

UNITED STATES DEPARTMENT OF AGRICULTURE

FOREST SERVICE --- REGION SIX

WILLAMETTE NATIONAL FOREST

MIDDLE FORK RANGER DISTRICT

Lane County, Oregon

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PLANS FOR PROPOSED

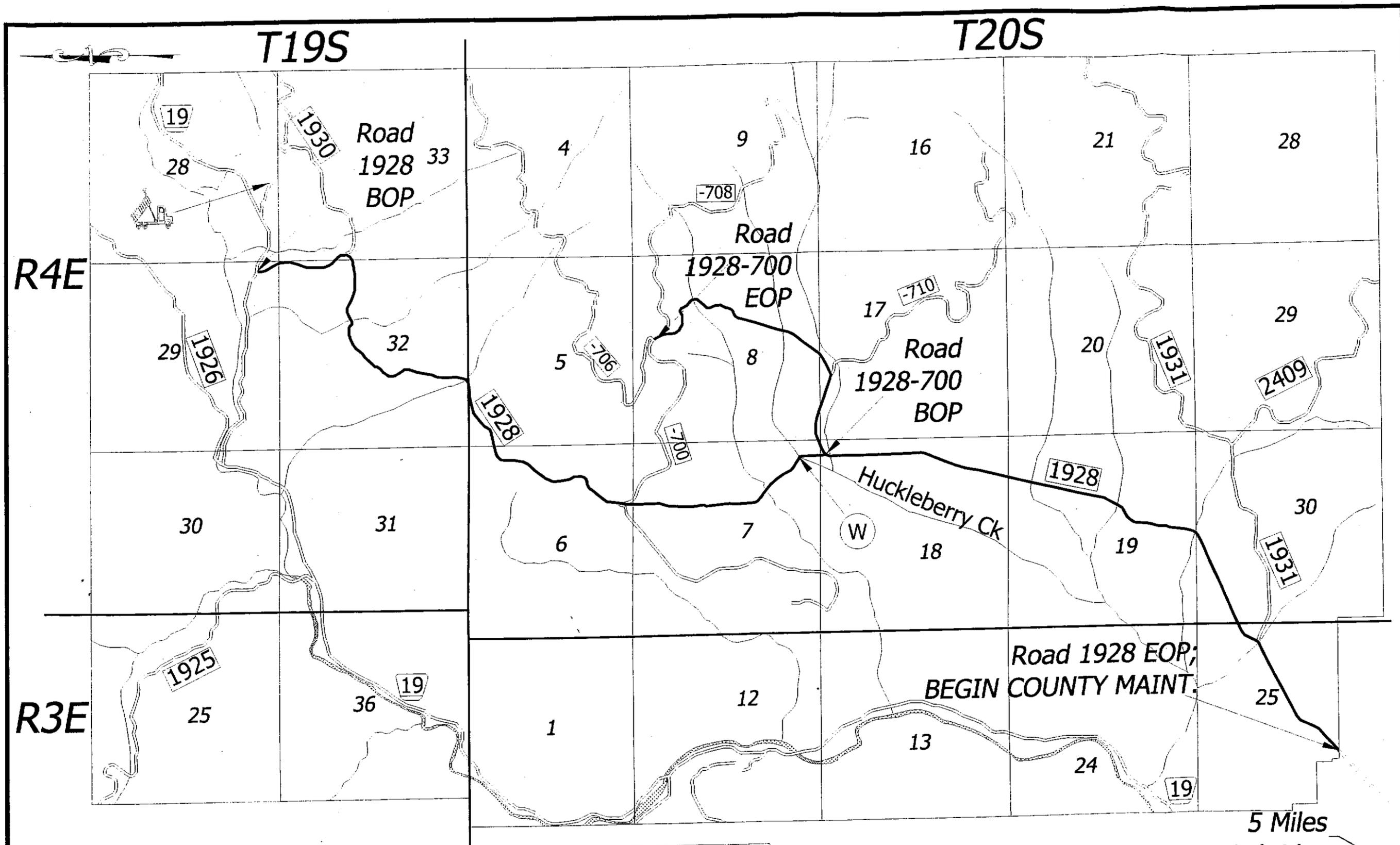
SIDEWALK THIN TIMBER SALE
ROADS

<u>ROAD NO.</u>	<u>LENGTH/MILES</u>	<u>CONST./RECONST.</u>
1928	7.72	Reconstruction
1928 700	1.77	Reconstruction

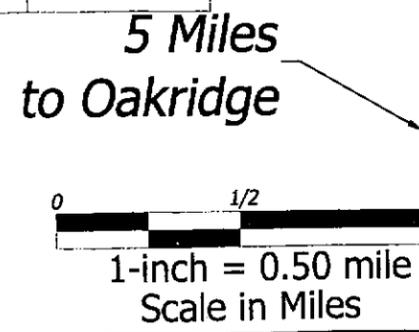
INDEX TO SHEETS

<u>SHEET</u>	<u>DESCRIPTION</u>
1	Title Sheet
2	Vicinity Map
3 - 4	Estimate of Quantities
5	General Notes
6 - 7	Drainage Listing
8	Drainage Typical
9	Reconstruction / Misc. Typical
10	Brushing Typical
11	Dewatering Typical
12 - 16	Reconstruction Summary Road 1928
17 - 18	Reconstruction Summary Road 1928 700

Designed by:	
<i>Steffan Bolin</i>	6/10/13
Name	Date
Reviewed by:	
<i>Kenneth J. ...</i>	6/11/13
Name	Date
Reviewed by:	
<i>John ...</i>	6/14/13
Asst. Development Engineer	Date
Recommended by:	
<i>John ...</i>	6/18/13
For Zone Engineer	Date
Approved by:	
<i>[Signature]</i>	7/8/13
District Ranger	Date
<i>[Signature]</i>	6/14/13
Forest Engineer	Date



LEGEND			
	Reconstruction Segments		Willamette River
	Other Roads		Collector Road
	Creeks		Spur Road
	Arterial Road		Riprap Source
	Water Source		



SIDEWALK THIN TIMBER SALE

VICINITY MAP

SHEET NUMBER	TOTAL SHEETS
2	18

ESTIMATE OF QUANTITIES ROAD 1928

7.72 Miles

Item Number	Description	Unit	Quantities	Remarks
15101	Mobilization	Lump Sum	All	Includes equipment washing, temporary traffic control, pipe measurements, fire protection measures, and all minor dewatering. For all specified roads.
15755	Erosion control & pollution prevention	Each	1	Dewatering. Dewatering will be deleted if there is no water present when work is performed.
20253	Removal of individual trees, miscellaneous: disposal of tops & limbs f & logs f	Each	19	
20358	Removal of corrugated metal pipe, disposal method (a)	Each	6	
20419	Drainage excavation, type outlet ditch	Foot	1230	
23051	Roadside brushing, disposal method 1	Mile	5.58	
25101A	Placed riprap, class 4	Cubic Yard*	16	See General Note 10.
25101B	Placed riprap, class 5	Cubic Yard*	18	See General Note 10.
25104	Keyed riprap, class 5	Cubic Yard*	17	See General Note 10.
30359	Roadway reconditioning, compaction E	Mile	5.58	
32203	Aggregate base, grading D, compaction method B	Cubic Yard*	6173	Commercial source.
60276A	18-inch corrugated aluminized steel pipe, 0.064-inch thickness, method B	Foot	88	
60276B	24-inch corrugated aluminized steel pipe, 0.079-inch thickness, method B	Foot	101	
60276C	30-inch corrugated aluminized steel pipe, 0.079-inch thickness, method B	Foot	36	
60791A	Repair existing culvert	Each	1	Dispose of cut inlet and outlet culvert pieces by removing from government land according to FSSS 203.05 method a.
60791B	Repair existing culvert	Each	1	
62509	Mulching, dry method	Lump Sum	All	Government furnished, straw. Included for all roads.

* denotes contract quantities.

ESTIMATE OF QUANTITIES ROAD 1928 700

1.77 Miles

Item Number	Description	Unit	Quantities	Remarks
20253	Removal of individual trees, miscellaneous: disposal of tops & limbs f & logs f	Each	2	
20358	Removal of corrugated metal pipe, disposal method (a)	Each	3	
20419	Drainage excavation, type outlet ditch	Foot	150	
23051	Roadside brushing, disposal method 1	Mile	1.77	
30359	Roadway reconditioning, compaction E	Mile	1.77	
32203	Aggregate base, grading D, compaction method B	Cubic Yard*	43	Commercial source.
60276A	18-inch corrugated aluminized steel pipe, 0.064-inch thickness, method B	Foot	64	
60276B	30-inch corrugated aluminized steel pipe, 0.079-inch thickness, method B	Foot	34	

* denotes contract quantities.

