

PROSPECTUS

Sale Date: May 22, 2012

(1) Roseburg Sale No.: 12-04
Douglas County, Oregon: O&C: Oral Auction

Sale Name: Red Butte Commercial Thinning
Bid Deposit Required: \$8,200.00

All timber designated for cutting on:

S½NE¼, SE¼	Sec. 17, T. 27 S., R. 2 W., Willamette Meridian
N½NE¼, SW¼NE¼	Sec. 20, T. 27 S., R. 2 W., Willamette Meridian
W½ NE¼	Sec. 21, T. 27 S., R. 2 W., Willamette Meridian
N½NE¼, NW¼NW¼	Sec. 28, T. 27 S., R. 2 W., Willamette Meridian
NE¼NE¼, SW¼NE¼, S½NW¼, W½SE¼	Sec. 29, T. 27 S., R. 2 W., Willamette Meridian
SE¼NE¼	Sec. 30, T. 27 S., R. 2 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
20,997	1,634	3,753	Douglas-fir	1,975	\$35.70 *	\$70,507.50
1,004	117	261	Grand Fir	141	\$32.90 *	\$4,638.90
1,740	81	196	Western Hemlock	101	\$31.20 *	\$3,151.20
593	19	54	W. Red-cedar	24	\$135.90	\$3,261.60
75	4	11	Ponderosa Pine	5	\$12.00 *	\$60.00
65	2	4	Incense-cedar	2	\$105.80	\$211.60
24,474	1,857	4,279		2,248		\$81,830.80

* 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 has 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 other species and R/W trees has been determined by individual tree measurements using a 100% cruise.

With respect to merchantable trees of all species: the average tree is 10.9 in. D.B.H.O.B., the average log contains 33 bd. ft., the total gross volume is approximately 2368 M bd. ft., and 95 % recovery is expected.

CUTTING AREA: An area of approximately 182 acres in 7 units are to be partially cut and a right-of-way of approximately 2 acres must be clearcut.

TIMBER ACREAGE:

Area 1:	20 acres	Area 5:	32 acres
Area 2:	27 acres	Area 6:	51 acres
Area 3:	26 acres	Area 7:	5 acres
Area 4:	21 acres	R/W:	2 acres

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

DIRECTIONS TO SALE AREA: To reach the sale area in Sections 17, 20, 21, 28, 29, and 30 of T. 27 S., R. 2 W., W.M., go east from Roseburg on State Hwy 138 (Diamond Lake Blvd) to County Road 17 (Little River Road). Turn right and proceed south on County Road 17 approximately 12.9 miles to the junction with Road 27-2-3.1. Proceed south on Road 27-2-3.1 and follow the Exhibit D map to the sale area.

ROAD MAINTENANCE: A maintenance and rockwear fee of \$15,439.34 will be required to be paid to the BLM.

ROAD CONSTRUCTION: Estimates include approximately 34+49 stations of road construction, 146+10 stations of road renovation, and 33+79 stations of road decommissioning as shown on Exhibit C.

DURATION OF CONTRACT will be 36 months for cutting and removal of timber. The contract will contain 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. The BLM has revised the log export restrictions special provision to reduce the log branding and painting requirements. The new requirements include branding of one end of all logs with a scaling diameter of over 10 inches. All loads of 11 logs or more, regardless of the diameter of the logs, will have a minimum of 10 logs branded on one end. All logs will be branded on loads of 10 logs or less. One end of all branded logs will be marked with yellow paint. At the discretion of the Contracting Officer, the Purchaser may be required to brand and paint all logs. The purchaser shall bear any increased costs for log branding and painting.
3. Seasonal restrictions on operations apply (see attached Seasonal Restriction Matrix).
4. Cable yarding in Harvest Areas 1, 2, 3, 4 and 5 may require the use of lift trees and/or intermediate support trees.
5. To prevent the introduction of noxious weeds to the Contract Area, all logging, road building and subsoiling equipment, except log trucks, must be steam cleaned or pressure washed prior to initial move-in or upon return to the sale area if used elsewhere.
6. License Agreements with Seneca Jones Timber Co. and the U.S. Forest Service are required. The License Agreement with the U.S. Forest Service requires the Purchaser to apply for an overload permit with the U.S.F.S. for any loads that exceed Legal Highway load limits according to ODOT Permit Weight Table 1.
7. Yarding of log lengths greater than forty-two (42) feet will not be permitted, unless approved by the Authorized Officer.
8. Directional falling away from or parallel to property lines, unit boundaries, roads, retention trees and snags will be required. Directional falling away from or parallel to reserve areas and riparian buffers will be required for all trees cut within 100 feet of these areas.
9. A harvester/forwarder system, feller-buncher, tractor, rubber-tired skidder, or track-mounted log loader may be used in the areas designated for ground-based yarding. Ground-based yarding is generally permitted between July 15 and September 30. Minor and incidental ground-based yarding may be permitted in limited portions of the cable yarding areas; ground-based yarding seasonal restrictions apply, and the locations involved and equipment used must be approved by the Authorized Officer.
10. Unsurfaced roads used for more than a single season or which must over-winter prior to decommissioning will be winterized in accordance with Exhibit C.
11. 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 112 MBF of such additional timber would be removed under the contract, but is not included in the advertised sale volume.
12. This contract contains provisions for subsoiling approximately 2.0 miles of compacted skid trails.
13. In the cable yarding areas, a skyline logging system with lateral yarding and multi-span capability will be required. One-end suspension of logs will be required. Cable yarding will not be permitted in or through reserve areas or riparian buffers, except in Harvest Area 2, where full suspension will be required.

14. Slash disposal requirements consist of the following: Hand piling and covering of approximately 9 acres of slash within fifty (50) feet of each side of the roads in the Harvest Areas, as designated on Exhibit E, and machine piling and covering slash and debris within fifty (50) feet of landings and other locations designated by the Authorized Officer.
15. Upon completion of logging operations Roads 27-2-28.2 Segment A(POR), 27-2-28.4 Segment A, and Spurs 1 and 2 shall be decommissioned in accordance with Exhibit C of this contract.
16. Portions of Harvest Areas 1, 2, 3, 4 and 5 are available for winter logging.
17. Wolf Creek Quarry (T27S- R03W-Section 13) SE ¼ SE 1/16: A peregrine Falcon nest site is located within 0.5 miles of the quarry. To minimize noise disturbance to the peregrine falcon during the critical breeding period, all quarry activities within 0.5 miles of the known nest site would be seasonally restricted from February 1st through August 15th, both days inclusive.

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 in the contract area is hereby reserved from cutting and removal under the terms of this contract and is retained as the property of the 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 snags in the Harvest Areas as shown on Exhibit A. Snags which pose a hazard to operations may be felled with the approval of the Authorized Officer.
- (c) All existing downed trees at the time of the timber cruise in the Harvest Areas shown on Exhibit A. Reserved existing downed trees may be bucked to facilitate yarding.

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

Section 41(A) Periodic Payment and First Installment Adjustment:

- (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 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 may 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 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 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 day 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 pre-work conference between the Purchaser's 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 (100) feet of the property lines, unit boundaries, reserve areas and riparian buffers shall be felled and yarded away from these areas.

- (4) No cable yarding, ground-based yarding or log loading shall be conducted in or through the reserve areas as shown on Exhibit A, except in Harvest Area 2 where full suspension will be required.
- (5) In the Harvest Areas shown on Exhibit A, all trees designated for cutting shall be manually felled, limbed and cut into log lengths not to exceed forty-two (42) feet before being yarded, unless otherwise approved by the Authorized Officer. Harvest Areas 6 and 7, and portions of Harvest Areas 2, 3, 4, and 5 may be felled mechanically using a feller-processor or feller-buncher with the approval of the Authorized Officer and in accordance with the following specifications:
 - (a) Mechanized felling operations shall be limited to slopes of thirty-five (35) percent or less.
 - (b) Mechanized felling operations are subject to seasonal operating restrictions as described in Section 41(B)(8)(b) of this contract.
 - (c) The feller-processor or feller-buncher shall be approved by the Authorized Officer prior to the start of mechanized felling operations. Only purpose-built carriers with boom-mounted felling heads may be approved. The purpose-built carrier may be of the articulated, rubber-tired design or the zero-clearance tail swing, leveling track-mounted design.
- (6) In Harvest Areas 6 and 7 and those portions of Harvest Areas 2, 3, 4, and 5 where mechanical felling is permitted with the approval of the Authorized Officer, all trees designated for cutting may be felled and whole tree yarded except when excessive stand damage occurs as determined by the Authorized Officer. If excessive stand damage occurs, all trees shall be completely limbed and bucked into log lengths not to exceed forty-two (42) feet prior to being yarded.
- (7) In the portions of Harvest Areas 1, 2, 3, 4, & 5 designated for cable yarding as shown on Exhibit A:
 - (a) Yarding shall be done with a cable skyline system utilizing a mechanical slack-pulling carriage capable of maintaining a fixed position on the skyline while lateral yarding and having a lateral capability of seventy-five (75) feet. The carriage must not move during in-haul. The cable yarder shall have a maximum tower height of fifty (50) feet and a maximum of two hundred fifty (250) horsepower. The system shall have the capability to yard in multi-span configuration.
 - (b) Wherever possible, skyline roads shall be perpendicular to hill-slope contour lines, parallel to each other and spaced at least one hundred fifty (150) feet apart to minimize damage to reserve trees.
 - (c) Cable yarding of logs shall be done under the canopy and with one end suspended. Lift trees and/or intermediate support trees shall be employed where necessary to meet this requirement. All logs shall be yarded away from or parallel to riparian buffers, except in Harvest Area 2 where full suspension will be required.

- (d) 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.
- (8) In the portions of Harvest Areas 2, 3, 4, 5, 6 & 7 designated for ground-based yarding as shown on Exhibit A:
- (a) Ground-based yarding operations shall be limited to slopes of thirty-five (35) percent or less, and existing skid trails shall be utilized to the greatest extent possible.
 - (b) Ground-based yarding operations shall be limited to the time of year when soil moisture content provides the most resistance to compaction as determined by the Authorized Officer, typically between July 15 and September 30, 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 cut-to-length 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 the potential for 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. Forwarder trails shall be located such that there are two harvester trails between forwarder trails, resulting in a spacing of at least 100 feet between forwarder trails.
 - (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.
- (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 the 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 roads and/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 skid roads shall be limited to (12) feet and cable yarding roads shall be limited to (15) 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 to clear danger trees when the trees have been marked with blue 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 thirty-six (36) 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/or 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, tail hold or tieback trees, and/or severely damaged from the normal conduct of felling or yarding operations to meet all applicable safety laws, codes or regulations. This timber must be cut or removed so that the Purchaser can continue active falling and 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 (5) 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 until 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 tractor skid roads 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 (as defined during the pre-work conference) 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 tail hold trees.
 - (10) Cut more than the minimum number of trees necessary to properly serve as tie-backs for topped tail hold trees.
 - (11) Failed to maintain accurate and current (no more than twenty-four [24] hours old) documentation of additional timber cut and removed.

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 (2) working days prior to the need for cutting and yarding any guyline tree, tailhold tree, tie-back tree, danger tree, corridor tree, pulled over

tree, and severely damaged 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 corridors 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) No falling or yarding shall be conducted between April 15 and July 15, both days inclusive, in order to prevent damage to residual trees due to bark slippage, unless otherwise approved by the Authorized Officer.
- (12) No road construction or renovation 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, unless approved by the Authorized Officer.
- (13) No timber yarding shall be conducted on those Harvest Areas accessed by unsurfaced roads between October 15 of one calendar year and July 15 of the following calendar year, both days inclusive, unless approved by the Authorized Officer.
- (14) No timber loading or hauling shall be conducted on unsurfaced roads between October 15 of one calendar year and May 15 of the following calendar year, both days inclusive, unless approved by the Authorized Officer.
- (15) 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. If a log or piece of log meeting or exceeding the above specifications is bucked and left in place, all portions of that log shall be yarded and decked at the above described location.

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 One Thousand six hundred eighty-six and 00/100 dollars (\$1,686.00). In the event only a portion of the contract timber is scaled the purchase price shall be reduced by that portion of One Thousand six hundred eighty-six and 00/100 dollars (\$1,686.00) 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 the 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 Purchaser upon request.

Section 41(D) Environmental Protection:

- (1) In addition to the requirements 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 requirements 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, prior to initial move-in, to minimize the likelihood of spreading noxious weeds and non-native plant species 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 all natural surfaced roads used under Section 41(F)(1) or any portion thereof, in accordance with the plans and specifications shown on Exhibit C, and in accordance with the following stipulations:
 - (a) The Purchaser intends to use the natural surfaced roads or portions thereof for more than a single operating season; or, circumstances require that the roads or portions thereof overwinter 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)(14) and Section 41(F)(2) of this contract, or as directed by the Authorized Officer.
- (4) In addition to the requirement set forth in Section 25 of this contract, the Purchaser shall, upon completion of logging operations, perform subsoiling operations on approximately two (2.0) miles of landings and main skid trails, and associated compacted areas such as turnouts, truck

turnarounds and log decking areas as designated by the Authorized Officer and in accordance with the following stipulations:

- (a) All subsoiling equipment shall be inspected and approved by the Authorized Officer before subsoiling begins.
 - (b) The compacted surfaces shall be subsoiled (broken up, loosened and de-compacted) using excavator attachments, log loader tongs or other approved equipment.
 - (c) Slash and other organic debris and some topsoil will be spread over the subsoiled surface to cover at least 50 percent of the subsoiled area, where available. Waterbars shall be constructed concurrently with subsoiling operations, on grades steeper than 10 percent, as directed by the Authorized Officer.
 - (d) Subsoiling shall occur during the same dry season as ground-based harvesting or completion of spur/road use and be completed prior to October 15, unless otherwise approved by the Authorized Officer.
 - (e) Subsoiling shall be completed to a minimum depth of eighteen (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 soil shall have clods greater than two (2) inches in diameter, unless otherwise approved by the Authorized Officer.
 - (g) Subsoiling 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.
- (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;
- (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.

- (6) All quarry activities within Wolf Creek Quarry (T27S- R03W-Section 13) SE ¼ SE 1/16 shall be seasonally restricted from February 1st through August 15th, both days inclusive to minimize noise disturbance to the peregrine falcon during the critical breeding period.

Section 41 (E) Cultural Resources 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) Purchaser shall construct Roads 27-2-28.4 Segment A, 27-2-20.0 Segment A(POR), Spurs 1 and 2, and renovate Roads 27-2-16.0 Segment B(POR), 27-2-20.0 Segment A(POR), 27-2-20.1 Segment A, 27-2-21.5 Segments A and B(POR), 27-2-28.2 Segment A(POR), 27-2-29.0 Segments A and B(POR), 27-2-29.1 Segments A and B(POR), and 27-2-29.2 Segment A(POR). Any required construction or renovation of structures and roads shall be completed prior to the removal of any timber, except right-of-way timber, over that road.
- (2) Unsurfaced roads constructed or renovated in the contract area shall be water-barred, blocked, and mulched in accordance with Exhibit C of this contract; the aforementioned work shall be completed after hauling and before October 15 of the same operating season, or as directed by the Authorized Officer, when over-wintering of roads is necessary.
- (3) Upon completion of logging operations, Spur 2 and Road 27-2-28.2 shall be water-barred, blocked, and mulched with slash in strict accordance with the plans and specifications shown on Exhibit C, which is attached hereto and made a part hereof.
- (4) Upon completion of logging operations, Spur 1 and Road 27-2-28.4 shall be water-barred, blocked, mulched with slash, and have the culverts removed in strict accordance with the plans and specifications shown on Exhibit C, which is attached hereto and made a part hereof.
- (5) 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)(6); in addition, the Purchaser is authorized to use Roads 27-3-13.0 Segment A(POR) and 27-3-14.1 Segments B1(POR) and B2 listed and shown on Exhibit D are for the purpose of rock haul only. 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 construction, 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.
- (6) The Purchaser shall pay the Government a maintenance and rockwear obligation in the amount of Fifteen Thousand Four Hundred Thirty-nine and 34/100 dollars (\$15,439.34) for the transportation of timber included in the contract price over roads listed on the Exhibit D.

The above road rockwear and maintenance amount is for use of 13.3 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.

- (7) 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.
- (8) 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.
- (9) In the use of Road 27-2-3.1 Segments A, A2, and B(POR), the Purchaser shall comply with the conditions, including but not limited to those set out below, of the Right-of-Way and Road Use Agreement No. R-724, dated May 20, 1980, between the United States of America and the U.S. Forest Service, available for inspection at the Bureau of Land Management, Roseburg District Office, 777 N.W. Garden Valley Blvd., Roseburg, Oregon 97471. These conditions include:
 - (a) Prior to the use of said roads, the Purchaser shall furnish the Authorized Officer a copy of the executed license agreement.
 - (b) 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 or road maintenance 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 OTHER THAN SENECA JONES TIMBER CO. PURCHASES:

- (10) In the use of Road 27-2-28.0 Segment A(POR) and construction of Road 27-2-28.4 Segment A, the purchaser shall comply with the conditions of Right-of-Way and Road Use Agreement No. R-769, dated July 7, 1964, between the United States of America and Seneca Jones Timber Co. This Document is available for inspection at the Bureau of Land Management, Roseburg District Office, 777 N.W. Garden Valley Blvd., Roseburg, Oregon 97471. These conditions include:
 - (a) Prior to the use of said roads, the Purchaser shall furnish the Authorized Officer a copy of the executed license agreement.
 - (b) Right-of-way timber on Road 27-2-28.4 Segment A shall be cut and decked along the right-of-way.

- (c) 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 or road maintenance 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.

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 Section 15 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 hazard reduction measures required by this contract:
 - (a) Machine Pile and Cover all slash situated within fifty (50) feet of all landings or other locations designated by the Authorized Officer in accordance with the following specifications:
 - (1) Landing slash piles shall be capped with a ten (10) foot by ten (10) foot cover of four (4) mil black plastic or equivalent material to maintain a dry ignition point. The covers shall be firmly fixed to each pile.
 - (2) Slash piles shall be located away from unit boundaries, wildlife trees, seed trees, retention trees, snags, downed logs and/or stumps.
 - (3) Finished piles shall be tight and free of earth
 - (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 the Purchaser's operations under the terms of this contract.
 - (c) Landings shall be piled and covered within thirty (30) days of the completion of yarding from each landing.
 - (d) Covering of slash piles shall be done concurrently with piling operations.
 - (e) Hand pile all slash within (50) feet each side along designated roads, as shown on Exhibit E, in or adjacent to Harvest Areas 3, 4, and 5 (approximately 0.8 miles of roads or 9 acres of piling) as directed by the Authorized Officer and in accordance with the

following specifications:

- (1) Piling shall be accomplished by hand.
 - (2) Pile all slash between three (3) and six (6) inches in diameter on the large end and greater than four (4) feet in length.
 - (3) Slash piles shall be capped with a five (5) foot by five (5) foot cover of four (4) mil black plastic or equivalent material to maintain a dry ignition point. The covers shall be firmly fixed to each pile. Maximum pile size shall be eight (8) feet in diameter and four (4) feet in height.
- (2) Notwithstanding the provisions of Section 15 of this contract, the Government shall assume all obligations for disposal or reduction of fire hazards created by the Purchaser's operations on Government lands

Section 41(l) Log Exports:

- (1) All timber sold to the Purchaser under the terms of this 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 ($8\frac{3}{4}$) 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 ($8\frac{3}{4}$) 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 the 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 Authorized 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.

Seasonal Restriction Matrix

Sheet 1 of 1

OR10-TS12-04

Red Butte Commercial Thinning

Seasonal Restrictions are Black-Stipple



Sale Area	Activity	Jan		Feb		Mar		Apr		May		June		July		Aug			Sept		Oct		Nov		Dec	
		1	15	1	15	1	15	1	15	1	15	1	15	1	16	1	6	15	1	16	1	15	1	15	1	15
Unit 1	Falling, bucking and yarding ¹																									
Unit 2	Falling, bucking and yarding ¹																									
	Ground-based yarding ^{1,2}																									
	Road construction, right-of-way logging and clearing ²																									
	Road renovation ²																									
Unit 3	Falling, bucking and yarding ¹																									
	Ground-based yarding ^{1,2}																									
	Road renovation ²																									
Unit 4	Falling, bucking and yarding ¹																									
	Ground-based yarding ^{1,2}																									
	Road renovation ²																									
	Loading or hauling on unsurfaced roads ²																									
Unit 5	Falling, bucking and yarding ¹																									
	Ground-based yarding ^{1,2}																									
	Cable yarding on unsurfaced roads ²																									
	Road construction, right-of-way logging and clearing ²																									
	Loading or hauling on unsurfaced roads ²																									
Unit 6	Falling, bucking and yarding ¹																									
	Ground-based yarding ^{1,2}																									
	Road construction, right-of-way logging and clearing ²																									
	Road renovation ²																									
	Loading or hauling on unsurfaced roads ²																									
Unit 7	Falling, bucking and yarding ¹																									
	Ground-based yarding ^{1,2}																									
	Road renovation ²																									
	Loading or hauling on unsurfaced roads ²																									
Quarry	All operations within 0.5 miles of quarry																									

¹Bark slip seasonal restriction from April 15th to July 15th may be conditionally waived.

²Wet season restrictions may be shortened or extended depending on soil moisture and weather conditions.

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) 12-04
Sale Name Red Butte Commercial Thinning
Sale Notice (dated) April 24, 2012 (sale date 05/22/12)
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 \$ **8,200.00** 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	1,975	x _____ = _____		x _____ = _____	
Grand Fir	MBF	141	x _____ = _____		x _____ = _____	
Western Hemlock	MBF	101	x _____ = _____		x _____ = _____	
Western Red-cedar	MBF	24	x _____ = _____		x _____ = _____	
Ponderosa Pine	MBF	5	x _____ = _____		x _____ = _____	
Incense-cedar	MBF	2	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 _____ = _____	
TOTAL PURCHASE PRICE						

(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.

