



TIMBER NOTICE OF SALE

SALE NAME: MCGONAGALL MANEUVER

AGREEMENT NO: 30-98037

AUCTION: March 26, 2020 starting at 10:00 a.m., **COUNTY:** Cowlitz
Pacific Cascade Region Office, Castle Rock, WA

SALE LOCATION: Sale located approximately 16 miles east of Woodland

PRODUCTS SOLD AND SALE AREA: All timber, except leave trees marked with two blue stump marks and a single band of blue paint, snags, and all down timber greater than 24 inches in diameter, bounded by the following: white "Timber Sale Boundary" tags with pink flagging, pink adjacent to the PH-1000 and PH- 1080 roads in Unit 1; all timber bound by the following: orange "Right of Way" tags and orange flagging in Units 2, 3, and 4 on part(s) of Sections 15 and 16 all in Township 6 North, Range 2 East, W.M., containing 92 acres, more or less.

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

ESTIMATED SALE VOLUMES AND QUALITY:

Species	Avg DBH	Ring Count	Total MBF	MBF by Grade								
				1P	2P	3P	SM	1S	2S	3S	4S	UT
Douglas fir	15	5	1,840						363	1,079	348	50
Hemlock	15		173						70	73	28	1
Red alder	10		35								25	10
Maple	12.5		4									4
Cottonwood	13		1					1				
Sale Total			2,053									

MINIMUM BID: \$552,000.00 **BID METHOD:** Sealed Bids

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

EXPIRATION DATE: October 31, 2021 **ALLOCATION:** Export Restricted

BID DEPOSIT: \$55,200.00 or Bid Bond. Said deposit shall constitute an opening bid at the appraised price.

HARVEST METHOD: Cable, and Ground based equipment. Harvesting activities are estimated to be approximately 5% cable/cable assist and 95% ground-based. Ground-based harvesting equipment is restricted to slopes of 40% and less, and shall only operate during dry soil conditions. See the H-140 clause for further harvest requirements. A detailed felling and yarding plan shall be required prior to any harvest activities and approved in writing by the Contract Administrator. Ground Based Yarding will not be permitted from November 1 to April 30 unless authorized in writing by the Contract Administrator.



TIMBER NOTICE OF SALE

ROADS: 2.19 stations of optional construction. 49.97 stations of optional reconstruction. 296.36 stations of required prehaul maintenance. 66.34 stations of post haul maintenance. 41.86 stations of required medium abandonment, if built. Rock used in accordance with the quantities in the ROCK LIST under this contract may be obtained at no cost to the Purchaser from the PH-3000 Pit, located in Section 20, Township 06 North, Range 02 East, W.M. Additional rock for this sale may be obtained from any commercial pit at the Purchaser's expense. Rock Sources will be subject to written approval by the Contract Administrator before their use. Road construction will not be permitted from October 1 to April 30 unless authorized in writing by the Contract Administrator.

ACREAGE DETERMINATION

CRUISE METHOD: The sale acres were determined by GIS delineation. Cruise was completed using variable plot cruise methods.

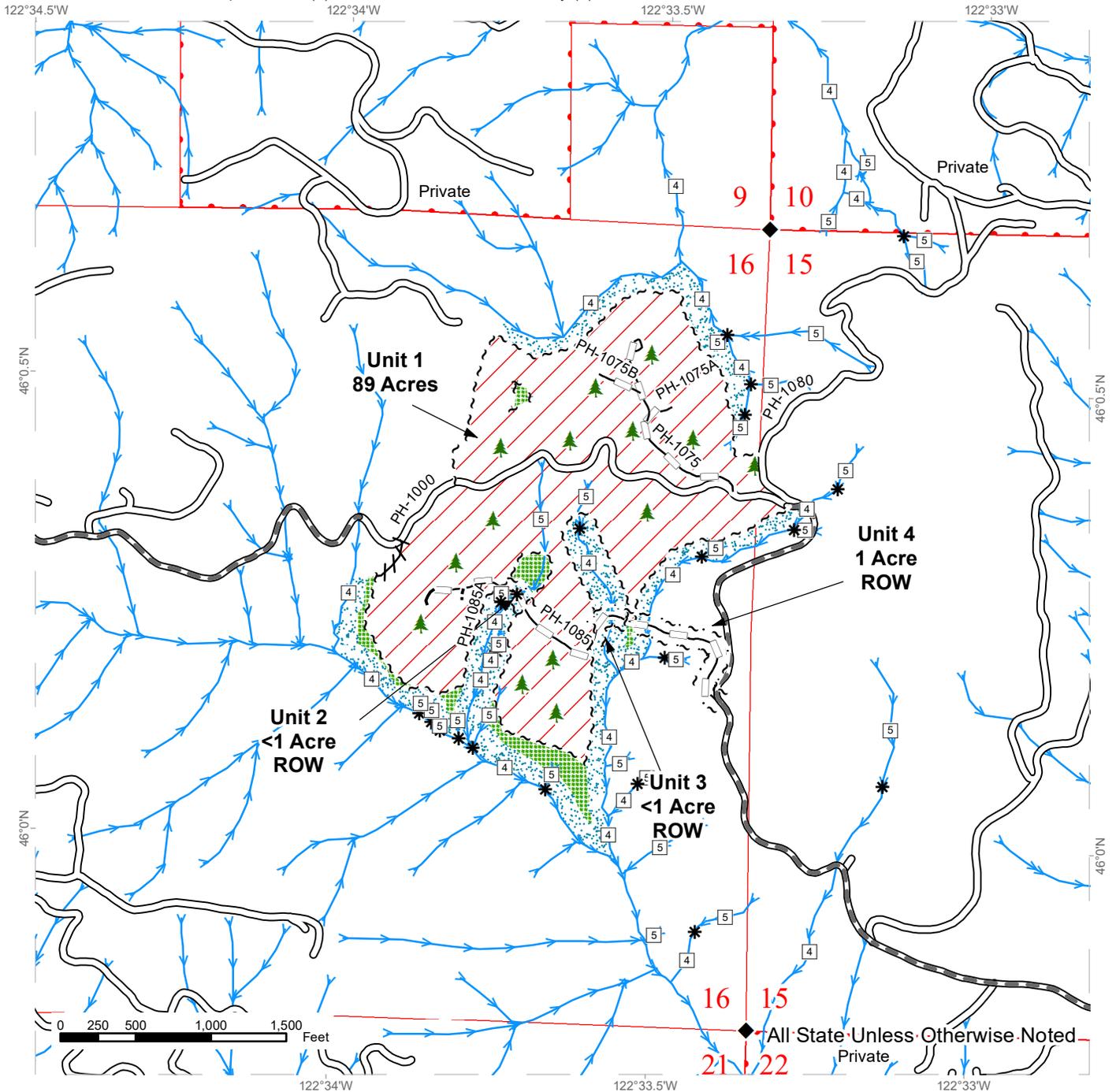
FEES: \$34,884.00 is due on day of sale. \$9.00 per MBF is due upon removal. These are in addition to the bid price.

SPECIAL REMARKS: None.

TIMBER SALE MAP

SALE NAME: MCGONAGALL MANEUVER
AGREEMENT #: 30-098037
TOWNSHIP(S): T6R2E
TRUST(S): Capitol Grant (7), Common School and Indemnity (3)

REGION: Pacific Cascade Region
COUNTY(S): Cowlitz
ELEVATION RGE: 1200-1840



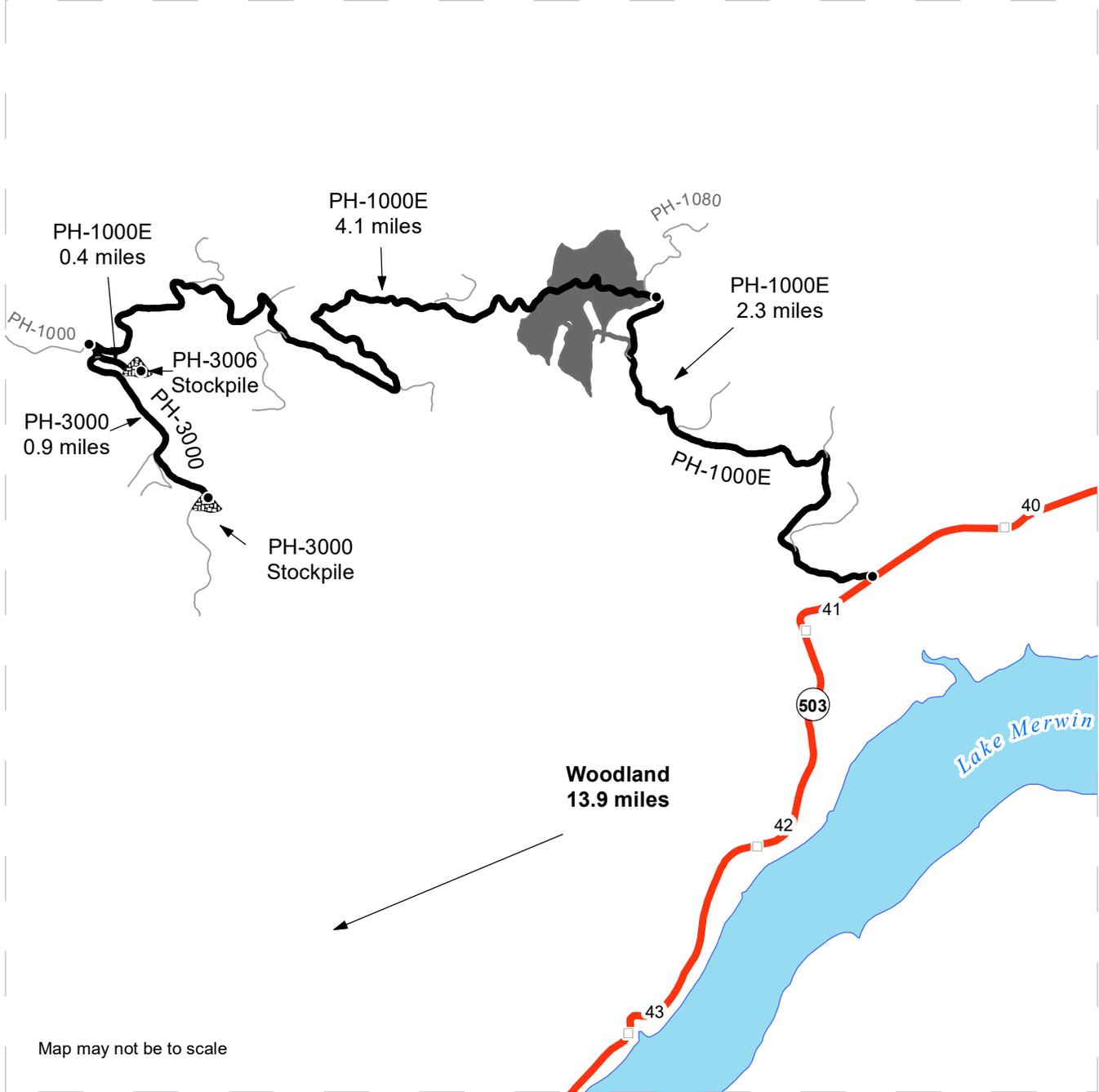
Variable Retention Harvest	Sale Boundary Tags	Existing Roads	Clipped Streams
Riparian Mgt Zone	Leave Tree Tags	Required Pre-Haul Maintenance	Stream Type
Leave Tree Area	Right of Way Tags	Optional Construction	Stream Type Break
DNR Managed Lands	Flag Line	Optional Reconstruction	Leave Trees
			Survey Monument



DRIVING MAP

SALE NAME: MCGONAGALL MANEUVER
AGREEMENT#: 30-098037
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Map may not be to scale

- Timber Sale Unit
- Highway
- Haul Route
- Other Road
- Milepost Markers
- Distance Indicator
- Stockpile

DRIVING DIRECTIONS:

From Woodland, drive east on SR-503 for 13.9 miles.
 Turn left (northeast) onto the PH-1000E Road. Follow the PH-1000E Road for 2.3 miles to reach Unit 1. Continue east on the PH-1000E Road for 4.1 miles to the PH-3000 junction.
 Turn left (south) onto the PH-3000 Road and continue for 0.9 miles to the PH-3000 stockpile.
 To the PH-3006 stockpile (from PH-1000/PH-3000 junction) turn left (east) onto the PH-3006 for 0.4 miles.



**STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES**

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

Export Restricted Lump Sum AGREEMENT NO. 30-098037

SALE NAME: MCGONAGALL MANEUVER

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

Section G: General Terms

G-001 Definitions

The following definitions apply throughout this contract;

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

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

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

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

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

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

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

G-011 Right to Remove Forest Products and Contract Area

Purchaser was the successful bidder on March 26, 2020 and the sale was confirmed on _____. The State, as owner, agrees to sell to Purchaser, and Purchaser agrees to purchase as much of the following forest products as can be cut and removed during the term of this contract: All timber, except leave trees marked with two blue stump marks and a single band of blue paint, snags, and all down timber greater than 24 inches in diameter, bounded by the following: white "Timber Sale Boundary" tags with pink flagging, pink adjacent to the PH-1000 and PH- 1080 roads in Unit 1; all timber bound by the following: orange "Right of Way" tags and orange flagging in Units 2, 3, and 4, located on approximately 92 acres on part(s) of Sections 15, and 16 all in Township 6 North, Range 2 East W.M. in Cowlitz County(s) as designated on the sale area and as shown on the attached timber sale map.

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

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

G-020 Inspection By Purchaser

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

G-031 Contract Term

Purchaser shall complete all work required by this contract prior to October 31, 2021.

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 \$983.00 per acre per annum for the acres on which an operating release has not been issued .
- f. In no event will the extension charge be less than \$200.00.
- g. Extension payments are non-refundable.

G-053 Surveys - Sensitive, Threatened, Endangered Species

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

G-060 Exclusion of Warranties

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

- a. The MERCHANTABILITY of the forest products. The use of the term "merchantable" in any document is not intended to vary the foregoing.
- b. The CONDITION of the forest products. The forest products will be conveyed "AS IS."
- c. The ACREAGE contained within any sale area. Any acreage descriptions appearing in the timber notice of sale, timber sale contract, or other documents are estimates only, provided solely for administrative and identification purposes.
- d. The VOLUME, QUALITY, OR GRADE of the forest products. The State neither warrants nor limits the amount of timber to be harvested. The descriptions of the forest products to be conveyed are estimates only, made solely for administrative and identification purposes.
- e. The CORRECTNESS OF ANY SOIL OR SURFACE CONDITIONS, PRE-SALE CONSTRUCTION APPRAISALS, INVESTIGATIONS, AND ALL OTHER PRE-BID DOCUMENTS PREPARED BY OR FOR THE STATE. These documents have been prepared for the State's appraisal purposes only.
- f. THAT THE SALE AREA IS FREE FROM THREATENED OR ENDANGERED SPECIES or their habitat. The State is not responsible for any interference with forestry operations that result from the presence of any

threatened or endangered species, or the presence of their habitat, within the sale area.

- g. THAT THE FORESTRY OPERATIONS to be performed under this contract WILL BE FREE FROM REGULATORY ACTIONS by governmental agencies. The State is not responsible for actions to enforce regulatory laws, such as the Washington Forest Practices Act (chapter 76.09 RCW), taken by the Department of Natural Resources or any other agency that may affect the operability of this timber sale.
- h. Items contained in any other documents prepared for or by the State.

G-062 Habitat Conservation Plan

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

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

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

G-063 Incidental Take Permit Notification Requirements

- a. Purchaser shall immediately notify the Contract Administrator of new locations of permit species covered by the Incidental Take Permits (ITP) that are discovered within the area covered by the State's Habitat Conservation Plan (HCP), including, but not limited to: locations of occupied murrelet habitat; spotted owl nest sites; wolves; grizzly bears; nests, communal roosts, or feeding concentrations of bald eagles; peregrine falcon nests; Columbian white-tailed deer; Aleutian Canada geese; Oregon silverspot butterflies; and additional stream reaches found to contain bull trout. Purchaser is required to

notify the Contract Administrator upon discovery of any fish species found in streams or bodies of water classified as non-fish bearing. In all circumstances, notification must occur within a 24 hour time period.

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

G-064 Permits

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

G-065 Regulatory Disclaimer

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

G-066 Governmental Regulatory Actions

a. Risk

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

Purchaser shall remain responsible for payment of the total contract price notwithstanding the impracticability or frustration.

b. Sale Area

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

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

c. Adjustment of Price

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

G-070 Limitation on Damage

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

G-080 Scope of State Advice

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

G-091 Sale Area Adjustment

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

G-101 Forest Products Not Designated

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

The pricing schedule has not been set for the sale.

G-111 Title and Risk of Loss

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

G-116 Sustainable Forestry Initiative® (SFI) Certification

Forest products purchased under this contract are certified as being in conformance with the Sustainable Forestry Initiative program Standard under certificate number: 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 Purchasers expense regardless of cost, to remedy deficiencies at any time.

G-140 Indemnity

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

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

G-150 Insurance

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

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

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

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

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

Purchaser shall include all subcontractors as insured under all required insurance policies, or shall furnish separate certificates of insurance and endorsements for each subcontractor. Subcontractor(s) must comply fully with all insurance requirements

stated herein. Failure of subcontractor(s) to comply with insurance requirements does not limit Purchaser's liability or responsibility.

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

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

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

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

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

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

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

Workers' Compensation Coverage. Purchaser shall comply with all State of Washington workers' compensation statutes and regulations. Workers' compensation coverage shall be provided for all employees of Purchaser and employees of any subcontractor or sub-subcontractor. Coverage shall include bodily injury (including

death) by accident or disease, which exists out of or in connection with the performance of this contract. Except as prohibited by law, Purchaser waives all rights of subrogation against State for recovery of damages to the extent they are covered by workers' compensation, employer's liability, commercial general liability, or commercial umbrella liability insurance.

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

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

G-160 Agents

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

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

G-170 Assignment and Delegation

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

G-180 Modifications

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

G-190 Contract Complete

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

G-200 Notice

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

G-210 Violation of Contract

G-220 State Suspends Operations

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

G-210 Violation of Contract

- a. If Purchaser violates any provision of this contract, the Contract Administrator, by written notice, may suspend those operations in violation. If the violation is capable of being remedied, Purchaser has 30 days after receipt of a suspension notice to remedy the violation. If the violation cannot be remedied (such as a violation of WAC 240-15-015) or Purchaser fails to remedy the violation within 30 days after receipt of a suspension notice, the State may terminate the rights of Purchaser under this contract and collect damages.
- b. If the contract expires pursuant to clause G-030 or G-031 without Purchaser having performed all its duties under this contract, Purchaser's right to operate is terminated and Purchaser shall not have the right to remedy the breach. This provision shall not relieve Purchaser of any payment obligations.
- c. The State has the right to remedy the breach in the absence of any indicated attempt by Purchaser or if Purchaser is unable, as determined by the State, to remedy the breach. Any expense incurred by the State shall be charged to Purchaser and shall be paid within 30 days of receipt of billing.
- d. If Purchaser's violation is a result of a failure to make a payment when due, in addition to a. and b. above, interest shall accrue on the unpaid balance at 12 percent per annum, beginning the date payment was due.

G-220 State Suspends Operation

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

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

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

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

G-230 Unauthorized Activity

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

G-240 Dispute Resolution

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

- a. In the event of a dispute, Purchaser must make a written request to the Region Manager for resolution prior to seeking other relief.
- b. The Region Manager will issue a written decision on Purchaser's request within ten business days.
- c. Within ten business days of receipt of the Region Manager's decision, Purchaser may make a written request for resolution to the Deputy Supervisor - Uplands of the Department of Natural Resources.

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

G-250 Compliance with All Laws

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

G-260 Venue

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

G-270 Equipment Left on State Land

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

G-280 Operating Release

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

G-310 Road Use Authorization

Purchaser is authorized to use the following State roads and roads for which the State has acquired easements and road use permits; PH-1000 (0+00 to 335+84), PH-1075, PH-1075A, PH-1075B, PH-1080 (0+00 to 5+00), PH-1085, PH-1085A, PH-3000 (0+00 to 50+00), PH-3006 (0+00 to 10+74). 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-430 Open Fires

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

G-450 Encumbrances

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

DATA MISSING

Section P: Payments and Securities

P-011 Initial Deposit

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

P-020 Payment for Forest Products

Purchaser agrees to pay the total, lump sum contract price of \$53,361.00. The total contract price consists of a \$0.00 contract bid price plus \$53,361.00 in fees. Fees collected shall be retained by the state unless the contract is adjusted via the G-066

clause. Purchaser shall be liable for the entire purchase price, and will not be entitled to any refunds or offsets unless expressly stated in this contract.

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

P-045 Guarantee of Payment

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

P-050 Billing Procedure

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

P-080 Payment Account Refund

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

P-090 Performance Security

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

P-100 Performance Security Reduction

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

Section H: Harvesting Operations

H-001 Operations Outside the Sale Boundaries

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

H-013 Reserve Tree Damage Definition

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

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

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

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

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

H-016 Skid Trail Requirements

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

Purchaser shall comply with the following during the yarding operation:

- a. A skid trail will not exceed 14 feet in width, including rub trees.
- b. Skid trails shall not cover more than 5 percent of the total acreage on one unit.

- c. Location of the skid trails must be marked by Purchaser and approved by the Contract Administrator.
- d. Except for rub trees, skid trails shall be felled and yarded prior to the felling of adjacent timber.
- e. Rub trees shall be left standing until all timber tributary to the skid trail has been removed.
- f. Excessive soil damage is not permitted. Excessive soil damage is described in clause H-017.
- g. Purchaser will not have more than two skid trails open to active skidding at any one time. All other skid trails used for skidding timber will be closed.
- h. Once a skid trail is closed, Purchaser will not reopen a skid trail unless approved in writing by the Contract Administrator.
- i. Skid trails will be water barred at the time of completion of yarding, if required by the Contract Administrator.

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

H-017 Preventing Excessive Soil Disturbance

Operations may be suspended when soil rutting exceeds 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 and removed using tracked shovel systems and cable systems including cable assist. Authority to use other equipment or to operate outside the equipment specifications detailed above must be approved in writing by the State.

H-140 Special Harvest Requirements

Purchaser shall accomplish the following during the harvest operations:

Shovel must be large enough to pick up one end of the largest log 35 feet from the machine.

Ground based yarding equipment will not be permitted on sustained slopes over 45%.

Ground based yarding equipment shall only operate during dry soil conditions.

Cable assist will not be allowed on slopes greater than 80%

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

H-141 Additional Harvest Requirements

Purchaser shall accomplish the following during the harvest operations:

Within shovel logging areas, the shovel operator shall break up concentrations of logging debris greater than 10 feet by 10 feet to allow exposure of natural forest soils to ensure proper reforestation.

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

H-190 Completion of Settings

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

H-220 Protection of Residual or Adjacent Trees

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

H-250 Additional Felling Requirements

Within all units, all non-merchantable hardwood stems 2 inches DBH or 10 feet tall, excluding western red cedar, shall be felled concurrently with felling operations. Areas of young or immature timber may be excluded from this requirement 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 9/9/2019 are hereby made a part of this contract.

C-050 Purchaser Road Maintenance and Repair

Purchaser shall perform work at their own expense on PH-1000 (0+00 to 335+84), PH-1075, PH-1075A, PH-1075B, PH-1080 (0+00 to 5+00), PH-1085, PH-1085A, PH-3000 (0+00 to 50+00) PH-3006 (0+00 to 10+74). All work shall be completed to the specifications detailed in the Road Plan.

