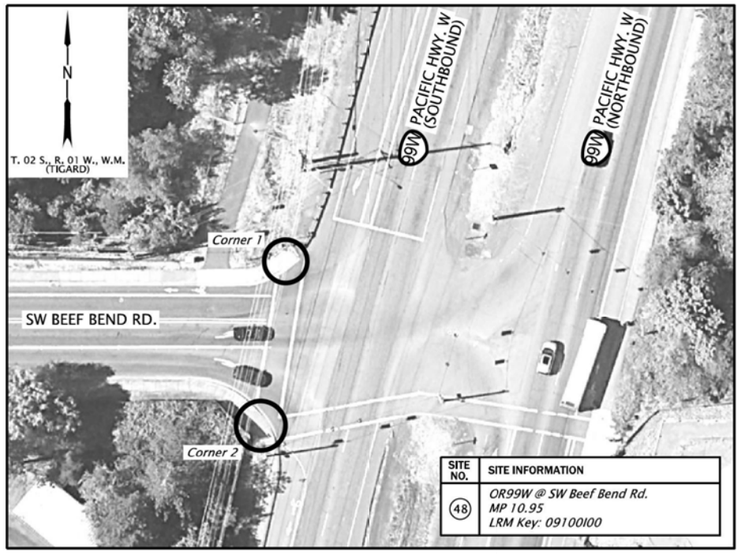
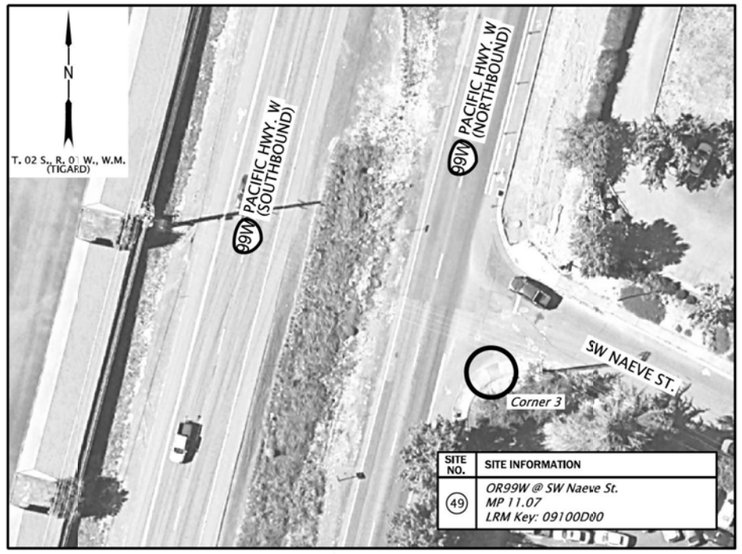
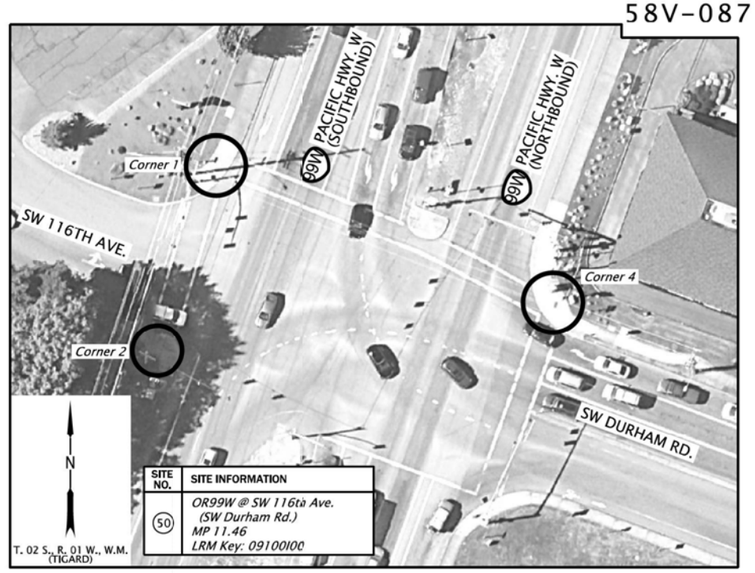
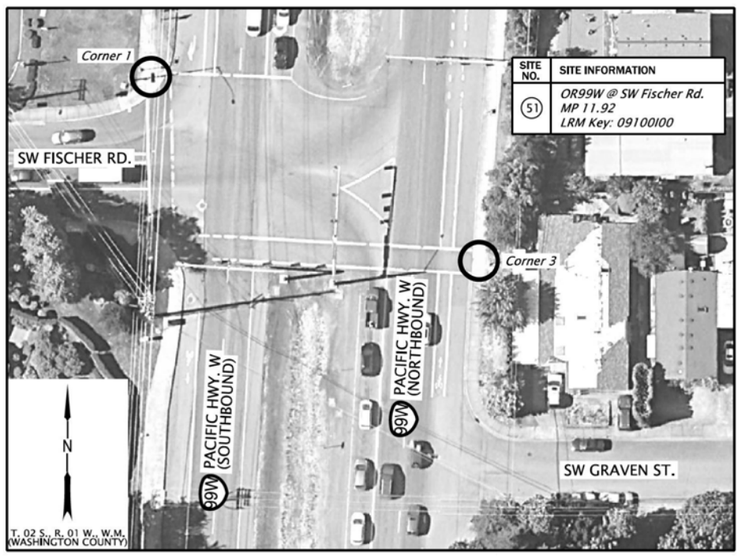
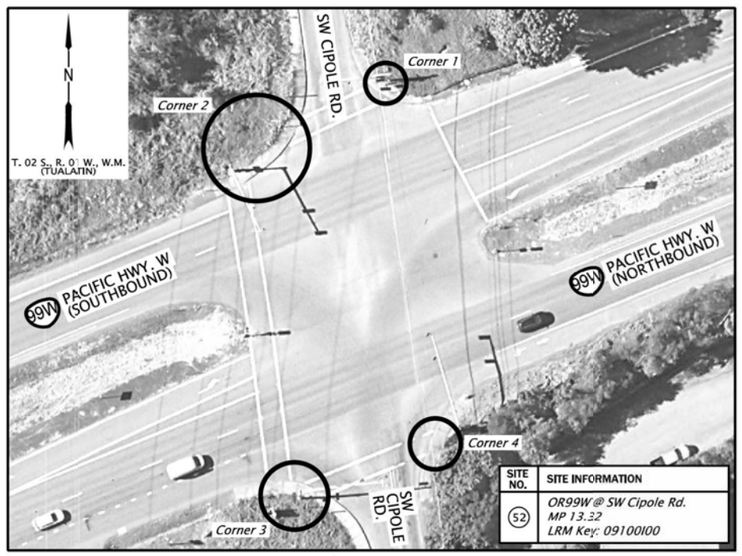
58V-087

