INDEX OF SHEETS

SHEET NO.  | DESCRIPTION
---------- | -----------
A01        | Cover Sheet
A02        | Index Of Sheets Contd. & Std. Diagrams

DESCHUTES COUNTY ROAD DEPARTMENT
PLANS FOR PROPOSED PROJECT
Bridges And Structures

SIEMORE BRIDGE REHABILITATION PROJECT
OUTFLOW OF TUMALO RES.

SIEMORE ROAD
DESCHUTES COUNTY
FEBRUARY 2020

BEGINNING OF PROJECT
STA. "S" 16+51.68

END OF PROJECT
STA. "S" 18+55.76

NOTE: Oregon Law Requires You To Follow Rules Adopted By The Oregon Utility Notification Center. Those Rules Are Set Forth In OAR 912-001-0010 Through OAR 912-001-0090. You May Obtain Copies Of The Rules By Calling The Center. (Note: The Telephone Number For The Oregon Utility Center Is (503) 222-1887.)

PLAN PREPARED FOR
DESCHUTES COUNTY ROAD DEPARTMENT
DAVID EVANS
ASSOCIATES
P.O. Box 913
Bend, Oregon 97707
Phone: 541-382-4919

These plans were developed using AASHTO design standards. Exceptions to these standards, if any, have been submitted and approved by the Deschutes County Public Works Director or their delegated authority.

SISMORE BRIDGE REHABILITATION PROJECT
SIEMORE ROAD
DESCHUTES COUNTY
HEBNER2020

COVER SHEET
A01
### INDEX OF SHEETS, CONT.

#### ROADWAY CONSTRUCTION

<table>
<thead>
<tr>
<th>SHEET NO.</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>BAD1</td>
<td>Typical Sections</td>
</tr>
<tr>
<td>C01</td>
<td>General Construction</td>
</tr>
<tr>
<td>C01A</td>
<td>Profile</td>
</tr>
<tr>
<td>D01</td>
<td>Traffic Detour</td>
</tr>
</tbody>
</table>

#### BRIDGE REHABILITATION

<table>
<thead>
<tr>
<th>SHEET NO.</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>J01</td>
<td>Plan And Elevation</td>
</tr>
<tr>
<td>J02</td>
<td>General Notes</td>
</tr>
<tr>
<td>J03</td>
<td>Containment And Access Plan</td>
</tr>
<tr>
<td>J04</td>
<td>Arch Repair Details (1 Of 2)</td>
</tr>
<tr>
<td>J05</td>
<td>Arch Repair Details (2 Of 2)</td>
</tr>
<tr>
<td>J06</td>
<td>Concrete Repair Details</td>
</tr>
<tr>
<td>J07</td>
<td>Curb Repair Details</td>
</tr>
<tr>
<td>J08</td>
<td>Rail Details</td>
</tr>
<tr>
<td>J09</td>
<td>Masonry Wall Repair Details</td>
</tr>
</tbody>
</table>

Standard Org. Nos:
- RD610: Asphalt Concrete Pavement (ACP) Details
- RD1003: Check Dams Type 1, 3 and 4
- RD1030: Sediment Barrier Type 2, 3 and 4
- TM670: Wood Post Sign Supports
- TM671: 3-Second Gust Wind Speed Map
- TM900: Tables, Abutment Edge and PCMS Details
- TM820: Temporary Sign Supports
- TM821: Temporary Sign Supports
- TM850: 2-Lane, 2-Way Roadways
GENERAL EROSION CONTROL NOTES:

The Construction, Adjustment, Maintenance, And Upgrading Of These Erosion Control Measures Is The Responsibility Of The Contractor For The Duration Of The Project.

Erosion Control Measures Shown On This Plan Are For Anticipated Site Conditions, Adjust Or Upgrade These Measures For Unexpected Storm Events To Ensure That Sediment And Sediment-Laden Water Does Not Leave The Site.

Install Measures Within The Right Of Way Unless Directed Otherwise.

Develop A Revised Plan Of The Erosion Control Measures Shown As Required By Section 00240, Oregon Standard Specifications For Construction. Implement This Plan For All Clearing And Grading Activities And In Segments Applicable To Each Phasing Phase. Construct In Such A Manner So As To Ensure That Sediment And Sediment-Laden Water Does Not Enter The Roadway Or Drainage System, Or Violate Applicable Water Standards.

