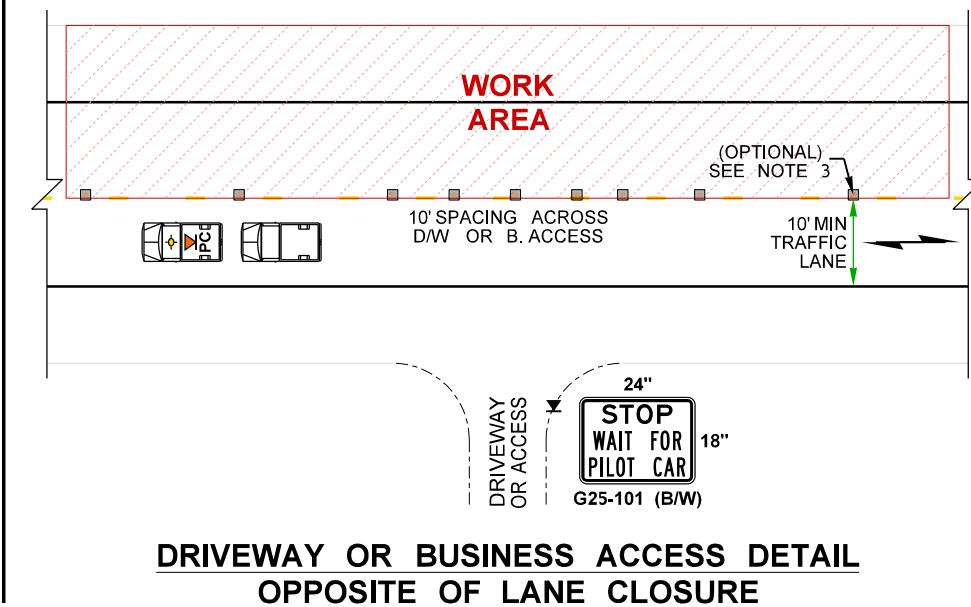
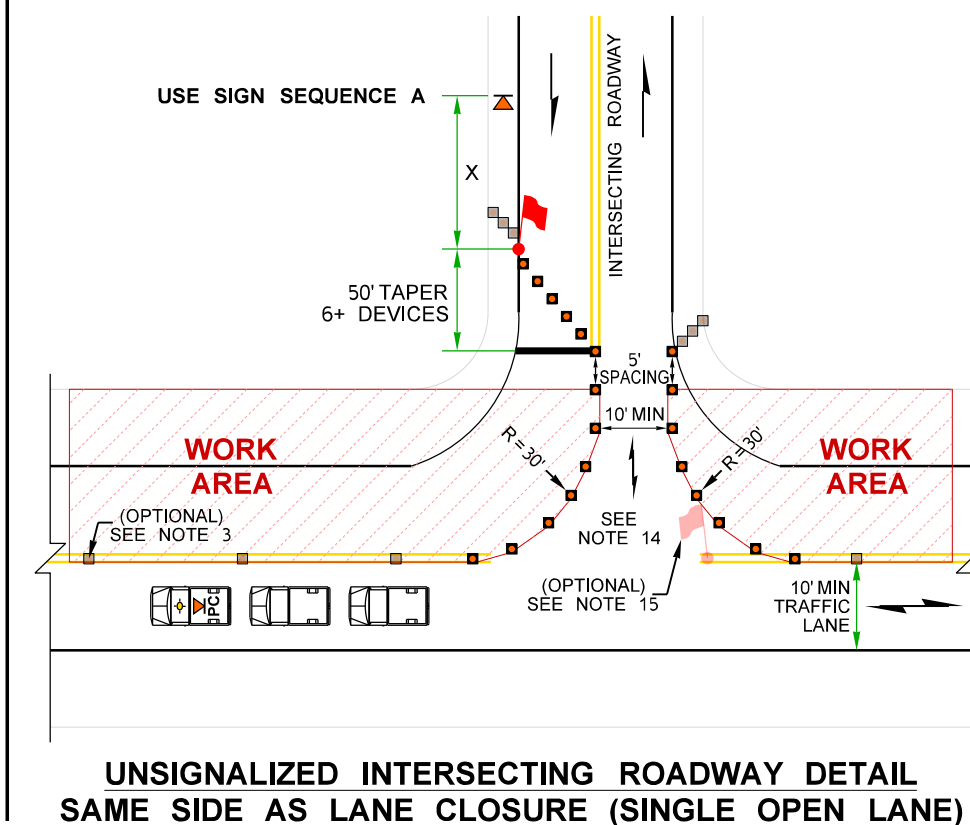
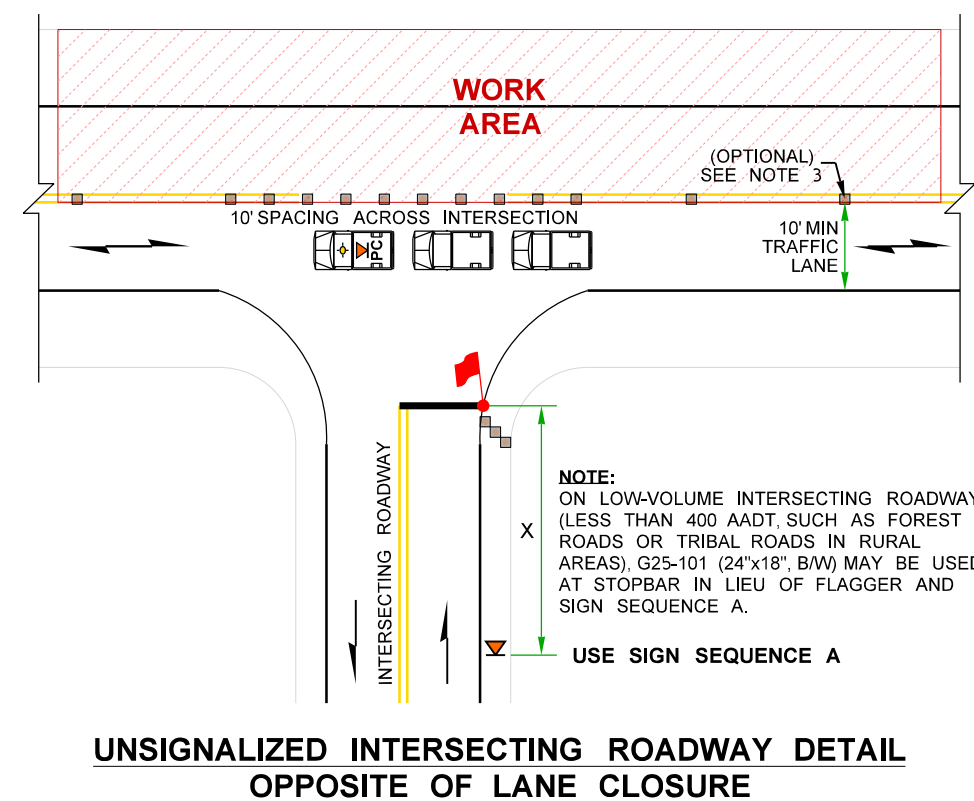
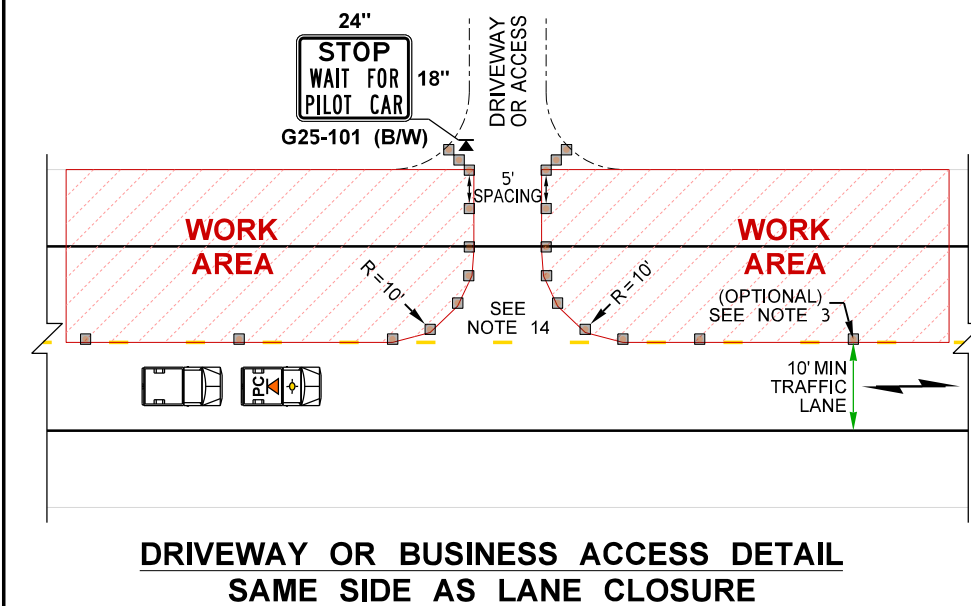
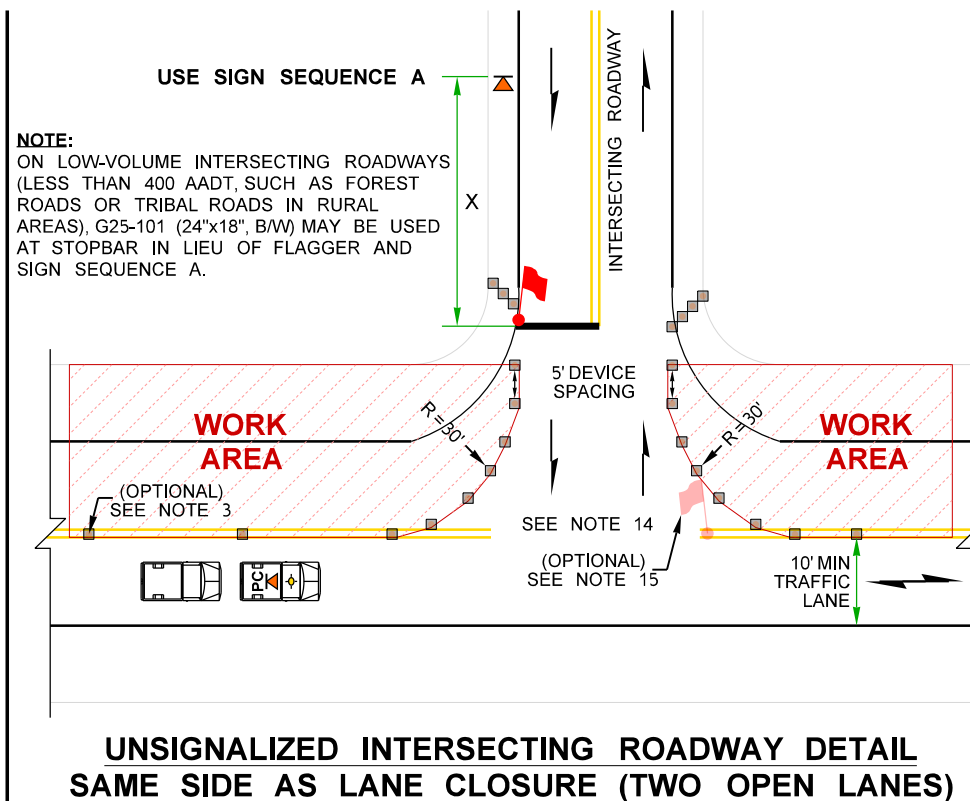
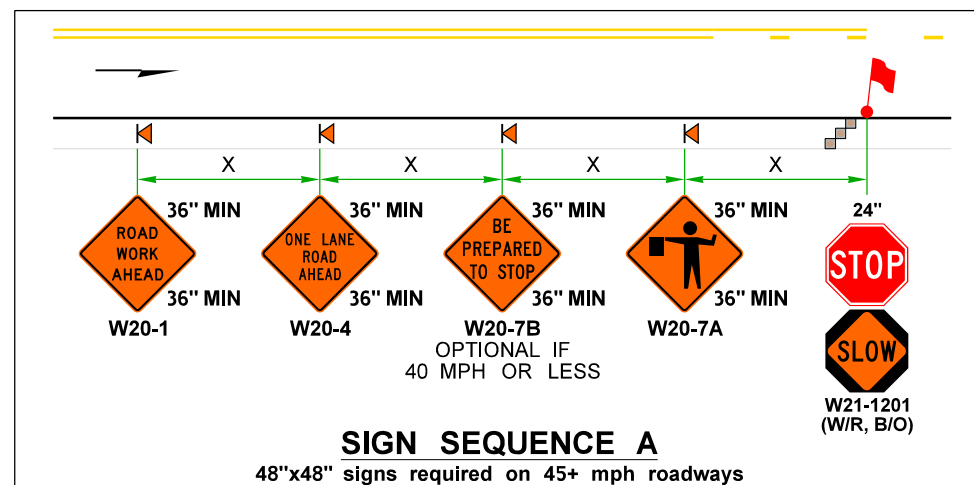





