

# PROSPECTUS

Sale Date: July 24, 2012

(1) Roseburg Sale No.: ORR04-TS12-06  
Douglas County, Oregon: O&C: Oral Auction

Sale Name: Cancoon Commercial Thinning  
Bid Deposit Required: \$16,200.00

All timber designated for cutting on:

NE $\frac{1}{4}$ , NE $\frac{1}{4}$ NW $\frac{1}{4}$ , N $\frac{1}{2}$ SE $\frac{1}{4}$	Sec. 15, T. 25 S., R. 1 W., Willamette Meridian
SW $\frac{1}{4}$ NE $\frac{1}{4}$ , N $\frac{1}{2}$ NW $\frac{1}{4}$ , SW $\frac{1}{4}$ NW $\frac{1}{4}$ , N $\frac{1}{2}$ SW $\frac{1}{4}$ , SW $\frac{1}{4}$ SW $\frac{1}{4}$ , N $\frac{1}{2}$ SE $\frac{1}{4}$	Sec. 23, T. 25 S., R. 1 W., Willamette Meridian
W $\frac{1}{2}$ SW $\frac{1}{4}$ , SE $\frac{1}{4}$ SW $\frac{1}{4}$	Sec. 25, T. 25 S., R. 1 W., Willamette Meridian
SE $\frac{1}{4}$ SE $\frac{1}{4}$	Sec. 26, T. 25 S., R. 1 W., Willamette Meridian

Approx. Number Merch. Trees	Est. Vol. MBF 32' Log	Est. Vol. CCF Cubic	Species	Est. Vol. MBF 16' Log	Appraised Price Per MBF	Est. Volume Times Appraised Price
20,026	2,019	4,598	Douglas-fir	2,445	\$62.50	\$152,812.50
1,093	124	279	Grand Fir	149	<b>\$34.50</b> *	\$5,140.50
1,080	69	174	Western Hemlock	87	<b>\$31.90</b> *	\$2,775.30
107	4	12	Incense-cedar	6	<b>\$35.10</b> *	\$210.60
113	4	11	Western Redcedar	5	\$124.20	\$621.00
<b>22,419</b>	<b>2,220</b>	<b>5,074</b>		<b>2,692</b>		<b>\$161,559.90</b>

\* BLM appraised price per MBF is a minimum stumpage value.

THE VOLUMES LISTED herein are estimates only, based on 16-foot taper breaks, which must be taken into consideration if comparisons are made with volume predictions based on other standards. The volumes based on 32-foot taper breaks are shown for comparison purposes. No sale shall be made for less than the total purchase price, without regard to the amount bid per unit, even though quantity of timber actually cut or removed or designated for taking is more or less than the estimated volume or quantity so listed.

APPRAISED PRICES are determined by analytical appraisal methods unless otherwise noted on individual timber sale notices.

## LOG EXPORT AND SUBSTITUTION RESTRICTIONS:

All timber sales, including timber from Federal rights-of-ways, shall be subject to the restrictions relating to the export and substitution of unprocessed timber from the United States in accordance with P.L. 94-165 and 43 CFR 5400 and 5424 as amended.

Excepting Port-Orford-cedar, all timber offered for sale hereunder is restricted from export from the United States in the form of unprocessed timber and is prohibited from being used as a substitute for exported private timber.

## CRUISE INFORMATION:

The Douglas-fir, Grand Fir, and Western Hemlock have been cruised using the 3P system to select sample trees. The sample trees have been cruised and their volume computed on form class tables for estimating volume in 16-

foot lengths. This volume is then expanded to a total sale volume. A map showing the location of these sample trees is available at the Roseburg District Office.

The volume of all trees above the 18" diameter class, all other species, and R/W trees have been determined by individual tree measurements using a 100% cruise.

With respect to merchantable trees of all species: the average tree is 11.6 D.B.H.O.B., the average log contains 36 bd. ft., the total gross volume is approximately 2750 M bd. ft., and 98% recovery is expected.

CUTTING AREA: An area of approximately 196 acres in 7 units are to be partially cut and a right-of-way of approximately 2 acres must be clearcut.

<u>TIMBER ACREAGE:</u>	Area 1: 30 acres	Area 4: 28 acres	Area 7: 31 acres
	Area 2: 35 acres	Area 5: 23 acres	R/W: 2 acres
	Area 3: 35 acres	Area 6: 14 acres	

ACCESS: Access to the sale area is provided by Government, County, and Privately controlled roads.

DIRECTIONS TO SALE AREA: To reach the access Harvest Areas No. 1, No. 2, No. 3, No. 4, No. 5 and No. 6, go east from Roseburg on State Highway 138 (Diamond Lake Blvd) to Steamboat. Turn left on County Road 249 and proceed northeast approximately 0.4 miles to the junction with BLM Road 25-1E-31.0 (Canton Creek) and turn left. Proceed northwest approximately 2.8 miles on BLM Road 25-1E-31.0 to the junction of BLM Road 25-1-25.0 and follow the Exhibit "D" map to the sale area.

To access Harvest Area No. 7, go east from Roseburg on State Highway 138 (Diamond Lake Blvd) to Steamboat. Turn left on County Road 249 and proceed northeast approximately 0.3 miles to the junction with BLM Road 25.5-1E-32.0 and turn left. Proceed northwest approximately 1.6 miles to the junction of BLM Road 25-1-36.0 and follow the Exhibit "D" map to the sale area.

ROAD MAINTENANCE: Rockwear and maintenance fees of \$11,114.94 will be required to be paid to the BLM. A rock wear fee of \$245.64 and a road use fee of \$190.19 will be required to be paid to Seneca Jones Timber Co.

ROAD CONSTRUCTION: Estimates include the following: construct 14+65 stations, renovate 224+40 stations and decommission 47+40 stations of road. Additional information is available in Exhibit C.

DURATION OF CONTRACT will be 36 months for cutting and removal of timber. The contract contains SPECIAL PROVISIONS regarding: logging, environmental protection, road construction, road renovation, road use, road maintenance, fire protection, slash disposal and log exporting. Log scaling may be required under the terms of this contract.

ADDITIONAL INFORMATION: This prospectus includes maps and tables that cannot be made Section 508 compliant. For help with its data or information, please contact the Roseburg District Office at 541-440-4930.

#### NOTES:

1. A revised Special Provision has been added to the contract which enables the Contracting Officer to suspend the contract to facilitate protection of certain plant or animal species, and /or to modify or terminate the contract when necessary to: (1) Comply with the Endangered Species Act, or; (2) Comply with a court order, or; (3) Protect species which were identified for protection through survey and manage and/or protection buffer standards and guidelines established in the ROD and RMP.

This contract provision limits the liability of the Government to the actual costs incurred by the Purchaser which have not been amortized by timber removed from the contract area.

2. This contract contains provisions for the sale and removal of additional timber necessary to facilitate safe and efficient Purchaser operations. It is estimated that approximately 135 MBF of such additional timber may be removed under the contract, but is not included in the advertised sale volume nor was it included in the timber sale appraisal. This estimate is a net figure reduced by the estimate of the volume of trees previously marked for cutting, which the Authorized Officer may elect to reserve.
3. Seasonal operating restrictions apply to this sale regarding road work, falling, bucking, yarding, loading, and hauling. Refer to Section 41(B)(7)(b), 41(B)(13-17) and the Exhibit E for details.
4. Harvest Area No. 7 is accessed by an inadequately surfaced road. No yarding, loading or hauling shall be conducted in Harvest Area No. 7 between October 15 of one calendar year and May 15 of the following calendar year, both days inclusive (wet season), unless otherwise approved by the Authorized Officer. Refer to the Exhibit E for details.
5. Spurs No. 2, No. 5, No. 6 and No. 7, and BLM Road No. 25-1-15.2 Segment A are to be decommissioned in the same operating season in which they are used for harvest activity. The Purchaser is required to perform decommissioning operations. Decommissioning operations will include water-barring, road blocking and covering the roads with logging slash to the satisfaction of the Authorized Officer. Refer to the Exhibit D for details. If an unsurfaced spur will overwinter before decommissioning, that spur shall be winterized. See Section 41(F)(1) for details.
6. A license agreement with Seneca Jones Timber Co. is required. Refer to the Exhibit D for details.

THIS IS A SALE PROSPECTUS ONLY. ATTACHMENTS MAY NOT INCLUDE ALL EXHIBITS REFERRED TO IN THE CONTRACT PROVISIONS. THE COMPLETE CONTRACT, INCLUDING ALL EXHIBITS, IS AVAILABLE FOR INSPECTION AT THE ROSEBURG DISTRICT OFFICE.

Section 40. TIMBER RESERVED FROM CUTTING - The following timber on the contract area is hereby reserved from cutting and removal under the terms of this contract and is retained as the property of Government.

- (a) All timber on the Reserve Areas as shown on Exhibit A, all retention trees marked with orange paint above and below stump height within the cutting areas and all orange painted and posted trees which are on or mark the boundaries of the Reserve Areas.
- (b) All existing coarse woody debris, logs and trees classified as decay Classes 3, 4, and 5, bark substantially sloughed off and in advanced stages of decay, within the Harvest Areas as shown on Exhibit A.



Section 41. The Purchaser shall comply with the special provisions which are attached hereto and made a part hereof, unless otherwise authorized in writing by the Authorized Officer.

Section 41(A) Periodic Payment and First Installment:

- (1) Notwithstanding the provisions of Section 3(b), the amount of the first installment may be reduced by the Government when the Contracting Officer requests the Purchaser to interrupt or delay operations for a period expected to last more than thirty (30) days during the operating season. Such interruption or delay must be beyond the Purchaser's control. Operating season shall be defined, for this purpose, as the time of year in which operations of the type required are normally conducted and not specifically restricted under the contract. The first installment may be reduced to five (5) percent of the installment amount listed in Section 3(b), during the delay period. The Purchaser must request such a reduction in writing. When the Contracting Officer notifies the Purchaser that operations may proceed, the Purchaser shall have fifteen (15) days after such notification to return the first installment to the full value specified in Section 3(b). Failure to return the first installment to the full value within the allotted time will be considered a material breach of contract. No timber shall be cut or removed from the contract area until the first installment is restored to the full amount.
- (2) Notwithstanding the provisions of Section 3(b), adjustments in the due dates for periodic payments may be made by the Government if the Contracting Officer interrupts or delays contract operations for a period expected to last at least thirty (30) days, and the interruption or delay is beyond the Purchaser's control. Any adjustment made shall provide the Purchaser with an equal amount of operating time as would have been available without the delay. The Purchaser shall request such adjustment in writing before the due date for a periodic payment contained in Section 3(b).

Section 41(B) Logging:

- (1) Before beginning operations on the contract area for the first time or after a shutdown of ten (10) or more days, the Purchaser shall notify the Authorized Officer in writing of the date they plan to begin operations. The Purchaser shall also notify the Authorized Officer in writing if they intend to cease operations for any period of ten (10) or more days.
- (2) Prior to the commencement of operations, the Purchaser shall obtain from the Authorized Officer written approval of a written operations and logging plan commensurate with the terms and conditions of the contract which shall include measures needed to assure protection of the environment and watershed. A prework conference between the Purchasers' authorized representative and the Authorized Officer must be held at a location designated by the Authorized Officer before the logging plan will be approved. All logging shall be done in accordance with the plan developed by this provision.
- (3) In the Harvest Areas shown on Exhibit A, all trees designated for cutting, which are within one hundred fifty (150) feet of the Reserve Areas, property lines and adjacent plantations shall be felled away from those areas.
- (4) In the Harvest Areas shown on Exhibit A, trees designated for cutting shall be felled, topped, limbed and cut into log lengths not to exceed forty-two (42) feet before being yarded, unless approved by the Authorized Officer.

- (5) In the Harvest Areas shown on Exhibit A, all timber shall be felled to lead.
- (6) In Harvest Areas No. 1 (portion), No. 2, No. 3 (portion), No. 4 (portion), No. 5, No. 6 and No. 7 (portion), as shown on the Exhibit A, yarding shall be done with a skyline yarding system capable of maintaining one end suspension and equipped with a mechanical slack pulling carriage having a minimum of one hundred (100) feet of lateral yarding capability, a maximum spar height of forty (40) feet, and a maximum power rating of two hundred twenty five (225) HP. The system shall have the capability to yard in multi-span configuration.
- (7) In Harvest Areas No. 1 (portion), No. 3 (portion), No. 4 (portion) and No. 7 (portion) designated for ground-based yarding as shown on Exhibit A:
  - (a) Ground-based yarding operations shall generally be limited to slopes of thirty-five (35) percent or less, and existing skid trails shall be utilized to the greatest extent possible.
  - (b) No ground-based yarding shall be permitted between October 15 of one calendar year and May 15 of the following calendar year, both days inclusive, or other periods of unseasonably wet weather and soil moisture conditions, unless otherwise approved by the Authorized Officer.
  - (c) A rubber-tired or track-mounted skidder may be used in accordance with the following specifications:
    - (1) The skidder shall be approved by the Authorized Officer prior to ground-based yarding operations.
    - (2) Yarding shall be done with one end of the log suspended.
    - (3) The skidder shall be restricted to designated skid trails. Skid trails shall be clearly identified on the ground, twelve (12) feet or less in width and spaced at least one hundred fifty (150) feet apart. Designated skid trails, whether existing or newly proposed, shall be approved by the Authorized Officer prior to the felling of timber.
  - (d) A track-mounted log loader, or shovel yarding system, may be used in accordance with the following specifications:
    - (1) The track-mounted log loader shall be approved by the Authorized Officer prior to ground-based yarding operations.
    - (2) The track-mounted log loader shall be restricted to designated skid trails and shall utilize the swing yarding method to the greatest extent practicable. The designated skid trail network shall minimize both the amount of ground covered by the tractor treads and the number of passes over any single spot on the ground. Designated skid trails, whether existing or newly proposed, shall be approved by the Authorized Officer prior to the felling of timber.

- (3) The track-mounted log loader shall be required to place logging slash in front of the machine's tracks prior to traveling designated skid trails in order to reduce soil compaction.
- (e) A harvester/forwarder system may be used in accordance with the following specifications:
  - (1) The harvester shall be required to cut off limbs and tops in front of the machine's tracks in order to reduce soil compaction. The harvester must have a lateral reach of twenty (20) feet or more, and the machine's lateral reach must be utilized as much as possible.
  - (2) The forwarder shall operate only on designated skid trails approved by the Authorized Officer. Forwarder trails shall be located on existing skid trails and/or the slash-covered areas traversed by the harvester. Forwarder trails shall be perpendicular to hill-slope contour lines as much as possible.
  - (3) Logs that are too large for the harvester/forwarder operation may be yarded with a rubber-tired or track-mounted skidder, or a track-mounted log loader approved by the Authorized Officer, and as directed by the Authorized Officer. The skidder shall operate on designated skid trails approved by the Authorized Officer.
  - (4) All trees designated for cutting shall be felled, topped, limbed and cut into log lengths not to exceed twenty-one (21) feet before being yarded, unless approved by the Authorized Officer.
- (8) Prior to attaching any logging equipment to a reserve tree, the Purchaser shall obtain written approval from the Authorized Officer and shall take precautions to protect the tree from damage as directed in writing by the Authorized Officer.
- (9) Before cutting and removing any trees necessary to facilitate logging in the Harvest Areas shown on Exhibit A, the Purchaser shall identify the location of skid roads, cable yarding roads, and tailhold, tieback, guyline, lift, intermediate support, and danger trees on the ground in a manner approved by the Authorized Officer at the pre-work conference and documented in the Logging Plan. Said Purchaser identification of trees to be cut and removed does not constitute authority to proceed with cutting and removal. In addition, before proceeding with cutting the following conditions must be met:
  - (a) All skid trails or cable yarding roads upon which timber is identified by the Purchaser to be cut and removed in accordance with this special provision must be necessary for the safe and expeditious removal of timber sold under this contract and shall be limited to the minimum width necessary for yarding of logs with a minimum of damage to reserve trees, however, unless otherwise approved in writing by the Authorized Officer, the width of each skid trail shall be limited to fourteen (14) feet, and each cable yarding road shall be limited to twenty (20) feet.
  - (b) The Purchaser may immediately cut and remove additional timber to clear skid roads and cable yarding roads; and provide tailhold, tieback, guyline, lift, and intermediate support trees; and clear danger trees when the trees have been marked with high visibility paint

above and below stump height by the Authorized Officer and thereby approved for cutting and removal by the Authorized Officer. The volume of the timber to be sold will be determined by the Authorized Officer in accordance with Bureau of Land Management prescribed procedures. No timber may be cut or removed under terms of this provision unless sufficient installment payments have been made in accordance with Section 3.(b). of the contract or sufficient bonding has been provided in accordance with Section 3.(d). of the contract.

- (c) The Purchaser agrees that sale of this additional timber shall be accomplished by a unilateral modification of the contract executed by the Contracting Officer and that such timber shall be sold at the unit prices shown in Exhibit B of this contract unless: the value of the timber must be reappraised subject to the terms for contract extension set forth in Section 9 of the contract; or, the Authorized Officer determines that trees otherwise reserved in Section 40 of the contract or any tree that exceeds twenty-eight (28) inches diameter at breast height shall be appraised and sold by bilateral modification of the contract at current fair market value in accordance with Section 8 of the contract.
  - (d) This authorization for the Purchaser to cut and remove additional timber prior to the execution of a modification may be withdrawn by the Contracting Officer if the Authorized Officer determines that the Purchaser has cut and removed any tree not previously marked and approved for cutting by the Authorized Officer, which under Section 10 of the contract constitutes a violation of the contract and under Section 13 of the contract may constitute a trespass rendering the Purchaser liable for damages under applicable law.
  - (e) If authorization is withdrawn, the Contracting Officer shall issue a written notice to the Purchaser that the sale of additional timber under this special provision is no longer approved. In this case, the Purchaser shall inform the Authorized Officer at least one (1) working day prior to the need for cutting and removing any additional timber, and execute a bilateral modification prior to cutting for such additional approved timber at the unit prices shown in Exhibit B of the contract or in accordance with Section 8 or Section 9 of the contract as determined by the Authorized Officer in accordance with this provision. The Contracting Officer may issue a written order to the Purchaser to suspend, delay, or interrupt any or all contract work for the period of time deemed necessary and appropriate for the Government to safely measure and mark additional timber.
  - (f) The Government may reserve trees previously designated for cutting and removal by applying orange paint as replacements for additional trees cut and removed for skid roads and cable yarding roads when the Authorized Officer determines such reservation is necessary to maintain stand densities consistent with objectives set forth in the management prescription(s). This may include the replacement of trees damaged by storm events, or insects or disease. The volume of this timber to be reserved will be determined by the Authorized Officer in accordance with Bureau of Land Management prescribed procedures and the value shall be based on the unit prices shown in Exhibit B of the contract. The Purchaser agrees that the Total Purchase Price shall be reduced accordingly through a unilateral modification to the contract executed by the Contracting Officer.
- (10) In accordance with the requirements of Section 8 of the contract it has been determined that it is in the best interest of the Government and within the provisions of 43 CFR 5402.0-6 to sell additional

timber located in the Contract Area, which is obstructing needed cable yarding roads, hazardous to workers, needed for guyline, tailhold, and tieback trees, severely damaged from the normal conduct of felling or yarding operations to meet all applicable State safety laws, codes or regulations. This timber must be cut or removed so that the Purchaser can continue active falling or yarding operations. The Purchaser is, therefore, authorized to cut and remove such additional timber in accordance with the provisions of Section 8 of the contract: provided, however, that:

- (a) Trees reserved for the tree improvement program and trees reserved for the wildlife habitat objectives under Section 40 of the contract are not included in the authorization.
- (b) The Purchaser shall identify each tree sold and cut in accordance with the provision by marking the cut surface of the stump and the bottom log immediately after falling with high visibility paint. The stump shall be marked by flagging the location of the stump with plastic fluorescent pink ribbon hung within five feet of the stump at eye level so that the stump can be visually located from a distance of not less than one hundred (100) feet.
- (c) The volume and price for such timber shall be determined by the Authorized Officer in accordance with Bureau of Land Management prescribed procedures and paid for by the Purchaser in accordance with Section 3(b) or 3(d) of the contract as required by Section 8 of the contract.
- (d) No timber may be cut or removed under the terms of this provision if all contract payments required by Section 3(b) or 3(d) of the contract have been made.
- (e) The permission to cut and remove additional timber contained in this provision may be withdrawn by the Contracting Officer if the Authorized Officer determines that the Purchaser:
  - (1) Failed to properly mark any stump with high visibility paint.
  - (2) Failed to identify the location of any stump.
  - (3) Cut any tree that was reserved for tree improvement and/or wildlife habitat.
  - (4) Cut any tree in or adjacent to cable yarding corridors that was not necessary to facilitate cable yarding.
  - (5) Cut any reserve tree in or adjacent to skid trails that was not necessary to facilitate ground based yarding.
  - (6) Failed to properly segregate any pulled over tree that was yarded to the landing.
  - (7) Cut any reserve tree that was not severely damaged from felling and yarding operations.
  - (8) Cut more than the minimum number of trees necessary to properly serve as guyline anchor stumps.
  - (9) Cut or topped more than the minimum number of trees necessary to properly serve as tailhold trees.
  - (10) Cut more than the minimum number of trees necessary to properly serve as tie-backs for topped tailhold trees.
  - (11) Failed to maintain accurate and current (no more than 24 hours old) documentation of cut and removed timber.

If the permission to cut and remove additional timber provision is withdrawn, the Authorized Officer shall deliver to the Purchaser a written notice that additional sale of timber under this special provision is no longer approved.

If the permission to cut and remove additional timber provision is withdrawn, the Purchaser shall inform the Authorized Officer at least two working days prior to the need for cutting and yarding any guyline tree, tailhold tree, tie-back tree, danger tree, and corridor tree. All sales of additional timber shall comply with Section 8 of the contract. The Contracting Officer may order the Purchaser, in writing, to suspend, delay, or interrupt all or any part of the work of this contract for the period of time that the Contracting Officer determines appropriate for the Government to safely measure and mark additional timber.

All cable yarding and/or ground based equipment skid roads upon which timber may be cut and removed in accordance with this special provision must be needed for the removal of timber sold under this contract and shall be limited to the narrowest width necessary for the yarding of logs with minimum damage to reserved trees.

The Purchaser shall be liable for damages in accordance with Section 13 of the contract for any reserved timber cut or removed in violation of the terms of this special provision.

- (11) For a distance of fifty (50) feet from the perimeter of each landing designated by the Authorized Officer, all logs more than eight (8) inches in diameter at the large end and longer than eight (8) feet in length shall be decked or windrowed at the location designated by the Authorized Officer except logs sold and removed from the Contract Area.
- (12) No yarding or loading is permitted in or through the Reserve Areas as shown on Exhibit A unless otherwise approved by the Authorized Officer.
- (13) No road renovation or construction shall be conducted on the Contract Area between October 15 of one calendar year and May 15 of the following calendar year, both days inclusive (wet season), unless otherwise approved by the Authorized Officer.
- (14) No timber falling, bucking or yarding shall be conducted on the Thinning Area from April 15 to July 15 of each calendar year, both days inclusive (bark slip period), unless otherwise approved by the Authorized Officer.
- (15) No timber yarding, loading or hauling shall be conducted on unsurfaced roads or inadequately surfaced roads between October 15 of one calendar year and May 15 of the following calendar year, both days inclusive (wet season), unless otherwise approved by the Authorized Officer. Refer to the Exhibit E for details.
- (16) No timber yarding shall be conducted on the downhill cable yarding portion of Harvest Area No. 4 between October 15 of one calendar year and May 15 of the following calendar year, both days inclusive (wet season), unless otherwise approved by the Authorized Officer.
- (17) For Harvest Area No. 7 as shown on Exhibit A, no operations may be conducted from February 1 to May 31, both days inclusive, of each calendar year due to the potential disruption of northern spotted owls. Refer to the Exhibit E for details.

The Government will conduct surveys to determine whether spotted owls are present within 0.25 miles of the Harvest Area. If it is determined that spotted owls are not present, are present but have not attempted to nest, or have failed in nesting attempts, the Authorized Officer may lift the seasonal restriction in any given year on such operations in writing.

Section 41(C) Miscellaneous:

- (1) The Government, at its option, may administratively check scale any portion of the timber removed from the contract area, and if necessary, conduct check scaling of independent scalers contracted to BLM for administrative check scaling purposes. The Purchaser hereby agrees to make such contract timber available for such scaling at a location or locations to be approved in writing by the Authorized Officer. At the approved location or locations, the Purchaser shall provide an area for logs to be safely rolled out for scaling, to unload logs from trucks, place logs in a manner so that both ends and three faces of each log are visible for scaling, and to reload or remove logs after scaling has been completed. In the event that BLM elects to administratively check scale and if such check scaling causes a delay in log transportation time, an adjustment will be made to the purchase price as follows: If the entire sale is check scaled, the purchase price of this contract shall be reduced by Two Thousand Nineteen and 00/100 dollars (\$2,019.00). In the event only a portion of the contract timber is scaled, the purchase price shall be reduced by that portion of Two Thousand Nineteen and 00/100 dollars (\$2,019.00) which is equal to the percentage of timber sold which was actually scaled by the Government. For purposes of computing this price reduction, the percentage of timber sold which has been scaled shall be determined by the Government. Any reduction in purchase price under the terms of this provision shall be full compensation to the Purchaser for any expense or loss incurred as a result of such scaling. Scaling shall be conducted in accordance with Eastside Scribner Decimal C Rules by BLM scalers, and/or independent scalers contracted to BLM. A copy of the scale report will be made available to the Purchaser upon request.

Section 41(D) Environmental Protection:

- (1) In addition to the requirement set forth in Section 25 of this contract, the Purchaser shall clean road surfaces, cut banks, landings, ditch lines and culverts of all debris created by logging operations.
- (2) In addition to the requirement set forth in Section 25 of this contract, the Purchaser shall steam clean or pressure wash all logging and road building equipment, except logging trucks and crew transport, prior to initial move-in, to minimize the likelihood of introducing noxious weeds to the Contract Area. Equipment washing shall occur at a location approved by the Authorized Officer. Equipment will be visually inspected by the Authorized Officer prior to use. Any logging or road building equipment removed from the Contract Area during the duration of the contract must be steam cleaned or pressure washed before it is returned to the Contract Area. Cleaning shall be defined as removal of all dirt, grease, plant parts and material that may carry noxious weed seeds.
- (3) In addition to the requirement set forth in Section 25 of this contract, the Purchaser shall winterize temporary Spurs No. 2, No. 5, No. 6 and No. 7, and temporary Road No. 25-1-15.2 Segment A, constructed or renovated under Section 41(F)(1), or any portion thereof, in accordance with the plans and specifications shown on Exhibit D, and in accordance with the following stipulations:
  - (a) The Purchaser intends to use the temporary spurs/temporary roads or portions thereof for more than a single operating season; or, circumstances require that the temporary spurs/temporary roads or portions thereof over-winter before decommissioning.

- (b) Winterizing shall consist of water-barring, blocking and mulching to the satisfaction of the Authorized Officer.
  - (c) Winterizing shall take place at the end of the operating season as described in Section 41(B)(13) and 41(F)(1) of this contract, or as directed by the Authorized Officer.
- (4) In addition to the requirements set forth in Section 25 of this contract, the Purchaser shall, upon completion of logging operations, perform soil amelioration operations in Harvest Area No. 3 on approximately fifty-five hundredths (0.55) mile of landings, skid trails and associated equipment areas as designated by the Authorized Officer and in accordance with the following stipulations:
- (a) All sub-soiling equipment shall be inspected and approved by the Authorized Officer before sub-soiling operations begin.
  - (b) Slash and other organic debris and some topsoil as inoculum will be spread over the sub-soiled surface. Slash and other organic debris, including some topsoil, will cover at least 50 percent of the sub-soiled area, where levels of this material are in enough abundance. Waterbars shall be constructed, concurrently with sub-soiling operations, on grades steeper than 10 percent, as directed by the Authorized Officer.
  - (c) Sub-soiling shall occur during the same dry season as ground-based harvesting or completion of spur/road use and be accomplished prior to October 15, unless otherwise approved by the Authorized Officer.
  - (d) The compacted surfaces of temporary spur roads, landings and main skid trails plus associated compacted areas such as turnouts, truck turnarounds and log decking areas shall be sub-soiled (broken up, loosened and de-compacted) using excavator attachments, log loader tongs or other approved equipment.
  - (e) Sub-soiling shall be completed to a minimum depth of 18 inches below the ground surface, unless otherwise approved by the Authorized Officer.
  - (f) Treated areas shall span the total width of compaction, as identified by the Authorized Officer. At least 80 percent of the compacted soil profile shall be shattered. No more than 50 percent of the treated compacted soil shall have clods greater than two inches in diameter, unless otherwise approved by the Authorized Officer.
  - (g) Sub-soiling shall not occur within a five foot radius of the boles of residual trees where major roots can be cut, mangled or pulled, unless otherwise directed by the Authorized Officer.
  - (h) Equipment shall not be allowed to operate on slopes in excess of 35 percent or to cross streams or drainages unless approved by the Authorized Officer. Examples to the 35% exception include situations such as small inclusions of steeper slopes, connecting trails to isolated ground-based harvest areas, or the use of existing trails that could be used without causing undue effects to the soil.



- (5) The Purchaser shall immediately discontinue specified construction or timber harvesting operations upon written notice from the Contracting Officer that:
- (a) threatened or endangered plants or animals protected under the Endangered Species Act of 1973, as amended, may be affected by the operation, and a determination is made that consultation or reinitiation of consultation is required concerning the species prior to continuing operation, or;
  - (b) when, in order to comply with the Endangered Species Act, the Contracting Officer determines it may be necessary to modify or terminate the contract, or;
  - (c) federal proposed, federal candidate, Bureau Sensitive or State listed species protected under BLM Manual 6840 - Special Status Species Management - have been identified, and a determination is made that continued operations would affect the species or its habitat, or;
  - (d) other active raptor nests have been discovered, and a determination is made that continued operations under this contract would adversely affect the present use of the discovered nesting area by the raptor, or;
  - (e) when, in order to comply with a court order which enjoins operations on the sale or otherwise requires the Bureau of Land Management to suspend operations, or;
  - (f) when, in order to comply with a court order, the Contracting Officer determines it may be necessary to modify or terminate the contract, or
  - (g) species have been discovered which were identified for protection through survey and manage and/or protection buffer standards and guidelines established in the ROD and RMP, and the Contracting Officer determines that continued operations would affect the species or its habitat, or;
  - (h) when, in order to protect species which were identified for protection through survey and manage and/or protection buffer standards and guidelines established in the ROD and RMP, the Contracting Officer determines it may be necessary to modify or terminate the contract.

Those operations necessary for a safe removal of personnel and equipment from the contract area and those directed by the Contracting Officer which are required in order to leave the contract area in an acceptable condition will be permitted. Discontinued operations may be resumed upon receipt of written instructions and authorization by the Contracting Officer.

During any period of suspension, the Purchaser may withdraw performance and payment bond coverage aside from that deemed necessary by the Authorized Officer to secure cut and/or removed timber for which the Bureau of Land Management has not received payment, and/or unfulfilled contract requirements associated with harvest operations that have already occurred and associated post-harvest requirements.

