UNITED STATES DEPARTMENT OF AGRICULTURE

FOREST SERVICE --- REGION SIX

WILLAMETTE NATIONAL FOREST

McKENZIE RIVER RANGER DISTRICT

LANE COUNTY, OREGON

PLANS FOR PROPOSED

Saddle Timber Sale

ROADS

ROAD NO.	LENGTH	CONST./RECONST.
1993000	3.35 miles	RECONST.
1993300	0.72 miles	RECONST.

INDEX TO SHEETS

SHEET	DESCRIPTION
1	TITLE SHEET
2	VICINITY MAP
3	GENERAL NOTES
4-5	ESTIMATE OF QUANTITIES
6	CLEARING TYPICAL
7	DRAINAGE LISTING
8	DEWATERING TYPICAL
9-10	DRAINAGE TYPICALS
11	AGGREGATE PLACEMENT
12	ASPHALT TRANSITION
13-15	RECONSTRUCTION SUMMARIES

Design Team:
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Name Assistant Zone Engineer Date

Approved by:
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Name Forest Engineer Date

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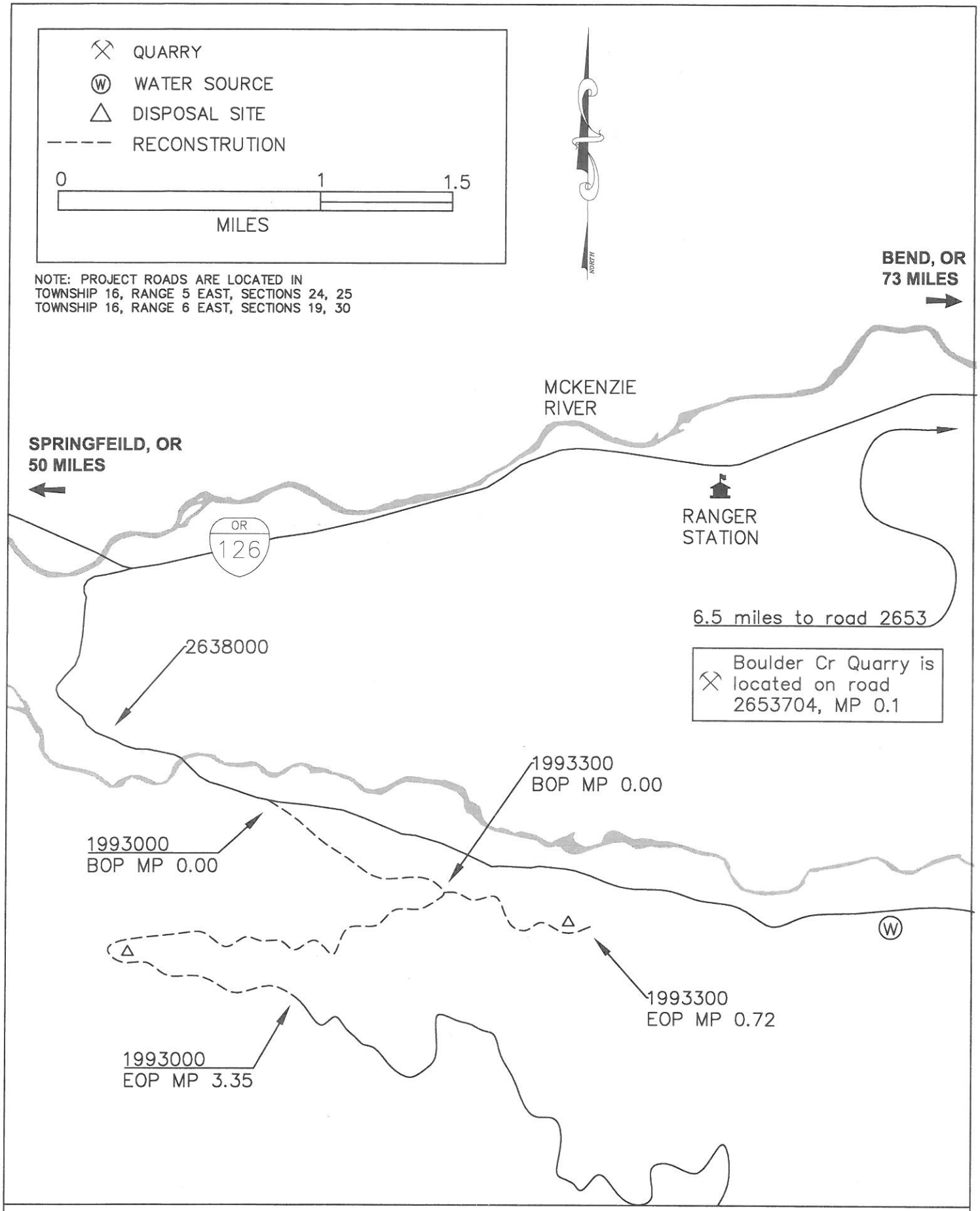
Name District Ranger Date



VICINITY MAP

GENERAL NOTES

1. Provide a construction tolerance of class A for the work under 404. For all other items, tolerance is class D, applicable section, 204 table 204-2.

