

PART III: EXHIBITS

State Timber Sale Contract
No. 341-06-91
Bowl Bound Beaver

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.: 341-06-91

(2) Sale Name: Bowl Bound Beaver

(3) Contract Expiration Date: October 1, 2008

Project Completion Dates: _____

(4) Purchaser: _____

(6) Purchaser Representatives:

Projects: _____	Phone: _____	Cell/Other Phone: _____	Home: _____
Projects: _____	Phone: _____	Cell/Other Phone: _____	Home: _____
Projects: _____	Phone: _____	Cell/Other Phone: _____	Home: _____
Projects: _____	Phone: _____	Cell/Other Phone: _____	Home: _____
Logging: _____	Phone: _____	Cell/Other Phone: _____	Home: _____
Logging: _____	Phone: _____	Cell/Other Phone: _____	Home: _____
Logging: _____	Phone: _____	Cell/Other Phone: _____	Home: _____
Logging: _____	Phone: _____	Cell/Other Phone: _____	Home: _____

(7) State Representatives:

Projects: _____	Phone: _____	Cell/Other Phone: _____	Home: _____
Logging: _____	Phone: _____	Cell/Other Phone: _____	Home: _____

(8) Name of Subcontractors & Starting Dates:

Projects: No(s) _____ - _____	Date: _____	Phone: _____
No(s) _____ - _____	Date: _____	Phone: _____
No(s) _____ - _____	Date: _____	Phone: _____
No(s) _____ - _____	Date: _____	Phone: _____
Logging: Felling _____	Date: _____	Phone: _____
Yarding: _____	Date: _____	Phone: _____

(9) Comments: _____

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

EXHIBIT B

INSTRUCTION SHEET FOR OPERATIONS PLAN

SUBMIT ONE COPY OF PLAN TO STATE

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

Item No. (from Page 1)

- (5) All sales require you to use a brand furnished by STATE. If the State brand has not been assigned when the plan is submitted, it will be furnished and assigned later. Complete drawing. If more than one brand is assigned to the sale, complete both drawings.
- (6) The contract requires you to have a designated representative available on the sale area or work location who is authorized to receive in your behalf any notice or instruction given by STATE and to take action in regard to performance under the contract. If logging and project work is widely separated, a representative is required for each.
- (7) The STATE representative will be designated when your plan is approved and is the person who will inspect and issue instructions regarding performance.
- (8) Show names of subcontractors to be used for any or all phases of the operations. If subcontractors are not known, or are changed later, give notification to the STATE representative prior to commencement of work by subcontractor.

Show projected dates for commencement of both projects and logging. If projected dates need to be changed at a later date, notification must be given to the STATE representative by supplemental plan or otherwise, prior to commencement of such operations.

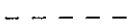
- (10) The STATE representative will furnish extra copies of Exhibit A of the contract for your use in preparing the operations map. The map shall use the following legend and show:
 1. Landing locations, approximate setting boundaries, and probable sequence of logging the settings. Number the settings in sequence.
 2. Locations of spur roads planned for construction, other than those required by the timber sale contract. Provide spur road specifications.
 3. Location of proposed tractor yarding roads. Show if and how marked on the ground.
 4. Location of temporary stream crossings.
 5. List the sequence of performing project work.
 6. Location of rock sources - attach pit development plans.



Cable landing, with numbers for sequence.



Tractor landing with alphabetical sequence.



Approximate setting boundary.



Spur truck roads.



Tractor yarding roads.



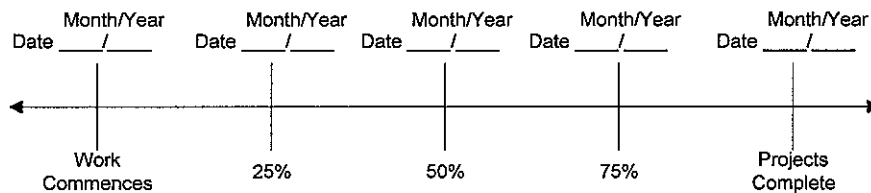
Temporary stream crossings.

EXHIBIT B
OPERATIONS PLAN

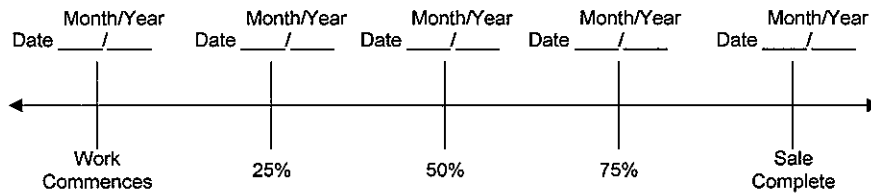
Completion Timeline

Indicate on the appropriate timeline below, the dates by which you plan to complete the work as required under this contract. The purpose of this section is to develop a plan that will ensure you complete the work as required, and meet the interim completion date(s) and contract expiration date. This plan is incorporated and made a part of the contract. When, in the opinion of STATE, operations are not commencing in a manner that meets the intent of this plan, you may be placed in violation of contract and your operations 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: Coos (07) Phone (541) 267-4136
 (State Forestry District)
 Address 63612 Fifth Road, Coos Bay, OR 97420

(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 Bowl Bound Beaver
 COUNTY Coos

(13) STATE CONTRACT NUMBER 341-06-91

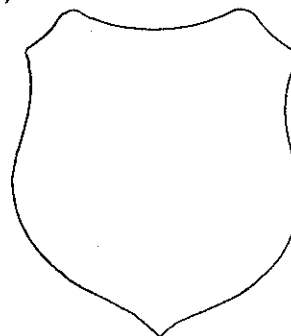
(14) SCALE: westside eastside cubic foot

(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: Loads consisting of only hardwood logs shall be verified by species and may be scaled by the load at 3.5 MBF/load.

