rock List. Compact road surface in accordance with the compaction list and after rock application. Perform maintenance grading in accordance with clause 2-5 Maintenance Grading. Perform maintenance on crossdrains, removing any debris or sediment that restricts proper drainage in accordance with clause 2-6 Cleaning Culverts. Perform ditch maintenance in accordance with clause 2-7 Cleaning Ditches, Headwalls, and Catch Basins. Perform brushing on both sides of the road in accordance with clause 3-1 Brushing and the Typical Section Sheet.
PT-S-5100.1	0+00 to 5+00	Perform maintenance in accordance with clause 2-5 Maintenance Grading. Perform brushing on both sides of the road in accordance with clause 3-1 Brushing.

PT-S-5100	0+00 to 67+00	<p>Apply Rock in accordance with clause 6-71 Rock Application, clause 6-73 Rock for Widened Portions, and the Rock List.</p> <p>Compact road surface in accordance with the compaction list and after rock application.</p> <p>Perform maintenance grading in accordance with clause 2-5 Maintenance Grading.</p> <p>Perform maintenance on crossdrains, removing any debris or sediment that restricts proper drainage in accordance with clause 2-6 Cleaning Culverts.</p> <p>Perform brushing on both sides of the road in accordance with clause 3-1 Brushing and the Typical Section Sheet.</p>
PT-S-5110	0+00 to 14+50	<p>Apply Rock in accordance with clause 6-71 Rock Application, 6-78 Rock for Spot Patching, and the Rock List. Compact road surface in accordance with the compaction list.</p> <p>Perform maintenance grading in accordance with clause 2-5 Maintenance Grading.</p> <p>Perform brushing on both sides of the road in accordance with clause 3-1 Brushing and the Typical Section Sheet.</p>
PT-S-5120	0+00 to 58+50	<p>Apply Rock in accordance with clause 6-71 Rock Application, clause 6-73 Rock for Widened Portions and the Rock List. Compact road surface in accordance with the compaction list.</p> <p>Perform maintenance grading in accordance with clause 2-5 Maintenance Grading.</p> <p>Perform maintenance on crossdrains, removing any debris or sediment that blocks or restricts proper drainage in accordance with clause 2-6 Cleaning Culverts.</p> <p>Perform brushing on both sides of the road in accordance with clause 3-1 Brushing and the Typical Section Sheet.</p> <p>4-9 Embankment Widening, Purchaser shall construct landings by widening portions of the road in accordance with clauses 4-46 Common Borrow, 4-49 Borrow Source, 4-50 Borrow Application and 6-71 Rock Application to meet the specifications called for in the Rock List.</p>
PT-S-5125	0+00 to 13+00	<p>Perform maintenance grading in accordance with clause 2-5 Maintenance Grading.</p> <p>Perform maintenance on crossdrains, removing any debris or sediment that restricts proper drainage in accordance with clause 2-6 Cleaning Culverts.</p>

		Perform brushing on both sides of the road in accordance with clause 3-1 Brushing and the Typical Section Sheet.
PT-S-5127	0+00 to 1+00	Perform brushing on both sides of the road in accordance with clause 3-1 Brushing and the Typical Section Sheet.
PT-S-5700	0+00 to 42+00	Compact road surface in accordance with the compaction list. Perform maintenance in accordance with clause 2-5 Maintenance Grading. Perform maintenance on crossdrains, removing any debris or sediment that restricts proper drainage in accordance with clause 2-6 Cleaning Culverts. Perform brushing on both sides of the road in accordance with clause 3-1 Brushing and the Typical Section Sheet.
PT-S-5700	42+00 to 60+70	Perform maintenance grading in accordance with clause 2-5 Maintenance Grading. Perform maintenance on crossdrains, removing any debris or sediment that restricts proper drainage in accordance with clause 2-6 Cleaning Culverts. Perform brushing on both sides of the road in accordance with clause 3-1 Brushing and the Typical Section Sheet.
PT-S-5760	0+00 to 10+60	Perform maintenance grading in accordance with clause 2-5 Maintenance Grading. Perform maintenance on crossdrains, removing any debris or sediment that restricts proper drainage in accordance with clause 2-6 Cleaning Culverts. Perform brushing on both sides of the road in accordance with clause 3-1 Brushing and the Typical Section Sheet.
Total Stations	555.30 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 Skidder Pit. Rock source development will involve stripping approximately 1 acre to useable rock as determined by the Contract Administrator and possible drilling and shooting to obtain ballast material. Purchaser shall also strip and drill & shoot Skidder Pit to obtain the volumes of rock called for in the Rock List. Work for developing rock sources is listed in Section 6 ROCK AND SURFACING.

Purchaser may develop an existing rock source called Far Far Away Pit. Rock source development will involve pecking oversize conglomerate to as determined by the Contract Administrator and possible drilling and shooting to obtain ballast material. Purchaser shall also strip and drill & shoot Skidder Pit to obtain the volumes of rock called for in the Rock List. Work for developing rock sources is listed in Section 6 ROCK AND SURFACING.

SECTION 1 – GENERAL

1-1 ROAD PLAN CHANGES

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

1-2 UNFORESEEN CONDITIONS

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

1-3 ROAD DIMENSIONS

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

1-4 ROAD TOLERANCES

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

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

1-5 DESIGN DATA

Road construction design data is available upon request at the Department of Natural Resources Straits District Office in Port Angeles, WA.

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.

1-10 WSDOT STANDARD SPECIFICATION REFERENCE

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

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.

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 set in the field for grade and alignment.

<u>Road</u>	<u>Stations</u>	<u>Type</u>
PT-S-5140	0+00 to 23+00	Centerline Construction
Spur 2+25	0+00 to 2+25	Centerline Construction
Spur 1+50	0+00 to 1+50	Centerline Construction
PT-S-5800	0+00 to 8+25	Centerline Construction
PT-S-5810	0+00 to 6+40	Centerline Construction

SUBSECTION TIMING

1-20 COMPLETE BY DATE

Purchaser shall complete 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 14 calendar days before work begins.

1-23 ROAD WORK PHASE APPROVAL

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

- Subgrade construction
- Drainage installation
- Subgrade compaction
- Ballast compaction
- Surfacing 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 including timber haul	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.

1-29 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 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.

1-33 SNOW PLOWING RESTRICTION

On the following road(s), 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.

<u>Road</u>	<u>Stations</u>
All roads	All stations

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>
W Uncas Rd
Wycoff Rd

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>
PT-S-5000	236+00 to 312+00	Blade off organics off of road surface. Remove organics and berms from road shoulders.
PT-S-5100	20+00 to 62+60	During Prehaul Maintenance, blade off all organics from road surface. Remove organics and berms from road shoulders.
PT-S-5110	0+00	Smooth surfacing at intersection to prevent rilling.
All roads	All stations	Grading and reshaping shall be performed as required by the Contract Administrator to maintain the road prism within the specifications of the Typical Section Sheet and the Forest Access Road Maintenance Specifications.

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>
PT-S-5000	All crossdrains
PT-S-5100	All crossdrains
PT-S-5120	All crossdrains
PT-S-5125	All crossdrains
PT-S-5700	All crossdrains
PT-S-5760	All crossdrains

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>
PT-S-5000	297+70 to 304+90	Left and Right	Pull ditches to conform to the Typical Section Sheet.

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>
PT-S-5000	0+00 to 312+00
PT-S-5100	0+00 to 67+00
PT-S-5100.1	0+00 to 5+00
PT-S-5110	0+00 to 14+50
PT-S-5120	0+00 to 58+50
PT-S-5125	0+00 to 13+00
PT-S-5127	0+00 to 1+00
PT-S-5700	0+00 to 60+70
PT-S-5760	0+00 to 10+60

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 if not marked in the field, between the clearing limits specified on the TYPICAL SECTION SHEET. Clearing must be completed before starting excavation and embankment.

3-7 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.
- Within 100 feet of a live stream, or wetland, 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.

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

4-20 SUBGRADE DIMENSIONS FOR INTERSECTIONS

On the following road(s), Purchaser shall construct the subgrade to the dimensions shown on the INTERSECTION DETAIL.

<u>Road</u>	<u>Stations</u>
PT-S-5140	0+00

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.

4-23 SUBGRADE FLARE FOR INTERSECTIONS

The PT-S-5100/PT-S-5140 intersections shall be constructed to include additional intersection flare.

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>
PT-S-5800	0+40, 1+75	Left

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 and waste areas identified in Clause 4-37 WASTE AREA LOCATION.

4-37 WASTE AREA LOCATION

Purchaser shall deposit waste material in the listed designated areas. The amount of material allowed in a waste area is at the discretion of the Contract Administrator.

Note: All amount values are estimated bank yards.

<u>Waste Area Location</u>	<u>Waste Generated From Road</u>	<u>Waste Generated at Stations</u>	<u>Estimated Volume</u>
PT-S-5140 STA 23+00	PT-S-5140	20+00 to 22+00	100 CY
PT-S-5700 STA 18+85	Ditch cleaning PT-S-5000	297+70 to 304+90	50 CY

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

4-46 COMMON BORROW

Common borrow consists of soil, and/or aggregate that is non-plastic and contains no more than 5% clay, organic debris, or trash by volume. The material is considered non-plastic if the fines in the sample cannot be rolled, between the hand and a smooth surface, into a thread at any moisture content.

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.

4-48 BORROW MATERIAL

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

4-49 BORROW SOURCE

Purchaser shall obtain borrow material from the listed borrow source(s). Development of the borrow source must be in accordance with the attached BORROW SOURCE DETAIL.

<u>Source</u>	<u>Location</u>	<u>Type / Yards</u>
PT-S-5120	16+50	Common Borrow, 150 CY
PT-S-5120	27+50	Common Borrow, 150 CY
PT-S-5120	58+50	Common Borrow, 150 CY

4-50 BORROW APPLICATION

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

<u>Road</u>	<u>Stations</u>	<u>Cubic Yards</u>	<u>Comments</u>
PT-S-5120	16+50	150	Material from cut bank will be used for landing development. Expansion into cut bank shall be used to help meet landing dimension in accordance with the Rock List. Culvert at 16+50 will need to be relocated to accommodate drainage realignment.
PT-S-5120	27+50	150	Material from cut bank will be used for landing development. Expansion into cut bank shall be used to help meet landing dimension in accordance with the Rock List.
PT-S-5120	55+00	150	Common borrow from STA 58+50 may be used for fill widening over the 24" plastic culvert.

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

5-1 REMOVAL OF SHOULDER BERMS

On the following road(s), Purchaser shall remove berms from road shoulders. The construction of ditchouts is required where ponding could result from the effects of sidecast debris.

<u>Road</u>	<u>Stations</u>
PT-S-5000	236+00 to 274+00
PT-S-5800	All
PT-S-5810	All

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 10-23.

5-6 CULVERT TYPE

Purchaser shall install culverts made of plastic in accordance with Clauses 10-15 through 10-23.

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 Skidder Pit.

