PART III: EXHIBITS

State Timber Sale Contract No. 341-13-33 Red Rock Hill

EXHIBIT B

Page 1 of 3 629-Form 341-203 Revised 06/97

OREGON DEPARTMENT OF FORESTRY

TIMBER SALE OPERATIONS PLAN

(See Page 2 for instructions)

Contract Expiration Date: October 31, 2015 Project Completion Dates:	Date	Received by STATE:	(5) State Bran	nd Information (complete):	~~~ ~~~	
Contract Expiration Date: October 31, 2015 Project Completion Dates:	(1)	Contract No.: <u>341-13-33</u>			$\langle \cdot \cdot$	
Contract Expiration Date: October 31, 2015 Project Completion Dates:	(2)	Sale Name: Red Rock Hill				
(4) Purchaser: Cell/Other Projects: Phone: Cell/Other Home: Cell/Other Projects: Phone: Phone: Home: Cell/Other Projects: Phone: Phone: Home: Cell/Other Logging: Phone: Phone: Home: Cell/Other Logging: Phone: Phone: Home: Cell/Other Logging: Phone: Phone: Home: Cell/Other Projects: Phone: Phone: Home: Cell/Other Projects: No(s) Phone: Phone: Home: Cell/Other Projects: No(s) Phone: Phone: Home: Cell/Other Projects: No(s) Phone: Phone: Phone: <td rowspa<="" td=""><td>(3)</td><td></td><td>Project Comple</td><td>tion Dates:</td><td></td></td>	<td>(3)</td> <td></td> <td>Project Comple</td> <td>tion Dates:</td> <td></td>	(3)		Project Comple	tion Dates:	
Purchaser Representatives: Projects:	` ′			tion Dates.		
Projects:	(4)	Purchaser:				
Projects:	(6)	Purchaser Representatives:				
Projects:		P. 1	DI.		**	
Projects:		Projects:	Phone:		Home:	
Projects:		Projects:	Phone:		Home:	
Projects:						
Projects: Phone: Phone: Cell/Other		Projects:	Phone:		Home:	
Logging:		Dunicata	Dhonor		Homo	
Logging:		Projects:	Phone:		nome:	
Cell/Other		Logging:	Phone:		Home:	
Cell/Other						
Logging:		Logging:	Phone:		Home:	
Cell/Other		Logging	Dhone		Ц ото:	
Logging: Phone: Phone: Home:		Logging.	rnone.		поше.	
Projects: Phone: Phone: Home:		Logging:	Phone:		Home:	
Projects: Phone: Phone: Home:	(7)	Stata Danrasantativas				
Projects:	(7)	State Representatives.		Cell/Other		
Logging: Phone: Phone: Home:		Projects:	Phone:		Home:	
(8) Name of Subcontractors & Starting Dates: Projects: No(s) Date:				Cell/Other		
Projects: No(s)		Logging:	Phone:	Phone:	Home:	
No(s) - Date: Phone: No(s) - Date: Phone: No(s) - Date: Phone: Logging: Felling Phone: Phone: Yarding: Date: Phone:	(8)	Name of Subcontractors & Starting Dates:				
No(s) - Date: Phone: No(s) - Date: Phone: No(s) - Date: Phone: Logging: Felling Phone: Phone: Yarding: Date: Phone:		Projects: No(s) -	Date:	Phone:		
Logging: Felling Date: Phone: Yarding: Date: Phone:		No(s)	Date:	Phone:		
Logging: Felling Date: Phone:		No(s)	Date:	Phone:		
Yarding: Date: Phone:		No(s)	Date:	Phone:		
Yarding: Date: Phone:		Logging: Felling	Date:	Phone:		
(9) Comments:		Yarding:	Date:	Phone:		
	(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.

Projects



Harvest & Other Requirements



The Federal 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)

Page 1 of 4 629-Form 343-307a Revised 11/11

EXHIBIT C – SAWMILL GRADE (WESTSIDE SCALE)

SCALING INSTRUCTIONS -- LOCATION APPROVAL -- BRAND INFORMATION

(1) (2) (3)	REVISION CANCELL TO:	REGISTRATION NUMBER ATION (Third Party Scale)	☐ D ☐ D				(9) (10) (11)	SALE NAME: Red Rock Hill COUNTY: Tillamook STATE CONTRACT NUMBER: 341-13-33 STATE BRAND REGISTRATION NUMBER:	
(4)	Address 8 F PURCHAS Mailing Ad Phone Nu	State Forestry District) O1 Gales Creek Ro Forest Grove, OR 9 BER: Idress: Idress:	ad 7116				(12)	STATE BRAND INFORMATION (COMPLETE):	
S	*Apply minimum WESTSID Use Region 6 act	MINIMUN volume test to whole logs over	1 NET VOL 10 10]	(14) PEE NO MEC	DEDUCTIONS ALLOWED FOR CHANICAL DAMAGE	
(8)	LOCATION	/ED SCALING DNS oproved Locations web-site)	Species	Yard	Truck	Weight	Operat	REMARKS	

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.