C-060 Designated Road Maintainer

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

C-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-035 Logging Debris Clean Up

Slash and debris created from harvest activities shall be treated in a manner approved in writing by the Contract Administrator.

S-040 Noxious Weed Control

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

S-050 Cessation of Operations for Low Humidity

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

S-060 Pump Truck or Pump Trailer

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

S-070 Water Supply

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

S-100 Stream Cleanout

Slash or debris which enters Any typed streams 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-130 Hazardous Materials

a. Hazardous Materials and Waste - Regulatory Compliance

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

b. Hazardous Materials Spill Prevention

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

c. Hazardous Materials Spill Containment, Control and Cleanup

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

d. Hazardous Material Release Reporting

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

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

DNR Contract Administrator

ECY - Northwest Region:

1-425-649-7000

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

ECY - Southwest Region:

1-360-407-6300

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

ECY - Central Region:

1-509-575-2490

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

ECY - Eastern Region:

1-509-329-3400

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

S-131 Refuse Disposal

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

Section D: Damages

D-013 Liquidated Damages or Failure to Perform

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

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

D-041 Reserve Tree Excessive Damage

When Purchaser's operations exceed the damage limits set forth in clause H-013, Reserve Tree Damage Definition, and when the Contract Administrator determines that a suitable replacement for a damaged reserve tree is not possible, the damaged trees result in substantial injury to the State. The value of the damaged reserve trees at the

time of the breach is not readily ascertainable. Therefore, the Purchaser agrees to pay the State as liquidated damages at the rate of \$1,000.00 per tree for all damaged reserve trees that are not replaced in all units.

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

STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES

Purchaser

Eric Wisch
Pacific Cascade Region Manager

Print Name

Date: _____

Date: _____

Address:

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

STATE OF _____)

COUNTY OF _____)

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

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

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

Notary Public in and for the State of

My appointment expires _____

PRE-CRUISE NARRATIVE

Sale Name: McGonagall Maneuver	Region: Pacific Cascade
Agreement #: 30-098037	District: Yacolt
Contact Forester: Michael Rutledge Phone / Location: 360-791-6640	County(s): Cowlitz
Alternate Contact: Scott Hancock Phone / Location: 360-608-9294	Other information:

Type of Sale: Lump Sum	
Harvest System: Ground based	95%
Harvest System: Uphill Cable	5%

UNIT ACREAGES AND METHOD OF DETERMINATION:

Unit # Harvest R/W or RMZ WMZ	Legal Description <small>(Enter only one legal for each unit)</small> Sec/Twp/Rng	Grant or Trust	Gross Proposal Acres	Deductions from Gross Acres (No harvest acres)				Net Harvest Acres	Acreage Determination <small>(List method and error of closure if applicable)</small>
				RMZ/ WMZ Acres	Leave Tree Acres	Existing Road Acres	Other Acres (describe)		
1	Sec 15&16/ T06N/ R02E	3	134	34	6	5	0	89	GPS (Trimble)
2 (ROW)	Sec16/ T06N/ R02E	3	2	0	0	1	0	<1	GPS (Trimble)
3 (ROW)	Sec16/ T06N/ R02E	3	2	0	0	1	0	<1	GPS (Trimble)
4 (ROW)	Sec16/ T06N/ R02E	3	2	0	0	1	0	1	GPS (Trimble)
TOTAL ACRES			140	34	6	8	0	92	

HARVEST PLAN AND SPECIAL CONDITIONS:

Unit #	Harvest Prescription: (Leave, take, paint color, tags, flagging etc.)	Special Management areas:	Other conditions (# leave trees, etc.)
1 VRH	Unit 1 is bounded by white "Timber Sale Boundary" tags and pink flagging.	VRH	Leave Tree Total=759. 103 Painted blue.
2 ROW	Unit 2 is bounded by orange "Right-of- Way" tags and orange flagging.	ROW	
3 ROW	Unit 3 is bounded by orange "Right-of- Way" tags and orange flagging.	ROW	
4	Unit 4 is bounded by orange "Right-of-	ROW	

ROW	Way" tags and orange flagging.		
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OTHER PRE-CRUISE INFORMATION:

Unit #	Primary, secondary Species / Estimated Volume (MBF)	Access information (Gates, locks, etc.)	Photos, traverse maps required
1	DF, WH, RA, BLM – (1820 MBF)	Unit 1 is accessed via the PH-1000 and the PH-1085	Cruise maps, driving map.
2	DF, WH, RA, BLM – (3 MBF)	Unit 2 is accessed via the PH-1085	Cruise maps, driving map.
3	DF, WH, RA, BLM – (3 MBF)	Unit 3 is accessed via the PH-1085	Cruise maps, driving map.
4	DF, WH, RA, BLM – (7 MBF)	Unit 4 is accessed via the PH-1085	Cruise maps, driving map.
TOTAL MBF	1833 MBF		

REMARKS:

The PH-1085 Road not a drivable road.

Prepared By: Michael Rutledge Date: 01/18/2019	Title: NRS 2	CC:
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Cruise Narrative

Sale Name: McGonagall Maneuver	Region: Pacific Cascade
App. #: 30-098037	District: Yacolt
Lead Cruiser: K. Bailey	Completion date: 06/24/2019
Other Cruisers: None	

Unit acreage specifications:

Unit #	Cruised acres	Cruised acres agree with sale acres? Yes/No	If acres do not agree explain why.
1	89	Yes	
2	1	Yes	
3	1	Yes	
4	1	Yes	
Total	92	Yes	

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 (Cru./Tally)	Total number of plots
1	VP	27.78	16'	208' x 208'	1:1	89
2	ITS	Ratio/Spp	4.5'	NA	NA	NA
3	ITS	Ratio/Spp	4.5'	NA	NA	NA
4	ITS	Ratio/Spp	4.5'	NA	NA	NA

Sale/Cruise Description:

Minor species cruise intensity:	Cruised on appropriate plots.						
Minimum cruise spec:	40% Of Form- Factor at 16 feet D.O.B or 5 inch Top, and merchantable top.						
Avg. ring count by sp:	<table style="width: 100%; border: none;"> <tr> <td style="border: none;">DF =</td> <td style="border: none; text-align: center;">5</td> <td style="border: none;">WH =</td> <td style="border: none; text-align: center;">NA</td> <td style="border: none;">SS =</td> <td style="border: none; text-align: center;">NA</td> </tr> </table>	DF =	5	WH =	NA	SS =	NA
DF =	5	WH =	NA	SS =	NA		
Leave/take tree description:	Leave tree clumps are bounded with yellow "Leave Tree Area" tags and pink flagging, individual leave trees are marked with a single band of blue paint.						
Sort Description:	<p>HA– Logs meeting the following criteria: Surface characteristics for a high quality A sort will have sound tight knots not to exceed 1 ½" in diameter, numbering not more than an average of one per foot of log length. May include logs with not more than two larger knots. Knots and knot indicators ½" in diameter and smaller shall not be a determining factor. Logs will have a growth ring count of 6 or more rings per inch in the outer third top end of the log. (min dia 8".)</p> <p>HB – Logs meeting the following criteria: Surface characteristics for a B sort will have sound tight knots not to exceed 1 ½" in diameter. May include logs with not more than two larger knots up to 2 ½" in diameter. Logs will have a growth ring count of 6 or more rings per inch in the outer third to end of the log. (min dia 8".)</p> <p>R – Logs meeting the following criteria: Gross diameter of 12 inches or greater, excessive knots greater than 2 ½ inches with recovery less than 65% of the net scale.</p>						

Field observations:

This one unit timber sale is located approximately 14 miles east of Woodland, WA. It consists of a fairly homogenous stand of 40-50 year old Douglas-fir with minor amounts of WH and RA.

This timber was of all domestic quality. The DF averaged 15 inches at DBH with 66 feet of bole.

Common defects in this sale were snow break, multi tops, crooks, and small isolated pockets of root rot.

The majority of sale is shovel ground. There is very little road work, mostly just re-construction of old grades.

There are no gate keys required for access.

Grants: 03**Prepared by: KB****Title: Check Cruiser**

TC		PSPCSTGR		Species, Sort Grade - Board Foot Volumes (Project)																	
T06N R02E S15 Ty00U1 THRU T06N R02E S15 Ty00U4				Project: MCGONAGA										Page 1							
				Acres 92.00										Date 6/24/2019			Time 11:28:58AM				
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	
									5-7	8-11	12-15	16+	12-20	21-30	31-35	36-99					
DF	CU	CU			100.0	100											2	7		0.00	30.3
DF	D	2S	19	3.7	4,093	3,941	363				90	10	2		2	96	37	13	218	1.60	18.1
DF	D	3S	59	1.9	11,964	11,732	1,079	13	87				1	1	2	97	37	9	101	0.75	115.7
DF	D	4S	19	1.4	3,838	3,784	348	99	1				9	25	31	35	30	5	32	0.32	117.5
DF	D	UT	3		544	544	50	67	15	19			60	13		27	19	6	27	0.36	20.4
DF Totals				90	2.6	20,538	20,001	1,840	28	52	18	2	4	6	7	83	30	7	66	0.62	302.0
WH	CU	CU			100.0	22											7	8		0.00	2.9
WH	D	2S	40	9.3	842	763	70			73	27					100	39	14	264	1.92	2.9
WH	D	3S	43	2.6	820	798	73	33	67						5	95	37	8	88	0.74	9.0
WH	D	4S	16	1.4	308	303	28	99	1			17	28	39	16		27	5	30	0.31	10.2
WH	D	UT	1		14	14	1		100			100					14	11	50	0.79	.3
WH Totals				8	6.3	2,006	1,879	173	30	29	30	11	3	5	8	84	30	7	74	0.74	25.3
RA	CU	CU			100.0	53											11	5		0.00	5.3
RA	D	UT	29		110	110	10	100					1	98		1	29	5	30	0.25	3.7
RA	D	4S	24		94	94	9		100					100			30	8	60	0.64	1.6
RA	D	4S	47	9.4	191	173	16	100						100			30	7	45	0.50	3.8
RA Totals				2	15.8	447	376	35	75	25			0	99		0	23	6	26	0.35	14.4
BM	CU	CU			100.0	0											9	5		0.00	.0
BM	D	UT	100		42	42	4	98	2					100			26	6	39	0.54	1.1
BM Totals				0	.5	42	42	4	98	2				100			26	6	38	0.54	1.1
CW	CU	CU			100.0	0											10	10		0.00	.0
CW	D	1S	100		11	11	1			24	76				100		40	17	500	3.10	.0
CW Totals				0	2.9	11	11	1		24	76				100		30	15	333	2.76	.0
Totals					3.2	23,044	22,309	2,052	29	49	19	3	4	7	7	82	29	7	65	0.62	342.8

TC PSTATS		PROJECT STATISTICS							PAGE	1	
		PROJECT					MCGONAG		DATE	6/24/2019	
TWP	RGE	SC	TRACT	TYPE		ACRES	PLOTS	TREES	CuFt	BdFt	
06N	02E	15	MCGONAGA	00U1	THR	92.00	92	520	S	W	
06N	02E	15	MCGONAGA	00U4							
			PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES				
TOTAL			92	520	5.7						
CRUISE			48	273	5.7	16,002	1.7				
DBH COUNT											
REFOREST											
COUNT			44	246	5.6						
BLANKS											
100 %											
STAND SUMMARY											
SAMPLE TREES		TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC	
DOUG FIR		220	149.8	14.9	66	47.0	181.5	20,538	20,001	5,540	5,520
R ALDER		17	9.0	10.6	46	1.7	5.5	447	376	125	113
WHEMLOCK		32	14.1	15.2	60	4.5	17.7	2,006	1,879	560	553
COTWOOD		1	.0	33.0	93	0.0	.1	11	11	3	3
BL MAPLE		3	1.1	12.5	28	0.3	.9	42	42	15	15
TOTAL		273	173.9	14.7	64	53.6	205.6	23,044	22,309	6,243	6,204
CONFIDENCE LIMITS OF THE SAMPLE											
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR											
CL	68.1	COEFF	SAMPLE TREES - BF				# OF TREES REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
DOUG FIR		75.4	5.1	165	174	183					
R ALDER		31.3	7.8	44	48	52					
WHEMLOCK		83.7	14.8	175	206	236					
COTWOOD											
BL MAPLE		25.0	17.3	33	40	47					
TOTAL		84.7	5.1	162	171	180	287	146	72		
CL	68.1	COEFF	SAMPLE TREES - CF				# OF TREES REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
DOUG FIR		68.8	4.6	46	48	50					
R ALDER		34.3	8.6	14	16	17					
WHEMLOCK		83.1	14.7	52	61	70					
COTWOOD											
BL MAPLE		15.2	10.5	13	15	16					
TOTAL		78.6	4.8	46	48	50	247	126	62		
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		54.1	5.6	141	150	158					
R ALDER		379.5	39.5	5	9	13					
WHEMLOCK		258.2	26.9	10	14	18					
COTWOOD		959.2	99.9	0	0	0					
BL MAPLE		939.7	97.9	0	1	2					
TOTAL		41.5	4.3	166	174	181	69	35	17		
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		45.9	4.8	173	181	190					
R ALDER		373.4	38.9	3	5	8					
WHEMLOCK		258.5	26.9	13	18	22					
COTWOOD		959.2	99.9	0	0	0					
BL MAPLE		938.0	97.7	0	1	2					
TOTAL		36.5	3.8	198	206	213	53	27	13		

PROJECT STATISTICS

PROJECT MCGONAG

DATE 6/24/2019

TWP	RGE	SC	TRACT	TYPE		ACRES	PLOTS	TREES	CuFt	BdFt
06N	02E	15	MCGONAGA	00U1	THR	92.00	92	520	S	W
06N	02E	15	MCGONAGA	00U4						
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			46.5	4.8	19,031	20,001	20,970			
R ALDER			372.9	38.8	230	376	523			
WHEMLOCK			265.6	27.7	1,360	1,879	2,399			
COTWOOD			959.2	99.9	0	11	22			
BL MAPLE			939.1	97.8	1	42	82			
TOTAL			39.2	4.1	21,398	22,309	23,220	61	31	15
CL	68.1		COEFF	NET CUFT FT/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0		VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10
DOUG FIR			45.7	4.8	5,257	5,520	5,782			
R ALDER			372.8	38.8	69	113	157			
WHEMLOCK			267.4	27.8	399	553	708			
COTWOOD			959.2	99.9	0	3	5			
BL MAPLE			938.3	97.7	0	15	30			
TOTAL			38.7	4.0	5,954	6,204	6,454	60	30	15
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					105	110	116			
R ALDER			292.8	30.5	42	68	95			
WHEMLOCK			220.0	22.9	77	106	136			
COTWOOD			959.2	99.9	0	168	337			
BL MAPLE			718.0	74.8	1	46	91			
TOTAL			40.3	4.2	104	108	113	65	33	16

T06N R02E S15 T00U1										T06N R02E S15 T00U1				
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt					
06N	02E	15	MCGONAGA	00U1	89.00	89	235	S	W					

Spp	S T	So rt	Gr ad	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log				Logs Per /Acre	
									Log Scale Dia.				Log Length				Ln Ft	Dia In	Bd Ft	CF/ Lf		
									5-7	8-11	12-15	16+	12-20	21-30	31-35	36-99						
DF		CU	CU		100.0	103												2	7		0.00	31.2
DF		DM	2S	19	3.8	4,191	4,034	359			90	10		2		2	96	37	13	218	1.60	18.5
DF		DM	3S	59	1.9	12,259	12,024	1,070	13	87			1	1	2	97		37	9	101	0.75	118.8
DF		DM	4S	19	1.4	3,936	3,881	345	99	1			9	25	31	35		30	5	32	0.32	120.6
DF		DM	UT	3		562	562	50	67	15	19		60	13		27		19	6	27	0.36	21.1
DF	Totals			90	2.6	21,051	20,501	1,825	28	52	18	2	4	6	7	83		30	7	66	0.62	310.1
WH		CU	CU		100.0	23												7	8		0.00	2.8
WH		DM	2S	41	9.3	870	789	70			73	27				100		39	14	264	1.92	3.0
WH		DM	3S	42	2.7	836	813	72	34	66					5	95		37	8	88	0.73	9.3
WH		DM	4S	16	1.4	309	305	27	100				17	27	41	16		27	5	30	0.31	10.3
WH		DM	UT	1		14	14	1		100			100					14	11	50	0.79	.3
WH	Totals			8	6.3	2,052	1,922	171	30	29	30	11	3	4	8	84		30	7	75	0.74	25.6
RA		CU	CU		100.0	47												11	5		0.00	4.7
RA		DM	UT	30		105	105	9	100					100				29	5	30	0.24	3.5
RA		DM	4S	23		77	77	7		100				100				30	8	60	0.64	1.3
RA		DM	4S	47	9.3	171	156	14	100					100				30	7	45	0.49	3.4
RA	Totals			1	15.7	401	338	30	77	23				100				23	6	26	0.34	12.9
BM		DM	UT	100		42	42	4	100					100				26	6	39	0.54	1.1
BM	Totals			0		42	42	4	100					100				26	6	39	0.54	1.1
Type Totals					3.2	23,546	22,803	2,029	29	49	19	3	4	7	7	82		29	7	65	0.62	349.8

T06N R02E S15 T00U2	T06N R02E S15 T00U2
Twp Rge Sec Tract Type Acres Plots Sample Trees CuFt	BdFt
06N 02E 15 MCGONAGA 00U2 1.00 1 11 S	W

Spp	So	Gr	% 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					
								5-7	8-11	12-15	16+	12-20	21-30	31-35	36-99	Ft	In	Ft	Lf					
DF	DM	2S	18	5.0	460	437	0	100				100				40	12	190	1.48	2.3				
DF	DM	3S	65	2.9	1,587	1,541	2	7	93					7	93	36	9	112	0.84	13.8				
DF	DM	4S	17	5.6	414	391	0	100				35	41	24	32	5	34	0.33	11.5					
DF	Totals		64	3.7	2,461	2,369	2	21	60	18					6	12	83	35	8	86	0.70	27.6		
RA	CU	CU		100.0	95											8	6		0.00	14.3				
RA	DM	UT	8		95	95	0	100				100				20	5	20	0.29	4.8				
RA	DM	4S	54		618	618	1	100				100				30	9	65	0.70	9.5				
RA	DM	4S	38	10.0	475	428	0	100				100				30	7	45	0.60	9.5				
RA	Totals		31	11.1	1,283	1,140	1	46	54					8	92					21	7	30	0.51	38.0
WH	CU	CU														5			0.00	4.8				
WH	DM	4S	100		190	190	0	100				100				40	5	40	0.40	4.8				
WH	Totals		5		190	190	0	100				100				20	5	20	0.40	9.5				
Type Totals				6.0	3,934	3,699	4	33	55	12					3	32	7	58	26	7	49	0.59	75.1	

T06N R02E S15 T00U3										T06N R02E S15 T00U3				
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt					
06N	02E	15	MCGONAGA	00U3	1.00	1	12	S	W					

Spp	S T	So rt	Gr ad	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log				Logs Per /Acre
									Log Scale Dia.				Log Length				Ln	Dia	Bd	CF/	
									5-7	8-11	12-15	16+	12-20	21-30	31-35	36-99	Ft	In	Ft	Lf	
DF		DM	3S	79	3.7	3,608	3,476	3	100				100				37	10	132	0.94	26.4
DF		DM	4S	21	4.5	968	924	1	100				14	48	38	33	5	35	0.35	26.4	
DF	Totals			84	3.8	4,576	4,400	4	21	79			3	10	87	35	8	83	0.66	52.8	
RA		CU	CU		100.0	90											12	5		0.00	9.0
RA		DM	UT	31		210	210	0	100				43		57	34	5	35	0.33	6.0	
RA		DM	4S	28		180	180	0	100				100			30	8	60	0.64	3.0	
RA		DM	4S	41	10.0	300	270	0	100				100			30	7	45	0.53	6.0	
RA	Totals			13	15.4	780	660	1	73	27			82		18	24	6	28	0.38	24.0	
WH		DM	3S	88	6.3	160	150	0	100						100	36	11	150	1.31	1.0	
WH		DM	4S	12	33.3	30	20	0	100				100			25	5	20	0.40	1.0	
WH	Totals			3	10.5	190	170	0	12	88			12		88	31	8	85	0.94	2.0	
Type Totals					5.7	5,546	5,230	5	27	73			13	8	78	32	7	66	0.60	78.8	

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT	MCGONAG			DATE	6/24/2019	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
06N	02E	15	MCGONAGA	00U1	89.00	89	481	S	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
				PLOTS	TREES	TREES	TREES			
TOTAL		89	481	5.4						
CRUISE		45	234	5.2	15,793	1.5				
DBH COUNT										
REFOREST										
COUNT		44	246	5.6						
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		200	153.8	14.9	66	48.2	186.1	21,051	20,501	5,677
WHEMLOCK		28	14.4	15.2	60	4.6	18.0	2,052	1,922	573
R ALDER		4	8.2	10.4	46	1.5	4.9	401	338	111
BL MAPLE		2	1.1	12.5	27	0.3	.9	42	42	15
TOTAL		234	177.4	14.7	65	54.7	209.9	23,546	22,803	6,376
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL:	68.1 %	COEFF	SAMPLE TREES - BF				# OF TREES REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR		77.9	5.5	165	174	184				
WHEMLOCK		81.5	15.7	185	219	254				
R ALDER		28.7	16.4	38	45	52				
BL MAPLE		35.4	33.1	27	40	53				
TOTAL		80.5	5.3	167	176	185	259	132	65	
CL:	68.1 %	COEFF	SAMPLE TREES - CF				# OF TREES REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR		70.7	5.0	46	48	51				
WHEMLOCK		81.2	15.6	55	65	75				
R ALDER		36.4	20.8	11	14	17				
BL MAPLE		21.4	20.0	12	14	17				
TOTAL		75.3	4.9	47	49	52	226	115	57	
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		51.5	5.5	145	154	162				
WHEMLOCK		257.4	27.3	10	14	18				
R ALDER		416.3	44.1	5	8	12				
BL MAPLE		943.4	99.9	0	1	2				
TOTAL		39.7	4.2	170	177	185	63	32	16	
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		43.3	4.6	178	186	195				
WHEMLOCK		257.3	27.2	13	18	23				
R ALDER		419.4	44.4	3	5	7				
BL MAPLE		943.4	99.9	0	1	2				
TOTAL		34.2	3.6	202	210	218	47	24	12	
CL:	68.1 %	COEFF	NET BF/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR		44.0	4.7	19,545	20,501	21,458				
WHEMLOCK		263.7	27.9	1,385	1,922	2,459				
R ALDER		415.0	44.0	189	338	486				
BL MAPLE		943.4	99.9	0	42	84				
TOTAL		36.9	3.9	21,911	22,803	23,695	54	28	14	