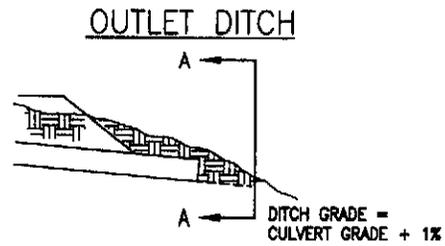
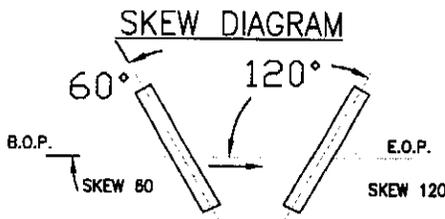
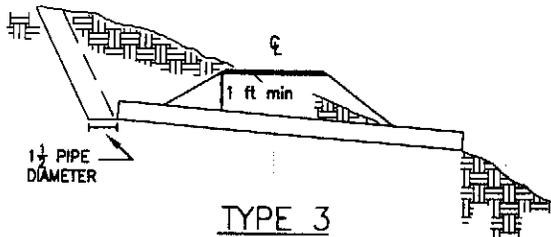
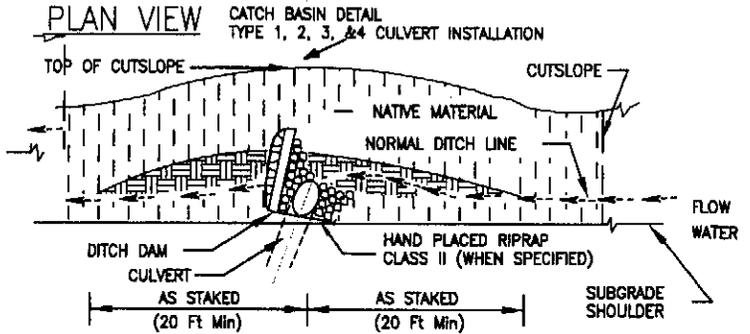
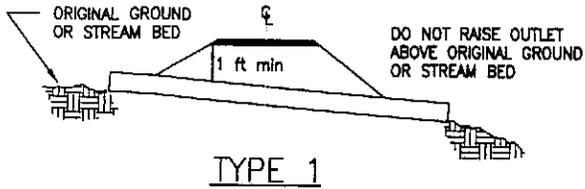
GENERAL NOTES

- 1 Remove all berms, previously existing or created, unless designated to remain, to allow drainage of water from the traveled way.
- 2 Salvage existing aggregate during culvert removal and use as bedding / backfill material around pipe during installation.
- 3 The Contracting Officer will designate disposal areas prior to placement of material. Smooth and shape material to drain, indirect to 30359 pay item.
- 4 Do not undercut backslopes when cleaning and/or reconstructing ditchline
- 5 Spread government furnished straw over all areas where soil has been disturbed, excluding ditches. Cover area's completely. Straw is stored at the Flat Creek Work Center, located on FS road 24, 2 miles east of the town of Oakridge. Contact the CO to arrange for pick up.
- 6 Recondition roadbed, including turnouts and curve widening, to dimensions existing on the ground.
- 7 Place aggregate lifts to the top width dimension identified in the Reconstruction Summary and to the existing turnout and curve widening dimensions.
- 8 Timing / date restrictions are included in C6.24 and C6.315 of the timber sale provisions and in FSSS 156.05.
- 9 Rebuild fills with a maximum slope steepness of 1V:1.5H fill slopes and minimum 1' shoulders.
- 10 Class 4 and 5 riprap is available, as marked by CO, at Whiterock Quarry, Road 1900703, T19S, R4E, Sec 28, SE of SW, and Sinkrock Quarry on Road 1900749, T19S, R5E, Sec 31, NW of NE. Sorting required.
- 11 Replace culverts when dry or during instream work period. Minor dewatering is paid indirect to 151 pay item and is defined as dewatering performed on any stream with a flow equal to or less than 10 gallons per minute.

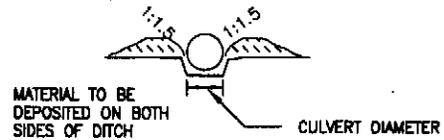
DRAINAGE LISTING													Remarks
M.P.	CMP	Outlet Pipe	As Built		Dimensions		Installation Details			Misc.			Remarks
			M.P.	Feet	Inch	FE Inch	Type	Grade	Skew	Outlet Ditch	Splash Apron	Headwall	
	Feet	Feet						%	Deg	Feet	C.Y.	C.Y.	
Road 1928													
0.52	36				30	0.079	#	*	#				
0.72	42				24	0.079	#	*	#		3		Lower outlet 1'. Class 4 splash apron. 14 gauge.
0.90											18		Lower outlet 1' to ground level. 14 gauge.
2.29	32				24	0.079	#	#	#	110			Cut off 2' from inlet and paint. Class 5 splash apron. Requires dewatering.
2.37	27				24	0.079	#	#	#	100			14 gauge.
2.41	26				18	0.064	#	#	#	100			14 gauge.
2.48										30			
3.13										40			
3.25										40			
3.39										40			
3.51										80			
4.03										40			
4.17										140			
4.20										30			Jack out inlet.
4.21	62				18	0.064	#	#	#				
4.30											17		Keyed class 5 riprap headwall armoring.
4.67										50			
5.35										70			
5.45										50			
5.82										80			
6.24											13		Class 4 riprap headwall armoring.
6.50										100			
7.21										50			
7.32										80			
Road 1928 700													
0.61	36				18	0.064	#	#	#	50			
0.67										80			
0.84	34				30	0.079	#	#	#				Lower entire installation 0.5'. 14 gauge.
1.23	28				18	0.064	#	#	#				
1.50										20			

DRAINAGE LISTING														
M.P.	CMP	Outlet Pipe	As Built		Dimensions		Installation Details			Misc.			Remarks	
					Size	Thick	Type	Grade	Skew	Outlet	Splash	Headwall		
	Feet	Feet	M.P.	Feet	Inch	FE Inch		%	Deg	Ditch	Apron			
										Feet	C.Y.	C.Y.		
ALL INSTALLATIONS INCLUDE CONNECTING BANDS														
NOTE: Standard pipe corrugation will be 2 2/3 inch X 1/2 inch unless otherwise noted.														
# Skew, grade and type shall match removed installation unless otherwise noted.														
* Will vary to accomodate other installation designations.														
All pipes 30" diameter and larger, require gaskets, indirect to respective 602 pay item.														
Some installations of culverts may require additional excavation below grade line, indirect to 602 pay item.														
Where necessary, lower CMP installations to obtain a minimum of 1' of cover over culverts, not including surface rock.														
Construct outlet ditches in existing flow channel unless marked by CO otherwise.														

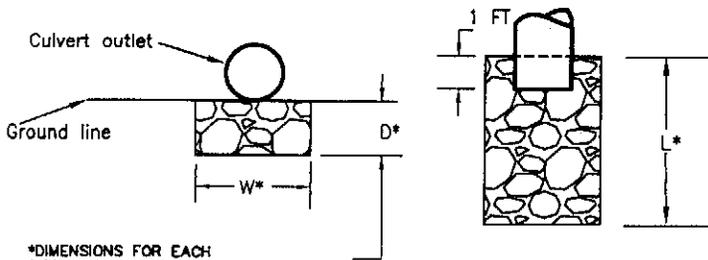
DRAINAGE TYPICALS



SECTION A-A



SPLASH APRON



*DIMENSIONS FOR EACH DISSIPATOR ARE IN THE RECONSTRUCTION SUMMARIES. RIPRAP WILL BE PLACED TO THE BOTTOM OF THE CHANNEL

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

SHEET NUMBER

8

TOTAL SHEETS

18



SIDEWALK THIN TIMBER SALE

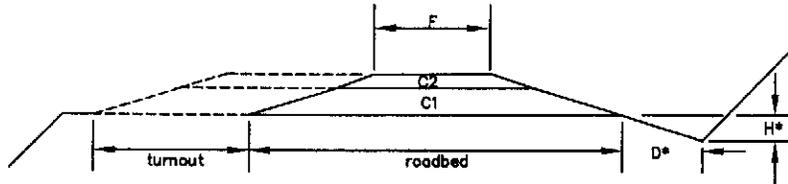
DRAINAGE TYPICAL

U.S.D.A. FOREST SERVICE

RECONSTRUCTION TYPICALS

(not to scale)

TYPICAL SECTION



⊙ Widths are minimums. Reconstruct roadbed including turnouts and curve widening to match the existing road widths.

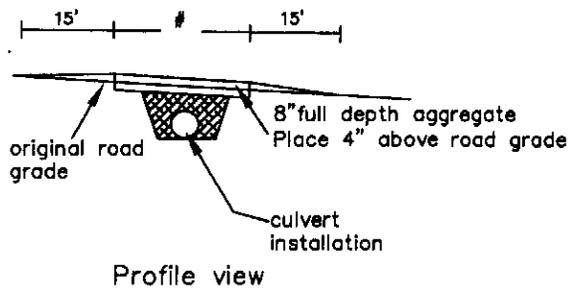
* Dimensions marked with an asterisk may be adjusted during construction by the CO to fit site geometry.

**AGGREGATE IS TO BE PLACED AS DIRECTED IN THE RECONSTRUCTION SUMMARY.

ROAD NUMBER	MILE POST TO	MILE POST	CONSTRUCTION TOLERANCE	GRADING			PAVEMENT STRUCTURE				
				OUTSLOPE (O) INSLOPE (I) CROWN (C)	ROADBED WIDTH	DITCH DIMENSIONS	TRAVELED WAY WIDTH	GRADATION		COMPACTED DEPTH**	ROCK SLOPE
				*	ft	D H	F	C1 C2	Inch	C1 C2	V:H
1928	0.00	0.92	C	2C	15.67⊙	3* 1*	13⊙	- D	-	**	1:2
1928	2.26	7.42	C	2C	15.67⊙	3* 1*	13⊙	- D	-	**	1:2
1928700	0.00	1.77	C	2C	14.67⊙	3* 1*	12⊙	- D	-	**	1:2

CULVERT SURFACE ROCK TYPICAL

#Top length and width dimension designated in the Reconstruction Summary.



