Schedule of Items Summary Sheet

CPP Timber Sale

Road Number	Cost without mobilization	Mobilization cost	Total road cost	C5.213 Engineering Services
1900	$ 172,278.77	$ 14,488.43	$ 186,767.20	
1900710	$ 2,316.06		$ 2,316.06	
1900749	$ 8,628.53		$ 8,628.53	
1934	$ 18,377.05		$ 18,377.05	
1934746	$ 5,377.10		$ 5,377.10	
TOTALS	$206,977.51	$ 14,488.43	$221,465.94	$ 33,276.00

UNITED STATES DEPARTMENT OF AGRICULTURE

FOREST SERVICE--REGION SIX
WILLAMETTE NATIONAL FOREST
MIDDLE FORK RANGER DISTRICT

Project located in Lane County, OR

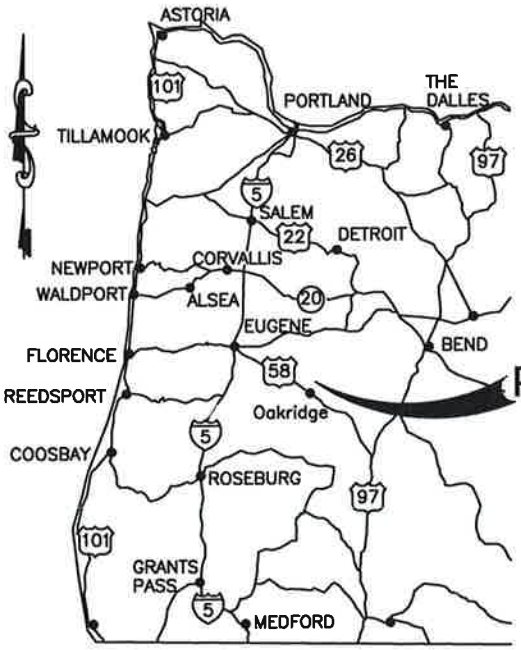
PLANS FOR PROPOSED

CPP TIMBER SALE

ROADS

ROAD NO.	NAME	LENGTH	TYPE OF WORK
1900	NO NAME	19.89 MILES	RECONSTRUCTION
1900710	NO NAME	0.30 MILES	RECONSTRUCTION
1900749	NO NAME	0.49 MILES	RECONSTRUCTION
1934	NO NAME	3.31 MILES	RECONSTRUCTION
1934746	NO NAME	0.44 MILES	RECONSTRUCTION

INDEX TO SHEETS	
NO.	DESCRIPTION
1	TITLE SHEET
2	VICINITY MAP
3	ESTIMATE OF QUANTITIES
4-5	DRAINAGE LISTING
6	ROADSIDE BRUSHING AND CLEARING AND GRUBBING TYPICAL
7	EXCAVATION AND BACKFILL TYPICAL
8	DRAINAGE CONSTRUCTION DETAILS
9	DRAINAGE CONSTRUCTION DETAILS
10	DRAINAGE TYPICAL
11	RECONSTRUCTION TYPICALS
12-17	SPECIFIED ROAD WORKLIST



PROJECT SITE

WESTERN OREGON
PROJECT LOCATION MAP

- 22 — STATE HIGHWAY
- 20 — FEDERAL HIGHWAY
- 5 — INTERSTATE HIGHWAY

WILLAMETTE NATIONAL FOREST

DESIGNED BY: John Piper	DATE: John W. Piper Jr. 6/4/15
REVIEWED BY: Mike Larman	DATE: Mike Larman 6/4/15
REVIEWED BY (DEVELOPMENT ENGINEER): Jeff Caswell	DATE: 6/9/15
RECOMMENDED BY (DISTRICT ENGINEER): Scott Ferre	DATE: 6/4/15
APPROVED BY (DISTRICT RANGER): Duane Bishop	DATE: June 9, 2015
APPROVED BY (FOREST ENGINEER): Darren Lemon	DATE: 6/16/15

CPP Timber Sale Vicinity Map

Rd. 1900
MP 0.00 - 19.89

Rd. 1900710 MP 0.00 - 0.30
Rd. 1900749 MP 0.00 - 0.49
Rd. 1934 MP 0.00 - 3.31
Rd. 1934746 MP 0.00 - 0.44

Legend
- CountyRoads_parkerThin
- Highway
- Project Roads
- Water Source
- Rock Source
- Disposal Site
- Township Range Line
- Section Line

N W E S

Same Location
Rd. 1900 MP 19.89

EOP 1900
MP 19.89

BOP 1934
MP 0.00

BOP 1900710
MP 0.00

EOP 1900710
MP 0.30

BOP 1900749
MP 0.00

EOP 1900749
MP 0.49

BOP 1934746
MP 0.00

EOP 1934746
MP 0.44

EOP 1934
MP 3.31

BOP 1900
MP 0.00

W3715
W3503
W3704
W3702
W3701
W3712
W4101

Trout Lake
Hemaloose Lake
Huckleberry Lake

Middle Fork Ranger Station

STATE HIGHWAY 58

T19SR02E
T19SR03E
T19SR04E
T19SR05E
T20SR02E
T20SR03E
T20SR04E
T20SR05E
T21SR02E
T21SR03E
T21SR04E
T21SR05E

~5.1 miles from Rd. 1900 MP 0.00 to Middle Fork Ranger District
~38 miles from Middle Fork Ranger Station to Eugene, OR via Hwy. 58

0 0.75 1.5 3 Miles

0 0.5 1 2 Miles

ESTIMATE OF QUANTITIES

NOTES:
1. All volume unit pay items are measured in-place. All reference to quantities of excavated volumes refer to original insitu (prior to excavation) volume.
2. See worklists and vicinity map for further description and location of work.
3. All units are measured as Actual Quantity unless denoted by an asterisk (*). If denoted by an asterisk (*), the quantity is measured as a Contract Quantity in accordance with FP-03 109.2.
4. Obtain aggregate and pit run from Sink Rock Quarry located on Forest Road 1900-749, T19 S, R 5 E, Sec 31 and Bullseye Quarry located on Forest Road 1942, T 19 S, R 5 E, Sec 34. Obtain riprap from White Rock Quarry located on Forest Road 1900-703, T 19 S, R 4 E, Sec 28.
5. All waste material from excavation shall be hauled to the approved disposal site. Any woody debris or slash shall be disposed of at the approved and designated disposal site.

NOTES: **Road 1900 only**
6. The submitted Traffic Control Plan shall include methods for accomodating public traffic and safety within the project until the project is accepted. Use flaggers at both ends of the work zone to control traffic. Each culvert replacement site must have a warning sign on both sides and cones on all four corners until the final placement of asphalt is finished.
7. Place warning signs to inform public of road construction work termini and rough road conditions at each access point into project area.
8. Initially place 12" of aggregate at culvert replacement and fill repair sites to accommodate traffic. Maintain leveling course at all times, matching road surface elevations until asphalt is placed. Remove 4" of aggregate in preparation for asphalt placement for a final depth of 8". Haul excess aggregate to area desingated by the CO for stockpiling. Maintenance of aggregate leveling course is indirect to 63501. Removal of aggregate is indirect to 40451.

Road No.	1900	1900710	1900749	1934	1934746
Project Length (Miles)	19.89	0.30	0.49	3.31	0.44
Work Type	Reconstruction	Reconstruction	Reconstruction	Reconstruction	Reconstruction