TC TSTATS				STATISTICS				PAGE	2	
				PROJECT	MCGONAG			DATE	6/24/2019	
TWP	RGE	SECT	TRACT	TYPE	ACRES		PLOTS	TREES	CuFt	BdFt
06N	02E	15	MCGONAGA	00U1	89.00		89	481	S	W
CL:	68.1 %	COEFF		NET CUFT FT/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.	S.E.%	LOW	AVG	HIGH	5	7	10	
CL:	68.1 %	COEFF		NET CUFT FT/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR		43.3	4.6	5,397	5,656	5,916				
WHEMLOCK		265.5	28.1	407	566	725				
R ALDER		419.2	44.4	55	100	144				
BL MAPLE		943.4	99.9	0	15	31				
TOTAL		36.4	3.9	6,093	6,338	6,582	53	27	13	
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				105	110	115				
WHEMLOCK		230.8	24.4	77	107	136				
R ALDER		175.8	18.6	39	69	100				
BL MAPLE		943.4	99.9	0	46	92				
TOTAL		196.2	20.8	104	109	113	1,537	784	384	

TC TSTATS		STATISTICS							PAGE	1	
		PROJECT MCGONAG							DATE	6/24/2019	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt		
06N	02E	15	MCGONAGA	00U2	1.00	1	11	S	W		
				TREES	ESTIMATED	PERCENT					
		PLOTS	TREES	PER PLOT	TOTAL	SAMPLE					
					TREES	TREES					
TOTAL		1	11	11.0							
CRUISE		1	11	11.0	38	29.3					
DBH COUNT											
REFOREST											
COUNT											
BLANKS											
100 %											
STAND SUMMARY											
	SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET	
	TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC	
DOUG FIR	6	13.8	16.3	74	5.0	20.1	2,461	2,369	678	678	
R ALDER	4	19.0	13.3	48	5.0	18.3	1,283	1,140	421	396	
WHEMLOCK	1	4.8	11.0	49	0.9	3.1	190	190	76	76	
TOTAL	11	37.5	14.2	58	11.0	41.5	3,934	3,699	1,175	1,150	
CONFIDENCE LIMITS OF THE SAMPLE											
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR											
CL:	68.1 %	COEFF	SAMPLE TREES - BF				# OF TREES REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
DOUG FIR	28.4	12.6		150	172	193					
R ALDER	36.0	20.6		48	60	72					
WHEMLOCK											
TOTAL	59.4	18.8		97	119	141	155	79	39		
CL:	68.1 %	COEFF	SAMPLE TREES - CF				# OF TREES REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
DOUG FIR	35.9	16.0		41	49	57					
R ALDER	25.9	14.8		18	21	24					
WHEMLOCK											
TOTAL	55.8	17.6		30	36	42	137	70	34		

TC TSTATS		STATISTICS							PAGE	1	
		PROJECT MCGONAG					DATE	6/24/2019			
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt		
06N	02E	15	MCGONAGA	00U3	1.00	1	12	S	W		
		PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES					
TOTAL		1	12	12.0							
CRUISE		1	12	12.0	42	28.3					
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	6	26.4	16.1	73	9.3	37.2	4,576	4,400	1,222	1,222	
R ALDER	5	15.0	11.3	47	3.1	10.5	780	660	243	220	
WHEMLOCK	1	1.0	19.0	63	0.5	2.0	190	170	57	57	
TOTAL	12	42.4	14.7	64	13.0	49.7	5,546	5,230	1,523	1,500	
CONFIDENCE LIMITS OF THE SAMPLE											
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR											
CL:	68.1 %	COEFF	SAMPLE TREES - BF				# OF TREES REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
DOUG FIR	24.2	10.8		149	167	185					
R ALDER	25.9	12.9		38	44	50					
WHEMLOCK											
TOTAL	59.9	18.0		95	116	137	156	80	39		
CL:	68.1 %	COEFF	SAMPLE TREES - CF				# OF TREES REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
DOUG FIR	27.3	12.2		41	46	52					
R ALDER	31.5	15.6		12	15	17					
WHEMLOCK											
TOTAL	57.4	17.3		28	34	40	144	73	36		

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT	MCGONAG			DATE	6/24/2019	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
06N	02E	15	MCGONAGA	00U4	1.00	1	16	S	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
				PLOTS	TREES	TREES	TREES			
TOTAL		1	16	16.0						
CRUISE		1	16	16.0	129		12.4			
DBH COUNT										
REFOREST										
COUNT										
BLANKS										
100 %										
STAND SUMMARY										
	SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET
	TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC
DOUG FIR	8	51.0	16.3	72	18.2	73.6	8,925	8,670	2,469	2,469
R ALDER	4	62.0	11.4	47	13.0	44.0	3,410	2,790	1,002	883
WHEMLOCK	2	13.0	14.7	61	4.0	15.4	1,495	1,495	404	404
COTWOOD	1	1.0	33.0	93	1.0	5.9	1,030	1,000	256	248
BL MAPLE	1	2.0	13.0	38	0.5	1.8	100	80	35	30
TOTAL	<i>16</i>	<i>129.0</i>	<i>14.1</i>	<i>59</i>	<i>37.4</i>	<i>140.8</i>	<i>14,960</i>	<i>14,035</i>	<i>4,166</i>	<i>4,035</i>
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL:	68.1 %	COEFF	SAMPLE TREES - BF				# OF TREES REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR		62.3	23.5	130	170	210				
R ALDER		28.7	16.4	38	45	52				
WHEMLOCK		67.6	63.3	42	115	188				
COTWOOD										
BL MAPLE										
TOTAL		<i>136.2</i>	<i>35.1</i>	<i>114</i>	<i>176</i>	<i>237</i>	<i>791</i>	<i>403</i>	<i>198</i>	
CL:	68.1 %	COEFF	SAMPLE TREES - CF				# OF TREES REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR		63.7	24.0	37	48	60				
R ALDER		38.7	22.1	11	14	17				
WHEMLOCK		62.8	58.8	13	31	49				
COTWOOD										
BL MAPLE										
TOTAL		<i>124.1</i>	<i>32.0</i>	<i>33</i>	<i>48</i>	<i>64</i>	<i>655</i>	<i>334</i>	<i>164</i>	

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

T06N R02E S15 Ty00U1	89.0
T06N R02E S15 Ty00U2	1.0
T06N R02E S15 Ty00U	1.0

Project MCGONAG
Acres 92.00

Page No 1
Date: 6/24/2019
Time 11:29:02AM

Species	Total	Total	Total	Net Cubic Ft/		CF/ LF	Total CCF		Total MBF	
	Trees	Logs	Tons	Tree	Log		Gross	Net	Gross	Net
DOUG FIR	13,778	24,995	14,525	36.86	20.32	0.63	5,096	5,078	1,890	1,840
WHEMLOCK	1,298	2,062	1,649	39.24	24.69	0.76	515	509	185	173
R ALDER	826	831	317	12.56	12.49	0.43	115	104	41	35
BL MAPLE	99	99	37	14.23	14.23	0.55	14	14	4	4
COTWOOD	1	2	6	248.27	124.14	3.10	3	2	1	1
Totals	16,002	27,989	16,534	35.67	20.39	0.64	5,744	5,707	2,120	2,052

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	15,076	27,057	16,174	37.06	20.65	0.64	5,612	5,587	2,074	2,013
H	926	932	360	13.00	12.92	0.45	132	120	46	39
Totals	16,002	27,989	16,534	35.67	20.39	0.64	5,744	5,707	2,120	2,052



Forest Practices Application/Notification
Notice of Decision

FPA/N No: 2936740
Effective Date: 09/05/2019
Expiration Date: 09/05/2022
Shut Down Zone: 660
EARR Tax Credit: Eligible Non-eligible
Reference: McGonagall Maneuver
30-098037

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

No additional conditions.

NOTE:

Refer to WAC 222-24-042 (2) for culvert installation requirements in Type Np and Ns waters.

Refer to WAC 222-30-050(1) & (2) for felling and bucking within type Np and Ns waters

Refer to WAC 222-30-021 (2) (a) for equipment limitation zones associated with perennial and seasonal streams.

Issued By: Jon Byerly

Region: Pacific Cascade

Title: Forest Practices Forester

Date: 09/05/2019

Copies to: Landowner, Timber Owner and Operator.

Issued in person: Landowner Timber Owner Operator By: Jacqui Sahn

Appeal Information

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

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

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

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

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

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

And

Department Of Natural Resources
Pacific Cascade Region
PO Box 280
Castle Rock WA 98611

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)

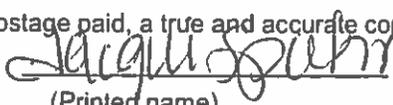
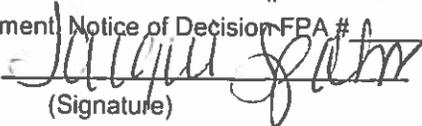
Obligations include reforestation, road maintenance and abandonment plans, conversions of forest land to non-forestry use and/or harvest strategies on perennial non-fish habitat (Type Np) waters in Eastern Washington.

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.

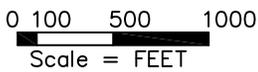
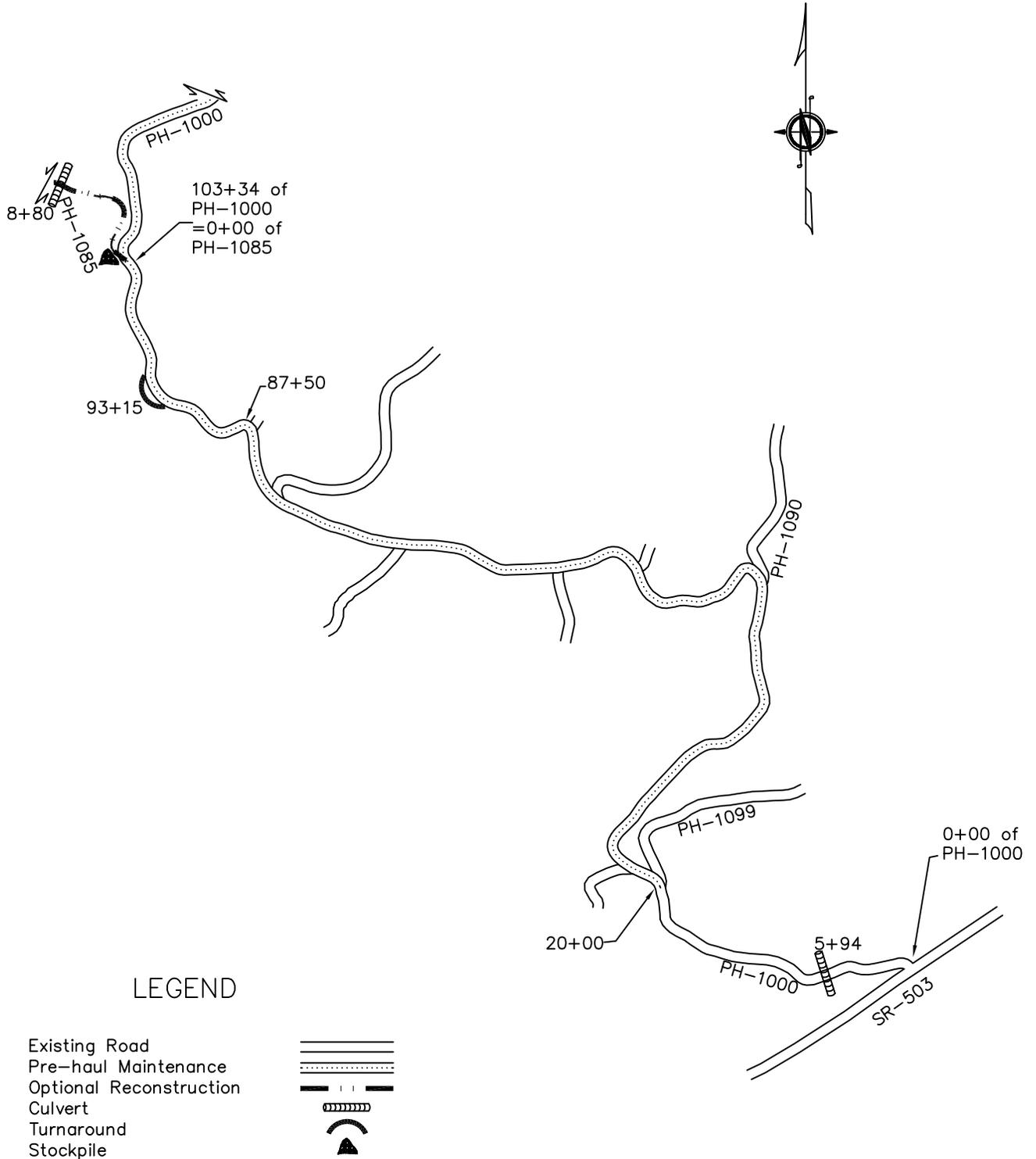
DNR affidavit of mailing:

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

MCGONAGALL MANEUVER

ROAD PLAN MAP

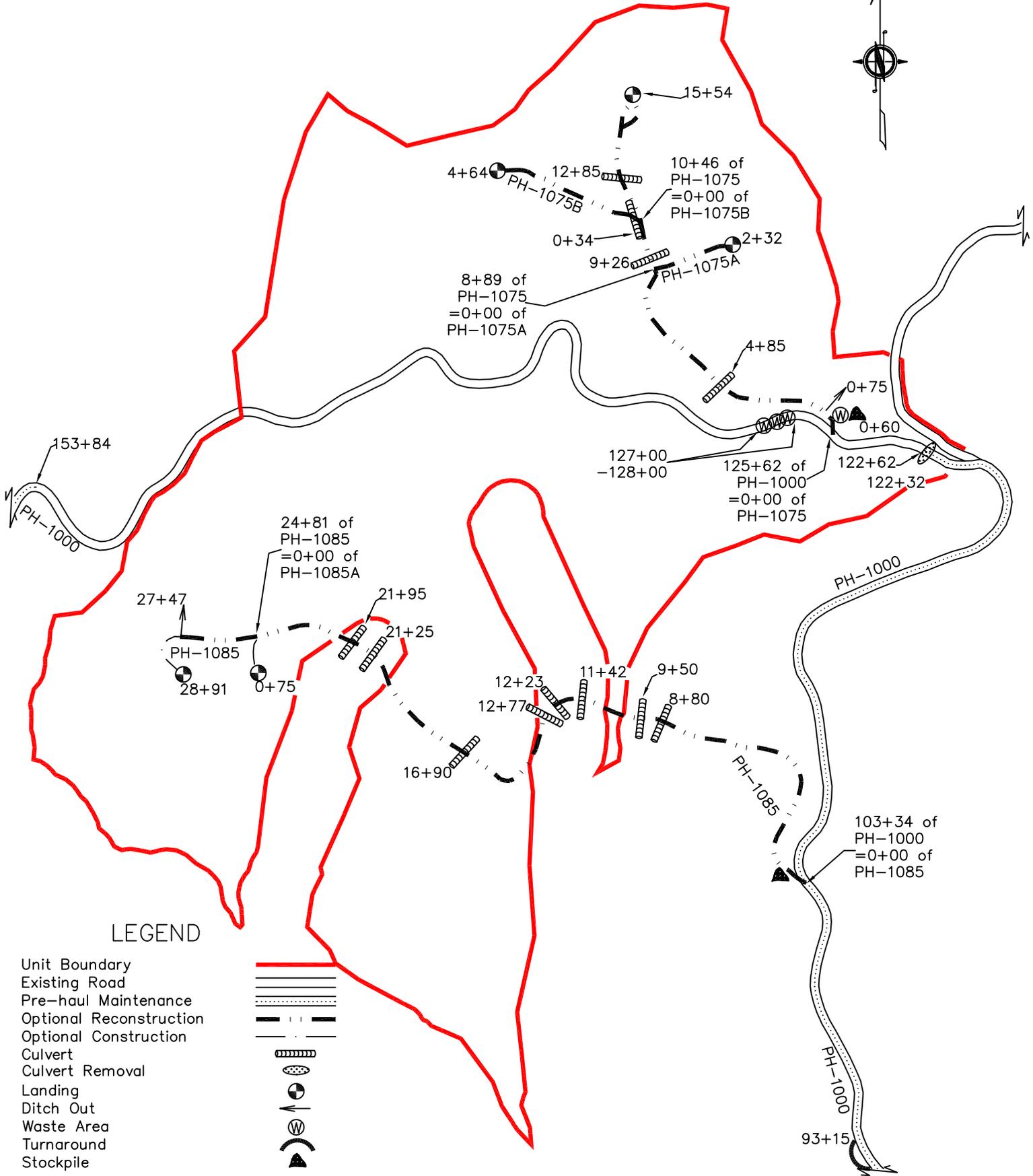
Map page 1 of 3



MCGONAGALL MANEUVER

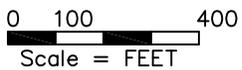
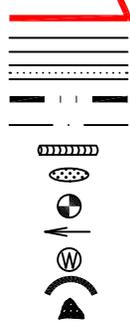
ROAD PLAN MAP

Map page 2 of 3



LEGEND

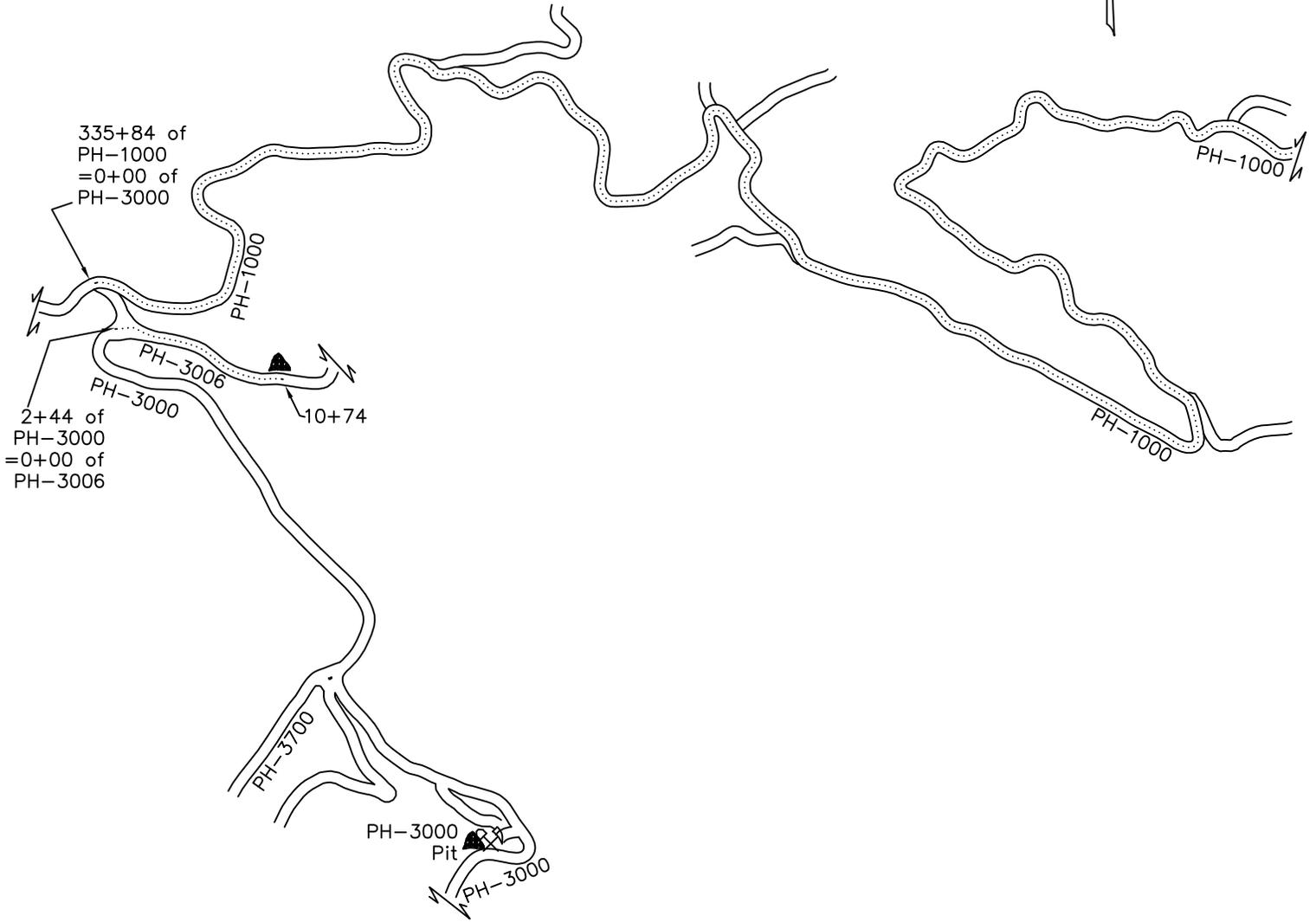
- Unit Boundary
- Existing Road
- Pre-haul Maintenance
- Optional Reconstruction
- Optional Construction
- Culvert
- Culvert Removal
- Landing
- Ditch Out
- Waste Area
- Turnaround
- Stockpile



MCGONAGALL MANEUVER

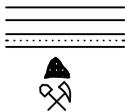
ROAD PLAN MAP

Map page 3 of 3



LEGEND

Existing Road
Pre-haul Maintenance
Stockpile
Rock Source



0 100 500 1000
Scale = FEET

STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES

MCGONAGALL MANEUVER TIMBER SALE ROAD PLAN
COWLITZ COUNTY
YACOLT DISTRICT
PACIFIC CASCADE REGION

AGREEMENT NO.: 30-098037

STAFF ENGINEER: TYLER LEMAHIEU

CREATED DATE: 08/02/2018

DRAWN & COMPILED BY: ALICIA COMPTON

MODIFIED DATE: 09/09/2019

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>
PH-1000	5+44 to 6+44	Pre-haul Maintenance
PH-1000	20+00 to 122+62	Pre-haul Maintenance
PH-1000	153+84 to 335+84	Pre-haul Maintenance
PH-1000	87+50 to 153+84	Post-haul Maintenance
PH-3006	0+00 to 10+74	Pre-haul Maintenance

0-3 OPTIONAL ROADS

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

<u>Road</u>	<u>Stations</u>	<u>Type</u>
PH-1000	93+15	Turnaround Construction
PH-1075	0+00 to 15+54	Reconstruction
PH-1075A	0+00 to 2+32	Reconstruction
PH-1075B	0+00 to 4+64	Reconstruction
PH-1085	0+00 to 27+47	Reconstruction
PH-1085	27+47 to 28+91	Construction
PH-1085A	0+00 to 0+75	Construction

0-4 CONSTRUCTION

Construction includes, but is not limited to clearing, grubbing, right-of-way debris disposal, excavation and/or embankment to subgrade, ditch construction, ditch-out construction, turnout, turnaround and landing construction; acquisition and installation of drainage structures; manufacture, application, and compaction of rock; acquisition, and application of erosion control materials.

0-5 RECONSTRUCTION

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

<u>Road</u>	<u>Stations</u>	<u>Requirements</u>
PH-1075	0+00 to 15+54	Widen subgrade to the dimensions shown on the TYPICAL SECTION SHEET. Construct ditches, culvert catch basins and outlets. Install culverts as shown on the CULVERT LIST. Apply rock as shown on the ROCK LIST.
PH-1075A	0+00 to 2+32	
PH-1075B	0+00 to 4+64	
PH-1085	0+00 to 27+47	

0-6 PRE-HAUL MAINTENANCE

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

<u>Road</u>	<u>Stations</u>	<u>Requirements</u>
PH-1000	5+44 to 6+44	Replace culvert per CULVERT LIST. Apply rock as shown on the ROCK LIST.
	20+00 to 121+90	Perform brushing of roadside per Clause 3-1 BRUSHING.
	122+32	Remove culvert. Apply rock as shown on the ROCK LIST.
	153+84 to 335+84	Perform brushing of roadside per Clause 3-1 BRUSHING.
PH-3006	0+00 to 10+74	BRUSHING.