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 B	0+00 to 21+35	Ditch
14 feet	12 feet	B to C	0+00 to 13+45	Ditch
14 feet	12 feet	C to D	0+00 to 6+85	Ditch
14 feet	12 feet*	E to F	0+00 to 6+85	Outslope**
14 feet	12 feet*	H to I	0+00 to 11+00	Outslope**

*Surfaced width only applies if "WINTER AND WET WEATHER OPTION" is chosen.

**Drainage shall be changed to Ditch if "WINTER AND WET WEATHER OPTION" is chosen.

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

Where clearing limits have not been marked, the "Road Brushing Specifications" in Exhibit D shall apply. Clearing debris shall not be placed or permitted to remain in or under any road embankment sections. Clearing debris shall not be left lodged against standing trees.

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

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

All stumps shall be completely removed within the limits of required grubbing. Stumps overhanging cutslopes shall be removed. Grubbing debris shall not be placed or permitted to remain in or under any road embankment sections. Grubbing debris shall not be left lodged against standing trees. Grubbing classifications are 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 ditch, whichever is widest, or as marked in the field.

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 F.

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 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: As marked in the field.

GRADING

Rock

Common - side slopes 50% and over

Common - side slopes less than 50%

Common - turnpike (level) section

Back Slopes

Vertical to 1/4:1

3/4:1

1/2:1

2:1

Fill Slopes

Not steeper
than 1½:1

Top of cutslope shall be rounded.

LANDINGS. Landings shall be constructed as Directed by STATE. Surface is to be crowned for drainage, with general grade no more than 3 percent.

EXHIBIT D

ADDITIONAL ROAD IMPROVEMENT/CONSTRUCTION INSTRUCTIONS

- A to B – The brush and trees along the edges of the road shall be removed according to specifications in Exhibit D, "Road Brushing Specifications." The road shall be bladed to achieve a smooth running surface.
- B to C – Waste material from the road improvement between Points H and I, and the reconstruction of the Landing at Point I, shall be placed in portions of the road (Station 0+00 to 6+50). This material shall be used to fill in low spots and improve drainage. Culverts shall be added according to specifications in Exhibit G, "Culvert Specifications." The remainder of the road shall be bladed to achieve a smooth running surface.
- C to D – This is a new road and Landing to be constructed. Between Station 1+10 to 6+85, the road and Landing shall be full bench construction, no sidecast construction shall be allowed. A small amount of material (approx. 100 yds.) shall be put on the outside edge of the existing Landing at Point C. A ditch shall be included according to the specifications in Exhibit D, "Forest Road Specifications." All material shall be taken to Point G and treated according to specifications in Exhibit D, "Endhauling Requirements." The stumps removed from the right-of-way shall be hauled to a stable location near Point G.
- E to F – This is a new road and Landing to be constructed. No end-haul is necessary for the construction of this road and Landing.
- G – A Landing shall be constructed at this point. The waste material from the construction of Points C to D shall be hauled to Point G and used as fill to construct the Landing.
- H to I – This road shall be reopened. The brush and small trees shall be removed according to the specifications in Exhibit D, "Road Brushing Specifications." A stump shall be removed from the subgrade at Station 4+25. Cutbank slough shall be removed in order to gain adequate road width. The material removed shall be hauled to the road improvement area between Points B and C.
- I – The Landing here shall be made larger by cutting back into the ridge behind the Landing. A small amount of material shall be placed on the Northeast side of the Landing to gain some width (approximately 360 yds.). The remaining material shall be hauled out to the road improvements between Points B and C (approximately 750 yds.).

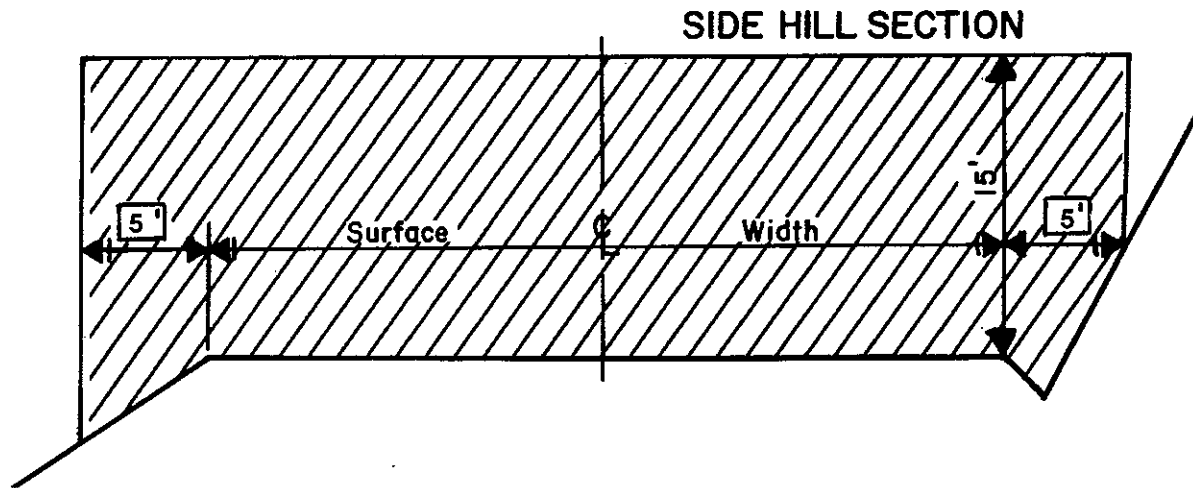
ADDITIONAL ROAD IMPROVEMENT/CONSTRUCTION INSTRUCTIONS
(WINTER AND WET WEATHER OPTION ONLY)

If the "WINTER AND WET WEATHER OPTION" is chosen, drainage shall be changed according to Exhibit D, "Forest Road Specifications," all road segments shall receive crushed rock according to specifications in Exhibit E, "Rocking Specifications," and culverts shall be added according to specifications in Exhibit G, "Culvert Specifications."

EXHIBIT D
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.

PURCHASER is required to **either** clear up to the designated clearing height as shown on the above diagram **or** clear the designated distance past the top of the cutbank as shown on the above diagram.