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

Southern Oregon Log Scaling & Grading Bureau

P.O. Box 580, Roseburg, OR 97470

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

Email: info@southernoregonlogscaling.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

- State District office, address and phone. (3)
- Enter Purchaser's business name, address, and phone number as it appears on the Contract.
- Minimum Scaling Specifications.
- Westside Region 6 actual taper segment scale. Check Yes or No. Special Service Rules on file with TPSO. See: Segment (6)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. 341-13-33 Red Rock Hill 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 REVISION NUMBER Date	(10)	STATE CONTRACT NUMBER: 341-13-33
	CANCELLATION Date	(11)	STATE BRAND REGISTRATION NUMBER
(2)	TO:(Approved Pulp Processing Facility)	(12)	STATE BRAND INFORMATION: (COMPLETE BELOW)
(3)	FROM: Forest Grove (5) Phone (503) 357-2191 (State Forestry District)		
(4)	PURCHASER:		
(5)	Scaling Bureau (TPSO) Processing Weight receipts:		
	Mailing Address:Phone Number:		
(6)	STATE Definition of Approved Pulp Sort:	(13)	REMARKS:
	Top portion of the tree (tops).		
	 All logs with a diameter (Big End) greater than8 inches marked with blue paint. 		
	man _o_ monoc manoc war shae pama	Oper	rator's Name (Optional inclusion by District):
(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. 	(14)	SIGNATURES:
	Gross weight and truck tare weight for each load Aball he machine printed on the weight receipt		
	shall be machine printed on the weight receipt.Weigher shall sign the weight receipt.Weigher shall record the Log Load Receipt		Purchaser or Authorized Representative Date
	number on the weight receipt.Weigher shall attach the Weight receipt to the		State Forester Representative Date
	Log Load Receipt and mail them weekly to the		
	TPSO processing the Weight receipt.		State Forester Representative PRINT NAME
(8)	TPSO PROCESSING INSTRUCTIONS • Mail to ODF weekly.		
	• IVIAII (U ODI WEEKIY.		

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.

• Convert to mbf using 10 tons per mbf.

SALE NAME: Red Rock Hill COUNTY: Tillamook

(9)

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

Southern Oregon Log Scaling & Grading Bureau

P.O. Box 580, Roseburg, OR 97470

Phone: (541) 673-5571 Fax: (541) 672-6381 Email: info@southernoregonlogscaling.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) 639-04880

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 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. 341-13-33 Red Rock Hill

EXHIBIT D FOREST ROAD SPECIFICATIONS

SUBGRADE	SURFACED	POINT TO	STATION TO	
WIDTH	WIDTH	POINT	STATION	DRAINAGE
14 feet	-	A to B	0+00 to 7+90	Crowned
16 feet	12 feet	C to D	0+00 to 2+00	Crowned
14 feet	1	E to F	0+00 to 7+25	Crowned
14 feet	-	G to H	0+00 to 5+90	Crowned
16 feet	12 feet	I to J	0+00 to 38+70	Crowned
14 feet	•	J to K	0+00 to 25+00	Crowned
14 feet	-	L to M	0+00 to 11+40	Crowned
14 feet	-	N to O	0+00 to 9+10	Crowned
16 feet	12 feet	P to Q	0+00 to 13+00	Crowned
16 feet	12 feet	P to Q	13+00 to 19+50	Outsloped
14 feet	-	R to S	0+00 to 33+00	Crowned
16 feet	12 feet	T to U	0+00 to 28+10	Crowned

<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 5 feet out from the toe of the fill slope, or as directed by STATE. 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.

State Timber Sale Contract No. 341-13-33 Red Rock Hill

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.

ROAD WIDTH LIMITATIONS. 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.

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

<u>Ditchouts</u>. 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.

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

Top of cutslope shall be rounded.

<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 or crowned 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.

<u>SEASONAL WINTERIZATION</u>. All unsurfaced roads or unfinished subgrades shall be waterbarred in accordance with the specifications in Exhibit G, and blocked from vehicular traffic prior to October 31, annually and as directed by STATE.