Pay Item	Description	Unit	1900	1900710	1900749	1934	1934746	Total Quantities	Remarks
15101	Mobilization	Lump Sum	ALL REQUIRED					ALL	Includes equipment washing, fire protection measures, maintenance for Sink Rock Quarry and White Rock Quarry access and all dewatering.
15755A	Erosion control and pollution prevention	Each	9	1	1	2		13	Dewatering
15755B	Erosion control and pollution prevention	Each	1					1	Dewatering M.P. 10.17.
20253	Removal of individual trees, miscellaneous; disposal of tops & limbs (f) & logs (f)	Each	35		4			39	
20301A	Removal of logs, disposal method (f)	Each	3					3	
20301B	Remove and replace road close barrier	Each	1					1	Disposal area.
20303	Removal of existing asphalt	Square Yard*	1078.9					1078.9	Disposal method (a).
20358	Removal of corrugated metal pipe, disposal method (a)	Each	22	1	3	6	2	34	
20401	Roadway Excavation, compaction method E, finishing method A	Cubic Yard*	29					29	Fill repair method B.
20404	Unclassified borrow, compaction method B, finishing method n/a	Cubic Yard*	80					80	Included for all pipe repalcements and fills for all specified roads. Borrow needed to finish fills that are short of material due to unsuitable material, oversteepened original fill slopes or any reason as indentified by CO. Includes excavation, haul and placement.
20419	Drainage excavation, type outlet ditch	Linear Foot	360		25	135		520	
20420A	Drainage excavation, type catchbasin	Each	3					3	
20420B	Drainage excavation, type pipe outlet	Each				1		1	
23051	Roadside brushing, disposal method (f)	Mile			0.49	3.31	0.44	4.24	
25101	Placed riprap, Class 4	Cubic Yard*	46		4	9		59	Government furnished at White Rock Quarry source, ripping/sorting required.
25104	Keyed riprap, Class 4	Cubic Yard*	17					17	Government furnished at White Rock Quarry source, ripping/sorting required.
30304	Road reconditioning, ditch	Mile*	1.00		0.49	1.19	0.44	3.12	Road 1900 as staked by CO.
32203	Aggregate base, grading A, compaction method B	Cubic Yard*	898		15	30	10	953	Commerical soure.
32222	Pit run maximum size 6", compaction method B	Cubic Yard*	172					172	Government furnished at Sink Rock Quarry or Bullseye Quarry source, ripping/sorting required.
40451	State of Oregon DOT HMAC, ½-inch dense graded, level II, asphalt cement PG 64-22	Ton	245.40					245.4	Commerical source. Seal the edges of the completed patch with emulcified asphalt, and blot with fine sand.
60276A	18-inch corrugated aluminized steel, .079-inch thickness, Method B	Linear Foot	386			68	86	540	Includes bands and necessary hardware.
60276B	24-inch corrugated aluminized steel, .079-inch thickness, Method B	Linear Foot	728	30	92	130		980	Includes bands, gaskets and necessary hardware.
60276C	42-inch corrugated aluminized steel, .109-inch thickness, Method B	Linear Foot	60					60	Includes bands, gaskets and necessary hardware.
60604A	Anchors for downdrain, 18-inch pipe	Each	4			2	2	8	
60604B	Anchors for downdrain, 24-inch pipe	Each	2			2		4	
60605A	Pipe elbow, hinged	Each	2			1	1	4	
60605B	Pipe elbow, hinged	Each	1			1		2	
60655A	18-inch full-circle aluminized steel outlet pipe	Linear Foot	40			20	20	80	
60655B	24-inch full-circle aluminized steel outlet pipe	Linear Foot	25			15		40	
60710	Recondition drainage structures, jack open culvert inlet	Each	1					1	Jack out pipe.
62509	Mulching, dry method	Lump Sum	ALL REQUIRED					ALL	Government furnished, straw. Included for all roads. Straw is stored at 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.
63501	Temporary Traffic Control	Lump Sum	ALL REQUIRED					ALL	Included for all roads. Two flaggers are required at all times on Road 1900.

LOCATION AND CULVERT LENGTHS								INSTALLATION DETAILS AND SPECIAL SECTIONS									RIPRAP REQUIREMENTS												Remarks
DESIGNED				AS BUILT				CORRUGATED METAL PIPE			SPILLWAYS			BEVELED DROP INLET			HEADWALL			SPLASH APRON			SLOPE PROTECTION			SUBGRADE REINFORCEMENT			
MP	STA (FT)	LENGTH (FT)	DEGREE SKEW and GRADE	MP	STA (FT)	SKEW	LENGTH (FT)	DIA (IN)	TH (IN)	TYPE	DOWN-DRAIN LENGTH (FT)	ANCHORS (EA)	ELBOW	DIA (IN)	LENGTH (FT)	"B" ANGLE	CY	CLASS	TYPE	CY	CLASS	TYPE	CY	CLASS	TYPE	CY	CLASS	TYPE	
Road 1900																													
0.29		50	#					18	0.079	3																			Remove existing culvert.
0.38		40	#					18	0.079	2	20	2	1																Remove existing culvert. Hinged elbow.
0.42		94	#					18	0.079	1																			Remove existing culvert.
2.52		64	#					24	0.079	3										5	4	D							Remove existing culvert. Requires Dewatering.
2.63		72	#					24	0.079	3																			Remove existing culvert.
3.18																													Construct 40 feet outlet ditch.
4.14		50	#					18	0.079	1																			Remove existing culvert. Dewater pipe.
4.42		40	#					24	0.079	3																			Remove existing culvert. Outlet ditch.
4.60		56	#					18	0.079	3																			Remove existing culvert.
5.06		40	#					24	0.079	3										5	4	D							Remove existing culvert.
5.38		54	#					24	0.079	3																			Remove existing culvert. Outlet ditch.
5.80		Ex																		5	4	D							
6.51		44	#					24	0.079	2	25	2	1																Remove existing culvert. Hinged elbow. Dewater pipe.
6.71		Ex						18	0.079	2	20	2	1																Hinged elbow. Cut 2 feet off existing pipe.
7.19		Ex																		4	4	D							
7.32		Ex																		4	4	D							
7.42		Ex																		5	4	D							
7.81																													Recondition catch basin.
8.83		Ex																		4	4	D							
9.54		46	#					24	0.079	1																			Remove existing culvert. Dewater pipe.
9.61																													Construct 25 feet outlet ditch.
9.76																													Recondition catch basin. Outlet ditch.
9.83		46	#					24	0.079	3																			Remove existing culvert.
10.17		60	#					42	0.109	1							8	4	M	9	4	M							Remove existing culvert. Keyed headwall. Keyed splash apron. Requires Dewatering. 12 Gage.
10.36																													Tark span inlet
10.49		50	#					24	0.079	1										5	4	D							Remove existing culvert. Lower installation 2.5 feet. Dewater pipe.
10.83																													Construct 25 feet outlet ditch.
11.05		Ex																		4	4	D							
11.65		50	#					24	0.079	3																			Remove existing culvert. Outlet ditch.
11.95		54	#					24	0.079	1																			Remove existing culvert. Lower outlet 1 foot.

NOTES:

1) Locations for culverts has been staked by the Forest Service.
2) Excavations for new culverts and culvert replacements are generally deeper than existing culvert installations. Excavation of solid rock may be required in some locations.
3) Unless shown otherwise, where cover heights exceed 11-feet, culverts shall be cambered an amount equal to 0.5% of the culvert length.
4) Riprap shall be placed to the minimum dimensions shown on typical section drawings.
5) Riprap type abbreviations: D - Dumped, H - Hand Placed, M - Machine Placed or keyed.
6) Refer to Sheets 06 - 09 for typical culvert installation and construction details.
7) Ex = Existing culvert, not to be replaced.
8) # = skew and grade is same as replaced culvert.

U.S. DEPARTMENT OF AGRICULTURE FOREST SERVICE WILLAMETTE NATIONAL FOREST THE PACIFIC NORTHWEST REGION	CPP TIMBER SALE DRAINAGE LIST	SHEET 04 OF 17

LOCATION AND CULVERT LENGTHS								INSTALLATION DETAILS AND SPECIAL SECTIONS									RIPRAP REQUIREMENTS												Remarks
DESIGNED				AS BUILT				CORRUGATED METAL PIPE			SPILLWAYS			BEVELED DROP INLET			HEADWALL			SPLASH APRON			SLOPE PROTECTION			SUBGRADE REINFORCEMENT			
MP	STA (FT)	LENGTH (FT)	DEGREE SKEW and GRADE	MP	STA (FT)	SKEW	LENGTH (FT)	DIA (IN)	TH (IN)	TYPE	DOWN DRAIN LENGTH (FT)	ANCHORS (EA)	ELBOW	DIA (IN)	LENGTH (FT)	"B" ANGLE	CY	CLASS	TYPE	CY	CLASS	TYPE	CY	CLASS	TYPE	CY	CLASS	TYPE	
Road 1900																													
12.07		50	"same					24	0.079	3																			Remove existing culvert. Lower outlet 1 foot.
12.13		82	"same					24	0.079	1																			Remove existing culvert. Dewater pipe.
12.87		48	"same					18	0.079	3																			Remove existing culvert
13.18																													Construct 15 feet outlet ditch.
13.49																													Construct 50 feet outlet ditch. Recondition catch basin.
13.62		36	"same					24	0.079	1										5	4	D							Remove existing culvert. Lower installation 3 feet. Dewater pipe.
14.57		48	"same					18	0.079	3																			Remove existing culvert
Road 1900710																													
0.30		30	"same					24	0.079	1																			Remove existing culvert
Road 1900749																													
0.23																													Construct 25 feet outlet ditch.
0.27		26	"same					24	0.079	3							4	4	M										Remove existing culvert.
0.33		36	"same					24	0.079	1																			Remove existing culvert. Dewater pipe.
0.46		30	"same					24	0.079	1																			Remove existing culvert
Road 1934																													
0.21																													Clean outlet
0.42		38	"same					24	0.079	3																			Remove existing culvert
0.91		28	"same					18	0.079	2	20	2	1																Remove existing culvert. Hinged elbow.
1.01		34	"same					24	0.079	1																			Remove existing culvert
1.09		30	"same					24	0.079	2	15	2	1																Remove existing culvert. Hinged elbow.
1.91		28	"same					24	0.079	1							4	4	D	5	4	D							Remove existing culvert. White Rock Quarry source.
2.32		40	"same					18	0.079	3																			Remove existing culvert
Road 1934746																													
0.35		48	"same					18	0.079	3																			Remove existing culvert
0.44		38	"same					18	0.079	2	20	2	1																Remove existing culvert. Hinged elbow.