0-7 POST-HAUL MAINTENANCE

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

0-10 ABANDONMENT

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

0-12 DEVELOP ROCK SOURCE

Purchaser shall develop an existing rock source. Rock source development will involve excavating, sorting and processing rock. Work for developing rock sources is listed in Section 6 ROCK AND SURFACING.

SECTION 1 – GENERAL

1-1 ROAD PLAN CHANGES

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

1-2 UNFORESEEN CONDITIONS

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

1-3 ROAD DIMENSIONS

Purchaser shall perform road work in accordance with the dimensions shown on the TYPICAL SECTION SHEET and the specifications within this road plan.

1-4 ROAD TOLERANCES

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

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

1-6 ORDER OF PRECEDENCE

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

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

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

1-7 TEMPORARY ROAD CLOSURE

Purchaser shall notify the Contract Administrator a minimum of 3 calendar days before the closure of any road.

1-8 REPAIR OR REPLACEMENT OF DAMAGED MATERIALS

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

1-9 DAMAGED METALLIC COATING

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

1-15 ROAD MARKING

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

- Construction: orange flagging, orange paint and RP's.
- Reconstruction: orange paint, orange flagging, and RPs.
- Pre-haul maintenance: activity-labeled wooden stakes, orange flagging, and orange paint or blue flagging and blue paint for culverts.

1-18 REFERENCE POINT DAMAGE

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

1-20 COMPLETE BY DATE

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

1-21 HAUL APPROVAL

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

1-22 WORK NOTIFICATIONS

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

1-23 ROAD WORK PHASE APPROVAL

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

- Subgrade construction, drainage installation, and subgrade compaction
- Rock application and compaction
- Abandonment

1-25 ACTIVITY TIMING RESTRICTION

The specified activities are not allowed during the listed closure periods unless authorized in writing by the Contract Administrator.

<u>Roads</u>	<u>Activity</u>	<u>Closure Period</u>
All Roads	All Road Work	October 1 to April 30

1-26 OPERATING DURING CLOSURE PERIOD

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

1-29 SEDIMENT RESTRICTION

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

1-30 CLOSURE TO PREVENT DAMAGE

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

- Wheel track rutting exceeds 6 inches on jaw run roads.
- Wheel track rutting exceeds 4 inches on crushed rock roads.
- Wheel track rutting exceeds 4 inches on native surface roads.
- Surface or base stability problems persist.
- Weather is such that satisfactory results cannot be obtained in an area of operations.

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

1-32 BRIDGE AND ASPHALT SURFACE RESTRICTION

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

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

1-33 SNOW PLOWING RESTRICTION

Snowplowing will be allowed after the execution of a SNOW PLOWING AGREEMENT, which is available from the 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.

1-40 ROAD APPROACHES TO COUNTY ROADS AND STATE HIGHWAYS

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

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

SECTION 2 – MAINTENANCE

2-1 GENERAL ROAD MAINTENANCE

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

2-2 ROAD MAINTENANCE – PURCHASER MAINTENANCE

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

2-3 ROAD MAINTENANCE – DESIGNATED MAINTAINER

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

2-4 PASSAGE OF LIGHT VEHICLES

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

2-5 MAINTENANCE GRADING – EXISTING ROAD

On the following road(s), Purchaser shall use a grader to shape the existing surface before post-haul rock application.

<u>Road</u>	<u>Stations</u>
PH-1000	87+50 to 153+84

2-6 CLEANING CULVERTS

On the following road, Purchaser shall clean the inlets and outlets of all culverts before post-haul rock application.

<u>Road</u>	<u>Stations</u>
PH-1000	87+50 to 153+84

2-7 CLEANING DITCHES, HEADWALLS, AND CATCH BASINS

On the following road(s), Purchaser shall clean ditches, headwalls, and catchbasins. Work must be completed before post-haul rock application and must be done in accordance with the TYPICAL SECTION DETAIL. Pulling ditch material across the road or mixing in with the road surface is not allowed.

<u>Road</u>	<u>Stations</u>
PH-1000	87+50 to 153+84

SECTION 3 – CLEARING, GRUBBING, AND DISPOSAL

3-1 BRUSHING

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

<u>Road</u>	<u>Stations</u>
PH-1000	20+00 to 121+90
PH-1000	153+84 to 335+84
PH-3006	0+00 to 10+74

3-2 BRUSHING RESTRICTION

Pulling, digging, pushing over, and other non-cutting methods used for vegetation removal may not be used for brushing.

3-5 CLEARING

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

3-7 RIGHT-OF-WAY DECKING

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

3-8 PROHIBITED DECKING AREAS

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

- Within the grubbing limits.
- Within 25 feet of any stream.
- In locations that interfere with the construction of the road prism.
- In locations that impede drainage.
- On slopes greater than 45%.
- Against standing trees.
- On uphill side of road prism.

3-10 GRUBBING

Purchaser shall remove all stumps between the grubbing limits specified on the TYPICAL SECTION SHEET. Purchaser shall also remove stumps with undercut roots outside the grubbing limits. Purchaser shall remove stumps using a hydraulic mounted excavator unless authorized in writing by the Contract Administrator. Stumps over 22 inches diameter must be split. Stumps over 40 inches must be quartered. Grubbing must be completed before starting excavation and embankment.

3-12 STUMP PLACEMENT

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

3-14 STUMPS WITHIN DESIGNATED WASTE AREAS

Purchaser is not required to remove stumps within waste areas if they are cut flush with the ground.

3-20 ORGANIC DEBRIS DEFINITION

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

3-21 DISPOSAL COMPLETION

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

3-23 PROHIBITED DISPOSAL AREAS

Purchaser shall not place organic debris in the following areas:

- Within 25 feet of a cross drain culvert.
- Within 50 feet of a live stream, or wetland.
- On road subgrades, or excavation and embankment slopes.
- On slopes greater than 45%.
- Within the operational area for cable landings where debris may shift or roll.
- On locations where brush can fall into the ditch or onto the road surface.
- Against standing timber.
- On uphill side of road prism.

3-24 BURYING ORGANIC DEBRIS RESTRICTED

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

3-25 SCATTERING ORGANIC DEBRIS

On the following road(s), Purchaser shall scatter organic debris as designated.

<u>Road</u>	<u>Stations</u>	<u>Requirements</u>
PH-1000	127+00 to 128+00	Purchaser shall scatter organic debris on the left side of the road or as directed by the Contract Administrator.
PH-1075	0+00 to 4+00	Purchaser shall scatter organic debris outside of the clearing limits on the right side of the road.
	4+00 to 15+54	
PH-1075A	0+00 to 2+32	Purchaser shall scatter organic debris outside of the clearing limits or in natural openings on the downhill side of the road or as directed by the Contract Administrator.
PH-1075B	0+00 to 4+64	
PH-1085	0+00 to 27+47	
PH-1085A	0+00 to 0+75	

SECTION 4 – EXCAVATION

4-2 PIONEERING

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

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

4-3 ROAD GRADE AND ALIGNMENT STANDARDS

Purchaser shall follow these standards for road grade and alignment:

- Grade and alignment must have smooth continuity, without abrupt changes in direction.
- Maximum grades may not exceed 18 percent favorable and 15 percent adverse.
- Minimum curve radius is 60 feet at centerline.
- Maximum grade change for sag vertical curves is 5% in 100 feet.
- Maximum grade change for crest vertical curves is 4% in 100 feet.

4-4 SWITCHBACK STANDARDS

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

Purchaser shall follow these standards for switchbacks:

- Maximum adverse grades for switchbacks is 10% of the curve radius.
- Maximum favorable grades for switchbacks is 12%.
- Maximum transition grades entering and leaving switchbacks is a 5% grade change.
- Transition grades required to meet switchback grade limitations must be constructed on the tangents preceding and departing from the switchbacks.

4-5 CUT SLOPE RATIO

Purchaser shall construct excavation slopes no steeper than shown on the following table:

<u>Material Type</u>	<u>Excavation Slope Ratio</u>	<u>Excavation Slope Percent</u>
Common Earth	1:1	100
Fractured or loose rock	½:1	200
Hardpan or solid rock	¼:1	400

4-6 EMBANKMENT SLOPE RATIO

Purchaser shall construct embankment slopes no steeper than shown on the following table:

<u>Material Type</u>	<u>Embankment Slope Ratio</u>	<u>Embankment Slope Percent</u>
Sandy Soils	2:1	50
Common Earth and Rounded Gravel	1½:1	67
Angular Rock	1¼:1	80

4-7 SHAPING CUT AND FILL SLOPE

Purchaser shall construct excavation and embankment slopes to a uniform line and left rough for easier revegetation.

4-8 CURVE WIDENING

The minimum widening placed on the inside of curves is:

- 6 feet for curves of 50 to 79 feet radius.
- 4 feet for curves of 80 to 100 feet radius.

4-9 EMBANKMENT WIDENING

The minimum embankment widening is:

- 2 feet for embankment heights at centerline of 2 to 6 feet.
- 4 feet for embankment heights at centerline of greater than 6 feet.

Purchaser shall apply embankment widening equally to both sides of the road to achieve the required width.

4-10 WIDEN THE EXISTING SUBGRADE

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

<u>Road</u>	<u>Stations</u>	<u>Comments</u>
PH-1075	0+00 to 4+00	Excess material not required to widen the existing subgrade shall be end haul or pushed to the designated waste areas identified in Clause 4-37 WASTE AREA LOCATION.
	4+00 to 15+54	
PH-1075A	0+00 to 2+32	
PH-1075B	0+00 to 4+64	
PH-1085	0+00 to 27+47	
PH-1085A	0+00 to 0+75	

4-21 TURNOUTS

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

4-22 TURNAROUNDS

Purchaser shall construct turnarounds must no larger than 30 feet long and 30 feet wide. Locations are subject to written approval by the Contract Administrator.

4-25 DITCH CONSTRUCTION AND RECONSTRUCTION

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

4-27 DITCH WORK – MATERIAL USE PROHIBITED

Purchaser shall not pull ditch material across the road or mix in with the road surface. Excavated material must be scattered outside the grubbing limits or endhailed to the location specified in Clause 4-37 WASTE AREA LOCATION.

4-28 DITCH DRAINAGE

Ditches must drain to cross-drain culverts or ditchouts.

4-29 DITCHOUTS

Purchaser shall construct ditchouts as identified in the table below, as needed, and as directed by the Contract Administrator. Ditchouts must be constructed in a manner that diverts ditch water onto the forest floor and must have excavation backslopes no steeper than a 1:1 ratio. Locations may not be changed without written approval from the Contract Administrator. L or R denotes ditchout left or ditchout right.

<u>Road</u>	<u>Stations</u>	<u>L or R</u>
PH-1075	0+75	R
PH-1085	27+47	R

4-35 WASTE MATERIAL DEFINITION

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

4-36 DISPOSAL OF WASTE MATERIAL

Purchaser may sidecast waste material on side slopes up to 45% if the waste material is compacted and free of organic debris. On side slopes greater than 45%, all waste material must be end hauled or pushed to the designated embankment sites and waste areas identified in Clause 4-37 WASTE AREA LOCATION.

4-37 WASTE AREA LOCATION

Purchaser shall deposit waste material in the listed designated areas. Additional waste areas may also be identified or approved by the Contract Administrator. The amount of material allowed in a waste area is at the discretion of the Contract Administrator.

<u>Road</u>	<u>Waste Area Location</u>	<u>Comments</u>
PH-1075	0+00 to 1+00	Spread and compact material in accordance to COMPACTION LIST. Material may be used to construct the floor for a stockpile site.

4-38 PROHIBITED WASTE DISPOSAL AREAS

Purchaser shall not deposit waste material in the following areas, except as otherwise specified in this plan:

- Within 50 feet of a cross drain culvert.
- Within 100 feet of a live stream or wetland.
- Within a riparian management zone.
- Within a wetland management zone.
- On side slopes steeper than 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.
- On uphill side of road prism.

4-48 NATIVE MATERIAL

Native material consists of naturally occurring material that is free of organic debris, trash, and rocks greater than 4 inches in any dimension.

4-55 ROAD SHAPING

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

4-56 DRY WEATHER SHAPING

At any time of 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.

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 embankment and waste area segments too narrow to accommodate equipment. Waste material may be placed by end-dumping or sidecasting until sufficiently wide enough to support the equipment.

4-61 SUBGRADE COMPACTION

Purchaser shall compact subgrades in accordance with the COMPACTION LIST by routing equipment over the entire width except ditch.

4-62 DRY WEATHER COMPACTION

At any time of 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.

SECTION 5 – DRAINAGE

5-5 CULVERTS

Purchaser shall install culverts as part of this contract. Culverts must be installed concurrently with subgrade work and must be installed before subgrade compaction and rock application. Culvert locations and the minimum requirements for culvert length and diameter are designated on the CULVERT LIST. Culvert, downspout, and flume lengths may be adjusted to fit as-built conditions and may not terminate directly on unprotected soil.

5-6 CULVERT TYPE

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

<u>Road</u>	<u>Stations</u>
PH-1075	0+00 to 15+54
PH-1075B	0+00 to 4+64
PH-1085	8+80 to 28+91

5-7 USED CULVERT MATERIAL

On the following roads, Purchaser may install used culverts. All other roads must have new culverts installed. Purchaser shall obtain approval from the Contract Administrator for the quality of the used culverts before installation. Culverts must meet the specifications in Clauses 10-15 through 10-24.

<u>Road</u>	<u>Stations</u>
PH-1075	0+00 to 15+54
PH-1075A	0+00 to 2+32
PH-1075B	0+00 to 4+64
PH-1085	8+80 to 28+91
PH-1085A	0+00 to 0+75

5-8 TEMPORARY STREAM CULVERT INSTALLATION

Purchaser shall install temporary culverts as shown in the CULVERT LIST. Temporary stream culverts must be located in the natural channel of the stream. Temporary culverts must be removed upon completion of road use as indicated in Clause 9-21 ROAD ABANDONMENT.

<u>Road</u>	<u>Stations</u>
PH-1085	9+50
PH-1085	12+23
PH-1085	21+25

5-10 CULVERT MARKER INSTALLATION

On the following roads, Purchaser shall provide and install culvert markers at the inlet in accordance with the CULVERT AND DRAINAGE SPECIFICATION DETAIL.

<u>Road</u>	<u>Stations</u>
PH-1000	5+94

5-12 UNUSED MATERIALS STATE PROPERTY

On required roads, any materials listed on the CULVERT LIST and materials listed in Clause 5-13 CONTINGENCY CULVERTS that are not installed will become the property of the state. Purchaser shall stockpile materials as directed by the Contract Administrator.

5-13 CONTINGENCY CULVERTS

The following culverts will be supplied by the Purchaser and are available for installation as directed by the Contract Administrator.

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

5-15 CULVERT INSTALLATION

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

5-16 APPROVAL FOR LARGER CULVERT INSTALLATION

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

5-17 CROSS DRAIN SKEW AND SLOPE

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

5-18 CULVERT DEPTH OF COVER

Cross drain culverts must be installed with a depth of cover of not less than 1 foot of compacted subgrade over the top of the culvert at the shallowest point. Stream crossing culverts must be installed with a depth of cover recommended by the culvert manufacturer for the type and size of the pipe.

5-20 ENERGY DISSIPATERS

Purchaser shall install energy dissipaters in accordance with the CULVERT AND DRAINAGE SPECIFICATION DETAIL at all culverts on the ROCK LIST that specify the placement of rock.

The type of energy dissipater and the amount of material must be consistent with the specifications listed on the ROCK LIST. Placement must be with a zero-drop-height method only.

5-25 CATCH BASINS

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

5-26 HEADWALLS FOR CROSS DRAIN CULVERTS

Purchaser shall construct headwalls in accordance with the CULVERT AND DRAINAGE SPECIFICATION DETAIL at all cross drain culverts, except for temporary culverts. Rock must be placed on shoulders, slopes, and around culvert inlets and outlets. Minimum specifications require that rock be placed at a width of one culvert diameter on each side of the culvert opening, and to a height of one culvert diameter above the top of the culvert. Rock may not restrict the flow of water into culvert inlets or catch basins. Placement must be with a zero-drop-height only. No placement by end dumping or dropping of rock is allowed.

5-27 ARMORING FOR STREAM CROSSING CULVERTS

At the following culverts, Purchaser shall place rock in conjunction with or immediately following construction of the embankment. Rock must be placed on shoulders, slopes, and around culvert inlets and outlets as designated on the CULVERT AND DRAINAGE SPECIFICATION DETAIL or as directed by the Contract Administrator. Rock may not restrict the flow of water into culvert inlets or catch basins. Placement must be with a zero-drop-height only. No placement by end dumping or dropping of rock is allowed.

<u>Road</u>	<u>Stations</u>	<u>Rock Type</u>
PH-1085	9+50	LIGHT LOOSE RIP RAP
PH-1085	12+23	
PH-1085	21+25	

SECTION 6 – ROCK AND SURFACING

6-2 ROCK SOURCE ON STATE LAND

Rock used in accordance with the quantities on the ROCK LIST may be obtained from the following sources on state land at no charge to the Purchaser. Purchaser shall obtain written approval from the Contract Administrator for the use of material from any other source. If other operators are using, or desire to use the rock sources, a joint operating plan must be developed. All parties shall follow this plan. Purchaser shall notify the Contract Administrator a minimum of 3 calendar days before starting any operations in the listed locations.

<u>Source</u>	<u>Location</u>	<u>Rock Type</u>
PH-3000 Pit	NW¼ S20 T06 R02E	4-INCH JAW RUN

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 stockpiles on state land at no charge to the Purchaser. Purchaser shall not remove additional yardage without prior written approval from the Contract Administrator. Other stockpiles may not be used without prior written approval from the Contract Administrator.

<u>Source</u>	<u>Rock Type</u>	<u>Quantity</u>
PH-3000 Pit Stockpile	1¼-INCH MINUS CRUSHED	2150 cy
PH-3006 Stockpile	4-INCH JAW RUN	500 cy
PH-1075	SELECT PIT RUN	60 cy

6-5 ROCK FROM COMMERCIAL SOURCE

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

6-10 ROCK SOURCE DEVELOPMENT PLAN BY STATE

Purchaser shall conduct rock source development and use at the following sources, in accordance with the written ROCK SOURCE DEVELOPMENT PLAN prepared by the state and included in this road plan. Upon completion of operations, the rock source must be left in the condition specified in the ROCK SOURCE DEVELOPMENT PLAN, and approved in writing by the Contract Administrator. Purchaser shall notify the Contract Administrator a minimum of 3 calendar days before starting any operations in the rock source.

<u>Source</u>	<u>Location</u>	<u>Rock Type</u>
PH-3000 Pit	NW ¼, T06 R02E S20	4-INCH JAW RUN

6-23 ROCK GRADATION TYPES

Purchaser shall provide or manufacture rock in accordance with the types and amounts listed in the ROCK LIST. Rock must meet the following specifications for gradation and uniform quality when placed in hauling vehicles. The exact point of evaluation for conformance to specifications will be determined by the Contract Administrator.

6-37 4-INCH JAW RUN ROCK

% Passing 4" square sieve	95%
% Passing U.S. #40 sieve	16% maximum
% Passing U.S. #200 sieve	5% maximum

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

6-41 SELECT PIT RUN ROCK

No more than 20 percent of the rock may be smaller than 6 inches in any dimension and no rock may be larger than 10 inches in any dimension. Select Pit Run rock may not contain organic debris, dirt, and trash. Rock may require processing to meet this specification.

6-50 LIGHT LOOSE RIP RAP

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

<u>Quantity</u>	<u>Approximate size range</u>
20% / 90%	36" to 54"
80% / --	24" to 42"
10% / 20%	3" to 8"

6-55 ROCK APPLICATION MEASURED BY COMPACTED DEPTH

Measurement of the specified rock depths, are defined as the compacted depths using the compaction methods required in this road plan. Estimated quantities specified in the ROCK LIST are loose yards. Purchaser shall apply adequate amounts of rock to meet the specified rock depths.

6-56 ROCK MEASUREMENT BY TRUCK VOLUME

Measurement of culvert armoring, culvert backfill, energy dissipater, turnaround, landing, and junction rock is on a cubic yard truck measure basis. The Contract Administrator shall measure each truck box before rock hauling. An average of such volumes for each truck will be used to tally the volume hauled. The Contract Administrator may periodically require that a load be flattened off and its volume calculated. Purchaser shall maintain load tally sheets for each truck as shown in ROCK ACCOUNTABILITY DETAIL and shall give them to the Contract Administrator on a weekly basis during rocking operations.

6-65 ROCK STOCKPILE LOCATION

Purchaser shall stockpile rock as listed below in accordance with Clauses 9-21 ROAD ABANDONMENT and 9-23 MEDIUM ABANDONMENT. Rock stockpiles must be in accordance Clause 6-67 ROCK STOCKPILE SPECIFICATIONS.

<u>Rock Source</u>	<u>Rock Type</u>	<u>Stockpile Location</u>
PH-1075	4-INCH JAW RUN	Station 0+00 of PH-1075
PH-1075A		
PH-1075B		
PH-1085	4-INCH JAW RUN	Station 1+00 of PH-1085
PH-1085	4-INCH JAW RUN	Station 0+00 of PH-1075
PH-1085A		

6-67 ROCK STOCKPILE SPECIFICATIONS

Rock stockpiles listed in Clause 6-65 ROCK STOCKPILE LOCATION must meet the following specifications:

Before placing aggregates upon the stockpile site, the site must be cleared of vegetation, trees, stumps, brush, rocks, or other debris and the ground leveled to a smooth, firm, uniform surface.

When completed, the stockpile must be neat and regular in shape. The stockpile height is limited to a maximum of 24 feet. Stockpiles in excess of 200 cubic yards must be built up in layers of not more than 4 feet deep. Stockpile layers must be constructed by trucks, clamshells, or other methods approved in writing by the Contract Administrator. Each layer must be completed over the entire area of the pile before depositing aggregates in the next layer. The aggregates may not be dumped so that they run down and over the lower layers in the stockpile. The method of dropping from a bucket or spout in one location to form a cone shaped pile is not allowed. No equipment other than pneumatic tired equipment may be used on stockpiles.

6-70 APPROVAL BEFORE ROCK APPLICATION

Purchaser shall obtain written approval from the Contract Administrator for completed subgrade, ditch, and drainage installation, including inlet and outlet armor before rock application.

6-71 ROCK APPLICATION

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

6-72 ROCK APPLICATION AFTER HAULING

On the following road, upon completion of all hauling operations, Purchaser shall apply 1¼-INCH MINUS CRUSHED rock in accordance with the quantities shown on the ROCK LIST.

<u>Road</u>	<u>Stations</u>
PH-1000	87+50 to 153+84

6-73 ROCK FOR WIDENED PORTIONS

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

6-75 OPTIONAL ROCK EXCEPTION

On the following roads, if hauling takes place from June 1 to September 30 Purchaser may provide and place less rock than shown on the ROCK LIST, when approved in writing by the Contract Administrator.

