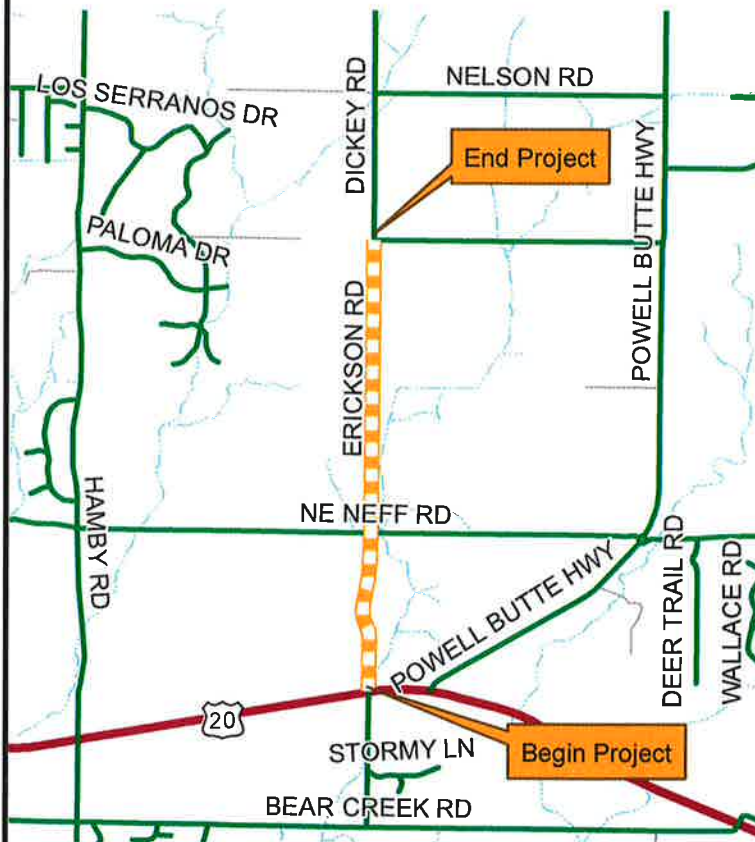
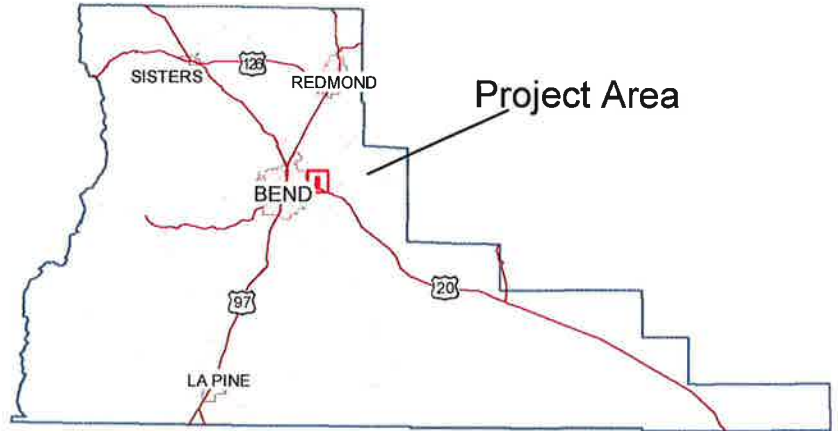


DESCHUTES COUNTY ROAD DEPARTMENT  
 PLANS FOR  
**PAVING OF ERICKSON ROAD: US 20 TO DICKEY RD**  
 APRIL 2018



**LOCATION MAP**

NOT TO SCALE

**LEGEND**

- Section to Overlay
- County Routes
- State Highway
- Road Centerlines
- Canals

**INDEX OF SHEETS**

Sheet #	Description
1	COVER SHEET
2	TYPICAL SECTION
3	DETAILS
4	PLAN---Sta 0+00 To 10+00
5	PLAN---Sta 10+00 To 20+00
6	PLAN---Sta 20+00 To 30+00
7	PLAN---Sta 30+00 To 40+00
8	PLAN---Sta 40+00 To 50+00
9	PLAN---Sta 50+00 To 60+00
10	PLAN---Sta 60+00 To 70+00
11	PLAN---Sta 70+00 To 80+00
12	PLAN---Sta 80+00 To 81+46

**OREGON STANDARD DRAWING NO.**

- TM800 TABLES, ABRUPT EDGE, AND PCMS DETAILS
- TM850 2-LANE, 2-WAY ROADWAYS

**DESCHUTES COUNTY ROAD DEPARTMENT**  
 61150 S.E. 27TH STREET  
 BEND, OR, 97702

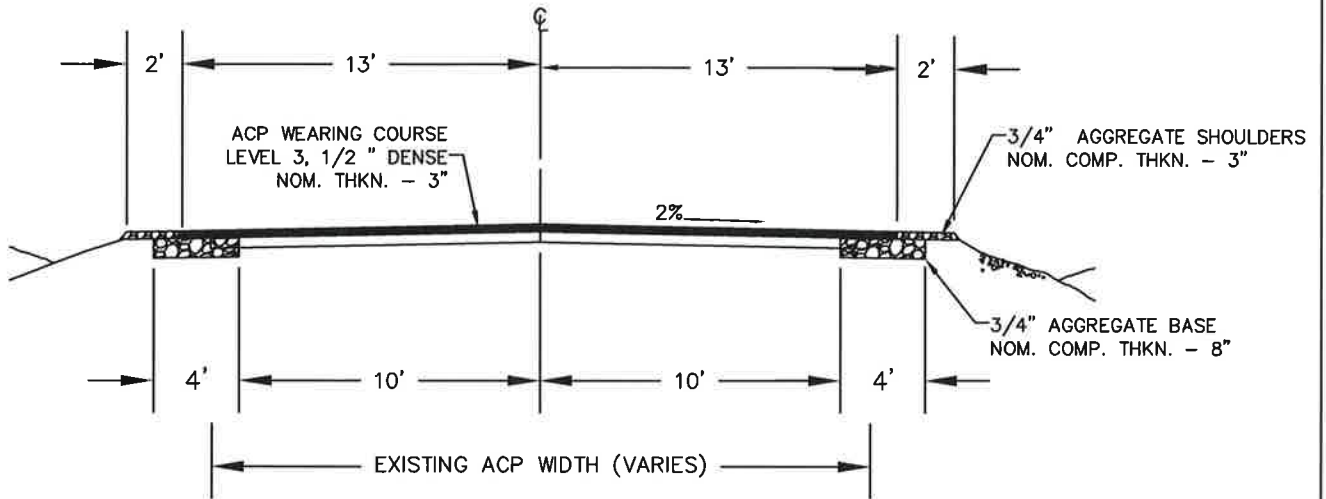
PHONE: 541-388-6581      FAX: 541-388-2719

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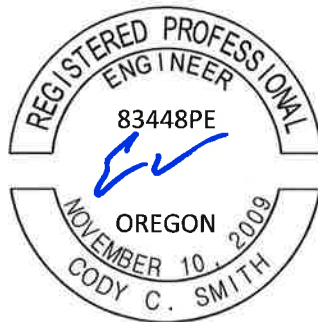
**PAVING OF ERICKSON RD: US 20 TO DICKEY RD**