FOREST ROAD SPECIFICATIONS

GENERAL ROAD CONSTRUCTION INSTRUCTIONS

- 1. <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 this Exhibit.
- 2. <u>Subgrade Reinforcement</u>. Where subgrade reinforcement is required, clean 6"-0" pitrun rock shall be hauled in and used for subgrade preparation. Truck measure volumes are given, but shall not limit the amount of rock spread to meet subgrade compaction requirements required in this Exhibit.
- 3. <u>Subgrade Preparation and Application of Surfacing Rock.</u>
 - (a) Complete culvert installations, drainage ditches, ditchouts, fill construction, subgrade reinforcement, 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

Segment	<u>Station</u>	Work Description
A to B	0+00	Point A. Begin road construction; crown road, begin ditch. Construct junction with suitable local material and suitable overburden from pit development.
	7+90	Point B. End road construction, construct landing.
C to D	0+00 2+00	Point C. Begin road construction; crown road, begin ditch. Point D. End road construction, construct landing.
E to F	0+00	Point E. Begin road construction; crown road, begin ditch. Drift material ahead to
		reduce grade.
	3+00 5+80	End drift, begin balanced construction. Install Culvert No. 1 (18" x 30').
	3+00	7+25 Point F. Begin drifting material back to 5+80 to reduce grade. End road construction, construct landing.
G to H	0+00	Point G. Begin road construction, crown road, begin ditch. Drift material ahead to reduce grade.
	2+00	End drift, begin balance construction.
	5+90	Point H. End road construction, construct landing.
N to O	0+00	Point N. Begin road construction, crown road, begin ditch. The centerline of the existing road shall be move into the cutback 5' horizontally for a length of 50' in order to construct junction. Excavated material shall be used to construct junction. Excess cutbank material shall be drifted to Point J.
	9+10	Point O. End road construction, construct landing.

FOREST ROAD SPECIFICATIONS

SPECIFIC ROAD CONSTRUCTION INSTRUCTIONS

Segment J to K	Station 0+00 1+00 1+70 5+00 5+50 6+00 10+00 17+00 17+50 18+00 23+50 24+00 25+00	Work Description Point J. Begin road construction, crown road, begin ditch. Junction with L to M to right. Install Culvert No. 7 (18" x 30"). Begin subgrade reinforcement. Install Culvert No. 8 (18" x 30"). End subgrade reinforcement. Install Culvert No. 9 (18" x 30"). Begin subgrade reinforcement. Install Culvert No. 10 (18" x 30"). End subgrade reinforcement. Begin subgrade reinforcement. Begin subgrade reinforcement. Point K. End road construction, construct landing.
L to M	0+00 7+50 11+40 0+00 13+00	Point L. Begin road construction, crown road, begin ditch. Construct ditchout to the left. Point M. End road construction, construct landing. Point P. Begin road construction, crown road, begin ditch. Begin outslope construction, end ditch.
R to S	19+50 0+00 3+40 6+00 33+00	Point Q. End road construction, construct landing. Point R. Begin road construction, crown road, begin ditch. Construct roadside landing on left. Install Culvert No. 11 (18" x 30"). Point S. End road construction, construct landing.

FOREST ROAD SPECIFICATIONS

GENERAL ROAD IMPROVEMENT INSTRUCTIONS:

- 1. <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 D.
- 2. <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. Waste materials shall be seeded and mulched in accordance with specifications in Exhibit H.
- 3. <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.
- 4. <u>Controlled Blasting</u>. Controlled blasting techniques shall be utilized for any blasting operations, and shall be accomplished using timing devices, delayed charges, low intensity shots, or other suitable means to contain material within the road prism.
- 5. <u>Subgrade Preparation and Application of Surfacing Rock.</u>
 - (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 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.

FOREST ROAD SPECIFICATIONS

SPECIFIC ROAD IMPROVEMENT INSTRUCTIONS

<u>Segment</u>	<u>Station</u>	Work Description:
I to J	0+00	Point I. Begin road improvement, crown road, begin ditch. Install Culvert No. 2 (18" x 40').
	10+65	Junction with T to U to left. Construct ditchout to the right. Waste Area 1 on right.
	17+00	Install Culvert No. 3 (18" x 30').
	20+40	Junction with R to S to right.
	22+05	Junction with P to Q to left.
	22+25	Install Culvert No. 4 (18" x 30').
	27+80	Install Culvert No. 5 (18" x 34').
	36+20	Install Culvert No. 6 (18" x 30').
	37+00	Junction with N to O to right.
	38+70	Point J. End improvement.
T to U	0+00 4+20	Point T. Begin road improvement, crown road, begin ditch. Install Culvert No. 13 (18" x 30').
	8+90	Install Culvert No. 14 (18" x 30').
	11+00	Begin road widening and road realignment.
	11+50	Excavate rocky outcrop to maintain road width. Utilize suitable rocky material as subgrade reinforcement between stations 12+50 and 13+00, excess material shall be end-hauled to Waste Area 1.
	12+00	End road widening.
	12+50	Install Culvert No. 15 (18" x 30'). Begin subgrade reinforcement.
	13+00	End road realignment, end subgrade reinforcement.
	15+00	Install Culvert No. 16 (18" x 30').
	16+80	Excavate rocky outcrop to maintain road width and end-haul material to Waste Area 1.
	17+40	Install Culvert No. 17 (18" x 30').
	21+20	Install Culvert No. 18 (18" x 30').
	26+70	Install Culvert No. 19 (18" x 30).
	28+10	Point U. Improve landing, end improvement.

