

# PROSPECTUS

Sale Date: September 11, 2012

(1) Roseburg Sale No.: 12-08  
Douglas County, Oregon: O&C: Oral Auction

Sale Name: White Castle Variable Retention Harvest  
Bid Deposit Required: \$71,000.00

All timber designated for cutting on:

W½NE¼, E½NW¼	Sec. 31, T. 28 S., R. 2 W.,	Willamette Meridian
NW¼, N½SW¼, W½SE¼, SE¼SE¼	Sec. 32, T. 28 S., R. 2 W.,	Willamette Meridian
SW¼SW¼	Sec. 33, T. 28 S., R. 2 W.,	Willamette Meridian
SE¼SE¼	Sec. 23, T. 28 S., R. 3 W.,	Willamette Meridian
W½NE¼, NW¼, NE¼SW¼, NW¼SE¼	Sec. 25, T. 28 S., R. 3 W.,	Willamette Meridian
NE¼NE¼	Sec. 26, T. 28 S., R. 3 W.,	Willamette Meridian
Lots 2 and 3	Sec. 4, T. 29 S., R. 2 W.,	Willamette Meridian

Approx. Number	Est. Vol. MBF	Est. Vol. CCF	Species	Est. Vol. MBF	Appraised Price Per MBF	Est. Volume Times Appraised Price
Merch. Trees	32' Log	Cubic		16' Log		
21,098	4,592	9,614	Douglas-fir	5,743	\$120.00	\$689,160.00
5014	421	1,041	Western Hemlock	551	<b>\$30.80</b> *	\$16,970.80
623	63	143	Grand Fir	79	\$35.50	\$2,804.50
80	10	25	Sugar Pine	14	<b>\$27.70</b> *	\$387.80
30	4	7	W. White Pine	5	<b>\$22.50</b> *	\$112.50
61	2	7	Incense-cedar	3	\$43.70	\$131.10
<b>26,906</b>	<b>5,092</b>	<b>10,837</b>		<b>6,395</b>		<b>\$709,566.70</b>

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

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

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

## LOG EXPORT AND SUBSTITUTION RESTRICTIONS:

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

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

CRUISE INFORMATION:

The Douglas-fir and western hemlock has been cruised using the 3P system to select sample trees. The sample trees have been cruised and their volume computed on form class tables for estimating volume in 16-foot lengths. This volume is then expanded to a total sale volume. A map showing the location of these sample trees is available at the Roseburg District Office.

The volume of all other species have been determined by individual tree measurements using a 100% cruise.

With respect to merchantable trees of all species: the average tree is 15.6 D.B.H.O.B., the average log contains 94 bd. ft., the total gross volume is approximately 7206 M bd. ft., and 89% recovery is expected.

CUTTING AREA: An area of approximately 187 acres in 9 units are to be regeneration harvested and a right-of-way of approximately 1 acre must be clearcut. See Exhibit A for details.

<u>TIMBER ACREAGE:</u>	Area 1: 33 acres	Area 5: 7 acres	Area 9: 3 acres
	Area 2: 13 acres	Area 6: 16 acres	R / W: 1 acre
	Area 3: 1 acre	Area 7: 28 acres	
	Area 4: 13 acres	Area 8: 73 acres	

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

DIRECTIONS TO SALE AREA: To access Harvest Areas No. 1, No. 2, No. 3, No. 4, No. 5, No. 6, and No. 7, proceed east from Myrtle Creek on Douglas County Road 18 (South Myrtle Road) for approximately sixteen and three tenths (16.3) miles until it turns into paved BLM Road No. 28-3-35.0. Proceed east approximately three and six tenths (3.6) miles to the junction of BLM Road No. 28-2-32.1 (Cruddy Mountain Road) Refer to timber sale Exhibits A and D for further details.

To access Harvest Areas No. 8 and No. 9, proceed east from Myrtle Creek on Douglas County Road 18 (South Myrtle Road) for approximately fourteen and nine tenths (14.9) miles to the junction of BLM Road No. 29-3-11.1 (White Rock Road) and turn left. Refer to timber sale Exhibits A and D for further details.

ROAD MAINTENANCE: Rockwear and maintenance fees of \$45,122.22 will be required to be paid to the BLM. Rockwear fees of \$246.15 will be required to be paid to the U.S. Forest Service.

ROAD CONSTRUCTION: Estimates include the following: construct 59+90 stations, renovate 25+10 stations, and improve 6+90 stations of road. Additional information is available in Exhibit C.

DURATION OF CONTRACT: The contract duration 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/site preparation and log exporting. Log scaling may be required under the terms of this contract.

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

NOTES:

1. A revised Special Provision has been added to the contract which enables the Contracting Officer to suspend the contract to facilitate protection of certain plant or animal species, and /or to modify or terminate the contract when necessary to: (1) Comply with the Endangered Species Act, or; (2) Comply with a court order, or; (3) Protect species which were identified for protection through survey and manage and/or protection buffer standards and guidelines established in the ROD and RMP. This contract provision limits the liability of the Government to the actual costs incurred by the Purchaser which have not been amortized by timber removed from the contract area.

2. Seasonal operating restrictions apply to this sale regarding right-of-way logging, road work, falling, bucking, yarding, loading and hauling, machine piling, and sub-soiling. Refer to Section 41(B)(3), 41(B)(4), 41(B)(10)(b), 41(D)(3)(c), 41(D)(4)(d), 41(D)(5)(d), 41(F)(2), 41(H)(1)(e)(2), and the Exhibit E for details.
3. Hand fire trail construction, under-burning, and mop-up are required for Harvest Areas No. 1 (portion), No. 2 (portion), No. 4, No. 6, and No. 8 (portion), and hand piling and covering is required in Harvest Area No. 7 (portion) as shown on Exhibit F. Fuels pull-back from selected trees and snags prior to under-burning is required for Harvest Areas No. 1 (portion), No. 4 (portion), No. 6 (portion), and No. 8 (portion) as shown on Exhibit G. Refer to Section 41(H) for details. The contract contains an optional contribution "buyout" provision for these operations. Refer to Section 41(I) for details.
4. Machine piling and covering of slash is required in Harvest Areas No. 1 (portion), No. 2 (portion), No. 5, No. 7 (portion), No. 8 (portion), and No. 9 as shown on Exhibit F. Machine piling and covering is to be completed as promptly as possible after harvesting operations are complete. Refer to Section 41(H)(1)(e) for details.
5. Sub-soiling of new skid trails and associated equipment areas is required for Harvest Areas No. 1 (portion), No. 2 (portion), No. 5, No. 7 (portion), No. 8 (portion), and No. 9. Sub-soiling of old skid trails and old roads is required for Harvest Areas No. 2 and No. 5, as shown on Exhibit G. Sub-soiling these areas is to be completed once harvesting and machine-piling operations are complete. Refer to Section 41(D)(4) for details. There is **not an** optional contribution "buyout" provision for these operations.
6. Sub-soiling is required as part of road decommissioning for Spurs No. 1 through No. 5. Road decommissioning is to be completed after burning operations are complete. Refer to Exhibit D, Section 41(D)(5), and Section 41(F)(1) for details. The contract contains an optional contribution "buyout" provision for these operations. Refer to Section 41(I) for details. If a spur will overwinter before decommissioning, that spur shall be winterized. Refer to Section 41(D)(3), Section 41(F)(1) and Exhibit C for details.
7. In the Harvest Areas, as shown on Exhibit A, trees designated for cutting shall be yarded with limbs attached to the bole and the top attached to the top log, unless otherwise directed by the Authorized Officer. There is **no** log length restriction.
8. The "optional operator spurs" in Harvest Areas No. 4, and No. 7 as shown on Exhibit A, shall only be constructed between May 15 and October 15. If these spurs are built, the Purchaser would be responsible for decommissioning, which would include: blocking, covering with slash, and water-barring. The "optional operator spurs" in Harvest Area No. 7 may be rocked, but the "optional operator spur" in Harvest Area No. 4 shall not be rocked. If a spur will overwinter before decommissioning, that spur shall be winterized as described in Section 41(D)(3)(b).
9. No ground-based skidding, machine piling, hand piling, under-burning, sub-soiling, or equipment/vehicle parking shall be allowed inside of the shrub retention area in Harvest Area No. 7, as shown on Exhibit F, as designated by the Authorized Officer.
10. Snow Removal -- The Bureau of Land Management reserves the first right to perform snow removal from all BLM controlled roads. Snow removal is considered an extraordinary cost and not a part of normal or routine maintenance. BLM limits snow removal operations to those roads actively being used for commercial timber haul and only if the operator agrees to pay for the additional service. In some instances commercial operators can be given permission to remove snow at their own expense but will be subject to terms and conditions outlined by the Bureau.
11. A License Agreement with the U.S. Forest Service is required. Refer to Exhibit D for details.

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

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

- (a) All timber on the Reserve Areas as shown on Exhibit A, all retention trees marked with orange paint above and below stump height within the cutting areas and all orange painted and posted trees which are on or mark the boundaries of the Reserve Areas and the retention aggregates.
- (b) Approximately seventy-two (72) trees marked with an orange painted "X" above stump height and orange paint below stump height in all Harvest Areas as shown on Exhibit G. These trees are Special Wildlife Trees and are specially valued as a component of the Wildlife Habitat Management program. Special Wildlife Trees damaged or destroyed by the purchaser shall be valued for purposes of determining damages at current market value of merchantable volume plus the cost to replace the damaged or destroyed trees. BLM has determined that the cost to replace the specially valued trees to be four (4) times the fair market value of the trees. The Purchaser will be liable under applicable sections of this contract for the removal or destruction of these selected wildlife trees, except for such trees which the Authorized Officer determines to be a safety hazard as defined by applicable safety codes and regulations. When selected wildlife trees are determined to be danger trees, written approval to fell such trees shall be obtained from the Authorized Officer conforming to all requirements of Section 8 of this contract.
- (c) All existing coarse woody debris, logs and trees classified as decay Classes 3, 4, and 5, bark substantially sloughed off and in advanced stages of decay, within the Harvest Areas as shown on Exhibit A.

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

Section 41(A) Periodic Payment and First Installment:

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

Section 41(B) Logging:

- (1) Before beginning operations on the Contract Area for the first time or after a shutdown of ten (10) or more days, the Purchaser shall notify the Authorized Officer in writing of the date they plan to begin operations. The Purchaser shall also notify the Authorized Officer in writing if they intend to cease operations for any period of ten (10) or more days.
- (2) Prior to the commencement of operations, the Purchaser shall obtain from the Authorized Officer written approval of a written operations and logging plan commensurate with the terms and conditions of the contract which shall include measures needed to assure protection of the environment and watershed. A prework conference between the Purchasers' authorized representative and the Authorized Officer must be held at a location designated by the Authorized Officer before the logging plan will be approved. All logging shall be done in accordance with the plan developed by this provision.
- (3) No timber yarding, loading or hauling shall be conducted on unsurfaced roads between October 15 of one calendar year and May 15 of the following calendar year, both days inclusive (wet season), unless otherwise approved by the Authorized Officer. Refer to the Exhibit E for details.

- (4) For Harvest Areas No. 5, No. 6, No. 7, No. 8, and No. 9, as shown on Exhibit A, no operations may be conducted from February 1 to June 15, both days inclusive, of each calendar year due to the potential disruption of northern spotted owls. Refer to the Exhibit E for details.  
The Government will conduct surveys to determine whether northern spotted owls are present within 0.25 miles of the Harvest Area. If it is determined that spotted owls are not present, are present but have not attempted to nest, or have failed in nesting attempts, the Authorized Officer may lift the seasonal restriction in any given year on such operations in writing.
- (5) No yarding or loading is permitted in or through the Reserve Areas or retention aggregates, as shown on Exhibit A, unless otherwise approved by the Authorized Officer. Trees felled in the retention aggregates to facilitate yarding shall be left in place, unless otherwise approved by the Authorized Officer.
- (6) 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, retention aggregates, and adjacent plantations shall be felled away from those areas.
- (7) In the Harvest Areas as shown on Exhibit A, trees designated for cutting shall be yarded with limbs attached to the bole and the top attached to the top log, unless otherwise directed by the Authorized Officer.
- (8) In the Harvest Areas shown on Exhibit A, all timber shall be felled to lead.
- (9) In Harvest Areas No. 1 (portion), No. 2 (portion), No. 3, No. 4, No. 6, No. 7 (portion), and No. 8 (portion), as shown on the Exhibit A, yarding shall be done with a skyline yarding system capable of maintaining one end suspension and equipped with a mechanical slack pulling carriage having a minimum of one hundred (100) feet of lateral yarding capability. The system shall have the capability to yard in multi-span configuration.
- (10) In Harvest Areas No. 1 (portion), No. 2 (portion), No. 5, No. 7 (portion), No. 8 (portion) and No. 9 designated for ground-based yarding, as shown on Exhibit A:
  - (a) Ground-based yarding operations shall generally be limited to slopes of thirty-five (35) percent or less, and existing skid trails shall be utilized to the greatest extent possible.
  - (b) No ground-based yarding shall be permitted between October 15 of one calendar year and May 15 of the following calendar year, both days inclusive, or other periods of unseasonably wet weather and soil moisture conditions, unless otherwise approved by the Authorized Officer.
  - (c) A rubber-tired or track-mounted skidder may be used in accordance with the following specifications:
    - (1) The skidder shall be approved by the Authorized Officer prior to ground-based yarding operations.
    - (2) Yarding shall be done with one end of the log suspended.

- (3) The skidder shall be restricted to designated skid trails. Skid trails shall be clearly identified on the ground, 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.
- (e) A harvester/forwarder system may be used in accordance with the following specifications:
  - (1) The harvester must have a lateral reach of twenty (20) feet or more, and the machine's lateral reach must be utilized as much as possible.
  - (2) The forwarder shall operate only on designated skid trails approved by the Authorized Officer. Forwarder trails shall be located on existing skid trails and/or the slash-covered areas traversed by the harvester. Forwarder trails shall be perpendicular to hill-slope contour lines as much as possible.
  - (3) Logs that are too large for the harvester/forwarder operation may be yarded with a rubber-tired or track-mounted skidder, or a track-mounted log loader approved by the Authorized Officer, and as directed by the Authorized Officer. The skidder shall operate on designated skid trails approved by the Authorized Officer.
- (11) 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.
- (12) 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 roads, 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 roads upon which timber is identified by the Purchaser to be cut and removed in accordance with this special provision must be necessary for the safe and expeditious removal of timber sold under this contract and shall be limited to the minimum width necessary for yarding of logs with a minimum of damage to reserve trees, however, unless otherwise approved in writing by the Authorized Officer, the width of each skid trail shall be limited to fourteen (14) feet and each cable yarding road shall be limited to twenty (20) feet.
- (b) The Purchaser may immediately cut and remove additional timber to clear skid trails and cable yarding roads; and provide tailhold, tieback, guyline, lift, and intermediate support trees; and clear danger trees when the trees have been marked with high visibility paint above and below stump height by the Authorized Officer and thereby approved for cutting and removal by the Authorized Officer. The volume of the timber to be sold will be determined by the Authorized Officer in accordance with Bureau of Land Management prescribed procedures. No timber may be cut or removed under terms of this provision unless sufficient installment payments have been made in accordance with Section 3.(b). of the contract or sufficient bonding has been provided in accordance with Section 3.(d). of the contract.
- (c) The Purchaser agrees that sale of this additional timber shall be accomplished by a unilateral modification of the contract executed by the Contracting Officer and that such timber shall be sold at the unit prices shown in Exhibit B of this contract unless: the value of the timber must be reappraised subject to the terms for contract extension set forth in Section 9 of the contract.
- (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 cable yarding roads when the Authorized Officer determines such reservation is necessary to maintain stand densities consistent with objectives set forth in the management prescription(s). This may include the replacement of trees damaged by storm events, or insects or disease. The volume of this timber to be reserved will be determined by the Authorized Officer in accordance with Bureau of Land Management prescribed procedures and the value shall be based on the unit prices shown in Exhibit B of the contract. The Purchaser agrees that the Total Purchase Price shall be reduced accordingly through a unilateral modification to the contract executed by the Contracting Officer.
- (13) 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 roads, hazardous to workers, needed for guyline, tailhold, and tieback trees, severely damaged from the normal conduct of felling or yarding operations to meet all applicable State safety laws, codes or regulations. This timber must be cut or removed so that the Purchaser can continue active falling or yarding operations. The Purchaser is, therefore, authorized to cut and remove such additional timber in accordance with the provisions of Section 8 of the contract: provided, however, that:
- (a) Trees reserved for the tree improvement program and trees reserved for the wildlife habitat objectives under Section 40 of the contract are not included in the authorization.
  - (b) The Purchaser shall identify each tree sold and cut in accordance with the provision by marking the cut surface of the stump and the bottom log immediately after falling with high visibility paint. The stump shall be marked by flagging the location of the stump with plastic fluorescent pink ribbon hung within five feet of the stump at eye level so that the stump can be visually located from a distance of not less than one hundred (100) feet.
  - (c) The volume and price for such timber shall be determined by the Authorized Officer in accordance with Bureau of Land Management prescribed procedures and paid for by the Purchaser in accordance with Section 3(b) or 3(d) of the contract as required by Section 8 of the contract.
  - (d) No timber may be cut or removed under the terms of this provision if all contract payments required by Section 3(b) or 3(d) of the contract have been made.
  - (e) The permission to cut and remove additional timber contained in this provision may be withdrawn by the Contracting Officer if the Authorized Officer determines that the Purchaser:
    - (1) Failed to properly mark any stump with high visibility paint.
    - (2) Failed to identify the location of any stump.
    - (3) Cut any tree that was reserved for tree improvement and/or wildlife habitat.

- (4) Cut any tree in or adjacent to cable yarding corridors that was not necessary to facilitate cable yarding.
- (5) Cut any 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 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 roads 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 41(C) Miscellaneous:

- (1) The Government, at its option, may administratively check scale any portion of the timber removed from the contract area, and if necessary, conduct check scaling of independent scalers contracted to BLM for administrative check scaling purposes. The Purchaser hereby agrees to make such contract timber available for such scaling at a location or locations to be approved in writing by the Authorized Officer. At the approved location or locations, the Purchaser shall provide an area for logs to be safely rolled out for scaling, to unload logs from trucks, place logs in a manner so that both ends and three faces of each log are visible for scaling, and to reload or remove logs after scaling has been completed. In the event that BLM elects to administratively check scale and if such check scaling causes a delay in log transportation time, an adjustment will be made to the purchase price as follows: If the entire sale is check scaled, the purchase price of this contract shall be reduced by Four Thousand Seven Hundred Ninety-six and 00/100 dollars (\$4,796.00). In the event only a portion of the contract timber is scaled, the purchase price shall be reduced by that portion of Four Thousand Seven Hundred Ninety-six and 00/100

dollars (\$4,796.00) which is equal to the percentage of timber sold which was actually scaled by the Government. For purposes of computing this price reduction, the percentage of timber sold which has been scaled shall be determined by the Government. Any reduction in purchase price under the terms of this provision shall be full compensation to the Purchaser for any expense or loss incurred as a result of such scaling. Scaling shall be conducted in accordance with Eastside Scribner Decimal C Rules by BLM scalers, and/or independent scalers contracted to BLM. A copy of the scale report will be made available to the Purchaser upon request.

Section 41(D) Environmental Protection:

- (1) In addition to the requirements set forth in Section 25 of this contract, the Purchaser shall clean road surfaces, cut banks, landings, ditch lines and culverts of all debris created by logging operations.
- (2) In addition to the requirements set forth in Section 25 of this contract, the Purchaser shall steam clean or pressure wash all logging and road building equipment, except logging trucks 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 25 of this contract, the Purchaser shall winterize temporary Spurs No. 1 through 13 and Road No. 29-2-4.2 Segment A (portion), constructed, renovated, or improved under Section 41(F)(1), or any portion thereof, in accordance with the plans and specifications shown on Exhibit C, and in accordance with the following stipulations:
  - (a) The Purchaser intends to use the temporary spurs/temporary roads or portions thereof for more than a single operating season; or, circumstances require that the temporary spurs/temporary roads or portions thereof over-winter before decommissioning.
  - (b) Winterizing native surfaced spurs shall consist of water barring, blocking and mulching to the satisfaction of the Authorized Officer. Winterizing rock surfaced spurs shall consist of cleaning ditches, blading and reshaping the road surface, and ensuring drainage structures are properly functioning, to the satisfaction of the Authorized Officer.
  - (c) Winterizing shall take place at the end of the operating season as described in Section 41(F)(1) and 41(F)(2) of this contract, or as directed by the Authorized Officer.
- (4) In addition to the requirements set forth in Section 25 of this contract, the Purchaser shall, upon completion of logging operations and machine piling and covering operations, perform sub-soiling operations in Harvest Areas No. 1 (portion), No. 2 (portion), No. 5, No. 7 (portion), No. 8 (portion), and No. 9, on approximately two and fifteen hundredths (2.15) of new skid trails, old skid trails and old roads as shown on Exhibit G, and associated equipment areas as designated by the Authorized Officer and in accordance with the following stipulations:

- (a) Sub-soiling new and old skid trails, old roads, and associated equipment areas shall take place after ground based yarding and machine piling and covering is completed, unless otherwise approved by the Authorized Officer.
  - (b) All sub-soiling equipment shall be inspected and approved by the Authorized Officer before sub-soiling operations begin.
  - (c) Slash and other organic debris, including some topsoil, will cover at least 50 percent of the sub-soiled area, where levels of this material are in enough abundance. Water bars shall be constructed concurrently with sub-soiling operations on grades steeper than 10 percent, as directed by the Authorized Officer.
  - (d) Sub-soiling shall occur during the same dry season as ground-based harvesting or completion of skid trail use, and be accomplished prior to October 15, unless otherwise approved by the Authorized Officer.
  - (e) The compacted surfaces of landings and main skid trails plus designated old skid trails and old roads shall be sub-soiled (broken up, loosened and de-compacted) using excavator attachments, log loader tongs or other approved equipment.
  - (f) Sub-soiling shall be completed to a minimum depth of 18 inches below the ground surface, unless otherwise approved by the Authorized Officer.
  - (g) Treated areas shall span the total width of compaction, as identified by the Authorized Officer. At least 80 percent of the compacted soil profile shall be shattered. No more than 50 percent of the treated compacted soil shall have clods greater than two inches in diameter, unless otherwise approved by the Authorized Officer.
  - (h) 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.
  - (i) Equipment shall not be allowed to operate on slopes in excess of 35 percent or to cross streams or drainages unless approved by the Authorized Officer. Examples to the 35% exception include situations such as small inclusions of steeper slopes, connecting trails to isolated ground-based harvest areas, or the use of existing trails that could be used without causing undue effects to the soil.
- (5) In addition to the requirements set forth in Section 25 of this contract, the Purchaser shall, upon completion of burning operations, perform sub-soiling operations on temporary spurs No. 1, No. 2, No. 3, No. 4, and No. 5 on approximately fifty-nine hundredths (0.59) miles of spur roads, landings, and associated equipment areas as designated by the Authorized Officer and in accordance with the following stipulations:
- (a) Sub-soiling temporary spur roads accessing any given unit shall not be initiated until after burning operations in that unit are completed, unless otherwise approved by the Authorized Officer.
  - (b) All sub-soiling equipment shall be inspected and approved by the Authorized Officer before sub-soiling operations begin.
  - (c) Slash and other organic debris, including some topsoil, will cover at least 50 percent of the sub-soiled area, where levels of this material are in enough abundance. Water bars

shall be constructed concurrently with sub-soiling operations on grades steeper than 10 percent, as directed by the Authorized Officer.

- (d) Sub-soiling shall occur during the dry season after completion of spur/road use, and be accomplished prior to October 15, unless otherwise approved by the Authorized Officer.
  - (e) The compacted surfaces of temporary spur roads and landings, plus associated compacted areas such as turnouts, truck turnarounds and log decking areas shall be sub-soiled (broken up, loosened and de-compacted) using excavator attachments, log loader tongs or other approved equipment.
  - (f) Sub-soiling shall be completed to a minimum depth of 18 inches below the ground surface, unless otherwise approved by the Authorized Officer.
  - (g) Treated areas shall span the total width of compaction, as identified by the Authorized Officer. At least 80 percent of the compacted soil profile shall be shattered. No more than 50 percent of the treated compacted soil shall have clods greater than two inches in diameter, unless otherwise approved by the Authorized Officer.
  - (h) 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.
  - (i) Equipment shall not be allowed to operate on slopes in excess of 35 percent or to cross streams or drainages unless approved by the Authorized Officer. Examples to the 35% exception include situations such as small inclusions of steeper slopes, connecting trails to isolated ground-based harvest areas, or the use of existing trails that could be used without causing undue effects to the soil.
- (6) 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(h) of the contract. The Purchaser shall not resume contract operations until the First Installment amount is fully restored.

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

In the event that operating time is lost as a result of the incorporation of additional contract requirements, or delays due to Endangered Species Act consultation with the U.S. Fish and Wildlife Service or U.S. National Marine Fisheries Service, or court-ordered injunctions, the Purchaser agrees that an extension

of time, without reappraisal, will constitute a full and complete remedy for any claim that delays due to the suspension hindered performance of the contract or resulted in damages of any kind to the Purchaser.

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

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

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

Section 41(E) Cultural Resource Protection:

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

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

- (1) The Purchaser shall construct Spurs No. 1, No. 2 (portion), No. 3, No. 4, No. 5, No. 7, No. 8, No. 9, No. 11, and No. 13; renovate or improve Spurs No. 2 (portion), No. 6, No. 10, and No. 12, and Roads No. 28-3-35.0 Segment B (portion) and No. 29-2-4.2 Segment A (portion); in strict accordance with the plans and specifications shown on Exhibit C, which is attached hereto and made a part hereof. Spurs No. 1 through No. 13, and Road No. 29-2-4.2 Segment A (portion) shall be winterized as described in Section 41(D)(3) after harvesting operations are complete, and decommissioned after burning operations are complete. Refer to Exhibit D for details. Any required construction, improvement, 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, improvement 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.
- (3) The Purchaser is authorized to use the roads listed and shown on Exhibit D which are under the jurisdiction of the Bureau of Land Management for the removal of Government timber sold under the terms of this contract, provided that the Purchaser pay the required maintenance and rockwear obligations described in Section 41(F)(4). Any road listed on Exhibit D and requiring improvement or renovation in Exhibit C of this contract shall be maintained by the Purchaser until receiving written acceptance of the improvement or renovation from the Authorized Officer. The Purchaser shall pay current Bureau of Land Management maintenance and rockwear fees for the sale of additional timber under modification to the contract.
- (4) The Purchaser shall pay the Government a road maintenance and rockwear obligation in the amount of Forty-five Thousand One Hundred Twenty-two and 22/100 dollars (\$45,122.22) 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 19.2 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, "Road Maintenance Specifications," of this contract, which is attached hereto and made a part hereof.
- (6) The Purchaser also agrees that if they elect to use any other private road which is the subject of a right-of way agreement with the Government for the removal of Government timber sold under the terms of this contract, the Purchaser shall request and agree to the modification of this contract to provide for such use and for allowances for amortization of the Government's share of the capital investment of any such road.
- (7) In the use of Roads No. 2500-120 Segment A, No. 2500-050 Segment A (portion), No. 2792 Segment A (portion), and No. 2810 Segment A (portion), as shown on Exhibit D, the Purchaser shall comply with the conditions of Right-of Way and Road Use Agreement No. R-724, dated May 20, 1980, between the Bureau of Land Management and U.S. Forest Service. This document is available for inspection at the Bureau of Land Management, Roseburg District Office, 777 NW Garden Valley Blvd., Roseburg, Oregon 97471.

These conditions include:

- (a) Prior to the use of said road, the Purchaser shall furnish the Authorized Officer a copy of the executed License Agreement.
- (b) Payment of a rockwear obligation in the amount of Two Hundred Forty-six and fifteen/100 dollars (\$246.15).

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

Section 41(G) Fire Prevention and Control:

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

Section 41 (H) Slash Disposal and Site Preparation:

- (1) Logging Residue Reduction. In addition to the requirements of Sections 15 and 25 of this contract, and notwithstanding the Purchaser's satisfactory compliance with State laws and regulations regarding offsetting or abating the additional fire hazard created by this operation and the State's willingness to release the Purchaser from liability for such hazard, the Purchaser shall remain responsible to the Government for performance of the following logging residue reduction and site preparation measures required by this contract:
  - (a) Prior to commencement of any operation under Section H (Slash Disposal and Site Preparation) of this contract, a slash disposal and site preparation 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) 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.
  - (d) Machine Piling and Covering landing piles - 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.
    - (1) 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. Machine piling and covering shall be completed as promptly as possible after harvesting operations are completed, as directed by the Authorized Officer.

