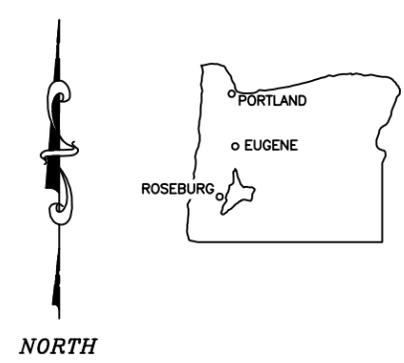
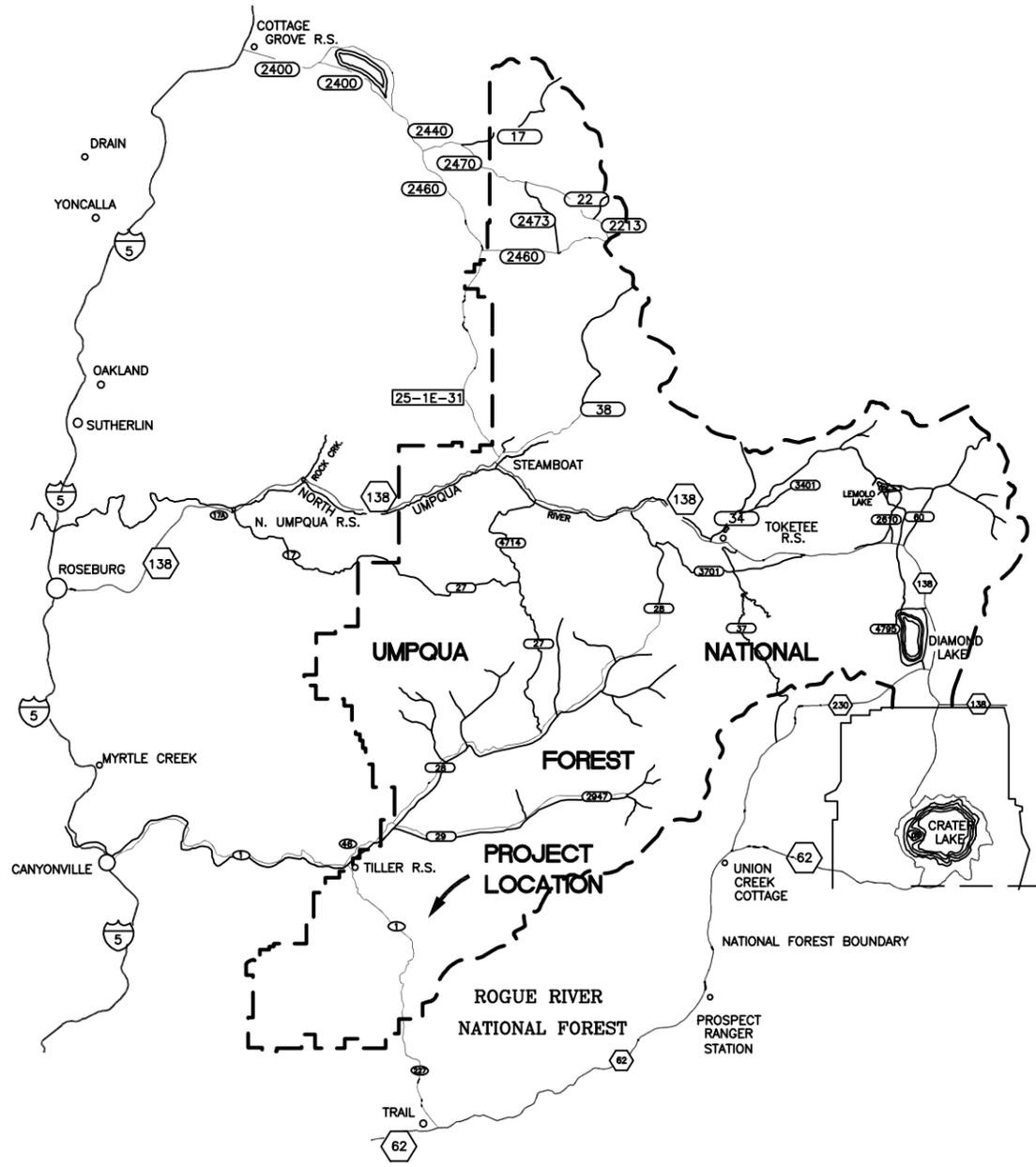


**U.S. DEPARTMENT of AGRICULTURE
FOREST SERVICE
UMPUA NATIONAL FOREST
TILLER RANGER DISTRICT**



**REGION SIX
VICINITY MAP**



LEGEND

	NATIONAL PARK BOUNDARY
	INTERSTATE HIGHWAY
	STATE HIGHWAY
	COUNTY ROAD
	FOREST ROAD
	CITY OR TOWN

INDEX

<u>SHEET NO.</u>	<u>SHEET TITLE</u>
1	TITLE SHEET
2	VICINITY MAP
3	ESTIMATE OF QUANTITIES
4-5	DRAINAGE LIST
6	CULVERT CONSTRUCTION DETAILS
7	ROAD RECONDITIONING TYPICAL AND AGGREGATE PLACEMENT TYPICAL FOR CULVERTS
8	ROADSIDE BRUSHING TYPICAL
9	LOW WATER FORD AND SIGN DRAWINGS AND NOTES
10-11	SIGN DETAILS
12	ROAD CLOSURE BARRIER DETAIL
13-15	ROAD 31 TURNAROUND
16-18	ROAD 1610-400 TURNAROUND
19-22	BRIDGE DETAILS
23	ROAD 1610-300 MP 0.80 THROUGH 0.87
24	1610 WORKLIST
25-26	1610-300 WORKLIST
26	1610-400, 1610-410, 1610-416, 1610-420, 1610-432 WORKLISTS
27	1610-434, 1610-448, 2925, 31, 3100-851 WORKLISTS

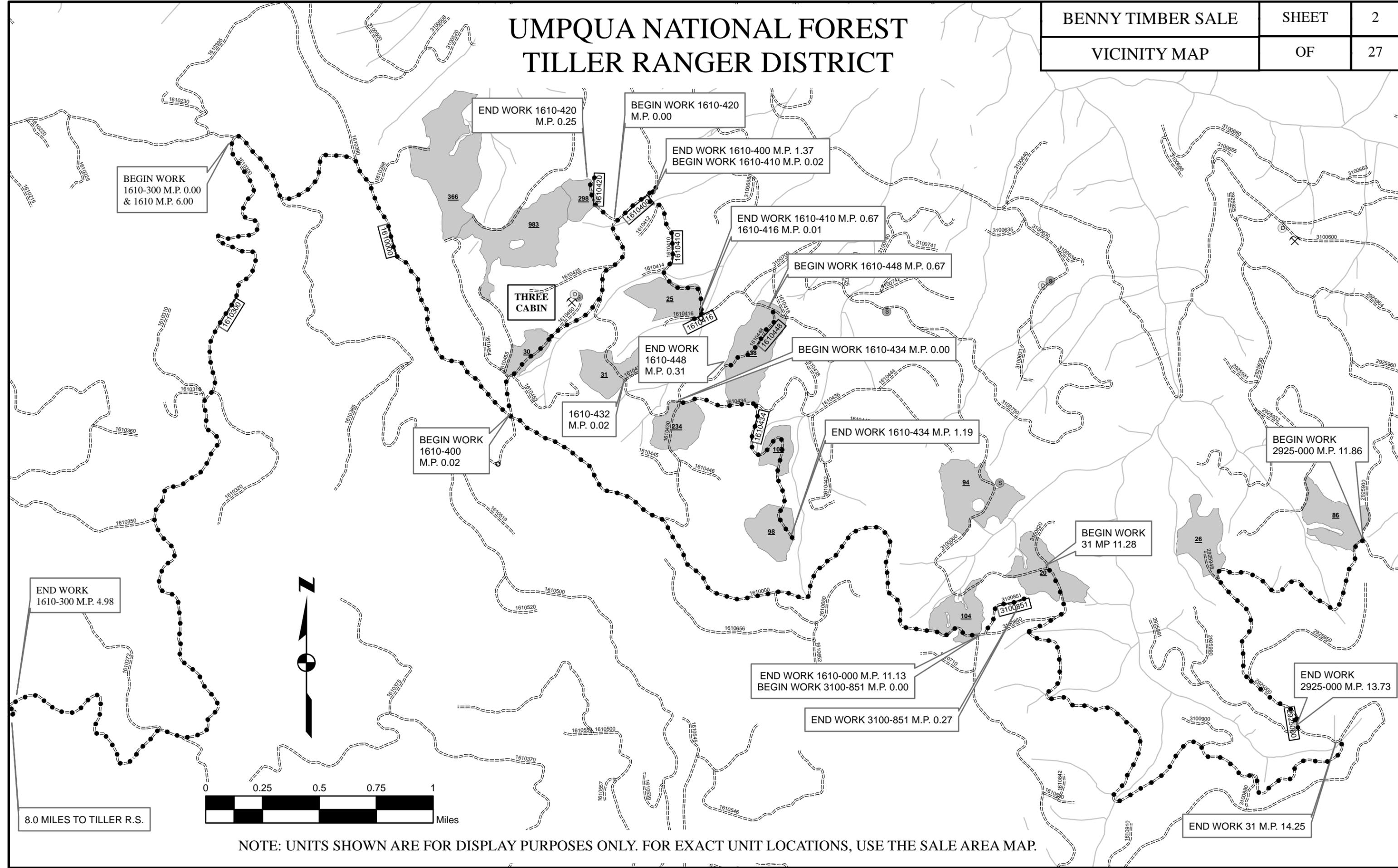
<u>ROAD NUMBER</u>	<u>LENGTH</u>	<u>PROPOSED PROJECT</u>	<u>TYPE OF WORK</u>
1610	5.13 MILES		RECONSTRUCTION
1610-300	4.98 MILES		RECONSTRUCTION
1610-400	1.35 MILES		RECONSTRUCTION
1610-410	0.65 MILES		RECONSTRUCTION
1610-416	0.01 MILES		RECONSTRUCTION
1610-420	0.25 MILES		RECONSTRUCTION
1610-432	M.P. 0.02		RECONSTRUCTION
1610-434	1.19 MILES		RECONSTRUCTION
1610-448	0.36 MILES		RECONSTRUCTION
2925	1.87 MILES		RECONSTRUCTION
31	2.97 MILES		RECONSTRUCTION
3100-851	0.27 MILES		RECONSTRUCTION

RECOMMENDED BY: _____	DATE: _____	DESIGNED BY: _____
TRANSPORTATION ENGINEER		PLAN IN HAND BY: _____
APPROVED BY: _____	DATE: _____	REVIEWED BY: _____
FOREST ENGINEER		DATE: _____
DISTRICT RANGER: _____		PROJECT TEAM LEADER/DISTRICT ENGINEER

BENNY REOFFER TIMBER SALE

UMPQUA NATIONAL FOREST TILLER RANGER DISTRICT

BENNY TIMBER SALE	SHEET	2
VICINITY MAP	OF	27



BENNY TIMBER SALE ROADS - ESTIMATE OF QUANTITIES

**BENNY TIMBER SALE ROADS
SHEET 3 OF 26**

NOTES:
 1. All volume unit pay items are measured in-place. All reference to quantities of excavated volumes refer to original (prior to excavation) volume.
 2. See worklists and vicinity map for further description and location of work.
 3. Units are measured as Actual Quantities 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. All waste material, woody debris, slash or boulders shall be hauled and placed in disposal area at Three Cabin Pit, or approved disposal site located on the 1610-400, MP 1.80.
 5. Obtain aggregate from 3 Cabin Quarry located on Forest Road 1610-450, T 31 S, R 1 W, Sec 15, and riprap fromMaverick Pit located on Forest Road 3100-630, T 31 S, R 1 W, Sec 13.
 6. Approved water source is located at Stampede Creek on road 31 at M.P. 4.27, T 31 S, R 1 W, Sec 3.

Road No.	1610	1610-300	1610-400	1610-410	1610-416	1610-420	1610-432	1610-434	1610-448	2925	31	3100-851
Project Length (miles)	5.13	4.98	1.35	0.65	0.01	0.25	M.P. 0.02	1.19	0.36	1.87	2.97	0.27
Work Type	Recon.	Recon.	Recon.	Recon.	Recon.	Recon.	Recon.	Recon.	Recon.	Recon.	Recon.	Recon.

Pay Item	Description	Unit	Pay Item Quantities by Road										Total Quantities	Remarks	
151-01	Mobilization	L.S.	All Required											Mobilization for all roads.	
152-01.1	Construction survey & staking, method I, tolerance E	L.S.			1							1		2	
152-01.2	Construction Survey and Staking Method 1 Tolerance A	L.S.				1								1	
201-03.1	Clearing & grubbing, disposal of tops & limbs G , logs F	Mile										0.27		0.27	
201-03.2	Clearing & grubbing, disposal of tops & limbs I , logs K , stumps G	Mile					0.17		0.12	0.36				0.65	
201-04.1	Clearing & grubbing, disposal of tops & limbs F, logs I, stumps F.	Acre*										0.35		0.35	
201-04.2	Clearing & grubbing, disposal of tops & limbs G, logs I, stumps K.	Acre*			0.42									0.42	
203-01.1	Removal of metal culvert	Each	4	5	2						1			12	
203-01.2	Removal of road closure barrier	Each					1		3					4	
203-04	Removal and disposal of signs, method (a)	L.S.	All Required												
204-01	Roadway Excavation, Compaction Method B	C.Y.*		46		280								326	Construction tolerance class D
204-20.1	Drainage excavation, type lead-in ditch	L.F.		158										158	
204-20.2	Drainage excavation, type construct catch basin	Each		1										1	
204-20.3	Drainage excavation, type water bar	Each							17	10				27	
204-20.4	Drainage excavation, type low water ford	Each							1					1	
204-52	Roadway excavation, compaction method B	L.S.			1							1		2	Construction tolerance class D
204-55	Embankment construction	C.Y.*		2										2	
207-01	Earthwork Geotextile Type II-B	S.Y.*				14								14	
230-51	Roadside Brushing	Mile	5.13	5.01										10.14	
251-01.1	Placed riprap, class 1	C.Y.*	1						10					11	
251-01.2	Placed riprap, class 2	C.Y.*		13					3					16	
251-01.4	Placed Riprap, Class 4	C.Y.*				19								19	
251-01.6	Placed riprap, class 6	C.Y.*		48										48	
251-10.1	Hand placed riprap, class 1	C.Y.*			2									2	
303-57	Roadway reconditioning, compaction method B	Mile	2.13	5.00				0.25		0.12	0.36		0.27	8.13	
322-32	Haul and place stockpiled aggregate. Compaction Method B.	C.Y.*	45	90	220	2						5	150	512	
322-51	Haul and Place Pit Run Maximum Size 6 inches, Compaction Method A	C.Y.*				95								95	
571-01	Prefabricated Bridge Superstructure - Design, Fabricate, Deliver, and Install	Each				1								1	The bridge remains the property of the US Government.
602-63.18	18 inch aluminized steel, corrugated steel pipe, .064 inch thickness, method A	L.F.	312	282		50	38					36	74	792	
602-63.24	24 inch aluminized steel, corrugated steel pipe, .064 inch thickness, method A	L.F.			98									98	
604-03	Inlet, beveled drop inlet	Each	3											3	
606-02.18	Spillway Assembly, 18-inch full circle outlet pipe	L.F.		20										20	
606-04.18	Anchors for downdrain, 18-inch pipe	Each		2										2	
606-05.18	Pipe elbow, Turner	Each		1										1	
607-90	Clean culvert, trash rack & inlet area	Each		1										1	
633-13	Signs, HDO plywood	S.F.*	13.8	1.7	4.0						4.4	3.4		27.3	
633-15	Posts, treated wood	Each	5	1	2									8	
633-17	OM, Type 3	Each				4								4	
633-19	OM, Type 2, Hazard, FFP, white	Each	1											1	
633-23	Route Markers & Mile Posts, FFP, Brown, with white lettering	Each	6	5	4	1	1		1	2	1	2	4	27	
633-25	Reset posts	Each										2		2	
633-29.24	Construction sign, 24" X 24", Black on Orange	Each	1			2								3	
633-31.08	8' - 2 lb. Steel U-channel sign post	Each				6								6	
650-04A	Install Road Closure Barrier, Type A	Each						1	3					4	
650-04B	Install Road Closure Barrier, Type B	Each							1					1	

LOCATION AND CULVERT LENGTHS				INSTALLATION DETAILS AND SPECIAL SECTIONS									RIPRAP REQUIREMENTS						SHEET 4 OF 27						
DESIGNED				AS BUILT				CORRUGATED METAL PIPE			SPILLWAYS			BEVELED DROP INLET			HEADWALL		SPLASH APRON		SLOPE PROTECTION		SUBGRADE REINFORCEMENT		BENNY TIMBER SALE DRAINAGE LISTING
MP	STA. (FT)	LENGTH (FT)	DEGREE SKEW	MP	STA. (FT)	SKEW	LENGTH (FT)	DIA. (IN)	TH. (IN)	TYPE	DOWN-DRAIN LENGTH (FT)	ANCHORS (EA)	ELBOW	DIA (INCH)	LENGTH (FT)	"B" ANGLE	CY	CLASS	CY	CLASS	CY	CLASS	CY	CLASS	
1610-000																									
6.28		38	120					18	0.064	3				24	4	350									
6.47		36	124					18	0.064	3															Catch basin
6.97		34	126					18	0.064	3															Catch basin
7.25		32	*same					18	0.064	3															
7.39		34	122					18	0.064	3				24	4	350									
7.54		36	*same					18	0.064	3															
7.58		32	*same					18	0.064	3															
7.70		36	120					18	0.064	3															
7.82		34	130					18	0.064	3				24	4	310									
1610-300																									
0.20		12						18	0.064																Install culvert extensions
0.50		42	140					18	0.064	3															
0.52		38	122					18	0.064	2	20	2	1												Catch basin
0.80																		48	6	II	2				See sht 23
0.86		50	48					18	0.064	3															
1.02																									Construct catch basin
1.45		34	52					18	0.064	3															
1.90		28	115					18	0.064	3															
2.10		24	*same					18	0.064	3															
2.70		26	80					18	0.064	3															
4.20		28	45					18	0.064	3															
4.30																		2	2						Construct splash apron on existing 18" CMP
1610-400																									
0.45		46	70					24	0.064	1							1	1							Construct headwall
1.10		52	40					24	0.064	1							1	1							Construct headwall
1610-410																									
0.65		50	60					18	0.064	3															Catch basin
0.67																									Install temporary bridge
1610-416																									
0.01		38	90					18	0.064	3															Catch basin; Pitrun as backfill in culvert trench

NOTE:

- 1) Staking for culverts has been completed by the Forest Service. Culvert lengths and locations are based on as-staked conditions. Install culverts as staked.
- 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) Dimpled bands shall not be used on downpipes, elbows, or pipes laid on grades greater than 15%.
- 4) Unless shown otherwise, where cover heights exceed 10-feet, culverts shall be cambered an amount equal to 0.5% of the culvert length.
- 5) Riprap shall be placed to the minimum dimensions shown on typical section drawings.
- 6) Refer to Sheet 6 for typical Culvert Construction Details and Sheet 7 for Aggregate Placement Typical for Culverts.
- 7) Skew is in degrees. From center line of roadway, looking ahead on line, turn angle right.
- 8) Ex = Existing culvert, not to be replaced.
- 9) *same = skew is same as replaced culvert.

LOCATION AND CULVERT LENGTHS				INSTALLATION DETAILS AND SPECIAL SECTIONS									RIPRAP REQUIREMENTS								SHEET 5 OF 27				
DESIGNED				AS BUILT				CORRUGATED METAL PIPE			SPILLWAYS			BEVELED DROP INLET			HEADWALL		SPLASH APRON		SLOPE PROTECTION		SUBGRADE REINFORCEMENT		BENNY TIMBER SALE DRAINAGE LISTING
MP	STA. (FT)	LENGTH (FT)	DEGREE SKEW	MP	STA. (FT)	SKEW	LENGTH (FT)	DIA. (IN)	TH. (IN)	TYPE	DOWN-DRAIN LENGTH (FT)	ANCHORS (EA)	ELBOW	DIA (INCH)	LENGTH (FT)	"B" ANGLE	CY	CLASS	CY	CLASS	CY	CLASS	CY	CLASS	
1610-434																									
0.00																									Construct water bar
0.04																									Construct water bar
0.14																									Construct water bar
0.18																									Construct water bar
0.26																									Construct water bar
0.33																									Construct water bar
0.48																									Construct water bar
0.53																									Construct water bar
0.58																					3	2	10	1	Construct low water ford
0.66																									Construct water bar
0.75																									Construct water bar
0.90																									Construct water bar
0.99																									Construct water bar
1.10																									Construct water bar
1.15																									Construct water bar
1.16																									Construct water bar
1.19																									Construct water bar
1610-448																									
0.31																									Construct waterbar
0.37																									Construct waterbar
0.40																									Construct waterbar
0.42																									Construct waterbar
0.46																									Construct waterbar
0.48																									Construct waterbar
0.51																									Construct waterbar
0.57																									Construct waterbar
0.59																									Construct waterbar
0.65																									Construct waterbar
2925-000																									
13.62		36	*same					18	0.064	3															

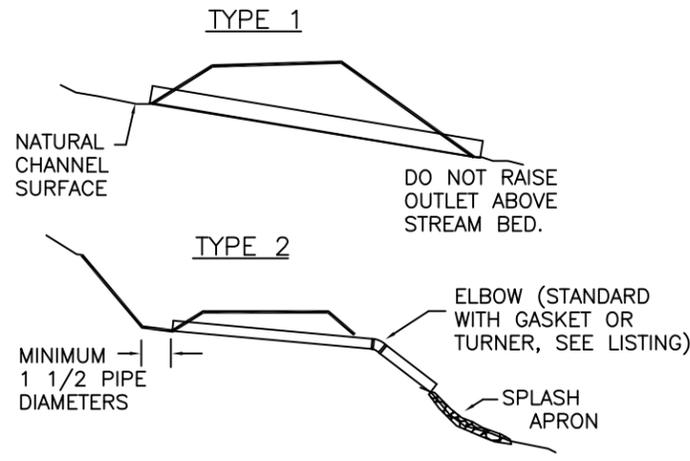
NOTES:

- 1) Staking for culverts has been completed by the Forest Service. Culvert lengths and locations are based on as-staked conditions. Install culverts as staked.
- 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) Dimpled bands shall not be used on downpipes, elbows, or pipes laid on grades greater than 15%.
- 4) Unless shown otherwise, where cover heights exceed 10-feet, culverts shall be cambered an amount equal to 0.5% of the culvert length.
- 5) Riprap shall be placed to the minimum dimensions shown on typical section drawings.
- 6) Refer to Sheet 6 for typical Culvert Construction Details and Sheet 7 for Aggregate Placement Typical for Culverts.
- 7) Skew is in degrees. From center line of roadway, looking ahead on line, turn angle right.
- 8) Ex = Existing culvert, not to be replaced.
- 9) *same = skew is same as replaced culvert.

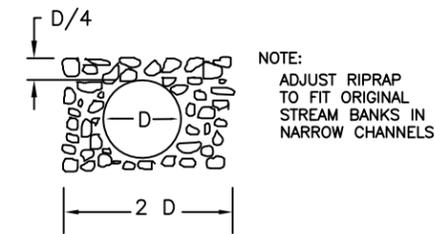
CULVERT CONSTRUCTION DETAILS

PROJECT	SHEET	OF
BENNY TIMBER SALE	6	27

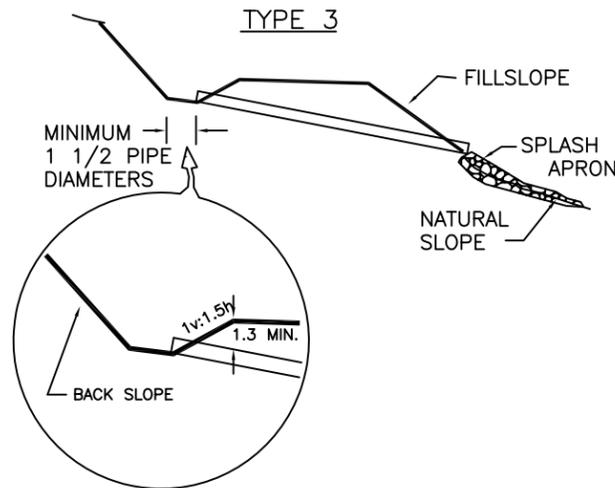
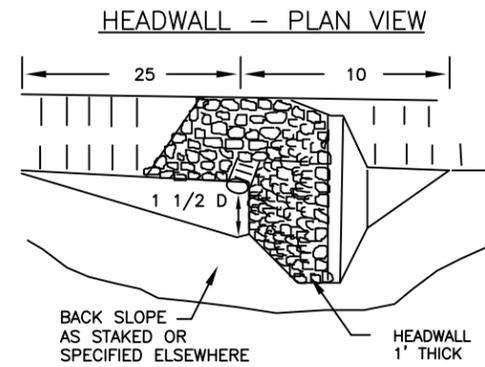
DISTANCES IN FEET EXCEPT WHERE NOTED. NOT TO SCALE. ALSO REFER TO WORKLISTS.