NOTES:

1) **Locations for culverts has been** staked by the Forest Service.
2) Excavations for new culverts and culvert replacements are generally deeper than existing culvert installations. Excavation of solid rock may be required in some locations.
3) Unless shown otherwise, where cover heights exceed 11-feet, culverts shall be cambered an amount equal to 0.5% of the culvert length.
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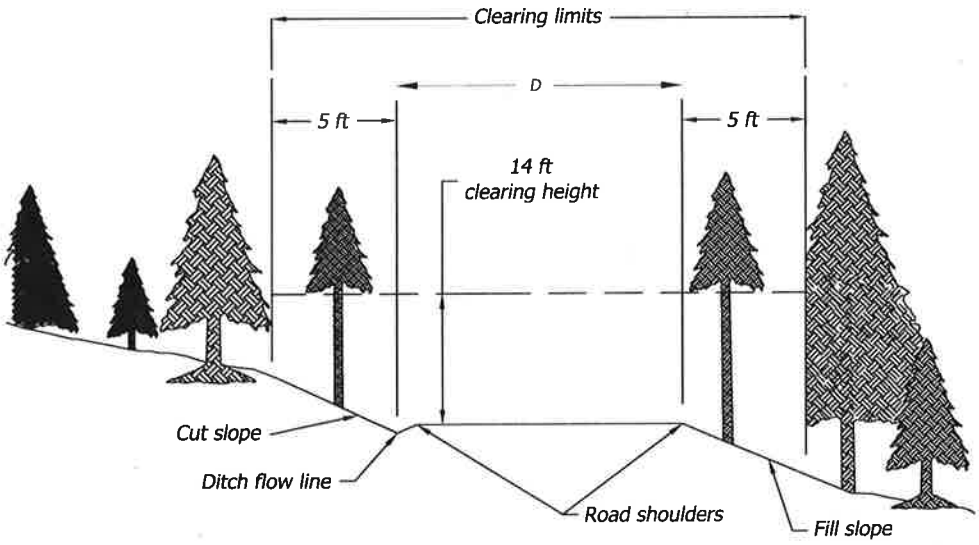
6) Refer to Sheets 06 - 09 for typical culvert installation and construction details.
7) Ex = Existing culvert, not to be replaced.
8) # = skew is same as replaced culvert.

U.S. DEPARTMENT OF AGRICULTURE FOREST SERVICE WILLAMETTE NATIONAL FOREST THE PACIFIC NORTHWEST REGION	CPP TIMBER SALE DRAINAGE LIST	SHEET 05 OF 17



NOTES:

1. Remove trees outside of "D" up to 8 inches in diameter (measured at 4.5 ft above the ground on the downhill side) and all vegetation within the clearing limits.
2. Cut all vegetation within the clearing limits to a maximum height of 6 inches above the ground surfaces.
3. Grub all trees and stumps within "D" above. Deck logs at designated locations by the Contracting Officer and scatter tops, limbs, and stumps outside the clearing limits.
4. Drawings not to scale.

CPP TIMBER SALE

ROADSIDE BRUSHING AND CLEARING AND GRUBBING TYPICAL

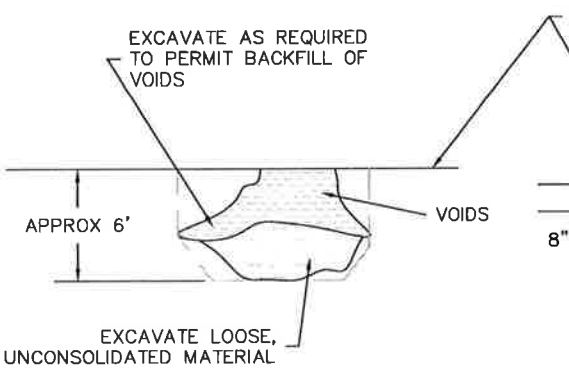
PACIFIC NORTHWEST REGION

U.S.D.A FOREST SERVICE

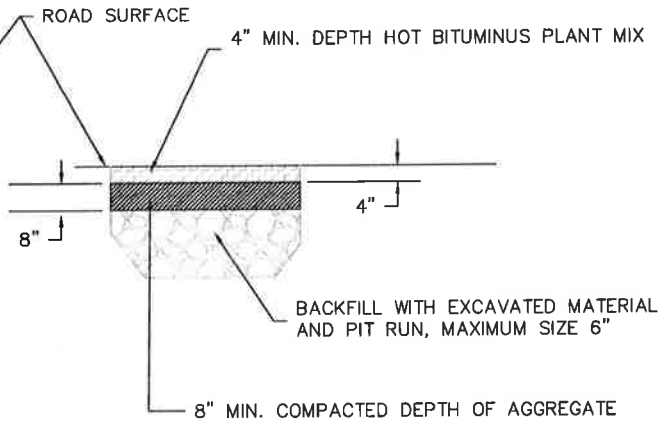
FOREST SERVICE U.S. DEPARTMENT OF AGRICULTURE

SHEET NUMBER	TOTAL SHEETS
6	17

EXCAVATION TYPICAL
NOT TO SCALE



BACKFILL TYPICAL
NOT TO SCALE



BACKFILL NOTES

1. Backfill with excavated material and pit run material, maximum size 6"
2. Place the material in layers that, when compacted, do not exceed 12" in thickness
3. Compact each layer according to FP-03 subsection 209.11, Compaction Method B
4. Retain 1-1/2" material from excavation and place as surfacing, 6 in. thickness. If suitable material is not present, use commercial source, in accordance with Forest Service Supplemental Specification 322 – Minor Aggregate Courses

CPP TIMBER SALE

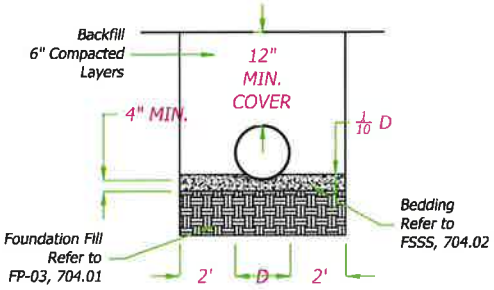
EXCAVATION AND BACKFILL TYPICAL

PACIFIC NORTHWEST REGION

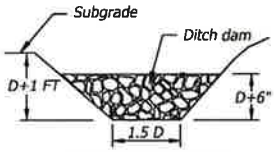
U.S.D.A FOREST SERVICE

SHEET NUMBER	TOTAL SHEETS
7	17

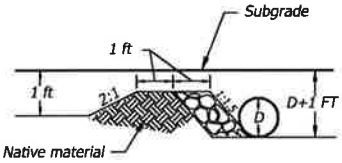
CULVERT BEDDING & BACKFILL TYP.



RIPRAP DITCH DAM

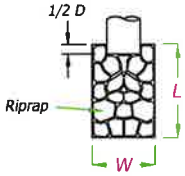


CATCH BASIN ELEVATION

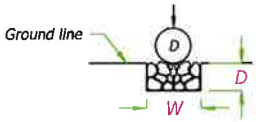


X-SECTION OF DITCH DAM

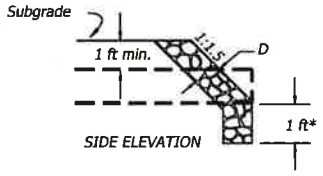
SPLASH APRON PLAN VIEW



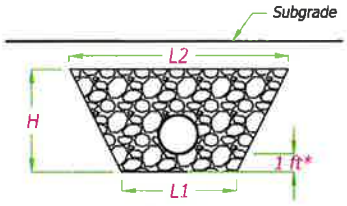
SPLASH APRON ELEV. VIEW



RIPRAP HEADWALL



SIDE ELEVATION



FRONT ELEVATION

* For culverts over 24" in diameter otherwise 0 ft.