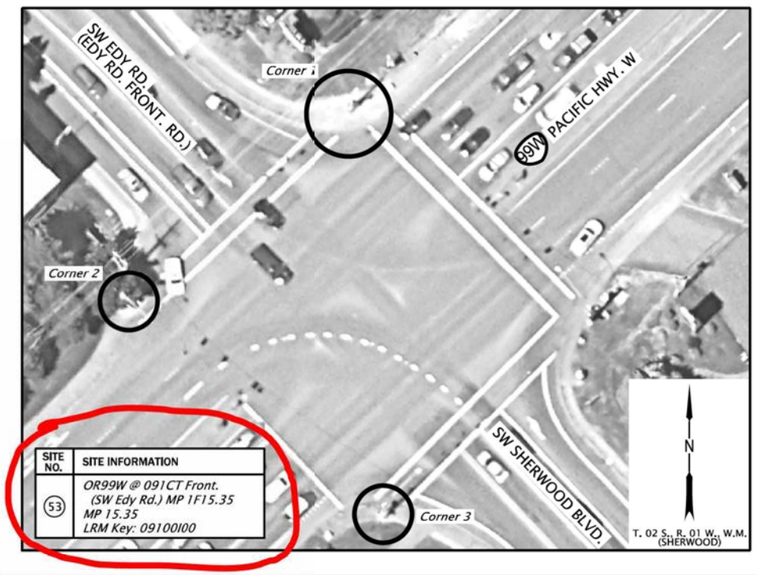












NOTES:

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2. *Images obtained from Google Earth Pro and utilized in accordance with Terms of Service. (© 2024 Google LLC. All rights reserved)*
3. *Street names listed in the "SITE INFORMATION" match the street names in ODOT TransGIS and may differ from signed names in the field. For the purposes of curb ramp inspection reports, the names shown in the plans shall take priority over signed names.*

REGISTERED PROFESSIONAL ENGINEER
82399PE
DIGITALLY SIGNED 2025.08.04 09:05:55-07'00'
OREGON
JANUARY 14, 2020
ERIC MICHAEL WILDER
RENEWS: 06-30-2026

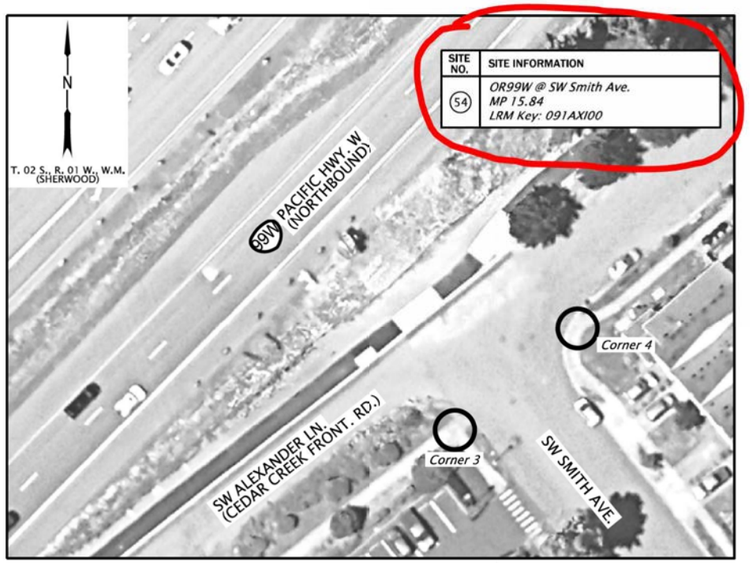
FINAL ELECTRONIC DOCUMENT AVAILABLE UPON REQUEST

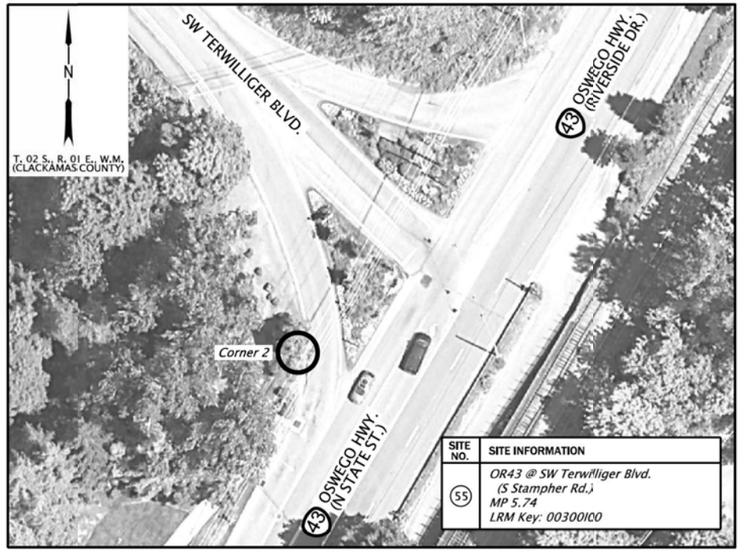
DAVID EVANS AND ASSOCIATES INC.
5121 Skyline Village Loop S, Suite 200
Salem Oregon 97306
Phone: 503.361.8635

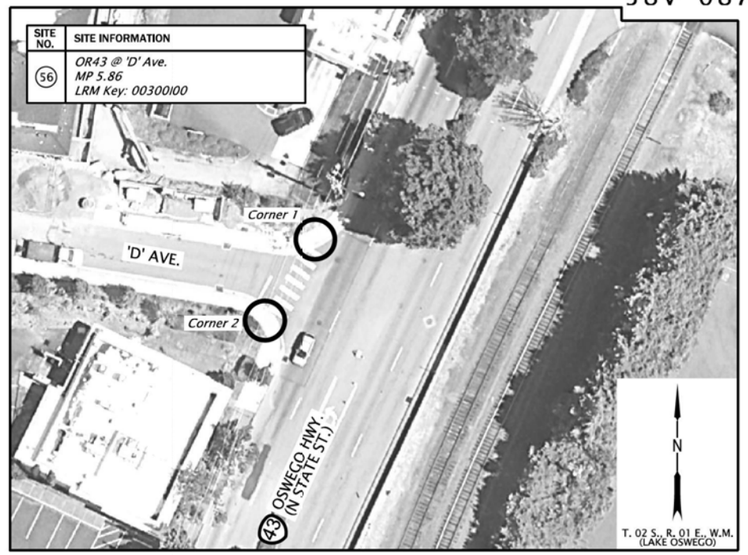
PORTLAND METRO AREA 2024-2027 ADA CURB RAMPS, PHASE 6 PROJ.
VARIOUS HIGHWAYS
VARIOUS COUNTIES