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

SUBSECTION CULVERT INSTALLATION

5-15 CULVERT INSTALLATION

Culvert installation must be in accordance with the Culvert and Drainage Specification Detail and 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.

5-16 APPROVAL FOR LARGER CULVERT INSTALLATION

Purchaser shall obtain written approval from the District Engineer or his/her designee for the installation of culverts 24 inches in diameter and over before backfilling.

5-17 CROSS DRAIN SKEW AND SLOPE

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

5-18 CULVERT DEPTH OF COVER

Cross drain culverts must be installed with a depth of cover of not less than 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 ENERGY DISSIPATERS

5-20 ENERGY DISSIPATERS

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

Rock used for energy dissipaters must weigh at least 10 pounds. Energy dissipaters must extend a minimum of 1 foot to each side of the culvert at the outlet and a minimum of 2 feet beyond the outlet. Placement must be with a zero-drop-height method only.

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.

5-27 ARMORING FOR STREAM CROSSING CULVERTS

At the following culvert(s), Purchaser shall place rip rap immediately following construction of the embankment. Rock must be placed on shoulders, slopes, and around culvert inlets and outlets as designated on the TYPICAL TYPE NS NP CULVERT INSTALLION DETAIL or as directed by the Contract Administrator. Rock may not restrict the flow of water into culvert inlets or catch basins. Rock must be set in place by machine. Placement must be with a zero-drop-height method only. No placement by end dumping or dropping of rock is allowed.

SUBSECTION SURFACE DRAINAGE

5-33 NATIVE SURFACE ROADS

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

SECTION 6 – ROCK AND SURFACING

SUBSECTION ROCK SOURCE

6-5 ROCK FROM COMMERCIAL SOURCE

Rock used in accordance with the quantities on the ROCK LIST may be obtained from the listed commercial sources 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.

<u>Possible Source</u>	<u>Location</u>
Penny Creek Quarry	450 Penny Creek Rd
Shine Quarry	9861 HWY 104

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 AND RECLAMATION 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 calendar days before starting any operations in the rock source.

<u>Source</u>	<u>Rock Type</u>
Skidder Pit	2-inch minus Jaw Rock

6-11 ROCK SOURCE DEVELOPMENT PLAN BY PURCHASER

Purchaser may conduct rock source development and use at the following sources, in accordance with a written ROCK SOURCE DEVELOPMENT AND RECLAMATION 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 AND RECLAMATION PLAN, and approved in writing by the Contract Administrator. Purchaser shall notify the Contract Administrator a minimum of 5 business calendar days before starting any operations in the rock source.

<u>Source</u>	<u>Rock Type</u>
Far Far Away Pit	Light Loose Rip Rap

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

- Rock source location.
- Rock source overview showing access roads, development areas, stockpile locations, waste areas, and floor drainage.
- Rock source profiles showing development areas, bench locations including widths, and wall faces including heights.
- Rock source reclamation plan describing how the area will be left in a condition that will ensure public safety and minimize environmental impacts.

6-12 ROCK SOURCE SPECIFICATIONS

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

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

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

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

6-14 DRILL AND SHOOT

Rock drilling and shooting 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 shall block access roads and trails before blasting operations.

6-16 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.
- All testing and operations must be performed in accordance with the attached ROCK CRUSHING COMPLIANCE PROCEDURE.
- Purchaser shall produce sieve analysis for crushing operations for each rock gradation type.
- 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.

6-21 IN-PLACE PROCESSING

Purchaser may use in-place processing, such as a grid roller or other method, if suitable crushing can be demonstrated to meet the surfacing size-specified in Clauses 6-33 through 6-39. Purchaser shall remove any existing organic debris before the start of in-place crushing operations. The use of in-place processing methods is subject to written approval by the Contract Administrator.

6-22 FRACTURE REQUIREMENT FOR ROCK

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

6-23 ROCK GRADATION TYPES

Purchaser shall provide manufactured 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>
2-inch minus Jaw Rock (Pitrun)	7640

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.

SUBSECTION ROCK GRADATIONS

6-28 1 ¼-INCH MINUS CRUSHED ROCK

% Passing 1 ¼" square sieve	100%
% Passing 5/8" square sieve	50 - 80%
% Passing U.S. #4 sieve	30 - 50%
% Passing U.S. #40 sieve	3 - 18%
% Passing U.S. #200 sieve	5%

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.

6-30 2-INCH MINUS JAW ROCK (PITRUN)

% Passing 2" square sieve	100%
% Passing 1" square sieve	55 - 75%
% Passing U.S. #4 sieve	20 - 45%

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

6-33 3-INCH MINUS CRUSHED ROCK

% Passing 3" square sieve	100%
% Passing 2" square sieve	65 - 95%
% Passing 3/4" square sieve	28 - 70%
% Passing U.S. #4 sieve	10 - 35%
% Passing U.S. #200 sieve	0 - 10%

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 MINUS BALLAST ROCK

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

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

6-50 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. The Contract Administrator will direct locations for rock that is to be applied as spot patching. Road surfaces must be compacted in accordance with the COMPACTION LIST by routing equipment over the entire width and in lifts not to exceed 6 inches.

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

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.

6-79 COMMERICAL ROCK SOURCE APPLICATION

Commerical rock is to be used as a substitute at the descretion of the Contract Administrator. Quantities for ballast and surface rock shall equate to total rock volumes called for in the Rock List by station at an application rate of 1:1 and applied at the direction of the Contract Administrator.

SECTION 7 – STRUCTURES

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>
PT-S-5000	28+00

SECTION 8 – EROSION CONTROL

8-1 SEDIMENT CONTROL STRUCTURES

Purchaser shall install sediment traps in accordance with the SEDIMENT TRAP DETAIL. Sediment control shall be accomplished using catch basins and silt fencing or other methods as approved in writing by the Contract Administrator.

8-2 PROTECTION FOR EXPOSED SOIL

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

8-3 EROSION CONTROL MATTING

On the following road(s), Purchaser shall install biodegradable erosion control matting to provide full coverage of embankment slopes. Matting must be natural fiber matting made of jute or coconut. Erosion control matting must conform to the specifications listed in Clause 10-10 JUTE EROSION CONTROL MATTING and/ or 10-11 COCONUT

EROSION CONTROL MATTING. Installation must be in accordance with the manufacturer’s recommendations.

<u>Road</u>	<u>Stations</u>
PT-S-5140	0+00 to 2+00
PT-S-5140	20+00 to 22+00

SUBSECTION REVEGETATION

8-15 REVEGETATION

Purchaser shall spread grass seed on all exposed soils including, but not limited to, stream culverts, waste areas, sidecast pullback areas, stream crossing removals, bridge installations, where listed in clause 8-17 Revegetation Timing 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 all seed, mulch, straw and/or hay, matting etc..

8-17 REVEGETATION TIMING

On the following roads, Purchaser shall revegetate after road work is completed. 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.

<u>Road</u>	<u>Revegetation Type</u>	<u>Comments</u>
PT-S-5140	Clause 8-25 Grass Seed	Apply seed on all exposed soils before the first rain. Successful germination of seeds in concordance with clause 8-19 shall be observed before November 1 st as determined by the Contract Administrator.
Spur 2+25	Clause 8-25 Grass Seed	
Yarder Trail	Clause 8-25 Grass Seed	
Waste Area	Clause 8-25 Grass Seed	
PT-S-5700 STA 18+85		

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. Seed may not be allowed to sit exposed during any rain event. The protective cover requirement may be waived in writing by the Contract Administrator if Purchaser is able to demonstrate a revegetation plan that will result in the establishment of a uniform dense crop (at least 50% coverage) of 3-inch tall grass by October 31.

8-19 ASSURANCE FOR SEEDED AREA

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

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

10-6 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 EROSION CONTROL AND REVEGETATION

10-2 GEOTEXTILE FOR SEPARATION

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

	<u>ASTM Test</u>	<u>Requirements</u>
Type	--	Non-woven
Apparent opening size	D 4751	No. 30 max

Water permittivity	D 4491	0.02 sec ⁻¹
Grab tensile strength	D 4632	160 lb
Grab tensile elongation	D 4632	>= 50%
Puncture strength	D 6241	310 lb
Tear strength	D 4533	50 lb
Ultraviolet stability	D 4355	50% retained after 500 hours of exposure

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

10-10 JUTE EROSION CONTROL MATTING

Jute mesh must have a uniform open plain weave made from jute yarn that does not vary by more than half its nominal diameter. Erosion control matting must conform to the specifications listed below, and must be recommended by the manufacturer for use on embankments with a slope of 1½:1 (H:V) or steeper.

- Mesh size 1 inch max.
- Mesh mass, 0.9 lb/yd² ±5%

10-11 COCONUT EROSION CONTROL MATTING

Coconut mat must have a uniform open plain weave made from jute, coconut coir, synthetic polypropylene fibers, or other approved yarn. Erosion control matting must conform to the specifications listed below, and must be recommended by the manufacturer for use on embankments with a slope of 1½:1 (H:V) or steeper.

- Mesh size 0.5 to 1 inch.
- Mesh mass, 0.4 lb/yd² min.
- Netting must be photodegradable on one side.
- Moisture content may not exceed 20%.

10-12 WOOD EXCELSIOR EROSION CONTROL MATTING

Excelsior blanket must have a uniform thickness made of curled wood excelsior secured on the top side to a biodegradable, photodegradable extruded plastic mesh. Matting

must be smolder resistant without the use of additional chemical additives. Erosion control matting must conform to the specifications listed below, and must be recommended by the manufacturer for use on embankments with a slope of 1½:1 (H:V) or steeper.

- Mesh size 1 to 2 inch.
- Blanket mass, 1 lb/yd² ±10%
- Excelsior fibers 7.8 inch (200-mm) length 80% min.

SUBSECTION CULVERTS

10-17 CORRUGATED PLASTIC CULVERT

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

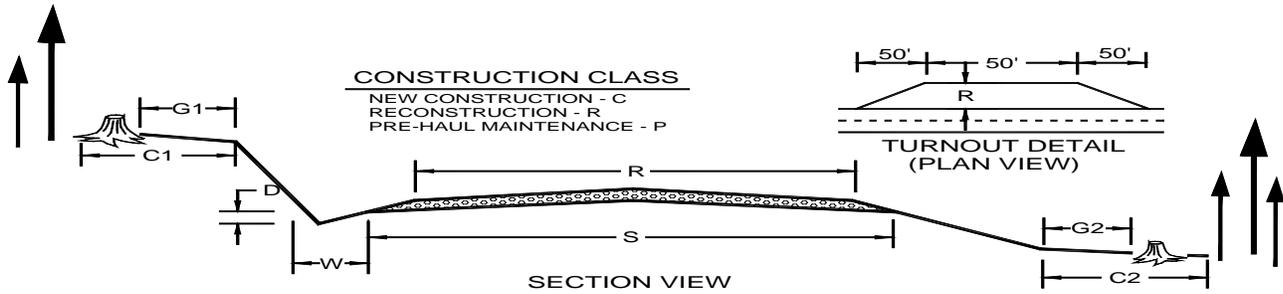
10-20 FLUME AND DOWNSPOUT

Downspouts and flumes must meet the AASHTO specification designated for the culvert. Plastic downspouts and flumes must be Type C – corrugated single walled pipe.