Installing Stabilized Construction Entrances At The Beginning Of Construction And Maintain For The Duration Of The Project. Additional Measures May Be Required To Insure That All Paved Areas Are Kept Clean.


Protect All Inlets During Surface Grading, Paving, And Earthwork Operations To Prevent Pollutants From Entering Storm Water Systems.
NOTES:
1. To be accompanied by TM670, TM671, TM680, TM681, TM682
2. Adjust sign spacing or locations as needed to avoid obstacles conflicts.
PLAN
Scale: 1" = 20'-0"

Note:
Maintain access to the dam intake and spillway for Tumalo Irrigation District.

ELEVATION
Scale: 1" = 20'-0"

Note:
Elevations shown are based on North American Vertical Datum 1929 (NAVD29).

GRADEDLINE DIAGRAM
No Scale
GENERAL NOTES:
Provide all materials and perform all work according to the Oregon Standard Specifications for Construction 2018.

Bridge rehabilitation is designed to provide rating factors greater than 1.0 for ODOT legal trucks according to the ODOT LRFR Manual (June 2018).

Provide all reinforcing steel according to ASTM Specification A706, or AASHTO M31 (ASTM A615) Grade 60. Provide field bent stirrups according to ASTM Specification A706. Use the following splice lengths (unless shown otherwise):

<table>
<thead>
<tr>
<th>Bar Size</th>
<th>#3</th>
<th>#4</th>
<th>#5</th>
<th>#6</th>
<th>#7</th>
<th>#8</th>
<th>#9</th>
<th>#10</th>
<th>#11</th>
<th>#14</th>
<th>#18</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uncoated</td>
<td>1'-0&quot;</td>
<td>1'-4&quot;</td>
<td>1'-8&quot;</td>
<td>2'-0&quot;</td>
<td>2'-9&quot;</td>
<td>3'-7&quot;</td>
<td>4'-6&quot;</td>
<td>5'-9&quot;</td>
<td>7'-0&quot;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not Permitted</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Reinforcing Splice Lengths (Class B) Grade 60, Fc = 4.0 ksi, ϕc = 0.4, 2" min. concrete clear cover

Increase all splice lengths 30% for horizontal or nearly horizontal bars placed so that more than 1/2 of fresh concrete is cast below the bar.

Splice reinforcing steel at alternate bars, staggered at least one splice length or as far as possible, unless shown otherwise.

All reinforcing spacing is intended to be maximum unless shown otherwise.

Support the bottom mat reinforcing steel from the existing concrete with premixed mortar blocks at 2 x maximum center each way. Support the top mat of reinforcing steel from the bottom mat of reinforcing steel with wire bar supports as shown in Chapter 3 of the CRO Manual of Standard Practice (SWC, B81, or CVCSI). Place wire bar supports at 2 x maximum centers.

Use uncoated reinforcing steel in the deck. This includes longitudinal bars, transverse bars, and all bars extending into the arch slab.

Place bars 2" clear of the nearest face of concrete (unless shown otherwise). The top bends of stirrups extending from arch slab into the top slab may be shop or field bent (unless shown otherwise).

Provide Class 4000 1½"; 1" or ½" concrete for all concrete.

Provide non-shrink cementitious grout with a minimum 28-day compressive strength of 1000 psi. Provide grout test panels for color review and approval prior to construction.

For the curb concrete, provide cured test panels for color review and approval prior to construction.

Provide general surface finish on all repaired concrete, and sand blast.

Low Density Cellular Concrete (LDCC) Shall meet the following criteria:
- Unit weight = 30 psf maximum
- Compressive strength = 200 psi minimum
- Permeable

Structure Excavation Limits:
Pay limits of Structure Excavation are between the Arch side walls and limits shown on SHE. J05 and on Ground Line Concrete Repair Detail on SHE. J06. All other excavation on the roadway approaches is General Excavation.

