PART III: EXHIBITS

State Timber Sale Contract No. 341-15-51 Good Barber

EXHIBIT B

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OREGON DEPARTMENT OF FORESTRY

TIMBER SALE OPERATIONS PLAN

(See Page 2 for instructions)

Date	Received by STATE:	(5) State Brand Inf	Cormation (complete):	\sim
(1)	Contract No.: 341-15-51		(
(2)	Sale Name: Good Barber	<u></u>		•
(3)	Contract Expiration Date: July 31, 2015	Project Completion I	Dates:	
(4)	Purchaser:			
(6)	Purchaser Representatives:		a wa t	
	Projects:	Phone:		Home:
	Projects:	Phone:	Cell/Other Phone:	Home:
	Projects:	Phone:	Cell/Other Phone:	Home:
	3		Cell/Other	
	Projects:		Cell/Other	
	Logging:	Phone:	Phone: Cell/Other	_ Home:
	Logging:	Phone:		Home:
	Logging:	Phone:	Cell/Other Phone:	Home:
	Logging:		Cell/Other	
(7)	State Representatives:			
(1)	State Representatives.		Cell/Other	
	Projects:	Phone:	· · · · · · · · · · · · · · · · · · ·	Home:
	Logging:	Phone:	Cell/Other Phone:	Home:
(8)	Name of Subcontractors & Starting Dates:			
	Projects: No(s)	Date:	Phone:	
	No(s) -	Date:	Phone:	
	No(s) No(s)	Date:	Phone:	
	NO(S)	Date:	Phone:	
	Logging: Felling	Date:	Phone:	
	Yarding:		Filolic	
(9)	Comments:			

(10) Operations Map: Attach a copy of timber sale Exhibit A or other suitable map which plainly shows the items listed on the instruction sheet.

EXHIBIT B

INSTRUCTION SHEET FOR OPERATIONS PLAN

SUBMIT ONE COPY OF PLAN TO STATE

Operations shall be limited to the work shown in the plan until a revised plan or supplemental plan is submitted covering additional work. Compliance with this plan is not in lieu of compliance with any federal requirements related to the federal Endangered Species Act. If STATE has prepared a required Forest Practices Act (FPA) "Written Plan" for operations, PURCHASER shall comply with all provisions of the Written Plan.

Explanation of Item No. (from Page 1)

- (5) All sales require you to use a brand furnished by STATE. If the State brand has not been assigned when the plan is submitted, it will be furnished and assigned later. Complete drawing. If more than one brand is assigned to the sale, complete both drawings.
- (6) The contract requires you to have a designated representative available on the sale area or work location who is authorized to receive in your behalf any notice or instruction given by STATE and to take action in regard to performance under the contract. If logging and project work is widely separated, a representative is required for each.
- (7) The STATE representative will be designated when your plan is approved and is the person who will inspect and issue instructions regarding performance.
- (8) Show names of subcontractors to be used for any or all phases of the operations. If subcontractors are not known, or are changed later, give notification to the STATE representative prior to commencement of work by subcontractor.
 - Show projected dates for commencement of both projects and logging. If projected dates need to be changed at a later date, notification must be given to the STATE representative by supplemental plan or otherwise, prior to commencement of such operations.
- (10) The STATE representative will furnish extra copies of Exhibit A of the contract for your use in preparing the operations map. The map shall use the following legend and show:
 - 1. Landing locations, approximate setting boundaries, and probable sequence of logging the settings. Number the settings in sequence.
 - 2. Locations of spur roads planned for construction, other than those required by the timber sale contract. Provide spur road specifications.
 - 3. Location of proposed tractor yarding roads. Show if and how marked on the ground.
 - 4. Location of temporary stream crossings.
 - 5. List the sequence of performing project work.
 - 6. Location of rock sources attach pit development plans.

1	Cable Landing, with numbers for sequence.
A	Tractor Landing with alphabetical sequence.
	Approximate setting boundary.
	Spur truck roads.
	Tractor yarding roads.
X	Temporary stream crossings.

EXHIBIT B

OPERATIONS PLAN

Completion Timeline

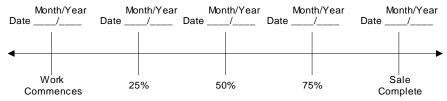
Indicate on the appropriate timeline below, the dates by which you plan to complete the work as required under this contract. The purpose of this section is to develop a plan that will ensure you complete the work as required, and meet the interim completion date(s) and contract expiration date. This plan is incorporated and made a part of the contract. When, in the opinion of STATE, operations are not commencing in a manner that meets the intent of this plan, you may be placed in violation of contract and your operations suspended until an amended plan is submitted and approved by STATE.



The Federal



Harvest & Other Requirements



Endangered Species Act (ESA) prohibits a person from taking any federally listed threatened or endangered species. Taking under the federal ESA may include alteration of habitat. STATE's approval of this plan does not certify that PURCHASER's operation under the plan is lawful under the federal ESA. As provided in the timber sale contract, PURCHASERS must comply with all applicable state, federal, and local laws.

PURCHASER's compliance with this plan is not in lieu of compliance with any federal requirements related to the federal Endangered Species Act.

APPROVED: Date: STATE OF OREGON - DEPARTMENT OF FORESTRY	SUBMITTED BY: PURCHASER
Title	Title

Original: Salem
cc: District File
Purchaser

Operations Plan.doc/Jaz B (TS)

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EXHIBIT C – SAWMILL GRADE (WESTSIDE SCALE)

SCALING INSTRUCTIONS -- LOCATION APPROVAL -- BRAND INFORMATION

(1) (2) (3)	REVISION I CANCELLA TO: FROM: We (Sta	REGISTRATION NUMBER TION (Third Party Scalin estern Lane (03) Pr ate Forestry District) 950 Territorial Hwy.	Dat Dat Organizat none (541	e ion)) 935-	2283		(11)	SALE NAME: Good Barber COUNTY: Lane STATE CONTRACT NUMBER: 341-15-51 STATE BRAND REGISTRATION NUMBER: STATE BRAND INFORMATION (COMPLETE):
(4)	Mailing Add Phone Num	R: ress: ber: UM SCALING SPE						
	SPECIES Conifers Hardwoods	MINIMUN	1 NET VOLU 10 10	JME			(13)	PAINT REQUIRED: YES 🗵 COLOR: Orange
(6) (7)	WESTSIDE	l taper rule. Logs over 40'.		YES	NO		PE NC MI AE	4) SPECIAL REQUESTS (Check applicable) ELABLE CULL (all species)
(8)	LOCATIO	ED SCALING DNS proved Locations web-site)	Species	Yard	Truck	Weight	(15)	REMARKS
							Onora	tor's Name (Optional inclusion by District):
								SIGNATURES:
							-	Purchaser or Authorized Representative Date
								State Forester Representative Date
								State Forester Representative PRINT NAME

Notify the District within one hour when branding or painting is inadequate for quick identification, the receipts are missing, not correctly or completely filled out, and/or when logs presented for scaling are impossible to scale accurately.

