

PROSPECTUS

Sale Date: June 24, 2014

(1) Roseburg Sale No.: 2014.0004
Douglas County, Oregon: O&C & PD: Oral Auction

Sale Name: Big Thunder
Bid Deposit Required: \$150,500.00

All timber designated for cutting on:

Lots 8, 9, 14, 15, 16, 17, 21 & 22	Sec. 19, T. 26 S., R. 2 W., Willamette Meridian
Lots 7, 8, 9, 10, 14 & 16	Sec. 20, T. 26 S., R. 2 W., Willamette Meridian
NW¼NE¼, S½NE¼, N½NW¼, SE¼NW¼, S½	Sec. 29, T. 26 S., R. 2 W., Willamette Meridian
Lot 4, NE¼NW¼, SE¼SW¼	Sec. 30, T. 26 S., R. 2 W., Willamette Meridian
Lots 1, 2 & 3, NE¼, E½NW¼, NE¼ SW¼	Sec. 31, T. 26 S., R. 2 W., Willamette Meridian

Approx. Number Merch. Trees	Est. Vol. MBF 32' Log	Species	Est. Vol. MBF 16' Log	Appraised Price Per MBF	Est. Volume Times Appraised Price
46,655	6,558	Douglas-fir	8,209	\$149.20	\$1,224,782.80
7,207	1,295	Grand Fir	1,636	\$56.20	\$91,943.20
11,809	1,058	Western Hemlock	1,324	\$55.70	\$73,746.80
6,955	383	Western Redcedar	471	\$208.00	\$97,968.00
3,710	225	Incense-cedar	286	\$54.80	\$15,672.80
4	2	Sugar Pine	2	\$53.80	\$107.60
76,340	9,521		11,928		\$1,504,221.20

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:

For Harvest Area 1 and all rights-of-ways: The Douglas-fir up to 22 inches D.B.H.O.B., Grand Fir, Western Hemlock and Incense-cedar have been cruised using the 3P system to select sample trees. The sample trees have been cruised and their volume computed on form class tables for estimating volume in 16-foot lengths. This volume is then expanded to a total sale volume. A map showing the location of these sample trees is available at the Roseburg District Office. The volume of Douglas-fir 24 inches D.B.H.O.B. and larger, Western Redcedar and Sugar Pine have been determined by individual tree measurements using a 100% cruise.

For Harvest Areas 2, 3, 4 and 5: the timber volumes for all tree species are based on a variable plot cruise, containing a total of 266 plots and 252 randomly selected sample trees. Plots were measured using a 20 basal area factor (BAF). A map showing the location of the plots and sample trees is available at the Roseburg District Office.

With respect to merchantable trees of all species: the average tree is 13.3 in. D.B.H.O.B., the average log contains 47 bd. ft., the total gross volume is approximately 12936 M bd. ft., and 92% recovery is expected.

CUTTING AREA: An area of approximately 652 acres in 5 units will be partially cut and rights-of-ways totaling approximately 5 acres will be clearcut.

<u>TIMBER ACREAGE:</u>	Area 1:	271 acres	Area 4:	31 acres
	Area 2:	264 acres	Area 5:	24 acres
	Area 3:	62 acres	R/W:	5 acres

ACCESS: Access to the sale area is provided by Government, County, and privately controlled roads. A road use fee of \$4,025.60 will be required to be paid to FIA Timber Growth Master, LLC.

DIRECTIONS TO SALE AREA: From Roseburg, proceed east on OR 138 (North Umpqua Highway) approximately 16.2 miles to the junction with County Road 17A (Little River Road). Then:

1. To reach Harvest Area 1 and portions of Harvest Areas 2 and 4, turn right onto County Road 17A (Little River Road) and proceed approximately 5.6 miles to the intersection with Road 26-3-34.2 (Thunder Mountain Road). Turn left onto Thunder Mountain Road and follow the Exhibit D map northeast approximately 5.2 miles to the sale area.
2. To reach Harvest Areas 3 and 5 and portions of Harvest Areas 2 and 4, proceed east on OR 138 (North Umpqua Highway) approximately 6.2 miles to the junction with Road 26-3-1.1 (Swiftwater Road) and follow the Exhibit D map southeast approximately 6.5 miles to the sale area.

ROAD MAINTENANCE: Rockwear and maintenance fees of \$47,107.01 will be required to be paid to the BLM; and rockwear and maintenance fees of \$66,270.82 will be required to be paid to Seneca Jones Timber Company, LLC.

ROAD CONSTRUCTION: Estimates include the following: construct 81+65 stations, renovate 705+65 stations, and decommission 206+25 stations of road. Additional information is available in Exhibit C and Exhibit D of the timber sale contract.

DURATION OF CONTRACT will be 36 months for cutting and removal of timber. The contract will contain SPECIAL PROVISIONS regarding: logging; environmental protection; road construction, renovation, maintenance, and use; fire prevention; slash disposal; and log exports. 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 restrictions on operations apply to this sale regarding road work, falling, bucking, yarding, loading, and hauling. Refer to Sections 42(A)(6)(b), 42(A)(7)(b), 42(A)(11-13), 42(D)(2), and Exhibit F for details. A "seasonal restriction matrix" is included with this prospectus to serve as a guide in planning and scheduling operations for each harvest unit.
3. License agreements with FIA Timber Growth Master, LLC, and Seneca Jones Timber Company, LLC. are required. The terms and conditions of each license agreement are available for inspection at the Roseburg District Office.
4. This contract contains provisions for the sale and removal of additional timber necessary to facilitate safe and efficient Purchaser operations. It is estimated that approximately 596 MBF of such additional timber would be removed under the contract, but is not included in the advertised sale volume.
5. Slash disposal requirements consist of the following: machine piling, covering and burning slash and debris within a fifty (50) foot radius of landings (approximately 200 landings); and hand piling, covering and burning slash and debris within two hundred (200) feet either side of the ridge top in Harvest Areas 1 and 2, and within fifty (50) feet each side of designated roads in Harvest Areas 1, 2 and 3 (approximately 85 acres). The Purchaser will have the option to assist in burning or to make a contribution to the Bureau of Land Management in lieu thereof. Refer to Section 42(F), Section 42(G) and Exhibit E for details.
6. This contract contains provisions for subsoiling approximately 5 miles of skid trails, landings and other areas of soil compaction associated with the Purchaser's operations. Refer to Section 42(C)(4) for details.
7. Portions of Harvest Area 1 were marked for thinning approximately 10 years ago, but the thinning was never implemented. The silvicultural prescription has been revised for this sale. Harvest Area 1 contains approximately 29,167 trees designated for cutting under the current thinning prescription. The trees in Harvest Area 1 which are reserved from cutting are those marked with fresh orange paint above and below stump height in 2014. Refer to Section 41 for details regarding timber reserved from cutting.
8. As appraised, approximately 51% of the sale area is available for wet season operations, including portions of Harvest Areas 1 (135 acres), 2 (127 acres), 3 (39 acres), 4 (9 acres) and 5 (22 acres). Wet season operations may be maximized at the Purchaser's expense by:
 - Cable yarding portions of Harvest Areas 1, 2, 3, 4 and 5 to the rocked roads, instead of ground-based yarding (approximately 112 additional acres);
 - Adding rock to Road 26-2-31.5 Segment A (portion) and Spurs 20 & 23 as necessary for wet season haul to cable yard a portion of Harvest Area 1, instead of ground-based yarding (approximately 45 additional acres);
 - In order to maximize wet season operations, the Authorized Officer must approve the logging plan and a contract modification may be required.

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

Section 41. TIMBER RESERVED FROM CUTTING -The following timber in the Contract Area is hereby reserved from cutting and removal under the terms of this contract and is retained as the property of the Government.

- (a) All timber on the Reserve Areas as shown on Exhibit A.
- (b) 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.
- (c) All existing downed trees at the time of the timber cruise in the Harvest Areas shown on Exhibit A. Reserved existing downed trees may be bucked to facilitate yarding.
- (d) All snags in the Harvest Areas as shown on Exhibit A. Snags which pose a hazard to operations may be felled with the approval of the Authorized Officer.

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

Section 42 (A) Logging:

- (1) Before beginning operations on the Contract Area for the first time or after a shutdown of ten (10) or more days, the Purchaser shall notify the Authorized Officer in writing of the day they plan to begin operations. The Purchaser shall also notify the Authorized Officer in writing if they intend to cease operations for any period of ten (10) or more days.
- (2) Prior to the commencement of operations, the Purchaser shall obtain from the Authorized Officer written approval of a written operations and logging plan commensurate with the terms and conditions of the contract which shall include measures needed to assure protection of the environment and watershed. A pre-work conference between the Purchaser's authorized representative and the Authorized Officer must be held at a location designated by the Authorized Officer before the logging plan will be approved. All logging shall be done in accordance with the plan developed by this provision.
- (3) Before beginning operations in the portions of Harvest Areas 1 and 2 adjacent to the Pacific Power 115,000 volt transmission line right-of-way as shown on Exhibit "A", the Purchaser shall notify the Authorized Officer, who shall inform Pacific Power which reserves the right to assign a line patrolman to the area of operations. Operations adjacent to the transmission line right-of-way shall be conducted in a manner approved by the Authorized Officer at the pre-work conference and documented in the logging plan.
- (4) In the Harvest Areas shown on Exhibit A, all trees designated for cutting within one hundred (100) feet of the Reserve Areas shall be felled and yarded away from these areas.
- (5) No cable yarding, ground based yarding or log loading is permitted in or through the Reserve Areas as shown on Exhibit A, unless otherwise approved by the Authorized Officer.
- (6) In the Harvest Areas shown on Exhibit A, all trees designated for cutting shall be manually felled, limbed and cut into log lengths not to exceed forty-two (42) feet before being yarded, unless otherwise approved by the Authorized Officer. Portions of Harvest Areas may be felled mechanically using a feller-processor or feller-buncher with the approval of the Authorized Officer and in accordance with the following specifications:
 - (a) Mechanized felling operations shall generally be limited to slopes of thirty-five (35) percent or less.
 - (b) Mechanized felling operations are subject to seasonal operating restrictions as described in Section 42(A)(7)(b) of this contract.
 - (c) The feller-processor or feller-buncher shall be approved by the Authorized Officer prior to the start of mechanized felling operations. Only purpose-built carriers with boom-mounted felling heads may be approved. The purpose-built carrier may be of the articulated, rubber-tired design or the zero tail swing, leveling, track-mounted design.

- (d) In Harvest Areas where mechanical felling is permitted with the approval of the Authorized Officer, all tress designated for cutting may be felled and whole tree yarded except when excessive stand damage occurs as determined by the Authorized Officer. If excessive stand damage occurs, all trees shall be completely limbed and bucked into log lengths not to exceed forty-two (42) feet prior to being yarded.
- (7) In the portions of Harvest Areas 1, 2, 3, 4 & 5 designated for ground-based yarding as shown on Exhibit A (approximately 276 acres):
- (a) Ground-based yarding operations shall generally be limited to slopes of thirty-five (35) percent or less, and existing skid trails shall be utilized to the greatest extent possible.
 - (b) No ground-based yarding shall be permitted between September 30 of one calendar year and July 15 of the following calendar year, both days inclusive, or other periods of unseasonably wet weather and soil moisture conditions, unless otherwise approved by the Authorized Officer.
 - (c) A rubber-tired or track-mounted skidder may be used in accordance with the following specifications:
 - (1) The skidder shall be approved by the Authorized Officer prior to ground-based yarding operations.
 - (2) Yarding shall be done with one end of the log suspended.
 - (3) The skidder shall be restricted to designated skid trails. Skid trails shall be clearly identified on the ground, twelve (12) feet or less in width and spaced at least one hundred fifty (150) feet apart. Designated skid trails, whether existing or newly proposed, shall be approved by the Authorized Officer prior to the felling of timber.
 - (d) A track-mounted log loader, or shovel yarding system, may be used in accordance with the following specifications:
 - (1) The track-mounted log loader shall be approved by the Authorized Officer prior to ground-based yarding operations.
 - (2) The track-mounted log loader shall be restricted to designated skid trails and shall utilize the swing yarding method to the greatest extent practicable. The designated skid trail network shall minimize both the amount of ground covered by the tractor treads and the number of passes over any single spot on the ground. Designated skid trails, whether existing or newly proposed, shall be approved by the Authorized Officer prior to the felling of timber.
 - (3) The track-mounted log loader shall be required to place logging slash in front of the machine's tracks prior to traveling designated skid trails in order to reduce soil compaction.

- (e) A cut-to-length system may be used in accordance with the following specifications:
 - (1) The harvester shall be required to cut off limbs and tops in front of the machine's tracks in order to reduce the potential for soil compaction. The harvester must have a lateral reach of twenty (20) feet or more, and the machine's lateral reach must be utilized as much as possible.
 - (2) The forwarder shall operate only on designated skid trails approved by the Authorized Officer. Forwarder trails shall be located on existing skid trails and/or the slash-covered areas traversed by the harvester. Forwarder trails shall be perpendicular to hill-slope contour lines as much as possible. Forwarder trails shall be located such that there are two harvester trails between forwarder trails, resulting in a spacing of at least one hundred (100) feet between forwarder trails.
 - (3) Logs that are too large for the harvester/forwarder operation may be yarded with a rubber-tired or track-mounted skidder, or a track-mounted log loader approved by the Authorized Officer, and as directed by the Authorized Officer. The skidder shall operate on designated skid trails approved by the Authorized Officer.
- (8) In the portions of Harvest Areas 1, 2, 3, 4 & 5 designated for cable yarding as shown on Exhibit A:
 - (a) Yarding shall be done with a cable skyline system utilizing a mechanical slack-pulling carriage capable of maintaining a fixed position on the skyline while lateral yarding and having a lateral capability of seventy five (75) feet. The carriage must not move during in-haul. The cable yarder shall have a maximum tower height of fifty (50) feet and a maximum of two hundred fifty (250) horsepower. The system shall have the capability to yard in multi-span configuration.
 - (b) Wherever possible, cable yarding corridors shall be perpendicular to hill-slope contour lines, parallel to each other and spaced at least one hundred fifty (150) feet apart to minimize damage to reserve trees.
 - (c) Cable yarding of logs shall be done under the canopy and with one end suspended. Lift trees and/or intermediate support trees shall be employed where necessary to meet this requirement. All logs shall be yarded away from or parallel to streams as shown on Exhibit A, except in those portions of Harvest Areas 1, 2, 3 and 5 where full suspension over the streams will be required.
 - (d) Prior to attaching any logging equipment to a reserve tree, the Purchaser shall obtain written approval from the Authorized Officer and shall take precautions to protect the tree from damage as directed in writing by the Authorized Officer.

- (9) Before cutting and removing any trees necessary to facilitate logging in the Harvest Areas shown on Exhibit A, the Purchaser shall identify the location of the skid trails, cable yarding corridors, and tailhold, tieback, guyline, lift, intermediate support, and danger trees on the ground in a manner approved by the Authorized Officer at the pre-work conference and documented in the logging plan. Said Purchaser identification of trees to be cut and removed does not constitute authority to proceed with cutting and removal. In addition, before proceeding with cutting the following conditions must be met:
- (a) All skid trails and/or cable yarding corridors upon which timber is identified by the Purchaser to be cut and removed in accordance with this special provision must be necessary for the safe and expeditious removal of timber sold under this contract and shall be limited to the minimum width necessary for yarding of logs with a minimum of damage to reserve trees, however, unless otherwise approved in writing by the Authorized Officer, the width of skid trails shall be limited to twelve (12) feet and cable yarding corridors shall be limited to fifteen (15) feet.
 - (b) The Purchaser may immediately cut and remove additional timber to clear skid trails and cable yarding corridors; and provide tailhold, tieback, guyline, lift and intermediate support trees; and to clear danger trees when the trees have been marked with blue paint above and below stump height by the Authorized Officer and thereby approved for cutting and removal by the Authorized Officer. The volume of the timber to be sold will be determined by the Authorized Officer in accordance with Bureau of Land Management prescribed procedures. No timber may be cut or removed under terms of this provision unless sufficient installment payments have been made in accordance with Section 3(b) of the contract or sufficient bonding has been provided in accordance with Section 3(f) of the contract.
 - (c) The Purchaser agrees that sale of this additional timber shall be accomplished by a unilateral modification of the contract executed by the Contracting Officer and that such timber shall be sold at the unit prices shown in Exhibit B of this contract unless: the value of the timber must be reappraised subject to the terms for contract extension set forth in Section 9 of the contract; or the Authorized Officer determines that trees otherwise reserved in Section 41 of the contract or any tree that exceeds thirty-six (36) inches diameter at breast height shall be appraised and sold by bilateral modification of the contract at current fair market value in accordance with Section 8 of the contract.
 - (d) This authorization for the Purchaser to cut and remove additional timber prior to the execution of a modification may be withdrawn by the Contracting Officer if the Authorized Officer determines that the Purchaser has cut and removed any tree not previously marked and approved for cutting by the Authorized Officer, which under Section 10 of the contract constitutes a violation of the contract and under Section 13 of the contract may constitute a trespass rendering the Purchaser liable for damages under applicable law.
 - (e) If authorization is withdrawn, the Contracting Officer shall issue a written notice to the Purchaser that the sale of additional timber under this special provision is no longer approved. In this case, the Purchaser shall inform the Authorized Officer at least one (1) working day prior to the need for cutting and removing any additional timber, and

execute a bilateral modification prior to cutting for such additional approved timber at the unit prices shown in Exhibit B of the contract or in accordance with Section 8 or Section 9 of the contract as determined by the Authorized Officer in accordance with this provision. The Contracting Officer may issue a written order to the Purchaser to suspend, delay, or interrupt any or all contract work for the period of time deemed necessary and appropriate for the Government to safely measure and mark additional timber.

- (f) The Government may reserve trees previously designated for cutting and removal by applying orange paint as replacements for additional trees cut and removed for skid trails and/or cable yarding corridors when the Authorized Officer determines such reservation is necessary to maintain stand densities consistent with objectives set forth in the management prescription(s). This may include the replacement of trees damaged by storm events, or insects or disease. The volume of this timber to be reserved will be determined by the Authorized Officer in accordance with Bureau of Land Management prescribed procedures and the value shall be based on the unit prices shown in Exhibit B of the contract. The Purchaser agrees that the Total Purchase Price shall be reduced accordingly through a unilateral modification to the contract executed by the Contracting Officer.
- (10) In accordance with the requirements of Section 8 of the contract it has been determined that it is in the best interest of the Government and within the provisions of 43 CFR 5402.0-6 to sell additional timber located in the Contract Area which is obstructing needed cable yarding corridors, hazardous to workers, needed for guyline, tail hold or tieback trees, and/or severely damaged from the normal conduct of felling or yarding operations to meet all applicable safety laws, codes or regulations. This timber must be cut or removed so that the Purchaser can continue active falling and yarding operations. The Purchaser is, therefore, authorized to cut and remove such additional timber in accordance with the provisions of Section 8 of the contract: provided, however, that:
- (a) Trees reserved for the tree improvement program and trees reserved for the wildlife habitat objectives under Section 41 of the contract are not included in the authorization.
 - (b) The Purchaser shall identify each tree sold and cut in accordance with the provision by marking the cut surface of the stump and the bottom log immediately after falling with high visibility red paint. The stump shall be marked by flagging the location of the stump with plastic fluorescent pink ribbon hung within five (5) feet of the stump at eye level so that the stump can be visually located from a distance of not less than one hundred (100) feet.
 - (c) The volume and price for such timber shall be determined by the Authorized Officer in accordance with Bureau of Land Management prescribed procedures and paid for by the Purchaser in accordance with Section 3(b) or 3(f) of the contract as required by Section 8 of the contract.
 - (d) No timber may be cut or removed under the terms of this provision if all contract payments required by Section 3(b) or 3(f) of the contract have been made.

- (e) The permission to cut and remove additional timber contained in this provision may be withdrawn by the Contracting Officer if the Authorized Officer determines that the Purchaser:
- (1) Failed to properly mark any stump with high visibility paint.
 - (2) Failed to identify the location of any stump.
 - (3) Cut any tree that was reserved for tree improvement and/or wildlife habitat.
 - (4) Cut any tree in or adjacent to cable yarding corridors that was not necessary to facilitate cable yarding.
 - (5) Cut any reserve tree in or adjacent to skid trails that was not necessary to facilitate ground based yarding.
 - (6) Failed to properly segregate any pulled-over tree that was yarded to the landing.
 - (7) Cut any reserve tree that was not severely damaged (as defined during the pre-work conference) from felling and yarding operations.
 - (8) Cut more than the minimum number of trees necessary to properly serve as guyline anchor stumps.
 - (9) Cut or topped more than the minimum number of trees necessary to properly serve as tail hold trees.
 - (10) Cut more than the minimum number of trees necessary to properly serve as tie-backs for topped tail hold trees.
 - (11) Failed to maintain accurate and current (no more than twenty-four [24] hours old) documentation of additional timber cut and removed.

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

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

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

- (11) Except for right-of-way logging, no falling or yarding shall be conducted between April 15 and July 15 (bark slip period), both days inclusive, unless otherwise approved by the Authorized Officer.

- (12) No logging activity or log hauling shall be conducted on unsurfaced roads between October 15 of one calendar year and May 15 of the following calendar year (wet season), both days inclusive, unless otherwise approved by the Authorized Officer.
- (13) For portions of Harvest Areas 1 and 4, as shown on Exhibit F, which is attached hereto and made a part hereof, no operations, except hauling, may be conducted from March 1 to July 15, both days inclusive, of each calendar year due to the potential disruption of northern spotted owls.

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 northern spotted owls are not present, the Authorized Officer may lift the seasonal restriction in any given year on such operations in writing.

- (14) For a distance of fifty (50) feet from the perimeter of each landing designated by the Authorized Officer, all logs more than eight (8) inches in diameter at the large end and longer than eight (8) feet in length shall be decked or windrowed at the location designated by the Authorized Officer, except logs sold and removed from the Contract Area. If a log or piece of log meeting or exceeding the above specifications is bucked and left in place, all portions of that log shall be yarded and decked at the above described location.

Section 42 (B) Miscellaneous:

- (1) The Government, at its option, may administratively check scale any portion of the timber removed from the Contract Area, and if necessary, conduct check scaling of independent scalers contracted to BLM for administrative check scaling purposes. The Purchaser hereby agrees to make such contract timber available for such scaling at a location or locations to be approved in writing by the Authorized Officer. At the approved location or locations, the Purchaser shall provide an area for logs to be safely rolled out for scaling, to unload logs from trucks, place logs in a manner so that both ends and three faces of each log are visible for scaling, and to reload or remove logs after scaling has been completed. In the event that BLM elects to administratively check scale, and if such check scaling causes a delay in log transportation time, an adjustment will be made to the purchase price as follows: if the entire sale is check scaled, the purchase price of this contract shall be reduced by Eight Thousand Nine Hundred Forty-six and 00/100 dollars (\$8,946.00); in the event only a portion of the contract timber is scaled, the purchase price shall be reduced by that portion of Eight Thousand Nine Hundred Forty-six and 00/100 dollars (\$8,946.00) which is equal to the percentage of timber sold which was actually scaled by the Government. For purposes of computing this price reduction, the percentage of timber sold which has been scaled shall be determined by the Government. Any reduction in purchase price under the terms of this provision shall be full compensation to the Purchaser for any expense or loss incurred as a result of such scaling. Scaling shall be conducted in accordance with the Eastside (Scribner Decimal C) Rules by BLM scalers, and/or independent scalers contracted to BLM. A copy of the scale report will be made available to Purchaser upon request.

Section 42 (C) Environmental Protection:

- (1) In addition to the requirements set forth in Section 26 of this contract, the Purchaser shall clean road surfaces, cut banks, landings, ditch lines and culverts of all debris created by logging operations.
- (2) In addition to the requirements set forth in Section 26 of this contract, the Purchaser shall steam clean or pressure wash all logging and road building equipment, except logging trucks, prior to initial move-in, to minimize the likelihood of spreading noxious weeds and non-native plant species to the Contract Area. Equipment washing shall occur at a location approved by the Authorized Officer. Equipment will be visually inspected by the Authorized Officer prior to use. Any logging or road building equipment removed from the Contract Area during the duration of the contract must be steam cleaned or pressure washed before it is returned to the Contract Area. Cleaning shall be defined as removal of all dirt, grease, plant parts and material that may carry noxious weed seeds.
- (3) In addition to the requirements set forth in Section 26 of this contract, the Purchaser shall winterize all native surfaced roads used under Section 42(D)(1) or any portion thereof, in accordance with the plans and specifications shown on Exhibit D, which is attached hereto and made a part hereof, and in accordance with the following stipulations:
 - (a) The Purchaser intends to use the native surfaced roads or portions thereof for more than a single operating season; or, circumstances require that the roads or portions thereof overwinter before decommissioning.
 - (b) Winterizing shall consist of water-barring, blocking and mulching to the satisfaction of the Authorized Officer.
 - (c) Winterizing shall take place prior to the end of the operating season as described in Section 42(A)(12) of this contract, or as directed by the Authorized Officer.
- (4) In addition to the requirements set forth in Section 26 of this contract, the Purchaser shall, upon completion of logging operations, perform subsoiling operations on approximately five (5.0) miles of landings, and main skid trails, and associated compacted areas such as turnouts, truck turnarounds and log decking areas as designated by the Authorized Officer and in accordance with the following stipulations:
 - (a) All subsoiling equipment shall be inspected and approved by the Authorized Officer before subsoiling begins.
 - (b) The compacted surfaces shall be subsoiled (broken up, loosened, and de-compacted) using excavator attachments, log loader tongs or other approved equipment.
 - (c) Slash and other organic debris and some topsoil will be spread over the subsoiled surface to cover at least fifty (50) percent of the subsoiled area, where levels of this material are available. Waterbars shall be constructed concurrently with subsoiling operations on grades steeper than 10 percent, as directed by the Authorized Officer.

- (d) Subsoiling shall occur during the same dry season as ground-based harvesting as described in 42(A)(7)(b), unless otherwise approved by the Authorized Officer.
 - (e) Subsoiling shall be completed to a minimum depth of eighteen (18) inches below the ground surface, unless otherwise approved by the Authorized Officer.
 - (f) Treated areas shall span the total width of compaction, as identified by the Authorized Officer. At least 80 percent of the compacted soil profile shall be shattered. No more than 50 percent of the treated soil shall have clods greater than two (2) inches in diameter, unless otherwise approved by the Authorized Officer.
 - (g) Subsoiling shall not occur within a five foot radius of the boles of residual trees where major roots can be cut, mangled or pulled, unless otherwise directed by the Authorized Officer.
 - (h) Equipment shall not be allowed to operate on slopes in excess of thirty-five (35) percent or to cross streams or drainages unless approved by the Authorized Officer.
- (5) The Purchaser shall immediately discontinue specified construction or timber harvesting operations upon written notice from the Contracting Officer that:
- (a) Threatened or endangered plants or animals protected under the Endangered Species Act of 1973, as amended, may be affected by the operation, and a determination is made that consultation or reinitiation of consultation is required concerning the species prior to continuing operation, or;
 - (b) When, in order to comply with the Endangered Species Act, the Contracting Officer determines it may be necessary to modify or terminate the contract, or;
 - (c) Federal proposed, federal candidate, Bureau sensitive or State listed species protected under BLM Manual 6840 - Special Status Species Management - have been identified, and a determination is made that continued operations would affect the species or its habitat, or;
 - (d) Other active raptor nests have been discovered, and a determination is made that continued operations under this contract would adversely affect the present use of the discovered nesting area by the raptor, or;
 - (e) When, in order to comply with a court order which enjoins operations on the sale or otherwise requires the Bureau of Land Management to suspend operations, or;
 - (f) When, in order to comply with a court order, the Contracting Officer determines it may be necessary to modify or terminate the contract;

- (g) Species have been discovered which were identified for protection through Survey and Manage and/or protection buffer standards and guidelines established in the ROD and RMP, and the Contracting Officer determines that continued operations would affect the species or its habitat, or;
- (h) When, in order to protect species which were identified for protection through survey and manage and/or protection buffer standards and guidelines established in the ROD and RMP, the Contracting Officer determines it may be necessary to modify or terminate the contract.

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

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

In the event of a suspension period or a combination of suspension periods that exceed a total of thirty (30) days, the First Installment held on deposit may be temporarily reduced upon the written request of the Purchaser. For the period of suspension extending beyond thirty (30) days, the First Installment on deposit may be reduced to five (5) percent of the First Installment amount listed in Section 3(b) of the contract. Any First Installment amount temporarily reduced may be refunded or transferred to another BLM contract at the request of the Purchaser. However, if the Purchaser has outstanding debt owing the United States, the Contracting Officer must first apply the amount of First Installment that could be refunded to the debt owed in accordance with the Debt Collection Improvement Act, as amended (31 USC 3710, *et seq.*). Upon Purchaser's receipt of a bill for collection and written notice from the Contracting Officer lifting the suspension, the Purchaser shall restore the First Installment to the full amount shown in Section 3(b) of the contract within fifteen (15) days after the bill for collection is issued, subject to Section 3(j) of the contract. The Purchaser shall not resume contract operations until the First Installment amount is fully restored.

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

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

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

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

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

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

Section 42 (D) Road Construction, Maintenance & Use:

- (1) Purchaser shall construct: Spurs 1, 2, 3, 4, 6, 8, 9, 11, 13 (portion), 16, 17, 22, 23 (portion), and 24; and Road 26-2-28.0 Segment B. Purchaser shall renovate: Spurs 5, 7, 10, 12, 13 (portion), 14, 15, 18, 19, 20, 21, 23 (portion), and 25; Road 26-2-19.0 Segment A; Road 26-2-20.0 Segment A1 (portion); Road 26-2-20.1 Segment A; Road 26-2-21.0 Segments C (portion), D1, D2, D3, D4, and D5 (portion); Road 26-2-28.0 Segment A; Road 26-2-29.1 Segment A (portion); Road 26-2-29.3 Segment A; Road 26-2-30.2 Segment A (portion); Road 26-2-31.0 Segment A; Road 26-2-31.1 Segment A (portion); Road 26-2-31.2 Segments B (portion) and C; Road 26-2-31.5 Segment A (portion); Road 26-2-31.6 Segment A1 (portion); Road 26-2-32.2 Segments A and B; Road 26-3-13.0 Segments A, B, C, D, E and F; and Road 26-3-25.3 Segment A. Any required construction or renovation shall be completed in strict accordance with the plans and specifications shown on Exhibit C, which is attached hereto and made a part hereof. Any required construction or renovation of structures and roads shall be completed prior to the removal of any timber, except right-of-way timber, over that road.

- (2) No road construction or renovation shall be conducted 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) Upon completion of logging operations, the following roads and spurs shall be decommissioned in strict accordance with the plans and specifications shown on Exhibit D: Road 26-2-19.0 Segment A; Road 26-2-20.1 Segment A; Road 26-2-28.0 Segments A and B; and Spurs 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23 and 24.
- (4) The Purchaser is authorized to use the roads listed and shown on Exhibit D which are under the jurisdiction of the Bureau of Land Management for the removal of Government timber sold under the terms of this contract provided that the Purchaser pay the required maintenance and rockwear obligations described in Section 42(D)(5). Any road listed on Exhibit D and requiring construction or renovation in Exhibit C of this contract shall be maintained by the Purchaser until receiving written acceptance of the construction 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.
- (5) The Purchaser shall pay the Government a road maintenance and rockwear obligation in the amount of Forty-seven Thousand One Hundred Seven and 01/100 dollars (\$47,107.01) for the transportation of timber included in the contract price over roads listed on the Exhibit D. The above road rockwear and maintenance amount is for use of sixteen (16.0) 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 00/100 dollars (\$500.00) payable in the same manner as and together with payments required in Section 3 of this contract.
- (6) The Purchaser shall perform any required road repair and maintenance work on roads used by them, under the terms of Exhibit D of this contract.
- (7) The Purchaser also agrees that if they elect to use any other private road which is the subject of a right-of-way agreement with the Government for the removal of Government timber sold under the terms of this contract, the Purchaser shall request and agree to the modification of this contract to provide for such use and for allowances for amortization of the Government's share of the capital investment of any such road.

IF OTHER THAN FIA TIMBER GROWTH MASTER, LLC PURCHASES:

- (8) In the use of Road 26-3-1.1 Segment D (base), Road 26-3-13.0 Segment A (base), Road 26-3-13.0 Segment B (base), Road 26-3-13.0 Segment C (base), Road 26-3-13.0 Segment D (base), and Road 26-3-13.0 Segment E (base), the Purchaser shall comply with the conditions, including but not limited to those set out below, of the Right-of-Way and Road Use Agreement No. R-698, dated February 17, 1966, between the United States of America and FIA Timber Growth Master, LLC, available for inspection at the Bureau of Land Management, Roseburg District Office, 777 N.W. Garden Valley Blvd., Roseburg, Oregon 97471. These conditions include:

- (a) Prior to the use of said roads, the Purchaser shall furnish the Authorized Officer a copy of the executed license agreement.
- (b) Payment of a road use obligation in the amount of Four Thousand Twenty-five and 60/100 dollars (\$4,025.60).
- (c) Default by the Purchaser of said Right-of-Way and Road Use Agreement, or any License Agreement executed pursuant thereto, for failure to pay appropriate road use fees or road maintenance fees shall be considered a violation of this contract. The amount of unpaid fees shall be considered as the amount of damage suffered by the Government as a result of the violation of this provision.

IF FIA TIMBER GROWTH MASTER, LLC PURCHASES:

- (9) In accordance with 43 CFR 2812.6-2(a)(5), the following allowances have been made for amortization on capital investment of the road covered by Right-of-Way and Road Use Agreement No. R-698, dated February 17, 1966, with the Purchaser: Four Thousand Twenty-five and 60/100 dollars (\$4,025.60) for Road 26-3-1.1 Segment D (base), Road 26-3-13.0 Segment B (base), Road 26-3-13.0 Segment C (base), Road 26-3-13.0 Segment D (base), and Road 26-3-13.0 Segment E (base).

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

IF OTHER THAN SENECA JONES TIMBER COMPANY PURCHASES:

- (10) In the use of Road 26-2-28.0 Segment A (base), Road 26-2-31.1 Segment A (portion), Road 26-2-31.2 Segment B, Road 26-2-31.3 Segment A (imp), Road 26-2-31.5 Segment A (portion), Road 26-2-32.1 Segment A (base), Road 26-2-32.1 Segment C (portion), Road 26-2-32.2 Segment A, Road 26-2-32.3 Segments A (imp) and B, Road 26-3-34.2 Segment A, Road 26-3-34.2 Segment C1, Road 26-3-34.2 Segment D and Road 26-3-34.2 Segment F (portion), the Purchaser shall comply with the conditions, including but not limited to those set out below, of the Right-of-Way and Road Use Agreement No. R-913, dated August 17, 1977, between the United States of America and Seneca Jones Timber Company, available for inspection at the Bureau of Land Management, Roseburg District Office, 777 N.W. Garden Valley Blvd., Roseburg, Oregon 97471. These conditions include:
 - (a) Prior to the use of said roads, the Purchaser shall furnish the Authorized Officer a copy of the executed license agreement.
 - (b) Payment of a rockwear and maintenance obligation in the amount of Sixty-six Thousand Two Hundred Seventy and 82/100 dollars (\$66,270.82).
 - (c) Payment for right-of-way timber from the construction of Spur 1 and associated yarding wedge located in NW $\frac{1}{4}$ NE $\frac{1}{4}$ Section 30, T. 26 S., R. 2 W., W.M., prior to cutting as follows:

Number of Trees	Species	Estimated Volume (MBF)	Appraised Price per MBF	Value
11	Douglas-fir	0.3	\$307.20	\$92.16

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

Section 42 (E) Fire Prevention and Control:

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

Section 42 (F) Slash Disposal and Site Preparation:

- (1) Fire Hazard Reduction. In addition to the requirements of Section 15 of this contract, and notwithstanding the Purchaser's satisfactory compliance with state laws and regulations regarding offsetting or abating the additional fire hazard created by this operation and the State's willingness to release the Purchaser from liability for such hazard, the Purchaser shall remain responsible to the Government for performance of the following hazard reduction measures required by this contract:
- (a) Slash, as defined for this section, shall mean all material (brush, limbs, tops, unmerchantable stems and chunks) severed or knocked over as a result of the Purchaser's operations under the terms of this contract.
 - (b) Landings shall be piled and covered within thirty (30) days of the completion of yarding from each landing.
 - (c) Covering of slash piles shall be done concurrently with piling operations. The covers shall be firmly fixed to each pile.
 - (d) Finished piles shall be tight and free of earth.
 - (e) Machine pile and cover all slash within fifty (50) feet of all landings or other locations as directed by the Authorized Officer in accordance with the following specifications:
 - (1) Landing slash piles shall be capped with a ten (10) foot by ten (10) foot cover of four (4) mil black plastic to maintain a dry ignition point.
 - (2) Slash piles shall be located away from unit boundaries, retention trees, snags, downed logs and stumps.