10-22 PLASTIC BAND

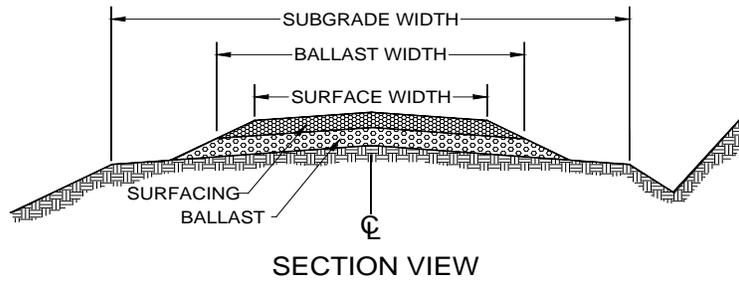
Plastic coupling and end bands must meet the AASHTO specification designated for the culvert. Only fittings supplied or recommended by the culvert manufacturer may be used. Couplings must be split coupling band. Split coupling bands must have a minimum of four corrugations, two on each side of the pipe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

TYPICAL SECTION SHEET



ROAD NAME	START STATION	END STATION	CONSTRUCTION CLASS	TOLERANCE CLASS	SUBGRADE WIDTH (S)	ROAD WIDTH (R)	CROWN AT CL (in)	DITCH WIDTH (W)	DITCH DEPTH (D)	GRUBBING CUT BANK (G1)	GRUBBING FILL TOE (G2)	ROAD CUT CLEARING (C1)	ROAD FILL CLEARING (C2)
Wycoff Rd	0+00	13+00	P	C						3'	3'	5'	5'
PT-S-5000	0+00	312+00	P	C	14'	12'	3"	3'	1'	3'	3'	5'	5'
PT-S-5100.1	0+00	5+00	P	C	14'	12'	3"	3'	1'	3'	3'	5'	5'
PT-S-5100	0+00	67+00	P	C	14'	12'	3"	3'	1'	3'	3'	5'	5'
PT-S-5110	0+00	14+50	P	C	14'	12'	3"	3'	1'	3'	3'	5'	5'
PT-S-5120	0+00	58+50	P	C	14'	12'	3"	3'	1'	3'	3'	5'	5'
PT-S-5125	0+00	13+00	P	C	14'	12'	3"	3'	1'	3'	3'	5'	5'
PT-S-5127	0+00	1+00	P	C	14'	12'	3"	3'	1'	3'	3'	5'	5'
PT-S-5700	0+00	60+70	P	C	14'	12'	3"	3'	1'	3'	3'	5'	5'
PT-S-5760	0+00	10+60	P	C	14'	12'	3"	3'	1'	3'	3'	5'	5'
Spur 2+00	0+00	2+50	C	C	17'	16'	3"	3'	1'	3'	3'	5'	5'
Yarder Trail	0+00	3+00	C	C									
PT-S-5761	0+00	3+75	C	C	14'	12'	3"	3'	1'	3'	3'	5'	5'
PT-S-5800	0+00	8+25	C	C	14'	12'	3"	3'	1'	3'	3'	5'	5'
PT-S-5810	0+00	6+40	C	C	14'	12'	3"	3'	1'	3'	3'	5'	5'
Spur 1+50	0+00	1+50	C	C	14'	12'	3"	3'	1'	3'	3'	5'	5'
PT-S-5140	0+00	1+50	C	C	18'	17'	3"	3'	1'	3'	3'	5'	5'
PT-S-5140	1+50	20+50	C	C	14'	12'	3"	3'	1'	3'	3'	5'	5'
PT-S-5140	20+50	23+00	C	C	16'	15'	3"	3'	1'	3'	3'	5'	5'
Spur 2+25	0+00	2+25	C	C	14'	12'	3"	3'	1'	3'	3'	5'	5'

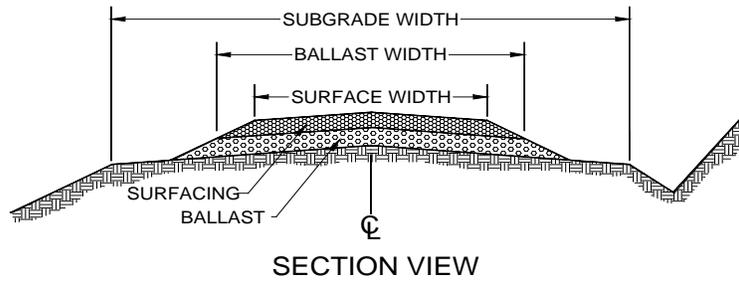
ROCK LIST SHEET



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 (CA).
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) Skidder Pit: Pitrun 2 inch minus; 2) Far Far Away Pit: Rip Rap; 3) Commercial: Substitute as approved by CA

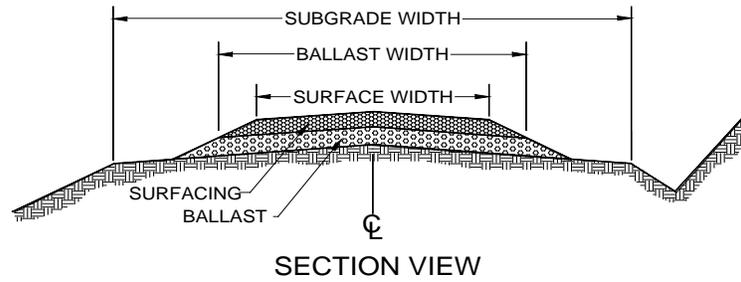
ROAD NAME	START STATION	END STATION	SUBGRADE WIDTH (ft)	Pitrun SOURCE	Pitrun WIDTH (ft)	Pitrun DEPTH (in)	Pitrun Quantity(yd ³ /sta)	Pitrun SUBTOTAL(yd ³)	Crushed SOURCE	Crushed WIDTH (ft)	Crushed DEPTH (in)	Crushed Quantity(yd ³ /sta)	Crushed Subtotal(yd ³)	Oversize/ Rip rap Source	Oversize/Rip Rap Quantity(yd ³)
PT-S-5000															
Spot Patch	35+35	36+35		1, 3				20							
Spot Patch	56+40	57+40		1, 3				20							
Spot Patch	68+50	69+50		1, 3				20							
Spot Patch	75+50	78+50		1, 3				20							
Lift	85+50	93+50		1, 3	12	2	10	50							
Lift	120+45	134+00		1, 3	12	2	10	130							
Spot Patch	139+80	140+80		1, 3	12	2	20	20							
Spot Patch	229+00	230+00		1, 3	12	2	20	20							
Lift	236+00	312+00		1, 3	12	4	20	1400							
Landing	287+50	288+50	50	1, 3	50	6	30	120							
Landing	304+90	305+10	70	1, 3	70	5	30	50							
Landing	312+00		30	1, 3	30	5	30	50							
Spur 2+00															
Lift	0+00	2+00	17	1, 3	16	12	60	150							
Turn Around	1+35	1+50	70	1, 3	70	12	60	50							
Landing	2+00		30	1, 3	30	12	60	70							
PT-S-5100															
Lift	5+00	10+00		1, 3	12	2	10	50							
Lift	20+00	67+00		1, 3	12	4	20	950							
Totals:								3190							

ROCK LIST SHEET CONTINUED



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)
PT-S-5110															
Spot Patch	5+00	5+50		1, 3			10								
PT-S-5120															
Landing	16+00	16+50	75	1, 3	75	12	30	100							
Culvert	16+00			1, 3			20								
Landing	27+00	27+50	75	1, 3	75	12	30	100							
Lift	54+50	55+50	20	1, 3	18	24		150						2	50
Landing	58+50		30	1, 3	30	12	30	50							
PT-S-5140															
Lift	0+00	1+50	18	1, 3	17	12	60	120							
Culvert Installation	0+40			1, 3			20							2	5
Lift	1+50	2+50	14	1, 3	12	12	60	60							
Landing	2+50	3+00	30	1, 3	30	12	60	100							
Lift	3+00	20+35	14	1, 3	12	12	60	1000							
Culvert Installation	3+10			1, 3			20							2	5
Culvert Installation	13+00			1, 3			20							2	5
Culvert Installation	14+75			1, 3			20							2	5
Turn Around	20+35	20+50	50	1, 3	50	12		50							
Lift	20+50	23+00	16	1, 3	15	12	60	180							
Culvert Installation	21+50			1, 3			20							2	5
Landing	23+00		30	1, 3	30	12		100							
Spur 2+25															
Lift	0+00	0+50	14	1, 3	12	12	60	50							
Turnout	0+50	1+00	20	1, 3	18	12		50							
Lift	1+00	2+25		1, 3	14	12	60	80							
Landing	2+25		30	1, 3	30	12		100							
Totals:								2420							75

ROCK LIST SHEET CONTINUED



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)
PT-S-5761															
Culvert Installation	0+10			1, 3				20						2	1
Lift	0+00	3+00	14	1, 3	12	12	60	180							
Landing	3+00	3+25	50	1, 3	50	12		70							
Lift	3+25	3+75	16	1, 3	15	12		50							
Spur 1+50															
Lift	0+00	1+25	14	1, 3	12	1	60	70							
Culvert Installation	0+75			1, 3				20							
Landing	1+25	1+50	50	1, 3	50			70							
Turn Around	1+50		16	1, 3	15	12		50							
PT-S-5800															
Lift	0+00	7+35	14	1, 3	12	12	60	500							
Culvert Installation	0+40			1, 3				20							
Culvert Installation	5+25			1, 3				20							
Turn Around	7+35	7+50	50	1, 3	50			50							
Lift	7+50	8+25	14	1, 3	12			50							
Landing	8+25		30	1, 3	30	12		100							
PT-S-5810															
Lift	0+00	4+05	14	1, 3	12	12	60	230							
Turn Around	4+05	4+20	50	1, 3	50	12		50							
Lift	4+20	6+40	14	1, 3	12	12	60	130							
Landing	6+40		30	1, 3	30	12		100							
Stockpile/Post Haul															
				1, 3				250							
Totals:								2030							1
Grand Totals:								7640							76