EXHIBIT C - SAWMILL GRADE

INSTRUCTIONS FOR FORM 343-307a (rev. 11/11)

Check appropriate box. REVISION NUMBER requires comments. CANCELLATION requires logging and hauling to be complete, recall branding hammers, date and sign where indicated, write diagonally across page "CANCEL", and send to TPSO.

Pacific Rim Log Scaling Bureau, Inc.

Yamhill Log Scaling & Grading Bureau

P.O. Box 709, Forest Grove, OR 97116

Pacific Log Scaling & Grading Bureau, Inc.

Phone: (360) 528-8710

Email: office@prlsb.com

Phone: (503) 359-4474

Email: yamhill@attglobal.net

8288 28th Court North East, Lacey, WA 98516

Fax: (360) 528-8718

Fax: (503) 359-4476

Designate Third Party Scaling Organization (TPSO).

Columbia River Log Scaling & Grading Bureau

P.O. Box 7002, Eugene, OR 97401

Phone: (541) 342-6007 Fax: (541) 342-2631

Email: services@crls.com

Mountain Western Log Scaling & Grading Bureau

P.O. Box 580, Roseburg, OR 97470

Phone: (541) 673-5571 Fax: (541) 672-6381

Email: info@solsqb.com

Northwest Log Scalers, Inc

5526 NE 122nd Ave, Portland, OR 97230

Phone: (503) 254-0600

Email: info@nwlogscalers.com

State District office, address and phone.

P.O. Box 23939, Portland, OR 97281 Phone: (503) 684-5599 Fax: (503) 639-4880 Fax: (503) 408-0919 Email: PacLogScale@aol.com

(4) Enter Purchaser's business name, address, and phone number as it appears on the Contract.

- Minimum Scaling Specifications. (5)
- Westside Region 6 actual taper segment scale. Check Yes or No. Special Service Rules on file with TPSO. See: Segment Scaling and Grading of Long Logs -- All Species -- State Forestry Department Scaling Practices (Westside).
- Weight Scale Sample Check box if sale is to be a Weight Scale Sample. All specifics for handling, scaling and processing will be attached or explained in the Remarks section Item (15).
- Show scaling locations only applicable to TPSO. Location name should appear as it does on the ODF Approved Scaling Location web site: http://www.odf.state.or.us/DIVISIONS/management/asset_management/ScalingLocation.asp Locations with scaling and processing directions specific to their location should be on a separate form. Species should be identified if not capable of receiving "all" species. Check appropriate box for either: yard, truck scale, or weight. Refer to the web site listed above for the locations approval status.
- (9) Enter sale name and county.
- (10) Enter sale Contract number.
- (11) Enter Oregon's State Brand Registry Number (REQUIRED).
- (12) Show brand assigned to timber sale. One brand only. If more than one brand is assigned to the sale: (1) make a separate form for each brand and (2) on each form, explain and show other brand(s) in the Remarks section Item (15).
- (13) Check yes for Paint Required and designate "Orange" for color. Non required removal volumes may sometimes require blue paint.
- (14) Special Requests. These are requests that will be applied to ODF timber sales. All boxes applicable to the timber sales designated in the Exhibit C form must be "marked". If "Other" is indicated, it must contain a description and any necessary comments.
- (15) Use this space to designate any weight conversion factors, per load volumes, weight scale sample instructions or any other explanations to clarify scaling, processing and/or mailing requirements. If additional scaling locations are approved, revise original or current form showing all (old and new) locations. Check REVISION box at top of form and explain under remarks. Route as indicated.
- (16) Require purchaser to sign and date completed form in addition to State Forester Representative, sign and print name on the form.

Salem Distribution Instructions: Original will be mailed to Salem after it is electronically scanned and placed in the Salem transfer drive \\WPODFFILL01\Transfer\ScalingInstructions or e-mailed directly to scaling@odf.state.or.us. Scaling instructions for each brand should be scanned separately, for each approved TPSO. State Timber Sale Contract No. 341-15-51 Good Barber Page 3 of 4 629-Form 343-307b Revised 11/11

EXHIBIT C - PULP SORT

PROCESSING INSTRUCTIONS -- LOCATION APPROVAL -- BRAND INFORMATION

(1)	ORIGINAL REGISTRATION Date	(9)	SALE NAME: Good Barber
	REVISION NUMBER Date CANCELLATION Date		COUNTY: Lane
(2)	TO:(Approved Pulp Processing Facility)	(10)	STATE CONTRACT NUMBER: 341-15-51
(3)	FROM: Western Lane (03) Phone (541) 935-2283	(11)	STATE BRAND REGISTRATION NUMBER
(4)	(State Forestry District) PURCHASER:	(12)	STATE BRAND INFORMATION: (COMPLETE BELOW)
(5)	Scaling Bureau (TPSO) Processing Weight receipts:		
	Mailing Address: Phone Number:		
(6)	 STATE Definition of Approved Pulp Sort: Top portion of the tree (tops). All logs with a diameter (Big End) greater than7_ inches marked with blue paint. 	(13)	REMARKS:
(7)	 PULP FACILITY PROCESSING INSTRUCTIONS: Pulp loads shall be weighed in lieu of scaling. One Ton = 2000 lbs (Short Ton). Pulp loads shall have a yellow Log Load Receipt attached. 	Oper	ator's Name (Optional inclusion by District):
	 Gross weight and truck tare weight for each load shall be machine printed on the weight receipt. Weigher shall sign the weight receipt. Weigher shall record the Log Load Receipt 	(14)	SIGNATURES:
	 number on the weight receipt. Weigher shall attach the Weight receipt to the Log Load Receipt and mail them weekly to the 		Purchaser or Authorized Representative Date
(0)	TPSO processing the Weight receipt.		State Forester Representative Date
(8)	 TPSO PROCESSING INSTRUCTIONS Mail to ODF weekly. Convert to mbf using 10 tons per mbf. 		State Forester Representative PRINT NAME

Notify the District within one hour when branding is inadequate for quick identification, the logs are marked with orange paint, the receipts are missing, not correctly or completely filled out, and/or logs do not meet the specifications of the STATE definition of Approved Pulp Sort.

