

# PART III: EXHIBITS

State Timber Sale Contract  
No. 341-06-84  
Rip Tide

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)



Date Received by STATE: \_\_\_\_\_

(5) State Brand Information (complete):

(1) Contract No.: 341-06-84

(2) Sale Name: Rip Tide

(3) Contract Expiration Date: October 31, 2008

Project Completion Dates: \_\_\_\_\_

(4) Purchaser: \_\_\_\_\_

(6) Purchaser Representatives:

Projects: \_\_\_\_\_ Phone: \_\_\_\_\_ Cell/Other Phone: \_\_\_\_\_ Home: \_\_\_\_\_

Projects: \_\_\_\_\_ Phone: \_\_\_\_\_ Cell/Other Phone: \_\_\_\_\_ Home: \_\_\_\_\_

Projects: \_\_\_\_\_ Phone: \_\_\_\_\_ Cell/Other Phone: \_\_\_\_\_ Home: \_\_\_\_\_

Projects: \_\_\_\_\_ Phone: \_\_\_\_\_ Cell/Other Phone: \_\_\_\_\_ Home: \_\_\_\_\_

Logging: \_\_\_\_\_ Phone: \_\_\_\_\_ Cell/Other Phone: \_\_\_\_\_ Home: \_\_\_\_\_

Logging: \_\_\_\_\_ Phone: \_\_\_\_\_ Cell/Other Phone: \_\_\_\_\_ Home: \_\_\_\_\_

Logging: \_\_\_\_\_ Phone: \_\_\_\_\_ Cell/Other Phone: \_\_\_\_\_ Home: \_\_\_\_\_

Logging: \_\_\_\_\_ Phone: \_\_\_\_\_ Cell/Other Phone: \_\_\_\_\_ Home: \_\_\_\_\_

(7) State Representatives:

Projects: \_\_\_\_\_ Phone: \_\_\_\_\_ Cell/Other 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) _____ - _____	Date: _____	Phone: _____
	No(s) _____ - _____	Date: _____	Phone: _____

Logging: Felling	_____	Date: _____	Phone: _____
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.

**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.



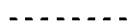
Cable landing, with numbers for sequence.



Tractor landing with alphabetical sequence.



Approximate setting boundary.



Spur truck roads.



Tractor yarding roads.



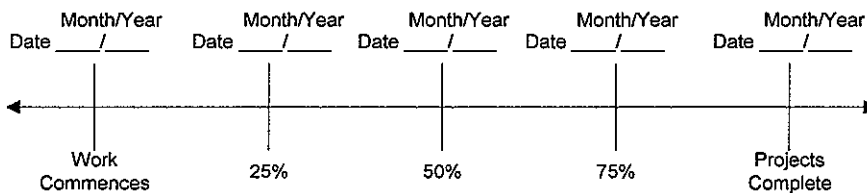
Temporary stream crossings.

EXHIBIT B  
OPERATIONS PLAN

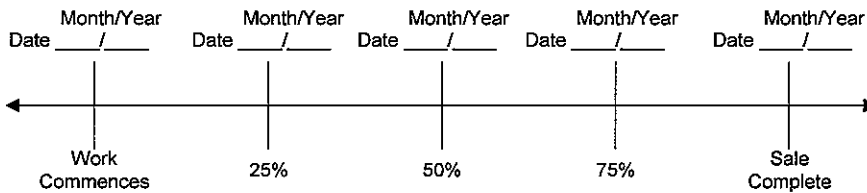
**Completion Timeline**

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 are 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: \_\_\_\_\_

SUBMITTED BY:  
PURCHASER

STATE OF OREGON - DEPARTMENT OF FORESTRY

\_\_\_\_\_  
Title \_\_\_\_\_

\_\_\_\_\_  
Title \_\_\_\_\_

Original: Salem  
cc: District File  
Purchaser

EXHIBIT C

SCALING INSTRUCTIONS -- LOCATION APPROVAL -- BRAND INFORMATION

(1) ORIGINAL REGISTRATION  Date \_\_\_\_\_  
 REVISION NUMBER \_\_\_\_\_  Date \_\_\_\_\_  
 CANCELLATION  Date \_\_\_\_\_

(2) TO: \_\_\_\_\_  
 (Third Party Scaling Organization)

(3) FROM: Astoria (04) Phone 503-325-5451  
 (State Forestry District)  
 Address 92219 Hwy 202, Astoria, OR 97103

(4) PURCHASER: \_\_\_\_\_  
 Address \_\_\_\_\_

(12) SALE NAME Rip Tide  
 COUNTY Clatsop

(13) STATE CONTRACT NUMBER 341-06-84

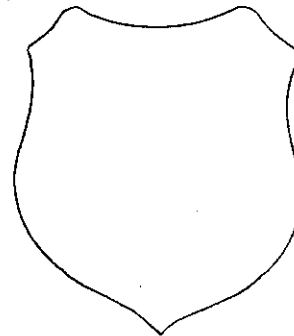
(14) SCALE: westside  eastside  cubic foot

(15) STATE BRAND REGISTRATION NUMBER \_\_\_\_\_

(16) BUREAU BRAND CODE NUMBER \_\_\_\_\_

(17) STATE BRAND INFORMATION:

(COMPLETE) ↓



MINIMUM SCALING SPECIFICATIONS			CLASS		
SPECIES	SCALING DIAMETER INCHES	*NET SCALE VOLUME	PER MBF	** SUM	SUB
Conifers	--	10	X		
Hardwoods	--	10	X		

\* Apply minimum volume test to whole logs over 40' Westside; 20' Eastside.  
 \*\* Sum (if indicated): see instructions and explain in Item (20).

