

The volume of all Douglas-fir trees in the 24" diameter class and larger, all other species, and R/W trees have been determined by individual tree measurements using a 100% cruise.

With respect to merchantable trees of all species: the average tree is 12.8 D.B.H.O.B., the average log contains 43 bd. ft., the total gross volume is approximately 4200 M bd. ft., and 93% recovery is expected.

CUTTING AREA: An area of approximately 233 acres in 11 units is to be partially cut and a right-of-way of approximately 1 acre must be clearcut.

<u>TIMBER ACREAGE</u> :	Area 1: 19 acres	Area 5: 2 acres	Area 9: 9 acres
	Area 2: 5 acres	Area 6: 31 acres	Area 10: 16 acres
	Area 3: 17 acres	Area 7: 22 acres	Area 11: 26 acres
	Area 4: 32 acres	Area 8: 54 acres	R/W: 1 acre

ACCESS: Access to the sale area is provided by Government, County and Privately controlled roads. A road use fee of \$1,303.42 will be required to be paid to FIA Timber Growth Master, LLC.

DIRECTIONS TO SALE AREA: To access all Harvest Areas, go east from Roseburg on State Highway 138 (Diamond Lake Blvd) to Rock Creek. Turn left on County Road 78 (which turns into BLM Road 26-3-1.0 at 1.2 miles) and proceed northeast approximately 6.4 miles to the junction with BLM Road 25-2-16.0 and turn right. Refer to timber sale Exhibits A and D for further details.

ROAD MAINTENANCE: Rockwear and maintenance fees of \$33,804.19 will be required to be paid to the BLM. A rockwear fee of \$106.50 will be required to be paid to FIA Timber Growth Master, LLC.

ROAD CONSTRUCTION: Estimates include the following: construct 14+00 stations, renovate 87+05 stations, and decommission 58+70 stations of road.

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

NOTES:

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

This contract provision limits the liability of the Government to the actual costs incurred by the Purchaser which have not been amortized by timber removed from the contract area.
2. This contract contains provisions for the sale and removal of additional timber necessary to facilitate safe and efficient Purchaser operations. It is estimated that approximately 196 MBF of such additional timber may be removed under the contract, but is not included in the advertised sale volume nor was it included in the timber sale appraisal. This estimate is a net figure reduced by the estimate of the volume of trees previously marked for cutting, which the Authorized Officer may elect to reserve.
3. Seasonal operating restrictions apply to this sale regarding road work, falling, bucking, yarding, loading, hauling and sub-soiling. Refer to Section 42(A)(3-5), 42(A)(11)(b), 42(C)(3)(c), 42(C)(4)(c), 42(D)(2) and the Exhibit E for details.

4. Spurs No. 1 and No. 2 and Roads No. 25-2-25.1 Segment A and No. 25-2-26.5 Segment A will be constructed or renovated and used for harvest operations by October 15 of each calendar year, then decommissioned in the same respective operating season. The decommissioning will include water barring, slashing and blocking. Refer to Exhibit D for details. If an unsurfaced spur will overwinter before decommissioning, that spur shall be winterized. See Section 42(C)(3) for details.
5. A license agreement with FIA Timber Growth Master, LLC is required.
6. Sub-soiling is required for two and six tenth (2.6) miles of compacted skid trails and associated equipment/decking areas. Refer to section 42(C)(4) for details.
7. Roads No. 25-2-23.2 Segments A and B (portion) and No. 25-2-23.3 Segment A, are inadequately surfaced roads for wet season haul. Road No. 25-2-23.2 Segments A and B (portion) may be rocked at the Purchaser's expense to extend the operating season, as approved by the Authorized Officer.
8. Spur No. 1 and Road 25-2-25.1 Segment A, are native surfaced roads. They may be rocked at the Purchaser's expense as approved by the Authorized Officer. Spur No. 2 and Road No. 25-2-26.5 shall not be rocked.
9. Optional Operator Spur No. 6-1 in Harvest Area No. 6, as shown on Exhibit A, may only be constructed between May 15 and October 15 of any given calendar year. This unsurfaced spur shall be constructed, used, and decommissioned in the same operating season. The Purchaser would be responsible for decommissioning, which would include: blocking, covering with slash, and water barring. This spur shall not be rocked.

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 41. TIMBER RESERVED FROM CUTTING - The following timber on the Contract Area is hereby reserved from cutting and removal under the terms of this contract and is retained as the property of 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 existing coarse woody debris, logs, trees and snags classified as decay Classes 3, 4, and 5, (having bark substantially sloughed off and in advanced stages of decay), within 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.

Section 42. The Purchaser shall comply with the special provisions which are attached hereto and made a part hereof, unless otherwise authorized in writing by the Authorized Officer.

Section 42(A) Logging:

- (1) Before beginning operations on the Contract Area for the first time or after a shutdown of ten (10) or more days, the Purchaser shall notify the Authorized Officer in writing of the date they plan to begin operations. The Purchaser shall also notify the Authorized Officer in writing if they intend to cease operations for any period of ten (10) or more days.
- (2) Prior to the commencement of operations, the Purchaser shall obtain from the Authorized Officer written approval of a written operations and logging plan commensurate with the terms and conditions of the contract which shall include measures needed to assure protection of the environment and watershed. A 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) No timber falling, bucking or yarding shall be conducted on the Thinning Area from April 15 to July 15 of each calendar year, both days inclusive (bark slip period), unless otherwise approved by the Authorized Officer. Refer to the Exhibit E, which is attached hereto and made a part hereof.
- (4) No timber yarding, loading or hauling shall be conducted on unsurfaced or inadequately surfaced roads between October 15 of one calendar year and May 15 of the following calendar year, both days inclusive (wet season), unless otherwise approved by the Authorized Officer. Refer to the Exhibit E.
- (5) For Harvest Area No. 11 as shown on Exhibit A, no operations may be conducted from March 1 to July 15, both days inclusive, of each calendar year due to the potential disruption of spotted owls. Refer to the Exhibit E for details.

The Government will conduct surveys to determine whether spotted owls are present within one quarter (0.25) mile of the Harvest Area. If it is determined that spotted owls are not present, the Authorized Officer may lift the seasonal restriction in any given year on such operations in writing.

- (6) 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.
- (7) In the Harvest Areas shown on Exhibit A, all trees designated for cutting which are within one hundred fifty (150) feet of the Reserve Areas, property lines, and adjacent plantations shall be felled away from those areas.
- (8) Trees felled for yarding corridors in the "no harvest stream buffers", as shown on Exhibit A, shall be left in place unless otherwise approved by the Authorized Officer.

- (9) In the Harvest Areas as shown on Exhibit A, all trees designated for cutting shall be felled, limbed and cut into log lengths not to exceed forty-two (42) feet before being yarded, unless otherwise approved by the Authorized Officer.
- (10) In the Harvest Areas shown on Exhibit A, all timber shall be felled to lead.
- (11) In the portions of Harvest Areas designated for ground-based yarding, as shown on Exhibit A (Approximately 81 acres):
 - (a) Ground-based yarding operations shall generally be limited to slopes of thirty-five (35) percent or less, and existing skid trails shall be utilized to the greatest extent possible.
 - (b) No ground-based yarding shall be permitted between October 15 of one calendar year and May 15 of the following calendar year, both days inclusive, or other periods of unseasonably wet weather and soil moisture conditions, unless otherwise approved by the Authorized Officer. Refer to Exhibit E.
 - (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, fourteen (14) 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 processor/harvester system may be used in accordance with the following specifications:

- (1) The processor/harvester shall be required to cut off limbs and tops in front of the machine's tracks in order to reduce soil compaction. The processor/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 processor/harvester. Forwarder trails shall be perpendicular to hill-slope contour lines as much as possible.
 - (3) Logs that are too large for the harvester/forwarder operation may be yarded with a rubber-tired or track-mounted skidder, or a track-mounted log loader approved by the Authorized Officer, and as directed by the Authorized Officer. The skidder shall operate on designated skid trails approved by the Authorized Officer.
 - (4) All trees yarded with a forwarder shall be felled, topped, limbed and cut into log lengths not to exceed twenty-one (21) feet before being yarded, unless otherwise approved by the Authorized Officer.
- (12) In the portions of Harvest Areas 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 yarding 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, cable yarding corridors 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 streams as shown on Exhibit A.
 - (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.
- (13) Before cutting and removing any trees necessary to facilitate logging in the Harvest Areas shown on Exhibit A, the Purchaser shall identify the location of skid trails, cable yarding corridors, tailhold, tieback, guylines, lift, intermediate support, and danger trees on the ground in a manner approved by the Authorized Officer at the pre-work conference and documented in the logging plan. Said Purchaser identification of trees to be cut and removed does not constitute authority to proceed with cutting and removal. In addition, before proceeding with cutting the following conditions must be met:

- (a) All skid trails or cable yarding corridors upon which timber is identified by the Purchaser to be cut and removed in accordance with this special provision must be necessary for the safe and expeditious removal of timber sold under this contract and shall be limited to the minimum width necessary for yarding of logs with a minimum of damage to reserve trees, however, unless otherwise approved in writing by the Authorized Officer, the width of each skid trail shall be limited to fourteen (14) feet and each cable yarding corridor shall be limited to twenty (20) feet.
- (b) The Purchaser may immediately cut and remove additional timber to clear skid trails and cable yarding corridors; and provide tailhold, tieback, guyline, lift, and intermediate support trees; and clear danger trees when the trees have been marked with high visibility paint above and below stump height by the Authorized Officer and thereby approved for cutting and removal by the Authorized Officer. The volume of the timber to be sold will be determined by the Authorized Officer in accordance with Bureau of Land Management prescribed procedures. No timber may be cut or removed under terms of this provision unless sufficient installment payments have been made in accordance with Section 3(b) of the contract or sufficient bonding has been provided in accordance with Section 3(f) 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 41 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 trails and/or cable yarding corridors 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.

- (14) 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 skid trails or cable yarding corridors, hazardous to workers, needed for guyline, tailhold, and tieback trees, severely damaged from the normal conduct of felling or yarding operations to meet all applicable State safety laws, codes or regulations. This timber must be cut or removed so that the Purchaser can continue active falling or yarding operations. The Purchaser is, therefore, authorized to cut and remove such additional timber in accordance with the provisions of Section 8 of the contract: provided, however, that:
- (a) Trees reserved for the tree improvement program and trees reserved for the wildlife habitat objectives under Section 41 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(f) of the contract as required by Section 8 of the contract.
 - (d) No timber may be cut or removed under the terms of this provision if all contract payments required by Section 3(b) or 3(f) 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 tree in or adjacent to skid trails that was not necessary to facilitate ground based yarding.
 - (6) Failed to properly segregate any pulled over tree that was yarded to the landing.
 - (7) Cut any reserve tree that was not severely damaged from felling and yarding operations.

- (8) Cut more than the minimum number of trees necessary to properly serve as guyline anchor stumps.
- (9) Cut or topped more than the minimum number of trees necessary to properly serve as tailhold trees.
- (10) Cut more than the minimum number of trees necessary to properly serve as tie-backs for topped tailhold trees.
- (11) Failed to maintain accurate and current (no more than twenty-four (24) hours old) documentation of cut and removed timber.

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

If the permission to cut and remove additional timber provision is withdrawn, the Purchaser shall inform the Authorized Officer at least two (2) working days prior to the need for cutting and yarding any guyline tree, tailhold tree, tie-back tree, danger tree, and corridor tree. All sales of additional timber shall comply with Section 8 of the contract. The Contracting Officer may order the Purchaser, in writing, to suspend, delay, or interrupt all or any part of the work of this contract for the period of time that the Contracting Officer determines appropriate for the Government to safely measure and mark additional timber.

All cable yarding corridors and/or ground-based equipment skid trails 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.

Section 42(B) Miscellaneous:

- (1) The Government, at its option, may administratively check scale any portion of the timber removed from the Contract Area, and if necessary, conduct check scaling of independent scalers contracted to BLM for administrative check scaling purposes. The Purchaser hereby agrees to make such contract timber available for such scaling at a location or locations to be approved in writing by the Authorized Officer. At the approved location or locations, the Purchaser shall provide an area for logs to be safely rolled out for scaling, to unload logs from trucks, place logs in a manner so that both ends and three faces of each log are visible for scaling, and to reload or remove logs after scaling has been completed. In the event that BLM elects to administratively check scale and if such check scaling causes a delay in log transportation time, an adjustment will be made to the purchase price as follows: If the entire sale is check scaled, the purchase price of this contract shall be reduced by Two Thousand Nine Hundred Forty-three and seventy-five/100 dollars (\$2,943.75). In the event only a portion of the contract timber is scaled, the purchase price shall be reduced by that portion of Two Thousand Nine Hundred Forty-three and seventy-five/100 dollars (\$2,943.75) which is equal to the percentage of timber sold which was actually scaled by the Government. For purposes of computing this price reduction, the percentage of timber sold which has been scaled shall be determined by the Government. Any reduction in purchase price under the terms of this provision shall be full compensation to the Purchaser for any expense or loss incurred as a result of such scaling. Scaling shall be conducted in accordance with Eastside Scribner Decimal C Rules by BLM scalers, and/or independent scalers contracted to BLM. A copy

of the scale report will be made available to the Purchaser upon request.

Section 42(C) Environmental Protection:

- (1) In addition to the requirements set forth in Section 26 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 26 of this contract, the Purchaser shall steam clean or pressure wash all logging and road building equipment, except logging trucks and crew transport, prior to initial move-in, to minimize the likelihood of introducing noxious weeds to the Contract Area. Equipment washing shall occur at a location approved by the Authorized Officer. Equipment will be visually inspected by the Authorized Officer prior to use. Any logging or road building equipment removed from the Contract Area during the duration of the contract must be steam cleaned or pressure washed before it is returned to the Contract Area. Cleaning shall be defined as removal of all dirt, grease, plant parts and material that may carry noxious weed seeds.
- (3) In addition to the requirements set forth in Section 26 of this contract, the Purchaser shall winterize all native surfaced roads, constructed or renovated under Section 42(D)(1) or any portion thereof, in accordance with the plans and specifications shown on Exhibits C and D, which are attached hereto and made a part hereof, and in accordance with the following stipulations:
 - (a) The Purchaser intends to use the native surfaced roads or portions thereof for more than a single operating season; or, circumstances require that the native surfaced roads or portions thereof over-winter before decommissioning.
 - (b) Winterizing shall consist of water-barring, blocking and mulching to the satisfaction of the Authorized Officer.
 - (c) Winterizing shall take place at the end of the operating season as described in Section 42(D)(2) of this contract, or as directed by the Authorized Officer.
- (4) In addition to the requirements set forth in Section 26 of this contract, the Purchaser shall, upon completion of logging operations and machine piling and covering operations, perform sub-soiling operations on approximately two and six tenths (2.6) miles of compacted skid trails and landings and associated equipment/decking areas, located in the ground-based portions of Harvest Areas, as shown on Exhibit A, and in accordance with the following stipulations:
 - (a) All sub-soiling equipment shall be inspected and approved by the Authorized Officer before sub-soiling operations begin.
 - (b) Slash and other organic debris, including some topsoil, will cover at least fifty (50) percent of the sub-soiled area, where levels of this material are in enough abundance. Water bars shall be constructed concurrently with sub-soiling operations on grades steeper than ten (10) percent, as directed by the Authorized Officer.
 - (c) Sub-soiling shall occur during the same dry season as ground-based harvesting, as described in Section (42)(A)(11)(b), and be accomplished prior to October 15, unless otherwise approved by the Authorized Officer.

- (d) The compacted surfaces of main skid trails and associated equipment/decking areas shall be sub-soiled (broken up, loosened and de-compacted) using excavator attachments, log loader tongs or other approved equipment.
 - (e) Sub-soiling shall be completed to a minimum depth of 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 eighty (80) percent of the compacted soil profile shall be shattered. No more than fifty (50) percent of the treated compacted soil shall have clods greater than two inches in diameter, unless otherwise approved by the Authorized Officer.
 - (g) Sub-soiling shall not occur within a five foot radius of the boles of residual trees where major roots can be cut, mangled or pulled, unless otherwise directed by the Authorized Officer.
 - (h) Equipment shall not be allowed to operate on slopes in excess of thirty-five (35) percent or to cross streams or drainages unless approved by the Authorized Officer. Examples to the thirty-five (35) percent exception include situations such as small inclusions of steeper slopes, connecting trails to isolated ground-based harvest areas, or the use of existing trails that could be used without causing undue effects to the soil.
- (5) The Purchaser shall immediately discontinue specified construction or timber harvesting operations upon written notice from the Contracting Officer that:
- (a) threatened or endangered plants or animals protected under the Endangered Species Act of 1973, as amended, may be affected by the operation, and a determination is made that consultation or reinitiation of consultation is required concerning the species prior to continuing operation, or;
 - (b) when, in order to comply with the Endangered Species Act, the Contracting Officer determines it may be necessary to modify or terminate the contract, or;
 - (c) federal proposed, federal candidate, Bureau sensitive or State listed species protected under BLM Manual 6840 - Special Status Species Management - have been identified, and a determination is made that continued operations would affect the species or its habitat, or;
 - (d) other active raptor nests have been discovered, and a determination is made that continued operations under this contract would adversely affect the present use of the discovered nesting area by the raptor, or;
 - (e) when, in order to comply with a court order which enjoins operations on the sale or otherwise requires the Bureau of Land Management to suspend operations, or;
 - (f) when, in order to comply with a court order, the Contracting Officer determines it may be necessary to modify or terminate the contract, or
 - (g) species have been discovered which were identified for protection through survey and manage and/or protection buffer standards and guidelines established in the Record of Decision (ROD) and Resource Management Plan (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(j) of the contract. The Purchaser shall not resume contract operations until the First Installment amount is fully restored.

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

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

The Contracting Officer may determine that it is necessary to terminate the cutting and removal rights under the contract in order to comply with the Endangered Species Act, protect species that have been discovered which were identified for protection through survey and manage and/or

protection buffer standards and guidelines established in the ROD and RMP, or comply with a court order. Following the issuance of a written notice that cutting and removal rights will be terminated, the Purchaser will be permitted to remove timber cut under the contract, if allowed by the Endangered Species Act, survey and manage and/or protection buffer standards and guidelines established in the ROD and RMP, or court order requirements necessitating the modification or termination.

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

The Purchaser specifically and expressly waives any right to claim damages, other than those described in the preceding paragraph, based on an alleged breach of any duty to the Purchaser, whether express or implied, in regard to the manner in which the Government defended the litigation which resulted in the court order affecting the operation of the contract. This waiver also extends to any claims based on effects on the operation of the contract that arise from litigation against another agency. Furthermore, the Purchaser specifically acknowledges and agrees that a court ruling that the Government violated the Administrative Procedures Act cannot be interpreted, in itself, to mean that the Government had not acted reasonably in regard to its duties to the Purchaser under this contract.

Section 42(D) Road Construction - Maintenance – Use:

- (1) The Purchaser shall construct Spur No. 2 and Road No 25-2-26.5 Segment A; renovate or improve Spur No. 1, and Roads No. 25-2-16.0 Segment C (portion), No. 25-2-23.2 Segment A (portion), No. 25-2-23.3 Segment A (portion), No. 25-2-23.4 Segment A1 (portion) and No. 25-2-25.1 Segment A; in strict accordance with the plans and specifications shown on Exhibit C. All native surfaced spurs and roads to be constructed or renovated shall be used for harvest operations by October 15 of each calendar year, then decommissioned in the same respective operating season. The decommissioning may include water barring, slashing, blocking and removal of culverts. Refer to Exhibit D for details. Any required construction or renovation of structures and roads shall be completed and accepted, in accordance with Section 18, prior to the removal of any timber, except right-of-way timber, over that road.
- (2) 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 (wet season), unless otherwise approved by the Authorized Officer. Refer to Exhibit E.
- (3) The Purchaser is authorized to use the roads listed and shown on Exhibit D which are under the jurisdiction of the Bureau of Land Management for the removal of Government timber sold under the terms of this contract, provided that the Purchaser pay the required maintenance and rockwear obligations described in Section 42(D)(4). Any road listed on Exhibit D and requiring renovation in Exhibit C of this contract shall be maintained by the Purchaser until receiving written acceptance of the renovation from the Authorized Officer. The Purchaser shall pay current Bureau of Land Management maintenance and rockwear fees for the sale of additional timber under modification to

the contract.