Distribution: ORIGINAL: Salem / COPIES: TPSO, Approved Pulp Processing Location, Purchaser, District, Mgmt. Unit

EXHIBIT C - PULP SORT

INSTRUCTIONS FOR FORM 343-307b (rev. 11/11)

- (1) Must Complete. Check appropriate box. REVISION NUMBER requires comments in the Remarks Section (13). CANCELLATION requires logging and hauling to be complete, recall branding hammers, date and sign where indicated, write diagonally across page "CANCEL", and send to TPSO.
- (2) **Must Complete**. Approved Pulp Processing Facility. Write in as written in the Approved Log Delivery Location http://www.odf.state.or.us/DIVISIONS/management/asset_management/ScalingLocation.asp
- (3) Must Complete. State Forestry District and District Phone Number.
- (4) Must Complete. Purchaser's business name as it appears on the Contract.
- (5) **Must Complete.** Third Party Scaling Organization that will be processing the weight tickets, mailing address, and phone number.

Columbia River Log Scaling & Grading Bureau P.O. Box 7002, Eugene, OR 97401

Phone: (541) 342-6007 Fax: (541) 342-2631

Email: services@crls.com

Mountain Western Log Scaling & Grading Bureau P.O. Box 580, Roseburg, OR 97470

Phone: (541) 673-5571 Fax: (541) 672-6381

Email: info@solsqb.com

Northwest Log Scalers, Inc . 5526 NE 122nd Ave, Portland, OR 97230 Phone: (503) 254-0600 Fax: (503) 408-0919

Email: info@nwlogscalers.com

Pacific Rim Log Scaling Bureau, Inc.

8288 28th Court North East, Lacey, WA 98516

Phone: (360) 528-8710 Fax: (360) 528-8718

Email: office@prlsb.com

Yamhill Log Scaling & Grading Bureau P.O. Box 709, Forest Grove, OR 97116

Phone: (503) 359-4474 Fax: (503) 359-4476

Email: yamhill@attglobal.net

Pacific Log Scaling & Grading Bureau, Inc. P.O. Box 23939, Portland, OR 97281

Phone: (503) 684-5599 Fax: (503) 639-4880

Email: PacLogScale@aol.com

- (6) **Must Complete.** Big end log not to exceed _____ inches. Big end of log is not to exceed 2 inches greater than the minimum removal specifications in the contract. Example: Minimum removal specifications 6 inches and 20 board feet, then the Big end of log not to exceed 8 inches. When conifer and hardwood removal specifications are different, use the smaller removal diameter to determine this specification.
- (9) **Must Complete**. Enter sale name and county. If more than one county write in all the counties that the sale is located in.
- (10) Must Complete. Enter sale Contract number.
- (11) Must Complete. Enter Oregon's State Brand Registry Number (REQUIRED).
- (12) **Must Complete**. Show brand assigned to timber sale. One brand only. If more than one brand is assigned to the sale: (1) make a separate form for each brand and (2) on each form, explain and show other brand(s) in the Remarks section Item (13).
- (13) Use this section to list any special instructions or the reason for any revisions in section item (1).
- (14) **Must Complete.** Purchaser required to sign and date completed form in addition to State Forester Representative, sign <u>and</u> print name on the form.

Salem Distribution Instructions: Original will be mailed to Salem after it is electronically scanned and placed in the Salem transfer drive \\WPODFFILL01\Transfer\ScalingInstructions or e-mailed directly to scaling@odf.state.or.us. Scaling instructions for each brand should be scanned separately, for each approved TPSO.

FOREST ROAD SPECIFICATIONS

Road	SUBGRADE WIDTH	SURFACED WIDTH	POINT TO POINT	STATION TO STATION	DRAINAGE
Barber Ridge Rd.	16 ft	12 ft	A to G	0+00 to 328+00	Ditched
Spur 1	14 ft	12 ft		0+00 to 9+70	Outsloped
Spur 1a	14 ft	12 ft		0+00 to 1+60	Outsloped

<u>CLEARING</u>. This work shall consist of clearing, removing, and disposing of all trees, Snags, Down Timber, brush, surface objects, and protruding obstructions within the clearing limits.

Where clearing limits have not been marked, the clearing limits shall extend 10 feet back of the top of the cutslope and 10 feet out from the toe of the fill slope, or as directed by STATE. The "Road Brushing Specifications" in Exhibit H shall apply. Clearing debris shall not be placed or permitted to remain in or under any road embankment sections. Clearing debris shall not be left lodged against standing trees.

All danger trees, leaners, and Snags outside the clearing limits which could fall and hit the road shall be felled.

GRUBBING. This work shall consist of the removal or digging out of stumps and protruding objects.

All stumps shall be completely removed within the limits of required grubbing. Stumps overhanging cutslopes shall be removed. Grubbing debris shall not be placed or permitted to remain in or under any road embankment sections. Grubbing debris shall not be left lodged against standing trees.

GRUBBING CLASSIFICATION.

New construction - from the top of the cutslope to the toe of the fill.

Improvements and reconstructions - 4 feet back from the shoulder of the subgrade or ditch, whichever is widest, or as marked in the field.

<u>CLEARING AND GRUBBING DISPOSAL</u>. Scatter in stable locations through openings in the timber outside of the cleared right-of-way, except areas where end-haul is required. In areas where end-haul is required, clearing and grubbing debris shall be fully contained and hauled to a designated waste area. Clearing and grubbing debris shall be left in a stable location, and not left lodged against standing trees.

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EXHIBIT D

FOREST ROAD SPECIFICATIONS

EXCAVATION. Excavation and grading shall not be done when weather and/or ground conditions are such that damage will result to existing subgrade or cause excessive erosion.

