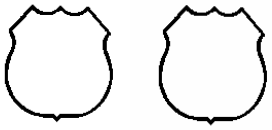
PART III: EXHIBITS

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.: 341-12-59

(2) Sale Name: Jolly Roger

(3) Contract Expiration Date: October 31, 2015 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.

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.

Cable Landing, with numbers for sequence.

Tractor Landing with alphabetical sequence.

_ _ _ _ _ Approximate setting boundary.

- - - - - - - - Spur truck roads.

Tractor yarding roads.

X Temporary stream crossings.

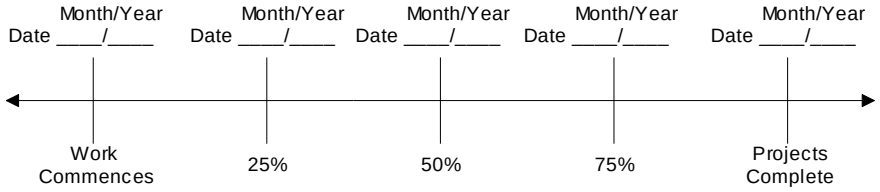
EXHIBIT B

OPERATIONS PLAN

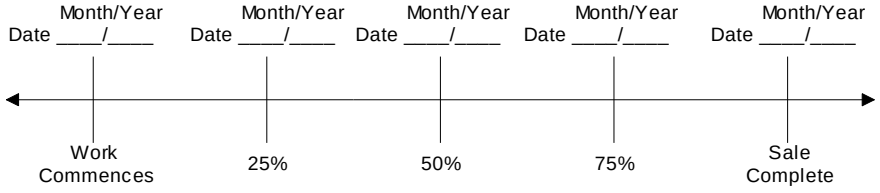
Completion Timeline

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. The STATE's approval of this plan does not certify that the PURCHASER's operation under the plan is lawful under the federal ESA. As provided in the timber sale contract, PURCHASER's 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

_____

Title _____

SUBMITTED BY:
PURCHASER

_____

Title _____

Original: Salem
cc: District File
Purchaser

EXHIBIT C – SAWMILL GRADE (WESTSIDE SCALE)

SCALING INSTRUCTIONS -- LOCATION APPROVAL -- BRAND INFORMATION

(1) ORIGINAL REGISTRATION ☐ Date _____
REVISION NUMBER _____ ☐ Date _____
CANCELLATION ☐ Date _____

(2) TO: _____
(Third Party Scaling Organization)

(3) FROM: Tillamook (06) Phone (503) 842-2545
(State Forestry District)
Address 5005 Third St., Tillamook, OR 97141

(4) PURCHASER: _____
Mailing Address: _____
Phone Number: _____

(5) **MINIMUM SCALING SPECIFICATIONS**	
SPECIES	MINIMUM NET VOLUME
Conifers	10
Hardwoods	10

* Apply minimum volume test to whole logs over 40' Westside

	YES	NO
(6) WESTSIDE SCALE: Use Region 6 actual taper rule. Logs over 40'.	☒	☐
(7) Weight Scale Sample	☐	☒

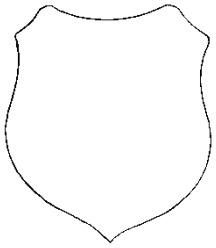
(8) **APPROVED SCALING LOCATIONS** (as shown on the ODF Approved Locations web-site)	Species	Yard	Truck	Weight

(9) SALE NAME: Jolly Roger
COUNTY: Tillamook

(10) STATE CONTRACT NUMBER: 341-12-59

(11) STATE BRAND REGISTRATION NUMBER:
_____

(12) STATE BRAND INFORMATION (COMPLETE):



(13) PAINT REQUIRED: YES ☒
COLOR: Orange

(14) **SPECIAL REQUESTS** (Check applicable)	
PEELABLE CULL (all species)	☐
NO DEDUCTIONS ALLOWED FOR MECHANICAL DAMAGE	☒
ADD-BACK VOLUME - Deductions due to delay	☒
OTHER:	

(15) **REMARKS** _____

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

(16) SIGNATURES:

_____
Purchaser or Authorized Representative Date

_____
State Forester Representative Date

_____
State Forester Representative PRINT NAME

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

Distribution (See specific instructions on pg. 2): ORIGINAL: Salem / COPIES: TPSO, Approved Scaling Location, Purchaser, District, Mgmt. Unit

EXHIBIT C – SAWMILL GRADE
INSTRUCTIONS FOR FORM 343-307a (rev. 11/11)

(1) 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.

(2) 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

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

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

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

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

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

(3) State District office, address and phone.

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

(5) Minimum Scaling Specifications.

(6) Westside – Region 6 actual taper segment scale. Check Yes or No. Special Service Rules on file with TPSO. See: Segment Scaling and Grading of Long Logs -- All Species -- State Forestry Department Scaling Practices (Westside).

(7) 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).

(8) 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.

EXHIBIT C – PULP SORT

PROCESSING INSTRUCTIONS -- LOCATION APPROVAL -- BRAND INFORMATION

(1) ORIGINAL REGISTRATION ☐ Date _____
REVISION NUMBER _____ ☐ Date _____
CANCELLATION ☐ Date _____

(2) TO: _____
(Approved Pulp Processing Facility)

(3) FROM: Tillamook (06) Phone (503) 842-2545
(State Forestry District)

(4) PURCHASER: _____

(5) Scaling Bureau (TPSO) Processing Weight receipts:

_____
Mailing Address: _____
Phone Number: _____

(6) **STATE Definition of Approved Pulp Sort:**

- Top portion of the tree (tops).
- All logs with a diameter (Big End) greater than **7** inches marked with blue paint.

(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.
- Gross weight and truck tare weight for each load shall be machine printed on the weight receipt.
- Weigher shall sign the weight receipt.
- Weigher shall record the Log Load Receipt number on the weight receipt.
- Weigher shall attach the Weight receipt to the Log Load Receipt and mail them weekly to the TPSO processing the Weight receipt.

(8) TPSO PROCESSING INSTRUCTIONS

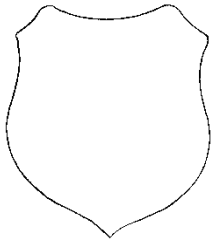
- Mail to ODF weekly.
- Convert to mbf using 10 tons per mbf.

(9) SALE NAME: Jolly Roger
COUNTY: Tillamook

(10) STATE CONTRACT NUMBER: 341-12-59

(11) STATE BRAND REGISTRATION NUMBER _____

(12) STATE BRAND INFORMATION: (COMPLETE BELOW)



(13) REMARKS: _____

Operator's Name (Optional inclusion by District):

_____

(14) SIGNATURES:

_____
Purchaser or Authorized Representative Date

_____
State Forester Representative Date

_____
State Forester Representative PRINT NAME

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

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

EXHIBIT C – PULP SORT

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

(1) **Must Complete.** Check appropriate box. REVISION NUMBER requires comments in the Remarks Section (13). CANCELLATION requires logging and hauling to be complete, recall branding hammers, date and sign where indicated, write diagonally across page "CANCEL", and send to TPSO.

(2) **Must Complete**. Approved Pulp Processing Facility. Write in as written in the Approved Log Delivery Location http://www.odf.state.or.us/DIVISIONS/management/asset_management/ScalingLocation.asp

(3) **Must Complete.** State Forestry District and District Phone Number.

(4) **Must Complete**. Purchaser's business name as it appears on the Contract.

(5) **Must Complete.** Third Party Scaling Organization that will be processing the weight tickets, mailing address, and phone number.

Columbia River Log Scaling & Grading Bureau
P.O. Box 7002, Eugene, OR 97401
Phone: (541) 342-6007 Fax: (541) 342-2631
Email: services@crls.com

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

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

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

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

Pacific Log Scaling & Grading Bureau, Inc.
P.O. Box 23939, Portland, OR 97281
Phone: (503) 684-5599 Fax: (503) 639-4880
Email: PacLogScale@aol.com

(6) **Must Complete.** Big end log not to exceed_____ inches. Big end of log is not to exceed 2 inches greater than the minimum removal specifications in the contract. Example: Minimum removal specifications 6 inches and 20 board feet, then the Big end of log not to exceed 8 inches. When conifer and hardwood removal specifications are different, use the smaller removal diameter to determine this specification.

(9) **Must Complete**. Enter sale name and county. If more than one county write in all the counties that the sale is located in.

(10) **Must Complete**. Enter sale Contract number.

(11) **Must Complete**. Enter Oregon's State Brand Registry Number **(REQUIRED)**.