CULVERT LIST

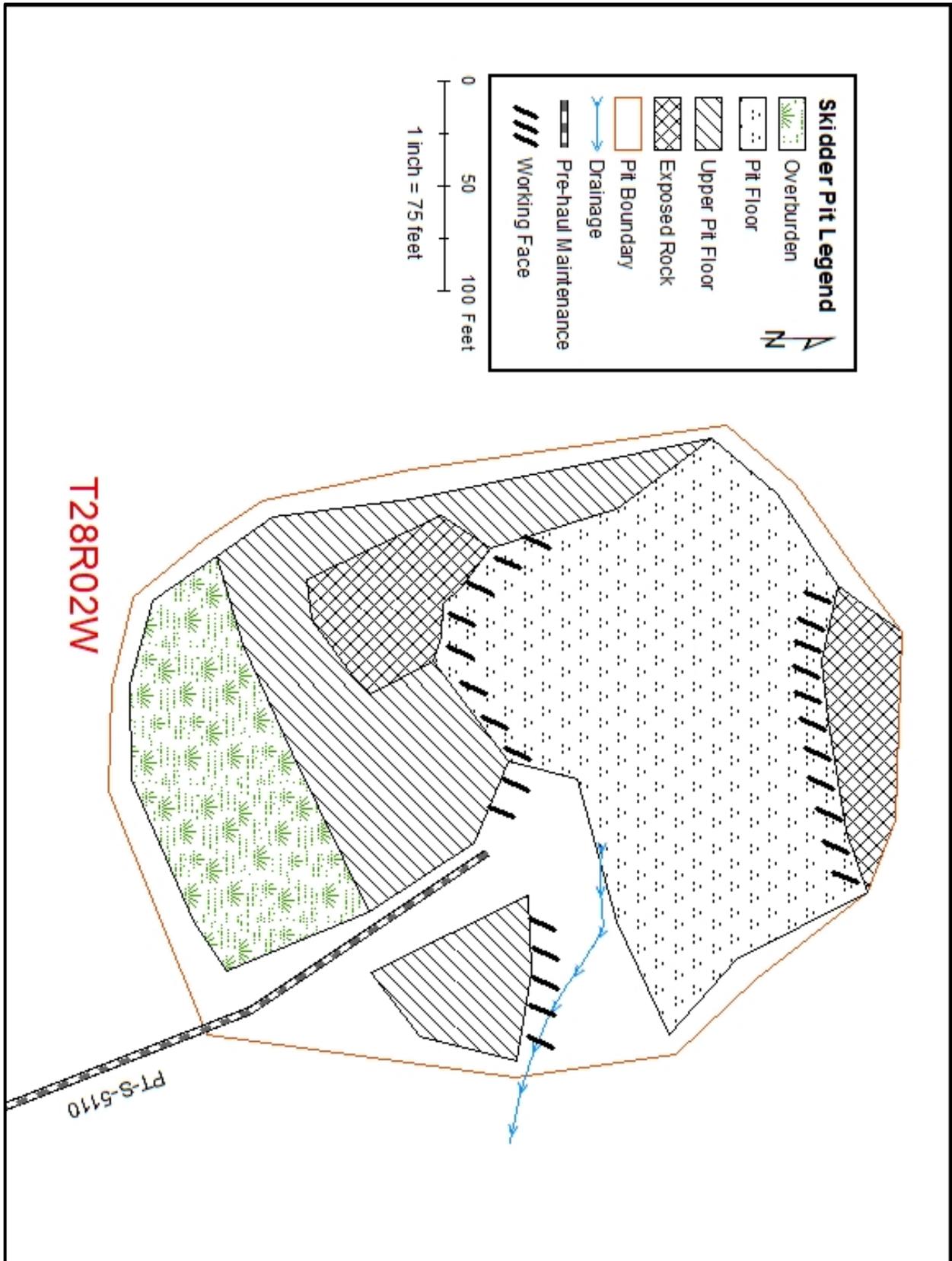
ROAD NAME	STATION	CULVERT DIAMETER (in)	CULVERT LENGTH (ft)	FLUME LENGTH (ft)	RIP RAP - INLET (cy)	RIP RAP – OUTLET (cy)	BACKFILL MATERIAL	NOTES
PT-S-5140								
	0+40	18	50		2.5	2.5	Native	Plastic; Installation
	3+10	18	30		2.5	2.5	Native	Plastic; Installation
	13+00	18	30		2.5	2.5	Native	Plastic; Installation
	14+75	18	50		2.5	2.5	Native	Plastic; Installation
	21+50	18	35		2.5	2.5	Native	Plastic; Installation
PT-S-5120								
	16+50	18	30		0.5	0.5	Native	Replacement
	55+00	24	5		25	25	Borrow	Plastic; Extension
PT-S-5761								
	0+10	18	40		0.5	0.5	Native	Plastic
PT-S-5800								
	0+40	18	30				Native	Plastic
	5+25	18	30				Native	Plastic
Spur 1+50								
	1+00	18	30				Native	Plastic
Contengency								
		18	30					Culvert & Band
		18	30					Culvert & Band

All rip rap shall be Oversize unless specified in the Rock List, or in the field. All backfill shall be native material (NT) unless specified otherwise. CR= 1 ¼" - crushed rock, PR= Pit Run Rock

COMPACTION LIST

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

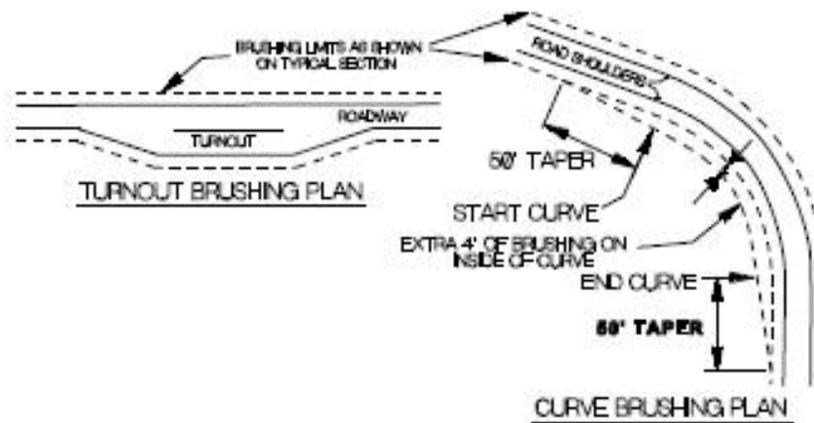
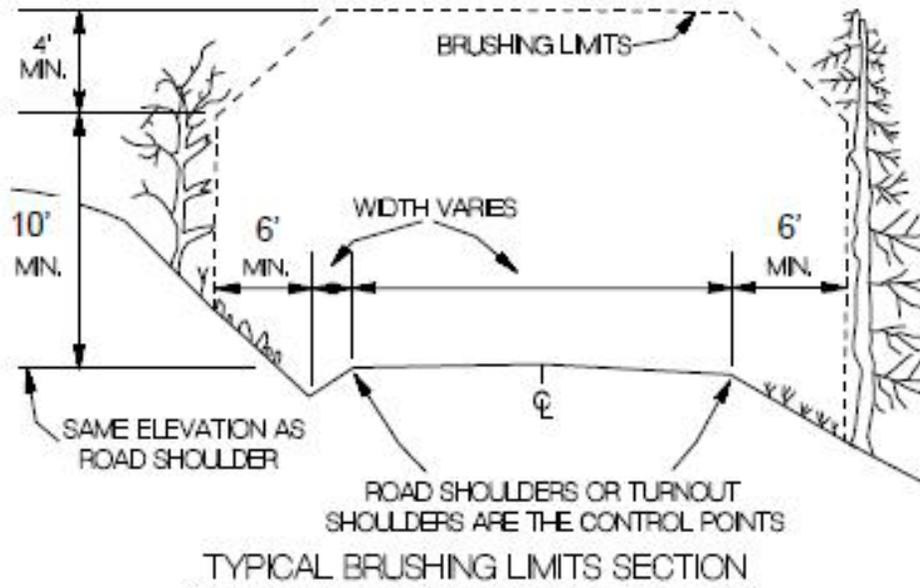
SKIDDER PIT MAP



**SKIDDER PIT
ROCK SOURCE DEVELOPMENT PLAN
SEC. 2, T.28N., R.02W
PIT USE REQUIREMENTS**

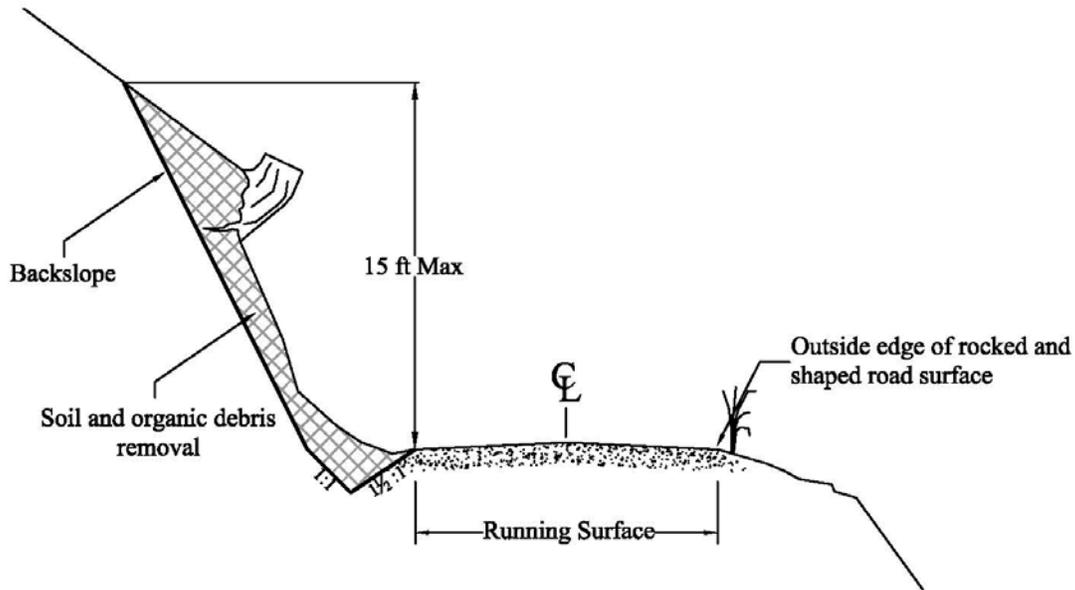
1. Mining shall begin in the development shown on pit plan.
2. All vegetation including stumps shall be cleared a minimum 20 feet beyond the top of all working faces. Trees shall be cleared to a minimum of $\frac{3}{4}$ of height of the tallest tree adjacent to the pit. The Contractor shall maintain 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.
17. Purchaser shall notify PENCOR, Dispatch, and Clallam County Sheriff before blasting.