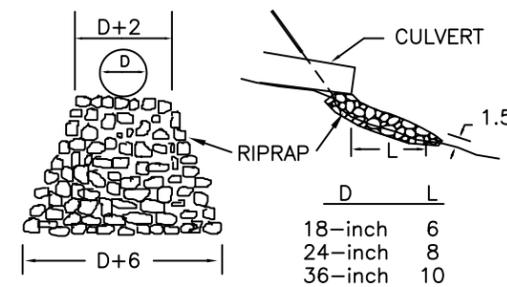
HEADWALLS FOR TYPE 1



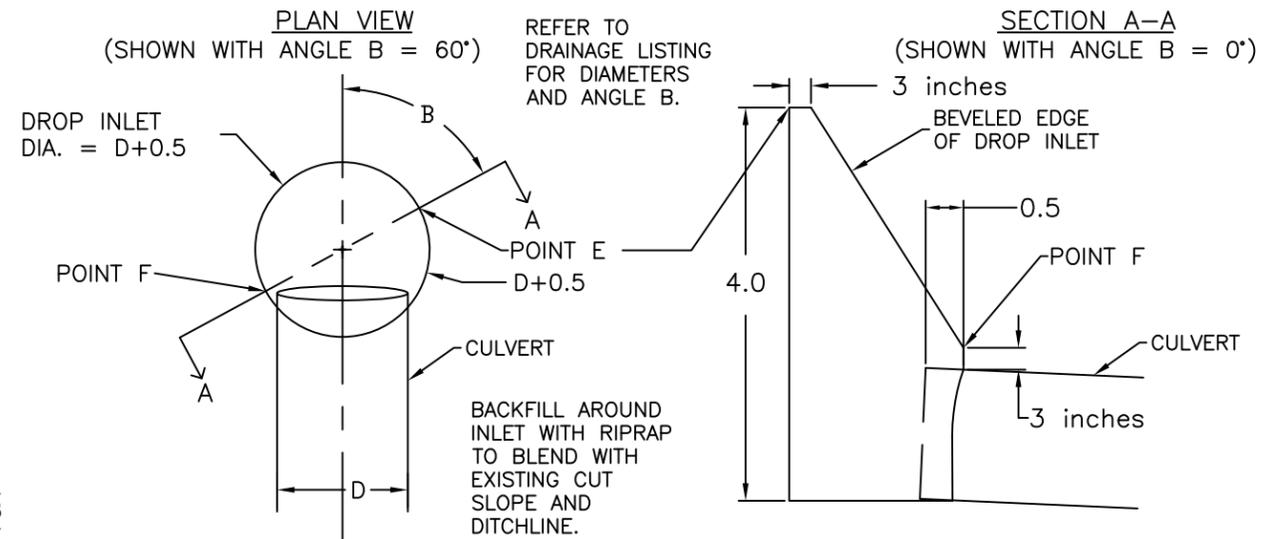
CATCH BASIN DETAIL FOR TYPE 2 & 3



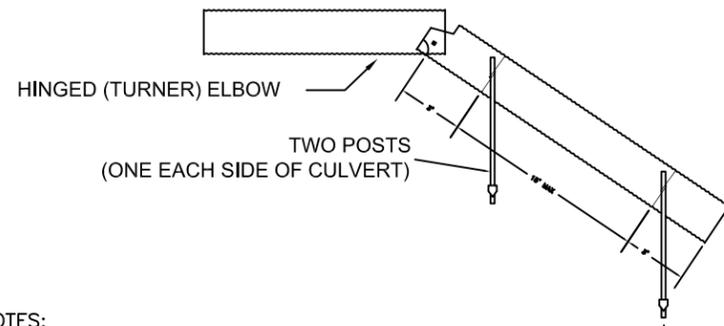
SPLASH APRON



BEVELED DROP INLET



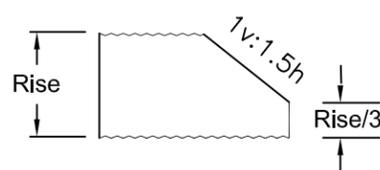
SPECIAL ANCHORING FOR TYPE 2 (DOWNDRAIN)



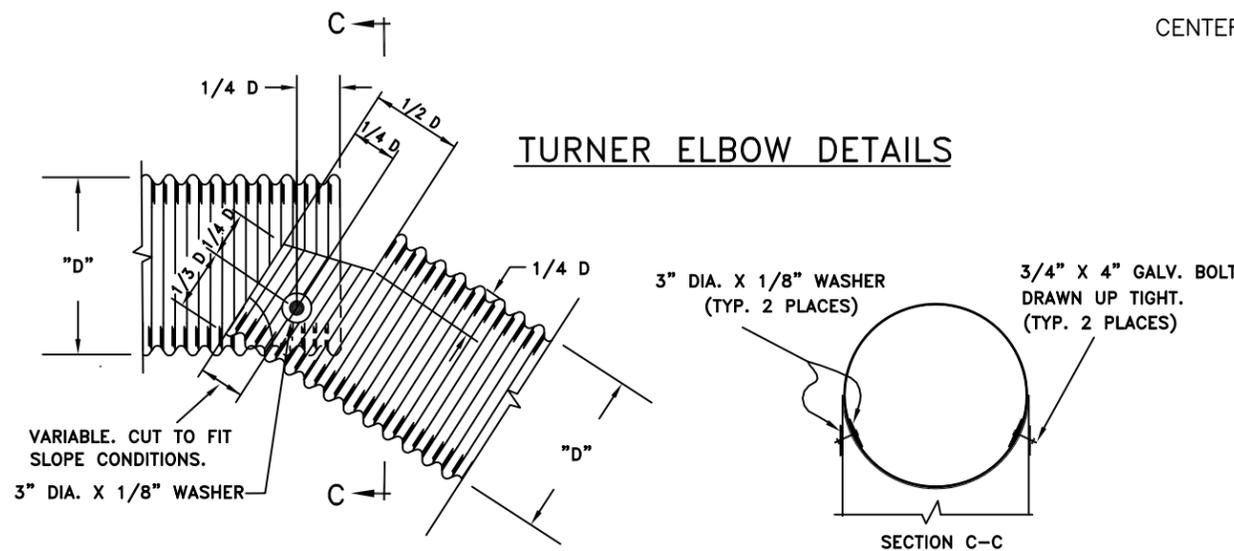
NOTES:

- 1) PROVIDE 3 WRAPS OF #9 GALVANIZED WIRE AROUND EACH CULVERT AND POST. EACH WRAP SHALL BE PLACED IN THE SAME CORRUGATION ON THE CULVERT. EACH POST SHALL BE DRIVEN SO THAT THE TOP OF THE POST DOES NOT PROTRUDE ABOVE THE TOP OF THE CULVERT.
- 2) TWO 6 FT. STUDDED TEE FENCE POSTS, ROLLED HIGH CARBON TOUGH RAIL STEEL, 1 3/8" x 1 3/8", 1.33 LB./SECTION-FT. OR EQUAL, SET AGAINST CULVERT.
- 3) TWO ANCHOR ASSEMBLIES MINIMUM PER DOWN DRAIN WITH 15 FT MAXIMUM DISTANCE BETWEEN ANCHOR SETS. ADDITIONAL ANCHORS AS REQUIRED TO MAINTAIN 15 FT MAXIMUM SPACING.

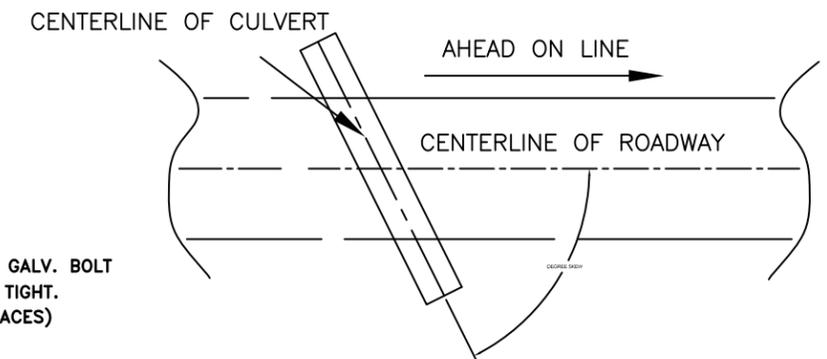
PARTIAL BEVEL END TREATMENT



TURNER ELBOW DETAILS



SKIEW DIAGRAM

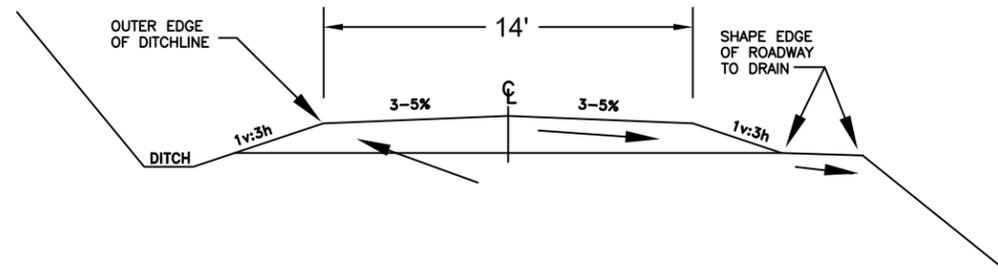


ROAD RECONDITIONING, WATERBAR, AND AGGREGATE PLACEMENT TYPICALS

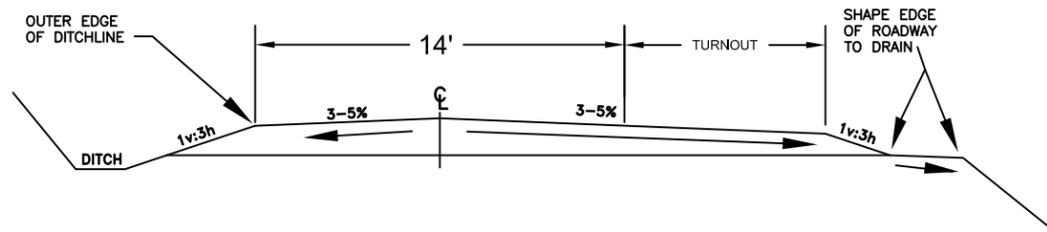
PROJECT
BENNY TIMBER SALE

SHEET 7 OF 27

ROAD RECONDITIONING REQUIREMENTS

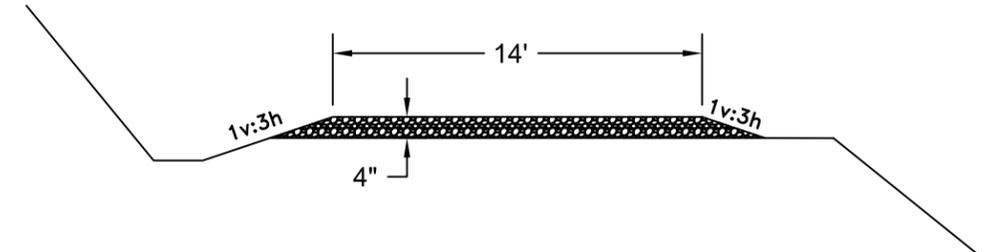


ROAD RECONDITIONING REQUIREMENTS WITH TURNOUT

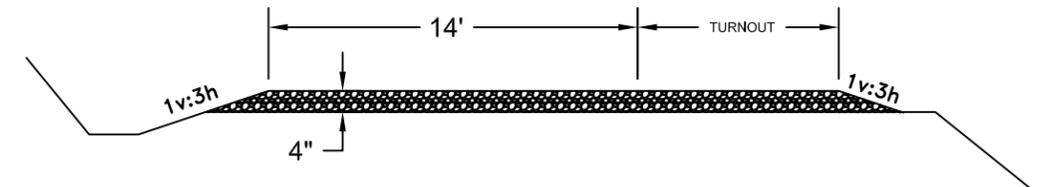


ROAD	M.P.	TURNOUT WIDTH	TURNOUT LENGTH	TRANSITION LENGTH
1610-000	6.53	8'	65'	15'
1610-000	6.64	10'	65'	15'
1610-000	6.83	10'	65'	50'
1610-000	7.11	10'	60'	25'
1610-000	7.41	6'	65'	30'
1610-000	7.68	6'	65'	25'
1610-300	0.18	10'	65'	25'
1610-300	0.27	10'	65'	30'
1610-300	0.49	10'	65'	25'
1610-300	0.67	10'	65'	30'
1610-300	0.98	6'	65'	50'
1610-300	1.19	6'	65'	30'
1610-300	1.66	6'	65'	30'
1610-300	2.00	10'	65'	30'
1610-300	2.99	10'	65'	50'
1610-300	3.17	6'	65'	35'
1610-300	3.84	10'	65'	35'
1610-300	4.01	10'	65'	35'
1610-300	4.95	6'	65'	30'

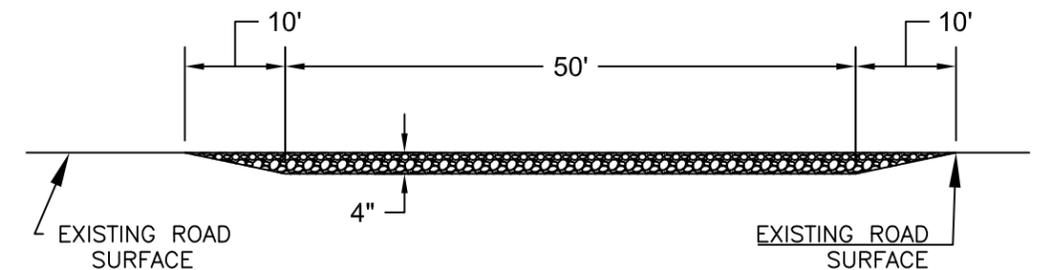
AGGREGATE PLACEMENT CROSS SECTION, USE OVER NEW AND REPLACED CULVERTS



AGGREGATE PLACEMENT CROSS SECTION, WITH TURNOUT USE OVER NEW AND REPLACED CULVERTS



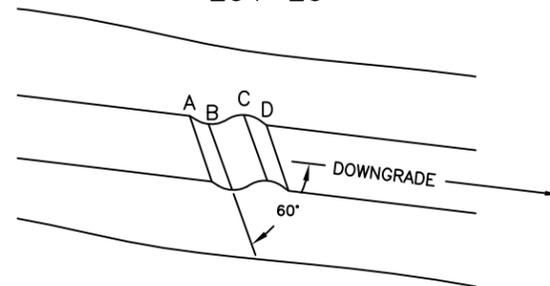
AGGREGATE PLACEMENT CENTERLINE PROFILE USE OVER NEW AND REPLACED CULVERTS



NOTES:

1. RE-ESTABLISH A 14-FT WIDE TRAVELWAY MEASURED FROM THE OUTER EDGE OF DITCHLINE.
2. CROWN RECONDITIONED TRAVELWAY. SLOPE 3-5% AWAY FROM CENTERLINE OF TRAVELWAY.
3. CREATE A 1v:3h SLOPE AT EDGE OF RECONDITIONED TRAVELWAY.

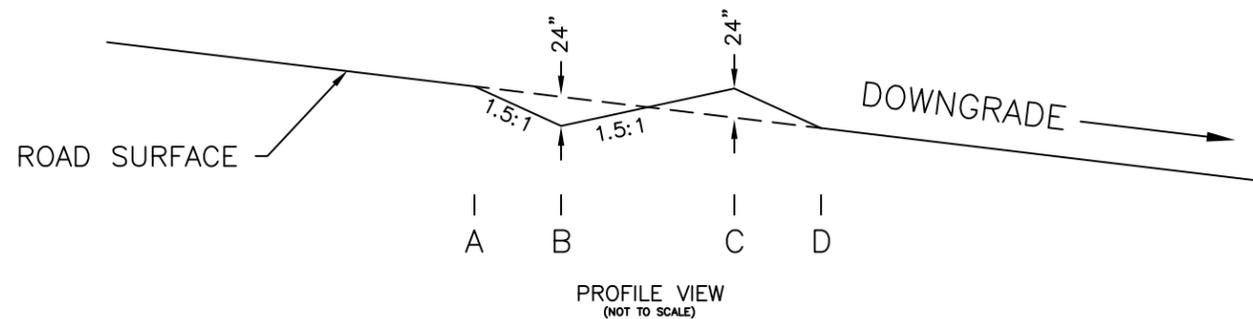
WATER BAR 204-20



PERSPECTIVE VIEW (NOT TO SCALE)

NOTES:

- 1) EXCAVATION SHALL BE SLOPED TO DRAIN.
- 2) EXCAVATION AND BARRIER MOUND SHALL CROSS ENTIRE ROADWAY AND DITCHLINE.



PROFILE VIEW (NOT TO SCALE)

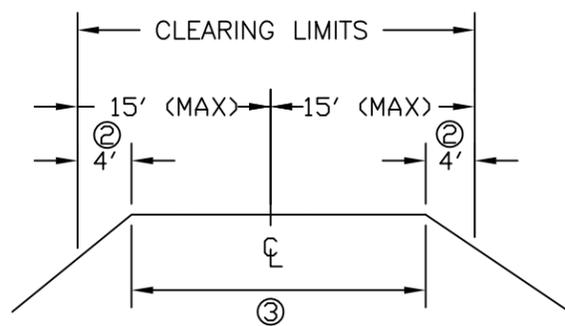
NOTES:

1. THESE TYPICALS APPLY TO ALL AREAS REQUIRING SUPPLEMENTAL AGGREGATE PLACEMENT OVER NEWLY INSTALLED AND REPLACED CULVERTS.
2. REFER TO WORKLIST FOR LOCATIONS. ITEM 322-32 QUANTITIES ARE INTENDED TO SUPPLEMENT EXISTING MATERIALS CONSERVED DURING CONSTRUCTION.
3. RECONDITION ENTIRE SUBGRADE LENGTH AS SPECIFIED IN PROFILE DRAWING PRIOR TO AGGREGATE PLACEMENT.

ROADSIDE BRUSHING TYPICALS ITEM 230-50

(NOT TO SCALE)

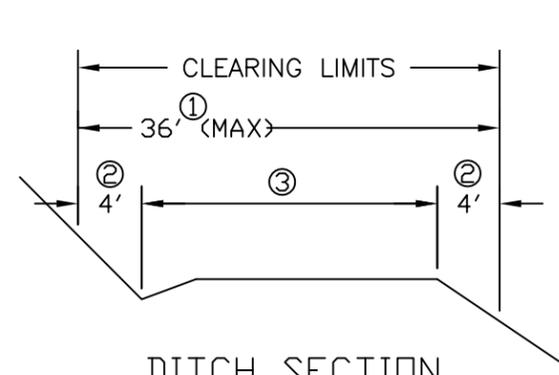
PROJECT	SHEET	OF
BENNY TIMBER SALE	8	27



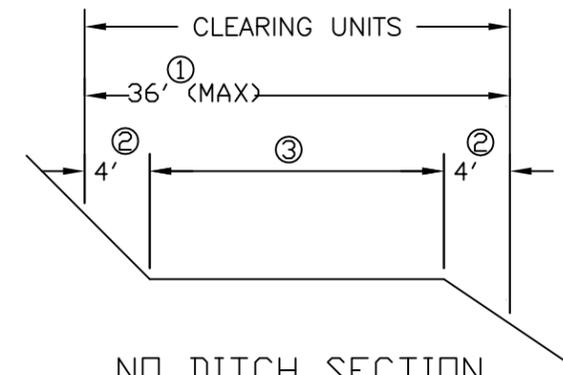
THROUGH FILL

NOTES: (REFER TO TYPICAL SECTIONS)

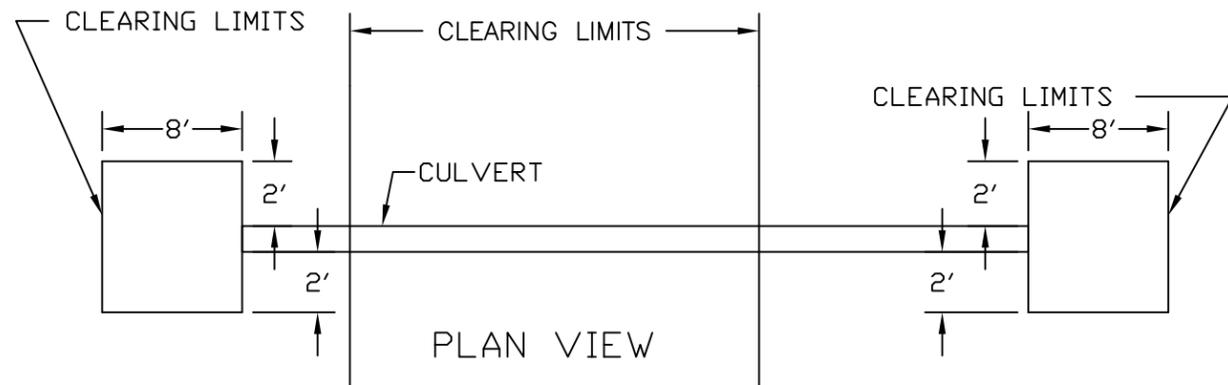
- ① MAXIMUM CLEARING DISTANCE MEASURED FROM CUTSLOPE SIDE
- ② CUT BRUSH AND SMALL TREES AND LIMB LIVE TREES IN ACCORDANCE WITH SPECIFICATION 230.02
- ③ STUMPS MAY BE GRUBBED FROM THIS AREA TO FACILITATE OPERATIONS (OPTIONAL)
- ④ MAXIMUM CLEARING DISTANCE MEASURED FROM ROAD CENTERLINE



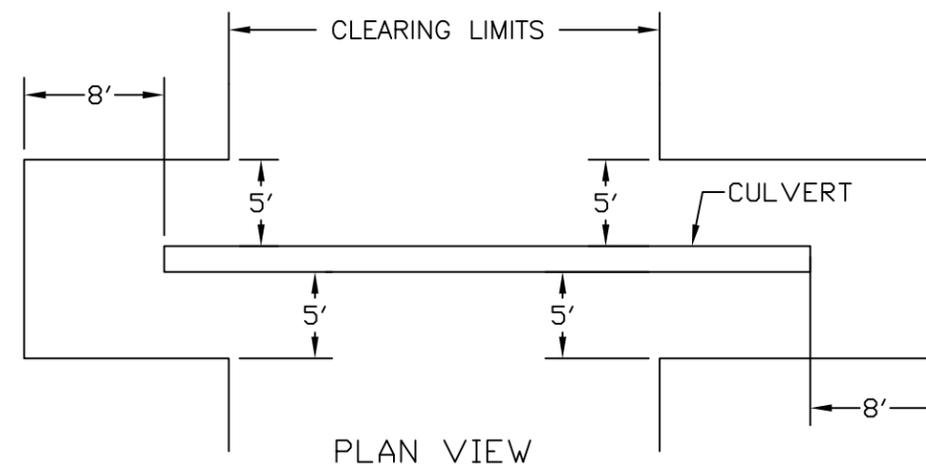
DITCH SECTION



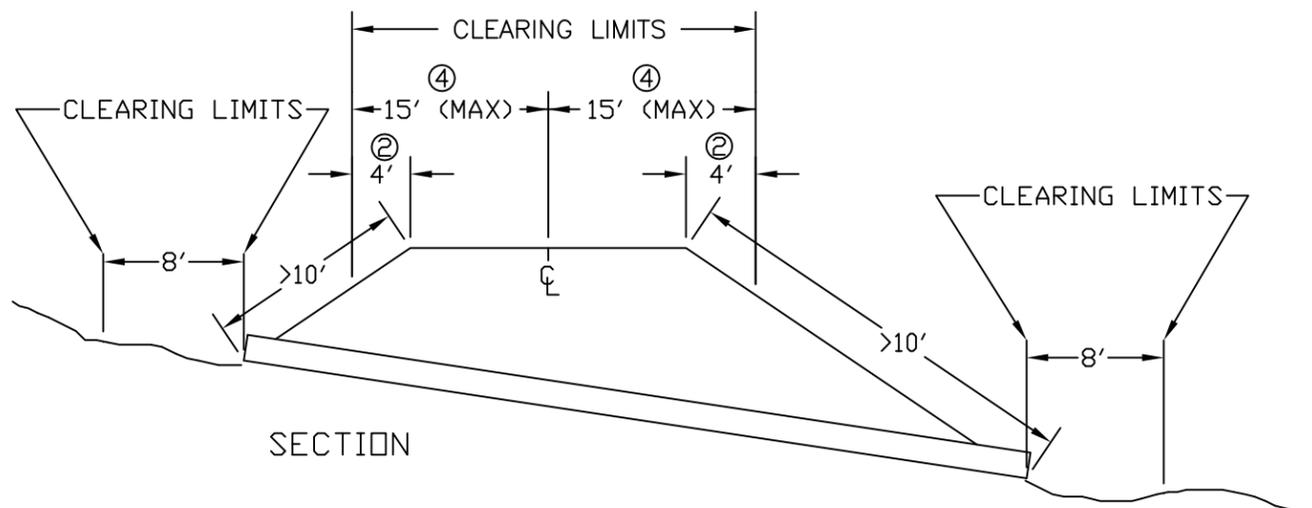
NO DITCH SECTION



PLAN VIEW

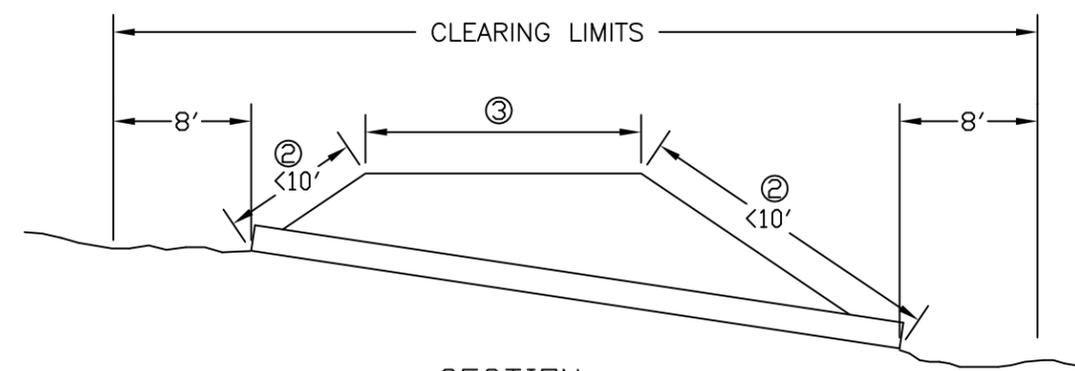


PLAN VIEW



SECTION

THROUGH FILL CULVERT - SLOPES > 10'



