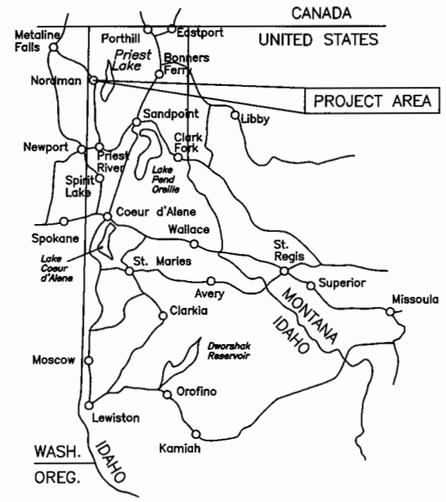
U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE, REGION 1

NICKELPLATE

IDAHO PANHANDLE NATIONAL FORESTS
PRIEST LAKE RANGER DISTRICT
BONNER COUNTY, IDAHO



NORTHERN IDAHO LOCATION MAP

	INDEX TO SHEETS
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1	TITLE SHEET
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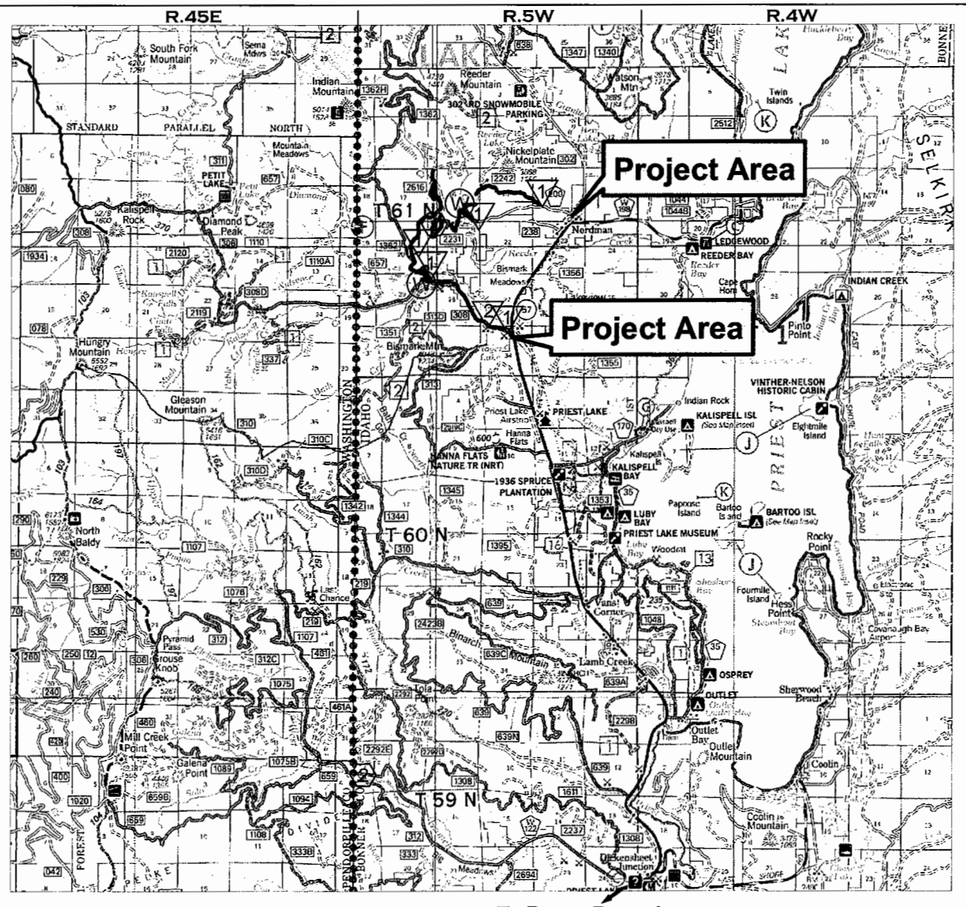
LEGEND:

- RECONSTRUCTION ROADS
- (W) WATER SOURCE
- (1) PIT RUN SOURCE 1
- (2) RIPRAP SOURCE 2
- (1) "ROAD CONSTRUCTION AHEAD", 36" X 36" SIGN PLACE AT THE BEGINING OF ROADS UNDERGOING RECONSTRUCTION AND WITH IN 500' OF ACTIVITIES THAT CREATE A HAZARD.
- (2) "TRUCKS HAULING", 30" X 30" SIGN PLACE ON ROADS DURING ROCK HAULING

SPECIFICATIONS:
STANDARD SPECIFICATIONS FOR CONSTRUCTION OF ROADS AND BRIDGES ON FEDERAL HIGHWAY PROJECTS (FP-03) AND APPLICABLE SPECIAL PROVISIONS



VICINITY MAP
NO SCALE

TO PRIEST RIVER, IDAHO
APPROXIMATELY 22 MILES

APPROVED:

DISTRICT RANGER
IDAHO PANHANDLE NATIONAL FORESTS
DATE 4-24-12

REVIEWED:

FOREST ENGINEER
IDAHO PANHANDLE NATIONAL FORESTS
DATE 4/23/12

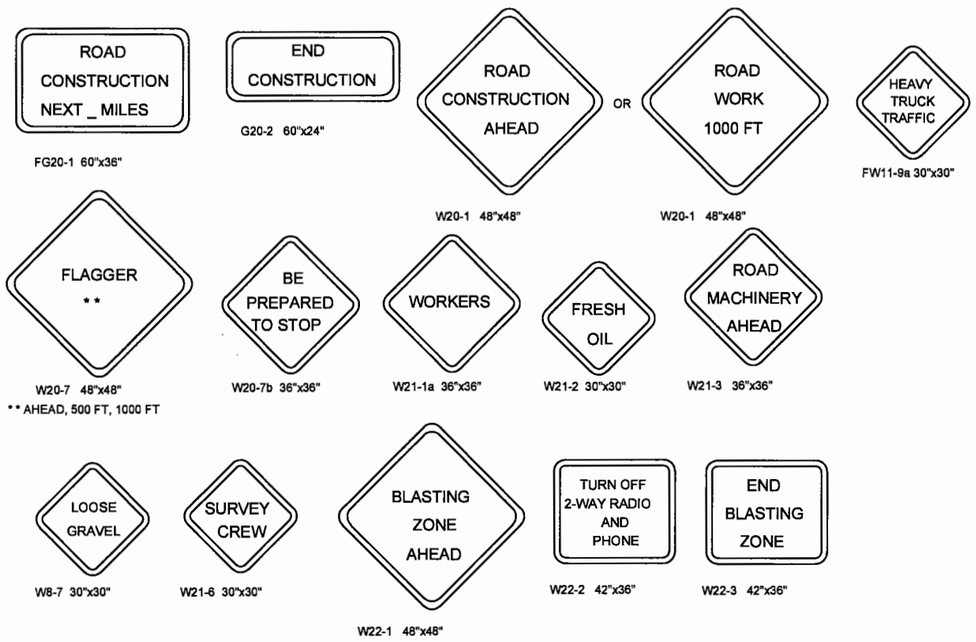
RECOMMENDED:

PROJECT TEAM LEADER
IDAHO PANHANDLE NATIONAL FORESTS
DATE 4/20/12

CALL BEFORE YOU DIG
811 OR 1-800-626-4950

TRAFFIC CONTROL SIGNS SHALL CONFORM TO THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES" & THE TRAFFIC CONTROL PLAN, OR AS DIRECTED BY THE C.O.

Warning Signs - Black on Orange



Regulatory Signs - Black on White

TYPICAL WARNING & REGULATORY SIGNS (AS PER MUTCD)

GENERAL SIGN & WARNING DEVICE NOTES

1. The Contractor shall be responsible for furnishing, installing, maintaining, and removeing signs and warning devices in conformance with the most current revision of the Manual on Uniform Traffic Control Devices (MUTCD) and the approved traffic safety sign plan.

2. A detailed "Traffic Safety Sign Plan" shall be submitted by the Contractor for Approval by the Contracting Officer. The plan shall address types, amounts, locations and timing of signs and warning devices to be used for a specific road or activity.

3. Signs and warning devices shall be installed at the approved locations prior to starting any work activities.

4. During periods of non-work (weekends, holidays, end of work day, etc.) all signs shall be covered or removed.

5. Additional signs and warning devices shall be installed by the Contractor if conditions change.

6. All signs and warning devices shall be removed from the project upon completion and acceptance of the work.

7. Payment for furnishing, installing, maintaining, and removing signs and warning devices and for preparing the plan shall be considered incidental to pay items under Section 151 - Mobilization. No seperate payment will be made.

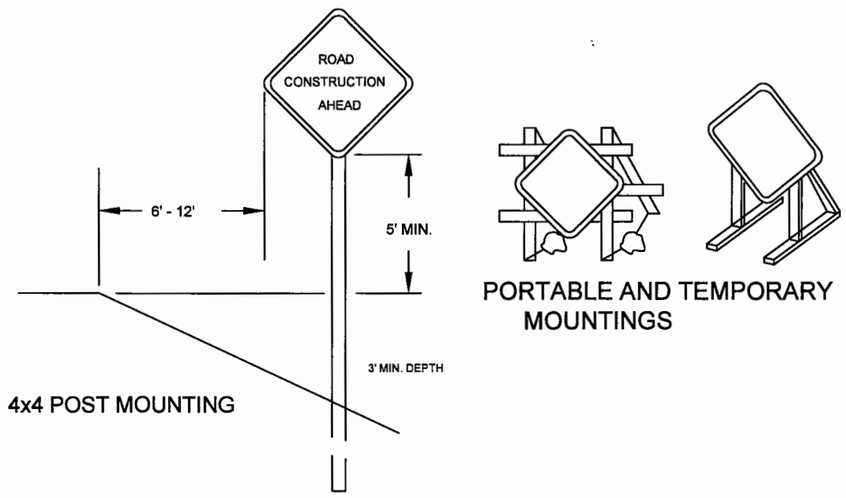
8. Warning signs shall be black symbol/message/border on orange background, as per MUTCD.

9. Regulatory signs shall be black symbol/message/border on white background, as per MUTCD.

10. All signs shall be either reflectorized with a material that has a smooth, sealed outer surface, or iluminated to show approximately the same shape and color day and noght.

11. "Home-made" signs shall not be allowed. Signs shall not be attached to trees or other sign posts unless approved by the Contracting Officer

12. "Truck Crossing" W8-6 36" x 36" sign shall be placed along HWY 57 at intersections of Forest Roads along the haul routes during rock hauling or other hauling activities. Follow MUTCD standard for placement distance away from intersections in both directions of the highway.