CONSTRUCTION SEQUENCE:
Arch Strengthening:
See Special Provisions Section 220 for scheduling requirements.
1. Remove existing ACIR and arch fill.
2. Blast clean exposed concrete surface.
3. Perform Concrete Repair on surfaces inside arch.
4. Perform Rail Replacement and Curb Repair.
5. Drill and epoxy embed dowels into concrete.
6. Place reinforcement.
7. Cast new concrete over existing arch.
8. Install waterproofing membrane.
9. Install new drainage pipes.
10. Replace fill with granular drain backfill, and low density cellular concrete (LDCC).

Concrete Repair:
Concrete repair includes patching deteriorated concrete and sealing cracks. This work is to be performed on pier walls, top and bottom of arch slab, and the interior and exterior side walls of arch. Concrete repair of the interior and exterior arch side walls and the top of the arch slab to be performed concurrently with the arch strengthening.
1. Remove all deteriorated concrete (poor consolidation, spalling, and delaminated).
2. Blast clean all exposed near and concrete surfaces.
3. Place grout to be flush with original concrete surface.
4. Use compressed air to remove debris from cracks greater than or equal to 0.05" in width.
5. Seal and epoxy inject all cracks greater than or equal to 0.05" in width, except large cracks in Bent 1 east wingwall shall receive concrete repair per Section 00442 of the Special Provisions.
6. Remove crack sealant with blast cleaning.

Rail Replacement and Curb Repair:
1. Remove existing rail, remove existing concrete from top and front faces of curbs, and protect existing concrete below the removal limits.
3. Recast concrete on top and front faces of curbs, embedding new rail.

Masonry Wall Repair:
1. Replace all missing or loose stones and grout into place.
2. Rechink ungrouted masonry.
Notes:
Scaffolding containment and construction access shown are conceptual.
Design and construct containment and access system in conformance to
the Special Provisions.

Only temporary untreated timber wood and vertical support elements are
allowed to touch the regulated work area within the OHW limits to the
west of bridge and the wetland east of the bridge. All other elements
within those areas shall be above ground and above water.

Locate supports to prevent restrictions to channel flow.

Provide deck sheathing and felle guards to contain construction material
and cleaning fluids, and to prevent their entry into the waterway.

Maintain access to the dam intake and spillway for Tumalo Irrigation
District. Do not support containment and access scaffolding off of dam or
dam intake system.
2' Deep x ½" wide swallet at ends of Bents 1 and 5, fill with hot applied joint sealant, typ.

4" ACWS  
Low density cellular concrete (LDCC)  
Asphalt leveling lift

6" @ 6" w/90° hooks at ends  
#6 @ 12"  
Waterproofing membrane  
Drainage geotextile  
Granular drain backfill, at pier walls only, 12" max thickness  
Existing pier wall, typ

2' Deep x ½" wide swallet at 4 of Bents 2-5, fill with hot applied joint sealant, typ.

Low density cellular concrete (LDCC)

#4 Hook bar @ 24" each way. Drill and epoxy dowel into extg. concrete 8" embed, typ.

2" Diameter perforated pipe, typ. Extend pipe through existing holes in arch side walls to within ½" of exterior face.

LONGITUDINAL BRIDGE SECTION
Scale: 1/8" = 1'-0"
GROUND LINE CONCRETE REPAIR DETAIL

Scale: 1/2" = 1'-0"

Remove all unsound concrete per special provisions. Blast clean concrete surfaces and rebar before restoring concrete.

Existing rebar, typ.

1/8" Deep saw cut, typ.

Notes:

See project special provisions.

Save and protect existing rebar.

Adjust saw cut depth as required to avoid damage to existing rebar.

Remove concrete in repair area to sound concrete but do not remove less than the minimum limits shown or as directed by the Engineer.

All repair areas shall receive a final surface finish matching the texture and color of existing concrete. Provide a sand blast finish per project special provisions.

Concrete area to be repaired

Concrete area to be repaired

Chip repair area to

minimum 1/2 depth

2'-0"

1'-0"

1'-0"

1'-0"

GROUND LINE CONCRETE REPAIR DETAIL

Scale: 1/2" = 1'-0"

NEAR SURFACE STRUCTURAL CONCRETE REPAIR DETAILS

No Scale

DESCHUTES COUNTY ROAD DEPARTMENT

MAKENZIE AWA ELEET

MADISON BRIDGE REHABILITATION PROJECT

COUNTY: Deschutes

DESCHUTES COUNTY ROAD DEPARTMENT

SIEMORE ROAD

CONCRETE REPAIR DETAILS
PROPOSED RAIL ELEVATION

Scale: 1/2" = 1'-0"

Notes:
For existing rail removal details, see Sh. J07.
All fasteners shall be galvanized.
All fittings and pipe shall be galvanized and powder coated black.

