



TIMBER NOTICE OF SALE

SALE NAME: *Q TANAGER THIN*

AGREEMENT NO: 30-99489

AUCTION: August 27, 2020 starting at 10:00 a.m., **COUNTY:** Klickitat, Skamania Pacific
Cascade Region Office, Castle Rock, WA

SALE LOCATION: Sale located approximately 9 miles west of Husum, WA

PRODUCTS SOLD AND SALE AREA: All timber meeting the Schedule A Cutting Prescription; bounded by pink flagging and timber sale boundary tags.

All forest products above located on part(s) of Sections 7, 18, 19, 20, 21, 28, 29 and 30 all in Township 4 North, Range 10 East, Sections 13 and 24 all in Township 4 North, Range 9 East, W.M., containing 530 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 Ring DBH	Ring Count	Total MBF	Total Tons	Price \$/Ton	MBF by Grade						UT		
						1P	2P	3P	SM	1S	2S		3S	4S
Douglas fir	15		4,524	37,569	\$31.13						998	2,700	826	
Grand fir	13		580	5,136	\$19.15						103	304	173	
Sale Total			5,104	42,705										

MINIMUM BID: \$31.13/ton (est. value \$1,268,000.00) **BID METHOD:** Sealed Bids

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

EXPIRATION DATE: October 31, 2022 **ALLOCATION:** Export Restricted

BIDDABLE SPECIES: Douglas fir

BID DEPOSIT: \$126,800.00 or Bid Bond. Said deposit shall constitute an opening bid at the appraised price.

HARVEST METHOD: Rubber tired or tracked skidder. Falling and Yarding will not be permitted from November 1 to April 30 unless authorized in writing by the Contract Administrator.

ROADS: 3.25 stations of required construction. 66.16 stations of required reconstruction. 2.63 stations of optional construction. 35.85 stations of optional reconstruction. 93.79 stations of required prehaul maintenance. 50.36 stations of optional prehaul maintenance. Road construction will not be permitted from November 1 to April 30 unless authorized in writing by the Contract Administrator. The hauling of forest products will not be permitted from November 1 to April 30 unless authorized in writing by the Contract Administrator.



TIMBER NOTICE OF SALE

ACREAGE DETERMINATION

CRUISE METHOD: Traversed with Garmin 64 gps. Gross acres with no deductions for roads or unforested areas within the unit boundaries. Variable plot cruise- See narrative for details.

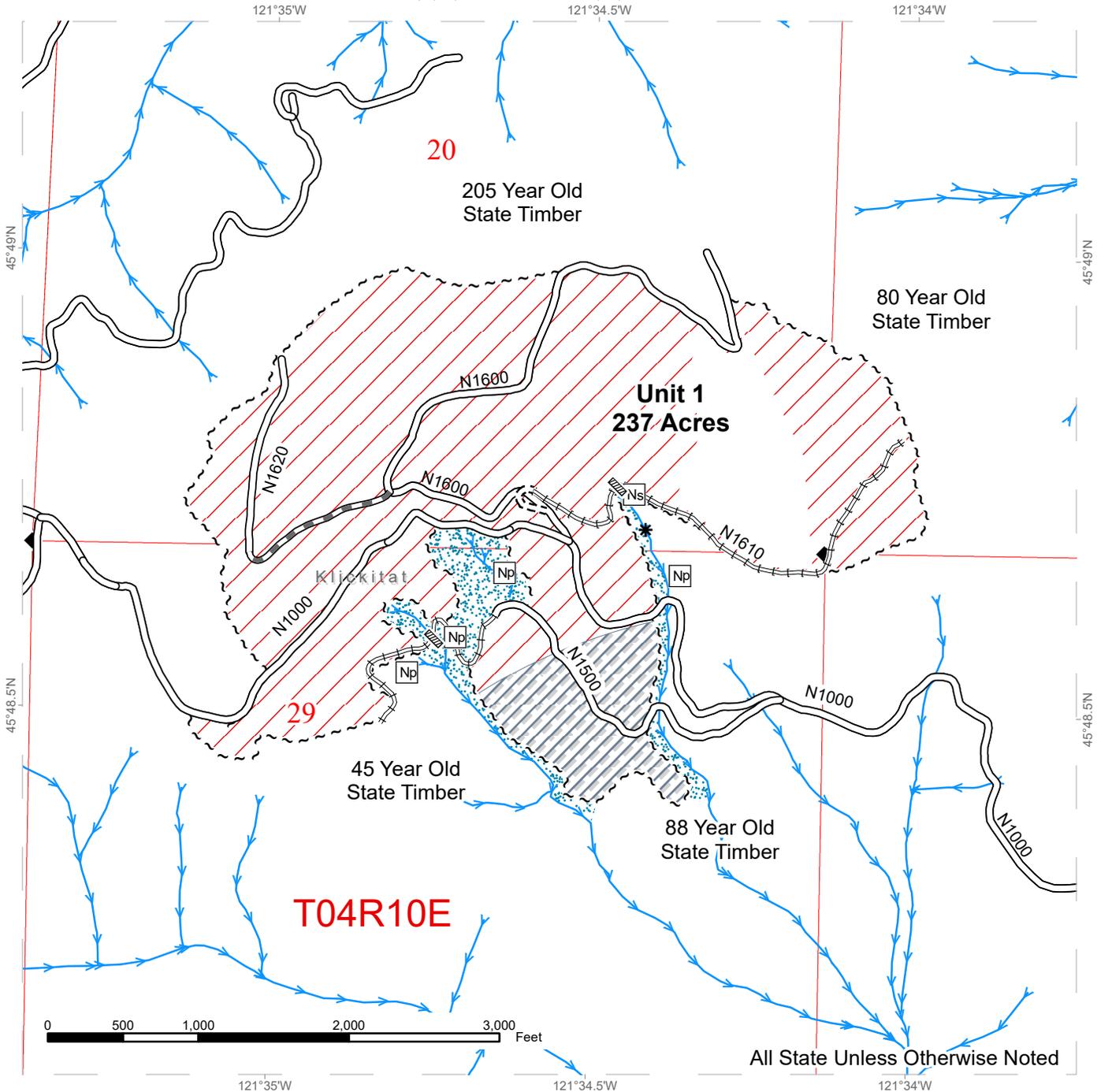
FEES: \$86,768.00 is due on day of sale. \$1.08 per ton is due upon removal. These are in addition to the bid price.

SPECIAL REMARKS: The Buck Creek trail is within and adjacent to some of the units as well as using some of the roads in the sale area.

TIMBER SALE MAP

SALE NAME: Q TANGER
AGREEMENT #: 30-099489
TOWNSHIP(S): T4R10E, T4R9E
TRUST(S): Common School and Indemnity (03), Scientific School (10)

REGION: Southeast Region
COUNTY(S): Klickitat, Skamania
ELEVATION RANGE: 1920'-3520'



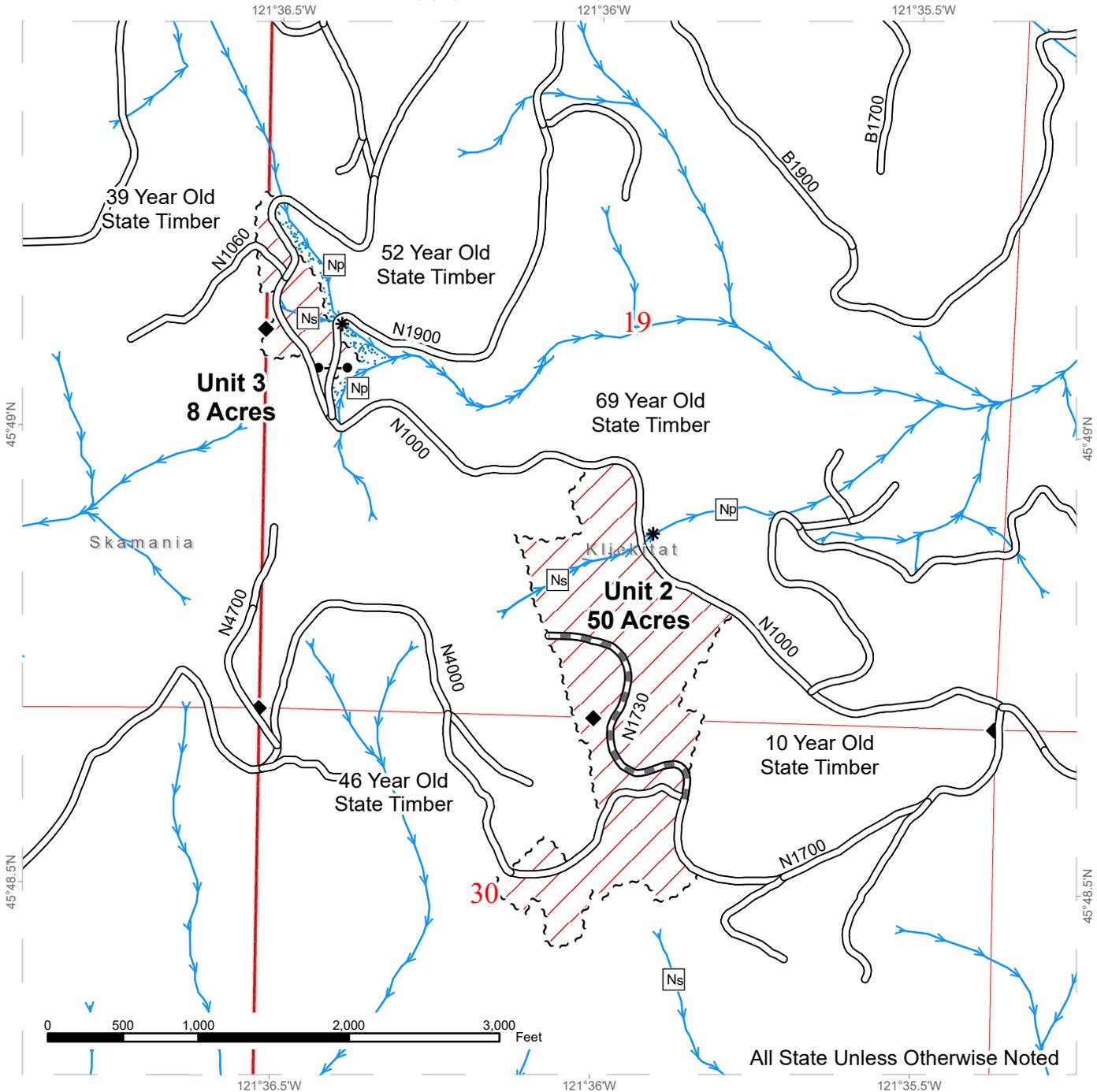
◆ Survey Monument	~~~~ Sale Boundary Tags	/// Timber Sale Area
□ Stream Type	— Existing Roads	● Riparian Management Zone
* Stream Type Break	==== Required Construction	□ Sections
▨ Culvert	— Required Pre-Haul Maintenance	□ Townships
→ Streams	— Required Reconstruction	□ DNR Managed Lands
	▨ Timing Restriction	



TIMBER SALE MAP

SALE NAME: Q Tanager
AGREEMENT #: 30-099489
TOWNSHIP(S): T4R10E, T4R9E
TRUST(S): Common School and Indemnity (03), Scientific School (10)

REGION: Southeast Region
COUNTY(S): Klickitat, Skamania
ELEVATION RANGE: 1920'-3520'



All State Unless Otherwise Noted

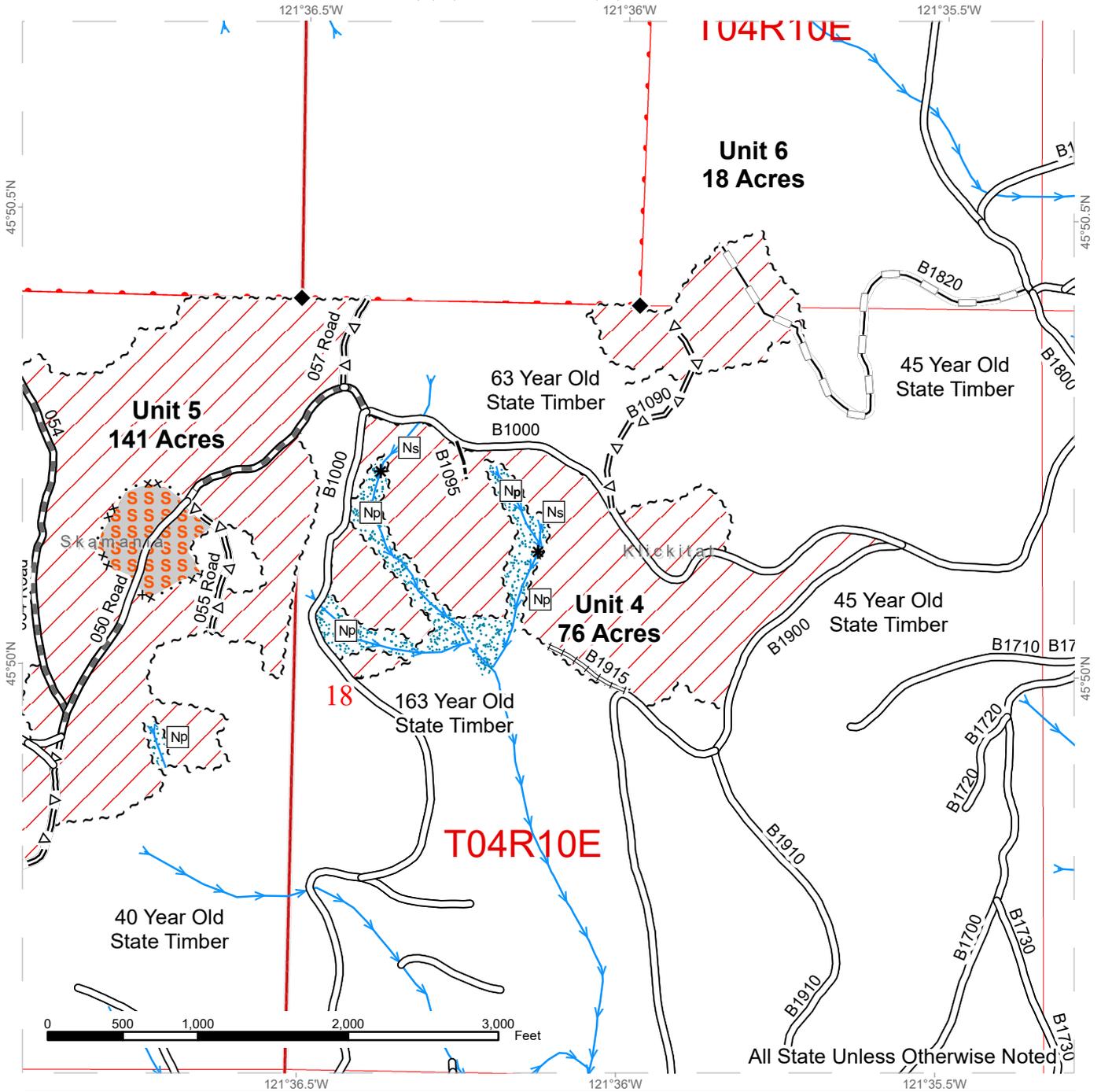
◆ Survey Monument	~~~~ Sale Boundary Tags	//// Timber Sale Area
□ Stream Type	— Existing Roads	▨ Riparian Management Zone
* Stream Type Break	▬ Required Pre-Haul Maintenance	□ Sections
→ Streams		▨ Townships
		▨ DNR Managed Lands



TIMBER SALE MAP

SALE NAME: Q TANGER
AGREEMENT #: 30-099489
TOWNSHIP(S): T4R10E, T4R9E
TRUST(S): Common School and Indemnity (03), Scientific School (10)

REGION: Southeast Region
COUNTY(S): Klickitat, Skamania
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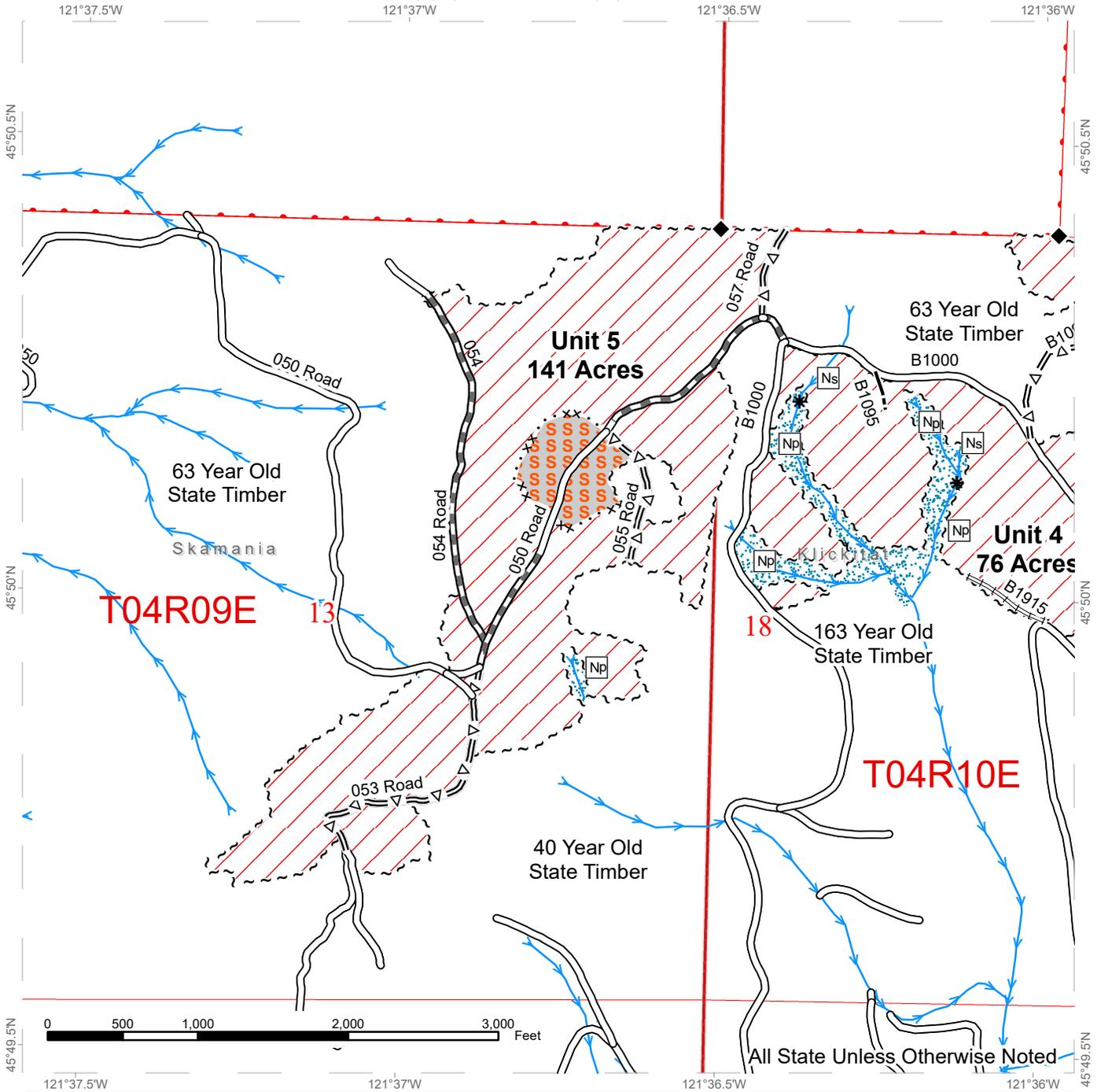
◆ Survey Monument	~ ~ ~ ~ Sale Boundary Tags	▨ Timber Sale Area
□ Stream Type	— Existing Roads	▨ Habitat Skip
* Stream Type Break	- - - Optional Construction	▨ Riparian Management Zone
→ Streams	= Δ = Optional Pre-Haul Maintenance	▨ Sections
	— Optional Reconstruction	▨ Townships
	▬ Required Pre-Haul Maintenance	▨ DNR Managed Lands
	▬ Required Reconstruction	



TIMBER SALE MAP

SALE NAME: Q Tanager
AGREEMENT #: 30-099489
TOWNSHIP(S): T4R10E, T4R9E
TRUST(S): Common School and Indemnity (03), Scientific School (10)

REGION: Southeast Region
COUNTY(S): Klickitat, Skamania
ELEVATION RANGE: 1920'-3520'