Excavation shall conform to STATE-specified lines, grades, dimensions, and plans when provided.

Unless road plans show otherwise, all roads shall be on a balanced cross section, except when the slope is over 50 percent, the road shall be on full bench for the width specified.

Suitable excavated material shall be used for the formation of fills, shoulders, and drainage structure backfills. Embankment materials shall be free of woody debris, brush, muck, sod, frozen material, and other deleterious materials.

Sidecast includes any road generated excess excavation material which is not essential as part of the road prism, is not compacted, and is below the roadway. Sidecast shall not be placed where it will enter a stream course. Leaving sidecast below the road is only permissible if specifically allowed in "Full Bench and End Haul Requirements" in this Exhibit.

All fills shall be machine compacted according to the "Compaction and Processing Requirements" in this Exhibit.

<u>ROAD WIDTH LIMITATIONS</u>. PURCHASER shall obtain advance written approval from STATE to construct the road to a greater width than specified. Extra subgrade width shall be required for:

Fill Widening. Add to each fill shoulder 1 foot for fills 3 feet to 6 feet high; 2 feet for fills over 6 feet high.

<u>Curve Widening</u>. Widen the inside shoulder of all curves as specified in the plans or as follows: 400 divided by the radius of the curve equals the amount of extra width.

DRAINAGE

<u>Subgrade</u>. Subgrade shall be crowned or outsloped at 4 to 6 percent as shown on the "Forest Road Specifications" table in this Exhibit.

Ditch. Construct "V" shaped ditch 3 feet wide and to a depth of 1 foot below subgrade.

Ditchouts. Construct ditchouts to drain away from subgrade at locations marked in the field or as directed by STATE.

<u>TURNOUTS</u>. Increase roadbed width an additional 8 feet for both subgrade and surfacing. Length shall be at least 25 feet, or as staked on the ground, plus 25-foot approaches at each end.

Location: Intervisible but not greater than 750 feet apart and as marked in the field.

SLOPES	Back Slopes	Fill Slopes
Solid Rock	Vertical to ½:1	
Fractured Rock	1⁄2:1	
Soil - side slopes 50% and over	1⁄2:1	1½:1
Soil - side slopes less than 50%	³ ⁄ ₄ :1	1½:1

<u>LANDINGS</u>. Landings shall be constructed as posted in the field, no less than 50 feet wide and no more than 70 feet wide unless otherwise approved by STATE. Surface is to be outsloped for drainage with general grade no more than 3 percent. Surface as shown in the "Road Surfacing" table in this Exhibit.

TURNAROUNDS. Increase subgrade width an additional 20 feet for a length of 20 feet at locations marked in the field.

FOREST ROAD SPECIFICATIONS

GENERAL ROAD CONSTRUCTION INSTRUCTIONS:

- (1) <u>Timber Removal</u>. Remove all trees within posted Right-of-Way Boundary as specified in Section 2210, Designated Timber.
- (2) <u>Excavated Materials</u>. Excavated materials shall be utilized for road construction and hauled in where necessary. Surplus excavation materials shall be hauled to the waste areas as marked in the field and/or designated on Exhibit A. Surplus excavated materials and waste materials shall be sloped and compacted for drainage. Fills shall be thoroughly compacted in accordance with Exhibit F.
- (3) <u>Subgrade Preparation and Application of Surfacing Rock.</u>
 - (a) Complete culvert installations, drainage ditches, ditchouts, fill construction, and other specified work prior to the application of surfacing rock.
 - (b) Subgrade shall be crowned or outsloped at 4 to 6 percent.
 - (c) Upon completion of above required work, apply, process, and compact surfacing rock in accordance with specifications in the "Compaction and Processing Requirements" in this Exhibit. Final road surface shall be crowned or outsloped at 4 to 6 percent.

SPECIFIC ROAD CONSTRUCTION INSTRUCTIONS

Spur 1a as shown on Exhibit A

Instructions:

- Clear and grub. Waste stumps in openings and gaps away from the toe of the fill.
 - Organic material may need to be end-hauled to a stable location to avoid contaminating fill material.
- Construct the subgrade.
 - The subgrade may be outsloped to 4% to allow for adequate drainage.
- Material may be wasted at the end of Spur 1a along the top of the ridge.
 - The organic material must be separated from any fill waste material.
- Construct a landing/platform for the yarder to sit on. Landing is located on south side of Spur 1a at approximately STA 1+60.
 - o Consult with the STATE prior to construction.
- Compact the subgrade with a vibratory roller.
- Apply a compacted depth of 6" of Jaw Run base rock.
- Apply a compacted depth of 2" of 1 ½" 0" cap rock.
- Apply the allotted landing rock.

FOREST ROAD SPECIFICATIONS

SPECIFIC ROAD CONSTRUCTION INSTRUCTIONS

Point F as shown on Exhibit A

Instructions:

- Clear and grub. Waste stumps in openings and gaps away from the toe of the fill.
- Construct a landing outsloping the subgrade to 4% to allow for adequate drainage.
 - o The intent is to provide a road side landing.
- End haul material to waste areas as shown on Exhibit A.
- Apply the allocated landing rock.

FOREST ROAD SPECIFICATIONS

GENERAL ROAD IMPROVEMENT INSTRUCTIONS:

- (1) <u>Timber Removal</u>. Remove all trees within posted Right-of-Way Boundary as specified in Section 2210, Designated Timber.
- (2) <u>Roadside Brushing</u>. Conduct roadside brushing as specified in Exhibit H.
- (3) <u>Excavated Materials</u>. Excavated materials shall be utilized for road and fill construction and hauled in where necessary. Surplus excavation materials shall be hauled to the waste areas as marked in the field and/or designated on Exhibit A. Waste materials shall be sloped and compacted for drainage. Fills shall be thoroughly compacted in accordance with Exhibit F.
- (4) <u>Bank Slough Removal</u>. Dig out all bank slough. Bank slough material shall not be pulled across existing surfacing rock, but shall be placed in nearby waste areas and uniformly sloped and compacted for drainage, as directed by STATE.
- (5) <u>Culvert Replacement, Culvert Installation, Fill Reconstruction, and Fill Removal</u>. Existing culvert geometry shall be modified to provide for optimum drainage and culvert performance. Modifications may include, skewing the culvert and/or installing the culvert at gradients equal to or exceeding the drainage (or ditch) gradient. Where fill reconstruction or culvert replacement is specified, fills shall be excavated to natural stream course levels. All woody debris encountered during fill excavation shall be removed. All waste materials shall be hauled to nearby waste areas and shall be uniformly sloped and compacted for drainage. Fill reconstruction backfill shall consist of select materials and may be obtained from borrow pits, as directed by STATE. Backfill materials shall be hauled in where necessary and thoroughly compacted in accordance with this Exhibit. Crushed rock shall be used for backfilling excavation trenches less than 3 feet deep. STATE may require the use of crushed rock for culvert bedding. Removed culverts shall be hauled to an approved refuse site off of STATE land.
- (6) <u>Drainage Ditches</u>. Restore or construct ditchlines, including ditchouts, as directed by STATE. Clean out all culvert inlets and outlets for a 10-foot radius. Re-establish or construct culvert sediment basins. Waste materials from drainage ditches and sediment basins shall not be pulled across existing surfacing rock, but shall be placed in nearby waste areas and uniformly sloped and compacted for drainage, as directed by STATE. Damaged culvert inlets and/or outlets shall be repaired by opening them with a hydraulic jack, or cutting off the culvert end to allow for free passage of water at peak flow levels. Install a culvert marker at each newly installed culvert and at each existing culvert that is missing a marker that could be reached by a grader blade.

FOREST ROAD SPECIFICATIONS

GENERAL ROAD IMPROVEMENT INSTRUCTIONS:

- (7) Subgrade Preparation and Application of Surfacing Rock.
 - (a) Complete culvert installations, drainage ditches, fill reconstruction, ditchouts, and other specified work prior to the application of new surfacing rock.
 - (b) Cut out all potholes and/or washboard sections from the existing surfacing.
 - (c) Apply required patching and leveling rock, as directed by STATE.
 - (d) Process grade and mix the existing surface and added base rock. Provide for a crown or outslope depending on the conditions present of 4 to 6 percent, and compact in accordance to the "Compaction and Processing Requirements" in this Exhibit.
 - (e) Upon completion of above required work, apply, process, and compact surfacing rock in accordance to this Exhibit.

SPECIFIC ROAD IMPROVEMENT INSTRUCTIONS

Barber Ridge Rd as shown on Exhibit A

Instructions:

- Grade and Shape Barber Ridge Rd.
 - o Intermittent grading (50% of road system) is required on Barber Ridge Road.
 - Grade out all potholes by cutting and remixing the surfacing aggregate with the base aggregate to produce a smooth running surface.
 - Grade out all washboards.
 - o Remove any slime, muck, brush, or debris from running surface.
 - o Re-establish ditchouts and ditches where needed.
- Apply spot rock.
 - Apply the allotted spot rock as directed by STATE.
 - Compact spot rock or road surface as directed by STATE.
- End haul bank slough along Barber Ridge Road to waste areas shown on Exhibit A.
 - The STATE is anticipating approximately 100 yds of material needing to be end hauled.

FOREST ROAD SPECIFICATIONS

SPECIFIC ROAD IMPROVEMENT INSTRUCTIONS

Spur 1 as shown on Exhibit A.

Instructions:

- Establish a viable running surface by clearing out any saplings, alder, and brush that has accumulated along the road side.
- Remove any existing waterbars.
- The road shall be outsloped at 4% to allow for adequate drainage.
- Compact unsurfaced subgrade.
- Apply a 6" lift of 1½"-0" of cap rock from station 0+00 to 6+00.
 - o The 6" lift shall be placed over the existing rocked portion as marked in the field.
- Apply a compacted 6" lift of 3"-0" base rock over the un-surfaced portion of the road from station 6+00 to 9+70.
- Apply a compacted 2" lift of $1\frac{1}{2}$ " 0" cap rock over the base rock from station 6+00 to 9+70.
- Apply the allocated landing rock.

FULL BENCH AND END-HAUL REQUIREMENTS

Road	POINT TO POINT	APPROX. YDS ³	CONTAINMENT SIDECAST	WASTE AREA TREATMENT	WASTE AREA LOCATION
Barber Ridge Rd	A to G	100	Not Specified	1 & 2	1 & 2
Barber Ridge Rd	F	350	2	1 & 2	1 & 2
Spur 1a	0+00 to 1+60	150	2	1 & 2	1 & 2

Full Bench and End-Haul Areas General Requirements

Sidecast includes any road generated excess excavation material which is not essential as part of the road prism, is not compacted, and is below the roadway. Material shall not be sidecast unless specified above.

Clearing and grubbing debris shall be end-hauled.

When controlled blasting is required, it shall be accomplished using timing devices, delayed charges, low intensity shots, or other suitable means to contain material within the road prism.

Containment/Sidecast

- (1) Full: No excavated material remains below the road.
- (2) Normal/Incidental: The amount of excavated material lost over the outside edge of the road shall not exceed 1 foot in depth.
- (3) Sidecast: Material shall be spread evenly below the road so that it does not build up behind trees, snags or other debris, and shall not exceed 3 feet in depth.

Any amount of material exceeding the containment requirements shall be removed by whatever means necessary and end-hauled to a designated waste area.

Waste Area Location

- (1) As shown on Exhibit A and as marked in the field.
- (2) Setback from slope break shall be a minimum of 20 feet horizontal measurement.

Waste Area Treatment

- (1) Deposit at waste area, spread evenly, compact, and provide adequate drainage.
- (2) Pile woody debris separate from other waste material.

Waste Area Requirements

Waste area 1 shall not receive more than 100 yds³ of material.

Waste area 2 shall not receive more than **500 yds**³ of material.