In the event of a suspension period or a combination of suspension periods that exceed a total of thirty (30) days, the First Installment held on deposit may be temporarily reduced upon the written request of the Purchaser. For the period of suspension extending beyond thirty (30) days, the First Installment on deposit may be reduced to five (5) percent of the First Installment amount listed in Section 3.b. of the contract. Any First Installment amount temporarily reduced may be refunded or

transferred to another BLM contract at the request of the Purchaser. However, if the Purchaser has outstanding debt owing the United States, the Contracting Officer must first apply the amount of First Installment that could be refunded to the debt owed in accordance with the Debt Collection Improvement Act, as amended (31 USC 3710, *et seq.*). Upon Purchaser's receipt of a bill for collection and written notice from the Contracting Officer lifting the suspension, the Purchaser shall restore the First Installment to the full amount shown in Section 3.b. of the contract within fifteen (15) days after the bill for collection is issued, subject to Section 3.h. of the contract. The Purchaser shall not resume contract operations until the First Installment amount is fully restored.

In the event of a suspension period or a combination of suspension periods that exceed a total of thirty (30) days, the unamortized Out-of-Pocket Expenses for road or other construction required pursuant to Exhibit C of the contract shall be refunded or transferred to another BLM contract at the request of the Purchaser. Upon written notice from the Contracting Officer lifting the suspension, the Purchaser shall reimburse the Government the amounts refunded or transferred. The Purchaser may choose to pay this reimbursement at once or in installments payable at the same time as payments are due for the timber under the contract and in amounts approximately equal to the expenses associated with the timber for which payment is due.

In the event that operating time is lost as a result of the incorporation of additional contract requirements, or delays due to Endangered Species Act consultation with the U.S. Fish and Wildlife Service or U.S. National Marine Fisheries Service, or court-ordered injunctions, the Purchaser agrees that an extension of time, without reappraisal, will constitute a full and complete remedy for any claim that delays due to the suspension hindered performance of the contract or resulted in damages of any kind to the Purchaser.

The Contracting Officer may determine that it is necessary to terminate the cutting and removal rights under the contract in order to comply with the Endangered Species Act, protect species that have been discovered which were identified for protection through survey and manage and/or protection buffer standards and guidelines established in the ROD and RMP, or comply with a court order. Following the issuance of a written notice that cutting and removal rights will be terminated, the Purchaser will be permitted to remove timber cut under the contract, if allowed by the Endangered Species Act, survey and manage and/or protection buffer standards and guidelines established in the ROD and RMP, or court order requirements necessitating the modification or termination.

In the event cutting and removal rights are terminated under this subsection, the Purchaser agrees that the liability of the United States shall be limited to the actual costs incurred by the Purchaser which have not been amortized by timber removed from the contract area. This calculation of liability shall utilize actual Purchaser costs and Government estimates of timber volumes. At the Authorized Officer's request, the Purchaser agrees to provide documentation of the actual costs incurred in the performance of the contract. In addition, the Purchaser shall be released from the obligation to pay the contract price for any timber which is not authorized to be removed from the contract area.

The Purchaser specifically and expressly waives any right to claim damages, other than those described in the preceding paragraph, based on an alleged breach of any duty to the Purchaser, whether express or implied, in regard to the manner in which the Government defended the litigation which resulted in the court order affecting the operation of the contract. This waiver also extends to any claims based on effects on the operation of the contract that arise from litigation against another agency. Furthermore, the Purchaser specifically acknowledges and agrees that a

court ruling that the Government violated the Administrative Procedures Act cannot be interpreted, in itself, to mean that the Government had not acted reasonably in regard to its duties to the Purchaser under this contract.

Section 41(E) Cultural Resource Protection:

- (1) If, in connection with operations under this contract, the Purchaser, their contractors, subcontractors, or the employees of any of them, discovers, encounters, or becomes aware of any objects or sites of cultural value on the contract area such as historical or prehistorical ruins, graves or grave markers, fossils, or artifacts, the Purchaser shall immediately suspend all operations in the vicinity of the cultural value and shall notify the Authorized Officer of the findings. Operations may resume at the discovery site upon receipt of written instructions and authorization by the Authorized Officer.

Section 41(F) Road Construction - Maintenance – Use:

- (1) The Purchaser shall construct Spurs No. 1, No. 3, No. 4, No. 5 and No. 7, and renovate Spurs No. 2 and No. 6 and Roads No. 25-1-15.0 Segment A (portion), No. 25-1-15.2 Segment A, No. 25-1-22.0 Segment C2, No. 25-1-22.1 Segment A (portion), No. 25-1-23.1 Segment A (portion), No. 25-1-25.0 Segments B (portion), C (portion) and D (portion), No. 25-1-26.0 Segment A, No. 25-1-26.1 Segment A1 (portion) and 25-1-36.0 Segments A and B in strict accordance with the plans and specifications shown on Exhibit C, which is attached hereto and made a part hereof. Spurs No. 2, No. 5, No. 6 and No. 7, and Road No. 25-1-15.2 Segment A will be constructed or renovated and used for harvest operations by October 15 of each calendar year, then decommissioned in the same respective operating season. The decommissioning of Spurs No. 2 and No. 6, and Road No. 25-1-15.2 Segment A will include water barring, slashing and blocking. The decommissioning of Spurs No. 5 and No. 7 will include water barring and slashing. Refer to Exhibit D for details. Spurs No. 1, No. 3 and No. 4 will be decommissioned after harvesting operations are complete by water barring and blocking.
- (2) Prior to removal of any timber, except right-of-way timber, from any Harvest Area, the Purchaser shall complete all required construction and/or renovation of roads to such Harvest Areas as specified in Exhibit C.
- (3) The Purchaser is authorized to use the roads listed and shown on Exhibit D which are under the jurisdiction of the Bureau of Land Management for the removal of Government timber sold under the terms of this contract, provided that the Purchaser pay the required maintenance and rockwear obligations described in Section 41(F)(4). Any road listed on Exhibit D and requiring improvement or renovation in Exhibit C of this contract shall be maintained by the Purchaser until receiving written acceptance of the improvement or renovation from the Authorized Officer. The Purchaser shall pay current Bureau of Land Management maintenance and rockwear fees for the sale of additional timber under modification to the contract.
- (4) The Purchaser shall pay the Government a road maintenance and rockwear obligation in the amount of Eleven Thousand One Hundred Fourteen and ninety-four/100 dollars (\$11,114.94) for the transportation of timber included in the contract price over roads listed in Section 41(F)(3).

The above road maintenance and rockwear amount is for use of 10.8 miles of road or less. Unless the total maintenance amount is paid prior to commencement of operations on the contract area, payments shall be made in installments of not less than Five Hundred and No/100 dollars

(\$500.00) payable in the same manner as and together with payments required in Section 3 of this contract.

- (5) The Purchaser shall perform any required road repair and maintenance work on roads used by him, under the terms of Exhibit D, "Road Maintenance Specifications," of this contract, which is attached hereto and made a part hereof.
- (6) The Purchaser also agrees that if they elect to use any other private road which is the subject of a right-of way agreement with the Government for the removal of Government timber sold under the terms of this contract, the Purchaser shall request and agree to the modification of this contract to provide for such use and for allowances for amortization of the Government's share of the capital investment of any such road.

**IF OTHER THAN SENECA JONES TIMBER COMPANY PURCHASES:**

- (7) In the use of Roads No. 25-1-23.1 Segment A (portion), No. 25-1-26.0 Segment A and 25-1-36.0 Segment A as shown on Exhibit D, the Purchaser shall comply with the conditions of Right-of-Way and Road Use Agreement No. R-490, dated August 18, 1958, between the United States of America and Seneca Jones Timber Company. This document is available for inspection at the Bureau of Land Management, Roseburg District Office, 777 NW Garden Valley Blvd., Roseburg, Oregon 97471.

These conditions include:

- (a) Prior to the use of said road, the Purchaser shall furnish the Authorized Officer a copy of the executed License Agreement.
- (b) Payment of a rockwear obligation in the amount of Two Hundred Forty Five and sixty-four/100 dollars (\$245.64).
- (c) Payment of a road use obligation in the amount of One Hundred Ninety and nineteen/100 dollars (\$190.19).
- (d) Default by the Purchaser of said Right-of-Way and Road Use Agreement, or any License Agreement executed pursuant thereto, for failure to pay appropriate road use fees shall be considered a violation of this contract. The amount of unpaid fees shall be considered as the amount of damage suffered by the Government as a result of the violation of this provision.

**IF SENECA JONES TIMBER COMPANY PURCHASES:**

- (8) In accordance with 43 CFR 2812.6-2(a)(5), the following allowances have been made for amortization on capital investment of the road covered by Right-of-Way and Road Use Agreement No. R-490 with the Purchaser: One Hundred Ninety and nineteen/100 dollars (\$190.19) for Roads No. 25-1-23.1 Segment A (portion) and 25-1-36.0 Segment A.

It is understood that the purchase price stated in Sec. 2 of this contract is the net price and no deductions will be made from the purchase price because of such allowances.

Section 41(G) Fire Prevention and Control:

- (1) Primarily for purposes of fire prevention and control, the Purchaser shall, prior to the operation of power driven equipment in construction or logging operations under this contract during the closed fire season or periods of fire danger, prepare a fire prevention and control plan to the satisfaction of the Authorized Officer.

Section 41 (H) Slash Disposal and Site Preparation:

- (1) Fire Hazard Reduction. In addition to the requirements of Sections 15 and 25 of this contract, and notwithstanding the Purchaser's satisfactory compliance with State laws and regulations regarding offsetting or abating the additional fire hazard created by this operation and the State's willingness to release the Purchaser from liability for such hazard, the Purchaser shall remain responsible to the Government for performance of the following logging residue reduction measures required by this contract:
  - (a) Prior to commencement of any operation under Section H (Slash Disposal and Site Preparation) of this contract, a slash disposal prework conference between the Purchaser's representative and the Authorized Officer must be held at a location designated by the Authorized Officer. All slash disposal and site preparation shall be done in accordance with the plans developed at the prework conference.
  - (b) Slash, as defined for this section, shall mean all material (brush, limbs, tops, unmerchantable stems and chunks) severed or knocked over as a result of Purchaser's operations under the terms of this contract.
  - (c) Pile all slash yarded to the landings and within fifty (50) feet of all landings. Piling is to be completed within thirty (30) days of the completion of yarding for each landing. Piles are to be tight and free of dirt.
  - (d) Cover each landing pile with a minimum ten (10) foot by ten (10) foot sheet of four (4) mil. black plastic, unless otherwise directed by the Authorized Officer to meet ignition and combustion needs. The cover shall be firmly fixed or weighed down to hold in place. Covering shall be done concurrently with piling.

Section 41(I) Log Exports:

- (1) All timber sold to the Purchaser under the terms of the contract, except exempted species, is restricted from export from the United States in the form of unprocessed timber, and is prohibited from being used as a substitute for exported private timber. For the purpose of this contract, unprocessed timber is defined as: (1) any logs except those of utility grade or below, such as sawlogs, peeler logs and pulp logs; (2) cants or squares to be subsequently remanufactured exceeding eight and three-quarters (8¾) inches in thickness; (3) split or round bolts or other roundwood not processed to standards and specifications suitable for end-product uses; or (4) western red cedar lumber which does not meet lumber of American Lumber Standards Grades of Number 3 dimension or better, or Pacific Lumber Inspection Bureau R-List Grades of Number 3 Common or better. Thus, timber manufactured into the following will be considered processed: (1) lumber and construction timber, regardless of size, manufactured to standards and specifications suitable for end-product uses; (2) chips, pulp, and pulp products; (3) green or dry veneer and plywood; (4) poles and piling cut or treated for use as such; (5) cants, squares, and lumber cut for

remanufacturing of eight and three-quarters (8¾) inches in thickness or less; (6) shakes and shingles.

Substitution will be determined under the definition found in 43 CFR 5400.0-5(n).

The Purchaser is required to maintain and upon request to furnish the following information:

- (a) Date of last export sale.
- (b) Volume of timber contained in last export sale.
- (c) Volume of timber exported in the past twelve (12) months from the date of last export sale.
- (d) Volume of Federal timber purchased in the past twelve (12) months from the date of last export sale.
- (e) Volume of timber exported in succeeding twelve (12) months from date of last export sale.
- (f) Volume of Federal timber purchased in succeeding twelve (12) months from date of last export sale.

In the event the Purchaser elects to sell any or all of the timber sold under this contract in the form of unprocessed timber, the Purchaser shall require each party buying, exchanging, or receiving such timber to execute a Form 5460-16 (Certificate as to Nonsubstitution and the Domestic Processing of Timber). The original of such certification shall be filed with the Authorized Officer. Additionally, when the other party is an affiliate of the Purchaser, the Purchaser will be required to update information under item (2) of Form 5450-17 (Export Determination) and file the form with the Authorized Officer.

In the event an affiliate of the Purchaser has exported private timber within twelve (12) months prior to purchasing or otherwise acquiring Federal timber sold under this contract, the Purchaser shall, upon request, obtain from the affiliate information in a form specified by the Authorized Officer and furnish the information to the Authorized Officer.

Prior to the termination of this contract, the Purchaser shall submit to the Authorized Officer Form 5460-15 (Log Scale and Disposition of Timber Removed Report) which shall be executed by the Purchaser. In addition, the Purchaser is required under the terms of this contract to retain for a three-year period from the date of termination of the contract the records of all sales or transfer of logs involving timber from the sale for inspection and use of the Bureau of Land Management.

Unless otherwise authorized in writing by the Contracting Officer, the Purchaser shall brand clearly and legibly one end of all logs with a scaling diameter (small end inside bark) of over 10 inches, prior to the removal of timber from the contract area. All loads of 11 logs or more will have a minimum of 10 logs clearly and legibly branded on one end regardless of the diameter of the logs. All logs will be branded on loads of 10 logs or less. One end of all branded logs to be processed domestically will be marked with a 3 square inch spot of highway yellow paint. The Purchaser will stop trucks for accountability monitoring at mutually agreed upon locations when notified by the Authorized Officer.

If multiple trailers (mule trains) are used, each bunked load shall be considered an individual load, and these guidelines will apply to each bunked load. If a flatbed stake trailer is used, each bundle will be treated as a separate load.

At the discretion of the Contracting Officer, the Purchaser may be required to brand and paint all logs. Any increased costs for log branding and painting shall be the responsibility of the Purchaser.

In the event of the Purchaser's noncompliance with this subsection of the contract, the Authorized Officer may take appropriate action as set forth in Section 10 of this contract. In addition, the Purchaser may be declared ineligible to receive future awards of Government timber for a period of one year.

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
OMB NO. 1004-0113  
Expires: July 31, 1992

☒ **TIMBER\***  
**DEPOSIT AND BID FOR** ☐ **VEGETATIVE RESOURCE**  
(Other Than Timber)

LUMP SUM SALE

Tract Number  
**(1) 12-06**  
Sale Name  
**Cancoon Commercial Thinning**  
Sale Notice (dated)  
**June 26, 2012 (sale date 07/24/12)**  
BLM District  
**Roseburg**

☐ Sealed Bid for Sealed Bid Sale ☒ Written Bid for Oral Auction Sale

In response to the above dated Sale Notice, the required deposit and bid are hereby submitted for the purchase of designated timber/vegetative resource on the tract specified above.

Required bid deposited is \$ **16,200.00** and is enclosed in for form of ☐ cash ☐ money order ☐ bank draft  
☐ cashier's check ☐ certified check ☐ bid bond of corporate surety on approved list of the United States Treasury  
☐ guaranteed remittance approved by the authorized officer.

IT IS AGREED That the bid deposit shall be retained by the United States as liquidated damages if the bid is accepted and the undersigned fails to execute and return the contract, together with any required performance bond and any required payment within 30 days after the contract is received by the successful bidder. It is understood that no bid for less than the appraised price on a unit basis per species will be considered. If the bid is rejected the deposit will be returned.

BID SCHEDULE - LUMP SUM SALE

NOTE: Bidders should carefully check computations in completing the Bid Schedule

BID SUBMITTED (Est. Volume MBF 16' Log)					ORAL BID MADE	
PRODUCT SPECIES	UNIT	ESTIMATED VOLUME OR QUANTITY	UNIT PRICE	TOTAL VALUE	UNIT PRICE	TOTAL VALUE
Douglas-fir	MBF	2,445	x _____ = _____		x _____ = _____	
Grand Fir	MBF	149	x _____ = _____		x _____ = _____	
Western Hemlock	MBF	87	x _____ = _____		x _____ = _____	
Incense-cedar	MBF	6	x _____ = _____		x _____ = _____	
Western Redcedar	MBF	5	x _____ = _____		x _____ = _____	
	MBF		x _____ = _____		x _____ = _____	
	MBF		x _____ = _____		x _____ = _____	
	MBF		x _____ = _____		x _____ = _____	
	MBF		x _____ = _____		x _____ = _____	
	MBF		x _____ = _____		x _____ = _____	
	MBF		x _____ = _____		x _____ = _____	
	MBF		x _____ = _____		x _____ = _____	
	MBF		x _____ = _____		x _____ = _____	
	MBF		x _____ = _____		x _____ = _____	
	MBF		x _____ = _____		x _____ = _____	
	MBF		x _____ = _____		x _____ = _____	
<b>TOTAL PURCHASE PRICE</b>						

(Continued on reverse)



If sale contract is executed, undersigned is liable for total purchase price even though the quantity cut, removed, or designated for taking is more or less than the total estimated volume or quantity shown above. Undersigned certifies bid was arrived at by bidder or offeror independently, and was tendered without collusion with any other bidder or offeror. In submitting or confirming this bid, undersigned agrees to the foregoing provisions, applicable regulations, and certifies that he is authorized to act as, or on behalf of, the bidder.

Bid submitted on *(date)*

*(Check appropriate box, sign in ink, and complete the following)*

<input type="checkbox"/> Signature, if firm is individually owned	Name of firm <i>(type or print)</i>
<input type="checkbox"/> Signatures, if firm is a partnership	Business address, include zip code <i>(type or print)</i>
<input type="checkbox"/> Corporation organized under the state laws of	<i>(To be completed following oral bidding)</i>
Signature of Authorized Corporate Signing Officer	I HEREBY confirm the above oral bid By <i>(signature)</i>
Title	Date
Submit bid, in <i>duplicate</i> , to qualify for either an oral auction or sealed bid sale together with the required bid deposit made payable to the Department of the Interior—BLM.	Sealed Bid — Send to District Manager, who issued the sale notice, in a sealed envelope marked on the outside: (1) "Bid for Timber" (2) Vegetative Resource Other Than Timber (3) Time bids are to be opened (4) Legal description
Oral Auction — Submit to Sales Supervisor prior to closing of qualifying period for tract.	

The Paperwork Reduction Act of 1980 (44 U.S.C. 3501 et. seq.) requires us to inform you that:

This information is being collected to obtain data relevant to the operation of this timber sale contract.

This information will be used to administer our timber sale program.

Response to this request is required to obtain a benefit.

## NOTICE

The Privacy Act of 1974 and the regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.

**AUTHORITY:** 38 FR 6280 and 43 CFR 5442.1

**PURPOSE:** To qualify an oral auction bidder, and then if successful, to bind bidder to certain contract conditions.

**ROUTINE USE:** To determine that an individual is qualified to participate in oral auction bidding, and, as surety that bidder will fulfill contract requirements.

**EFFECT OF NOT PROVIDING INFORMATION:** Filing this deposit and bid information is necessary only when an individual wishes to participate in a sealed or auction bid sale for timer or vegetative resources.

## BURDEN HOURS STATEMENT

Public reporting burden for this form is estimated to average 1 hr. 15 min. per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to U.S Department of the Interior, Bureau of Land Management, (Alternate) Bureau Clearance Officer, (WO-771), 18 and C Streets, N.W. Washington, D.C. 20240, and the Office of Management and Budget, Paperwork Reduction Project (1004-0113), Washington, D.C. 20503.

## INSTRUCTIONS TO BIDDERS

1. **AUTHORITY** — Timber located on the revested Oregon and California Railroad Grant Lands and on the reconveyed Coos Bay Wagon Road Grant Lands is administered and sold pursuant to authority of the Act of August 28, 1937 (50 Stat. 874; 43 U.S.C. 1181a); timber located on other lands and other vegetative resources on all public lands of the United States under jurisdiction of the Bureau of Land Management are administered and sold pursuant to authority of the Act of July 31, 1947 (61 Stat. 681), as amended, by the Act of July 23, 1955 (69 Stat. 367; 30 U.S.C. 601 et. seq.). Regulations of the Secretary of the Interior governing sale of timber are codified in 43 CFR Group 5400.

2. **QUALIFICATIONS OF BIDDERS** — A bidder for sale of timber/vegetative resources must be either (a) a citizen of the United States, (b) a partnership composed wholly of such citizens, (c) an unincorporated association composed wholly of such citizens, or (d) a corporation authorized to transact business in the State in which the timber/vegetative resource is located.

3. **INSPECTION OF TIMBER/VEGETATIVE RESOURCES** — Bidder is invited, urged, and cautioned to inspect the timber/vegetative resource prior to submitting a bid. By executing the timber/vegetative resource sale contract, bidder warrants that the contract is accepted on the basis of his examination and inspection of the timber/vegetative resource and his opinion of its value.

4. **DISCLAIMER OF WARRANTY** — Government expressly disclaims any warranty of the fitness of the designated timber/vegetative resource for any purpose of the bidder; all timber/vegetative resources are to be sold "As Is" without any warranty of merchantability by Government. Any warranty as to the quantity or quality of timber/vegetative resource to be sold is expressly disclaimed by Government.

5. **BIDS** — Sealed or written bids for not less than the advertised appraised price, per timber/vegetative resource must be submitted in duplicate to the District Manager who issued *Timber/Vegetative Resource Sale Notice*.

(a) **Sealed Bid Sales** — Bids will be received until time for opening which is set out in the Notice. Enclose both copies of bid with required bid deposit in a sealed envelope marked on the outside *Bid for Timber/Vegetative Resource*, time bid is to be opened, tract number, and legal description of land on which timber/vegetative resource is located. In event of a tie, the high bidder shall be determined by lot from among those who submitted the tie bids.

(b) **Auction Sales** — Submission of the required bid deposit and a written bid is required to qualify for oral bidding. Oral bidding shall begin from the highest written bid. No oral bid will be considered which is not higher than the preceding bid. In the event there is a tie in high written bids, and no oral bidding occurs, the bidder who was the first to submit his bid deposit and written bid shall be declared the high bidder. If the officer conducting the sale cannot determine who made the first submission of high tie written bids, the high bidder shall be determined by lot. High bidder must confirm his bid, in writing, immediately upon being declared high bidder.

(c) Except as otherwise provided in 43 CFR 5442.2, bids will not be considered in resale of timber/vegetative resource remaining from an uncompleted contract from any person or affiliate of such person who failed to complete the original contract because of (1) cancellation for the purchaser's breach or (2) through failure to complete payment by expiration date.

(d) When it is in the interest of the Government to do so, it may reject any and all bids and may waive minor deficiencies in bids or in sale advertisement.

6. **BID FORMS** — All sealed, written bids, and confirmation of oral bids shall be submitted on forms provided by Government.

(a) **Lump Sum Sales** — Bids shall specify (1) Bureau of Land Management estimated volume, (2) price per unit, and (3) total purchase price. Estimated volume and price per unit are to be used for administrative and appraisal purposes only. Upon award of contract, high bidder shall be liable for total purchase price, including any adjustment which may be made as a result of reappraisal if an extension of time is granted, even though quantity of timber/vegetative resource actually cut, removed, or designated for taking is more or less than the estimated volume or quantity listed.

(b) **Timber Scale Sales** — Bids must state price per thousand board feet that will be paid for each species. High bidder will be determined by multiplying bid price per thousand board feet per species by Bureau of Land Management estimate of volume of each species. Purchaser shall be liable for purchase price of all merchantable timber sold under contract even though all such timber is not actually cut and removed prior to expiration of time for cutting and removal as specified in contract.\*

\*Applies to Timber Only

7. **BID DEPOSIT** — All bidders must make a deposit of not less than the amount specified in the *Timber/Vegetative Resource Notice*. Deposit may be in the form of cash, money orders, bank drafts, cashiers or certified checks made payable to the Department of the Interior—BLM, bid bonds of a corporate surety shown on the approved list of the United States Treasury Department\*, or any approved guaranteed remittance approved by the Authorized Officer. Upon conclusion of bidding, the bid deposit of all bidders, except high bidder, will be returned. The cash deposit of the successful bidder may be applied toward the required sale deposit and/or the purchase price. Cash not applied to the sale deposit or the purchase price, or a corporate surety bid bond, will be returned at the time the contract is signed by the Government.

8. **AWARD OF CONTRACT** — Government may require high bidder to furnish such information as is necessary to determine the ability of bidder to perform the obligation of contract. Contract will be awarded to high bidder, unless he is not qualified or responsible or unless all bids are rejected. If high bidder is not qualified or responsible or fails to sign and return the contract together with required performance bond and any required payment, contract may be offered and awarded to the highest bidders qualified, responsible, and willing to accept the contract.

9. **TIMBER/VEGETATIVE RESOURCE SALE CONTRACT** — To be executed by purchaser, has been prepared by Government, and may be examined in the District Manager's office.

### 10. PERFORMANCE BOND —

(a) A performance bond in an amount of not less than 20 percent of total purchase price is required, but the amount of the bond shall not be in excess of \$500,000, except when the purchaser opts to increase the minimum bond to permit cutting prior to payment as provided in 43 CFR 5451.2, or in the event the purchaser is a holder of an unresolved default the bond may be increased as provided in 43 CFR 5450.1(b). Performance bond may be (1) bond of a corporate surety shown on approval list issued by the United States Treasury Department and executed on an approved standard form, (2) personal surety bond executed on an approved standard form if Government determines principals and bondsman are capable of carrying out the terms of the contract, (3) cash bonds, (4) negotiable securities of the United States, or (5) Any guaranteed remittance approved by the Authorized Officer.

(b) If purchaser elects to cut timber without skidding or yarding it to a loading point or removing it prior to the payment of the second or subsequent installments, Government shall require an increase in amount of performance bond initially required by an amount equal to the value of timber to be cut. Such increase must be on a bond rider form supplied by Government and be approved, in writing, by Government prior to cutting timber covered by the bond increase. This increased amount of bond shall be used to assure payment for timber cut in advance of payment.\*

11. **PAYMENT BOND** — If purchaser elects to (a) cut and remove timber, or (b) remove timber already cut which has been secured by an increased performance bond as provided in paragraph 10(b) above, before payment of the second or subsequent installments, Government shall require a payment bond on a form supplied by Government. Purchaser shall obtain written approval from Government of payment bond prior to cutting and/or removal of timber covered by the bond. Payment bond shall be used to assure payment for timber cut and/or removed in advance of payment.\*

12. **PAYMENT OF PURCHASE PRICE** — For sales of \$500 or more, Government may allow payment by installments. Except as discussed in paragraphs 10 and 11 above, no part of any timber/vegetative resource sold may be severed, cut, or removed unless advance payment has been made as provided in contract.

13. **LIQUIDATED DAMAGES** — Within thirty (30) days from receipt of *Timber/Vegetative Resource Sale Contract*, the successful bidder shall sign contract and return it to Government, together with required bond and any required payment. If successful bidder fails to comply within the stipulated time, his bid deposit shall be retained by Government as liquidated damages.

14. **NINETY-DAY SALES** — If no bid is received within time specified in the advertisement of sale and if Government determines that there has been no significant rise in the market value of timber/vegetative resource, it may, in its discretion, keep the sale open, not to exceed ninety (90) days.

15. **UNAUTHORIZED USE OF GOVERNMENT PROPERTY** — A sale may be refused to high bidder who has been notified that he has failed to make satisfactory arrangements for payment of damages resulting from unauthorized use of, or injury to, property of the United States.

16. **EQUAL OPPORTUNITY CLAUSE** — This contract is subject to the provisions of Executive Order No. 11246 of September 24, 1965, as amended, which sets forth the nondiscrimination clauses. Copies of this order may be obtained from the District Manager. 43 CFR 60-1.7(b) requires that the Equal Opportunity *Compliance Report Certification* will be completed by prospective contractors. Certification may be obtained from District Manager.

17. **LOG EXPORT** — All timber offered for sale except as noted in the *Timber Sale Notice* is restricted from export from the United States in the form of unprocessed timber and cannot be used as a substitute for exported private timber. For the purpose of this contract, unprocessed timber is defined as: (1) any logs except those of utility grade or below, such as sawlogs, peeler logs, and pulp logs; (2) cants or squares to be subsequently remanufactured exceeding eight and three quarters (8-3/4) inches in thickness; (3) split or round bolts or other roundwood not processed to standards and specifications suitable for end product use; or (4) western red cedar lumber which does not meet lumber of American Lumber Standards Grades of Number 3 dimension or better, or Pacific Lumber Inspection Bureau R-List Grades of Num-

ber 3 common or better. Timber manufactured into the following will be considered processed: (1) lumber and construction timbers, regardless of size, manufactured to standards and specifications suitable for end product uses; (2) chips, pulp and pulp products; (3) green or dry veneer and plywood; (4) poles and piling cut or treated for use as such; (5) cants, squares, and lumber cut for remanufacture of eight and three quarters (8-3/4) inches in thickness or less; or (6) shakes and shingles. In event purchaser wishes to sell any or all of timber restricted from export in the form of unprocessed timber, the buyer, exchanges, or recipient shall be required to comply with contractual provisions relating to "unprocessed timber." Special reporting, branding and painting of logs may be included in contract provisions.\*

18. **DETAILED INFORMATION** — Detailed information concerning contract provisions, bid, performance bond forms, tract location maps, and access conditions may be obtained from the District Manager. All persons interested in bidding on the products listed are encouraged to familiarize themselves with all such detailed information.

District	Township	Range	Section	Meridian	Contract Number
Roseburg	25S	1W	15, 23, 25, 26	Willamette	ORR04-TS12-06

















AREA	HARVEST ACRES	HARVEST METHOD
1	30	CABLE / GROUND BASED
2	35	CABLE
3	35	CABLE / GROUND BASED
4	28	CABLE / GROUND BASED
5	23	CABLE
6	14	CABLE
7	31	CABLE / GROUND BASED

THINNING AREA ----- 196 Ac.  
R/W AREA ----- 2 Ac.  
TOTAL HARVEST AREA ----- 198 Ac.  
RESERVE AREA ----- 602 Ac.  
TOTAL CONTRACT AREA ----- 800 Ac.