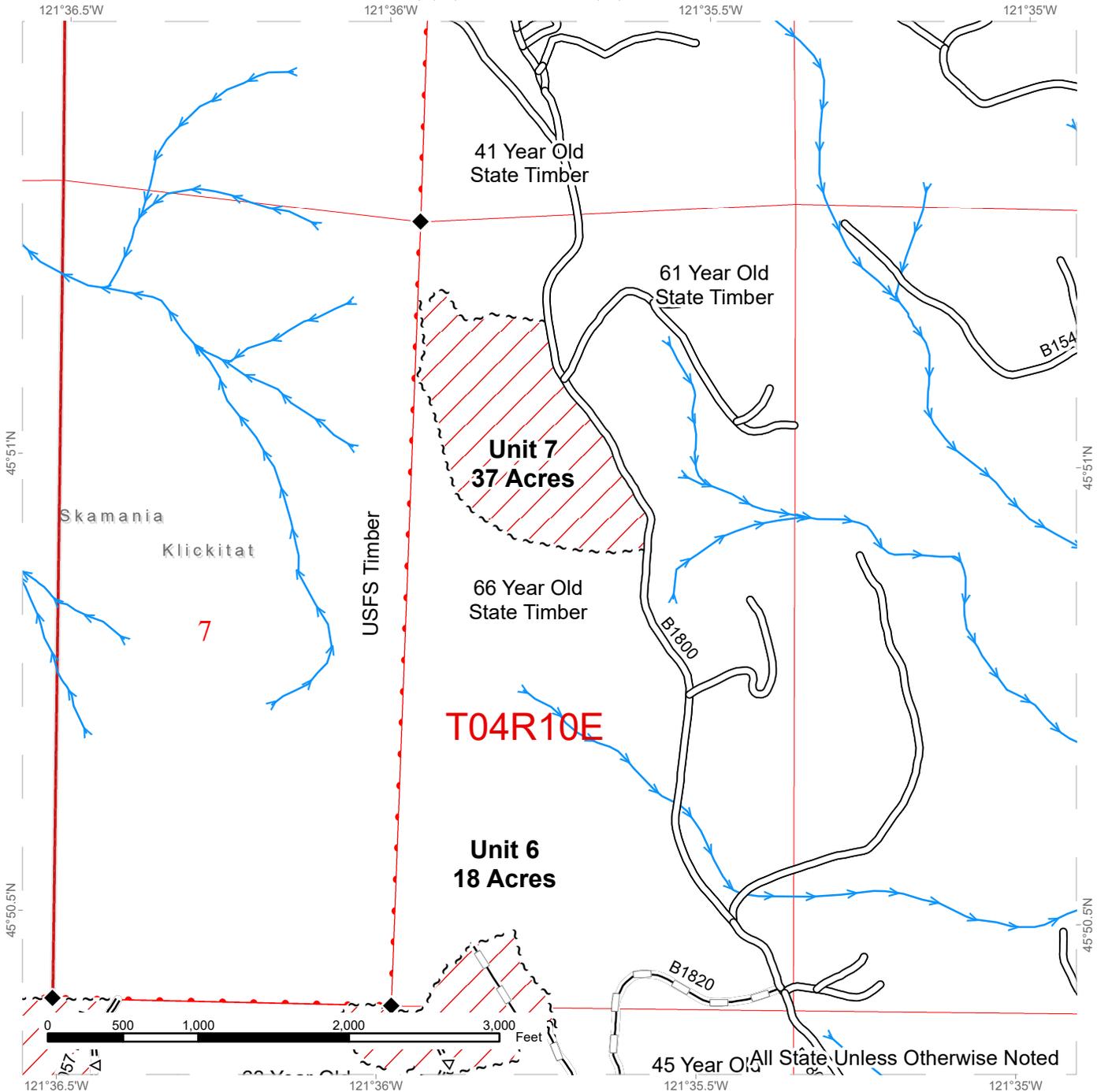
◆ Survey Monument	~~~~ Sale Boundary Tags	//// Timber Sale Area
□ Stream Type	— Existing Roads	SSSS Habitat Skip
* Stream Type Break	- - - Optional Construction	•••• Riparian Management Zone
→ Streams	=Δ= Optional Pre-Haul Maintenance	□ Sections
	▬ Required Pre-Haul Maintenance	▭ Townships
	▬▬▬ Required Reconstruction	▭ DNR Managed Lands



TIMBER SALE MAP

SALE NAME: Q TANGER
AGREEMENT #: 30-099489
TOWNSHIP(S): T4R10E, T4R9E
TRUST(S): Common School and Indemnity (03), Scientific School (10)

REGION: Southeast Region
COUNTY(S): Klickitat, Skamania
ELEVATION RANGE: 1920'-3520'



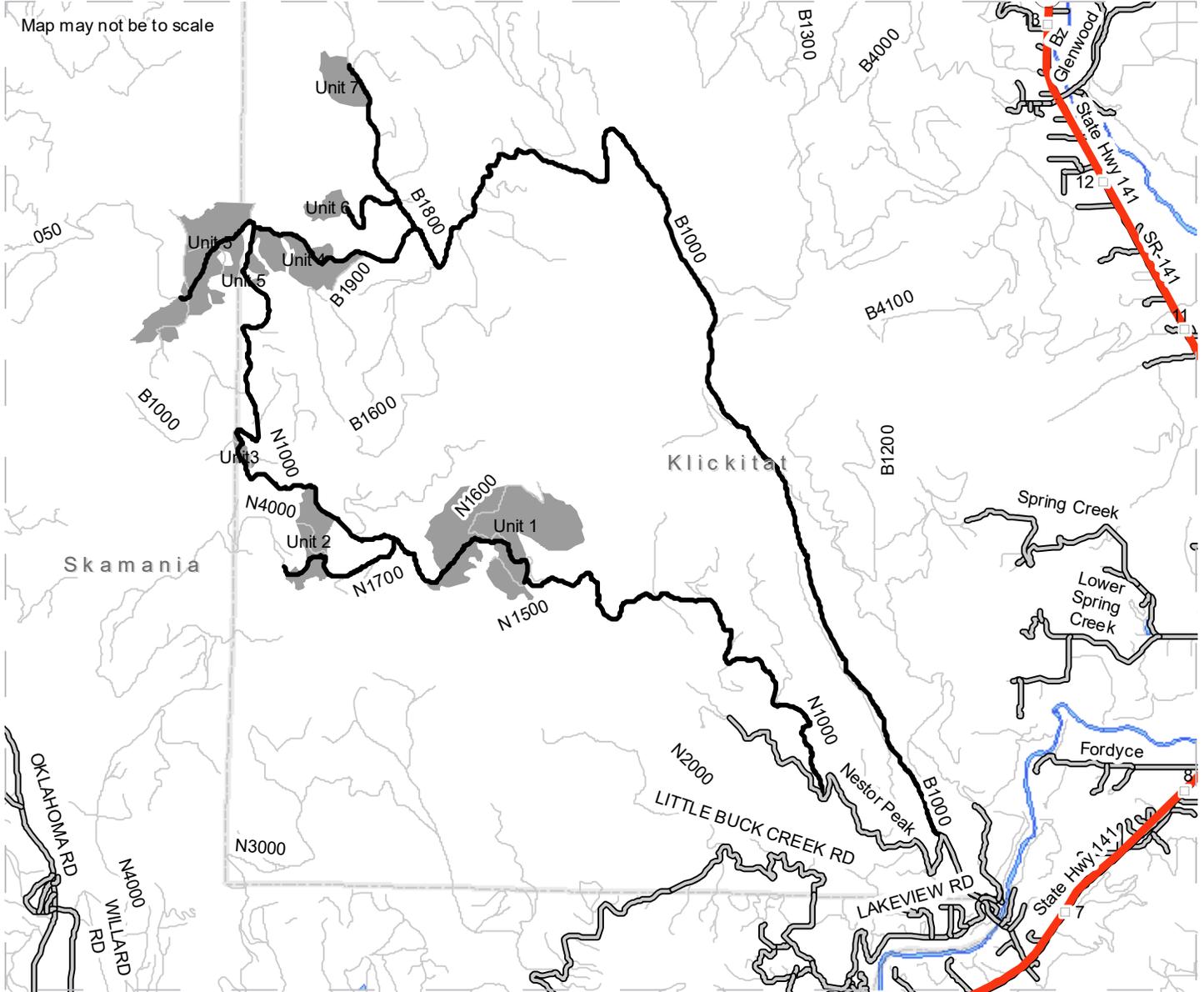
◆ Survey Monument	~~~~ Sale Boundary Tags	//// Timber Sale Area
□ Stream Type	— Existing Roads	□ Sections
* Stream Type Break	=Δ= Optional Pre-Haul Maintenance	□ Townships
→ Streams	— Optional Reconstruction	□ DNR Managed Lands

DRIVING MAP

SALE NAME: Q Tanager
 AGREEMENT#: 30-099489
 TOWNSHIPS: T4R10E, T4R9E
 TRUSTS: Common School and Indemnity (3), Scientific School (10)

REGION: Southeast Region
 COUNTIES: Klickitat, Skamania
 ELEVATION RGE: 1920-3520

Map may not be to scale



-  County Roads
-  Haul Routes
-  Units
-  County Boundaries
-  Other Roads
-  Highway
-  Milepost Markers
-  Open Water

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DRIVING DIRECTIONS:

Unit 1
 At the Nestor Peak and N1000 junction turn right onto the N1000 and continue for 2.9 miles.

Unit 2
 At the Nestor Peak and N1000 junction turn right onto the N1000 and continue for 4.4 miles. Turn left onto the N1700 for 0.6 miles.

Unit 3
 At the Nestor Peak and N1000 junction turn right onto the N1000 and continue for 5.7 miles.

Unit 4
 From the Nestor Peak and B1000 junction continue on the B1000 for 7.3 miles. Turn left onto the B1900.

Unit 5
 From the Nestor Peak and B1000 junction continue on the B1000 for 8.1 miles. Turn right on the O50. Continue on the O50 for 0.2 miles the unit is located north of the O50.

Unit 6 and Unit 7
 From the Nestor Peak and B1000 junction continue on the B1000 for 6.9 miles. Turn right onto the B1800. Both units accessed via the B1800.

**STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES**

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

Export Restricted Tonnage Scale AGREEMENT NO. 30-099489

SALE NAME: Q TANAGER THIN

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

Section G: General Terms

G-001 Definitions

The following definitions apply throughout this contract;

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

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

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

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

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

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

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

G-010 Products Sold and Sale Area

Purchaser was the successful bidder on August 27, 2020 and the sale was confirmed on _____. The State, as owner, agrees to sell to Purchaser, and Purchaser agrees to purchase, cut, and remove the following forest products: All timber meeting the Schedule A Cutting Prescription; bounded by pink flagging and timber sale boundary tags., located on approximately 530 acres on part(s) of Sections 7, 18, 19, 20, 21, 28, 29, and 30 all in Township 4 North, Range 10 East, Sections 13, and 24 all in Township 4 North, Range 9 East W.M. in Klickitat, and Skamania County(s) as shown on the attached timber sale map and as designated on the sale area.

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

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

G-020 Inspection By Purchaser

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

G-025 Schedules

The following attached schedules are hereby incorporated by reference:

Schedule	Title
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A Cutting Prescription

G-030 Contract Term

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

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

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

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

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

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

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

- e. Payment of \$1.00 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-090 Sale Area Adjustment

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

G-100 Forest Products Not Designated

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

G-110 Title and Risk of Loss

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

G-116 Sustainable Forestry Initiative® (SFI) Certification

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

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

G-120 Responsibility for Work

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

G-121 Exceptions

Exceptions to Purchaser's responsibility in clause G-120 shall be limited exclusively to the following. These exceptions shall not apply where road damage occurs due to

Purchaser's failure to take reasonable precautions or to exercise sound forest engineering and construction practices.

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

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

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

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

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

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

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

G-140 Indemnity

To the fullest extent permitted by law, Purchaser shall indemnify, defend and hold harmless State, agencies of State and all officials, agents and employees of State, from and against all claims arising out of or resulting from the performance of the contract. "Claim" as used in this contract means any financial loss, claim, suit, action, damage, or expense, including but not limited to attorneys' fees, attributable for bodily injury, sickness, disease or death, or injury to or destruction of tangible property including loss of use resulting therefrom. Purchasers' obligations to indemnify, defend, and hold harmless includes any claim by Purchasers' agents, employees, representatives, or any subcontractor or its employees. Purchaser expressly agrees to indemnify, defend, and

hold harmless State for any claim arising out of or incident to Purchasers' or any subcontractors' performance or failure to perform the contract. Purchasers' obligation to indemnify, defend, and hold harmless State shall not be eliminated or reduced by any actual or alleged concurrent negligence of State or its agents, agencies, employees and officials. Purchaser waives its immunity under Title 51 RCW to the extent it is required to indemnify, defend and hold harmless State and its agencies, officials, agents or employees.

G-150 Insurance

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

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

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

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

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

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

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

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

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

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

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

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

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

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

compensation, employer's liability, commercial general liability, or commercial umbrella liability insurance.

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

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

G-160 Agents

The State's rights and duties will be exercised by the Region Manager at Ellensburg, 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; the B1000, B1090, B1095, B1800, B1820, B1900, B1915, N1000, N1500, N1600, N1610, N1620, N1700, N1730, N4000, 050, 053, 054, 055, and 057.. 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 B1000, B1800, B1900, 050, N1000, N1700, and N4000, unless authority is granted in writing by the Contract Administrator.

G-430 Open Fires

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

G-450 Encumbrances

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

DATA MISSING

Section P: Payments and Securities

P-010 Initial Deposit

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

P-024 Payment for Forest Products

Purchaser agrees to weigh all loads and pay the following rate per ton for forest products conveyed plus \$86,768.00 on day of sale and \$1.08 per ton upon removal in fees. Fees collected shall be retained by the state unless the contract is adjusted via the G-066 clause.

DATA MISSING

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

P-027 Payment for Removal of Optional Forest Products

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

P-040 Weighing and Scaling Costs

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

P-045 Guarantee of Payment

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

P-052 Payment Procedure

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

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

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

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

Forest products included in this agreement which are destroyed, damaged, stolen, lost, or mismanufactured shall be paid for by Purchaser on demand of the State. The rates contained in clause P-024 shall apply.

P-080 Payment Account Refund

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

P-090 Performance Security

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

P-100 Performance Security Reduction

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

Section L: Log Definitions and Accountability

L-060 Load Tickets

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

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

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

L-071 Log and Load Reporting Service

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

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

L-110 State Approval of Log Scaling and Weighing Locations

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

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

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

Falling and Yarding will not be permitted from November 1 to April 30 unless authorized in writing by the Contract Administrator.

H-011 Certification of Fallers and Yarder Operators

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

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

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

When leave tree damage exceeds the limits set forth in clause H-012, Purchaser shall be subject to liquidated damages (clause D-040 or D-041).

H-012 Leave Tree Damage Definition

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

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

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

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

H-013 Reserve Tree Damage Definition

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

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

- a. A reserve tree has one or more scars on its trunk exposing the cambium layer, which in total exceeds 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-015 Skid Trail Requirements

A skid trail is defined as an area that is used for more than three passes by any equipment.

Purchaser shall comply with the following during the yarding operation:

- a. Skid trails will not exceed 16 feet in width, including rub trees.
- b. Skid trails shall not cover more than 20 percent of the total acreage on one unit.
- c. Skid trail location will be pre-approved by the Contract Administrator.
- d. Except for rub trees, skid trails shall be felled and yarded prior to the felling of adjacent timber.
- e. Rub trees shall be left standing until all timber tributary to the skid trail has been removed.
- f. Excessive soil damage is not permitted. Excessive soil damage is described in clause H-017.
- g. Skid trails will be water barred at the time of completion of yarding, if required by the Contract Administrator.

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

H-017 Preventing Excessive Soil Disturbance

Operations may be suspended when soil rutting exceeds 4 inches as measured from the natural ground line. To reduce soil damage, the Contract Administrator may require water bars to be constructed, grass seed to be placed on exposed soils, or other mitigation measures. Suspended operations shall not resume unless approval to do so has been given, in writing, by the Contract Administrator.

H-025 Timing Requirements for Timber Removal

All non-utility timber must be removed within 45 days of being felled.

H-030 Timber Falling

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

H-040 Purchaser Harvest Plan

Purchaser shall, as part of the plan of operations, prepare an acceptable harvest plan for all 7 units. The plan shall address the seasonal restrictions, which are part(s) of this contract. The harvest plan shall be approved by the Contract Administrator prior to beginning the harvest operation. Purchaser shall not deviate from the harvest plan without prior written approval by the Contract Administrator.

H-052 Branding and Painting

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

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

H-080 Snags Not to be Felled

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

H-110 Stump Height

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

H-120 Harvesting Equipment

Forest products sold under this contract shall be harvested and removed using a feller/buncher and ground skidding equipment with a grapple. Authority to use other equipment or to operate outside the equipment specifications detailed above must be approved in writing by the State.

H-130 Hauling Schedule

The hauling of forest products will not be permitted from November 1 to April 30 unless authorized in writing by the Contract Administrator.

H-140 Special Harvest Requirements

Purchaser shall accomplish the following during the harvest operations:

If a Northern Goshawk is discovered in the sale area operations must cease in that area and the Contract Administrator and Region Biologist must be immediately notified.

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

H-150 Required Removal of Forest Products

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

Species	Net bd ft	Log length (ft)	Log dib
All sp.	20	16	6

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

H-157 Optional Removal of Forest Products Not Designated

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

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

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

H-160 Mismatch

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

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

H-180 Removal of Specialized Forest Products or Firewood

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

H-190 Completion of Settings

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

H-220 Protection of Residual or Adjacent Trees

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

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

Road construction and associated work provisions of the Road Plan for this sale, dated 1/7/2020 are hereby made a part of this contract.

C-050 Purchaser Road Maintenance and Repair

Purchaser shall perform work at their own expense on the B1090 0+00-15+54, B1095 0+00-2+63, B1820 0+00-35+85, B1915 0+00-6+00, N1500 25+93-44+76, N1610 0+00-44+58, N1620 0+00-11+19, N1730 0+00-19+52, 053 0+00-18+95, 054 0+00-23+74, 055 0+00-9+82, 057 0+00-6+05, N1500 25+93-44+76, N1610 0+00-44+58, N1620 0+00-11+19, N1730 0+00-19+52. 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 the B1000 0+00 to 556+39, B1800 0+00 to 59+87, B1900 0+00 to 27+60, 050 161+33 to 195+07, N1000 0+00 to 327+70, N1700 0+00 to 31+50, N4000 0+00 to 296+18. Purchaser shall furnish a statement in a form satisfactory to the State showing the costs incurred while performing this work. Costs shall be based on the rates set forth in the equipment rate schedule on file at the Region office or Engineering Division in Olympia. The State shall reimburse Purchaser for said costs within 30 days of receipt and approval of the statement.

C-080 Landing Locations Approved Prior to Construction

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

C-140 Water Bars

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

Section S: Site Preparation and Protection

S-001 Emergency Response Plan

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

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

S-010 Fire Hazardous Conditions

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

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

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

S-030 Landing Debris Clean Up

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

S-040 Noxious Weed Control

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

S-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-130 Hazardous Materials

- a. Hazardous Materials and Waste - Regulatory Compliance

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

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

b. Hazardous Materials Spill Prevention

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

c. Hazardous Materials Spill Containment, Control and Cleanup

If safe to do so, Purchaser shall take immediate action to contain and control all hazardous material spills. Purchaser shall ensure that enough quick response spill kits capable of absorbing 10 gallons of oil, coolant, solvent or contaminated water are available on site to quickly address potential spills from any piece of equipment at all times throughout active operations. If large quantities of bulk fuel/other hazardous materials are stored on site, Purchaser must be able to effectively control a container leak and contain & recover a hazmat spill equal to the largest single on site storage container volume. (HAZWOPER reg. 29CFR 1910.120 (j) (1) (vii)).

d. Hazardous Material Release Reporting

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

- Department of Emergency Management (contact information below).
- National Response Center (contact information below).
- Appropriate Department of Ecology (DOE) regional office (contact information below).
- DNR Contract Administrator

DOE - Northwest Region: 1-425-649-7000

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

DOE - Southwest Region: 1-360-407-6300
(Clallam, Clark, Cowlitz, Grays Harbor, Jefferson, Mason, Lewis, Pacific, Pierce, Skamania, Thurston, and Wahkiakum counties)

DOE - Central Region: 1-509-575-2490
(Benton, Chelan, Douglas, Kittitas, Klickitat, Okanogan, and Yakima counties)

DOE - Eastern Region: 1-509-329-3400
(Adams, Asotin, Columbia, Ferry, Franklin, Garfield, Grant, Lincoln, Pend Oreille, Spokane, Stevens, Walla Walla, and Whitman counties)

Department of Emergency Management 24-hour Number: 1-800-258-5990

National Response Center: 1-800-424-8802

S-131 Refuse Disposal

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

S-150 Recreation Trail Cleanout

At the completion of logging operations , Purchaser shall repair any damage to and clean out all logging debris from recreational trail(s).

Section D: Damages

D-010 Liquidated Damages

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

D-021 Failure to Remove Forest Products

Purchaser's failure to remove all or part of the forest products sold in this agreement prior to the expiration of the contract term results in substantial injury to the State. The value of the forest products sold at the time of breach is not readily ascertainable. Purchaser's failure to perform disrupts the State's management plans, the actual cost of

which is difficult to assess. A resale involves additional time and expense and is not an adequate remedy. Therefore, Purchaser agrees to pay the State as liquidated damages a sum calculated using the following formula:

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

Where:

LD = Liquidated Damage value.

V = The unremoved value at the date of breach of contract. The value is determined by subtracting the removal tonnage to date from the cruised tonnage multiplied by the contract bid rates.

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

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

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

A = Administrative Fee = \$2,500.00.

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

Where:

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

LD = Liquidated damage value.

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

D-030 Inadequate Log Accountability

Removal of forest products from the sale area without adequate branding and/or valid load tickets attached to the load and scaling forest products in a location other than the facility approved by the State can result in substantial injury to the State. Failure to properly account for loads and scaling and/or weighing information can result in loss to the State. The potential loss from not having proper branding, ticketing, scaling and/or weighing location and accountability is not readily ascertainable. Purchaser's failure to perform results in a loss of log weight and scale accountability, increases the potential for unauthorized removal of forest products, and increases the State's administration costs, the actual costs of which are difficult to assess.

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

D-040 Leave Tree Excessive Damage

When Purchaser's operations exceed the damage limits set forth in clause H-012, Leave Tree Damage Definition, the trees damaged result in substantial injury to the State. The value of the damaged leave trees at the time of the breach is not readily ascertainable. Therefore, Purchaser agrees to pay the State as liquidated damages at the rate of \$500.00 per tree for all damaged trees in the sale area.

SIGNATURES

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

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

STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES

Purchaser

Todd Welker

Print Name

Southeast 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
Cutting Prescription

Harvest Objective

Proportional thinning across all diameters from 8"-20" removing approximately 45% of the existing basal area and 50% of the trees per acre. The primary cut species on this sale will be Douglas fir.

Trees selected for cutting will include:

- A proportional thinning, cut suppressed trees across the diameter ranges.
- Cut trees with the shortest live crown or trees in clumps, approximately 1/10 acre, with those that meet the prescription.
- If all crowns are below 30%, leave the largest diameter trees and trees that are in close proximity with them.

Leave Trees:

- Well-formed trees of all diameters or trees with crown ratio > 40% . Leave the most vigorous trees that have the highest live crown percentage and trees that are in close proximity with the most vigorous trees
- Dominant Douglas-fir and grand fir trees with the largest diameters and best overall form
- Trees with physical defect for wildlife trees such as crooks, forks, cavities, mistletoe, or broken tops.
- Species preference to leave in order: western redcedar, western hemlock, noble fir, pacific silver fir, Douglas-fir, grand fir.
- DNR designated (blue painted) leave trees shall be left.