SECTION

THROUGH FILL CULVERT - SLOPES < 10'

LOW WATER FORD AND SIGN TYPICALS

Notes:

- Signs shall be sized, manufactured and installed in accordance with the following references:
 - EM 7100-15 "Sign and Poster Guidelines for the Forest Service." Dec. 2005
 - 7100-Engineering "Sign Installation Guide" March 2010.
 - MUTCD "Manual on Uniform Traffic Control Devices". 2009 Edition with Revision Numbers 1 and 2 incorporated, dated May 2012.
 - FP- 03 with FS Supplements.
- All roads requiring signing on this contract are ML2, low volume roads, with speed limits up to 15 mph.
- Removal and disposal of all sign and post material will be paid under Pay Item 203-04.
- All HDO plywood signs shall be fully retroreflective, using Type III or IV High intensity sheeting, with a white legend on a brown background. Use U.S. Forest Service brown, Federal Standard 595C #20059.
- All sign areas shall be brushed so signs are clearly visible and provide adequate time for proper viewer response. (Paid indirectly under Pay Items 633)
- Further information about Forest Service signs may be obtained from the following sources:

P&M Signs, Inc.
866-767-4461
www.pmsignsinc.com

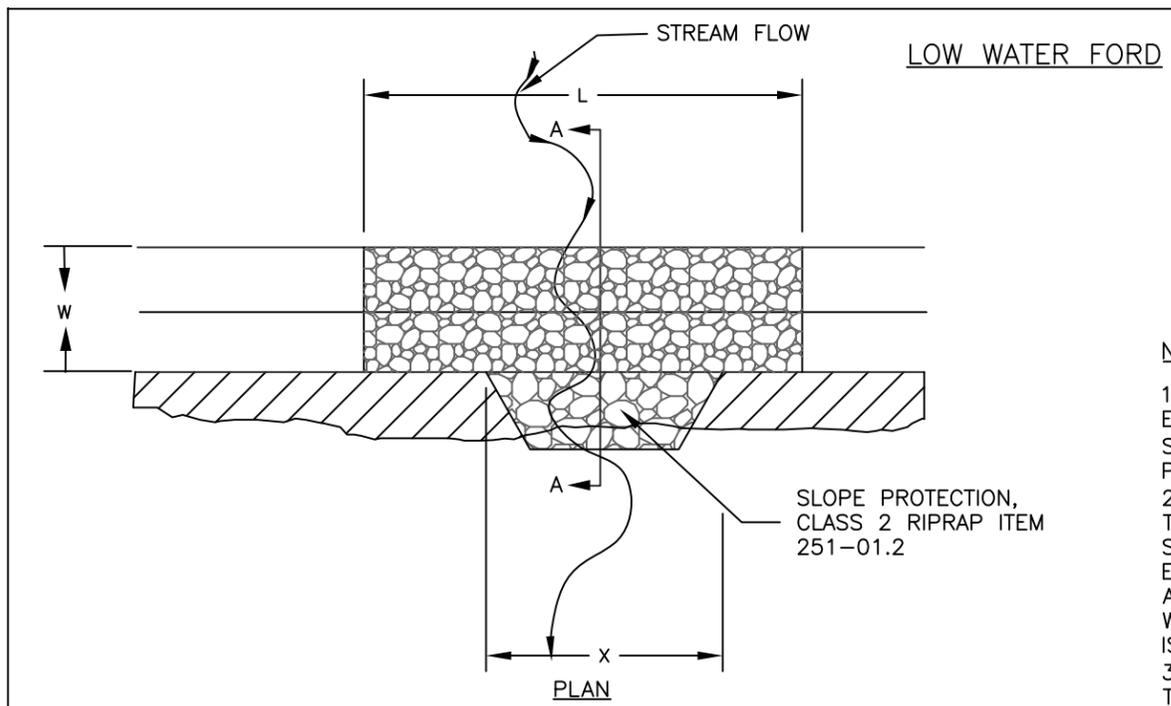
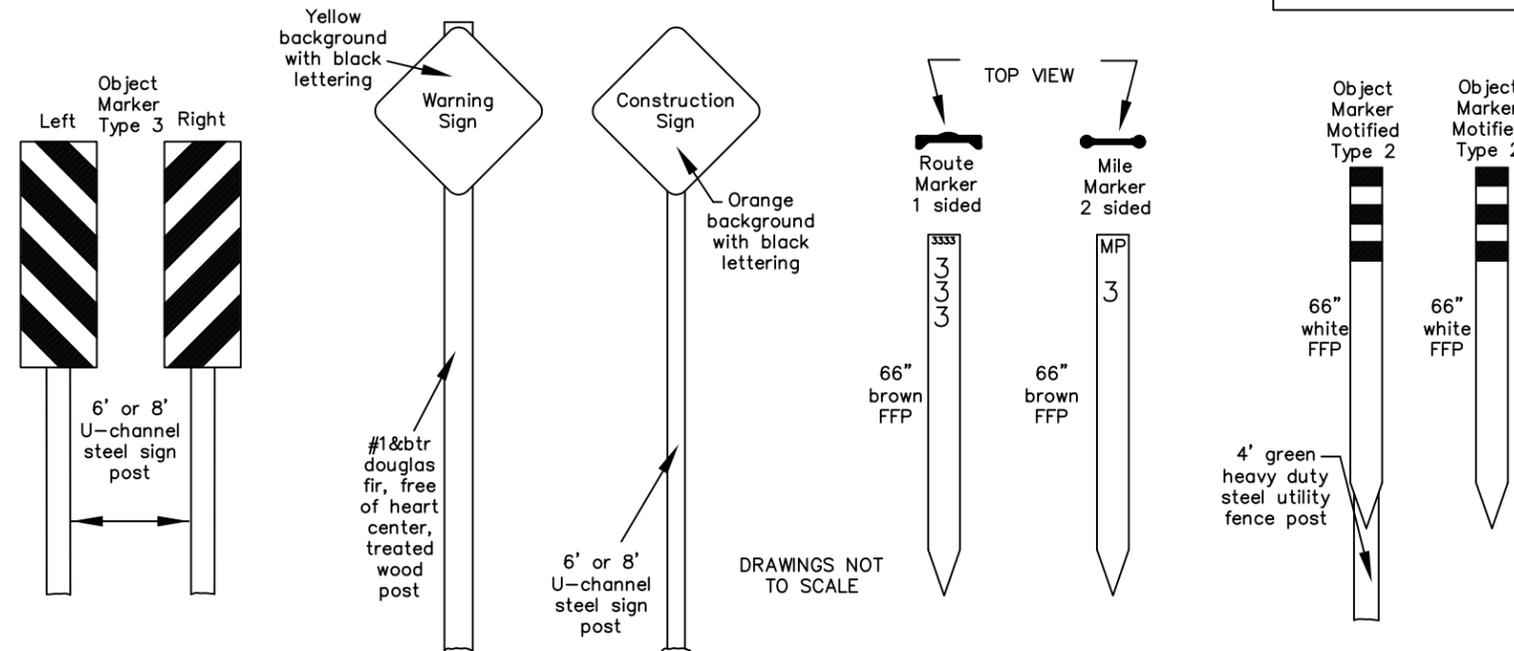
Rockart Signs & Markers
480-854-3400
www.rockartsigns.com

TAPCO
800-236-0112
www.tapconet.com

Wood Product Signs
970-641-1675
www.woodproductsigns.com

7. Acronyms used:

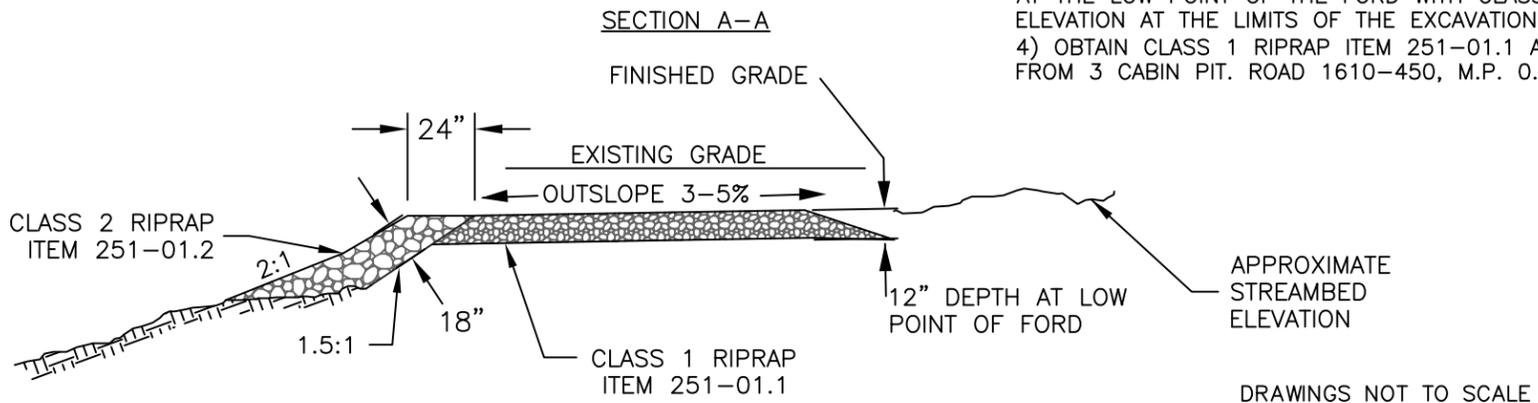
- FFP = Flexible Fiberglass Post
- HDO = High Density Overlay
- MP = Milepoint
- ML = Maintenance Level designation of F.S. Roads
- OM = Object Marker - Type 3 or Modified Type 2



	CLASS 1 RIPRAP		CLASS 3 RIPRAP
LOCATION	L	W	X
1610-434 M.P. 0.58	20'	14'	8'

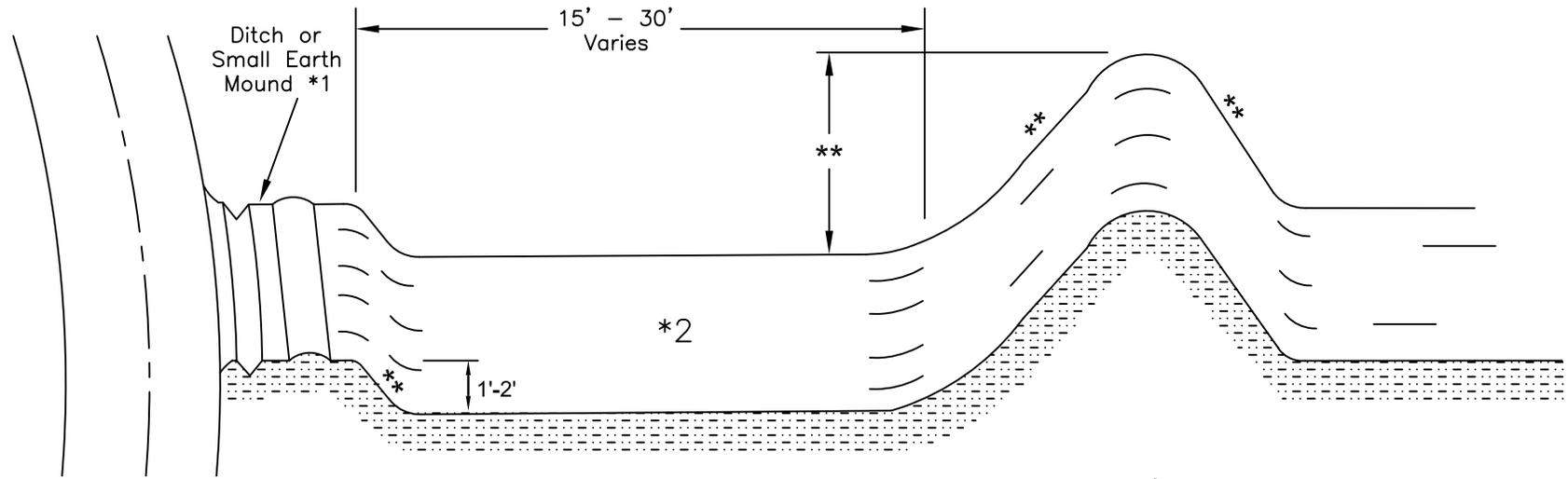
NOTES:

- LOW WATER FORD LOCATIONS SHALL BE EXCAVATED 2 FEET DEEPER THAN THE EXISTING GRADE AT THE LOW POINT OF THE FORD CROSSING. THE EXCAVATION SHALL BE 10' EACH SIDE OF THE LOW POINT AND SHALL TAPER FROM THE LOW POINT TO THE EXISTING ROAD SURFACE.
- EXCAVATED MATERIAL FROM LOW WATER FORD LOCATIONS SHALL BE HAULED TO THE DISPOSAL AREA LOCATED AT 3 CABIN PIT. ROAD 1610-450, M.P. 0.1. THE SPECIFIC LOCATION FOR THE WASTE STOCKPILE SHALL BE DESIGNATED BY THE ENGINEER. DISPOSE OF MATERIAL IN AREA FLAGGED OR IDENTIFIED BY ER. SPREAD AND SHAPE WASTE TO DRAIN AND TO FIT EXISTING GROUND. FINISH SLOPES ON WASTE NO STEEPER THAN 1.5H:1V. DISPOSAL AND PLACEMENT OF EXCESS MATERIAL IS INDIRECTLY PAID TO ITEM 204-20.
- FINISHED GRADE AT THE LOW POINT OF THE FORD SHALL BE 1' LOWER THAN THE EXISTING ROAD GRADE. CREATE A SMOOTH TRANSITION FROM DESIGN GRADE AT THE LOW POINT OF THE FORD WITH CLASS 1 RIPRAP TO THE EXISTING ROADWAY ELEVATION AT THE LIMITS OF THE EXCAVATION.
- OBTAIN CLASS 1 RIPRAP ITEM 251-01.1 AND CLASS 2 RIPRAP ITEM 251-01.2 FROM 3 CABIN PIT. ROAD 1610-450, M.P. 0.1. RIPRAP WILL REQUIRE SORTING.



ROAD CLOSURE – EARTH MOUND TYPICAL

BENNY TIMBER SALE	SHEET 12
GCTVJ 'O QWPF 'DCTTKGT	OF 27

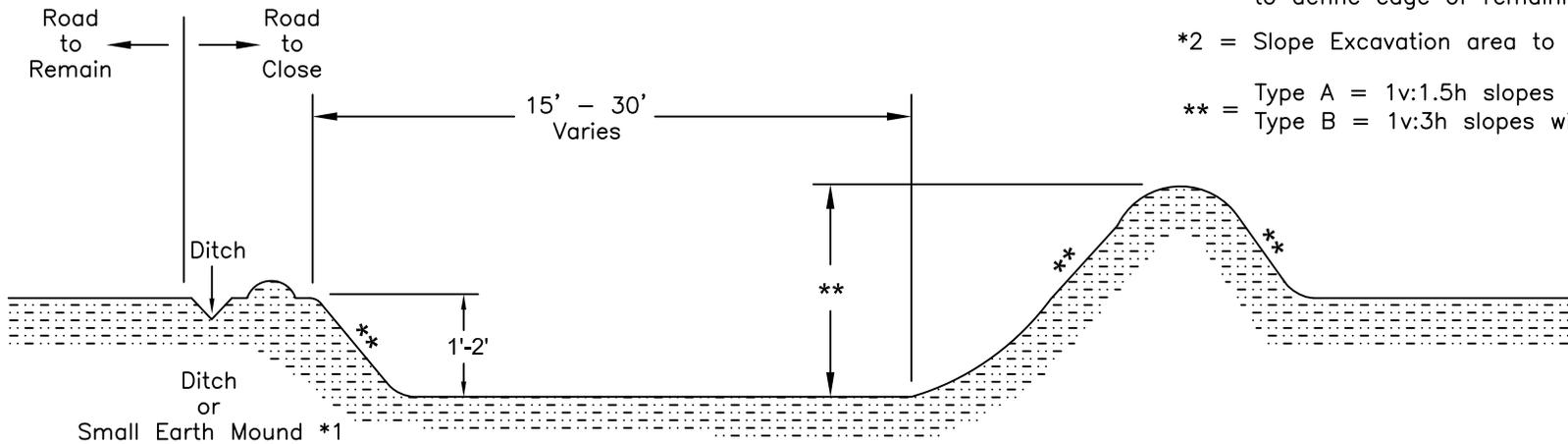


Isometric View

*1 = Construct ditch line or small earth mound across closed road entrance to define edge of remaining road.

*2 = Slope Excavation area to drain

** = Type A = 1v:1.5h slopes with 5' height.
 ** = Type B = 1v:3h slopes with 4' height.



Profile View

3100-000 & 3100-850 Intersection

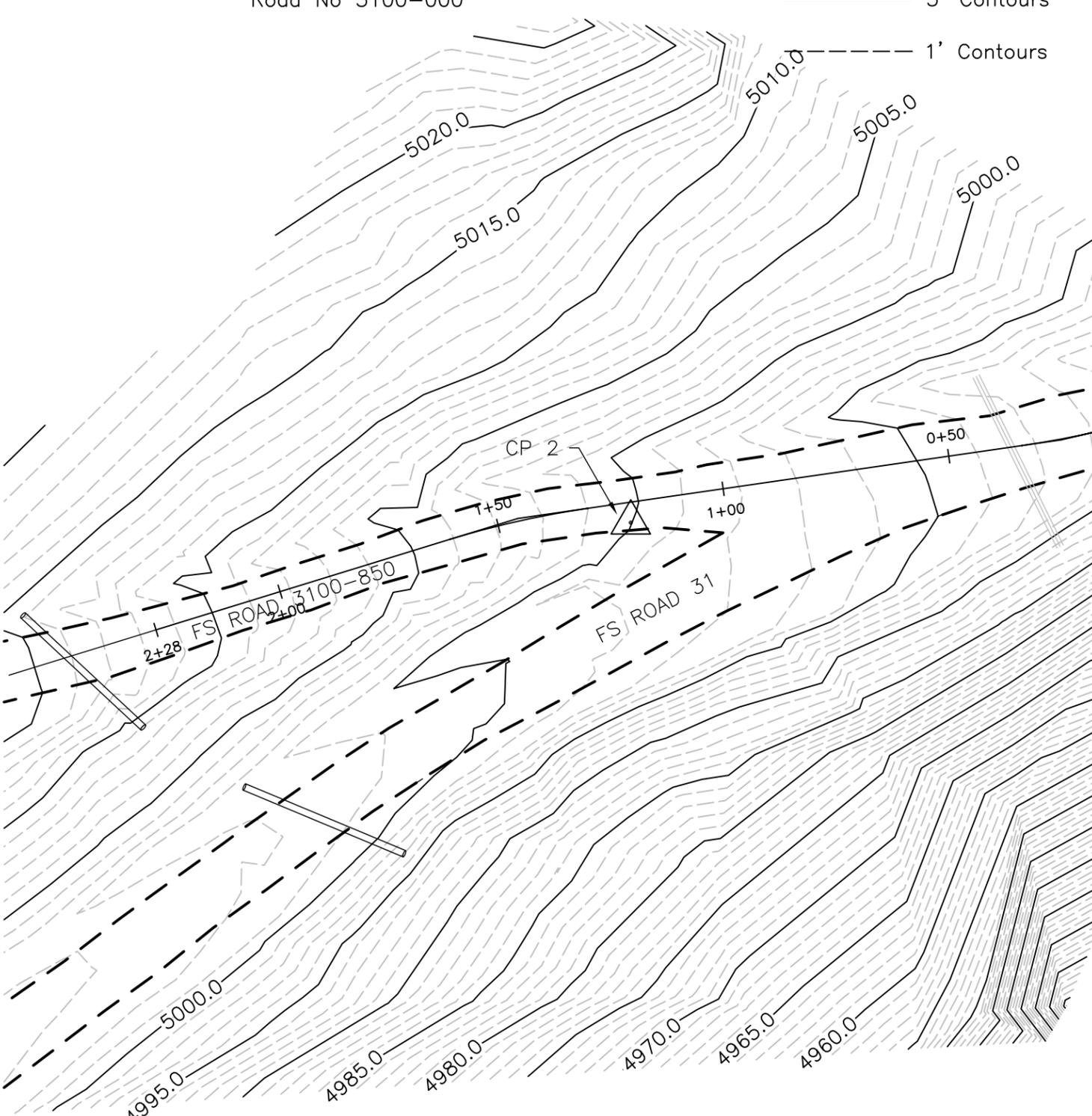
Benny Timber Sale

Umpqua National Forest
 Tiller Ranger District
 Sec. 24, T. 31S, R. 1W W.M.
 Road No 3100-000

