

PART III: EXHIBITS

State Timber Sale Contract
No. 341-06-16
Greenback

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.: 341-06-16

(2) Sale Name: Greenback

(3) Contract Expiration Date: September 30, 2007

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.



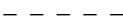



	Cable landing, with numbers for sequence.
	Tractor landing with alphabetical sequence.
	Approximate setting boundary.
	Spur truck roads.
	Tractor yarding roads.
	Temporary stream crossings.

EXHIBIT B
OPERATIONS PLAN

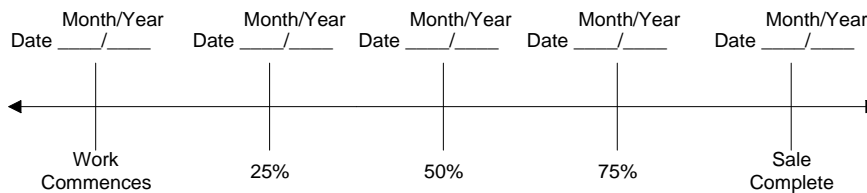
Completion Timeline

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 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: West Oregon (01) Phone 541-929-3266
(State Forestry District)
Address 24533 Alsea Hwy., Philomath, OR 97370
- (4) PURCHASER: _____
Address _____

(5) 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

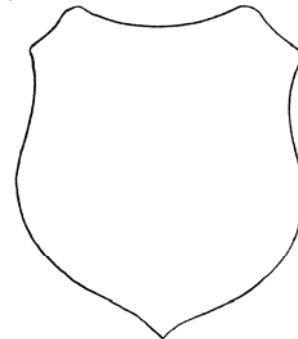
(10) APPROVED SCALING LOCATIONS	Species	Yard	Truck

- (11) NOTICE OF CANCELLATION OF BRAND:
Effective Date: _____

State Forester's Representative

- (12) SALE NAME Greenback
COUNTY Polk
- (13) STATE CONTRACT NUMBER 341-06-16
- (14) SCALE: westside ☒ eastside ☐ cubic foot ☐
- (15) STATE BRAND REGISTRATION NUMBER _____
- (16) BUREAU BRAND CODE NUMBER _____
- (17) STATE BRAND INFORMATION:

(COMPLETE) ↓



- (18) PAINT REQUIRED: YES ☒
COLOR Orange

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

- (20) REMARKS: _____

Operator's Name (Optional inclusion by District): _____

- (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
14 feet	12 feet	A to A1	0+00 to 317+00	Ditch
14 feet	12 feet	A2 to A3	0+00 to 3+00	No Ditch
14 feet	12 feet	A4 to D	0+00 to 19+10	Ditch
14 feet	12 feet	B to B1	0+00 to 22+30	Ditch
14 feet	12 feet	B2 to B3	0+00 to 9+80	No Ditch
14 feet	12 feet	C to C1	0+00 to 139+00	Ditch
14 feet	12 feet	C2 to C3	0+00 to 8+50	No Ditch
14 feet	12 feet	C3 to C4	0+00 to 4+50	No Ditch
14 feet	12 feet	C3 to C5	0+00 to 18+00	No Ditch
14 feet	12 feet	C6 to C7	0+00 to 7+40	No Ditch
14 feet	12 feet	C8 to C9	0+00 to 31+30	No Ditch
14 feet	12 feet	D to D1	0+00 to 51+20	Ditch
14 feet	12 feet	D1 to D2	0+00 to 1+80	No Ditch
14 feet	12 feet	D3 to D4	0+00 to 2+50	No Ditch
14 feet	12 feet	E to E1	0+00 to 65+50	Ditch
14 feet	--	E2 to E3	0+00 to 7+70	No Ditch
14 feet	--	E4 to E5	0+00 to 10+60	No Ditch
14 feet	12 feet	F to F1	0+00 to 29+00	Ditch
14 feet	--	F to F1	29+00 to 33+90	No Ditch
14 feet	--	F2 to F3	0+00 to 12+70	No 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.

All clearing limits shall be marked by State with R/W tags and fluorescent pink flagging. 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 classifications are as follows:

New construction, improvements, and re-constructions – 5 feet back from the top of the cutslope and 5 feet out from the toe of the fill.

CLEARING AND GRUBBING DISPOSAL. Scatter through openings in the timber outside of the cleared right-of-way, except areas where end-haul is required.

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-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 backfills. Embankment materials shall be free of woody debris, brush, muck, sod, frozen material, and other deleterious materials. All fills and drainage structure backfills shall be machine compacted according to the specifications in Exhibit E.