2. 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.

3. Scarify to a minimum depth of 2 inches below surface irregularities.

4. Designated disposal sites are identified on work summary sheets. Layer place, smooth and shape to drain. Additional disposal sites may be identified during work 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 & 303.

5. Remove all berms (existing or created) to allow drainage from traveled way, unless otherwise designated to remain.

6. Maintain all staking on the project, until final inspection and acceptance.

7. Salvage existing aggregate during culvert replacement; use as backfill material.

8. Spread government furnished straw over disturbed soil at all culvert installations, disposal areas and other exposed soil, excluding ditches. Cover areas completely. Straw is stored at Horse Creek Work Center, located off Horse Creek Road. Contact the CO to arrange for pick up.

9. All fill slopes shall have a minimum slope of 1V:1.5H.

10. See FSSS 107.02 **Protection and Restoration of Property and Landscape** and Timber Sale provisions for restrictions/mitigations related to this project.

11. Replace culverts when stream channels are dry or during instream work period. Dewatering will be deleted if there is no water in the stream when the work is done.

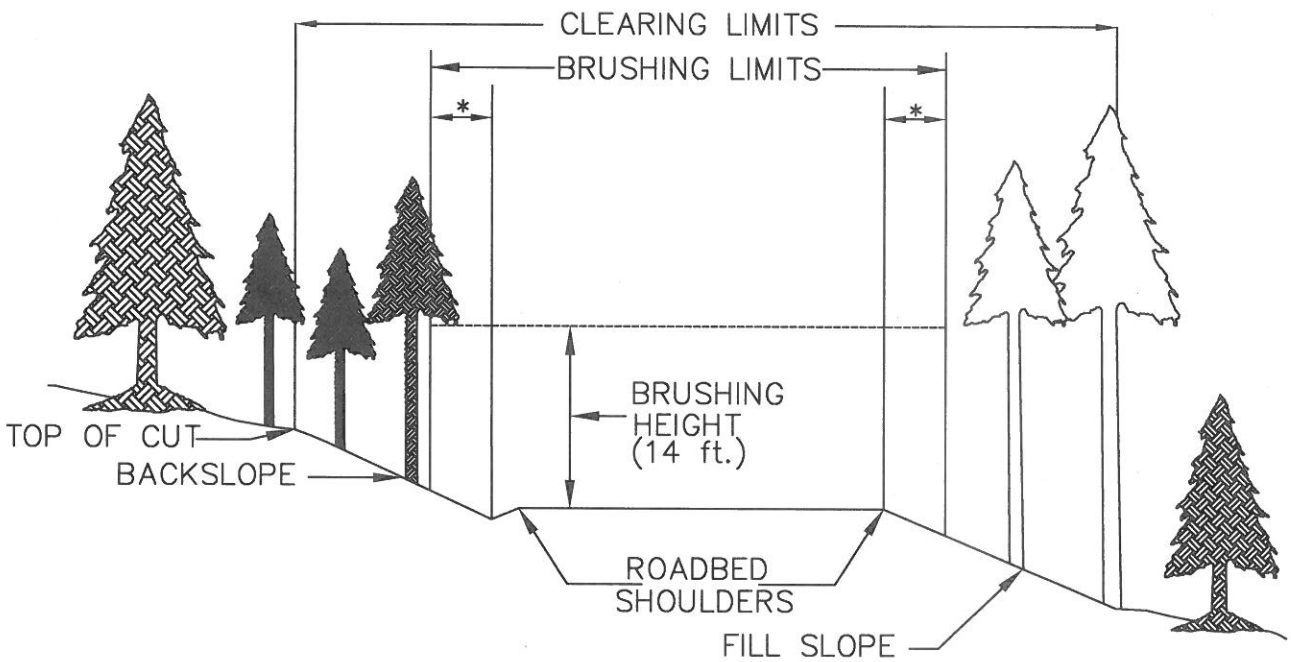
12. Submit a written Erosion Control Plan for approval 21 days prior to beginning culvert replacement. Refer to FSSS 157.02 for additional requirements. Dewatering is included under Pay item 15755.

13. Road 199300 - match the road surface elevation of all fill and/or culvert repair sites before leaving project site. Maintain road surface elevation at repair sites until placement of asphalt is completed. Excess aggregate used to temporarily match surrounding asphalt surface elevation, excavated prior to asphalt placement, may be used as shoulder rock as designated by CO.