**U.S. Department of Interior
Bureau of Land Management**

EXHIBIT "A"

Sheet 1 of 5

**Red Butte CT
Sale No. 12-04**

District	Township	Range	Section	Meridian	Contract Number
ROSEBURG	27S	2W	17,20,21, 28,29,30	WILLAMETTE	OR10-TS12-04

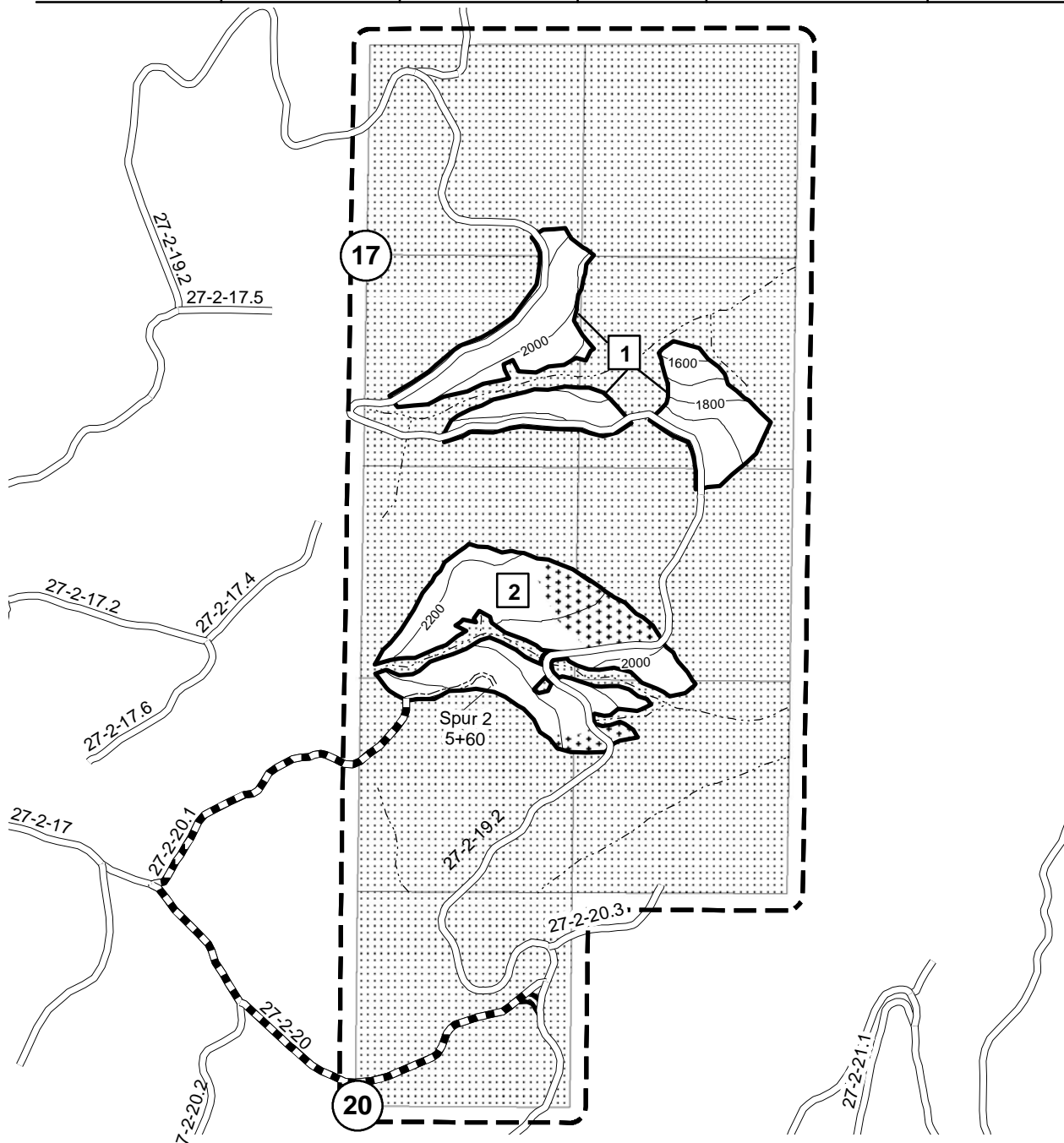
HARVEST AREA	HARVEST TYPE	HARVEST ACRES	HARVEST METHOD
1	COMMERCIAL THINNING	20	CABLE
2	COMMERCIAL THINNING	27	CABLE/GROUND
3	COMMERCIAL THINNING	26	CABLE/GROUND
4	COMMERCIAL THINNING	21	CABLE/GROUND
5	COMMERCIAL THINNING	32	CABLE/GROUND
6	COMMERCIAL THINNING	51	GROUND
7	COMMERCIAL THINNING	5	GROUND
Totals		182	

THINNING AREA	-----	182 Acres
RIGHT-OF-WAY - (Clearing)	-----	2 Acres
RESERVE AREA	-----	656 Acres
TOTAL CONTRACT AREA	-----	840 Acres

1. Boundaries are posted with tags that read "Boundary of Timber Reserve," and boundary trees are painted orange.
2. Property lines are posted with orange and white tags that read "Timber Cutting Boundary."
3. Clearing limits on road rights-of-way are marked with colored paper flashers.
4. Trees marked with orange paint in all Harvest Areas and on all Harvest Area boundaries are reserved by the government.
5. Ground-based yarding is limited to dry season operations and slopes 35% or less within the approximate ground-based area shown on Exhibit A.

Note: Acres shown on Exhibit A have been computed using a Trimble Geo XT Global Positioning System receiver and ESRI ArcMap 10 GIS software. Acreage was calculated based on Global Positioning System traverse procedures including differential correction.

District	Township	Range	Section	Meridian	Contract Number
ROSEBURG	27S	2W	17 & 20	WILLAMETTE	OR10-TS12-04



1,000 500 0 1,000 Feet

Scale 1" = 1000 Ft

LEGEND



Harvest Area - Ground Based Yarding



Harvest Area - Cable Yarding



Reserve Area

— Boundary of Cutting Area

- - - Boundary of Contract Area

== Existing Road

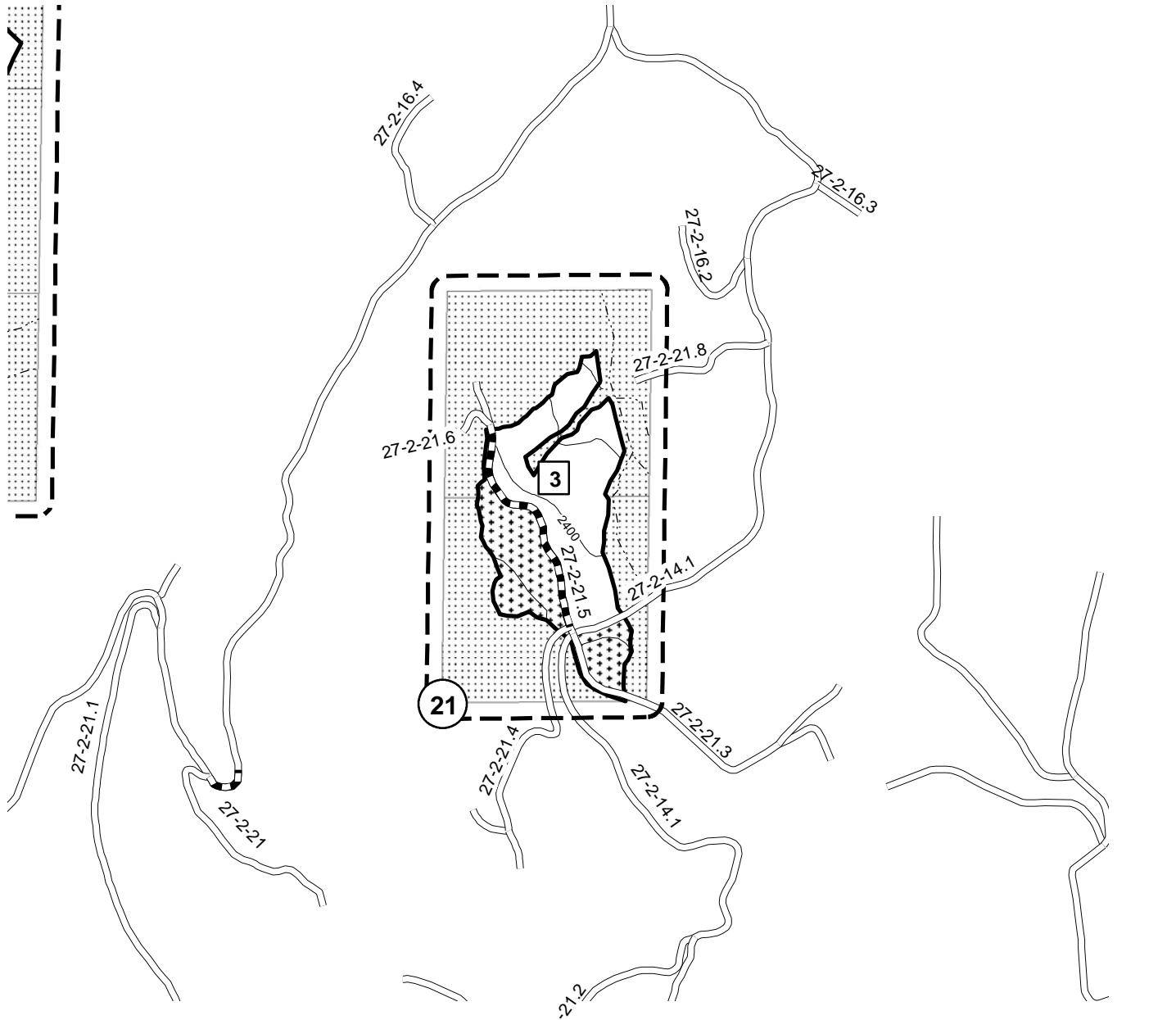
==== Spur To Be Constructed

—+— Road to be Renovated

-.-.- Stream











District	Township	Range	Section	Meridian	Contract Number
ROSEBURG	27S	2W	21	WILLAMETTE	OR10-TS12-04



1,000 500 0 1,000 Feet
Scale 1" = 1000 Ft

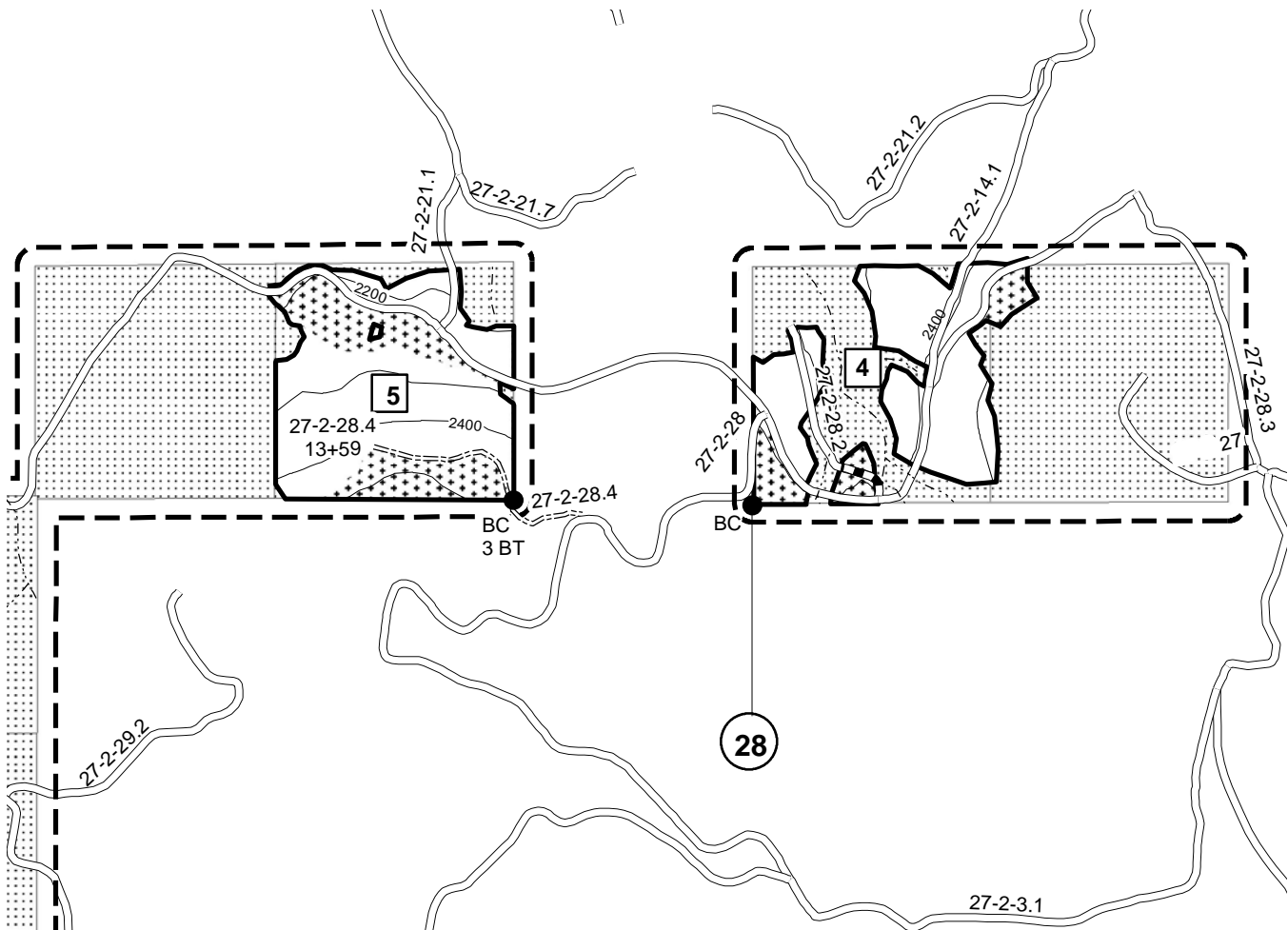
LEGEND

-  Harvest Area - Ground Based Yarding
-  Harvest Area - Cable Yarding
-  Reserve Area
-  Boundary of Cutting Area
-  Boundary of Contract Area

-  Existing Road
-  Road to be Renovated
-  Stream











District	Township	Range	Section	Meridian	Contract Number
ROSEBURG	27S	2W	28 & 29	WILLAMETTE	OR10-TS12-04



1,000 500 0 1,000 Feet
Scale 1" = 1000 Ft

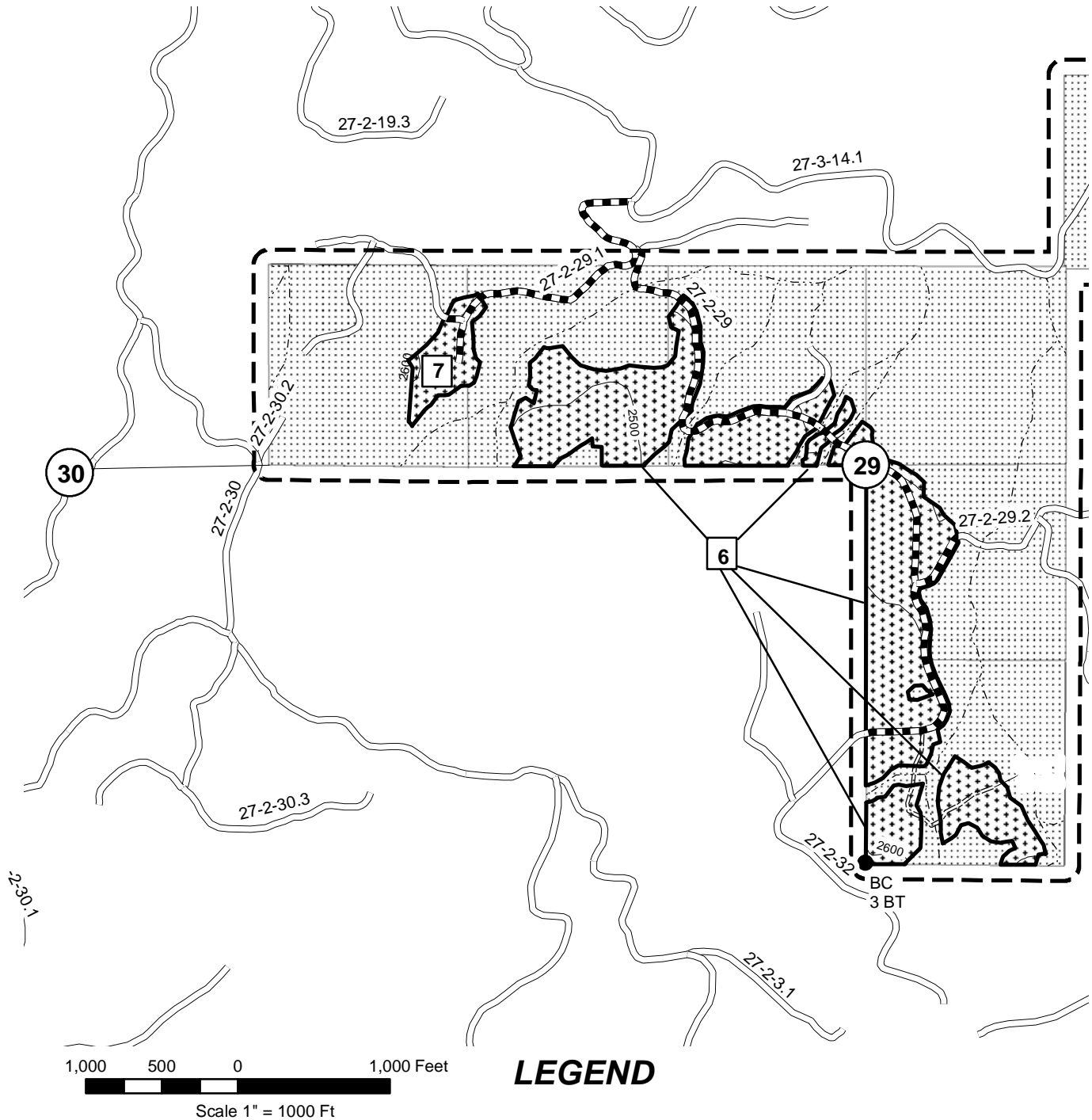
LEGEND

-  Harvest Area - Ground Based Yarding
-  Harvest Area - Cable Yarding
-  Reserve Area
-  Boundary of Cutting Area
-  Boundary of Contract Area
-  Found Corner

-  Existing Road
-  Spur To Be Constructed
-  Stream



District	Township	Range	Section	Meridian	Contract Number
ROSEBURG	27S	2W	29 & 30	WILLAMETTE	OR10-TS12-04



LEGEND



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

Roseburg
Red Butte CT
OR10-TS12-04

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	1,975		
Grand Fir	141		
Western Hemlock	101		
Western red-cedar	24		
Ponderosa Pine	5		
Incense-cedar	2		
Sale Totals	2,248		

Unit Details (16' MB)

Unit 1 20 Acres Value per Acre : \$0.00

Species	Net Volume	Bid Price	Species Value
Douglas-fir	203		
Grand Fir	6		
Western Hemlock	8		
Western red-cedar	2		
Unit Totals	219		

Unit 2 27 Acres Value per Acre : \$0.00

Species	Net Volume	Bid Price	Species Value
Douglas-fir	403		
Grand Fir	4		
Western Hemlock	3		
Western red-cedar	1		
Unit Totals	411		

Roseburg
Red Butte CT
OR10-TS12-04

Species	Net Volume	Bid Price	Species Value
Douglas-fir	226		
Grand Fir	1		
Ponderosa Pine	5		
Western Hemlock	7		
Unit Totals	239		

Species	Net Volume	Bid Price	Species Value
Douglas-fir	256		
Grand Fir	15		
Incense-cedar	2		
Western Hemlock	5		
Western red-cedar	1		
Unit Totals	279		

Species	Net Volume	Bid Price	Species Value
Douglas-fir	307		
Grand Fir	50		
Western Hemlock	34		
Western red-cedar	8		
Unit Totals	399		

Species	Net Volume	Bid Price	Species Value
Douglas-fir	499		
Grand Fir	61		
Western Hemlock	40		
Western red-cedar	10		
Unit Totals	610		

Species	Net Volume	Bid Price	Species Value
Douglas-fir	42		
Grand Fir	2		
Western Hemlock	2		
Western red-cedar	1		
Unit Totals	47		

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

Roseburg
Red Butte CT
OR10-TS12-04

Unit RW 2 Acres Value per Acre : \$0.00

Species	Net Volume	Bid Price	Species Value
Douglas-fir	39		
Grand Fir	2		
Western Hemlock	2		
Western red-cedar	1		
Unit Totals	44		

