

Willamette National Forest  
 Timber Sale: **Buck**

Prepared By: S. Sullivan  
 Date: **8/23/2013**  
 Edited by

Road No.	Road Name	LEVEL OF SERVICE	MAINT. LEVEL	Design Class	Approx. Mi./km	C/R *	Specified Road Cost	Required Completion Date
2639480	O'Leary	D	2	SL-12-20	4.85/7.81	R	\$52,580.31	10/31/2014

\* C=Construction  
 R=Reconstruction

**Summary of Road Construction/Reconstruction Costs**

Specified Roads	\$52,580.31
Share Cost Roads	
Road Engineering Reconst. Deposit Cost	\$7,835.00
Total Road Costs	<u>\$60,415.31</u>
Contributed Funds	
Total Timber Sale Road Costs	<u>\$60,415.31</u>

**Total Estimated Road Construction Cost**

Public Works Cost (opted sales)	\$63,381.99
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**Attachments**

Schedule of Items	1 pages
Plans	12 sheets
Specification Lists	2 pages for Specified Roads, 1 page for TS haul route maintenance
FS Supplemental Specs	53 pages
Road Maintenance T-Specs	18 pages

\* Applicable to Specified Roads only.

Buck Timber Sale

SCHEDULE OF ITEMS					
		ROAD NUMBER	2639480		
		SEGMENT	0.00 - 4.85		
		CONSTRUCTION			
		RECONSTRUCTION	X		SPECIFIED
		PROJECT LENGTH (Miles)	4.85		ROADS
ITEM NO.	DESCRIPTION	Pay Unit	QTY	UNIT COST	TOTAL
15101	Mobilization	Lump sum	ALL	\$6,806.13	\$6,806.13
15755	Erosion control & pollution prevention	Each	2	186.72	\$373.44
20103	Clearing and grubbing, disposal of tops and limbs (f), logs (f), stumps (f)	Mile	4.85	\$760.42	\$3,688.04
20207	Removal of individual trees, disposal of tops and limbs (f), logs (f), stumps (f)	Each	6	\$26.75	\$160.50
20253	Removal of individual trees, miscellaneous: disposal of tops & limbs (f) & logs (f)	Each	7	\$92.15	\$645.05
20358	Removal of corrugated metal pipe, disposal method (a)	Each	5	\$289.03	\$1,445.15
20419A	Drainage excavation, type culvert leadoff ditch	Foot	120	\$42.17	\$5,060.40
20419B	Drainage excavation, type culvert outlet ditch	Foot*	35	\$4.46	\$156.10
20479	Drainage excavation, type roadway ditch	Mile	2.62	\$2,092.59	\$5,482.59
25101	Placed riprap, class 2	Cubic Yard*	2	\$94.13	\$188.26
30359	Roadway reconditioning, compaction method E	Mile	4.85	\$736.56	\$3,572.32
32450	Crushed aggregate surfacing, compaction method B	Cubic Yard *	410	\$42.69	\$17,502.90
60276	18-inch corrugated aluminized steel pipe, 0.064-inch thickness, method B	Foot	186	\$34.04	\$6,331.44
60710	Reconditioning drainage structures, culvert inlet or outlet	Each	10	\$32.13	\$321.30
62509	Mulching, dry method	Lump sum	ALL	\$846.69	\$846.69
* Designates Contract Quantities				Total	\$52,580.31