15. SINGLE FLAGGER (WITH RED FLAG/RED GLOW CONE FLASHLIGHT) MAY BE ADDED TO THE INTERSECTING ROADWAY APPROACH TO HELP GUIDE ALTERNATING & TURNING TRAFFIC.



**ALTERNATING 1-LANE, 2-WAY TRAFFIC: AFAD-CONTROLLED + TEMP. RUMBLE STRIPS**  
**SHARED BIKE-LANE STRATEGY (45+ MPH HIGHWAYS)**  
 NOT TO SCALE

FILE NAME C:\Users\LintzF\OneDrive - Washington State Department of Transportation\Desktop\Work Zone TCPs\334Hwy45+AltTrafficAFADPilotCarOpRumbleStrips.dgn										Plot 2	
TIME	6:57:59 AM				REGION NO.	STATE	FED.AID PROJ.NO.		 <b>Washington State</b> <b>Department of Transportation</b>		PLAN REF NO
DATE	7/18/2023				10	WASH					TC334
PLOTTED BY	LintzF				JOB NUMBER		LOCATION NO.		<b>TYPICAL TRAFFIC CONTROL PLANS</b>		SHEET <b>2</b> OF <b>4</b> SHEETS
DESIGNED BY					CONTRACT NO.						
ENTERED BY											
CHECKED BY											
PROJ. ENGR.											
REGIONAL ADM.		REVISION	DATE	BY							



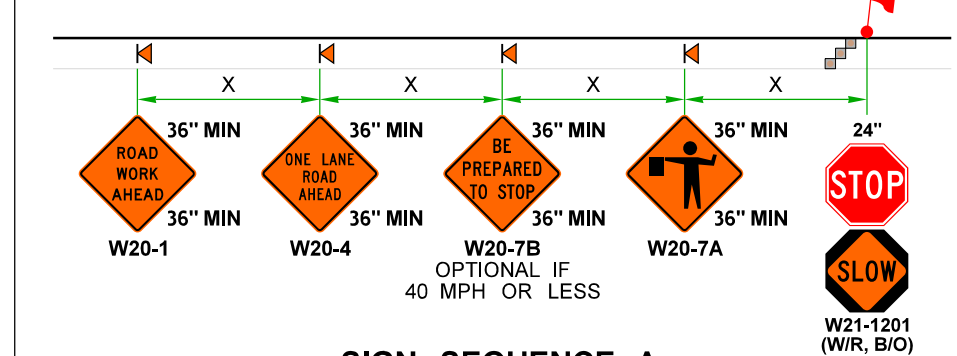


16. FOR LEGEND, TABLES, AND ADDITIONAL NOTES: SEE TC334, SHEET 3.

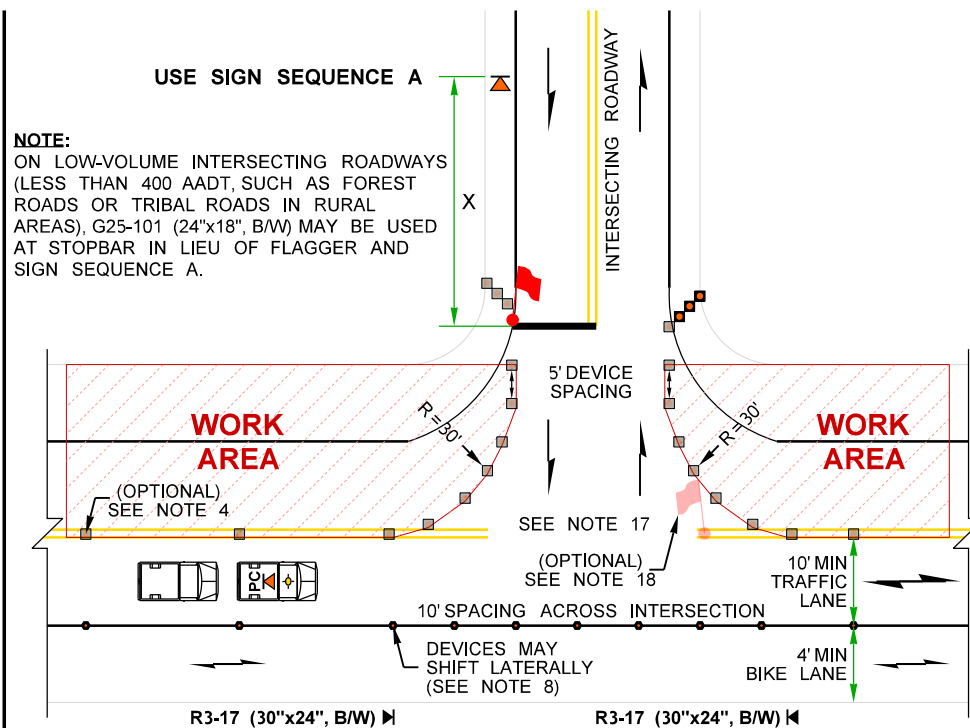
18. SINGLE FLAGGER (WITH RED FLAG/RED GLOW CONE FLASHLIGHT) MAY BE ADDED TO THE INTERSECTING ROADWAY APPROACH TO HELP GUIDE ALTERNATING & TURNING TRAFFIC.