SECTION A-A
Scale: 1" = 1'-0"

Note:
Maintain rail post location 8" from back of concrete curb along curved portions of rail.
Curved rail radius to be verified in field.
BENT 6 MASONRY WALL
No Scale

LEGEND:

Replace stones

Rechink ungrouted stones
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.

TABLE 1

<table>
<thead>
<tr>
<th>Posted Speed</th>
<th>Taper Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 45 mph</td>
<td>1&quot; per 50'</td>
</tr>
<tr>
<td>≥ 45 mph</td>
<td>1&quot; per 100'</td>
</tr>
</tbody>
</table>

METHOD A *

ACP PAVEMENT MATCH AT PROJECT ENDS
OR BRIDGE ENDS WHEN NOT OVERLAYING THE BRIDGE

METHOD B *

ACP PAVEMENT MATCH AT PROJECT ENDS
OR BRIDGE ENDS WHEN NOT OVERLAYING THE BRIDGE

METHOD OF FEATHERING ACP PAVEMENT
AT GRAVEL APPROACHES

METHOD OF MATCHING EXTG. ACP INLAY SURFACING
(inlay to extg. asphalt conc. pvmt.)
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.

OREGON STANDARD DRAWINGS
CHECK DAMS TYPE 1, 3 AND 4
2018

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.

Effective Date: December 1, 2019 - May 31, 2020
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.

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

Effective Date: December 1, 2019 - May 31, 2020
### General Notes:
1. Wood posts are available in the following commercial lengths: 12', 14', 16', 18', 20', 22', 24', 26', 28', 30'.
2. Material shall be Douglas Fir No. 1 and according to Section 00330.40.
3. For horizontal and vertical clearances of permanent signs refer to TM621 and of temporary signs refer to TM622.
5. Use the 3 second gust wind speeds shown on TM621 for the specific sign location.
6. General design parameters are Kz = 0.87, SO (duration factor) = 1.6, C1 (sign) = 1.20, and C2 = 1.14.
7. The sign width to sign height or sign height to sign width ratio shall not exceed 5:1.
8. Permanent signing uses an Ir = 0.25 for a recurrence interval of 10 years.
9. Temporary signing uses an Ir = 0.45 for a recurrence interval of 1.5 years.
10. Posts protected by barrier or guardrail do not require field drilled holes.
11. 4" x 4" posts should not be used in snow plow areas.

### Post Embedment Installation:
1. Excavate the hole to at least 12" larger in diameter than the diagonal dimension of the post. Maintain at least 6" of space around the edges of the post to accommodate compaction equipment.
2. Align the post in the hole to a vertical position.
3. The space around the wood post shall be backfilled to finished ground surface.
4. Backfill with selected general backfill meeting the requirements of 00330.13.
5. Place in layers not greater than 6 inches.
6. Backfill sets and tamp the layers into the excavation area around the post.
7. Stamped during placement if too dry to compact properly.
8. Replace and finish the surface around the post to the surrounding surface.

### TEMPORARY WOOD POST TABLE

<table>
<thead>
<tr>
<th>X</th>
<th>Y</th>
<th>Z</th>
<th>3 Second Gust Wind Speed (TM671)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4&quot; x 4&quot;</td>
<td>3&quot; x 3&quot;</td>
<td>3&quot; x 3&quot;</td>
<td>Maximum</td>
</tr>
<tr>
<td>105 and 110 MPH</td>
<td>105 and 110 MPH</td>
<td>105 and 110 MPH</td>
<td>105 and 110 MPH</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>1</td>
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<td>3</td>
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</tr>
<tr>
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<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