CPP TIMBER SALE

DRAINAGE CONSTRUCTION DETAILS

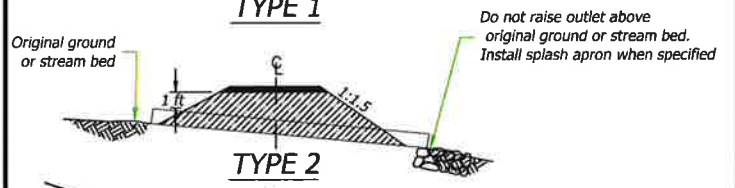
PACIFIC NORTHWEST REGION

U.S.D.A FOREST SERVICE

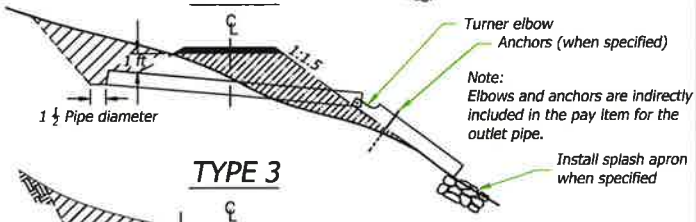
SHEET NUMBER	TOTAL SHEETS
8	17

CULVERT TYPES

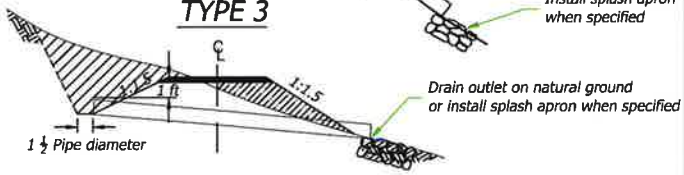
TYPE 1



TYPE 2

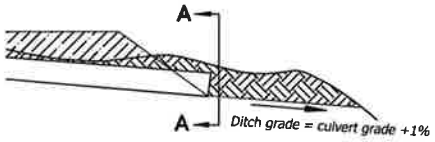


TYPE 3



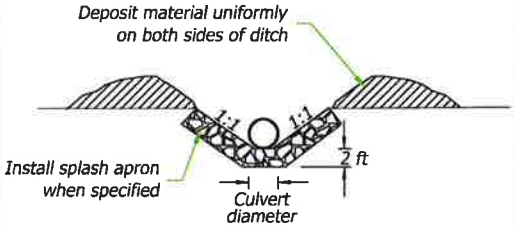
Some installations of culverts may require additional excavation below grade line.

OUTLET DITCH



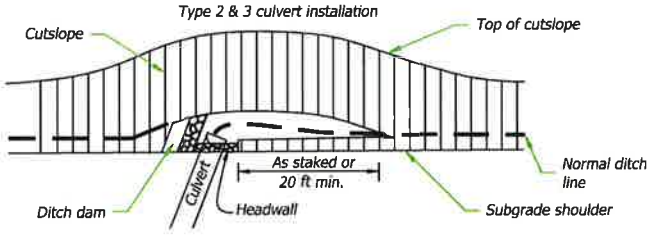
Note: Seed ditch and berm when specified

OUTLET DITCH SECTION A-A

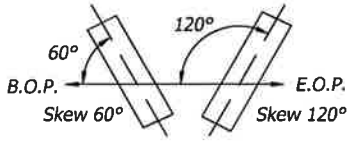


CATCH BASIN DETAIL

PLAN VIEW
Type 2 & 3 culvert installation



SKEW DIAGRAM



Drawings not to scale

CPP TIMBER SALE

DRAINAGE CONSTRUCTION DETAILS

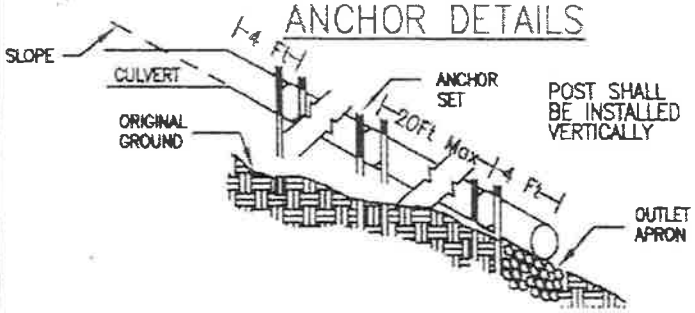
PACIFIC NORTHWEST REGION

U.S.D.A FOREST SERVICE

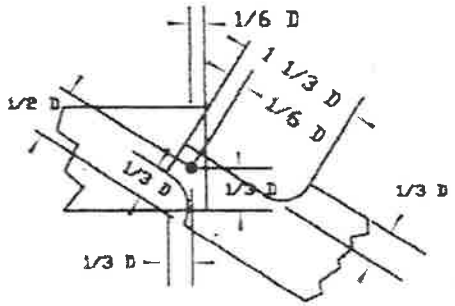
FOREST SERVICE U S DEPARTMENT OF AGRICULTURE

SHEET NUMBER	TOTAL SHEETS
9	17

ANCHOR DETAILS

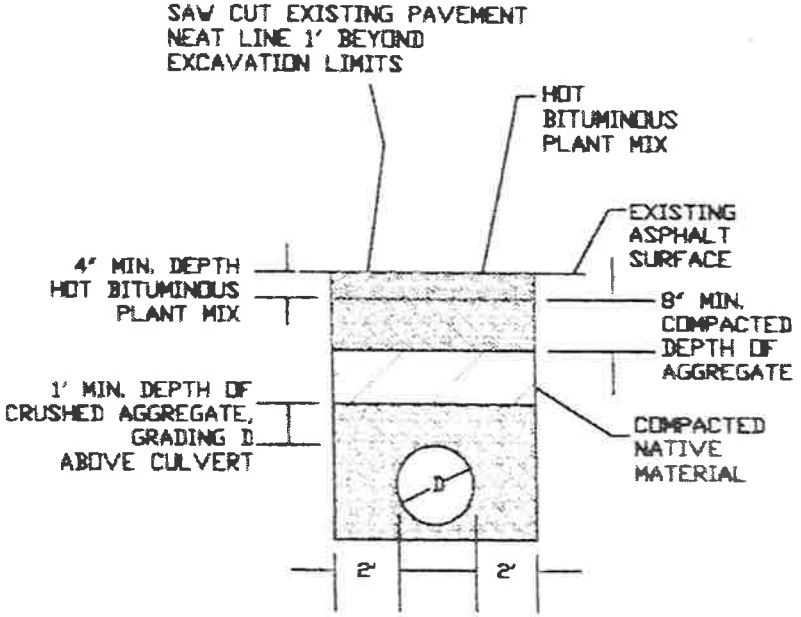


HINGED ELBOW

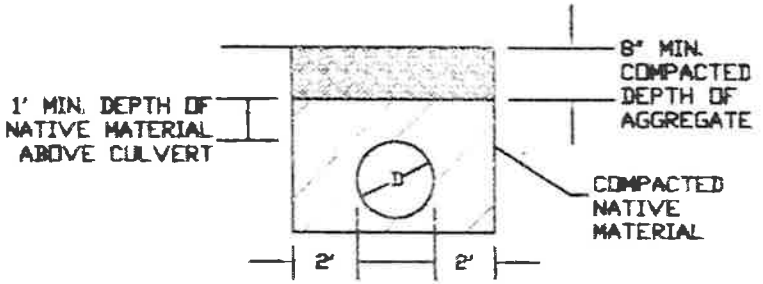


DIMENSIONS SHOWN ARE FRACTIONS OF THE CULVERT DIAMETER.

NOTES:
ANCHOR SETS CONSIST OF TWO 6 FT. STEEL FENCE POSTS (AASHTO M 281) AND NO. 9 GALVANIZED WIRE. WRAP WIRE TO ENCOMPASS THE ENTIRE CIRCUMFERENCE OF THE PIPE 3 TIMES.