COUNTY ENGINEER	4-11-18 DATE
ROAD DEPT DIRECTOR	01/11/18 DATE

<b>COVER SHEET</b>	SHEET NO. <b>1 OF 12</b>
--------------------	-----------------------------



STA. 0+00 - STA. 28+61  
 STA. 28+86 - STA. 81+46



RENEWS: JUNE 30, 2018



**DESCHUTES COUNTY ROAD DEPARTMENT**

61150 S.E. 27TH STREET  
 BEND, OR. 97702

PHONE: 541-388-6581 FAX: 541-388-2719

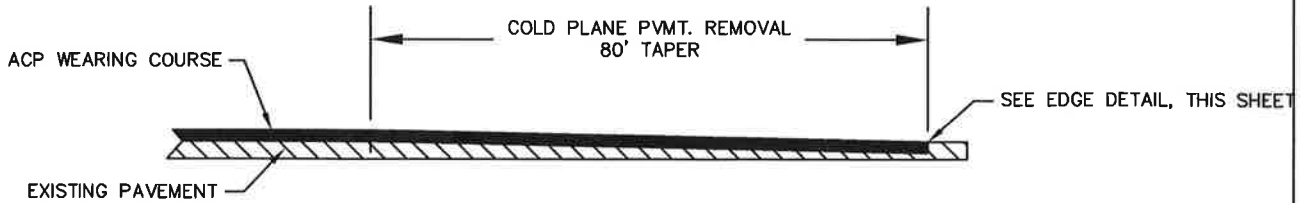
**PAVING OF ERICKSON RD: US 20 TO DICKEY RD**

DRAFTER: T.WILSON DATE: 4/9/18

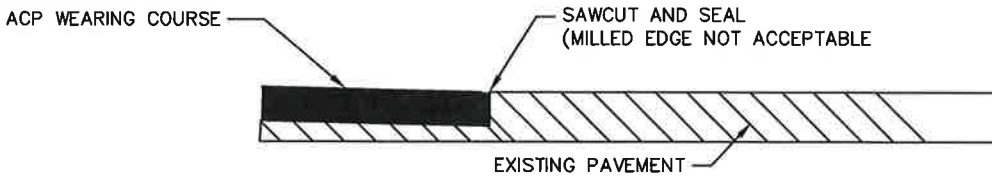
REVIEWED BY: C.SMITH DATE: 4/9/18

**TYPICAL SECTION**

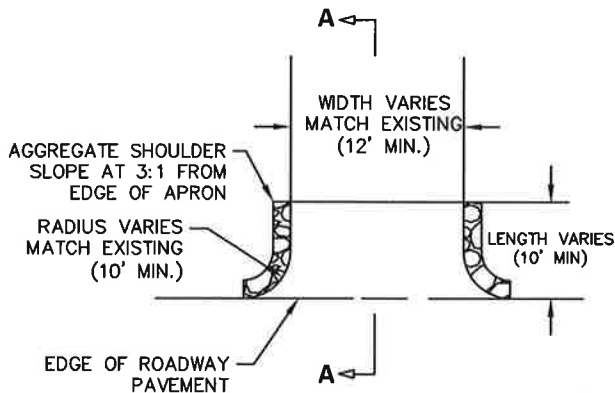
SHEET NO.  
 2 OF 12



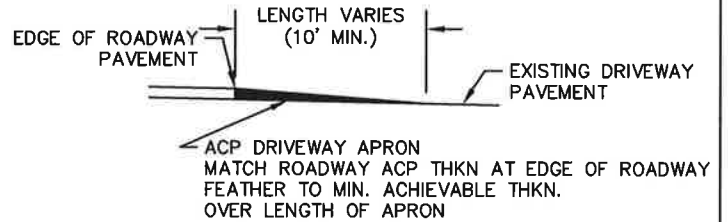
0-3" COLD PLANE REMOVAL DETAIL



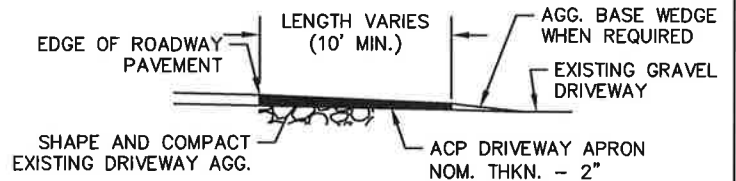
COLD PLANE REMOVAL EDGE DETAIL



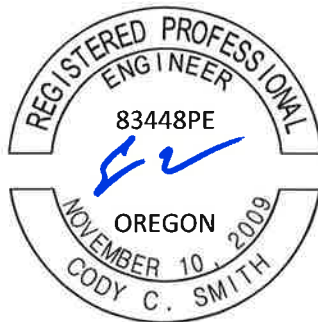
DRIVEWAY APRON DETAIL



SECTION A-A (EXISTING PAVED APPROACH)



SECTION A-A (EXISTING GRAVEL APPROACH)



RENEWS: JUNE 30, 2018



**DESCHUTES COUNTY ROAD DEPARTMENT**

61150 S.E. 27TH STREET  
BEND, OR. 97702

PHONE: 541-388-6581 FAX: 541-388-2719

**ERICKSON RD OVERLAY**

DRAFTER: T.WILSON

DATE: 4/9/18

REVIEWED BY: C.SMITH

DATE: 4/9/18

**DETAILS**

SHEET NO.





3 OF 12





**PLAN**  
NOT TO SCALE

**LEGEND**

-  3" COLD PLANE REMOVAL
-  0"-3" COLD PLANE REMOVAL  
(SEE DETAIL, SHEET 3)
-  PAVING AREA  
(SEE TYPICAL SECTION, SHEET 2)
-  DRIVEWAY APPROACH  
(SEE DETAIL, SHEET 3)



