

**TIMBER NOTICE OF SALE**

**SALE NAME: CLAWED BEAR**

**AGREEMENT NO: 30-092364**

**AUCTION:** May 25, 2016 starting at 10:00 a.m.,  
Olympic Region Office, Forks, WA

**COUNTY:** Clallam

**SALE LOCATION:** Sale located approximately 20 miles north of Forks, WA

**PRODUCTS SOLD  
AND SALE AREA:**

All timber, except leave trees marked with blue paint or bounded out by leave tree area tags, bounded by timber sale boundary tags in Unit 1, Unit 2, and Unit 3. All right of way timber bounded by right of way boundary tags on part(s) of Sections 6 and 7 all in Township 30 North, Range 11 West, Sections 1 and 12 all in Township 30 North, Range 12 West, Sections 36 all in Township 31 North, Range 12 West, W.M., containing 227 acres, more or less.

**CERTIFICATION:** This sale is certified under the Sustainable Forestry Initiative® program Standard (cert no: BV-SFIS-US09000572)

**ESTIMATED SALE VOLUMES AND QUALITY:**

Species	Avg DBH	Ring Count	Total MBF	MBF by Grade								
				1P	2P	3P	SM	1S	2S	3S	4S	UT
Douglas fir	17.2	6	4,733				36		2,664	1,465	567	1
Hemlock	14.7	5	3,048						1,237	1,256	556	
Red cedar	13		324						172	152		
Red alder	11.3		306						8	54	224	20
Silver fir	19		19						15	4		
Spruce	22		1							1		
Sale Total			8,431									

**MINIMUM BID:** \$1,040,000.00

**BID METHOD:** Sealed Bids

**PERFORMANCE  
SECURITY:**

\$100,000.00

**SALE TYPE:** Lump Sum

**EXPIRATION DATE:** October 31, 2019

**ALLOCATION:** Export Restricted

**BID DEPOSIT:** \$104,000.00 or Bid Bond. Said deposit shall constitute an opening bid at the appraised price.

**HARVEST METHOD:** Cable - 96% - Ground - 4% Cable logging is required on slopes exceeding 35%. Ground methods allowed on six acres of right of way timber. No rubber tired skidders will be allowed. 30' Equipment Limitation Zones on all typed waters.

**ROADS:** 19.36 stations of required construction. 96.96 stations of required reconstruction. 69.53 stations of optional construction. 8.77 stations of optional reconstruction. 88.39 stations of required pre-haul maintenance. In Bear Pit, Purchaser must strip 0.5 acres to useable rock - see road plan for details. Rock haul, reconstruction and road construction will not be permitted from October 15 to April 15 unless authorized in writing by the Contract Administrator.

**ACREAGE DETERMINATION**

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



## TIMBER NOTICE OF SALE

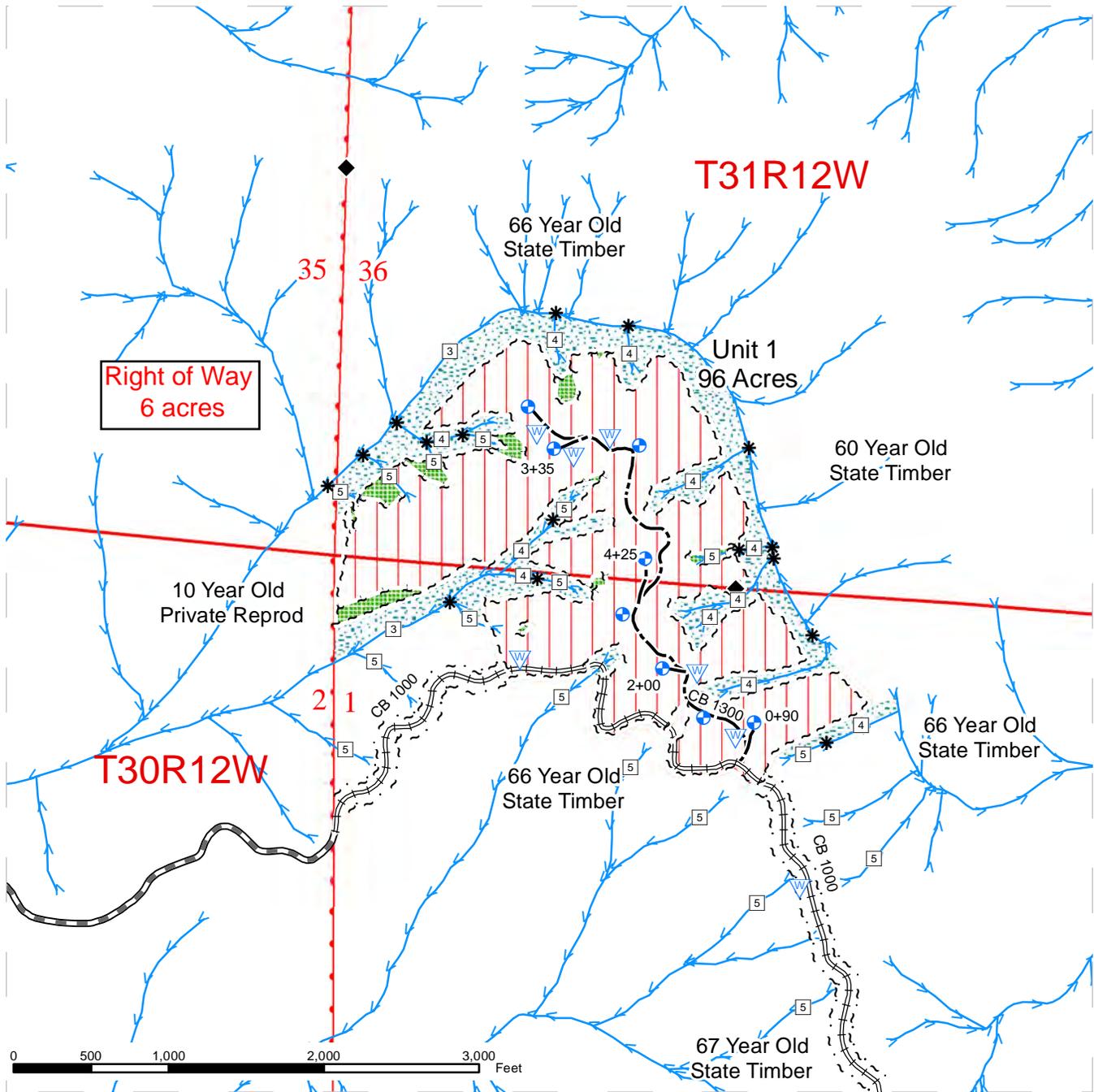
**FEES:** On day of sale, Purchaser must provide the DNR a cashiers check made payable to JLCG LLC in the amount of \$2,006.43 for a road use permit. \$149,650.00 is due on day of sale. \$9.00 per MBF is due upon removal. These are in addition to the bid price.

**SPECIAL REMARKS:** There are locked gates on the Mary Clark Pit Road and the CB-1000 Road- contact the Olympic Region Dispatch Center at 360-374-2811 to obtain a AA-1 key.

# TIMBER SALE MAP

**SALE NAME:** Clawed Bear  
**AGREEMENT#:** 30-092364  
**TOWNSHIP(S):** T30R11W,T30R12W,T31R12W  
**TRUST(S):** Capitol Grant (07), Common School (03), Agricultural School (04)

**REGION:** Olympic  
**COUNTY(S):** Clallam  
**ELEVATION RGE:** 951-1694 feet



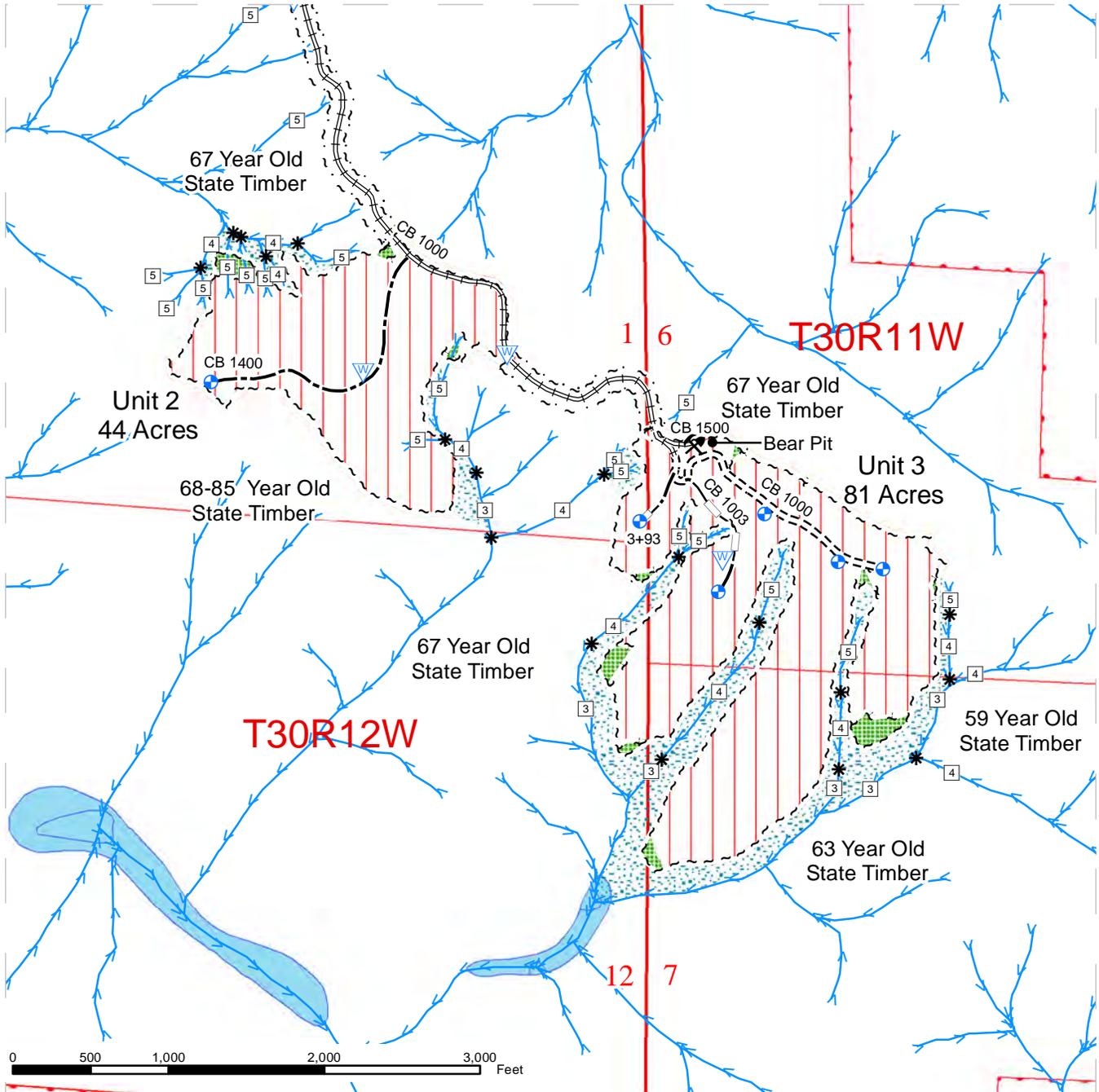
◆ Monumented Corners	— Existing Roads	- - - Right of Way Tags
⊕ Landing	▬ Required Prehaul Maintenance	~ ~ ~ Timber Sale Boundary Tags
▽ Waste Area	▬ Required Construction	- ~ - Leave Tree Area Tags
* Type Break	▬ Optional Construction	▬ Leave Tree Area
③ Stream Type	▬ Required Reconstruction	▬ Cable
→ Streams	▬ Optional Reconstruction	▬ Public Land Survey Sections
▨ Riparian Management Zone	⚡ Rock Pit	▬ DNR Managed Lands
□ Open Water		



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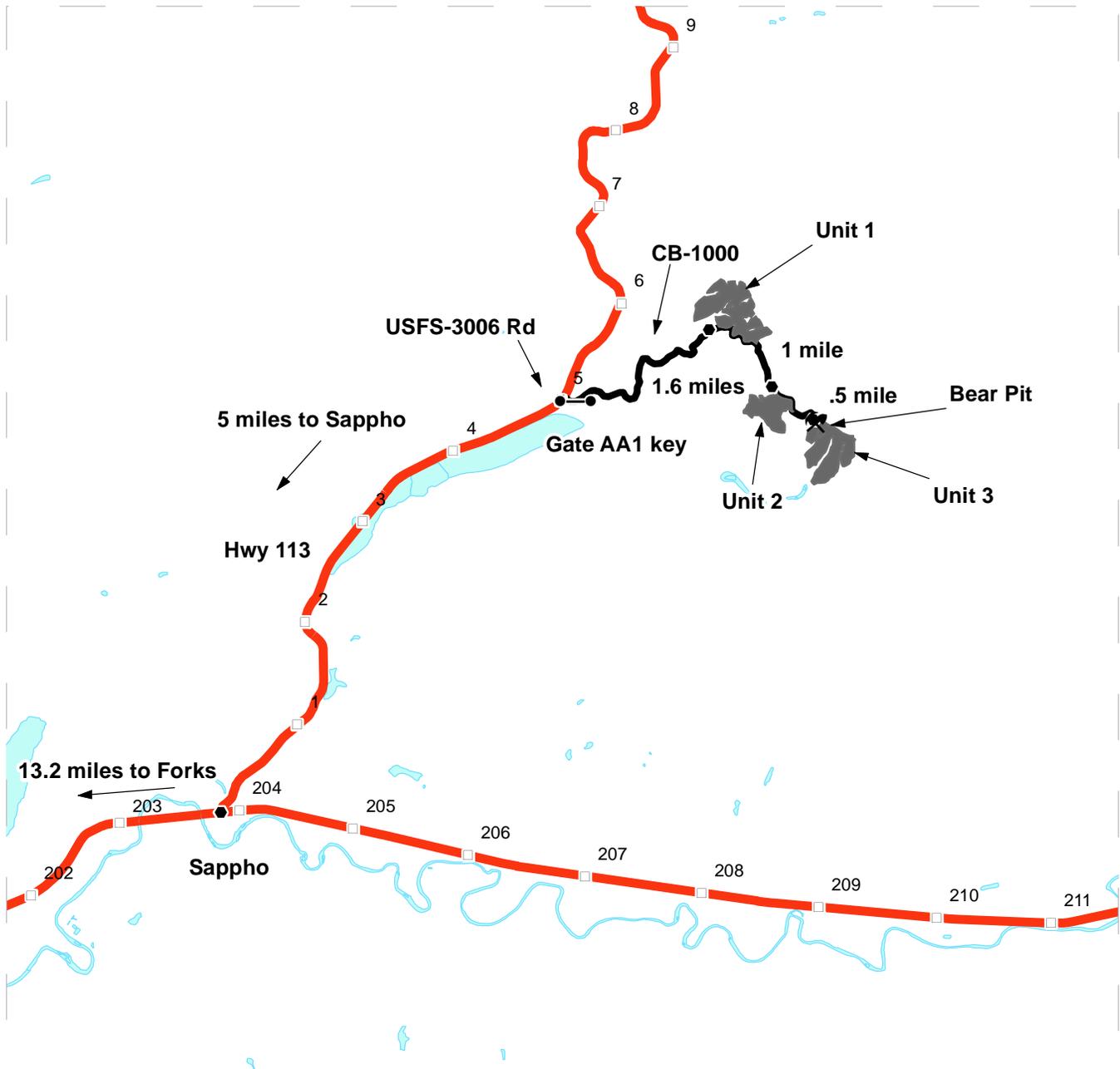


◆ Monumented Corners	— Existing Roads	- - - Right of Way Tags
● Landing	— Required Prehaul Maintenance	- - - Timber Sale Boundary Tags
▽ Waste Area	⋯ Required Construction	- - - Leave Tree Area Tags
* Type Break	--- Optional Construction	▨ Leave Tree Area
③ Stream Type	=== Required Reconstruction	▭ Cable
→ Streams	— Optional Reconstruction	▭ Public Land Survey Sections
▨ Riparian Management Zone	⚡ Rock Pit	▭ DNR Managed Lands
■ Open Water		

# DRIVING MAP

**SALE NAME:** Clawed Bear  
**AGREEMENT#:** 30-092364  
**TOWNSHIP(S):** T30R12W  
**TRUST(S):** Common School Indemnity (3), Agricultural School (4) Capitol Grant (7)

**REGION:** Olympic  
**COUNTY(S):** Clallam  
**ELEVATION RGE:** 951-1694

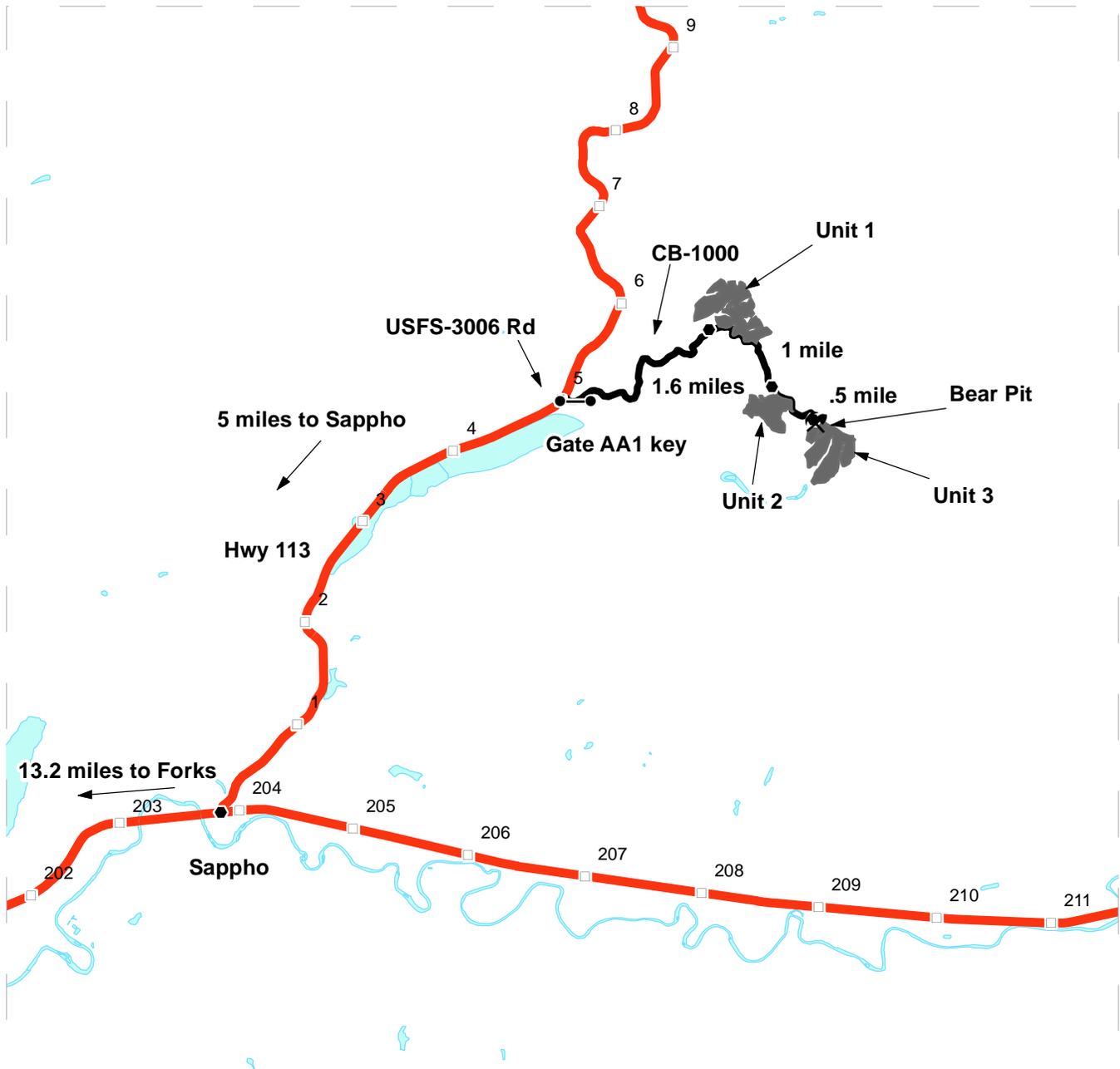


<ul style="list-style-type: none"> <li> Pit</li> <li> Gate</li> <li> Distance Indicator</li> <li> Timber Sale Unit</li> <li> Milepost Markers</li> <li> Haul Route</li> <li> Highways</li> <li> Open Water</li> </ul>	<p><b>Driving Directions</b></p> <p>From Forks head north on US 101 13.2 miles to Sappho. Turn left on HWY 113 and go north 5 miles to USFS-3006 Turn Right on USFS-3006. Take immediate left at the CB-1000 Rd. Yellow Gate (AA1 Key) Drive approximately 1.6 miles to unit 1. Continue 1 mile to unit 2. Continue .5 mile to unit 3 and Bear Pit</p>
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	Pit
	Gate
	Distance Indicator
	Timber Sale Unit
	Milepost Markers
	Haul Route
	Highways
	Open Water

**Driving Directions**

From Forks head north on US 101 13.2 miles to Sappho. Turn left on HWY 113 and go north 5 miles to USFS-3006 Turn Right on USFS-3006. Take immediate left at the CB-1000 Rd. Yellow Gate (AA1 Key) Drive approximately 1.6 miles to unit 1. Continue 1 mile to unit 2. Continue .5 mile to unit 3 and Bear Pit



**STATE OF WASHINGTON  
DEPARTMENT OF NATURAL RESOURCES**

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

**Export Restricted Lump Sum AGREEMENT NO. 30-092364**

**SALE NAME: CLAWED BEAR**

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

Section G: General Terms

G-001 Definitions

The following definitions apply throughout this contract;

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

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

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

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

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

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

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

G-011 Right to Remove Forest Products and Contract Area

Purchaser was the successful bidder on May 25, 2016 and the sale was confirmed on \_\_\_\_\_. The State, as owner, agrees to sell to Purchaser, and Purchaser agrees to purchase as much of the following forest products as can be cut and removed during the term of this contract: All timber, except leave trees marked with blue paint or bounded out by leave tree area tags, bounded by timber sale boundary tags in Unit 1, Unit 2, and Unit 3. All right of way timber bounded by right of way boundary tags, located on approximately 227 acres on part(s) of Sections 6, and 7 all in Township 30 North, Range 11 West, Sections 1, and 12 all in Township 30 North, Range 12 West, Section 36 in Township 31 North, Range 12 West W.M. in Clallam County(s) as designated on the sale area and as shown on the attached timber sale map.

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

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

G-020 Inspection By Purchaser

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

G-025 Schedules

The following attached schedules are hereby incorporated by reference:

Schedule	Title
A	SLASH PILING SPECS
B	GREEN TREE RETENTION PLAN - COAST

G-031 Contract Term

Purchaser shall complete all work required by this contract prior to October 31, 2019.

G-040 Contract Term Adjustment - No Payment

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

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

G-051 Contract Term Extension - Payment

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

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

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

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

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

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

- e. Payment of \$652.00 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. 812521 and 1168 (collectively referred to as ITP), or as amended hereafter by the Services. The ITP authorizes the incidental take of certain federally listed threatened and endangered species, as specified in the ITP conditions. All HCP materials, including the ITP, are available for review at the State's Regional Offices and the administrative headquarters in Olympia, Washington.

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

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

#### G-063 Incidental Take Permit Notification Requirements

- a. Purchaser shall immediately notify the Contract Administrator of new locations of permit species covered by the Incidental Take Permits (ITP) that are discovered within the area covered by the State's Habitat Conservation Plan (HCP), including, but not limited to: locations of occupied murrelet habitat; spotted owl nest sites; wolves; grizzly bears; nests, communal roosts,

or feeding concentrations of bald eagles; peregrine falcon nests; Columbian white-tailed deer; Aleutian Canada geese; Oregon silverspot butterflies; and additional stream reaches found to contain bull trout. Purchaser is required to notify the Contract Administrator upon discovery of any fish species found in streams or bodies of water classified as non-fish bearing. In all circumstances, notification must occur within a 24 hour time period.

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

#### G-064 Permits

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

#### G-065 Regulatory Disclaimer

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

#### G-066 Governmental Regulatory Actions

- a. Risk

Purchaser shall be responsible for any increased operational costs arising from any applicable foreign or domestic governmental regulation or order that does

not cause contract performance to become commercially impracticable or that does not substantially frustrate the purpose of the contract. If impracticability or frustration results from Purchaser's failure to comply with this contract, Purchaser shall remain responsible for payment of the total contract price notwithstanding the impracticability or frustration.

b. Sale Area

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

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

c. Adjustment of Price

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

G-070 Limitation on Damage

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

G-080 Scope of State Advice

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

**G-091 Sale Area Adjustment**

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

**G-101 Forest Products Not Designated**

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

The pricing schedule has not been set for the sale.

**G-106 Adding Naturally Damaged Forest Products**

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

**G-111 Title and Risk of Loss**

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

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

Forest products purchased under this contract are certified as being in conformance with the Sustainable Forestry Initiative program Standard under certificate number: BV-SFIS-US09000572.

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

**G-120 Responsibility for Work**

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

**G-121 Exceptions**

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

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

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

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

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

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

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

## G-140 Indemnity

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

## G-150 Insurance

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

#### G-160 Agents

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

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

G-170 Assignment and Delegation

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

G-180 Modifications

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

G-190 Contract Complete

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

G-200 Notice

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

G-210 Violation of Contract

G-220 State Suspends Operations

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

G-210 Violation of Contract

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

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

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

#### G-220 State Suspends Operation

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

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

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

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

#### G-230 Unauthorized Activity

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

#### G-240 Dispute Resolution

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

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

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

G-250 Compliance with All Laws

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

G-260 Venue

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

G-270 Equipment Left on State Land

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

G-280 Operating Release

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

G-310 Road Use Authorization

Purchaser is authorized to use the following State roads and roads for which the State has acquired easements and road use permits; CB-1000, Mary Clark Pit Road, USFS-3006 and all newly constructed roads associated with this sale. 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 CB-1000, USFS-3006 and Mary Clark Pit Roads, unless authority is granted in writing by the Contract Administrator.

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

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

Easement #55-073678 from Crown Pacific Limited Partnership to the Department of Natural Resources dated July 14, 2003.

Easement #55-091435 from Peeshbad, LLC to the Department of Natural Resources dated June 14, 2014.

Road Use Permit #55-092352 from JLCG, Inc. to Washington State Department of Natural Resources, dated November 19, 2015.

**G-430 Open Fires**

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

## Section P: Payments and Securities

## P-011 Initial Deposit

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

## P-020 Payment for Forest Products

Purchaser agrees to pay the total, lump sum contract price of \$225,529.00. The total contract price consists of a \$0.00 contract bid price plus \$225,529.00 in fees. Fees collected shall be retained by the state unless the contract is adjusted via the G-066 clause. Purchaser shall be liable for the entire purchase price, and will not be entitled to any refunds or offsets unless expressly stated in this contract.

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

## P-045 Guarantee of Payment

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

## P-050 Billing Procedure

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

## P-080 Payment Account Refund

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

## P-090 Performance Security

Purchaser agrees to furnish, within 30 days of the confirmation date, security acceptable to the State in the amount of \$100,000.00. The Security provided shall

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

P-100 Performance Security Reduction

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

Section H: Harvesting Operations

H-013 Reserve Tree Damage Definition

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

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

- a. A reserve tree has one or more scars on its trunk exposing the cambium layer, which in total exceeds 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 area, as approved by the Contract Administrator. Purchaser may be required to pay liquidated damages for Excessive Reserve Tree Damage as detailed in clause D-041.

