

mPCMS	
1	2
RIGHT LANE CLOSURE	1 MILE AHEAD
2.0 SEC	2.0 SEC

FIELD LOCATE 1± MILE PRIOR TO CLOSURE TAPER PER STD. SPEC. 1-10.3(3)C.

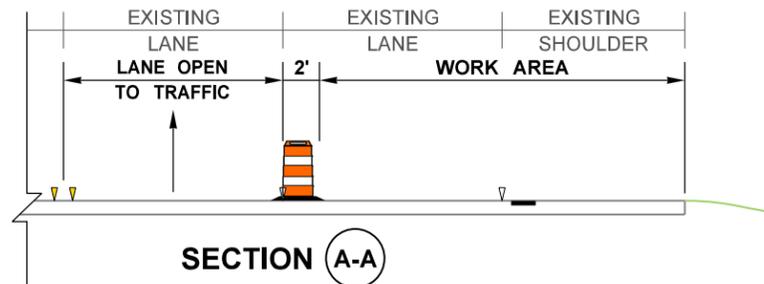
mPCMS - ALT 1		
1	2	3
RIGHT LANE CLOSURE	WATCH FOR SLOW TRAFFIC	NEXT # MILES
1.5 SEC	1.5 SEC	1.5 SEC

USE IF TRAFFIC BACKUPS EXPECTED, BUT NOT VERIFIED HOURLY BY TCS.

mPCMS		
1	2	3
RIGHT LANE CLOSURE	SLOW TRAFFIC AHEAD	NEXT # MILES
1.5 SEC	1.5 SEC	1.5 SEC

ONLY USED IF TCS VERIFIES HOURLY THAT TRAFFIC BACKUPS ARE PRESENT.

FIELD LOCATE 1± MILE PRIOR TO CLOSURE TAPER OR UPSTREAM OF EXPECTED MAXIMUM TRAFFIC QUEUE PER STD. SPEC. 1-10.3(3)C.



RECOMMENDED SIGN SPACING = X (1)		
RURAL HIGHWAYS	60-65 MPH	800±
RURAL ROADS	45-55 MPH	500±

(1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERCHANGE RAMPS, AT-GRADE INTERSECTIONS AND DRIVEWAYS.

LANE CLOSURE TAPER LENGTH = L						
LANE WIDTH	SPEED (MPH)	45	50	55	60	65
12'	L (feet)	540	600	680	720	800

Avoid reducing lane closure length on 45+ mph roadways.

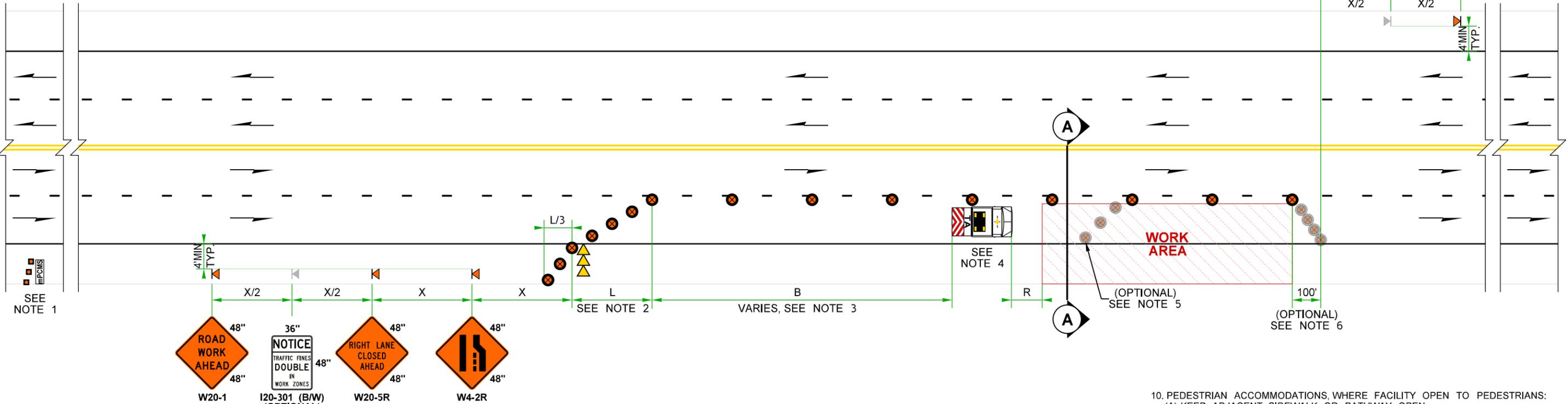
MAXIMUM CHANNELIZATION DEVICE SPACING (feet)		
MPH	TAPER	TANGENT
50 - 65	40	80
45	30	60

SHOULDER CLOSURE TAPER LENGTH = L/3						
SHOULDER WIDTH	SPEED (MPH)	45	50	55	60	65
< 6'	L/3 (feet)	60	80	80	80	80
6'		90	120	120	120	160
10'		150	200	200	200	240

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'

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.



NOTES:

- FULL-SIZE PCMS (11' x 6' DISPLAY) MAY BE USED IN LIEU OF mPCMS. PCMS MESSAGES MAY BE MODIFIED.
- IF FEASIBLE, AVOID PLACING LANE CLOSURE TAPER WITHIN OR IMMEDIATELY FOLLOWING HORIZONTAL AND VERTICAL CREST CURVES.
- DISTANCE INCREASES AS WORK AREA MOVES DOWNSTREAM.
- RED/WHITE OR BLACK/YELLOW CHEVRON PATTERN OK. ADDITIONAL TRANSPORTABLE ATTENUATORS MAY BE ADDED BEHIND EACH WORK CREW.
- IF USED, PLACE DEVICES TRANSVERSELY ACROSS CLOSED LANES AT 45°± AND 5' SPACING AT STRATEGIC LOCATIONS.
- IF USED, DOWNSTREAM TAPER DEVICE SPACING IS 20'.
- SIGNS ARE BLACK ON ORANGE UNLESS OTHERWISE INDICATED.
- PLAN IS APPLICABLE TO LANE CLOSURES OF 7 DAYS OR LESS.
- ADD W21-30 SERIES SIGNS (48"x48", 5' HEIGHT) 500± PRIOR TO FREQUENT CONSTRUCTION VEHICLE INGRESS/EGRESS INTO OPEN LANE(S).
- PEDESTRIAN ACCOMMODATIONS, WHERE FACILITY OPEN TO PEDESTRIANS:
 - KEEP ADJACENT SIDEWALK OR PATHWAY OPEN.
 - CLOSE ADJACENT SIDEWALK OR PATHWAY. PROVIDE PEDESTRIAN DETOUR, ALTERNATE ROUTE, OR FREE SHUTTLE (WORK TRUCK, VAN, OR BUS OK).
 - STOP WORK OPS. & ESCORT PEDESTRIANS THROUGH WORK AREA.
 - ENGINEER TO ACCEPT ANY ALTERNATIVE STRATEGIES.
- BICYCLIST ACCOMMODATIONS, WHERE FACILITY OPEN TO BICYCLES:
 - BICYCLES PROHIBITED VIA R5-6 SIGNS. PROVIDE SIGNED DETOUR OR ALTERNATIVE ROUTE.
 - BICYCLES PROHIBITED VIA R5-6 SIGN(S). PROVIDE FREE SHUTTLE (WORK TRUCK, VAN, OR BUS OK) + CONTACT INFORMATION/PHONE BOX/LABORER.
 - STOP WORK OPS & ESCORT BICYCLISTS THROUGH CLOSURE.
 - PROVIDE 4' TEMP BIKE LANE THROUGH CLOSURE, SEE SHEETS 2 OR 3.
 - ENGINEER TO ACCEPT ANY ALTERNATIVE STRATEGIES.