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 D
END-HAULING REQUIREMENTS

POINT TO POINT	STA. TO STA.	CONTAINMENT	WASTE AREA LOCATION	WASTE AREA TREATMENT
C to D	1+10 to 6+85	Full	(1)	(1, 2, 3)
H to I	0+00 to 11+00	Full	(2)	(1, 2, 3)
I	--	Full	(2)	(1, 2, 3)

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 as much material as possible 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.

Trees 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) Point G, use for fill to create Landing
- (2) Between Points B and C, in low spots in road, use to improve drainage

Waste Area Treatment

- (1) Deposit at waste area, spread evenly, compact, and provide adequate drainage.
- (2) Pile woody debris separate from other waste material.
- (3) See Exhibit D, "Additional Road Improvement/Construction Instructions."

EXHIBIT E
 ROAD SURFACING

TYPE OF ROCK	SIZE OF ROCK	COMP. DEPTH	YDS/ STA	TONS/ STA	POINT TO POINT	STATION TO STATION	APPROX. TOTAL TRUCK MEASURE VOLUME	
Hard Crushed Quarry	2½"-0"	4"	23	30.79	A to B	0+00 to 21+35	504 CY	670.32 Ton
Hard Crushed Quarry	2½"-0"	6"	35	47.10	B to C	0+00 to 13+45	486 CY	646.38 Ton
Hard Crushed Quarry	2½"-0"	8"	48	64.04	C to D	0+00 to 6+85	324 CY	430.92 Ton
LANDINGS:			YDS/ LND	TONS/ LND	NO. OF LNDGS.	POINTS		
Hard Crushed Quarry	6" Jaw - Run	6"	54	71.82	1	D	54 CY	71.82 Ton

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

ROAD SURFACING
 (WINTER AND WET WEATHER OPTION ONLY)

TYPE OF ROCK	SIZE OF ROCK	COMP. DEPTH	YDS/ STA	TONS/ STA	POINT TO POINT	STATION TO STATION	APPROX. TOTAL TRUCK MEASURE VOLUME	
Hard Crushed Quarry	2 ½"-0"	8"	48	64.04	E to F	0+00 to 6+85	324 CY	430.92 Ton
Hard Crushed Quarry	2 ½"-0"	8"	48	64.04	H to I	0+00 to 11+00	540 CY	718.20 Ton
LANDINGS:			YDS/ LND	TONS/ LND	NO. OF LNDGS.	POINTS		
Hard Crushed Quarry	6" Jaw - Run	6"	54	71.82	3	F, G, I	162 CY	215.46 Ton

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: 6" Maximum

<u>For 2½ "-0"</u>	Passing	3" sieve	100%
	Passing	2½" sieve	95-100%
	Passing	1¼" sieve	55-75%
	Passing	1/4" sieve	30-45%

Of the fraction passing 1/4" sieve, 40% to 60% shall pass the No. 10 sieve.

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

ROCK ACCOUNTABILITY

The rock shall meet the quality and size specifications in Exhibit E. A sample of the rock shall be supplied to STATE for testing and approval 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.

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 F

COMPACTION AND PROCESSING REQUIREMENTS

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
B to C, Pt. G	Crawler Tractor, Dump Trucks

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
C to D, E to F*, H to I*	Vibratory Roller

*Only required if "WINTER AND WET WEATHER OPTION" is chosen

EXHIBIT F

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, B to C, C to D, E to F*, H to I*	Vibratory Roller

*Only required if "WINTER AND WET WEATHER OPTION" is chosen

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.

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

Dump Trucks. Dump trucks shall be routed over the entire cross section of fill layers.

EXHIBIT G

CULVERT SPECIFICATIONS

All culvert materials shall be furnished and installed by PURCHASER, unless otherwise specified in the Contract. Culverts shall be constructed of corrugated galvanized or aluminized steel. Corrugated polyethylene may be used for sizes up to 36 inches in diameter. 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.

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 2 percent unless otherwise specified.

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 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.

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

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

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

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

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

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

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" 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.

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

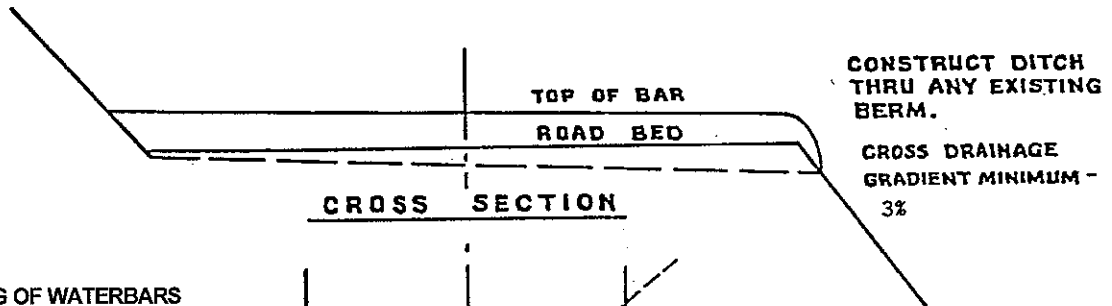
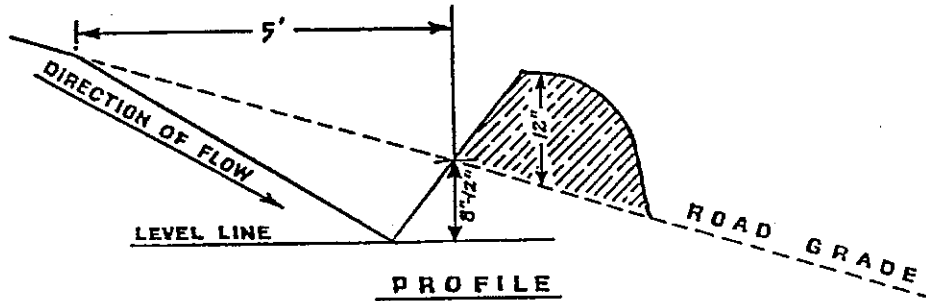
EXHIBIT G
CULVERT LIST