ROAD 1900 CULVERT INSTALLATION DETAIL



ROAD 1900-749, 1934 AND 1934-746 CULVERT INSTALLATION DETAIL

CPP TIMBER SALE

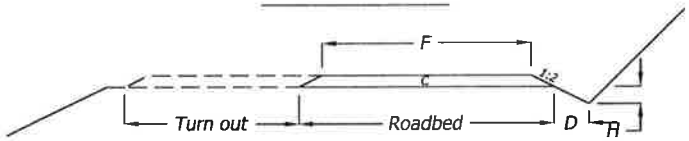
DRAINAGE TYPICAL

PACIFIC NORTHWEST REGION

U.S.D.A FOREST SERVICE

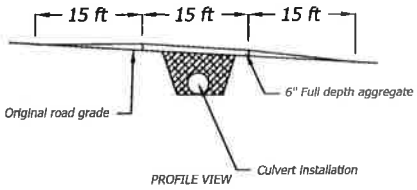
SHEET NUMBER	TOTAL SHEETS
10	17

TYPICAL SECTION



PLAN VIEW

CULVERT SURFACE ROCK
REPLACEMENT FOR AGGREGATE ROADS ONLY



PROFILE VIEW

Note: Top width dimension is 12 ft unless noted otherwise

ROAD NUMBER	BEGINNING MILE POST	ENDING MILE POST	CONSTRUCTION TOLERANCE	OUTSLOPED INSLOPED CROWNED	ROADBED WIDTH (FT)	DITCH DIMENSIONIS (FT)		PAVEMENT STRUCTURE		
								TRAVELED WAY WIDTH (FT)	COMPACTED DEPTH (IN)	SLOPE RATIO AGG
				%		D	H	F	C	V:H
1934	0.00	3.31	D	2 C	14*	2	1	12*	6	1V:2H
1934746	0.00	0.44	D	2 C	14*	2	1	12*	6	1V:2H

* Widths varies. Reconstruct roadbed to match existing conditions.

Drawings not to scale.

CPP TIMBER SALE

RECONSTRUCTION TYPICALS

PACIFIC NORTHWEST REGION

U.S.D.A FOREST SERVICE

FOREST SERVICE U.S. DEPARTMENT OF AGRICULTURE

SHEET NUMBER	TOTAL SHEETS
11	17

MP	SPECIFIED ROAD WORKLIST- ROAD 1900	PAY ITEM	QUANTITY
0.00	Junction road 1900 and West Oak Road. **Begin work this road.**		
0.18	Junction with road right.		
0.22	Junction with road to landing, right.		
0.29	Remove existing culvert and replace with a new 18" CMP. Suitable material from existing excavation may be used as backfill material. Cut and remove existing asphalt. Place 8-inch compacted depth of crushed aggregate base (see Drainage Typical sheet 10). Place 4-inch depth of hot asphalt concrete to match existing pavement width. Haul excavated asphalt off Forest Service lands. Any unsuitable backfill material, woody debris or slash from excavation will be hauled (indirectly paid by Item 60276A) to approved disposal sites. Construct 30-feet outlet ditch.	20303 20358 20419 32203 40451 60276A	43.3 SY* 1 EA 30 LF 33 CY* 9.90 TON 50 LF
0.38	Remove existing culvert and replace with a new 18" CMP, with 18-inch full-circle aluminized steel outlet pipe by 20-feet down pipe. Cut and remove existing asphalt. Place 8-inch compacted depth of crushed aggregate base (see Drainage Typical sheet 10). Place 4-inch depth of hot asphalt concrete to match existing pavement width. Suitable material from existing excavation may be used as backfill material. Haul excavated asphalt off Forest Service lands. Any unsuitable backfill material, woody debris or slash from excavation will be hauled (indirectly paid by Item 60276A) to approved disposal sites.	20303 20358 32203 40451 60276A 60604A 60605A 60655A	33.3 SY* 1 EA 26 CY* 7.60 TON 40 LF 2 EA 1 EA 20 LF
0.42	Remove existing culvert and replace with a new 18" CMP. Leave new culvert shotgunned. Suitable material from existing excavation may be used as backfill material. Dewater site. Cut and remove existing asphalt. Place 8-inch compacted depth of crushed aggregate base (see Drainage Typical sheet 10). Place 4-inch depth of hot asphalt concrete to match existing pavement width. Haul excavated asphalt off Forest Service lands. Any unsuitable backfill material, woody debris or slash from excavation will be hauled (indirectly paid by Item 60276A) to approved disposal sites. Remove tree (indirectly paid by Item 60276A). Scatter top, limbs, and stump. Deck log where staked by Forest Service.	15755A 20303 20358 32203 40451 60276A	1 EA 53.3 SY* 1 EA 58 CY* 12.10 TON 94 LF
0.64	Remove log from cutslope.	20301A	1 EA
0.72	Junction with spur 010, left.		
0.83	Junction with spur 011, left.		
0.93	Junction with spur 010, left.		
0.94	Junction with spur 201, right.		
1.00	Junction with spur 201, right.		
1.59	Junction with spur 050, right.		
2.18	Remove log from cutslope.	20301A	1 EA
2.52	Remove existing culvert and replace with a new 24" CMP. Suitable material from existing excavation may be used as backfill material. Dewater site. Cut and remove existing asphalt. Place 12-inch compacted depth of pit run material. Place 8-inch compacted depth of crushed aggregate base (see Drainage Typical sheet 10). Place 4-inch depth of hot asphalt concrete to match existing pavement width. Haul excavated asphalt off Forest Service lands. Any unsuitable backfill material, woody debris or slash from excavation will be hauled (indirectly paid by Item 60276B) to approved disposal sites. Remove one tree (indirectly paid by Item 60276B). Scatter top, limbs, and stump. Deck log where approved by Forest Service. Install splash apron, class 4 , 8'L X 8.5'W X 2'D.	15755A 20303 20358 25101 32203 32222 40451 60276B	1 EA 71.5 SY* 1 EA 5 CY* 53 CY* 24 CY* 16.30 TON 64 LF
2.63	Remove existing culvert and replace with a new 24" CMP. Suitable material from existing excavation may be used as backfill material. Cut and remove existing asphalt. Place 12-inch compacted depth of pit run material. Place 8-inch compacted depth of crushed aggregate base (see Drainage Typical sheet 10). Place 4-inch depth of hot asphalt concrete to match existing pavement width. Haul excavated asphalt off Forest Service lands. Any unsuitable backfill material, woody debris or slash from excavation will be hauled (indirectly paid by Item 60276B) to approved disposal sites. Remove trees (indirectly paid by Item 60276B). Scatter tops, limbs, and stumps. Deck logs where staked by Forest Service.	20303 20358 32203 32222 40451 60276B	93.5 SY* 1 EA 63 CY* 32 CY* 21.30 TON 72 LF
2.92	Junction with road 1910, left.		
3.15	Junction with spur road, right.		
3.18	Fall 1 danger tree, left. Construct 40-feet outlet ditch.	20253 20419	1 EA 40 LF
3.92	Fall 1 danger tree, left.	20253	1 EA
4.14	Remove existing culvert and replace with a new 18" CMP. Suitable material from existing excavation may be used as backfill material. Dewater site. Cut and remove existing asphalt. Place 8-inch compacted depth of crushed aggregate base (see Drainage Typical sheet 10). Place 4-inch depth of hot asphalt concrete to match existing pavement width. Haul excavated asphalt off Forest Service lands. Any unsuitable backfill material, woody debris or slash from excavation will be hauled (indirectly paid by Item 60276A) to approved disposal sites. Remove tree (indirectly paid by Item 60276A). Scatter top, limbs, and stump. Deck log where staked by Forest Service.	15755A 20303 20358 32203 40451 60276A	1 EA 34.5 SY* 1 EA 31 CY* 7.80 TON 50 LF
4.19	Fall 5 danger trees, left.	20253	5 EA
4.21	Fall 1 danger tree, right.	20253	1 EA