**ELEVATION**

No scale

**POST SIZE**

<table>
<thead>
<tr>
<th>X</th>
<th>Y</th>
<th>Z</th>
<th>3 Second Gust Wind Speed (TM671)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4&quot; x 4&quot;</td>
<td>3&quot; x 3&quot;</td>
<td>3&quot; x 3&quot;</td>
<td>Maximum</td>
</tr>
<tr>
<td>105 and 110 MPH</td>
<td>105 and 110 MPH</td>
<td>105 and 110 MPH</td>
<td>105 and 110 MPH</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
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<tr>
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<td>4</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
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<td>4</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

**SECTION A-A**

No scale

**NOTES:**
- Linear interpolates X*Y*Z post values for signs greater than 15' and less than 20'.
- Linear interpolates X*Y*Z post values for signs greater than 15' and less than 20'.
- See note 8
- See note 9
- See note 10
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.

NOTES:
1. The wind velocity map shown is adapted from AASHO 2001 4th edition – "Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals", Appendix C, Figure C-3 and section 3, Figure 3-2. It uses the wind speed map shown in Figure 1609 of the 2007 Oregon Structural Code to account for locations in the State with special wind regions.
2. The wind velocities shown above are 3-Second Gust wind velocities.
3. The Exposure Category is C.
4. The mean recurrence interval is 50-Years.
5. Mountainous terrain, gorges, and ocean promontories are classified as special wind regions and shall be examined for unusual wind conditions.
6. The Interval Height (Kz) is 30 ft.
7. All areas with full exposure to ocean winds shall be designated 110 mph areas.
8. Areas in Multnomah and Hood River counties with full exposure to Columbia River Gorge winds shall be designated 110 mph areas.
9. Localities may have adopted wind speed higher that shown on this map. Those higher wind speed shall be used.
### Baseline Report Date

**BASELINE REPORT DATE**

W = 16

**REVISION DESCRIPTION**

**SIGN (PCMS) INSTALLATION**

**TM 800**

**CALC BOOK NO.**

**TM09-01**

**DATE**

01-JAN-2019

---

#### Notes:

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

<table>
<thead>
<tr>
<th>SPEED (mph)</th>
<th>MINIMUM FLARE RATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>10</td>
</tr>
<tr>
<td>25</td>
<td>15</td>
</tr>
<tr>
<td>30</td>
<td>20</td>
</tr>
<tr>
<td>35</td>
<td>25</td>
</tr>
</tbody>
</table>

**Under Construction**

**Effective Date:** December 1, 2019 - May 31, 2020

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**PORTABLE CHANGEABLE MESSAGE SIGN (PCMS) INSTALLATION**

**FLAGGER STATION LIGHTING DELINEATION**

---

**OREGON STANDARD DRAWINGS**

**TABLES, ABRUPT EDGE AND PCMS DETAILS**

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.

---

**TYPICAL ABRUPT EDGE DELINEATION**

**Effective Date:** December 1, 2019 - May 31, 2020

---

**TERMINATION**

**FLYOUT**

---

**CONCRETE BARRIER FLARE RATE TABLE**

---

**MIXTURE LENGTH TABLE**

---

**TRAFFIC CONTROL DEVICES (TCD) SPACING TABLE**

---

**NOTES:**

- Use Pre-Construction Posted Speed to select the speed from the Tables below.
- Use aggregate base rock aggregate 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 4' B(III)L barriercalldes with 6' B(III)L barricades and replace the "RIGHT" (CW21-18B) riders with "LEFT" (CW21-8A) riders.
- Place roll-up signs in advance of barricades.
- If roll-up signs are used, attach the correct (CW21-9) riders with "LEFT" (CW21-8A) riders.
- Use fluorescent orange sheeting for the background of all temporary warning signs.
- All signs are 48" x 48" unless otherwise shown.
- Place changeable message signs on medians or under construction sites.
- Low speed highways have a pre-construction posted speed of 40 mph or less.
- 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. TM0820 & TM0821.

---

**TYPICAL ABRUPT EDGE DELINEATION**

---

**TECHNICAL SPECIFICATIONS**

---

**CONSTRUCTION SPECIFICATIONS**

---

**OREGON STANDARD DRAWINGS**

---

**DRAWINGS**

---

**TM800**
NOTES:

- Markings for barricade rails shall slope downward at an angle of 45° in the direction traffic is to pass.
- Where a barricade extends entirely across a roadway, it is desirable that the stripes slope downward in the direction toward which traffic must turn in detouring.
- Where both right and left turns are provided for, slope the chevron striping downward in both directions from the center of the barricade.
- For full roadway closures, the C or LR barricade may be used. Extend barricades completely across roadway unless access is required for local road users.