- (4) The Purchaser shall pay the Government a road maintenance and rockwear obligation in the amount of Thirty Three Thousand Eight Hundred Four and nineteen/100 dollars (\$33,804.19) for the transportation of timber included in the contract price over roads listed and shown on Exhibit D, which are under the jurisdiction of the Bureau of Land Management. The above road maintenance and rockwear amount is for use of thirteen and eight tenths (13.8) miles of road or less. Unless the total maintenance amount is paid prior to commencement of operations on the Contract Area, payments shall be made in installments of not less than Five Hundred and No/100 dollars (\$500.00) payable in the same manner as and together with payments required in Section 3 of this contract.
- (5) The Purchaser shall perform any required road repair and maintenance work on roads used by them, under the terms of Exhibit D of this contract.
- (6) The Purchaser also agrees that if they elect to use any other private road which is the subject of a right-of-way agreement with the Government for the removal of Government timber sold under the terms of this contract, the Purchaser shall request and agree to the modification of this contract to provide for such use and for allowances for amortization of the Government's share of the capital investment of any such road.

IF OTHER THAN FIA TIMBER GROWTH MASTER, LLC PURCHASES:

- (7) In the use of Roads No. 25-2-23.1 Segments B and C (portion), No. 25-2-23.2 Segment B, No. 25-2-23.4 Segment A1 and 25-2-23.8 Segment A, as shown on Exhibit D, the Purchaser shall comply with the conditions of Right-of-Way and Road Use Agreement No. R-540 B, dated March 11, 1960, between the United States of America and FIA Timber Growth Master, LLC. This document is available for inspection at the Bureau of Land Management, Roseburg District Office, 777 NW Garden Valley Blvd., Roseburg, Oregon 97471.

These conditions include:

- (a) Prior to the use of said roads, the Purchaser shall furnish the Authorized Officer a copy of the executed License Agreement.
- (b) Payment of a road use obligation in the amount of One Thousand Three Hundred Three and forty-two/100 dollars (\$1,303.42).
- (c) Payment of a rockwear obligation in the amount of One Hundred Six and fifty/100 dollars (\$106.50).
- (d) Prior to cutting or removing any timber from the Yarding Wedge Right-of-Way in NW¼SW¼ T. 25 S., R. 2 W., Section 24 W.M. and Road No. 25-2-26.5 Segment A, the Purchaser shall pay to FIA Timber Growth Master, LLC, the owner of the Right-of-Way timber, the total value of that timber as shown below based upon the indicated estimated volume and species price per unit used in the Government's contract as set forth on Exhibit B.

Species	Estimated Volume M. bd. ft.	Price Per M. bd. ft.	Estimated Volume times Unit Price
Douglas-fir	71.0	*	*
Western Hemlock	5.5	*	*
Western Redcedar	1.5	*	*
Grand Fir	0.4	*	*

* These figures will not be available until after the timber sale.

- (e) Default by the Purchaser of said Right-of-Way and Road Use Agreement, or any License Agreement executed pursuant thereto, for failure to pay appropriate road use fees shall be considered a violation of this contract. The amount of unpaid fees shall be considered as the amount of damage suffered by the Government as a result of the violation of this provision.

IF FIA TIMBER GROWTH MASTER, LLC PURCHASES:

- (8) In accordance with 43 CFR 2812.6-2(a)(5), the following allowances have been made for amortization on capital investment of the roads covered by Road Agreement No. R-540 B with the Purchaser; One Thousand Three Hundred Three and forty-two/100 dollars (\$1,303.42) for Roads No. 25-2-23.2 Segment B and No. 25-2-23.4 Segment A1.

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

Section 42(E) 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 42(F) Slash Disposal and Site Preparation:

- (1) 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) Prior to commencement of any operation under Section (42)F (Slash Disposal and Site Preparation) of this contract, a slash disposal prework conference between the Purchaser's representative and the Authorized Officer must be held at a location designated by the Authorized Officer. All slash disposal and site preparation shall be done in accordance with the plans developed at the prework conference.

- (b) Slash, as defined for this section, shall mean all material (brush, limbs, tops, unmerchantable stems, and chunks) severed or knocked over as a result of Purchaser's operations under the terms of this contract.
- (c) Pile all slash yarded to the landings and within fifty (50) feet of all landings. Piling is to be completed within thirty (30) days of the completion of yarding for each landing. Piles are to be tight and free of dirt.
- (d) Cover each landing pile with a minimum ten (10) foot by ten (10) foot sheet of four (4) mil. black plastic, unless otherwise directed by the Authorized Officer to meet ignition and combustion needs. The cover shall be firmly fixed or weighed down to hold in place. Covering shall be done concurrently with piling.

Section 42(G) Log Exports:

- (1) All timber sold to the Purchaser under the terms of the contract, except exempted species, is restricted from export from the United States in the form of unprocessed timber, and is prohibited from being used as a substitute for exported private timber. For the purpose of this contract, unprocessed timber is defined as: (1) any logs except those of utility grade or below, such as sawlogs, peeler logs and pulp logs; (2) cants or squares to be subsequently remanufactured exceeding eight and three-quarters ($8\frac{3}{4}$) 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 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.

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

Bid submitted on *(date)*

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

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

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

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

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

Response to this request is required to obtain a benefit.

NOTICE

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

AUTHORITY: 38 FR 6280 and 43 CFR 5442.1

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

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

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

BURDEN HOURS STATEMENT

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

INSTRUCTIONS TO BIDDERS

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

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

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

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

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

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

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

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

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

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

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

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

*Applies to Timber Only

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

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

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

10. PERFORMANCE BOND —

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

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

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

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

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

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

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

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

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

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

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

District	Township	Range	Section	Meridian	Contract Number
Roseburg	25 S	2 W	23, 25	Willamette	ORR04-TS-2013.0003

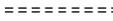
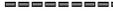
AREA	THINNING ACRES	HARVEST METHOD
①	19	CABLE / GROUND-BASED
②	5	CABLE
③	17	CABLE / GROUND-BASED
④	32	CABLE / GROUND-BASED
⑤	2	GROUND-BASED
⑥	31	CABLE / GROUND-BASED
⑦	22	CABLE / GROUND-BASED
⑧	54	CABLE / GROUND-BASED
⑨	9	CABLE
⑩	16	CABLE / GROUND-BASED
⑪	26	CABLE / GROUND-BASED

THINNING AREA -----	233	Ac.
R/W AREA -----	1	Ac.
TOTAL HARVEST AREA -----	234	Ac.
RESERVE AREA -----	526	Ac.
TOTAL CONTRACT AREA -----	760	Ac.

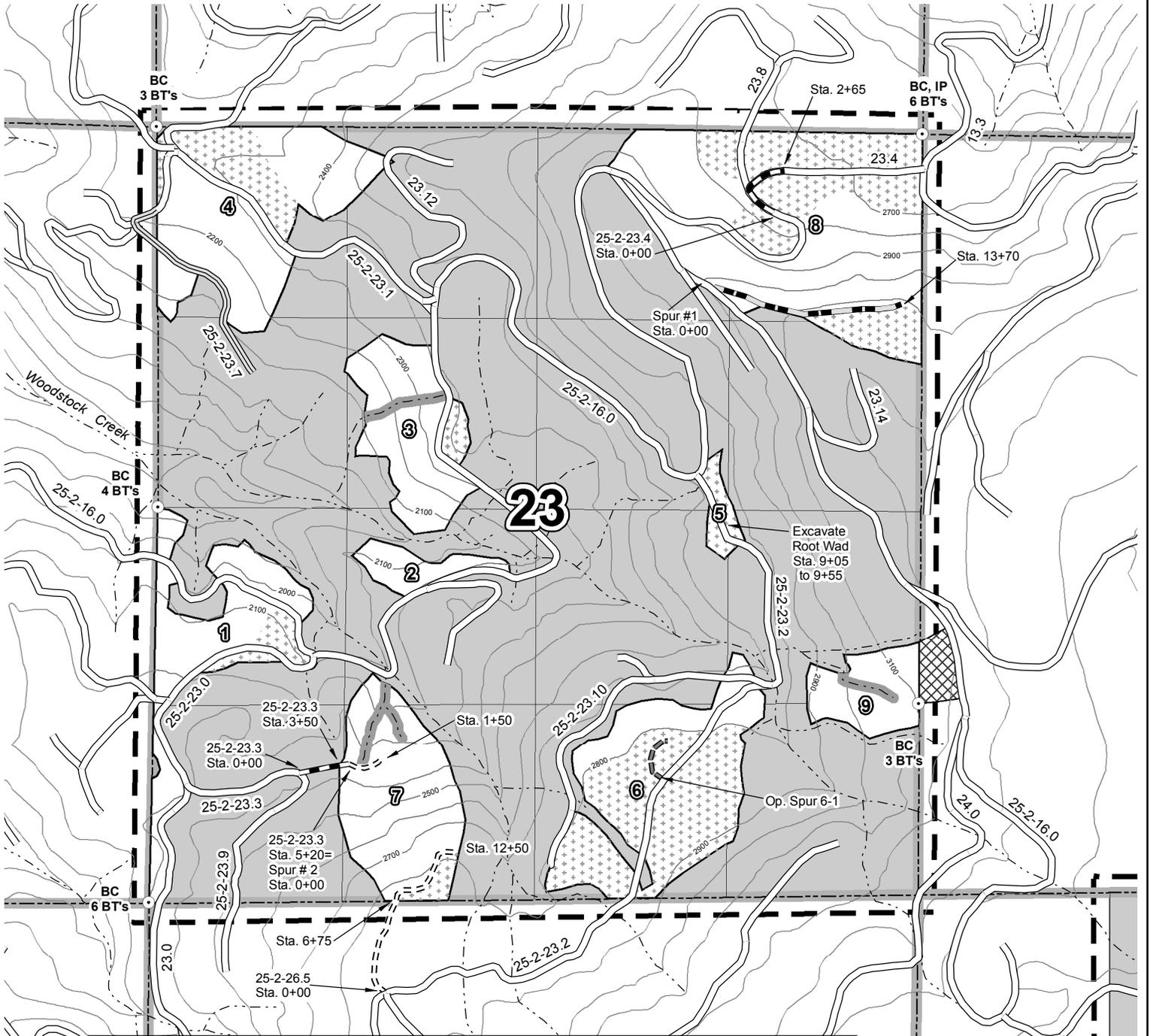
NOTE:

- HARVEST UNIT BOUNDARIES ARE PAINTED ORANGE AND POSTED WITH WHITE "BOUNDARY OF TIMBER RESERVE" TAGS, EXCEPT ON PROPERTY LINES WHICH ARE PAINTED ORANGE OR FLAGGED, AND POSTED WITH ORANGE AND WHITE "TIMBER CUTTING BOUNDARY" TAGS.
- BOUNDARIES OF RIGHTS-OF-WAY WITHIN UNIT #7 ARE POSTED WITH "RIGHT-OF-WAY" TAGS AND PAINTED ORANGE.
- RETENTION TREES ARE MARKED WITH ORANGE PAINT ABOVE AND BELOW STUMP HEIGHT.
- APPROXIMATELY 81 ACRES ARE AVAILABLE FOR GROUND-BASED HARVEST.
- BOUNDARIES OF RIGHTS-OF-WAY TO UNIT #7 AND THE YARDING WEDGE FOR UNIT #9 ON PRIVATE LAND, ARE FLAGGED IN ORANGE AND BLACK CANDY-STRIPE AND POSTED WITH RIGHT-OF-WAY TAGS.

LEGEND

	HARVEST AREA - CABLE YARDING		EXISTING ROAD
	HARVEST AREA - GROUND-BASED		TEMPORARY ROAD TO BE CONSTRUCTED, USED AND DECOMMISSIONED IN THE SAME OPERATING SEASON
	RESERVE AREA		ROAD TO BE RENOVATED AND DECOMMISSIONED
	YARDING WEDGE RIGHT-OF-WAY		ROAD TO BE RENOVATED
	SURVEY CORNERS FOUND		OPTIONAL OPERATOR SPUR
BC	BRASS CAP		100 FT. CONTOUR LINES
BT	BEARING TREE		STREAM
IP	IRON PIPE		NO HARVEST STREAM BUFFER
			SECTION LINE
			BOUNDARY OF CONTRACT AREA
			UNDRIVABLE ROAD

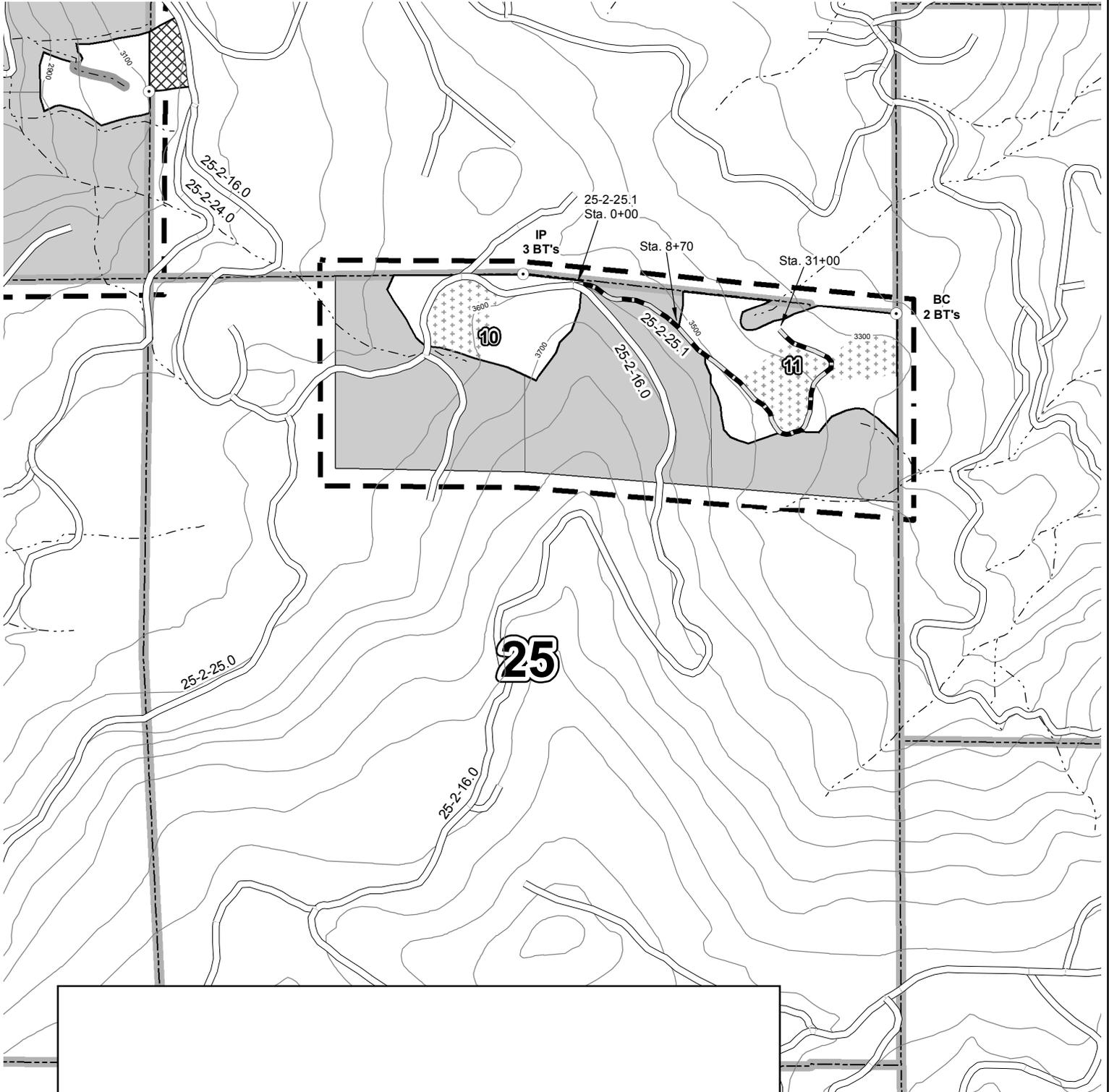
District	Township	Range	Section	Meridian	Contract Number
Roseburg	25 S	2 W	23	Willamette	ORR04-TS-2013.0003



BT	BEARING TREE		NO HARVEST STREAM BUFFER
IP	IRON PIPE		SECTION LINE
			BOUNDARY OF CONTRACT AREA

T25S, R2W
Willamette Meridian, Douglas Co., OR.

District	Township	Range	Section	Meridian	Contract Number
Roseburg	25 S	2 W	25	Willamette	ORR04-TS-2013.0003



BC	BRASS CAP		SECTION LINE
BT	BEARING TREE		BOUNDARY OF CONTRACT AREA
IP	IRON PIPE		

T25S, R2W
Willamette Meridian, Douglas Co., OR.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Contract No.
ORR04-TS-2013.0003
IT'S ALL RELATIVE

EXHIBIT B / PRE-SALE

5450-3

The following estimates and calculations of value of timber sold are made solely as an administrative aid for determining: (1) adjustments made or credits given in accordance with Secs. 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 as provided in Sec. 2, Purchaser shall be liable for total purchase price even though 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 **Exhibit A**.

SPECIES	ESTIMATED VOLUME OR QUANTITY <i>(Units Specified)</i>		PRICE PER UNIT	ESTIMATED VOLUME OR QUANTITY X UNIT PRICE
Douglas Fir	3,663.0	MBF	\$105.90	\$387,911.70
Western Hemlock	167.0	MBF	\$33.80	\$5,644.60
Western Redcedar	74.0	MBF	\$171.00	\$12,654.00
Grandfir	20.0	MBF	\$35.50	\$710.00
Incense-cedar	1.0	MBF	\$89.50	\$89.50
TOTALS	3,925.0	MBF		\$407,009.80

The apportionment of the total purchase price is as follows:

Unit 1

Douglas Fir	261.0 MBF	X	\$105.90 =	\$27,639.90
Western Hemlock	22.0 MBF	X	\$33.80 =	\$743.60
Western Redcedar	5.0 MBF	X	\$171.00 =	\$855.00
Total	288.0 Mbf			\$29,238.50 ÷ 19.0 acres = \$1,538.87/Acre

Unit 10

Douglas Fir	362.0 MBF	X	\$105.90 =	\$38,335.80
Western Hemlock	18.0 MBF	X	\$33.80 =	\$608.40
Western Redcedar	1.0 MBF	X	\$171.00 =	\$171.00
Grandfir	8.0 MBF	X	\$35.50 =	\$284.00
Total	389.0 Mbf			\$39,399.20 ÷ 16.0 acres = \$2,462.45/Acre

Unit 11

Douglas Fir	562.0 MBF	X	\$105.90 =	\$59,515.80
Western Hemlock	21.0 MBF	X	\$33.80 =	\$709.80
Western Redcedar	1.0 MBF	X	\$171.00 =	\$171.00
Grandfir	10.0 MBF	X	\$35.50 =	\$355.00
Total	594.0 Mbf			\$60,751.60 ÷ 26.0 acres = \$2,336.60/Acre

Unit 2

Douglas Fir	66.0 MBF	X	\$105.90 =	\$6,989.40
Western Hemlock	6.0 MBF	X	\$33.80 =	\$202.80
Western Redcedar	1.0 MBF	X	\$171.00 =	\$171.00
Total	73.0 Mbf			\$7,363.20 ÷ 5.0 acres = \$1,472.64/Acre

UNITED STATES
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IT'S ALL RELATIVE

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Unit 3

Douglas Fir	296.0 MBF	X	\$105.90	=	\$31,346.40
Western Hemlock	2.0 MBF	X	\$33.80	=	\$67.60
Western Redcedar	1.0 MBF	X	\$171.00	=	\$171.00
Grandfir	1.0 MBF	X	\$35.50	=	\$35.50
Total	300.0 Mbf				\$31,620.50 ÷ 17.0 acres = \$1,860.03/Acre

Unit 4

Douglas Fir	478.0 MBF	X	\$105.90	=	\$50,620.20
Western Hemlock	10.0 MBF	X	\$33.80	=	\$338.00
Western Redcedar	3.0 MBF	X	\$171.00	=	\$513.00
Total	491.0 Mbf				\$51,471.20 ÷ 32.0 acres = \$1,608.48/Acre

Unit 5

Douglas Fir	34.0 MBF	X	\$105.90	=	\$3,600.60
Total	34.0 Mbf				\$3,600.60 ÷ 2.0 acres = \$1,800.30/Acre

Unit 6

Douglas Fir	426.0 MBF	X	\$105.90	=	\$45,113.40
Western Hemlock	25.0 MBF	X	\$33.80	=	\$845.00
Western Redcedar	13.0 MBF	X	\$171.00	=	\$2,223.00
Grandfir	1.0 MBF	X	\$35.50	=	\$35.50
Total	465.0 Mbf				\$48,216.90 ÷ 31.0 acres = \$1,555.38/Acre

Unit 7

Douglas Fir	253.0 MBF	X	\$105.90	=	\$26,792.70
Western Hemlock	22.0 MBF	X	\$33.80	=	\$743.60
Western Redcedar	8.0 MBF	X	\$171.00	=	\$1,368.00
Total	283.0 Mbf				\$28,904.30 ÷ 22.0 acres = \$1,313.83/Acre