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

Ditch. Construct "V" ditch 3 feet wide and to a depth of 1 foot below subgrade. Subgrade shall be crowned at 4 to 6 percent. Construct ditchouts away from subgrade at locations marked in the field.

Outslope. Road subgrade shall be outsloped at 1 to 3 percent.

TURNOUTS. 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: As marked in the field.

GRADING

Rock
Common - side slopes 50% and over
Common - side slopes less than 50%
Common - turnpike (level) section

<u>Back Slopes</u>
Vertical to 1/4:1
1/2:1
3/4:1
2:1

<u>Fill Slopes</u>
Not steeper than 1½:1

Top of cutslope shall be rounded.

LANDINGS. Landings shall be constructed to the dimensions posted in the field. Surface is to be crowned for drainage, with general grade no more than 3 percent.

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

EXHIBIT E
ROAD SURFACING

POINT TO POINT	STATION TO STATION	TYPE OF ROCK	ROCK SIZE	COMPACTED DEPTH	VOLUME PER STA.	APPROX. TOTAL VOL.
B to B1	0+00 to 22+30	Crushed	1½ - 0"	4"	22 CY	504 CY
B2 to B3	0+00 to 9+80	Crushed	2½ - 0"	8"	44 CY	414 CY
C to C1	32+00 to 90+00	Crushed	1½ - 0"	4"	22 CY	1278 CY
C2 to C3	0+00 to 8+50	Crushed	2½ - 0"	8"	44 CY	378 CY
C3 to C4	0+00 to 4+50	Crushed	2½ - 0"	8"	44 CY	180 CY
C3 to C5	0+00 to 18+00	Crushed	2½ - 0"	8"	44 CY	774 CY
C6 to C7	0+00 to 7+40	Crushed	2½ - 0"	8"	44 CY	306 CY
D to D1	0+00 to 33+00	Crushed	1½ - 0"	6"	33 CY	1098 CY
D to D1	33+00 to 51+20	Crushed	2½ - 0"	8"	44 CY	792 CY
D1 to D2	0+00 to 1+80	Crushed	2½ - 0"	8"	44 CY	54 CY
D3 to D4	0+00 to 2+50	Crushed	2½ - 0"	8"	44 CY	90 CY
		TURNOUTS:			NO. OF TURNOUTS	
B to B1	0+00 to 22+30	Turnout Rock	2½ - 0"	--	1	9 CY
C to C1	32+00 to 90+00	Turnout Rock	2½ - 0"	--	17	180 CY
D to D1	0+00 to 33+00	Turnout Rock	2½ - 0"	--	4	54 CY
	POINT	LANDINGS:		VOL. PER LANDING	NO. OF LDG.	
B2 to B3	B3	Crushed	Jaw-Run	36 CY	1	36 CY
C3 to C4	C4	Crushed	Jaw-Run	36 CY	1	36 CY
C3 to C5	C5	Crushed	Jaw-Run	54 CY	1	54 CY
C3 to C5	Sta. 7+50	Crushed	Jaw-Run	27 CY	1	27 CY
C6 to C7	C7	Crushed	Jaw-Run	36 CY	1	36CY
D to D1	D1	Crushed	Jaw-Run	36 CY	1	36 CY
D1 to D2	D2	Crushed	Jaw-Run	36 CY	1	36 CY
D3 to D4	D4	Crushed	Jaw-Run	36 CY	1	36 CY