TYPICAL SIGN INSTALLATION (AS PER MUTCD)

U.S. DEPARTMENT OF AGRICULTURE
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Revised Josh T. Nelson Date 04/16/2012
Revised _____ Date _____
Revised _____ Date _____
Revised _____ Date _____

NOT TO SCALE

Date Drawn: 05/07/2010

Drawn Josh Nelson
Design _____
Checked _____
Reviewed _____

Forest: Idaho Panhandle National Forests
Project Name: Nickelplate

Sheet Title: SIGN Plan

Sheet 2 of 16

ESTIMATE OF QUANTITIES

ITEM NO.	DESCRIPTION	METHOD OF MEASURE	UNIT	REVISION DATE	ROAD NUMBER	308	1362	2231	2231A	2242	2242A Seg I	2242A Seg II	2516	Project Totals
					MILE POST (MILES)	2.3	0.82	0.83	0.66	1.26	0.31	0.73	2.93	
						QUANTITIES								
15101	Mobilization	LSQ	Lump Sum	2006		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
20206	Removal of individual stumps, Disposal Method f - (Scatter)	AQ	Each	2006				1.00						1.00
20301	Removal of Culverts	AQ	Each	2006		1.00		1.00	2.00	1.00				5.00
20407	Select borrow, compaction method C, finishing method A, (Source 1)	CQ	Cubic Yard	2010								40.00		40.00
20419A	Drainage excavation, type Outlet Ditch	AQ	Foot	2006		40.00		180.00		20.00	50.00			290.00
20419B	Drainage excavation, type Ditch	AQ	Foot	2006					800.00	200.00				1000.00
20419C	Drainage excavation, type Drivable Water Bar	AQ	Foot	2006					200.00					200.00
20420	Drainage excavation, type Catch Basin	AQ	Each	2006		2.00		1.00	1.00	1.00				5.00
20426	Grade dips, Armored (class I riprap)	AQ	Each	2006				1.00	1.00	2.00				4.00
21250	Linear grading	CQ	Sta	2010							16.40			16.40
21251	Linear grading (Truck Turn Around)	CQ	Each	2010							1.00	1.00		2.00
25101A	Placed riprap, class I (Machine Placed - Source 2)	CQ	Cubic Yard	2006		20.00		5.00	40.00	5.00		5.00		75.00
25101B	Placed riprap, class V (Machine Placed - Source 2)	CQ	Cubic Yard	2006		10.00			450.00					460.00
25101C	Placed riprap, class III (Dumped - Source 2)	CQ	Cubic Yard	2006									10.00	10.00
30111	Aggregate surface course, grading F or G, compaction method A (Commercial Source)	CQ	Cubic Yard	2006		360.00		108.00	9.00			60.00		537.00
30122	Pit run maximum size 4", compaction method A (Source 1)	CQ	Cubic Yard	2006				190.00	170.00	480.00				840.00
30322	Road reconditioning, compaction method A	CQ	Mile	2006		2.30	0.82	0.83	0.66	1.26		0.73	2.93	9.53
30605	Calcium Chloride Flake @ 77% minimum concentration	AQ	Ton	2006		16.20	5.80							22.00
55703A	Treated structural timber and lumber (Bridge Running Planks)	CQ	MFBM	2006		0.70								0.70
55703B	Treated structural timber and lumber (Bridge Curbs)	CQ	MFBM	2006		0.31								0.31
55703C	Treated structural timber and lumber (Bridge End Bumpers)	CQ	MFBM	2006		0.19								0.19
60211A	18 Inch Corrugated Steel Pipe 0.064 Inch Thickness	AQ	Foot	2009		56.00		26.00	72.00	30.00		24.00		208.00
60211B	24 Inch Corrugated Steel Pipe 0.075 Inch Thickness	AQ	Foot	2009		40.00			34.00					74.00
60712	Cleaning Bridges in place	CQ	Each	2006		1.00								1.00
62527	Seeding, Fertilizing, and Mulching, Dry Method	CQ	Acre	2006		0.02		0.01	0.05	0.01				0.09
63305	Posts, Pressure Treated Wood	AQ	Foot	2006		36.00								36.00
63306	Object markers, OM3	AQ	Each	2006		4.00								4.00

U.S. DEPARTMENT OF AGRICULTURE
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Drawn Josh Nelson
Design
Checked
Reviewed

Forest
Idaho Panhandle National Forests
Project Name
Nickelplate

Sheet Title
Summary of Estimated Quantities

Project	Nickelplate					
Road #	308	Miles	2.30			
Mile Post	Work Description	Pay Item	Estimated Quantity	Unit of Measure	Method of Measure	Remarks & Instructions
0.000	Begin Project					MP 34.02 SH57
	Begin Reconditioning of Roadbed	30322	2.3	MI	CQ	Here to jct w/1362, water incidental See Note #1 on Sheet 6 of 13
	Begin CaCl Flake @77% min, pellet @ 94% min, Prep Mthd 1	30605	16.2	TON	AQ	16' width, 1.5#/SY, here to MP 2.3, water incidental
0.715	Removal of Culvert	20301	1	EA	AQ	Includes existing 24" culvert and piece on shoulder
	Install 24" CMP (incl culv excav), Steel Pipe .075 inch Thickness, Method C	60211B	40	LF	AQ	As staked
	Machine Placed Riprap, Class I	25101A	10	CY	CQ	Place at inlet on fill and in catch basin and at outlet on fill and below pipe and in ditch ahead, as marked
	Begin Crushed Aggregate, Type surfacing, Grading F or G, Comp A (commercial source)	30111	300	CY	CQ	4" depth x 16' top, from 25' back of new pipe to MP 0.96, as marked
1.905	Machine Placed Riprap, Class V	25101B	70	CY	CQ	Repair hole in fill and armor fill, as marked
	Begin Crushed Aggregate, Type surfacing, Grading F or G, Comp A (commercial source)	30111	20	CY	CQ	4" depth x 16', as marked
1.980	Install 18" CMP (incl culv excav), Thickness: Steel 0.064 inch, Method C	60211A	28	LF	AQ	As staked
	Drainage Excavation, Type Catch Basin	20420	1	EA	AQ	
	Construct Outlet Ditches	20419A	20	LF	AQ	
	Machine Placed Riprap, Class I	25101A	5	CY	CQ	Place at inlet on fill and in catch basin and at outlet on fill and below pipe, as marked
	Seeding	62527	0.01	Acre	CQ	All disturbed areas
	Begin Crushed Aggregate, Type surfacing, Grading F or G, Comp A (commercial source)	30111	10	CY	CQ	4" depth x 16' top, over new pipe, as marked
2.064	Install 18" CMP (incl culv excav), Steel Pipe 0.064 inch Thickness, Method C	60211A	28	LF	AQ	As staked
	Drainage Excavation, Type Catch Basin	20420	1	EA	AQ	
	Construct Outlet Ditches	20419A	20	LF	AQ	
	Machine Placed Riprap, Class I	25101A	5	CY	CQ	Place at inlet on fill and in catch basin and at outlet on fill and below pipe, as marked
	Seeding	62527	0.01	Acre	CQ	All disturbed areas
	Begin Crushed Aggregate, Type surfacing, Grading F or G, Comp A (commercial source)	30111	10	CY	CQ	4" depth x 16' top, over new pipe, as marked
2.256	Bridge repair items	55703A 55703B 55703C 60712 63305 63306				See Bridge Details, Sheets 14-16
	Begin Crushed Aggregate, Type surfacing, Grading F or G, Comp A (commercial source)	30111	20	CY	CQ	4" depth x 16' top, each side of bridge, as marked
2.300	End Reconditioning of Roadbed					
	End CaCl flake					

Project	Nickelplate					
Road #	2242	Miles	1.26			
Mile Post	Work Description	Pay Item	Estimated Quantity	Unit of Measure	Method of Measure	Remarks & Instructions
0.000	Begin Project Road 2242					Jct w/County Road 200, Reeder Creek, @ MP 0.68
	Begin Reconditioning of Roadbed	30322	1.26	MI	DQ	Maintain all grade dips. Repair as noted. Incidental.
	Begin Pit Run Aggregate (source 1)	30122	180	CY	DQ	6" depth x 12' top width, to MP 0.131
0.131	End Pit Run Aggregate					
0.152	Begin Pit Run Aggregate (source 1)	30122	50	CY	DQ	6" depth x 12' top width, to MP 0.185
0.185	End Pit Run Aggregate					
0.211	Begin Pit Run Aggregate (source 1)	30122	80	CY	DQ	6" depth x 12' top width, to MP 0.267
	Repair dip					outlet to drain
0.267	End Pit Run Aggregate					
0.402	Repair dip					outlet to drain
0.436	Construct outlet ditch	20419A	20	LF	AQ	As marked
0.518	Begin Pit Run Aggregate (source 1)	30122	130	CY	DQ	6" depth x 12' top width, to MP 0.610
0.545						
0.561						
0.610	End Pit Run Aggregate					End 20' past new culvert, as marked
	Removal of culvert	20301	1	EA	AQ	Remove existing culvert 30' back
	Install 18" CMP (incl culv excav), Thickness: Steel 0.064 inch, Aluminum 0.075 inch, Method C	60211A	30	LF	AQ	30' ahead, as staked
	Drainage Excavation, Type Catch Basin	20420	1	EA	AQ	
	Machine Placed Riprap, Class I	25101A	5	CY	CQ	Place at inlet on fill and in catch basin and at outlet on fill and below pipe, as marked
	Seeding	62527	0.01	Acre	DQ	All disturbed areas
0.706	Construct Grade Dip	20426	1	EA	AQ	10 CY Class I Riprap Incidental
0.766	Construct Grade Dip	20426	1	EA	AQ	10 CY Class I Riprap Incidental
0.868	Construct ditch	20419B	200	LF	AQ	As marked
0.906	End ditch construction					
1.015	Pit Run Aggregate	30122	10	CY	DQ	Spot, 6" depth x 12' top, as marked
1.058	Pit Run Aggregate	30122	20	CY	DQ	Spot, 6" depth x 12' top, as marked
1.136	Pit Run Aggregate	30122	10	CY	DQ	Spot, 6" depth x 12' top, as marked
1.256	End Reconditioning of Roadbed					
	End Project					Road 2242 continues up around switchback right, gated. 2242A left, spur ahead.

Project	Nickelplate					
Road #	1362 & 2516	Miles	0.82 & 2.93			
Mile Post	Work Description	Pay Item	Estimated Quantity	Unit of Measure	Method of Measure	Remarks & Instructions
0.000	Begin Project Road 1362					Jct w/Rd 308 @ MP 2.3
	Begin Reconditioning of Roadbed	30322	0.82	MI	DQ	
	Begin CaCl Flake @77% min, pellet @94% min, Prep Mthd 1	62527	5.8	TON	AQ	16' width, 1.5#/SY
0.820	End Reconditioning of Roadbed					
	End CaCl Flake					
	End Project Rd 1362					Jct w/Rd 2516, 1362 continues
0.000	Begin Project Rd 2516					Jct w/Rd 1362 @ MP 0.82
	Begin Reconditioning of Roadbed	30322	2.93	MI	DQ	
2.082	Dumped riprap Class III	25101C	10	CY	DQ	
2.930	End Project					

U.S. DEPARTMENT OF AGRICULTURE
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NORTHERN REGION

Revised Josh T. Nelson Date 04/16/2012
Revised _____ Date _____
Revised _____ Date _____
Revised _____ Date _____