(12) **Must Complete**. Show brand assigned to timber sale. One brand only. If more than one brand is assigned to the sale: (1) make a separate form for each brand and (2) on each form, explain and show other brand(s) in the Remarks section Item (13).

(13) Use this section to list any special instructions or the reason for any revisions in section item (1).

(14) **Must Complete.** Purchaser required to sign and date completed form in addition to State Forester Representative, sign 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.

EXHIBIT D

FOREST ROAD SPECIFICATIONS

SUBGRADE WIDTH	SURFACED WIDTH	POINT TO POINT	STATION TO STATION	DRAINAGE	DITCH TOP WIDTH (Feet)	DITCH CONFIGURATION (U, V, TRAPAZOID)	DITCH DEPTH FROM SUBGRADE (Feet)
16 feet	12 feet	A to B	0+00 to 89+15	Outslope	---	---	---
16 feet	12 feet	A to B	89+15 to 92+65	Ditch	---	---	---
16 feet	12 feet	C to D	0+00 to 3+60	Outslope	---	---	---
16 feet	12 feet	E to F	0+00 to 2+40	Ditch	---	---	---
16 feet	12 feet	G to H	0+00 to 57+00	Existing	---	---	---
16 feet	12 feet	G to H	57+00 to 63+00	Outslope	---	---	---
16 feet	12 feet	G to H	63+00 to 82+50	Ditch	---	---	---
16 feet	12 feet	G to H	82+50 to 87+25	Outslope	---	---	---
16 feet	12 feet	G to H	87+25 to 90+60	Ditch	---	---	---
16 feet	12 feet	I to J	0+00 to 35+95	Outslope	---	---	---
16 feet	12 feet	K to L	0+00 to 1+40	Ditch	3	V	1
16 feet	12 feet	K to L	1+40 to 28+00	Outslope	---	---	---
16 feet	12 feet	M to N	0+00 to 5+60	Outslope	---	---	---
16 feet	12 feet	O to P	0+00 to 2+20	Outslope	---	---	---
16 feet	12 feet	Q to R	0+00 to 1+00	Ditch	3	V	1
16 feet	12 feet	Q to R	1+00 to 23+40	Outslope	---	---	---

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. Clearing debris shall not be placed or permitted to remain in or under any road embankment sections. Trees outside the clearing limits shall not be felled unless approved in writing by STATE. All danger trees, leaners, and snags outside the clearing limits which could fall and hit the road shall be felled. Where clearing limits have not been marked, clearing limits shall be as follows:

New construction – 10 feet back from the top of the cut slope and 5 feet back from the toe of fill slopes.

Improvements and reconstructions - 10 feet back from the shoulder of the subgrade or the ditch, whichever is widest.

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 limits shall be as follows:
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 the ditch, whichever is widest.

EXHIBIT D

FOREST ROAD SPECIFICATIONS

CLEARING AND GRUBBING DISPOSAL. Clearing and grubbing debris shall not be left lodged against standing trees. Clearing and grubbing debris may be scattered through openings in the timber outside of the cleared right-of-way, except for the following areas, debris shall be fully contained and hauled to a designated waste area.

- Where end-haul is required.
- On side slopes exceeding 60 percent.
- On unstable areas.
- In any stream channel (Type F, N or D) or where material may enter the stream channel.

Clearing, grubbing, and associated disposal shall be completed prior to subgrade approval.

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.

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 60 percent, the road shall be on full bench for the width specified. Surplus excavation materials shall be hauled to the waste areas as marked in the field and/or designated on Exhibit A.

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.

All excavation earthwork, and ditching on a project road segment shall be completed prior to subgrade approval.

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 ditch as specified in Exhibit D. 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 4 to 6 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: Intervisible but not greater than 750 feet where not marked. See ADDITIONAL ROAD INSTRUCTIONS for required locations.

GRADING	Back Slopes	Fill Slopes
Rock -	Vertical to 1/4:1	1 ½:1
Fractured Rock – (A to B 58+50 to 73+60)	½:1	1 ½:1
Common -	3/4:1	1 ½:1

Top of cutslope shall be rounded.

EXHIBIT D

FOREST ROAD SPECIFICATIONS

LANDINGS. Landings shall be constructed as posted in the field, no less than 50 feet wide and no more than 70 feet wide. Surface shall be crowned for drainage.

TURNAROUNDS. Increase subgrade width an additional 30 feet for a length of 16 feet with 20' radius returns at locations marked in the field. See ADDITIONAL ROAD INSTRUCTIONS for required locations.

EXHIBIT D

ADDITIONAL ROAD INSTRUCTIONS

A to B Improve existing horizontal and vertical alignment to the grades shown below and as marked in field (9+90 to 16+60).
Construct Turnout right (56+50 to 57+25).
Construct Turnout right (68+65 to 69+40).
Curve Widening from 77+30 to 79+60 with total road width of 20 Ft. at 78+40.
Construct Turnout right (78+10 to 78+85).
Construct Turnout left (88+30 to 89+05).
Construct fill 90+20 to 90+95. Centerline at 90+20 shall be 2 Ft. above the existing ground and 0 Ft. at 90+95 with a -6% grade between the stations.
Construct Turnaround right (90+22 to 90+78).
Cut and drift back to fill (90+95 to 92+00).
Construct 60 Ft. diameter Landing from 92+05 to 92+65. Centerline at 92+05 shall be 9 Ft. below the existing ground and 2 Ft. below at 92+65 with a -1% grade between the stations.

Maximum finished grade shall be as follows:

From Station	To Station	% Grade
0+00	9+90	Existing
9+90	10+80	-10
10+80	14+35	-15
14+35	15+10	-12
15+10	16+60	-8
16+60	55+00	Existing
55+00	58+50	-2
58+50	60+20	3
60+20	61+20	-3
61+20	64+30	4
64+30	65+00	-2
65+00	66+80	0
66+80	67+50	3
67+50	69+05	7
69+05	69+50	2
69+50	70+70	-3
70+70	72+90	-5
72+90	74+25	-9
74+25	77+30	-14
77+30	79+05	-18
79+05	83+70	-16
83+70	89+60	-17
89+60	90+15	-10
90+15	92+00	-6
92+00	92+65	-1

EXHIBIT D

ADDITIONAL ROAD INSTRUCTIONS

C to D Construct Turnaround left (1+77 to 2+33).
Construct 60 Ft. diameter Landing from 3+00 to 3+60.

Maximum finished grade shall be as follows:

From Station	To Station	% Grade
0+00	0+30	0
0+30	0+95	8
0+95	1+77	5
1+77	2+35	2
2+35	2+95	0
2+95	3+60	-1

E to F Construct Turnout/Junction left (0+00 to 0+75).
Construct Fill 0+50 to 1+80. Maximum height shall be 5 Ft.
Construct 60 Ft. diameter Landing from 1+80 to 2+40.

Maximum finished grade shall be as follows:

From Station	To Station	% Grade
0+00	0+80	-5
0+80	1+65	-3
1+65	2+40	0

EXHIBIT D

ADDITIONAL ROAD INSTRUCTIONS

G to H

Culvert grade excavation shall be between 6% to 8%. Completed excavation shall be approved by STATE prior to culvert installation (0+50).
Construct Turnout left (61+50 to 62+25).
Construct Turnout right (69+00 to 69+75).
Cut and drift to fill (70+50 to 72+00).
Construct fill from 72+00 to 73+50. Maximum fill height shall be 12 Ft. at 72+90.
Construct Turnout left (77+75 to 78+50).
Construct Turnout right (82+20 to 82+95).
Construct fill and Turnaround left from 87+76 to 88+32.
Construct 70 Ft. diameter Landing from 88+54 to 89+24.

Maximum finished grade shall be as follows:

From Station	To Station	% Grade
0+00	57+00	Existing
57+00	58+25	-7
58+25	59+10	-4
59+10	60+91	2
59+10	61+61	1
61+61	62+88	* VC1 k = 20
62+88	63+10	-5
63+10	64+00	-9
64+00	66+00	-13
66+00	67+25	-9
67+25	68+66	* VC2 k = 20
68+66	69+25	-2
69+25	69+72	4
69+72	71+41	* VC3 k = 20
71+41	71+52	-5
71+52	74+49	* VC4 k = 19.9
74+49	74+90	1
74+90	75+42	-3
75+42	76+85	-8
76+85	79+00	-4
79+00	79+40	-2
79+40	79+81	2
79+81	81+48	* VC5 k = 20
81+48	82+95	-6
82+95	83+75	-10
83+75	87+30	-17
87+30	87+75	-15
87+75	87+97	-12
87+97	88+45	-9
88+45	90+60	-5

* VC = Vertical curve, k = parabolic rate i.e. the horizontal distance required for a one percent change in grade.