14. Do not undercut existing backslopes when reconstructing or reconditioning roadway ditch under pay items 20419A or 30359.

ESTIMATE OF QUANTITIES				
		ROAD NUMBER	1993000	
		SEGMENT		
		PROJECT LENGTH (Miles)	3.35	
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	1	Includes dewatering for culvert replacements.
20103A	Clearing and grubbing, disposal of tops and limbs (f), logs (f), stumps (f)	mile	3.35	
20253	Removal of individual trees, miscellaneous, disposal of tops and limbs (f), logs (f)	each	7	Fell and leave.
20304	Removal of old asphalt	Lump Sum	All	
20358	Removal of corrugated metal pipe, disposal Method (a)	Each	2	
20419A	Drainage excavation, type roadway ditch	Foot*	450	As staked by the CO.
20419B	Drainage excavation, type outlet ditch	Foot*	45	
25101	Placed riprap, class 4	Cubic Yard*	3	Commercial source.
30359	Roadway Reconditioning, compaction E	Mile	3.35	
32232	Haul and place stockpiled aggregate, compaction method B	Cubic Yard*	340	Stockpile location, Road 2653704, MP 0.1 Government furnished. Includes transition aggregate.
40451	ODOT 3/8- inch dense graded HMAC, level II, asphalt cement PG 64 - 22	Ton	20.47	Includes material for Asphalt Transitions Sand seal all joints. Commerical source.
60276A	24-inch corrugated aluminized steel pipe, 0.064-inch thickness, method B	Foot	38	
60276B	36-inch corrugated aluminized steel pipe, 0.079-inch thickness, method B	Foot	36	
60710	Reconditioning drainage structures, culvert inlet/outlet	Each	4	
62509	Mulching, dry method	Lump Sum	All	
		* Denotes Contract Quantity		

ESTIMATE OF QUANTITIES				
		ROAD NUMBER	1993300	
		SEGMENT		
		PROJECT LENGTH (Miles)	0.72	
ITEM NO.	DESCRIPTION	Pay Unit	QTY	REMARKS
20103B	Clearing and grubbing, disposal of tops and limbs (g), logs (i), stumps (f)	Mile	0.72	
20479	Drainage excavation, type roadway ditch	Mile	0.72	
30359	Roadway Reconditioning, compaction E	Mile	0.72	
32211	Aggregate surface course, grading T, compaction method B	Cubic Yard*	480	Commercial Source
		* Denotes Contract Quantity		



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. Trees larger than 8 inches in diameter (when measured 6 inches above the ground) that do not interfere with ditch and surface maintenance are designated to remain.

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.

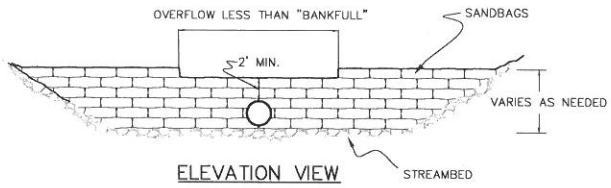
* BRUSHING LIMITS		
ROAD NO.	M.P. LOCATION OR STATION	BRUSHING WIDTH
1993000	0.00 – 3.35	6'
1993300	0.00 – 0.72	4'

CLEARING TYPICAL		
PROJECT	SHEET NUMBER	TOTAL SHEETS
Saddle Timber Sale	6	15

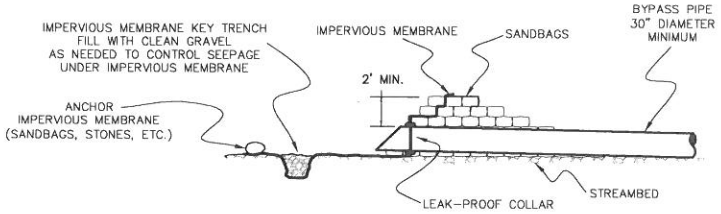
DRAINAGE LISTING

M.P.	Corrugated Metal Pipe						Riprap			Remarks
	Length	Diameter	Thickness	Installation Details			Splash Apron	Inlet/Outlet Armor	Outlet Ditch	
				Grade	Skew	Type				
	Feet	**Inches**	**Inches**	**%**	**Deg**		**C.Y.**	**C.Y.**	**Feet**	
Road 1993										
0.22	38	24	0.064	existing	existing	3				
0.44									10	
0.51	36	36	0.079	5	existing	2			35	raise outlet 1-foot
0.65										jack open outlet
0.70							1			class 4 riprap, as energy dissipator
0.83										jack open outlet
1.20										jack open inlet
2.00							2			class 4 riprap, as energy dissipator
2.10										jack open inlet

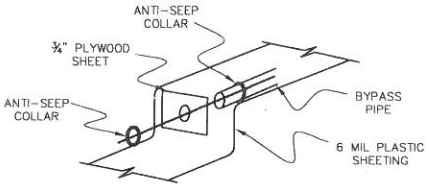
Standard pipe corrugation will be 2-2/3" x 1/2" unless otherwise noted.
THE ABOVE INSTALLATIONS INCLUDE CONNECTING BANDS
All pipes require neoprene gaskets, indirect to respective 602 pay item.
Some culvert installations listed above may require additional excavation below grade line.