- (f) Hand pile and cover all slash approximately three (3) to six (6) inches in diameter within two hundred (200) feet each side of the ridge top in Harvest Areas 1 and 2, and within 50 feet each side of designated roads in Harvest Areas 1, 2 and 3 as shown on Exhibit E, which is attached hereto and made a part hereof, and as directed by the Authorized Officer in accordance with the following specifications:
- (1) All slash more than two (2) feet long and between three (3) and six (6) inches in diameter at the large end shall be hand piled and covered.
 - (2) Piles shall be located away from unit boundaries, retention trees, snags, downed logs and stumps.
 - (3) 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. Piles shall be stacked in a manner directed by the Authorized Officer.
 - (4) Covering shall be done concurrently with piling. A minimum of fifty (50) percent of each pile shall be covered using four (4) mil black plastic to maintain a dry ignition point. The covers shall be firmly fixed to each pile as determined by the Authorized Officer.
 - (5) Hand piling and covering shall begin within thirty (30) days and shall be completed no later than ninety (90) days following the completion of logging operations in each harvest area.
- (2) Notwithstanding the provisions of Section 15 of this contract, the Government shall assume all obligations for disposal or reduction of fire hazards created by the Purchaser's operations on Government lands, except for burning and mop-up assistance 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 the Purchaser's own expense, the services of personnel and equipment on each unit as shown below:

For igniting and burning landing piles and hand piles in all Harvest Areas, the Purchaser shall provide one (1) eight (8) person hand crew including a designated crew foreman. The crew shall be equipped with fuel, ten (10) drip torches or propane burners, four (4) fire shovels, four (4) pulaskis, one (1) power saw and enough radios to facilitate inter-crew communications. All crew members must have a current qualification card for FFT2 or higher. 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 above.

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 area with the following personal safety equipment: lug-soled leather boots with minimum eight (8) inch uppers that provide ankle support; an approved hardhat; leather gloves; long pants and a long sleeve shirt made of approved aramid fabric (Nomex or equivalent); and 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.

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 a 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 shall also be responsible for such additional costs.

Section 42 (G) Optional Contributions:

- (1) The Purchaser shall assist in burning as described in Section 42(F)(2). 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 Eleven Thousand Eight Hundred Ninety and 58/100 dollars (\$11,890.58) and upon making such contribution, the Purchaser shall be relieved of the obligations set out in these subsections. The amount of the contribution shown above shall be paid prior to cutting. The Purchaser shall notify the Authorized Officer of his intention to make this contribution upon execution of this contract.

Section 42 (H) Log Exports:

- (1) All timber sold to the Purchaser under the terms of this contract, except exempted species, is restricted from export from the United States in the form of unprocessed timber, and is prohibited from being used as a substitute for exported private timber. For the purpose of this contract, unprocessed timber is defined as: (1) any logs except those of utility grade or below, such as sawlogs, peeler logs and pulp logs; (2) cants or squares to be subsequently remanufactured exceeding eight and three-quarters (8¾) inches in thickness; (3) split or round

bolts or other roundwood not processed to standards and specifications suitable for end-product uses; or (4) western red cedar lumber which does not meet lumber of American Lumber Standards Grades of Number 3 dimension or better, or Pacific Lumber Inspection Bureau R-List Grades of Number 3 Common or better. Thus, timber manufactured into the following will be considered processed: (1) lumber and construction timber, regardless of size, manufactured to standards and specifications suitable for end-product uses; (2) chips, pulp and pulp products; (3) green or dry veneer and plywood; (4) poles and piling cut or treated for use as such; (5) cants, squares and lumber cut for remanufacturing of eight and three-quarters (8¾) inches in thickness or less; (6) shakes and shingles.

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

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

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

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

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

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

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

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

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

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

Note: This matrix is intended to serve prospective purchasers as a guide only.

Seasonal restrictions are cross-hatched.



Refer to the contract Special Provisions for a full statement of the seasonal operating restrictions.

Harvest Area	Activity	Jan		Feb		Mar		Apr		May		June		July		Aug			Sept		Oct		Nov		Dec	
		1	15	1	15	1	15	1	15	1	16	1	15	1	16	1	5	16	1	15	1	15	1	15	1	15
1 Cable/ Ground	Right-of-way logging and clearing, road construction, renovation ¹																									
	Falling and bucking ²																									
	Ground-based yarding ^{2, 3}																									
	Cable yarding on rocked roads ²																									
	Cable yarding on unsurfaced roads ^{1, 2}																									
	Loading or hauling on unsurfaced roads ¹																									
	All operations except hauling within NSO restricted area as shown on Exhibit F ⁴																									
2 Cable/ Ground	Right-of-way logging and clearing, road construction, renovation ¹																									
	Falling and bucking ²																									
	Ground-based yarding ^{2, 3}																									
	Cable yarding on rocked roads ²																									
	Cable yarding on unsurfaced roads ^{1, 2}																									
	Loading or hauling on unsurfaced roads ¹																									
3 Cable/ Ground	Right-of-way logging and clearing, road construction, renovation ¹																									
	Falling and bucking ²																									
	Ground-based yarding ^{2, 3}																									
	Cable yarding on rocked roads ²																									
	Cable yarding on unsurfaced roads ^{1, 2}																									
	Loading or hauling on unsurfaced roads ¹																									

¹ Wet season restriction: unsurfaced roads and all road construction (October 15 – May 15) may be shortened or extended depending on weather conditions.

² Bark slip seasonal restriction (April 15 – July 15) may be conditionally waived.

³ Wet season restriction: ground-based yarding (October 1 – July 15) may be shortened or extended depending on soil moisture and weather conditions.

⁴ Spotted owl seasonal restriction (March 1 - July 15) may be conditionally waived.

Note: This matrix is intended to serve prospective purchasers as a guide only;

Seasonal restrictions are cross-hatched.



Refer to the contract Special Provisions for a full statement of the seasonal operating restrictions.

Harvest Area	Activity	Jan		Feb		Mar		Apr		May		June		July		Aug			Sept		Oct		Nov		Dec	
		1	15	1	15	1	15	1	15	1	16	1	15	1	16	1	5	16	1	15	1	15	1	15	1	15
4 Cable/ Ground	Right-of-way logging and clearing, road construction, renovation ¹																									
	Falling and bucking ²																									
	Ground-based yarding ^{2,3}																									
	Cable yarding on rocked roads ^{2,4}																									
	Loading or hauling on unsurfaced roads ¹																									
	All operations within NSO restricted area as shown on Exhibit F ⁴																									
5 Cable	Right-of-way logging and clearing, road construction, renovation ¹																									
	Falling and bucking ²																									
	Ground-based yarding ^{2,3}																									
	Cable yarding on rocked roads ²																									

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⁴ Spotted owl seasonal restriction (March 1 – July 15) may be conditionally waived.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

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

LUMP SUM SALE

Tract Number
(1) 2014.0004
Sale Name
Big Thunder
Sale Notice (dated)
May 27, 2014 (Sale date 06/24/2014)
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 \$ **150,500.00** and is enclosed in for form of ☐ cash ☐ money order ☐ bank draft

☐ cashier's check ☐ certified check ☐ bid bond of corporate surety on approved list of the United States Treasury

☐ guaranteed remittance approved by the authorized officer.

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

BID SCHEDULE - LUMP SUM SALE

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

BID SUBMITTED (Est. Volume MBF 16' Log)					ORAL BID MADE	
PRODUCT SPECIES	UNIT	ESTIMATED VOLUME OR QUANTITY	UNIT PRICE	TOTAL VALUE	UNIT PRICE	TOTAL VALUE
Douglas-fir	MBF	8,209	x	=	x	=
Grand Fir	MBF	1,636	x	=	x	=
Western Hemlock	MBF	1,324	x	=	x	=
Western Redcedar	MBF	471	x	=	x	=
Incense-cedar	MBF	286	x	=	x	=
Sugar Pine	MBF	2	x	=	x	=
	MBF		x	=	x	=
	MBF		x	=	x	=
	MBF		x	=	x	=
	MBF		x	=	x	=
	MBF		x	=	x	=
	MBF		x	=	x	=
	MBF		x	=	x	=
	MBF		x	=	x	=
TOTAL	MBF	11,928		=	x	=
TOTAL PURCHASE PRICE						

(Continued on reverse)

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

Bid submitted on *(date)*

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

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

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

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

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

Response to this request is required to obtain a benefit.

NOTICE

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

AUTHORITY: 38 FR 6280 and 43 CFR 5442.1

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

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

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

BURDEN HOURS STATEMENT

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

INSTRUCTIONS TO BIDDERS

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

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

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

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

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

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

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

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

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

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

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

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

*Applies to Timber Only

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

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

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

10. PERFORMANCE BOND —

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

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

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

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

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

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

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

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

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

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

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

Township 26 South, Range 2 West, Sections 19, 20, 29, 30, 31, Willamette Meridian

HARVEST AREA	HARVEST ACRES	HARVEST METHOD
<div>1</div>	271	CABLE/GROUND
<div>2</div>	264	CABLE/GROUND
<div>3</div>	62	CABLE/GROUND
<div>4</div>	31	CABLE/GROUND
<div>5</div>	24	CABLE/GROUND
Total	652	

THINNING AREA-----	652	Acres
RIGHT-OF-WAY (CLEARING)-----	5	Acres
TOTAL HARVEST AREA-----	657	Acres
RESERVE AREA -----	909.07	Acres
TOTAL CONTRACT AREA -----	1566.07	Acres

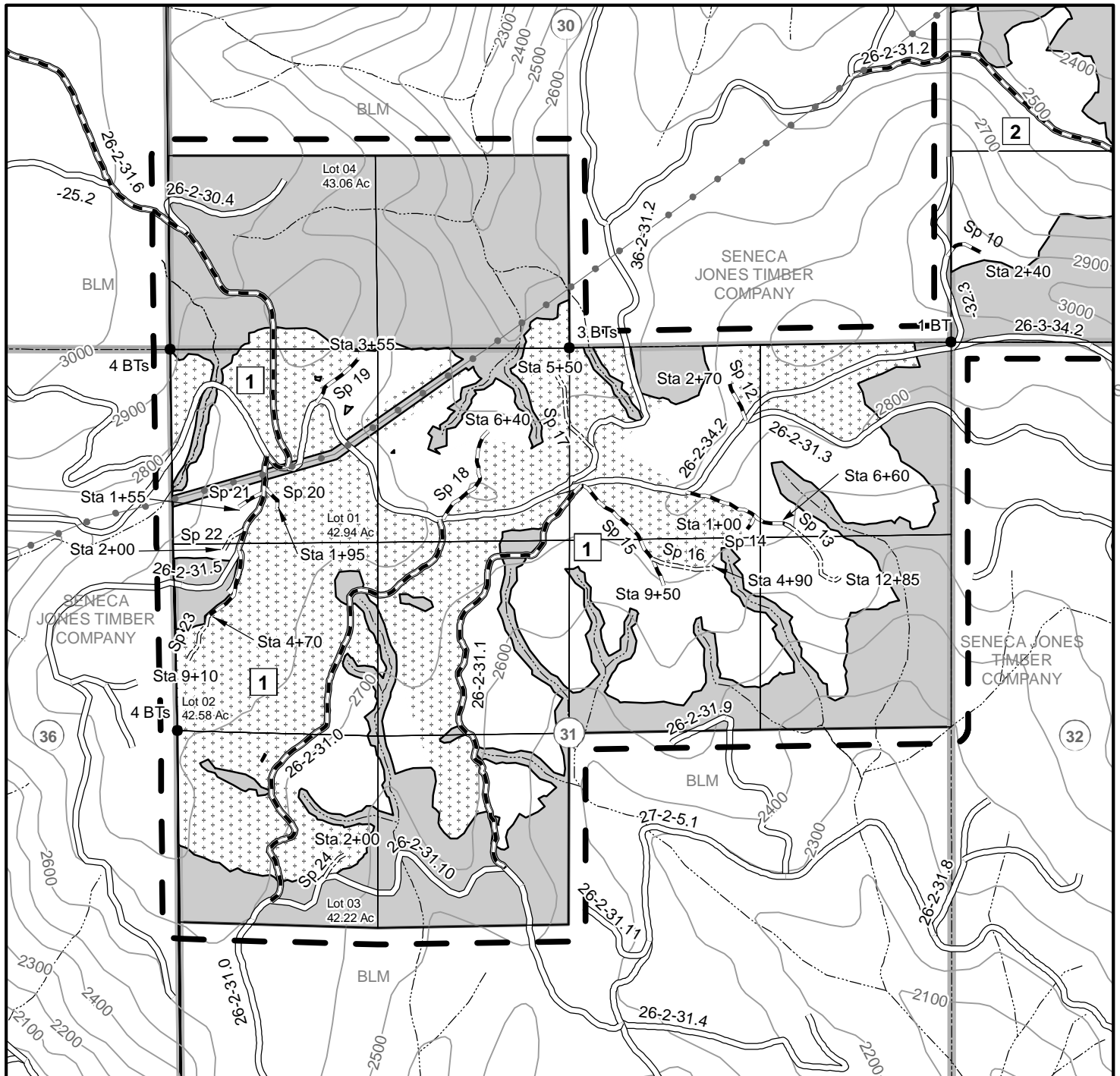
1. Boundaries are posted with tags that read "Boundary of Timber Reserve" and trees are painted orange.
2. Property lines are posted with orange and white tags that read "Timber Cutting Boundary".
3. Clearing limits on road rights-of-ways are posted with tags that read "Right-of-Way".
4. Trees marked with orange paint in all Harvest Areas and on all harvest area boundaries are reserved by the government.
5. Ground-based yarding is limited to dry season operations and slopes 35% or less within the ground-based area shown on Exhibit A, approximately 276 acres.

Note: Acres shown on Exhibit A have been computed using a Trimble Geo XT Global Positioning System receiver and ESRI ArcMap 10.1 GIS software. Acreage was calculated based on Global Positioning System traverse procedures including differential correction.

R03W

R02W

T26S



0 500 1,000 1,500 2,000
Feet

Legend

- === Road Construction
- Road Renovation
- Existing Road
- Streams
- Transmission Line
- Cable Harvest
- Ground Harvest
- Reserve Area
- Contract Area
- Survey Corner Found



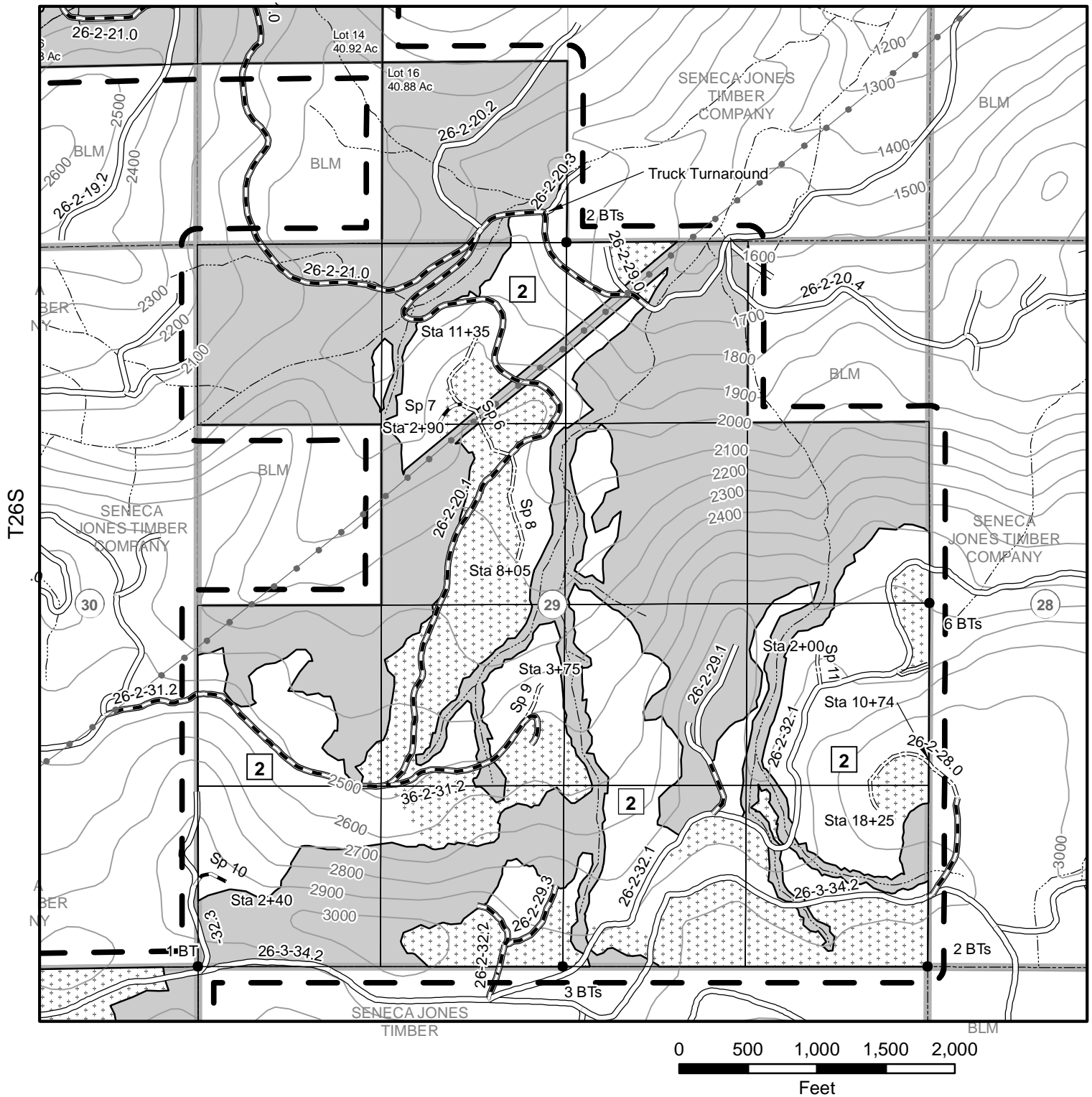
1:12,000 1 inch = 1,000 feet
5/14/2014



Roseburg District
Bureau of Land Management
777 NW Garden Valley Blvd.
Roseburg, Oregon 97471

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R02W



Legend

- == Road Construction
- == Road Renovation
- == Existing Road
- == Undrivable_Roads
- Streams
- Transmission Line
- Cable Harvest
- Ground Harvest
- Reserve Area
- Contract_Area
- Survey Corner Found



1:12,000 1 inch = 1,000 feet

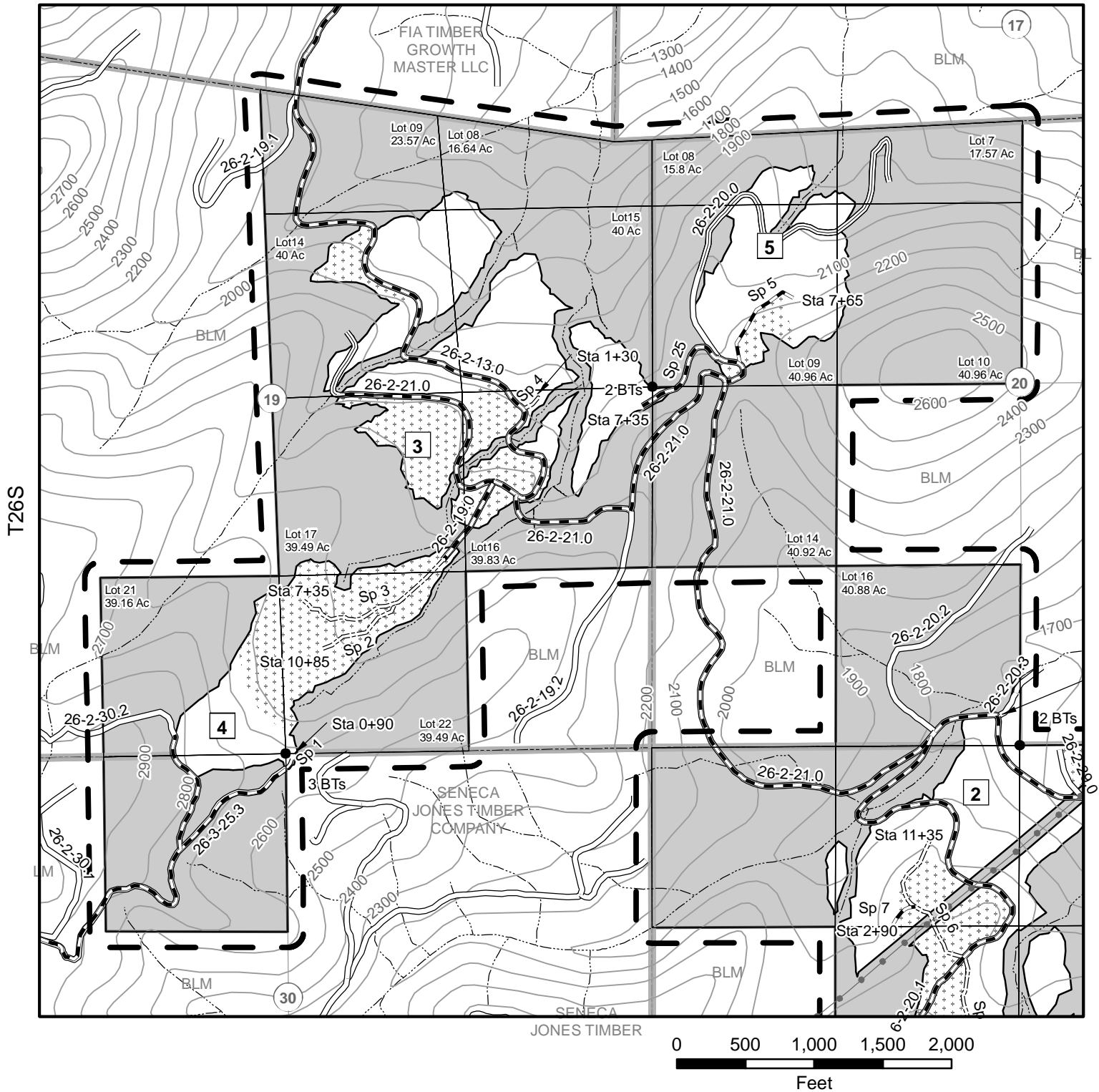
5/14/2014

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R02W



Legend

- ==: Road Construction
- : Road Renovation
- : Existing Road
- : Undrivable_Roads
- : Streams
- : Transmission Line
- : Cable Harvest
- : Ground Harvest
- : Reserve Area
- : Contract_Area
- : Survey Corner Found



1:12,000 1 inch = 1,000 feet

5/14/2014

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UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

EXHIBIT B / PRE-SALE

5450-3

Contract No.

ORR04-TS-2014.0004

Big Thunder

The following estimates and calculations of value of timber sold are made solely as an administrative aid for determining: (1) adjustments made or credits given in accordance with Secs. 6, 9, or 11; (2) when payments are due; and (3) value of timber subject to any special bonding provisions. The value of timber will be determined by multiplying the value per acre as shown below, times the amount of acreage as determined by the Authorized Officer, which has been cut or removed or designated for taking. Except as provided in Sec. 2, Purchaser shall be liable for total purchase price even though quantity of timber actually cut or removed or designated for taking is less than the estimated volume or quantity shown. Cutting areas are shown on **Exhibit A**.

SPECIES	ESTIMATED VOLUME OR QUANTITY (Units Specified)		PRICE PER UNIT	ESTIMATED VOLUME OR QUANTITY X UNIT PRICE
Douglas Fir	8,209.0	MBF	\$149.20	\$1,224,782.80
Grandfir	1,636.0	MBF	\$56.20	\$91,943.20
Western Hemlock	1,324.0	MBF	\$55.70	\$73,746.80
Western Redcedar	471.0	MBF	\$208.00	\$97,968.00
Incense-cedar	286.0	MBF	\$54.80	\$15,672.80
Sugar Pine	2.0	MBF	\$53.80	\$107.60
TOTALS	11,928.0	MBF		\$1,504,221.20

The apportionment of the total purchase price is as follows:

Unit 1

Grandfir	1,030.0	MBF	X	\$56.20	=	\$57,886.00
Western Hemlock	405.0	MBF	X	\$55.70	=	\$22,558.50
Western Redcedar	62.0	MBF	X	\$208.00	=	\$12,896.00
Incense-cedar	226.0	MBF	X	\$54.80	=	\$12,384.80
Douglas Fir	3,801.0	MBF	X	\$149.20	=	\$567,109.20
Total	5524.0	Mbf				\$672,834.50 ÷ 271.0 acres = \$2,482.78/Acre

Unit 2

Douglas Fir	2,678.0	MBF	X	\$149.20	=	\$399,557.60
Grandfir	387.0	MBF	X	\$56.20	=	\$21,749.40
Western Hemlock	615.0	MBF	X	\$55.70	=	\$34,255.50
Western Redcedar	269.0	MBF	X	\$208.00	=	\$55,952.00
Incense-cedar	32.0	MBF	X	\$54.80	=	\$1,753.60
Total	3981.0	Mbf				\$513,268.10 ÷ 264.0 acres = \$1,944.20/Acre

Unit 3

Douglas Fir	629.0	MBF	X	\$149.20	=	\$93,846.80
Grandfir	91.0	MBF	X	\$56.20	=	\$5,114.20
Western Hemlock	144.0	MBF	X	\$55.70	=	\$8,020.80
Western Redcedar	63.0	MBF	X	\$208.00	=	\$13,104.00
Incense-cedar	8.0	MBF	X	\$54.80	=	\$438.40
Total	935.0	Mbf				\$120,524.20 ÷ 62.0 acres = \$1,943.94/Acre

Unit 4

Douglas Fir	315.0	MBF	X	\$149.20	=	\$46,998.00
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UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

EXHIBIT B / PRE-SALE

5450-3

Contract No.

ORR04-TS-2014.0004

Big Thunder

The following estimates and calculations of value of timber sold are made solely as an administrative aid for determining: (1) adjustments made or credits given in accordance with Secs. 6, 9, or 11; (2) when payments are due; and (3) value of timber subject to any special bonding provisions. The value of timber will be determined by multiplying the value per acre as shown below, times the amount of acreage as determined by the Authorized Officer, which has been cut or removed or designated for taking. Except as provided in Sec. 2, Purchaser shall be liable for total purchase price even though quantity of timber actually cut or removed or designated for taking is less than the estimated volume or quantity shown. Cutting areas are shown on **Exhibit A**.

Unit 4

Grandfir	45.0 MBF	X	\$56.20	=	\$2,529.00
Western Hemlock	72.0 MBF	X	\$55.70	=	\$4,010.40
Western Redcedar	31.0 MBF	X	\$208.00	=	\$6,448.00
Incense-cedar	4.0 MBF	X	\$54.80	=	\$219.20
Total	467.0 Mbf				\$60,204.60 ÷ 31.0 acres = \$1,942.08/Acre

Unit 5

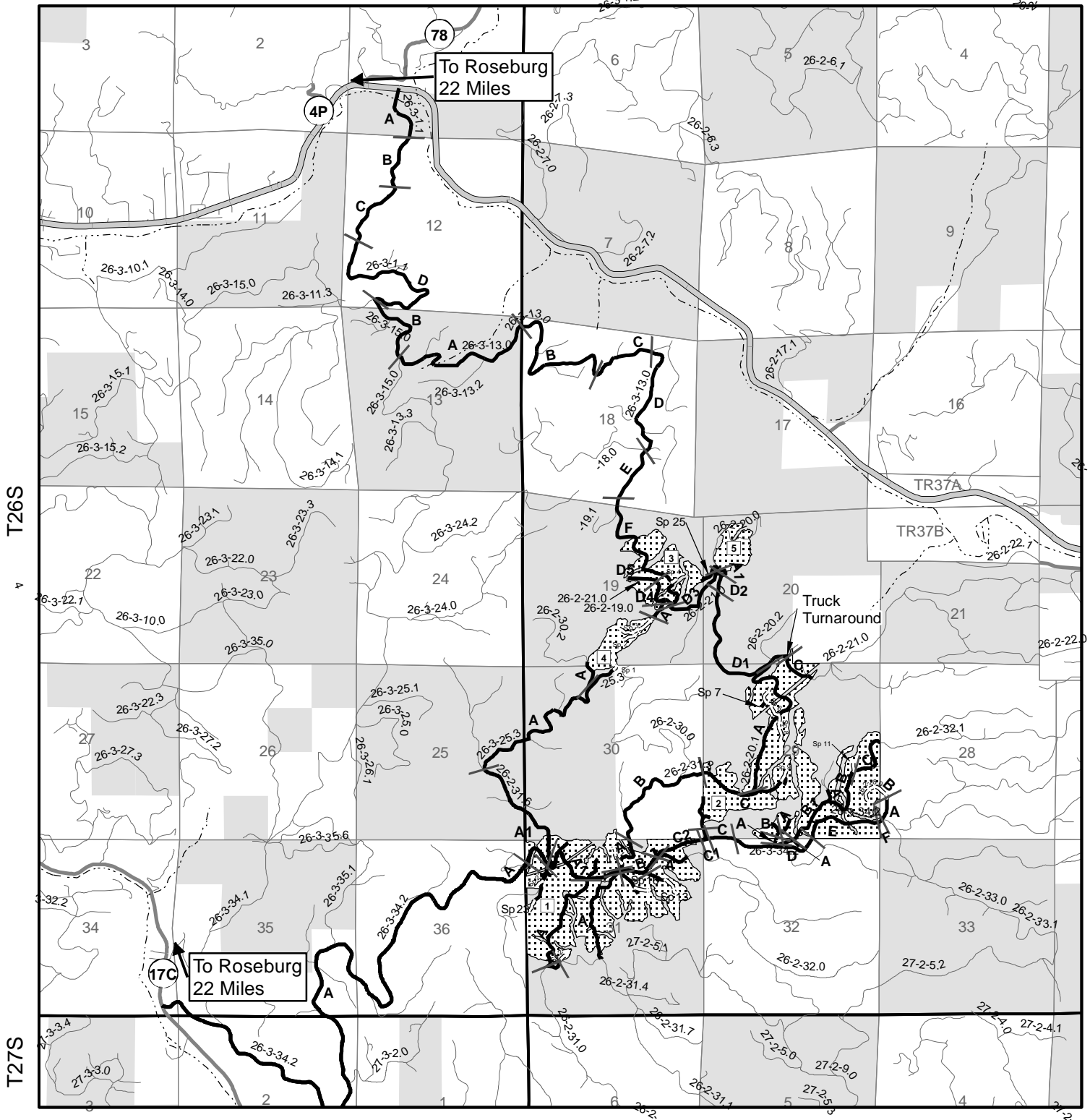
Douglas Fir	243.0 MBF	X	\$149.20	=	\$36,255.60
Grandfir	35.0 MBF	X	\$56.20	=	\$1,967.00
Western Hemlock	56.0 MBF	X	\$55.70	=	\$3,119.20
Western Redcedar	24.0 MBF	X	\$208.00	=	\$4,992.00
Incense-cedar	3.0 MBF	X	\$54.80	=	\$164.40
Total	361.0 Mbf				\$46,498.20 ÷ 24.0 acres = \$1,937.43/Acre

Unit RW

Douglas Fir	543.0 MBF	X	\$149.20	=	\$81,015.60
Grandfir	48.0 MBF	X	\$56.20	=	\$2,697.60
Western Hemlock	32.0 MBF	X	\$55.70	=	\$1,782.40
Western Redcedar	22.0 MBF	X	\$208.00	=	\$4,576.00
Incense-cedar	13.0 MBF	X	\$54.80	=	\$712.40
Sugar Pine	2.0 MBF	X	\$53.80	=	\$107.60
Total	660.0 Mbf				\$90,891.60 ÷ 5.0 acres = \$18,178.32/Acre

R03W

R02W



Legend

- Segment_Break
- Major Stream
- Harvest Area
- BLM Lands
- Haul_Route
- Road Construction

0 0.5 1
Miles

1:50,000

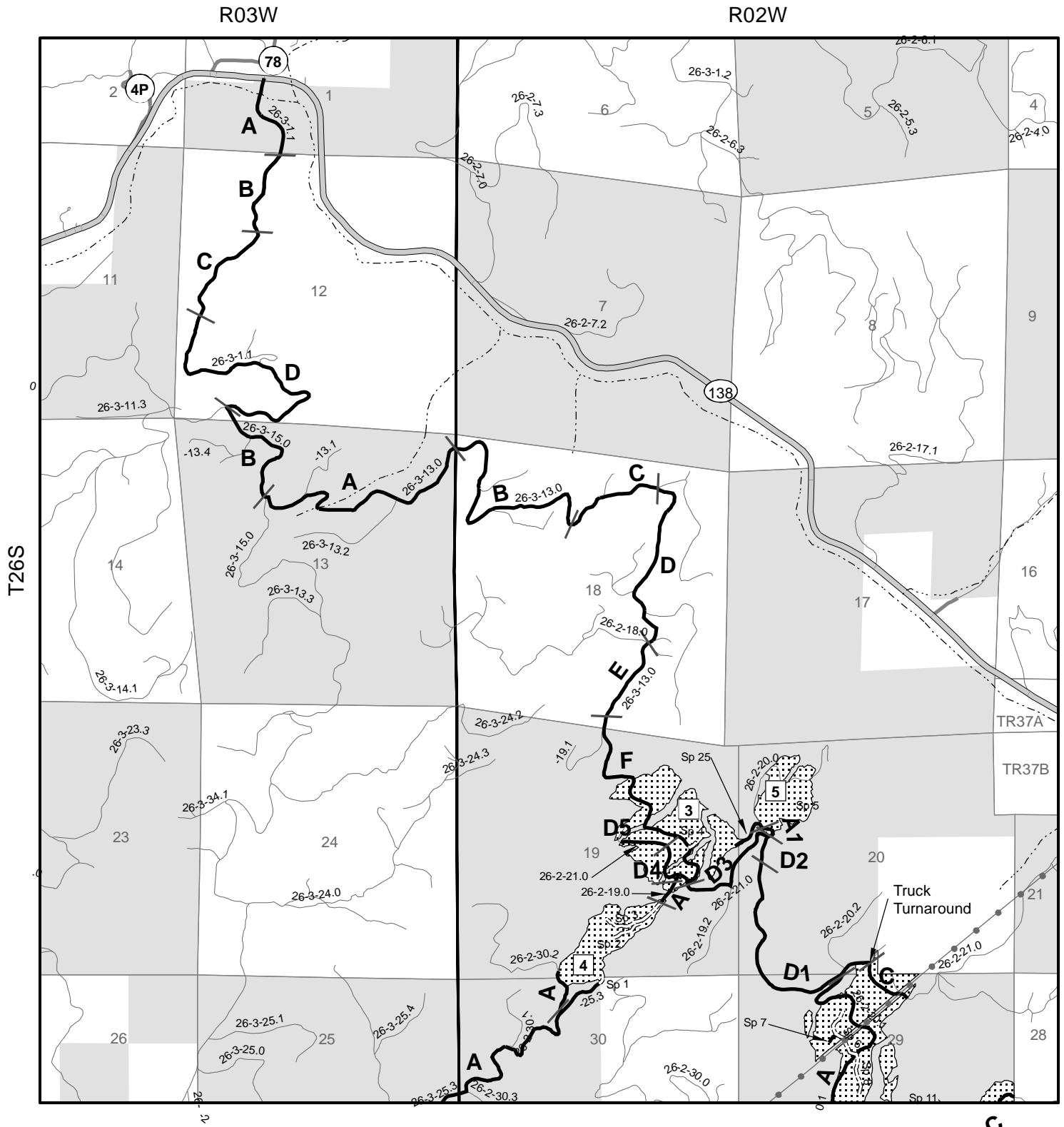


Roseburg District
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5/13/2014

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Legend

- Segment_Break
- Haul_Route
- Road Construction
- Major Stream
- Transmission Line
- Harvest Area
- BLM Lands