CULVERT NO.	DIAMETER (Inches)	LENGTH (Feet)	ROAD SEGMENT POINT TO POINT	STATION
1	18	40	B to C	1+85
2	18	40	B to C	Pt. E
3	18	30	C to D	1+10
4	18	30	C to D	4+85

CULVERT LIST
(WINTER AND WET WEATHER OPTION)

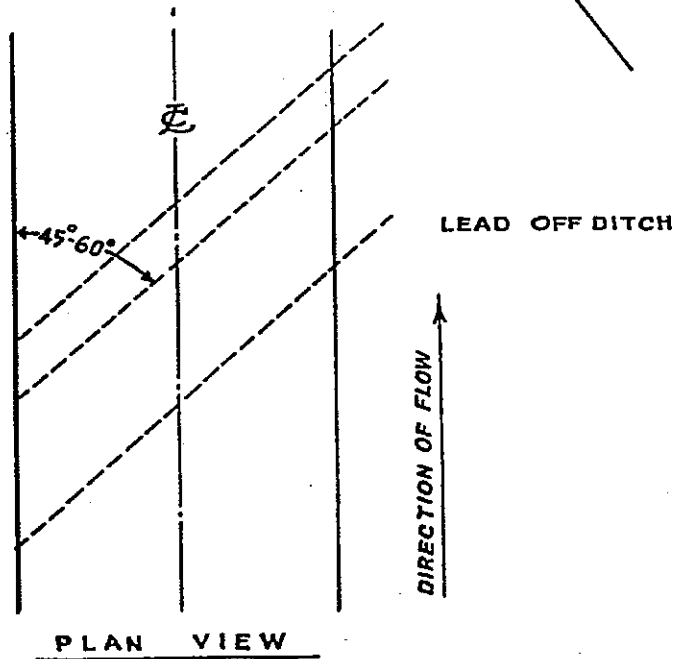
CULVERT NO.	DIAMETER (Inches)	LENGTH (Feet)	ROAD SEGMENT POINT TO POINT	STATION
5	18	30	H to I	As Directed
6	18	30	H to I	As Directed

EXHIBIT H
 WATERBAR SPECIFICATIONS



SPACING OF WATERBARS

ROAD GRADE	DISTANCE
≤ 5%	300'
6-10%	200'
11-15%	100'
16-20% or greater	50'



PART IV: OTHER INFORMATION

WRITTEN PLAN

SALE NAME: Bowl Bound Beaver, 341-06-91

LOCATION: Portions of Sections 2, T24S, R11W, W.M. Coos County, Oregon.

LANDOWNER: Oregon Department of Forestry; 63612 Fifth Road, Coos Bay, Or.

CONTRACT PURCHASER: _____

NOTIFICATION NO: _____

This written plan is prepared to comply with the requirements for a written plan as provided for by the Forest Practices Act (OAR) 629-635-130 (1a). This plan outlines the measures to be taken to comply with Type F stream protection requirements. The affected stream is Beaver Creek and tributaries of said stream.

SITUATION AND PROTECTED RESOURCE

Area 1 of the timber sale is adjacent to the main channel of Beaver Creek. Sale boundaries have been posted at least 100 feet from the stream to meet all FPA requirements.

LAYOUT

Landing locations have been provided to enable deflection for suspension of logs while yarding the sale area.

FELLING AND BUCKING

1. Trees shall be directionally felled parallel to or away from stream riparian management areas (RMA's) as feasible.
2. High stumps shall be left as needed to prevent logs from entering stream channels as shown on the Exhibit "A."

YARDING

1. Operator will use a machine and logging system capable of fully suspending logs.
2. Operator will fully suspend logs over stream buffers and single end suspension elsewhere.
3. Any corridors needed within the RMA will be spaced a minimum of 100 feet apart.

OPERATIONS PLAN.

Purchaser shall attach a yarding plan indicating landing locations, machinery and procedures to be used to obtain adequate suspension in the sale area and to minimize impacts during the felling process.

PURCHASER REPRESENTATIVE

DATE:

OPERATOR REPRESENTATIVE (if listed on notification)

DATE:



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal Cost Summary Bowl Bound Beaver Sale 341-06-91

District: Coos

Date: 4/10/06

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$1,548,307.08	\$21,916.96	\$1,570,224.04
		Project Work	(\$80,210.00)
		Advertised Value	\$1,490,014.04



Timber Sale Appraisal Timber Description Bowl Bound Beaver Sale 341-06-91

"STEWARDSHIP IN FORESTRY"

District: Coos

Location: Section 2, T24S, R11W, W.M., Coos County, Oregon.

Date: 4/10/06

Stand Stocking: 40%

Species	Avg. DBH	Amortized%	Recovery%
Douglas - Fir	24	0	95
Western Hemlock / Fir	14	0	90
Alder (Red)	15	0	85

Volume by Grade	Douglas - Fir	Western Hemlock / Fir	Alder (Red)	Total
3P	214	0	0	214
SM	208	0	0	208
2S	1,968	0	14	1,982
3S	169	118	22	309
3S 12"+	253	0	0	253
4S	0	0	16	16
Total	2,812	118	52	2,982

Comments: Pond Values Used: 1st Quarter Calendar Year 2006.

Hauling costs adjusted to make equivalent to \$620 daily truck cost w/o P&R (P&R to be added).

Western Red Cedar Stumpage Price = Pond Value minus DF logging costs.
\$705/MBF = \$850/MBF - \$145/MBF

Other Costs (See attached sheet).