**DESCHUTES COUNTY ROAD DEPARTMENT**

61150 S.E. 27TH STREET  
BEND, OR, 97702

PHONE: 541-388-6581

FAX: 541-388-2719

PAVING OF ERICKSON RD: US 20 TO DICKEY RD

DRAFTER: R. PINKSTON

DATE: 2/28/18

REVIEWED BY: C. SMITH

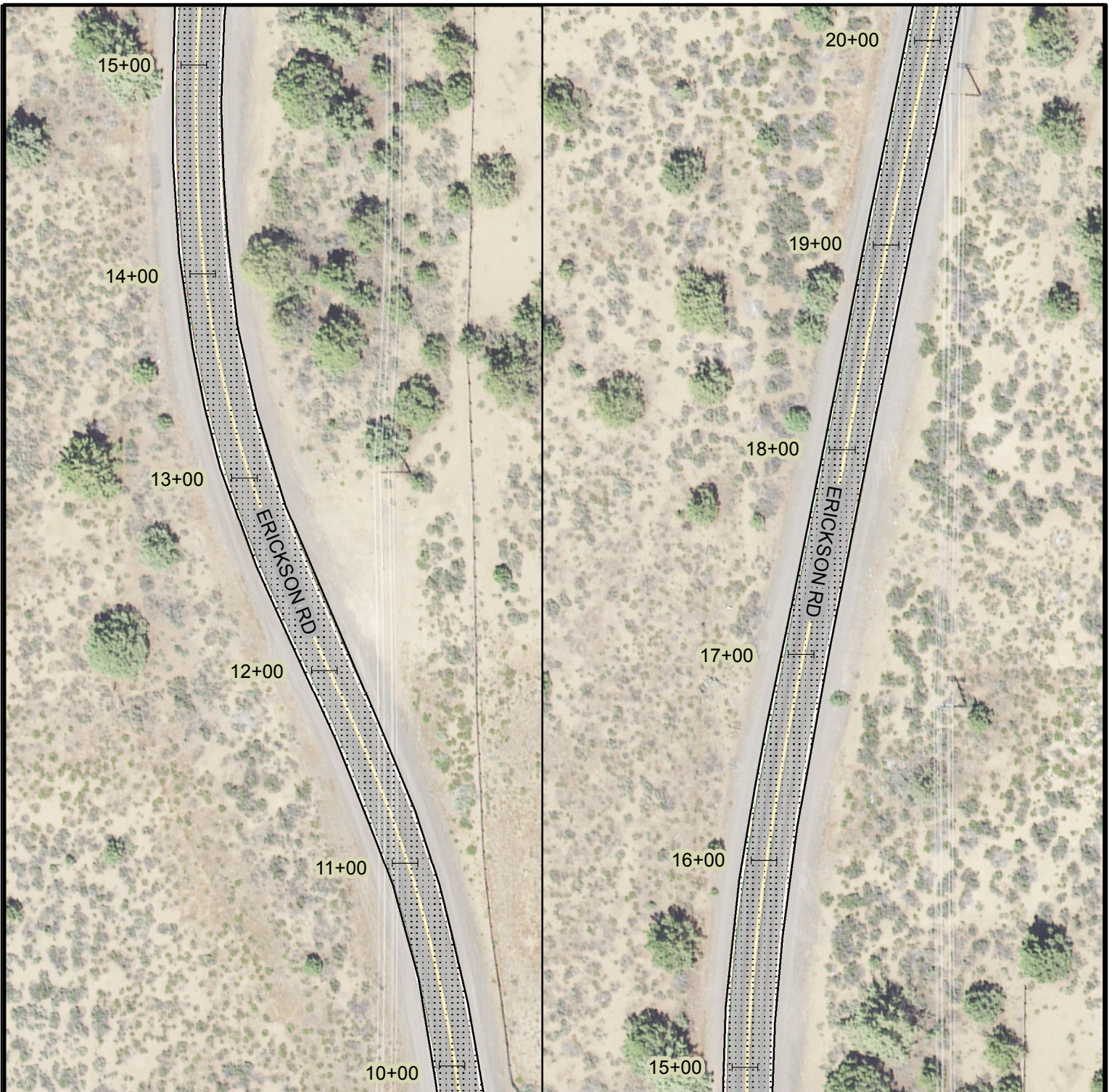
DATE:

PLAN---STA 0+00 TO 10+00

SHEET NO.


4 OF 12





**PLAN**  
NOT TO SCALE

**LEGEND**

 PAVING AREA  
(SEE TYPICAL SECTION, SHEET 2)



**DESCHUTES COUNTY ROAD DEPARTMENT**  
61150 S.E. 27TH STREET  
BEND, OR, 97702

PHONE: 541-388-6581 FAX: 541-388-2719

PAVING OF ERICKSON RD: US 20 TO DICKEY RD

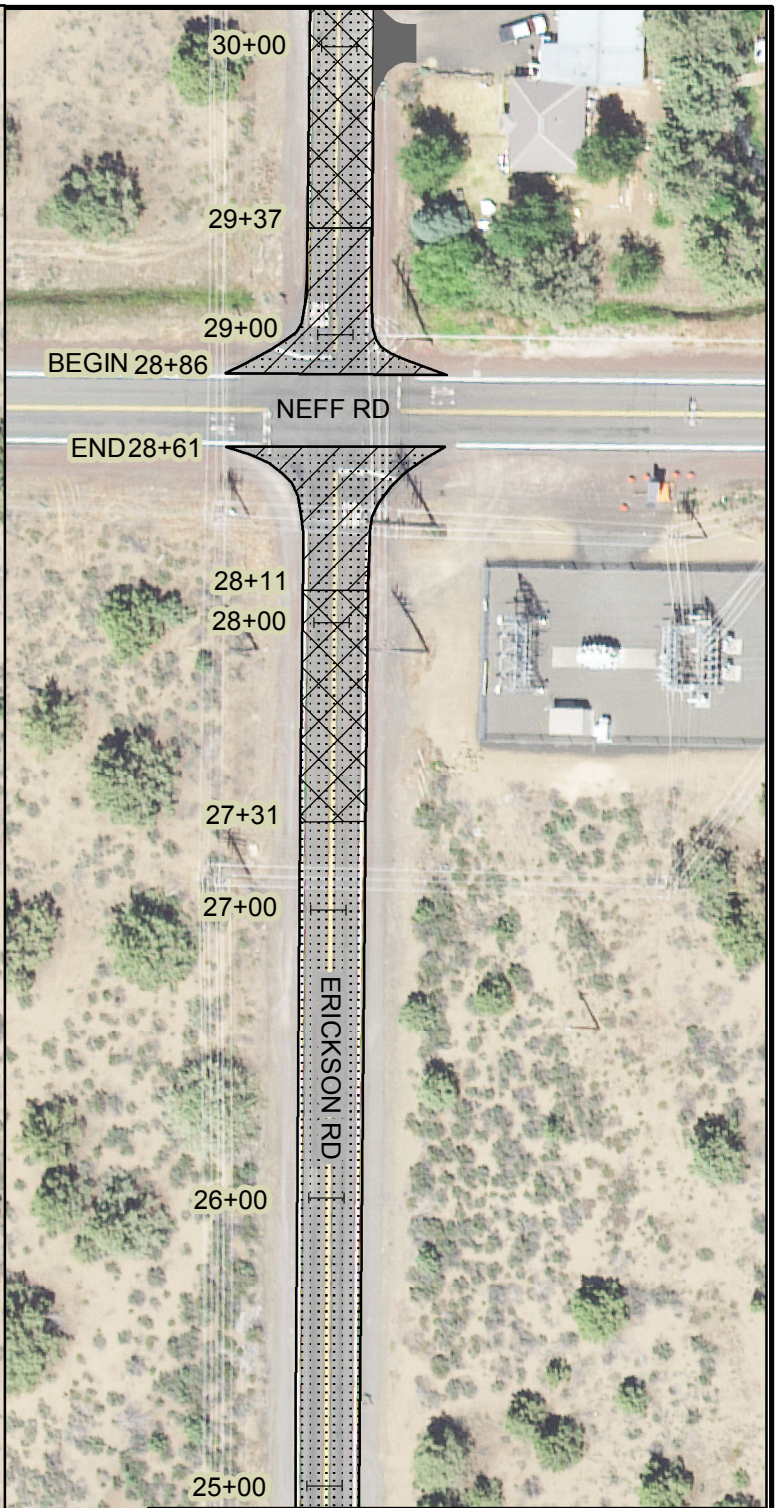
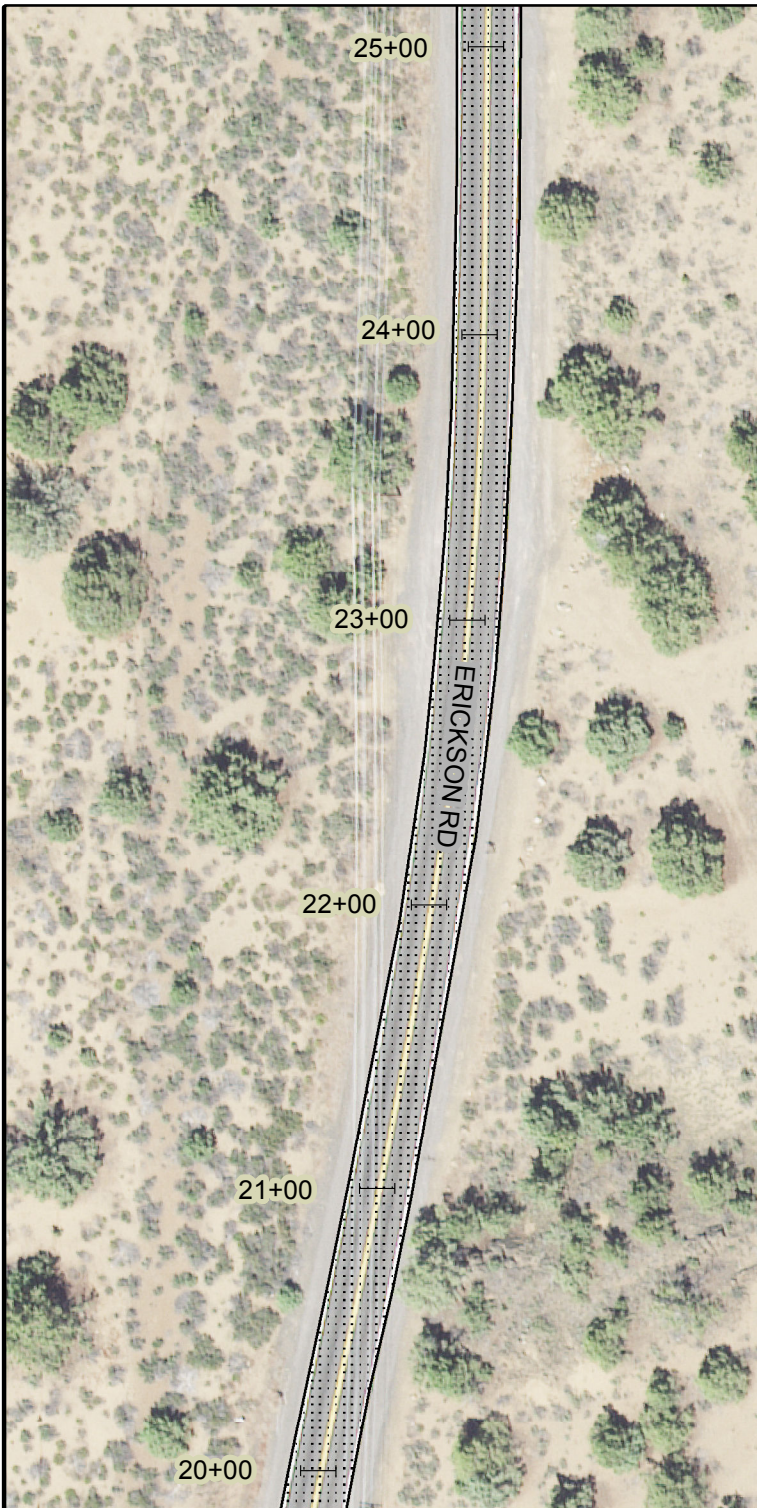
DRAFTER: R. PINKSTON DATE: 2/28/18