Unit 8

Douglas Fir	747.0 MBF	X	\$105.90	=	\$79,107.30
Western Hemlock	33.0 MBF	X	\$33.80	=	\$1,115.40
Western Redcedar	38.0 MBF	X	\$171.00	=	\$6,498.00
Incense-cedar	1.0 MBF	X	\$89.50	=	\$89.50
Total	819.0 Mbf				\$86,810.20 ÷ 54.0 acres = \$1,607.60/Acre

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Contract No.
ORR04-TS-2013.0003
IT'S ALL RELATIVE

EXHIBIT B / PRE-SALE

5450-3

The following estimates and calculations of value of timber sold are made solely as an administrative aid for determining: (1) adjustments made or credits given in accordance with Secs. 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 as provided in Sec. 2, Purchaser shall be liable for total purchase price even though 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 **Exhibit A.**

Unit 9

Douglas Fir	159.0 MBF	X	\$105.90	=	\$16,838.10
Western Hemlock	6.0 MBF	X	\$33.80	=	\$202.80
Western Redcedar	3.0 MBF	X	\$171.00	=	\$513.00
Total	168.0 Mbf				\$17,553.90 ÷ 9.0 acres = \$1,950.43/Acre

Unit RW - Road 26.5

Douglas Fir	19.0 MBF	X	\$105.90	=	\$2,012.10
Western Hemlock	2.0 MBF	X	\$33.80	=	\$67.60
Total	21.0 Mbf				\$2,079.70 ÷ 1.0 acres = \$2,079.70/Acre

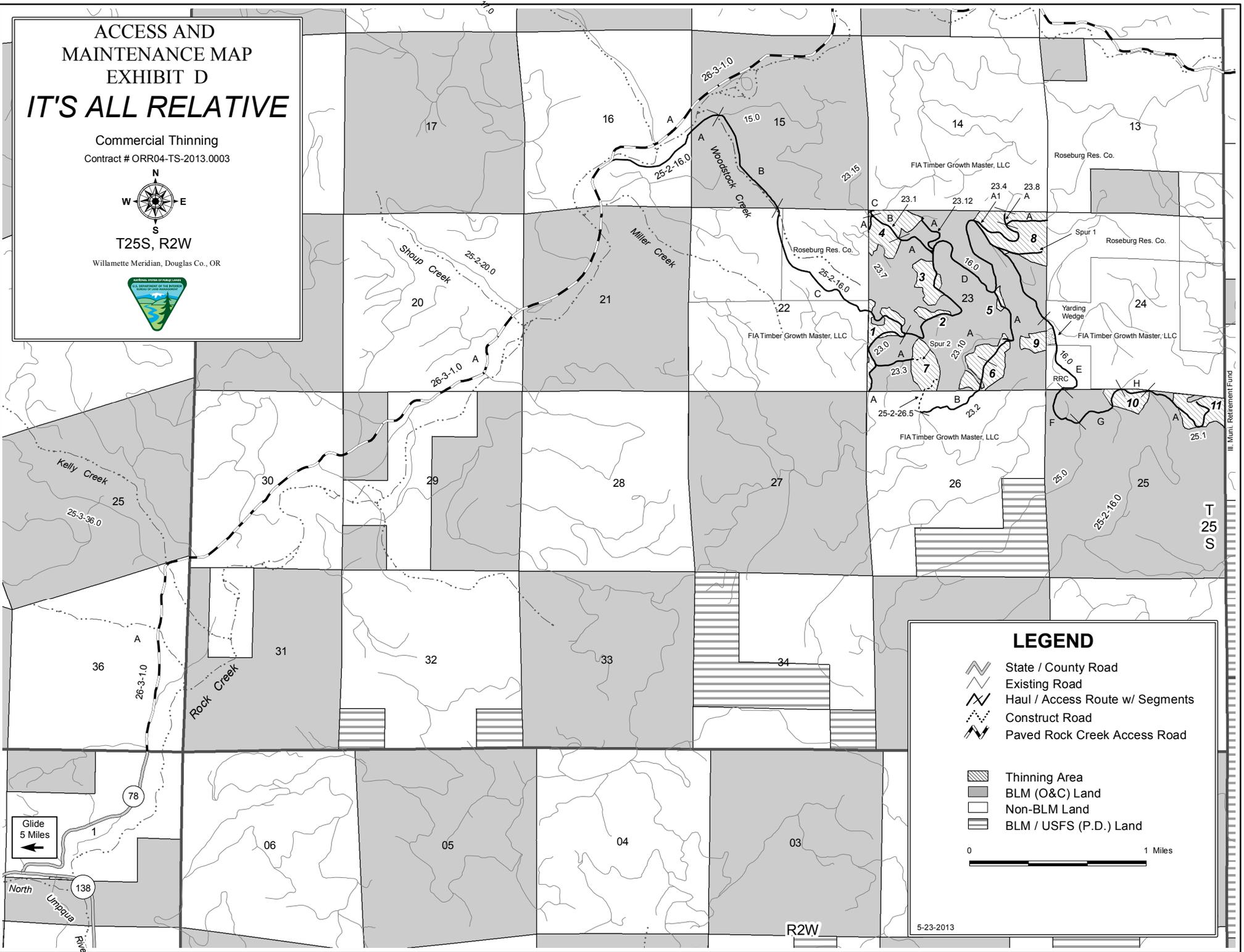
ACCESS AND MAINTENANCE MAP EXHIBIT D *IT'S ALL RELATIVE*

Commercial Thinning
Contract # ORR04-TS-2013.0003



T25S, R2W

Willamette Meridian, Douglas Co., OR



LEGEND

- State / County Road
- Existing Road
- Haul / Access Route w/ Segments
- Construct Road
- Paved Rock Creek Access Road

- Thinning Area
- BLM (O&C) Land
- Non-BLM Land
- BLM / USFS (P.D.) Land



5-23-2013



III. Mtn. Retirement Fund

T
25
S

R2W

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

Sale Name: It's All Relative							
Contract No. ORR04-TS-2013.0003							
Road Number	Road Seg.	Segment Length	Segment Owner	Road Use Fees	Surface Type	Timber Haul Fees	Maintained By
25-2-16.0	A	0.90	BLM		Rock	\$1.13	BLM
25-2-16.0	B	0.60	BLM		Rock	\$1.13	BLM
25-2-16.0	C	1.20	BLM		Rock	\$1.13	BLM
25-2-16.0	D	2.40	BLM		Rock	\$1.13	BLM
25-2-16.0	E	0.70	BLM		Rock	\$1.13	BLM
25-2-16.0	F	0.30	BLM		Rock	\$1.13	BLM
25-2-16.0	G	0.21	BLM		Rock	\$0.51	Purchaser
25-2-16.0	H (POR)	0.15	BLM		Rock	\$0.51	Purchaser
25-2-23.0	A (POR)	0.53	BLM		Rock	\$1.13	BLM
25-2-23.1	A	0.26	BLM		Rock	\$0.51	Purchaser
25-2-23.1	B (BASE)	0.18	TGM	Paid off	Rock		Purchaser
25-2-23.1	B (IMP)	0.18	BLM		Rock	\$0.51	Purchaser
25-2-23.1	C (POR)	0.05	TGM		Rock	\$0.51*	Purchaser
25-2-23.10	A (POR)	0.05	BLM		Rock	\$0.51	Purchaser
25-2-23.12	A (POR)	0.29	BLM		Rock	\$0.51	Purchaser
25-2-23.2	A	0.51	BLM		Rock	\$0.51	Purchaser
25-2-23.2	B	0.57	TGM	\$4.90	Rock	\$0.51*	Purchaser
25-2-23.3	A	0.30	BLM		Rock	\$0.51	Purchaser
25-2-23.4	A	0.30	BLM		Rock	\$0.51	Purchaser
25-2-23.4	A1 (BASE)	0.43	BLM		Rock		Purchaser
25-2-23.4	A1 (IMP)	0.43	TGM	\$0.47	Rock	\$0.51*	Purchaser
25-2-23.7	A (POR)	0.09	BLM		Native		Purchaser
25-2-23.8	A	0.07	TGM		Rock		Purchaser
25-2-25.1	A	0.59	BLM		Native		Purchaser
25-2-26.5	A	0.24	BLM		Native		Purchaser
26-3-1.0	A (POR)	4.91	BLM		Bituminous	\$0.65	BLM
Spur 1	A	0.26	BLM		Native		Purchaser
Spur 2	A	0.03	BLM		Native		Purchaser

* Rockwear fees payable to the segment owner.
7/30/2013

ROAD MAINTENANCE SPECIFICATIONS

General road maintenance specifications are designated by numeric symbols according to the type of work performed as follows:

SECTION	DESCRIPTION
3000	General
3100	Operational Maintenance
3200	Seasonal Maintenance
3300	Final Maintenance
3400	Other Maintenance
3500	Decommissioning

ROAD MAINTENANCE SPECIFICATIONS

GENERAL - 3000

- 3001 The Purchaser shall be required to maintain all roads listed and/or referenced in section 42(D) Special Provisions of this contract in accordance with Sections 3000, 3100, 3200, 3300, 3400, and 3500 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 geometric standards required in Exhibit C of this contract.
- 3003 The minimum required maintenance on any roads shall include the provisions specified in Subsections 3101, 3104, and 3105.
- 3004 The Purchaser shall be responsible for providing timely maintenance and cleanup on any roads 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.

OPERATIONAL MAINTENANCE - 3100

- 3101 The Purchaser shall blade and shape the road surface and shoulders with a motor 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 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 designated, suitable disposal site where material cannot erode into streams, lakes, or reservoirs or cause undue damage to road fill slopes which have been planted or mulched to control soil erosion as directed by the Authorized Officer.
- 3104b The Purchaser shall be responsible for removal of all slides or slough, up to fifteen station yards in quantity, at any one site. This work includes unlimited multiple sites on all roads required to be maintained by the purchaser.

ROAD MAINTENANCE SPECIFICATIONS

Prior to removal of any slough or slide material exceeding fifteen 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 Road Cost Guide. 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 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 repair and replacement of eroded material exceeding fifteen 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, 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 Road Cost Guide. 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 by scattering below the road.

3108 The Purchaser shall avoid fouling gravel or bituminous surfaces 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.

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

ROAD MAINTENANCE SPECIFICATIONS

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.

SEASONAL MAINTENANCE - 3200

- 3201 The Purchaser shall perform preventative 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 requirements specified in Section 3100.
- 3202 The Purchaser shall perform and complete maintenance specified in Sections 3000, 3100, and 3200 on all roads maintained by the Purchaser, prior to October 1 each year, except as specified in Subsection 3203, after initial commencement of construction or logging operations. Thereafter, all roads shall have continuous preventive maintenance and road cleanup until suspension of seasonal operations. This includes all roads used and not used during the proceeding operating seasons.
- 3203 The Purchaser shall complete road cleanup and maintenance, as specified in Section 3100, at the completion of logging operations on any roads 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.

FINAL MAINTENANCE - 3300

- 3301 The Purchaser shall complete final maintenance and/or damage repairs on all roads used under the terms of their contract within thirty 30 calendar days following the completion of hauling or the expiration of the Purchaser's right to cut and remove timber 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 perform final road maintenance only when weather or soil moisture

ROAD MAINTENANCE SPECIFICATIONS

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 30 days.

OTHER MAINTENANCE - 3400

3401 The Purchaser shall 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.

DECOMMISSIONING – 3500

3501 Decommissioning shall consist of removing culverts, installing water bars, placement of slash, blocking road from access by vehicles. This work is required for road acceptance under Section 18 of this contract.

3503 Decommissioning shall be performed on existing roads in accordance with these specifications, and as shown on the plans at the following locations:

Road No	From Sta	To Sta	Method of Decommissioning
25-2-25.1	0+00	31+00	Water bar, block, and slash mat
25-2-26.5	0+00	12+50	Water bar, block, and slash mat
Spur 1	0+00	13+70	Water bar, block, and slash mat
Spur 2	0+00	1+50	Water bar, block, and slash mat

3506 Stockpiled slash shall be used to protect exposed areas created by the Purchaser's decommissioning and subsoiling operations described in these sections. Slash shall be

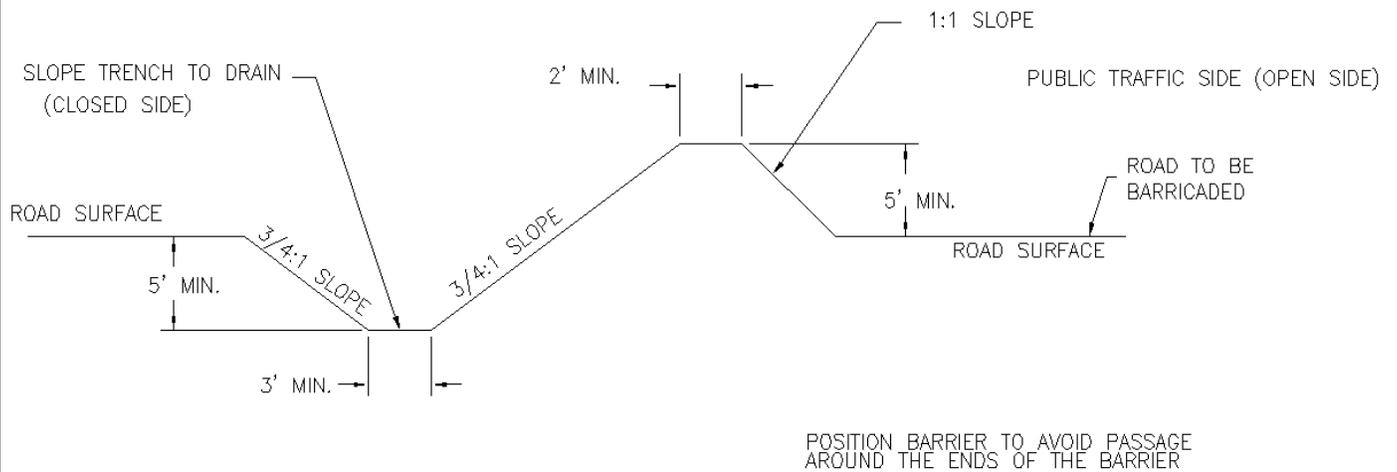
ROAD MAINTENANCE SPECIFICATIONS

uniformly spread and placed without bunching. The operation shall produce a dense, uniform mat. Where slash is not available exposed soil areas shall be stabilized in accordance with Section 1800.

- 3508 Protect areas treated with slash placement from damage by Purchaser traffic or construction equipment. Damaged areas shall be repaired by the Purchaser.
- 3509 Access shall be blocked with barricades as shown on the typical detail sheet at locations listed in Section 3503.
- 3511 Water barring shall be done on designated roadways, turnouts, disturbed areas, and landings.
- 3513 Water bars shall be installed across full width of roadway at the spacing shown on the drawings. Water bars shall be constructed as shown on water bar detail sheet.
- 3514 Protection of exposed surfaces shall be accomplished by placement of slash described in Subsection 3506 or placement of soil stabilization material in accordance with Section 1800 on designated roadways landings, cut banks, fill slopes, and other areas disturbed by the purchaser's decommissioning operations in accordance with these specifications and as shown in the plans.

ROAD MAINTENANCE SPECIFICATIONS

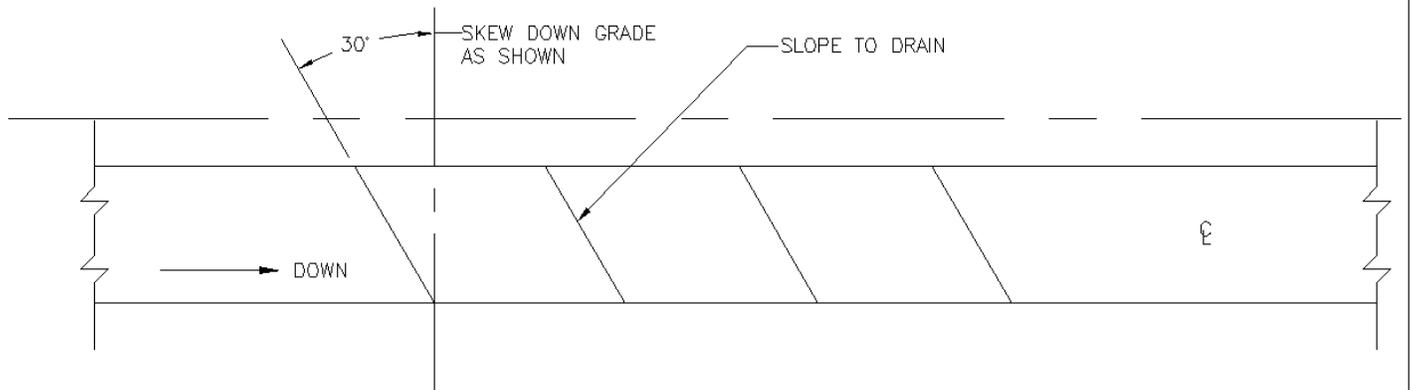
EXHIBIT D
TRENCH BARRIER DETAIL



TRENCH BARRIER
SCALE: NONE

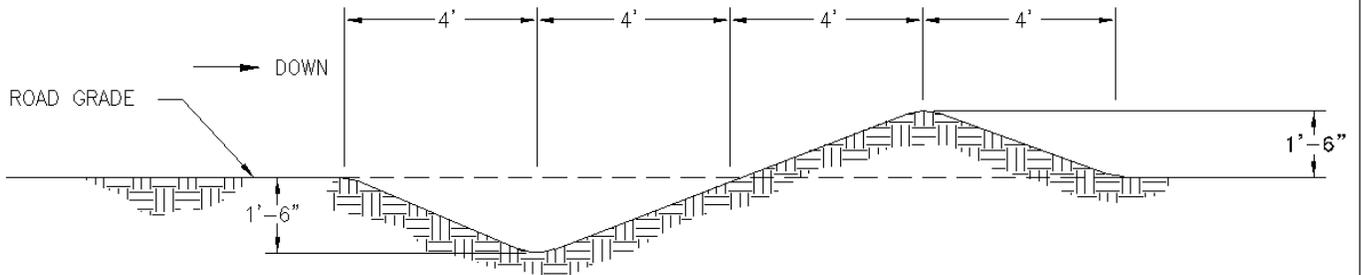
ROAD MAINTENANCE SPECIFICATIONS

EXHIBIT D
 WATERBAR DETAIL



ROAD PLAN

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

ROAD PROFILE

SCALE: NONE

Exhibit E Seasonal Restriction Matrix

(Page 1 of 2)

It's All Relative

ORR04-TS-2013.0003

 Restricted Times Are Darkly Shaded

Sale Area	Activity	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
		1 15	1 15	1 15	1 15	1 16	1 15	1 16	1 15	1 15	1 15	1 15	1 15
Harvest Area 1	Falling and bucking ²												
	Ground-based yarding and sub-soiling ^{1, 2}												
	Cable yarding on rock roads ²												
	Loading or hauling on rock roads												
Harvest Area 2	Falling and bucking ²												
	Cable yarding on rock roads ²												
	Loading or hauling on rock roads												
Harvest Area 3	Falling and bucking ²												
	Ground-based yarding and sub-soiling ^{1, 2}												
	Cable yarding on rock roads ²												
	Loading or hauling on rock roads												
Harvest Area 4	Falling and bucking ²												
	Ground-based yarding and sub-soiling ^{1, 2}												
	Cable yarding on rock roads ²												
	Loading or hauling on rock roads												
Harvest Area 5	Falling and bucking ²												
	Ground-based yarding and sub-soiling ^{1, 2}												
	Loading or hauling on rock roads												
Harvest Area 6	Falling and bucking ²												
	Ground-based yarding and sub-soiling ^{1, 2}												
	Cable yarding on inadequately surfaced roads ^{1, 2}												
	Loading or hauling on inadequately surfaced roads ¹												
Harvest Area 7	Falling and bucking ²												
	Ground-based yarding and sub-soiling ^{1, 2}												
	Cable yarding on unsurfaced roads ^{1, 2}												
	Loading or hauling on unsurfaced temporary roads ¹												

¹ Wet season restrictions (October 15 - May 15) may be shortened or extended depending on weather conditions.

² Bark slip seasonal restrictions (April 15 - July 15) may be conditionally waived.