0 0.5 1
Miles
1:31,680

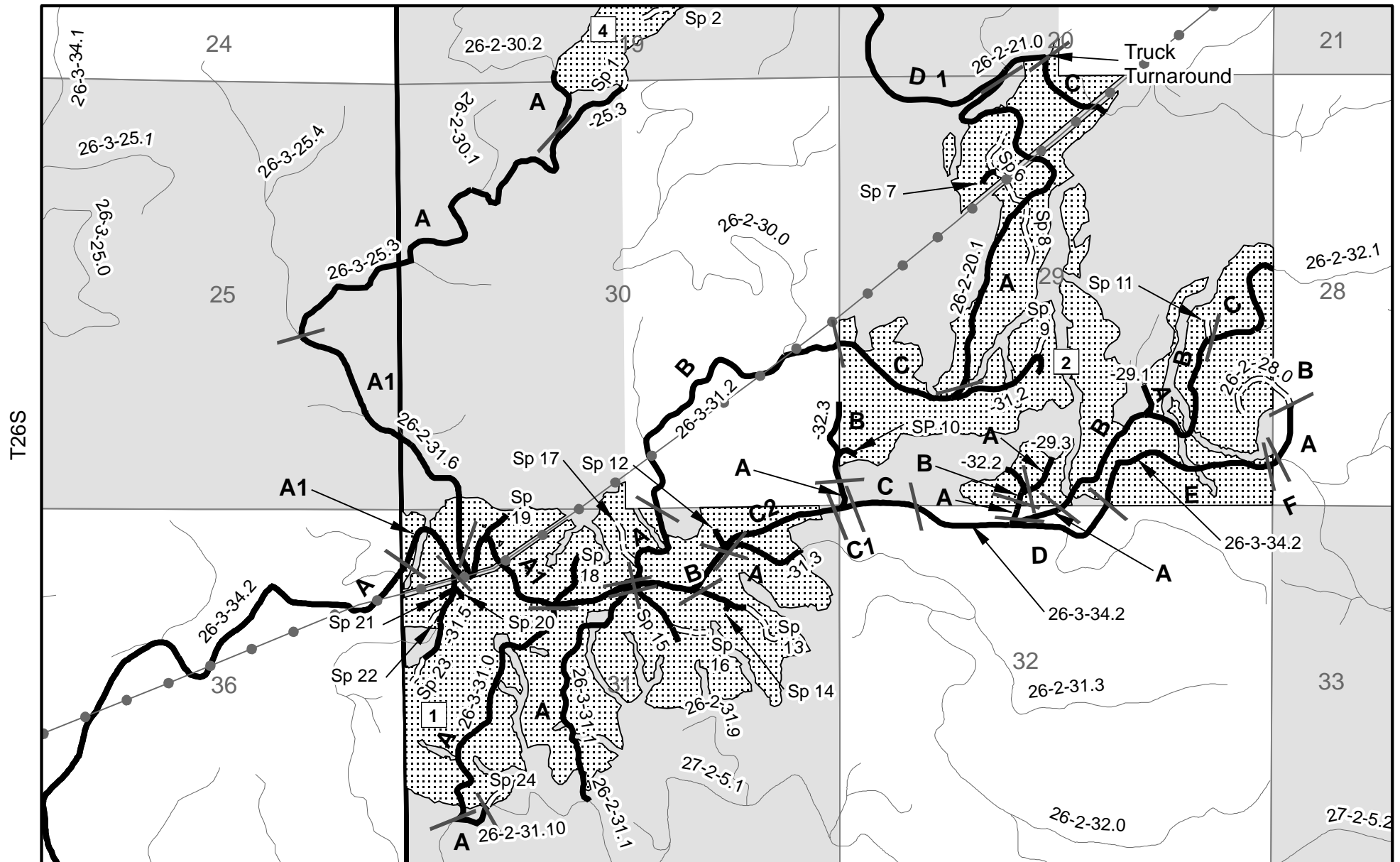


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R02W

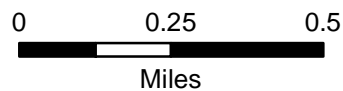


Legend

-  Segment_Break
  Transmission Line
-  Haul_Route
  Harvest Area
-  Road Construction
  BLM Lands



1:20,000



5/13/2014

Roseburg District
Bureau of land management
777 NW Garden Valley Blvd.
Roseburg, Oregon 97471

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Access & Maintenance List
EXHIBIT D

Road Number	Road Seg.	Segment Length	Segment Owner	Road Use Fees	Surface Type	Timber Haul Fees	Maintained By
26-2-19.0	A	0.14	BLM		NATIVE		Purchaser
26-2-20.0	A1(por)	0.07	BLM		ROCK	\$0.49	Purchaser
26-2-20.1	A	1.00	BLM		NATIVE		Purchaser
26-2-21.0	C(por)	0.21	BLM		ROCK	\$1.46	BLM
26-2-21.0	D1	0.81	BLM		ROCK	\$1.46	BLM
26-2-21.0	D2	0.15	BLM		ROCK	\$1.46	BLM
26-2-21.0	D3	0.45	BLM		ROCK	\$1.46	BLM
26-2-21.0	D4	0.17	BLM		ROCK	\$0.49	Purchaser
26-2-21.0	D5(por)	0.20	BLM		ROCK	\$0.49	Purchaser
26-2-28.0	A(base)	0.14	SENECA	Paid Off	NATIVE		Purchaser
26-2-28.0	A(imp)	0.14	BLM		ROCK	\$0.49	Purchaser
26-2-28.0	B	0.21	BLM		ROCK	\$0.49	Purchaser
26-2-29.1	A(por)	0.06	BLM		ROCK	\$0.49	Purchaser
26-2-29.3	A	0.12	BLM		ROCK	\$0.49	Purchaser
26-2-30.2	A(por)	0.24	BLM		ROCK	\$0.49	Purchaser
26-2-31.0	A	0.54	BLM		ROCK	\$0.49	Purchaser
26-2-31.1	A(por)*	0.60	SENECA	Paid Off	ROCK		Purchaser
26-2-31.10	A(por)	0.07	BLM		ROCK	\$0.49	Purchaser
26-2-31.2	A	0.27	BLM		ROCK	\$0.49	Purchaser
26-2-31.2	A(imp)	0.27	SENECA	Paid Off	ROCK		Purchaser
26-2-31.2	B*	0.69	SENECA	Paid Off	ROCK	\$0.49	Purchaser
26-2-31.2	C	0.60	BLM		ROCK	\$0.49	Purchaser
26-2-31.3	A(base)*	0.28	BLM		ROCK	\$0.49	Purchaser
26-2-31.3	A(imp)	0.28	SENECA	Paid Off	ROCK		Purchaser
26-2-31.5	A(por)*	0.14	SENECA	Paid Off	ROCK	\$0.49	Purchaser
26-2-31.6	A1(por)	0.74	BLM		ROCK	\$1.46	BLM
26-2-32.1	A(base)	0.14	SENECA	Paid Off	ROCK	\$1.46	SENECA
26-2-32.1	A(imp)	0.14	BLM		ROCK		SENECA
26-2-32.1	B	0.67	BLM		ROCK	\$1.46	BLM
26-2-32.1	C(por)	0.31	SENECA	Paid Off	ROCK	\$1.46	SENECA
26-2-32.2	A*	0.07	SENECA	Paid Off	ROCK	\$0.49	Purchaser
26-2-32.2	B	0.12	BLM		ROCK	\$0.49	Purchaser
26-2-32.3	A(base)	0.05	BLM		ROCK	\$1.46	BLM
26-2-32.3	A(imp)	0.05	SENECA	Free Use	ROCK		BLM
26-2-32.3	B*	0.22	SENECA	Paid Off	ROCK	\$1.46	BLM
26-3-1.1	A	0.30	BLM		BST	\$0.71	BLM
26-3-1.1	B	0.46	County		ROCK	\$1.25	BLM
26-3-1.1	C	0.32	BLM		ROCK	\$1.25	BLM

* Rockwear fees payable to the segment owner.

**Access & Maintenance List
EXHIBIT D**

Road Number	Road Seg.	Segment Length	Segment Owner	Road Use Fees	Surface Type	Timber Haul Fees	Maintained By
26-3-1.1	D(base)	1.15	FIATGM	\$0.42	ROCK		BLM
26-3-1.1	D(imp)	1.15	BLM		ROCK	\$1.46	BLM
26-3-13.0	A(base)	1.00	FIATGM	Paid Off	ROCK		BLM
26-3-13.0	A(imp)	1.00	BLM		ROCK	\$1.46	BLM
26-3-13.0	B(base)	0.90	FIATGM	\$0.41	ROCK		BLM
26-3-13.0	B(imp)	0.90	BLM		ROCK	\$1.46	BLM
26-3-13.0	C(base)	0.32	FIATGM	\$0.13	ROCK		BLM
26-3-13.0	C(imp)	0.32	BLM		ROCK	\$1.46	BLM
26-3-13.0	D(base)	0.63	FIATGM	\$0.31	ROCK		BLM
26-3-13.0	D(imp)	0.63	BLM		ROCK	\$1.46	BLM
26-3-13.0	E(base)	0.33	FIATGM	\$0.09	ROCK		BLM
26-3-13.0	E(imp)	0.33	BLM		ROCK	\$1.46	BLM
26-3-13.0	F	1.02	BLM		ROCK	\$1.46	BLM
26-3-15.0	B	0.47	BLM		ROCK	\$1.46	BLM
26-3-25.3	A	1.24	BLM		ROCK	\$1.46	BLM
26-3-34.2	A	4.91	SENECA	Paid Off	ROCK	\$1.46	SENECA
26-3-34.2	A1	0.79	BLM		ROCK	\$1.46	BLM
26-3-34.2	B	0.27	BLM		ROCK	\$1.46	BLM
26-3-34.2	C	0.30	BLM		ROCK	\$1.46	BLM
26-3-34.2	C1	0.03	SENECA	Paid Off	ROCK	\$1.46	SENECA
26-3-34.2	C2	0.20	BLM		ROCK	\$1.46	BLM
26-3-34.2	D	0.51	SENECA	Paid Off	ROCK	\$1.46	SENECA
26-3-34.2	E	0.50	BLM		ROCK	\$1.46	BLM
26-3-34.2	F(por)	0.03	SENECA	Paid Off	ROCK	\$1.46	SENECA
Spur 1	A	0.02	BLM		ROCK		Purchaser
Spur 10	A	0.05	BLM		ROCK		Purchaser
Spur 11	A	0.04	BLM		ROCK		Purchaser
Spur 12	A	0.05	BLM		ROCK		Purchaser
Spur 13	A	0.24	BLM		ROCK		Purchaser
Spur 14	A	0.02	BLM		ROCK		Purchaser
Spur 15	A	0.18	BLM		ROCK		Purchaser
Spur 16	A	0.09	BLM		ROCK		Purchaser
Spur 17	A	0.10	BLM		NATIVE		Purchaser
Spur 18	A	0.12	BLM		ROCK		Purchaser
Spur 19	A	0.07	BLM		ROCK		Purchaser
Spur 2	A	0.21	BLM		NATIVE		Purchaser
Spur 20	A	0.04	BLM		NATIVE		Purchaser
Spur 21	A	0.03	BLM		ROCK		Purchaser

* Rockwear fees payable to the segment owner.

Access & Maintenance List
EXHIBIT D

Road Number	Road Seg.	Segment Length	Segment Owner	Road Use Fees	Surface Type	Timber Haul Fees	Maintained By
Spur 22	A	0.04	BLM		ROCK		Purchaser
Spur 23	A	0.17	BLM		NATIVE		Purchaser
Spur 24	A	0.04	BLM		NATIVE		Purchaser
Spur 25	A	0.14	BLM		ROCK		Purchaser
Spur 3	A	0.14	BLM		NATIVE		Purchaser
Spur 4	A	0.02	BLM		ROCK		Purchaser
Spur 5	A	0.14	BLM		ROCK		Purchaser
Spur 6	A	0.22	BLM		NATIVE		Purchaser
Spur 7	A	0.05	BLM		NATIVE		Purchaser
Spur 8	A	0.15	BLM		NATIVE		Purchaser
Spur 9	A	0.07	BLM		ROCK		Purchaser

* Rockwear fees payable to the segment owner.

ROAD MAINTENANCE SPECIFICATIONS

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

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

ROAD MAINTENANCE SPECIFICATIONS

GENERAL - 3000

- 3001 The Purchaser shall be required to maintain all roads listed and/or referenced in Section 42.D., Special Provisions of this contract in accordance with Sections 3000, 3100, 3200, 3300, 3400 and 3500 of this exhibit.
- 3002 The Purchaser shall maintain the cross section of existing dirt or graveled roads to the existing geometric standards. Any roads required to be constructed, improved, or renovated under terms of this contract shall be maintained to the geometric standards required in Exhibit C of this contract.
- 3003 The minimum required maintenance on any roads shall include the provisions specified in Subsections 3101, 3104, and 3105.
- 3004 The Purchaser shall be responsible for providing timely maintenance and cleanup on any roads with logging units substantially completed prior to moving operations to other roads. The maximum length of non-maintained or non-cleanup of the road prism shall not exceed the sum of one (1) mile at any time. Release of maintenance requirements may be granted, upon written request, when the conditions specified in Sections 3300 and 3400 are met satisfactorily.

OPERATIONAL MAINTENANCE - 3100

- 3101 The Purchaser shall blade and shape the road surface and shoulders with a motor grader. Banks shall not be undercut. Back blading with tractors or similar equipment will be allowed only around landings and other areas when approved by the Authorized Officer.
- 3103 The purchaser shall maintain established berms and place additional berms using adjacent material where needed to protect fills as directed 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.

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

ROAD MAINTENANCE SPECIFICATIONS

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. Skidding of logs on the roadway in or outside designated logging units is not authorized without prior written approval by the

Authorized Officer. Repair required caused by such skidding activity is not considered maintenance and shall be repaired at the Purchaser's expense.

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.

ROAD MAINTENANCE SPECIFICATIONS

- 3202 The purchaser shall perform and complete maintenance specified in Sections 3000, 3100, and 3200 on all roads maintained by him, 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 expiration of Purchaser's right to cut and remove timber or 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 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 and 3108a. 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.

ROAD MAINTENANCE SPECIFICATIONS

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 installing water bars, placement of slash and blocking road from access by vehicles. This work is not required for road acceptance under Section 18 of this contract.

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

Road No.	From Sta	To Sta	Decommission
26-2-19.0	0+00	7+50	Blade, water bar, slash, block
26-2-20.1	0+00	59+00	Blade, water bar, seed & mulch
26-2-28.0	0+00	18+25	Blade, water bar, block
Spur 1	0+00	0+90	Blade, water bar
Spur 2	0+00	10+85	Blade, water bar, slash, block
Spur 3	0+00	7+35	Blade, water bar, slash, block
Spur 4	0+00	1+30	Blade, water bar, block
Spur 5	0+00	7+65	Blade, water bar,
Spur 6	0+00	4+20	Blade, water bar, seed & mulch
Spur 6	4+20	11+35	Blade, water bar, slash, block
Spur 7	0+00	2+90	Blade, water bar, slash
Spur 8	0+00	8+05	Blade, water bar, slash, block
Spur 9	0+00	3+75	Blade, water bar, block
Spur 10	0+00	2+40	Blade, water bar, block
Spur 11	0+00	2+00	Blade, water bar, block
Spur 12	0+00	2+70	Blade, water bar, block
Spur 13	0+00	12+85	Blade, water bar, block
Spur 14	0+00	1+00	Blade, water bar
Spur 15	0+00	9+50	Blade, water bar, block
Spur 16	0+00	4+90	Blade, water bar
Spur 17	0+00	5+50	Blade, water bar, slash, block
Spur 18	0+00	6+40	Blade, water bar, block
Spur 19	0+00	3+55	Blade, water bar, block
Spur 20	0+00	1+95	Blade, water bar, slash, block
Spur 21	0+00	1+55	Blade, water bar, block
Spur 22	0+00	2+00	Blade, water bar, block

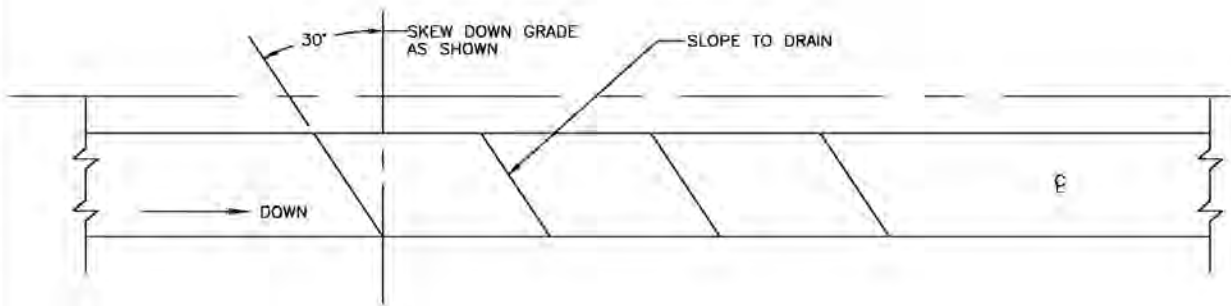
ROAD MAINTENANCE SPECIFICATIONS

Spur 23	0+00	9+10	Blade, water bar, slash, block
Spur 24	0+00	2+00	Blade, water bar, slash, block

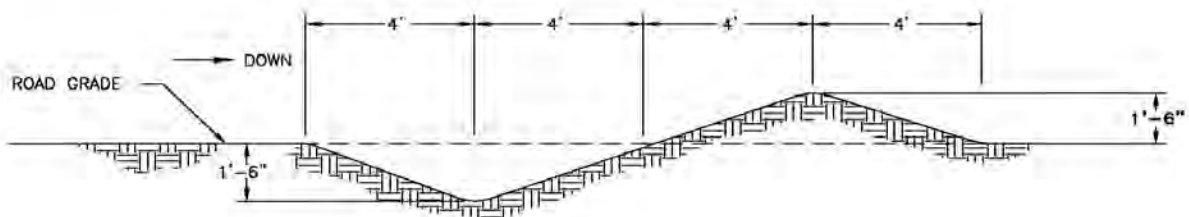
- 3504 Decommissioning work shall be completed at the end of timber hauling activities .
- 3506 Stockpiled slash shall be used to protect exposed areas created by the Purchaser's operations described in these sections. Slash shall be uniformly spread and placed without bunching. The operation shall produce a dense, uniform mat. Where slash is not available exposed soil areas shall be stabilized in accordance with Section 1800.
- 3509 Access shall be blocked with barricades as shown on the typical detail sheet and at locations as shown Subsection 3503.
- 3511 Water barring shall be done on designated roadways, turnouts, disturbed areas and landings.
- 3513 Water bars shall be installed across full width of roadway at locations and spacing shown in the specifications and typical detail sheet. Water bars shall be constructed as shown on typical detail sheet. No water bar will be installed closer than 50 feet to a draw crossing.
- 3514 Protection of exposed surfaces shall be accomplished by placement of soil stabilization material in accordance with Section 1800 on designated roadways, turnouts, disturbed areas, landings, cut banks, fill slopes and other areas disturbed by the purchaser's operations in accordance with these specifications.

ROAD MAINTENANCE SPECIFICATIONS

EXHIBIT D
 WATERBAR DETAIL



ROAD PLAN
 SCALE: NONE

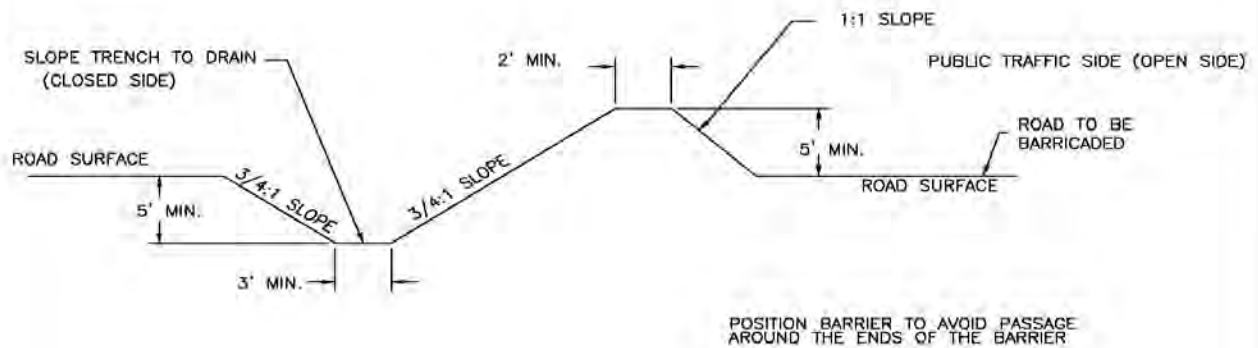


ROAD PROFILE
 SCALE: NONE

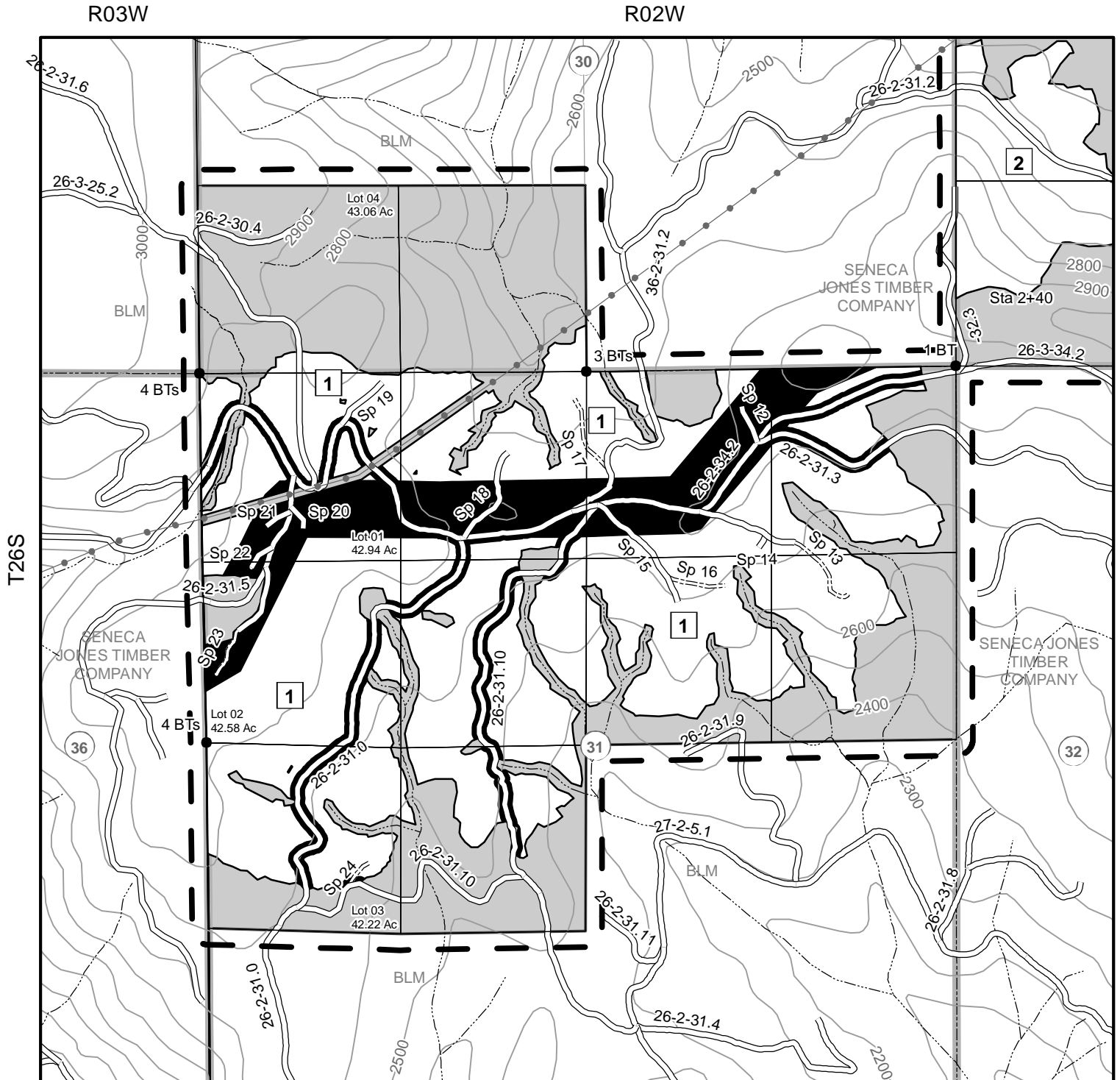
WATERBAR SPACING IN FEET	
ROAD GRADIENT IN %	SPACING
3 TO 5	300
6 TO 10	200
11 TO 15	150
16 TO 20	75
21 TO 35	50

ROAD MAINTENANCE SPECIFICATIONS

EXHIBIT D
TRENCH BARRIER DETAIL



TRENCH BARRIER
SCALE: NONE



Legend

- == Road Construction
- Existing Road
- Streams
- Transmission Line
- Handpiling area
- Reserve Area
- Contract Area
- Survey Corner Found

0 500 1,000 1,500 2,000

Feet

1:12,000 1 inch = 1,000 feet

5/13/2014



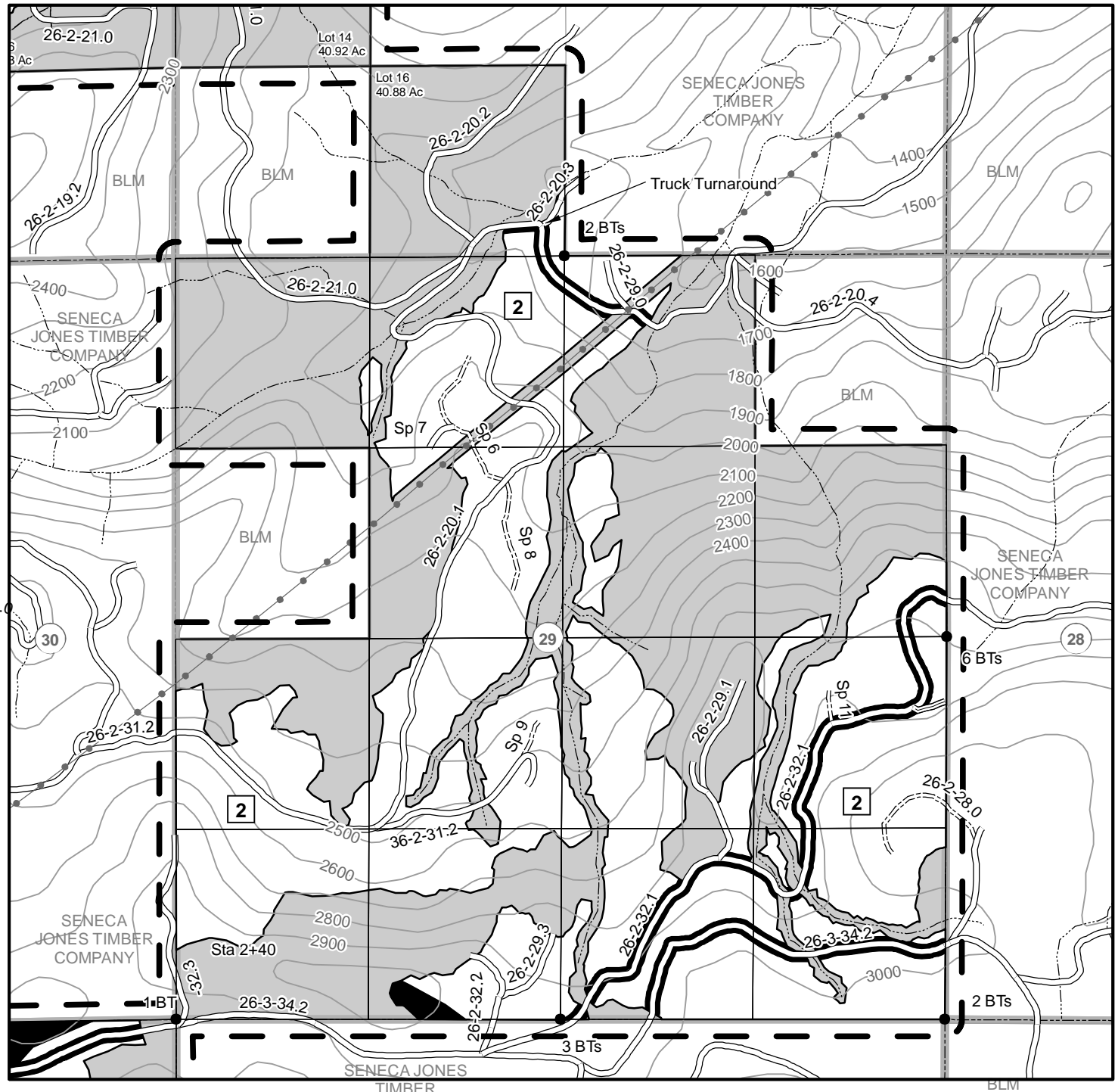
Roseburg District
Bureau of land management
777 NW Garden Valley Blvd.
Roseburg, Oregon 97471



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

BLM R02W

T26S



2

Legend

- == Road Construction
- Existing Road
- ≡≡≡ Undriveable_Roads
- Streams
- Survey Corner Found
- Handpiling area
- ▨ Reserve Area
- ⌈ Contract_Area

0 500 1,000 1,500 2,000

Feet

1:12,000 1 inch = 1,000 feet

5/13/2014



Roseburg District
Bureau of land management
777 NW Garden Valley Blvd.
Roseburg, Oregon 97471

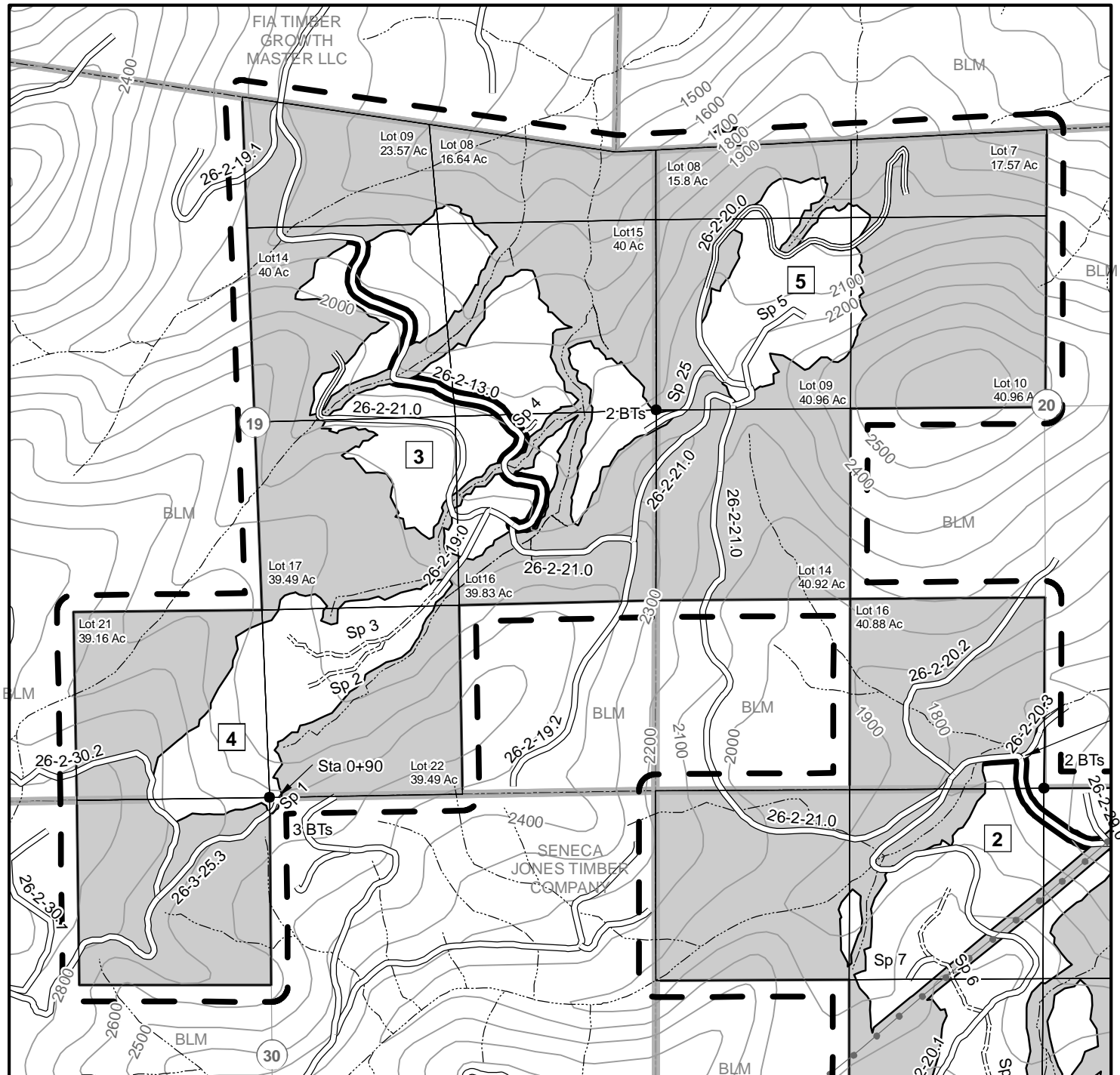


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R02W

2

T26S



0 500 1,000 1,500 2,000

Feet

1:12,000 1 inch = 1,000 feet

5/13/2014

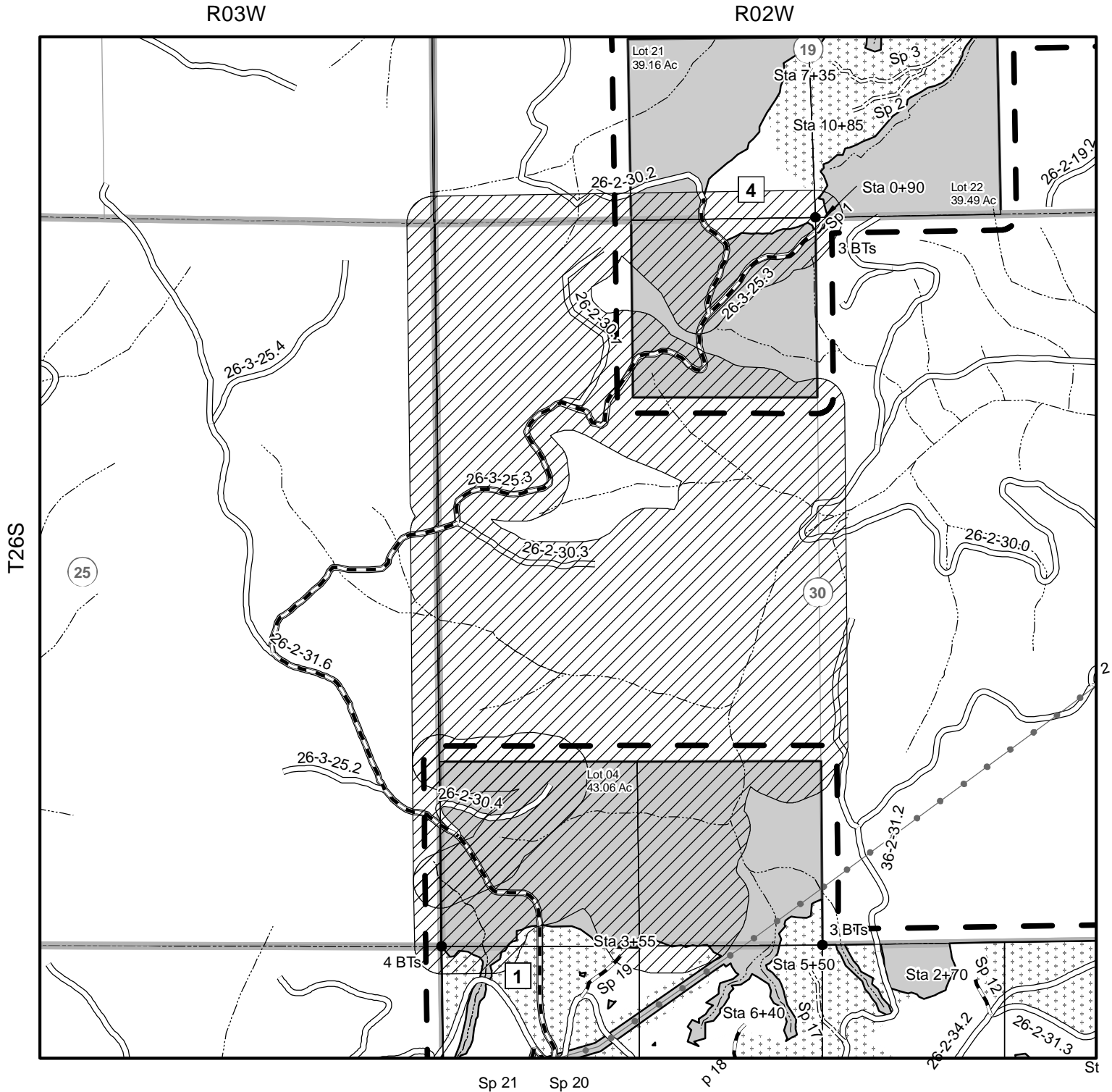


Roseburg District
Bureau of land management
777 NW Garden Valley Blvd.
Roseburg, Oregon 97471