(6) WESTSIDE SCALE: YES  NO   
 Actual taper all logs over 40' scaling length

(7) EASTSIDE SCALE: YES  NO   
 \*Actual taper butt logs over 40' scaling length

(8) PENCIL BUCK YES  NO   
 back to Minimum Scaling Diameter \_\_\_\_\_

(9) ADD-BACK VOLUME -- YES  NO   
 Deductions due to delay

(18) PAINT REQUIRED: YES   
 COLOR Orange

(19) SPECIAL SCALES
PEELABLE CULL (all species)
UTILITY/PULP (all species)
<b>NO DEDUCTIONS ALLOWED FOR MECHANICAL DAMAGE</b>
OTHER: _____
OTHER: _____

(10) APPROVED SCALING LOCATIONS	Species	Yard	Truck

(20) REMARKS: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Operator's Name (Optional inclusion by District): \_\_\_\_\_

(11) NOTICE OF CANCELLATION OF BRAND:  
 Effective Date: \_\_\_\_\_

State Forester's Representative

(21) SIGNATURES:

\_\_\_\_\_  
 Purchaser or Authorized Representative Date

\_\_\_\_\_  
 State Forester Representative Date

**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.**

Distribution: ORIGINAL: Salem / COPIES: TPSO (4), Purchaser, Operator, District, Mgmt. Unit

EXHIBIT C

INSTRUCTIONS FOR FORM 343-307 (rev. 5/01)

- (1) Check appropriate box. REVISION NUMBER requires comments. CANCELLATION requires Item (21). Complete date.
- (2) Designate Third Party Scaling Organization (TPSO). Send 4 copies to TPSO, 1 to purchaser, 1 to Salem, and keep such copies as to district needs.
- (3) State District office, address and phone.
- (4) Enter Purchaser's business name and address as it appears on the Contract.
- (5) Minimum Scaling Specifications. Review Section 2040 or 2045, "Log Removal," of the Contract. Species, or combined species can be separate entries. Information serves as a basis for scaling (see also Items (13) thru (17)), and is required to show existence on the sale. **PerM** (per MBF). **SUM** (lump sum material). **SUB** (submerchantable material). **SUB**, as used by the State, references that material containing at least 10 bf (net) but less than the lower merchantable net volume limit or grade requirements for other merchantable (PerM) entries. PerM, SUM, and Sub must be indicated by checking the appropriate column. Species with the same specifications and value are combined into one entry. PerM and Sub require scaling therefore complete specifications. SUM need not be scaled, hence no specifications. Loads containing only SUM are to be ticketed if so instructed in Item (19). Mixed loads of SUM, PERM and/or subspecies will always be scaled.
- (6) Westside -- 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).
- (7) Eastside -- actual taper/taper table segment scale. Special Service Rules on file with TPSO. See: Segment Scaling and Grading of Long Logs -- All Species -- State Forestry Department Scaling Practices (Eastside). Items with \* follow U.S. Forest Service Eastside rules.
- (8) Pencil Buck. Check NO if a westside sale, optional for eastside sales.
- (9) Add-Back Volume. Add-Back is normally checked YES. Scaler records deductions (sap rot, weather checks, etc.) caused by an abnormal delay in removal. Enter separately on scale ticket. TPSO provides State with summaries that include this as a net volume by species. Salvage sales and certain other circumstances may require that "NO" be checked.
- (10) Show scaling locations only applicable to TPSO. Not necessary to list markets. If all species are scaled at same location, enter "ALL."
- (11) When logging is complete, recall branding hammers, date and sign where indicated, check CANCELLATION box at top of form, and send to TPSO.
- (12) Enter sale name and county.
- (13) Enter sale Contract number.
- (14) Check Westside or Eastside log scale. Cubic foot refers to Northwest Log Rules Cubic Foot Scale.
- (15) Oregon Forest Products Brand Registry Number (optional).
- (16) DO NOT USE -- TPSO will fill in when applicable.
- (17) Show one brand only. Complete drawing. If more than one brand is assigned to the sale, (1) make separate form for each brand, and (2) on each form, explain and show other brand(s) under REMARKS, Item 19.
- (18) Check YES and designate orange.
- (19) Special Scales. These are the Special Scales that will be applied. If "Other" is indicated, please describe. Give comments in Item (19).
- (20) Use this space to designate weight conversion factors, or any other explanations to clarify scaling requirements. If additional scaling locations are approved, prepare another form showing all (old and new) locations. Check REVISION box at top of form and explain under remarks. Route as indicated.
- (21) Require purchaser to sign and date completed form.

EXHIBIT D  
FOREST ROAD SPECIFICATIONS

SUBGRADE WIDTH	SURFACED WIDTH	POINT TO POINT	STATION TO STATION	DRAINAGE
16 feet	12 feet	1A to 1B	0+00 to 1+40	Ditch
16 feet	12 feet	2A to 2B	0+00 to 30+60	Ditch
16 feet	12 feet	2C to 2D	0+00 to 8+80	Ditch
16 feet	12 feet	2E to 2F	0+00 to 4+70	Ditch
16 feet	12 feet	3A to 3B	0+00 to 4+30	Ditch
16 feet	12 feet	3C to 3D	0+00 to 3+00	Ditch
16 feet	12 feet	11 to 12	0+00 to 39+40	Ditch
16 feet	12 feet	13 to 14	0+00 to 6+80	Ditch
16 feet	12 feet	15 to 16	0+00 to 12+30	Ditch
16 feet	12 feet	17 to 18	0+00 to 31+20	Ditch

**CLEARING.** 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 staked, the clearing limits shall extend 5 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 CLASSIFICATION.** New construction – From the top of the cutslope to the toe of the fill.  
Improvement and reconstruction – Four feet back from the shoulder of the subgrade or ditch, whichever is widest, or as marked in the field.

**CLEARING AND GRUBBING DISPOSAL.** 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. Do not place clearing and grubbing debris on side slopes exceeding 50 percent. Grubbing debris shall be left in a stable location, and not left lodged against standing trees.

**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-engineered lines, grades, dimensions, and plans when provided.

All suitable excavated material shall be used where possible for the formation of fills, shoulders, and drainage structure backfill. Embankment materials shall be free of woody debris, brush, muck, sod, frozen material, and other deleterious materials. All fills and drainage structure backfill shall be machine compacted according to the specifications in Exhibit D.