Exhibit E Seasonal Restriction Matrix

(Page 2 of 2)

It's All Relative

ORR04-TS-2013.0003

 Restricted Times Are Darkly Shaded

Sale Area	Activity	Jan		Feb		Mar		Apr		May		June		July		Aug		Sept		Oct		Nov		Dec	
		1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15
Harvest Area 8	Falling and bucking ²																								
	Ground-based yarding and sub-soiling ^{1, 2}																								
	Cable yarding on rock roads ²																								
	Loading or hauling on unsurfaced temporary roads ¹																								
	Loading or hauling on rock roads																								
Harvest Area 9	Falling and bucking ²																								
	Cable yarding on rock roads ²																								
	Loading or hauling on rock roads																								
Harvest Area 10	Falling and bucking ²																								
	Ground-based yarding and sub-soiling ^{1, 2}																								
	Cable yarding on rock roads ²																								
	Loading or hauling on rock roads																								
Harvest Area 11	Falling and bucking ^{2, 3}																								
	Ground-based yarding and sub-soiling ^{1, 2, 3}																								
	Cable yarding on unsurfaced roads ^{1, 2, 3}																								
	Loading or hauling on unsurfaced temporary roads ¹																								
Spurs No. 1 and No. 2 and Roads No. 25-2-23.3 Seg A and No. 25-2-26.5 Seg A	Road construction and renovation ¹																								
	Right-of-way logging and clearing ¹																								
Road No. 25-2-25.1	Road renovation ^{1, 3}																								
	Right-of-way logging and clearing ^{1, 3}																								

¹ Wet season restrictions (October 15 - May 15) may be shortened or extended depending on weather conditions.

² Bark slip seasonal restrictions (April 15 - July 15) may be conditionally waived.

³ Spotted owl seasonal restrictions (March 1 - July 15) may be conditionally waived.



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

District : Roseburg
Sale Name : It's All Relative
Sale Date : 09/10/2013
Appraisal Method : 16' MBF

Contract # : ORR04-TS-2013.0003
Job File # : 950
Master Unit : Douglas
Planning Unit : South River

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

Roseburg
It's All Relative
ORR04-TS-2013.0003

Timber - Sale - Summary

Legal Description

Forest Type	Township	Range	Section	Subdivision
O&C	25S.	2W.	23	All Subdivisions
O&C	25S.	2W.	25	N1/2NE1/4, NE1/4NW1/4

Cutting Volume (16' MBF)

Unit	DF	WH	WRC	GF	IC				Total	Regen	Partial	ROW
1	261	22	5						288	0	19	0
2	66	6	1						73	0	5	0
3	296	2	1	1					300	0	17	0
4	478	10	3						491	0	32	0
5	34								34	0	2	0
6	426	25	13	1					465	0	31	0
7	253	22	8						283	0	22	0
8	747	33	38		1				819	0	54	0
9	159	6	3						168	0	9	0
10	362	18	1	8					389	0	16	0
11	562	21	1	10					594	0	26	0
26.5 rd.	19	2							21	0	0	1
Totals	3,663	167	74	20	1				3,925	0	233	1

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Logging Costs per 16' MBF

Stump to Truck	\$	161.54
Transportation	\$	68.32
Road Construction	\$	19.04
Road Amortization	\$	0.33
Road Maintenance	\$	11.66

Other Allowances :

Equipment Cleaning	\$ 0.42
Misc	\$ 1.21
Slash Disposal	\$ 3.15
Total Other Allowances :	\$ 4.78

Total Logging Costs per 16' MBF

\$ 265.67

Utilization Centers

Center #1 : Roseburg Oregon	30 Miles
Center #2	0 Miles
Weighted distance to Utilization Centers	30

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 : 44 bf	All : 43 bf
Recovery	Douglas-fir : 95 %	All : 93 %
Salvage	Douglas-fir : 0 %	All : 0 %
Avg Volume (16' MBF per Acre)		17
Avg Yarding Slope		55 %
Avg Yarding Distance (feet)		250
Avg Age		54
Volume Cable		64 %
Volume Ground		36 %
Volume Aerial		0 %
Road Construction Stations		14.00
Road Improvement Stations		0.00
Road Renovation Stations		87.05
Road Decommission Stations		58.70

Cruise

Cruised By	DS,KT,MK BG
Date	02/04/2013
Type of Cruise	DF-3P, Minors 100%
County, State	Douglas, OR

Net Volume

Green (16' MBF)	3,925
Salvage (16' MBF)	0
Douglas-fir Peeler	0
Export Volume	0
Scaling Allowance (\$0.75 per 16' MBF)	\$2,943.75

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Prospectus

Appraisal Method : (16' MBF)

Species	Trees	Net Volume 16' MBF	Net Volume 32' MBF	Net Volume CCF
Douglas-fir	23,012	3,663	3,034	
Western Hemlock	2,155	167	130	
Western red-cedar	1,381	74	56	
Grand Fir	188	20	16	
Incense-cedar	49	1	1	
Total	26,785	3,925	3,237	

All Species

Gross Volume	Number Trees	Avg bf Volume Per Tree	DBH	Gross Merch Volume	Merch Logs	Avg bf Gross Merch Log
4,200	26,785	156	12.8	4,103	94,971	43

Merch Logs	Cull Logs	Total Logs	Logs per Tree	Net Volume	Gross Volume	Recovery
94,971	2,956	97,927	3.7	3,925	4,200	93 %

Douglas-fir

Gross Volume	Number Trees	Avg bf Volume Per Tree	DBH	Gross Merch Volume	Merch Logs	Avg bf Gross Merch Log
3,871	23,012	168	12.9	3,822	87,335	44

Merch Logs	Cull Logs	Total Logs	Logs per Tree	Net Volume	Gross Volume	Recovery
87,335	1,831	89,166	3.9	3,663	3,871	95 %

Cutting Areas

Unit	Regen Acres	Partial Cut Acres	Right Of Way Acres	Total Acres
1		19		19
2		5		5
3		17		17
4		32		32
5		2		2
6		31		31
7		22		22
8		54		54
9		9		9
10		16		16
11		26		26
26.5 rd.			1	1
Totals :		233	1	234

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Volume Summary

Sale Volume Totals

234 Acres 0 Regen 233 Partial 1 R/W 12 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	23,012	87,335	1,831	3,663	3,822	3,871	3,034	3,163	3,203	0	0	0
Western Hemlock	2,155	4,476	1,032	167	175	220	130	137	172	0	0	0
Western red-cedar	1,381	2,534	87	74	83	86	56	63	66	0	0	0
Grand Fir	188	565	4	20	21	21	16	17	17	0	0	0
Incense-cedar	49	61	2	1	2	2	1	1	2	0	0	0
Totals	26,785	94,971	2,956	3,925	4,103	4,200	3,237	3,381	3,460	0	0	0

Unit Totals

Unit : 1 19 Acres 0 Regen 19 Partial 0 R/W

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	1,653	6,257	131	276	272	261
Western Hemlock	257	586	84	27	23	22
Western red-cedar	94	157	7	5	5	5
Unit Totals	2,004	7,000	222	308	300	288

Unit : 2 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	435	1,588	33	70	69	66
Western Hemlock	67	151	37	8	6	6
Western red-cedar	16	30		1	1	1
Unit Totals	518	1,769	70	79	76	73

Unit : 3 17 Acres 0 Regen 17 Partial 0 R/W

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	1,543	7,073	149	313	309	296
Western Hemlock	25	49	12	3	2	2
Grand Fir	2	8		1	1	1
Western red-cedar	15	25		1	1	1
Unit Totals	1,585	7,155	161	318	313	300

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Douglas-fir	902	3,809	80	168	166	159
Western Hemlock	55	112	36	8	6	6
Western red-cedar	58	102	1	4	4	3
Unit Totals	1,015	4,023	117	180	176	168

Unit : 10 16 Acres 0 Regen 16 Partial 0 R/W

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	2,260	8,673	182	382	378	362
Western Hemlock	199	447	72	22	19	18
Grand Fir	63	204	1	8	8	8
Western red-cedar	19	37		1	1	1
Unit Totals	2,541	9,361	255	413	406	389

Unit : 11 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	3,757	13,467	283	594	586	562
Western Hemlock	242	566	45	24	22	21
Grand Fir	115	329	3	11	11	10
Western red-cedar	26	39		1	1	1
Unit Totals	4,140	14,401	331	630	620	594

Unit : 26.5 rd. 1 Acres 0 Regen 0 Partial 1 R/W

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	132	448	3	20	20	19
Western Hemlock	30	56	23	3	2	2
Unit Totals	162	504	26	23	22	21

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Stump to Truck Costs

Total (16' MBF)

Total Stump to Truck Costs	Net Volume	Cost / Net Volume
\$ 634,037.95	3,925	\$ 161.54

Detail

Yarding & Loading

Yarding System	Unit Of Measure	Units	Cost / Unit	Total Cost
Short Twr<40	MBF	327	\$ 379.63	\$ 124,139.01
Short Twr<40	MBF	539	\$ 202.47	\$ 109,131.33
Short Twr<40	MBF	391	\$ 121.48	\$ 47,498.68
Short Twr<40	Job	1	\$ 89,851.75	\$ 89,851.75
Short Twr<40	MBF	333	\$ 86.77	\$ 28,894.41
Shovel	MBF	223	\$ 107.59	\$ 23,992.57
Wheel Skidder	MBF	1,451	\$ 124.26	\$ 180,301.26
Track Skidder	Job	1	\$ 3,758.94	\$ 3,758.94
Subtotal				\$ 607,567.95

Other Costs

Explanation	Unit Of Measure	Units	Cost / Unit	Total Cost
Intermediate Supports	Per Suprts	33	\$ 250.00	\$ 8,250.00
Lift Trees	Per Tree	107	\$ 150.00	\$ 16,050.00
Subtotal				\$ 24,300.00

Additional Move-Ins

Equipment	# Move-In	Cost / Move In	Total Cost
Yarder / Loader	3	\$ 434.00	\$ 1,302.00
Dozer	1	\$ 434.00	\$ 434.00
Skidder	1	\$ 434.00	\$ 434.00
Subtotal			\$ 2,170.00

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Other Allowances Costs

Total (16' MBF)

Total Other Allowances Costs	Net Volume	Cost / Net Volume *	Total Buy Out Cost
\$18,764.00	3,925	\$4.78	\$0.00

Equipment Cleaning

Detail (16' MBF)

Cost Item	Total Cost	Cost / Net Vol *	Buy Out	Buy Out Cost
Other Equipment	\$ 1,650.00	\$ 0.42	N	\$ 0.00
Subtotal	\$ 1,650.00	\$ 0.42		\$ 0.00

Misc

Detail (16' MBF)

Cost Item	Total Cost	Cost / Net Vol *	Buy Out	Buy Out Cost
Skid Trail Subsoiling	\$ 4,739.00	\$ 1.21	N	\$ 0.00
Subtotal	\$ 4,739.00	\$ 1.21		\$ 0.00

Slash Disposal

Detail (16' MBF)

Cost Item	Total Cost	Cost / Net Vol *	Buy Out	Buy Out Cost
Landings-All (clean-up, covering, piling, burning)	\$ 12,375.00	\$ 3.15	N	\$ 0.00
Subtotal	\$ 12,375.00	\$ 3.15		\$ 0.00

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

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Consolidated Comments

General

This sale has 11 units spread out over 2 sections with some difficult logging in some units. This sale also ranges from 3700' to 1900' elevation and may not be accessible year around due to deep snow. Due to these issues it is this appraisers opinion that an extra move-in is needed to complete this sale.

Yarding & Loading

-1.5 acres yarding/day and volume/acre/unit were used to determine loads/day for yarding costs.
-\$4.25/gallon fuel cost and 4.5mbf/load were used in logging cost calculations.
-Track Skidder was used for yarding spurs.
-Intermediate supports and lift trees are based on Cruiser/Appraiser's logging plan est.
-1 additional move-in was included based on appraisers judgement of production and seasonal restrictions.
-Due to rounding issues with the private volume under Stump to truck unit of measure job was used twice to allow accurate valuing.

Road Costs

See engineering package for more information.

(see Engineering Appraisal for details).

Transportation

-From weighted mid point of sale (unit #9) to State Hwy 138 is 63 RTM's & 11.2 miles.
-From Rock Cr. to Roseburg city limits on St. Hwy 138 is 93 RTM's & 19 miles.
-3.6hrs/load
-*4186.2 16'gm/4.5mbf per load(net)=931 loads.
-931 loads x 3.6hrs per load = 3,352 total hours.
-3,352 hours x \$80.00/hr(trucking cost)= \$268,160.00 total transportation cost.
-*Volume Includes Private Volume

(see Transportation appendix for details).

Other Allowances

-Landing Pile and cover: 99 landings x \$125.00/landing = \$12,375.00
-Number of landings and location based off of Cruiser/Appraiser's estimated logging plan.
-Equipment Cleaning: 1 Yarder, 2 Loaders, 1 Rubber Tired Skidder & 1 Track Skidder
5 pieces x 3hrs/piece x \$55.00/hr x 2 seasons = \$1,650.00

-Skid Trail Subsoiling: 2.55 miles/.75 miles/day = 4 days
-4 days x 9 hrs/day = 36hrs x \$115.00/hr = \$4,140.00
-Move-in: 1 excavator x\$434.00/move-in = \$434.00
-Equipment cleaning: 1 excavator x 3hrs/piece x \$55.00/hr = \$165.00
-Total for Skid Trail Subsoiling = \$4,739.00

-Private Volume to be sold at sale bid price.

Prospectus

The Standard Error for the 3P cruise of the Douglas Fir was 5.4% <22" DBH.

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Summary of All Roads and Projects

Updated: 5/1/2013

T.S. Contract Name: It's All Relative	Tract No:	Sale Date: 09/10/2013
Prepared by: B. Albin Ph: 3328	Print Date: 7/18/2013 3:25:34 PM	
Construction: 14.00 sta		
Improve: 0.00 sta	Renov: 87.05 sta	Decom: 0.00 sta Temp: 0.00 sta
200 Clearing and Grubbing: 5.7 acres		\$11,985.52
Clearing: 66.6 sta	Grubbing: 5.7 acres	
Slash Treatment: 5.7 acres		
300 Excavation:		\$19,307.23
Haul: 0 sta-yds		
400 Drainage:		\$14,089.98
Culvert: 3 lf	wt = 63 lbs factor = 1.2	
DownSpout: 30 lf		
PolyPipe: 772 lf		
500 Renovation:		\$6,246.90
Blading 0.36 mi		
Surfacing:		\$16,781.80
Quarry Name: 3" Minus	460 cy	
Quarry Name: 1" Open	70 cy	
1300 Geotextiles:		\$0.00
1400 Slope Protection:		\$0.00
1800 Soil Stabilization: 1.1 acres		\$622.90
Includes Small Quantity Factor of 1.54		
1900 Cattleguards:		\$0.00
2100 RoadSide Brushing: 0.0 acres		\$0.00
2300 Engineering: 0.00 sta.		\$0.00
2400 Minor Concrete:		\$0.00
2500 Gabions:		\$0.00
8000 Miscellaneous:		\$0.00
Mobilization: Const.	\$4,169.43 Surf. \$1,535.02	\$5,704.45
Quarry Development:		\$0.00
	Total: 3,925 mbf @ \$19.042/mbf =	\$74,738.79

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: It's All Relative Sale Date: 09/10/2013

Road Number: 25-2-16.0 Road Name:

Road Renovation: 0.64 mi 16 ft Subgrade 3 ft ditch 5/1/2013

200 Clearing and Grubbing: 0.0 acres	\$0.00
Clearing:0.0 sta Grubbing:0.0 acres	
Slash Treatment:0.0 acres	
300 Excavation:	\$14,627.14
400 Drainage:	\$14,000.88
Culvert: 0 lf wt = 0 lbs factor = 1.2	
DownSpout: 30 lf	
PolyPipe: 772 lf	
500 Renovation:	\$98.27
Surfacing:	\$9,300.00
Quarry Name: 3" Minus 240 cy	
Quarry Name: 1" Open 70 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
2300 Engineering: 0.00 sta.	\$0.00
2400 Minor Concrete:	\$0.00
2500 Gabions:	\$0.00
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$2,296.65 Surf. \$897.84.....	\$3,194.50
Quarry Development:	\$0.00
	Total: \$41,220.78

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: It's All Relative Sale Date: 09/10/2013

Road Number: 25-2-23.2 Road Name:

Road Renovation: 0.01 mi 16 ft Subgrade 3 ft ditch 5/1/2013

200 Clearing and Grubbing: 0.0 acres	\$0.00
Clearing:0.0 sta Grubbing:0.0 acres	
Slash Treatment:0.0 acres	
300 Excavation:	\$225.86
400 Drainage:	\$0.00
Culvert: 0 lf wt = 0 lbs factor = 1.2	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	\$0.00
Surfacing:	\$902.10
Quarry Name: 3" Minus 30 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
2300 Engineering: 0.00 sta.	\$0.00
2400 Minor Concrete:	\$0.00
2500 Gabions:	\$0.00
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$68.12 Surf. \$86.89.....	\$155.01
Quarry Development:	\$0.00
	Total: \$1,282.97

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: It's All Relative Sale Date: 09/10/2013

Road Number: 25-2-23.3 Road Name:

Road Renovation: 0.10 mi 14 ft Subgrade 3 ft ditch 5/1/2013

200 Clearing and Grubbing: 0.4 acres	\$777.76
Clearing:5.2 sta Grubbing:0.4 acres	
Slash Treatment:0.4 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:	\$225.93
Blading 0.10 mi	
Surfacing:	\$0.00
1300 Geotextiles:	\$0.00
1400 Slope Protection:	\$0.00
1800 Soil Stabilization: 0.0 acres	\$0.00
1900 Cattleguards:	\$0.00
2100 RoadSide Brushing: 0.0 acres	\$0.00
2300 Engineering: 0.00 sta.	\$0.00
2400 Minor Concrete:	\$0.00
2500 Gabions:	\$0.00
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$60.62 Surf. \$0.00.....	\$60.62
Quarry Development:	\$0.00
Total:	\$1,064.31

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: It's All Relative Sale Date: 09/10/2013

Road Number: 25-2-23.4 Road Name:

Road Renovation: 0.05 mi 25 ft Subgrade 3 ft ditch 5/1/2013

200 Clearing and Grubbing: 0.2 acres	\$390.41
Clearing:2.7 sta Grubbing:0.2 acres	
Slash Treatment:0.2 acres	
300 Excavation:	\$1,017.54
400 Drainage:	\$89.10
Culvert: 3 lf wt = 63 lbs factor = 1.2	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	\$0.00
Surfacing:	\$6,579.70
Quarry Name: 3" Minus 190 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
2300 Engineering: 0.00 sta.	\$0.00
2400 Minor Concrete:	\$0.00
2500 Gabions:	\$0.00
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$487.81 Surf. \$550.29.....	\$1,038.10
Quarry Development:	\$0.00
	Total: \$9,114.85

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: It's All Relative Sale Date: 09/10/2013

Road Number: 25-2-25.1 Road Name:

Road Renovation: 0.59 mi 14 ft Subgrade 3 ft ditch 5/1/2013

200 Clearing and Grubbing: 3.0 acres	\$5,588.64
Clearing:31.0 sta Grubbing:3.0 acres	
Slash Treatment:3.0 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:	\$4,218.70
Surfacing:	\$0.00
1300 Geotextiles:	\$0.00
1400 Slope Protection:	\$0.00
1800 Soil Stabilization: 0.6 acres	\$339.76
Includes Small Quantity Factor of 1.54	
1900 Cattleguards:	\$0.00
2100 RoadSide Brushing: 0.0 acres	\$0.00
2300 Engineering: 0.00 sta.	\$0.00
2400 Minor Concrete:	\$0.00
2500 Gabions:	\$0.00
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$612.85 Surf. \$0.00.....	\$612.85
Quarry Development:	\$0.00
Total:	\$10,759.95

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: It's All Relative Sale Date: 09/10/2013

Road Number: 25-2-26.5 Road Name:

Road Construction: 0.24 mi 14 ft Subgrade 3 ft ditch 5/1/2013

200 Clearing and Grubbing: 1.0 acres	\$2,885.56
Clearing:12.5 sta Grubbing:1.0 acres	
Slash Treatment:1.0 acres	
300 Excavation:	\$2,925.37
400 Drainage:	\$0.00
Culvert: 0 lf wt = 0 lbs factor = 1.2	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	\$0.00
Surfacing:	\$0.00
1300 Geotextiles:	\$0.00
1400 Slope Protection:	\$0.00
1800 Soil Stabilization: 0.5 acres	\$283.14
Includes Small Quantity Factor of 1.54	
1900 Cattleguards:	\$0.00
2100 RoadSide Brushing: 0.0 acres	\$0.00
2300 Engineering: 0.00 sta.	\$0.00
2400 Minor Concrete:	\$0.00
2500 Gabions:	\$0.00
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$368.06 Surf. \$0.00.....	\$368.06
Quarry Development:	\$0.00
	Total: \$6,462.12

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are COMPACTED in place cubic yards.