EXHIBIT D FULL BENCH AND END-HAUL REQUIREMENTS

POINT TO POINT	STATION	CONTAINMENT - SIDECAST	WASTE AREA LOCATION	WASTE AREA TREATMENT
T to U	11+50	1 & 2	1	1, 2 & 3
T to U	12+50	1	1	1, 2 & 3
T to U	16+80	1 & 2	1	1, 2 & 3

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) Rock from outcrops may be used as road surfacing, as directed by STATE.

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

Waste Area 1 (I to J 10+65) as shown on Exhibit A and as marked in the field.

Waste Area Treatment

- (1) Deposit at waste area, spread evenly, compact, and provide adequate drainage.
- (2) Pile woody debris separate from other waste material.
- (3) Mulch and seed all waste areas in accordance with Exhibit H.

ROAD SURFACING

ROAD SEGMEN	Γ: C to D			POINT TO PO	INT	Sta. to Sta	١.	TOTAL
Application	Rock Size	Locatio	Depth of	C to D			0+00 to 2+00	
	and Type	n	Rock	Volume (CY	')	Number		(CY)
	-		(inches)	Per `	,	of		
Base Rock	6"- 0" Pit-run	C to D	10	Station	53	Stations	2	106
Junctions	6"- 0" Pit-run	Point C	10	Junction	20	Junctions	1	20
Landings	6"- 0" Pit-run	Point D	10	Landing	150	Landings	1	150
Total Rock for Ro					to D			276
ROAD SEGMEN				POINT TO PO	INT	Sta. to Sta	۱.	TOTAL
Application	Rock Size	Locatio	Depth of	I to J		0+00 to 38+	70	VOLUME
	And Type	n	Rock	Volume (CY	')	Number		(CY)
			(inches)	Per		Of		
Base Rock	6"- 0" Pit-run	I to J	10	Station	53	Stations	38.7	2,051
Turnouts	6"- 0" Pit-run		10	Turnout	18	Turnouts	3	54
Junctions	6"- 0" Pit-run	Point I	10	Junction	20	Junctions	1	20
Landings	6"- 0" Pit-run	Point J	10	Landing	150	Landings	1	150
Total Rock for Ro	ad Segment:			l t	o J	<u> </u>	•	2,275
ROAD SEGMEN	T: J to K			POINT TO PO	INT	Sta. to Sta	۱.	TOTAL
Application	Rock Size	Locatio	Depth of	J to K		0+00 to 25+	00	VOLUME
	and Type	n	Rock	Volume (CY	')	Number		(CY)
			(inches)	Per		of		
Subgrade	6"- 0" Pit-run	5+00,	Varies	Subgrade	120	Subgrade	2.5	300
Reinforcement		17+00 &		Reinforcement		Reinforcement		
		23+50						
Total Rock for Ro	ad Segment:				o K			300
ROAD SEGMEN	,			POINT TO PO	INT	Sta. to Sta	۱.	TOTAL
Application	Rock Size	Locatio	Depth of	P to Q		0+00 to 19+	50	VOLUME
	and Type	n	Rock	Volume (CY	')	Number		(CY)
			(inches)	Per		of		
Base Rock					53			
	6"- 0" Pit-run	P to Q	10	Station	55	Stations	19.5	1,034
Turnouts	6"- 0" Pit-run	P to Q	10	Station Turnouts	18	Turnouts	19.5 3	48
		P to Q						
Turnouts Turnaround Junction	6"- 0" Pit-run 6"- 0" Pit-run 6"- 0" Pit-run	P to Q Point P	10	Turnouts	18 16 20	Turnouts	3	48
Turnouts Turnaround Junction Landings	6"- 0" Pit-run 6"- 0" Pit-run 6"- 0" Pit-run 6"- 0" Pit-run		10	Turnouts Turnaround	18 16	Turnouts Turnarounds	3	48 16 20 150
Turnouts Turnaround Junction Landings Total Rock for Ro	6"- 0" Pit-run 6"- 0" Pit-run 6"- 0" Pit-run 6"- 0" Pit-run ad Segment:	Point P	10 10 10	Turnouts Turnaround Junction Landings	18 16 20 150 to Q	Turnouts Turnarounds Junctions Landings	3 1 1 1	48 16 20 150 1,268
Turnouts Turnaround Junction Landings Total Rock for Ro ROAD SEGMEN	6"- 0" Pit-run 6"- 0" Pit-run 6"- 0" Pit-run 6"- 0" Pit-run ad Segment: T: T to U	Point P	10 10 10 10	Turnouts Turnaround Junction Landings	18 16 20 150 to Q	Turnouts Turnarounds Junctions Landings Sta. to Sta	3 1 1 1	48 16 20 150 1,268 TOTAL
Turnouts Turnaround Junction Landings Total Rock for Ro	6"- 0" Pit-run 6"- 0" Pit-run 6"- 0" Pit-run 6"- 0" Pit-run ad Segment:	Point P	10 10 10	Turnouts Turnaround Junction Landings Pt POINT TO PO T to U	18 16 20 150 to Q	Turnouts Turnarounds Junctions Landings	3 1 1 1	48 16 20 150 1,268 TOTAL VOLUME
Turnouts Turnaround Junction Landings Total Rock for Ro ROAD SEGMEN	6"- 0" Pit-run 6"- 0" Pit-run 6"- 0" Pit-run 6"- 0" Pit-run ad Segment: T: T to U	Point P Point Q	10 10 10 10 10	Turnouts Turnaround Junction Landings Pt POINT TO PO	18 16 20 150 to Q	Turnouts Turnarounds Junctions Landings Sta. to Sta	3 1 1 1	48 16 20 150 1,268 TOTAL
Turnouts Turnaround Junction Landings Total Rock for Ro ROAD SEGMEN	6"- 0" Pit-run 6"- 0" Pit-run 6"- 0" Pit-run 6"- 0" Pit-run ad Segment: T: T to U Rock Size	Point P Point Q Locatio	10 10 10 10	Turnouts Turnaround Junction Landings Pt POINT TO PO T to U	18 16 20 150 to Q	Turnouts Turnarounds Junctions Landings Sta. to Sta 0+00 to 28+	3 1 1 1	48 16 20 150 1,268 TOTAL VOLUME
