

SW SUNSET BLVD & SW TIMBREL LN INTERSECTION IMPROVEMENT

GRADING, ROADSIDE DEVELOPMENT, SIGNING,
PAVEMENT MARKINGS, PHB SIGNAL

PREPARED FOR
THE CITY OF SHERWOOD, OREGON

May 15, 2025

Call Before You Dig:

POTENTIAL UNDERGROUND
FACILITY OWNERS
"ONE CALL"
UTILITY NOTIFICATION CENTER

1-800-332-2344 or 811
ATTENTION: Oregon Law Requires You To Follow Rules Adopted By The Oregon Utility Notification Center. Those Rules Are Set Forth In OAR 952-001-0010 Through 952-001-0090. You May Obtain Copies Of The Rules By Calling The Center. (Note: The Telephone Number For The Oregon Utility Notification Center Is (503) 232-1987.)

BASIS OF HORIZONTAL CONTROL:

Bench Mark #1: 5/8" Iron Rod w/RPC "S&F Lands Control" in the grass field approximately 125' east of the intersection at N622592.53/E7594292.33

Temporary Bench Mark #2: PK Marker located in the existing SE sidewalk curb ramp at N622612.67/E7594367.96

SITE INFORMATION

SW 1/4 of Section 31, Township 2 South, Range 1 West, Washington County

DATUM:

Elevations are based on Washington County Benchmark No. 945
Datum: NGVD29
Elevation: 203.02

HORIZONTAL DATUM (BASIS OF BEARINGS):

Oregon State Plane Coordinate System North Zone, NAD83 (2011), based on GPS observations. Distances shown hereon are ground distances, international feet, scaled about control point No. 945. To convert to grid distances, multiply by the combined factor of 1.001088333.

ORS 92.044

This Design Complies With ORS 92.044 (7) In That No Utility Infrastructure Is Designed To Be Within One Foot Of A Survey Monument Location Shown On A Subdivision Or Partition Plat. No Design Modification Nor Final Field Location Change Shall Be Permitted If It Would Cause Any Utility Infrastructure To Be Placed Within The Prohibited Area.

PROJECT CONTACTS:

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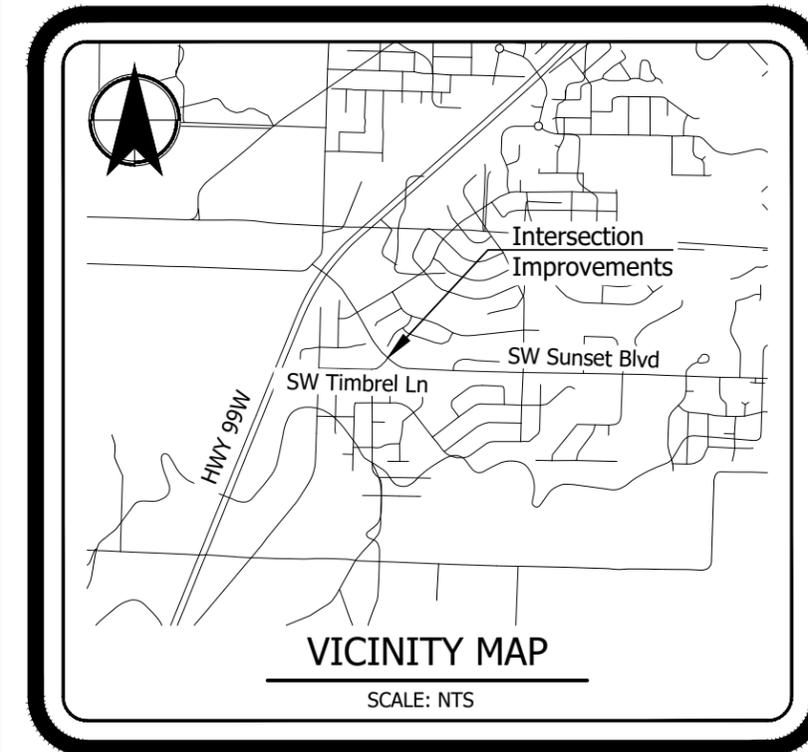
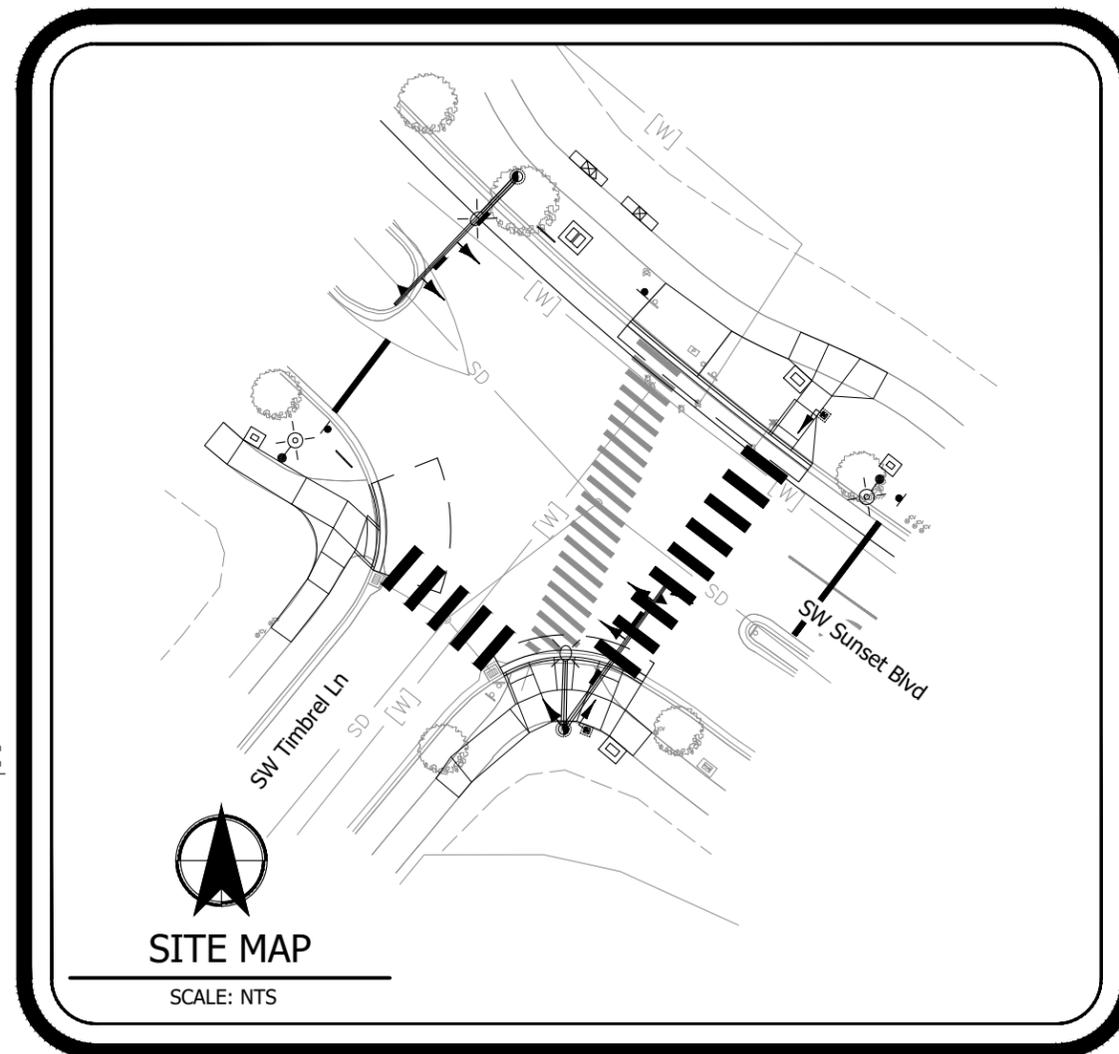
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#	DATE	REVISION	APP'D

Submission Date:
05/15/2025

Drawn: JCH
Designed: DPB
Checked: AMR

PROJECT NO.
729ST

ORIGINAL PLANS 11x17



EXPIRES: 12/31/2026

SW SUNSET BLVD & SW TIMBREL LN
INTERSECTION IMPROVEMENT

COVER SHEET

SHEET NO.
1

Plot Stamp: 5/7/2025 2:55:36 PM - Daniel Bowers
 File: H:\29\29152 - Sunset_Timber Crossing\001 - Sunset_Timber Crossing\001 - CD-1A-COVER.dwg

Index of Sheets		
	Sheet Number	Sheet Title
General	1	Cover Sheet
	1A	Sheet Index and Abbreviations
	1B	Legend
	1C	General Notes
Details	2A-1 Thru 2A-34	Details
	2B	Landscaping Plan
Street Plans	3	Street Plans
	4	Street Plans
Signal Plans	TS	Traffic Signal Plans
	TS-2	Traffic Signal Plans
	TS-3	Traffic Signal Details
	TS-4	Traffic Signal Details

ABBREVIATIONS

Δ	Delta Angle	Min.	Minimum	TCAA	Temporary Construction Access Agreement
ACP	Asphalt Concrete Pavement	MJ	Mechanical Joint	THKN.	Thickness
AD	Area Drain	NO.	Number	TOC	Top Of Curb
ADA	American Disabilities Act	NOM.	Nominal	VC	Vertical Curve
BC	Bottom Face of Curb	N.T.S./NTS	Not to Scale	W	Water
BVC	Begin Vertical Curve	ODOT	Oregon Department of Transportation	Wash. Co.	Washington County
BW	Back of Sidewalk	PC	Point of Curvature	WQ	Water Quality
CB	Catch Basin	PCC	Portland Cement Concrete	WQMH	Water Quality Manhole
CI	Curb Inlet	PE	Plain End		
CoS	City of Sherwood	PGE	Portland General Electric		
COMP.	Composite	PI	Point of Inflection		
DI	Ductile Iron	PRC	Point of Reverse Curvature		
DWG.	Drawing	PSE	Public Slope Easement		
E	Electrical	PT	Point of Tangency		
EA	Each	PUE	Public Utility Easement		
EAC	Edge of Asphalt Concrete	PVC	Poly Vinyl Chloride		
ELEV	Elevation	PVI	Point of Vertical Inflection		
EVC	End Vertical Curve	R	Radius		
Extg.	Existing	RCP	Reinforced Concrete Pipe		
F.L./FL	Flow Line	R.O.W.	Right-of-Way		
FLG	Flange	Rt.	Right		
FT	Feet	S	Slope		
F.T.	Flat Top	Sta.	Station		
G	Gas	SD	Storm Drain		
GV	Gas Valve	SHT	Sheet		
IE	Invert Elevation	T	Telecom		
L	Length	TC	Top of Curb (Face)		
LF	Linear Feet				
Lt.	Left				
LVC	Length of Vertical Curve				
Max.	Maximum				
MH	Manhole				

STANDARD DRAWINGS

City of Sherwood

RD-21	Vertical Curb
RD-22	Monolithic Curb and Gutter
RD-26	Sidewalk Detail
RD-44	Double Crossing Curb Return and Ramp Detail
RD-57	Westbrook Streetlight Detail
S-2	Sign Text Detail
S-3	Striping Details

ODOT

RD722	Sidewalk Joints and Transition Panels
RD900	Curb Ramp Components and Legend
RD902	Detectable Warning Surface Details
RD904	Detectable Warning Surface Placement for Curb Ramps
RD910	Perpendicular Curb Ramp
RD912	Perpendicular Curb Ramp
TM200	Sign Installation Details
TM240	Crosswalk Closure Detail
TM450	Mast Arm Pole Details
TM457	Pedestal Foundation and Traffic Signal Assembly
TM460	Vehicle Signal Details
TM462	Vehicle Signal Bracket & Sign Bracket (Type B) Details
TM467	Pedestrian Signal Mount and Pedestrian Pushbutton Details
TM470	Wire & Cable Installation
TM471	Trenching & Conduit Installation
TM482	Controller Cabinet & Service Cabinet Foundation Details
TM485	Service Cabinet Wiring Details
TM503	Pavement Marking Standard Detail Blocks
TM679	Signal Mast Arm Street Name Sign Mounts
TM681	Perforated Steel Square Tube (PSST) Sign Support Installation
TM687	Perforated Steel Square Tube (PSST) Anchor Foundation

Washington County

6511	Street Name Signs
6820	Typical Foundation for Luminaire Supports
6831	Illumination Junction Box Details
6911	Traffic Signal Support Notes and Design Criteria
6912	Traffic Signal Supports General Details
6913	Traffic Signal Supports Steel Details
6921	Traffic Signal Supports Foundation Standard (Square)
6922	Traffic Signal Supports Foundation Standard (Round)

Clean Water Services

905	Curb and Gutter Inlet Protection
915	Inlet Protection Type 4
945	Standard Erosion Control Notes for Sites Less Than 1 Acre



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SW SUNSET BLVD & SW TIMBREL LN
 INTERSECTION IMPROVEMENT

SHEET INDEX AND ABBREVIATIONS

SHEET NO.
1A

ORIGINAL PLANS 11x17

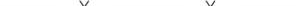


EXPIRES: 12/31/2026

EXISTING

-  EXISTING RIGHT OF WAY
-  EXISTING PROPERTY LINE
-  EXISTING CENTERLINE
-  EXISTING EDGE OF PAVEMENT
-  EXISTING CURB
-  EXISTING BUILDING
-  EXISTING STORM
-  EXISTING DITCH
-  EXISTING SANITARY
-  EXISTING WATER
-  EXISTING GAS
-  EXISTING OVERHEAD TELEPHONE
-  EXISTING UNDERGROUND TELEPHONE
-  EXISTING OVERHEAD POWER
-  EXISTING UNDERGROUND POWER
-  EXISTING OVERHEAD CABLE TV
-  EXISTING UNDERGROUND CABLE TV
-  EXISTING OVERHEAD WIRE
-  EXISTING FENCE
-  EXISTING WALL
-  EXISTING MANHOLE
-  EXISTING CATCH BASIN
-  EXISTING CURB INLET
-  EXISTING CLEANOUT
-  EXISTING AREA DRAIN
-  EXISTING WATER METER
-  EXISTING TESTING STATION
-  EXISTING BLOW-OFF ASSEMBLY
-  EXISTING IRRIGATION BOX
-  EXISTING GATE VALVE
-  EXISTING FIRE HYDRANT
-  EXISTING POWER METER
-  EXISTING UTILITY POLE
-  EXISTING GUY WIRE
-  EXISTING TV PEDESTAL
-  EXISTING STREET LIGHT
-  EXISTING MAILBOX
-  EXISTING ELECTRICAL BOX
-  EXISTING GAS VALVE
-  EXISTING LUMINAIRE
-  EXISTING SIGN
-  EXISTING TREE, SHRUB, OR ROOT SYSTEM
-  EXISTING UNDERGROUND UTILITY STRUCTURES (DIMENSIONS VARY)

PROPOSED

-  PROPOSED CURB
-  PROPOSED SIDEWALK
-  PROPOSED LANDSCAPE AREA (BARK MULCH)
-  PROPOSED LANDSCAPE AREA (TOPSOIL/GRASS SEED)
-  PROPOSED STORM
-  PROPOSED SAWCUT
-  PROPOSED EROSION CONTROL FENCE
-  APPROXIMATE EARTHWORK CUT LINE
-  APPROXIMATE EARTHWORK FILL LINE
-  PROPOSED STREET LIGHT

CONTOURS

-  251 PROPOSED FENCE
-  251 APPROXIMATE CUT LINE
-  251 APPROXIMATE FILL LINE
-  251 PROPOSED SLOPE EASEMENT



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LEGEND

SHEET NO.
1B



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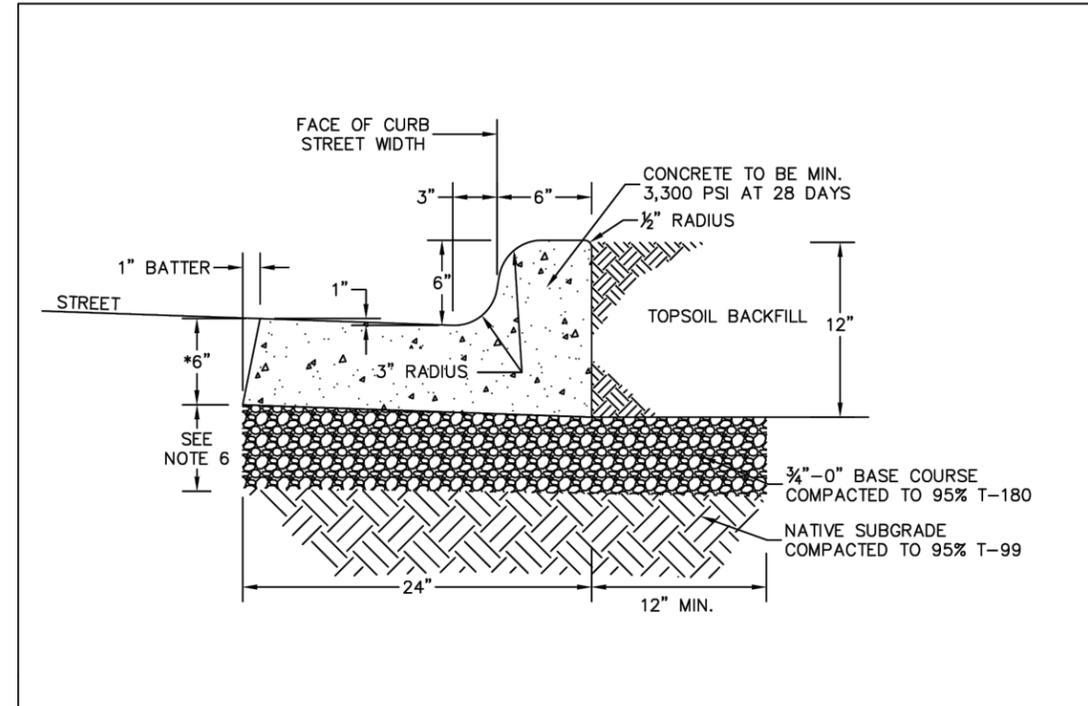
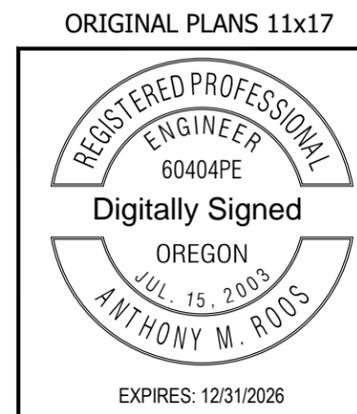
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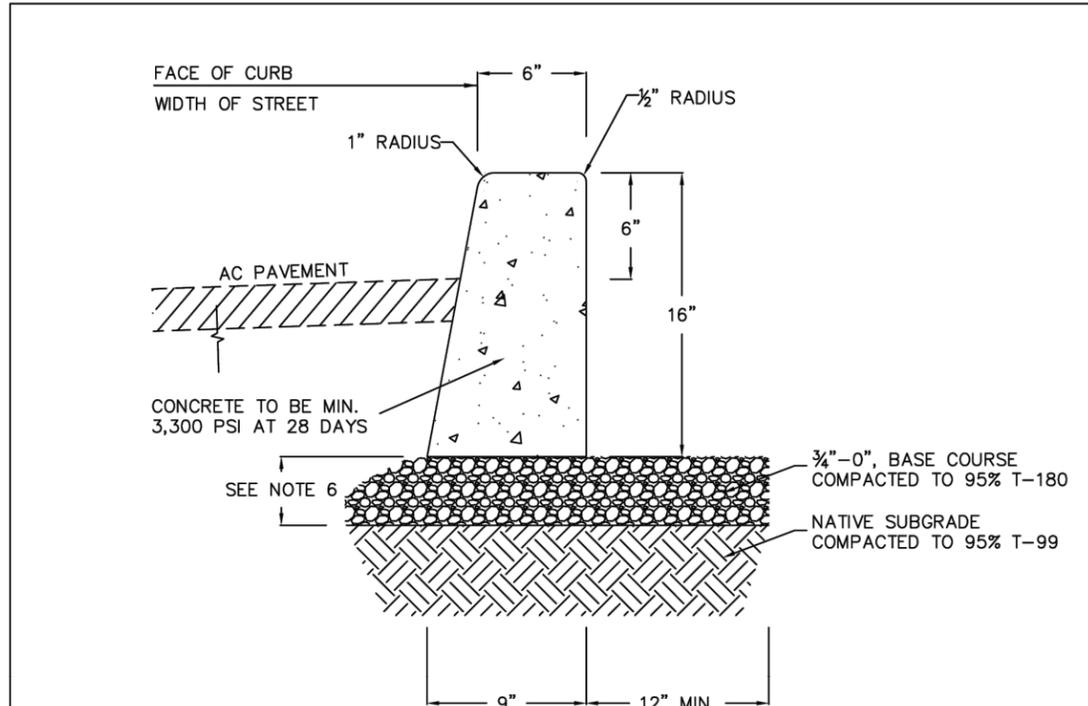
DETAILS

SHEET NO. 2A-1



- NOTES:
- MONOLITHIC CURB AND GUTTER SHALL BE USED ON ALL NEW ROADWAY SECTIONS, EXCEPT AT ROADWAY MEDIANS AND AT MOUNTABLE CURB SECTIONS (SEE STD DET RD-21 & RD-24 FOR THESE CONDITIONS).
 - CONCRETE SHALL BE COMMERCIAL MIX, WITH A 28-DAY COMPRESSIVE STRENGTH OF 3,300 PSI, WITH A 4" MAX SLUMP.
 - EXPANSION JOINTS TO BE PROVIDED AT EACH:
 - POINT OF TANGENCY.
 - COLD JOINT.
 - SIDE OF INLET STRUCTURES.
 - SIDE OF DRIVEWAYS.
 - EXPANSION JOINT MATERIAL SHALL BE PRE-MOLDED, ASPHALT IMPREGNATED, NON-EXTRUDING, WITH A THICKNESS OF 1/2".
 - CONTRACTION JOINTS SHALL HAVE:
 - SPACING OF NOT MORE THAN 15 FEET.
 - DEPTH OF JOINT OF AT LEAST 1 1/2".
 - BASE ROCK SHALL BE 3/4"-0", COMPACTED TO 95% OF MAXIMUM DENSITY PER AASHTO T-180. BASE ROCK SHALL BE TO SUBGRADE OF STREET STRUCTURES OR 6", WHICHEVER IS GREATER, AND SHALL EXTEND 12" BEHIND CURB.
 - FOR CURB AND GUTTER REQUIREMENTS ON SHED AND SUPERELEVATED ROAD SECTIONS, SEE STD DET RD-23
- * COMMERCIAL DRIVEWAY DROPS SHALL BE 8" THICK, RE-BAR REINFORCED, AND 4,000 PSI AT 28 DAYS.

STANDARD DRAWING TITLE		DRAWING NUMBER
MONOLITHIC CURB AND GUTTER		RD-22
Any alteration of this drawing may not be associated in any way with the City of Sherwood Standard Drawings.	SCALE	DATE
	N.T.S.	MAR '16



- NOTES:
- VERTICAL CURB TO BE USED AT MEDIANS AND MEDIAN PLANTING STRIPS, OR IN REPLACEMENT OF DAMAGED EXISTING VERTICAL CURBS.
 - CONCRETE SHALL BE COMMERCIAL MIX. MIN. COMPRESSIVE STRENGTH OF 3,300 PSI AT 28 DAYS.
 - EXPANSION JOINTS TO BE PROVIDED: AT POINT OF TANGENCY OF THE CURB, AT EACH COLD JOINT, AT THE SIDE OF INLET STRUCTURES, AT THE ENDS OF DRIVEWAYS AND AT LOCATIONS NECESSARY TO LIMIT SPACING TO 45 FEET.
 - MATERIAL TO BE PRE-MOLDED, ASPHALT IMPREGNATED, NON-EXTRUDING, WITH A THICKNESS OF 1/2 INCH.
 - CONTRACTION JOINTS SHALL NOT BE SPACED MORE THAN 15 FEET AND SHALL BE 1 1/2" IN DEPTH..
 - BASE ROCK: 3/4"-0", COMPACTED TO 95% MAX DENSITY. BASE ROCK SHALL BE TO SUBGRADE OF STREET STRUCTURE OR 6" IN DEPTH, WHICHEVER IS GREATER.

STANDARD DRAWING TITLE		DRAWING NUMBER
VERTICAL CURB		RD-21
Any alteration of this drawing may not be associated in any way with the City of Sherwood Standard Drawings.	SCALE	DATE
	N.T.S.	MAR '16



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NO.	REVISION	DATE	APP'D.

Submission Date: 05/15/2025

Drawn: JCH Designed: DPB Checked: AMR

PROJECT NO. 729ST

SW SUNSET BLVD & SW TIMBREL LN
INTERSECTION IMPROVEMENT

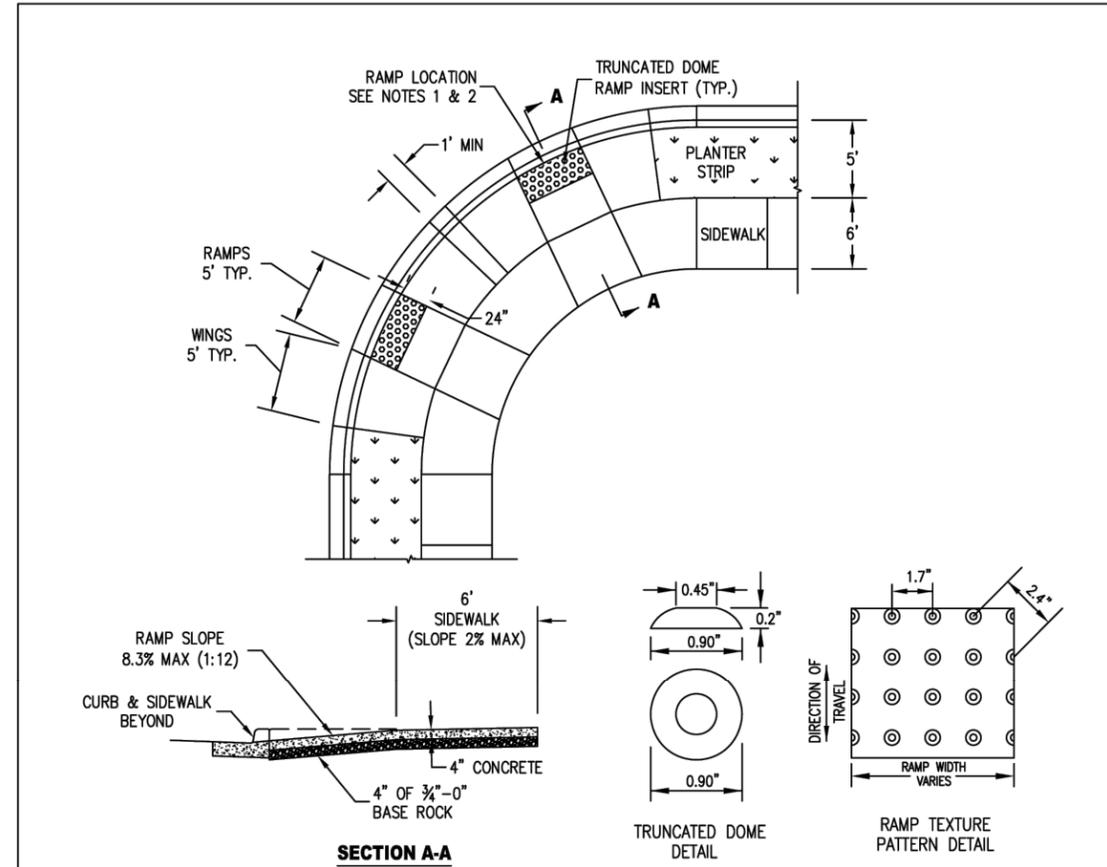
DETAILS

SHEET NO. 2A-2

ORIGINAL PLANS 11x17



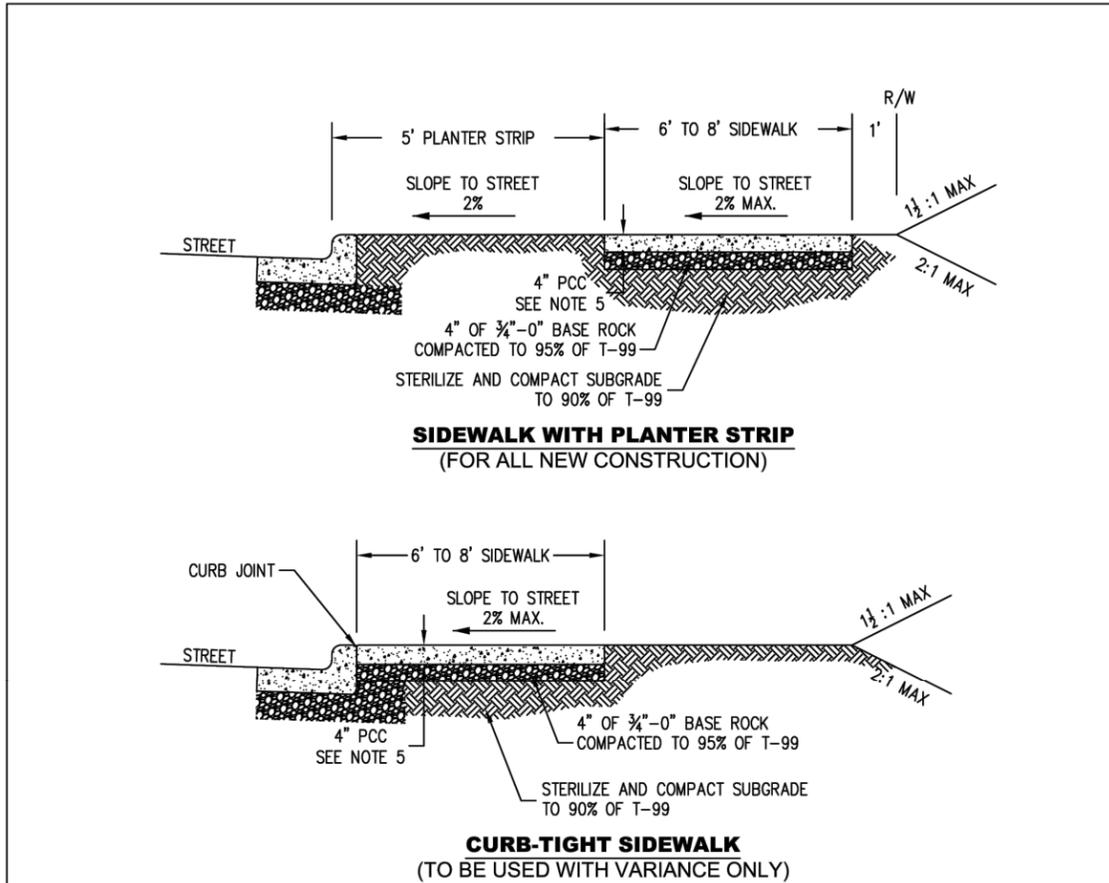
EXPIRES: 12/31/2026



NOTES:

- PROJECT ENGINEER SHALL USE THIS DRAWING AS A GUIDE FOR DESIGNING RAMPS AND SHALL PREPARE A SITE SPECIFIC DRAWING FOR EACH RAMP.
- PROJECT ENGINEER SHALL VERIFY APPLICABILITY OF THIS DRAWING TO SPECIFIC LOCATIONS WITHIN THE PROJECT BEFORE USING IT AS A DESIGN GUIDE AND SHALL LOCATE EACH RAMP RELATIVE TO CROSSWALK OR STOP LINE.
- SIDEWALK RAMP GRADES SHALL MEET CURRENT ADA STANDARDS.
- DETECTABLE WARNING SHALL BE TRUNCATED DOME TYPE, 24" LONG IN DIRECTION OF TRAVEL AND FULL WIDTH OF RAMP, WITH DOMES ALIGNED ON A SQUARE GRID WITH ITS GRIDLINES PARALLEL AND PERPENDICULAR TO THE CENTERLINE OF THE RAMP. COLOR OF DETECTABLE WARNING SHALL BE SAFETY YELLOW.
- CURB INLET OR CATCH BASIN SHALL NOT BE ALLOWED IN FRONT OF RAMP.
- CONCRETE SHALL BE A COMMERCIAL MIX, WITH A 28 DAY DESIGN COMPRESSIVE STRENGTH OF 3300 PSI, WITH A 4" MAX SLUMP.
- 3/4"-0" BASE ROCK SHALL BE COMPACTED TO 90% OF MAXIMUM DENSITY.
- BEVEL THE CURB CUT FROM GUTTER TO BACK OF CURB AT 8.3% (1:12) MAX.
- SCORE CONCRETE AT GRADE CHANGES, SURFACE TEXTURE CHANGES AND AT ALL OTHER POINTS SHOWN.
- CONCRETE SURFACE SHALL HAVE BROOM FINISH, AND 3" EDGE (SHINE) ALL JOINTS.
- PROJECT ENGINEER SHALL ACCEPT FULL RESPONSIBILITY FOR CORRECTING ALL UNACCEPTABLE RAMP CONSTRUCTION RESULTING FROM APPLYING THIS DRAWING "AS IS" AND NOT PROVIDING A SITE-SPECIFIC DRAWING FOR EACH RAMP.

STANDARD DRAWING TITLE		DRAWING NUMBER
DOUBLE CROSSING CURB RETURN & RAMP DETAIL		RD-44
Any alteration of this drawing may not be associated in any way with the City of Sherwood Standard Drawings.	SCALE	REVISION DATE
	N.T.S.	2024.05.15



NOTES:

- CONCRETE SHALL BE COMMERCIAL MIX, MIN. COMPRESSIVE STRENGTH OF 3,300 PSI @ 28 DAYS, WITH A 4" MAX SLUMP.
- SIDEWALK PANELS TO BE SQUARE (6' LONG x 6' WIDE TYP.).
- EXPANSION JOINTS TO BE PLACED AT SIDES OF DRIVEWAY APPROACHES, UTILITY VAULTS, CURB RAMPS, AND/OR POINTS OF TANGENCY IN CURB AS SHOWN ON THE STANDARD DRAWINGS FOR SIDEWALK RAMPS, AND AT SPACING NOT TO EXCEED 45'.
- FOR SIDEWALKS ADJACENT TO THE CURB AND POURED AT THE SAME TIME AS THE CURB, THE JOINT BETWEEN THEM SHALL BE A TROWELED JOINT WITH A MINIMUM 1/2" RADIUS.
- SIDEWALKS SHALL HAVE A MINIMUM THICKNESS OF 4". IF MOUNTABLE CURB IS USED, OR IF SIDEWALK IS INTENDED AS PORTION OF A RESIDENTIAL DRIVEWAY IT SHALL HAVE A 6" MINIMUM THICKNESS, COMMERCIAL 8".
- CONCRETE SHALL HAVE A BROOM FINISH, ALL JOINTS SHALL BE EDGED WITH 3" SHINE.
- WIDTH OF PLANTER STRIP IS MEASURED FROM FACE OF CURB.
- IF DRAIN BLOCKOUTS IN CURBS ARE APPROVED, THEY SHALL BE EXTENDED PERPENDICULAR TO CURB TO 1' PAST BACK OF SIDEWALK WITH A 3" DIAMETER ADS PIPE. CONTRACTION JOINT SHALL BE PLACE OVER PIPE.