REVIEWED BY: C. SMITH DATE:

PLAN---STA 10+00 TO 20+00





SHEET NO.  
5 OF 12





**PLAN**  
NOT TO SCALE

**LEGEND**

-  3" COLD PLANE REMOVAL
-  0"-3" COLD PLANE REMOVAL  
(SEE DETAIL, SHEET 3)
-  PAVING AREA  
(SEE TYPICAL SECTION, SHEET 2)
-  DRIVEWAY APPROACH  
(SEE DETAIL, SHEET 3)



**DESCHUTES COUNTY ROAD DEPARTMENT**  
61150 S.E. 27TH STREET  
BEND, OR, 97702

PHONE: 541-388-6581 FAX: 541-388-2719

PAVING OF ERICKSON RD: US 20 TO DICKEY RD

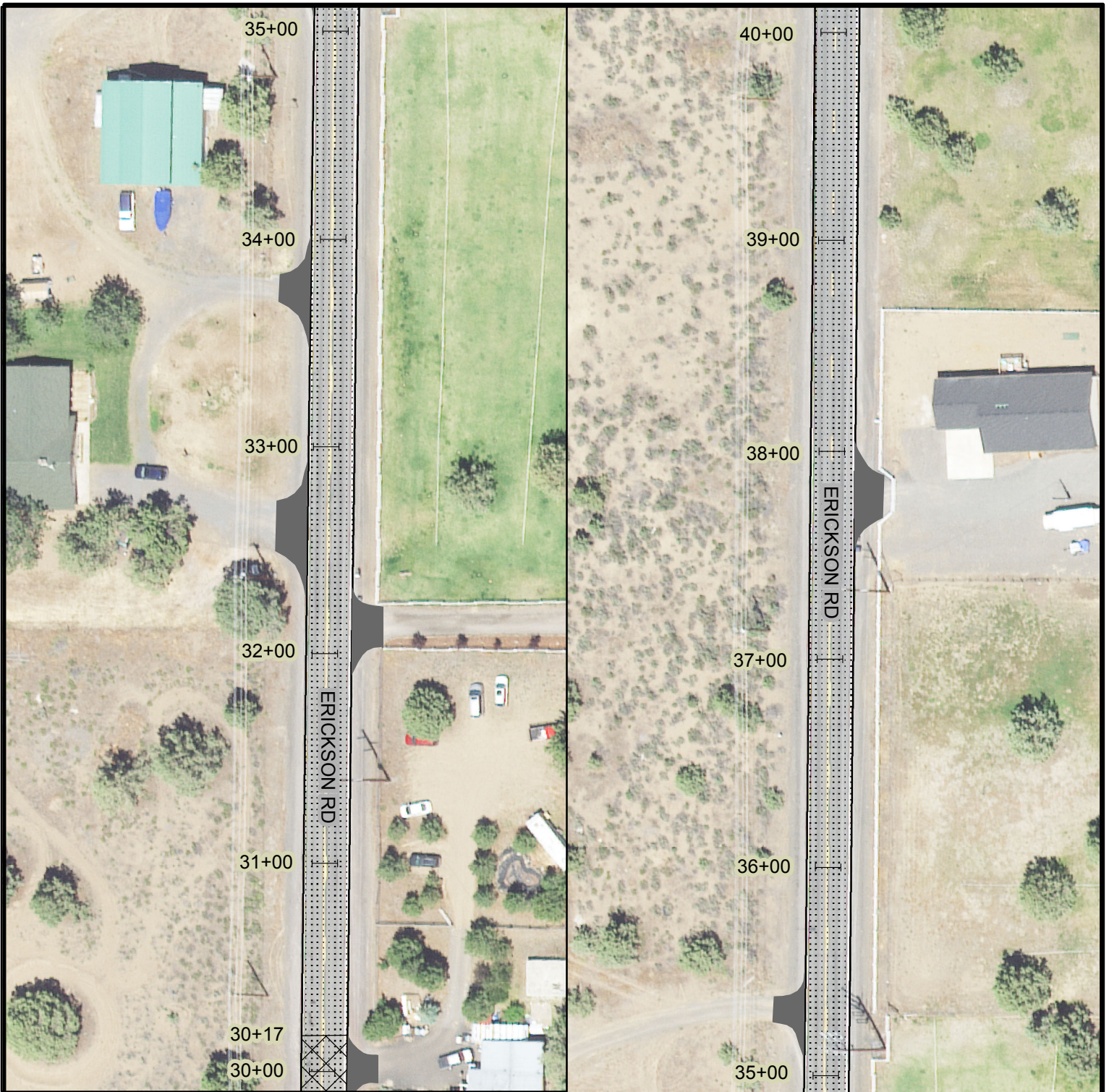
DRAFTER: R. PINKSTON DATE: 2/28/18

REVIEWED BY: C. SMITH DATE:

PLAN---STA 20+00 TO 30+00

SHEET NO.  
6 OF 12








**PLAN**  
NOT TO SCALE



**DESCHUTES COUNTY ROAD DEPARTMENT**  
61150 S.E. 27TH STREET  
BEND, OR, 97702

PHONE: 541-388-6581 FAX: 541-388-2719

**LEGEND**

-  0"-3" COLD PLANE REMOVAL  
(SEE DETAIL, SHEET 3)
-  PAVING AREA  
(SEE TYPICAL SECTION, SHEET 2)
-  DRIVEWAY APPROACH  
(SEE DETAIL, SHEET 3)