<u>Road</u>	<u>Stations</u>
PH-1075	0+00 to 15+54
PH-1075A	0+00 to 2+32
PH-1075B	0+00 to 4+64
PH-1085	8+80 to 28+91
PH-1085A	0+00 to 0+75

6-76 DRY WEATHER ROCK COMPACTION

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

SECTION 7 – STRUCTURES

7-5 STRUCTURE DEBRIS

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

7-6 STREAM CROSSING INSTALLATION

Purchaser shall install stream crossing structures in accordance with the manufacturer's requirements, FPA, and STREAM DIVERSION PROCEDURE.

7-57 CULVERT SHAPE CONTROL

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

SECTION 8 – EROSION CONTROL

8-1 SEDIMENT CONTROL

Sediment control shall be accomplished using sediment traps, silt fences, settling ponds, or other methods as approved, in writing, by the Contract Administrator.

8-2 PROTECTION FOR EXPOSED SOIL

Purchaser shall provide and evenly spread a 3-inch layer of straw to all exposed soils within 50 feet of a stream or wetland. Soils may not sit exposed during any rain event. Soils must be covered before the first anticipated storm event.

8-15 REVEGETATION

Purchaser shall spread grass seed on all exposed soils within the grubbing limits resulting from road work activities using manual dispersal techniques. Other methods of covering must be approved in writing by the Contract Administrator.

<u>Road</u>	<u>Qty (lbs)*</u>	<u>Type</u>
Maintenance	10	Grass Seed
Construction	6	
Reconstruction	41	
Abandonment	183	

*Quantities are estimates only. Actual quantities may vary and are the responsibility of the Purchaser.

8-16 REVEGETATION SUPPLY

The Purchaser shall provide the grass seed.

8-17 REVEGETATION TIMING

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

8-18 PROTECTION FOR SEED

Purchaser shall provide a protective cover for seed on all exposed soils if revegetation occurs between July 1 and March 31. The protective cover may consist of straw. Seed must be covered before the first anticipated storm event. Seed may not be allowed to sit exposed during any rain event. The protective cover requirement may be waived in writing by the Contract Administrator if Purchaser is able to demonstrate a revegetation plan that will result in the establishment of a uniform dense crop (at least 50% coverage) of 3-inch tall grass by October 31.

8-19 ASSURANCE FOR SEEDED AREA

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

8-25 GRASS SEED

Purchaser shall evenly spread the seed mixture listed below on all exposed soil inside the grubbing limits at a rate of 40 pounds per acre of exposed soil. Grass seed must meet the following specifications:

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

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

SECTION 9 – POST-HAUL ROAD WORK

9-1 EARTHEN BARRICADES

Purchaser shall construct barricades in accordance with the EARTHEN BARRICADE DETAIL.

<u>Road</u>	<u>Stations</u>	<u>Comments</u>
PH-1085	8+80	Road is currently barricaded with jersey barriers. Purchaser shall obtain approval from the Contract Administrator for the quality of these barriers before using again.
PH-1075	1+50	

9-2 CULVERT REMOVAL FROM LIVE STREAM

On the following road(s), Purchaser shall remove existing culverts from live streams and leave the resulting channel open with excavation slope and excavated channel width as specified. Place excavated material in a waste area designated in Clause 4-37 WASTE AREA LOCATION, in a manner consistent with the ROAD WASTE PRISM DETAIL designated by the Contract Administrator. Culvert removal from live streams must be in accordance with the FPA, and STREAM DIVERSION PROCEDURE.

<u>Road</u>	<u>Stations</u>	<u>Excavated Channel Width</u>	<u>Slope Ratio</u>
PH-1085	9+50	4'	1 ½(H):1(V)
PH-1085	12+23	4'	1 ½(H):1(V)
PH-1085	21+25	3'	1 ½(H):1(V)

9-3 CULVERT MATERIAL REMOVED FROM STATE LAND

Culverts removed from roads become the property of the Purchaser and must be removed from state land. If required by the Contract Administrator, designated culverts must be salvaged and delivered to a location specified by the Contract Administrator.

9-5 POST-HAUL MAINTENANCE

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

<u>Road</u>	<u>Stations</u>	<u>Additional Requirements</u>
PH-1000	87+50 to 153+84	Clean ditches; clean culvert inlets and outlets; grade, shape, and compact existing road surface; application and compaction of rock.

9-10 LANDING DRAINAGE

Purchaser shall provide for drainage of the landing surfaces.

9-11 LANDING EMBANKMENT

Purchaser shall slope landing embankments to the original construction specifications.

9-21 ROAD ABANDONMENT

Purchaser shall abandon the following roads before the termination of this contract. Work must be in accordance with the ROAD ABANDONMENT CROSS SECTIONS DETAIL and Clause 9-23 MEDIUM ABANDONMENT.

<u>Road</u>	<u>Stations</u>	<u>Type</u>
PH-1075	1+50 to 15+54	Medium
PH-1075A	All Stations	
PH-1075B	All Stations	
PH-1085	8+80 to 28+91	
PH-1085A	All Stations	

9-23 MEDIUM ABANDONMENT

- Reclaim 60 percent of compacted rock depth and stockpile in locations as specified in Clause 6-65 ROCK STOCKPILE LOCATION. Stockpile rock in accordance to Clause 6-67 ROCK STOCKPILE SPECIFICATIONS. Removal of rock must begin at the end of the road and continue towards the start of the road.
- Fill in ditches. Outslope the surface at a minimum of 20 percent.
- Remove road shoulder berms except as directed.
- Construct non-drivable waterbars in accordance with the attached NON-DRIVABLE WATERBAR DETAIL at a maximum spacing that will produce a vertical drop of no more than 20 feet between waterbars or between natural drainage paths and with a maximum spacing of 200 feet, or as marked in the field.
- Skew waterbars at least 30 degrees from perpendicular to the road centerline on roads in excess of 3 percent grade. Key waterbars into the cut-slope to intercept the ditch. Waterbars must be outsloped to provide positive drainage. Outlets must be on stable locations.
- Scatter woody debris onto abandoned road surfaces.
- Block roads with earthen barricades in accordance with the attached EARTHEN BARRICADE DETAIL.
- Remove ditch cross drain culverts and leave the resulting trench open in accordance with CROSS DRAIN REMOVAL DETAIL.
- Apply grass seed concurrently with abandonment and in accordance with Section 8 EROSION CONTROL.
- Cover, concurrently with abandonment, all exposed soils within 50 feet of any live stream, with a 3-inch deep layer of straw.

SECTION 10 MATERIALS

10-15 CORRUGATED STEEL CULVERT

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

10-17 CORRUGATED PLASTIC CULVERT

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

10-20 FLUME AND DOWNSPOUT

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

10-21 METAL BAND

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

10-22 PLASTIC BAND

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

10-23 RUBBER CULVERT GASKETS

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

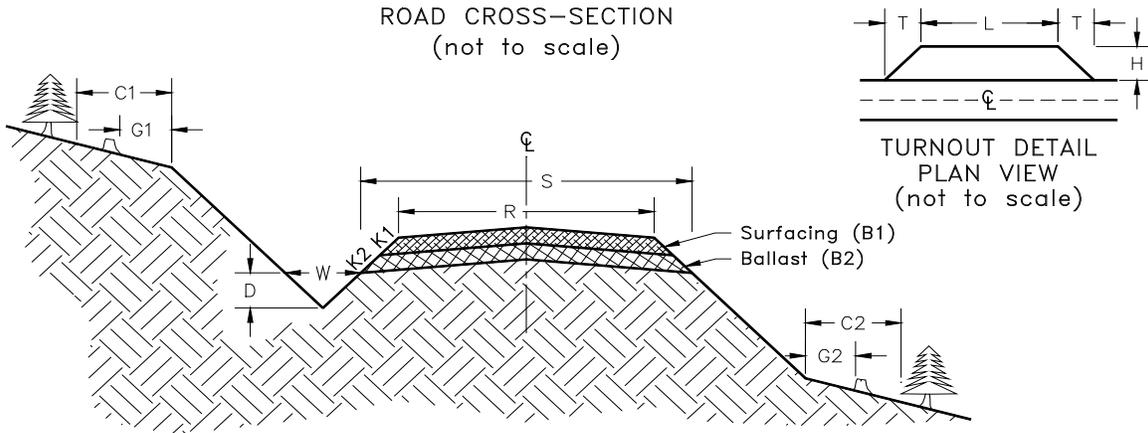
10-24 GAUGE AND CORRUGATION

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

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

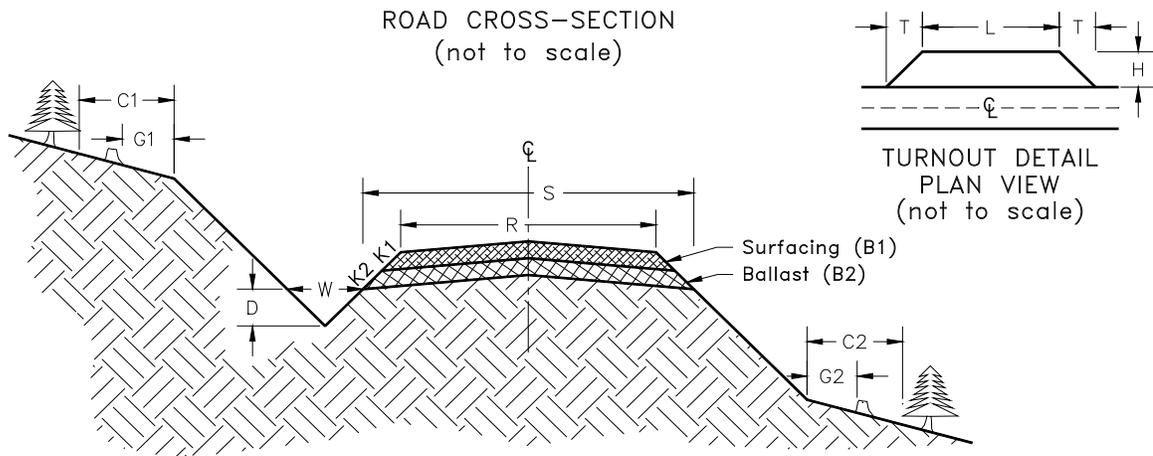
TYPICAL SECTION SHEET

Page 1 of 1



Road Number	From Station	To Station	Tolerance Class	Subgrade	Road	Ditch	Ditch	Crown @ CL	Grubbing Limits		Clearing Limits		
				Width	Width	Width	Depth		ft	ft	ft	ft	
				ft	ft	ft	ft	in	G1	G2	C1	C2	
Pre-Haul PH-1000	20+00	122+62	A	--	--	--	--	--	--	--	--	--	--
--	153+85	335+85	A	--	--	--	--	--	--	--	--	--	--
Post-Haul PH-1000	87+50	153+85	A	14	12	3	1	4	-	-	-	-	
PH-1075	0+00	15+54	C	15	12	3	1	4	3	3	5	5	
PH-1075A	0+00	2+32	C	15	12	3	1	4	3	3	5	5	
PH-1075B	0+00	4+64	C	15	12	3	1	4	3	3	5	5	
PH-1085	0+00	28+91	C	15	12	3	1	4	3	3	5	5	
PH-1085A	0+00	0+75	C	15	12	3	1	4	3	3	5	5	
PH-3006	0+00	10+74	A	--	--	--	--	--	--	--	--	--	--

ROCK LIST
Page 1 of 3

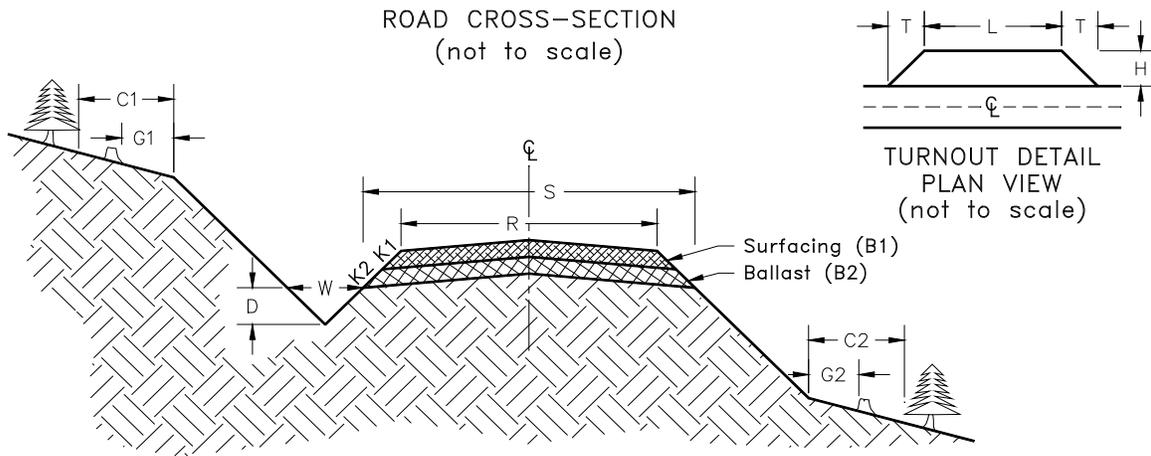


1¼-INCH MINUS CRUSHED

Road Number	Optional Rock	From Station	To Station	Rock Slope	Compacted Rock Depth (in)	C.Y. per Station or Unit	# of Stations or Units	C.Y. Subtotal	Rock Source	Turnout		
										Length	Width	Taper
				K1	B1				PH-3000 Pit Stockpile	L	H	T
PH-1000		Culvert Replacement and Removal Surface Rock @ 5+94 and 122+32		1½:1		30	1.8	50				
--		87+50	153+84	1½:1	6	30	66.34	1991				
--		Turnouts		1½:1	6	13	3	39		25	10	25
--		Curve Widening		1½:1	6	--	--	70				

REQUIRED CRUSHED ROCK: 2150 CY

ROCK LIST
Page 2 of 3



4-INCH JAW RUN

Road Number	Optional Rock	From Station	To Station	Rock Slope	Compacted Rock Depth (in)	C.Y. per Station or Unit	# of Stations or Units	C.Y. Subtotal	Rock Source	Turnout		
										Length	Width	Taper
				K2	B2				PH-3000 Pit or PH-3006 Stockpile	L	H	T
PH-1075	*	0+00	15+54	1½:1	12	63	15.54	979				
	*	Curve Widening		1½:1	--	1	34	34				
	*	Junctions		1½:1	--	12	1	12				
	*	Landings		1½:1	--	54	1	54				
PH-1075A	*	0+00	2+32	1½:1	12	63	2.32	146				
	*	Turnarounds		1½:1	--	34	1	34				
	*	Curve Widening		1½:1	--	5	1	5				
	*	Junctions		1½:1	--	12	1	12				
	*	Landings		1½:1	--	54	1	54				
PH-1075B	*	0+00	4+64	1½:1	12	63	4.64	292				
	*	Turnarounds		1½:1	--	34	1	34				
	*	Curve Widening		1½:1	--	1	10	10				
	*	Junctions		1½:1	--	12	1	12				
	*	Landings		1½:1	--	54	1	54				
PH-1085		0+00	8+80	1½:1	12	63	8.80	554				
	*	8+80	28+91	1½:1	12	63	20.11	1267				
	*	Turnarounds		1½:1	--	34	1	34				
	*	Turnouts		1½:1	--	27	2	54		25	10	25
	*	Curve Widening		1½:1	--	64	1	64				
	*	Junctions		1½:1	--	12	1	12				
	*	Landings		1½:1	--	54	1	54				
PH-1085A	*	0+00	0+75	1½:1	12	63	0.75	47				
	*	Curve Widening		1½:1	--	2	1	2				
	*	Junctions		1½:1	--	12	1	12				
	*	Landings		1½:1	--	54	1	54				

REQUIRED BALLAST: 554 CY
OPTIONAL BALLAST: 3332 CY

ROCK LIST
Page 3 of 3
SELECT PIT RUN

Road Number	Optional Rock	From Station	To Station	Rock Slope	Compacted Rock Depth (in)	C.Y. per Station or Unit	# of Stations or Units	C.Y. Subtotal	Rock Source	Turnout		
										Length L	Width H	Taper T
PH-1000			Energy Dissipater	--	--	1	2	2	PH-3000 Pit			
--	*		Turnaround at 93+15	--	--	60	1	60	PH-1075			
PH-1085			Energy Dissipater	--	--	1	5	5	PH-3000 Pit			
PH-1075			--	--	--	1	3	3	--			
PH-1075B			--	--	--	1	1	1	--			

REQUIRED SELECT PIT RUN: 11 CY
OPTIONAL SELECT PIT RUN: 60 CY

LIGHT LOOSE RIP RAP

Road Number	From Station	To Station	Rock Slope	Compacted Rock Depth (in)	C.Y. per Station or Unit	# of Stations or Units	C.Y. Subtotal	Rock Source
PH-1085		9+50	--	--	10	1	10	PH-3000 Pit
--		12+23	--	--	8	1	8	
--		21+25	--	--	8	1	8	

REQUIRED RIP RAP: 28 CY

CULVERT LIST

Page 1 of 1

<u>Road Number</u>	<u>Location</u>	<u>Culvert</u>			<u>Culvert Armor / Energy Dissapater Rock (C.Y.)</u>			<u>Backfill Material</u>	<u>Bedding Material</u>	<u>Inlet Marker</u>	<u>Remarks</u>
		<u>Dia (In)</u>	<u>Length</u>	<u>Type</u>	<u>Inlet</u>	<u>Outlet</u>	<u>Type</u>				
PH-1000	5+94	18	30	PD	0.5	0.5	SP	NT	CR	Y	Replacement Pipe
PH-1085	8+80	18	30	XX	0.5	0.5	SP	NT	NT	N	
PH-1085	9+50	36	50	XX	5.0	5.0	LL	NT	NT	N	Type Np Stream Crossing
PH-1085	11+42	18	30	XX	0.5	0.5	SP	NT	NT	N	
PH-1085	12+23	24	60	XX	5.0	5.0	LL	NT	NT	N	Type Np Stream Crossing
PH-1085	12+77	18	30	XX	0.5	0.5	SP	NT	NT	N	
PH-1085	16+90	18	30	XX	0.5	0.5	SP	NT	NT	N	
PH-1085	21+25	24	50	XX	5.0	5.0	LL	NT	NT	N	Type Np Stream Crossing
PH-1085	21+95	18	30	XX	0.5	0.5	SP	NT	NT	N	
PH-1075	4+85	18	30	XX	0.5	0.5	SP	NT	NT	N	
PH-1075	9+26	18	30	XX	0.5	0.5	SP	NT	NT	N	
PH-1075	12+85	18	30	XX	0.5	0.5	SP	NT	NT	N	
PH-1075B	0+34	18	30	XX	0.5	0.5	SP	NT	NT	N	

Key:

- CR - 1¼-INCH MINUS CRUSHED
- NT - Native (bank run)
- SR - Shot Rock
- SP - Select Pit Run
- LL - Light Loose Riprap
- GM - Galvanized Metal
- PD - Polyethylene Pipe Dual Wall
- XX - PD or GM

COMPACTION LIST

Page 1 of 1

Road	Type	Max Depth Per Lift (inches)	Equipment Type	Equipment Weight (lbs)	Minimum Number of Passes	Maximum Operating Speed (mph)	Maximum Amount of Deflection (inches)
All	Existing Surface	--	Vibratory Smooth Drum	14,000	4	3	1
All	Subgrade	--	Vibratory Smooth Drum	14,000	4	3	1
All	Embankment/Fill	12	Vibratory Smooth Drum	28,000	4	3	1
All	Surfacing (1¼-INCH MINUS CRUSHED)	6	Vibratory Smooth Drum	14,000	4	3	1
All	Ballast (4-INCH JAW RUN)	12	Vibratory Smooth Drum	14,000	4	3	2
All	Waste Areas	24	Excavation	14,000	--	--	4
All	Culvert Bedding/Backfill	6	Vibratory Plate Compactor	260	--	--	1

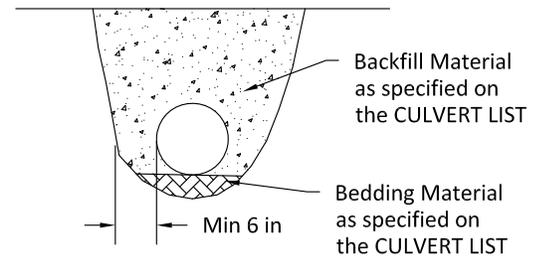
CULVERT AND DRAINAGE SPECIFICATION DETAIL
PAGE 1 OF 2

INSTALLATION REQUIREMENTS:

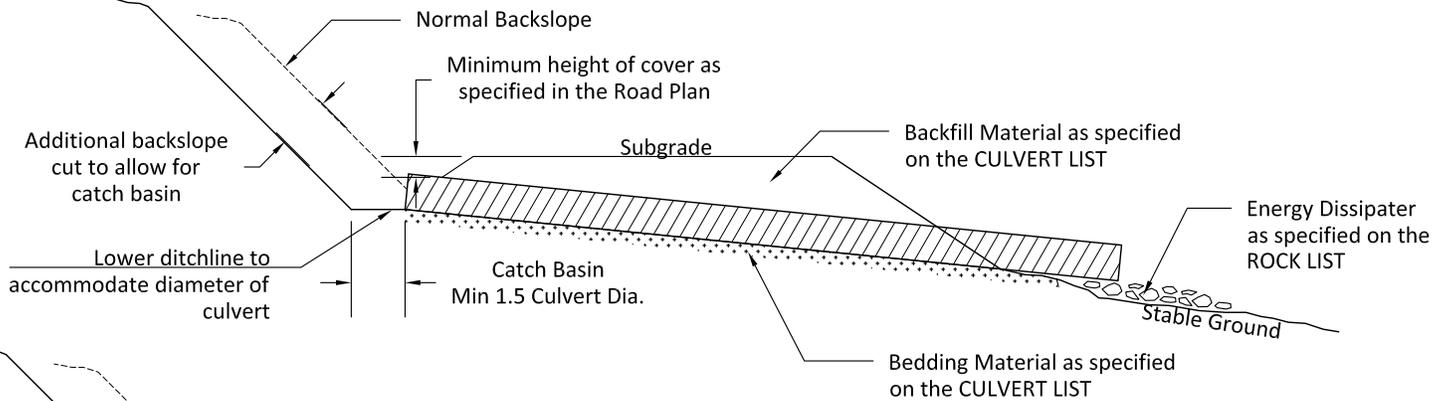
1. Proper preparation of foundation and placement of any required bedding material shall precede the installation of all culverts. This includes necessary leveling of the native trench bottom and compaction of required bedding material to form a uniform, dense, unyielding base. The pipe must be uniformly supported along the barrel.
2. Backfill material shall be compacted under the culvert haunches, around the sides, and above the culvert in accordance with the COMPACTION LIST.