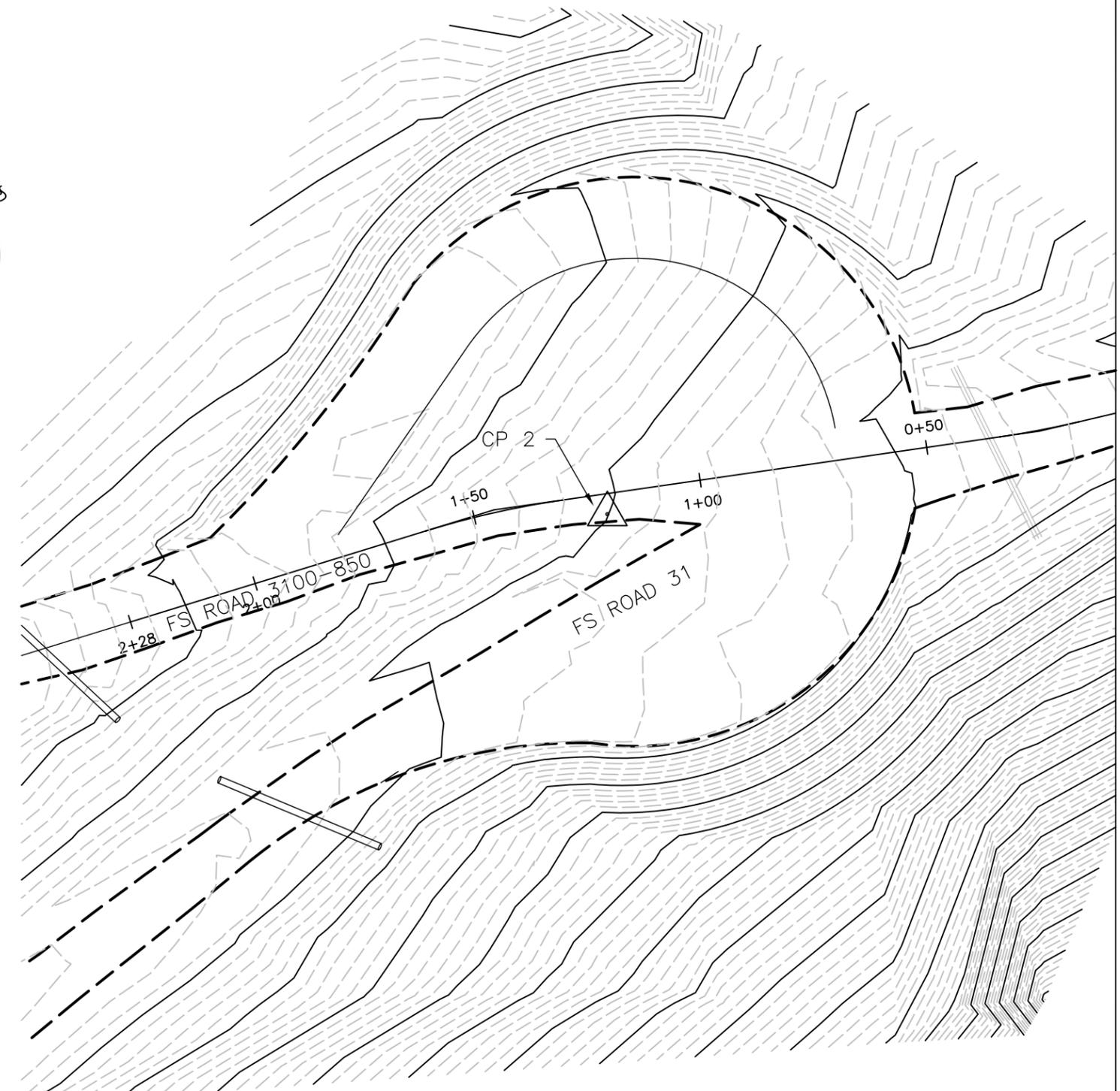
CONTROL POINTS				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
1	10089.60	5275.76	4977.08	CP
2	10000.00	5000.00	5000.00	CP
3	9948.65	4757.99	5027.82	CP

————— 5' Contours

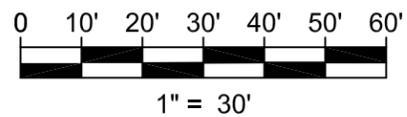
- - - - - 1' Contours



Existing Site Plan



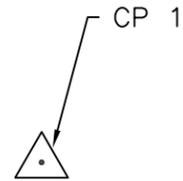
Proposed Site Plan



PROJECT NAME: 31 & 3100-850 INTERSECTION	SHEET TITLE: EXISTING AND PROPOSED PLAN VIEW	SHT. 13 OF 27
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3100-000 & 3100-850 Intersection
 Benny Timber Sale
 Umpqua National Forest
 Tiller Ranger District
 Sec. 24, T. 31S, R. 1W W.M.
 Road No 3100-000

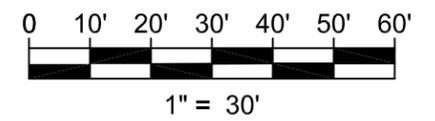
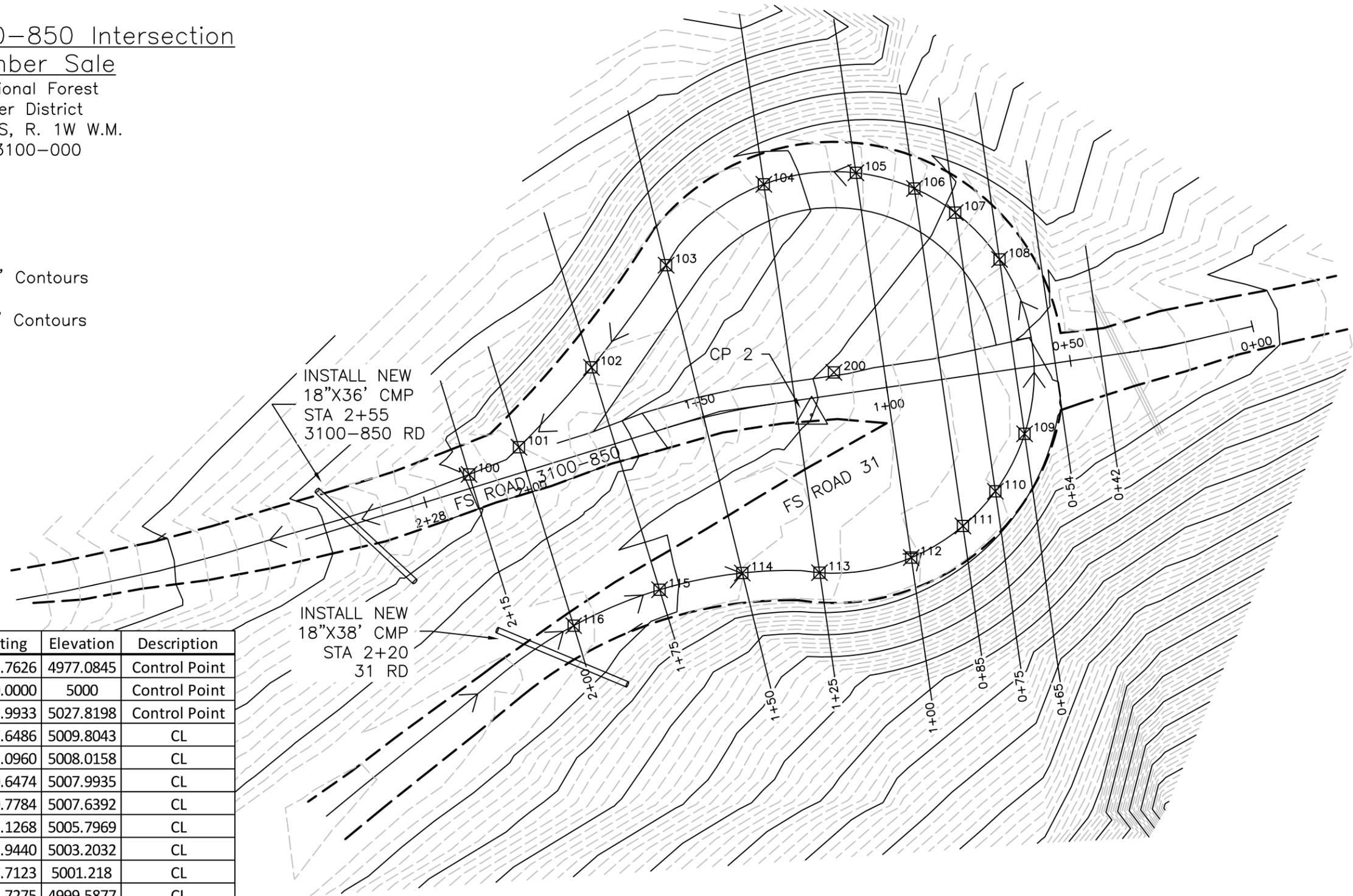
————— 5' Contours
 - - - - - 1' Contours



Point #	Northing	Easting	Elevation	Description
1	10089.6007	5275.7626	4977.0845	Control Point
2	10000.0000	5000.0000	5000	Control Point
3	9948.6482	4757.9933	5027.8198	Control Point
100	9983.9979	4907.6486	5009.8043	CL
101	9991.3029	4921.0960	5008.0158	CL
102	10012.7884	4940.6474	5007.9935	CL
103	10040.2640	4960.7784	5007.6392	CL
104	10062.0096	4987.1268	5005.7969	CL
105	10065.1087	5011.9440	5003.2032	CL
106	10060.8881	5027.7123	5001.218	CL
107	10054.4062	5038.7275	4999.5877	CL
108	10041.8186	5050.6665	4997.2578	CL
109	9994.9127	5057.4215	4995.6638	CL
110	9979.4673	5049.5477	4996.0331	CL
111	9970.1352	5040.7872	4996.4631	CL
112	9961.6394	5026.8571	4997.1113	CL
113	9957.5752	5002.1227	4998.2734	CL
114	9957.4938	4981.3136	4999.0285	CL
115	9952.9950	4959.0245	5000.2717	CL
116	9943.3282	4935.8384	5001.2465	CL
200	10011.4339	5006.0261	4999.5697	Center 54' Rad.

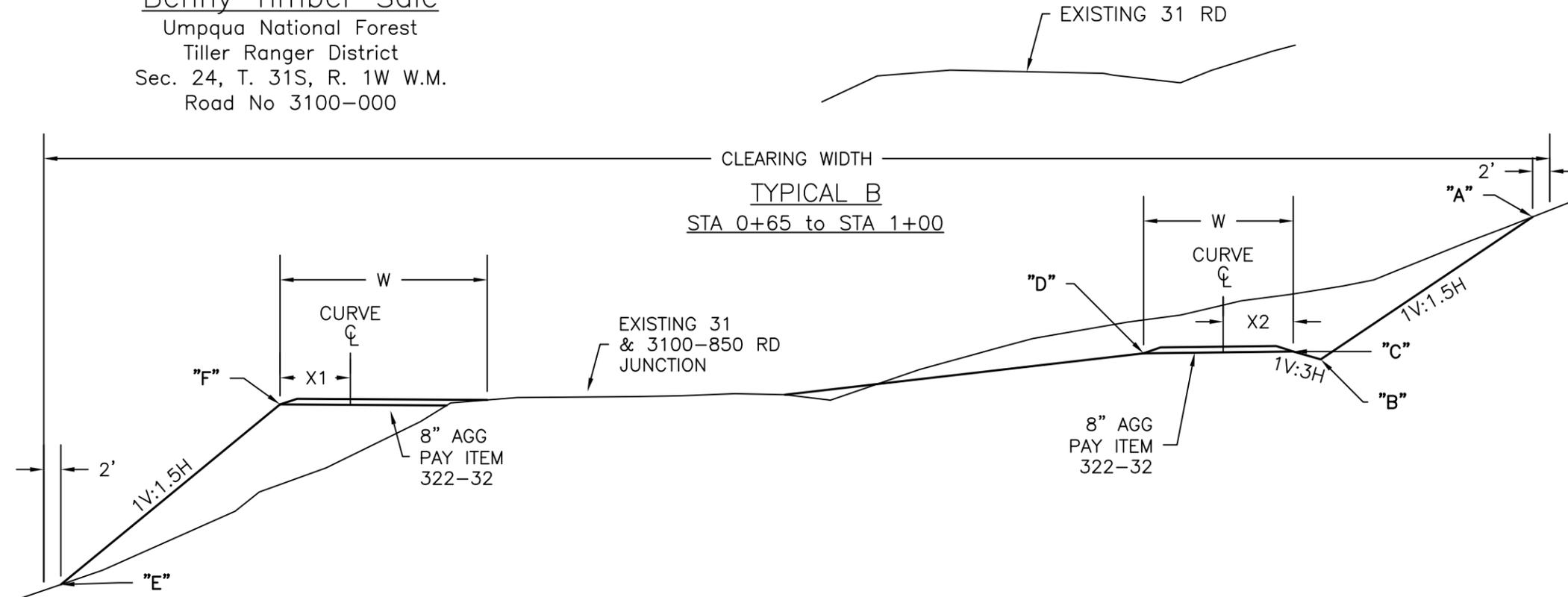
INSTALL NEW
 18"X36' CMP
 STA 2+55
 3100-850 RD

INSTALL NEW
 18"X38' CMP
 STA 2+20
 31 RD



3100-000 & 3100-850 Intersection
 Benny Timber Sale
 Umpqua National Forest
 Tiller Ranger District
 Sec. 24, T. 31S, R. 1W W.M.
 Road No 3100-000

TYPICAL A
 STA 0+00 to STA 0+54



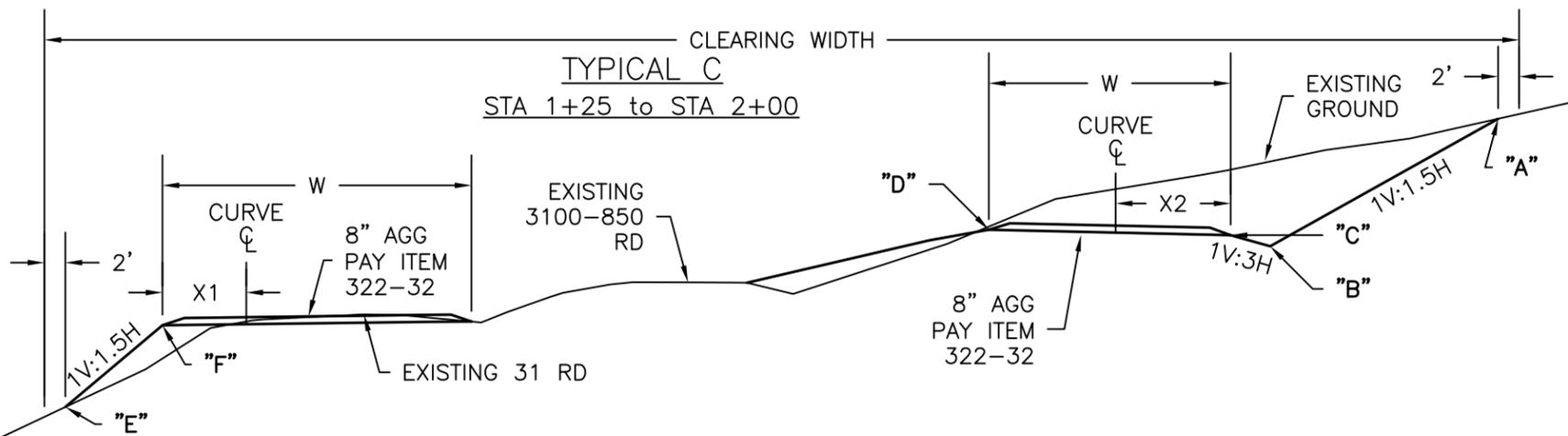
"A"				
P-Line Sta	Point #	Northing	Easting	Elevation
0+54	300	10060.2876	5058.9778	5002.58
0+65	301	10073.6140	5046.0741	5005.64
0+75	302	10081.0288	5034.9016	5007.78
0+85	303	10086.9362	5023.9464	5010.37
1+00	304	10099.8564	5006.9284	5018.99
1+25	305	10102.2704	4981.3218	5024.36
1+50	306	10074.3885	4952.6541	5018.38
1+75	307	10039.4727	4932.4474	5015.32
2+00	308	10012.0820	4914.7107	5012.69
2+15	309	9998.0903	4903.3180	5011.57

"B"				
P-Line Sta	Point #	Northing	Easting	Elevation
0+54	310	10043.5349	5061.3933	4995.60
0+65	311	10059.6743	5048.0840	4998.01
0+75	312	10067.5227	5036.8489	4999.47
0+85	313	10072.2145	5026.0690	5000.76
1+00	314	10075.2793	5010.4720	5002.33
1+25	315	10072.1105	4985.6704	5004.52
1+50	316	10053.4539	4957.7527	5006.35
1+75	317	10024.3045	4937.1085	5006.85
2+00	318	10002.1649	4917.7582	5006.62
2+15	319	9993.5927	4904.7001	5008.51

P-Line Sta	W	Curve L-Line Centerline					X1	W	Curve L-Line Centerline					X2
		Point #	Northing	Easting	Elevation	Point #			Northing	Easting	Elevation			
0+65	13.69	109	9994.9127	5057.4215	4995.664	13.29	35.56	108	10041.8186	5050.6665	4997.258	13.34		
0+75	14.62	110	9979.4673	5049.5477	4996.033	9.46	26.13	107	10054.4062	5038.7275	4999.588	9.46		
0+85	16.82	111	9970.1352	5040.7872	4996.463	8.09	20.44	106	10060.8881	5027.7123	5001.218	8.08		
1+00	19.53	112	9961.6394	5026.8571	4997.111	7.23	17.61	105	10065.1087	5011.944	5003.203	7.2		

"C"				
P-Line Sta	Point #	Northing	Easting	Elevation
0+54	320	10033.7233	5062.8080	4995.47
0+65	321	10054.9597	5048.7637	4998.55
0+75	322	10063.7516	5037.3927	5000.16
0+85	323	10068.8775	5026.5502	5001.51
1+00	324	10072.2381	5010.9105	5003.20
1+25	325	10069.0897	4986.1060	5005.55
1+50	326	10049.8371	4958.6335	5007.42
1+75	327	10020.8251	4938.1778	5007.87
2+00	328	9998.8967	4918.7625	5007.66
2+15	329	9990.7160	4905.5841	5009.56

"D"				
P-Line Sta	Point #	Northing	Easting	Elevation
0+75	330	10037.9923	5041.1068	4997.83
0+85	331	10048.6722	5029.4635	5000.40
1+00	332	10054.8076	5013.4237	5003.03
1+25	333	10051.8335	4988.5940	5006.21
1+50	334	10027.2525	4964.1339	5007.92
1+75	335	10001.4033	4944.1460	5007.17



"E"				
P-Line Sta	Point #	Northing	Easting	Elevation
0+65	336	9934.7387	5066.0977	4965.77
0+75	337	9936.4418	5055.7487	4972.17
0+85	338	9931.9496	5046.2930	4973.17
1+00	339	9929.0350	5031.5581	4975.99
1+25	340	9932.3526	5005.8212	4982.77
1+50	341	9941.8186	4984.9410	4991.25

"F"				
P-Line Sta	Point #	Northing	Easting	Elevation
0+65	342	9981.7542	5059.3188	4995.71
0+75	343	9970.1082	5050.8945	4996.09
0+85	344	9962.1281	5041.9417	4996.44
1+00	345	9954.4863	5027.8884	4997.05
1+25	346	9950.4992	5003.2048	4998.09
1+50	347	9950.6110	4982.7996	4998.84
1+75	348	9946.3028	4961.0781	5000.13
2+00	349	9936.5007	4937.9365	5001.16

P-Line Sta	W	Curve L-Line Centerline					X1	W	Curve L-Line Centerline					X2
		Point #	Northing	Easting	Elevation	Point #			Northing	Easting	Elevation			
1+25	19.28	101	9991.3029	4921.0960	5008.016	7.18	17.45	116	9943.3282	4935.8384	5001.247	7.16		
1+50	23.09	102	10012.7884	4940.6474	5007.994	7.04	23.25	115	9952.9950	4959.0245	5000.272	9.81		
1+75	15.00	103	10040.2640	4960.7784	5007.639	7.00	20.33	114	9957.4938	4981.3136	4999.029	8.41		
2+00	13.05	104	10062.0096	4987.1268	5005.797	7.14	19.18	113	9957.5752	5002.1227	4998.273	7.95		

PROJECT NAME:
 31 & 3100-850
 INTERSECTION

SHEET TITLE:
 TYPICAL DETAILS

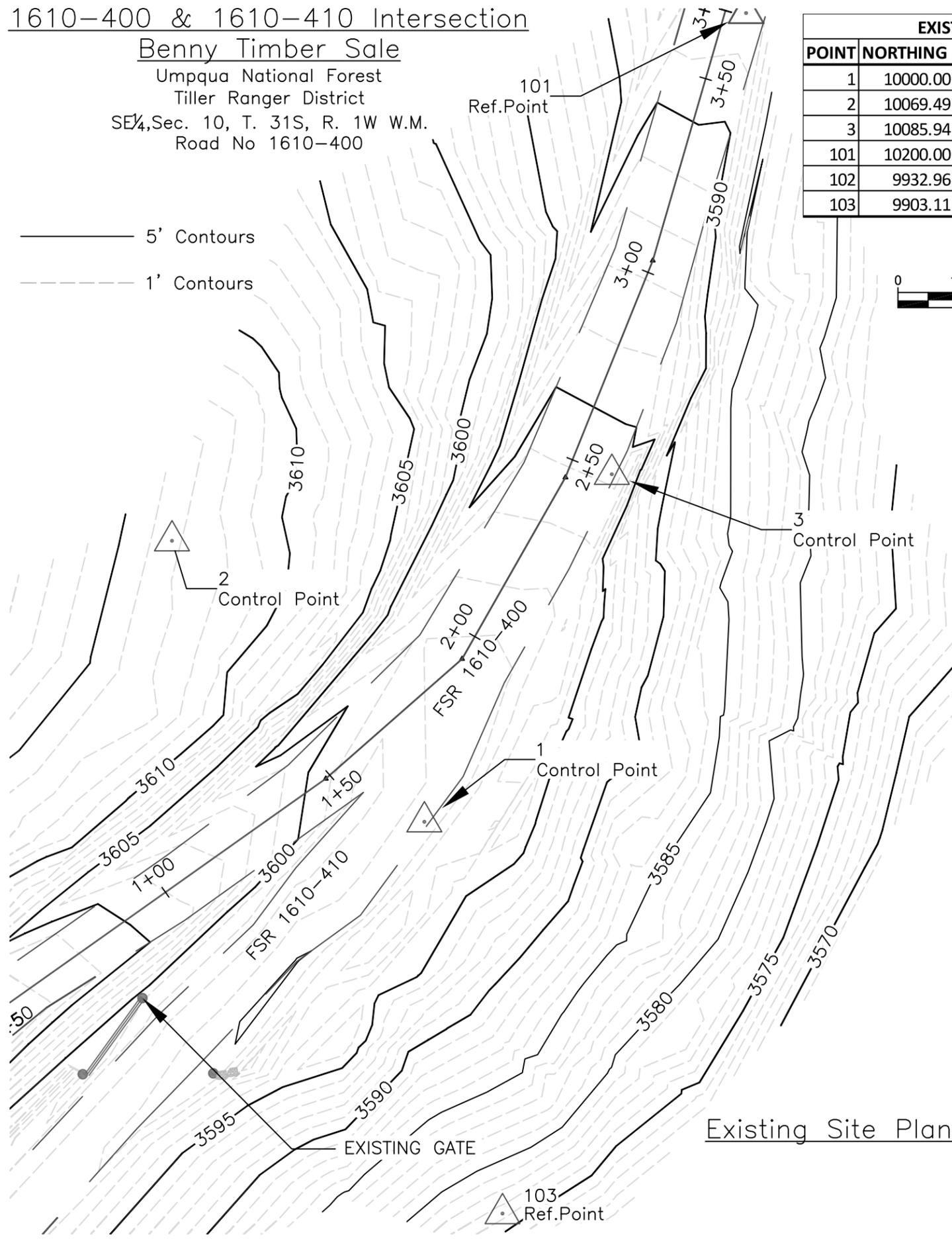
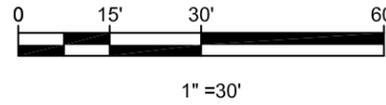
1610-400 & 1610-410 Intersection

Benny Timber Sale

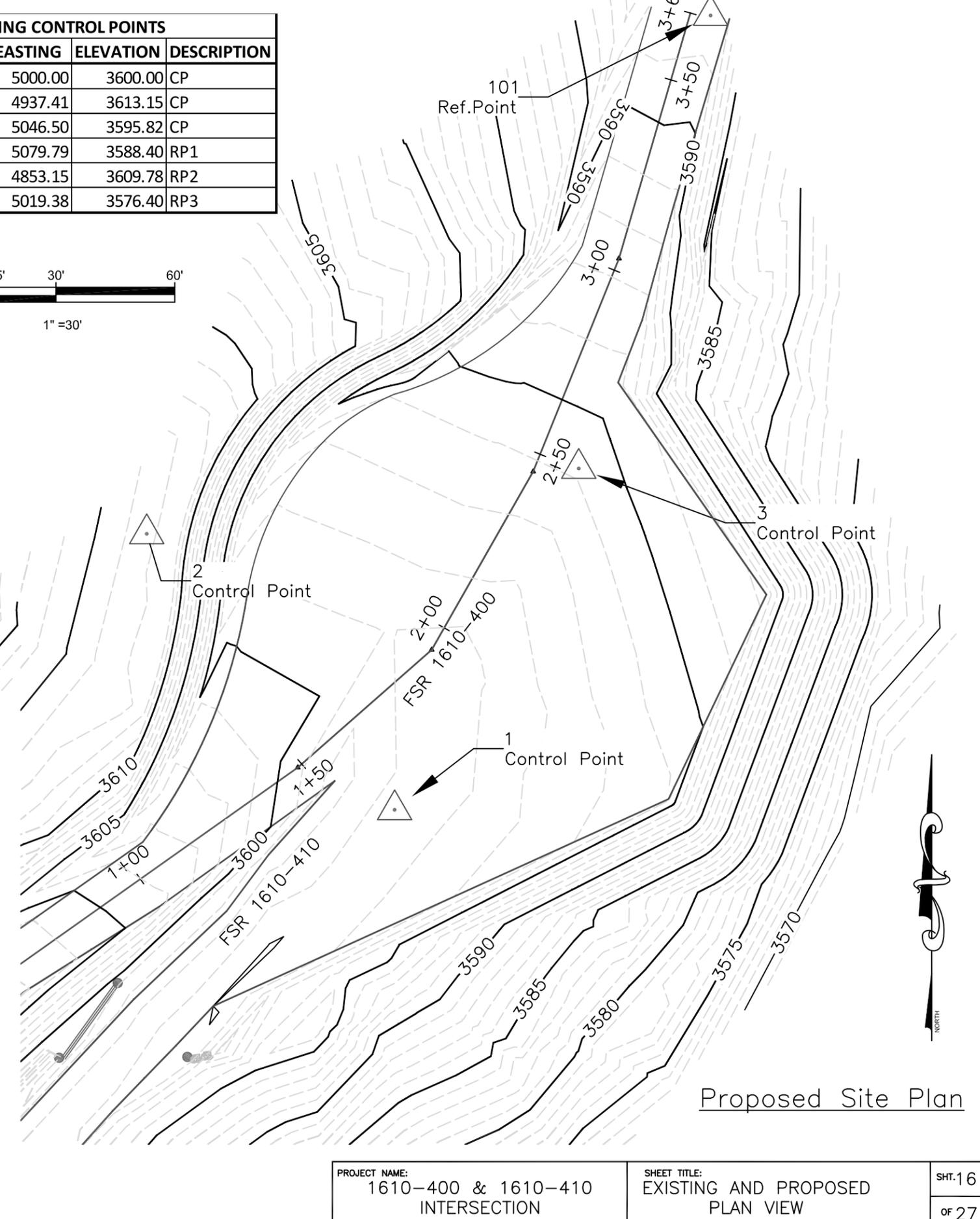
Umpqua National Forest
 Tiller Ranger District
 SE¼, Sec. 10, T. 31S, R. 1W W.M.
 Road No 1610-400