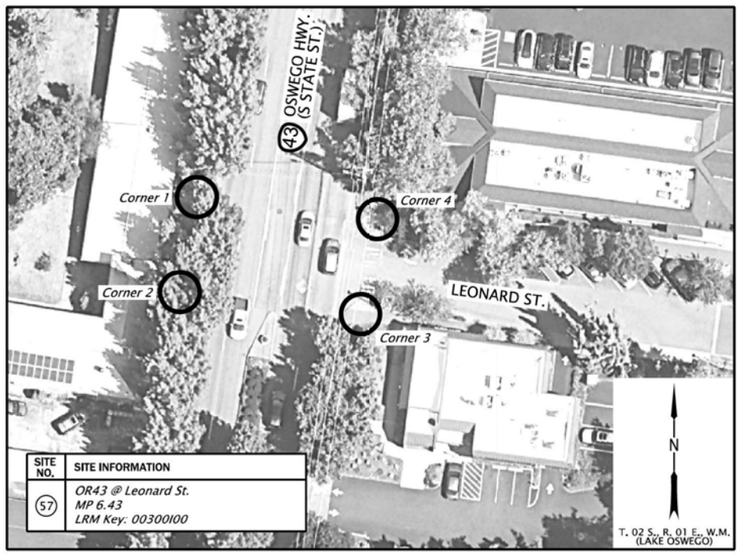
Designer: Shaun Garey-Wilder | Reviewer: Mike Morris
Drafter: Ryan Berger | Checker: Eric Wilder

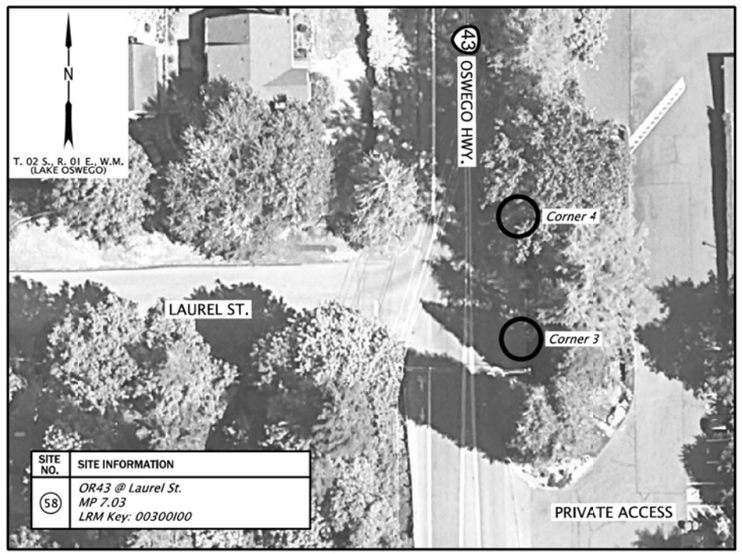
PLAN SHEET LAYOUT | SHEET NO. AA08

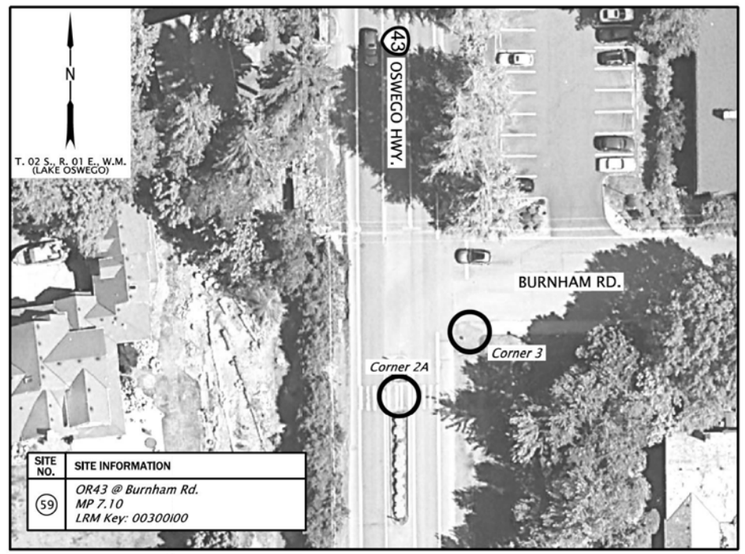












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OREGON
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ERIC MICHAEL WILDER
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PORTLAND METRO AREA 2024-2027 ADA CURB RAMPS, PHASE 6 PROJ.
VARIOUS HIGHWAYS
VARIOUS COUNTIES

Designer: Shaun Garey-Wilder | Reviewer: Mike Morris
Drafter: Ryan Berger | Checker: Eric Wilder