EXHIBIT E
ROAD SURFACING

POINT TO POINT	STATION/POINT	MISCELLANEOUS:	ROCK SIZE			TOTAL VOLUME
A to A1	0+00 to 239+90	Spot Rock	1½ - 0"	--	--	100 CY
A to A1	235+00 (Pt. C)	Culvert Patch Rock	1½ - 0"	--	--	9 CY
B to B1	0+00 to 22+30	Curve Widening Rock	1½ - 0"	--	--	54 CY
B2 to B3	0+00 to 9+80	Curve Widening Rock	2½ - 0"	--	--	54 CY
C to C1	0+00 to 139+00	Culvert Bedding Rock	1½ - 0"	--	--	54 CY
C to C1	67+10	Culvert Patch Rock	2½ - 0"	--	--	9 CY
C to C1	79+48	Culvert Patch Rock	2½ - 0"	--	--	9 CY
C to C1	85+45	Culvert Patch Rock	2½ - 0"	--	--	9 CY
C to C1	88+80	Culvert Patch Rock	2½ - 0"	--	--	9 CY
C to C1	98+80	Culvert Patch Rock	1½ - 0"	--	--	9 CY
C to C1	98+80	Culvert Patch Rock	2½ - 0"	--	--	18 CY
C to C1	135+00	Culvert Patch Rock	1½ - 0"	--	--	9 CY
C to C1	135+00	Culvert Patch Rock	2½ - 0"	--	--	9 CY
C to C1	0+00 to 32+00, 90+00 to 139+00	Spot Rock	1½ - 0"			252 CY
C to C1	32+00 to 90+00	Curve Widening Rock	1½ - 0"	--	--	162 CY
C2 to C3	0+00 to 8+50	Curve Widening Rock	2½ - 0"	--	--	36 CY
C2 to C3	Pt. C2	Junction Patch Rock	1½ - 0"	--	--	9 CY
C3 to C5	11+15	Bedding Rock	1½ - 0"	--	--	9 CY
C3 to C5	0+00 to 18+00	Curve Widening Rock	2½ - 0"	--	--	90 CY
C6 to C7	Pt. C6	Junction Patch Rock	1½ - 0"	--	--	9 CY
D to D1	0+00 to 33+00	Curve Widening Rock	1½ - 0"	--	--	108 CY
E2 to E3	Pt. E2	Junction Patch Rock	1½ - 0"	--	--	9 CY
E4 to E5	Pt. E4	Junction Patch Rock	1½ - 0"	--	--	9 CY
F2 to F3	Pt. F2	Junction Patch Rock	1½ - 0"	--	--	9 CY
	LOCATION	POST-HARVEST:		VOL PER LANDING	NO. OF LANDINGS	
A to A1	285+00 (Pt. B) to 317+00 (Pt. A1)	Landing Patch Rock	1½ - 0"	9 CY	12	108 CY
B to B1	0+00 to 22+30	Landing Patch Rock	1½ - 0"	9 CY	5	54 CY
C to C1	0+00 to 139+00	Landing Patch Rock	1½ - 0"	9 CY	12	108 CY
D to D1	21+60 to 33+00	Landing Patch Rock	1½ - 0"	9 CY	4	36 CY
D to D1	33+00 to 51+20	Landing Patch Rock	2½ - 0"	9 CY	5	45 CY
B2 to B3	Pt. B3	Turnaround Rock	2½ - 0"	27 CY	--	27 CY
C3 to C4	Pt. C4	Turnaround Rock	2½ - 0"	27 CY	--	27 CY
C3 to C5	Pt. C5	Turnaround Rock	2½ - 0"	27 CY	--	27 CY
C6 to C7	Pt. C7	Turnaround Rock	2½ - 0"	27 CY	--	27 CY
D to D1	Pt. D1	Turnaround Rock	2½ - 0"	27 CY	--	27 CY
	Haul Route	Maintenance Rock	1½ - 0"	--	--	234 CY

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.

Additional rock for curve widening is required and has been included in the volume estimates.

Fifty feet has been subtracted from the total length of rock roads for the landing rock.

Rock volumes rounded to nearest 9 or 18 CY load.

EXHIBIT E

CRUSHED ROCK SPECIFICATIONS

Materials. The material shall be fragments of rock or other hard, durable particles crushed to the required size and a filler of finely crushed stone, sand, or other finely divided mineral matter. The material shall be free from vegetation and lumps of clay.

Quality and Grading Requirements. The stone base materials shall be crushed rock, including sand. River gravel shall not be used.

The material from which base material is produced or manufactured shall meet the following test requirements:

Hardness - Test Method AASHTO T 96 35% Maximum

Durability - Test Method ODOT TM 208
Passing No. 20 Sieve: 30% Maximum
Sediment Height: 3" Maximum

<u>For 1½ "-0"</u>	Passing	2" sieve	100%
	Passing	1½" sieve	95-100%
	Passing	¾" sieve	55-75%
	Passing	¼" sieve	35-50%

Of the fraction passing ¼" sieve, 40% to 60% shall pass the No. 10 sieve.

<u>For 2½ "-0"</u>	Passing	3" sieve	100%
	Passing	2½" sieve	95-100%
	Passing	1¼" sieve	55-75%
	Passing	¼" sieve	30-45%

Of the fraction passing ¼" sieve, 40% to 60% shall pass the No. 10 sieve.

<u>For Jaw-Run</u>	Passing	6" sieve	100%
	Passing	3" sieve	45-65%

EXHIBIT E

ROCK ACCOUNTABILITY

The rock shall meet the quality and size specifications in Exhibit E. A copy of the rock test sheets shall be supplied to and approved by STATE prior to rocking. 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.