Turnouts Turnaround Junction Landings Total Rock for Ro ROAD SEGMEN	6"- 0" Pit-run 6"- 0" Pit-run 6"- 0" Pit-run 6"- 0" Pit-run and Segment: T: T to U Rock Size and Type	Point P Point Q Locatio	10 10 10 10 10	Turnouts Turnaround Junction Landings P t POINT TO PO T to U Volume (CY	18 16 20 150 to Q	Turnouts Turnarounds Junctions Landings Sta. to Sta 0+00 to 28+ Number	3 1 1 1 1	48 16 20 150 1,268 TOTAL VOLUME
Turnouts Turnaround Junction Landings Total Rock for Ro ROAD SEGMEN Application	6"- 0" Pit-run 6"- 0" Pit-run 6"- 0" Pit-run 6"- 0" Pit-run and Segment: T: T to U Rock Size and Type 6"- 0" Pit-run	Point P Point Q Locatio n	10 10 10 10 10 Depth of Rock (inches)	Turnouts Turnaround Junction Landings P t POINT TO PO T to U Volume (CY Per	18 16 20 150 to Q	Turnouts Turnarounds Junctions Landings Sta. to Sta 0+00 to 28+ Number of	3 1 1 1 1	48 16 20 150 1,268 TOTAL VOLUME (CY)
Turnouts Turnaround Junction Landings Total Rock for Ro ROAD SEGMEN Application Base Rock	6"- 0" Pit-run 6"- 0" Pit-run 6"- 0" Pit-run 6"- 0" Pit-run and Segment: T: T to U Rock Size and Type	Point P Point Q Locatio n	10 10 10 10 10 Depth of Rock (inches)	Turnouts Turnaround Junction Landings P t POINT TO PO T to U Volume (CY Per Station	18 16 20 150 o Q INT	Turnouts Turnarounds Junctions Landings Sta. to Sta 0+00 to 28+ Number of Stations	3 1 1 1 1 10	48 16 20 150 1,268 TOTAL VOLUME (CY)
Turnouts Turnaround Junction Landings Total Rock for Ro ROAD SEGMEN Application Base Rock Turnouts	6"- 0" Pit-run 6"- 0" Pit-run 6"- 0" Pit-run 6"- 0" Pit-run and Segment: T: T to U Rock Size and Type 6"- 0" Pit-run	Point P Point Q Locatio n	10 10 10 10 10 Depth of Rock (inches)	Turnouts Turnaround Junction Landings P t POINT TO PO T to U Volume (CY Per Station Turnouts	18 16 20 150 o Q INT ')	Turnouts Turnarounds Junctions Landings Sta. to Sta 0+00 to 28+ Number of Stations Turnouts	3 1 1 1 1 10 28.1 4	48 16 20 150 1,268 TOTAL VOLUME (CY)
Turnouts Turnaround Junction Landings Total Rock for Ro ROAD SEGMEN Application Base Rock Turnouts Turnaround	6"- 0" Pit-run 6"- 0" Pit-run 6"- 0" Pit-run 6"- 0" Pit-run ead Segment: T: T to U Rock Size and Type 6"- 0" Pit-run 6"- 0" Pit-run 6"- 0" Pit-run	Point P Point Q Locatio n T to U	10 10 10 10 10 Depth of Rock (inches)	Turnouts Turnaround Junction Landings P t POINT TO PO T to U Volume (CY Per Station Turnouts Turnaround	18 16 20 150 o Q INT 7) 53 18 16	Turnouts Turnarounds Junctions Landings Sta. to Sta 0+00 to 28+ Number of Stations Turnouts Turnaround	3 1 1 1 1 10 28.1 4	48 16 20 150 1,268 TOTAL VOLUME (CY) 1,489 72 16
Turnouts Turnaround Junction Landings Total Rock for Ro ROAD SEGMEN Application Base Rock Turnouts Turnaround Junction	6"- 0" Pit-run 6"- 0" Pit-run 6"- 0" Pit-run 6"- 0" Pit-run ead Segment: T: T to U Rock Size and Type 6"- 0" Pit-run 6"- 0" Pit-run 6"- 0" Pit-run 6"- 0" Pit-run	Point P Point Q Locatio n T to U Point T	10 10 10 10 10 Depth of Rock (inches) 10 10	Turnouts Turnaround Junction Landings Pt POINT TO PO T to U Volume (CY Per Station Turnouts Turnaround Junction	18 16 20 150 o Q iNT () 53 18 16 20	Turnouts Turnarounds Junctions Landings Sta. to Sta 0+00 to 28+ Number of Stations Turnouts Turnaround Junction	3 1 1 1 1 10 28.1 4 1 1	48 16 20 150 1,268 TOTAL VOLUME (CY) 1,489 72 16 20
Turnouts Turnaround Junction Landings Total Rock for Ro ROAD SEGMEN Application Base Rock Turnouts Turnaround Junction Landing	6"- 0" Pit-run 6"- 0" Pit-run 6"- 0" Pit-run 6"- 0" Pit-run ead Segment: T: T to U Rock Size and Type 6"- 0" Pit-run	Point P Point Q Locatio n T to U Point T Point U	10 10 10 10 10 Depth of Rock (inches) 10 10 10	Turnouts Turnaround Junction Landings Pt POINT TO PO T to U Volume (CY Per Station Turnouts Turnaround Junction Landing Subgrade Reinforcement	18 16 20 150 o Q INT 53 18 16 20 150	Turnouts Turnarounds Junctions Landings Sta. to Sta 0+00 to 28+ Number of Stations Turnouts Turnaround Junction Landing	3 1 1 1 1 10 28.1 4 1 1 1	48 16 20 150 1,268 TOTAL VOLUME (CY) 1,489 72 16 20 150