ELEVATION VIEW



PROFIILE VIEW



ANTI-SEEP COLLAR DETAIL

SANDBAG BYPASS DAM DETAILS

(NOT TO SCALE)

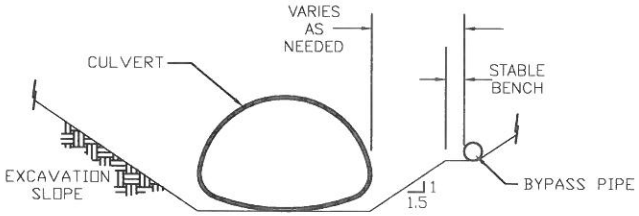
NOTES

1. THE DEWATERING & SEDIMENT CONTROL PLAN SHOWS THE MINIMUM ACCEPTABLE CRITERIA. MAINTAINING CLEAN WATER DOWNSTREAM OF THE PROJECT IS THE RESPONSIBILITY OF THE CONTRACTOR THROUGHOUT THE DURATION OF THE PROJECT.

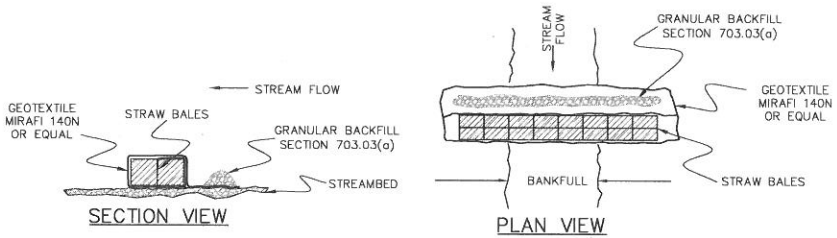
2. MAINTAIN PUMPING CAPACITY EQUAL TO FLOW IN STREAM UNTIL STREAM IS FLOWING ON APPROVED FINISHED STREAMBED.

3. USE CERTIFIED WEED FREE STRAW BALES.

4. REMOVE ALL EROSION CONTROL AND DEWATERING MATERIALS FROM GOVERNMENT LAND. STRAW BALES MAY BE USED AS MULCH ON DISTURBED AREAS.



TYPICAL SECTION A–A

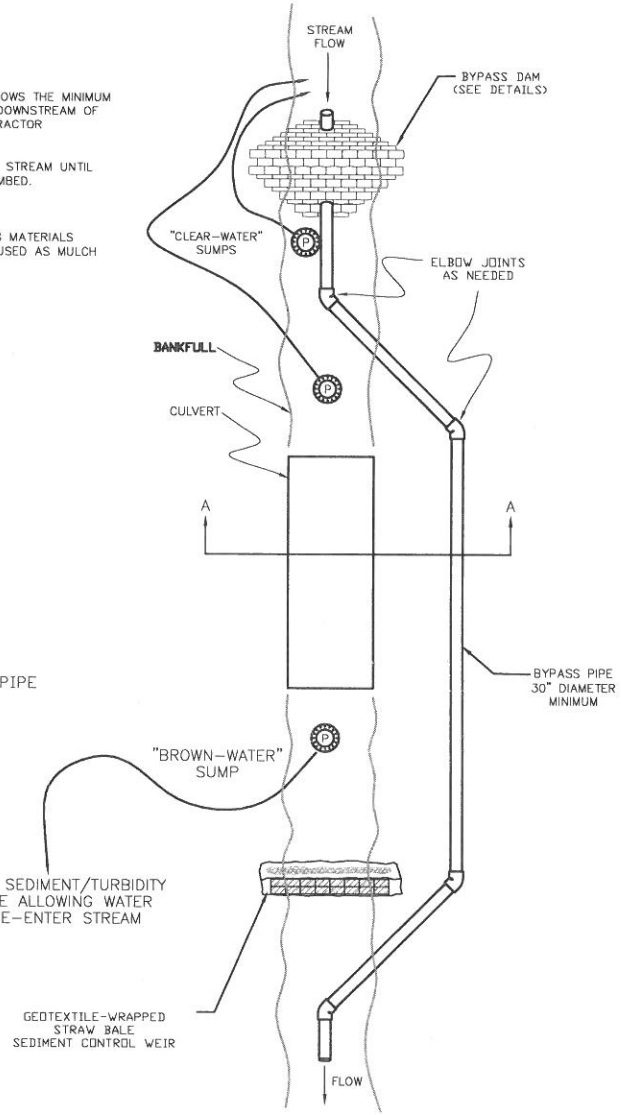


SECTION VIEW

PLAN VIEW

GEOTEXTILE–WRAPPED STRAW BALE SEDIMENT CONTROL WEIR

(NOT TO SCALE)