EXHIBIT D

ADDITIONAL ROAD INSTRUCTIONS

I to J Maximum finished grades shall be as follows:

From Station	To Station	% Grade
0+00	0+45	16
0+45	3+45	18
3+45	6+15	20
6+15	6+65	16
10+20	21+90	18
23+05	25+90	17
25+90	29+25	14
29+25	35+55	16

K to L Construct ditch right from station 0+00 to 1+40 and construct ditchout at 1+40.

Remove large stump right at station 8+15. End haul to waste area.

Pullback 5 feet of sidecast material from station 12+40 to 13+80, according to specifications in Exhibit K. End haul to waste area, spread and compact according to specifications in Exhibit E.

Q to R Construct ditchouts left and right at station 8+75.

EXHIBIT D

END-HAULING REQUIREMENTS

POINT TO POINT	STA. TO STA.	WASTE AREA LOCATION	WASTE AREA TREATMENT
A to B	9+90 to 16+60	1	1
A to B	58+95 to 82+30	1, 2	1, 2
C to D	0+00 to 3+00	1, 2	1, 2
G to H	0+00 to 1+00	1	1
G to H	83+50 to 87+75	1, 2	1, 2
I to J	9+20 to 15+00	2	2
I to J	18+20 to 21+90	2	2
I to J	24+20 to 25+90	2	2
I to J	33+50 to 35+30	2	2
K to L	1+40 to 16+20	1	1
K to L	18+00 to 21+00	1	1
K to L	21+90 to 22+35	1	1
K to L	25+90 to 28+00	1	1
Q to R	9+00 to 23+40	1	1

End-Haul Areas General Requirements

Material shall not be intentionally side cast. Clearing and grubbing debris shall be end-hauled. When blasting is required, it shall be accomplished using timing devices, delayed charges, low intensity shots, or other suitable means to contain all material within the road prism.

Containment

Full containment: The amount of material lost over the outside edge of the road shall not exceed 6 inches in depth measured perpendicular to the natural ground slope. Pioneer excavation shall be removed by digging, loading, and hauling rather than by pushing or scraping methods.

Tree bases and stumps may have up to 12 inches of material directly above them. Any amount of material exceeding the containment requirements shall be removed by whatever means necessary and end-hauled to a designated waste area.

Waste Area Location

(1) As shown on Exhibit A and as marked in the field.

(2) Road segment fills.

Waste Area Treatment

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

(2) Spread and compact in layers, according to the specifications in Exhibit E, to form required road fills. Scatter woody debris in stable locations or pile separately at waste area.

EXHIBIT E

ROAD SURFACING

ROAD SEGMENT:	A to B		STATIONS:	9+90 to 92+05				
Application	**Rock Size and Type**	**Location**	**Compacted Depth**	**Volume (CY) per**		**Number of Units**	**Curve Widening (CY)**	**Approx. Total (CY)**
Road Rock	Crushed 4"-0"	9+90 to 16+60	8 "	station	46.269	6.70	20	330
Road Rock	Stockpile 1"-0"	9+90 to 16+60	3 "	station	16.418	6.70	10	120
Road Rock	Crushed 4"-0"	55+00 to 92+05	8 "	station	41.835	37.05	70	1,620
Turnouts	Crushed 4"-0"	A to B	8 "	TO	20	1		20
Turnouts	Stockpile 1"-0"	A to B	3 "	TO	10	1		10
Turnouts	Crushed 4"-0"	A to B	8 "	TO	20	4		80
Turnarounds	Crushed 4"-0"	90+50	8 "	TA	30	1		30
Application	**Rock Size and Type**	**Location**	**Approx. Total (CY)**					
Landing Rock	Crushed 4"-0"	92+30	100					

ROAD SEGMENT:	C to D		STATIONS:	0+00 to 3+00				
Application	**Rock Size and Type**	**Location**	**Compacted Depth**	**Volume (CY) per**		**Number of Units**	**Curve Widening (CY)**	**Approx. Total (CY)**
Road Rock	Crushed 4"-0"	0+00 to 3+00	8 "	station	43.333	3.00	0	130
Turnarounds	Crushed 4"-0"	2+05	8 "	TA	30	1		30
Application	**Rock Size and Type**	**Location**	**Approx. Total (CY)**					
Landing Rock	Crushed 4"-0"	3+30	100					

ROAD SEGMENT:	E to F		STATIONS:	0+00 to 1+80				
Application	**Rock Size and Type**	**Location**	**Compacted Depth**	**Volume (CY) per**		**Number of Units**	**Curve Widening (CY)**	**Approx. Total (CY)**
Road Rock	Crushed 4"-0"	0+00 to 1+80	8 "	station	44.444	1.80	10	90
Turnouts	Crushed 4"-0"	E to F	8 "	TO	20	1		20
Application	**Rock Size and Type**	**Location**	**Approx. Total (CY)**					
Landing Rock	Crushed 4"-0"	2+10	100					
Junction Rock	Crushed 4"-0"	0+30	20					

EXHIBIT E

ROAD SURFACING

ROAD SEGMENT:	G to H		STATIONS:	0+00 to 90+60				
Application	**Rock Size and Type**	**Location**	**Compacted Depth**	**Volume (CY) per**		**Number of Units**	**Curve Widening (CY)**	**Approx. Total (CY)**
Road Rock	Crushed 4"-0"	0+00 to 1+00	8 "	station	50.000	1.00	20	70
Road Rock	Crushed 4"-0"	57+00 to 90+60	8 "	station	41.964	33.60	70	1,480
Road Rock	Stockpile 1"-0"	0+00 to 1+00	3 "	station	20.000	1.00	10	30
Turnouts	Crushed 4"-0"	G to H	8 "	TO	20	4		80
Turnouts	Stockpile 1"-0"	G to H	3 "	TO	10	1		10
Turnarounds	Crushed 4"-0"	88+05	8 "	TA	30	1		30

Application	**Rock Size and Type**	**Location**	**Approx. Total (CY)**
Culvert Backfill	Stockpile 1"-0"	0+50	20
Landing Rock	Crushed 4"-0"	89+90	100
Spot Rock	Stockpile 1"-0"	As Marked In Field	200
Energy Dissipator	Riprap 24"-12"	0+50	30

ROAD SEGMENT:	I to J		STATIONS:	0+00 to 35+95				
Application	**Rock Size and Type**	**Location**	**Compacted Depth**	**Volume (CY) per**		**Number of Units**	**Curve Widening (CY)**	**Approx. Total (CY)**
Road Rock	Crushed 4"-0"	0+00 to 35+95	8 "	station	42.003	35.95	70	1,580
Road Rock	Stockpile 1"-0"	0+45 to 6+15	2 "	station	10.526	5.70	10	70
Turnouts	Crushed 4"-0"	I to J	8 "	TO	20	5		100
Turnouts	Stockpile 1"-0"	I to J	2 "	TO	10	1		10
Turnarounds	Crushed 4"-0"	0+00	8 "	TA	30	1		30

Application	**Rock Size and Type**	**Location**	**Approx. Total (CY)**
Landing Rock	Crushed 4"-0"	35+95	100
Junction Rock	Crushed 4"-0"	0+00	20

ROAD SEGMENT:	K to L		STATIONS:	0+00 to 1+00				
Application	**Rock Size and Type**	**Location**	**Compacted Depth**	**Volume (CY) per**		**Number of Units**	**Curve Widening (CY)**	**Approx. Total (CY)**
Road Rock	Crushed 4"-0"	0+00 to 1+00	8 "	station	50.000	1.00	10	60

Application	**Rock Size and Type**	**Location**	**Approx. Total (CY)**
Junction Rock	Crushed 4"-0"	0+00	20

EXHIBIT E

ROAD SURFACING

ROAD SEGMENT:	M to N			STATIONS:	3+30 to 4+30				
Application	**Rock Size and Type**	**Location**		**Compacted Depth**	**Volume (CY) per**		**Number of Units**	**Curve Widening (CY)**	**Approx. Total (CY)**
Road Rock	Crushed 4"-0"	3+30	to 4+30	8 "	station	50.000	1.00	10	60
Application	**Rock Size and Type**	**Location**		**Approx. Total (CY)**					
Energy Dissipator	Riprap 24"-12"	3+80		10					

ROAD SEGMENT:	O to P			STATIONS:	0+00 to 1+00				
Application	**Rock Size and Type**	**Location**		**Compacted Depth**	**Volume (CY) per**		**Number of Units**	**Curve Widening (CY)**	**Approx. Total (CY)**
Road Rock	Crushed 4"-0"	0+00	to 1+00	8 "	station	50.000	1.00	10	60
Application	**Rock Size and Type**	**Location**		**Approx. Total (CY)**					
Junction Rock	Crushed 4"-0"	0+00		20					

ROAD SEGMENT:	Q to R	STATIONS:	0+00 to 23+40
Application	**Rock Size and Type**	**Location**	**Approx. Total (CY)**
Landing Rock	Crushed 4"-0"	23+40	80

TOTAL ROCK	24”-12” RIPRAP	4”- 0” CRUSHED	1”- 0” CRUSHED
7,070 CY	40 CY	6,560 CY	470 CY

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

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

Turnouts, turnarounds, Landings and junctions shall be rocked concurrently with the road.