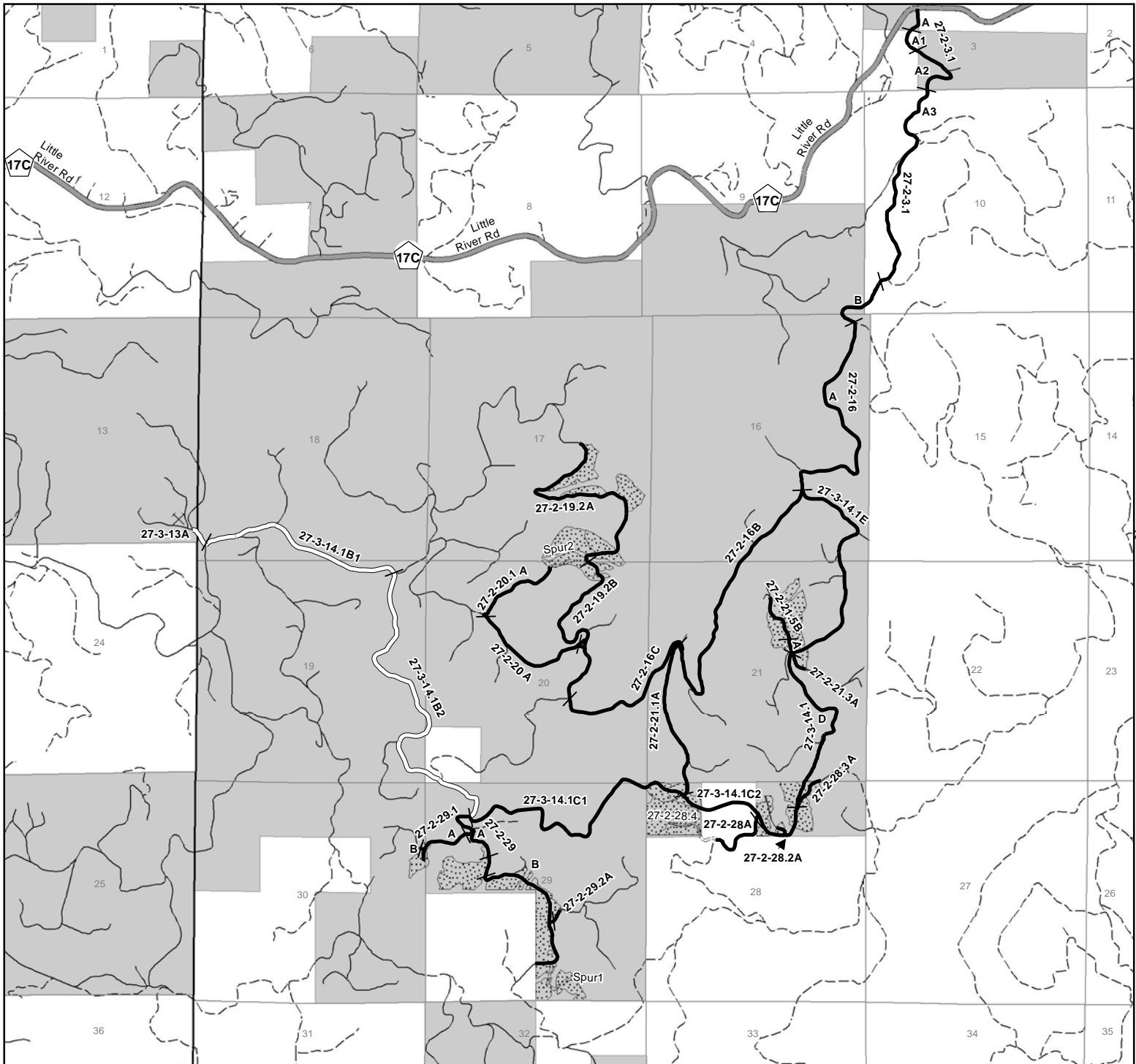
ACCESS & MAINTENANCE MAP

EXHIBIT D

Red Butte

Commercial Thinning

R2W



0.4 0.2 0 0.4 0.8 1.2 Miles

Legend

- Interstate & State Hwy
- County Road
- Spurs New Construction
- Haul Route
- Rock Haul Only
- BLM Road
- Other Road
- Harvest Area
- BLM Administered Land
- Stockpile



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

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

Sale Name: Red Butte Commercial Thinning							
Contract No. OR10-TS12-04							
Road Number	Road Seg.	Segment Length	Segment Owner	Road Use Fees	Surface Type	Timber Haul Fees	Maintained By
27-2-16.0	A	1.15	BLM		ROCK	\$1.13	BLM
27-2-16.0	B	1.40	BLM		ROCK	\$1.13	BLM
27-2-16.0	C	0.96	BLM		ROCK	\$1.13	BLM
27-2-19.2	A (POR)	1.22	BLM		ROCK	\$1.13	BLM
27-2-19.2	B	1.04	BLM		ROCK	\$1.13	BLM
27-2-20.0	A (POR)	0.57	BLM		ROCK	\$1.13	BLM
27-2-20.1	A	0.36	BLM		ROCK	\$1.13	BLM
27-2-21.1	A	0.76	BLM		ROCK	\$1.13	BLM
27-2-21.3	A (POR)	0.10	BLM		ROCK		PURCHASER
27-2-21.5	A	0.14	BLM		ROCK		PURCHASER
27-2-21.5	B (POR)	0.19	BLM		ROCK		PURCHASER
27-2-28.0	A(POR)	0.33	SENECA	PAID OFF	ROCK		PURCHASER
27-2-28.2	A (POR)	0.06	BLM		NATIVE		PURCHASER
27-2-28.3	A (POR)	0.19	BLM		ROCK		PURCHASER
27-2-28.4	A	0.26	BLM		NATIVE		PURCHASER
27-2-29.0	A	0.38	BLM		ROCK		PURCHASER
27-2-29.0	B (POR)	0.74	BLM		ROCK		PURCHASER
27-2-29.1	A	0.27	BLM		ROCK		PURCHASER
27-2-29.1	B (POR)	0.03	BLM		NATIVE		PURCHASER
27-2-29.2	A (POR)	0.09	BLM		ROCK		PURCHASER
27-2-3.1	A	0.16	USFS	FREE USE	ROCK	\$1.13	BLM
27-2-3.1	A1	0.20	PUBLIC	FREE USE	ROCK	\$1.13	BLM
27-2-3.1	A2	0.24	USFS	FREE USE	ROCK	\$1.13	BLM
27-2-3.1	A3	1.20	USFS	FREE USE	ROCK	\$1.13	BLM
27-2-3.1	B(POR)	0.20	USFS	FREE USE	ROCK	\$1.13	BLM
27-3-13.0	A (POR)	0.20	BLM		ROCK		BLM
27-3-14.1	B1 (POR)	0.95	BLM		ROCK		BLM
27-3-14.1	B2	1.51	BLM		ROCK		BLM
27-3-14.1	C1	1.27	BLM		ROCK	\$1.13	BLM
27-3-14.1	C2	0.66	BLM		ROCK	\$1.13	BLM
27-3-14.1	D	0.82	BLM		ROCK	\$1.13	BLM
27-3-14.1	E	1.00	BLM		ROCK	\$1.13	BLM
Spur 1	A	0.22	BLM		NATIVE		PURCHASER
Spur 2	A	0.11	BLM		ROCK		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 Section 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 removal 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 complete Decommissioning according to Exhibit "C" Decommissioning 2600 Specifications on native surfaced roads used under terms of their contract within 30 calendar days following the expiration of Purchaser's right to cut and remove timber Section 4 and in accordance with Sec. 16(b) of this contract.
- 3303- The Purchaser shall perform final road maintenance only when weather or soil moisture conditions are suitable for normal maintenance equipment operations as determined by the Authorized Officer.

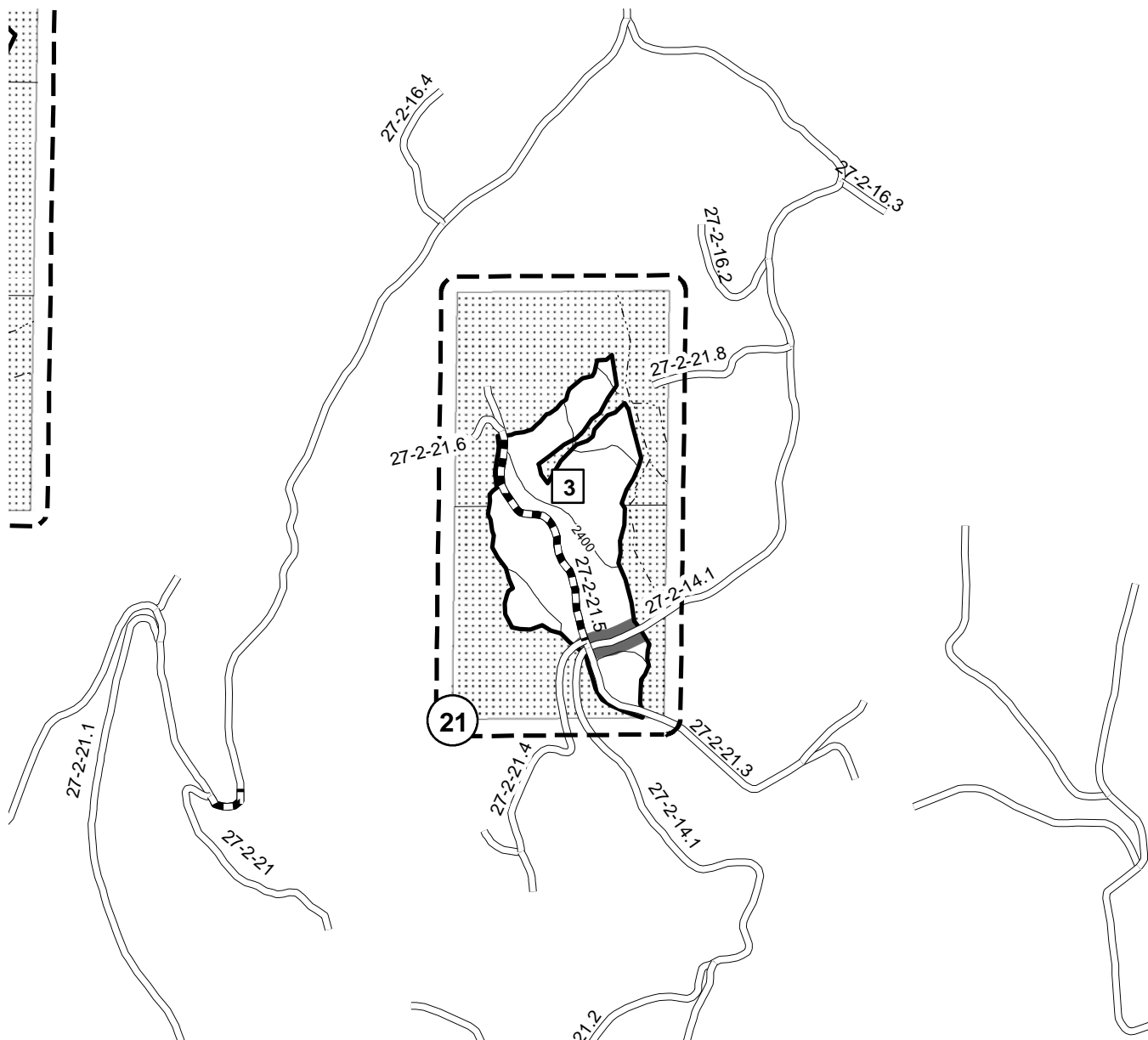
If final maintenance is delayed after the date required in Subsection 3301 of this contract by adverse soil moisture or unsuitable equipment operating conditions, the Purchaser will be notified by the Authorized Officer when soil moisture and equipment operating conditions are suitable. The Purchaser shall then be required to complete final maintenance within 45 days.

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.

District	Township	Range	Section	Meridian	Contract Number
ROSEBURG	27S	2W	21	WILLAMETTE	OR-10-TS12-04



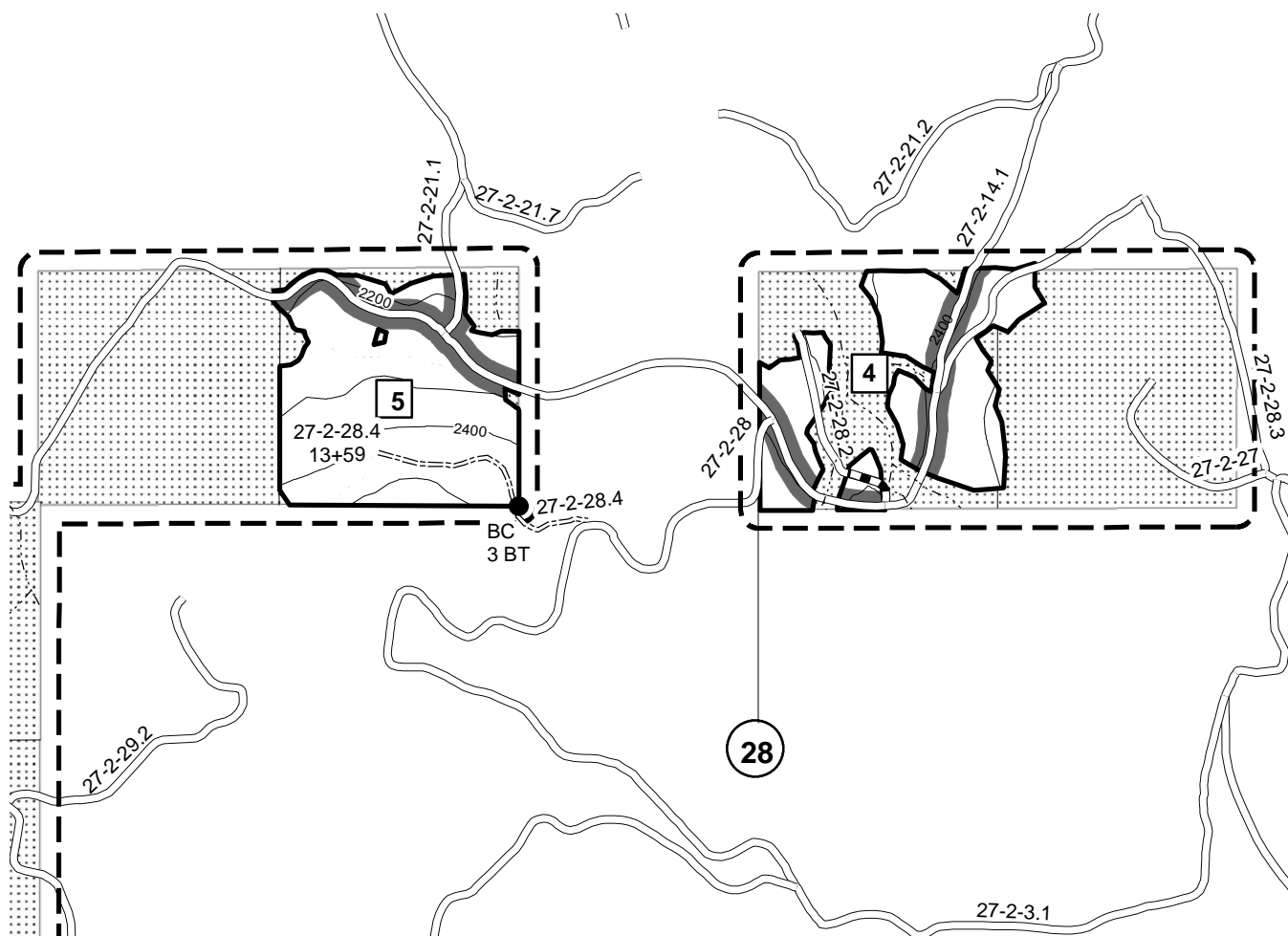
LEGEND

-  Hand Piling Area
-  Harvest Area
-  Reserve Area
-  Boundary of Cutting Area
-  Boundary of Contract Area

-  Existing Road
-  Road to be Renovated
-  Stream



District	Township	Range	Section	Meridian	Contract Number
ROSEBURG	27S	2W	28 & 29	WILLAMETTE	OR-10-TS12-04



1,100 550 0 1,100 Feet
Scale 1" = 1000 Ft

LEGEND

- Hand Piling Area
- Harvest Area
- Reserve Area
- Boundary of Cutting Area
- Boundary of Contract Area

- Existing Road
- Spur To Be Constructed
- Stream



UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Summary of All Roads and Projects

T.S. Update 04/15/10

T.S. Contract Name: Red Butte Sale Date: 05-22-2012

Prepared by: B. Albin Ph: 3328 Print Date: 1/11/2012 10:09:51 AM

Construction: 34.49 sta (Surfaced 17.10 sta Natural 13.59 sta)

Improve: 0.00 sta Renov: 146.10 sta Decom: 0.00 sta Temp: 0.00 sta

200 Clearing and Grubbing: 1.0 acres	\$4,223.81
Clearing: 31.7 sta Grubbing: 1.0 acres	
Slash Treatment: 1.0 acres	
300 Excavation:	\$7,415.96
Haul: 0 sta-yds	
400 Drainage:	\$3,859.23
Culvert: 0 lf wt = 0 lbs	
DownSpout: 0 lf	
PolyPipe: 96 lf	
500 Renovation:	\$7,613.51
Blading 2.44 mi	
Surfacing:	\$21,526.49
Quarry Name: Vian 612 cy	
Quarry Name: WOLF CREEK QUARRY 80 cy	
1300 Geotextiles:	\$0.00
1400 Slope Protection:	\$1,887.45
Gradation Class 3: 50 cy	
1800 Soil Stabilization: 0.4 acres	\$213.91
Includes Small Quantity Factor of 1.58	
1900 Cattleguards:	\$0.00
2100 RoadSide Brushing: 5.5 acres	\$3,970.64
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:	\$3,363.50
Mobilization: Const. \$7,159.20 Surf. \$1,628.01.....	\$8,787.21
Quarry Development:	\$0.00
Total: 2,248 mbf @ \$27.96/mbf =	\$62,861.69

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: Red Butte Sale Date: 05-22-2012

Road Number: 27-2-16.0 Road Name:

Road Renovation: 0.02 mi 14 ft Subgrade 3 ft ditch

T.S. Update 04/15/10

200 Clearing and Grubbing: 0.0 acres	\$510.33
Clearing:0.0 sta Grubbing:0.0 acres	
Slash Treatment:0.0 acres	
300 Excavation:	\$930.01
400 Drainage:	\$78.82
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:	\$1,887.45
Gradation Class 3: 50 cy	
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. \$451.02 Surf. \$0.00.....	\$451.02
Quarry Development:	\$0.00
Total:	\$3,857.63

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: Red Butte Sale Date: 05-22-2012

Road Number: 27-2-20.0 Road Name:

Road Renovation: 0.57 mi 14 ft Subgrade 3 ft ditch

T.S. Update 04/15/10

200 Clearing and Grubbing: 0.0 acres	\$375.79
Clearing:0.0 sta Grubbing:0.0 acres	
Slash Treatment:0.0 acres	
300 Excavation:	\$547.64
400 Drainage:	\$1,434.00
Culvert: 0 lf wt = 0 lbs factor = 1.2	
DownSpout: 0 lf	
PolyPipe: 60 lf	
500 Renovation:	\$1,220.90
Blading 0.50 mi	
Surfacing:	\$10,498.35
Quarry Name: Vian 345 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: 1.0 acres	\$624.29
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. \$1,946.34 Surf. \$811.65.....	\$2,757.99
Quarry Development:	\$0.00

Total: \$17,458.95

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: Red Butte Sale Date: 05-22-2012

Road Number: 27-2-20.1 Road Name:

Road Renovation: 0.39 mi 14 ft Subgrade 3 ft ditch

T.S. Update 04/15/10

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:	\$976.72
Blading 0.40 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: 0.7 acres	\$437.00
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. \$187.17 Surf. \$0.00.....	\$187.17
Quarry Development:	\$0.00
Total:	\$1,600.89

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: Red Butte Sale Date: 05-22-2012

Road Number: 27-2-21.5 Road Name:

Road Renovation: 0.27 mi 14 ft Subgrade 3 ft ditch

T.S. Update 04/15/10

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:	\$911.85
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: 0.5 acres	\$312.15
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. \$162.05 Surf. \$0.00.....	\$162.05
Quarry Development:	\$0.00

Total: \$1,386.04

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: Red Butte Sale Date: 05-22-2012

Road Number: 27-2-28.2 Road Name:

Road Renovation: 0.06 mi 14 ft Subgrade ft ditch

T.S. Update 04/15/10

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	\$268.52
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:	\$403.62
Mobilization: Const. \$120.74 Surf. \$0.00.....	\$120.74
Quarry Development:	\$0.00

Total: \$1,032.68

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: Red Butte Sale Date: 05-22-2012

Road Number: 27-2-28.4 Road Name:

Road Construction: 0.26 mi 14 ft Subgrade ft ditch T.S. Update 04/15/10

200 Clearing and Grubbing: 0.5 acres	\$1,686.96
Clearing:13.6 sta Grubbing:0.5 acres	
Slash Treatment:0.5 acres	
300 Excavation:	\$2,335.97
400 Drainage:	\$1,158.48
Culvert: 0 lf wt = 0 lbs factor = 1.2	
DownSpout: 0 lf	
PolyPipe: 36 lf	
500 Renovation:	\$0.00
Surfacing:	\$0.00
1300 Geotextiles:	\$0.00
1400 Slope Protection:	\$0.00
1800 Soil Stabilization: 0.4 acres	\$213.91
Includes Small Quantity Factor of 1.58	
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:	\$672.70
Mobilization: Const. \$803.38 Surf. \$0.00.....	\$803.38
Quarry Development:	\$0.00
Total:	\$6,871.39

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: Red Butte Sale Date: 05-22-2012

Road Number: 27-2-29.0 Road Name:

Road Renovation: 1.12 mi 14 ft Subgrade 3 ft ditch

T.S. Update 04/15/10

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:	\$443.14
Culvert: 0 lf wt = 0 lbs factor = 1.2	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	\$3,113.99
Blading 1.20 mi	
Surfacing:	\$96.00
Quarry Name: WOLF CREEK QUARRY 20 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: 2.7 acres	\$1,685.58
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. \$706.82 Surf. \$47.05.....	\$753.87
Quarry Development:	\$0.00
Total:	\$6,092.58

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: Red Butte Sale Date: 05-22-2012

Road Number: 27-2-29.1 Road Name: 27-2-29.1 A & B

Road Renovation: 0.34 mi 14 ft Subgrade 3 ft ditch

T.S. Update 04/15/10

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:	\$730.78
Blading 0.34 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: 0.6 acres	\$374.57
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. \$146.34 Surf. \$0.00.....	\$146.34
Quarry Development:	\$0.00
Total:	\$1,251.69