Depth Measurement. Rock shall be spread and compacted according to the depths specified in Exhibit E. 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 E. The average depth for each road segment shall be the specified depth or greater.

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 E

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." At least 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 the approved equipment listed below or others approved by STATE:

Subgrade shall be crowned at 4 to 6 percent unless otherwise specified.

ROAD SEGMENT	COMPACTION EQUIPMENT OPTIONS
B2 to B3, C2 to C3, C3 to C4, C3 to C5, C6 to C7, D to D1 Station 33+00 to Point D1, D1 to D2, and D3 to D4	1
F2 to F3	4

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 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
C to C1 and D to D1 (culvert replacements)	2
C3 to C5	1 and 2

EXHIBIT E

COMPACTION AND PROCESSING REQUIREMENTS

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 6 inches in depth. When more than 1 layer is required, each shall be shaped and compacted before the succeeding layer is placed. Any irregularities or depressions that develop during compaction of the top layer shall be corrected by loosening the material at these places and adding or removing material until the surface is smooth and uniform. Each layer shall be compacted with a minimum of 3 passes over the entire width and length of the road. 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:

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

Rock shall be crowned at 4 to 6 percent unless otherwise specified.

ROAD SEGMENT	COMPACTION EQUIPMENT OPTIONS
B to B1, B2 to B3, C to C1 Station 32+00 to 90+00 (Point E), C2 to C3, C3 to C4, C3 to C5, C6 to C7, D to D1, D1 to D2, and D3 to D4.	1 and 3
Spot, Maintenance, Junction, and Landing Patch Rock	3

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 miles to 1.8 miles per hour, as directed by STATE.
- (2) 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.
- (3) Rock Trucks. Rock spreading shall begin at the nearest point to the rock source and progress toward the end of the project. Rock trucks shall be routed over the entire cross section of rock layers.
- (4) Crawler Tractors. D-7 Caterpillar or equivalent or larger.

EXHIBIT F

CULVERT SPECIFICATIONS

All culvert materials shall be furnished and installed by PURCHASER, unless otherwise specified in the Contract. Culverts shall be constructed of aluminized steel. All culverts shall conform to the material and fabricating requirements of the "Standard Specifications for Highway Construction" prepared by the Highway Division of the Oregon State Department of Transportation. Corrugation types and shapes other than those meeting the above minimum Highway requirements, shall be approved in writing by STATE.

Watertight joints with gaskets are required for all culverts 36 inches in diameter or larger. Required gasket materials shall be in accordance with the minimum requirements of the Oregon Department of Transportation Drawing RD 354, or as approved in writing by STATE.

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 the same grade as the ditch.

Culverts less than 36 inches in diameter shall be installed with the lock seam on the inlet end placed within 45 degrees of the bottom of the trench.

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 pipe. The culvert trench shall be excavated $1\frac{1}{2}$ times the pipe diameter with at least 2 feet on each side of the pipe to permit compaction and working on each side of pipe. Tamping shall be done in 6-inch lifts 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.

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.

EXHIBIT F

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" 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.

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 a 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.

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

Dia.	Steel Pipe Gauge	Band Gauges	Band Widths ("")			Hugger Band Widths ("")	
			Annular	Helical	Dimpled	Annular	Helical
12-15	16	16	7	12	12	13 1/8	10 1/2
18-24	16	16	12	12	12	13 1/8	10 1/2
30-36	16	16	12	12	12	13 1/8	10 1/2
42	14	16	12	12	NA	13 1/8	10 1/2
48	14	16	24	24	NA	13 1/8	10 1/2
54	14	16	24	24	NA	13 1/8	10 1/2
60	12	16	24	24	NA	13 1/8	10 1/2
66-72	12	16	24	24	NA	13 1/8	10 1/2
78	12	16	24	24	NA	13 1/8	10 1/2
84	12	16	24	24	NA	14 3/4	10 1/2
90-120	12	16	26	26	NA	NA	NA

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

EXHIBIT F
CULVERT LIST

CULVERT NO.	DIAMETER (Inches)	CULVERT GAUGE	LENGTH (Feet)	MATERIAL TYPE	ROAD SEGMENT POINT TO POINT	STATION
1	18	16	30	Aluminized	A to A1	235+00
2	18	16	40	Aluminized	C to C1	67+10
3	18	16	34	Aluminized	C to C1	79+48
4	18	16	40	Aluminized	C to C1	85+45
5	18	16	40	Aluminized	C to C1	88+80
6	24	16	60	Aluminized	C to C1	98+80
7	18	16	36	Aluminized	C to C1	135+00
8	18	16	50	Aluminized	C3 to C5	11+15
9	21" Half Round	16	40	Aluminized	C3 to C5	11+15
10	18	16	40	Aluminized	D to D1	33+00

Tamping is required.