LEGEND:

- TEMPORARY SIGN LOCATION (1' MIN HEIGHT)
- TRAFFIC SAFETY DRUM
- SEQUENTIAL ARROW SIGN
- TRANSPORTABLE ATTENUATOR
- mPCMS mini PORTABLE CHANGEABLE MESSAGE SIGN (PCMS OK, SEE NOTE 1)

SINGLE RIGHT LANE CLOSURE (45+ MPH 4-LANE HIGHWAYS)
NOT TO SCALE

FILE NAME	C:\Users\LintzF\OneDrive - Washington State Department of Transportation\Desktop\Work Zone TCPs\361MLHwy45+1RtLane.dgn			REGION NO.	STATE	FED.AID PROJ.NO.	Washington State Department of Transportation	Plot 1
TIME	2:19:15 PM			10	WASH			PLAN REF NO
DATE	5/1/2024			JOB NUMBER				TC361
PLOTTED BY	LintzF			CONTRACT NO.		LOCATION NO.		SHEET 1 OF 6 SHEETS
DESIGNED BY								
ENTERED BY								
CHECKED BY								
PROJ. ENGR.								
REGIONAL ADM.	REVISION	DATE	BY					

mPCMS	
1	2
RIGHT LANE CLOSURE	1 MILE AHEAD
2.0 SEC	2.0 SEC

FIELD LOCATE 1± MILE PRIOR TO CLOSURE TAPER PER STD. SPEC. 1-10.3(3)C.

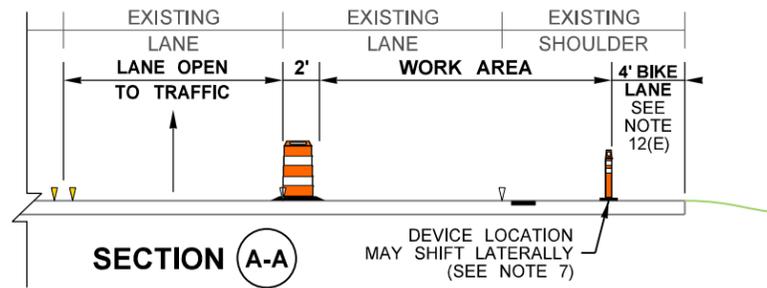
mPCMS - ALT 1		
1	2	3
RIGHT LANE CLOSURE	WATCH FOR SLOW TRAFFIC	NEXT # MILES
1.5 SEC	1.5 SEC	1.5 SEC

USE IF TRAFFIC BACKUPS EXPECTED, BUT NOT VERIFIED HOURLY BY TCS.

mPCMS		
1	2	3
RIGHT LANE CLOSURE	SLOW TRAFFIC AHEAD	NEXT # MILES
1.5 SEC	1.5 SEC	1.5 SEC

ONLY USED IF TCS VERIFIES HOURLY THAT TRAFFIC BACKUPS ARE PRESENT.

FIELD LOCATE 1± MILE PRIOR TO CLOSURE TAPER OR UPSTREAM OF EXPECTED MAXIMUM TRAFFIC QUEUE PER STD. SPEC. 1-10.3(3)C.



RECOMMENDED SIGN SPACING = X (1)		
RURAL HIGHWAYS	60-65 MPH	800±
RURAL ROADS	45-55 MPH	500±

(1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERCHANGE RAMPS, AT-GRADE INTERSECTIONS AND DRIVEWAYS.

LANE CLOSURE TAPER LENGTH = L						
LANE WIDTH	SPEED (MPH)	45	50	55	60	65
12'	L (feet)	540	600	680	720	800

Avoid reducing lane closure length on 45+ mph roadways.

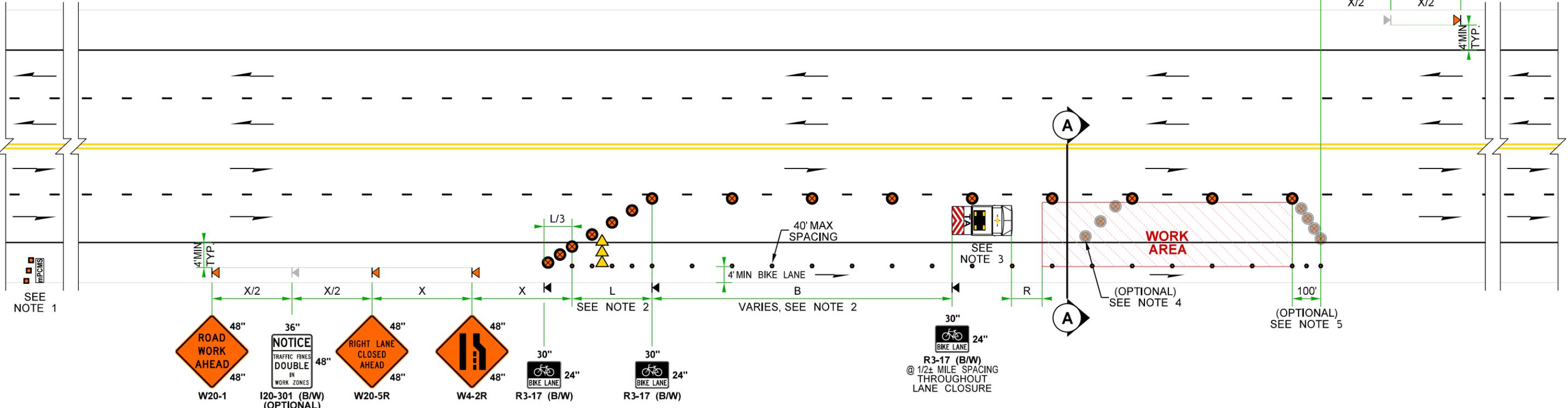
MAXIMUM CHANNELIZATION DEVICE SPACING (feet)		
MPH	TAPER	TANGENT
50 - 65	40	80
45	30	60

SHOULDER CLOSURE TAPER LENGTH = L/3						
SHOULDER WIDTH	SPEED (MPH)	45	50	55	60	65
< 6'	L/3 (feet)	60	80	80	80	80
6'		90	120	120	120	160
10'		150	200	200	200	240

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'

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.