FOREST SERVICE --- REGION SIX  
WILLAMETTE NATIONAL FOREST  
**McKENZIE RIVER RANGER DISTRICT**  
 LANE COUNTY, OREGON

PLANS FOR PROPOSED

BUCK TIMBER SALE  
 ROADS

ROAD NO.  
 2639480

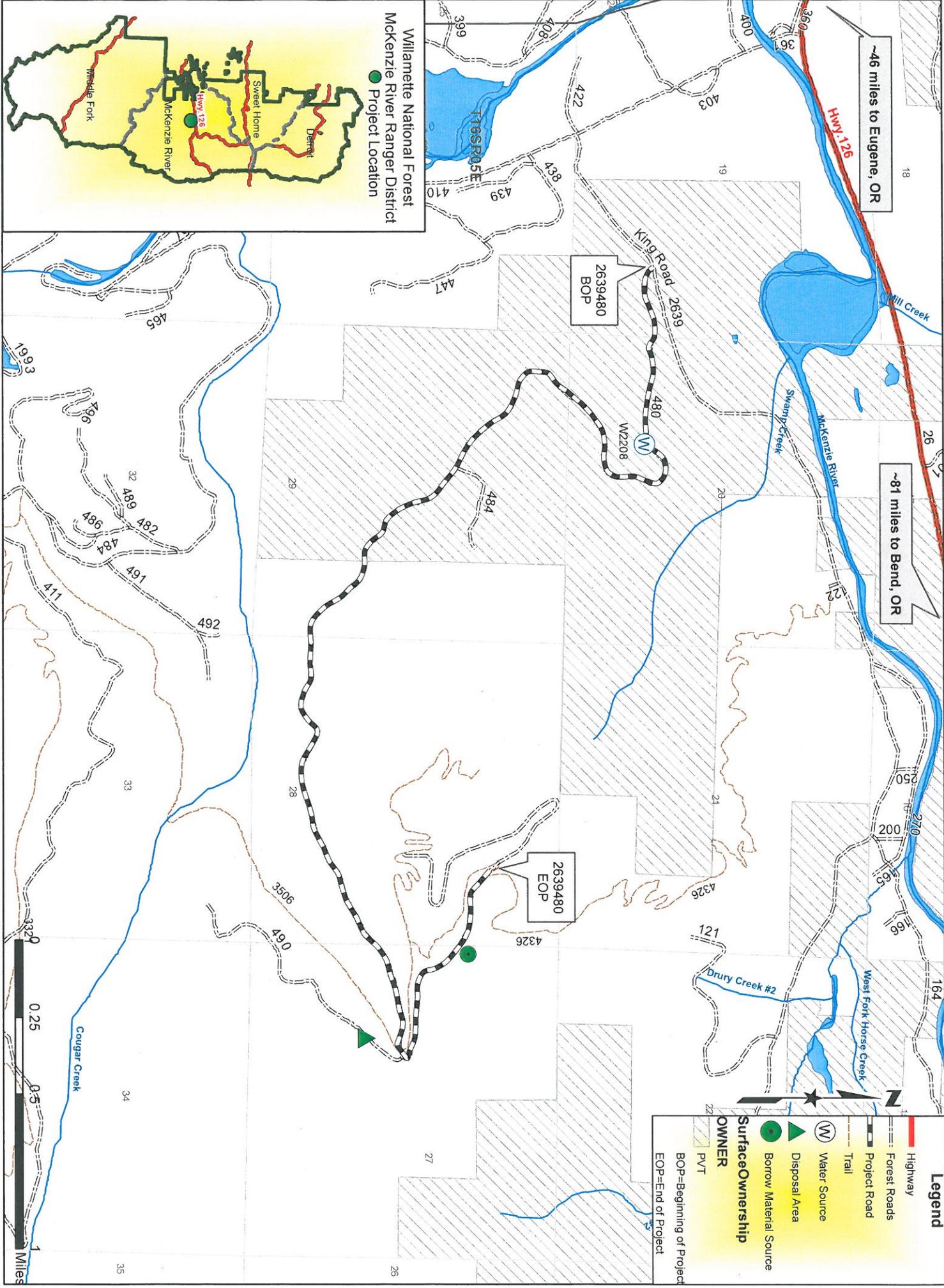
<u>LENGTH</u>
4.85

CONST./RECONST.  
 RECONST.

Total Miles    4.85

INDEX TO SHEETS	
SHEET	DESCRIPTION
1	TITLE SHEET
2	VICINITY MAP
3	GENERAL NOTES
4	ESTIMATE OF QUANTITIES
5-8	RECONSTRUCTION SUMMARIES
9	TYPICAL SECTIONS
10	DRAINAGE LISTING
11	DRAINAGE DETAIL
12	CLEARING TYPICAL
13	DEWATERING PLAN TYPICAL

Design Team:		
<u>Starr A Sullivan, Kenneth C. Gabriel</u>	8/28/2018	
Name	Date	
Reviewed by:		
<u>[Signature]</u>	09/04/2013	
Name	Assistant Zone Engineer	Date
Reviewed by:		
<u>[Signature]</u>	9/5/2013	
Name	Dev. Engineer	Date
Recommended by:		
<u>[Signature]</u>	9/4/13	
Name	Zone Engineer	Date
Approved by:		
<u>[Signature]</u>	9/5/2013	
Name	for Forest Engineer	Date
<u>[Signature]</u>	9/4/13	
Name	District Ranger	Date



~46 miles to Eugene, OR

~81 miles to Bend, OR

**Legend**

- Highway
- Forest Roads
- Project Road
- Trail
- Water Source
- Disposal Area
- Borrow/ Material Source

**Surface Ownership**

- OWNER
- PVT

BOP=Beginning of Project  
EOP=End of Project

Williamette National Forest  
McKenzie River Ranger District  
Project Location



### GENERAL NOTES

- 1) Remove all berms created from roadway reconditioning or ditch reconstruction to allow for drainage of water. All safety berms are designated to remain.
- 2) Do not undercut backslopes when cleaning and/or reconstructing ditchlines.  
Under pay items 20479 or 30359.
- 3) Salvage existing aggregate during culvert replacement; use as backfill or bedding material.
- 4) Recondition or reconstruct turnouts and curve widening the same as the basic roadbed.  
Quantities listed in the estimate of quantities include turnouts and curve widening.
- 5) See FSSS 107.02 **Protection and Restoration of Property and Landscape** and Timber Sale provisions for restrictions/mitigations related to this project.
- 6) Designated disposal sites are identified on reconstruction summary sheets. Layer place, smooth and shape to drain excess or unsuitable excavation materials. Additional disposal sites may be identified during construction if the need arises. No other disposal sites will be used, unless designated in advance by the Contracting Officer. Cost for disposal site shaping is indirect to the listed pay items under Sections 204 and 303.
- 7) Maintain all construction staking on the project, until final inspection and acceptance.
- 8) Spread weed free straw over disturbed soil at all culvert installations, disposal areas and other exposed soil, excluding ditches. Cover areas completely.
- 9) Submit a written Erosion Control for approval 21 days prior to beginning culvert replacement. Refer to FSSS 157.03 for additional requirements.
- 10) Provide class D construction tolerance for Road 2639480.
- 11) Set culvert reference stakes prior to excavation and removal of all culverts shown on the Drainage Listing Sheet as "# match existing" installation. Set a culvert reference stake on the centerline of the culvert 10 feet from each end or beyond the clearing limit, whichever is greater.  
Record the following on culvert reference stakes: Mile point, actual stake distance from culvert inlet and outlet and existing culvert diameter.