STANDARD DRAWING TITLE		DRAWING NUMBER
SIDEWALK DETAIL		RD-26
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	N.T.S.	2023.03.17



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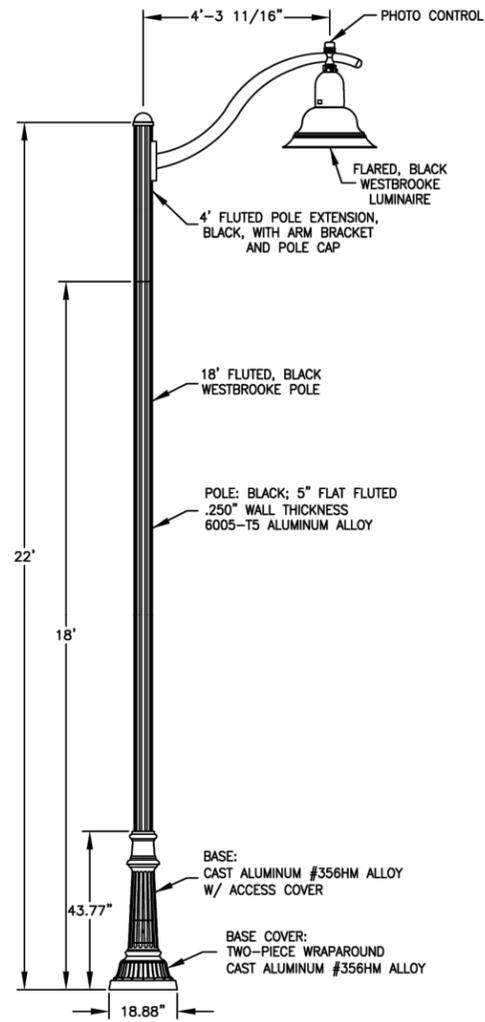
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729ST

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 INTERSECTION IMPROVEMENT

DETAILS

SHEET NO.
2A-3



PREFERRED PRECAST FOOTING:
 UTILITY VAULT 20R-LB-4-PGE
 (CONFIRM BEFORE ORDERING)

NOTES:

1. STREETLIGHTS SHALL BE OPTION "C".
2. PGE APPROVED STREET LIGHTING EQUIPMENT, LATEST EDITION, SHALL BE USED WHEN ORDERING LIGHTING COMPONENTS AND APPURTENANCES.
3. STREETLIGHT COMPONENTS AND INSTALLATION SHALL MEET PGE SPECIFICATIONS.
4. WESTBROOKE TO HAVE 18' BLACK-FLUTED POLE, A 4' EXTENSION POLE, AND BLACK-FLARED LUMINAIRE.
5. STREETLIGHT SHALL BE CENTERED IN PLANTER STRIP.
6. 3000K (WARM) LED'S. LAMP WATTAGE AND DISTRIBUTION TYPE SHALL BE DETERMINED BY PHOTOMETRIC DESIGN.
7. FOOTING TO BE PER PGE SPECIFICATIONS FOR POLE TYPE.
8. THIS DETAIL IS SCHEMATIC AND FOR REFERENCE ONLY. SPECIFICATIONS SHALL BE SUBMITTED TO THE CITY FOR APPROVAL PRIOR TO ORDERING OR INSTALLING STREETLIGHTING.

	STANDARD DRAWING TITLE	DRAWING NUMBER
	WESTBROOKE STREETLIGHT	RD-57
	SCALE	REVISION DATE
	N.T.S.	2024.05.15

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ORIGINAL PLANS 11x17



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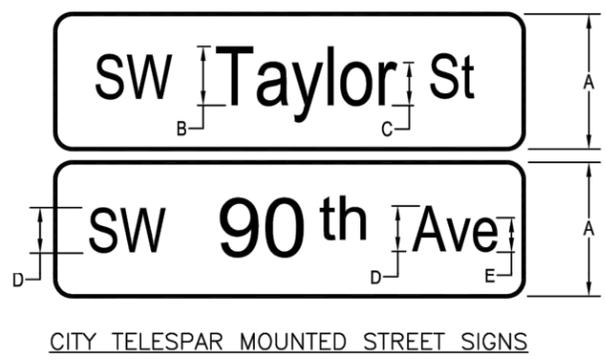
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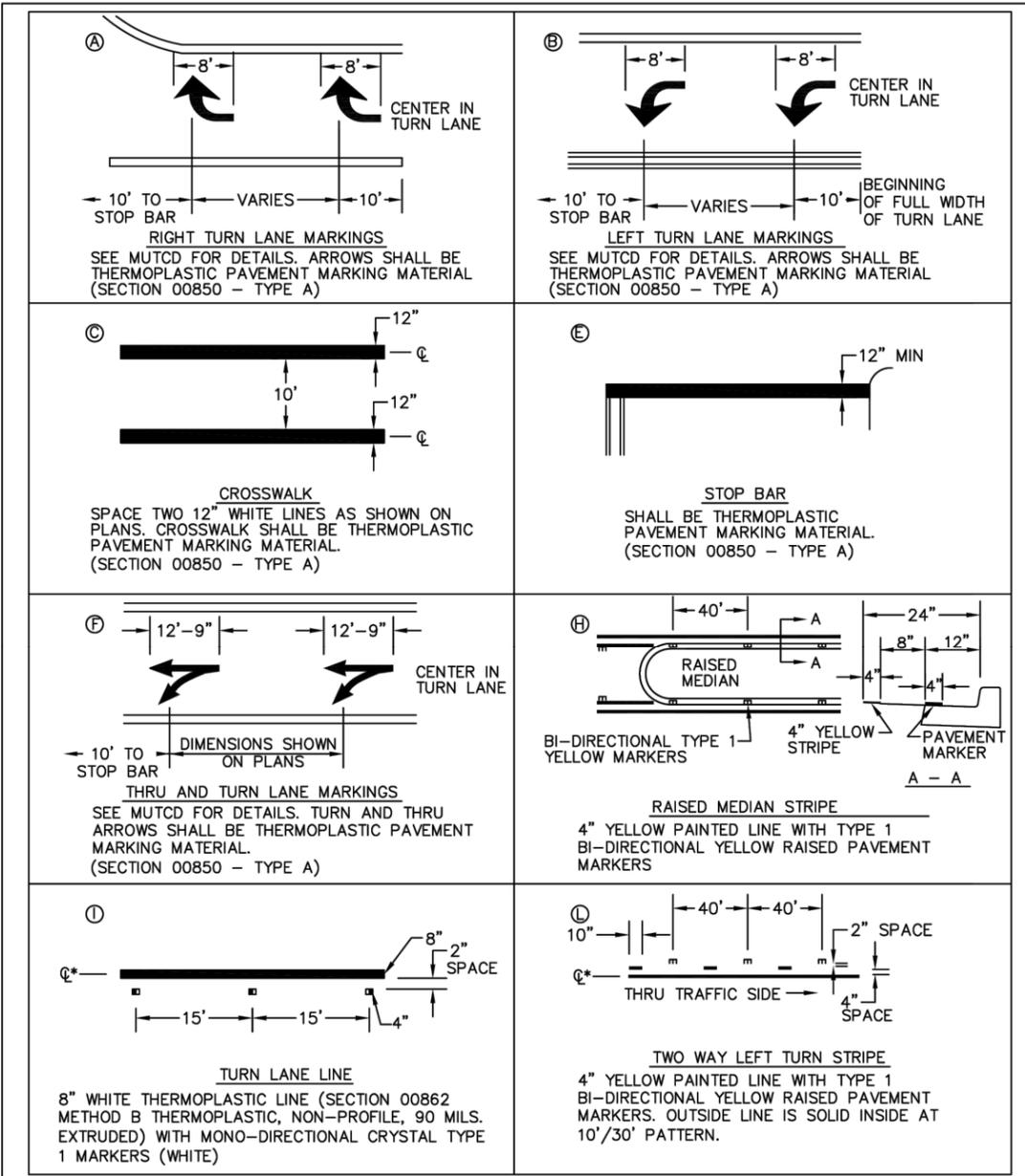
SHEET NO. 2A-4

LETTER HEIGHTS ON TELES PAR MOUNTED STREET NAME SIGNS (REFER TO MUTCD TABLE 2D-6)						
Street & Highway Type	Speed Limit	Sign Height (in.)	Recommended Minimum Letter Height (in.)			
			Initial Uppercase	Lowercase	Prefix/Suffix Uppercase	Prefix/Suffix Lowercase
Local	25 MPH	A	B	C	D	E
Multi - Lane	30 MPH to 40 MPH	8"	4"	3"	3"	2.25"
Multi - Lane	More than 40 MPH	SEE MUTCD	SEE MUTCD	SEE MUTCD	SEE MUTCD	SEE MUTCD



- Street Name Signs:
1. Verify final street names with the City before ordering street name signs. Sign materials, dimensions, text and specifications submittal shall be provided to the City for review prior to ordering.
 2. Lettering for names of streets shall be composed of a combination of lower-case letters with initial upper-case letters.
 3. Street name signs for intersecting streets shall be designed to the standard for the approaching road.
 4. Spacing between words or between words and sign edges should be approximately 3/4 of the upper case letter height.
 5. Green ASTM type 3 or 4 background with silver-white ASTM type 3 or 4 legend.
 6. Sheet aluminum shall be used for all street name signs.
 7. Border shall be 5/8" width with zero margin and 2" radius sign corners.
 8. Install telespar mounted signs per detail RD-35.
 9. All street name sign text, excluding superscript (top justified), shall be center justified type C font. Common abbreviations : use MUTCD table 1D-1, with these exceptions:
 Avenue=Ave; Lp=Loop; Way=Way
 10. All street signs shall comply with MUTCD standards, latest edition.

STANDARD DRAWING TITLE	DRAWING NUMBER
SIGN TEXT DETAIL	S-2
SCALE	REVISION DATE
N.T.S.	2024.10.29



* LANE MARKING DIMENSION LOCATION AT C OF STRIPING UNLESS NOTED OTHERWISE. SEE DRAWING NUMBER S-4 FOR STRIPING NOTES.

STANDARD DRAWING TITLE	DRAWING NUMBER
STRIPING DETAILS	S-3
SCALE	DATE
N.T.S.	MAR '16



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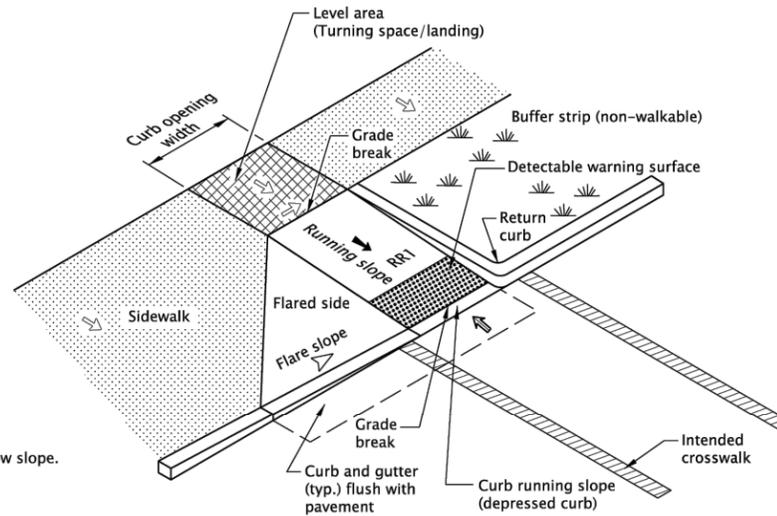
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DETAILS

SHEET NO. 2A-6

CURB RAMP INDEX

STD. DWG. NO.	STD. DWG. TITLE
RD900	Curb Ramp Components And Legend
RD901	Curb Ramp Legend And Corner Identification
RD902	Detectable Warning Surface Details
RD904	Detectable Warning Surface Placement For Curb Ramps
RD905	Detectable Warning Surface Placement For Directional Curbs
RD906	Detectable Warning Surface Placement For Accessible Route Island
RD908	Detectable Warning Surface Placement For Rail
RD909	Detectable Guide Strip Placement At Bike Ramps
RD910, RD912	Perpendicular Curb Ramp
RD913	Perpendicular Curb Ramp With Closure
RD916	Perpendicular Curb Ramp Single Ramp
RD920	Parallel Curb Ramp
RD922	Parallel Curb Ramp Single Ramp
RD930, RD932 & RD936	Combination Curb Ramp
RD938	Combination Curb Ramp Single Ramp
RD940	Blended Transition Curb Ramp Single Ramp
RD950 & RD952	End Of Walk Curb Ramp
RD960	Unique Curb Ramp



TYPICAL CURB RAMP SYSTEM COMPONENTS
(PERPENDICULAR TYPE SHOWN)

LEGEND:

- Marked or intended crossing location
- Sidewalk or other traversable surface
- Detectable warning surface (DWS)
- Level area (Turning space/landing)
- Cross slope 1.5% max. (Max. 2.0% finished surface slope) (Normal sidewalk cross slope)
- Running slope 4.0% max. (Max. 4.9% finished surface slope)
- Running slope 7.5% max. (Max. 8.3% finished surface slope)
- Counter slope 4.0% max. ascending or descending (Max. 5.0% finished surface slope) Slope as required for drainage
- Flare slope (Max. 10.0% finished surface slope)
- 4'x4' clear space
- RR1 Ramp Run Position 1

INTERSECTION CONDITION TYPES

- MB = Midblock, less than or equal to roadway grade finished gutter flow slope.
- SU = Signalized or Uncontrolled, max. 5.0% finished gutter flow slope.
- SY = Stop or Yield, max. 2.0% finished gutter flow slope.

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 first consulting a Registered Professional Engineer.

All materials shall be in accordance with the current Oregon Standard Specifications.

OREGON STANDARD DRAWINGS

CURB RAMP COMPONENTS AND LEGEND

2024

DATE	REVISION DESCRIPTION
07-2020	NEW DRAWING CREATED
07-2021	REVISED DETAILS AND NOTES
01-2022	REVISED LEGEND
11-2023	REVISED LEGEND

CALC. BOOK NO. N/A	SDR DATE 19-JAN-2024	RD900
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ORIGINAL PLANS 11x17



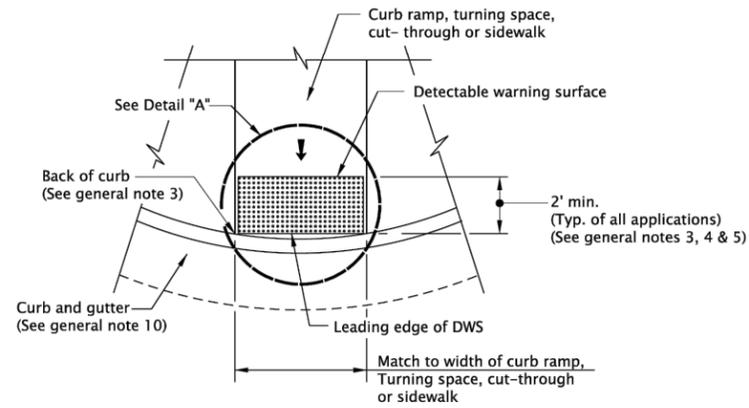
EXPIRES: 12/31/2026

Effective Date: December 1, 2024 – May 31, 2025

19-JAN-2024

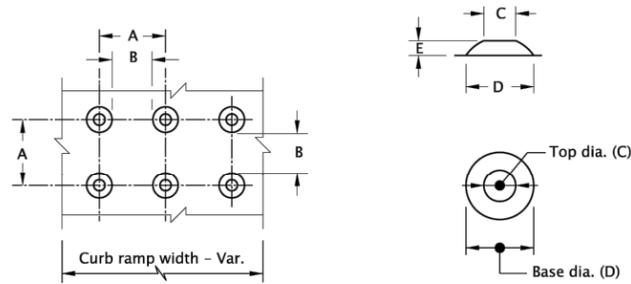
RD900.dgn

19-JUL-2021 RD902.dgn



DETECTABLE WARNING SURFACE DETAIL

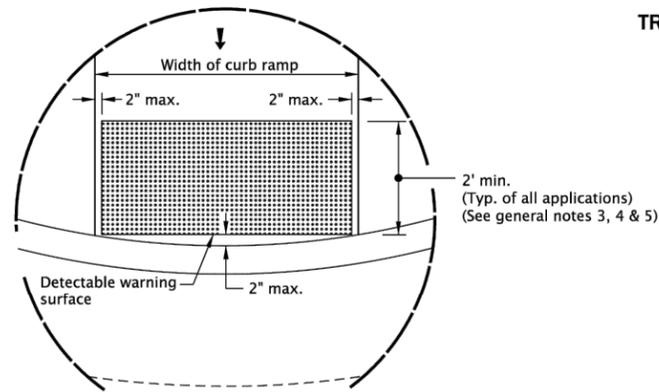
	A	B	C	D	E
MIN.	1.60"	0.65"	0.45"	0.90"	0.20"
MAX.	2.40"	--	0.91"	1.40"	0.20"



TRUNCATED DOME SPACING

TRUNCATED DOME

TRUNCATED DOME DETAILS



DETAIL "A"

GENERAL NOTES FOR ALL DETAILS ON THIS SHEET:

- Detectable warning surface details & locations are based on applicable ODOT Standards.
- See project plans for details not shown. See Std. Dwgs. RD700 & RD701 for curbs.
- The detectable warning surface shall extend the full width of the curb ramp opening, shared use path, blended transition, turning space, or other roadway entrance as applicable. A gap of up to 2 inches on each side of the detectable warning surface is permitted (measured at the leading edge of the detectable warning surface panel as shown in Detail "A").
- Detectable warning surface shall be placed at the back of curb for a minimum depth of 2 ft. in the direction of pedestrian travel at curb ramps that are adjacent to traffic. Detectable warning surface may be radial or rectangular, but must comply with the truncated dome size and spacing standards. Detectable warning surface may be cut to meet necessary shape as shown in plans. Detectable warning surface across a grade break is prohibited. Place abutting panels within 1/4 inch of each other and install anchors, as specified by manufacturers, along cut edge.
- Color to be safety yellow if no color specified in construction note. Alternative colors require a design exception on or along state highways.
- Detectable warning surface shall be used in the following locations:
 - Curb ramps at street crossings.
 - Crossing islands (Accessible Route Islands).
 - Rail crossings.
- Where public transportation stations (rail, bus, etc.) use platform boarding, detectable warning surface shall be placed along the full edge length of the station, when not protected by platform screens or guards, (see Std. Dwg. RD908).
- Detectable warning surface shall not be used on the following locations:
 - End of sidewalk transitions that are not at a crosswalk, (see Std. Dwgs. RD950, RD952 and RD960).
 - Driveways, unless constructed with curb return or are signalized.
 - Parking lots, access aisles and passenger loading zones where curb ramp does not lead to vehicular way.
- Where no curb is present, the detectable warning surface shall be placed at the edge of the roadway.
- On or along state highways, curb and gutter is required at curb ramps.

LEGEND:

- Detectable warning surface
- Cross slope 1.5% max. (Max. 2.0% finished surface slope) (Normal sidewalk cross slope)
- Running slope 7.5% max. (Max. 8.3% finished surface slope)

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 first consulting a Registered Professional Engineer.

All materials shall be in accordance with the current Oregon Standard Specifications.

OREGON STANDARD DRAWINGS

DETECTABLE WARNING SURFACE DETAILS

2024

DATE	REVISION	DESCRIPTION
07-2020	NEW DRAWING CREATED	
07-2021	REVISED DETAILS AND NOTES	

CALC. BOOK NO. --- N/A --- SDR DATE 19-JUL-2021 RD902

Effective Date: December 1, 2024 – May 31, 2025

ORIGINAL PLANS 11x17



EXPIRES: 12/31/2026

REVISION	DATE	#	APP'D

Submission Date: 05/15/2025
 Drawn: JCH, Designed: DPB, Checked: AMR

PROJECT NO. 729ST

SW SUNSET BLVD & SW TIMBREL LN INTERSECTION IMPROVEMENT

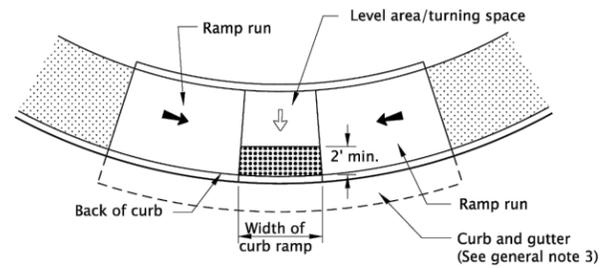
DETAILS

SHEET NO. 2A-7

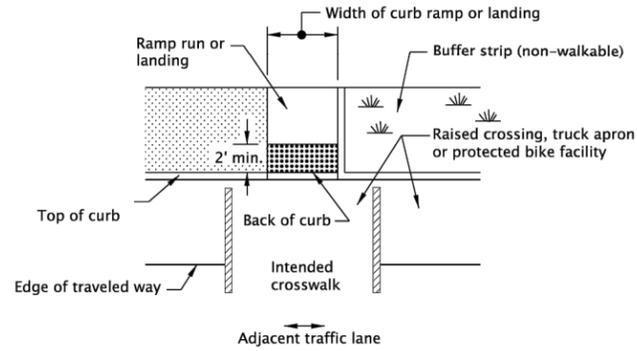


KITTELSON & ASSOCIATES
 610 SW ALDER STREET, SUITE 700
 PORTLAND, OR 97205
 P-503.228.5230 F-503.273.8169

20-JUL-2020 RD904.dgn



PARALLEL CURB RAMP



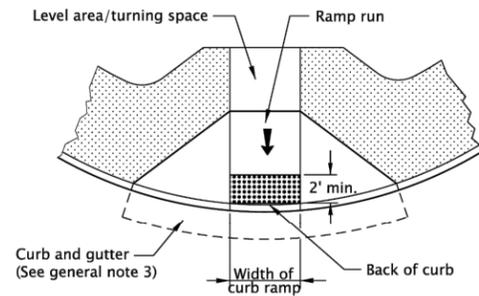
RAISED CROSSING, TRUCK APRON OR PROTECTED BIKE FACILITY

GENERAL NOTES FOR ALL DETAILS ON THIS SHEET:

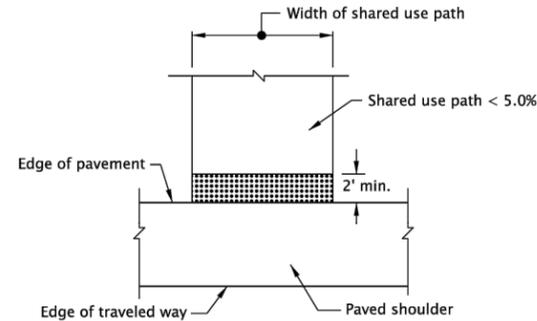
1. Detectable warning surface details & locations are based on applicable ODOT Standards.
2. See project plans for details not shown. See Std. Dwg. RD700 & RD701 for curbs. See Std. Dwg. RD902 for detectable warning surface installation details.
3. On or along state highways, curb and gutter is required at curb ramps.
4. Detectable warning surface placement for perpendicular ramps vary as shown.

LEGEND:

- Marked or intended crossing location
- Sidewalk
- Detectable warning surface
- Cross slope 1.5% max. (Max. 2.0% finished surface slope) (Normal sidewalk cross slope)
- Running slope 7.5% max. (Max. 8.3% finished surface slope)



**PERPENDICULAR CURB RAMP
GRADE BREAK IN FRONT OF CURB**



SHARED-USE PATH CONNECTION

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 first consulting a Registered Professional Engineer.

All materials shall be in accordance with the current Oregon Standard Specifications.
OREGON STANDARD DRAWINGS

DETECTABLE WARNING SURFACE PLACEMENT FOR CURB RAMPS

DATE	REVISION DESCRIPTION
07-2020	NEW DRAWING CREATED

CALC. BOOK NO. N/A SDR DATE 20-JUL-2020 **RD904**

Effective Date: December 1, 2024 – May 31, 2025

ORIGINAL PLANS 11x17



EXPIRES: 12/31/2026

APP'D	REVISION	DATE	#

Submission Date: 05/15/2025
 Drawn: JCH Designed: DPB Checked: AMR

PROJECT NO. 729ST

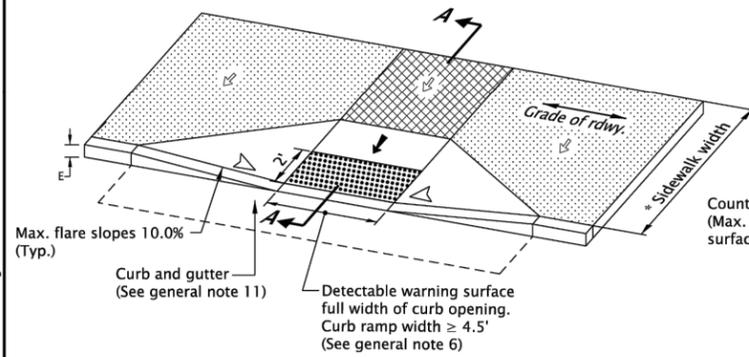
SW SUNSET BLVD & SW TIMBREL LN INTERSECTION IMPROVEMENT

DETAILS

SHEET NO. 2A-8

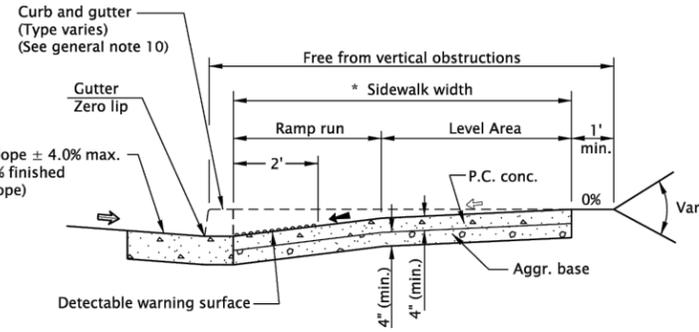
14-JAN-2022

RD910.dgn



PERPENDICULAR CURB RAMP DETAIL

(Use "Parallel Curb Ramp Detail" or "Combination Curb Ramp Detail" when reqd. turning space cannot be obtained)



SECTION A-A

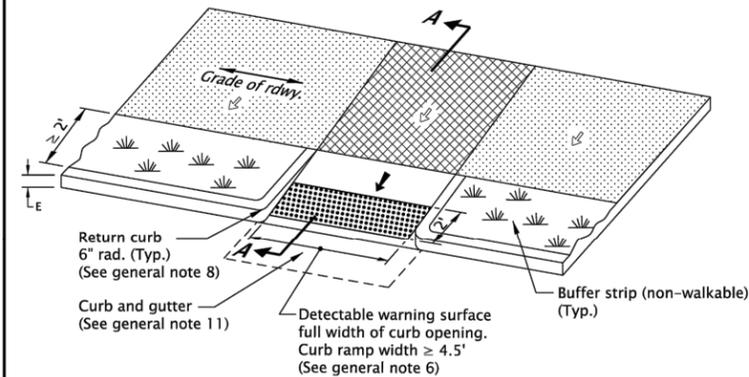
* NOTE: Minimum width of 14.25 feet sidewalk for E=7"

GENERAL NOTES FOR ALL DETAILS ON THIS SHEET:

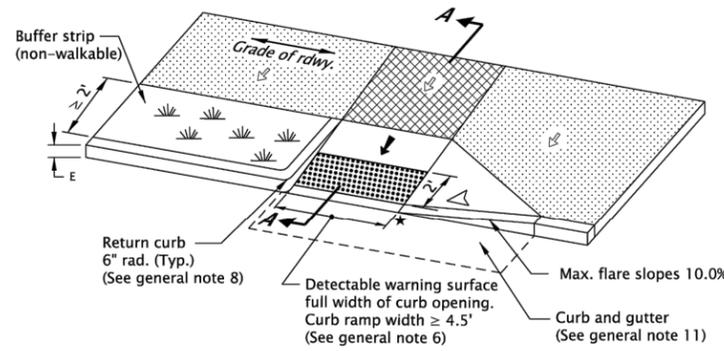
1. Curb ramp details are based on applicable ODOT Standards.
2. See Std. Dwgs. RD700 & RD701 for curbs. See Std. Dwgs. RD720 & RD721 for sidewalks. See Std. Dwgs. RD902 through RD908 for detectable warning surface installation details. See Std. Dwgs. RD912 through RD916 for curb ramp placement options.
3. Site conditions normally require a project specific design. See project plans for details not shown.
4. Tooled dummy joints are required at all curb ramp grade break lines, (see Std. Dwg. RD722).
5. Curb ramp slopes shown are relative to the true level horizon (zero bubble).
6. Place detectable warning surface at the back of curb for a minimum depth of 2' in the direction of pedestrian travel full width of curb ramp opening that is adjacent to traffic.
7. Grade breaks at the top and bottom of curb ramp runs shall be perpendicular to the direction of the ramp run. Grade breaks shall not be permitted on the surface of ramp runs and turning spaces. Surface slopes that meet at grade breaks shall be flush.
8. Return curb may be provided in lieu of flared slope only if protected from traverse travel by landscaping, see Std. Dwg. RD721. Return curb shall not reduce width of approaching sidewalk.
9. Curb ramps for shared use paths intersecting a roadway shall be full width of path, excluding flares. When a curb ramp is used to provide bicycle access from a roadway to a sidewalk, the curb ramp opening will be $\geq 8'$ wide, (see Std. Dwg. RD909 for additional details).
10. Place an inlet at upstream side of curb ramp or perform other approved design mitigation. Check the gutter flow depth at curb ramp locations to assure that the design flood does not overtop the back of sidewalk.
11. On or along state highways, curb and gutter is required at curb ramps.

LEGEND:

- Sidewalk
- Detectable warning surface
- Level area (Turning space/landing)
Unobstructed 4.5' x 4.5'
With obstruction 4.5' x 5.5' (Longer dimension in direction of pedestrian street crossing).
For the purposes of this application, a max. 2.0% finished surface slope (for drainage) measured perpendicular in two directions is considered level.
- Cross slope 1.5% max.
(Max. 2.0% finished surface slope)
(Normal sidewalk cross slope)
- Running slope 7.5% max.
(Max. 8.3% finished surface slope)
- Counter slope 4.0% max. ascending or descending,
(Max. 5.0% finished surface slope)
Slope as required for drainage
- Flare slope
(Max. 10% finished surface slope)



THROUGH BUFFER STRIP



WITH SINGLE FLARE

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All materials shall be in accordance with the current Oregon Standard Specifications.
OREGON STANDARD DRAWINGS

PERPENDICULAR CURB RAMP

2024

DATE	REVISION DESCRIPTION
12-2021	NEW DRAWING CREATED
01-2022	REVISED NOTES

CALC. BOOK NO. - - - N/A - - -	SDR DATE 14-JAN-2022	RD910
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Effective Date: December 1, 2024 – May 31, 2025

ORIGINAL PLANS 11x17



EXPIRES: 12/31/2026

APP'D	REVISION	DATE	#

Submission Date: 05/15/2025

Drawn: JCH, Designed: DPB, Checked: AMR

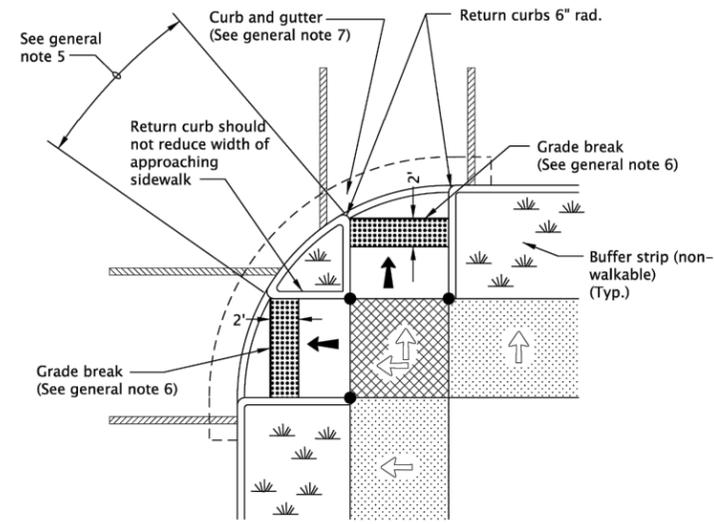
PROJECT NO. 729ST

SW SUNSET BLVD & SW TIMBREL LN INTERSECTION IMPROVEMENT

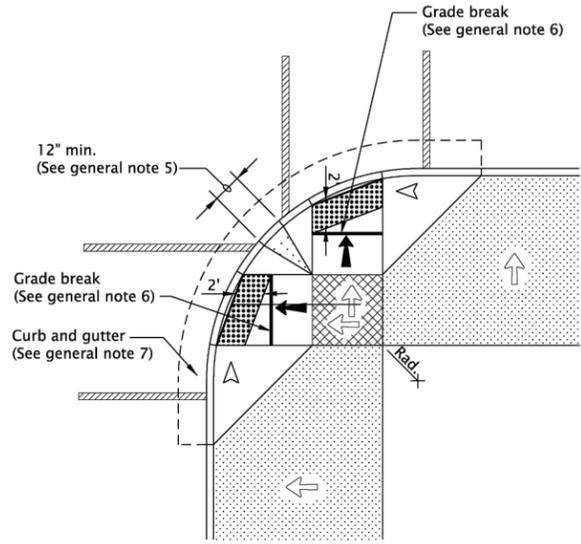
DETAILS

SHEET NO. 2A-9

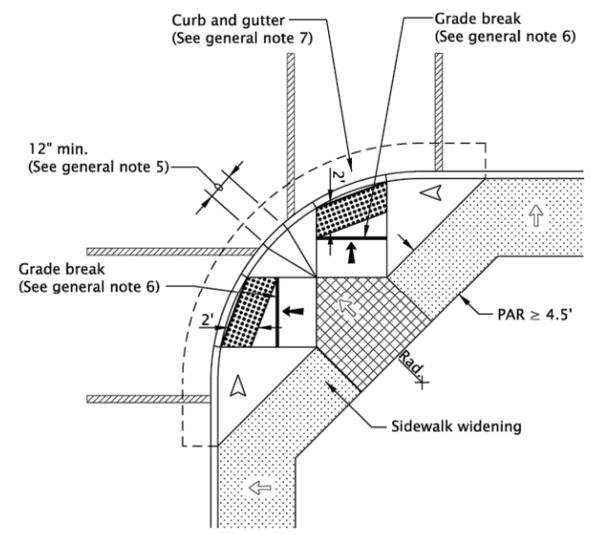
14-JAN-2022
RD912.dgn



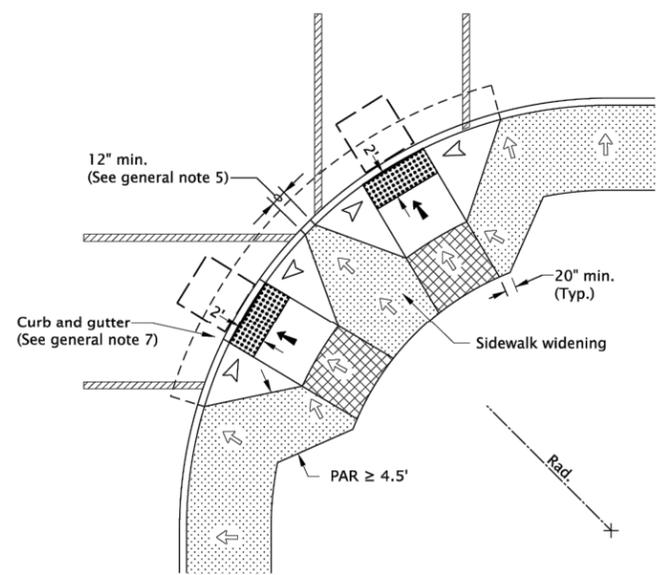
**WITH LANDSCAPED BUFFER STRIP
OPTION "PR-1"**



**FOR WIDE SIDEWALKS
OPTION "PR-2"**



**FOR NARROW SIDEWALKS
OPTION "PR-3"**



**FOR NARROW SIDEWALKS
OPTION "PR-4"**

GENERAL NOTES FOR ALL DETAILS ON THIS SHEET:

- Curb ramp details are based on applicable ODOT Standards.
- See project plans for details not shown. See Std. Dwgs. RD700 & RD701 for curbs. See Std. Dwgs. RD720 & RD721 for sidewalks. See Std. Dwg. RD910 for perpendicular curb ramp details. See Std. Dwgs. RD902 through RD908 for detectable warning surface installation details.
- Tooled dummy joints are required at all curb ramp grade break lines, (see Std. Dwg. RD722).
- Curb ramp slopes shown are relative to the true level horizon (zero bubble).
- When 2 curb ramps are immediately adjacent, the curb exposure (E) between the adjacent side flares may range between 3" and full design exposure.
- Grade breaks at the top and bottom of curb ramp runs shall be perpendicular to the direction of the ramp run. Grade breaks shall not be permitted on the surface of ramp runs and turning spaces. Surface slopes that meet at grade breaks shall be flush.
- On or along state highways, curb and gutter is required at curb ramps.