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: Red Butte Sale Date: 05-22-2012

Road Number: 27-2-29.2 Road Name:

Road Renovation: 0.09 mi 14 ft Subgrade 3 ft ditch

T.S. Update 04/15/10

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:	\$419.49
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	\$268.52
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. \$91.09 Surf. \$0.00.....	\$91.09
Quarry Development:	\$0.00
Total:	\$779.10

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: Red Butte Sale Date: 05-22-2012

Road Number: Spur 1 Road Name:

Road Construction: 0.22 mi 14 ft Subgrade ft ditch

T.S. Update 04/15/10

200 Clearing and Grubbing: 0.4 acres	\$1,143.78
Clearing:11.5 sta Grubbing:0.4 acres	
Slash Treatment:0.4 acres	
300 Excavation:	\$2,026.65
400 Drainage:	\$744.79
Culvert: 0 lf wt = 0 lbs factor = 1.2	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	\$0.00
Surfacing:	\$2,470.91
Quarry Name: WOLF CREEK QUARRY 60 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:	\$1,210.86
Mobilization: Const. \$1,005.80 Surf. \$141.16.....	\$1,146.96
Quarry Development:	\$0.00
Total:	\$8,743.94

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: Red Butte Sale Date: 05-22-2012

Road Number: Spur 2 Road Name:

Road Construction: 0.11 mi 15 ft Subgrade ft ditch

T.S. Update 04/15/10

200 Clearing and Grubbing: 0.1 acres	\$506.96
Clearing:6.6 sta Grubbing:0.1 acres	
Slash Treatment:0.1 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:	\$8,461.23
Quarry Name: Vian 267 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:	\$1,076.32
Mobilization: Const. \$1,538.46 Surf. \$628.15.....	\$2,166.61
Quarry Development:	\$0.00
Total:	\$13,786.80

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

District : Roseburg	Contract # : OR10-TS12-04
Sale Name : Red Butte CT	Job File # : R10505
Sale Date : 05/22/2012	Master Unit : Douglas
Appraisal Method : 16' MBF	Planning Unit : Swiftwater

Contents

Timber Sale Summary	2
Stumpage Summary	4
Prospectus	5
Exhibit B	6
Volume Summary	9
Stump to Truck Costs	12
Other Allowances Costs	13
Consolidated Comments	14

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

Roseburg
Red Butte CT
OR10-TS12-04

Legal Description

Forest Type	Township	Range	Section	Subdivision
O&C	27S	02W	17	S1/2NE1/4, SE1/4
O&C	27S	02W	20	N1/2NE1/4, SW1/4NE1/4
O&C	27S	02W	21	W1/2NE1/4
O&C	27S	02W	28	N1/2NE1/4, NW1/4NW1/4
O&C	27S	02W	29	NE1/4NE1/4, SW1/4NE1/4, S1/2NW1/4, W1/2SE1/4
O&C	27S	02W	30	SE1/4NE1/4

Cutting Volume (16' MBF)

Unit	DF	GF	WH	WRC	PP	IC			Total	Regen	Partial	ROW
1	203	6	8	2					219	0	20	0
2	403	4	3	1					411	0	27	0
3	226	1	7		5				239	0	26	0
4	256	15	5	1		2			279	0	21	0
5	307	50	34	8					399	0	32	0
6	499	61	40	10					610	0	51	0
7	42	2	2	1					47	0	5	0
RW	39	2	2	1					44	0	0	2

Totals	1,975	141	101	24	5	2			2,248	0	182	2
--------	-------	-----	-----	----	---	---	--	--	-------	---	-----	---

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

Roseburg
Red Butte CT
OR10-TS12-04

Logging Costs per 16' MBF

Stump to Truck	\$ 172.54
Transportation	\$ 55.42
Road Construction	\$ 27.96
Road Amortization	\$ 0.00
Road Maintenance	\$ 7.73

Other Allowances :

Equipment Cleaning	\$ 0.37
Misc	\$ 8.63
Total Other Allowances :	\$ 9.00

Total Logging Costs per 16' MBF

\$ 272.65

Utilization Centers

Center #1 : Roseburg, Or 37 Miles
Center #2 0 Miles
Weighted distance to Utilization Centers 37

Length of Contract

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

Profit & Risk

Total Profit & Risk	14 %
Basic Profit & Risk	11 % + Additional Risk 3 %
Back Off	0 %

Tract Features

Avg Log	Douglas-fir : 32 bf	All : 33 bf
Recovery	Douglas-fir : 96 %	All : 95 %
Salvage	Douglas-fir : 0 %	All : 0 %
Avg Volume (16' MBF per Acre)		12
Avg Yarding Slope		40 %
Avg Yarding Distance (feet)		500
Avg Age		45
Volume Cable		53 %
Volume Ground		47 %
Volume Aerial		0 %
Road Construction Stations		34.49
Road Improvement Stations		0.00
Road Renovation Stations		146.10
Road Decommission Stations		33.79

Cruise

Cruised By	JK, BP
Date	07/01/2011
Type of Cruise	3-P DF, 100% Minors
County, State	Douglas, OR

Net Volume

Green (16' MBF)	2,248
Salvage (16' MBF)	0
Douglas-fir Peeler	0
Export Volume	0
Scaling Allowance (\$0.75 per 16' MBF)	\$1,686.00

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

Roseburg
Red Butte CT
OR10-TS12-04

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	20,997	1,975	\$ 357.02	\$ 49.98	\$ 272.65			\$ 35.70	\$ 70,507.50
GF	1,004	141	\$ 328.66	\$ 46.01	\$ 272.65			\$ 32.90	\$ 4,638.90
WH	1,740	101	\$ 312.41	\$ 43.74	\$ 272.65			\$ 31.20	\$ 3,151.20
WRC	593	24	\$ 475.02	\$ 66.50	\$ 272.65			\$ 135.90	\$ 3,261.60
PP	75	5	\$ 120.00	\$ 16.80	\$ 272.65			\$ 12.00	\$ 60.00
IC	65	2	\$ 440.00	\$ 61.60	\$ 272.65			\$ 105.80	\$ 211.60
Totals	24,474	2,248							\$ 81,830.80

Log Code by Percent

Species	Code #1	Code #2	Code #3	Code #4	Code #5	Code #6
Douglas-fir				8.0	75.0	17.0
Grand Fir				26.0	63.0	11.0
Western Hemlock				3.0	71.0	26.0
Western red-cedar						100.0
Ponderosa Pine						100.0
Incense-cedar						100.0

Marginal Log Volume

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

Appraised By : Keady, Joe

Date : 12/05/2011

Area Approval By : Coppersmith, Jason

Date : 01/10/2012

District Approval By : Thompson, Kristen

Date : 04/18/2012

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

Roseburg
Red Butte CT
OR10-TS12-04

Prospectus

Appraisal Method : (16' MBF)

Species	Trees	Net Volume 16' MBF	Net Volume 32' MBF	Net Volume CCF
Douglas-fir	20,997	1,975	1,634	3,753
Grand Fir	1,004	141	117	261
Western Hemlock	1,740	101	81	196
Western red-cedar	593	24	19	54
Ponderosa Pine	75	5	4	11
Incense-cedar	65	2	2	4
Total	24,474	2,248	1,857	4,279

All Species

Gross Volume	Number Trees	Avg bf Volume Per Tree	DBH	Gross Merch Volume	Merch Logs	Avg bf Gross Merch Log
2,368	24,474	96	10.9	2,333	71,178	33

Merch Logs	Cull Logs	Total Logs	Logs per Tree	Net Volume	Gross Volume	Recovery
71,178	996	72,174	2.9	2,248	2,368	95 %

Douglas-fir

Gross Volume	Number Trees	Avg bf Volume Per Tree	DBH	Gross Merch Volume	Merch Logs	Avg bf Gross Merch Log
2,048	20,997	97	10.8	2,048	63,247	32

Merch Logs	Cull Logs	Total Logs	Logs per Tree	Net Volume	Gross Volume	Recovery
63,247	9	63,256	3.0	1,975	2,048	96 %

Cutting Areas

Unit	Regen Acres	Partial Cut Acres	Right Of Way Acres	Total Acres
1		20		20
2		27		27
3		26		26
4		21		21
5		32		32
6		51		51
7		5		5
RW			2	2
Totals :		182	2	184

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

Roseburg
Red Butte CT
OR10-TS12-04

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	1,975		
Grand Fir	141		
Western Hemlock	101		
Western red-cedar	24		
Ponderosa Pine	5		
Incense-cedar	2		
Sale Totals	2,248		

Unit Details (16' MB)

Unit 1 20 Acres Value per Acre : \$0.00

Species	Net Volume	Bid Price	Species Value
Douglas-fir	203		
Grand Fir	6		
Western Hemlock	8		
Western red-cedar	2		
Unit Totals	219		

Unit 2 27 Acres Value per Acre : \$0.00

Species	Net Volume	Bid Price	Species Value
Douglas-fir	403		
Grand Fir	4		
Western Hemlock	3		
Western red-cedar	1		
Unit Totals	411		

Roseburg
Red Butte CT
OR10-TS12-04

Species	Net Volume	Bid Price	Species Value
Douglas-fir	226		
Grand Fir	1		
Ponderosa Pine	5		
Western Hemlock	7		
Unit Totals	239		

Species	Net Volume	Bid Price	Species Value
Douglas-fir	256		
Grand Fir	15		
Incense-cedar	2		
Western Hemlock	5		
Western red-cedar	1		
Unit Totals	279		

Species	Net Volume	Bid Price	Species Value
Douglas-fir	307		
Grand Fir	50		
Western Hemlock	34		
Western red-cedar	8		
Unit Totals	399		

Species	Net Volume	Bid Price	Species Value
Douglas-fir	499		
Grand Fir	61		
Western Hemlock	40		
Western red-cedar	10		
Unit Totals	610		

Species	Net Volume	Bid Price	Species Value
Douglas-fir	42		
Grand Fir	2		
Western Hemlock	2		
Western red-cedar	1		
Unit Totals	47		

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

Roseburg
Red Butte CT
OR10-TS12-04

Unit RW 2 Acres Value per Acre : \$0.00

Species	Net Volume	Bid Price	Species Value
Douglas-fir	39		
Grand Fir	2		
Western Hemlock	2		
Western red-cedar	1		
Unit Totals	44		

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

Roseburg
Red Butte CT
OR10-TS12-04

Sale Volume Totals

184 Acres 0 Regen 182 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	20,997	63,247	9	1,975	2,048	2,048	1,634	1,681	1,682	3,753	3,891	3,892
Grand Fir	1,004	3,552	122	141	144	149	117	118	123	261	267	276
Western Hemlock	1,740	3,196	795	101	106	134	81	86	107	196	207	261
Western red-cedar	593	925	58	24	27	29	19	21	23	54	60	65
Ponderosa Pine	75	182	8	5	6	6	4	5	5	11	12	12
Incense-cedar	65	76	4	2	2	2	2	2	2	4	4	5
Totals	24,474	71,178	996	2,248	2,333	2,368	1,857	1,913	1,942	4,279	4,441	4,511

Unit Totals

Unit : 1 20 Acres 0 Regen 20 Partial 0 R/W

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	2,335	6,532		211	211	203
Western Hemlock	117	250	35	10	9	8
Grand Fir	42	135	7	7	6	6
Western red-cedar	46	69		2	2	2
Unit Totals	2,540	6,986	42	230	228	219

Unit : 2 27 Acres 0 Regen 27 Partial 0 R/W

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	4,270	12,966		418	418	403
Grand Fir	41	114	8	4	4	4
Western Hemlock	54	84	37	4	3	3
Western red-cedar	21	34		1	1	1
Unit Totals	4,386	13,198	45	427	426	411

Unit : 3 26 Acres 0 Regen 26 Partial 0 R/W

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	2,759	7,277		235	235	226
Western Hemlock	164	271	76	10	7	7
Ponderosa Pine	75	182	8	6	6	5
Grand Fir	16	39	3	1	1	1

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

Roseburg
Red Butte CT
OR10-TS12-04

Unit Totals	3,014	7,769	87	252	249	239
--------------------	--------------	--------------	-----------	------------	------------	------------

Unit : 4 21 Acres 0 Regen 21 Partial 0 R/W

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	2,590	8,210		265	265	256
Grand Fir	123	404	11	16	16	15
Western Hemlock	76	138	53	7	5	5
Incense-cedar	65	76	4	2	2	2
Western red-cedar	34	54	3	2	2	1
Unit Totals	2,888	8,882	71	292	290	279

Unit : 5 32 Acres 0 Regen 32 Partial 0 R/W

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	3,086	9,875		319	319	307
Grand Fir	302	1,166	48	53	51	50
Western Hemlock	483	1,026	250	45	35	34
Western red-cedar	182	329	7	10	9	8
Unit Totals	4,053	12,396	305	427	414	399

Unit : 6 51 Acres 0 Regen 51 Partial 0 R/W

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	5,223	16,022		517	517	499
Grand Fir	451	1,610	41	64	62	61
Western Hemlock	789	1,315	309	53	42	40
Western red-cedar	263	363	45	12	11	10
Unit Totals	6,726	19,310	395	646	632	610

Unit : 7 5 Acres 0 Regen 5 Partial 0 R/W

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	383	1,343		43	43	42
Grand Fir	16	44	3	2	2	2
Western Hemlock	30	53	17	2	2	2
Western red-cedar	38	58		1	1	1
Unit Totals	467	1,498	20	48	48	47

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

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	351	1,022	9	40	40	39

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

Roseburg
Red Butte CT
OR10-TS12-04

Western Hemlock	27	59	18	3	3	2
Grand Fir	13	40	1	2	2	2
Western red-cedar	9	18	3	1	1	1
Unit Totals	400	1,139	31	46	46	44

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

Roseburg
Red Butte CT
OR10-TS12-04

Stump to Truck Costs

Total (16' MBF)

Total Stump to Truck Costs	Net Volume	Cost / Net Volume
\$ 387,860.01	2,248	\$ 172.54

Detail

Yarding & Loading

Yarding System	Unit Of Measure	Units	Cost / Unit	Total Cost
Short Twr<40	MBF	1,158	\$ 201.58	\$ 233,429.64
Short Twr<40	MBF(downhill)	83	\$ 377.97	\$ 31,371.51
Track Skidder	MBF(RW)	46	\$ 90.02	\$ 4,140.92
Wheel Skidder	MBF(units)	1,046	\$ 102.95	\$ 107,685.70
Track Skidder	MBF(pvt)	12	\$ 88.52	\$ 1,062.24
Subtotal				\$ 377,690.01

Other Costs

Explanation	Unit Of Measure	Units	Cost / Unit	Total Cost
Int. Supports	Each	17	\$ 250.00	\$ 4,250.00
Lift Trees	Each	16	\$ 150.00	\$ 2,400.00
Subtotal				\$ 6,650.00

Additional Move-Ins

Equipment	# Move-In	Cost / Move In	Total Cost
Skidder	2	\$ 1,760.00	\$ 3,520.00
Subtotal			\$ 3,520.00

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Roseburg
Red Butte CT
OR10-TS12-04

Other Allowances Costs

Total (16' MBF)

Total Other Allowances Costs	Net Volume	Cost / Net Volume *	Total Buy Out Cost
\$20,230.00	2,248	\$9.00	\$0.00

Equipment Cleaning

Detail (16' MBF)

Cost Item	Total Cost	Cost / Net Vol *	Buy Out	Buy Out Cost
Yarder	\$ 165.00	\$ 0.07	N	\$ 0.00
Shovel	\$ 330.00	\$ 0.15	N	\$ 0.00
Track Skidder	\$ 165.00	\$ 0.07	N	\$ 0.00
Wheel Skidder	\$ 165.00	\$ 0.07	N	\$ 0.00
Subtotal	\$ 825.00	\$ 0.37		\$ 0.00

Misc

Detail (16' MBF)

Cost Item	Total Cost	Cost / Net Vol *	Buy Out	Buy Out Cost
Pile and Cover Landings	\$ 9,875.00	\$ 4.39	N	\$ 0.00
Sub-Soiling	\$ 3,105.00	\$ 1.38	N	\$ 0.00
Move-in (sub-soil)	\$ 1,760.00	\$ 0.78	N	\$ 0.00
Equip. clean (sub-soil)	\$ 165.00	\$ 0.07	N	\$ 0.00
Roadside handpiling	\$ 4,500.00	\$ 2.00	N	\$ 0.00
Subtotal	\$ 19,405.00	\$ 8.63		\$ 0.00

* 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
Red Butte CT
OR10-TS12-04

General

Yarding & Loading

Down hill logging in unit #4.
Track skidder appraised for R/W only.
Track Skidder (pvt) is for 28.4 rd. new construction(Seneca). Actual volume is 11.8 MBF @ \$90.02/MBF for a total of \$1,062.24. (logs to be decked along R/W)
Lift trees and Intermediate supports are estimates only based on Appraiser judgement.
Additional moves for ground base logging(assuming 2 months a season for dry season logging):
2 move-ins, 2 move-out @ 8 hrs ea. = 32 hrs
Lowboy @ \$110/hr x 32 hrs = \$3,520.00.

Road Costs

Maintenance breakdown:
Maintenance due BLM = \$8,471.14
Rockwear due BLM = \$6,968.20
Maintenance credit to Purchaser = \$1,947.69

(see Engineering Appraisal for details).

Transportation

WTD. sale area to Little River Road = 6 miles, 50 round trip minutes(RTM).
Little River Road to Roseburg = 31 miles, 77 RTM.
60 minute delay.

Used 3.2 hours/load:
2333 MBF(gm) @ 4.5 MBF/load = 519 loads
519 loads x 3.2 hrs/load = 1661 hrs.
1661 hrs x \$75.00/hr = \$124,575.00

(see Transportation appendix for details).

Other Allowances

BLM to burn landings and piles.
Sub-soil = Approx. 2 miles @ 3/4 mile/day (9 hr day).
Allowed 2 8 hour days to move in/out for sub-soiling.
Handpile 50' either side (in units only)of 14.1 road in units 3, 4, and 5. 21.1 road in unit 5(in units only).

Prospectus

United States Department of the Interior

**BUREAU OF LAND MANAGEMENT
Roseburg District Office**

ROAD CONSTRUCTION SPECIFICATIONS

Red Butte Commercial Thinning

EXHIBIT C

(Revised July 1996)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

ROAD SPECIFICATIONS

T. 27 S., R. 2 W.
Sections 16, 20, 21, 28, 29 & 30

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
700	AGGREGATE BASE COURSE (PIT RUN)
1000	AGGREGATE BASE COURSE (CRUSHED ROCK)
1200	AGGREGATE SURFACE COURSE (CRUSHED ROCK)
1300	GEOTEXTILES
1400	SLOPE PROTECTION
1700	EROSION CONTROL
1800	SOIL STABILIZATION
2100	ROADSIDE BRUSHING
2600	DECOMMISSIONING

GENERAL - 100

101 - Prewrite 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 sidecasting 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 0.9 mile to 1.8 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.
- 202a - Where clearing limits for structures have not been staked or shown on the plans, the limits shall extend 10 feet out from the outside edge of the structure.
- 202b - Where clearing limits for borrow pits, quarries, stockpile sites and channel changes have not been staked or shown on the plans, the limits shall extend 10 feet back of the top of the cut slope and 5 feet outside of the outside slope lines.
- 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, 202a, and 202b.

- 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.
- 210a - Disposal of clearing and grubbing debris on nongovernment property by scattering this material outside of clearing limits will be permitted provided the Purchaser obtains a written permit from the property owner on whose property the disposal is to be made. The Purchaser shall furnish the Authorized Officer a certified copy of the permit, and a written release from the property owner absolving the Government from responsibilities in connection with the disposal of debris on said property.
- 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 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 6 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.
- 321 - Excess excavated, unsuitable, or slide materials shall not be disposed of on areas where the material will encroach on a stream course or other body of water. Such materials shall be disposed of in accordance with Subsections 321b and 321c.
- 321b - Excess construction material as specified under Subsection 321 shall be loaded, hauled and disposed of at disposal sites as shown on the plans or at sites approved by the Authorized Officer.
- 321c - End-dumping will be permitted for the placement of excess materials under Subsection 321 in designated disposal areas or within areas approved by the Authorized Officer. Watering, rolling, and placement in layers is not required. Materials placed shall be sloped, shaped, and otherwise brought to a neat and sightly condition acceptable to the Authorized Officer.
- 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 in writing by the Authorized Officer prior to surfacing in segments or for the total project 3 day 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 metal tags.