ROCK TOTALS (CY)	6"- 0" Pit-run	
	5,896	

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

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.

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:

Subgrade 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
All road segments	1

<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
All road segments.	1 & 2

<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 at 4 to 6 percent as specified in the "Forest Roads Specifications" table in Exhibit D.

ROAD SEGMENT	COMPACTION EQUIPMENT OPTIONS
All Surfaced Roads	3

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>Tampingfoot Compactors</u>. Tampingfoot compactors shall exert a minimum pressure of 250 pounds per square inch on the ground area in contact with the tamping feet. The compactor shall cover a minimum width of 60 inches per pass and weigh a minimum of 16,000 pounds.
- 3. <u>Vibratory Grid Compactors</u>. The roller shall have a grid surface and have an operating weight of 32,000 pounds or more. The rock shall be worked with a grader weighing at least 20,000 pounds during the grid rolling process. All rock shall come in contact with the vibratory grid compactor.

.

EXHIBIT E

CULVERT SPECIFICATIONS

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

Culverts shall be constructed of corrugated double-walled polyethylene and meet the requirements of AASHTO M-294-06, Type S Culvert.

Polyethylene joints shall be made with split couplings, corrugated to engage the culvert corrugations, and shall engage a minimum of 4 corrugations, 2 on each side of the culvert joint.

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 drains shall be skewed to fit the required culvert length to the road prism.

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 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.

EXHIBIT E

CULVERT SPECIFICATIONS

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", add 6" for roads which will not be rocked. 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 all culverts.

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

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.

A manufacturer's certification that the product was manufactured, tested, and supplied in accordance with this specification shall be furnished to STATE upon request.

EXHIBIT E

CULVERT LIST

CULVERT NO.	DIAMETER (Inches)	LENGTH (Feet)	MATERIAL TYPE	ROAD SEGMENT POINT TO POINT	STATION
1	18	30	CPP	E to F	5+80
2	18	40	CPP	I to J	0+00
3	18	30	CPP	I to J	17+00
4	18	30	CPP	I to J	22+25
5	18	34	CPP	I to J	27+80
6	18	30	CPP	I to J	36+20
7	18	30	CPP	J to K	1+70
8	18	30	CPP	J to K	5+50
9	18	30	CPP	J to K	10+00
10	18	30	CPP	J to K	17+50
11	18	30	CPP	R to S	6+80
12 – deleted	-	-	-	-	-
13	18	30	CPP	T to U	4+20
14	24	36	CPP	T to U	8+90
15	18	30	CPP	T to U	12+50
16	18	30	CPP	T to U	15+00
17	18	30	CPP	T to U	17+40
18	18	30	CPP	T to U	21+20
19	18	30	CPP	T to U	26+70