Timber Sale Appraisal Logging Conditions Bowl Bound Beaver Sale 341-06-91

"STEWARDSHIP IN FORESTRY"

Combination#: 1	Douglas - Fir	100.00%	
	Western Hemlock / Fir	100.00%	
	Alder (Red)	100.00%	
Yarding Distance:	Medium (800 ft)		Downhill Yarding: No
Logging System:	Cable: Large Tower >=70		Process: Manual Delimiting
Tree Size:	Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF		
Loads/Day:	12		Bd. Ft./Load: 4,800
Cost/MBF:	\$61.63		
Machines:			
	Log Loader (A)		
	Tower Yarder (Large)		



Timber Sale Appraisal Logging Costs Bowl Bound Beaver Sale 341-06-91

"STEWARDSHIP IN FORESTRY"

Date: 4/10/06

Operating Seasons: 0.5

Profit & Risk: 13%

Project Costs: \$80,210

Other Costs (P/R): \$12,112

Slash Disposal: \$0

Other Costs: \$0

Miles of Road			
Dirt	Rock (Contractor)	Rock (State)	Paved
0.4	0.8	0.0	0.0

Road Maintenance: \$0.00

Hauling Costs

Species	\$/MBF	Trips/Day	MBF/Load
Douglas - Fir	\$65.45	2.0	4.5
Western Hemlock / Fir	\$62.00	2.0	4.5
Alder (Red)	\$75.30	2.0	3.5



Timber Sale Appraisal Logging Costs Breakdown Bowl Bound Beaver Sale 341-06-91

"STEWARDSHIP IN FORESTRY"

Costs	Douglas - Fir	Westem Hemlock / Fir	Alder (Red)
Logging	61.63	61.63	61.63
Road Maintenance	0.56	0.60	0.63
Fire Protection	0.45	0.45	0.45
Hauling	68.89	68.89	88.59
Other (P/R appl.)	4.06	4.06	4.06
Profit & Risk	17.63	17.63	20.20
Slash Disposal	0.00	0.00	0.00
Scaling	2.00	2.00	2.00
Other	0.00	0.00	0.00
Total	155.22	155.26	177.56

Amortization	0.00	0.00	0.00
Pond Value	692.20	480.00	599.04
Stumpage	536.98	324.74	421.48
Amortized	0.00	0.00	0.00



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal Summary

Bowl Bound Beaver Sale 341-06-91

Amortized

	Douglas - Fir	Western Hemlock / Fir	Alder (Red)
MBF	0.00	0.00	0.00
Value	0.00	0.00	0.00
Total	0.00	0.00	0.00

Unamortized

	Douglas - Fir	Western Hemlock / Fir	Alder (Red)
MBF	2,812.00	118.00	52.00
Value	536.98	324.74	421.48
Total	1,509,987.76	38,319.32	21,916.96

Gross Timber Sale Value

Recovery \$1,570,224.04

Prepared by: Ryan Greco

Date: 4/10/06

District: Coos

Phone: (541) 267-1755

Summary of "Other Costs" for Timber Sale Appraisals

Sale Name: Bowl Bound Beaver

Additional "Other Cost" with additional profit and risk to be added:

	<u>Units</u>	<u>Quantity</u>	<u>Cost/unit</u>	<u>Total Cost</u>
Felling				
Felling of unmerch material	MBF	0	\$ 1.00	\$ -
Directional Felling	MBF	500	\$ 2.00	\$ 1,000.00
Yarding and Loading				
Artificial tailhold	anchor		\$ 500.00	\$ -
Artificial guyline support	anchor	0	\$ 500.00	\$ -
Brand and paint logs	MBF	2982	\$ 1.00	\$ 2,982.00
Loader time for firewood stacking	Hours	2	\$ 75.00	\$ 150.00
Cull sorting/slash piling on landings	landing	4	\$ 125.00	\$ 500.00
Rig lift trees	lift tree	0	\$ 100.00	\$ -
Snag Creation				
Tree Topping	Trees	54	\$ 100.00	\$ 5,400.00
Tree Girdling	Trees	54	\$ 20.00	\$ 1,080.00
Miscellaneous Costs				
Additional Fire Equipment	Seasons	1	\$ 1,000.00	\$ 1,000.00
Maintenance rock per section 5	Cubic Yards	0	\$ 18.00	\$ -
Safety Flagging and/or signing	per day	0	\$ 150.00	\$ -

Total additional "Other Cost" with additional profit and risk to be added

\$ 12,112.00

Additional "Other Cost" with no additional profit and Risk

	<u>Units</u>	<u>Quantity</u>	<u>Cost/unit</u>	<u>Total Cost</u>
Non-required road construction	Stations			\$ -
Non-required road rocking	Cubic Yards			\$ -
Stream clearance	Feet			\$ -
Scaling (high piece count)	MBF		\$ 1.00	\$ -

Total additional "Other Cost" with no additional profit and Risk

\$ -

**SUMMARY OF CONSTRUCTION COST
Bowl Bound Beaver**

Project 1A: Road Improvement

Points: A to B Length: 2135' Type: 14' subgrade w/ditch

Saw time to brush road (2 person crew)	<u>10</u>	hrs at	<u>\$73.50</u>	per hour	<u>\$735.00</u>
Excavator to clean up brush	<u>2</u>	hrs at	<u>\$120.00</u>	per hour	<u>\$240.00</u>
Grader time	<u>3</u>	hrs at	<u>\$75.00</u>	per hour	<u>\$225.00</u>

Total Project 1A: \$1,200.00

Project 1B: Road Improvement

Points: B to C Length: 1345' Type: 14' subgrade w/ditch

Improvements

Cat time to shape waste in road	<u>10</u>	hrs at	<u>\$120.00</u>	per hour	<u>\$1,200.00</u>
Grader to smooth road	<u>3</u>	hrs at	<u>\$75.00</u>	per hour	<u>\$225.00</u>

Total Improvements \$1,425.00

Culvert Installation

18" culverts (includes installation)	<u>80</u>	ft at	<u>\$18.36</u>	per ft	<u>\$1,468.80</u>
18" bands	<u>2</u>	band at	<u>\$10.80</u>	per band	<u>\$21.60</u>