End-dumping of riprap shall not be allowed, unless otherwise approved in writing by STATE.

Any additional turnarounds or turnouts created during any operation associated with this timber sale shall be rocked at PURCHASER's expense and as instructed by STATE.

Roads shall be uniformly graded and approved by STATE prior to rocking. For typical cross section, turnout and turnaround see Forestry Department Drawing Nos. 351-C, 351-D and TOTA-1 at the Forestry Department district office.

EXHIBIT E

CRUSHED ROCK SPECIFICATIONS

Materials. The material shall be well graded and consistent.

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

If material is specified as durable, it must meet the following test requirements:

Hardness - Test Method AASHTO T 96: 30% Maximum

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

The rock crusher shall be calibrated to produce rock as specified in Exhibit E. Prior to the commencement of production crushing, PURCHASER shall sample, test, and provide rock test results meeting STATE specifications. STATE may then sample and test crushed rock for approval to proceed. PURCHASER shall take one sample of each 1,000 cubic yards of crushed rock material produced thereafter, using approved AASHTO sampling procedures. PURCHASER shall submit samples to a certified laboratory or shall perform testing for gradation requirements using AASHTO T 11 and AASHTO T 27 testing procedures. Prior to testing, each sample shall be split, making one-half of the sample, with proper identification, available for testing by STATE. Each sample and the results of PURCHASER testing shall be made available to STATE within 24 hours of sampling. Any rock crushed prior to STATE approval to proceed shall not be credited to the required rock quantity. Any subsequent rock tests not meeting STATE specifications shall be reason for rejection of that portion of crushed rock produced after that test and shall not be credited to the required rock quantity. STATE may sample the crushed rock at any time during the operation. Results of STATE's tests shall prevail over all other test results.

EXHIBIT E

CRUSHED ROCK SPECIFICATIONS

For 4”- 0” Crushed Rock

Sieve Size	Percent Passing
4	95-100
3	--
2	70-90
1.5	--
1	50-70
3/4	--
1/4 or #4	15-50
#10	0-30
#40	0-10

For 24”-12” Riprap — 50% or more of the rock shall be at 24 inches in one dimension. 100% of the rock shall be at least 12 inches in one dimension.

Control of riprap gradation shall be by visual inspection by STATE.

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

EXHIBIT E

ROCK ACCOUNTABILITY

PURCHASER shall obtain STATE approval for subgrades prior to rocking. Rocking must be done only when weather conditions are acceptable to STATE, and must be suspended when muddy water could enter streams.

Rock accountability shall be determined by depth measurement. STATE shall be given 24 hours' notice prior to rocking.

Depth Measurement. Road 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.

Turnouts shall have a surfaced area of at least 44 square yards each at the depths shown in Exhibit E.

Turnarounds shall have a surfaced area of at least 73 square yards each at the depths shown in Exhibit E.

Landings shall have a minimum surfaced area of at least 220 square yards each at the depths shown in Exhibit E.

Curve Surfacing. Extra surface width shall be required for the inside of all curves as follows: 400 divided by the radius of the curve equals the amount of extra width to be surfaced at the depths shown in Exhibit E.

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.

ROAD SEGMENT	COMPACTION EQUIPMENT OPTIONS
ALL	Vibratory Roller

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 the approved equipment listed below or others approved by STATE:

ROAD SEGMENT	COMPACTION EQUIPMENT OPTIONS
A to B, E to F, G to H, I to J, K to L, M to N	Crawler Tractor
I to J (5+00 - 6+70), G to H (72+00 to 73+50)	Tampingfoot Compactor

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 the approved equipment listed below or others approved by STATE:

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
A to B (9+90 to 16+60, 55+00 to 92+30)	Vibratory Roller
C to D, E to F	Vibratory Roller
G to H (0+00 to 1+00, 57+00 to 90+60)	Vibratory Roller
I to J, K to L, M to N (0+00 – 4+00), O to P (0+00 – 1+00)	Vibratory Roller
Landing at Point R	Vibratory Roller

Existing Crushed Rock. The existing rock shall be unearthed to a minimum depth of 4 inches or to 1 inch below the bottom of potholes, whichever is greater. The existing rock shall then be uniformly mixed and moistened or dried to a uniform moisture content suitable for maximum compaction and compacted. Any irregularities or depressions that develop during compaction shall be corrected by loosening the material at these places and adding or removing material until the surface is smooth and uniform. The existing rock 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 the approved equipment listed below or others approved by STATE:

Existing crushed rock shall be compacted and processed after completion of all project work and log hauling, unless otherwise approved in writing by STATE.

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

ROAD SEGMENT	COMPACTION EQUIPMENT OPTIONS
A to B (0+00 to 9+90, 16+60 to 55+00)	Vibratory Roller
G to H (Spot rock locations 1+00 to 57+00)	Vibratory Roller
Q to R	Vibratory Roller

EXHIBIT E

COMPACTION EQUIPMENT OPTIONS

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.

Vibratory Compactors. Vibratory compactors shall consist of multiple or gang type compacting units or pads with a minimum variable width of 2 feet. It shall be self-contained and capable of compacting material as required.

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.

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.

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.

Grid Rollers. Pit-run rock shall be processed by grid rolling with a Hyster Grid Roller Model D or equivalent, fully equipped with 32,000 pounds or more of ballast weights. Twenty passes shall be made with a grid roller over the entire length and width of the road, unless STATE requires fewer passes. A grader weighing at least 20,000 pounds shall work the pit-run surface during grid rolling so that all pit-run rock comes in contact with the grid roller. Grid rolling shall be performed when the subgrade is dry and firm. Road surface shall be uniformly shaped and graded prior to and during grid rolling.

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. A minimum of 10 passes shall be made with the grader and vibratory grid compactor over the entire length of the road, unless STATE requires fewer passes.

Crawler Tractors. D-7 Caterpillar or equivalent (or larger).

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.

State Timber Sale Contract
No. 341-12-59
Jolly Roger

EXHIBIT F

ROCK PIT DEVELOPMENT AND USE

(1) PURCHASER shall conduct the Operations 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. All waste shall be deposited at an approved "waste disposal site."

(2) Where overburden removal limits have not been marked, they shall extend for a distance of at least 20 feet beyond the developed rock source. Overburden removal limits, when marked, are designated by orange right-of-way boundary tags. Overburden and woody debris shall be hauled to a designated waste area. All merchantable timber shall be felled and decked. Overburden shall be spread evenly, grass seeded, and compacted at the waste area and woody debris stacked separately. Prior to drilling or rock removal, completion of overburden removal shall be approved in writing by STATE.

(3) The rock pit floor shall be developed to provide drainage away from the rock pit. Rock pit drainage ditches shall be developed and maintained. Benches shall be 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 degrees or less. There shall be a minimum of 1 bench with an access road to it. All benches shall have an access road to them. Said benches shall be easily accessible with tractors. All accesses and benches shall be left free and clear of unused shot rock material and dirt. Unused shot rock material shall be piled in pit area designated by STATE. Dirt (overburden) shall be hauled to designated waste area.

(4) The STATE shall be notified two working days prior to the beginning of drilling operations. Working days shall be defined as Monday through Friday, 6:00 a.m. to 2:30 p.m.

(5) 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 all material in the rock pit prism (full containment). Each low intensity shot shall be shot into the previous shots' void in order to contain all the material in the rock pit prism. Each shot shall also have a "tattle-tale" end cap so that it is known if all charges were detonated. The purchaser shall detonate or remove all non-detonated explosives from STATE LANDS. PURCHASER shall maintain a comprehensive log that contains all pertinent data for all blasting operations. The blasting log shall be submitted to the STATE after the completion of all blasting activity. The blasting log is intended for STATE record keeping purposes only.

(6) Pit face shall be developed in a uniform manner.

(7) Oversized material that is produced or encountered during development shall be broken down and utilized for crushing.

(8) PURCHASER shall prepare a written development plan for the pit area. The plan shall be submitted to STATE for approval prior to conducting any operation in the pit area.