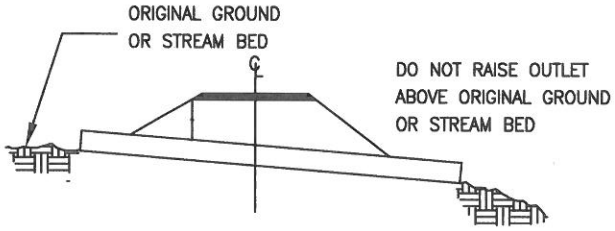


BYPASS TYPICAL PLAN VIEW

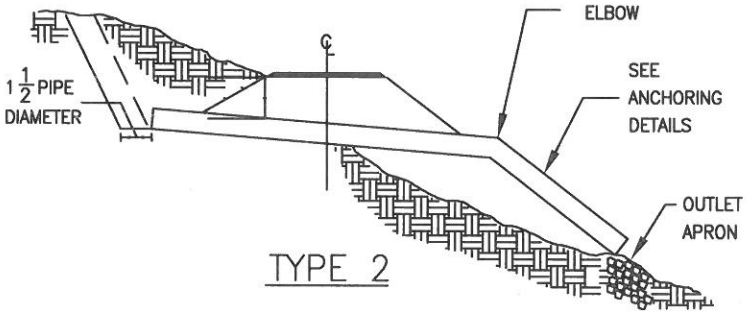
(NOT TO SCALE)

DEWATERING TYPICAL

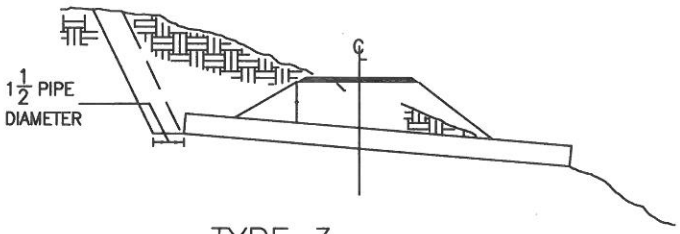
SADDLE TIMBER SALE	SHEET NUMBER	TOTAL SHEETS
	8	15



TYPE 1



TYPE 2



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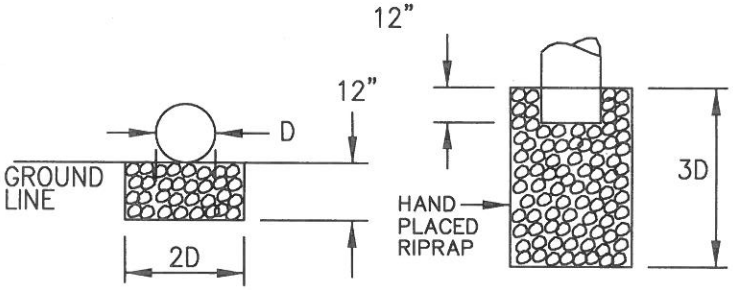
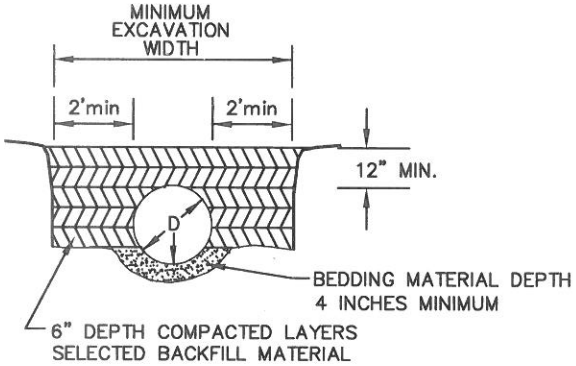
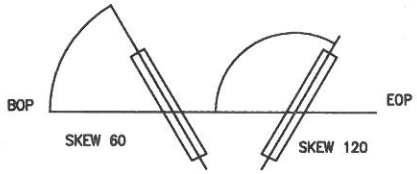


APRON SURFACE SHALL BE
LEFT WITH PROTRUDING RIPRAP
FOR VELOCITY BREAK.