EXHIBIT D

FOREST ROAD SPECIFICATIONS

Unless road design 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.

Excess excavation shall not be sidecast where material will enter a stream course or where material will accumulate in areas deemed a high landslide hazard location by STATE.

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.

Curve Widening. Widen the inside shoulder of all curves as follows: 400 divided by the radius of the curve equals the amount of extra width.

DRAINAGE

Subgrade. Subgrade shall be crowned at 4 to 6 percent ( $\frac{1}{2}$  inch per foot).

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

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

Outslope. Road subgrade shall be outsloped at 4 to 6 percent.

TURNOUTS. Increase roadbed width an additional 8 feet for both subgrade and surfacing. Length shall be at least 50 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.

GRADING

Rock

Common - side slopes 50% and over

Common - side slopes less than 50%

Common - turnpike (level) section

Top of cutslope shall be rounded.

Back Slopes

Vertical to 1/4:1

3/4:1

1:1

2:1

Fill Slopes

Not steeper  
than 1½:1

LANDINGS. Landings shall be constructed as posted in the field, no less than 50 feet wide and no more than 70 feet wide. Surface is to be crowned for drainage, with general grade no more than 3 percent. Surface as shown on Exhibit D.

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

SEASONAL WINTERIZATION. All unrocked roads or unfinished subgrades shall be waterbarred in accordance with the specifications in Exhibit H, and blocked from vehicular traffic prior to October 1, annually, and as directed by STATE.

EXHIBIT D  
FOREST ROAD SPECIFICATIONS

GENERAL ROAD CONSTRUCTION INSTRUCTIONS:

- (1) Excavated Materials. 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. Waste materials shall be sloped and compacted for drainage. Fills shall be thoroughly compacted in accordance with Exhibit D. Full bench road construction shall be performed in accordance with Exhibit D.
- (2) Fill Armor and Energy Dissipator Construction. Where rock is used for fill armor, rock shall be placed and tamped at a 1½:1 slope, beginning at the fill toes. Where rock is used for an energy dissipator, rock shall be placed below the culvert outlet and embedded for a minimum of 3 feet, in accordance with Exhibit I.

SPECIFIC ROAD CONSTRUCTION INSTRUCTIONS:

<u>Segment</u>	<u>Station</u>	<u>Work Description</u>
2A to 2B	0+00	Begin 50 foot radius curve. Widen curve 8 feet on the inside of curve.
	1+84	End 50 foot radius curve.
	8+50	Begin 70 foot radius curve. Widen curve 6 feet on the inside of curve.
	10+40	End 70 foot radius curve.
	14+60	Install culvert. Utilize 30 cubic yards of ¾"-0" crushed rock for culvert bedding and backfill. Utilize 40 cubic yards of 24"-6" riprap rock for fill armor and energy dissipator construction.
	22+60	Install culvert. Utilize 30 cubic yards of ¾"-0" crushed rock for culvert bedding and backfill. Utilize 40 cubic yards of 24"-6" riprap rock for fill armor and energy dissipator construction.
	22+80	Junction with 1C to 1D.
	25+30	Begin 60 foot radius curve. Widen curve 7 feet on the inside of curve.
	25+35	Install culvert. Utilize 30 cubic yards of ¾"-0" crushed rock for culvert bedding and backfill. Utilize 30 cubic yards of 24"-6" riprap rock for fill armor and energy dissipator construction.
26+21	End 60 foot radius curve.	
2C to 2D	1+40	Install culvert. Utilize 20 cubic yards of ¾"-0" crushed rock for culvert bedding and backfill.



EXHIBIT D

FOREST ROAD SPECIFICATIONS

GENERAL ROAD IMPROVEMENT INSTRUCTIONS:

- (1) Drainage Ditches. 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.
- (2) Subgrade Preparation and Application of Surfacing Rock.
  - (a) Restore or construct drainage ditches 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 surfacing and added base rock. Provide for a crown of 4 to 6 percent, ( $\frac{1}{2}$  inch per foot), and compact in accordance with Exhibit D.
  - (e) Upon completion of above required work, apply, process, and compact surfacing rock in accordance with specifications in Exhibit D.

EXHIBIT D

ROAD SURFACING – PROJECT NO. 1

ROAD SEGMENT: 1A to 1B				POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)
Application	Rock Size and Type	Location	Depth of Rock (inches)	1A to 1B		0+00 to 1+40		
				Volume (CY) per	Number of	Stations	Number of	
Base Rock	6"-0" Pit-Run	1A to 1B	10	Station	63	Stations	1.40	88
Junctions	6"-0" Pit-Run	1A	10	Junction	24	Junctions	1	24
Landing Rock	6"-0" Pit-Run	1+40	N/A	Landing	50	Landings	1	50
Total Rock for Road Segment:				<b>1A to 1B</b>				162
ROAD SEGMENT: 2A to 2B				POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)
Application	Rock Size and Type	Location	Depth of Rock (inches)	2A to 2B		0+00 to 30+60		
				Volume (CY) per	Number of	Stations	Number of	
Base Rock	6"-0" Pit-Run	2A to 2B	10	Station	63	Stations	30.60	1,928
Surfacing	¾"-0" Crushed	0+00 – 30+00	3	Station	19	Stations	30.60	570
Turnouts	6"-0" Pit-Run		10	Turnout	30	Turnouts	7	210
Turnouts	¾"-0" Crushed		3	Turnout	10	Turnouts	7	70
Curve Widening	6"-0" Pit-Run		10			Curves		150
Curve Widening	¾"-0" Crushed		3			Curves		50
Culvert Bedding	¾"-0" Crushed	14+60, 22+60 & 25+35	N/A	Culvert	30	Culverts	3	90
Energy Dissipator	24"-6" Riprap	14+60, 22+60 & 25+35	N/A	Dissipator	10	Dissipators	3	30
Fill Armor	24"-6" Riprap	14+60, 22+60 & 25+35	N/A					100
Turnaround	6"-0" Pit-Run	29 + 40	N/A	TA	24	TA	1	24
Junctions	6"-0" Pit-Run	2A	10	Junction	30	Junctions	1	30
Junctions	¾"-0" Crushed	2A	3	Junction	10	Junctions	1	10
Landing Rock	6"-0" Pit-Run	30+60	N/A	Landing	50	Landings	1	50
Total Rock for Road Segment:				<b>2A to 2B</b>				3,312
ROAD SEGMENT: 2C to 2D				POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)
Application	Rock Size and Type	Location	Depth of Rock (inches)	2C to 2D		0+00 to 8+80		
				Volume (CY) per	Number of	Stations	Number of	
Base Rock	6"-0" Pit-Run	2C to 2D	10	Station	63	Stations	8.80	554
Surfacing	¾"-0" Crushed	0+00 – 8+50	3	Station	19	Stations	8.50	162
Turnouts	6"-0" Pit-Run		10	Turnout	30	Turnouts	1	30
Turnouts	¾"-0" Crushed		3	Turnout	10	Turnouts	1	10
Culvert Bedding	¾"-0" Crushed	1+40	N/A	Culvert	20	Culverts	1	20
Energy Dissipator	24"-6" Riprap	1+40	N/A	Dissipator	10	Dissipators	1	10
Turnaround	6"-0" Pit-Run	7+50	N/A	TA	24	TA	1	24
Junctions	6"-0" Pit-Run	2C	10	Junction	30	Junctions	1	30
Junctions	¾"-0" Crushed	2C	3	Junction	10	Junctions	1	10
Landing Rock	6"-0" Pit-Run	8+80	N/A	Landing	50	Landings	1	50
Total Rock for Road Segment:				<b>2C to 2D</b>				900