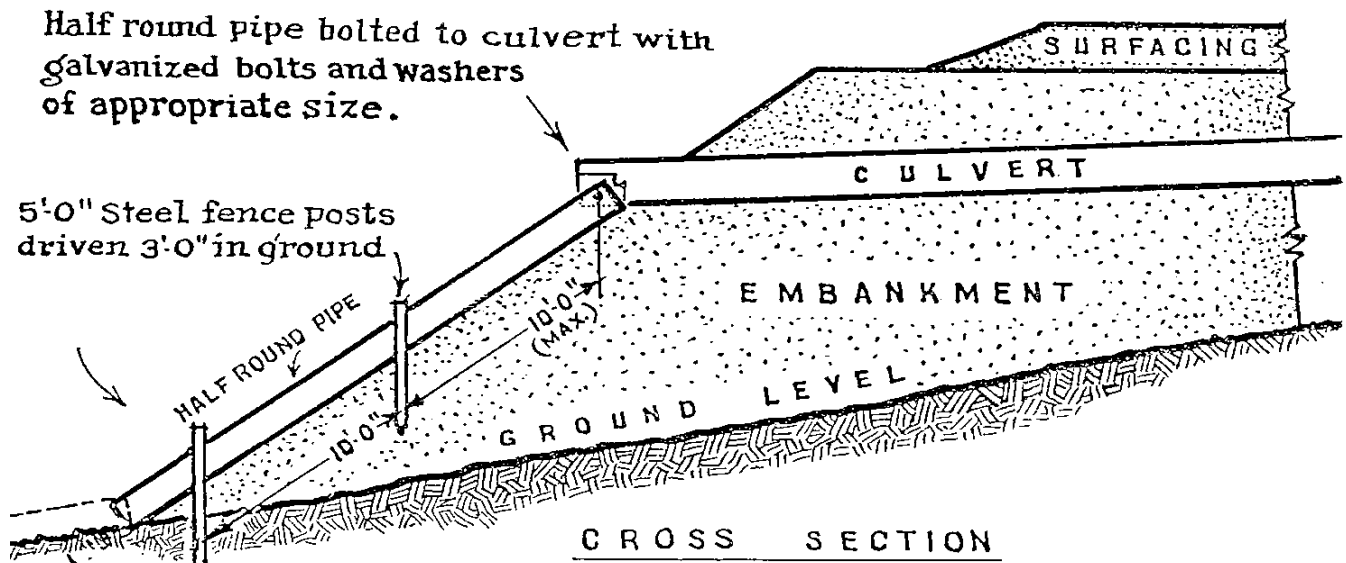
All metal culverts scheduled for replacement shall become property of PURCHASER and be removed from STATE land in the same project period in which replacement occurred.

Half rounds shall be installed within 72 hours of culvert installation, unless otherwise approved in writing by STATE. Steel posts used with half round installation shall be painted with rust preventative paint.

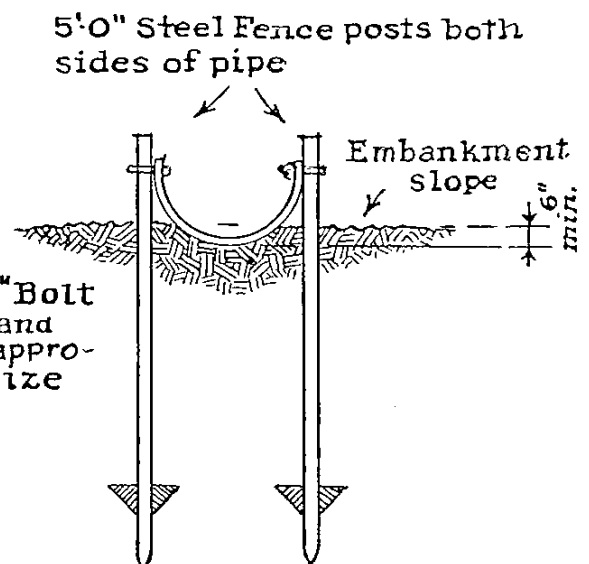
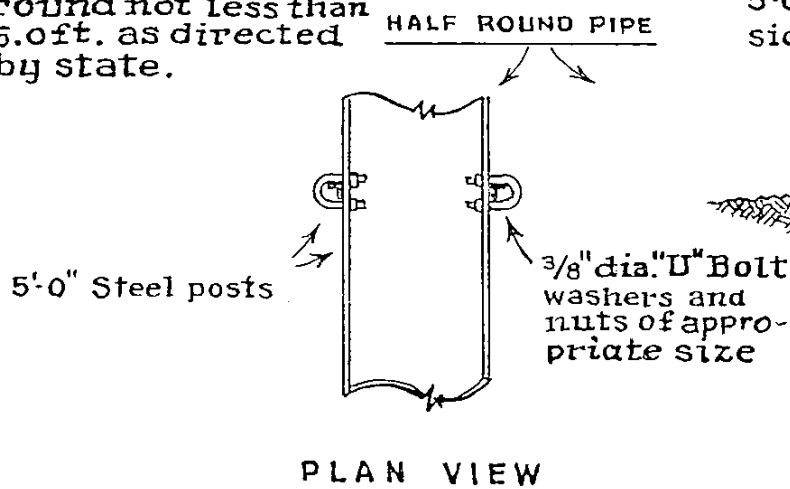
EXHIBIT F