- NOTES:**
- FULL-SIZE PCMS (11'x 6'DISPLAY) MAY BE USED IN LIEU OF mPCMS. PCMS MESSAGES MAY BE MODIFIED.
 - IF FEASIBLE, AVOID PLACING LANE CLOSURE TAPER WITHIN OR IMMEDIATELY FOLLOWING HORIZONTAL AND VERTICAL CREST CURVES.
 - DISTANCE INCREASES AS WORK AREA MOVES DOWNSTREAM.
 - RED/WHITE OR BLACK/YELLOW CHEVRON PATTERN OK. ADDITIONAL TRANSPORTABLE ATTENUATORS MAY BE ADDED BEHIND EACH WORK CREW.
 - IF USED, PLACE DEVICES TRANSVERSELY ACROSS CLOSED LANES AT 45°± AND 5' SPACING AT STRATEGIC LOCATIONS.
 - IF USED, DOWNSTREAM TAPER DEVICE SPACING IS 20'.
 - 28" TRAFFIC CONE, 36" TRAFFIC CONE, 42" TALL CHANNELIZING DEVICE OK. DEVICE MAY SHIFT Laterally TO PROVIDE 4' MIN BIKE LANE.
 - SIGNS ARE BLACK ON ORANGE UNLESS OTHERWISE INDICATED.
 - PLAN IS APPLICABLE TO LANE CLOSURES OF 7 DAYS OR LESS.
 - ADD W21-30 SERIES SIGNS (48"x48", 5' HEIGHT) 500± PRIOR TO FREQUENT CONSTRUCTION VEHICLE INGRESS/EGRESS INTO OPEN LANE(S).
 - PEDESTRIAN ACCOMMODATIONS, WHERE FACILITY OPEN TO PEDESTRIANS: (A) KEEP ADJACENT SIDEWALK OR PATHWAY OPEN. (B) CLOSE ADJACENT SIDEWALK OR PATHWAY. PROVIDE PEDESTRIAN DETOUR, ALTERNATE ROUTE, OR FREE SHUTTLE (WORK TRUCK, VAN, OR BUS OK). (C) STOP WORK OPS. & ESCORT PEDESTRIANS THROUGH WORK AREA. (D) ENGINEER TO ACCEPT ANY ALTERNATIVE STRATEGIES.
 - BICYCLIST ACCOMMODATIONS, WHERE FACILITY OPEN TO BICYCLES: (E) PROVIDE TEMP. 4' MIN BIKE LANE ON PAVED EDGE OF SHOULDER THROUGH CLOSURE.

SINGLE RIGHT LANE CLOSURE - TEMP. BIKE LANE @ CLOSED SHLDR (45+ MPH 4-LANE HIGHWAYS)

NOT TO SCALE

LEGEND:

- ◀ TEMPORARY SIGN LOCATION (1' MIN HEIGHT)
- ⊗ TRAFFIC SAFETY DRUM
- PORTABLE TUBULAR MARKER (SEE NOTE 2)
- ▶▶▶ SEQUENTIAL ARROW SIGN
- ▬ TRANSPORTABLE ATTENUATOR
- mPCMS mini PORTABLE CHANGEABLE MESSAGE SIGN (PCMS OK, SEE NOTE 1)



FILE NAME: C:\Users\LintzF\OneDrive - Washington State Department of Transportation\Desktop\Work Zone TCPs\361MLHwy45+1RtLane.dgn		REGION NO. STATE		FED.AID PROJ.NO.		Plot 2	
TIME: 2:19:15 PM		10	WASH			PLAN REF NO. TC361	
DATE: 5/1/2024						SHEET 2 OF 6 SHEETS	
PLOTTED BY: LintzF						<p>Washington State Department of Transportation</p>	
DESIGNED BY:							
ENTERED BY:							
CHECKED BY:							
PROJ. ENGR.:							
REGIONAL ADM.:	REVISION	DATE	BY	DATE	DATE	TYPICAL TRAFFIC CONTROL PLANS	

mPCMS	
1	2
RIGHT LANE CLOSURE	1 MILE AHEAD
2.0 SEC	2.0 SEC

FIELD LOCATE 1± MILE PRIOR TO CLOSURE TAPER PER STD. SPEC. 1-10.3(3)C.

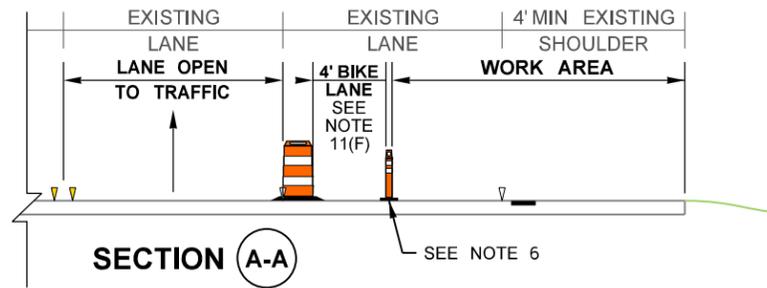
mPCMS - ALT 1		
1	2	3
RIGHT LANE CLOSURE	WATCH FOR SLOW TRAFFIC	NEXT # MILES
1.5 SEC	1.5 SEC	1.5 SEC

USE IF TRAFFIC BACKUPS EXPECTED, BUT NOT VERIFIED HOURLY BY TCS.

mPCMS		
1	2	3
RIGHT LANE CLOSURE	SLOW TRAFFIC AHEAD	NEXT # MILES
1.5 SEC	1.5 SEC	1.5 SEC

ONLY USED IF TCS VERIFIES HOURLY THAT TRAFFIC BACKUPS ARE PRESENT.

FIELD LOCATE 1± MILE PRIOR TO CLOSURE TAPER OR UPSTREAM OF EXPECTED MAXIMUM TRAFFIC QUEUE PER STD. SPEC. 1-10.3(3)C.



RECOMMENDED SIGN SPACING = X (1)		
RURAL HIGHWAYS	60-65 MPH	800±
RURAL ROADS	45-55 MPH	500±

(1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERCHANGE RAMPS, AT-GRADE INTERSECTIONS AND DRIVEWAYS.

LANE CLOSURE TAPER LENGTH = L						
LANE WIDTH	SPEED (MPH)	45	50	55	60	65
12'	L (feet)	540	600	680	720	800

Avoid reducing lane closure length on 45+ mph roadways.