PLAN SHEET LAYOUT | SHEET NO. AA09

SITE NUMBER	ROUTE NUMBER	MILEPOINT	LRM	CROSS STREET	CORNER NO.	RAMP NO.	RAMP TYPE (WITH NUMBER)	STD. DWG. NOS.	INTERSECTION CONDITION TYPE	CROSSWALK CLOSURE NO.	MAX. STRUCTURE FDTN. EXPOSURE	CONSTRUCTION NOTES
45	OR99W	6.39	09100100	SW HUBER ST.	2	1	Unique	N/A	SU			Const. perpendicular end-of-walk ramp, PR-EW (For details, see sht. BA07)
					3	1	Perpendicular (PR-7)	RD913	SY			Inst. inlet protection (Type 3); Replace 2 LF of 'S' Stop bar; Remove and reinst. extg. sign on new 4"x4" wood post; 14' length
					4A	1	Perpendicular (PR-6)	RD913	SY			
					4A	2	Perpendicular (PR-6)	RD913	SY			Inst. inlet protection (Type 3)
					5	1	Parallel (PL-2)	RD920	SY			
					5	2	Parallel (PL-2)	RD920	SU			
46	OR99W	8.54	091CM100	MIDBLOCK CROSSING	1	1	Perpendicular (PR-2)	RD912	MB			
					4	1	Perpendicular (PR-2)	RD912	MB			
47	OR99W	10.43	09100100	ACCESS (TO SW GAARDE ST.)	1	2	Parallel (PL-2)	RD920	SY	2022-349.1 (C1 R1)		Replace 4 LF of 'CW' crosswalk bar
					2	1	Perpendicular (PR 6)	RD913	SY	2022 349.1 (C2 R2)		Replace 4 LF of 'CW' crosswalk bar
48	OR99W	10.95	09100100	SW BEEF BEND RD.	1	2	Unique (Curbed Option)	RD960	SU	2022-188.1 (C1 R1)		Inst. inlet protection (Type 11); Replace 4 LF of 'CW' crosswalk bar
					2	1	Combination (CC-4)	RD936	SU		0"	Inst. inlet protection (Type 11); Replace 4 LF of 'CW' crosswalk bar; Adjust signal junction box
49	OR99W	11.07	09160D00	SW NAEVE ST.	3	2	Parallel (PL-2)	RD920	SY	2019-226 (C3 R1)		Inst. inlet protection (Type 3); Adjust water valve box (by others)
50	OR99W	11.46	09100100	SW 116TH AVE. (SW DURHAM RD.)	1	1	Combination (CC-1)	RD932	SU		0"	Inst. inlet protection (Type 3); Replace 4 LF of 'CW' crosswalk bar; Adjust signal junction box
					1	2	Unique (Curbed Option)	RD960	SU		0"	Inst. inlet protection (Type 3); Replace 4 LF of 'CW' crosswalk bar
					2	1	Perpendicular (PR-6)	RD913	SU	2022-190.1 (C2 R2)	0"	Inst. inlet protection (Type 3); Remove & reinst. extg. signs on new 4"x6" wood post 16' length; Replace 4 LF of 'CW' crosswalk bar; Adjust water valve box (by others)
					4	1					12"	See sht. C11 for General Construction plan.
					4	2					12"	See sht. C11 for General Construction plan.
51	OR99W	11.92	09100100	SW FISCHER RD.	1	2	Combination (CC-2)	RD932	SU	HWY 091 MP 11.92 (C1 R1)		Inst. inlet protection (Type 11); Replace 4 LF of 'CW' crosswalk bar; Adjust water valve box
					3	1	Parallel (PL-1)	RD920	SU			Const. back in maneuver turn space, as directed, next to the pedestrian push button pole; Inst. inlet protection (Type 11); Replace 8 LF of 'CW' Crosswalk bar; 2" Cold plane pvmt. removal to the bike lane (For details, see sht. BA01)
52	OR99W	13.32	09100100	SW CIPOLE RD.	1	2	Parallel (PL-2)	RD920	SU	2022-191.1 (C1 R1)	3"	Const. back in maneuver next to the mast arm pole; Replace 4 LF of 'CW' crosswalk bar
					2	1	Parallel (PL-1)	RD920	SU		3"	Inst. inlet protection (Type 11); Replace 4 LF of 'CW' crosswalk bar
					2	2	Parallel (PL-1)	RD920	SU		3"	Replace 4 LF of 'CW' crosswalk bar
					3	1	Combination (CC-4)	RD936	SU		3"	Replace 4 LF of 'CW' crosswalk bar
					3	2	Combination (CC-4)	RD936	SU		3"	Replace 4 LF of 'CW' crosswalk bar
					4	1	Parallel (PL-2)	RD920	SU	2022-191.1 (C4 R2)	3"	4" Cold plane pvmt. removal to center of lane (For details, see sht. BA01); Replace 4 LF of 'CW' crosswalk bar; Adjust water valve box
53	OR99W	15.35	09100100	091CT FRONT. (SW EDY RD.) M.P. 1F15.35	1	1	Combination (CC-4)	RD936	SU		12"	Inst. inlet protection (Type 3); Minor adjust manhole; Replace 4 LF of 'CW' crosswalk bar
					1	2	Combination (CC-4)	RD936	SU		12"	Inst. inlet protection (Type 3); Replace 4 LF of 'CW' crosswalk bar
					2	1	Perpendicular (PR-7)	RD913	SU	2022-192.1 (C2 R2)	12"	Inst. inlet protection (Type 3); Replace 4 LF of 'CW' crosswalk bar
					3	2	Combination (CC-2)	RD932	SU	2022-192.1 (C3 R1)	12"	Inst. inlet protection (Type 11); Replace 4 LF of 'CW' crosswalk bar
54	OR99W	15.84	091AX100	SW SMITH AVE.	3	1	Combination (CC-12)	RD938	SU			Adjust Inlet; Inst. inlet protection (Type 3); Adjust water valve box (By others)
					3	2	Combination (CC-12)	RD938	SY			
					4	1	Parallel (PL-1)	RD920	SY			Adjust Inlet; Inst. inlet protection (Type 3)
55	OR43	5.74	00300100	SW TERWILLIGER BLVD. (S STAMPHER RD.)	2	1	Combination (CC-4)	RD936	SU			Adjust Inlet; Inst. inlet protection (Type 3); Replace 12 LF of "W-2" 8" white line (Method A) thermoplastic, extruded, surface, non-profiled
56	OR43	5.86	00300100	'D' AVE.	1	2	Combination (CC-4)	RD936	SY	2018-071 (C1 R1)		Replace (two) 'CW-SC' continental crosswalk bars
					2	1	Parallel (PL-1)	RD920	SY	2018-071 (C2 R2)		Replace (single) 'CW-SC' continental crosswalk bars

CURB RAMP WORK TABLES

NOTES:

1. *See notes on sht. C01.*

REGISTERED PROFESSIONAL ENGINEER
82399PE
DIGITALLY SIGNED 2025.08.29 08:32:43-07'00'
OREGON
JANUARY 14, 2020
ERIC MICHAEL WILDER
RENEWS: 06-30-2026

FINAL ELECTRONIC DOCUMENT AVAILABLE UPON REQUEST

DAVID EVANS AND ASSOCIATES INC.
5121 Skyline Village Loop S, Suite 200
Salem Oregon 97306
Phone: 503.361.8635

OREGON DEPARTMENT OF TRANSPORTATION

PORTLAND METRO AREA 2024-2027 ADA CURB RAMPS, PHASE 6 PROJ.
VARIOUS HIGHWAYS
VARIOUS COUNTIES

Designer: Shaun Garey-Wilder | Reviewer: Mike Morris
Drafter: Ryan Berger | Checker: Eric Wilder