— 5' Contours
 - - - 1' Contours

EXISTING CONTROL POINTS				
POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
1	10000.00	5000.00	3600.00	CP
2	10069.49	4937.41	3613.15	CP
3	10085.94	5046.50	3595.82	CP
101	10200.00	5079.79	3588.40	RP1
102	9932.96	4853.15	3609.78	RP2
103	9903.11	5019.38	3576.40	RP3



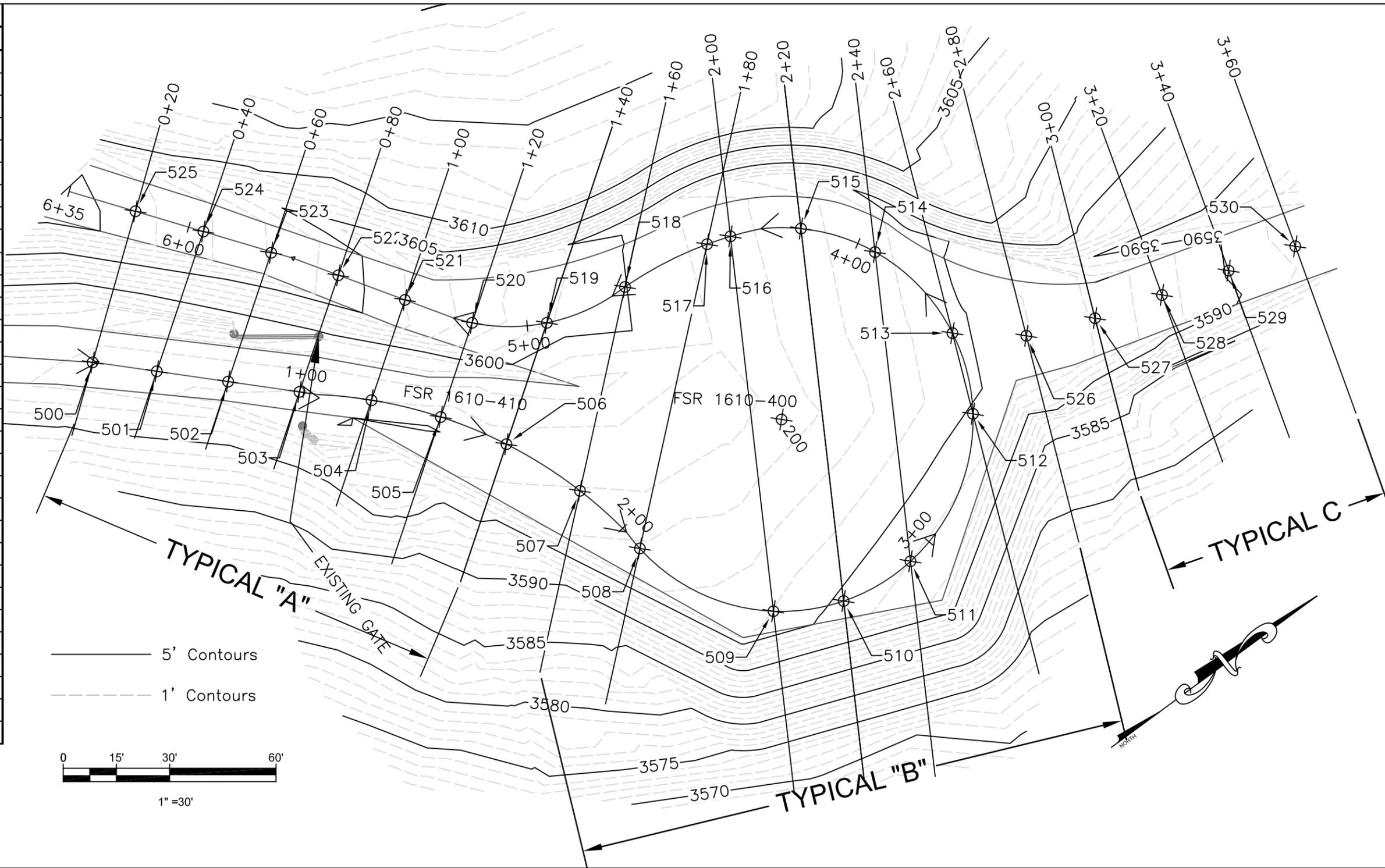
Existing Site Plan



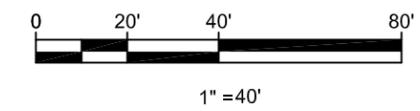
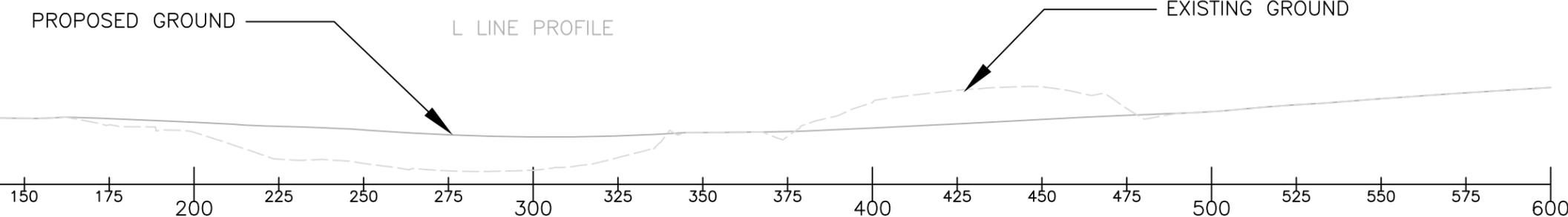
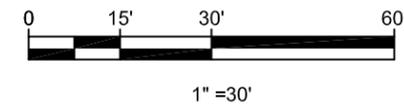
Proposed Site Plan



CONSTRUCTION CONTROL POINTS				
PT #	NORTHING	EASTING	ELEV.	DESCRIPTION
200	10047.76	5026.11	3598.50	CENTER 54' RAD
500	9900.67	4898.19	3598.16	L LINE CL
501	9913.77	4910.93	3598.61	L LINE CL
502	9928.28	4925.17	3598.69	L LINE CL
503	9942.79	4939.41	3599.06	L LINE CL
504	9957.76	4953.32	3599.00	L LINE CL
505	9970.68	4968.67	3599.53	L LINE CL
506	9981.11	4985.80	3599.57	L LINE CL
507	9990.07	5008.65	3598.92	L LINE CL
508	9994.09	5031.72	3597.85	L LINE CL
509	10013.98	5068.25	3595.96	L LINE CL
510	10031.64	5077.65	3594.75	L LINE CL
511	10053.46	5079.78	3594.00	L LINE CL
512	10092.20	5056.78	3594.83	L LINE CL
513	10100.98	5035.04	3595.31	L LINE CL
514	10096.88	5003.76	3596.29	L LINE CL
515	10083.96	4986.05	3597.34	L LINE CL
516	10066.63	4976.06	3598.36	L LINE CL
517	10060.02	4973.94	3598.72	L LINE CL
518	10034.25	4969.93	3600.02	L LINE CL
519	10010.52	4965.02	3601.02	L LINE CL
520	9993.52	4952.55	3602.71	L LINE CL
521	9982.07	4936.15	3604.03	L LINE CL
522	9971.03	4919.46	3605.56	L LINE CL
523	9959.49	4903.12	3606.92	L LINE CL
524	9947.65	4887.00	3608.16	L LINE CL
525	9935.57	4871.08	3609.37	L LINE CL
526	10117.32	5047.98	3594.03	P LINE CL
527	10135.87	5055.47	3592.86	P LINE CL
528	10154.97	5061.37	3591.38	P LINE CL
529	10174.17	5066.97	3589.92	P LINE CL



——— 5' Contours
 - - - 1' Contours

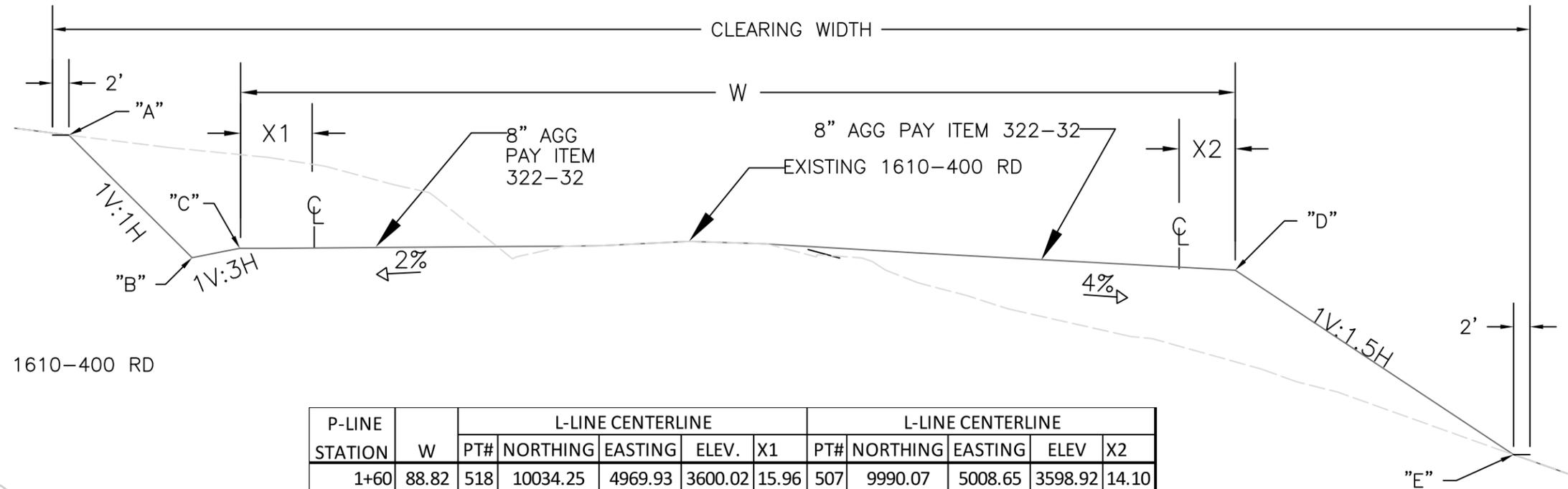


1610-400 & 1610-410 Intersection

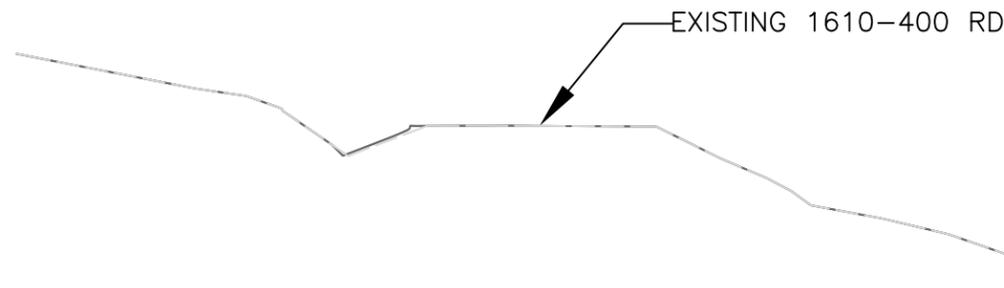
Benny Timber Sale

Umpqua National Forest
Tiller Ranger District
SE 1/4, Sec. 10, T. 31S, R. 1W W.M.
Road No 1610-400

Typical B
STA 1+60 to 2+60

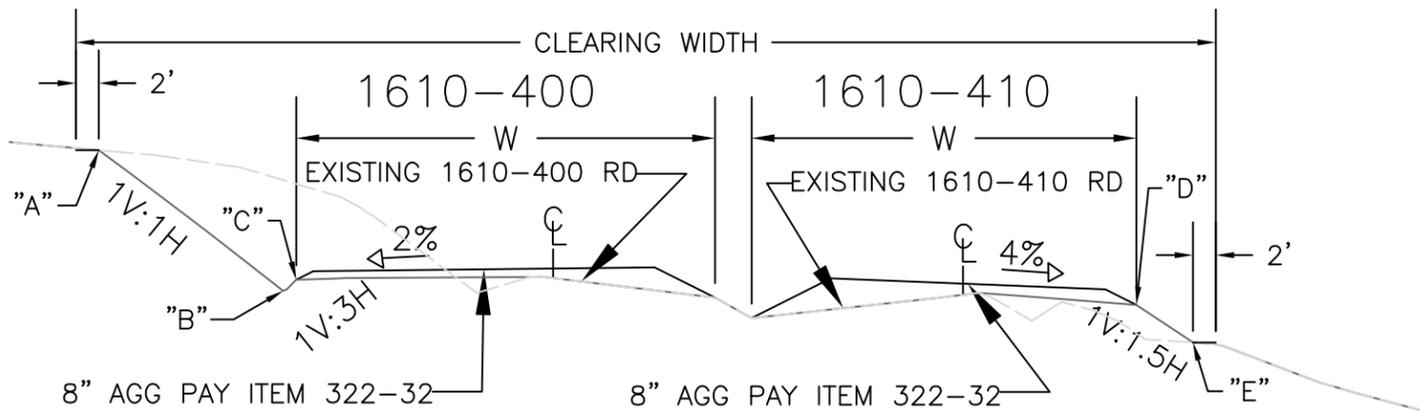


Typical C
STA 2+80 to 3+60



P-LINE STATION	W	L-LINE CENTERLINE					L-LINE CENTERLINE				
		PT#	NORTHING	EASTING	ELEV.	X1	PT#	NORTHING	EASTING	ELEV.	X2
1+60	88.82	518	10034.25	4969.93	3600.02	15.96	507	9990.07	5008.65	3598.92	14.10
1+80	106.49	517	10060.02	4973.94	3598.72	10.85	508	9994.09	5031.72	3597.85	7.98
2+00	121.39	516	10066.63	4976.06	3598.36	9.50	509	10013.98	5068.25	3595.96	5.72
2+20	119.35	515	10083.96	4986.05	3597.34	8.96	510	10031.64	5077.65	3594.75	4.89
2+40	110.37	514	10096.88	5003.76	3596.29	10.40	511	10053.46	5079.78	3594.00	12.44
2+60	67.52	513	10100.98	5035.04	3595.31	28.37	512	10092.20	5056.78	3594.83	15.71

Typical A
STA 0+20 to 1+40



P-LINE STATION	W	PT. #	L-LINE CENTERLINE		
			NORTHING	EASTING	ELEV.
1+40	36.65	518	10010.52	4965.02	3601.02
1+20	24.34	519	9993.52	4952.55	3602.71
1+00	15.77	520	9982.07	4936.15	3604.03
0+80	14.67	521	9971.03	4919.46	3605.56
0+60	13.98	522	9959.49	4903.12	3606.92
0+40	15.15	523	9947.65	4887.00	3608.16
0+20	16.34	524	9935.57	4871.08	3609.37

P-LINE STATION	W	PT. #	L-LINE CENTERLINE		
			NORTHING	EASTING	ELEV.
0+20	16.35	500	9900.67	4898.19	3598.16
0+40	16.09	501	9913.77	4910.93	3598.61
0+60	15.64	502	9928.28	4925.17	3598.69
0+80	19.44	503	9942.79	4939.41	3599.06
1+00	15.13	504	9957.76	4953.32	3599.00
1+20	24.33	505	9970.68	4968.67	3599.53
1+40	33.67	506	9981.11	4985.80	3599.57

"A"				
P-Line Sta	Point #	Northing	Easting	Elevation
1+20	531	10018.0235	4935.2357	3611.02
1+40	532	10042.9898	4942.0869	3612.18
1+60	533	10063.3756	4944.3970	3612.52
1+80	534	10085.5962	4951.5158	3611.95
2+00	535	10081.6883	4949.7041	3612.08
2+20	536	10098.6858	4960.2701	3611.02
2+40	537	10111.7140	4977.7857	3607.49
2+60	538	10117.8297	4993.3011	3604.51
2+80	539	10129.2895	5018.3395	3599.62
3+00	540	10142.6718	5038.6157	3591.22

"B"				
P-Line Sta	Point #	Northing	Easting	Elevation
1+20	541	10008.8894	4941.6876	3601.28
1+40	542	10029.8064	4951.3991	3599.91
1+60	543	10049.2108	4956.8123	3598.71
1+80	544	10073.2473	4962.3395	3597.26
2+00	545	10074.2351	4962.7535	3597.18
2+20	546	10091.1840	4973.4046	3596.00
2+40	547	10104.7626	4989.9565	3594.73
2+60	548	10112.4415	5006.6472	3593.51
2+80	549	10126.1329	5026.1579	3591.79
3+00	550	10142.3112	5039.5088	3590.26

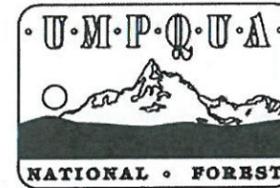
"C"				
P-Line Sta	Point #	Northing	Easting	Elevation
1+20	551	10004.4048	4944.8553	3602.40
1+40	552	10024.8738	4954.8832	3601.03
1+60	553	10044.5195	4960.9241	3599.79
1+80	554	10068.4592	4966.5362	3598.43
2+00	555	10071.3939	4967.7280	3598.29
2+20	556	10088.4460	4978.1985	3597.29
2+40	557	10102.1000	4994.6184	3596.19
2+60	558	10109.8763	5013.0010	3595.20
2+80	559	10123.5404	5032.5794	3593.96
3+00	560	10139.7003	5045.9760	3592.86

"D"				
P-Line Sta	Point #	Northing	Easting	Elevation
1+20	561	9960.4139	4975.9284	3599.29
1+40	562	9968.8238	4994.4742	3598.67
1+60	563	9979.4662	5017.9428	3597.90
1+80	564	9988.0961	5036.9737	3597.27
2+00	565	10011.1432	5073.2181	3595.65
2+20	566	10029.2184	5081.8971	3594.45
2+40	567	10047.2937	5090.5761	3593.25
2+60	568	10086.3231	5071.3400	3593.77

"E"				
P-Line Sta	Point #	Northing	Easting	Elevation
1+20	569	9956.8991	4978.4111	3596.44
1+40	570	9964.7698	4997.3378	3595.40
1+60	571	9970.7409	5025.5905	3590.40
1+80	572	9974.1438	5049.2028	3585.27
2+00	573	9994.3114	5102.6882	3573.23
2+20	574	10012.5668	5111.0517	3572.27
2+40	575	10030.4127	5120.1322	3570.76
2+60	576	10067.6885	5117.4962	3574.65

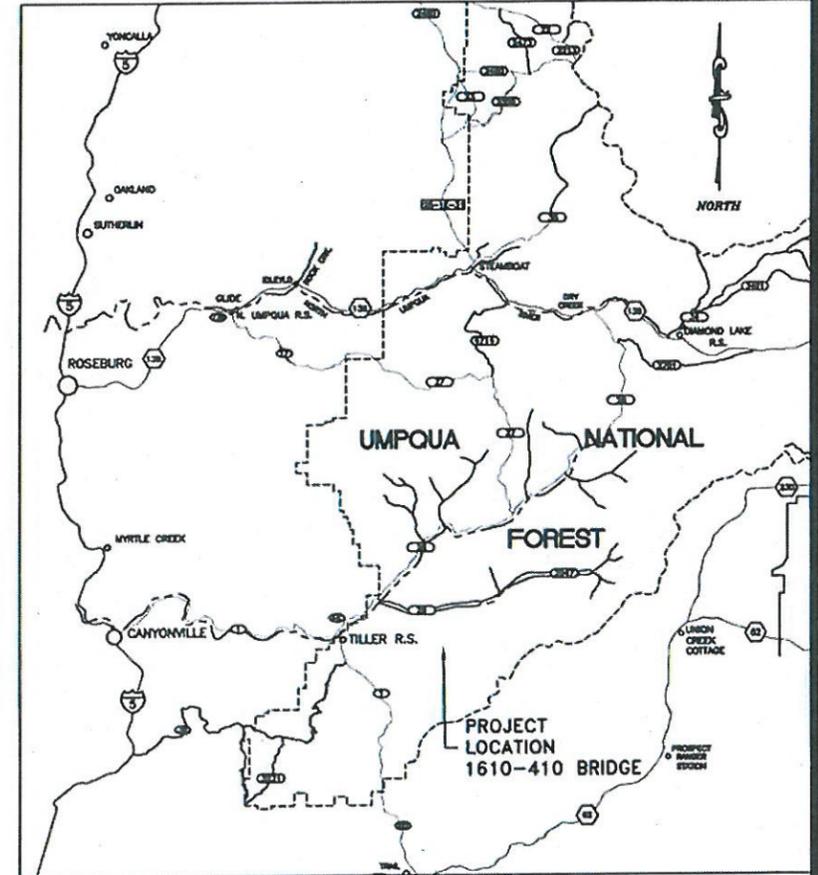
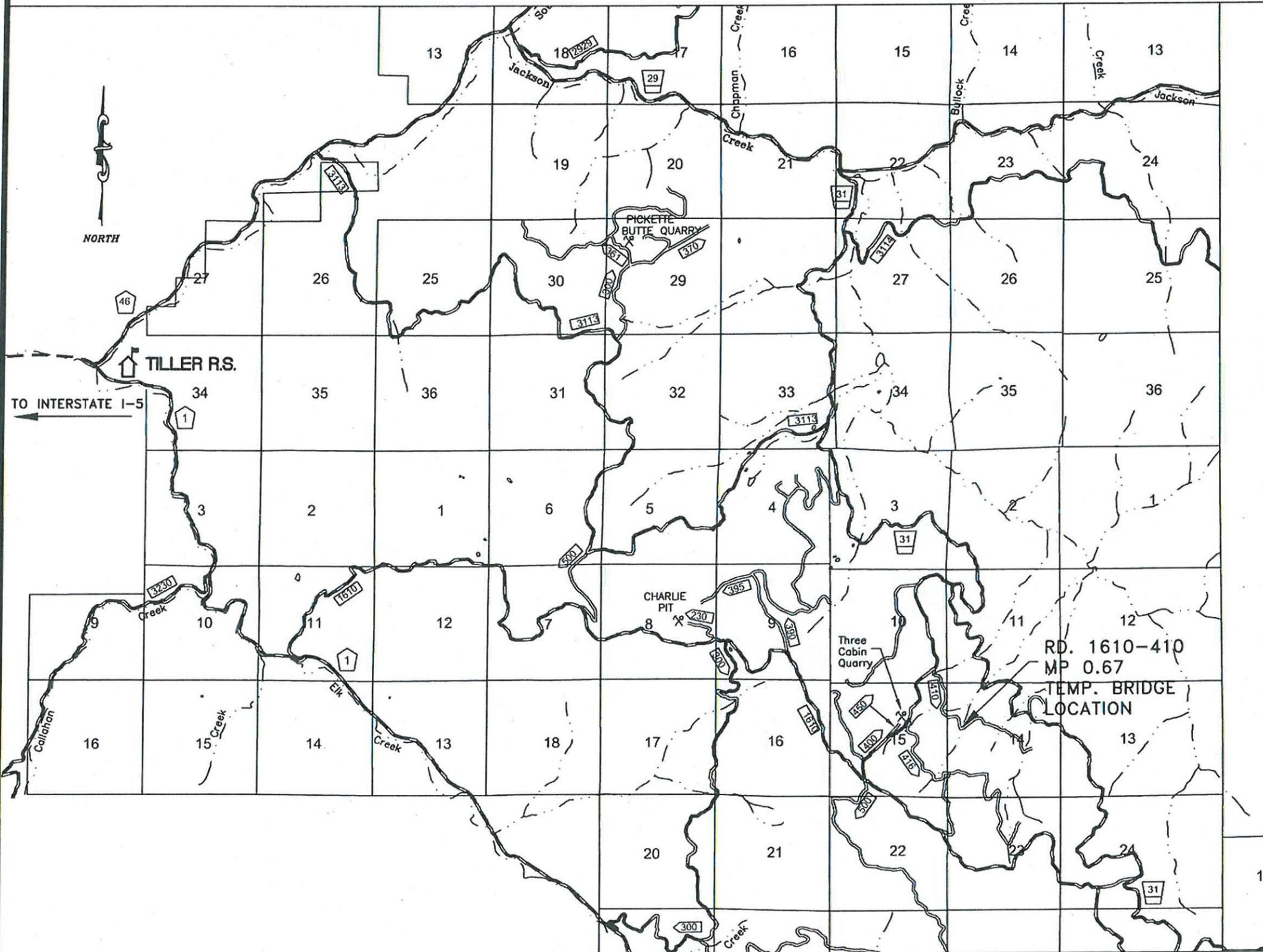