ALL DRAWINGS ARE NOT TO SCALE

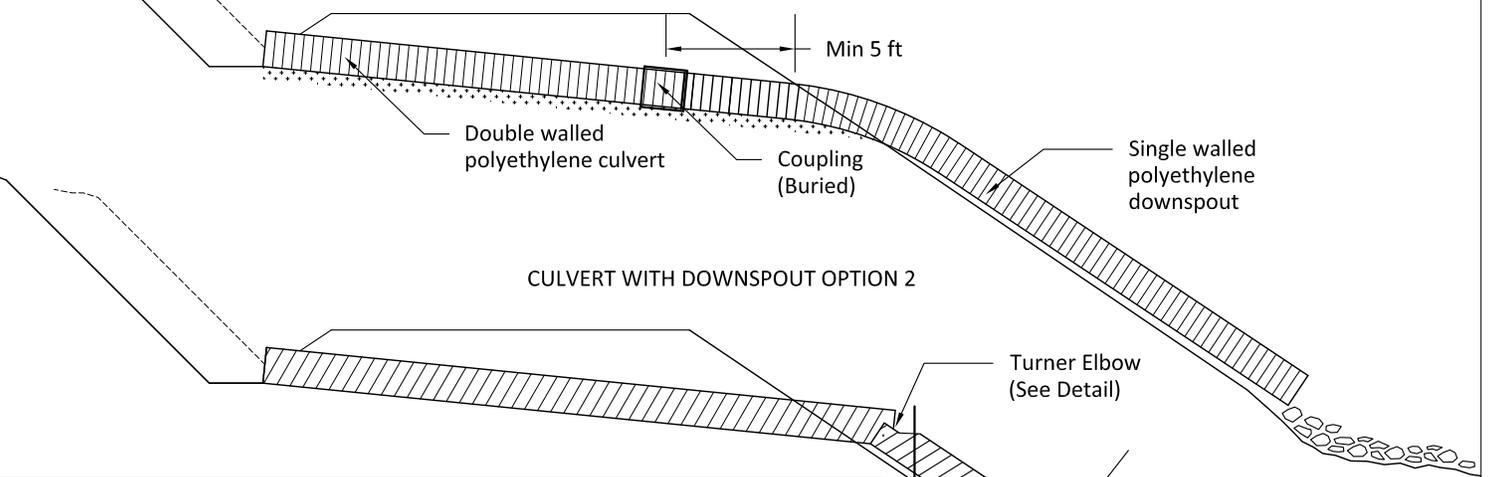
CROSS SECTION



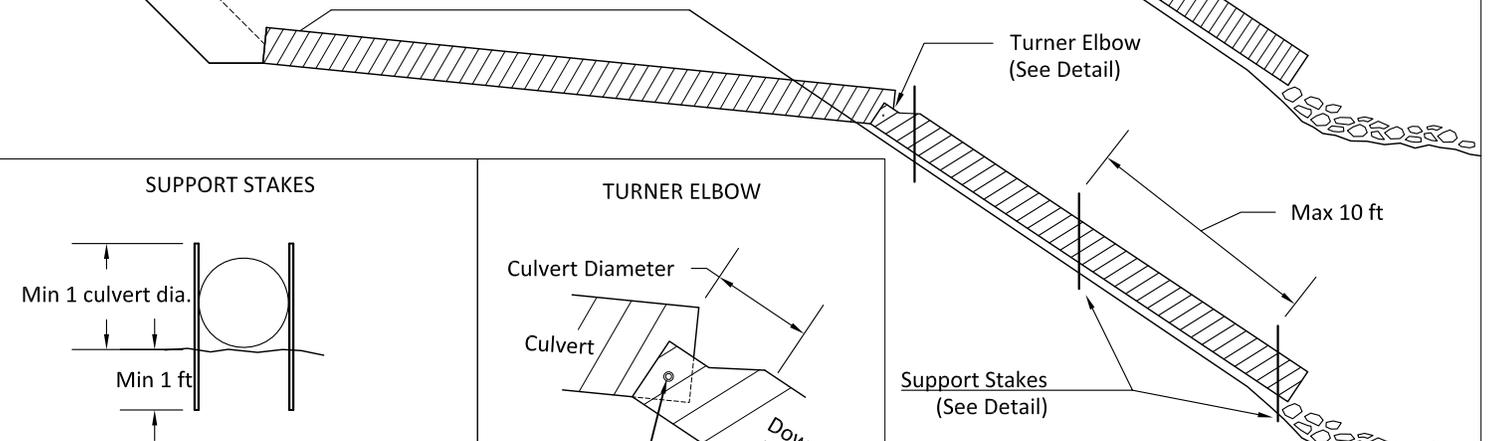
CULVERT PROFILE (TYPICAL)



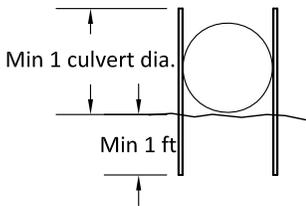
CULVERT WITH DOWNSPOUT OPTION 1



CULVERT WITH DOWNSPOUT OPTION 2

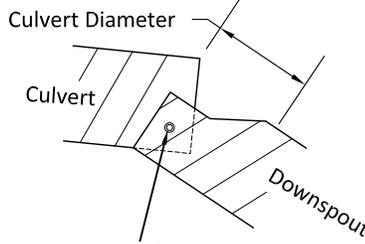


SUPPORT STAKES



Stake Material: T-post with rust protection coating.
Connections: Bolt support stakes to the culvert with $\frac{5}{8}$ " u-bolts, with washers on both the inside and outside of the culvert.
Alternative staking methods may be approved, in writing, by the Contract Administrator.

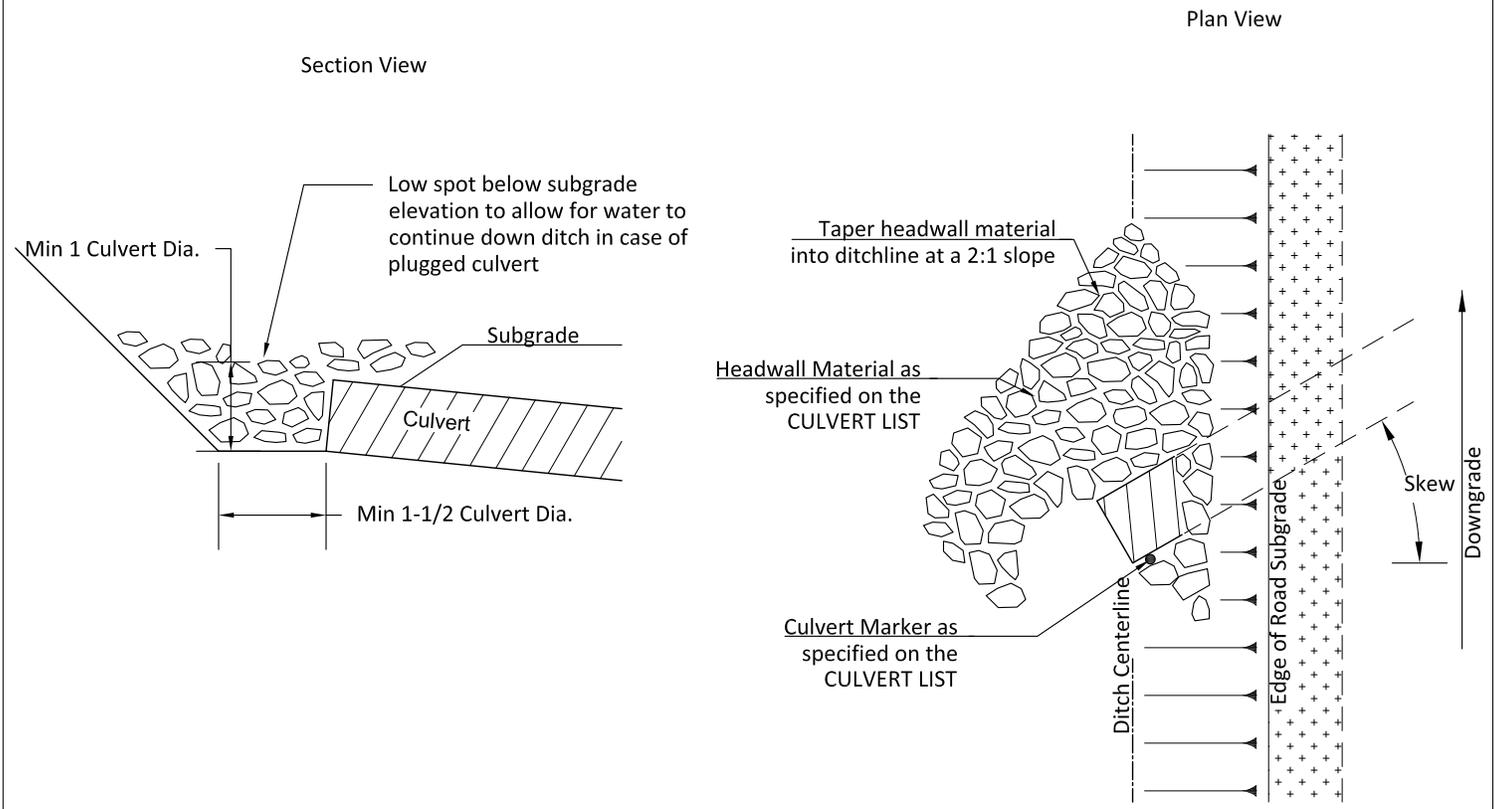
TURNER ELBOW



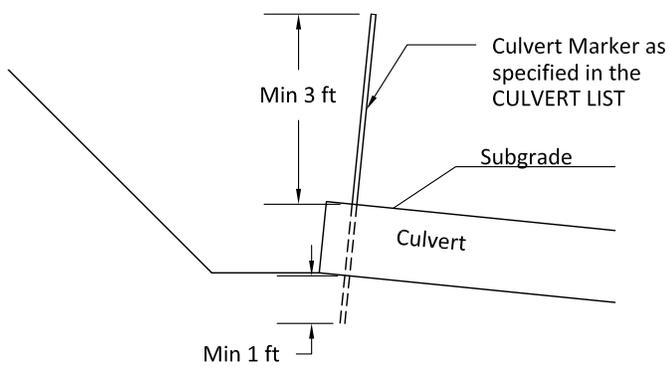
Downspout must be 6 inches larger in diameter than the culvert.

CULVERT AND DRAINAGE SPECIFICATION DETAIL
PAGE 2 OF 2

HEADWALLS

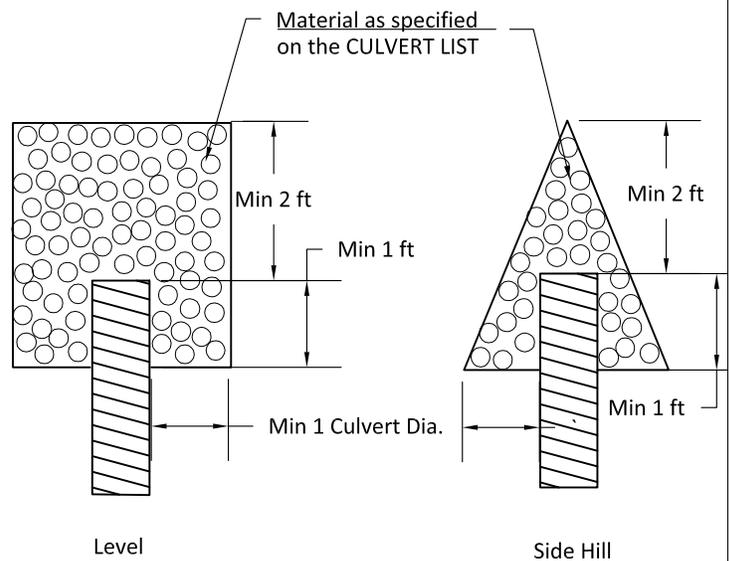


CULVERT MARKERS



Culvert Marker Material: 1 Inch I.D., Schedule 40 PVC Pipe, White. Marker must be capped on the top.
 Culvert Marker Placement: Place on uphill side of culvert, between corrugations if possible.
 Alternative culvert marker types may be approved, in writing, by the Contract Administrator.

ENERGY DISSIPATORS



Min Energy Dissipater Depth: 1 Culvert Dia.

Cuts and Fills

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

Surface

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

Drainage

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

Preventative Maintenance

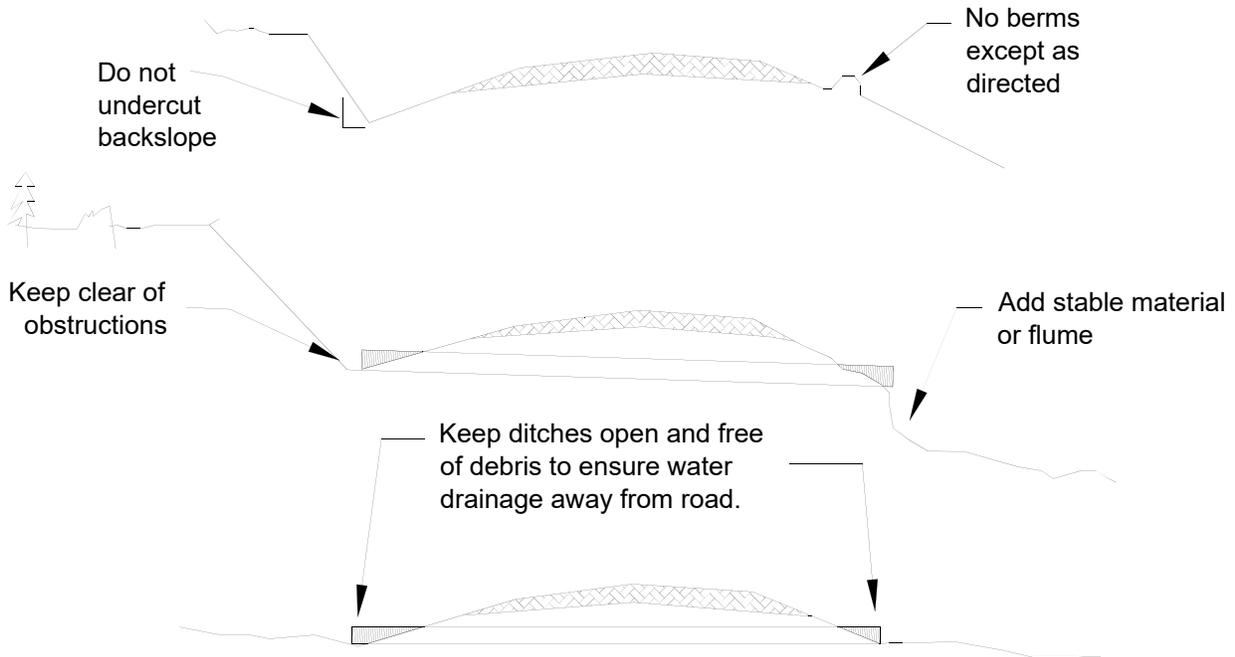
- Perform preventative maintenance work to safeguard against storm damage, such as blading to ensure correct runoff, ditch and culvert cleaning, and waterbar maintenance.

Termination of Use or End of Season

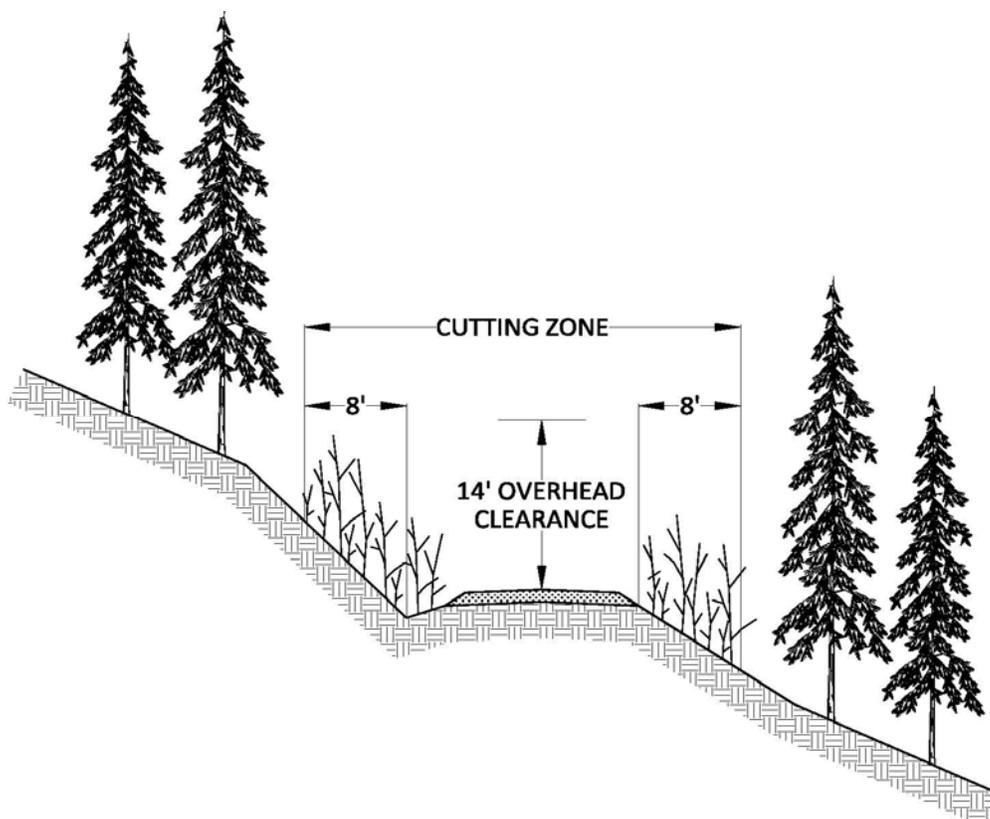
- At the conclusion of logging operations, ensure all conditions of these specifications have been met.

Debris

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



ROAD BRUSHING DETAIL



SPECIFICATIONS:

Brush shall be cut on the road surface and 8 ft. back from the back of road ditch and outside edge of running surface.

On the inside of switchbacks and tight curves, brush shall be cut back 16 ft. for visibility.

On truck turnouts or turnarounds, brush shall be cut 8 ft. back from outside edge of running surface.

Brush shall be cut to provide an overhead clearance of 14 ft. above the road running surface.

Brush shall be cut to within 6 in. of the ground.

Slash shall be removed from cut slopes above the road and scattered on embankment slopes.

Ditches and road surfaces shall be cleared of woody debris.

Culvert inlets and outlets shall be cleaned a minimum distance of two pipe diameters away.

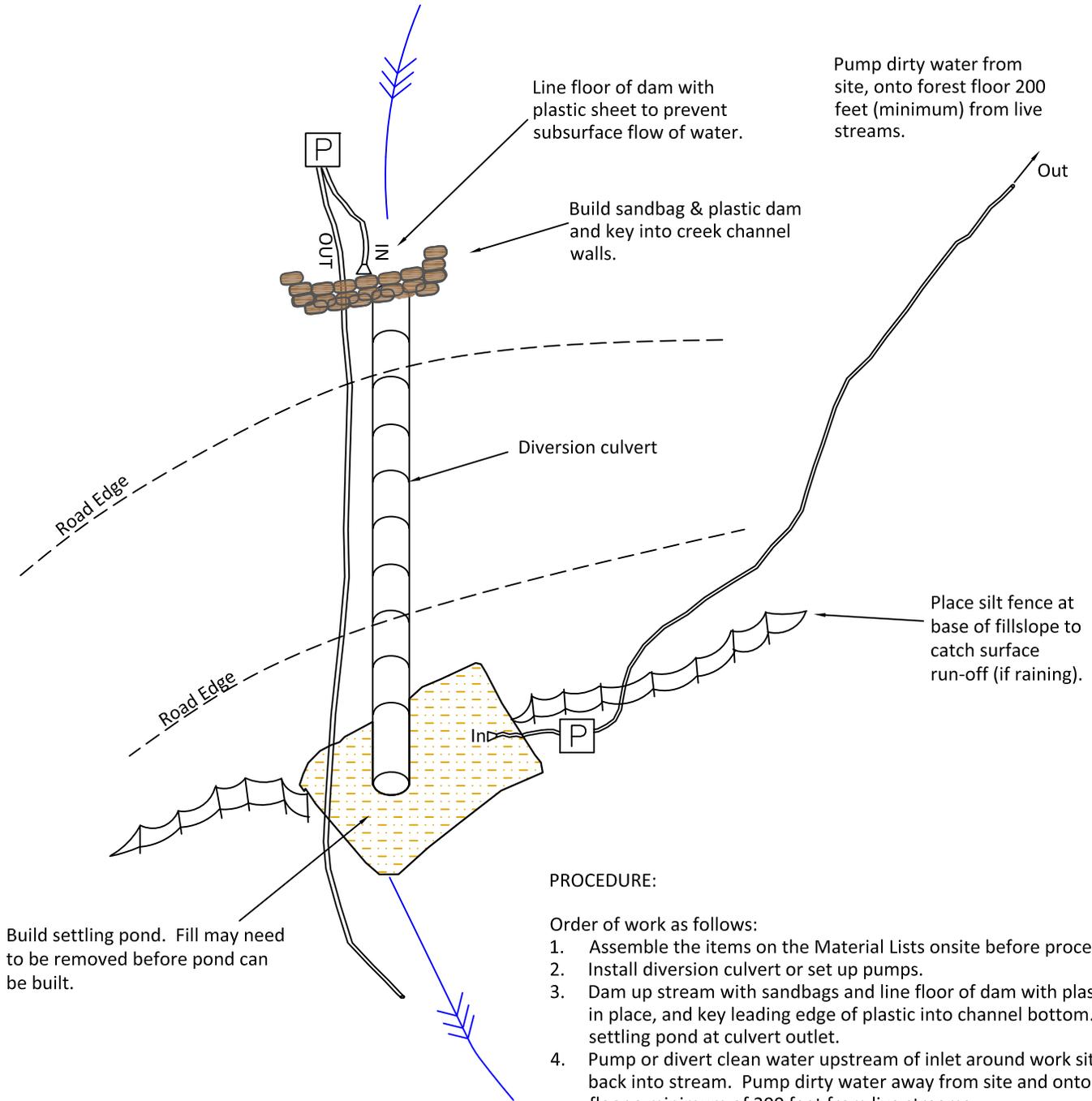
STREAM DIVERSION PROCEDURE

For culvert installation or removal in live waters, sites shall be dewatered within the area of direct influence of the stream. Stream culvert installations or removals will occur as follows, any deviations shall be approved, in writing, by the Contract Administrator.

1. Prior to any work within the high waterline, Purchaser shall contact the Contract Administrator for an on-site pre-work to submit a plan for pumping and/or diverting all stream flow around the work area and pumping and/or diverting any groundwater flow from out of the work area, as approved, in writing, by the Contract Administrator. The SETTLING POND AND PUMP DETAIL, included herein, is an example of a pre-approved dewatering plan.
2. Once the stream has been pumped and/or diverted, stream flow shall not be allowed through the work area until all work below the ordinary high water line has been completed and approved, in writing, by the Contract Administrator.
3. Sedimentation shall be avoided during culvert installation or removal in accordance with Road Plan Clause 1-29 SEDIMENT RESTRICTION.
4. Per Road Plan Clause 8-1 SEDIMENT CONTROL STRUCTURES, Purchaser shall install silt fences or other suitable sediment control methods as approved by the Contract Administrator.
5. Backfill any settling ponds and remove any diversion culverts.
6. Maintain a clean jobsite in accordance with Road Plan Clause 7-5 STRUCTURE DEBRIS.

SETTLING POND AND PUMP DETAIL

NOT TO SCALE



Build settling pond. Fill may need to be removed before pond can be built.

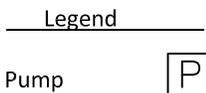
PROCEDURE:

Order of work as follows:

1. Assemble the items on the Material Lists onsite before proceeding.
2. Install diversion culvert or set up pumps.
3. Dam up stream with sandbags and line floor of dam with plastic to hold in place, and key leading edge of plastic into channel bottom. Build a settling pond at culvert outlet.
4. Pump or divert clean water upstream of inlet around work site and back into stream. Pump dirty water away from site and onto forest floor a minimum of 200 feet from live streams.
5. Install/remove stream crossing structure.
6. Backfill any settling ponds.
7. Cover exposed soils in accordance with Section 8 EROSION CONTROL as stated within Road Plan.