- 501a - This work shall include the removal and disposal of slides in accordance with these specifications.
- 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.
- 503a - Debris from slides shall be hauled to designated disposal sites.
- 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 - 700
PIT RUN ROCK MATERIAL

- 701 - This work shall consist of hauling and placing one or more layers of pit run rock material on the approved roadbeds in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross sections shown on the plans.
- 702 - Pit run rock materials used in this work shall be obtained from the source shown on the plans.
- 703 - Pit run rock materials shall consist of talus rock, or other approved materials. The materials shall be reasonably free from vegetative matter or other deleterious material. The material obtained from the sources identified under Section 702 shall consist of the best material available from these sources as designated by the Authorized Officer.
- 704 - Pit run rock material shall consist of native materials of such a size and grading that it can be taken directly from the source and placed on the road without crushing or screening. The material shall contain only occasional oversize particles to be removed. The term "oversize" shall be construed to mean material greater than 2/3 the compacted thickness of the layer in which it is placed.
- 705 - Pit run rock material shall be placed in layers of sufficient thickness to accommodate the material, except that the maximum thickness of any layer shall not exceed 12 inches. Where the total specified thickness is greater than 12 inches the material shall be placed in two or more layers of equal thickness.
- 706 - Oversize material that cannot be accommodated in the layer shall be removed at the source or on the road, and shall be disposed of as directed by the Authorized Officer.
- 708 - The roadbed as shaped and compacted under Section 300 of these specifications shall be approved in writing by the Authorized Officer prior to placement of pit run rock material.
- 709 - Pit run rock material shall be placed on roadbed and spread to required dimensions.
- 711 - Layers of pit run rock material placed and shaped as specified shall be uniformly moistened or dried to the optimum moisture content for maximum density and compacted to full width by compacting equipment conforming to the requirements of Subsections 103f and 103h. All of the surface area of each lift of placed pit run shall be compacted by a minimum of 6 complete passes or until visual displacement ceases.
- 712 - Pit run rock material shall be surface bladed during the compaction operation to remove irregularities and to produce a smooth running surface.
- 713 - Pit run rock material used to repair or reinforce soft, muddy, frozen, yielding, or rutted subgrades shall not be construed as surfacing required under this specification unless approved in writing by the Authorized Officer prior to placement.

AGGREGATE BASE COURSE - 1000
CRUSHED ROCK MATERIAL

- 1001- This work shall consist of furnishing, hauling, and placing one or more lifts of crushed rock material on approved roadbeds and landings 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.
- 1002 - Crushed rock materials used in this work shall consist of quarry rock, stone, gravel or other approved materials obtained from the source shown on the plans.
- 1002a- Crushed rock materials may be obtained from a commercial source selected by the Purchaser at his option and expense providing that the rock materials selected comply with the specifications in this section.
- 1003- Crushed rock material produced from gravel shall have 2 manufactured fractured faces on 65 percent, by weight, of the material retained on the No. 4 sieve
- 1004- Crushed rock materials shall consist of hard durable rock fragments conforming to the following gradation requirements:

TABLE 1004
AGGREGATE BASE COURSE
CRUSHED ROCK MATERIAL
Percentage by Weight Passing Square Mesh Sieves
(AASHTO T 11 & T 27)
GRADATION

<u>Sieve</u> <u>Designation</u>	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>F</u>	<u>G</u>	<u>H</u>
4-inch	-	-	-	100	-	-	-
3-inch	100	-	100	-	100	-	-
2-inch	90-95	100	-	100	65-95	100	100
1-1/2-inch	-	90-95	-	-	-	-	-
1-inch	45-75	50-90	-	-	-	50-85	60-90
3/4-inch	-	-	-	-	28-70	-	-
1/2-inch	-	-	-	-	-	27-60	44-70
3/8-inch	-	-	-	-	-	-	-
No. 4	15-45	15-50	-	-	10-35	15-40	28-50
No. 8	-	-	-	-	-	-	20-41
No. 10	-	-	-	-	-	-	-
No. 30	-	-	-	-	5-22	8-26	9-26
No. 40	5-25	5-25	-	-	-	-	-
No. 200	2-15	2-15	-	-	3-10	3-12	3-12

- 1005- 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.
- 1006- Crushed rock material shall show durability value of not less than 35, as determined by AASHTO T 210.

- 1006a- Crushed rock material shall show a loss of not more than 20 percent by weight when immersed in DMSO, dimethyl sulfoxide, for five days, in accordance with Federal Highway Administration's Region 10 Accelerated Weathering Test Procedure.
- 1008a- 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.
- 1009 - The roadbed, as shaped and compacted under Sections 300 of these specifications, shall be approved by the Authorized Officer at least 3 days prior to placement of crushed rock materials.
- 1010 - Crushed rock materials shall be placed and processed on the approved roadbed in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross sections shown on the plans and compacted in layers not to exceed 6 inches in depth. When more than one layer is required, each shall be shaped, processed, and 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 adding or removing crushed rock material until the surface is smooth and uniform.
- 1010a - Crushed rock material used to repair or reinforce soft, muddy, frozen, yielding, or rutted roadbeds shall not be construed as surfacing under this specification, unless approved as such by the Authorized Officer prior to placement.
- 1012 - Each layer of crushed rock material shall be placed, processed, shaped, moistened or dried to uniform moisture content suitable for maximum compaction, and compacted to full width by compaction equipment conforming to the requirements of Subsection 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.
- 1016 - Landing rock allotment of 200 cubic yards load ticket measure of Gradation 1004A crushed rock material shall be used on landing as directed by the Authorized Officer. This work is not required prior to road acceptance under Section 18 of this contract.

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 and base courses 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 comply with these specifications.
- 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 fractured

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

<u>Sieve</u> <u>Designation</u>	<u>GRADATION</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.
- 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 base course shall be completed and approved in writing, prior to placing crushed rock material in accordance to the requirements of Subsection 300 and 500 and Subsection 1000 for placing on the base course.
- 1210 - Crushed rock material conforming to the requirements of these specifications shall be placed on the approved base course in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross sections shown on the plans and staked on the ground. Compacted layers shall not exceed 4 inches in depth. When more than one layer is required, each shall be shaped, processed, compacted, and approved in writing 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.

- 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 Subsections 103f and 103h. Minimum compaction for each layer shall be a minimum of 6 complete passes or until visual displacement ceases.

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.

SLOPE PROTECTION - 1400

- 1401 - This work shall consist of furnishing, hauling, and placing stone materials for slope protection structures 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 slope protection structure as directed by the Authorized Officer.
- 1402 - Stone material shall consist of hard angular quarry rock of such quality that it will not disintegrate on exposure to water or weathering, and shall be graded in accordance with these specifications.
- 1404 - The material shall be well graded from the smallest to the maximum size specified. Stones smaller than the specified 10 percent size shall consist of spalls and fine rock fragments so distributed as to provide a stable compact mass.
- 1405 - Rip rap shall conform to the following gradations:

Class 1:

Weight of Rock (Pounds)	Volume Ft	Cubic Dim. (inches)	Sphere Dia. (inches)	% Passing Total Stones	Number of Stones/100
21	0.128	6.0	8	100	5
9	0.053	4.5	6	61	10
2	0.012	2.7	3	29	35
0	0.002	1.5	2	4	50*

Class 2:

Weight of Rock (Pounds)	Volume Ft	Cubic Dim. (inches)	Sphere Dia. (inches)	% Passing Total Stones	Number of Stones/100
534	3.23	17.6	22	100	5
293	1.77	14.5	18	95	20
86	0.52	9.6	12	75	15
12	0.07	5.0	6	60	60*

Class 3:

Weight of Rock (Pounds)	Volume Ft	Cubic Dim. (inches)	Sphere Dia. (inches)	% Passing Total Stones	Number of Stones/100
700	4.52	20	24	100	5
500	3.23	18	22	95	20
200	1.29	13	16	75	15
20	0.13	6	7.5	60	60*

Class 4:

Weight of Rock (Pounds)	Volume Ft	Cubic Dim. (inches)	Sphere Dia. (inches)	% Passing Total Stones	Number of Stones/100
2000	12.90	28	35	100	5
1400	9.03	25	31	95	20
700	4.52	20	24	75	15
40	0.32	8	10	60	60*

Class 5:

Weight of Rock (Pounds)	Volume Ft	Cubic Dim. (inches)	Sphere Dia. (inches)	% Passing Total Stones	Number of Stones/100
2700	16.30	31	38	100	5
1600	9.68	26	32	95	5
800	4.84	20	25	75	30
100	0.60	10	13	60	60*

Class 6:

Weight of Rock (Pounds)	Volume Ft	Cubic Dim. (inches)	Sphere Dia. (inches)	% Passing Total Stones	Number of Stones/100
4000	24.20	35	43	100	5
2000	12.10	28	34	95	10
500	3.02	17	22	90	40
70	0.42	9	11	60	45*

* Rocks smaller than six inches in diameter are not counted.

- 1406a- The embankment shall be placed in successive horizontal layers of sufficient depth to contain the maximum size rock present in the material. Spalls and finer fragments of stone other than specified in Subsection 1405 shall be used to chock the larger stones solidly in position and to fill voids between the major stones as laid in the embankment. The exposed face of the embankment shall be reasonably smooth and uniform; material shall be prevented from escaping beyond the toe of the structure.
- 1406b - Spaces in back of machine placed embankment shall be filled with hand tamped or rammed rock-spall material.
- 1407 - Determination of the acceptability of the slope protection material gradation will be through visual inspection and physical measurements by the Authorized Officer.
- 1408 - Trenches for slope protection structures shall be excavated to the lines, elevations, and typical diagram shown on the plans. They shall be of sufficient size to permit the placing of structure footing of the full widths and length shown. Trenches shall be approved by the Authorized Officer prior to placement of slope protection material.
- 1408a- Foundation trenches and other required excavation as shown on the plans shall be approved prior to placing the slope protection material.
- 1409 - Slope protection material shall be placed so as to form the cross sections shown on the plans. The face of the slope protection structure above the low-water line shall be uniform, free from humps, depressions, or large cavities.
- 1410 - The embankment slopes at the following location(s):

 Road No. Sta.

27-2-16 42+25

shall be protected and stabilized by placement of rock materials to form a slope protection structure conforming to the construction requirements and details of these specifications.

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 1st 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 8 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 8 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 foot 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.

DECOMMISSIONING - 2600

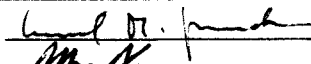


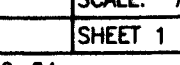
- 2601 - This work shall consist of installing water bars, scatter slash over road surface and blocking with trench barrier on roads designated to be decommissioned.
- 2603 - Decommissioning work shall be completed at the end of timber hauling activities.
- 2604 - Water bars shall be constructed and installed at locations as shown on the drawings.
- 2605 - 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.
- 2606 - Trench barriers shall be constructed according to the drawings and specifications.

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

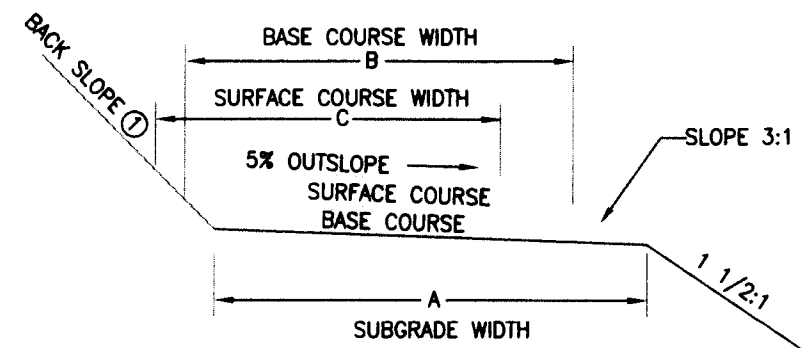
CONTRACT NAME: RED BUTTE CT
CONTRACT NO: OR10-TS12-04

ROAD NUMBER	STA/MP	TO	STA/MP	CONST.	REN OV.	DECOM.	SUB-SOILING	IMPROVE.	BASE COURSE		SURFACE COURSE		ROAD DIMENSIONS			TYP. ROAD SECTION	SHEET NO.
									DEPTH	TYPE	DEPTH	TYPE	A	B	C		
27-2-16.0	42+25	-	42+25		X							ROCK	EXISTING			1,3	4
27-2-20.0	0+00	-	3+80	X					9"	1004A		ROCK	15'	12'		3	6
27-2-20.0	3+80	-	30+20		X							ROCK	EXISTING			3	6
27-2-20.1	0+00	-	20+50		X							ROCK	EXISTING			3	4
27-2-21.5	0+00	-	14+50		X							ROCK	EXISTING			3	4
27-2-28.2	0+00	-	3+10		X	X						NATIVE	EXISTING			1,2	4
27-2-28.4	0+00	-	13+59	X		X						NATIVE	14'			1,2	9
27-2-29.0	0+00	-	58+90		X							ROCK	EXISTING			1,3	4
27-2-29.1A	0+00	-	17+00		X							ROCK	EXISTING			1,3	5
27-2-29.1B	0+00	-	1+20		X							ROCK	EXISTING			1,3	5
27-2-29.2	0+00	-	4+50		X							ROCK	EXISTING			3	5
SPUR 1	0+00	-	11+50	X		X						NATIVE	14'			1,2	7 & 10
SPUR 2	0+00	-	5+60	X		X			9"	1004A		ROCK	15'	12'		1	8

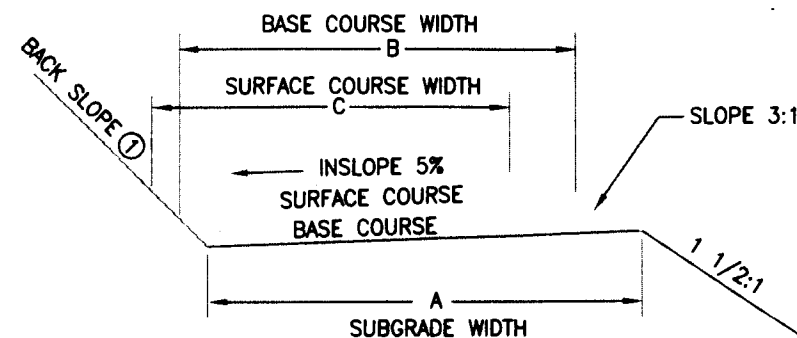
INDEX OF SHEETS	
SHEET	DESCRIPTION
1	ROAD SUMMARY
2	TYPICAL SECTIONS
3	VICINITY MAP
4	RENOVATION 27-2-16.0, 20.1, 21.5, 28.0, 28.2, 29.0
5	RENOVATION 27-2-29.1A, 29.1B, 29.2
6	RENOVATION 27-2-20.0
7	SPUR 1 CONSTRUCTION
8	SPUR 2 CONSTRUCTION
9	27-2-28.4 CONSTRUCTION
10	SPUR 1 LOG CULVERT DETAIL
11	CULVERT SUMMARY
12	CULVERT INSTALLATION DETAIL
13	SLOPE PROTECTION DETAIL
14	BRUSHING DETAIL
15	WATER BAR DETAIL
16	TRENCH BARRIER DETAIL

REV. NO.	DESCRIPTION	DATE	APPROVED
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT DIVISION OF OPERATIONS OREGON STATE OFFICE			
RED BUTTE COMMERCIAL THINNING ROAD SUMMARY			
ROSEBURG DISTRICT		OREGON	
ENGINEERING APPROVAL			
SUBMITTED			
RECOMMENDED			
APPROVED			
DRAWN: B. ALBIN	SCALE: AS SHOWN		
DATE: 9/1/2011	SHEET 1 OF 16		
DRAWING NO. OR10-TS12-04		BLM #	

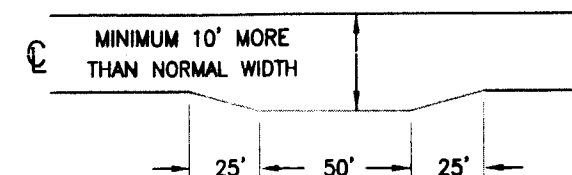




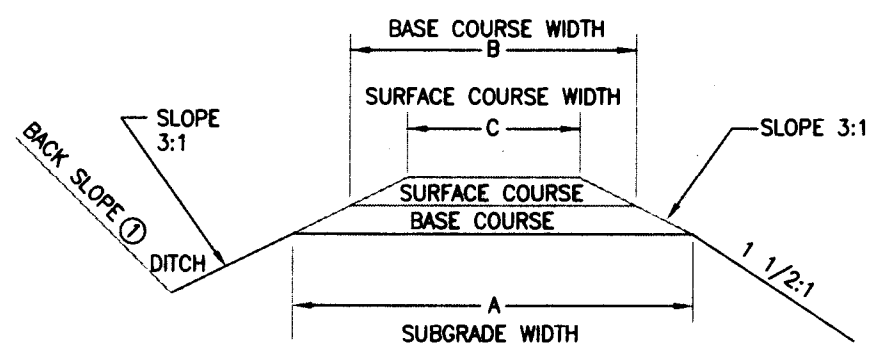
SECTION OUT SLOPE ROAD ①



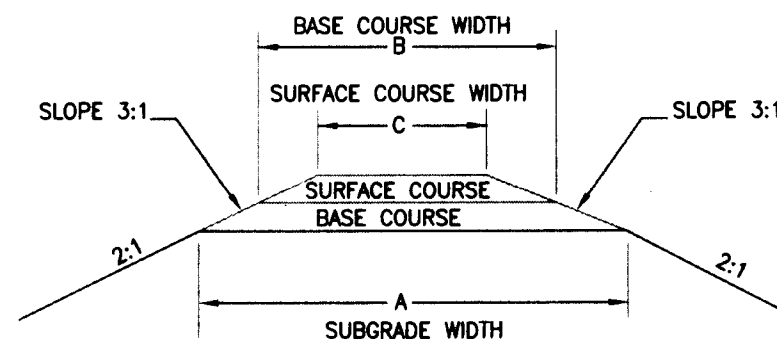
SECTION INSLOPE ROAD ②



TYPICAL 50' TURNOUT DIMENSIONS



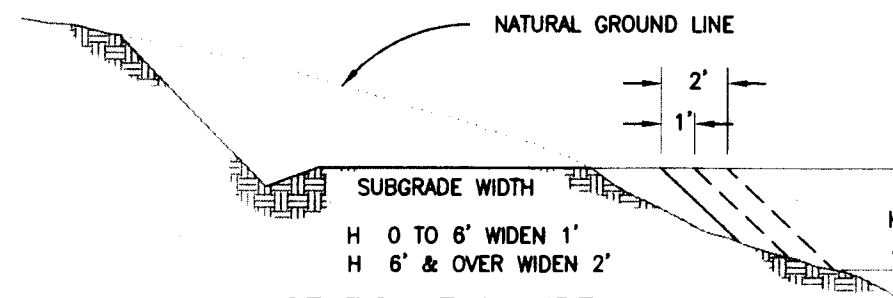
SECTION ROAD ③



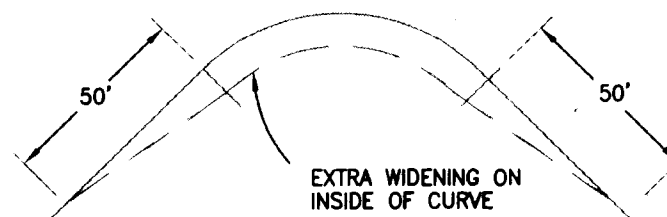
SECTION ROAD ④

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

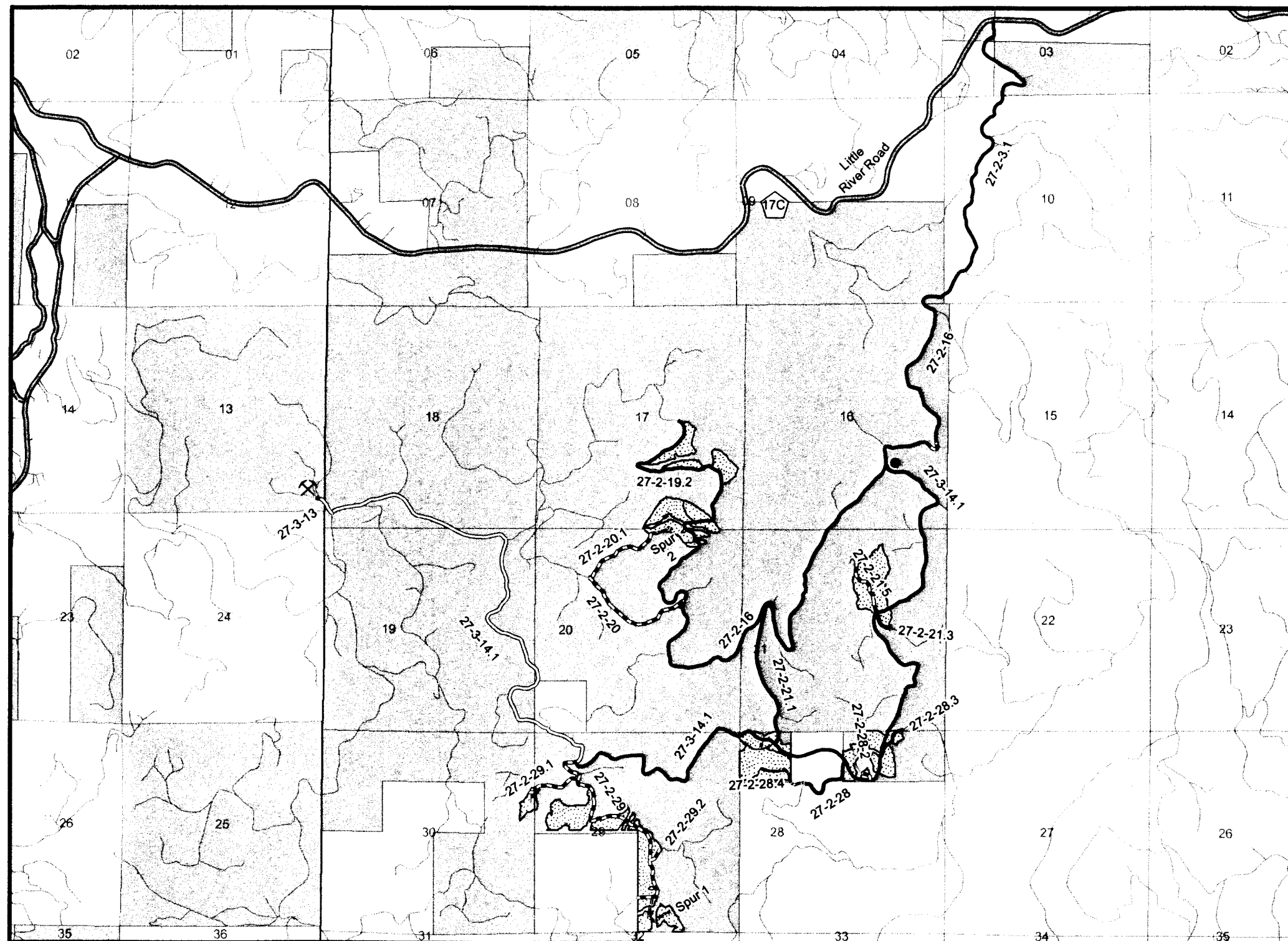
CURVE WIDENING TABLE FOR NON-DESIGN ROADS OR AS SHOWN ON PLANS. MAX 75' CURVE OR AS SHOWN ON PLANS.