BRUSHING DETAIL



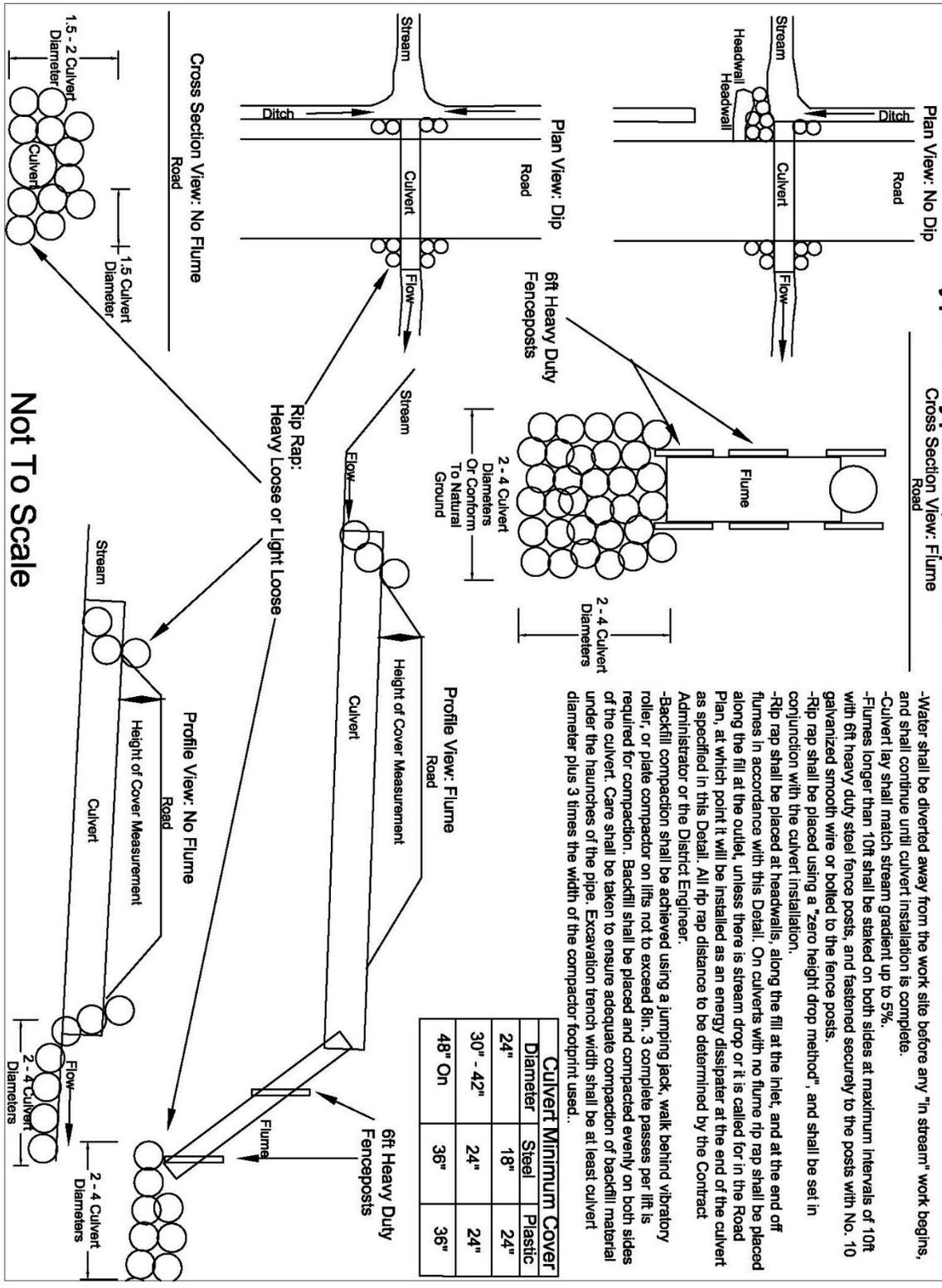
1. All vegetation within the brushing limits shall be cut to within 3 inches of the ground, unless otherwise directed by the Contract Administrator
2. All brush, trees, limbs, etc. shall be removed from the road surface, cut banks, culvert inlets/outlets, and ditch lines
3. All debris that may roll or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

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, than 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.

Typical Type Ns, Np Culvert Installation Detail Sheet.



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

Not To Scale

CULVERT AND DRAINAGE SPECIFICATION DETAIL

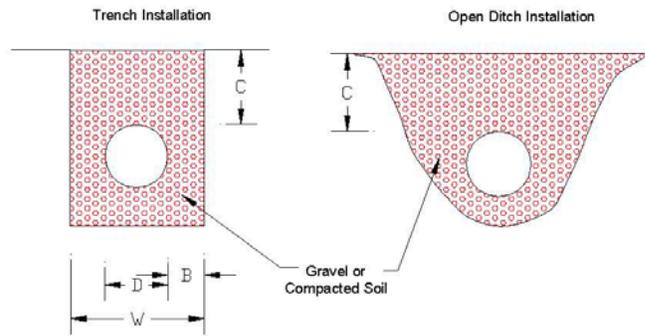
(Page 3 of 3)

POLYETHYLENE PIPE INSTALLATION

INSTALLATION REQUIREMENTS:

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

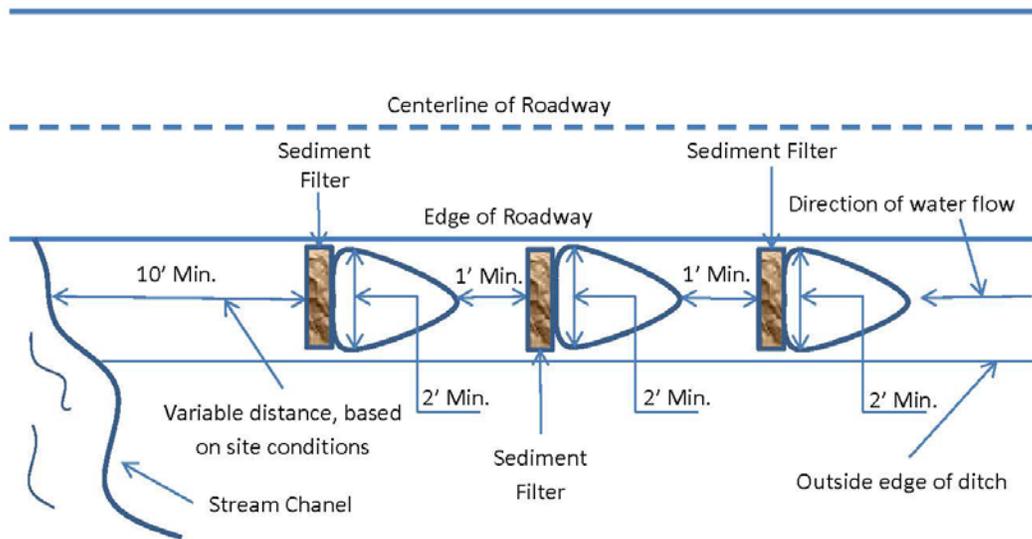
MINIMUM DIMENSIONS
Trench or Open Ditch Installation



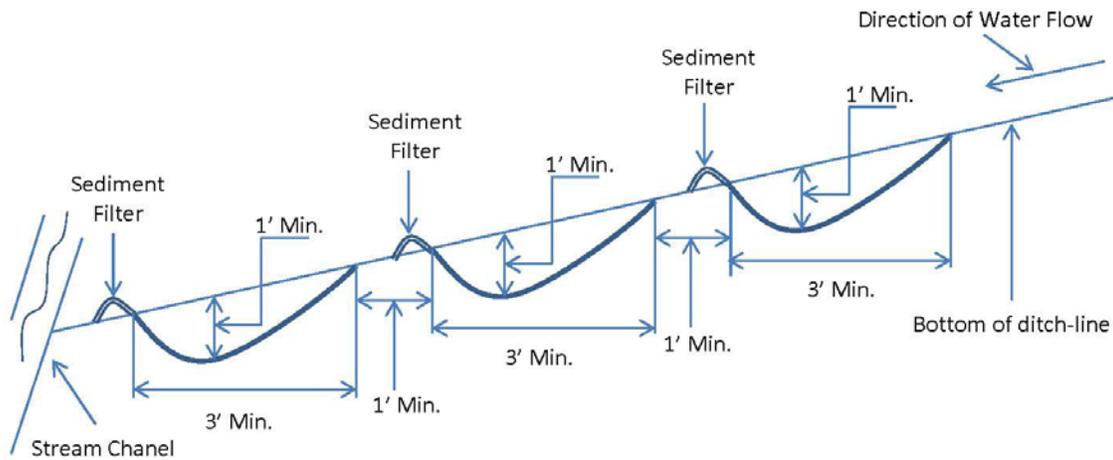
Nominal Diameter	Minimum Thickness	Minimum Cover	Min. Trench Width
D	B	C	W
18"	6"	12"	36"
24"	6"	12"	42"
30"	6"	12"	48"
36"	6"	12"	54"