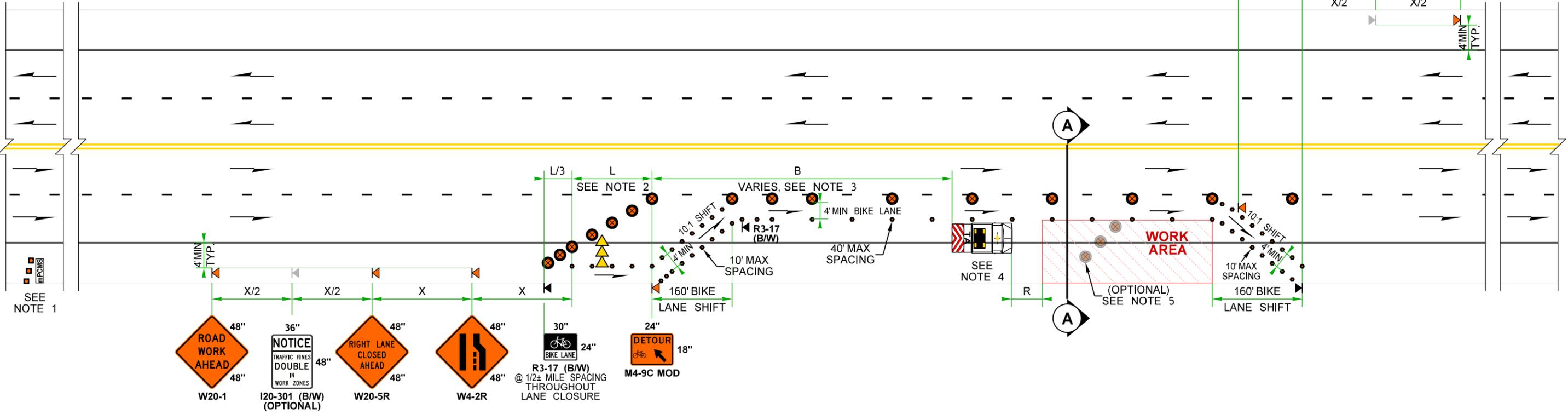
STATIONARY TRANSPORTABLE ATTENUATOR ROLL AHEAD DISTANCE = R			
HOST VEHICLE WEIGHT LESS THAN 22,000 lbs.	HOST VEHICLE WEIGHT 22,000+ lbs.		
45-55 MPH	60+ MPH	45-55 MPH	60+ MPH
123'	172'	100'	150'

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

SHOULDER CLOSURE TAPER LENGTH = L/3						
SHOULDER WIDTH	SPEED (MPH)	45	50	55	60	65
< 6'	L/3 (feet)	60	80	80	80	80
6'		90	120	120	120	160
10'		150	200	200	200	240



NOTES:

- FULL-SIZE PCMS (11' x 6' DISPLAY) MAY BE USED IN LIEU OF mPCMS. PCMS MESSAGES MAY BE MODIFIED.
- IF FEASIBLE, AVOID PLACING LANE CLOSURE TAPER WITHIN OR IMMEDIATELY FOLLOWING HORIZONTAL AND VERTICAL CREST CURVES.
- DISTANCE INCREASES AS WORK AREA MOVES DOWNSTREAM.
- RED/WHITE OR BLACK/YELLOW CHEVRON PATTERN OK. ADDITIONAL TRANSPORTABLE ATTENUATORS MAY BE ADDED BEHIND EACH WORK CREW.
- IF USED, PLACE DEVICES TRANSVERSELY ACROSS CLOSED LANES AT 45± AND 5' SPACING AT STRATEGIC LOCATIONS.
- 28" TRAFFIC CONE, 36" TRAFFIC CONE, 42" TALL CHANNELIZING DEVICE OK. DEVICE MAY SHIFT LATERALLY TO PROVIDE 4' MIN BIKE LANE.
- SIGNS ARE BLACK ON ORANGE UNLESS OTHERWISE INDICATED.
- PLAN IS APPLICABLE TO LANE CLOSURES OF 7 DAYS OR LESS.
- ADD W21-30 SERIES SIGNS (48"x48", 5' HEIGHT) 500± PRIOR TO FREQUENT CONSTRUCTION VEHICLE INGRESS/EGRESS INTO OPEN LANE(S).

- PEDESTRIAN ACCOMMODATIONS, WHERE FACILITY OPEN TO PEDESTRIANS:
 - KEEP ADJACENT SIDEWALK OR PATHWAY OPEN.
 - CLOSE ADJACENT SIDEWALK OR PATHWAY. PROVIDE PEDESTRIAN DETOUR, ALTERNATE ROUTE, OR FREE SHUTTLE (WORK TRUCK, VAN, OR BUS OK).
 - STOP WORK OPS. & ESCORT PEDESTRIANS THROUGH WORK AREA.
 - ENGINEER TO ACCEPT ANY ALTERNATIVE STRATEGIES.

- BICYCLIST ACCOMMODATIONS, WHERE FACILITY OPEN TO BICYCLES:
 - PROVIDE TEMP. 4' MIN BIKE LANE THROUGH LANE CLOSURE ADJACENT TO VEHICLE TRAFFIC.

LEGEND:

- TEMPORARY SIGN LOCATION (1' MIN HEIGHT)
- TRAFFIC SAFETY DRUM
- PORTABLE TUBULAR MARKER (SEE NOTE 7)
- SEQUENTIAL ARROW SIGN
- TRANSPORTABLE ATTENUATOR
- mPCMS mini PORTABLE CHANGEABLE MESSAGE SIGN (PCMS OK, SEE NOTE 1)

SINGLE RIGHT LANE CLOSURE - TEMP BIKE LANE @ CLOSED LANE (45+ MPH 4-LANE HIGHWAYS)

NOT TO SCALE



FILE NAME	C:\Users\LintzF\OneDrive - Washington State Department of Transportation\Desktop\Work Zone TCPs\361MLHwy45+1RtLane.dgn			REGION NO.	STATE	FED.AID PROJ.NO.	Plot 3
TIME	2:19:16 PM			10	WASH		PLAN REF NO
DATE	5/1/2024						TC361
PLOTTED BY	LintzF			JOB NUMBER			SHEET
DESIGNED BY				CONTRACT NO.			3
ENTERED BY				LOCATION NO.			OF
CHECKED BY							6
PROJ. ENGR.							SHEETS
REGIONAL ADM.	REVISION	DATE	BY				



TYPICAL TRAFFIC CONTROL PLANS

mPCMS	
1	2
RIGHT LANE CLOSURE	1 MILE AHEAD
2.0 SEC	2.0 SEC

FIELD LOCATE 1± MILE PRIOR TO CLOSURE TAPER PER STD. SPEC. 1-10.3(3)C.

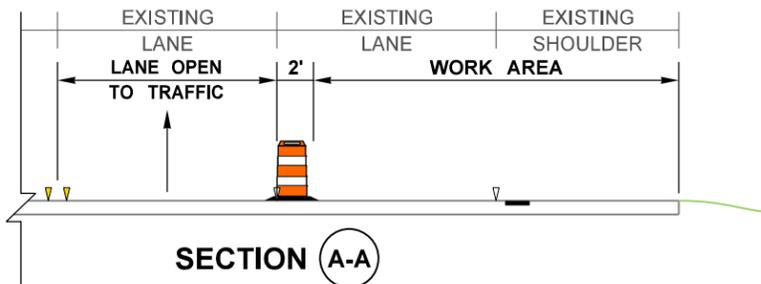
mPCMS - ALT 1		
1	2	3
RIGHT LANE CLOSURE	WATCH FOR SLOW TRAFFIC	NEXT # MILES
1.5 SEC	1.5 SEC	1.5 SEC

USE IF TRAFFIC BACKUPS EXPECTED, BUT NOT VERIFIED HOURLY BY TCS.

mPCMS		
1	2	3
RIGHT LANE CLOSURE	SLOW TRAFFIC AHEAD	NEXT # MILES
1.5 SEC	1.5 SEC	1.5 SEC

ONLY USED IF TCS VERIFIES HOURLY THAT TRAFFIC BACKUPS ARE PRESENT.