GENERAL CONSTRUCTION | SHEET NO. C07

SITE	INTERSECTION/ INTERCHANGE	MP	CORNER	TRAFFIC CONTROL MEASURES DURING WORKING HOURS	TCP		TPAR		GENERAL NOTES	PERMIT REQUIREMENTS
					Detail Sheet	TM Sheet	Detail Sheet	TM sheet		
53	OR99W/ SW EDY RD.	15.35	C1	OR99W SB bike lane and outside lane closure. SW Edy Rd WB bike lane closure.	N/A	TM800, TM843 (4-Lane, 2-Way Right Lane Closure)	EA01	TM845	TCP: Lane closure with lane shift as needed. Detour WB vehicles north on OR99W to SW Roy Rogers Rd, west to SW Borchers Dr, south to SW Edy Rd. TPAR: Construct temp ramps and temp pedestrian push buttons outside the work zone. Detour peds into lane around work zone.	City of Sherwood •Permits Contact: Andrew Sterling (503-570-1566). •Obtain Right-of-Way permit for temporary traffic control on city facility ($325) •To be submitted with plan set and may be reviewed within 2 weeks. Notify city of noise for work occurring outside of normal working hours or evenings.
			C2	OR99W SB bike lane and outside lane closure. SW Edy EB right-turn lane closure.	N/A	TM800, TM843 (4-Lane, 2-Way Right Lane Closure)	EA01	TM845	TCP: Lane closure with lane shift as needed. Detour EB right-turn vehicles into outside EB lane to turn right around work zone. TPAR: Construct temp ramps and temp pedestrian push buttons outside the work zone. Detour peds into lane around work zone.	
			C3	OR99W NB bike lane and outside lane closure. SW Sherwood Blvd EB bike lane closure.	N/A	TM800, TM843 (4-Lane, 2-Way Right Lane Closure)	EA01	TM845	TCP: Lane closure with lane shift as needed. TPAR: Construct temp ramps and temp pedestrian push buttons outside the work zone. Detour peds to cross SW Sherwood Blvd at SW Langer Dr.	
54	SW ALEXANDER LN/ SW SMITH AVE.	15.84	C3	SW Smith Ave SB parking lane closure.	EA03, EA04	TM800	N/A	TM844 (Sidewalk Closure, Corner)	TCP: Lane closure with lane shift as needed. TPAR: Detour peds to cross SW Alexandar Ln at corners 1 and 4. Detour peds to cross SW Smith Ave at corners 1 and 2 and at SW Sherwood Dr.	City of Sherwood •Permits Contact: Andrew Sterling (503-570-1566). •Obtain Right-of-Way permit for temporary traffic control on city facility ($325) •To be submitted with plan set and may be reviewed within 2 weeks. Notify city of noise for work occurring outside of normal working hours or evenings.
			C4	SW Smith Ave NB parking lane closure. SW Alexander Ln EB parking lane closure.	EA03, EA04	TM800	N/A	TM844 (Sidewalk Closure, Corner)	TCP: Lane closure with lane shift as needed. TPAR: Detour peds to cross SW Alexandar Ln at corners 2 and 3 and SW Vintner Ln. Detour peds to cross SW Smith Ave at corners 1 and 2 and at SW Sherwood Dr.	
55	OR43/ SW TERWILLIGER BLVD. (S STAMPHER RD.)	5.74	C2	SW Terwilliger Blvd EB right-turn lane closure.	EA09	TM800	N/A	N/A	TCP: Lane closure and lane shifts as needed. Detour EB right-turn vehicles north on OR43 to S Breyman Ave, west to S Edgecliff Rd, south to S Greenwood Rd, east to OR43. TPAR: Maintain pedestrian access on trail behind new ramp.	Clackamas County •Permits Contact: Joel Howie (503-742-4658). •Right-of-Way permit for temporary traffic control on city facility ($300) to be submitted with plan set. One week review. City of Lake Oswego •Permits Contact: Lucas Rhyan (503-635-0284). •Right-of-Way permit for temporary traffic control on city facility (no fee) to be submitted with plan set.
56	OR43/D AVE.	5.86	C1	OR43/N State St SB lane closure. D Ave WB lane closure.	EA04, EA08	TM800	N/A	TM844 (Sidewalk Closure, Corner)	TCP: Lane closures and lane shifts as needed. Detour EB vehicles on D Ave to 1st St, south to B Ave, west to OR43. TPAR: Detour peds across D Ave via 1st St and E Ave.	City of Lake Oswego •Permits Contact: Lucas Rhyan (503-635-0284). •Right-of-Way permit for temporary traffic control on city facility (no fee) to be submitted with plan set.
			C2	OR43/N State St SB lane closure. D Ave WB lane closure.	EA04, EA08	TM800	N/A	TM844 (Sidewalk Closure, Corner)	TCP: Lane closures and lane shifts as needed. Detour EB vehicles on D Ave to 1st St, south to B Ave, west to OR43. TPAR: Detour peds across D Ave via 1st St and E Ave.	
57	OR43/LEONARD ST.	6.43	C1	OR43 SB outside lane closure.	N/A	TM800, TM851 (4-Lane, 2-Way Exterior Lane Closure)	N/A	TM844 (Sidewalk Closure, Midblock)	TCP: Lane closure as needed. TPAR: Detour peds across OR43 to the north and south at North Shore Rd and Middlecrest Rd.	City of Lake Oswego •Permits Contact: Lucas Rhyan (503-635-0284). •Right-of-Way permit for temporary traffic control on city facility (no fee) to be submitted with plan set. •Tree Removal Permits Contact: Daphne Cissell (503-675-3990). Email: Trees@ci.oswego.or.us •Type II Tree Removal Permit for tree removal within Right-of-Way (Fee $254 + mitigation cost)
			C2							
			C3	OR43 NB outside lane closure. Leonard St WB lane closure with EB lane shift.	EA08	TM800	N/A	TM844 (Sidewalk Closure, Corner)	TCP: Lane closures with lane shifts as needed. Detour Leonard St WB vehicles south on Durham St to Wilbur St, west to OR43. TPAR: Detour peds across OR43 to the north and south at North Shore Rd and Middlecrest Rd.	
			C4	OR43/S Hood Ave NB outside lane closure. Leonard St WB lane closure.	EA08	TM800	N/A	TM844 (Sidewalk Closure, Corner)	TCP: Lane closures with lane shifts as needed. Detour Leonard St WB vehicles south on Durham St to Wilbur St, west to OR43. TPAR: Detour peds across OR43 to the north and south at North Shore Rd and Middlecrest Rd.	
58	LAUREL ST.	7.03	C3	OR43/S Hood Ave NB lane shift.	EA12	TM800	EA02	TM845	TCP: Lane closure and lane shift. TPAR: Construct temp ramps outside of work zone. Detour peds into lane around work zone.	City of Lake Oswego •Permits Contact: Lucas Rhyan (503-635-0284). •Right-of-Way permit for temporary traffic control on city facility (no fee) to be submitted with plan set.
			C4	OR43/S Hood Ave NB lane shift.	EA12	TM800	EA02	TM845	TCP: Lane closure and lane shift. TPAR: Construct temp ramps outside of work zone. Detour peds into lane around work zone.	
59	OR43/BURNHAM RD.	7.10	C2A	OR43 NB shoulder and bike lane closure with lane shift.	EA12	TM800	N/A	TM844 (Sidewalk Closure, Corner)	Construct C2A and C3 simultaneously. TCP: Lane closures with lane shifts as needed. Station flaggers on each leg of the intersection to control traffic. Detour NB vehicles to use the SB lane to go around the work zone. TPAR: Detour peds across OR43 to the north and south at Laurel St and Wells St. Route peds to use the west leg of OR43.	TriMet •Bus Service Coordinator Contact: Terry Colley and Rich Vasquez (503-962-4949) •No permit required City of Lake Oswego •Permits Contact: Lucas Rhyan (503-635-0284). •Right-of-Way permit for temporary traffic control on city facility (no fee) to be submitted with plan set.
			C3							
60	ROBINWOOD WAY	8.29	C3	OR43/Willamette Dr NB shoulder closure.	EA12	TM800	EA02	TM845	TCP: Lane closures and lane shifts as needed. TPAR: Construct temp ramps outside of work zone. Detour peds into lane around work zone.	Site is on ODOT facilities. No permits required by contractor
			C4	OR43/Willamette Dr NB shoulder closure.	EA12	TM800	EA02	TM845	TCP: Lane closures and lane shifts as needed. TPAR: Construct temp ramps outside of work zone. Detour peds into lane around work zone.	