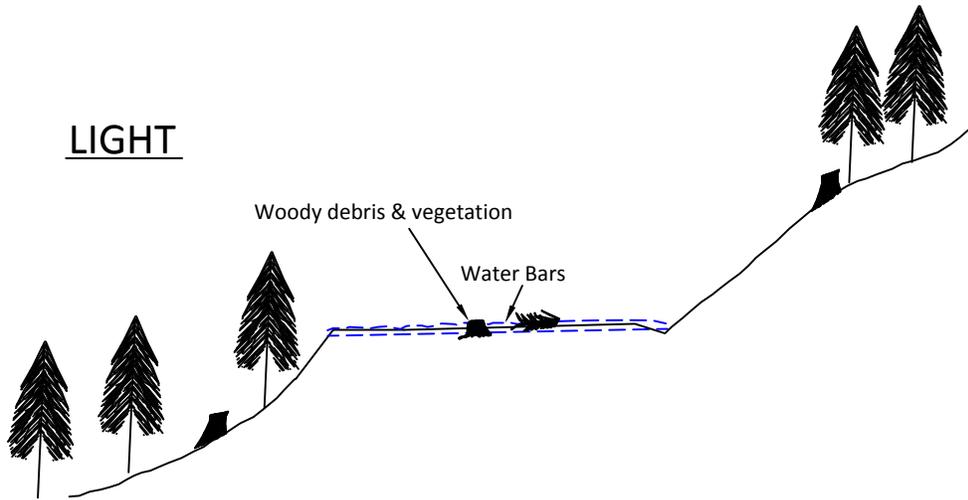
Material Lists:

- 3 pumps, (one as a backup). The clean water pump (dam at culvert catch basin) shall have a minimum capacity of 1200 gallons per minute (gpm). The dirty water pump (settling pond) and the backup pump shall each have a minimum capacity of 600 gpm.
- Silt fence and stakes
- Plastic sheets
- Grass seed and bales of straw.

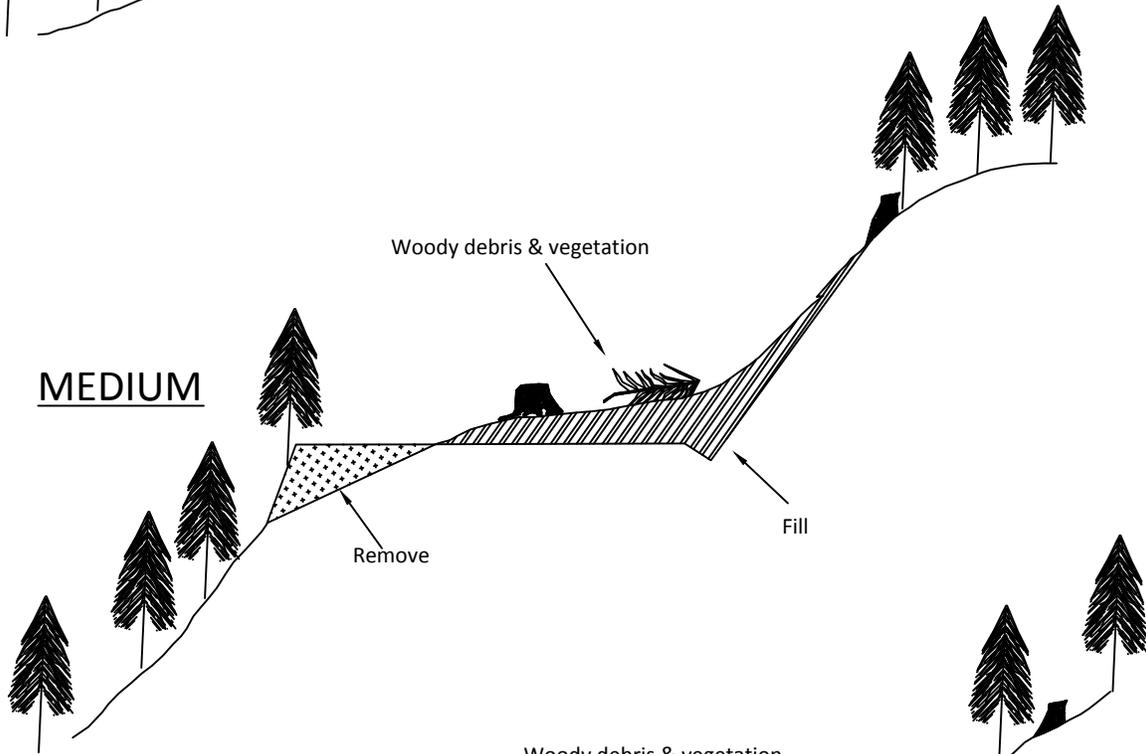


ROAD ABANDONMENT CROSS SECTIONS

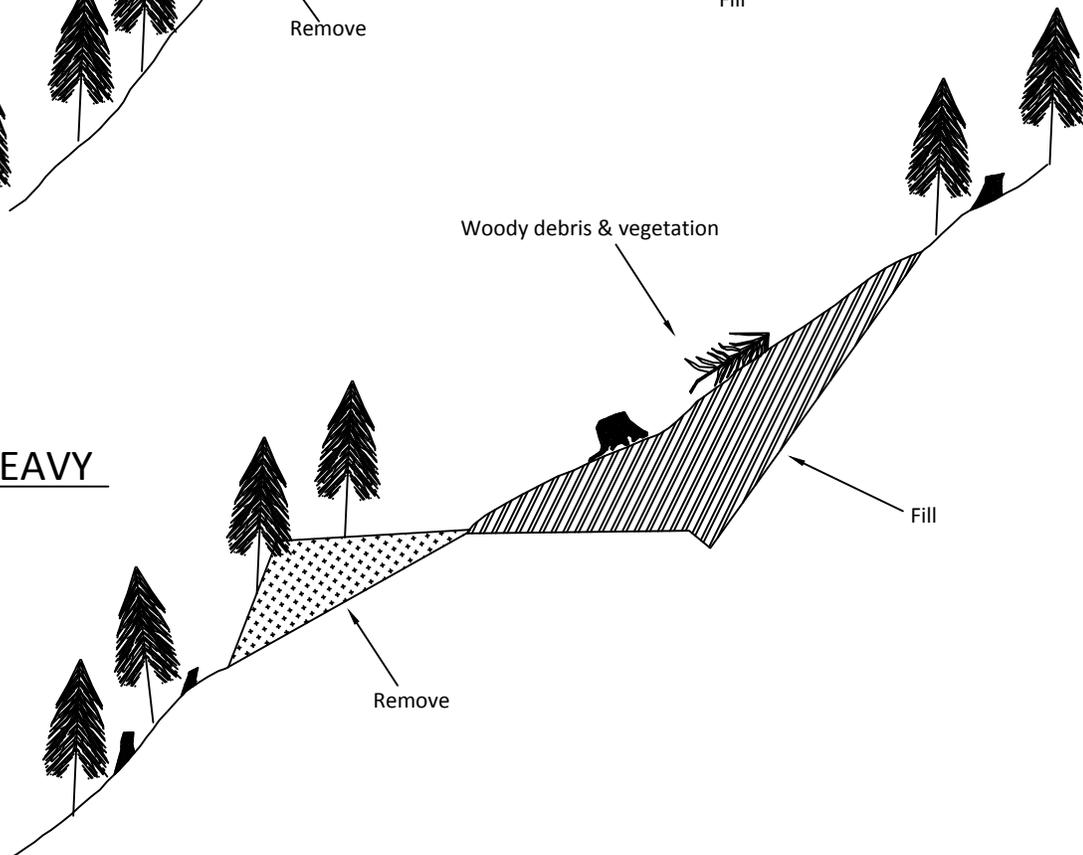
LIGHT



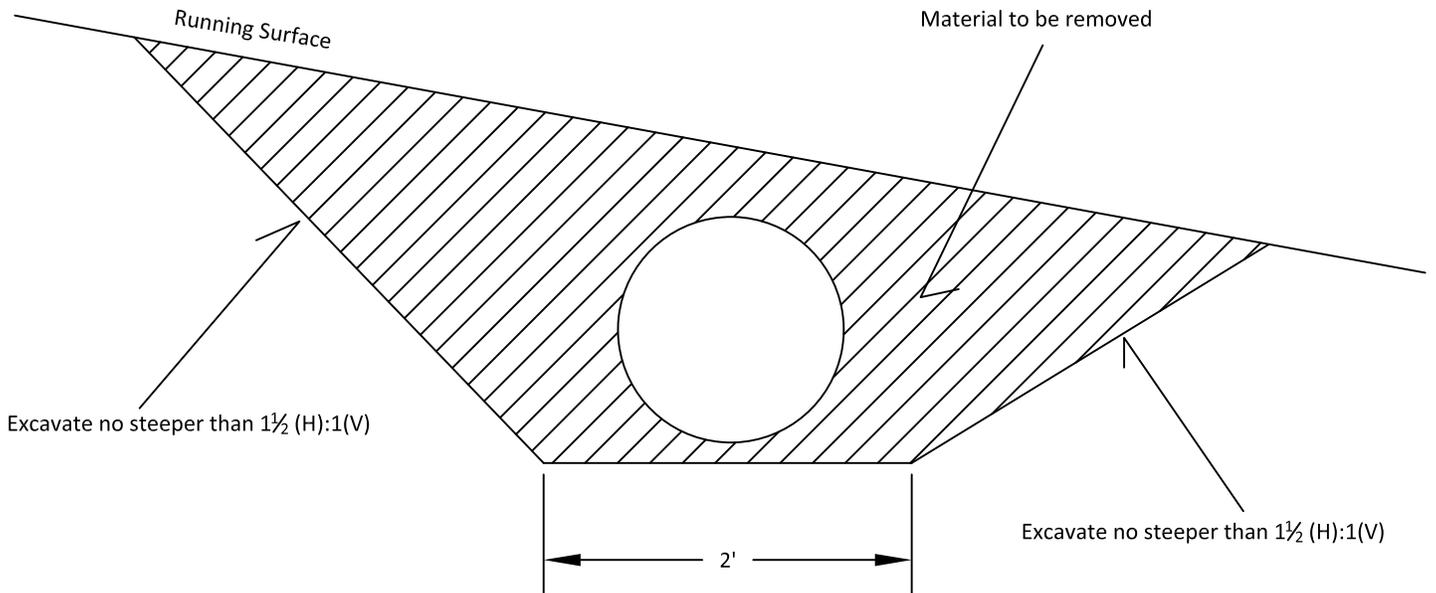
MEDIUM



HEAVY



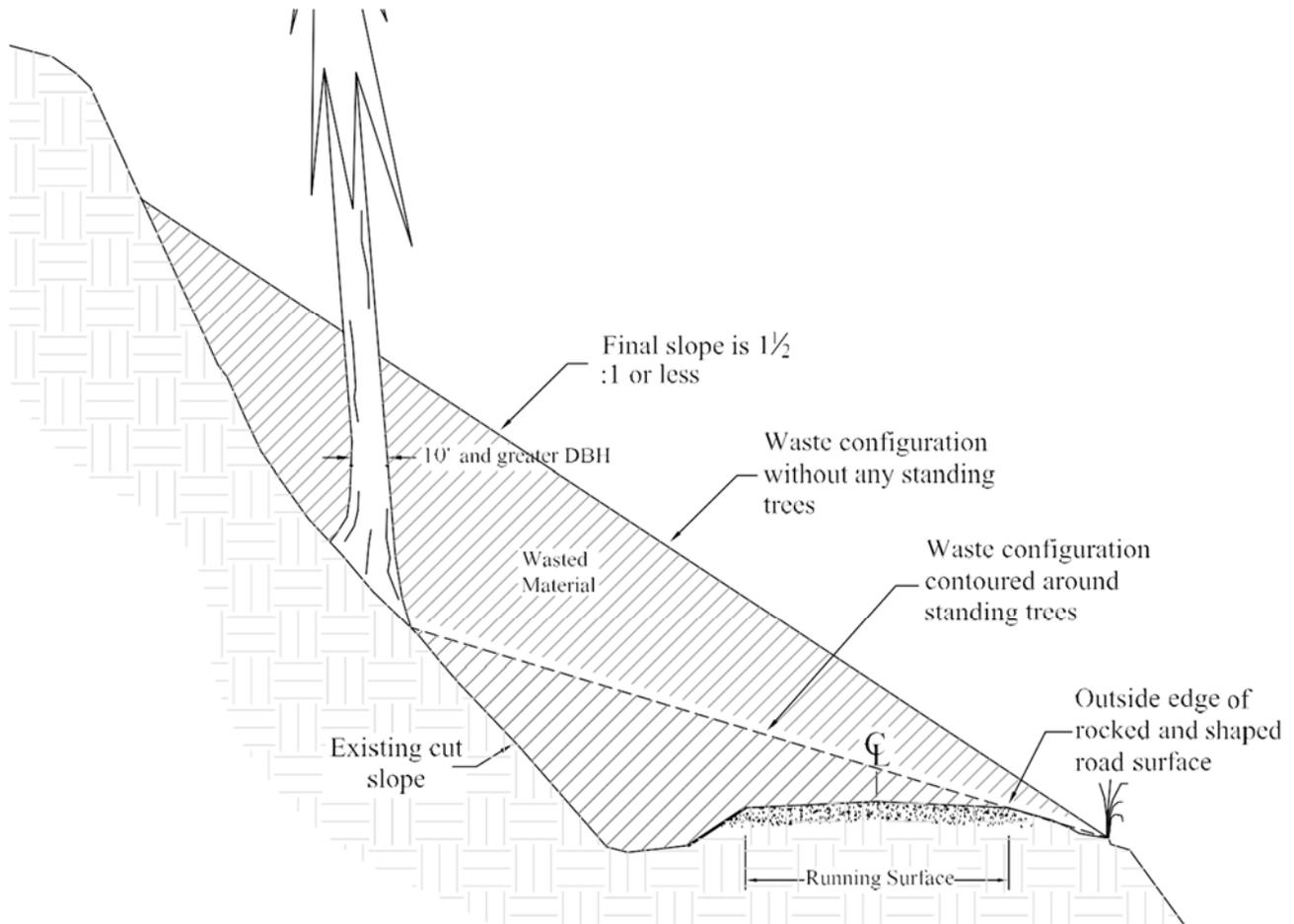
CROSS DRAIN REMOVAL DETAIL



1) Excavated material may be wasted on the road surface on the downhill side of the excavation. Waste material shall be sloped no steeper than 1½ (H):1(V).

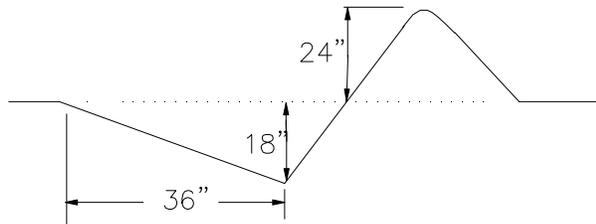
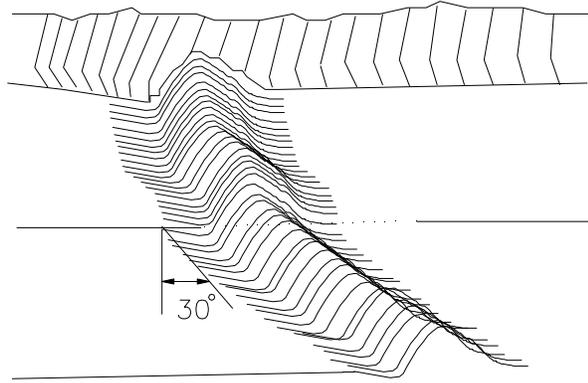
2) Resulting trench shall be keyed into the ditchline and sloped towards the outside edge of the road with a drop of at least 1 foot in 10 feet.

ROAD PRISM WASTE DETAIL



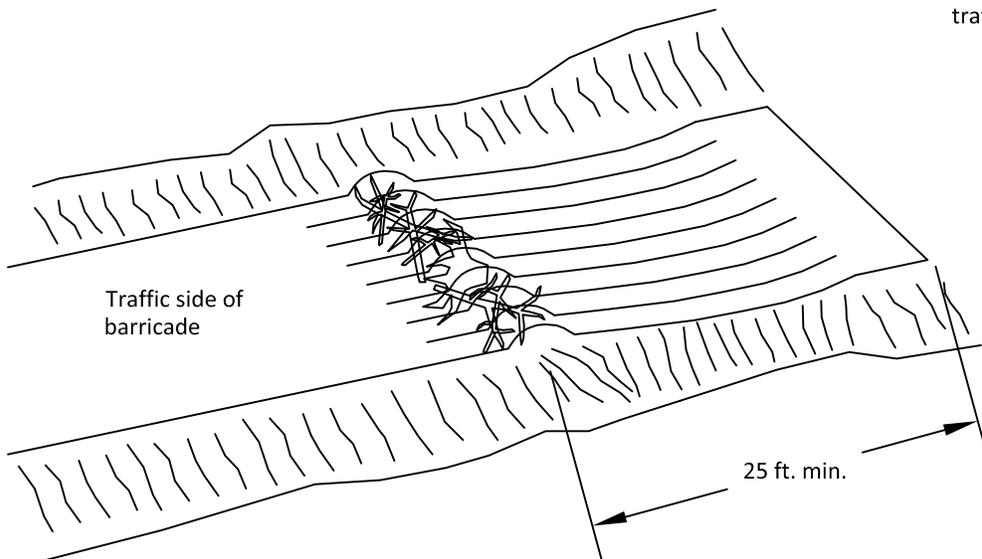
1. Excavated material may be wasted in the road prism, including ditchline, as long as it is sloped no steeper than $1\frac{1}{2}(H):1(V)$ and is placed at a minimum of 10 feet from the edge of excavation limits. Waste material shall not impede the natural drainage of water.
2. Waste shall be placed in 2-foot lifts and compacted by routing tracked excavation equipment over it.
3. A water bar shall be constructed immediately above the waste area.
4. All waste areas shall be grass seeded and covered with straw in accordance with Section 8 of Road Plan.
5. Woody debris shall not be buried in waste areas. Trees less than 10-inches DBH shall be cleared and scattered on top of the waste areas. Trees greater than 10-inches DBH shall be left in place, and the waste contoured around the base of the tree. Standing trees shall not be buried or partially buried by waste.

NON-DRIVABLE WATER BAR DETAIL



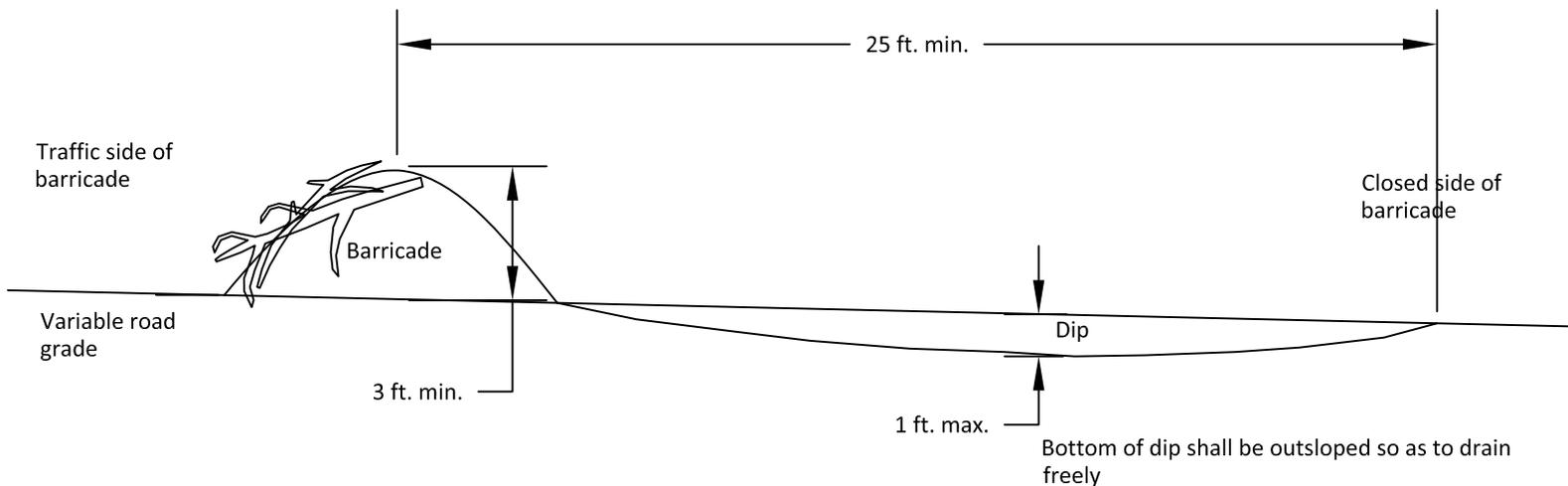
EARTHEN BARRICADE DETAIL

PLAN VIEW
(Not to scale)



Slash and root wads shall be incorporated into traffic side of the barricade.

PROFILE VIEW
(Not to scale)



ROCK SOURCE DEVELOPMENT PLAN

1. All operations shall be carried out in compliance with all regulations of:
 - a. Regulations and Standards Applicable to Metal and Nonmetal Mining and Milling Operations (30 CFR) U.S. Department of Labor, Mine Safety and Health Administration.
 - b. "Safety Standards for Construction Work" (296-155 WAC), Washington Department of Labor and Industries.
2. Purchaser shall arrange with the Contract Administrator to review the following designated pit(s) and examine the area before beginning any operations. A rock source plan of operations shall be developed and agreed upon by the Contract Administrator and Purchaser before beginning any operations.

<u>Pit Name</u>	<u>Legal Description</u>	<u>Requirements</u>
PH-3000 Pit	NW¼, Sec 20, T06N, R02E	The processing of 4-INCH JAW RUN rock shall utilize the loose shot mixed aggregate size material located within the pit floor.

3. The pit floor shall have continuity of slope with a smooth and neat condition that provides drainage at a minimum of 3 percent. All knobs, bumps, or extrusions shall be removed to the designated floor level by excavation. No sediment shall enter live water.
4. The location and amount of material deposited in a temporary stockpile is subject to approval by the Contract Administrator. All stockpiled material shall be maintained in a neat and useable condition.
5. Oversize material is defined as rock fragments larger than two feet in any direction. At the conclusion of operations, all remaining oversize material shall be located as directed by the Contract Administrator.
6. Upon completion of pit operations, the following shall occur:
 - a. The pit area will be left in a condition that will not endanger public safety, damage property, or be hazardous to animal or human life.
 - b. The pit area shall be worked and left in a condition that future operations may proceed in an orderly manner.
 - c. The site shall be cleared of all temporary structures, equipment and rubbish, block access roads with existing on-site rip rap as directed by the Contract Administrator, and shall be left in a neat and presentable condition.
 - d. The Purchaser shall obtain written approval of final rock source condition and compliance with the terms of this plan.