SHEET NUMBER

9

TOTAL SHEETS

18



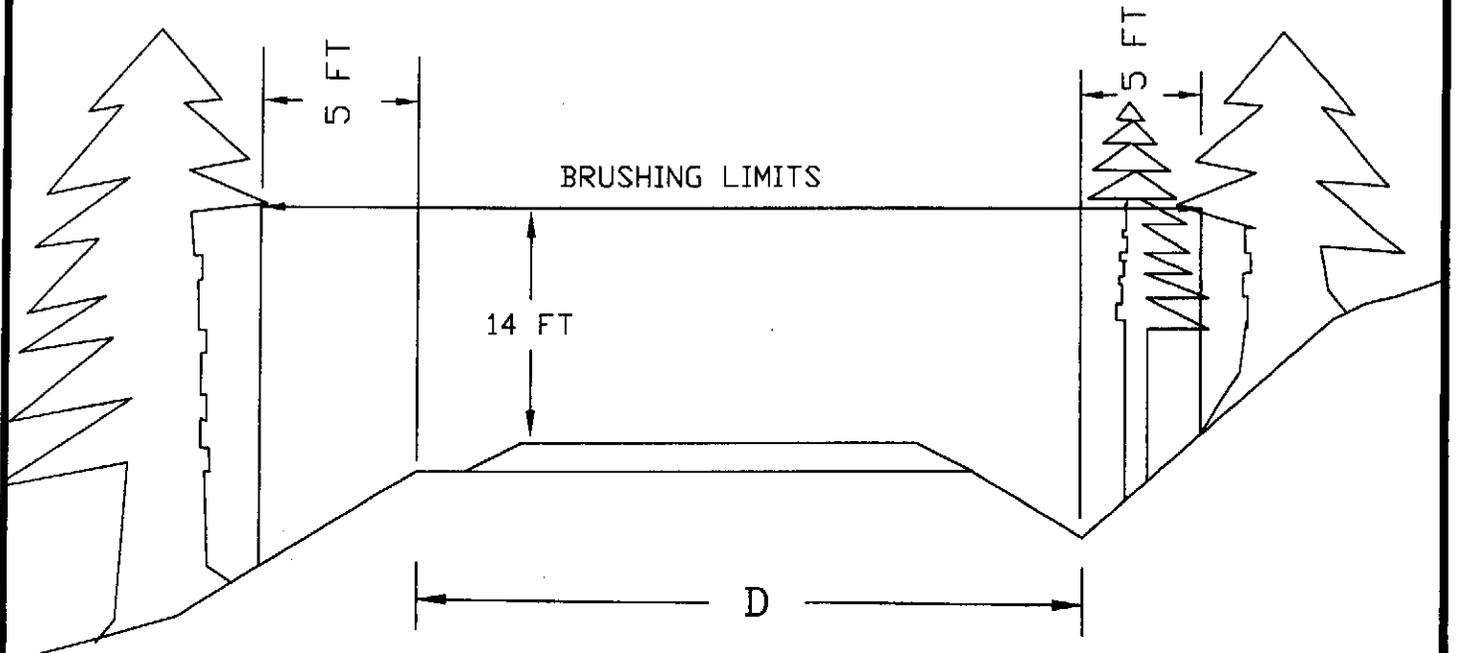
SIDEWALK THIN TIMBER SALE

RECONSTRUCTION / MISC. TYPICAL

U.S.D.A. FOREST SERVICE

ROADSIDE BRUSHING DETAILS

TYPICAL SECTION



Leave trees over 8 inches in diameter, measured at 4 foot height, that are within the brushing limits but beyond the bottom of ditch and beyond hinge point on the fill slope side, and limb to 14 feet above the traveled way surface.

Grub and haul to designated disposal areas stumps within "D" above or as noted on the work descriptions.

Cut all vegetation to a maximum height of 6 inches above the ground surface.

Roads mechanically brushed may require manual scattering of cut material beyond the clearing limits.

SHEET NUMBER

10

TOTAL SHEETS

18



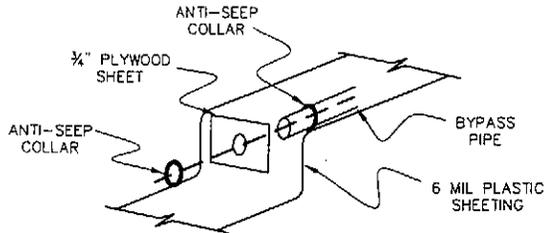
SIDEWALK THIN TIMBER SALE

BRUSHING TYPICAL

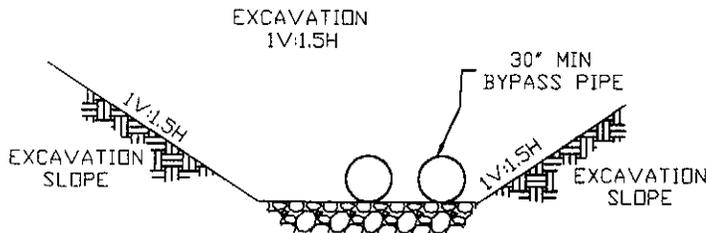
U.S.D.A. FOREST SERVICE

NOTES

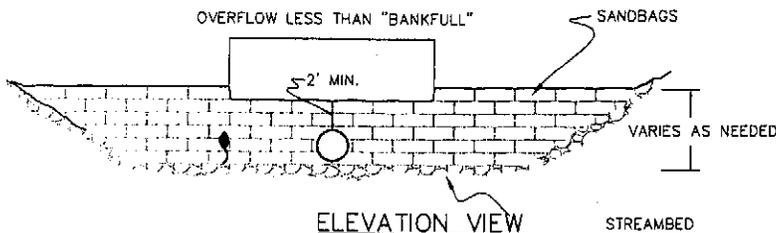
1. THE DEWATERING & SEDIMENT CONTROL PLAN SHOWS THE MINIMUM ACCEPTABLE CRITERIA. MAINTAINING CLEAN WATER DOWNSTREAM OF THE PROJECT IS THE RESPONSIBILITY OF THE CONTRACTOR THROUGHOUT THE DURATION OF THE PROJECT, 24 HRS/DAY.
2. MAINTAIN PUMPING CAPACITY EQUAL TO FLOW IN STREAM UNTIL STREAM IS FLOWING ON APPROVED FINISHED STREAMBED.
3. REMOVE ALL EROSION CONTROL AND DEWATERING MATERIALS FROM GOVERNMENT LAND AFTER USE. STRAW BALES MAY BE USED AS MULCH ON DISTURBED AREAS.



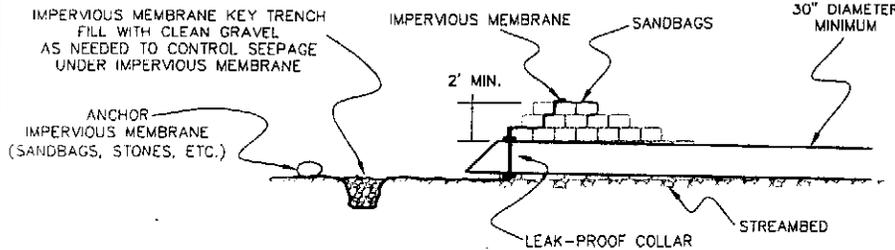
ANTI-SEEP COLLAR DETAIL



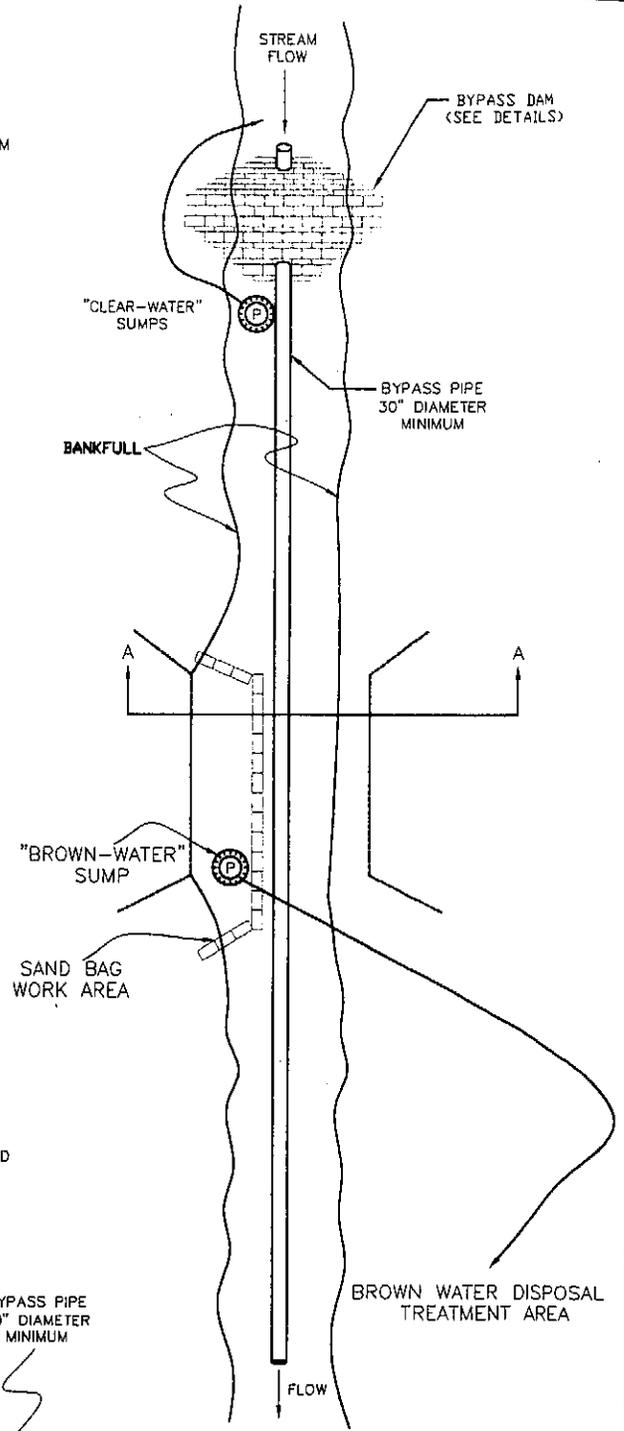
TYPICAL SECTION A-A



ELEVATION VIEW



PROFILE VIEW



BYPASS TYPICAL PLAN VIEW

(NOT TO SCALE)