Buck Timber Sale

ESTIMATE OF QUANTITIES				
ROAD NUMBER			2639480	
SEGMENT			0.00 - 4.85	
PROJECT LENGTH (Miles)			4.85	
ITEM NO.	DESCRIPTION	Pay Unit	QTY	REMARKS
15101	Mobilization	Lump sum	ALL	Includes equipment washing, temporary traffic control, and fire protection measures.
15755	Erosion control & pollution prevention	Each	2	Includes dewatering for culvert replacement.
20103	Clearing and grubbing, disposal of tops and limbs (f), logs (f), stumps (f)	Mile	4.85	Scatter existing woody debris or blowdown (located within the roadway) outside the clearing limits or as specified by CO.
20207	Removal of individual trees, disposal of tops and limbs (f), logs (f), stumps (f)	Each	6	
20253	Removal of individual trees, miscellaneous: disposal of tops & limbs (f) & logs (f)	Each	7	Fell and leave.
20358	Removal of corrugated metal pipe, disposal method (a)	Each	5	
20419A	Drainage excavation, type culvert leadoff ditch	Foot	120	
20419B	Drainage excavation, type culvert outlet ditch	Foot*	35	
20479	Drainage excavation, type roadway ditch	Mile	2.62	Removal of large rocks/boulders within areas identified for reconstruction is an indirect cost to this pay item.
25101	Placed riprap, class 2	Cubic Yard*	2	Commercial Source.
30359	Roadway reconditioning, compaction method E	Mile	4.85	
32450	Crushed aggregate surfacing, compaction method B	Cubic Yard *	410	Submit gradations meeting the specified requirements for F.S. grading T or ODOT 3/4 inch minus for approval. Commercial source.
60276	18-inch corrugated aluminized steel pipe, 0.064-inch thickness, method B	Foot	186	Staking of culverts and Payment for placement of borrow material at overexcavated catchbasins is indirect to pay item.
60710	Reconditioning drainage structures, culvert inlet or outlet	Each	10	
62509	Mulching, dry method	Lump sum	ALL	Commercial Source. Certified weed free.
* Designates Contract Quantities				

RECONSTRUCTION SUMMARY  
ROAD 2639480

Milepost	Reference Point or Work Required	Pay Item
0.00	Reference: Intersection with Road 2639. Beginning of project. Begin clearing. Begin Reconditioning of roadway. Scarify a minimum of 1" below the depth of all existing potholes, corrugations or surface irregularities. Sod and fine organic materials growing on road surface may be incorporated into surfacing. Grubbing and disposal of all stumps and root masses within the roadbed and in the ditch is required unless otherwise noted in the work description. Haul material from the cleaning of ditches, inlets and outlets and slough and slide removal to designated disposal sites. Begin placing 100 CY of crushed aggregate, spot surfacing at locations specified by C.O. Blend to adjacent road surfaces to provide a smooth transition.	20103 30359  32450
0.02	Reference: Intersection with road, right (closed by gate).	
0.22	Existing culvert. Repair (jack open) culvert inlet; straighten and reform circular opening. Repair culvert outlet; cut off ripped culvert edge. Place 1 CY class 2 riprap at outlet as energy dissipator.	60710 60710 25101
0.63	Reference: Water Source 2208.	
0.72	Begin placing 1" depth crushed aggregate. Scarify existing roadbed surface and new aggregate to a maximum depth of 4-inches. Reshape roadbed to obtain a minimum 3% crown.	32450 30359
0.73	Reference: Intersection with Belknap Road, left.	
0.96	Reference: Intersection with spur road, left.	
1.15	Remove existing culvert. Install new 18" x 34' culvert. Reconstruct outlet ditch, 15 feet. Place 10 CY crushed aggregate over installation; blend to adjacent road surfaces to provide a smooth transition.	20358 60276 20419B 32450
1.27	Reference: Intersection with Bumble Bee Road, right.	
1.71	Remove existing culvert. Install new 18" x 40' culvert. Place 10 CY crushed aggregate over installation; blend to adjacent road surfaces to provide a smooth transition.	20358 60276 32450
1.77	End placing 1" depth crushed aggregate and scarification.	
1.78	Reference: Intersection with Castle View Road, right.	