Date Drawn: 05/07/2010

Drawn Josh Nelson
Design _____
Checked _____
Reviewed _____

Forest
Idaho Panhandle National Forests
Project Name
Nickelplate

Sheet Title
Project Work Descriptions
Rds 308, 1362 & 2516, 2242
Sheet 4 of 16

Project	Nickelplate					
Road #	2231	Miles	0.83			
Mile Post	Work Description	Pay Item	Estimated Quantity	Unit of Measure	Method of Measure	Remarks & Instructions
0.000	Begin Project					Jct w/County Road 200, Reeder Creek, @ MP 1.981
	Begin Reconditioning of Roadbed	30322	0.83	MI	DQ	Maintain all grade dips. Repair as noted. Incidental.
0.124	Begin Pit Run Aggregate (source 1)	30122	60	CY	DQ	6" depth x 14' top width, from 25' back to 25' ahead of MP 0.153, as marked
	Removal of Culvert	20301	1	EA	AQ	
	Install 18" CMP (incl culv excav), Thickness: Steel 0.064 inch, Aluminum 0.075 inch, Method C	60211A	26	LF	AQ	As staked
	Drainage Excavation, Type Catch Basin	20420	1	EA	AQ	
	Machine Placed Riprap, Class I	25101A	5	CY	CQ	Place at inlet on fill and in catch basin and at outlet on fill and below pipe, as marked
	Seeding	62527	0.01	Acre	DQ	All disturbed areas
0.153	End Pit Run Aggregate					25' ahead, as marked
	Construct Outlet Ditches	20419A	160	LF	AQ	Cut 20' outlet ditches every 100', as marked up to MP 0.309
0.334	Construct Grade Dip	20426	1	EA	AQ	50' back, as marked. Includes 10 CY Class I riprap, 4"-6" size, in bottom and on fill
0.376	Begin Pit Run Aggregate (source 1)	30122	90	CY	DQ	6" depth x 12' top width, to MP 0.444, as marked
0.444	End Pit Run Aggregate					
0.660	Begin Pit Run Aggregate (source 1)	30122	30	CY	DQ	6" depth x 12' top width, to MP 0.679, as marked
	Construct Outlet Ditch	20419A	20	LF	AQ	Cut 20' outlet ditchas marked
0.679	Individual Removal of Stumps	20206	1	EA	AQ	In left shoulder
	End Pit Run Aggregate					
0.749	Begin Crushed Aggregate, Type surfacing, Grading A or B, Comp (commercial source)	30111	108	CY	DQ	6" depth x 12' top to MP 0.80, as marked
0.800	End Crushed Aggregate					
0.830	End Reconditioning of Roadbed					Existing gate.
	End Project					Road 2231 continues ahead down ridge to left. Jct w/Road 2231A Station 0+00

Project	Nickelplate					
Road #	2231A	Miles	0.66			
Station	Work Description	Pay Item	Estimated Quantity	Unit of Measure	Method of Measure	Remarks & Instructions
0+00	Begin Project					Jct w/Road 2231 @ MP 0.83. Gate - Location of Source 1 to the Right as Marked on the ground
	Begin Reconditioning of Roadbed	30322	0.66	MI	DQ	Maintain all grade dips. Repair as noted. Incidental.
0+90						
1+65						
2+40						
3+60	Construct Ditch	20419B	365	LF	AQ	Recut ditch on left
	Begin Pit Run Aggregate (source 1)	30122	160	CY	DQ	6" depth x 12' top width, to 9+65, as marked
6+35						
8+00						
9+65						
10+60	Construct Ditch	20419B	170	LF	AQ	Recut ditch on left to 12+00
14+00	Drivable Water Bar	20419C	200	LF	AQ	Start here on right and skew back down to 12+00. Tie into ditch on left
14+90	Pit Run Aggregate (source 1)	30122	10	CY	DQ	Spot, 6" depth x 12' top width, to 15+25, as marked
16+70	Removal of Culvert	20301	1	EA	AQ	Remove existing 18" culvert in live stream.
	Install 24" CMP (incl culv excav), .075 inch Thickness, Method C	60211B	34	LF	AQ	As staked
	Machine Placed Riprap, Class V	25101B	10	CY	DQ	Place on fill around inlet up to high water and at outlet, as marked
	Seeding	62527	0.01	Acre	DQ	All disturbed areas
17+60	Install 18" CMP (incl culv excav), Thickness: Steel 0.064 inch, Aluminum 0.075 inch, Method C	60211A	36	LF	AQ	As marked
	Drainage Excavation, Type Catch Basin	20420	1	EA	AQ	
	Construct Ditch	20419B	265	LF	AQ	Construct ditch up to 20+25
	Machine Placed Riprap, Class I	25101A	5	CY	CQ	Place at inlet on fill and in catch basin and at outlet on fill and below pipe, as marked
	Seeding	62527	0.03	Acre	DQ	All disturbed areas
19+40	Machine Placed Riprap, Class V	25101B	450	CY	DQ	Place Riprap on Fill Slope to Repair Slide
	Place Crushed Aggregate, Type surfacing, Grading A or B, Comp A (commercial source)	30111	9	CY	DQ	See Sheet 9 of 16 for Slide Details
20+25	Removal of Culvert	20301	1	EA	AQ	
	Machine Placed Riprap, Class I	25101A	5	CY	CQ	Place at inlet on fill and in catch basin and at outlet on fill and below pipe, as marked
	Install 18" CMP (incl culv excav), Thickness: Steel 0.064 inch, Aluminum 0.075 inch, Method C	60211A	36	LF	AQ	As marked
	Seeding	62527	0.01	Acre	DQ	All disturbed areas
20+72	Machine Placed Riprap, Class I	25101A	10	CY	DQ	Place in bottom of existing water bar and on fill slope at outlet, as marked
22+05	Machine Placed Riprap, Class I	25101A	10	CY	DQ	Place in bottom of existing water bar and on fill slope at outlet, as marked
23+42	Machine Placed Riprap, Class I	25101A	10	CY	DQ	Place in bottom of existing water bar and on fill slope at outlet, as marked
34+05	Construct Grade Dip	20426	1	EA	AQ	Includes 10 CY Class 1 riprap, 4"-6" size, in bottom and on fill
34+80	End Reconditioning of Roadbed					
	End Project					Road 2231A continues ahead to the left. Jct w/2231C ahead right.

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NORTHERN REGION

Revised Josh T. Nelson Date 04/16/2012
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Revised _____ Date _____
Revised _____ Date _____

Date Drawn: 05/07/2010

Drawn Josh Nelson
Design _____
Checked _____
Reviewed _____

Forest
Idaho Panhandle National Forests
Project Name
Nickelplate

Sheet Title
Project Work Descriptions
Rds 2231, 2231A
Sheet 5 of 16

Project	Nickelplate					
Road #	2242A Seg I	Miles	0.31			
Mile Post	Work Description	Pay Item	Estimated Quantity	Unit of Measure	Method of Measure	Remarks & Instructions
0.000	Begin Project					Jct w/Road 2242 @ MP 1.26
	Begin Linear Grading (composite road reconstruction)	21250A	16.4	STA	DQ	Reconstruct approach onto road 2242 to the east. Reshape existing road to drain and provide a smooth running surface. Minimum clear width is 24', or as marked Minimum road width is 12'.
0.072	Construct outlet ditch	20419A	30	LF	AQ	As marked
0.179	Construct outlet ditch	20419A	20	LF	AQ	As marked
0.306	Construct truck turn around	21250B	1	EA	AQ	See typical section
0.312	End Linear Grading					
	End Project					Road continues ahead down steep pitch and ties to Road 2242A SegII

Project	Nickelplate					
Road #	2242A Seg II	Miles	0.73			
Mile Post	Work Description	Pay Item	Estimated Quantity	Unit of Measure	Method of Measure	Remarks & Instructions
0.000	Begin Project					Jct w/Road 2231 @ MP 0.083
	Begin Reconditioning of Roadbed	30322	0.73	MI	DQ	Maintain all grade dips. Repair as noted. Incidental.
0.035	Install 18" CMP (incl culv excav), Thickness: Steel 0.064 inch, Aluminum 0.075 inch, Method C	60211A	24	LF	AQ	As staked
	Select Borrow (source 1)	20407	40	CY	DQ	Use material to raise grade over new culvert . 14' finished width, as marked.
	Machine Placed Riprap, Class I	25101A	5	CY	CQ	Place at inlet on fill and in catch basin and at outlet on fill and below pipe, as marked
0.349	Begin Crushed Aggregate, Type surfacing, Grading A or B, Comp A (commercial source)	30111	50	CY	DQ	6" depth x 12' top to MP 0.387, as marked
0.387	End Crushed Aggregate					
0.634	Crushed Aggregate, Type surfacing, Grading A or B, Comp A (commercial source)	30111	10	CY	DQ	Spot, 6" depth x 12' top, as marked
0.720	Construct truck turn around	21250B	1	EA	AQ	See typical section
0.730	End Reconditioning of Roadbed					
	End Project					Road continues ahead up steep pitch and ties to Road 2242A Seg I

GENERAL NOTES:

1. Old Corduroy Logs and other woody debris brought to the surface during reconditioning of road 308 shall be disposed of by piling at the designated location in the gravel pit at mile post 0.42. Resulting holes shall be backfilled with suitable material and compacted.
2. Estimated quantity for Item 30605 is based on an application rate for CaCL Flake @ 77% minimum concentration of 1.5 pounds per square yard, at the width specified on the Line Diagrams. The cost of watering the surface prior to application is incidental.
   Substitution may be made as follows: Calcium Chloride Pellet, 94% minimum concentration application rate on 1.23 pounds per square yard. Construct roads to Tolerance Class E.
3. Watering as per section 170 is incidental to pay items under sections 301, 303, 306, and 625 if needed.
4. Section 204, 303, and 602, Excess, oversize or unsuitable material shall be sidecast uniformly over adjacent fill slopes, so it does not enter live streams.
5. ROCK SOURCES: Source 1 is an existing FS cut slope at the junction with roads 2231A and 2231 as shown on the drawings and designated on the ground.
   Source 2 is an existing FS Pit on road 1094, T59N R5W Sec7. Access is from SH 57 at MP 22.3, West on Road 312.
6. Pit Development and Rehab:
   a. The work for both pits is incidental to Pay Item 30311 and 30322.
   b. Clearing Limits shall be 3' from the new top of cut, as marked.
   c. Slash disposal: T&L - K, Stumps - K, Logs - i, UOT - as per Section 20106. Deck at area designated by the CO.
   d. Finished cut slope at 1:1 slope.
   e. Grade floor to match road.
   f. Match existing ditch to drain.
8. For Pay Items 21250A and 21250B
   a. Clearing and Grubbing as per 203.05
      - Slash Disposal Methods: T&L - K, Stumps - K, Logs - i, UOT - as per section 201.06
   b. Clearing Width:
      - 5' Past New Top of Cut, 5' Past shoulders or 24' minimum or as marked.
   c. Cut and Fill Slopes
      - Cut 1:1, Fill 1½:1
   d. Finished Subgrade width
      - 14' or as shown on the drawings
   e. Finished subgrade: Shape to drain and have a smooth horizontal & vertical alignment by Ripping and Scarifying to remove protruding rocks, holes, sags & humps.
9. Construction Tolerance Class is E as per table 204-2.