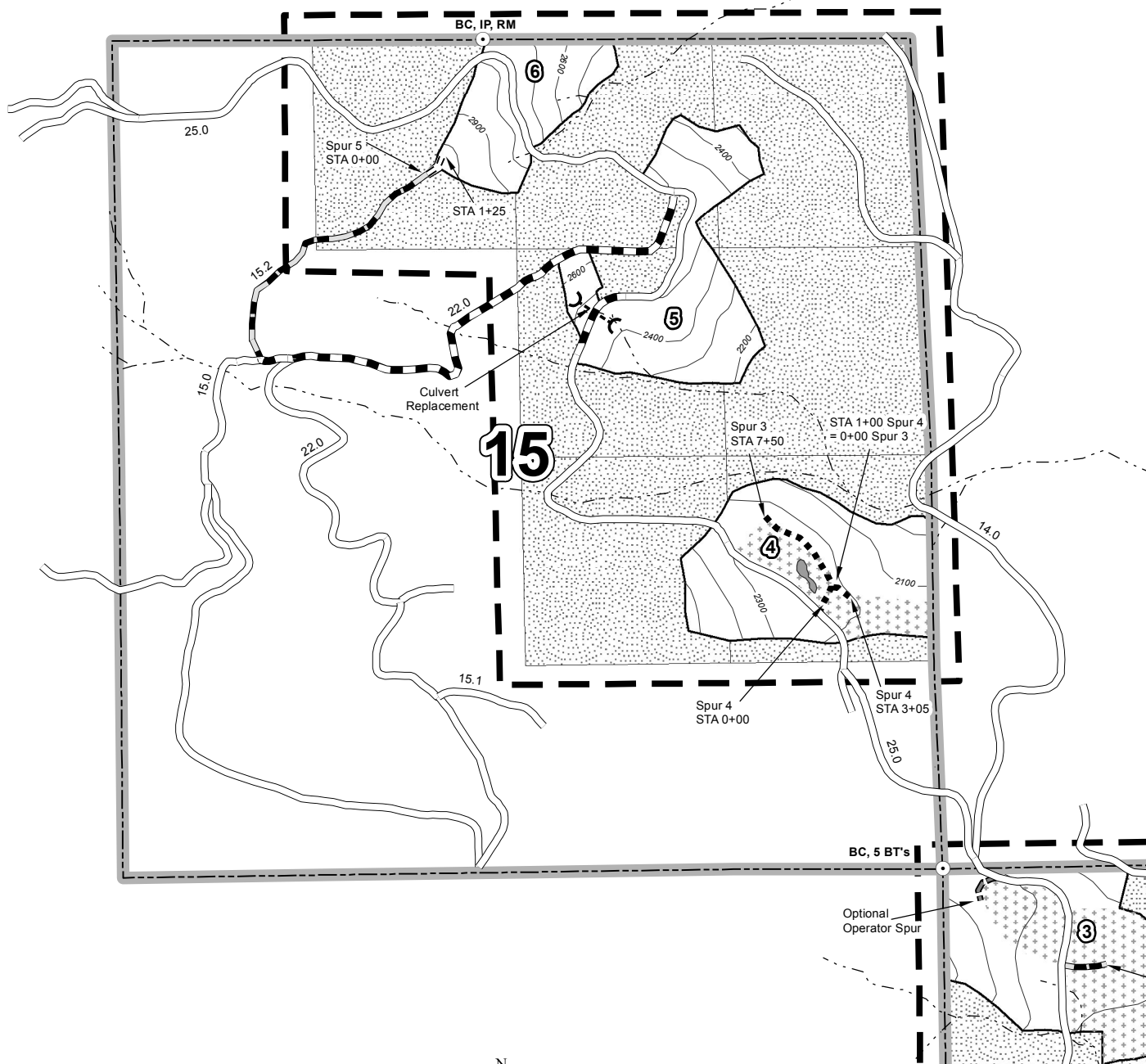
**NOTE:**

- HARVEST UNIT BOUNDARIES ARE PAINTED ORANGE AND POSTED WITH WHITE "BOUNDARY OF TIMBER RESERVE" TAGS, EXCEPT ON PROPERTY LINES WHICH ARE PAINTED OR FLAGGED AND POSTED WITH ORANGE AND WHITE "TIMBER CUTTING BOUNDARY" TAGS.
- BOUNDARIES OF RIGHT-OF-WAY TO, AND WITHIN UNITS #1, 3, 4, 6 AND 7, ARE POSTED WITH "RIGHT-OF-WAY" TAGS AND PAINTED ORANGE (2 ACRES).
- BOUNDARY OF WET AREA, WITHIN UNIT #4, IS POSTED WITH GREEN "BOUNDARY OF TIMBER RESERVE" TAGS AND PAINTED ORANGE.
- RETENTION TREES ARE MARKED WITH ORANGE PAINT ABOVE AND BELOW STUMP HEIGHT.
- APPROXIMATELY 49 ACRES ARE AVAILABLE FOR GROUND BASED HARVEST.

**LEGEND**

	HARVEST AREA - CABLE YARDING		EXISTING ROAD
	HARVEST AREA - GROUND BASED		ROAD TO BE RENOVATED
	RESERVE AREA		ROAD TO BE RENOVATED, USED AND DECOMMISSIONED IN THE SAME OPERATING SEASON
	WET AREA		CONSTRUCT / ROCK
	SURVEY CORNERS FOUND		CONSTRUCT / DECOMMISSION
	CULVERT REPLACEMENT		OPTIONAL OPERATOR SPUR
<b>BT</b>	BEARING TREE		100 FT. CONTOUR LINES
<b>BS</b>	BEARING STUMP		STREAM
<b>BC</b>	BRASS CAP		BOUNDARY OF CONTRACT AREA
<b>IP</b>	IRON PIPE		SECTION LINE
<b>RM</b>	REFERENCE MONUMENT		

District	Township	Range	Section	Meridian	Contract Number
Roseburg	25 S	1 W	15	Willamette	ORR04-TS12-06

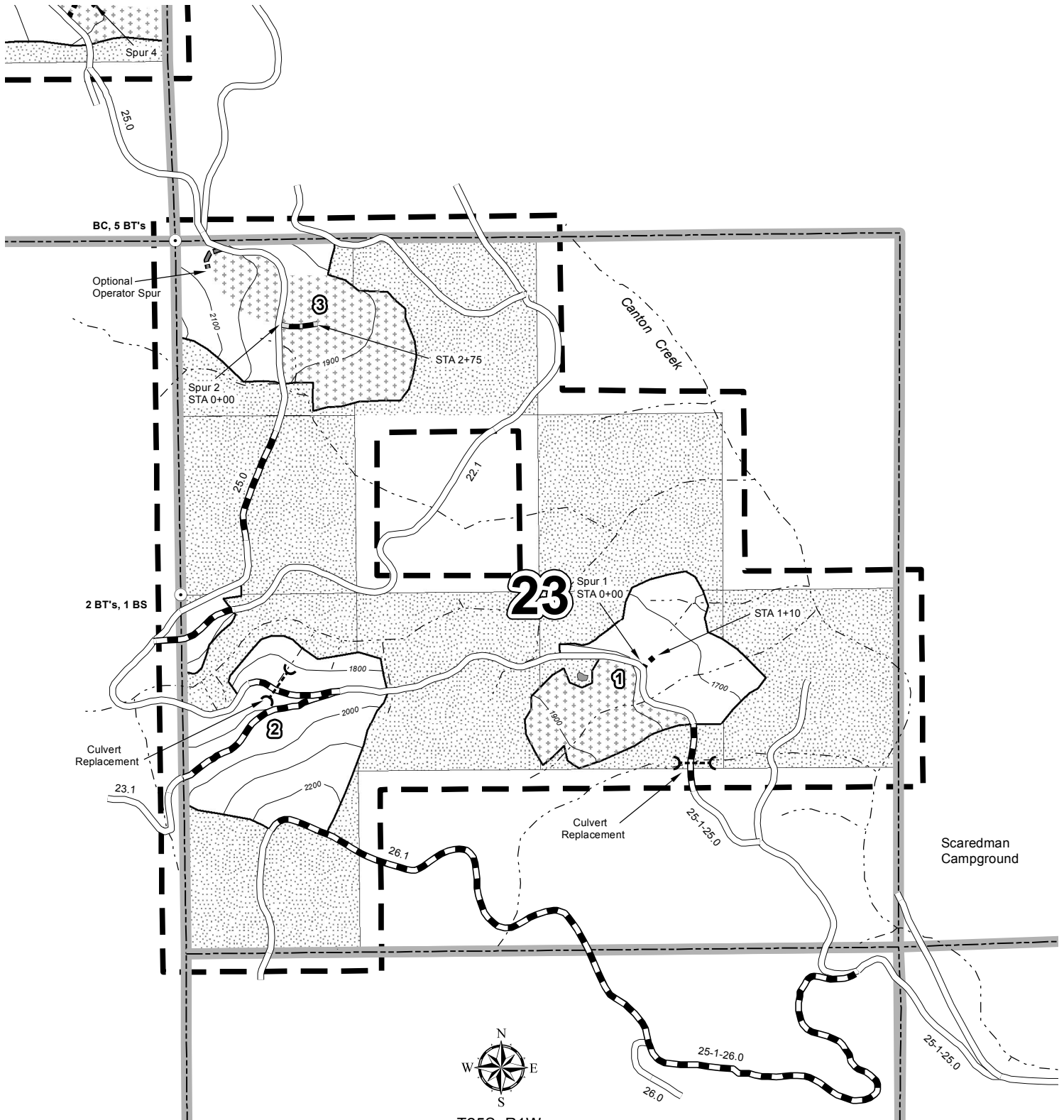


T25S, R1W

Willamette Meridian, Douglas Co., OR.

0 1,000 Feet

District	Township	Range	Section	Meridian	Contract Number
Roseburg	25 S	1 W	23	Willamette	ORR04-TS12-06

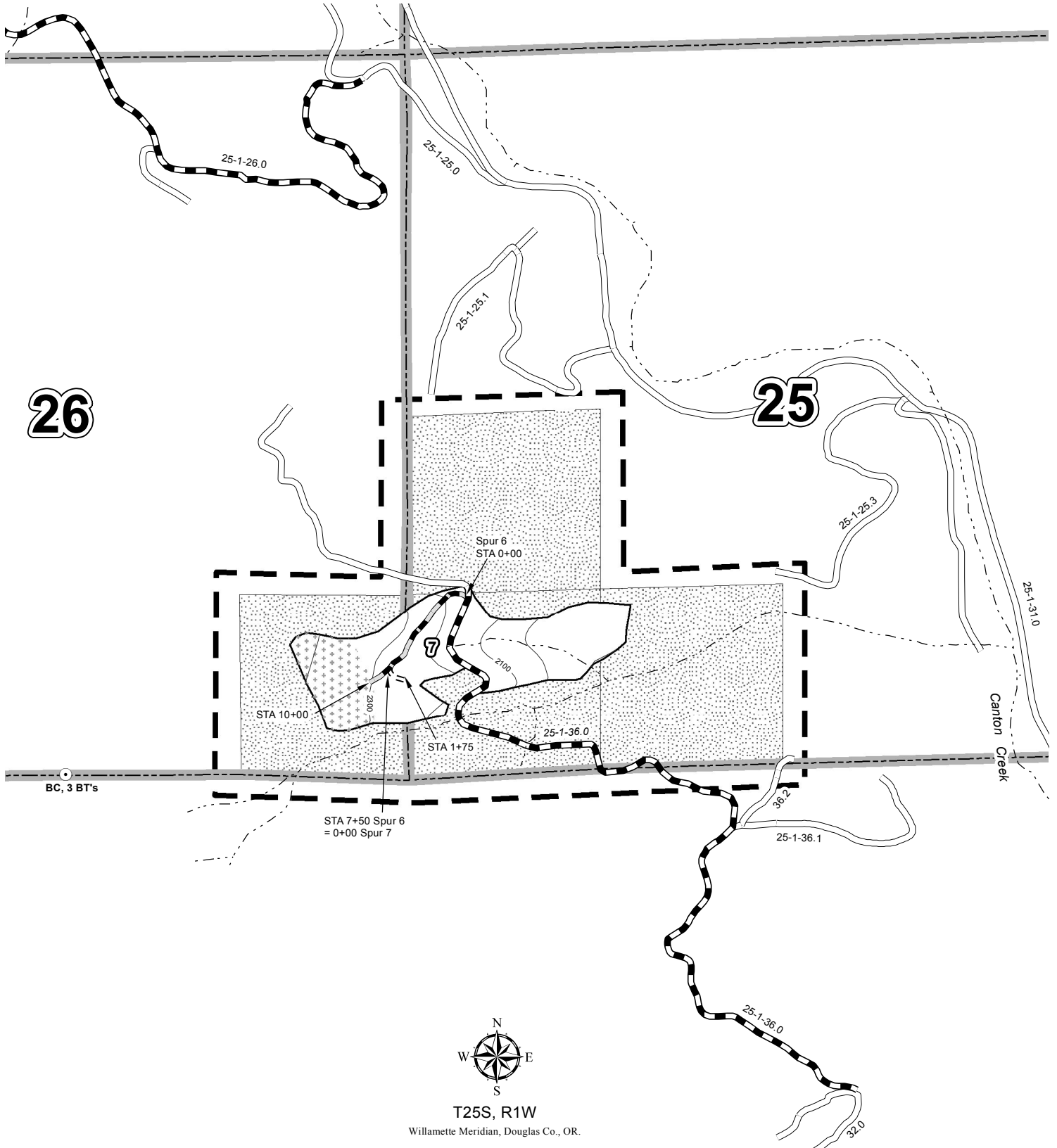


T25S, R1W

Willamette Meridian, Douglas Co., OR.

0 1,000 Feet

District	Township	Range	Section	Meridian	Contract Number
Roseburg	25 S	1 W	25, 26	Willamette	ORR04-TS12-06



**UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT**

Roseburg  
Cancoon Commercial Thinning  
ORR04-TS-12-06

**Exhibit B**

The following estimates and calculations of timber sold are made solely as an administrative aid for determining: (1) Adjustments made or credits given in accordance with Sections 6, 9, or 11; (2) When payments are due; and (3) Value of timber subject to any special bonding provisions. The value of timber will be determined by multiplying the value per acre as shown below, times the amount of acreage as determined by the authorized officer, which has been cut or removed or designated for taking.

Except provided in Section 2, Purchaser shall be liable for the total purchase price even though the quantity of timber actually cut or removed or designated for taking is less than the estimated volume or quantity shown. Cutting areas are shown on the Exhibit A.

**Sale Totals (16' MBF)**

Species	Net Volume	Bid Price	Sale SubTotal
Douglas-fir	2,445		
Grand Fir	149		
Western Hemlock	87		
Incense-cedar	6		
Western red-cedar	5		
<b>Sale Totals</b>	<b>2,692</b>		

**Unit Details (16' MB)**

**Unit 1                      30 Acres                      Value per Acre : \$0.00**

Species	Net Volume	Bid Price	Species Value
Douglas-fir	356		
Grand Fir	10		
Western Hemlock	1		
<b>Unit Totals</b>	<b>367</b>		

**Unit 2                      35 Acres                      Value per Acre : \$0.00**

Species	Net Volume	Bid Price	Species Value
Douglas-fir	440		
Grand Fir	33		
Incense-cedar	1		
Western Hemlock	15		
Western red-cedar	1		
<b>Unit Totals</b>	<b>490</b>		



Roseburg  
Cancoon Commercial Thinning  
ORR04-TS-12-06

Species	Net Volume	Bid Price	Species Value
Douglas-fir	514		
Grand Fir	57		
Western Hemlock	6		
<b>Unit Totals</b>	<b>577</b>		

Species	Net Volume	Bid Price	Species Value
Douglas-fir	305		
Grand Fir	31		
Western Hemlock	37		
Western red-cedar	4		
<b>Unit Totals</b>	<b>377</b>		

Species	Net Volume	Bid Price	Species Value
Douglas-fir	289		
Grand Fir	2		
Incense-cedar	2		
Western Hemlock	6		
<b>Unit Totals</b>	<b>299</b>		

Species	Net Volume	Bid Price	Species Value
Douglas-fir	174		
Incense-cedar	2		
Western Hemlock	14		
<b>Unit Totals</b>	<b>190</b>		

Species	Net Volume	Bid Price	Species Value
Douglas-fir	297		
Grand Fir	12		
Western Hemlock	7		
<b>Unit Totals</b>	<b>316</b>		

**UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT**

Roseburg  
Cancoon Commercial Thinning  
ORR04-TS-12-06

**Unit      RW                                  2 Acres                                  Value per Acre : \$0.00**

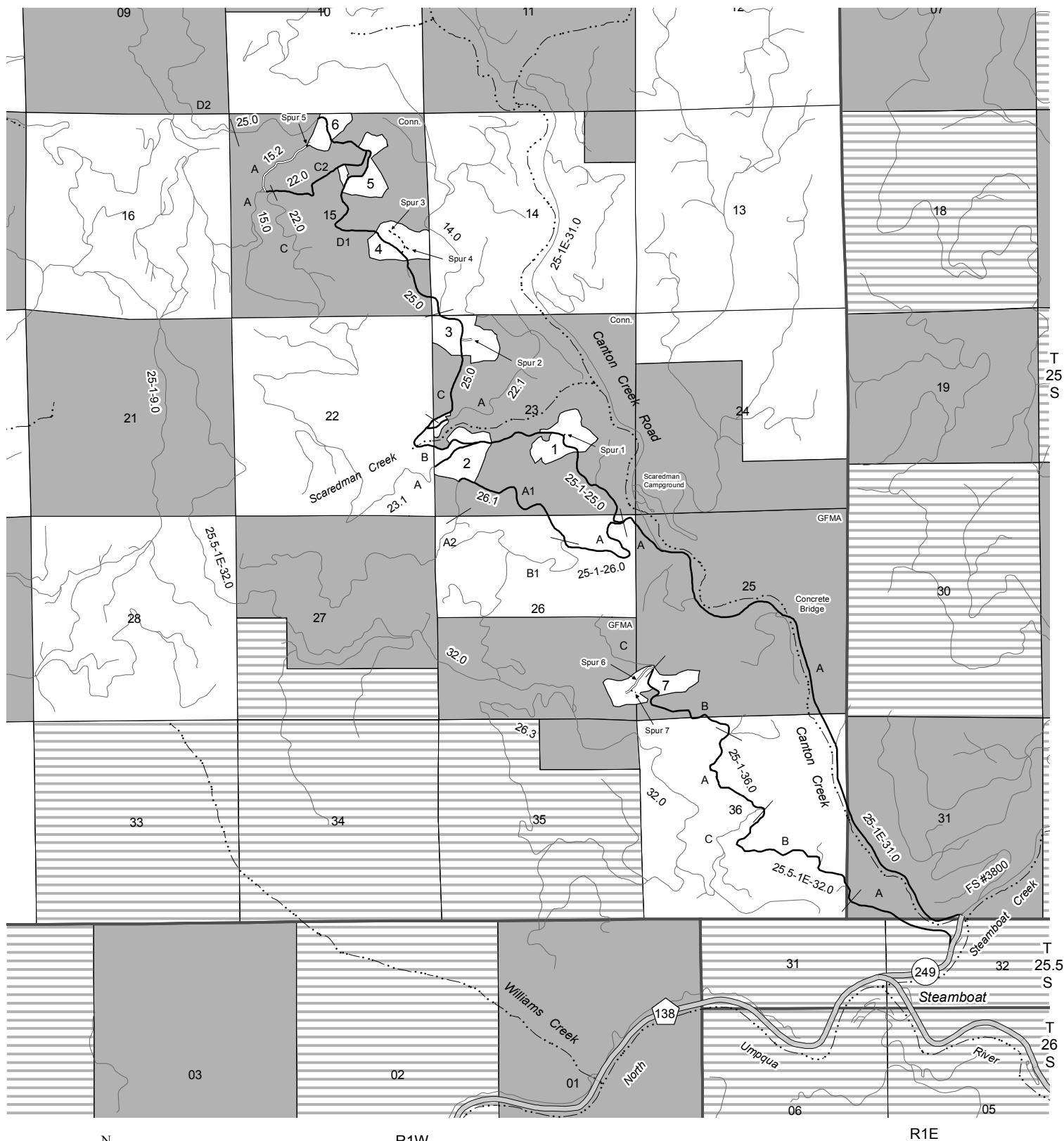
<b>Species</b>	<b>Net Volume</b>	<b>Bid Price</b>	<b>Species Value</b>
Douglas-fir	70		
Grand Fir	4		
Incense-cedar	1		
Western Hemlock	1		
<b>Unit Totals</b>	<b>76</b>		

## CANCOON

Commercial Thinning

R1W

R1E



T25S, R1W

Willamette Meridian, Douglas Co., OR.

5-24-2012

No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data. Original data were compiled from various sources and may be updated without notification.



- State / County Highway
- Access / Haul Route
- Existing Road
- Road to be Constructed
- Road to Renovate, Decom.

- 'Cancoon' Thinning Area
- BLM (O&C) Land
- Non-BLM Land
- USFS (PD) Land

Exhibit "D"

**United States Department of the Interior  
Bureau of Land Management Roseburg District  
EXHIBIT "D"**

Sale Name: Cancoon CT							
Contract No. ORR04-TS12-06							
Road Number	Road Seg.	Segment Length	Segment Owner	Road Use Fees	Surface Type	Timber Haul Fees	Maintained By
25.5-1E-32.0	A	0.70	USFS	Free Use	Rock	\$1.13	BLM
25.5-1E-32.0	B	0.90	USFS	Free Use	Rock	\$1.13	BLM
25-1-15.0	A (POR)	0.03	BLM		Rock	\$0.51	PURCHASER
25-1-15.2	A	0.38	BLM		Native		PURCHASER
25-1-22.0	C2	0.62	BLM		Rock	\$0.51	PURCHASER
25-1-22.1	A ( POR)	0.12	BLM		Rock	\$0.51	PURCHASER
25-1-23.1	A (POR)	0.25	Seneca	\$0.35	Rock	\$0.51	PURCHASER
25-1-25.0	A	0.29	BLM		Rock	\$1.13	BLM
25-1-25.0	B	1.60	BLM		Rock	\$1.13	BLM
25-1-25.0	C	0.60	BLM		Rock	\$1.13	BLM
25-1-25.0	D1 (POR)	1.65	BLM		Rock	\$1.13	BLM
25-1-26.0	A	0.70	Seneca	Paid off	Rock	\$0.51	PURCHASER
25-1-26.1	A1 (POR)	0.70	BLM		Rock	\$0.51	PURCHASER
25-1-36.0	A	0.70	Seneca	\$0.48	Rock	\$0.51	PURCHASER
25-1-36.0	B	0.53	BLM		Rock	\$0.51	PURCHASER
25-1E-31.0	A (POR)	2.80	BLM		BST	\$0.65	BLM
SPUR 1	A	0.02	BLM		Rock	\$0.51	PURCHASER
SPUR 2	A	0.05	BLM		Native		PURCHASER
SPUR 3	A	0.14	BLM		Rock	\$0.51	PURCHASER
SPUR 4	A	0.06	BLM		Rock	\$0.51	PURCHASER
SPUR 5	A	0.02	BLM		Native		PURCHASER
SPUR 6	A	0.19	BLM		Native		PURCHASER
SPUR 7	A	0.03	BLM		Native		PURCHASER

## ROAD MAINTENANCE SPECIFICATIONS

### 3000 - General

- 3001- The Purchaser shall be required to maintain all roads listed and/or referenced in Section 41 Special Provisions and as shown in the Exhibit "D" of this contract in accordance with Sections 3000, 3100, 3200, 3300 and 3400 of this exhibit.
- 3002- The Purchaser shall maintain the cross section of existing dirt or graveled roads to the existing geometric standards. Any roads required to be constructed, improved, or renovated under terms of this contract shall be maintained to the standards as required in Exhibit C of this contract.
- 3003- The minimum required maintenance on any roads shall include the provisions specified in Subsections 3101, and 3105.
- 3004- The purchaser shall be responsible for providing timely maintenance and cleanup on any road with logging units substantially completed prior to moving operations to other roads. The maximum length of non-maintained or non-cleanup of the road prism shall not exceed the sum of one (1) mile at any time. Release of maintenance requirements may be granted, upon written request, when the conditions specified in Sections 3300 and 3400 are met satisfactorily.

### 3100 - Operational Maintenance

- 3101- The Purchaser shall blade and shape the road surface and shoulders with a motor patrol grader. Banks shall not be undercut. Back blading with tractors or similar equipment will be allowed only around landings and other areas when approved by the Authorized Officer.
- 3104- The Purchaser shall perform other road cleanup including removal of debris, fallen timber, bank slough, and slides which can practicably be accomplished by a motor patrol grader, rubber tired front end bucket loader, rubber tired backhoe or comparable equipment, and by the use of hand tools.
- 3104a Removal of bank slough and slide material includes placement of material at the nearest suitable turnout or disposal site where material cannot erode into streams, lakes, or reservoirs or cause undue damage to road fill slope which have been planted or mulched to control soil erosion.
- 3104b The Purchaser shall be responsible for removal of all slides or slough, up to fifteen (15) station yards in quantity, at any one site. This work includes unlimited multiple sites on all roads required to be maintained by the Purchaser.

Prior to removal of any slough or slide material exceeding fifteen (15) station yards at any one site, the Purchaser and the Authorized Officer or their Authorized Representatives shall agree in writing, in the field, to the quantity of material, method of disposal, and the disposal site. Work may commence immediately after agreement.

Upon completion of agreed upon work, a reduction in timber sale purchase price will be made to offset the cost of the work, based on current BLM Timber Appraisal Production Cost Schedules. Adjustments in purchase price for completed work shall be made as necessary, and no less than once per year when actual work is ongoing.

- 3105- The Purchaser shall be responsible for maintaining normal flow in drainage structures. This includes cleaning out drainage ditches, catch basins, clearing pipe inverts of sediment and other debris lodged in the barrel of the pipe, and maintaining water dips and water bars using equipment specified in Subsection 3104 and other culvert cleaning and flushing equipment.
- 3106- The Purchaser shall be responsible for repair and replacement of all materials eroded from road shoulders and fill slopes, up to fifteen (15) station yards in quantity, at any one slide. The work includes unlimited multiple sites on all roads required to be maintained by the Purchaser. Prior to repair and replacement of eroded material exceeding fifteen (15) station yards at any one site, the Purchaser and the Authorized Officer or their Authorized Representative shall agree in writing, in the field, to the quantity of material, borrow source and method of repair. Work may commence immediately after agreement.

Upon completion of agreed upon work, a reduction in timber sale purchase price will be made to offset the cost of the work, based upon current BLM Timber Appraisal Production Cost Schedules for rental rates and labor costs. Adjustments in purchase price for completed work shall be made as necessary, and no less than once per year when actual work is ongoing.

- 3107- The Purchaser shall cut or trim trees and brush which obstructs vision or prevents the safe passage of traffic along the traveled way, when directed by the Authorized Officer. The Purchaser shall also cut trees or brush encroaching on the road prism that are a result of his activities or winter damage during the contract period. Disposal of such vegetative material shall be as directed by the Authorized Officer.
- 3108- The Purchaser shall avoid fouling gravel or bituminous surface through covering with earth and debris from side ditches, slides, or other sources. The Purchaser shall also avoid blading surfacing material off the running surface of the roadway. Skidding of logs on the roadway in or outside designated logging unit is not authorized without prior written approval by the Authorized Officer. Repair required by such skidding activity is not considered maintenance and shall be performed at the Purchaser's expense.
- 3109- The maximum allowable rut depth on aggregate surfaced roads is 2". Roads with ruts exceeding this requirement shall be bladed and brought back into conformance with the typical sections shown in the drawings. Rut depth shall be measured by centering a minimum 3 foot long straightedge across the wheel rut maintaining contact with the aggregate at both ends of the strait edge. The rut depth shall be the distance measured between the bottom of the strait edge and the lowest point of the wheel rut.

#### 3200 - Seasonal Maintenance

- 3201- The Purchaser shall perform preventive maintenance at the end of Purchaser's hauling each season and during non-hauling periods which occur between other operations on the contract area. This includes cross ditching, water barring, constructing vehicle barriers, removing ruts or other surface irregularities, and all other requirements specified in Section 3100 and Exhibit "C" Erosion Control 1700 Specifications.
- 3203- The Purchaser shall complete road cleanup and maintenance, as specified in Section 3100, at the completion of logging operations on any road located in an area separate from the area where logging activities will resume.

- 3204- The Purchaser shall be responsible for performing post storm inspections and maintenance during the winter season to minimize erosion and potential road or watershed damage.

3300 - Final Maintenance

- 3301 - The Purchaser shall complete final maintenance and/or damage repairs on all roads used under terms of their contract within 30 calendar days following the expiration of Purchaser's right to cut and remove timber (Sec. 4) and in accordance with Sec. 16(b) of this contract. This work shall include any maintenance and/or damage repairs specified in Sections 3000, 3100, and 3200 necessary to meet the conditions specified in Subsection 3002 and shall be executed in accordance with Subsection 3302 of this Section.

The Authorized Officer may grant acceptance of Purchaser's maintenance responsibility in part where certain individual roads or road segments are no longer of any use to the Purchaser's remaining timber harvest operations, providing that all contract requirements as specified under Sec. 16(b), Special Provisions (Sections 3000, 3100, 3200, and 3300 of the maintenance specifications) have been completed and a relinquishment of cutting and removal rights on cutting units tributary to these roads is signed by the Purchaser. Request for partial acceptance must be submitted in writing by the Purchaser.

- 3302 - The Purchaser shall perform final road maintenance and/or decommissioning only when weather or soil moisture conditions are suitable for normal maintenance equipment operations as determined by the Authorized Officer.

The Purchaser will be notified by the Authorized Officer when soil moisture and equipment operating conditions are suitable, if final maintenance is delayed after the date required in Subsection 3301 of this contract due to adverse soil moisture or unsuitable equipment operating conditions. The Purchaser shall then be required to complete final maintenance within 30 days.

- 3303 - Decommissioning shall include installing water bars, scattering slash over road surface and installing trench barriers.

- 3304 - The Purchaser shall perform decommissioning on existing roads in accordance with these specification, and at the following locations:

Road No or Location	From Station	To Station	Activity
25-1-15.2	0+00	20+00	Water bar, slash/mulch and block
Spur 1	0+00	1+10	Water bar and block
Spur 2	0+00	2+75	Water bar, slash/mulch and block
Spur 3	0+00	7+50	Water bar and remove culvert
Spur 4	0+00	3+05	Water bar and block
Spur 5	0+00	1+25	Water bar and slash/mulch
Spur 6	0+00	10+00	Water bar, slash/mulch and block
Spur 7	0+00	1+75	Water bar and slash/mulch

3305 - Water bars shall be installed across full width of roadway at spacing shown on the drawings.

3306 - Slash shall be scattered over the decommissioned road surface and all areas disturbed by the decommissioning process. Where there is not slash available the disturbed area shall be seeded and mulched according to these specifications.

3307 - Trench barriers shall be constructed according to the drawings and specifications.

3311 - Seed shall be Government furnished seed.

3312 - Straw mulch shall be certified weed free from oats, wheat, rye or other approved grain crops which are free from noxious weeds, mold or other objectionable materials as attested to by written certification submitted to the Authorized officer. Straw mulch shall be in an air-dry condition.