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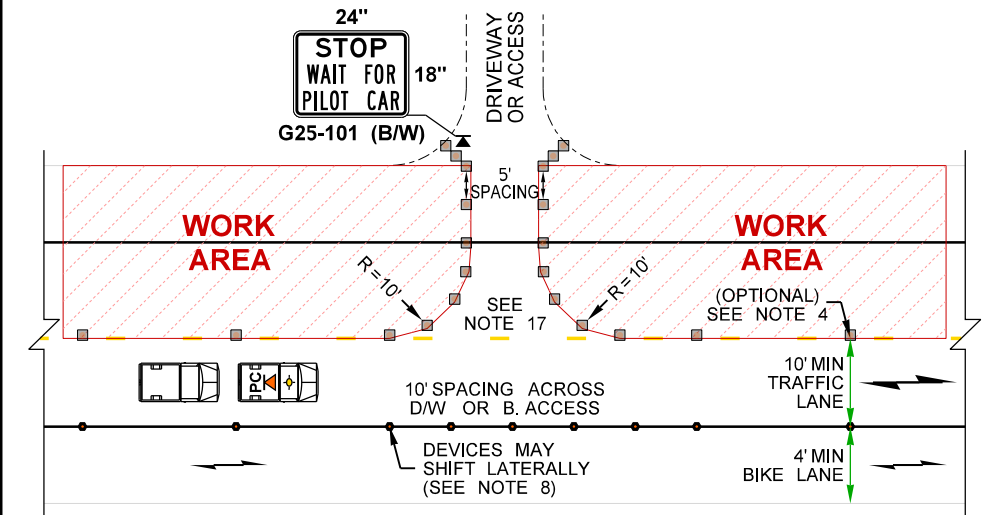


## 48"x48" signs required on 45+ mph roadways

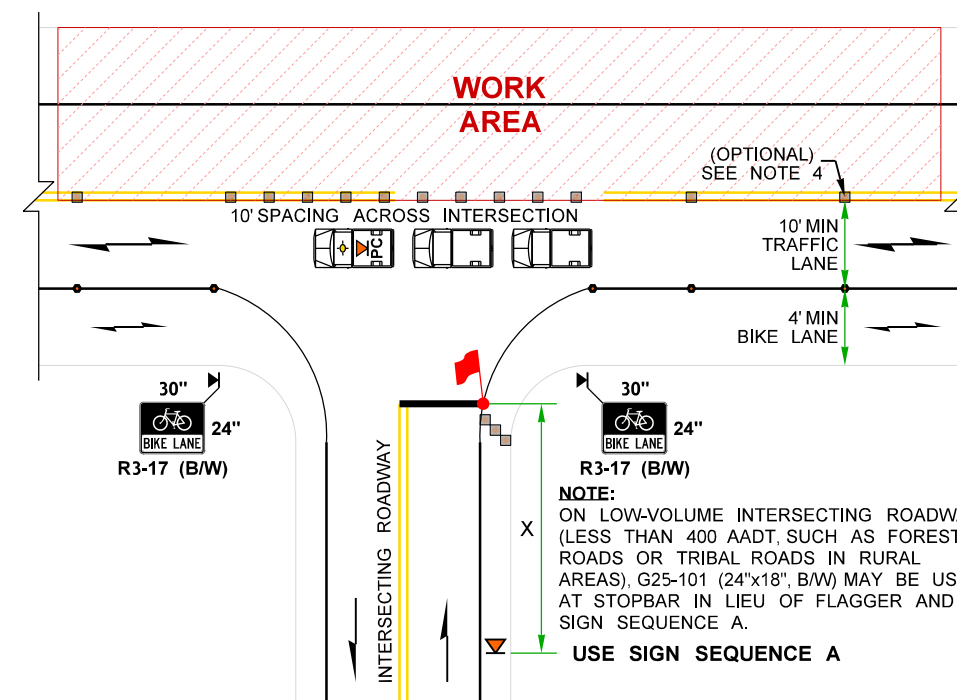


**NOTE:**  
ON LOW-VOLUME INTERSECTING ROADWAYS (LESS THAN 400 AADT, SUCH AS FOREST ROADS OR TRIBAL ROADS IN RURAL AREAS), G25-101 (24"x18", B/W) MAY BE USED AT STOPBAR IN LIEU OF FLAGGER AND SIGN SEQUENCE A.

### UNSIGNALIZED INTERSECTING ROADWAY DETAIL SAME SIDE AS LANE CLOSURE (TWO OPEN LANES)



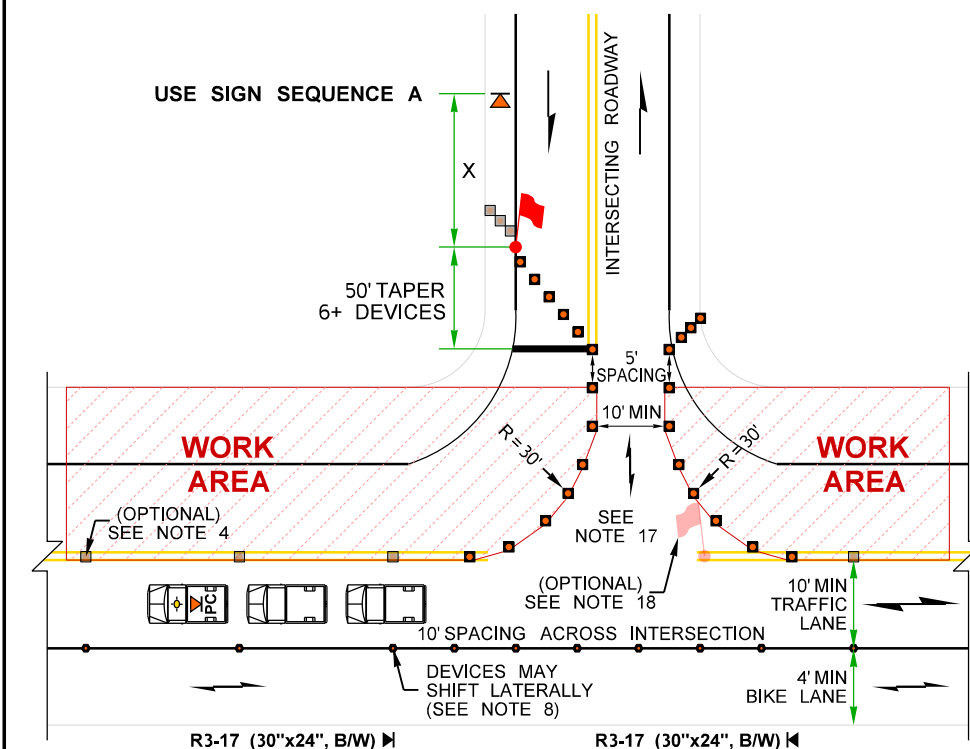
### DRIVEWAY OR BUSINESS ACCESS DETAIL SAME SIDE AS LANE CLOSURE



ON LOW-VOLUME INTERSECTING ROADWAYS (LESS THAN 400 AADT, SUCH AS FOREST ROADS OR TRIBAL ROADS IN RURAL AREAS), G25-101 (24"x18", B/W) MAY BE USED AT STOPBAR IN LIEU OF FLAGGER AND SIGN SEQUENCE A.