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Revised Josh T. Nelson Date 04/16/2012
Revised _____ Date _____
Revised _____ Date _____
Revised _____ Date _____

Date Drawn: 05/07/2010

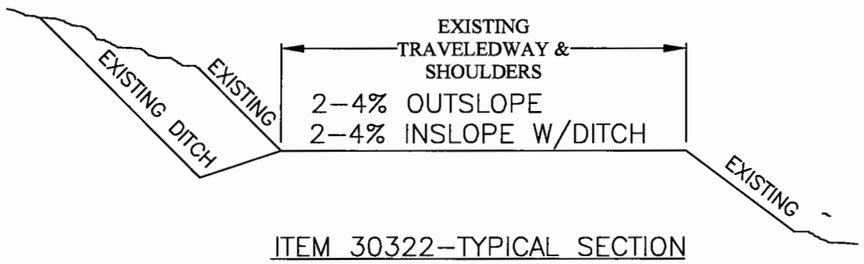
Drawn Josh Nelson
Design _____
Checked _____
Reviewed _____

Forest: Idaho Panhandle National Forests
Project Name: Nickelplate

Sheet Title: Project Work Descriptions
Rds 2242A Seg I, 2242A Seg II, Gen Notes
Sheet 6 of 16

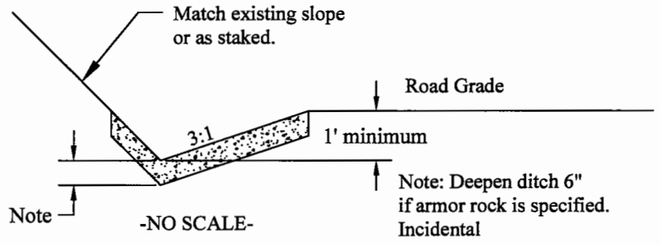
NOTES:

1. Compacted depth and finished top width as shown in the Project Work Descriptions.
2. Section 301 Aggregate Surface Course shall come from a Commercial Source for designated roads. The cost of watering is incidental to Item 30111.
3. Section 303 – Scarification is not required.
4. Pay Item 30322 – Ditch sections adjacent to crushed aggregate surfaces shall becleaned in a manner that <u>does not</u> contaminate the aggregate surface, excess and unsuitable material shall be sidecast uniformly along adjacent fill slopes. A 50' transition shall be made at each traveled intersection.
5. For Item 20419A
   a. Ditch Centerline at outlet will be marked.
   b. Ditch Depth varies to allow free drainage and to daylight at the outlet.
   c. Clearing is incidental. Slash shall be scattered.
   d. Place excavated material away from ditch. Smooth and shape piles to allow free drainage.
6. Maintain all existing Grade Dips, incidental to 30322.
7. Clean all Ditches, Catch Basins & the Inlets & Outlets of culverts to the typical dimensions, incidental to 330322.

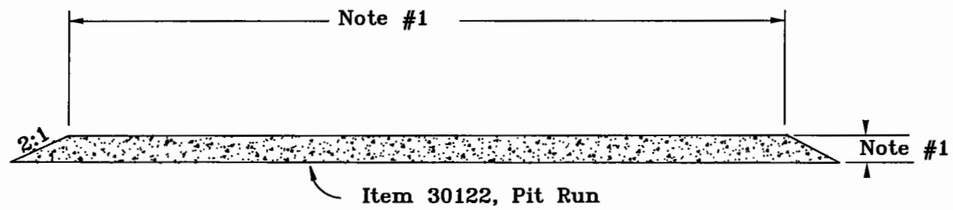


ITEM 30322–TYPICAL SECTION

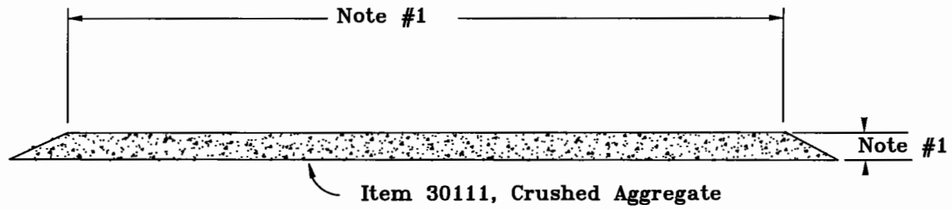
–NO SCALE–



DITCH TYPICAL SECTION

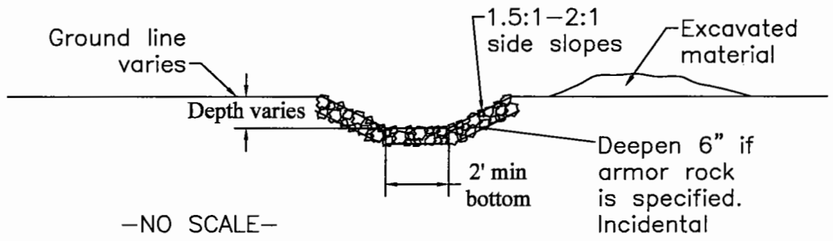


Pit Run Typical Section



Crushed Aggregate Typical Section

(not to scale)



Outlet Ditch Typical

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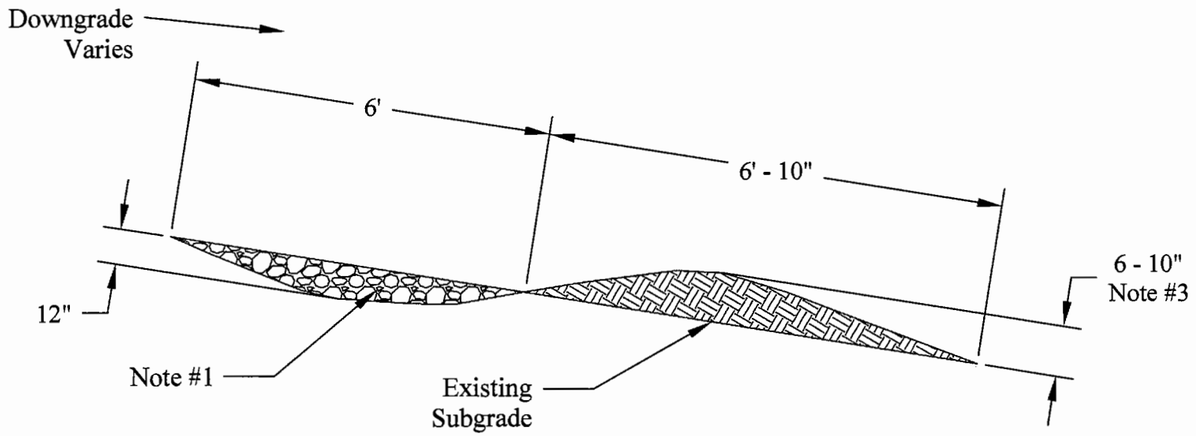
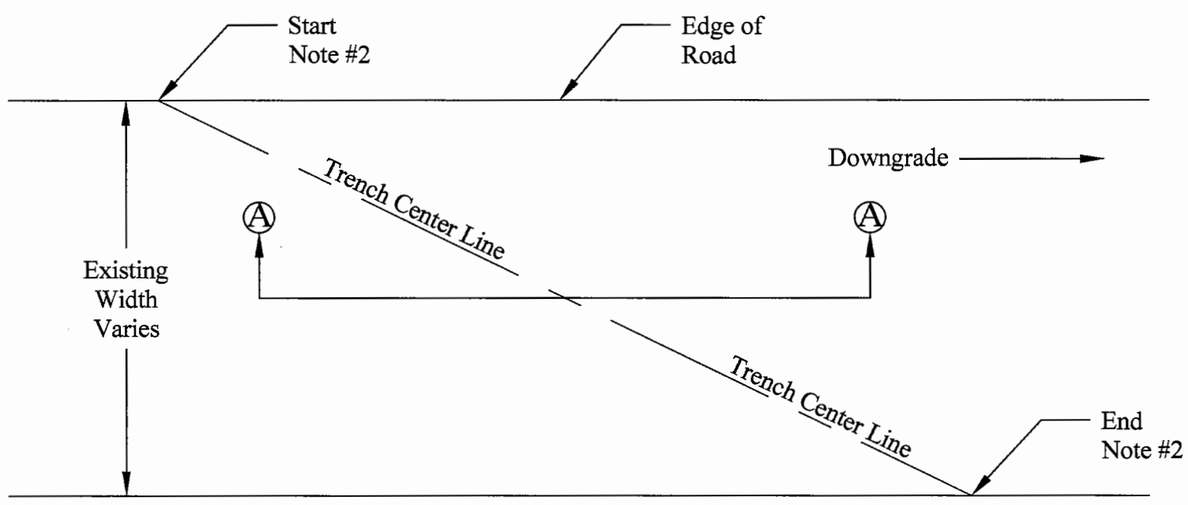


DRIVABLE WATER BAR - Sec. A-A

Not to Scale

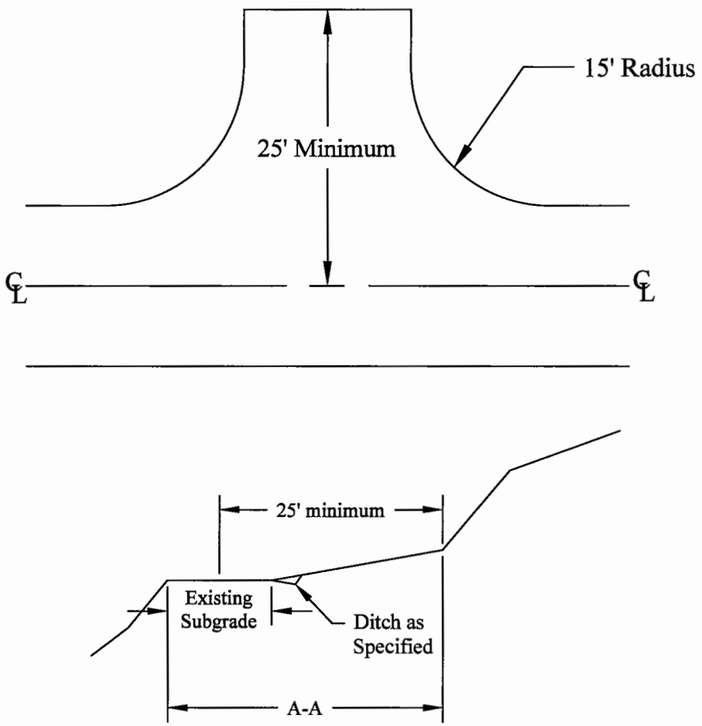


DRIVABLE WATER BAR - PLAN VIEW

Item 20419C

Drivable Water Bar Notes:

1. Fill Excavation Trench with clean class I rip rap to intercept overland flow and act as a drain to channel the water downgrade to the desired outlet. This is incidental.Quantity of rip rap will be based on a design volume of 0.1 CY per LF, and is included in item 20419C. Riprap shall come from Source 1.
2. The length of item 20419C to be paid will be the length from the marked start point to the marked end point along the bottom of the excavated trench.
3. Utilize the material excavated from the trench to construct a compacted mound on the downgrade side.