#### 3400 - Other Maintenance

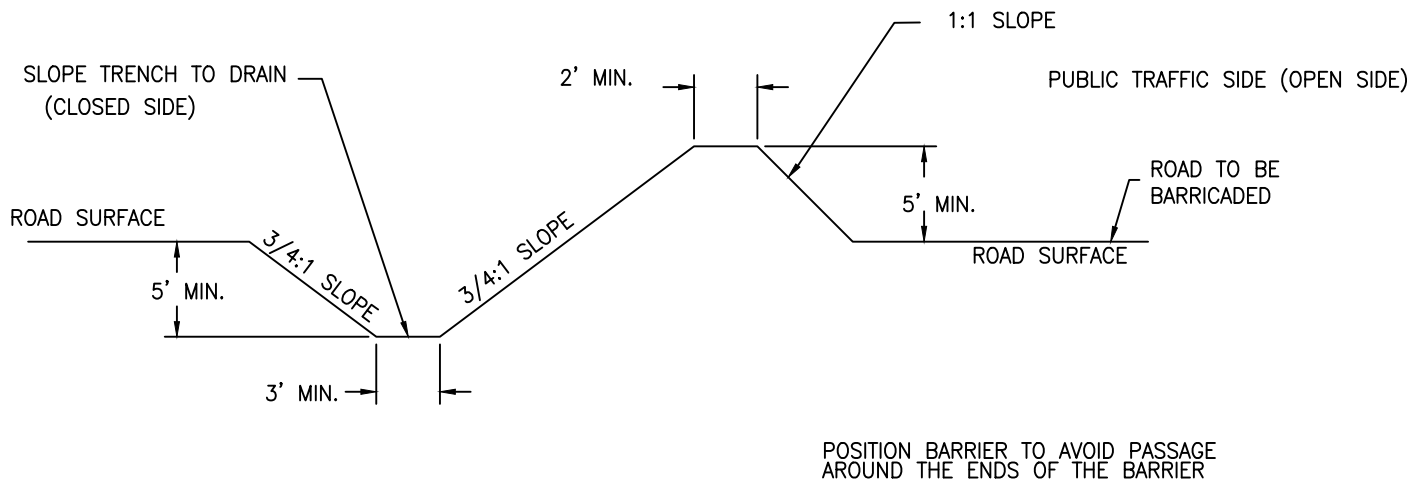
3401 - The Purchaser shall be required to repair any damage to road surfaces that was specified under Subsection 3108. This repair includes restoring the roadway to the designed standard and replacement of surfacing with approved surface material. This repair is not limited to use of equipment specified in subsection 3104.

3402 - The Purchaser shall be permitted to remove ice and snow from roads authorized for use under this contract only when prior written approval has been secured from the Authorized Officer. The Purchaser shall submit a written request for permission to remove ice and snow in advance of the date operations are to begin.

Upon receiving written authorization for ice or snow removal, the Purchaser will perform the work according to the conditions and equipment requirements set forth in the Authorization.

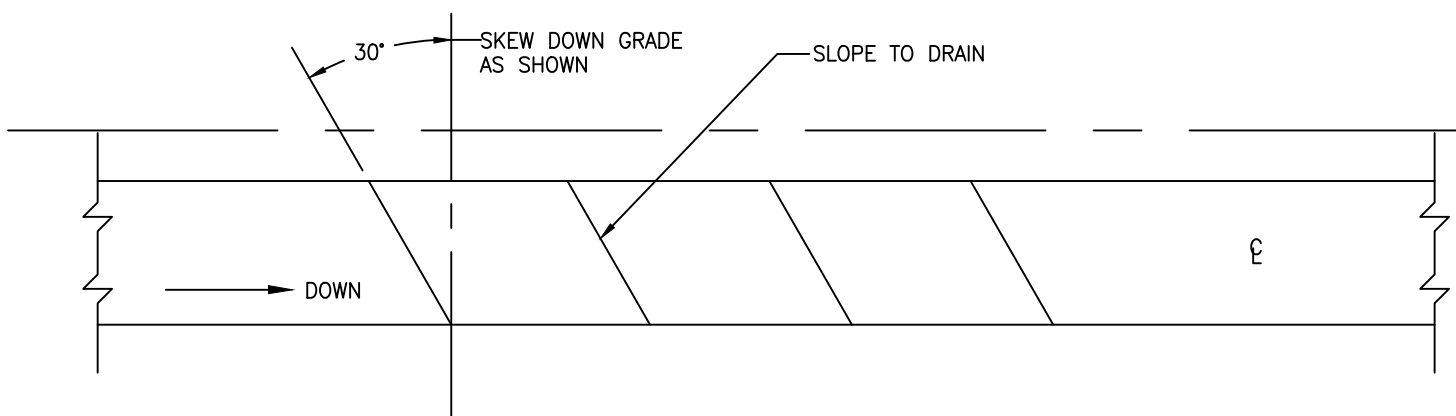


# EXHIBIT D TRENCH BARRIER DETAIL

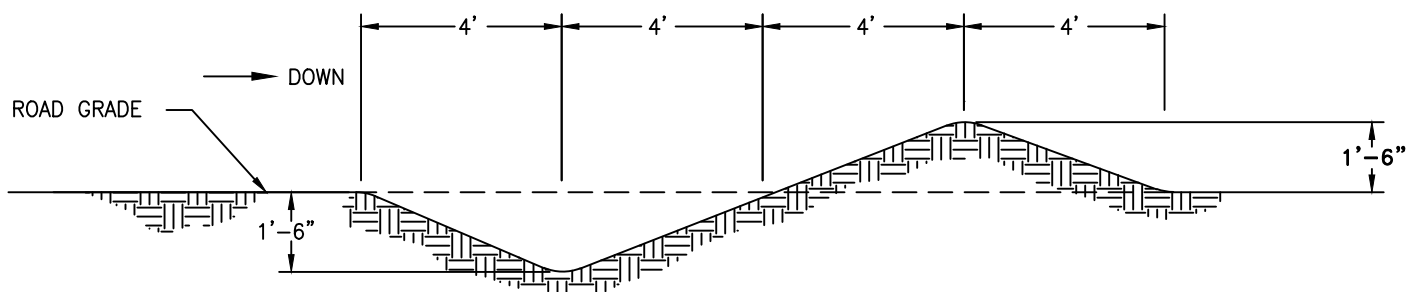


TRENCH BARRIER

SCALE: NONE



SCALE: NONE



SCALE: NONE

WATERBAR SPACING IN FEET	
ROAD GRADIENT IN %	SPACING
3 TO 5	300
6 TO 10	200
11 TO 15	150
16 TO 20	75
21 TO 35	50

# Exhibit E

## Seasonal Restriction Matrix (Page 1 of 2)

ORR04-TS12-06

Cancoon Commercial Thinning



Restricted Times Are Darkly Shaded

Sale Area	Activity	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sept	Oct	Nov	Dec
		1 15	1 15	1 15	1 15	1 16	1 15	1 16	1 15	1 15	1 15	1 15	1 15
Unit 1	Falling and bucking <sup>2</sup>												
	Ground-based yarding <sup>1, 2</sup>												
	Cable yarding on rock roads <sup>2</sup>												
	Right-of-way logging and clearing <sup>1</sup>												
	Loading or hauling on rock roads												
Unit 2	Falling and bucking <sup>2</sup>												
	Cable yarding on rock roads <sup>2</sup>												
	Loading or hauling on rock roads												
Unit 3	Falling and bucking <sup>2</sup>												
	Ground-based yarding <sup>1, 2</sup>												
	Cable yards <sup>2</sup>												
	Right-of-way logging and clearing <sup>1</sup>												
	Loading or hauling on unsurfaced roads <sup>1</sup>												
	Loading or hauling on rock roads												
Unit 4	Falling and bucking <sup>2</sup>												
	Ground-based yarding <sup>1, 2</sup>												
	Downhill cable yarding on rock roads <sup>1, 2</sup>												
	Cable yarding on rock roads <sup>2</sup>												
	Right-of-way logging and clearing <sup>1</sup>												
	Loading or hauling on rock roads												
Unit 5	Falling and bucking <sup>2</sup>												
	Cable yards <sup>2</sup>												
	Loading or hauling on rock roads												

<sup>1</sup>Wet season restrictions (October 15 – May 15) may be shortened or extended depending on weather conditions.

<sup>2</sup>Bark slip seasonal restrictions (April 15 – July 15) may be conditionally waived.

<sup>3</sup>Spotted owl seasonal restriction (February 1 – May 31) may be conditionally waived.

# Exhibit E

## Seasonal Restriction Matrix (Page 2 of 2)

ORR04-TS12-06

Cancoon Commercial Thinning



Restricted Times Are Darkly Shaded

Sale Area	Activity	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
		1 15	1 15	1 15	1 15	1 16	1 15	1 16	1 15	1 15	1 15	1 15	1 15
Unit 6	Falling and bucking <sup>2</sup>												
	Cable yarding on rock roads <sup>2</sup>												
	Right-of-way logging and clearing <sup>1</sup>												
	Loading or hauling on unsurfaced roads <sup>1</sup>												
	Loading or hauling on rock roads												
Unit 7	Falling and bucking <sup>2, 3</sup>												
	Ground-based yarding <sup>1, 2, 3</sup>												
	Cable yarding on inadequately surfaced rock roads <sup>1, 2, 3,</sup>												
	Right-of-way logging and clearing <sup>1, 3</sup>												
	Loading or hauling on unsurfaced roads <sup>1</sup>												
	Loading or hauling on inadequately surfaced rock roads <sup>1</sup>												
Spurs No. 6 and No. 7 and Road No. 25-1-36.0	Road construction or renovation <sup>1, 3</sup>												
Spurs No. 1, No. 2, No. 3, No. 4, and No. 5, and Roads No. 25-1-15.2 and No. 25-1-25.0	Road construction or renovation <sup>1</sup>												
Roads No. 25-1-15.0, No. 25-1-22.0, No. 25-1-22.1, No. 25-1-23.1, No. 25-1-26.0 and No. 25-1-26.1	Road renovation												

<sup>1</sup>Wet season restrictions (October 15 – May 15) may be shortened or extended depending on weather conditions.

<sup>2</sup>Bark slip seasonal restrictions (April 15 – July 15) may be conditionally waived.

<sup>3</sup>Spotted owl seasonal restriction (February 1 – May 31) may be conditionally waived.

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

**Summary of All Roads and Projects**

T.S. Update 05/15/12

T.S. Contract Name: Cancoon Sale Date: July 2012

Prepared by: T.McNamara Ph: 3313 Print Date: 6/7/2012 7:51:31 AM

Construction: 14.65 sta (Surfaced 11.65 sta Natural 3.00 sta)

Improve: 0.00 sta Renov: 224.40 sta Decom: 0.00 sta Temp: 0.00 sta

200 Clearing and Grubbing: 0.0 acres .....	\$6,273.65
Clearing: 37.3 sta      Grubbing: 0.6 acres	
Slash Treatment: 0.0 acres	
300 Excavation: .....	\$6,812.37
Haul: 0 sta-yds	
400 Drainage: .....	\$6,424.83
Culvert: 152 lf      wt = 3,312 lbs      factor = 1.2	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation: .....	\$10,940.75
Blading 3.59 mi	
Surfacing: .....	\$34,474.12
Quarry Name: Vian 751 cy	
1300 Geotextiles: .....	\$0.00
1400 Slope Protection: .....	\$0.00
1800 Soil Stabilization: 0.0 acres .....	\$0.00
1900 Cattleguards: .....	\$0.00
2100 RoadSide Brushing: 1.1 acres .....	\$2,628.24
2200 Surface Treatment: 0.0 tons .....	\$0.00
2300 Engineering: 0.00 sta. ....	\$0.00
2400 Minor Concrete: .....	\$0.00
2500 Gabions: .....	\$0.00
8000 Miscellaneous: .....	\$0.00
Mobilization: Const. \$3,154.44    Surf. \$1,617.96.....	\$4,772.40
Quarry Development: .....	\$0.00

Total: 2,692 mbf @ \$26.87/mbf = \$72,326.35

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities are COMPACTED in place cubic yards.

# ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Cancoon Sale Date: July 2012

**Road Number: 25-1-15.0** Road Name: 25-1-15.0

Road Renovation: 0.03 mi 14 ft Subgrade 3 ft ditch

T.S. Update 05/15/12

200 Clearing and Grubbing: 0.0 acres .....	\$0.00
Clearing:0.0 sta    Grubbing:0.0 acres	
Slash Treatment:0.0 acres	
300 Excavation: .....	\$0.00
400 Drainage: .....	\$0.00
Culvert: 0 lf    wt = 0 lbs    factor = 1.2	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation: .....	\$531.81
Surfacing: .....	\$0.00
1300 Geotextiles: .....	\$0.00
1400 Slope Protection: .....	\$0.00
1800 Soil Stabilization: 0.0 acres .....	\$0.00
1900 Cattleguards: .....	\$0.00
2100 RoadSide Brushing: 0.0 acres .....	\$103.74
2200 Surface Treatment: 0.0 tons .....	\$0.00
2300 Engineering: 0.00 sta. ....	\$0.00
2400 Minor Concrete: .....	\$0.00
2500 Gabions: .....	\$0.00
8000 Miscellaneous: .....	\$0.00
Mobilization: Const. \$29.68 Surf. \$0.00.....	\$29.68
Quarry Development: .....	\$0.00
Total:	\$665.23

## Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are COMPACTED in place cubic yards.

# ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Cancoon Sale Date: July 2012

**Road Number: 25-1-15.2** Road Name: 25-1-15.2

Road Renovation: 0.38 mi 14 ft Subgrade ft ditch

T.S. Update 05/15/12

200 Clearing and Grubbing: 0.0 acres .....	\$1,345.40
Clearing:0.0 sta    Grubbing:0.0 acres	
Slash Treatment:0.0 acres	
300 Excavation: .....	\$0.00
400 Drainage: .....	\$0.00
Culvert: 0 lf    wt = 0 lbs    factor = 1.2	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation: .....	\$792.05
Blading 0.38 mi	
Surfacing: .....	\$0.00
1300 Geotextiles: .....	\$0.00
1400 Slope Protection: .....	\$0.00
1800 Soil Stabilization: 0.0 acres .....	\$0.00
1900 Cattleguards: .....	\$0.00
2100 RoadSide Brushing: 1.1 acres .....	\$605.31
2200 Surface Treatment: 0.0 tons .....	\$0.00
2300 Engineering: 0.00 sta. ....	\$0.00
2400 Minor Concrete: .....	\$0.00
2500 Gabions: .....	\$0.00
8000 Miscellaneous: .....	\$0.00
Mobilization: Const. \$128.07 Surf. \$0.00.....	\$128.07
Quarry Development: .....	\$0.00
Total:	\$2,870.83

## Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are COMPACTED in place cubic yards.

# ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Cancoon Sale Date: July 2012

Road Number: 25-1-22.0 Road Name: 25-1-22.0

Road Renovation: 0.61 mi 15 ft Subgrade 3 ft ditch

T.S. Update 05/15/12

200 Clearing and Grubbing: 0.0 acres .....	\$0.00
Clearing:0.0 sta    Grubbing:0.0 acres	
Slash Treatment:0.0 acres	
300 Excavation: .....	\$0.00
400 Drainage: .....	\$0.00
Culvert: 0 lf    wt = 0 lbs    factor = 1.2	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation: .....	\$1,356.29
Blading 0.61 mi	
Surfacing: .....	\$0.00
1300 Geotextiles: .....	\$0.00
1400 Slope Protection: .....	\$0.00
1800 Soil Stabilization: 0.0 acres .....	\$0.00
1900 Cattleguards: .....	\$0.00
2100 RoadSide Brushing: 0.0 acres .....	\$259.35
2200 Surface Treatment: 0.0 tons .....	\$0.00
2300 Engineering: 0.00 sta. ....	\$0.00
2400 Minor Concrete: .....	\$0.00
2500 Gabions: .....	\$0.00
8000 Miscellaneous: .....	\$0.00
Mobilization: Const. \$75.44 Surf. \$0.00.....	\$75.44
Quarry Development: .....	\$0.00

Total: \$1,691.08

## Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are COMPACTED in place cubic yards.



# ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Cancoon Sale Date: July 2012

Road Number: 25-1-22.1 Road Name: 25-1-22.1

Road Renovation: 0.12 mi 14 ft Subgrade ft ditch

T.S. Update 05/15/12

200 Clearing and Grubbing: 0.0 acres .....	\$0.00
Clearing:0.0 sta    Grubbing:0.0 acres	
Slash Treatment:0.0 acres	
300 Excavation: .....	\$0.00
400 Drainage: .....	\$0.00
Culvert: 0 lf    wt = 0 lbs    factor = 1.2	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation: .....	\$719.08
Surfacing: .....	\$0.00
1300 Geotextiles: .....	\$0.00
1400 Slope Protection: .....	\$0.00
1800 Soil Stabilization: 0.0 acres .....	\$0.00
1900 Cattleguards: .....	\$0.00
2100 RoadSide Brushing: 0.0 acres .....	\$155.61
2200 Surface Treatment: 0.0 tons .....	\$0.00
2300 Engineering: 0.00 sta. ....	\$0.00
2400 Minor Concrete: .....	\$0.00
2500 Gabions: .....	\$0.00
8000 Miscellaneous: .....	\$0.00
Mobilization: Const. \$40.84 Surf. \$0.00.....	\$40.84
Quarry Development: .....	\$0.00

Total: \$915.53

## Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are COMPACTED in place cubic yards.

# ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Cancoon Sale Date: July 2012

Road Number: 25-1-23.1 Road Name: 25-1-23.1

Road Renovation: 0.24 mi 14 ft Subgrade 3 ft ditch

T.S. Update 05/15/12

200 Clearing and Grubbing: 0.0 acres .....	\$0.00
Clearing:0.0 sta    Grubbing:0.0 acres	
Slash Treatment:0.0 acres	
300 Excavation: .....	\$0.00
400 Drainage: .....	\$0.00
Culvert: 0 lf    wt = 0 lbs    factor = 1.2	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation: .....	\$0.00
Surfacing: .....	\$0.00
1300 Geotextiles: .....	\$0.00
1400 Slope Protection: .....	\$0.00
1800 Soil Stabilization: 0.0 acres .....	\$0.00
1900 Cattleguards: .....	\$0.00
2100 RoadSide Brushing: 0.0 acres .....	\$155.61
2200 Surface Treatment: 0.0 tons .....	\$0.00
2300 Engineering: 0.00 sta. ....	\$0.00
2400 Minor Concrete: .....	\$0.00
2500 Gabions: .....	\$0.00
8000 Miscellaneous: .....	\$0.00
Mobilization: Const. \$7.27 Surf. \$0.00.....	\$7.27
Quarry Development: .....	\$0.00

Total: \$162.88

## Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are COMPACTED in place cubic yards.

# ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Cancoon Sale Date: July 2012

Road Number: 25-1-25.0 Road Name: culvert replacement

Road Renovation: 0.08 mi 14 ft Subgrade 3 ft ditch

T.S. Update 05/15/12

200 Clearing and Grubbing: 0.0 acres .....	\$0.00
Clearing:0.0 sta    Grubbing:0.0 acres	
Slash Treatment:0.0 acres	
300 Excavation: .....	\$0.00
400 Drainage: .....	\$5,112.84
Culvert: 116 lf    wt = 2,556 lbs    factor = 1.2	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation: .....	\$0.00
Surfacing: .....	\$6,431.01
Quarry Name: Vian 141 cy	
1300 Geotextiles: .....	\$0.00
1400 Slope Protection: .....	\$0.00
1800 Soil Stabilization: 0.0 acres .....	\$0.00
1900 Cattleguards: .....	\$0.00
2100 RoadSide Brushing: 0.0 acres .....	\$0.00
2200 Surface Treatment: 0.0 tons .....	\$0.00
2300 Engineering: 0.00 sta. ....	\$0.00
2400 Minor Concrete: .....	\$0.00
2500 Gabions: .....	\$0.00
8000 Miscellaneous: .....	\$0.00
Mobilization: Const. \$539.04 Surf. \$303.77.....	\$842.81
Quarry Development: .....	\$0.00

Total: \$12,386.67

## Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are COMPACTED in place cubic yards.

# ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Cancoon Sale Date: July 2012

Road Number: 25-1-26.0 Road Name: 25-1-26.0

Road Renovation: 0.60 mi 15 ft Subgrade 3 ft ditch

T.S. Update 05/15/12

200 Clearing and Grubbing: 0.0 acres .....	\$0.00
Clearing:0.0 sta    Grubbing:0.0 acres	
Slash Treatment:0.0 acres	
300 Excavation: .....	\$0.00
400 Drainage: .....	\$0.00
Culvert: 0 lf    wt = 0 lbs    factor = 1.2	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation: .....	\$1,445.22
Blading 0.65 mi	
Surfacing: .....	\$0.00
1300 Geotextiles: .....	\$0.00
1400 Slope Protection: .....	\$0.00
1800 Soil Stabilization: 0.0 acres .....	\$0.00
1900 Cattleguards: .....	\$0.00
2100 RoadSide Brushing: 0.0 acres .....	\$207.48
2200 Surface Treatment: 0.0 tons .....	\$0.00
2300 Engineering: 0.00 sta. ....	\$0.00
2400 Minor Concrete: .....	\$0.00
2500 Gabions: .....	\$0.00
8000 Miscellaneous: .....	\$0.00
Mobilization: Const. \$77.17 Surf. \$0.00.....	\$77.17
Quarry Development: .....	\$0.00

Total: \$1,729.88

## Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are COMPACTED in place cubic yards.

# ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Cancoon Sale Date: July 2012

Road Number: 25-1-26.1 Road Name: 25-1-26.1

Road Renovation: 0.72 mi 14 ft Subgrade 3 ft ditch

T.S. Update 05/15/12

200 Clearing and Grubbing: 0.0 acres .....	\$0.00
Clearing:0.0 sta    Grubbing:0.0 acres	
Slash Treatment:0.0 acres	
300 Excavation: .....	\$0.00
400 Drainage: .....	\$0.00
Culvert: 0 lf    wt = 0 lbs    factor = 1.2	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation: .....	\$1,600.86
Blading 0.72 mi	
Surfacing: .....	\$0.00
1300 Geotextiles: .....	\$0.00
1400 Slope Protection: .....	\$0.00
1800 Soil Stabilization: 0.0 acres .....	\$0.00
1900 Cattleguards: .....	\$0.00
2100 RoadSide Brushing: 0.0 acres .....	\$414.96
2200 Surface Treatment: 0.0 tons .....	\$0.00
2300 Engineering: 0.00 sta. ....	\$0.00
2400 Minor Concrete: .....	\$0.00
2500 Gabions: .....	\$0.00
8000 Miscellaneous: .....	\$0.00
Mobilization: Const. \$94.13 Surf. \$0.00.....	\$94.13
Quarry Development: .....	\$0.00

Total: \$2,109.95

## Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are COMPACTED in place cubic yards.

# ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Cancoon Sale Date: July 2012

Road Number: 25-1-36.0 Road Name: 25-1-36.0

Road Renovation: 1.23 mi 15 ft Subgrade 3 ft ditch

T.S. Update 05/15/12

200 Clearing and Grubbing: 0.0 acres ..... \$1,199.92  
 Clearing:12.7 sta Grubbing:0.6 acres  
 Slash Treatment:0.0 acres

300 Excavation: ..... \$0.00

400 Drainage: ..... \$0.00  
 Culvert: 0 lf wt = 0 lbs factor = 1.2  
 DownSpout: 0 lf  
 PolyPipe: 0 lf

500 Renovation: ..... \$3,444.98  
 Blading 1.23 mi

Surfacing: ..... \$0.00

1300 Geotextiles: ..... \$0.00

1400 Slope Protection: ..... \$0.00

1800 Soil Stabilization: 0.0 acres ..... \$0.00

1900 Cattleguards: ..... \$0.00

2100 RoadSide Brushing: 0.0 acres ..... \$414.96

2200 Surface Treatment: 0.0 tons ..... \$0.00

2300 Engineering: 0.00 sta. .... \$0.00

2400 Minor Concrete: ..... \$0.00

2500 Gabions: ..... \$0.00

8000 Miscellaneous: ..... \$0.00

Mobilization: Const. \$236.27 Surf. \$0.00..... \$236.27

Quarry Development: ..... \$0.00

Total: \$5,296.12

## Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are COMPACTED in place cubic yards.

# ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Cancoon Sale Date: July 2012

Road Number: Spur 1 Road Name: Spur 1

Road Construction: 0.02 mi 14 ft Subgrade ft ditch T.S. Update 05/15/12

200 Clearing and Grubbing: 0.0 acres .....	\$302.26
Clearing:1.1 sta    Grubbing:0.0 acres	
Slash Treatment:0.0 acres	
300 Excavation: .....	\$1,050.46
400 Drainage: .....	\$0.00
Culvert: 0 lf    wt = 0 lbs    factor = 1.2	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation: .....	\$0.00
Surfacing: .....	\$5,153.93
Quarry Name: Vian 113 cy	
1300 Geotextiles: .....	\$0.00
1400 Slope Protection: .....	\$0.00
1800 Soil Stabilization: 0.0 acres .....	\$0.00
1900 Cattleguards: .....	\$0.00
2100 RoadSide Brushing: 0.0 acres .....	\$0.00
2200 Surface Treatment: 0.0 tons .....	\$0.00
2300 Engineering: 0.00 sta. ....	\$0.00
2400 Minor Concrete: .....	\$0.00
2500 Gabions: .....	\$0.00
8000 Miscellaneous: .....	\$0.00
Mobilization: Const. \$303.83 Surf. \$243.45.....	\$547.28
Quarry Development: .....	\$0.00
Total:	\$7,053.92

## Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are COMPACTED in place cubic yards.

# ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Cancoon Sale Date: July 2012

Road Number: Spur 2 Road Name: Spur 2

Road Renovation: 0.05 mi 15 ft Subgrade ft ditch T.S. Update 05/15/12

200 Clearing and Grubbing: 0.0 acres .....	\$0.00
Clearing:0.0 sta    Grubbing:0.0 acres	
Slash Treatment:0.0 acres	
300 Excavation: .....	\$0.00
400 Drainage: .....	\$0.00
Culvert: 0 lf    wt = 0 lbs    factor = 1.2	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation: .....	\$239.80
Surfacing: .....	\$0.00
1300 Geotextiles: .....	\$0.00
1400 Slope Protection: .....	\$0.00
1800 Soil Stabilization: 0.0 acres .....	\$0.00
1900 Cattleguards: .....	\$0.00
2100 RoadSide Brushing: 0.0 acres .....	\$103.74
2200 Surface Treatment: 0.0 tons .....	\$0.00
2300 Engineering: 0.00 sta. ....	\$0.00
2400 Minor Concrete: .....	\$0.00
2500 Gabions: .....	\$0.00
8000 Miscellaneous: .....	\$0.00
Mobilization: Const. \$16.04 Surf. \$0.00.....	\$16.04
Quarry Development: .....	\$0.00

Total: \$359.58

## Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are COMPACTED in place cubic yards.



# ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Cancoon Sale Date: July 2012

Road Number: Spur 3 Road Name: Spur 3

Road Construction: 0.14 mi 15 ft Subgrade ft ditch T.S. Update 05/15/12

200 Clearing and Grubbing: 0.0 acres ..... \$1,033.44  
 Clearing:7.5 sta Grubbing:0.0 acres  
 Slash Treatment:0.0 acres

300 Excavation: ..... \$2,100.92

400 Drainage: ..... \$1,311.98  
 Culvert: 36 lf wt = 756 lbs factor = 1.2  
 DownSpout: 0 lf  
 PolyPipe: 0 lf

500 Renovation: ..... \$0.00

Surfacing: ..... \$15,416.18  
 Quarry Name: Vian 338 cy

1300 Geotextiles: ..... \$0.00

1400 Slope Protection: ..... \$0.00

1800 Soil Stabilization: 0.0 acres ..... \$0.00

1900 Cattleguards: ..... \$0.00

2100 RoadSide Brushing: 0.0 acres ..... \$0.00

2200 Surface Treatment: 0.0 tons ..... \$0.00

2300 Engineering: 0.00 sta. .... \$0.00

2400 Minor Concrete: ..... \$0.00

2500 Gabions: ..... \$0.00

8000 Miscellaneous: ..... \$0.00

Mobilization: Const. \$927.48 Surf. \$728.19..... \$1,655.67

Quarry Development: ..... \$0.00

Total: \$21,518.20

## Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are COMPACTED in place cubic yards.

# ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Cancoon Sale Date: July 2012

Road Number: Spur 4 Road Name: Spur 4

Road Construction: 0.06 mi 15 ft Subgrade ft ditch T.S. Update 05/15/12

200 Clearing and Grubbing: 0.0 acres .....	\$630.15
Clearing:3.1 sta    Grubbing:0.0 acres	
Slash Treatment:0.0 acres	
300 Excavation: .....	\$1,575.69
400 Drainage: .....	\$0.00
Culvert: 0 lf    wt = 0 lbs    factor = 1.2	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation: .....	\$0.00
Surfacing: .....	\$7,473.00
Quarry Name: Vian 159 cy	
1300 Geotextiles: .....	\$0.00
1400 Slope Protection: .....	\$0.00
1800 Soil Stabilization: 0.0 acres .....	\$0.00
1900 Cattleguards: .....	\$0.00
2100 RoadSide Brushing: 0.0 acres .....	\$0.00
2200 Surface Treatment: 0.0 tons .....	\$0.00
2300 Engineering: 0.00 sta. ....	\$0.00
2400 Minor Concrete: .....	\$0.00
2500 Gabions: .....	\$0.00
8000 Miscellaneous: .....	\$0.00
Mobilization: Const. \$451.95 Surf. \$342.55.....	\$794.51
Quarry Development: .....	\$0.00
Total:	\$10,473.34

## Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are COMPACTED in place cubic yards.

# ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Cancoon Sale Date: July 2012

Road Number: Spur 5 Road Name: Spur 5

Road Construction: 0.02 mi 14 ft Subgrade ft ditch T.S. Update 05/15/12

200 Clearing and Grubbing: 0.0 acres .....	\$441.32
Clearing:1.3 sta    Grubbing:0.0 acres	
Slash Treatment:0.0 acres	
300 Excavation: .....	\$965.32
400 Drainage: .....	\$0.00
Culvert: 0 lf    wt = 0 lbs    factor = 1.2	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation: .....	\$0.00
Surfacing: .....	\$0.00
1300 Geotextiles: .....	\$0.00
1400 Slope Protection: .....	\$0.00
1800 Soil Stabilization: 0.0 acres .....	\$0.00
1900 Cattleguards: .....	\$0.00
2100 RoadSide Brushing: 0.0 acres .....	\$0.00
2200 Surface Treatment: 0.0 tons .....	\$0.00
2300 Engineering: 0.00 sta. ....	\$0.00
2400 Minor Concrete: .....	\$0.00
2500 Gabions: .....	\$0.00
8000 Miscellaneous: .....	\$0.00
Mobilization: Const. \$65.68 Surf. \$0.00.....	\$65.68
Quarry Development: .....	\$0.00

Total: \$1,472.32

## Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are COMPACTED in place cubic yards.

# ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Cancoon Sale Date: July 2012

Road Number: Spur 6 Road Name: Spur 6

Road Renovation: 0.19 mi 14 ft Subgrade ft ditch T.S. Update 05/15/12

200 Clearing and Grubbing: 0.0 acres .....	\$839.76
Clearing:10.0 sta    Grubbing:0.0 acres	
Slash Treatment:0.0 acres	
300 Excavation: .....	\$0.00
400 Drainage: .....	\$0.00
Culvert: 0 lf    wt = 0 lbs    factor = 1.2	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation: .....	\$810.66
Surfacing: .....	\$0.00
1300 Geotextiles: .....	\$0.00
1400 Slope Protection: .....	\$0.00
1800 Soil Stabilization: 0.0 acres .....	\$0.00
1900 Cattleguards: .....	\$0.00
2100 RoadSide Brushing: 0.0 acres .....	\$207.48
2200 Surface Treatment: 0.0 tons .....	\$0.00
2300 Engineering: 0.00 sta. ....	\$0.00
2400 Minor Concrete: .....	\$0.00
2500 Gabions: .....	\$0.00
8000 Miscellaneous: .....	\$0.00
Mobilization: Const. \$86.75 Surf. \$0.00.....	\$86.75
Quarry Development: .....	\$0.00

Total: \$1,944.65

## Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are COMPACTED in place cubic yards.

# ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Cancoon Sale Date: July 2012

Road Number: Spur 7 Road Name: Spur 7

Road Construction: 0.03 mi 14 ft Subgrade ft ditch T.S. Update 05/15/12

200 Clearing and Grubbing: 0.0 acres .....	\$481.41
Clearing:1.8 sta    Grubbing:0.0 acres	
Slash Treatment:0.0 acres	
300 Excavation: .....	\$1,119.98
400 Drainage: .....	\$0.00
Culvert: 0 lf    wt = 0 lbs    factor = 1.2	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation: .....	\$0.00
Surfacing: .....	\$0.00
1300 Geotextiles: .....	\$0.00
1400 Slope Protection: .....	\$0.00
1800 Soil Stabilization: 0.0 acres .....	\$0.00
1900 Cattleguards: .....	\$0.00
2100 RoadSide Brushing: 0.0 acres .....	\$0.00
2200 Surface Treatment: 0.0 tons .....	\$0.00
2300 Engineering: 0.00 sta. ....	\$0.00
2400 Minor Concrete: .....	\$0.00
2500 Gabions: .....	\$0.00
8000 Miscellaneous: .....	\$0.00
Mobilization: Const. \$74.78 Surf. \$0.00.....	\$74.78
Quarry Development: .....	\$0.00

Total: \$1,676.16

## Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are COMPACTED in place cubic yards.



**United States of America**  
**Department of the Interior**  
**Bureau Of Land Management**  
**Timber Sale Appraisal**

---

<b>District :</b> Roseburg	<b>Contract # :</b> ORR04-TS-12-06
<b>Sale Name :</b> Cancoon Commercial Thinning	<b>Job File # :</b> R10-551
<b>Sale Date :</b> 07/24/2012	<b>Master Unit :</b> Douglas
<b>Appraisal Method :</b> 16' MBF	<b>Planning Unit :</b> Swiftwater

---

**Contents**

Timber Sale Summary	2
Stumpage Summary	4
Prospectus	5
Exhibit B	6
Volume Summary	9
Stump to Truck Costs	11
Other Allowances Costs	12
Consolidated Comments	13

**UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
Timber - Sale - Summary**

Roseburg  
Cancoon Commercial Thinning  
ORR04-TS-12-06

**Legal Description**

Forest Type	Township	Range	Section	Subdivision
O&C	25 S	01 W	15	NE1/4, NE1/4NW1/4, N1/2SE1/4
O&C	25 S	01 W	23	SW1/4NE1/4, N1/2NW1/4, SW1/4NW1/4, N1/2SW1/4, SW1/4SW1/4, N1/2SE1/4
O&C	25 S	01 W	25	W1/2SW1/4, SE1/4SW1/4
O&C	25 S	01 W	26	SE1/4SE1/4

**Cutting Volume (16' MBF)**

Unit	DF	GF	WH	IC	WRC				Total	Regen	Partial	ROW
1	356	10	1						367	0	30	0
2	440	33	15	1	1				490	0	35	0
3	514	57	6						577	0	35	0
4	305	31	37		4				377	0	28	0
5	289	2	6	2					299	0	23	0
6	174		14	2					190	0	14	0
7	297	12	7						316	0	31	0
RW	70	4	1	1					76	0	0	2

Totals	2,445	149	87	6	5				2,692	0	196	2
--------	-------	-----	----	---	---	--	--	--	-------	---	-----	---

**UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT**

Roseburg  
Cancoon Commercial Thinning  
ORR04-TS-12-06

**Logging Costs per 16' MBF**

Stump to Truck	\$	199.95
Transportation	\$	61.75
Road Construction	\$	26.87
Road Amortization	\$	0.07
Road Maintenance	\$	6.53

Other Allowances :

Equipment Cleaning	\$ 0.31
Misc	\$ 0.73
Slash Disposal	\$ 2.74
<b>Total Other Allowances :</b>	<b>\$ 3.78</b>

Total Logging Costs per 16' MBF

**\$ 298.95**

**Utilization Centers**

Center #1 : Roseburg 45 Miles  
Center #2 0 Miles  
Weighted distance to Utilization Centers 45

**Length of Contract**

Cutting and Removal Time 36 Months  
Personal Property Removal Time 1 Months

**Profit & Risk**

Total Profit & Risk		12 %
Basic Profit & Risk	11 % + Additional Risk	1 %
Back Off		0 %

**Tract Features**

Avg Log	Douglas-fir : 36 bf	All : 36 bf
Recovery	Douglas-fir : 98 %	All : 98 %
Salvage	Douglas-fir : 0 %	All : 0 %
Avg Volume ( 16' MBF per Acre)		14
Avg Yarding Slope		0 %
Avg Yarding Distance (feet)		0
Avg Age		50
Volume Cable		70 %
Volume Ground		30 %
Volume Aerial		0 %
Road Construction Stations		14.65
Road Improvement Stations		0.00
Road Renovation Stations		224.40
Road Decommission Stations		47.40

**Cruise**

Cruised By	JK, JC, KT, DS
Date	03/01/2012
Type of Cruise	3-P, 100%
County, State	Douglas, OR

**Net Volume**

Green (16' MBF)	2,692
Salvage (16' MBF)	0
Douglas-fir Peeler	0
Export Volume	0
Scaling Allowance (\$0.75 per 16' MBF)	\$2,019.00



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

Roseburg  
Cancoon Commercial Thinning  
ORR04-TS-12-06

**Stumpage Summary**

**Stumpage Computation (16' MBF)**

Species	Trees	Net Volume	Pond Value	(-) Profit & Risk	(-) Logging Cost	(+) Marginal Log Value	(-) Back Off	Appraised Price	Appraised Value
DF	20,026	2,445	\$ 410.73	\$ 49.29	\$ 298.95			\$ 62.50	\$ 152,812.50
GF	1,093	149	\$ 344.75	\$ 41.37	\$ 298.95			<b>\$ 34.50</b>	\$ 5,140.50
WH	1,080	87	\$ 319.06	\$ 38.29	\$ 298.95			<b>\$ 31.90</b>	\$ 2,775.30
IC	107	6	\$ 351.35	\$ 42.16	\$ 298.95			<b>\$ 35.10</b>	\$ 210.60
WRC	113	5	\$ 480.80	\$ 57.70	\$ 298.95			\$ 124.20	\$ 621.00
<b>Totals</b>	<b>22,419</b>	<b>2,692</b>							<b>\$ 161,559.90</b>

**Log Code by Percent**

Species	Code #1	Code #2	Code #3	Code #4	Code #5	Code #6
Douglas-fir				16.0	71.0	13.0
Grand Fir				14.0	74.0	12.0
Western Hemlock				10.0	70.0	20.0
Incense-cedar						100.0
Western red-cedar						100.0

**Marginal Log Volume**

Species	Grade #7	Grade #8
Douglas-fir		
Grand Fir		
Western Hemlock		
Incense-cedar		
Western red-cedar		

<b>Appraised By :</b> Keady, Joe	<b>Date :</b> 05/30/2012
<b>Area Approval By :</b> Coppersmith, Jason	<b>Date :</b> 06/04/2012
<b>District Approval By :</b> Thompson, Kristen	<b>Date :</b> 06/20/2012

**UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT**

Roseburg  
Cancoon Commercial Thinning  
ORR04-TS-12-06

**Prospectus**

**Appraisal Method : (16' MBF)**

Species	Trees	Net Volume 16' MBF	Net Volume 32' MBF	Net Volume CCF
Douglas-fir	20,026	2,445	2,019	4,598
Grand Fir	1,093	149	124	279
Western Hemlock	1,080	87	69	174
Incense-cedar	107	6	4	12
Western red-cedar	113	5	4	11
<b>Total</b>	<b>22,419</b>	<b>2,692</b>	<b>2,220</b>	<b>5,074</b>

**All Species**

Gross Volume	Number Trees	Avg bf Volume Per Tree	DBH	Gross Merch Volume	Merch Logs	Avg bf Gross Merch Log
2,750	22,419	122	11.6	2,748	75,511	36

Merch Logs	Cull Logs	Total Logs	Logs per Tree	Net Volume	Gross Volume	Recovery
75,511	67	75,578	3.4	2,692	2,750	98 %

**Douglas-fir**

Gross Volume	Number Trees	Avg bf Volume Per Tree	DBH	Gross Merch Volume	Merch Logs	Avg bf Gross Merch Log
2,487	20,026	124	11.6	2,486	68,436	36

Merch Logs	Cull Logs	Total Logs	Logs per Tree	Net Volume	Gross Volume	Recovery
68,436	22	68,458	3.4	2,445	2,487	98 %

**Cutting Areas**

Unit	Regen Acres	Partial Cut Acres	Right Of Way Acres	Total Acres
1		30		30
2		35		35
3		35		35
4		28		28
5		23		23
6		14		14
7		31		31
RW			2	2
<b>Totals :</b>		<b>196</b>	<b>2</b>	<b>198</b>

**UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT**

Roseburg  
Cancoon Commercial Thinning  
ORR04-TS-12-06

**Exhibit B**

The following estimates and calculations of timber sold are made solely as an administrative aid for determining: (1) Adjustments made or credits given in accordance with Sections 6, 9, or 11; (2) When payments are due; and (3) Value of timber subject to any special bonding provisions. The value of timber will be determined by multiplying the value per acre as shown below, times the amount of acreage as determined by the authorized officer, which has been cut or removed or designated for taking.

Except provided in Section 2, Purchaser shall be liable for the total purchase price even though the quantity of timber actually cut or removed or designated for taking is less than the estimated volume or quantity shown. Cutting areas are shown on the Exhibit A.

**Sale Totals (16' MBF)**

Species	Net Volume	Bid Price	Sale SubTotal
Douglas-fir	2,445		
Grand Fir	149		
Western Hemlock	87		
Incense-cedar	6		
Western red-cedar	5		
<b>Sale Totals</b>	<b>2,692</b>		

**Unit Details (16' MB)**

**Unit 1                      30 Acres                      Value per Acre : \$0.00**

Species	Net Volume	Bid Price	Species Value
Douglas-fir	356		
Grand Fir	10		
Western Hemlock	1		
<b>Unit Totals</b>	<b>367</b>		

**Unit 2                      35 Acres                      Value per Acre : \$0.00**

Species	Net Volume	Bid Price	Species Value
Douglas-fir	440		
Grand Fir	33		
Incense-cedar	1		
Western Hemlock	15		
Western red-cedar	1		
<b>Unit Totals</b>	<b>490</b>		

Roseburg  
Cancoon Commercial Thinning  
ORR04-TS-12-06

Species	Net Volume	Bid Price	Species Value
Douglas-fir	514		
Grand Fir	57		
Western Hemlock	6		
<b>Unit Totals</b>	<b>577</b>		

Species	Net Volume	Bid Price	Species Value
Douglas-fir	305		
Grand Fir	31		
Western Hemlock	37		
Western red-cedar	4		
<b>Unit Totals</b>	<b>377</b>		

Species	Net Volume	Bid Price	Species Value
Douglas-fir	289		
Grand Fir	2		
Incense-cedar	2		
Western Hemlock	6		
<b>Unit Totals</b>	<b>299</b>		

Species	Net Volume	Bid Price	Species Value
Douglas-fir	174		
Incense-cedar	2		
Western Hemlock	14		
<b>Unit Totals</b>	<b>190</b>		

Species	Net Volume	Bid Price	Species Value
Douglas-fir	297		
Grand Fir	12		
Western Hemlock	7		
<b>Unit Totals</b>	<b>316</b>		

**UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT**

Roseburg  
Cancoon Commercial Thinning  
ORR04-TS-12-06

**Unit      RW                                  2 Acres                                  Value per Acre : \$0.00**

<b>Species</b>	<b>Net Volume</b>	<b>Bid Price</b>	<b>Species Value</b>
Douglas-fir	70		
Grand Fir	4		
Incense-cedar	1		
Western Hemlock	1		
<b>Unit Totals</b>	<b>76</b>		

**UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
Volume Summary**

Roseburg  
Cancoon Commercial Thinning  
ORR04-TS-12-06

**Sale Volume Totals**

198 Acres                      0 Regen                      196 Partial                      2 R/W                      8 Units

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Net	16' MBF GM	16' MBF Gross	32' MBF Net	32' MBF GM	32' MBF Gross	CCF Net	CCF GM	CCF Gross
Douglas-fir	20,026	68,436	22	2,445	2,486	2,487	2,019	2,047	2,047	4,598	4,686	4,687
Grand Fir	1,093	4,085	3	149	155	155	124	128	128	279	289	289
Western Hemlock	1,080	2,629	36	87	96	97	69	75	77	174	191	194
Incense-cedar	107	181	5	6	6	6	4	5	5	12	13	13
Western red-cedar	113	180	1	5	5	5	4	4	4	11	12	12
<b>Totals</b>	<b>22,419</b>	<b>75,511</b>	<b>67</b>	<b>2,692</b>	<b>2,748</b>	<b>2,750</b>	<b>2,220</b>	<b>2,259</b>	<b>2,261</b>	<b>5,074</b>	<b>5,191</b>	<b>5,195</b>

**Unit Totals**

Unit : 1                      30 Acres                      0 Regen                      30 Partial                      0 R/W

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	2,794	9,980	2	361	361	356
Grand Fir	76	262		10	10	10
Western Hemlock	16	38		1	1	1
<b>Unit Totals</b>	<b>2,886</b>	<b>10,280</b>	<b>2</b>	<b>372</b>	<b>372</b>	<b>367</b>

Unit : 2                      35 Acres                      0 Regen                      35 Partial                      0 R/W

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	3,498	12,406		448	448	440
Grand Fir	246	902		34	34	33
Western Hemlock	191	471	5	18	18	15
Incense-cedar	19	26	1	1	1	1
Western red-cedar	23	32	1	1	1	1
<b>Unit Totals</b>	<b>3,977</b>	<b>13,837</b>	<b>7</b>	<b>502</b>	<b>502</b>	<b>490</b>

Unit : 3                      35 Acres                      0 Regen                      35 Partial                      0 R/W

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	4,216	14,118	2	522	522	514
Grand Fir	416	1,594		59	59	57
Western Hemlock	71	191	2	7	7	6
<b>Unit Totals</b>	<b>4,703</b>	<b>15,903</b>	<b>4</b>	<b>588</b>	<b>588</b>	<b>577</b>

**UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT**

Roseburg  
Cancoon Commercial Thinning  
ORR04-TS-12-06

**Unit : 4                      28 Acres                      0 Regen                      28 Partial                      0 R/W**

<b>SpeciesName</b>	<b># of Trees</b>	<b>Merch Logs</b>	<b>Cull Logs</b>	<b>16' MBF Gross</b>	<b>16' MBF GM</b>	<b>16' MBF Net</b>
Douglas-fir	2,632	8,866		309	309	305
Western Hemlock	458	1,107	12	41	40	37
Grand Fir	212	838	2	33	33	31
Western red-cedar	90	148		4	4	4
<b>Unit Totals</b>	<b>3,392</b>	<b>10,959</b>	<b>14</b>	<b>387</b>	<b>386</b>	<b>377</b>

**Unit : 5                      23 Acres                      0 Regen                      23 Partial                      0 R/W**

<b>SpeciesName</b>	<b># of Trees</b>	<b>Merch Logs</b>	<b>Cull Logs</b>	<b>16' MBF Gross</b>	<b>16' MBF GM</b>	<b>16' MBF Net</b>
Douglas-fir	2,187	8,216	1	294	294	289
Western Hemlock	77	174	2	6	6	6
Grand Fir	18	60		2	2	2
Incense-cedar	40	61	1	2	2	2
<b>Unit Totals</b>	<b>2,322</b>	<b>8,511</b>	<b>4</b>	<b>304</b>	<b>304</b>	<b>299</b>

**Unit : 6                      14 Acres                      0 Regen                      14 Partial                      0 R/W**

<b>SpeciesName</b>	<b># of Trees</b>	<b>Merch Logs</b>	<b>Cull Logs</b>	<b>16' MBF Gross</b>	<b>16' MBF GM</b>	<b>16' MBF Net</b>
Douglas-fir	1,270	4,733		177	177	174
Western Hemlock	151	411	4	15	15	14
Incense-cedar	41	74	3	2	2	2
<b>Unit Totals</b>	<b>1,462</b>	<b>5,218</b>	<b>7</b>	<b>194</b>	<b>194</b>	<b>190</b>

**Unit : 7                      31 Acres                      0 Regen                      31 Partial                      0 R/W**

<b>SpeciesName</b>	<b># of Trees</b>	<b>Merch Logs</b>	<b>Cull Logs</b>	<b>16' MBF Gross</b>	<b>16' MBF GM</b>	<b>16' MBF Net</b>
Douglas-fir	2,942	8,542	2	302	301	297
Grand Fir	102	344		13	13	12
Western Hemlock	103	218	2	8	8	7
<b>Unit Totals</b>	<b>3,147</b>	<b>9,104</b>	<b>4</b>	<b>323</b>	<b>322</b>	<b>316</b>

**Unit : RW                      2 Acres                      0 Regen                      0 Partial                      2 R/W**

<b>SpeciesName</b>	<b># of Trees</b>	<b>Merch Logs</b>	<b>Cull Logs</b>	<b>16' MBF Gross</b>	<b>16' MBF GM</b>	<b>16' MBF Net</b>
Douglas-fir	487	1,575	15	74	74	70
Grand Fir	23	85	1	4	4	4
Incense-cedar	7	20		1	1	1
Western Hemlock	13	19	9	1	1	1
<b>Unit Totals</b>	<b>530</b>	<b>1,699</b>	<b>25</b>	<b>80</b>	<b>80</b>	<b>76</b>

**UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT**

Roseburg  
Cancoon Commercial Thinning  
ORR04-TS-12-06

**Stump to Truck Costs**

**Total (16' MBF)**

<b>Total Stump to Truck Costs</b>	<b>Net Volume</b>	<b>Cost / Net Volume</b>
\$ 538,260.20	2,692	\$ 199.95

**Detail**

**Yarding & Loading**

<b>Yarding System</b>	<b>Unit Of Measure</b>	<b>Units</b>	<b>Cost / Unit</b>	<b>Total Cost</b>
Short Twr<40	MBF	1,604	\$ 202.47	\$ 324,761.88
Short Twr<40	MBF	309	\$ 379.63	\$ 117,305.67
Wheel Skidder	MBF	755	\$ 103.55	\$ 78,180.25
Track Skidder	MBF	80	\$ 90.53	\$ 7,242.40
<b>Subtotal</b>				<b>\$ 527,490.20</b>

**Other Costs**

<b>Explanation</b>	<b>Unit Of Measure</b>	<b>Units</b>	<b>Cost / Unit</b>	<b>Total Cost</b>
Int supports	each	21	\$ 250.00	\$ 5,250.00
Lift Trees	each	28	\$ 150.00	\$ 4,200.00
<b>Subtotal</b>				<b>\$ 9,450.00</b>

**Additional Move-Ins**

<b>Equipment</b>	<b># Move-In</b>	<b>Cost / Move In</b>	<b>Total Cost</b>
Yarder / Loader	2	\$ 550.00	\$ 1,100.00
Skidder	1	\$ 220.00	\$ 220.00
<b>Subtotal</b>			<b>\$ 1,320.00</b>



**UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT**

Roseburg  
Cancoon Commercial Thinning  
ORR04-TS-12-06

**Other Allowances Costs**

**Total (16' MBF)**

<b>Total Other Allowances Costs</b>	<b>Net Volume</b>	<b>Cost / Net Volume *</b>	<b>Total Buy Out Cost</b>
\$10,165.00	2,692	\$3.78	\$0.00

Equipment Cleaning

**Detail (16' MBF)**

<b>Cost Item</b>	<b>Total Cost</b>	<b>Cost / Net Vol *</b>	<b>Buy Out</b>	<b>Buy Out Cost</b>
Yarder	\$ 165.00	\$ 0.06	N	\$ 0.00
Wheel Skidder	\$ 165.00	\$ 0.06	N	\$ 0.00
Track Skidder	\$ 165.00	\$ 0.06	N	\$ 0.00
Shovel	\$ 330.00	\$ 0.12	N	\$ 0.00
<b>Subtotal</b>	<b>\$ 825.00</b>	<b>\$ 0.31</b>		<b>\$ 0.00</b>

Misc

**Detail (16' MBF)**

<b>Cost Item</b>	<b>Total Cost</b>	<b>Cost / Net Vol *</b>	<b>Buy Out</b>	<b>Buy Out Cost</b>
Sub-soiling	\$ 920.00	\$ 0.34	N	\$ 0.00
Sub-soil move-in/out	\$ 880.00	\$ 0.33	N	\$ 0.00
Clean Excavator	\$ 165.00	\$ 0.06	N	\$ 0.00
<b>Subtotal</b>	<b>\$ 1,965.00</b>	<b>\$ 0.73</b>		<b>\$ 0.00</b>

Slash Disposal

**Detail (16' MBF)**

<b>Cost Item</b>	<b>Total Cost</b>	<b>Cost / Net Vol *</b>	<b>Buy Out</b>	<b>Buy Out Cost</b>
Landings-All (clean-up, covering, piling, burning)	\$ 7,375.00	\$ 2.74	N	\$ 0.00
<b>Subtotal</b>	<b>\$ 7,375.00</b>	<b>\$ 2.74</b>		<b>\$ 0.00</b>

\* Cost / Net Volume has been rounded to the nearest \$0.01 Subtotals may not tie to Sale Total Cost / Net Volume.

**UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
Consolidated Comments**

Roseburg  
Cancoon Commercial Thinning  
ORR04-TS-12-06

---

**General**

**Yarding & Loading**

309 MBF is downhill yarding at 2 loads a day.  
Track skidder is R/W's only.  
Int. supports and Lift trees are estimates only.  
The additional move is to move equipment to unit #7 over pavement.

**Road Costs**

Maintenance/rockwear due BLM: \$11,114.94  
Rockwear due Seneca: \$245.64  
Credit to purchaser: \$6,218.79 (\$1.99 timber haul maint., \$1,991.68 for maint., \$4,225.12 to Decom. 25-1-15.2 road and spurs 2, 5, 6, and 7).  
Road use due Seneca: \$190.19  
(see Engineering Appraisal for details).

**Transportation**

Wtd sale area to Hwy 138: 43 RTM, 5.4 miles  
Jct 138/Steamboat to Jct 138/Rock cr: 45 RTM, 17 miles  
Jct 138/Rock cr to Roseburg: 55 RTM, 23 miles  
60 minute delay  
  
203 minutes = 3.4 hours  
  
2748 mbf(gm) / 4.5 mbf load = 611 loads  
611 loads X 3.4 hours/load = 2078 hours  
(see Transportation appendix for details).

**Other Allowances**

BLM to burn landings.  
Equipment cleaning(logging): 5 pieces at 3 hrs each = 15 hours total.  
Sub-Soiling: Approx. .55 miles of skid trails at 3/4 mile/day. 1 day min.  
Equipment cleaning(Sub-Soil): Excavator at 3 hours.

**Prospectus**

**United States Department of the Interior**

**BUREAU OF LAND MANAGEMENT  
Roseburg District Office**

**ROAD CONSTRUCTION SPECIFICATIONS**

**Cancoon Commercial Thinning**

**EXHIBIT C**

**(Revised July 1996)**

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

ROAD SPECIFICATIONS

T. 25 S., R.1 W.  
Sections 15, 23, 25 & 36

Willamette Meridian

Douglas County Oregon

INDEX

100	GENERAL
200	CLEARING AND GRUBBING
300	EXCAVATION AND EMBANKMENT
400	PIPE CULVERTS
500	RENOVATION OF EXISTING ROADS
600	WATERING
900	AGGREGATE BASE COURSE (SCREENED ROCK)
1200	AGGREGATE SURFACE COURSE (CRUSHED ROCK)
1300	GEOTEXTILES
1700	EROSION CONTROL
1800	SOIL STABILIZATION
2100	ROADSIDE BRUSHING

GENERAL - 100

101 - Pework Conferences:

A prework conference will be held prior to the start of new construction, improvements, reconstruction, quarry development, surfacing and mulching operations. The Purchaser shall request the conference at least 48 hours prior to the time it is to be held. The conference will be attended by the Purchaser and/or his representatives, subcontractors and/or his or their representatives and the Authorized Officer and/or his representatives.

The purpose will be to review the required work, exhibits and specifications, and to establish a work schedule and a list of the Purchaser's representatives and subcontractors.

102 - Definitions:

AASHTO - American Association of State Highway and Transportation Officials. Current editions of tests and specifications.

ACI - American Concrete Institute

ASTM - American Society for Testing and Materials.

Base Course - Surfacing structure consisting of crushed gravel or stone, crushed sandstone, pit run rock, bank or river run gravels, etc., to provide support and, in the event no surface course is placed, the running surface for traffic load.

BLM - Bureau of Land Management

Borrow - Excavated material required for embankments and other portions of the work.

Culvert - A pipe, pipe-arch, arch, or box structure constructed of metal, concrete, plastic or wood which provides an opening under the roadway primarily for the conveyance of liquids, pedestrians or livestock.

Curve Widening - Widening required on inside of curves to accommodate long log and equipment hauling trucks.

Embankment - A structure of soil, aggregate, or rock material placed on a prepared ground surface and constructed to subgrade.

End Haul - Excavated material moved, other than by dozer, to an embankment or waste area to prevent sidcasting material outside of the road prism.

Excess Excavation - Material from the roadway in excess of that needed for construction of the designed roadway (waste).

Grading - Leveling to grade, shaping and smoothing of a road subgrade; the shaping of roadside ditches as to grade and contour. In some instances includes smoothing of the cut bank.

Overhaul - Distance excavated material is transported in excess of the distance included in the cost for excavation.

Pioneer Road - Temporary construction access built along the route of the project.

Plans - The approved drawings, or exact reproductions thereof which show the locations, character, dimensions, and details of the work to be done.

Purchaser - The individual, partnership, joint venture, or corporation contracting with the Government under the terms of a Timber Sale Contract and acting independently or through their, or its agents, employees, or contractors.

Reasonably Close Conformity - Compliance with reasonable and customary manufacturing and construction tolerances where working tolerances are not specified.

Roadbed - The graded portion of the road within top and side slopes, prepared as a foundation for the pavement structure and shoulders.

Road Centerline - Longitudinal center of roadbed.

Road Improvement - Work done to an existing road which improves it over its original design standard.

Road Renovation - Work done to an existing road which restores it to its original design.

Roadway - The portion of a road within limits of construction. Usually from the toe of the fill slope to a point where the cut slope intersects natural ground line. Synonym - road prism.

Scale - In quarrying, consists of the removal of loose or overhanging rock adhering to the solid face after a shot or a round of shots has been fired.

Scarification - The process of loosening or breaking up of the surface layer of soil or road, usually to a specified depth.

Shoulder - The portion of the roadbed contiguous with the traveled way designed for accommodation of stopped vehicles, safety, and lateral support of base and surface courses.

Spalls - Flakes or chips of stone.

Specifications - A general term applied to all directions, provisions, and requirements pertaining to performance of the work.

Specific Gravity - The ratio of the density of a material to the density of water obtained by weighing known volumes of both items in air. A specific gravity less than one implies that the material will float.

Structures Bridges, culverts, catch basins, retaining walls, underdrains, flumes, splash pads, downspouts, and other project features which may be involved in the work and not otherwise classified in these specifications.

Subbase - Reinforcement of the subgrade with large particles of pit run or crushed stone. Usually confined to roads having wet subgrades or subgrades with weak support characteristics.

Surface Course - Top layer of a road structure consisting of finely crushed gravels or asphalt designed to provide a smooth running surface for traffic load.

Subgrade - The top surface of a roadbed upon which the traveled way and shoulders are constructed.

Timber - Standing trees, downed trees, or logs which can be measured in board feet.

Traveled Way - The portion of the roadbed used for the movement of vehicles, exclusive of shoulders.

Typical Cross Sections - Cross sectional plane of a typical roadway; showing natural ground line and designed roadway in relation to cut and fill, through cut, and through fill.

Turnout - Extra widening of the roadbed at appropriate intervals on single-lane roads for passing purposes.

#### Geotextile Definitions:

Abrasion Resistance - The ability of a fabric surface to resist wear by friction.

Apparent Opening Size (AOS) - Number of the U.S. Bureau of Standard sieve (or its opening size in millimeters or inches) having openings closest in size to the diameter of uniform particles which will allow 5 percent by weight to pass through the geotextile material when shaken in a prescribed manner. Also referred to as Equivalent Opening Size (EOS).

Burst Strength - The resistance of a geotextile material to rupture from pressure applied at right angles to the plane of the geotextile material under specified conditions, usually expressed as the amount of pressure causing failure. Rupture or burst results from tensile failure of the geotextile material.

Grab Tensile Strength - A modified tensile strength of a geotextile material. The strength of a specific width of geotextile material together with the additional strength contributed by adjacent areas. Typically, grab strength is determined on a 12-inch-wide strip of geotextile material, with the tensile load applied at the midpoint of the geotextile material width through 1-inch-wide jaw faces.

Nonwoven Geotextile Material - A textile structure produced by bonding or interlocking of fibers, or both, accomplished by mechanical, or chemical means.

Penetration Resistance - The geotextile material property determined by the force required to penetrate a geotextile material with a sharp pointed object. Initial penetration is by separating the fibers. Further penetration is essentially a tearing process.

Percent Open Area - The net area of a geotextile material that is not occupied by geotextile material filaments, normally determinable only for woven and nonwoven geotextile material having distinct, visible, and measurable openings that continue directly through the geotextile material.

Permeability - The geotextile material property which permits water to be transmitted in the longitudinal or transverse planes of the geotextile material.

Piping - The process by which soil particles are washed in or through pore spaces in drains and filters or poorly compacted fill/backfill material.

Pore Size - The size of an opening between geotextile material filaments; apparent opening size (AOS) is used to quantify this geotextile material property.

Puncture Resistance - The geotextile material property determined by the force required to penetrate a geotextile material with a blunt object. Failure results in a tearing of the geotextile material.