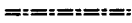
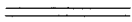






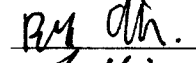
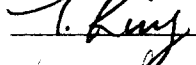
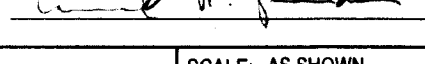
REV. NO.	DESCRIPTION	DATE	APPROVED
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT DIVISION OF OPERATIONS OREGON STATE OFFICE			
RED BUTTE COMMERCIAL THINNING TYPICAL SECTIONS			
ROSEBURG DISTRICT OREGON			
DESIGNED	<i>Ray M. King</i>		
REVIEWED	<i>L. King</i>		
APPROVED	<i>W. M. P. Smith</i>		
DRAWN: G. STACEY		SCALE: AS SHOWN	
DATE: 12/19/2006		SHEET 2 OF 16	
DRAWING NO. OR10-TS12-04		BLM #	

R 3 W

R 2 W

T
27
S**Legend**

-  RENOVATION
-  CONSTRUCTION
-  ROCK HAUL ONLY
-  HAUL ROUTE
-  COUNTY ROAD
-  HARVEST AREA
-  WOLF CREEK QUARRY
-  DESIGNATED DISPOSAL SITE

REV. NO.	DESCRIPTION	DATE	APPROVED
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT DIVISION OF OPERATIONS OREGON STATE OFFICE			
RED BUTTE COMMERCIAL THINNING VICINITY MAP			
ROSEBURG DISTRICT		OREGON	
DESIGNED			
REVIEWED			
APPROVED			
DRAWN: MGH		SCALE: AS SHOWN	
DATE: 9/10/2011		SHEET 3 OF 16	
DRAWING NO. OR10-TS12-04			BLM #

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



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
	27-2-16.0
0+00	BEGIN STATIONING AT JUNCTION OF 27-2-16.0 AND 27-2-3.1
42+25	PLACE SLOPE PROTECTION AT INLET OF CULVERT. 50 CY CLASS 3 RIP RAP, AND 65 SQ YDS GEOTEXTILE SEE SLOPE PROTECTION DETAIL SHEET PAGE 13 EXCESS MATERIAL TO BE PLACED AT DESIGNATED DISPOSAL SITE SEE VICINITY MAP PAGE 3 BEVEL INLET TO MATCH FILL SLOPE SEE CULVERT INSTALLATION DETAIL SHEET PAGE 12: BEVELED END DETAIL
	27-2-20.1
0+00	BEGIN RENOVATION AT JUNCTION OF 27-2-20.0 AND 27-2-20.1 BEGIN BRUSHING, BLADING, COMPACTION, CLEAN CULVERTS
8+30	EXISTING TURNOUT RIGHT
20+50	END RENOVATION BEGIN CONSTRUCTION OF SPUR 2 RIGHT
	27-2-21.5
0+00	BEGIN RENOVATION AT JUNCTION OF 27-2-21.5 and 27-3-14.1 BEGIN BRUSHING, BLADING, COMPACTION, PULL DITCHES AND CLEAN CULVERTS
3+80	EXISTING TURNOUT RIGHT
13+00	EXISTING TURNOUT RIGHT
14+50	END RENOVATION

STATION	DESCRIPTION
	27-2-28.2
0+00	BEGIN RENOVATION AT JUNCTION OF 27-2-28.2 AND 27-3-14.1 BEGIN BRUSHING AND BLADING
3+10	UNIT BOUNDARY END RENOVATION
	27-2-29.0
0+00	BEGIN RENOVATION AT JUNCTION OF 27-2-29.0 AND 27-3-14.1 BEGIN BRUSHING, BLADING, COMPACTION, PULLING DITCHES, AND CLEANING CULVERTS WIDEN SHOULDER LEFT WITH 20 CY OF PIT RUN PROTECT EXISTING CULVERT OUTLET DITCH AND CULVERT OUTLET SHALL BE RESTORED AT END OF HAULING OPERATION PIT RUN SOURCE WOLF CREEK QUARRY. SEE VICINITY MAP
3+20	EXISTING CULVERT
7+20	JUNCTION 27-2-29.1 RIGHT
22+10	EXISTING CULVERT
44+50	JUNCTION 27-2-29.2 LEFT
55+30	JUNCTION SPUR 1 LEFT
58+90	UNIT BOUNDARY / PROPERTY LINE END RENOVATION



REV. NO.	DESCRIPTION	DATE	APPROVED
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT DIVISION OF OPERATIONS OREGON STATE OFFICE RED BUTTE COMMERCIAL THINNING RENOVATION NOTES ROSEBURG DISTRICT OREGON			
DESIGNED	<i>mm mm.</i>		
REVIEWED	<i>J. King</i>		
APPROVED	<i>Carl H. P...</i>		
DRAWN: B. ALBIN		SCALE: AS SHOWN	
DATE: 8/1/2011		SHEET 4 OF 16	
DRAWING NO. OR10-TS12-04		BLM #	

ROAD RENOVATION CONTINUED

STATION	DESCRIPTION
	27-2-29.1A
0+00	BEGIN RENOVATION AT JUNCTION OF 27-2-29.1 AND 27-2-29.0 BEGIN BRUSHING, BLADING, AND COMPACTION
12+20	ENTER UNIT
13+90	CONTINUE RENOVATING 27-2-29.1B FOR 120' RIGHT
17+00	END RENOVATION
	27-2-29.2
0+00	BEGIN RENOVATION AT JUNCTION OF 27-2-29.2 AND 27-2-29.0 BEGIN BRUSHING, BLADING, COMPACTION, CLEAN CULVERTS
0+30	EXISTING CULVERT
4+50	END RENOVATION

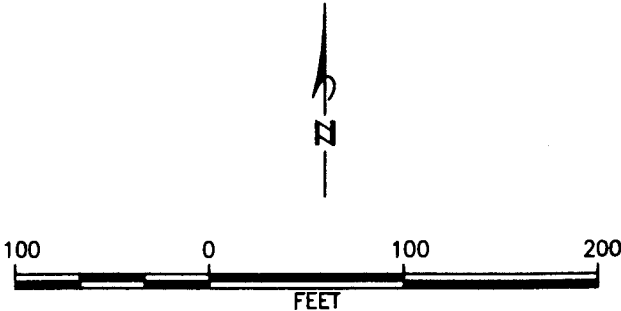
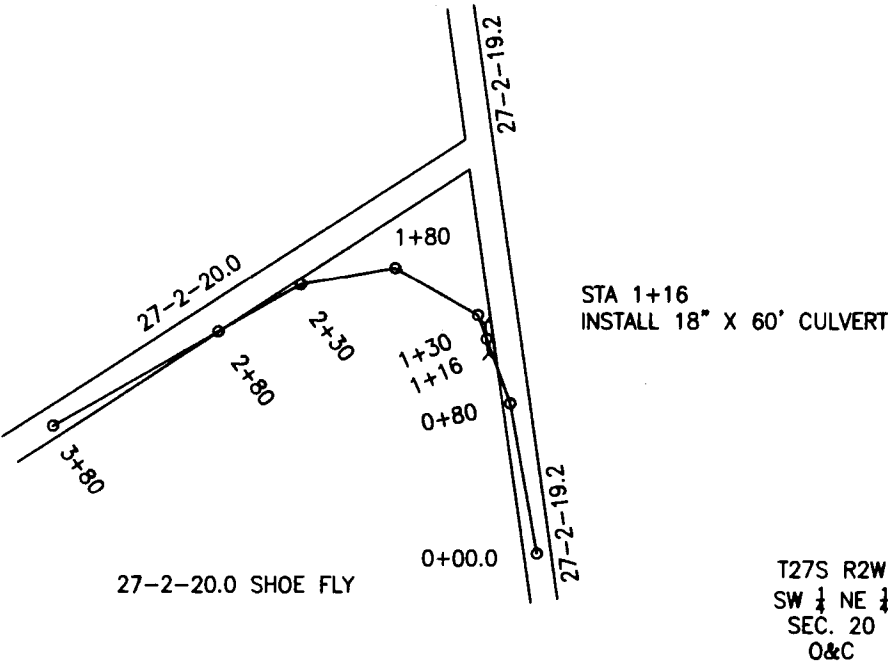


REV. NO.	DESCRIPTION	DATE	APPROVED
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT DIVISION OF OPERATIONS OREGON STATE OFFICE			
RED BUTTE COMMERCIAL THINNING			
RENOVATION NOTES			
ROSEBURG DISTRICT OREGON			
DESIGNED	<i>AMM</i>		
REVIEWED	<i>T. King</i>		
APPROVED	<i>Carl R. Pender</i>		
DRAWN: B. ALBIN		SCALE: AS SHOWN	
DATE: 8/2/2011		SHEET 5 OF 16	
DRAWING NO. OR10-TS12-04			BLM #

ROAD RENOVATION CONTINUED

27-2-20.0 SHOE FLY			
STA	DISTANCE	BEARING	% GRADE
0+00	80	N8W	9%
0+80	26	N20W	9%
1+06	24	N20W	11%
1+30	50	N60W	12%
1+80	50	S80W	12%
2+30	50	S60W	15%
2+80	100	S60W	13%
3+80			

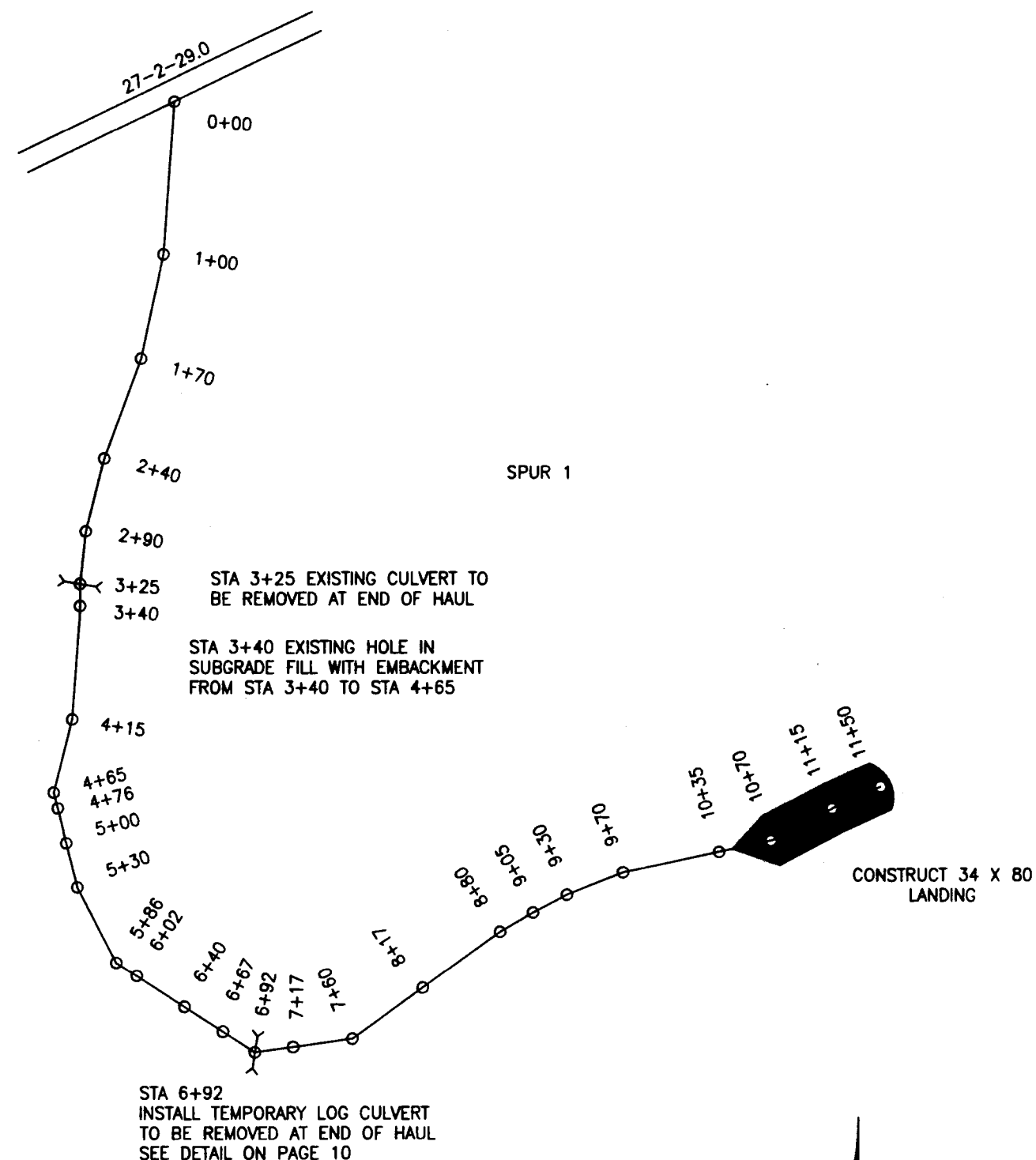
STATION	DESCRIPTION
	27-2-20.0
0+00	BEGIN STATIONING 230' SOUTH OF JUNCTION OF 27-2-19.2 AND 27-2-20.0
0+80	BEGIN SHOE FLY CONSTRUCTION BEGIN SURFACING WITH 9" 1004A BASE COURSE
1+16	INSTALL 18" X 60' CULVERT
2+80	RESUME EXISTING ROAD GRADE
3+80	RESUME EXISTING HORIZONTAL ALIGNMENT BEGIN BRUSHING, BLADING, COMPACTION, CLEAN CULVERTS END SURFACING
30+20	JUNCTION WITH 27-2-20.1 END RENOVATION



REV. NO.	DESCRIPTION	DATE	APPROVED
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT DIVISION OF OPERATIONS OREGON STATE OFFICE			
RED BUTTE COMMERCIAL THINNING 27-2-20.0 RENOVATION ROSEBURG DISTRICT OREGON			
DESIGNED	<i>AM</i>		
REVIEWED	<i>T. King</i>		
APPROVED	<i>[Signature]</i>		
DRAWN: B. ALBIN		SCALE: AS SHOWN	
DATE: 7/12/2011		SHEET 6 OF 16	
DRAWING NO. OR10-TS12-04		BLM #	

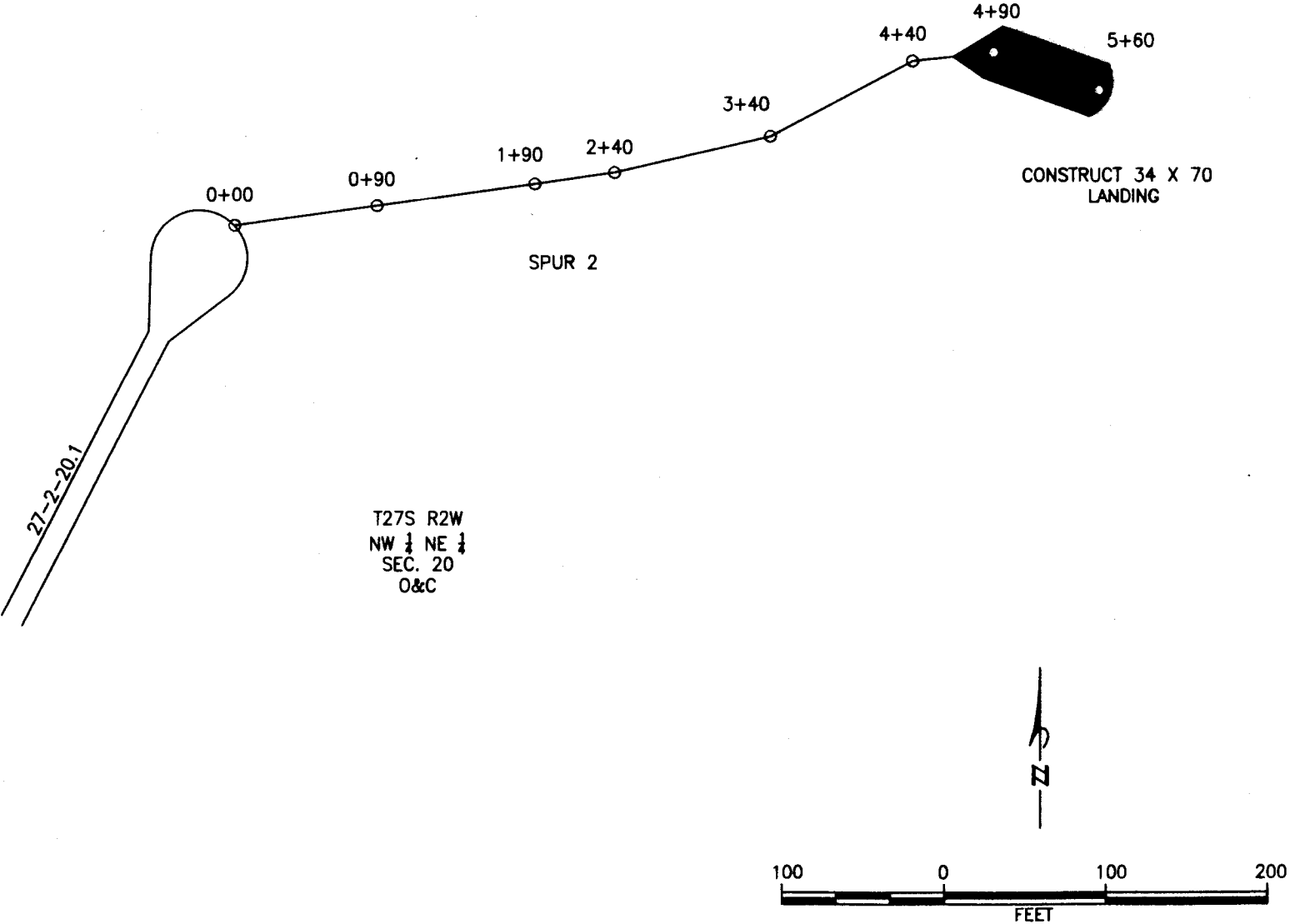
SPUR 1			
STA	DISTANCE	BEARING	% GRADE
0+00	100	S4W	-3%
1+00	70	S12W	-3%
1+70	70	S20W	-8%
2+40	50	S14W	-8%
2+90	35	S6W	-7%
3+25	15	S	-5%
3+40	75	S4W	7%
4+15	50	S14W	5%
4+65	11	S14E	2%
4+76	24	S14E	7%
5+00	30	S14E	5%
5+30	56	S27E	5%
5+86	16	S57E	-4%
6+02	38	S57E	-8%
6+40	27	S57E	-3%
6+67	25	S57E	-3%
6+92	25	N82E	4%
7+17	43	N82E	13%
7+60	57	N54E	6%
8+17	63	N54E	11%
8+80	25	N59E	7%
9+05	25	N62E	-6%
9+30	40	N68E	-16%
9+70	65	N78E	-14%
10+35	35	N78E	-3%
10+70	45	N62E	-5%
11+15	35	N62E	2%
11+50			

T27S R2W
SW 1/4 SE 1/4
SEC. 29
O&C



REV. NO.	DESCRIPTION	DATE	APPROVED
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT DIVISION OF OPERATIONS OREGON STATE OFFICE			
RED BUTTE COMMERCIAL THINNING SPUR 1			
ROSEBURG DISTRICT		OREGON	
DESIGNED	<i>M. M.</i>		
REVIEWED	<i>J. King</i>		
APPROVED	<i>[Signature]</i>		
DRAWN: B. ALBIN		SCALE: AS SHOWN	
DATE: 5/30/2011		SHEET 7 OF 16	
DRAWING NO. OR10-TS12-04			BLM #

SPUR 2			
STA	DISTANCE	BEARING	% GRADE
0+00	90	N82E	-16%
0+90	100	N82E	-12%
1+90	50	N82E	-12%
2+40	100	N77E	-12%
3+40	100	N62E	-5%
4+40	50	N84E	-1%
4+90	70	S70E	-5%
5+60			



REV. NO.	DESCRIPTION	DATE	APPROVED
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT DIVISION OF OPERATIONS OREGON STATE OFFICE			
RED BUTTE COMMERCIAL THINNING SPUR 2			
ROSEBURG DISTRICT		OREGON	
DESIGNED	<i>Am dho.</i>		
REVIEWED	<i>J. King</i>		
APPROVED	<i>W. J. Pender</i>		
DRAWN: B. Albin		SCALE: AS SHOWN	
DATE: 3/20/2011		SHEET 8 OF 16	
DRAWING NO. OR10-TS12-04			BLM #



ROAD 27-2-28.4			
STA	DISTANCE (FT)	BEARING	% GRADE
0+00	17.0	N77W	-4%
0+17	44.1	N78W	-4%
0+61.1	33.9	N77W	-12%
0+95	31.4	S76W	-12%
1+26.4	31.4	S75W	-12%
1+57.8	41.8	S73W	-12%
1+99.6	18.4	S54W	-7%
2+18	32.3	S51W	-7%
2+50.3	24.1	S79W	-3%
2+74.4	25.6	S79W	-3%
3+00	46.7	N73W	-4%
3+46.7	49.6	N40W	-4%
3+96.3	50.1	N24W	-4%
4+46.4	24.2	N18W	-4%
4+70.6	17.4	N16W	-4%
4+88	7.4	N18W	-4%
4+95.4	8.6	N18W	-4%
5+04	20.9	N17W	-4%
5+24.9	27.0	N15W	-4%
5+51.9	90.1	N8W	-6%
6+42	39	N32W	-4%
6+81	50	N44W	3%
7+31	50	N60W	3%
7+81	50	N80W	8%
8+31	50	S80W	15%
8+81	24	S80W	15%
9+05	65	S80W	15%
9+70	59	S78W	13%
10+29	80	S74W	5%
11+09	80	N87W	1%
11+89	80	N82W	2%
12+69	90	N80W	-2%
13+59			