TRUCK TURN AROUND

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Details

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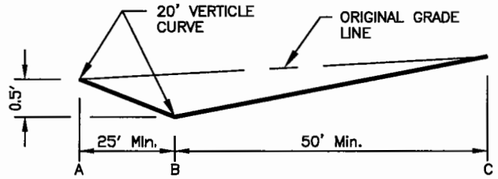
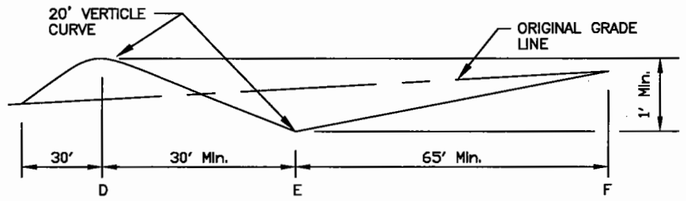


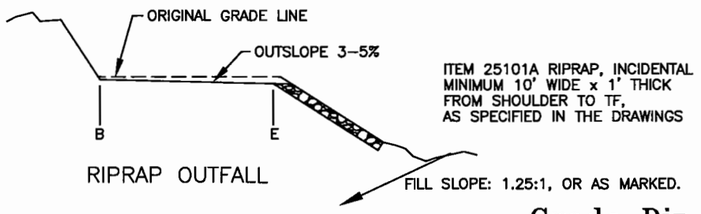
ROAD PROFILE ALONG A–B–C OF DRAIN DIP

DIP WILL MATCH BOTTOM OF DITCH IN DITCH SECTIONS, OR AS MARKED.
SEE NOTE 8



ROAD PROFILE ALONG D–E–F OF DRAIN DIP

DIP WILL MATCH THE ORIGINAL GRADE LINE IN DITCH SECTIONS, OR AS MARKED.
SEE NOTE 8



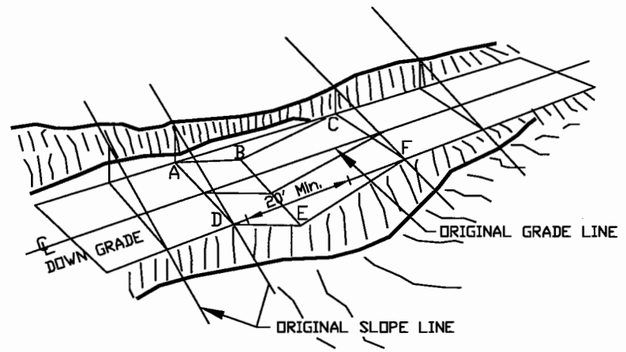
RIPRAP OUTFALL

Grade Dip Details

Item 20426

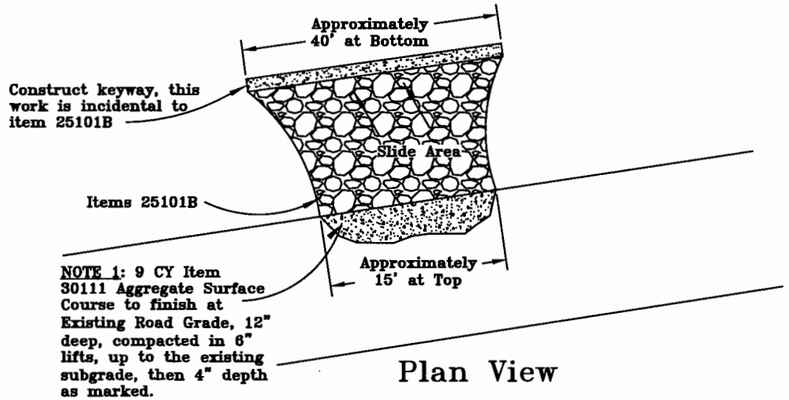
GRADE DIP NOTES:

1. GRADE DIP SHALL DISCHARGE ONTO NATURAL GROUND.
2. INSLOPE/OUTSLOPE OF DRAINAGE DIP WILL BE 3–5%.
3. SKEW LINE B–E TO FIT LOW POINT IN DRAW, IF LOCATED IN NATURAL DRAIN, OR AS MARKED.
4. EXCAVATION BELOW THE EXISTING GRADE LINE WILL BE USED AS EMBANKMENT ABOVE THE EXISTING GRADE LINE ON THE DOWN SIDE OF THE DRAINAGE DIP.
5. THE MAXIMUM DEPTH OF EXCAVATION AND EMBANKMENT WILL VARY WITH THE PERCENT OF GRADE.
6. COARSE ROCK FOR OUTFALLS SHALL CONFORM TO AND BE THE CLASS AS NOTED IN THE SCHEDULE OF ITEMS.
7. EXCAVATE 0.5' DEEPER THAN SHOWN IF ROCK IS SPECIFIED.
8. IN DITCH SECTIONS, DIP INSLOPE WILL START AT ORIGINAL ROAD GRADE AT FILL SHOULDER AND SLOPE DOWN GRADE INTO BOTTOM OF DITCH, OR AS MARKED.
9. FINAL LOCATION TO BE APPROVED BY THE ENGINEER.

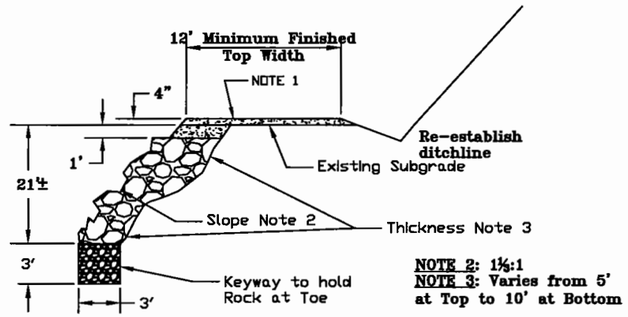


PERSPECTIVE VIEW

NON–DITCH SECTION



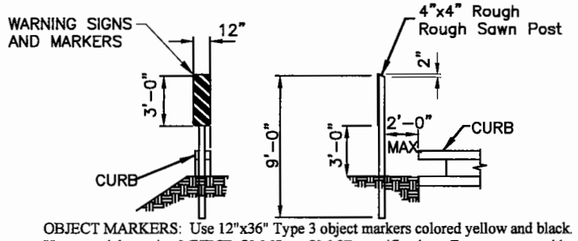
Plan View



Cross Section

Slide Details

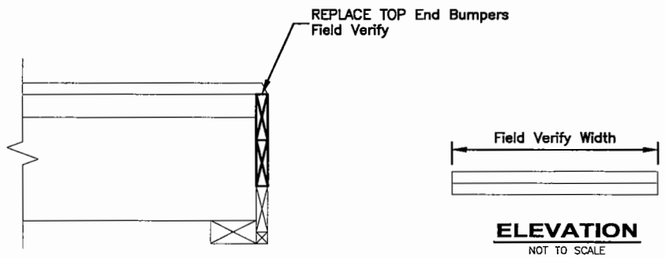
Road 2231A Sta. 19+40



OBJECT MARKERS: Use 12"x36" Type 3 object markers colored yellow and black. Use material meeting MUTCD OM-3L or OM-3R specifications. Fasten to post with (2) ¼" Ø machine bolts with washers. Field drill bolts holes. Install posts such that the inside edge of the reflectorized panel is on line with the inside edge of the curb.

OBJECT MARKER TYPE 3 TYPICAL INSTALLATION

NOT TO SCALE



END BUMPERS

NOT TO SCALE

Item 55703C

BRIDGE NOTES:

1. Remove existing running planks and pile at an agreed to location for later burning. Indirectly paid to Item 55703A
2. Locate Object Markers in same place as existing. Posts shall be 4" x 4".
3. Remove and dispose Guardrail. Indirectly paid under 55703B.
4. Work above includes all mounting hardware.
5. See Sheets 14–16 for Bridge Typicals

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Project Name: Nickelplate

Sheet Title: Details Cont.

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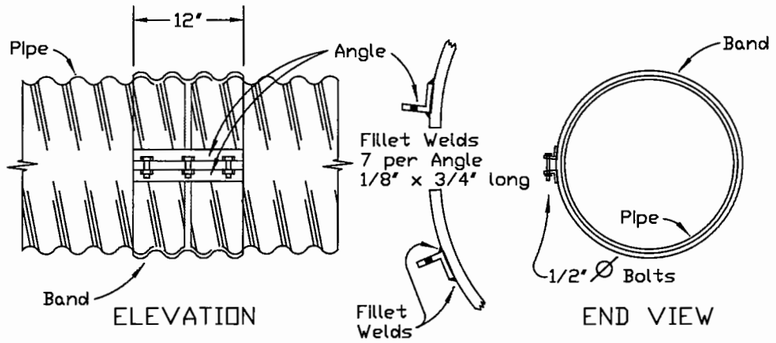
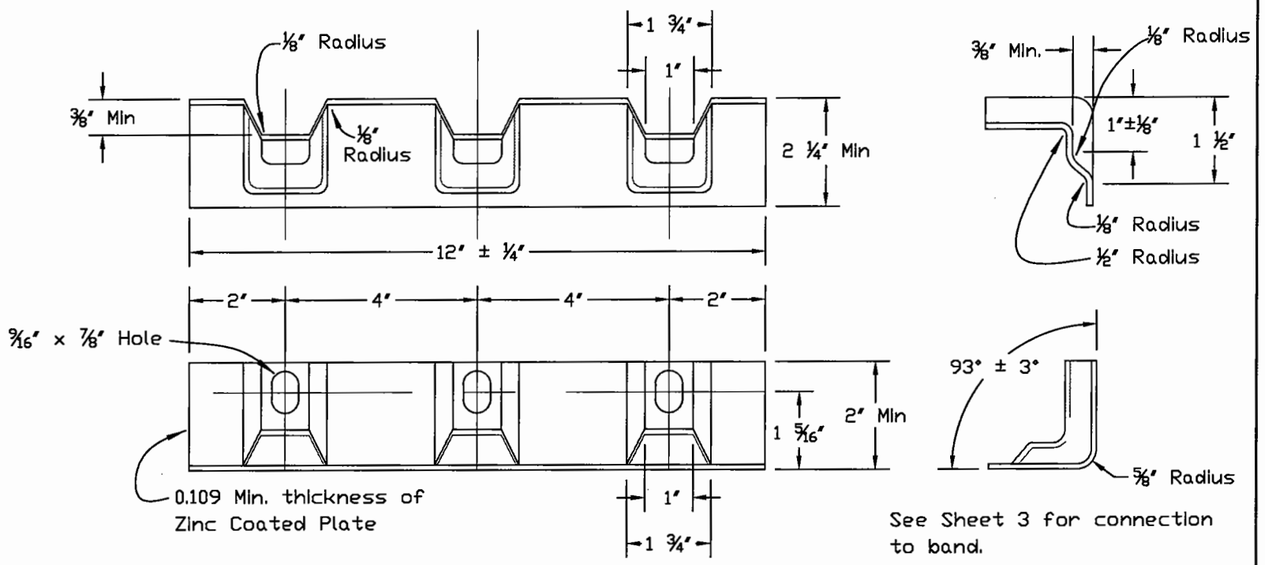
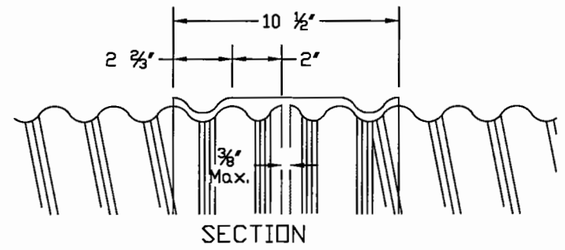