Legend

- == Road Construction
- Existing Road
- ≡≡≡ Undrivable_Roads
- Streams
- Survey Corner Found
- Handpiling area
- ▨ Reserve Area
- ⌈⌋ Contract_Area

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0 500 1,000 1,500 2,000
Feet

1:12,000 1 inch = 1,000 feet

5/14/2014



Roseburg District
Bureau of Land Management
777 NW Garden Valley Blvd.
Roseburg, Oregon 97471



Legend

- Survey Corner Found
- ==== Road Construction
- Road Renovation
- Existing Road
- Streams
- Transmission Line
- Northern Spotted Owl Seasonal Restriction March 1 - July 15
- Cable Harvest
- Ground Harvest
- Reserve Area
- Contract_Area

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

District : Roseburg
Sale Name : Big Thunder
Sale Date : 06/24/2014
Appraisal Method : 16' MBF

Contract # : ORR04-TS-2014.0004
Job File # : 691
Master Unit : Douglas
Planning Unit : Swiftwater

Contents

Timber Sale Summary	2
Stumpage Summary	3
Prospectus	4
Exhibit B	5
Volume Summary	7
Stump to Truck Costs	9
Other Allowances Costs	10
Consolidated Comments	11

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

Roseburg
Big Thunder
ORR04-TS-2014.0004

Legal Description

Forest Type	Township	Range	Section	Subdivision
O&C	26	2	19	Lots 8, 9, 14, 15, 16, 17, 21, & 22
PD	26	2	20	Lots 7, 8, 9, 10, 14, & 16
O&C	26	2	29	NW1/4NE1/4, S1/2NE1/4, N1/2NW1/4, SE1/4NW1/4, S1/2
PD	26	2	30	Lot 4, NE1/4NW1/4, SE1/4SW1/4
O&C	26	2	31	Lots 1, 2, & 3, NE1/4, E1/2NW1/4, NE1/4SW1/4

Cutting Volume (16' MBF)

Unit	DF	GF	WH	WRC	IC	SP			Total	Regen	Partial	ROW
1	3,801	1,030	405	62	226				5,524	0	271	0
2	2,678	387	615	269	32				3,981	0	264	0
3	629	91	144	63	8				935	0	62	0
4	315	45	72	31	4				467	0	31	0
5	243	35	56	24	3				361	0	24	0
RW	543	48	32	22	13	2			660	0	0	5
Totals	8,209	1,636	1,324	471	286	2			11,928	0	652	5

Logging Costs per 16' MBF

Stump to Truck	\$ 175.19
Transportation	\$ 53.88
Road Construction	\$ 47.08
Road Amortization	\$ 0.34
Road Maintenance	\$ 10.59
Other Allowances :	

Equipment Cleaning	\$ 0.26
Misc	\$ 6.94
Total Other Allowances :	\$ 7.20

Profit & Risk

Total Profit & Risk	13 %
Basic Profit & Risk	11 % + Additional Risk 2 %
Back Off	0 %

Tract Features

Avg Log	Douglas-fir : 48 bf	All : 47 bf
Recovery	Douglas-fir : 97 %	All : 92 %
Salvage	Douglas-fir : 0 %	All : 0 %
Avg Volume (16' MBF per Acre)		18
Avg Yarding Slope		45 %
Avg Yarding Distance (feet)		600
Avg Age		0
Volume Cable		54 %
Volume Ground		46 %
Volume Aerial		0 %
Road Construction Stations		81.65
Road Improvement Stations		0.00
Road Renovation Stations		705.65
Road Decommission Stations		206.25

Cruise

Cruised By	JK/JC
Date	01/15/2014
Type of Cruise	100%, 3P, PCMTRE
County, State	Douglas, OR

Net Volume

Green (16' MBF)	11,928
Salvage (16' MBF)	0
Douglas-fir Peeler	0
Export Volume	0
Scaling Allowance (\$0.75 per 16' MBF)	\$8,946.00

Total Logging Costs per 16' MBF

\$ 294.29

Utilization Centers

Center #1 : Roseburg, Or.	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	3 Months

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

Roseburg
Big Thunder
ORR04-TS-2014.0004

Stumpage Summary

Stumpage Computation (16' MBF)

Species	Trees	Net Volume	Pond Value	(-) Profit & Risk	(-) Logging Cost	(+) Marginal Log Value	(-) Back Off	Appraised Price	Appraised Value
DF	46,655	8,209	\$ 509.71	\$ 66.26	\$ 294.29			\$ 149.20	\$ 1,224,782.80
GF	7,207	1,636	\$ 402.84	\$ 52.37	\$ 294.29			\$ 56.20	\$ 91,943.20
WH	11,809	1,324	\$ 402.30	\$ 52.30	\$ 294.29			\$ 55.70	\$ 73,746.80
WRC	6,955	471	\$ 577.37	\$ 75.06	\$ 294.29			\$ 208.00	\$ 97,968.00
IC	3,710	286	\$ 401.22	\$ 52.16	\$ 294.29			\$ 54.80	\$ 15,672.80
SP	4	2	\$ 400.15	\$ 52.02	\$ 294.29			\$ 53.80	\$ 107.60
Totals	76,340	11,928							\$ 1,504,221.20

Log Code by Percent

Species	Code #1	Code #2	Code #3	Code #4	Code #5	Code #6
Douglas-fir				35.0	57.0	8.0
Grand Fir				46.0	47.0	7.0
Western Hemlock				18.0	70.0	12.0
Incense-cedar						100.0
Western red-cedar						100.0
Sugar Pine			23.0	61.0	14.0	2.0

Marginal Log Volume

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

Appraised By : Keady, Joe

Date : 04/08/2014

Area Approval By : Coppersmith, Jason

Date : 04/29/2014

District Approval By : Snider, Douglas

Date : 05/19/2014

**UNITED STATES
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Prospectus

Appraisal Method : (16' MBF)

Species	Trees	Net Volume 16' MBF	Net Volume 32' MBF	Net Volume CCF
Douglas-fir	46,655	8,209	6,558	
Grand Fir	7,207	1,636	1,295	
Western Hemlock	11,809	1,324	1,058	
Western red-cedar	6,955	471	383	
Incense-cedar	3,710	286	225	
Sugar Pine	4	2	2	
Total	76,340	11,928	9,521	

All Species

Gross Volume	Number Trees	Avg bf Volume Per Tree	DBH	Gross Merch Volume	Merch Logs	Avg bf Gross Merch Log
12,936	76,340	169	13.3	12,684	267,658	47

Merch Logs	Cull Logs	Total Logs	Logs per Tree	Net Volume	Gross Volume	Recovery
267,658	3,503	271,161	3.6	11,928	12,936	92 %

Douglas-fir

Gross Volume	Number Trees	Avg bf Volume Per Tree	DBH	Gross Merch Volume	Merch Logs	Avg bf Gross Merch Log
8,434	46,655	180	13.2	8,409	173,555	48

Merch Logs	Cull Logs	Total Logs	Logs per Tree	Net Volume	Gross Volume	Recovery
173,555	428	173,983	3.7	8,209	8,434	97 %

Cutting Areas

Unit	Regen Acres	Partial Cut Acres	Right Of Way Acres	Total Acres
1		271		271
2		264		264
3		62		62
4		31		31
5		24		24
RW			5	5
Totals :		652	5	657

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Exhibit B

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

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

Sale Totals (16' MBF)

Species	Net Volume	Bid Price	Sale SubTotal
Douglas-fir	8,209		
Grand Fir	1,636		
Western Hemlock	1,324		
Western red-cedar	471		
Incense-cedar	286		
Sugar Pine	2		
Sale Totals	11,928		

Unit Details (16' MB)

Unit 1 **271 Acres** **Value per Acre : \$0.00**

Species	Net Volume	Bid Price	Species Value
Douglas-fir	3,801		
Grand Fir	1,030		
Incense-cedar	226		
Western Hemlock	405		
Western red-cedar	62		
Unit Totals	5,524		

Unit 2 **264 Acres** **Value per Acre : \$0.00**

Species	Net Volume	Bid Price	Species Value
Douglas-fir	2,678		
Grand Fir	387		
Incense-cedar	32		
Western Hemlock	615		
Western red-cedar	269		
Unit Totals	3,981		

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Species	Net Volume	Bid Price	Species Value
Douglas-fir	629		
Grand Fir	91		
Incense-cedar	8		
Western Hemlock	144		
Western red-cedar	63		
Unit Totals	935		

Species	Net Volume	Bid Price	Species Value
Douglas-fir	315		
Grand Fir	45		
Incense-cedar	4		
Western Hemlock	72		
Western red-cedar	31		
Unit Totals	467		

Species	Net Volume	Bid Price	Species Value
Douglas-fir	243		
Grand Fir	35		
Incense-cedar	3		
Western Hemlock	56		
Western red-cedar	24		
Unit Totals	361		

Species	Net Volume	Bid Price	Species Value
Douglas-fir	543		
Grand Fir	48		
Incense-cedar	13		
Sugar Pine	2		
Western Hemlock	32		
Western red-cedar	22		
Unit Totals	660		

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Volume Summary**

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Sale Volume Totals

657 Acres 0 Regen 652 Partial 5 R/W 6 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	46,655	173,555	428	8,209	8,409	8,434	6,558	6,704	6,723	0	0	0
Grand Fir	7,207	30,903	199	1,636	1,736	1,744	1,295	1,374	1,377	0	0	0
Western Hemlock	11,809	39,912	1,862	1,324	1,658	1,808	1,058	1,312	1,436	0	0	0
Western red-cedar	6,955	15,537	820	471	561	625	383	450	495	0	0	0
Incense-cedar	3,710	7,737	193	286	318	323	225	249	255	0	0	0
Sugar Pine	4	14	1	2	2	2	2	2	2	0	0	0
Totals	76,340	267,658	3,503	11,928	12,684	12,936	9,521	10,091	10,288	0	0	0

Unit Totals

Unit : 1 271 Acres 0 Regen 271 Partial 0 R/W

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	18,793	73,834	133	3,904	3,900	3,801
Grand Fir	4,260	18,097	190	1,086	1,080	1,030
Western Hemlock	2,886	10,821	500	537	496	405
Incense-cedar	2,615	5,739	183	256	251	226
Western red-cedar	613	1,382	201	82	70	62
Unit Totals	29,167	109,873	1,207	5,865	5,797	5,524

Unit : 2 264 Acres 0 Regen 264 Partial 0 R/W

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	17,652	62,320	190	2,750	2,737	2,678
Western Hemlock	6,022	19,568	916	852	777	615
Grand Fir	1,919	8,293		421	421	387
Western red-cedar	4,184	9,340	399	357	323	269
Incense-cedar	672	1,163		36	36	32
Unit Totals	30,449	100,684	1,505	4,416	4,294	3,981

Unit : 3 62 Acres 0 Regen 62 Partial 0 R/W

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	4,146	14,636	45	646	643	629
Western Hemlock	1,414	4,595	215	200	183	144

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Grand Fir	451	1,948		99	99	91
Western red-cedar	983	2,194	94	84	76	63
Incense-cedar	158	273		9	9	8
Unit Totals	7,152	23,646	354	1,038	1,010	935

Unit : 4 31 Acres 0 Regen 31 Partial 0 R/W

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	2,073	7,318	22	323	321	315
Western Hemlock	707	2,298	108	100	91	72
Grand Fir	225	974		50	49	45
Western red-cedar	491	1,097	47	42	38	31
Incense-cedar	79	137		4	4	4
Unit Totals	3,575	11,824	177	519	503	467

Unit : 5 24 Acres 0 Regen 24 Partial 0 R/W

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	1,605	5,665	17	250	249	243
Western Hemlock	547	1,779	83	77	71	56
Grand Fir	174	754		38	38	35
Western red-cedar	380	849	36	33	29	24
Incense-cedar	61	106		3	3	3
Unit Totals	2,767	9,153	136	401	390	361

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

SpeciesName	# of Trees	Merch Logs	Cull Logs	16' MBF Gross	16' MBF GM	16' MBF Net
Douglas-fir	2,386	9,782	21	561	559	543
Grand Fir	178	837	9	50	49	48
Western Hemlock	233	851	40	42	40	32
Western red-cedar	304	675	43	27	25	22
Incense-cedar	125	319	10	15	15	13
Sugar Pine	4	14	1	2	2	2
Unit Totals	3,230	12,478	124	697	690	660

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Stump to Truck Costs

Total (16' MBF)

Total Stump to Truck Costs	Net Volume	Cost / Net Volume
\$ 2,089,646.23	11,928	\$ 175.19

Detail

Yarding & Loading

Yarding System	Unit Of Measure	Units	Cost / Unit	Total Cost
Short Twr<40	mbf	4,946	\$ 202.55	\$ 1,001,812.30
Short Twr<40	mbf	1,750	\$ 202.55	\$ 354,462.50
Short Twr<40	mbf	216	\$ 379.63	\$ 82,000.08
Wheel Skidder	mbf	3,977	\$ 103.55	\$ 411,818.35
Wheel Skidder	mbf	1,105	\$ 124.26	\$ 137,307.30
Track Skidder	mbf	690	\$ 90.53	\$ 62,465.70
Subtotal				\$ 2,049,866.23

Other Costs

Explanation	Unit Of Measure	Units	Cost / Unit	Total Cost
Int supports	Each	46	\$ 250.00	\$ 11,500.00
Lift trees	Each	168	\$ 150.00	\$ 25,200.00
Subtotal				\$ 36,700.00

Additional Move-Ins

Equipment	# Move-In	Cost / Move In	Total Cost
Skidder	2	\$ 770.00	\$ 1,540.00
Yarder / Loader	2	\$ 770.00	\$ 1,540.00
Subtotal			\$ 3,080.00

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Other Allowances Costs

Total (16' MBF)

Total Other Allowances Costs	Net Volume	Cost / Net Volume *	Total Buy Out Cost
\$85,900.00	11,928	\$7.20	\$11,890.58

Equipment Cleaning

Detail (16' MBF)

Cost Item	Total Cost	Cost / Net Vol *	Buy Out	Buy Out Cost
Yarder	\$ 330.00	\$ 0.03	N	\$ 0.00
Shovel	\$ 1,320.00	\$ 0.11	N	\$ 0.00
Wheel Skidder	\$ 990.00	\$ 0.08	N	\$ 0.00
Track Skidder	\$ 330.00	\$ 0.03	N	\$ 0.00
Other Equipment	\$ 165.00	\$ 0.01	N	\$ 0.00
Subtotal	\$ 3,135.00	\$ 0.26		\$ 0.00

Misc

Detail (16' MBF)

Cost Item	Total Cost	Cost / Net Vol *	Buy Out	Buy Out Cost
Hand pile/cover	\$ 43,180.00	\$ 3.62	N	\$ 0.00
Burn hand piles	\$ 4,675.00	\$ 0.39	Y	\$ 5,745.58
Pile/cover landings	\$ 25,000.00	\$ 2.10	N	\$ 0.00
Burn landings	\$ 5,000.00	\$ 0.42	Y	\$ 6,145.00
Sub-soiling	\$ 4,140.00	\$ 0.35		\$ 0.00
Move in subsoil	\$ 770.00	\$ 0.06		\$ 0.00
Subtotal	\$ 82,765.00	\$ 6.94		\$ 11,890.58

* 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

Yarding & Loading

-Do to it's size, this sale has been appraised for two sides on both ground and cable base logging. With winter logging opportunity, No additional moves for cable. Ground base logging is appraised for two additional moves.
-Track skidder is for logging R/W's.
-Lift trees and Intermediate supports anre this appraisers estimates.

Road Costs

To BLM:
Maintenance:\$30,772.81
Rockwear:\$15,667.02
Credit from county:\$667.18

To Seneca:
Maintenance:\$43,768.78
Rockwear:\$22,502.04

To FIA/TGM:
Road Fees:\$4,025.60

To Purchaser: \$12,987.28

(see Engineering Appraisal for details).

Transportation

-Wtd sale area to Little River/Hwy 138 jct = 69.2 RTM/13.7 miles
-Little River/Hwy 138 jct to Roseburg, Or. = 42 RTM/17.5 miles
-60 minute delay
-69.2 RTM + 42 RTM + 60 min delay = 171.2 minutes = 2.85 hours

(see Transportation appendix for details).

Other Allowances

-Hand piling consists of 47 acres roadside piling minus 4 acres existing landings for a total of 43 acres 50 feet either side of through roads.
42 acres of ridge top will be hand piled to act as a natural fire break.
-The purchaser has the option to buy out on the burning.
-Equipment cleaning is for one cleaning of cable yarding equipment and three cleanings of ground base equipment. Other equipment is the excavator for sub-soiling.
-There is approximatly five miles of sub-soiling at 3/4 mile a day for a total of four days.

Prospectus

UNITED STATES
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Summary of All Roads and Projects

Updated: 5/1/2013

T.S. Contract Name: TS 2014.0004 Tract No: Sale Date: 6-24-14

Prepared by: T King Ph: 3227 Print Date: 4/28/2014 1:56:17 PM

Construction: 81.65 sta

Improve: 000 sta Renov: 705.65 sta Decom: 0.00 sta Temp: 0.00 sta

200 Clearing and Grubbing: 9.0 acres	\$15,243.22
Clearing: 220.4 sta Grubbing: 9.0 acres	
Slash Treatment: 9.0 acres	
300 Excavation: 5,211 cy	\$20,020.93
Haul: 0 sta-yds	
400 Drainage:	\$17,296.45
Culvert: 588 lf wt = 12,696 lbs factor = 1.0	
DownSpout: 10 lf	
PolyPipe: 0 lf	
500 Renovation:	\$39,120.91
Blading 11.95 mi	
Surfacing:	\$442,140.53
1000 Quarry Name: Thunder Mt. 3"minus 6,114 cy	
1000 Quarry Name: Thunder Mt. 6" minus 9,905 cy	
1000 Quarry Name: 6" minus Stockpile 7,000 cy	
1000 Quarry Name: 3" minus stockpile 3,000 cy	
1300 Geotextiles:	\$0.00
1400 Slope Protection:	\$0.00
1800 Soil Stabilization: 1.0 acres	\$372.22
Includes Small Quantity Factor of 1.54	
1900 Cattleguards:	\$1,000.00
2100 RoadSide Brushing: 28.1 acres	\$11,594.06
2300 Engineering: 0.00 sta.	\$0.00
2400 Minor Concrete:	\$0.00
2500 Gabions:	\$0.00
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$2,711.13 Surf. \$8,060.37.....	\$10,771.50
Quarry Development:	\$4,054.62

Total: 11,928 mbf @ \$47.084/mbf = \$561,614.44

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities are COMPACTED in place cubic yards.

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ROAD CONSTRUCTION SUMMARY

Contract Name: TS 2014.0004
Sale Date: 6-24-14

1/ Const/Impr/Renov/Decom/Temp 2/ yd-miles haul 3/ Lin ft CMP 4/ Lin ft Polypipe 5/ Lin ft Downspout 6/ slide removal cy

Road Number	Type 1/	Miles	Clear Grubb	Excav -ation	Drain -age	Reno- vation	Surf- acing	Soil Stabil	Cattle Guard	Rdside Brush	Mobil- ization	Quarry Develop	Sub- Total
26-2-19.0	R	0.14				\$964				\$167 0.3ac	\$6		\$1,137
26-2-20.0	R	0.07				\$726	\$2,949 107cy			\$188	\$52	\$17	\$3,933
26-2-20.1	R	1.12	\$2,428 49.0sta	\$1,952		\$2,071 1.12mi	\$973 33cy		\$1,000	\$752 2.7ac	\$56	\$5	\$9,236
26-2-21.0	R	1.96		\$1,129		\$4,346 1.96mi	\$11,904 461cy			\$1,336 2.4ac	\$236	\$72	\$19,023
26-2-28.0 con	C	0.21	\$448 11.1sta	\$2,137 770cy			\$10,959 655cy				\$270	\$102	\$13,916
26-2-28.0 ren	R	0.14	\$684 7.2sta			\$757 0.14mi	\$3,684 226cy			\$167 0.3ac	\$96	\$35	\$5,423
26-2-29.1	R	0.06				\$386				\$188	\$3		\$577
26-2-29.3	R	0.11				\$919				\$223 0.2ac	\$6		\$1,148
26-2-30.2	R	0.24				\$918				\$668 0.6ac	\$8		\$1,594
26-2-31.0	R	0.66			\$2,163 3/ 76'	\$1,491 0.66mi	\$1,300 80cy			\$891 1.6ac	\$54	\$12	\$5,912
26-2-31.1	R	0.60	\$1,603 31.7sta		\$7,600 3/ 282'	\$1,680 0.60mi	\$39,739 2438cy			\$835 1.5ac	\$1,010	\$380	\$52,848
26-2-31.2	R	0.70	\$784		\$1,388 3/ 40'	\$1,392 0.70mi	\$28,759 1627cy			\$946 1.7ac	\$669	\$254	\$34,192
26-2-31.5	R	0.14				\$73 0.14mi	\$343 20cy			\$167 0.3ac	\$9	\$3	\$594
26-2-31.6	R	0.75				\$1,694 0.75mi	\$163 10cy			\$278 1.0ac	\$14	\$2	\$2,151
26-2-32.2	R	0.14				\$844				\$223 0.2ac	\$5		\$1,072
26-3-13.0	R	4.24			\$5,175 3/ 154' 5/ 10'	\$9,579 4.24mi	\$148,007 5686cy	\$372 1.0ac		\$2,867 10.3ac	\$2,585	\$886	\$169,471
26-3-25.3	R	1.19				\$2,689 1.19mi	\$775 40cy			\$807 2.9ac	\$34	\$6	\$4,311
Spur 1	C	0.02	\$126 0.9sta	\$559 70cy			\$1,370 74cy				\$33	\$12	\$2,100

Road Number	Type 1/	Miles	Clear Grubb	Excav -ation	Drain -age	Reno- vation	Surf- acing	Soil Stabil	Cattle Guard	Rdside Brush	Mobil- ization	Quarry Develop	Sub- Total
Spur 10	R	0.05	\$191 2.4sta			\$503	\$3,386 225cy				\$90	\$35	\$4,206
Spur 11	C	0.04	\$143 2.0sta	\$759			\$3,613 211cy				\$88	\$33	\$4,636
spur 12	R	0.05	\$273 2.7sta			\$759	\$1,701 109cy			\$56 0.1ac	\$48	\$17	\$2,854
Spur 13 con	C	0.12	\$436 6.3sta	\$1,187 438cy			\$7,225 463cy				\$187	\$72	\$9,108
Spur 13 ren	R	0.13	\$437 6.6sta			\$240 0.13mi	\$6,289 403cy			\$84 0.3ac	\$160	\$63	\$7,272
Spur 14	R	0.02	\$127 1.0sta			\$386	\$1,967 125cy				\$51	\$19	\$2,550
Spur 15	R	0.18	\$593 9.5sta			\$333 0.18mi	\$10,297 654cy			\$111 0.4ac	\$259	\$102	\$11,694
Spur 16	C	0.09	\$384 4.9sta	\$851 343cy			\$6,172 392cy				\$158	\$61	\$7,626
Spur 17	C	0.10	\$440 5.5sta	\$955 385cy							\$7		\$1,402
Spur 18	R	0.12	\$389 6.4sta			\$696	\$7,258 461cy			\$84 0.3ac	\$185	\$72	\$8,683
Spur 19	R	0.07	\$222 3.6sta			\$503	\$2,160 136cy			\$111 0.2ac	\$57	\$21	\$3,075
Spur 2	C	0.21	\$846 10.9sta	\$1,885 760cy							\$14		\$2,745
Spur 20	R	0.04	\$164 2.0sta			\$759				\$56 0.1ac	\$5		\$984
Spur 21	R	0.03	\$158 1.6sta			\$759	\$1,132 71cy			\$56 0.1ac	\$32	\$11	\$2,149
Spur 22	C	0.04	\$232 2.0sta	\$759			\$1,324 100cy				\$42	\$16	\$2,373
Spur 23 con	C	0.08	\$346 4.4sta	\$764 308cy							\$6		\$1,115
Spur 23 ren	R	0.09	\$285 4.7sta			\$1,201				\$111 0.2ac	\$8		\$1,605
Spur 24	C	0.04	\$232 2.0sta	\$759	\$970 3/ 36'						\$10		\$1,971
Spur 25	R	0.14				\$297 0.14mi	\$5,403 217cy			\$167 0.3ac	\$96	\$34	\$5,997
Spur 3	C	0.14	\$576 7.4sta	\$1,277 515cy							\$9		\$1,863
Spur 4	C	0.02	\$175 1.3sta	\$759			\$3,950 151cy				\$71	\$24	\$4,979

Road Number	Type 1/	Miles	Clear Grubb	Excav -ation	Drain -age	Reno- vation	Surf- acing	Soil Stabil	Cattle Guard	Rdside Brush	Mobil- ization	Quarry Develop	Sub- Total
Spur 5	R	0.14	\$453 7.7sta			\$1,394	\$13,673 552cy				\$248	\$86	\$15,854
Spur 6	C	0.21	\$901 11.4sta	\$2,101 795cy							\$15		\$3,017
Spur 7	R	0.05	\$230 2.9sta			\$759				\$56 0.1ac	\$5		\$1,050
Spur 8	C	0.15	\$634 8.1sta	\$1,491 564cy							\$11		\$2,135
Spur 9	C	0.07	\$305 3.8sta	\$695 263cy			\$5,165 292cy				\$121	\$46	\$6,332
STOCK PILE	I	0.01					\$110,500 10000cy				\$3,646	\$1,558	\$115,704

TIMBER SALE ROAD SPECIFICATIONS

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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
1600	Quarry and Borrow Pit Development
1700	Erosion Control
1800	Soil Stabilization
1900	Cattle Guards and Bypass Gates
2100	Roadside Brushing

TIMBER SALE ROAD SPECIFICATIONS

GENERAL - 100

101 - Prewrite Conference(s):

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

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

102 - Definitions:

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

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

ACI - American Concrete Institute

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

ASTM - American Society for Testing and Materials.

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

BLM - Bureau of Land Management

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

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

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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 side casting 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 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.

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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.

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.

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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.

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

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ground line and designed roadway in relation to cut and fill, through cut, and through fill.

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

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

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

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

102a - Tests Used in These Specifications:

AASHTO T 11

Quantity of rock finer than No. 200 sieve.

AASHTO T 27

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

AASHTO T 89

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

AASHTO T 90

Plastic limits and plasticity index of soil.

a. Plastic limit - lowest water content at which the soil remains plastic.

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

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.

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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-inch drop height.

AASHTO T 191

Sand Cone, Density of soil in place: For subgrade use 6-inch or 12-inch cone, for rock surfacing 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 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

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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-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,

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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 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

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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 and as staked on the ground.
- 202 - Where clearing limits have not been staked, established by these specifications or shown on the plans, the limits shall extend 10 feet back of the top of the cut slope and 5 feet out from the toe of the fill slope.
- 203 - Clearing shall consist of the removal and disposal of trees, logs, rotten material, brush, and other vegetative materials and surface objects in accordance with these specifications and within the limits established for clearing as specified under Subsection 202 as posted.
- 203a - Brush less than 2 feet in height need not be cut within the limits established for clearing.
- 203b - Standing trees and snags to be cleared shall be felled within the limits established for clearing unless otherwise authorized.
- 204 - Grubbing shall consist of the removal and disposal of stumps, roots, and other wood material embedded in the ground and protruding obstacles remaining as a result of the clearing operation in accordance with Subsections 204a and 204c between the top of the cut slope and the toe of the fill slope.
- 204a - Stumps, including those overhanging cut banks, shall be removed within the required excavation limits.
- 204c - On excavated areas, roots and embedded wood shall be removed to a depth not less than 6 inches below the subgrade.

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- 205 - Clearing and grubbing debris shall not be placed or permitted to remain in or under road embankment sections.
- 210 - Disposal of clearing and grubbing debris shall be by scattering over government owned lands outside of established clearing limits in a manner acceptable to the Authorized Officer. The areas for such scattering shall have the prior approval of the Authorized Officer.
- 210a - Disposal of clearing and grubbing debris, stumps and cull logs 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.
- 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, and 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 metal tags.
- 303 - Suitable material removed from the excavation shall be used in the formation of embankment subgrade, shoulders, slopes, bedding, backfill for structures, and for other purposes as shown on the plans.
- 305 - Embankment construction shall consist of the placement of excavated and borrowed materials, backfilling, leveling, grading, compaction, and other earth-

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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.
- 306 - Layers of embankment, selected borrow, final subgrade and selected roadway excavation material as specified under Subsections 305a and 305b shall be moistened or dried to a uniform optimum moisture content suitable for maximum density and compacted to full width with compacting equipment conforming to requirements of Subsections 103f, 103g, 103h and 103i.
- 306a - Minimum compaction for each layer of embankment, selected borrow, and selected roadway excavation material placed at optimum moisture shall be a minimum of 4 passes over each full-width layer or until visual displacement ceases.
- 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.

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Such materials shall be disposed of in accordance with Subsection 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.

- 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.
- 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 or for the total project. The Purchaser shall give the Authorized Officer 3 days' notice prior to start of surfacing operations.

PIPE CULVERTS - 400

- 401 - This work shall consist of furnishing and installing pipe culverts and other erosion control devices in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross sections shown on the plans. Individual lengths and locations are approximate; final lengths and locations will be determined by the Authorized Officer upon completion of the roadbed and upon installation of the appurtenance structures. Additional pipe and erosion control devices may be required at the option of the Authorized Officer, in which case a reduction in the total purchase price shall be made to offset the cost of furnishing and installing such items. Costs will be based upon the unit prices set forth in the current BLM Timber Appraisal Production Cost Schedule.
- 403 - Grade culverts shall have a gradient of from 2 percent to 4 percent greater than the adjacent road grade. Grade culverts shall be skewed down grade 30 degrees as measured from the perpendicular to the centerline unless otherwise specified on the plans.
- 404 - Damage to the spelter, or burn back in excess of 3/8 inch, shall be wire brushed and painted with two coats of zinc-rich paint on zinc-coated, steel pipe and aluminum-rich paint on aluminum or aluminum-coated pipe.

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- 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.
- 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, grades, dimensions, and typical diagram that are shown on the Culvert Installation Detail Sheet.
- 412 - Where ledge rock or boulders are encountered, they shall be excavated a minimum of 10 inches below the invert grade for a width of at least 2 feet on each side of the pipe and shall be backfilled with compacted select fill.
- 412a - Where soft or spongy soils are encountered, they shall be excavated a minimum of 2 feet below the invert grade for a width of at least one pipe diameter on each side of the pipe and shall be backfilled with compacted select fill.
- 416 - Select-fill material for pipe culverts shall be well graded crushed rock material free of excess moisture and devoid of rocks or stones 3 inches or larger which may impinge upon and damage the pipe or otherwise interfere with proper compaction.

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- 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 12 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 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.
- 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 culverts as stated on the renovation notes and culvert summary.
- 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.
- 428 - Remove and dispose of old culverts in a legal manner, and for any fees required. The Purchaser shall remove the old culverts from the work site prior to road acceptance.

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 installing, cleaning and repairing drainage structures of existing roads in accordance with these specifications, as shown on the plans and as marked on the ground with metal tags.
- 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.

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- 502a - Rocks larger than 4 inches in maximum dimension shall be removed from the roadbed. Material so removed will not be permitted to remain on road shoulders or in ditches.
- 502b - Drainage ditches shall be bladed and shaped in accordance with the lines, grades, dimensions, and typical cross sections shown on the plans.
- 504 - Existing road surface shall be uniformly moistened or dried to the optimum moisture content suitable for maximum density and compacted to full width with equipment conforming to requirements of Subsections 103f, 103h, and 103i.
- 504a - Minimum compaction required shall be 3 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 by the Authorized Officer 3 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.

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- 603 - Water trucks used in this work shall be equipped with a distributing device of ample capacity and of such design as to ensure uniform application of water on the road bed.
- 605 - The Purchaser shall secure the necessary water permits and pay all required water fees for use of water sources selected by the Purchaser and approved by the Authorized Officer.

AGGREGATE BASE COURSE - 1000
CRUSHED ROCK MATERIAL

- 1001 - This work shall consist of furnishing, hauling, and placing one or more lifts of crushed rock material on roadbeds and landings approved for placing crushed rock material, in accordance with these specifications and conforming to the dimensions and typical cross sections shown on the plans. Material not conforming to these specifications will be rejected and shall be removed from the road at the purchaser's expense.
- 1002 - Crushed rock materials used in this work shall consist of quarry rock, stone, gravel, or other approved materials obtained from the source shown on the plans. Development and mining of such source shall be in accordance with Subsections 1601 and 1602 of these specifications.
- 1003 - Crushed rock material produced from gravel shall have 2 manufactured fractured faces on 65 percent, by weight, of the material retained on the No. 4 sieve.
- 1004 - Crushed rock materials shall consist of hard durable rock fragments conforming to the following gradation requirements:

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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	-

- 1004a - The Purchaser shall be required to take one sample of each 2,000 cubic yards of crushed rock material produced, using approved AASHTO sampling procedures. The Purchaser shall submit samples to a certified lab or shall perform testing for gradation requirements using ASHTO T 11 and AASHTO T 27 testing procedures. Prior to testing, each sample shall be split, making one-half of the sample with proper identification available for testing by the Authorized Officer. Each sample and the results of Purchaser testing shall be made available to the Authorized Officer within twenty-four (24) hours of sampling. The Purchaser shall provide test results for the first five hundred (500) cubic yards produced prior to commencing production crushing and hauling.
- 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

TIMBER SALE ROAD SPECIFICATIONS

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 3 days' notice 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 4 inches in depth. When more than one layer is required, each shall be shaped, processed, compacted, and approved by the Authorized officer before the succeeding layer is placed. Irregularities or depressions that develop during compaction of the top layer shall be corrected by loosening the material at these places and 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 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 3 passes over each full-width layer or until visual displacement ceases.
- 1016 - The Purchaser shall place in stockpile 3000 cubic yards stockpile measure of Gradation 1004A crushed rock material and 7000 cubic yards load ticket measure of Gradation 1004I crushed rock material at sites shown on the plans. This work is not required prior to road acceptance under Section 18 of this contract.