RECONSTRUCTION SUMMARY  
ROAD 2639480

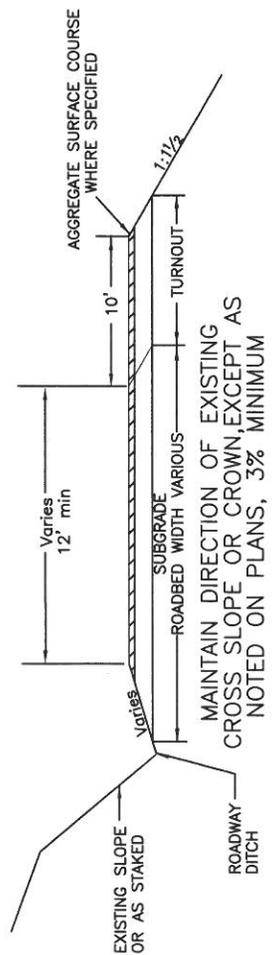
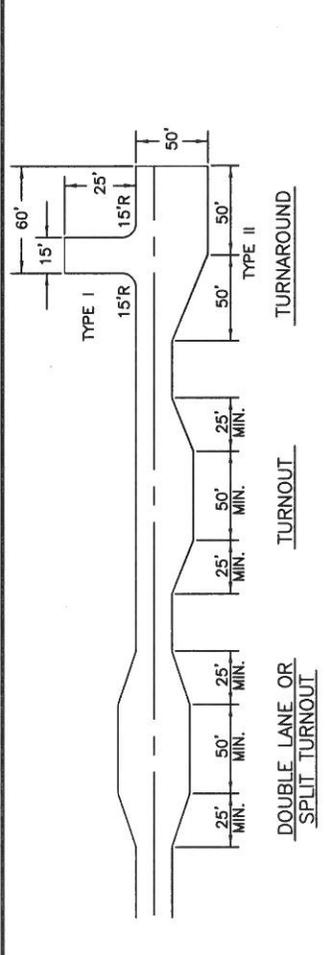
Milepost	Reference Point or Work Required	Pay Item
1.81	Reference: Intersection with spur road, left.	
1.94	Reference: Intersection with spur road, right.	
2.04	Reference: Intersection with spur road, right.	
2.07	Remove existing culvert.	20358
	Install new 18" x 40' culvert.	60276
	Dewater culvert installation site, and/or prevent erosion and pollution.	15755
	Backfill existing catchbasin with suitable backfill material to bottom of culvert inlet. Borrow material located at MP 4.49, right.	20358
	Reconstruct outlet ditch, 10 feet.	20419B
	Remove 1 green tree from outlet.	20207
	Place 10 CY crushed aggregate over installation; blend to adjacent road surfaces to provide a smooth transition.	32450
2.11	Reference: Intersection with spur road, right. Begin ditch reconstruction, left.	20479
2.14	Reference: Intersection with spur road, left. Private land sign.	
2.25	Remove existing culvert.	20358
	Install new 18" x 32' culvert. Raise culvert inlet 6".	60276
	Dewater culvert installation site, and/or prevent erosion and pollution.	15755
	Backfill existing catchbasin with suitable backfill material to bottom of culvert inlet. Borrow material located at MP 4.49, right.	20358
	Place 10 CY crushed aggregate over installation; blend to adjacent road surfaces to provide a smooth transition.	32450
2.37	Existing culvert.	
	Remove 2 green trees from outlet.	20207
	Reconstruct outlet ditch, 10 feet.	20419B
2.68	Reference: Intersection with spur road, left.	
3.04	Remove existing culvert.	20358
	Install new 18" x 40' culvert.	60276
	Place 1 CY class 2 riprap at outlet as energy dissipator.	25101
	Place 10 CY crushed aggregate over installation; blend to adjacent road surfaces to provide a smooth transition.	32450
3.18	Existing culvert.	
	Repair culvert inlet; cut off ripped culvert edge.	60710

RECONSTRUCTION SUMMARY  
ROAD 2639480

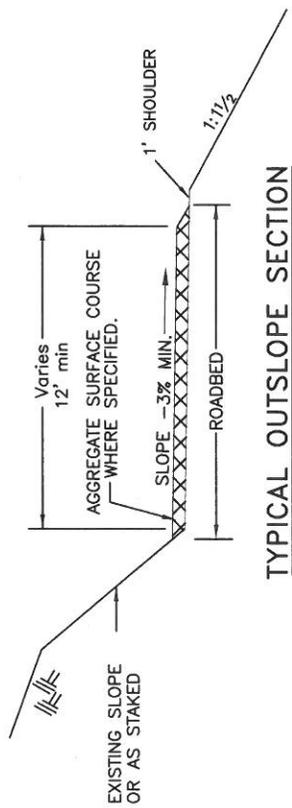
Milepost	Reference Point or Work Required	Pay Item
3.26	Existing culvert. Repair culvert inlet; cut off ripped culvert edge.	60710
3.33	Existing culvert. Repair (jack open) culvert inlet; straighten and reform circular opening.	60710
3.45	Existing culvert. Repair (jack open) culvert inlet; straighten and reform circular opening.	60710
3.68	Existing culvert. Repair (jack open) culvert inlet; straighten and reform circular opening. Remove 1 green tree from outlet channel.	60710 20207
3.77	Existing culvert. Repair culvert inlet; cut off ripped culvert edge.	60710
3.81	Existing culvert. Repair (jack open) culvert inlet; straighten and reform circular opening.	60710
3.88	Existing culvert. Remove 2 green trees from outlet channel.	20207
4.06	Reference: Intersection with Trail 3506.	
4.09	Reference: Intersection with Road 490, right. Disposal area is located at MP 0.10 on Road 490, right.	
4.11	End ditch reconstruction, left.	
4.12	Begin ditch reconstruction, right.	20479
4.18	Reference: Beginning of berm on shoulder of road, left. Construct leadoff ditch, left 60 feet. Excavate three two foot wide openings through berm at locations staked by C.O. to provide for drainage. Begin shaping roadbed and shoulder to provide for a free draining roadbed to toe of berm, left.	20419A 30359 30359
4.25	End shaping roadbed and shoulder to provide for a free draining roadbed to toe of berm, left.	
4.31	Existing culvert. Repair culvert inlet; cut off ripped culvert edge.	60710