- (2) The BLM will be responsible for burning landing piles; landing pile burning shall be completed before under-burning takes place.
- (e) Machine Piling and Covering area piles - Machine pile and cover all slash in Harvest Areas No. 1 (portion), No. 2 (portion), No. 5, No. 7 (portion), No. 8 (portion), and No. 9 as shown on Exhibit F, or as directed by the Authorized Officer, in accordance with the following specifications:
- (1) Piling shall be performed with a track-mounted excavator to pile brush and logging slash. Prior to beginning piling operations, all equipment shall be approved by the Authorized Officer.
  - (2) No machine piling 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.
  - (3) In order to limit soil disturbance, the piling method shall minimize both the total amount of ground covered by the tractor treads and the number of passes over any single spot on the ground.
  - (4) Machine piling equipment shall be restricted to existing skid trails, and machine piling and covering shall be completed as promptly as possible after harvesting is completed, as directed by the Authorized Officer.
  - (5) Slash piles shall be capped with a minimum ten (10) foot by (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 weighted down to hold in place. Covering shall be done concurrently with piling. The BLM will be responsible for burning machine piles; machine pile burning shall be completed before under-burning takes place.
  - (6) Maximum pile size shall be twenty (20) feet in diameter by (10) feet in height.
  - (7) Unmerchantable logs greater than twelve (12) inches in diameter on the small end shall be left in place, or positioned so that they will not be burned.
  - (8) No pile shall be located within (10) feet of any snag, large downed log, reserve tree, or unit boundary, unless approved by the Authorized Officer. Piles may be placed against some live reserve trees, as directed or approved by the Authorized Officer, in order to create snags for wildlife habitat; Special Wildlife Trees marked with an orange painted "X" as shown on Exhibit G are not included in this authorization.
  - (9) For appraisal purposes on this contract it was assumed that seventy-two (72) acres would be machine piled and covered with a per acre cost of Five Hundred and 00/100 dollars (\$500.00), for a total appraised cost of Thirty Six Thousand and 00/100 dollars (\$36,000.00). The Total Purchase Price set forth in Section 2 shall be adjusted by the amount that the total cost of machine piling designated

pursuant to this section differ from Thirty Six Thousand and 00/100 (\$36,000.00), as calculated using the estimated acres determined by the Authorized Officer and the per acre costs listed in this section.

- (f) Fuels Pull-Back - Fuels pull-back shall be performed on Harvest Areas No. 1 (portion), No. 4 (portion), No. 6 (portion), and No. 8 (portion) as shown on Exhibit G in accordance with the following specifications.
  - (1) Fuels shall be pulled back from approximately forty (40) Special Wildlife Trees marked with an orange painted "X" as shown on Exhibit G, and any snags greater than twenty (20) inches diameter at breast height and twenty (20) feet tall in the "Area of Fuels Pull-Back" as shown on Exhibit G.
  - (2) Fuels pull-back shall occur after harvesting operations are complete but before under-burning operations have commenced.
  - (3) Each tree/snag designated for pull-back shall be cleared around according to the following: All slash less than three (3) inches in diameter at the large end shall be removed from within fifteen (15) feet of the base of the tree or snag. Slash greater than three (3) inches in diameter at the large end shall be removed from within four (4) feet of the base of the tree. For live trees: two to four (2-4) inches of duff and litter shall be pulled back from within two (2) feet from the base of the tree.
  - (4) Scatter all removed slash and avoid slash concentrations. On ground greater than thirty five (35) percent slope, fuel shall be scattered uphill or sidehill from the tree or snag. On ground less than thirty five (35) percent slope, any direction is acceptable.
- (g) Hand Fire Trails – Hand fire trails to mineral soil, a minimum width three (3) feet, not to exceed five (5) feet wide, within an eight (8) foot wide clear corridor, shall be located, constructed, and maintained as directed by the Authorized Officer, (see Exhibit F for approximate location) not to exceed thirty four thousand four hundred (34,400) horizontal feet in length. Concentrations of slash shall be pulled back fifteen (15) feet from the mineral fire line at locations to be designated on the ground and dispersed within the harvest area. Water bars shall be constructed and maintained on the fire trails to the satisfaction of the Authorized Officer.
  - (1) Water bars shall be constructed on all fire trails. The water bar shall consist of a diagonal ditch across the portion of the fire trail cleared to mineral soil. The water bar shall be six (6) inches deep and shall extend one (1) foot beyond the width of the fire line.
  - (2) Water bar spacing -- Percent of Slope: 0% to 9% - None Required, 10 to 29% - 1 water bar every 300 feet, 30% to 59% - 1 water bar every 150 feet, 60%+ - 1 water bar every 100 feet.
- (2) In addition to requirements stated in Section 41(H)(1) the Purchaser shall perform logging residue reduction and site preparation work on approximately one hundred eleven (111) acres of Harvest Areas as shown on Exhibit F.

- (a) The required work shall consist of any treatment or combination of treatments listed in the table below, as determined by the Authorized Officer and specified in writing by the Contracting Officer. The number of acres and locations of each treatment shall be determined by the Authorized Officer.

<u>Treatment</u>	<u>Cost/Acre</u>
Hand Pile and Cover	\$525.00
Under-burn and Mop-up (includes Fire Trail construction)	\$1,327.17

- (b) The following treatments were assumed for appraisal purposes on this contract:

<u>Appraised Treatment</u>	<u>Acres</u>	<u>Cost/Acre</u>	<u>Total Appraised Cost</u>
Hand Pile and Cover	5 acres	\$525.00	\$2,625.00
Under-burn and Mop-up (includes Fire Trail construction)	106 acres	\$1,327.17	<u>\$140,680.02</u>
Total Appraised Cost			\$143,305.02

- (c) The Total Purchase Price set forth in Section 2 shall be adjusted by the amount that the total cost of the logging residue reduction and site preparation treatments designated pursuant to Section 41(H)(2)(a) differs from One Hundred Forty Three Thousand Three Hundred Five and 02/100 (\$143,305.02), as calculated by using the estimated acres determined by the Authorized Officer and the per acre costs listed in Section 41(H)(2)(a).

(3) Under-burning Specifications

- (a) All ignition shall be done by hand with drip torches, propane burners or other methods as approved by the Authorized Officer.
- (b) Ignition shall be done in a method agreed upon in the Slash Disposal and Site Preparation Plan described in Section 41 (H)(1)(a).
- (c) The Authorized Officer shall be on site during periods of active ignition and burning.

(4) Mop-up Specifications

- (a) The burn perimeter shall be secured to the satisfaction of the Authorized Officer before the crew can be released for the first night.
- (b) Mop-up shall continue the following days until there is no further flaming or smoldering anywhere in the Harvest Area, as shown on Exhibit F.
- (c) Use of surfactants will be limited, as directed by the Authorized Officer.
- (d) The timeline for mop-up may be accelerated due to smoke, weather, or other concerns, as directed by the Authorized Officer.

(5) Hand Piling and Covering Specifications

- (a) All logging slash and slashed brush more than two (2) feet long and between one (1) and six (6) inches in diameter at the large end shall be hand piled and covered. Larger material which has a portion meeting this specification must be bucked at the six (6) inch diameter, and that portion piled.
  - (b) No pile shall be located within (10) feet of any snag, large downed log, reserve tree, or unit boundary, unless approved by the Authorized Officer. Piles may be placed against some live reserve trees, as directed or approved by the Authorized Officer, in order to create snags for wildlife habitat; Special Wildlife Trees as shown on Exhibit G are not included in this authorization.
  - (c) Maximum pile size shall be eight (8) feet in diameter by six (6) feet in height. Minimum pile size shall be four (4) feet in diameter by four (4) feet in height.
  - (d) Covering shall be done concurrently with piling. A minimum of fifty (50) percent of the pile is to be covered using four (4) mil. black plastic or equivalent, and anchored or weighted down to the satisfaction of the Authorized Officer.
  - (e) Hand piling and covering shall be completed as promptly as possible after harvesting is completed, as directed by the Authorized Officer.
  - (f) The BLM will be responsible for burning hand piles; hand pile burning shall be completed before under-burning takes place.
- (6) Notwithstanding the provisions of Sec. 15 of this contract, the Government shall assume all obligations for disposal or reduction of fire hazards created by the Purchaser's operations on Government lands, except for stipulations described in Section 41(H) as required herein. In accordance with written instructions to be issued by the Authorized Officer at least ten (10) days in advance of the earliest date of required performance, the Purchaser shall, under supervision of the Authorized Officer or designated representative, assist in preparing units for burning, mop-up, and patrol by furnishing at Purchaser's own expense, the services of personnel and equipment on each unit as shown below.
- (a) For Hand Igniting and Burning each Under-burn Harvest Area No. 1 (portion), No. 2 (portion), No. 4, No. 6, and No. 8 (portion), as shown on Exhibit F. All qualifications are defined according to National Wildfire Coordinating Group (NWCG) Wildland Fire Qualifications System guide, PMS 310-1. Qualifications and equipment levels are the minimum and may exceed those stated.
    - (1) One (1) Burn Boss (RXB2) to supervise crews and equipment operators, and to serve as Purchaser's representative.
    - (2) One (1) Firing Boss (FIRB).
    - (3) One (1) twenty (20) person hand crew, including a designated crew foreman. The crew shall be equipped with fuel, twenty (20) drip torches or propane burners, eight (8) fire shovels, eight (8) pulaskis, two (2) power saws, five (5) backpack pumps, and enough radios to facilitate inter-crew communications.
    - (4) One (1) Type 3 or 4 engine with operator (ENGB/ICT4) and two (2) crew

members. Engine must be equipped with drafting capability and compressed air foam system (all engines must meet or exceed typing standards, including inventory, from the fire line handbook appendix A).

- (5) One (1) water tender truck with driver/operator. The water tender truck shall have two thousand five hundred (2500) gallon capacity or more.
  - (6) Two (2) Type 6 engines with operators (ENGB/ICT4) and one (1) crew member each. Engine must be equipped with foam and drafting capability.
  - (7) Two (2) portable pumps with fuel and equipment to draft water.
  - (8) One thousand five-hundred (1,500) feet of one and one half (1½) inch hose, one thousand (1000) feet of one (1) inch hose, five hundred (500) feet of three-quarter (¾) inch hose, twelve (12) one and a half (1½) inch gated wye valves, fifteen (15) one and a half (1½) inch to one (1) inch reducers, six (6) one (1) to three-quarter (¾) inch reducers, ten (10) one (1) inch combination fog and stream nozzles, and six (6) one and one half (1½) inch combination fog and stream nozzles.
  - (9) All hose couplings shall have the standard thread adopted by the State Fire Marshall pursuant to ORS 476.610 as amended.
- (b) Mop-up of each Under-burn Harvest Area No. 1 (portion), No. 2 (portion), No. 4, No. 6, and No. 8 (portion), as shown on Exhibit F.
- (1) One (1) Burn Boss (RXB2) to supervise crews and equipment operators, and to serve as Purchaser's representative.
  - (2) One (1) twenty (20) person hand crew, including a designated crew foreman. The crew shall be equipped with fuel, five (5) drip torches or propane burners, eight (8) fire shovels, eight (8) pulaskis, two (2) power saws and five (5) backpack pumps.
  - (3) One (1) water tender truck with driver/operator. The water tender truck shall have two thousand five hundred (2500) gallon capacity or more.
  - (4) Two (2) Type 6 engines with operators (ENGB/ICT4) and one (1) crew member each. Engine must be equipped with foam and drafting capability (all engines must meet or exceed typing standards, including inventory, from the fire line handbook appendix A).
  - (5) Two (2) portable pumps with fuel and equipment to draft water.
  - (6) One thousand five-hundred (1,500) feet of one and one half (1½) inch hose, one thousand (1000) feet of one (1) inch hose, five hundred (500) feet of three-quarter (¾) inch hose, twelve (12) one and a half (1½) inch gated wye valves, fifteen (15) one and a half (1½) inch to one (1) inch reducers, six (6) one (1) to three-quarter (¾) inch reducers, ten (10) one (1) inch combination fog and stream nozzles, and six (6) one and one half (1½) inch combination fog and stream nozzles.

- (7) All hose couplings shall have the standard thread adopted by the State Fire Marshall pursuant to ORS 476.610 as amended.

Aircraft and pilots used for logging residue reduction or the suppression of escaped fires from logging residue reduction operations, shall be acquired from a list of aircraft and pilots approved (i.e., carded for these specific activities) by the Office of Aircraft Services or the U.S. Forest Service. This list is available from BLM District Offices upon request.

All listed personnel shall be physically fit, experienced, and fully capable of functioning as required. All personnel shall arrive at the project areas with the following personal safety equipment: long sleeve natural fabric shirt, full length natural fabric trousers, minimum eight (8) inch top leather boots, hardhat, and leather gloves. All personnel directly involved in burning operations shall wear clothing made of approved aramid fabric (Nomex or equivalent) and shall carry an approved fire shelter.

All listed tools and equipment shall be in good usable condition. All power-driven equipment shall be fully fueled and available for immediate use. During periods of use under this subsection, the Purchaser shall provide fuel and maintenance for all such power-driven equipment. In addition, all listed personnel directly involved in burning operations shall be certified Fire Fighters qualified according to National Wildfire Coordinating Group (NWCG) Wildland Fire Qualification System guide, PMS 310-1 and provide documentation. The work leaders must be fluent in English and be able to effectively speak to all crew members under their direction. Personnel who do not meet these requirements or who do not have proper clothing and personal protective equipment (PPE) will not be allowed to participate.

Except as provided hereafter for fire escapement, the Purchaser shall continue the required assistance in mop-up of each unit burned as shown on Exhibit A, required in Section 41(H)(4) and Section 41(H)(6)(b) for three hundred (300) work hours for each under burn unit as directed by the Authorized Officer within a thirty (30) day period for each under burn unit beginning 8:00 a.m. the day following completion of ignition in that unit or until released from such services by the Authorized Officer, whichever occurs first.

In the event of a fire escapement, Purchaser's personnel and equipment shall, under supervision of the Authorized Officer or designated representative, take action to suppress, including control and mop-up, the escaped fire until released from such service by the Government. If it becomes necessary to suppress a fire which escapes from the prescribed fire area for a period beyond midnight of ignition day, then the Government shall, at its option:

- (1) reimburse the Purchaser for such additional use of personnel and equipment at wage rates shown in the current Administratively Determined Pay Rates for Western Area and at equipment rates shown in the current Oregon-Washington Interagency Fire Fighting Equipment Rental Rates schedule, until the Purchaser is released from such service by the Government, or
- (2) release the Purchaser from additional suppression work and assume responsibility for suppressing the escaped fire.

In situations where an escaped fire is controlled and contained by an adequate fire break (i.e., trail, road, stream, rock formation, etc.) the Government may permit the Purchaser to remove personnel for that day: provided that, all mop-up work on the escaped fire area is included with mop-up work on the prescribed fire area. In such an event, the Purchaser must sign a statement of agreement to complete mop-up work on all escaped fire areas concurrently with mop-up work on the prescribed fire area.

In case of injury to personnel or damage to equipment furnished by the Purchaser as required by this subsection, liability shall be borne by the Purchaser, unless such injury or damage is caused by Government negligence.

Time is of the essence in complying with this provision. In the event the Purchaser fails to provide the personnel and equipment required herein, the Purchaser shall be responsible for all additional costs incurred by the Government in disposing of slash including but not limited to the wages and other costs of providing federal employees and others as substitute labor force, the cost of providing substitute equipment and appropriate additional overhead expenses. If the Purchaser's failure results in deferral of burning and new conditions necessitate additional site preparation work and/or use of additional personnel and equipment to accomplish planned burning, the Purchaser also shall be responsible for such additional costs.

Section 41(I) Optional Contributions:

- (1) The purchaser shall perform fuels pull-back, construct hand fire trails, hand pile and cover slash, and assist in under-burning and mop-up as described in Section 41(H)(1)(f), 41(H)(1)(g), and 41(H)(2) through 41(H)(6). The Purchaser shall have the option of completing this work, or in lieu thereof, may make a contribution to the Bureau of Land Management in the amount of One Hundred Seventy One Thousand Ninety-three and 92/100 (\$171,093.92), and upon making such contribution, the Purchaser shall be relieved of the applicable obligations set out in these subsections. The purchaser shall subsoil and decommission spur roads as described in Section 41 (D)(5) and Exhibit D. The Purchaser shall have the option of completing this work, or in lieu thereof, may make a contribution to the Bureau of Land Management in the amount of Eight Thousand Nine Hundred Eighty-three and 36/100 (\$8,983.36), and upon making such contribution, the Purchaser shall be relieved of the applicable obligations set out in these subsections. The Purchaser shall notify the Authorized Officer of his intention to make this contribution upon execution of this contract. If the Purchaser elects to make a contribution, the Authorized Officer shall establish an installment schedule of payments of the contribution.

Section 41(J) 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 Contracting Officer, the Purchaser shall brand clearly and legibly one end of all logs with a scaling diameter (small end inside bark) of over 10 inches, prior to the removal of timber from the contract area. All loads of 11 logs or more will have a minimum of 10 logs clearly and legibly branded on one end regardless of the diameter of the logs. All logs will be branded on loads of 10 logs or less. One end of all branded logs to be processed domestically will be marked with a 3 square inch spot of highway yellow paint. The Purchaser will stop trucks for accountability monitoring at mutually agreed upon locations when notified by the Authorized Officer.

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

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

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

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

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

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

LUMP SUM SALE

Tract Number  
**(1) 12-08**  
Sale Name  
**White Castle VRH**  
Sale Notice (dated)  
**Aug. 14, 2012 (sale date 09/11/12)**  
BLM District  
**Roseburg**

Sealed Bid for Sealed Bid Sale  Written Bid for Oral Auction Sale

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

Required bid deposited is \$ **71,000.00** and is enclosed in for form of  cash  money order  bank draft  
 cashier's check  certified check  bid bond of corporate surety on approved list of the United States Treasury  
 guaranteed remittance approved by the authorized officer.

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

BID SCHEDULE - LUMP SUM SALE

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

PRODUCT SPECIES	BID SUBMITTED			(Est. Volume MBF 16' Log)		ORAL BID MADE	
	UNIT	ESTIMATED VOLUME OR QUANTITY		UNIT PRICE	TOTAL VALUE	UNIT PRICE	TOTAL VALUE
Douglas-fir	MBF	5,743	x	=		x	=
Western Hemlock	MBF	551	x	=		x	=
Grand Fir	MBF	79	x	=		x	=
Sugar Pine	MBF	14	x	=		x	=
W. White Pine	MBF	5	x	=		x	=
Incense-cedar	MBF	3	x	=		x	=
	MBF		x	=		x	=
	MBF		x	=		x	=
	MBF		x	=		x	=
	MBF		x	=		x	=
	MBF		x	=		x	=
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	MBF		x	=		x	=
	MBF		x	=		x	=
	MBF		x	=		x	=
	MBF		x	=		x	=
<b>TOTAL PURCHASE PRICE</b>							

(Continued on reverse)

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

Bid submitted on *(date)*

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

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

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

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

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

Response to this request is required to obtain a benefit.

## NOTICE

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

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

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

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

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

## BURDEN HOURS STATEMENT

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

## INSTRUCTIONS TO BIDDERS

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

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

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

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

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

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

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

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

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

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

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

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

\*Applies to Timber Only

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

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

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

### 10. PERFORMANCE BOND —

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

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

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

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

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

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

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

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

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

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

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

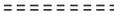
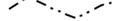
District	Township	Range	Section	Meridian	Contract Number
Roseburg	28S 28S 29S	2W 3W 2W	31, 32, 33 23, 25, 26 4	Willamette	ORR05-TS12-08

AREA	HARVEST ACRES	HARVEST METHOD
	33	CABLE / GROUND BASED
	13	CABLE / GROUND BASED
	1	CABLE
	13	CABLE
	7	GROUND BASED
	16	CABLE
	28	CABLE / GROUND BASED
	73	CABLE / GROUND BASED
	<u>3</u>	GROUND BASED
Total	187	

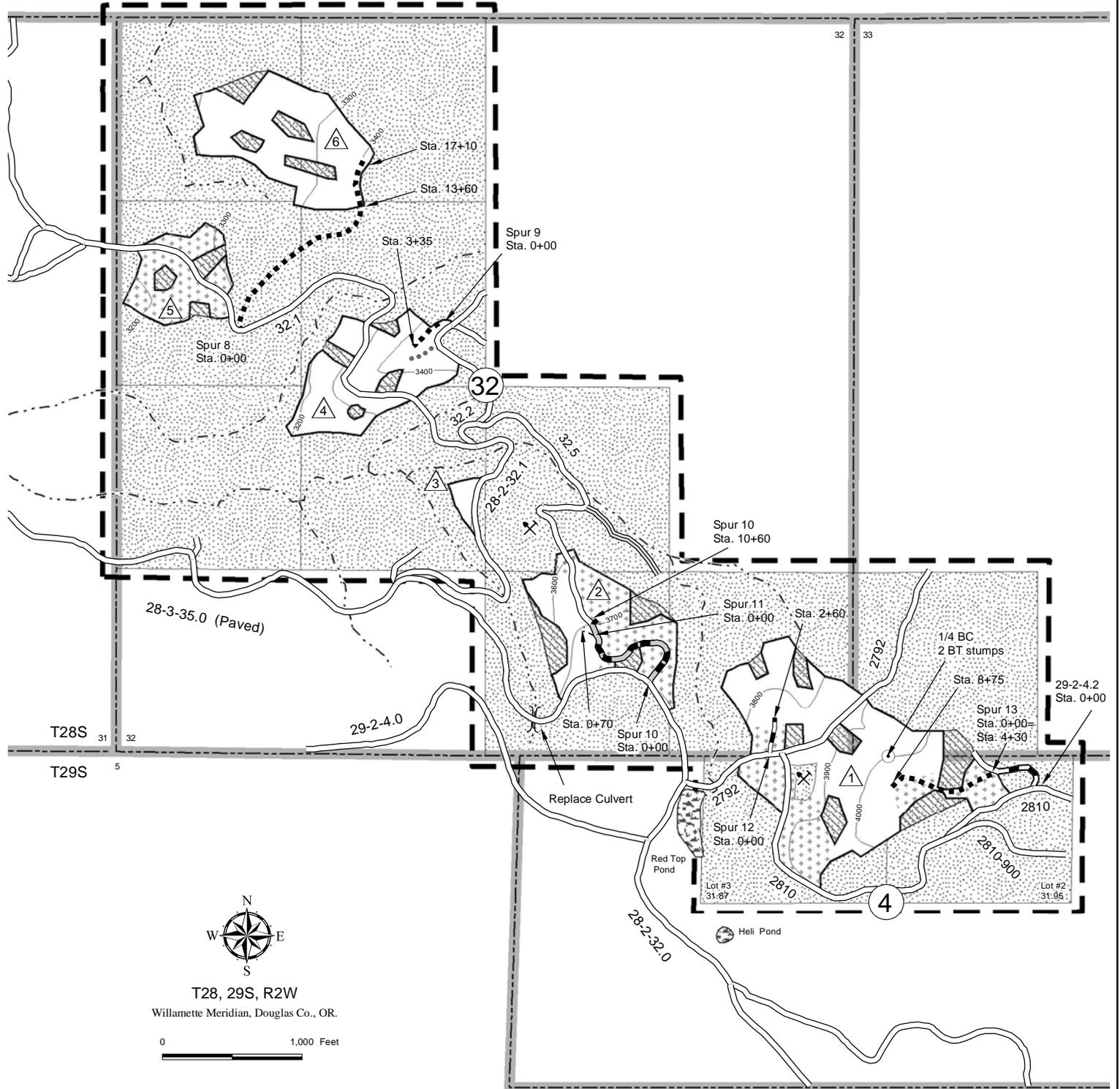
HARVEST AREA -----	187	Ac.
R/W AREA -----	1	Ac.
TOTAL HARVEST AREA -----	188	Ac.
RESERVE AREA -----	835.83	Ac.
TOTAL CONTRACT AREA -----	1023.83	Ac.

- NOTE:**
- HARVEST AREA BOUNDARIES ARE PAINTED ORANGE AND POSTED WITH WHITE OR GREEN "BOUNDARY OF TIMBER RESERVE" TAGS, EXCEPT ON PROPERTY LINES WHICH ARE FLAGGED AND POSTED WITH ORANGE AND WHITE "TIMBER CUTTING BOUNDARY" TAGS.
  - BOUNDARIES OF RIGHT-OF-WAY TO UNITS #1, #6 AND #9 ARE POSTED WITH "RIGHT-OF-WAY" TAGS AND PAINTED ORANGE (1 ACRE).
  - BOUNDARIES OF RETENTION AGGREGATES WITHIN HARVEST AREA BOUNDARIES ARE POSTED WITH WHITE OR GREEN "BOUNDARY OF TIMBER RESERVE" TAGS AND PAINTED ORANGE.
  - RETENTION TREES ARE MARKED WITH ORANGE PAINT ABOVE AND BELOW STUMP HEIGHT.
  - APPROXIMATELY 80 ACRES ARE AVAILABLE FOR GROUND BASED HARVEST.

**LEGEND**

	HARVEST AREA - CABLE YARDING		EXISTING ROAD
	HARVEST AREA - GROUND BASED YARDING		ROAD TO BE RENOVATED, DIRT
	RESERVE AREA		ROAD TO BE IMPROVED, ROCKED
	RESERVE AREA - RETENTION AGGREGATE		ROAD TO BE CONSTRUCTED, DIRT
	BOUNDARY OF CONTRACT AREA		ROAD TO BE CONSTRUCTED, ROCKED
	BOUNDARY OF CUTTING AREA		OPTIONAL OPERATOR SPUR
	SECTION LINE		UNDRIVABLE ROAD
	SURVEY CORNERS FOUND		STREAM
<b>BC</b>	BRASS CAP		100 FT. CONTOUR LINES
<b>BT</b>	BEARING TREE		QUARRY / STOCKPILE SITE
			CULVERT TO BE REPLACED

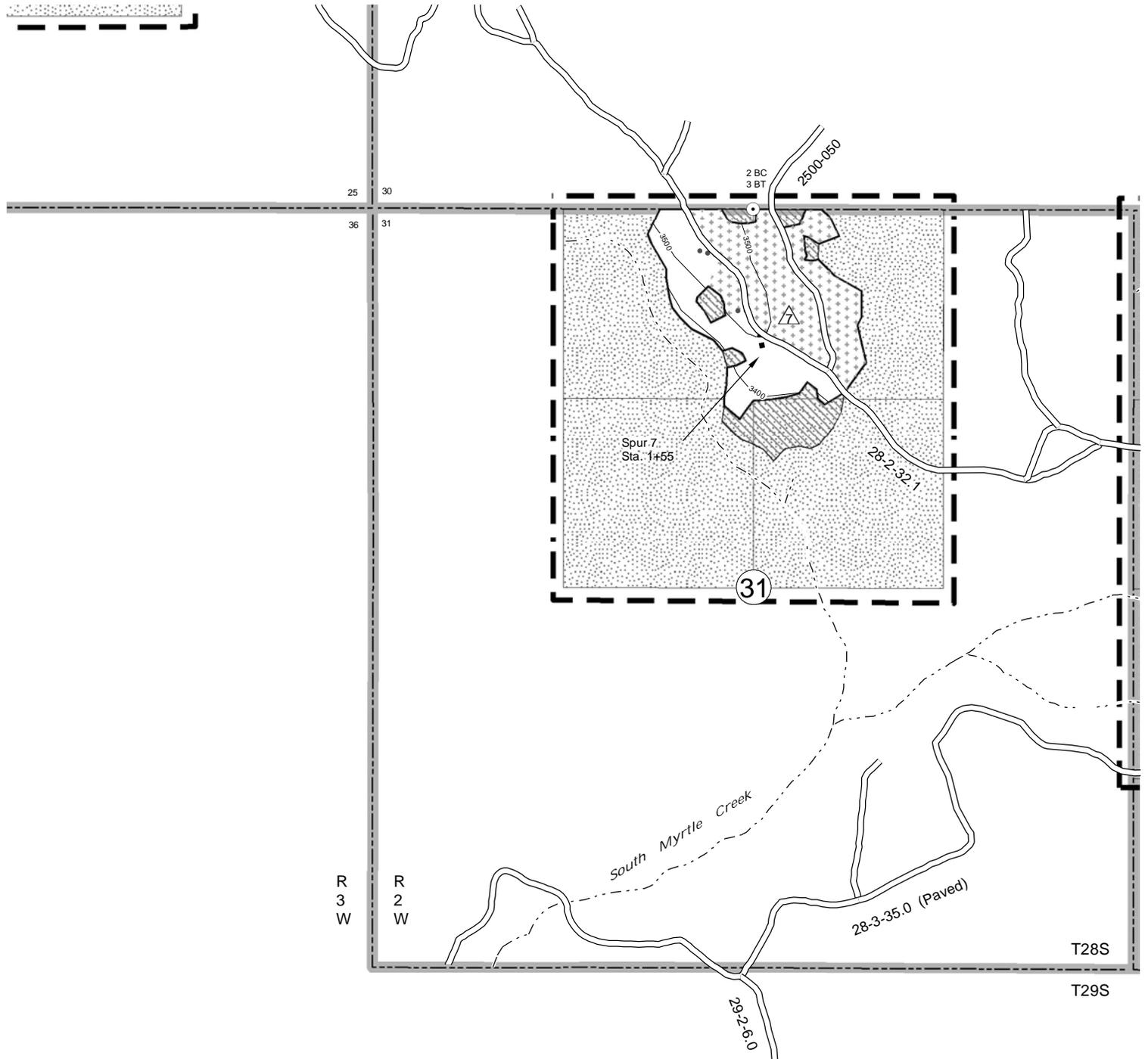
District	Township	Range	Section	Meridian	Contract Number
Roseburg	28S 29S	2W 2W	32, 33 4	Willamette	ORR05-TS12-08



T28, 29S, R2W  
Willamette Meridian, Douglas Co., OR.