ROAD 1610-410 PORTABLE TEMPORARY FOLDING BRIDGE CONSTRUCTION
 ROAD 1610-410, MP 0.67
 UMPQUA NATIONAL FOREST
 TILLER RANGER DISTRICT
 T31S, R1W, SEC. 14



INDEX OF BRIDGE DRAWINGS

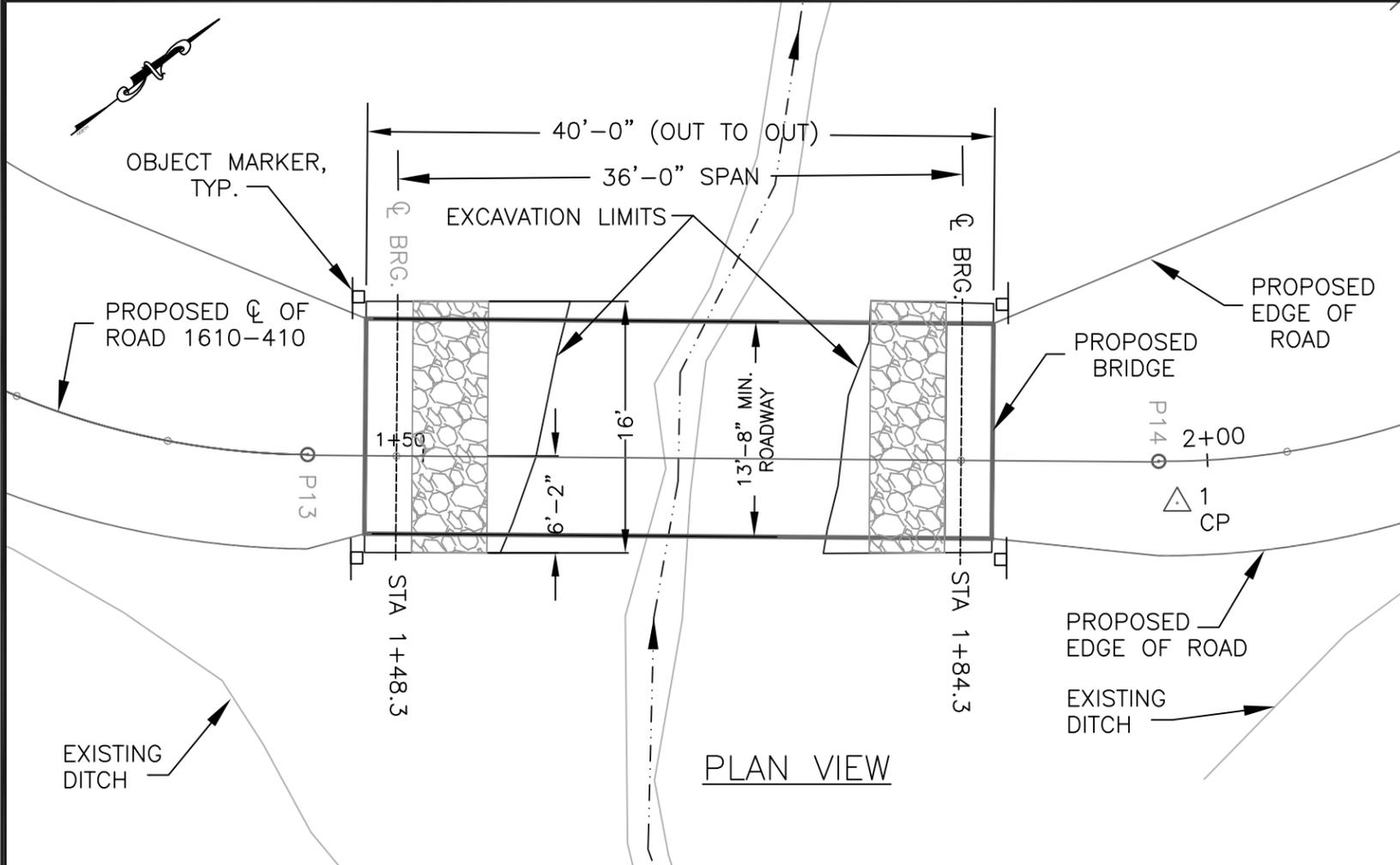
NO.	DESCRIPTION
1	BRIDGE TITLE SHEET
2	BRIDGE GENERAL LAYOUT
3	EXISTING SITE PLAN AND PROFILE
4	CONSTRUCTION STAKING AND ROAD SECTIONS



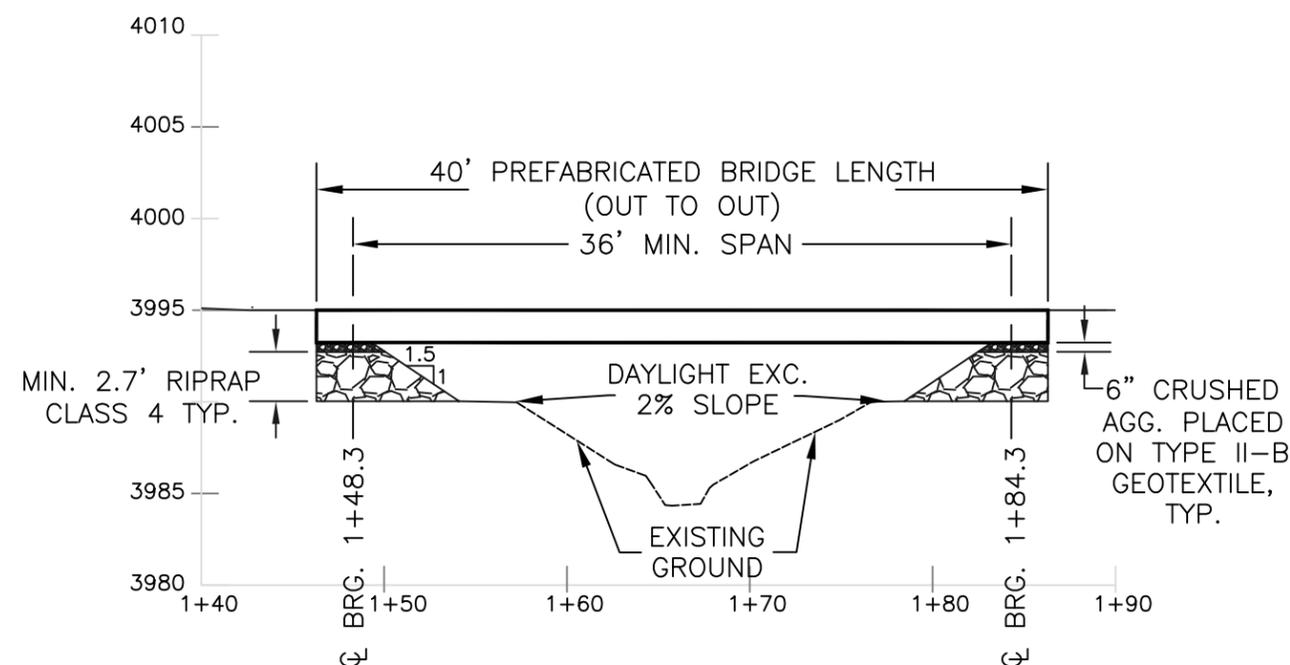
DESIGNED BY:	<i>Julie Jackson-Meritt</i>	7/31/2012
	FOREST BRIDGE ENGINEER	DATE
BRIDGE DESIGN APPROVED BY:	<i>Kathleen Van Hecke</i>	8/2/2012
	REGIONAL STRUCTURES ENGINEER	DATE
PROJECT APPROVED BY:	<i>Jose L. Alvarez</i>	8/6/12
	DIRECTOR OF ENGINEERING	DATE
RECOMMENDED BY:		
	ASSISTANT FOREST ENGINEER	DATE
APPROVED BY:	<i>John P. Bush</i>	7/31/12
	FOR REALM STAFF OFFICE / FOREST ENGINEER	DATE
APPROVED BY:		
	DISTRICT RANGER	DATE

GENERAL NOTES

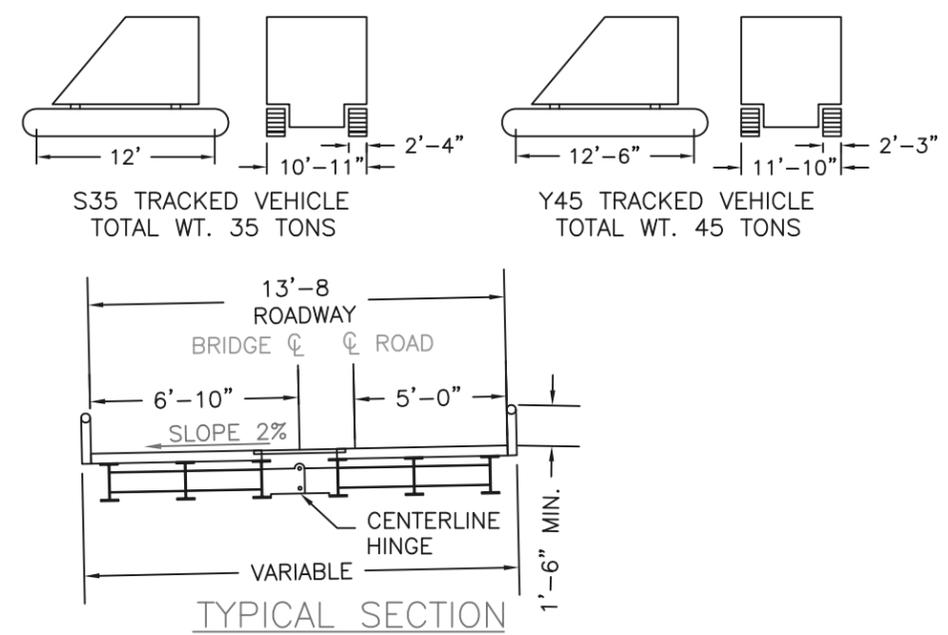
SPECIFICATIONS:
DESIGN: "AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, 1996 WITH INTERIM REVISIONS THRU 2002."
CONSTRUCTION: "STANDARD SPECIFICATIONS FOR CONSTRUCTION OF ROADS AND BRIDGES ON FEDERAL HIGHWAY PROJECTS, FP-03" WITH SUPPLEMENTAL SPECIFICATIONS.
DESIGN:
DEAD LOAD: TIMBER AT 50 PCF, STEEL AT 490 PCF, EARTH AT 120 PCF,
LIVE LOAD: AASHTO HS20-44 LOADING INCREASED 25 PERCENT ("HS25") WITH IMPACT AT 10% OF MAXIMUM Y45 AND S35 TRACKED VEHICLE: NO IMPACT. DEFLECTION NOT TO EXCEED L/360. 2 FEET OF EARTH PRESSURE TO SIMULATE LIVE LOAD LATERAL SURCHARGE PRESSURE.
TRANSPORTABILITY: PROVIDE A PORTABLE STEEL BRIDGE THAT IS HINGED LONGITUDINALLY SUCH THAT IT IS CAPABLE OF BEING TRANSPORTED WITHIN LEGAL WIDTH LIMITS. INSTALL LIFTING POINTS SUITABLE FOR MOVING THE BRIDGE INTO PLACE UTILIZING STANDARD HEAVY EQUIPMENT SUCH AS HYDRAULIC EXCAVATOR. INSTALL TOW BARS SUCH THAT THE BRIDGE MAY BE SKIDDED OR DRAGGED INTO FINAL ALIGNMENT WITHOUT DAMAGING THE STRUCTURAL INTEGRITY OF THE STRUCTURE.
MATERIALS:
STRUCTURAL STEEL: FURNISH STRUCTURAL STEEL CONFORMING TO ASTM A992, GR. 50 FOR STRINGERS AND ASTM A36 FOR ALL OTHER LOAD BEARING STEEL COMPONENTS. PROVIDE A COATING SYSTEM CONSISTING OF EPOXY PRIMER AND URETHANE TOPCOAT OR LEAVE UNPAINTED AND FABRICATE FROM ASTM A588 STEEL. PROVIDE STEEL CERTIFICATIONS. ALL WELDS TO CONFORM TO AWS D1.1 STRUCTURAL WELDING CODE - STEEL REQUIREMENTS.
HARDWARE AND FASTENERS: FURNISH GALVANIZED NUTS, BOLTS AND WASHERS CONFORMING TO ASTM A307 FOR LOAD BEARING HARDWARE UNLESS OTHERWISE NOTED.
TIMBER & LUMBER: PROVIDE SOLID SAWN TIMBER MEMBERS CONFORMING TO THE REQUIREMENTS OF AN AGENCY ACCREDITED BY THE AMERICAN LUMBER STANDARDS COMMITTEE FOR THE SPECIES AND GRADE.
TREATMENT: FURNISH PRESERVATIVE TREATED MATERIALS IN ACCORDANCE WITH CURRENT AMERICAN WOOD PROTECTION ASSOCIATION (AWPA) SPECIFICATIONS USING THE TREATMENT MATERIALS LISTED BELOW FOR ALL TREATED MEMBERS. COMPLY WITH THE REQUIREMENTS OF THE CURRENT EDITION OF WESTERN WOOD PRESERVERS INSTITUTE (WWPI) "BEST MANAGEMENT PRACTICES FOR THE USE OF TREATED WOOD IN AQUATIC AND OTHER SENSITIVE ENVIRONMENTS" PRIOR TO DELIVERY TO THE JOB SITE. REJECT MEMBERS THAT DEVELOP AREAS OF BLEEDING OR ARE NOT CLEAN, DRY AND RESIDUE-FREE. COMPLETELY AND ACCURATELY FABRICATE ALL MEMBERS INCLUDING DRILLING OF BOLT HOLES AND NOTCHES PRIOR TO TREATMENT. INCISE MEMBERS AFTER FABRICATION AND TREAT IN ACCORDANCE WITH AWPA USE CATEGORY SYSTEM (U1) FOR USE CATEGORY 3B ABOVE GROUND EXPOSED (UC3B) WITH PENTACHLOROPHENOL IN LIGHT OIL (TYPE C SOLVENT), PCP-C, COPPER NAPHTHENATE, CuN, OR APPROVED EQUAL.
INSPECTION AND CERTIFICATION:
 FURNISH ONE COPY OF THE FOLLOWING COMPLIANCE CERTIFICATES UPON DELIVERY OF THE MATERIAL AND BEFORE INSTALLATION:
 1. SUPPLIER OR INSPECTION AGENCY CERTIFICATION THAT ALL WOOD MEETS THE SPECIFICATION AND GRADING REQUIREMENTS, AND BEST MANAGEMENT PRACTICES AS CALLED FOR IN SPECIFICATION SECTIONS 557 AND 716.
 2. LOT CERTIFICATION OF EACH CHARGE FOR THE PRESERVATIVE TYPE, PENETRATION IN INCHES, AND RETENTION IN POUNDS PER CUBIC FOOT (ASSAY METHOD) BY AN INDEPENDENT TESTING AND INSPECTION AGENCY ACCREDITED BY THE ALSIC.
FIELD TREATMENT: NO FIELD CUTTING IS PERMITTED UNLESS APPROVED BY THE ENGINEER. CAREFULLY CLEAN OR TRIM AS APPROPRIATE, ALL ABRASIONS, CUTS, HOLES AND OTHER MODIFICATION TO TREATED TIMBER. TREAT WITH THREE BRUSH COATS OF COPPER NAPHTHENATE (OR APPROVED EQUIVALENT) MEETING AWPA P8 (MINIMUM 2% COPPER METAL SOLUTION. PLUG UNUSED HOLES WITH TIGHT FITTING TREATED PLUGS AFTER FIELD TREATMENT.



PLAN VIEW



ELEVATION VIEW

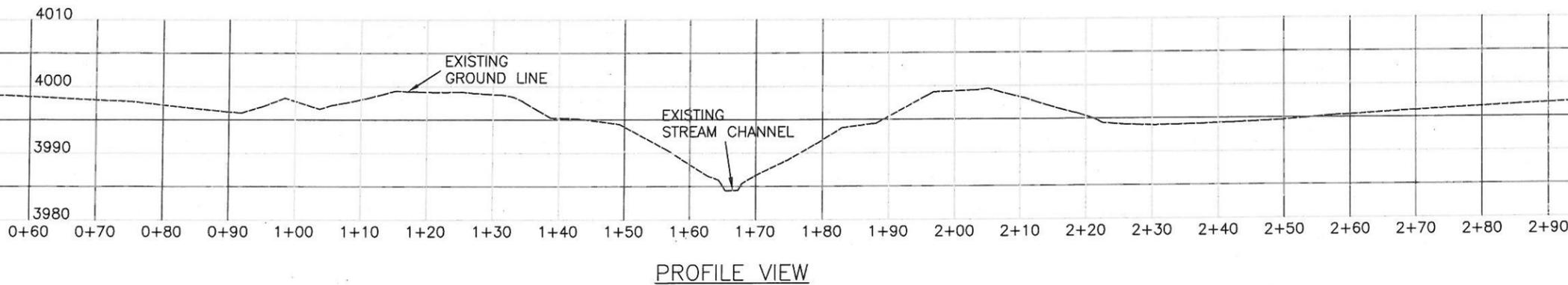


TYPICAL SECTION

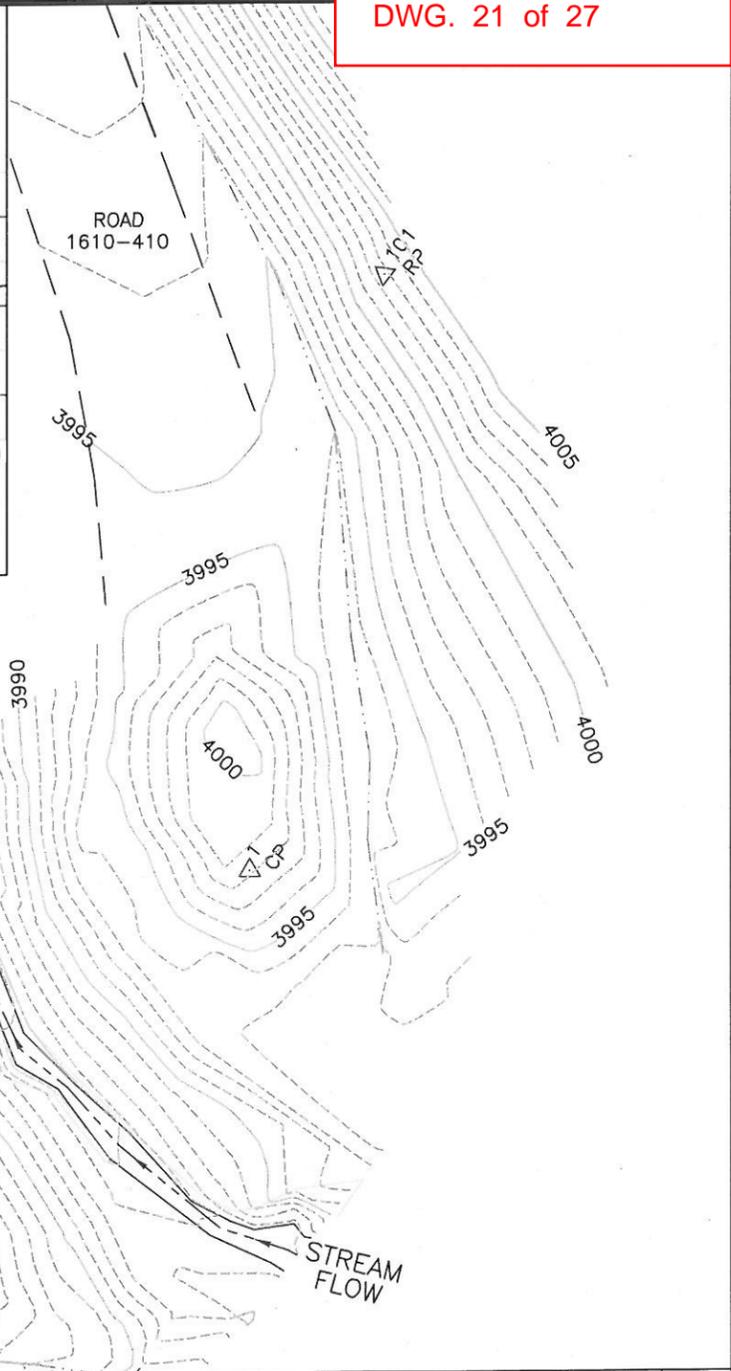
DO NOT SCALE DRAWING

REV.	DESCRIPTION	APPROVED	DATE
1	Revised General Notes	JJM	10/16/12

U.S. DEPARTMENT OF AGRICULTURE
 FOREST SERVICE
 THE PACIFIC NORTHWEST REGION (R-6)
 RD. 1610-410
 TEMP. FOLDING BRIDGE
 GENERAL LAYOUT
 Forest: UMPQUA Loading: HS25
 Bridge No.: 1610410-0.67 Length: 36'-0" (SPAN)
 Location: S14,T31S,R1W. Width: 13'-8" (ROADWAY)
 Designed: J.MERRITT Drawn: PSR Checked: .
 Approved: /s/Kathryn L. VanHecke Date: 8/2/2012
 REGIONAL BRIDGE ENGINEER



PROFILE VIEW



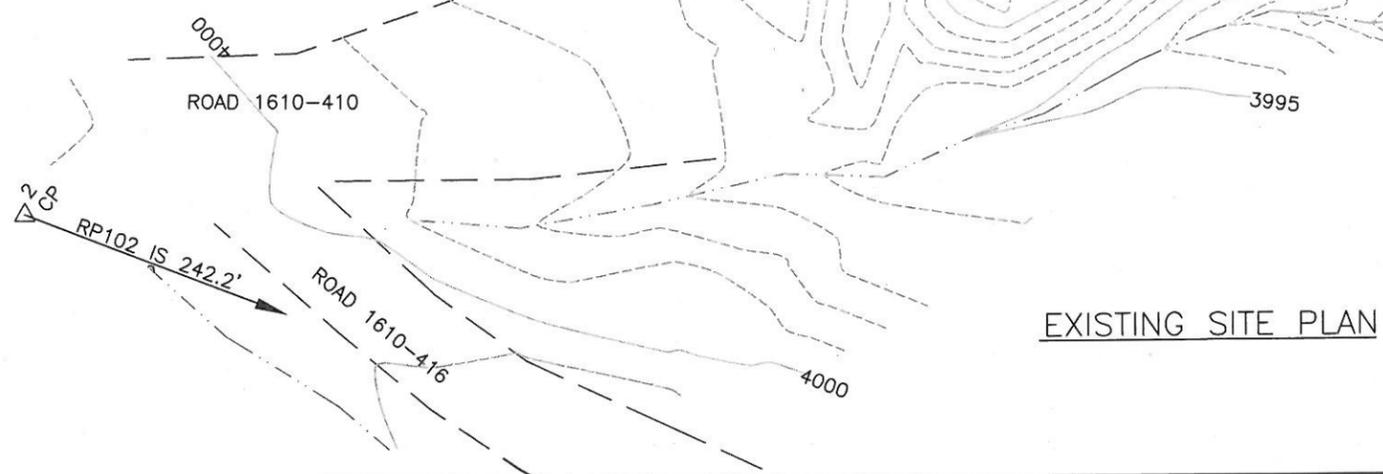
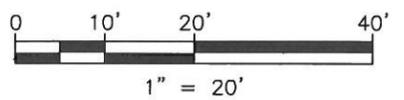
COORDINATE TABLE