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

**H-017 Preventing Excessive Soil Disturbance**

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

**H-035 Fall Trees Into Sale Area**

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

**H-051 Branding and Painting**

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

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

**H-080 Snags Not to be Felled**

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

**H-120 Harvesting Equipment**

Forest products sold under this contract shall be harvested by cable methods (required on slopes exceeding 35%); ground methods will be allowed on six acres of right of way (rubber tire skidders are not allowed); unless authority to use other equipment is granted in writing by the State.

**H-125 Log Suspension Requirements**

Lead-end suspension is required for all yarding activities.

**H-140 Special Harvest Requirements**

Purchaser shall accomplish the following during the harvest operations:

1. Purchaser shall immediately repair all gate damage resulting from operations to an equal or better condition than existed at the time of the sale.
2. Yarding equipment shall not cross live streams without an HPA/FPHP.
3. The Purchaser shall notify all employees and contractors working on this sale that any danger tree, marked or unmarked may be felled. Any felled marked danger tree shall be replaced with a suitable tree of similar size and species as approved by the Contract Administrator.

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

H-190 Completion of Settings

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

H-220 Protection of Residual or Adjacent Trees

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

H-230 Tops and Limbs Outside the Sale Boundary

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

Section C: Construction and Maintenance

C-040 Road Plan

Road construction and associated work provisions of the Road Plan for this sale, dated 3/4/2016 are hereby made a part of this contract.

C-050 Purchaser Road Maintenance and Repair

Purchaser shall perform work at their own expense on all road used in association with this sale except the Mary Clark Pit Road. 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 Mary Clark Pit Road and all roads used and not covered in C-050. Purchaser shall furnish a statement in a form satisfactory to the State showing the costs incurred while performing this work. Costs shall be based on the rates set forth in the State current Equipment Rate Schedule on file at the region and Olympia offices. The State shall reimburse Purchaser for said costs within 30 days of receipt and approval of the statement.

C-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-050 Cessation of Operations for Low Humidity**

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

**S-060 Pump Truck or Pump Trailer**

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

**S-100 Stream Cleanout**

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

## S-110 Resource Protection

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

## S-120 Stream Protection

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

## S-130 Hazardous Materials

## a. Hazardous Materials and Waste - Regulatory Compliance

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

## b. Hazardous Materials Spill Prevention

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

## c. Hazardous Materials Spill Containment, Control and Cleanup

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

## d. Hazardous Material Release Reporting

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

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

DNR Contract Administrator

ECY - Northwest Region:

1-425-649-7000

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

ECY - Southwest Region:

1-360-407-6300

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

ECY - Central Region:

1-509-575-2490

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

ECY - Eastern Region:

1-509-329-3400

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

#### S-131 Refuse Disposal

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

#### Section D: Damages

##### D-013 Liquidated Damages or Failure to Perform

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

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

substantial injury to the State. Therefore, Purchaser agrees to pay the State the full lump sum contract price in P-020 in the event of failure to perform.

D-041 Reserve Tree Excessive Damage

When Purchaser's operations exceed the damage limits set forth in clause H-013, Reserve Tree Damage Definition, and when the Contract Administrator determines that a suitable replacement for a damaged reserve tree is not possible, the damaged trees result in substantial injury to the State. The value of the damaged reserve trees at the time of the breach is not readily ascertainable. Therefore, the Purchaser agrees to pay the State as liquidated damages at the rate of \$500.00 per tree for all damaged reserve trees that are not replaced in all units.

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

STATE OF WASHINGTON  
DEPARTMENT OF NATURAL RESOURCES

\_\_\_\_\_  
Purchaser

\_\_\_\_\_  
Susan K. Trettevik  
Olympic Region Manager

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

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

CORPORATE ACKNOWLEDGEMENT

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

\_\_\_\_\_ )

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

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

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

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

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

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

\_\_\_\_\_

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

**Schedule A**  
**SLASH PILING SPECS**

Specifications for Slash Piling

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

1. Piles shall be a minimum of 12 feet tall by 8 feet wide to a maximum of 30 feet tall and 16 feet wide. Piles shall be cone shaped and stable.
2. Piles shall be free of topsoil, large rotten logs and large stumps. No material larger than 8 inches in diameter shall be piled. Any burnable material shall be well scattered.
3. Piles shall not be placed on large stumps or logs.
4. Piles shall be stacked a minimum of 50 feet from all unit boundaries, Riparian Management Zones, leave tree areas and any standing timber; a minimum of 100 feet from any public roads and highways; and a minimum of 200 feet from any structures.
5. Piling shall be completed using an approved hydraulic shovel and grapples.
6. Slash generated during cable yarding shall be stacked in dirt free piles and shall not block roads or interfere with functioning of drainage structures, ditches, or stream channels.

**Schedule B**  
**GREEN TREE RETENTION PLAN - COAST**

Leave the following as directed by the Contract Administrator:

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

Unit #	# of Individually Marked Trees	# of Clumps	# of Trees Clumped	Total # of Leave Trees
1	87	11	764	851
2	119	3	244	363
3	116	9	548	664



## 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 (specifically required by the contract) prior to haul*

#### EXCISE TAX EXEMPT ACTIVITIES

**Temporary Optional Construction:** **linear feet**  
*Optional roads to be constructed and then abandoned*

**Temporary Optional Reconstruction:** **linear feet**  
*Optional roads to be reconstructed and then abandoned*

**New Abandonment:** **linear feet**  
*Abandonment of roads constructed or reconstructed under the contract*

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

(Revised 4/09)

## PRE-CRUISE NARRATIVE

Sale Name: <b>Clawed Bear</b>	Region: <b>Olympic</b>
Agreement #: <b>30-77392</b>	District: <b>Ozette</b>
Contact Forester: Kellen Salseina Phone / Location: 360-640-4343 / Forks, WA	County(s): <b>Clallam</b>
Alternate Contact: Mike Potter Phone / Location: 360-640-0722 / Forks, WA	Other information: (Unit 1 55%-03, 28%-07, 10%-04 (Unit 2) 90%-04, 10%-07 (Unit 3) 95%07, 5%-04

Type of Sale: Lump Sum	
Harvest System: Uphill Cable	100%

### UNIT ACREAGES AND METHOD OF DETERMINATION:

Unit #	Legal Description (Enter only one legal for each unit) Sec/Twp/Rng	Grant or Trust	Gross Proposal Acres	Deductions from Gross Acres (No harvest acres)				Net Harvest Acres	Acreage Determination  (List method and error of closure if applicable)
				RMZ/ WMZ/ Skip Acres	Leave Tree Acres	Existing Road Acres	Other Acres		
1	Sec. 1, T30N, R12W Sec. 36, T31N, R12W	03/07 /04	101	0	5	0	0	96	GPS (Garmin)
2	Sec. 1, T30N, R12W	04/07	46	0	2	0	0	44	GPS (Garmin)
3	Sec. 1, T30N, R12W Sec. 12, T30N R12W Sec. 6, T30N R11W Sec. 7, T30N R11W	04/07	84	0	3	0	0	81	GPS (Garmin)
<b>ROW</b>			6	0	0	0	0	6	
<b>TOTAL ACRES</b>			237	0	10	0	0	227	

### HARVEST PLAN AND SPECIAL CONDITIONS:

Unit #	Harvest Prescription: (Leave, take, paint color, tags, flagging etc.)	Special Management areas:	Other conditions (# leave trees, etc.)
1	<u>Unit Boundaries</u> are marked with white unit boundary tags, red flashers, pink ribbon, and blue paint. <u>Leave Tree Areas</u> are marked with yellow Leave Tree Area tags, red flashers, pink ribbon, and blue paint. <u>Individual Leave Trees</u> are marked with a blue paint line encircling the tree approximately at DBH, and blue paint butt marks.	N/A	Total Leave Trees- 851 LTA- 764 trees Individual- 87 trees
2	<u>Unit Boundaries</u> are marked with white unit boundary tags, red flashers, pink ribbon, and blue paint. <u>Leave Tree Areas</u> are marked with yellow Leave Tree Area tags, red flashers, pink ribbon, and blue paint. <u>Individual Leave Trees</u> are marked with a blue paint line encircling the tree approximately at DBH, and blue paint butt marks.	N/A	Total Leave Trees-363 LTA- 244 trees Individual- 119 trees

3	<u>Unit Boundaries are marked with white unit boundary tags, red flashers, pink ribbon, and blue paint. Leave Tree Areas are marked with yellow Leave Tree Area tags, red flashers, pink ribbon, and blue paint. Individual Leave Trees are marked with a blue paint line encircling the tree approximately at DBH, and blue paint butt marks.</u>	N/A	Total Leave Trees- 656 LTA- 548 trees Individual- 116 trees
ROW	<u>Right of Way</u> is marked with orange right of way boundary tags, orange ribbon, orange paint.	N/A	N/A

**OTHER PRE-CRUISE INFORMATION:**

Unit #	Primary, secondary Species / Estimated Volume (MBF)	Access information (Gates, locks, etc.)	Photos, traverse maps required
1	DF/WH	Access on CB-1000 Rd through DNR gate (AA-1 lock). CB-1000 road is the proposed haul route for this unit. 100% uphill cable.	Cruise Map
2	DF/WH	Access on CB-1000 Rd through DNR gate (AA-1 lock). CB-10000 road is the proposed haul route for this unit. 100% uphill cable.	Cruise Map
3	DF-WH	Access on CB-1000 Rd through DNR gate (AA-1 lock). CB-1000 road is the proposed haul route for this unit. 100% uphill cable.	Cruise Map
TOTAL MBF	37 mbf/ac		

**REMARKS:**

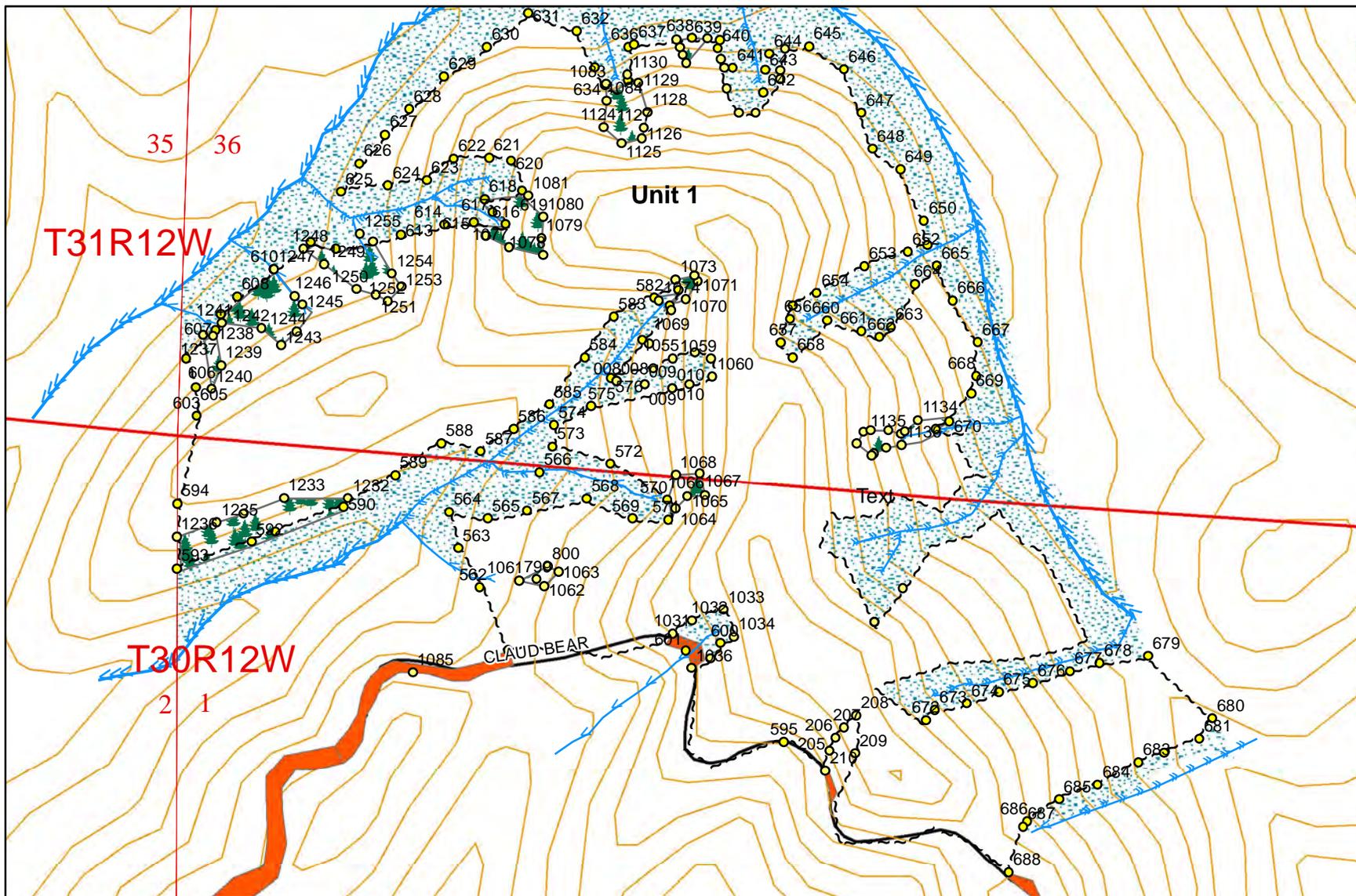
Vehicle access should be 4x4 only and limited to dry days unless you have ATV access. The Right of Way acreage is approximate and was determined based on an average 50' wide and the length of the entire 4 segments.

Prepared By: Kellen Salseina  
Date: 11/20/2014

Title: Forester 1

CC:

# Unit 1 Pre Cruise Map



## Legend

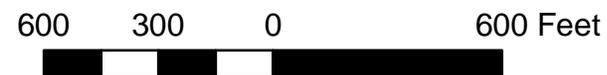
- GPS Points
- Public Land Survey Sections

## Streams

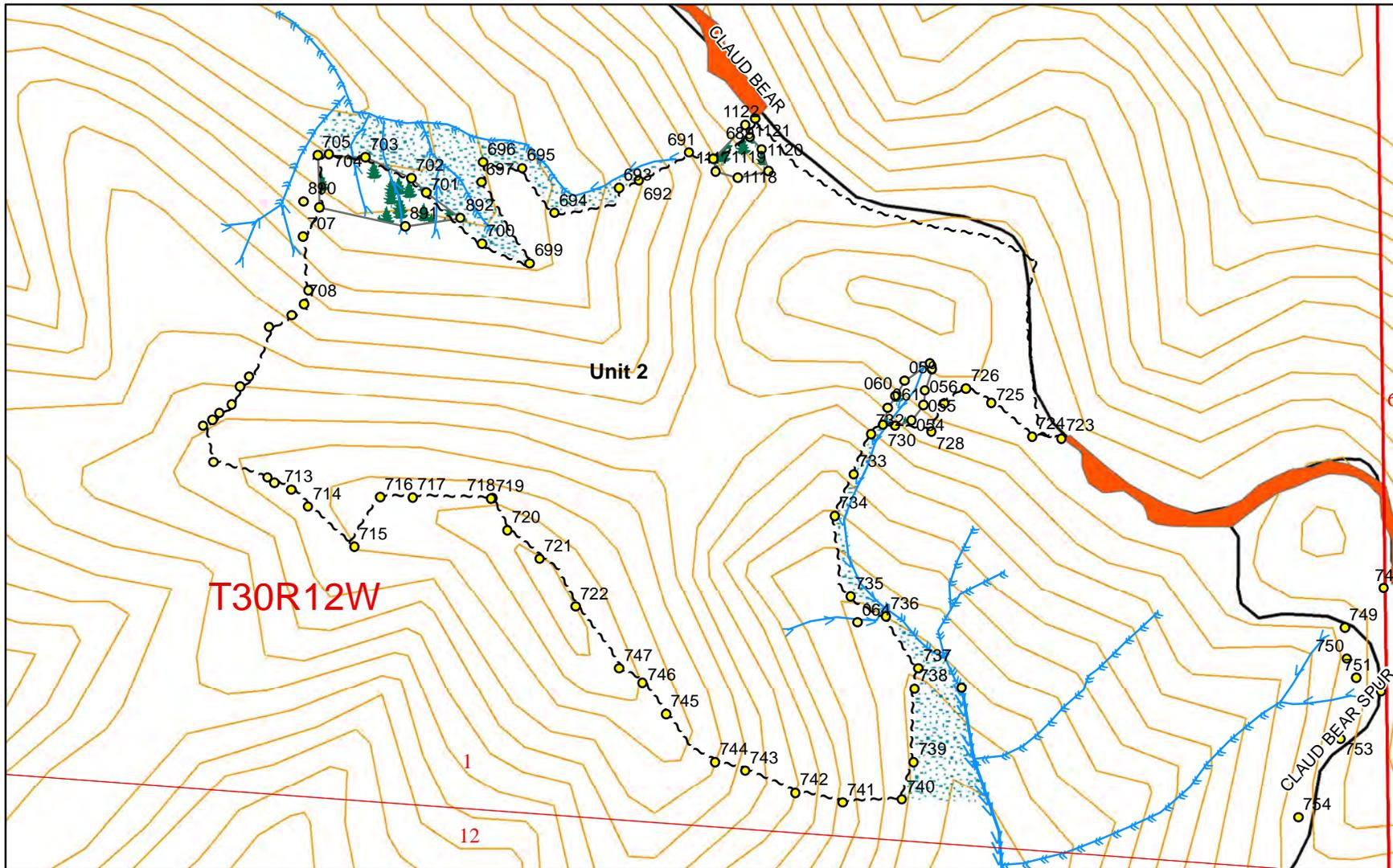
### Id

- 3
- 4
- 5

- - - Timber Sale Boundary Tags
- Leave Tree Area
- RMZ
- Public Land Survey Townships
- Right of Way
- Contours 40-foot
- Active



# Unit 2 Pre Cruise Map



## Legend

- GPS Points
- Public Land Survey Sections

### Streams

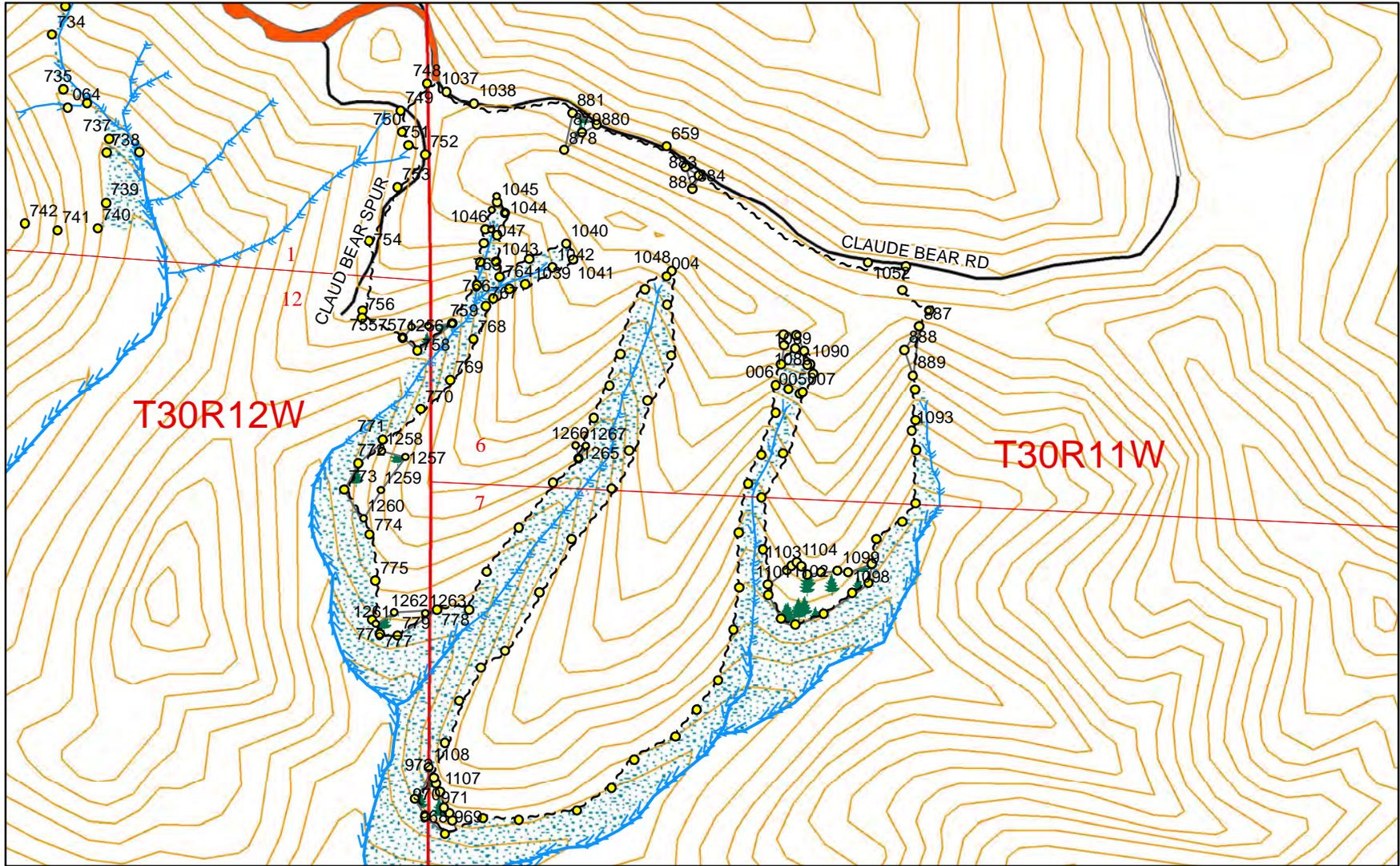
#### Id

- 3
- 4
- 5

- - - Timber Sale Boundary Tags
- 🌲 Leave Tree Area
- 🌲 RMZ
- Public Land Survey Townships
- Right of Way
- Contours 40-foot
- Active



# Unit 3 Pre Cruise Map



## Legend

- GPS Points
- Public Land Survey Sections

### Streams

#### Id

- 3
- 4
- 5

- Timber Sale Boundary Tags
- Leave Tree Area
- RMZ
- Public Land Survey Townships
- Right of Way
- Contours 40-foot
- Active



## Cruise Narrative

<b>Sale Name:</b> Claude Bear	<b>Region:</b> Olympic
<b>Agree. #:</b> 30-	<b>District:</b> Coast
<b>Lead cruiser:</b> Jason Michaud	<b>Completion date:</b> 12/4/2014
<b>Other cruisers on sale:</b> Kevin Peterson	

### Unit acreage specifications:

Unit #	Cruised acres	Cruised acres agree with sale acres? Yes/No	If acres do not agree explain why.
1	96	y	
2	44	y	
3	81	y	
ROW	6	y	
Total	227		

### 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	62.5,40	y	310x310	1:1	41
2	VP	62.5,40	y	310x310	1:1	19
3	VP	62.5,40	y	310x310	1:1	34
ROW 1,3,4	VP	40,20	y	Random	All Cruise	8
ROW 2	ITS				All cruise	

### Sale/Cruise Description:

<b>Minor species cruise intensity:</b>	ALL minor species were cruised on all plots.					
<b>Minimum cruise spec:</b>	10 Bd. Ft. net / 5 inch top of 40% dia@16					
<b>Avg ring count by sp:</b>	<b>DF =</b>	6	<b>WH =</b>	5	<b>SS =</b>	

<b>Leave/take tree description:</b>	Timber sale boundaries are marked with white harvest boundary tags, red flashers, blue paint and pink ribbon Leave trees are marked with yellow leave tree tags, blue paint and pint ribbon. Individual leave trees are ringed with blue paint, and marked at the base.
<b>Other conditions</b>	All roads and existing right-of-ways acres were deducted from the gross acreage.

**Field observations:**

Unit 1 consists mostly of Douglas-fir and western hemlock, and has minor species of alder and cedar. The Douglas-fir and Hemlock in this unit are large with diameters ranging from 15-35 inches and bole heights up to 110 feet. The stand is densely stocked and is 96 net acres in size. Unit 2 is 44 acres The dominate species is Douglas-fir which has bole heights ranging from 75-100 feet. The Northern part of the unit consists of some pockets of alder but this unit is dominantly Douglas-fir and Hemlock. Unit 3 consists mostly of Douglas-fir and western hemlock as well. There are also small amounts of Pacific Silver fir and spruce in this unit. Bole heights range from 75-110 feet and diameters range from 15-38 inches. The unit consists of 65 year old timber and has a maximum slope of 100%. Unit 3 is 81 net acres in size. The Right-of-way Has 35-40 year old timber on it. It has a total of 6 acres. The main species are Douglas-fir and alder. Right-of-ways 1, 3, 4 were sampled using VP while right-of-way number 2 was cruised using the ITS method.