0 1,000 Feet

District	Township	Range	Section	Meridian	Contract Number
Roseburg	28S	2W	31	Willamette	ORR05-TS12-08



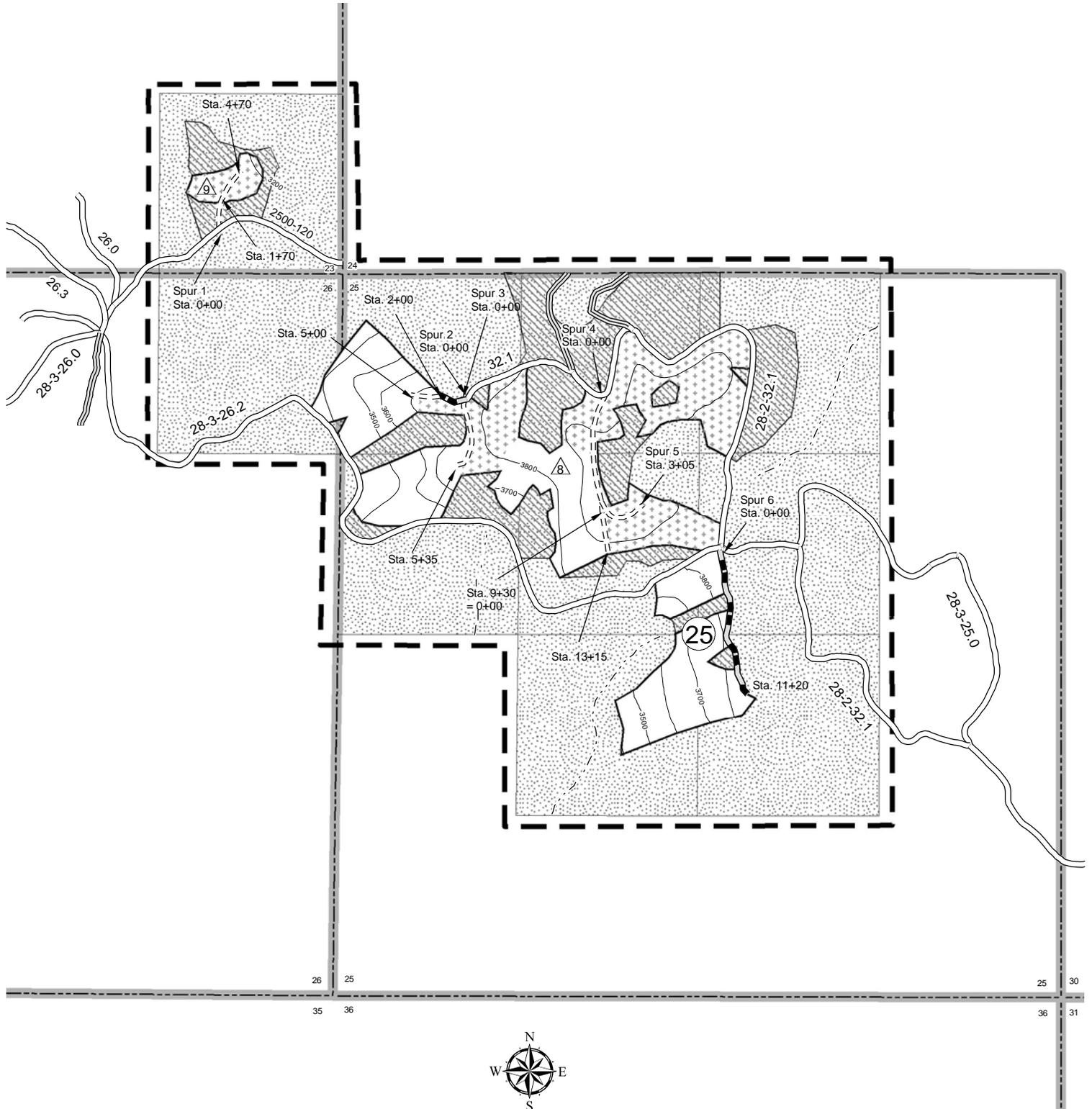
T28, R2W

Willamette Meridian, Douglas Co., OR.

0 1,000 Feet



District	Township	Range	Section	Meridian	Contract Number
Roseburg	28S	3W	23, 25, 26	Willamette	ORR05-TS12-08



T28, R3W  
Willamette Meridian, Douglas Co., OR.





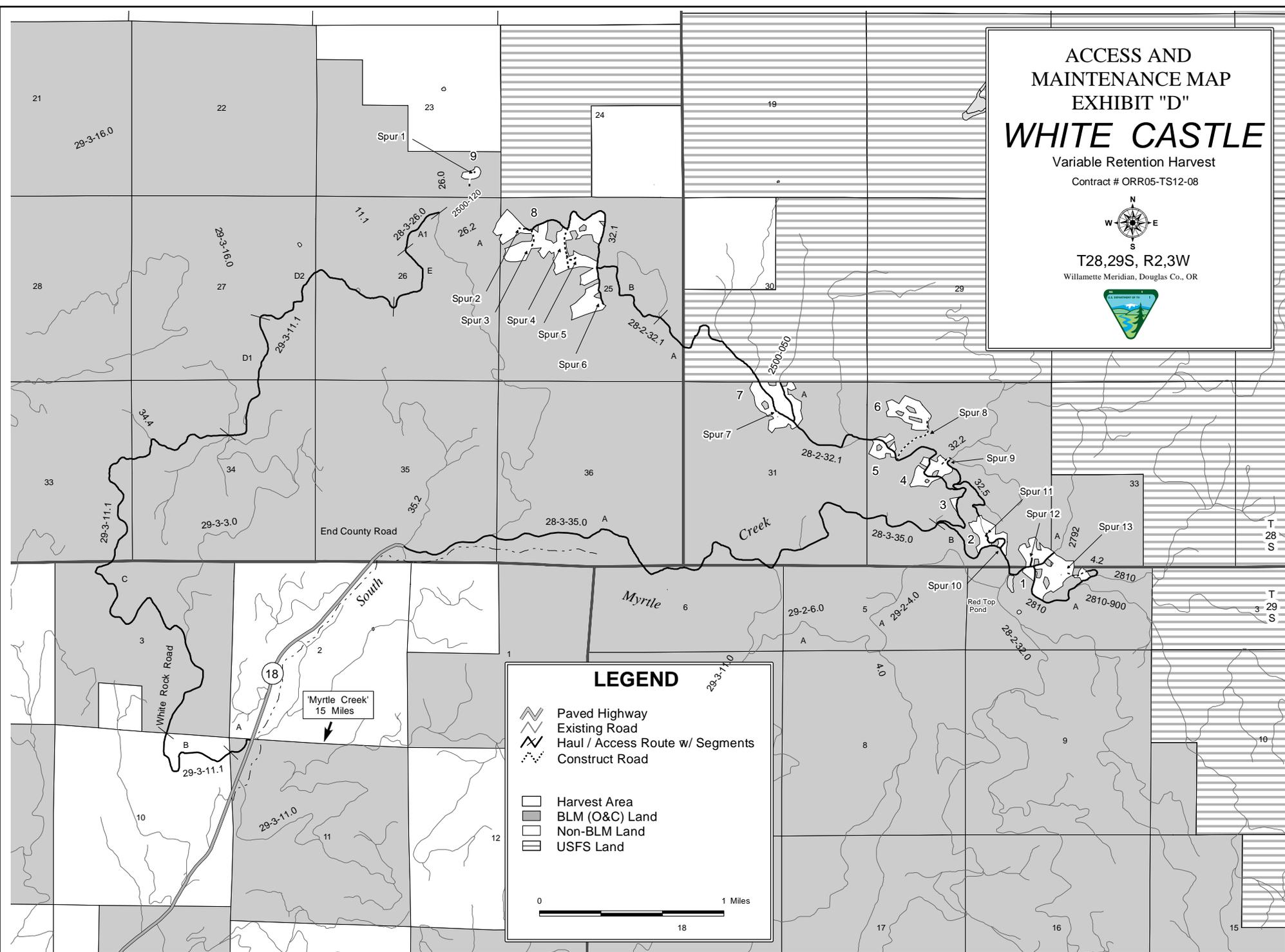




ACCESS AND  
MAINTENANCE MAP  
EXHIBIT "D"  
**WHITE CASTLE**  
Variable Retention Harvest  
Contract # ORR05-TS12-08

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**T28,29S, R2,3W**  
Willamette Meridian, Douglas Co., OR

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

Sale Name: White Castle VRH							
Contract No. ORR05-TS12-08							
Road Number	Road Seg.	Segment Length	Segment Owner	Road Use Fees	Surface Type	Timber Haul Fees	Maintained By
2792	A (POR)	0.29	USFS	Free Use	Rock	\$1.21	BLM
2810	A (POR)	0.58	USFS	Free Use	Rock	\$1.21	BLM
2500-050	A (POR)	0.24	USFS	Free Use	Rock	\$0.62	BLM
2500-120	A	0.19	USFS	Free Use	Rock	\$0.62	BLM
28-2-32.1	A	2.97	BLM		Rock	\$1.13	BLM
28-2-32.1	B	1.46	BLM		Rock	\$1.13	BLM
28-2-32.2	A (POR)	0.24	BLM		Rock	\$1.13	BLM
28-2-32.5	A	0.35	BLM		Rock	\$1.13	BLM
28-3-26.0	A1 (POR)	0.35	BLM		Rock	\$1.13	BLM
28-3-26.2	A	1.31	BLM		Rock	\$1.13	BLM
28-3-35.0	A	3.60	BLM		BST	\$0.65	BLM
28-3-35.0	B	0.60	BLM		BST	\$0.65	BLM
29-2-4.2	A (POR)	0.09	BLM		Rock	\$1.13	BLM
29-3-11.1	A	0.18	BLM		Rock	\$1.13	BLM
29-3-11.1	B	0.64	BLM		Rock	\$1.13	BLM
29-3-11.1	C	3.20	BLM		Rock	\$1.13	BLM
29-3-11.1	D1	0.78	BLM		Rock	\$1.13	BLM
29-3-11.1	D2	1.00	BLM		Rock	\$1.13	BLM
29-3-11.1	E (POR)	0.45	BLM		Rock	\$1.13	BLM
SPUR 1	A	0.09	BLM		Native		PURCHASER
SPUR 2	A	0.09	BLM		Native		PURCHASER
SPUR 3	A	0.10	BLM		Native		PURCHASER
SPUR 4	A	0.25	BLM		Native		PURCHASER
SPUR 5	A	0.06	BLM		Native		PURCHASER
SPUR 6	A	0.21	BLM		Native		PURCHASER
SPUR 7	A	0.03	BLM		Rock	\$0.51	PURCHASER
SPUR 8	A	0.32	BLM		Rock	\$0.51	PURCHASER
SPUR 9	A	0.06	BLM		Rock	\$0.51	PURCHASER
SPUR 10	A	0.20	BLM		Native		PURCHASER
SPUR 11	A	0.01	BLM		Native		PURCHASER
SPUR 12	A	0.05	BLM		Rock	\$0.51	PURCHASER
SPUR 13	A	0.17	BLM		Rock	\$0.51	PURCHASER

\* Rockwear fees payable to the segment owner.  
8/8/2012

## ROAD MAINTENANCE SPECIFICATIONS

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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

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## ROAD MAINTENANCE SPECIFICATIONS

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### GENERAL - 3000

- 3001 The Purchaser shall be required to maintain all roads specified on the exhibit D road segment summary of this contract in accordance with Sections 3000, 3100, 3200, 3300, and 3400 of this exhibit.
- 3002 The Purchaser shall maintain the cross section of existing dirt or graveled roads to the existing geometric standards. Any roads required to be constructed, improved, or renovated under terms of this contract shall be maintained to the 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

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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

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## ROAD MAINTENANCE SPECIFICATIONS

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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 terms of their contract within thirty 30 calendar days following the completion of hauling 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**

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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, and subsoiling in accordance with section 41(D)(5) of this contract. 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 or Site	From Sta	To Sta	Method of Decommissioning
29-2-4.2	0+00	2+00	Water bar, block, slash mat, & remove culverts
29-2-4.2	2+00	4+30	Water bar
Spur 1	0+00	4+70	Water bar, block, subsoil, & slash mat
Spur 2	0+00	5+00	Water bar, block, subsoil, & slash mat
Spur 3	0+00	5+35	Water bar, block, subsoil, & slash mat
Spur 4	0+00	13+15	Water bar, block, subsoil, & slash mat

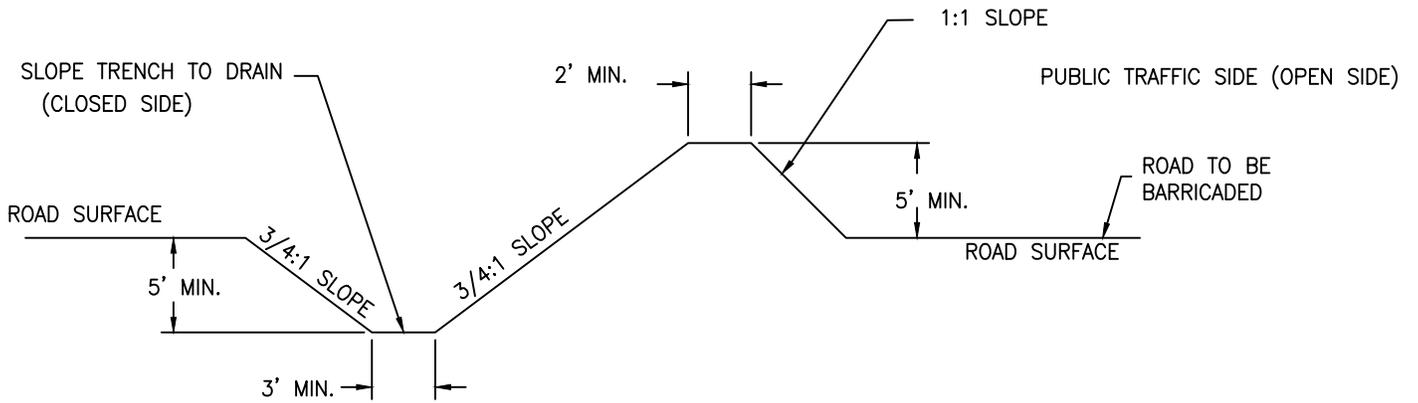
**ROAD MAINTENANCE SPECIFICATIONS**

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Spur 5	0+00	3+05	Water bar, block, subsoil, & slash mat
Spur 6	0+00	3+00	Water bar, block, & slash mat
Spur 6	3+00	11+20	Water bar
Spur 7	0+00	1+55	Water bar, block, & slash mat
Spur 8	0+00	3+30	Water bar, block, slash mat, & remove culverts
Spur 8	3+30	17+10	Water bar
Spur 9	0+00	3+35	Water bar, block, & slash mat
Spur 10	0+00	10+60	Water bar, block, & slash mat
Spur 11	0+00	0+70	Water bar, block, & slash mat
Spur 12	0+00	2+60	Water bar, block, slash mat, & remove culverts
Spur 13	0+00	8+75	Water bar & remove culverts

- 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 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 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.

# EXHIBIT D TRENCH BARRIER DETAIL

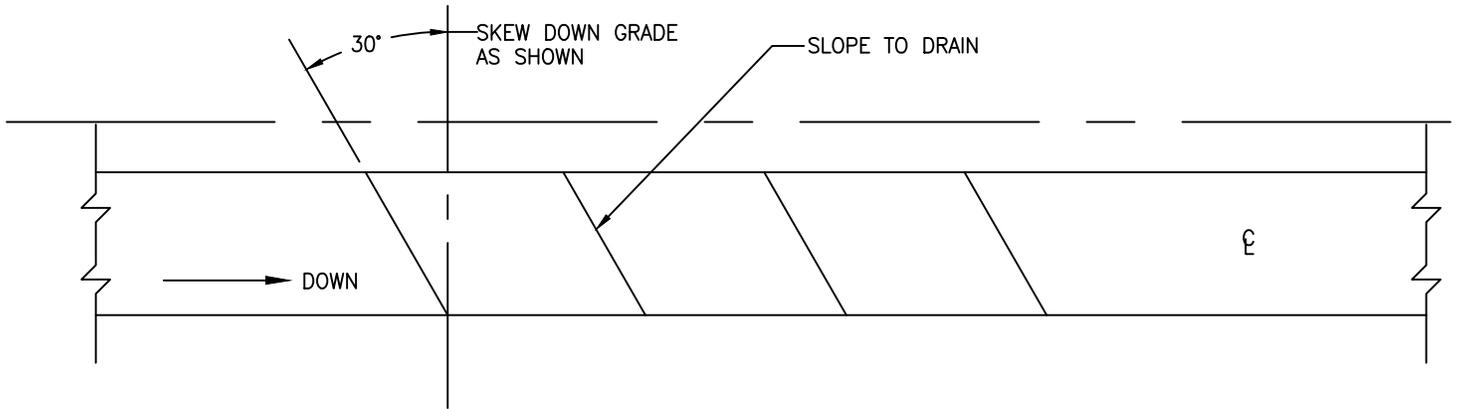


POSITION BARRIER TO AVOID PASSAGE  
AROUND THE ENDS OF THE BARRIER

TRENCH BARRIER

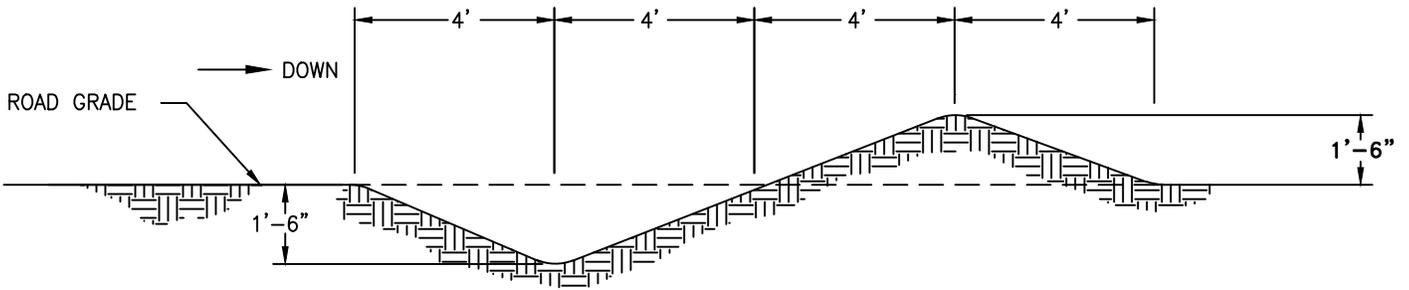
SCALE: NONE

# EXHIBIT D WATERBAR DETAIL



## ROAD PLAN

SCALE: NONE



## ROAD PROFILE

SCALE: NONE

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

# Exhibit E

## Seasonal Restriction Matrix

(Page 1 of 2)

White Castle Variable Retention Harvest

ORR05-TS12-08

 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 16	1 15	1 6 15	1 15	1 15	1 15	1 15
<b>Unit 1</b>	Falling and bucking												
	Ground-based yarding, machine piling, and sub-soiling <sup>1</sup>												
	Cable yarding on rocked road												
	Loading or hauling on rocked road												
<b>Unit 2</b>	Falling and bucking												
	Cable yarding on unsurfaced spurs <sup>1</sup>												
	Ground-based yarding, machine piling, and sub-soiling <sup>1</sup>												
	Loading or hauling on unsurfaced road <sup>1</sup>												
	Cable yarding on paved road												
	Loading or hauling on paved road												
<b>Unit 3</b>	Falling and bucking												
	Cable yarding on rocked road												
	Loading or hauling on rocked road												
<b>Unit 4</b>	Falling and bucking												
	Cable yarding on rocked road												
	Loading or hauling on rocked road												
<b>Spurs No. 9, No. 10, No. 11, No. 12, No. 13, and Roads No. 29-2-4.2 Segment A (por), and 28-3-35.0 Segment B (por)</b>	Right-of-way logging and clearing, road construction, improvement, and renovation <sup>1</sup>												

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

<sup>2</sup>Northern Spotted Owl seasonal restriction (February 1 - June 15) may be conditionally waived.

# Exhibit E

## Seasonal Restriction Matrix

(Page 2 of 2)

White Castle Variable Retention Harvest  
ORR05-TS12-08

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 16	1 15	1 6 15	1 15	1 15	1 15	1 15
Unit 5	Falling and bucking <sup>2</sup>												
	Ground-based yarding, machine piling, and sub-soiling <sup>1,2</sup>												
	Loading or hauling on rocked road												
Unit 6	Falling and bucking <sup>2</sup>												
	Cable yarding on rocked road <sup>2</sup>												
	Loading or hauling on rocked road												
Unit 7	Falling and bucking <sup>2</sup>												
	Ground-based yarding, machine piling, and sub-soiling <sup>1,2</sup>												
	Cable yarding on rocked road <sup>2</sup>												
	Loading or hauling on rocked road												
Unit 8	Falling and bucking <sup>2</sup>												
	Ground-based yarding, machine piling, and sub-soiling <sup>1,2</sup>												
	Cable yarding on unsurfaced spurs <sup>1,2</sup>												
	Loading or hauling on unsurfaced spur <sup>1</sup>												
	Cable yarding on rocked road <sup>2</sup>												
	Loading or hauling on rocked road												
Unit 9	Ground-based yarding, machine piling, and sub-soiling <sup>1,2</sup>												
	Loading or hauling on unsurfaced spur <sup>1</sup>												
Spurs No. 1, No. 2, No. 3, No. 4, No. 5, No. 6, No. 7, and No. 8	Right-of-way logging and clearing, road construction, and renovation <sup>1,2</sup>												

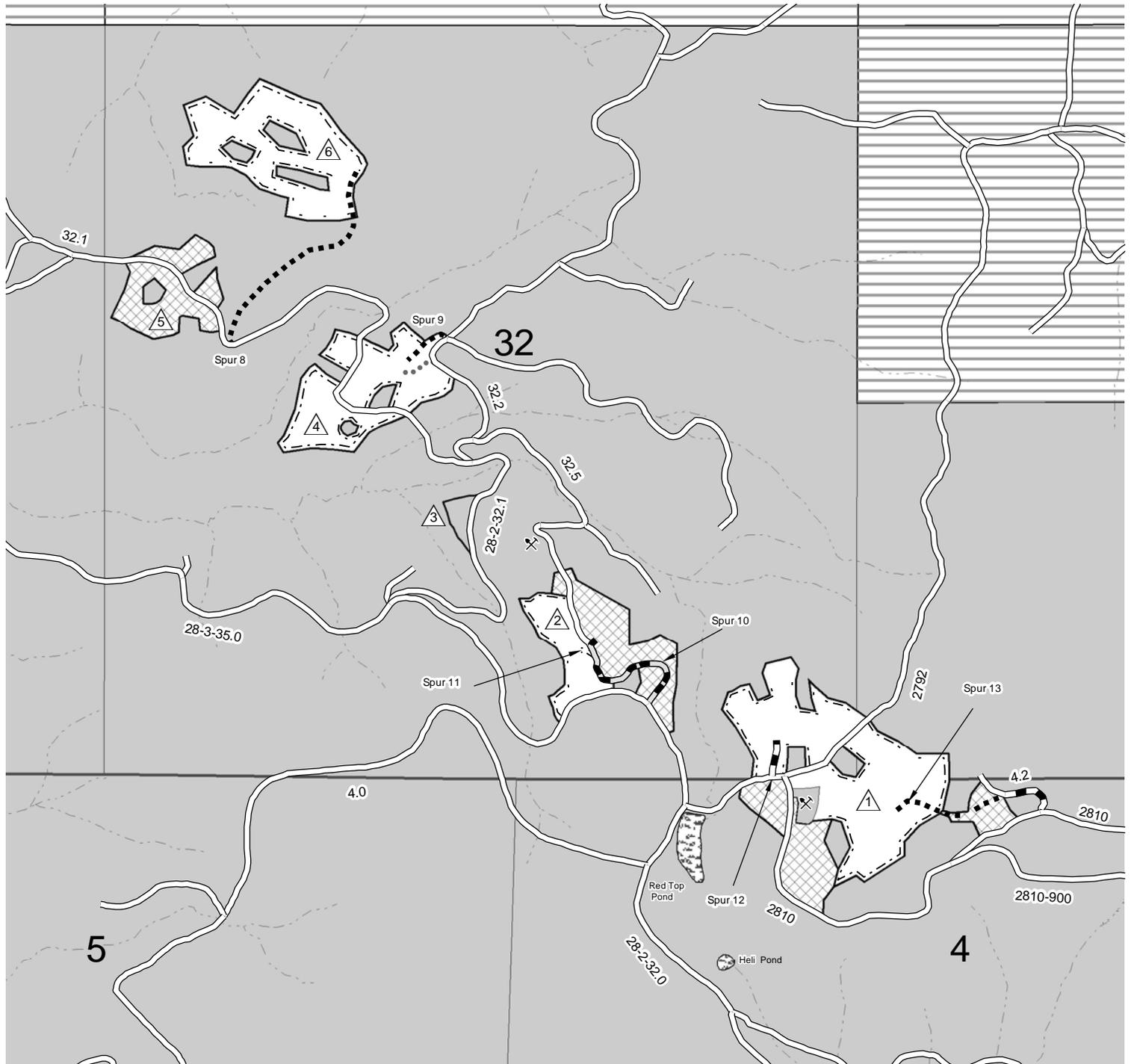
<sup>1</sup>Wet season restrictions (October 15 - May 15) may be shortened or extended depending on weather conditions.

<sup>2</sup>Northern Spotted Owl seasonal restriction (February 1 - June 15) may be conditionally waived.

# SLASH DISPOSAL AND SITE PREPARATION MAP EXHIBIT "F"



## WHITE CASTLE Variable Retention Harvest



T28, 29S, R2W

Willamette Meridian, Douglas Co., OR.



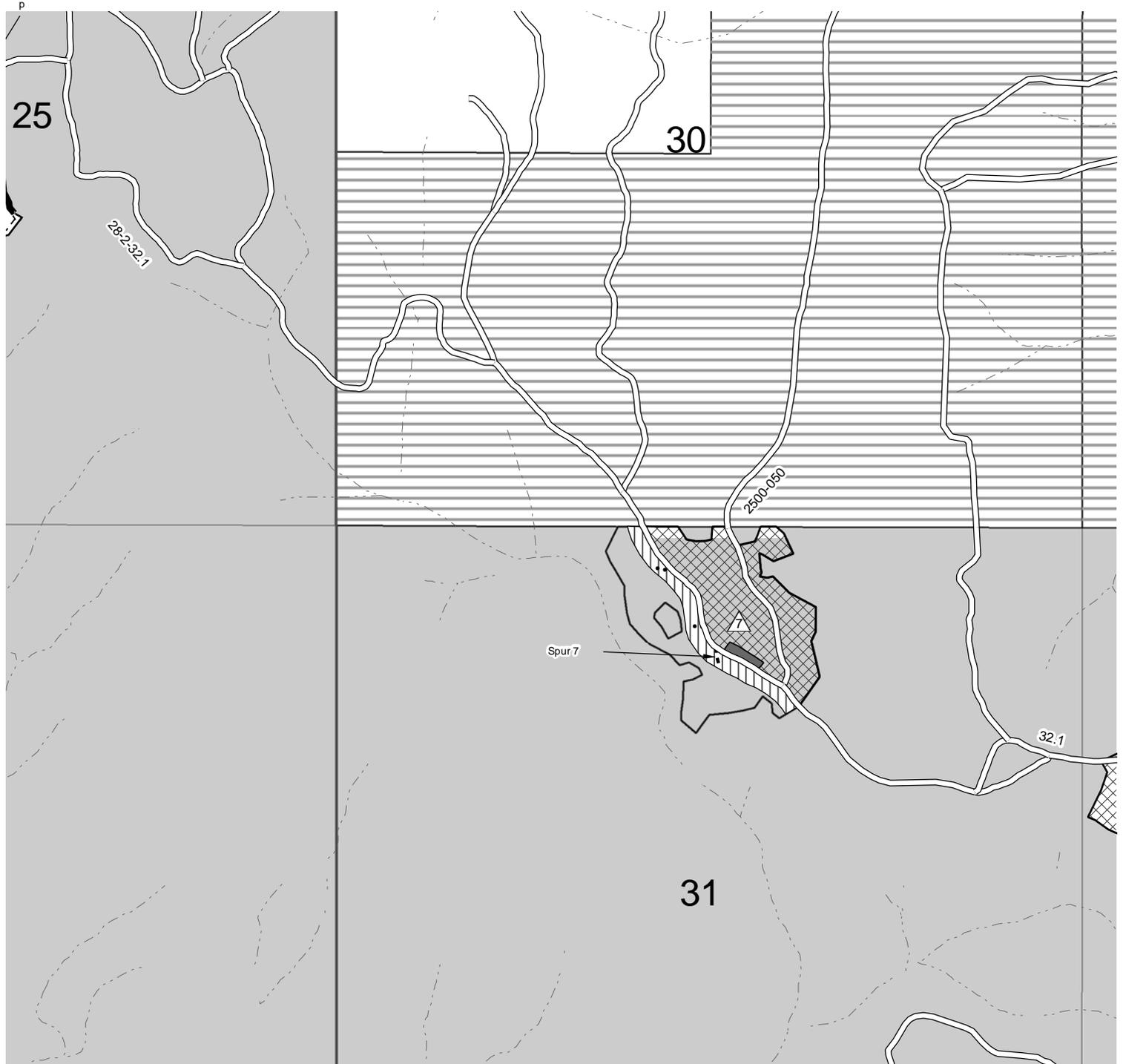
- Quarry / Stockpile Site
- Optional Operator Spur
- Existing Road
- Road To Improve, Rock
- Road to Renovate, Dirt
- Road to Construct, Rock
- Road to Construct, Dirt
- Stream

- Hand Fire Trail to Construct
- Machine Pile Slash
- Hand Pile Slash
- Shrub Retention Area (No Piling or Burning)
- Area to be Under-burned
- Harvest Area Boundary
- BLM (O&C) Land
- USFS (PD) Land
- Non-BLM Land

# SLASH DISPOSAL AND SITE PREPARATION MAP EXHIBIT "F"



## WHITE CASTLE Variable Retention Harvest



T28S, R2W

Willamette Meridian, Douglas Co., OR.