SEDIMENT TRAP DETAIL

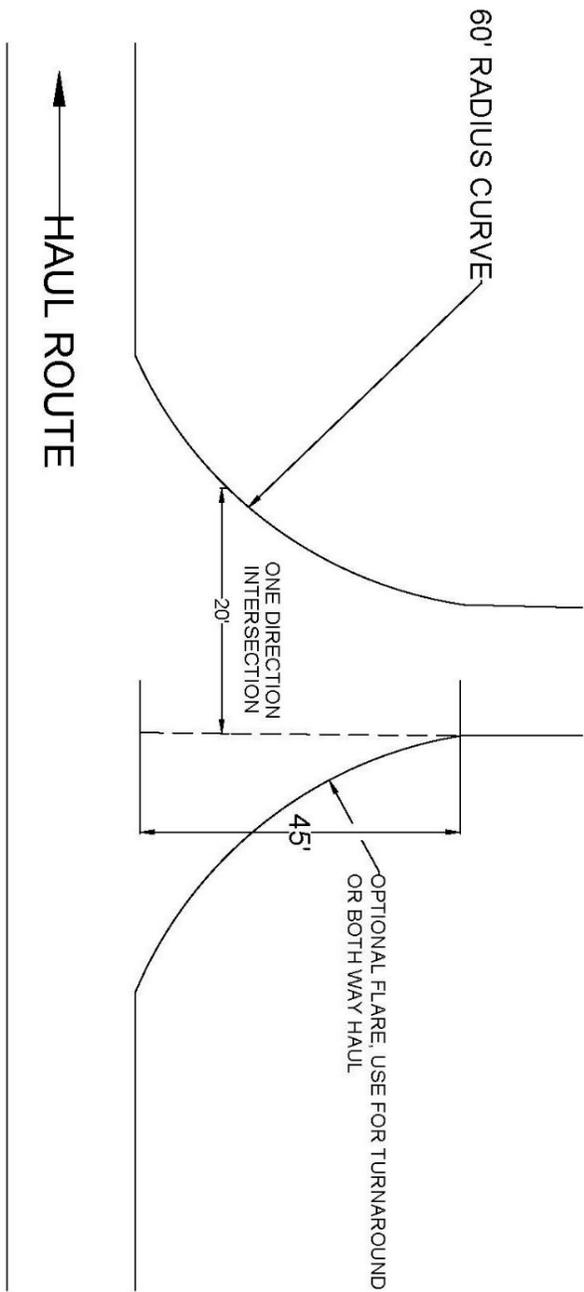
Top View



Profile View



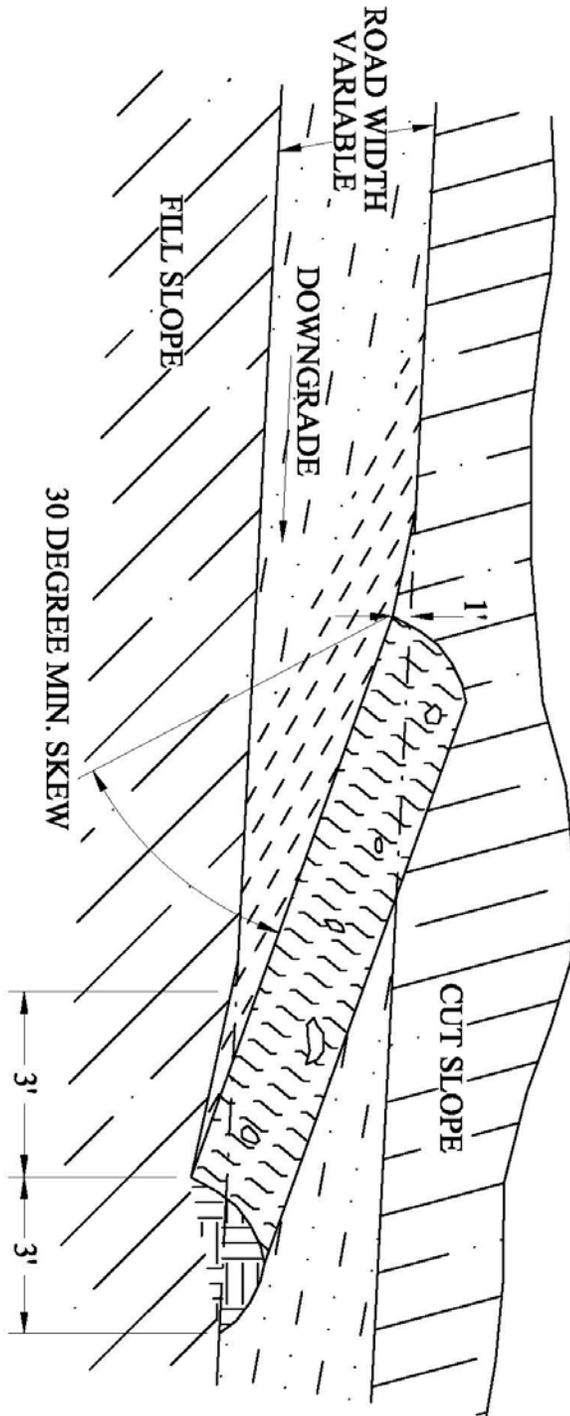
TYPICAL INTERSECTION



NOT TO SCALE

DRIVABLE WATER BAR DETAIL

SCALE: NTS



NOTES:

1. ALL WATER BARS SHALL BEGIN AT THE INTERSECTION OF THE ROADBED AND CUT SLOPE AND RUN ACROSS THE ENTIRE WIDTH OF THE ROADBED.
2. ALL WATER BARS SHALL HAVE FREE FLOWING OUTLETS.

		SUMMARY - Road Development Costs								
SALE NAME:	City Skidder	CONTRACT#:	30-099253	REGION:	Olympic	DISTRICT:	Straits			
LEGAL DESCRIPTION:	T28R02W									
ROAD NAME:	Spur 2+00	Yarder Spur	PT-S-5140	Spur 2+25	PT-S-5761	Spur 1+50	PT-S-5800	PT-S-5810	TOTAL:	SHEET #2-4
	0	0	0	0	0	0	0	0		
ROAD TYPE:	Construction	Construction	Construction	Construction	Construction	Construction	Construction	Construction		
NUMBER OF STATIONS:	2	4	23	2	4	2	8	6	51.15	1,032.35
SIDESLOPE:	0	0	0	0	0	0	0	0	160%	0%
CLEARING AND GRUBBING:	228	759	4,366	427	428	171	941	730	\$8,049	\$0
ROAD BRUSHING:	0	0	0	0	0	0	0	0	\$0	\$9,373
EXCAVATION AND FILL:	283	1,921	11,046	1,081	848	212	1,165	904	\$17,459	\$0
ROAD GRADING:	0	0	0	0	0	0	0	0	\$0	\$6,710
DITCH CLEANING/CONSTRUCTION:	0	0	0	0	0	0	0	0	\$0	\$3,740
ROCK TOTALS (Cu. Yds./ROCK COSTS):	0	0	0	0	0	0	0	0		
Ballast:	7640	7,640	1,710	280	320	210	740	510	\$4,040	\$3,600
Surface:	0	4,093	11,731	2,013	2,614	1,978	6,971	4,804	\$0.00	\$0.00
Overize:	76	0	25	0	1	0	0	0	\$26.00	\$50.00
CULVERTS AND FLLMES:	0	0	178	0	8	0	0	0		
STRUCTURES:	0	0	0	0	0	0	0	0		
MISC. EXPENSES:	12	487	3,207	13	72	29	358	122	\$4,300	\$11,630
OVERHEAD:	369	253	2,785	283	388	244	860	525	\$5,708	\$6,815
TOTAL COSTS:	4,985	3,421	37,602	3,817	5,237	3,294	11,615	7,085	\$77,055	\$81,568
COST PER STATION:	0	0	0	0	0	0	0	0		
	2,492	855	1,635	1,696	1,397	2,196	1,408	1,107	\$1,506	\$135.76
MOBILIZATION:			\$24,400							
ROAD DEACTIVATION AND ABANDONMENT COSTS:			\$0							
Pt Work			\$15,000							
NOTE: This appraisal has no allowance for profit and risk.										
Sheet 1 of 5										
Plans to be furnished by:	Jonathan Mason									

Road Standard	Const.	Reconst.	Prehaul	Posthaul	TOTAL (All Roads) =	\$199,223.73
Total Costs =	101,389	0	78,821	19,014	SALE VOLUME MBF =	6,925
Total Sta. =	51	0	521	521	TOTAL COST PER MBF =	\$28.77
Cost per Sta. =	1,982	0	151	37	TOTAL COST PER STATION =	\$183.87
Compiled by:	0				Date:	01/00/00

SALE NAME: City Skidder		SUMMARY - Road Development Costs							DISTRICT: Straits	
LEGAL DESCRIPTION:		CONTRACT#: 30-099253			REGION: Olympic					
T28R02W										
ROAD NAME:		PT-S-5000	PT-S-5100.1	PT-S-5100	PT-S-5110	PT-S-5120	PT-S-5125	PT-S-5127	PT-S-5700	PT-S-5760
ROAD TYPE:		Prehaul	Prehaul	Prehaul	Prehaul	Prehaul	Prehaul	Prehaul	Prehaul	Prehaul
NUMBER OF STATIONS:		312	5	63	15	59	13	1	43	11
SIDESLOPE:		0	0	0	0	0	0	0	0	0
CLEARING AND GRUBBING:		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
ROAD BRUSHING:		\$5,616.00	\$90.00	\$1,139.40	\$261.00	\$1,053.00	\$234.00	\$18.00	\$770.40	\$190.80
EXCAVATION AND FILL:		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
ROAD GRADING:		\$2,028.00	\$32.50	\$411.45	\$94.25	\$380.25	\$84.50	\$6.50	\$278.20	\$68.90
DITCH CLEANING/CONSTRUCTION:		\$1,298.70	\$0.00	\$1,661.40	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
ROCK TOTALS (Cu. Yds.)/ROCK COSTS:		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Ballast:		\$1,920.00	\$0.00	\$1,000.00	\$10.00	\$420.00	\$0.00	\$0.00	\$0.00	\$0.00
Surface:		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Oversize:		\$0.00	\$0.00	\$0.00	\$0.00	\$50.00	\$0.00	\$0.00	\$0.00	\$0.00
CULVERTS AND FLUMES:		\$0.00	\$0.00	\$0.00	\$0.00	\$790.05	\$0.00	\$0.00	\$0.00	\$0.00
STRUCTURES:		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
MISC. EXPENSES:		\$4,046.01	\$39.90	\$1,750.13	\$115.71	\$1,089.33	\$103.74	\$319.23	\$964.04	\$209.09
OVERHEAD:		\$3,880.22	\$14.62	\$1,011.81	\$48.27	\$589.44	\$38.00	\$30.94	\$181.14	\$42.19
TOTAL COSTS:		\$46,993.73	\$177.02	\$12,254.20	\$584.63	\$7,138.77	\$460.24	\$374.67	\$2,193.78	\$510.98
COST PER STATION:		\$150.62	\$35.40	\$193.59	\$40.32	\$122.03	\$35.40	\$374.67	\$51.26	\$48.21

		SUMMARY - Road Development Costs																
SALE NAME:	City Skidder	CONTRACT#:	30-099253	REGION:	Olympic	DISTRICT:	Strait											
LEGAL DESCRIPTION:	T28R02W																	
ROAD NAME:		Spur 2+00	Yarder Spu	PT-S-5140	Spur 2+25	PT-S-5761	Spur 1+50	PT-S-5800	PT-S-5810	PT-S-5000	PT-S-5100.1	PT-S-5100	PT-S-5110	PT-S-5120	PT-S-5125	PT-S-5127	PT-S-5700	PT-S-5760
ROAD TYPE:		Posthaul	Posthaul	Posthaul	Posthaul	Posthaul	Posthaul	Posthaul	Posthaul	Posthaul	Posthaul	Posthaul	Posthaul	Posthaul	Posthaul	Posthaul	Posthaul	Posthaul
NUMBER OF STATIONS:		2	4	23	2	4	2	8	6	307	5	63	15	59	13	1	43	11
SIDESLOPE:		0	0	0	0	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	0	0	0	0
ROAD BRUSHING:		0	0	0	0	0	0	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	0	0	0	0	0	0
ROAD GRADING:		13	26	150	15	24	10	54	42	1,995	33	407	94	380	85	7	278	69
DITCHING:		0	0	78	39	39	0	0	0	195	39	117	39	195	39	0	195	39
ROCK TOTALS (Cr. Yds.)/ROCK COSTS:		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ballast:		0	0	0	0	0	0	0	0	250	0	0	0	0	0	0	0	0
Surface:		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Overize:		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CULVERTS AND FLOWES:		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STRUCTURES:		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MISC. EXPENSES:		12	23	135	13	22	9	48	37	1,795	29	366	85	342	76	6	250	62
OVERHEAD:		3	5	40	7	9	2	11	9	636	11	98	24	101	22	1	80	19
TOTAL COSTS:		27	55	402	74	95	21	113	88	6,419	112	988	242	1,018	222	14	803	189
COST PER STATION:		14	14	17	33	25	14	14	14	21	22	16	17	17	17	14	19	18

Forest Access Road Maintenance Specifications

Cuts and Fills

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

Surface

- Grade, shape, compact the road surface, turnouts, and shoulders to the original shape on the TYPICAL SECTION SHEET, Inslope or outslope as directed, 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