Additional:

- Leave no-cut skips around large downed wood, large snags, advanced conifer reproduction
- All Units- Maximum cut diameter 21" dbh.
- Unit 5 - There is a 9 acre no harvest special management area.

Minimum residual basal area and trees per acre average across the unit are as listed in the chart below:

Post-harvest	TPA > 8" dbh	BA/acre
Unit 1	83	112
Unit 2	136	128
Unit 3	74	113
Unit 4	93	112
Unit 5	70	126
Unit 6	113	147
Unit 7	78	144

Leave all existing snags where operationally safe and feasible to do so. Any snags that must be felled for safety reasons must remain in the unit. Create buncher-cut snags from trees with defect in the lower bole as directed by the contract administrator.

TANAGER Stand Table

% of TPA and BA/acre cut by diameter class

Dbh class	% TPA cut	% BA cut
9" - 12"	37%	64%
13" - 16"	64%	55%
17" - 20"	44%	43%
21"+	0%	0%



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: Q Tanager	Region: Southeast
Agreement #: 30-088241	District: Coast
Contact Forester: Rachel Mickey Phone / Location: 509-774-7170	County(s): Klickitat
Alternate Contact: Joe Smith Phone / Location: 509-925-8510	Other information:

Type of Sale: Weight Scale	
Harvest System: Ground based	100%

UNIT ACREAGES AND METHOD OF DETERMINATION:

Unit # Harvest R/W or RMZ WMZ	Legal Description (Enter only one legal for each unit) Sec/Twp/Rng	Grant or Trust	Gross Proposal Acres	Deductions from Gross Acres (No harvest acres)				Net Harvest Acres	Acreage Determina tion (List method and error of closure if applicable)
				RMZ/ WMZ Acres	Leave Tree Acres	Existing Road Acres	Other Acres (describe)		
1	S20/T04N/R10E	03	252	15	0	5	21 acres unforest ed, rocky	211	GPS (Garmin)
2	S19/T04N/R10E	03	54	0	0	2	2	50	GPS (Garmin)
3	S14/T04N/R10E	03/10	12	3	0	1	0	7.5	GPS (Garmin)
4	S18/T04N/R10E	03	92	16	0	2	0	74	GPS (Garmin)
5	S13/T04N/R09E	10/03	141	.5	0	0	9 acres, habitat SMZ	132	GPS (Garmin)
6	S18/T04N/R10E	03	18	0	0	0	0	18	GPS (Garmin)
7	S07/T04N/R10E	03	37	0	0	0	0	37	GPS (Garmin)
TOTAL ACRES			606	34	0	10	32	530	

HARVEST PLAN AND SPECIAL CONDITIONS:

Unit #	Harvest Prescription: (Leave, take, paint color, tags, flagging etc.)	Special Management Zone (SMZ):	Other conditions (# leave trees, etc.)
1	White Timber sale boundary tags, pink flagging, and pink or orange flashers and roads mark the unit boundary. Max cut diameter limit of 21" DBH.	A 22-acre section within the unit has been removed from the cruise acres due to those acres being unforested.	
2	White Timber sale boundary tags, pink flagging, and pink or orange flashers and roads mark the unit boundary. Max cut diameter limit of 21" DBH.	A 2 acre nonforested section was removed from the cruise acres.	
3	White Timber sale boundary tags, pink flagging, and pink or orange flashers and roads mark the unit boundary. Max cut diameter limit of 21" DBH.		
4	White Timber sale boundary tags, pink flagging, and pink or orange flashers and roads mark the unit boundary. Max cut diameter limit of 21" DBH.	Unit four is comprised of three sub units 4a, 4b, and 4c- separated by riparian areas tagged out of the sale.	
5	White Timber sale boundary tags, pink flagging, and pink or orange flashers and roads mark the unit boundary. A SMZ interior to the unit is marked with blue SMZ tags and pink flagging. Max cut diameter limit of 21" DBH.	9 acres have been bound out of the harvest boundary with SMZ tags as a habitat skip	
6	White Timber sale boundary tags, pink flagging, and pink or orange flashers mark the unit boundary. Max cut diameter limit of 21" DBH.		
7	White Timber sale boundary tags, pink flagging, and pink or orange flashers and roads mark the unit boundary. Max cut diameter limit of 21" DBH.		

OTHER PRE-CRUISE INFORMATION:

Unit #	Primary,secondary Species / Estimated Volume (MBF)	Access information (Gates, locks, etc.)	Photos, traverse maps required
1	DF/GF 1,601	N1000/ B1000 road systems	Cruise Map
2	DF/GF 494	N1000/ B1000 road systems	Cruise Map
3	DF/GF 87	N1000/ B1000 road systems	Cruise Map
4	DF/GF 917	N1000/ B1000 road systems	Cruise Map
5	DF/GF 1,300	N1000/ B1000 road systems	Cruise Map
6	DF/GF 156	N1000/ B1000 road systems	Cruise Map
7	DF/GF 549	N1000/ B1000 road systems	Cruise Map
TOTAL MBF	5,104 MBF		

REMARKS:

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Prepared By: Rachel Mickey Date: 07/23/19	Title: Forester	CC:
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Cruise Narrative

Sale Name: Q Tanager	Region: Southeast
App. #: 30-099489	District: Klickitat
Lead Cruiser: Rachel Mickey	Completion date: 08-06-2019
Other Cruisers on sale: Albert Durkee and Travis Serdar	

Unit acreage specifications:

Unit #	Cruised acres	Cruised acres agree with sale acres? Yes/No	If acres do not agree explain why.
1	211	N	Unforested area excluded from harvest and road acres removed
2	50	N	Unforested area excluded from harvest and road acres removed
3	7.5	N	Road acres removed
4	74	N	Road acres removed
5	132	Y	9 SMZ acres were excluded from the net harvest acres
6	18	Y	
7	37	Y	
Total	530		

Unit cruise specifications:

Unit #	Sample type (VP, FP, ITS,100%)	Expansion factor (BAF, full/half)	Sighting height (4.5 ft, 16 ft.)	Grid size (Plot spacing or % of area)	Plot ratio (cruise:count)	Total number of plots
1	VP	46.9	4.5'	350' x 350'	1:1	86
2	VP	46.9	4.5'	350' x 350'	1:1	23
3	VP	46.9	4.5'	300' x 300'	1:1	5
4	VP	46.9	4.5'	350' x 350'	1:1	30
5	VP	46.9	4.5'	350' x 350'	1:1	56
6	VP	46.9	4.5'	350' x 350'	1:1	7
7	VP	46.9	4.5'	350' x 350'	1:1	16

Sale/Cruise Description:

Minor species cruise intensity:	All cruise					
Minimum cruise spec:	8 inch DBH					
Avg ring count by sp:	DF =		WH =		SS =	
Leave/take tree description:						
Other conditions						

Field observations:

<p>The harvest units are located on the N1000 and B1000 road systems approximately 8 miles west of Husum, WA. The sale consist of 530 net harvest acres with a total take volume of 5,104 MBF. The sale is entirely ground-based harvest, with the steepest slope within the harvest area being 45%.</p> <p>The timber harvest species composition is 85% Douglas fir and 15% grand fir.</p> <p>The ponderosa take trees average 15 in dbh and 45 feet in bole height and the average grand fir take tree average 13 dbh and 41 feet in bole height.</p> <p>Defect within the stand is present primarily in the form of broken and forked tops. Tree grades of 2 saw, 3 saw, and 4 saw are present.</p>

Grants: Common School Fund (03), Scientific School (10)

Prepared by: Rachel Mickey
Title: Klickitat Forester
CC:

T004 R010 S20 Ty0001 THRU T004 R010 S20 Ty0007	Project: TANAGER Acres 529.50	Page 1 Date 1/7/2020 Time 2:21:56PM
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S Spp	So T	Gr rt ad	% Net BdFt	Bd. Ft. per Acre Def% Gross Net			Total Net MBF	Percent of Net Board Foot Volume								Average Log				Logs Per /Acre	
								Log Scale Dia.				Log Length				Ln Ft	Dia In	Bd Ft	CF/ Lf		
								4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99						
DF	D	2S	22	2.1	1,927	1,886	998			100		2	91	8	32	13	181	1.42	10.4		
DF	D	3S	59	1.8	5,191	5,099	2,700			100		1	3	56	41	35	8	88	0.75	57.7	
DF	D	4S	19		1,560	1,560	826	49	51			4	31	15	50	31	6	39	0.40	39.6	
DF Totals			61	1.5	8,677	8,544	4,524	9	69	22		1	8	56	35	33	8	79	0.70	107.7	
DF	L	D 2S	41	2.1	1,867	1,828	968			63	37			100		32	14	232	1.82	7.9	
DF	L	D 3S	48		2,114	2,114	1,120	29	71					3	72	25	33	7	58	0.56	36.4
DF	L	D 4S	11		445	445	236	100						13		87	36	5	35	0.38	12.6
DF Totals			31	.9	4,426	4,387	2,323	24	34	26	15		3	77	21	33	7	77	0.68	56.8	
GF	D	2S	17	1.1	197	195	103			100				100		32	13	177	1.38	1.1	
GF	D	3S	53	2.1	586	573	304	2	90	9			2	61	36	34	8	83	0.75	6.9	
GF	D	4S	30	5.7	347	327	173	64	36				41	1	58	32	5	36	0.39	9.0	
GF Totals			8	3.0	1,129	1,095	580	20	58	22			13	50	36	33	7	64	0.60	17.0	
WH	L	D 3S	100		15	15	8			100					100	40	8	90	0.79	.2	
WH Totals			0		15	15	8			100					100	40	8	90	0.79	.2	
Totals				1.4	14,248	14,042	7,435	15	57	23	5		1	6	62	31	33	8	77	0.68	181.7

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

T004 R010 S20 Ty0001	211.0
T004 R010 S20 Ty0002	50.0
T004 R010 S20 Ty0007	37.0

Project TANAGER
Acres 529.50

Page No 1
Date: 1/7/2020
Time 2:24:27PM

Species	s T	Total	Total	Total	Net Cubic Ft/		CF/	Total CCF		Total MBF	
		Trees	Logs	Tons	Tree	Log	LF	Gross	Net	Gross	Net
DOUG FIR		39,470	57,030	37,569	33.38	23.10	0.70	13,182	13,176	4,595	4,524
DOUG FIR	L	23,635	30,082	19,501	28.95	22.75	0.69	6,843	6,843	2,343	2,323
GRAND F		6,835	8,991	5,136	26.23	19.94	0.60	1,793	1,793	598	580
WHEMLOCK	L	91	91	92	31.53	31.53	0.79	29	29	8	8
Totals		70,031	96,194	62,298	31.19	22.70	0.69	21,846	21,840	7,544	7,435

Wood Type	Total	Total	Total	Net Cubic Ft/		CF/	Total CCF		Total MBF	
Species	Trees	Logs	Tons	Tree	Log	LF	Gross	Net	Gross	Net
C	70,031	96,194	62,298	31.19	22.70	0.69	21,846	21,840	7,544	7,435
Totals	70,031	96,194	62,298	31.19	22.70	0.69	21,846	21,840	7,544	7,435

TC PSTATS		PROJECT STATISTICS							PAGE	1	
		PROJECT			TANAGER				DATE	1/7/2020	
TWP	RGE	SC	TRACT	TYPE		ACRES	PLOTS	TREES	CuFt	BdFt	
004	010	20	313972	0001	THR	529.50	223	1,055	S	W	
004	010	20	313972	0007							
				TREES		ESTIMATED	PERCENT				
		PLOTS	TREES	PER PLOT		TOTAL	SAMPLE				
						TREES	TREES				
TOTAL		223	1055	4.7							
CRUISE		221	1053	4.8		93,507	1.1				
DBH COUNT											
REFOREST											
COUNT		2	2	1.0							
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	421	76.8	14.5	45	23.2	88.4	4,421	4,350	1,267	1,266	
DOUG FIR-L	494	66.4	16.9	19	25.2	103.7	235	234	67	67	
GRAND F	60	13.4	13.0	41	3.4	12.4	543	533	159	159	
GRAND F-L	22	5.1	12.7	17	1.3	4.5					
WHEMLOCK-L	20	4.7	12.7	18	1.1	4.1	15	15	5	5	
NOBLE F-L	7	1.2	15.4	17	0.4	1.6					
PS FIR-L	3	.6	13.9	17	0.2	.7					
BL MAPLE-L	18	7.6	9.7	17	1.3	3.9					
WR CEDAR-L	8	.7	21.4	17	0.4	1.7					
TOTAL	1,053	176.6	15.1	31	56.8	220.9	5,215	5,132	1,499	1,498	
CONFIDENCE LIMITS OF THE SAMPLE											
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR											
CL	68.1	COEFF	SAMPLE TREES - BF				# OF TREES REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUG FIR	125.0	6.1		70	74	79					
DOUG FIR-L	813.6	36.6		3	5	6					
GRAND F	135.5	17.5		47	57	67					
GRAND F-L											
WHEMLOCK-L	447.2	102.5			5	9					
NOBLE F-L											
PS FIR-L											
BL MAPLE-L											
WR CEDAR-L											
TOTAL	212.8	6.6		33	35	38	1,808	452	201		
CL	68.1	COEFF	SAMPLE TREES - CF				# OF TREES REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUG FIR	117.8	5.7		20	21	23					
DOUG FIR-L	790.9	35.6		1	1	2					
GRAND F	130.5	16.8		14	17	20					
GRAND F-L											
WHEMLOCK-L	447.2	102.5			2	3					
NOBLE F-L											
PS FIR-L											
BL MAPLE-L											
WR CEDAR-L											
TOTAL	203.7	6.3		9	10	11	1,657	414	184		
CL	68.1	COEFF	TREES/ACRE				# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUG FIR	103.6	6.9		71	77	82					
DOUG FIR-L	71.0	4.7		63	66	70					
GRAND F	300.1	20.1		11	13	16					
GRAND F-L	426.8	28.6		4	5	7					

TC PSTATS		PROJECT STATISTICS							PAGE	2		
		PROJECT			TANAGER				DATE	1/7/2020		
TWP	RGE	SC	TRACT	TYPE		ACRES			PLOTS	TREES	CuFt	BdFt
004	010	20	313972	0001	THR	529.50			223	1,055	S	W
004	010	20	313972	0007								
CL	68.1	COEFF		TREES/ACRE			# OF PLOTS REQ.		INF. POP.			
SD:	1.00	VAR.	S.E.%	LOW	AVG	HIGH	5 10		15			
WHEMLOCK-L		499.9	33.4	3	5	6						
NOBLE F-L		885.0	59.2	0	1	2						
PS FIR-L		858.5	57.4	0	1	1						
BL MAPLE-L		520.9	34.9	5	8	10						
WR CEDAR-L		1268.8	84.9	0	1	1						
TOTAL		58.7	3.9	170	177	184	137 34		15			
CL	68.1	COEFF		BASAL AREA/ACRE			# OF PLOTS REQ.		INF. POP.			
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5 10		15			
DOUG FIR		87.7	5.9	83	88	94						
DOUG FIR-L		49.6	3.3	100	104	107						
GRAND F		273.6	18.3	10	12	15						
GRAND F-L		386.4	25.9	3	4	6						
WHEMLOCK-L		426.3	28.5	3	4	5						
NOBLE F-L		833.2	55.7	1	2	2						
PS FIR-L		858.4	57.4	0	1	1						
BL MAPLE-L		516.2	34.5	3	4	5						
WR CEDAR-L		1319.1	88.3	0	2	3						
TOTAL		45.2	3.0	214	221	228	82 20		9			
CL	68.1	COEFF		NET BF/ACRE			# OF PLOTS REQ.		INF. POP.			
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5 10		15			
DOUG FIR		159.5	10.7	3,886	4,350	4,814						
DOUG FIR-L		478.4	32.0	159	234	309						
GRAND F		379.3	25.4	397	533	668						
GRAND F-L												
WHEMLOCK-L		1493.3	99.9	0	15	31						
NOBLE F-L												
PS FIR-L												
BL MAPLE-L												
WR CEDAR-L												
TOTAL		148.2	9.9	4,623	5,132	5,641	877 219		97			
CL	68.1	COEFF		NET CUFT FT/ACRE			# OF PLOTS REQ.		INF. POP.			
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5 10		15			
DOUG FIR		152.7	10.2	1,137	1,266	1,396						
DOUG FIR-L		470.3	31.5	46	67	89						
GRAND F		362.4	24.2	121	159	198						
GRAND F-L												
WHEMLOCK-L		1493.3	99.9	0	5	11						
NOBLE F-L												
PS FIR-L												
BL MAPLE-L												
WR CEDAR-L												
TOTAL		141.5	9.5	1,357	1,498	1,640	799 200		89			

T004 R010 S20 T0001										T004 R010 S20 T0001				
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt					
004	010	20	313972	0001	211.00	86	344	S	W					

Spp	So	Gr	T	rt	ad	%	Bd. Ft. per Acre			Total	Percent Net Board Foot Volume								Average Log				Logs Per /Acre						
											Net	BdFt	Def%	Gross	Net	Net MBF	Log Scale Dia.				Log Length				Ln	Dia	Bd	CF/Lf	
																	4-5	6-11	12-16	17+	12-20	21-30		31-35					36-99
DF	L	DM	2S			36	3.0	3,160	3,064	647			45	55		100					32	15	254	1.87	12.1				
DF	L	DM	3S			50		4,144	4,144	874	37	63				83	17				33	6	54	0.54	76.6				
DF	L	DM	4S			14		1,116	1,116	236	100					13					36	5	35	0.38	31.5				
DF	L	Totals				52	1.1	8,421	8,325	1,756	32	32	17	20		2	78	20			33	7	69	0.62	120.2				
DF		DM	2S			28	3.1	2,100	2,034	429			100			4	86	10			32	13	182	1.46	11.1				
DF		DM	3S			50	1.0	3,629	3,592	758		100			2	3	59	36			34	9	91	0.77	39.4				
DF		DM	4S			22		1,530	1,530	323	57	43			6	12	18	64			33	6	44	0.40	34.8				
DF	Totals					45	1.4	7,259	7,155	1,510	12	59	28		2	5	58	35			34	8	84	0.71	85.3				
GF		DM	2S			22	5.3	103	97	21			100			100					32	13	180	1.66	.5				
GF		DM	3S			26	14.1	133	114	24		100				57	43				35	9	77	0.80	1.5				
GF		DM	4S			52		220	220	46	60	40			40		60				32	5	35	0.31	6.3				
GF	Totals					3	5.3	456	432	91	30	47	23		21	38	42				33	7	52	0.49	8.3				
Type	Totals						1.4	16,135	15,912	3,357	23	44	22	11	1	4	68	27			33	7	74	0.65	213.7				

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT	TANAGER		DATE	12/12/2019		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
004	010	20	313972	0001	211.00	86	346	S	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
				PLOTS	TREES	TREES	TREES			
TOTAL		86	346	4.0						
CRUISE		84	344	4.1	32,128		1.1			
DBH COUNT										
REFOREST										
COUNT		2	2	1.0						
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	130	64.2	14.2	45	18.8	70.9	3,629	3,578	1,015	1,015
DOUG FIR-L	173	60.3	16.9	20	22.9	94.3	292	289	87	87
BL MAPLE-L	18	19.2	9.7	17	3.2	9.8				
GRAND F	9	4.8	13.7	56	1.3	4.9	203	192	59	59
GRAND F-L	6	2.1	17.0	17	0.8	3.3				
WR CEDAR-L	8	1.7	21.4	17	0.9	4.4				
TOTAL	<i>344</i>	<i>152.3</i>	<i>15.0</i>	<i>31</i>	<i>48.4</i>	<i>187.6</i>	<i>4,124</i>	<i>4,058</i>	<i>1,161</i>	<i>1,161</i>
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL: 68.1 %	COEFF	SAMPLE TREES - BF				# OF TREES REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUG FIR	130.3	11.4	70	79	89					
DOUG FIR-L	783.6	59.5	2	6	9					
BL MAPLE-L										
GRAND F	180.3	63.6	18	50	82					
GRAND F-L										
WR CEDAR-L										
TOTAL	<i>236.2</i>	<i>12.7</i>	<i>30</i>	<i>34</i>	<i>39</i>	<i>2,228</i>	<i>557</i>	<i>248</i>		
CL: 68.1 %	COEFF	SAMPLE TREES - CF				# OF TREES REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUG FIR	123.6	10.8	20	22	24					
DOUG FIR-L	726.8	55.2	1	2	2					
BL MAPLE-L										
GRAND F	175.1	61.8	6	16	25					
GRAND F-L										
WR CEDAR-L										
TOTAL	<i>225.4</i>	<i>12.1</i>	<i>8</i>	<i>10</i>	<i>11</i>	<i>2,028</i>	<i>507</i>	<i>225</i>		
CL: 68.1 %	COEFF	TREES/ACRE				# OF PLOTS REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUG FIR	127.2	13.7	55	64	73					
DOUG FIR-L	85.6	9.2	55	60	66					
BL MAPLE-L	314.9	33.9	13	19	26					
GRAND F	470.3	50.7	2	5	7					
GRAND F-L	615.4	66.3	1	2	3					
WR CEDAR-L	786.8	84.8	0	2	3					
TOTAL	<i>67.5</i>	<i>7.3</i>	<i>141</i>	<i>152</i>	<i>163</i>	<i>182</i>	<i>45</i>	<i>20</i>		
CL: 68.1 %	COEFF	BASAL AREA/ACRE				# OF PLOTS REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUG FIR	101.3	10.9	63	71	79					
DOUG FIR-L	56.8	6.1	89	94	100					
BL MAPLE-L	311.9	33.6	7	10	13					
GRAND F	486.8	52.4	2	5	7					