**Grants: 03, 04, 07**

**Prepared by: Jason Michaud**

**Title: Cruiser/Forester 1**

**CC:**

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TC		PSPCSTGR		Species, Sort Grade - Board Foot Volumes (Project)																	
T026 R012 S06 Ty00R1 THRU T30N R12W S20 Ty00U1				Project: <b>CLAUDE</b>											Page <b>1</b>						
				Acres <b>226.90</b>											Date <b>12/5/2014</b>						
				Time <b>8:20:17AM</b>																	
Spp	S T	So rt	Gr ad	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent of Net Board Foot Volume								Average Log				Logs Per /Acre
					Def%	Gross	Net		Log Scale Dia.				Log Length				Ln Ft	Dia In	Bd Ft	CF/ Lf	
									4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99					
DF	HA	2S		4		960	960	218			67	33		15	16	69	36	13	227	1.46	4.2
DF	HB	2S		1		158	158	36				100				100	40	19	600	3.78	.3
DF	HB	2S		2	3.2	478	462	105			100					100	40	13	220	1.38	2.1
DF	D	2S		49	4.9	10,687	10,167	2,307			64	36				100	40	15	322	2.15	31.6
DF	D	3S		30	2.7	6,538	6,359	1,443			100			1	2	96	39	8	102	0.75	62.5
DF	D	4S		12	3.9	2,601	2,500	567	81	19			12	37	12	40	27	5	30	0.33	84.6
DF	D	UT				6	6	1	1	99			99	1			2	5	3	0.27	2.4
DF	RO	2S		1	10.5	167	149	34				100				100	40	21	680	4.74	.2
DF	RO	3S		1	40.1	164	98	22				100				100	40	27	820	8.28	.1
<b>DF Totals</b>				56	4.1	21,760	20,860	4,733	10	33	37	21	1	6	3	90	33	8	111	0.92	188.0
WH	HA	2S		1		135	135	31			100					100	40	12	200	1.28	.7
WH	HB	2S		1	4.2	145	139	32			100					100	40	13	230	1.45	.6
WH	D	2S		38	7.9	5,617	5,175	1,174			79	21				100	40	14	292	1.92	17.7
WH	D	3S		41	1.1	5,595	5,534	1,256			100			0	1	99	40	9	113	0.78	48.8
WH	D	4S		19	3.8	2,548	2,452	556	89	11			7	35	23	35	29	5	31	0.31	79.4
WH	D	UT				0	0	0	100				100				9	5	10	0.17	.0
<b>WH Totals</b>				36	4.3	14,040	13,434	3,048	16	43	32	8	1	6	5	88	34	8	91	0.73	147.2
SS	D	2S		85	10.5	3	3	1			100			100			26	14	170	1.98	.0
SS	D	UT		15		1	1	0	100					100			25	5	30	0.60	.0
<b>SS Totals</b>				0	9.1	4	3	1	15		85			100			26	10	100	1.30	.0
RA	D	2S		2	9.0	38	34	8			100		100				20	13	109	1.19	.3
RA	D	3S		18	12.9	271	237	54			100		19	24		57	34	8	66	0.69	3.6
RA	D	4S		73	5.5	1,044	987	224	47	53			13	8	17	62	30	6	38	0.41	25.7
RA	D	UT		7	.1	90	90	20	100				88	8	0	4	13	5	12	0.21	7.3
<b>RA Totals</b>				4	6.6	1,443	1,347	306	41	56	3		21	11	13	55	27	6	36	0.43	36.9
RC	D	3S		53	12.8	870	758	172	0	47	39	13		2		98	39	10	133	1.53	5.7
RC	D	4S		47		668	668	152	87	13			9	52	15	24	27	5	29	0.39	23.2
<b>RC Totals</b>				4	7.3	1,538	1,427	324	41	31	21	7	4	25	7	63	29	6	49	0.69	28.9
SF	D	2S		76	5.0	69	65	15			100					100	40	12	190	1.48	.3
SF	D	3S		24		21	21	5			100					100	40	6	60	0.49	.3
<b>SF Totals</b>				0	3.8	89	86	19		24	76					100	40	9	125	0.99	.7
<b>Totals</b>					4.4	38,874	37,157	8,431	14	37	33	15	2	7	4	87	33	8	92	0.80	401.7

TC PSTATS		<b>PROJECT STATISTICS</b>								PAGE	1
		<b>PROJECT</b>				<b>CLAUDE</b>				DATE	12/5/2014
TWP	RGE	SC	TRACT	TYPE		ACRES	PLOTS	TREES	CuFt	BdFt	
026	012	06	CB	00R1	THR	226.90	100	554	S	W	
30N	12W	20	CB	00U1							
				TREES		ESTIMATED	PERCENT				
				PER PLOT		TOTAL	SAMPLE				
		PLOTS	TREES			TREES	TREES				
TOTAL		100	554	5.5							
CRUISE		56	293	5.2		54,740	.5				
DBH COUNT											
REFOREST											
COUNT		44	253	5.8							
BLANKS											
100 %											
<b>STAND SUMMARY</b>											
SAMPLE		TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET	
TREES		/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC	
DOUG FIR		127	103.9	17.2	71	40.2	166.7	21,760	20,860	5,779	
WHEMLOCK		90	87.1	14.7	69	26.7	102.5	14,040	13,434	3,631	
R ALDER		47	25.6	11.3	54	5.3	17.9	1,443	1,347	431	
WR CEDAR		27	24.4	13.0	52	6.2	22.4	1,538	1,427	583	
S SPRUCE		1	.0	22.0	62	0.0	.0	4	3	1	
PS FIR		1	.3	19.0	89	0.2	.7	89	86	27	
<b>TOTAL</b>		<b>293</b>	<b>241.3</b>	<b>15.4</b>	<b>67</b>	<b>79.2</b>	<b>310.2</b>	<b>38,874</b>	<b>37,157</b>	<b>10,452</b>	
CONFIDENCE LIMITS OF THE SAMPLE											
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR											
CL	68.1	COEFF	TREES/ACRE				# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
DOUG FIR		100.8	10.1	93	104	114					
WHEMLOCK		129.5	12.9	76	87	98					
R ALDER		229.1	22.9	20	26	31					
WR CEDAR		194.0	19.4	20	24	29					
S SPRUCE		1000.0	99.9	0	0	0					
PS FIR		1000.0	99.9	0	0	1					
<b>TOTAL</b>		<b>59.9</b>	<b>6.0</b>	<b>227</b>	<b>241</b>	<b>256</b>	<b>143</b>	<b>73</b>	<b>36</b>		
CL	68.1	COEFF	BASAL AREA/ACRE				# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
DOUG FIR		86.1	8.6	152	167	181					
WHEMLOCK		115.0	11.5	91	102	114					
R ALDER		229.1	22.9	14	18	22					
WR CEDAR		196.9	19.7	18	22	27					
S SPRUCE		1000.0	99.9	0	0	0					
PS FIR		1000.0	99.9	0	1	1					
<b>TOTAL</b>		<b>46.8</b>	<b>4.7</b>	<b>296</b>	<b>310</b>	<b>325</b>	<b>87</b>	<b>45</b>	<b>22</b>		
CL	68.1	COEFF	NET BF/ACRE				# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
DOUG FIR		87.6	8.7	19,035	20,860	22,685					
WHEMLOCK		118.2	11.8	11,847	13,434	15,021					
R ALDER		229.4	22.9	1,039	1,347	1,656					
WR CEDAR		206.4	20.6	1,132	1,427	1,721					
S SPRUCE		1000.0	99.9	0	3	7					
PS FIR		1000.0	99.9	0	86	172					
<b>TOTAL</b>		<b>52.2</b>	<b>5.2</b>	<b>35,219</b>	<b>37,157</b>	<b>39,095</b>	<b>109</b>	<b>56</b>	<b>27</b>		
CL	68.1	COEFF	V_BAR/ACRE				# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
DOUG FIR				114	125	136					
WHEMLOCK		40.5	4.1	116	131	147					
R ALDER		188.9	18.9	58	75	93					

TC PSTATS				<b>PROJECT STATISTICS</b>				PAGE	2	
				PROJECT	CLAUDE			DATE	12/5/2014	
TWP	RGE	SC	TRACT	TYPE		ACRES	PLOTS	TREES	CuFt	BdFt
026	012	06	CB	00R1	THR	226.90	100	554	S	W
30N	12W	20	CB	00U1						
CL	68.1		COEFF	<b>V_BAR/ACRE</b>				# OF PLOTS REQ.		INF. POP.
SD:	1.00		VAR.	S.E.%	LOW	AVG	HIGH	5	7	10
WR CEDAR			54.6	5.5	51	64	77			
S SPRUCE			1000.0	99.9	0	76	151			
PS FIR			1000.0	99.9	0	127	254			
<b>TOTAL</b>			<i>47.2</i>	<i>4.7</i>	<i>114</i>	<i>120</i>	<i>126</i>	<i>89</i>	<i>45</i>	<i>22</i>

<b>T026 R012 S06 T00R1</b>										<b>T026 R012 S06 T00R1</b>				
<b>Twp</b>	<b>Rge</b>	<b>Sec</b>	<b>Tract</b>	<b>Type</b>	<b>Acres</b>	<b>Plots</b>	<b>Sample Trees</b>	<b>CuFt</b>	<b>BdFt</b>					
026	012	06	CB	00R1	1.60	3	18	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
				Def%	Gross	Net		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					
WH	DM	2S	31	4.8	1,276	1,215	2	100				100				40	12	209	1.68	5.8
WH	DM	3S	53	1.5	2,100	2,070	3	100				16 7 76				35	10	127	1.18	16.3
WH	DM	4S	16	12.4	695	609	1	26	74	86 14				21	6	25	0.40	24.5		
<b>WH</b>	<b>Totals</b>		38	4.4	4,072	3,894	6	4	65	31	14	9	6	72	28	8	83	0.97	46.6	
RA	DM	2S	9	16.7	406	339	1	100				100				20	13	100	1.55	3.4
RA	DM	4S	50	7.9	1,974	1,818	3	100				100				40	8	90	0.66	20.3
RA	DM	UT	41		1,446	1,446	2	100				7	56	37		25	5	25	0.30	58.7
<b>RA</b>	<b>Totals</b>		35	5.9	3,826	3,602	6	40	50	9	12	22	65		28	6	44	0.46	82.4	
DF	DM	2S	43		763	763	1	100				100				40	19	600	3.78	1.3
DF	DM	3S	40	1.8	697	684	1	100				100				40	7	80	0.69	8.5
DF	DM	4S	17		290	290	0	100				25 75				24	5	23	0.53	12.7
<b>DF</b>	<b>Totals</b>		17	.7	1,750	1,737	3	17	39	44	4		96		31	7	77	0.85	22.4	
RC	DM	3S	92	4.2	1,014	972	2	15	85	52 48				26	7	52	0.70	18.7		
RC	DM	4S	8		85	85	0	100				100				18	5	20	0.29	4.2
<b>RC</b>	<b>Totals</b>		10	3.9	1,098	1,056	2	22	78	8 48 44				25	7	46	0.64	22.9		
<b>Type Totals</b>				4.3	10,746	10,289	16	21	57	15	7	11	16	2	71	28	7	59	0.67	174.4

<b>T026 R012 S06 T00R2</b>										<b>T026 R012 S06 T00R2</b>				
<b>Twp</b>	<b>Rge</b>	<b>Sec</b>	<b>Tract</b>	<b>Type</b>	<b>Acres</b>	<b>Plots</b>	<b>Sample Trees</b>	<b>CuFt</b>	<b>BdFt</b>					
<b>026</b>	<b>012</b>	<b>06</b>	<b>CB</b>	<b>00R2</b>	<b>1.00</b>	<b>1</b>	<b>20</b>	<b>S</b>	<b>W</b>					

Spp	S T	So rt	Gr ad	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log				Logs Per /Acre
									Log Scale Dia.				Log Length				Ln	Dia	Bd	CF/ Lf	
									4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99	Ft	In	Ft	Lf	
DF		DM	2S	25		240	240	0	100				100				40	13	240	1.78	1.0
DF		DM	3S	59	1.8	560	550	1	100				20 80				38	7	79	0.70	7.0
DF		DM	4S	13		130	130	0	100				46	23	31		18	5	19	0.27	7.0
DF		DM	UT	3		20	20	0	100				100				21	5	20	0.17	1.0
<b>DF</b>	<b>Totals</b>			69	1.1	950	940	1	16	59	26		6	5	12	77	28	7	59	0.65	16.0
RA		DM	3S	17		60	60	0	100				100				40	6	60	0.49	1.0
RA		DM	4S	40		140	140	0	21	79			100				28	7	47	0.40	3.0
RA		DM	UT	43	11.8	170	150	0	100				60	20	20		20	5	19	0.21	8.0
<b>RA</b>	<b>Totals</b>			26	5.4	370	350	0	51	49			26	49	9	17	24	6	29	0.31	12.0
WH		DM	3S	75		60	60	0	100				100				40	6	60	0.49	1.0
WH		DM	4S	12		10	10	0	100				100				13	5	10	0.14	1.0
WH		DM	UT	13		10	10	0	100				100				9	5	10	0.17	1.0
<b>WH</b>	<b>Totals</b>			6		80	80	0	25	75			25		75		21	5	27	0.37	3.0
<b>Type Totals</b>					2.1	1,400	1,370	1	26	57	18		12	16	10	61	26	6	44	0.51	31.0

<b>T030 R012 S07 T0RW3</b>	<b>T030 R012 S07 T0RW3</b>
Twp <b>030</b> Rge <b>012</b> Sec <b>07</b> Tract <b>CB</b> Type <b>0RW3</b> Acres <b>2.30</b> Plots <b>3</b> Sample Trees <b>15</b> CuFt <b>S</b> BdFt <b>W</b>	

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	25	6.2	3,342	3,133	7	100				100				40	12	199	1.68	15.8						
DF	DM	3S	38	1.7	4,935	4,851	11	100				100				40	7	74	0.59	65.3						
DF	DM	4S	37	3.1	4,670	4,525	10	88	12					6	32	11	52	29	5	31	0.28	146.3				
<b>DF</b>	<b>Totals</b>		76	3.4	12,947	12,509	29	32	43	25					2	11	4	83	33	6	55	0.50	227.4			
RC	DM	3S	64	41.5	2,388	1,397	3	40 60				100				40	16	254	3.49	5.5						
RC	DM	4S	36		777	777	2	66	34					16	84					25	6	35	0.56	22.5		
<b>RC</b>	<b>Totals</b>		13	31.3	3,165	2,174	5	23	12	26	38					6	30					28	8	78	1.37	28.0
WH	DM	2S	90		1,528	1,528	4	100				100				40	15	360	2.18	4.2						
WH	DM	4S	10		170	170	0	100				100				27	7	40	0.75	4.2						
<b>WH</b>	<b>Totals</b>		10		1,698	1,698	4	10 90				10 90				34	11	200	1.61	8.5						
<b>Type Totals</b>				8.0	17,810	16,380	38	27	36	32	5	2	14	3	81	33	6	62	0.62	263.9						









TC TSTATS				STATISTICS				PAGE	1	
PROJECT				CLAUDE				DATE	12/5/2014	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
026	012	06	CB	00R1	1.60	3	18	S	W	
			TREES	ESTIMATED	PERCENT					
			PER PLOT	TOTAL	SAMPLE					
			TREES	TREES	TREES					
TOTAL	3	18	6.0							
CRUISE	3	18	6.0	185	9.7					
DBH COUNT										
REFOREST										
COUNT										
BLANKS										
100 %										
STAND SUMMARY										
SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET	
TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC	
WHEMLOCK	7	31.3	16.5	57	11.5	46.7	4,072	3,894	1,272	1,272
R ALDER	6	58.7	11.2	60	12.0	40.0	3,826	3,602	1,081	1,081
DOUG FIR	3	13.9	16.2	56	5.0	20.0	1,750	1,737	592	592
WR CEDAR	2	11.5	14.6	62	3.5	13.3	1,098	1,056	363	363
<b>TOTAL</b>	<b>18</b>	<b>115.5</b>	<b>13.8</b>	<b>59</b>	<b>32.3</b>	<b>120.0</b>	<b>10,746</b>	<b>10,289</b>	<b>3,308</b>	<b>3,308</b>
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL:	68.1 %	COEFF	TREES/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
WHEMLOCK	104.8	72.5	9	31	54					
R ALDER	91.3	63.2	22	59	96					
DOUG FIR	173.2	119.8		14	31					
WR CEDAR	173.2	119.8		11	25					
<b>TOTAL</b>	<b>13.7</b>	<b>9.4</b>	<b>105</b>	<b>115</b>	<b>126</b>	<b>11</b>	<b>5</b>	<b>3</b>		
CL:	68.1 %	COEFF	BASAL AREA/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
WHEMLOCK	89.2	61.7	18	47	75					
R ALDER	100.0	69.2	12	40	68					
DOUG FIR	173.2	119.8		20	44					
WR CEDAR	173.2	119.8		13	29					
<b>TOTAL</b>	<b>16.7</b>	<b>11.5</b>	<b>106</b>	<b>120</b>	<b>134</b>	<b>16</b>	<b>8</b>	<b>4</b>		
CL:	68.1 %	COEFF	NET BF/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
WHEMLOCK	88.1	61.0	1,520	3,894	6,268					
R ALDER	114.4	79.2	750	3,602	6,454					
DOUG FIR	173.2	119.8		1,737	3,819					
WR CEDAR	173.2	119.8		1,056	2,322					
<b>TOTAL</b>	<b>20.1</b>	<b>13.9</b>	<b>8,862</b>	<b>10,289</b>	<b>11,717</b>	<b>23</b>	<b>12</b>	<b>6</b>		
CL:	68.1 %	COEFF	V-BAR/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
WHEMLOCK	88.1	61.0	33	83	134					
R ALDER	114.4	79.2	19	90	161					
DOUG FIR	173.2	119.8		87	191					
WR CEDAR	173.2	119.8		79	174					
<b>TOTAL</b>	<b>20.1</b>	<b>13.9</b>	<b>74</b>	<b>86</b>	<b>98</b>	<b>23</b>	<b>12</b>	<b>6</b>		

**STATISTICS**

PROJECT CLAUDE

TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
026	012	06	CB	00R2	1.00	1	20	S	W

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	1	20	20.0		
CRUISE	1	20	20.0	20	100.0
DBH COUNT					
REFOREST					
COUNT					
BLANKS					
100 %					

**STAND SUMMARY**

	SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
DOUG FIR	9	9.0	14.4	59	2.7	10.2	950	940	292	292
R ALDER	9	9.0	8.9	62	1.3	3.9	370	350	87	87
WHEMLOCK	2	2.0	9.5	48	0.3	1.0	80	80	23	23
<b>TOTAL</b>	<i>20</i>	<i>20.0</i>	<i>11.8</i>	<i>59</i>	<i>4.4</i>	<i>15.1</i>	<i>1,400</i>	<i>1,370</i>	<i>403</i>	<i>403</i>

CONFIDENCE LIMITS OF THE SAMPLE

68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT	CLAUDE			DATE	12/5/2014	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
030	012	07	CB	ORW3	2.30	3	15	S	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
					TREES	TREES				
TOTAL		3	15	5.0						
CRUISE		3	15	5.0	470		3.2			
DBH COUNT										
REFOREST										
COUNT										
BLANKS										
100 %										
<b>STAND SUMMARY</b>										
	SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET
	TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC
DOUG FIR	11	177.7	12.3	63	41.8	146.7	12,947	12,509	3,807	3,807
WR CEDAR	3	22.5	18.1	40	9.4	40.0	3,165	2,174	1,087	1,086
WHEMLOCK	1	4.2	24.0	69	2.7	13.3	1,698	1,698	456	456
<b>TOTAL</b>	<b>15</b>	<b>204.4</b>	<b>13.4</b>	<b>61</b>	<b>54.7</b>	<b>200.0</b>	<b>17,810</b>	<b>16,380</b>	<b>5,350</b>	<b>5,350</b>
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL:	68.1 %	COEFF	TREES/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR		94.5	65.4	62	178	294				
WR CEDAR		173.2	119.8		22	49				
WHEMLOCK		173.2	119.8		4	9				
<b>TOTAL</b>		<b>68.5</b>	<b>47.4</b>	<b>108</b>	<b>204</b>	<b>301</b>	<b>269</b>	<b>137</b>	<b>67</b>	
CL:	68.1 %	COEFF	BASAL AREA/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR		41.7	28.8	104	147	189				
WR CEDAR		173.2	119.8		40	88				
WHEMLOCK		173.2	119.8		13	29				
<b>TOTAL</b>		<b>20.0</b>	<b>13.8</b>	<b>172</b>	<b>200</b>	<b>228</b>	<b>23</b>	<b>12</b>	<b>6</b>	
CL:	68.1 %	COEFF	NET BF/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR		30.0	20.8	9,910	12,509	15,107				
WR CEDAR		173.2	119.8		2,174	4,779				
WHEMLOCK		173.2	119.8		1,698	3,732				
<b>TOTAL</b>		<b>24.3</b>	<b>16.8</b>	<b>13,628</b>	<b>16,380</b>	<b>19,132</b>	<b>34</b>	<b>17</b>	<b>8</b>	
CL:	68.1 %	COEFF	V-BAR/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR		30.0	20.8	68	85	103				
WR CEDAR		173.2	119.8		54	119				
WHEMLOCK		173.2	119.8		127	280				
<b>TOTAL</b>		<b>24.3</b>	<b>16.8</b>	<b>68</b>	<b>82</b>	<b>96</b>	<b>34</b>	<b>17</b>	<b>8</b>	

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT	CLAUDE			DATE	12/5/2014	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
030	011	06	CB	ORW4	1.00	2	5	S	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
				PLOTS	TREES	TREES	TREES			
TOTAL		2	5	2.5						
CRUISE		2	5	2.5	79		6.3			
DBH COUNT										
REFOREST										
COUNT										
BLANKS										
100 %										
<b>STAND SUMMARY</b>										
	SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET
	TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC
R ALDER	3	62.9	9.4	61	9.8	30.0	2,110	2,039	562	562
WHEMLOCK	1	12.7	12.0	71	2.9	10.0	891	891	268	268
S SPRUCE	1	3.8	22.0	62	2.1	10.0	833	758	252	252
<b>TOTAL</b>	<b>5</b>	<b>79.4</b>	<b>10.7</b>	<b>62</b>	<b>15.3</b>	<b>50.0</b>	<b>3,835</b>	<b>3,688</b>	<b>1,081</b>	<b>1,081</b>
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL:	68.1 %	COEFF	<b>TREES/ACRE</b>				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
R ALDER		109.2	102.3		63	127				
WHEMLOCK		141.4	132.4		13	30				
S SPRUCE		141.4	132.4		4	9				
<b>TOTAL</b>		<b>70.6</b>	<b>66.1</b>		<b>27</b>	<b>79</b>	<b>132</b>	<b>349</b>	<b>178</b>	<b>87</b>
CL:	68.1 %	COEFF	<b>BASAL AREA/ACRE</b>				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
R ALDER		47.1	44.1		17	30	43			
WHEMLOCK		141.4	132.4		10	23				
S SPRUCE		141.4	132.4		10	23				
<b>TOTAL</b>		<b>28.3</b>	<b>26.5</b>		<b>37</b>	<b>50</b>	<b>63</b>	<b>56</b>	<b>29</b>	<b>14</b>
CL:	68.1 %	COEFF	<b>NET BF/ACRE</b>				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
R ALDER		12.2	11.5		1,805	2,039	2,272			
WHEMLOCK		141.4	132.4			891	2,072			
S SPRUCE		141.4	132.4			758	1,761			
<b>TOTAL</b>		<b>1.6</b>	<b>1.5</b>		<b>3,631</b>	<b>3,688</b>	<b>3,744</b>	<b>0</b>	<b>0</b>	<b>0</b>
CL:	68.1 %	COEFF	<b>V-BAR/ACRE</b>				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
R ALDER		12.2	11.5		60	68	76			
WHEMLOCK		141.4	132.4			89	207			
S SPRUCE		141.4	132.4			76	176			
<b>TOTAL</b>		<b>1.6</b>	<b>1.5</b>		<b>73</b>	<b>74</b>	<b>75</b>	<b>0</b>	<b>0</b>	<b>0</b>

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT	CLAUDE			DATE	12/5/2014	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
30N	12W	20	CB	00U1	96.00	41	241	S	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
					TREES	TREES				
TOTAL		41	241	5.9						
CRUISE		22	115	5.2	22,361		.5			
DBH COUNT										
REFOREST										
COUNT		19	119	6.3						
BLANKS										
100 %										
<b>STAND SUMMARY</b>										
	SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET
	TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC
WHEMLOCK	54	117.1	15.2	70	37.7	146.6	20,116	19,366	5,260	5,260
DOUG FIR	39	53.7	20.9	83	27.9	127.5	18,413	17,333	4,850	4,850
WR CEDAR	12	36.7	13.8	56	10.2	38.0	2,827	2,596	1,061	1,061
R ALDER	10	25.5	11.9	58	5.7	19.5	1,742	1,594	506	505
<b>TOTAL</b>	<i>115</i>	<i>232.9</i>	<i>16.2</i>	<i>69</i>	<i>82.5</i>	<i>331.7</i>	<i>43,099</i>	<i>40,889</i>	<i>11,677</i>	<i>11,676</i>
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL:	68.1 %	COEFF	<b>TREES/ACRE</b>				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
WHEMLOCK		105.3	16.4	98	117	136				
DOUG FIR		105.3	16.4	45	54	63				
WR CEDAR		153.4	23.9	28	37	45				
R ALDER		212.0	33.1	17	25	34				
<b>TOTAL</b>		<i>54.8</i>	<i>8.5</i>	<i>213</i>	<i>233</i>	<i>253</i>	<i>120</i>	<i>61</i>	<i>30</i>	
CL:	68.1 %	COEFF	<b>BASAL AREA/ACRE</b>				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
WHEMLOCK		86.8	13.5	127	147	167				
DOUG FIR		98.3	15.3	108	128	147				
WR CEDAR		150.4	23.5	29	38	47				
R ALDER		195.1	30.4	14	20	25				
<b>TOTAL</b>		<i>34.3</i>	<i>5.4</i>	<i>314</i>	<i>332</i>	<i>349</i>	<i>47</i>	<i>24</i>	<i>12</i>	
CL:	68.1 %	COEFF	<b>NET BF/ACRE</b>				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
WHEMLOCK		89.7	14.0	16,654	19,366	22,078				
DOUG FIR		100.7	15.7	14,610	17,333	20,056				
WR CEDAR		151.4	23.6	1,983	2,596	3,209				
R ALDER		193.4	30.2	1,113	1,594	2,074				
<b>TOTAL</b>		<i>40.0</i>	<i>6.2</i>	<i>38,339</i>	<i>40,889</i>	<i>43,439</i>	<i>64</i>	<i>33</i>	<i>16</i>	
CL:	68.1 %	COEFF	<b>V-BAR/ACRE</b>				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
WHEMLOCK				114	132	151				
DOUG FIR				115	136	157				
WR CEDAR				52	68	84				
R ALDER		110.3	17.2	57	82	106				
<b>TOTAL</b>		<i>196.3</i>	<i>30.6</i>	<i>116</i>	<i>123</i>	<i>131</i>	<i>1,538</i>	<i>785</i>	<i>385</i>	

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT	CLAUDE			DATE	12/5/2014	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
030	012	01	CB	00U2	44.00	17	93	S	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
				TREES	TREES	TREES				
TOTAL		17	93	5.5						
CRUISE		7	38	5.4	10,546		.4			
DBH COUNT										
REFOREST										
COUNT		10	55	5.5						
BLANKS										
100 %										
<b>STAND SUMMARY</b>										
	SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET
	TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC
DOUG FIR	20	155.0	16.2	66	54.9	220.6	25,207	24,120	7,108	7,108
WHEMLOCK	7	52.3	15.7	63	17.7	69.9	10,116	9,218	2,634	2,633
WR CEDAR	6	21.1	12.8	51	5.3	18.8	1,026	1,008	452	452
R ALDER	5	11.3	13.8	68	3.2	11.8	1,005	939	324	324
<b>TOTAL</b>	<b>38</b>	<b>239.7</b>	<b>15.7</b>	<b>64</b>	<b>81.1</b>	<b>321.0</b>	<b>37,354</b>	<b>35,285</b>	<b>10,517</b>	<b>10,517</b>
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL:	68.1 %	COEFF	<b>TREES/ACRE</b>				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	60.8	15.2		131	155	179				
WHEMLOCK	146.1	36.5		33	52	71				
WR CEDAR	187.1	46.7		11	21	31				
R ALDER	412.3	103.0			11	23				
<b>TOTAL</b>	<b>47.7</b>	<b>11.9</b>		<b>211</b>	<b>240</b>	<b>268</b>	<b>96</b>	<b>49</b>	<b>24</b>	
CL:	68.1 %	COEFF	<b>BASAL AREA/ACRE</b>				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	57.6	14.4		189	221	252				
WHEMLOCK	126.1	31.5		48	70	92				
WR CEDAR	170.0	42.5		11	19	27				
R ALDER	412.3	103.0			12	24				
<b>TOTAL</b>	<b>35.8</b>	<b>9.0</b>		<b>292</b>	<b>321</b>	<b>350</b>	<b>54</b>	<b>28</b>	<b>14</b>	
CL:	68.1 %	COEFF	<b>NET BF/ACRE</b>				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR	59.2	14.8		20,554	24,120	27,687				
WHEMLOCK	133.3	33.3		6,148	9,218	12,288				
WR CEDAR	167.9	41.9		585	1,008	1,431				
R ALDER	412.3	103.0			939	1,906				
<b>TOTAL</b>	<b>39.6</b>	<b>9.9</b>		<b>31,794</b>	<b>35,285</b>	<b>38,776</b>	<b>67</b>	<b>34</b>	<b>17</b>	
CL:	68.1 %	COEFF	<b>V-BAR/ACRE</b>				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR				93	109	126				
WHEMLOCK				88	132	176				
WR CEDAR	130.0	32.5		31	54	76				
R ALDER	412.3	103.0			80	162				
<b>TOTAL</b>	<b>265.8</b>	<b>66.4</b>		<b>99</b>	<b>110</b>	<b>121</b>	<b>2,997</b>	<b>1,529</b>	<b>749</b>	