0 1,000 Feet

- Quarry / Stockpile Site
- Optional Operator Spur
- Existing Road
- Road To Improve, Rock
- Road to Renovate, Dirt
- Road to Construct, Rock
- Road to Construct, Dirt
- Stream

- Hand Fire Trail to Construct
- Machine Pile Slash
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# SLASH DISPOSAL AND SITE PREPARATION MAP EXHIBIT "F"



## WHITE CASTLE Variable Retention Harvest



T28S, R3W

Willamette Meridian, Douglas Co., OR.



- Quarry / Stockpile Site
- Optional Operator Spur
- Existing Road
- Road To Improve, Rock
- Road to Renovate, Dirt
- Road to Construct, Rock
- Road to Construct, Dirt
- Stream

- Hand Fire Trail to Construct
- Machine Pile Slash
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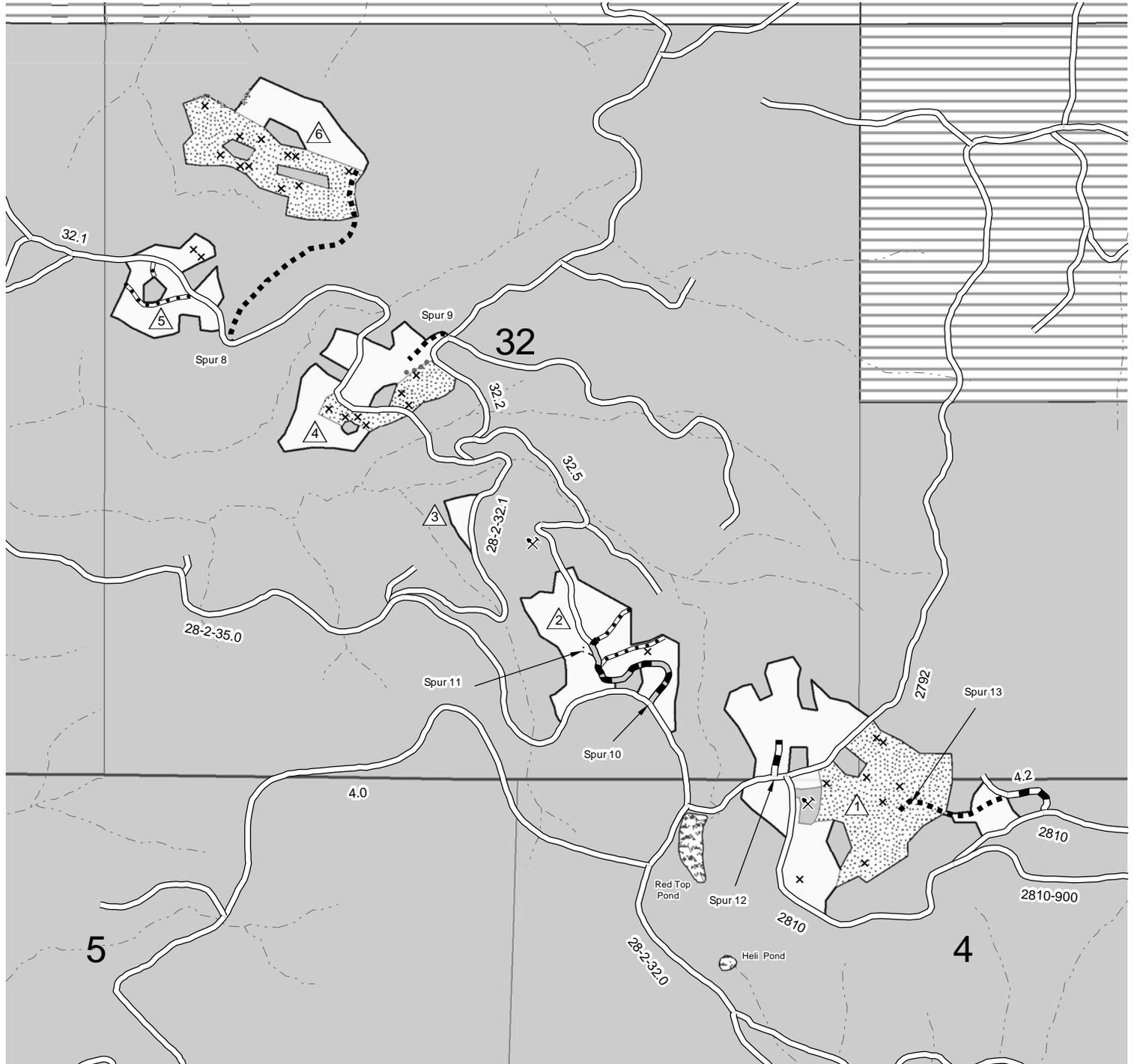
# FUELS PULL-BACK AND SPECIAL WILDLIFE TREE MAP EXHIBIT "G"



Page 1 of 3

## WHITE CASTLE

Variable Retention Harvest



0 1,000 Feet

- Old Road or Skid Trail to Subsoil
- Quarry / Stockpile Site
- Optional Operator Spur
- Existing Road
- Road To Improve, Rock
- Road to Renovate, Dirt
- Road to Construct, Rock
- Road to Construct, Dirt
- Stream

- "X" Marked Reserve Tree
- Area of Fuels Pull-Back
- Harvest Area Boundary
- BLM (O&C) Land
- USFS (PD) Land
- Non-BLM Land

T28, 29S, R2W

Willamette Meridian, Douglas Co., OR.

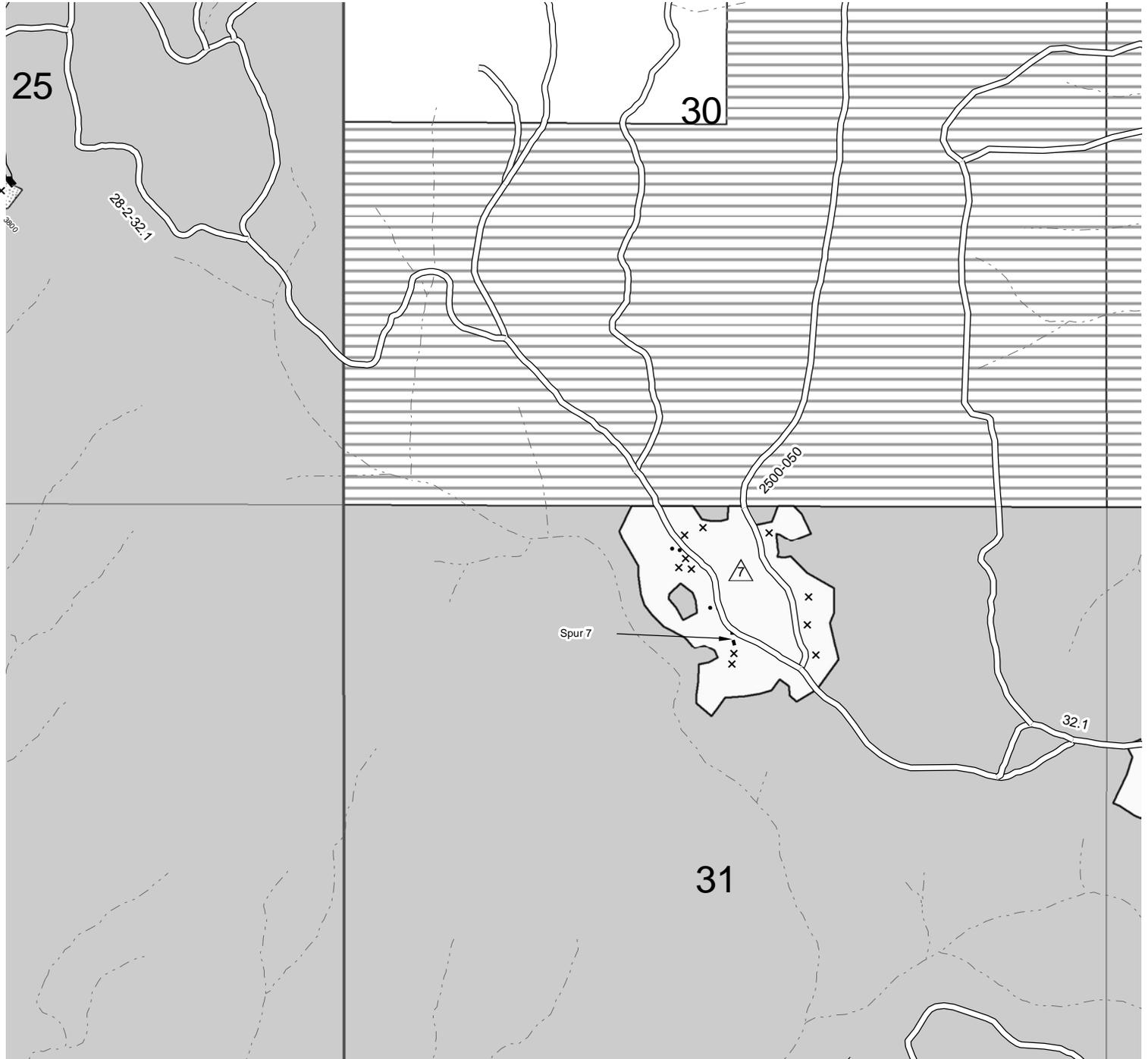
# FUELS PULL-BACK AND SPECIAL WILDLIFE TREE MAP EXHIBIT "G"



Page 2 of 3

## WHITE CASTLE

Variable Retention Harvest



T28S, R2W

Willamette Meridian, Douglas Co., OR.



- Old Road or Skid Trail to Subsoil
- Quarry / Stockpile Site
- Optional Operator Spur
- Existing Road
- Road To Improve, Rock
- Road to Renovate, Dirt
- Road to Construct, Rock
- Road to Construct, Dirt
- Stream

- "X" Marked Reserve Tree
- Area of Fuels Pull-Back
- Harvest Area Boundary
- BLM (O&C) Land
- USFS (PD) Land
- Non-BLM Land



# FUELS PULL-BACK AND SPECIAL WILDLIFE TREE MAP EXHIBIT "G"

Page 3 of 3

## WHITE CASTLE

Variable Retention Harvest



T28S, R3W

Willamette Meridian, Douglas Co., OR.



- Old Road or Skid Trail to Subsoil
- Quarry / Stockpile Site
- Optional Operator Spur
- Existing Road
- Road To Improve, Rock
- Road to Renovate, Dirt
- Road to Construct, Rock
- Road to Construct, Dirt
- Stream

- "X" Marked Reserve Tree
- Area of Fuels Pull-Back
- Harvest Area Boundary
- BLM (O&C) Land
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**United States of America**  
**Department of the Interior**  
**Bureau Of Land Management**  
**Timber Sale Appraisal**

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**District :** Roseburg  
**Sale Name :** White Castle V.R.H.  
**Sale Date :** 09/11/2012  
**Appraisal Method :** 16' MBF

**Contract # :** ORR05-TS2012.0008  
**Job File # :** 910  
**Master Unit :** South Umpqua  
**Planning Unit :** South River

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

Roseburg  
White Castle V.R.H.  
ORR05-TS2012.0008

**Timber - Sale - Summary**

**Legal Description**

Forest Type	Township	Range	Section	Subdivision
O&C	28S	2W	31	W1/2NE1/4,E1/2NW1/4
O&C	28S	2W	32	NW1/4,N1/2SW1/4,W1/2SE1/4SE1/4
O&C	28S	2W	33	SW1/4SW1/4
O&C	28S	3W	23	SE1/4SE1/4
O&C	28S	3W	25	W1/2NE1/4,NW1/4,NE1/4SW1/4,NW1/4SE1/4
O&C	28S	3W	26	NE1/4NE1/4
O&C	29S	2W	4	Lots No. 2 and 3

**Cutting Volume (16' MBF)**

Unit	DF	WH	GF	SP	WWP	IC			Total	Regen	Partial	ROW
1	504	173	57		2				736	33	0	0
2	183	106			1				290	13	0	0
3	16	11							27	1	0	0
4	231	65	21			3			320	13	0	0
5	169	21							190	7	0	0
6	445	67							512	16	0	0
7	435	82		14	2				533	28	0	0
8	3,579	6	1						3,586	73	0	0
9	160	19							179	3	0	0
Spur 8	21	1							22	0	0	1
<b>Totals</b>	<b>5,743</b>	<b>551</b>	<b>79</b>	<b>14</b>	<b>5</b>	<b>3</b>			<b>6,395</b>	<b>187</b>	<b>0</b>	<b>1</b>

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

Roseburg  
White Castle V.R.H.  
ORR05-TS2012.0008

**Logging Costs per 16' MBF**

Stump to Truck	\$	128.89
Transportation	\$	56.46
Road Construction	\$	17.38
Road Amortization	\$	0.00
Road Maintenance	\$	9.03

Other Allowances :

Equipment Cleaning	\$ 0.72
Fire Trails	\$ 3.77
Misc	\$ 0.77
Slash Disposal	\$ 26.52
<b>Total Other Allowances :</b>	<b>\$ 31.79</b>

Total Logging Costs per 16' MBF

**\$ 243.55**

**Utilization Centers**

Center #1 : Riddle Oregon	31 Miles
Center #2	0 Miles
Weighted distance to Utilization Centers	31

**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 : 86 bf	All : 79 bf
Recovery	Douglas-fir : 89 %	All : 89 %
Salvage	Douglas-fir : 0 %	All : 0 %
Avg Volume ( 16' MBF per Acre)		34
Avg Yarding Slope		60 %
Avg Yarding Distance (feet)		250
Avg Age		89
Volume Cable		57 %
Volume Ground		43 %
Volume Aerial		0 %
Road Construction Stations		59.20
Road Improvement Stations		6.90
Road Renovation Stations		25.10
Road Decommission Stations		0.00

**Cruise**

Cruised By	DS,KT,JK,JC,BD,DW,JB,BP
Date	05/01/2012
Type of Cruise	3P and 100%
County, State	Douglas, OR

**Net Volume**

Green (16' MBF)	6,395
Salvage (16' MBF)	0
Douglas-fir Peeler	57
Export Volume	0
Scaling Allowance (\$0.75 per 16' MBF)	\$4,796.25



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**Prospectus**

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

Species	Trees	Net Volume 16' MBF	Net Volume 32' MBF	Net Volume CCF
Douglas-fir	21,098	5,743	4,592	9,614
Western Hemlock	5,014	551	421	1,041
Grand Fir	623	79	63	143
Sugar Pine	80	14	10	25
Western White Pine	30	5	4	7
Incense-cedar	61	3	2	7
<b>Total</b>	<b>26,906</b>	<b>6,395</b>	<b>5,092</b>	<b>10,837</b>

**All Species**

Gross Volume	Number Trees	Avg bf Volume Per Tree	DBH	Gross Merch Volume	Merch Logs	Avg bf Gross Merch Log
7,206	26,906	267	15.6	7,114	89,836	79

Merch Logs	Cull Logs	Total Logs	Logs per Tree	Net Volume	Gross Volume	Recovery
89,836	2,097	91,933	3.4	6,395	7,206	89 %

**Douglas-fir**

Gross Volume	Number Trees	Avg bf Volume Per Tree	DBH	Gross Merch Volume	Merch Logs	Avg bf Gross Merch Log
6,428	21,098	304	16.4	6,379	74,295	86

Merch Logs	Cull Logs	Total Logs	Logs per Tree	Net Volume	Gross Volume	Recovery
74,295	1,154	75,449	3.6	5,743	6,428	89 %

**Cutting Areas**

Unit	Regen Acres	Partial Cut Acres	Right Of Way Acres	Total Acres
1	33			33
2	13			13
3	1			1
4	13			13
5	7			7
6	16			16
7	28			28
8	73			73
9	3			3
Spur 8			1	1
<b>Totals :</b>	<b>187</b>		<b>1</b>	<b>188</b>







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**Volume Summary**

**Sale Volume Totals**

188 Acres                      187 Regen                      0 Partial                      1 R/W                      10 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	21,098	74,295	1,154	5,743	6,379	6,428	4,592	5,102	5,143	9,614	10,639	10,731
Western Hemlock	5,014	13,400	825	551	628	666	421	478	509	1,041	1,188	1,260
Grand Fir	623	1,715	73	79	83	87	63	66	68	143	150	157
Sugar Pine	80	228	30	14	15	16	10	11	12	25	26	29
Western White Pine	30	95	5	5	5	5	4	4	4	7	7	7
Incense-cedar	61	103	10	3	4	4	2	3	3	7	8	9
<b>Totals</b>	<b>26,906</b>	<b>89,836</b>	<b>2,097</b>	<b>6,395</b>	<b>7,114</b>	<b>7,206</b>	<b>5,092</b>	<b>5,664</b>	<b>5,739</b>	<b>10,837</b>	<b>12,018</b>	<b>12,193</b>

**Unit Totals**

**Unit : 1                      33 Acres                      33 Regen                      0 Partial                      0 R/W**

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	3,486	10,185	186	531	526	504
Western Hemlock	1,657	4,327	264	210	198	173
Grand Fir	525	1,418	48	62	60	57
Western White Pine	16	52	1	2	2	2
<b>Unit Totals</b>	<b>5,684</b>	<b>15,982</b>	<b>499</b>	<b>805</b>	<b>786</b>	<b>736</b>

**Unit : 2                      13 Acres                      13 Regen                      0 Partial                      0 R/W**

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	1,064	3,683	68	192	191	183
Western Hemlock	1,015	2,612	161	128	121	106
Western White Pine	2	8	2	1	1	1
<b>Unit Totals</b>	<b>2,081</b>	<b>6,303</b>	<b>231</b>	<b>321</b>	<b>313</b>	<b>290</b>

**Unit : 3                      1 Acres                      1 Regen                      0 Partial                      0 R/W**

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	83	323	6	17	17	16
Western Hemlock	60	235	15	13	13	11
<b>Unit Totals</b>	<b>143</b>	<b>558</b>	<b>21</b>	<b>30</b>	<b>30</b>	<b>27</b>

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**Unit : 4                                      13 Acres                                      13 Regen                                      0 Partial                                      0 R/W**

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	1,429	4,756	91	244	241	231
Western Hemlock	588	1,655	104	80	75	65
Grand Fir	96	289	24	24	22	21
Incense-cedar	61	103	10	4	4	3
<b>Unit Totals</b>	<b>2,174</b>	<b>6,803</b>	<b>229</b>	<b>352</b>	<b>342</b>	<b>320</b>

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

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	1,067	3,230	58	178	177	169
Western Hemlock	173	541	33	26	24	21
<b>Unit Totals</b>	<b>1,240</b>	<b>3,771</b>	<b>91</b>	<b>204</b>	<b>201</b>	<b>190</b>

**Unit : 6                                      16 Acres                                      16 Regen                                      0 Partial                                      0 R/W**

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	2,503	8,420	155	468	465	445
Western Hemlock	589	1,622	99	80	76	67
<b>Unit Totals</b>	<b>3,092</b>	<b>10,042</b>	<b>254</b>	<b>548</b>	<b>541</b>	<b>512</b>

**Unit : 7                                      28 Acres                                      28 Regen                                      0 Partial                                      0 R/W**

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	3,661	9,032	162	457	454	435
Western Hemlock	807	2,060	125	99	94	82
Sugar Pine	80	228	30	16	15	14
Western White Pine	12	35	2	2	2	2
<b>Unit Totals</b>	<b>4,560</b>	<b>11,355</b>	<b>319</b>	<b>574</b>	<b>565</b>	<b>533</b>

**Unit : 8                                      73 Acres                                      73 Regen                                      0 Partial                                      0 R/W**

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	7,187	32,785	400	4,135	4,103	3,579
Western Hemlock	33	66	10	7	6	6
Grand Fir	2	8	1	1	1	1
<b>Unit Totals</b>	<b>7,222</b>	<b>32,859</b>	<b>411</b>	<b>4,143</b>	<b>4,110</b>	<b>3,586</b>

**Unit : 9                                      3 Acres                                      3 Regen                                      0 Partial                                      0 R/W**

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
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Douglas-fir	457	1,465	21	184	183	160
Western Hemlock	76	246	12	21	20	19
<b>Unit Totals</b>	<b>533</b>	<b>1,711</b>	<b>33</b>	<b>205</b>	<b>203</b>	<b>179</b>

**Unit : Spur 8                      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	161	416	7	22	22	21
Western Hemlock	16	36	2	2	1	1
<b>Unit Totals</b>	<b>177</b>	<b>452</b>	<b>9</b>	<b>24</b>	<b>23</b>	<b>22</b>

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**Stump to Truck Costs**

**Total (16' MBF)**

Total Stump to Truck Costs	Net Volume	Cost / Net Volume
\$ 824,264.22	6,395	\$ 128.89

**Detail**

**Yarding & Loading**

Yarding System	Unit Of Measure	Units	Cost / Unit	Total Cost
Med Twr=40-70	16'GM	2,192	\$ 81.62	\$ 178,911.04
Med Twr=40-70	16'GM	880	\$ 130.60	\$ 114,928.00
Med Twr=40-70	16'GM	1,065	\$ 261.19	\$ 278,167.35
Wheel Skidder	16'GM	2,954	\$ 77.66	\$ 229,407.64
Track Skidder	16'GM	23	\$ 90.53	\$ 2,082.19
<b>Subtotal</b>				<b>\$ 803,496.22</b>

**Other Costs**

Explanation	Unit Of Measure	Units	Cost / Unit	Total Cost
Int. Suprt. Trees	Per Tree	8	\$ 250.00	\$ 2,000.00
Lift Trees	Per Tree	56	\$ 150.00	\$ 8,400.00
<b>Subtotal</b>				<b>\$ 10,400.00</b>

**Additional Move-Ins**

Equipment	# Move-In	Cost / Move In	Total Cost
Yarder / Loader	2	\$ 1,296.00	\$ 2,592.00
Yarder / Loader	2	\$ 1,296.00	\$ 2,592.00
Yarder / Loader	2	\$ 1,296.00	\$ 2,592.00
Skidder	2	\$ 1,296.00	\$ 2,592.00
<b>Subtotal</b>			<b>\$ 10,368.00</b>

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**Other Allowances Costs**

**Total (16' MBF)**

Total Other Allowances Costs	Net Volume	Cost / Net Volume *	Total Buy Out Cost
\$203,278.00	6,395	\$31.79	\$171,093.92

Equipment Cleaning

**Detail (16' MBF)**

Cost Item	Total Cost	Cost / Net Vol *	Buy Out	Buy Out Cost
Other Equipment	\$ 4,620.00	\$ 0.72	N	\$ 0.00
<b>Subtotal</b>	<b>\$ 4,620.00</b>	<b>\$ 0.72</b>		<b>\$ 0.00</b>

Fire Trails

**Detail (16' MBF)**

Cost Item	Total Cost	Cost / Net Vol *	Buy Out	Buy Out Cost
Hand Trails	\$ 24,080.00	\$ 3.77	Y	\$ 28,510.72
<b>Subtotal</b>	<b>\$ 24,080.00</b>	<b>\$ 3.77</b>		<b>\$ 28,510.72</b>

Misc

**Detail (16' MBF)**

Cost Item	Total Cost	Cost / Net Vol *	Buy Out	Buy Out Cost
Fuels Pull Back	\$ 1,200.00	\$ 0.19	Y	\$ 1,420.80
Skid Trail Subsoiling	\$ 3,105.00	\$ 0.49	N	\$ 0.00
Excavator move-in/out	\$ 648.00	\$ 0.10		\$ 0.00
<b>Subtotal</b>	<b>\$ 4,953.00</b>	<b>\$ 0.77</b>		<b>\$ 1,420.80</b>

Slash Disposal

**Detail (16' MBF)**

Cost Item	Total Cost	Cost / Net Vol *	Buy Out	Buy Out Cost
Maching Piling (covering, piling, burning)	\$ 14,400.00	\$ 2.25	N	\$ 0.00
Hand Piling (covering, piling, burning)	\$ 2,625.00	\$ 0.41	Y	\$ 3,108.00
Broadcast/mop-up units	\$ 116,600.00	\$ 18.23	Y	\$ 138,054.40
Maching Piling (covering, piling, burning)	\$ 36,000.00	\$ 5.63	N	\$ 0.00
<b>Subtotal</b>	<b>\$ 169,625.00</b>	<b>\$ 26.52</b>		<b>\$ 141,162.40</b>

\* 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

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**General**

This sale is part of the secretarial pilot project. The biggest distinction about this sale is that it is a variable retention harvest.

**Yarding & Loading**

- \$4.25/gallon fuel cost and 4,500mbf/load was used on 4,922 16'gm and 4,800mbf/load was used on 2,192 16'gm for logging cost calculations.
- Track Skidder was used for yarding spurs.
- Intermediate supports and lift trees are based on cruisers logging plan estimate.
- The difference in loads for the medium tower is based on cruisers judgement of yarding difficulty in sale.
- Additional move-in's is due to lack of year around access so sale will require 3 additional seasonal move-in's for both ends of sale area.

**Road Costs**

- Maintenance and rockwear due BLM: \$45,122.22
- Maintenance, Winterization and Decommissioning credit to Purchaser: \$12,392.54
- Rockwear Fee paid to USFS: \$246.15

(see Engineering Appraisal for details).

**Transportation**

- Weighted center of sale area to I-5 exit 108: 98.48 RTM's, 7 miles.
- I-5 exit 108 to 103 and utilization center: 16 RTM's, 7 miles.
- 2.91 hrs/load

- 2192 16'gm/4800mbf per load = 457 loads
- 4921 16'gm/4500mbf per load = 1094 loads
- Total loads of 1551 x 2.91 hrs. per load = 4,513 total hrs.
- 4,513 hrs. x \$80.00 per hr. (trucking cost) = \$361,040.00

(see Transportation appendix for details).

**Other Allowances**

- Landing Piling/Cover: 72 landings @ \$200.00/landing = \$14,400.00
- Hand Pile/Cover: 5 acres @ \$525.00/acre = \$2,625.00
- Prescribed Underburning & Mop-up: 106 acres @ \$1,100.00/acre = \$116,600.00
- Hand line Construction: 34,400' @ \$.70/ft = \$24,080.00
- Fuels Pull back: 48 acres @ \$25.00/acre = \$1,200.00
- Ground Based Machine Piling: 72 acres @ \$500.00/acre = \$36,000.00
- \*\*SLASH DISPOSAL BUY OUT:  
Total of hand piling, underburning, handline construction & fuels pull back = \$144,505.00  
\$144,505.00 + 18.4% Administrative Fee = \$171,093.92 (Total Burn Buy Out Cost)
- Skid Trail Subsoiling: 2.15 miles of skid trail/.75 miles subsoiled per day = 3 days  
3 days x 9 hrs. per day = 27 hrs. x \$115.00/hr. = \$3,105.00  
Move-in/out, 1 Excavator x \$648.00/move-in/out x 1 move = \$648.00  
Equipment Cleaning, 1 Excavator @ 3hrs./piece x \$55.00/hr = 165.00  
TOTAL COST for Skid Trail Subsoiling = \$3,918.00
- \*\*ALL ROAD DECOMMISSIONING BUY OUT: \$7,587.30 (from Engineering Package) + 18.4% Admin Fee = \$8,983.36 (Total Spur Rd. Decommission & Subsoiling Buy Out Cost)
- Equipment Cleaning:  
Cable 2 Sides; 2 Yarders, 2 Loaders @ 3hrs/piece x \$55.00/hr x 3 seasons = \$1,980.00  
Ground Based 2 Sides; 2 Rubber Tired Skidders, 1 Track Skidder, 2 Loaders @ 3hrs/piece x \$55.00/hr x 3 seasons = \$2,475.00

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**Prospectus**

\*\*The rationale behind the additional 3% Risk is this is an experimental Pilot project with some new or perceived logging difficulties being proposed during a difficult economic period, limited amount of winter logging opportunities due to unsurfaced roads, high elevations snow-out possibilities, and seasonal restrictions.

Cruise Method: Units 1-7; DF & WH were 3P sampled up to 24", Units 8 & 9; DF were 3P sampled up to 48", all others were 100% cruised.