QUARRY AND BORROW PIT DEVELOPMENT - 1600

- 1601 - This work shall consist of quarry development and rehabilitation in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross sections shown on the plans.

TIMBER SALE ROAD SPECIFICATIONS

- 1602 - The designated rock quarry site is located at the following location:

Willamette Meridian			
Subdivision	Sec.	T.	R.
SW¼, SW¼	29	26S	2W

shall be developed and mined in strict accordance with these specifications and the mining and reclamation plan shown on the plans. The Purchaser shall perform reclamation work in accordance with the requirements of Subsection 1617, as shown on the plans, and as directed by the Authorized Officer.

- 1603 - If the Purchaser elects to use a rock source other than the designated source, the rock material produced shall comply with applicable sections of these specifications. If the alternate source is located on BLM ownership and a current BLM plan is not available, a development, mining, and reclamation plan shall be prepared by the Purchaser, and submitted for approval by the Authorized Officer. Development, mining and reclamation work shall be in accordance with the approved plan and 1600 specifications.
- 1604 - If the designated source proves insufficient as to quantity and quality of the required rock material, the Purchaser shall, when ordered in writing by the Authorized Officer, move his operation to an alternate materials source selected by the Authorized Officer. An equitable adjustment will be made in the contract price.
- 1605c - The operation of equipment related to the production of rock aggregate and quarry operations shall be confined to the quarry operations area and to the designated tractor trails as shown on the plans.
- 1609 - Overburden, trees, stumps, logs, and loose rock shall be removed back from the edge of working quarry faces for a minimum distance of 10 feet.
- 1611 - The Purchaser shall notify the Authorized Officer at least 3 days prior to commencing quarry operations.
- 1611a - The Purchaser shall not commence production drilling or crushing until the Authorized Officer has inspected and approved the site development in writing.

TIMBER SALE ROAD SPECIFICATIONS

- 1612 - The Purchaser shall notify MSHA (Mining Safety and Health Administration) by standard form or telephone, and in accordance with part 56, Chapter 1 of Title 30 Code of Federal Regulations (CFR), of what date he intends to commence, terminate, and/or temporarily close down operations of the quarry. Notice shall be submitted a minimum of 10 days prior to the proposed date of the action to be taken. Notification shall be submitted to:

Mining Safety and Health Administration
Albany, OR 97321

or

Mining Safety and Health Administration
Bellevue, WA 98004

The Purchaser shall also prepare and submit to MSHA the quarterly Employment Report and Injury and Illness Report for the mining operation.

- 1613 - The Purchaser shall comply with local and State Safety Codes covering quarrying operations, warning signs, seismic monitoring, and traffic control. All quarrying operations will be conducted by appropriately licensed personnel; i.e. blasting and powder handler's license, etc.
- 1613a - The Purchaser shall submit a written blasting plan or modification of the plan to the Authorized Officer for the Thunder Mountain Quarry, 3 working days prior to the start of drilling. The plan shall include: a) plan view of delay pattern; b) cross section of a typical loaded hole; c) types of explosives; d) powder factor; e) burden spacing, hole diameter, depth of holes, and depth of subdrill; and f) number of lifts. Acceptance of the blasting plan does not relieve the Purchaser of the liability or responsibility for the results of the blasting.
- 1616 - Upon completion of quarrying operations, overburden and waste materials shall be disposed of in accordance with requirements of the approved reclamation plan or in a manner approved in writing by the Authorized Officer.
- 1617 - Upon completion of quarrying operations, required site reclamation measures shall be performed to the satisfaction of the Authorized Officer, including but not limited to the following:

TIMBER SALE ROAD SPECIFICATIONS

- (b) Backfill pits and excavations with overburden and waste as directed by the Authorized Officer.
- (c) Grade backfill material to the natural contour or desired landforms as directed by the Authorized Officer.
- (g) Construct waterbars and take other erosion control measures as directed by the Authorized Officer.
- (j) Complete required site-reclamation measures within 14 days after final cessation of quarrying operations.
- (k) Clear quarry benches and scale wall of loose or dislodged shot material and move to a designated location within the quarry.

EROSION CONTROL - 1700

- 1701 - This work shall consist of measures to control soil erosion or water pollution during the construction operation through the use of berms, dikes, dams, sediment basins, fiber mats, netting, gravel, mulches, grasses, slope drains, and other erosion control devices or methods in accordance with these specifications and conforming to the lines, grades, dimensions and typical cross sections shown on the plans.
- 1708a - Road segments not completed during dry weather periods shall be winterized, by providing a well-drained roadway 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.

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. This work is not required for road acceptance under Section 18 of this contract.
- 1802a - Soil stabilization work consisting of seeding and mulching shall be performed on new road construction, road renovation, landings, and disposal sites in accordance with these specifications.

TIMBER SALE ROAD SPECIFICATIONS

- 1803 - Soil stabilization work as specified under Subsections 1802 and 1802a shall be performed during the following seasonal period:

From: September 15	To: October 31
--------------------	----------------

If soil stabilization of disturbed areas is not completed by the specified fall date, the Purchaser shall treat disturbed areas in accordance with Subsection 1701 and then complete the requirements of Section 1800 the next construction season. The Authorized Officer may modify the above seasonal dates to conform to existing weather conditions and changes in the construction schedule.

- 1804 - The BLM shall provide native grass/forb seed.

- 1806a - Additional soil stabilization work consisting of seeding and mulching, may be required at the option of the Authorized Officer. Providing the additional stabilization is not due to Purchaser negligence as specified in Sec. 12 of the contract, a reduction in the total purchased price shall be made to offset the cost of furnishing and applying such additional stabilization material. Cost shall be based upon the unit price set forth in the current BLM Timber Appraisal Production Cost Schedule.

- 1808 - Mulch materials conforming to the requirements of Subsection 1808a shall be furnished by the Purchaser.

- 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.

- 1815b - Dry Method - Blowers, mechanical seeders or other approved mechanical seeding equipment may be used when seed and mulch are to be applied in dry form.

TIMBER SALE ROAD SPECIFICATIONS

- 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.
- 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.
- 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.

CATTLE GUARDS AND BYPASS GATES - 1900

- 1901 - This work shall consist of furnishing and installation of a rail gate in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross sections shown on the plans.
- 1915 - Rail gate materials and construction shall conform to the requirements and details shown on the plans.

ROADSIDE BRUSHING - 2100

- 2101 - This work shall consist of the removal of vegetation from the road prism - variable distance, and inside curves in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross sections shown on the Roadside Brushing Detail Sheet of this exhibit, at designated locations as shown in the plans.
- 2102 - Roadside brushing may be performed mechanically with self-powered, self-propelled equipment 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 4 inches above the ground and running surface. Limbs below the 4

TIMBER SALE ROAD SPECIFICATIONS

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 distance of 15 feet from edge of subgrade, whichever is achieved first. Overhanging limbs and vegetation in excess of 1 foot in height shall be cut within these areas.
- 2108 - Self-propelled equipment shall not be permitted on cut and fill slopes or in ditches.
- 2109 - Debris resulting from this operation shall be scattered downslope from the roadway. Debris shall not be allowed to accumulate in concentrations. Debris in excess of 1 foot in length and 2 inches in diameter shall not be allowed to remain on cut slopes, ditches, roadways or water courses, or as directed by the Authorized Officer.
- 2115 - Mechanical brush cutters shall not be operated when there are people and occupied vehicles within 400 feet of the immediate operating area.
- 2116 - Traffic warning signs shall be required at each end of the work area. Signs shall meet the requirements of the Manual on Uniform Traffic Devices.

CONTRACT NAME: BIG THUNDER TIMBER SALE
CONTRACT NO: ORR04-TS-2014.0004

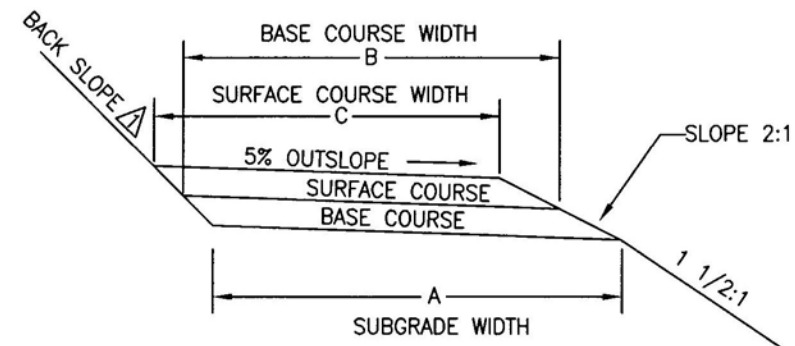
UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
ROSEBURG DISTRICT
TIMBER SALE EXHIBIT C

ROAD NUMBER	STA/MP	TO	STA/MP	CONST.	RENOV.	BASE COURSE		SURFACE COURSE		ROAD DIMENSIONS			TYP. ROAD SECTION	SHEET NO.
						DEPTH	TYPE	DEPTH	TYPE	A	B	C		
26-2-19.0	0+00	-	7+50		X				NATIVE	14			1	4
26-2-20.0	0+00	-	3+85		X			6"	1004A		14	12	4	4
26-2-20.1	0+00	-	50+00		X				NATIVE	14			1&2	4
26-2-20.1	50+00	-	51+80		X			6"	1004A		14	12	4	4
26-2-20.1	51+80	-	59+00		X				ROCK	EXISTING			4	4
26-2-21.0	0+00	-	10+60		X	6"	1004I			15	14		1	4
26-2-21.0	10+60	-	18+25		X			3"	1004A	15	14		4	4
26-2-21.0	18+25	-	103+65		X				ROCK	EXISTING			4	
26-2-28.0	0+00	-	7+20		X	6"	1004I			15	14		1	8
26-2-28.0	7+20	-	10+74.4	X		6"	1004I			15	14		1	8
26-2-28.0	10+74.4	-	18+25	X		12"	1004I			16	14		1	8
26-2-29.1	0+00	-	3+30		X				ROCK	EXISTING			5	4
26-2-29.3	0+00	-	5+60		X				ROCK	EXISTING			4	4
26-2-30.2	0+00	-	12+90		X				ROCK	EXISTING			4	4
26-2-31.0	0+00	-	34+70		X				ROCK	EXISTING			4	5
26-2-31.1	0+00	-	31+65		X	12"	1004I			18	14		4	5
26-2-31.2	46+25	-	53+45		X	6"	1004I			16	14		4	5
26-2-31.2	53+45	-	83+30		X	12"	1004I			18	14		4	5
26-2-31.5	0+00	-	7+60		X				ROCK	EXISTING			1	5
26-2-31.6	0+00	-	39+55		X				ROCK	EXISTING			4	5
26-2-32.2	0+00	-	7+30		X				ROCK	EXISTING			4	6
26-3-13.0	0+00	-	174+70		X			6"	1004A		14	12	4	6
26-3-13.0	174+70	-	223+80		X				ROCK	EXISTING			4	6
26-3-25.3	0+00	-	62+75		X				ROCK	EXISTING			4	7
SPUR 1	0+00	-	0+90	X		6"	1004I			15	14		1	9
SPUR 2	0+00	-	10+85	X					NATIVE	14			1&2	9
SPUR 3	0+00	-	7+35	X					NATIVE	14			1&2	9
SPUR 4	0+00	-	1+30	X		12"	1004I			18	14		5	10
SPUR 5	0+00	-	7+65		X	12"	1004I			16	14		1	7
SPUR 6	0+00	-	11+35	X					NATIVE	14			1&2	10
SPUR 7	0+00	-	2+90		X				NATIVE	14			1	10
SPUR 8	0+00	-	8+05	X					NATIVE	14			1&2	11
SPUR 9	0+00	-	3+75	X		12"	1004I			18	14		3	11
SPUR 10	0+00	-	2+40		X	12"	1004I			16	14		1	7
SPUR 11	0+00	-	2+00	X		12"	1004I			18	14		5	11
SPUR 12	0+00	-	2+70		X	6"	1004I			15	14		1	7
SPUR 13	0+00	-	6+60		X	12"	1004I			16	14		1	12
SPUR 13	6+60	-	12+85	X		12"	1004I			16	14		1&3	12
SPUR 14	0+00	-	1+00		X	12"	1004I			16	14		1	12
SPUR 15	0+00	-	9+50		X	12"	1004I			16	14		1	7
SPUR 16	0+00	-	4+90	X		12"	1004I			16	14		1	13
SPUR 17	0+00	-	5+50	X					NATIVE	14			1	13
SPUR 18	0+00	-	6+40		X	12"	1004I			16	14		1	7
SPUR 19	0+00	-	3+55		X	6"	1004I			15	14		1	7
SPUR 20	0+00	-	1+95		X				NATIVE	EXISTING			1	7
SPUR 21	0+00	-	1+55		X	6"	1004I			15	14		1	7
SPUR 22	0+00	-	2+00	X		6"	1004I			15	14		1	13
SPUR 23	0+00	-	4+70		X				NATIVE	14			1	14
SPUR 23	4+70	-	9+10	X					NATIVE	14			1	14
SPUR 24	0+00	-	2+00	X					NATIVE	14			1	14
SPUR 25	0+00	-	7+35		X	6"	1004I			15	14		1	7

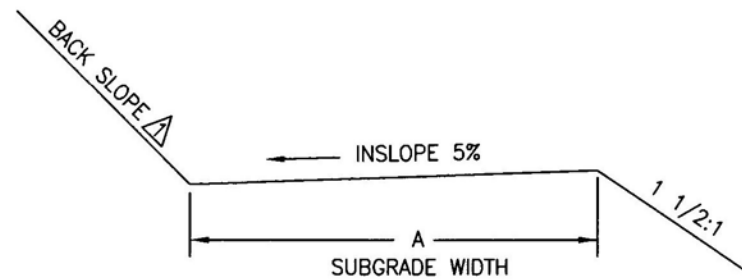
INDEX OF SHEETS	
SHEET	DESCRIPTION
1	ROAD SUMMARY
2	TYPICAL SECTIONS
3	VICINITY MAP
4-7	RENOVATION NOTES
8	ROAD CONSTR. PLAN 26-2-28.0
9	ROAD CONSTR. PLAN SPURS 1, 2 & 3
10	ROAD CONSTR. PLAN SPURS 4, 6 & 7
11	ROAD CONSTR. PLAN SPURS 8, 9 & 11
12	ROAD CONSTR. PLAN SPURS 13 & 14
13	ROAD CONSTR. PLAN SPURS 16, 17 & 22
14	ROAD CONSTR. PLAN SPURS 23 & 24
15	CULVERT SUMMARY
16	CULVERT INSTALLTIONS
17	BRUSHING DETAIL
18	RAIL GATE DETAIL
19	PIT PLAN
20	PIT SECTIONS
21	
22	

REV. NO.	DESCRIPTION	DATE	APPROVED
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT DIVISION OF OPERATIONS OREGON STATE OFFICE			
BIG THUNDER TS ROAD SUMMARY			
ROSEBURG DISTRICT		OREGON	
ENGINEERING APPROVAL		<i>Thane Johnson</i>	
SUBMITTED		<i>Myr Meyer</i>	
RECOMMENDED		<i>John Artyu</i>	
APPROVED		<i>per [Signature]</i>	
DRAWN: T. KING		SCALE: AS SHOWN	
DATE: 03-06-14		SHEET 1 OF 22	
		BLM #	

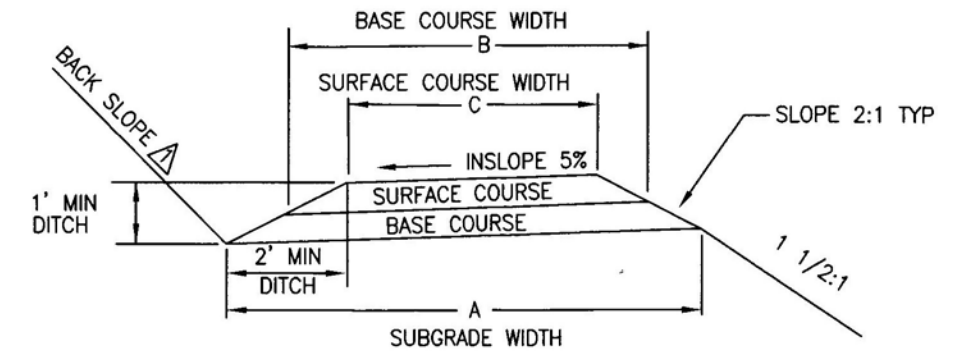




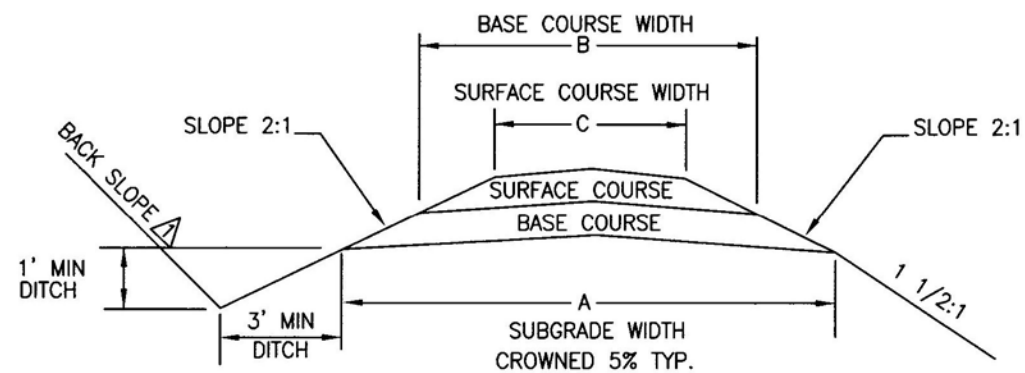
SECTION OUT SLOPE ROAD ①



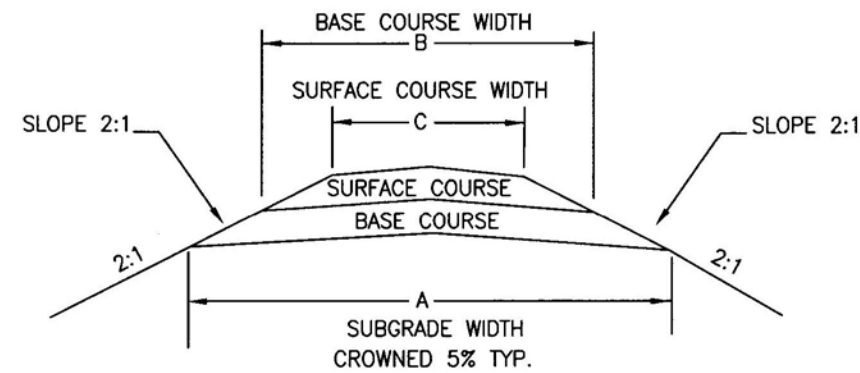
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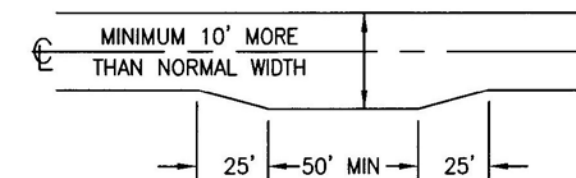
SECTION INSLOPE ROAD ③



SECTION ROAD ④



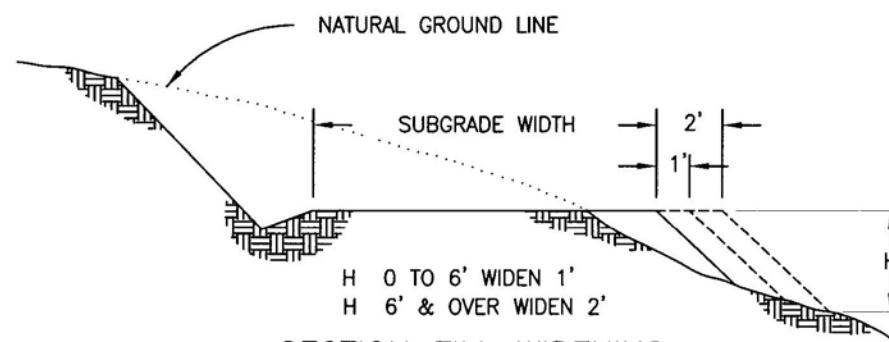
SECTION ROAD ⑤



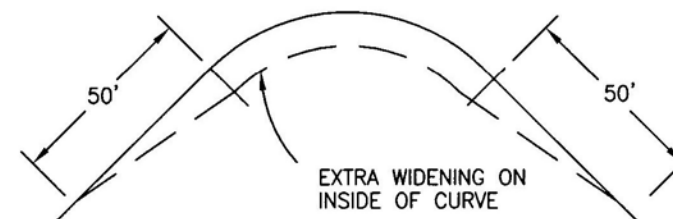
TYPICAL TURNOUT DIMENSIONS

NOTES:

1. Backslope to match existing backslope unless otherwise specified.
2. Backslope for Non-Design Roads:
Slopes under 50%, 3/4:1
Slopes over 50%, 1/2:1
Solid Rock 1/4:1
3. Out slope road segments with grades less than 6%, crown or inslope road segments with grades exceeding 6%.
4. Inslope road sections permitted only for temporary roads. Native surface restricted to summer haul.



SECTION FILL WIDENING

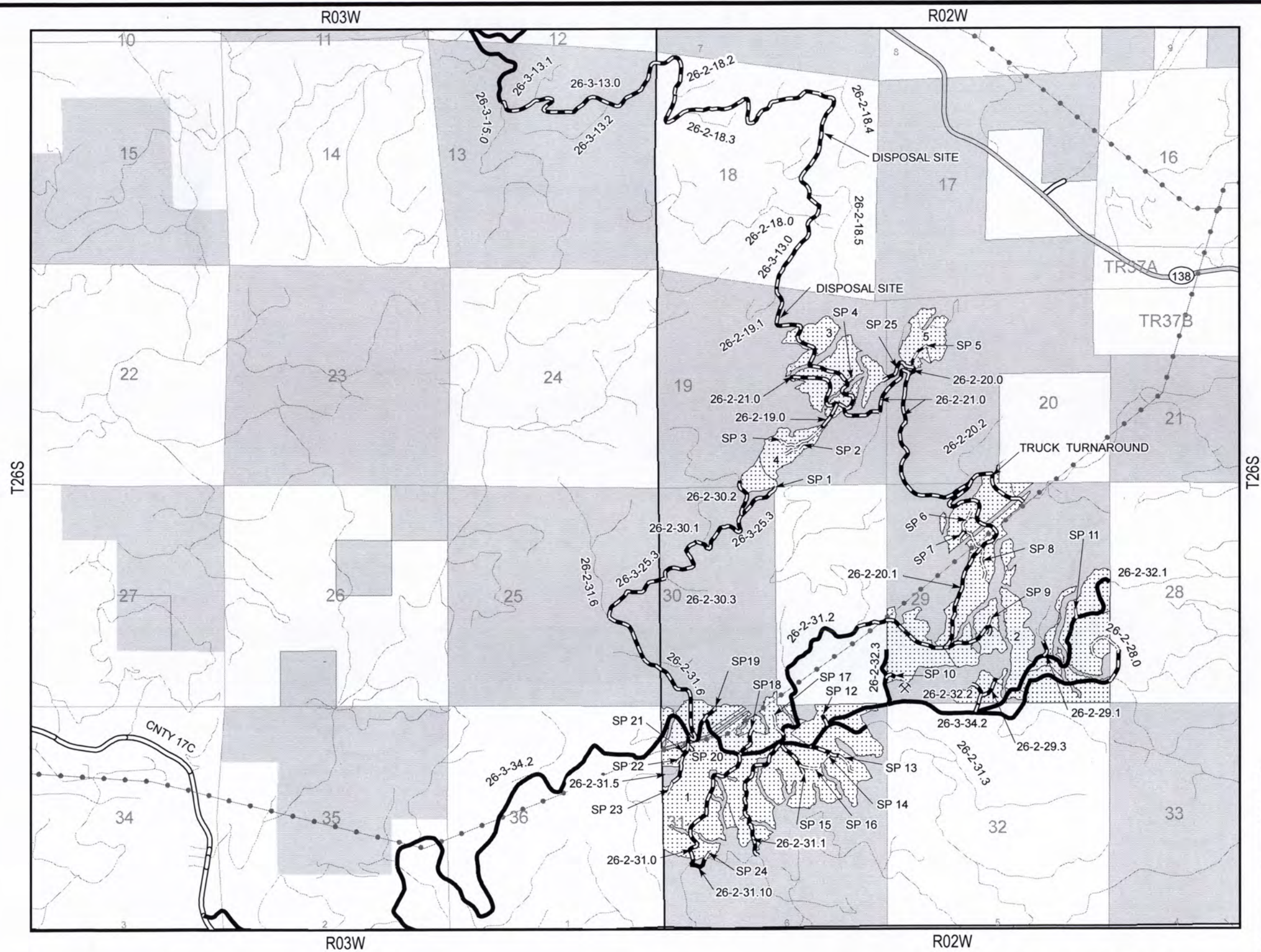


DEGREE OF CURVE	8-21	22-35	36-51	52-64	65-79	80-90
EXTRA WIDTH IN FEET	1	2	3	4	5	6

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

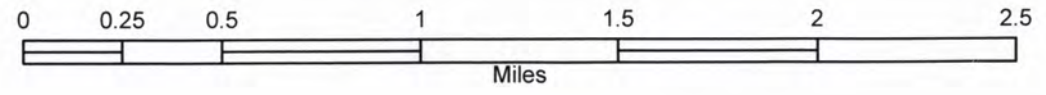


REV. NO.	DESCRIPTION	DATE	APPROVED
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT DIVISION OF OPERATIONS OREGON STATE OFFICE			
BIG THUNDER TS TYPICAL SECTIONS ROSEBURG DISTRICT OREGON			
DESIGNED	<i>J. King</i>		
REVIEWED	<i>Jim M. [unclear]</i>		
APPROVED	<i>Thane [unclear]</i>		
DRAWN: T. King	SCALE: NONE		
DATE: 4-18-2014	SHEET 2 OF 22		
			BLM #



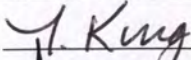
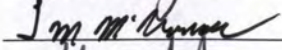
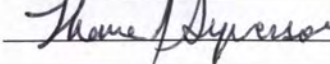
LEGEND

- ⊗ Rock Quarry
- ==== Road Construction
- Road Renovation
- Haul Route
- Transmission Line
- State Highway
- County Road
- Other Road
- ▨ Harvest Area
- BLM
- Other



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

 Transverse Mercator
 Zone 10 North NAD 1983

REV. NO.	DESCRIPTION	DATE	APPROVED
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT DIVISION OF OPERATIONS OREGON STATE OFFICE			
BIG THUNDER TS			
VICINITY MAP			
ROSEBURG DISTRICT		OREGON	
DESIGNED			
REVIEWED			
APPROVED			
DRAWN: T. KING		SCALE: AS SHOWN	
DATE: 03-21-14		SHEET: 3 OF 22	
			BLM #

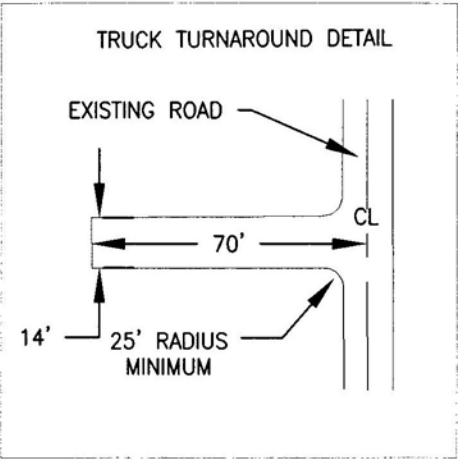
ROAD RENOVATION

Notes:

- 1. All roads shall be renovated in accordance with attached specifications and the work items listed below. Renovation may include roadside brushing, installing culverts and splash pads, blading, shaping, cleaning ditches, removing slide material, and cleaning existing drainage structures. Features to construct are so noted. Existing features are noted at approximate station in the notes below. Place 20 cy of 1004A crushed rock at each culvert installation for surface replacement. The Purchaser shall dispose of all culvert pipe removed as a part of the work described in this contract at a legal site off of BLM land.
- 2. All renovation and construction shall be done and approved prior to any hauling activity.
- 3. Existing turnouts, on roads to be renovated, shall be surfaced to the same standard as newly constructed turnouts.
- 4. Back slopes shall be cut to match existing unless otherwise specified.
- 5. All work shall be performed according to OSHA safety requirements.

STA	DESCRIPTION
<u>26-2-19.0</u>	
0+00	BEGIN RENOVATION @ JCT. OF 26-2-19.0 AND 26-2-21.0 BEGIN BRUSHING, BLADING AND COMPACTION
7+50	END RENOVATION, BEGIN CONSTRUCTION SPUR 2
<u>26-2-20.0</u>	
0+00	BEGIN RENOVATION @ JCT. OF 26-2-20.0 AND 26-2-21.0 BEGIN BRUSHING, BLADING, PULL DITCHES, CLEAN CULVERTS AND SURFACING WITH 6" OF 1004A AGGREGATE BASE COURSE CRUSHED ROCK
2+00	JCT. SPUR 5 RT.
3+85	JCT. SPUR 25 LT. END RENOVATION
<u>26-2-20.1</u>	
0+00	BEGIN RENOVATION @ JCT. OF 26-2-20.1 AND 26-2-31.2 BEGIN BRUSHING, BLADING, COMPACTION, CLEARING AND GRUBBING INSTALL RAIL GATE
27+15	JCT. SPUR 8 RT. AND JCT. SPUR 6 LT.
39+10	REMOVE EXISTING CLUVERT
43+30	REMOVE EXISTING CULVERT
44+45	BEGIN CENTER LINE SHIFT 5' LEFT, USE SUITABLE MATERIAL ON ROADWAY, PLACE UNSUITABLE MATERIAL @ STA 27+15
45+35	END CENTER LINE SHIFT
48+25	BEGIN REESTABLISH DITCHLINE
49+00	END REESTABLISH DITCHLINE, CLEAN INLET AND OUTLET OF CULVERT END CLEARING AND GRUBBING
50+00	BEGIN SURFACING WITH 6" OF 1004A AGGREGATE BASE COURSE CRUSHED ROCK
50+75	END SURFACING, BEGIN LOW WATER FORD CLEAN LOW WATER FORD FOR TRAFFIC, PROTECT CONCRETE
51+30	END LOW WATER FORD, BEGIN SURFACING WITH 6" OF 1004A AGGREGATE BASE COURSE CRUSHED ROCK
51+80	END SURFACING, BEGIN PULL DITCH
59+00	INSTALL RAIL GATE END RENOVATION JCT OF 26-2-21.0

STA	DESCRIPTION
<u>26-2-21.0</u>	
0+00	BEGIN RENOVATION @ CREEK BEGIN BRUSHING, BLADING, COMPACTION AND CLEAN CULVERTS AND SURFACING WITH 6" OF 1004I AGGREGATE BASE COURSE CRUSHED ROCK
10+60	BEGIN PULL DITCH, END SURFACING WITH 6" OF 1004I AGGREGATE BASE COURSE CRUSHED ROCK. BEGIN SURFACING WITH 3" OF 1004A AGGREGATE BASE COURSE CRUSHED ROCK
15+70	JCT 26-2-19.0 RT.
18+25	JCT. 26-2-13.0 LT. END SURFACING
41+50	JCT. 26-2-20.0 LT.
87+35	JCT. 26-2-20.1 RT.
87+60	JCT. 26-2-20.2 LT.
92+80	CONSTRUCT 70' TRUCK TURNAROUND LT. PLACE EXCESS WASTE TO LEFT OF TURNAROUND
102+00	JCT. 26-2-29.0 LT.
103+65	END RENOVATION
<u>26-2-29.1</u>	
0+00	BEGIN RENOVATION @ JCT OF 26-2-29.1 AND 26-2-32.1 BEGIN BRUSHING, BLADING AND COMPACTION
3+30	END RENOVATION
<u>26-2-29.3</u>	
0+00	BEGIN RENOVATION @ JCT OF 26-2-29.3 AND 26-2-32.2 BEGIN BRUSHING, BLADING, COMPACTION, PULL DITCHED AND CLEAN CULVERTS
5+60	END RENOVATION
<u>26-2-30.2</u>	
0+00	BEGIN RENOVATION @ JCT 26-2-30.2 AND 26-3-25.3 BEGIN BRUSHING, BLADING, COMPACTION, PULL DITCH AND CLEAN CULVERTS
12+90	END REONVATION



REV. NO.	DESCRIPTION	DATE	APPROVED
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT DIVISION OF OPERATIONS OREGON STATE OFFICE			
26-2-19.0, 20.1, 21.0, 29.3 BIG THUNDER TS			
RENOVATION NOTES			
ROSEBURG DISTRICT OREGON			
DESIGNED	T. King		
REVIEWED	[Signature]		
APPROVED	[Signature]		
DRAWN: T. KING		SCALE: AS SHOWN	
DATE: 03-06-14		SHEET 4 OF 22	
BLM #			

ROAD RENOVATION CONTINUED

STA	DESCRIPTION
<u>26-2-31.0</u>	
0+00	BEGIN RENOVATION @ JCT. 26-2-31.0 AND 26-3-34.2 BEGIN BRUSHING, BLADING, PULL DITCH, CLEAN CULVERTS AND COMPACTION
0+85	EXISTING CMP
9+45	REPLACE CULVERT WITH 18"x40' CULVERT, BACKFILL WITH CRUSHED ROCK
13+70	EXISTING CMP
24+15	EXISTING CMP
25+50	REPLACE CULVERT WITH 18"x36' CULVERT AND SPLASH PAD, BACKFILL WITH CRUSHED ROCK
29+80	EXISTING CMP
34+70	END RENOVATION
<u>26-2-31.1</u>	
0+00	BEGIN RENOVATION @ JCT 26-2-31.1 AND 26-3-34.2 BEGIN BRUSHING, BLADING, PULL DITCH, CLEARING, GRUBBING, COMPACTION AND SURFACING WITH 12" OF 1004I AGGREGATE BASE COURSE CRUSHED ROCK. BEGIN SHOFLY WIDENING 5' LT.
0+50	END SHOEFLY WIDENING, BEGIN DITCH
3+20	END PULLING DITCH, INSTALL 18"x30' CULVERT, BACKFILL WITH CRUSHED ROCK
7+60	BEGIN PULLING DITCH
8+80	INSTALL 18"x36' CULVERT, BACKFILL WITH CRUSHED ROCK
12+55	INSTALL 18"x36' CULVERT, BACKFILL WITH CRUSHED ROCK
14+70	INSTALL 18"x36' CULVERT, BACKFILL WITH CRUSHED ROCK
15+45	TURNOUT LT
18+30	INSTALL 18"x36' CULVERT, BACKFILL WITH CRUSHED ROCK
21+15	INSTALL 18"x36' CULVERT, BACKFILL WITH CRUSHED ROCK
23+15	INSTALL 18"x36' CULVERT, BACKFILL WITH CRUSHED ROCK
26+30	INSTALL 18"x36' CULVERT, BACKFILL WITH CRUSHED ROCK
29+60	LEAVE UNIT 1
31+65	END RENOVATION @ JCT. 26-2-31.10