SHEET NUMBER

11

TOTAL SHEETS

18



SIDEWALK THIN TIMBER SALE

DEWATERING TYPICAL

U.S.A. FOREST SERVICE

RECONSTRUCTION SUMMARY ROAD 1928

Mile Point	Pay Item	Quantity	Unit	Work Description
0.00				Junction with Road 19. Beginning of project.
0.50	23051	0.42	Mile	Junction left, Road 1930. Begin roadside brushing.
	30359	0.42	Mile	Begin reconditioning of roadway. Grubbing & disposal of all vegetation & root masses within roadbed and in the ditch is required unless otherwise noted in the work description. Haul material from ditch reconditioning, slough and slide removal to designated disposal areas. Scatter all logs and woody debris from top of cutbank to the opposite road shoulder outside clearing limits. Scarify minimum 1" below the depth of all potholes, washboards or surface irregularities.
	32203	455	Cubic Yard*	Begin placing a 4" aggregate lift. Place aggregate to have a 13' top width except to match existing turnouts and curve widening widths and tapers. Taper both ends of lift to achieve a smooth transition to existing road surfaces.
0.52	20358	1	Each	Remove existing CMP.
	60276C	36	Foot	Install 30" CMP. Lower outlet 1'.
	32203	9	Cubic Yard*	Place 4" crushed aggregate full depth for 15 feet centered over installed culvert with 15 foot tapers on each end and a 17' top width. Blend to adjacent road surfaces to provide a smooth transition.
	25101A	3	Cubic Yard*	Construct splash apron, 7'L x 4'W x 2.5'D.
0.55	20253	1	Each	Fell 1 danger tree, left.
0.72	20358	1	Each	Remove existing CMP.
	60276B	42	Foot	Install 24" CMP. Lower outlet 1' to ground level.
	32203	8	Cubic Yard*	Place 4" crushed aggregate full depth for 15 feet centered over installed culvert with 15 foot tapers on each end and a 15' top width. Blend to adjacent road surfaces to provide a smooth transition.
0.90				Coffee Creek.
	15755	1	Each	Dewater site.
	25101B	18	Cubic Yard*	Construct splash apron, 12'L x 10'W x 4'D. Place riprap up against eroded fill underneath culvert.
	60791A	1	Each	Cut off 2' from inlet.
0.92				End roadside brushing. End reconditioning of roadway. End placing 4" aggregate lift.
2.25				OHV trail right.
2.26				OHV trail left.
	23051	5.16	Mile	Begin roadside brushing.

RECONSTRUCTION SUMMARY ROAD 1928

Mile Point	Pay Item	Quantity	Unit	Work Description
	30359	5.16	Mile	Begin reconditioning of roadway. Grubbing & disposal of all vegetation & root masses within roadbed and in the ditch is required unless otherwise noted in the work description. Haul material from ditch reconditioning, slough and slide removal to designated disposal areas. Scatter all logs and woody debris from top of cutbank to the opposite road shoulder outside clearing limits. Scarify minimum 1" below the depth of all potholes, washboards or surface irregularities.
	32203	5670	Cubic Yard*	Begin placing a 4" aggregate lift. Place aggregate to have a 13' top width except to match existing turnouts and curve widening widths and tapers. Taper both ends of lift to achieve a smooth transition to existing road surfaces.
2.28	20253	1	Each	Fell 1 danger tree, left.
2.29	20253	1	Each	Fell 1 danger tree, left.
	20358	1	Each	Remove existing CMP.
	60276B	32	Foot	Install 24" CMP.
	32203	6	Cubic Yard*	Place 4" crushed aggregate full depth for 15 feet centered over installed culvert with 15 foot tapers on each end and a 13' top width. Blend to adjacent road surfaces to provide a smooth transition.
	20419	110	Foot	Construct outlet ditch.
2.37	20253	1	Each	Fell 1 danger tree, left.
	20358	1	Each	Remove existing CMP.
	60276B	27	Foot	Install 24" CMP.
	32203	7	Cubic Yard*	Place 4" crushed aggregate full depth for 15 feet centered over installed culvert with 15 foot tapers on each end and a 16' top width. Blend to adjacent road surfaces to provide a smooth transition.
	20419	100	Foot	Construct outlet ditch.
2.41	20358	1	Each	Remove existing CMP.
	60276A	26	Foot	Install 18" CMP.
	32203	6	Cubic Yard*	Place 4" crushed aggregate full depth for 15 feet centered over installed culvert with 15 foot tapers on each end and a 14' top width. Blend to adjacent road surfaces to provide a smooth transition.
	20419	100	Foot	Construct outlet ditch.
2.44	20253	1	Each	Fell 1 danger tree, left.
2.48	20419	30	Foot	Construct outlet ditch.
2.49	20253	2	Each	Fell 2 danger trees, right.
2.55				OHV trail #107.
2.66	20253	1	Each	Fell 1 danger tree, right.

RECONSTRUCTION SUMMARY ROAD 1928

Mile Point	Pay Item	Quantity	Unit	Work Description
2.70				Junction left, Road 1928 186.
2.83	20253	1	Each	Fell 1 danger tree, left.
2.90				OHV trail #100, left. Disposal area, right.
2.96				Junction left, Road 1928 700 (northern junction).
3.00				Junction right, Road 1928 704.
3.01				Disposal area, right.
3.62				Disposal area, left.
3.13	20419	40	Foot	Construct outlet ditch.
3.25	20419	40	Foot	Construct outlet ditch.
3.28				Disposal area, right.
3.39	20419	40	Foot	Construct outlet ditch.
3.51	20419	80	Foot	Construct outlet ditch.
3.52				Disposal area, right.
3.62				Disposal area, right.
3.89				Huckleberry Flats OHV staging area, left.
4.03	20419	40	Foot	Construct outlet ditch.
4.17	20419	140	Foot	Construct outlet ditch.
4.20	20419	30	Foot	Construct outlet ditch.
	60791B	1	Each	Repair culvert inlet. Jack out pipe inlet to original shape.
4.21				Junction left, Road 1928 700 (southern junction).
	20358	1	Each	Remove existing CMP.
	60276A	62	Foot	Install 18" CMP.
	32203	12	Cubic Yard*	Place 4" crushed aggregate full depth for 15 feet centered over installed culvert with 15 foot tapers on each end and a 27' top width. Blend to adjacent road surfaces to provide a smooth transition.
4.30				Huckleberry Creek.
	25104	17	Cubic Yard*	Place and key class 5 riprap 25'L x 5'W x 3.5'D to construct headwall leading into pipe inlet and armor road shoulder. Place as marked by CO.

RECONSTRUCTION SUMMARY ROAD 1928

Mile Point	Pay Item	Quantity	Unit	Work Description
4.35	20253	2	Each	Fell 2 danger trees, left.
4.39	20253	1	Each	Fell 1 danger tree, left.
4.44	20253	1	Each	Fell 1 danger tree, left.
4.59	20253	1	Each	Fell 1 danger tree, right.
4.67	20419	50	Foot	Construct outlet ditch.
4.70				Disposal area, right.
4.74				Junction left, Road 1928 731.
5.07				Junction left, Road 1928 740.
5.22				Junction left, Road 1928 732.
5.35	20419	70	Foot	Construct outlet ditch.
5.45	20419	50	Foot	Construct outlet ditch.
5.53				Disposal area, right.
5.73				Disposal area, left.
5.82	20419	80	Foot	Construct outlet ditch.
5.83				Junction left, Road 1928 246.
5.87				OHV trail #201, right.
5.90				Junction right, Road 1928 240.
6.02				Junction left, Road 1928 236.
6.17				Junction right, Road 1928 702.
6.24	25101A	13	Cubic Yard*	Fourth Creek. Place class 4 riprap 20'L x 7'W x 2.5'D to construct headwall leading into pipe inlet and armor road shoulder. Place as marked by CO.
6.46	20253	1	Each	Fell 1 danger tree, right.
6.50	20419	100	Foot	Construct outlet ditch.
6.61				Disposal area, right.
6.68	20253	1	Each	Fell 1 danger tree, left.

RECONSTRUCTION SUMMARY ROAD 1928

Mile Point	Pay Item	Quantity	Unit	Work Description
6.96				Junction left, Road 1931.
6.97	20253	1	Each	Fell 1 danger tree, left.
7.21	20419	50	Foot	Construct outlet ditch.
7.26	20253	2	Each	Fell 2 danger trees, right.
7.32	20419	80	Foot	Construct outlet ditch.
7.42				End placing 4" aggregate lift. End roadside brushing. End roadway reconditioning.
7.62				End aggregate surface, begin pavement.
7.72				End Forest Service maintenance, begin county maintenance. End of project.