SUMMARY - ROAD DEVELOPMENT COSTS

Page 1 of 9

REGION: Pacific Cascade
 DISTRICT: Yacolt

SALE/PROJECT NAME: McGonagall Maneuver

AGREEMENT #: 30-098037

ROAD NUMBERS: Optional: PH-1075, PH-1075A, PH-1075B, PH-1085, and PH-1085A

Required: PH-1000 Pre-haul, PH-1000 Post-haul, PH-3006

ROAD STANDARD:	Construction	Reconstruction	Maintenance
NUMBER OF STATIONS:	2.19	49.97	360.98
CLEARING & GRUBBING, EXCAVATION AND FILL, MISC.:	\$2,936.99	\$11,811.02	\$12,339.06
ROAD ROCK:			
Optional:	\$2,566.94	\$55,703.23	\$0.00
Required:	\$0.00	\$0.00	\$19,454.10
Total:	\$2,566.94	\$55,703.23	\$19,454.10
STOCKPILE:	-	-	\$0.00
CULVERTS AND FLUMES:	\$0.00	\$11,523.70	\$681.20
STRUCTURES:	-	-	-
MOBILIZATION:	\$341.55	\$1,373.54	\$1,434.95
TOTAL COSTS:	\$5,845.48	\$80,411.49	\$33,909.31
COST PER STATION:	\$2,669	\$1,609	\$94
ROAD ABANDONMENT COSTS:	\$398.84	\$16,976.57	\$0

10% OVERHEAD AND GENERAL EXPENSE =	\$12,016.63
TOTAL (All Roads) =	\$149,558.32
TOTAL (Minus Optional Rock) =	\$91,288.15
SALE VOLUME MBF =	2,053
TOTAL \$/MBF =	\$72.85
TOTAL \$/MBF (Minus Optional Rock) =	\$44.47

Sale: McGonagall Maneuver		Road: PH-1000
Required Pre- Haul Maintenance- 283+90 stations 5.38 miles	Required Reconstruction - 0+00 stations 0.00 miles	Required Construction - 0.00 stations 0.00 miles
Required Abandonment- 0+00 stations 0.00 miles	Optional Reconstruction - 0+00 stations 0.00 miles	Optional Construction - 0.00 stations 0.00 miles

PRE-HAUL MAINTENANCE

CLEARING						
Roadside Brushing	20+00 TO 121+90 AND 153+84 TO 335+84	5.38	miles @	\$1,200.00 per mile =	\$6,456.00	
EXCAVATION						
Remove culverts from state lands - @ 5+94 and 122+32		2.00	@	\$197.20 total	\$197.20	
TOTAL CLEARING, GRUBBING, EXCAVATION, FILL, and MISC.						\$6,653.20

CONSTRUCTION

MISC.						
Construct turnaround @ sta. - 93+15		1.00	@	\$246.93 each	\$246.93	
TOTAL CLEARING, GRUBBING, EXCAVATION, FILL, and MISC.						\$246.93

CULVERTS - MATERIALS & INSTALLATION

<u>Culverts</u>	30	LF of 18"	\$673.20
			\$673.20
<u>Culvert Stakes & Markers</u>	1	markers	\$8.00
			\$8.00

TOTAL CULVERTS **\$681.20**

ROCK

Culvert Replacement	5+94	30	cy. of	Crushed	@	\$8.16	per c.y.=	\$244.80
Culvert Remval	122+32	20	cy. of	Crushed	@	\$8.16	per c.y.=	\$163.20
Cross Drain Armor	5+94	1	cy. of	Pit-Run	@	\$10.05	per c.y.=	\$10.05
Cross Drain Armor	122+32	1	cy. of	Pit-Run	@	\$10.05	per c.y.=	\$10.05
TOTAL ROCK								\$428.10

SUBTOTAL **\$8,009.43**

TOTAL **\$8,009.43**

Optional Rock? NO

COST PER STATION **\$28.21**

Sale:	<u>McGonagall Maneuver</u>	Road:	<u>PH-1000</u>
Required Post-Haul Maintenance-	<input type="text" value="66+34"/> stations <u>1.26</u> miles	Required Reconstruction -	<input type="text" value="0.00"/> stations <u>0.00</u> miles
Required Abandonment-	<input type="text" value="0.00"/> stations <u>0.00</u> miles	Optional Reconstruction -	<input type="text" value="0.00"/> stations <u>0.00</u> miles
		Required Construction -	<input type="text" value="0.00"/> stations <u>0.00</u> miles
		Optional Construction -	<input type="text" value="0.00"/> stations <u>0.00</u> miles

POST-HAUL MAINTENANCE

EXCAVATION

Pull and clean ditch- 66.34 stations @ \$53.75 per station \$3,565.78
 Clean inlets and outlets 66.34 stations @ \$7.32 per station \$485.61

MISC.

Grade and shape existing road surface - 66.34 stations @ \$13.75 per station \$912.18
 Roll shaped road surface w/ vibratory roller prior to rocking - 66.34 stations @ \$7.27 per station \$482.29

TOTAL CLEARING, GRUBBING, EXCAVATION, FILL, and MISC. **\$5,445.86**

ROCK

87+50 to 153+84 2,100 cy. of Crushed @ \$9.06 per c.y. = \$19,026.00
 TOTAL ROCK **\$19,026.00**

SUBTOTAL **\$24,471.86**

Optional Rock?

TOTAL **\$24,471.86**

COST PER STATION **\$368.89**

Sale:	McGonagall Maneuver		Road:	PH-1075	
Required Haul Maintenance-	Pre- <input type="text" value="0.00"/> stations miles	Required Reconstruction - <input type="text" value="0.00"/> stations miles	Required Construction - <input type="text" value="0.00"/> stations miles		
Required Abandonment-	<input type="text" value="14+54"/> stations miles <input type="text" value="0.28"/> miles	Optional Reconstruction - <input type="text" value="15+54"/> stations miles <input type="text" value="0.29"/> miles	Optional Construction - <input type="text" value="0.00"/> stations miles		

RECONSTRUCTION

CLEARING/GRUBBING

Scattering Organic Debris		15.54	sta @	\$115.00	per sta	\$1,787.10
Remove large stumps -	throughout	6.00	@	\$252.00	each	\$1,512.00
Construct waste areas -	0+60	1.50	hours @	\$252.00	per hour	\$378.00

EXCAVATION

Pull and clean ditch-		15.54	stations @	\$31.85	per station	\$494.95
Construct ditchouts -	00+75	1.00	@	\$57.33	each	\$57.33
Grade and shape subgrade -		15.54	stations @	\$11.00	per station	\$170.94

MISC.

Roll subgrade w/ vibratory roller prior to rocking -		15.54	stations @	\$9.09	per station	\$141.26
Reconstruct landing -	14+60	1.00	@	\$193.85	each	\$193.85
Grass seed and fertilize -		14.40	lbs @	\$2.80	per lbs	\$40.32

TOTAL CLEARING, GRUBBING, EXCAVATION, FILL, and MISC. **\$4,775.75**

CULVERTS - MATERIALS & INSTALLATION

<u>Culverts</u>	90	LF of 18"	<u>\$2,019.60</u>		
			\$2,019.60		
				<u>TOTAL CULVERTS</u>	\$2,019.60

ROCK

Cross Drain Armor	4+85	1	cy. of	Pit-Run	@	\$17.39	per c.y.=	\$17.39
Cross Drain Armor	9+26	1	cy. of	Pit-Run	@	\$17.39	per c.y.=	\$17.39
Cross Drain Armor	12+85	1	cy. of	Pit-Run	@	\$17.39	per c.y.=	\$17.39
0+00 to	15+54	1,079	cy. of	Ballast	@	\$15.89	per c.y.=	<u>\$17,145.31</u>
								<u>TOTAL ROCK</u>
								\$17,197.48

ABANDONMENT

Construct waterbar -		12.00	@	\$57.33	each	\$687.96
Construct Spoil Berm -		1.00	@	\$172.00	each	\$172.00
Grass seed and fertilize -		53.60	lbs @	\$2.80	per lbs	\$150.08
Remove culverts from state lands -		3.00	@	\$278.06	total	\$278.06
Strip Rock and stockpile		917.15	cy recovered @	\$4.00	per cy	<u>\$3,668.60</u>
						<u>TOTAL ADDITIONAL REQUIREMENTS</u>
						\$4,956.70

SUBTOTAL **\$28,949.53**

TOTAL **\$28,949.53**

Optional Rock?

COST PER STATION **\$1,862.90**

Sale: McGonagall Maneuver Road: PH-1075A

Required Haul Maintenance -	Pre- <input type="text" value="0.00"/> stations miles	Required Reconstruction -	<input type="text" value="0.00"/> stations miles	Required Construction -	<input type="text" value="0.00"/> stations miles
Required Abandonment -	<input type="text" value="2+32"/> stations miles 0.04	Optional Reconstruction -	<input type="text" value="2+32"/> stations miles 0.04	Optional Construction -	<input type="text" value="0.00"/> stations miles

RECONSTRUCTION

CLEARING/GRUBBING						
Scattering Organic Debris	2.32	sta @	\$115.00	per sta	\$266.80	
EXCAVATION						
Pull and clean ditch-	2.32	stations @	\$53.75	per station	\$124.70	
Grade and shape subgrade -	2.32	stations @	\$11.00	per station	\$25.52	
MISC.						
Roll subgrade w/ vibratory roller prior to rocking -	2.32	stations @	\$9.09	per station	\$21.09	
Reconstruct landing @ Sta. 2+32	1.00	@	\$193.85	each	\$193.85	
Grass seed and fertilize -	2.00	lbs @	\$2.80	per lbs	\$5.60	
TOTAL CLEARING, GRUBBING, EXCAVATION, FILL, and MISC.						\$637.56

ROCK

0+00 to	2+32	251	cy. of	Ballast	@	\$15.89	per c.y.=	<u>\$3,988.39</u>	
TOTAL ROCK									\$3,988.39

ABANDONMENT

Construct waterbar -	1.00	@	\$57.33	each	\$57.33	
Grass seed and fertilize -	8.40	lbs @	\$2.80	per lbs	\$23.52	
Strip Rock and stockpile	213.35	cy recovered @	\$4.00	per cy	\$853.40	
TOTAL ADDITIONAL REQUIREMENTS						\$934.25

SUBTOTAL **\$5,560.20**

Optional Rock?

TOTAL **\$5,560.20**

COST PER STATION \$2,396.64

Sale:	McGonagall Maneuver		Road:	PH-1075B	
Required Haul Maintenance-	Pre- <input type="text" value="0.00"/> stations miles	Required Reconstruction -	<input type="text" value="0.00"/> stations miles	Required Construction -	<input type="text" value="0.00"/> stations miles
Required Abandonment-	<input type="text" value="4+64"/> stations miles 0.09	Optional Reconstruction -	<input type="text" value="4+64"/> stations miles 0.09	Optional Construction -	<input type="text" value="0.00"/> stations miles

RECONSTRUCTION

CLEARING/GRUBBING					
Scatter Organic Debris	4.64	sta @	\$115.00	per sta	\$533.60
EXCAVATION					
Pull and clean ditch-	4.64	stations @	\$53.75	per station	\$249.40
Grade and shape subgrade -	4.64	stations @	\$11.00	per station	\$51.04
MISC.					
Roll subgrade w/ vibratory roller prior to rocking -	4.64	stations @	\$9.09	per station	\$42.18
Reconstruct landing @ sta. 4+64	1.00	@	\$193.85	each	\$193.85
Grass seed and fertilize -	4.40	lbs @	\$2.80	per lbs	\$12.32
TOTAL CLEARING, GRUBBING, EXCAVATION, FILL, and MISC.					\$1,082.39

CONSTRUCTION

MISC.					
Construct turnaround @ sta. -	1.00	@	\$96.93	each	\$96.93
TOTAL CLEARING, GRUBBING, EXCAVATION, FILL, and MISC.					\$96.93

CULVERTS - MATERIALS & INSTALLATION

<u>Culverts</u>	30	LF of 18"	\$673.20		
			\$673.20		
TOTAL CULVERTS					\$673.20

ROCK

Cross Drain Armor	0+34	1	cy. of	Pit-Run	@	\$9.50	per c.y.=	\$9.50
0+00 to	4+64	402	cy. of	Ballast	@	\$8.00	per c.y.=	\$3,216.00
TOTAL ROCK								\$3,225.50

ABANDONMENT

Construct waterbar -	3.00	@	\$57.33	each	\$171.99
Grass seed and fertilize -	17.20	lbs @	\$2.80	per lbs	\$48.16
Remove culverts from state lands -	1.00	@	\$122.56	total	\$122.56
Strip Rock and stockpile	341.70	cy recovered @	\$4.00	per cy	\$1,366.80
TOTAL ADDITIONAL REQUIREMENTS					\$1,709.51
SUBTOTAL					\$6,787.53

Optional Rock?	<input type="text" value="YES"/>	TOTAL	\$6,787.53
		COST PER STATION	\$1,462.83

Sale: McGonagall Maneuver Road: PH-1085

Required Haul Maintenance-	Pre- <u>0+00</u> stations <u>0.00</u> miles	Required Reconstruction -	<u>0+00</u> stations <u>0.00</u> miles	Required Construction -	<u>0+00</u> stations <u>0.00</u> miles
Required Abandonment-	<u>20+11</u> stations <u>0.38</u> miles	Optional Reconstruction -	<u>27+47</u> stations <u>0.52</u> miles	Optional Construction -	<u>1+44</u> stations <u>0.03</u> miles

RECONSTRUCTION

CLEARING/GRUBBING

Scattering Organic Debris 27.47 sta @ \$115.00 per sta \$3,159.05

EXCAVATION

Pull and clean ditch- 27.47 stations @ \$53.75 per station \$1,476.51
 Construct ditchouts - 27+47 1.00 @ \$57.33 each \$57.33
 Grade and shape subgrade - 27.47 stations @ \$11.00 per station \$302.17

MISC.

Roll subgrade w/ vibratory roller prior to rocking - 27.47 stations @ \$9.09 per station \$249.70
 Grass seed and fertilize - 25.20 lbs @ \$2.80 per lbs \$70.56

TOTAL CLEARING, GRUBBING, EXCAVATION, FILL, and MISC. **\$5,315.32**

CONSTRUCTION

CLEARING/GRUBBING

Scattering Organic Debris 1.44 sta @ \$230.00 per sta \$331.20

EXCAVATION

Road Construction Earthwork 1.44 sta. @ \$150.00 per sta. = \$216.00
 Grade and shape subgrade - 1.44 stations @ \$11.00 per station \$15.84

MISC.

Construct turnouts @ sta. - 19+97 1.00 @ \$96.93 each \$96.93
 Construct turnaround @ sta. - 27+47 1.00 @ \$96.93 each \$96.93
 Construct landing - 28+91, 10+09, 15+40 3.00 @ \$387.70 each \$1,163.10
 Grass seed and fertilize - 3.60 lbs @ \$2.80 per lbs \$10.08

TOTAL CLEARING, GRUBBING, EXCAVATION, FILL, and MISC. **\$1,930.08**

CULVERTS - MATERIALS & INSTALLATION

<u>Culverts</u>						
150	LF of 18"	\$3,366.00		110	LF of 24"	\$3,139.40
				50	LF of 36"	\$2,325.50
		<u>\$3,366.00</u>				<u>\$5,464.90</u>
						TOTAL CULVERTS

\$8,830.90

ROCK

Cross Drain Armor	8+80	1	cy. of	Pit-Run	@	\$17.39	per c.y.=	\$17.39
Cross Drain Armor	9+50	10	cy. of	Riprap	@	\$17.39	per c.y.=	\$173.90
Cross Drain Armor	11+42	1	cy. of	Pit-Run	@	\$17.39	per c.y.=	\$17.39
Cross Drain Armor	12+23	8	cy. of	Riprap	@	\$17.39	per c.y.=	\$139.12
Cross Drain Armor	12+77	1	cy. of	Pit-Run	@	\$17.39	per c.y.=	\$17.39
Cross Drain Armor	16+90	1	cy. of	Pit-Run	@	\$17.39	per c.y.=	\$17.39
0+00 to	28+91	2,039	cy. of	Ballast	@	\$15.89	per c.y.=	\$32,399.71
Cross Drain Armor	21+25	8	cy. of	Riprap	@	\$17.39	per c.y.=	\$139.12
Cross Drain Armor	21+95	1	cy. of	Pit-Run	@	\$17.39	per c.y.=	\$17.39
								TOTAL ROCK

\$32,938.80

ABANDONMENT

Construct waterbar -	17.00	@	\$57.33	each	\$974.61
Construct Spoil Berm -	1.00	@	\$172.00	each	\$172.00
Construct rolling dip -	2.00	@	\$172.00	each	\$344.00
Grass seed and fertilize -	74.00	lbs @	\$2.80	per lbs	\$207.20
Remove culverts from state lands -	8.00	@	\$663.70	total	\$663.70
Stream pumping	0.50	days @	\$164.00	per day	\$82.00
Strip Rock and stockpile	1733.15	cy recovered @	\$4.00	per cy	\$6,932.60
					TOTAL ADDITIONAL REQUIREMENTS

\$9,376.11

SUBTOTAL **\$58,391.21**

TOTAL **\$58,391.21**

Optional Rock? YES

COST PER STATION **\$2,019.76**

Sale:	McGonagall Maneuver		Road:	PH-1085A	
Required Haul Maintenance-	Pre- <input type="text" value="0.00"/> stations miles	Required Reconstruction - <input type="text" value="0.00"/> stations miles	Required Construction - <input type="text" value="0.00"/> stations miles		
Required Abandonment-	<input type="text" value="0+75"/> stations miles <input type="text" value="0.01"/>	Optional Reconstruction - <input type="text" value="0.00"/> stations miles	Optional Construction - <input type="text" value="0+75"/> stations miles <input type="text" value="0.01"/>		

CONSTRUCTION

CLEARING/GRUBBING						
Scattering Organic Debris	0.75	sta @	\$230.00	per sta	\$172.50	
EXCAVATION						
Road Construction Earthwork	0.75	sta. @	\$109.57	per sta. =	\$82.18	
MISC.						
Roll subgrade w/ vibratory roller prior to rocking -	0.75	stations @	\$9.09	per station	\$6.82	
Construct landing - @ +75	1.00	@	\$387.70	each	\$387.70	
			TOTAL CLEARING, GRUBBING, EXCAVATION, FILL, and MISC.			\$663.05

ROCK

0+00 to	0+75	115	cy. of	Ballast	@	\$8.00	per c.y.=	<u>\$920.00</u>	
								TOTAL ROCK	\$920.00

ABANDONMENT

Grass seed and fertilize -	2.80	lbs @	\$2.80	per lbs	\$7.84	
Strip Rock and stockpile	97.75	cy recovered @	\$4.00	per cy	\$391.00	
			TOTAL ADDITIONAL REQUIREMENTS			\$398.84

SUBTOTAL **\$1,981.89**

Optional Rock?

TOTAL \$1,981.89
COST PER STATION \$2,642.52

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

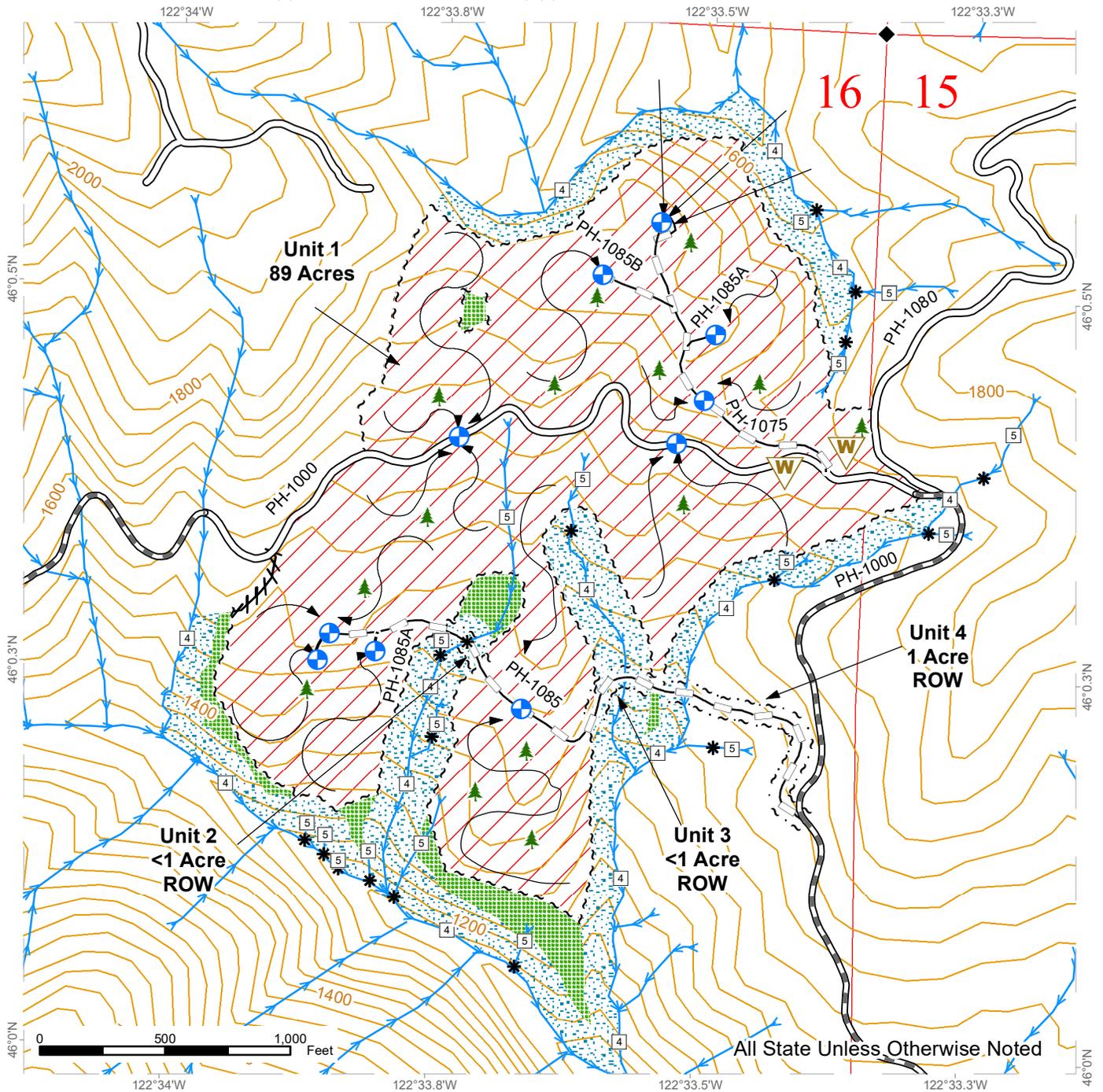
All parties must make their own assessment of the taxable or non-taxable status of any work performed under the timber sale contract. The Department of Revenue bears responsibility for determining forest road excise taxes. The Department of Natural Resources developed this form to help estimate the impact 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 6/13)

LOGGING PLAN MAP

SALE NAME: MCGONAGALL MANEUVER
AGREEMENT#: 30-098037
TOWNSHIP(S): T6R2E
TRUST(S): Capitol Grant (7), Common School and Indemnity (3)

REGION: Pacific Cascade Region
COUNTY(S): Cowlitz
ELEVATION RGE: 1200-1840



	Variable Retention Harvest		Sale Boundary Tags		Existing Roads		Streams
	Leave Tree Area		Leave Tree Tags		Required Pre-Haul Maintenance		Stream Type Break
	Riparian Mgt Zone		Right of Way Tags		Optional Construction		Stream Type
	Cable Harvest		Flag Line		Optional Reconstruction		Survey Monument
	Ground Harvest						Landing - Proposed
							Leave Tree Area
							Waste Area