EXHIBIT D

ROAD SURFACING – PROJECT NO. 1

ROAD SEGMENT: 2E to 2F				POINT TO POINT:		Sta. to Sta.		TOTAL VOLUME (CY)
Application	Rock Size and Type	Location	Depth of Rock (inches)	2E to 2F		0+00 to 4+70		
				Volume (CY) per	Number of	Volume (CY) per	Number of	
Base Rock	6"-0" Pit-Run	2E to 2F	10	Station	63	Stations	4.70	296
Surfacing	¾"-0" Crushed	0+00 – 4+30	3	Station	19	Stations	4.30	82
Turnouts	6"-0" Pit-Run		10	Turnout	30	Turnouts	7	30
Turnouts	¾"-0" Crushed		3	Turnout	10	Turnouts	7	10
Turnaround	6"-0" Pit-Run		N/A	TA	24	TA	1	24
Junctions	6"-0" Pit-Run	2E	10	Junction	30	Junctions	1	30
Junctions	¾"-0" Crushed	2E	3	Junction	10	Junctions	1	10
Landing Rock	6"-0" Pit-Run	4+70	N/A	Landing	50	Landings	1	50
Total Rock for Road Segment:				2E to 2F				532
ROAD SEGMENT: 3A to 3B				POINT TO POINT:		Sta. to Sta.		TOTAL VOLUME (CY)
Application	Rock Size and Type	Location	Depth of Rock (inches)	3A to 3B		0+00 to 4+30		
				Volume (CY) per	Number of	Volume (CY) per	Number of	
Base Rock	6"-0" Pit-Run	3A to 3B	10	Station	63	Stations	4.30	271
Turnaround	6"-0" Pit-Run		N/A	TA	24	TA	1	24
Junctions	6"-0" Pit-Run	3A	10	Junction	24	Junctions	1	24
Junctions	¾"-0" Crushed	3A	3	Junction	20	Junctions	1	20
Landing Rock	6"-0" Pit-Run	2+50	N/A	Landing	50	Landings	1	50
Total Rock for Road Segment:				3A to 3B				389
ROAD SEGMENT: 3C to 3D				POINT TO POINT:		Sta. to Sta.		TOTAL VOLUME (CY)
Application	Rock Size and Type	Location	Depth of Rock (inches)	3C to 3D		0+00 to 3+00		
				Volume (CY) per	Number of	Volume (CY) per	Number of	
Base Rock	6"-0" Pit-Run	3C to 3D	10	Station	63	Stations	3.30	189
Junctions	6"-0" Pit-Run	3A	10	Junction	24	Junctions	1	24
Junctions	¾"-0" Crushed	3A	3	Junction	20	Junctions	1	20
Landing Rock	6"-0" Pit-Run	2N	N/A	Landing	50	Landings	1	50
Total Rock for Road Segment:				3C to 3D				283
ROAD SEGMENT: I1 to I2				POINT TO POINT:		Sta. to Sta.		TOTAL VOLUME (CY)
Application	Rock Size and Type	Location	Depth of Rock (inches)	I1 to I2		0+00 to 39+40		
				Volume (CY) per	Number of	Volume (CY) per	Number of	
Subgrade Leveling	¾"-0" Crushed		N/A					100
Surfacing	¾"-0" Crushed	I1 to I2	3	Station	19	Stations	39.4	749
Turnouts	¾"-0" Crushed		3	Turnout	10	Turnouts	6	60
Junctions	¾"-0" Crushed		3	Junction	10	Junctions	3	30
Turnaround	6"-0" Pit-Run		N/A	TA	24	TA	1	24
Landing Rock	6"-0" Pit-Run	39+40	N/A	Landing	40	Landings	1	40
Total Rock for Road Segment:				I1 to I2				1,003