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Summary of All Roads and Projects

T.S. Update 05/15/12

T.S. Contract Name: White Castle Sale Date: 9/11/2012  
 Prepared by: B. Albin Ph: 3328 Print Date: 8/6/2012 1:14:21 PM  
 Construction: 59.90 sta (Surfaced 30.75 sta Natural 29.15 sta)  
 Improve: 6.90 sta Renov: 25.10 sta Decom: 0.00 sta Temp: 0.00 sta

200 Clearing and Grubbing: 3.4 acres .....	\$9,174.53
Clearing: 67.9 sta   Grubbing: 3.4 acres	
Slash Treatment: 3.4 acres	
300 Excavation: .....	\$18,234.96
Haul: 14,482 sta-yds	
400 Drainage: .....	\$7,682.36
Culvert: 56 lf    wt = 2,016 lbs    factor = 1.2	
DownSpout: 0 lf	
PolyPipe: 210 lf	
500 Renovation: .....	\$1,938.89
Blading 0.25 mi	
Surfacing: .....	\$66,856.87
Quarry Name: all rock 3" 1,712 cy	
Quarry Name: Knife River 15 cy	
1300 Geotextiles: .....	\$0.00
1400 Slope Protection: .....	\$338.30
Gradation Class 3: 10 cy	
1800 Soil Stabilization: 0.0 acres .....	\$0.00
1900 Cattleguards: .....	\$0.00
2100 RoadSide Brushing: 0.7 acres .....	\$440.22
2200 Surface Treatment: 0.0 tons .....	\$0.00
2300 Engineering: 0.00 sta. ....	\$0.00
2400 Minor Concrete: .....	\$0.00
2500 Gabions: .....	\$0.00
8000 Miscellaneous: .....	\$0.00
Mobilization: Const. \$4,319.40 Surf. \$2,177.55.....	\$6,496.95
Quarry Development: .....	\$0.00
Total: 6,395 mbf @ \$17.38/mbf = \$111,163.09	

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: White Castle Sale Date: 9/11/2012

Road Number: 28-3-35.0 Road Name:

Road Renovation: 0.01 mi 27 ft Subgrade ft ditch T.S. Update 05/15/12

200	Clearing and Grubbing: 0.0 acres .....	\$0.00
	Clearing:0.0 sta Grubbing:0.0 acres	
	Slash Treatment:0.0 acres	
300	Excavation: .....	\$5,416.72
	Haul: 7,920 sta-yds	
400	Drainage: .....	\$3,961.16
	Culvert: 56 lf wt = 2,016 lbs factor = 1.2	
	DownSpout: 0 lf	
	PolyPipe: 0 lf	
500	Renovation: .....	\$0.00
	Surfacing: .....	\$10,359.55
	Quarry Name: all rock 3" 260 cy	
	Quarry Name: Knife River 15 cy	
1300	Geotextiles: .....	\$0.00
1400	Slope Protection: .....	\$338.30
	Gradation Class 3: 10 cy	
1800	Soil Stabilization: 0.0 acres .....	\$0.00
1900	Cattleguards: .....	\$0.00
2100	RoadSide Brushing: 0.0 acres .....	\$0.00
2200	Surface Treatment: 0.0 tons .....	\$0.00
2300	Engineering: 0.00 sta. ....	\$0.00
2400	Minor Concrete: .....	\$0.00
2500	Gabions: .....	\$0.00
8000	Miscellaneous: .....	\$0.00
	Mobilization: Const. \$828.49 Surf. \$346.74.....	\$1,175.24
	Quarry Development: .....	\$0.00
		Total: \$21,250.97

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: White Castle Sale Date: 9/11/2012

Road Number: 29-2-4.2 Road Name:

Road Improvement: 0.08 mi 15 ft Subgrade ft ditch

T.S. Update 05/15/12

200 Clearing and Grubbing: 0.2 acres .....	\$369.83
Clearing:4.3 sta    Grubbing:0.2 acres	
Slash Treatment:0.2 acres	
300 Excavation: .....	\$212.07
400 Drainage: .....	\$1,134.08
Culvert: 0 lf    wt = 0 lbs    factor = 1.2	
DownSpout: 0 lf	
PolyPipe: 64 lf	
500 Renovation: .....	\$0.00
Surfacing: .....	\$5,953.23
Quarry Name: all rock 3" 153 cy	
1300 Geotextiles: .....	\$0.00
1400 Slope Protection: .....	\$0.00
1800 Soil Stabilization: 0.0 acres .....	\$0.00
1900 Cattleguards: .....	\$0.00
2100 RoadSide Brushing: 0.0 acres .....	\$0.00
2200 Surface Treatment: 0.0 tons .....	\$0.00
2300 Engineering: 0.00 sta. ....	\$0.00
2400 Minor Concrete: .....	\$0.00
2500 Gabions: .....	\$0.00
8000 Miscellaneous: .....	\$0.00
Mobilization: Const. \$316.50 Surf. \$192.92.....	\$509.41
Quarry Development: .....	\$0.00
	Total: \$8,178.62

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: White Castle Sale Date: 9/11/2012

**Road Number: spur 1** Road Name:

Road Construction: 0.09 mi 14 ft Subgrade ft ditch

T.S. Update 05/15/12

200 Clearing and Grubbing: 0.2 acres .....	\$494.10
Clearing:5.0 sta Grubbing:0.2 acres	
Slash Treatment:0.2 acres	
300 Excavation: .....	\$741.94
400 Drainage: .....	\$0.00
Culvert: 0 lf wt = 0 lbs factor = 1.2	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation: .....	\$0.00
Surfacing: .....	\$0.00
1300 Geotextiles: .....	\$0.00
1400 Slope Protection: .....	\$0.00
1800 Soil Stabilization: 0.0 acres .....	\$0.00
1900 Cattleguards: .....	\$0.00
2100 RoadSide Brushing: 0.0 acres .....	\$0.00
2200 Surface Treatment: 0.0 tons .....	\$0.00
2300 Engineering: 0.00 sta. ....	\$0.00
2400 Minor Concrete: .....	\$0.00
2500 Gabions: .....	\$0.00
8000 Miscellaneous: .....	\$0.00
Mobilization: Const. \$51.01 Surf. \$0.00.....	\$51.01
Quarry Development: .....	\$0.00
Total:	\$1,287.05

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: White Castle Sale Date: 9/11/2012

**Road Number: Spur 10** Road Name:

Road Renovation: 0.20 mi 14 ft Subgrade ft ditch

T.S. Update 05/15/12

200 Clearing and Grubbing: 0.0 acres .....	\$0.00
Clearing:0.0 sta Grubbing:0.0 acres	
Slash Treatment:0.0 acres	
300 Excavation: .....	\$0.00
400 Drainage: .....	\$0.00
Culvert: 0 lf wt = 0 lbs factor = 1.2	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation: .....	\$364.01
Blading 0.20 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: 0.2 acres .....	\$110.06
2200 Surface Treatment: 0.0 tons .....	\$0.00
2300 Engineering: 0.00 sta. ....	\$0.00
2400 Minor Concrete: .....	\$0.00
2500 Gabions: .....	\$0.00
8000 Miscellaneous: .....	\$0.00
Mobilization: Const. \$19.56 Surf. \$0.00.....	\$19.56
Quarry Development: .....	\$0.00
Total:	\$493.63

Notes:

Quantities shown are estimates only and not pay items.  
 Surfacing Quantities shown are COMPACTED in place cubic yards.

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: White Castle Sale Date: 9/11/2012

Road Number: Spur 11 Road Name:

Road Construction: 0.01 mi 30 ft Subgrade ft ditch T.S. Update 05/15/12

200 Clearing and Grubbing: 0.1 acres .....	\$259.03
Clearing:1.0 sta    Grubbing:0.1 acres	
Slash Treatment:0.1 acres	
300 Excavation: .....	\$398.57
Haul: 422 sta-yds	
400 Drainage: .....	\$0.00
Culvert: 0 lf    wt = 0 lbs    factor = 1.2	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation: .....	\$0.00
Surfacing: .....	\$0.00
1300 Geotextiles: .....	\$0.00
1400 Slope Protection: .....	\$0.00
1800 Soil Stabilization: 0.0 acres .....	\$0.00
1900 Cattleguards: .....	\$0.00
2100 RoadSide Brushing: 0.0 acres .....	\$0.00
2200 Surface Treatment: 0.0 tons .....	\$0.00
2300 Engineering: 0.00 sta. ....	\$0.00
2400 Minor Concrete: .....	\$0.00
2500 Gabions: .....	\$0.00
8000 Miscellaneous: .....	\$0.00
Mobilization: Const. \$27.14 Surf. \$0.00.....	\$27.14
Quarry Development: .....	\$0.00
	Total: \$684.73

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: White Castle Sale Date: 9/11/2012

Road Number: Spur 12 Road Name:

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

200 Clearing and Grubbing: 0.2 acres .....	\$496.94
Clearing:2.6 sta    Grubbing:0.2 acres	
Slash Treatment:0.2 acres	
300 Excavation: .....	\$370.97
400 Drainage: .....	\$886.00
Culvert: 0 lf    wt = 0 lbs    factor = 1.2	
DownSpout: 0 lf	
PolyPipe: 50 lf	
500 Renovation: .....	\$0.00
Surfacing: .....	\$5,330.67
Quarry Name: all rock 3" 137 cy	
1300 Geotextiles: .....	\$0.00
1400 Slope Protection: .....	\$0.00
1800 Soil Stabilization: 0.0 acres .....	\$0.00
1900 Cattleguards: .....	\$0.00
2100 RoadSide Brushing: 0.0 acres .....	\$0.00
2200 Surface Treatment: 0.0 tons .....	\$0.00
2300 Engineering: 0.00 sta. ....	\$0.00
2400 Minor Concrete: .....	\$0.00
2500 Gabions: .....	\$0.00
8000 Miscellaneous: .....	\$0.00
Mobilization: Const. \$292.37 Surf. \$172.74.....	\$465.11
Quarry Development: .....	\$0.00
	Total: \$7,549.69

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are COMPACTED in place cubic yards.

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: White Castle Sale Date: 9/11/2012

**Road Number: Spur 13** Road Name:

Road Construction: 0.17 mi 15 ft Subgrade ft ditch T.S. Update 05/15/12

200 Clearing and Grubbing: 0.4 acres .....	\$1,304.40
Clearing:8.8 sta Grubbing:0.4 acres	
Slash Treatment:0.4 acres	
300 Excavation: .....	\$1,483.88
400 Drainage: .....	\$637.92
Culvert: 0 lf wt = 0 lbs factor = 1.2	
DownSpout: 0 lf	
PolyPipe: 36 lf	
500 Renovation: .....	\$0.00
Surfacing: .....	\$12,529.02
Quarry Name: all rock 3" 322 cy	
1300 Geotextiles: .....	\$0.00
1400 Slope Protection: .....	\$0.00
1800 Soil Stabilization: 0.0 acres .....	\$0.00
1900 Cattleguards: .....	\$0.00
2100 RoadSide Brushing: 0.0 acres .....	\$0.00
2200 Surface Treatment: 0.0 tons .....	\$0.00
2300 Engineering: 0.00 sta. ....	\$0.00
2400 Minor Concrete: .....	\$0.00
2500 Gabions: .....	\$0.00
8000 Miscellaneous: .....	\$0.00
Mobilization: Const. \$658.45 Surf. \$406.01.....	\$1,064.45
Quarry Development: .....	\$0.00
Total:	\$17,019.67

Notes:

Quantities shown are estimates only and not pay items.  
 Surfacing Quantities shown are COMPACTED in place cubic yards.

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: White Castle Sale Date: 9/11/2012

Road Number: spur 2 const Road Name:

Road Construction: 0.04 mi 14 ft Subgrade ft ditch T.S. Update 05/15/12

200 Clearing and Grubbing: 0.1 acres .....	\$326.66
Clearing:2.2 sta    Grubbing:0.1 acres	
Slash Treatment:0.1 acres	
300 Excavation: .....	\$519.32
400 Drainage: .....	\$0.00
Culvert: 0 lf    wt = 0 lbs    factor = 1.2	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation: .....	\$0.00
Surfacing: .....	\$0.00
1300 Geotextiles: .....	\$0.00
1400 Slope Protection: .....	\$0.00
1800 Soil Stabilization: 0.0 acres .....	\$0.00
1900 Cattleguards: .....	\$0.00
2100 RoadSide Brushing: 0.0 acres .....	\$0.00
2200 Surface Treatment: 0.0 tons .....	\$0.00
2300 Engineering: 0.00 sta. ....	\$0.00
2400 Minor Concrete: .....	\$0.00
2500 Gabions: .....	\$0.00
8000 Miscellaneous: .....	\$0.00
Mobilization: Const. \$34.91 Surf. \$0.00.....	\$34.91
Quarry Development: .....	\$0.00
Total:	\$880.89

Notes:

Quantities shown are estimates only and not pay items.  
 Surfacing Quantities shown are COMPACTED in place cubic yards.

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: White Castle Sale Date: 9/11/2012

Road Number: spur 2 ren Road Name:

Road Renovation: 0.05 mi 14 ft Subgrade ft ditch T.S. Update 05/15/12

200 Clearing and Grubbing: 0.0 acres .....	\$0.00
Clearing:0.0 sta    Grubbing:0.0 acres	
Slash Treatment:0.0 acres	
300 Excavation: .....	\$0.00
400 Drainage: .....	\$0.00
Culvert: 0 lf    wt = 0 lbs    factor = 1.2	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation: .....	\$91.00
Blading 0.05 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: 0.1 acres .....	\$110.06
2200 Surface Treatment: 0.0 tons .....	\$0.00
2300 Engineering: 0.00 sta. ....	\$0.00
2400 Minor Concrete: .....	\$0.00
2500 Gabions: .....	\$0.00
8000 Miscellaneous: .....	\$0.00
Mobilization: Const. \$8.30 Surf. \$0.00.....	\$8.30
Quarry Development: .....	\$0.00
	Total: \$209.36

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: White Castle Sale Date: 9/11/2012

Road Number: spur 3 Road Name:

Road Construction: 0.10 mi 14 ft Subgrade ft ditch T.S. Update 05/15/12

200 Clearing and Grubbing: 0.2 acres .....	\$695.54
Clearing:5.4 sta    Grubbing:0.2 acres	
Slash Treatment:0.2 acres	
300 Excavation: .....	\$890.29
400 Drainage: .....	\$0.00
Culvert: 0 lf    wt = 0 lbs    factor = 1.2	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation: .....	\$0.00
Surfacing: .....	\$0.00
1300 Geotextiles: .....	\$0.00
1400 Slope Protection: .....	\$0.00
1800 Soil Stabilization: 0.0 acres .....	\$0.00
1900 Cattleguards: .....	\$0.00
2100 RoadSide Brushing: 0.0 acres .....	\$0.00
2200 Surface Treatment: 0.0 tons .....	\$0.00
2300 Engineering: 0.00 sta. ....	\$0.00
2400 Minor Concrete: .....	\$0.00
2500 Gabions: .....	\$0.00
8000 Miscellaneous: .....	\$0.00
Mobilization: Const. \$65.44 Surf. \$0.00.....	\$65.44
Quarry Development: .....	\$0.00
	Total: \$1,651.27

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: White Castle Sale Date: 9/11/2012

Road Number: spur 4 Road Name:

Road Construction: 0.25 mi 14 ft Subgrade ft ditch T.S. Update 05/15/12

200 Clearing and Grubbing: 0.6 acres .....	\$1,843.28
Clearing:13.2 sta    Grubbing:0.6 acres	
Slash Treatment:0.6 acres	
300 Excavation: .....	\$1,854.85
400 Drainage: .....	\$0.00
Culvert: 0 lf    wt = 0 lbs    factor = 1.2	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation: .....	\$0.00
Surfacing: .....	\$0.00
1300 Geotextiles: .....	\$0.00
1400 Slope Protection: .....	\$0.00
1800 Soil Stabilization: 0.0 acres .....	\$0.00
1900 Cattleguards: .....	\$0.00
2100 RoadSide Brushing: 0.0 acres .....	\$0.00
2200 Surface Treatment: 0.0 tons .....	\$0.00
2300 Engineering: 0.00 sta. ....	\$0.00
2400 Minor Concrete: .....	\$0.00
2500 Gabions: .....	\$0.00
8000 Miscellaneous: .....	\$0.00
Mobilization: Const. \$152.62 Surf. \$0.00.....	\$152.62
Quarry Development: .....	\$0.00
	Total: \$3,850.74

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: White Castle Sale Date: 9/11/2012

**Road Number: spur 5** Road Name:

Road Construction: 0.06 mi 14 ft Subgrade ft ditch T.S. Update 05/15/12

200 Clearing and Grubbing: 0.1 acres .....	\$410.21
Clearing:3.1 sta Grubbing:0.1 acres	
Slash Treatment:0.1 acres	
300 Excavation: .....	\$741.94
400 Drainage: .....	\$0.00
Culvert: 0 lf wt = 0 lbs factor = 1.2	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation: .....	\$0.00
Surfacing: .....	\$0.00
1300 Geotextiles: .....	\$0.00
1400 Slope Protection: .....	\$0.00
1800 Soil Stabilization: 0.0 acres .....	\$0.00
1900 Cattleguards: .....	\$0.00
2100 RoadSide Brushing: 0.0 acres .....	\$0.00
2200 Surface Treatment: 0.0 tons .....	\$0.00
2300 Engineering: 0.00 sta. ....	\$0.00
2400 Minor Concrete: .....	\$0.00
2500 Gabions: .....	\$0.00
8000 Miscellaneous: .....	\$0.00
Mobilization: Const. \$47.55 Surf. \$0.00.....	\$47.55
Quarry Development: .....	\$0.00
Total:	\$1,199.70

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: White Castle Sale Date: 9/11/2012

**Road Number: spur 6** Road Name:

Road Renovation: 0.21 mi 14 ft Subgrade ft ditch T.S. Update 05/15/12

200 Clearing and Grubbing: 0.0 acres .....	\$0.00
Clearing:0.0 sta Grubbing:0.0 acres	
Slash Treatment:0.0 acres	
300 Excavation: .....	\$0.00
400 Drainage: .....	\$0.00
Culvert: 0 lf wt = 0 lbs factor = 1.2	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation: .....	\$1,483.88
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: 0.4 acres .....	\$220.11
2200 Surface Treatment: 0.0 tons .....	\$0.00
2300 Engineering: 0.00 sta. ....	\$0.00
2400 Minor Concrete: .....	\$0.00
2500 Gabions: .....	\$0.00
8000 Miscellaneous: .....	\$0.00
Mobilization: Const. \$70.32 Surf. \$0.00.....	\$70.32
Quarry Development: .....	\$0.00
Total:	\$1,774.31

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: White Castle Sale Date: 9/11/2012

Road Number: spur 7 Road Name:

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

200 Clearing and Grubbing: 0.1 acres .....	\$212.81
Clearing:2.0 sta    Grubbing:0.1 acres	
Slash Treatment:0.1 acres	
300 Excavation: .....	\$519.32
400 Drainage: .....	\$0.00
Culvert: 0 lf    wt = 0 lbs    factor = 1.2	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation: .....	\$0.00
Surfacing: .....	\$3,229.53
Quarry Name: all rock 3" 83 cy	
1300 Geotextiles: .....	\$0.00
1400 Slope Protection: .....	\$0.00
1800 Soil Stabilization: 0.0 acres .....	\$0.00
1900 Cattleguards: .....	\$0.00
2100 RoadSide Brushing: 0.0 acres .....	\$0.00
2200 Surface Treatment: 0.0 tons .....	\$0.00
2300 Engineering: 0.00 sta. ....	\$0.00
2400 Minor Concrete: .....	\$0.00
2500 Gabions: .....	\$0.00
8000 Miscellaneous: .....	\$0.00
Mobilization: Const. \$163.49 Surf. \$104.65.....	\$268.14
Quarry Development: .....	\$0.00
	Total: \$4,229.81

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: White Castle Sale Date: 9/11/2012

Road Number: Spur 8 Road Name:

Road Construction: 0.32 mi 15 ft Subgrade ft ditch T.S. Update 05/15/12

200 Clearing and Grubbing: 1.0 acres .....	\$2,040.68
Clearing:17.1 sta    Grubbing:1.0 acres	
Slash Treatment:1.0 acres	
300 Excavation: .....	\$3,502.98
Haul: 3,500 sta-yds	
400 Drainage: .....	\$1,063.20
Culvert: 0 lf    wt = 0 lbs    factor = 1.2	
DownSpout: 0 lf	
PolyPipe: 60 lf	
500 Renovation: .....	\$0.00
Surfacing: .....	\$25,135.86
Quarry Name: all rock 3" 646 cy	
1300 Geotextiles: .....	\$0.00
1400 Slope Protection: .....	\$0.00
1800 Soil Stabilization: 0.0 acres .....	\$0.00
1900 Cattleguards: .....	\$0.00
2100 RoadSide Brushing: 0.0 acres .....	\$0.00
2200 Surface Treatment: 0.0 tons .....	\$0.00
2300 Engineering: 0.00 sta. ....	\$0.00
2400 Minor Concrete: .....	\$0.00
2500 Gabions: .....	\$0.00
8000 Miscellaneous: .....	\$0.00
Mobilization: Const. \$1,309.97 Surf. \$814.53.....	\$2,124.50
Quarry Development: .....	\$0.00
	Total: \$33,867.22

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: White Castle Sale Date: 9/11/2012

**Road Number: Spur 9** Road Name:

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

200 Clearing and Grubbing: 0.3 acres .....	\$721.07
Clearing:3.4 sta Grubbing:0.3 acres	
Slash Treatment:0.3 acres	
300 Excavation: .....	\$1,582.11
Haul: 2,640 sta-yds	
400 Drainage: .....	\$0.00
Culvert: 0 lf wt = 0 lbs factor = 1.2	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation: .....	\$0.00
Surfacing: .....	\$4,319.01
Quarry Name: all rock 3" 111 cy	
1300 Geotextiles: .....	\$0.00
1400 Slope Protection: .....	\$0.00
1800 Soil Stabilization: 0.0 acres .....	\$0.00
1900 Cattleguards: .....	\$0.00
2100 RoadSide Brushing: 0.0 acres .....	\$0.00
2200 Surface Treatment: 0.0 tons .....	\$0.00
2300 Engineering: 0.00 sta. ....	\$0.00
2400 Minor Concrete: .....	\$0.00
2500 Gabions: .....	\$0.00
8000 Miscellaneous: .....	\$0.00
Mobilization: Const. \$273.29 Surf. \$139.96.....	\$413.25
Quarry Development: .....	\$0.00
Total:	\$7,035.44

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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**TABLE OF CONTENTS**

SECTION	DESCRIPTION
100	General
200	Clearing and Grubbing
300	Excavation and Embankment
400	Pipe Culverts
500	Renovation and Improvement of Existing Roads
600	Watering
1000	Aggregate Base Course - Crushed Rock
1400	Slope Protection
1700	Erosion Control
1800	Soil Stabilization
2100	Roadside Brushing
2600	Hot Mix Asphalt Concrete Paving

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**TIMBER SALE ROAD SPECIFICATIONS**

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**GENERAL – 100**

101 - Prewrite 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.

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## TIMBER SALE ROAD SPECIFICATIONS

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

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

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

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

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

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

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.

Percent Open Area - The net area of a geotextile material that is not occupied by

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## TIMBER SALE ROAD SPECIFICATIONS

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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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## TIMBER SALE ROAD SPECIFICATIONS

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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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## TIMBER SALE ROAD SPECIFICATIONS

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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

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between the liquid and plastic limits of the soil.

- AASHTO T 96 Resistance to abrasion of small size coarse aggregate by use of the Los Angeles machine.
- AASHTO T 99 Relationship between soil moisture and 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.
- AASHTO T 119 Slump of hydraulic cement concrete.
- AASHTO T 152 Air content of freshly mixed concrete.
- AASHTO T 166 Specific Gravity of compacted Bituminous Mixtures.
- AASHTO T 176 Shows relative portions of fine dust or claylike materials in soil or graded aggregate.
- AASHTO T 180 (OSHD 106-71) moisture density relationship of soil same as AASHTO T 99 proctor but uses a 10-lb rammer & 18-in drop height.
- AASHTO T 191 Sand Cone. Density of soil in place: For subgrade use 6-inch or 12-inch cone. For rock surfacing for 1-1/2-inch minus to 3-inch minus use 12-inch cone.
- AASHTO T 205 Rubber balloon. Density of soil in place. Use for compacted or firmly bonded soil.
- AASHTO T 209 Maximum Specific Gravity of Bituminous Paving Mixtures.
- AASHTO T 210 Durability of aggregates based on resistance to produce fines.
- AASHTO T 224 Correction for coarse particles in the soil.
- AASHTO T 238 Density of Soil and Soil-Aggregate in place by nuclear methods.
- AASHTO T 248 Reducing field samples of aggregate to testing size by mechanical

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splitter, quartering, or miniature stockpile sampling.

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 tamper feet shall be such that the diagonal distance from any foot to the nearest foot in each adjacent row shall be not more than 12 inches. The cross-sectional area of the face of each tamper foot, measured perpendicular to the axis of the stud, shall be not less than 5-1/2 square inches nor more than 8 square inches.
- The weight of the tamping-roller unit shall be such as to exert a minimum pressure of 250 pounds per square inch on the ground area in contact with the tamping feet, and the roller shall be so designed that the weight may be increased to exert a pressure up to 500 pounds per square inch on the ground area in contact with the tamping feet. The ground pressure shall be determined by dividing the total weight of the roller unit, not including the weight of the tractor, by the total cross-sectional area of the tamping feet in one row of tamping feet parallel to the axis of the roller.
- 103c - Smooth-wheel power rollers. Smooth-wheel power rollers shall either be of the 3-wheel type, weighing not less than 10 tons, or of the tandem type, 2-wheel or 3-

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wheel, weighing not less than 8 tons. Smooth-wheel roller shall provide compression of 325 pounds per linear inch of width of rear wheels or drum.

- 103d - Pneumatic-tired rollers. Pneumatic-tired rollers shall be of the double-axle type equipped with pneumatic tires each of equal size and type. The spacing between the sidewalls of adjacent tires shall not exceed 5 inches and the rear tires shall be staggered in relation to the front tires. The rolling width of the unit shall be not less than 60 inches, exclusive of the power unit. The roller shall be so constructed that the contact pressure is uniformly distributed on all of the tires, and the tires shall be inflated to maintain the air pressure in the several tires within a total tolerance of 5 pounds per square inch. The roller shall be so constructed that the total weight shall be between 1,000 and 2,000 pounds per tire. The actual operating weight of the rollers shall be as ordered by the Authorized Officer.

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

- 103e - Grid roller. A grid roller shall consist of two or more cylindrical drums independently mounted on a common shaft in a rigid frame. Each drum shall have a minimum outside diameter of 5 feet and a minimum width of 2 feet 6 inches. The overall width of the roller exclusive of frame shall be not less than 5 feet 6 inches of which not more than 6 inches shall be used for center spacing between two roller drums. The face of the drums shall have the appearance of woven open-mesh made by interlacing bars of not less than 1-1/4 inches nor more than 1-3/4 inches diameter space spaced on 4-1/2 inches to 5-1/2 inches center. Net opening between the bars shall be not less than 3 inches nor more than 4 inches. The roller shall be so constructed that counterweights can be used to adjust the gross weight of the roller to not less than 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

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the unit to travel through a loose layer of material at a speed ranging from 0.9 mile to 1.8 miles per hour, as directed by the Authorized Officer.

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

- 103g - Vibratory compactor. Vibratory compactors shall consist of multiple or gang-type compacting units or pads with a minimum variable width of 2 feet. It shall be self-contained and capable of compacting material as required.
- 103h - 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.

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- 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 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

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Authorized Officer. The areas for such scattering shall have the prior approval of the Authorized Officer.

- 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

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borrowed materials, backfilling, leveling, grading, compaction, and other earth-moving work necessary for the construction of the roadway and landings in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross sections shown on the plans.

- 305a - Material used in the construction of embankment sections shall be free of 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

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- selected roadway excavation material placed at optimum moisture shall be a minimum of 8 complete passes or until visual displacement ceases.
- 308 - In the case of rock fills, placement of material in layers is not required and such material may be placed by end-dumping or other methods approved by the Authorized Officer provided that the rock be reasonably prevented from escaping beyond the embankment toe.
- 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.
- 321a - Excess construction materials specified under Subsection 321 shall be loaded, hauled, and placed as embankment for the roadbed on the following road sections:



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Road No.	From Sta./M.P.	To Sta./M.P.
SPUR 11	0+00	0+70
SPUR 9	0+00	3+35

- 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

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on the plans.

- 405b - Corrugated-aluminum-alloy pipe culverts and pipe-arch culverts shall conform to the requirements of AASHTO M 196.
- 405e - Corrugated-polyethylene pipe for culverts 12-inch through 36-inch diameter shall meet the requirements of AASHTO M 294. Installation will be subject to the same specification as other pipe materials.
- 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.
- 411 - Trenches necessary for the installation of pipe culverts shall conform to the lines,

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grades, dimensions, and typical diagram shown on the Culvert Installation Detail Sheet.