ENERGY DISSIPATOR

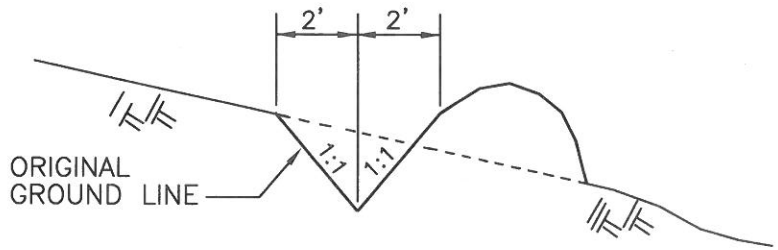


TYPICAL BEDDING
AND BACKFILL DETAIL

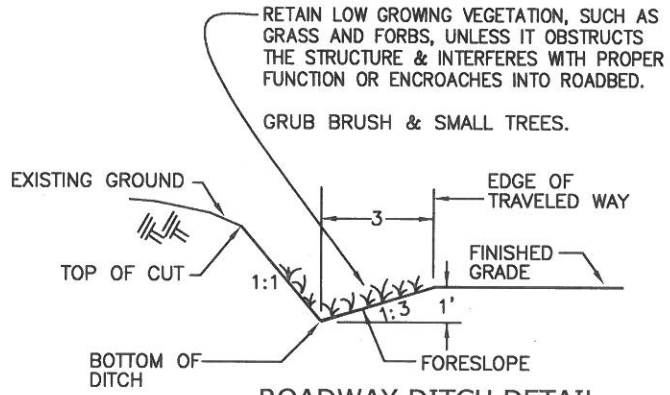


SKEW DIAGRAM

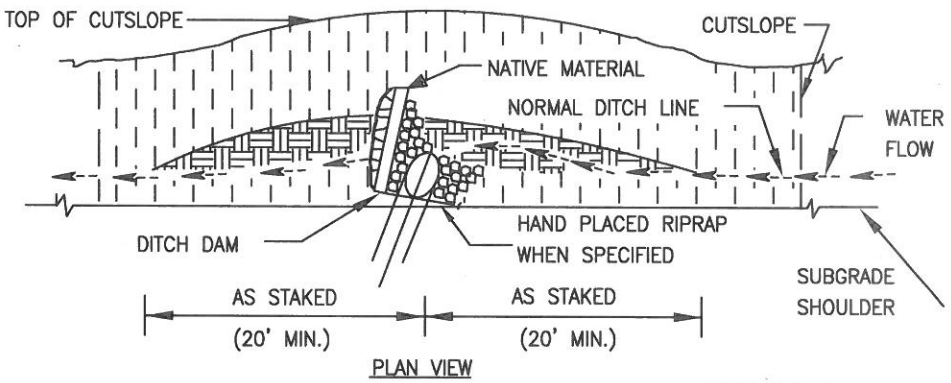
DRAINAGE TYPICALS		
SADDLE TIMBER SALE	SHEET NUMBER	TOTAL SHEETS
	9	15



TYPICAL LEADOFF DITCH



ROADWAY DITCH DETAIL

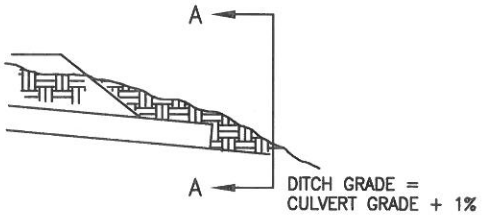


PLAN VIEW

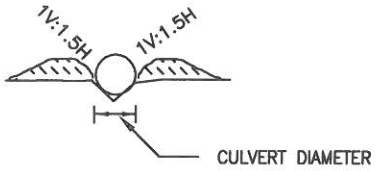
CATCH BASIN DETAIL

TYPE 2 & 3
CULVERT INSTALLATION

OUTLET DITCH



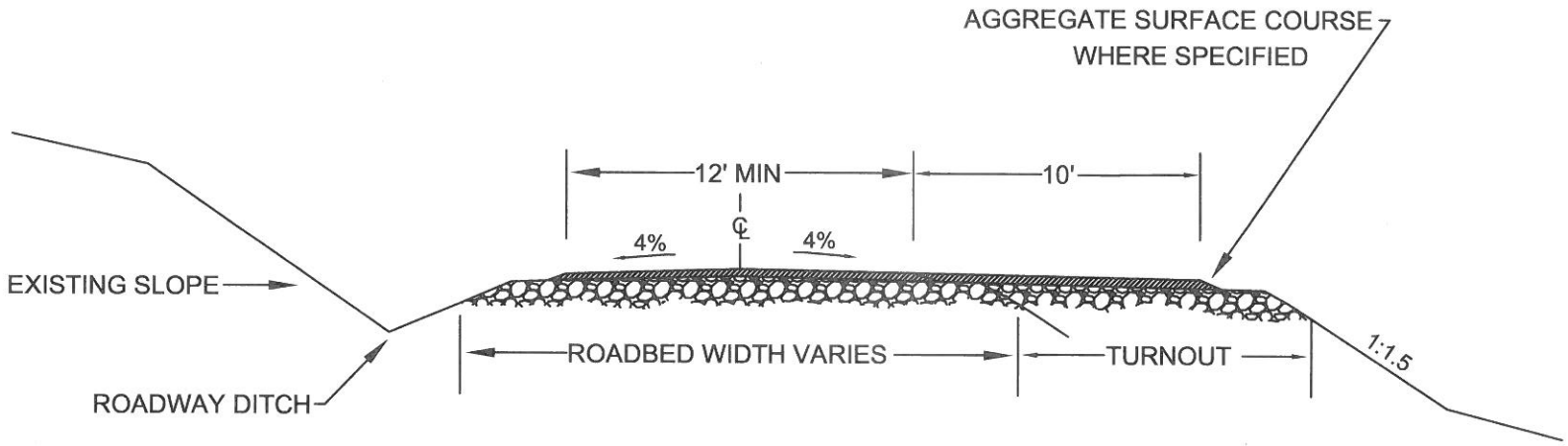
SECTION A–A



NOT TO SCALE

DRAINAGE TYPICALS		
SADDLE TIMBER SALE	SHEET NUMBER	TOTAL SHEETS
	10	15

AGGREGATE PLACEMENT					
ROAD NO.	LOCATION (MP)	GRADATION	DEPTH	TRAVELED WAY WIDTH	ROCK SLOPE
1993000	1.12-1.42	Stockpile	3"	12'	1:3
1993000	1.43	Stockpile	6"	12'	1:3
1993000	1.71	Stockpile	6"	12'	1:3
1993000	1.81	Stockpile	6"	12'	1:3
1993000	2.77	Stockpile	6"	12'	1:3
1993000	2.97	Stockpile	6"	12'	1:3
1993000	3.25	Stockpile	6"	12'	1:3
1993300	0.00-0.72	T	3"	12'	1:2

