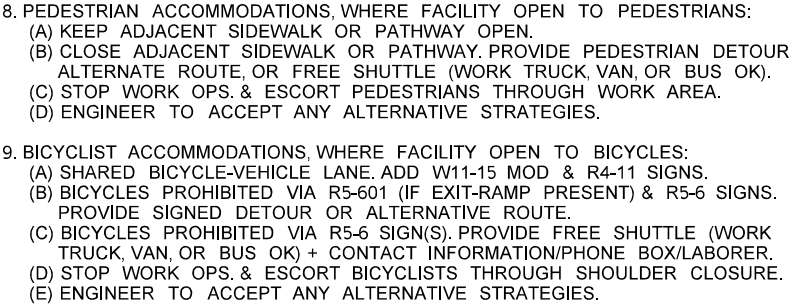


SHOULDER CLOSURE TAPER LENGTH = L/3						
SHOULDER WIDTH	SPEED (MPH)	45	50	55	60	65
< 8'	L/3 (feet)	USE	LANE	CLOSURE	INSTEAD	
8'		120	160	160	160	200
10'		150	200	200	200	240

LONGITUDINAL BUFFER SPACE = B					
SPEED (MPH)	45	50	55	60	65
B (feet)	360	425	495	570	645
Buffer space may be adjusted (±) based on field conditions.					

MAXIMUM CHANNELIZING DEVICE SPACING (feet)		
MPH	TAPER	TANGENT
50 - 65	40	80
45	30	60

STATIONARY TRANSPORTABLE ATTENUATOR ROLL AHEAD DISTANCE = R			
HOST VEHICLE WEIGHT LESS THAN 22,000 lbs.		HOST VEHICLE WEIGHT 22,000+ lbs.	
45-55 MPH	60+ MPH	45-55 MPH	60+ MPH
123'	172'	100'	150'



1. IF FEASIBLE, AVOID PLACING SHOULDER CLOSURE TAPER WITHIN OR IMMEDIATELY FOLLOWING HORIZONTAL AND VERTICAL CREST CURVES.
2. DISTANCE INCREASES AS WORK AREA MOVES DOWNSTREAM.
3. 28" TRAFFIC CONE, 36" TRAFFIC CONES, 42" TALL CHANNELIZING DEVICES, OR TRAFFIC SAFETY DRUMS ALLOWED ON TAPERS AND TANGENTS. ENCROACHMENT INTO ADJACENT OPEN LANE PROHIBITED (BASE WEIGHT MAY ENCROACH).

4. RED/WHITE OR BLACK/YELLOW CHEVRON PATTERN OK. ADDITIONAL
TRANSPORTABLE ATTENUATORS MAY BE ADDED BEHIND EACH WORK CREW.

5. IF PAVED SHOULDER IS LESS THAN 8 FEET WIDE AT TRANSPORTABLE ATTENUATORS AND WORK AREA, THEN A LANE CLOSURE SHALL BE IMPLEMENTED.

6. SIGNS ARE BLACK ON ORANGE UNLESS OTHERWISE INDICATED.

7. PLAN IS APPLICABLE TO SHOULDER CLOSURES OF 7 DAYS OR LESS.

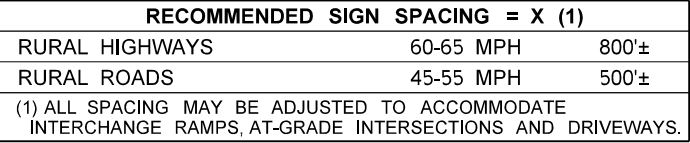
9. BICYCLIST ACCOMMODATIONS, WHERE FACILITY OPEN TO BICYCLES:
 (A) SHARED BICYCLE-VEHICLE LANE, ADD W11-15 MOD & R4-11 SIGNS.
 (B) BICYCLES PROHIBITED VIA R5-601 (IF EXIT-RAMP PRESENT) & R5-6 SIGNS.
 PROVIDE SIGNED DETOUR OR ALTERNATIVE ROUTE.
 (C) BICYCLES PROHIBITED VIA R5-6 SIGN(S). PROVIDE FREE SHUTTLE (WORK
 TRUCK, VAN, OR BUS OK) + CONTACT INFORMATION/PHONE BOX/LABORER.
 (D) STOP WORK OPS. & ESCORT BICYCLISTS THROUGH SHOULDER CLOSURE.
 (E) ENGINEER TO ACCEPT ANY ALTERNATIVE STRATEGIES.