FIELD LOCATE 1± MILE PRIOR TO CLOSURE TAPER OR UPSTREAM OF EXPECTED MAXIMUM TRAFFIC QUEUE PER STD. SPEC. 1-10.3(3)C.



RECOMMENDED SIGN SPACING = X (1)		
RURAL HIGHWAYS	60-65 MPH	800±
RURAL ROADS	45-55 MPH	500±

(1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERCHANGE RAMP, AT-GRADE INTERSECTIONS AND DRIVEWAYS.

LANE CLOSURE TAPER LENGTH = L						
LANE WIDTH	SPEED (MPH)	45	50	55	60	65
12'	L (feet)	540	600	680	720	800

Avoid reducing lane closure length on 45+ mph roadways.

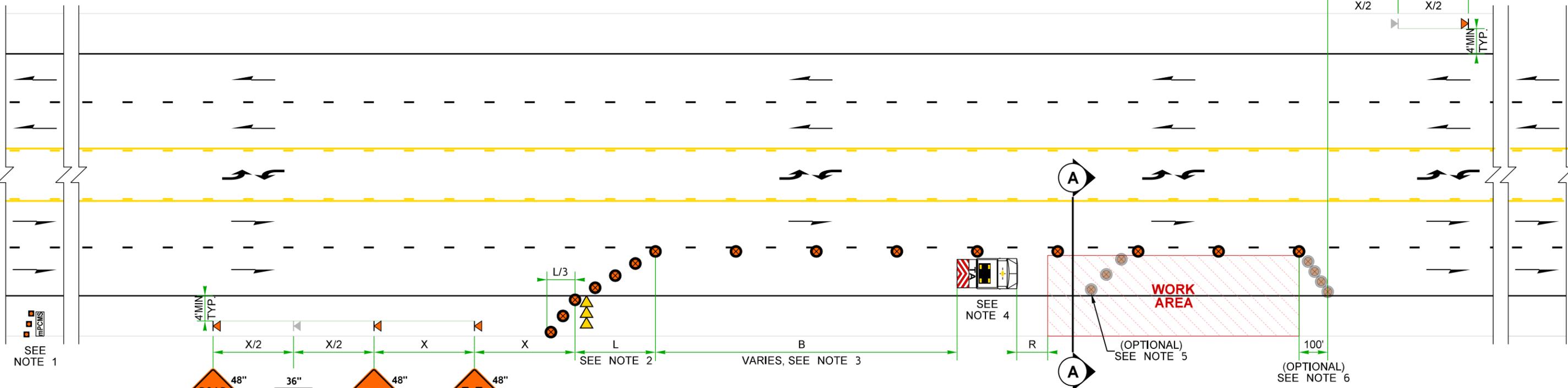
MAXIMUM CHANNELIZATION DEVICE SPACING (feet)		
MPH	TAPER	TANGENT
50 - 65	40	80
45	30	60

SHOULDER CLOSURE TAPER LENGTH = L/3						
SHOULDER WIDTH	SPEED (MPH)	45	50	55	60	65
< 6'	L/3 (feet)	60	80	80	80	80
6'	L/3 (feet)	90	120	120	120	160
10'	L/3 (feet)	150	200	200	200	240

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
123'	172'	100'	150'

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.



NOTES:

- FULL-SIZE PCMS (11' x 6' DISPLAY) MAY BE USED IN LIEU OF mPCMS. PCMS MESSAGES MAY BE MODIFIED.
- IF FEASIBLE, AVOID PLACING LANE CLOSURE TAPER WITHIN OR IMMEDIATELY FOLLOWING HORIZONTAL AND VERTICAL CREST CURVES.
- DISTANCE INCREASES AS WORK AREA MOVES DOWNSTREAM.
- RED/WHITE OR BLACK/YELLOW CHEVRON PATTERN OK. ADDITIONAL TRANSPORTABLE ATTENUATORS MAY BE ADDED BEHIND EACH WORK CREW.
- IF USED, PLACE DEVICES TRANSVERSELY ACROSS CLOSED LANES AT 45°± AND 5' SPACING AT STRATEGIC LOCATIONS.
- IF USED, DOWNSTREAM TAPER DEVICE SPACING IS 20'.
- SIGNS ARE BLACK ON ORANGE UNLESS OTHERWISE INDICATED.
- PLAN IS APPLICABLE TO LANE CLOSURES OF 7 DAYS OR LESS.
- ADD W21-30 SERIES SIGNS (48"x48", 5' HEIGHT) 500± PRIOR TO FREQUENT CONSTRUCTION VEHICLE INGRESS/EGRESS INTO OPEN LANE(S).
- PEDESTRIAN ACCOMMODATIONS, WHERE FACILITY OPEN TO PEDESTRIANS:
(A) KEEP ADJACENT SIDEWALK OR PATHWAY OPEN.
(B) CLOSE ADJACENT SIDEWALK OR PATHWAY. PROVIDE PEDESTRIAN DETOUR, ALTERNATE ROUTE, OR FREE SHUTTLE (WORK TRUCK, VAN, OR BUS OK).
(C) STOP WORK OPS. & ESCORT PEDESTRIANS THROUGH WORK AREA.
(D) ENGINEER TO ACCEPT ANY ALTERNATIVE STRATEGIES.
- BICYCLIST ACCOMMODATIONS, WHERE FACILITY OPEN TO BICYCLES:
(A) BICYCLES PROHIBITED VIA R5-6 SIGNS. PROVIDE SIGNED DETOUR OR ALTERNATIVE ROUTE.
(B) BICYCLES PROHIBITED VIA R5-6 SIGN(S). PROVIDE FREE SHUTTLE (WORK TRUCK, VAN, OR BUS OK) + CONTACT INFORMATION/PHONE BOX/LABORER.
(C) STOP WORK OPS & ESCORT BICYCLISTS THROUGH CLOSURE.
(D) PROVIDE 4' TEMP BIKE LANE THROUGH CLOSURE, SEE SHEETS 2 OR 3.
(E) ENGINEER TO ACCEPT ANY ALTERNATIVE STRATEGIES.