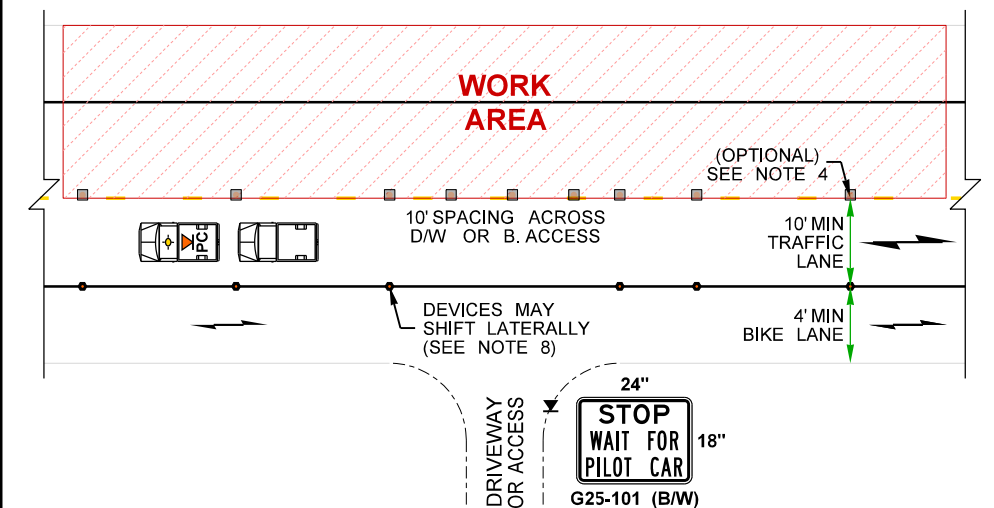
- USE SIGN SEQUENCE A

## UNSIGNALIZED INTERSECTING ROADWAY DETAIL OPPOSITE OF LANE CLOSURE




50' TAPER  
6+ DEVICES

**UNSIGNALIZED INTERSECTING ROADWAY DETAIL**  
**SAME SIDE AS LANE CLOSURE (SINGLE OPEN LANE)**



**DRIVEWAY OR BUSINESS ACCESS DETAIL**  
**OPPOSITE OF LANE CLOSURE**

**FOR ALTERNATING 1-LANE, 2-WAY TRAFFIC: AFAD-CONTROLLED + TEMP. RUMBLE STRIPS**  
**SEPARATED BICYCLE LANE STRATEGY (45+ MPH HIGHWAYS)**  
 NOT TO SCALE

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DATE	7/18/2023				10	WASH				TC334	
PLOTTED BY	LintzF				JOB NUMBER						
DESIGNED BY					CONTRACT NO.		LOCATION NO.			SHEET 4 OF 4 SHEETS	
ENTERED BY											
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PROJ. ENGR.										TYPICAL TRAFFIC CONTROL PLANS	
REGIONAL ADM.		REVISION	DATE	BY							
										P.E. STAMP BOX _____ DATE _____	
										P.E. STAMP BOX _____ DATE _____	
										  Washington State Department of Transportation	

TIME	6:58:00 AM
DATE	7/18/2023

DATE	7/18/2023
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PLOTTED BY LintzF

DESIGNED BY

ENTERED BY

CHECKED BY

PROJ. ENGR.

REGIONAL ADM.