- 412 - Where ledge rock, boulders, soft, or spongy soils are encountered, they shall be excavated a minimum of 24 inches below the invert grade for a width of at least one pipe diameter or span on each side of the pipe and shall be backfilled with crushed rock material.
- 416 - Side-fill material for pipe culverts shall be placed within 1 pipe diameter, or a minimum of 2 feet, of the sides of the pipe barrel, and to 1 foot over the pipe with crushed rock material free of excess moisture, muck, frozen material, roots, sod, or other deleterious or caustic material and devoid of rocks or stones of sizes which may impinge upon and damage the pipe or otherwise interfere with proper compaction.
- 417 - 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.
- 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.
- 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.

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- 426 - Culvert markers consisting of 1/2-inch round steel bars 4 feet in length bolted to the culvert at the inlet or 4 foot steel fence posts painted with fluorescent paint, shall be furnished, fabricated, and installed by the Purchaser as shown on the plans and as directed by the Authorized Officer.
- 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.
- 429 - Keep the excavation site dewatered so that the installation of culverts is completed under dry conditions. Dispose of excess water by using pumping or natural drainage ways near the site in a manner that will avoid damage to adjacent property. Diversion streams shall not be returned to the natural channel until all in-stream work has been completed.

**RENOVATION AND IMPROVEMENT OF EXISTING ROADS - 500**

- 501 - This work shall consist of reconditioning and preparing the roadbed and shoulders, minor excavation and/or embankment, cleaning and shaping drainage ditches, trimming vegetation from cut and embankment slopes, and cleaning and repairing drainage structures of existing roads in accordance with these specifications, as shown on the plans, and as marked on the ground with stakes or metal tags.
- 501a - This work shall include the removal and disposal of slides in accordance with these specifications.
- 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.

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- 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 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.

**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

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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.
- 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:

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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	-	100	65-95	100	100	-
1 1/2-inch	-	90-95	-	-	-	-	-	-
1-inch	45-75	50-90	-	-	-	50-85	60-90	-
3/4-inch	-	-	-	-	28-70	-	-	-
1/2-inch	-	-	-	-	-	27-60	44-70	-
3/8-inch	-	-	-	-	-	-	-	-
No. 4	15-45	15-50	-	-	10-35	15-40	28-50	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.
- 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

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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 8 passes over each full-width layer, or until visual displacement ceases.

**SLOPE PROTECTION – 1400**

- 1401 - This work shall consist of furnishing , hauling , and placing stone materials for slope protection structures in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross-sections shown on the plans. Material not conforming to these specifications will be rejected and

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shall be removed from the slope protection structure at the purchaser's expense as directed by the Authorized Officer.

- 1402 - Stone material shall consist of blasted rock and coarse stone from roadway excavation of such quality that it will not disintegrate on exposure to water or weathering, and shall be graded in accordance with these specifications.
- 1405 - Rip rap shall conform to the following gradations:

TABLE 1405

Class	Approx. Cubic Dimension (inches)	Sphere Diameter (inches)	% of Total Volume Smaller than Size of Stone
1	6-8	8	100
	5-6	6	80
	2-5	6	50
	0-2	2	10
2	8-10	12	100
	6-8	8	80
	3-6	6	50
	0-3	4	10
3	14-16	21	100
	10-14	18	80
	5-10	12	50
	0-5	6	10
4	18-20	24	100
	14-18	22	80
	6-14	18	50
	0-6	8	10
5	26-28	36	100
	20-26	32	80
	8-20	25	50
	0-8	10	10

**TIMBER SALE ROAD SPECIFICATIONS**

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6	28-34	42	100
	22-28	34	80
	10-22	27	50
	0-10	12	10

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

- 1405a - Stone materials shall show a durability value of not less than 50 as determined by AASHTO T 210.
- 1406a - The embankment shall be placed in successive horizontal layers of sufficient depth to contain the maximum size rock present in the material. Spalls and finer fragments of stone other than specified in Subsection 1405 shall be used to chock the larger stones solidly in position and to fill voids between the major stones as laid in the embankment. The exposed face of the embankment shall be reasonably smooth and uniform; material shall be prevented from escaping beyond the toe of the structure.
- 1406b - Spaces in back of hand-laid embankment shall be filled with hand-tamped or rammed rock-spall material.
- 1407 - Determination of the acceptability of the slope protection material gradation will be through visual inspection by the Authorized Officer.
- 1408 - Trenches for slope protection structures shall be excavated to the lines, elevations, and typical diagram shown on the plans. They shall be of sufficient size to permit the placing of structure footing of the full widths and length shown. Trenches shall be approved by the Authorized Officer prior to placement of slope protection material.
- 1408a - Foundation trenches and other required excavation as shown on the plans shall be approved prior to placing the slope protection material.
- 1409 - Slope protection material shall be placed so as to form the cross sections shown on the plans. The face of the slope protection structure above the low-water line shall be uniform, free from humps, depressions, or large cavities.

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**TIMBER SALE ROAD SPECIFICATIONS**

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- 1411 - Slope protection materials shall be placed on geotextile material as shown on the plans.

**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 having surface rock in place will be blocked or barricaded to prevent vehicular traffic.

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**TIMBER SALE ROAD SPECIFICATIONS**

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**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 <sup>st</sup> | To: October 15 <sup>th</sup> |
|---------------------------------|------------------------------|
- 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.
- 1808 - Mulch materials conforming to the requirements of Subsection 1808a shall be furnished by the Purchaser in the amounts specified under Subsection 1811 and

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**TIMBER SALE ROAD SPECIFICATIONS**

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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.

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

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**TIMBER SALE ROAD SPECIFICATIONS**

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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.

**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

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**TIMBER SALE ROAD SPECIFICATIONS**

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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.
- 2106 - Vegetative growth capable of growing 1 foot in height or higher shall be cut, within the road prism-variable distance or as directed by the Authorized Officer.
- 2107 - Inside curves shall be brushed out for a sight distance of 200 feet chord distance or a middle ordinate distance of 25 feet, whichever is achieved first. Overhanging limbs and vegetation in excess of 1 foot in height, shall be cut within these areas.

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**TIMBER SALE ROAD SPECIFICATIONS**

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- 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.

**HOT MIX ASPHALT CONCRETE PAVING – 2600**

- 2601 - This work shall consist of furnishing, applying and compacting Hot Mix Asphalt Concrete (HMAC) on prepared surfaces, in the depths, amounts and locations as shown on the plans.
- 2602 - Submit 2 copies of the bituminous job mix formula to be used on this project 3 weeks prior to placement of paving. The Purchaser shall have written approval of the formula by the Authorized Officer prior to placement of pavement.
- 2603 - Vehicular traffic, including heavy equipment, will not be permitted on the pavement until all rolling and compacting operations have been completed.
- 2604 - Place bituminous mixture only when air temperature is above 45°F, on surfaces that do not have standing water, and when it is not raining.
- 2605 - Asphalt paving shall conform to the Oregon Department of Transportation, Level III, ½" dense, PG 64-22 Asphalt Binder mix for use on roadways. Furnish aggregate that conform to the aggregate requirements for hot mix asphalt concrete by the Oregon Department of Transportation.

**TIMBER SALE ROAD SPECIFICATIONS**

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- 2606 - Aggregate shall be tested by AASHTO T 11 and T 27. The aggregate selected for use in the work shall have a gradation within the limits designated in Table 2606.

TABLE 2606

TOLERANCE GRADATION OF AGGREGATES  
Total Percentage by Weight Passing Square Mesh Sieves  
(AASHTO T 11 and AASHTO T 27)

Sieve Size	Percent
¾ inch	100
½ inch	90-100
No. 4	JMF +/- 5
No. 8	JMF +/- 4
No. 30	JMF +/- 4
No. 200	JMF +/- 2

JMF = Job Mix Formula

- 2607 - Bituminous material shall meet the requirements of AASHTO M 320.
- 2608 - Water shall be clean and free from deleterious materials.
- 2609 - The asphalt spreader shall be capable of spreading hot bituminous mixtures without tearing, shoving, or gouging and produce a finished surface of the specified grade and smoothness.
- 2610 - The number, type and weight of rollers shall be sufficient to compact the mixture to the required density without detrimentally affecting the compacted material. All rollers shall be suitable for rolling hot-mix bituminous pavements and capable of being operated without turning on the mat and without loosening the surface being rolled. Rollers shall have suitable devices and apparatus to keep the rolling surfaces wet and prevent adherence of bituminous mixture.
- 2610a - Vibratory rollers shall be especially designed for bituminous concrete compacting and may be used provided the rollers do not impair stability of the pavement structure and any underlying layers. Depressions in pavement surfaces resulting from the use of vibratory rollers are not acceptable. Rollers shall be

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**TIMBER SALE ROAD SPECIFICATIONS**

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- self-propelled, single or dual vibrating drums, and steel drive wheels, as applicable; equipped with variable amplitude and separate controls for energy and propulsion.
- 2611 - Make pavement cuts with parallel, straight lines, 1 foot wider than trench width on each side of trenches.
- 2612 - Prior to laying the asphalt concrete pavement the Purchaser shall obtain written approval from the Authorized Officer by showing satisfactory test results of the crushed aggregate base course that has been tested and meets the requirements of the specifications.
- 2613 - Prior to laying the asphalt concrete, remove unsuitable material from the underlying course.
- 2614 - Place string lines to identify the edge of pavement. Establish lines parallel to the centerline of the area to be paved, and place string lines coinciding with the established lines for the spreading machine to follow. The number and location of the lines will be as approved by the Authorized Officer.
- 2615 - Restore disturbed edges of existing bituminous pavements, matching existing edges.
- 2616 - The thickness of the asphalt concrete pavement shall be as shown on the plans.
- 2617 - Plants used for the preparation of bituminous mixtures shall conform to AASHTO M 156 and to Oregon Department of Transportation requirements.
- 2618 - Transport bituminous material from the mixing plant to the paving site in trucks having tight, clean, smooth beds that have been coated with a minimum amount of concentrated solution of hydrated lime and water or other approved coating to prevent adhesion of the mixture to the truck bodies. Petroleum products will not be permitted for coating truck bodies. When the air temperature is less than 60°F or if haul time is greater than 30 minutes, cover each load with canvas or other approved material of ample size to protect the mixture from the loss of heat.
- 2619 - Compact each layer of Hot Mix Asphalt Concrete to a minimum density of 91 percent of the maximum specific gravity determined by AASHTO T 166 and T 209. Percent compaction will be determined from at least one production sample per day.

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**TIMBER SALE ROAD SPECIFICATIONS**

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- 2620 - Shaping and compacting of aggregate base shall be completed and approved, prior to placing Hot Mix Asphalt Concrete, in accordance to the requirements of Subsection 1000 for aggregate base courses.
  
- 2621 - Hot Mix Asphalt Concrete shall be placed on the approved roadbed in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross sections shown on the plans and compacted in layers not to exceed 3 inches in depth. When more than one layer is required, each shall be shaped, compacted, and approved by the Authorized officer before the succeeding layer is placed.

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

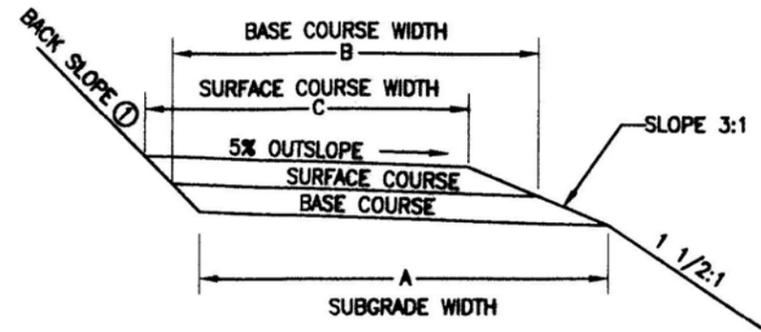
CONTRACT NAME: WHITE CASTLE VRH  
CONTRACT NO: ORR05-TS12-08

ROAD NUMBER	STA/MP	TO	STA/MP	CONST.	RENOV.	IMPROVE.	BASE COURSE		SURFACE COURSE		ROAD DIMENSIONS			TYP. ROAD SECTION	SHEET NO.
							DEPTH	TYPE	DEPTH	TYPE	A	B	C		
28-3-35.0	15+00		15+50		X		6"	2608 HMAC		BST	27	24		4	5
29-2-4.2	0+00	-	4+30			X	6"	1004A		ROCK	15	14		1,3	4
SPUR 1	0+00	-	4+70	X						NATIVE	14			1	6
SPUR 2	0+00	-	2+80		X					NATIVE	14			3	6
SPUR 2	2+80	-	5+00	X						NATIVE	14			1	6
SPUR 3	0+00	-	5+35	X						NATIVE	14			1,3	6
SPUR 4	0+00	-	13+15	X						NATIVE	14			1,3	7
SPUR 5	0+00	-	3+05	X						NATIVE	14			1	7
SPUR 6	0+00	-	11+20		X					NATIVE	14			1,3	4
SPUR 7	0+00	-	1+10	X			6"	1004A		ROCK	15	14		1	9
SPUR 7	1+10	-	1+55	X			9"	1004A		ROCK	40	36		3	9
SPUR 8	0+00	-	13+10	X			6"	1004A		ROCK	15	14		1,3	8
SPUR 8	13+10	-	17+10	X			9"	1004A		ROCK	30	26		1,3	8
SPUR 9	0+00	-	2+65	X			6"	1004A		ROCK	15	14		1,3	9
SPUR 9	2+65	-	3+35	X			9"	1004A		ROCK	30	26		1,3	9
SPUR 10	0+00	-	10+60		X					NATIVE	14			1,3	4
SPUR 11	0+00	-	0+70	X						NATIVE	30			1	4
SPUR 12	0+00	-	2+20			X	6"	1004A		ROCK	15	14		1,3	4
SPUR 12	2+20	-	2+60			X	9"	1004A		ROCK	30	26		1,3	4
SPUR 13	0+00	-	5+60	X			6"	1004A		ROCK	15	14		1,3	9
SPUR 13	5+60	-	8+75	X			9"	1004A		ROCK	15	14		1,3	9

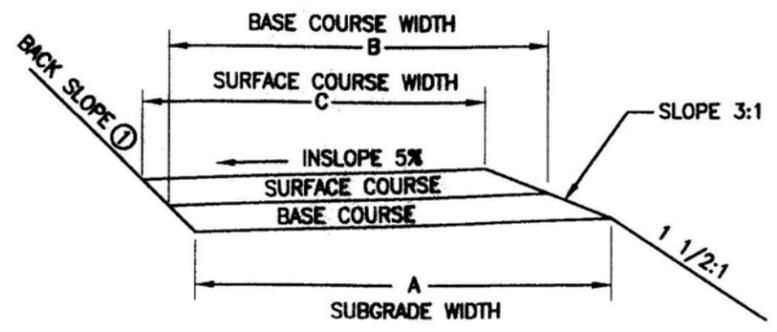
INDEX OF SHEETS	
SHEET	DESCRIPTION
1	ROAD SUMMARY
2	TYPICAL SECTIONS
3	VICINITY MAP
4	RENOVATION NOTES
5	28-3-35.0 CULVERT REPLACEMENT
6	SPURS 1, 2, & 3
7	SPURS 4 & 5
8	SPUR 8
9	SPURS 7, 9, & 13
10	CULVERT INSTALLATION DETAIL
11	CULVERT SUMMARY
12	BRUSHING DETAIL
13	SLOPE PROTECTION DETAIL

REV. NO.	DESCRIPTION	DATE	APPROVED
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT DIVISION OF OPERATIONS OREGON STATE OFFICE WHITE CASTLE VARIABLE RETENTION HARVEST ROAD SUMMARY ROSEBURG DISTRICT OREGON			
ENGINEERING APPROVAL		<i>Tom Jensen</i>	
SUBMITTED		<i>[Signature]</i>	
RECOMMENDED		<i>[Signature]</i>	
APPROVED		<i>[Signature]</i>	
DRAWN: B. ALBIN		SCALE: AS SHOWN	
DATE: 7/13/2012		SHEET 1 OF 13	
DRAWING NO. ORR05-TS12-08			BLM #

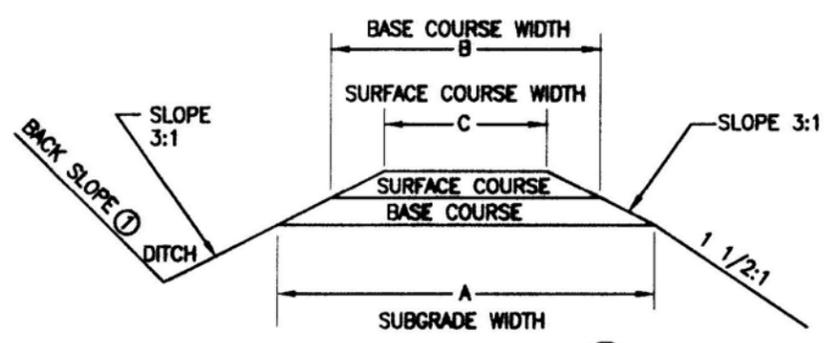
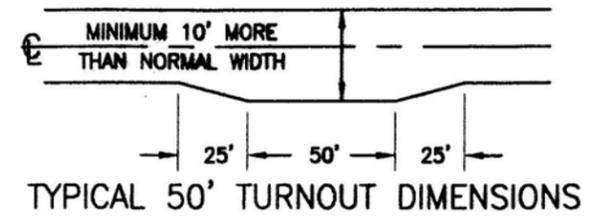




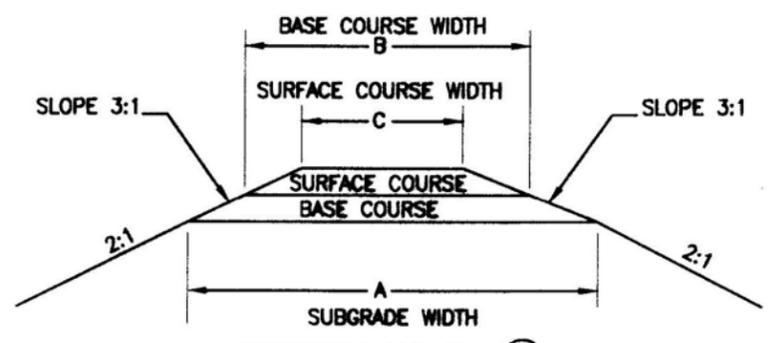
SECTION OUT SLOPE ROAD ①



SECTION INSLOPE ROAD ②



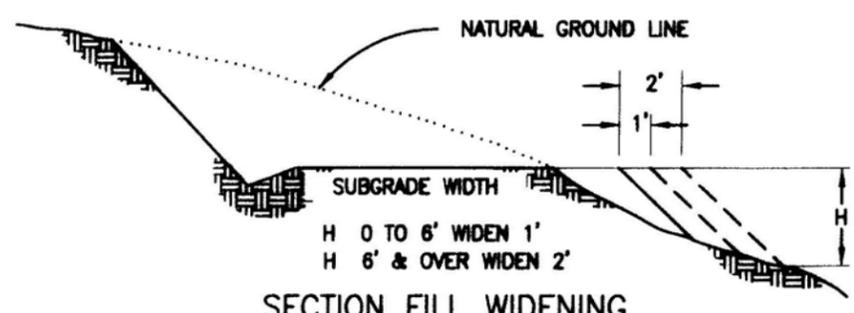
SECTION ROAD ③



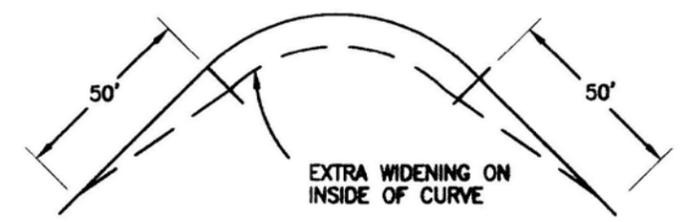
SECTION ROAD ④

NOTES:

- ① Backslope to match existing backslope unless otherwise specified.
2. 1 foot depth on all ditches; depth measured from top of road surface to lowest point of ditch.
3. Out slope (section 1) road segments with grades less than 6%, crown (section 3) road segments with grades exceeding 6%.



SECTION FILL WIDENING

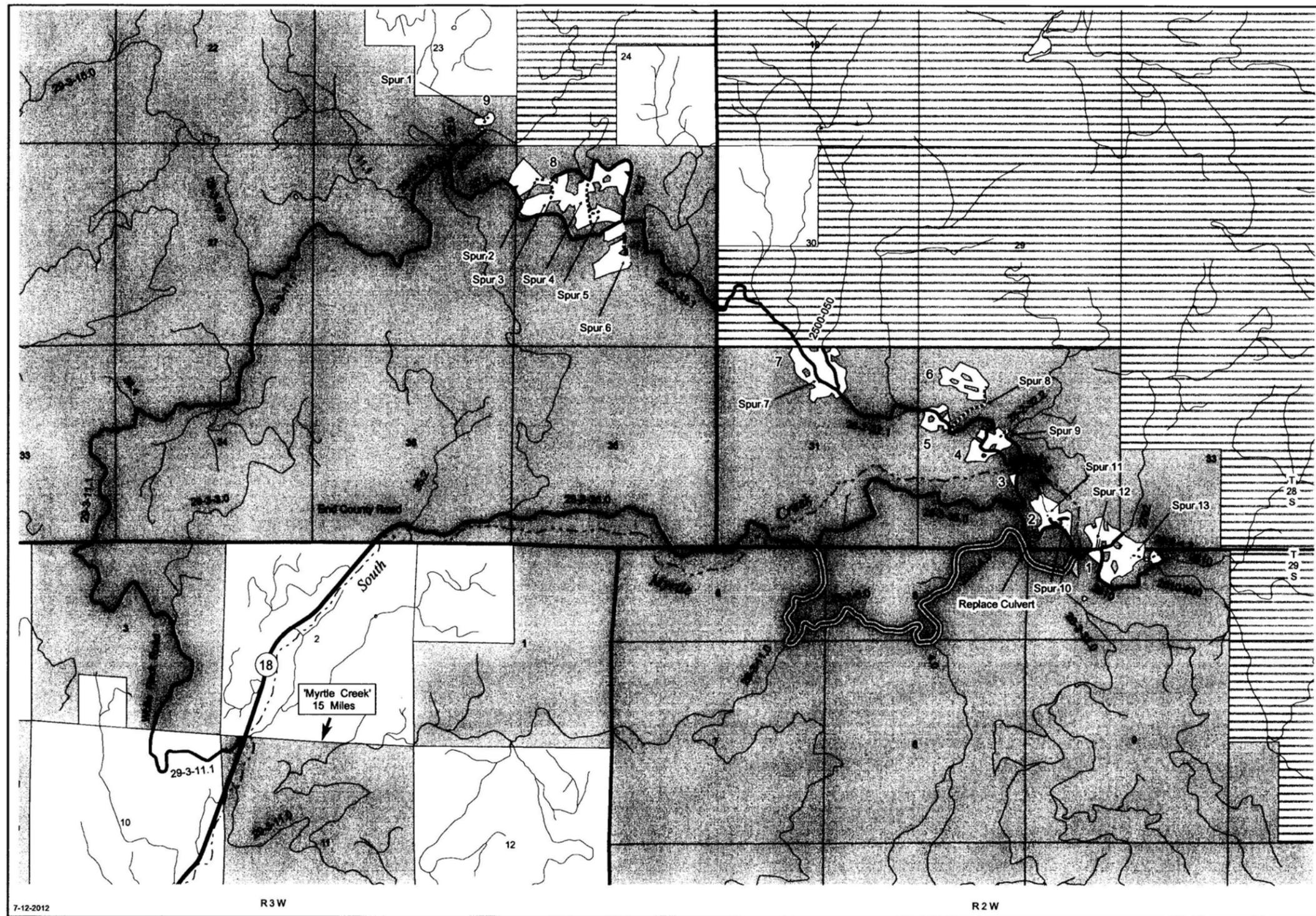


DEGREE OF CURVE	8-21	22-35	36-51	52-64	65-79	80-90
EXTRA WIDTH IN FEET	1	2	3	4	5	6

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 WHITE CASTLE VARIABLE RETENTION HARVEST <b>TYPICAL SECTIONS</b> ROSEBURG DISTRICT OREGON			
DESIGNED	<i>[Signature]</i>		
REVIEWED	<i>[Signature]</i>		
APPROVED	<i>[Signature]</i>		
DRAWN: G. STACEY	SCALE: AS SHOWN		
DATE: 12/19/2008	SHEET 2 OF 13		
DRAWING NO. ORR05-TS12-08	BLM #		





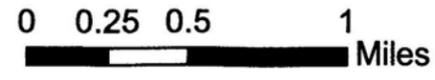
### Legend

- Haul Route
- Renovation
- Construction
- Other Roads
- Detour Route
- Harvest Area

REV. NO.	DESCRIPTION	DATE	APPROVED
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT DIVISION OF OPERATIONS      OREGON STATE OFFICE			
WHITE CASTLE VARIABLE RETENTION HARVEST <b>VICINITY MAP</b>			
ROSEBURG DISTRICT		OREGON	
DESIGNED			
REVIEWED			
APPROVED			
DRAWN: B. ALBIN	SCALE: AS SHOWN		
DATE: 7/20/12	SHEET 3 OF 13		
DRAWING NO. ORR05-TS12-08			BLM#

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

Universal Transverse Mercator Projection  
 Zone 10 North NAD 1983

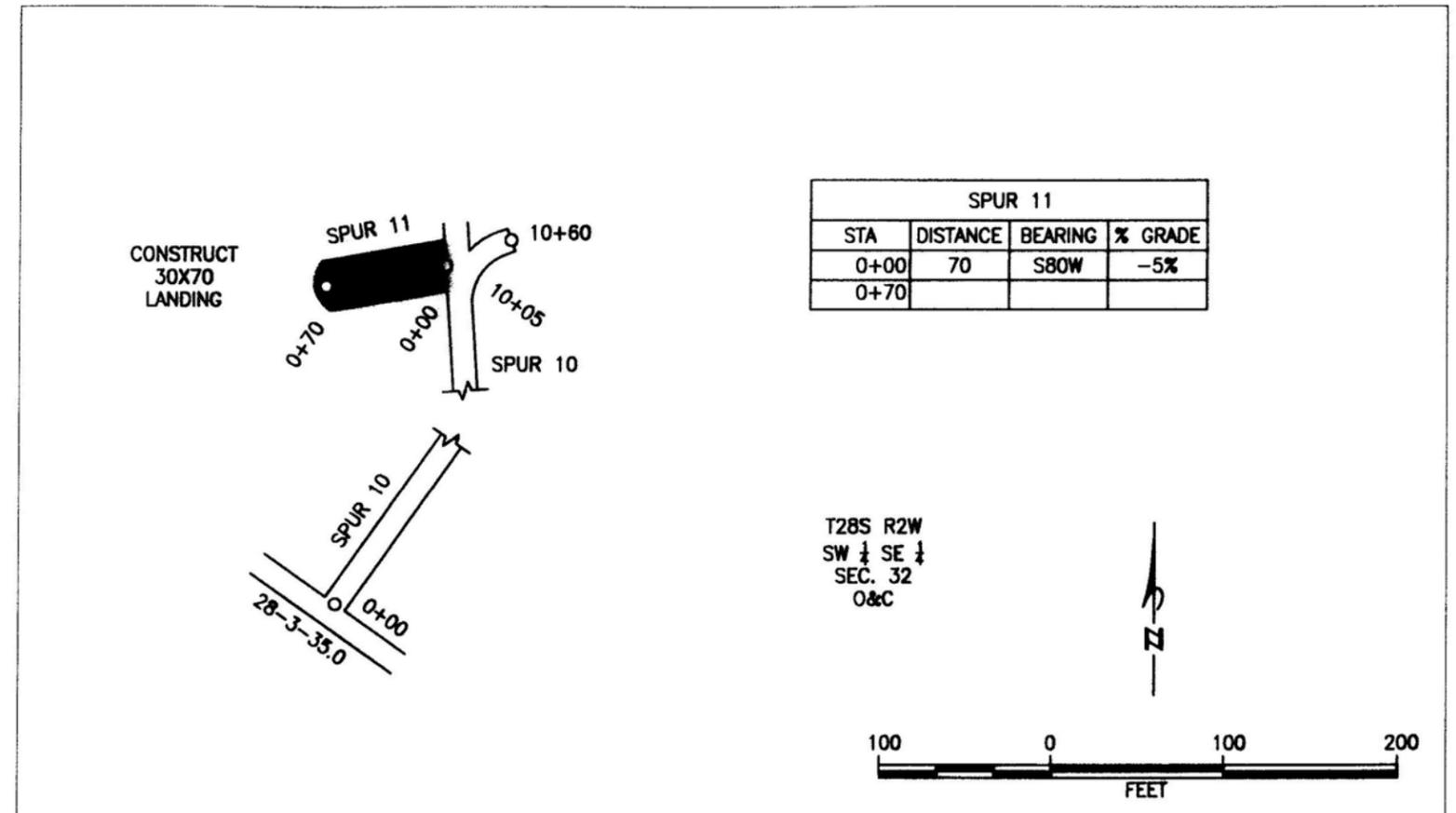


# ROAD RENOVATION

**Notes:**

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

STA	DESCRIPTION
<b>29-2-4.2</b>	
0+00	BEGIN RENOVATION AT JUNCTION OF 29-2-4.2 AND USFS 2810 ROAD INSTALL 18" X 64' CROSS DRAIN IN EXISTING DITCHLINE BEGIN CLEARING, GRUBBING, BLADING, COMPACTION, RE-ESTABLISH DITCHLINE BEGIN SURFACING WITH 6" OF 1004A
4+30	END RENOVATION JUNCTION SPUR 13 LEFT
<b>SPUR 6</b>	
0+00	BEGIN RENOVATION AT JUNCTION OF 28-2-32.1 AND 28-3-26.2 REMOVE VEHICLE BARRIER, BEGIN BRUSHING, BLADING, AND COMPACTION
10+60	RENOVATE EXISTING LANDING
11+20	END RENOVATION
<b>SPUR 10</b>	
0+00	BEGIN RENOVATION AT JUNCTION OF SPUR 10 AND 28-3-35.0 BEGIN BRUSHING, BLADING, AND COMPACTION
10+05	JUNCTION SPUR 11 LEFT
10+60	END RENOVATION, SEE DETAIL THIS PAGE
<b>SPUR 12</b>	
0+00	BEGIN RENOVATION AT JUNCTION OF SPUR 12 AND USFS 2792 ROAD INSTALL 18" X 50' TEMPORARY CROSS DRAIN CULVERT IN EXISTING DITCH LINE BEGIN CLEARING, GRUBBING, BLADING, AND COMPACTION BEGIN SURFACING WITH 6" OF 1004A
2+20	RENOVATE EXISTING 30X40 LANDING SURFACE LANDING WITH 9" OF 1004A
2+60	END RENOVATION