RECONSTRUCTION SUMMARY ROAD 1928 700

Mile Point	Pay Item	Quantity	Unit	Work Description
0.00				Beginning of project, Junction with Road 1928 (southern junction).
	23051	1.77	Mile	Begin roadside brushing.
	30359	1.77	Mile	Begin reconditioning of roadway. Grubbing & disposal of all vegetation & root masses within roadbed and in the ditch is required unless otherwise noted in the work description. Haul material from ditch reconditioning, slough and slide removal to designated disposal areas. Scatter all logs and woody debris from top of cutbank to the opposite road shoulder outside clearing limits. Scarify minimum 1" below the depth of all potholes, washboards or surface irregularities.
0.11	20253	1	Each	Fell 1 danger tree, right.
0.15	20253	1	Each	Fell 1 danger tree, right.
0.47				Junction right, Road 1928 710.
0.61	20358	1	Each	Remove existing CMP.
	60276A	36	Foot	Install 18" CMP.
	32203	19	Cubic Yard*	Place 8" crushed aggregate full depth for 15 feet centered over installed culvert with 15 foot tapers on each end and a 14' top width. Blend to adjacent road surfaces to provide a smooth transition.
	20419	50	Foot	Construct outlet ditch.
0.67	20419	80	Foot	Construct outlet ditch.
0.75				Disposal area, left.
0.84	20358	1	Each	Remove existing CMP.
	60276B	34	Foot	Install 30" CMP. Lower entire installation 0.5'.
	32203	12	Cubic Yard*	Place 8" crushed aggregate full depth for 15 feet centered over installed culvert with 15 foot tapers on each end and a 14' top width. Blend to adjacent road surfaces to provide a smooth transition.
1.23	20358	1	Each	Remove existing CMP.
	60276A	28	Foot	Install 18" CMP.
	32203	12	Cubic Yard*	Place 4" crushed aggregate full depth for 15 feet centered over installed culvert with 15 foot tapers on each end and a 12' top width. Blend to adjacent road surfaces to provide a smooth transition.
1.25				OHV trail #100.
1.28				Disposal area, left.
1.50	20419	20	Foot	Construct outlet ditch.
1.75				Junction right, Road 1928 708.

RECONSTRUCTION SUMMARY ROAD 1928 700				
Mile Point	Pay Item	Quantity	Unit	Work Description
1.77				Junction right, Road 1928 706. End of project.

SCHEDULE OF ITEMS

Timber Sale: Sidewalk Thin

Name: Tumble Creek

Project: 1928 Reconstruction

Length 7.72 Miles

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	SPECIFIED ROAD COST
15101	Mobilization	Lump Sum	All	\$18,384.00	\$18,384.00
15755	Erosion control & pollution prevention	Each	1	\$206.31	\$206.31
20253	Removal of individual trees, miscellaneous: disposal of tops & limbs f & logs f	Each	19	\$52.24	\$992.56
20358	Removal of corrugated metal pipe, disposal method (a)	Each	6	\$400.42	\$2,402.52
20419	Drainage excavation, type outlet ditch	Foot	1230	\$3.61	\$4,440.30
23051	Roadside brushing, disposal method 1	Mile	5.58	\$513.00	\$2,862.54
25101A	Placed riprap, class 4	Cubic Yard*	16	\$49.69	\$795.04
25101B	Placed riprap, class 5	Cubic Yard*	18	\$64.14	\$1,154.52
25104	Keyed riprap, class 5	Cubic Yard*	17	\$52.65	\$895.05
30359	Roadway reconditioning, compaction E	Mile	5.58	\$3,020.00	\$16,851.60
32203	Aggregate base, grading D, compaction method B	Cubic Yard*	6173	\$33.76	\$208,400.48
60276A	18-inch corrugated aluminized steel pipe, 0.064-inch thickness, method B	Foot	88	\$30.55	\$2,688.40
60276B	24-inch corrugated aluminized steel pipe, 0.079-inch thickness, method B	Foot	101	\$47.88	\$4,835.88
60276C	30-inch corrugated aluminized steel pipe, 0.079-inch thickness, method B	Foot	36	\$53.87	\$1,939.32
60791A	Repair existing culvert	Each	1	\$108.78	\$108.78
60791B	Repair existing culvert	Each	1	\$49.86	\$49.86
62509	Mulching, dry method	Lump Sum	All	\$917.40	\$917.40

* denotes contract quantities.

Total \$267,924.56

SCHEDULE OF ITEMS

Timber Sale: Sidewalk Thin

Project: 1928 700 Reconstruction

Length: 1.77 Miles

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	SPECIFIED ROAD COST
20253	Removal of individual trees, miscellaneous: disposal of tops & limbs f & logs f	Each	2	\$48.14	\$96.28
20358	Removal of corrugated metal pipe, disposal method (a)	Each	3	\$369.88	\$1,109.64
20419	Drainage excavation, type outlet ditch	Foot	150	\$4.43	\$664.50
23051	Roadside brushing, disposal method 1	Mile	1.77	\$576.00	\$1,019.52
30359	Roadway reconditioning, compaction E	Mile	1.77	\$1,836.00	\$3,249.72
32203	Aggregate base, grading D, compaction method B	Cubic Yard*	43	\$34.68	\$1,491.24
60276A	18-inch corrugated aluminized steel pipe, 0.064-inch thickness, method B	Foot	64	\$32.97	\$2,110.08
60276B	30-inch corrugated aluminized steel pipe, 0.079-inch thickness, method B	Foot	34	\$52.14	\$1,772.76

* denotes contract quantities.

Total \$11,513.74

SCHEDULE OF ITEMS

Timber Sale: Sidewalk Thin

Name: Tumble Creek

Project: 1928 Reconstruction

Length 7.72 Miles

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	SPECIFIED ROAD COST
15101	Mobilization	Lump Sum	All	\$18,384.00	\$18,384.00
15755	Erosion control & pollution prevention	Each	1	\$206.31	\$206.31
20253	Removal of individual trees, miscellaneous: disposal of tops & limbs f & logs f	Each	19	\$52.24	\$992.56
20358	Removal of corrugated metal pipe, disposal method (a)	Each	6	\$400.42	\$2,402.52
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60791B	Repair existing culvert	Each	1	\$49.86	\$49.86
62509	Mulching, dry method	Lump Sum	All	\$917.40	\$917.40

* denotes contract quantities.

Total \$267,924.56

SCHEDULE OF ITEMS

Timber Sale: Sidewalk Thin

Project: 1928 700 Reconstruction

Length: 1.77 Miles

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	SPECIFIED ROAD COST
20253	Removal of individual trees, miscellaneous: disposal of tops & limbs f & logs f	Each	2	\$48.14	\$96.28
20358	Removal of corrugated metal pipe, disposal method (a)	Each	3	\$369.88	\$1,109.64
20419	Drainage excavation, type outlet ditch	Foot	150	\$4.43	\$664.50
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32203	Aggregate base, grading D, compaction method B	Cubic Yard*	43	\$34.68	\$1,491.24
60276A	18-inch corrugated aluminized steel pipe, 0.064-inch thickness, method B	Foot	64	\$32.97	\$2,110.08
60276B	30-inch corrugated aluminized steel pipe, 0.079-inch thickness, method B	Foot	34	\$52.14	\$1,772.76

* denotes contract quantities.

Total \$11,513.74

Timber Sale Road
Maintenance Specifications
for the Sidewalk Thin Timber Sale

Road Name													
Road Number		1930701	1930	1928	19	1928709	1928707	1928718	1928706				
Termini (Miles)		0.87	1.81	0.92	14.50	0.06	0.88	0.20	2.66				
	Latest Revision Date												
Maintenance Specification	2003												
T-803	05/07	X	X	X	X	X	X	X	X				X
T-811	10/07		X										
T-813	05/07												
T-831	10/07	X	X			X	X	X	X				X
T-832	05/07	X	X			X	X	X	X				X
T-834	05/07	X	X			X	X	X	X				X
T-835	05/07												
T-838	05/07	X				X		X					X
T-839	05/07												
T-842	10/07		X										
T-851	05/07		X										
T-854	05/07	X	X			X		X					X
T-891	05/07		X										

Timber Sale Road
Maintenance Specifications
for the Sidewalk Thin Timber Sale

Road Name									
Road Number		1928700	1928						
Termini (Miles)		1.77	5.46						
	Latest Revision Date								
Maintenance Specification	2003								
T-803	05/07	X	X						
T-811	10/07	X							
T-813	05/07	X							
T-831	10/07	X							
T-832	05/07	X							
T-834	05/07	X							
T-835	05/07								
T-838	05/07								
T-839	05/07								
T-842	05/07	X							
T-851	05/07	X							
T-854	05/07	X							
T-891	05/07	X							

T-803 - SNOW REMOVAL (05/07)

803.01 Description

This Section provides for removal of snow from roads to facilitate logging operations and safe use.

803.02 Maintenance Requirements

- (1) Erect signs required by the Sign Plan in the SUPPLEMENTAL SPECIFICATIONS.
- (2) Perform work in a manner to preserve and protect roads and appurtenances, and prevent erosion damage to roads, streams, and other Forest values.
- (3) Do not undercut banks. Do not blade gravel or other surfacing material off the road.
- (4) Keep roadbed drainage ditches, drain dips, and culverts functional when needed during operations and upon completion of operations.
- (5) Control snow removal to identify the usable traveled way having roadbed support. Reshape over-width plowing as necessary to define the usable width.
- (6) Space, construct, and maintain drainage holes in the dike of snow or berm caused by snow removal operations. Place drain holes to obtain surface drainage without discharging on erodible fills.
- (7) Close roads to wheeled vehicles at times and in the manner specified in C(T)5.12 or the Road Rules document.
- (8) Upon seasonal completion of Purchaser's Operations, effectively block the road by a snow barricade, unless otherwise approved by the Contracting Officer.
- (9) Remove snow for either public access or project use as established in the SUPPLEMENTAL SPECIFICATIONS and meet the following requirements:
 - (a) Removal for Public Access (Method JU) - Remove snow from all of the traveled way, including turnouts, for safe and efficient use for both timber transportation and the public. Remove intruding windfalls, debris, or slough and slide material for the full width of the traveled way and

deposit out of drainage's at locations designated by the Contracting Officer.