## REVISION

DATE \_\_\_\_\_

BY

REGION NO.	STATE
10	WASH

JOB NUMBER

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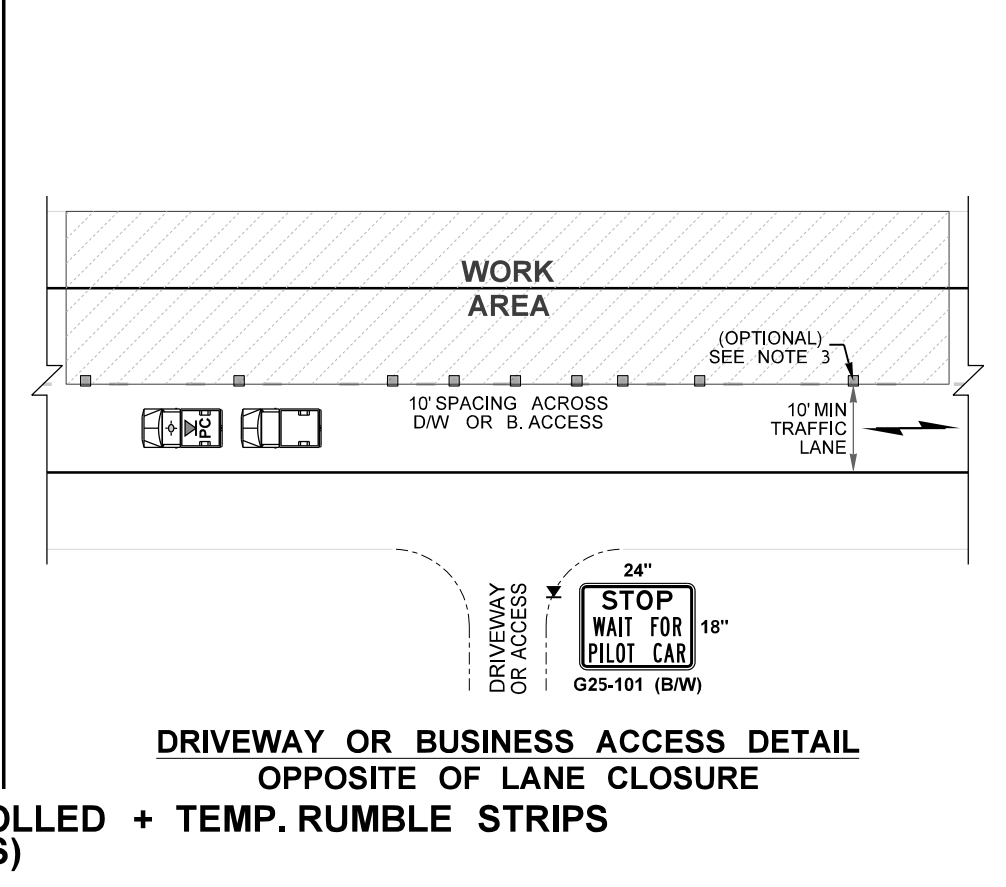
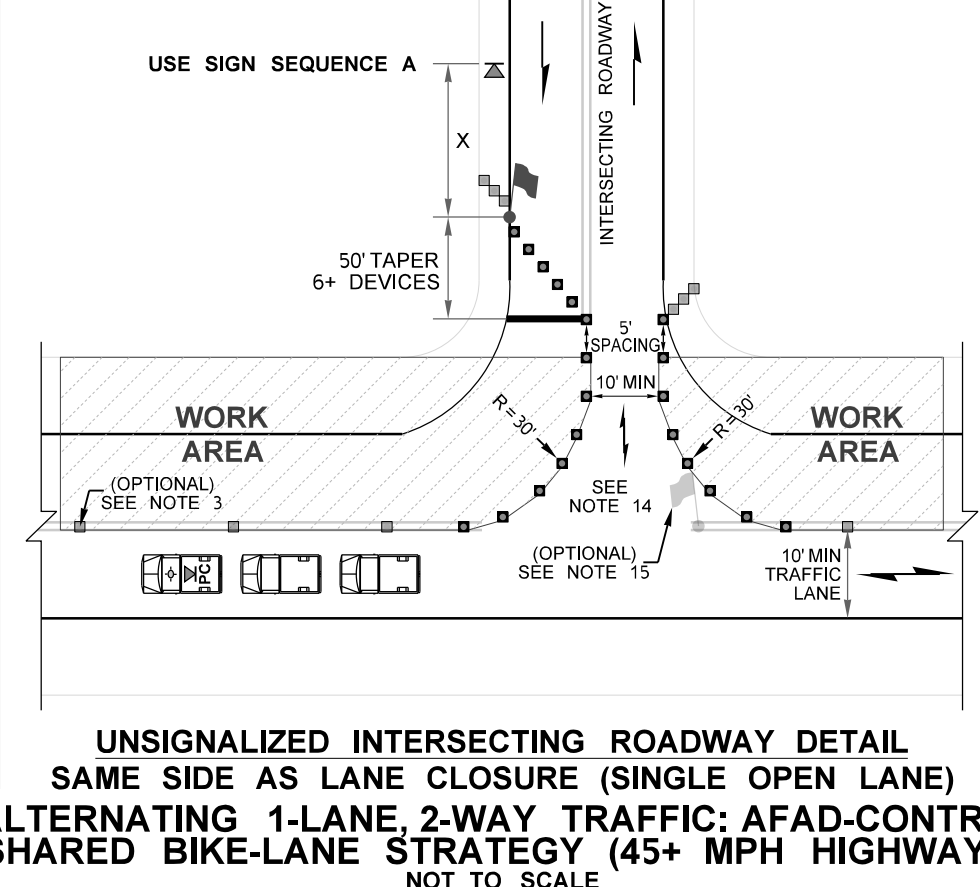
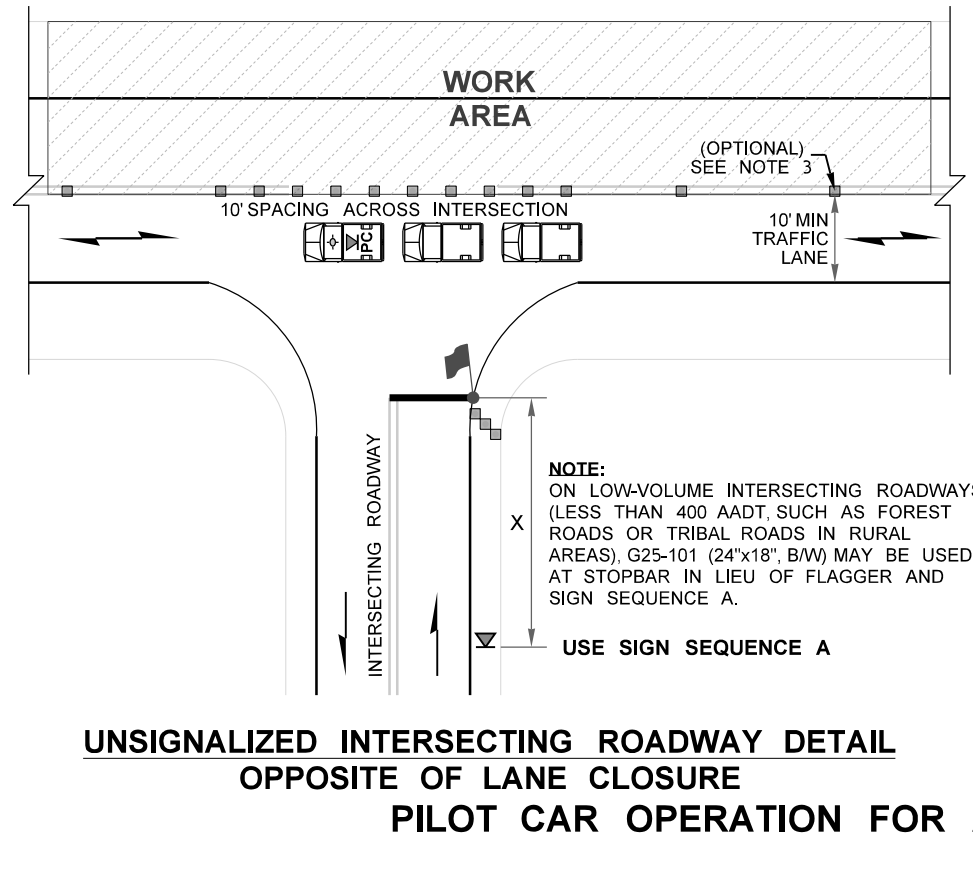
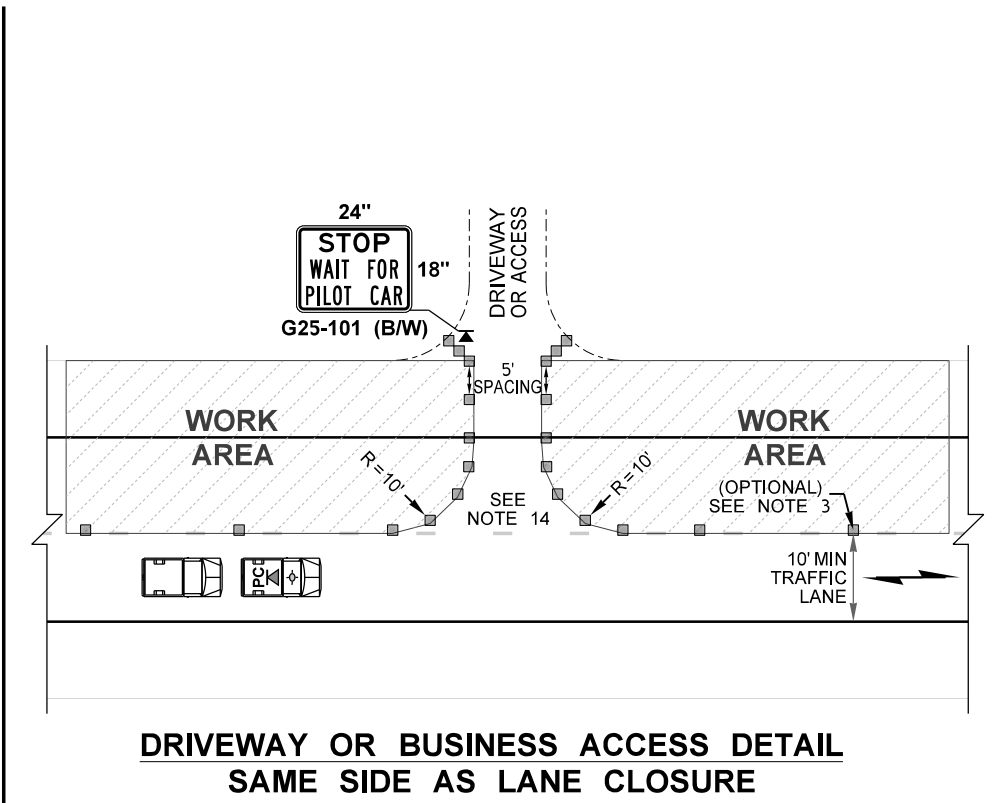
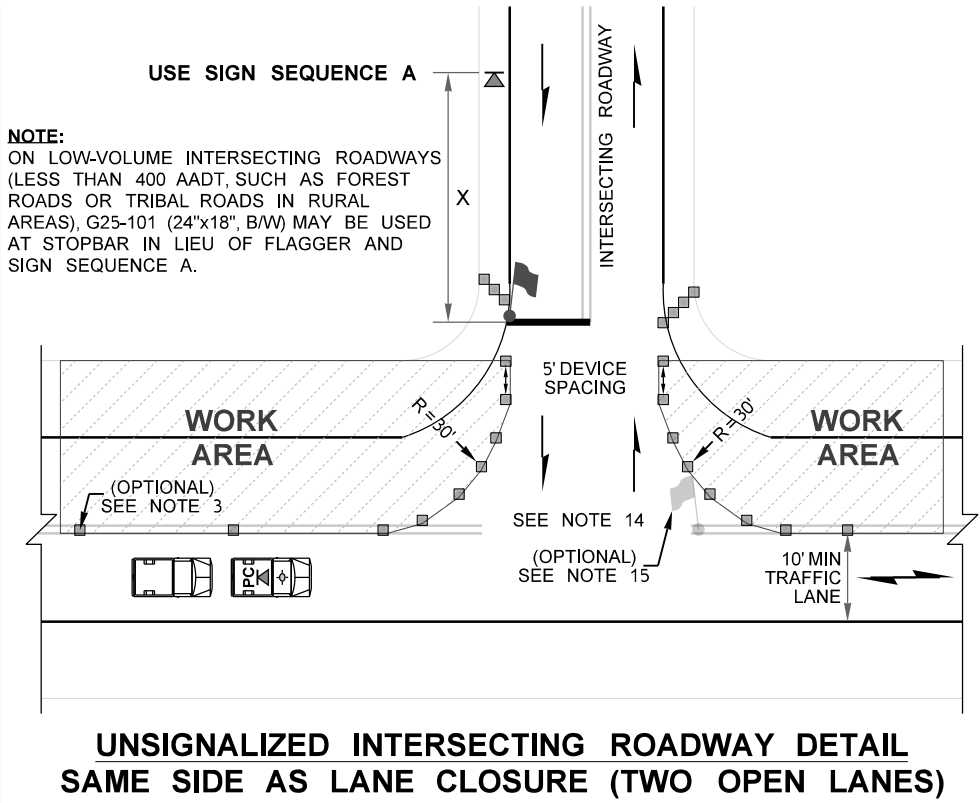
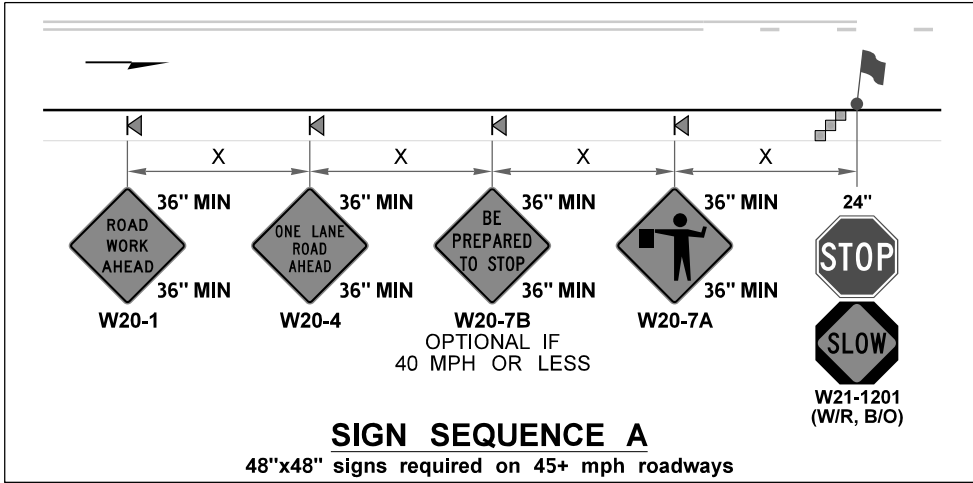
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4  
OF  
4  
SHEETS