CPP = Polyethylene

EXHIBIT F

ROCK QUARRY DEVELOPMENT AND USE

- 1. PURCHASER shall prepare a written development plan for the quarry area. The plan shall be submitted to STATE for approval prior to conducting any operation in quarry area. The plan shall include, but not be limited to:
 - (a) Location of benches and roads to benches.
 - (b) Disposal site for woody debris, overburden and reject material.
 - (c) Time lines for rock quarry use.
 - (d) Erosion Control measures.
- PURCHASER shall schedule and coordinate quarry and stockpile usage with other existing or planned activity requiring quarry or stockpile usage. PURCHASER shall notify STATE 5 days prior to the start of quarry development activities.
- 3. The quarry site shall be left in a condition free from overburden and debris. Access roads to the quarry, and the quarry floor, shall be cleared at the termination of use. Overburden shall be removed for a distance of 20 feet beyond the developed rock source.
- 4. All overburden and reject material shall be hauled to Waste Area 2, as shown on Exhibit A and as directed by STATE.
- 5. PURCHASER shall conduct the operations relative to the disposal of waste material in such manner that sediment, rock, or debris shall not be washed, conveyed, or otherwise deposited in any stream.
- 6. At the Rock Pit, fall all timber within the pit development area and remove all merchantable timber. All woody debris, including stumps and Slash shall be hauled to the designated disposal areas, piled as directed by STATE.
- 7. Benches shall be maintained/constructed at intervals of 40 feet or less in height and shall be a minimum of 20 feet in width. Any gravel or talus slopes shall be left with a working face at an angle of 60 percent or less. There shall be a minimum of one bench with an access road to it. Said bench shall be easily accessible with tractors.
- 8. Quarry face shall be developed in a uniform manner. All quarry backslopes shall be left in a stable condition.
- Oversized material that is produced shall be piled in a designated area adjacent to the pit. It shall not be wasted.
- 10. The quarry floor shall be developed to provide for drainage away from the quarry. All quarry and stockpile site drainage ditches shall be maintained. Quarry access roads shall be cleared and blocked upon completion of guarry use as directed by STATE.
- 11. Proper winterization and storm-water control measures such as waterbarring, drainage, utilization of filter bales, mulching and/or blocking access shall be constructed and maintained to protect the watershed and Project Work, as directed by STATE.
- 12. Apply seed and mulch to the waste area, as specified in Exhibit H.

EXHIBIT F

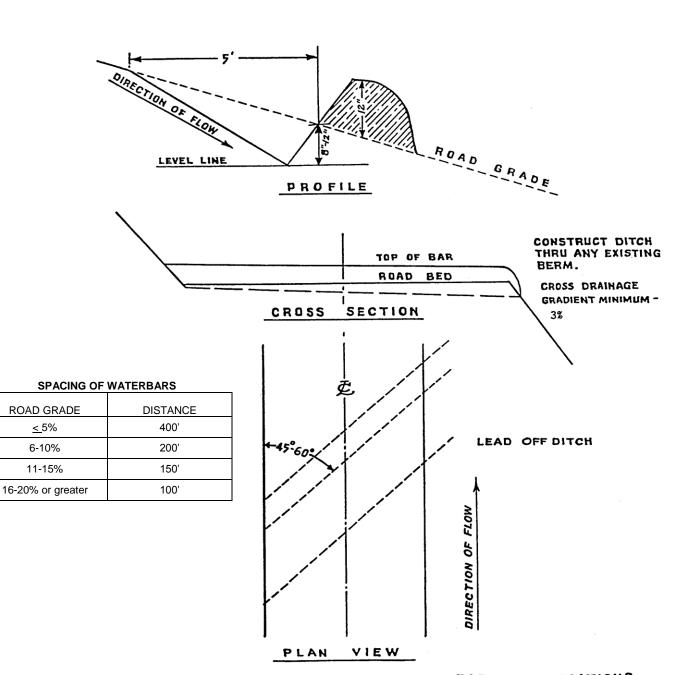
PIT-RUN ROCK SPECIFICATIONS

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%

Material shall be well graded, free of organic material and shall not have excessive fine materials.