EXHIBIT E ROAD SURFACING

Road	ROCK TYPE	SIZE OF ROCK	COMPACTED DEPTH	APPROX YDS³/STA	STATION TO STATION	TOTAL YDS ³
SPUR 1	Сар	1½" – 0"	6"	33	0+00 to 6+00	200
SPUR 1	Base	3"-0"	6"	33	6+00 to 9+70	130
SPUR 1	Сар	1½" – 0"	2"	11	6+00 to 9+70	40
SPUR 1a	Base	Jaw Run	6"	33	0+00 to 4+60	166
SPUR 1a	Сар	1½" – 0"	2"	11	0+00 to 4+60	58
TURNAROUNDS:				NO. OF T.A.	POINT	
Barber Ridge Rd	Сар	1½" – 0"		1		10
LANDINGS AND JUN	NCTIONS:			APPROX YDS³/STA	NO. OF LDGS.	
Barber Ridge Road	Base	Jaw-Run	6"	33	1	33
Spur 1	Base	Jaw-Run	6"	33	2	66
Spur 1a	Base	Jaw-Run	6"	33	2	66
MISCELLANEO (Spot Rock)			AMOUNT	POINT TO POINT	STATION TO STATION	
Barber Ridge Road	Spot	1½" – 0"	330	A to G	N/A	330

Total Approximate Yds³ $1\frac{1}{2}$ " - 0" = 638 Total Approximate Yds³ 3"-0" = 130 Total Approximate Yds³ Jaw Run = 331

Roads shall be uniformly graded, shaped and approved by STATE prior to rocking.

EXHIBIT E

ROCK ACCOUNTABILITY

PURCHASER shall obtain subgrade approval from STATE prior to rocking. Rocking shall be limited to periods when weather conditions are acceptable to STATE and when sediment will not enter streams. Additional surfacing needed because of construction season or construction practice is not included in the preceding ROAD SURFACING table, and shall be furnished at PURCHASER expense.

Rock accountability shall be determined by the following methods, as directed by STATE. STATE shall be given 24 hours' notice prior to rocking.

<u>Depth Measurement</u>. Rock shall be spread and compacted according to the depths specified in Exhibit D. Truck measure volumes are given, but shall not limit the amount of rock spread.

Depth shall be determined in the most compacted area of the surface cross section. The depth of compacted aggregates shall not vary more than 1 inch from the depth specified in the "Road Surfacing" table in Exhibit D. The average depth for each road segment shall be the specified depth or greater. If additional rock is required because of insufficient depth, the locations and volumes to be added shall be determined by STATE.

<u>Load Records</u>. Notify STATE before spreading the rock and maintain a record of all rock delivered for spreading. Make the record available for STATE inspection. A report listing the amount of rock delivered weekly. However depth measurement shall be used to determine contract compliance.

EXHIBIT E

DURABLE CRUSHED ROCK SPECIFICATIONS

Grading Requirements

For 1½"-0"	Passing Passing Passing Passing Passing Passing Passing	2" sieve 1½" sieve 3/4" sieve 1/4" sieve No. 10 sieve No. 40 sieve	100% 90-100% 60-90% 30-50% 15-30% 7-15%
For 3"-0"	Passing Passing Passing Passing Passing Passing Passing	4" sieve 3" sieve 1½" sieve 3/4" sieve 1/4" sieve No. 10 sieve	100% 90-100% 60-90% 40-60% 20-40% 5-20%

The referenced sieve shall have square openings as set forth in AASHTO M 92, Woven Cloth Series. The determinations of size and gradation shall be as set forth in AASHTO T 27.

JAW RUN AND PIT RUN

For Jaw-Run	Passing	6" sieve	100%
	Passing	3" sieve	45-65%
For 6"-0" Pit-Run	Passing	10" sieve	100%
	Passing	6" sieve	60-85%
	Passing	3" sieve	30-50%
	Passing	1/4" sieve	0-20%

<u>For 24"-6" Riprap</u> A minimum of 50 percent of the material shall measure a minimum of 24 inches, measured in one dimension. Material shall be clean, well graded, and free of 2"-0" fines.

Control of gradation for Jaw and Pit Run shall be by visual inspection by STATE.

EXHIBIT F

COMPACTION AND PROCESSING REQUIREMENTS

<u>Moisture Content</u>: Compaction must take place when moisture content of the materials being compacted is favorable for effective compaction as determined by STATE.

<u>Compaction Pass</u>: A pass is defined as traveling a road section forward and then backward over that same section.

<u>Subgrade</u>. Subgrade surfaces of the road segments listed below shall be graded and compacted prior to rocking. Compaction shall be accomplished by traveling all surfaces from shoulder to shoulder until the surface is smooth and hard and visible deformation ceases. At least 3 passes shall be made over the entire width and length of the road. Compaction shall be accomplished by using one or more of the approved equipment options listed below:

ROAD SEGMENT	COMPACTION EQUIPMENT OPTIONS
Spur 1 Spur 1a	Vibratory Roller (1)

Subgrade shall be crowned or outsloped at 4 to 6 percent as specified in the "Forest Roads Specifications" table in Exhibit D.

<u>Fills</u>. Embankments and fills shall be placed in (approximately) horizontal layers not more than 8 inches in depth. Each layer shall be separately, and thoroughly, compacted. Compaction equipment shall be operated over the entire width of each layer until visible deformation of the layers ceases. At least 3 passes shall be made over the entire width and length of each layer.

Placing individual rocks or boulders with more depth than the allowed layer thickness shall be permitted, provided the embankment will accommodate them. Such rocks and boulders shall be at least 6 inches below the subgrade. They shall be carefully distributed and the voids filled with finer material, forming a dense and compacted mass. Compaction shall be accomplished by using one or more of the approved equipment options listed below:

ROAD SEGMENT	COMPACTION EQUIPMENT OPTIONS
Spur 1 Spur 1a	Vibratory Roller (1)

<u>Crushed Rock</u>. The rock shall be uniformly mixed and spread in layers on the approved roadbed. Each layer of crushed rock shall be moistened or dried to uniform moisture content suitable for maximum compaction and compacted in layers not to exceed 6 inches in depth. When more than 1 layer is required, each shall be shaped and compacted before the succeeding layer is placed. Any irregularities or depressions that develop during compaction of the top layer shall be corrected by loosening the material at these places and adding or removing material until the surface is smooth and uniform. Each layer shall be compacted with a minimum of 3 passes over the entire width and length of the road until the surface is smooth and hard and visible deformation ceases. Compaction shall be accomplished by using one or more of the approved equipment options listed below:

Rock shall be compacted and processed during the same project period it is spread, unless otherwise approved in writing by STATE.

Rock shall be crowned or outsloped at 4 to 6 percent as specified in the "Forest Roads Specifications" table in Exhibit D.