## TYPICAL TRAFFIC CONTROL PLANS



- NOTES:**
13. FOR LEGEND, TABLES, AND ADDITIONAL NOTES: SEE TC334, SHEET 1.
14. WORK MAY BRIEFLY OCCUR WITHIN LANE CLOSURE ACROSS INTERSECTING ROADWAY APPROACHES, BUSINESS ACCESSES, OR DRIVEWAYS. **MAY HOLD APPROACH OR ACCESS TRAFFIC FOR 5 MINUTES OR LESS** (ENGINEER MAY ACCEPT HOLDS UP TO 10 MINUTES) WHILE RESTRICTING TURNS FROM MAINLINE. CHANNELIZATION DEVICES DELINEATING APPROACH OR ACCESS MAY BE REMOVED OR RELOCATED AS NEEDED.
15. SINGLE FLAGGER (WITH RED FLAG/RED GLOW CONE FLASHLIGHT) MAY BE ADDED TO THE INTERSECTING ROADWAY APPROACH TO HELP GUIDE ALTERNATING & TURNING TRAFFIC.



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TIME	6:58:01 AM	10	WASH						PLAN REF NO
DATE	7/18/2023								TC334
PLOTTED BY	LintzF								SHEET
DESIGNED BY									2
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PROJ. ENGR.									SHEETS
REGIONAL ADM.		REVISION	DATE	BY					TYPICAL TRAFFIC CONTROL PLANS