RECONSTRUCTION SUMMARY  
ROAD 2639480

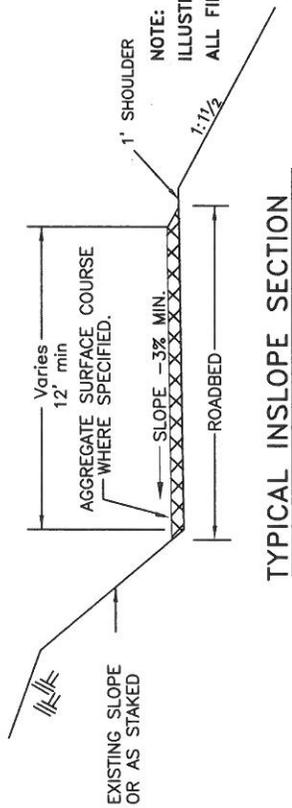
Milepost	Reference Point or Work Required	Pay Item
4.34	Begin placing 1" depth crushed aggregate. Scarify existing roadbed surface and new aggregate to a maximum depth of 4-inches. Reshape roadbed to obtain a minimum 3% crown.	32450 30359
4.43	End placing 1" depth crushed aggregate and scarification.	
4.46	Reference: Beginning of through cut. End ditch reconstruction, right. Reconstruct leadoff ditch, left 60 feet. Remove ravel for full length to toe of cut, right and left.	20419A 30359
4.49	Begin ditch reconstruction, left. Reference: Borrow material, right.	20479
4.56	End ditch reconstruction, left.	
4.59	Begin reconstructing ditch, left.	20479
4.65	Begin placing 1" depth crushed aggregate. Scarify existing roadbed surface and new aggregate to a maximum depth of 4-inches. Reshape roadbed to obtain a minimum 3% crown.	32450 30359
4.70	End placing 1" depth crushed aggregate and scarification.	
4.80	End ditch reconstruction, left.	
4.85	Reference: Intersection with trail, right. End of Project. End all reconstruction.	
<b>DANGER TREE REMOVAL LIST</b>		
4.27	Remove 1 danger tree, right.	20253
4.58	Remove 2 danger trees, left.	20253
4.66	Remove 1 danger tree, left.	20253
4.82	Remove 1 danger tree, left.	20253
<b>NOTE:</b>	Remove 2 danger trees (to be field identified)	20253



TYPICAL SINGLE, DOUBLE LANE, TURNOUT AND TURNAROUND

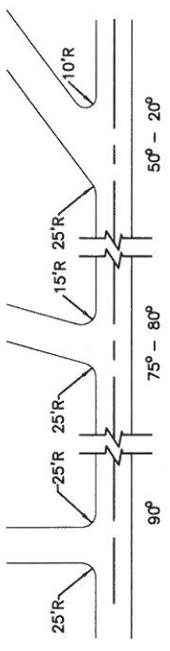


TYPICAL OUTSLOPE SECTION



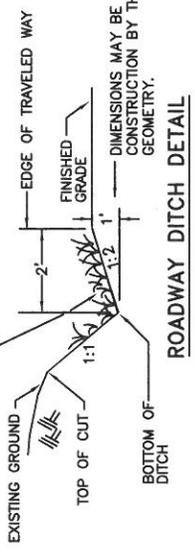
TYPICAL INSLOPE SECTION

NOT TO SCALE

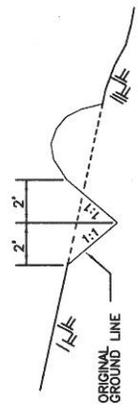


TYPICAL INTERSECTION

RETAIN LOW GROWING VEGETATION, SUCH AS GRASS, AND FORBS, UNLESS IT OBSTRUCTS THE STRUCTURE & INTERFERES WITH PROPER FUNCTION OR ENCROACHES INTO ROADBED. GRUB BRUSH & SMALL TREES.