TYPICAL HALF ROUND CULVERT INSTALLATION

(no scale)



Solid rock, boulders etc.
If erodable, install half
round not less than
5.0ft. as directed
by state.



END VIEW

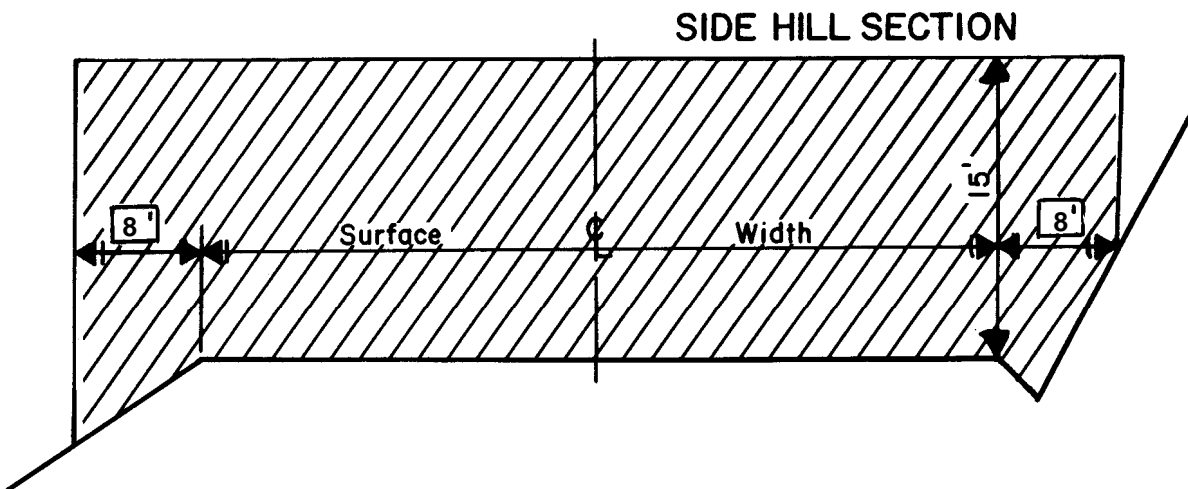
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659
B