(b) Removal for Project Use (Method TS) - Remove snow from all or part of the traveled way, including sufficient turnouts for safe and efficient use for timber transportation and to protect the road. Remove intruding windfalls, debris or slough and slide material and dispose of only as necessary to provide passage for timber transportation. Removed materials may be deposited off the traveled way or outside the traveled way at locations designated by the Contracting Officer.

(10) When directed by the Contracting Officer, replace in kind, within sixty (60) days after the start of Normal Operating Season, any surfacing material which has been bladed off the road, unless otherwise agreed. Contracting Officer will notify Purchaser in writing as to the cubic yard equivalent of bladed off material by the start of the normal operating season.

803.03 Equipment

Purchaser may use any type of equipment to remove snow, providing:

- a. Type or use of equipment is not restricted in C(T)5.12 or Road Rules document.
- b. Equipment is of the size and type commonly used to remove snow and will not cause damage to the road.
- c. The use of plows or dozers to remove snow requires written approval by the Contracting Officer. Equip plows or dozers with shoes or runners to keep the dozer blade a minimum of 2 inches above the road surface unless otherwise approved by the Contractor Officer.

803.04 Ice Control

Ice control may be performed by Purchaser when approved by the Contracting Officer in writing. Such approval will include ice control materials, application rates, and any specific requirements of use.

T-811 BLADING (10/07)

811.01 Description

This work consists of surface blading the traveled way to a condition that facilitates traffic and provides proper drainage. Blading includes shaping the

crown or slope of travel way, berms, and drainage dips in accordance with this specification. Compaction is required when shown on the ROAD LISTING.

811.02 Maintenance Requirements

A. Timing - Perform surface blading during the contract period as often as needed to provide conditions stated for the maintenance level of the road.

B. General

1. Blade and shape the existing traveled way and shoulders, including turnouts, to produce a surface which is uniform, consistent to grade, and crowned or cross-sloped as indicated by the character of the existing surface, unless otherwise shown in the ROAD LISTING, to at least $\frac{1}{2}$ inch per 1 foot of width, but not more than $\frac{3}{4}$ inch per 1 foot of width. Thoroughly loosen surfacing material to no less than 2 inches depth or the depth of potholes or corrugations. Scarification to facilitate cutting to the full depth of potholes or corrugations may be elected, but will be considered incidental to blading. Do not scarify to a depth that will cause contamination of the surfacing.

2. Apply water during blading when sufficient moisture is not present to prevent segregation. Supply, haul, and apply water in accordance with Section T-891.

3. Shape existing native rock or aggregate surfaced drainage dips to divert surface runoff to existing outlet devices, ditches, or discharge locations.

4. Establish a blading pattern which provides a uniform driving surface, retains the surfacing on the roadbed, and provides a thorough mixing of the materials within the completed surface width. Upon final blading, no disturbed rock shall protrude more than 2 inches above the adjacent surface unless otherwise provided in the contract. Remove and place outside the roadbed, material not meeting this dimension so as not to obstruct drainage ways or structures. This material may be scattered off the roadbed if there is free drainage.

5. Where DESIGNATED ON THE GROUND, included in the ROAD LISTING, SHOWN ON THE DRAWINGS or as ordered by the Contracting Officer invasive species of concern prevention practices shall be followed as listed below.

Invasive Species of Concern Prevention Practices

NA

C. Routine Blading

1. Conform to the dimensions SHOWN ON THE DRAWINGS or designated in the SUPPLEMENTAL SPECIFICATIONS upon completion of blading.
2. Shape roadbed width in excess of the dimensions shown only as needed to provide drainage away from the traveled way. Do not remove established grasses and other vegetation from the excess width except as incidental to providing drainage or unless otherwise provided in the contract.

D. Compaction Roads requiring compaction will be included in the ROAD LISTING. Unless Compaction Method B is designated in the ROAD LISTING, all traveled ways requiring compaction may be compacted by Method A. Compaction shall commence immediately following blading.

Compaction methods are:

Compaction Method A: Breaking track while operating equipment on the traveled way.

Compaction Method B: 7-10 ton pneumatic, steel, or equivalent vibratory roller, operated to cover the full width two (2) times.

E. Undercutting - Undercutting roadway back slope is not permitted.

F. Intersections

1. At intersections, blade the roadbeds of side roads which are not closed or restricted from vehicular use to ensure smooth transitions.
2. Signing, cross ditching in the road surface (traveled way), earth berms, or other devices placed to discourage or eliminate use by passenger cars, are field evidence of road closure or restriction. Roads listed for work under Sections T-835, T-836, T-838, or T-839 are considered restricted.

3. Side roads listed for work under this Section are not restricted.

G. Cleaning of Structures - Do not allow materials resulting from work under this Section to remain on or in structures, such as bridges, culverts, cattle guards, or drainage dips.

H. Berms - Maintain existing berms to the condition of adjacent segments. Do not create new berms.

I. Smooth Blading - Smooth blading may be used as an interim measure to remove loose surfacing material from the wheel paths, and store removed materials in a recoverable windrow, until blade processing as described in this section is feasible. Watering will not be required for smooth blading. Accomplish smooth blading without distorting the existing cross-slope or crown of the traveled way.

Move and store loose surfacing materials on the high side of super-elevated curves and sections with uniform inslope or outslope. In crowned sections, store the material on either or both sides as elected. Windrow and place stored materials to provide not less than 12 feet of smooth traveled way on one-lane segments, or 20 feet of smooth traveled way on two-lane segments, or segments with turnouts. Cut holes through windrows, which may collect water on the road, for drainage at least every 500 feet.

T-813 SURFACING (10/07)

813.01 Description

This work consists of placing surface aggregate as DESIGNATED ON THE GROUND, or as ordered by the Contracting Officer. It includes preparing the area, furnishing, hauling, and placing all necessary materials and other work necessary to blend with the adjacent road cross section.

813.02 Materials

Materials will be Government-furnished when stated in the supplemental specifications.

Materials furnished by the Purchaser shall conform to the gradation and quality requirements of Section 703 of the "Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects FP-03 U.S. Customary Units" and FS supplements to the FP-03.

All materials transported onto National Forest System land shall be free of invasive species of concern. Written documentation of methods used to determine the invasive species of concern free status of any and all materials furnished by the Purchaser shall be submitted to the Contracting Officer before transport of any materials onto National Forest System land.

The Contracting Officer shall have 5 days, excluding weekends and Federal holidays, to review the methods and inspect the materials after the required written documentation is provided by the Purchaser. After satisfactory review and inspection or after such 5 day period, the Purchaser may transport the material onto National Forest System land.

Material or methods appropriate for establishing invasive species of concern free status for the particular invasive species of concern are listed below.

Invasive Species of Concern and Acceptable Methods specific to this project:

Invasive Species of Concern			Acceptable Methods
<u>Potential Invaders</u>	<u>New Invaders</u>	<u>Established Infestations</u>	
<u>Leafy spurge</u>	<u>Spotted knapweed</u>	<u>Canada thistle</u>	
<u>Yellow starthistle</u>	<u>Diffuse knapweed</u>	<u>Bull thistle</u>	
<u>Distaff thistle</u>	<u>Yellow toadflax</u>	<u>Scotch broom</u>	
<u>Squarrose knapweed</u>	<u>Dalmatian toadflax</u>	<u>Tansy ragwort</u>	
<u>Gorse</u>	<u>Japanese knotweed</u>	<u>St. Johns-wort</u>	
<u>Orange hawkweed</u>	<u>Meadow knapweed</u>	<u>Foxglove</u>	
<u>French broom</u>	<u>Climbing nightshade</u>	<u>Oxeye daisy</u>	
<u>Garlic mustard</u>	<u>Field bindweed</u>		
<u>Himalayan knotweed</u>	<u>Evergreen blackberry*</u>		
<u>Milk thistle</u>	<u>Himalayan blackberry*</u>		
<u>Daphnia</u>	<u>False brome</u>		
	<u>Reed</u>		
	<u>canarygrass*</u>		
	<u>Sweetclover</u>		
	<u>Houndstongue</u>		

<p> <u>English ivy</u> <u>Butterfly bush</u> <u>Yellow</u> <u>hawkweed</u> <u>Purple</u> <u>loosestrife</u> <u>Everlasting</u> <u>peavine</u> <u>Vinca</u> <u>Evening</u> <u>primrose</u> <u>Bladder</u> <u>campion</u> <u>Creeping</u> <u>buttercup</u> <u>Creeping</u> <u>charlie</u> <u>Yellowflag iris</u> <u>Shinyleaf</u> <u>geranium</u> <u>Sulphur</u> <u>cinquefoil</u> <u>Herb robert</u> <u>Depford pink</u> <u>Burdock</u> <u>Feverfew</u> <u>Anise</u> <u>Fennel</u> </p> <p> * Species with a star may be considered either new or established weed infestations, depending on their densities. For example, blackberry at low elevations along river corridors are established, but single clumps at high elevations are newly invading. Reed canarygrass around reservoir fringes is established but clumps around alpine lakes are newly invading. </p>	
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813.03 Maintenance Requirements

- A. Thoroughly loosen the area to be surfaced to a minimum depth of 1 inch prior to placement of aggregate.
- B. Mixing and Placing

When scheduled coincidentally with work under Section T-811, and included in the SUPPLEMENTAL SPECIFICATIONS, mix surfacing and existing aggregate with water until a uniform mixture is obtained prior to final shaping and compaction.