Reinforcement - Strengthening of concrete with iron bars or mesh: geotextile with geotextile material inclusion: subgrade with aggregate: etc.

Separation - Function of geotextile material as a partition between adjacent materials to prevent mixing of those materials.

Tensile Strength - The strength shown by a geotextile material subjected to tension as distinct from torsion, compression, or shear.

Tensile Stress-Strain Modulus - A measure of the resistance to elongation under stress. The ratio of the change in tensile stress to the corresponding change in strain.

Tensile Test - A test which subjects geotextile material to tensile forces and measures resultant stresses and strains.

Ultraviolet (UV) Radiation Stability - The ability of geotextile material to resist deterioration from exposure to sunlight.

Unaged Cloth - Cloth in condition received from the manufacturer or distributor.

Woven Geotextile Material - A textile structure comprising two or more sets of filaments of yarns interlaced in such a way that the elements pass each other at essentially right angles with one set of elements parallel to the geotextile material axis.



102a - Tests Used in These Specifications:

AASHTO T 11

Quantity of rock finer than No. 200 sieve.

AASHTO T 27

Sieve analysis of fine and coarse aggregate using sieves with square openings; gradation.

AASHTO T 89

Liquid limit of material passing the No. 40 sieve. Water content at which the soil passes from a plastic to a liquid state.

AASHTO T 90

Plastic limits and plasticity index of soil.

- a. Plastic limit - lowest water content at which the soil remains plastic.
- b. Plasticity index - range of water content, within which the material is in a plastic state. Numerical difference between the liquid and plastic limits of the soil.

AASHTO T 96

Resistance to abrasion of small size coarse aggregate by use of the Los Angeles machine.

AASHTO T 99

Relationship between soil moisture and maximum density of soil.

Method A - 4" mold, soil passing a No. 4 Sieve. 25 blows/layer & 3 layers.

Method D - 6" mold, soil passing a 19.00mm 3/4 inches sieve. 56 blows/layer & 5 layers.

AASHTO T 176

Shows relative portions of fine dust or claylike materials in soil or graded aggregate.

AASHTO T 180

(OSHD 106-71) moisture density relationship of soil same as AASHTO T 99 proctor but uses a 10-lb rammer & 18-in drop.

AASHTO T 191

Sand Cone. Density of soil in place: For subgrade use 6-inch or 12-inch cone. For rock surfacing for 1-1/2-inch minus to 3-inch minus use 12-inch cone.

AASHTO T 205

Rubber balloon. Density of soil in place. Use for compacted or firmly bonded soil.

AASHTO T 210

Durability of aggregates based on resistance to produce fines.

AASHTO T 224

Correction for coarse particles in the soil.

AASHTO T 238

Determination of density of soil and soil aggregates in place by nuclear methods.

AASHTO T 248

Reducing field samples of aggregate to testing size by mechanical splitter, quartering, or miniature stockpile sampling.

DES. E-12

Determination of relative density of cohesionless soils.

DMSO (dimethyl sulfide)

Determines volume of expanding clays in aggregates. Usually associated with marine basalts.

- 103 -        Compaction equipment shall meet the following requirements:
- 103a -        Padded Drum (Tamping) Rollers. The unit shall consist of a drum with pads, be either self propelled or towed by a tractor, and capable of operating at a speed of 6 mph. The drum shall be not less than 48 inches in diameter over the pads, and not less than 60 inches in width. The pads shall have a minimum height of 3 inches, and a face area of not less than 14 square inches. The weight at drum shall be no less than 8,000 lb.
- 103b -        Sheepfoot, Tamping rollers. A tamping roller unit shall consist of two watertight metal drums mounted in frames in such manner as to be fully oscillating, together with a tractor having sufficient weight and power under actual working conditions to pull the roller drums at a maximum speed of 3 miles per hour. The drums shall be not less than 60 inches in diameter and not less than 54 inches in length, measured at the drum's surface, and shall be studded with tamping feet projecting not less than 7 inches from the face of the drums.
- The distance between circumferential rows of tamper feet shall be such that the diagonal distance from any foot to the nearest foot in each adjacent row shall be not more than 12 inches. The cross sectional area of the face of each tamper foot, measured perpendicular to the axis of the stud, shall be not less than 5-1/2 square inches nor more than 8 square inches.
- The weight of the tamping-roller unit shall be such as to exert a minimum pressure of 250 pounds per square inch on the ground area in contact with the tamping feet, and the roller shall be so designed that the weight may be increased to exert a pressure up to 500 pounds per square inch on the ground area in contact with the tamping feet. The ground pressure shall be determined by dividing the total weight of the roller unit, not including the weight of the tractor, by the total cross sectional area of the tamping feet in one row of tamping feet parallel to the axis of the roller.
- 103c -        Smooth-wheel power rollers. Smooth-wheel power rollers shall either be of the 3-wheel type, weighing not less than 10 tons, or of the tandem type, 2-wheel or 3-wheel, weighing not less than 8 tons. Smooth-wheel roller shall provide compression of 325 pounds per linear inch of width of rear wheels or drum.
- 103d -        Pneumatic-tired rollers. Pneumatic-tired rollers shall be of the double-axle type equipped with pneumatic tires each of equal size and type. The spacing between the sidewalls of adjacent tires shall not exceed 5 inches and the rear tires shall be

staggered in relation to the front tires. The rolling width of the unit shall be not less than 60 inches, exclusive of the power unit. The roller shall be so constructed that the contact pressure is uniformly distributed on all of the tires, and the tires shall be inflated to maintain the air pressure in the several tires within a total tolerance of 5 pounds per square inch. The roller shall be so constructed that the total weight shall be between 1,000 and 2,000 pounds per tire. The actual operating weight of the rollers shall be as ordered by the Authorized Officer.

Each pneumatic-tired roller shall be drawn by equipment having sufficient power and weight under normal working condition to pull the roller at a minimum speed of 5 miles per hour, or it may be self-propelled to obtain a minimum speed of 5 miles per hour.

103e - Grid roller. A grid roller shall consist of two or more cylindrical drums independently mounted on a common shaft in a rigid frame. Each drum shall have a minimum outside diameter of 5 feet and a minimum width of 2 feet 6 inches. The overall width of the roller exclusive of frame shall be not less than 5 feet 6 inches of which not more than 6 inches shall be used for center spacing between two roller drums. The face of the drums shall have the appearance of woven open-mesh made by interlacing bars of not less than 1-1/4 inches nor more than 1-3/4 inches diameter space spaced on 4-1/2 inches to 5-1/2 inches center. Net opening between the bars shall be not less than 3 inches nor more than 4 inches. The roller shall be so constructed that counterweights can be used to adjust the gross weight of the roller to not less than 30,000 pounds. The grid roller shall be drawn by a power unit capable of propelling the fully loaded roller through 6 inches of loose embankment material at a speed of at least 4 miles per hour.

103f - Vibratory roller. The drum diameter shall be not less than 48 inches, the drum width not less than 58 inches, and have a turning radius of 15 feet or less. Vibration frequency shall be regulated in steps to 1400, 1500, and 1600 vibrations per minute (VPM), corresponding to engine speeds of 1575, 1690, and 1800 RPM. The centrifugal force developed shall be 7 tons at 1600 RPM. It shall be activated by a power unit of not less than 25 horsepower. The vibratory roller shall be self-propelled or drawn by a vehicle of sufficient horsepower to enable the unit to travel through a loose layer of material at a speed ranging from 1 mile to 2 miles per hour, as directed by the Authorized Officer.

The towing vehicle and roller or self-propelled unit meeting the above requirements shall be considered a vibratory roller unit.

103g - Vibratory compactor. 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.

103h - Other. Compaction equipment approved by the Authorized Officer.

#### CLEARING AND GRUBBING - 200

201 - This work shall consist of clearing, grubbing, removing and disposing of vegetation, debris, surface objects, and protruding obstructions within the clearing limits in

accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross sections shown on the plans.

- 201a - This work shall also consist of clearing, grubbing, removing and disposing of vegetation, debris, surface objects, and protruding obstructions from borrow pits, quarries, channel changes, stockpile sites, etc., in accordance with these specifications.
- 202 - Where clearing limits have not been staked, established by these specifications or shown on the plans, the limits shall extend 10 feet back of the top of the cut slope and 5 feet out from the toe of the fill slope.
- 203 - Clearing shall consist of the removal and disposal of trees, logs, rotten material, brush, and other vegetative materials and surface objects in accordance with these specifications and within the limits established for clearing as specified under Subsections 202.
- 203a - Brush less than 2 feet in height need not be cut within the limits established for clearing.
- 203b - Standing trees and snags to be cleared shall be felled within the limits established for clearing, unless otherwise authorized.
- 204 - Grubbing shall consist of the removal and disposal of stumps, roots, and other wood material embedded in the ground, and protruding obstacles remaining as a result of the clearing operation in accordance with Subsections 204a and 204c between the top of the cut slope and the toe of the fill slope.
- 204a - Stumps, including those overhanging cut banks, shall be removed within the required excavation limits.
- 204c - On excavated areas, roots and embedded wood shall be removed to a depth not less than 6 inches below the subgrade.
- 205 - Clearing and grubbing debris shall not be placed or permitted to remain in or under road embankment sections.
- 210 - Disposal of clearing and grubbing debris shall be by scattering over government owned lands outside of established clearing limits in a manner acceptable to the Authorized Officer.
- 212 - No grading will be permitted prior to completion and approval by the Authorized Officer of the required clearing and grubbing work, except that stump grubbing may proceed with the excavation of the road prism.
- 213 - No clearing or grubbing debris shall be left lodged against standing trees.

EXCAVATION AND EMBANKMENT - 300

- 301 - This work shall consist of excavating, overhaul, placement of embankments, backfilling, borrowing, leveling, ditching, grading, insloping, outsloping, crowning and scarification of the subgrade, compaction, disposal of excess and unsuitable materials, and other earth-moving work in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross sections shown on the plans.
- 302 - Excavation shall also consist of the excavation of road and landing cut sections, borrow sites, backfilling, leveling, ditching, grading, compaction and other earth moving work necessary for the construction of the roadway in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross sections shown on the plans.
- 303 - Suitable material removed from the excavation shall be used in the formation of embankment subgrade, shoulders, slopes, bedding, backfill for structures, and for other purposes as shown on the plans.
- 305 - Embankment construction shall consist of the placement of excavated and borrowed materials, backfilling, leveling, grading, compaction, and other earth-moving work necessary for the construction of the roadway and landings in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross sections shown on the plans.
- 305a - Material used in the construction of embankment sections shall be free of organic material, frozen material and other deleterious materials and shall be placed and compacted as specified.
- 305b - Embankment materials shall be placed in successive parallel layers on areas cleared of organic material and deleterious materials, except as provided under Subsection 204. Roadway embankments of earth material shall be placed in loose, horizontal layers not exceeding 12 inches in depth.
- 305c - Embankments formed of material containing less than 25 percent rock not larger than 8 inches in the greatest dimension shall be placed in 12-inch layers. Material containing more than 25 percent rock, not larger than 12 inches in the greatest dimension, shall be placed in successive layers not exceeding 2 feet in thickness. Individual rocks and boulders greater than 12 inches in diameter may be used to construct 2 foot embankment layers, provided they are carefully distributed, with interstices filled with fine material to form a dense and compact mass.
- 305d - Where embankments are constructed predominantly of blasted rock material, depth of layers shall not exceed 4 feet. Rock fragments having dimensions greater than 4 feet will be permitted provided that they have no dimensions greater than 6 feet and that clearance between adjacent fragments is adequate for the placing and compacting of material in horizontal layers as specified, and that no part of the larger fragments comes within 4 feet of subgrade.

- 306 - Layers of embankment, selected borrow; final subgrade and selected roadway excavation material as specified under Subsections 305a and 305b shall be moistened or dried to a uniform optimum moisture content suitable for maximum density and compacted to full width with compacting equipment conforming to requirements of Subsections 103f, 103g and 103h.
- 306a - Optimum moisture content shall be determined by hand clump test i.e., where soil sample forms a firm ball by hand that does not crumble or free moisture is not visible on the surface and material does not squeeze between fingers.
- 306b - Minimum compaction for each layer of embankment, selected borrow, final subgrade and selected roadway excavation material placed shall be a minimum of 8 complete passes or until visual displacement ceases.
- 308 - In the case of rock fills, placement of material in layers is not required and such material may be placed by end-dumping or other methods approved by the Authorized Officer provided that the rock be reasonably prevented from escaping beyond the embankment toe.
- 320 - Ditches shall conform to the slope, grade, dimensions, and shape of the required cross section shown on the plans. Roots, stumps, rocks, and other projections shall be removed to form smooth, even slopes.
- 323 - In the construction of channel changes and stream crossing embankment sections, natural stream flow shall be maintained unless otherwise provided.
- 324 - Excavated material shall not be allowed to cover boles of standing trees to a depth in excess of 2 feet on the uphill side.
- 327 - The finished grading shall be approved by the Authorized Officer prior to surfacing, in segments or for the total project, 3 days prior to start of surfacing operations.

#### PIPE CULVERTS – 400

- 401 - This work shall consist of furnishing and installing pipe culverts and other erosion control devices in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross sections shown on the plans. Individual lengths and locations are approximate; final lengths and locations will be determined by the Authorized Officer upon installation of the appurtenance structures. Additional pipe and erosion control devices may be required at the option of the Authorized Officer, in which case a reduction in the total purchase price shall be made to offset the cost of furnishing and installing such items. Costs will be based upon the unit prices set forth in the current BLM Timber Appraisal Production Cost Schedule.
- 403 - Grade culverts shall have same gradient as the adjacent road grade, except grades shall not exceed 10% nor be less than 2%, and shall be skewed down grade 30 degrees, as measured from the perpendicular to the centerline, unless otherwise specified on the plans.

- 405b - Corrugated-aluminum-alloy pipe culverts and pipe-arch culverts shall conform to the requirements of AASHTO M 196.
- 405e - Corrugated Polyethylene Pipe for culverts 12-inch through 36-inch diameter shall meet the requirements of AASHTO M 294-03, Type S.
- 407 - Special sections, such as elbows, branch connections, and flared-end sections, shall be of the same gauge as the pipe to which they are joined, and shall conform to the requirements of AASHTO M 36 and AASHTO M 218 or AASHTO M 274.
- 408 - Pipe culverts and pipe-arch culverts shall be placed on the bed starting at the downstream end with the inside circumferential laps pointing downstream and with the longitudinal laps at the side or quarter points. Coupling bands of the types required under these specifications shall be installed so as to provide the circumferential and longitudinal strength necessary to preserve the pipe alignment, prevent separation of the pipe sections, and minimize infiltration of fill material.
- 410 - Pipe shall be unloaded and handled with reasonable care. If the Authorized Officer determines any structure is damaged to the extent that it is unsuitable for use in the road construction, it shall be replaced at the Purchaser's expense.
- 411 - Trenches necessary for the installation of pipe culverts shall conform to the lines, grades, dimensions and typical diagram shown on the Culvert Installation Detail Sheet.
- 412 - Where ledge rock, boulders, soft, or spongy soils are encountered, they shall be excavated a minimum of 24 inches below the invert grade for a width of at least one pipe diameter or span on each side of the pipe and shall be backfilled with selected granular or fine readily compactable soil material.
- 416 - Side-fill material for pipe culverts shall be placed within 1 pipe diameter, or a minimum of 2 feet, of the sides of the pipe barrel, and to subgrade over the pipe with readily compacted soil free of excess moisture, muck, frozen material, roots, sod, or other deleterious or caustic material and devoid of rocks or stones of sizes which may impinge upon and damage the pipe or otherwise interfere with proper compaction.
- 417 - Side-fill material shall be placed and compacted under the haunches of the pipe, and shall be brought up evenly and simultaneously on both sides of the pipe to 1 foot above the pipe, in layers not exceeding 12 inches loose in depth and 1 pipe diameter/span in width, on each side of and adjacent to, the full length of pipe barrel. Each layer shall be moistened or dried to a uniform optimum moisture content specified under Subsection 306a suitable for maximum compaction and immediately compacted by approved hand or pneumatic tampers as specified under Subsection 306b.
- 418 - Side fills beyond the compaction limits specified under Subsection 417 shall be compacted as specified under Section 300.
- 425 - Removed culverts shall be properly disposed of in accordance with all State and Federal Regulations.

- 427 - The Purchaser shall record culvert sizes, lengths and location actually installed on a copy of the culvert list. This culvert list shall be furnished to the Authorized Officer.

RENOVATION OF EXISTING ROADS - 500

- 501 - This work shall consist of reconditioning and preparing the roadbed and shoulders, cleaning and shaping drainage ditches, trimming vegetation from cut and embankment slopes, and cleaning and repairing drainage structures of existing roads in accordance with these specifications as shown on the plans and as marked on the ground with stakes or metal tags.
- 501a - This work shall include the removal and disposal of slides in accordance with these specifications and as marked on the ground with stakes or metal tags.
- 502 - The existing road surface shall be bladed and shaped to the lines, grades, dimensions, and typical cross sections shown on the plans and as marked on the ground.
- 502a - Rocks larger than 4 inches in maximum dimension shall be removed from the roadbed. Material so removed will not be permitted to remain on road shoulders or in ditches.
- 502b - Drainage ditches shall be bladed and shaped in accordance with the lines, grades, dimensions, and typical cross sections shown on the plans.
- 504 - Existing road surface shall be uniformly moistened or dried to the optimum moisture content suitable for maximum density and compacted to full width with equipment conforming to requirements of Subsections 103f and 103h.
- 504a - Minimum compaction required on existing rock surfaces shall be a minimum of 3 complete passes or until visual displacement ceases.
- 504b - Minimum compaction required on existing native surfaces shall be a minimum of 4 complete passes or until visual displacement ceases.
- 506 - The inlet end of existing drainage structures shall be cleared of vegetative debris and boulders that are of sufficient size to obstruct normal stream flow. Pipe inverts shall be cleared of sediment and other debris lodged in the barrel of the pipe. The outflow area of pipe structures shall be cleared of rock and vegetative obstructions which will impede the structure's designed outflow configuration. Catch basins shall conform to the lines, grade, dimensions, and typical diagram shown on the plans.

WATERING - 600

- 601 - This work shall consist of furnishing and applying water required for the compaction of embankments, roadbeds, backfills, base courses, surface courses, finishing and reconditioning of existing roadbeds laying dust, or for other uses in accordance with these specifications.
- 602 - Water, when needed for compaction or laying dust, shall be applied at the locations, in the amounts, and during the hours as directed by the Authorized Officer. Amounts of



water to be provided will be the minimum needed to properly execute the compaction requirements in conformance with these specifications, and for laying dust during work periods.

- 603 - Water trucks used in this work shall be equipped with a distributing device of ample capacity and of such design as to ensure uniform application of water on the roadbed.
- 605 - The Purchaser shall secure the necessary water permits and pay all required water fees.

AGGREGATE BASE COURSE - 900  
SCREENED ROCK MATERIAL

- 901 - This work shall consist of hauling, and placing one or more lifts of screened rock material on roadbed and landing approved for placing screened rock material, in accordance with these specifications and conforming to the dimensions and typical cross sections shown on the plans.
- 902a - Screened rock materials to be used in this work may be obtained from a source selected by the Purchaser, at his option providing the rock materials furnished comply with these specifications.
- 903 - Screened rock material shall conform to the following gradation requirements:

TABLE 903

SCREENED ROCK MATERIAL GRADATION REQUIREMENTS  
 Percentage by Weight Passing Square Mesh Sieves  
 (AASHTO T 27)

Sieve	<u>GRADATION</u>			
Designation	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>
6 inch	100			
3 inch		100		
2 inch		95-100	100	
1-1/2 inch			95-100	100
1 inch	50-60			95-100
No. 4	11-44	16-49	21-54	26-59
No. 200	2-15	2-15	0-15	0-15

- 904 - Screened rock material retained on the No. 4 sieve shall have a percentage of loss not more than 35 at 500 revolutions, as determined by AASHTO T 96.
- 904a - Screened rock material shall show a durability value of not less than 35, as determined by AASHTO T 210.

- 905 - The roadbed as shaped and compacted under Sections 300 and 500 of these specifications, shall be approved by the Authorized Officer prior to placement of screened rock materials. Notification for final inspection, prior to rocking, shall be 72 hours prior to that inspection and shall be 3 days prior to start of rocking operations.
- 906 - Screened rock material shall be placed in layers not to exceed 8 inches in thickness. Where the required total thickness is more than 8 inches, the rock material shall be shaped and compacted in two or more layers of approximately equal thickness.
- 908 - Screened rock material shall be blade-processed and spread to required dimensions. Processing shall be performed in such a manner as to minimize aggregate segregation.
- 910 - Screened rock material, bladed and shaped as specified, shall be moistened or dried to optimum moisture content for maximum compaction and compacted to full width by compaction equipment conforming to the requirements of Subsections 103f and 103h. All of the surface area of each lift of placed aggregate shall be compacted by a minimum of 8 complete passes or until visual displacement ceases.

AGGREGATE SURFACE COURSE - 1200  
CRUSHED ROCK MATERIAL

- 1201 - This work shall consist of furnishing, hauling, and placing one or more layers of crushed rock materials on the approved roadbeds in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross sections shown on the plans. Material not conforming to these specifications will be rejected, and shall be removed from the road.
- 1202a - Crushed rock materials used in this work may be obtained from commercial sources selected by the Purchaser at his option and expense, providing the rock materials furnished complies with the specifications in this section.
- 1203 - When crushed rock material is produced from gravel, not less than 65 percent by weight of the particles retained on the No. 4 sieve will have 2 manufactured faces. If necessary to meet the above requirements, or to eliminate an excess of filler, the gravel shall be screened before crushing.
- 1204 - Crushed rock material shall consist of hard durable rock fragments conforming to the following gradation requirement.

TABLE 1204  
AGGREGATE SURFACE COURSE  
CRUSHED ROCK MATERIAL  
 Percentage by weight passing square mesh sieves  
 AASHTO T 11 & T 27

Sieve	<u>GRADATION</u>					
<u>Designation</u>	<u>C</u>	<u>C-1</u>	<u>D</u>	<u>D-1</u>	<u>E</u>	<u>E-1</u>
1-1/2 inch	100	100	-	-	-	-
1 inch	-	-	100	100	-	-
3/4 inch	50-90	60-90	-	70-98	100	100
1/2 inch	-	-	-	-	-	70-98
No. 4	25-50	30-55	30-60	36-60	40-75	44-70
No. 8	-	22-43	-	25-47	-	30-54
No. 30	-	11-27	-	12-31	-	15-34
No. 40	5-25	-	5-30	-	5-35	-
No. 200	2-15	3-15	3-15	3-15	2-15	3-15

- 1205 - Crushed rock material retained on the No. 4 sieve shall have a percentage of loss of not more than 35 at 500 revolutions, as determined by AASHTO T 96.
- 1206 - Crushed rock material shall show a durability value of not less than 35 as determined by AASHTO T 210.
- 1206a - The crushed rock material shall show a loss of not more than 20 percent by weight, when submerged in DMSO, dimethyl sulfoxide, for five days, according to Federal Highway Administration Region 10 Accelerated Weathering Test Procedure.
- 1207 - That portion of crushed rock material passing the No. 40 sieve, including blending filler, shall have a liquid limits of not more than 35, and a plasticity index of not less than 4 and not more than 12 as determined by AASHTO T 89 and AASHTO T 90.
- 1208 - If additional binder or filler material is necessary to meet the grading or plasticity requirements, or for satisfactory bonding of the material, it shall be uniformly blended with the crushed rock material at the crushing and screening plant prior to placing on the road, unless otherwise agreed. The material for such purposes shall be obtained from sources approved by the Authorized Officer and shall be free from stones, vegetative matter, and other deleterious materials.
- 1208a - Each layer of crushed rock material shall be thoroughly mixed on the roadbed by alternately blading, to full depth, until a uniform mixture has been obtained. The mixture shall then be spread to full width. When completed, the spreading shall produce a surface which is smooth, presents uniform shoulder lines, and conforms to the specified cross section.
- 1209 - Shaping and compacting of roadbed shall be completed and approved, prior to placing crushed rock material in accordance to the requirements of Subsections 300 and 500 for placing on the roadbed.

- 1210 - Crushed rock material conforming to the requirements of these specifications shall be placed on the approved roadbed in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross sections shown on the plans. Compacted layers shall not exceed 6 inches in depth. When more than one layer is required, each shall be shaped, processed, compacted, and approved by the Authorized Officer before the succeeding layer is placed. Irregularities or depressions that develop during compaction of the top layer shall be corrected by loosening the material at these places and then adding or removing crushed rock material until the surface is smooth and uniform.
- 1210a - Crushed rock material used to repair or reinforce soft, muddy, frozen, yielding, or rutted roadbed shall not be construed as surfacing required by this specification.
- 1212 - Each layer of crushed rock material placed, processed, and shaped as specified shall be moistened or dried to a uniform moisture content suitable for maximum compaction and compacted to full width by compacting equipment conforming to the requirements of Subsection 103f and 103h. Minimum compaction for each layer shall be a minimum of 6 passes over each point.

#### GEOTEXTILES - 1300

- 1301 - This work shall consist of furnishing, hauling and installing geotextile material at the locations and in accordance with these specifications and the lines, grades, dimensions, and typical cross sections shown on the plans.
- 1302 - Fibers used in the manufacture of geotextile material shall consist of long-chain synthetic polymers composed of at least 85 percent by weight of polyolephines, polyesters, or polyamides.
- 1303 - The Purchaser shall furnish a mill certificate verifying that the geotextile material furnished meets the requirements of these specifications.
- 1303a - Each roll of geotextile material shall be labeled to provide for identification of the material. The geotextile material shall be wrapped in a heavy duty protective covering and shall be protected from mud, dirt, dust, debris, and direct sunlight.
- 1303b - Geotextile materials subject to deterioration by ultraviolet rays shall be protected from direct sunlight during transport and storage. For those geotextile materials subject to damage by sunlight, the information on the package label shall warn against exposing the geotextile material to sunlight. Geotextile material deemed to have been overexposed to sunlight by the Authorized Officer shall be rejected.
- 1307 - Where material separation is required, clearing, grubbing, and excavation of the subgrade shall be completed prior to the placement of geotextile material. The subgrade shall be leveled and smoothed to remove lumps and depressions which exceed 6 inches in height and depth. Small pieces of woody debris shall be removed. Light vegetation, i.e., grasses, weeds, leaves, and other small woody debris, may be left in place.

- 1308 - The geotextile material shall be installed directly on the prepared surface. Longitudinal and transverse joints shall be overlapped a minimum of 3 feet.
- 1309 - Borrow or base course material shall be placed to the designated thickness in one lift and spread in the direction of the geotextile material overlap. Borrow or base course material shall be spread in a manner to fill soft or weak bearing areas. Hauling equipment shall not be operated on the geotextile until the total thickness of borrow or base course is placed.
- 1310 - Torn, punctured, or separated sections of the geotextile material shall be repaired by installing a geotextile material patch over the damaged area prior to placing the borrow or base course material. The patch shall be at least 3 feet larger in horizontal dimensions than the hole to be repaired.
- 1311 - Geotextile material used for material separation shall be constructed of woven or non-woven polypropylene or polyester filament fibers and meet the following requirements:

Acceptable Test Results

<u>Geotextile Property</u>	<u>for Unaged Geotextile</u>
Weight, (ASTM D 1910)	4 oz./sq.yd., minimum
Grab Tensile Strength (ASTM D 1682)	120 lbs./in. minimum
Grab Elongation at Failure (ASTM D 1062)	25% minimum
Trapezoidal Tear Strength (ASTM D 117)	75 lbs., minimum
AOS (Corps of Engineer Test CW-02215)	U.S. Standard Sieve No. Equivalent 70-100

- 1312 - Where geotextile material is specified as filter wrap for underdrains, it shall be inert to commonly encountered chemicals, mildew and rot resistant, resistant to ultraviolet light exposure, and insect and rodent resistant.

EROSION CONTROL - 1700

- 1701 - This work shall consist of measures to control soil erosion or water pollution during the construction operation through the use of berms, dikes, dams, sediment basins, fiber mats, netting, gravel, mulches, grasses, slope drains and other erosion control devices or methods in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross sections shown on the plans.
- 1708a - Road segments not completed during dry weather periods shall be winterized, by providing a well-drained roadway by water barring, maintaining drainage, and performing additional measures necessary to minimize erosion and other damage to the roadway, as directed by the Authorized Officer. Portions of roads not having surface rock in place will be blocked or barricaded to prevent vehicular traffic.

SOIL STABILIZATION - 1800

- 1801 - This work shall consist of seeding and mulching on designated cut, fill, borrow, disposal, and special areas in accordance with these specifications and as shown on the plans. This work is not required for road acceptance under Section 18 of this contract.
- 1802a - Soil stabilization work consisting of seeding and mulching shall be performed on new road construction, road renovation, improvements, landings and disturbed areas in accordance with these specifications and as shown on the plans.
- 1803 - Soil stabilization work as specified under Subsection 1801 shall be performed during the following seasonal periods:
- From: September 1<sup>st</sup> to: October 15th
- If soil stabilization of disturbed areas is not completed by the specified fall date, the Purchaser shall treat disturbed areas in accordance with Section 1700 and then complete the requirements of Soil Stabilization 1800 the next construction season.
- The Authorized Officer may modify the above seasonal dates to conform to existing weather conditions and changes in the construction schedule.
- 1803a - The Purchaser shall begin soil stabilization work within 10 days of the starting work date when notified by the Authorized Officer.
- 1804 - BLM will furnish seed.
- 1806a - Additional soil stabilization work consisting of seeding and mulching may be required at the option of the Authorized Officer. Providing the additional stabilization is not due to Purchaser negligence as specified in Sec. 12 of the contract, a reduction in the total purchased price shall be made to offset the cost of furnishing and applying such additional stabilization material. Cost shall be based upon the unit price set forth in the current BLM Timber Appraisal Production Cost Schedule.
- 1809 - Mulch materials conforming to the requirements of Subsection 1809b shall be furnished by the Purchaser in the amounts specified under Subsection 1812 and applied in accordance with Subsection 1816.
- 1809b - Straw mulch shall be from oats, wheat, rye or other approved grain crops which are free from noxious weeds, mold or other objectionable materials as attested to by written certification submitted to the Authorized officer. Straw mulch shall be in an air-dry condition and suitable for placing with power spray equipment.

- 1812 - The Purchaser shall furnish and apply to the areas designated for treatment as stated in these specifications, a mixture of grass and legume seed, mulch, material at the following rate of application:

Grass & Legume Seed	25 lbs. /acre
Mulch	2000 lbs. /acre

The above proportion and application rate are subject to adjustment by the Authorized Officer during the application operation.

- 1816 - The seed and mulch materials shall be placed by the dry method in accordance with the requirements set forth in Subsection 1816b.
- 1816b - Dry Method - Blowers, mechanical seeders, seed drills, landscape seeders, cultipacker seeders, fertilizer spreaders or other approved mechanical seeding equipment may be used when seed and fertilizer are to be applied in dry form.
- 1820 - The Purchaser shall notify the Authorized Officer at least 3 days in advance of date he intends to commence the specified soil stabilization work.
- 1826 - Twine, rope, sacks, and other debris resulting from the soil stabilization operation shall be picked up and disposed of to the satisfaction of the Authorized Officer.