EXHIBIT D

ROAD SURFACING – PROJECT NO. 1

ROAD SEGMENT: 13 to 14				POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)
Application	Rock Size and Type	Location	Depth of Rock (inches)	13 to 14		0+00 to 6+80		
				Volume (CY) per		Number of		
Base Rock	6"-0" Pit-Run	3C to 3D	8	Station	50	Stations	6.8	340
Turnouts	6"-0" Pit-Run		8	Turnout	22	Turnouts	1	22
Turnaround	6"-0" Pit-Run		N/A	TA	24	TA	1	24
Landing Rock	6"-0" Pit-Run	6+80	N/A	Landing	30	Landings	1	30
Total Rock for Road Segment:				<b>13 to 14</b>				416
ROAD SEGMENT: 15 to 16				POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)
Application	Rock Size and Type	Location	Depth of Rock (inches)	15 to 16		0+00 to 12+30		
				Volume (CY) per		Number of		
Base Rock	6"-0" Pit-Run	15 to 16	8	Station	50	Stations	12.3	615
Turnouts	6"-0" Pit-Run		8	Turnout	22	Turnouts	3	66
Junctions	6"-0" Pit-Run		8	Junction	30	Junctions	1	30
Turnaround	6"-0" Pit-Run		N/A	TA	24	TA	1	24
Landing Rock	6"-0" Pit-Run	12+30	N/A	Landing	30	Landings	1	30
Total Rock for Road Segment:				<b>15 to 16</b>				765
ROAD SEGMENT: 17 to 18				POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)
Application	Rock Size and Type	Location	Depth of Rock (inches)	17 to 18		0+00 to 31+20		
				Volume (CY) per		Number of		
Subgrade Leveling	1"-0" Crushed		N/A					100
Surfacing	1"-0" Crushed	0+00-31+20	2	Station	13	Stations	31.2	406
Turnouts	1"-0" Crushed		2	Turnout	10	Turnouts	5	50
Junctions	1"-0" Crushed		2	Junction	10	Junctions	2	40
Total Rock for Road Segment:				<b>17 to 18</b>				596

**Total Rock for Project No. 1**

24"-6"	6"-0"	1"-0"	¾"-0"	TOTAL
140	5,549	596	2,073	8,358

Roads shall be uniformly graded and approved by STATE prior to rocking. For typical cross section, see Forestry Department Drawing Nos. 351-C and 351-D at the Forestry Department District Office.

EXHIBIT D

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 sediments will not enter streams.

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

Rock Checking. All rock spreading shall be done only when a STATE representative is present. STATE shall issue a receipt for each load delivered, and rock shall be measured without allowance for shrinkage or shakedown during hauling. Total truck measure volume for each road segment shall be as shown on Exhibit D. Deliver at least 600 cubic yards per 8-hour shift, unless otherwise approved by STATE. A penalty of \$10 for each 10 cubic yards which are not delivered during a single shift shall be billed, and payment shall be required prior to final acceptance of the project by STATE.

Depth Measurement. 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. If additional rock is required because of insufficient depth, it shall be added by truck measure to those areas that were slighted. The conversion from compacted yardage to truck yardage is 1.3 multiplied by the compacted yardage equals truck yardage.

The depth of compacted aggregates shall not vary more than 1 inch from the depth specified in Exhibit D. The average depth for each road segment shall be the specified depth or greater. Surfacing areas shall be staked by STATE.

Load Records. 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 the prior month must be submitted no later than the 15th of each month.

EXHIBIT D

COMPACTION AND PROCESSING REQUIREMENTS

Subgrade. 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 visible deformation ceases, or in the case of a sheepsfoot roller, the roller "walks out." A minimum of 3 passes shall be made over the entire width and length of the road. A pass is defined as traveling a road section in one direction and then back over that same section again. Compaction shall be accomplished by using one or more of the approved equipment options listed below:

ROAD SEGMENT	COMPACTION EQUIPMENT OPTIONS
All road segments that require rock surfacing.	1

Fills. 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 or, in the case of a sheepsfoot roller, the roller "walks out." At least of 3 passes shall be made over the entire width and length of each layer. A pass is defined as traveling a fill layer in one direction and then back over that same layer again.

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 or 3, and 4

Crushed Rock. 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 a 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. A pass is defined as traveling a road section in one direction and then back over that same section again. Compaction shall be accomplished by using one or more of the approved equipment options listed below:

ROAD SEGMENT	COMPACTION EQUIPMENT OPTIONS
All road segments requiring crushed rock	1

EXHIBIT D

COMPACTION AND PROCESSING REQUIREMENTS

Pit-Run Rock. 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 a 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. A pass is defined as traveling a road section in one direction and then back over that same section again. Compaction shall be accomplished by using one or more of the approved equipment options listed below:

ROAD SEGMENT	COMPACTION EQUIPMENT OPTIONS
All road segments requiring pit-run rock	5

COMPACTION EQUIPMENT OPTIONS

- (1) Vibratory Rollers. 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 mile to 1.8 miles per hour, as directed by STATE.
- (2) Rubber-Tired Skidders. A rubber-tired skidder weighing a minimum of 20,000 pounds shall be operated over the fill layers so that the entire layered surface comes in contact with the tires. Skidders with oversized tires (high flotation) are not acceptable for compaction.
- (3) Tampingfoot Compactors. Tampingfoot or sheepsfoot 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.
- (4) Vibratory Hand-Operated or Backhoe-Mounted Tamper. Vibratory hand-held or hydraulic tampers shall be used for compaction of backfill materials around culverts (and/or bridge approach embankment materials around abutments). The tamper shoe dimensions shall be a minimum of 10" X 13" and capable of a centrifugal force of 2,250 pounds.
- (5) Vibratory Grid Compactors. 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. All culverts shall conform to the material and fabricating requirements of Sections 2410 and 2420 of the "Standard Specifications for Highway Construction" prepared by the Highway Division of the Oregon State Department of Transportation. Culverts shall be constructed of double-walled polyethylene and shall meet the requirements of AASHTO M-294-901, Type S. Corrugation types and shapes other than those meeting the above minimum Highway requirements, shall be approved in writing by STATE. This specification applies to high density polyethylene corrugated pipe with an integrally formed smooth interior. Clean, reworked material may be used.

All culverts 24 inches in diameter or greater shall have 1:1 beveled inlets.

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 stipulated in special instructions.

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

Culvert grade shall slope away from ditch grade at least 5 percent unless otherwise specified.