LEGEND:

- Marked or intended crossing location
- Sidewalk
- Detectable warning surface
- Level area (Turning space/landing)
Unobstructed 4.5' x 4.5'
With obstruction 4.5' x 5.5' (Longer dimension in direction of pedestrian street crossing).
For the purposes of this application, a max. 2.0% finished surface slope (for drainage) measured perpendicular in two directions is considered level.
- Cross slope 1.5% max.
(Max. 2.0% finished surface slope)
(Normal sidewalk cross slope)
- Running slope 7.5% max.
(Max. 8.3% finished surface slope)
- Flare slope
(Max. 10% finished surface slope)
- Zero curb exposure
- 4' x 4' clear space
- PAR Pedestrian Access Route

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 first consulting a Registered Professional Engineer.

All materials shall be in accordance with the current Oregon Standard Specifications.

OREGON STANDARD DRAWINGS

PERPENDICULAR CURB RAMP

2024

DATE	REVISION	DESCRIPTION
07-2020	NEW DRAWING CREATED	
07-2021	REVISED DETAIL AND NOTES	
01-2022	REVISED DETAILS AND NOTES NOTES	

CALC. BOOK NO. - - - N/A - - -	SDR DATE 14-JAN-2022	RD912
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Effective Date: December 1, 2024 – May 31, 2025

ORIGINAL PLANS 11x17



EXPIRES: 12/31/2026

APP'D	REVISION	DATE	#

Submission Date: 05/15/2025

Drawn: JCH, Designed: DPB, Checked: AMR

PROJECT NO. 729ST

SW SUNSET BLVD & SW TIMBREL LN
INTERSECTION IMPROVEMENT

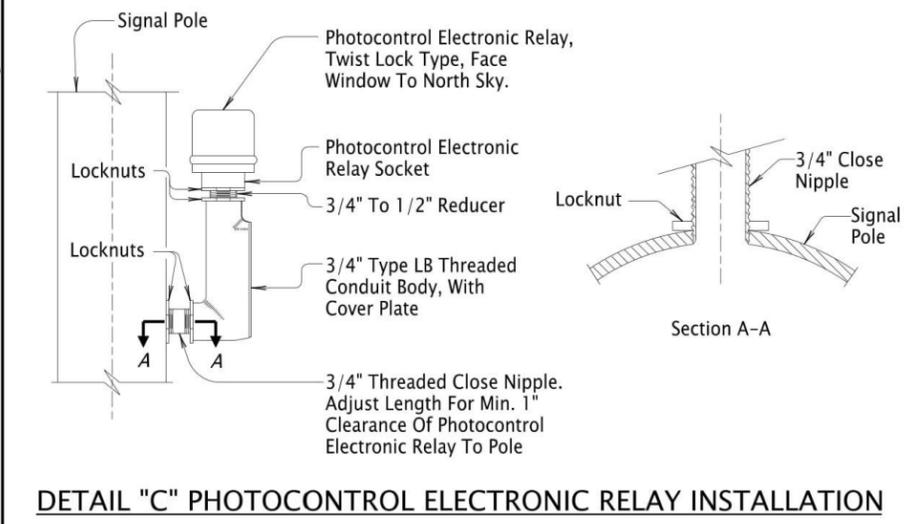
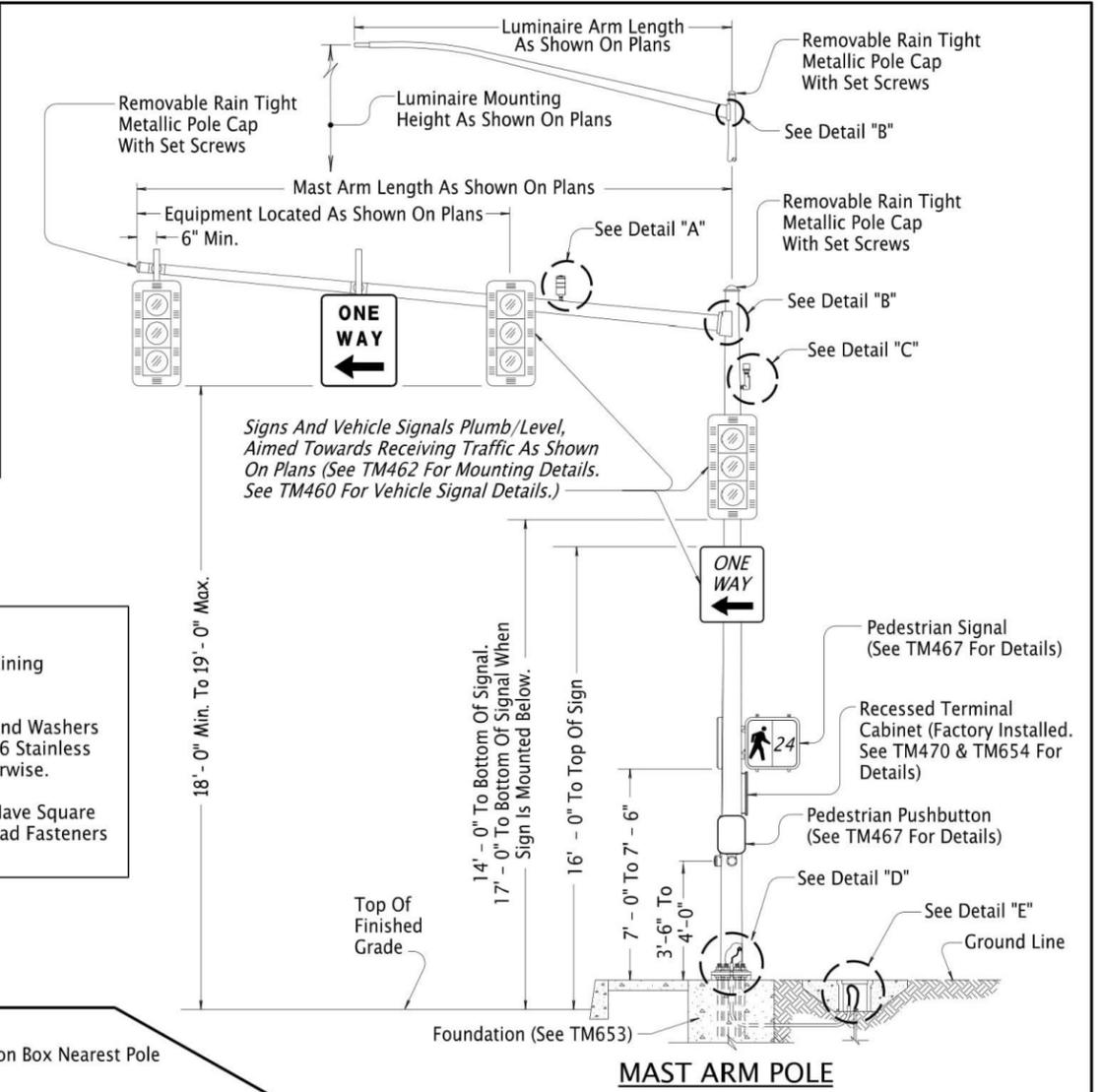
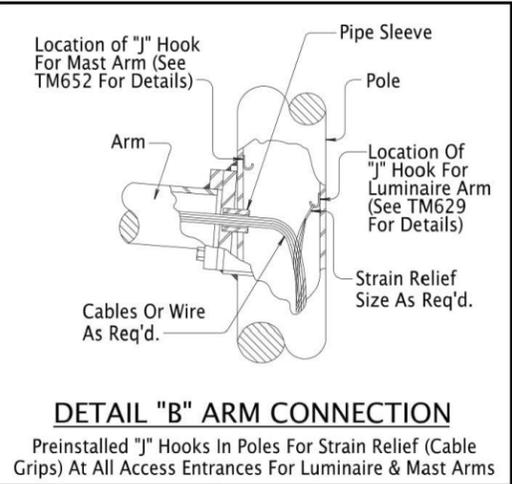
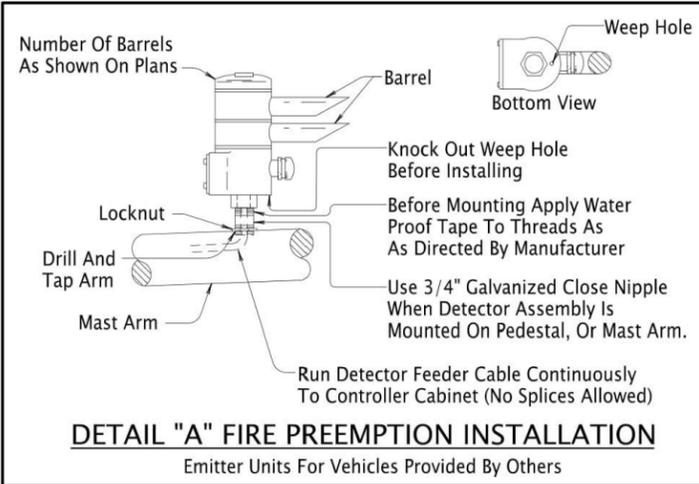
DETAILS

SHEET NO. 2A-10

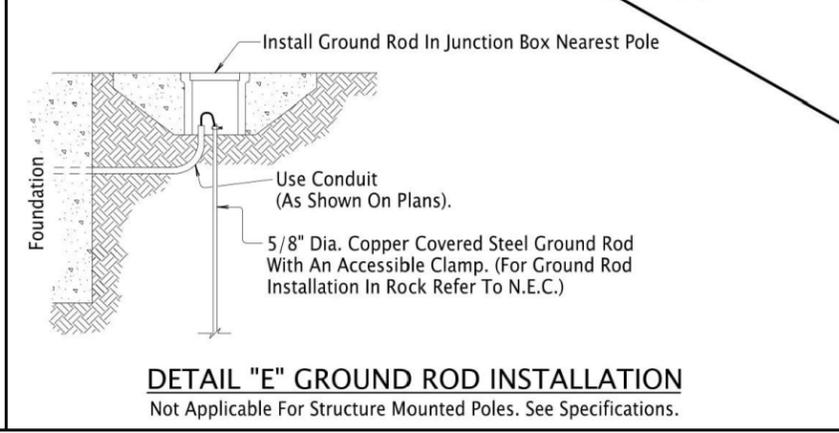
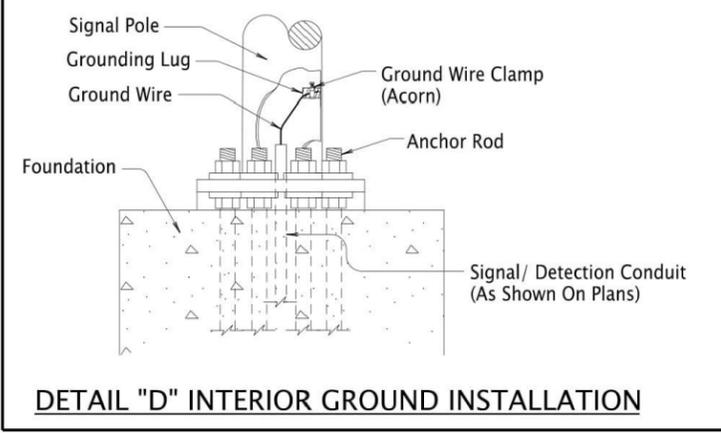
12-JUL-2024

TM450.dgn

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- General Notes:**
1. All Pole Entrances Containing Wiring Shall Be Smooth.
 2. All Screws, Bolts, Nuts And Washers Shall Be Type 304 Or 316 Stainless Steel Unless Noted Otherwise.
 3. Bolts And Screws Shall Have Square Or Hex Heads. Allen Head Fasteners Not Allowed.



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 first consulting a Registered Professional Engineer.

All materials shall be in accordance with the current Oregon Standard Specifications.

OREGON STANDARD DRAWINGS

MAST ARM POLE DETAILS

2024

DATE	REVISION DESCRIPTION
01-2021	CORRECTED STD. DWG. REFERENCE
07-2023	ADDED STD. DWG. REFERENCE
01-2024	MINOR TEXT REVISION FOR CONSISTENCY
07-2024	MINOR TEXT/ILLUSTRATION REVISIONS FOR CONSISTENCY & CLARITY

CALC. BOOK NO. N/A SDR DATE 12-JUL-2024 **TM450**

ORIGINAL PLANS 11x17

REGISTERED PROFESSIONAL ENGINEER
 60404PE
 Digitally Signed
 OREGON
 JUL 15, 2003
 ANTHONY M. ROOS

EXPIRES: 12/31/2026

#	DATE	REVISION	APP'D

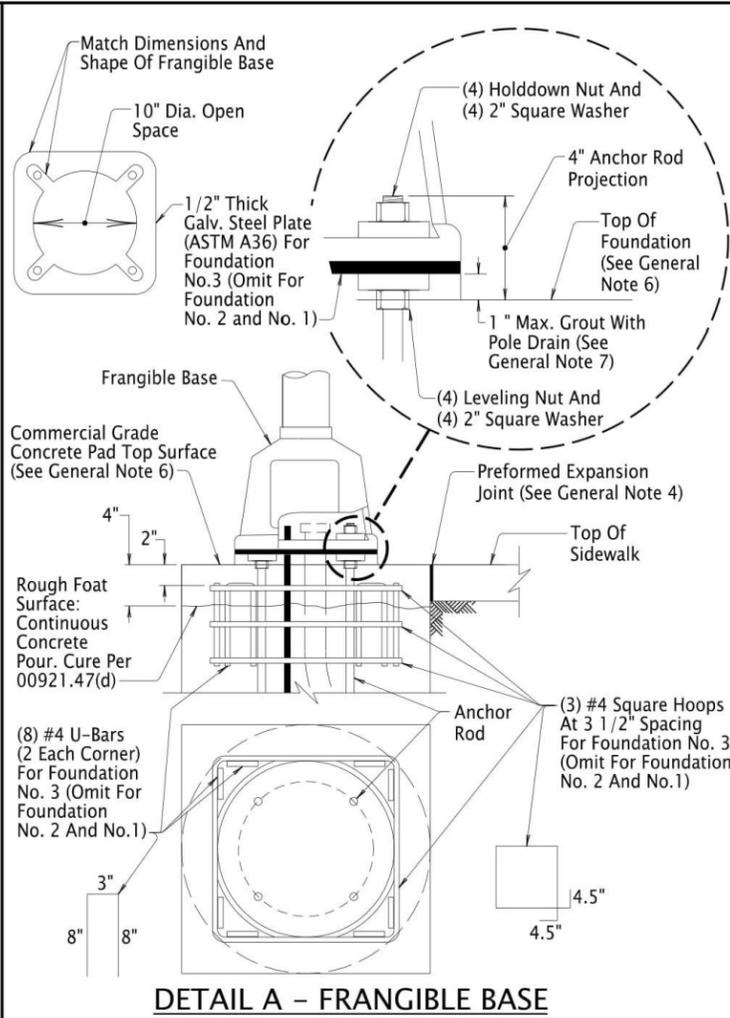
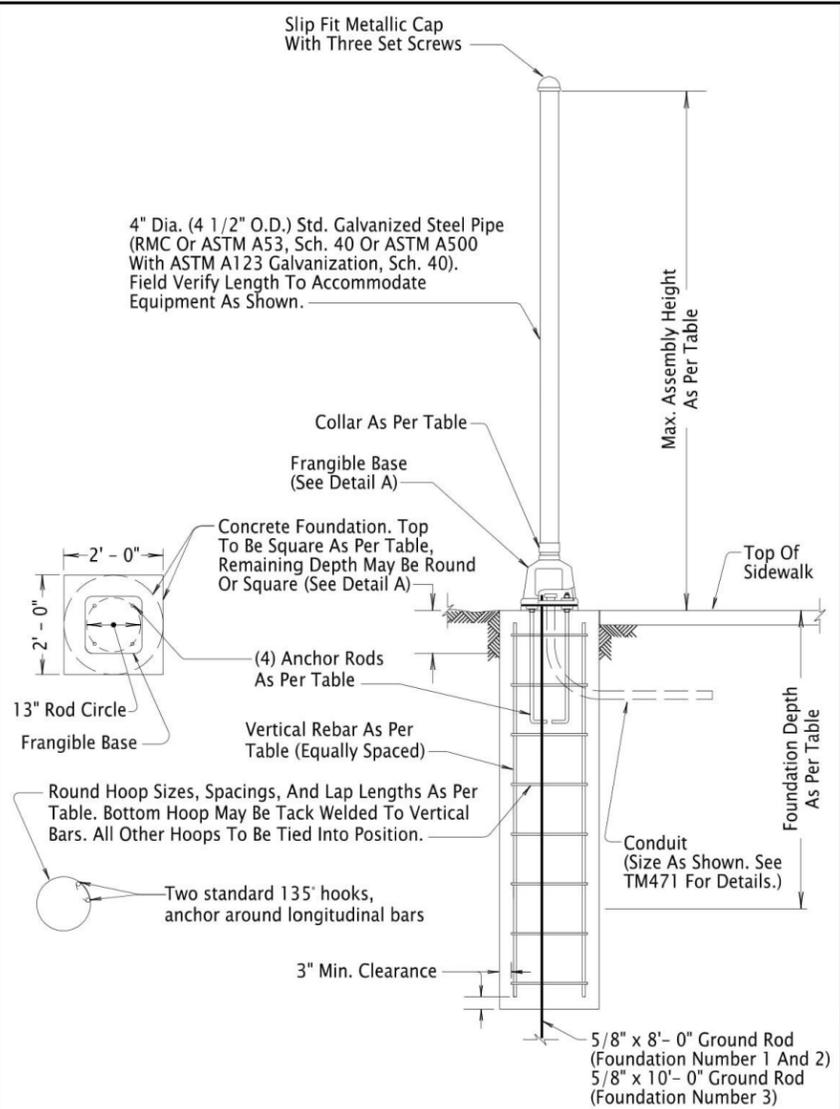
Submission Date: 05/15/2025
 Drawn: JCH Designed: DPB Checked: AMR
 PROJECT NO. 729ST

SW SUNSET BLVD & SW TIMBERL LN INTERSECTION IMPROVEMENT
 DETAILS
 SHEET NO. 2A-11

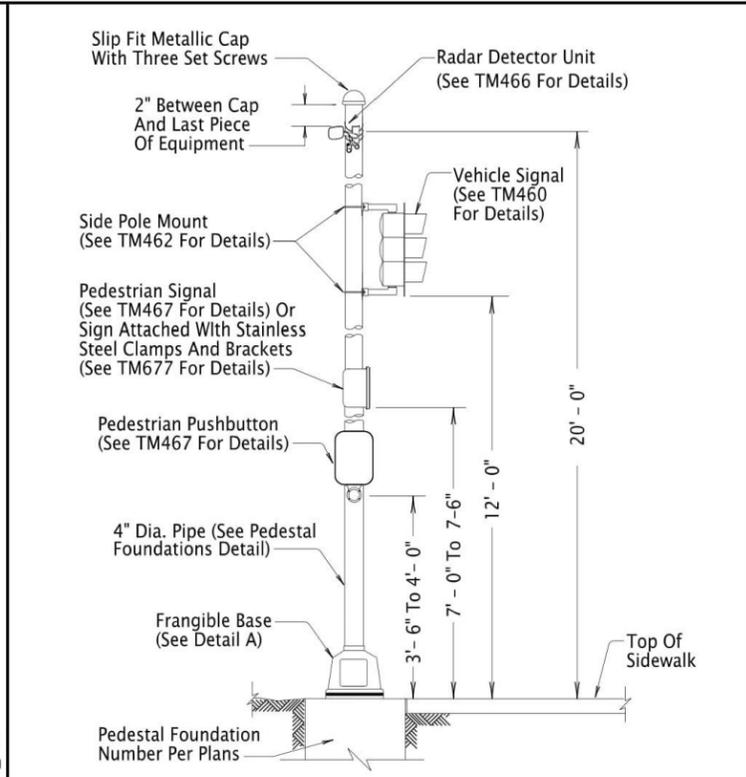
Effective Date: December 1, 2024 – May 31, 2025

14-JUL-2023

TM457.dgn



- General Notes:**
- All Bolts, Nuts And Washers To Conform To 02560.20 And Be Galvanized Steel According To 02560.40 Unless Noted Otherwise.
 - All Anchor Rods To Be Galvanized Steel Conforming To 02560.30.
 - All Pole Entrances Containing Wiring To Be Smooth.
 - Install 1/4" Thick Preformed Expansion Joint Filler Around Footing In Sidewalk Areas.
 - The Entire Foundation To Be Located On A Single Plane With Less Than 2% Slope. The Flat Edge(s) Of The Foundation May Be Adjacent To The Turn Space, Back Of Walk, Or A Curb Ramp Grade Break Line.
 - Install Commercial Grade Concrete Pad Above Rough Float Surface With Top Surface Matching Sidewalk Grade And Less Than 1/4" Vertical Exposure From Adjacent Grade. Clean Rough Float Surface Prior To Placing Fresh Concrete By Removing All Scum, Laitance, Loose Gravel, And Sediment. Pour During Sidewalk Installation After Installing Pipe And Appurtenances.
 - Non-Shrink High Early Strength Grout (Non-Ferrous) with 3/4" Diameter Pole Drain And A Minimum Strength of 5000 psi. Do Not Use Footing Concrete.



- Notes:**
- Equipment Shown In The Assembly Detail Is An Example Of The Equipment That May Be Mounted. Install Equipment As Shown.
 - See TM492 For Ramp Meter Pedestal Mounting Details.
 - See TM493 For RRFB Pedestal Mounting Details.

TRAFFIC SIGNAL PEDESTAL ASSEMBLY

Pedestal Foundation Number	Max. Assembly Height	Foundation Depth	Depth of Square Foundation	Anchor Rods (ASTM F 1554 Grade 36)	Reinforcing Steel			Collar
					Vertical Rebar	Hoop Size & Spacing	Hoop Lap Length	
1	6' - 0"	2' - 0"	4"	3/4" x 18" x 4" (6" Thread)	N/A	N/A	N/A	N/A
2	10' - 0"	3' - 0"	4"	1" x 36" x 4" (6" Thread)	8-#6	#4-12"	6" with 2 hooks	Req'd
3	20' - 6"	8' - 0"	12"	1" x 36" x 4" (6" Thread)	8-#6	#4-12"	6" with 2 hooks	Req'd

PEDESTAL FOUNDATIONS

All materials shall be in accordance with the current Oregon Standard Specifications.

OREGON STANDARD DRAWINGS

PEDESTAL FOUNDATION AND TRAFFIC SIGNAL ASSEMBLY

2024

DATE	REVISION	DESCRIPTION
01-2021		UPDATED ALL ANCHOR ROD DETAILS. CORRECTED STD. DWG. REFERENCE
07-2022		COMPLETE REDESIGN OF FOUNDATION AND INSTALLATION PROCEDURE
07-2023		NOTE 5 - CHANGED TO 2% SLOPE. ADDED RMC AS PIPE OPTION. MINOR TEXT CHANGES FOR CLARITY.

CALC. BOOK NO. N/A SDR DATE 14-JUL-2023 **TM457**

Effective Date: December 1, 2024 - May 31, 2025

ORIGINAL PLANS 11x17

EXPIRES: 12/31/2026

#	DATE	REVISION	APP'D

Submission Date: 05/15/2025
 Drawn: JCH Designed: DPB Checked: AMR
 PROJECT NO. 729ST

SW SUNSET BLVD & SW TIMBREL LN INTERSECTION IMPROVEMENT

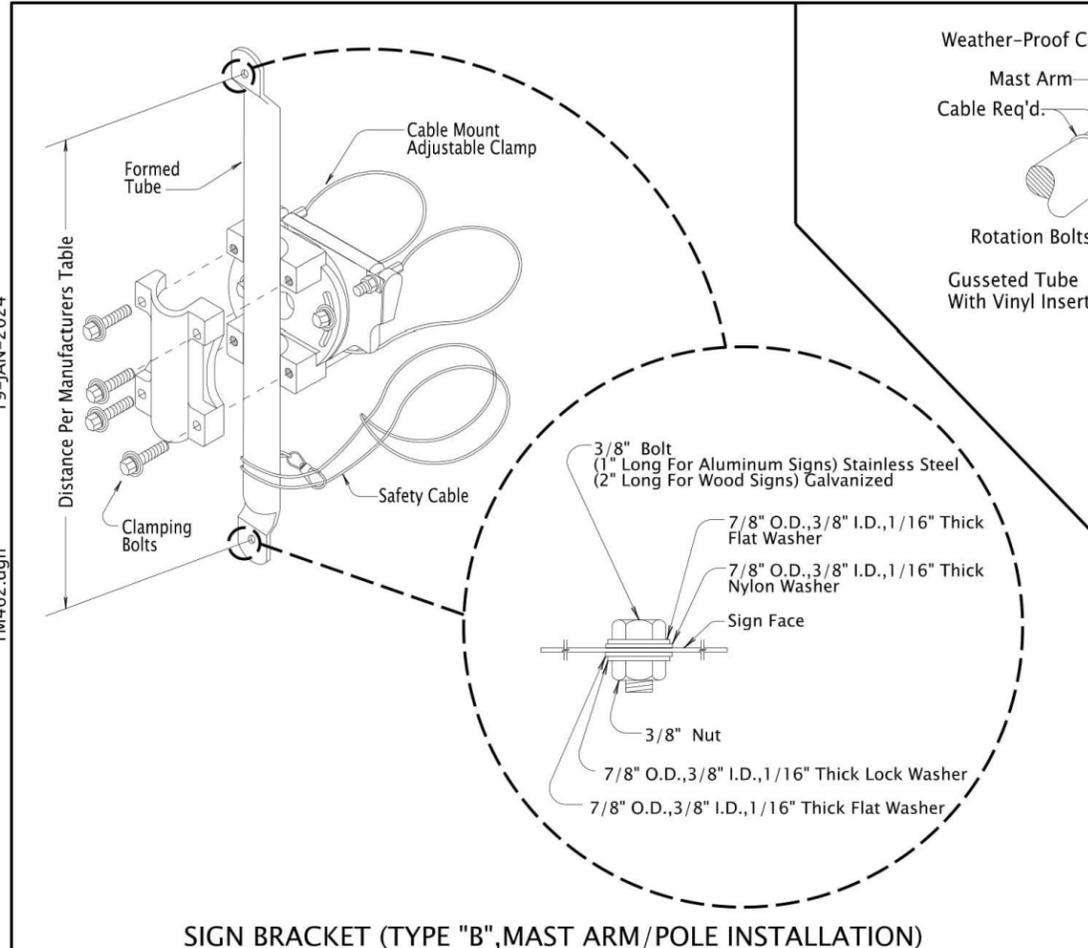
DETAILS

SHEET NO. 2A-12

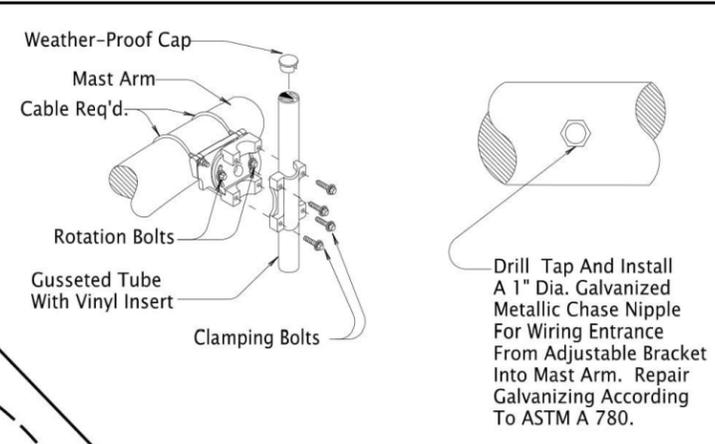
19-JAN-2024

TM462.dgn

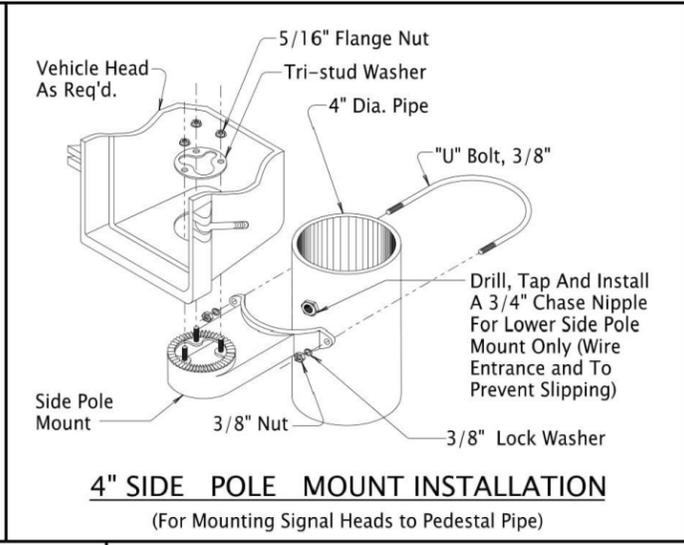
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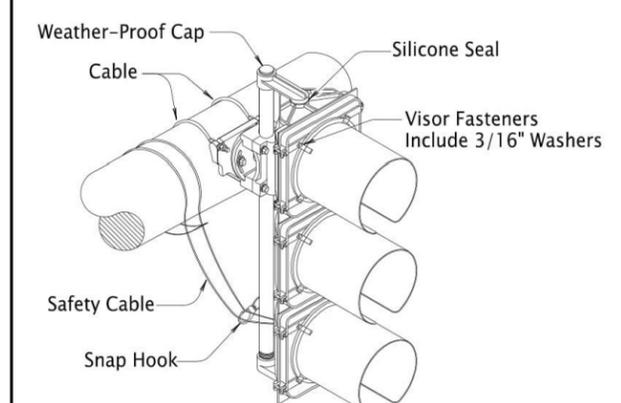
SIGN BRACKET (TYPE "B", MAST ARM/POLE INSTALLATION)



VEHICLE SIGNAL MAST ARM INSTALLATION



4 SIDE POLE MOUNT INSTALLATION
(For Mounting Signal Heads to Pedestal Pipe)



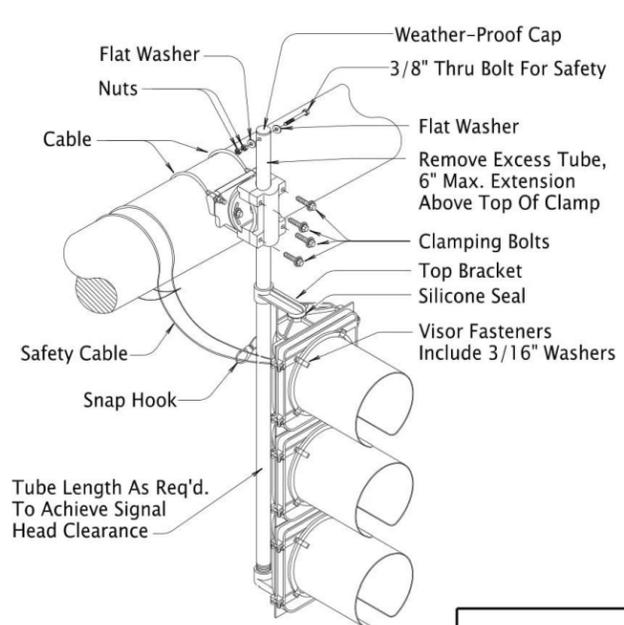
MOUNTING VEHICLE SIGNAL BETWEEN BRACKET ARMS

NOTE:
This Detail Can Be Applied To Any Signal Head Configuration. If The Extension Between The Center Line Of The Mast Arm And The Top Bracket Exceeds 18" Consult Engineer For Guidance.

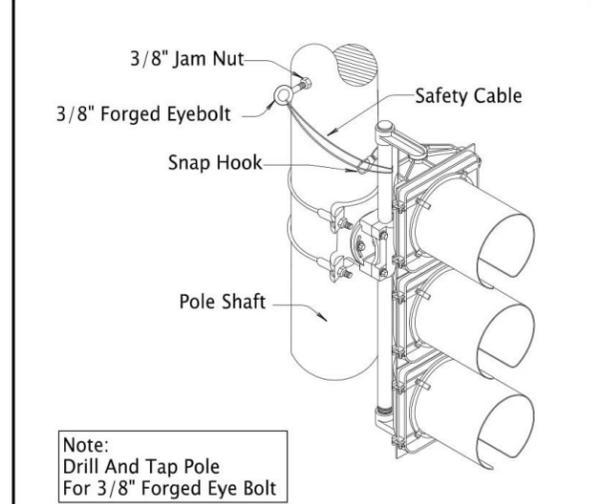
MOUNTING VEHICLE SIGNAL ABOVE BRACKET ARMS

General Notes:

1. All Screws, Bolts, Nuts And Washers Shall Be Type 304 Or 316 Stainless Steel Unless Noted Otherwise.
2. Bolts And Screws Shall Have Square Or Hex Heads. Allen Head Fasteners Not Allowed.
3. Follow Manufacturers Recommendations For Installation.



Tube Length As Req'd. To Achieve Signal Head Clearance



Note:
Drill And Tap Pole For 3/8" Forged Eye Bolt

POLE SHAFT INSTALLATION

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 first consulting a Registered Professional Engineer.

All materials shall be in accordance with the current Oregon Standard Specifications.