No. 341-13-33 Red Rock Hill

EXHIBIT G
WATERBAR SPECIFICATIONS



WATERBAR SPECIFICATIONS FOR CROSS DITCHING #298

EXHIBIT G
TANK TRAP SPECIFICATIONS

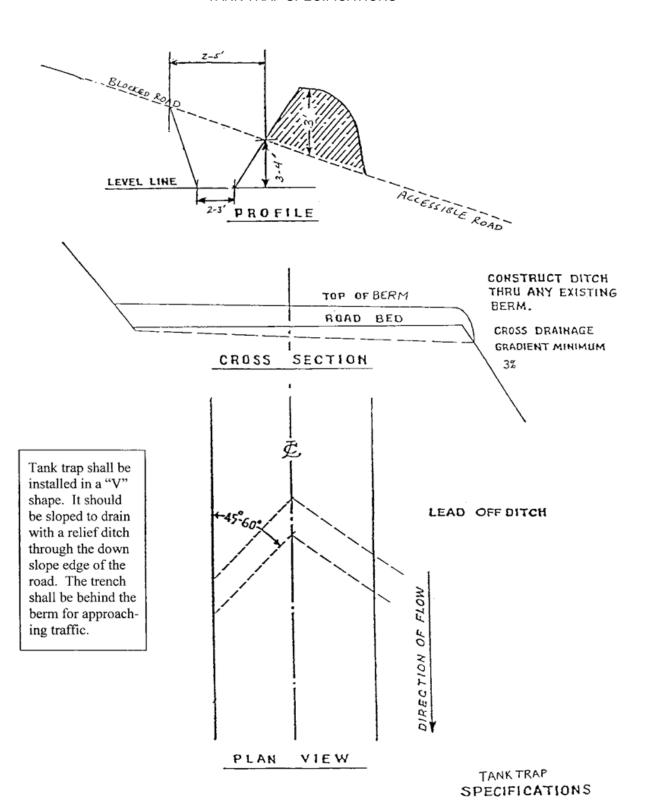


EXHIBIT H

GRASS SEEDING AND FERTILIZER

This work shall consist of preparing seedbeds and furnishing and placing required seed, fertilizer, and straw mulch. Straw mulch shall consist of straw that is free of noxious weeds. Apply seed, fertilizer, and straw mulch to all waste areas, and bare soils resulting from Project No. 1.

<u>Seeding Seasons</u>. Seeding shall be performed only from <u>March 1</u> through <u>June 15</u> and <u>August 15</u> through <u>October 31</u>. Seeding materials shall not be applied during windy weather or when the ground is excessively wet or frozen. Areas of disturbed soil shall be seeded by the end of the project period in which work was started.

APPLICATION METHODS FOR SEED AND FERTILIZER

<u>Dry Method</u>. Mechanical seeders, seed drills, landscape seeders, cultipacker seeders, fertilizer spreaders, or other approved mechanical seeding equipment shall be used to apply the seed and fertilizer in the amounts and mixtures specified. Hand-operated seeding devices may be used when seed and fertilizer are applied in dry form.

APPLICATION RATES FOR SEED AND FERTILIZER

The seed mixture listed below shall be applied at 100 lbs. per acre. The seed mixture shall be comprised of the following:

SPECIES	MIXTURE	PURE LIVE SEED	GERMINATION
Annual Rye	33%	95%	>90%
Orchard Grass	33%	95%	>90%
Perennial Rye	34%	95%	>90%

<u>Fertilizer</u>: Chemical analysis shall be 16-20-0 and shall be applied at the rate of 200 pounds per acre. Fertilizer shall not be applied within 100 feet of streams.

Mulching Period. Straw mulch shall be applied within 24 hours of spreading grass seed and fertilizer.

APPLICATION RATES FOR MULCH

Place straw mulch to a reasonably uniform thickness of 1½ to 2½ inches. This rate requires between 2 and 3 tons of dry mulch per acre.

PART IV: OTHER INFORMATION

State Timber Sale Contract No. 341-13-33 Red Rock Hill

NOTICE OF TRANSFER OF STATE TIMBER

Instructions 629:-Form-301-010 Complete Section 1. Mark the box which applies to you/your company in Section 2. Complete Section 3 and obtain signatures. **SECTION 1** On ______, state timber sale purchaser (Transferor) _____, sold, exchanged or otherwise transferred to _____, (Transferee) state timber originating from State Timber Sale Contract No. _____ Transferee hereby certifies that they: Will not export the unprocessed state timber which is the subject of this transaction; Will not sell, transfer, exchange or otherwise convey the unprocessed timber which is the subject of this (b) transaction to any other person without first obtaining a like certification from that person; and Are not prohibited by OAR's 629-31-005 through 045 from purchasing state timber or logs directly from (c) the State Forester, or this is a sale of Western Red Cedar for domestic processing. **SECTION 2** Have not exported unprocessed timber originating from private lands in Oregon in the last 24 months. П 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. **SECTION 3** The parties understand that falsely entering into this certification, or failure to comply with the terms of this certification is a violation of the Forest Conservation and Shortage Relief Act of 1990 and OAR Chapter 629, Division 31, and is subject to any and all penalties contained therein. Transferor: Transferee: Signed Signed Title Title Dated Dated [Note: 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

Notice of Transfer of State Timber Form 301-010.doc/Jaz B (SF)

Salem, OR 97310