Otherwise, spread the material on the prepared area in layers no more than 4 inches in depth. When more than one (1) layer is required, shape and compact each layer before the succeeding layer is placed. Upon completion, the surfacing shall reasonably conform to the adjacent cross section and provide smooth transitions in the road profile.

C. Compaction Methods

Compaction Method A: Breaking track while operating equipment on the traveled way.

Compaction Method B: 7-10 ton pneumatic, steel, or equivalent vibratory roller, operated to cover the full width two (2) times.

Either Method A or B may be used unless Method B is designated in the ROAD LISTING.

T-831 DITCH MAINTENANCE (10/07)

831.01 Description

This Section provides for routine maintenance of various types of ditches to provide a waterway which is unobstructed, as shown on the ROAD LISTING or DESIGNATED ON THE GROUND.

831.02 Maintenance Requirements

- A. Maintain ditches by removing rock, soil, wood, and other materials. Maintained ditches shall function to meet the intent of the original design.
- B. Undercutting backslopes during removal operations is not permitted.
- C. Suitable material up to 4 inches in greatest dimension removed from the ditches may be blended into existing native road surface and shoulder or placed in designated berm.
- D. Do not blend material from ditch cleaning operations into aggregate surfaced roads. Do not blade material across aggregate or bituminous surfaced roads, unless approved in writing by the Contracting Officer.

- E. Haul material in excess of 831.02 D or subject to 831.02 E to a designated waste area under Section T-832. Remove excess materials temporarily stored on the ditch slope or edge of the shoulder daily.
- F. Remove limbs and wood chunks in excess of 12 inches in length or 3 inches in diameter from ditches and place outside the roadway.
- G. Clean paved surfaces of all materials resulting from ditch maintenance work.

Shape lead-off ditches to drain away from the traveled way.

Where DESIGNATED ON THE GROUND, included in the ROAD LISTING, SHOWN ON THE DRAWINGS or as ordered by the Contracting Officer invasive species of concern prevention practices shall be followed as listed below.

Invasive Species of Concern Prevention Practices
NA

T-832 REMOVE AND END HAUL MATERIALS (05/07)

832.01 Description

Work consists of loading, hauling, and placing of slide, slough, or excess materials such as rock, soil, vegetation, and other materials to designated disposal sites.

832.02 Maintenance Requirements

- A. Remove, end haul, and dispose of excess materials generated by work under other Sections of this contract.
- B. Remove the slide and slough materials in the area extending approximately 6 feet vertically above the road surface and not more than 3 feet down slope from the roadbed. Dispose of material at designated sites as SHOWN ON THE DRAWINGS, identified in SUPPLEMENTAL SPECIFICATIONS, or as ordered by the Contracting Officer. Reshape the slope which generated the slide material as nearly as practical to its original condition by equipment operating from road surface. Reshaping of roadside ditches in slide area shall be in accordance with Section T-831.
- C. When approved by the Contracting Officer, fill slumps by compacting selected materials into roadway depressions. Compaction is by Method 2.

- D. Place all materials in disposal sites as specified in the SUPPLEMENTAL SPECIFICATIONS, as SHOWN ON THE DRAWINGS, or as ordered by the Contracting Officer.
1. Method 1 - Side Casting and End Dumping. Material may be placed by side casting and end dumping. Where materials include large rocks, provide a solid fill by working smaller pieces and fines into voids. Shape the finished surfaces to drain.
 2. Method 2 Layer Placement - Step or roughen surfaces on which materials are to be placed prior to placing any material. Place materials in approximately horizontal layers no more than 12 inches thick. Compact each layer by operating hauling and spreading equipment over the full width of each layer.
- E. Repair any damage to existing aggregate or pavement surfaces.

T-834 DRAINAGE STRUCTURE MAINTENANCE (10/07)

834.01 Description

This work consists of cleaning and reconditioning culverts and other drainage structures.

834.02 Maintenance Requirements

- A. Clean drainage structures, inlet structures, culverts, catch basins, and outlet channels specified in the SUPPLEMENTAL SPECIFICATIONS. Clean catch basins by removing the material within the area SHOWN ON THE DRAWINGS.
- B. Clean the transition from the ditch line to the catch basin a distance of 10 feet from the catch basin. Clean outlet channels and lead-off ditches a distance of 6 feet. Remove and place debris and vegetation so as to not enter the channel or ditch, or obstruct traffic. Haul debris and vegetation to a designated disposal area in accordance with Section T-832.
- C. Hydraulic flushing of drainage structures is not allowed unless provided for in the SUPPLEMENTAL SPECIFICATIONS.

- D. Cleaning and reconditioning are limited to the first 3 feet of inlet and outlet, determined along the top of the structure. Recondition culvert inlet and outlet by field methods such as jacking out or cutting away damaged metal which obstructs flow. Treat cut edges with a zinc rich coating, in accordance with AASHTO M 36M and ASTM A 849.
- E. Where DESIGNATED ON THE GROUND, included in the ROAD LISTING, SHOWN ON THE DRAWINGS or as ordered by the Contracting Officer invasive species of concern prevention practices shall be followed as listed below.

T-835 ROADWAY DRAINAGE MAINTENANCE (05/07)

835.01 Description

This work consists of providing post haul drainage on roads.

835.02 Maintenance Requirements

A. Drainage

1. Upon completion of work, shape the roadway to provide for the removal of surface water. The roadway need not be passable to vehicles. Repair and reinstall water bars, barriers or berms existing prior to the Purchaser's operation. Areas where water is ponded by existing centerline profile sags in through cuts may be left untreated.
2. Continuous blade shaping of the roadbed is not required under this specification.
3. Work to be done at staked locations shall be as indicated on the stake and/or stated in SUPPLEMENTAL SPECIFICATIONS:
4. Any of the following methods are acceptable for use at eroded or rutted locations:

Method A: Outsloping the roadbed at not less than ½ inch per yard of width.

Method B: Insloping the roadbed at not less than ½ inch per yard of width.

Method C: Water bar roadbed at locations staked on the ground and construct as SHOWN ON THE DRAWINGS or as included in SUPPLEMENTAL SPECIFICATIONS.

5. Drainage structures located in through fills and natural watercourses shall be fully functional without obstructions, including inlet and outlet channel within 20 feet of the structure.

6. Either clean culverts and other fabricated structures to provide drainage from road ditches and make the ditch functional or provide water bar(s) across the roadbed. Removed structures shall become Purchaser's property to be removed from National Forest System land. Remove and replace any purchaser-installed temporary drainage structures with a water bar.

B. Slides, Slumps and Slough

1. Slides and slough may be left in place, provided they do not potentially impound water or divert water from watercourses. As necessary, reshape the various surfaces to provide drainage.

2. Provide drainage to effectively decrease or eliminate the entry of surface water into slides, slumps, and roadbed surface cracks. Place berms, waterbars or ditches as needed to intercept and remove runoff water from the roadbed. Surface seal cracks by covering over with native soil materials to prevent additional water entry and compact with equipment tires.

C. Entrance Devices

Upon completion of work, replace entrance devices to effectively eliminate access by motorized vehicles having four (4) wheels and a width in excess of 50 inches.

D. Seeding

Seed and fertilize all disturbed areas in accordance with requirements set forth in Section T-841.

T-838 - MAINTENANCE FOR HIGH CLEARANCE VEHICLE USE (05/07)

838.01 Description

This work consists of making limited use roads passable for project use by Purchaser and providing drainage from the traveled way and roadbed.

838.02 Maintenance Requirements

A. Traveled Way

Purchaser may smooth or fill existing cross ditches and water bars and by agreement modify existing road junctions to enable vehicle access. Prior to beginning haul and resumption of haul after an extended stoppage:

1. Remove brush, fallen trees, rocks, and other debris from traveled way, including turnouts, turnarounds, and other locations that interfere with needed maintenance as follows:
 - a. No object extending over 4 inches above the road surface shall remain within the 12 feet usable traveled way and 10 feet turnout widths. Center the usable width on the roadbed or position away from the fill slope.
 - b. Cut and remove standing or down trees, logs, brush, and limbs from within the area described in 1 a. above. Remove encroaching limbs to a height of 14 feet above the traveled way surface. Scatter material not meeting utilization standards outside and below the roadbed on the fill side. Limb and remove timber which meets utilization standards or deck at agreed locations.
 - c. Place all removed materials away from drainages.
 - d. During use, maintain drainage structures, including dips, ditches and culverts in a useable condition.
2. Clean and recondition drainage facilities in accordance with: Section T-831 and T-834.

B. Slough and Slides

1. Slough and slides may be left in place, provided surface drainage is provided and at least 12 feet of width is available for vehicle passage.
2. Purchaser may reposition or ramp over slides and slough when the traveled way width is less than 12 feet providing the material is capable of supporting vehicles. Limit out slope to no more than six percent.
3. Reposition slough or slide materials on the roadbed which are not capable of supporting a vehicle to provide the 12 foot width. When directed by the Contracting Officer, slough or slide material will be removed under Section T-832.

C. Slumps and Washouts

1. Drain the roadbed immediately upgrade of slumps and longitudinal cracks to prevent water from entering slump area.
2. Slumps and longitudinal cracks at the edge of the roadbed shall not be considered a part of the usable width. Usable width may be reduced to 10 feet in the area of the slump.
3. Unless the Contractor Officer agrees to material being placed on slumps, ramp the slumps on both ends into undisturbed roadbed to provide at least 10 feet usable width. Use removed materials to guide vehicles to the ramp location or to aid in draining the area.
4. Washouts may be filled with suitable material.