LEGEND:

- TEMPORARY SIGN LOCATION (1' MIN HEIGHT)
- TRAFFIC SAFETY DRUM
- SEQUENTIAL ARROW SIGN
- TRANSPORTABLE ATTENUATOR
- mPCMS mini PORTABLE CHANGEABLE MESSAGE SIGN (PCMS OK, SEE NOTE 1)

SINGLE RIGHT LANE CLOSURE (45+ MPH 4-LANE HIGHWAYS)
NOT TO SCALE

W21-30A
W21-30
W21-30B
R5-601 (B/W) AT EXIT-RAMP PRIOR TO SHLDR CLOSURE
R5-6 (R/B/W) PRIOR TO AND WITHIN SHLDR CLOSURE

FILE NAME	C:\Users\LintzF\OneDrive - Washington State Department of Transportation\Desktop\Work Zone TCPs\361MLHwy45+1RtLane.dgn	REGION NO.	STATE	FED.AID PROJ.NO.	Plot 4
TIME	2:19:16 PM	10	WASH		PLAN REF NO
DATE	5/1/2024				TC361
PLOTTED BY	LintzF	JOB NUMBER			SHEET
DESIGNED BY		CONTRACT NO.			4
ENTERED BY		LOCATION NO.			OF
CHECKED BY					6
PROJ. ENGR.					SHEETS
REGIONAL ADM.		REVISION	DATE	BY	



TYPICAL TRAFFIC CONTROL PLANS

mPCMS	
1	2
RIGHT LANE CLOSURE	1 MILE AHEAD
2.0 SEC	2.0 SEC

FIELD LOCATE 1± MILE PRIOR TO CLOSURE TAPER PER STD. SPEC. 1-10.3(3)C.

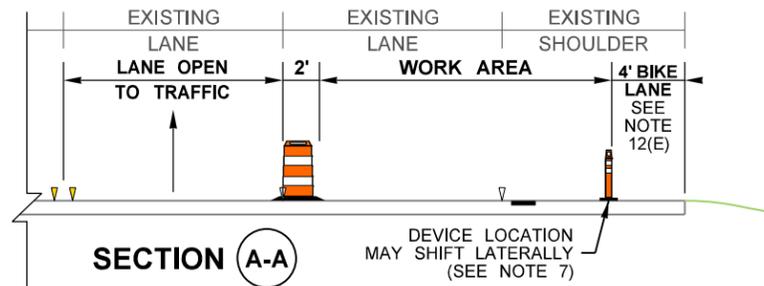
mPCMS - ALT 1		
1	2	3
RIGHT LANE CLOSURE	WATCH FOR SLOW TRAFFIC	NEXT # MILES
1.5 SEC	1.5 SEC	1.5 SEC

USE IF TRAFFIC BACKUPS EXPECTED, BUT NOT VERIFIED HOURLY BY TCS.

mPCMS		
1	2	3
RIGHT LANE CLOSURE	SLOW TRAFFIC AHEAD	NEXT # MILES
1.5 SEC	1.5 SEC	1.5 SEC

ONLY USED IF TCS VERIFIES HOURLY THAT TRAFFIC BACKUPS ARE PRESENT.

FIELD LOCATE 1± MILE PRIOR TO CLOSURE TAPER OR UPSTREAM OF EXPECTED MAXIMUM TRAFFIC QUEUE PER STD. SPEC. 1-10.3(3)C.



RECOMMENDED SIGN SPACING = X (1)		
RURAL HIGHWAYS	60-65 MPH	800±
RURAL ROADS	45-55 MPH	500±

(1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERCHANGE RAMP, AT-GRADE INTERSECTIONS AND DRIVEWAYS.

LANE CLOSURE TAPER LENGTH = L						
LANE WIDTH	SPEED (MPH)	45	50	55	60	65
12'	L (feet)	540	600	680	720	800

Avoid reducing lane closure length on 45+ mph roadways.

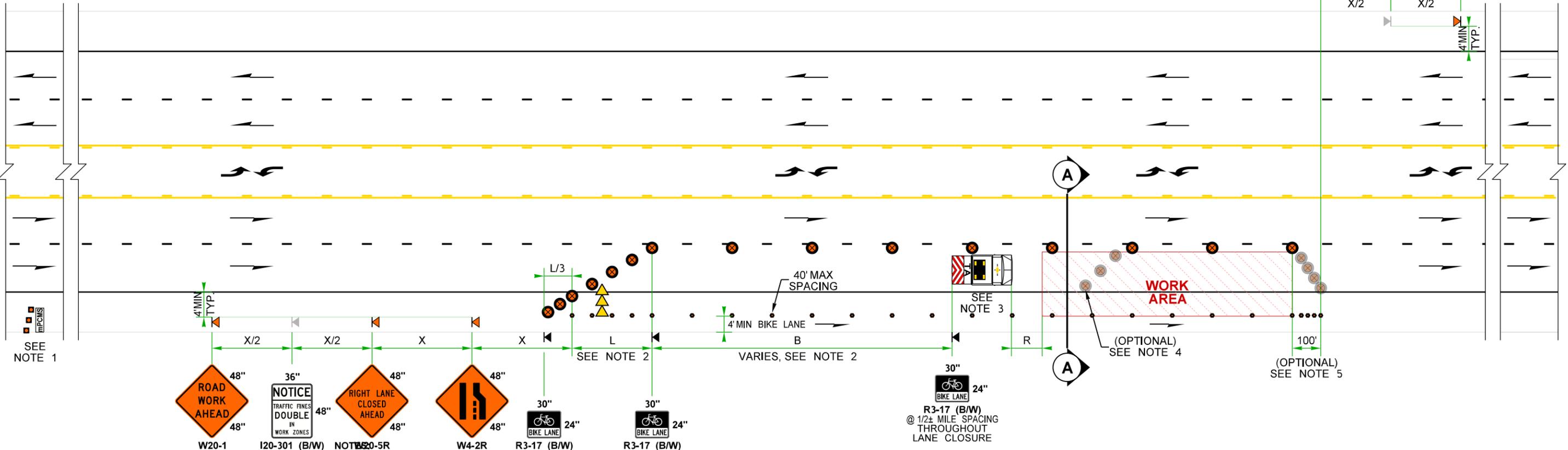
MAXIMUM CHANNELIZATION DEVICE SPACING (feet)		
MPH	TAPER	TANGENT
50 - 65	40	80
45	30	60

SHOULDER CLOSURE TAPER LENGTH = L/3						
SHOULDER WIDTH	SPEED (MPH)	45	50	55	60	65
< 6'	L/3 (feet)	60	80	80	80	80
6'		90	120	120	120	160
10'		150	200	200	200	240

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'

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.



- LEGEND:**
- ◀ TEMPORARY SIGN LOCATION (1' MIN HEIGHT)
 - ⊗ TRAFFIC SAFETY DRUM
 - PORTABLE TUBULAR MARKER (SEE NOTE 2)
 - ▶▶▶ SEQUENTIAL ARROW SIGN
 - ▬ TRANSPORTABLE ATTENUATOR
 - mPCMS mini PORTABLE CHANGEABLE MESSAGE SIGN (PCMS OK, SEE NOTE 1)

- FULL-SIZE PCMS (11'x 6' DISPLAY) MAY BE USED IN LIEU OF mPCMS. PCMS MESSAGES MAY BE MODIFIED.
- IF FEASIBLE, AVOID PLACING LANE CLOSURE TAPER WITHIN OR IMMEDIATELY FOLLOWING HORIZONTAL AND VERTICAL CREST CURVES.
- DISTANCE INCREASES AS WORK AREA MOVES DOWNSTREAM.
- RED/WHITE OR BLACK/YELLOW CHEVRON PATTERN OK. ADDITIONAL TRANSPORTABLE ATTENUATORS MAY BE ADDED BEHIND EACH WORK CREW.
- IF USED, PLACE DEVICES TRANSVERSELY ACROSS CLOSED LANES AT 45°± AND 5' SPACING AT STRATEGIC LOCATIONS.
- IF USED, DOWNSTREAM TAPER DEVICE SPACING IS 20'.
- 28" TRAFFIC CONE, 36" TRAFFIC CONE, 42" TALL CHANNELIZING DEVICE OK. DEVICE MAY SHIFT LATERALLY TO PROVIDE 4' MIN BIKE LANE.
- SIGNS ARE BLACK ON ORANGE UNLESS OTHERWISE INDICATED.
- PLAN IS APPLICABLE TO LANE CLOSURES OF 7 DAYS OR LESS.
- ADD W21-30 SERIES SIGNS (48"x48", 5' HEIGHT) 500± PRIOR TO FREQUENT CONSTRUCTION VEHICLE INGRESS/EGRESS INTO OPEN LANE(S).