TC TSTATS				STATISTICS				PAGE	2	
				PROJECT	TANAGER			DATE	12/12/2019	
TWP	RGE	SECT	TRACT	TYPE	ACRES		PLOTS	TREES	CuFt	BdFt
004	010	20	313972	0001	211.00		86	346	S	W
CL:	68.1 %	COEFF		BASAL AREA/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.	S.E.%	LOW	AVG	HIGH	5	10	15	
GRAND F-L		529.1	57.0	1	3	5				
WR CEDAR-L		818.3	88.2	1	4	8				
TOTAL		<i>53.0</i>	<i>5.7</i>	<i>177</i>	<i>188</i>	<i>198</i>	<i>112</i>	<i>28</i>	<i>12</i>	
CL:	68.1 %	COEFF		NET BF/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR		177.8	19.2	2,892	3,578	4,263				
DOUG FIR-L		427.3	46.0	156	289	422				
BL MAPLE-L										
GRAND F		550.1	59.3	78	192	306				
GRAND F-L										
WR CEDAR-L										
TOTAL		<i>171.8</i>	<i>18.5</i>	<i>3,307</i>	<i>4,058</i>	<i>4,809</i>	<i>1,178</i>	<i>295</i>	<i>131</i>	
CL:	68.1 %	COEFF		NET CUFT FT/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR		171.6	18.5	827	1,015	1,203				
DOUG FIR-L		416.6	44.9	48	87	126				
BL MAPLE-L										
GRAND F		544.8	58.7	24	59	93				
GRAND F-L										
WR CEDAR-L										
TOTAL		<i>164.4</i>	<i>17.7</i>	<i>955</i>	<i>1,161</i>	<i>1,366</i>	<i>1,079</i>	<i>270</i>	<i>120</i>	

T004 R010 S20 T0002										T004 R010 S20 T0002				
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt					
004	010	20	313972	0002	50.00	23	116	S	W					

S Spp	So T	Gr rt ad	% Net BdFt	Bd. Ft. per Acre Def% Gross Net			Total Net MBF	Percent Net Board Foot Volume								Average Log				Logs Per /Acre
								Log Scale Dia.				Log Length				Ln Ft	Dia In	Bd Ft	CF/ Lf	
								4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99					
DF	DM	2S	18		1,415	1,415	71	100					71	29	34	12	177	1.34	8.0	
DF	DM	3S	51	.9	3,829	3,795	190	100					45	55	37	8	87	0.73	43.6	
DF	DM	4S	31		2,320	2,320	116	59	41				58	7	35	31	5	38	0.41	61.1
DF	Totals		76	.5	7,564	7,529	376	18	63	19			18	38	44	33	7	67	0.61	112.8
GF	DM	2S	20		481	481	24	100							32	12	160	1.33	3.0	
GF	DM	3S	59		1,377	1,377	69	100					5	80	16	33	8	87	0.74	15.9
GF	DM	4S	21		488	488	24	80	20				70	10	20	27	5	33	0.35	14.6
GF	Totals		24		2,346	2,346	117	17	63	21			17	69	13	30	7	70	0.64	33.5
Type Totals				.4	9,910	9,875	494	18	63	19			18	46	37	33	7	68	0.62	146.2

TC TSTATS				STATISTICS						PAGE	1
				PROJECT	TANAGER				DATE	12/12/2019	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt		
004	010	20	313972	0002	50.00	23	116	S	W		
				TREES	ESTIMATED	PERCENT					
				PER PLOT	TOTAL	SAMPLE					
				PLOTS	TREES	TREES	TREES				
TOTAL		23	116	5.0							
CRUISE		23	116	5.0	12,320		9				
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	42	88.3	13.3	42	23.5	85.6	4,058	4,040	1,233	1,233	
DOUG FIR-L	52	99.1	14.0	17	28.3	106.0					
GRAND F	11	22.5	13.5	61	6.1	22.4	1,706	1,706	472	472	
GRAND F-L	3	15.0	8.6	17	2.1	6.1					
WHEMLOCK-L	8	21.5	11.8	17	4.7	16.3					
TOTAL	<i>116</i>	<i>246.4</i>	<i>13.3</i>	<i>30</i>	<i>64.9</i>	<i>236.5</i>	<i>5,764</i>	<i>5,746</i>	<i>1,705</i>	<i>1,705</i>	
CONFIDENCE LIMITS OF THE SAMPLE											
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR											
CL: 68.1 %	COEFF	SAMPLE TREES - BF					# OF TREES REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15			
DOUG FIR	126.5	19.5	52	64	77						
DOUG FIR-L											
GRAND F	83.8	26.5	76	104	131						
GRAND F-L											
WHEMLOCK-L											
TOTAL	<i>201.4</i>	<i>18.7</i>	<i>27</i>	<i>33</i>	<i>39</i>	<i>1,620</i>	<i>405</i>	<i>180</i>			
CL: 68.1 %	COEFF	SAMPLE TREES - CF					# OF TREES REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15			
DOUG FIR	117.1	18.1	15	19	22						
DOUG FIR-L											
GRAND F	84.2	26.6	21	29	37						
GRAND F-L											
WHEMLOCK-L											
TOTAL	<i>193.5</i>	<i>18.0</i>	<i>8</i>	<i>10</i>	<i>11</i>	<i>1,495</i>	<i>374</i>	<i>166</i>			
CL: 68.1 %	COEFF	TREES/ACRE					# OF PLOTS REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15			
DOUG FIR	77.4	16.5	74	88	103						
DOUG FIR-L	67.1	14.3	85	99	113						
GRAND F	215.0	45.8	12	22	33						
GRAND F-L	264.9	56.4	7	15	23						
WHEMLOCK-L	307.7	65.6	7	21	36						
TOTAL	<i>47.4</i>	<i>10.1</i>	<i>222</i>	<i>246</i>	<i>271</i>	<i>94</i>	<i>23</i>	<i>10</i>			
CL: 68.1 %	COEFF	BASAL AREA/ACRE					# OF PLOTS REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15			
DOUG FIR	78.6	16.7	71	86	100						
DOUG FIR-L	38.2	8.1	97	106	115						
GRAND F	187.8	40.0	13	22	31						
GRAND F-L	264.0	56.2	3	6	10						
WHEMLOCK-L	282.3	60.1	7	16	26						
TOTAL	<i>33.5</i>	<i>7.1</i>	<i>220</i>	<i>237</i>	<i>253</i>	<i>47</i>	<i>12</i>	<i>5</i>			
CL: 68.1 %	COEFF	NET BF/ACRE					# OF PLOTS REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15			

TC TSTATS				STATISTICS				PAGE	2	
				PROJECT	TANAGER			DATE	12/12/2019	
TWP	RGE	SECT	TRACT	TYPE	ACRES		PLOTS	TREES	CuFt	BdFt
004	010	20	313972	0002	50.00		23	116	S	W
CL:	68.1 %	COEFF		NET BF/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR		164.1	35.0	2,628	4,040	5,452				
DOUG FIR-L										
GRAND F		247.0	52.6	809	1,706	2,604				
GRAND F-L										
WHEMLOCK-L										
TOTAL		<i>141.7</i>	<i>30.2</i>	<i>4,011</i>	<i>5,746</i>	<i>7,481</i>	<i>839</i>	<i>210</i>	<i>93</i>	
CL:	68.1 %	COEFF		NET CUFT FT/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR		152.8	32.5	832	1,233	1,634				
DOUG FIR-L										
GRAND F		236.3	50.3	235	472	710				
GRAND F-L										
WHEMLOCK-L										
TOTAL		<i>134.4</i>	<i>28.6</i>	<i>1,217</i>	<i>1,705</i>	<i>2,193</i>	<i>754</i>	<i>188</i>	<i>84</i>	

T004 R010 S20 T0003	T004 R010 S20 T0003
Twp 004 Rge 010 Sec 20 Tract 313972 Type 0003 Acres 7.50 Plots 5 Sample Trees 24 CuFt S BdFt W	

Spp	So	Gr	%	Bd. Ft. per Acre			Total	Percent Net Board Foot Volume								Average Log				Logs Per /Acre					
								Net BdFt	Def%	Gross	Net	Net MBF	Log Scale Dia.				Log Length				Ln Ft	Dia In	Bd Ft	CF/Lf	
													4-5	6-11	12-16	17+	12-20	21-30	31-35						36-99
DF	DM	2S	26	2,285	2,285	17	100				100				32	12	160	1.18	14.3						
DF	DM	3S	68	5,715	5,715	43	100				10	61	28	32	7	68	0.60	83.7							
DF	DM	4S	6	485	485	4	100				100				40	5	40	0.60	12.1						
DF	Totals		73	8,486	8,486	64	6	67	27		7	68	25	33	8	77	0.67	110.2							
GF	DM	2S	44	1,379	1,379	10	100				100				32	12	160	1.18	8.6						
GF	DM	3S	56	1,754	1,754	13	100				100				38	7	78	0.63	22.4						
GF	Totals		27	3,133	3,133	23	56	44		44	56			37	9	101	0.76	31.0							
Type Totals				11,619	11,619	87	4	64	32		5	62	33	34	8	82	0.69	141.1							

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT	TANAGER		DATE	12/12/2019		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
004	010	20	313972	0003	7.50	5	24	S	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
				PLOTS	TREES	TREES	TREES			
TOTAL		5	24	4.8						
CRUISE		5	24	4.8	1,218		2.0			
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	9	64.9	15.4	64	21.5	84.4	7,033	7,033	2,005	2,005
DOUG FIR-L	10	59.2	17.0	17	22.7	93.8				
GRAND F	3	23.4	14.8	65	7.3	28.1	2,089	2,089	579	579
GRAND F-L	2	14.9	15.2	17	4.8	18.8				
TOTAL	24	162.4	15.9	43	56.4	225.1	9,122	9,122	2,583	2,583
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL: 68.1 %	COEFF	SAMPLE TREES - BF				# OF TREES REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUG FIR	60.2	21.3	94	120	146					
DOUG FIR-L										
GRAND F	107.0	74.1	27	103	180					
GRAND F-L										
TOTAL	138.2	28.8	41	58	75	796	199	88		
CL: 68.1 %	COEFF	SAMPLE TREES - CF				# OF TREES REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUG FIR	52.8	18.6	27	33	39					
DOUG FIR-L										
GRAND F	99.3	68.7	9	28	47					
GRAND F-L										
TOTAL	131.8	27.5	12	16	20	724	181	80		
CL: 68.1 %	COEFF	TREES/ACRE				# OF PLOTS REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUG FIR	78.0	38.8	40	65	90					
DOUG FIR-L	46.2	23.0	46	59	73					
GRAND F	145.1	72.1	7	23	40					
GRAND F-L	223.6	111.1		15	31					
TOTAL	22.7	11.3	144	162	181	26	6	3		
CL: 68.1 %	COEFF	BASAL AREA/ACRE				# OF PLOTS REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUG FIR	72.4	36.0	54	84	115					
DOUG FIR-L	35.4	17.6	77	94	110					
GRAND F	149.1	74.1	7	28	49					
GRAND F-L	223.6	111.1		19	40					
TOTAL	22.8	11.3	200	225	251	26	6	3		
CL: 68.1 %	COEFF	NET BF/ACRE				# OF PLOTS REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUG FIR	98.1	48.7	3,605	7,033	10,461					
DOUG FIR-L										
GRAND F	223.6	111.1		2,089	4,410					
GRAND F-L										
TOTAL	95.0	47.2	4,815	9,122	13,429	446	111	50		

TC TSTATS				STATISTICS				PAGE	2	
				PROJECT	TANAGER			DATE	12/12/2019	
TWP	RGE	SECT	TRACT	TYPE	ACRES		PLOTS	TREES	CuFt	BdFt
004	010	20	313972	0003	7.50		5	24	S	W
CL:	68.1 %	COEFF		NET CUFT FT/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.	S.E.%	LOW	AVG	HIGH	5	10	15	
CL:	68.1 %	COEFF		NET CUFT FT/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR. %	S.E. %	LOW	AVG	HIGH	5	10	15	
DOUG FIR		100.0	49.7	1,009	2,005	3,001				
DOUG FIR-L										
GRAND F		223.6	111.1		579	1,221				
GRAND F-L										
TOTAL		92.6	46.0	1,395	2,583	3,772	424	106	47	

T004 R010 S20 T0004										T004 R010 S20 T0004				
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt					
004	010	20	313972	0004	74.00	30	156	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
									Log Scale Dia.				Log Length				Ln	Dia	Bd	CF/	
									4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99	Ft	In	Ft	Lf	
DF		DM	2S	19	.8	2,024	2,008	149	100				100				32	13	199	1.29	10.1
DF		DM	3S	56		5,699	5,699	422	100				5 56 39				35	8	88	0.76	64.8
DF		DM	4S	25		2,477	2,477	183	17	83	10 41 6 44				27	6	35	0.39	69.9		
DF	Totals			82	.2	10,199	10,183	754	4	76	20	2 13 52 32				31	7	70	0.64	144.7	
GF		DM	2S	29		655	655	48	100				100				32	13	190	1.34	3.4
GF		DM	3S	30	5.1	681	647	48	100				73 27				34	8	74	0.77	8.7
GF		DM	4S	41	13.6	1,044	902	67	43	57	18 82				36	6	41	0.49	22.1		
GF	Totals			18	7.4	2,380	2,203	163	18	53	30	7 51 42				35	7	64	0.63	34.2	
Type Totals					1.5	12,579	12,386	917	7	72	21	2 12 52 34				32	7	69	0.64	179.0	

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT	TANAGER		DATE	12/12/2019		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
004	010	20	313972	0004	74.00	30	156	S	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
				PLOTS	TREES	TREES	TREES			
TOTAL		30	156	5.2						
CRUISE		30	156	5.2	17,642		.9			
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	68	108.3	13.4	42	29.0	106.3	4,200	4,193	1,179	1,179
DOUG FIR-L	63	78.1	15.2	17	25.3	98.5				
GRAND F	17	36.9	11.5	27	7.8	26.6	560	518	179	179
GRAND F-L	3	5.9	12.0	17	1.4	4.7				
WHEMLOCK-L	3	6.1	11.9	17	1.4	4.7				
PS FIR-L	2	3.1	13.7	17	0.8	3.1				
TOTAL	<i>156</i>	<i>238.4</i>	<i>13.7</i>	<i>30</i>	<i>65.9</i>	<i>243.9</i>	<i>4,760</i>	<i>4,711</i>	<i>1,358</i>	<i>1,358</i>
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL: 68.1 %	COEFF	SAMPLE TREES - BF					# OF TREES REQ.		INF. POP.	
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUG FIR	167.3	20.3	43	54	65					
DOUG FIR-L										
GRAND F	239.3	59.8	11	26	42					
GRAND F-L										
WHEMLOCK-L										
PS FIR-L										
TOTAL	<i>256.6</i>	<i>20.5</i>	<i>21</i>	<i>27</i>	<i>32</i>	<i>2,628</i>	<i>657</i>	<i>292</i>		
CL: 68.1 %	COEFF	SAMPLE TREES - CF					# OF TREES REQ.		INF. POP.	
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUG FIR	149.8	18.2	12	15	17					
DOUG FIR-L										
GRAND F	212.5	53.1	4	8	13					
GRAND F-L										
WHEMLOCK-L										
PS FIR-L										
TOTAL	<i>233.0</i>	<i>18.6</i>	<i>6</i>	<i>7</i>	<i>9</i>	<i>2,167</i>	<i>542</i>	<i>241</i>		
CL: 68.1 %	COEFF	TREES/ACRE					# OF PLOTS REQ.		INF. POP.	
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUG FIR	96.1	17.8	89	108	128					
DOUG FIR-L	61.0	11.3	69	78	87					
GRAND F	194.8	36.2	24	37	50					
GRAND F-L	382.1	70.9	2	6	10					
WHEMLOCK-L	306.1	56.8	3	6	10					
PS FIR-L	380.6	70.6	1	3	5					
TOTAL	<i>51.7</i>	<i>9.6</i>	<i>216</i>	<i>238</i>	<i>261</i>	<i>111</i>	<i>28</i>	<i>12</i>		
CL: 68.1 %	COEFF	BASAL AREA/ACRE					# OF PLOTS REQ.		INF. POP.	
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUG FIR	91.9	17.1	88	106	124					
DOUG FIR-L	49.0	9.1	90	98	107					
GRAND F	177.6	33.0	18	27	35					
GRAND F-L	305.1	56.6	2	5	7					

TC TSTATS				STATISTICS				PAGE	2	
				PROJECT	TANAGER			DATE	12/12/2019	
TWP	RGE	SECT	TRACT	TYPE	ACRES		PLOTS	TREES	CuFt	BdFt
004	010	20	313972	0004	74.00		30	156	S	W
CL:	68.1 %	COEFF		BASAL AREA/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.	S.E.%	LOW	AVG	HIGH	5	10	15	
WHEMLOCK-L		305.1	56.6	2	5	7				
PS FIR-L		380.6	70.6	1	3	5				
TOTAL		50.6	9.4	221	244	267	106	26	12	
CL:	68.1 %	COEFF		NET BF/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR		165.9	30.8	2,902	4,193	5,484				
DOUG FIR-L										
GRAND F		276.9	51.4	252	518	785				
GRAND F-L										
WHEMLOCK-L										
PS FIR-L										
TOTAL		151.7	28.2	3,385	4,711	6,038	951	238	106	
CL:	68.1 %	COEFF		NET CUFT FT/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR		163.4	30.3	821	1,179	1,536				
DOUG FIR-L										
GRAND F		260.7	48.4	92	179	266				
GRAND F-L										
WHEMLOCK-L										
PS FIR-L										
TOTAL		149.0	27.7	982	1,358	1,733	918	229	102	

T004 R010 S20 T0005										T004 R010 S20 T0005				
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt					
004	010	20	313972	0005	132.00	56	283	S	W					

S Spp	So T	Gr rt ad	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log				Logs Per /Acre	
								Log Scale Dia.				Log Length				Ln	Dia	Bd	CF/		
								4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99	Ft	In	Ft	Lf		
DF	DM	2S	12	3.1	1,136	1,101	145	100				90 10				33	12	175	1.51	6.3	
DF	DM	3S	79	2.5	7,100	6,920	913	100				0 1 51 47				36	8	88	0.76	78.8	
DF	DM	4S	9		763	763	101	84	16				44 25 32				31	5	35	0.38	22.0
DF	Totals		89	2.4	8,999	8,784	1,159	7	80	13		0 5 54 41				35	8	82	0.73	107.1	
GF	DM	3S	77		827	827	109	100				4 38 58				36	8	86	0.71	9.7	
GF	DM	4S	23		240	240	32	100				60 40				31	5	33	0.36	7.2	
GF	Totals		11		1,067	1,067	141	22	78		16 30 54				33	7	63	0.57	16.9		
Type Totals				2.1	10,066	9,851	1,300	9	80	11		0 6 51 43				35	8	79	0.71	123.9	

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT	TANAGER		DATE	1/7/2020		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
004	010	20	313972	0005	132.00	56	283	S	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
				PLOTS	TREES	TREES	TREES			
TOTAL		56	283	5.1						
CRUISE		56	283	5.1	20,619		1.4			
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	117	74.7	15.5	40	24.9	98.0	4,461	4,354	1,354	1,351
DOUG FIR-L	138	58.6	19.0	17	26.5	115.6				
GRAND F	16	13.2	13.7	39	3.6	13.4	600	600	183	183
GRAND F-L	3	2.4	13.8	17	0.7	2.5				
WHEMLOCK-L	7	6.2	13.1	17	1.6	5.9				
NOBLE F-L	2	1.1	16.6	17	0.4	1.7				
TOTAL	283	156.2	16.7	30	58.0	237.0	5,061	4,955	1,536	1,534
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL: 68.1 %	COEFF	SAMPLE TREES - BF					# OF TREES REQ.		INF. POP.	
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUG FIR	121.5	11.2	60	67	75					
DOUG FIR-L										
GRAND F	118.4	30.6	34	49	64					
GRAND F-L										
WHEMLOCK-L										
NOBLE F-L										
TOTAL	206.8	12.3	27	31	34	1,708	427	190		
CL: 68.1 %	COEFF	SAMPLE TREES - CF					# OF TREES REQ.		INF. POP.	
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUG FIR	115.6	10.7	19	21	23					
DOUG FIR-L										
GRAND F	112.0	28.9	11	15	19					
GRAND F-L										
WHEMLOCK-L										
NOBLE F-L										
TOTAL	199.7	11.9	8	9	11	1,593	398	177		
CL: 68.1 %	COEFF	TREES/ACRE					# OF PLOTS REQ.		INF. POP.	
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUG FIR	85.1	11.4	66	75	83					
DOUG FIR-L	46.6	6.2	55	59	62					
GRAND F	273.9	36.6	8	13	18					
GRAND F-L	468.5	62.6	1	2	4					
WHEMLOCK-L	307.4	41.0	4	6	9					
NOBLE F-L	533.3	71.2	0	1	2					
TOTAL	49.6	6.6	146	156	167	98	25	11		
CL: 68.1 %	COEFF	BASAL AREA/ACRE					# OF PLOTS REQ.		INF. POP.	
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUG FIR	67.9	9.1	89	98	107					
DOUG FIR-L	42.4	5.7	109	116	122					
GRAND F	256.0	34.2	9	13	18					
GRAND F-L	424.1	56.6	1	3	4					

TC TSTATS				STATISTICS				PAGE	2	
				PROJECT	TANAGER			DATE	1/7/2020	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
004	010	20	313972	0005	132.00	56	283	S	W	
CL:	68.1 %	COEFF	BASAL AREA/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.	S.E.%	LOW	AVG	HIGH	5	10	15	
WHEMLOCK-L		267.0	35.6	4	6	8				
NOBLE F-L		524.3	70.0	1	2	3				
TOTAL		34.5	4.6	226	237	248	47	12	5	
CL:	68.1 %	COEFF	NET BF/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR		140.2	18.7	3,540	4,354	5,169				
DOUG FIR-L										
GRAND F		390.3	52.1	288	600	913				
GRAND F-L										
WHEMLOCK-L										
NOBLE F-L										
TOTAL		129.7	17.3	4,097	4,955	5,813	671	168	75	
CL:	68.1 %	COEFF	NET CUFT FT/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR		133.6	17.8	1,110	1,351	1,592				
DOUG FIR-L										
GRAND F		378.2	50.5	90	183	275				
GRAND F-L										
WHEMLOCK-L										
NOBLE F-L										
TOTAL		123.5	16.5	1,281	1,534	1,787	609	152	68	