#### ROADSIDE BRUSHING - 2100

- 2101 - This work shall consist of the removal of vegetation from the road prism - variable distance, and inside curves in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross sections shown on the Roadside Brushing Detail Sheet of this exhibit, at designated locations as shown in the plans.
- 2102 - Roadside brushing may be performed mechanically with self powered, self-propelled equipment or manually with hand tools, including chain saws.
- 2103 - Vegetation cut manually or mechanically less than 6 inches in diameter when measured 6 inches above the ground shall be cut to a maximum height of 2 inches above the ground surface or above obstructions such as rocks or stumps on cut and fill sloped and all limbs below the 2 inch area will be severed from the trunk.
- Vegetation shall be cut and removed from the road bed between the outside shoulder and the ditch centerline and such vegetation shall be cut to a maximum height of 1 foot above the ground and running surface. Limbs below the 1 foot area will be severed from the trunk. Sharp pointed ends will not be permitted. Cuts shall be parallel to the ground line or running surface.
- 2104 - Trees in excess of 6 inches in diameter when measured 6 inches above the ground line shall be limbed, so that no limbs extend into the treated area or over the roadbed to a height of 14 feet above the running surface of the roadway on cut and fill slopes, within the road prism-variable distance. Limbs shall be cut to within 1 inch of the trunk

- to produce a smooth vertical face. Removal of trees larger than 6 inches in diameter for sight distance or safety may be directed by the Authorized Officer.
- 2105 - Vegetation that is outside of the road prism-variable distance that protrudes into the road prism and within 14 feet in elevation above the running surface shall be cut, to within 1 inch of the trunk to produce a smooth vertical face.
  - 2106 - Vegetative growth capable of growing 1 foot in height or higher shall be cut, within the road prism-variable distance or as directed by the Authorized Officer.
  - 2107 - Inside curves shall be brushed out for a sight distance of 200 feet chord distance or a middle ordinate distance of 25 feet whichever is achieved first. Overhanging limbs and vegetation in excess of 1 foot in height shall be cut within these areas. Due to variations in curvature, the Authorized Officer may direct a chord or middle ordinate distance of something less.
  - 2108 - Self propelled equipment shall not be permitted on cut and fill slopes or in ditches.
  - 2109 - Debris resulting from this operation shall be scattered downslope from the roadway. Debris shall not be allowed to accumulate in concentrations. Debris in excess of 1 feet in length and 2 inches in diameter shall not be allowed to remain on cut slopes, ditches, roadways or water courses, or as directed by Authorized Officer.
  - 2113 - Roadside brushing shall be accomplished as shown on the plans.
  - 2116 - Mechanical brush cutters shall not be operated when there are people and occupied vehicles within 400 feet of the immediate operating area.
  - 2117 - Traffic warning signs shall be required at each end of the work area. Signs shall meet the requirements of the Manual on Uniform Traffic Devices.



UNITED STATES DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
ROSEBURG DISTRICT  
TIMBER SALE EXHIBIT C

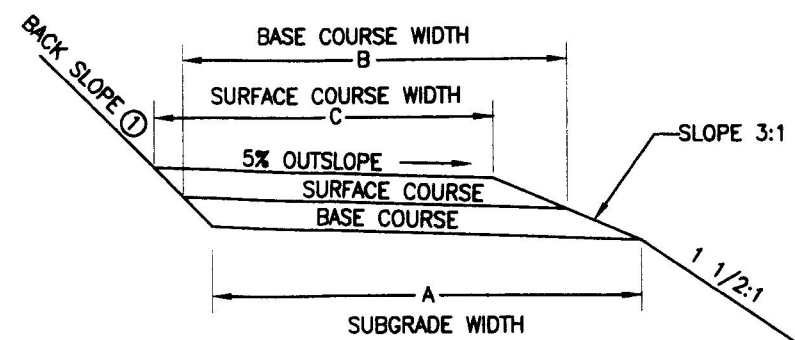
CONTRACT NAME: CANCOON CT  
CONTRACT NO: ORR04-TS12-06

ROAD NUMBER	STA/MP	TO	STA/MP	CONST.	RENOV.	IMPROVE.	BASE COURSE		SURFACE COURSE		ROAD DIMENSIONS			TYP. ROAD SECTION	SHEET NO.
							DEPTH	TYPE	DEPTH	TYPE	A	B	C		
25-1-15.0	0+00	-	1+80		X					ROCK	14'			EXISTING	4
25-1-15.2	0+00	-	20+00		X					NATIVE	14'			EXISTING	4
25-1-22.0	0+00	-	32+25		X					ROCK	14'			EXISTING	4
25-1-22.1	0+00	-	6+35		X					ROCK	14'			EXISTING	4
25-1-23.1	0+00	-	12+75		X					ROCK	14'			EXISTING	4
25-1-25.0 B	27+75	-	28+25		X				12"	1204C	18'		14'	3	4
25-1-25.0 B	67+75	-	68+25		X				12"	1204C	18'		14'	3	4
25-1-25.0 C	110+00	-	112+00		X				4"	1204C	18'		14'	3	4
25-1-25.0 D	188+00	-	188+50		X				12"	1204C	18'		14'	3	4
25-1-25.0 D	189+65	-	190+15		X					ROCK	14'			EXISTING	4
25-1-26.0	0+00	-	31+50		X					ROCK	14'			EXISTING	4
25-1-26.1	0+00	-	38+00		X					ROCK	14'			EXISTING	4
25-1-36.0	0+00	-	65+00		X					ROCK	14'			EXISTING	5
SPUR 1	0+00	-	1+10	X			9"	900B		ROCK	15'	12'		1,2	6
SPUR 2	0+00	-	2+75		X					NATIVE	14'			EXISTING	4
SPUR 3	0+00	-	7+50	X			9"	900B		ROCK	15'	12'		1,2	7
SPUR 4	0+00	-	3+05	X			9"	900B		ROCK	15'	12'		1,2	7
SPUR 5	0+00	-	1+25	X						NATIVE	14'			1,2	6
SPUR 6	0+00	-	10+00		X					NATIVE	14'			EXISTING	5
SPUR 7	0+00	-	1+75	X						NATIVE	14'			1,2	5

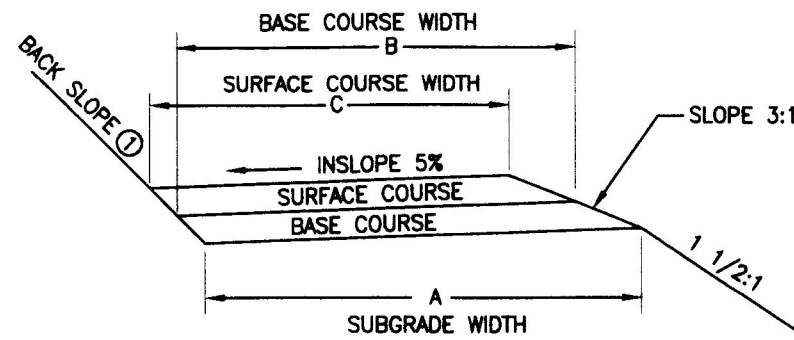
INDEX OF SHEETS	
SHEET	DESCRIPTION
1	ROAD SUMMARY
2	TYPICAL SECTION
3	VICINITY MAP
4	RENOVATION NOTES
5	RENOVATION / CONSTRUCTION
6	SPURS 1 & 5
7	SPURS 3 & 4
8	BRUSHING DETAIL
9	CULVERT SUMMARY
10	CULVERT INSTALLATION

REV. NO.	DESCRIPTION	DATE	APPROVED
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT DIVISION OF OPERATIONS OREGON STATE OFFICE			
CANCOON COMMERICAL THINNING ROAD SUMMARY ROSEBURG DISTRICT OREGON			
ENGINEERING APPROVAL	<i>Handwritten Signature</i>		
SUBMITTED	<i>Handwritten Signature</i>		
RECOMMENDED	<i>Handwritten Signature</i>		
APPROVED	<i>Handwritten Signature</i>		
DRAWN: TOM MCNAMARA	SCALE: AS SHOWN		
DATE: 02/15/2012	SHEET 1 OF 10		
DRAWING NO. ORR04-TS12-06			BLM #

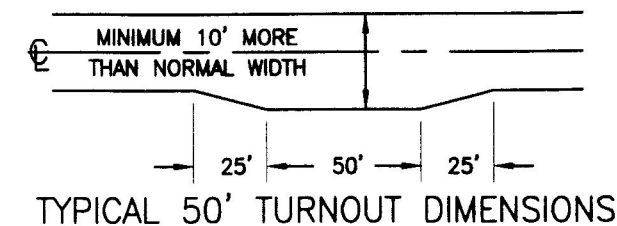




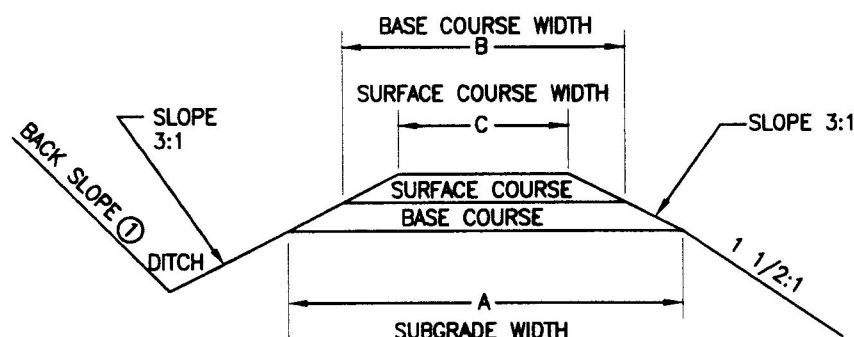
SECTION OUT SLOPE ROAD ①



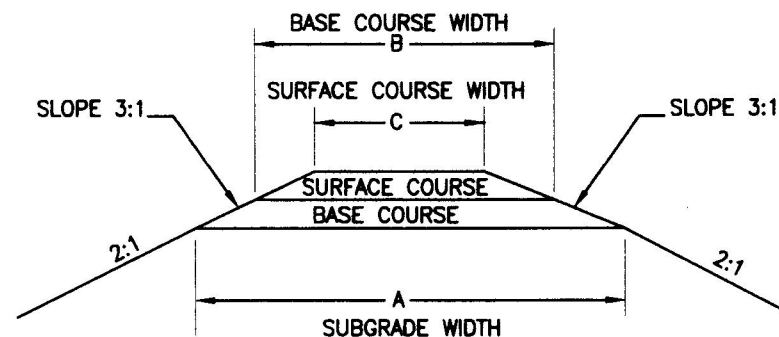
SECTION INSLOPE ROAD ②



TYPICAL 50' TURNOUT DIMENSIONS



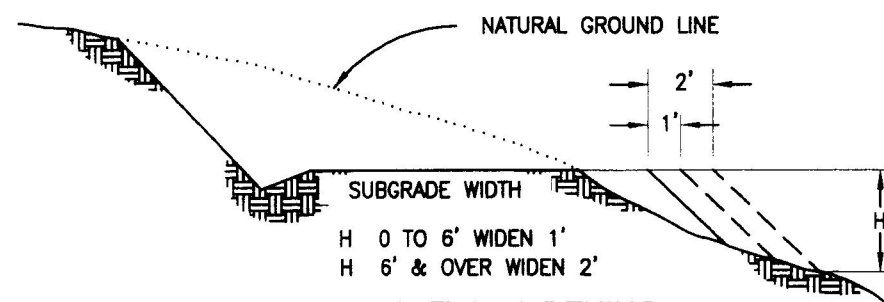
SECTION ROAD ③



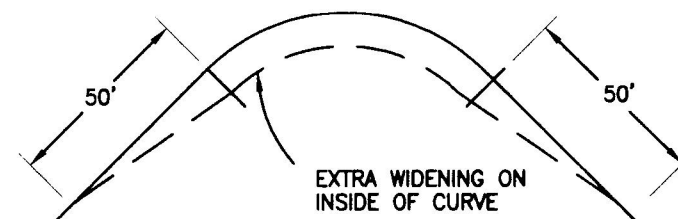
SECTION ROAD ④

NOTES:

- ① Backslope to match existing backslope unless otherwise specified.
2. 1 foot depth on all ditches; depth measured from top of road surface to lowest point of ditch.



SECTION FILL WIDENING



DEGREE OF CURVE	8-21	22-35	36-51	52-64	65-79	80-90
EXTRA WIDTH IN FEET	1	2	3	4	5	6

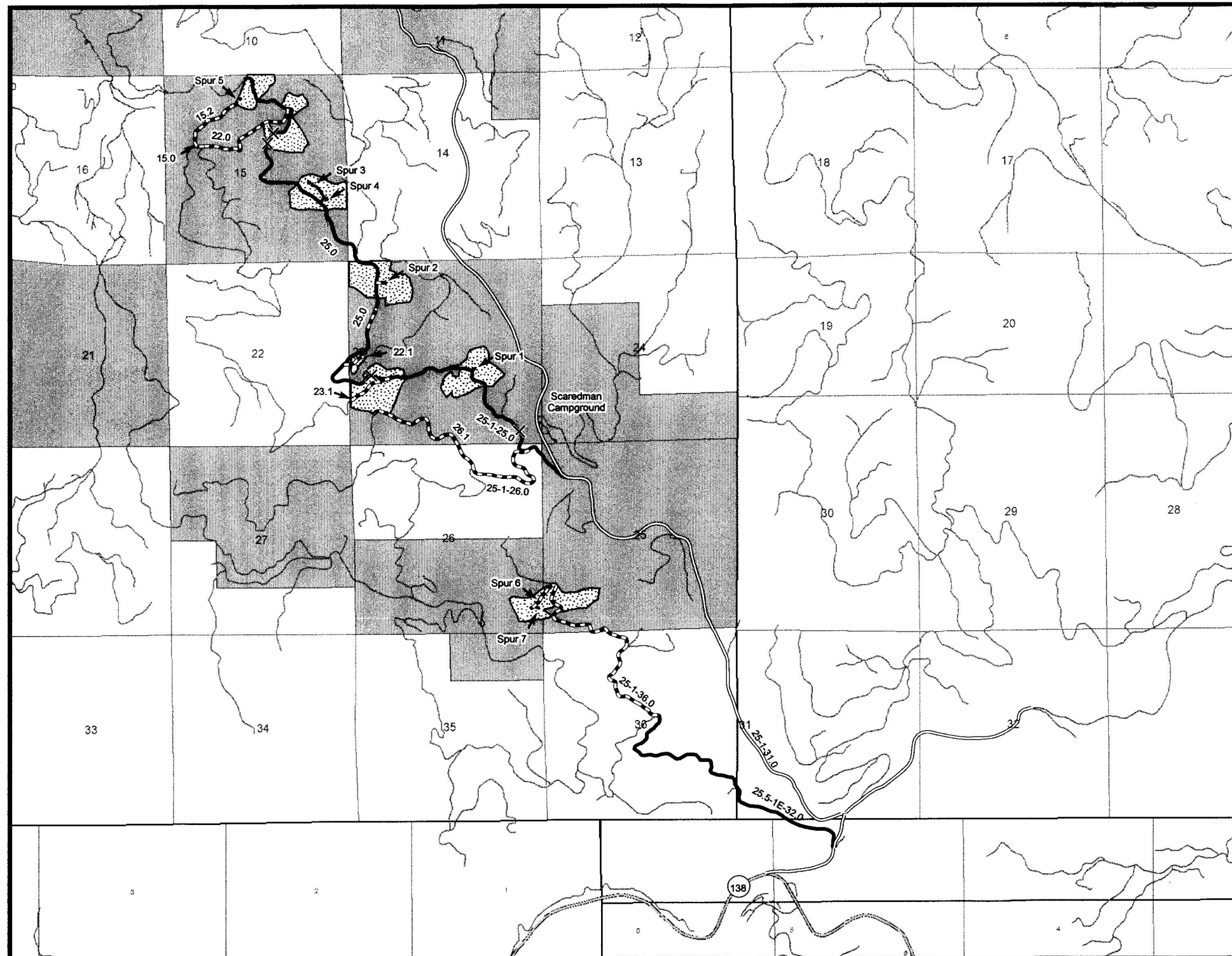
CURVE WIDENING TABLE FOR NON-DESIGN ROADS OR AS SHOWN ON PLANS. MAX 75' CURVE OR AS SHOWN ON PLANS.

REV. NO.	DESCRIPTION	DATE	APPROVED
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT DIVISION OF OPERATIONS OREGON STATE OFFICE			
CANCOON COMMERCIAL THINNING TYPICAL SECTIONS ROSEBURG DISTRICT OREGON			
DESIGNED			
REVIEWED			
APPROVED			
DRAWN: G. STACEY	SCALE: AS SHOWN		
DATE: 12/19/2006	SHEET 2 OF 10		
DRAWING NO. ORR04-TS12-06			BLM #



R 1 W

R 1 E

T  
25  
S

0 0.25 0.5 1 1.5 2 2.5 Miles

United States Department of the Interior  
Bureau of Land Management  
Roseburg District  
777 NW Garden Valley Blvd  
Roseburg, Oregon 97471

Universal Transverse Mercator Projection  
Zone 10 North NAD 1983

### Legend

- PAVED FOREST SERVICE ROAD
- RENOVATION
- HAUL ROUTE
- CONSTRUCTION
- HARVEST AREA
- INTERSTATE HIGHWAY
- STATE HIGHWAY
- COUNTY ROAD
- OTHER ROAD
- X CULVERT REPLACEMENT

REV. NO.	DESCRIPTION	DATE	APPROVED
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT DIVISION OF OPERATIONS OREGON STATE OFFICE			
CANCOON COMMERCIAL THINNING VICINITY MAP			
ROSEBURG DISTRICT		OREGON	
DESIGNED	<i>[Signature]</i>		
REVIEWED	<i>[Signature]</i>		
APPROVED	<i>[Signature]</i>		
DRAWN: MGH		SCALE: AS SHOWN	
DATE: 12/14/2011		SHEET 3 OF 10	
DRAWING NO. ORR04- TS12-06			BLM#



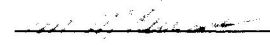
# ROAD RENOVATION

## Notes:

1. All roads shall be renovated in accordance with attached specifications and the work items listed below. Renovation may include roadside brushing, installing culverts and splash pads, blading, shaping, cleaning ditches, removing slide material, and cleaning existing drainage structures. Features to construct are so noted. Existing features are noted at approximate station in the notes below. Place 20 cy of 1204C crushed rock at each culvert installation for surface replacement. The Purchaser shall dispose of all culvert pipe removed as a part of the work described in this contract at a legal site off of BLM land.
2. All renovation and construction shall be done and approved prior to any hauling activity.
3. Existing turnouts, on roads to be renovated, shall be surfaced to the same standard as newly constructed turnouts.
4. Back slopes shall be cut to match existing unless otherwise specified.
5. All work shall be performed according to OSHA safety requirements.

STATION	DESCRIPTION
<b>25-1-15.0</b>	
0+00	BEGIN RENOVATION AT THE JUNCTION OF THE 25-1-15.0 AND 25-1-22.0 BEGIN BRUSHING, BLADING, COMPACTION, PULL DITCHES AND CLEAN CULVERTS
1+80	END RENOVATION
<b>25-1-15.2</b>	
0+00	BEGIN RENOVATION AT THE JUNCTION OF THE 25-1-15.2 AND 25-1-15.0 BEGIN BRUSHING, CLEARING, GRUBBING, BLADING, COMPACTION AND CLEAN CULVERTS
10+15	EXISTING CULVERT
20+00	END RENOVATION BEGIN CONSTRUCTION SPUR 5
<b>25-1-22.0</b>	
0+00	BEGIN RENOVATION AT THE JUNCTION OF THE 25-1-22.0 AND 25-1-25.0 BEGIN BRUSHING, BLADING, COMPACTION, PULL DITCHES AND CLEAN CULVERTS
32+25	END RENOVATION
<b>25-1-22.1</b>	
0+00	BEGIN RENOVATION AT THE JUNCTION OF THE 25-1-22.1 AND 25-1-25.0 BEGIN BRUSHING, BLADING, COMPACTION, PULL DITCHES AND CLEAN CULVERTS
2+10	CROSS PROPERTY LINE, ENTER UNIT
6+35	END RENOVATION
<b>25-1-23.1</b>	
0+00	BEGIN RENOVATION AT THE JUNCTION OF THE 25-1-23.1 AND 25-1-25.0 BEGIN BRUSHING
12+75	END RENOVATION

STATION	DESCRIPTION
<b>25-1-25.0</b>	
27+75	INSTALL 18" X 40' CULVERT, AND SPLASH PAD BACKFILL PIPE WITH CRUSHED ROCK
67+75	REPLACE EXISTING CULVERT WITH 24" X 40' CULVERT AND SPLASH PAD WITH GEOTEXTILE, BACKFILL PIPE WITH CRUSHED ROCK.
110+00	BEGIN SURFACING, PLACE 4" OF 1204C SURFACE ROCK
112+00	END SURFACING
188+00	INSTALL 18" X 36' CULVERT, AND SPLASH PAD BACKFILL PIPE WITH CRUSHED ROCK
189+65	INSTALL SPLASH PAD AT EXISTING CULVERT
<b>25-1-26.0</b>	
0+00	BEGIN RENOVATION AT THE JUNCTION OF THE 25-1-26.0 AND 25-1-25.0 BEGIN BRUSHING, BLADING, COMPACTION, PULL DITCHES AND CLEAN CULVERTS
31+50	END RENOVATION
<b>25-1-26.1</b>	
0+00	BEGIN RENOVATION AT THE JUNCTION OF THE 25-1-26.1 AND 25-1-26.0 BEGIN BRUSHING, BLADING, COMPACTION, PULL DITCHES AND CLEAN CULVERTS
33+80	ENTER UNIT
38+00	END RENOVATION
<b>SPUR 2</b>	
0+00	BEGIN RENOVATION AT THE JUNCTION OF SPUR 2 AND THE 25-1-25.0 BEGIN BRUSHING AND BLADING
2+75	END RENOVATION

REV. NO.	DESCRIPTION	DATE	APPROVED
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT DIVISION OF OPERATIONS OREGON STATE OFFICE			
CANCOON COMMERCIAL THINNING <b>RENOVATION NOTES</b> ROSEBURG DISTRICT OREGON			
DESIGNED			
REVIEWED			
APPROVED			
DRAWN: TOM McNAMARA		SCALE: AS SHOWN	
DATE: 02/15/2012		SHEET 4 OF 10	
DRAWING NO. ORRO4-TS12-06			BLM #



STATION      DESCRIPTION

**25-1-36.0**

0+00    BEGIN RENOVATION AT THE JUNCTION OF 25-1-36.0 AND 25.5-1E-32.0  
          BEGIN BRUSHING, BLADING, COMPACTION AND CLEAN CULVERTS

31+70    25-1-36.1 JUNCTION RIGHT

42+25    BEGIN PULLING DITCH

44+80    PROPERTY LINE

46+00    EXISTING TURNOUT RIGHT

50+70    REMOVE DOWNED LOG

51+10    EXISTING CULVERT

54+25    BEGIN CLEARING AND GRUBBING

55+50    EXISTING CULVERT

58+90    ENTER UNIT

59+10    EXISTING TURNOUT RIGHT

63+00    EXISTING CULVERT

65+00    END RENOVATION  
          BEGIN RENOVATION SPUR 6 JUNCTION LEFT

**SPUR 6**

0+00    BEGIN RENOVATION AT THE JUNCTION OF SPUR 6 AND 25-1-36.0  
          BEGIN CLEARING, GRUBBING, BRUSHING, BLADING AND COMPACTION

7+50    SPUR 7 JUNCTION LEFT

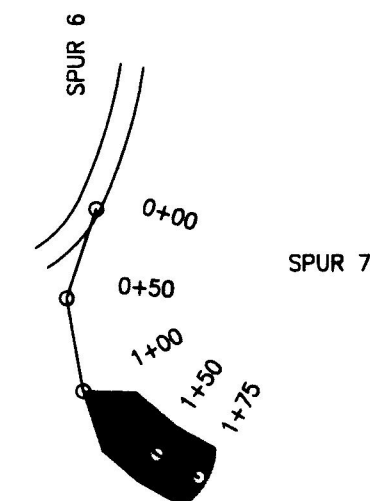
9+30    RENOVATE EXISTING LANDING APPROXIMATELY 40' X 70'

10+00    END RENOVATION

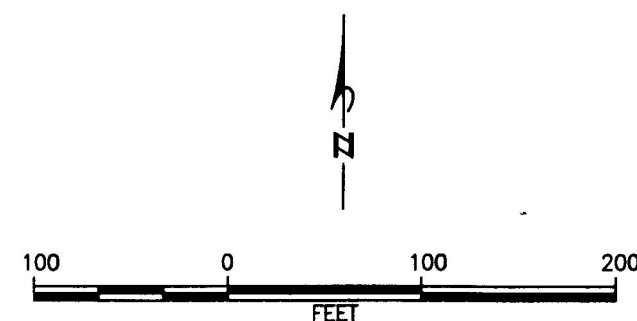


SPUR # 7			
STA	DISTANCE	BEARING	% GRADE
0+00	50	S18W	18%
0+50	50	S10E	12%
1+00	50	S49E	3%
1+50	25	S61E	-3%
1+75			

O & C  
 T25S, R1W  
 SE ¼, SE ¼  
 SECTION 25



CONSTRUCT 34' X 50'  
 LANDING

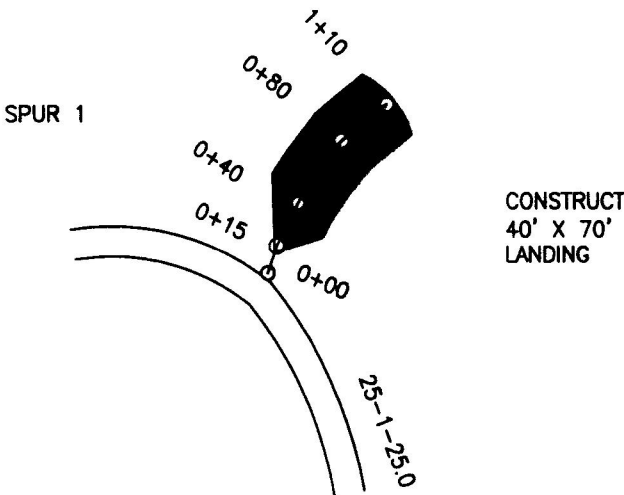


REV. NO.	DESCRIPTION	DATE	APPROVED
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT DIVISION OF OPERATIONS      OREGON STATE OFFICE CANCOON COMMERCIAL THINNING <b>RENOVATION/CONSTRUCTION</b> ROSEBURG DISTRICT      OREGON			
DESIGNED			
REVIEWED			
APPROVED			
DRAWN: TOM McNAMARA		SCALE: AS SHOWN	
DATE: 02/15/2012		SHEET 5 OF 10	
DRAWING NO. ORR04-TS12-06			BLM #



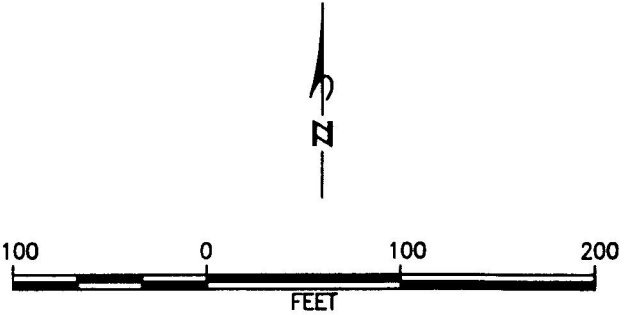
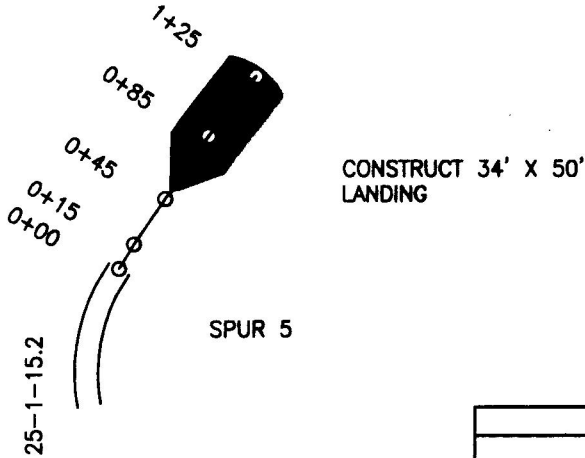
SPUR # 1			
STA	DISTANCE FEET	BEARING	% GRADE
0+00	15	N23E	3%
0+15	25	N27E	3%
0+40	40	N30E	-1%
0+80	30	N38E	-5%
1+10			