EXHIBIT G
ROAD BRUSHING SPECIFICATIONS



Clearing Limits

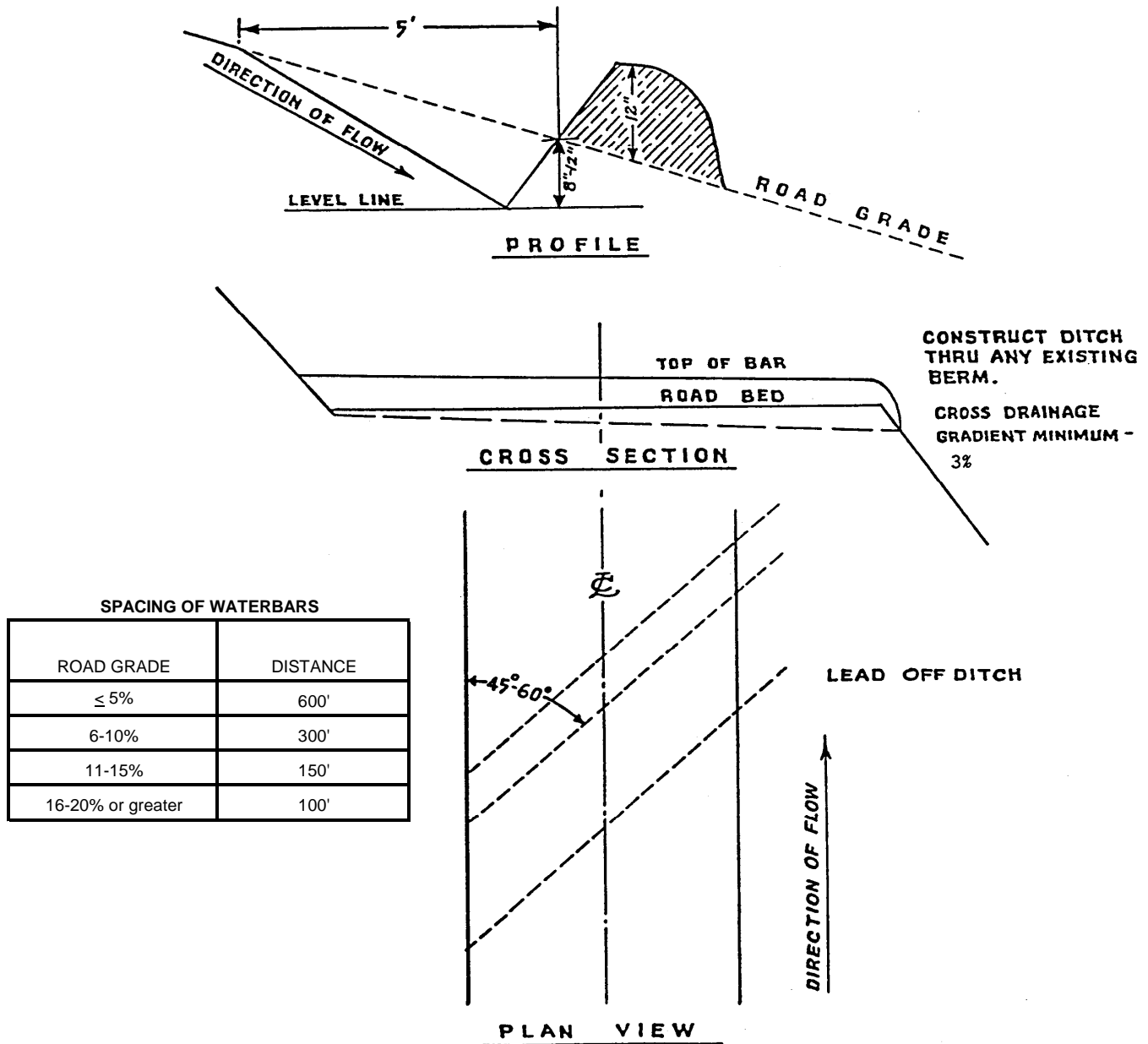


REQUIREMENTS

Unless otherwise approved in writing by STATE, brush and trees shall be cut to a height of 6 inches or less above the ground surface or obstructions such as rocks or existing stumps.

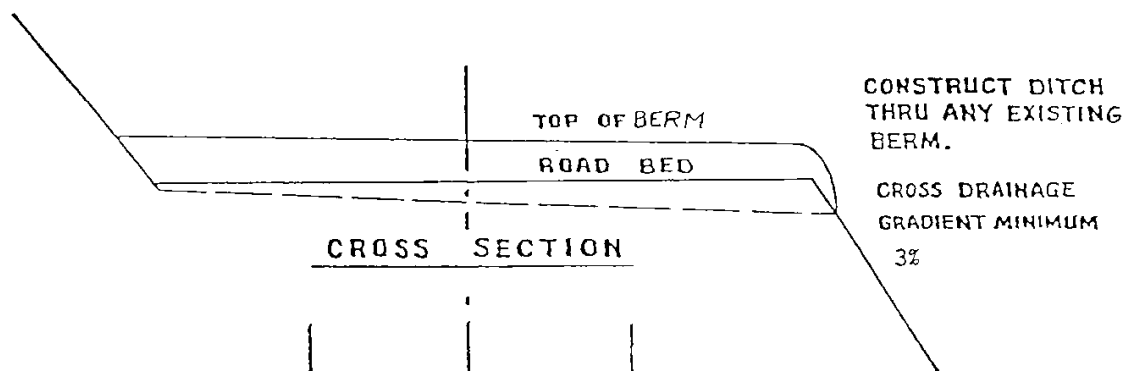
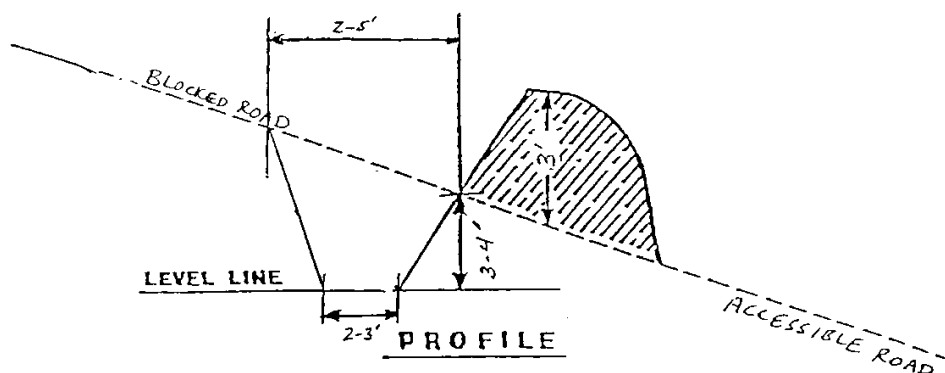
Debris resulting from the brushing operation shall be removed from the roadway, cutslope, ditches, and water courses within 72 hours and may be scattered downslope from the road or placed in other stable locations, unless otherwise approved by STATE.