T004 R010 S20 T0006										T004 R010 S20 T0006				
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt					
004	010	20	313972	0006	18.00	7	35	S	W					

S Spp	So T	Gr rt ad	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log				Logs Per /Acre
								Log Scale Dia.				Log Length				Ln	Dia	Bd	CF/	
				Def%	Gross	Net		4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99	Ft	In	Ft	Lf	
DF	DM	2S	8	8.7	769	702	13	100				100				32	14	210	1.74	3.3
DF	DM	3S	72	4.4	5,991	5,728	103	100				84 16				33	9	96	0.85	59.5
DF	DM	4S	20		1,577	1,577	28	100				35 17 49				30	5	33	0.32	48.5
DF	Totals		92	4.0	8,336	8,006	144	20	72	9		7	72	21	32	7	72	0.66	111.4	
GF	DM	3S	70		479	479	9	100				100				32	8	70	0.64	6.8
GF	DM	4S	30		205	205	4	100				100				30	5	30	0.24	6.8
GF	Totals		8		684	684	12	30	70			30	70		31	7	50	0.45	13.7	
Type Totals				3.7	9,021	8,690	156	21	71	8		9	72	19	32	7	70	0.64	125.0	

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT	TANAGER			DATE	12/12/2019	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
004	010	20	313972	0006	18.00	7	35	S	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
				PLOTS	TREES	TREES	TREES			
TOTAL		7	35	5.0						
CRUISE		7	35	5.0	3,188		1.1			
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	12	57.5	16.0	58	20.1	80.4	6,947	6,672	1,949	1,949
DOUG FIR-L	13	57.3	16.7	17	21.3	87.1				
NOBLE F-L	5	27.2	15.0	17	8.6	33.5				
GRAND F	1	6.8	13.4	70	1.8	6.7	684	684	189	189
GRAND F-L	2	20.7	10.9	17	4.1	13.4				
WHEMLOCK-L	1	1.6	28.0	17	1.3	6.7				
PS FIR-L	1	6.0	14.3	17	1.8	6.7				
TOTAL	35	177.1	15.6	32	59.4	234.5	7,631	7,356	2,138	2,138
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL: 68.1 %	COEFF	SAMPLE TREES - BF					# OF TREES REQ.	INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUG FIR	61.2	18.4	98	120	142					
DOUG FIR-L										
NOBLE F-L										
GRAND F										
GRAND F-L										
WHEMLOCK-L										
PS FIR-L										
TOTAL	162.8	27.5	32	44	56	1,058	265	118		
CL: 68.1 %	COEFF	SAMPLE TREES - CF					# OF TREES REQ.	INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUG FIR	61.1	18.4	29	36	42					
DOUG FIR-L										
NOBLE F-L										
GRAND F										
GRAND F-L										
WHEMLOCK-L										
PS FIR-L										
TOTAL	163.1	27.5	9	13	17	1,062	265	118		
CL: 68.1 %	COEFF	TREES/ACRE					# OF PLOTS REQ.	INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
DOUG FIR	88.3	35.9	37	58	78					
DOUG FIR-L	81.4	33.1	38	57	76					
NOBLE F-L	182.6	74.3	7	27	47					
GRAND F	264.6	107.7	7	14	14					
GRAND F-L	264.6	107.7	21	43	43					
WHEMLOCK-L	264.6	107.7	2	3	3					
PS FIR-L	264.6	107.7	6	12	12					
TOTAL	14.4	5.9	167	177	188	10	2	1		
CL: 68.1 %	COEFF	BASAL AREA/ACRE					# OF PLOTS REQ.	INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		

TC TSTATS				STATISTICS				PAGE	2	
				PROJECT	TANAGER			DATE	12/12/2019	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
004	010	20	313972	0006	18.00	7	35	S	W	
CL:	68.1 %	COEFF	BASAL AREA/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR		87.3	35.5	52	80	109				
DOUG FIR-L		78.8	32.1	59	87	115				
NOBLE F-L		175.5	71.4	10	34	57				
GRAND F		264.6	107.7		7	14				
GRAND F-L		264.6	107.7		13	28				
WHEMLOCK-L		264.6	107.7		7	14				
PS FIR-L		264.6	107.7		7	14				
TOTAL		25.8	10.5	210	235	259	31	8	3	
CL:	68.1 %	COEFF	NET BF/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR		114.8	46.7	3,555	6,672	9,789				
DOUG FIR-L										
NOBLE F-L										
GRAND F		264.6	107.7		684	1,421				
GRAND F-L										
WHEMLOCK-L										
PS FIR-L										
TOTAL		111.6	45.4	4,016	7,356	10,697	577	144	64	
CL:	68.1 %	COEFF	NET CUFT FT/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR		114.2	46.5	1,044	1,949	2,855				
DOUG FIR-L										
NOBLE F-L										
GRAND F		264.6	107.7		189	392				
GRAND F-L										
WHEMLOCK-L										
PS FIR-L										
TOTAL		109.8	44.7	1,183	2,138	3,094	559	140	62	

T004 R010 S20 T0007										T004 R010 S20 T0007				
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt					
004	010	20	313972	0007	37.00	16	95	S	W					

Spp	So	Gr	T	rt	ad	%	Bd. Ft. per Acre						Percent Net Board Foot Volume								Average Log				Logs Per /Acre
							Def%	Gross		Net		Total Net MBF	Log Scale Dia.				Log Length				Ln Ft	Dia In	Bd Ft	CF/Lf	
								4-5	6-11	12-16	17+		12-20	21-30	31-35	36-99									
DF	L	DM		2S		56	8,690	8,690			322	100				100				32	13	198	1.73	43.9	
DF	L	DM		3S		44	6,625	6,625			245	100				12	36	52	34	8	79	0.64	83.7		
DF	L	Totals				50	15,314	15,314			567	43	57		5	72	22	33	10	120	1.01	127.6			
DF		DM		2S		33	.4	4,748	4,727		175	100				100				32	12	173	1.37	27.3	
DF		DM		3S		53	3.7	7,614	7,331		271	100				4	57	39	35	8	86	0.70	85.5		
DF		DM		4S		14		1,922	1,922		71	6	94		28	26	46	32	6	46	0.43	41.9			
DF	Totals					46	2.1	14,284	13,980		517	1	65	34	6	67	27	33	8	90	0.74	154.6			
GF		DM		3S		100		858	858		32	16	84		100				32	9	95	0.92	9.0		
GF	Totals					3		858	858		32	16	84		100				32	9	95	0.92	9.0		
WH	L	DM		3S		100		221	221		8	100				100				40	8	90	0.79	2.5	
WH	L	Totals				1		221	221		8	100				100				40	8	90	0.79	2.5	
Type Totals							1.0	30,676	30,373		1,124	1	53	47	5	70	24	33	9	103	0.86	293.7			

TC TSTATS				STATISTICS						PAGE	1
				PROJECT	TANAGER				DATE	12/12/2019	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt		
004	010	20	313972	0007	37.00	16	95	S	W		
				TREES	ESTIMATED	PERCENT					
				PER PLOT	TOTAL	SAMPLE					
				PLOTS	TREES	TREES	TREES				
TOTAL		16	95	5.9							
CRUISE		16	95	5.9	6,391		1.5				
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	43	89.9	16.0	61	31.5	126.0	7,972	7,803	2,133	2,133	
DOUG FIR-L	45	67.4	18.9	26	30.3	131.9	1,702	1,702	471	471	
GRAND F	3	5.2	17.6	31	2.1	8.8	286	286	88	88	
GRAND F-L	3	7.8	14.4	17	2.3	8.8					
WHEMLOCK-L	1	2.5	14.8	55	0.8	2.9	221	221	77	77	
TOTAL	95	172.7	17.2	44	67.2	278.5	10,180	10,011	2,770	2,770	
CONFIDENCE LIMITS OF THE SAMPLE											
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR											
CL: 68.1 %	COEFF	SAMPLE TREES - BF					# OF TREES REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15			
DOUG FIR	104.7	15.9	82	98	113						
DOUG FIR-L	296.1	44.1	16	29	41						
GRAND F	173.2	119.8		63	139						
GRAND F-L											
WHEMLOCK-L											
TOTAL	160.8	16.5	51	61	71	1,033	258	115			
CL: 68.1 %	COEFF	SAMPLE TREES - CF					# OF TREES REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15			
DOUG FIR	104.9	16.0	23	27	31						
DOUG FIR-L	301.3	44.9	5	8	12						
GRAND F	173.2	119.8		20	43						
GRAND F-L											
WHEMLOCK-L											
TOTAL	162.2	16.6	14	17	20	1,050	263	117			
CL: 68.1 %	COEFF	TREES/ACRE					# OF PLOTS REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15			
DOUG FIR	82.4	21.2	71	90	109						
DOUG FIR-L	43.3	11.2	60	67	75						
GRAND F	400.0	103.2		5	11						
GRAND F-L	367.2	94.7	0	8	15						
WHEMLOCK-L	400.0	103.2		2	5						
TOTAL	40.3	10.4	155	173	191	69	17	8			
CL: 68.1 %	COEFF	BASAL AREA/ACRE					# OF PLOTS REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15			
DOUG FIR	77.7	20.0	101	126	151						
DOUG FIR-L	32.4	8.4	121	132	143						
GRAND F	400.0	103.2		9	18						
GRAND F-L	290.1	74.8	2	9	15						
WHEMLOCK-L	400.0	103.2		3	6						
TOTAL	36.6	9.4	252	278	305	57	14	6			
CL: 68.1 %	COEFF	NET BF/ACRE					# OF PLOTS REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15			

TC TSTATS				STATISTICS				PAGE	2	
				PROJECT	TANAGER			DATE	12/12/2019	
TWP	RGE	SECT	TRACT	TYPE	ACRES		PLOTS	TREES	CuFt	BdFt
004	010	20	313972	0007	37.00		16	95	S	W
CL:	68.1 %	COEFF		NET BF/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR		148.3	38.3	4,817	7,803	10,789				
DOUG FIR-L		156.2	40.3	1,016	1,702	2,387				
GRAND F		400.0	103.2		286	581				
GRAND F-L										
WHEMLOCK-L		400.0	103.2		221	449				
TOTAL		126.9	32.7	6,734	10,011	13,288	686	171	76	
CL:	68.1 %	COEFF		NET CUFT FT/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR		144.1	37.2	1,341	2,133	2,926				
DOUG FIR-L		153.7	39.7	284	471	658				
GRAND F		400.0	103.2		88	180				
GRAND F-L										
WHEMLOCK-L		400.0	103.2		77	157				
TOTAL		122.6	31.6	1,894	2,770	3,646	640	160	71	



Forest Practices Application/Notification Notice of Decision

FPA/N No: _____

Effective Date: _____

Expiration Date: _____

Shut Down Zone: _____

EARR Tax Credit: Eligible Non-eligible

Reference: _____

Decision

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

FPA/N Classification

Class II Class III Class IVG Class IVS

Number of Years Granted on Multi-Year Request

4 years 5 years

Conditions on Approval / Reasons for Disapproval

Issued By: _____

Region: _____

Title: _____

Date: _____

Copies to: Landowner, Timber Owner and Operator.

Issued in person: Landowner Timber Owner Operator By: _____

Appeal Information

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

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

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

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

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.

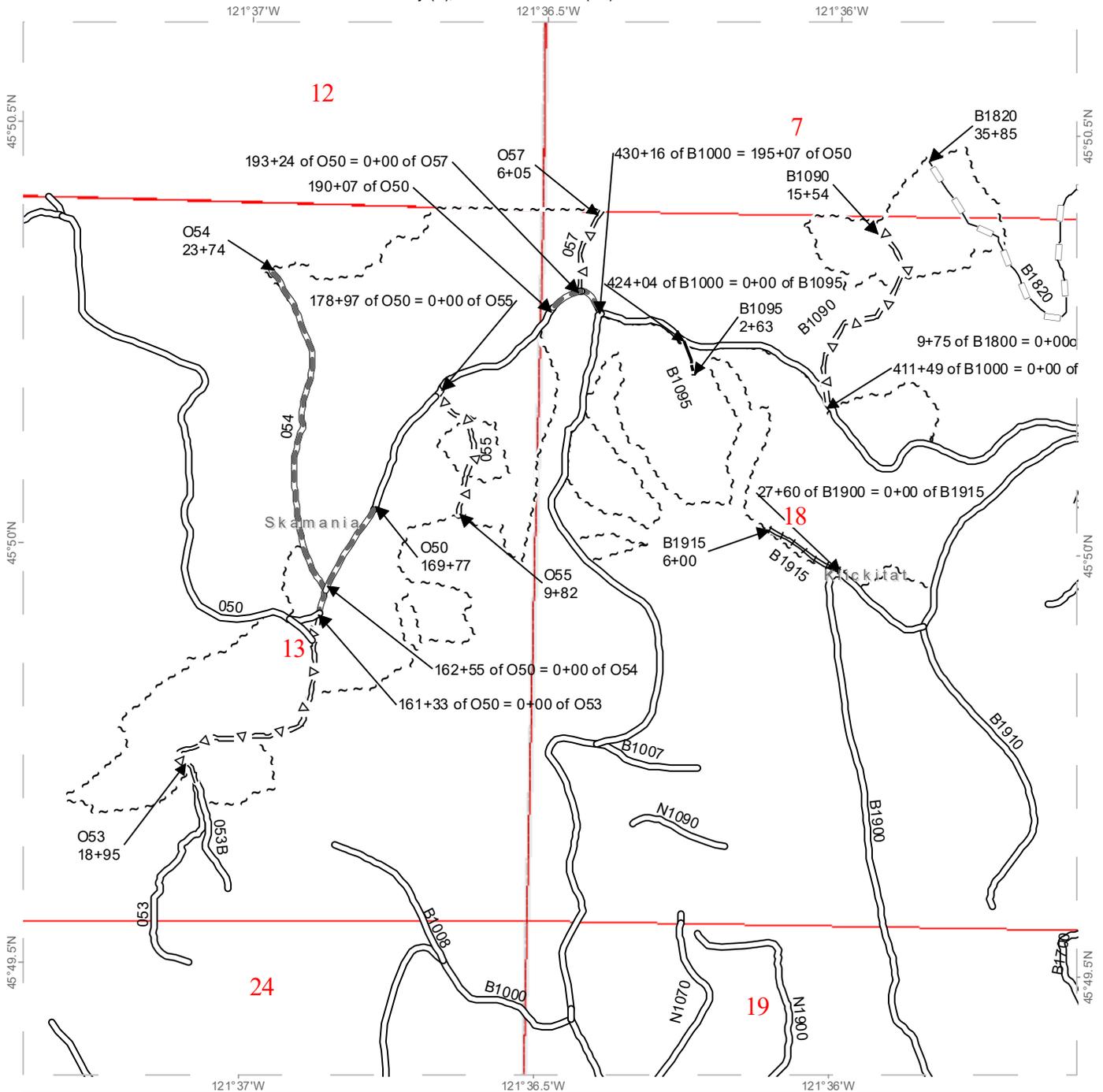
DNR affidavit of mailing:

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

ROADPLAN MAP 1 of 5

SALE NAME: Q Tanager
AGREEMENT #: 30-099489
TOWNSHIP(S): T4R10E, T4R9E
TRUST(S): Common School and Indemnity (3), Scientific School (10)

REGION: Southeast Region
COUNTY(S): Klickitat, Skamania
ELEVATION RGE: 1920-3520



	Existing Roads
	Required Pre-Haul Maintenance
	Required Reconstruction
	Optional Pre-Haul Maintenance
	Optional Construction
	Optional Reconstruction

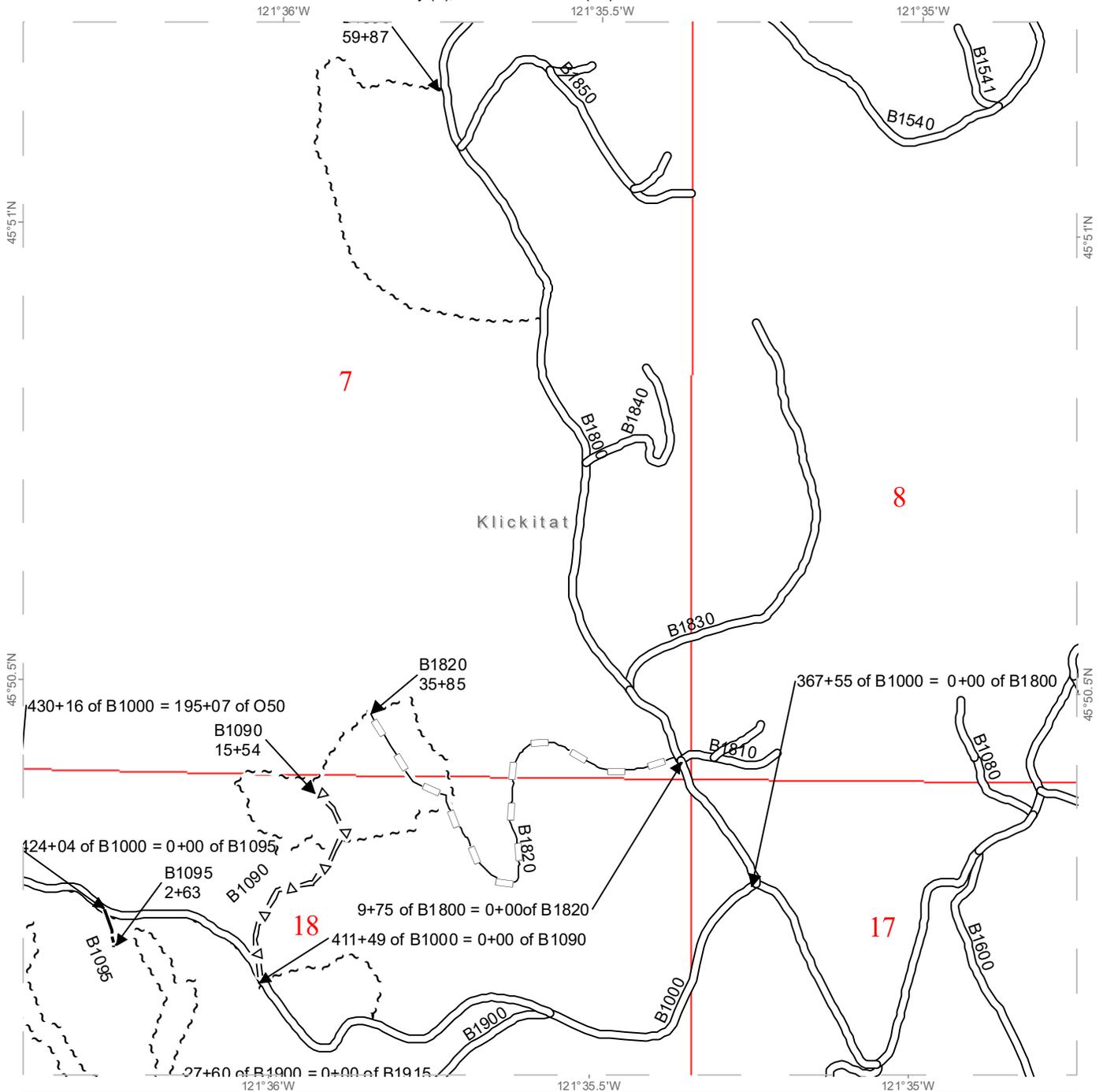
0 500 1,000 2,000 3,000 Feet

N

ROADPLAN MAP 2 of 5

SALE NAME: Q Tanager
AGREEMENT #: 30-099489
TOWNSHIP(S): T4R10E, T4R9E
TRUST(S): Common School and Indemnity (3), Scientific School (10)

REGION: Southeast Region
COUNTY(S): Klickitat, Skamania
ELEVATION RGE: 1920-3520



	Existing Roads
	Optional Pre-Haul Maintenance
	Optional Construction
	Optional Reconstruction