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: It's All Relative Sale Date: 09/10/2013

Road Number: Spur 1 Road Name:

Road Renovation: 0.26 mi 14 ft Subgrade 3 ft ditch 5/1/2013

200 Clearing and Grubbing: 0.9 acres	\$1,811.10
Clearing:13.7 sta Grubbing:0.9 acres	
Slash Treatment:0.9 acres	
300 Excavation:	\$0.00
400 Drainage:	\$0.00
Culvert: 0 lf wt = 0 lbs factor = 1.2	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	\$1,704.01
Blading 0.26 mi	
Surfacing:	\$0.00
1300 Geotextiles:	\$0.00
1400 Slope Protection:	\$0.00
1800 Soil Stabilization: 0.0 acres	\$0.00
1900 Cattleguards:	\$0.00
2100 RoadSide Brushing: 0.0 acres	\$0.00
2300 Engineering: 0.00 sta.	\$0.00
2400 Minor Concrete:	\$0.00
2500 Gabions:	\$0.00
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$212.30 Surf. \$0.00.....	\$212.30
Quarry Development:	\$0.00
Total:	\$3,727.40

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: It's All Relative Sale Date: 09/10/2013

Road Number: spur 2 Road Name:

Road Construction: 0.03 mi 14 ft Subgrade 3 ft ditch 5/1/2013

200 Clearing and Grubbing: 0.2 acres	\$532.06
Clearing:1.5 sta Grubbing:0.2 acres	
Slash Treatment:0.2 acres	
300 Excavation:	\$511.32
400 Drainage:	\$0.00
Culvert: 0 lf wt = 0 lbs factor = 1.2	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	\$0.00
Surfacing:	\$0.00
1300 Geotextiles:	\$0.00
1400 Slope Protection:	\$0.00
1800 Soil Stabilization: 0.0 acres	\$0.00
1900 Cattleguards:	\$0.00
2100 RoadSide Brushing: 0.0 acres	\$0.00
2300 Engineering: 0.00 sta.	\$0.00
2400 Minor Concrete:	\$0.00
2500 Gabions:	\$0.00
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$63.02 Surf. \$0.00.....	\$63.02
Quarry Development:	\$0.00

Total: \$1,106.40

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are COMPACTED in place cubic yards.

TIMBER SALE ROAD SPECIFICATIONS

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TIMBER SALE ROAD SPECIFICATIONS

GENERAL – 100

101 - Prework Conference(s):

A prework conference will be held prior to the start of new construction, improvement, renovation, 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 of the prework conference 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.

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

ACI - American Concrete Institute

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. This is also referred to as Equivalent Opening Size (EOS).

ASTM - American Society for Testing and Materials.

Base Course - Surfacing structure consisting of crushed gravel or stone, crushed sandstone, pitrun 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.

Burst Strength - The resistance of a geotextile material to rupture from pressure applied

TIMBER SALE ROAD SPECIFICATIONS

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.

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 sidestepping material outside of the road prism.

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

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.

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.

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

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

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.

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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.

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

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

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

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.

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.

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

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

Road Centerline - The longitudinal center of a 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.

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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.

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

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 pitrun rock 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.

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

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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.

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.

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.

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<u>AASHTO T 96</u>	Resistance to abrasion of small size coarse aggregate by use of the Los Angeles machine.
<u>AASHTO T 99</u>	Relationship between soil moisture and density of soil. Method A - 4" mold, soil passing a No. 4 sieve 25 blows/layer & 3 layers. Method C - 4" mold, soil passing a 3/4 inch sieve 25 blows/layer & 3 layers. Method D - 6" mold, soil passing a 3/4 inch sieve. 56 blows/layer & 3 layers.
<u>AASHTO T 119</u>	Slump of hydraulic cement concrete.
<u>AASHTO T 152</u>	Air content of freshly mixed concrete.
<u>AASHTO T 166</u>	Specific Gravity of compacted Bituminous Mixtures.
<u>AASHTO T 176</u>	Shows relative portions of fine dust or claylike materials in soil or graded aggregate.
<u>AASHTO T 180</u>	(OSHD 106-71) moisture density relationship of soil same as AASHTO T 99 proctor but uses a 10-lb rammer & 18-in drop height.
<u>AASHTO T 191</u>	<u>Sand Cone.</u> 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.
<u>AASHTO T 205</u>	<u>Rubber balloon.</u> Density of soil in place. Use for compacted or firmly bonded soil.
<u>AASHTO T 209</u>	Maximum Specific Gravity of Bituminous Paving Mixtures.
<u>AASHTO T 210</u>	Durability of aggregates based on resistance to produce fines.
<u>AASHTO T 224</u>	Correction for coarse particles in the soil.
<u>AASHTO T 238</u>	Density of Soil and Soil-Aggregate in place by nuclear methods.
<u>AASHTO T 248</u>	Reducing field samples of aggregate to testing size by mechanical splitter, quartering, or miniature stockpile sampling.

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ASTM D 4564 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 no 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 8000 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 minimum speed of 2.5 miles per hour. The drums shall be no less than 60 inches in diameter and no 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 tamping 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 tamping 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.

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- 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 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 27,000 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.

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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 - Drum drive self-propelled vibratory grid roller. The unit shall consist of one cylindrical drum with a drum diameter of not less than 56 inches, nor more than 66 inches and the drum width shall be 84 inches. Vibratory frequency shall be regulated in seeps from 1200 to 1800 vibrations per minute (VPM), and the centrifugal force developed shall be at least 40,000 pounds at 1800 RPM. The vibratory grid roller shall be self-propelled and have a power unit of not less than 112 horsepower. The "grid" design shall be a herringbone or z-bar pattern around the circumference of the drum. The grid bars shall be 1 inch in height and spaced not more than 8-1/2 inches apart.
- 103i - 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 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, or quarries, stockpile sites, channel changes, and ditches 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

TIMBER SALE ROAD SPECIFICATIONS

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, 202b, and as shown on the plans.
- 203a - Brush under 2 feet in height need not be cut within the limits established for clearing.
- 203c - Disposal of logs from private timber cleared within the limits established as staked on the ground shall consist of decking at a location designated by the Authorized Officer.
- 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, 204b, 204c, and 204d.
- 204a - Stumps, including those overhanging cut banks, shall be removed within the required excavation limits.
- 204b - Stumps and other protruding objects shall be completely removed within the limits of required embankments having heights of less than 4 feet. When authorized, stumps and other nonperishable objects may be left provided they do not extend more than 6 inches above the existing ground line.
- 204c - On excavated areas, roots and embedded wood shall be removed to a depth not less than 6 inches below the subgrade.
- 204d - On areas to be occupied by embankments having heights greater than 4 feet, no stump or portion thereof shall remain within 3 feet of embankment subgrades or slope surfaces after grubbing is completed.
- 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. The areas for such scattering shall have the prior approval of the Authorized Officer.

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- 210a - Disposal of clearing and grubbing on non-government 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 and as marked on the ground with stakes or metal tags.
- 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,

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dimensions, and typical cross sections shown on the plans.

- 305a - Material used in the construction of embankment sections shall be free of stumps, cull logs, brush, muck, sod, roots, 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 stumps, cull logs, brush, sod, and other vegetative and deleterious materials, except as provided under Subsection 204. Roadway embankments of earth material shall be placed in 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 103i....
- 306a - Minimum compaction for each layer of embankment, selected borrow, and selected roadway excavation material placed at optimum moisture shall be a minimum of 8 complete passes or until visual displacement ceases.

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- 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.

- 312 - When material, except solid rock, encountered in cuts at subgrade, is suitable for use in forming the finished roadbed, the top 6-inch layer of the subgrade shall be thoroughly scarified for the full width of the roadbed. Roots, sod, and other deleterious material or stones that will not pass a 6-inch square opening shall be removed. The scarified material shall be processed to the optimum moisture content suitable for maximum density and compacted in accordance with with Subsection 306.

- 313 - In cut areas where solid rock is encountered at, or near subgrade, the rock shall be excavated to a minimum depth of 6 inches below subgrade elevation and the excavated area backfilled with suitable material. The backfill material shall be processed to the optimum moisture content suitable for maximum density and compacted to full width in accordance with the requirements of Subsection 306.

- 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 Subsection 321a and 321c. Materials not disposed of in this manner shall be retrieved and disposed of at the Purchaser's expense and at the direction of the Authorized Officer.

- 321b - Excess construction material as specified under Subsection 321 shall be loaded, hauled, and disposed of at a disposal site at the following location:

Willamette Meridian			
Subdivision	Sec.	T.	R.
NW ¼ of NW ¼	15	25	2

TIMBER SALE ROAD SPECIFICATIONS

- 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 are not required. Materials placed shall be sloped, shaped, and otherwise brought to a visible 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 by the Authorized Officer in segments. The Purchaser shall give the Authorized Officer 3 days notice 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 completion of the roadbed and 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 a gradient of from 2 percent to 4 percent greater than the adjacent road grade. Grade culverts 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.

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- 405e - Corrugated-polyethylene pipe for culverts 12-inch through 36-inch diameter shall meet the requirements of AASHTO M 294. Installation will be subject to the same specification as other pipe materials.

- 405f - Corrugated perforated polyethylene pipe for underdrains 3-inch through 10-inch diameter shall meet the requirements of AASHTO M 252, and shall have a minimum inlet area of 1 square inch per linear foot. Installation will be subject to the same specifications as other pipe materials unless otherwise specified on the plans.

- 406 - Coupling bands shall conform to the requirements of AASHTO M 36 and AASHTO M 218 or AASHTO M 274 with the exception of band widths and the "Hugger"-type band which shall conform to the details, dimensions, and typical diagram shown on the plans.

- 406a - "Hugger"-type coupling bands shall only be used with annular corrugated pipe and pipe-arch culverts, or helically corrugated pipe and pipe-arch culverts having annular reformed ends. Annular reformed ends shall consist of two annular corrugations.

- 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 type 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.

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- 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 or boulders are encountered, they shall be excavated a minimum of 10 inches below the invert grade for a width of at least 2 feet on each side of the pipe and shall be backfilled with compacted select fill.
- 412a - Where soft or spongy soils are encountered, they shall be excavated a minimum of 2 feet below the invert grade for a width of at least one pipe diameter on each side of the pipe and shall be backfilled with compacted select fill.
- 413 - Pipe culverts and pipe-arch culverts shall be bedded on a selected granular fill, crushed rock material, or fine readily compactable soil material having a depth of not less than 6 inches as shown on plans. Foundation material shall be of uniform density throughout the length of the structure and shall be shaped to fit the pipe.
- 416 - Select-fill material for pipe culverts shall be well graded crushed rock material free of excess moisture and devoid of rocks or stones 3 inches or larger which may impinge upon and damage the pipe or otherwise interfere with proper compaction.
- 417 - For pipe culverts:
Side-fill material conforming to the requirements of Subsection 416 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 6 inches in depth and 1 pipe diameter/span, or a minimum of 2 feet in width each side of, and adjacent to, the full length of the pipe barrel. Each layer shall be moistened or dried to a uniform moisture content suitable for maximum compaction and immediately compacted by approved hand or pneumatic tampers as specified in Subsection 306A.
- 418 - Side fills beyond the compaction limits specified under Subsection 417 shall be compacted as specified under Section 300.

TIMBER SALE ROAD SPECIFICATIONS

- 419 - The pipe culvert after being bedded and backfilled as required by these specifications shall be protected by a 1-foot cover of fill before heavy equipment is permitted to cross the drainage structures. Removal of the protection fill shall be as directed by the Authorized Officer.
- 420 - Perforated pipe for underdrains shall be placed in accordance with the plans and specifications. Pipe sections shall be securely joined together. Inlets of underdrains shall be capped.
- 421 - Trenches and bedding rock necessary for the installation of perforated pipe shall conform to the lines, grades, dimensions and typical diagram as shown on the plans.
- 422 - Drain rock shall be carefully placed on geotextile material required in section 1300, to prevent damage or displacement. A minimum 4-inch bedding of drain rock shall be placed and compacted in the bottom of the trench before installing the underdrain pipe. Underdrain pipe shall be firmly embedded in this layer and drain rock placed to the height shown on the plans, or as directed by the Authorized Officer, and then compacted. Care shall be taken not to displace the underdrain pipe or the covering at open joints. Geotextile material shall be overlapped on top of the drain rock a minimum of 1 foot, as shown on the plans.
- 423 - Construction of catch basins conforming to lines, grades, dimensions and typical diagrams shown on the plans, shall be required for culverts.
- 424 - Construction of splash pads conforming to lines, grades, dimensions and typical diagram shown on the plans, shall be required for grade culverts.
- 427 - 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 AND IMPROVEMENT OF EXISTING ROADS - 500

- 501 - This work shall consist of reconditioning and preparing the roadbed and shoulders, installing culverts and splash pads, minor excavation and/or embankment, cleaning and shaping drainage ditches, brushing vegetation from

TIMBER SALE ROAD SPECIFICATIONS

cut and embankment slopes, cleaning and repairing drainage structures of existing roads in accordance with these specifications, as shown on the plans, and as marked on the ground with stakes or metal tags.

- 501a - This work shall include the removal and disposal of slides in accordance with these specifications.
- 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 with stakes or metal tags.
- 502a - Rocks larger than 4 inches in maximum dimension shall be removed from the scarified layers of the roadbed. Material so removed will not be permitted to remain on road shoulders or in ditches.
- 502b - Drainage ditches shall be bladed and shaped in accordance with the lines, grades, dimensions, and typical cross sections shown on the plans.
- 504 - Existing road surface shall be uniformly moistened or dried to the optimum moisture content suitable for maximum density and compacted to full width with equipment conforming to requirements of Subsection 103f and 103i.
- 504a - Minimum compaction required shall be a minimum of 8 passes over each full-width layer, 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.
- 509 - The finished grading shall be approved in writing by the Authorized Officer 1 day prior to surfacing operations. The Purchaser shall give the Authorized Officer 3 days notice prior to final inspection of the grading operations.

TIMBER SALE ROAD SPECIFICATIONS

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 road bed.
- 605 - The Purchaser shall secure the necessary water permits and pay all required water fees for use of water sources selected by the Purchaser and approved by the Authorized Officer.

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 roadbeds and landings approved for placing crushed rock material, in accordance with these specifications and conforming to the 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 at the purchaser's expense.
- 1002a - Crushed rock materials may be obtained from commercial sources selected by the Purchaser at his option and expense providing that the rock materials selected comply with the specifications in this section.

TIMBER SALE ROAD SPECIFICATIONS

- 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

Sieve Designation	A	B	C	D	F	G	H	I
(6) -inch	-	-	-	-	-	-	-	100
3-inch	100	-	100	-	100	-	-	45-65
2-inch	90-95	100	-	-	65-95	100	100	-
1 1/2-inch	-	90-95	-	-	-	-	-	-
1-inch	45-75	50-90	-	100	-	50-85	60-90	-
3/4-inch	-	-	-	-	28-70	-	-	-
1/2-inch	-	-	-	0-20	-	27-60	44-70	-
3/8-inch	-	-	-	-	-	-	-	-
No. 4	15-45	15-50	-	0-5	10-35	15-40	28-50	0-10
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.

TIMBER SALE ROAD SPECIFICATIONS

- 1006 - Crushed rock material shall show durability value of not less than 35, as determined by AASHTO T 210.
- 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 and 500 of these specifications, shall be approved by the Authorized Officer prior to placement of crushed rock materials. Notification for final inspection prior to rocking shall be 72 hours prior to that inspection.
- 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, 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 adding or removing crushed rock material until the surface is smooth and uniform.
- 1010a - Crushed rock material used to repair or reinforce a soft, muddy, frozen, yielding, or rutted roadbed 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 a uniform moisture content suitable for maximum compaction, and compacted to full width by compaction equipment conforming to the requirements of Subsection 103f and 103i. Minimum compaction shall be a minimum of 8 passes over each full-width layer, or until visual displacement ceases.

TIMBER SALE ROAD SPECIFICATIONS

GEOTEXTILES – 1300

- 130 - 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 - Use long-chain, synthetic polymers, composed of at least 95 percent by mass of polyolefins or polyesters, to manufacture geotextile or the threads used to sew geotextile.
- 1303 - Furnish to the Authorized Officer a commercial certification including the name of the manufacturer, product name, style number, chemical composition of the filaments or yarns, and other pertinent information to fully describe the geotextile.
- 1303a - Each roll of geotextile material shall be labeled to provide for identification of the material. Elevate and protect rolls with a waterproof cover if stored outdoors.
- 1303b - When using a geotextile for a permanent installation limit material exposure to ultraviolet radiation to less than 10 days. (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. Place the geotextile smooth and free of tension, stress, or wrinkles. Fold or cut the geotextile to conform to curves. Overlap in the direction of construction. Overlap the geotextile a minimum of 2 feet at the ends and sides of adjoining sheets, or sew the geotextile joints according to manufacturer's recommendations. Do not place longitudinal overlaps below anticipated wheel loads. Hold the geotextile in place with pins, staples, or piles of cover material.
- 1310 - Repair or replace all geotextile that is torn, punctured, or muddy. Remove the damaged area and place a patch of the same type of geotextile overlapping 3 feet beyond the damaged area.
- 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

TIMBER SALE ROAD SPECIFICATIONS

ultraviolet light exposure, and insect and rodent resistant.

- 1313 - Trenches for underdrains shall be excavated to the dimensions and grades shown on the plans and adjusted to meet field conditions. Smooth the trench surfaces by removing all projections that may damage the geotextile. Minimum slope of trenches shall be one percent. The Authorized Officer shall have a minimum of two (2) days notice in which to approve trenches prior to installation of the geotextile material, pipe, drain rock, or other backfill.
- 1314 - Geotextile material used as a filter shall be placed in a manner and at the locations shown on the plans. Place the long dimension of the geotextile parallel to the centerline of the trench. Position the geotextile, without stretching, in contact with the trench surface. Overlap the joints a minimum of 24 inches with the upstream geotextile placed over the downstream geotextile. Replace geotextile damaged during installation.
- 1315 - Geotextile materials used for subsurface drainage shall meet the following requirements:

TABLE 1315
Physical Requirements for Subsurface Drainage Geotextile

Property	Test Method ASTM	Units	Specifications ⁽¹⁾					
			Type I-A	Type I-B	Type I-C	Type I-D	Type I-E	Type I-F
Grab strength	D 4632	N	1100/700	1100/700	1100/700	800/500	800/500	800/500
Sewn seam strength	D 4632	N	990/630	990/630	990/630	720/450	720/450	720/450
Tear strength	D 4533	N	400 ⁽³⁾ /250	400 ⁽³⁾ /250	400 ⁽³⁾ /250	300/175	300/175	300/175
Puncture strength	D 4833	N	400/250	400/250	400/250	300/175	300/175	300/175
Burst strength	D 3786	kPa	2750/1350	2750/1350	2750/1350	2100/950	2100/950	2100/950
Permittivity	D 4491	s ⁻¹	0.5	0.2	0.1	0.5	0.2	0.1
Apparent opening size	D 4751	mm	0.43 ⁽²⁾	0.25 ⁽²⁾	0.22 ⁽²⁾	0.43 ⁽²⁾	0.25 ⁽²⁾	0.22 ⁽²⁾
Ultraviolet stability	D 4355	%	50% after 500 hours of exposure					

TIMBER SALE ROAD SPECIFICATIONS

- (1) The first values in a column apply to geotextiles that break at < 50 percent elongation (ASTM D 4632). The second values in a column apply to geotextiles that break at ≥ 50 percent elongation (ASTM D 4632).
- (2) Maximum average roll value.
- (3) The minimum average tear strength for woven monofilament geotextile is 245 N.

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, geofabric rolls, 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.
- 1703 - This work shall consist of furnishing and installing silt fences, straw bales, geofabric rolls, or similar erosion control devices in accordance with these specifications and in reasonably close conformity with the lines and grades as directed by the Authorized Officer.
- 1703a - Additional erosion control work consisting of furnishing and installing silt fences, straw bales, geofabric rolls, or similar erosion control devices, may be required at the option of the Authorized Officer. Providing the additional erosion control 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 installing such additional erosion control devices. Cost shall be based upon the unit price set forth in the current BLM Timber Appraisal Production Cost Schedule.
- 1704 - The erosion control provisions specified under this Subsection shall be coordinated with the Soil Stabilization requirements of Section 1800.
- 1708a - Road segments not completed during dry weather periods shall be winterized, by providing a well-drained roadway using water bars, 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

TIMBER SALE ROAD SPECIFICATIONS

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 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 1802a shall be performed during the following seasonal periods:

From: September 1 st	To: October 15 th
---------------------------------	------------------------------

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. 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 - The BLM shall provide native grass/forb seed for this project.
- 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.

TIMBER SALE ROAD SPECIFICATIONS

- 1808 - Mulch materials conforming to the requirements of Subsection 1808a shall be furnished by the Purchaser in the amounts specified under Subsection 1811 and applied in accordance with Subsection 1812.

- 1808a - Straw mulch shall be certified weed free from commercial grain fields and native grass fields. Straw mulch shall be from oats, wheat, rye, or other approved grain crops and shall be free from, mold, or other objectionable material. Straw mulch shall be in an air-dry condition and suitable for placement.

- 1809 - Mulch material shall be delivered to the work area in a dry state. Material found to be wet will not be accepted. Material to be used in the mulching operation may be stockpiled along the road designated for treatment provided that it is maintained in a dry state and has the approval of the Authorized Officer.