ROADWAY DITCH DETAIL



TYPICAL LEADOFF DITCH AND FURROW DITCH

AGGREGATE SURFACE COURSE

ROAD NO.	GRADATION	TYPICAL SECTION	M.P. LOCATION	DEPTH	TRAVELED WAY WIDTH	ROCK SLOPE
2639480	As Approved	C	0.72 - 1.77 **	1"	12'	1:2
2639480	As Approved	C	4.34 - 4.43 **	1"	12'	1:2
2639480	As Approved	C	4.65 - 4.70 **	1"	12'	1:2
2639480	As Approved	C	0.00 - 4.85	3"	12'	1:2

Locations to be identified and staked by CO during reconstruction

C = CROWNED  
I = INSLOPED  
O = OUTSLOPED

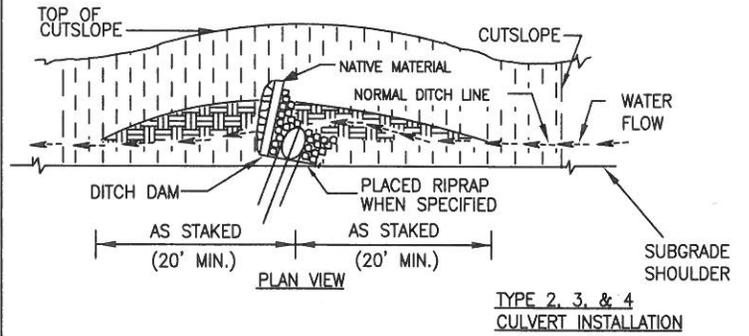
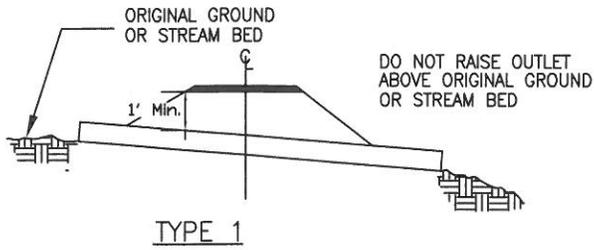
\*\* Place aggregate to full depth shown prior to scarification and roadbed reconstruction  
See Reconstruction Summaries for culvert installation spot surfacing locations

ILLUSTRATED SLOPE RATIO = RISE:RUN (WHERE RISE = 1)  
ALL FILL SLOPES TO BE 1:1 1/2 UNLESS NOTED OTHERWISE

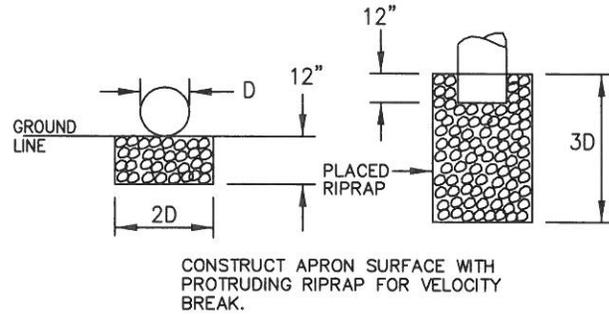
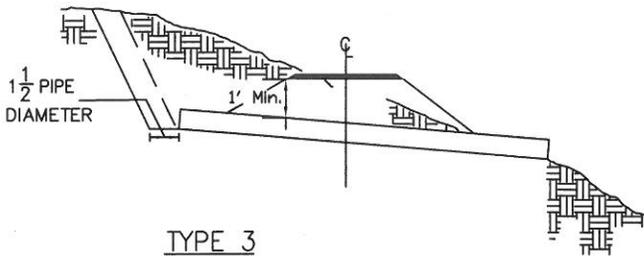
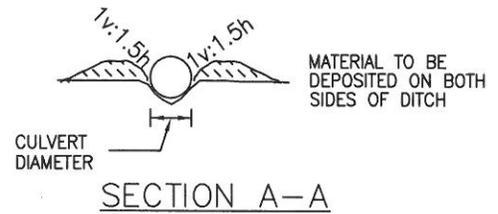
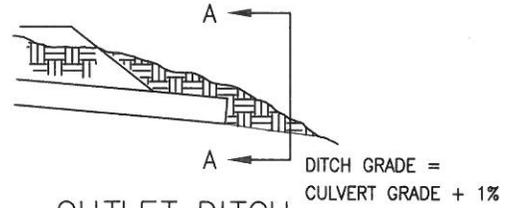
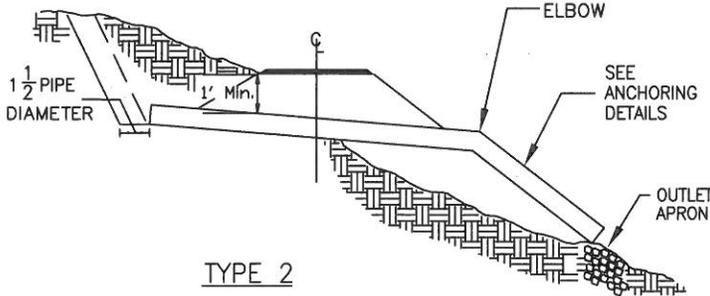
TYPICAL SECTIONS