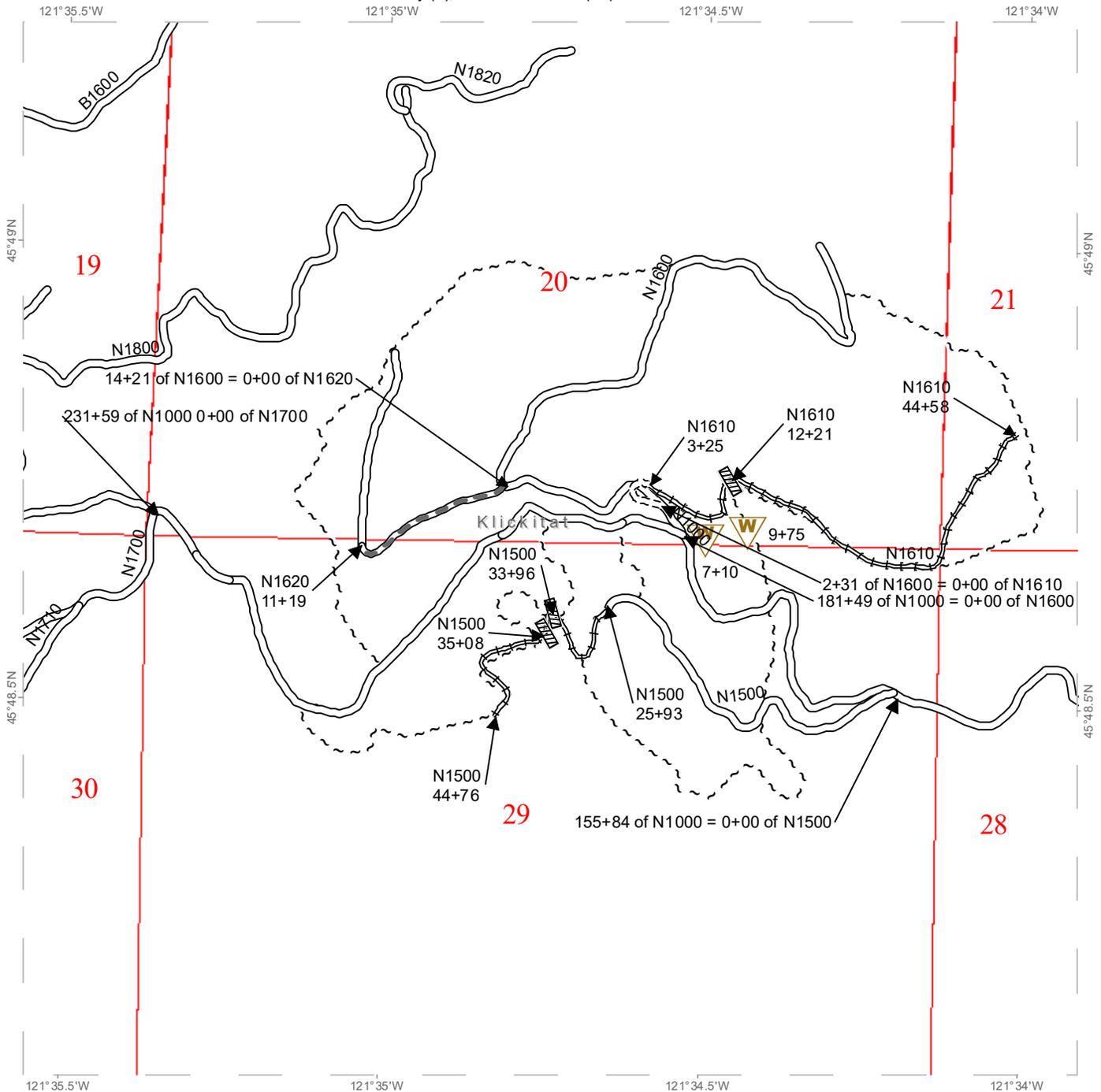
0 500 1,000 2,000 3,000 Feet

N

ROADPLAN MAP 4 of 5

SALE NAME: Q TANAGER
AGREEMENT #: 30-099489
TOWNSHIP(S): T4R10E, T4R9E
TRUST(S): Common School and Indemnity (3), Scientific School (10)

REGION: Southeast Region
COUNTY(S): Klickitat, Skamania
ELEVATION RGE: 1920-3520



	Existing Roads
	Required Pre-Haul Maintenance
	Required Construction
	Required Reconstruction
	Culvert
	Waste Area

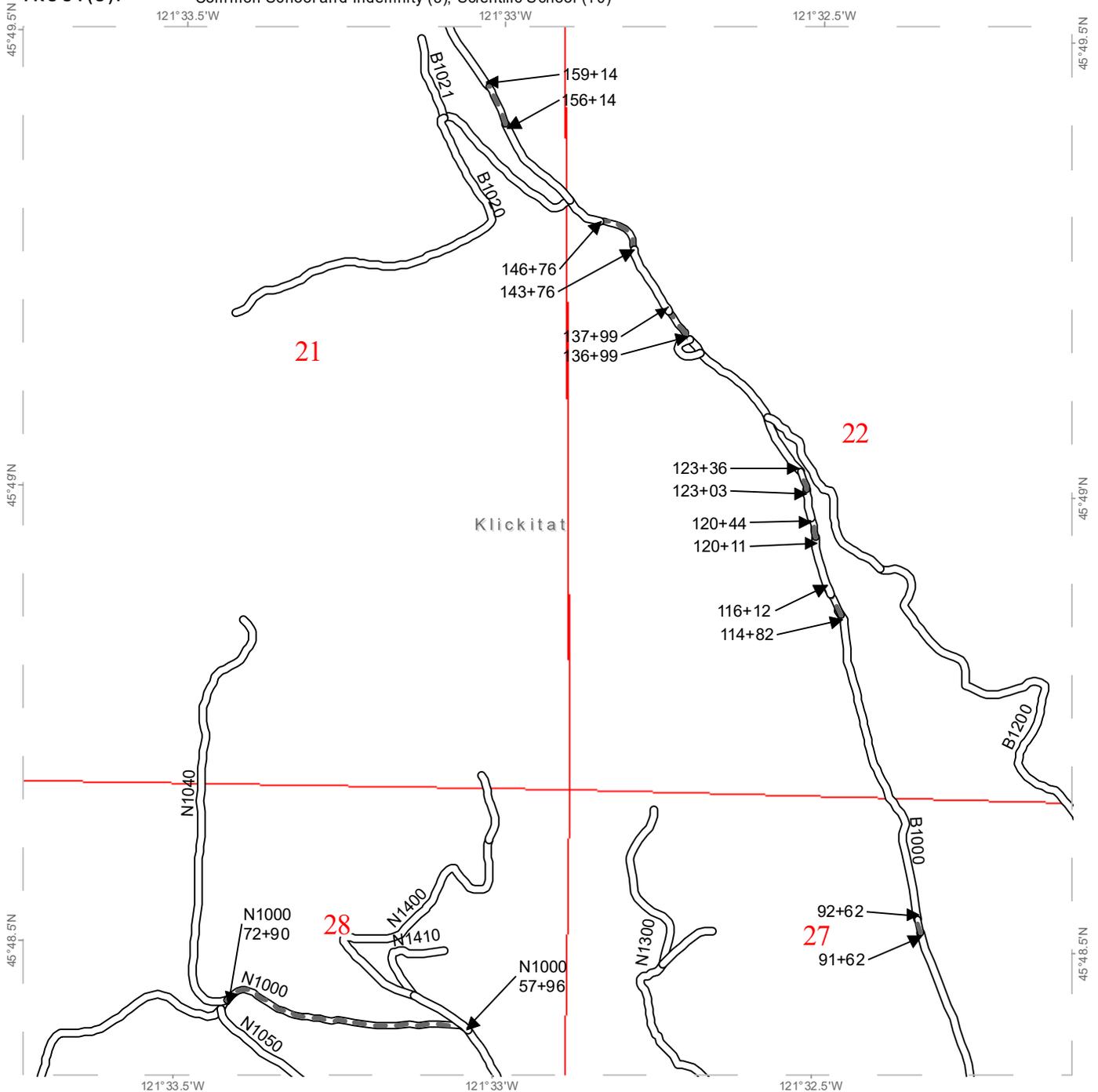
0 500 1,000 2,000 3,000 Feet

N

ROADPLAN MAP 5 of 5

SALE NAME: Q Tanager
AGREEMENT #: 30-099489
TOWNSHIP(S): T4R10E, T4R9E
TRUST(S): Common School and Indemnity (3), Scientific School (10)

REGION: Southeast Region
COUNTY(S): Klickitat, Skamania
ELEVATION RGE: 1920-3520



	Existing Roads
	Required Pre-Haul Maintenance



0 500 1,000 2,000 3,000 Feet



N

STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES

Q TANAGER THIN TIMBER SALE ROAD PLAN
KLICKITAT COUNTY
KLICKITAT DISTRICT
SOUTHEAST REGION

AGREEMENT NO.: 30-099489

STAFF ENGINEER: TARA BAKER

DATE: JANUARY 7, 2020

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 acquisition, 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>
B1000	91+62 to 92+62	Pre-haul Maintenance
	114+82 to 116+12	Pre-haul Maintenance
	120+11 to 120+44	Pre-haul Maintenance
	123+03 to 123+36	Pre-haul Maintenance
	136+99 to 137+99	Pre-haul Maintenance
	143+76 to 147+76	Pre-haul Maintenance
	156+14 to 159+14	Pre-haul Maintenance
B1915	0+00 to 6+00	Reconstruction
N1000	57+96 to 72+90	Pre-haul Maintenance
N1500	25+93 to 44+76	Reconstruction
N1610	0+00 to 3+25	Construction
	3+25 to 44+58	Reconstruction
N1620	0+00 to 11+19	Pre-haul Maintenance
N1730	0+00 to 19+52	Pre-haul Maintenance
O50	161+33 to 169+77	Pre-haul Maintenance
	190+07 to 195+07	Pre-haul Maintenance
O54	0+00 to 23+74	Pre-haul 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>
B1090	0+00 to 15+54	Pre-haul Maintenance
B1095	0+00 to 2+63	Construction
B1820	0+00 to 35+85	Reconstruction
O53	0+00 to 18+95	Pre-haul Maintenance
O55	0+00 to 9+82	Pre-haul Maintenance
O57	0+00 to 6+05	Pre-haul Maintenance

0-4 CONSTRUCTION

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

<u>Road</u>	<u>Stations</u>	<u>Requirements</u>
B1095	0+00 to 2+63	Clearing, grubbing, excavation to grade, debris disposal
N1610	0+00 to 3+25	Clearing, grubbing, construct subgrade according to construction stakes, excavation to grade, debris disposal,

0-5 RECONSTRUCTION

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

<u>Road</u>	<u>Stations</u>	<u>Requirements</u>
B1820	0+00to 35+85	Clear and grub, debris disposal, reconstruct road prism to dimensions shown on the Typical Section Sheet
B1915	0+00 to 6+00	Clear and grub, debris disposal, reconstruct road prism to dimensions shown on the Typical Section Sheet
N1500	25+93 to 44+76	Clear and grub, reconstruct subgrade according to construction stakes (excavation and embankment), rock acquisition and placement, culvert acquisition and installation.
N1610	3+25 to 15+55	Clear and grub, reconstruct ditch and reconstruct subgrade to dimensions shown on the Typical Cross Section, and culvert acquisition and installation.
N1610	15+55 to 27+06	Clear and grub, reconstruct ditch and reconstruct subgrade to dimensions shown on the Typical Cross Section, full bench construction and endhaul.
N1610	27+06 to 44+58	Clear and grub, reconstruct ditch and reconstruct subgrade to dimensions shown on the Typical Cross Section.

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>
B1000	91+62 to 92+62 114+82 to 116+12 120+11 to 120+44 123+03 to 123+36 136+99 to 137+99 143+76 to 147+76 156+14 to 159+14	Acquisition and placement of surface rock in the quantities show on the rock list
B1090	0+00 to 15+54	Brush, grade and shape
N1000	57+96 to 72+90	Acquisition and placement of surface rock in the quantities show on the rock list
N1620	0+00 to 11+19	Brush right-of-way and right-of-way debris disposal, grade and shape
N1730	0+00 to 19+52	Brush right-of-way and right-of-way debris disposal, grade and shape
O50	161+33 to 169+77 190+07 to 195+07	Acquisition and placement of ballast rock in the quantities show on the rock list
O53	0+00 to 18+95	Brush right-of-way and right-of-way debris disposal, removing non-drivable waterbars; grading and shaping existing road surface and turnouts.
O54	0+00 to 23+74	Brush right-of-way and right-of-way debris disposal
O55	0+00 to 9+82	Brush right-of-way and right-of-way debris disposal
O57	0+00 to 6+05	Brush right-of-way and right-of-way debris disposal

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 any submitted plan that changes the scope of work or environmental condition from the original road 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.

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

Cross section design data is available upon request at the Department of Natural Resources Husum Work Center Husum, 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.

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:

- 4’ lathe with orange flagging for construction and reconstruction.
- Construction staked with 2’ stake at top of cut and top of cut reference points.

1-16 CONSTRUCTION STAKES SET BY STATE

Purchaser shall perform work on the following roads in accordance with the construction stakes set in the field for grade and alignment. Reconstruction of existing road grades must conform to the original location except where construction staked or designed.

<u>Road</u>	<u>Stations</u>	<u>Type</u>
N1500	34+09 to 41+32	Reconstruction
N1610	0+00 to 3+25	Construction
N1610	15+55 to 27+06	Reconstruction

1-18 REFERENCE POINT DAMAGE

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

SUBSECTION TIMING

1-20 COMPLETE BY DATE

Purchaser shall complete road work before the start of timber haul.

1-21 HAUL APPROVAL

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

1-22 WORK NOTIFICATIONS

On the following roads, Purchaser shall notify the Contract Administrator a minimum of 7 calendar days before work begins.

<u>Road</u>	<u>Stations</u>
N1500	34+09 to 41+32
N1610	0+00 to 44+58

1-23 ROAD WORK PHASE APPROVAL

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

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

1-26 OPERATING DURING CLOSURE PERIOD

If permission is granted to operate during a closure period in Contract Clause H-130, Purchaser shall 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.

SUBSECTION RESTRICTIONS

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 2 inches on pit run roads.
- Wheel track rutting exceeds 2 inches on crushed rock roads.
- Wheel track rutting exceeds 4 inches on native surface roads.
- Weather is such that satisfactory results cannot be obtained in an area of operations.
- When, in the opinion of the Contract Administrator excessive road damage or rutting may occur.

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

1-32 BRIDGE SURFACE RESTRICTION

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

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

1-33 SNOW PLOWING RESTRICTION

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

SECTION 2 – MAINTENANCE

2-1 GENERAL ROAD MAINTENANCE

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

2-2 ROAD MAINTENANCE – PURCHASER MAINTENANCE

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

2-3 ROAD MAINTENANCE – DESIGNATED MAINTAINER

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

2-4 PASSAGE OF LIGHT VEHICLES

Purchaser shall maintain the following roads in a condition that will allow the passage of light administrative vehicles.

<u>Road</u>	<u>Stations</u>
B1000	0+00 to 556+39
B1800	0+00 to 59+87
B1900	0+00 to 27+60
O50	161+33 to 195+07
N1000	0+00 to 327+70
N1700	0+00 to 46+26
N4000	0+00 to 296+18

SECTION 3 – CLEARING, GRUBBING, AND DISPOSAL

SUBSECTION BRUSHING

3-1 BRUSHING

On the following roads, Purchaser shall cut vegetative material up to 3 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>
B1090	0+00 to 15+54
N1620	0+00 to 11+19
N1730	0+00 to 19+52
O53	0+00 to 18+95
O54	0+00 to 23+74
O55	0+00 to 9+82
O57	0+00 to 6+05

SUBSECTION CLEARING

3-5 CLEARING

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

3-7 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 and within waste and debris areas. Purchaser shall also remove stumps with undercut roots outside the grubbing limits.

3-12 STUMP PLACEMENT

Purchaser shall place grubbed stumps outside of the clearing limits 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 on stable locations.

<u>Road</u>	<u>Stations</u>
B1095	0+00 to 2+63
B1820	0+00 to 35+85
B1915	0+00 to 6+00
N1500	25+93 to 44+76
N1610	15+55 to 27+06

SUBSECTION ORGANIC DEBRIS

3-20 ORGANIC DEBRIS DEFINITION

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

3-21 DISPOSAL COMPLETION

Purchaser shall remove organic debris from the road surface, ditchlines, and culvert inlets and outlets. Purchaser shall complete all disposal of organic debris, except burning, before start of timber haul.

3-23 PROHIBITED DISPOSAL AREAS

Purchaser shall not place organic debris in the following areas:

- Within 50 feet of a cross drain culvert.
- Within 100 feet of a live stream, or wetland.
- On road subgrades, or excavation and embankment slopes.
- On slopes greater than 40%.
- 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

On all roads, Purchaser shall scatter organic debris outside of the grubbing limits, unless detailed in the table below or as directed by the Contract Administrator.

<u>Road</u>	<u>Stations</u>	<u>Requirements</u>
N1610	12+68 to 44+58	Place organic debris on the downhill side of the road outside grubbing limits.

SECTION 4 – EXCAVATION

4-1 EXCAVATOR CONSTRUCTION

On the following roads, Purchaser shall use a track mounted hydraulic excavator for construction work, unless authorized in writing by the Contract Administrator.

<u>Road</u>	<u>Stations</u>
N1500	25+93 to 44+76
N1610	15+55 to 27+06

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 except as designed:

- Grade and alignment must have smooth continuity, without abrupt changes in direction.
- Maximum grades may not exceed 18 percent favorable and 12 percent adverse.
- Minimum curve radius is 60 feet at centerline.
- Maximum grade change for sag vertical curves is 5% in 100 feet.
- Maximum grade change for crest vertical curves is 4% in 100 feet.

4-4 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% of the curve radius.
- 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:

<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:

<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.

4-10 WIDEN THE EXISTING SUBGRADE

On the following roads, Purchaser shall widen the subgrade and fill slopes to the dimensions shown on the TYPICAL SECTION SHEET. If necessary, Purchaser shall reconstruct excavation slopes to provide sufficient width for the road surface and any ditches.

<u>Road</u>	<u>Stations</u>
B1820	0+00to 35+85
B1915	0+00 to 6+00
N1500	25+93 to 44+76
N1610	3+25 to 44+58

4-12 FULL BENCH CONSTRUCTION

On the following road at the locations listed below, the Purchaser shall use full bench construction for the entire subgrade width. Purchaser shall end haul waste material to the location specified in Clause 4-37 WASTE AREA LOCATION.

<u>Road</u>	<u>Full Bench Location</u>
N1610	15+55 to 27+06

SUBSECTION TURNAROUNDS

4-22 TURNAROUNDS

Purchaser shall construct turnarounds as designated on the TURNAROUND LIST. Turnarounds must be no larger than 50 feet long and 10 feet wide.

SUBSECTION DITCH CONSTRUCTION

4-25 DITCH CONSTRUCTION AND RECONSTRUCTION

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

4-28 DITCH DRAINAGE

Ditches must drain to cross-drain culverts or ditchouts.

SUBSECTION WASTE MATERIAL (DIRT)

4-35 WASTE MATERIAL DEFINITION

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

4-36 DISPOSAL OF WASTE MATERIAL

Purchaser may sidecast waste material on side slopes up to 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. Additional waste areas may also be identified or approved by the Contract Administrator. The amount of material allowed in a waste area is as listed in the table below:

<u>Road</u>	<u>Waste Area Location</u>	<u>Comments</u>	<u>Volume</u>
N1610	1+75 to 2+50	Construct road embankment and include curve widening	175
N1610	7+60	Waste on old road prism and turnout left	710
N1610	9+75	Opening on left side of road	60

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.
- On side slopes steeper than 45%.
- In locations that interfere with the construction of the road prism.
- In locations that impede drainage.
- Against standing timber.

SUBSECTION SHAPING

4-55 ROAD SHAPING

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

4-56 DRY WEATHER SHAPING

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

SUBSECTION COMPACTION

4-60 FILL COMPACTION

Purchaser shall compact all embankment and waste material in accordance with the COMPACTION LIST by routing excavation equipment over the entire width of each lift. Waste material may be placed by end-dumping or sidecasting until sufficiently wide enough to support the equipment.

4-61 SUBGRADE COMPACTION

Purchaser shall compact reconstructed subgrades deeper than 3 feet at the road shoulder in accordance with the COMPACTION LIST by routing excavation equipment over the entire width.

4-62 DRY WEATHER COMPACTION

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

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 meet the specifications in Clauses 10-17 through 10-22.

SUBSECTION CULVERT INSTALLATION

5-15 CULVERT INSTALLATION

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

5-17 CROSS DRAIN SKEW AND SLOPE

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

5-18 CULVERT DEPTH OF COVER

All culverts must be installed with a depth of cover of not less than 2 foot of compacted subgrade over the top of the culvert at the shallowest point.

SUBSECTION CATCH BASINS, HEADWALLS, AND ARMORING

5-25 CATCH BASINS

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

5-26 HEADWALLS FOR CROSS DRAIN CULVERTS

Purchaser shall construct headwalls in accordance with the CULVERT AND DRAINAGE SPECIFICATION DETAIL at all cross drain culverts. Rock used for headwalls must weigh at least 15 pounds. 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.

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- SURFACING and ROCK LIST - BALLAST ROCK shall be obtained from any commercial source at the Purchaser's expense. Rock sources are subject to written approval by the Contract Administrator before their use.

SUBSECTION ROCK GRADATIONS

6-28 1 ¼-INCH MINUS CRUSHED ROCK - SURFACING

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

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

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

6-34 3-INCH MINUS BALLAST ROCK

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

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

SUBSECTION ROCK MEASUREMENT

6-55 ROCK APPLICATION MEASURED BY COMPACTED DEPTH

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

SUBSECTION ROCK APPLICATION

6-71 ROCK APPLICATION

Purchaser shall apply rock in accordance with the specifications and quantities shown on the ROCK LIST- SURFACING and ROCK LIST - BALLAST. Rock must be spread, shaped, and compacted full width concurrent with rock hauling operations. Road surfaces must be compacted in accordance with the COMPACTION LIST by routing excavation equipment over the entire width.

6-76 DRY WEATHER ROCK COMPACTION

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

SUBSECTION GATE CLOSURE

7-70 GATE CLOSURE

Purchaser shall keep gates closed and locked except during periods of haul. All gates must be closed at termination of use. A key can be obtained from the Department of Natural Resources Husum Work Center.

SECTION 9 – POST-HAUL ROAD WORK

SUBSECTION POST-HAUL LANDING MAINTENANCE

9-10 LANDING DRAINAGE

Purchaser shall provide for drainage at all landing surfaces.

SECTION 10 MATERIALS

SUBSECTION CULVERTS

10-17 CORRUGATED PLASTIC CULVERT

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

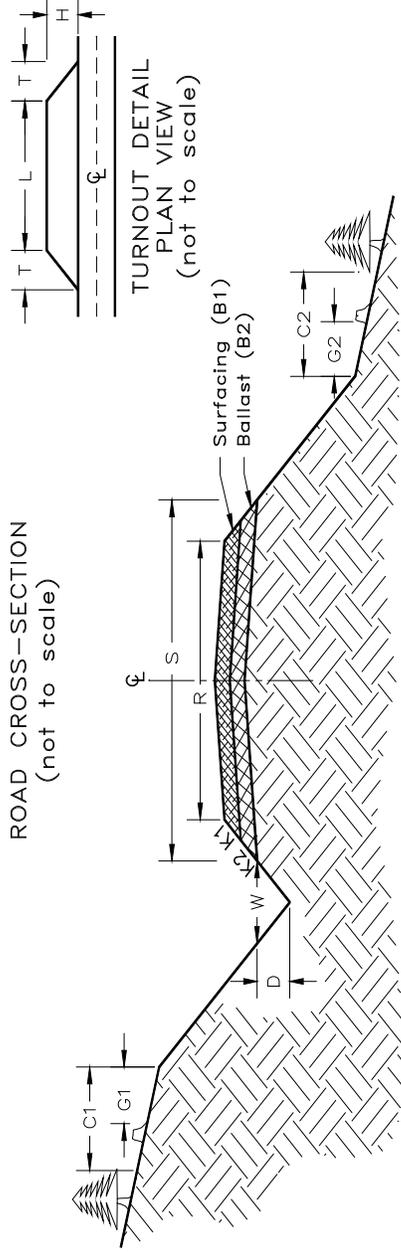
10-20 FLUME AND DOWNSPOUT

Downspouts and flumes must meet the AASHTO specification designated for the culvert. Plastic downspouts and flumes must be Type S – double walled with a corrugated exterior and smooth interior.