STA	DESCRIPTION
<u>26-2-31.2</u>	
0+00	STATIONING BEGINS @ JCT. 26-2-31.2 AND 26-3-34.2
46+25	BEGIN RENOVATION BEGIN BRUSHING, BLADING, PULL DITCH, COMPACTION AND SURFACING WITH 6" OF 1004I AGGREGATE BASE COURSE CRUSHED ROCK
53+45	PROPERTY LINE ENTER BLM LAND ENTER UNIT 2 BEGIN CLEARING OF ALL TREES WITHIN THE CLEARING LIMITS. DECK MERCH. AND SCATTER NON-MERCH. GRUB STUMPS ON SHOULDER AND IN DITCH LINE. BEGIN 12" OF 1004I AGGREGATE BASE COURSE CRUSHED ROCK
69+20	100' DOUBLE WIDE TURNOUT
69+70	JCT. 26-2-20.1 LT
77+05	REPLACE CULVERT WITH 24"x40' CULVERT, BACK FILL WITH CRUSHED ROCK
80+90	JCT. SPUR 9 LT
82+30	BEGIN 50'X100' LANDING
83+30	END RENOVATION
<u>26-2-31.5</u>	
0+00	BEGIN RENOVATION @ JCT. 26-2-31.5 AND 26-3-34.2 BEGIN BRUSHING AND BLADING
1+95	JCT. SPUR 20 LT
2+45	JCT. SPUR 21 RT
5+55	JCT. SPUR 22 RT PLACE 10 CY OF 1004A AGGREGATE BASE COURSE CRUSHED ROCK TO LEVEL GRADE IN LOW AREA
6+60	JCT. SPUR 23 LT
7+60	END RENOVATION
<u>26-2-31.6</u>	
0+00	BEGIN RENOVATION @ JCT 26-2-31.6 AND 26-3-34.2 BEGIN BRUSHING, BLADING, PULL DITCH AND CLEAN CULVERTS PLACE 10 CY OF 1004A AGGREGATE BASE COURSE CRUSHED ROCK IN LOW AREA @ JCT.
9+70	LEAVE UNIT 1
39+55	END RENOVATION



REV. NO.	DESCRIPTION	DATE	APPROVED
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT DIVISION OF OPERATIONS OREGON STATE OFFICE 26-2-31.0, 31.1, 31.2, 31.5, 31.6 BIG THUNDER TS RENOVATION NOTES ROSEBURG DISTRICT OREGON			
DESIGNED	<i>T. King</i>		
REVIEWED	<i>Jim M. Hanna</i>		
APPROVED	<i>Shane Dwyer</i>		
DRAWN: T. KING		SCALE: AS SHOWN	
DATE: 03-20-14		SHEET 5 OF 22	
BLM #			

ROAD RENOVATION CONTINUED

STA	DESCRIPTION
<u>26-2-32.2</u>	
0+00	BEGIN RENOVATION @ JCT 26-2-32.2 AND 26-3-34.2 BEGIN BRUSHING, BLADING, PULL DITCH, CLEAN CULVERTS AND COMPACTION
2+35	PROPERTY LINE ENTER BLM LAND
3+70	JCT. 26-2-29.3 RT
7+30	END REONVATION
<u>26-3-13.0</u>	
0+00	BEGIN RENOVATION @ JCT. 26-3-13.0 AND 26-3-15.0 BEGIN BRUSHING, BLADING, PULL DITCH, COMPACTION, CLEAN CULVERTS AND SURFACE WITH 6" 1004A OF AGGREGATE BASE COURSE CRUSHED ROCK
9+20	JCT 26-3-13.1 LT.
17+40	EXISTING CULVERT, SEED DITCHLINE LEADING INTO CREEK AFTER PULLING
18+40	EXISTING CULVERT
22+00	EXISTING CULVERT
25+25	EXISTING CULVERT, SEED DITCHLINE LEADING INTO CREEK AFTER PULLING
34+50	JCT. 26-3-13.2 RT.
46+50	EXISTING CULVERT
54+00	PROPERTY LINE ENTER FIA TIMBER GROWTH MASTERS LAND
55+15	EXISTING CULVERT
66+40	EXISTING CULVERT
66+90	JCT. 26-2-18.2 LT.
73+60	EXISTING CULVERT, SEED DITCHLINE LEADING INTO CREEK AFTER PULLING
78+80	JCT. 26-2-18.3 RT.
83+40	EXISTING CULVERT
100+10	EXISTING CULVERT, SEED DITCHLINE LEADING INTO CREEK AFTER PULLING
101+10	REMOVE STUMP FROM CUT SLOPE PLACE EXCESS MATERIAL @ STA 119+85
101+85	REPLACE EXISTING CULVERT WITH 24"x42' CULVERT, BACKFILL WITH CRUSHED ROCK
106+25	EXISTING CULVERT
109+05	JCT. 26-2-18.4 LT.
112+40	EXISTING CULVERT

STA	DESCRIPTION
<u>26-3-13.0 CONT.</u>	
119+85	DISPOSAL SITE LT.
120+25	JCT. 26-2-18.5 LT. EXISTING CULVERT
127+00	EXISTING CULVERT
135+05	EXISTING CULVERT
146+25	REPLACE EXISTING CULVERT WITH 18"x42' CULVERT AND SPLASH PAD, BACKFILL WITH CRUSHED ROCK
150+50	REPLACE EXISTING CULVERT WITH 24"x34' CULVERT, BACKFILL WITH CRUSHED ROCK
154+80	EXISTING CULVERT
157+25	JCT. 26-2-18.0 RT.
164+50	EXISTING CULVERT
170+85	EXISTING CULVERT
174+70	END SURFACING, EXISTING CULVERT,
176+80	PROPERTY LINE ENTER BLM LAND, EXISTING CULVERT
177+65	JCT. 26-2-19.1 RT.
183+80	DISPOSAL SITE LT.
186+60	EXISTING CULVERT, SEED DITCHLINE LEADING INTO CREEK AFTER PULLING
187+15	INSTALL 18"x36' CULVERT WITH 10' DOWNSPOUT AND SPLASH PAD, BACKFILL WITH CRUSHED ROCK
201+75	ENTER UNIT 3
204+05	EXISTING CULVERT, SEED DITCHLINE LEADING INTO CREEK AFTER PULLING
207+40	EXISTING CULVERT
214+35	JCT. SPUR 4 LT.
223+80	END RENOVATION @ JCT. OF 26-2-21.0



REV. NO.	DESCRIPTION	DATE	APPROVED
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT DIVISION OF OPERATIONS OREGON STATE OFFICE			
26-2-32.2 & 26-3-13.0 BIG THUNDER TS			
RENOVATION NOTES			
ROSEBURG DISTRICT		OREGON	
DESIGNED	<i>T. King</i>		
REVIEWED	<i>Tom McSherry</i>		
APPROVED	<i>Thane Depressa</i>		
DRAWN: T. KING		SCALE: AS SHOWN	
DATE: 03-20-14		SHEET 6 OF 22	
		BLM #	

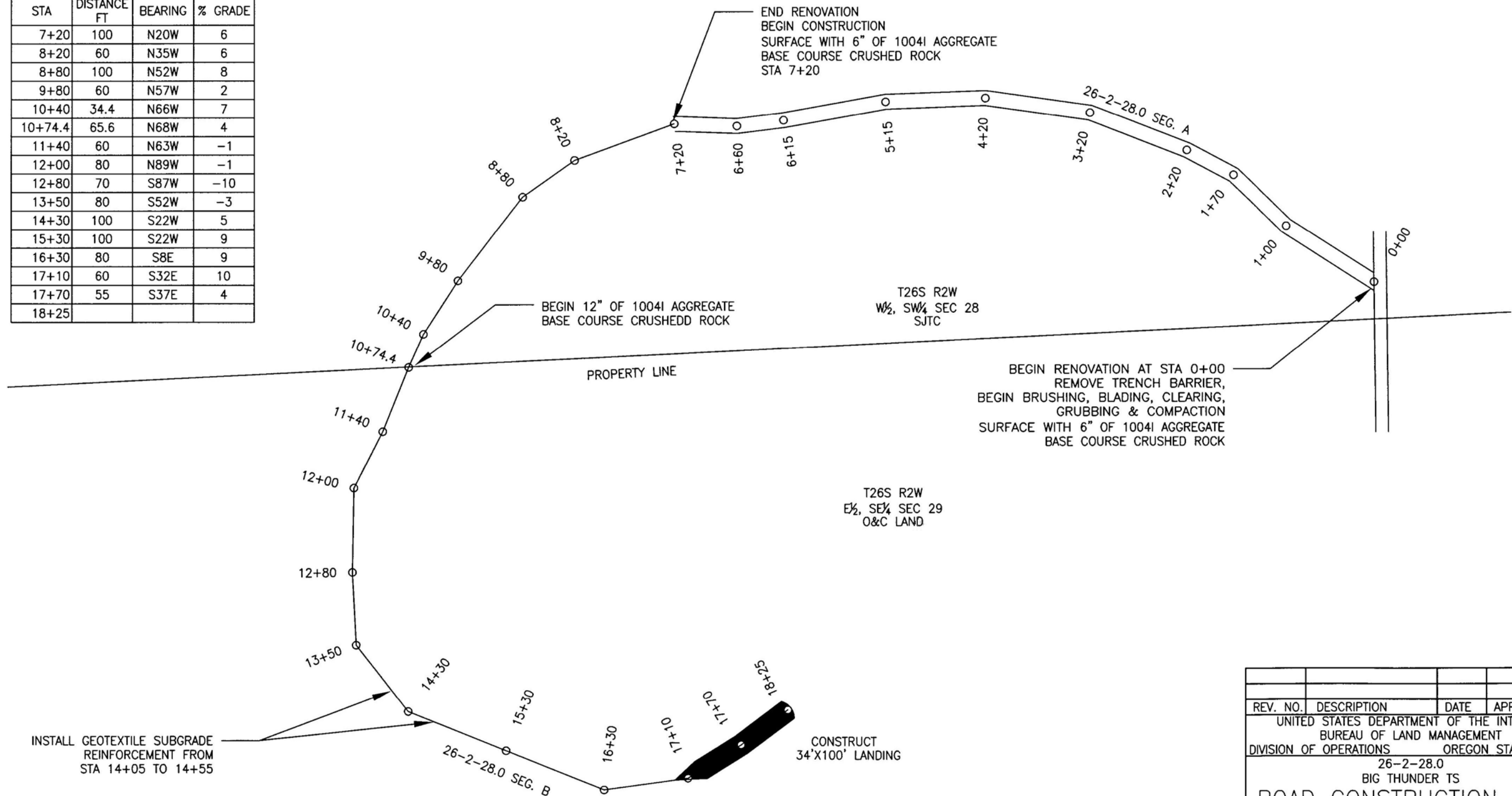
ROAD RENOVATION CONTINUED

STA	DESCRIPTION	STA	DESCRIPTION	STA	DESCRIPTION
<u>26-3-25.3</u>		<u>SPUR 15</u>		<u>SPUR 25</u>	
0+00	BEGIN RENOVATION @ JCT. OF 26-3-25.3 AND 26-2-31.6 BEGIN BRUSHING, BLADING, PULL DITCH, COMPACTION AND CLEAN CULVERTS	0+00	BEGIN RENOVATION @ JCT. OF SPUR 15 AND 26-3-34.2 BEGIN CLEARING, GRUBBING, BRUSHING, BLADING, COMPACTION AND SURFACING WITH 12" OF 1004I AGGREGATE BASE COURSE CRUSHED ROCK	0+00	BEGIN RENOVATION @ JCT. OF SPUR 25 AND 26-2-20.0 BEGIN BRUSHING, BLADING, CLEAN CULVERTS, COMPACTION AND SURFACING WITH 6" OF 1004I AGGREGATE BASE COURSE CRUSHED ROCK
17+70	JCT. 26-2-30.3 RT.	7+00	JCT SPUR16 LT	5+45	ENTER UNIT 3
33+55	JCT. 26-2-30.1 LT.	8+75	BEGIN 34'X75' LANDING	7+35	END RENOVATION
40+25	PLACE 10 CY OF 1004A AGGREGATE BASE COURSE CRUSHED ROCK TO LEVEL GRADE	9+50	END RENOVATION		
44+45	BEGIN CENTER LINE SHIFT 2' LEFT, FILL DITCH WITH 6" MINUS ROCK	<u>SPUR 18</u>			
45+15	END CENTER LINE SHIFT LEFT	0+00	BEGIN RENOVATION @ JCT. OF SPUR 18 AND 26-3-34.2 BEGIN CLEARING, GRUBBING, BRUSHING, BLADING, COMPACTION AND SURFACING WITH 12" OF 1004I AGGREGATE BASE COURSE CRUSHED ROCK		
52+42	JCT. 26-2-30.2 LT.	5+70	BEGIN 34'X70' LANDING		
62+75	END RENOVATION, BEGIN CONSTRUCT SPUR 1, PROPERTY LINE	6+40	END RENOVATION		
<u>SPUR 5</u>		<u>SPUR 19</u>			
0+00	BEGIN RENOVATION @ JCT OF SPUR 5 AND 26-2-20.0 BEGIN BLADING, CLEARING, GRUBBING, COMPACTION AND SURFACING WITH 12" OF 1004I AGGREGATE BASE COURSE CRUSHED ROCK CONSTRUCT TRANSITION FROM 26-2-20.0 TO SPUR 5	0+00	BEGIN RENOVATION @ JCT. OF SPUR 19 AND 26-3-34.2 BEGIN CLEARING, GRUBBING, BRUSHING, BLADING, COMPACTION AND SURFACING WITH 6" OF 1004I AGGREGATE BASE COURSE CRUSHED ROCK		
6+75	BEGIN 34'X90' LANDING	2+70	BEGIN 34'X85' LANDING		
7+65	END RENOVATION	3+55	END RENOVATION		
<u>SPUR 10</u>		<u>SPUR 20</u>			
0+00	BEGIN RENOVATION @ JCT. SPUR 10 AND 26-2-32.3 BEGIN CLEARING, GRUBBING, BLADING, COMPACTION AND SURFACING WITH 12" OF 1004I AGGREGATE BASE COURSE CRUSHED ROCK	0+00	BEGIN RENOVATION @ JCT. OF SPUR 20 AND 26-2-31.5 BEGIN CLEARING, GRUBBING, BRUSHING, BLADING, COMPACTION		
1+40	BEGIN 34'X100' LANDING	0+95	BEGIN 30'X100' LANDING		
2+40	END RENOVATION	1+95	END RENOVATION		
<u>SPUR 12</u>		<u>SPUR 21</u>			
0+00	BEGIN RENOVATION @ JCT. OF SPUR 12 AND 26-3-34.2 BEGIN CLEARING, GRUBBING, BRUSHING, BLADING, COMPACTION AND SURFACING WITH 6" OF 1004I AGGREGATE BASE COURSE CRUSHED ROCK	0+00	BEGIN RENOVATION @ JCT. OF SPUR 21 AND 26-2-31.5 BEGIN CLEARING, GRUBBING, BRUSHING, BLADING, COMPACTION AND SURFACING WITH 6" OF 1004I AGGREGATE BASE COURSE CRUSHED ROCK		
1+95	BEGIN 34'X75' LANDING	1+00	BEGIN 34'X55' LANDING		
2+70	END RENOVATION	1+55	END RENOVATION		



REV. NO.	DESCRIPTION	DATE	APPROVED
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT DIVISION OF OPERATIONS OREGON STATE OFFICE 26-3-25.3 & SPURS 5 - 25 BIG THUNDER TS RENOVATION NOTES ROSEBURG DISTRICT OREGON			
DESIGNED	<i>T. King</i>		
REVIEWED	<i>Jim M. King</i>		
APPROVED	<i>Thane J. Syversen</i>		
DRAWN: T. KING	SCALE: AS SHOWN		
DATE: 03-20-14	SHEET 7 OF 22		
			BLM #

26-2-28.0			
STA	DISTANCE FT	BEARING	% GRADE
7+20	100	N20W	6
8+20	60	N35W	6
8+80	100	N52W	8
9+80	60	N57W	2
10+40	34.4	N66W	7
10+74.4	65.6	N68W	4
11+40	60	N63W	-1
12+00	80	N89W	-1
12+80	70	S87W	-10
13+50	80	S52W	-3
14+30	100	S22W	5
15+30	100	S22W	9
16+30	80	S8E	9
17+10	60	S32E	10
17+70	55	S37E	4
18+25			



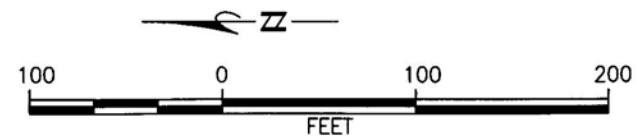
NOTES:
 1. GEOTEXTILE SHALL CONFORM TO THE FOLLOWING MINIMUM STANDARDS OR APPROVED EQUIVALENT:

GEOTEXTILE PROPERTY

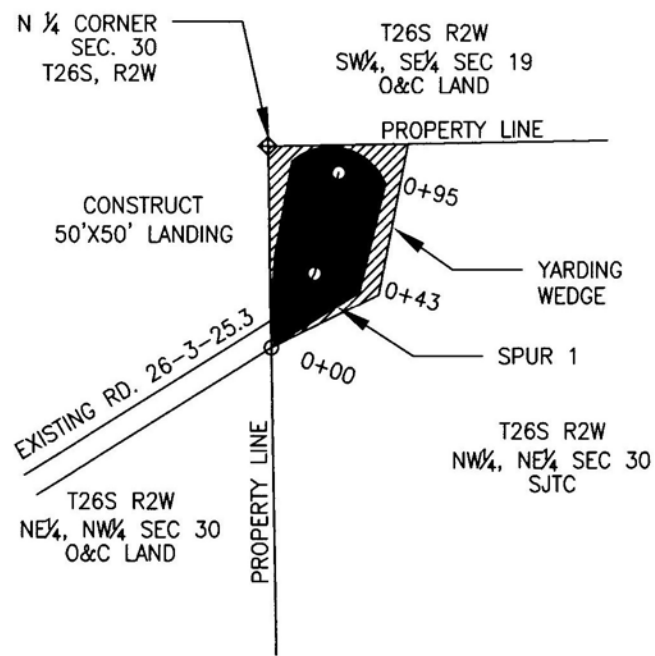
WEIGHT ASTM D3776
 GRAB TENSILE STRENGTH ASTM D4632
 PUNCTURE ASTM D4833

TEST RESULTS FOR GEOTEXTILE

10 OZ.SQ.YD., MIN.
 250 LBS/IN., MIN
 100 PSI, MIN



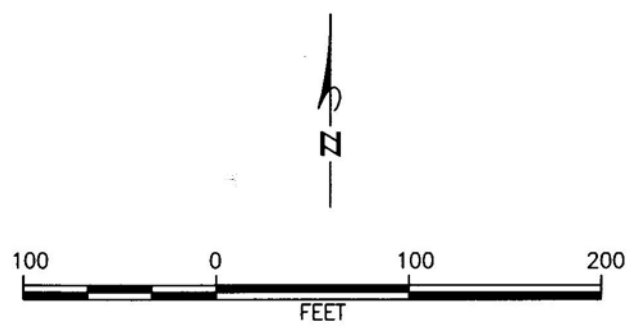
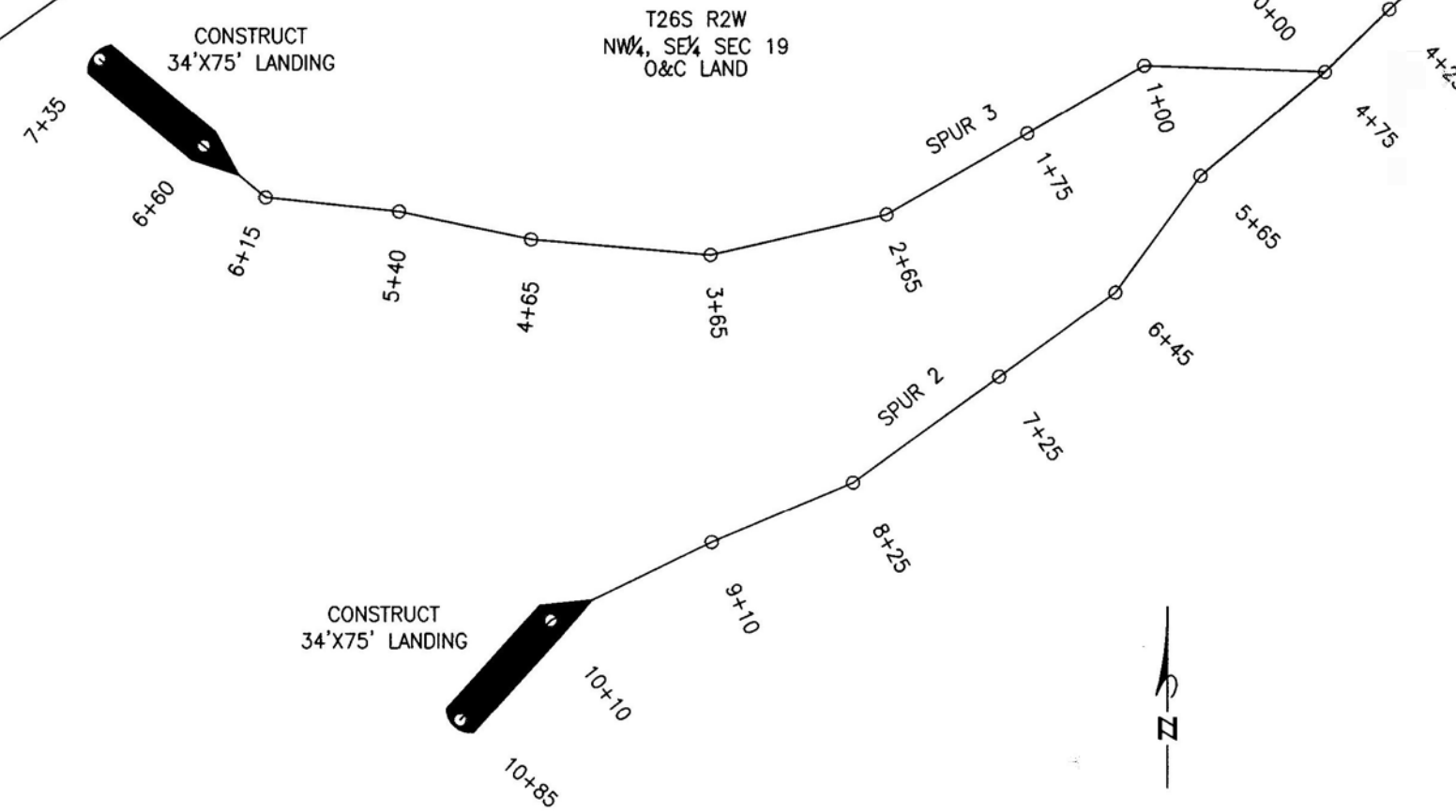
REV. NO.	DESCRIPTION	DATE	APPROVED
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT DIVISION OF OPERATIONS OREGON STATE OFFICE			
26-2-28.0 BIG THUNDER TS ROAD CONSTRUCTION PLAN ROSEBURG DISTRICT OREGON			
DESIGNED	<i>T. King</i>		
REVIEWED	<i>Tom McHugh</i>		
APPROVED	<i>Thane Peterson</i>		
DRAWN: T. KING	SCALE: AS SHOWN		
DATE: 04-28-14	SHEET 8 OF 22		
			BLM #



SPUR 1			
STA	DISTANCE FT	BEARING	% GRADE
0+00	43	N45E	-12
0+43	52	N25E	-5
0+95			

SPUR 3			
STA	DISTANCE FT	BEARING	% GRADE
EQ 0+00	100	N88W	1
1+00	75	S60W	1
1+75	90	S60W	1
2+65	100	S77W	3
3+65	100	N85W	5
4+65	75	N78W	7
5+40	75	N84W	13
6+15	45	N50W	13
6+60	75	N50W	4
7+35			

SPUR 2			
STA	DISTANCE FT	BEARING	% GRADE
0+00	75	S60W	12
0+75	80	S35W	12
1+55	70	S24W	15
2+25	100	S48W	15
3+25	100	S45W	9
4+25	50	S46W	9
EQ 4+75	90	S50W	6
5+65	80	S36W	4
6+45	80	S54W	4
7+25	100	S54W	4
8+25	85	S67W	7
9+10	100	S67W	11
10+10	75	S42W	4
10+85			

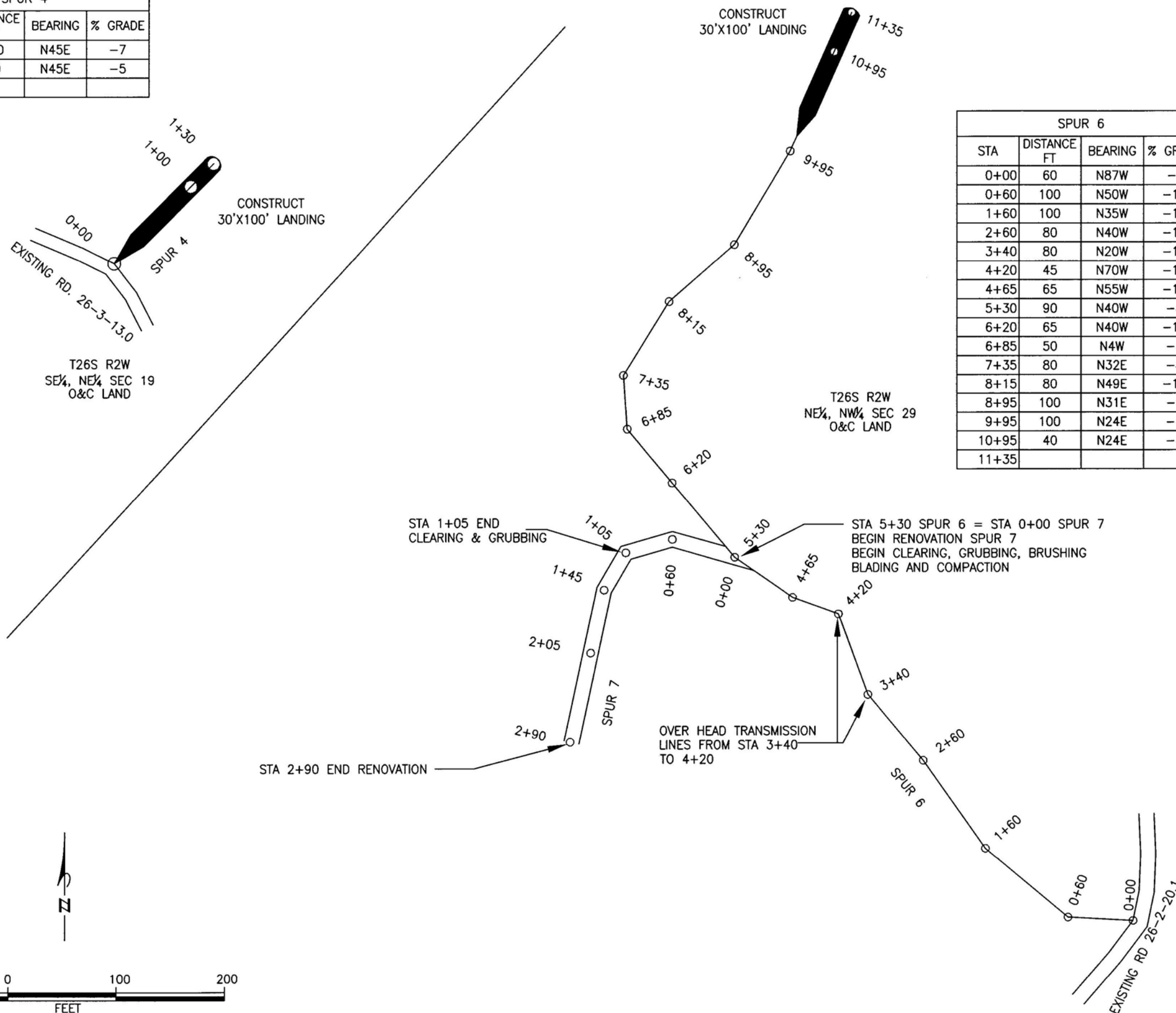
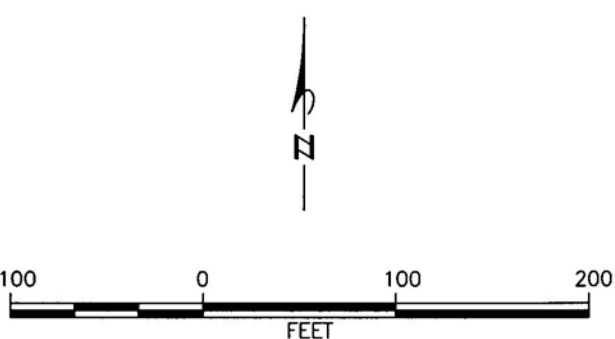


ALWAYS
THINK
SAFETY

REV. NO.	DESCRIPTION	DATE	APPROVED
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT DIVISION OF OPERATIONS OREGON STATE OFFICE			
SPURS 1, 2 & 3 BIG THUNDER TS ROAD CONSTRUCTION PLAN ROSEBURG DISTRICT OREGON			
DESIGNED	T. King		
REVIEWED	[Signature]		
APPROVED	[Signature]		
DRAWN: T. KING		SCALE: AS SHOWN	
DATE: 02-24-14		SHEET 9 OF 22	
		BLM #	

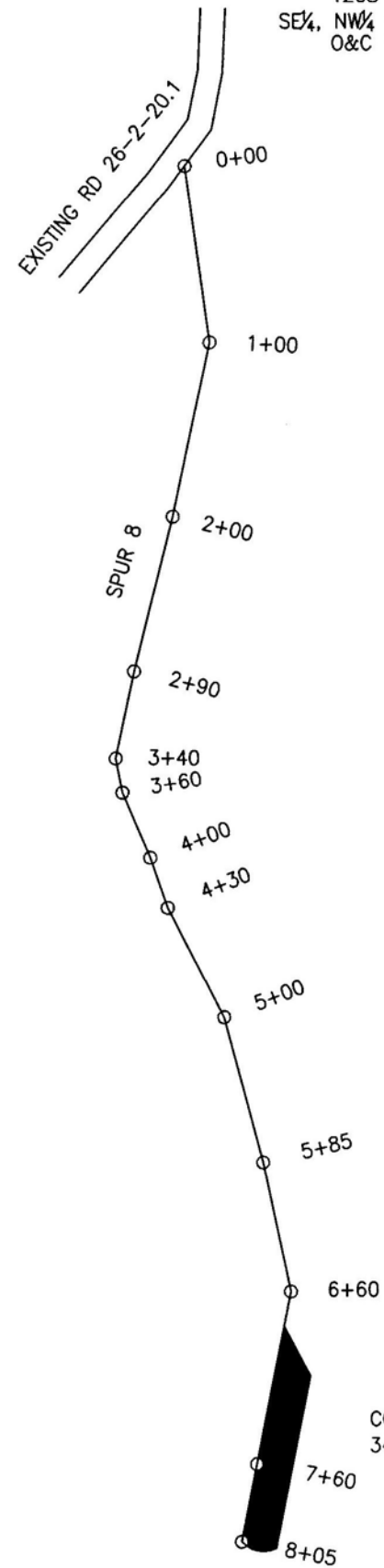
SPUR 4			
STA	DISTANCE FT	BEARING	% GRADE
0+00	100	N45E	-7
1+00	30	N45E	-5
1+30			

SPUR 6			
STA	DISTANCE FT	BEARING	% GRADE
0+00	60	N87W	-1
0+60	100	N50W	-13
1+60	100	N35W	-13
2+60	80	N40W	-13
3+40	80	N20W	-12
4+20	45	N70W	-12
4+65	65	N55W	-12
5+30	90	N40W	-8
6+20	65	N40W	-10
6+85	50	N4W	-3
7+35	80	N32E	-8
8+15	80	N49E	-12
8+95	100	N31E	-9
9+95	100	N24E	-4
10+95	40	N24E	-4
11+35			

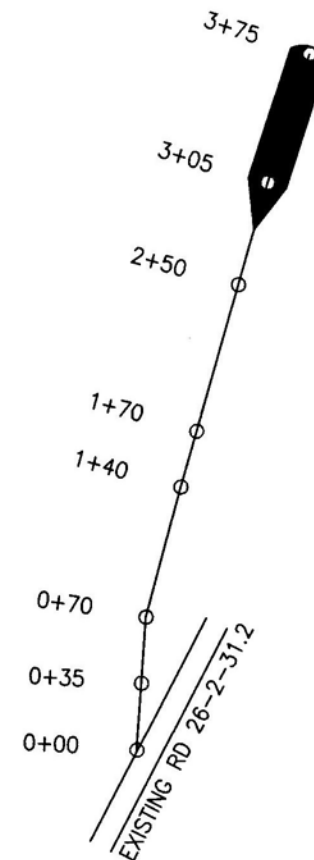


REV. NO.	DESCRIPTION	DATE	APPROVED
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT DIVISION OF OPERATIONS OREGON STATE OFFICE			
SPURS 4, 6 & 7 BIG THUNDER TS ROAD CONSTRUCTION PLAN ROSEBURG DISTRICT OREGON			
DESIGNED	<i>T. King</i>		
REVIEWED	<i>Jim M. Langley</i>		
APPROVED	<i>Thane J. Syverson</i>		
DRAWN: T. KING		SCALE: AS SHOWN	
DATE: 03-20-14		SHEET 10 OF 22	
			BLM #

T26S R2W
SE¼, NW¼ SEC 29
O&C LAND



SPUR 8			
STA	DISTANCE FT	BEARING	% GRADE
0+00	100	S8E	1
1+00	100	S12W	5
2+00	90	S14W	11
2+90	50	S12W	11
3+40	20	S11E	7
3+60	40	S23E	5
4+00	30	S19E	7
4+30	70	S27E	4
5+00	85	S15E	4
5+85	75	S12E	10
6+60	100	S11W	8
7+60	45	S11W	4
8+05			



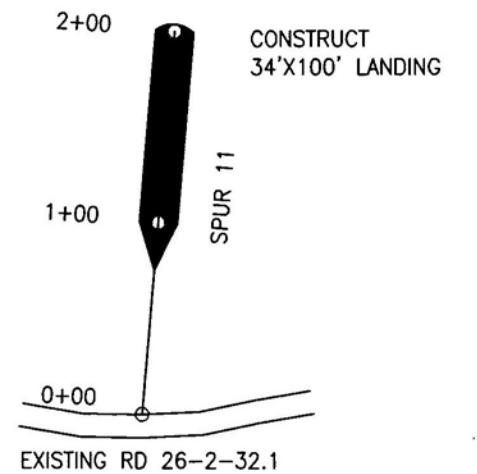
CONSTRUCT
34'X70' LANDING

SPUR 9			
STA	DISTANCE FT	BEARING	% GRADE
0+00	35	N4E	-9
0+35	35	N4E	-9
0+70	70	N15E	-5
1+40	30	N16E	-15
1+70	80	N16E	-15
2+50	55	N16E	-13
3+05	70	N18E	-3
3+75			