OREGON STANDARD DRAWINGS
VEHICLE SIGNAL BRACKET & SIGN BRACKET (TYPE B) DETAILS
2024

DATE	REVISION	DESCRIPTION
01-2024	MINOR TEXT REVISION FOR CONSISTENCY	

CALC. BOOK NO. N/A SDR DATE 19-JAN-2024 **TM462**

Effective Date: December 1, 2024 – May 31, 2025

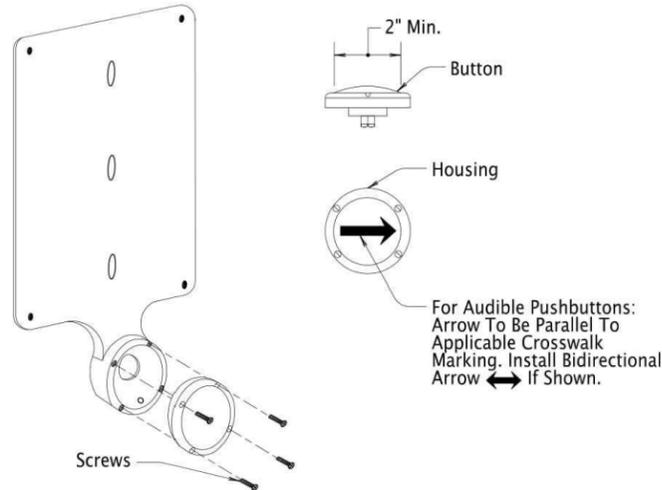
ORIGINAL PLANS 11x17



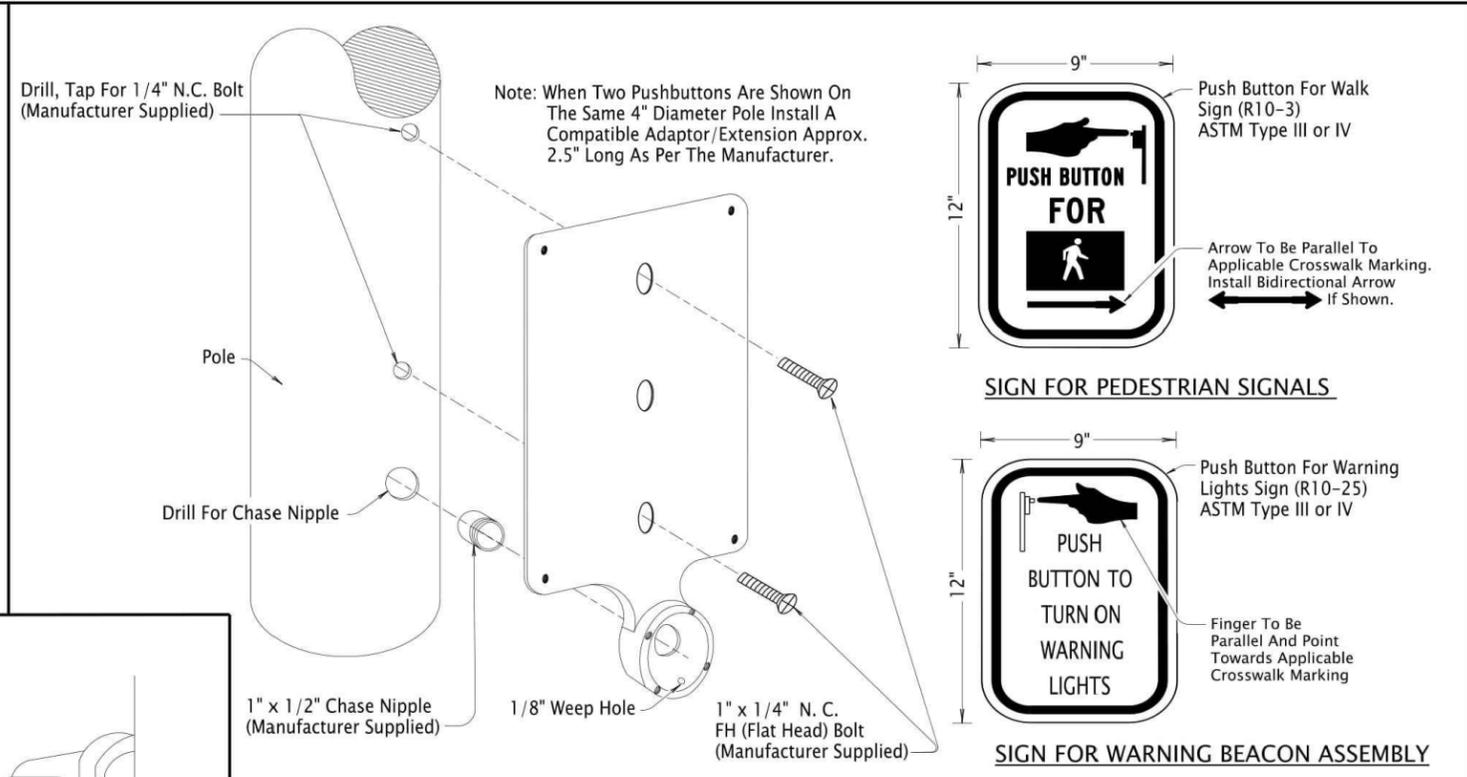
EXPIRES: 12/31/2026

12-JUL-2024

TM467.dgn

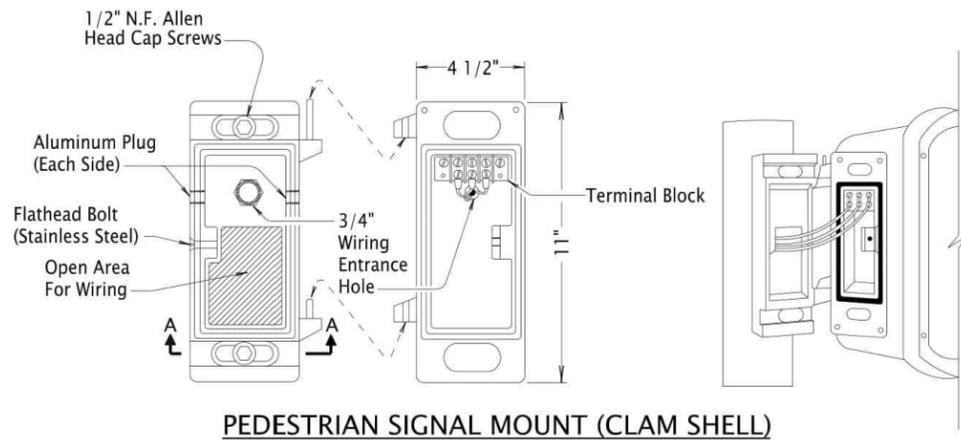


STANDARD PUSHBUTTON



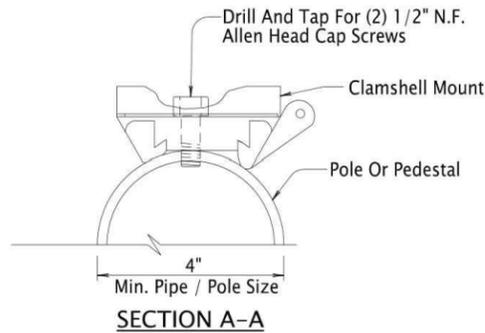
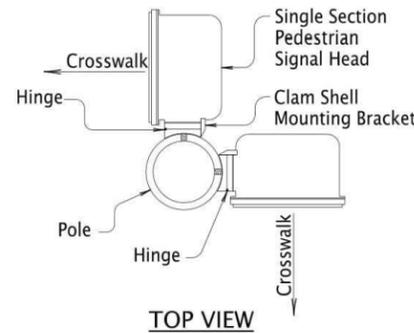
STANDARD PUSHBUTTON STATION AND INSTRUCTION SIGN

- General Notes:**
- All Screws, Bolts, Nuts And Washers To Be Type 304 Or 316 Stainless Steel Unless Noted Otherwise.
 - Bolts And Screws To Have Square Or Hex Heads. Allen Head Fasteners Not Allowed.
 - Drill And Tap Pole As Per Orientation Shown On Plans.
 - Horizontal Reach To The Pushbutton To Be 10 Inches Maximum. See Plans Or Consult Engineer To Ensure Compliance.



PEDESTRIAN SIGNAL MOUNT (CLAM SHELL)

- NOTES:**
- Where Two Heads Are Side Mounted On 4" Conduit, Proper Clearance To Be Maintained To Allow Legend To Be Fully Visible.
 - Clam Shells To Be Orientated So That The Heads Can Be Opened For Maintenance. (Verify Hinge Placement Of Clamshell).



CLAM SHELL ORIENTATION

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 first consulting a Registered Professional Engineer.

All materials shall be in accordance with the current Oregon Standard Specifications.

**OREGON STANDARD DRAWINGS
 PEDESTRIAN SIGNAL MOUNT AND
 PEDESTRIAN PUSHBUTTON
 DETAILS
 2024**

DATE	REVISION	DESCRIPTION
07-2022	ADDED R10-25 SIGN. ADDED EXTENSION MOUNTING NOTE FOR	
	2 PUSHBUTTONS ON SAME 4" DIA. POLE.	
07-2024	ADDED ARROW TO PUSHBUTTON. ADDED BI-DIRECTIONAL ARROW.	

CALC. BOOK NO. N/A SDR DATE: 12-JUL-2024 **TM467**

ORIGINAL PLANS 11x17



EXPIRES: 12/31/2026

Effective Date: December 1, 2024 – May 31, 2025

#	DATE	REVISION	APP'D

Submission Date: 05/15/2025

Drawn: JCH Designed: DPB Checked: AMR

PROJECT NO. 729ST

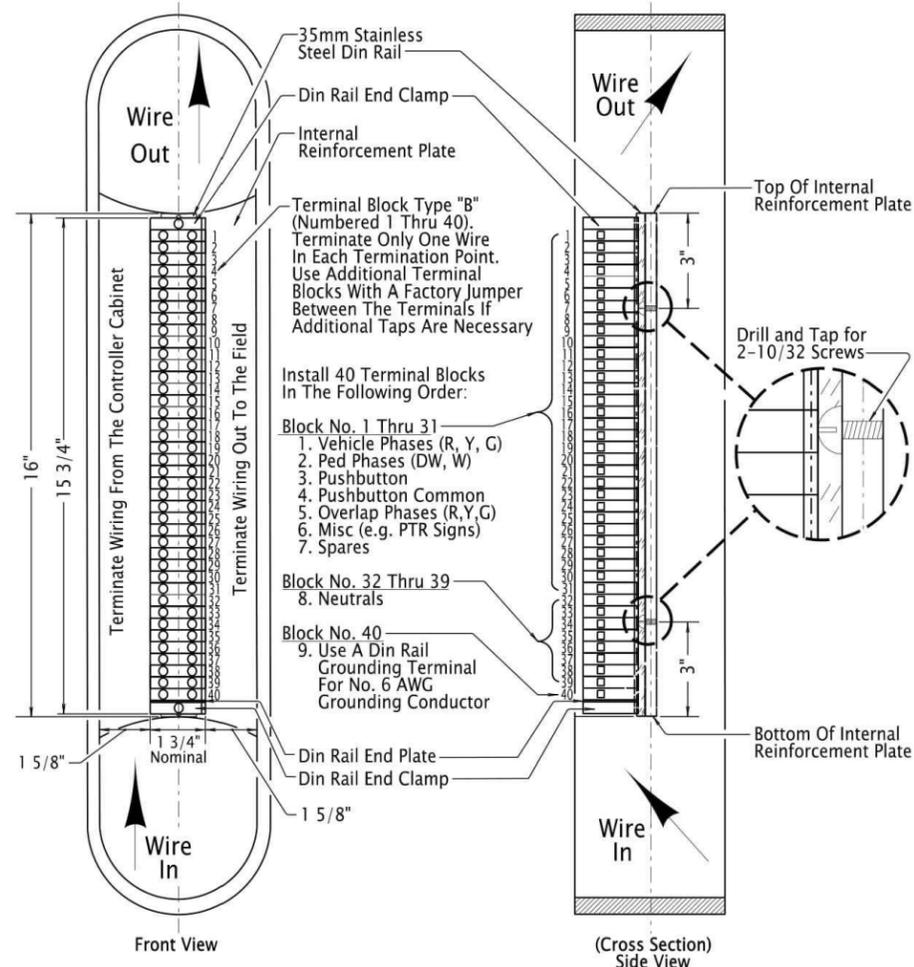
SW SUNSET BLVD & SW TIMBREL LN INTERSECTION IMPROVEMENT

DETAILS

SHEET NO. 2A-15

12-JUL-2024

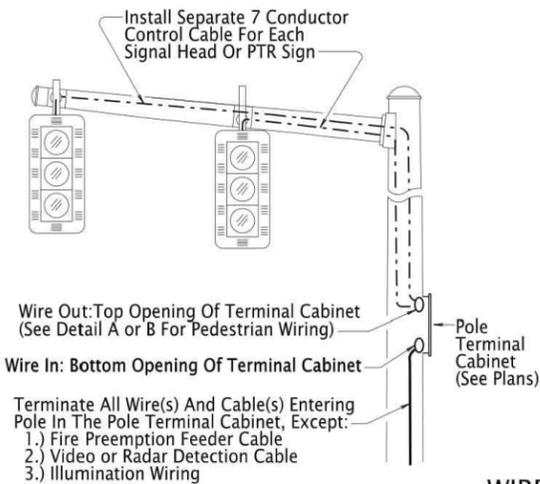
TM470.dgn



DIN RAIL, TERMINAL BLOCKS, & WIRING IN POLE RECESSED TERMINAL CABINET

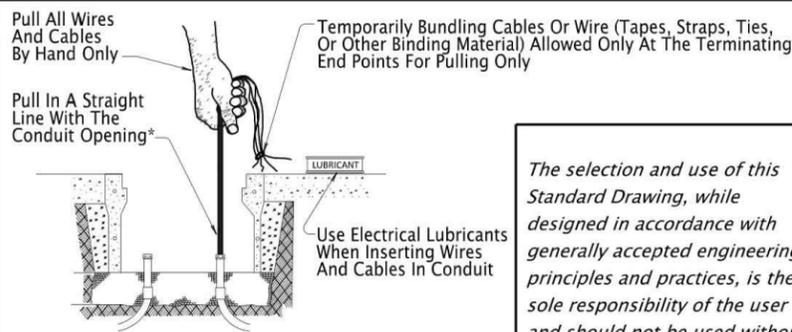
7 Conductor Control Cable			Pedestrian Phases	Vehicle Phases	Signal Head Types			
Conductor Number	Base Color	First Tracer	1 Pedestrian Phase	1 Vehicle Phase	6L or 3LBF	4L, 5, or 7	1R, 1Y, 2, 3L, 3LCF, 3U, 3R, 4, 9, 12, or 12M	10
1	White	—	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral
2	Black	—	Walk	Yellow	Yellow	Yellow	Yellow	Yellow
3	Red	—	Dont Walk	Red	Red	Red	Red	Red 1
4	Orange	—	P.B. Common	Spare	Flashing Yellow	Turn Yellow	Spare	Red 2
5	Green	—	Pushbutton	Green	Green	Green	Green	Spare
6	Blue	—	Spare	Spare	Spare	Turn Green	Spare	Spare
7	White	Black	Spare	Spare	Spare	Spare	Spare	Spare

COLOR CODE CHART CONTROL CABLE



WIRE & CABLE IN POLES

- General Notes:**
1. Install All Wire And Cable Between Terminal Blocks Without Splicing.
 2. Mark Phase Number Or Identification On All Cable In Junction Boxes, Terminal Cabinets, Service Cabinets, And Controller Cabinets With Permanent Tags. Use Handheld Labeler (Brady M210 Label Maker With Vinyl B-595 Tape). Overlaps Shall Be Labeled (OLA, OLB, OLC, OLD).
 3. Mark Phase Number & Function Or Identification On All Wires Terminated In Controller Cabinet And Terminal Cabinet With Permanent Tags. Use Handheld Labeler (Brady M210 Label Maker With Vinyl B-595 Tape). Overlaps Shall Be Labeled (OLA, OLB, OLC, OLD).
 4. Install No. 16 AWG TFFN Orange Base With Blue Tracertone Wire In All Conduits As A Locate Wire. Leave Slack As Required In General Note 5 And Install A Wire Nut. Do Not Join Multiple Locate Wires Under A Common Wire Nut Unless Otherwise Shown.
 5. Tape The Ends Of Unused Conductors With Insulated Vinyl Plastic Tape.
 6. Leave Slack In Each Wire And Cable As Follows:
 A.) 2 Feet In Junction Boxes And Poles
 B.) 6 Feet In The First Junction Box Nearest The Controller Cabinet
 C.) 6 Feet In Controller Cabinet And Service Cabinet
 7. Install Polyethylene Pull Line In All Conduits Noted On The Plans For Future Use (No Wires/Cables In Conduit). Leave 6 Feet Of Slack Pull Line.
 8. At Existing Installations Re-wire And Re-label New And Existing Control Cables And Wires, In All Junction Boxes, Terminal Cabinets, Service Cabinets, And Controller Cabinets.



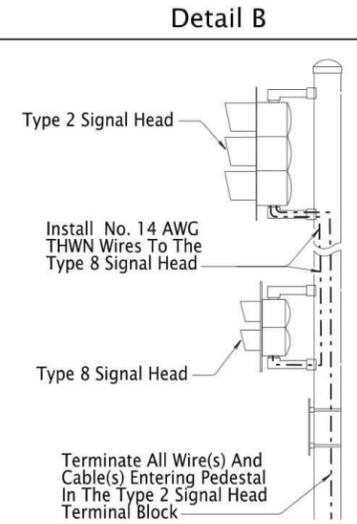
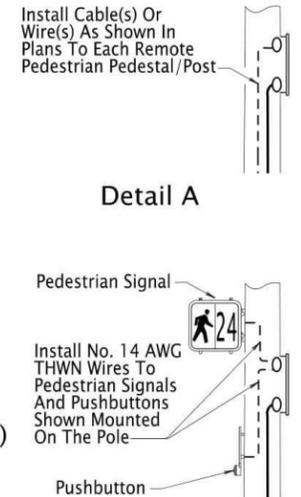
* Use A Pulley Device To Achieve A Straight Line If Pulls Are Made With Poles Or Controller Cabinets In Place

WIRE & CABLE IN CONDUITS

Ped Phase	Function	Base Color	First Tracer	Second Tracer
2	Walk	Black	White	—
2	Dont Walk	Blue	Black	—
6	Walk	Black	—	—
6	Dont Walk	Blue	—	—
4	Walk	Tan	—	—
4	Dont Walk	Purple	—	—
8	Walk	Tan	Blue	—
8	Dont Walk	Purple	Blue	—
2	Pushbutton	Tan	White	—
6	Pushbutton	Purple	White	—
4	Pushbutton	Brown	—	—
8	Pushbutton	Brown	Blue	—
All	Pushbutton Common	Brown	White	—
All	Signal Head Neutral	White	—	—

For Odd Pedestrian Phases 1, 3, 5, & 7 Use The Following:
 Ph. 1 Ped Ph. 2 Ped } Color Code With
 Ph. 3 Ped Ph. 4 Ped } The Addition
 Ph. 5 Ped Ph. 6 Ped } Of A Yellow
 Ph. 7 Ped Ph. 8 Ped } Second Tracer

Color Code Chart Pedestrian Single Conductors (See Detail B)



WIRE & CABLE IN RAMP METER PEDESTALS

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 first consulting a Registered Professional Engineer.

All materials shall be in accordance with the current Oregon Standard Specifications.

OREGON STANDARD DRAWINGS

WIRE & CABLE INSTALLATION

2024

DATE	REVISION	DESCRIPTION
01-2024		REVISED SIGNAL HEAD TYPES IN COLOR CODE CHART CONTROL CABLE DETAIL
07-2024		ADDED GEN. NOTE 3, ADDED PED COLOR CODE, ADDED FACTORY JUMPERS

CALC. BOOK NO. N/A SDR DATE 12-JUL-2024 **TM470**

ORIGINAL PLANS 11x17

REGISTERED PROFESSIONAL ENGINEER
 60404PE
 Digitally Signed
 OREGON
 JUL 15, 2003
 ANTHONY M. ROOS

EXPIRES: 12/31/2026

APP'D	REVISION	DATE	#

Submission Date: 05/15/2025
 Drawn: JCH Designed: DPB Checked: AMR

PROJECT NO. 729ST

SW SUNSET BLVD & SW TIMBREL LN INTERSECTION IMPROVEMENT

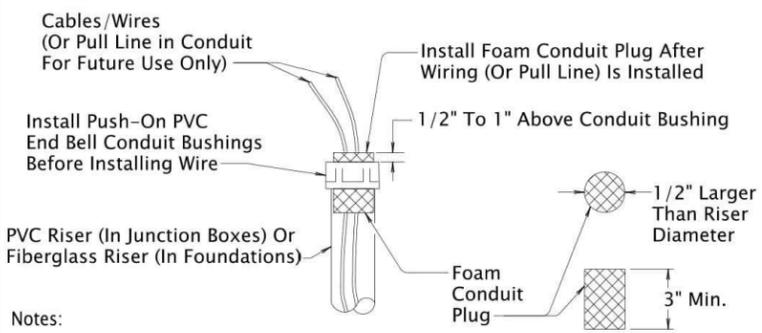
DETAILS

SHEET NO. 2A-16

Type Of Conduit	Minimum Cover From Top of Finished Surface (Use Permit Depth If Greater Than These)	
	Roadway & Shoulders	Other Areas
Metallic	24"	18"
Non-Metallic	30"(See Note 2)	18"

- Notes:
- Additional Cover Depth May Be Necessary Near Foundations And Junction Boxes To Accommodate The Minimum Radius ("R") Of The Conduit Elbow. See "Conduit Elbow", "Conduit Installation In Foundations" And "Conduit Installation In Junction Boxes" Details For More Information.
 - For Non-Metallic Conduit Under Roadway & Shoulders Installed Horizontally Into Fiber Optic Hand Hole As Per TM472, The Minimum Cover Depth Is 24 Inches.

MINIMUM COVER FROM FINISHED SURFACE



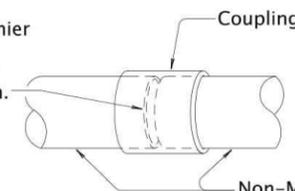
- Notes:
- Ream Conduit Ends To Remove Rough Edges And Burrs
 - Temporarily Plug Or Cap Conduit Ends At All Times To Keep Debris Out

CONDUIT ENDS AND BUSHINGS

Conduit Diameter	R (min.)
1 1/2"	10"
2"	12"
2 1/2"	15"
3"	18"

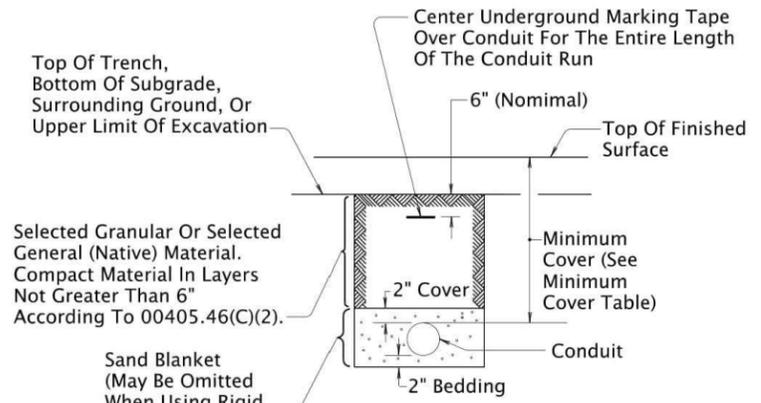
CONDUIT ELBOWS

Make Cuts Square And True So Conduit Ends Fit Together For Thier Full Circumference. Use Solvent Weld To Connect Conduit As Per Manufacturer's Recommendation.

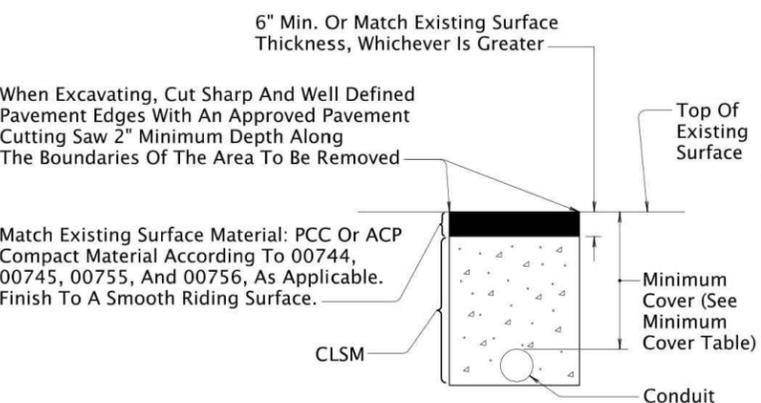


- Notes:
- Slip Joints, Running Threads Or Reducing Couplings Not Allowed. Use The Same Size Conduit For The Entire Length, Outlet To Outlet.

CONDUIT COUPLINGS

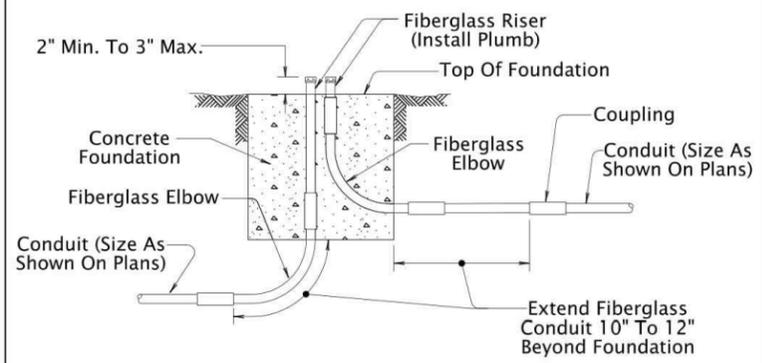


UNSURFACED AREAS
(new roadway prior to paving, shoulders, under sidewalk, landscaped areas, etc.)

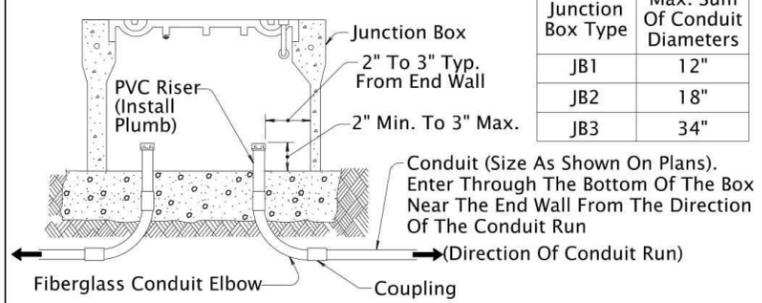


- Trenching & Backfill Notes:
- Excavate According To 00960.40. In Areas To Be Paved Or Landscaped, Place All Conduit Before Paving Or Landscaping.
 - Hold Trench Width To A Practical Minimum
 - Do Not Backfill Trenches Until Inspected By The Engineer
 - Furnish Backfill Materials According To 00960.10

CONDUIT OPEN TRENCH EXCAVATION & BACKFILL



CONDUIT INSTALLATIONS IN FOUNDATIONS
(Applicable for Pole, Pedestal, Post, Service Cabinet and Controller Cabinet Foundations)



Junction Box Type	Max. Sum Of Conduit Diameters
JB1	12"
JB2	18"
JB3	34"

- General Notes:
- Install Non-Metallic Conduit Unless Otherwise Shown. Conduit Runs Shall Be Continuous Between Any Pole, Junction Box, Or Cabinet.
 - Install Conduit By Open Trench Method, Horizontal Directional Drilling, Or As Shown
 - Conduit Runs Shown On Plans Are For Bidding Purposes Only. Locations May Be Changed To Avoid Obstructions.
 - Larger Conduit Than Specified May Be Used At The Option And Cost Of The Contractor If Max. Sum Of Conduit Diameters In Junction Box Is Not Exceeded.

All materials shall be in accordance with the current Oregon Standard Specifications.

OREGON STANDARD DRAWINGS

TRENCHING & CONDUIT INSTALLATION

2024

DATE	REVISION	DESCRIPTION
01-2021	ADDED NOTE 1 TO "MINIMUM COVER FROM FINISHED SURFACE" DETAIL	
07-2024	ADDED NOTE 2 TO "MINIMUM COVER FROM FINISHED SURFACE" DETAIL	

CALC. BOOK NO. N/A SDR DATE 12-JUL-2024 **TM471**

Effective Date: December 1, 2024 – May 31, 2025

ORIGINAL PLANS 11x17



EXPIRES: 12/31/2026

#	DATE	REVISION	APP'D

Submission Date: 05/15/2025

Drawn: JCH	Designed: DPB	Checked: AMR
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PROJECT NO. 729ST

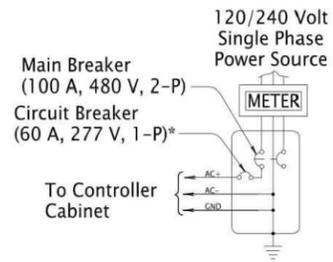
SW SUNSET BLVD & SW TIMBREL LN INTERSECTION IMPROVEMENT

DETAILS

SHEET NO. 2A-17

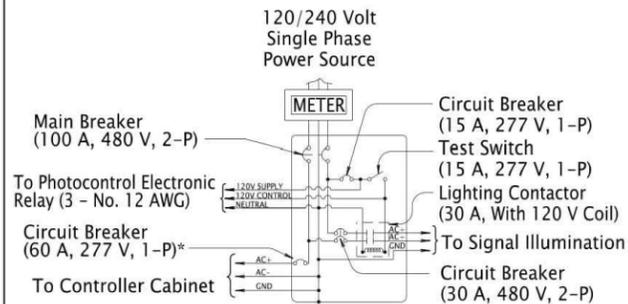
12-JUL-2024 TM485.dgn

* When installing the service cabinet for an RRFB use a 20 A, 277 V, 1-P circuit breaker

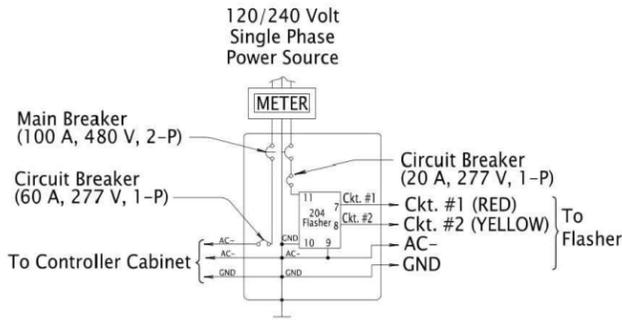


SERVICE CABINET WIRING: (BMC) (SC)
(Signal System)

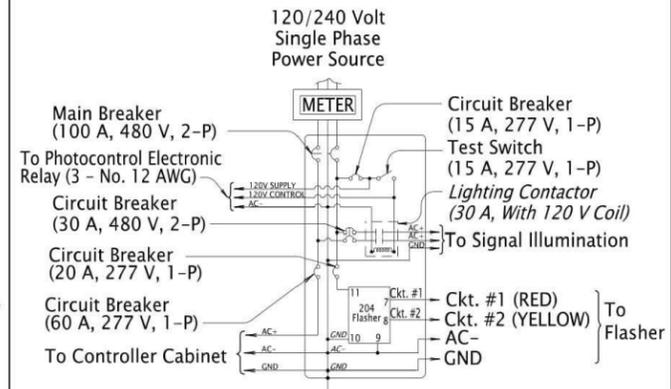
* When installing the service cabinet for an RRFB use a 20 A, 277 V, 1-P circuit breaker



SERVICE CABINET WIRING: (BMCL) (SCL)
(Signal + Illumination System)

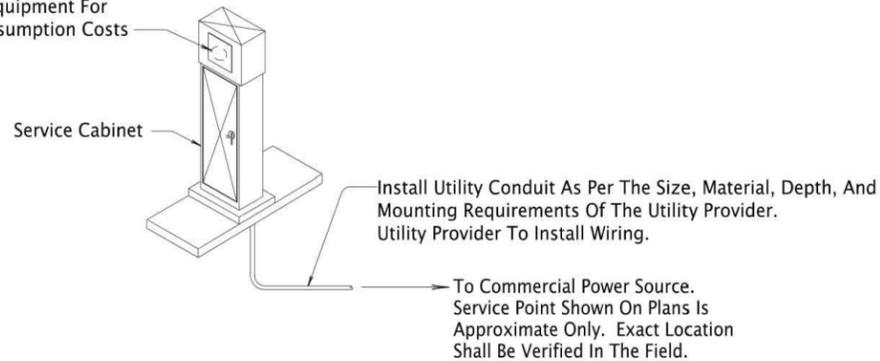


SERVICE CABINET WIRING: (BMCF)
(Signal + Flashing Beacon System)



SERVICE CABINET WIRING: (BMCF)
(Signal + Flashing Beacon + Illumination System)

Utility Provider To Supply And Install Meter Or Required Equipment For Flat-Rate Power Consumption Costs



UTILITY PROVIDER DETAILS

General Notes:

1. Notify Utility Before Making Any Connections To Utility Poles.
2. Service Cabinet Shall Have A Solid Copper Neutral Bus And The Number And Size Of Switches Or Circuit Breakers As Shown. Service Cabinet Can Accommodate A Maximum Of 10 Circuit Breakers.
3. Wiring Connections To The Terminal Screws On The Circuit Breakers And Contactors Shall Make Full Contact Under The Screw Head.
4. Circuit Breakers Shall Be UL489 Listed, Unenclosed, Molded Case Bolt-On Type With End Conductor Terminals Suitable For Surface Mounting In The Cabinet On A False Back Or Bracket.
5. Label Circuit Breakers And Equipment With An Engraved Permanent Label On The Dead Front Panel To Indicate The Circuit Controlled.
6. Fill Out Manufacturer Provided Arc Flash Stickers Using A Permanent Handheld Labeler (Brady IDXPRT with XC-1500-580-WT-BK Tags Or Approved Equal).

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 first consulting a Registered Professional Engineer.

All materials shall be in accordance with the current Oregon Standard Specifications.

OREGON STANDARD DRAWINGS

SERVICE CABINET WIRING DETAILS

2024

DATE	REVISION	DESCRIPTION
07-2023		REVISED SERVICE CABINET WIRING TITLES. ADDED NOTE 6.
01-2024		ADDED NOTE FOR RRFB 20 AMP BREAKER IN BMC & BMCL DETAILS
07-2024		MINOR TEXT REVISIONS FOR UNIFORMITY

CALC. BOOK NO. N/A SDR DATE 12-JUL-2024 **TM485**

Effective Date: December 1, 2024 – May 31, 2025

ORIGINAL PLANS 11x17



EXPIRES: 12/31/2026

#	DATE	REVISION	APP'D

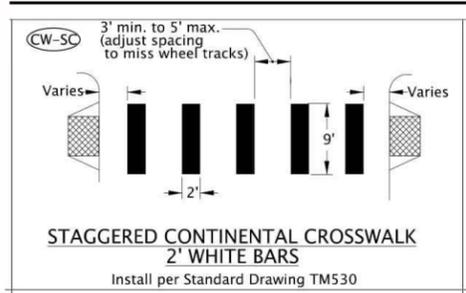
Submission Date: 05/15/2025
Drawn: JCH Designed: DPB Checked: AMR

PROJECT NO. 729ST

SW SUNSET BLVD & SW TIMBREL LN
INTERSECTION IMPROVEMENT

DETAILS

SHEET NO. 2A-19



General Note:
 1. Arrow, letter, and bike symbol dimensions nominal.

LEGEND
 ← Direction of Travel

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 first consulting a Registered Professional Engineer.