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT	CLAUDE			DATE	12/5/2014	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
030	011	06	CB	00U3	81.00	33	162	S	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
					TREES	TREES				
TOTAL		33	162	4.9						
CRUISE		18	82	4.6	21,080		.4			
DBH COUNT										
REFOREST										
COUNT		15	79	5.3						
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	45	137.7	16.0	70	47.9	191.3	25,026	24,387	6,456	6,456
WHEMLOCK	18	75.8	13.4	70	20.2	73.9	9,852	9,535	2,464	2,464
R ALDER	14	33.2	10.3	48	6.0	19.4	1,326	1,275	403	403
WR CEDAR	4	12.5	9.4	43	2.0	6.1	289	289	93	93
PS FIR	1	1.0	19.0	89	0.4	1.9	250	240	76	76
<b>TOTAL</b>	<b>82</b>	<b>260.2</b>	<b>14.4</b>	<b>66</b>	<b>77.2</b>	<b>292.5</b>	<b>36,743</b>	<b>35,727</b>	<b>9,491</b>	<b>9,491</b>
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL:	68.1 %	COEFF	TREES/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR		78.4	13.6	119	138	156				
WHEMLOCK		130.3	22.7	59	76	93				
R ALDER		196.7	34.2	22	33	45				
WR CEDAR		256.5	44.6	7	13	18				
PS FIR		574.5	99.9	0	1	2				
<b>TOTAL</b>		<b>50.5</b>	<b>8.8</b>	<b>237</b>	<b>260</b>	<b>283</b>	<b>102</b>	<b>52</b>	<b>25</b>	
CL:	68.1 %	COEFF	BASAL AREA/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR		66.3	11.5	169	191	213				
WHEMLOCK		124.2	21.6	58	74	90				
R ALDER		193.8	33.7	13	19	26				
WR CEDAR		240.3	41.8	4	6	9				
PS FIR		574.5	99.9	0	2	4				
<b>TOTAL</b>		<b>38.6</b>	<b>6.7</b>	<b>273</b>	<b>293</b>	<b>312</b>	<b>59</b>	<b>30</b>	<b>15</b>	
CL:	68.1 %	COEFF	NET BF/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR		68.0	11.8	21,501	24,387	27,273				
WHEMLOCK		124.0	21.6	7,478	9,535	11,592				
R ALDER		187.2	32.6	860	1,275	1,690				
WR CEDAR		244.8	42.6	166	289	413				
PS FIR		574.5	99.9	0	240	481				
<b>TOTAL</b>		<b>45.6</b>	<b>7.9</b>	<b>32,896</b>	<b>35,727</b>	<b>38,559</b>	<b>83</b>	<b>42</b>	<b>21</b>	
CL:	68.1 %	COEFF	V-BAR/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR				112	127	143				
WHEMLOCK				101	129	157				
R ALDER		180.0	31.3	44	66	87				
WR CEDAR		215.2	37.4	27	48	68				
PS FIR		574.5	99.9	0	127	254				
<b>TOTAL</b>		<b>205.1</b>	<b>35.7</b>	<b>112</b>	<b>122</b>	<b>132</b>	<b>1,679</b>	<b>857</b>	<b>420</b>	

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

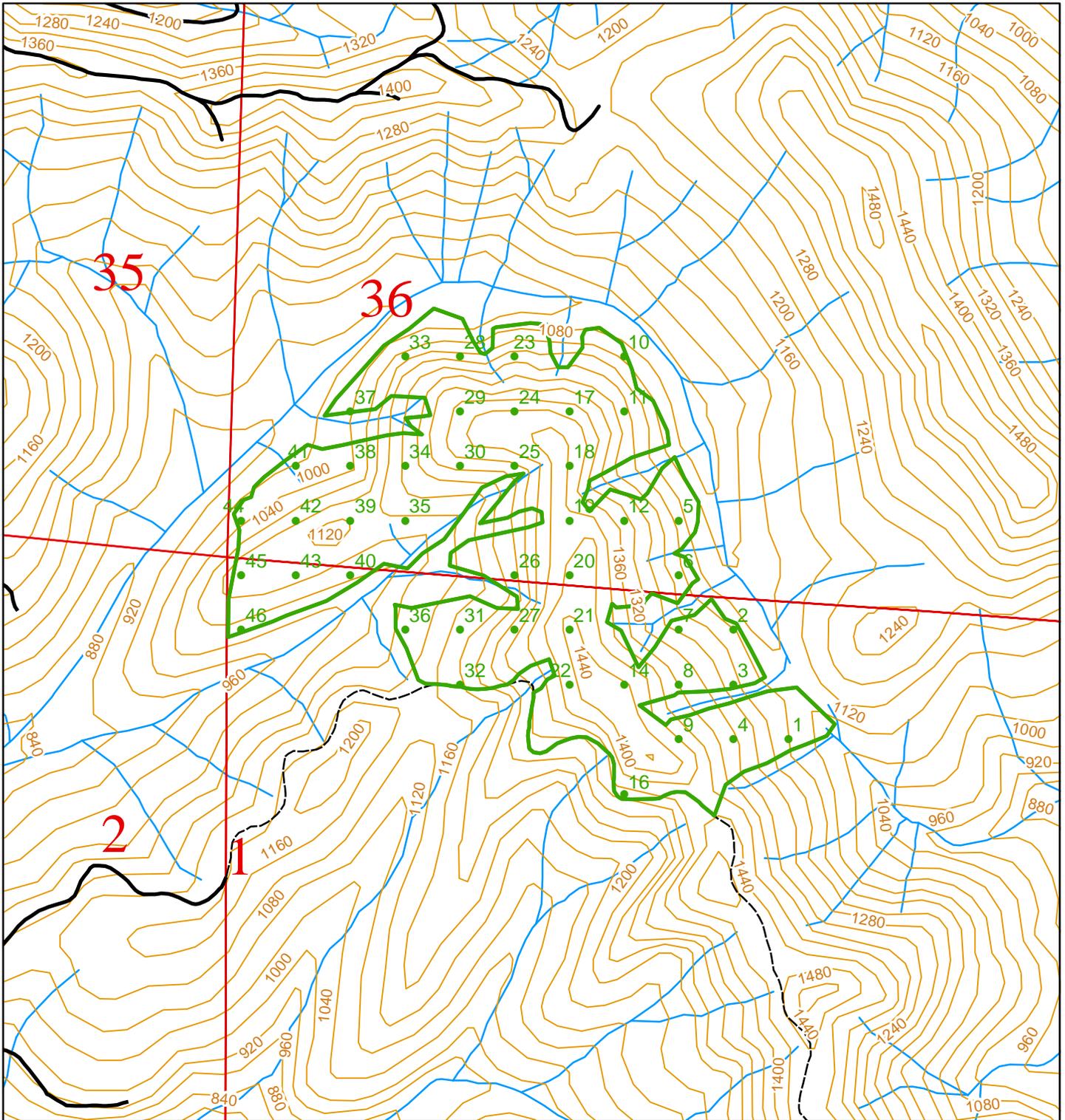
T026 R012 S06 Ty00R1	1.6
T026 R012 S06 Ty00R2	1.0
T30N R12W S20 Ty00U	96.0

Project **CLAUDE**  
Acres **226.90**

Page No **1**  
Date: **12/5/2014**  
Time **8:20:17AM**

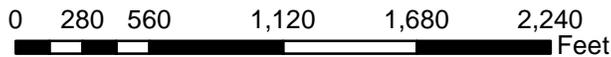
Species	Total	Total	Total	Net Cubic Ft/		CF/ LF	Total CCF		Total MBF	
	Trees	Logs	Tons	Tree	Log		Gross	Net	Gross	Net
DOUG FIR	23,568	42,706	37,370	55.64	30.70	0.94	13,112	13,112	4,937	4,733
WHEMLOCK	19,754	34,150	26,361	41.70	24.12	0.74	8,238	8,238	3,186	3,048
WR CEDAR	5,537	6,561	3,111	23.91	20.18	0.69	1,324	1,324	349	324
R ALDER	5,800	8,378	2,691	16.86	11.67	0.43	978	978	327	306
PS FIR	78	156	176	78.98	39.49	0.99	62	62	20	19
S SPRUCE	4	8	7	66.47	33.24	1.28	3	3	1	1
<b>Totals</b>	<b>54,740</b>	<b>91,958</b>	<b>69,716</b>	<b>43.32</b>	<b>25.79</b>	<b>0.81</b>	<b>23,717</b>	<b>23,715</b>	<b>8,821</b>	<b>8,431</b>

Wood Type Species	Total	Total	Total	Net Cubic Ft/		CF/ LF	Total CCF		Total MBF	
	Trees	Logs	Tons	Tree	Log		Gross	Net	Gross	Net
C	48,941	83,580	67,026	46.46	27.20	0.84	22,738	22,738	8,493	8,125
H	5,800	8,378	2,691	16.86	11.67	0.43	978	978	327	306
<b>Totals</b>	<b>54,740</b>	<b>91,958</b>	<b>69,716</b>	<b>43.32</b>	<b>25.79</b>	<b>0.81</b>	<b>23,717</b>	<b>23,715</b>	<b>8,821</b>	<b>8,431</b>



**FMU POLYGON AND SAMPLE POINT INFORMATION**

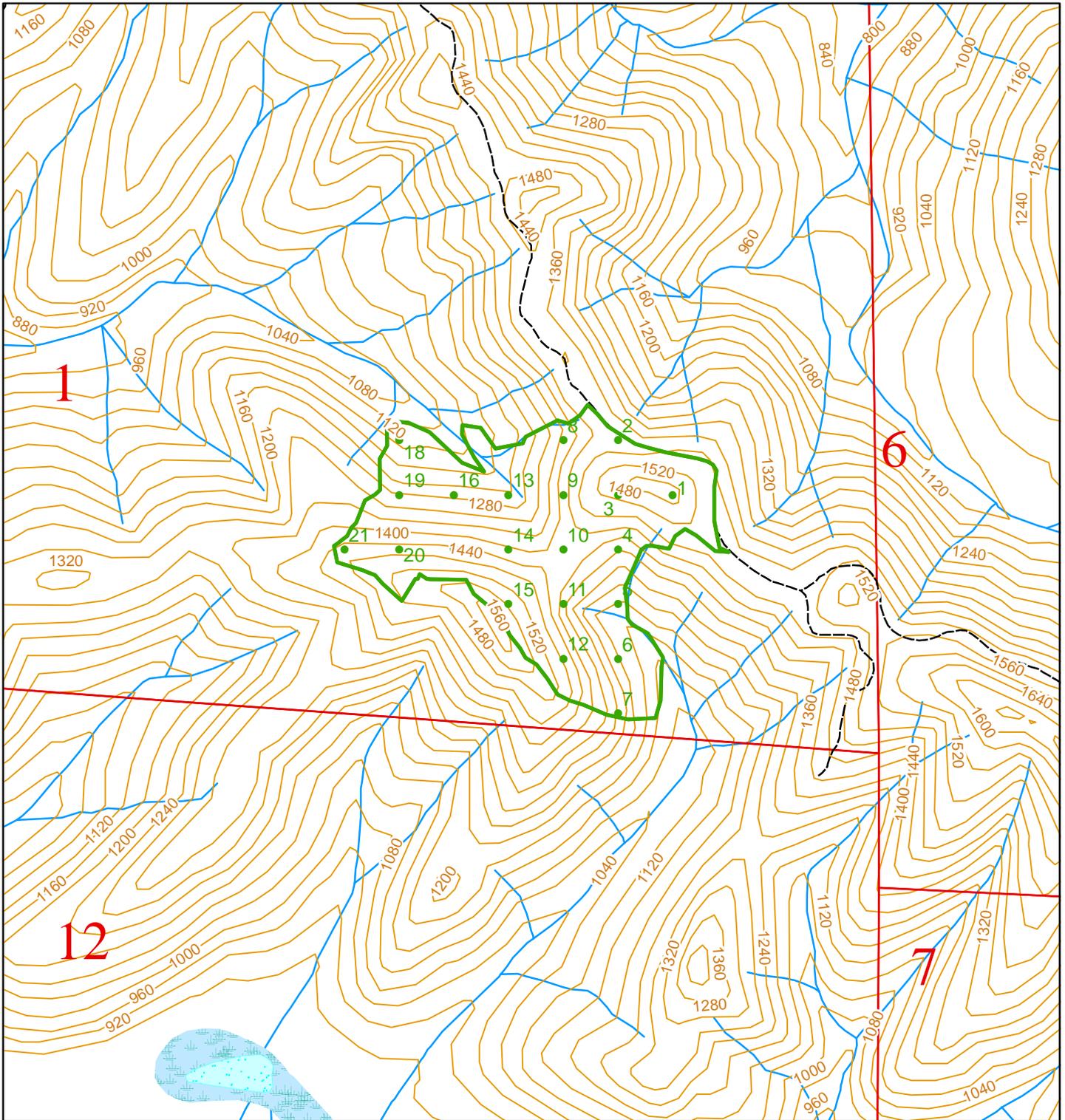
FMU_NM:	CLAWED BEAR U-1	Township: T31R12W, T30R12W
FMU_ID:	47489	DNR Region: OLYMPIC
Acres:	101	Total Sample Points: 46
County:	CLALLAM	Spacing Between Points: Width: 310 Height: 310



Scale 1:9,600

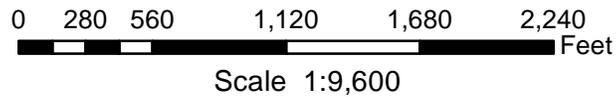
**Legend**

- Sample Points
- FMU polys
- Public Land Survey Sections
- Contours 40-foot



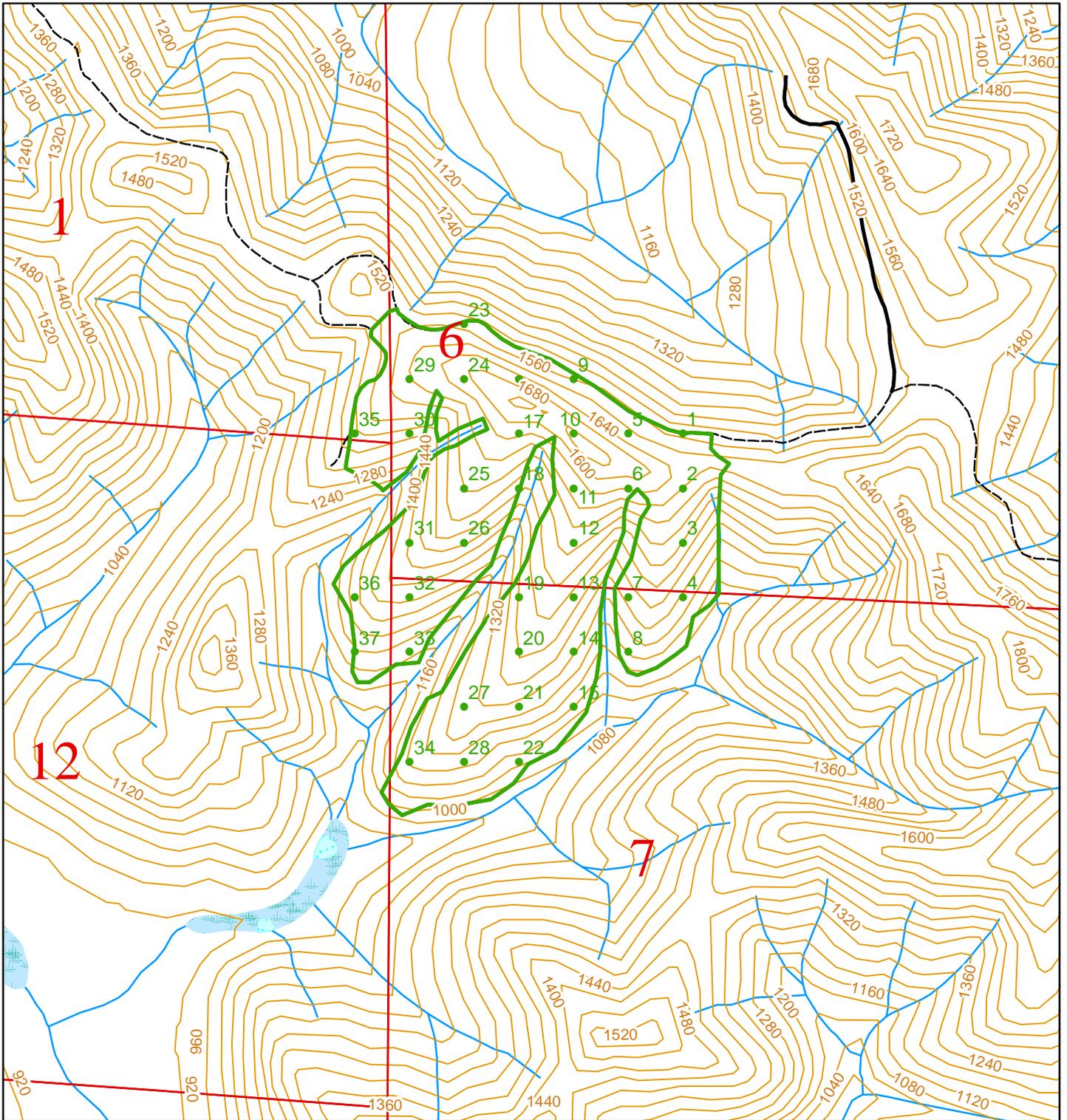
**FMU POLYGON AND SAMPLE POINT INFORMATION**

FMU_NM:	CLAWED BEAR U-2	Township:	T30R12W
FMU_ID:	47590	DNR Region:	OLYMPIC
Acres:	47	Total Sample Points:	21
County:	CLALLAM	Spacing Between Points:	Width: 310 Height: 310



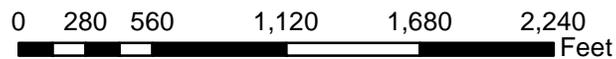
**Legend**

- Sample Points
- FMU polys
- Public Land Survey Sections
- Contours 40-foot



**FMU POLYGON AND SAMPLE POINT INFORMATION**

FMU_NM:	CLAWED BEAR U3	Township: T30R11W, T30R12W
FMU_ID:	64032	DNR Region: OLYMPIC
Acres:	83	Total Sample Points: 37
County:	CLALLAM	Spacing Between Points: Width: 310 Height: 310



Scale 1:9,600

**Legend**

- Sample Points
- FMU polys
- Public Land Survey Sections
- Contours 40-foot



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

FPA/N No: 2614062  
 Effective Date: 3/6/2016  
 Expiration Date: 3/6/2019  
 Shut Down Zone: 652NW  
 EARR Tax Credit:  Eligible [ ] Non-eligible  
 Reference: DNR - Clawed Bear VRH

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

**Decision**

- Notification Operations shall not begin before the effective date.
- Approved This Forest Practices Application is subject to the conditions listed below.
- Disapproved This Forest Practices Application is disapproved for the reasons listed below.
- Closed Applicant has withdrawn 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: Erik Dukes Region: Olympic

Title: Forest Practice Forester Date: 3/6/2016

Copies to:  Landowner, Timber Owner and Operator.

Issued in person:  Landowner [ ] Timber Owner [ ] Operator By: Connie L. Sallee  
 Connie L. Sallee

**Appeal Information**

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

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

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

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

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

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

And

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

**Other Applicable Laws**

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

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

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

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

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

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

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

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

**DNR affidavit of mailing:**

On this day \_\_\_\_\_, I placed in the United States mail at \_\_\_\_\_, WA,  
(date) (post office location)

postage paid, a true and accurate copy of this document. Notice of Decision FPA # 2614062

\_\_\_\_\_  
(Printed name)

\_\_\_\_\_  
(Signature)