D. Post haul

At the end of hauling or prior to entering into seasonal shutdowns or a period of extended inactivity:

1. Shape the traveled way and disturbed roadbed to provide functional drainage.
2. Reinstall removed cross ditches and water bars and provide any additional drainage structures necessary to offset changes caused through use and maintenance.
3. Leave roads useable for high clearance vehicles. Remove or reshape purchaser modifications at road junctions to leave the entrance as it was before use, or as agreed at the time of improvement.

T-839 MAINTENANCE FOR PROJECT USE (05/07)

839.01 Description

Work consists of providing minimum access required for Purchaser's Operations and associated Forest Service contract administration and preventing unacceptable resource or road damage.

839.02 Maintenance Requirements

A. Purchaser is authorized to perform the following maintenance to provide vehicle passage and drainage:

1. Removing log, earth, and rock barriers and/or improving existing road junctions to enable vehicle access as mutually agreed.
2. Smoothing or filling existing cross ditches and water bars.
3. Installing Purchaser-furnished culverts or other temporary drainage structures for shallow stream crossings as approved by the Contracting Officer.
4. Removing brush, fallen trees, rocks, and other materials from the traveled way and other locations that interfere with needed maintenance:
 - a. Place all removed materials away from drainages.
 - b. Limb and remove timber which meets utilization standards or deck at locations approved by the Contracting Officer. Scatter other woody materials, including limbs, off of and below the roadbed without creating concentrations.
5. Clean and recondition drainage structures in accordance with Section T-831 and Section T-834.
6. Reposition or ramp over slough and slides to provide adequate width of traveled way material.
7. Provide traveled way drainage above slumps and seal cracks in slump area. Ramp the slumps on both ends into undisturbed roadbed to provide usable width unless otherwise ordered by the Contracting Officer.

B. During use, the traveled way shall not channel water along the road. Prior to seasonal periods of anticipated rains and runoff, perform the following work:

1. Shape the traveled way and roadbed to drain.
2. Reinstall removed cross ditches and water bars and provide any additional drainage structures necessary to offset changes through use and maintenance.
3. Perform work outlined in 839.02 A (5), (6), and (7).

4. During periods of non use, replace original barrier or provide and maintain standard MUTCD, Type 3, barricades unless alternate type barriers are approved by the Contracting Officer.

839.03 Post Haul Requirements

- A. Upon completion of project use perform such work as needed to reasonably conform to the character of the existing road prior to Purchaser's maintenance for project use, unless otherwise provided in the SUPPLEMENTAL SPECIFICATIONS or the Road Listing. Work shall be in addition to requirements of 839.02 B and in accordance with 839.03 B and C.
- B. Roads designated in the Road Listing to be blocked shall conform to the requirements of Section T-835. Unless otherwise approved by the Contracting Officer, remove Purchaser-installed temporary structures from National Forest System land. Associated commercially-obtained materials shall remain the property of the Purchaser.
- C. Remove or reshape Purchaser improvements at road junctions, as approved by the Contracting Officer at the time of improvement

T-842 CUTTING ROADWAY VEGETATION (10/07)

842.01 Description

This work consists of cutting all vegetative growth, including trees and other vegetation less than 4 inches in diameter measured 6 inches above the ground, on roadway surfaces and roadsides.

842.02 Maintenance Requirements

A. General

1. Cut brush, trees, and other vegetation within each area treated to a maximum height of 6 inches above the ground surface or obstruction such as rocks or existing stumps. When work is performed under this Section, remove all limbs which extend into the

treated area, or over the roadbed, to a height of 14 feet above the traveled way surface elevation.

2. Items to remain will be DESIGNATED ON THE GROUND.
3. Work may be performed either by hand or mechanically unless specifically shown in the Road Listing. Self-propelled equipment is not allowed on cut and fill slopes or in ditches.
4. Correct damage to trunks of standing trees caused by Purchaser's operation either by treatment with a commercial nursery sealer or by removing the tree as directed by the Contracting Officer.
5. Limb trees within the cutting limits which are over 4 inches - measured at 6 inches above the ground in lieu of cutting.
6. When trees are limbed, cut limbs within 4 inches of the trunk.

D. Cutting Side Vegetation

1. Show the width of vegetation to be removed in the Road Listing.
2. Unless otherwise included in the SUPPLEMENTAL SPECIFICATIONS or DESIGNATED ON THE GROUND:
 - a. Commence work at the edge of the traveled way and proceed away from the road centerline.
 - b. Roads without a defined traveled way: The starting point for cutting will be marked on the ground or defined in the SUPPLEMENTAL SPECIFICATIONS.
3. The points for establishing cutting limits are as follows:
 - a. Fill and daylighted (wide roadbed) section cutting commences at the edge of the traveled way and proceeds away from the road center line.
 - b. Drainage ditched section cutting commences at the bottom of the existing ditch and proceeds away from the road center line. Cutting on ditch foreslopes is not required.
 - c. Unditched cut section cutting commences at the intersection of the cutbank and the roadbed and proceeds away from center line.

4. Provide transitions between differing increments of cutting width. Accomplish transitions in a taper length of not less than 50 feet nor more than 70 feet.

C. Debris

1. Materials resulting from the cutting operation in excess of 12 inches in length or 3 inches in diameter is not allowed to remain on roadway slopes within the treated area, in ditches, or within water courses.
2. Remove limbs and chunks in excess of 3 inches in any dimension from the traveled way and shoulders.
3. Materials may be scattered down slope from the roadbed, outside of the work area and drainages unless otherwise listed in D. Invasive Species of Concern.

T-851 LOGGING OUT (5/07)

851.01 Description

This work consists of removal of fallen trees and snags which encroach into the roadway or the 3 feet of roadside abutting the roadway on the cut side.

851.02 Maintenance Requirements

A. Limb and remove timber which meets Utilization Standards, or deck at locations designated by the Contracting Officer.

B. Limb other material cut into lengths for handling. Deck outside ditches and drainages, off the traveled way and turnouts or at staked locations. The clearing width is to the edge of the roadway for public use roads, except limited use roads. The clearing width for limited use roads is shown in the specifications.

C. Notwithstanding B(T)2.3, blowdown timber outside Sale Area required to be removed, which meets Utilization Standards in A(T)2, when designated by the Contracting Officer is Included Timber subject to requirements of B(T)2.2.

D. Do not leave woody debris and slash in excess of 12 inches in length or 3 inches in diameter, or concentrations which may plug ditches or culverts, in

ditches, drainage channels, or on backslopes, traveled way, shoulders, or turnouts.

T-854 – TREATMENT AND DISPOSAL OF DANGER TREES (5/07)

854.01 Description

This work consists of felling and disposal of designated live or dead danger trees sufficiently tall to reach roads used by the Purchaser. Any removal of logs is subject to prior agreement between the Contractor Officer and the Purchaser.

854.02 Requirements

A. Designation of danger trees.

Danger trees to be felled will be designated in advance by the Contracting Officer. Trees to be removed will be Marked.

B. Falling, bucking and treatment for disposal.

Use controlled felling to ensure the direction of fall and prevent damage to property, structures, roadway, residual trees, and traffic. Stump heights, measured on the side adjacent to the highest ground, must not exceed 12 inches or 1/3 of the stump diameter, whichever is greater. Higher stump heights are permitted when necessary for safety.

Felled snags and trees, which are not Marked for removal, will be left in a stable condition such that they will not roll or slide. Position logs away from standing trees so they will not roll, are not on top of one another, and are located out of roadway and drainage structures.

Fell, limb and, remove trees, which are Marked for removal, that equal or exceed the utilization standards as listed in the Timber Sale contract or SUPPLEMENTAT SPECIFICATIONS. Dispose of merchantable timber designated for removal in accordance with B/BT2.32 Construction Clearing, of the Timber Sale Contract, or as described in SUPPLEMENTAL SPECIFICATIONS.

C. Slash treatment.

Within the roadway, remove limbs, chunks, and debris in excess of 12 inches in length and 3 inches in diameter, and concentrations that may plug ditches or culverts, and water courses.

Dispose of slash by scattering outside the roadway limits without damaging trees, or improvements.

Large accumulations of slash may be ordered hauled under T-832.

T-891 WATER SUPPLY AND WATERING (5/07)

891.01 Description

This work consists of providing facilities to furnish an adequate water supply, hauling and applying water.

891.02 Materials

If the Purchaser elects to provide water from other than designated sources, the Purchaser is responsible to obtain the right to use the water, including any cost for royalties involved.

Suitable and adequate water sources available for Purchaser's use under this contract are designated as follows:

Map Key No.	Location Road	Location Milepost	Use Restrictions
Huckleberry Creek	1928	4.30	Screen hose per FSSS Supplemental 170.00

891.03 Equipment

A. Positive control of water application is required. Equipment shall provide uniform application of water without ponding or washing.

B. An air gap or positive anti-siphon device shall be provided between the water source and the vehicle being loaded if the vehicle has been used for other than water haul, if the source is a domestic potable water supply, or the water is used for tank mixing with any other materials.

C. The designated water sources may require some work prior to their use. Such work may include cleaning ponded areas, installing temporary weirs or sandbags, pipe repair, pump installation, or other items appropriate to the Purchaser's operations. Flowing streams may be temporarily sandbagged or a

weir placed to pond water, provided a minimum flow of 20 cu. ft/sec is maintained. Obtain approval from the Contracting Officer on improvements for sandbags or weirs prior to placement.