The plan shall include, but not be limited to:

(a) Location of benches and roads to benches.

(b) Disposal site for debris and overburden.

(c) Time lines for rock quarry use.

(d) Erosion control measures.

(e) Oversized material location.

(9) PURCHASER shall schedule and coordinate quarry and stockpile usage with other existing or planned STATE contracts requiring quarry and stockpile usage.

(10) PURCHASER shall notify STATE 5 days prior to the start of quarry development activities.

(11) Upon completion of use, the pit site and access roads shall be left in a condition free from overburden and debris. Rock pit roads shall be waterbarred to provide drainage as specified in Exhibit I and blocked as directed by STATE.

EXHIBIT G

CULVERT SPECIFICATIONS

All culvert materials shall be furnished and installed by PURCHASER, unless otherwise specified in the Contract. Culverts smaller than 36 inches in diameter shall be constructed of corrugated polyethylene. Culverts 36 inches in diameter and larger shall be constructed of corrugated aluminized steel. 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. Polyethylene culverts shall also be double walled and 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.

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, and other objects which would dent or damage the pipe. The culvert trench shall be excavated 3 pipe diameters wide 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. Minimum bedding depth shall be 6 inches.

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.

When joints are employed, the longest length of pipe shall be placed at the outlet end.

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

EXHIBIT G

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” in diameter (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 shortest culvert section length shall be placed at the inlet end.

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 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.

	Aluminized		Band Widths (")			Hugger Band Widths (")	
Dia.	Steel Pipe Gauge	Band Gauges	Annular	Helical	Dimpled	Annular	Helical
36	12	14	12	12	NA	13 1/8	10 1/2

EXHIBIT G

CULVERT LIST

CULVERT NO.	DIAMETER (Inches)	LENGTH (Feet)	ROAD SEGMENT Point to Point	STATION
1	36	50	G to H	0+50
2	18	34	M to N	3+80
3	18	34	O to P	0+00

The intake end of culverts shall be marked by installing a 5 foot long, painted steel fence post two feet into the ground, within 6 inches of the inlet on the downgrade side.

Culverts 36 inches in diameter or larger shall have 1:1 beveled inlets.

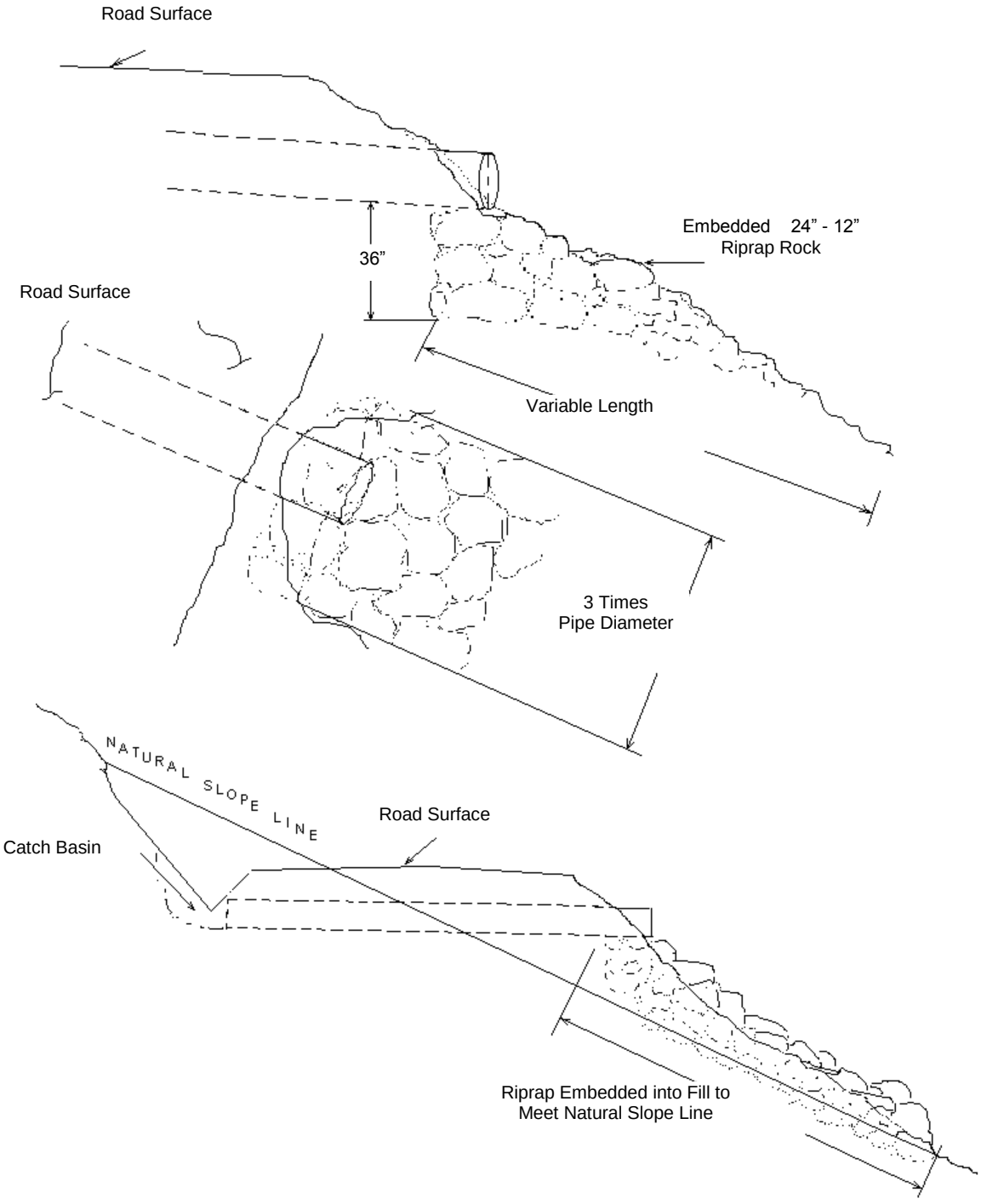
Tamping is required on all culverts. Backfills on culverts over 30 inches in diameter shall be compacted with a vibratory hand-operated or Backhoe mounted tamper.