Total Culverts \$1,490.40

Total Project 1B: \$2,916.00

Project 1C: Road Improvement

Points: H to I Length: 1100' Type: 14' subgrade no ditch

Cat time for road improvement	<u>10</u>	hrs at	<u>\$120.00</u>	per hour	<u>\$1,200.00</u>
Excavator time for road improvement	<u>10</u>	hrs at	<u>\$120.00</u>	per hour	<u>\$1,200.00</u>
Dump Truck to haul slough to waste areas in road between Points B to C	<u>10</u>	hrs at	<u>\$75.00</u>	per hour	<u>\$750.00</u>
Laborer	<u>10</u>	hrs at	<u>\$30.00</u>	per hour	<u>\$300.00</u>
Grader to smooth road	<u>2</u>	hrs at	<u>\$75.00</u>	per hour	<u>\$150.00</u>

Total Project 1C: \$3,600.00

Move-In

Equipment	Miles	hrs	Lowboy Rate/hr	Total
Excavator	25	4	\$95.00	\$380.00
Cat	25	4	\$95.00	\$380.00
Grader	25	4	\$95.00	\$380.00
Drill & Comp	25	4	\$95.00	\$380.00
Dump Truck	25	4	\$95.00	\$380.00

Total Move-In: \$1,900.00

Project 1 Total \$9,616.00

**SUMMARY OF CONSTRUCTION COST
Bowl Bound Beaver**

Project 2A: Road and Landing Construction

Points: C to D Length: 685' Type: 14' subgrade w/ditch

Clearing and Grubbing

Clear and Grub	<u>0.6</u>	acres at	<u>\$1,383.00</u>	per acre	<u>\$829.80</u>
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Total Clear and Grub \$829.80

Excavation

Excavator (rock excavation)	<u>3201</u>	yds at	<u>\$1.63</u>	per yd	<u>\$5,217.63</u>
Excavator (common excavation)	<u>4836</u>	yds at	<u>\$1.26</u>	per yd	<u>\$6,093.36</u>
Drill and shoot	<u>2,300</u>	yds at	<u>\$3.25</u>	per yd	<u>\$7,475.00</u>
Dump Truck to haul material to Pt G	<u>8,037</u>	yds at	<u>\$0.89</u>	per yd	<u>\$7,152.93</u>
Dump Truck to haul stumps near Pt G	<u>2</u>	hrs at	<u>\$75.00</u>	per hour	<u>\$150.00</u>
Excavator to load stumps	<u>2</u>	hrs at	<u>\$120.00</u>	per hour	<u>\$240.00</u>
Laborer	<u>95</u>	hrs at	<u>\$30.00</u>	per hour	<u>\$2,850.00</u>

Total Excavation \$29,178.92

Culvert Installation

18" culverts (includes installation)	<u>60</u>	ft at	<u>\$18.36</u>	per ft	<u>\$1,101.60</u>
18" bands	<u>2</u>	band at	<u>\$10.80</u>	per band	<u>\$21.60</u>

Total Culverts \$1,123.20

Grader

Grader to smooth road surface	<u>1</u>	hrs at	<u>\$75.00</u>	per hour	<u>\$75.00</u>
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Total Grader \$75.00

Total Project 2A: \$31,206.92

Project 2B: Road and Landing Construction

Points: E to F Length: 685' Type: 14' subgrade no ditch

Excavation

Excavator	<u>10</u>	hrs at	<u>\$120.00</u>	per hour	<u>\$1,200.00</u>
Cat time	<u>15</u>	hrs at	<u>\$120.00</u>	per hour	<u>\$1,800.00</u>
Laborer	<u>15</u>	hrs at	<u>\$30.00</u>	per hour	<u>\$450.00</u>

Total Excavation \$3,450.00

Grader

Grader to smooth road surface	<u>1</u>	hrs at	<u>\$75.00</u>	per hour	<u>\$75.00</u>
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Total Grader \$75.00

Total Project 2B: \$3,525.00

**SUMMARY OF CONSTRUCTION COST
Bowl Bound Beaver**

Project 2C: Landing Construction

Points:	G	Length:	n/a	Type:	n/a
Cat time to prep area and shape material		35	hrs at	\$120.00	per hour \$4,200.00
					Total Project 2C:
					\$4,200.00

Project 2D: Landing Re-Construction

Points:	I	Length:	n/a	Type:	n/a
Excavator		10	hrs at	\$120.00	per hour \$1,200.00
Cat time		10	hrs at	\$120.00	per hour \$1,200.00
Dump Truck to haul material to waste areas in road between Points B to C		10	hrs at	\$75.00	per hour \$750.00
Laborer		10	hrs at	\$30.00	per hour \$300.00
					Total Project 2D:
					\$3,450.00
					Project 2 Total
					\$42,382.00

Project 3: Road Surfacing

Points: A to B
 Length: 2135'
 Rock Type: 2 1/2"-0" Hard Crushed Quarry
 Depth: 4" compacted 23 yds/STA 30.79 tons/STA (1.33 tons/cu yd)

2 1/2"-0" Rock (2.4 hr RT)	670.32	tons at	\$13.82	per ton	\$9,263.82
Processing (Grader and Roller)	670.32	tons at	\$1.32	per ton	\$884.82

Points: B to C
 Length: 1345'
 Rock Type: 2 1/2"-0" Hard Crushed Quarry
 Depth: 6" compacted 35 yds/STA 47.10 tons/STA (1.33 tons/cu yd)

2 1/2"-0" Rock (2.4 hr RT)	646.38	tons at	\$13.82	per ton	\$8,932.97
Processing (Grader and Roller)	646.38	tons at	\$1.32	per ton	\$853.22

Points: C to D
 Length: 685'
 Rock Type: 2 1/2"-0" Hard Crushed Quarry
 Depth: 8" compacted 48 yds/STA 64.04 tons/STA (1.33 tons/cu yd)