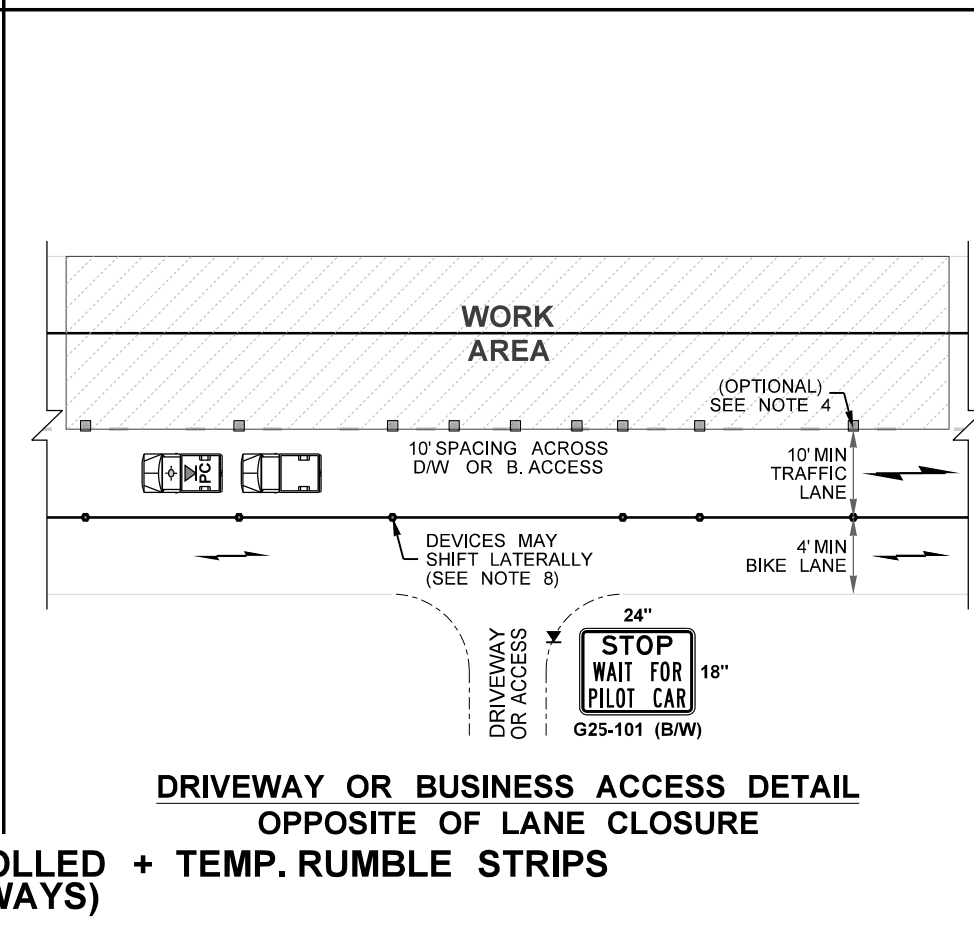
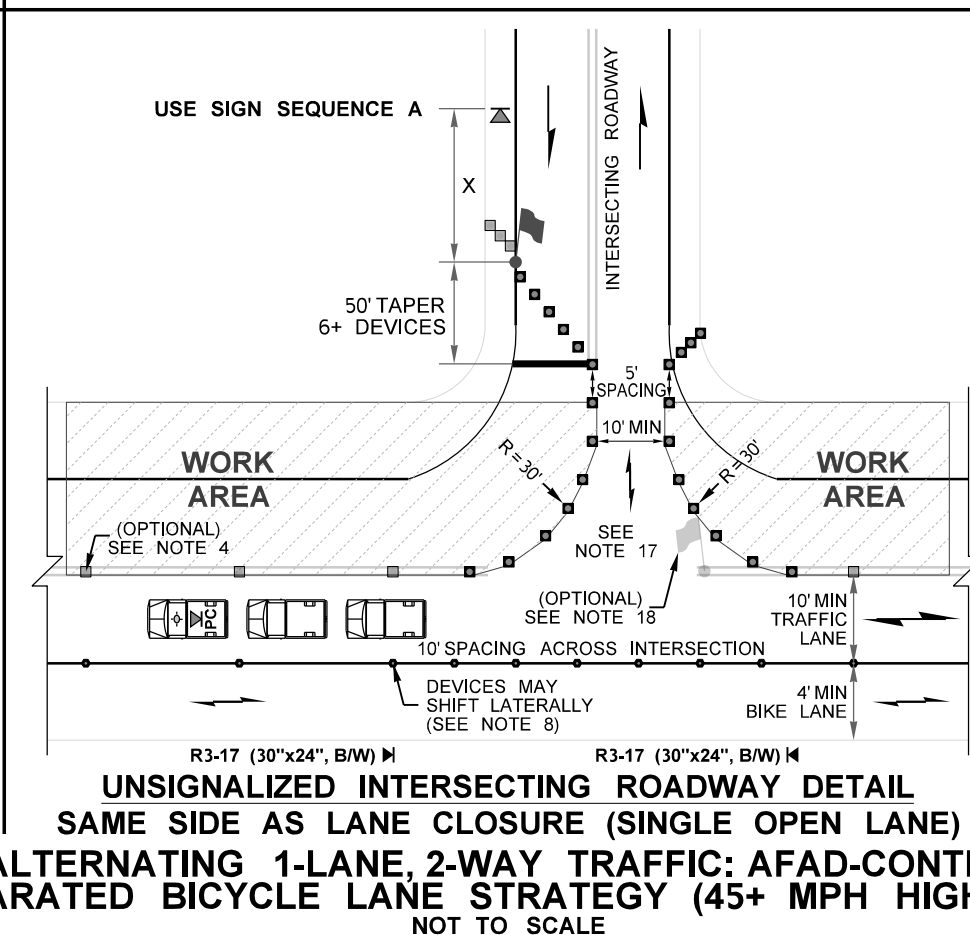
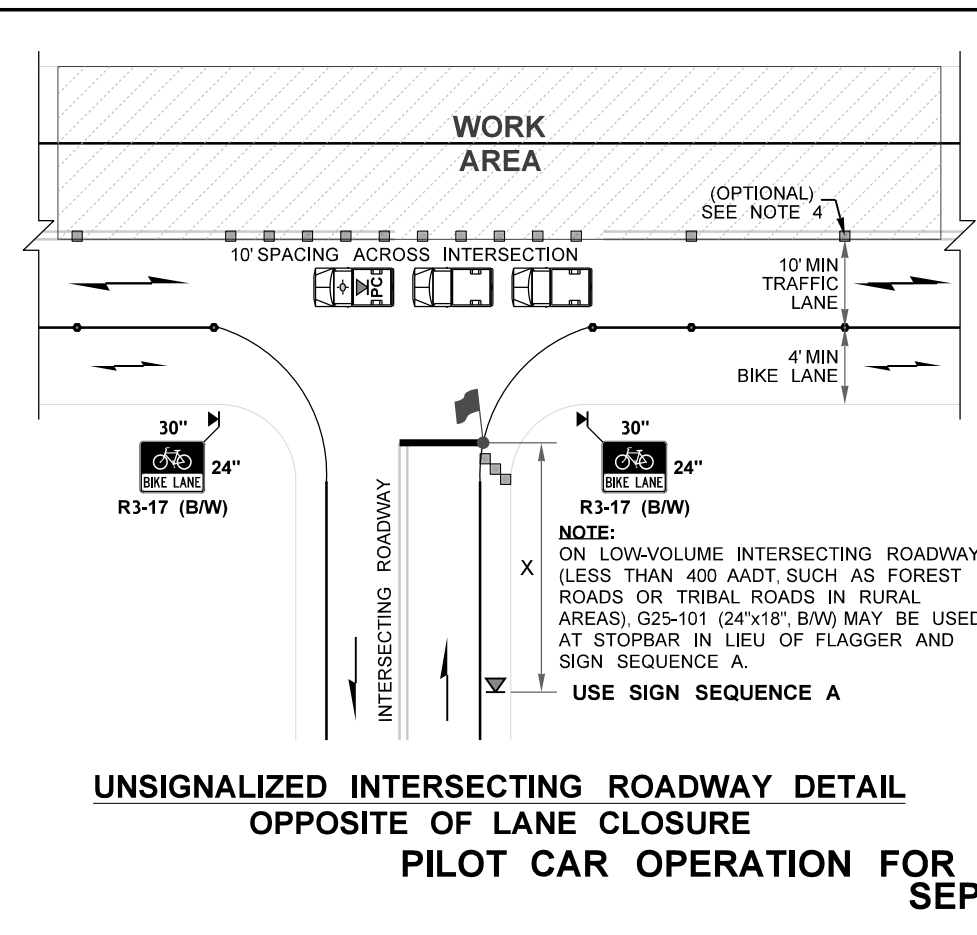
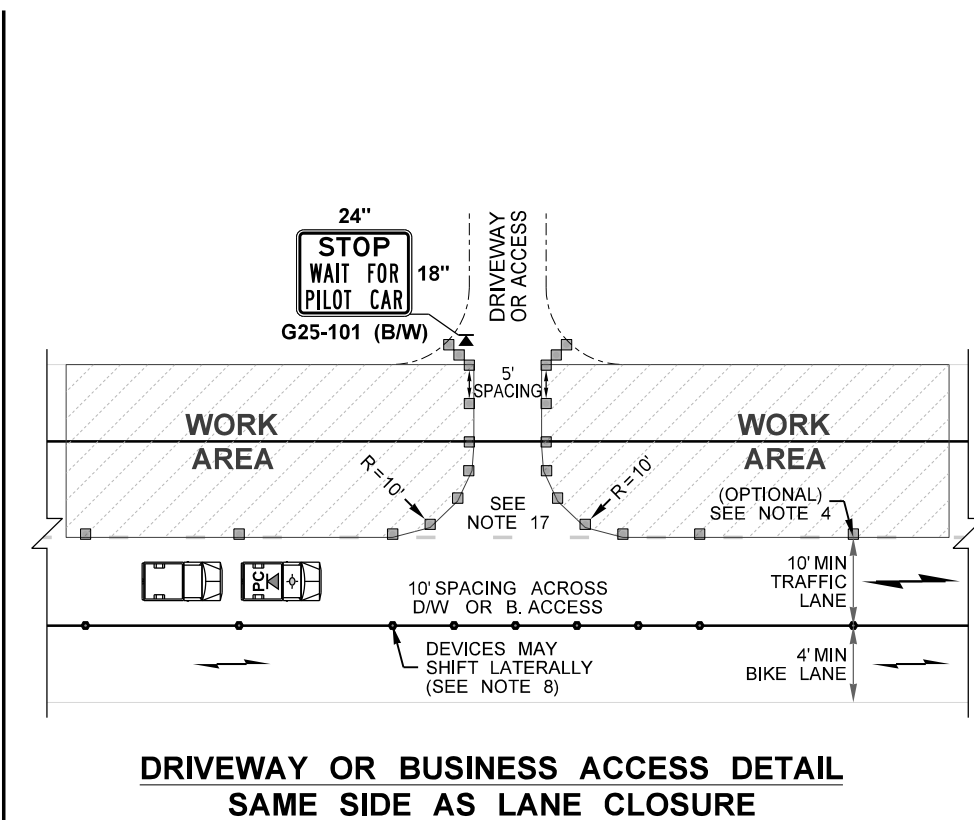
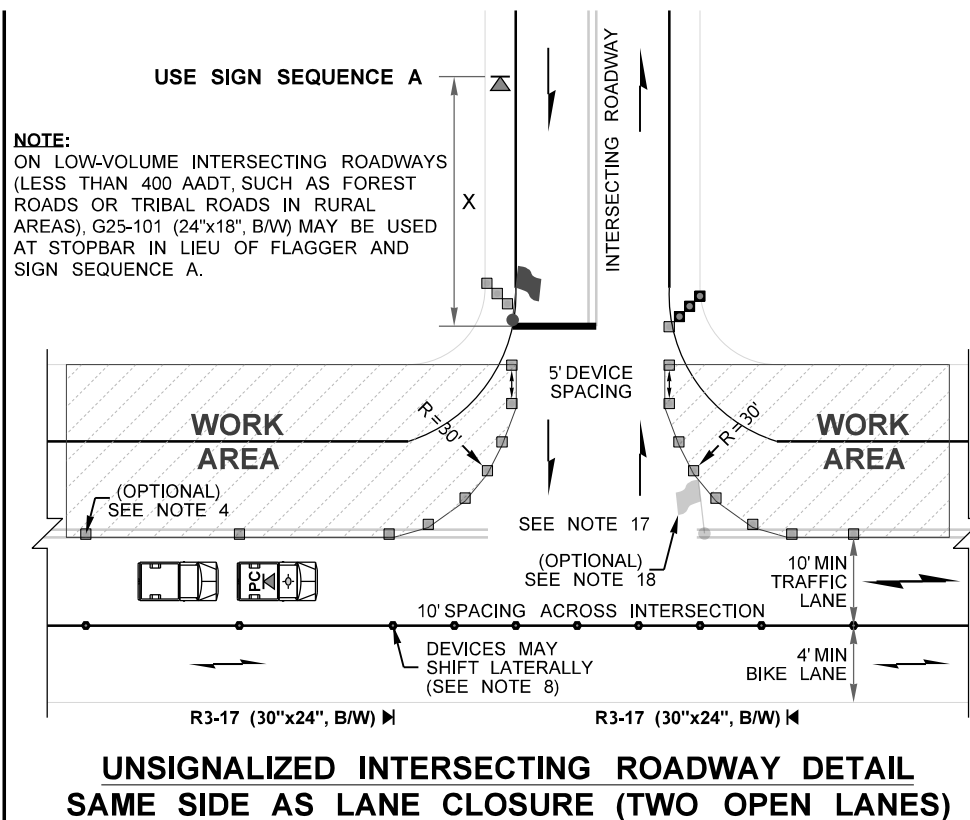
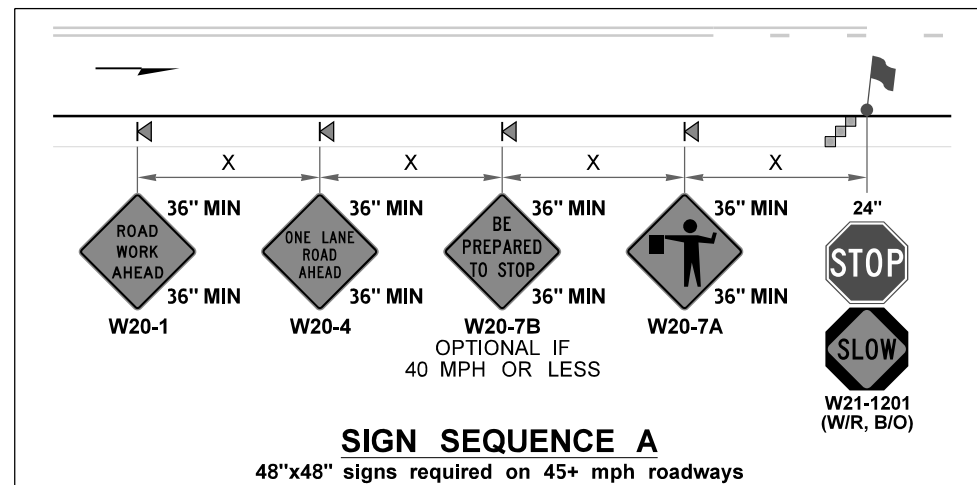




16. FOR LEGEND, TABLES, AND ADDITIONAL NOTES: SEE TC334, SHEET 3.

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DATE 7/18/2023						10		WASH						TC3	
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REGIONAL ADM.				REVISION		DATE		BY							
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										P.E. STAMP BOX		P.E. STAMP BOX			
										<div><p>Washington State Department of Transportation</p></div>		TYPICAL TRAFFIC CONTROL PLANS			
												SHEET 4 OF 4 SHEET			



**WORK ZONE MICROSTATION CELLS: Updated work zone cells incorporated (July 2023).**

WSDOT CAE automatically updates cell libraries on WSDOT and on-site consultant staff computers (no action needed); however, external users or off-site consultants must manually install them. For additional information email HQCAEHelpDesk@wsdot.wa.gov.