TRAFFIC CONTROL & TPAR TABLE

TRAFFIC CONTROL NOTES:

1. *Signs and other Traffic Control Devices (TCD) shown are min. reqd. Adjustment of temp. TCD may be reqd. to accommodate extg. field conditions. Addl. Traffic Control Measures (TCM) may be reqd. For addl. details not shown, see dwg. nos. TM800, TM820, TM821, TM822, TM841, TM844, TM851 & TM855.*
2. *For TCD and sign spacings not shown, see "TRAFFIC CONTROL DEVICES (TCD) SPACING TABLE" on dwg. no. TM800.*
3. *Where available, use extg. on-street parallel parking as shldr. closure for construction, and maintain extg. lane width to the extent possible. For details, see "2-LANE, 2-WAY SHOULDER CLOSURE" detail on dwg. no. TM841.*
4. *If lane or street closures are needed during construction, refer to 00220.40's closed lanes.*
5. *When side streets are in a 1-lane, 2-way configuration return side street to 2-lane, 2-way traffic during non-work hours, unless otherwise approved by the engineer.*
6. *Inst. a "BICYCLES ON ROADWAY" (CW11-1) sign in advance of shoulder closures when marked bike lanes merge into vehicle traffic lanes. Bikes may only share the roadway where hwy. speed zones are 35 mph or less.*
7. *Remove all street restrictions during non-working hours unless specified otherwise or approved by the engineer. Aggr. backfill or non-slip plating may be used over pvmt. removal area as necessary to accomodate vehicle or pedestrian traffic during non-working hours.*

TEMPORARY PEDESTRIAN ACCESSIBLE ROUTE (TPAR) NOTES:

1. *Temporary Pedestrian Accessible Route (TPAR) must meet or exceed current level of accessibility. If the conditions in the field for the designed route do not meet the accessibilty conditions, the Contractor may propose an alternate route. Alternate routes require the approval of the engineer.*
2. *TPAR shall maintain an unobstructed width of 60 inches. Where 60 inches can't be achieved, the min. unobstructed width shall be 48 inches, accompanied by 60 inch x 60 inch passing spaces every 200 feet (min.)*
3. *Contractor shall maintain any business access located directly within the work zone.*
4. *Inst. Type II barricades and Temp. Sign Supports (TSS) so as not to impede the pedestrian accessible route.*
5. *Keep TPAR route within public ROW.*

REGISTERED PROFESSIONAL ENGINEER
72597PE
DIGITALLY SIGNED 2025.08.01 16:49:01-07'00'
OREGON
JUNE 14, 2007
PAUL D. TAPPANA
EXPIRES: 06/30/2026

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PORTLAND METRO AREA 2024-2027 ADA CURB RAMPS, PHASE 6 PROJ.
VARIOUS HIGHWAYS
VARIOUS COUNTIES

Designer: Paul Tappana / Anthony Ayala | Reviewer: Tai Imamura
Drafter: Ryan Berger | Checker: Eric Wilder

TRAFFIC CONTROL PLAN | SHEET NO. EC08

FINAL ELECTRONIC DOCUMENT AVAILABLE UPON REQUEST

SIGNAL PLAN
EQUIPMENT REPLACEMENT LOCATIONS
VARIOUS HIGHWAYS
(PORTLAND, TIGARD, TUALATIN, SHERWOOD & WEST LINN)

SITE NUMBER	ROUTE NUMBER	MILEPOINT	LRM	TSSU ID NO.	TSSU MILPOINT	CROSS STREET	CORNER NO.	RAMP NO.	MAINTAIN / REMOVE	INSTALLATION / MODIFICATION	CONSTRUCTION NOTES
53	OR99W	15.35	09100100	2B531	15.35	091CT FRONT. (SWEDY RD.) M.P.1F15.35	1	1	Maintain extg. push button location; Remove extg. junction box	Inst. JB2 in same location	Inst. temp. pedestrian pushbutton post and button
							1	2	Maintain extg. push button location		
							2	1		Move extg. push button to other side of signal pole	Inst. temp. pedestrian pushbutton post and button
							3	2	Maintain extg. push button location		Inst. temp. pedestrian pushbutton post and button
63	OR43	8.90	00300100	2B313	8.90	HIDDEN SPRINGS RD.	1	1	Maintain extg. push button location; Remove extg. junction box	Inst. JB2 in same location	
							1	2	Maintain extg. push button location		
73	OR43	10.52	00300100	2B314	10.52	HOLMES ST.	2	1	Maintain extg. push button location		
							3	1		Raise extg. push button	
80	OR213	3.59	16000100	2B001	3.59	MOLALLA AVE. (DOUGLAS LOOP RD.)	1	1	Remove extg. push button	Inst. new pedestrian push buttton on a 6" extension bracket mount	Inst. temp. pedestrian pushbutton post and button
							1	2	Remove extg. push button	Inst. new pedestrian push buttton on a 6" extension bracket mount	
							2	1	Maintain extg. push button location		Inst. temp. pedestrian pushbutton post and button
							2	2	Maintain extg. push button location		
							3	1	Remove extg. push button	Inst. new pedestrian push buttton on a 6" extension bracket mount	
							3	2	Remove extg. push button	Inst. new pedestrian push buttton on a 6" extension bracket mount	
							4	1	Maintain extg. push button location		
							4	2	Maintain extg. push button location		
81	OR213	3.81	16000100	2B004	3.81	CAUFIELD RD. (GLEN OAK RD.)	1	1	Maintain extg. push button location; Remove extg. junction box	Inst. JB2 in same location	Inst. temp. pedestrian pushbutton post and button
							1	2	Maintain extg. push button location		
							4	1	Maintain extg. push button location		Inst. temp. pedestrian pushbutton post and button
							4	2	Maintain extg. push button location		
84	OR213	5.73	16000100	2B003	5.73	S LELAND RD.	2	1	Maintain extg. push button location		Inst. temp. pedestrian pushbutton post and button
							2	2	Maintain extg. push button location		
							3	1	Remove extg. push button	Inst. new pedestrian push buttton on a 6" extension bracket mount	Inst. temp. pedestrian pushbutton post and button
							3	2	Remove extg. push button; Remove extg. junction box	Inst. new pedestrian push buttton on a 6" extension bracket mount; Inst. JB2 in same location	
							4	1	Maintain extg. push button location; Remove extg. junction box	Inst. JB2 in same location	Inst. temp. pedestrian pushbutton post and button
							4	2	Maintain extg. push button location		

EQUIPMENT REPLACEMENT LOCATIONS TABLE

NOTES:

1. If any component of the extg. loop detection system is damaged during construction, abandon damaged elements and inst. new elements with appropriate connections to provide a fully functioning system.
2. Splice new loop wiring to extg. loop wiring in junction box adjacent to the sand pocket.
3. Field verify push button extension bracket mount size. The max. reach distance to the push button from the edge of the flat landing shall be no more than 10".
4. Inst. push buttons to meet vert. clearance requirements.
5. Contact Region 1 Signal Operations Engineer at least two weeks prior to work at curb ramps and potential impacts to signal operation.