- PEDESTRIAN ACCOMMODATIONS, WHERE FACILITY OPEN TO PEDESTRIANS:
 - (A) KEEP ADJACENT SIDEWALK OR PATHWAY OPEN.
 - (B) CLOSE ADJACENT SIDEWALK OR PATHWAY. PROVIDE PEDESTRIAN DETOUR, ALTERNATE ROUTE, OR FREE SHUTTLE (WORK TRUCK, VAN, OR BUS OK).
 - (C) STOP WORK OPS. & ESCORT PEDESTRIANS THROUGH WORK AREA.
 - (D) ENGINEER TO ACCEPT ANY ALTERNATIVE STRATEGIES.
- BICYCLIST ACCOMMODATIONS, WHERE FACILITY OPEN TO BICYCLES:
 - (E) PROVIDE TEMP. 4' MIN BIKE LANE ON PAVED EDGE OF SHOULDER THROUGH CLOSURE.

SINGLE RIGHT LANE CLOSURE - TEMP. BIKE LANE @ CLOSED SHLDR (45+ MPH 4-LANE HIGHWAYS)

NOT TO SCALE



FILE NAME: C:\Users\LintzF\OneDrive - Washington State Department of Transportation\Desktop\Work Zone TCPs\361MLHwy45+1RtLane.dgn		REGION NO. STATE		FED.AID PROJ.NO.		Plot 5	
TIME: 2:19:17 PM		10	WASH			PLAN REF NO. TC361	
DATE: 5/1/2024						SHEET 5 OF 6 SHEETS	
PLOTTED BY: LintzF						<p>Washington State Department of Transportation</p>	
DESIGNED BY:							
ENTERED BY:							
CHECKED BY:							
PROJ. ENGR.:						TYPICAL TRAFFIC CONTROL PLANS	
REGIONAL ADM.:							
REVISION		DATE	BY	DATE	DATE		

mPCMS	
1	2
RIGHT LANE CLOSURE	1 MILE AHEAD
2.0 SEC	2.0 SEC

FIELD LOCATE 1± MILE PRIOR TO CLOSURE TAPER PER STD. SPEC. 1-10.3(3)C.

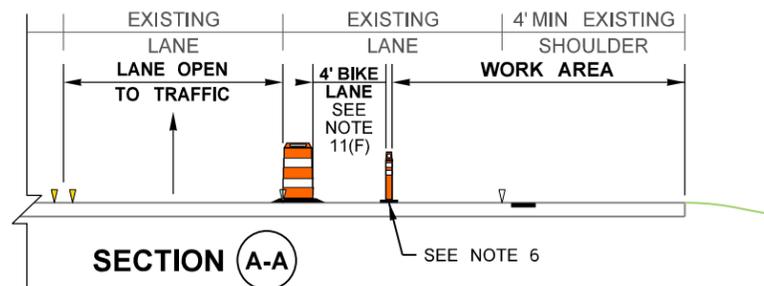
mPCMS - ALT 1		
1	2	3
RIGHT LANE CLOSURE	WATCH FOR SLOW TRAFFIC	NEXT # MILES
1.5 SEC	1.5 SEC	1.5 SEC

USE IF TRAFFIC BACKUPS EXPECTED, BUT NOT VERIFIED HOURLY BY TCS.

mPCMS		
1	2	3
RIGHT LANE CLOSURE	SLOW TRAFFIC AHEAD	NEXT # MILES
1.5 SEC	1.5 SEC	1.5 SEC

ONLY USED IF TCS VERIFIES HOURLY THAT TRAFFIC BACKUPS ARE PRESENT.

FIELD LOCATE 1± MILE PRIOR TO CLOSURE TAPER OR UPSTREAM OF EXPECTED MAXIMUM TRAFFIC QUEUE PER STD. SPEC. 1-10.3(3)C.



RECOMMENDED SIGN SPACING = X (1)		
RURAL HIGHWAYS	60-65 MPH	800±
RURAL ROADS	45-55 MPH	500±

(1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERCHANGE RAMPS, AT-GRADE INTERSECTIONS AND DRIVEWAYS.

LANE CLOSURE TAPER LENGTH = L						
LANE WIDTH	SPEED (MPH)	45	50	55	60	65
12'	L (feet)	540	600	680	720	800

Avoid reducing lane closure length on 45+ mph roadways.

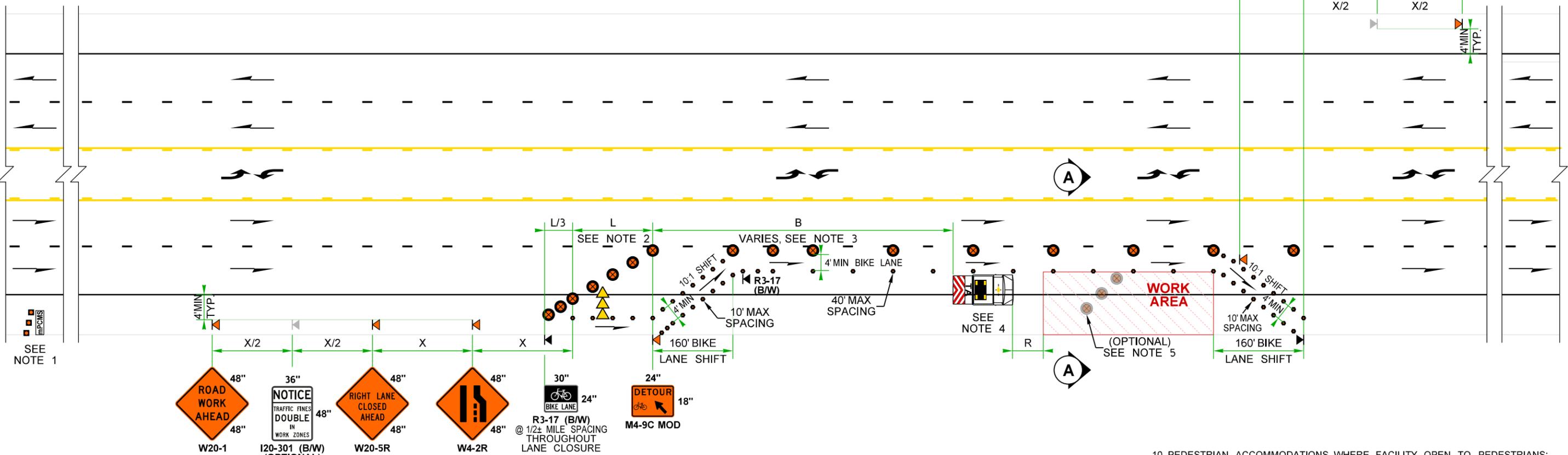
STATIONARY TRANSPORTABLE ATTENUATOR ROLL AHEAD DISTANCE = R			
HOST VEHICLE WEIGHT LESS THAN 22,000 lbs.	HOST VEHICLE WEIGHT 22,000+ lbs.		
45-55 MPH	60+ MPH	45-55 MPH	60+ MPH
123'	172'	100'	150'