MP	SPECIFIED ROAD WORKLIST- ROAD 1900 Continued	PAY ITEM	QUANTITY
4.22	Junction with spur road, right.		
4.28	Fall 1 danger tree, right.	20253	1 EA
4.40	Fall 1 danger tree, left.	20253	1 EA
4.42	Remove existing culvert and replace with a new 24" CMP. Suitable material from existing excavation may be used as backfill material. Cut and remove existing asphalt. Place 8-inch compacted depth of crushed aggregate base (see Drainage Typical sheet 10). Place 4-inch depth of hot asphalt concrete to match existing pavement width. Haul excavated asphalt off Forest Service lands. Any unsuitable backfill material, woody debris or slash from excavation will be hauled (indirectly paid by Item 60276B) to approved disposal sites. Construct 50-feet outlet ditch.	20303 20358 20419 32203 40451 60276B	24.9 SY* 1 EA 50 LF 28 CY* 5.70 TON 40 LF
4.60	Remove existing culvert and replace with a new 18" CMP. Suitable material from existing excavation may be used as backfill material. Cut and remove existing asphalt. Place 8-inch compacted depth of crushed aggregate base (see Drainage Typical sheet 10). Place 4-inch depth of hot asphalt concrete to match existing pavement width. Haul excavated asphalt off Forest Service lands. Any unsuitable backfill material, woody debris or slash from excavation will be hauled (indirectly paid by Item 60276A) to approved disposal sites.	20303 20358 32203 40451 60276A	42.2 SY* 1 EA 36 CY* 9.60 TON 56 LF
4.61	Junction with road 1912, left.		
4.65	Fall 1 danger tree, right.	20253	1 EA
4.97	Remove log from cutslope.	20301A	1 EA
5.06	Fall 1 danger tree, right. Remove existing culvert and replace with a new 24" CMP. Suitable material from existing excavation may be used as backfill material. Cut and remove existing asphalt. Place 8-inch compacted depth of crushed aggregate base (see Drainage Typical sheet 10). Place 4-inch depth of hot asphalt concrete to match existing pavement width. Haul excavated asphalt off Forest Service lands. Any unsuitable backfill material, woody debris or slash from excavation will be hauled (indirectly paid by Item 60276B) to approved disposal sites. Install splash apron, class 4 , 8'L X 8.5'W X 2'D.	20253 20303 20358 25101 32203 40451 60276B	1 EA 39 SY* 1 EA 5 CY* 31 CY* 8.90 TON 40 LF
5.38	Fall 1 danger tree, right. Remove existing culvert and replace with a new 24" CMP. Shift inlet 4-feet toward road. Suitable material from existing excavation may be used as backfill material. Cut and remove existing asphalt. Place 8-inch compacted depth of crushed aggregate base (see Drainage Typical sheet 10). Place 4-inch depth of hot asphalt concrete to match existing pavement width. Haul excavated asphalt off Forest Service lands. Any unsuitable backfill material, woody debris or slash from excavation will be hauled (indirectly paid by Item 60276B) to approved disposal sites. Construct 25-feet outlet ditch.	20253 20303 20358 20419 32203 40451 60276B	1 EA 40.5 SY* 1 EA 25 LF 40 CY* 9.20 TON 54 LF
5.80	Install splash apron, class 4 , 8'L X 8.5'W X 2'D.	25101	5 CY*
6.24	Junction with spur road, left.		
6.26	Junction with spur road, right.		
6.38	Fall 1 danger tree, left.	20253	1 EA
6.48	Fall 1 danger tree, right.	20253	1 EA
6.51	Remove existing culvert and replace with a new 24" CMP, with 24-inch full-circle aluminized steel outlet pipe by 25-feet down pipe. Dewater site. Cut and remove existing asphalt. Place 8-inch compacted depth of crushed aggregate base (see Drainage Typical sheet 10). Place 4-inch depth of hot asphalt concrete to match existing pavement width. Suitable material from existing excavation may be used as backfill material. Haul excavated asphalt off Forest Service lands. Any unsuitable backfill material, woody debris or slash from excavation will be hauled (indirectly paid by Item 60276B) to approved disposal sites.	15755A 20303 20358 32203 40451 60276B 60604B 60605B 60655B	1 EA 40.5 SY* 1 EA 34 CY* 9.20 TON 44 LF 2 EA 1 EA 25 LF
6.60	Fall 1 danger tree, right.	20253	1 EA
6.71	Cut off 2-feet from pipe outlet (indirectly paid by Item 60655A). Install 18-inch full-circle aluminized steel outlet pipe by 20-feet down pipe. Remove tree (indirectly paid by Item 60655A). Scatter top, limbs, and stump. Deck log where staked by Forest Service.	60604A 60605A 60655A	2 EA 1 EA 20 LF
7.19	Install splash apron, class 4 , 6'L X 8'W X 2'D.	25101	4 CY*
7.32	Install splash apron, class 4 , 6'L X 8'W X 2'D.	25101	4 CY*
7.42	Install splash apron, class 4 , 8'L X 8.5'W X 2'D.	25101	5 CY*
7.52	Fall 1 danger tree, right.	20253	1 EA
7.81	Clean catchbasin.	20420A	1 EA
8.62	Junction with Road 1919, left.		
8.83	Install splash apron, class 4 , 6'L X 8'W X 2'D.	25101	4 CY*
9.31	Junction with Road 1920, left.		

MP	SPECIFIED ROAD WORKLIST- ROAD 1900 Continued	PAY ITEM	QUANTITY
9.45	Junction with spur road, left.		
9.54	Remove existing culvert and replace with a new 24" CMP. Suitable material from existing excavation may be used as backfill material. Dewater site. Cut and remove existing asphalt. Place 8-inch compacted depth of crushed aggregate base (see Drainage Typical sheet 10). Place 4-inch depth of hot asphalt concrete to match existing pavement width. Haul excavated asphalt off Forest Service lands. Any unsuitable backfill material, woody debris or slash from excavation will be hauled (indirectly paid by Item 60276B) to approved disposal sites.	15755A 20303 20358 32203 40451 60276B	1 EA 40.5 SY* 1 EA 35 CY* 9.20 TON 46 LF
9.55	Fall 1 danger tree, right.	20253	1 EA
9.61	Construct 25-feet outlet ditch.	20419	25 LF
9.76	Clean inlet. Construct 25-feet outlet ditch.	20419 20420A	25 LF 1 EA
9.83	Remove existing culvert and replace with a new 24" CMP. Suitable material from existing excavation may be used as backfill material. Cut and remove existing asphalt. Place 8-inch compacted depth of crushed aggregate base (see Drainage Typical sheet 10). Place 4-inch depth of hot asphalt concrete to match existing pavement width. Haul excavated asphalt off Forest Service lands. Any unsuitable backfill material, woody debris or slash from excavation will be hauled (indirectly paid by Item 60276B) to approved disposal sites.	20303 20358 32203 40451 60276B	43.3 SY* 1 EA 36 CY* 9.90 TON 46 LF
9.85	Junction with spur road, left and right.		
10.03	Junction with loop road, left.		
10.17	Remove existing culvert and replace with a new 42" CMP. Maintain pond level. Suitable material from existing excavation may be used as backfill material. Dewater site. Cut and remove existing asphalt. Place 12-inch compacted depth of pit run material. Place 8-inch compacted depth of crushed aggregate base (see Drainage Typical sheet 10). Place 4-inch depth of hot asphalt concrete to match existing pavement width. Haul excavated asphalt off Forest Service lands. Any unsuitable backfill material, woody debris or slash from excavation will be hauled (indirectly paid by Item 60276C) to approved disposal sites. Remove trees (indirectly paid by Item 60276C). Scatter tops, limbs, stumps and logs. Construct keyed headwall, class 4, 9.5'L1 X 13.5'L2 X 11'H X 2'D on inlet. Install keyed splash apron, class 4, 12'L X 10'W X 2'D (see Drainage Construction Details Typical sheet 8).	15755B 20303 20358 25104 32203 32222 40451 60276C	1 EA 112.5 SY* 1 EA 17 CY* 80 CY* 38 CY* 25.60 TON 60 LF
10.36	Jack open inlet.	60710	1 EA
10.49	Remove existing culvert and replace with a new 24" CMP. Lower new pipe 2.5-feet. Suitable material from existing excavation may be used as backfill material. Dewater Site. Cut and remove existing asphalt. Place 12-inch compacted depth of pit run material. Place 8-inch compacted depth of crushed aggregate base (see Drainage Typical sheet 10). Place 4-inch depth of hot asphalt concrete to match existing pavement width. Haul excavated asphalt off Forest Service lands. Any unsuitable backfill material, woody debris or slash from excavation will be hauled (indirectly paid by Item 60276B) to approved disposal sites. Install splash apron, class 4, 8'L X 8.5'W X 2'D.	15755A 20303 20358 25101 32203 32222 40451 60276B	1 EA 49.1 SY* 1 EA 5 CY* 40 CY* 17 CY* 11.20 TON 50 LF
10.83	Construct 25-feet outlet ditch.	20419	25 LF
11.05	Install splash apron, class 4 , 6'L X 8'W X 2'D.	25101	4 CY*
11.27	Junction with spur road, right. Designated waste area; Remove and replace boulders blocking road.	20301B	1 EA
11.44	Fall 1 danger tree, right.	20253	1 EA
11.65	Junction with Road 1900-025, left. Remove existing culvert and replace with a new 24" CMP. Suitable material from existing excavation may be used as backfill material. Cut and remove existing asphalt. Place 8-inch compacted depth of crushed aggregate base (see Drainage Typical sheet 10). Place 4-inch depth of hot asphalt concrete to match existing pavement width. Haul excavated asphalt off Forest Service lands. Any unsuitable backfill material, woody debris or slash from excavation will be hauled (indirectly paid by Item 60276B) to approved disposal sites. Remove tree (indirectly paid by Item 60276B). Scatter top, limbs, stump, and log. Construct 75-feet outlet ditch.	20303 20358 20419 32203 40451 60276B	49.5 SY* 1 EA 75 LF 40 CY* 11.30 TON 50 LF
11.70	Junction with Road 1900-025 loop, left.		
11.95	Remove existing culvert and replace with a new 24" CMP. Lower outlet 1-feet to natural ground. Suitable material from existing excavation may be used as backfill material. Dewater site. Cut and remove existing asphalt. Place 8-inch compacted depth of crushed aggregate base (see Drainage Typical sheet 10). Place 4-inch depth of hot asphalt concrete to match existing pavement width. Haul excavated asphalt off Forest Service lands. Any unsuitable backfill material, woody debris or slash from excavation will be hauled (indirectly paid by Item 60276B) to approved disposal sites.	15755A 20303 20358 32203 40451 60276B	1 EA 45.0 SY* 1 EA 41 CY* 10.20 TON 54 LF
11.98	Junction with Road 1925, left.		
12.07	Remove existing culvert and replace with a new 24" CMP. Lower outlet 1-feet to match with riprap. Suitable material from existing excavation may be used as backfill material. Cut and remove existing asphalt Place 8-inch compacted depth of crushed aggregate base (see Drainage Typical sheet 10). Place 4-inch depth of hot asphalt concrete to match existing pavement width. Haul excavated asphalt off Forest Service lands. Any unsuitable backfill material, woody debris or slash from excavation will be hauled (indirectly paid by Item 60276B) to approved disposal sites.	20303 20358 32203 40451 60276B	42.0 SY* 1 EA 38 CY* 9.60 TON 50 LF
12.11	Junction with "Y" leg of Road 1925, left.		