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

State Timber Sale Contract
No. 341-12-59
Jolly Roger

EXHIBIT H

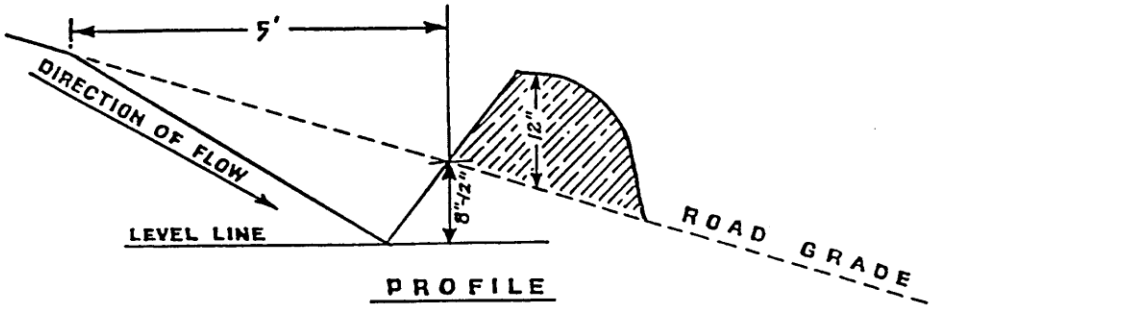
TYPICAL EMBEDDED ENERGY DISSIPATOR

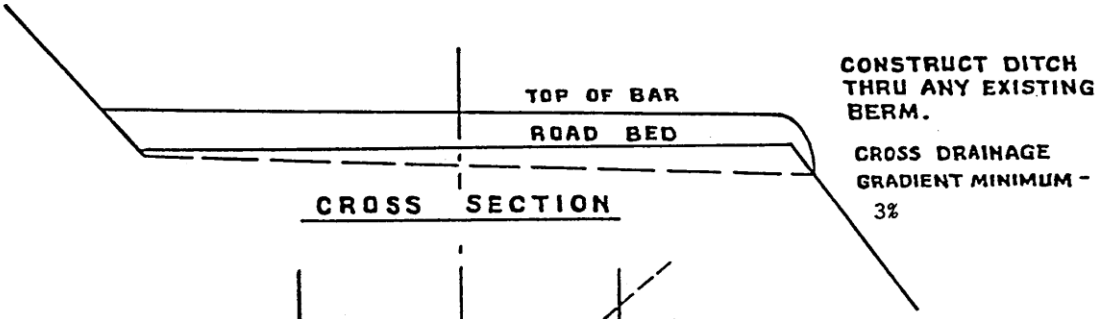


State Timber Sale Contract
No. 341-12-59
Jolly Roger

EXHIBIT I

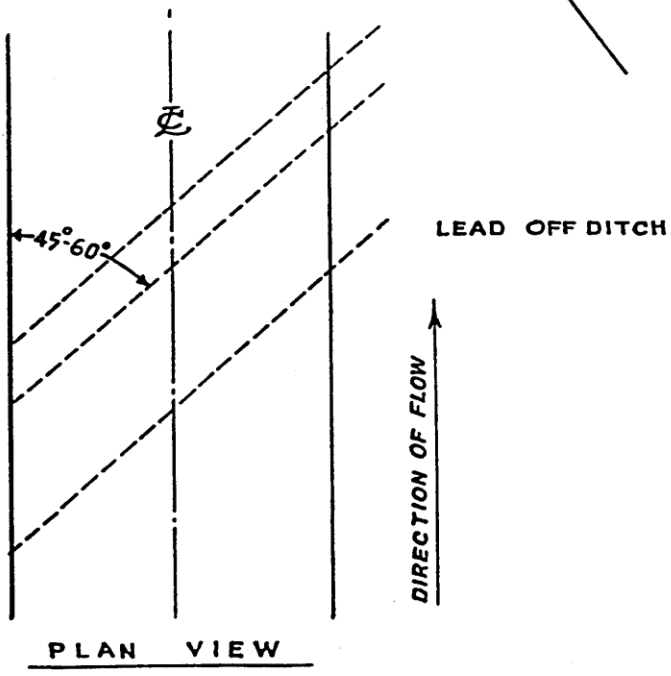
WATERBAR SPECIFICATIONS





SPACING OF WATERBARS

ROAD GRADE	DISTANCE
≤ 5%	600'
6-10%	300'
11-15%	150'
16-20% or greater	100'

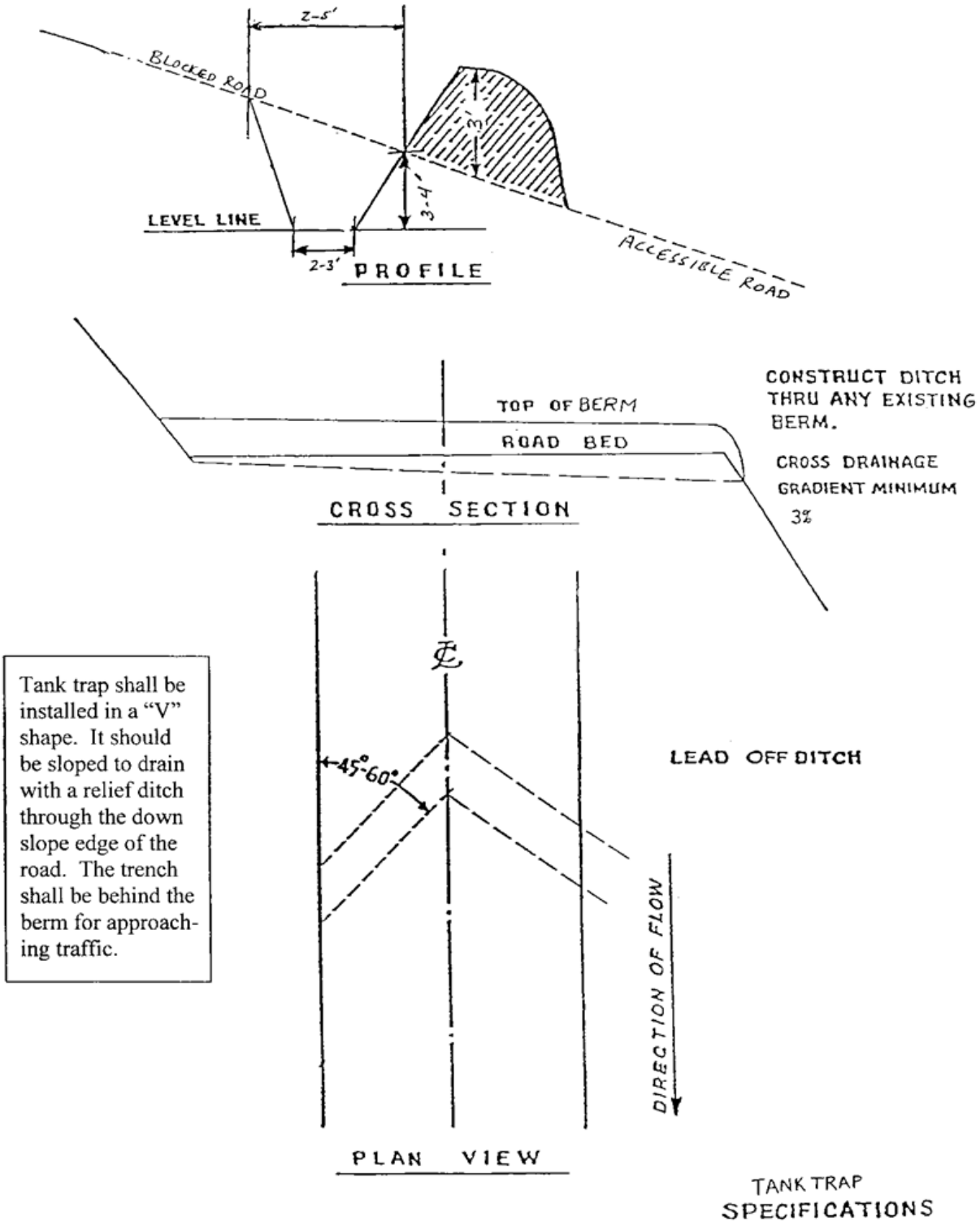


WATERBAR SPECIFICATIONS
FOR CROSS DITCHING #298

State Timber Sale Contract
No. 341-12-59
Jolly Roger

EXHIBIT J

TANK TRAP SPECIFICATIONS

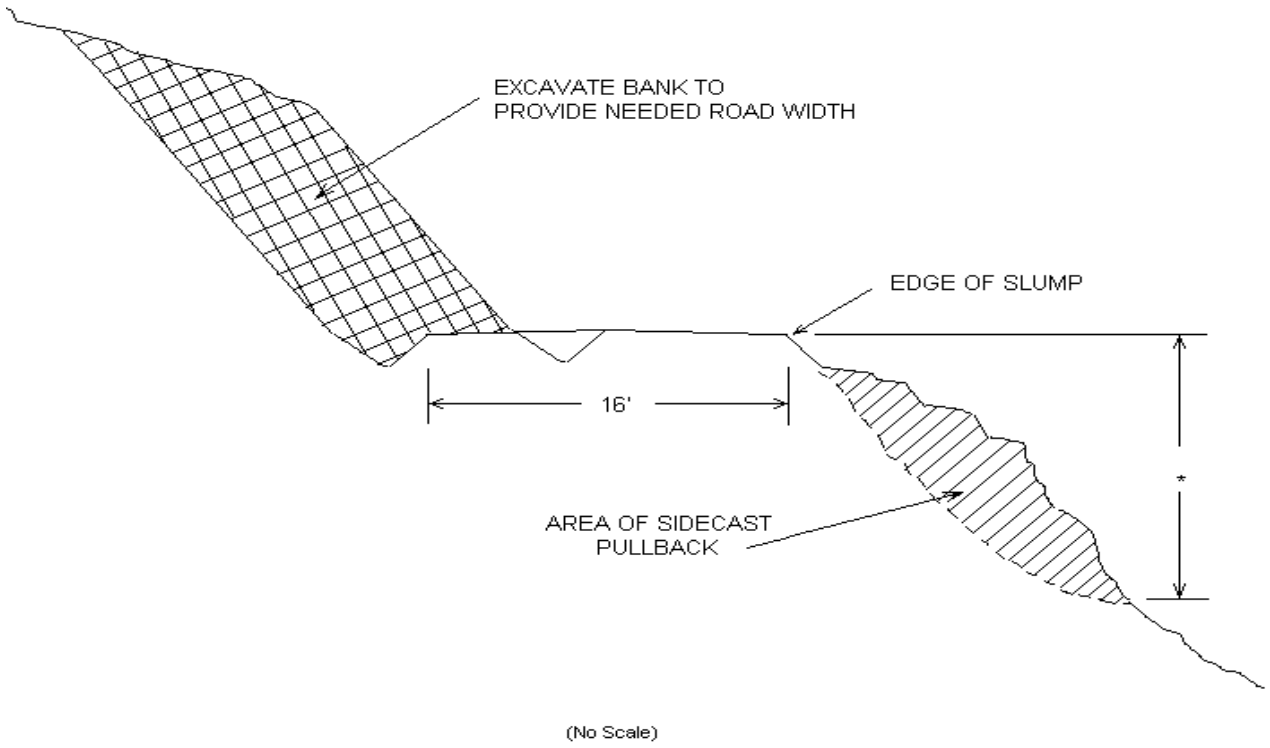


Tank trap shall be installed in a "V" shape. It should be sloped to drain with a relief ditch through the down slope edge of the road. The trench shall be behind the berm for approaching traffic.