Scott B. Cramer 2025.08.06 08:43:20 -07'00'
Traffic Section Approval

HWY: VARIES
M.P.: VARIES
UNIT FILE CODE 24056
DFI/TSSU NO. SEE TABLE

REGISTERED PROFESSIONAL ENGINEER
102583PE
DIGITALLY SIGNED 2025.08.01 15:51:09-06'00'
OREGON
MAY 09, 2023
LISA MICHELLE CANDELARIA
RENEWS: 12-31-2025

FINAL ELECTRONIC DOCUMENT AVAILABLE UPON REQUEST

DAVID EVANS AND ASSOCIATES INC.
5121 Skyline Village Loop S, Suite 200
Salem Oregon 97306
Phone: 503.361.8635

PORTLAND METRO AREA 2024-2027 ADA CURB RAMPS, PHASE 6 PROJ.
VARIOUS HIGHWAYS
VARIOUS COUNTIES

Designer: Ryan Berger | Reviewer: Lisa Candelaria
Drafter: Ryan Berger | Checker: Eric Wilder

SIGNAL PLAN | SHEET NO. MB02

TAPER TYPES & FORMULAS	
TAPER	FORMULA
Merging (Lane Closure)	"L"
Shifting	"L"/2 or ½"L"
Shoulder Closure	"L"/3 or ⅓"L"
Flagging (See Drg. TM850)	50' – 100'
Downstream (Termination)	Varies (See Drawings)

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

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

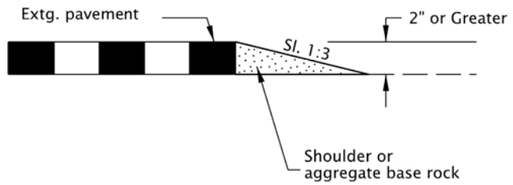
MINIMUM LENGTHS TABLE					
	"L" VALUE FOR TAPERS (ft)				BUFFER "B" (ft)
★ SPEED (mph)	W = Lane or Shoulder Width being closed or shifted				
	W ≤ 10	W = 12	W = 14	W = 16	
25	105	125	145	165	75
30	150	180	210	240	100
35	205	245	285	325	125
40	265	320	375	430	150
45	450	540	630	720	180
50	500	600	700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

NOTES:
- For Lane closures where W < 10', use "L" value for W = 10'.
- For Shoulder closures where W < 10', use "L" value for W = 10' or calculate "L" using formula, for Speeds ≥ 45: L = WS, Speeds < 45: L = $S^2W/60$, S = Speed, W=Width

TRAFFIC CONTROL DEVICES (TCD) SPACING TABLE				
★ SPEED (mph)	Sign Spacing (ft)			Max. Channelizing Device Spacing (ft)
	A	B	C	
20 – 30	100	100	100	20
35 – 40	350	350	350	20
45 – 55	500	500	500	40
60 – 70	700	700	700	40
Freeway	1000	1500	2640	40

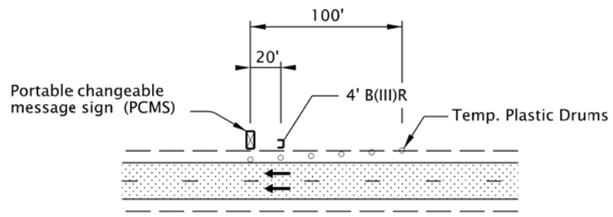
NOTES:
- Place traffic control devices on 10 ft. spacing for intersection and access radii.
- When necessary, sign spacing may be adjusted to fit site conditions. Limit spacing adjustments to 30% of the "A" dimension for all speeds.

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



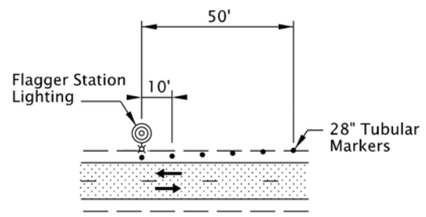
EXCAVATION ABRUPT EDGE

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



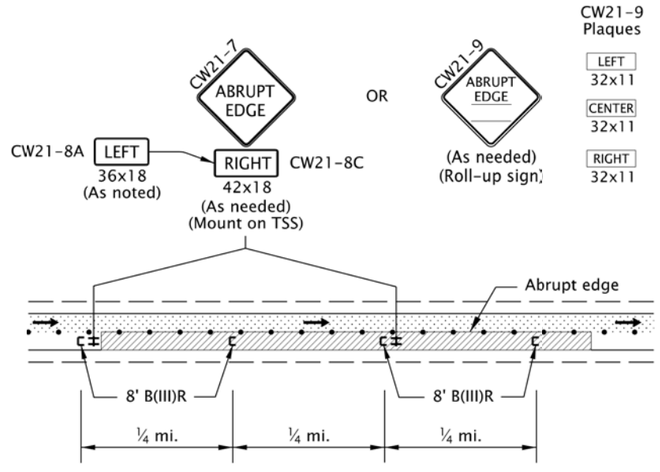
PORTABLE CHANGEABLE MESSAGE SIGN (PCMS) INSTALLATION

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



FLAGGER STATION LIGHTING DELINEATION

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



TYPICAL ABRUPT EDGE DELINEATION

GENERAL NOTES FOR ALL TCP DRAWINGS:
- Signs and other Traffic Control Devices (TCD) shown are the minimum required.
- Place a barricade approx. 20' ahead of all sequential arrow boards.
- Arrows shown in roadway are directional arrows to indicate traffic movements.
- All signs are 48" x 48" unless otherwise shown. Use fluorescent orange sheeting for the background of all temporary warning signs.
- All diamond shaped warning signs mounted on barrier sign supports shall be 36" by 36". All other signs mounted on barrier sign supports shall not exceed 12 sq. ft. in total sign area.
- Low speed highways have a pre-construction posted speed of 40 mph or less. High speed highways have a pre-construction posted speed of 45 mph or higher.
- Do not locate sign supports in locations designated for bicycle or pedestrian traffic.
- Combine drawing details to complete temporary traffic control for each work activity.
- Coordinate and control pedestrian movements through a Temporary Accessible Route using Flaggers, Traffic Control Measures, or as directed.
- To be accompanied by Dwg. Nos. TM820 & TM821.

○ ○ ○ Temp. Plastic Drums See TCD Spacing Table for max. spacing.

• • • 28" Tubular Markers See TCD Spacing Table for max. spacing.

UNDER TRAFFIC

UNDER CONSTRUCTION

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

TABLES, ABRUPT EDGE AND PCMS DETAILS

2021

DATE	REVISION DESCRIPTION
07-2022	Added a note for TPARs

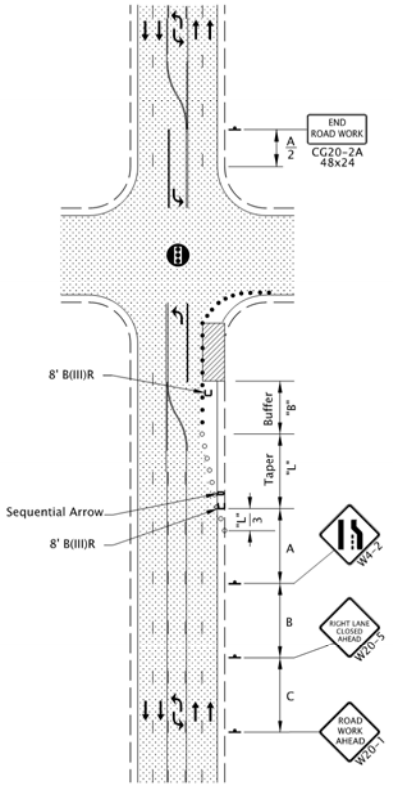
CALC. BOOK NO. N/A | SDR DATE 01-JUL-2022 | **TM800**