10-22 PLASTIC BAND

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

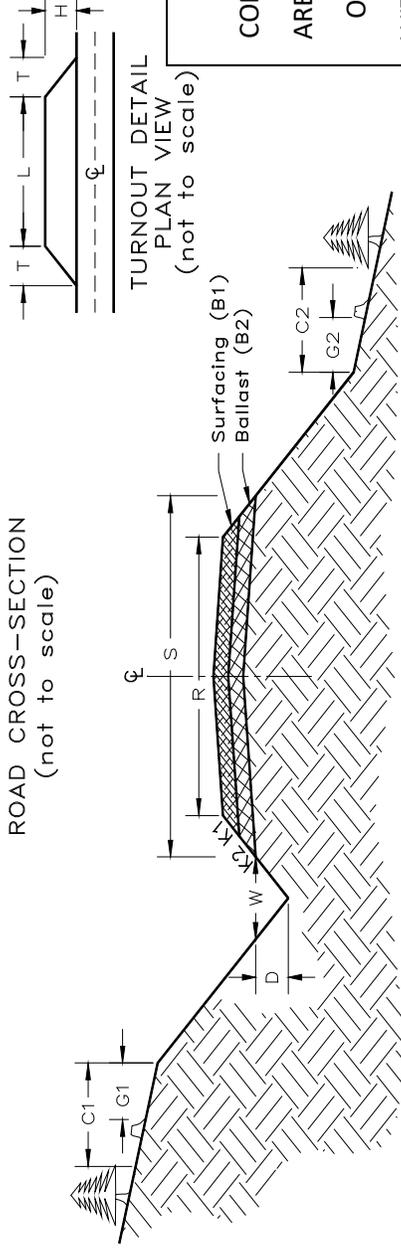
REQUIRED ROADWORK TYPICAL SECTION SHEET



NOTE: GRUBBING LIMITS FOR
CONSTRUCTION AND RECONSTRUCTION
ARE 1' BEYOND EDGE OF ROAD OR BACK
OF DITCH. CLEARING LIMITS POSTED
WITH RIGHT OF WAY TAGS AND YELLOW
FLAGGING. IF NOT POSTED, SEE RIGHT-
OF-WAY SPECIFICATION SHEET.

ROAD	CONSTRUCTION/ RECONSTRUCTION/ PRE-HAUL	FROM STATION	TO STATION	TOL. CLASS	SUBGRADE WIDTH S	CROWN INCHES @ CENTERLINE	OUTSLOPE INCHES IN 10 FEET	ROAD WIDTH R	DITCH WIDTH DEPTH W D	GRUBBING LIMITS G1 G2	CLEARING LIMITS C1 C2
B1000	Pre-haul	91+62	92+62		17'	4"		14'	3' 1'	NA	NA
B1000	Pre-haul	114+82	116+12		17'	4"		14'	3' 1'	NA	NA
B1000	Pre-haul	120+11	120+44		17'	4"		14'	3' 1'	NA	NA
B1000	Pre-haul	123+03	123+36		17'	4"		14'	3' 1'	NA	NA
B1000	Pre-haul	136+99	137+99		17'	4"		14'	3' 1'	NA	NA
B1000	Pre-haul	143+76	147+76		17'	4"		14'	3' 1'	NA	NA
B1000	Pre-haul	156+14	159+14		17'	4"		14'	3' 1'	NA	NA
B1915	Reconstruction	0+00	6+00	B	12'	4"	4"	12'	NA	SEE NOTE	SEE NOTE
N1000	Pre-haul	57+96	72+90		14'	4"		12'	3' 1'	NA	NA
N1500	Reconstruction	25+93	44+76	B	12'	4"		12'	3' 1'	SEE NOTE	SEE NOTE
N1610	Construction	0+00	3+25	C	12'	4"		12'	3' 1'	SEE NOTE	SEE NOTE
N1610	Reconstruction	3+25	44+58	C	12'	4"		12'	3' 1'	SEE NOTE	SEE NOTE
N1620	Pre-haul	0+00	11+19		12'	4"	4"	12'	3' 1'	NA	NA
N1730	Pre-haul	0+00	19+52		12'	4"	4"	12'	NA	NA	NA
O50	Pre-haul	161+33	169+77		12'	4"	4"	12'	NA	NA	NA
O50	Pre-haul	190+07	195+07		12'	4"	4"	12'	NA	NA	NA
O54	Pre-haul	0+00	23+74		12'	4"	4"	12'	NA	NA	NA

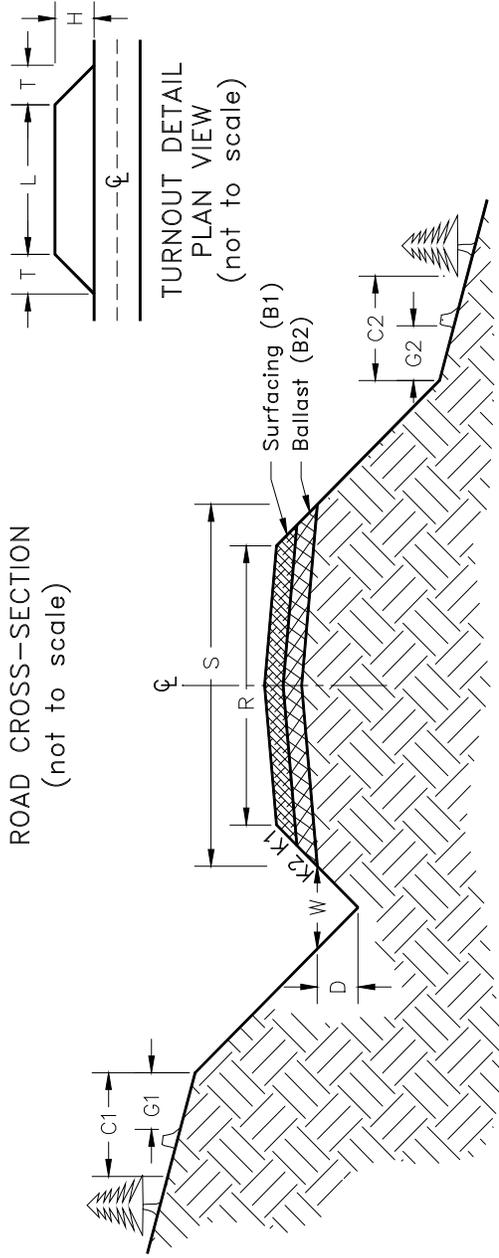
OPTIONAL ROAD WORK TYPICAL SECTION SHEET



NOTE: GRUBBING LIMITS FOR CONSTRUCTION AND RECONSTRUCTION ARE 1' BEYOND EDGE OF ROAD OR BACK OF DITCH. CLEARING LIMITS POSTED WITH RIGHT OF WAY TAGS AND YELLOW FLAGGING. IF NOT POSTED, SEE RIGHT-OF-WAY SPECIFICATION SHEET.

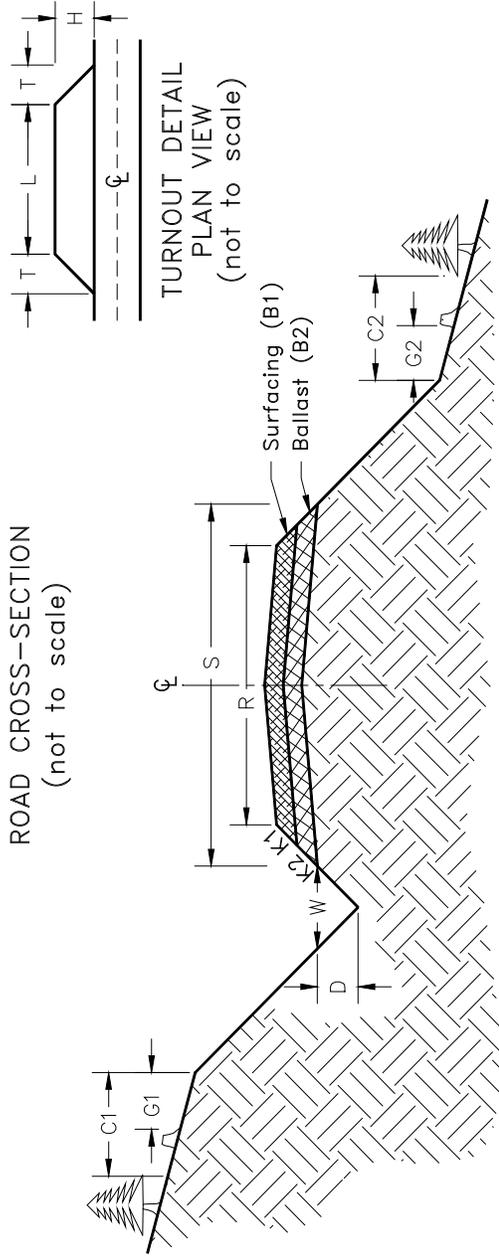
ROAD	CONSTRUCTION/ RECONSTRUCTION/ PRE-HAUL	FROM STATION	TO STATION	TOL. CLASS	SUBGRADE WIDTH S	CROWN INCHES @ CENTERLINE	OUTSLOPE INCHES IN 10 FEET	ROAD WIDTH R	DITCH WIDTH DEPTH W D	GRUBBING LIMITS G1 G2	CLEARING LIMITS C1 C2
B1090	Pre-haul	0+00	15+54		12'		4"	12'	NA	NA	NA
B1095	Construction	0+00	2+63	C	12'		4"	12'	NA	SEE NOTE	SEE NOTE
B1820	Pre-haul	0+00	35+85		12'		4"	12'	NA	NA	NA
O53	Pre-haul	0+00	18+95		12'		4"	12'	NA	NA	NA
O55	Pre-haul	0+00	9+82		12'		4"	12'	NA	NA	NA
O57	Pre-haul	0+00	6+05		12'		4"	12'	NA	NA	NA

ROCK LIST - BALLAST



Road Number	From Station	To Station	Rock Slope K2	Compacted Rock Depth B2	C. Y./ Station	# of Stations	C. Y. Subtotal	Rock Source
N1500	34+83	35+33	1 1/2 : 1	6"	40	0.50	20	COMMERCIAL
O50	161+33	169+77	1 1/2 : 1	6"	30	8.44	250	COMMERCIAL
O50	190+07	195+07	1 1/2 : 1	6"	30	5.00	150	COMMERCIAL
BALLAST TOTAL 420 Cubic Yards								

ROCK LIST – SURFACING



Road Number	From Station	To Station	Rock Slope K2	Compacted Rock Depth B2	C. Y./ Station	# of Stations	C. Y. Subtotal	Rock Source
B1000	91+62	92+62	1 1/2:1	4"	20	1.00	20	COMMERCIAL
B1000	114+82	116+12	1 1/2:1	4"	23	1.30	30	COMMERCIAL
B1000	120+11	120+44	1 1/2:1	4"	30	0.33	10	COMMERCIAL
B1000	123+03	123+36	1 1/2:1	4"	30	0.33	10	COMMERCIAL
B1000	136+99	137+99	1 1/2:1	4"	30	1.00	30	COMMERCIAL
B1000	143+76	147+76	1 1/2:1	4"	23	4.00	90	COMMERCIAL
B1000	156+14	159+14	1 1/2:1	4"	23	3.00	70	COMMERCIAL
N1000	57+96	72+90	1 1/2:1	4"	19	14.94	290	COMMERCIAL

SURFACE TOTAL 550 Cubic Yards

COMPACTION LIST

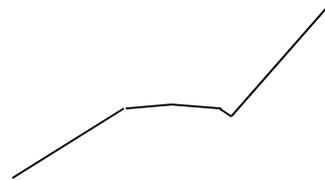
Road	From Station	To Station	Type	Equipment Type	Equipment Weight (lbs)	Minimum Number of Passes	Maximum Operating Speed (mph)
B1000	91+62	92+62	Surface Rock	Vibratory Smooth Drum	16000	3	3
	114+82	116+12	Surface Rock	Vibratory Smooth Drum	16000	3	3
	120+11	120+44	Surface Rock	Vibratory Smooth Drum	16000	3	3
	123+03	123+36	Surface Rock	Vibratory Smooth Drum	16000	3	3
	136+99	137+99	Surface Rock	Vibratory Smooth Drum	16000	3	3
	143+76	147+76	Surface Rock	Vibratory Smooth Drum	16000	3	3
	156+14	159+14	Surface Rock	Vibratory Smooth Drum	16000	3	3
B1095	0+00	2+63	Subgrade	Vibratory Smooth Drum	16000	3	3
B1820	0+00	35+85	Subgrade	Vibratory Smooth Drum	16000	3	3
N1000	57+96	72+90	Surface Rock	Vibratory Smooth Drum	16000	3	3
N1500	25+93	44+76	Subgrade	Vibratory Smooth Drum	16000	3	3
N1610	0+00	44+58	Subgrade	Vibratory Smooth Drum	16000	3	3
O50	161+33	169+77	Surface Rock	Vibratory Smooth Drum	16000	3	3
O50	190+07	195+07	Surface Rock	Vibratory Smooth Drum	16000	3	3

RIGHT-OF-WAY SPECIFICATION SHEET

Based on a 12' road width. All clearing distances are measured horizontally from the centerline of the road. All ditches are 1' deep. Ditched roads are crowned 4" at the centerline. Roads with no ditch are outsloped 4" in 10'.

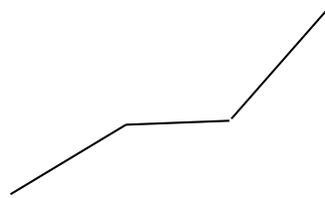
CROWNED ROAD WITH DITCH RIGHT

<u>Sideslope</u>	<u>Clearing Left</u>	<u>Clearing Right</u>
0-10%	16'	14'
10-20%	17'	15'
20-30%	19'	17'
30-40%	22'	18'
40-50%	27'	22'



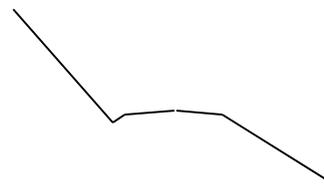
OUTSLOPE LEFT ROAD

<u>Sideslope</u>	<u>Clearing Left</u>	<u>Clearing Right</u>
0-10%	16'	11'
10-20%	17'	12'
20-30%	19'	13'
30-40%	22'	15'
40-50%	27'	17'



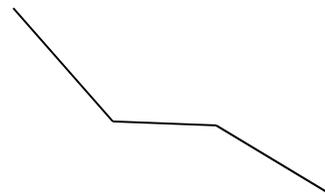
CROWNED ROAD WITH DITCH LEFT

<u>Sideslope</u>	<u>Clearing Left</u>	<u>Clearing Right</u>
0-10%	14'	16'
10-20%	15'	17'
20-30%	17'	19'
30-40%	18'	22'
40-50%	22'	27'

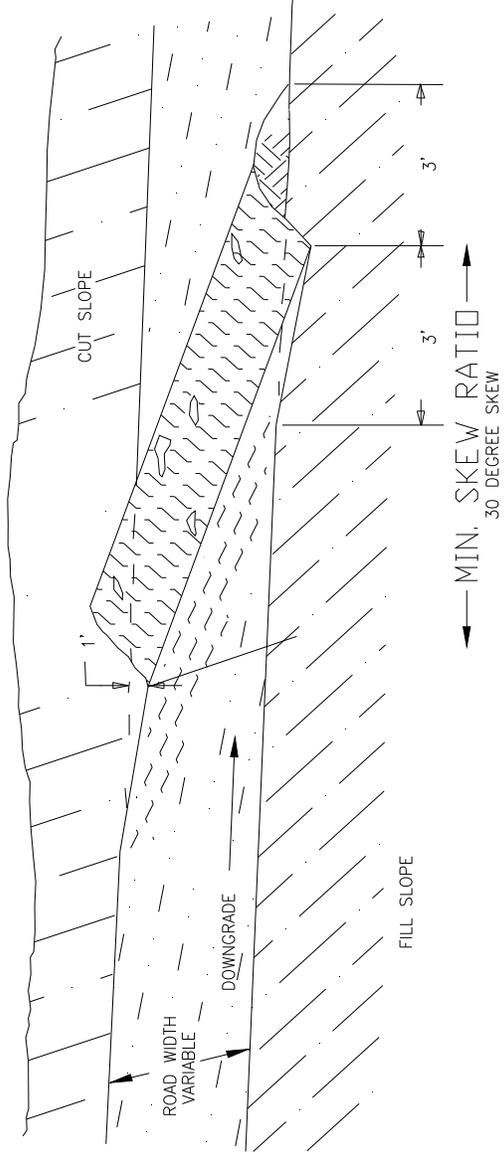


OUTSLOPE RIGHT ROAD

<u>Sideslope</u>	<u>Clearing Left</u>	<u>Clearing Right</u>
0-10%	11'	16'
10-20%	12'	17'
20-30%	13'	19'
30-40%	15'	22'
40-50%	17'	27'



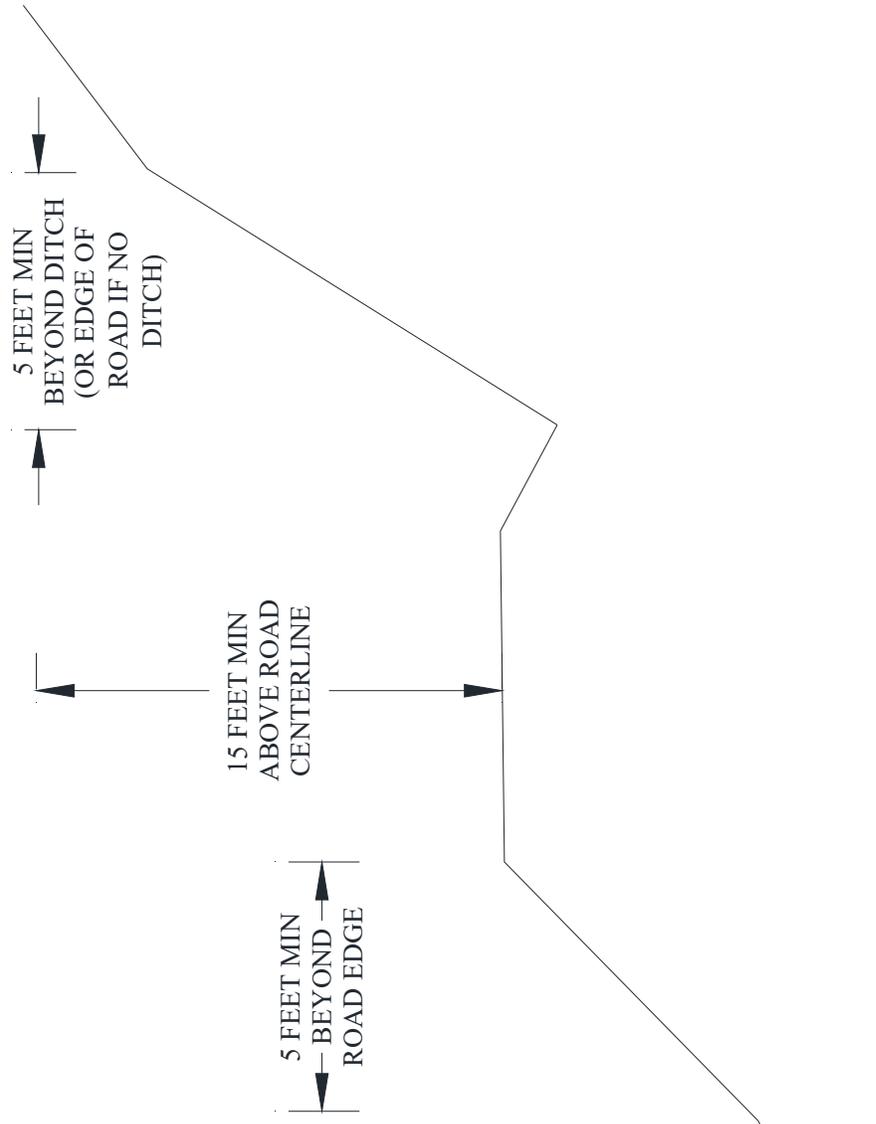
DRIVABLE WATER BAR DETAIL



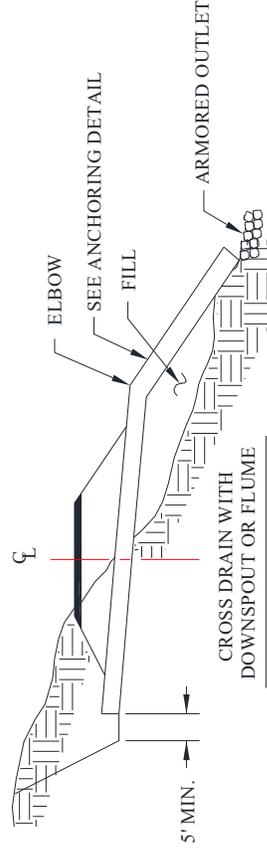
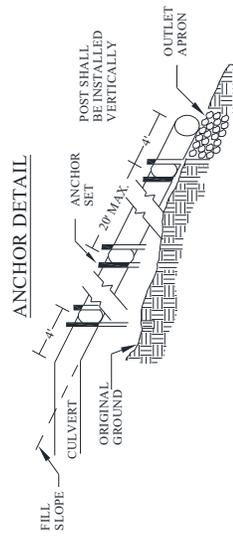
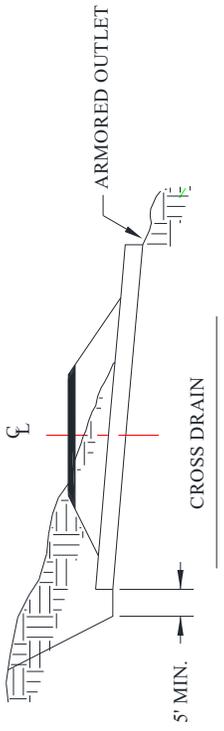
NOTES

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.