2 1/2"-0" Rock (2.4 hr RT)	430.92	tons at	\$13.82	per ton	\$5,955.31
Processing (Grader and Roller)	430.92	tons at	\$1.32	per ton	\$568.81

Points: Landing at D
 Rock Type: Jaw Run
 Amount: 54 yds/landing 71.82 tons/landing (1.33 tons/cu yd)

Jaw Run Rock (2.4 hr RT)	71.82	tons at	\$13.82	per ton	\$992.55
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**SUMMARY OF CONSTRUCTION COST
Bowl Bound Beaver**

Move-in

<u>Equipment</u>	<u>Miles</u>	<u>hrs</u>	<u>Lowboy Rate/hr</u>	<u>Total</u>
Grader	25	4	\$95.00	\$380.00
Roller	25	4	\$95.00	\$380.00

Total Move-in \$760.00

Project 3 Total \$28,212.00

Total Project Costs \$80,210.00

TIMBER SALE SUMMARY

Bowl Bound Beaver

1. Type of Sale: Final Harvest, Recovery, Sealed Bid

2. Boundary Lines: Sale boundaries are marked on the ground with "Timber Sale Boundary" posters, "Right of way Boundary" posters, red flagging, and red paint at locations shown on the Exhibit "A".

3. Revenue Distribution: 100% CSL, 100% Coos County.

4. Sale Acreage: The sale is comprised of two units totaling 55 acres. One of the units is a Right Of Way for road construction. Sale acreage was determined from electronic digitizing using the ArcView GIS program. Interior road acres were accounted for by either including in the cruise or deducting from the expansion acreage.

5. Volume by Species, Fund and County. See Attached table titled Net Volumes and Acreages

6. Grade: (by Percent, all areas)

Species	3 Peeler %	Spec. Mill %	2 Saw %	3 Saw %	Big 3 Saw %	4 Saw %
Douglas-fir	8%	7%	70%	6%	9%	
Hemlock				100%		
Hardwoods			27%	42%		31%

7. Cruise: Area 1 of Bowl Bound Beaver was variable plot cruised using a nested Big BAF plot method. The Big BAF method is a combination of count plots and individually measured trees. The plots were spaced 66 feet apart on cruise lines spaced 425 feet apart. A 250 BAF full plot at 16 feet was taken to determine which Douglas-fir trees would be fully measured.

A total of 59 Douglas-fir trees were fully measured for DBH, height, grade and defect. A 40 BAF full plot at 16 feet was used to determine tree counts and to measure minor species. A total of 65 count plots were measured. Cruising was done in October 2005 by ODF foresters.

Area 2 Right of Way was 100% cruised in January, 2006 by ODF foresters.

A. Summary data:

Diam	Ht. Stand	Form Pt.	Form Factor	CV %	SE %
D4H	6" DIB	Conifer: 16' Hardwood: 16'	Recorded for all cruised trees by estimate and measure	64%	7.9 %

B. Stand Data:

SPECIES	DBH	TREES/ACRE	BASAL AREA/AC	NET MBF/ACRE
Douglas Fir	24	68	221	51
Hemlock	14	14	27	2
Hardwoods	15	17	22	1

C. Green Tree Retention: There are nine (9) green tree reserve areas associated with this sale. The reserve areas consist primarily of fish bearing and perennial stream buffer extensions and trees left along seasonal

drainages. The majority of the green tree retention is posted out of the sale boundary. The table below summarizes reserve trees whose volume has been removed from the cruise. Stream buffers and GTR areas are mapped in Exhibit "A."

Sale Area	Douglas fir - MBF	Hemlock MBF	Hardwood MBF
1	173	5.4	7

8. Timber Description: Timber in the sale area is stocked with mature 124 year-old Douglas-fir sawtimber with minor amounts of western hemlock and red alder. Area 2, a Right of Way is approximately 1 acre of 95 year old Douglas fir. Timber quality is good.

9. Topography: Area 1 has a dominant northerly aspect with some eastern faces. Terrain is generally steep with gentler ground at the top of the ridge. The sale area is bordered by Beaver Creek to the north and northeast, and a Beaver Creek tributary to the east. Locations of stream buffers and green tree retention areas are indicated on the Exhibit "A".

10. Logging Method: Area 1 is designed for cable logging. A small amount of Area 1 may be ground logged. Existing roads will be used for logging access and will require improvement. Final determination of landing locations and logging method must give priority to protection of stream buffers and green tree retention areas. Full suspension will be required while yarding over drainages and stream buffers and single end suspension over the remainder of the sale. The landing at point D is intended for winter harvest. The remainder of the sale is intended for summer harvest. Purchaser must comply with winter and wet weather option if operations are conducted during the wet season. The sale has been designed to be logged from four landings situated on spurs from the 1420 road. Roads and landings are indicated on the Exhibit "A".

11. Access: From Coos Bay, proceed east on the Coos River Highway through Allegany and turn left (north) onto the 1000 road. Follow the 1000 line approximately 8 miles to the 1400 road, turn east and go 0.1 mile where the road forks. Take the right fork (1420) and proceed to the end of the road, approximately 0.5 mile.