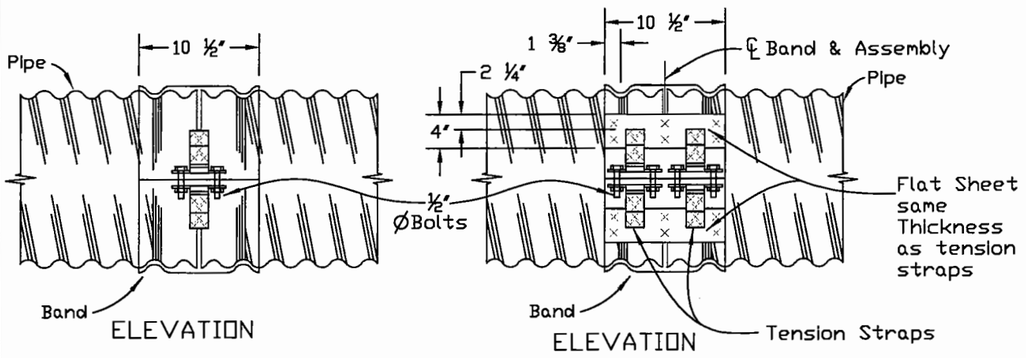
AMERICAN CULVERT BAND
FOR HELICALLY CORRUGATED STEEL PIPE



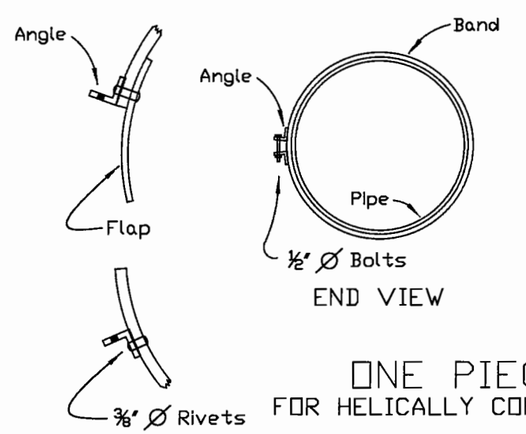
NORTHWEST CULVERT ANGLE ALTERNATIVE
FOR STEEL PIPE



SECTION



HUGGER COUPLING BAND
FOR REFORMED END HELICALLY CORRUGATED
WELDED SEAM STEEL PIPE



ONE PIECE FLAP BAND
FOR HELICALLY CORRUGATED STEEL OR ALUMINUM

COUPLING BAND DETAILS
FOR
CORRUGATED PIPE AND PIPE ARCH

U.S. DEPARTMENT OF AGRICULTURE
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Sheet Title
Coupling Band Details For
Corrugated Pipe and Pipe Arch
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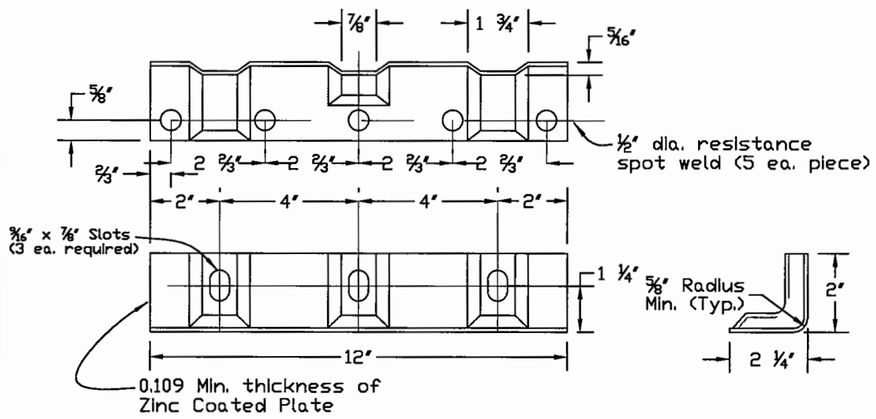
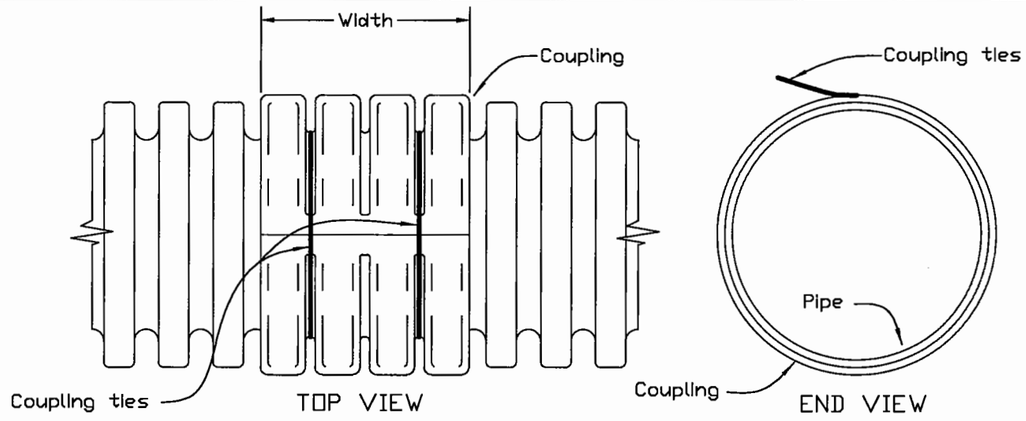
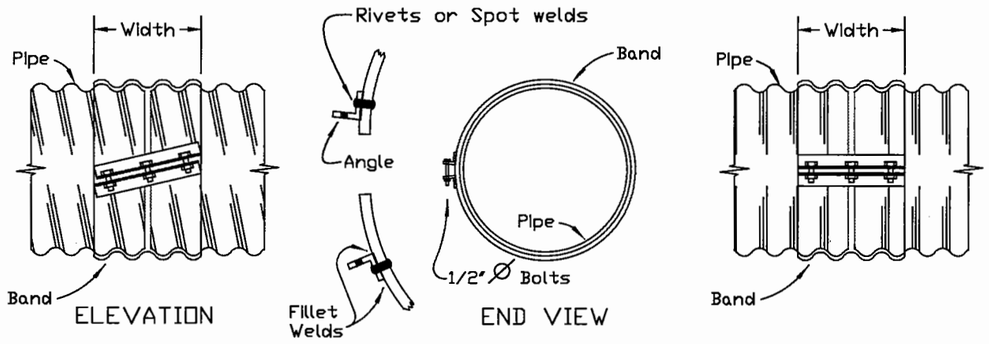


ALTERNATE FOR 2X2X3/16 ANGLE
FOR STEEL PIPE



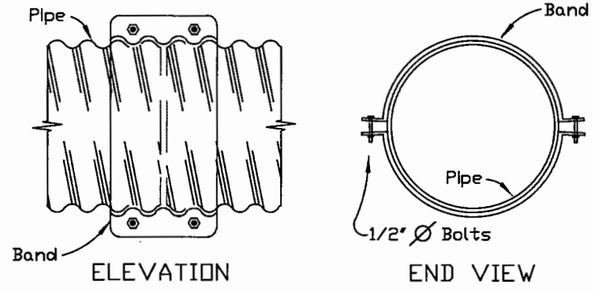
SPLIT COLLAR COUPLING
FOR ANNULAR CORRUGATED POLYETHYLENE PIPE

Notes:
1. Minimum width 4 corrugations, 2 on each culvert segment.
2. The opening of the coupling shall be within 15° of the top of the culvert.



HELICAL COUPLING BAND
FOR HELICALLY CORRUGATED STEEL OR ALUMINUM PIPE

ANNULAR COUPLING BAND
FOR ANNULAR OR REFORMED END HELICALLY CORRUGATED STEEL OR ALUMINUM PIPE



TWO PIECE INTEGRAL FLANGE
FOR HELICALLY CORRUGATED STEEL OR ALUMINUM PIPE

Notes:
1 Use 2x12x0.150 thickness 5052-H141 aluminum plate washer under bolt head & nut on aluminum pipe flange.
2. Use 2x12x0.125 thickness galvanized steel plate washer under bolt head & nut on steel pipe flange.

COUPLING BAND DETAILS FOR CORRUGATED PIPE AND PIPE ARCH

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Coupling Band Details For Corrugated Pipe and Pipe Arch
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COUPLING TYPE	CORRUGATION Inches	PIPE DIAMETER Inches	WIDTH Inches	SPECIFIED THICKNESS See Note 1-C		ANGLE - See Note 1-H			
				Pipe Wall	Band	DIMENSION	BOLTS NO / DIAMETER	ANGLE TO BAND	
								RIVETS	SPOT WELDS
Metal Pipe Annular and Helical	2-2/3x1/2 (Steel or Aluminum)	Thru 36	12	0.064-0.138	0.064-0.079	2x2x3/16	3-1/2	3-3/8	5-1/2
		42-60	12	0.064-0.079	0.064	2x2x3/16	3-1/2	3-3/8	5-1/2
		42-60	12	0.064-0.168	0.064-0.109	2x2x5/16	3-1/2	5-3/8	
		66-84	24	0.109-0.168	0.064-0.109	2x2x5/16	5-1/2	7-3/8	
	3x1 and 5x1 (Steel Only)	36-60	14	0.064-0.079	0.064	2x2x3/16	3-1/2	3-3/8	5-1/2
		42-60	14	0.109	0.064	2x2x5/16	3-1/2	5-3/8	
		66-120	25	0.064-0.109	0.064	2x2x5/16	5-1/2	9-3/8	
One Piece Flap Band & Two Piece Integral Flange	2-2/3x1/2 (Steel or Aluminum) see Note 1-I	18-24	12	0.064-0.079	0.064		3-1/2	4-3/8*	* Flap Band Only
								WELDS ANGLE TO BAND	
American Culvert Band	2-2/3x1/2 (Steel Only)	Thru 24	12	0.064-0.109	0.064-0.079	2x2x0.183	3-1/2	7-1/8x3/4 Long Fillet	
		30-36	12	0.064-0.109	0.064	2x2x0.183	3-1/2		
		42-48	12	0.064-0.079	0.064	2x2x0.183	3-1/2		
Northwest Culvert Alternative	2-2/3x1/2 (Steel Only)	Thru 84	12	0.064-0.079	0.064-0.109			5-3/16x3/4 Long Fillet	
		Thru 54	12	0.109	0.064-0.109				
		Thru 42	12	0.138	0.064-0.109				
		Thru 84	12	0.064-0.168	0.064-0.109			5-1/2 Spot	
						BAR AND STRAP			
						NUMBER/ THICKNESS	BOLT DIAMETER	BAR DIAMETER	BAR YIELD STRENGTH P.S.I.
Hugger	2-2/3x1/2 (Steel Only)	Thru 48	10-1/2	0.064-0.109	0.064-0.109	One 0.079	1/2	7/8	32,000
		36-48	10-1/2	0.138-0.168	0.079-0.109	One 0.109	1/2	7/8	45,000
		54-60	10-1/2	0.079-0.168	0.064-0.109	Two 0.079	1/2	7/8	32,000
		66-84	10-1/2	0.109-0.168	0.109	Two 0.109	1/2	7/8	45,000
	3x1 (Steel Only)	36-66	10-1/2	0.064-0.109	0.064	Two 0.079	1/2	7/8	32,000
		72-84	10-1/2	0.109	0.079	Two 0.079	1/2	7/8	32,000
		61-120	10-1/2	0.109	0.109	Two 0.109	1/2	7/8	45,000
PE Pipe Split Collar		Thru 24	See Drawing	per AASHTO M-294	per AASHTO M-294				

GENERAL NOTES

1. Metal Coupling Bands
   - A. These coupling bands meet the strength requirements for special Joint Types under Non-erodible Soil Conditions, Table 2.23.3 of AASHTO's 'Standard Specifications for Highway Bridges'.
   - B. For pipe walls and bands, the Specified Thickness for steel is given. For aluminum, the Specified Thickness is that for steel less the allowance for the zinc coating which is 0.003 to 0.004 of an inch per AASHTO M-36, M-196 and M-197.
   - C. The minimum specified Thickness for bands is two Specified Thicknesses less than that for the pipe, but in no case thinner than 0.064 inches, (0.060 for aluminum).
   - D. For pipe arches, use the same width band as for round pipe of equal periphery.
   - E. A two-piece band is required for pipe greater than 42 inches in diameter.
   - F. Tension straps may be connected to bands of plates with either spot or fillet welds that develop minimum required strength of strap.
   - G. For helically corrugated coupling bands, the connection angles may be oriented parallel to the pipe axis, provided connecting holes are slotted lengthwise sufficiently to allow adjustment for the helix angle.
   - H. Use 1 1/4 inch center to center gauge line dimension on attached angle leg for rivets and spot welds.
   - I. The Two Piece Integral Flange coupling band shall not be used on pipe arches.
   - J. Culvert bands shall be made of the same metal as the culverts being joined.
2. Polyethylene (PE) Couplings

   Testing standards for Corrugated Polyethylene (PE) Pipe couplings have not been established nor have couplings been tested for shear or bending moment. Therefore, until further information is available, PE couplings shall be used only where bending moment and shear requirements are minimal. Typical situations are:
   - A. Where the slope of the culvert will not be more than 5%.
   - B. Where the fill below the culvert is less than 2 feet.
   - C. In areas of firm soils. This excludes marshes unless the bedding is specially designed and approved by the engineer.
3. Other

   Couplings other than those shown on this drawing may be used upon submission of testing data (see 1-A above) and approval by the Engineer.