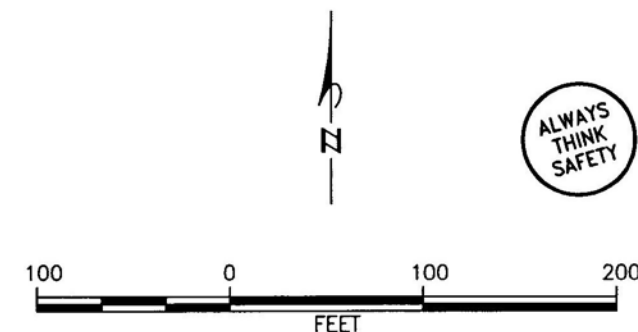
T26S R2W
NE¼, SW¼ SEC 29
O&C LAND

SPUR 11			
STA	DISTANCE FT	BEARING	% GRADE
0+00	100	N5E	-8
1+00	100	N5E	-8
2+00			

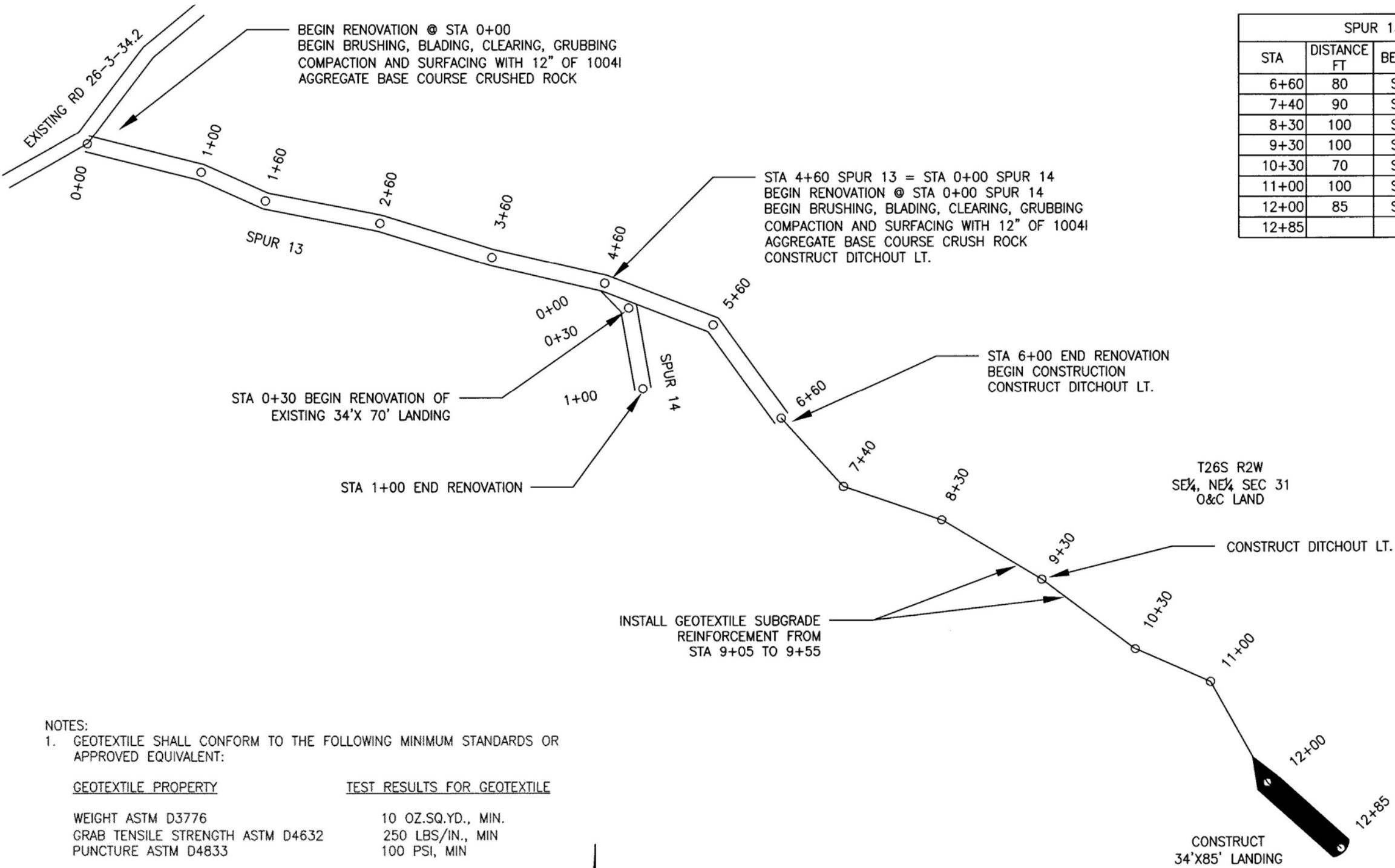
T26S R2W
NE¼, SE¼ SEC 29
O&C LAND



REV. NO.	DESCRIPTION	DATE	APPROVED
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT DIVISION OF OPERATIONS OREGON STATE OFFICE			
SPURS 8, 9 & 11 BIG THUNDER TS			
ROAD CONSTRUCTION PLAN			
ROSEBURG DISTRICT OREGON			
DESIGNED	T. King		
REVIEWED	Jan M. Hynge		
APPROVED	Thane Syverson		
DRAWN: T. KING	SCALE: AS SHOWN		
DATE: 03-20-14	SHEET 11 OF 22		
BLM #			

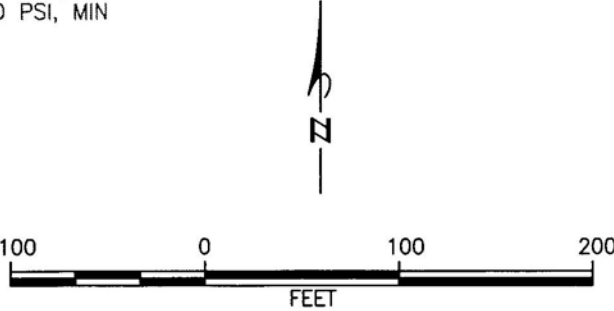


SPUR 13			
STA	DISTANCE FT	BEARING	% GRADE
6+60	80	S42E	-16
7+40	90	S71E	-16
8+30	100	S59E	-8
9+30	100	S53E	4
10+30	70	S66E	1
11+00	100	S29E	-7
12+00	85	S48E	-5
12+85			

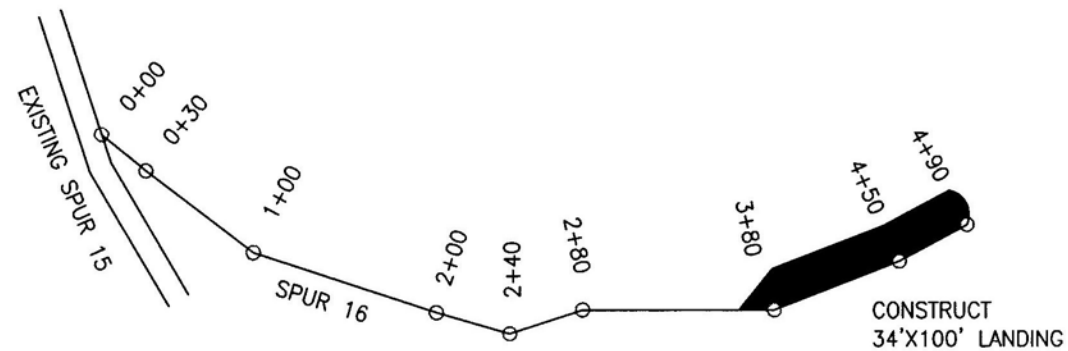


NOTES:
1. GEOTEXTILE SHALL CONFORM TO THE FOLLOWING MINIMUM STANDARDS OR APPROVED EQUIVALENT:

GEOTEXTILE PROPERTY	TEST RESULTS FOR GEOTEXTILE
WEIGHT ASTM D3776	10 OZ.SQ.YD., MIN.
GRAB TENSILE STRENGTH ASTM D4632	250 LBS/IN., MIN
PUNCTURE ASTM D4833	100 PSI, MIN



REV. NO.	DESCRIPTION	DATE	APPROVED
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT DIVISION OF OPERATIONS OREGON STATE OFFICE			
SPURS 13 & 14 BIG THUNDER			
ROAD CONSTRUCTION PLAN			
ROSEBURG DISTRICT OREGON			
DESIGNED	<i>T. King</i>		
REVIEWED	<i>Jim M. [unclear]</i>		
APPROVED	<i>Thane [unclear]</i>		
DRAWN:	T. KING	SCALE:	AS SHOWN
DATE:	04-28-14	SHEET	12 OF 22
BLM #			



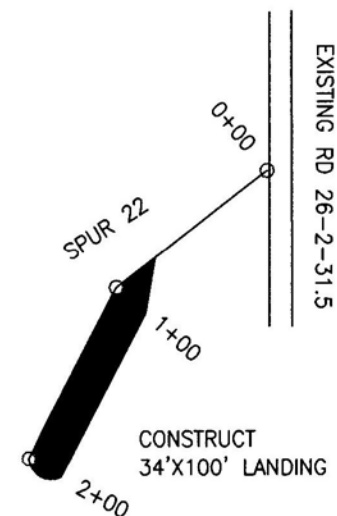
SPUR 16			
STA	DISTANCE FT	BEARING	% GRADE
0+00	30	S51E	13
0+30	70	S53E	3
1+00	100	S72E	-1
2+00	40	S74E	-11
2+40	40	N72E	-14
2+80	100	EAST	-14
3+80	70	N69E	-10
4+50	40	N62E	-4
4+90			

T26S R2W
SW 1/4, NE 1/4 SEC 31
O&C LAND

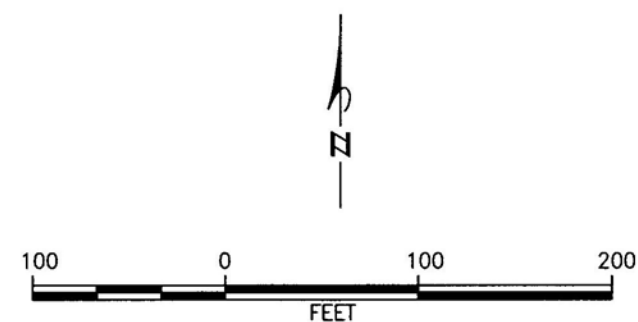
SPUR 17			
STA	DISTANCE FT	BEARING	% GRADE
0+00	80	N51W	-4
0+80	100	N43W	-5
1+80	70	N36W	-10
2+50	100	N12W	-16
3+50	100	N4W	-9
4+50	100	N28W	-9
5+50			



T26S R2W
NW 1/4, NE 1/4 SEC 31
O&C LAND



SPUR 22			
STA	DISTANCE FT	BEARING	% GRADE
0+00	100	S53W	1
1+00	100	S28W	2
2+00			



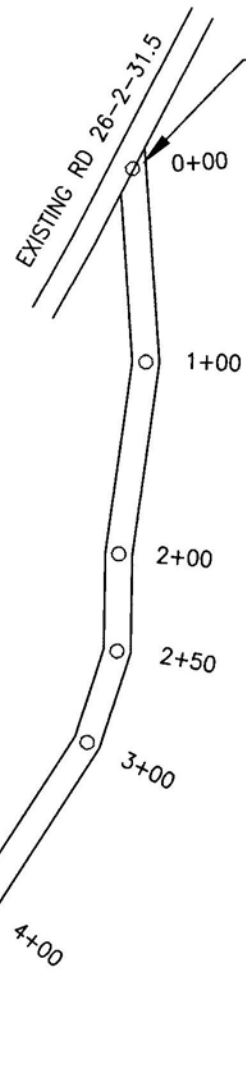
REV. NO.	DESCRIPTION	DATE	APPROVED
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT DIVISION OF OPERATIONS OREGON STATE OFFICE			
SPURS 16, 17 & 22 BIG THUNDER TS			
ROAD CONSTRUCTION PLAN			
ROSEBURG DISTRICT OREGON			
DESIGNED	J. King		
REVIEWED	M. King		
APPROVED	Thane J. Dyerson		
DRAWN: T. KING		SCALE: AS SHOWN	
DATE: 03-20-14		SHEET 13 OF 22	
BLM #			



SPUR 23			
STA	DISTANCE FT	BEARING	% GRADE
4+70	100	S41W	6
5+70	100	S19W	8
6+70	60	S12W	-1
7+30	100	S22W	-2
8+30	80	S22W	-1
9+10			

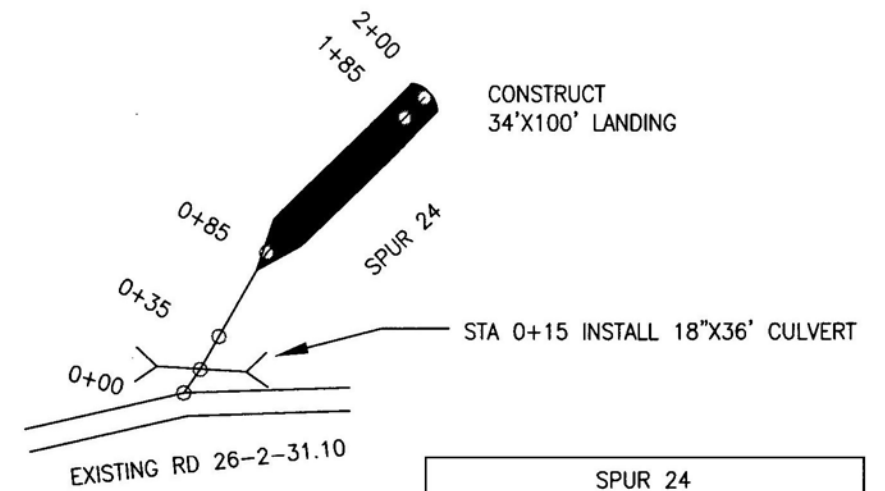
STA 4+70 END RENOVATION
BEGIN CONSTRUCTION

CONSTRUCT
34'X80' LANDING



BEGIN RENOVATION @ STA 0+00
BEGIN BRUSHING, BLADING, CLEARING,
GRUBBING & COMPACTION

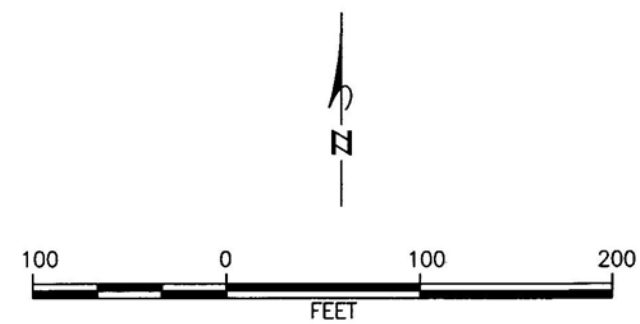
T26S R2W
SW¹/₄, NW¹/₄ SEC 31
O&C LAND



CONSTRUCT
34'X100' LANDING

SPUR 24			
STA	DISTANCE FT	BEARING	% GRADE
0+00	15	N35E	3
0+15	20	N30E	7
0+35	50	N30E	10
0+85	100	N46E	-1
1+85	15	N46E	-1
2+00			

T26S R2W
NW¹/₄, SW¹/₄ SEC 31
O&C LAND



REV. NO.	DESCRIPTION	DATE	APPROVED
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT DIVISION OF OPERATIONS OREGON STATE OFFICE			
SPURS 23 & 24 BIG THUNDER TS ROAD CONSTRUCTION PLAN ROSEBURG DISTRICT OREGON			
DESIGNED	<i>T. King</i>		
REVIEWED	<i>Jim M. Jones</i>		
APPROVED	<i>Shawn J. Syverson</i>		
DRAWN: T. KING		SCALE: AS SHOWN	
DATE: 03-20-14		SHEET 14 OF 22	
			BLM #

CULVERT LIST

NOTES:

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

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

[illegible]

ROUND PIPE CULVERT				
MATERIAL	SIZE	GAGE	CORRUGATIONS	LENGTH
*	18"	14	NOTE 2	472'
*	24"	14	NOTE 2	116'

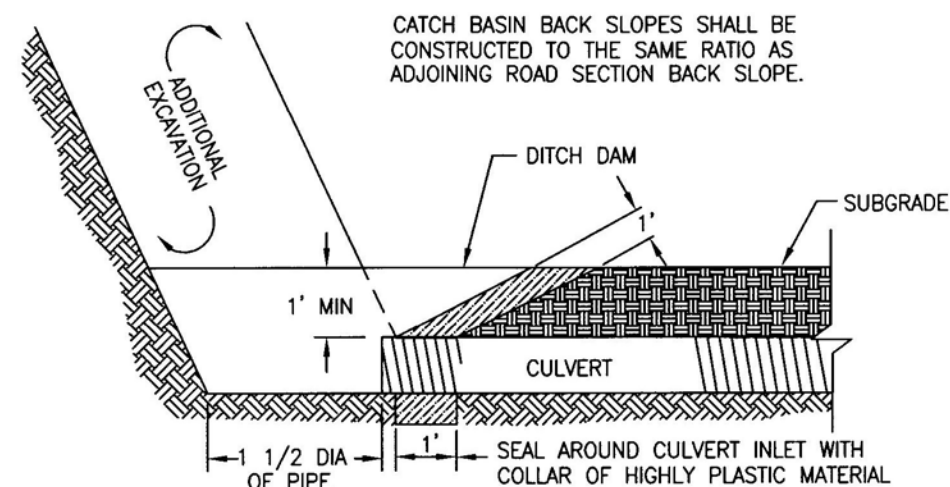
* ALUMINIZED OR POLYETHYLENE

DOWNSPOUTS		
TYPE	SIZE	LENGTH
NOTE 4 a	18"	10'

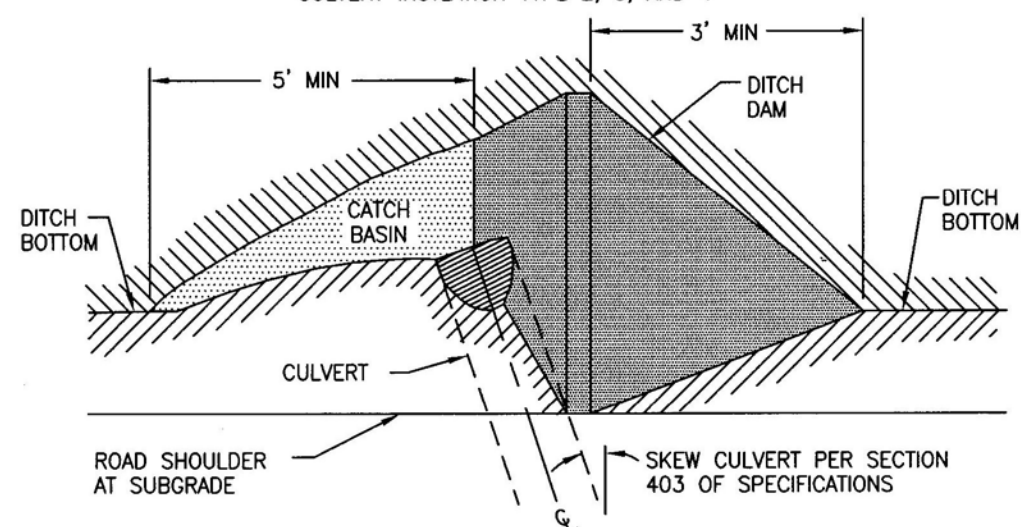


REV. NO.	DESCRIPTION	DATE	APPROVED
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT DIVISION OF OPERATIONS OREGON STATE OFFICE			
BIG THUNDER TS CULVERT SUMMARY			
ROSEBURG DISTRICT		OREGON	
DESIGNED	<i>T. King</i>		
REVIEWED	<i>Jim M. Meyer</i>		
APPROVED	<i>Thane Syverson</i>		
DRAWN: T. KING		SCALE: AS SHOWN	
DATE: 03-06-14		SHEET 15 OF 22	
			BLM #

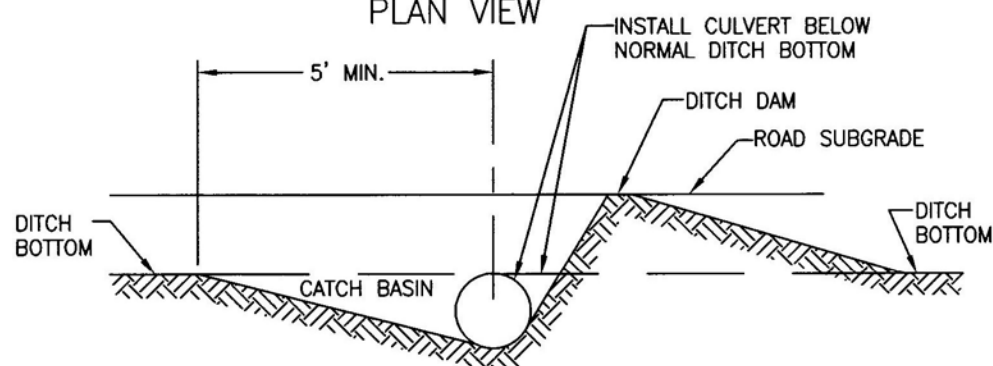
BIG THUNDER TS CULVERT SUMMARY



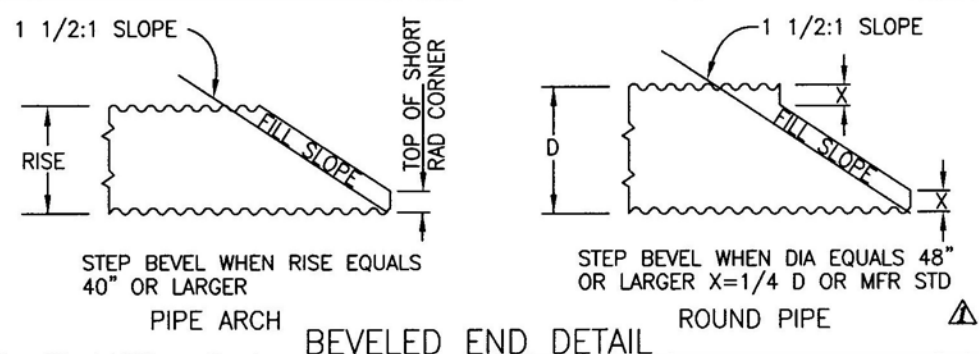
CROSS SECTION AT CATCH BASIN
CULVERT INSTALLATION TYPE 2, 3, AND 4



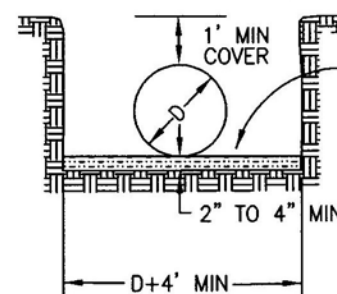
PLAN VIEW



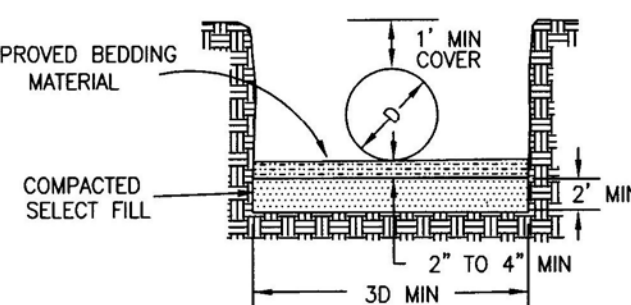
CATCH BASIN ELEVATION



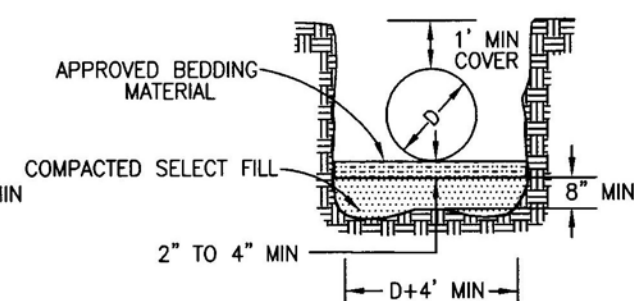
BEVELED END DETAIL



BEDDING OF CULVERTS ON STABLE NATURAL GROUND FOUNDATION



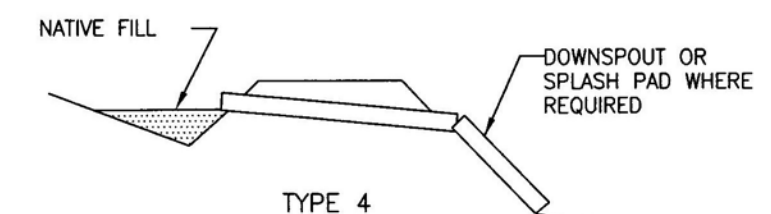
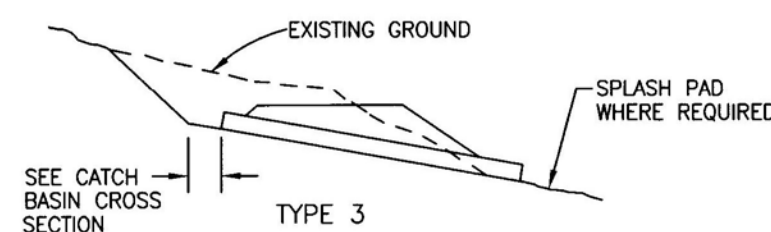
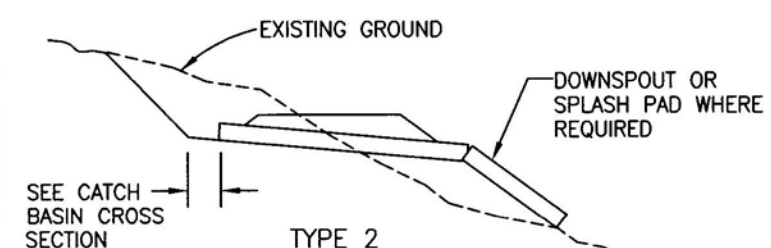
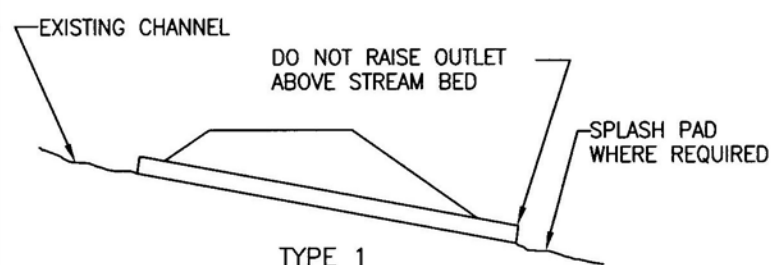
BEDDING OF CULVERTS ON SOFT SPONGY, UNSTABLE SOIL FOUNDATION OR COMPACTED EMBANKMENT



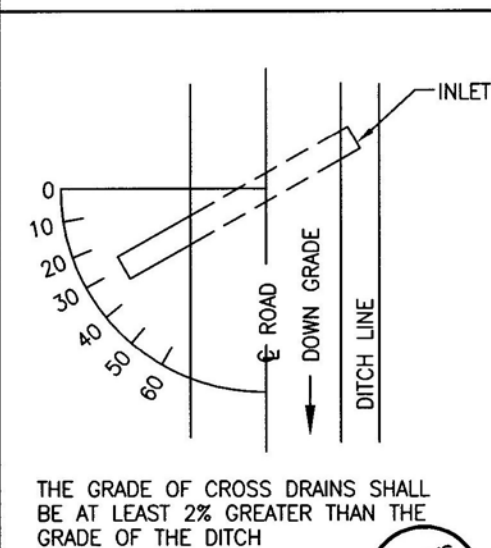
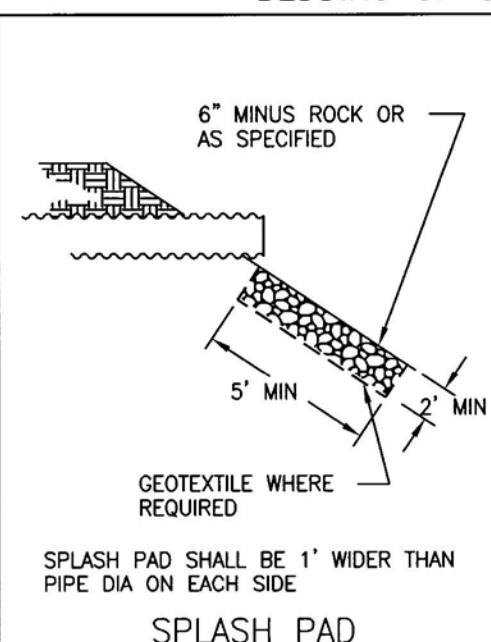
BEDDING OF CULVERTS IN SOLID ROCK OR BOULDER FOUNDATION

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

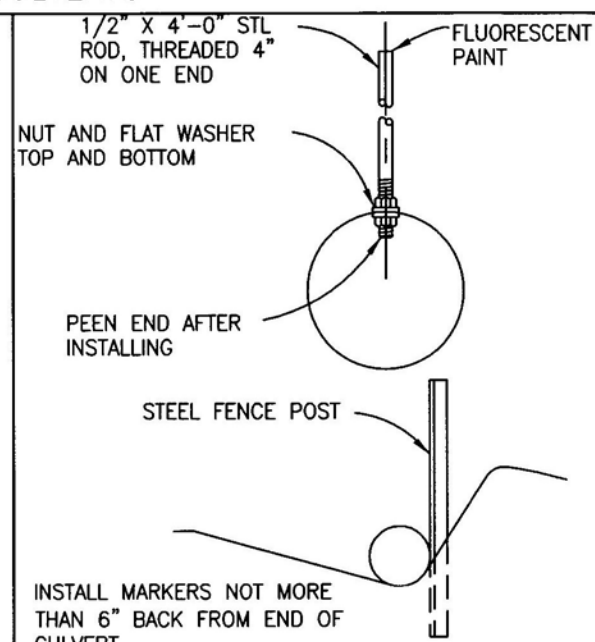
BEDDING OF CULVERTS



CULVERT INSTALLATION TYPES



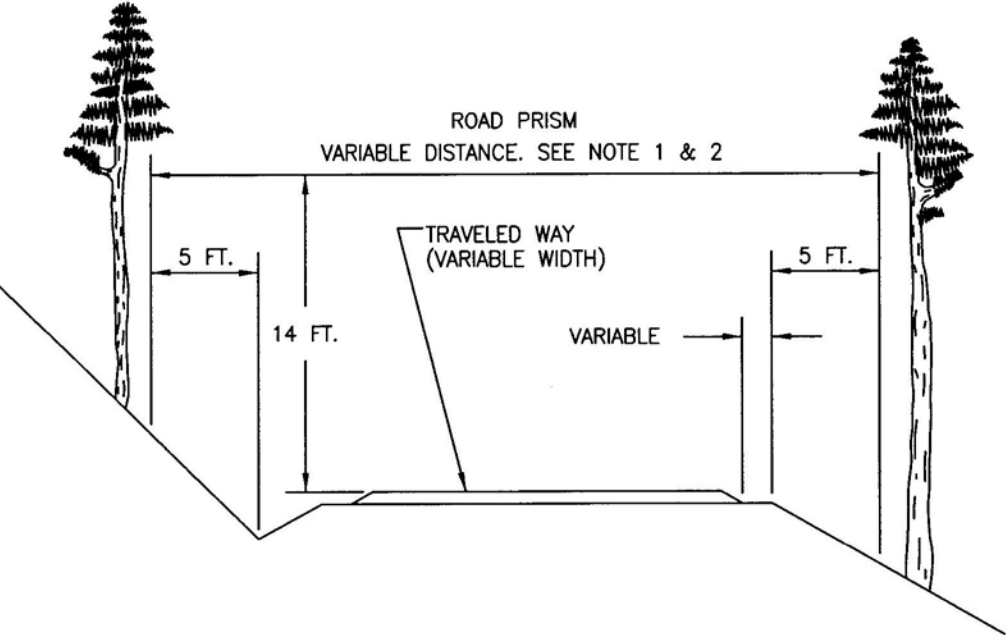
SKUEW DIAGRAM



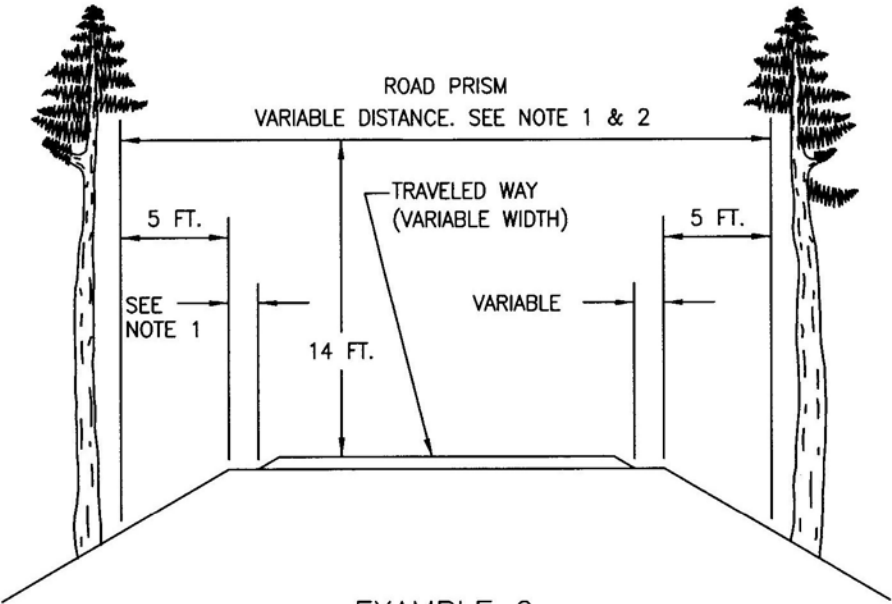
CULVERT MARKER INSTALLATION

REV. NO.	DESCRIPTION	DATE	APPROVED
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT DIVISION OF OPERATIONS OREGON STATE OFFICE			
BIG THUNDER CULVERT INSTALLATIONS			
ROSEBURG DISTRICT		OREGON	
DESIGNED	<i>T. King</i>		
REVIEWED	<i>Jim M. King</i>		
APPROVED	<i>Thane Peterson</i>		
DRAWN: TERRIE KING		SCALE: NOT TO SCALE	
DATE: 2/20/2013		SHEET 16 OF 22	
			BLM #

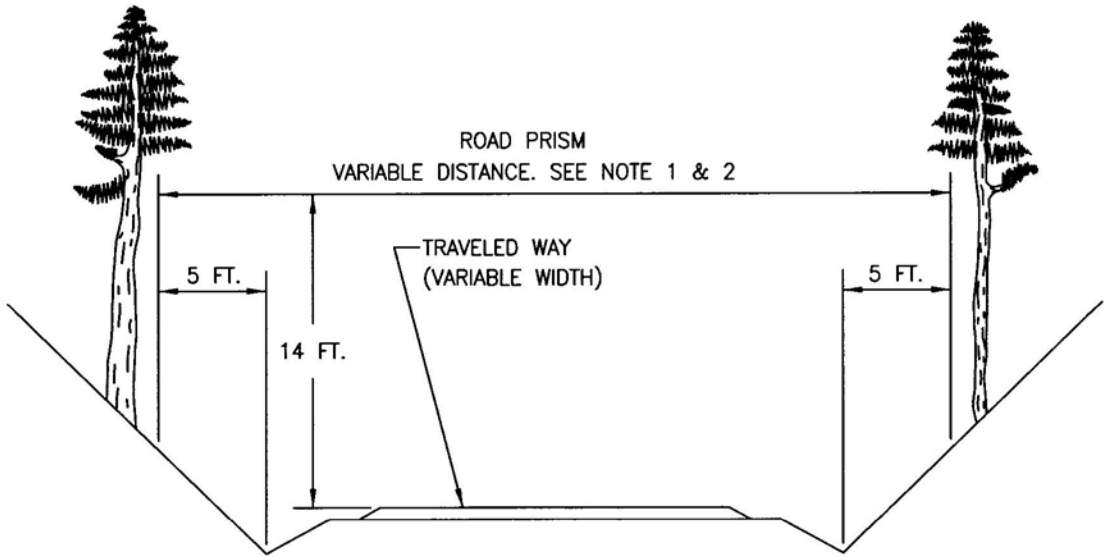
- NOTE:
1. ALL AREAS WITHIN THE VARIABLE DISTANCE SHALL BE CLEARED OF VEGETATION.
 2. ALL AREAS WITHIN THE VARIABLE DISTANCE SHALL BE FREE OF ALL OVERHANGING LIMBS AND BRANCHES WITHIN 14 FEET ELEVATION ABOVE RUNNING SURFACE.