STATE	FOREST	PROJECT	SHEET NUMBER	TOTAL SHEETS
OREGON	WILLAMETTE	BUCK TIMBER SALE	9	13

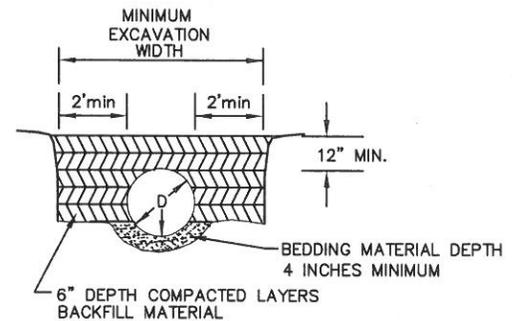
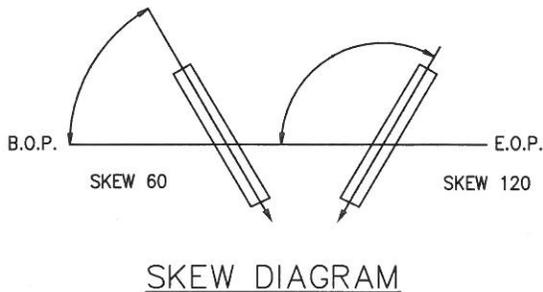




**CATCHBASIN DETAIL**



**ENERGY DISSIPATOR**



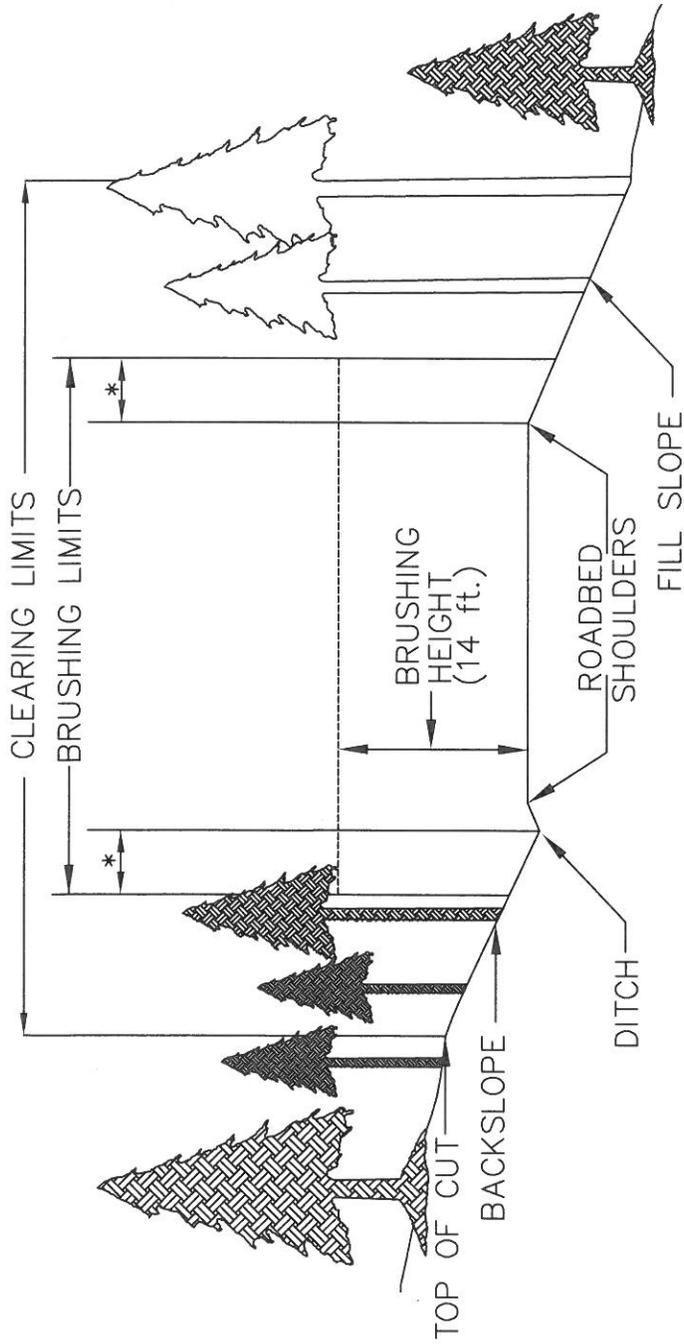
**TYPICAL BEDDING AND BACKFILL DETAIL**

NOT TO SCALE

**DRAINAGE DETAIL**

B.O.P.= BEGINNING OF PROJECT  
E.O.P.= END OF PROJECT

STATE	FOREST	PROJECT	SHEET NUMBER	TOTAL SHEETS
OREGON	WILLAMETTE	BUCK TIMBER SALE	11	13



Not To Scale

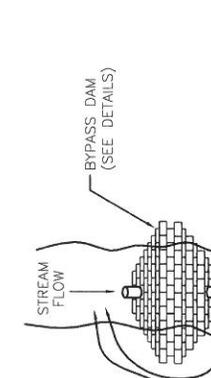
NOTES

1. Remove all vegetative growth inside the brushing limits, from the shoulders of the road or the bottom of the ditch, to a maximum height of 6 inches above ground surfaces.
2. Leave trees larger than 6 inches in diameter (when measured 6 inches above the ground) within the brushing limits, that are beyond the bottom of the ditch and beyond the hinge point on the fill slope.
3. Trim limbs on remaining trees from ground level to a clearing height limit of 14 feet above the travelway surface.
4. Grub areas designated in reconstruction summaries.