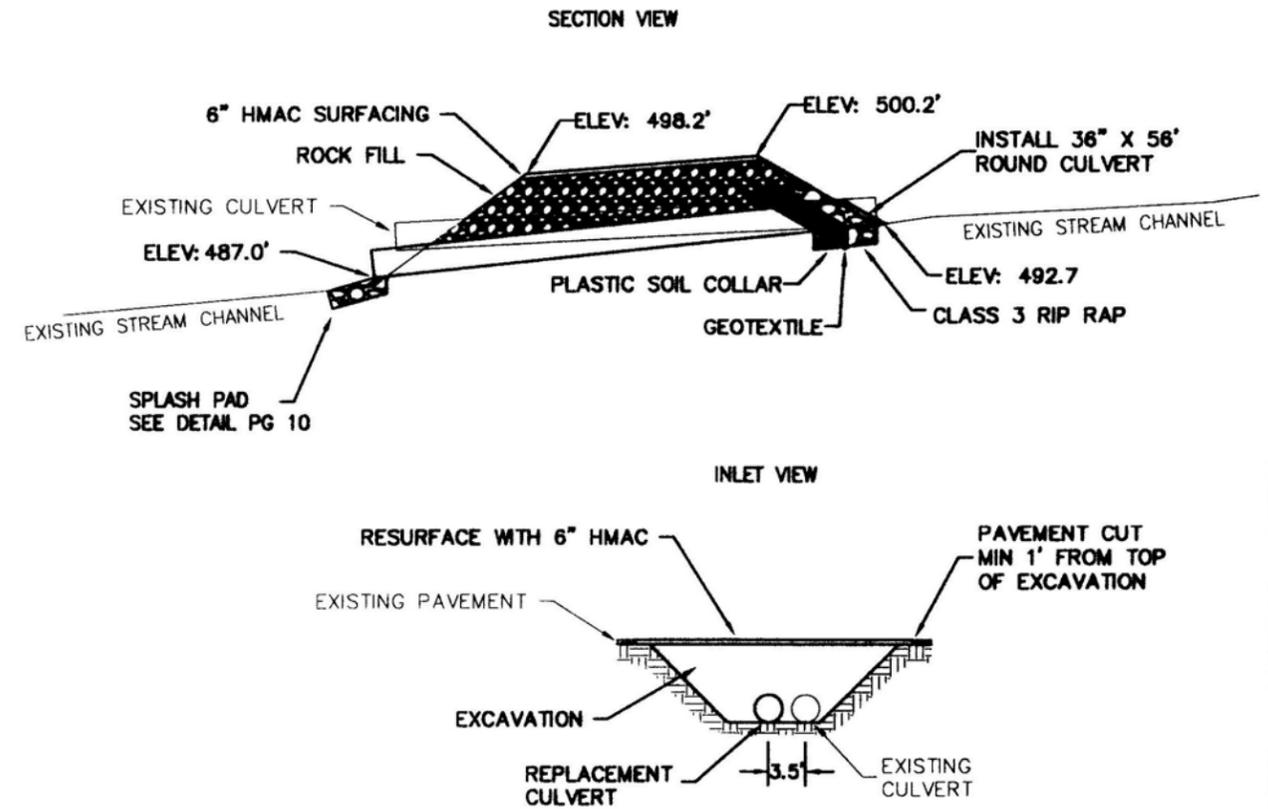
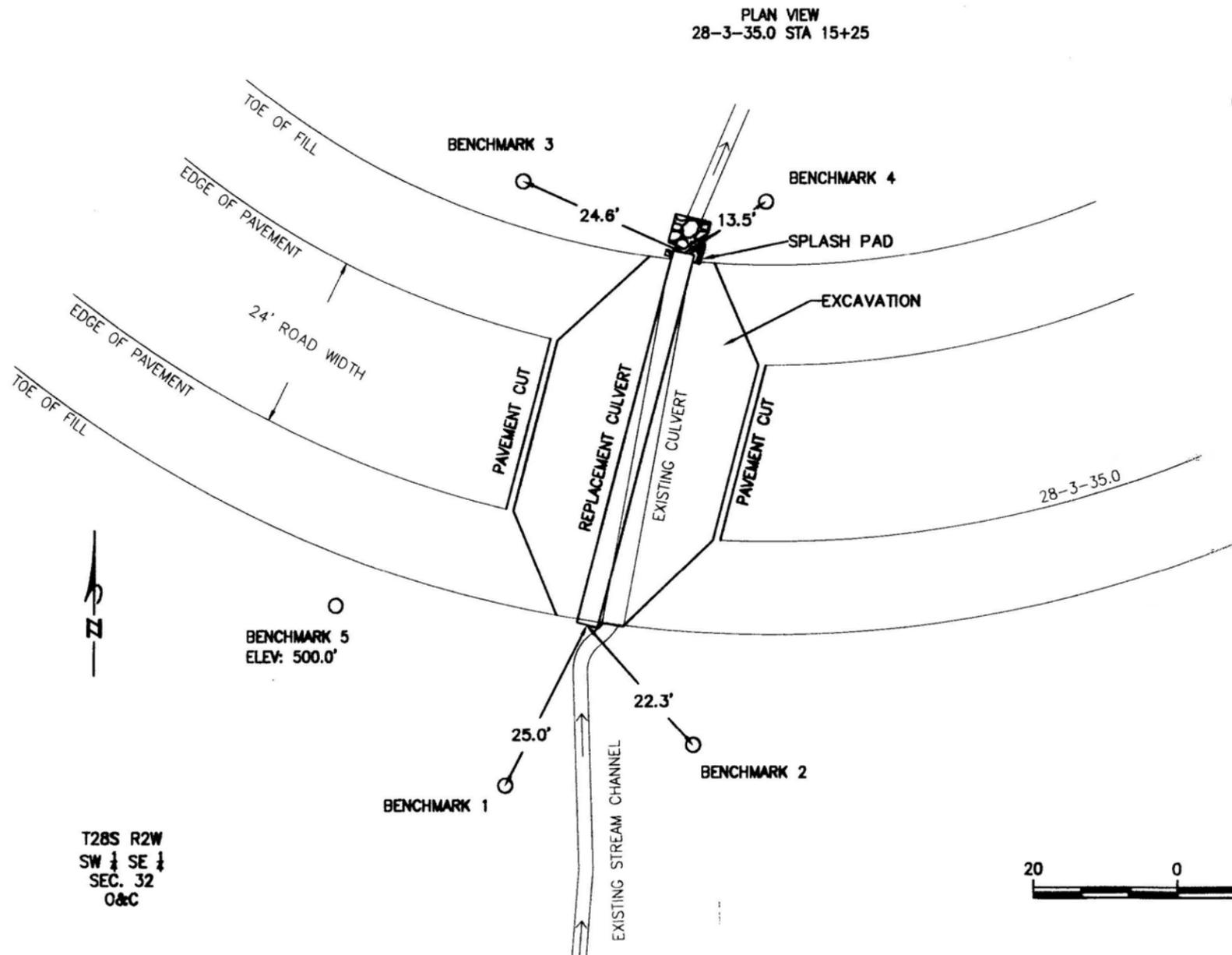


SPUR 11			
STA	DISTANCE	BEARING	% GRADE
0+00	70	S80W	-5%
0+70			

REV. NO.	DESCRIPTION	DATE	APPROVED
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT DIVISION OF OPERATIONS OREGON STATE OFFICE WHITE CASTLE VARIABLE RETENTION HARVEST <b>RENOVATION NOTES</b> ROSEBURG DISTRICT OREGON			
DESIGNED	<i>[Signature]</i>		
REVIEWED	<i>[Signature]</i>		
APPROVED	<i>[Signature]</i>		
DRAWN: B. ALBIN		SCALE: AS SHOWN	
DATE: 6/15/2012		SHEET 4 OF 13	
DRAWING NO. ORR05-TS12-08			BLM #



28-3-35.0 CULVERT REPLACEMENT	
STA	DESCRIPTION
0+00	BEGIN STATIONING AT INTERSECTION OF 28-3-35.0 AND 28-2-32.1
15+25	REPLACE EXISTING STREAM CROSSING WITH 36" X 56' ROUND CULVERT ALIGN WITH NATURAL STREAM CHANNEL, 10% GRADE BEVEL INLET, INSTALL 2' PLASTIC SOIL COLLAR ARMOR INLET WITH 2' OF CLASS 3 RIP RAP, SEE DETAIL ON PAGE 13 CONSTRUCT SPLASH PAD USING CLASS 3 RIP RAP (SPEC NO. 1405) BACKFILL CULVERT WITH 1004A CRUSHED ROCK EXCESS SUITABLE MATERIAL TO BE USED AS EMBANKMENT FOR SPUR 11 SURFACE WITH 6" PG 64-22 ASPHALT IN LEVEL 3, 1/2" DENSE HMAC (SPEC NO. 2600) HMAC TO BE APPLIED IN LIFTS NOT TO EXCEED 3" IN DEPTH SEE VICINITY MAP ON PAGE 3 FOR DETOUR ROUTE

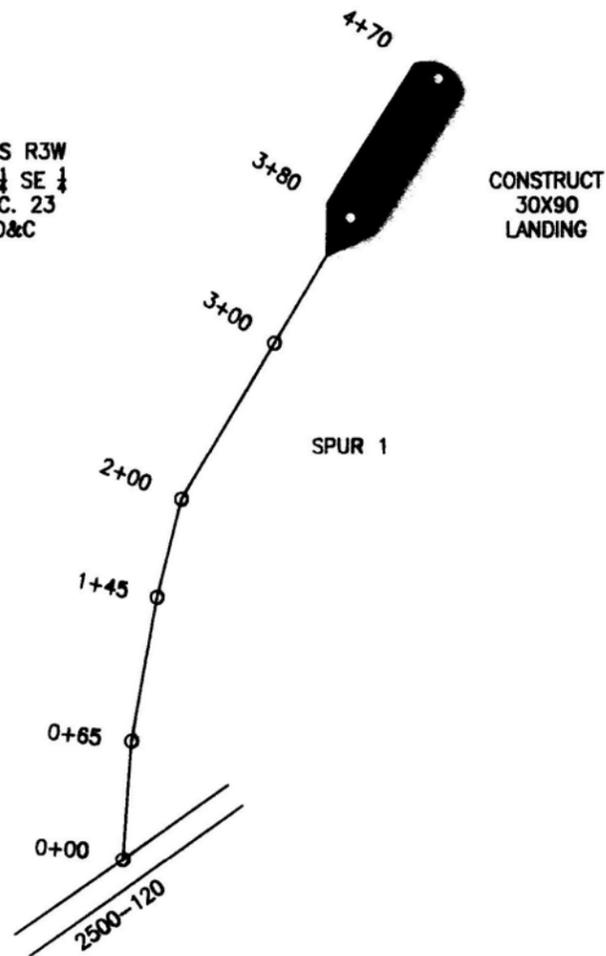


REV. NO.	DESCRIPTION	DATE	APPROVED
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT DIVISION OF OPERATIONS OREGON STATE OFFICE WHITE CASTLE VARIABLE RETENTION HARVEST <b>28-3-35.0 CULVERT REPLACEMENT</b> ROSEBURG DISTRICT OREGON			
DESIGNED	<i>[Signature]</i>		
REVIEWED	<i>[Signature]</i>		
APPROVED	<i>[Signature]</i>		
DRAWN: B. ALBIN	SCALE: AS SHOWN		
DATE: 7/17/2012	SHEET 5 OF 13		
DRAWING NO. ORR05-TS12-08	BLM #		



T28S R2W  
SW 1/4 SE 1/4  
SEC. 32  
O&C

T28S R3W  
SE 1/4 SE 1/4  
SEC. 23  
O&C



SPUR 1			
STA	DISTANCE	BEARING	% GRADE
0+00	65	N4E	-5%
0+65	80	N10E	1%
1+45	55	N14E	1%
2+00	100	N31E	-6%
3+00	80	N32E	-1%
3+80	90	N32E	2%
4+70			

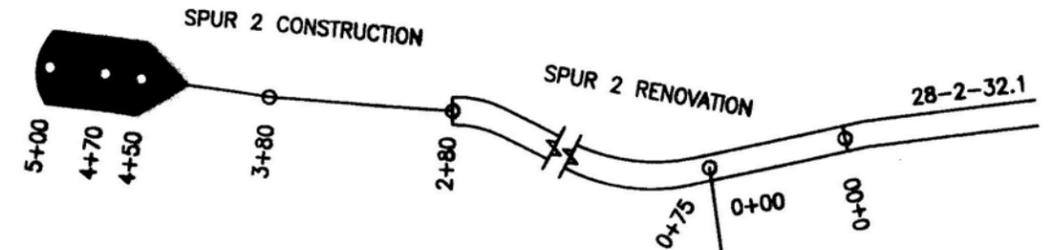
CONSTRUCT  
30X90  
LANDING

SPUR 2 RENOVATION	
MILES	DESCRIPTION
0+00	BEGIN RENOVATION AT END OF 28-2-32.1 ROAD BEGIN BRUSHING, BLADING, AND COMPACTION
0+75	JUNCTION WITH SPUR 3 LEFT
2+80	END RENOVATION, BEGIN CONSTRUCTION

SPUR 2 CONSTRUCTION			
STA	DISTANCE	BEARING	% GRADE
2+80	100	N86W	3%
3+80	70	N81W	11%
4+50	20	N81W	5%
4+70	30	N83W	5%
5+00			

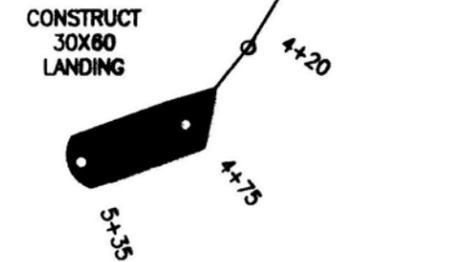
SPUR 3			
STA	DISTANCE	BEARING	% GRADE
0+00	105	S8E	5%
1+05	95	S15E	7%
2+00	80	S8E	10%
2+80	50	S13W	14%
3+30	90	S31W	11%
4+20	55	S39W	1%
4+75	60	S70W	-4%
5+35			

CONSTRUCT  
40X50  
LANDING

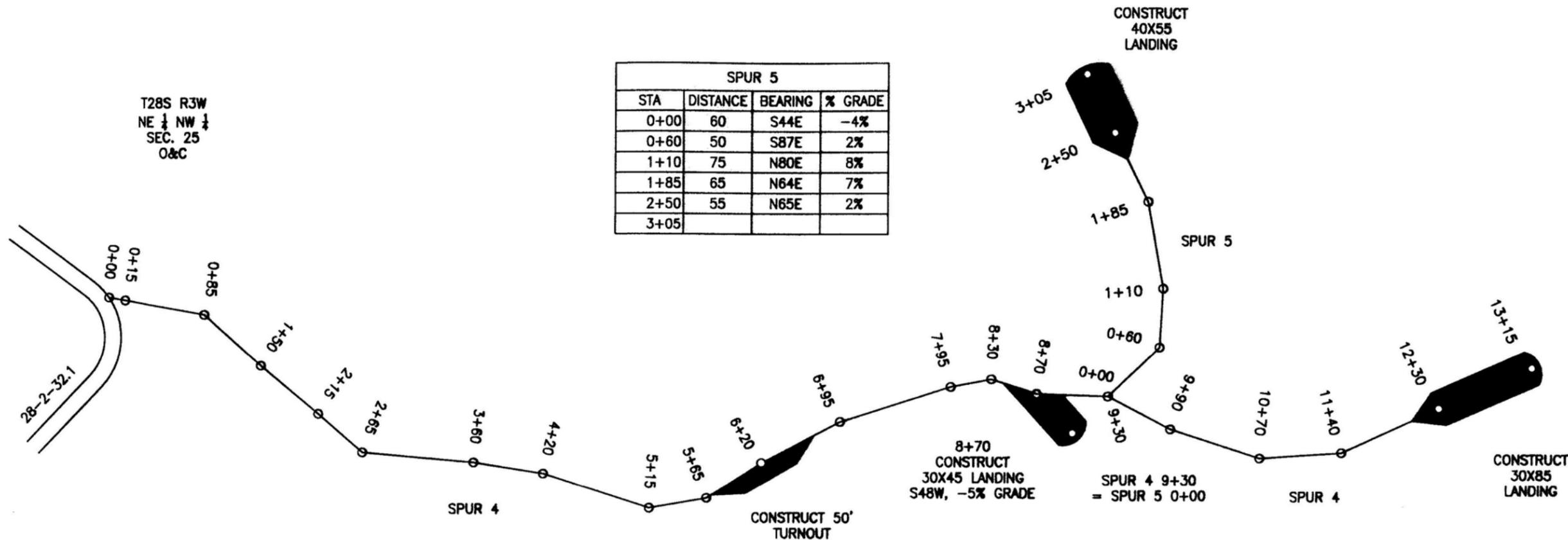


T28S R3W  
NW 1/4 NW 1/4  
SEC. 25  
O&C

CONSTRUCT  
30X80  
LANDING

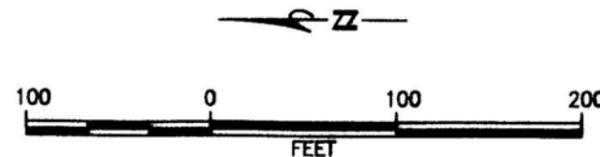


REV. NO.	DESCRIPTION	DATE	APPROVED
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT DIVISION OF OPERATIONS OREGON STATE OFFICE WHITE CASTLE VARIABLE RETENTION HARVEST <b>SPURS 1, 2, &amp; 3</b> ROSEBURG DISTRICT OREGON			
DESIGNED	<i>[Signature]</i>		
REVIEWED	<i>[Signature]</i>		
APPROVED	<i>[Signature]</i>		
DRAWN: B. ALBIN		SCALE: AS SHOWN	
DATE: 6/20/2012		SHEET 6 OF 13	
DRAWING NO. ORR05-TS12-08			BLM #



SPUR 5			
STA	DISTANCE	BEARING	% GRADE
0+00	60	S44E	-4%
0+60	50	S87E	2%
1+10	75	N80E	8%
1+85	65	N64E	7%
2+50	55	N65E	2%
3+05			

SPUR 4			
STA	DISTANCE	BEARING	% GRADE
0+00	15	S10W	13%
0+15	70	S10W	18%
0+85	65	S42W	14%
1+50	65	S40W	16%
2+15	50	S41W	15%
2+65	95	S5W	12%
3+60	60	S9W	12%
4+20	95	S18W	15%
5+15	50	S10E	16%
5+65	55	S33E	6%
6+20	75	S28E	4%
6+95	100	S18E	19%
7+95	35	S11E	15%
8+30	40	S18W	5%
8+70	60	S2W	-7%
9+30	60	S28W	-13%
9+90	80	S18W	-13%
10+70	70	S4E	-8%
11+40	90	S25E	-5%
12+30	85	S24E	-4%
13+15			



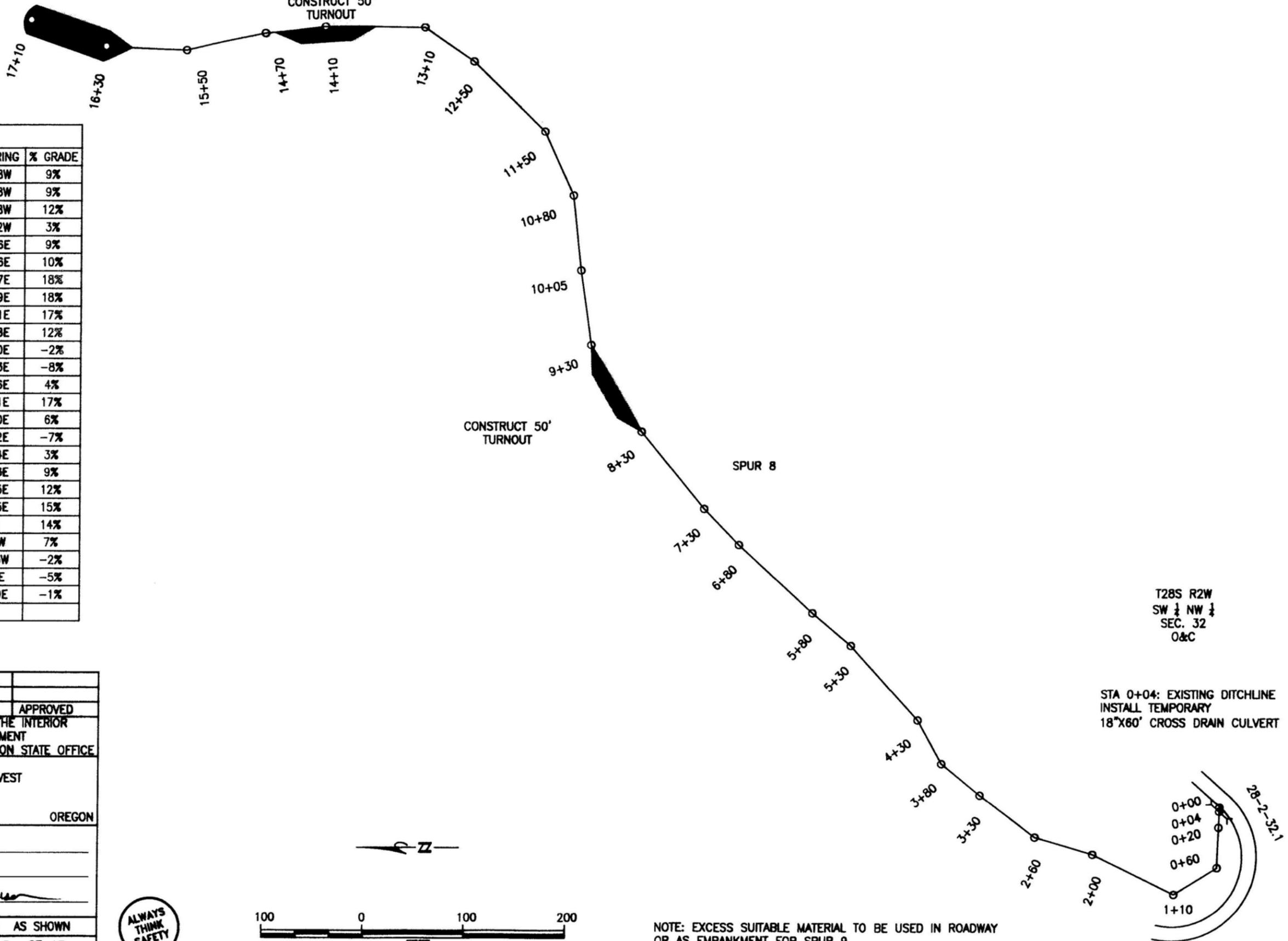
REV. NO.	DESCRIPTION	DATE	APPROVED
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT DIVISION OF OPERATIONS OREGON STATE OFFICE WHITE CASTLE VARIABLE RETENTION HARVEST <b>SPURS 4 &amp; 5</b> ROSEBURG DISTRICT OREGON			
DESIGNED	<i>[Signature]</i>		
REVIEWED	<i>[Signature]</i>		
APPROVED	<i>[Signature]</i>		
DRAWN: B. ALBIN	SCALE: AS SHOWN		
DATE: 7/5/2012	SHEET 7 OF 13		
DRAWING NO. ORR05-TS12-08	BLM #		



CONSTRUCT  
30X80  
LANDING

CONSTRUCT 50'  
TURNOUT

SPUR 8			
STA	DISTANCE	BEARING	% GRADE
0+00	4	N88W	9%
0+04	16	N88W	9%
0+20	40	N88W	12%
0+60	50	N32W	3%
1+10	90	N26E	9%
2+00	60	N16E	10%
2+60	70	N37E	18%
3+30	50	N39E	18%
3+80	50	N61E	17%
4+30	100	N48E	12%
5+30	50	N40E	-2%
5+80	100	N43E	-8%
6+80	50	N46E	4%
7+30	100	N51E	17%
8+30	100	N60E	6%
9+30	75	N82E	-7%
10+05	75	N84E	3%
10+80	70	N66E	9%
11+50	100	N45E	12%
12+50	60	N35E	15%
13+10	100	N	14%
14+10	60	N6W	7%
14+70	80	N13W	-2%
15+50	80	N3E	-5%
16+30	80	N19E	-1%
17+10			



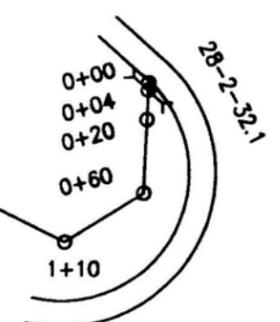
T28S R2W  
SW 1/4 NW 1/4  
SEC. 32  
O&C

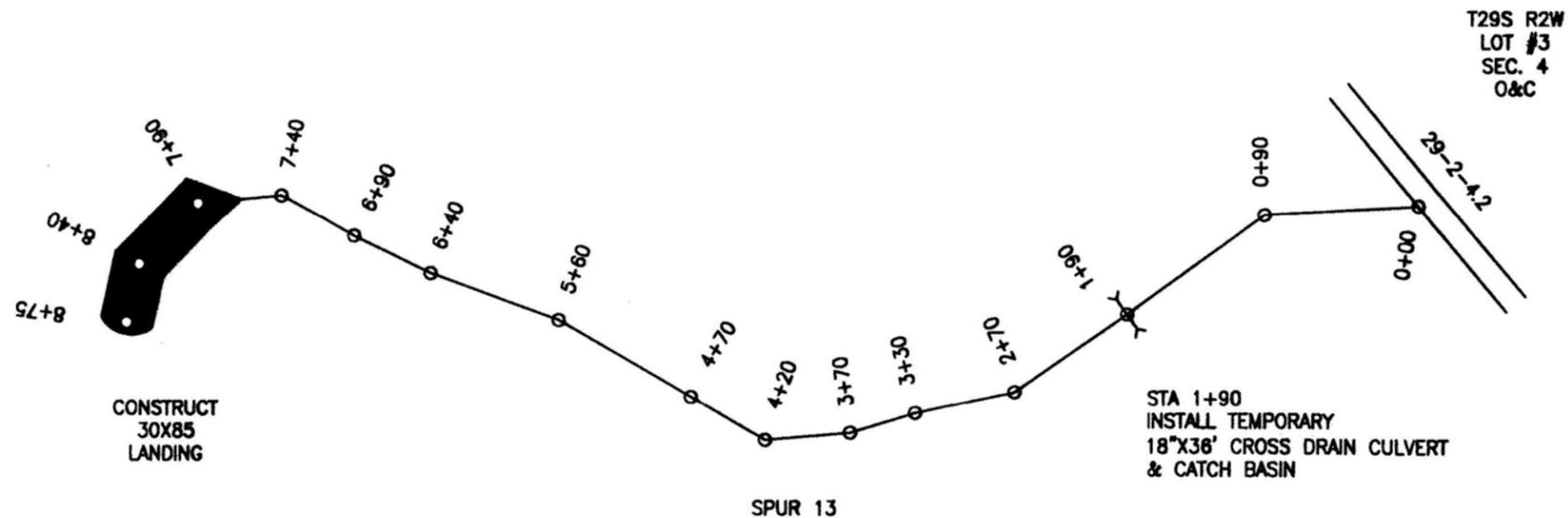
STA 0+04: EXISTING DITCHLINE  
INSTALL TEMPORARY  
18"X60' CROSS DRAIN CULVERT

REV. NO.	DESCRIPTION	DATE	APPROVED
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT DIVISION OF OPERATIONS OREGON STATE OFFICE			
WHITE CASTLE VARIABLE RETENTION HARVEST SPUR 8			
ROSEBURG DISTRICT		OREGON	
DESIGNED	<i>[Signature]</i>		
REVIEWED	<i>[Signature]</i>		
APPROVED	<i>[Signature]</i>		
DRAWN: B. ALBIN	SCALE: AS SHOWN		
DATE: 7/2/2012	SHEET 8 OF 13		
DRAWING NO. ORR05-TS12-08	BLM #		