EXHIBIT F

COMPACTION AND PROCESSING REQUIREMENTS

ROAD SEGMENT	COMPACTION EQUIPMENT OPTIONS
All road segments requiring crushed rock.	Vibratory Roller (1)

<u>Pit-Run Rock</u>. The rock shall be uniformly mixed and spread in layers on the approved roadbed. Each layer of pit-run rock shall be moistened or dried to uniform moisture content suitable for maximum compaction and compacted in layers not to exceed 8 inches in depth. When more than 1 layer is required, each shall be shaped and compacted before the succeeding layer is placed. Any irregularities or depressions that develop during compaction of the top layer shall be corrected by loosening the material at these places and adding or removing material until the surface is smooth and uniform. Each layer shall be compacted with a minimum of 3 passes over the entire width and length of the road. Compaction shall be accomplished by using one or more of the approved equipment options listed below:

Rock shall be crowned or outsloped at 4 to 6 percent as specified in the "Forest Roads Specifications" table in Exhibit D.

ROAD SEGMENT	COMPACTION EQUIPMENT OPTIONS		
Any Segments requiring pit-run rock	1 or 2		

EXHIBIT F

COMPACTION EQUIPMENT OPTIONS

- (1) <u>Vibratory Rollers</u>. The drum shall have a smooth surface, a diameter not less than 48 inches, a width not less than 58 inches, and a turning radius of 15 feet or less. Vibration frequency shall be regulated in steps to 1400, 1500, and 1600 VPM, corresponding to engine speeds of 1575, 1690, and 1800 RPM. The centrifugal force developed shall be 7 tons at 1600 VPM. It shall be activated by a power unit of not less than 25 horsepower. The vibratory roller shall be self-propelled and operated at speeds ranging from 0.9 miles to 1.8 miles per hour, as directed by STATE.
- (2) <u>D7 cat or equivalent</u>.

EXHIBIT G

CULVERT SPECIFICATIONS

All culvert materials shall be furnished and installed by PURCHASER, unless otherwise specified in the Contract.

Culverts shall be constructed of corrugated aluminized (Type 2) steel.

Aluminized (Type 2) steel culverts shall meet the requirements of AASHTO M-36-031.

Culverts shall be located according to the alignment and grade as shown on the Plan and Profile, and/or as staked in the field, or as specified in special instructions.

The STATE Representative shall determine final culvert locations and stake the locations in the field prior to installation.

Cross drain culverts on road grades in excess of 3 percent shall be skewed at least 30 degrees from perpendicular to the road centerline, except that cross drain culverts at the low point of dips in roads shall not be skewed.

Cross drain culverts shall be installed at a slope steeper than the incoming ditch grade, but not less than 3 percent or greater than 10 percent.

The foundation and trench walls for all culverts shall be free from logs, stumps, limbs, stones, and other objects which would dent or damage the culvert. The culvert trench shall be excavated 3 culvert diameters wide to permit compaction and working on each side of the culvert. Tamping shall be done in 6-inch lifts, 1 culvert diameter each side of the culvert. Bedrock shall be excavated as required to provide a uniform foundation for the full length of the culvert.

Backfill shall consist of, crushed rock ,or job-excavated soil free of stumps, limbs, rocks, or other objects which would damage the culvert.

Transporting of the culvert shall be done carefully. Dragging or allowing free fall from trucks or into trenches shall not be permitted.

Minimum height of cover over top of culvert to subgrade when road is to be rocked shall be as follows: 12" for culverts 18" to 36" and 18" for culverts 42" to 96". Minimum vertical cover for other designs shall be as specified by STATE.

Lengths of individual culvert sections shall be not less than 10 feet, unless otherwise provided for in special instructions.

The ends of each culvert shall be free of logs and debris which would restrict the free flow of water.

The intake end of relief culverts shall be provided with a sediment catching basin 3 feet in diameter at the bottom. The outlet end of any culvert which would allow water to erode embankment soil shall be provided with an energy dissipator, half round, or other approved slope protection device. Construct lead-off ditches away from culvert outlets where the slope gradients restrict the free flow of water.

Compaction by tamping utilizing a Vibratory Hand-Operated or Backhoe-Mounted Tamper is required for stream crossing culverts.

All culverts scheduled for replacement shall become property of the PURCHASER and be removed from STATE land and hauled to an approved refuse site in the same project period in which replacement occurred.

EXHIBIT G CULVERT SPECIFICATIONS

The intake ends of culverts in fills less than 3 feet to the top of the culvert shall be marked by driving steel posts within 6 inches of the downgrade side. Posts shall be painted with a rust-resistant paint and be a minimum of 5 feet long, with the spade driven 2 feet into the ground.

Following are the minimum standard gauges for steel culvert and coupling bands. Some culverts may require different gauges and may be found in the culvert listing.

	Steel Culvert	Thickness			Band Widths (")	
<u>Dia.</u>	<u>Gauge</u>	<u>Uncoated</u>	<u>Coated</u>	Band Gauges	<u>Annular</u>	<u>Helical</u>
12-15	16	(0.0598")	(0.064")	16	7	12
18-24	16	(0.0598")	(0.064")	16	12	12
30-36	16	(0.0598")	(0.064")	16	12	12
42	14	(0.0747")	(0.079")	16	12	12
48	14	(0.0747")	(0.079")	16	24	24
54	14	(0.0747")	(0.079")	16	24	24
60	12	(0.1046")	(0.109")	16	24	24
66-72	12	(0.1046")	(0.109")	16	24	24
78	12	(0.1046")	(0.109")	16	24	24
84	12	(0.1046")	(0.109")	16	24	24
90-120	12	(0.1046")	(0.109")	16	26	26

Culverts larger than 60" in diameter shall have 3" x 1" corrugations.