- 1810 - Bulk mulching material required under these specifications shall be delivered to the work area bound either by twine, string or hemp rope. Wire binding will not be permitted.

- 1811 - The Purchaser shall furnish and apply to approximately 0.5 acres designated for treatment as shown on the plans and as specified under Subsections 1802a and 1806a, a mixture of grass seed and mulch material at the following rate of application:

Grass 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.

- 1812 - The Purchaser shall furnish and apply to the area designated for treatment as shown on the plans and as specified under Subsections 1802a and 1806a, a mixture of grass seed and mulch material, at the application rate to be determined by the Authorized Officer based on visual observation of trial applications.

TIMBER SALE ROAD SPECIFICATIONS

Mulches shall be spread/placed in treatment areas to a depth of 2 inches to allow seed germination or as directed by the Authorized Officer. Treatment area will be covered evenly and completely. Mulch can be broadcast onto the soil surface by hand or with hand/mechanical operated spreaders.

- 1814 - The Purchaser may reduce the application rate on partially covered slopes and refrain from application on areas already well stocked with grass or on rock surfaces as determined by the Authorized Officer.
- 1815 - The seed and mulch materials shall be placed by the dry method in accordance with the requirements set forth in Subsection 1815b.
- 1815b - Dry Method - Blowers, mechanical seeders, seed drills, landscape seeders, cultipaker seeders, fertilizer spreaders, or other approved mechanical seeding equipment may be used when seed and fertilizer are to be applied in dry form.
- 1819 - The Purchaser shall notify the Authorized Officer at least 3 days in advance of date he intends to commence the specified soil stabilization work.
- 1820 - When sprayed, the mix or slurry must overlap on the ground uniformly so that there will be no voids in the treated areas.
- 1821 - Mulch that collects at the end of culverts or accumulates to excessive depths on the slopes shall be evenly spread by hand methods, as directed by the Authorized Officer.
- 1822 - No materials shall be applied when wind velocities would prevent a uniform application of the mix or slurry or when winds would drift the mix or slurry spray outside of the designated treatment area.
- 1824 - 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.

TIMBER SALE ROAD SPECIFICATIONS

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 maybe performed mechanically with self powered, self-propelled equipment and/or manually with hand tools, including chain saws.
- 2103 - Vegetation cut manually and/or mechanically less than 6 inches in diameter when measured 6 inches above the ground shall be cut to a maximum height of 2 inches above the ground surface or above obstructions such as rocks or stumps on cut and fill slopes and all limbs below the 2 inch area will be severed from the trunk.
- 2103a - Vegetation shall be cut and removed from the road bed between the outside shoulders and the ditch centerline and such vegetation shall be cut to a maximum height of 2 inches above the ground and running surface. Limbs below the 2 inch area will be severed from the trunk. Sharp pointed ends will not be permitted. Cuts shall be parallel to the ground line or running surface.
- 2104 - Trees in excess of 6 inches in diameter when measured 6 inches above the ground line shall be limbed, so that no limbs extend into the treated area or over the roadbed to a height of 14 feet above the running surface of the roadway on cut and fill slopes, within the road prism-variable distance. Limbs shall be cut to within 1 inch of the trunk to produce a smooth vertical face. Removal of trees larger than 6 inches in diameter for sight distance or safety may be directed by the Authorized Officer.
- 2105 - Vegetation that is outside of the road prism-variable distance that protrudes into the road prism and within 14 feet in elevation above the running surface shall be cut, to within 1 inch of the trunk to produce a smooth vertical face.

TIMBER SALE ROAD SPECIFICATIONS

- 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 distance of 15 feet from edge of subgrade, whichever is achieved first. Overhanging limbs and vegetation in excess of 1 foot in height, shall be cut within these areas.
- 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 the Authorized Officer.
- 2115 - Mechanical brush cutters shall not be operated when there are people and occupied vehicles within 400 feet of the immediate operating area.
- 2116 - Traffic warning signs shall be required at each end of the work area. Signs shall meet the requirements of the Manual on Uniform Traffic Devices.

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

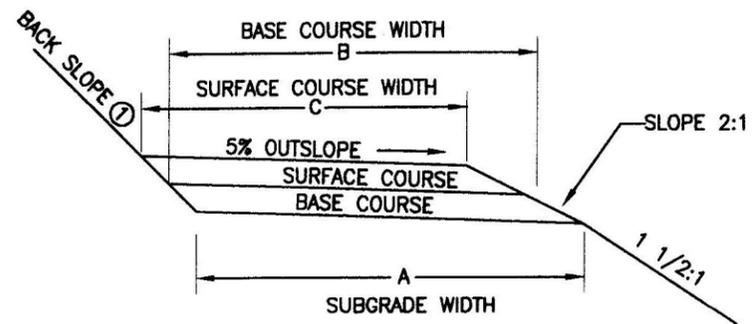
CONTRACT NAME: IT'S ALL RELATIVE
CONTRACT NO: ORR04-TS-2013.0003

ROAD NUMBER	STA/MP	TO	STA/MP	CONST.	RENOV.	DECOM.	BASE COURSE		SURFACE COURSE		ROAD DIMENSIONS			TYP. ROAD SECTION	SHEET NO.
							DEPTH	TYPE	DEPTH	TYPE	A	B	C		
25-2-16.0	0+00	-	34+00		X				ROCK	EXISTING			4	5	
25-2-23.2	9+05	-	9+55		X		9"	1004A	ROCK	EXISTING			4	4	
25-2-23.3	0+00	-	5+20		X				NATIVE	14'			1,4	4	
25-2-23.4	0+00	-	2+65		X		9"	1004A	ROCK	25'	22'		4	6	
25-2-25.1	0+00	-	31+00		X	X			NATIVE	14'			4	4	
25-2-26.5	0+00	-	12+50	X		X			NATIVE	14'			1,4	7	
SPUR 1	0+00	-	13+70		X	X			NATIVE	14'			4	4	
SPUR 2	0+00	-	1+50	X		X			NATIVE	14'			4	7	

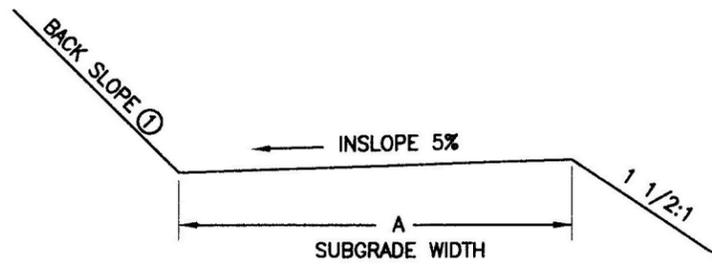
INDEX OF SHEETS	
SHEET	DESCRIPTION
1	ROAD SUMMARY
2	TYPICAL SECTIONS
3	VICINITY MAP
4	RENOVATION NOTES
5	25-2-16.0 RENOVATION
6	25-2-23.4 RENOVATION
7	25-2-26.5, SPUR 2
8	CULVERT SUMMARY
9	CULVERT INSTALLATION DETAIL
10	BRUSHING DETAIL

REV. NO.	DESCRIPTION	DATE	APPROVED
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT DIVISION OF OPERATIONS OREGON STATE OFFICE IT'S ALL RELATIVE			
ROAD SUMMARY			
ROSEBURG DISTRICT OREGON			
ENGINEERING APPROVAL	<i>Home Dyreus</i>		
SUBMITTED	<i>[Signature]</i>		
RECOMMENDED	<i>[Signature]</i>		
APPROVED	<i>[Signature]</i>		
DRAWN: B. ALBIN	SCALE: NONE		
DATE: 5/16/2013	SHEET 1 OF 10		
BLM #			

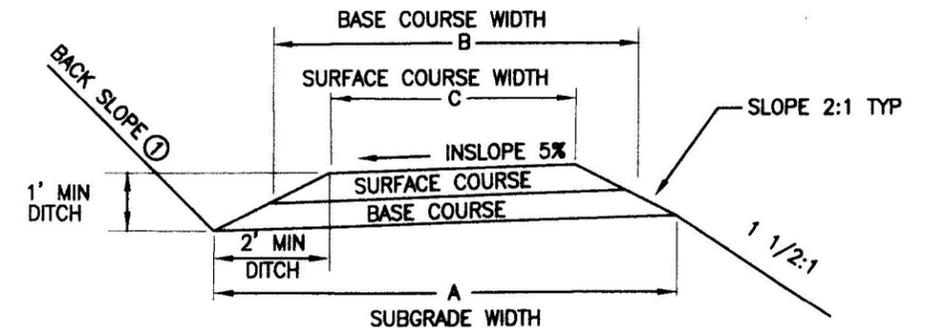




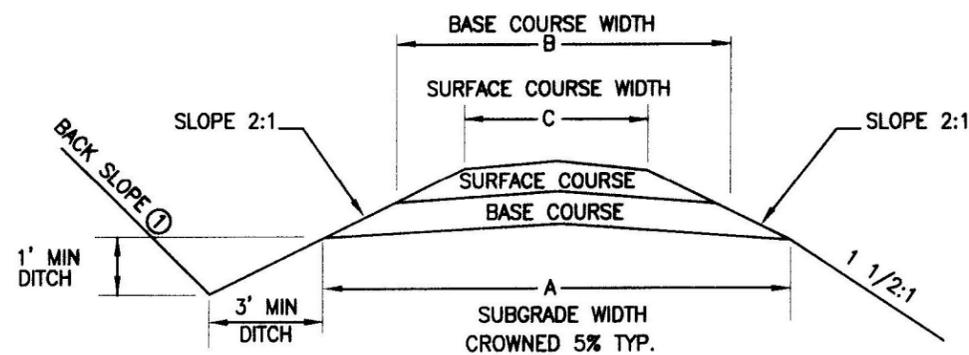
SECTION OUT SLOPE ROAD ①



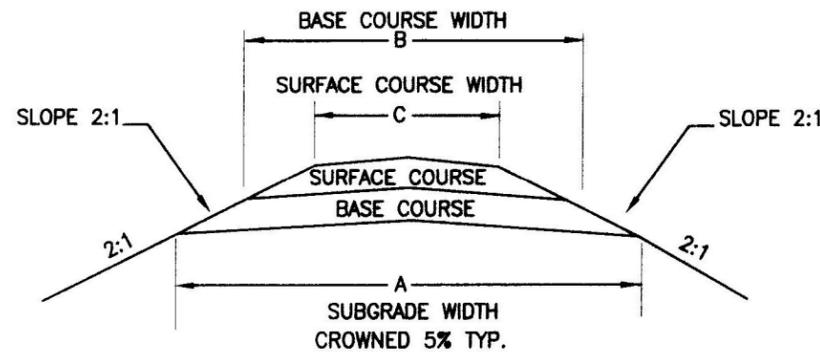
SECTION INSLOPE ROAD ②



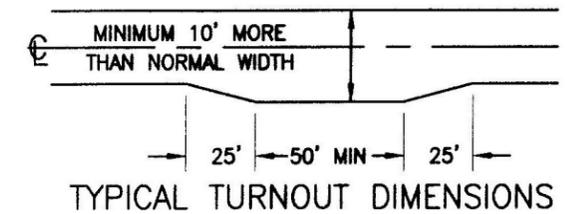
SECTION INSLOPE ROAD ③



SECTION ROAD ④

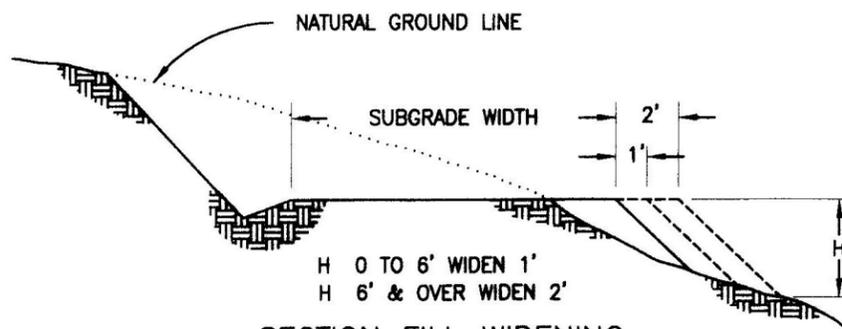


SECTION ROAD ⑤

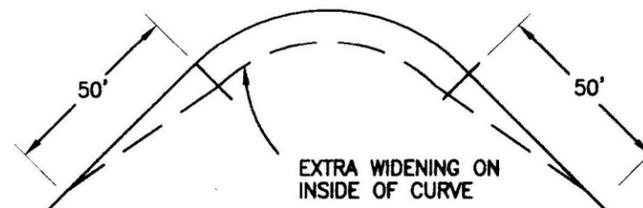


NOTES:

- ① Backslope to match existing backslope unless otherwise specified.
2. Out slope road segments with grades less than 6%, crown or inslope road segments with grades exceeding 6%.
3. Inslope road sections permitted only for temporary roads. Native surface restricted to summer haul.



SECTION FILL WIDENING

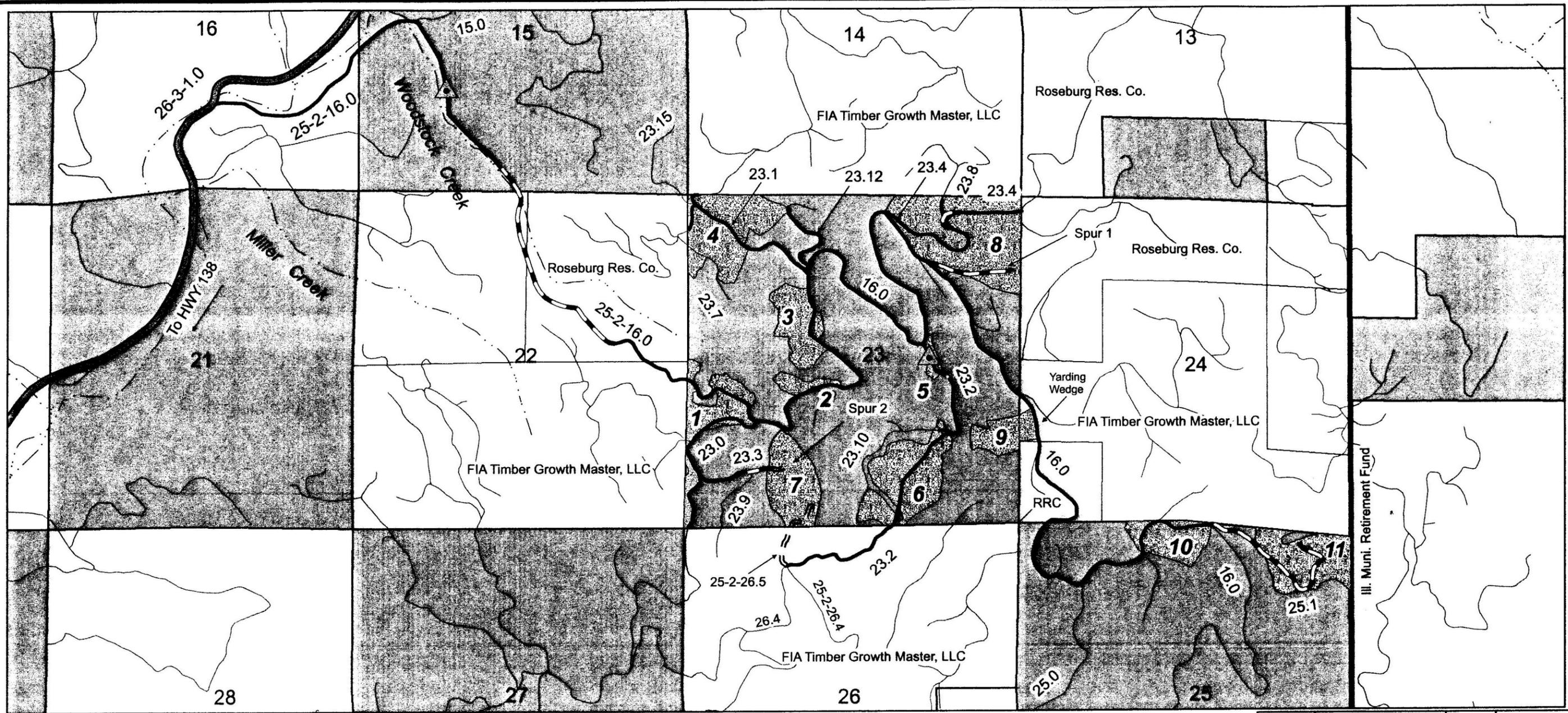


DEGREE OF CURVE	8-21	22-35	36-51	52-64	65-79	80-90
EXTRA WIDTH IN FEET	1	2	3	4	5	6

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

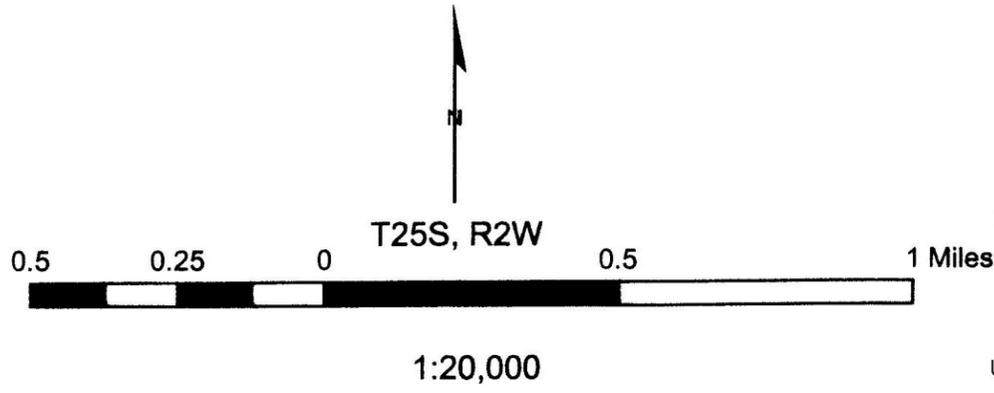


REV. NO.	DESCRIPTION	DATE	APPROVED
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT DIVISION OF OPERATIONS OREGON STATE OFFICE IT'S ALL RELATIVE			
TYPICAL SECTIONS			
ROSEBURG DISTRICT		OREGON	
DESIGNED	<i>[Signature]</i>		
REVIEWED	<i>[Signature]</i>		
APPROVED	<i>[Signature]</i>		
DRAWN: T. King		SCALE: NONE	
DATE: 2/20/2013		SHEET 2 OF 10	
DRAWING NO. ORR04-TS-2013.0003			BLM #



Legend

- Haul Route
- == New Construction
- Renovation
- Rock Creek Road
- Other Roads
- Major Streams
- BLM Ownership
- Other Ownership
- Harvest Area
- △ Disposal Site



United States Department of the Interior
 Bureau of Land Management
 Roseburg District
 777 NW Garden Valley Blvd
 Roseburg, Oregon 97470
 Universal Transverse Mercator Projection
 Zone 10 North NAD 1983

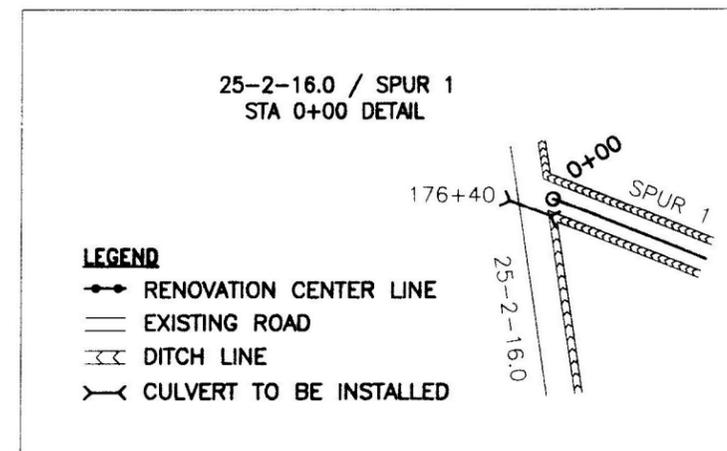
REV. NO.	DESCRIPTION	DATE	APPROVED
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT DIVISION OF OPERATIONS OREGON STATE OFFICE IT'S ALL RELATIVE			
VICINITY MAP			
ROSEBURG DISTRICT		OREGON	
DESIGNED	<i>[Signature]</i>		
REVIEWED	<i>[Signature]</i>		
APPROVED	<i>[Signature]</i>		
DRAWN: B. ALBIN		SCALE: AS SHOWN	
DATE: 5/15/2013		SHEET 3 OF 10	
DRAWING NO. ORR04-TS-2013.0003			BLM#

ROAD RENOVATION

Notes:

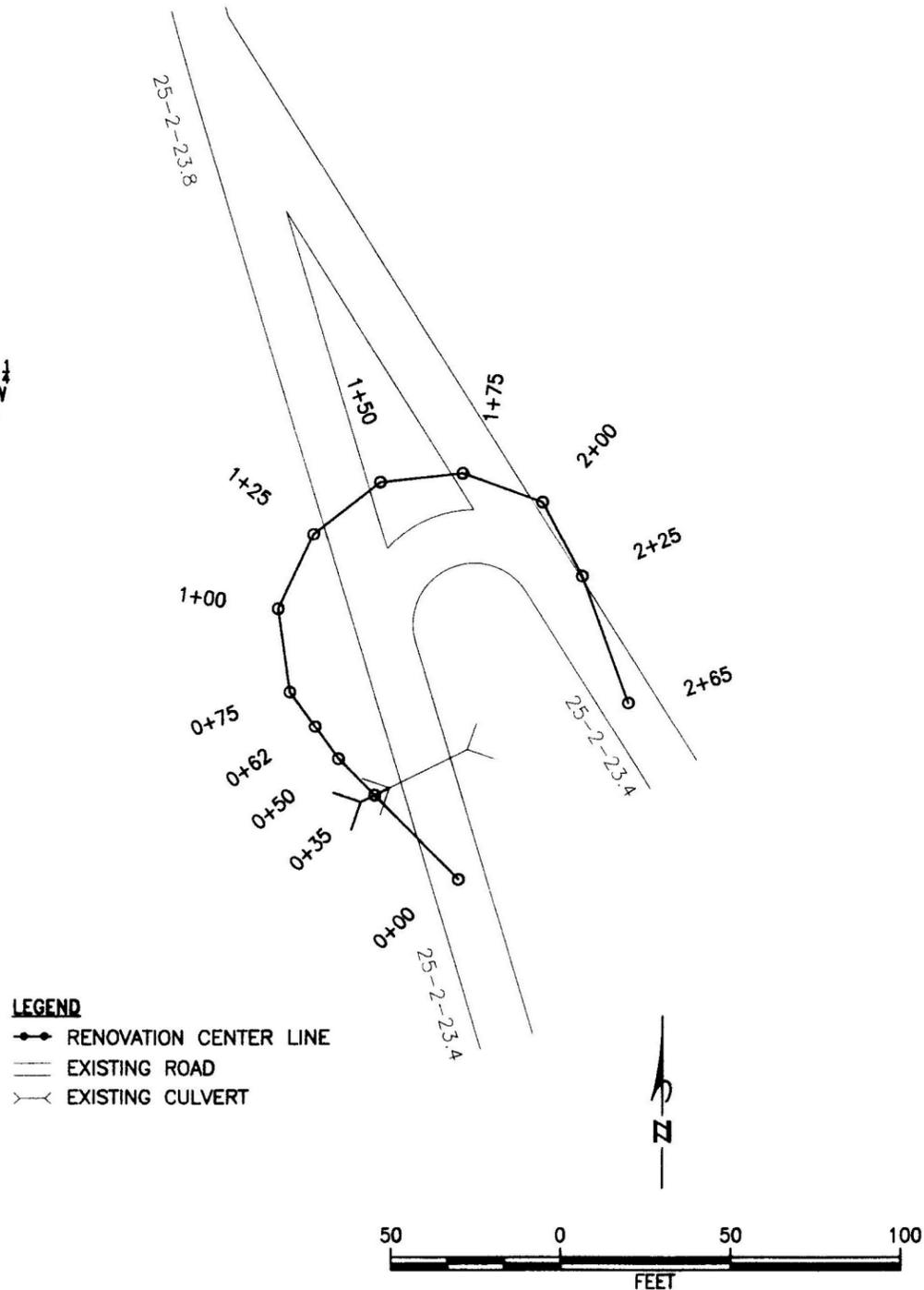
1. All roads shall be renovated in accordance with attached specifications and the work items listed below. Renovation may include roadside brushing, installing culverts and splash pads, blading, shaping, cleaning ditches, removing slide material, and cleaning existing drainage structures. Features to construct are so noted. Existing features are noted at approximate station in the notes below. Place 20 cy of 1004A 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.

MILES	DESCRIPTION	STA	DESCRIPTION
	25-2-23.2		SPUR 1
0+00	BEGIN STATIONING AT INTERSECTION OF 25-2-23.2 AND 25-2-16.0	0+00	BEGIN RENOVATION AT JUNCTINO OF SPUR 1 AND 25-2-16.0 SPUR 1 STA 0+00 = 25-2-16.0 STA 176+40 BEGIN CLEARING, GRUBBING, BLADING, PULLING DITCHES, AND COMPACTION
9+05	EXCAVATE DECOMPOSING ROOT WAD FROM ROADWAY BACKFILL WITH SUITABLE BORROWED MATERIAL RESURFACE WITH 9" OF 3" MINUS (SPEC. NO. 1004A)	1+50	BEGIN ELEVATING ROAD GRADE
9+55	END STATIONING	2+40	APPROXIMATE 2' FILL
	25-2-23.3	3+10	BEGIN LOWERING ROAD GRADE EXCESS SUITABLE MATERIAL TO BE USED AS EMBANKMENT BETWEEN STA 1+50 AND 3+10
0+00	BEGIN RENOVATION AT JUNCTION OF 25-2-23.3 AND 25-2-23.9 BEGIN CLEARING, GRUBBING, PULLING DITCHES, CLEANING CULVERTS, BLADING, AND COMPACTION	3+60	APPROXIMATE 1' CUT
5+20	END RENOVATION BEGIN SPUR 2 CONSTRUCTION	4+40	CONSTRUCT DITCHOUT ON RIGHT
	25-2-25.1	4+50	RESUME EXISTING VERTICAL ALIGNMENT
0+00	BEGIN RENOVATION AT JUNCTION OF 25-2-25.1 AND 25-2-16.0 RENOVATE INTERSECTION WITH 25-2-16.0 BEGIN CLEARING, GRUBBING, BLADING, AND COMPACTING	6+50	BEGIN SHIFTING ROAD CENTERLINE TO THE RIGHT
8+70	ENTER UNIT	7+50	SHIFT CENTERLINE 5' TO THE RIGHT
30+50	BEGIN RENOVATING EXISTING 40' X 50' LANDING	8+50	END CENTERLINE SHIFT, RESUME EXISTING HORIZONTAL ALIGNMENT
31+00	END RENOVATION	13+20	BEGIN RENOVATING EXISTING 40' X 50' LANDING
		13+70	END RENOVATION

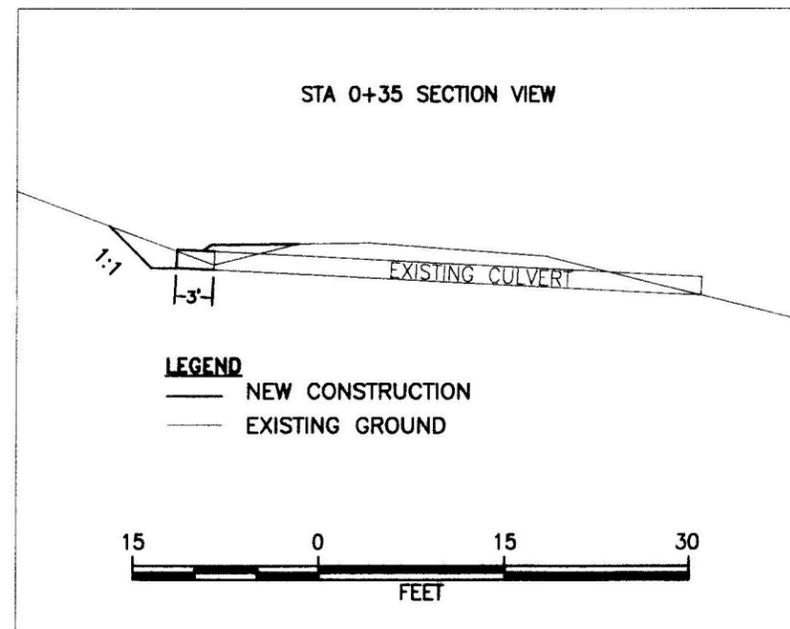


REV. NO.	DESCRIPTION	DATE	APPROVED
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT DIVISION OF OPERATIONS OREGON STATE OFFICE IT'S ALL RELATIVE			
RENOVATION NOTES			
ROSEBURG DISTRICT		OREGON	
DESIGNED	<i>[Signature]</i>		
REVIEWED	<i>[Signature]</i>		
APPROVED	<i>[Signature]</i>		
DRAWN: B. ALBIN		SCALE: NONE	
DATE: 5/16/2013		SHEET 4 OF 10	
DRAWING NO. ORRO4-TS-2013.0003			BLM #

O&C
NE 1/4 NE 1/4
T25S R2W
SEC. 23

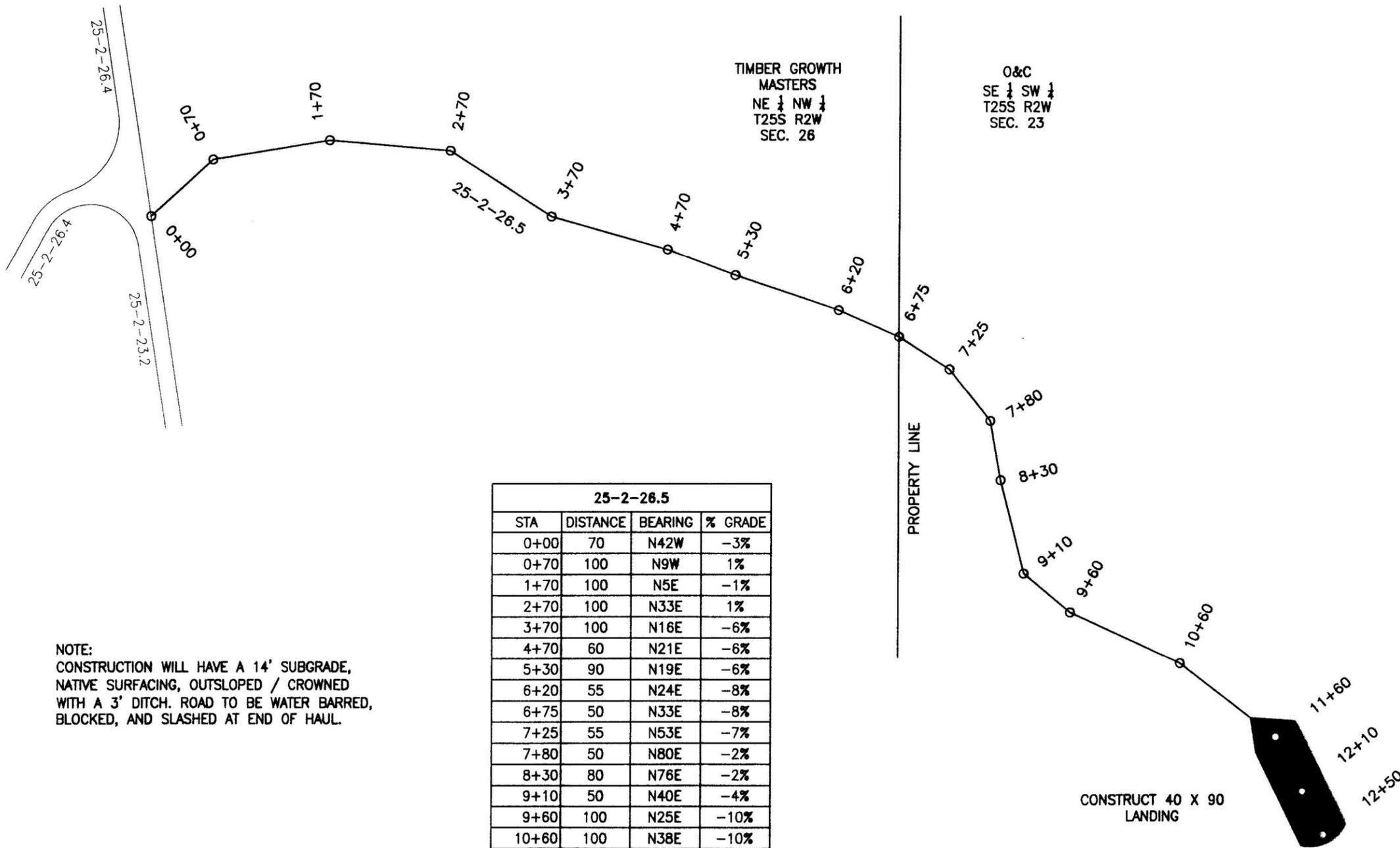


25-2-23.4 RENOVATION TABLE				
STA	DIST	BEARING	GRADE	DESCRIPTION
0+00				BEGIN RENOVATION 90' SOUTH OF INTERSECTION WITH 25-2-23.8. BEGIN CLEARING, GRUBBING, BLADING, AND COMPACTION. BEGIN SURFACING WITH 9" OF 3" MINUS (SPEC NO 1004A)
	35'	N45W	-2%	
0+35				EXTEND INLET OF EXISTING 18" CMP CULVERT 3'. CONSTRUCT CATCH BASIN
	15'	N45W	-2%	
0+50				
	12'	N36W	-2%	
0+62				BEGIN CUTTING INTO HILLSIDE ON LEFT. EXCESS SUITABLE MATERIAL TO BE USED AS EMBANKMENT AT STATIONS 1+50 TO 2+65
	13'	N36W	-2%	
0+75				
	25'	N8W	-3%	
1+00				
	25'	N25E	-4%	
1+25				EDGE OF EXISTING ROAD
	25'	N52E	-1%	MATCH GRADE OF EXISTING ROAD
1+50				EDGE OF EXISTING ROAD
	25'	N84E	-8%	
1+75				
	25'	S70E	-11%	
2+00				
	25'	S28E	-9%	
2+25				
	40'	S20E	-6%	
2+65				END SURFACING. RESUME EXISTING HORIZONTAL AND VERTICAL ALIGNMENT

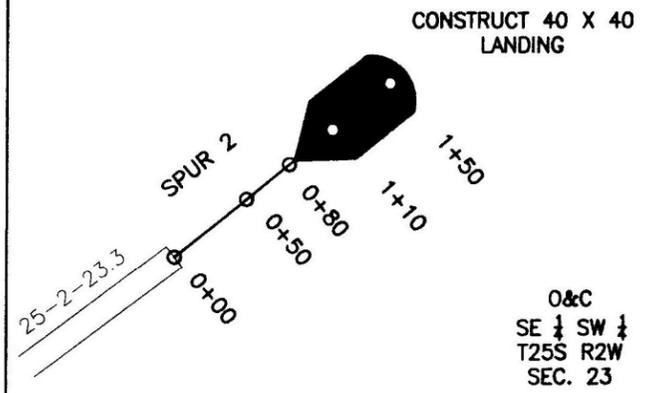


REV. NO.	DESCRIPTION	DATE	APPROVED
	UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT DIVISION OF OPERATIONS		OREGON STATE OFFICE IT'S ALL RELATIVE
25-2-23.4 RENOVATION			
ROSEBURG DISTRICT		OREGON	
DESIGNED	<i>[Signature]</i>		
REVIEWED	<i>[Signature]</i>		
APPROVED	<i>[Signature]</i>		
DRAWN: B. ALBIN	SCALE: AS SHOWN		
DATE: 5/16/2013	SHEET 6 OF 10		
DRAWING NO. ORR04-TS-2013.0003	BLM #		





SPUR 2			
STA	DISTANCE	BEARING	% GRADE
0+00	50	N51E	-13%
0+50	30	N51E	-14%
0+80	30	N51E	-7%
1+10	40	N51E	-5%
1+50			

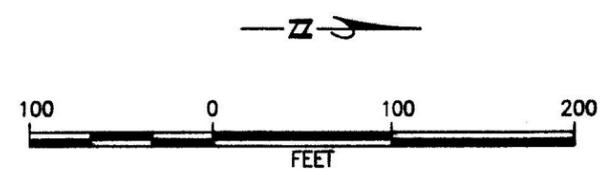


NOTE:
CONSTRUCTION WILL HAVE A 14' SUBGRADE,
NATIVE SURFACING, CROWNED WITH A 3' DITCH.
ROAD TO BE WATER BARRED, BLOCKED, AND
SLASHED AT END OF HAUL.



25-2-26.5			
STA	DISTANCE	BEARING	% GRADE
0+00	70	N42W	-3%
0+70	100	N9W	1%
1+70	100	N5E	-1%
2+70	100	N33E	1%
3+70	100	N16E	-6%
4+70	60	N21E	-6%
5+30	90	N19E	-6%
6+20	55	N24E	-8%
6+75	50	N33E	-8%
7+25	55	N53E	-7%
7+80	50	N80E	-2%
8+30	80	N76E	-2%
9+10	50	N40E	-4%
9+60	100	N25E	-10%
10+60	100	N38E	-10%
11+60	50	N64E	-5%
12+10	40	N64E	-5%
12+50			

NOTE:
CONSTRUCTION WILL HAVE A 14' SUBGRADE,
NATIVE SURFACING, OUTSLOPED / CROWNED
WITH A 3' DITCH. ROAD TO BE WATER BARRED,
BLOCKED, AND SLASHED 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 IT'S ALL RELATIVE			
25-2-26.5, SPUR 2 ROSEBURG DISTRICT OREGON			
DESIGNED	<i>[Signature]</i>		
REVIEWED	<i>[Signature]</i>		
APPROVED	<i>[Signature]</i>		
DRAWN: B. ALBIN		SCALE: AS SHOWN	
DATE: 5/16/2013		SHEET 7 OF 10	
DRAWING NO. ORR04-TS-2013.0003			BLM #



CULVERT LIST														
CULVERT LOCATIONS										DOWNSPOUT (NOTE 4)				REMARKS (NOTE 6)
DESIGNED (NOTE 2)					AS BUILT					TYPE	SIZE	LENGTH	ELBOW TYPE (NOTE 5)	
ROAD NO. STATION OR M.P.	SIZE (IN)	GAGE	LENGTH (FT)	SKEW ANGLE	INSTALL TYPE (NOTE 3)	ROAD NO. STATION OR M.P.	SIZE	GAGE	LENGTH					
25-2-16.0														
1+45	18"		52'	30	2									PERMANENT CROSS DRAIN
6+50	18"		50'	30	2									PERMANENT CROSS DRAIN
8+00	18"		50'	EXISTING	2									PERMANENT CROSS DRAIN
14+50	6"		370'	45	DETAIL PG. 5									6" PERFORATED PIPE FOR UNDER DRAIN. SEE DETAIL PG. 5
18+20	18"		50'	EXISTING	2					FULL	18"	30	A	PERMANENT CROSS DRAIN
25+90	18"		50'	EXISTING	2									PERMANENT CROSS DRAIN
33+00	18"		50'	EXISTING	2									PERMANENT CROSS DRAIN
34+00	18"		50'	EXISTING	2									PERMANENT CROSS DRAIN
176+40	18"		50'	30	2									PERMANENT CROSS DRAIN
25-2-23.4														
0+35	18"	14	3'	EXISTING	2									EXTENSION OF EXISTING CULVERT

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

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

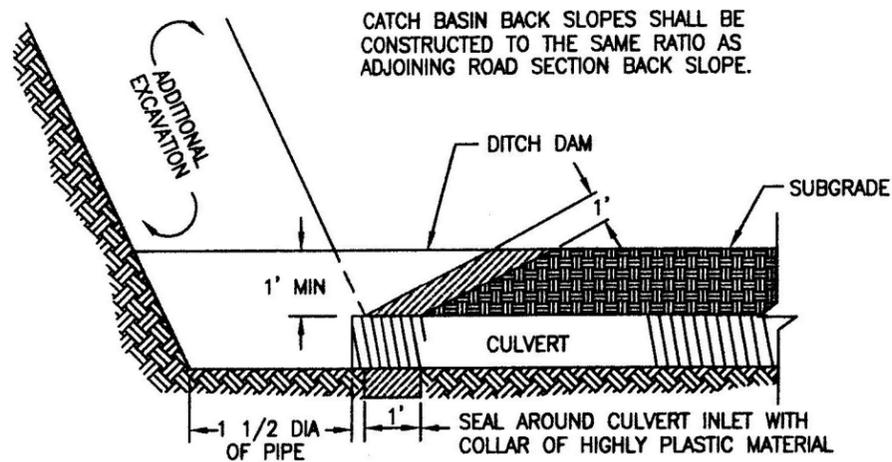
* MATERIAL TYPE: HI-DENSITY POLYETHYLENE OR ALUMINIZED
 ** MATERIAL TYPE: SINGLE WALL, CORRUGATED HI-DENSITY POLYETHYLENE PERFORATED DRAIN PIPE

ROUND PIPE CULVERT				
MATERIAL	SIZE	GAGE	CORRUGATIONS	LENGTH
*	18"			402'
**	6"			370'
CMP	18"	14		3'