PAVING OF ERICKSON RD: US 20 TO DICKEY RD

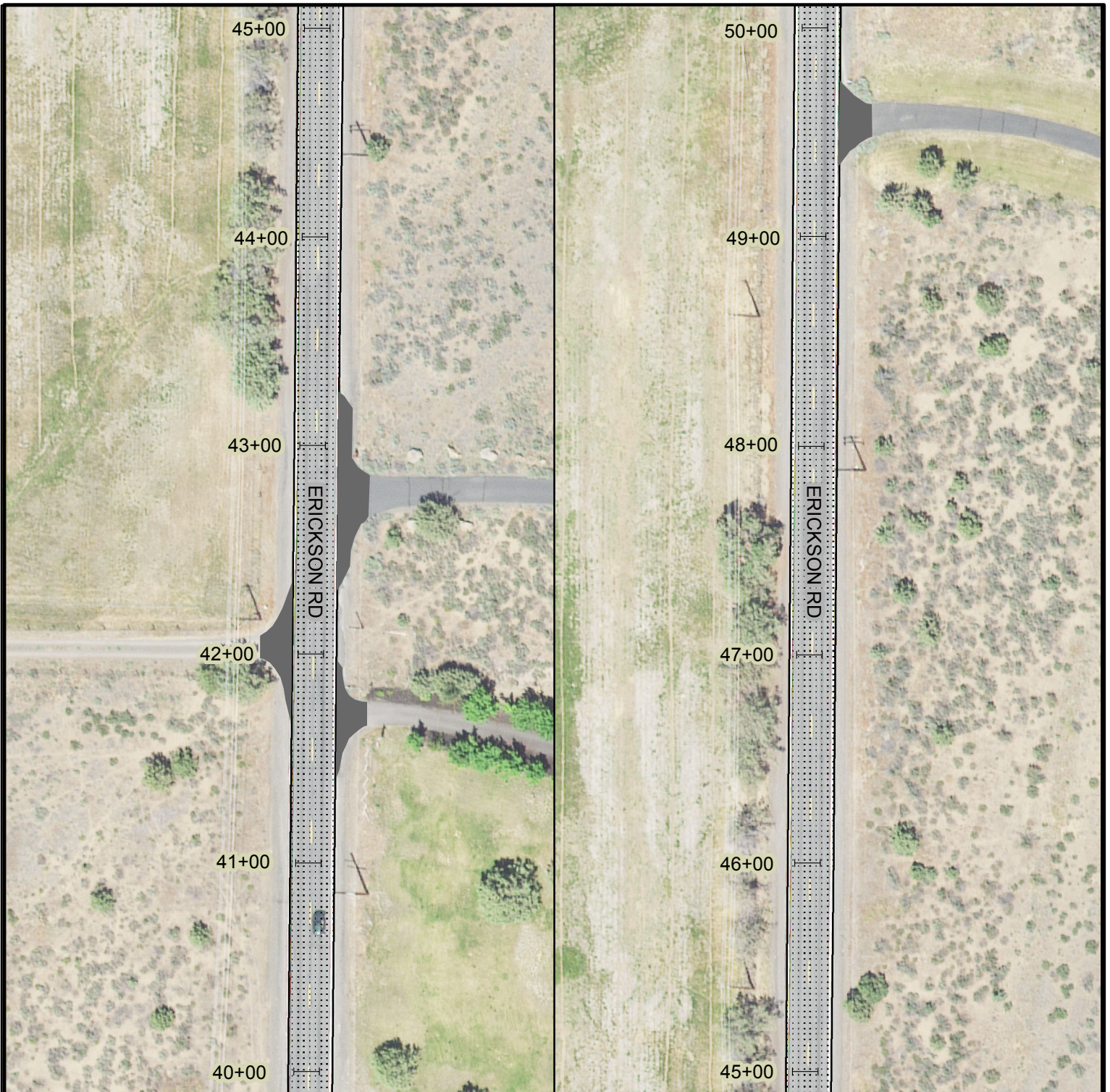
DRAFTER: R. PINKSTON DATE: 2/28/18

REVIEWED BY: C. SMITH DATE:

PLAN---STA 30+00 TO 40+00

SHEET NO.  
7 OF 12






**PLAN**  
NOT TO SCALE




**DESCHUTES COUNTY ROAD DEPARTMENT**  
61150 S.E. 27TH STREET  
BEND, OR, 97702

PHONE: 541-388-6581 FAX: 541-388-2719

**LEGEND**

 PAVING AREA  
(SEE TYPICAL SECTION, SHEET 2)

 DRIVEWAY APPROACH  
(SEE DETAIL, SHEET 3)



PAVING OF ERICKSON RD: US 20 TO DICKEY RD

DRAFTER: R. PINKSTON DATE: 2/28/18

REVIEWED BY: C. SMITH DATE:

PLAN---STA 40+00 TO 50+00

SHEET NO.  
8 OF 12






**PLAN**  
NOT TO SCALE




**DESCHUTES COUNTY ROAD DEPARTMENT**  
61150 S.E. 27TH STREET  
BEND, OR, 97702

PHONE: 541-388-6581 FAX: 541-388-2719

**LEGEND**

 PAVING AREA  
(SEE TYPICAL SECTION, SHEET 2)

 DRIVEWAY APPROACH  
(SEE DETAIL, SHEET 3)



PAVING OF ERICKSON RD: US 20 TO DICKEY RD

DRAFTER: R. PINKSTON DATE: 2/28/18

REVIEWED BY: C. SMITH DATE:

PLAN---STA 50+00 TO 60+00


SHEET NO.  
9 OF 12






**PLAN**  
NOT TO SCALE

**LEGEND**

 PAVING AREA  
(SEE TYPICAL SECTION, SHEET 2)

 DRIVEWAY APPROACH  
(SEE DETAIL, SHEET 3)



**DESCHUTES COUNTY ROAD DEPARTMENT**  
61150 S.E. 27TH STREET  
BEND, OR, 97702

PHONE: 541-388-6581

FAX: 541-388-2719

PAVING OF ERICKSON RD: US 20 TO DICKEY RD

DRAFTER: R. PINKSTON

DATE: 2/28/18

REVIEWED BY: C. SMITH

DATE:

PLAN---STA 60+00 TO 70+00

SHEET NO.  
10 OF 12







**PLAN**  
NOT TO SCALE



**DESCHUTES COUNTY ROAD DEPARTMENT**  
61150 S.E. 27TH STREET  
BEND, OR, 97702

PHONE: 541-388-6581 FAX: 541-388-2719

LEGEND

-  PAVING AREA  
(SEE TYPICAL SECTION, SHEET 2)
-  DRIVEWAY APPROACH  
(SEE DETAIL, SHEET 3)



PAVING OF ERICKSON RD: US 20 TO DICKEY RD

DRAFTER: R. PINKSTON DATE: 2/28/18

REVIEWED BY: C. SMITH DATE:

PLAN---STA 70+00 TO 80+00

SHEET NO.  
11 OF 12





**DESCHUTES COUNTY ROAD DEPARTMENT**  
 61150 S.E. 27TH STREET  
 BEND, OR, 97702

PHONE: 541-388-6581 FAX: 541-388-2719

PAVING OF ERICKSON RD: US 20 TO DICKEY RD

DRAFTER: R. PINKSTON DATE: 2/28/18



REVIEWED BY: C. SMITH DATE:

PLAN---STA 80+00 TO 81+46

SHEET NO.  
 12 OF 12

**PLAN**  
 NOT TO SCALE

**LEGEND**

-  0"-3" COLD PLANE REMOVAL  
(SEE DETAIL, SHEET 3)
-  PAVING AREA  
(SEE TYPICAL SECTION, SHEET 2)





tm800.dgn 01-JUL-2017

00800

TAPER TYPES & FORMULAS	
TAPER	FORMULA
Merging (Lane Closure)	"L"
Shifting	"L"/2 or 1/2"L"
Shoulder Closure	"L"/3 or 1/3"L"
Flagging (See Drg. TM850)	50' - 100'
Downstream (Termination)	Varies (See Drawings)

★ Use Pre-Construction Posted Speed to select the Speed from the Tables below:

CONCRETE BARRIER FLARE RATE TABLE	
★ SPEED (mph)	MINIMUM FLARE RATE
≤ 30	8:1
35	9:1
40	10:1
45	12:1
50	14:1
55	16:1
60	18:1
65	19:1
70	20:1

MINIMUM LENGTHS TABLE					
★ SPEED (mph)	"L" VALUE FOR TAPERS (ft)				BUFFER "B" (ft)
	W ≤ 10	W = 12	W = 14	W = 16	
25	105	125	145	165	75
30	150	180	210	240	100
35	205	245	285	325	125
40	265	320	375	430	150
45	450	540	630	720	180
50	500	600	700	800	210
55	550	660	770	880	250
60	600	720	840	960	285
65	650	780	910	1000	325
70	700	840	980	1000	365
FREEWAYS					
55	1000	1000	1000	1000	250
60	1000	1000	1000	1000	285
65	1000	1000	1000	1000	325
70	1000	1000	1000	1000	365

NOTES:

- For Lane closures where W < 10', use "L" value for W = 10'.
- For Shoulder closures where W < 10', use "L" value for W = 10' or calculate "L" using formula, for Speeds ≥ 45: L = WS, Speeds < 45: L = S²W/60, S = Speed, W=Width

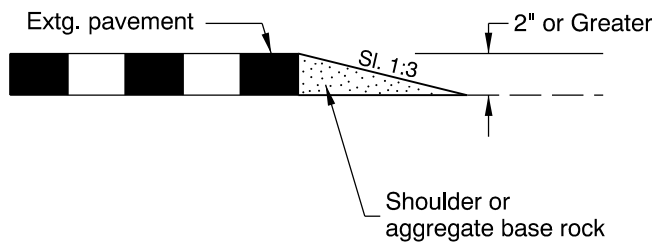
★ SPEED (mph)	Sign Spacing (ft)			Max. Channelizing Device Spacing (ft)
	A	B	C	
20 - 30	100	100	100	20
35 - 40	350	350	350	20
45 - 55	500	500	500	40
60 - 70	700	700	700	40
Freeway	1000	1500	2640	40

NOTES:

- Place traffic control devices on 10 ft. spacing for intersection and access radii.
- When necessary, sign spacing may be adjusted to fit site conditions. Limit spacing adjustments to 30% of the "A" dimension for all speeds.

NOTES:

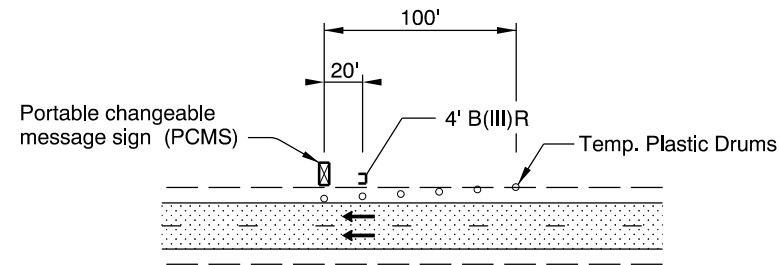
- When paved shoulders adjacent to excavations are less than four feet wide protect longitudinal abrupt edge as shown.
- Use aggregate wedge when abrupt edge is 2 inches or greater.



EXCAVATION ABRUPT EDGE

NOTES:

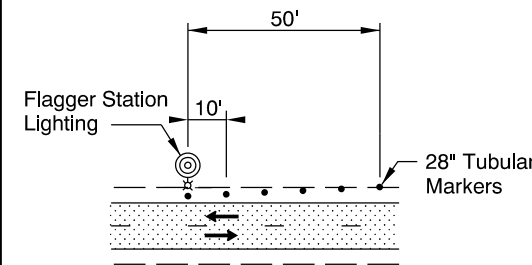
- Install PCMS beyond the outside shoulder, when possible.
- Use the appropriate type of barricade panels for PCMS location. Right shoulder, use Type B(III)R. Left shoulder, use Type B(III)L.
- Use six drums in shoulder taper on 20' spacing. The drums and barricade may be omitted when PCMS is placed behind a roadside barrier.
- Detail as shown is used for trailered and non-crashworthy components of:
  - Portable Traffic Signals
  - Smart Work Zone Systems



PORTABLE CHANGEABLE MESSAGE SIGN (PCMS) INSTALLATION

NOTES:

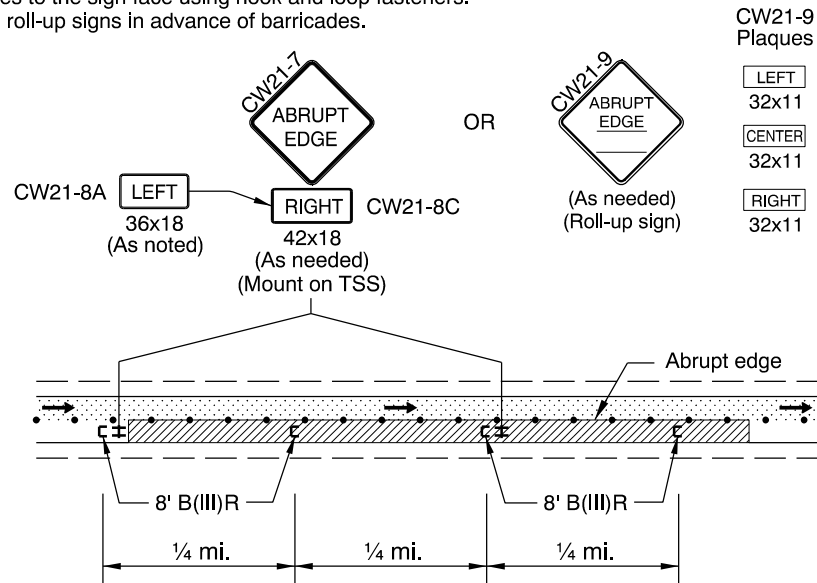
- Install Flagger Station Lighting beyond the outside shoulder, where practical.
- Use six tubular markers in shoulder taper on 10' spacing.
- Place cart / generator / power supply off of the shoulder, as far as practical.



FLAGGER STATION LIGHTING DELINEATION

NOTES:

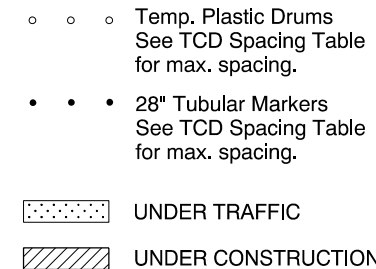
- Abrupt edges may be created by paving, operations, excavations or other roadway work. Use abrupt edge signing for longitudinal abrupt edges of 1 inch or greater.
- If the excavation is located on left side of traffic, replace the 8' B(III)R barricades with 8' B(III)L barricades and replace the "RIGHT" (CW21-8C) riders with "LEFT" (CW21-8A) riders.
- Continue signing and other traffic control devices throughout excavation area at spacings shown.
- If roll-up signs are used, attach the correct (CW21-9) plaques to the sign face using hook and loop fasteners. Place roll-up signs in advance of barricades.