EXHIBIT G TYPICAL HALF ROUND CULVERT INSTALLATION

(no scale)

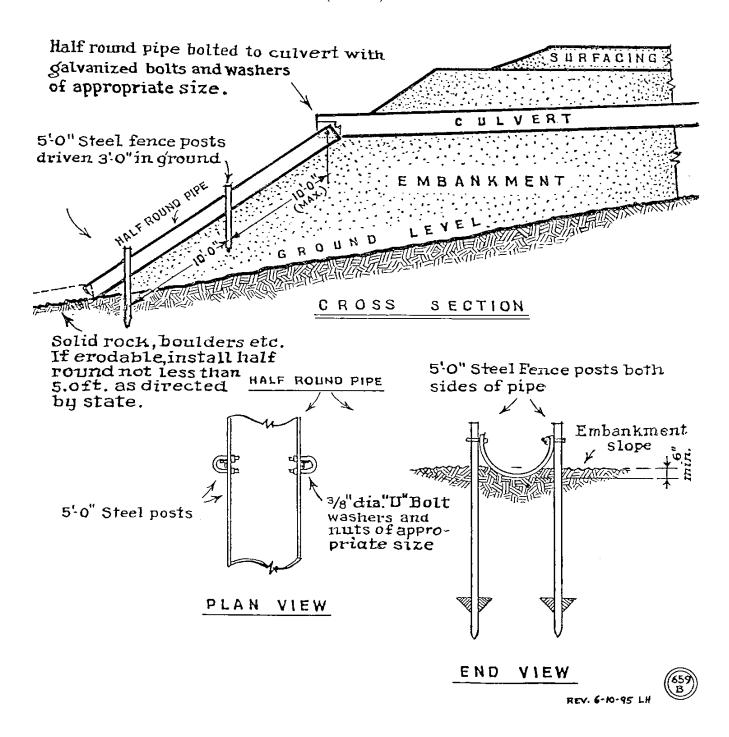


EXHIBIT G

TYPICAL EMBEDDED ENERGY DISSIPATOR

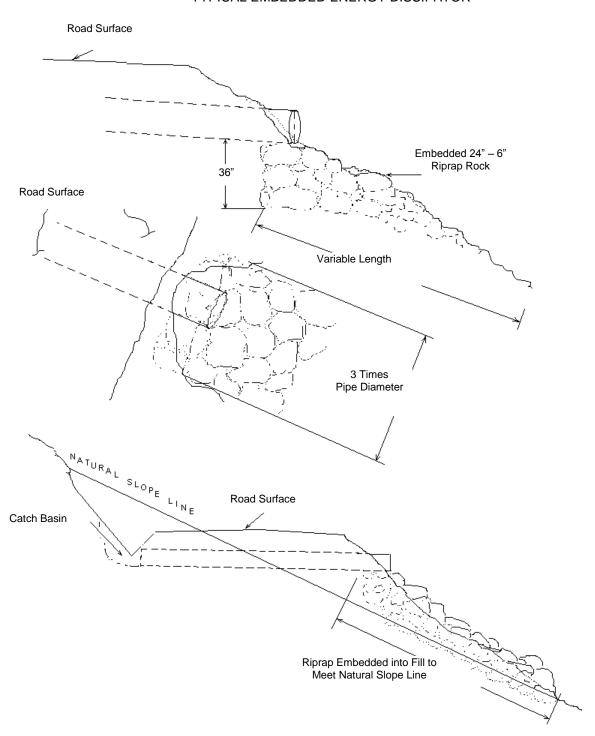
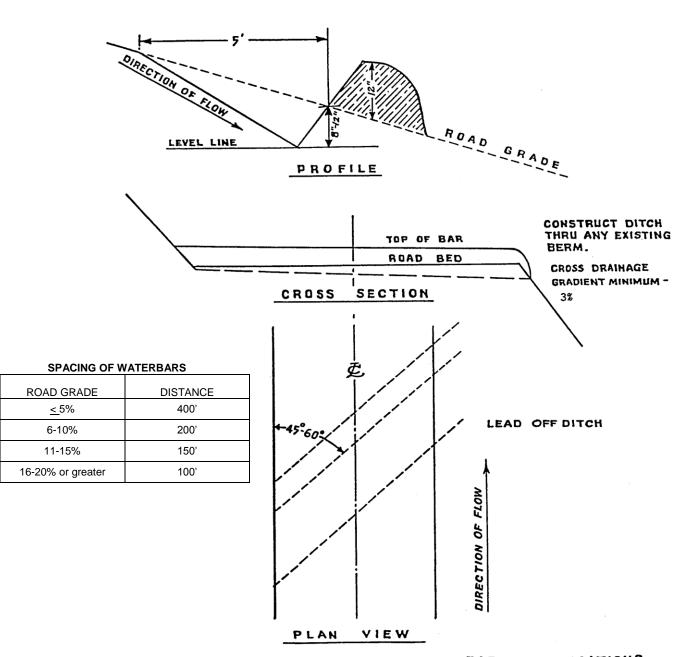


EXHIBIT H
WATERBAR SPECIFICATIONS



WATERBAR SPECIFICATIONS FOR CROSS DITCHING #298

PART IV: OTHER INFORMATION

State Timber Sale Contract No. 341-15-51 Good Barber

NOTICE OF TRANSFER OF STATE TIMBER

Instruct	ions 629:-Form-301-010			
•	te Section 1. Mark the box which applies to you/your company in Section 2. Complete Section 3 and ignatures.			
SECTIO	N 1			
On	, state timber sale purchaser (Transferor)			
	, sold, exchanged or otherwise transferred to			
	, (Transferee) state timber originating from State			
Timber \$	Sale Contract No			
Transfer	ree hereby certifies that they:			
(a)	Will not export the unprocessed state timber which is the subject of this transaction;			
(b)	Will not sell, transfer, exchange or otherwise convey the unprocessed timber which is the subject of this transaction to any other person without first obtaining a like certification from that person; and			
(c)	Are not prohibited by OAR's 629-31-005 through 045 from purchasing state timber or logs directly from the State Forester, or this is a sale of Western Red Cedar for domestic processing.			
SECTIO	N 2			
	Have not exported unprocessed timber originating from private lands in Oregon in the last 24 months.			
	This is a sale of hardwood logs for domestic processing.			
	This is a sale of Western Red Cedar for domestic processing.			
	This is a sale of pulp logs or cull logs processed at domestic pulp mills, domestic chip plants or other domestic operations for the purpose of conversion of the logs into chips.			
SECTIO	N 3			
certificat	ties understand that falsely entering into this certification, or failure to comply with the terms of this tion is a violation of the Forest Conservation and Shortage Relief Act of 1990 and OAR Chapter 629, 31, and is subject to any and all penalties contained therein.			
Transfe	eror: Transferee:			
Signed	Signed			
Title	Title			
Dated	Dated			
[Not	te: For the purpose of this form, the definition of unprocessed timber is the same as in OAR 629-31-005]			

Mail To: State Forester 2600 State Street Salem, OR 97310