O & C  
T25S, R1W  
NW 1/4, SE 1/4  
SECTION 23



SPUR # 5			
STA	DISTANCE FEET	BEARING	% GRADE
0+00	15	N31E	13%
0+15	30	N34E	13%
0+45	40	N34E	6%
0+85	40	N38E	3%
1+25			

O & C  
T25S, R1W  
NE 1/4, NW 1/4  
SECTION 15



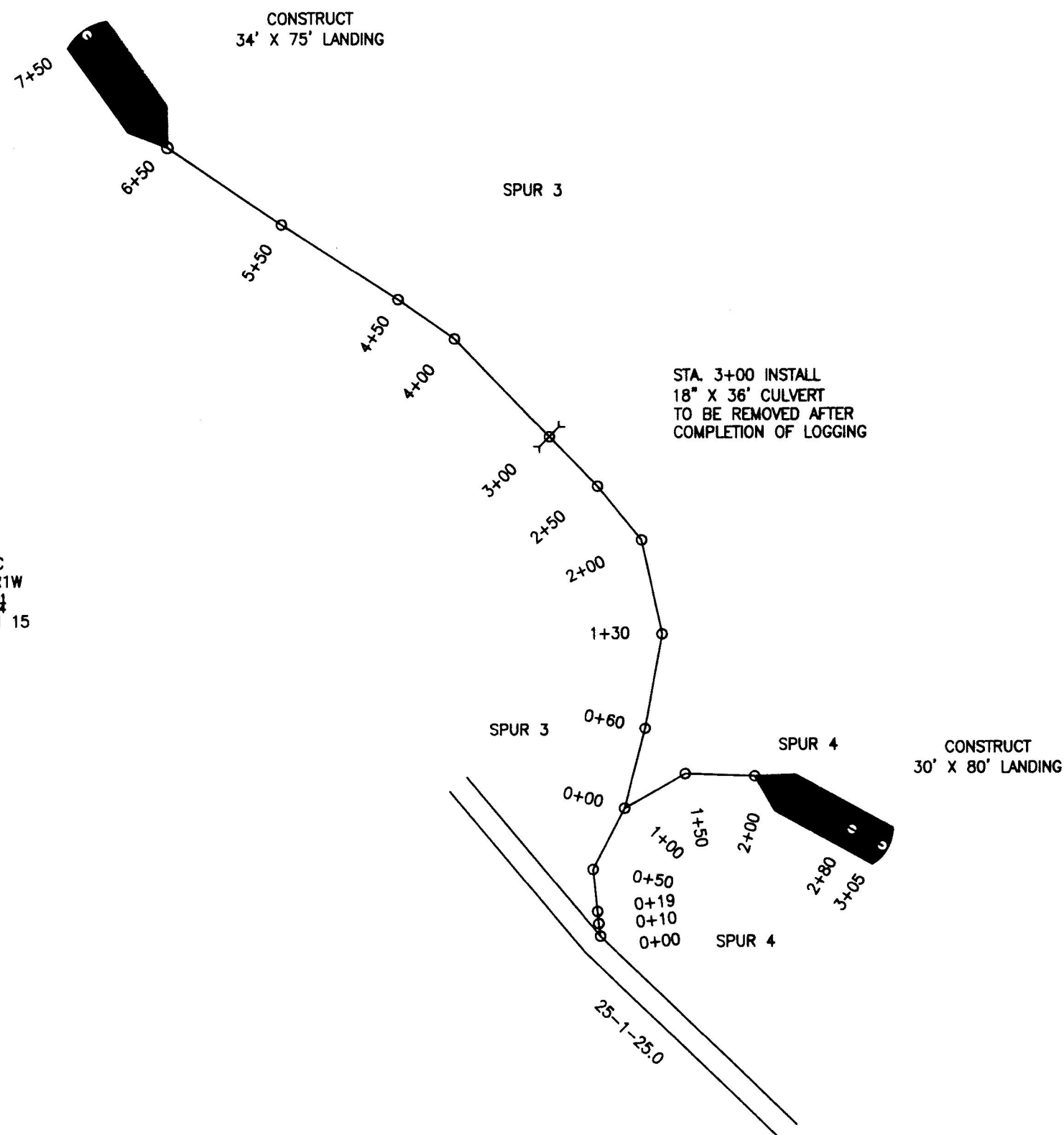
REV. NO.	DESCRIPTION	DATE	APPROVED
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT DIVISION OF OPERATIONS CANCOON OREGON STATE OFFICE			
COMMERCIAL THINNING SPURS 1 AND 5 ROSEBURG DISTRICT OREGON			
DESIGNED	<i>[Signature]</i>		
REVIEWED	<i>[Signature]</i>		
APPROVED	<i>[Signature]</i>		
DRAWN: TOM MCNAMARA		SCALE: AS SHOWN	
DATE: 02/15/2012		SHEET 6 OF 10	
DRAWING NO. ORR04-TS12-06			BLM #



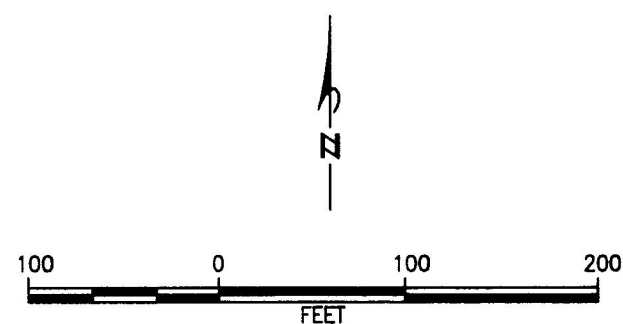


SPUR # 3			
STA	DISTANCE FEET	BEARING	% GRADE
0+00	60	N14E	2%
0+60	70	N10E	6%
1+30	70	N12E	3%
2+00	50	N39W	1%
2+50	50	N44W	1%
3+00	100	N44W	9%
4+00	50	N55W	12%
4+50	100	N57W	8%
5+50	100	N56W	7%
6+50	100	N35W	-3%
7+50			

O & C  
T25S, R1W  
SW 1/4, SE 1/4  
SECTION 15




SPUR # 4			
STA	DISTANCE FEET	BEARING	% GRADE
0+00	10	N6W	-6%
0+10	9	N6W	-9%
0+19	31	N6W	-9%
0+50	50	N27W	-6%
1+00	50	N60E	-2%
1+50	50	S88E	-1%
2+00	80	S61E	-1%
2+80	25	S61E	-1%
3+05			

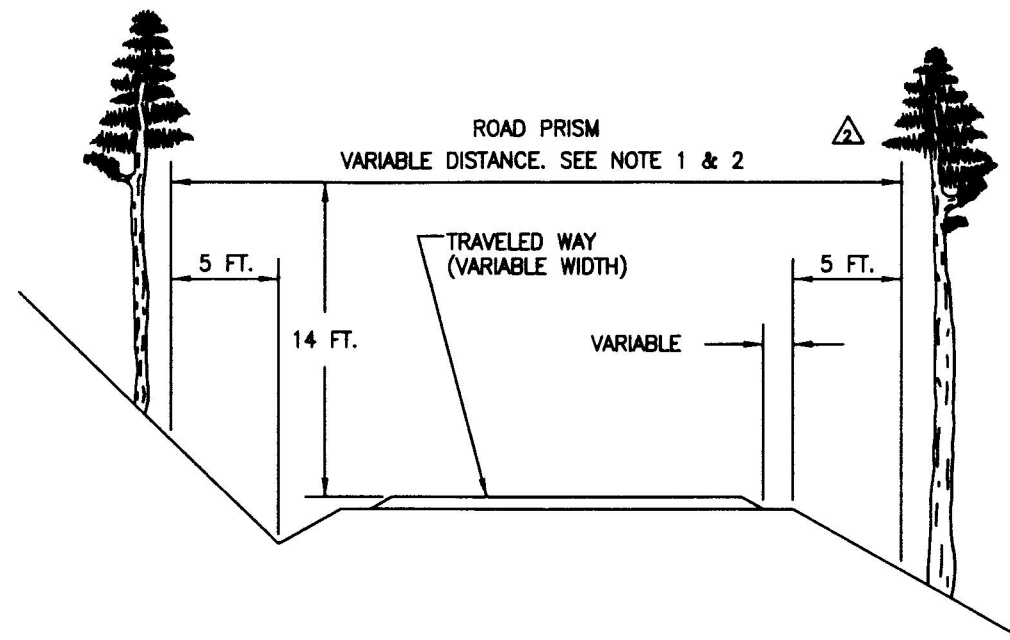


REV. NO.	DESCRIPTION	DATE	APPROVED
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT DIVISION OF OPERATIONS OREGON STATE OFFICE			
CANCOON COMMERCIAL THINNING SPURS 3 AND 4 ROSEBURG DISTRICT OREGON			
DESIGNED	<i>[Signature]</i>		
REVIEWED	<i>[Signature]</i>		
APPROVED	<i>[Signature]</i>		
DRAWN: TOM MCNAMARA		SCALE: AS SHOWN	
DATE: 02/15/2012		SHEET 7 OF 10	
DRAWING NO. ORR04-TS12-06			BLM #

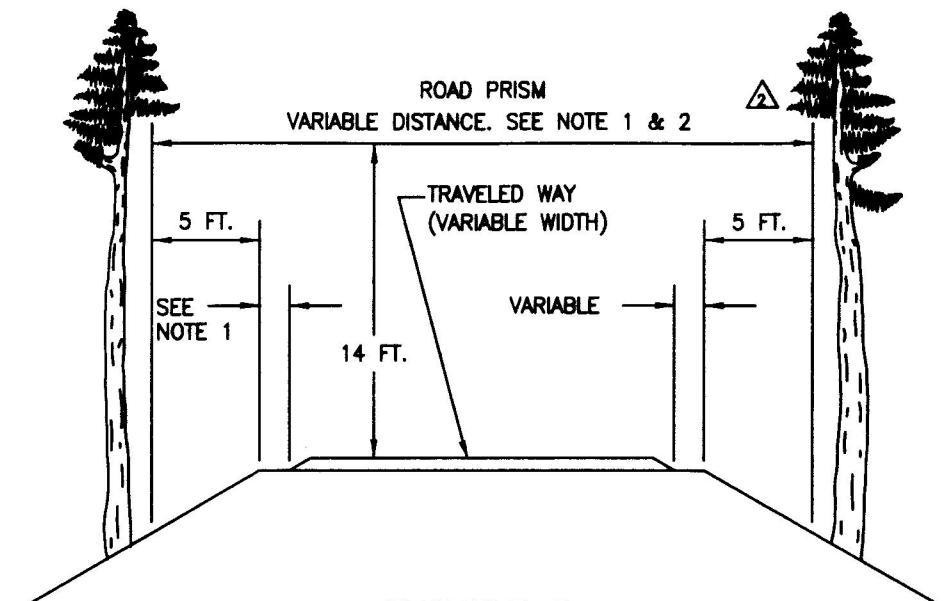


NOTE:

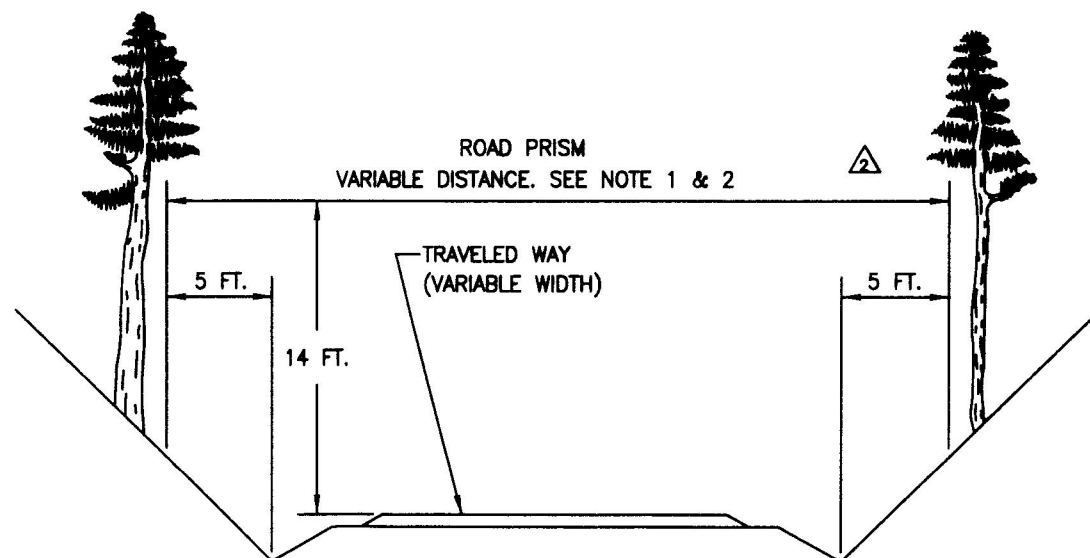
1. ALL AREAS WITHIN THE VARIABLE DISTANCE SHALL BE CLEARED OF VEGETATION.
2. ALL AREAS WITHIN THE VARIABLE DISTANCE SHALL BE FREE OF ALL OVERHANGING LIMBS AND BRANCHES WITHIN 14 FEET ELEVATION ABOVE RUNNING SURFACE. 



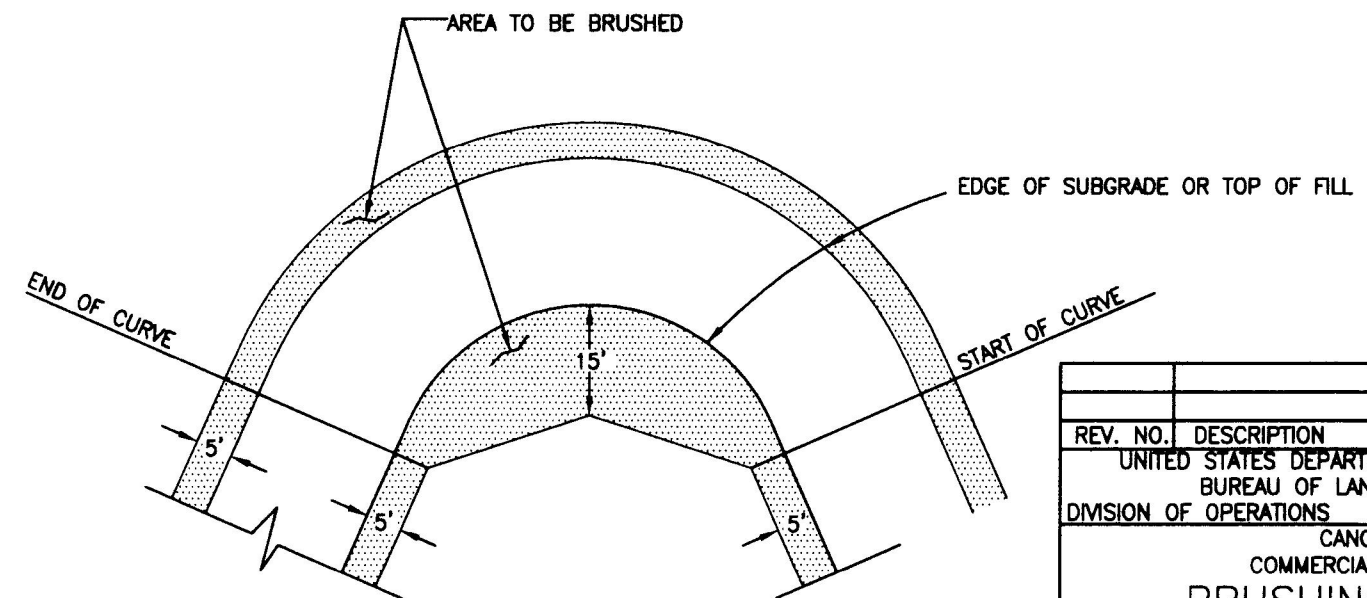
EXAMPLE 1



EXAMPLE 2

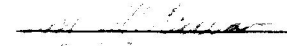
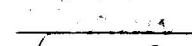
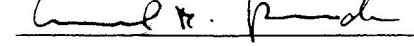


EXAMPLE 3



CURVE



REV. NO.	DESCRIPTION	DATE	APPROVED
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT DIVISION OF OPERATIONS OREGON STATE OFFICE			
CANCOON COMMERCIAL THINNING <b>BRUSHING DETAIL</b> ROSEBURG DISTRICT OREGON			
DESIGNED			
REVIEWED			
APPROVED			
DRAWN: BILL HOUGH		SCALE: AS SHOWN	
DATE: 2/21/01		SHEET 8 OF 10	
DRAWING NO. ORRO4-TS12-06			BLM #



[illegible]



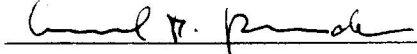
1. DESIGNED CULVERT LENGTHS AND LOCATIONS ARE APPROXIMATE.
2. ALL CULVERTS HAVE 2 2/3" X 1/2" CORRUGATIONS UNLESS OTHERWISE SPECIFIED.
3. SEE CULVERT INSTALLATION SHEET.
4. DOWN SPOUT TYPES:
  - a. FULL
  - b. HALF
  - c. FLUME
5. ELBOW TYPES:
  - a. CONVENTIONAL OR FABRICATED
  - b. TURNER TYPE
  - c. SLIP JOINT
6. INCLUDE SPECIAL SECTIONS, STRUCTURES, HEADWALLS, FOOTINGS, AND OTHER DATA.

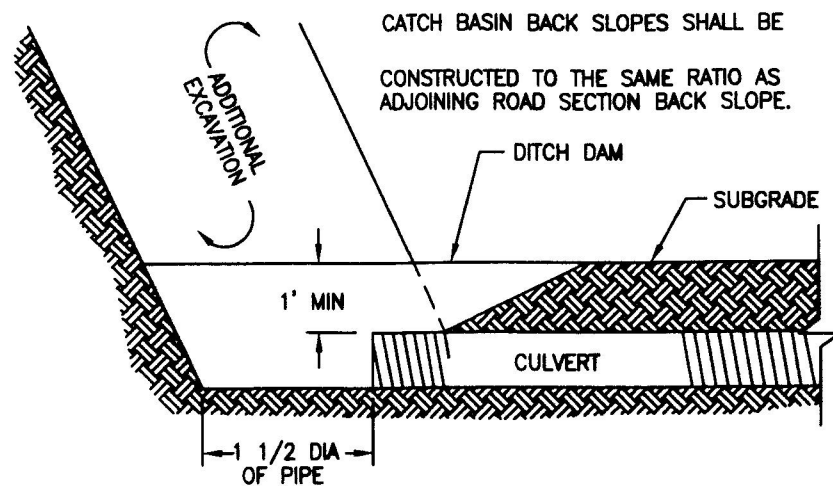
GAGE CHART		
GAGE	DEC. EQUIV INCHES	
	STEEL	ALUM.
10	0.1380	0.1350
12	0.1090	0.1050
14	0.0790	0.0750
16	0.0640	0.0600

ROUND PIPE CULVERT				
MATERIAL	SIZE	GAGE	CORRUGATIONS	LENGTH
*	18"	14	2 $\frac{3}{8}$ " X $\frac{1}{2}$ "	112'
*	24"	14	2 $\frac{3}{8}$ " X $\frac{1}{2}$ "	40

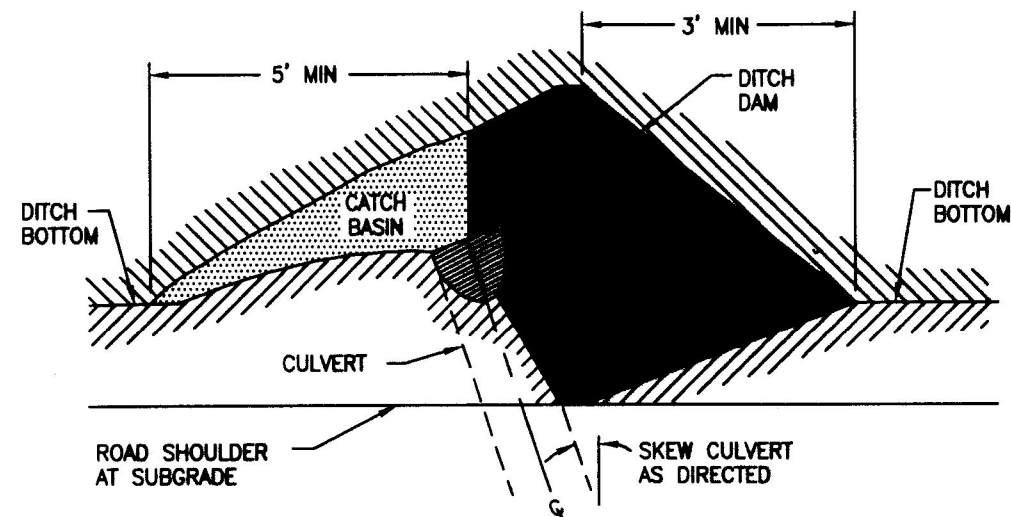
\* POLY OR ALUMINIZED



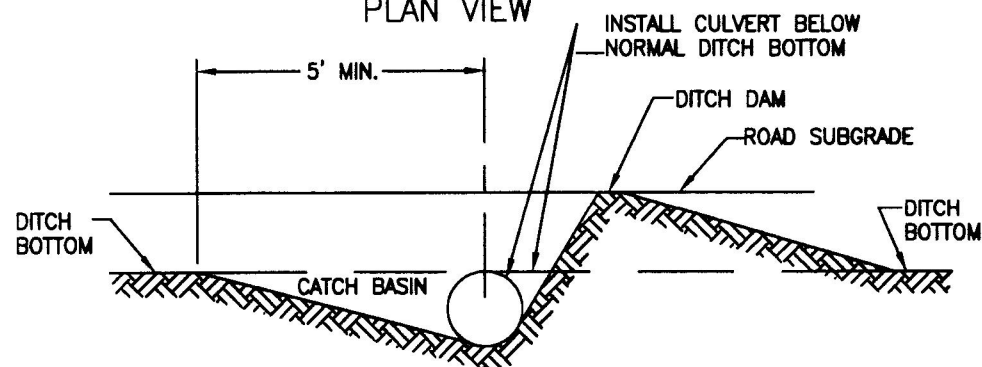
REV. NO.	DESCRIPTION	DATE	APPROVED
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT DIVISION OF OPERATIONS OREGON STATE OFFICE			
CANCOON COMMERCIAL THINNING CULVERT SUMMARY			
ROSEBURG DISTRICT			OREGON
DESIGNED			
REVIEWED			
APPROVED			
DRAWN: G. STACEY		SCALE: AS SHOWN	
DATE: 07/26/2007		SHEET 9 OF 10	
DRAWING NO. ORR04-TS12-06			BLM #



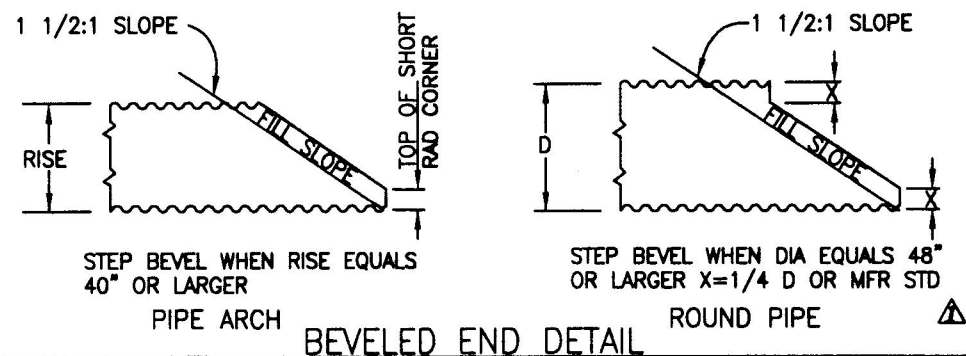
CROSS SECTION AT CATCH BASIN  
CULVERT INSTALLATION TYPE 2, 3, AND 4



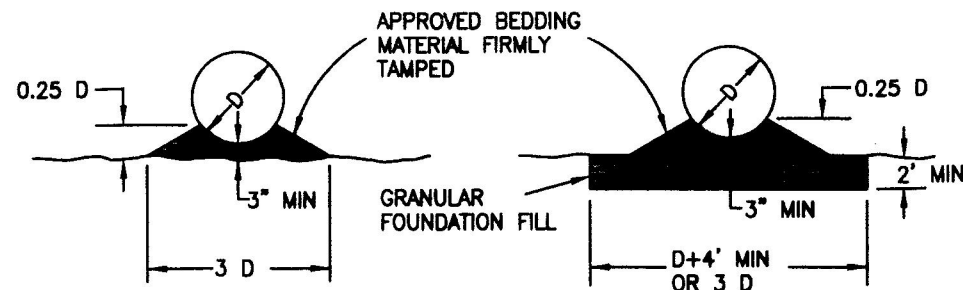
PLAN VIEW



CATCH BASIN ELEVATION

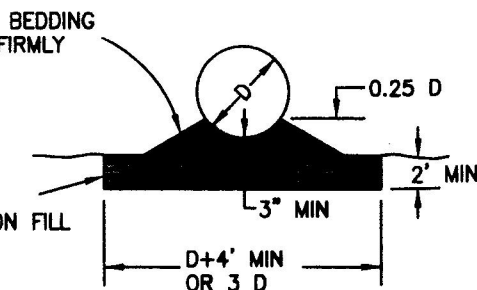


BEVELED END DETAIL



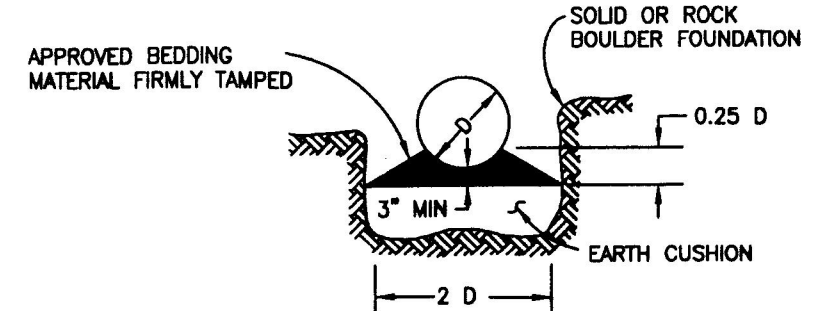
BEDDING MATERIAL SHALL BE SHAPED TO FIT THE BOTTOM OF THE CULVERT

BEDDING OF CULVERTS ON STABLE NATURAL GROUND FOUNDATION OR COMPACTED EMBANKMENT



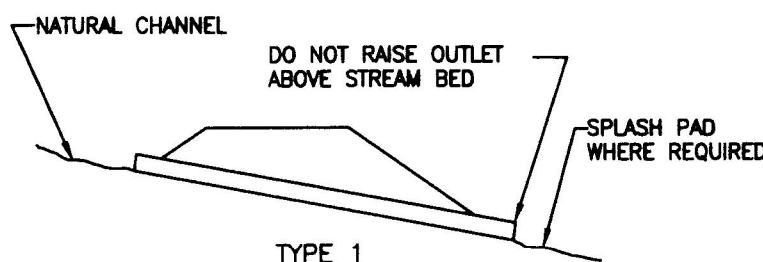
BEDDING MATERIAL SHALL BE SHAPED TO FIT THE BOTTOM OF THE CULVERT

BEDDING OF CULVERTS ON SOFT SPONGY OR UNSTABLE SOIL FOUNDATION

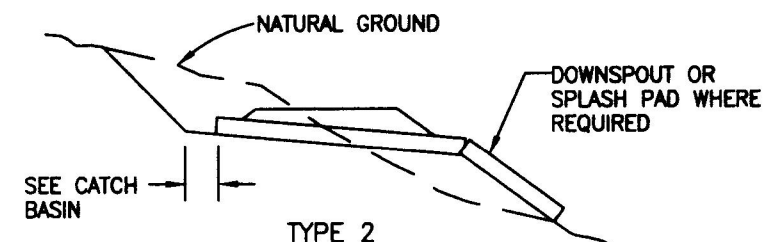


BEDDING MATERIAL SHALL BE SHAPED TO FIT THE BOTTOM OF THE CULVERT. EARTH CUSHIONING OF SILTY CLAY LOAM OR SAND MAY BE USED IF MATERIAL CAN BE PLACED IN THE DRY CONDITION. IF THE EXCAVATION IS WET, USE GRANULAR FOUNDATION FILL MATERIAL. MAINTAIN 8" MIN DEPTH BETWEEN HIGH POINTS OF ROCKS AND/OR BOULDERS AND THE BOTTOM OF THE CULVERT.

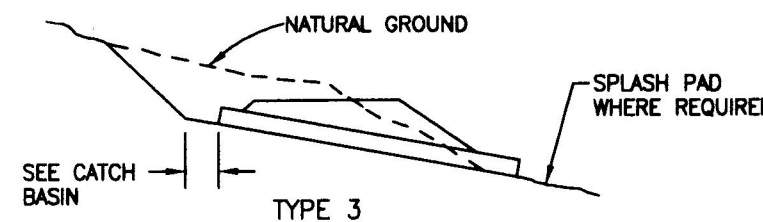
BEDDING OF CULVERTS IN SOLID ROCK OR BOULDER FOUNDATION



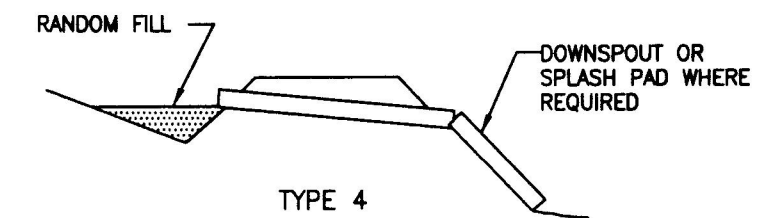
TYPE 1



TYPE 2

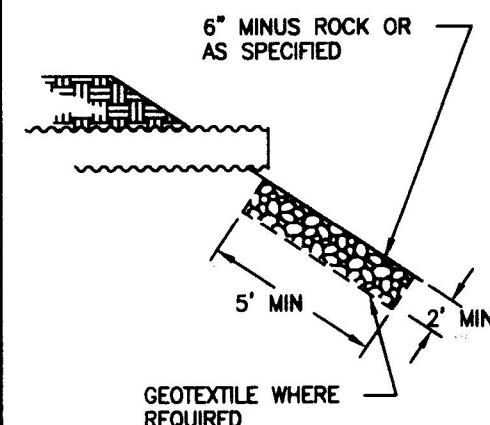


TYPE 3



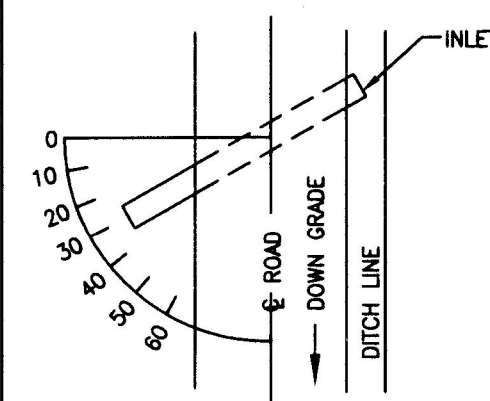
TYPE 4

CULVERT INSTALLATION TYPES



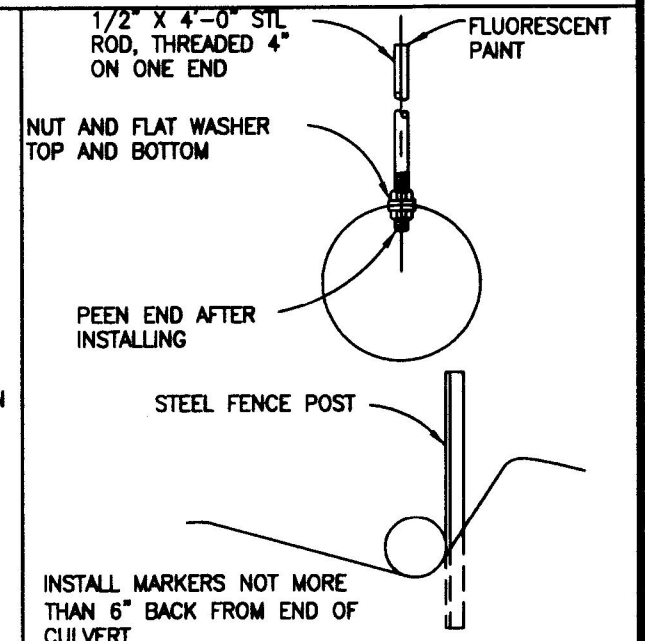
SPLASH PAD SHALL BE 1' WIDER THAN PIPE DIA ON EACH SIDE

SPLASH PAD



THE GRADE OF CROSS DRAINS SHALL BE AT LEAST 2% GREATER THAN THE GRADE OF THE DITCH

SKUEW DIAGRAM



CULVERT MARKER INSTALLATION

REV. NO.	DESCRIPTION	DATE	APPROVED
	UNITED STATES DEPARTMENT OF THE INTERIOR		
	BUREAU OF LAND MANAGEMENT		
	DIVISION OF OPERATIONS		
	CANCOON		

COMMERCIAL THINNING	
CULVERT INSTALLATION	
ROSEBURG DISTRICT	OREGON

DESIGNED	
REVIEWED	
APPROVED	

DRAWN: BILL HOUGH	SCALE: AS SHOWN
DATE: 12/17/01	SHEET 10 OF 10
DRAWING NO. ORR04-TS12-06	BLM #

ALWAYS THINK SAFETY