12. Projects:

Project No. 1: Road and landing improvement

Project No. 2: Road and landing construction

Project No. 3: Road surfacing

CRUISE VOLUME COMPUTATION REPORT

SALE NAME: Bowl Bound Beav
 GAL LOCATION: Section 2, T24S, R11W, WM Coos County

DATE: 01/17/2006
 BY: Ryan Greco

GROSS VOLUME MBF *

SPECIES>> AREA	Doug-fir	Hemlock	Hardwds	TOTAL BY AREA
1	3361	136.6	66.7	3564
Less GTR Vol.	172.7	5.4	7	186
GrossNet	3188	131.2	59.3	3378
Area 2 ROW	44	0.0	0.0	44
TOTAL	3232	131	59	3423

DEFECT AND BREAKAGE *

ALL AREAS

Species	Doug-fir	Hemlock	Hardwds
Field cull	0.05	0.03	0.04
Hidden cull	0.04	0.03	0.04
Breakage	0.04	0.04	0.05
Total	0.13	0.10	0.13

NET VOLUME BY MBF

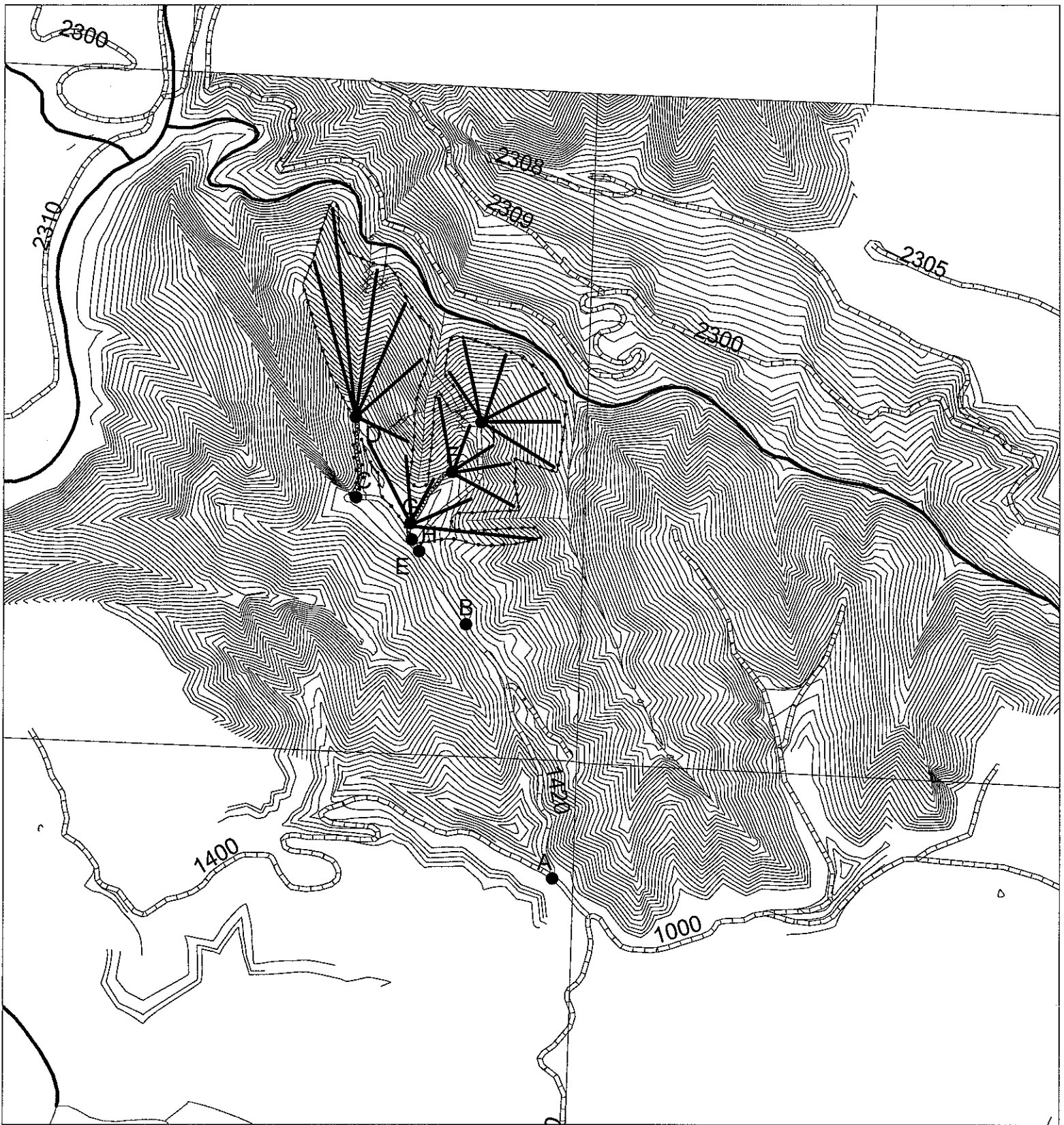
SPECIES AREA	Doug-fir	Hemlock	Hardwds	TOTALS BY AREA
1	2774	118	52	2944
2 ROW	38	0	0	38
TOTALS	2812	118	52	2982










NET VOLUME BY GRADE AND MBF *

Grade >>>>>>>>>>	Area	Species	3 PEE	SM	2 SAW	3 SAW	Big 3 SAW	4 SAW/CR	check value
		Doug-Fir	214	208	1968	169	253	0	2812
		Hemlock	0	0	0	118	0	0	118.1
		Hardwoods	0	0	14	22	0	16	52

GRADE DISTRIBUTION BY PERCENT

Grade >>>>>>>>>>	Area	Species	3 PEE	SM	2 SAW	3 SAW	Big 3 SAW	4 SAW	
		Doug-fir	8%	7%	70%	6%	9%	0.0%	1.00
		Hemlock	0%	0%	0%	100%	0%	0%	1.00
		Hardwoods	0%	0%	27%	42%	0%	31%	1.00



-  Timber Sale Boundary
-  Right of way boundary
-  Logging corridors
-  20' Contours
-  Project Points
- Streams**
-  Type F
-  Type N Perennial
-  Type N Seasonal
-  Individual GTR



Approximate Net Acreage
 Area 1 - 54 acres
 Area 2 ROW - 1 acre
 Total - 55 acres

LOGGING PLAN
OF TIMBER SALE NO.
 341-06-91
BOWL BOUND BEAVER
 T24S, R11W, SECTION 2,
 W.M., COOS COUNTY, OREGON

Approx. Scale 1" = 1000'



The information shown on this map depicts approximate locations. Exact locations of features represented by map symbols shall be determined on site and shall depend upon the conditions that exist on site. Activities will be conducted based upon features determined on site rather than features shown on this map.