STATE OF WASHINGTON  
DEPARTMENT OF NATURAL RESOURCES

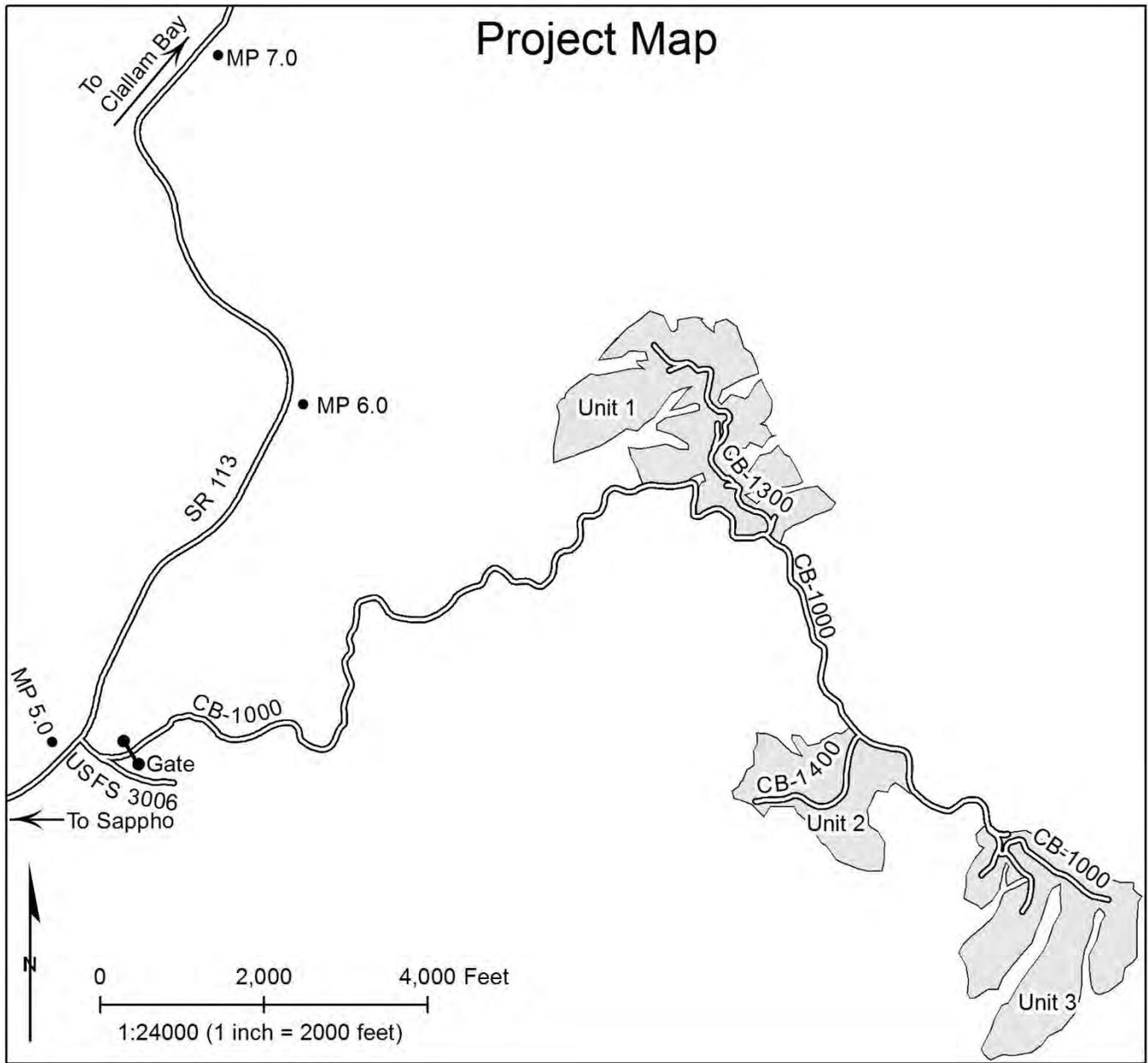
CLAWED BEAR TIMBER SALE ROAD PLAN  
CLALLAM COUNTY  
COAST DISTRICT

AGREEMENT NO.: 30-092364

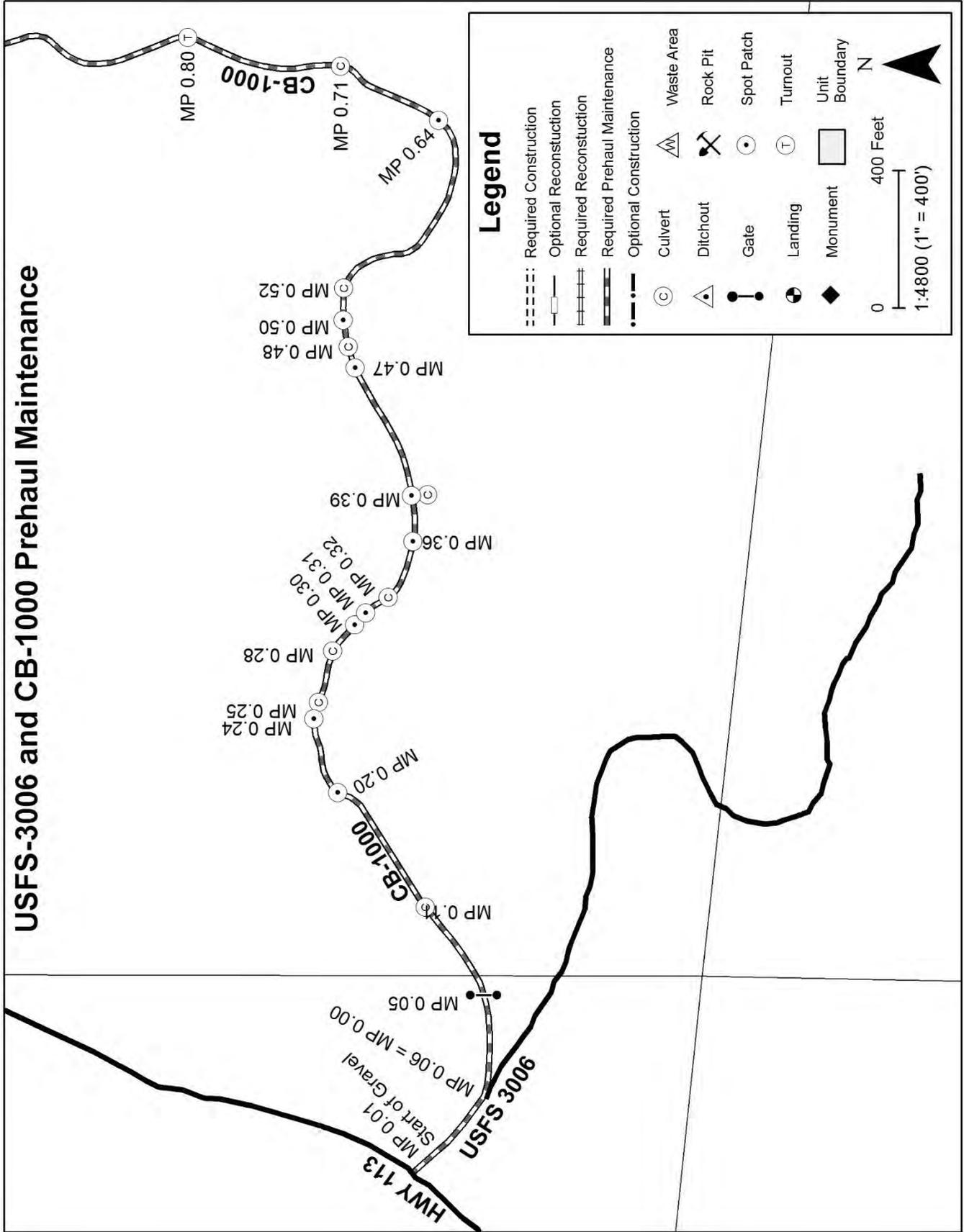
DISTRICT ENGINEER: MATTHEW WOLFORD

DATE: MARCH 4, 2016

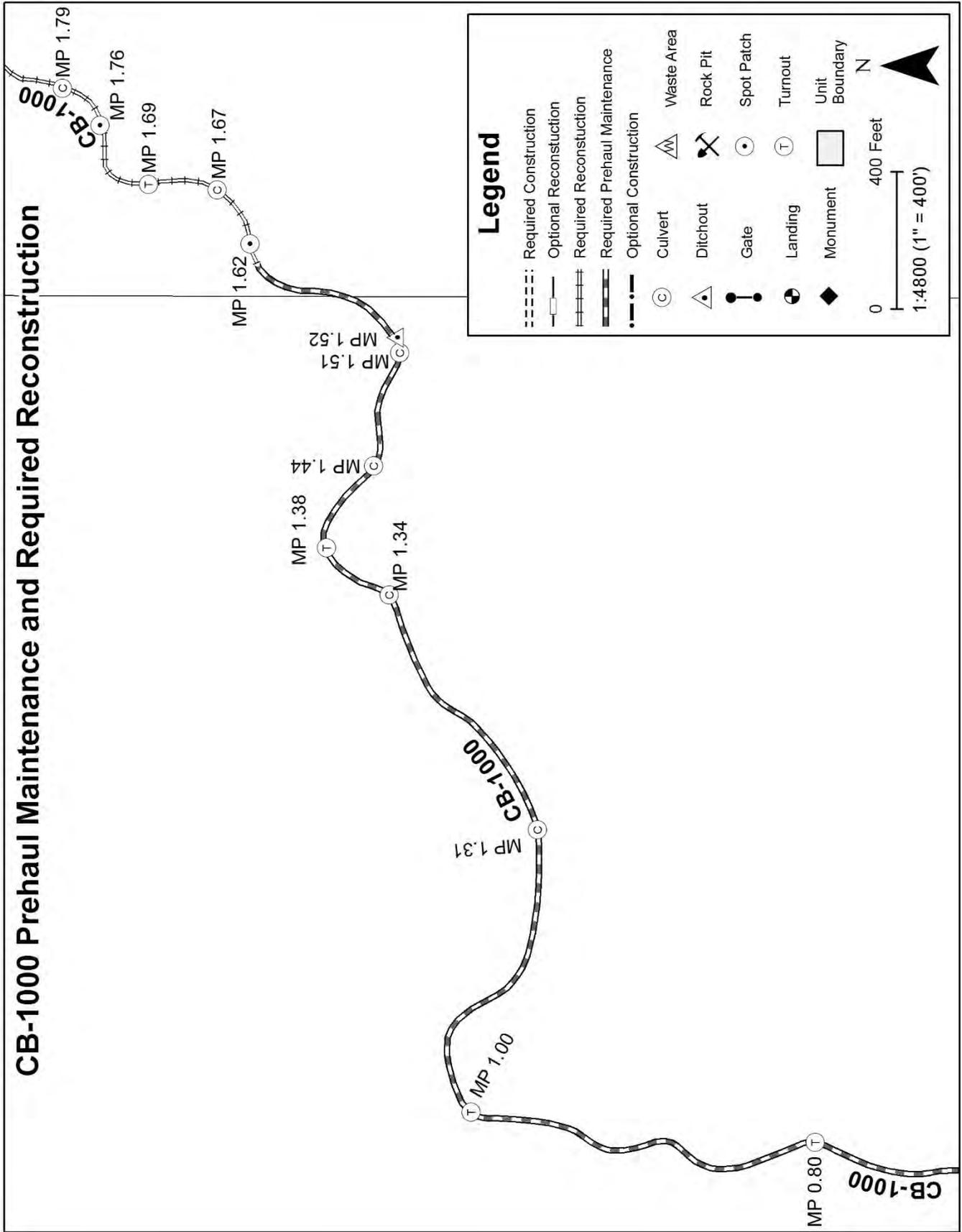
DRAWN & COMPILED BY: MADISEN WARNSTADT

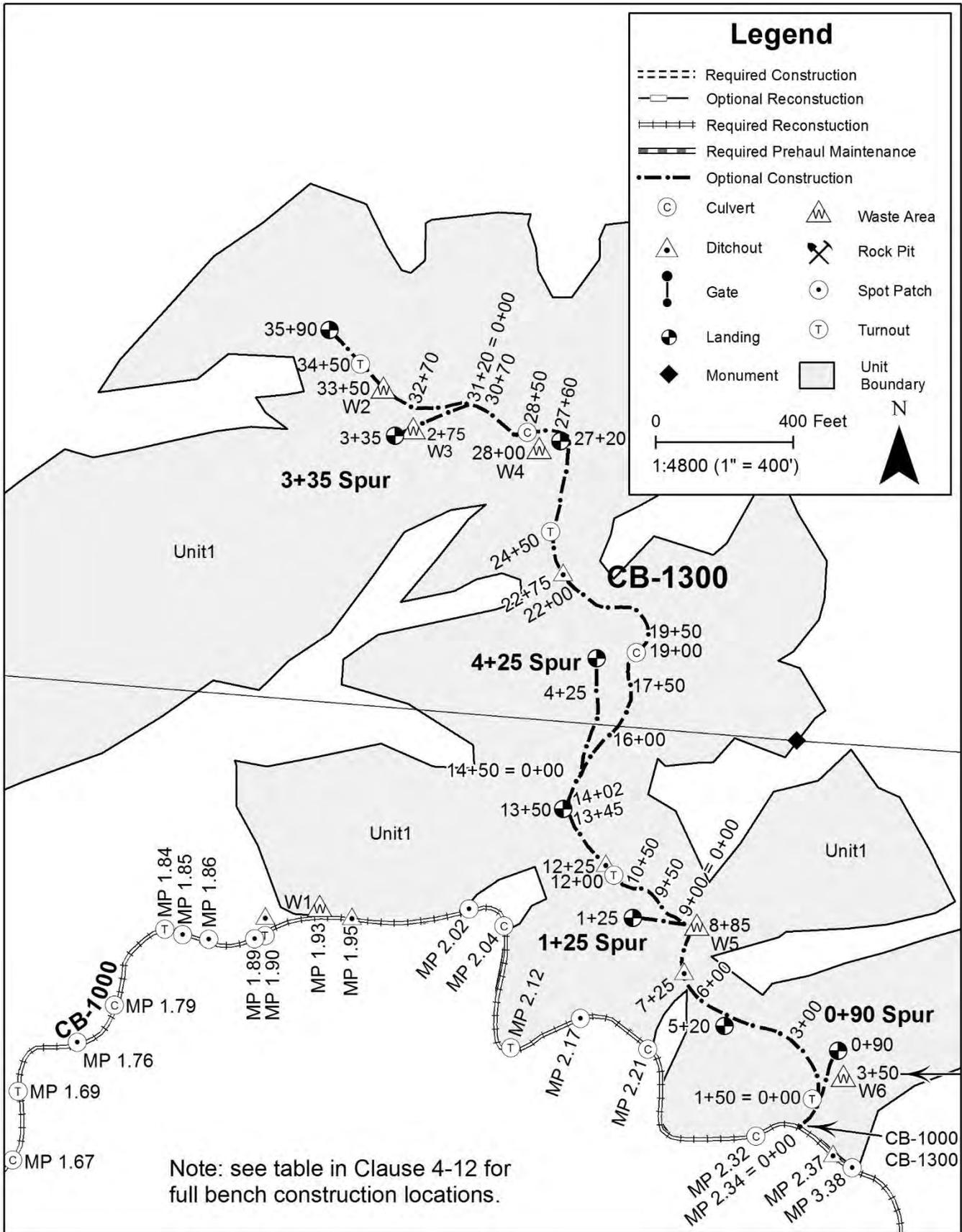


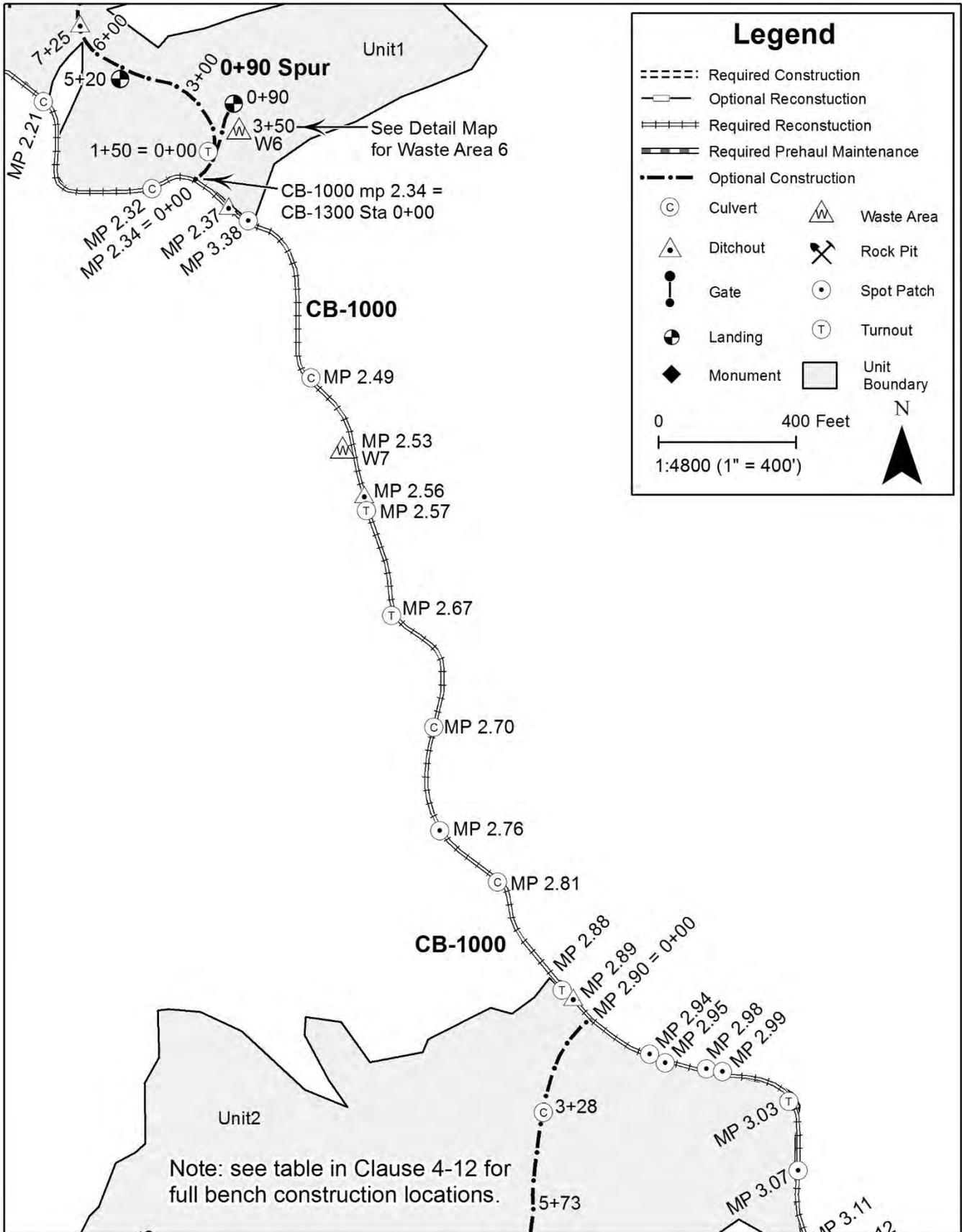
# USFS-3006 and CB-1000 Prehaul Maintenance

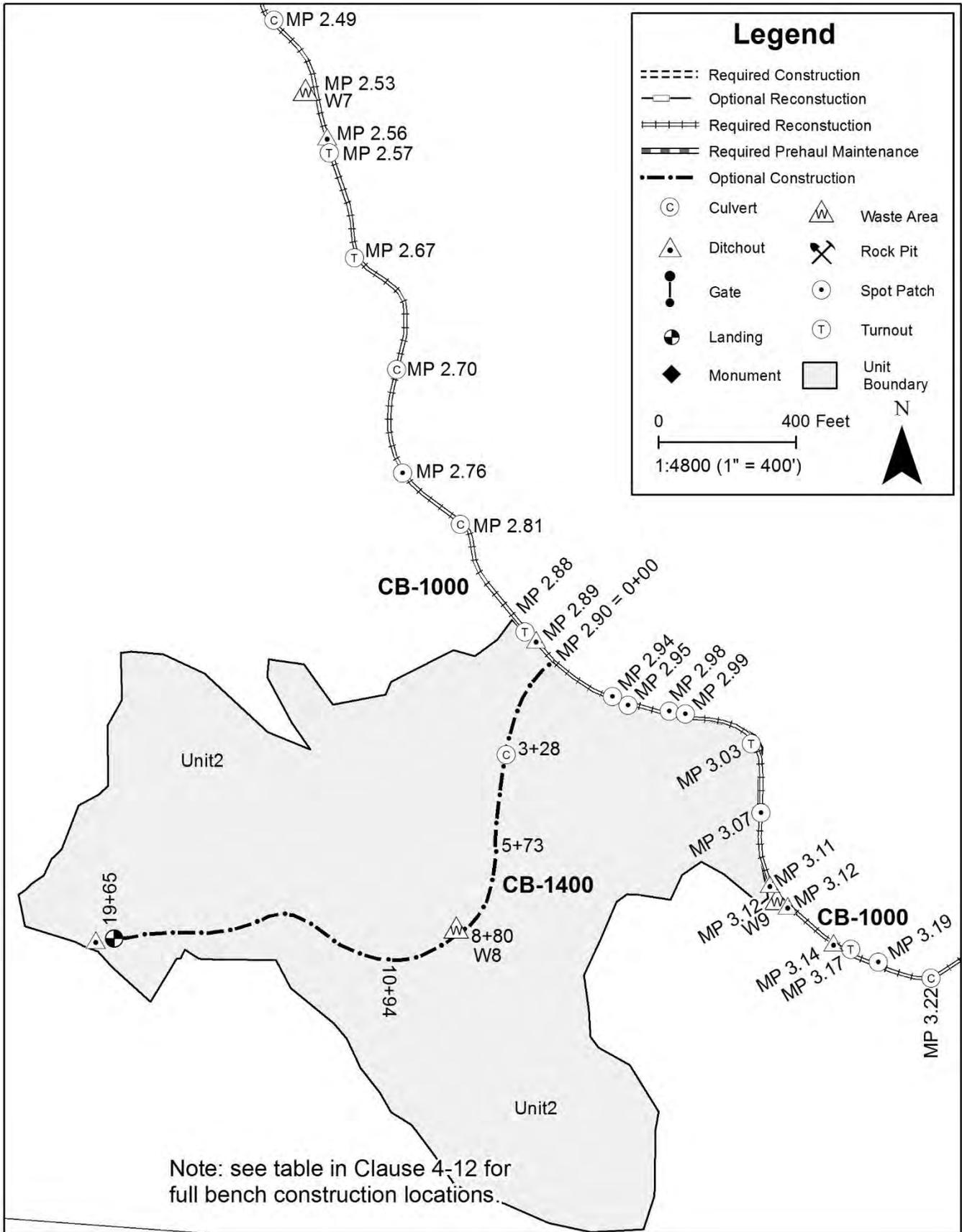


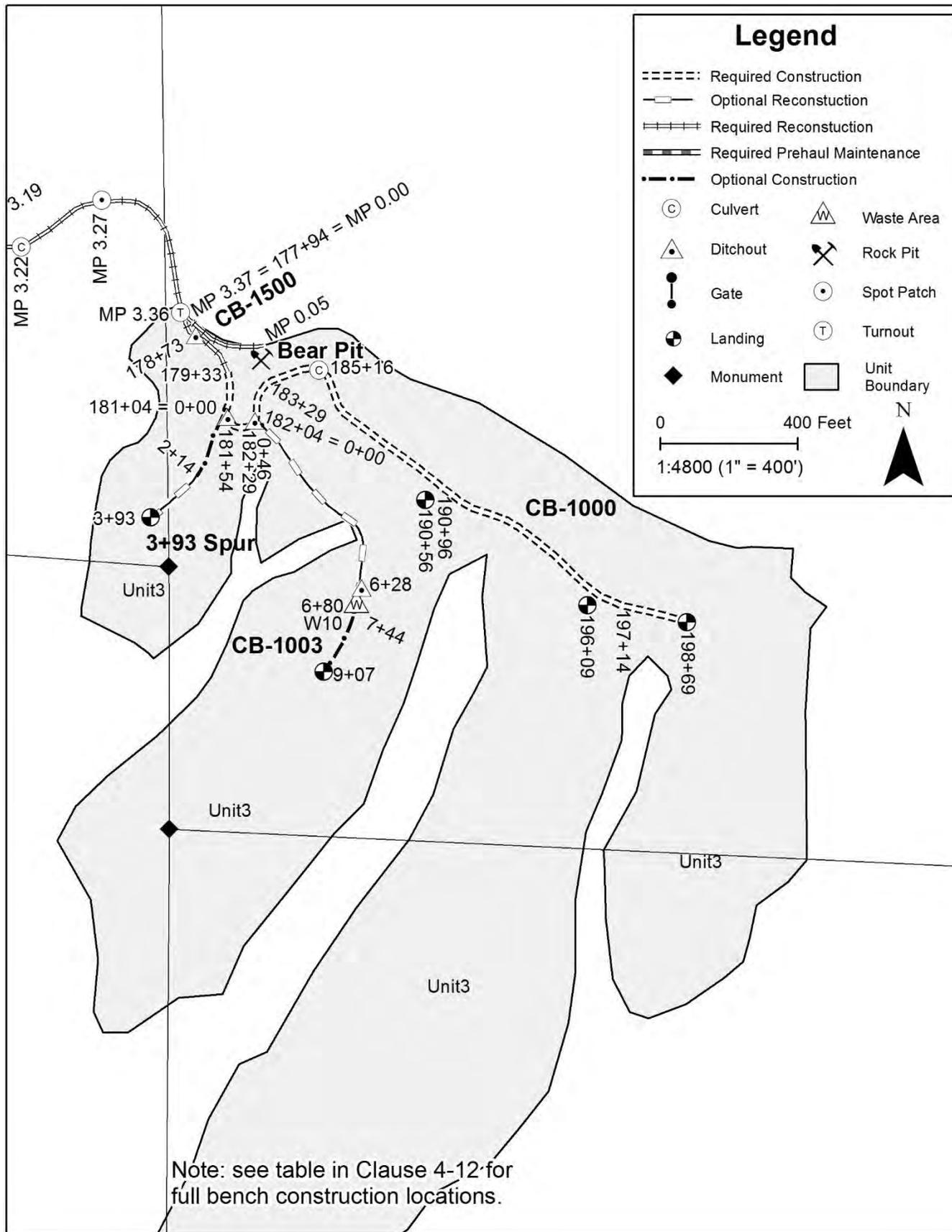
# CB-1000 Prehaul Maintenance and Required Reconstruction











SECTION 0 – SCOPE OF PROJECT

**0-1 ROAD PLAN SCOPE**

Clauses in this Road Plan apply to all road related work, including landings and rock source development, unless otherwise noted.

**0-2 REQUIRED ROADS**

The specified work on the following roads is required.

<u>Road</u>	<u>Stations</u>	<u>Type</u>
CB-1000	85.01	Prehaul Maintenance
CB-1000	19.36	Construction
CB-1000	94.32	Reconstruction
CB-1500	2.64	Reconstruction
USFS-3006	3.38	Prehaul Maintenance

**0-3 OPTIONAL ROADS**

The specified work on the following roads is not required. Any optional roads built by the Purchaser shall meet all the specifications in this Road Plan.

<u>Road</u>	<u>Stations</u>	<u>Type</u>
0+90 Spur	0.90	Construction
1+25 Spur	1.25	Construction
4+25 Spur	4.25	Construction
3+35 Spur	3.35	Construction
3+93 Spur	2.14	Construction
3+93 Spur	1.79	Reconstruction
CB-1003	2.09	Construction
CB-1003	6.98	Reconstruction
CB-1300	35.90	Construction
CB-1400	19.65	Construction

**0-4 CONSTRUCTION**

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

<u>Road</u>	<u>Stations</u>	<u>Requirements</u>
0+90 Spur	0+00 – 0+90	See below.
1+25 Spur	0+00 – 1+25	See below.
3+35 Spur	0+00 – 3+35	See below.
3+93 Spur	0+00 – 2+14	See below.
4+25 Spur	0+00 – 4+25	See below.
CB-1000	179+33 – 198+69	See below.
CB-1003	0+00 – 0+46 7+44 – 9+07	See below.
CB-1300	0+00 – 35+90	See below. Station 2+50 may be constructed at half bench.
CB-1400	0+00 – 19+65	See below.

Construction includes, but is not limited to:

Clearing, grubbing, right-of-way debris disposal, excavation and/or embankment to subgrade, compaction of subgrade, end hauling material for construction, constructing ditchlines, constructing ditchouts, constructing

turnouts and turn arounds, curve widening, acquisition and installation of drainage structures, application and compaction of rock, spreading grass seed and hay.

**0-5 RECONSTRUCTION**

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

<u>Road</u>	<u>Stations</u>	<u>Requirements</u>
3+93 Spur	2+14 – 3+93	Remove all vegetative material and debris from road with a minimum loss of rock. Apply rock in accordance with Rock List, grade and shape road in accordance with Typical Section Sheet and compact in accordance with Compaction List. End haul waste in accordance with CLAUSE 4-37.
CB-1000	MP 1.61 – MP 3.37 177+94 – 179+33	Remove all vegetative material and debris from road with a minimum loss of rock. Apply rock in accordance with Rock List, grade and shape road in accordance with Typical Section Sheet and compact in accordance with Compaction List. Construct ditches in accordance with CLAUSE 2-7. Install culvert in accordance with Culvert List. Widen road in accordance with Typical Reconstruction Road Widening Sheet, as marked in the field and in accordance Typical Section Sheet. Remove shoulder berms from MP 1.46 – MP 3.37. End haul waste in accordance with CLAUSE 4-37. Construct ditchouts.
CB-1003	0+46 – 7+44	Remove all vegetative material and debris from road with a minimum loss of rock. Construct ditches in accordance with CLAUSE 2-7. Apply rock in accordance with Rock List, grade and shape road in accordance with Typical Section Sheet and compact in accordance with Compaction List. End haul waste in accordance with CLAUSE 4-37. Construct ditchouts.
CB-1500	MP 0.00 – MP 0.05	Remove all vegetative material and debris from road with a minimum loss of rock. Apply rock in accordance with Rock List, grade and shape road in accordance with Typical Section Sheet and compact in accordance with Compaction List. End haul waste in accordance with CLAUSE 4-37. Remove shoulder berms from MP 0.00 – MP 0.05

Reconstruction includes, but is not limited to:

Installing additional culverts, realigning road segments, end hauling waste material, application and compaction of rock, removing culverts.

**0-6 PRE-HAUL MAINTENANCE**

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

<u>Road</u>	<u>Stations</u>	<u>Requirements</u>
CB-1000	MP 0.00 – MP 1.61	Apply rock in accordance with Rock List, grade and shape road in accordance with Typical Section Sheet and compact in accordance with Compaction List. Construct ditches in accordance with CLAUSE 2-7. Install culvert in accordance with Culvert List. Construct ditchouts. Clean Culverts in accordance with CLAUSE 2-6.
USFS-3006	MP 0.00 – MP 0.06	Apply rock in accordance with Rock List, grade and shape road in accordance with Typical Section Sheet and compact in accordance with Compaction List.

Maintenance includes, but is not limited to:

Brushing right-of-way, right-of-way debris disposal, cleaning ditches, constructing ditches, installing additional culverts, widening road segments, constructing headwalls, cleaning culvert inlets and outlets, cross drain culvert replacement, installing erosion control materials and sediment removal structures, spot rocking, application and compaction of rock, grading and shaping existing road surface and turnouts, constructing additional turnouts, compaction of road surface, acquisition and application of grass seed and hay.

**0-7 POST-HAUL MAINTENANCE**

This project includes, but is not limited to post-haul road maintenance listed in Clause 9-5 Post Haul Maintenance.

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 shall be submitted, in writing, to the Contract Administrator for consideration. The State must approve the submitted plans before road work begins

**1-2 UNFORSEEN 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 shall 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**

Unless controlled by construction stakes or design data (plan, profile, and cross-sections), road work shall be performed in accordance with the dimensions shown on the Typical Section Sheet and the specifications within this Road Plan.

**1-6 ORDER OF PRECEDENCE**

Any conflict or inconsistency in this Road Plan shall be resolved by giving the documents precedence in the following order:

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

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

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

The Purchaser is responsible for the repair or replacement of all materials, roadway infrastructure, and road components damaged during roadwork or operation activities. Repairs and replacements shall be directed by the Contract Administrator. Repairs to structural materials will be made according to the manufacturer's recommendation, and shall not begin without written approval from the Contract Administrator.

**1-9 DAMAGED METALLIC COATING**

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

**1-10 WSDOT STANDARD SPECIFICATION REFERENCE**

References in this Road Plan to “WSDOT Standard Specifications” means the Washington State Department of Transportation’s Standard Specifications for Road, Bridge, and Municipal Construction 2012 (M41-10).

**1-12 SURVEY MONUMENTS**

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

**1-13 LOG LOADING**

At no time shall the loading of logs occur on the CB-1000 between MP 0.00 – MP 3.38 road, except for the right of way logs. In addition, no debris from harvesting operations shall be allowed on this road.

SUBSECTION ROAD MARKING

**1-15 ROAD MARKING**

Road work must be in accordance with the State’s marked location. All road work is marked as follows:

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

**1-18 REFERENCE POINT DAMAGE**

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

SUBSECTION TIMING

**1-20 COMPLETE BY DATE**

On all roads, road work shall be completed before the start of timber haul.

**1-21 HAUL APPROVAL**

The Purchaser shall not use roads under this Road Plan without written approval from the Contract Administrator.

**1-22 WORK NOTIFICATIONS**

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

**1-23 ROAD WORK PHASE APPROVAL**

Written approval by Contract Administrator needs to be given at these phases of road work:

- Subgrade approval
- Drainage installation
- Subgrade compaction
- Rock application
- Rock compaction

## SUBSECTION RESTRICTIONS

### 1-25 ACTIVITY TIMING RESTRICTION

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

<u>Road</u>	<u>Stations</u>	<u>Activity</u>	<u>Closure Period</u>
All	All	All	October 15 <sup>th</sup> – April 15 <sup>th</sup>

### 1-26 OPERATING DURING CLOSURE PERIOD

If permission is granted to operate during a closure period listed in Clause 1-25 Activity Timing Restriction, the Purchaser shall provide a maintenance plan to include further protection of State resources. The Contract Administrator must approve the maintenance plan in writing, and preventative measures shall be put in place, before operation in the closure period. The Purchaser shall be required to maintain all haul roads at their own expense including those listed in Contract Clause C-060 Designated Road Maintainer. If other operators are using, or desire to use these designated maintainer roads, a joint operating plan shall be developed. All parties shall follow this plan.

### 1-29 SEDIMENT RESTRICTION

Silt-bearing runoff shall not be permitted to go into streams.