PT	NORTHING	EASTING	ELEVATION	DESCRIPTION
CP1	10,000.00	5,000.00	4,000.00	IR w/YPC
CP2	9,922.94	4,811.21	4,001.55	SWB
RP101	10,066.86	5,015.13	4,002.43	IR w/YPC
RP102	9,849.44	5,061.86	4,000.46	IR w/YPC



LEGEND

- — — — — EDGE OF ROAD
- - - - - DITCH
- - - - - THREAD OF STREAM
- — — — — EDGE OF CHANNEL
- △ CONTROL POINT
- IR w/YPC IRON ROD W/YELLOW PLASTIC CAP
- SWB SPIKE W/BROOM



EXISTING SITE PLAN

REV.	DESCRIPTION	APPROVED	DATE

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
 THE PACIFIC NORTHWEST REGION (R-8)

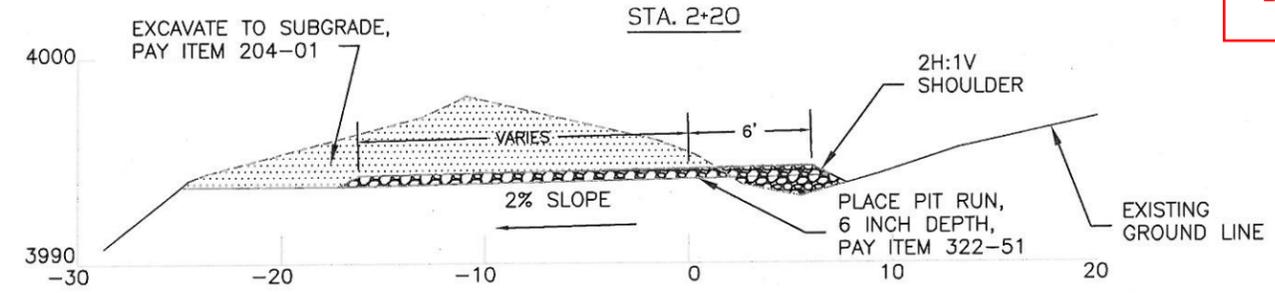
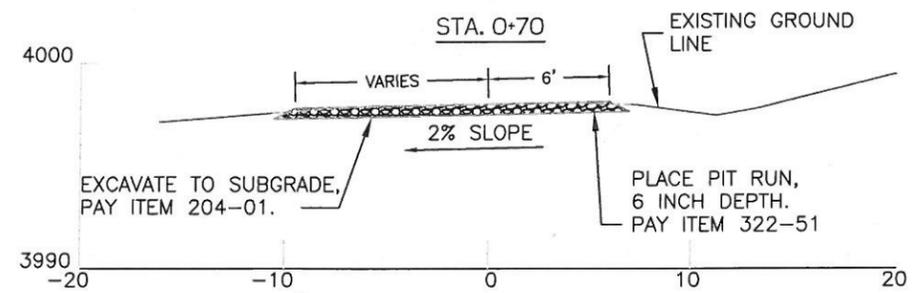
RD. 1610-410
 TEMP. FOLDING BRIDGE
 EXISTING SITE PLAN & PROFILE

Forest: UMPQUA Loading: HS25
 Bridge No.: 1610410-0.67 Length: 36'-0" (SPAN)
 Location: S14,T31S,R1W. Width: 13'-8" (ROADWAY)

Designed: J.MERRITT Drawn: PSR Checked:

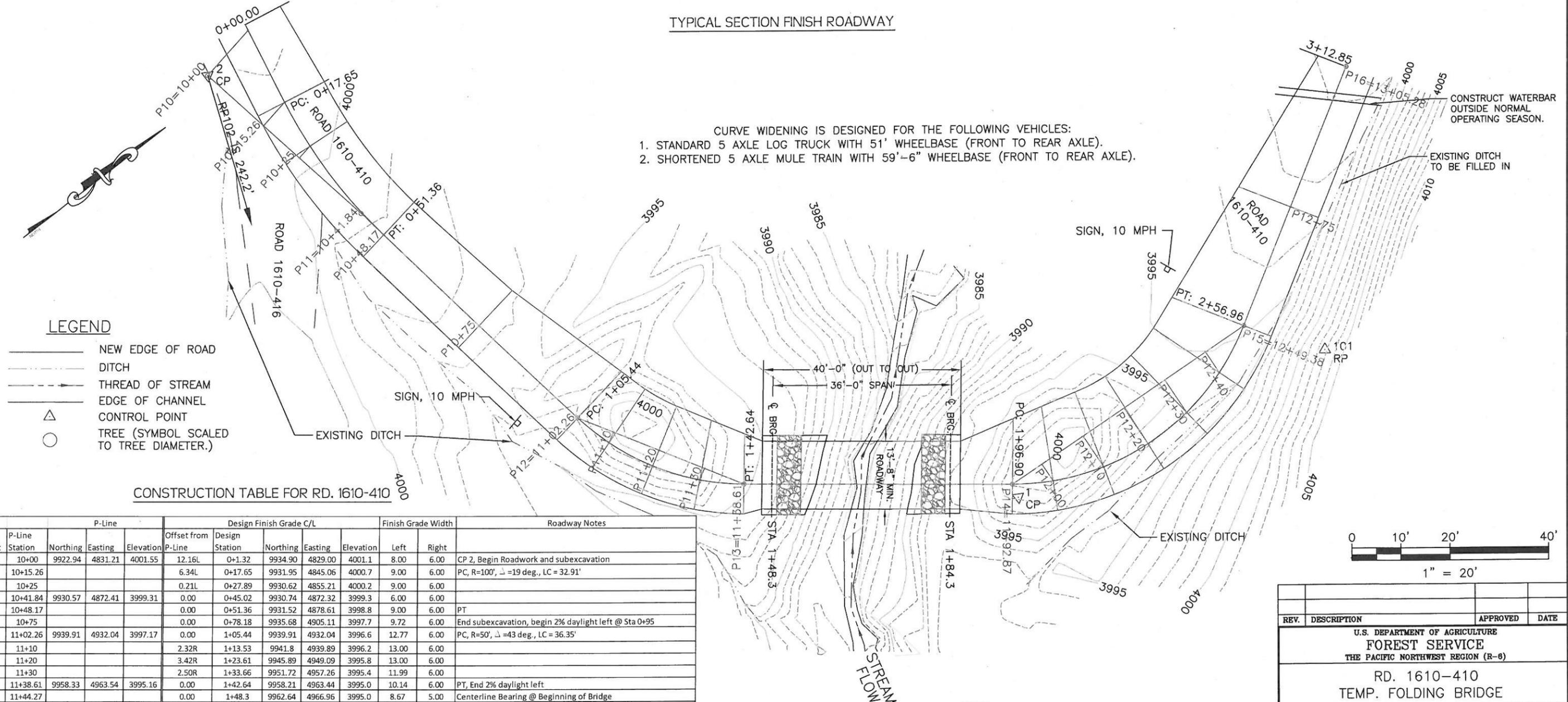
Approved: *Kathleen VanHock* Date: 8/2/2012
 REGIONAL BRIDGE ENGINEER

SHEET 3 of 4 DWG.No.



TYPICAL SECTION FINISH ROADWAY

- CURVE WIDENING IS DESIGNED FOR THE FOLLOWING VEHICLES:
1. STANDARD 5 AXLE LOG TRUCK WITH 51' WHEELBASE (FRONT TO REAR AXLE).
 2. SHORTENED 5 AXLE MULE TRAIN WITH 59'-6" WHEELBASE (FRONT TO REAR AXLE).



LEGEND

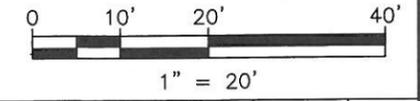
- NEW EDGE OF ROAD
- - - DITCH
- - - - - THREAD OF STREAM
- EDGE OF CHANNEL
- △ CONTROL POINT
- TREE (SYMBOL SCALED TO TREE DIAMETER.)

CONSTRUCTION TABLE FOR RD. 1610-410

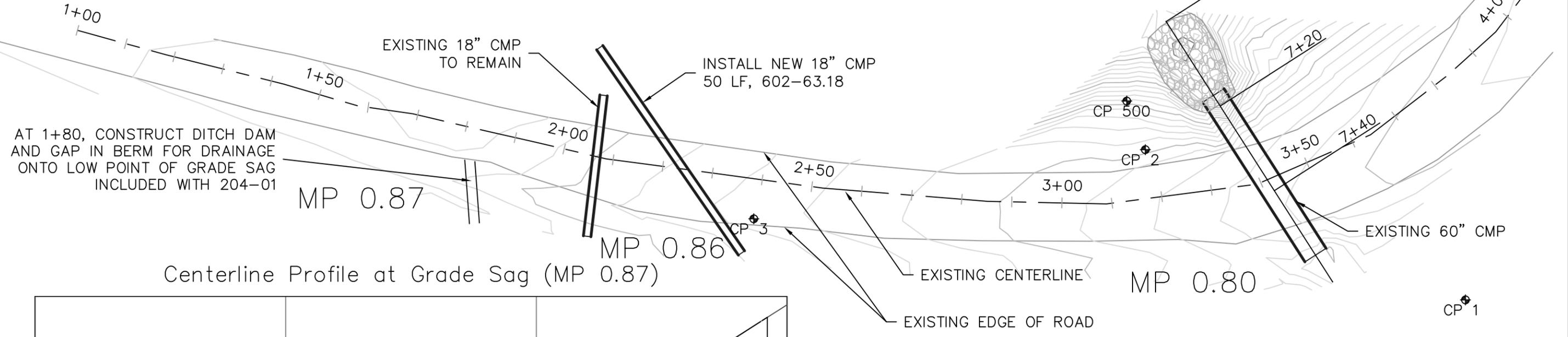
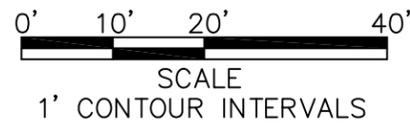
P Point	P-Line Station	P-Line			Design Finish Grade C/L			Finish Grade Width		Roadway Notes		
		Northing	Easting	Elevation	Offset from P-Line	Station	Northing	Easting	Elevation		Left	Right
P 10	10+00	9922.94	4831.21	4001.55	12.16L	0+1.32	9934.90	4829.00	4001.1	8.00	6.00	CP 2, Begin Roadwork and subexcavation
	10+15.26				6.34L	0+17.65	9931.95	4845.06	4000.7	9.00	6.00	PC, R=100', Δ=19 deg., LC=32.91'
	10+25				0.21L	0+27.89	9930.62	4855.21	4000.2	9.00	6.00	
P 11	10+41.84	9930.57	4872.41	3999.31	0.00	0+45.02	9930.74	4872.32	3999.3	6.00	6.00	
	10+48.17				0.00	0+51.36	9931.52	4878.61	3998.8	9.00	6.00	PT
	10+75				0.00	0+78.18	9935.68	4905.11	3997.7	9.72	6.00	End subexcavation, begin 2% daylight left @ Sta 0+95
P 12	11+02.26	9939.91	4932.04	3997.17	0.00	1+05.44	9939.91	4932.04	3996.6	12.77	6.00	PC, R=50', Δ=43 deg., LC=36.35'
	11+10				2.32R	1+13.53	9941.8	4939.89	3996.2	13.00	6.00	
	11+20				3.42R	1+23.61	9945.89	4949.09	3995.8	13.00	6.00	
	11+30				2.50R	1+33.66	9951.72	4957.26	3995.4	11.99	6.00	
	11+38.61	9958.33	4963.54	3995.16	0.00	1+42.64	9958.21	4963.44	3995.0	10.14	6.00	PT, End 2% daylight left
P 14	11+44.27				0.00	1+48.3	9962.64	4966.96	3995.0	8.67	5.00	Centerline Bearing @ Beginning of Bridge
	11+80.27				0.00	1+84.3	9990.83	4989.35	3995.0	8.67	5.00	Centerline Bearing @ End of Bridge
	11+92.87	10000.56	4997.19	3999.08	0.00	1+96.9	10000.70	4997.18	3994.9	13.22	6.00	PC, R=50', Δ=69 deg., LC=56.51', begin 2% daylight left & right
	12+00				4.07R	2+05.12	10007.53	5001.74	3994.8	15.19	6.00	2% daylight left
	12+10				7.50R	2+15.71	10017.26	5005.87	3994.7	16.19	6.00	2% daylight left, fill ditch right
P 15	12+20				8.74R	2+25.80	10027.15	5007.81	3994.6	16.20	6.00	Low point 3994.5 @ Sta 2+30
	12+30				7.96R	2+35.85	10037.18	5007.74	3994.7	16.20	6.00	End 2% daylight, begin subexcavation
	12+40				5.05R	2+46.28	10047.36	5005.54	3995.1	16.20	6.00	
	12+49.38	10057.11	5001.11	3995.25	0.00	2+56.96	10057.08	5001.17	3995.5	15.70	6.00	PT
	12+75				0.00	2+82.58	10079.18	4988.21	3996.7	11.25	6.00	
P 16	12+97				0.00	3+06.35	--	--	3998.0	7.13	6.00	End fill ditch right. Waterbar outside Normal Operating Season
	13+05.28	10105.28	4972.95	3998.47	0.00	3+12.85	10105.30	4972.91	3998.5	6.20	6.00	End Roadwork

PROPOSED SITE PLAN

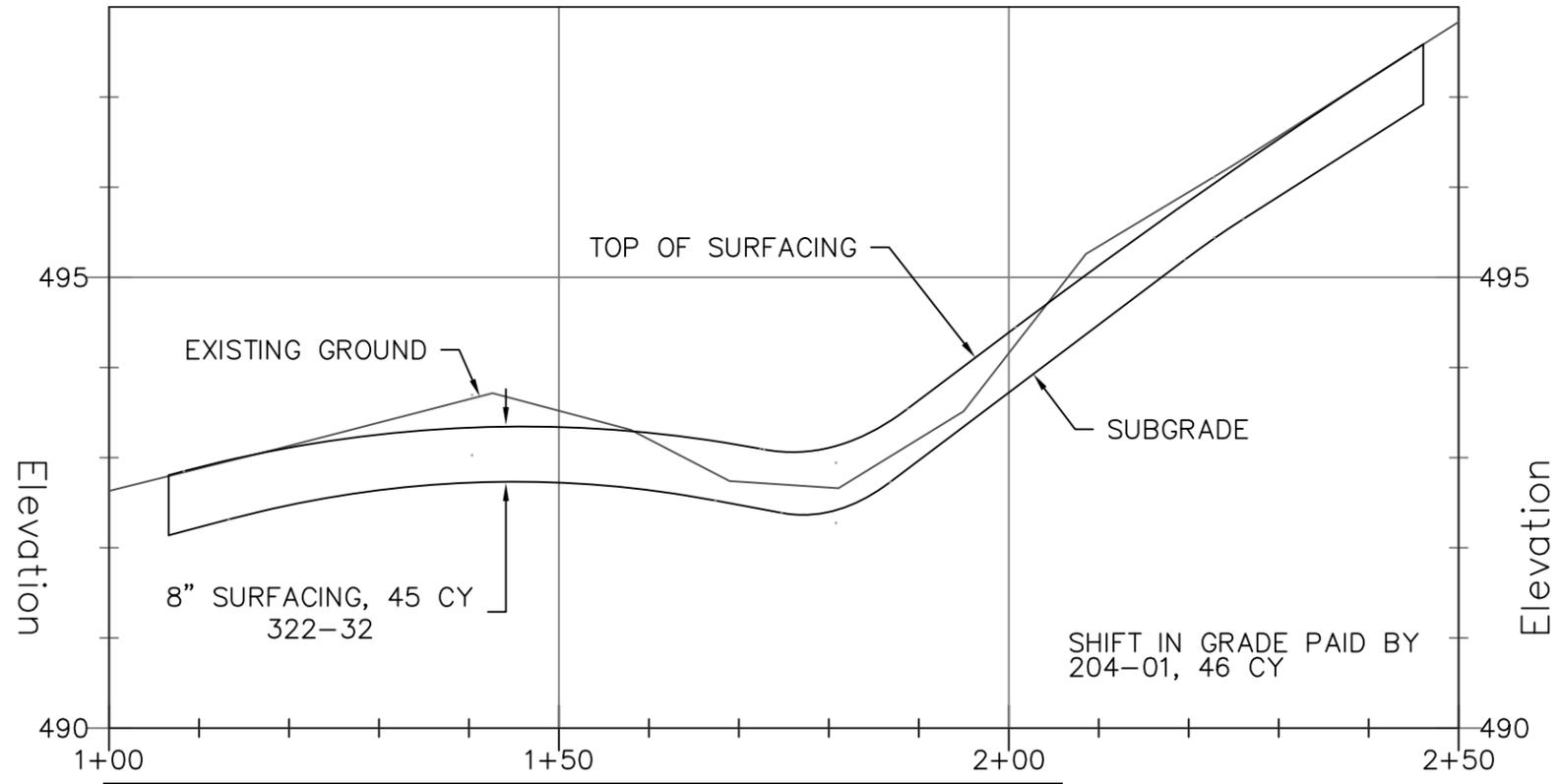
NOTE:
SEE POST HAUL MAINTENANCE TO REMOVE BRIDGE & SIGNS.
TRANSPORT TO TILLER RANGER DISTRICT OFFICE BONEYARD.
CONTACT LINDA SPENCER AT 541-825-3163.



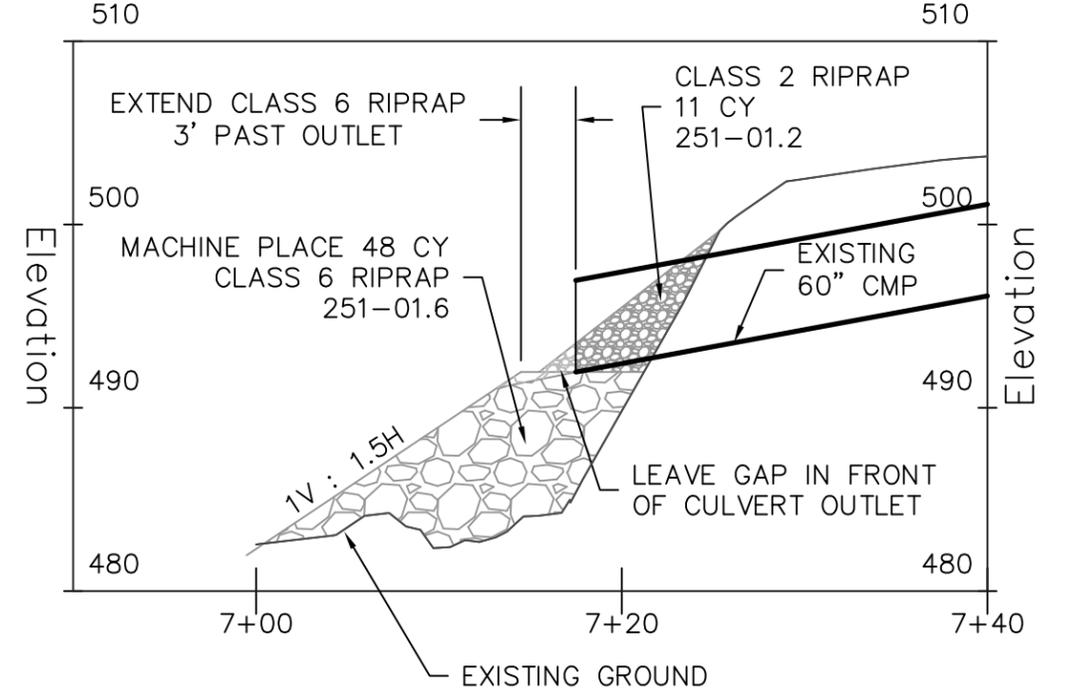
REV.	DESCRIPTION	APPROVED	DATE
U.S. DEPARTMENT OF AGRICULTURE FOREST SERVICE THE PACIFIC NORTHWEST REGION (R-8)			
RD. 1610-410 TEMP. FOLDING BRIDGE CONSTRUCTION STAKING/ROAD SECTIONS			
Forest: UMPQUA Bridge No.: 1610410-0.67 Location: S14,T31S,R1W.		Loading: HS25 Length: 36'-0" (SPAN) Width: 13'-8" (ROADWAY)	
Designed: J.MERRITT Approved: <i>Katherine A. VanHedoo</i> REGIONAL BRIDGE ENGINEER		Drawn: PSR Checked: Date: 8/2/2012	
SHEET 4 of 4		DWG.No.	



Centerline Profile at Grade Sag (MP 0.87)



Profile of 60" CMP at 3+42 (MP 0.80)



Grade Sag Design Table							
Station	Northing	Easting	Subgrade Elevation	Station	Northing	Easting	Subgrade Elevation
1+00	9787.00	4976.24		1+80	9864.60	4995.38	492.40
1+10	9796.64	4978.90	492.23	1+90	9874.35	4997.60	492.97
1+20	9806.29	4981.51	492.47	2+00	9884.09	4999.86	493.72
1+30	9816.00	4983.92	492.64	2+10	9893.85	5002.02	494.48
1+40	9825.70	4986.33	492.72	2+20	9903.76	5003.33	495.23
1+50	9835.33	4989.05	492.72	2+30	9913.67	5004.66	495.90
1+60	9844.98	4991.58	492.64	2+40	9923.58	5006.01	496.53
1+70	9854.87	4993.09	492.48	2+50	9933.49	5007.35	

Control Points			
Point	Northing	Easting	Elevation
CP 1	10063.84	5029.92	511.80
CP 2	10000.00	5000.00	500.00
CP 3	9921.90	5013.77	497.40
CP 500	9996.29	4990.32	496.06