The foundation and trench walls for all culverts shall be free from logs, stumps, limbs, stones over 3 inches, and other objects which would dent or damage the pipe during installation or use. The culvert trench shall be excavated wide enough to permit compaction and working on each side of the pipe. Tamping shall be done in 6-inch lifts, 1 pipe diameter each side of the pipe to 95 percent density or over. Bedrock shall be excavated as required to provide a uniform foundation for the full length of the culvert.

A bedding of granulated material or crushed rock as specified shall be placed to provide a wide band of support and to transmit the load from above evenly over the entire length of the pipe.

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

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

Joining shall be done with bands of like material and corrugations. Manufacturers' instructions shall be followed for prefabricated pipe assembly.

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

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

Fill heights, if not shown on a road plan and profile, shall be in accordance with those shown in Drawing No. 2094, "Fill Height Tables", prepared by the Highway Division of the Oregon State Department of Transportation. Any deviation must be approved by STATE.

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" (add 6" for roads which will not be rocked). Minimum vertical cover for other designs shall be as specified by STATE.



EXHIBIT E

CULVERT SPECIFICATIONS

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. Construct lead-off ditches away from culvert outlets where the slope gradients restrict the free flow of water.

Polyethylene culverts shall be double walled and meet the requirements of AASHTO M-294-901, Type S.

The intake ends of culverts in fills less than 3 feet shall be marked by driving white fiberglass posts within 6 inches of the downgrade side. Posts shall be a minimum of 6 feet long and 2 ½ inches wide, with the spade driven 2 feet into the ground.

Tamping is required.

All removed culverts shall be hauled to an approved refuse site off of STATE land.

CULVERT LIST

CULVERT NO.	DIAMETER (Inches)	LENGTH (Feet)	MATERIAL TYPE	ROAD SEGMENT POINT TO POINT	STATION
1	18	30	CPP	2A to 2B	4+50
2	18	30	CPP	2A to 2B	8+00
3	18	50	CPP	2A to 2B	10+64
4	18	30	CPP	2A to 2B	13+85
5	24	40	CPP	2A to 2B	14+60
6	18	40	CPP	2A to 2B	19+40
7	18	30	CPP	2A to 2B	21+60
8	18	50	CPP	2A to 2B	22+60
9	18	36	CPP	2A to 2B	25+35
10	18	30	CPP	2A to 2B	27+00
11	18	40	CPP	2C to 2D	1+40

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.
- (2) PURCHASER shall schedule and coordinate quarry and stockpile usage with other existing or planned STATE contracts.
- (3) 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.
- (4) PURCHASER shall conduct the operation relative to the disposal of waste material in such manner that silt, rock, debris, dirt, or clay shall not be washed, conveyed, or otherwise deposited in any stream.
- (5) Quarry face shall be developed in a uniform manner.
- (6) Benches shall be maintained 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 degrees or less. Said bench shall be easily accessible with tractors.
- (7) Proper winterization and storm-water control measures such as water barring, drainage, utilization of filter bales, mulching and/or blocking access shall be utilized and such measures maintained to protect the watershed and project work, as directed by STATE.
- (8) PURCHASER shall notify STATE 2 days prior to the start of quarry development activities.
- (9) All quarry backslopes shall be left in a stable condition.
- (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 quarry use as directed by STATE.

State Timber Sale Contract  
No. 341-06-84  
Rip Tide

EXHIBIT G

PIT-RUN AND RIPRAP ROCK SPECIFICATIONS

<u>For 6"-0" Pit-Run</u>	Passing	10" sieve	100%
	Passing	6" sieve	65%

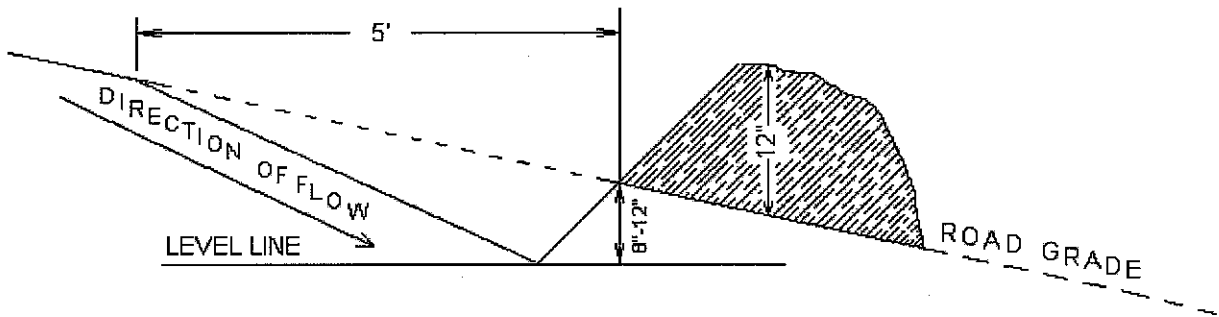
Control of gradation shall be by visual inspection by STATE.

For 24"-6" Riprap      A minimum of 50 percent or more of the material shall measure at least 24 inches, measured in one dimension. Material shall be clean, well graded, and free of 2"-0" fines.

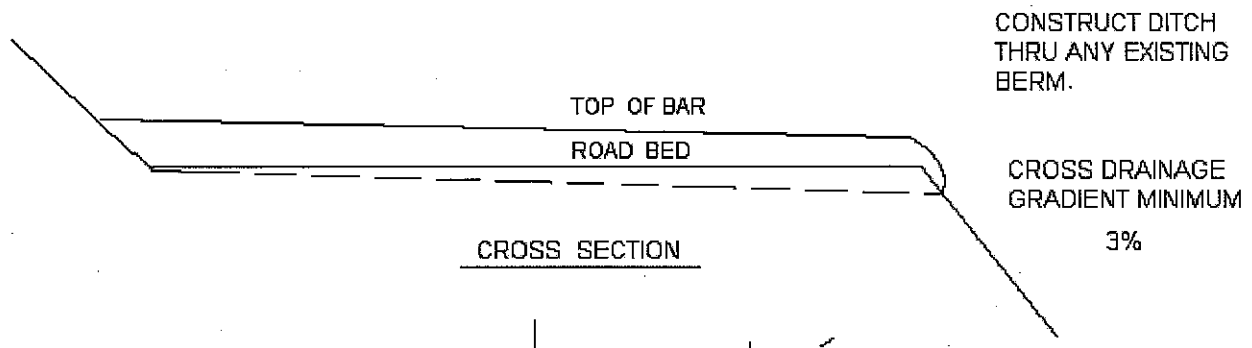
Control of gradation shall be by visual inspection by STATE.