COUPLING BAND DETAILS FOR CORRUGATED PIPE AND PIPE ARCH

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Project Name: Nickelplate

Sheet Title: Coupling Band Details For Corrugated Pipe and Pipe Arch
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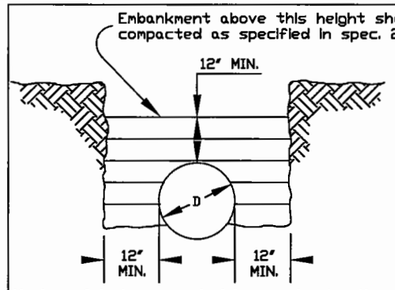


Maximum 6-inch compacted layers to density called for in the specifications. Bedding shall be suitable material uniformly compacted and shaped to fit the bottom of the pipe.

METAL THICKNESS AND GAGE TABLES			
Steel		Aluminum	Approx. Gage
Zinc Coated	Un-Coated		
Metal Thickness in Inches			
0.064	0.0598	0.060	16
0.079	0.0747	0.075	14
0.109	0.1046	0.105	12
0.138	0.1345	0.135	10
0.168	0.1644	0.164	8
0.188	0.1838		7
0.218	0.2145		5
0.249	0.2451		3
0.280	0.2758		1

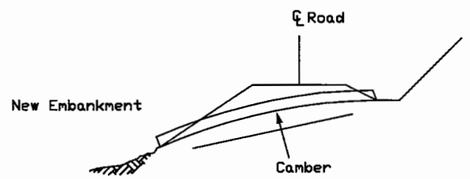
GENERAL NOTES:

TREATMENT OF DAMAGED SPELTER: The damaged or corroded ends of metal pipe to be extended shall be removed. If the damaged end is flame cut, the burned spelter on the galvanized pipe shall be wire brushed to clean metal and the area shall be painted with two coats of paint, high in zinc content, for repair of the galvanized surfaces.

SETTLEMENT AND CAMBER: Pipes shall be cambered as necessary to compensate for any anticipated settlement in the foundation or bed. Camber shall be on a parabolic curve with no point along the invert being higher than the invert at the inlet.

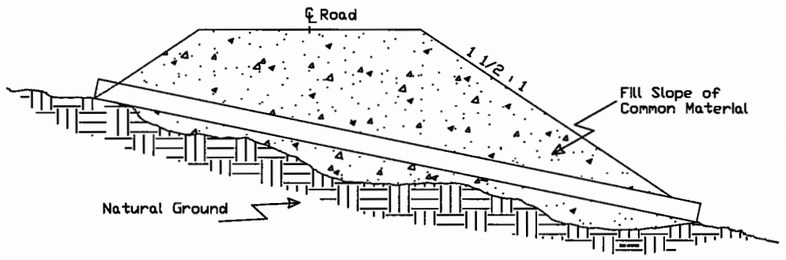
EMBANKMENT AND FOUNDATION SOIL CONDITION
Existing Fills, Regardless of Foundation Soils

CAMBER
1% of pipe length, not to exceed 3/4 of pipe span.

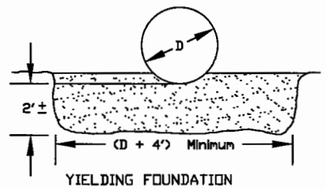


1% of pipe length, not to exceed 3/4 of pipe span or as determined by the engineer.

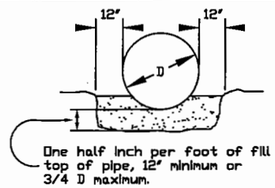
TYPICAL INSTALLATION IN EMBANKMENT



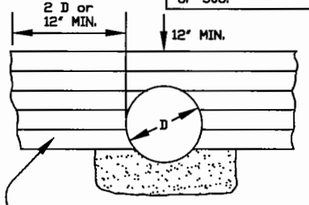
TYPICAL BEDDING MATERIAL



YIELDING FOUNDATION

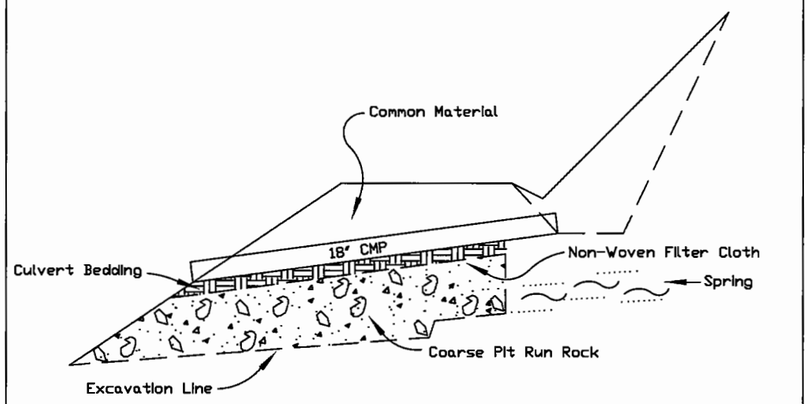


ROCK FOUNDATION

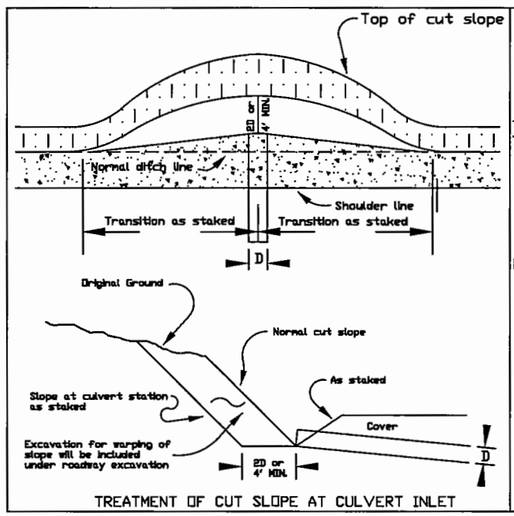


TYPICAL BACKFILL DETAIL

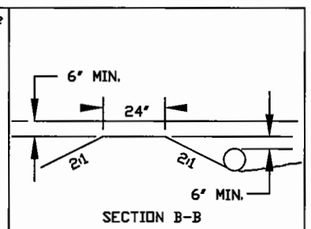
Bedding shall be suitable material uniformly compacted and shaped to fit the bottom of the pipe



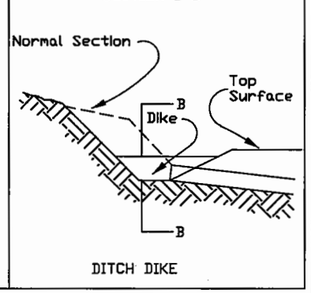
UNDERDRAIN TYPICAL SECTION



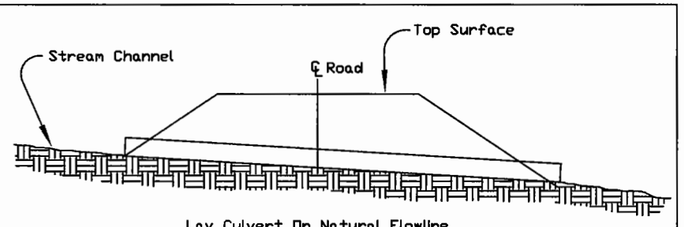
TREATMENT OF CUT SLOPE AT CULVERT INLET



SECTION B-B



DITCH DIKE



Lay Culvert On Natural Flowline

TYPICAL INSTALLATION IN STREAM CHANNEL

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Project Name
Nickelplate

Sheet Title
Culvert Installation Details

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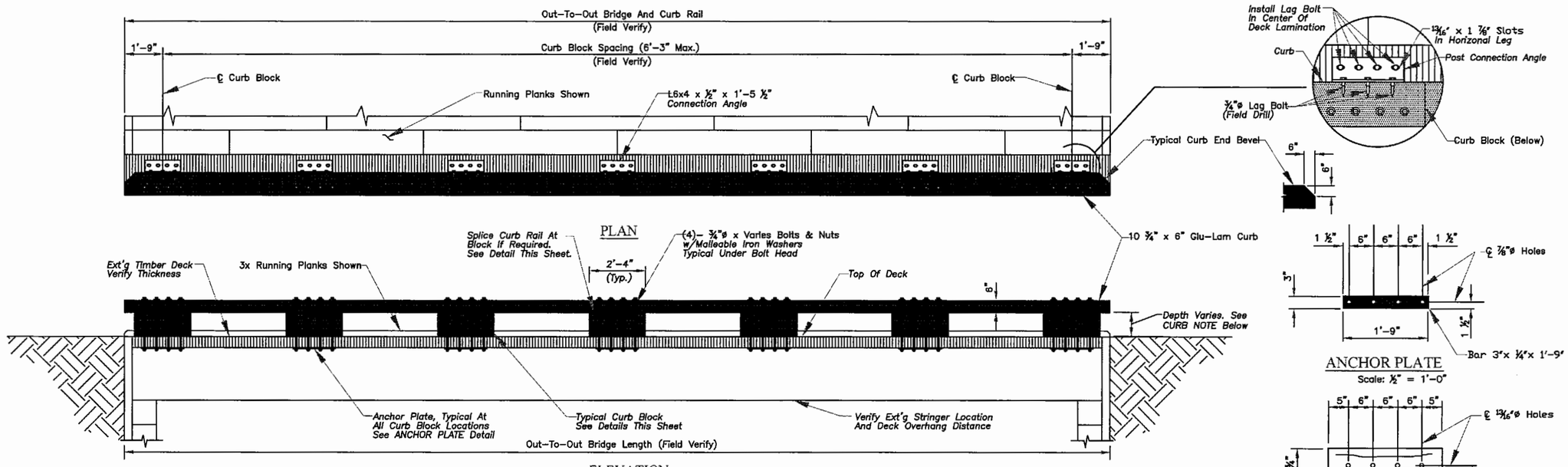


ELEVATION

GENERAL LAYOUT

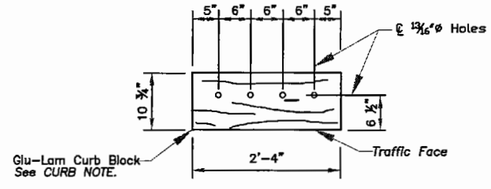
Scale: ¼" = 1'-0"

NOTE:

CONTRACTOR SHALL FIELD VERIFY ACTUAL CONDITIONS, MEMBER DIMENSIONS, AND BOLT SPACING – BOTH NEW AND EXISTING – PRIOR TO ORDERING MATERIALS.