The diagram illustrates the placement of two traffic signs relative to a shoulder closure. On the left, sign R5-601 (B/W) is shown with a bicycle symbol and the text 'MUST EXIT 1/4 MILE'. It is placed 24 inches before the ramp, with a 3C/4C classification. On the right, sign R5-6 (R/B/W) is shown with a red circle and slash over a bicycle symbol. It is placed 24 inches before and within the shoulder closure.

SHOULDER CLOSURE (45+ MPH HIGHWAYS)

NOT TO SCALE

[illegible]



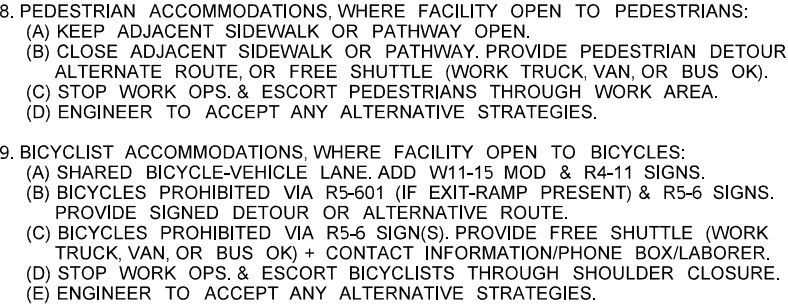
SHOULDER CLOSURE TAPER LENGTH = L/3						
SHOULDER WIDTH	SPEED (MPH)	45	50	55	60	65
< 8'	L/3 (feet)	USE LANE CLOSURE INSTEAD				
8'		120	160	160	160	200
10'		150	200	200	200	240

LONGITUDINAL BUFFER SPACE = B					
SPEED (MPH)	45	50	55	60	65
B (feet)	360	425	495	570	645

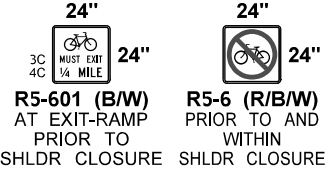
Buffer space may be adjusted (±) based on field conditions.

MAXIMUM CHANNELIZING DEVICE SPACING (feet)		
MPH	TAPER	TANGENT
50 - 65	40	80
45	30	60

STATIONARY TRANSPORTABLE ATTENUATOR ROLL AHEAD DISTANCE = R			
HOST VEHICLE WEIGHT LESS THAN 22,000 lbs.		HOST VEHICLE WEIGHT 22,000+ lbs.	
45-55 MPH	60+ MPH	45-55 MPH	60+ MPH
123'	172'	100'	150'




4. RED/WHITE OR BLACK/YELLOW CHEVRON PATTERN OK. ADDITIONAL TRANSPORTABLE ATTENUATORS MAY BE ADDED BEHIND EACH WORK CREW.
5. IF PAVED SHOULDER IS LESS THAN 8 FEET WIDE AT TRANSPORTABLE ATTENUATORS AND WORK AREA, THEN A LANE CLOSURE SHALL BE IMPLEMENTED.
6. SIGNS ARE BLACK ON ORANGE UNLESS OTHERWISE INDICATED.
7. PLAN IS APPLICABLE TO SHOULDER CLOSURES OF 7 DAYS OR LESS.



NOTES:

1. IF FEASIBLE, AVOID PLACING SHOULDER CLOSURE TAPER WITHIN OR IMMEDIATELY FOLLOWING HORIZONTAL AND VERTICAL CREST CURVES.
2. DISTANCE INCREASES AS WORK AREA MOVES DOWNSTREAM.
3. 28" TRAFFIC CONE, 36" TRAFFIC CONES, 42" TALL CHANNELIZING DEVICES, OR TRAFFIC SAFETY DRUMS ALLOWED ON TAPERS AND TANGENTS. ENCROACHMENT INTO ADJACENT OPEN LANE PROHIBITED (BASE WEIGHT MAY ENCROACH).