All materials shall be in accordance with the current Oregon Standard Specifications.	
OREGON STANDARD DRAWINGS	
PAVEMENT MARKING STANDARD DETAIL BLOCKS	
2024	
DATE	REVISION DESCRIPTION
07-2022	Added note for measurement of Standard Crosswalk
CALC. BOOK NO.	N/A
SDR DATE	07-08-2022
	TM503

Effective Date: December 1, 2024 – May 31, 2025

ORIGINAL PLANS 11x17

EXPIRES: 12/31/2026

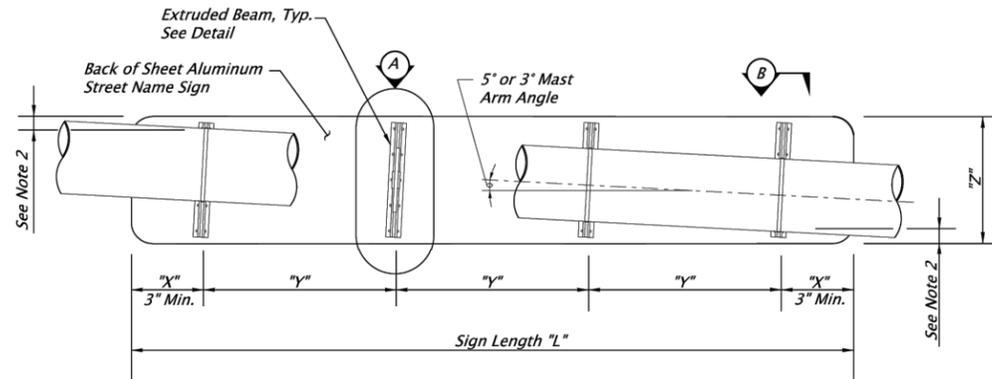


KITTELSON & ASSOCIATES
 610 SW ALDER STREET, SUITE 700
 PORTLAND, OR 97205
 P 503.228.5230 F 503.273.8169

#	DATE	REVISION	APP'D

Submission Date: 05/15/2025
 Drawn: JCH Designed: DPB Checked: AMR
 PROJECT NO.
729ST

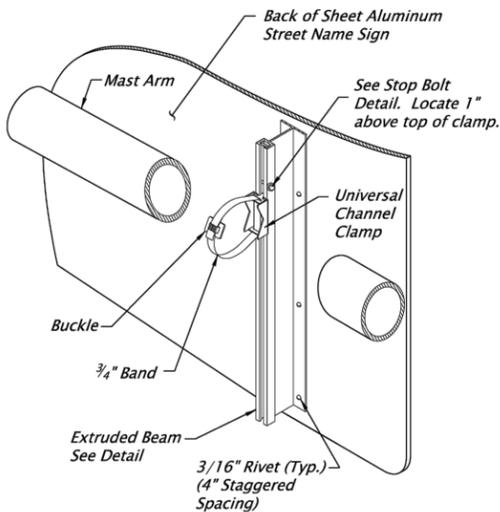
SW SUNSET BLVD & SW TIMBREL LN
 INTERSECTION IMPROVEMENT
 DETAILS
 SHEET NO.
2A-20



Mast Arm Street Name Mount Requirements				
Sign Length "L"	Maximum Sign Height "Z"	Maximum Edge Distance "X"	Maximum Support Spacing "Y"	Number of Extruded Beam Locations
"L" Less than or Equal to 4'-0"	30"	"L"/4	"L"/2	2
"L" Greater than > 4'-0" and "L" less than or Equal to 8'-0"	30"	1'-0"	3'-0"	3
"L" Greater than > 8'-0" and "L" less than or Equal to 10'-0"	21"	1'-0"	2'-8"	4
"L" Greater than > 10'-0" and "L" less than or Equal to 12'-0"	21"	1'-0"	2'-6"	5

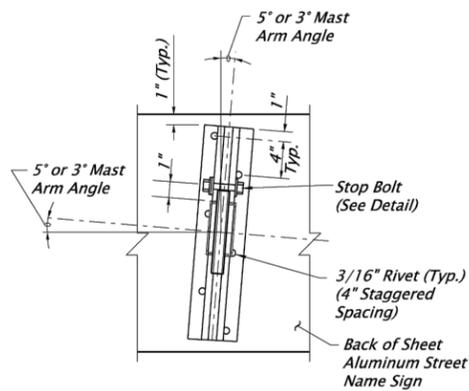
MAST ARM STREET NAME SIGN MOUNT

No Scale



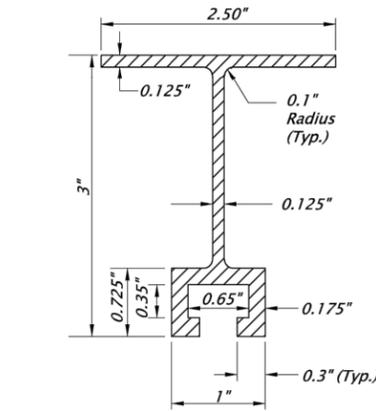
TYPICAL MAST ARM INSTALLATION

No Scale



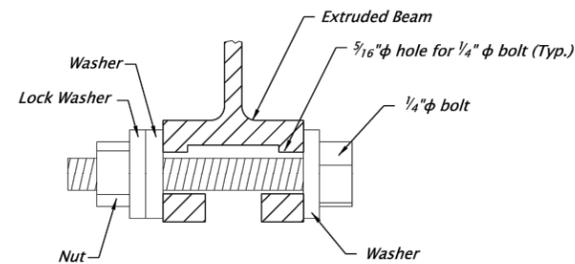
DETAIL A

No Scale



EXTRUDED BEAM DETAIL

No Scale



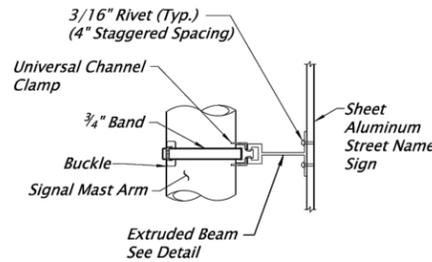
STOP BOLT DETAIL

No Scale

GENERAL NOTES:

- Physical fit of the sign must be verified. The edges of the street name sign shall not be within 6" of other signs or the mast arm connection flanges.
- Equal spaces top and bottom.
- The top of the street name sign shall be leveled.
- Extruded Beams are to be set at an angle perpendicular to the mast arm.
- Material for extruded beam shall be ASTM B 221 6061-T6 Aluminum.
- Material for 3/4" Band shall be 3/4" wide, 0.03" thick, and ASTM A 666, Type 201 Stainless Steel.
- Material for the Sign Bracket, Universal Channel Clamp, and buckle shall be ASTM A 666, Type 201 Stainless Steel.
- Existing signal poles must be analyzed to verify that the pole and foundation can support the new street name sign loading. See TM650 for allowable street name sizes on new installations.

- All hardware to be Type 316 Stainless Steel.
- Locate 1" above the top of the Universal Channel Clamp.



DETAIL VIEW B

No Scale

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 first consulting a Registered Professional Engineer.

All materials shall be in accordance with the current Oregon Standard Specifications.
OREGON STANDARD DRAWINGS

SIGNAL MAST ARM STREET NAME SIGN MOUNTS

2024	
DATE	REVISION DESCRIPTION

CALC. BOOK NO. N/A SDR DATE: 06-JAN-2012 **TM679**

Effective Date: December 1, 2024 – May 31, 2025

ORIGINAL PLANS 11x17



EXPIRES: 12/31/2026

APP'D	REVISION	DATE	#

Submission Date: 05/15/2025
Drawn: JCH Designed: DPB Checked: AMR

PROJECT NO. 729ST

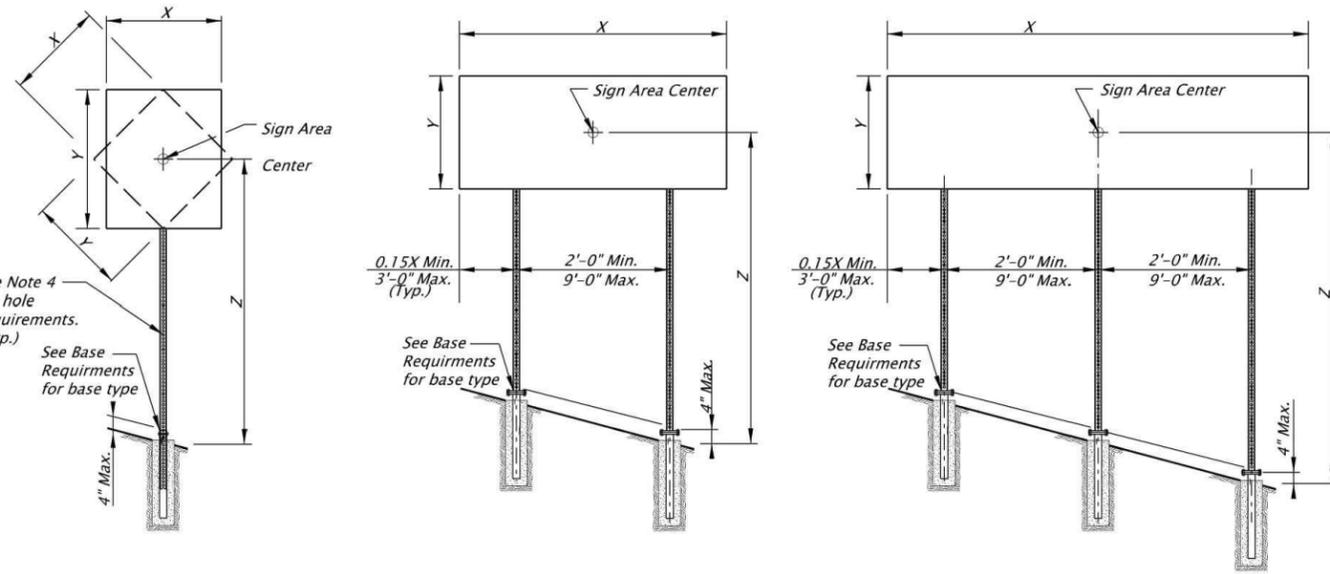
SW SUNSET BLVD & SW TIMBREL LN INTERSECTION IMPROVEMENT

DETAILS

SHEET NO. 2A-21

10-JUL-2020

TM681.dgn



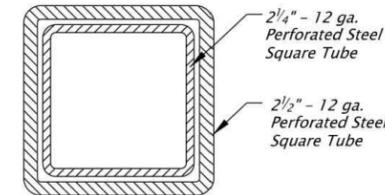
GENERAL NOTES:

1. Perforated Steel Square Supports are designed in accordance with the AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals 4th Edition, 2001, 2002, 2003, and 2006 interim revisions.
2. The design basic wind speed (3 second gust) shall be according to the wind map shown on TM671.
3. Material grade for base hardware connection shall be according to the manufacturer's recommendation and based on crash testing.
4. Use 7/16" diameter holes at 1" spacing on each of the 4 sides.
5. Steel post shall have a minimum yield stress of 50 ksi.
6. Steel shall be galvanized according to ASTM A653 with coating designation G90.
7. General design parameters are $K_z = 0.87$, $C_d(\text{sign}) = 1.20$, and $G = 1.14$.
8. Permanent signing uses an $I_r = 0.71$ for a recurrence interval of 10 years.
9. Temporary signing uses an $I_r = 0.45$ for a recurrence interval of 1.5 years.
10. The sign width to sign height or sign height to sign width ratio shall not exceed 5.0.
11. For horizontal and vertical clearances of permanent signs refer to TM200 and of temporary signs refer to TM822.
12. Posts protected by barrier or guardrail do not require slip bases.

SINGLE POST ELEVATION
No scale

TWO POST ELEVATION
No scale

THREE POST ELEVATION
No scale



2 1/4" - 12 ga. PSST to extend entire length inside of the 2 1/2" - 12 ga. PSST.

2 1/4" & 2 1/2" - 12 GA. DETAIL
No scale

Square Tube Size	(X * Y * Z) in ft ³ - Maximum								
	3 Second Gust Wind Speed (TM671)								
	85 MPH			95 MPH			105 or 110 MPH		
	Number of Posts			Number of Posts			Number of Posts		
2"-12 ga.	79	158	237	63	126	189	57	114	171
2 1/2"-12 ga.	136	272	408	109	218	327	98	196	294
2 1/2"-10 ga.	165	330	495	132	264	396	119	238	357
2 1/4" & 2 1/2"-12 ga.	231	462	693	185	370	555	167	334	501

PERMANENT PERFORATED STEEL SQUARE TUBE TABLE

Square Tube Size	(X * Y * Z) in ft ³ - Maximum								
	3 Second Gust Wind Speed (TM671)								
	85 MPH			95 MPH			105 or 110 MPH		
	Number of Posts			Number of Posts			Number of Posts		
2"-12 ga.	125	250	375	100	200	300	90	180	270
2 1/2"-12 ga.	215	430	645	172	344	516	155	310	465
2 1/2"-10 ga.	261	522	783	209	418	627	189	378	567
2 1/4" & 2 1/2"-12 ga.	364	728	1092	292	584	876	263	526	789

TEMPORARY PERFORATED STEEL SQUARE TUBE TABLE

* - See 2 1/4" & 2 1/2" - 12 ga. detail.

Square Tube Size	Number of Posts		
	1	2	3
2"-12 ga.	Anchor	Anchor	N/A
2 1/2"-12 ga.	Anchor	Slip	Slip
2 1/2"-10 ga.	Slip	Slip	Slip
2 1/4" & 2 1/2"-12 ga.	Slip	Slip	Slip

BASE REQUIREMENTS

1. Anchor - See Drawing TM687 for PSST anchor foundation details.
2. Slip - See Drawing TM688 for PSST slip base foundation details.
3. N/A - Do not use this option.

Accompanied by dwgs. TM200, TM671, TM687, TM688, TM689, TM822

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 first consulting a Registered Professional Engineer.

OREGON STANDARD DRAWINGS
PERFORATED STEEL SQUARE TUBE (PSST) SIGN SUPPORT INSTALLATION
2024

DATE	REVISION	DESCRIPTION

CALC. BOOK NO. 5752 SDR DATE 10-JUL-2017 **TM681**

Effective Date: December 1, 2024 - May 31, 2025

ORIGINAL PLANS 11x17

REGISTERED PROFESSIONAL ENGINEER
60404PE
Digitally Signed
ANTHONY M. ROOS
JUL 15, 2003
OREGON

EXPIRES: 12/31/2026

#	DATE	REVISION	APP'D

Submission Date: 05/15/2025
Drawn: JCH Designed: DPB Checked: AMR

PROJECT NO. 729ST

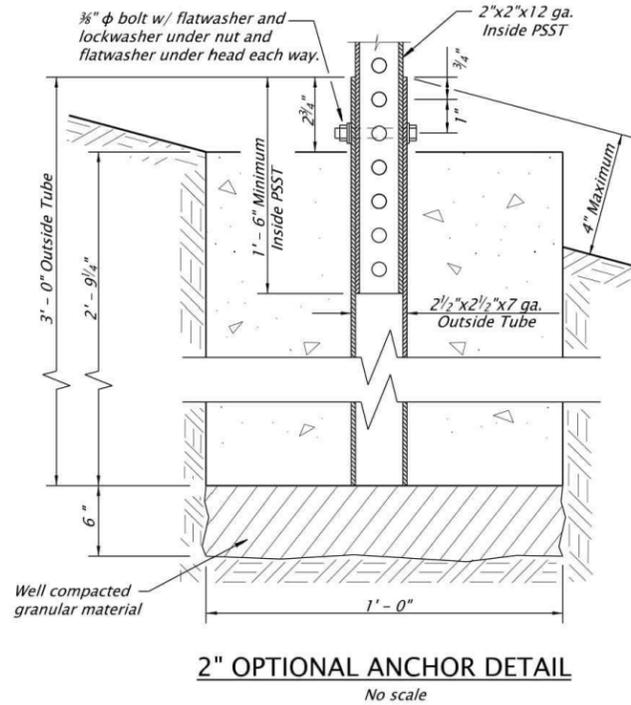
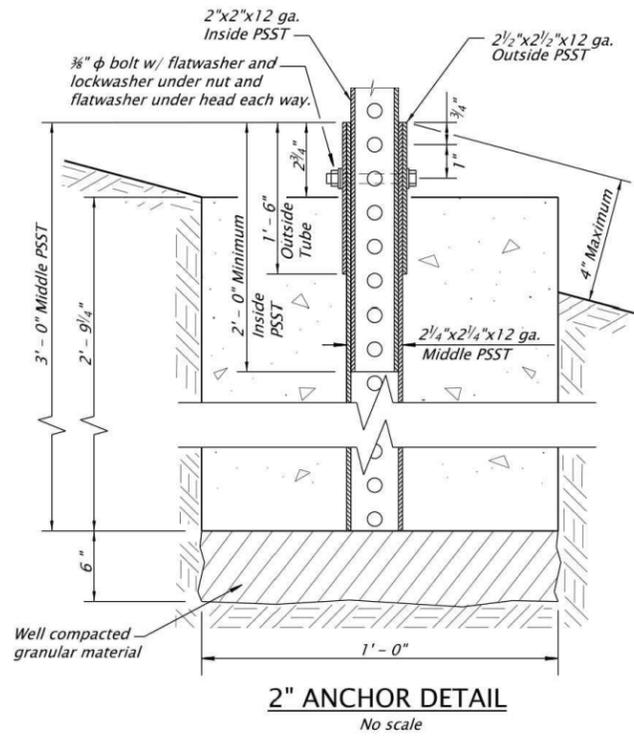
SW SUNSET BLVD & SW TIMBREL LN INTERSECTION IMPROVEMENT

DETAILS

SHEET NO. 2A-22

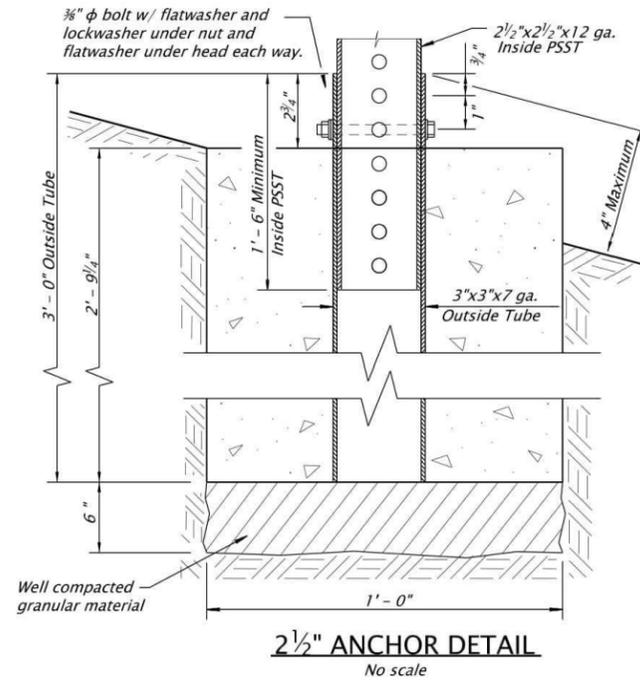
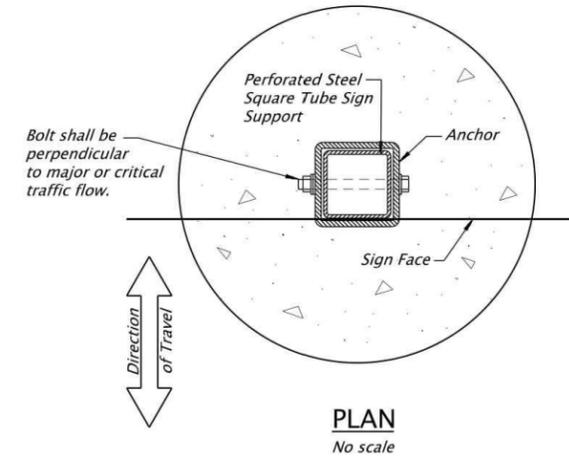
10-JUL-2020

TM687.dgn



General Notes:

1. Material grade for base hardware connection shall be according to the manufacturer's recommendation and based on crash testing.
2. Anchor steel shall be hot dipped galvanized or approved equal.
3. Footing concrete shall be Commercial Grade Concrete ($f_c = 3000$ psi) per Specification 00440. The CGC mixture may be accepted at the site of placement according to 00440.14.
4. The estimated concrete volume is .09 cubic yards.



Accompanied by dwgs. TM681, TM688

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 first consulting a Registered Professional Engineer.

All materials shall be in accordance with the current Oregon Standard Specifications.
OREGON STANDARD DRAWINGS
PERFORATED STEEL SQUARE TUBE (PSST) ANCHOR FOUNDATION
 2024

DATE	REVISION	DESCRIPTION

CALC. BOOK NO. 5752 SDR DATE 06-JAN-2012 **TM687**

Effective Date: December 1, 2024 – May 31, 2025

ORIGINAL PLANS 11x17



EXPIRES: 12/31/2026

#	DATE	REVISION	APP'D

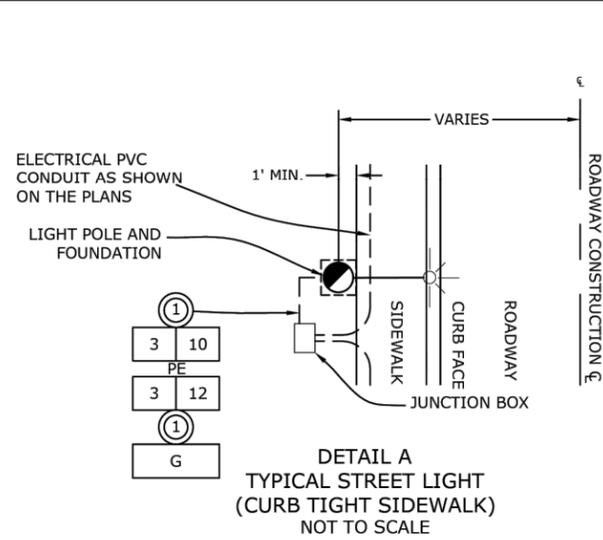
Submission Date: 05/15/2025
 Drawn: JCH Designed: DPB Checked: AMR

PROJECT NO. 729ST

SW SUNSET BLVD & SW TIMBREL LN
 INTERSECTION IMPROVEMENT

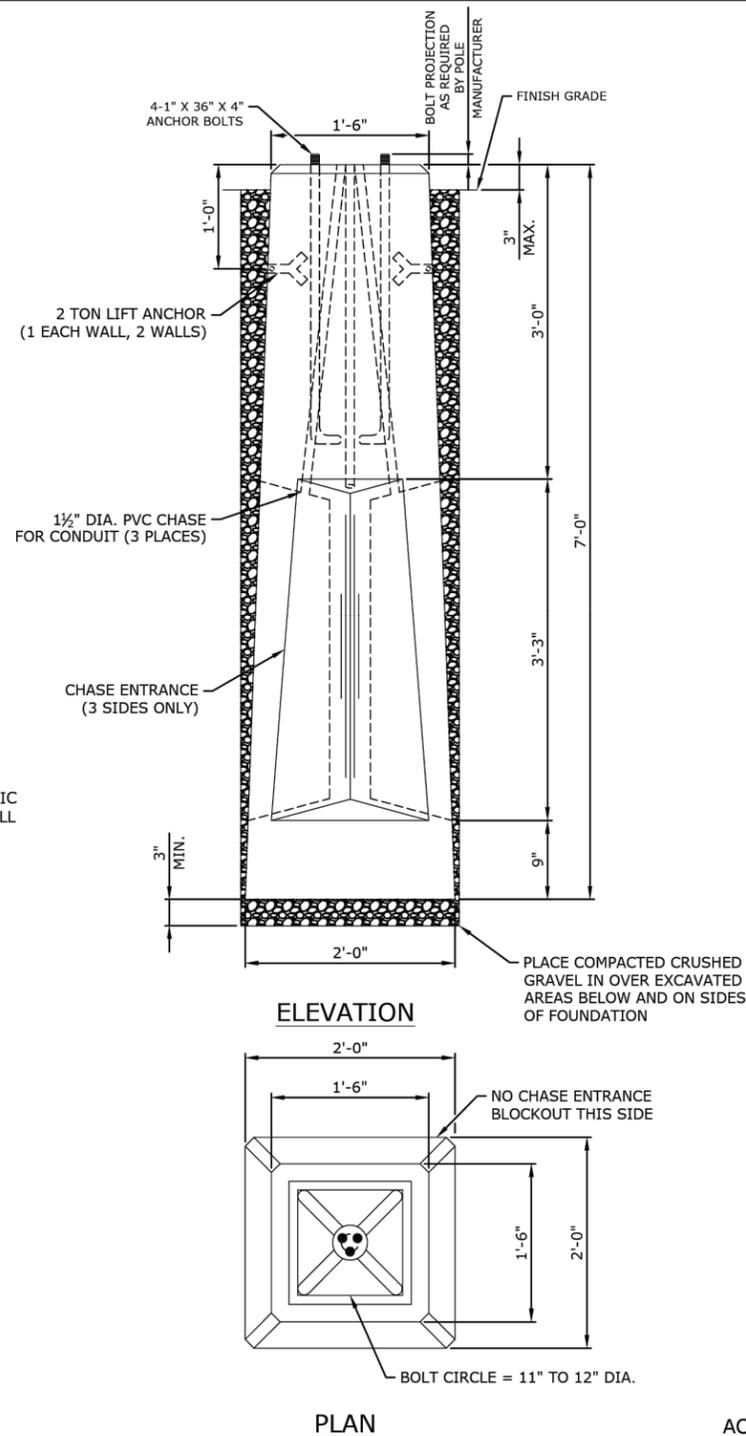
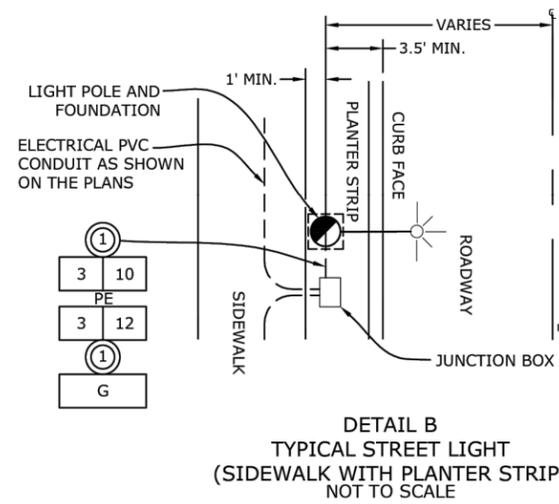
DETAILS

SHEET NO. 2A-23

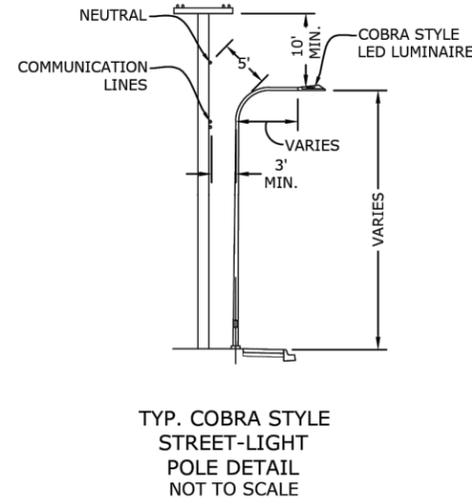


LEGEND:

- ① INSTALL 1" ELECTRICAL PVC CONDUIT
- G INSTALL GROUND WIRE PER SECTION 00960.45(b)
- 3 10 INSTALL 3 #10 AWG TYPE XHHW WIRES.
- 3 12 INSTALL 3 #12 AWG TYPE XHHW WIRES FOR PHOTOELECTRIC CONTROL RELAY WHEN SHOWN ON PLANS. THE WIRES SHALL BE WHITE, RED AND BLACK.

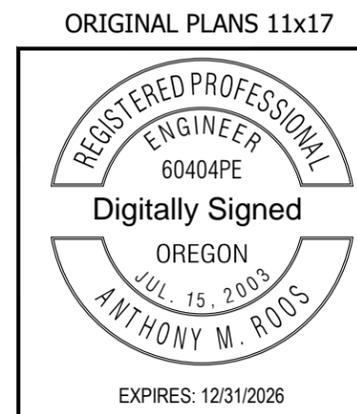


- GENERAL NOTES:**
- REFER TO SPECIAL PROVISIONS AND STANDARD SPECIFICATIONS SECTION 00960 AND 00970 FOR APPROVED EQUIPMENT AND ADDITIONAL REQUIREMENTS
 - INSTALL LIGHT POLE MIN. 3' BEHIND FACE OF CURB PER AASHTO ROADSIDE DESIGN GUIDE 3.4.1.
 - PROVIDE 3 FEET OF SLACK OF ALL CONDUCTORS IN EACH JUNCTION BOX.
 - PROVIDE 20' OF SEPARATION BETWEEN STREET LIGHTS AND STREET TREES.
 - POLE DESIGNED PER 2015 AASHTO LRFD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS.
 - FOUNDATION DESIGN PER 2014 OREGON STRUCTURAL SPECIALTY CODE.
 - FOUNDATION REINFORCEMENT PER FOUNDATION MANUFACTURER.
 - ANCHORAGE AND BOLT CIRCLE DIAMETER PROVIDED BY POLE MANUFACTURER.
 - CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH F'c OF 5500 PSI.
 - SEE SPECIAL PROVISIONS SECTION 00960, 00962 FOR INSTALLATION REQUIREMENTS.



ACCOMPANIED BY STANDARD DRAWING 6810, 6831, AND 6833

TYPICAL FOUNDATION FOR LUMINAIRE SUPPORTS AND TYPICAL LUMINAIRE DETAILS	WASH. CO. # 6820
	EFFECTIVE DATE: 06/01/2023
WASHINGTON COUNTY DEPARTMENT OF LAND USE & TRANSPORTATION ENGINEERING SECTION	PLOT STAMP: 06/01/23 4:34P KYLE CAD: 6820.DWG



#	DATE	REVISION	APP'D

Submission Date:	05/15/2025
Drawn:	JCH
Designed:	DPB
Checked:	AMR
PROJECT NO.	729ST

SW SUNSET BLVD & SW TIMBREL LN INTERSECTION IMPROVEMENT	DETAILS
SHEET NO. 2A-24	

REVISION	DATE	APP'D

Submission Date:	05/15/2025
Drawn:	JCH
Designed:	DPB
Checked:	AMR

PROJECT NO.
729ST

SW SUNSET BLVD & SW TIMBREL LN
INTERSECTION IMPROVEMENT

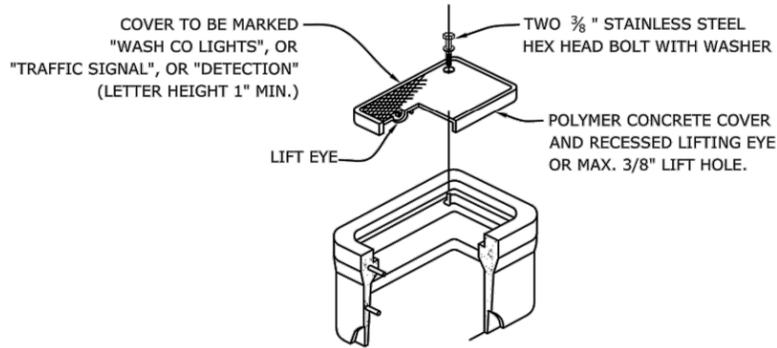
DETAILS

SHEET NO.
2A-25

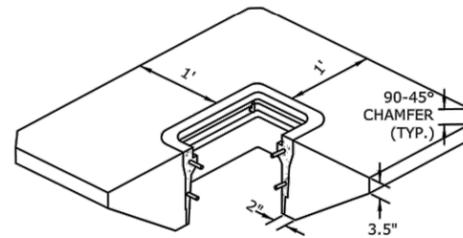
GENERAL NOTES:

- CONDUITS SHOWN ARE FOR EXAMPLE ONLY. ADDITIONAL CONDUITS MAY BE REQUIRED AS SHOWN ON THE PLAN SHEETS.
- FOR CONDUIT END TREATMENT REFER TO ODOT STANDARD SPECIFICATIONS FOR CONSTRUCTION, LATEST EDITION (SEE SECTION 00960.42) AND OREGON STANDARD DRAWING LATEST EDITION (TM472).
- IN JUNCTION BOXES WHERE THERE ARE EXISTING WIRES AND CONDUITS, THE CONTRACTOR SHALL ADJUST THEM AS NECESSARY TO MAINTAIN THE SYSTEM WHEN WORK IS COMPLETE.
- JUNCTION BOXES AND COVERS SHALL BE RATED TIER 15 ACCORDING TO ANSI/SCTE 77-2007.
- JUNCTION BOXES SHALL BE INSTALLED BEHIND THE SIDEWALK OR IN THE PLANTER STRIP WHEN POSSIBLE.
- REFER TO SPECIAL PROVISIONS AND STANDARD SPECIFICATIONS SECTION 00960, 00970, AND 02920 FOR APPROVED EQUIPMENT AND ADDITIONAL REQUIREMENTS.
- JUNCTION BOXES SHALL BE FLARED WITH SIZE AS SHOWN ON PLANS.
- FURNISH ELECTRICAL SPLICE MATERIAL MEETING THE FOLLOWING REQUIREMENTS:
SPLIT BOLT - MADE OF SILICON BRONZE TO SECURELY JOIN THE WIRES BOTH MECHANICALLY AND ELECTRICALLY.
HEAT-SHRINK TUBING - SURFACE-IRRADIATED TUBE COMPLYING WITH UL 486, RATED AT 194°F WITH 600 V INNER MELTING WALL OR LINER TO PROVIDE VOID-FREE ENCAPSULATED INSULATION.
INSULATING RUBBER TAPE - ELECTRICAL GRADE, NONDRYING, RUBBER BASED, ELASTIC TYPE CONFORMING TO ASTM D4388.

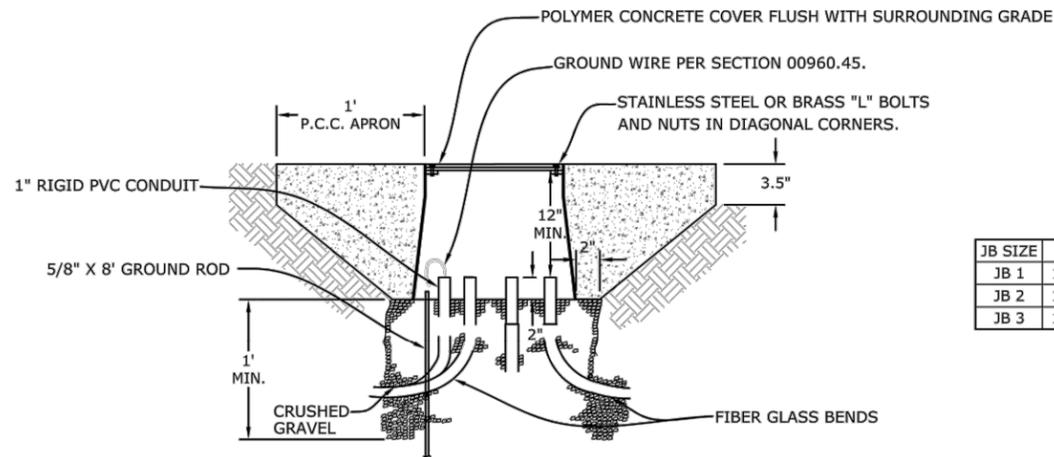
WASHINGTON COUNTY DEPARTMENT OF LAND USE & TRANSPORTATION ENGINEERING SECTION 	PLOT STAMP: 06/01/22 5:16P ANTHONYD CAD: 6831.DWG
	EFFECTIVE DATE: 06/01/2022
TRAFFIC ENGINEERING JUNCTION BOX DETAILS	WASH. CO. # 6831



TRAFFIC SIGNAL/ILLUMINATION JUNCTION BOX
 NOT TO BE USED IN TRAVEL LANES, SHOULDERS OR AREAS EXPOSED TO TRAFFIC.



CONCRETE APRON AROUND JUNCTION BOX
 (APPROX. 7 FT.³ CONCRETE IN NEAT SECTION)



JUNCTION BOX INSTALLATION WITH APRON (NEAR ILLUMINATION POLE)
 NOT TO SCALE

NOTES:

- ILLUMINATION CIRCUIT WIRES ARE NOT SHOWN. SEE ILLUMINATION PLANS.
- ILLUMINATION CIRCUITS SHALL BE SPLICED ACCORDING TO GENERAL NOTE 8.