TYPICAL ABRUPT EDGE DELINEATION

GENERAL NOTES FOR ALL TCP DRAWINGS:

- Signs and other Traffic Control Devices (TCD) shown are the minimum required.
- Place a barricade approx. 20' ahead of all sequential arrow boards.
- Arrows shown in roadway are directional arrows to indicate traffic movements.
- All signs are 48" x 48" unless otherwise shown. Use fluorescent orange sheeting for the background of all temporary warning signs.
- All diamond shaped warning signs mounted on barrier sign supports shall be 36" by 36". All other signs mounted on barrier sign supports shall not exceed 12 sq. ft. in total sign area.
- Low speed highways have a pre-construction posted speed of 40 mph or less. High speed highways have a pre-construction posted speed of > 40 mph.
- Do not locate sign supports in locations designated for bicycle or pedestrian traffic.
- Combine drawing details to complete temporary traffic control for each work activity.



To be accompanied by Drg. Nos. TM820 & TM821

CALC. BOOK NO. TM09-01 BASELINE REPORT DATE 01-JUL-2017

NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications

OREGON STANDARD DRAWINGS  
TABLES, ABRUPT EDGE AND PCMS DETAILS

2018

DATE	REVISION DESCRIPTION

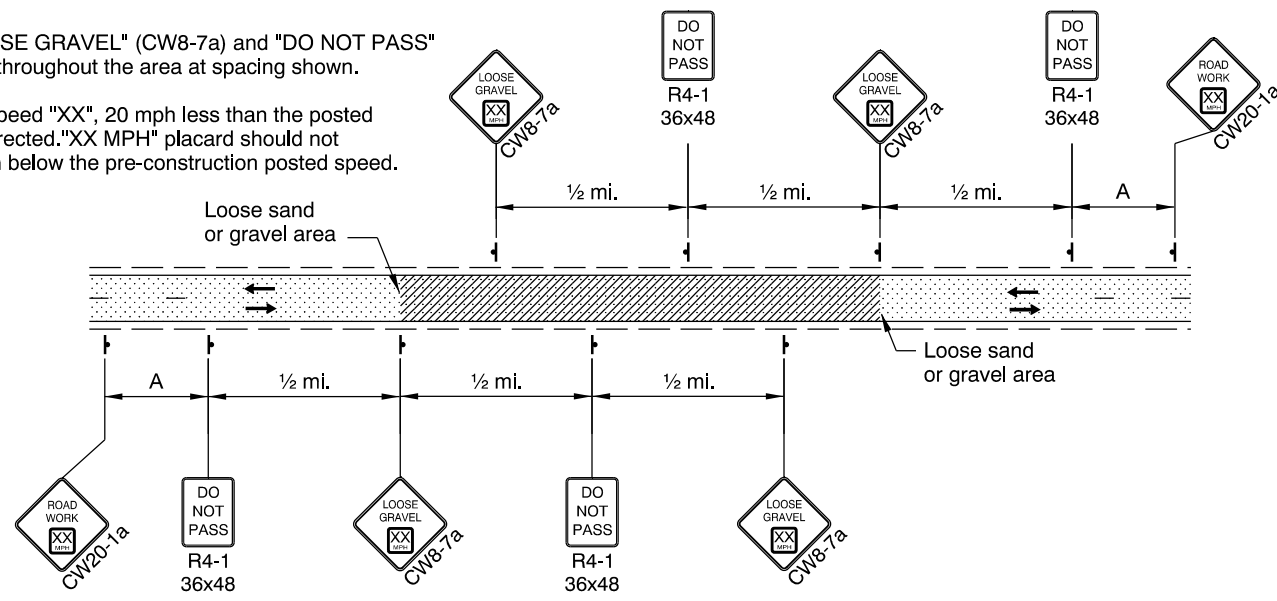
The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.



tm850.dgn 01-JAN-2018

NOTE:

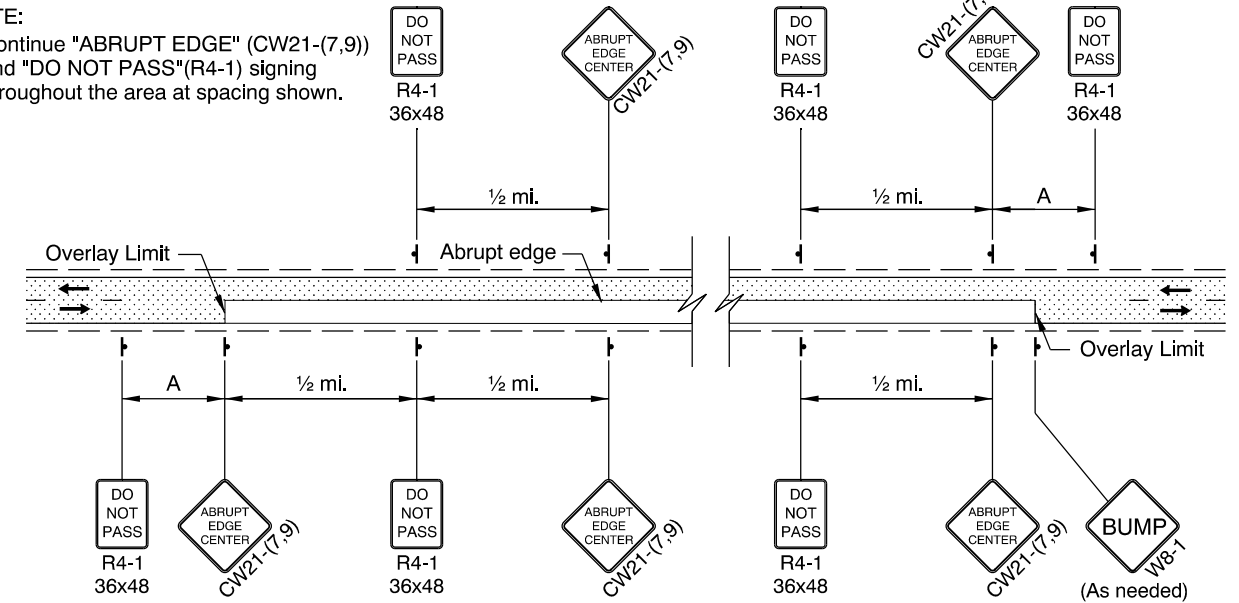
- Continue "LOOSE GRAVEL" (CW8-7a) and "DO NOT PASS" (R4-1) signing throughout the area at spacing shown.
- Use advisory speed "XX", 20 mph less than the posted speed, or as directed. "XX MPH" placard should not exceed 20 mph below the pre-construction posted speed.