State Timber Sale Contract
No. 341-12-59
Jolly Roger

EXHIBIT K

TYPICAL CROSS SECTION VIEW OF SIDECAST PULLBACK AND ROAD REALIGNMENT



(No Scale)

* As marked in field

State Timber Sale Contract
No. 341-12-59
Jolly Roger

EXHIBIT L

SPECIFICATIONS FOR LANDING SLASH PILING

Piling Slash/Covering Piles: All piles shall be as compact as possible. Piles shall be built to a minimum height of 3 to 4 feet and then covered to prevent water from reaching the Slash. PURCHASER shall supply the materials for covering. Additional woody debris shall be piled on top of the covered piles to complete the piling, as directed by STATE.

Placement of Piles: Piles shall be placed in a location to minimize damage from burning to standing green trees and Snags. Piles shall be placed as follows:

(a) No less than 30 feet from any Snags or green trees, unless otherwise approved by STATE.

(b) Cull log segments suitable for firewood shall be piled separately from Slash at a distance of no closer than 20 feet from the Slash piles.

State Timber Sale Contract
No. 341-12-59
Jolly Roger

EXHIBIT M

SEEDING AND FERTILIZING

This work shall consist of preparing seedbeds and furnishing and placing required seed and fertilizer.

Seeding Seasons. Seeding shall be performed only from March 1 through June 15 and August 15 through October 15. 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.

Soil Preparation. Areas to be seeded that have been damaged by erosion or other causes shall be restored prior to seeding. All areas to be seeded shall be finished and then cultivated to provide a reasonably firm, but friable seedbed. A minimum of 1/2 inch of surface soil shall be in a loose condition.

Application Methods for Seed and Fertilizer

Dry Method. 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

Seed listed below shall be applied at the following rates per acre:

Species	Lb./Acre	Mixture	Pure Live Seed	Poison and/or Repellent
Fine Fescue	12	40%	98%	0
Annual Ryegrass	6	20%	98%	0
Perennial Ryegrass	9	30%	98%	0
White Dutch Clover	3	10%	98%	0

Fertilizer: Chemical analysis shall be 16-20-0 and shall be applied at the rate of 300 pounds per acre.

Seeding will be considered acceptable when all other specified requirements in Exhibits M and N have been completed and a healthy, uniform, close stand of grass has been established, unless otherwise approved in writing by STATE.

State Timber Sale Contract
No. 341-12-59
Jolly Roger

EXHIBIT N

MULCHING

This work shall consist of furnishing and placing required mulch. Mulch shall consist of straw that is free of noxious weeds.

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

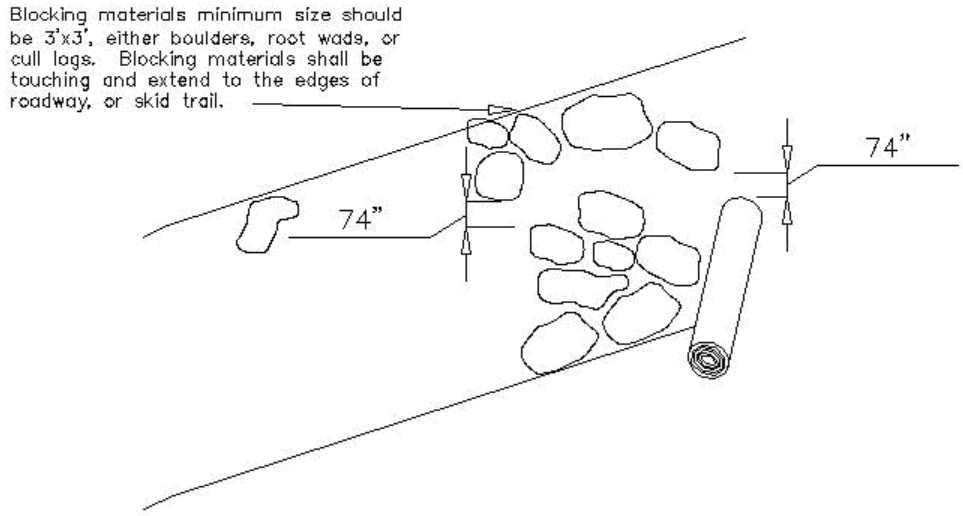
Application Rates for Mulch

Place straw mulch to a reasonably uniform thickness of 3/4 to 1 ¼ inches. This rate requires between 1 and 1 ½ tons of dry mulch per acre.

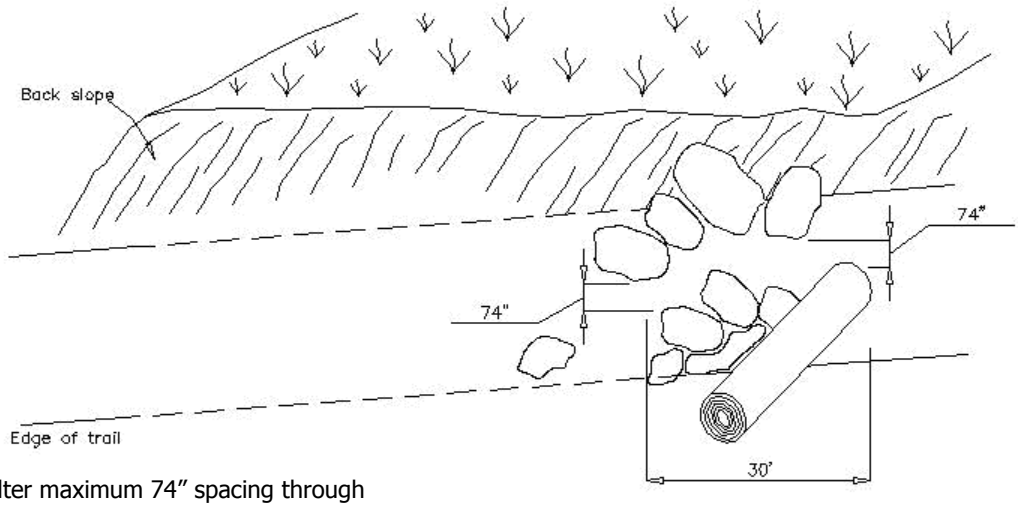
Timber sale Contract
341-12-59 EXHIBIT O
Jolly Roger

OHV TRAIL FILTER FOR 4WD TRAIL

NOT TO SCALE



PLAN VIEW



Filter maximum 74" spacing through path entrance and exit.
6'- 8' curve radius through filter.
Overall length of filter should be 30'.
Boulders used as blocking material should be buried 1/3 of original height.