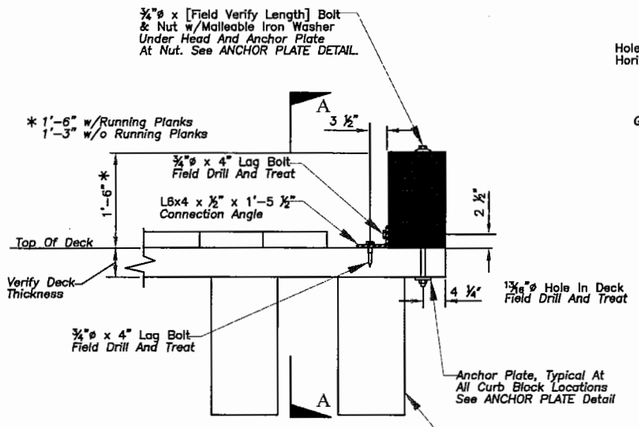
ANCHOR PLATE

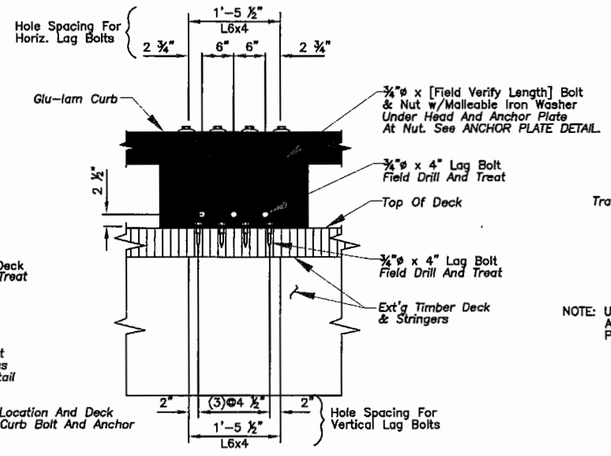
Scale: ½" = 1'-0"



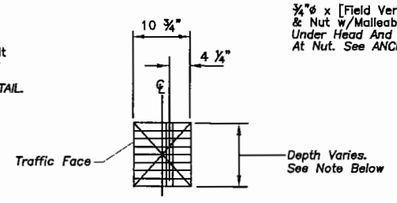
PLAN - CURB BLOCK

Scale: ½" = 1'-0"



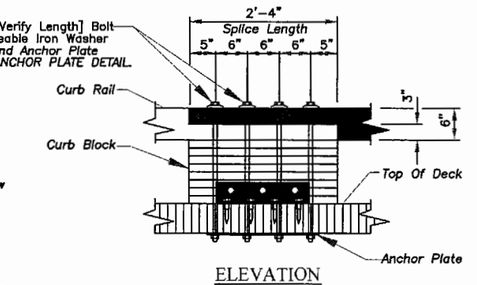


VIEW A-A



SECTION - CURB BLOCK

NOTE: Use 10 ¾" x 12" Curb Blocks Typical w/Running Planks And Use 10 ¾" x 9" Curb Blocks Typical Where Running Planks Are Not To Be Installed On The Bridge.



ELEVATION

CURB SPLICE DETAIL

Scale: ½" = 1'-0"

GLUED-LAMINATED CURB DETAIL

Refer To Dwg. No. R1913, Sheet 2 Of 2 For General Notes.

Scale: ½" = 1'-0"

Date:	DRAWING NO. R1913
Approved: Northern Region Director Of Engineering	SHEET 1 Of 2

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R1913 Bridge Curb

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GENERAL NOTES:

SPECIFICATIONS: *Materials And Construction Of This Structure Shall Be In Accordance With The Current Adopted USDA – Forest Service Specifications For Construction Of Roads And Bridges.*

GLUED-LAMINATES: *Glued–Laminated Members Shall Be Of Coastal Region Douglas–Fir Conforming To The American Institute Of Timber Construction (AITC) 117–2001, Combination Symbol 3, 4, Or 5, And Shall Be Manufactured For Wet Condition Use And Industrial Appearance.*

TREATMENT: *After Fabrication, All Members Shall Be Incised And Pressure Treated In Accordance With AWPA C–2B (Soil Contact), Using Pentachlorophenol Meeting AWPA P–8 With Type A Solvent Meeting AWPA P–9. Treatment Will Comply With The Requirements Of The Current Edition Of WWPI's "Best Management Practices For The Use Of Treated Wood In Aquatic Environments".*

FIELD TREATMENT: *Copper Naphthenate (2% Solution) Shall Be Furnished For Field Treating Of Wood. All Abrasions, Field Drilled Holes, And Field Cuts –Approved By The Contracting Officer– Shall Be Carefully Trimmed And Given Three Brush Coats Of The Field Preservative Treatment Solution.*

INSPECTION AND CERTIFICATION:
The Following Compliance Certificates Shall Be Furnished Upon Delivery:

- *A) Supplier Certification, From A WWPA Or WCLIB Approved Supplier, That All Wood Material Meet Requirements As To Species And Grade.*
- *B) Certification Of Preservative, Penetration In Inches, And Retention In Pounds Per Cubic Foot (Assay Method) By Either A Qualified Testing And Inspection Agency Or Supplier Certification. Supplier Certification Requires Each Solid Piece To Be Stamped Or Branded With The ALSC Quality Mark.*
- *C) Certification From A Qualified Inspection And Testing Agency Indicating Conformance Of All Glued–Laminated Members With AITC 117–2001.*
- *D) Supplier Certification That All Treated Wood Materials Were Treated In Accordance With And Meet The Requirements Of WWPI's "Best Management Practices For The Use Of Treated Wood In Aquatic Environments".*

HARDWARE AND STRUCTURAL STEEL: *Steel Shapes, Plates And Bars Shall Be Structural Steel Conforming To AASHTO M183 (ASTM A36). All Bolts And Nuts Shall Conform To A307, Unless Noted Otherwise, And Need Not Be Galvanized. Install Malleable Iron Washers Against Wood Unless Noted Otherwise.*

FABRICATION: *Field Verify All Member Dimensions And Bolt Spacing –New And Existing– Before Ordering Materials. Submit Shop Drawings For All Treated Timber. Show All Dimensions And Fabrication Details For All Cut Or Bored Timber. All Lumber Fabrication Shall Be Completed Before Treatment. Field Drilling Of Holes Shall Not Be Allowed Unless Otherwise Noted On The Drawings.*

LAG BOLT INSTALLATION: *Prebore Lag Bolt Holes Using Two Diameters, One For The Shank And One For The Threads. The Lead Hole For The Shank Is To Be 1/16" Larger Than The Shank Diameter And Is To Be Bored To The Depth Of Penetration Of The Shank. The Lead Hole For The Threaded Portion Is To Be 70% Of The Bolt Diameter As Shown On The PLANS And Is To Be Bored At Least To The Length Of The Threads. DO NOT DRIVE LAG BOLTS WITH A HAMMER.*

Date: _____

Approved: _____
Northern Region Director Of Engineering

DRAWING NO. R1913

SHEET 2 Of 2

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Nickelplate

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R1913 Bridge Curb

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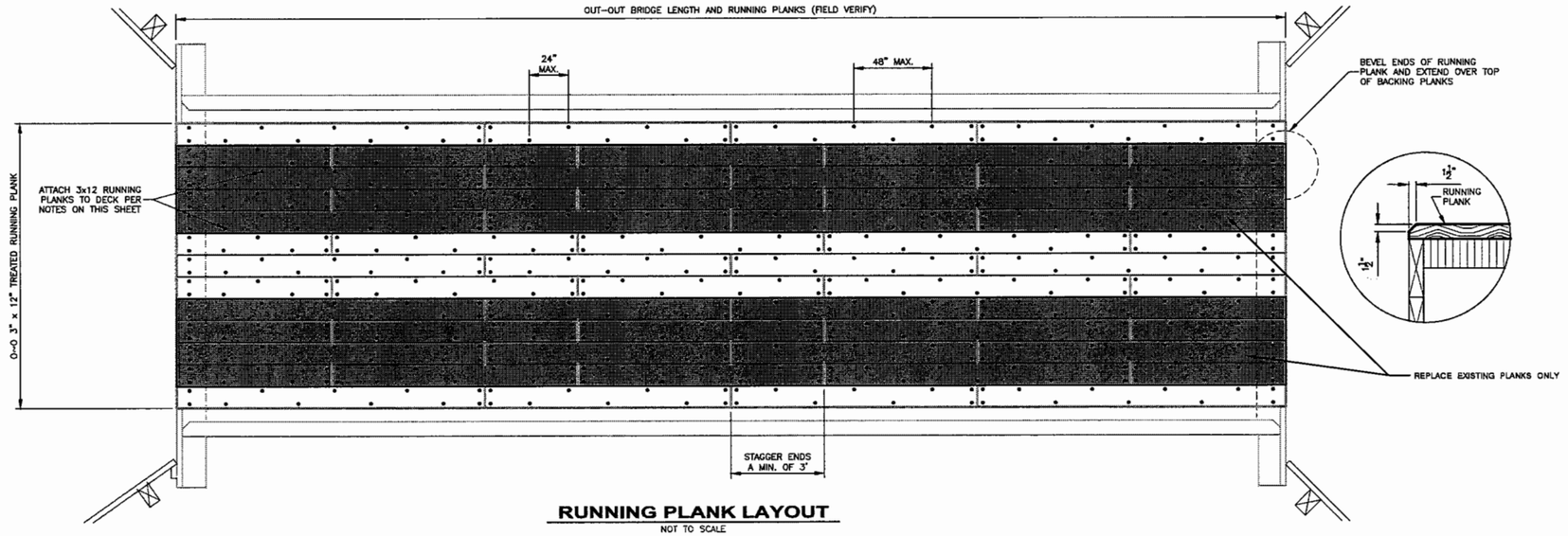

RUNNING PLANK LAYOUT

NOT TO SCALE

NOTES:

1. FASTEN RUNNING PLANKS TO DECK WITH TWO ROWS OF 6" RING SHANK NAILS PER PLANK @ ±24" ALTERNATE CENTERS AND (2) AT EACH END. PREBORE SPIKE LEAD HOLE USING A HOLE EQUAL TO 75% OF SPIKE DIAMETER. TREAT HOLE WITH COPPER NAPHTHENATE (2% SOLUTION) BEFORE PLACING EACH SPIKE. EACH RUNNING PLANK MAY BE FURNISHED IN MULTIPLE PIECES. STAGGER PLANK SPLICES BETWEEN RUNS A MINIMUM OF 3 FEET.

D:\Contract Documents\Rick Drigo\Development\DR\Nickelplate\Contract\DrawingSet\Reference\BridgeDrawings\R1915.dwg

REGION ONE

TREATED TIMBER BRIDGE REPAIRS

RUNNING PLANK DETAILS

DRAWING NO. R1915 - SHEET 1 OF 1

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DJK	WBL	

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