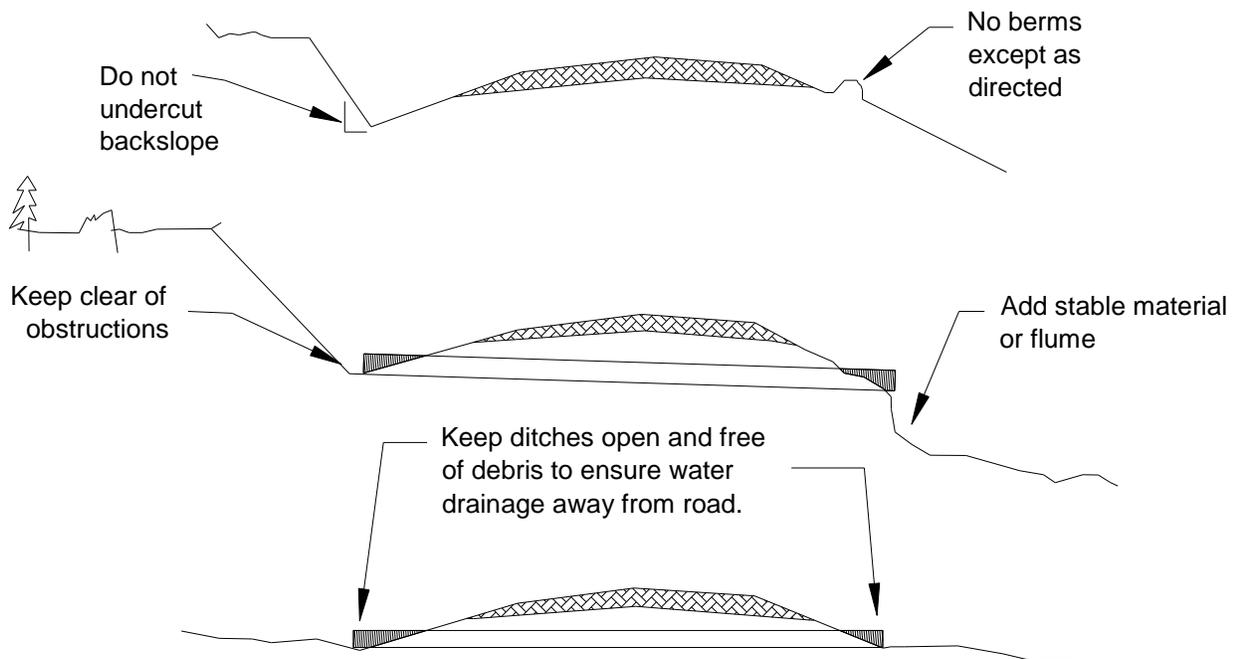
- Perform preventative maintenance work to safeguard against storm damage, such as blading to ensure correct runoff, ditch and culvert cleaning, and waterbar maintenance.

Termination of Use or End of Season

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

Debris

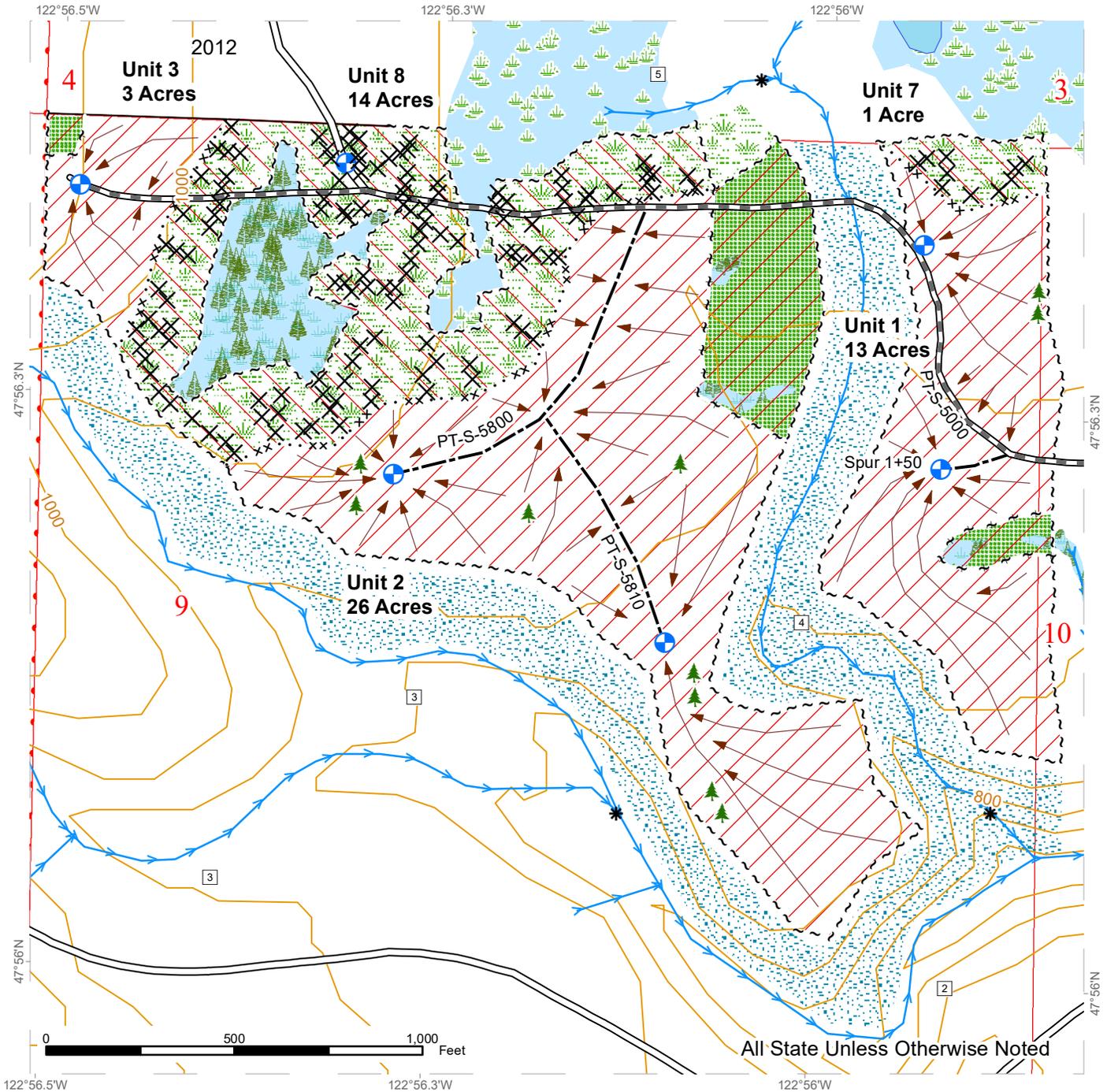
- Remove fallen timber, limbs, and stumps from the slopes, roadway, ditchlines, and culvert inlets.



LOGGING PLAN MAP

SALE NAME: CITY SKIDDER
AGREEMENT#: 30-099253
TOWNSHIP(S): T28R2W
TRUST(S): State Forest Transfer (1)

REGION: Olympic Region
COUNTY(S): Jefferson
ELEVATION RGE: 880-1920



Legend

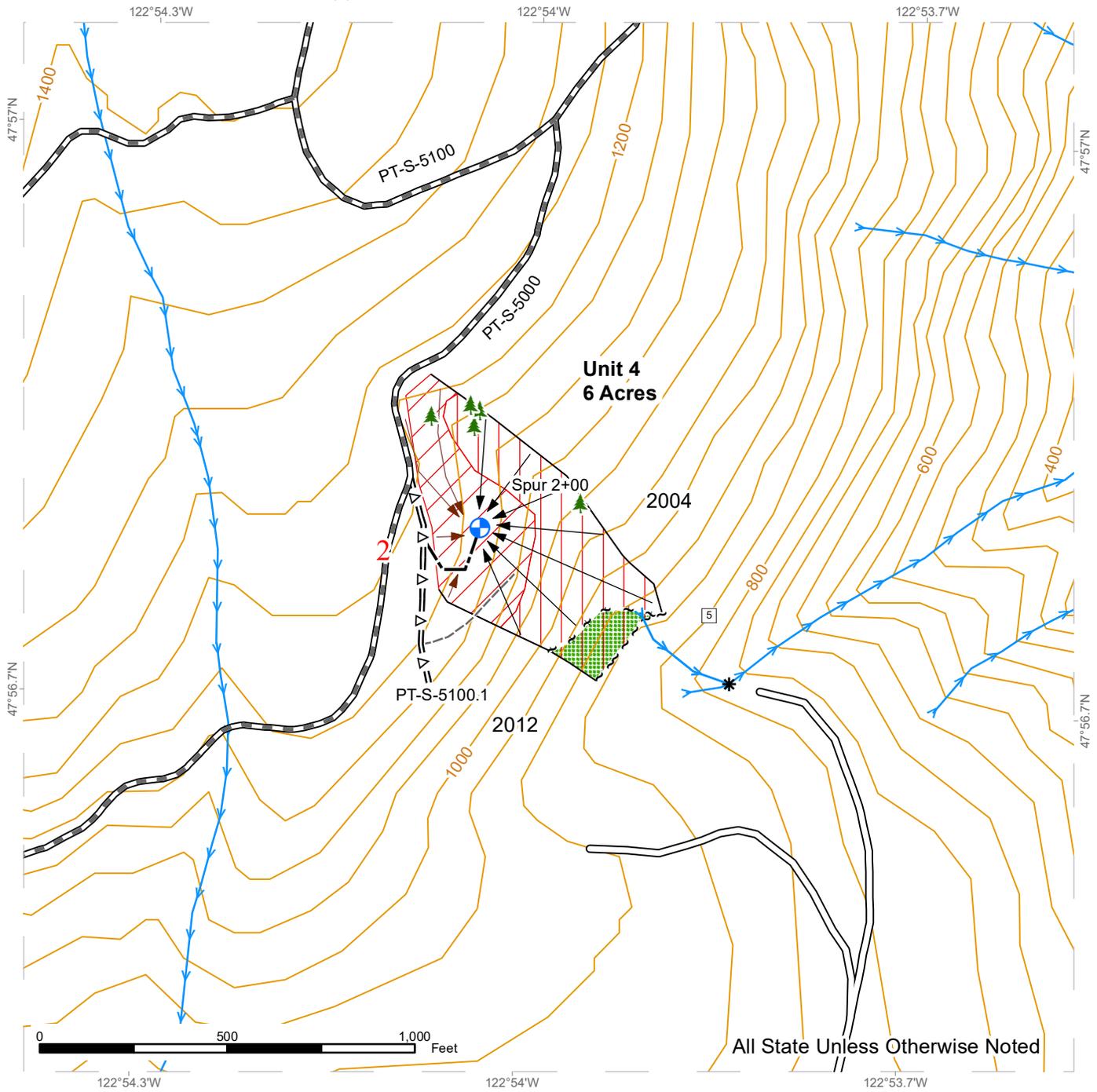
Ground with Restrictions	Sale Boundary Tags	Existing Roads	Landing - Proposed	Stream Type
Shovel Only	Special Mgmt Area	Required Pre-Haul Maintenance	Designated Crossing	Stream Type Break
Cable and Handfall Only	Leave Tree Tags	Required Construction	Leave Tree	Leave Tree Area
Cable or Seasonal Shovel	Timber Type Change	Optional Pre-Haul Maintenance	Take Tree	Riparian Mgt Zone
Ground Harvest	Property Line	Optional Construction	Spring	Wetland Mgt Zone
Cable Harvest		Optional Yarder Trail	Streams	Wetlands - Non-forested
				Forested Wetland