Division 4 in WSDOT Plans Preparation Manual, Section 400.06(29), provides updated work zone cell library policy and information for PS&Es. See <https://wsdot.wa.gov/engineering-standards/all-manuals-and-standards/manuals/plans-preparation-manual>

**TYPICAL TCP USAGE EXPLANATION:**

**Plot 1:** Pilot Car Operation for AFAD-controlled 1-lane, 2-way alternating traffic on the mainline for 45+ mph 2-lane highways with a shared bicycle-vehicle lane with portable temporary rumble strips in advance..

**Plot 2:** Details for intersecting roadways and driveway/business access for Plot 1.

**Plot 3:** Pilot Car Operation for AFAD-controlled 1-lane, 2-way alternating traffic on the mainline for 45+ mph 2-lane highways with a separated bicycle lane with portable temporary rumble strips in advance.. Separated bike lanes maximize vehicle capacity (minimizing queue & delays) especially when high bicycle volumes are expected and mainline flaggers are 1500'+ apart.

**Plot 4:** Details for intersecting roadways and driveway/business access for Plot 3.

**Other Alternating Traffic TCPs (45+ mph):** See Typical Traffic Control Plan Library (<https://wsdot.wa.gov/engineering-standards/all-manuals-and-standards/plan-sheet-library/work-zone-typical-traffic-control-plans-tcp>)

- \* TC320s for flagger-controlled alternating traffic plans
- \* TC330s for other variations of AFAD-controlled alternating traffic plans
- \* TC340s for temporary signal-controlled alternating traffic plans
- \* TC350s for traffic holds

If not published yet, they will be added in the future.

**Other Alternating Traffic TCPs (40 mph or less):** See Typical Traffic Control Plan Library (<https://wsdot.wa.gov/engineering-standards/all-manuals-and-standards/plan-sheet-library/work-zone-typical-traffic-control-plans-tcp>)

- \* TC420s for flagger-controlled alternating traffic
- \* TC430s for AFAD-controlled alternating traffic
- \* TC440s for temporary signal-controlled alternating traffic plans
- \* TC450s for traffic holds

If not published yet, they will be added in the future.

**DESIGNER NOTES:**

- A. Contact Region Transportation Operations to determine which Typical TCP(s) to utilize, as their are several variations available (or soon will be).
- B. These typical traffic control plans may be modified for site specific situations and/or WSDOT Region Transportation Operations standard practices. **Typical TCPs are not "Standard Plans".**
- C. **Do not use intermittent (old: "variable") regulatory work zone speed limit reductions for flagging or AFAD operations.** Instead, maintain the existing speed limit (or continuous regulatory work zone speed limit reduction, if applicable). See WSDOT Traffic Manual Section 5-18 and Executive Order E1060 regulatory speed limit reductions & advisory speed approval policy for work zones thru Region Transportation Operations.
- D. See MUTCD Table 6F-1 for additional temporary sign size information. Work zone signs are usually smaller than those used permanently.
- E. WAC 468-95-300 modifies MUTCD Table 6-1 "Recommended Advance Warning Sign Minimum Spacing". Sign spacing may be adjusted for field conditions based on engineering judgement. The Sign Spacing table is acceptable to use in Typical TCPs; however, site-specific traffic control plans should include actual sign spacing values (with Å) that have been verified in the field, on SR view, or via Google Maps.
- F. When positioned behind channelization devices, temporary signs should be mounted at 5' minimum.
- G. The work zone design speed is typically the posted speed limit (or the work zone speed limit when in effect). For split speed limits (SPEED LIMIT 65 TRUCKS 60), use the higher 65 mph for work zone design. For this Typical TCP, the work zone design speed is based on the existing posted speed limit for sign spacing, channelization device spacing, buffer, and roll ahead distances.
- H. "Flagger tapers" are always 50'-100' per closed lane with 6 devices minimum (10'-20' spacing on the taper), regardless of the posted speed limit or lane width per MUTCD 6C.08, Paragraph 15. Never use "L" for these tapers.
- I. Channelization devices types may be modified (vertical panel channelization devices prohibited). 28" reflective traffic cones are recommended on AFAD-controlled alternating traffic (especially for access delineation to maintain visibility for turning motorists). 36" reflective traffic cones, 42" tall channelization devices, or traffic safety drums may be used. Warning lights on channelization devices is being phased out in Washington. Contact Region Transportation Operations for information regarding their standard practices.
- J. Maximum channelization device spacing table for tangents is based on WAC 468-95-301 and may ALWAYS be reduced.
- K. Sequential arrow boards are prohibited at flagger tapers per WSDOT standard practice and per MUTCD Guidance TA-10.
- L. Per MUTCD Section 6C.06, longitudinal buffer spaces are optional. Using longitudinal buffer spaces listed in MUTCD Table 6C-2 is recommended as best practice when feasible, but may be adjusted based on engineering judgement. The Longitudinal Buffer Space table is acceptable in Typical TCPs; however, site-specific traffic control plans should include actual buffer distances that have been verified in the field, on SR view, or via Google Maps.
- M. The lateral buffer (transverse distance between open travel lanes and work area) is optional. No lateral buffer has been provided in these Typical TCPs due to the low speeds of alternating traffic. Actual work area limits may be modified.
- N. WSDOT best practice is to place a protective vehicle (PV) in the closed lane in advance of the work area for AFAD-controlled alternating traffic, but provide a full longitudinal buffer space to provide errant vehicles an opportunity to stop at the posted speed limit on 45+ mph roadways before impacting the PV. If the longitudinal buffer distance must be reduced or eliminated on 45+ mph roadways with AFAD-controlled alternating traffic, then upgrade the PV to a transportable attenuator (TA). Additional PVs (or TAs) may be added prior to multiple work crews within a work area. Contact Region Transportation Operations for their standard practice.
- O. Placing channelization devices transversely (at 45° and 5-foot spacing) is an optional strategy to stop move errant drivers traveling within the closed lane(s) but is not shown in the Typical TCP.
- P. The downstream taper of 50'-100' is required on 1-lane, 2-way traffic configurations.
- Q. Duration of traffic holds for driveways, business accesses, and/or roadway approaches is listed as 5 minutes (1 minute on high volume highways) in this Typical Traffic Control Plan, but may be adjusted. Contact Region Transportation Operations for additional guidance.
- R. When utilizing AFADs in Contracts, include the three Section 1-10 General Special Provisions for Specification, Measurement, and Payment. <https://wsdot.wa.gov/publications/fulltext/projectdev/gspspdf/egsp1.pdf>
- \* 1-10.1(1).OPT1.GR1 (AFAD Materials GSP)
  - \* 1-10.3(3).OPT1.GR1 (AFAD Specifications GSP)
  - \* 1-10.4(2).OPT2.GR1 (AFAD Measurement GSP)
  - \* 1-10.5(2).OPT1.GR1 (AFAD Payment GSP)
- S. When utilizing temporary portable transverse rumble strips in Contracts, include the following General Special Provisions for Materials, Specification, Measurement, and Payment. <https://wsdot.wa.gov/publications/fulltext/projectdev/gspspdf/egsp1.pdf>
- \* 1-10.2(9-35).OPT1.GR1 (Temp Rumble Strip Materials GSP)
  - \* 1-10.3(3).OPT5.GR1 (Temp Rumble Strip Specifications GSP)
  - \* 1-10.4(2).OPT8.GR1 (Temp Rumble Strip Measurement GSP)
  - \* 1-10.5(2).OPT6.GR1 (Temp Rumble Strip Payment GSP)

**PILOT CAR OPERATION FOR ALTERNATING 1-LANE, 2-WAY TRAFFIC: AFAD-CONTROLLED + TEMP. RUMBLE STRIPS (45+ MPH HIGHWAYS)**

	<b>INFORMATIONAL USE ONLY</b>	Plot 5
	<b>DO NOT INCLUDE THIS SHEET IN CONTRACT PS&amp;Es or TCP SUBMITTALS.</b>	<b>TC334</b>
	<b>DESIGNER GUIDANCE</b>	