CONSTRUCT 34 X 90
LANDING



13+59
12+69
11+89
11+09

10+29
9+70
9+05
8+81
8+31
7+81
7+31
6+81
6+42

O&C
NW 1/4 NW 1/4
T27S R2W
SEC. 28

PROPERTY LINE

SENECA
NE 1/4 NW 1/4
T27S R2W
SEC. 28

NW 1/4 QTR. COR. OF
SEC. 28, T27S R2W

PROPERTY LINE

SENECA
S 1/4 NW 1/4
T27S R2W
SEC. 28

5+51.9
5+24.9
5+04
4+95.4
4+88
4+70.6
4+46.4

3+96.3
3+46.7
3+00
2+74.4
2+50.3
2+18
1+57.8
1+26.4
0+95
0+61.1
0+17
0+00

27-2-28.4

27-2-28.0

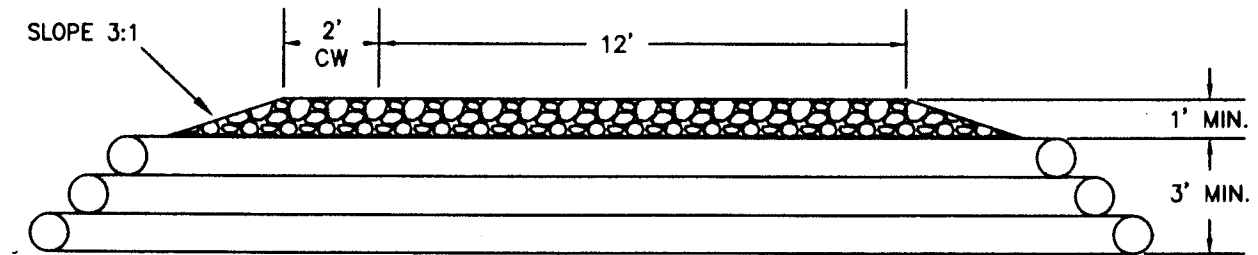
STA 2+74.4
INSTALL 24" X 36' TEMPORARY CULVERT
TO BE REMOVED AT END OF HAUL



REV. NO.	DESCRIPTION	DATE	APPROVED
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT DIVISION OF OPERATIONS OREGON STATE OFFICE			
RED BUTTE COMMERCIAL THINNING 27-2-28.4			
ROSEBURG DISTRICT		OREGON	
DESIGNED	<i>Paul Allen</i>		
REVIEWED	<i>T. King</i>		
APPROVED	<i>Mr. P. Allen</i>		
DRAWN: B. ALBIN		SCALE: AS SHOWN	
DATE: 6/8/2011		SHEET 9 OF 16	
DRAWING NO. OR10-TS12-04		BLM #	

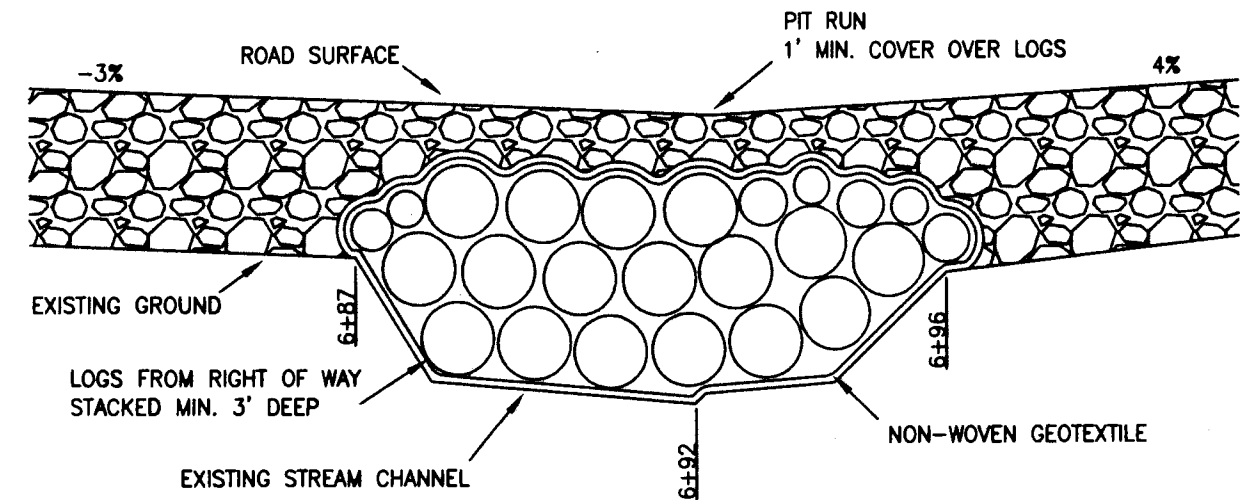


SPUR 1 LOG CULVERT SECTION DETAIL
STA. 6+92



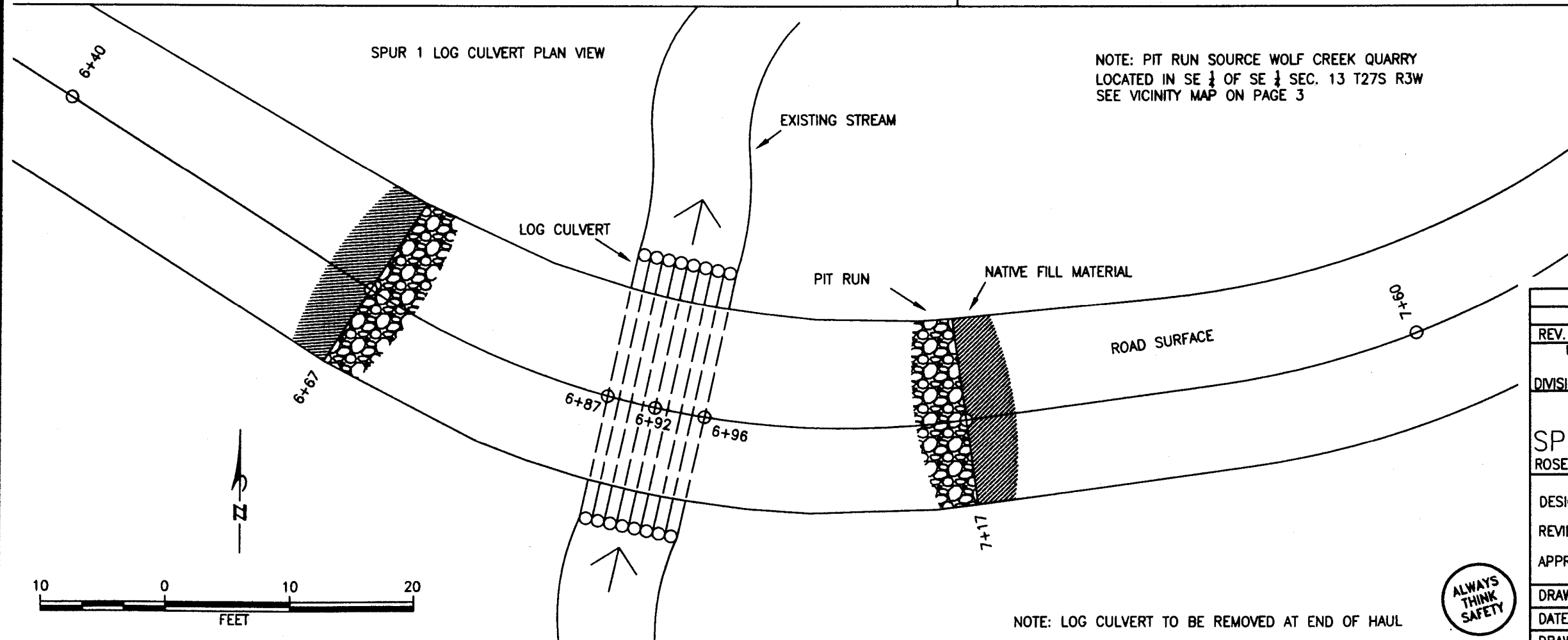
NTS

SPUR 1 LOG CULVERT PROFILE DETAIL



NTS

SPUR 1 LOG CULVERT PLAN VIEW

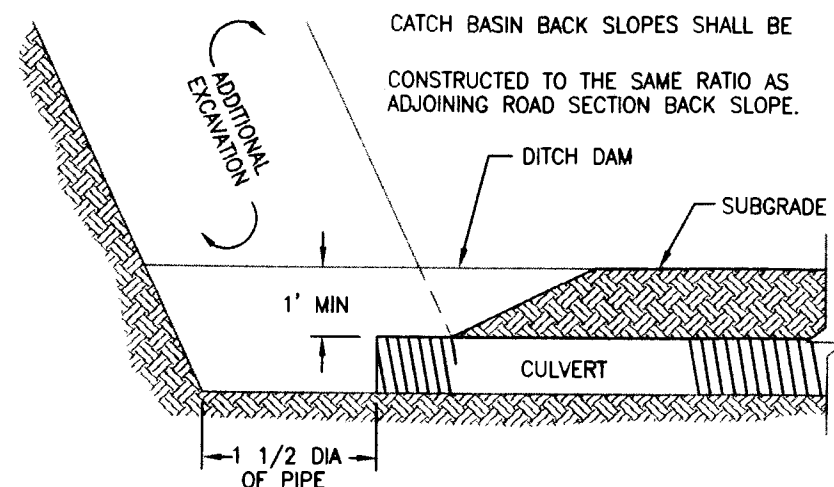


NOTE: PIT RUN SOURCE WOLF CREEK QUARRY
LOCATED IN SE 1/4 OF SE 1/4 SEC. 13 T27S R3W
SEE VICINITY MAP ON PAGE 3

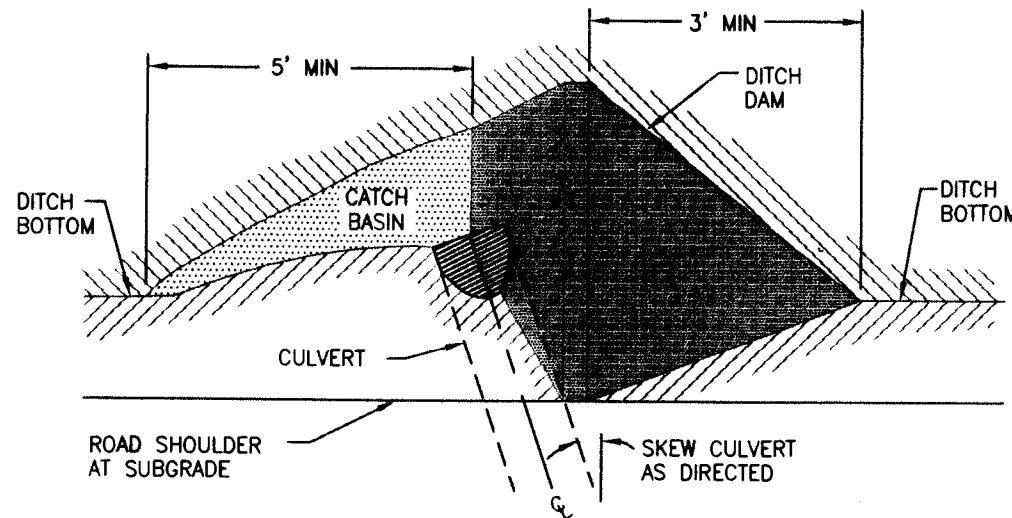
NOTE: LOG CULVERT TO BE REMOVED AT END OF HAUL

REV. NO.	DESCRIPTION	DATE	APPROVED
UNITED STATES DEPARTMENT OF THE INTERIOR			
BUREAU OF LAND MANAGEMENT			
DIVISION OF OPERATIONS OREGON STATE OFFICE			
RED BUTTE			
COMMERCIAL THINNING			
SPUR1 LOG CULVERT DETAIL			
ROSEBURG DISTRICT OREGON			
DESIGNED	<i>Mr. M.</i>		
REVIEWED	<i>T. King</i>		
APPROVED	<i>W. H. [Signature]</i>		
DRAWN: B. ALBIN	SCALE: AS SHOWN		
DATE: 8/22/2011	SHEET 10 OF 16		
DRAWING NO. OR10-TS12-04	BLM #		

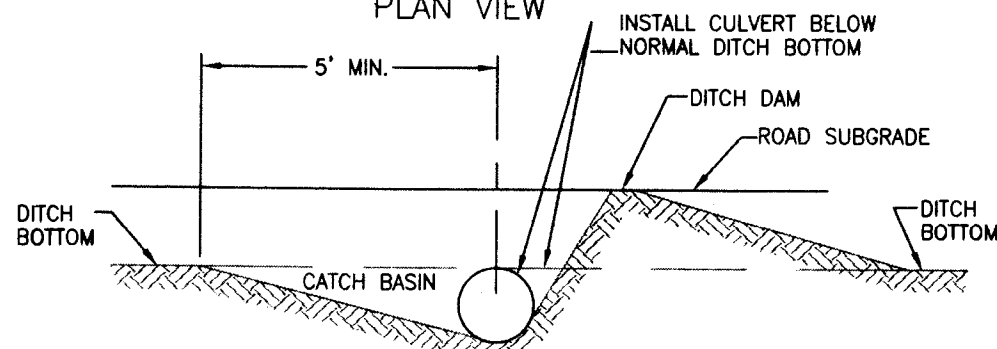




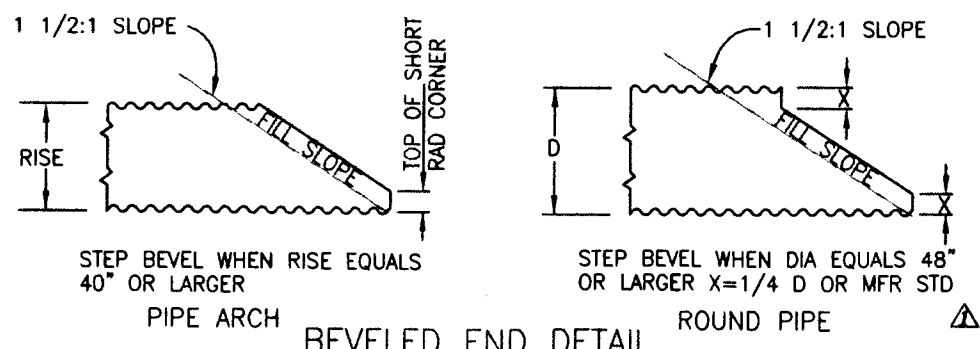
CROSS SECTION AT CATCH BASIN
CULVERT INSTALATION TYPE 2, 3, AND 4



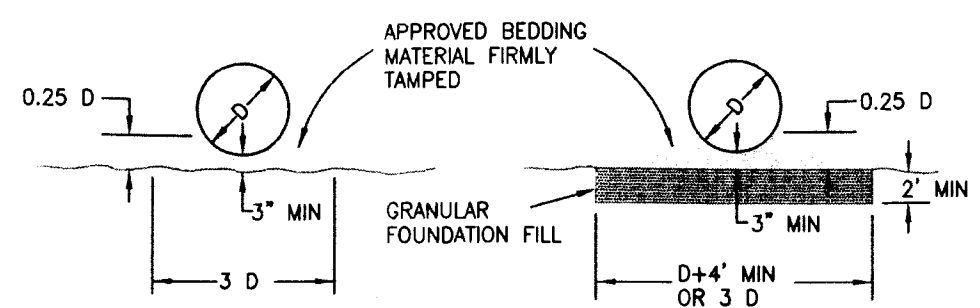
PLAN VIEW



CATCH BASIN ELEVATION

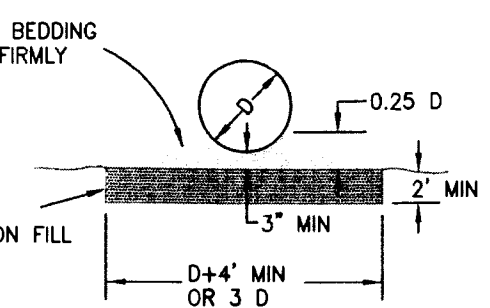


BEVELED END DETAIL



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

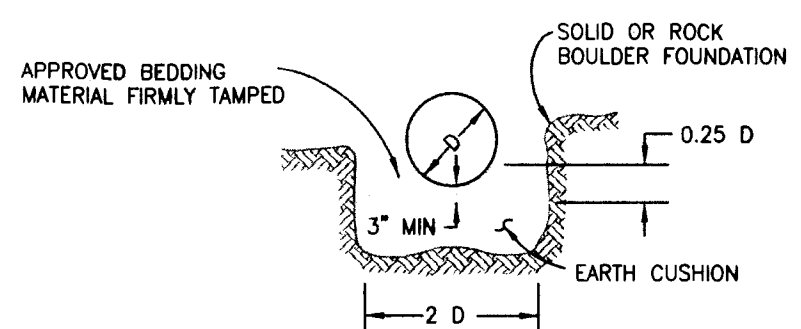
BEDDING OF CULVERTS ON STABLE NATURAL GROUND FOUNDATION OR COMPACTED EMBANKMENT



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

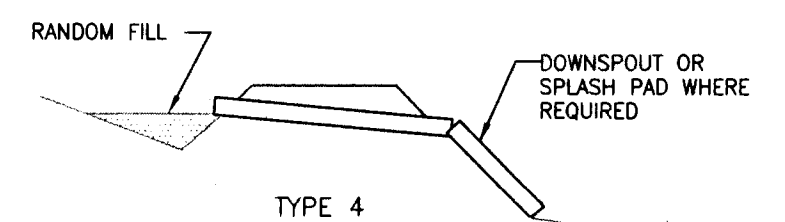
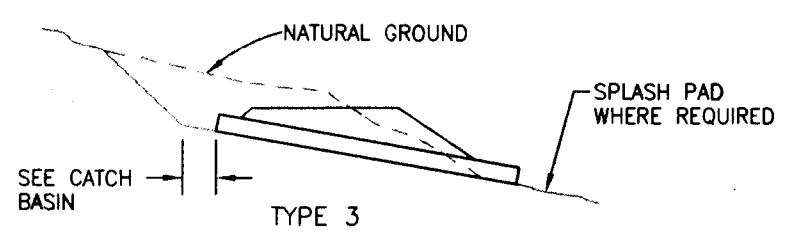
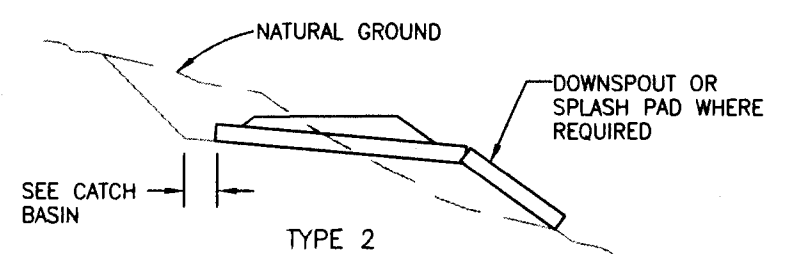
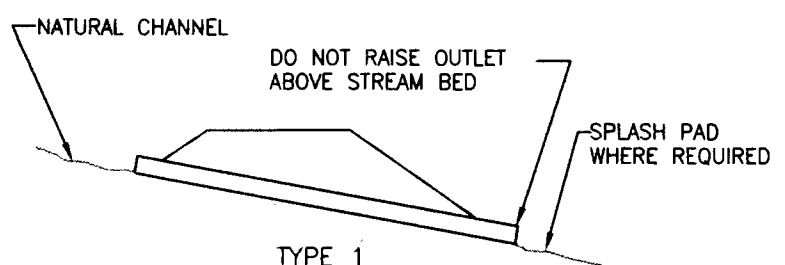
BEDDING OF CULVERTS ON SOFT SPONGY OR UNSTABLE SOIL FOUNDATION

BEDDING OF CULVERTS

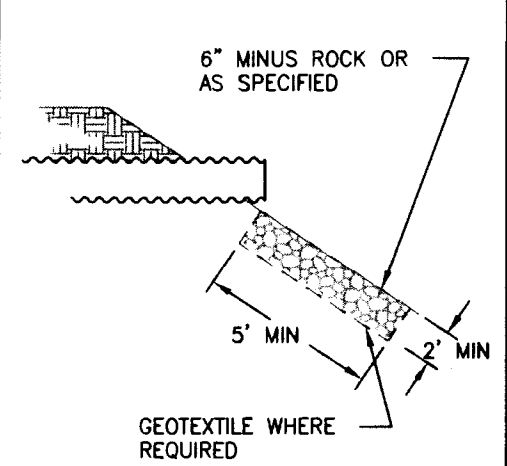


BEDDING MATERIAL SHALL BE SHAPED TO FIT THE BOTTOM OF THE CULVERT. EARTH CUSHIONING OF SILTY CLAY LOAM OR SAND MAY BE USED IF MATERIAL CAN BE PLACED IN THE DRY CONDITION. IF THE EXCAVATION IS WET, USE GRANULAR FOUNDATION FILL MATERIAL. MAINTAIN 8" MIN DEPTH BETWEEN HIGH POINTS OF ROCKS AND/OR BOULDERS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