BRUSHING DETAIL

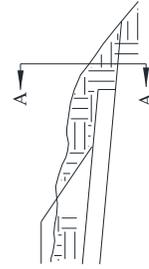


CULVERT AND DRAINAGE SPECIFICATION DETAIL

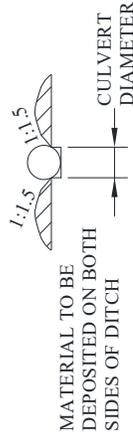


NOTE: MINIMUM COVER OVER CULVERT AT SHOULDER AT INLET SHALL BE 18" OR 1/2 THE CULVERT DIAMETER, WHICHEVER IS GREATER. CATCH BASINS SHALL BE MINIMUM 5' WIDE BY 6' LONG. CUT SLOPES AT CATCH BASINS SHALL BE AS SPECIFIED IN CLAUSE 4.5.

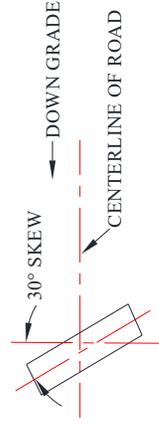
OUTLET DITCH



SECTION A-A



SKEW DIAGRAM



CULVERT LIST

Road	L-Station	Diameter	Length	Headwall	Remarks
N1500	33+96	24	40	Hand placed rock	Plastic, cross drain
N1500	35+08	24	30	Hand placed rock	Plastic, perennial stream
N1610	12+21	24	30	Hand placed rock	Plastic, seasonal stream

TURNAROUND LIST

Road #	Begin L-Station	End L- Station	Turnaround Width	Full Width Length	Taper Length	Remarks
N1610	34+31	34+71	20	30	10	Turnaround left
N1610	44+08	44+48	20	30	10	Turnaround left
N1620	10+75	11+15	20	30	10	Turnaround left

FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS

Cuts and Fills

- Maintain slope lines to a stable gradient compatible with the cut slope/fill slope ratios. Remove slides up to 50 cubic yards in volume from ditches and the roadway. Repair fill-failures, in accordance with Clause 4-6 EMBANKMENT SLOPE RATIO, with selected material or material approved by the Contract Administrator. Remove overhanging material from the top of cut slopes.
- Waste material from slides or other sources shall be placed and compacted in stable locations identified in the road plan or approved by the Contract Administrator, so that sediment will not deliver to any streams or wetlands.
- Slide material and debris shall not be mixed into the road surface materials, unless approved by the Contract Administrator.

Surface

- Grade the road surface, turnouts, and shoulders to the original shape on the TYPICAL SECTION SHEET to provide a smooth, rut-free traveled surface and maintain surface water runoff in an even, unconcentrated manner.
- Blading shall not undercut the backslope or cut into geotextile fabric on the road.
- If required by the Contract Administrator, water shall be applied as necessary to control dust and retain fine surface rock.
- Surface material shall not be bladed off the roadway. Replace surface material when lost or worn away, or as directed by the Contract Administrator.
- Remove shoulder berms, created by grading, to facilitate drainage, except as marked or directed by the Contract Administrator.
- For roads with geotextile fabric: spread surface aggregate to fill in soft spots and wheel ruts (barrel spread) to prevent damage to the geotextile fabric.

Drainage

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

Preventative Maintenance

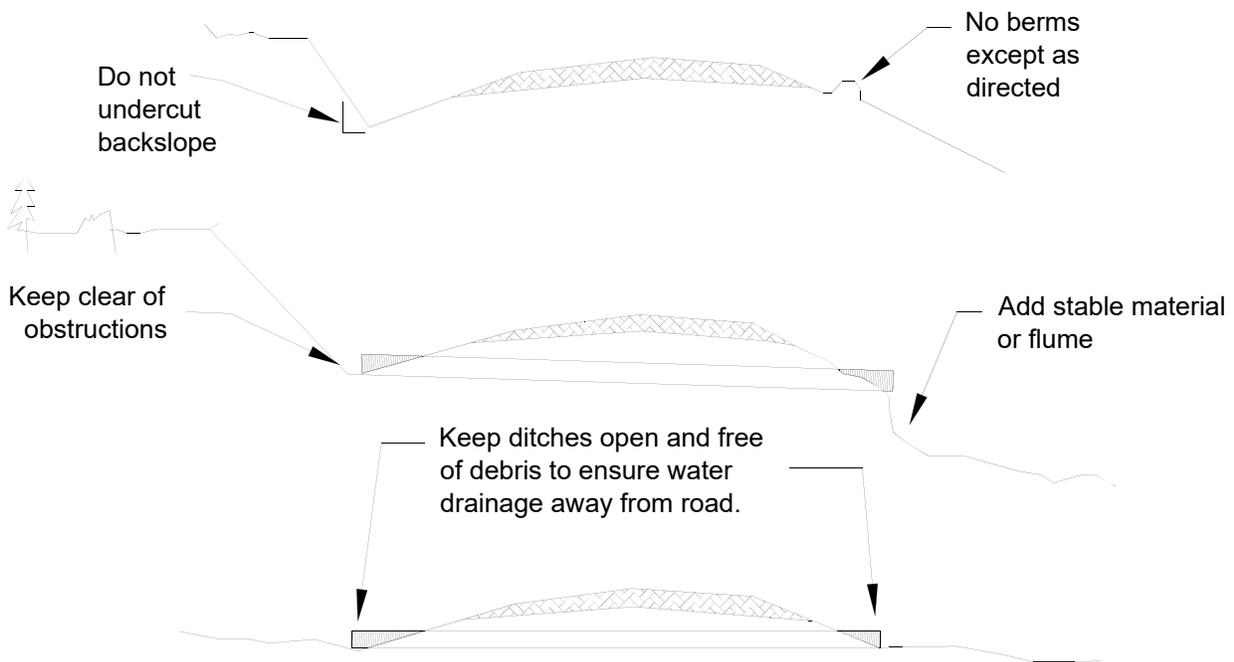
- Perform preventative maintenance work to safeguard against storm damage, such as blading to ensure correct runoff, ditch and culvert cleaning, and waterbar maintenance.

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.



File Name:	J:\FOREST-R\Timber Sales\FY 2021\Tanager
Sale/Project Name:	Q TANAGER THIN
Contract # :	30-099489
Legal Desc. :	Sections 7, 18, 19, 20, 29, 30 Township 04 North Range 10 East Section 13 Township 04 North Range 10 East
District :	Klickitat
Sale Volume (MBF):	5,104
Contract Date:	07-Jan-20
Compiled by:	TARA BAKER
Date Compiled:	January 7, 2020

SOUTHEAST REGION - ROAD COST ESTIMATE - MOBILIZATION

SALE NAME: Q TANAGER THIN

CONTRACT NUMBER: 30-099489

PRE-HAUL MOBILIZATION:

Description	\$ per Move	# of Moves	Sub-total
Grader	\$250	2	\$500.00
Compactor	\$275	2	\$550.00
Excavator	\$450	2	\$900.00
Dozer (D5)	\$275	2	\$550.00
Total Pre-Haul Mobilization =			<u>\$2,500.00</u>

POST-HAUL MOBILIZATION:

Description	\$ per Move	# of Moves	Sub-total
Dump Trucks	\$125		\$0.00
Compactor	\$275		\$0.00
Grader	\$250		\$0.00
Excavator	\$450		\$0.00
Dozer (D5)	\$275		\$0.00
Total Post-Haul Mobilization =			<u>\$0.00</u>

Total Mobilization: \$2,500.00

SOUTHEAST REGION - ROAD COST ESTIMATE - REQUIRED CONSTRUCTION

CONTRACT NUMBER: 30-099489

SALE NAME: Q Tanager THIN

I. CLEARING AND GRUBBING:

Flat Rate -	% Side Slope	MBF/ac	Disposal Factor	Production Factor	Cost/Station	Width Factor	Total Stations	Sub Total
N1610	10	20.0	1.00	2.00	\$48	1	3.25	\$374.40

Clear and Grub TOTAL = \$374.40

II. EXCAVATION:

Flat Rate -	% Side Slope	Exc. Type Fact.	Production Factor	Cost/Station	Width Factor	Total Stations	Sub Total
N1610	10	1.0	1.50	\$72	1.00	3.25	\$351.00

Excavation TOTAL = \$351.00

SHEET TOTAL = \$725.40

SOUTHEAST REGION - ROAD COST ESTIMATE - REQUIRED RECONSTRUCTION

CONTRACT NUMBER: 30-099489

SALE NAME: Q TANAGER THIN

I. CLEARING AND GRUBBING:

Flat Rate - Slope	% Side Slope	MBF/ac	Disposal Factor	Production Factor	Cost/Station	Width Factor	Total Stations	Sub Total
B1915	15	25.0	1.00	2.22	\$48	1.00	6.00	\$639.36
N1500	30	25.0	1.00	3.72	\$48	1.00	8.16	\$1,457.05
	30	25.0	1.00	3.72	\$48	1.00	7.23	\$1,290.99
N1610	15	25.0	1.00	2.22	\$49	2.00	3.44	\$748.41
	15	25.0	1.00	2.22	\$48	1.00	12.30	\$1,310.69
	50	25.0	1.00	3.72	\$48	1.00	11.51	\$2,055.23
	30	80.0	1.00	7.67	\$48	1.00	17.52	\$6,450.16

Clear and Grub TOTAL = \$13,951.88

II. EXCAVATION:

Flat Rate - Slope	% Side Slope	Exc. Type Fact.	Production Factor	Cost/Station	Width Factor	Total Stations	Sub Total
B1915	15	1.0	1.75	\$105	1.00	6.00	\$1,102.50
N1500	30	1.0	2.50	\$105	1.00	8.16	\$2,142.00
	30	1.0	2.50	\$105	1.00	7.23	\$1,897.88
N1610	15	2.0	1.75	\$106	1.00	3.44	\$1,276.24
	15	1.0	1.75	\$105	1.00	12.30	\$2,260.13
	50	1.0	6.75	\$105	1.00	11.51	\$8,157.71
	30	1.0	2.50	\$105	1.00	17.52	\$4,599.00

Excavation TOTAL = \$21,435.45

III. BALLAST AND SURFACING:

Ballast (3"-) 20 Cu. yds @ \$34.44 /cu. yd = \$688.80 N1500

Rock total = \$688.80

IV. CULVERTS AND FLUMES:

Description	Qty.	Diameter	No/Length	Cost/ft	Installed Sub-total
N1500 PCP	1	24	40	\$28.54	\$1,141.60
N1500 PCP	1	24	30	\$28.54	\$856.20
N1610 PCP	1	24	30	\$28.54	\$856.20
Bands & Gaskets					
N1500 PCP	1	24	2	\$28.54	\$57.08
N1500 PCP	1	24	2	\$28.54	\$57.08
N1610 PCP	1	24	2	\$28.54	\$57.08

Culvert total = \$3,025.24

V. STRUCTURES

Description	Cost / Structure	# Structures	Sub-total
N1610 Turnaround		2	\$200.00

\$200.00

Structure total = \$200.00

Road Totals:

B1915	\$1,741.86
N1500	\$11,613.32
N1610	\$25,946.19
Sum:	\$39,301.37

SHEET TOTAL = \$39,301.37

SOUTHEAST REGION - ROAD COST ESTIMATE - REQUIRED PRE-HAUL MAINTENANCE

SALE NAME: Q TANAGER THIN

CONTRACT NUMBER: 30-099489

I. MISC. MAINTENANCE ITEMS:

<u>Road</u>		Cost/ Station	Total Stations	Sub Total
N1620	mechanical brushing =	\$23.00	11.19	\$257.37
	grading =	\$14.40	11.19	\$161.14
			Cost / Item	# Items
	grade and shape turnout =	\$100.00	1.00	\$100.00
			Road TOTAL =	\$518.51

<u>Road</u>		Cost/ Station	Total Stations	Sub Total
N1730	mechanical brushing =	\$23.00	19.52	\$448.96
	grading =	\$14.40	19.52	\$281.09
			Road TOTAL =	\$730.05

<u>Road</u>		Cost/ Station	Total Stations	Sub Total
O54	mechanical brushing =	\$23.00	23.74	\$546.02
			Road TOTAL =	\$546.02

	<u>Road</u>		Cost/ Station	Total Stations	Sub Total	Total Stations
Spot Rocking	B1000	260 Cu. yds @	\$24.54 /cu. yd =		\$6,380.40	10.96
Spot Rocking	N1000	290 Cu. yds @	\$26.30 /cu. yd =		\$7,627.00	14.94
Spot Rocking	O50	400 Cu. yds @	\$36.46 /cu. yd =		\$14,584.00	13.44

Rock TOTAL = \$28,591.40

SHEET TOTAL = \$30,385.97

SOUTHEAST REGION - ROAD COST ESTIMATE - OPTIONAL CONSTRUCTION

CONTRACT NUMBER: 30-099489

SALE NAME: Q Tanager THIN

I. CLEARING AND GRUBBING:

Flat Rate -	% Side Slope	MBF/ac	Disposal Factor	Production Factor	Cost/Station	Width Factor	Total Stations	Sub Total
B1095	10	20.0	1.00	2.00	\$48	1	2.63	\$302.98

Clear and Grub TOTAL = \$302.98

II. EXCAVATION:

Flat Rate -	% Side Slope	Exc. Type Fact.	Production Factor	Cost/Station	Width Factor	Total Stations	Sub Total
B1095	10	1.0	1.50	\$72	1.00	2.63	\$284.04

Excavation TOTAL = \$284.04

SHEET TOTAL = \$587.02

SOUTHEAST REGION - ROAD COST ESTIMATE - OPTIONAL RECONSTRUCTION

SALE NAME: Q TANAGER THIN

CONTRACT NUMBER: 30-099489

I. CLEARING AND GRUBBING:

Flat Rate -	% Side Slope	MBF/ac	Disposal Factor	Production Factor	Cost/Station	Width Factor	Total Stations	Sub Total
B1820	15	25.0	1.00	2.22	\$48	1.00	35.85	\$3,820.18
Clear and Grub TOTAL =								\$3,820.18

II. EXCAVATION:

Flat Rate -	% Side Slope	Exc. Type Fact.	Production Factor	Cost/Station	Width Factor	Total Stations	Sub Total
B1820	15	1.0	1.75	\$105	1.00	35.85	\$6,587.44
Excavation TOTAL =							\$6,587.44

SHEET TOTAL = \$10,407.61

SOUTHEAST REGION - ROAD COST ESTIMATE - OPTIONAL PRE-HAUL MAINTENANCE

SALE NAME: Q TANAGER THIN

CONTRACT NUMBER: 30-099489

I. MISC. MAINTENANCE ITEMS:

<u>Road</u>		Cost/ Station	Total Stations	Sub Total
B1090	mechanical brushing =	\$23.00	15.54	\$357.42
	grading =	\$14.40	15.54	\$223.78
	Road TOTAL =			\$581.20
<u>Road</u>		Cost/ Station	Total Stations	Sub Total
O53	mechanical brushing =	\$23.00	18.95	\$435.85
	grading =	\$14.40	18.95	\$272.88
	Road TOTAL =			\$708.73
<u>Road</u>		Cost/ Station	Total Stations	Sub Total
O55	mechanical brushing =	\$23.00	9.82	\$225.86
	Road TOTAL =			\$225.86
<u>Road</u>		Cost/ Station	Total Stations	Sub Total
O57	mechanical brushing =	\$23.00	6.05	\$139.15
	Road TOTAL =			\$139.15
	SHEET TOTAL =			\$1,654.94

SUMMARY - ROAD COST ESTIMATE
 REGION: SOUTHEAST
 DISTRICT: Klickitat

SALE/PROJECT NAME: Q TANAGER THIN

CONTRACT #: 30-099489

MOBILIZATION:

Pre-haul: \$2,500.00
 Post haul: \$0.00

Total Cost for Mobilization: \$2,500.00

REQUIRED CONSTRUCTION:

N1610 **Total Cost =** \$725.40
Total Stations = 3.25
Cost / Station = \$223

Total Stations for REQUIRED CONSTRUCTION: 3.25

Total Cost for REQUIRED CONSTRUCTION: \$725.40

REQUIRED RECONSTRUCTION:

B1915 **Total Cost =** \$1,741.86
Total Stations = 6.00
Cost / Station = \$290.31

Total Stations of REQUIRED RECONSTRUCTION: 66.16

Total Cost for REQUIRED RECONSTRUCTION: \$39,301.37

N1500 **Total Cost =** \$11,613.32
Total Stations = 18.83
Cost / Station = \$616.75

N1610 **Total Cost =** \$25,946.19
Total Stations = 41.33
Cost / Station = \$627.78

REQUIRED PRE-HAUL MAINTENANCE:

B1000 **Total Cost =** \$6,380.40
Total Stations = 10.96
Cost / Station = \$582.15

N1000 **Total Cost =** \$7,627.00
Total Stations = 14.94
Cost / Station = \$510.51

N1620 **Total Cost =** \$518.51
Total Stations = 11.19
Cost / Station = \$46.34

N1730 **Total Cost =** \$730.05
Total Stations = 19.52
Cost / Station = \$37.40

O50 **Total Cost =** \$14,584.00
Total Stations = 13.44
Cost / Station = \$1,085.12

O54 **Total Cost =** \$546.02
Total Stations = 23.74
Cost / Station = \$23.00

Total Stations REQUIRED PRE-HAUL MAINTENANCE: 93.79

Total Cost for REQUIRED PRE-HAUL MAINTENANCE: \$30,385.97

OPTIONAL CONSTRUCTION:

B1095 **Total Cost =** \$587.02
Total Stations = 2.63
Cost / Station = \$223.20

Total Stations of OPTIONAL CONSTRUCTION: 2.63

Total Cost for OPTIONAL CONSTRUCTION: \$587.02

OPTIONAL RECONSTRUCTION:

B1820 **Total Cost =** \$10,407.61

Total Stations for OPTIONAL RECONSTRUCTION: 35.85

Total Stations = 35.85
 Cost / Station = \$290.31

Total Cost for OPTIONAL RECONSTRUCTION: \$10,407.61

OPTIONAL PRE- MAINTENANCE:

B1090 Total Cost = \$581.20
 Total Stations = 15.54
 Cost / Station = \$37.40

Total Stations OPTIONAL PRE-HAUL MAINTENANCE: 50.36

Total Cost for OPTIONAL PRE-HAUL MAINTENANCE: \$1,654.94

O53 Total Cost = \$708.73
 Total Stations = 18.95
 Cost / Station = \$37.40

O55 Total Cost = \$225.86
 Total Stations = 9.82
 Cost / Station = \$23.00

O57 Total Cost = \$139.15
 Total Stations = 6.05
 Cost / Station = \$23.00

PROFIT & RISK:
 15% = \$0.00

ROADS SUBTOTAL: \$85,562.31

PROFIT & RISK:= \$0.00

TOTAL (ALL ROADS): \$85,562.31

SALE VOLUME MBF: 5,104

TOTAL COST PER MBF: \$16.76

SUMMARY - Road Development Costs

REGION: Southeast
DISTRICT: Klickitat

SALE/PROJECT NAME: Q TANAGER THIN

CONTRACT #: 30-099489

ROAD NUMBERS:	B1095, N1610	B1820, B1915, N1500, N1610	B1000, B1090, N1000, N1620, N1730, O50, O53, O54, O55, O57,
ROAD STANDARD:	Construction	Reconstruction	Maintenance
NUMBER OF STATIONS:	5.88	102.01	144.15
CLEARING & GRUBBING:	\$677.38	\$17,772.06	-
EXCAVATION AND FILL:	\$635.04	\$28,022.89	-
MISC. MAINTENANCE:	-	\$200.00	\$3,449.51
ROAD ROCK:	-	\$688.80	\$28,591.40
STOCKPILE:	-	-	-
CULVERTS AND FLUMES:	-	\$3,025.24	-
STRUCTURES:	-	-	-
MOBILIZATION:	\$58.32	\$1,011.84	\$1,429.83
TOTAL COSTS:	\$1,371	\$50,720.83	\$33,470.74
COST PER STATION:	\$233	\$497.21	\$232.19
ROAD DEACTIVATION & ABANDONMENT COSTS:		\$0	

TOTAL (All Roads) = \$85,562.31
SALE VOLUME MBF = 5,104
TOTAL \$/MBF = \$16.76

Compiled by: TARA BAKER

Date: 1/7/2020

SALE NAME: Q Tanager Thin
CONTRACT NUMBER: 30-099489
SECTION 13 TOWNSHIP 04 NORTH RANGE 09 E

DATE: JANUARY 07, 2020

ROAD	TOTAL
PRE-HAUL SUMMARY	
REQUIRED CONSTRUCTION STA.	3.25
REQUIRED RECONSTRUCTION STA.	66.16
REQUIRED PRE-HAUL MAINTENANCE STA.	93.79
OPTIONAL CONSTRUCTION STA.	2.63
OPTIONAL RECONSTRUCTION STA.	35.85
OPTIONAL PRE-HAUL MAINTENANCE STA.	50.36
PURCHASER MAINT. STA.	235.38
DESIGNED MAIN. STA.	1297.62
CROWNED ROAD STA.	1057.04
FULL BENCH STA.	11.51
OUTSLOPED ROAD STA.	90.73
BALLAST YDS.	20
CULVERTS	3