FILE NAME C:\Users\Lintz\OneDrive - Washington State Department of Transportation\Desktop\Work Zone TCPs\303Hwy45+Shldr.dgn														 Washington State Department of Transportation		Plot 1	
TIME 12:47:12 PM								REGION NO. STATE		FED.AID PROJ.NO.		PLAN REF NO					
DATE 1/26/2024								10 WASH				LOCATION NO.		TC303			
PLOTTED BY LintzF								JOB NUMBER						SHEET 1 OF 1 SHEETS			
DESIGNED BY								CONTRACT NO.									
ENTERED BY																	
CHECKED BY																	
PROJ. ENGR.																	
REGIONAL ADM.		REVISION		DATE		BY						TYPICAL TRAFFIC CONTROL PLANS					
										DATE		DATE					
										P.E. STAMP BOX		P.E. STAMP BOX					

WORK ZONE MICROSTATION CELLS: Updated work zone cells incorporated (January 2024).

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 e-mail HQCAEHlpDesk@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>

PLOT USAGE EXPLANATION:

Plot 1: Shoulder closure maintaining existing speed limit on highways with 45 mph or higher speed limits.

Note: Detail sheets for interchange ramps can be found in TC102 but will need to be modified for highways. Details for at-grade intersections will be added at a future date.

DESIGNER NOTES:

A. These typical traffic control plans (Typical TCPs) may be modified for project-specific, site-specific situations, and/or WSDOT Region Transportation Operations standard practices. **Typical TCPs are not "Standard Plans".**

B. Because of the minimal traffic impacts of shoulder closures, Portable Changeable Message Signs (PCMSs) are avoided. PCMSs are optional per MUTCD Section 6F.60 and Section 6H and are used to supplement signage and inform motorists of unexpected situations.

c. 48"x48" diamond-shaped work zone signs used on 45+ mph highways by WSDOT standard practice, but MUTCD does allow 36"x36 signs on 45+ mph highways if needed per Table 6F-1. For shoulder closures, temporary signs are only placed on one shoulder (does not need to be gated). If signs are barrier-mounted, a special rectangular-shaped 24"x48" sign should be used. See MUTCD Table 6F-1 for additional temporary sign size information.

D. When positioned behind channelizing devices, temporary signs should be mounted at 5' minimum.

E. Work zone traffic control layout is based on the posted speed limit.

F. Traffic safety drums, 42" tall channelizing devices, 36" traffic cones, & 28" traffic cones allowable for tapers and tangents (vertical panel channelizing devices prohibited). Warning lights on channelizing devices being phased out in Washington. Contact Region Transportation Operations for information regarding their standard practices.

G. Maximum channelizing device spacing table for tangents is based on WAC 468-95-301 and may ALWAYS be reduced.

H. It is WSDOT standard practice not to use sequential arrow signs (arrow boards) for shoulder closure tapers. Per MUTCD TA-6, sequential arrow signs (arrow boards) should not be used.

i. Longitudinal buffer spaces (B) are optional per MUTCD Section 6C.06 but is desired when practical. Longitudinal buffers are the most adjustable component that may be increased/decreased to move lane closure tapers away from horizontal/vertical curves and from on-ramp merges.

7. The lateral buffer (transverse distance between open lanes and work area) is typically 2 feet on 45+ mph roadways but may be reduced to 1-foot to provide additional work area. Per MUTCD Section 6C.06 P14, lateral buffer spaces are optional. Actual work area limits may be modified.

K. WSDOT standard practice is not to encroach into adjacent open lanes on 45+ mph highways, even though MUTCD TA-6 permits the practice.

L. Per MUTCD TA-6, the downstream taper not used. Eliminating it allows construction vehicles to accelerate out of work area into reopened lane to minimize traffic impacts and increase safety.

SHOULDER CLOSURE (45+ MPH HIGHWAY)

	<p>INFORMATIONAL USE ONLY</p> <p>DO NOT INCLUDE THIS SHEET IN CONTRACT PS&Es or TCP SUBMITTALS.</p>	Plot 2
		TC303
<p>DESIGNER GUIDANCE</p>		