EXHIBIT H

WATERBAR SPECIFICATIONS

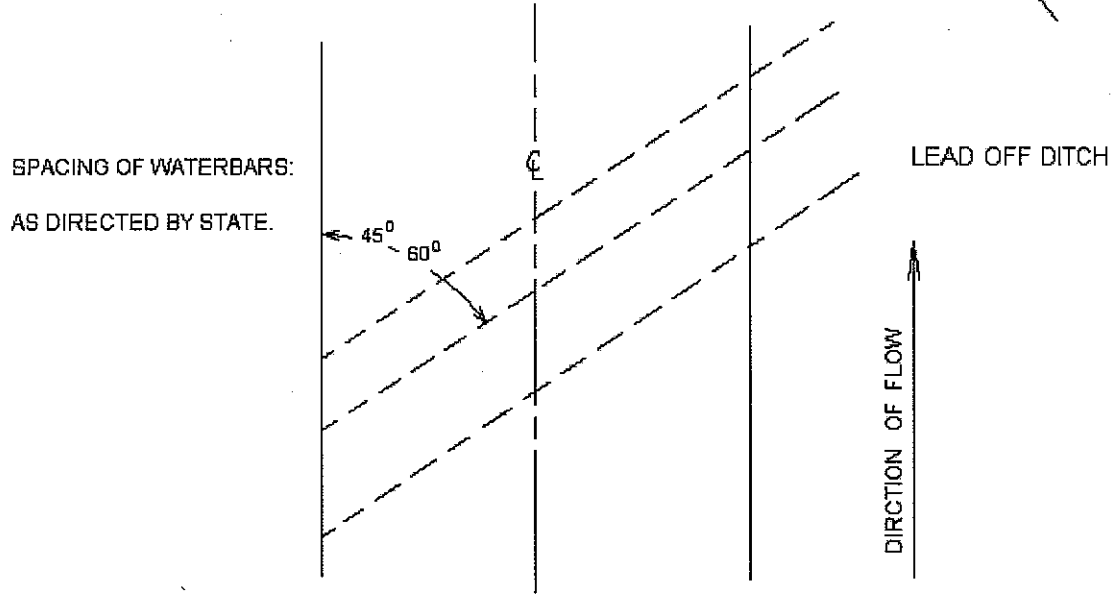


PROFILE



CROSS SECTION

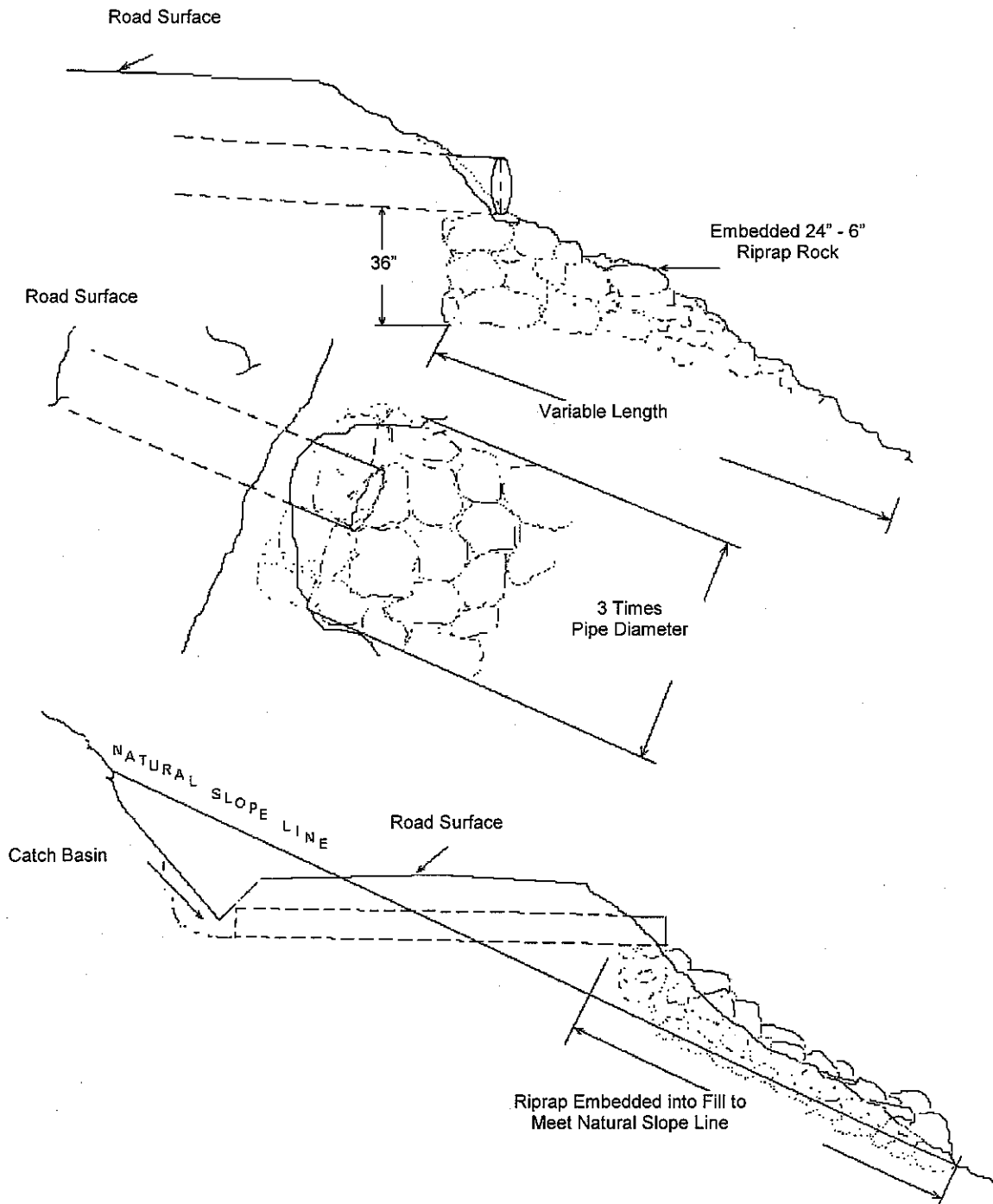
CONSTRUCT DITCH  
THRU ANY EXISTING  
BERM.  
  