LOGGING PLAN MAP

SALE NAME: CITY SKIDDER
AGREEMENT#: 30-099253
TOWNSHIP(S): T28R2W
TRUST(S): State Forest Transfer (1)

REGION: Olympic Region
COUNTY(S): Jefferson
ELEVATION RGE: 880-1920



All State Unless Otherwise Noted

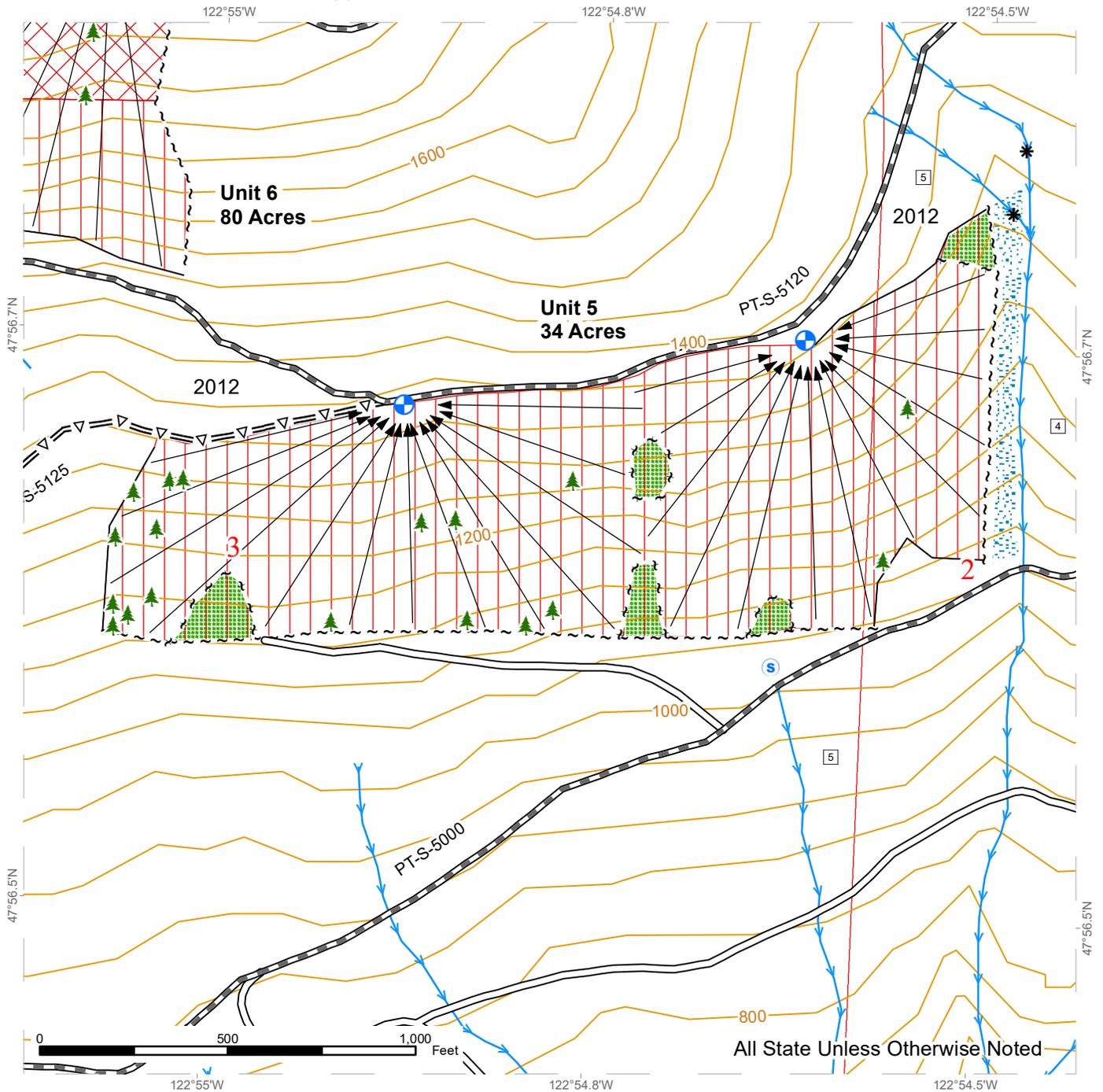
Legend			
Ground with Restrictions	Sale Boundary Tags	Existing Roads	Landing - Proposed
Shovel Only	Special Mgmt Area	Required Pre-Haul Maintenance	Stream Type
Cable and Handfall Only	Leave Tree Tags	Required Construction	Stream Type Break
Cable or Seasonal Shovel	Timber Type Change	Optional Pre-Haul Maintenance	Leave Tree Area
Ground Harvest	Property Line	Optional Construction	Riparian Mgt Zone
Cable Harvest		Optional Yarder Trail	Wetland Mgt Zone
			Wetlands - Non-forested
			Forested Wetland



LOGGING PLAN MAP

SALE NAME: CITY SKIDDER
AGREEMENT#: 30-099253
TOWNSHIP(S): T28R2W
TRUST(S): State Forest Transfer (1)

REGION: Olympic Region
COUNTY(S): Jefferson
ELEVATION RGE: 880-1920



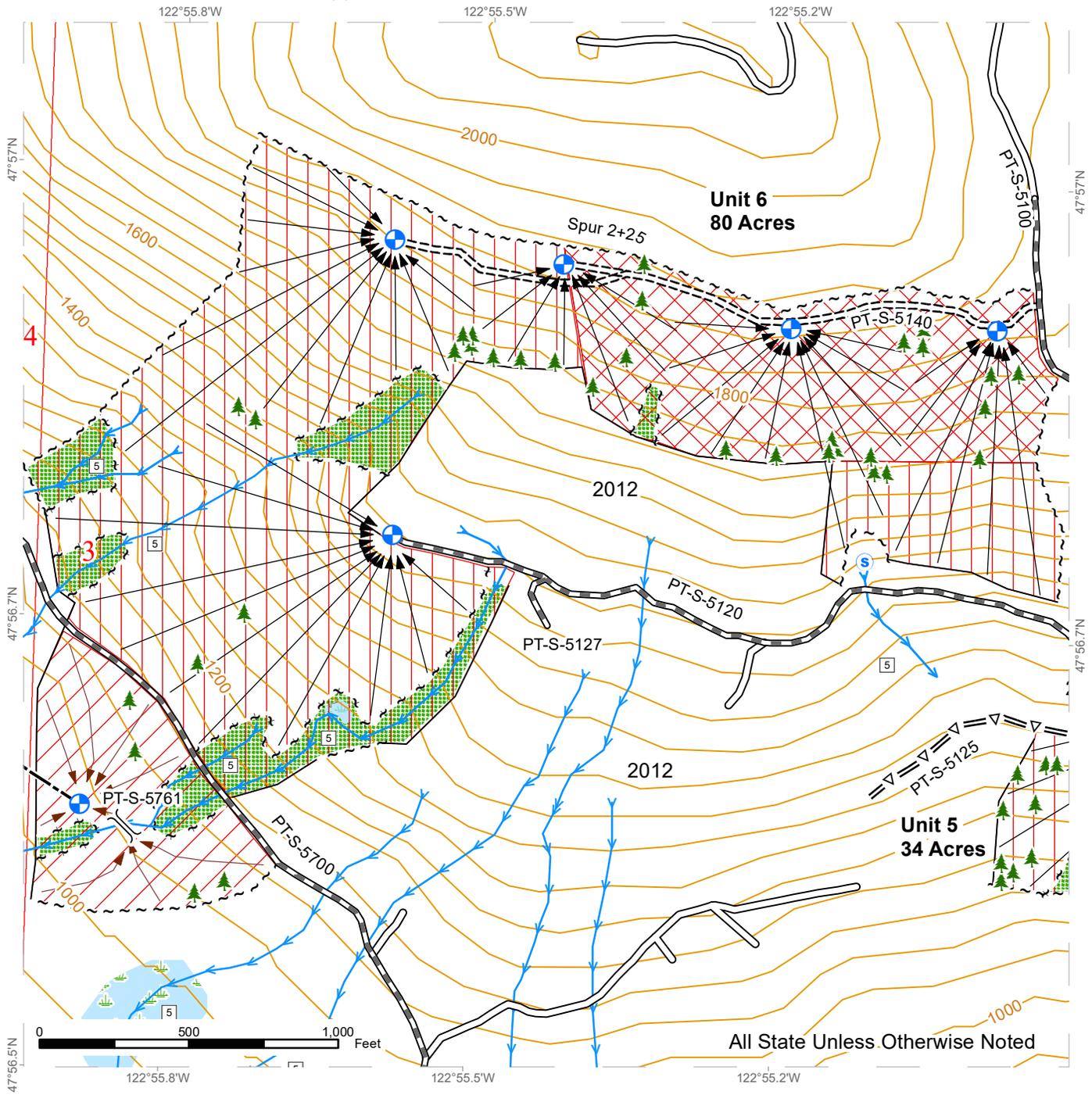
Legend			
Ground with Restrictions	Sale Boundary Tags	Existing Roads	Landing - Proposed
Shovel Only	Special Mgmt Area	Required Pre-Haul Maintenance	Stream Type
Cable and Handfall Only	Leave Tree Tags	Required Construction	Stream Type Break
Cable or Seasonal Shovel	Timber Type Change	Optional Pre-Haul Maintenance	Leave Tree Area
Ground Harvest	Property Line	Optional Construction	Riparian Mgt Zone
Cable Harvest		Optional Yarder Trail	Wetland Mgt Zone
			Wetlands - Non-forested
			Forested Wetland
			Streams
			Designated Crossing
			Leave Tree
			Take Tree
			Spring



LOGGING PLAN MAP

SALE NAME: CITY SKIDDER
AGREEMENT#: 30-099253
TOWNSHIP(S): T28R2W
TRUST(S): State Forest Transfer (1)

REGION: Olympic Region
COUNTY(S): Jefferson
ELEVATION RGE: 880-1920



Legend

- | | | | | |
|--------------------------|-----------------------|-------------------------------|---------------------|-------------------------|
| Ground with Restrictions | Sale Boundary Tags | Existing Roads | Landing - Proposed | Stream Type |
| Shovel Only | Special Mgmt Area | Required Pre-Haul Maintenance | Designated Crossing | Stream Type Break |
| Cable and Handfall Only | Leave Tree Tags | Required Construction | Leave Tree | Leave Tree Area |
| Cable or Seasonal Shovel | Timber Type Change | Optional Pre-Haul Maintenance | Take Tree | Riparian Mgt Zone |
| Ground Harvest | Property Line | Optional Construction | Spring | Wetland Mgt Zone |
| Cable Harvest | Optional Yarder Trail | | Streams | Wetlands - Non-forested |
| | | | | Forested Wetland |