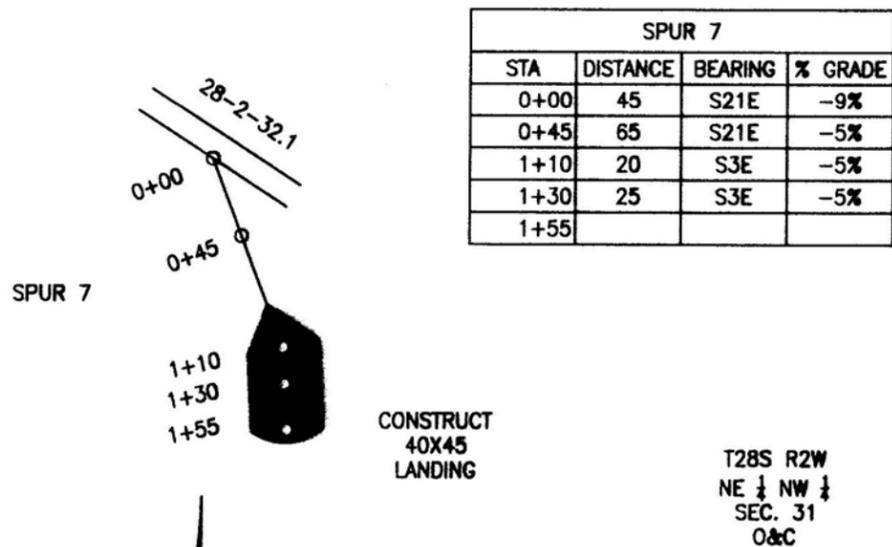


NOTE: EXCESS SUITABLE MATERIAL TO BE USED IN ROADWAY  
OR AS EMBANKMENT FOR SPUR 9

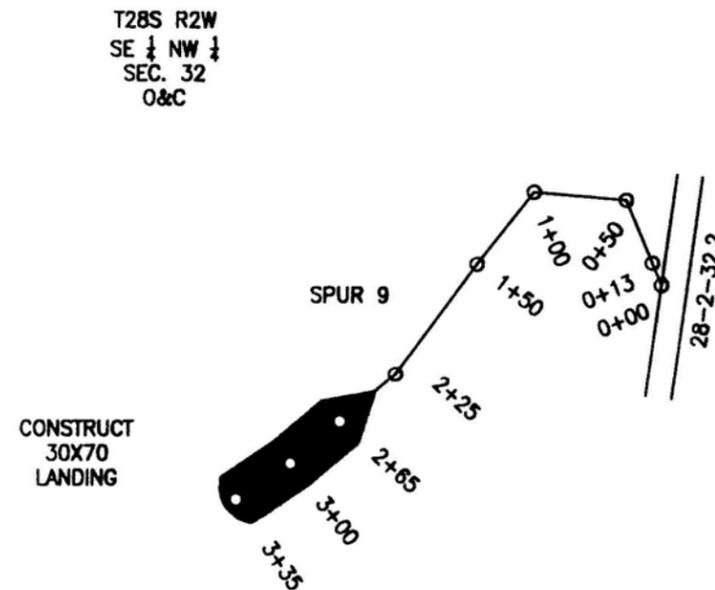




SPUR 13			
STA	DISTANCE	BEARING	% GRADE
0+00	90	S86W	-10%
0+90	100	S54W	-8%
1+90	80	S55W	3%
2+70	60	S78W	13%
3+30	40	S73W	13%
3+70	50	S85W	8%
4+20	50	N60W	-1%
4+70	90	N60W	-3%
5+60	80	N70W	-4%
6+40	50	N64W	-3%
6+90	50	N62W	-2%
7+40	50	S85W	-4%
7+90	50	S44W	-4%
8+40	35	S12W	-3%
8+75			



SPUR 7			
STA	DISTANCE	BEARING	% GRADE
0+00	45	S21E	-9%
0+45	65	S21E	-5%
1+10	20	S3E	-5%
1+30	25	S3E	-5%
1+55			



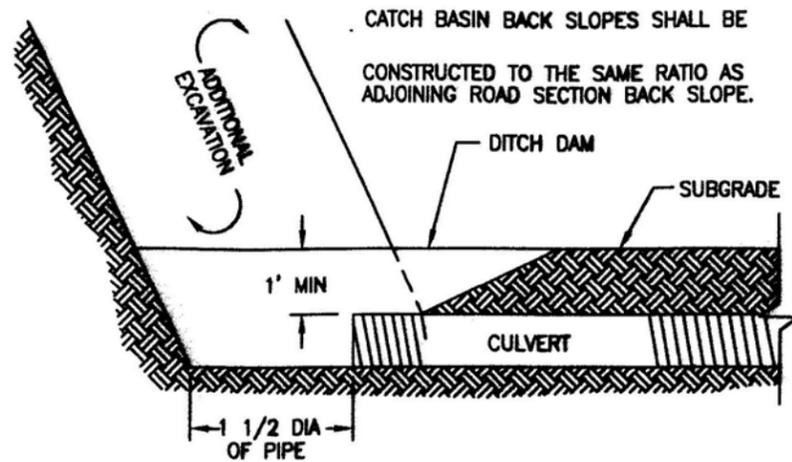
SPUR 9			
STA	DISTANCE	BEARING	% GRADE
0+00	13	N23W	-4%
0+13	37	N23W	-2%
0+50	50	N85W	1%
1+00	50	S38W	9%
1+50	75	S36W	19%
2+25	40	S49W	12%
2+65	35	S49W	5%
3+00	35	S56W	1%
3+35			



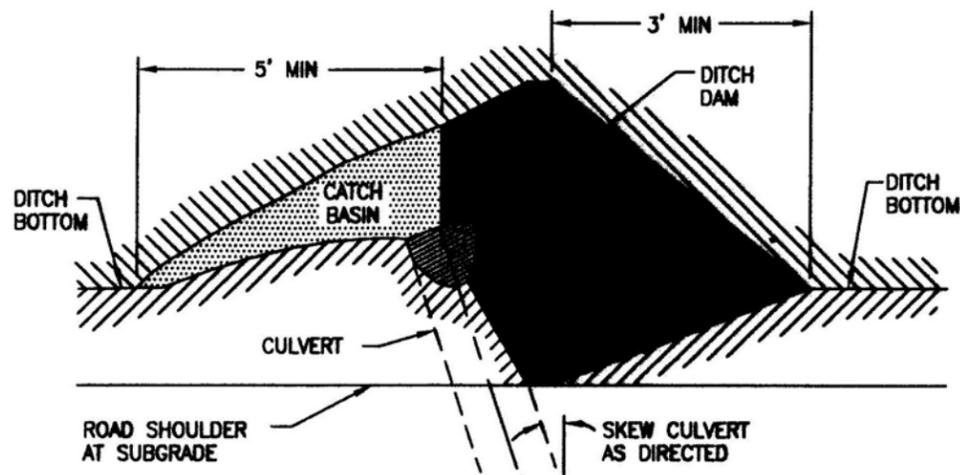
NOTE: EXCESS SUITABLE MATERIAL FROM SPUR 8 MAY BE USED AS ADDITIONAL FILL



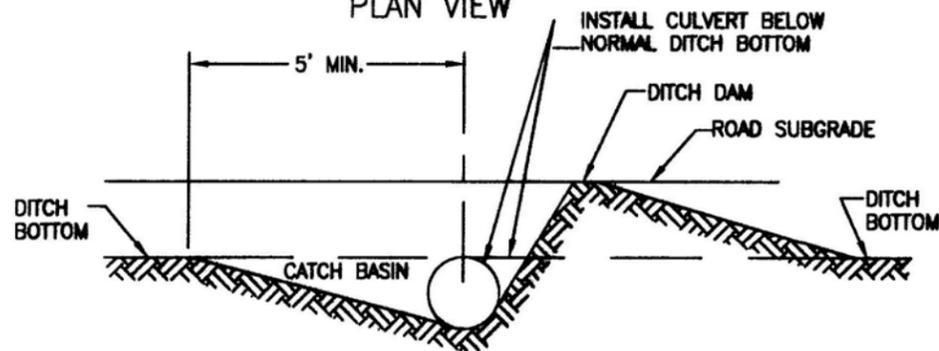
REV. NO.	DESCRIPTION	DATE	APPROVED
	UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT DIVISION OF OPERATIONS OREGON STATE OFFICE WHITE CASTLE VARIABLE RETENTION HARVEST SPURS 7, 9, & 13 ROSEBURG DISTRICT OREGON		
DESIGNED	<i>M. Mi.</i>		
REVIEWED	<i>Joe [unclear]</i>		
APPROVED	<i>Shane [unclear]</i>		
DRAWN: DRAFTER	SCALE: AS SHOWN		
DATE: 7/3/2012	SHEET 9 OF 13		
DRAWING NO. ORR05-TS12-08			BLM #



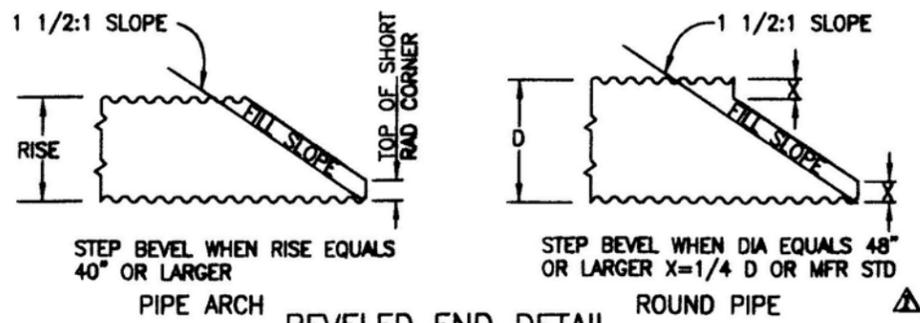
CROSS SECTION AT CATCH BASIN  
CULVERT INSTALATION TYPE 2, 3, AND 4



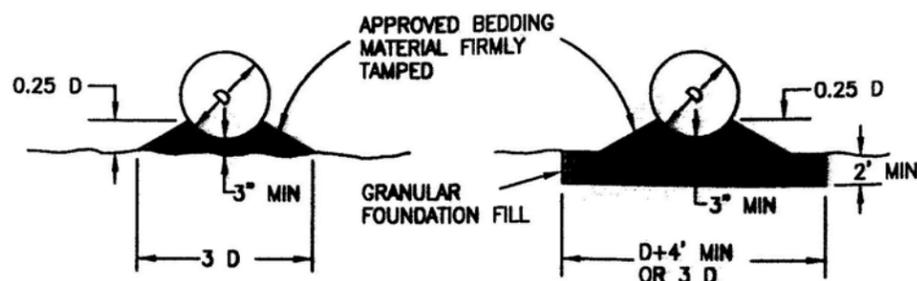
PLAN VIEW



CATCH BASIN ELEVATION

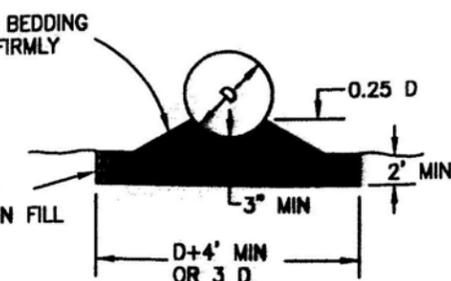


BEVELED END DETAIL



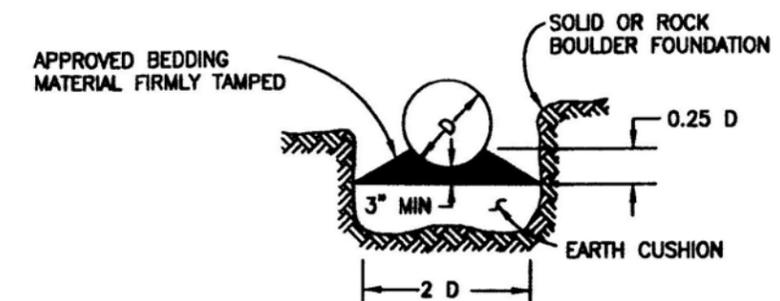
BEDDING MATERIAL SHALL BE SHAPED TO FIT THE BOTTOM OF THE CULVERT

BEDDING OF CULVERTS ON STABLE NATURAL GROUND FOUNDATION OR COMPACTED EMBANKMENT



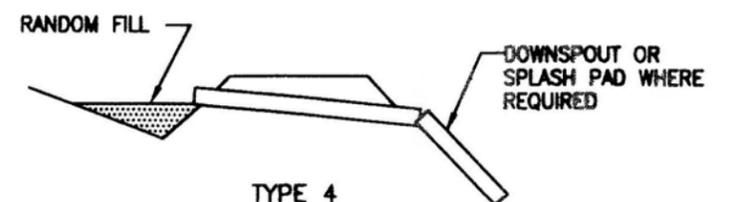
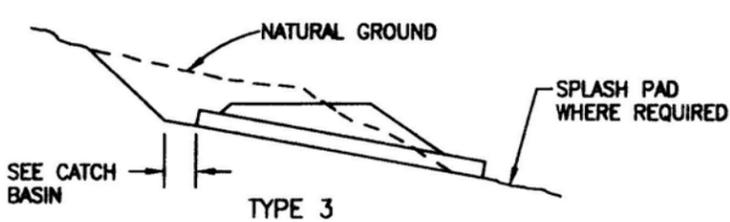
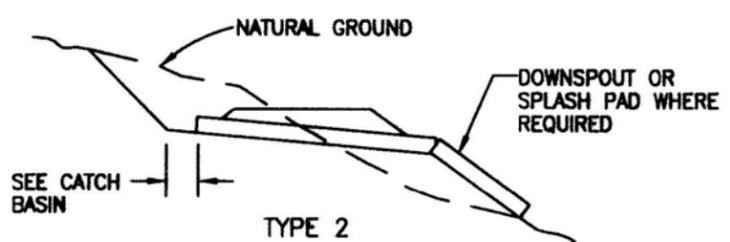
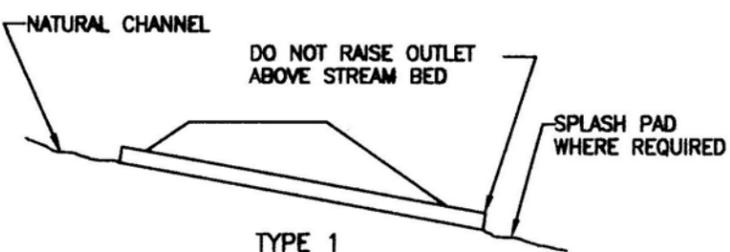
BEDDING MATERIAL SHALL BE SHAPED TO FIT THE BOTTOM OF THE CULVERT

BEDDING OF CULVERTS ON SOFT SPONGY OR UNSTABLE SOIL FOUNDATION

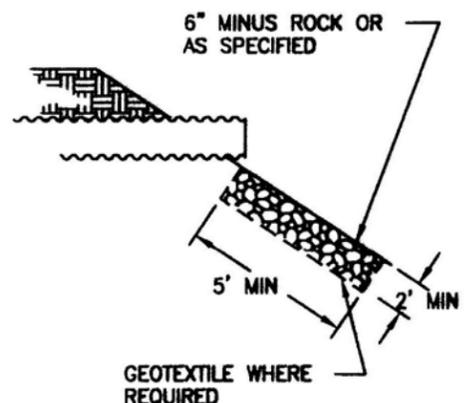


BEDDING MATERIAL SHALL BE SHAPED TO FIT THE BOTTOM OF THE CULVERT. EARTH CUSHIONING OF SILTY CLAY LOAM OR SAND MAY BE USED IF MATERIAL CAN BE PLACED IN THE DRY CONDITION. IF THE EXCAVATION IS WET, USE GRANULAR FOUNDATION FILL MATERIAL MAINTAIN 8" MIN DEPTH BETWEEN HIGH POINTS OF ROCKS AND/OR BOULDERS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

BEDDING OF CULVERTS IN SOLID ROCK OR BOULDER FOUNDATION

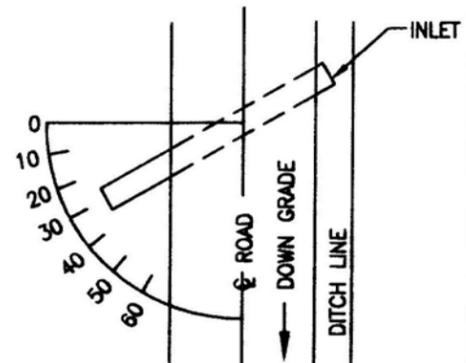


CULVERT INSTALLATION TYPES



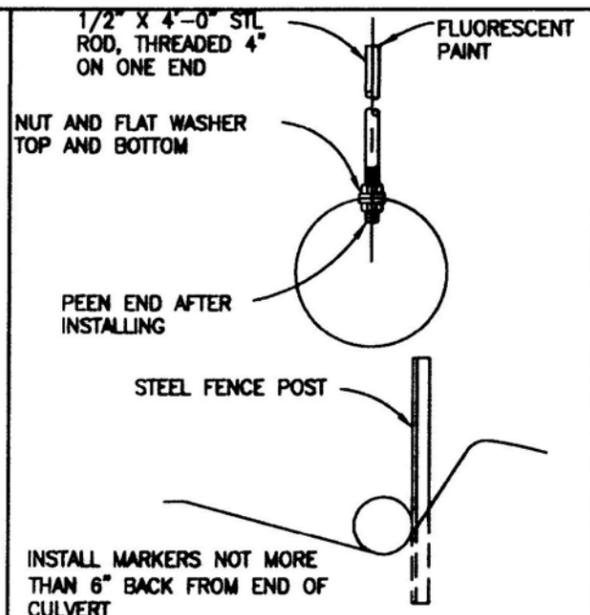
SPLASH PAD SHALL BE 1' WIDER THAN PIPE DIA ON EACH SIDE

SPLASH PAD



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

SKIEW DIAGRAM



CULVERT MARKER INSTALLATION

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

WHITE CASTLE  
VARIABLE RETENTION HARVEST  
CULVERT INSTALLATION  
ROSEBURG DISTRICT OREGON

DESIGNED: *[Signature]*  
REVIEWED: *[Signature]*  
APPROVED: *[Signature]*

DRAWN: BILL HOUGH	SCALE: AS SHOWN
DATE: 12/17/01	SHEET 10 OF 13
DRAWING NO. ORR05-TS12-08	BLM #



CULVERT LIST

CULVERT LOCATIONS						DOWNSPOUT (NOTE 4)				REMARKS (NOTE 6)				
DESIGNED (NOTE 2)					AS BUILT									
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		TYPE	SIZE	LENGTH	ELBOW TYPE (NOTE 5)
28-3-35.0														
15+25	36	14	56	EXISTING	1									PERMANENT CULVERT UNDER BST ROAD
29-2-4.2														
0+00	18		64	EXISTING	2									TEMPORARY CROSS DRAIN IN EXISTING DITCH
SPUR 8														
0+04	18		60	EXISTING	2									TEMPORARY CROSS DRAIN IN EXISTING DITCH
SPUR 12														
0+00	18		50	EXISTING	2									TEMPORARY CROSS DRAIN IN EXISTING DITCH
SPUR 13														
1+90	18		36	0	2									TEMPORARY CROSS DRAIN WITH CATCH BASIN

- 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

ROUND PIPE CULVERT				
MATERIAL	SIZE	GAGE	CORRUGATIONS	LENGTH
ALUMINIZED	36	14	2 3/8" X 1/2"	56
*	18		2 3/8" X 1/2"	210

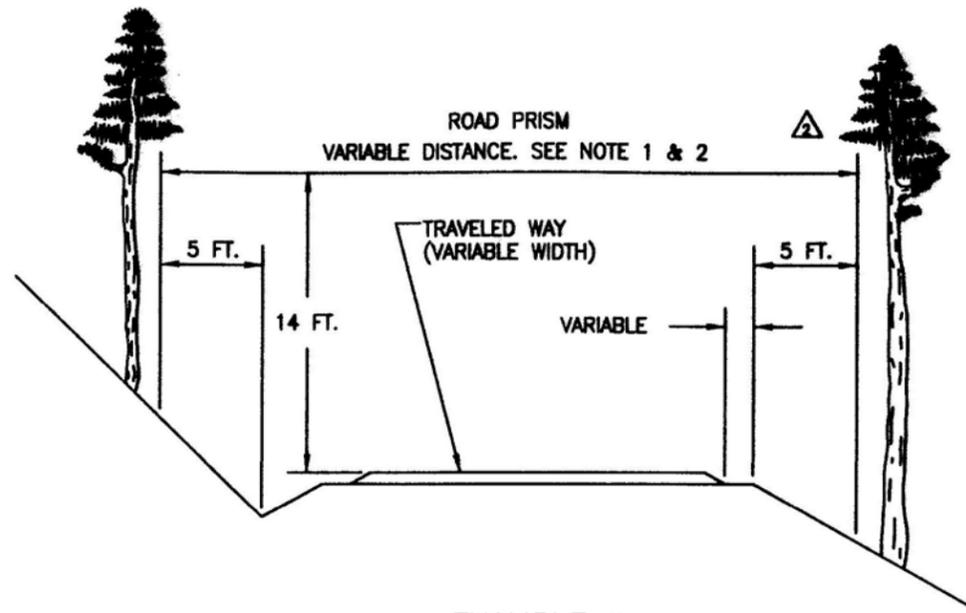
\* MATERIAL TYPE: HI-DENSITY POLYETHYLENE OR ALUMINIZED

REV. NO.	DESCRIPTION	DATE	APPROVED
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT DIVISION OF OPERATIONS OREGON STATE OFFICE WHITE CASTLE VARIABLE RETENTION HARVEST <b>CULVERT SUMMARY</b> ROSEBURG DISTRICT OREGON			
DESIGNED	<i>[Signature]</i>		
REVIEWED	<i>[Signature]</i>		
APPROVED	<i>[Signature]</i>		
DRAWN: G. STACEY	SCALE: AS SHOWN		
DATE: 7/6/2012	SHEET 11 OF 13		
DRAWING NO. ORR05-TS12-08	BLM #		

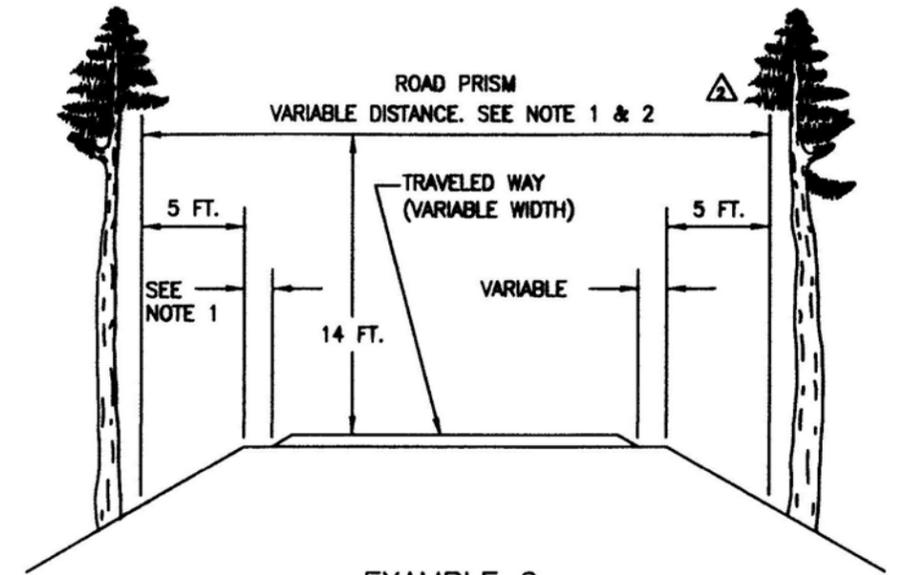


NOTE:

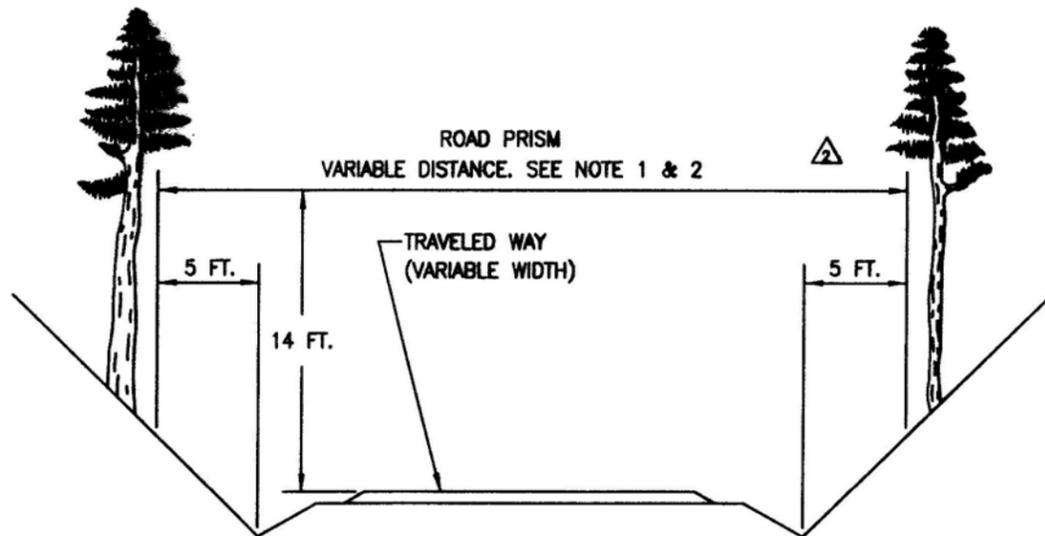
1. ALL AREAS WITHIN THE VARIABLE DISTANCE SHALL BE CLEARED OF VEGETATION.
2. ALL AREAS WITHIN THE VARIABLE DISTANCE SHALL BE FREE OF ALL OVERHANGING LIMBS AND BRANCHES WITHIN 14 FEET ELEVATION ABOVE RUNNING SURFACE. ⚠



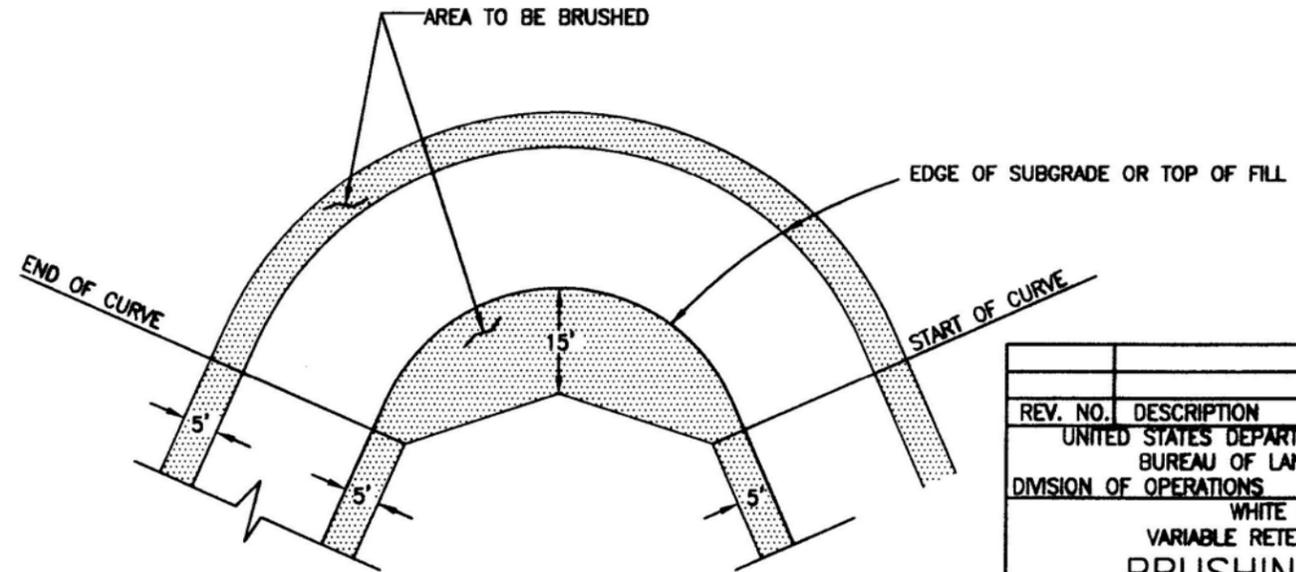
EXAMPLE 1



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 WHITE CASTLE VARIABLE RETENTION HARVEST <b>BRUSHING DETAIL</b> ROSEBURG DISTRICT OREGON			
DESIGNED	<i>[Signature]</i>		
REVIEWED	<i>[Signature]</i>		
APPROVED	<i>[Signature]</i>		
DRAWN: BILL HOUGH	SCALE: AS SHOWN		
DATE: 2/21/01	SHEET 12 OF 13		
DRAWING NO. ORR05-TS12-08	BLM #		