### 1-30 CLOSURE TO PREVENT DAMAGE

In accordance with Contract Clause G-220 State Suspends Operation, the Contract Administrator shall suspend road work or hauling of right-of-way timber, forest products, or rock under the following conditions:

- 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, the Purchaser will be required to cease operations, or perform corrective maintenance or repairs, subject to specifications within this Road Plan. Before and during any suspension, the Purchaser shall protect the work from damage or deterioration.

### 1-33 SNOW PLOWING RESTRICTION

On all roads, snowplowing shall be permitted only after the execution of a Snow Plowing Agreement, which is available from the Contract Administrator upon request. Purchaser shall request a Snow Plowing Agreement each time plowing occurs. If damage occurs while plowing, further permission to plow may be revoked by the Contract Administrator.

SUBSECTION OTHER INFRASTRUCTURE

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

At existing road approaches to county roads and state highways; any mud, dirt, rock or other material tracked or spilled on the asphalt surface shall be removed immediately by the Purchaser.

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

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

<u>Road Name</u>
HWY 113

**1-41 REQUIREMENTS FOR PAVED ROAD APPROACHES**

Requirements for the USFS 3006/HWY 113 road approaches:

Approaches shall be built up to allow a smooth grade transition between the USFS 3006 and HWY 113 roads. The top of the USFS 3006 road surfacing shall be kept level with the asphalt surface of the HWY 113 road at all times. On sloped approaches, the surface of the USFS 3006 approach shall slope from the edge of the HWY 113 road at the rate of no more than 2%, unless otherwise directed by the Contract Administrator.

SECTION 2 – MAINTENANCE

**2-1 GENERAL ROAD MAINTENANCE**

All roads used under this contract shall be maintained 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. Maintenance work shall be in accordance with Forest Access Road Maintenance Specifications.

**2-6 CLEANING CULVERTS**

On the following road(s), all inlets and outlets of culverts shall be cleaned before the start of timber haul and shall be subject to the written approval of the Contract Administrator.

<u>Road</u>	<u>Stations</u>
	MP 0.11
	MP 0.25
	MP 0.28
	MP 0.32

CB-1000	MP 0.39
	MP 0.52
	MP 0.71
	MP 1.31
	MP 1.34
	MP 1.44

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

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

<u>Road</u>	<u>Stations</u>	<u>Left or Right</u>
CB-1000	MP 0.06 – MP 0.07	L
CB-1000	MP 0.32 – MP 0.34	L
CB-1000	MP 0.38 – MP 0.39	L
CB-1000	MP 0.55 – MP 0.59	L
CB-1000	MP 0.65 – MP 0.67	L
CB-1000	MP 0.93 – MP 1.46	R
CB-1000	MP 1.52 – MP 1.54	L
CB-1000	MP 1.52 – MP 1.90	R
CB-1000	MP 1.95 – MP 2.34	L
CB-1000	MP 2.37 – MP 2.54	R
CB-1000	MP 2.39 – MP 2.42	L
CB-1000	MP 2.48 – MP 2.50	L
CB-1000	MP 2.56 – MP 2.87	L
CB-1000	MP 2.71 – MP 2.73	R
CB-1000	MP 2.88 – MP 3.17	R
CB-1000	MP 3.20 – MP 3.34	R
CB-1003	0+46 – 7+44	L

**2-9 REMOVING VEGETATIVE MATERIAL**

On the following road(s), Purchaser shall remove all vegetative material, dirt, mud, and other debris on the existing road surface with a minimum loss of rock. Material removed shall be disposed of in accordance with Clause 4-36 through Clause 4-38. A motor grader shall not be used to remove material.

<u>Road</u>	<u>Stations</u>
3+93 Spur	2+14 – 3+93
CB-1000	MP 0.00 – MP 3.37 177+94 – 179+33
CB-1003	0+46 – 7+44
CB-1500	MP 0.00 – MP 0.05

## SECTION 3 – CLEARING, GRUBBING, AND DISPOSAL

### SUBSECTION CLEARING

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

Fell 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 shall be completed before starting excavation and embankment.

#### **3-7 RIGHT-OF-WAY DECKING**

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

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

Right-of-way timber shall not be decked 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 unless approved by the Contract Administrator.

### SUBSECTION GRUBBING

#### **3-10 GRUBBING**

Remove all stumps between the grubbing limits specified on the Typical Section Sheet. Those stumps outside the grubbing limits but with undercut roots shall also be removed. Stump removal shall be accomplished using a hydraulic mounted excavator unless authorized, in writing, by the Contract Administrator. Grubbing shall be completed before starting excavation and embankment.

#### **3-12 STUMP PLACEMENT**

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

### SUBSECTION ORGANIC DEBRIS

#### **3-20 ORGANIC DEBRIS DEFINITION**

Organic debris is defined as all vegetative material not eligible for removal by Contract Clauses G-010 Products Sold And Sale Area or G-011 Right To Remove Forest Products And Contract Area, that is larger than one cubic foot in volume within the grubbing Typical Section Sheet.

#### **3-21 DISPOSAL COMPLETION**

All disposal of organic debris, shall be completed before the application of rock.

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

Organic debris shall not be deposited in the following areas:

- Within 5 feet of a cross drain culvert.
- Within 50 feet of a live stream, or wetland.
- On road subgrades road prism excavation and embankment slopes.
- On slopes greater than 45%.
- Within the operational area for cable landings where debris may shift or roll.
- On locations where brush will fall into the ditch or onto the road surface.
- Against standing timber.

### **3-24 BURYING ORGANIC DEBRIS RESTRICTED**

Organic debris shall not be buried unless otherwise stated in this Road Plan.

### **3-25 SCATTERING ORGANIC DEBRIS**

Organic debris shall be scattered outside of the grubbing limits in accordance with Clause 3-23 unless otherwise detailed in this Road Plan and as directed by the Contract Administrator.

## **SECTION 4 – EXCAVATION**

### **4-1 EXCAVATOR CONSTRUCTION**

All roads shall be constructed, reconstructed, and prehaul maintained using a track mounted hydraulic excavator unless stated otherwise within this Road Plan, or permission to do otherwise is granted in writing by the Contract Administrator.

### **4-2 PIONEERING**

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

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

### **4-3 ROAD GRADE AND ALIGNMENT STANDARDS**

The following road grade and alignment standards shall be followed:

- Grade and alignment shall have smooth continuity, without abrupt changes in direction.
- Maximum grade shall not exceed 18 percent favorable and 16 percent adverse.
- Minimum curve radius is 60 feet at centerline.
- Sag vertical curves shall not have a grade change greater than 5% in 100 feet.

Crest vertical curves shall not have a grade change greater than 4% in 100 feet

Grade limitations and alignment are modified as follows:

The following roads have specific limitations for grade and alignment and are referenced in the table below.

<u>Road</u>	<u>Stations</u>	<u>Minimum Curve Radius (ft)</u>	<u>Maximum Grade (%)</u>		<u>Maximum Vertical Grade Change per 100 ft (%)</u>
			<u>Favorable</u>	<u>Adverse</u>	
CB-1000	181+04 – 182+80	45	12	10	5
CB-1000	184+32 – 185+56	65	18	16	5

#### 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. The following standards for switchbacks shall be followed:

- a. Adverse grades on switchbacks shall not exceed 10%.
- b. Favorable grades through switchbacks shall not exceed 12%.
- c. Transition grades entering and leaving switchbacks shall not exceed a 5% grade change.
- d. Transition grades required to meet switchback grade limitations shall be constructed on the tangents preceding and departing from the switchbacks.

#### 4-5 CUT SLOPE RATIO

Unless construction staked or designed excavation slopes shall be constructed 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

Unless construction staked or designed embankment slopes shall be constructed 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

Excavation and embankment slopes shall be constructed 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 45 to 79 feet radius.
- 4 feet for curves of 80 to 100 feet radius.

Curve widening is modified as follows:

<u>Road</u>	<u>Stations</u>	<u>Curve Widening (ft)</u>
CB-1000	181+04 – 182+80	6
CB-1000	184+32 – 185+56	4
CB-1300	0+00 – 2+00	30

#### 4-10 WIDEN THE EXISTING SUBGRADE

On the following road(s), the Purchaser shall widen the subgrade and fill slopes to the dimensions shown on the Typical Section Sheet. If necessary, the Purchaser shall reconstruct excavation slopes to provide sufficient width for the road surface and any ditches. Excavated slopes shall be consistent with Clause 4-5. Pulling excavation material across the road or mixing in with the existing road surface is not allowed.

<u>Road</u>	<u>Stations</u>
CB-1000	MP 1.61 – MP 3.37
CB-1500	MP 0.00 – MP 0.05

#### 4-12 FULL BENCH CONSTRUCTION

On the following roads, and where side slopes exceed 45%, Purchaser shall use full bench construction for the entire subgrade width except as construction staked or designed. If designated, 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>	<u>Comments</u>
1+25 Spur	0+00 – 1+25	
3+93 Spur	0+48 – 2+14	
CB-1000	183+29 – 190+96, 197+14 – 198+69	
CB-1003	0+00 – 0+46	
CB-1300	3+00 – 6+00, 9+50 – 10+50, 13+45 – 14+02, 16+00 – 17+50, 19+50 – 22+00, 27+60 – 28+50, 30+70 – 32+70	
CB-1400	0+00 – 5+73, 10+94 – 19+65	

SUBSECTION INTERSECTIONS, TURNOUTS AND TURNAROUNDS

**4-21 TURNOUTS**

Turnouts shall be intervisible with maximum of 1,000 feet between turnouts unless shown otherwise on drawings. Locations shall be adjusted to fit the final subgrade alignment and sight distances. Turnout locations shall be subject to written approval by the Contract Administrator.

**4-22 TURNAROUNDS**

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

**4-23 SUBGRADE FLARE FOR INTERSECTIONS**

The CB-1000/CB-1300 intersections shall be constructed to include additional intersection flare.

SUBSECTION DITCH CONSTRUCTION

**4-25 DITCH CONSTRUCTION AND RECONSTRUCTION**

The Purchaser shall construct ditches into the subgrade as specified on the Typical Section Sheet. Excavated slopes shall be consistent with Clause 4-5 Cut Slope Ratio. Ditches shall be constructed concurrently with construction of the subgrade.

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

On all roads, pulling ditch material across the road or mixing in with the road surface will not be allowed. Excavated material shall be disposed of as specified in Clause 4-36 through Clause 4-38.

**4-28 DITCH DRAINAGE**

Ditches shall drain to cross-drain culverts and ditchouts.

**4-29 DITCHOUTS**

Ditchouts shall be constructed at locations shown on the list below, and as needed to fit as built conditions. Ditchouts shall be constructed in a manner that diverts ditch water onto the forest floor and shall have excavation backslopes no steeper than a 1:1 ratio. L or R denotes ditchout left or ditchout right heading in.

<u>Road</u>	<u>Stations</u>	<u>L or R</u>
CB-1000	MP 1.52	L
CB-1000	MP 1.90	R
CB-1000	MP 1.95	L
CB-1000	MP 2.37	R
CB-1000	MP 2.56	R
CB-1000	MP 2.89	L
CB-1000	MP 3.11	R
CB-1000	MP 3.12	R
CB-1000	MP 3.15	R
CB-1000	178+73	L
CB-1000	181+54	R
CB-1000	182+29	R
CB-1003	6+28	L
CB-1300	7+25	Both
CB-1300	12+25	L
CB-1300	22+75	L
CB-1400	19+65	Both

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**

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

**4-37 WASTE AREA LOCATION AND COMPACTION**

There are ten waste areas located within the Timber sale. Waste areas designated as non-fill can be used for all waste material, including organic waste such as stumps, logs, and woody debris. Waste areas designated as fill, are only to be used for material suitable to build road fills with. Waste areas designated as “fill” will be compacted in 6 inch lifts the same as road construction.

The “non-fill” waste area’s minimum acceptable compaction is to be achieved by placing embankments in 2 foot or shallower lifts and routing excavation equipment over the entire width of the lifts, The exceptions being for side hill embankments too narrow to accommodate excavation equipment may be placed by end-dumping or side casting until sufficiently wide to support the equipment. Compaction is not required for waste area W5. All “non-fill” waste areas will be grass seeded and hay spread over the surface before the start of the rainy season.

<u>Waste Area Identifier</u>	<u>Waste Area Location</u>	<u>Fill Type</u>	<u>Allowable Volume</u>
W1	CB-1000 MP 1.93	Non-fill	3,000 yd <sup>3</sup>
W7	CB-1000 MP 2.53	Non-fill	3,000 yd <sup>3</sup>
W9	CB-1000 MP 3.12	Non-fill	500 yd <sup>3</sup>
W3	3+35 Spur 2+75	Fill	700 yd <sup>3</sup>
W10	CB-1003 6+80	Non-fill	200 yd <sup>3</sup>
W6	CB-1300 3+50	Non-fill	20,000 yd <sup>3</sup>
W5	CB-1300 8+85	Non-fill	12,000 yd <sup>3</sup>
W4	CB-1300 28+00	Non-fill	500 yd <sup>3</sup>
W2	CB-1300 33+50	Non-fill	500 yd <sup>3</sup>
W8	CB-1400 8+80	Fill	28,000 yd <sup>3</sup>

**ESTIMATED WASTE BY ROAD**

<u>Waste Generated From Road</u>	<u>Waste Generated at Stations</u>	<u>Waste Area Location</u>	<u>Estimated Volume (CY)</u>
CB-1000	0+00 to mp 2.2	CB-1000 MP 1.93	3000
CB-1000	Mp 2.2 to mp 2.8	CB-1000 MP 2.53	3000
CB-1000	Mp 2.8 to 3.34	CB-1000 MP 3.12	500
CB-1000	Mp 2.8 to 3.34	CB-1400 8+80	2500
CB-1000	183+29 to 190+96	CB-1400 8+80	4000
CB-1003	0+00 to 9+07	CB-1400 8+80	2700
CB-1300	0+00 to 35+90	W2 thru W6	8500
CB-1400	0+00 to 5+73	W8 for fill, W6 non-fill	1050
CB-1400	11+50 to 19+65	W8 for fill, W6 non-fill	2000

1+25 Spur	0+00 to 1+25	W5	850
3+93 Spur	0+50 to 2+14	W8 for fill, W6 non-fill	910
3+35 Spur	2+75 to 3+35	W3	700
		<b>Estimated Total:</b>	<b>29,710</b>

**4-38 PROHIBITED WASTE DISPOSAL AREAS**

Waste material shall not be deposited in the following areas:

- Within 5 feet of a cross drain culvert.
- Within 50 feet of a live stream or wetland.
- Within a riparian management zone.
- On side slopes steeper than 45%.
- In locations that interfere with the construction of the road prism.
- In locations that impede drainage.
- Within the operational area for cable landings.
- Against standing timber.

**4-39 ORGANIC WASTE**

Endhaul waste that contains stumps, woody debris, and dirt as per CLAUSE 4-37 and CLAUSE 4-38 to waste areas that are non-fill.

**4-40 WASTE AREA COMPACTION**

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

SUBSECTION BORROW

**4-47 NATIVE MATERIAL**

Native material shall be excavated material free of organic debris, trash, and rocks greater than 12 inches in any dimension.

SUBSECTION SHAPING

**4-55 ROAD SHAPING**

The road subgrade and surface shall be shaped as shown on the Typical Section Sheet. The subgrade and surface shape shall ensure runoff in an even, un-concentrated manner, and shall be uniform, firm, and rut-free.

**4-56 DRY WEATHER SHAPING**

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

## SUBSECTION COMPACTION

### 4-60 FILL COMPACTION

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

### 4-61 SUBGRADE COMPACTION

Purchaser shall compact constructed and reconstructed subgrades in accordance with the Compaction List by routing equipment over the entire width, except ditch. Purchaser shall obtain written approval from the Contract Administrator for subgrade compaction before placement of rock.

### 4-62 DRY WEATHER COMPACTION

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.

### 4-63 EXISTING SURFACE COMPACTION

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

### 4-64 WASTE MATERIAL COMPACTION

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

### 4-65 CULVERT BACKFILL COMPACTION

Culvert backfills on the CB-1000 shall be accomplished by using a jumping jack compactor, performing at least 2 passes per lift, in lifts not to exceed 8 inches.

### 4-66 COMPACTION BY METHOD

Compaction shall consist of three complete passes over the entire width of each lift with a vibratory drum roller weighing a minimum of 14,000 pounds at a maximum operating speed of 3 mph. For embankment segments too narrow to accommodate a drum roller, a plate compactor shall be used.

## SECTION 5 – DRAINAGE START

### 5-1 REMOVAL OF SHOULDER BERMS

On the following road(s), berms shall be removed from road shoulders to permit the escape of runoff. Material shall be disposed of in accordance with Clauses 4-35 through 4-38. The construction of ditchouts will be required where ponding will result from the effects of sidecast debris.

<u>Road</u>	<u>Stations</u>
CB-1000	MP 1.46 – MP 3.37
CB-1500	MP 0.00 – MP 0.05

### 5-4 PUNCHEON RESTRICTED

At no time shall puncheon be used in the subgrade.

## SUBSECTION CULVERTS

### 5-5 CULVERTS

Culverts shall be installed as part of this contract. Culverts shall be installed concurrently with subgrade work and shall 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 shall be adjusted to fit as-built conditions and shall not terminate directly on unprotected soil. Culverts shall be new and meet the material specifications in Clauses 10-15 through 10-23.

### 5-11 UNUSED MATERIALS STATE PROPERTY

On required roads, any materials listed on the Culvert List and Rock List that are not installed shall become the property of the State. Purchaser shall stockpile materials as directed by the Contract Administrator.

## SUBSECTION CULVERT INSTALLATION

### 5-15 CULVERT INSTALLATION

Installation shall be in accordance with the Typical Cross Drain Culvert Installation Detail, Typical Type Ns Np Culvert Installation Detail, the National Corrugated Metal Pipe Association's "Installation Manual for Corrugated Steel Drainage Structures", and the Corrugated Polyethylene Pipe Association's "Recommended Installation Practices for Corrugated Polyethylene Pipe and Fittings". Corrugated Polyethylene pipe shall be installed in a manner consistent with the manufacturer's recommendations.

### 5-16 APPROVAL FOR LARGER CULVERT INSTALLATION

Installation of culverts 30 inches in diameter and over shall be subject to written approval by the District Engineer or their designee before backfilling.

### 5-17 CROSS DRAIN SKEW AND SLOPE

Cross drains, on road grades in excess of 3%, shall 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 shall not be skewed. Cross drain culverts shall be installed at a slope steeper than the incoming ditch grade, but not less than 3% or more than 10%.

### 5-18 CULVERT DEPTH OF COVER

Cross drain culverts shall be installed with a depth of cover of not less than 18 inches of compacted depth over the top of the culvert at the shallowest point. Stream crossing culverts shall be installed with a depth of cover specified in the Engineer's design, Type Ns Np Typical Detail Sheet, or to the minimum depth recommended by the culvert manufacturer for the type of cover material over the pipe, whichever is greater.

## SUBSECTION ENERGY DISSIPATERS

### 5-20 ENERGY DISSIPATERS

Energy dissipaters shall be installed to prevent erosion and are subject to approval by the Contract Administrator. Rock shall weigh at least 10 pounds and be placed by zero-drop-height method. Energy dissipater shall extend a minimum of  $\frac{3}{4}$  foot to each side of the culvert at the outlet and a minimum of 2 feet beyond the outlet.

**5-21 DOWNSPOUTS AND FLUMES**

Downspouts and flumes longer than 10 feet shall be staked on both sides at maximum intervals of 10 feet with 6-foot heavy-duty steel posts or 1 1/2" X 3/16" angle iron, and fastened securely to the posts with No. 10 galvanized smooth wire, or bolted using minimum 5/16" bolts and 2 washers per bolt, in accordance with the Culvert Installation Typical Details Page.

**5-24 PLASTIC CULVERT BANDS**

All plastic culvert bands shall be secured using No. 10 galvanized smooth wire.

SUBSECTION CATCH BASINS, HEADWALLS, AND ARMORING

**5-25 CATCH BASINS**

Catch basins shall be constructed to resist erosion. Approximate dimensions are 1-2 feet deep, 1-2 feet wide, and 2-4 feet long.

**5-26 HEADWALLS FOR CROSS DRAIN CULVERTS**

Headwalls shall be constructed in accordance with the Typical Cross Drain Culvert Installation Detail at all cross drain culverts that specify the placement of rock. Rock used for headwalls shall consist of oversize or quarry spall material. Rock shall be placed on shoulders, slopes, and around culvert inlets and outlets. Rock shall not restrict the flow of water into culvert inlets or catch basins. No end dumping of rock is allowed.

SECTION 6 – ROCK AND SURFACING

SUBSECTION ROCK SOURCE

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

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

<u>Source</u>	<u>Location</u>	<u>Rock Type</u>
Mary Clark Pit	T30N R12W Sec32	1 1/4" Minus crushed stockpile, Pitrun, Oversized
Bear Pit	T30N R11W Sec6	Ballast

**6-3 ROCK SOURCE STATE LAND, EXISTING STOCKPILE**

Rock used in accordance with the quantities on the Rock List may be obtained from the following existing stockpile(s) on state land at no charge to the Purchaser. Purchaser shall remove no more than 7301 cubic yards of 1 1/4" minus crushed rock.

<u>Source</u>	<u>Rock Type</u>	<u>Quantity</u>
Mary Clark Pit	1 1/4" Minus crushed stockpile	7301 yd <sup>3</sup>

**6-5 ROCK FROM COMMERCIAL SOURCE**

Rock used in accordance with the quantities on the Rock List may be obtained from any commercial source at the Purchaser's expense. Rock sources will be subject to written approval by the Contract Administrator before their use. Rock source(s) shall be a WSDOT certified source.

## SUBSECTION ROCK SOURCE DEVELOPMENT

### 6-10 ROCK SOURCE DEVELOPMENT PLAN BY STATE

All rock source development and use shall be in accordance with a written Rock Source Development and reclamation plan prepared by the State and included in this Road Plan. Rock source operations shall be conducted as directed by the Contract Administrator and in accordance with the plan. Upon completion of operations, the rock source shall be left in the condition specified in the Rock Source Development and reclamation plan, and approved in writing by the Contract Administrator. The Purchaser shall notify the Contract Administrator a minimum of 5 calendar days before starting any operations in the rock source.

### 6-12 ROCK SOURCE SPECIFICATIONS

Rock sources shall be in accordance with the following unless otherwise specified in Rock Source Development and reclamation plan:

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

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

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

### 6-14 DRILL AND SHOOT

Rock drilling and shooting shall meet the following specifications:

\*Oversize material remaining in the rock source at the conclusion of the timber sale shall not exceed 5% of the total volume mined in that source.

Oversize material is defined as rock fragments larger than five feet in any dimension.

Oversized rock that exceeds the maximum allowable amount shall be shot or broken up.

The Purchaser shall notify the Contract Administrator a minimum of 3 working days before blasting operations.

The Purchaser shall submit an informational drilling and shooting plan to the Contract Administrator 10 working days before any drilling (Form #M-126PAC).

All operations shall be carried out in compliance with all regulations of the Regulations and Standards Applicable to Metal and Nonmetal Mining and Milling Operations (30 CFR) U.S. Department of Labor, Mine Safety and Health Administration and Safety Standards for Construction Work (296-155 WAC), Washington Department of Labor and Industries.

**6-15 REQUIRED ROCK SOURCE WORK**

The following rock source work is required. Work is to be done according to the approved Rock Source Development And Reclamation Plan and as directed by the Contract Administrator.

<u>Site</u>	<u>Requirements</u>
Bear Pit	Strip 0.5 acres to useable rock. Endhaul waste in accordance with CLAUSE 4-37.

**SUBSECTION ROCK GRADATIONS**

**6-28 1 ¼-INCH MINUS CRUSHED ROCK**

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

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

**6-43 QUARRY SPALLS**

% Passing 12" square sieve	100%
% Passing 8" square sieve	10% maximum

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

**6-52 OVERSIZE**

% Passing 8" square sieve	100%
% Passing 4" square sieve	0%

Rock shall not contain more than 5 percent vegetative debris or 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 depth(s) using the compaction methods required in this Road Plan. Estimated quantities specified in the Rock List are estimated truck yards. Purchaser shall apply adequate amounts of rock to meet the specified rock depths. Specified rock depths are minimum requirements, and are not subject to reduction.

**SUBSECTION ROCK APPLICATION**

**6-70 APPROVAL BEFORE ROCK APPLICATION**

Subgrade drainage installation including grading and compaction, shall be completed and approved in writing by the Contract Administrator, before rock application.

**6-71 ROCK APPLICATION**

Rock shall be applied in accordance with the specifications and quantities shown on the Rock List. Rock shall be spread, shaped, and compacted full width concurrent with rock hauling operations. Rock shall be compacted in accordance with Compaction List, in lifts not to exceed 6 inches.

**6-73 ROCK FOR WIDENED PORTIONS**

Turnarounds, turnouts, and areas with curve widening shall have rock applied to the same depth and specifications as the traveled way.

**6-78 ROCK FOR SPOT PATCHING**

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

**7-38 APPLICATION OF PAINT**

All painting to be performed under this contract shall be performed in conformance with the best practices of the trade, recommendations of the coating manufacturer, and applicable portions of the Society of Protective Coatings Painting of Steel Surfaces Specification SSPC-PA 1. All metal surfaces shall be coated with a two-coat system that will consist of a prime coat, and topcoat.

A visual inspection for complete coverage will be made after each coat. Additional applications of paint shall be made as necessary to obtain complete coverage.

Sufficient time shall elapse between successive coats to permit them to dry properly for recoating. Consult with coating manufacturer regarding specific recoat information.

**SUBSECTION GATE CLOSURE**

**7-70 GATE CLOSURE**

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

<u>Road</u>	<u>Station</u>
CB-1000	MP 0.05
LTSP Mainline (Mary Clark Pit Access)	0+20

## SUBSECTION GATES AND FENCES

### 7-75 GATE MAINTENANCE

On the following road(s), gate maintenance as listed is required. All old gate material shall be removed from state land by the Purchaser before the termination of the contract.

<u>Road</u>	<u>Station</u>	<u>Requirements</u>
LTSP Mainline (Mary Clark Pit access)	0+20	Gate shall be painted Safety Yellow color using high gloss alkyd enamel paint. Prior to painting, surfaces shall be prepared by cleaning, sanding and removing all loose rust and paint. All surfaces shall be dry at the time of painting. Two coats of paint shall be applied, using the procedures described in the product instructions, with a minimum of eight hours drying time between coats.

## SECTION 8 – EROSION CONTROL

### 8-2 PROTECTION FOR EXPOSED SOIL

Purchaser shall furnish and evenly spread a 3-inch layer of straw to all exposed soils at stream culvert installations. Soils shall not be allowed to sit exposed during any rain event.

## SUBSECTION REVEGETATION

### 8-15 REVEGETATION

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

### 8-16 REVEGETATION SUPPLY

All seed, mulch, hay, matting, etc. will be provided by the Purchaser.

### 8-17 REVEGETATION TIMING

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

**8-18 PROTECTION FOR SEED**

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

**8-19 ASSURANCE FOR SEEDED AREA**

The Purchaser shall be responsible to ensure a uniform and dense crop of grass. The Purchaser shall reapply the seed and/or mulch in areas that have been damaged through any cause, before approval from the Contract Administrator. The Purchaser shall restore eroded or disturbed areas, clean up and properly dispose of eroded materials, and reapply the seed and/or mulch at no addition cost to the state.

SUBSECTION SEED, FERTILIZER, AND MULCH

**8-25 GRASS SEED**

Purchaser shall evenly spread the seed mixture listed below on all exposed soils at a rate of 60 pounds per acre of exposed soil.