MP	SPECIFIED ROAD WORKLIST- ROAD 1900 Continued	PAY ITEM	QUANTITY
12.13	Remove existing culvert and replace with a new 24" CMP. Suitable material from existing excavation may be used as backfill material. Dewater site. Cut and remove existing asphalt. Place 12-inch compacted depth of pit run material. Place 8-inch compacted depth of crushed aggregate base (see Drainage Typical sheet 10). Place 4-inch depth of hot asphalt concrete to match existing pavement width. Haul excavated asphalt off Forest Service lands. Any unsuitable backfill material, woody debris or slash from excavation will be hauled (indirectly paid by Item 60276B) to approved disposal sites.	15755A 20303 20358 32203 32222 40451 60276B	1 EA 58.3 SY* 1 EA 62 CY* 20 CY* 13.30 TON 82 LF
12.23	Fall 1 danger tree, right. Fall 1 danger tree, left.	20253	2 EA
12.58	Junction with Road 1900705, right.		
12.87	Remove existing culvert and replace with a new 18" CMP. Suitable material from existing excavation may be used as backfill material. Cut and remove existing asphalt. Place 8-inch compacted depth of crushed aggregate base (see Drainage Typical sheet 10). Place 4-inch depth of hot asphalt concrete to match existing pavement width. Haul excavated asphalt off Forest Service lands. Any unsuitable backfill material, woody debris or slash from excavation will be hauled (indirectly paid by Item 60276A) to approved disposal sites.	20303 20358 32203 40451 60276A	32.2 SY* 1 EA 30 CY* 7.40 TON 48 LF
12.90	Junction with Road 1926, left.		
13.18	Construct 15-feet outlet ditch.	20419	15 LF
13.44	Junction with Road 1900711, right.		
13.49	Construct 50-feet outlet ditch. Remove tree. Scatter top, limbs, and stump. Deck log where staked by Forest Service. Clean pipe inlet.	20419 20420A	50 LF 1 EA
13.62	Remove existing culvert and replace with a new 24" CMP. Lower pipe 3-feet. Suitable material from existing excavation may be used as backfill material. Dewater site. Cut and remove existing asphalt. Place 12-inch compacted depth of pit run material. Place 8-inch compacted depth of crushed aggregate base (see Drainage Typical sheet 10). Place 4-inch depth of hot asphalt concrete to match existing pavement width. Haul excavated asphalt off Forest Service lands. Any unsuitable backfill material, woody debris or slash from excavation will be hauled (indirectly paid by Item 60276B) to approved disposal sites. Install splash apron, class 4, 8'L X 8.5'W X 2'D.	15755A 20303 20358 25101 32203 32222 40451 60276B	1 EA 43.3 SY* 1 EA 5 CY* 30 CY* 15 CY* 9.70 TON 36 LF
13.99	Junction with Road 1928, right.		
14.17	Fall 1 danger tree, left.	20253	1 EA
14.36	Junction with Road 1900703, right.		
14.57	Remove existing culvert and replace with a new 18" CMP. Suitable material from existing excavation may be used as backfill material. Cut and remove existing asphalt. Place 8-inch compacted depth of crushed aggregate base (see Drainage Typical sheet 10). Place 4-inch depth of hot asphalt concrete to match existing pavement width. Haul excavated asphalt off Forest Service lands. Any unsuitable backfill material, woody debris or slash from excavation will be hauled (indirectly paid by Item 60276A) to approved disposal sites.	20303 20358 32203 40451 60276A	34.5 SY* 1 EA 30 CY* 7.90 TON 48 LF
15.01	Junction with spur road, left.		
15.57	Fall 1 danger tree, left.	20253	1 EA
16.06	Fall 2 danger trees, left.	20253	2 EA
16.35	Fall 1 danger tree, left.	20253	1 EA
16.37	Fall 1 danger tree, left.	20253	1 EA
16.84	Excavate 9'L X 9'W X 6'D to permit backfill of voids. See Excavation and Backfill Typical sheet 7 for description of work. Return Jersey barriers (indirectly paid by Item 20401) to Flat Creek work Center, located on Forest Route 24 two miles east of Oakridge, and place where staked by Forest Service.	20401 20303 32203 32222 40451	29 CY* 12.2 SY* 3 CY* 26 CY* 2.50 TON
17.26	Fall 1 danger tree, left.	20253	1 EA
17.84	Fall 1 danger tree, left.	20253	1 EA
17.89	Junction with Road 1934, right.		
18.57	Junction with Road 1900709, right.		
18.96	Fall 1 danger tree, left.	20253	1 EA
19.14	Fall 1 danger tree, left.	20253	1 EA
19.73	Fall 1 danger tree, right.	20253	1 EA
19.80	Fall 2 danger trees, left.	20253	2 EA
19.82	Fall 1 danger tree, left.	20253	1 EA
19.89	Junction with Road 1900749, right. **End work this road.**		
NOTE	Reconditioning roadside ditch as staked by CO.	30304	1 MI
MP	**SPECIFIED ROAD WORKLIST- ROAD 1900710**	**PAY ITEM**	**QUANTITY**
0.00	Junction Road 1900710 and Road 1900709. **Begin work this road.**		
0.30	Remove existing culvert and replace with a new 24" CMP. Dewater site. Suitable material from existing excavation may be used as backfill material. Any unsuitable backfill material, woody debris or slash from excavation will be hauled (indirectly paid by Item 60276B) to approved disposal sites. **End work this road.**	15755A 20358 60276B	1 EA 1 EA 30 LF