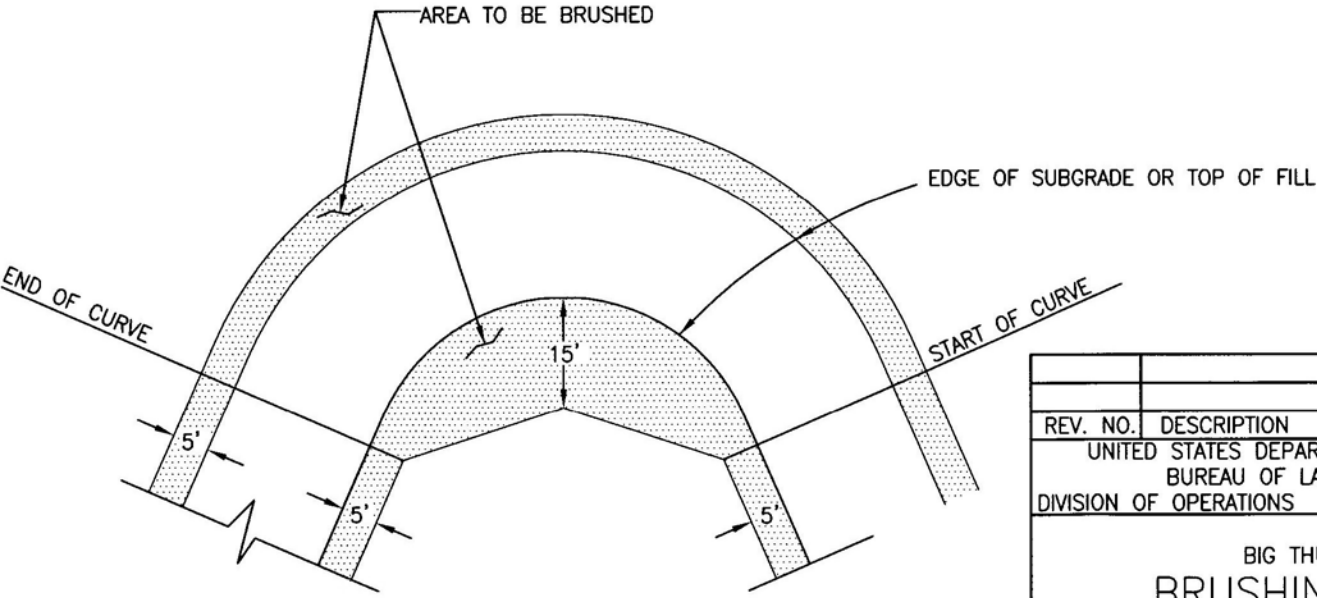
EXAMPLE 1



EXAMPLE 2



EXAMPLE 3

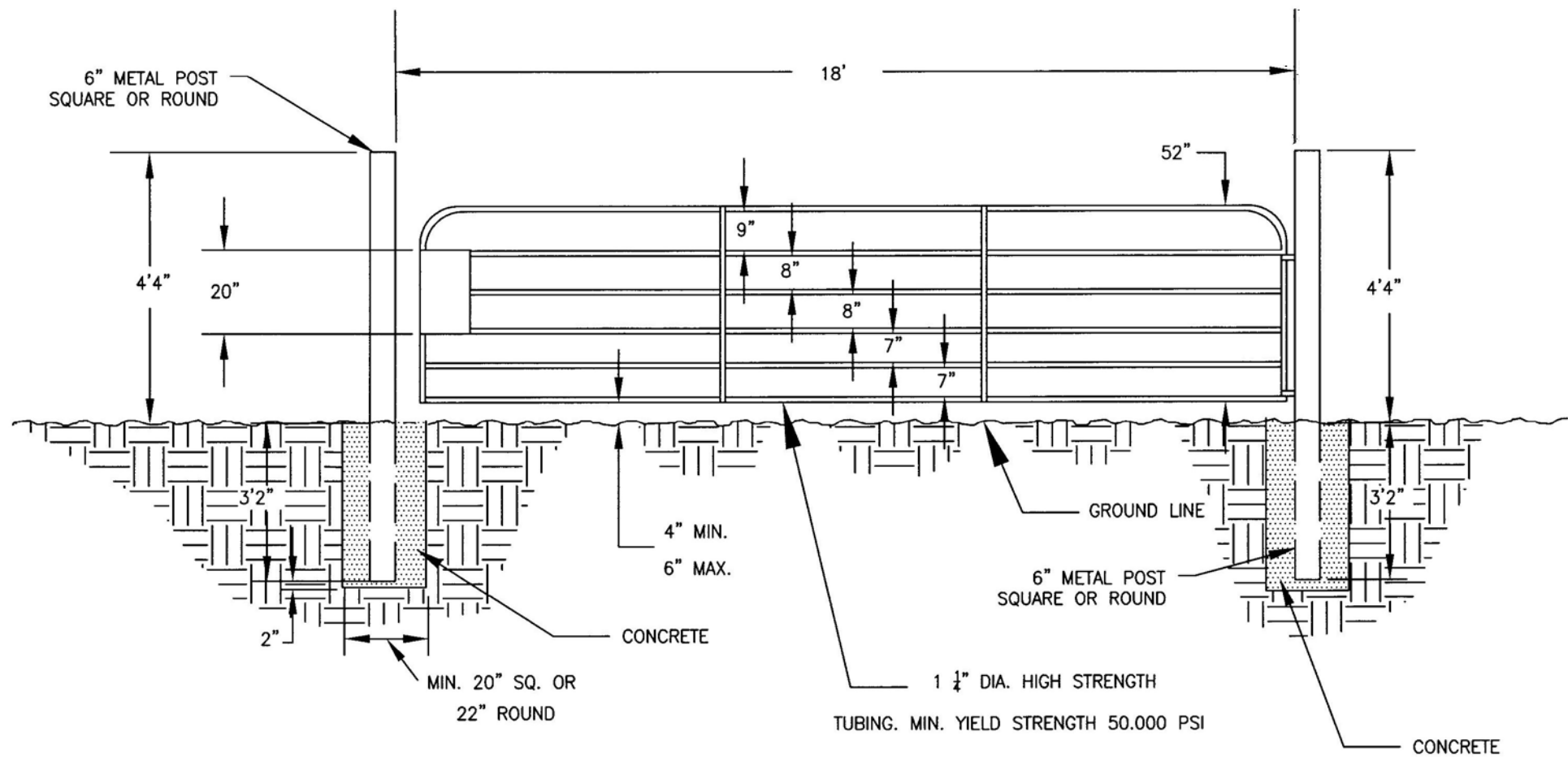


CURVE



REV. NO.	DESCRIPTION	DATE	APPROVED
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT DIVISION OF OPERATIONS OREGON STATE OFFICE			
BIG THUNDER TS BRUSHING DETAIL ROSEBURG DISTRICT OREGON			
DESIGNED	<i>J. King</i>		
REVIEWED	<i>Jim M. Munn</i>		
APPROVED	<i>Theresa J. Syversen</i>		
DRAWN: BILL HOUGH	SCALE: AS SHOWN		
DATE: 2/21/01	SHEET 17 OF 22		
			BLM #

RAIL GATE



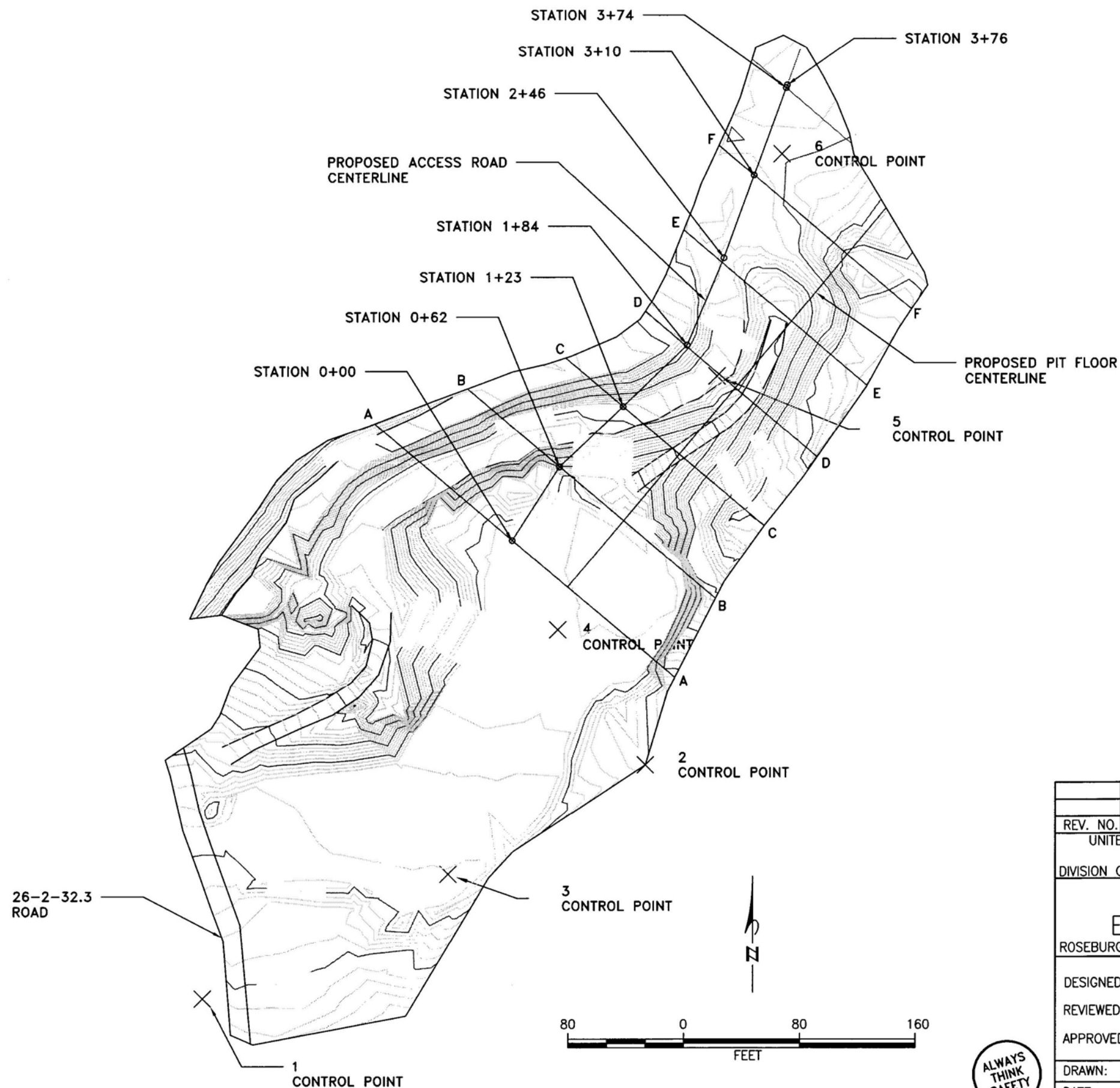
NOTES:

1. RAIL GATE:
 - (a) GATE SHALL WITHSTAND A MINIMUM OF 1200 LBS. WITHOUT SAGGING.
 - (b) HINGES AND LEVER LATCH SHALL BE OF MALLEABLE IRON OR STEEL.
 - (c) GATES 12 AND 14 FEET IN WIDTH SHALL HAVE TWO VERTICAL BRACES. GATES 16 FEET AND OVER SHALL HAVE THREE VERTICAL BRACES. BRACES SHALL BE EQUALLY SPACED AND MADE FROM 12 GAUGE STEEL.
 - (d) FINISH: ALL SURFACES SHALL BE PAINTED, COLOR APPROVED BY THE AUTHORIZED OFFICER.
2. EQUIVALENT GATES WILL BE ACCEPTABLE SUBJECT TO THE APPROVAL OF THE AUTHORIZED OFFICER.
3. CONCRETE SHALL BE COMMERCIAL READY MIX.

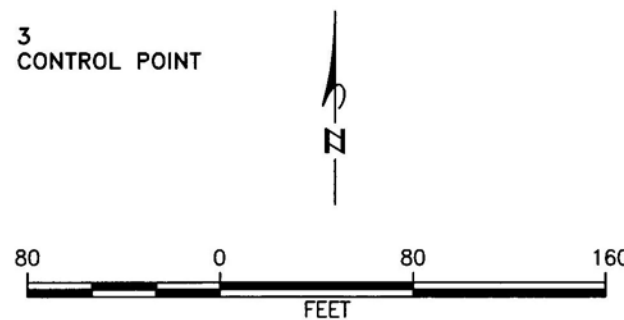


REV. NO.	DESCRIPTION	DATE	APPROVED
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT DIVISION OF OPERATIONS OREGON STATE OFFICE			
26-2-20.1 BIG THUNDER TS RAIL GATE			
ROSEBURG DISTRICT		OREGON	
DESIGNED	<i>J. King</i>		
REVIEWED	<i>Sam M. Dumas</i>		
APPROVED	<i>Thane J. Syversen</i>		
DRAWN: T. KING		SCALE: NONE	
DATE: 04-28-14		SHEET 18 OF 22	
		BLM #	

T26S R2W
SW¼, SW¼ SEC 29
O&C LAND



CONTROL POINT TABLE			
CP	N	E	Z
1	10000	5000	1000
2	10162.77	5306.13	1029.27
3	10086.64	5169.78	1011.90
4	10256.60	5245.72	1016.22
5	10432.15	5355.82	1066.56
6	10584.67	5400.58	1079.16



REV. NO.	DESCRIPTION	DATE	APPROVED
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT DIVISION OF OPERATIONS OREGON STATE OFFICE			
THUNDER MT. QUARRY BIG THUNDER TS EXISTING PLAN VIEW ROSEBURG DISTRICT OREGON			
DESIGNED	<i>J. King</i>		
REVIEWED	<i>Jim McNamee</i>		
APPROVED	<i>Thomas J. Syverson</i>		
DRAWN: M.HATFIELD		SCALE: 1"=80'	
DATE: 4/25/2014		SHEET 19 OF 22	
		BLM #	

- CONSTRUCTION NOTES:
1. OVERBURDEN SHALL BE STRIPPED BACK OF AT LEAST 5 FEET BEYOND ANY FACE.
 2. MINIMUM BENCH WIDTH SHALL BE 15 FEET; MAXIMUM BENCH HEIGHT SHALL BE 30 FEET; CUT FACES SHALL NOT EXCEED 1/4:1 SLOPE
 3. BLASTING SHALL BE CONTROLLED TO AVOID DAMAGE TO LANDSCAPE FEATURES OUTSIDE THE DEVELOPMENT AREA AND TO PREVENT THROWING ROCK BEYOND THE AREA WHERE IT CAN BE RECOVERED AND UTILIZED.
 4. ALL MATERIAL EXCEEDING 24 INCH IN DIAMETER WILL BE CONSIDERED OVERSIZE. ALL OVERSIZE MATERIAL RESULTING FROM CURRENT OPERATIONS SHALL BE REDUCED IN SIZE UNLESS OTHERWISE APPROVED IN WRITING BY THE AUTHORIZED OFFICER.
 5. ADEQUATE MEASURES WILL BE TAKEN TO PREVENT EROSION AND/OR PONDING OF WATER. PREVENTATIVE MEASURES MAY INCLUDE RESLOPING, SEEDING AND MULCHING, DITCHING, WATERBARS, AND/OR CULVERTS AS CONDITIONS REQUIRE.
 6. ALL DAMAGE TO EXISTING IMPROVEMENTS CAUSED BY THE PURCHASER, INCLUDING BUT NOT LIMITED TO: ROADS, POWERLINES, BRIDGES, ETC. SHALL BE REPAIRED BY THE PURCHASER.
 7. ALL OPERATIONAL DEBRIS SUCH AS PAPER, METAL, RUBBER, ETC. SHALL BE CLEANED UP AND PROPERLY DISPOSED OF OFF GOVERNMENT LAND.
 8. EXISTING SLASH WITHIN THE DEVELOPMENT AREA WILL BE DISPOSED OF WITHIN THE SLASH DISPOSAL AREA BY PILING. THE SLASH PILING AND OVERBURDEN WASTE AREAS SHALL BE DESIGNATED BY THE AUTHORIZED OFFICER.
 9. CONTROL POINTS 1 AND 2 ARE TO BE PROTECTED FROM DISTURBANCE, AND REPLACED AT THE PURCHASER'S EXPENSE IF DAMAGED.
 10. STOCKPILE AREA SHALL BE DESIGNATED BY THE AUTHORIZED OFFICER.

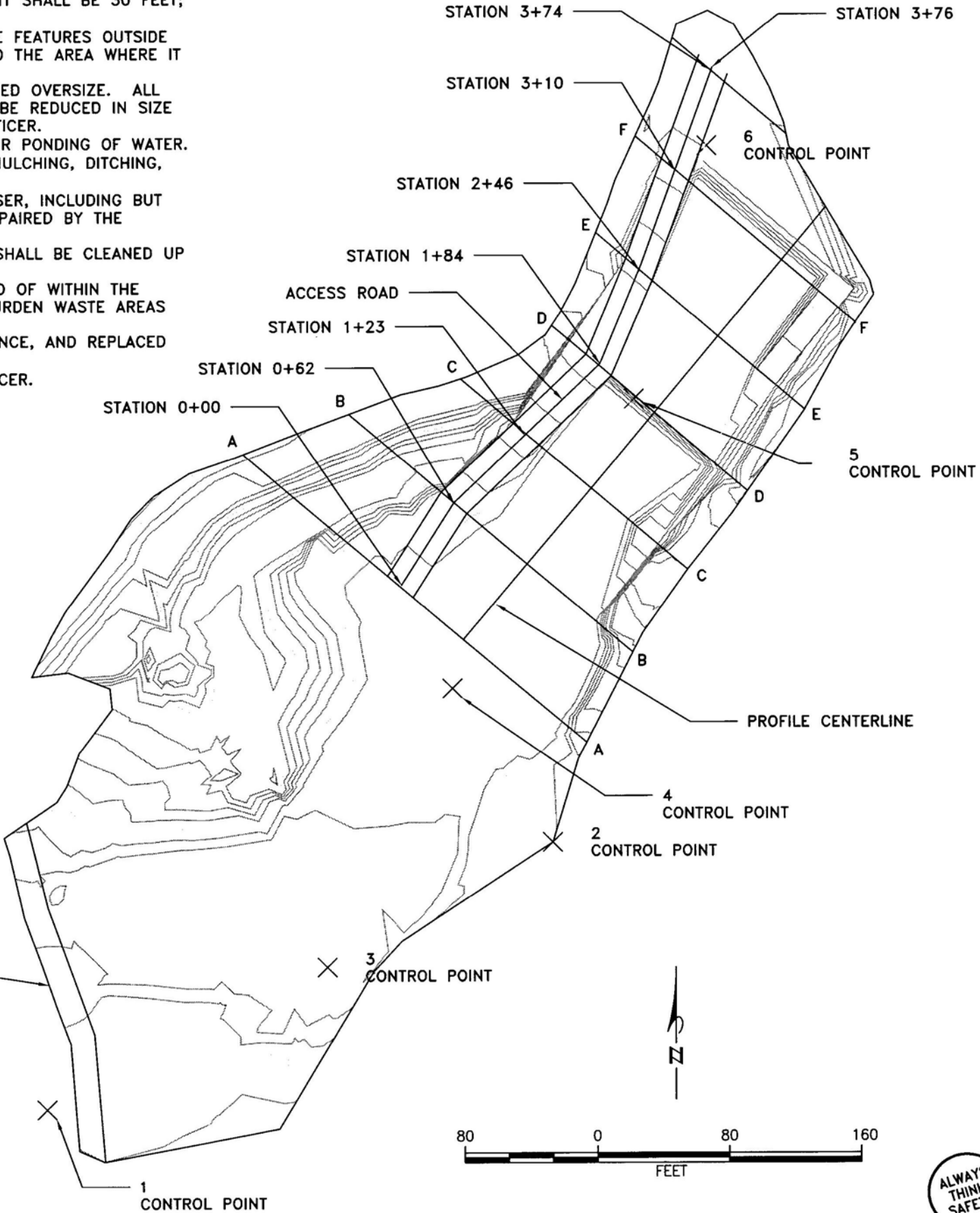
QUARRY ACCESS ROAD		
STA	DISTANCE FT	BEARING
0+00	62	N33E
0+62	61	N46E
1+23	61	N46E
1+84	62	N23E
2+46	64	N20E
3+10	64	N20E
3+74	2	N20E
3+76		

ROCK QUANTITIES	
BANK	27,500 CY
3" MINUS STOCKPILE	3000 CY
6" MINUS STOCKPILE	7000 CY

T26S R2W
SW¼, SW¼ SEC 29
O&C LAND

CONTROL POINT TABLE				
CP	N	E	Z	REMARKS
1	10000	5000	1000	REBAR AND CAP
2	10162.77	5306.13	1029.27	REBAR AND CAP
3	10086.64	5169.78	1011.90	NAIL AND BROOM
4	10256.60	5245.72	1016.22	NAIL AND BROOM
5	10432.15	5355.82	1066.56	NAIL AND BROOM
6	10584.67	5400.58	1079.16	NAIL AND BROOM

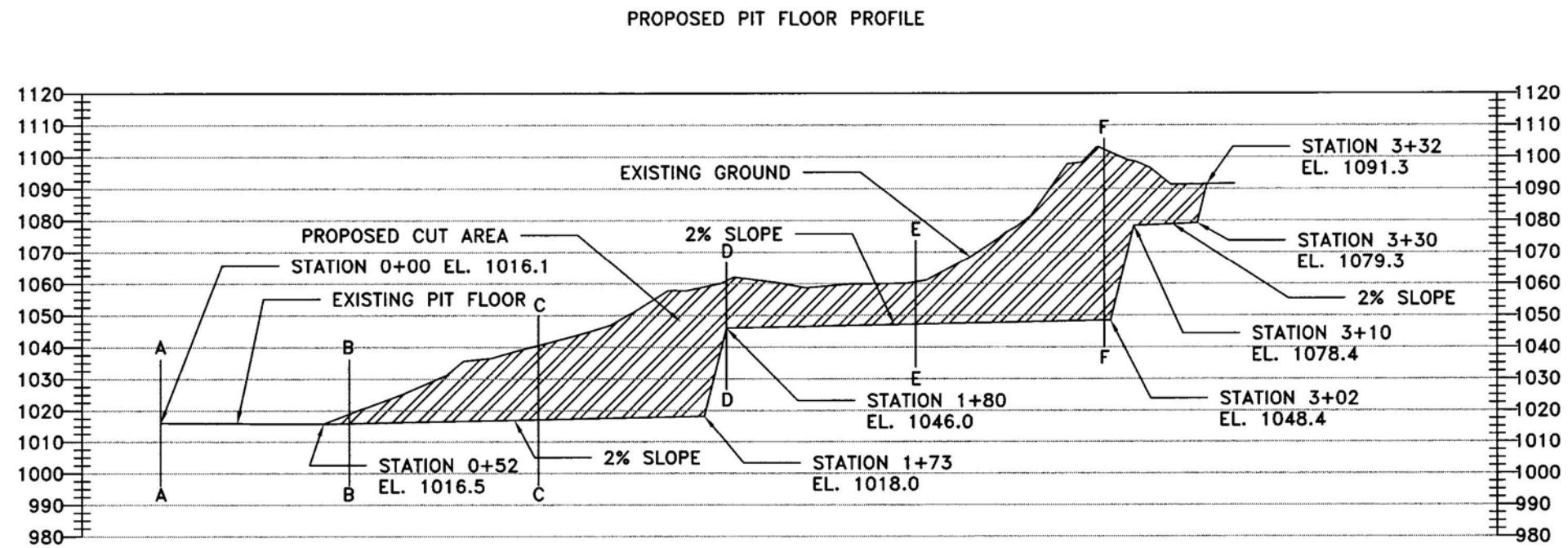
26-2-32.3
ROAD



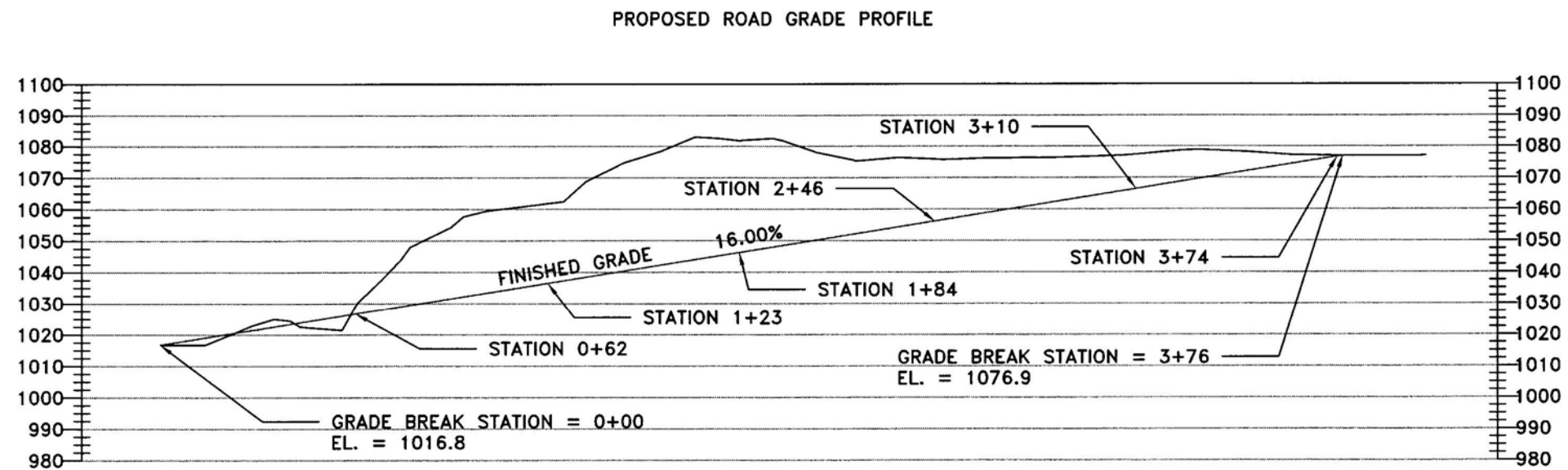
REV. NO.	DESCRIPTION	DATE	APPROVED
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT DIVISION OF OPERATIONS OREGON STATE OFFICE THUNDER MT. QUARRY BIG THUNDER TS PROPOSED PLAN VIEW ROSEBURG DISTRICT OREGON			
DESIGNED	<i>J. King</i>		
REVIEWED	<i>Tom McManis</i>		
APPROVED	<i>Thomas J. Sypers</i>		
DRAWN: M. HATFIELD		SCALE: 1" = 80'	
DATE: 4/25/2014		SHEET 20 OF 22	
BLM #			



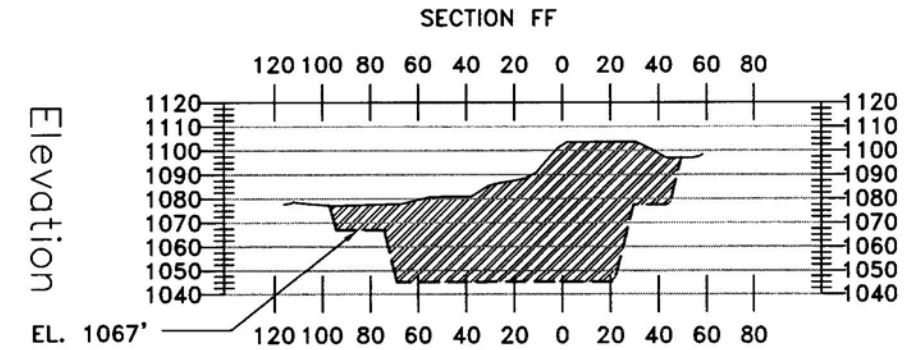
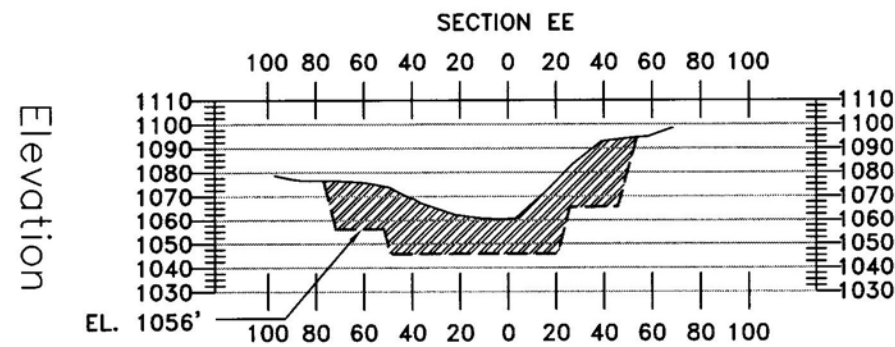
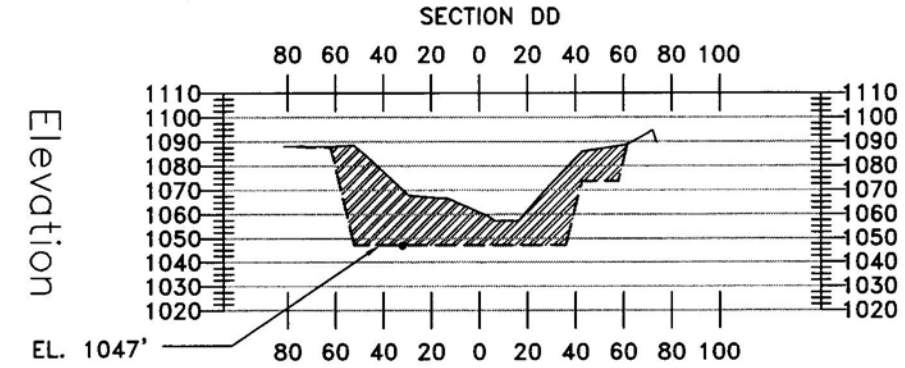
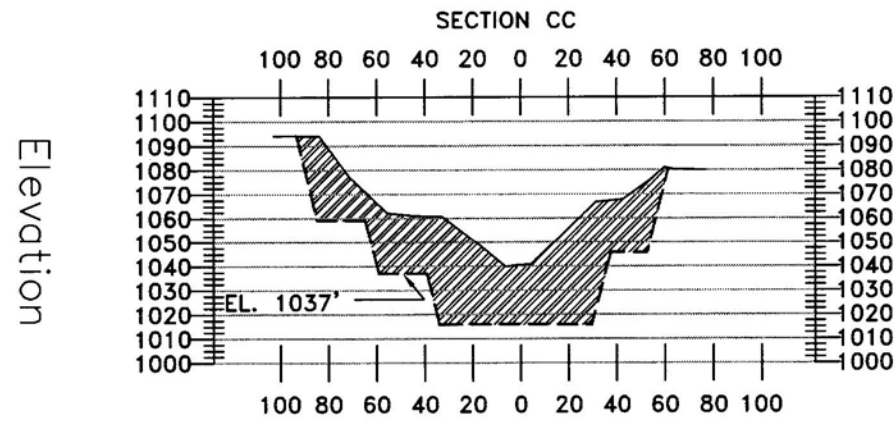
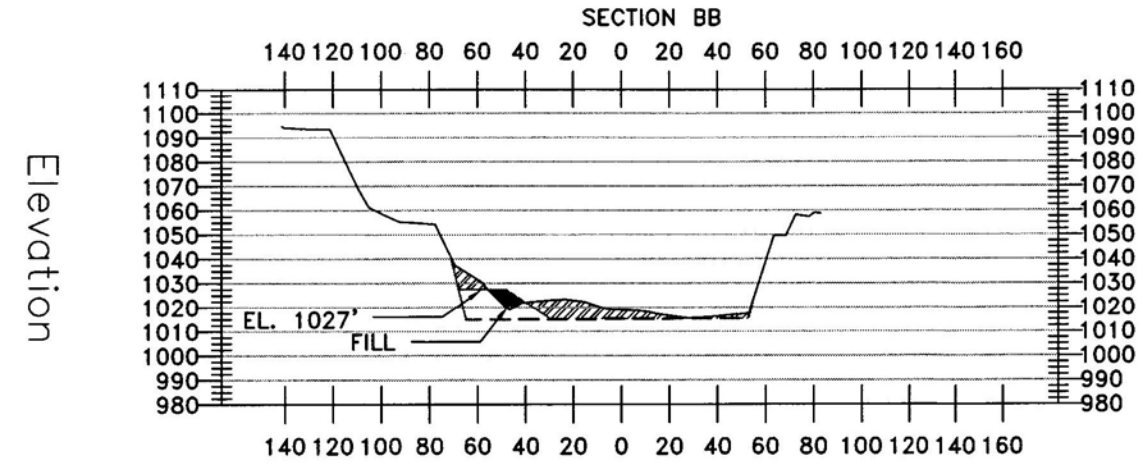
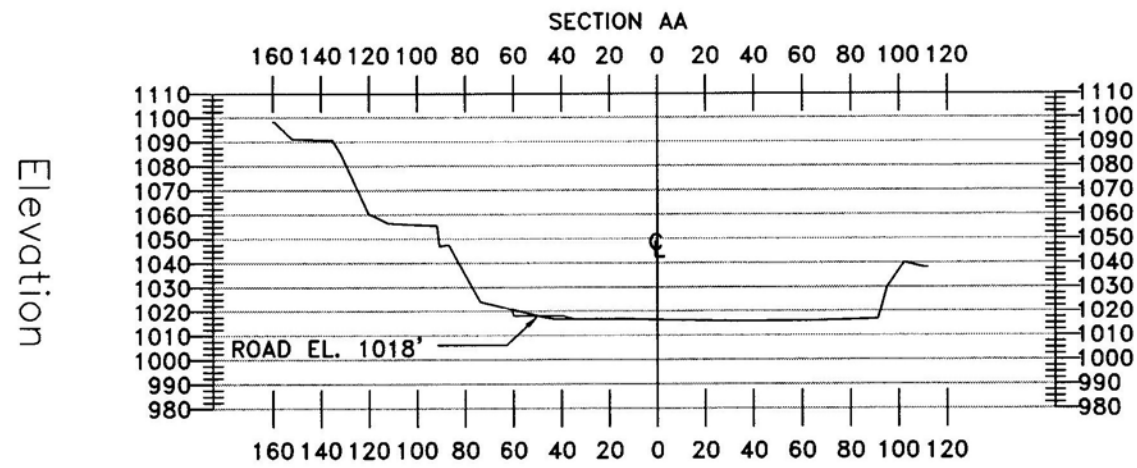
Elevation



Elevation



REV. NO.	DESCRIPTION	DATE	APPROVED
UNITED STATES DEPARTMENT OF THE INTERIOR			
BUREAU OF LAND MANAGEMENT			
DIVISION OF OPERATIONS		OREGON STATE OFFICE	
THUNDER MT. QUARRY			
BIG THUNDER TS			
PROFILES			
ROSEBURG DISTRICT		OREGON	
DESIGNED			
REVIEWED			
APPROVED			
DRAWN: M. HATFIELD		SCALE: 1" = 50'	
DATE: 4/25/2014		SHEET 21 OF 22	
		BLM #	



NOTE:
OUTSLOPE ROAD
MINIMUM 2%

BASE COURSE WIDTH

20'

SCALE: 1" = 20'

SLOPE 2:1

12" MIN THICKNESS
OF 6" MINUS PIT RUN ROCK

SECTION ACCESS ROAD



SCALE 1" = 80'



REV. NO.	DESCRIPTION	DATE	APPROVED
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT DIVISION OF OPERATIONS OREGON STATE OFFICE			
THUNDER MT. QUARRY BIG THUNDER TS SECTIONS			
ROSEBURG DISTRICT		OREGON	
DESIGNED	<i>J. Kuy</i>		
REVIEWED	<i>Jay Williams</i>		
APPROVED	<i>Steve Synerson</i>		
DRAWN: M. HATFIELD		SCALE: AS SHOWN	
DATE: 4/25/2014		SHEET 22 OF 22	
		BLM #	