<u>Seed Species</u>	<u>% by Weight</u>
• Perennial Ryegrass	40.00
• Creeping Red Fescue	40.00
• White Dutch Clover	10.00
• Colonial Bentgrass	10.00

Grass seed shall meet the following specifications:

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

SECTION 9 – POST-HAUL ROAD WORK

SUBSECTION POST-HAUL MAINTENANCE

**9-5 POST-HAUL MAINTENANCE**

Post haul maintenance shall be performed in accordance with the Forest Access Road Maintenance Specifications and as specified below.

<u>Road</u>	<u>Stations</u>	<u>Additional Requirements</u>
All	All	Clean culverts, clean ditches, grade, shape, and compact roads as direct by the Contract Administrator.

## SUBSECTION POST-HAUL LANDING MAINTENANCE

### 9-10 LANDING DRAINAGE

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

### 9-11 LANDING EMBANKMENT

On all roads, landing embankments shall be sloped to original construction specifications.

## SECTION 10 MATERIALS

### SUBSECTION EROSION CONTROL AND REVEGETATION

#### 10-10 JUTE EROSION CONTROL MATTING

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

- Mesh size 1 inch max.
- Mesh mass, 0.9 lb/yd<sup>2</sup> ±5%

#### 10-11 COCONUT EROSION CONTROL MATTING

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

- Mesh size 0.5 to 1 inch.
- Mesh mass, 0.4 lb/yd<sup>2</sup> min.
- Netting shall be photodegradable on one side.
- Moisture content shall not exceed 20%.

#### 10-12 WOOD EXCELSIOR EROSION CONTROL MATTING

Excelsior blanket shall have a uniform thickness made of curled wood excelsior secured on the top side to a biodegradable, photodegradable extruded plastic mesh. Matting shall be smolder resistant without the use of additional chemical additives. Erosion control matting shall conform to the specifications listed below, and shall be recommended by the manufacturer for use on embankments with a slope of 1½:1 (H:V) or steeper.

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

## SUBSECTION CULVERTS

### 10-15 CORRUGATED STEEL CULVERT

Metallic coated steel culverts shall meet AASHTO M-36 (ASTM A-760) specifications. Culverts shall be aluminized (aluminum type 2 coated meeting AASHTO M-274).

### 10-16 CORRUGATED ALUMINUM CULVERT

Aluminum culverts shall meet AASHTO M-196 (ASTM A-745) specifications.

### 10-17 CORRUGATED PLASTIC CULVERT

Polyethylene culverts shall meet AASHTO M-294 specifications. Culverts shall be Type S – double walled with a corrugated exterior and smooth interior.

### 10-20 FLUME AND DOWNSPOUT

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

### 10-21 METAL BAND

Metal coupling and end bands shall meet the AASHTO specification designated for the culvert and shall have matching corrugations. On culverts 24 inches and smaller, bands shall have a minimum width of 12 inches. On culverts over 24 inches, bands shall have a minimum width of 24 inches.

### 10-22 PLASTIC BAND

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

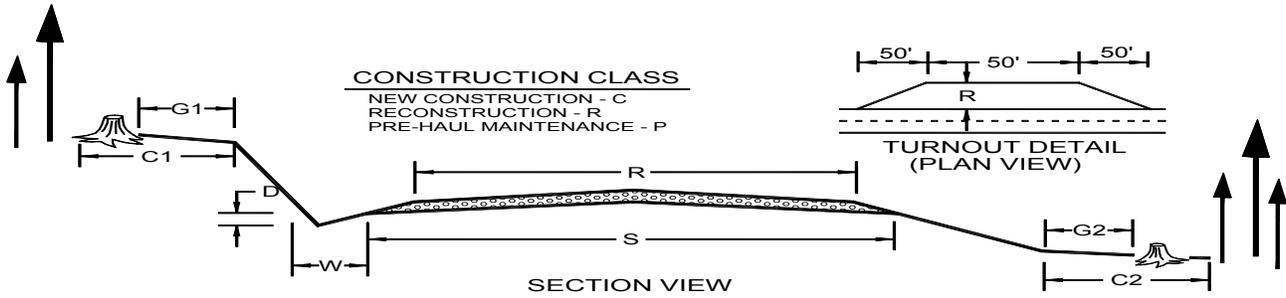
### 10-23 RUBBER CULVERT GASKETS

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

### 10-24 GAGE AND CORRUGATION

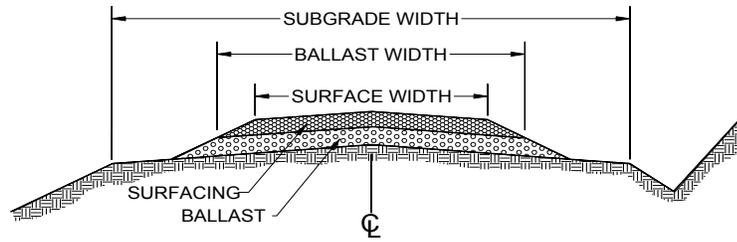
Metal culverts shall conform to the following specifications for gage and corrugation as a function of diameter.

<u>Diameter</u>	<u>Gage</u>	<u>Corrugation</u>
18"	16 (0.064")	2 <sup>2</sup> / <sub>3</sub> " X 1/2"
24" to 42"	14 (0.079")	2 <sup>2</sup> / <sub>3</sub> " X 1/2"
48" to 54"	12	3" X 1"
60" +	10	5" X 1"



ROAD NAME	START STATION	END STATION	CONSTRUCTION CLASS	SUBGRADE WIDTH (S)	ROAD WIDTH (R)	CROWN AT CL (in)	DITCH WIDTH (W)	DITCH DEPTH (D)	GRUBBING CUT BANK (G1)	GRUBBING FILL TOE (G2)	ROAD CUT CLEARING (C1)	ROAD FILL CLEARING (C2)
0+90 Spur	0+00	0+90	C	17'	12'	3'	3'	1'	5'	5'	5'	5'
1+25 Spur	0+00	1+25	C	17'	12'	3'	3'	1'	5'	5'	5'	5'
3+35 Spur	0+00	3+35	C	17'	12'	3'	3'	1'	5'	5'	5'	5'
3+93 Spur	0+00	2+14	C	17'	12'	3'	3'	1'	5'	5'	5'	5'
3+93 Spur	2+14	3+93	R	17'	12'	3'	3'	1'	5'	5'	5'	5'
4+25 Spur	0+00	4+25	C	17'	12'	3'	3'	1'	5'	5'	5'	5'
CB-1000	MP 0.00	MP 1.61	P		12'	3'	3'	1'				
CB-1000	MP 1.61	MP 3.37	R	18'	12'	3'	1	1'				
CB-1000	177+94	179+33	R	17'	12'	3'	1	1'	5'	5'	5'	5'
CB-1000	179+33	190+96	C	17'	12'	3'	1	1'	5'	5'	5'	5'
CB-1000	190+96	193+08	C	21'	16'	3'	1	1'	5'	5'	5'	5'
CB-1000	193+08	195+98	C	17'	12'	3'	1	1'	5'	5'	5'	5'
CB-1000	195+98	197+14	C	21'	16'	3'	1	1'	5'	5'	5'	5'
CB-1000	197+14	198+69	C	17'	12'	3'	1	1'	5'	5'	5'	5'
CB-1500	MP 0.00	MP 0.05	R	18'	12'	-3/+3						
CB-1003	0+00	0+46	C	17'	12'	3'	3'	1'	5'	5'	5'	5'
CB-1003	0+46	7+44	R	17'	12'	3'	3'	1'	5'	5'	5'	5'
CB-1003	7+44	9+07	C	17'	12'	3'	3'	1'	5'	5'	5'	5'
CB-1300	0+00	35+90	C	17'	12'	3'	3'	1'	5'	5'	5'	5'
CB-1400	0+00	19+65	C	17'	12'	3'	3'	1'	5'	5'	5'	5'

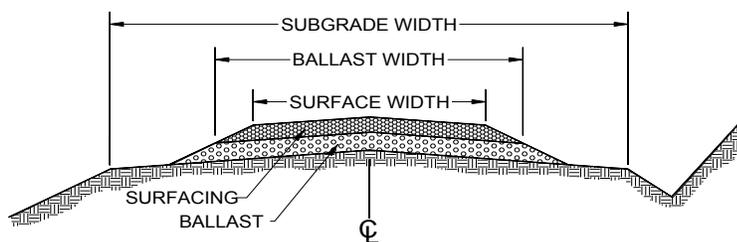
# ROCK LIST SHEET



1. Rock quantities, subtotals and totals are "truck measure" estimates. Rock shall be applied to at least the depths listed.
2. All depths are compacted depths.
3. Rock slopes shall be 1½ (H) : 1 (V).
4. All rock sources are subject to approval by the Contract Administrator.
5. Pitrun is defined as pitrun or ballast per Line 6. Crushed is defined as any crushed rock from ¼" minus to 4" minus per Line 6. Oversize is defined as oversize, quarry spalls, light loose rip rap, or heavy loose rip rap per Line 6.
6. Rock sources= 1: Bear Pit Ballast, 2: Mary Clark Pitrun, 3: Mary Clark 1 ¼" minus crushed rock, 4: Mary Clark Oversized

ROAD NAME	START STATION	END STATION	SUBGRADE WIDTH (ft)	Pitrun SOURCE	Pitrun WIDTH (ft)	Pitrun DEPTH (in)	Pitrun Quantity(yd <sup>3</sup> /sta)	Pitrun SUBTOTAL(yd <sup>3</sup> )	Crushed SOURCE	Crushed WIDTH (ft)	Crushed DEPTH (in)	Crushed Quantity(yd <sup>3</sup> /sta)	Crushed Subtotal(yd <sup>3</sup> )	Oversize/ Rip rap Source	Oversize/Rip Rap Quantity(yd <sup>3</sup> )
<b>0+90 Spur</b>	0+00	0+90	17	1	12	12	70	63							
Lift	0+00	0+90		2	12	6	35	32							
Landing	0+90			1				50							
<b>1+25 Spur</b>	0+00	1+25	17	1	12	12	70	88							
Lift	0+00	1+25		2	12	6	35	44							
Landing	1+25			1				50							
<b>3+35 Spur</b>	0+00	3+35	17	1	12	12	70	235							
Lift	0+00	3+35		2	12	6	35	117							
Landing	3+35			1				50							
<b>3+93 Spur</b>	0+00	3+93	17	1	12	6	35	138							
Lift	0+00	3+93		2	12	6	35	138							
Landing	3+93			1				50							
<b>4+25 Spur</b>	0+00	4+25	17	1	12	12	70	298							
Lift	0+00	4+25		2	12	6	35	149							
Landing		4+25		2				50							
<b>CB-1000</b>	MP 0.00	MP 0.15							3	12	6	35	277		
Spot Patch	MP 0.20								3				5		
Spot Patch	MP 0.24								3				10		
<b>Totals:</b>								<b>1552</b>					<b>292</b>		<b>0</b>

## ROCK LIST SHEET CONTINUED

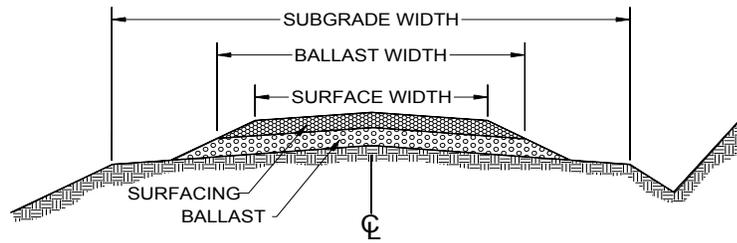


SECTION VIEW

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ROAD NAME	START STATION	END STATION	SUBGRADE WIDTH (ft)	Pitrun SOURCE	Pitrun WIDTH (ft)	Pitrun DEPTH (in)	Pitrun Quantity(yd <sup>3</sup> /sta)	Pitrun SUBTOTAL(yd <sup>3</sup> )	Crushed SOURCE	Crushed WIDTH (ft)	Crushed DEPTH (in)	Crushed Quantity(yd <sup>3</sup> /sta)	Crushed Subtotal(yd <sup>3</sup> )	Oversize/ Rip rap Source	Oversize/Rip Rap Quantity(yd <sup>3</sup> )
CB-1000 cont.															
Spot Patch	MP 0.30								3				5		
Spot Patch	MP 0.31								3				5		
Spot Patch	MP 0.36								3				5		
Spot Patch	MP 0.39								3				15		
Spot Patch	MP 0.47								3				5		
Culvert	MP 0.48								3				20	4	1
Spot Patch	MP 0.50								3				5		
Culvert	MP 0.52													4	1
Spot Patch	MP 0.64								3				10		
Lift	MP 0.70	MP 0.80							3	12	6	35	185		
Turnout	MP 0.80								3				10		
Lift	MP 0.89	MP 1.46							3	12	6	35	1053		
Turnout	MP 1.00								3				10		
Turnout	MP 1.38								3				15		
Lift	MP 1.46	MP 1.61		2	12	6	35	277							
Lift	MP 1.46	MP 1.61							3	12	6	35	277		
Culvert	MP 1.51								3				20	4	1
Lift	MP 1.61	MP 3.37	18	2	12	12	70	6505							
Lift	MP 1.61	MP 3.37							3	12	9	50	4646		
Totals:								6782					6286		3

## ROCK LIST SHEET CONTINUED

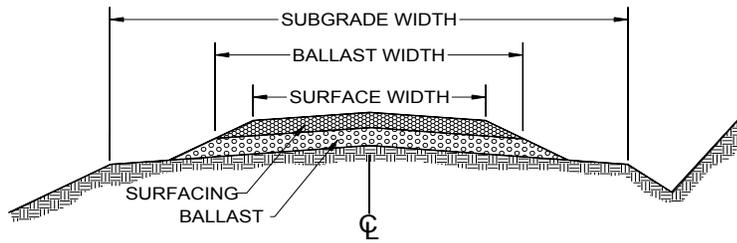


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ROAD NAME	START STATION	END STATION	SUBGRADE WIDTH (ft)	Pitrun SOURCE	Pitrun WIDTH (ft)	Pitrun DEPTH (in)	Pitrun Quantity(yd³/sta)	Pitrun SUBTOTAL(yd³)	Crushed SOURCE	Crushed WIDTH (ft)	Crushed DEPTH (in)	Crushed Quantity(yd³/sta)	Crushed Subtotal(yd³)	Oversize/ Rip rap Source	Oversize/Rip Rap Quantity(yd³)
<b>CB-1000 Cont.</b>															
Spot Patch	MP 1.62			2			10								
Culvert	MP 1.67								3				10	4	1
Turnout	MP 1.69								3				20		
Spot Patch	MP 1.76			2			20								
Culvert	MP 1.79								3				10	4	1
Turnout	MP 1.84								3				20		
Spot Patch	MP 1.85			2			15								
Spot Patch	MP 1.86			2			20								
Spot Patch	MP1.89			2			20								
Turnaround	MP 1.90								3				50		
Spot Patch	MP 2.02			2			10								
Culvert	MP 2.04								3				10	4	1
Turnout	MP 2.12								3				20		
Spot Patch	MP 2.17			2			20								
Culvert	MP 2.21								3				10	4	1
Culvert	MP 2.32								3				10	4	1
Spot Patch	MP 2.38			2			30						320		
<b>Totals:</b>							145						480		5

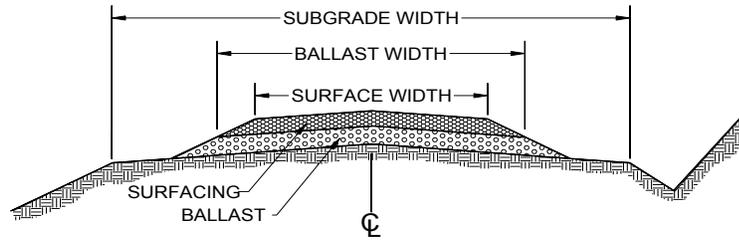
## ROCK LIST SHEET CONTINUED



1. Rock quantities, subtotals and totals are "truck measure" estimates. Rock shall be applied to at least the depths listed.
2. All depths are compacted depths.
3. Rock slopes shall be 1½ (H) : 1 (V).
4. All rock sources are subject to approval by the Contract Administrator.
5. Pitrun is defined as pitrun or ballast per Line 6. Crushed is defined as any crushed rock from ¼" minus to 4" minus per Line 6. Oversize is defined as oversize, quarry spalls, light loose rip rap, or heavy loose rip rap per Line 6.
6. Rock sources= 1: Bear Pit Ballast, 2: Mary Clark Pitrun, 3: Mary Clark 1 ¼" minus crushed rock, 4: Mary Clark Oversized

ROAD NAME	START STATION	END STATION	SUBGRADE WIDTH (ft)	Pitrun SOURCE	Pitrun WIDTH (ft)	Pitrun DEPTH (in)	Pitrun Quantity(yd <sup>3</sup> /sta)	Pitrun SUBTOTAL(yd <sup>3</sup> )	Crushed SOURCE	Crushed WIDTH (ft)	Crushed DEPTH (in)	Crushed Quantity(yd <sup>3</sup> /sta)	Crushed Subtotal(yd <sup>3</sup> )	Oversize/ Rip rap	Oversize/Rip Rap Quantity(yd <sup>3</sup> )
<b>CB-1000 Cont.</b>															
Culvert	MP 2.49								3				10	4	1
Turnout	MP 2.57								3				20		
Turnout	MP 2.67								3				20		
Culvert	MP 2.70								3				10	4	1
Spot Patch	MP 2.76			2			25								
Culvert	MP 2.81								3				10	4	1
Turnout	MP 2.88								3				20		
Spot Patch	MP 2.94			2			10								
Spot Patch	MP 2.95			2			10								
Spot Patch	MP 2.98			2			15								
Spot Patch	MP 2.99			2			10								
Turnout	MP 3.03								3				20		
Spot Patch	MP 3.07			2			5								
Turnout	MP 3.17								3				20		
Spot Patch	MP 3.19			2			15								
Culvert	MP 3.22								3				10	4	1
Spot Patch	MP 3.27			2			15								
<b>Totals:</b>								105					140		4

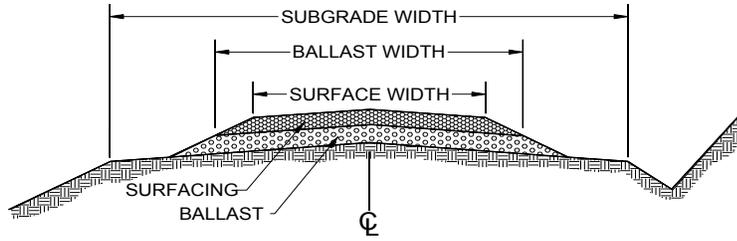
## ROCK LIST SHEET CONTINUED



1. Rock quantities, subtotals and totals are "truck measure" estimates. Rock shall be applied to at least the depths listed.
2. All depths are compacted depths.
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ROAD NAME	START STATION	END STATION	SUBGRADE WIDTH (ft)	Pitrun SOURCE	Pitrun WIDTH (ft)	Pitrun DEPTH (in)	Pitrun Quantity(yd³/sta)	Pitrun SUBTOTAL(yd³)	Crushed SOURCE	Crushed WIDTH (ft)	Crushed DEPTH (in)	Crushed Quantity(yd³/sta)	Crushed Subtotal(yd³)	Oversize/ Rip rap	Oversize/Rip Rap Quantiv(yd³)
<b>CB-1000 Cont.</b>															
Turnaround	MP 3.36								3				50		
Lift	177+94	193+26		1	12	12	70	1072							
Lift	177+94	193+26		2	12	6	35	536							
Curve Widening	181+04	182+80		1				62							
Curve Widening	181+04	182+80		2				31							
Curve Widening	184+32	185+56		1				44							
Curve Widening	184+32	185+56		2				22							
Culvert	185+16													4	1
Landing	190+56			1				50							
Lift	193+26	198+69		1	12	6	35	190							
Lift	193+26	198+69		2	12	6	35	190							
Landing	196+09			1				50							
Landing	198+69			1				50							
<b>CB-1003</b>	0+00	9+07	17	1	12	6	35	317							
Lift	0+00	9+07		2	12	6	35	317							
Landing	9+07			1				50							
<b>Totals:</b>								<b>2981</b>					<b>50</b>		<b>1</b>

## ROCK LIST SHEET CONTINUED



1. Rock quantities, subtotals and totals are "truck measure" estimates. Rock shall be applied to at least the depths listed.
2. All depths are compacted depths.
3. Rock slopes shall be 1½ (H) : 1 (V).
4. All rock sources are subject to approval by the Contract Administrator.
5. Pitrun is defined as pitrun or ballast per Line 6. Crushed is defined as any crushed rock from ¼" minus to 4" minus per Line 6. Oversize is defined as oversize, quarry spalls, light loose rip rap, or heavy loose rip rap per Line 6.
6. Rock sources= 1: Bear Pit Ballast, 2: Mary Clark Pitrun, 3: Mary Clark 1 ¼" minus crushed rock, 4: Mary Clark Oversized

ROAD NAME	START STATION	END STATION	SUBGRADE WIDTH (ft)	Pitrun SOURCE	Pitrun WIDTH (ft)	Pitrun DEPTH (in)	Pitrun Quantity(yd³/sta)	Pitrun SUBTOTAL(yd³)	Crushed SOURCE	Crushed WIDTH (ft)	Crushed DEPTH (in)	Crushed Quantity(yd³/sta)	Crushed Subtotal(yd³)	Oversize/ Rip rap	Oversize/Rip Rap Quantity(yd³)
<b>CB-1300</b>	0+00	35+90	17	1	12	12	70	2513							
Lift	0+00	35+90		2	12	6	35	1257							
Approach	0+00			1				30							
Approach	0+00			2				20							
Turnout	2+00			2				20							
Landing	5+20			1				50							
Turnout	12+00			2				20							
Culvert	19+00													4	1
Turnout	24+50			2				20							
Culvert	28+50													4	1
Turnout	34+50			2				20							
Landing	35+90			1				50							
<b>CB-1400</b>	0+00	19+65		1	12	12	70	1376							
Lift	0+00	19+65		2	12	6	35	688							
Culvert	3+28													4	1
Landing	19+65			1				50							
<b>USFS-3006</b>	MP 0.01	MP 0.06							3	14	3	20	53		
<b>CB-1500</b>															
Lift	MP 0.00	MP 0.05	18	2	18	12	110	290							
Totals:								6404					53		3
Grand Totals:								17969					7301		16

## CULVERT LIST

ROAD NAME	STATION	CULVERT DIAMETER (in)	CULVERT LENGTH (ft)	FLUME LENGTH (ft)		RIP RAP - INLET (cy)	RIP RAP - OUTLET (cy)	BACKFILL MATERIAL	NOTES
CB-1000	MP 0.11	18							Clean Inlet
CB-1000	MP 0.25	18							Clean Inlet
CB-1000	MP 0.28	18							Clean Inlet
CB-1000	MP 0.32	18							Clean Inlet and Outlet
CB-1000	MP 0.39	18							Clean Inlet and Outlet
CB-1000	MP 0.48	18	30	40		1.0	1.0	CR	New Culvert
CB-1000	MP 0.52	24				1.0			Install New Headwall and Clean Inlet
CB-1000	MP 0.71	18							Clean Inlet and Outlet
CB-1000	MP 1.31	18							Clean Outlet
CB-1000	MP 1.34	18							Clean Outlet
CB-1000	MP 1.44	18							Clean Inlet and Outlet
CB-1000	MP 1.51	18	30			0.5	0.5	CR	New Culvert
CB-1000	MP 1.67	18	30	30		0.5	0.5	CR	Replace Culvert
CB-1000	MP 1.79	18	26	30		0.5	0.5	CR	New Culvert
CB-1000	MP 2.04	18	36	40		0.5	0.5	CR	New Culvert
CB-1000	MP 2.21	18	30	40		0.5	0.5	CR	New Culvert
CB-1000	MP 2.32	18	30	40		0.5	0.5	CR	New Culvert
CB-1000	MP 2.49	18	32	26		0.5	0.5	CR	New Culvert
CB-1000	MP 2.70	18	28	40		0.5	0.5	CR	New Culvert
CB-1000	MP 2.81	18	30	50		0.5	0.5	CR	New Culvert
CB-1000	MP 3.22	18	30			0.5	0.5	CR	New Culvert
CB-1000	185+16	18	28			0.5	0.5	NT	New Culvert
CB-1300	19+00	18	30			0.5	0.5	NT	New Culvert
CB-1300	28+50	18	34			0.5	0.5	NT	New Culvert
CB-1400	3+28	18	28			0.5	0.5	NT	New Culvert

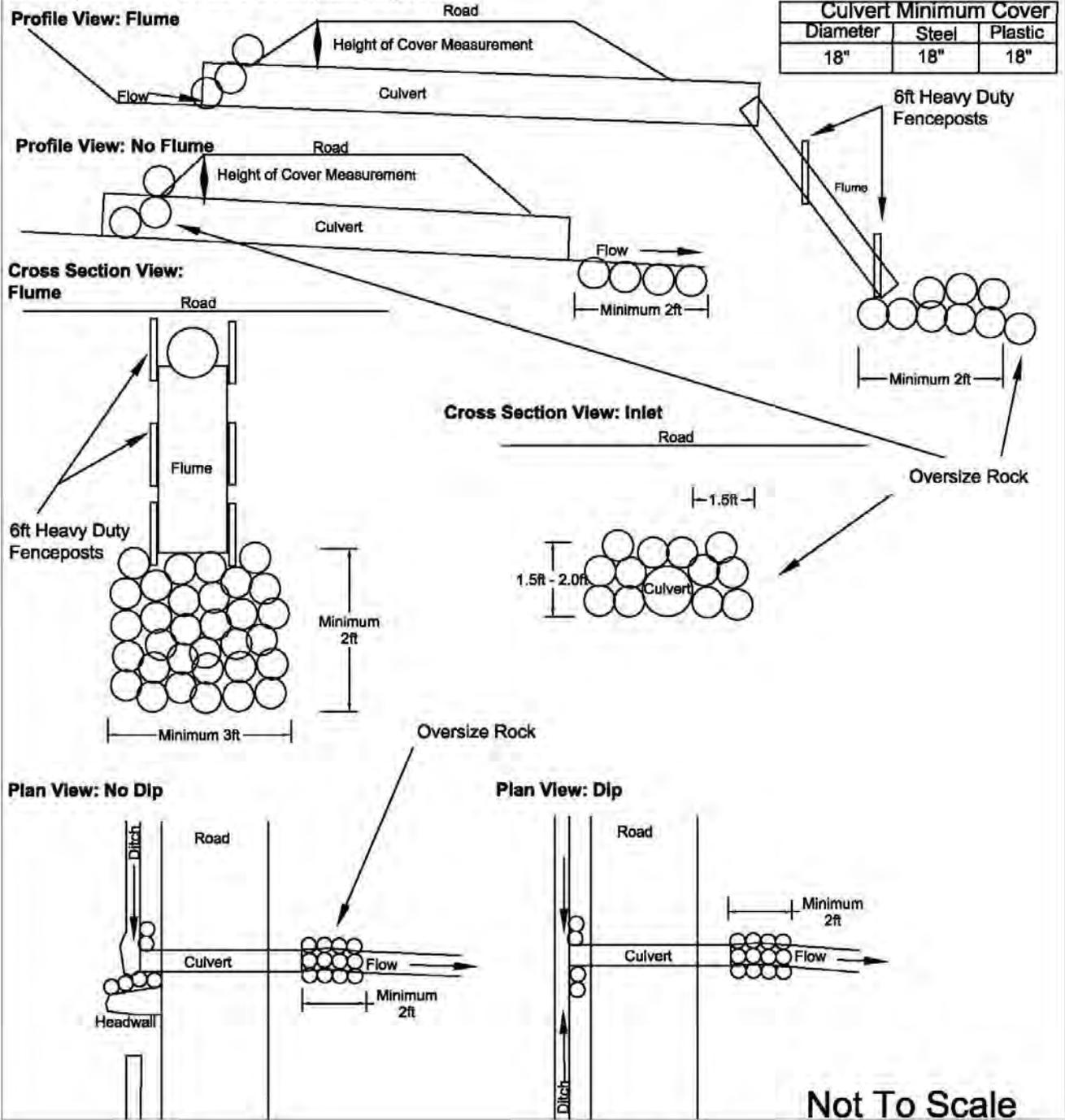
**All rip rap shall be Oversize unless specified in the Rock List, or in the field.  
All backfill shall be native material (NT) unless specified otherwise. CR= 1 ¼" - crushed rock, PR= pitrun or ballast**