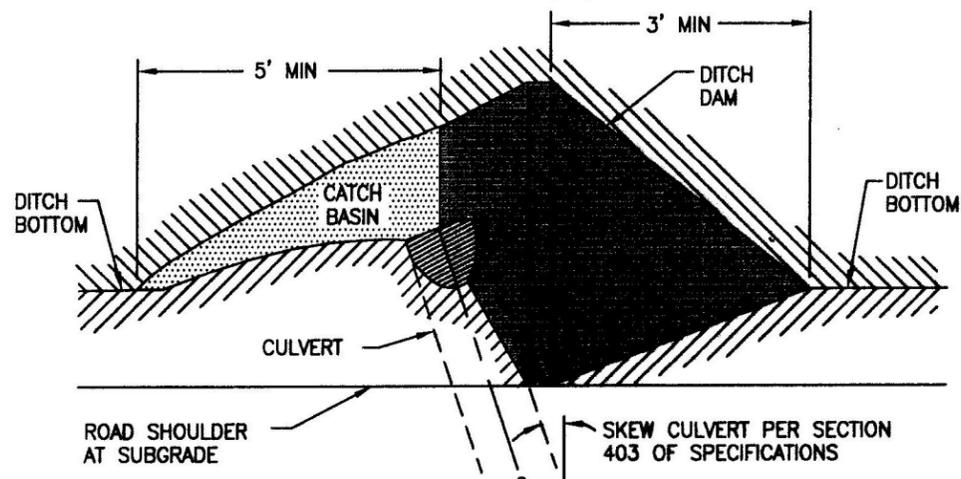
DOWNSPOUTS		
TYPE	SIZE	LENGTH
FULL	18"	30'



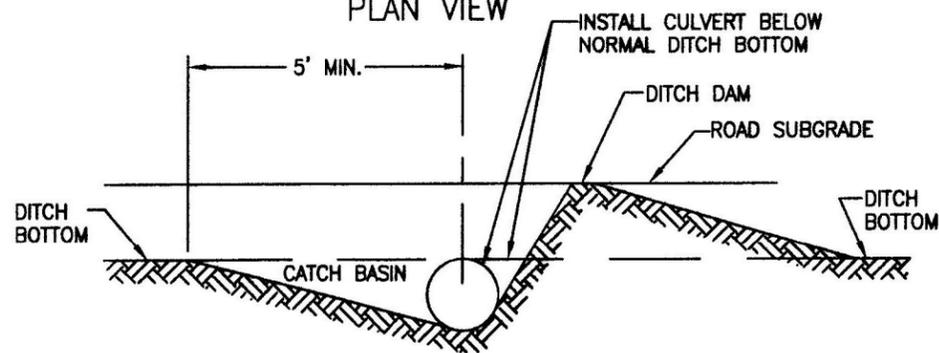
REV. NO.	DESCRIPTION	DATE	APPROVED
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT DIVISION OF OPERATIONS OREGON STATE OFFICE IT'S ALL RELATIVE			
CULVERT SUMMARY			
ROSEBURG DISTRICT		OREGON	
DESIGNED	<i>[Signature]</i>		
REVIEWED	<i>[Signature]</i>		
APPROVED	<i>[Signature]</i>		
DRAWN: B. ALBIN	SCALE: NONE		
DATE: 5/16/2013	SHEET 8 OF 10		
DRAWING NO. ORR04-TS-2013.0003	BLM #		



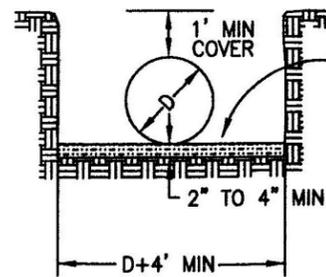
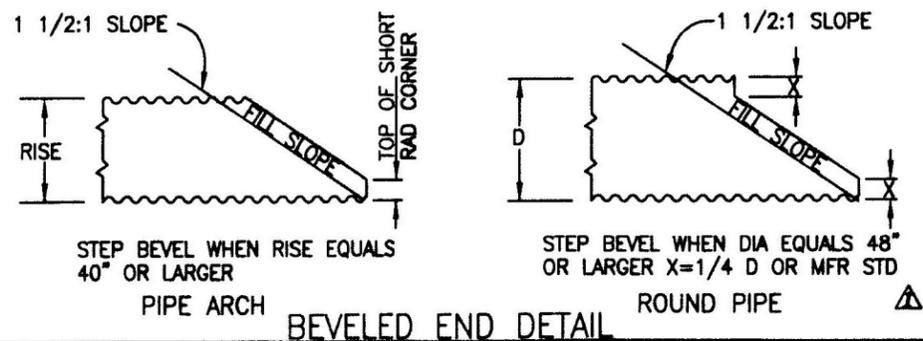
CROSS SECTION AT CATCH BASIN
CULVERT INSTALATION TYPE 2, 3, AND 4



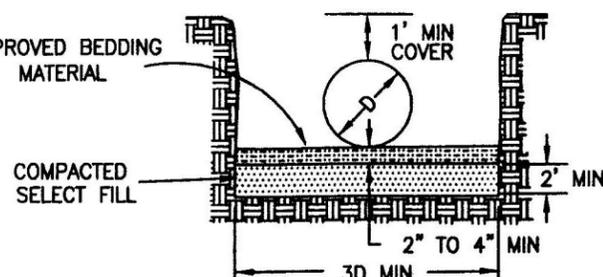
PLAN VIEW



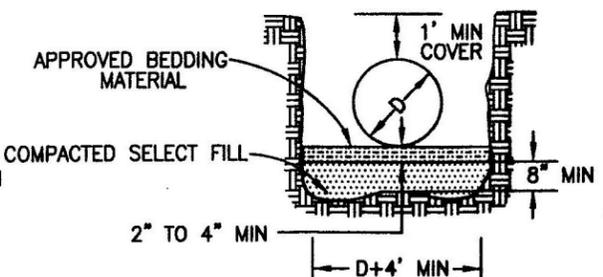
CATCH BASIN ELEVATION



BEDDING OF CULVERTS ON STABLE NATURAL GROUND FOUNDATION



BEDDING OF CULVERTS ON SOFT SPONGY, UNSTABLE SOIL FOUNDATION OR COMPACTED EMBANKMENT

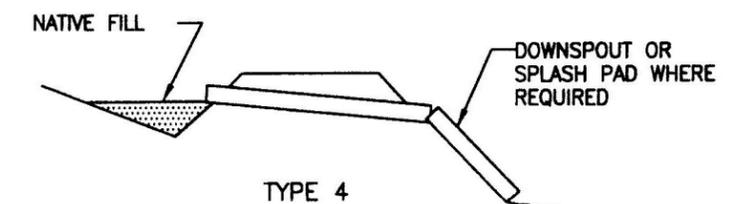
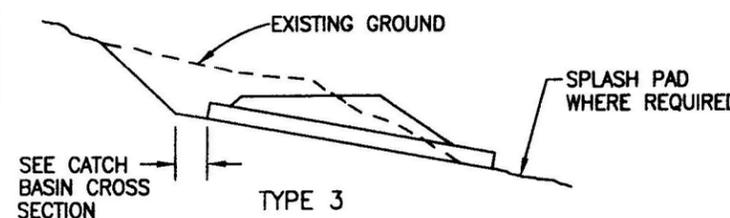
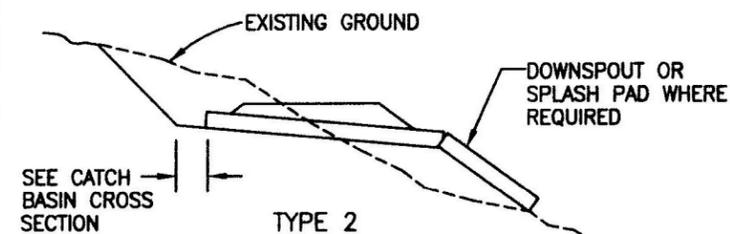
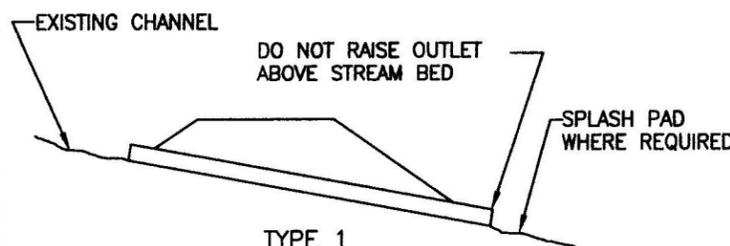


BEDDING OF CULVERTS IN SOLID ROCK OR BOULDER FOUNDATION

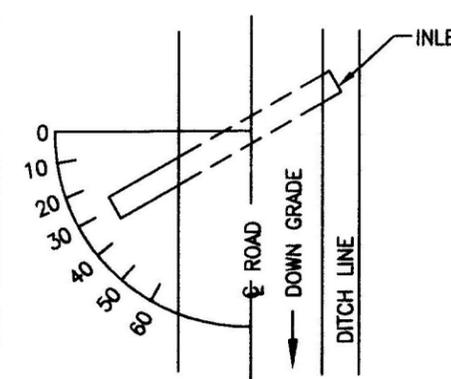
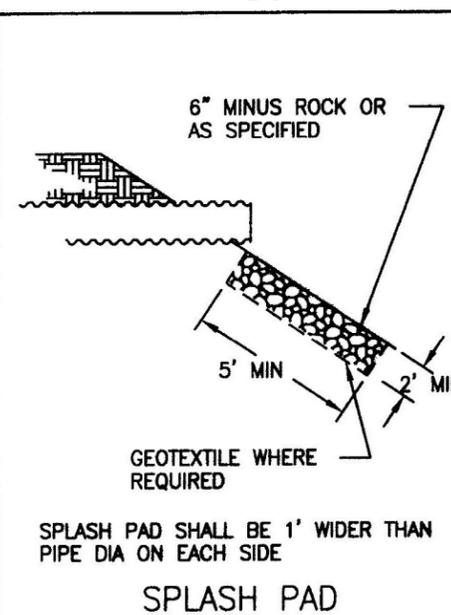
NOTES:

- BEDDING MATERIAL SHALL BE PLACED LOOSE AND SHAPED TO FIT THE BOTTOM OF THE CULVERT
- BACKFILL IN ACCORDANCE WITH SECTION 417 OF SPECIFICATIONS
- MAINTAIN 8" MIN DEPTH BETWEEN HIGH POINT OF ROCK AND/OR BOULDERS AND THE BOTTOM OF THE CULVERT BEDDING

BEDDING OF CULVERTS

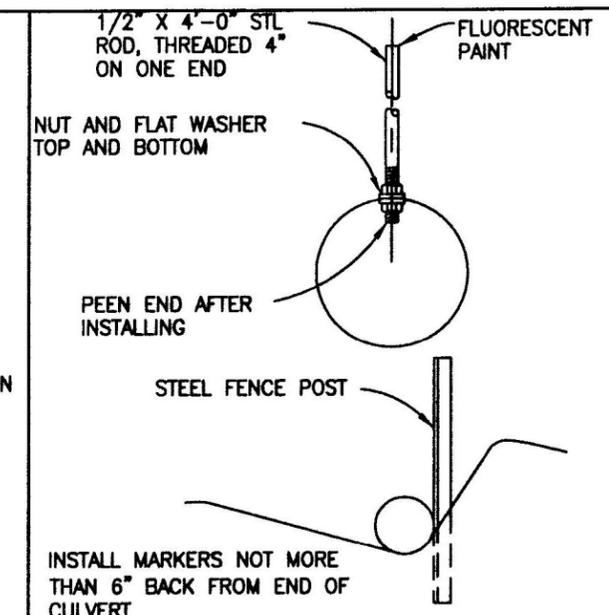


CULVERT INSTALLATION TYPES



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

SKUEW DIAGRAM



CULVERT MARKER INSTALLATION

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

CULVERT INSTALLATIONS
ROSEBURG DISTRICT OREGON

DESIGNED: *[Signature]*

REVIEWED: *[Signature]*

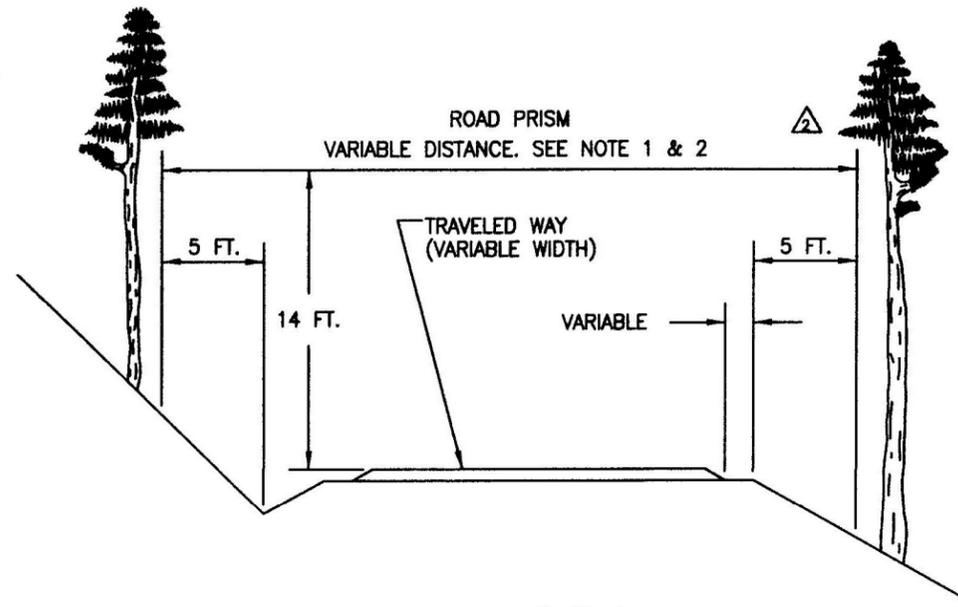
APPROVED: *[Signature]*

DRAWN: TERRIE KING	SCALE: NOT TO SCALE
DATE: 2/20/2013	SHEET 9 OF 10
DRAWING NO. ORR04-TS-2013.0003	BLM #

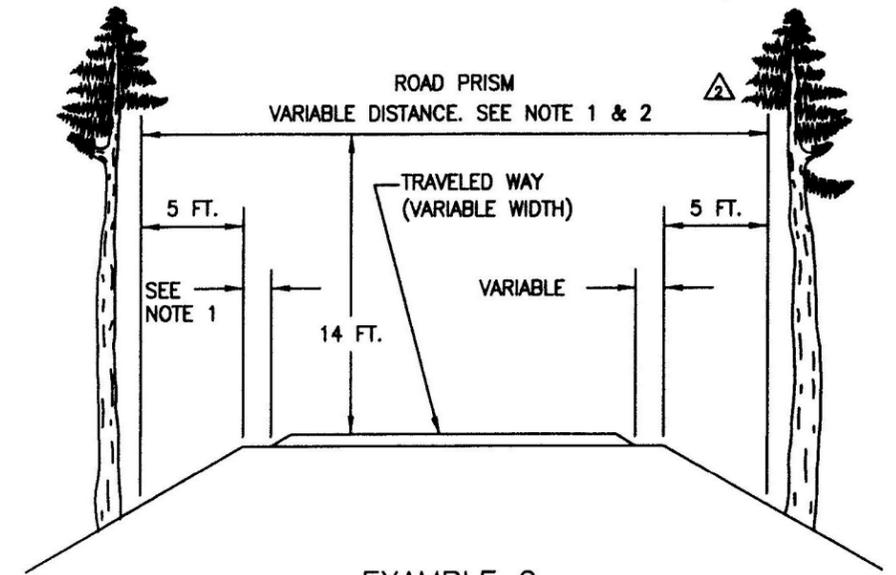


NOTE:

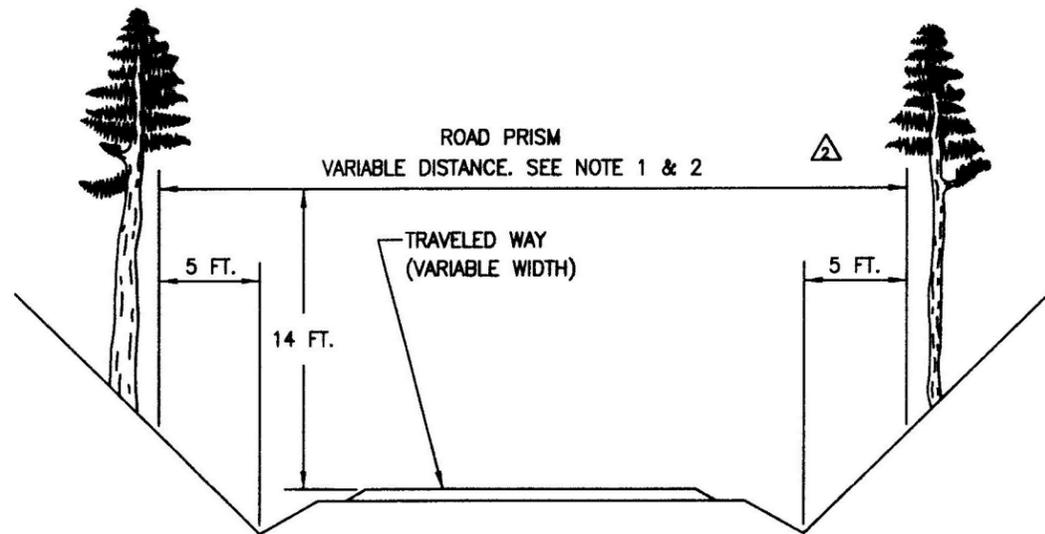
1. ALL AREAS WITHIN THE VARIABLE DISTANCE SHALL BE CLEARED OF VEGETATION.
2. ALL AREAS WITHIN THE VARIABLE DISTANCE SHALL BE FREE OF ALL OVERHANGING LIMBS AND BRANCHES WITHIN 14 FEET ELEVATION ABOVE RUNNING SURFACE. 



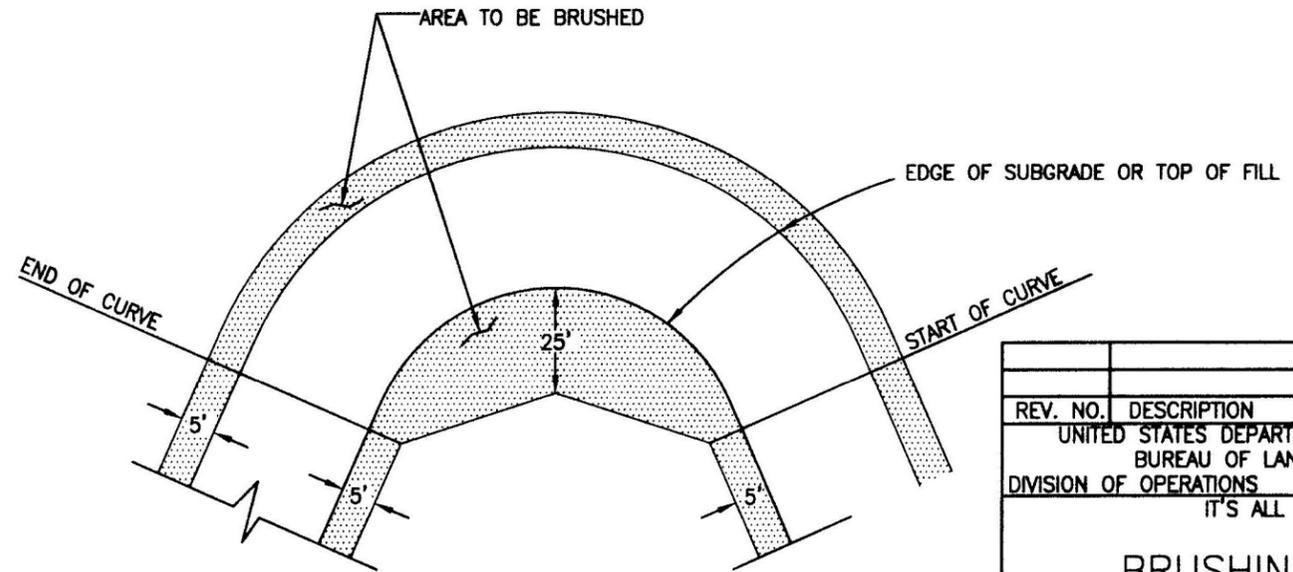
EXAMPLE 1



EXAMPLE 2

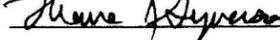


EXAMPLE 3



CURVE



REV. NO.	DESCRIPTION	DATE	APPROVED
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT DIVISION OF OPERATIONS OREGON STATE OFFICE IT'S ALL RELATIVE			
BRUSHING DETAIL			
ROSEBURG DISTRICT		OREGON	
DESIGNED			
REVIEWED			
APPROVED			
DRAWN: B. ALBIN		SCALE: NONE	
DATE: 2/26/13		SHEET 10 OF 10	
DRAWING NO. ORR04-TS-2013.0003			BLM #