BRUSHING LIMITS		
ROAD NO.	M.P. LOCATION OR STATION	*BRUSHING WIDTH
2639480	0.00 to 4.85	6'

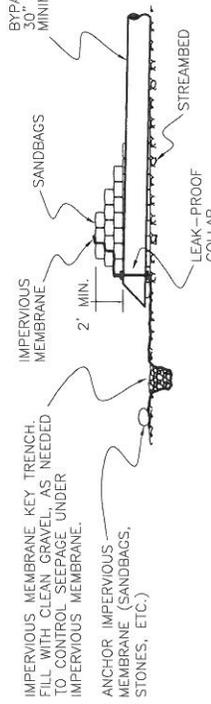
# CLEARING TYPICAL

STATE	FOREST	PROJECT	SHEET NUMBER	TOTAL SHEETS
OREGON	WILLAMETTE	BUCK TIMBER SALE	12	13



ELEVATION VIEW

NOTES:  
 THE DEWATERING & SEDIMENT CONTROL PLAN SHOWS THE MINIMUM ACCEPTABLE CRITERIAL. MAINTAINING CLEAN WATER DOWNSTREAM OF THE PROJECT IS THE RESPONSIBILITY OF THE CONTRACTOR FOR THE DURATION OF THE PROJECT.  
 MAINTAIN PUMPING CAPACITY EQUAL TO STREAM FLOW, UNTIL THE STREAM IS FLOWING ON THE APPROVED, FINISHED STREAMBED.

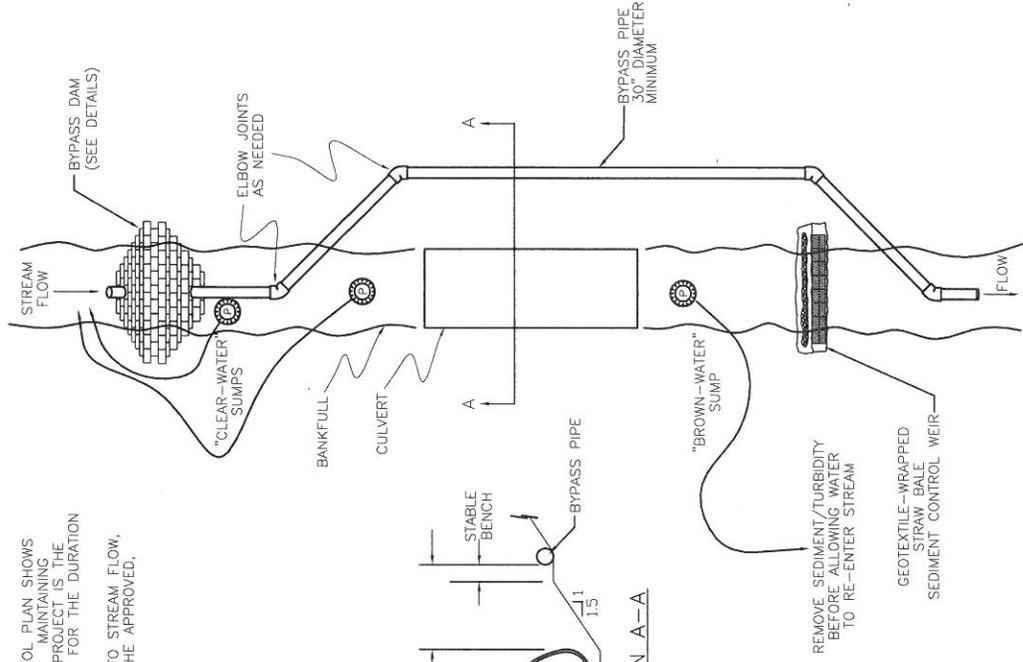
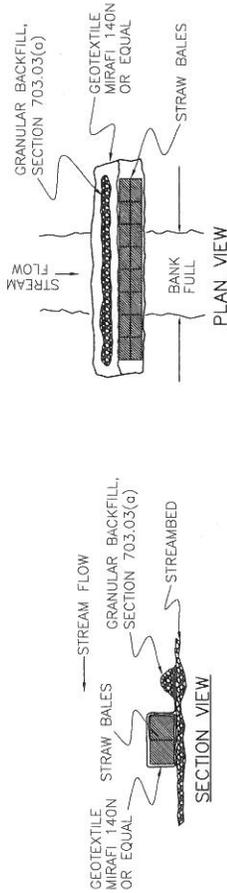


PROFILE VIEW



ANTI-SEEP COLLAR DETAIL

SANDBAG BYPASS DAM DETAILS



BYPASS TYPICAL PLAN VIEW

GEOTEXTILE-WRAPPED STRAW BALES SEDIMENT CONTROL WEIR

NOT TO SCALE

DEWATERING PLAN TYPICAL			
STATE	FOREST	PROJECT	TOTAL SHEETS
OREGON	WILLAMETTE	BUCK TIMBER SALE	13
			13