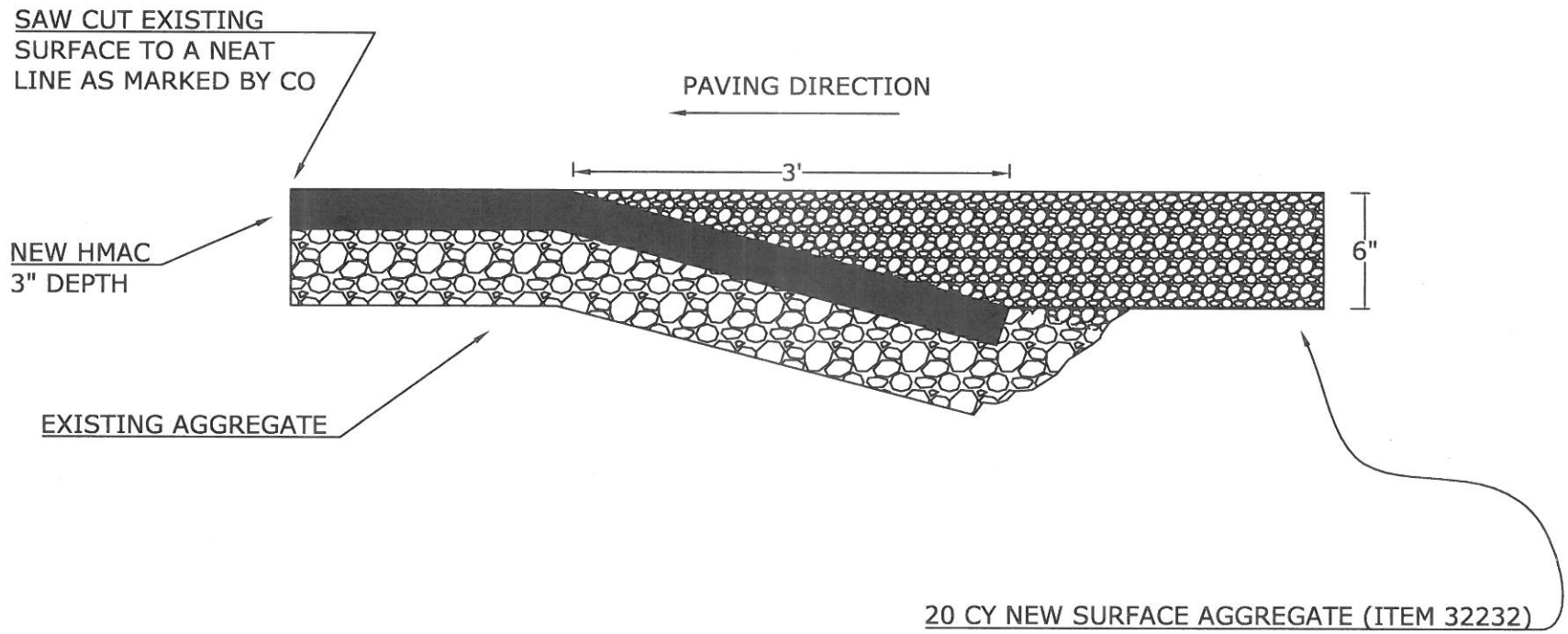


TYPICAL SECTION

NOT TO SCALE

AGGREGATE PLACEMENT		
SADDLE TIMBER SALE	SHEET NUMBER	TOTAL SHEETS
	11	15

ASPHALT TRANSITION DETAIL



NOTES:

1. BACKFILL IMMEDIATELY AFTER PLACEMENT WITH AGGREGATE SURFACING.
2. MATCH THE WIDTH OF THE EXISTING ASPHALT.

NOT TO SCALE

ASPHALT TRANSITION		
SADDLE TIMBER SALE	SHEET NUMBER	TOTAL SHEETS
	12	15

RECONSTRUCTION SUMMARY
ROAD 1993000

Mile Point	Reference Point or Work Required	Pay Item
0.00	Reference: Junction with road 2638. Beginning of Project.	
	Begin clearing and grubbing	20103A
	Begin reconditioning roadway. Provide a 4% crown on all gravel sections.	30359
0.09	Reference: Existing gate (closed Dec 1 - June 1).	
0.22	Remove asphalt.	20304
	Remove existing culvert.	20358
	Install new 24" x 38' culvert.	60276A
	Place new hot mix asphalt surface, 10' long x 14' wide x 3" deep.	40451
0.23	Reference: Junction with road 290, right.	
0.44	Reconstruct outlet ditch, 10'	20419B
0.51	Remove asphalt.	20304
	Remove 3 trees from outlet area.	20253
	Dewater installation and/or provide pollution prevention.	15755
	Reconstruct outlet ditch, 35'	20419B
	Remove existing culvert.	20358
	Install new 36" x 36' culvert. Raise the outlet 1'.	60276B
	Place new hot mix asphalt surface, 20' long x 14' wide x 3" depth.	40451
0.65	Reform circular opening (jack open outlet).	60710
0.70	Place 1 CY riprap at outlet as energy dissipator.	25101
0.75	Remove danger tree, right.	20253
0.78	Remove danger tree, right.	20253
0.83	Reform circular opening (jack open outlet).	60710
0.86	Reference: Junction with road 300, left.	
1.05	Remove danger tree, left.	20253
1.12	Begin placement of aggregate surface course, 3" depth	32232
1.20	Reform circular opening (jack open inlet).	60710