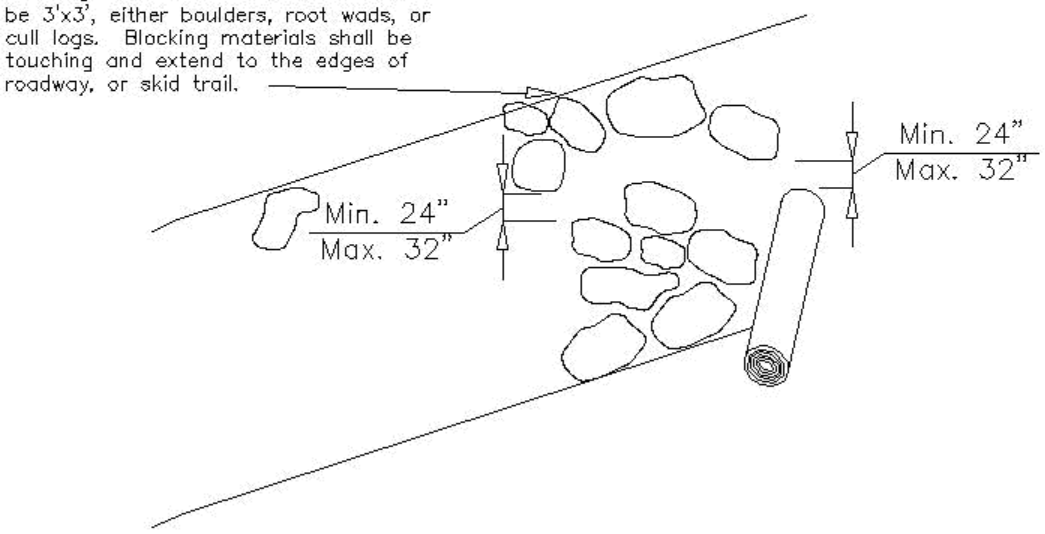
PROFILE

8/2005

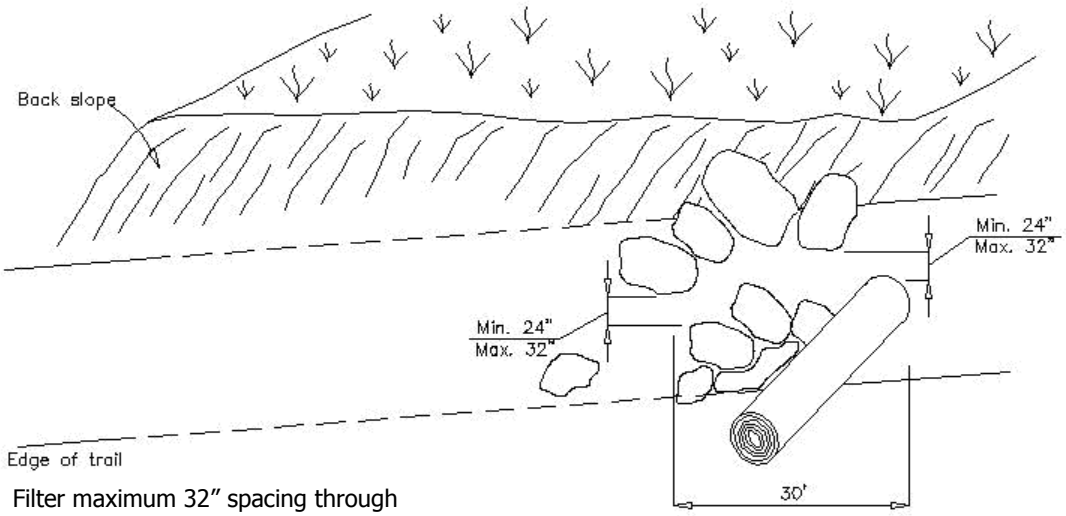
Timber sale Contract
341-12-59
Jolly Roger EXHIBIT P

OHV TRAIL FILTER FOR MC TRAIL

NOT TO SCALE



PLAN VIEW



Filter maximum 32" spacing through path entrance and exit. 6'-8' curve radius through filter. Overall length of filter should be 30'. Boulders used as blocking material should be buried 1/3 of original height.

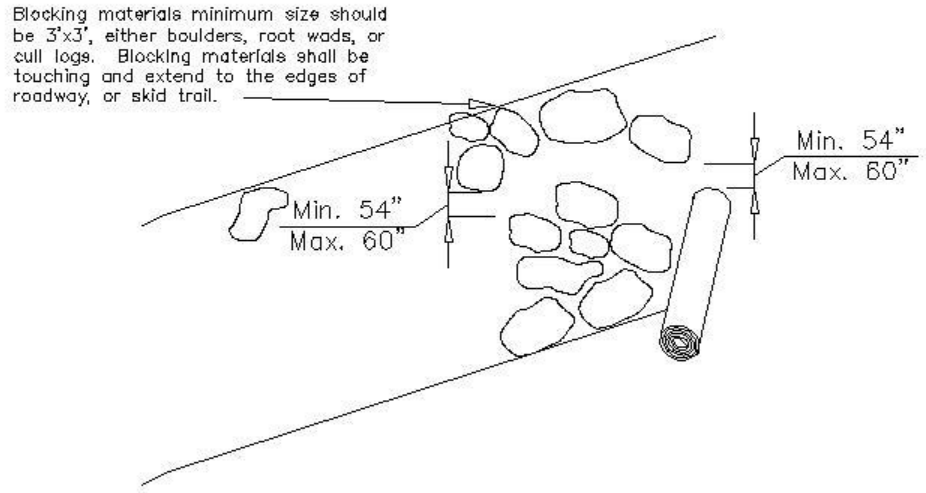
PROFILE

8/2005

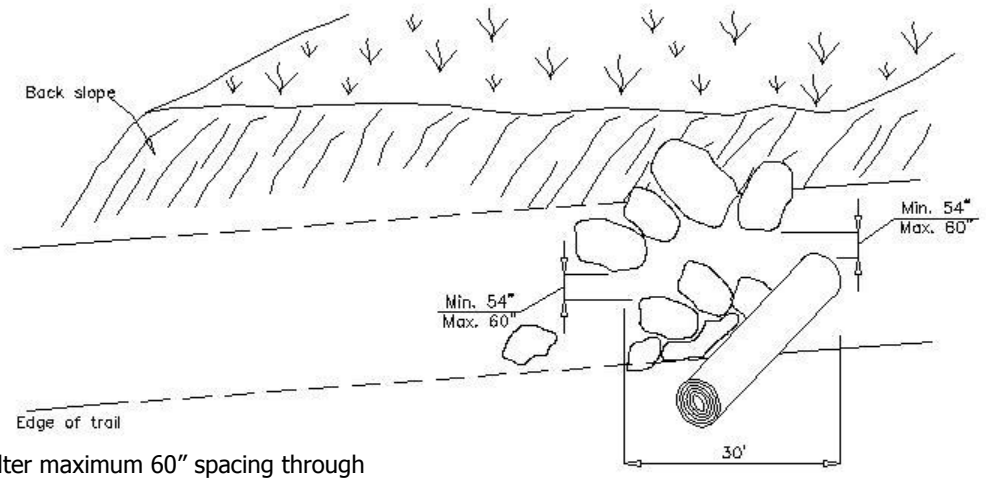
Timber sale Contract
341-12-59
Jolly Roger EXHIBIT Q

OHV TRAIL FILTER FOR QUAD TRAIL

NOT TO SCALE



PLAN VIEW



Filter maximum 60" spacing through path entrance and exit.
6'- 8' curve radius through filter.
Overall length of filter should be 30'.
Boulders used as blocking material should be buried 1/3 of original height.

PROFILE

8/2005

PART IV: OTHER INFORMATION

WRITTEN PLAN

SALE NAME: Jolly Roger

PROTECTED WATERS: Jordan Creek, Fox Creek, and Fall Creek, large Type F streams; Two un-named medium Type F tributaries to Fall Creek.

Definitions: Stream buffer: at least 100 feet horizontal distance from the high water mark on each side of the stream.

LOCATIONS: Portions of Section 30, T1N, R7W and portions of Sections 6, 8, 9, and 17, T1S, R7W, W.M., Tillamook County, Oregon.

ACTIVITIES: 1. Activity: Cable logging lines hanging over Type F stream.
Protection measures:

- All trees in the RMA are reserved from cutting.
- Cable yarding lines will be pulled out of the RMA prior to rigging the next yarding road.
- If trees or logs fall or slide into a stream channel they will not be limbed, bucked, or removed without prior approval from ODF.
- Cable lines will be an average of at least 150 feet apart where they extend over or through the Type F stream and buffer.

2. Activity: Harvesting within 100' of a High public safety risk landslide.
Protection measures:

- The harvest area was evaluated by NWO Area Geotechnicial Specialist and his recommendations were used to locate the harvest boundary.
- The sale boundary is located on slopes of less than 70%.
- A windfirm edge of trees was left between the area with a high public safety risk and the harvest area.

3. Activity: Construction of road fill higher than 15 feet.
Protection measures:

- Work will be performed during dry weather conditions only
- Fill will be constructed on existing side-slopes less than 60%
- Fill will be compacted in layers with slopes of 1½:1 for common material
- Fill will be located on ridge, 1,500 feet from Fall Creek

PREPARED BY: David Wells, Tillamook Contracts Unit; Troy Ramsell, Tillamook Engineering Unit
October 28, 2011

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:

(a) Will not export the unprocessed state timber which is the subject of this transaction;

(b) Will not sell, transfer, exchange or otherwise convey the unprocessed timber which is the subject of this transaction to any other person without first obtaining a like certification from that person; and

(c) Are not prohibited by OAR's 629-31-005 through 045 from purchasing state timber or logs directly from the State Forester, or this is a sale of Western Red Cedar for domestic processing.

SECTION 2

☐ Have not exported unprocessed timber originating from private lands in Oregon in the last 24 months.

☐ This is a sale of hardwood logs for domestic processing.

☐ This is a sale of Western Red Cedar for domestic processing.

☐ This is a sale of pulp logs or cull logs processed at domestic pulp mills, domestic chip plants or other domestic operations for the purpose of conversion of the logs into chips.

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
Salem, OR 97310