MP	SPECIFIED ROAD WORKLIST- ROAD 1610	PAY ITEM	QUANTITY
6.00	Junction road 1610 and road 1610-300. Begin work this road. Begin roadside brushing Begin reconditioning existing roadway. Conserve and utilize the aggregate that has scattered onto the shoulders of the roadway and re-incorporate into the traveled way. Scarify aggregate surface in accordance with FP-03 303.06. Shape and compact the traveled way, shoulders and existing staked turnouts. See Sheet 7. Existing staked turnouts are variable width and 65-feet in length plus transitions. Existing staked turnouts have variable length transitions. Mile post stakes are at approximate center of turnout.	230-51 303-57	5.13 MILE 2.13 MILE
6.00	Right. Install sign posts and signs near intersection. See Sheets 9-11.	633-13 633-15	4.0 SF 2 EA
6.00	Left. Remove and replace signs on existing post near intersection. See Sheets 9-11.	633-13	3.2 SF
6.28	Install 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. Replace conserved aggregate on road surface, supplementing the aggregate surface with 5 cubic yards of material obtained from Three Cabin Quarry. See Sheet 7. Any unsuitable backfill material, woody debris, slash or boulders from excavation will be hauled (indirectly paid by Item 602-63.18) to approved disposal sites. See Note 5 on Sheet 3. Install inlet, beveled drop inlet.	322-32 602-63.18 604-03	5 CY 38 LF 1 EA
6.47	Install 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. Replace conserved aggregate on road surface, supplementing the aggregate surface with 5 cubic yards of material obtained from Three Cabin Quarry. See Sheet 7. Any unsuitable backfill material, woody debris, slash or boulders from excavation will be hauled (indirectly paid by Item 602-63.18) to approved disposal sites. See Note 5 on Sheet 3. Construct catch basin. (indirectly paid by Item 602-63.18)	322-32 602-63.18	5 CY 36 LF
6.53	Center of turnout, right.		
6.64	Center of turnout, right.		
6.83	Center of turnout, right.		
6.84	Left. Remove and replace route marker on road 1610-390. See Sheets 9-11.	633-23	1 EA
6.97	Install 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. Replace conserved aggregate on road surface, supplementing the aggregate surface with 5 cubic yards of material obtained from Three Cabin Quarry. See Sheet 7. Any unsuitable backfill material, woody debris, slash or boulders from excavation will be hauled (indirectly paid by Item 602-63.18) to approved disposal sites. See Note 5 on Sheet 3. Construct catch basin. (indirectly paid by Item 602-63.18)	322-32 602-63.18	5 CY 34 LF
7.02	Left. Remove and replace route marker on road 1610-398. See Sheets 9-11.	633-23	1 EA
7.11	Center of turnout, right.		
7.18	Clean 3-feet of ditch up grade and adjacent to existing catch basin. Utilize material to raise floor of catch basin 0.3-feet. Haul waste (indirectly paid by Item 303-57) to approved disposal sites. See Note 5 on Sheet 3.		
7.25	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. Replace conserved aggregate on road surface, supplementing the aggregate surface with 5 cubic yards of material obtained from Three Cabin Quarry. See Sheet 7. Any unsuitable backfill material, woody debris, slash or boulders from excavation will be hauled (indirectly paid by Item 602-63.18) to approved disposal sites. See Note 5 on Sheet 3.	203-01.1 322-32 602-63.18	1 EA 5 CY 32 LF
7.39	Install 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. Replace conserved aggregate on road surface, supplementing the aggregate surface with 5 cubic yards of material obtained from Three Cabin Quarry. See Sheet 7. Any unsuitable backfill material, woody debris, slash or boulders from excavation will be hauled (indirectly paid by Item 602-63.18) to approved disposal sites. See Note 5 on Sheet 3. Install inlet, beveled drop inlet.	322-32 602-63.18 604-03	5 CY 34 LF 1 EA
7.41	Center of turnout, right.		
7.54	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. Replace conserved aggregate on road surface, supplementing the aggregate surface with 5 cubic yards of material obtained from Three Cabin Quarry. See Sheet 7. Any unsuitable backfill material, woody debris, slash or boulders from excavation will be hauled (indirectly paid by Item 602-63.18) to approved disposal sites. See Note 5 on Sheet 3.	203-01.1 322-32 602-63.18	1 EA 5 CY 36 LF
7.58	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. Replace conserved aggregate on road surface, supplementing the aggregate surface with 5 cubic yards of material obtained from Three Cabin Quarry. See Sheet 7. Any unsuitable backfill material, woody debris, slash or boulders from excavation will be hauled (indirectly paid by Item 602-63.18) to approved disposal sites. See Note 5 on Sheet 3. Begin ditch clean out. Haul waste (indirectly paid by Item 303-57) to approved disposal sites. See Note 5 on Sheet 3.	203-01.1 322-32 602-63.18	1 EA 5 CY 32 LF
7.60	End ditch clean out.		
7.68	Center of turnout, right.		
7.70	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. Replace conserved aggregate on road surface, supplementing the aggregate surface with 5 cubic yards of material obtained from Three Cabin Quarry. See Sheet 7. Any unsuitable backfill material, woody debris, slash or boulders from excavation will be hauled (indirectly paid by Item 602-63.18) to approved disposal sites. See Note 5 on Sheet 3. Right. Install 1 Object Marker, Modified Type 2 at abrupt end of turnout. See Sheets 9-11.	203-01.1 322-32 602-63.18 633-19	1 EA 5 CY 36 LF 1 EA
7.79	Place class 1 riprap to raise floor of existing catch basin 1.5-feet.	251-01.1	1 CY
7.80	Begin ditch clean out. Haul waste (indirectly paid by Item 303-57) to approved disposal sites. See Note 5 on Sheet 3.		
7.81	End ditch clean out.		
7.82	Install 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. Replace conserved aggregate on road surface, supplementing the aggregate surface with 5 cubic yards of material obtained from Three Cabin Quarry. See Sheet 7. Any unsuitable backfill material, woody debris, slash or boulders from excavation will be hauled (indirectly paid by Item 602-63.18) to approved disposal sites. See Note 5 on Sheet 3. Install inlet, beveled drop inlet.	322-32 602-63.18 604-03	5 CY 34 LF 1 EA
8.00	Left. Remove and replace mile marker on road 1610. See Sheets 9-11.	633-23	1 EA
8.11	Left. Remove and replace route sign on existing post on road 1610. See Sheets 9-11.	633-13	0.8 SF
8.13	Junction road 1610-400, left. Junction road 1610-500, right. End road reconditioning work.		
8.13	Right. Remove and replace signs on existing post on road 1610-500. See Sheets 9-11.	633-13 633-29.24	0.8 SF 1 EA
8.13	Right. Install sign posts and signs on road 1610. See Sheets 9-11.	633-13 633-15	4.0 SF 2 EA
8.15	Right. Remove and replace post and sign on road 1610. See Sheets 9-11.	633-13 633-15	0.8 SF 1 EA
8.96	Junction road 1610-430, left.		
8.96	Left. Remove and replace route marker on road 1610-430. See Sheets 9-11.	633-23	1 EA
8.96	Right. Remove and replace sign on existing post on road 1610. See Sheets 9-11.	633-13	3.4 SF
9.90	Right. Remove and replace route marker on road 1610-650. See Sheets 9-11.	633-23	1 EA
11.13	Junction road 3100-850, left. End roadside brushing.		
11.13	Left. Remove and replace route marker on road 3100-850. See Sheets 9-11. End work for road 1610.	633-23	1 EA
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		RD 1610 WORKLIST	

MP	SPECIFIED ROAD WORKLIST- ROAD 1610-300	PAY ITEM	QUANTITY
0.00	Junction road 1610 and road 1610-300. Begin work this road. Begin roadside brushing. Begin reconditioning existing roadway. Conserve and utilize the aggregate that has scattered onto the shoulders of the roadway and re-incorporate into the traveled way. Scarify aggregate surface in accordance with FP-03 303.06. Shape and compact the traveled way, shoulders and existing staked turnouts. See Sheet 7. Existing staked turnouts are variable width and 65-feet in length plus transitions. Existing staked turnouts have variable length transitions. Mile post stakes are at approximate center of turnout.	230-51 303-57	5.01 MILE 5.00 MILE
0.18	Center of turnout, left.		
0.20	Install a new 18" CMP 6 ft extension to inlet end of existing culvert and install a new 18" CMP 6 ft extension to outlet end of existing culvert. Conserve and utilize existing aggregate from roadbed at pipe excavation site. Suitable material from existing excavation may be used as backfill material. Replace conserved aggregate on road surface, supplementing the aggregate surface with 5 cubic yards of material obtained from Three Cabin Quarry. See Sheet 7. Any unsuitable backfill material, woody debris, slash or boulders from excavation will be hauled (indirectly paid by Item 602-63.18) to approved disposal sites. See Note 5 on Sheet 3. Reconstruct existing roadbed to 14-foot width over culvert extension area placing suitable embankment material obtained from Three Cabin Quarry disposal site.	204-55 322-32 602-63.18	2 CY 5 CY 12 LF
0.27	Center of turnout, left.		
0.49	Center of turnout, left.		
0.50	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. Replace conserved aggregate on road surface, supplementing the aggregate surface with 5 cubic yards of material obtained from Three Cabin Quarry. See Sheet 7. Any unsuitable backfill material, woody debris, slash or boulders from excavation will be hauled (indirectly paid by Item 602-63.18) to approved disposal sites. See Note 5 on Sheet 3. Place 2 cubic yards of suitable backfill material (indirectly paid by Item 602-63.18) obtained from Three Cabin Quarry disposal site.	203-01.1 322-32 602-63.18	1 EA 5 CY 42 LF
0.52	Install 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. Replace conserved aggregate on road surface, supplementing the aggregate surface with 5 cubic yards of material obtained from Three Cabin Quarry. See Sheet 7. Any unsuitable backfill material, woody debris, slash or boulders from excavation will be hauled (indirectly paid by Item 602-63.18) to approved disposal sites. See Note 5 on Sheet 3. Construct catch basin (indirectly paid by 602-63.18). Install new spillway assembly.	322-32 602-63.18 606-02.18 606-04.18 606-05.18	5 CY 38 LF 20 LF 2 EA 1 EA
0.67	Center of turnout, right.		
0.80	Machine place Class 6 and Class 2 riprap in scour hole as per detail on sheet 23. Excavation of access ramp is indirectly paid by Item 251-01.6.	251-01.2 251-01.6	11 CY 48 CY
0.86	Install 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. Replace conserved aggregate on road surface, supplementing the aggregate surface with 5 cubic yards of material obtained from Three Cabin Quarry. See Sheet 7. Any unsuitable backfill material, woody debris, slash or boulders from excavation will be hauled (indirectly paid by Item 602-63.18) to approved disposal sites. See Note 5 on Sheet 3. Construct catch basin (indirectly paid by 602-63.18).	322-32 602-63.18	5 CY 50 LF
0.87	Reconstruct Grade Sag to profile shown on sheet 23. Place 8 in. aggregate surfacing obtained from Three Cabins Quarry. Construct Ditch Dam and gap in berm for drainage onto low point of Grade Sag. Excess material will be hauled to approved disposal sites. See Note 5 on sheet 3.	204-01 322-32	46 CY 45 CY
0.98	Center of turnout, right.		
1.02	Reconstruct catch basin. Existing 18" CMP. Begin construction of roadside ditch, left. Haul waste (indirectly paid by Item 204-20.1) to approved disposal sites. See Note 5 on Sheet 3.	204-20.1 204-20.2	158 LF 1 EA
1.05	End construction of roadside ditch, left.		
1.10	Right. Install route marker on road 1610-320. See Sheets 9-11.	633-23	1 EA
1.19	Center of turnout, right.		
1.45	Install 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. Replace conserved aggregate on road surface, supplementing the aggregate surface with 5 cubic yards of material obtained from Three Cabin Quarry. See Sheet 7. Any unsuitable backfill material, woody debris, slash or boulders from excavation will be hauled (indirectly paid by Item 602-63.18) to approved disposal sites. See Note 5 on Sheet 3. Construct catch basin (indirectly paid by 602-63.18).	322-32 602-63.18	5 CY 34 LF
1.66	Center of turnout, right.		
1.80	Clean trash rack on existing culvert of brush and debris material. Haul slash and waste material (indirectly paid by Item 607-90) to approved disposal sites. See Note 5 on Sheet 3.	607-90	1 EA
1.90	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. Replace conserved aggregate on road surface, supplementing the aggregate surface with 5 cubic yards of material obtained from Three Cabin Quarry. See Sheet 7. Any unsuitable backfill material, woody debris, slash or boulders from excavation will be hauled (indirectly paid by Item 602-63.18) to approved disposal sites. See Note 5 on Sheet 3.	203-01.1 322-32 602-63.18	1 EA 5 CY 28 LF
2.00	Center of turnout, right.		
2.10	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. Replace conserved aggregate on road surface, supplementing the aggregate surface with 5 cubic yards of material obtained from Three Cabin Quarry. See Sheet 7. Any unsuitable backfill material, woody debris, slash or boulders from excavation will be hauled (indirectly paid by Item 602-63.18) to approved disposal sites. See Note 5 on Sheet 3.	203-01.1 322-32 602-63.18	1 EA 5 CY 24 LF
2.33	Left. Install post and signs on road 1610-300. See Sheets 9-11.	633-13 633-15	1.7 SF 1 EA
2.33	Right. Install route marker on road 1610-350. See Sheets 9-11.	633-23	1 EA
2.70	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. Replace conserved aggregate on road surface, supplementing the aggregate surface with 5 cubic yards of material obtained from Three Cabin Quarry. See Sheet 7. Any unsuitable backfill material, woody debris, slash or boulders from excavation will be hauled (indirectly paid by Item 602-63.18) to approved disposal sites. See Note 5 on Sheet 3. Remove tree (indirectly paid by Item 602-63.18) during excavation of hump near outlet.	203-01.1 322-32 602-63.18	1 EA 5 CY 26 LF
2.99	Center of turnout, right.		
3.17	Center of turnout, right.		
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		RD 1610-300 WORKLIST	

MP	SPECIFIED ROAD WORKLIST- ROAD 1610-300 Continued	PAY ITEM	QUANTITY
3.58	Left. Remove and replace route marker on road 1610-370. See Sheets 9-11.	633-23	1 EA
3.68	Right. Install new route marker on road 1610-372. See Sheets 9-11.	633-23	1 EA
3.84	Center of turnout, left.		
4.01	Center of turnout, left.		
4.20	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. Replace conserved aggregate on road surface, supplementing the aggregate surface with 5 cubic yards of material obtained from Three Cabin Quarry. See Sheet 7. Any unsuitable backfill material, woody debris, slash or boulders from excavation will be hauled (indirectly paid by Item 602-63.18) to approved disposal sites. See Note 5 on Sheet3.	203-01.1 322-32 602-63.18	1 EA 5 CY 28 LF
4.30	Existing 18" CMP. Construct splash apron.	251-01.2	2 CY
4.95	Center of turnout, right.		
5.00	End reconditioning road work. Begin existing asphalt cement surface.		
4.98	Left. Install new route marker on road 1610-300. See Sheets 9-11. End road work for this road.	633-23	1 EA
5.01	Junction road 1610-300 with Douglas County Road 1.		
MP	SPECIFIED ROAD WORKLIST- ROAD 1610-400	PAY ITEM	QUANTITY
0.00	Junction road 1610 and road 1610-400.		
0.02	Right. Install new route marker on road 1610-400. See Sheets 9-11.	633-23	1 EA
0.17	Junction road 1610-454, left.		
0.17	Left. Remove and replace route marker on road 1610-455. See Sheets 9-11.	633-23	1 EA
0.19	Left. Remove and replace route marker on road 1610-452. See Sheets 9-11.	633-23	1 EA
0.45	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. Replace conserved aggregate on road surface, supplementing the aggregate surface with 5 cubic yards of material obtained from Three Cabin Quarry. See Sheet 7. Any unsuitable backfill material, woody debris, slash or boulders from excavation will be hauled (indirectly paid by Item 602-63.24) to approved disposal sites. See Note 5 on Sheet 3. Construct headwall.	203-01.1 251-10.1 322-32 602-63.24	1 EA 1 CY 5 CY 46 LF
0.48	Intersection road 1610-450, left.		
1.10	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. Replace conserved aggregate on road surface, supplementing the aggregate surface with 5 cubic yards of material obtained from Three Cabin Quarry. See Sheet 7. Any unsuitable backfill material, woody debris, slash or boulders from excavation will be hauled (indirectly paid by Item 602-63.24) to approved disposal sites. See Note 5 on Sheet 3. Construct headwall.	203-01.1 251-10.1 322-32 602-63.24	1 EA 1 CY 5 CY 52 LF
1.12	Junction road 1610-420, left.		
1.12	Left. Install new route marker on road 1610-420. See Sheets 9-11.	633-23	1 EA
1.35	Junction road 1610-410, left. Reconstruct intersection turnaround. Place excavated material as shown on sheets 16-18. Additional fill material required is to be obtained from Three Cabin Quarry, indirectly paid by 204-52. Haul logs to decking site on road 1610-400, near MP 1.8, as staked by Forest Service.	152-01.1 201-04.2 204-52 322-32	1 LS 0.42 ACRES 1 LS 210 CY
1.35	Left. Install new posts and signs on road 1610-400. See Sheets 9-11.	633-13 633-15	4.0 SF 2 EA
1.37	End work for this road.		
MP	SPECIFIED ROAD WORKLIST- ROAD 1610-410	PAY ITEM	QUANTITY
0.00	Junction road 1610-400 and road 1610-410.		
0.02	Right. Remove and replace route marker on road 1610-410. See Sheets 9-11.	633-23	1 EA
0.65	Junction road 1610-410 and road 1610-416, right. Install 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. Replace conserved aggregate on road surface, supplementing the aggregate surface with 5 cubic yards of material obtained from Three Cabin Quarry. See Sheet 7. Any unsuitable backfill material, woody debris, slash or boulders from excavation will be hauled (indirectly paid by Item 602-63.18) to approved disposal sites. See Note 5 on Sheet 3. Construct catch basin (indirectly paid by 602-63.18).	322-32 602-63.18	5 CY 50 LF
0.67	Construct bridge abutments. Design, fabricate, deliver, and install prefabricated bridge superstructure. See Sheets 19-22 for bridge details. See Sheets 9-11 for sign details. End road work this road.	152-01.2 204-01 207-01 251-01.4 322-32 322-51 571-01 633-17L 633-17R 633-29.24 633-31.08	1 LS 280 CY 14 SY 19 CY 2 CY 95 CY 1 EA 2 EA 2 EA 2 EA 6 EA
1.17	Junction road 1610-410 and road 1610-448, right		
MP	SPECIFIED ROAD WORKLIST- ROAD 1610-416	PAY ITEM	QUANTITY
0.00	Junction road 1610-410 and road 1610-416.		
0.01	Install a new 18" CMP. Conserve and utilize existing pit run from roadbed at pipe excavation site. Suitable material from existing excavation may be used as backfill material. Use conserved pit run on road surface. Backfill culvert trench with conserved pit run (indirectly paid by Item 602-63.18). Any unsuitable backfill material, woody debris, slash or boulders from excavation will be hauled (indirectly paid by Item 602-63.18) to approved disposal sites. See Note 5 on Sheet 3. Construct catch basin (indirectly paid by 602-63.18).	602-63.18	38 LF
0.02	Right. Remove and replace route marker on road 1610-416. See Sheets 9-11. End work for this road.	633-23	1 EA
MP	SPECIFIED ROAD WORKLIST- ROAD 1610-420	PAY ITEM	QUANTITY
0.00	Junction road 1610-400 and road 1610-420. Begin road work. Remove road closure barrier. Begin reconditioning existing roadway in accordance with FP-03 303.05. Following completion of road work, construct road closure barrier, Type A. See sheet 12.	203-01.2 303-57 650-04A	1 EA 0.25 MILE 1 EA
0.08	Begin clearing and grubbing, disposal of tops and limbs scatter, logs deck, stumps scatter. Deck merchantable logs and non-merchantable logs as staked by Forest Service.	201-03.2	0.17 MILE
0.25	End work for this road.		
MP	SPECIFIED ROAD WORKLIST- ROAD 1610-432	PAY ITEM	QUANTITY
0.00	Junction road 1610-430 and road 1610-432.		
0.02	Remove and replace route marker on road 1610-432. See Sheets 9-11.	633-23	1 EA
		RD 1610-300,400,410,416,420,432 WORKLISTS	SHEET 26 OF 27
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MP	SPECIFIED ROAD WORKLIST- ROAD 1610-434	PAY ITEM	QUANTITY
	NOTE: The following work is required to access road 1610-434: Road 1610-430 at MP 0.00 - remove existing earth/log road closure barrier. At MP 0.02 - remove existing earthen road closure barrier. The following work is required to block access to road 1610-430 and road 1610-434 upon completion of specified road work on road 1610-434: On road 1610 at MP 8.94 is the intersect of a road closure breach route, left, leading to road 1610-430. Install Type A road closure barrier at beginning of breach route. On road 1610-436 at MP 0.00 install Type A road closure barrier. On road 1610-430 at MP 0.00 reinstall Type B road closure barrier. See Sheet 12.	203-01.2 650-04A 650-04B	2 EA 2 EA 1 EA
0.00	Junction road 1610-430 and road 1610-434. Install water bar. See Sheet 7.	204-20.3	1 EA
0.02	Remove and replace route marker on road 1610-434. See Sheets 9-11.	633-23	1 EA
0.04	Install water bar. See Sheet 7.	204-20.3	1 EA
0.14	Install water bar. See Sheet 7.	204-20.3	1 EA
0.18	Install water bar. See Sheet 7.	204-20.3	1 EA
0.26	Install water bar. See Sheet 7.	204-20.3	1 EA
0.33	Install water bar. See Sheet 7.	204-20.3	1 EA
0.35	Remove and replace route marker on road 1610-436. See Sheets 9-11.	633-23	1 EA
0.36	Remove existing earthen road closure barrier. Reinstall Type A road closure barrier after road work is completed.	203-01.2 650-04A	1 EA 1 EA
0.48	Install water bar. See Sheet 7.	204-20.3	1 EA
0.53	Install water bar. See Sheet 7.	204-20.3	1 EA
0.58	Construct Low Water Ford. See Sheet 9. Haul waste material (indirectly paid by Item 204-20.4) to approved disposal sites. See Note 5 on Sheet 3.	204-20.4 251-01.1 251-01.2	1 EA 10 CY 3 CY
0.66	Install water bar. See Sheet 7.	204-20.3	1 EA
0.75	Install water bar. See Sheet 7.	204-20.3	1 EA
0.90	Install water bar. See Sheet 7.	204-20.3	1 EA
0.99	Install water bar. See Sheet 7.	204-20.3	1 EA
1.08	Begin clearing and grubbing, disposal of tops and limbs scatter, logs deck, stumps scatter. Deck logs where staked by Forest Service. Begin reconditioning existing roadway. Conserve and utilize the aggregate that has scattered onto the shoulders of the roadway and re-incorporate into the traveled way. Scarify aggregate surface in accordance with FP-03 303.06. Shape and compact the traveled way, shoulders and existing turnouts. See Sheet 7.	201-03.2 303-57	0.12 MILE 0.12 MILE
1.10	Install water bar. See Sheet 7.	204-20.3	1 EA
1.15	Install water bar. See Sheet 7.	204-20.3	1 EA
1.16	Install water bar. See Sheet 7.	204-20.3	1 EA
1.19	Install water bar. See Sheet 7. End work for this road.	204-20.3	1 EA
MP	SPECIFIED ROAD WORKLIST- ROAD 1610-448	PAY ITEM	QUANTITY
0.67	Junction road 1610-410 and road 1610-448. Begin clearing and grubbing, disposal of tops and limbs scatter, logs deck, stumps scatter. Deck logs as staked by Forest Service. Begin reconditioning existing roadway. Scarify road surface in accordance with FP-03 303.05. Shape and compact the traveled way, shoulders and existing turnouts. See Sheet 7.	201-03.2 303-57	0.36 MILE 0.36 MILE
0.65	Right. Remove and replace route marker on road 1610-448. See Sheets 9-11. Install water bar. See Sheet 7.	633-23 204-20.3	1 EA 1 EA
0.59	Install water bar. See Sheet 7.	204-20.3	1 EA
0.57	Install water bar. See Sheet 7.	204-20.3	1 EA
0.51	Install water bar. See Sheet 7.	204-20.3	1 EA
0.48	Install water bar. See Sheet 7.	204-20.3	1 EA
0.46	Install water bar. See Sheet 7.	204-20.3	1 EA
0.42	Install water bar. See Sheet 7.	204-20.3	1 EA
0.40	Install water bar. See Sheet 7.	204-20.3	1 EA
0.37	Install water bar. See Sheet 7.	204-20.3	1 EA
0.31	Install water bar. See Sheet 7. End work for this road.	204-20.3	1 EA
MP	SPECIFIED ROAD WORKLIST- ROAD 2925	PAY ITEM	QUANTITY
11.86	Junction road 2925 and road 2925-900. Left. Remove and replace signs on existing posts at intersection. See Sheets 9-11.	633-13	4.4 SF
13.44	Left. Remove and replace route marker on road 2925-950.	633-23	1 EA
13.62	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. Replace conserved aggregate on road surface, supplementing the aggregate surface with 5 cubic yards of material obtained from Three Cabin Quarry. See Sheet 7. Any unsuitable backfill material, woody debris, slash or boulders from excavation will be hauled (indirectly paid by Item 602-63.18) to approved disposal sites. See Note 5 on Sheet 3.	203-01.1 322-32 602-63-18	1 EA 5 CY 36 LF
13.73	Right. Remove and replace route marker on road 2925-990. End work for this road.	633-23	1 EA
13.85	Junction road 2925 and road 31, left and right.		
MP	SPECIFIED ROAD WORKLIST- ROAD 31	PAY ITEM	QUANTITY
10.24	North boundary Unit #94.		
11.28	Begin road work. Left. Remove and replace route marker on road 3100-820. See Sheets 9-11.	633-23	1 EA
11.56	Left. Reset 2 posts on road 31. See Sheets 9-11.	633-25	2 EA
11.56	Right. Remove and replace route marker on road 3100-850. See Sheets 9-11.	633-23	1 EA
11.71	Junction road 3100-850, right. Reconstruct intersection. Place excavated material as shown on sheets 13-15. Excess material is to be hauled to Three Cabin Quarry, indirectly paid by 204-52. Work includes culvert installation as shown on plans.	152-01.1 201-04.1 204-52 322-32 602-63.18	1 LS 0.35 ACRES 1 LS 150 CY 74 LF
13.72	Junction road 3100-880, right.		
13.72	Right. Remove and replace route marker on road 3100-880. See Sheets 9-11.	633-23	1 EA
14.06	Right. Remove and replace mile marker on road 31. See Sheets 9-11.	633-23	1 EA
14.25	Right. Remove and replace signs on existing posts on road. See Sheets 9-11. End work for this road.	633-13	3.4 SF
14.42	Junction road 2925, left. Road 31 continues right.		
MP	SPECIFIED ROAD WORKLIST- ROAD 3100-851	PAY ITEM	QUANTITY
0.00	Junction road 3100-850. Begin road work. Begin clearing and grubbing, disposal of tops and limbs chip, logs deck, stumps scatter. Deck merchantable logs and non-merchantable logs as staked by Forest Service. Begin reconditioning existing roadway in accordance with FP-03 303.05.	201-03.1 303-57	0.27 MILE 0.27 MILE
0.27	End work for this road.		
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		RD 1610-434, RD 1610-448, RD 2925, RD 31, RD 3100-851 WORKLIST	