MP	SPECIFIED ROAD WORKLIST- ROAD 1900749	PAY ITEM	QUANTITY
0.00	Junction Road 1900749 and Road 1900. **Begin work this road.** Begin roadside brushing. Begin reconditioning roadside ditch.	23051 30304	0.49 MI 0.49 MI
0.03	Disposal area, right.		
0.08	Fall 1 danger tree, right.	20253	1 EA
0.17	Fall 1 danger tree, left.	20253	1 EA
0.21	Junction with Road 1900709, right.		
0.23	Construct 25-feet outlet ditch.	20419	25 LF
0.24	Fall 1 danger tree, right. Fall 1 danger tree, left.	20253	2 EA
0.27	Remove existing culvert and replace with a new 24" CMP. Conserve and utilize existing aggregate from roadbed at pipe excavation site. Suitable material from existing excavation may be used as backfill material. Place 8-inch compacted depth of crushed aggregate surface. Any unsuitable backfill material, woody debris or slash from excavation will be hauled (indirectly paid by Item 60276B) to approved disposal sites. Construct headwall 6'L1 X 10'L2 X 4'H X 2'D (see Drainage Construction Details Typical sheet 8).	20358 25101 32203 60276B	1 EA 4 CY* 5 CY* 26 LF
0.33	Remove existing culvert and replace with a new 24" CMP. Conserve and utilize existing aggregate from roadbed at pipe excavation site. Suitable material from existing excavation may be used as backfill material. Dewater site. Place 8-inch compacted depth of crushed aggregate surface. Any unsuitable backfill material, woody debris or slash from excavation will be hauled (indirectly paid by Item 60276B) to approved disposal sites. Remove tree (indirectly paid by Item 60276B). Scatter top, limbs, and stump. Deck log where staked by Forest Service.	15755A 20358 32203 60276B	1 EA 1 EA 5 CY* 36 LF
0.46	Remove existing culvert and replace with a new 24" CMP. Conserve and utilize existing aggregate from roadbed at pipe excavation site. Suitable material from existing excavation may be used as backfill material. Place 8-inch compacted depth of crushed aggregate surface. Any unsuitable backfill material, woody debris or slash from excavation will be hauled (indirectly paid by Item 60276B) to approved disposal sites.	20358 32203 60276B	1 EA 5 CY* 30 LF
0.49	Junction with Road 1900102, right. **End work this road.**		

MP	SPECIFIED ROAD WORKLIST- ROAD 1934	PAY ITEM	QUANTITY
0.00	Junction Road 1934 and Road 1900. **Begin work this road.** Begin roadside brushing.	23051	3.31 MI
0.01	End existing pavement.		
0.21	Clean pipe outlet, remove and scatter brush at outlet of pipe (indirectly paid by Item 20420B).	20420B	1 EA
0.42	Remove existing culvert and replace with a new 24" CMP. Conserve and utilize existing aggregate from roadbed at pipe excavation site. Suitable material from existing excavation may be used as backfill material. Place 8-inch compacted depth of crushed aggregate surface (see Drainage Typical sheet 10). Any unsuitable backfill material, woody debris or slash from excavation will be hauled (indirectly paid by Item 60276B) to approved disposal sites. Construct 30-feet outlet ditch.	20358 20419 32203 60276B	1 EA 30 LF 5 CY* 38 LF
0.56	Junction with spur road, right.		
0.73	Junction with Road 1934757, left.		
0.78	Construct 25-feet outlet ditch.	204-19	25 LF
0.91	Remove existing culvert and replace with a new 18" CMP, with 18-inch full-circle aluminized steel outlet pipe by 20-feet down pipe. Conserve and utilize existing aggregate from roadbed at pipe excavation site. Suitable material from existing excavation may be used as backfill material. Place 8-inch compacted depth of crushed aggregate surface (see Drainage Typical sheet 10). Any unsuitable backfill material, woody debris or slash from excavation will be hauled (indirectly paid by Item 60276A) to approved disposal sites. Deck one felled tree (indirectly paid by Item 60276A) where staked by Forest Service.	20358 32203 60276A 60604A 60605A 60655A	1 EA 5 CY* 28 LF 2 EA 1 EA 20 LF
1.01	Remove existing culvert and replace with a new 24" CMP. Conserve and utilize existing aggregate from roadbed at pipe excavation site. Suitable material from existing excavation may be used as backfill material. Place 8-inch compacted depth of crushed aggregate surface (see Drainage Typical sheet 10). Any unsuitable backfill material, woody debris or slash from excavation will be hauled (indirectly paid by Item 60276B) to approved disposal sites. Construct 30-feet outlet ditch.	20358 20419 32203 60276B	1 EA 30 LF 5 CY* 34 LF
1.09	Remove existing culvert and replace with a new 24" CMP, with down pipe. Conserve and utilize existing aggregate from roadbed at pipe excavation site. Suitable material from existing excavation may be used as backfill material. Dewater Site. Place 8-inch compacted depth of crushed aggregate surface (see Drainage Typical sheet 10). Any unsuitable backfill material, woody debris or slash from excavation will be hauled (indirectly paid by Item 60276B) to approved disposal sites. Remove tree (indirectly paid by Item 60276B). Scatter top, limbs, and stump. Deck log where staked by Forest Service.	15755A 20358 32203 60276B 60604B 60605B 60655B	1 EA 1 EA 5 CY* 30 LF 2 EA 1 EA 15 LF
1.35	Construct 50-feet outlet ditch.	20419	50 LF
1.45	Disposal area, right.		
1.58	Junction with Road 1934747, left. Junction with Road 1934708, right.		
1.91	Remove existing culvert and replace with a new 24" CMP. Lower pipe 2.5-feet. Conserve and utilize existing aggregate from roadbed at pipe excavation site. Suitable material from existing excavation may be used as backfill material. Dewater site. Place 8-inch compacted depth of crushed aggregate surface (see Drainage Typical sheet 10). Any unsuitable backfill material, woody debris or slash from excavation will be hauled (indirectly paid by Item 60276B) to approved disposal sites. Construct headwall. Install splash apron, class 4 riprap 8'L X 8.5'W X 2'D.	15755A 20358 25101 32203 60276B	1 EA 1 EA 9 CY* 5 CY* 28 LF
2.12	Junction with Road 1934746, left. Begin reconditioning roadside ditch.	30304	1.19 MI
2.32	Remove existing culvert and replace with a new 18" CMP. Conserve and utilize existing aggregate from roadbed at pipe excavation site. Suitable material from existing excavation may be used as backfill material. Place 8-inch compacted depth of crushed aggregate surface (see Drainage Typical sheet 10). Any unsuitable backfill material, woody debris or slash from excavation will be hauled (indirectly paid by Item 60276A) to approved disposal sites. Remove trees (indirectly paid by Item 60276A). Scatter tops, limbs, and stumps. Deck logs where staked by Forest Service.	20358 32203 60276A	1 EA 5 CY* 40 LF
2.87	Junction with Road 1934745, left.		
2.90	Junction with "Y" leg of Road 1934745, left.		
3.08	Disposal area, right.		
3.28	Disposal area, right.		
3.31	**End work this road.**		

MP	SPECIFIED ROAD WORKLIST- ROAD 1934746	PAY ITEM	QUANTITY
0.00	Junction Road 1934746 with Road 1934. **Begin work this road.** Begin roadside brushing. Begin ditch reconditioning.	23051 30304	0.44 MI 0.44 MI
0.30	Disposal area, left.		
0.35	Remove existing culvert and replace with a new 18" CMP. Conserve and utilize existing aggregate from roadbed at pipe excavation site. Suitable material from existing excavation may be used as backfill material. Place 8-inch compacted depth of crushed aggregate surface (see Drainage Typical sheet 10). Any unsuitable backfill material, woody debris or slash from excavation will be hauled (indirectly paid by Item 60276A) to approved disposal sites.	20358 32203 60276A	1 EA 5 CY* 48 LF
0.44	Remove existing culvert and replace with a new 18" CMP, with 18-inch full-circle aluminized steel outlet pipe by 20-feet down pipe. Conserve and utilize existing aggregate from roadbed at pipe excavation site. Suitable material from existing excavation may be used as backfill material. Place 8-inch compacted depth of crushed aggregate surface (see Drainage Typical sheet 10). Any unsuitable backfill material, woody debris or slash from excavation will be hauled (indirectly paid by Item 60276A) to approved disposal sites. **End work this road.**	20358 32203 60276A 60604A 60605A 60655A	1 EA 5 CY* 38 LF 2 EA 1 EA 20 LF

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 ½ inch per 1 foot of width, but not more than ¾ 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
To be filled in by local FS invasive plant specialist, if applicable.

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

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

B. 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.

C. 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
To be filled in by the local FS invasive plant specialist	*To be filled in by the local FS invasive plant specialist*

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-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-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.

B. 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.

D. Invasive Species of Concern

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
To be filled in by local FS invasive plant specialist, if applicable.

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:

Only sites approved by contracting officer.

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 10 cu. ft/sec is maintained. Obtain approval from the Contracting Officer on improvements for sandbags or weirs prior to placement.