01-JUL-2022

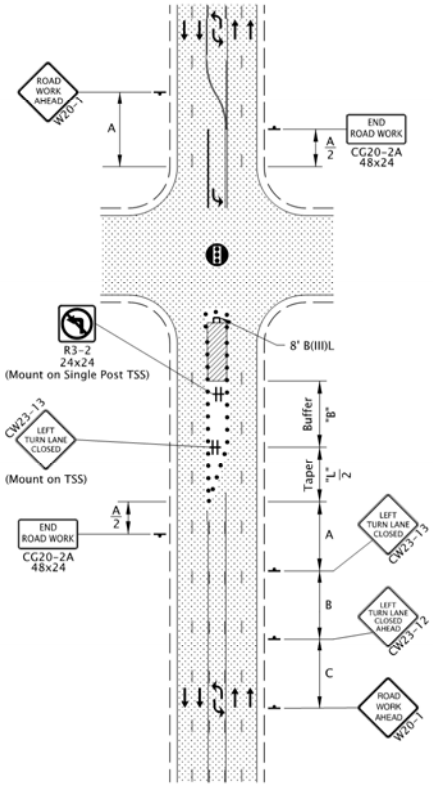
TM800.dgn

Effective Date: June 1, 2023 – November 30, 2023

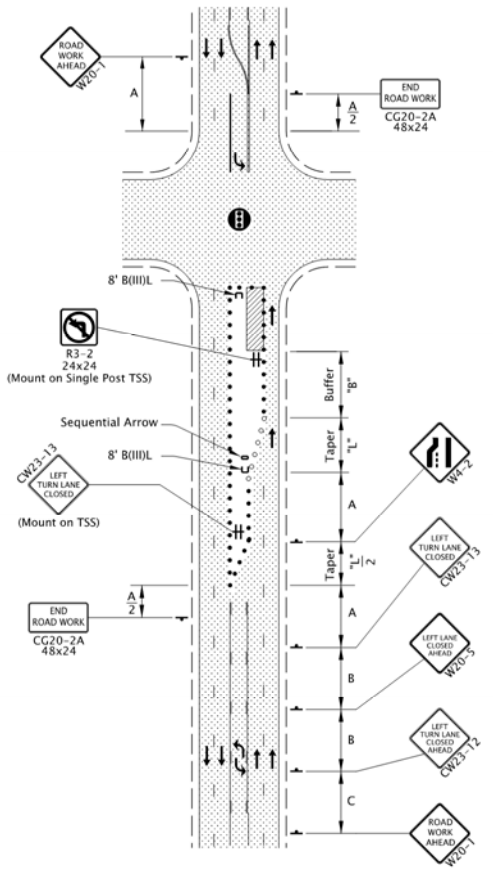
TM843.dgn 01-JUL-2020



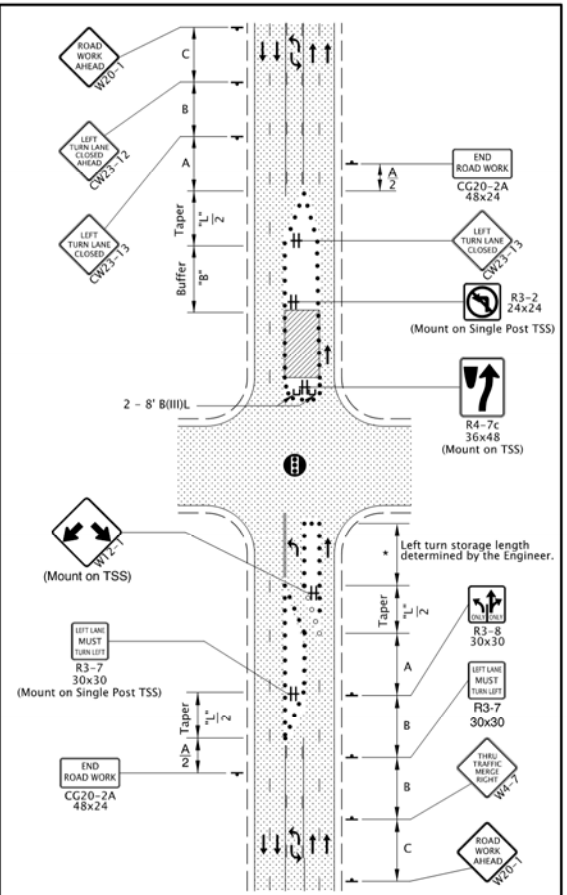
4-Lane, 2-Way Roadway With Left Turn Median
RIGHT LANE CLOSURE



4-Lane, 2-Way Roadway With Left Turn Median
LEFT TURN MEDIAN CLOSURE



4-Lane, 2-Way Roadway With Left Turn Median
LEFT TURN MEDIAN AND LEFT LANE CLOSURE



4-Lane, 2-Way Roadway With Left Turn Median
LEFT TURN MEDIAN & LEFT LANE CLOSURE, FAR SIDE

GENERAL NOTES FOR ALL DETAILS:

- Additional Traffic Control Measures (TCM) may be required for all legs of the intersection.
- To determine Taper Length ("L") and Buffer Length ("B") shown on this sheet, use the "MIMIMUM LENGTHS TABLE" on Dwg. TM800.
- When a through road intersects within the work zone, place a "ROAD WORK AHEAD" (W20-1) sign in advance of the intersection at sign spacing A.
- To determine sign spacing A, B, and C, use "TRAFFIC CONTROL DEVICES (TCD) SPACING TABLE" on Dwg. TM800.
- Tubular markers may be used in lane closure tapers where the posted speed is 40 mph or less.
- Taper Length of "L" for the through-lane shifting tapers may be used for higher speed roads.
- Taper Length of "L"/2 for center turn lane closure may be used in areas with high number of accesses within the work zone.
- Place channelizing devices around intersection radii, business accesses and driveways at 10' spacing.
- Install a "BICYCLES ON ROADWAY" (CW11-1) sign in advance of the closure when a bike lane is closed, or when the shoulder is closed and bikes are expected.
- Signal timing adjustments determined by the Engineer.
- To be accompanied by Dwg. Nos. TM820 & TM821.

Signal

28" Tubular Markers
See TCD Spacing Table on TM800 for max. spacing.

Temp. Plastic Drums
See TCD Spacing Table on TM800 for max. spacing.

UNDER TRAFFIC

UNDER CONSTRUCTION

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

OREGON STANDARD DRAWINGS

MULTI-LANE SIGNALIZED INTERSECTION DETAILS

2021

DATE	REVISION DESCRIPTION

CALC. BOOK NO. N/A | SDR DATE 01-JUL-2020 | **TM843**

Effective Date: June 1, 2023 - November 30, 2023