EXHIBIT H WATERBAR SPECIFICATIONS

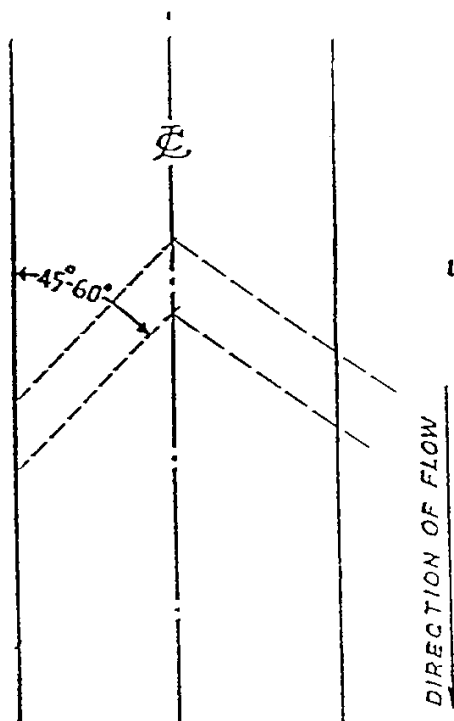


WATERBAR SPECIFICATIONS
FOR CROSS DITCHING #298

EXHIBIT H
TANK TRAP SPECIFICATIONS



Tank trap shall be installed in a "V" shape. It should be sloped to drain with a relief ditch through the down slope edge of the road. The trench shall be behind the berm for approaching traffic.



PLAN VIEW

TANK TRAP
SPECIFICATIONS

PART IV: OTHER INFORMATION

State Timber Sale Contract
No. 341-06-16
Greenback

FPA Written Plan for timber harvest
Greenback
341-06-16
Sections 6, 7, T10S, R7W and
Sections 1, T10S, R8W, W.M.
Polk County, Oregon.

Protected Resource:

The Yaquina River, a medium type "F" stream and Baily Creek, a small type "F" tributary to the Yaquina River.

Situation:

Baily Creek, a tributary to the Yaquina River originates in and flows south between Areas II and VI and to the east of Area VII. The Yaquina River flows south along the east boundary of Area V. Operations will be within 100 feet of these waterways.

Baily creek has been posted out of the sale on both sides at a minimum of 50 feet, horizontal distance with "Buffer Zone" posters and fluorescent pink flagging between Areas II and VI. Baily Creek by Area VII and the Yaquina River by Area V have been posted out of the sale at a minimum of 50 feet, horizontal distance with "Timber Sale Boundary" posters and fluorescent pink flagging.

Resource Protection Measures:

1. If the design of the logging system requires skylines to pass over the stream, pull cables out of the streamside vegetation prior to rigging the next yarding road.
2. Do not lower skyline cables into streamside vegetation during the yarding cycle.
3. Space skyline corridors passing over the type "F" stream at a minimum of 100 feet apart.
4. Do not fell any trees within the posted stream buffer.
5. Fell trees adjacent to the stream buffer so that they do not fall into the stream buffer.
6. Yard all logs away from the stream.
7. Do not operate ground based equipment within 50 feet of the posted buffer,

I, the undersigned, submit this written plan in compliance with the requirements of the Forest Practices Act, regarding operations conducted within 100 feet of type F streams.

PURCHASER REPRESENTATIVE

DATE