JB SIZE	W	L	D
JB 1	11"	18"	12"
JB 2	13"	24"	18"
JB 3	17"	30"	18"

ACCOMPANIED BY STANDARD DRAWING 6810, 6820, AND 6833

ORIGINAL PLANS 11x17



EXPIRES: 12/31/2026

#	DATE	REVISION	APP'D

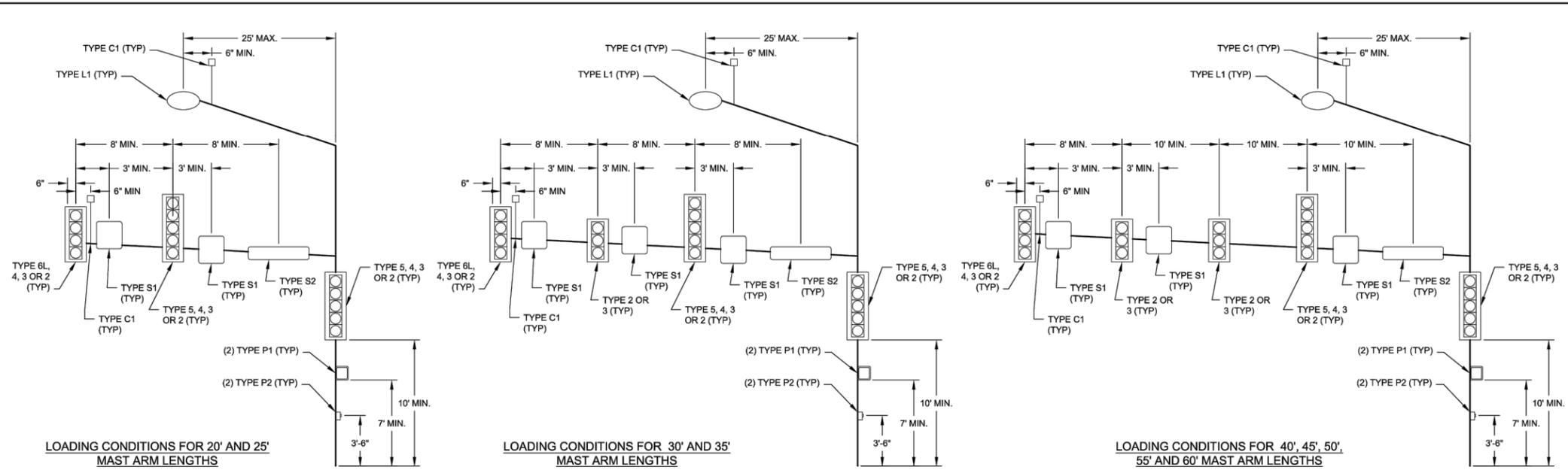
Submission Date: 05/15/2025
 Drawn: JCH Designed: DPB Checked: AMR

PROJECT NO.
729ST

SW SUNSET BLVD & SW TIMBRE LN
INTERSECTION IMPROVEMENT

DETAILS

SHEET NO.
2A-26



MATERIAL DATA	
COMPONENT	GRADE
STEEL TUBES	ASTM A572 GR. 50 OR A595 GR A
BASE PLATES	ASTM A572 GR. 50
FLANGE PLATES	ASTM A572 GR. 50
GUSSET PLATES	ASTM A572 GR. 50
HANDHOLE FRAMES	ASTM A572 GR. 50
HANDHOLE COVERS	ASTM A1011
ANCHOR BOLTS	ASTM F1554 GR. 55
NUTS	ASTM A563 GR. DH
WASHERS	ASTM F436 TYPE 1
ANCHOR PLATE/TEMPLATE	ASTM A36
CONNECTION BOLTS	ASTM A325
GALVANIZING	ASTM A123, A153, & F2329
PIPE	ASTM A53 GR. B OR ASTM A500 GR. B

- GENERAL NOTES**
- SIGNAL SUPPORTS SHALL BE DESIGNED IN ACCORDANCE WITH THE AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS, 5TH EDITION, 2009.
 - ALL TRAFFIC SIGNAL SUPPORTS SHALL CONFORM TO THE DESIGN CRITERIA AND DETAILS SHOWN ON THESE DRAWINGS EXCEPT AS APPROVED BY THE ENGINEER.
 - THE BASIC WIND SPEED (3-SECOND GUST) SHALL BE 95 MPH. GUST FACTOR G=1.14, I_r = 1.0 (50 YEAR RECURRENCE INTERVAL), FATIGUE CATEGORY II, NO GALLOPING, AND TRUCK SPEED = 55 MPH.
 - LOADING CONDITIONS SHOWN ON THIS SHEET ARE GENERIC. REFER TO PROJECT PLANS FOR ACTUAL APPURTENANCE LOCATIONS.
 - POLE AND MAST ARMS SHALL BE OCTAGONAL OR ROUND IN CROSS SECTION. TWO PLY AND FLUTED POLES OR ARMS ARE NOT PERMITTED.
 - POLE DIAMETERS ARE MEASURED FLAT TO FLAT FOR OCTAGONAL POLES.
 - POLE AND MAST ARMS SHALL HAVE TAPER OF 0.14 IN/FT.
 - FABRICATION SHALL CONFORM TO 2009 AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS AND AWS D1.1 STRUCTURAL STEEL WELDING CODE.
 - LONGITUDINAL SEAM WELD IS 60% MIN. PENETRATION EXCEPT FOR 6 INCHES FROM END OF SECTION AT FLANGE, BASE PLATE AND SLIP JOINT IS 100% PENETRATION.
 - SILICON CONTENT OF THE BASE METAL SHALL BE 0.0% TO 0.04% OR 0.15% TO 0.25%.
 - HUBS SHALL BE 3000# THREAD FORGED STEEL.
 - ALL STRUCTURAL STEEL INCLUDING FASTENERS SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION.
 - POLES AND MAST ARMS SHALL BE OF ONE PIECE CONSTRUCTION, SLIP-FIT CONNECTIONS ARE NOT PERMITTED.
 - ROUND AND SMOOTH ALL EDGES ALONG ELECTRICAL WAY.
 - TIGHTENING OF BOLTS WITH TAPPED HOLES SHALL CONFORM TO THE OREGON DEPARTMENT OF TRANSPORTATION'S 2008 STANDARD SPECIFICATIONS FOR CONSTRUCTION SECTION 962.46(j)(2).
 - ALL FASTENERS SHALL BE STAINLESS STEEL.
 - POLE CAPS SHALL BE CAST ALUMINUM.

APPURTENANCE LOADING						
TYPE	DESCRIPTION	WEIGHT (LBS)	AREA FACE (SQ FT)	AREA SIDE (SQ FT)	AREA BOTTOM (SQ FT)	ICE AREA (SQ FT)
2, 3	3-SECTION SIGNAL HEAD	55	8.67	4	1	25
4, 6L	4-SECTION SIGNAL HEAD	73	9.9	5	1	30
5	5-SECTION SIGNAL HEAD	92	11.97	6	1	35
S1	24" X 30" SIGN	50	7.5	0	0	7.5
S2	STREET NAME SIGN	105	30	0	0	30
L1	LUMINAIRE	60	3.3	3.3	3.3	15
P1	PEDESTRIAN SIGNAL HEAD	25	2.47	2.47	2.51	14.9
P2	PEDESTRIAN PUSH BUTTON	3	0.27	0.18	0.12	1.14
C1	VIDEO DETECTION CAMERA	30	1	2	1	2

- VIDEO DETECTION CAMERA AND EMERGENCY VEHICLE PRE-EMPTION MAY BE PLACED AT ANY LOCATION ALONG MAST ARM.
- APPURTENANCES MAY DIFFER FROM THOSE SHOWN AS LONG AS TOTAL WIND LOADING/DEAD LOADING/ETC. DOES NOT EXCEED DESIGNED WORST CASE VALUES.

**TRAFFIC SIGNAL SUPPORTS
NOTES AND DESIGN CRITERIA**

EFFECTIVE DATE: 6/16/2014 WASH. CO. # 6911

WASHINGTON COUNTY
DEPARTMENT OF LAND USE &
TRANSPORTATION
ENGINEERING SECTION

PLOT STAMP:
CAD: 6911.DWG

ORIGINAL PLANS 11x17



EXPIRES: 12/31/2026

#	DATE	REVISION	APP'D

Submission Date: 05/15/2025

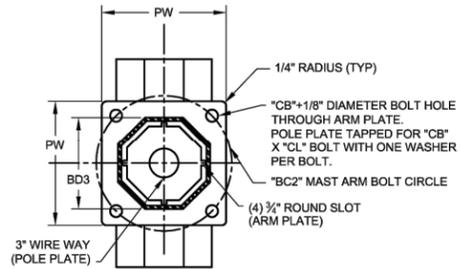
Drawn: JCH Designed: DPB Checked: AMR

PROJECT NO. 729ST

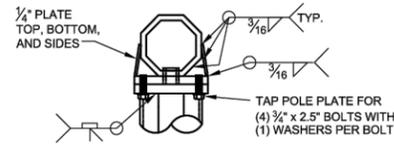
SW SUNSET BLVD & SW TIMBREL LN
INTERSECTION IMPROVEMENT

DETAILS

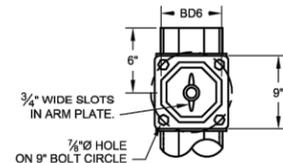
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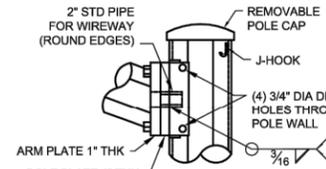
MAST ARM CONNECTION DETAIL 1-A



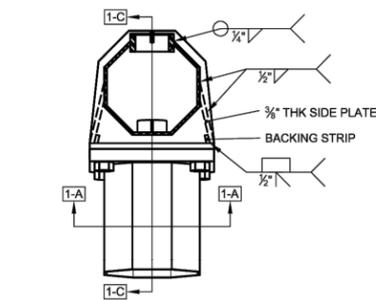
LUMINAIRE ARM CONNECTION DETAIL 1



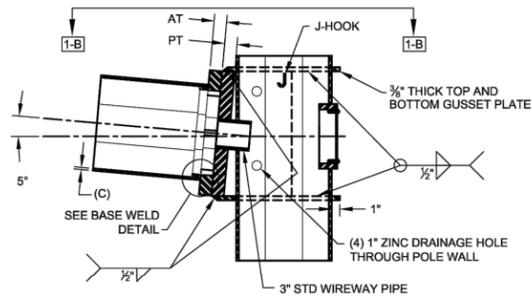
LUMINAIRE ARM CONNECTION DETAIL 2



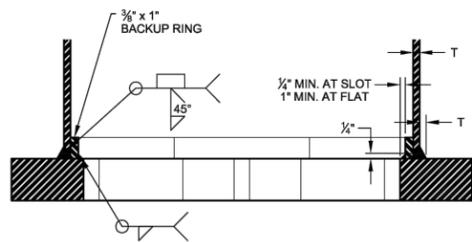
LUMINAIRE ARM CONNECTION DETAIL 3



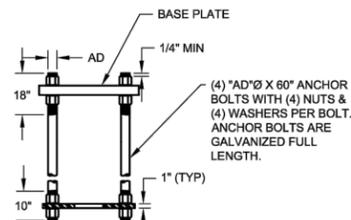
MAST ARM CONNECTION DETAIL 1-B



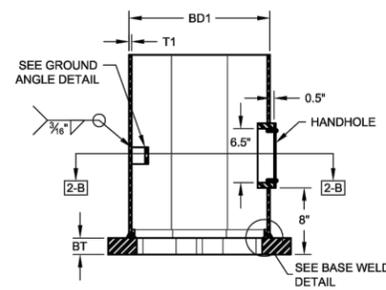
MAST ARM CONNECTION DETAIL 1-C



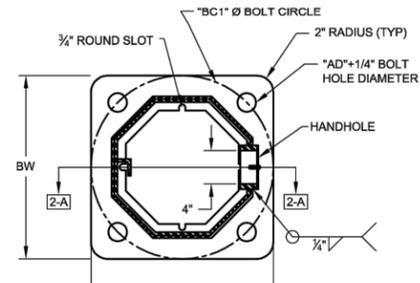
BASE WELD DETAIL (MAIN SHAFT, MAST ARMS & LUMINAIRE)



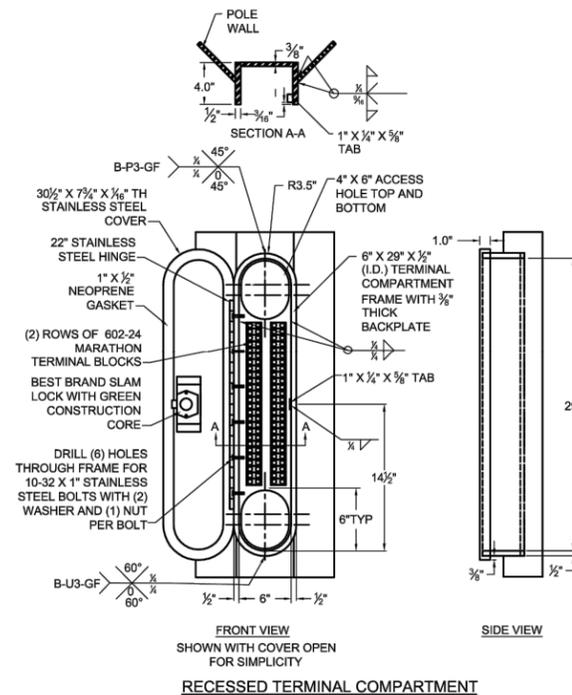
ANCHOR ROD DETAIL



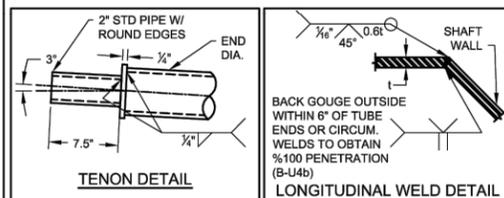
BASE DETAIL 2-A



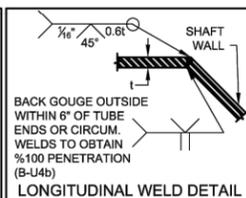
BASE DETAIL 2-B



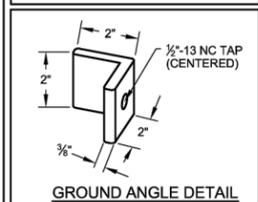
RECESSED TERMINAL COMPARTMENT



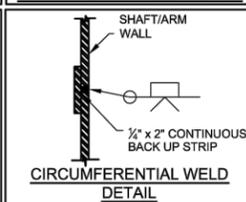
TENON DETAIL



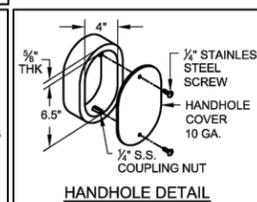
LONGITUDINAL WELD DETAIL



GROUND ANGLE DETAIL



CIRCUMFERENTIAL WELD DETAIL



HANDHOLE DETAIL

TRAFFIC SIGNAL SUPPORTS
STEEL DETAILS

WASHINGTON COUNTY
DEPARTMENT OF LAND USE &
TRANSPORTATION
ENGINEERING SECTION

6913

WASH. CO. #

EFFECTIVE DATE: 6/16/2014

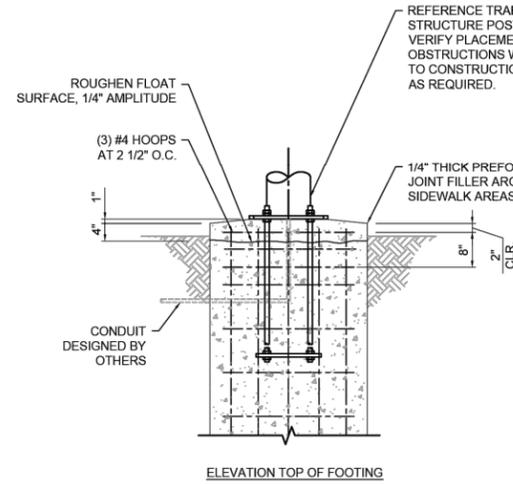
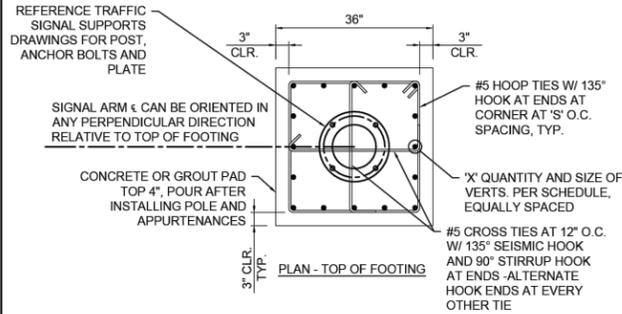
PLOT STAMP:
CAD: 6913.DWG

ORIGINAL PLANS 11x17



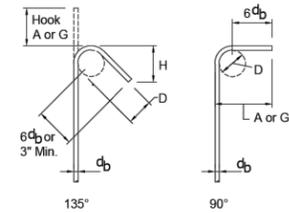
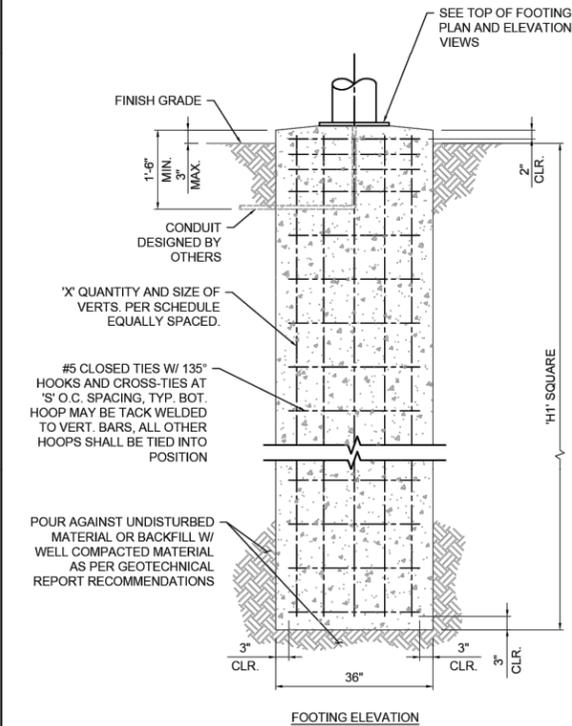
EXPIRES: 12/31/2026

POLE TYPE DESIGNATION	SERVICE LOADS				"H1"	"X" VERTS.	"S"
	AXIAL (kips)	SHEAR (KIPS)	MOMEN T (kip-ft)	TORSION (kip-ft)			
WCSM2	2.23	4.14	88.45	38.75	14'-0"	(16) #9	1'-0"
WCSM3	2.85	4.97	110.27	63.78	15'-0"	(16) #9	1'-0"
WCSM4	3.46	5.44	125.28	80.99	15'-6"	(16) #9	0'-10"
WCSM5	4.28	6.04	150.82	121.88	17'-0"	(16) #9	0'-7 1/2"
WCSM6	4.89	6.26	162.83	144.08	17'-0"	(16) #9	0'-6 1/2"
WCSM2L	2.23	4.14	88.45	38.75	14'-0"	(16) #9	1'-0"
WCSM3L	2.85	4.97	110.27	63.78	15'-0"	(16) #9	1'-0"
WCSM4L	3.46	5.44	125.28	80.99	15'-6"	(16) #9	0'-10"
WCSM5L	4.28	6.04	150.82	121.88	17'-0"	(16) #9	0'-7 1/2"
WCSM6L	4.89	6.26	162.83	144.08	17'-0"	(16) #9	0'-6 1/2"



NOTES:

- MINIMUM CONCRETE COMPRESSIVE STRENGTH = 4000 PSI AT 28 DAYS. A CONCRETE MIX DESIGN SHALL BE FURNISHED BY THE CONTRACTOR FOR REVIEW AND VERIFICATION PRIOR TO CONSTRUCTION. GROUT IN GROUT PADS SHALL BE NON-SHRINK HIGH EARLY STRENGTH GROUT WITH A MINIMUM STRENGTH OF 5000 PSI.
- STEEL TO BE 60 KSI YIELD STRENGTH FOR ALL REINFORCING BARS
- 135 DEGREE AND 180 DEGREE HOOKS ARE TO BE DETAILS AS RECOMMENDED PER THE REQUIREMENTS OF THE CONCRETE REINFORCING STEEL INSTITUTE (CRSI).
- DESIGN LOADS (SERVICE):
 AXIAL: SEE SCHEDULE
 SHEAR: SEE SCHEDULE (RESULTANT)
 MOMENT: SEE SCHEDULE (RESULTANT)
 TORSION: SEE SCHEDULE
 (LOADS APPLIED AT TOP OF PILE)
- DESIGN ASSUMPTIONS:
 - TORSIONAL DESIGN FORCE EQUALS ZERO
 - SILT (CEMENTED C-PHI SOIL)
 - $\phi = 19'$
 - $\gamma = 60$ LBS / FT³
 - $c = 0$
 - $E_{soil} = 0$
 - L-PILE PLUS VERSION 5.0 UTILIZED FOR DESIGN
- ASSUMED ALLOWABLE BEARING CAPACITY IS 1500 PSF.
- SIGNAL POLE FOUNDATION DRILLING IS TO BE MONITORED BY WASHINGTON COUNTY TO VERIFY SUB-SURFACE CONDITIONS ENCOUNTERED MATCH DESIGN ASSUMPTIONS OR IF APPROPRIATE RECOMMEND CHANGES TO DESIGN OR CONSTRUCTION PROCEDURES, BASED ON SPECIFIC CONDITIONS AT DRILLING SITE. NO PERMANENT CASING IS ALLOWED TO REMAIN AROUND SHAFT.



BAR SIZE	90° & 135° SEISMIC HOOK			
	D	A or G	A or G	H*
#5	2 1/2"	6"	5 1/2"	3 3/4"

*H DIMENSION IS APPROXIMATE
 d_b = BAR DIAMETER
 D = FINISHED INSIDE BEND DIAMETER

**TRAFFIC SIGNAL SUPPORTS
FOUNDATION STANDARD (SQUARE)**

WASHINGTON COUNTY
DEPARTMENT OF LAND USE &
TRANSPORTATION
ENGINEERING SECTION

PLOT STAMP: 08/27/19 3:59P ANTHONYD
CAD: 6921.DWG

EFFECTIVE DATE: 9/01/2019 WASH. CO. # 6921

Submission Date: 05/15/2025
 Drawn: JCH Designed: DPB Checked: AMR

ORIGINAL PLANS 11x17

EXPIRES: 12/31/2026

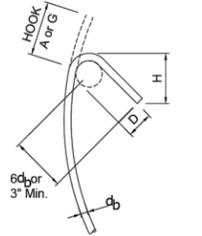
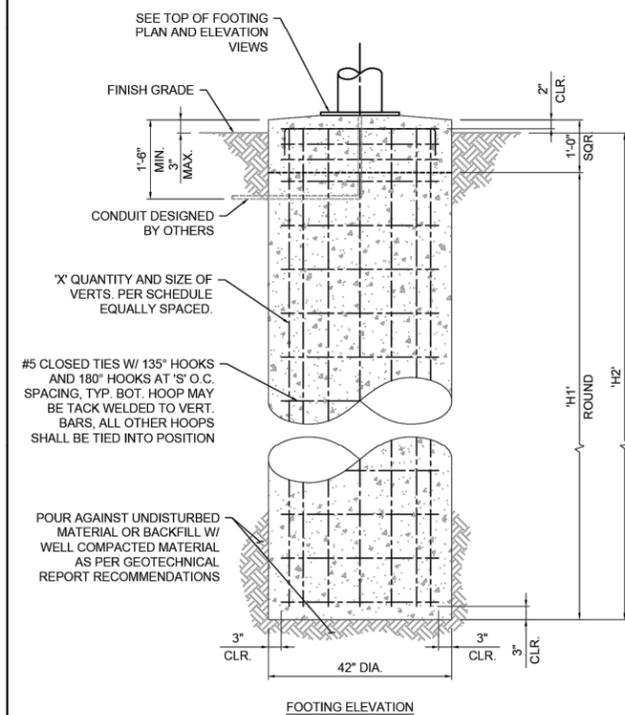
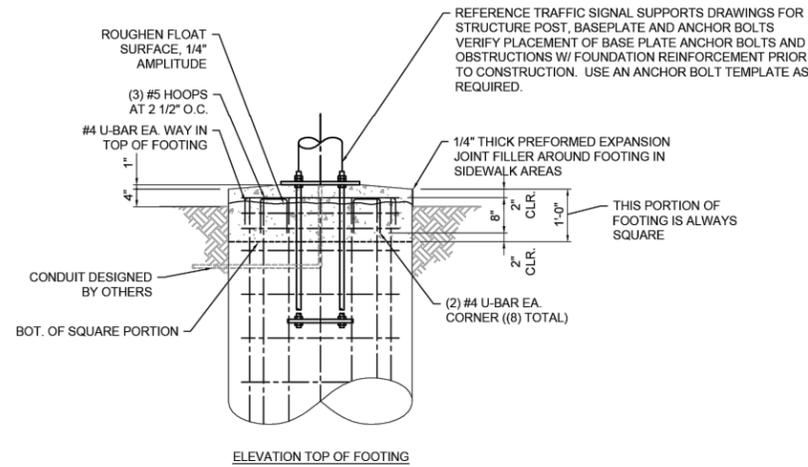
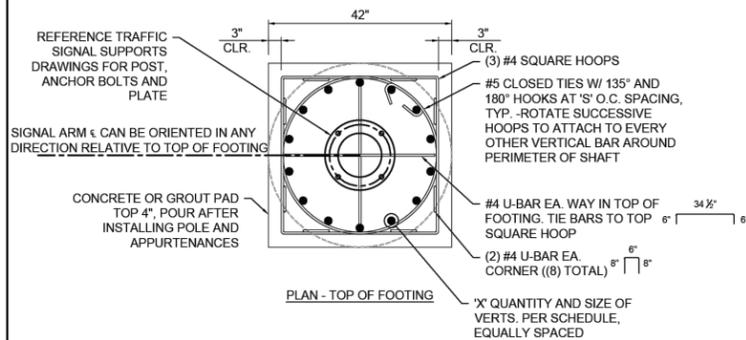
#	DATE	REVISION	APP'D

PROJECT NO.
729ST

SW SUNSET BLVD & SW TIMBREL LN
INTERSECTION IMPROVEMENT

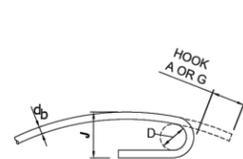
DETAILS

POLE TYPE DESIGNATION	SERVICE LOADS				'H1'	'H2'	'X' VERTS.	'S'
	AXIAL (kips)	SHEAR (KIPS)	MOMENT (kip-ft)	TORSION (kip-ft)				
WCSM2	2.23	4.14	88.45	38.75	12'-6"	13'-6"	(14) #9	1'-0"
WCSM3	2.85	4.97	110.27	63.78	13'-0"	14'-0"	(14) #9	1'-0"
WCSM4	3.46	5.44	125.28	80.99	14'-6"	15'-6"	(14) #9	1'-0"
WCSM5	4.28	6.04	150.82	121.88	15'-6"	16'-6"	(14) #9	0'-8 1/2"
WCSM6	4.89	6.26	162.83	144.08	16'-0"	17'-0"	(14) #9	0'-7 1/2"
WCSM2L	2.23	4.14	88.45	38.75	12'-6"	13'-6"	(14) #9	1'-0"
WCSM3L	2.85	4.97	110.27	63.78	13'-0"	14'-0"	(14) #9	1'-0"
WCSM4L	3.46	5.44	125.28	80.99	14'-6"	15'-6"	(14) #9	1'-0"
WCSM5L	4.28	6.04	150.82	121.88	15'-6"	16'-6"	(14) #9	0'-8 1/2"
WCSM6L	4.89	6.26	162.83	144.08	16'-0"	17'-0"	(14) #9	0'-7 1/2"



SEISMIC STIRRUP / TIE			
BAR SIZE	135° SEISMIC HOOK		
	D	A or G	H*
#5	2 1/2"	5 1/2"	3 3/4"

*H DIMENSION IS APPROXIMATE
d_s = BAR DIAMETER
D = FINISHED INSIDE BEND DIAMETER



STANDARD STIRRUP / TIE			
BAR SIZE	180° STANDARD HOOK		
	D	A or G	J
#5	3 3/4"	7"	5"

d_s = BAR DIAMETER
D = FINISHED INSIDE BEND DIAMETER

NOTES:

- MINIMUM CONCRETE COMPRESSIVE STRENGTH = 4000 PSI AT 28 DAYS. A CONCRETE MIX DESIGN SHALL BE FURNISHED BY THE CONTRACTOR FOR REVIEW AND VERIFICATION PRIOR TO CONSTRUCTION. GROUT IN GROUT PADS SHALL BE NON-SHRINK HIGH EARLY STRENGTH GROUT WITH A MINIMUM STRENGTH OF 5000 PSI.
- STEEL TO BE 60 KSI YIELD STRENGTH FOR ALL REINFORCING BARS
- 135 DEGREE AND 180 DEGREE HOOKS ARE TO BE DETAILS AS RECOMMENDED PER THE REQUIREMENTS OF THE CONCRETE REINFORCING STEEL INSTITUTE (CRSI).
- DESIGN LOADS (SERVICE):
AXIAL: SEE SCHEDULE
SHEAR: SEE SCHEDULE (RESULTANT)
MOMENT: SEE SCHEDULE (RESULTANT)
TORSION: SEE SCHEDULE (LOADS APPLIED AT TOP OF PILE)
- DESIGN ASSUMPTIONS:
- TORSIONAL DESIGN FORCE EQUALS ZERO
- SILT (CEMENTED C-PHI SOIL)
- $\phi = 19^\circ$
- p-y MODULUS: $K = 12 \text{ LBS} / \text{IN}^3$
- $\gamma = 60 \text{ LBS} / \text{FT}^3$
- $c = 0$
- $E_{so} = 0$
- L-PILE PLUS VERSION 5.0 UTILIZED FOR DESIGN
- ASSUMED ALLOWABLE BEARING CAPACITY IS 1500 PSF.
- SIGNAL POLE FOUNDATION DRILLING IS TO BE MONITORED BY WASHINGTON COUNTY TO VERIFY SUB-SURFACE CONDITIONS ENCOUNTERED MATCH DESIGN ASSUMPTIONS OR IF APPROPRIATE RECOMMEND CHANGES TO DESIGN OR CONSTRUCTION PROCEDURES, BASED ON SPECIFIC CONDITIONS AT DRILLING SITE. NO PERMANENT CASING IS ALLOWED TO REMAIN AROUND SHAFT.

TRAFFIC SIGNAL SUPPORTS FOUNDATION STANDARD (ROUND)

WASHINGTON COUNTY
DEPARTMENT OF LAND USE & TRANSPORTATION
ENGINEERING SECTION



PLOT STAMP: 08/27/19 4:04P ANTHONYD
CAD: 6922.DWG

EFFECTIVE DATE: 9/01/2019

WASH. CO. # 6922

ORIGINAL PLANS 11x17



EXPIRES: 12/31/2026

#	DATE	REVISION	APP'D

Submission Date: 05/15/2025

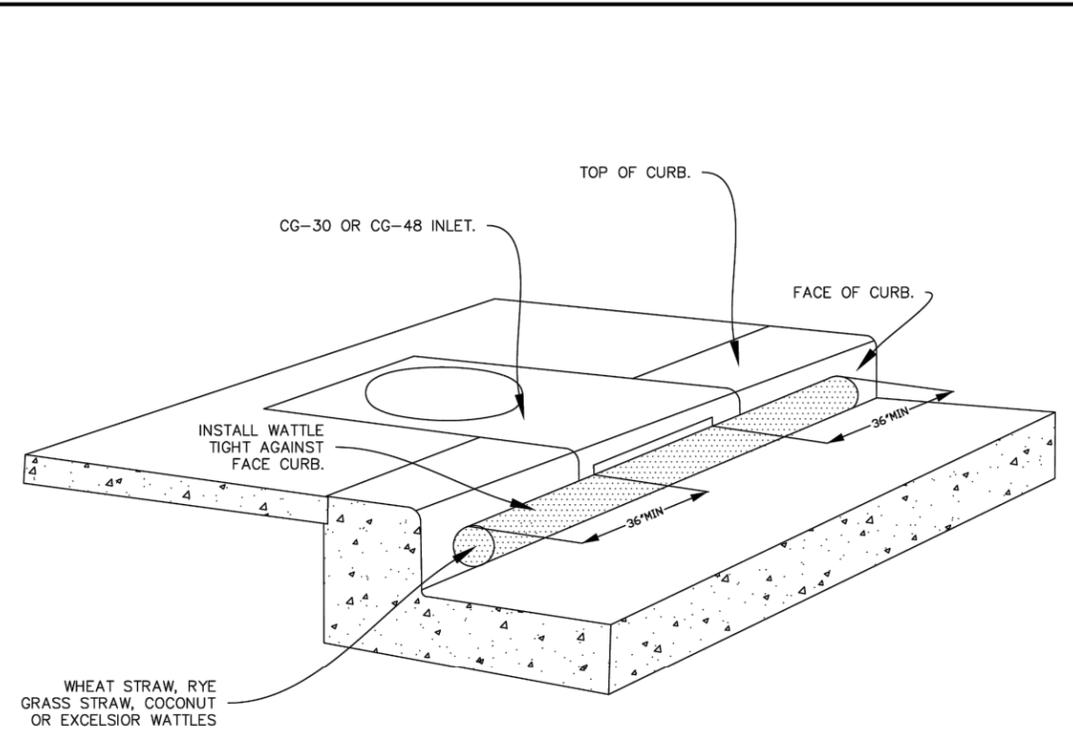
Drawn: JCH Designed: DPB Checked: AMR

PROJECT NO. 729ST

SW SUNSET BLVD & SW TIMBREL LN INTERSECTION IMPROVEMENT

DETAILS

SHEET NO. 2A-30



PERSPECTIVE VIEW SHOWING WATTLE ALONG GUTTER AT CURB INLET

INSTALLATION NOTES:

1. ONLY ALLOWED USE OF APPLICATION IS ON CG-30 AND CG-48 INLETS UNLESS APPROVED BY CWS.
2. INSTALL WATTLE ALONG INLET WITH WATTLE EXTENDING A MIN OF 36" BEYOND INLET OPENINGS IN EACH DIRECTION.
3. WATTLE MUST BE INSTALLED TIGHTLY AGAINST CURB. MAY REQUIRE ADDITIONAL MEASURES TO ENSURE WATTLE REMAINS TIGHT AGAINST CURB, SUCH AS USING ZIP-TIES TO SECURE WATTLE TO INLET'S TRASH BARS OR USING SANDBAGS TO WEIGHT DOWN WATTLE.