## COMPACTION LIST

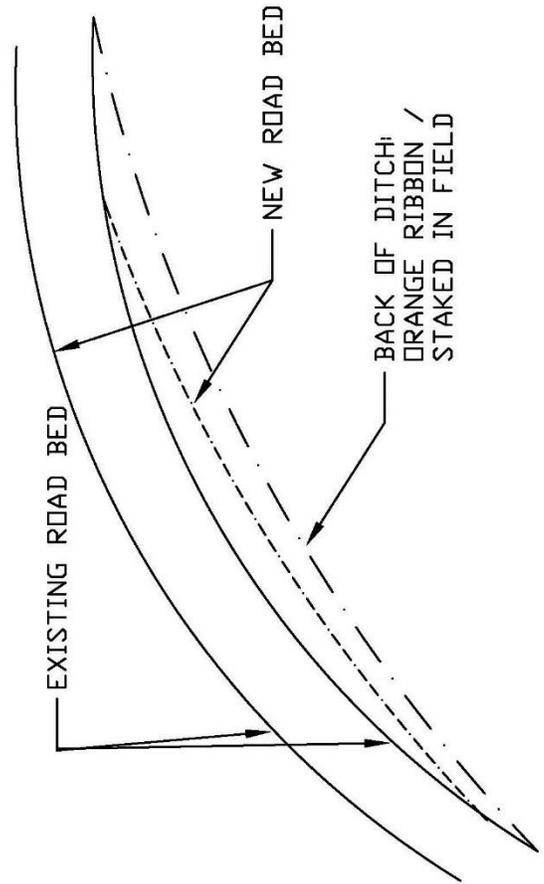
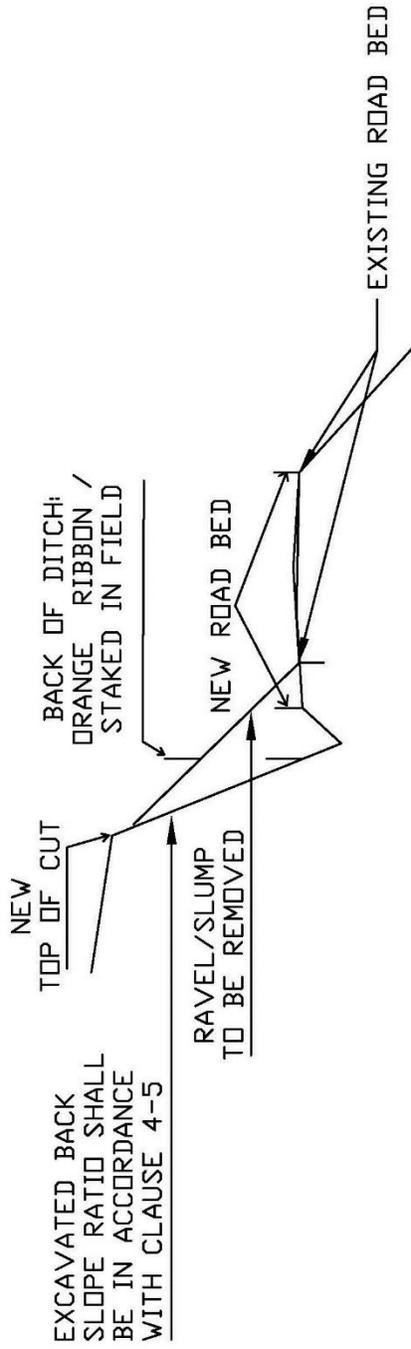
Road	Stations	Type	Max Depth Per Lift (inches)	Equipment Type	Equipment Weight (lbs)	Minimum Number of Passes	Maximum Operating Speed (mph)
Construction	All	Subgrade, Rock, Embankment	6	Vibratory Smooth Drum Roller	14,000	3	3
CB-1400	8+80	Waste Fill	6				
3+35 Spur	2+75	Waste Fill	6				
3+93 Spur	2+14 – 3+93	Prehaul Surface, Rock Lifts	6				
CB-1000	MP 0.00 – MP 3.37 179+33 – 198+69	Prehaul Surface, Rock Lifts	6				
CB-1003	0+00 – 7+44	Prehaul Surface, Rock Lifts	6				
USFS-3006	MP 0.01 – MP 0.06	Prehaul Surface, Rock Lifts	6				
CB-1500	MP 0.00 – MP 0.05	Prehaul Surface, Rock Lifts	6				
Waste Areas	All	Fill	6				
All	All	Culverts	6	Jumping Jack	N/A	3	N/A
Waste Areas	All	Non-Fill	24	Track	N/A	As directed	N/A

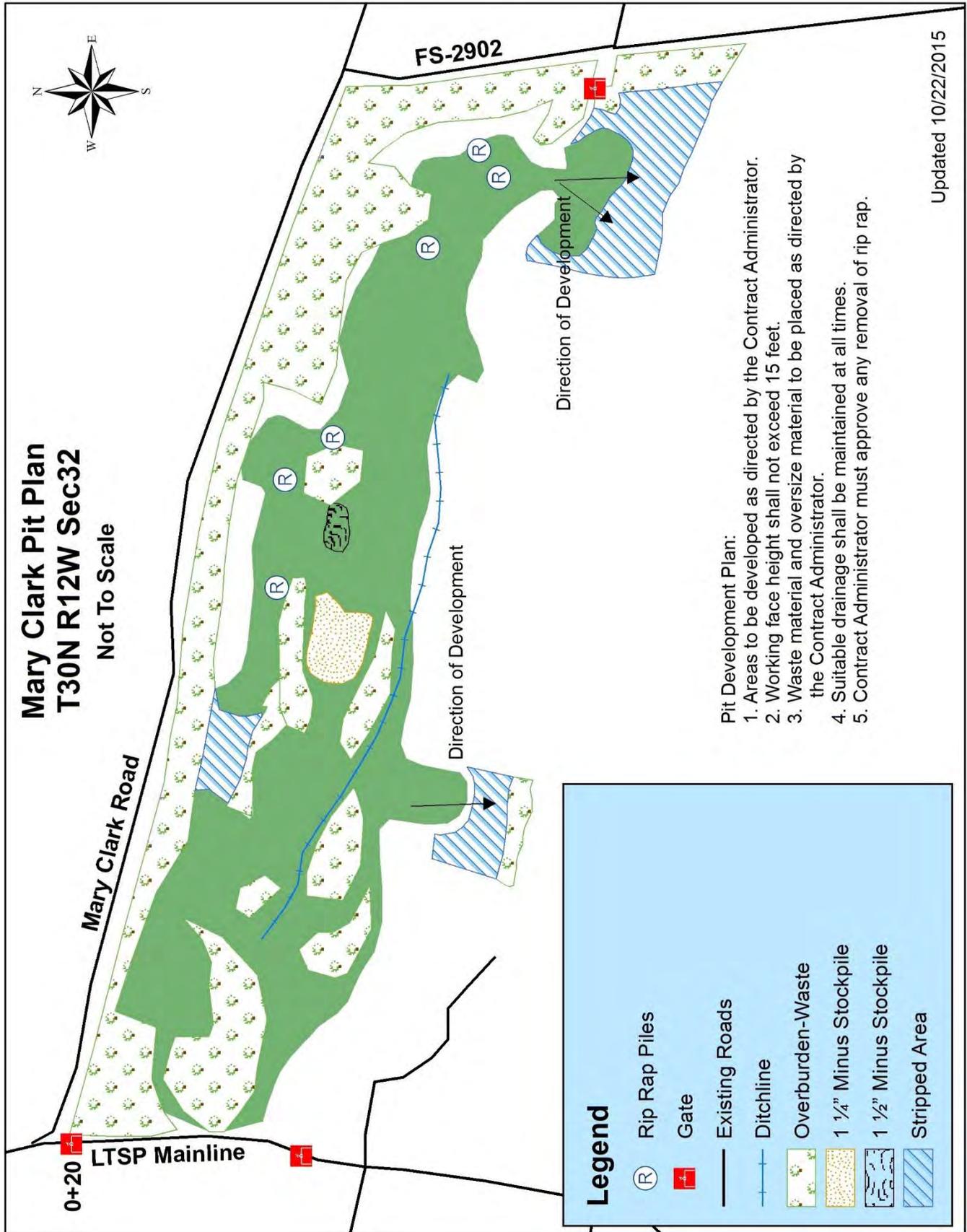
# Typical Cross Drain Culvert Installation Detail Sheet

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



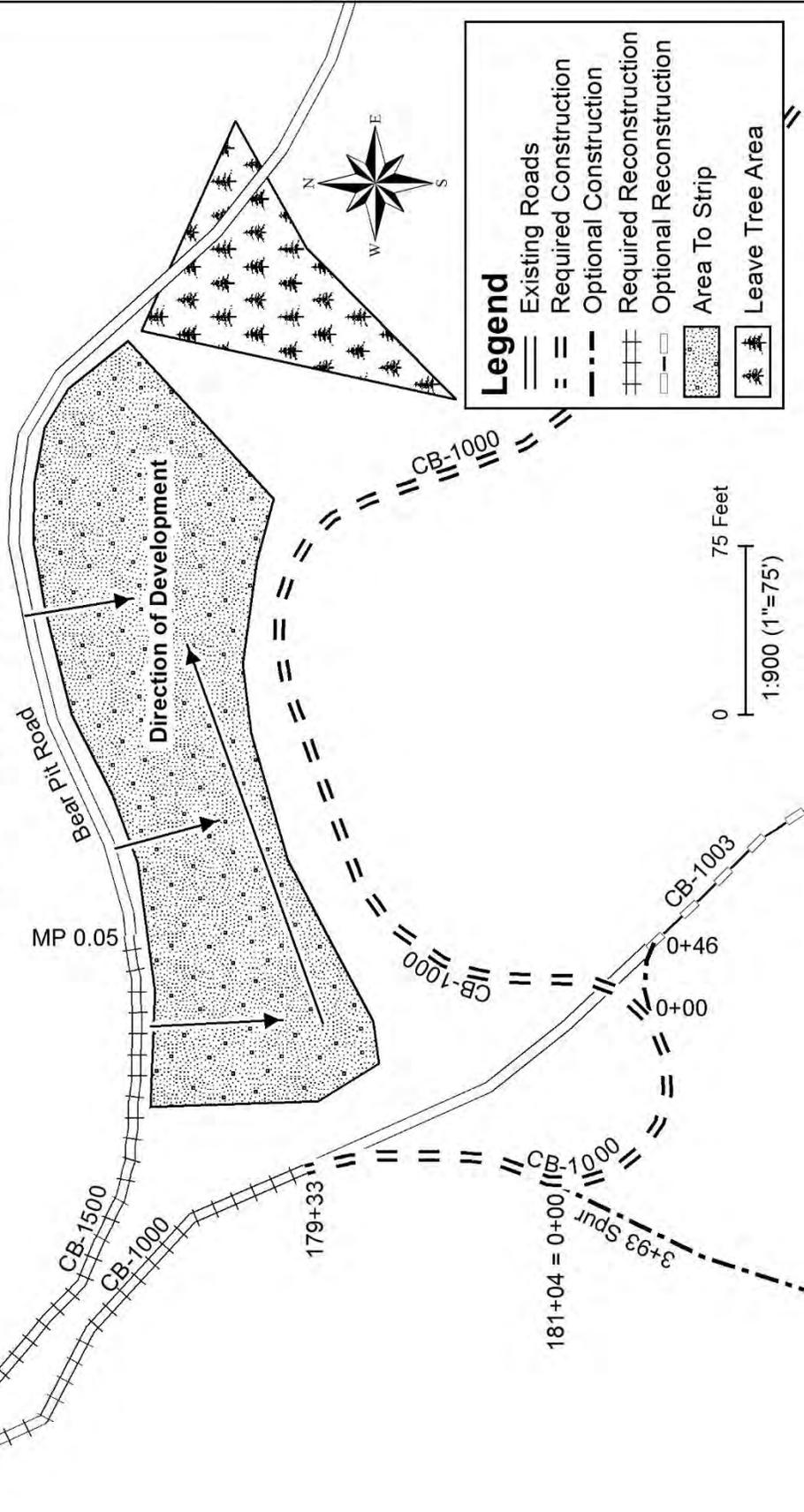
# TYPICAL RECONSTRUCTION ROAD WIDENING





# Bear Pit T30N R11W Sec. 6 Pit Development Plan

1. Areas to be developed as directed by the Contract Administrator.
2. Oversize material to be placed as directed by the Contract Administrator.
3. Suitable drainage shall be maintained at all times.
4. Woody debris, overburden, and waste material shall be enhaauled to the waste areas listed in Clause 4-37.



DEPARTMENT OF NATURAL RESOURCES

10/01/19 8:47 AM Rev. 01-008

SUMMARY - Road Development Costs

SALE NAME: Clawed Bear CONTRACT# 30-092364 REGION: Olympic DISTRICT: Coast  
 LEGAL DESCRIPTION: Sec 6 & 7 T. 30N R. 11W, Sec 1 & 12 T. 30N R. 11W, S. 36 T. 31N R. 12W

ROAD NAME:	0+90 Spur	1+25 Spur	4+25 Spur	3+35 Spur	3+93 Spur	CB-1000	CB-1003	CB-1300	CB-1400	TOTAL	SHEET #2-3
ROAD TYPE:	Construction										
NUMBER OF STATIONS:	0.90	1.25	4.25	3.35	1.79	19.36	2.09	35.90	19.65	88.54	194.26
SIDE SLOPE:	25%	35%	30%	30%	60%	0%	60%	65%	70%		
CLEARING AND GRUBBING:	\$148	\$348	\$1,185	\$934	\$681	\$2,935	\$795	\$14,324	\$7,471	\$21,349	\$19,112
ROAD BRUSHING:	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
EXCAVATION AND FILL:	\$600	\$3,494	\$1,194	\$3,342	\$7,740	\$40,970	\$6,398	\$69,320	\$26,830	\$133,057	\$101,964
ROAD GRADING:	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$573
DITCH CLEANING/CONSTRUCTION:	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$500
ROCK TOTALS (Cu Yds.):											
Ballast:	17969	17969	\$1,436	\$3,670	\$3,414	\$814	\$15,907	\$1,208	\$27,910	\$14,326	\$55,524
Surfbase:	7301	7301	\$736	\$469	\$1,642	\$1,294	\$858	\$8,966	\$842	\$14,650	\$7,655
Oversize:	16	16	\$0	\$0	\$0	\$0	\$12	\$0	\$22	\$11	\$34
CULVERTS AND FULMESH:	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,408	\$616	\$2,024	\$8,648
STRUCTURES:	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
MISC. EXPENSES:	\$2	\$2	\$8	\$6	\$3	\$36	\$24	\$146	\$76	\$227	\$810
OVERHEAD:	\$180	\$460	\$616	\$719	\$808	\$5,555	\$741	\$10,222	\$4,559	\$19,302	\$20,999
TOTAL COSTS:	\$2,432	\$6,210	\$8,314	\$9,709	\$10,904	\$74,997	\$10,008	\$138,003	\$61,544	\$322,120	\$280,062
COST PER STATION:	\$2,702	\$4,968	\$1,956	\$2,898	\$6,091	\$3,874	\$4,789	\$3,844	\$3,132	\$3,638	\$1,441.69
MOBILIZATION:			\$6,400								
ROAD DEACTIVATION AND ABANDONMENT COSTS:		\$13,320	\$0								
PI Work:											

NOTE: This appraisal has no allowance for profit and risk.  
 Sheet 1 of 2  
 Plans to be furnished by:

TOTAL (All Roads) = \$621,903  
 SALE VOLUME MBE = 8.431  
 TOTAL COST PER MBE = \$73.76  
 TOTAL COST PER STATION = \$2,199.09  
 Revised by: Bill Mehl Date: 02/26/16

**SUMMARY - Road Development Costs**

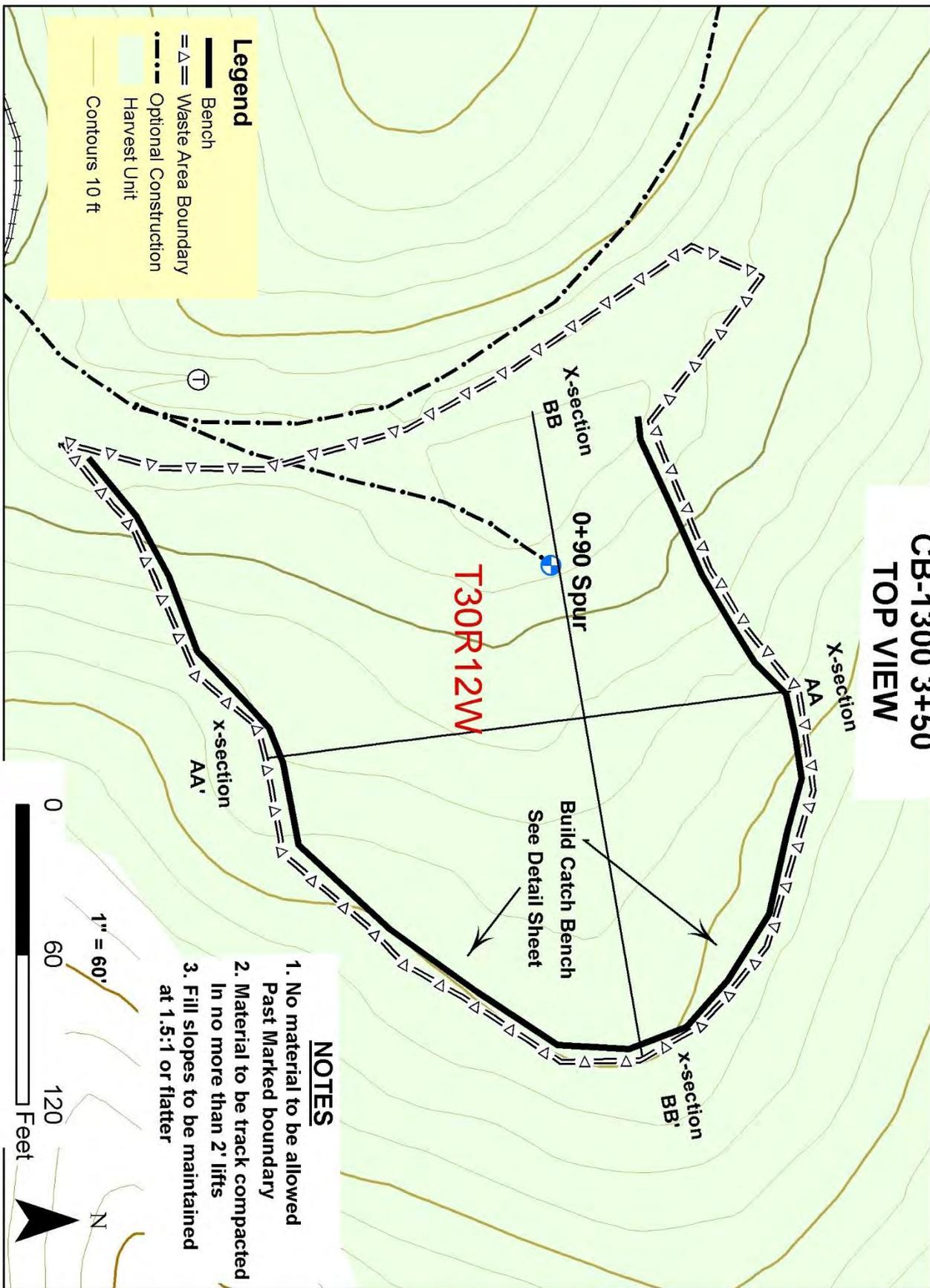
SALE NAME: Clawed Bear      CONTRACT#: 30-092364      REGION: Olympic

LEGAL DESCRIPTION: Sec. 6 & 7 T.30N.R.11W., Sec 1 & 12 T.30N.R.11W., S. 36 T.31N.R.12W

DISTRICT: Coast

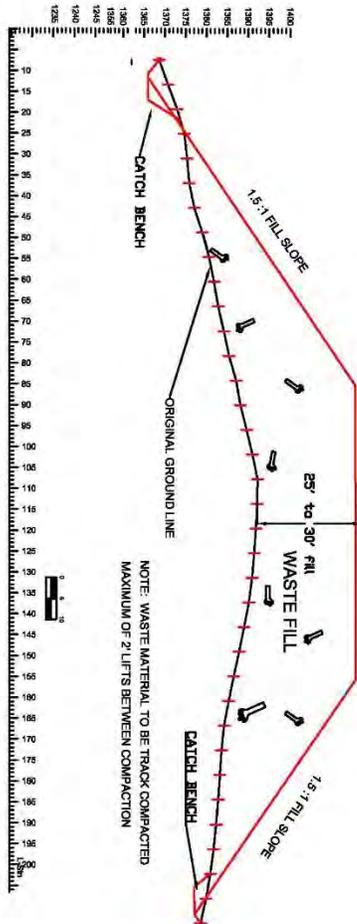
ROAD NAME:	3+93 Spur	CB-1000	CB-1003	CB-1500	CB-1000	USFS-3006
ROAD TYPE:	Recon.	Recon.	Recon.	Recon.	Prehaul	Prehaul
NUMBER OF STATIONS:	2.14	94.32	6.98	2.64	85.01	3.17
SIDESLOPE:	60%	50%	60%	100%	0%	100%
CLEARING AND GRUBBING:	\$1,270	\$15,903	\$1,939	\$0	\$0	\$0
ROAD BRUSHING:	\$0	\$0	\$0	\$0	\$0	\$0
EXCAVATION AND FILL:	\$8,617	\$70,526	\$16,982	\$2,543	\$3,296	\$0
ROAD GRADING:	\$0	\$0	\$0	\$0	\$553	\$21
DITCH CLEANING/CONSTRUCTION	\$0	\$65	\$272	\$103	\$60	\$0
ROCK TOTALS (Cu. Yds.):						
Ballast:	\$1,684	\$53,905	\$2,365	\$3,313	\$2,676	\$0
Surface:	\$722	\$41,093	\$2,800	\$0	\$18,180	\$591
Oversize:	\$0	\$99	\$0	\$0	\$30	\$0
CULVERTS AND FLUMES:	\$0	\$7,168	\$0	\$0	\$1,480	\$0
STRUCTURES:	\$0	\$0	\$0	\$0	\$0	\$0
MISC. EXPENSES:	\$4	\$334	\$13	\$5	\$416	\$38
OVERHEAD:	\$984	\$15,127	\$1,950	\$477	\$2,402	\$58
TOTAL COSTS:	\$13,280	\$204,219	\$26,320	\$6,441	\$29,093	\$708
COST PER STATION:	\$6,206	\$2,165	\$3,771	\$2,440	\$342	\$224

**WASTE AREA 6  
CB-1300 3+50  
TOP VIEW**

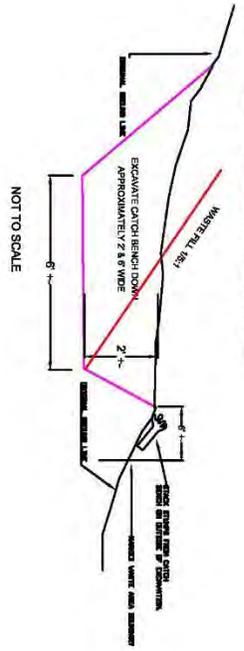


Mehl 2/22/2016

WASTE AREA 6 (CB-1300 3+50)  
 CROSS SECTION AA  
 Section 1 T.30N R.12W.

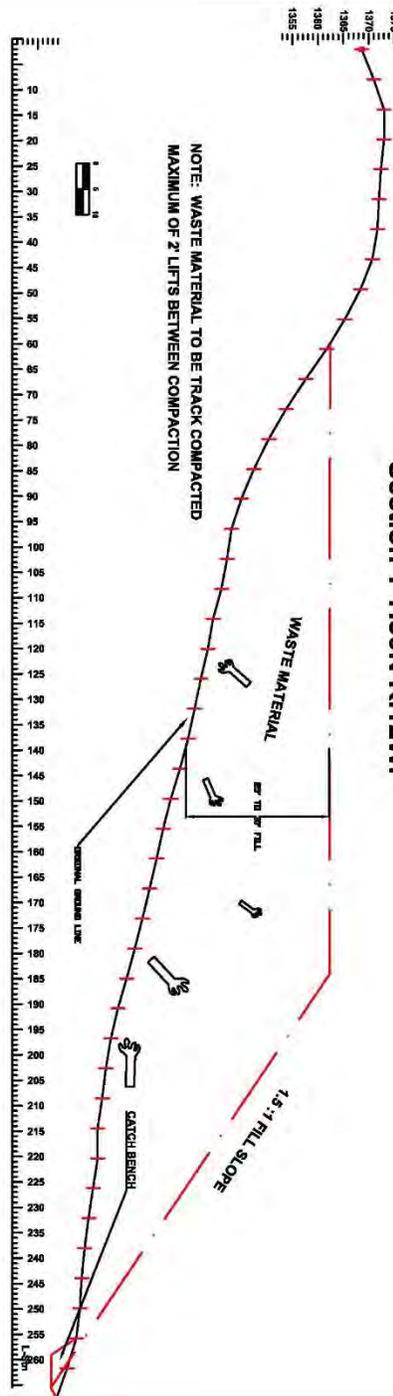


CATCH BENCH DETAIL

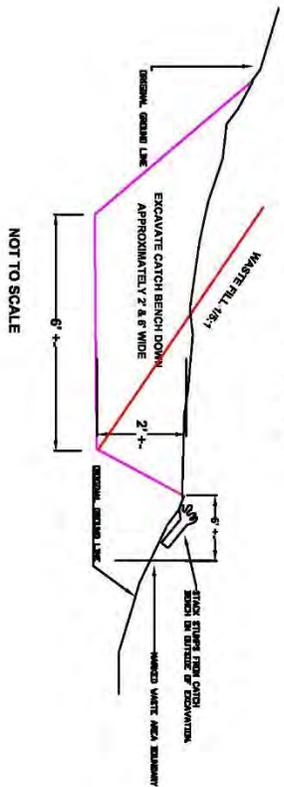


MEHL 2/22/2016

**WASTE AREA 6 (CB-1300 3+50)  
CROSS SECTION BB  
Section 1 T.30N R.12W.**



**CATCH BENCH DETAIL**



MEHL 2/22/2016

## FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS

### Cuts and Fills

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

### Surface

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

### Drainage

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

### 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.