1.22	Reconstruct roadway ditch, left side, as staked by CO.	20419A
1.30	Remove danger tree, left.	20253

1.42	End placement of aggregate surface course	
1.43	Construct new transition (see sheet 12 of 15).	40451 32232
1.44	Reconstruct roadway ditch, left side, as staked by CO.	20419A
1.48	Reference: Existing large culvert (Owl Creek)	
1.50	Reconstruct roadway ditch, left side, as staked by CO.	20419A
1.71	Construct new transition (see sheet 12 of 15).	40451 32232
1.81	Construct new transition (see sheet 12 of 15).	40451 32232
2.00	Place 2 CY riprap at outlet as energy dissapator	25101
2.07	Reference: Junction with road 310, right.	
2.10	Reform circular opening (jack open inlet).	60710
2.34	Reference: "MP 32"	
2.49	Reference: Large disposal site, left.	
2.77	Construct new transition (see sheet 12 of 15).	40451 32232
2.80	Reference: Olallie Trailhead, right.	
2.97	Construct new transition (see sheet 12 of 15).	40451 32232
3.25	Construct new transition (see sheet 12 of 15).	40451 32232
3.34	Reference: small disposal site, right.	
3.35	Reference: "MP 31" End Clearing and Grubbing. End Reconditioning Roadway. End of Project.	

RECONSTRUCTION SUMMARY

Road 1993300

Mile Point	Reference Point or Work Required	Pay Item
0.00	Reference: Junction with road 1993.	
	Begin clearing and grubbing. Remove all trees growing out of the ditch foreslope and traveled way.	20103B
	Begin reconstructing roadway ditch, right side.	20479
	Begin reconditioning roadway.	30359
	Begin placement of aggregate surface course, 3" depth.	32211
0.30	Reference: road 306	
0.67	Reference: disposal site, left side.	
0.72	End clearing and grubbing.	
	End ditch reconstruction.	
	End reconditioning roadway.	
	End placement of aggregate surface course.	
	End of Project.	