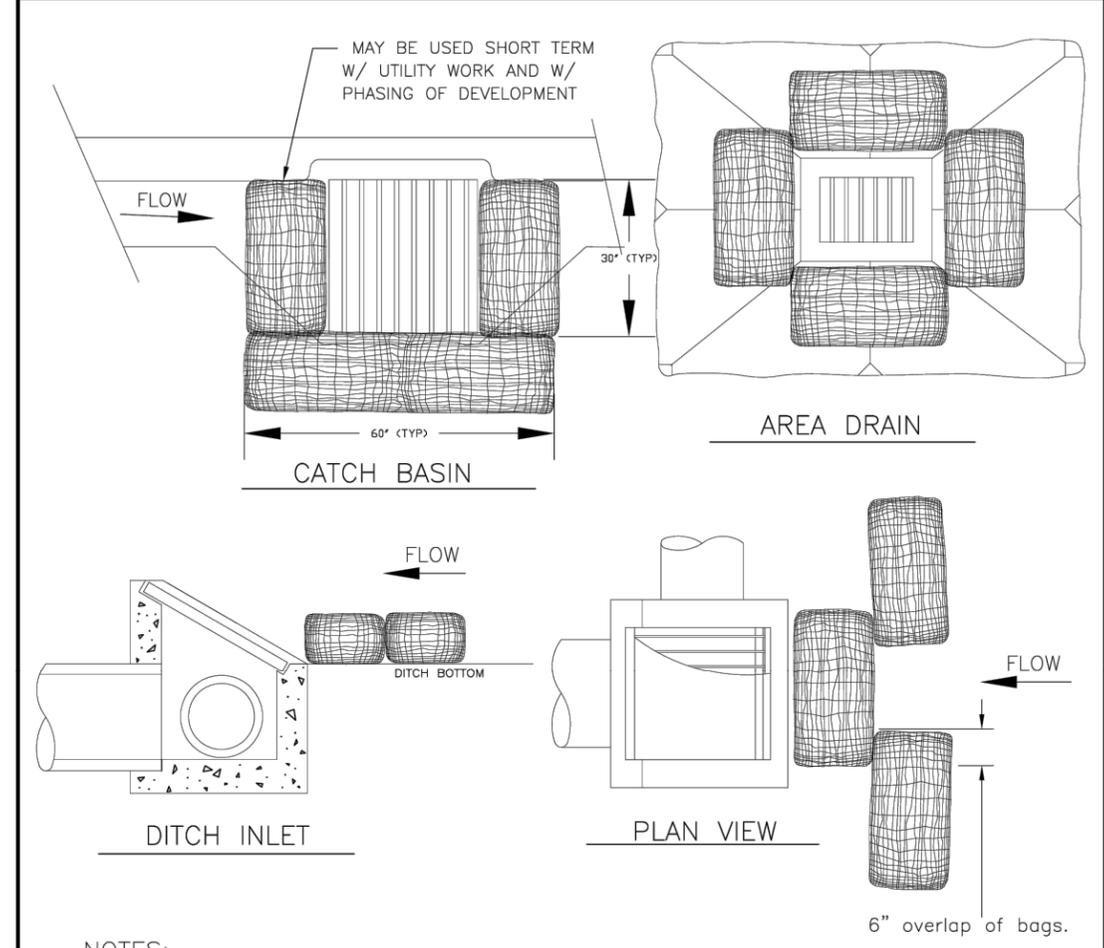
MAINTENANCE NOTES:

1. ANY VISIBLE SIGN OF SEDIMENT ACCUMULATION TO BE CLEANED UP AT THE END OF EACH WORKDAY.
2. REPLACE WATTLE AS NECESSARY TO PREVENT SEDIMENT FROM ENTERING THE STORM SYSTEM.

CURB AND GUTTER INLET PROTECTION

DRAWING NO. 905

REVISED 2-17



NOTES:

1. ADDITIONAL MEASURES MUST BE CONSIDERED DEPENDING ON SOIL TYPES.
2. BIO-FILTER BAGS SHOULD BE STAKED WHERE APPLICABLE USING (2) 1"x2" WOODEN STAKES OR APPROVED EQUAL PER BAG.
3. WHEN USING 30" BIO-BAGS TO PROTECT A CATCH BASIN YOU MUST HAVE 4 BAGS AND THEY SHALL BE OVERLAPPED BY 6".

FOR FURTHER INFORMATION ON DESIGN CRITERIA SEE CHAPTER 4 OF CLEAN WATER SERVICES EROSION PREVENTION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL.

INLET PROTECTION TYPE 4

DRAWING NO. 915

REVISED 12-16



ORIGINAL PLANS 11x17



EXPIRES: 12/31/2026

#	DATE	REVISION	APP'D

Submission Date: 05/15/2025
 Drawn: JCH, Designed: DPB, Checked: AMR
 PROJECT NO. 729ST

SW SUNSET BLVD & SW TIMBREL LN INTERSECTION IMPROVEMENT
 DETAILS

SHEET NO. 2A-31



KITTELSON & ASSOCIATES
 610 SW ALDER STREET, SUITE 700
 PORTLAND, OR 97205
 P-503.228.5230 F-503.273.8169

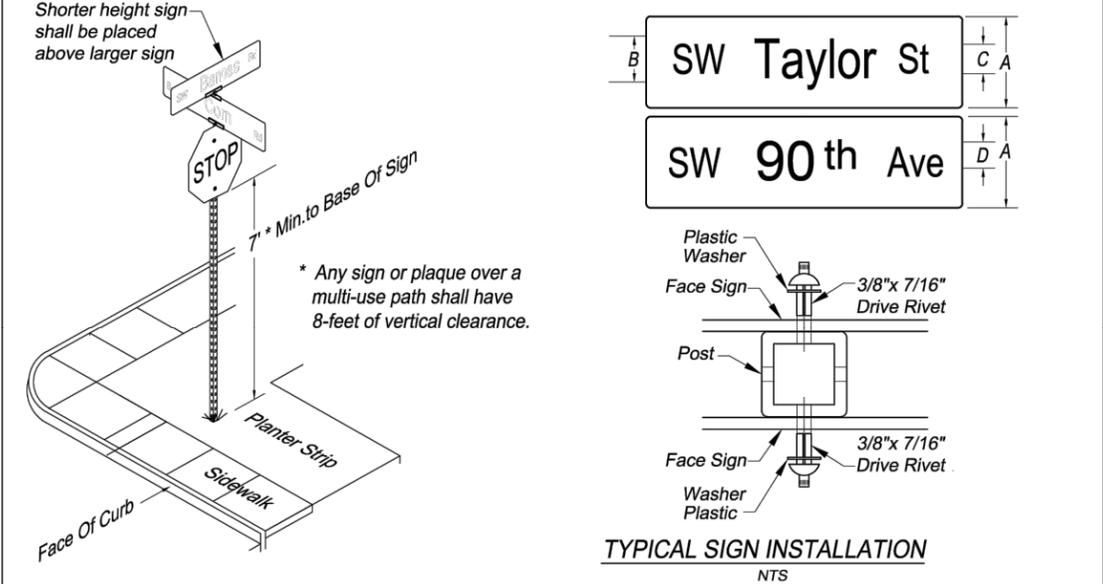
- NOTES:
- WHEN RAINFALL AND RUNOFF OCCURS, A KNOWLEDGEABLE AND EXPERIENCED PERSON IN THE PRINCIPLES, PRACTICES, INSTALLATION, AND MAINTENANCE OF EROSION AND SEDIMENT CONTROLS WHO WORKS FOR THE PERMITTEE MUST PROVIDE DAILY INSPECTIONS OF THE EROSION AND SEDIMENT CONTROLS AND DISCHARGE OUTFALLS.
 - CONSTRUCTION ACTIVITIES MUST AVOID OR MINIMIZE EXCAVATION AND CREATION OF BARE GROUND FROM OCTOBER 1 THROUGH MAY 31ST EACH YEAR.
 - DURING WET WEATHER PERIOD, TEMPORARY STABILIZATION OF THE SITE MUST OCCUR AT THE END OF EACH WORK DAY.
 - SEDIMENT CONTROLS MUST BE INSTALLED AND MAINTAINED ON ALL DOWN GRADIENT SIDES OF THE CONSTRUCTION SITE AT ALL TIMES DURING CONSTRUCTION. THEY MUST REMAIN IN PLACE UNTIL PERMANENT VEGETATION OR OTHER PERMANENT COVERING OF EXPOSED SOIL IS ESTABLISHED.
 - ALL ACTIVE INLETS MUST HAVE SEDIMENT CONTROLS INSTALLED AND MAINTAINED AT ALL TIMES DURING CONSTRUCTION. UNLESS OTHERWISE APPROVED, A SURFACE MOUNTED AND ATTACHABLE, U-SHAPED FILTER BAG IS REQUIRED FOR ALL CURB INLET CATCH BASINS.
 - SIGNIFICANT AMOUNTS OF SEDIMENT THAT LEAVES THE SITE MUST BE CLEANED UP WITHIN 24 HOURS AND PLACED BACK ON THE SITE AND STABILIZED OR PROPERLY DISPOSED. THE CAUSE OF THE SEDIMENT RELEASE MUST BE FOUND AND PREVENTED FROM CAUSING A RECURRENCE OF THE DISCHARGE WITHIN THE SAME 24 HOURS. ANY IN-STREAM CLEAN UP OF SEDIMENT SHALL BE PERFORMED ACCORDING TO THE OREGON DEPARTMENT OF STATE LANDS REQUIRED TIME FRAME.
 - SEDIMENT MUST NOT BE INTENTIONALLY WASHED INTO STORM SEWERS, DRAINAGE WAYS, OR WATER BODIES.
 - SEDIMENT MUST BE REMOVED FROM BEHIND ALL SEDIMENT CONTROL MEASURES WHEN IT HAS REACHED A HEIGHT OF 1/3-RD THE BARRIER HEIGHT AND PRIOR TO THE CONTROL MEASURES REMOVAL.
 - CLEANING OF ALL STRUCTURES WITH SUMPS MUST OCCUR WHEN THE SEDIMENT RETENTION CAPACITY HAS BEEN REDUCED BY 50% AND AT COMPLETION OF PROJECT.
 - ANY USE OF TOXIC OR OTHER HAZARDOUS MATERIALS MUST INCLUDE PROPER STORAGE, APPLICATION, AND DISPOSAL.
 - THE PERMITTEE MUST PROPERLY MANAGE HAZARDOUS WASTES, USED OILS, CONTAMINATED SOILS, CONCRETE WASTE, SANITARY WASTE, LIQUID WASTE, OR OTHER TOXIC SUBSTANCES DISCOVERED OR GENERATED DURING CONSTRUCTION.
 - THE APPLICATION RATE OF FERTILIZERS USED TO REESTABLISH VEGETATION MUST FOLLOW MANUFACTURER'S RECOMMENDATIONS. NUTRIENT RELEASES FROM FERTILIZERS TO SURFACE WATERS MUST BE MINIMIZED. TIME RELEASE FERTILIZERS SHOULD BE USED AND CARE SHOULD BE MADE IN APPLICATION OF FERTILIZERS WITHIN ANY WATER WAY RIPARIAN ZONE.
 - OWNER OR DESIGNATED PERSON SHALL BE RESPONSIBLE FOR PROPER INSTALLATION AND MAINTENANCE OF ALL EROSION AND SEDIMENT CONTROL MEASURES, IN ACCORDANCE WITH CURRENT CLEAN WATER SERVICES STANDARDS AND STATE, AND FEDERAL REGULATIONS.
 - PRIOR TO ANY LAND DISTURBING ACTIVITIES, THE BOUNDARIES OF THE CLEARING LIMITS, VEGETATED BUFFERS, AND ANY SENSITIVE AREAS SHOWN ON THIS PLAN SHALL BE CLEARLY DELINEATED IN THE FIELD. UNLESS OTHERWISE APPROVED, NO DISTURBANCE IS PERMITTED BEYOND THE CLEARING LIMITS. THE OWNER/PERMITTEE MUST MAINTAIN THE DELINEATION FOR THE DURATION OF THE PROJECT. NOTE: VEGETATED CORRIDORS TO BE DELINEATED WITH ORANGE CONSTRUCTION FENCE OR APPROVED EQUAL.
 - PRIOR TO ANY LAND DISTURBING ACTIVITIES, THE BMPs THAT MUST BE INSTALLED ARE GRAVEL CONSTRUCTION ENTRANCE, PERIMETER SEDIMENT CONTROL, AND INLET PROTECTION. THESE BMPs MUST BE MAINTAINED FOR THE DURATION OF THE PROJECT.
 - IF VEGETATIVE SEED MIXES ARE SPECIFIED, SEEDING MUST TAKE PLACE NO LATER THAN SEPTEMBER 1ST; THE TYPE AND PERCENTAGES OF SEED IN THE MIX ARE AS IDENTIFIED ON THE PLANS OR AS SPECIFIED BY THE DESIGN ENGINEER.
 - WATERTIGHT TRUCKS MUST BE USED TO TRANSPORT SATURATED SOILS FROM THE CONSTRUCTION SITE. AN APPROVED EQUIVALENT IS TO DRAIN THE SOIL ON SITE AT A DESIGNATED LOCATION USING APPROPRIATE BMPs; SOIL MUST BE DRAINED SUFFICIENTLY FOR MINIMAL SPILLAGE.
 - ALL PUMPING OF SEDIMENT LADEN WATER MUST BE DISCHARGED OVER AN UNDISTURBED, PREFERABLY VEGETATED AREA, AND THROUGH A SEDIMENT CONTROL BMP (I.E. FILTER BAG).
 - THE ESC PLAN MUST BE KEPT ONSITE. ALL MEASURES SHOWN ON THE PLAN MUST BE INSTALLED PROPERLY TO ENSURE THAT SEDIMENT LADEN WATER DOES NOT ENTER A SURFACE WATER SYSTEM, ROADWAY, OR OTHER PROPERTIES.
 - THE ESC MEASURES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE MEASURES SHALL BE UPGRADED AS NEEDED TO MAINTAIN COMPLIANCE WITH ALL REGULATIONS.
 - WRITTEN ESC LOGS ARE SUGGESTED TO BE MAINTAINED ONSITE AND AVAILABLE TO DISTRICT INSPECTORS UPON REQUEST.
 - IN AREAS SUBJECT TO WIND EROSION, APPROPRIATE BMPs MUST BE USED WHICH MAY INCLUDE THE APPLICATION OF FINE WATER SPRAYING, PLASTIC SHEETING, MULCHING, OR OTHER APPROVED MEASURES.
 - ALL EXPOSED SOILS MUST BE COVERED DURING WET WEATHER PERIOD.

STANDARD EROSION CONTROL NOTES FOR SITES LESS THAN 1 ACRE
 DRAWING NO. 945 REVISED 12-16

LETTER HEIGHTS ON STREET NAME SIGNS (REFER TO MUTCD TABLE 2D-2)

Mounting Type	Street & Highway Type	Speed Limit	Sign Height (in.)	Recommended Minimum Letter Height (in.)		
				Initial Uppercase	Lowercase	Prefix/Suffix
Overhead	All Types	All Speed Limits	A	B	C	D
			24	12 **	9 **	9 **
Post	Multi - Lane	More Than 40 MPH	18	8	6	6
Post	Multi - Lane	40 MPH or Less	12	6	4.5	4.5
Post	2 - Lane	All Speed Limits	12 *	6*	4.5 *	4.5 *

* On local 2-Lane Streets With Speed Limits of 25 MPH or Less, 8" Blank With 4" Initial Upper-Case Letters And 3" Lower-Case Or Prefix/Suffix Letters May Be Used.
 ** For Dual Stacked Overhead Signs Or Overhead Signs Where Standard Letter Heights Yield Sign Sizes Longer Than 12' In Length, 8" Initial Upper-Case with 6" Lower-Case Or Prefix/Suffix Letters Shall Be Used.



- Street Name Signs:
- It is the contractors responsibility to verify the final street names with the County Survey Office at (503) 846-8723 before ordering and installing street name signs.
 - Street name signs for intersecting streets shall be designed to the standard for the approaching road
 - Post mounted street name signs shall be two (2) sided, without borders and be installed on top of post with special brackets, unless they meet the following conditions:
 - Any street name sign 48" or greater in length or 12" or greater in height will need to be single-sided and riveted to the post. Double-sided signs with brackets are not allowed for larger sign sizes.
 - Overhead street name signs shall be one (1) sided, without borders and be installed with Pelco brackets or equivalent banding type adjustable brackets.
 - Spacing between words or between words and sign edges should be approximately 3/4 of the upper case letter height.
 - All street name sign text, excluding superscript (top justified), shall be center justified type C font, unless street name sign is longer than 5.5 ft, then use font B and contact Traffic Engineering for sign design approval.
 - Common abbreviations : use MUTCD table 1A-1, with these exceptions:
 Ave=Avenue; Lp=Loop; Way=Way

WASHINGTON COUNTY DEPARTMENT OF LAND USE & TRANSPORTATION ENGINEERING SECTION

STREET NAME SIGNS

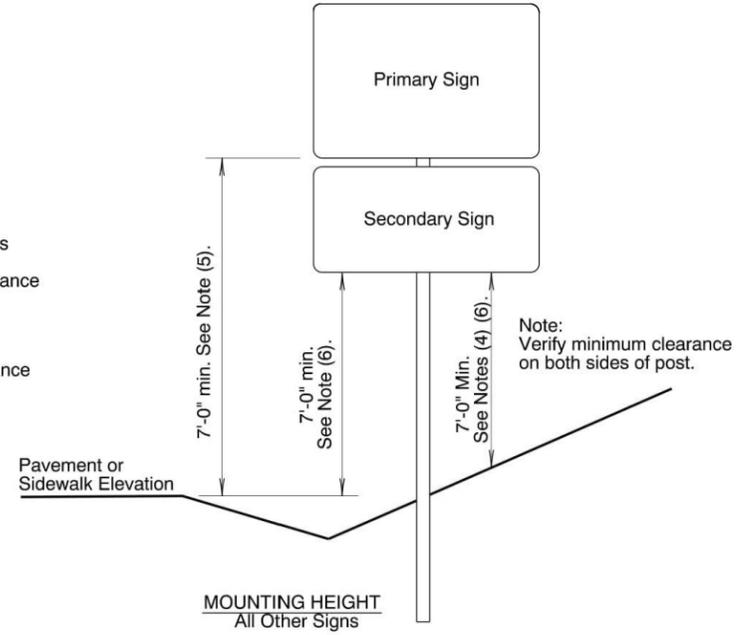
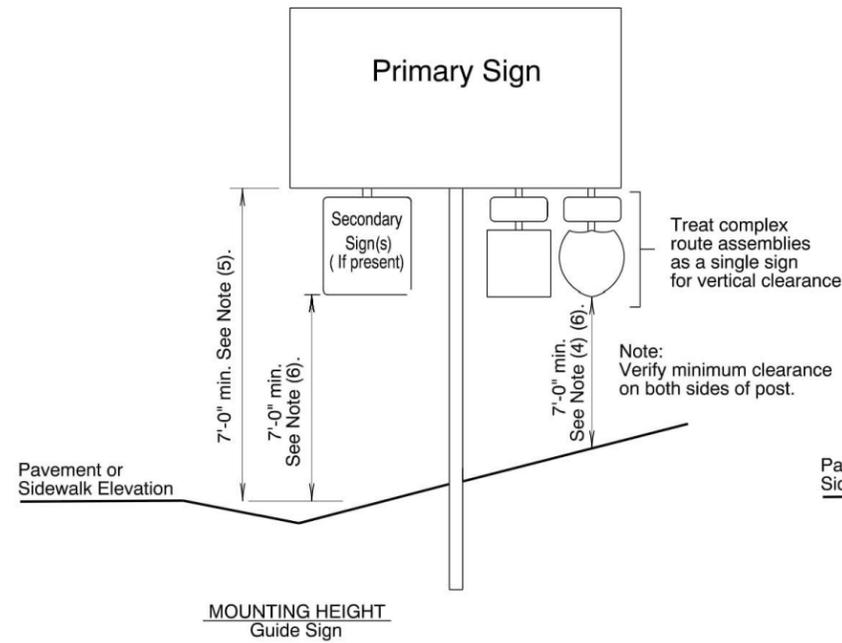
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ORIGINAL PLANS 11x17

#	DATE	REVISION	APP'D

Submission Date: 05/15/2025
 Drawn: JCH Designed: DPB Checked: AMR
 PROJECT NO. 729ST
 SW SUNSET BLVD & SW TIMBREL LN INTERSECTION IMPROVEMENT
 SHEET NO. 2A-32

Plot Stamp: 5/7/2025 2:56:41 PM - Daniel Bowers
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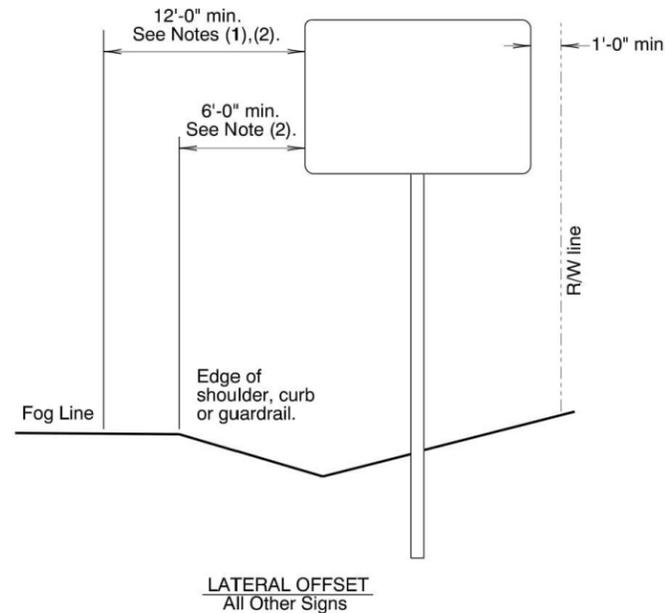
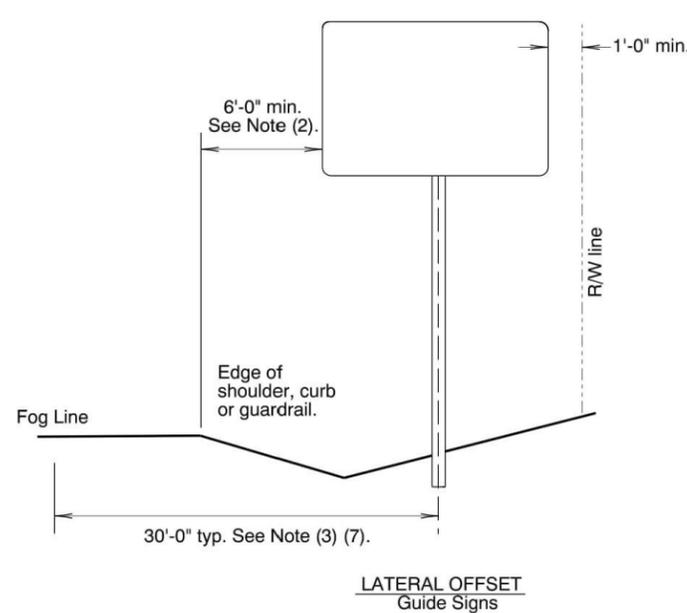


General Installation Notes:

- Signing details shown on this sheet are intended to convey "typical" conditions only. Individual locations may require installation different from those shown. For guidance regarding unique installations or exceptions call the Project Sign Designer or Region Traffic Section.
- Locate breakaway supports away from ditches to avoid problems with erosion, corrosion, debris, maintenance and breakaway performance. See Dwg. No. TM635 for more information.
- For wood post support details see Dwg. No. TM670.
- For perforated steelsquare tube support details see Dwg. No. TM681.
- For triangular base breakaway support details see Dwg. No. TM602.
- For multi-post breakaway support details see Dwg. No. TM600.
- Mounting heights should not be more than 3 inches more than the minimum heights shown, where practical.
- 2" vertical spacing between all signs.

Notes:

- 6' minimum if behind barrier.
- 2' minimum if restricted R/W.
- 20' for ramp terminals.
- 8' minimum if bicycle path underneath.
- 8' minimum if secondary signs attached.
- 5' minimum if outside clearzone, in rural areas and no pedestrians underneath.
- For multi-post installations measure distance from post closest to roadway.



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 first consulting a Registered Professional Engineer.

All materials shall be in accordance with the current Oregon Standard Specifications.

OREGON STANDARD DRAWINGS

SIGN INSTALLATION DETAILS

2024

DATE	REVISION	DESCRIPTION
01/22		Edited elevation text in Mounting Height details

CALC. BOOK NO. N/A SDR DATE 07 JAN 2022 **TM200**

Effective Date: December 1, 2024 – May 31, 2025

ORIGINAL PLANS 11x17



EXPIRES: 12/31/2026

#	DATE	REVISION	APP'D

Submission Date: 05/15/2025
 Drawn: JCH Designed: DPB Checked: AMR

PROJECT NO. 729ST

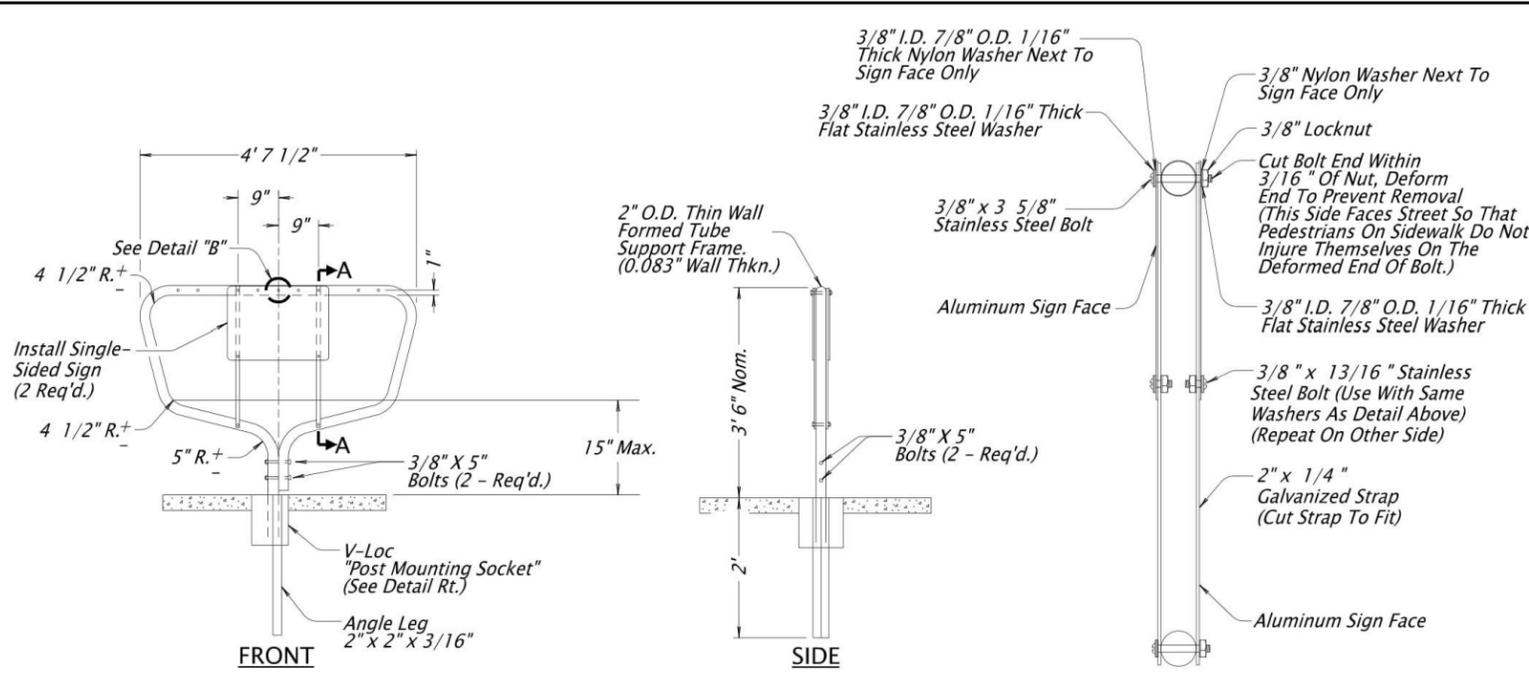
SW SUNSET BLVD & SW TIMBREL LN
 INTERSECTION IMPROVEMENT

DETAILS

SHEET NO. 2A-33

9-JUL-2024

TM240.dgn

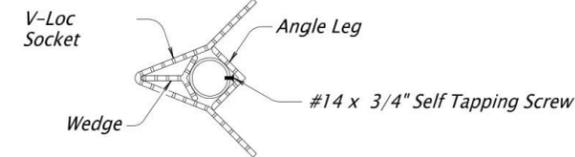


CROSSWALK CLOSURE SUPPORT DETAIL



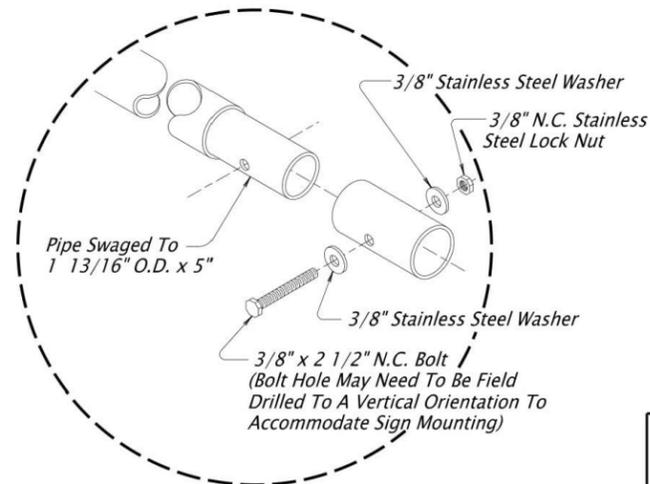
SIGN DETAIL
OR22-7
24" x 18"

Drill 3/8" Dia. Bolt Hole At Each Corner Where Needed.



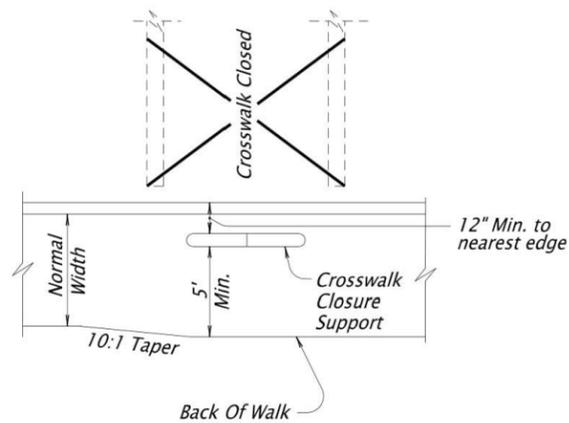
POST MOUNTING SOCKET
For Additional Details See Standard Drg. No. RD100

NOTE:
Care Shall Be Taken That No Concrete Is Placed Within Mounting Socket.



DETAIL "B"

- GENERAL NOTES:**
- All Holes In The Tube Support Frame To Be Predrilled By The Manufacturer. (1/32" Larger Than Mounting Bolt)
 - Pipe Swaged By The Manufacturer.



PLAN VIEW

Align support perpendicular to the closed unmarked crosswalk or as shown in plan.
See RD913, RD920 and RD932 for additional closure support placement details.

Effective Date: December 1, 2024 – May 31, 2025

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 first consulting a Registered Professional Engineer.

All materials shall be in accordance with the current Oregon Standard Specifications.	
OREGON STANDARD DRAWINGS	
2024	
DATE	REVISION DESCRIPTION
07/2024	Amended Plan View and Crosswalk Closure Support Detail
CALC. BOOK NO.	SDR DATE
N/A	9-JUL-2024
TM240	

ORIGINAL PLANS 11x17



EXPIRES: 12/31/2026

#	DATE	REVISION	APP'D

Submission Date:	05/15/2025
Drawn:	JCH
Designed:	DPB
Checked:	AMR

PROJECT NO.
729ST

SW SUNSET BLVD & SW TIMBREL LN
INTERSECTION IMPROVEMENT

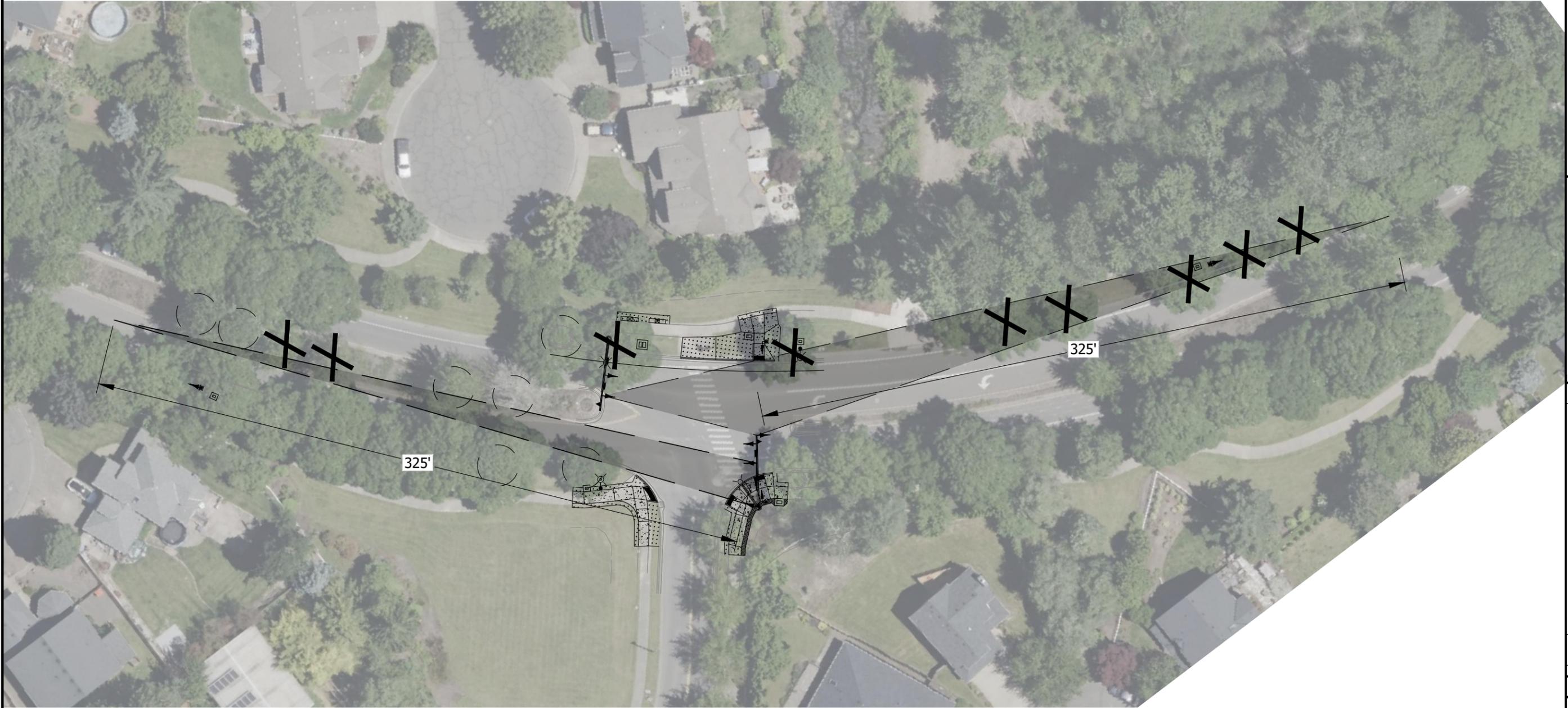
DETAILS

SHEET NO.
2A-34



KITTELSON & ASSOCIATES

610 SW ALDER STREET, SUITE 700
 PORTLAND, OR 97205
 P 503.228.5230 F 503.273.8169



LEGEND

X TREES TO BE REMOVED TO OBTAIN NECESSARY SIGHT DISTANCE TO PROPOSED PHB. TREE REMOVAL PENDING SIGNAL INSTALLATION AND VISIBILITY. CONFIRM WITH ENGINEER PRIOR TO REMOVING.