SIgned according to the TCP. See Dwg. No. TM 844.
TEMPORARY SIGN SUPPORTS

NOTES:
- Use Single Post TSS for a total sign area of 12 sq. ft. or less.
- Use Single Post TSS for a total sign area of 16 sq. ft. or less.
- Use Double Post TSS for a sign area of 20 sq. ft. or less.
- Use Double Post TSS for a sign area of 20 sq. ft. or less.

SIGN POST REFLECTIVE SHEETING PLACEMENT

NOTES:
- Apply fluorescent orange, ANSI Type VIII or IX retroreflective sheeting to TSS posts, as shown, for all temporary signs, except "STOP" and "DO NOT ENTER". For "STOP" and "DO NOT ENTER" signs, use red ANSI Type III retroreflective sheeting on the TSS posts.
- Apply sign post retroreflectivity to each TSS post facing front, and to the left and right sides of the TSS, as shown. Use 3" wide sheeting for wood post TSS's. Use 2" wide sheeting for PSST TSS's.
- Sheetings may be applied directly to post material; or applied to a rigid, lightweight substrate, then securely attached to the posts.

Oregon Standard Drawings

Effective Date: December 1, 2019 - May 31, 2020

TM821
NOTES:
- Do not block bicycle lanes, sidewalks, or TPAR’s with sign supports. Maintain minimum widths for these facilities according to TCP Design Manual, MUTCD, ADA, or as directed.
- To be accompanied by Drg. Nos. TM670, TM671, TM687, TM688 & TM690.

**URBAN AREAS WITH CURB/SIDEWALK**

- If bottom of plaque is installed less than 7' above the sidewalk it may extend a maximum of 6" into pedestrian pathway, as shown.
- 2' min. when the shoulder width is less than 6'.

**RURAL AREAS**

- Where temporary signs are located adjacent to or intrude into a paved shoulder or other surface used by bicycle traffic, install secondary sign (plaque) so bottom of sign is a minimum of 20' above pavement surface, as shown.

**DIVIDED HIGHWAY/FREEWAY MEDIANS**

- 6'-0" min.
- 4'-0" min.
- 1' min.

**NO CURB/SIDWALK**

- 6'-0" min.
- 4'-0" min.
- 1' min.

**RURAL OR URBAN AREAS – CURB OR NO CURB**

- BICYCLES ON SHOULDER

**TEMPORARY SIGN PLACEMENT**

- 4" max.*
- 3" (min.)
- 2' (min.)
- 6' - 12'

**CONCRETE BARRIER SIGN SUPPORT**

- 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.

- **CALC. BOOK NO.**
- **N/A**
- **BASELINE REPORT DATE**
- **01-JAN-2019**
- **REVISED NOTES**
- Do not block bicycle lanes, sidewalks, or TPAR’s with sign supports. Maintain minimum widths for these facilities according to TCP Design Manual, MUTCD, ADA, or as directed.
- To be accompanied by Drg. Nos. TM670, TM671, TM687, TM688 & TM690.

**OREGON STANDARD DRAWINGS**

- **REVISED DRAWING**
- **DATE**
- **TM822**
- **01-2018**

**TEMPORARY SIGN SUPPORTS**

- TM688 & TM689.
- To be accompanied by Drg. Nos. TM670, TM671, TM687, TM688 & TM690.

**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.**

**Effective Date:** December 1, 2019 - May 31, 2020
NOTE:
- Place "LOWS CRAVEL" (CW-76) and "DO NOT PASS" (NK-1) signing throughout the area at spacing shown.
- Use advisory speed "XX", 20 mph less than the posted speed, or as directed. "XX MPH" placed should not exceed 20 mph below the pre-construction posted speed.

ROAD WORK AHEAD

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OREGON STANDARD DRAWINGS

2-LANE, 2-WAY ROADWAYS

Effective Date: December 1, 2019 - May 31, 2020

TM850