CROSS DRAINAGE  
GRADIENT MINIMUM  
3%



PLAN VIEW

EXHIBIT I

TYPICAL EMBEDDED ENERGY DISSIPATOR



## **PART IV: OTHER INFORMATION**

### **FOREST PRACTICES ACT "WRITTEN PLAN" For Harvest of Rip Tide Timber Sale 341-06-84**

**Landowner:**

Oregon Department of Forestry  
92219 Hwy 202  
Astoria, OR 97103  
(503) 325-5451

**Protected Resources:**

The following streams are located in Section 35 of T6N, R6W, W.M., Clatsop County, Oregon.

Area 3 A portion of the northeastern boundary of Area 3 is adjacent to a medium Type F tributary of Bull Heifer Creek for approximately 1,500 feet. There are no Type F streams within Area 3.

**Specific Site Characteristics:**

Music Creek (Area 3): The streambeds are approximately 10 to 12 feet wide with moderate stream-bank slopes. Streamside vegetation is dominated by mature red alder and salmonberry maple. An old vacated Road parallels Music Creek just outside the timber sale boundary. There is a significant component of conifer trees located above the vacated road.

**Tree and Vegetation Retention:**

The timber sale boundary for Area 3 is posted at least 50 feet from the Type F stream. This is a partial cut harvest unit leaving 160 square feet of conifer basal area per acre. There is one small Type N stream that runs through the sale area and flows into Music Creek. This small Type N stream has a 25 foot unposted stream buffer which is shown on the Exhibit A map.

**Practices:**

Along the above mentioned Type F stream that is adjacent to Area 3, as well as all other perennial Type N streams not listed, the following practices are required under the timber sale contract:

- No trees will be felled within stream buffers (RMA's), except in cable corridors.
- Trees adjacent to the stream buffers (RMA's) will be felled away from or parallel to the streams to prevent trees from entering the aquatic areas.
- No ground based logging equipment will be permitted within the RMA's.

When cable logging is conducted nearby the RMA's, logging lines may cross, but will not be lowered into the RMA's during yarding, except during rigging. During rigging the lines must be pulled out of the RMA's when changing corridors.

I, the undersigned, submit this written plan in compliance with the requirements in the Forest Practices Act regarding the operations conducted within 100 feet of Type F streams. I agree to the protection measures listed on this plan:

Submitted: \_\_\_\_\_  
Purchaser/Operator Contract Representative

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

**Attachments:** Logging Plan Maps

State Timber Sale Contract  
No. 341-06-84  
Rip Tide

OREGON DEPARTMENT of FISH and WILDLIFE

FISH SCREENING PROGRAM

**SMALL PUMP SCREEN SELF CERTIFICATION**

The Oregon Water Resources Department in coordination and cooperation with the Oregon Department of Fish and Wildlife includes screen requirements on pumps to protect fish as a condition of many surface water and/or reservoir water right permits. This is done in accordance with ORS 537.153.

The Oregon Department of Fish and Wildlife does not usually inspect small pump screens at pumped diversions less than 225 GPM (Gallons per Minute), but furnishes the following fish screening criteria information to the water right permit tee:

**Screen material open area** must be at least 27% of the total wetted screen area.

**Perforated plate:** Openings shall not exceed 3/32 or 0.0938 inches (2.38 mm).

**Mesh/Woven wire screen:** Square openings shall not exceed 3/32 or 0.0938 inches (2.38mm) in the narrow direction, e.g., 3/32 inch x 3/32 inch open mesh.

**Profile bar screen/Wedge wire:** Openings shall not exceed 0.0689 inches (1.75 mm) in the narrow direction.

**Screen area** must be large enough to cause fish impact. Wetted screen area depends on the water flow rate and the water approach velocity. **Approach velocity** is the water velocity perpendicular to and approximately three inches in front of any part of the screen face.

**An Active pump screen** is a self cleaning screen that has a proven cleaning system. The **screen approach velocity for active pump screens** shall not exceed 0.4 fps (feet per second) or 0.12 mps (meters per second). The wetted screen area in square feet is calculated by dividing the maximum water flow rate in cubic feet per second (1 cfs = 449 gpm) by 0.4 fps.

**A Passive pump screen** is a screen that has no cleaning system other than periodic manual cleaning. **Screen approach velocity for passive pump screens** shall not exceed 0.2 fps or 0.06 mps. The wetted screen area in square feet is calculated by dividing the maximum water flow rate by 0.2 fps.

*For further information on fish screening please contact:*

Bernie Kepshire, Oregon Department of Fish and Wildlife,  
7118 NE Vandenberg Avenue, Corvallis, OR 97330-9446 (541) 757-4186 x 255

As evidence of having met fish screen installation requirements, please sign the certification and send to: Oregon Water Resources Department, Water Rights Section, 725 Summer St. NE, Suite A, Salem, OR 97301-1271

**Certification:** I certify that my small pumped diversion of less than 225 gpm meets fish screening criteria, and that I will maintain it to comply with regulatory criteria. I also understand that should fish screening standards change, I may be required to modify my installation to meet applicable standards.

Applicant Signature:

Date: / / WRD File #

Printed Name and Address:

Phone: ( )

Fax: ( )

*bm*

*3/11/99*

*PUMPCERT.doc*

NB: ODFW logo is 129% of logo on HQ mail label