TREES TO BE TRIMMED TO 7' CLEAR OVER SIDEWALK AND 17' CLEAR OVER ROAD

SIGNAL HEAD SIGHT DISTANCE TRIANGLE



Scale: 1" = 50'



#	DATE	REVISION	APP'D

Submission Date: 05/15/2025
 Drawn: JCH Designed: DPB Checked: AMR

PROJECT NO. 729ST

ORIGINAL PLANS 11x17



EXPIRES: 12/31/2026

SW SUNSET BLVD & SW TIMBREL LN
 INTERSECTION IMPROVEMENT
 LANDSCAPING PLAN

SHEET NO. 2B



KITTELSON & ASSOCIATES
 610 SW ALDER STREET, SUITE 700
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#	DATE	REVISION	APP'D

Submission Date: 05/15/2025
 Drawn: JCH, Designed: DPB, Checked: AMR
 PROJECT NO. 729ST

SW SUNSET BLVD & SW TIMBREL LN INTERSECTION IMPROVEMENT
 STREET PLANS
 SHEET NO. 4

LEGEND

- TURNING SPACE (2% FINISHED SURFACE SLOPE FOR CROSS AND RUNNING SLOPE)
- TRUNCATED DOME DETECTABLE WARNING SURFACE (CAST IN PLACE) PER ODOT STD. RD902 & RD904, SHT. 2A-4 & 2A-5
- CONCRETE SIDEWALK PER COS DWG. RD-26, SHT. 2A-2
- PROPOSED 4" TOPSOIL WITH GRASS SEEDING
- PROPOSED 4" BARK MULCH
- SEDIMENT FENCE
- SAWCUT LINE
- CUT LINE
- FILL LINE
- INLET PROTECTION
- TRANSITION PANEL PER ODOT STD. RD722, SHT. 2A-15

- CROSS SLOPE 1.5% MAX. (MAX. 2.0% FINISHED SURFACE SLOPE) (NORMAL SIDEWALK CROSS SLOPE)
- RUNNING SLOPE 4.0% MAX. (MAX. 4.9% FINISHED SURFACE SLOPE)
- RUNNING SLOPE 7.5% MAX. (MAX. 8.3% FINISHED SURFACE SLOPE)
- COUNTER SLOPE 4.0% MAX. ASCENDING OR DESCENDING (MAX. 5.0% FINISHED SURFACE SLOPE) (SLOPE AS REQUIRED FOR DRAINAGE)
- FLARE SLOPE (MAX. 10% FINISHED SURFACE SLOPE)
- RUNNING SLOPE IS GREATER THAN 8.33% AND MAXIMIZED AT 15'

ABBREVIATION

- RX.XX = RADIUS
- LX.XX = LINE LENGTH
- CX.XX = CURVE LENGTH

SIGN LEGEND



R10-6A
24"X36"

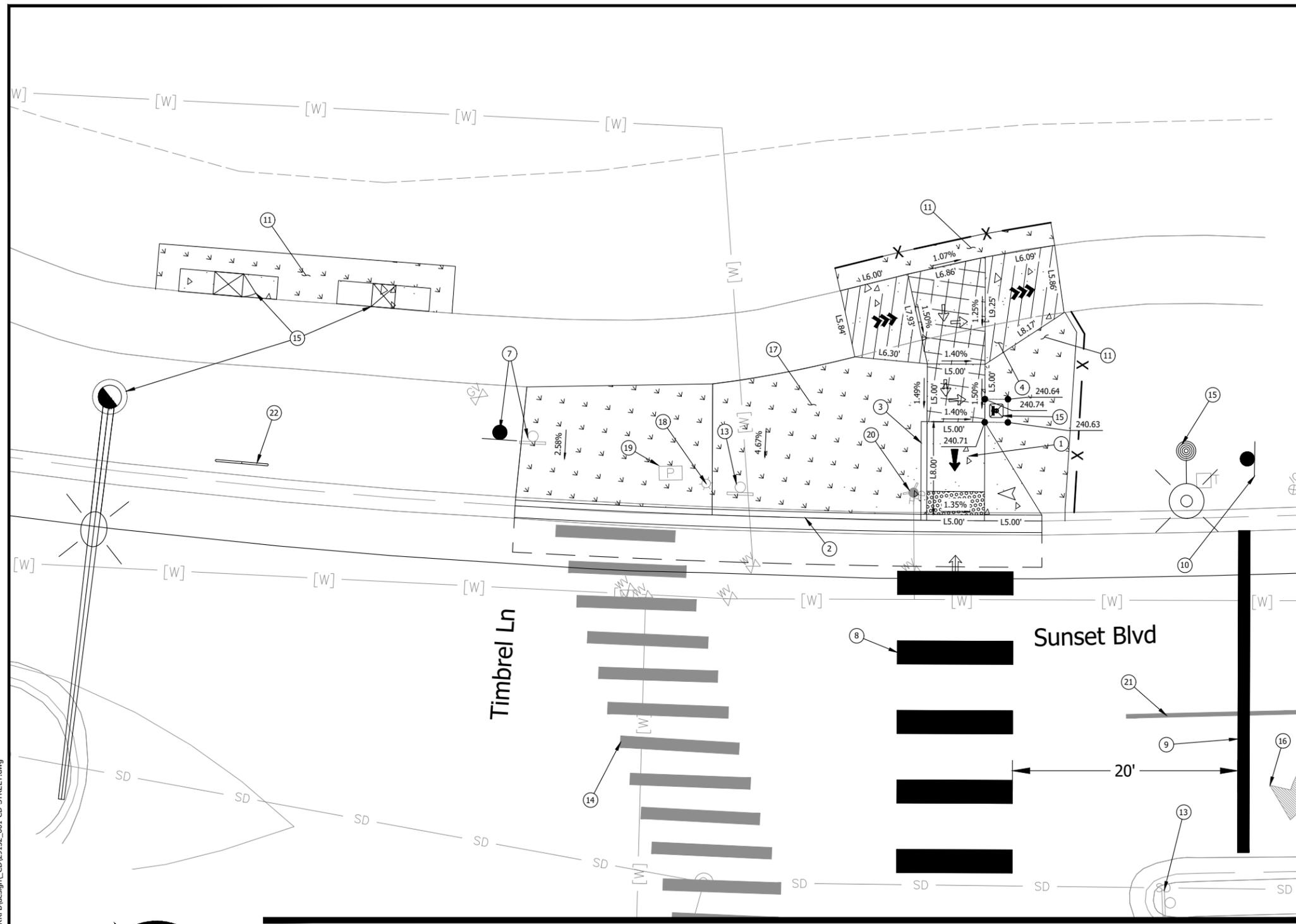
CONSTRUCTION NOTES

1. CONSTRUCT PERPENDICULAR CURB RAMP SEE ODOT STD. DWG. RD910 & RD912 AND CITY OF SHERWOOD STD. DWG. RD-44, SHTS. 2A-2, 2A-6, & 2A-7
2. CONSTRUCT CURB & GUTTER SEE CITY OF SHERWOOD STD. DWG. RD-22, SHT. 2A-1
3. CONSTRUCT VERTICAL CURB SEE CITY OF SHERWOOD STD. DWG. RD-21, SHT. 2A-1
4. CONSTRUCT PCC CONCRETE SIDEWALK, SEE CITY OF SHERWOOD STD. DWG. RD-26, SHT. 2A-2
5. NOTE NOT USED
6. NOTE NOT USED
7. RELOCATE EXISTING TRAFFIC CONTROL SIGN ASSEMBLY (BY OTHERS)
8. INSTALL CONTINENTAL CROSSWALK SEE ODOT STD. DWG. TM503, SHT. 2A-20
9. INSTALL STOP BAR SEE CITY OF SHERWOOD STD. DWG. S-3, SHT. 2A-3
10. INSTALL R10-6A SIGN "STOP HERE ON RED"; SEE ODOT STD. DWG. TM681 & TM687, SHT. 2A-22 & 2A-23
11. INSTALL SEED IN DISTURBED AREA
12. NOTE NOT USED
13. REMOVE EXISTING SCHOOL XING SIGN ASSEMBLY
14. REMOVE EXISTING STRIPING - 200 SF SEE SIGNAL PLANS
15. PROTECT AND MAINTAIN EXISTING PAVEMENT MARKINGS
16. REMOVE EXISTING SURFACING INSTALL 4" TOPSOIL WITH GRASS SEED. REPAIR ANY DAMAGED IRRIGATION
17. REMOVE EXISTING DECORATIVE LIGHT POLE AND RETURN TO SHERWOOD MAINTENANCE FACILITY. COORDINATE WITH CITY PUBLIC WORKS DIRECTOR. PULL WIRES TO NEAREST JUNCTION BOX AND CAP. FOUNDATION TO BE ABANDONED IN PLACE.
18. PROTECT AND MAINTAIN EXISTING UTILITY BOX
19. EXISTING FIRE HYDRANT TO REMAIN SHAPE CONCRETE TO MATCH CURB
20. REMOVE EXISTING PAVEMENT MARKINGS BACK TO PROPOSED STOP BAR (DIAMOND GRIND)
21. INSTALL CROSSWALK CLOSURE SIGN SEE ODOT STD DWG TM240, SHT 2A-34

ORIGINAL PLANS 11x17



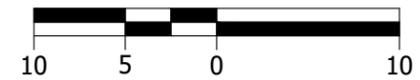
EXPIRES: 12/31/2026



MATCH LINE - SEE SHEET 3



Scale: 1" = 10'



GENERAL NOTES

1. Contractor to contact Engineer/Inspector for form inspection prior to pouring concrete.
2. For typical pavement section, see Sht. 3.

Plot Stamp: 5/17/2025 2:57:17 PM - Daniel Bowers
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LEGEND

CONTROLLERS & CABINETS (AGENCY SUPPLIED)

- C ATC** Install Intelight model YCT-207LDX ATC controller with latest version of MaxTime Software.
- 332S** Install model 332S cabinet (with C11 harness wired in for 40 detector inputs) and controller equipment with riser frame, orient louvered door as shown.
- BMCL** Install Base Mounted Service Cabinet, 100 amp, 120/240 volt metered, for signal and illumination systems. See Oregon Standard Dwg. TM482 and TM485, Sht. 2A-18 & 2A-19. See this sheet for BMCL service breaker schedule.

POLES (AGENCY SUPPLIED)

- MA L** Install (L=length) foot traffic signal mast arm.
- LA L** Install (L=length) foot luminaire arm.
- WSM T** Install Type (T = Type) Washington County standard traffic signal mast arm pole, as per County Standard Drawing Nos. 6911 thru 6913 and 6921 thru 6922, Shts. 2A-26 thru 2A-30.
- PP N** Install pedestrian signal pedestal with frangible base on (N=number) foundation. See Oregon Standard Dwg. TM457 for details, Sht. 2A-12.
- LPN** Install light pole (N=number) per COS Standard Drawing RD-57, Sht. 2A-3, and Washington County Standard Detail 6820, Sht. 2A-24. See Light Pole and Luminaire Schedule on this sheet for details.
- AB N** Install actuated flashing beacon assembly: School + Speed Feedback & with (N = number) backside vehicle signal (See Sht. TS4 for Details)

JUNCTION BOXES AND HAND HOLES

- JB 2A** Install 13"x24"x18" (min. dimension) precast concrete junction box with concrete apron. See Wash. Co. Standard Detail 6831, Sht. 2A-25.
- JB 3A** Install 17"x30"x18" (min. dimension) precast concrete junction box with concrete apron. See Wash. Co. Standard Detail 6831, Sht. 2A-25.
- JB 3/TA** Install tandem 17"x30"x18" (min. dimension) precast concrete junction box with concrete apron. See Wash. Co. Standard Detail 6831, Sht. 2A-25.

SIGNALS (AGENCY SUPPLIED)

- V Ph** Install phase (Ph=phase) vehicle signal with 2" fluorescent yellow reflective sheeting, ASTM type 9, see Oregon Standard Dwg. TM460 (Sht. 2A-13) and below Type 10 signal head detail.
- C/A Ph** Install phase (Ph=phase) countdown pedestrian signal with clamshell mount and audible Polara 3-wire APS pushbutton with mount.

LUMINAIRES (AGENCY SUPPLIED)

- 85 LED** Install Cobra Head L.E.D. luminaire, 85 watt, 3000K (GCL1-60G-MV-WW-2S-XX-450S).
- 87 LED** Install Hadco Westbrooke L.E.D. luminaire, 87 watt, 3000K (CXF14-64-G3-2-730-3).
- PE** Install photoelectric control relay on fixture.

FIRE PREEMPTION

- FF Ch** Install channel (Ch=channel) fire preemption detector feeder cable.
- FN Ch** Install channel (Ch=channel), (Number) barrel fire preemption detector unit. (Agency Supplied)

CONDUITS

- S** Install (S=size) inch electrical conduit.
- W** Install approx. 200' conduit and wiring to the power source as required by Portland General Electric. Location of power source to be coordinated with PGE.
- HDD** Install conduit by horizontal directional drilling. Open trench not allowed.

SIGNS

- SNS N** Install new aluminum street name sign (N = number), see Washington County detail 6511 (overhead mounting type) on Sht. 2A-32 and details on this sheet.
- AL 21** Install aluminum (24" X 30") 'CROSSWALK, STOP ON RED' sign (R10-23)

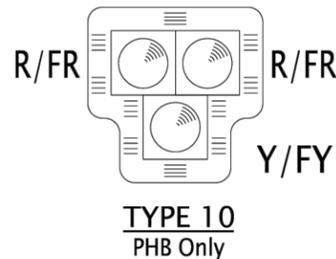
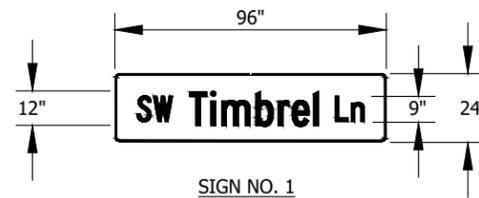
WIRES & CABLES

- PE 3 12** Install 3 No. 12 AWG Type XHHW Wires for Photoelectric Control Relay. Wires shall be White, Red, and Black.
- N G** Install (N=number) No. (G=AWG wire size) XHHW wires
- N-C** Install (N=number) No. 8 AWG THWN (Signal System Common).
- X-N G** Install (X=number of cables) control cables with (N=number) AWG No. (G=AWG wire size) conductors
- PL** Install poly pull line per ODOT QPL.
- LW** Install No. 16 AWG TFFN Stranded Copper Wire with Orange Base and Blue Tracer as Locate Wire

SIGNAL HEAD TYPES
10 = 12" R/FR + 12" R/FR, 12" Y/FY (PHB)

SIGNAL MOUNTING OPTIONS
B = Adjustable signal bracket assembly w/rain cap(s)
(Install 1 inch metallic chase nipple)

SIGN MOUNTING OPTIONS
AB = Adjustable sign bracket assembly w/rain cap(s)



GENERAL NOTES

- All materials and workmanship shall conform to the Project Special Provisions, Project Plans, Washington County Road Design and Construction Standards, the 2024 Oregon Standard Specifications for Construction, and the Washington County and Oregon Standard Drawings listed below.
- The contractor shall supply all equipment, materials, and labor required for the signal operations shown on this plan. All signal control equipment shall be tested at the ODOT signal lab in Salem at the contractors expense per specification, inclusive of latest version of Intelight MaxTime Controller software.
- The contractor shall verify the locations of existing utilities and coordinate this work with the utility companies/agencies to eliminate any conflicts.
- The contractor shall coordinate work with PGE for power service connection. The contractor shall install conduit and wiring to the power source as required by PGE. The Contractor shall coordinate with PGE (Service Desk, 503-323-6700) for all power requirements. Reference PGE job number M5647909.
- The engineer shall field verify the location of all signal equipment before installation.
- Washington County will provide signal field testing services at the contractor's expense.
- Equipment submittals and pole drawings shall be provided to City of Sherwood by the contractor after an initial review has been completed by the project engineer. City of Sherwood approval of these submittals must be obtained prior to construction.
- For each leg of the intersection affected by the signal, install a "New Traffic Pattern Ahead" sign on orange background approximately 200' in advance of the "Next Signal" sign. Keep "New Traffic Pattern Ahead" signs in place 30-days after signal activation. Removal after 30-days is incidental to original installation.
- Accompanied by City of Sherwood Standard Drawing RD-57, Washington County Standard Drawings: 6511, 6820, 6830, 6831, 6911, 6912, 6913, 6921, 6922, and Oregon Standard Drawings: TM450, TM457, TM460, TM462, TM467, TM470, TM471, TM482, TM485 and TM679. See Details series.
- Powder coat all signal equipment including signal poles, mast arms, luminaire arms, pedestrian poles, terminal cabinets, controller cabinets, and service cabinets. See Special Provisions Section 00593.
- Remove existing school flashers on East and West sides of project. Coordinate with City Staff and PGE prior to removal.

BMCL SERVICE BREAKER SCHEDULE

CIRCUIT	BREAKER RATING	CONTACTOR SIZE
MAIN	100A DPST	N/A
SIGNAL CABINET	60A SPST	N/A
SPEED FEEDBACK SIGNS	30A DPST	N/A
STREET LIGHTING	30A DPST	30A
PHOTOCELL / TEST SWITCH	15A SPST	N/A
SPARE	30A DPST	30A
SPARE	30A DPST	30A

ENHANCED CROSSING LIGHT LEVELS					
CROSSING	CLASSIFICATION	PAVEMENT TYPE	PEDESTRIAN CONFLICT AREA	Average Vertical Light Level (fc)	Uniformity Avg./Min. (fc)
SW SUNSET BLVD	Arterial	ASPHALT	RECOMMENDED	>1.5	<3.0
			DESIGN	1.5	1.5
EAST CROSSING (Vertical, EB)	Arterial	ASPHALT	RECOMMENDED	>1.5	<3.0
			DESIGN	2.2	3.6
EAST CROSSING (Vertical, WB)	Arterial	ASPHALT	RECOMMENDED	>1.5	<3.0
			DESIGN	2.3	3.3

LIGHT POLE AND LUMINAIRE SCHEDULE															
POLE NUMBER	ROADWAY	NORTHING	EASTING	POLE STYLE	BREAKAWAY DEVICE REQUIRED	MOUNTING HEIGHT	ARM LENGTH	FIXTURE STYLE	LUMINAIRE				BUG RATING	LIGHT LOSS	PGE SCHEDULE AND OPTIONS
									WATT	TYPE	INITIAL LUMENS	DISTRIBUTION			
LP1	SW SUNSET BLVD	7594477.71	622617.1	SEE COS DWG RD-57	NO	22'	4'	WESTBROOKE	87	LED	9,249	Type 2	B1-U0-G2	0.85	32
LP2	SW SUNSET BLVD	7594359.48	622621.3	SEE COS DWG RD-57	NO	22'	4'	WESTBROOKE	87	LED	9,249	Type 2	B1-U0-G2	0.85	32

ORIGINAL PLANS 11x17

REGISTERED PROFESSIONAL ENGINEER
60404PE
Digitally Signed
ANTHONY M. ROOS
JUL 15, 2003
OREGON
EXPIRES: 12/31/2026

City of Sherwood Oregon

KITTELSON & ASSOCIATES
610 SW ALDER STREET, SUITE 700
PORTLAND, OR 97205
P 503.228.5230 F 503.273.8169

REVISION # DATE

Submission Date: 05/15/2025

Drawn: JCH Designed: DPB Checked: AMR

PROJECT NO. 729ST

SW SUNSET BLVD & SW TIMBRE LN INTERSECTION IMPROVEMENT

SIGNAL PLANS

SHEET NO. TS1

Plot Stamp: 5/12/2025 10:27:25 AM - Daniel Bowers
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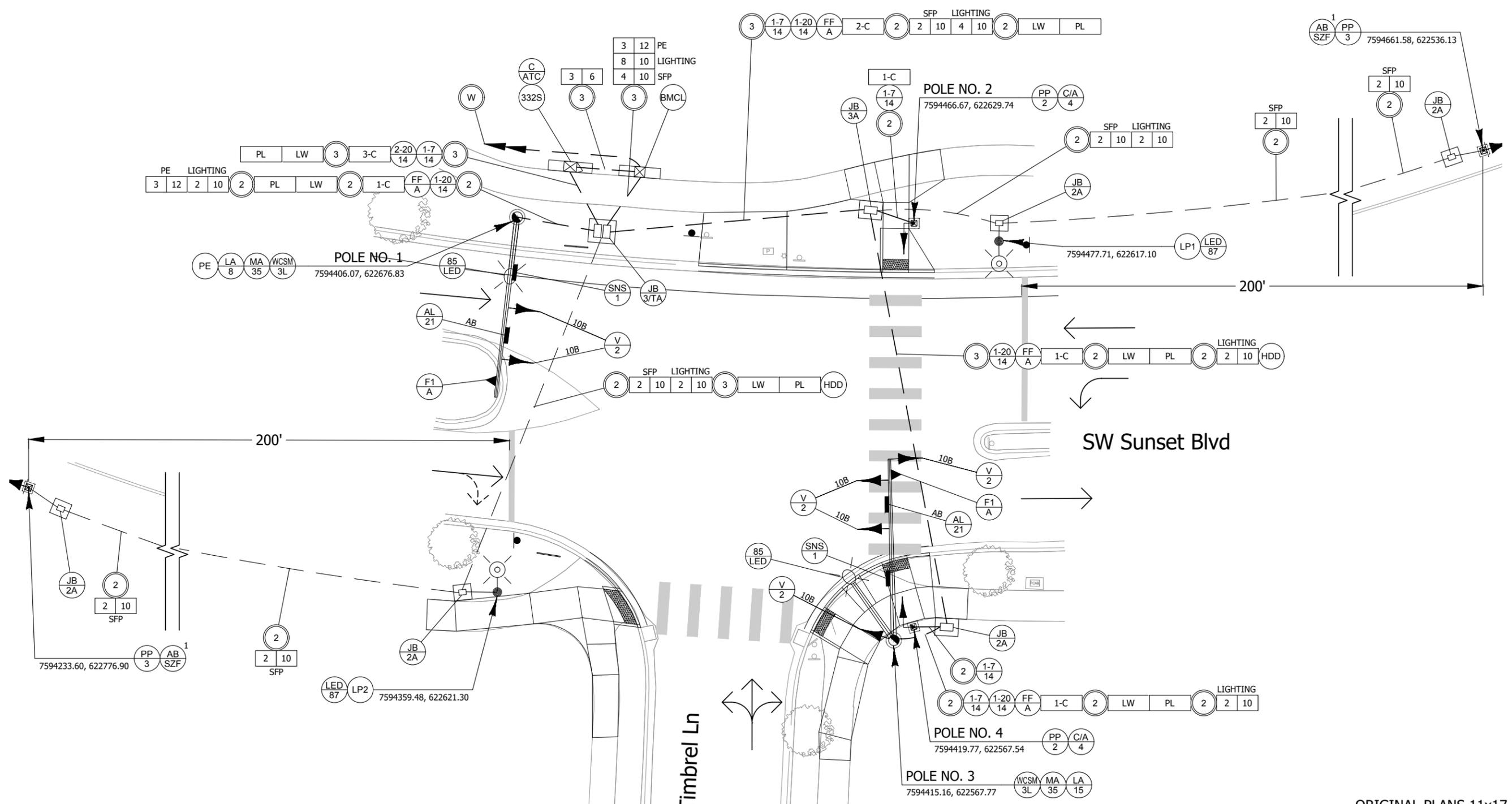


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#	DATE	REVISION	APP'D

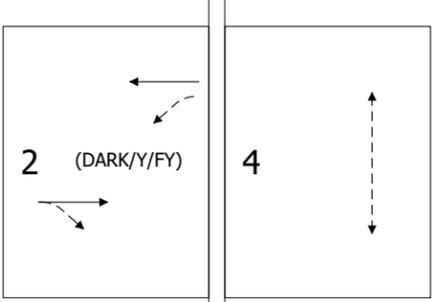
Submission Date: 05/15/2025
 Drawn: JCH Designed: DPB Checked: AMR
 PROJECT NO. 729ST

SW SUNSET BLVD & SW TIMBREL LN INTERSECTION IMPROVEMENT
 SIGNAL PLANS
 SHEET NO. TS2



General Notes

1. See sheet TS1 for Legend
2. Power source to be coordinated and confirmed prior to construction.
3. Field verify measurements before construction.
4. Arrows are representative of traffic direction only.
5. Powder coat all signal equipment including signal poles, mast arms, luminaire arms, pedestrian poles, terminal cabinets, controller cabinets, and service cabinets. See Special Provisions Section 00593.
6. All work on this sheet to be covered under pay item 00990.



NORMAL PHASE ROTATION

DESIGN APPROACH SPEEDS

STREET	DESIGN SPEED
SW Sunset Blvd	35 MPH
SW Timbrel Ln	25 MPH

ORIGINAL PLANS 11x17



EXPIRES: 12/31/2026

Plot Stamp: 5/12/2025 4:27:44 PM - Daniel Bowers
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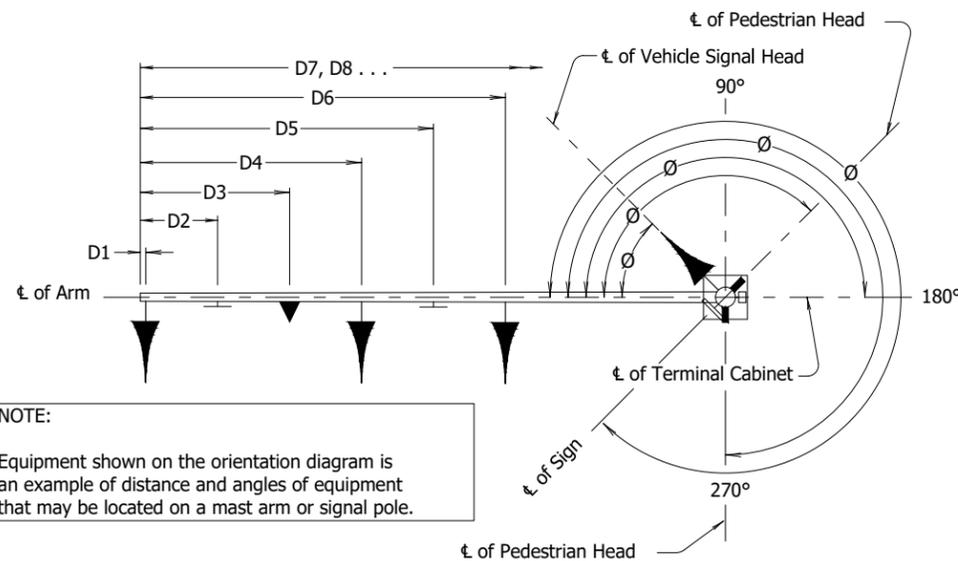
POLE ENTRANCE CHART

POLE NO.	SHT NO.	TYPE	EQUIPMENT ON POLE								EQUIPMENT ON MAST ARM (Length in Feet and Equipment Type)										LUMINAIRES				FOUNDATION INFORMATION				
			PED. SIGNAL DEG.	PUSH-BUTTON DEG.	TERM. CABINET DEG.	SIGN DEG.	TRAFFIC SIGNAL DEG.	PHOTO CELL DEG.	FIRE PRE-EMPTION	PTZ CAM.	ARM LENGTH	D 1	D 2	D 3	D 4	D 5	D 6	D 7	D 8	D 9	D 10	(Length in Feet)				STANDARD FOOTING TYPE *			
																						ARM LENGTH	ARM DEG.	MOUNT HEIGHT	TYPE		DISTRIBUTION	NUMBER OF LEDS	WATTS
1	TS2	WCSM3L	-	-	180	-	-	180	-	35'	3.0 F	7.0 V10	12.0 SA	17.0 V10	24.0 SNS	-	-	-	-	-	12	0	30	LED	TYPE 2	60	85	10,839	WCSM3L
2	TS2	PP/2	310	310	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Ped. 2
3	TS2	WCSM3L	-	-	0	-	270	-	35'	0.5 V10	3.0 F	4.0 V10	9.0 SA	14.0 V10	23.0 SNS	-	-	-	-	-	15	315	30	LED	TYPE 2	60	85	10,839	WCSM3L
4	TS2	PP/2	305	305	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Ped. 2	

* See Oregon Std Dwg TM457 for pedestal foundation details.
See Wash Co Std Dwgs 6921 and 6922 for traffic signal mast arm foundation details.

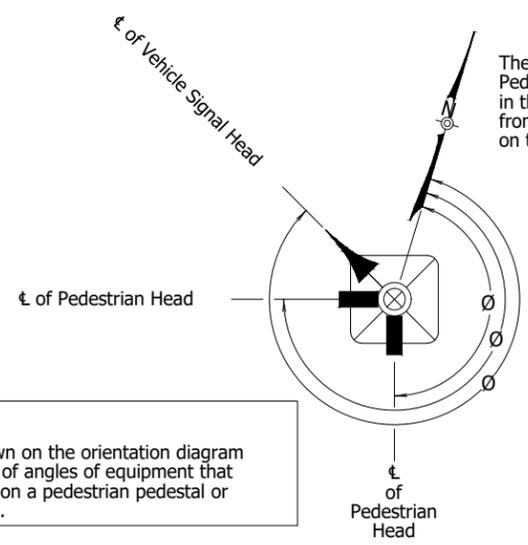
BRACKET MOUNT:
V10 = Traffic Signal Type 10, Adjustable Bracket Mount Tenon Not Required (See Std Dwg. TM460 & TM462)

MISC ITEMS:
F = Fire Preemption (See Std Dwg TM450)
SNS = Street Name Sign, Aluminum (See Std. Dwg. TM679)
SA = Sign, 24" X 30" Aluminum with Adjustable Bracket Mount (See Std. Dwg. 465)



NOTE:
Equipment shown on the orientation diagram is an example of distance and angles of equipment that may be located on a mast arm or signal pole.

MAST ARM POLE ORIENTATION DIAGRAM



NOTE:
Equipment shown on the orientation diagram is a clarification of angles of equipment that may be located on a pedestrian pedestal or vehicle pedestal.

PEDESTRIAN PEDESTAL / VEHICLE PEDESTAL ORIENTATION DIAGRAM

The north arrow shown relates to zero degrees on Pedestrian and Vehicle signal poles. Degrees shown in the pole entrance chart show the degrees clockwise from plan sheet north arrow (zero) to equipment located on the pole.

ORIGINAL PLANS 11x17

REGISTERED PROFESSIONAL ENGINEER
60404PE
Digitally Signed
OREGON
JUL. 15, 2003
ANTHONY M. ROOS
EXPIRES: 12/31/2026



KITTELSON & ASSOCIATES
610 SW ALDER STREET, SUITE 700
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#	DATE	REVISION	APP'D

Submission Date: 05/15/2025
Drawn: JCH, Designed: DPB, Checked: AMR
PROJECT NO. 729ST

SW SUNSET BLVD & SW TIMBREL LN INTERSECTION IMPROVEMENT
SIGNAL DETAILS
SHEET NO. TS3

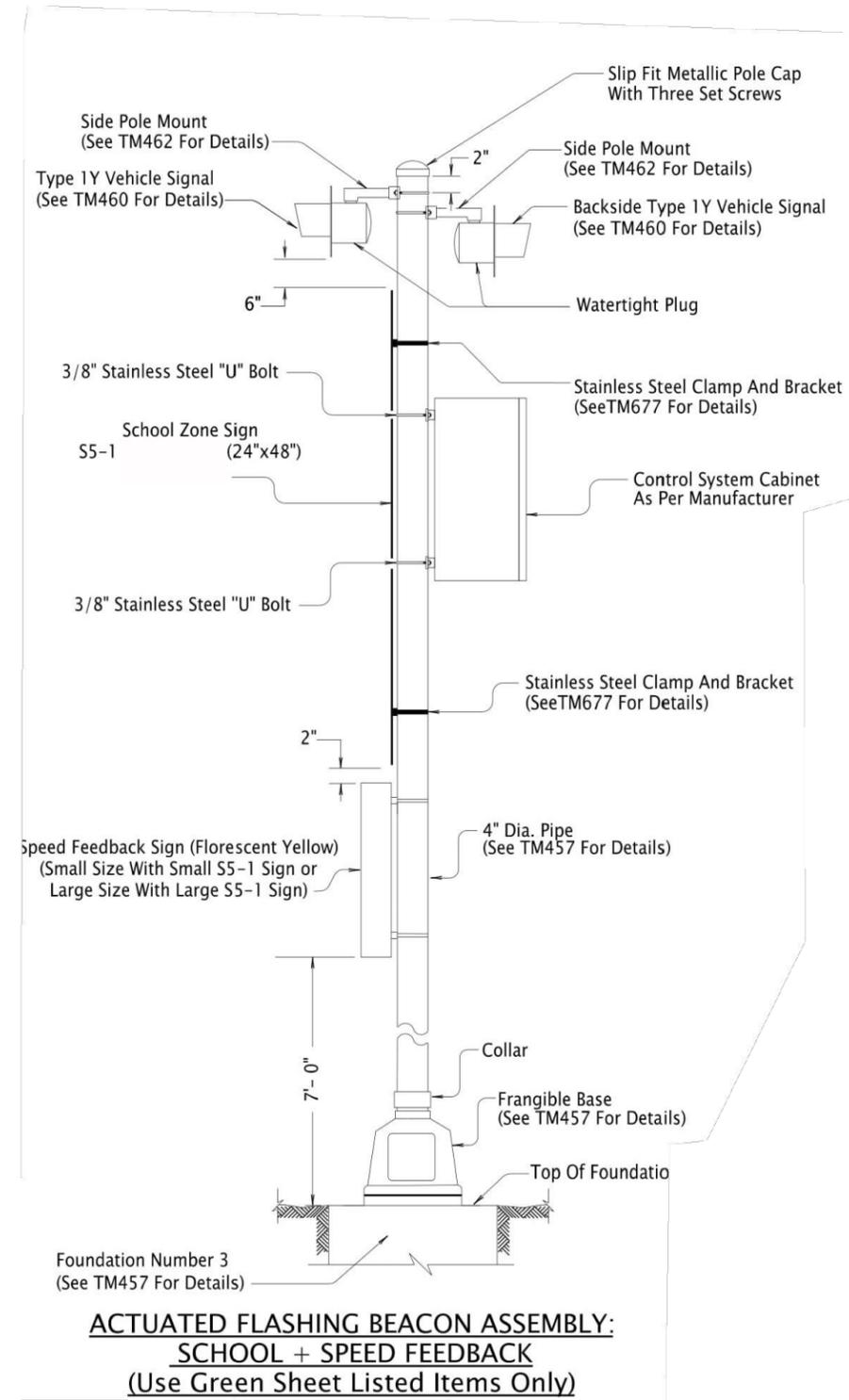
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File: H:\29\29152 - Sunset_Timbreln Ped Crossing\001 - Sunset_Timbreln RRFByDesign\CD\29152_001-CD-SIGNAL.dwg

GENERAL NOTES

1. EXISTING SPEED SIGNS SHALL NOT BE REMOVED UNTIL NEW UNITS ARE OPERATIONAL.
2. INSTALLATIONS THAT HAVE NOT BEEN ACTIVATED SHALL BE COVERED.
3. COORDINATE INSPECTION AND TURN ON OF SPEED FEEDBACK UNITS WITH CITY OF SHERWOOD AND WASHINGTON COUNTY. PROVIDE ONE WEEK NOTICE PRIOR TO TURN ON.
4. AIM SPEED FEEDBACK SIGN SO THEY ARE VISIBLE TO ONCOMING VEHICLE TRAFFIC.
5. ALL BOLTS, NUTS, AND WASHERS SHALL CONFORM TO 02560.20 AND BE GALVANIZED STEEL ACCORDING TO 02560.40 UNLESS NOTED OTHERWISE.
6. ALL ANCHOR RODS SHALL BE GALVANIZED STEEL CONFORMING TO 02560.30.
7. ALL POLE ENTRANCES CONTAINING WIRING SHALL BE SMOOTH.
8. INSTALL 1/4" THICK PREFORMED EXPANSION JOING FILLER AROUND FOOTING IN SIDEWALK AREA PER TM653.
9. TOP OF FOUNDATIONS SHALL HAVE 0" - 1/4" EXPOSURE ABOVE FINISH GRADE.
10. FLAT SIDE OF FOUNDATION SHOULD LINE UP WITH BACK OF SIDEWALK (WHERE SIDEWALK IS PRESENT)
11. SEE ODOT STANDARD DRAWING TM471 FOR ADDITIONAL CONDUIT INSTALLATION DETAILS.



Front View
(Not To Scale)
(For Reference Only, See Right for Details)



**ACTUATED FLASHING BEACON ASSEMBLY:
SCHOOL + SPEED FEEDBACK
(Use Green Sheet Listed Items Only)**

ORIGINAL PLANS 11x17



EXPIRES: 12/31/2026



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PROJECT NO. 729ST

SW SUNSET BLVD & SW TIMBREL LN INTERSECTION IMPROVEMENT

SIGNAL DETAILS

SHEET NO. TS4