2-LANE, 2-WAY ROADWAY  
LOOSE GRAVEL IN ROADWAY SIGNING

NOTE:

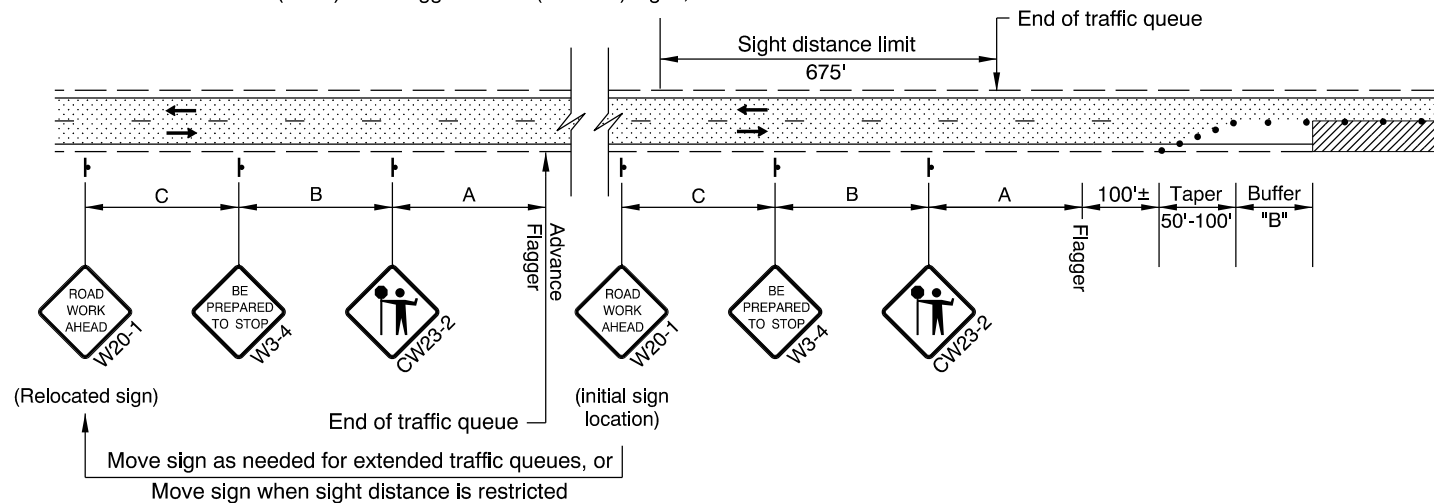
- Continue "ABRUPT EDGE" (CW21-(7,9)) and "DO NOT PASS" (R4-1) signing throughout the area at spacing shown.



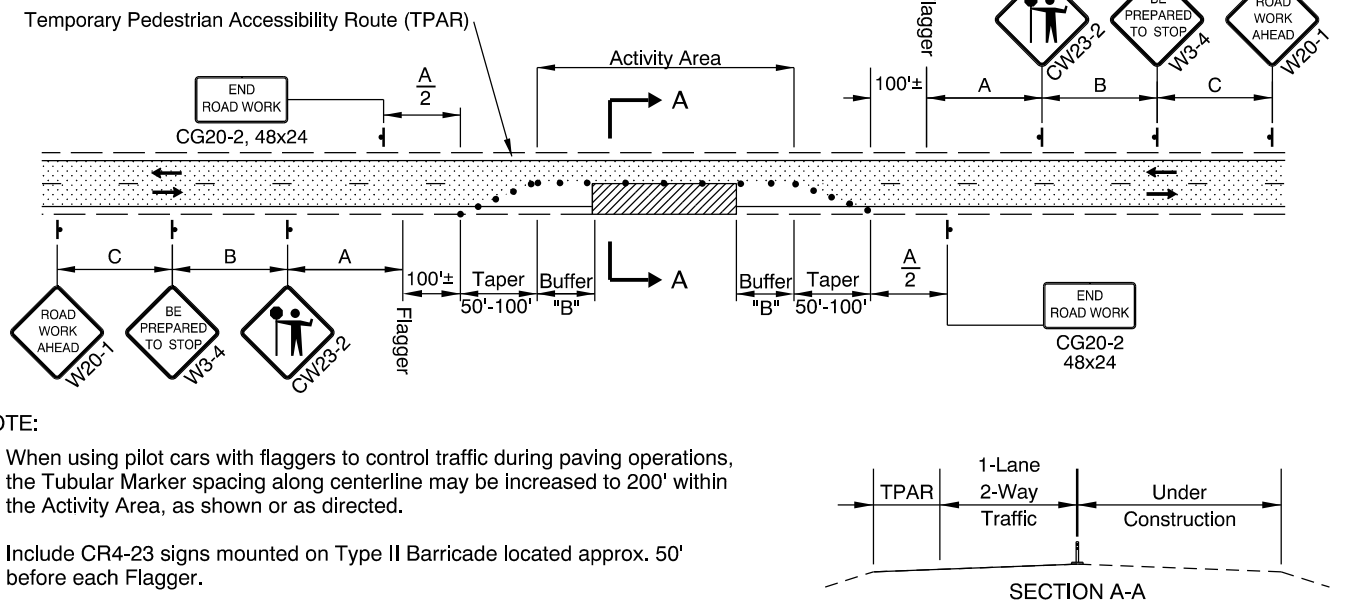
2-LANE, 2-WAY ROADWAY  
OVERLAY AREA SIGNING

NOTES:

- Place Advance Flagger and additional signing when traffic queues extend beyond initial warning signing OR when sight distance is restricted.
- Relocate initial "ROAD WORK AHEAD" (W20-1) sign in advance of additional "BE PREPARED TO STOP" (W3-4) and Flagger Ahead (CW23-2) signs, as shown.
- Place additional Tubular Markers for Flagger and Advance Flagger Stations according to FLAGGER STATION DELINEATION detail.



ADVANCE FLAGGER FOR EXTENDED TRAFFIC QUEUES



NOTE:

- When using pilot cars with flaggers to control traffic during paving operations, the Tubular Marker spacing along centerline may be increased to 200' within the Activity Area, as shown or as directed.
- Include CR4-23 signs mounted on Type II Barricade located approx. 50' before each Flagger.
- Coordinate and control pedestrians movements through the TPAR using Flaggers, other TCM, or as directed. When the existing shoulder is greater than or equal to 4' wide, provide a minimum of 4' of width for the TPAR.

2-LANE, 2-WAY ROADWAY  
ONE LANE CLOSURE

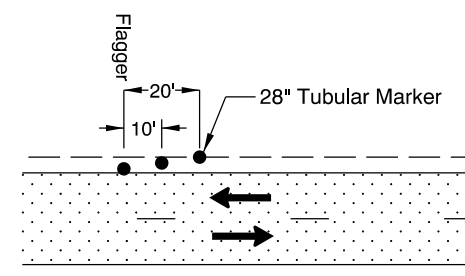
GENERAL NOTES FOR ALL DETAILS:

- The "FLAGGER" (CW23-2) symbol sign shall be used only in conjunction with the "BE PREPARED TO STOP" (W3-4) sign.
- Cover existing passing zone signing, as directed.
- Install temporary striping as required.
- To determine Taper Length ("L") and Buffer Length ("B"), use the "MINIMUM LENGTHS TABLE" shown on Drg. No. TM800.
- To determine sign spacing A, B, and C, use "TRAFFIC CONTROL DEVICES (TCD) SPACING TABLE" on Drg. No. TM800.
- Install a "BICYCLES ON ROADWAY" (CW11-1) sign in advance of the closure when a bike lane is closed, or when the shoulder is closed and bikes are expected.

- • • • • 28" Tubular Markers on 20' max. spacing for flagger tapers and stations
  - • • • • 28" Tubular Markers See TCD Spacing Table on TM800 for max. spacing.
- 
- To be accompanied by Drg. Nos. TM821

NOTE:

- Use a minimum of 3 tubular markers in shoulder taper on 10' spacing for flagger station delineation.



FLAGGER STATION DELINEATION

CALC. BOOK NO. N/A

BASELINE REPORT DATE 01-JAN-2018

NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications

OREGON STANDARD DRAWINGS

2-LANE, 2-WAY ROADWAYS

2018

DATE	REVISION	DESCRIPTION
01-01-2018	REVISED DRAWING AND NOTES	

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

TM850