BEDDING OF CULVERTS IN SOLID ROCK OR BOULDER FOUNDATION

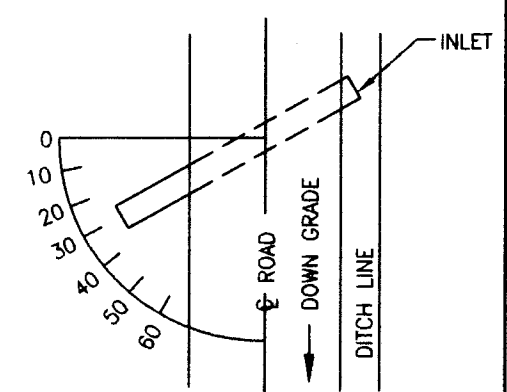


CULVERT INSTALLATION TYPES



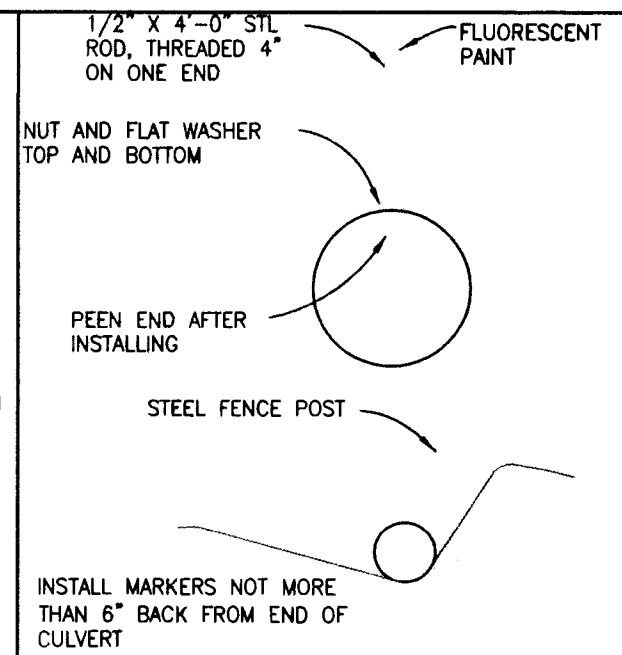
SPLASH PAD SHALL BE 1' WIDER THAN PIPE DIA ON EACH SIDE

SPLASH PAD



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

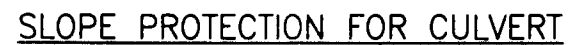
SKIEW DIAGRAM



CULVERT MARKER INSTALLATION

REV. NO.	DESCRIPTION	DATE	APPROVED
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT DIVISION OF OPERATIONS OREGON STATE OFFICE			
RED BUTTE COMMERCIAL THINNING CULVERT INSTALLATION ROSEBURG DISTRICT OREGON			
DESIGNED	<i>Mr. King</i>		
REVIEWED	<i>J. King</i>		
APPROVED	<i>Mr. King</i>		
DRAWN: BILL HOUGH	SCALE: AS SHOWN		
DATE: 12/17/01	SHEET 12 OF 16		
DRAWING NO. OR10-TS12-04		BLM #	

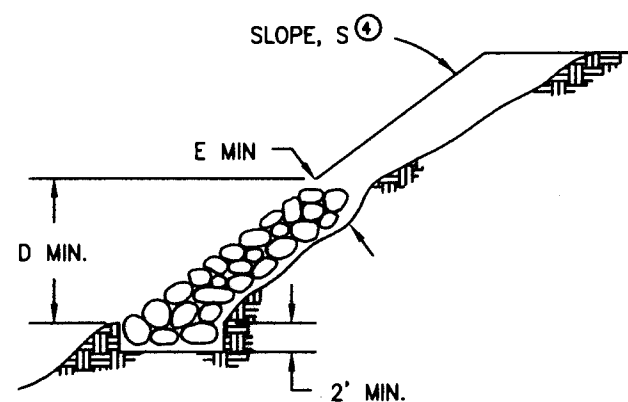




The diagram illustrates a ditch cross-section with the following labeled components and dimensions:

- BACKSLOPE ④**: The upper slope of the ditch, indicated by a dashed line and a circled number 4.
- A**: The top surface of the ditch, indicated by a dashed line.
- B MIN.**: The minimum depth of the ditch, indicated by a vertical dimension line.
- C**: The width of the ditch at the top, indicated by a horizontal dimension line.
- D**: The width of the ditch at the bottom, indicated by a horizontal dimension line.
- 2' MIN.**: The minimum width of the ditch at the bottom, indicated by a horizontal dimension line.

TYPICAL CUT SECTION SLOPE PROTECTION
OR SPECIAL ROCK EMBANKMENT



TYPICAL FILL SECTION SPECIAL ROCK
EMBANKMENT OR SLOPE PROTECTION

1. Slope protection shall conform to the 1400 specifications.
2. Install geotextile simultaneously with slope protection.
- ③ Geotextile shall conform to the following minimum standards or approved equivalent:

<u>Geotextile Property</u>	<u>Test Results for Geotextile</u>
Weight ASTM D3776	10 oz.sq.yd., min.
Grab Tensile Strength ASTM D4632	250 lbs/in., min
Puncture ASTM D4833	100 psi, min.


- ④. Match existing unless otherwise specified.
5. All tabulated dimensions in feet.

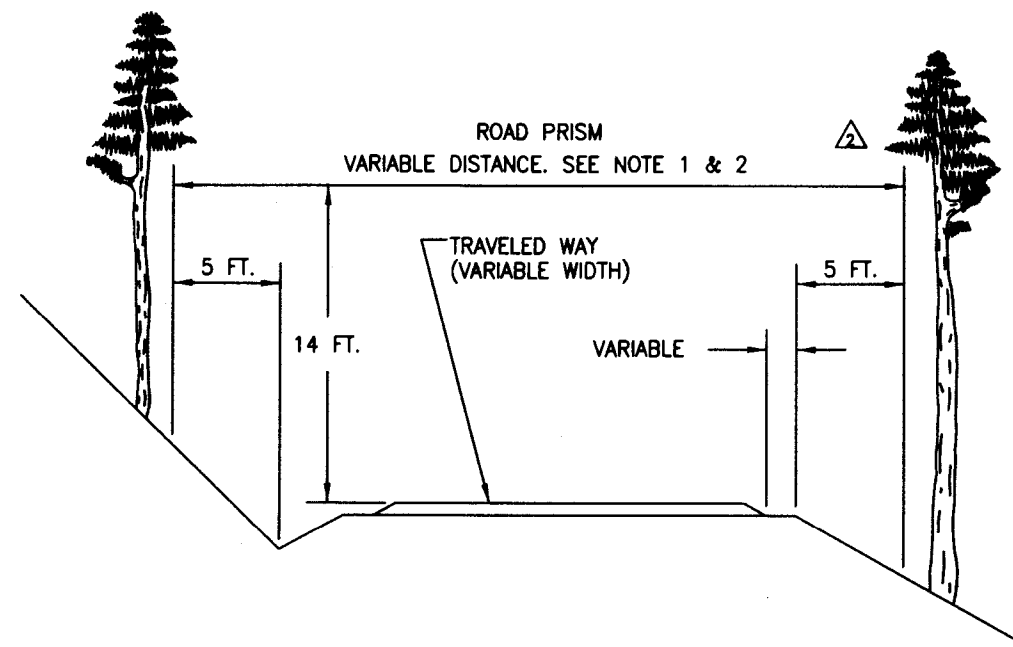
[illegible][illegible]

REV. NO.	DESCRIPTION	DATE	APPROVED
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT DIVISION OF OPERATIONS OREGON STATE OFFICE			
RED BUTTE COMMERCIAL THINNING SLOPE PROTECTION			
ROSEBURG DISTRICT		OREGON	
DESIGNED	<i>mm am.</i>		
REVIEWED	<i>J. King</i>		
APPROVED	<i>Carol H. [unclear]</i>		
DRAWN: B. ESCALERA		SCALE: AS SHOWN	
DATE: 02/10/1998		SHEET 13 OF 16	
DRAWING NO. OR10-TS12-04			BLM #

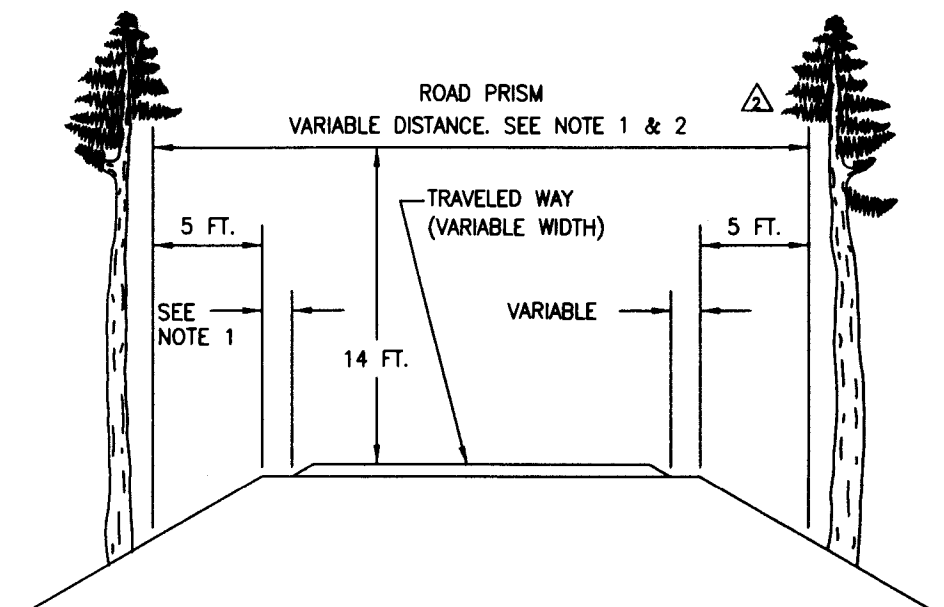


NOTE:

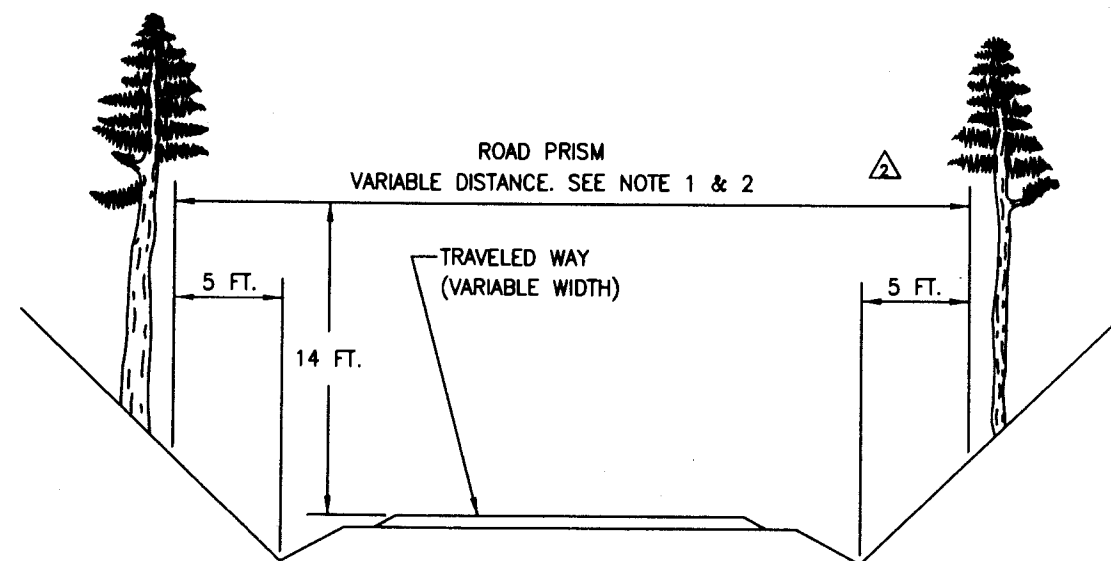
1. ALL AREAS WITHIN THE VARIABLE DISTANCE SHALL BE CLEARED OF VEGETATION.
2. ALL AREAS WITHIN THE VARIABLE DISTANCE SHALL BE FREE OF ALL OVERHANGING LIMBS AND BRANCHES WITHIN 14 FEET ELEVATION ABOVE RUNNING SURFACE. 



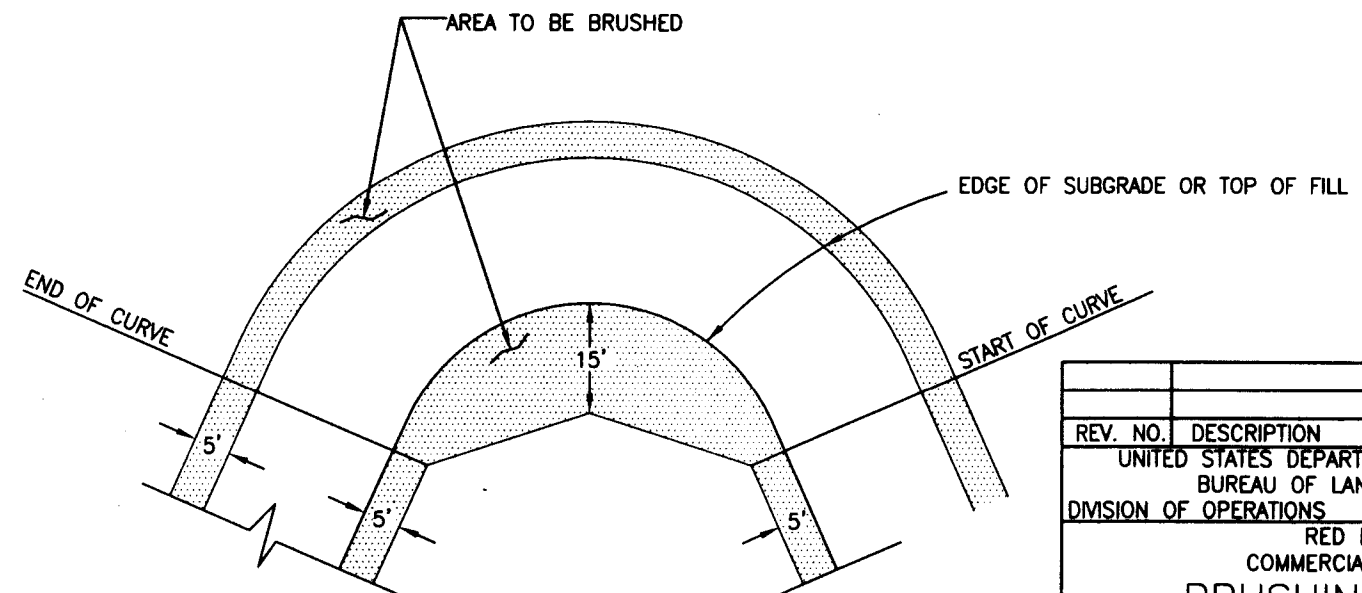
EXAMPLE 1



EXAMPLE 2



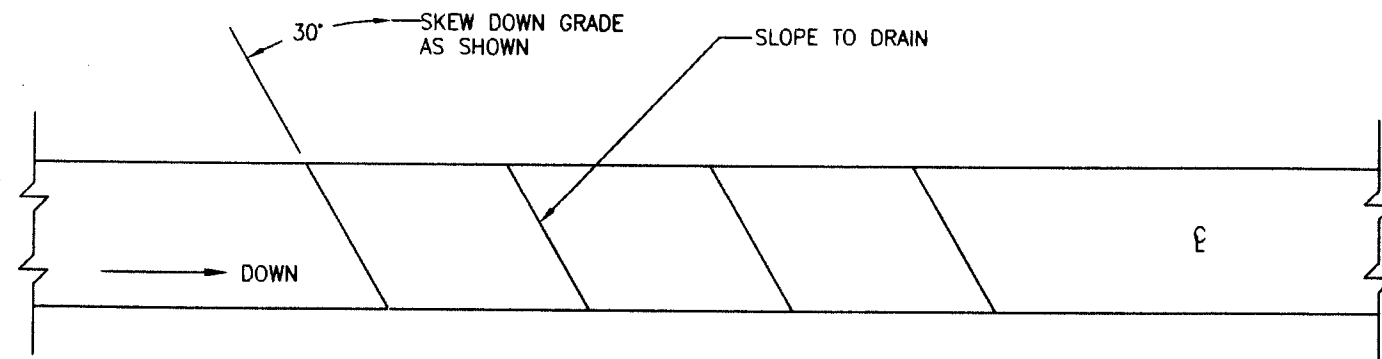
EXAMPLE 3



CURVE

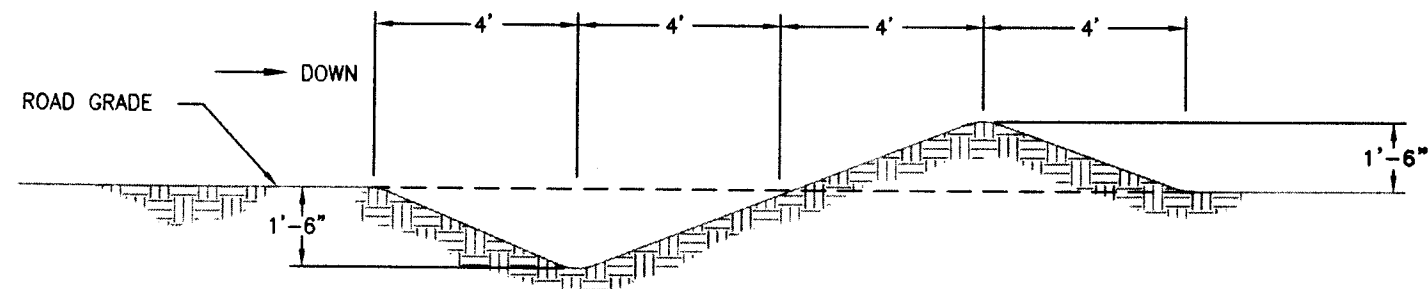


REV. NO.	DESCRIPTION	DATE	APPROVED
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT DIVISION OF OPERATIONS OREGON STATE OFFICE			
RED BUTTE COMMERCIAL THINNING BRUSHING DETAIL			
ROSEBURG DISTRICT		OREGON	
DESIGNED	<i>du di.</i>		
REVIEWED	<i>T. King</i>		
APPROVED	<i>W. H. Hough</i>		
DRAWN: BILL HOUGH		SCALE: AS SHOWN	
DATE: 2/21/01		SHEET 14 OF 16	
DRAWING NO. OR10-TS12-04		BLM #	



ROAD PLAN

SCALE: NONE



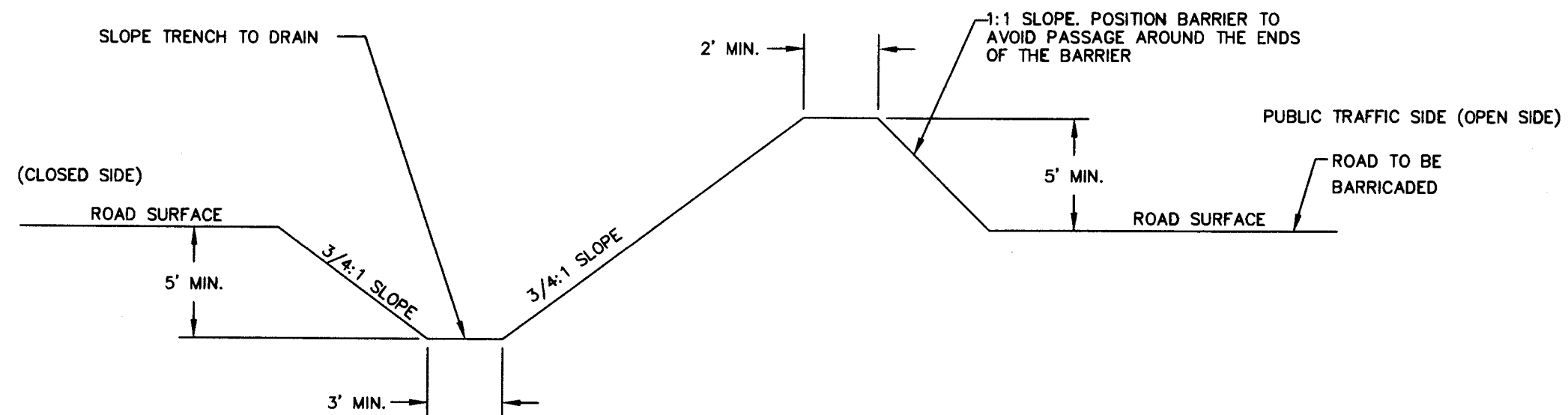
ROAD PROFILE

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

REV. NO.	DESCRIPTION	DATE	APPROVED
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT DIVISION OF OPERATIONS OREGON STATE OFFICE			
RED BUTTE COMMERCIAL THINNING WATER BAR DETAIL ROSEBURG DISTRICT OREGON			
DESIGNED	<i>Pat dir.</i>		
REVIEWED	<i>T. King</i>		
APPROVED	<i>Carol R. [signature]</i>		
DRAWN: Bill Hough		SCALE: AS SHOWN	
DATE: 5/19/04		SHEET 15 OF 16	
DRAWING NO. OR10-TS12-04		BLM #	





TRENCH BARRIER
SCALE: NONE



REV. NO.	DESCRIPTION	DATE	APPROVED
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT DIVISION OF OPERATIONS OREGON STATE OFFICE			
RED BUTTE COMMERCIAL THINNING TRENCH BARRIER DETAIL ROSEBURG DISTRICT OREGON			
DESIGNED	<i>M. W. H.</i>		
REVIEWED	<i>J. King</i>		
APPROVED	<i>G. Stacey</i>		
DRAWN: G. STACEY		SCALE: AS SHOWN	
DATE: 07/27/2007		SHEET 16 OF 16	
DRAWING NO. OR10-TS12-04		BLM #	