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

SHOULDER CLOSURE TAPER LENGTH = L/3						
SHOULDER WIDTH	SPEED (MPH)	45	50	55	60	65
< 6'	L/3 (feet)	60	80	80	80	80
6'		90	120	120	120	160
10'		150	200	200	200	240



LEGEND:

- TEMPORARY SIGN LOCATION (1' MIN HEIGHT)
- TRAFFIC SAFETY DRUM
- PORTABLE TUBULAR MARKER (SEE NOTE 7)
- SEQUENTIAL ARROW SIGN
- TRANSPORTABLE ATTENUATOR
- mPCMS mini PORTABLE CHANGEABLE MESSAGE SIGN (PCMS OK, SEE NOTE 1)

- NOTES:**
- FULL-SIZE PCMS (11'x 6' DISPLAY) MAY BE USED IN LIEU OF mPCMS. PCMS MESSAGES MAY BE MODIFIED.
 - IF FEASIBLE, AVOID PLACING LANE CLOSURE TAPER WITHIN OR IMMEDIATELY FOLLOWING HORIZONTAL AND VERTICAL CREST CURVES.
 - DISTANCE INCREASES AS WORK AREA MOVES DOWNSTREAM.
 - RED/WHITE OR BLACK/YELLOW CHEVRON PATTERN OK. ADDITIONAL TRANSPORTABLE ATTENUATORS MAY BE ADDED BEHIND EACH WORK CREW.

- IF USED, PLACE DEVICES TRANSVERSELY ACROSS CLOSED LANES AT 45± AND 5' SPACING AT STRATEGIC LOCATIONS.
- 28" TRAFFIC CONE, 36" TRAFFIC CONE, 42" TALL CHANNELIZING DEVICE OK. DEVICE MAY SHIFT LATERALLY TO PROVIDE 4' MIN BIKE LANE.
- SIGNS ARE BLACK ON ORANGE UNLESS OTHERWISE INDICATED.
- PLAN IS APPLICABLE TO LANE CLOSURES OF 7 DAYS OR LESS.
- ADD W21-30 SERIES SIGNS (48"x48", 5' HEIGHT) 500± PRIOR TO FREQUENT CONSTRUCTION VEHICLE INGRESS/EGRESS INTO OPEN LANE(S).

- PEDESTRIAN ACCOMMODATIONS, WHERE FACILITY OPEN TO PEDESTRIANS:
 - (A) KEEP ADJACENT SIDEWALK OR PATHWAY OPEN.
 - (B) CLOSE ADJACENT SIDEWALK OR PATHWAY, PROVIDE PEDESTRIAN DETOUR, ALTERNATE ROUTE, OR FREE SHUTTLE (WORK TRUCK, VAN, OR BUS OK).
 - (C) STOP WORK OPS. & ESCORT PEDESTRIANS THROUGH WORK AREA.
 - (D) ENGINEER TO ACCEPT ANY ALTERNATIVE STRATEGIES.

- BICYCLIST ACCOMMODATIONS, WHERE FACILITY OPEN TO BICYCLES:
 - (F) PROVIDE TEMP. 4' MIN BIKE LANE THROUGH LANE CLOSURE ADJACENT TO VEHICLE TRAFFIC.

SINGLE RIGHT LANE CLOSURE - TEMP BIKE LANE @ CLOSED LANE (45+ MPH 4-LANE HIGHWAYS)

NOT TO SCALE



FILE NAME	C:\Users\LintzF\OneDrive - Washington State Department of Transportation\Desktop\Work Zone TCPs\361MLHwy45+1RtLane.dgn			REGION NO.	STATE	FED.AID PROJ.NO.	Plot 6
TIME	2:19:17 PM			10	WASH		PLAN REF NO
DATE	5/1/2024						TC361
PLOTTED BY	LintzF			JOB NUMBER			SHEET
DESIGNED BY				CONTRACT NO.			6
ENTERED BY				LOCATION NO.			OF
CHECKED BY							6
PROJ. ENGR.							SHEETS
REGIONAL ADM.	REVISION	DATE	BY				



TYPICAL TRAFFIC CONTROL PLANS

mPCMS	
1	2
RIGHT LANE CLOSURE	1 MILE AHEAD
2.0 SEC	2.0 SEC

FIELD LOCATE 1± MILE PRIOR TO CLOSURE TAPER PER STD. SPEC. 1-10.3(3)C.

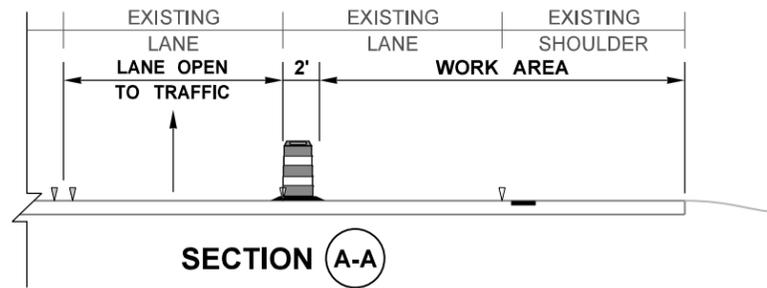
mPCMS - ALT 1		
1	2	3
RIGHT LANE CLOSURE	WATCH FOR SLOW TRAFFIC	NEXT # MILES
1.5 SEC	1.5 SEC	1.5 SEC

USE IF TRAFFIC BACKUPS EXPECTED, BUT NOT VERIFIED HOURLY BY TCS.

mPCMS		
1	2	3
RIGHT LANE CLOSURE	SLOW TRAFFIC AHEAD	NEXT # MILES
1.5 SEC	1.5 SEC	1.5 SEC

ONLY USED IF TCS VERIFIES HOURLY THAT TRAFFIC BACKUPS ARE PRESENT.

FIELD LOCATE 1± MILE PRIOR TO CLOSURE TAPER OR UPSTREAM OF EXPECTED MAXIMUM TRAFFIC QUEUE PER STD. SPEC. 1-10.3(3)C.



RECOMMENDED SIGN SPACING = X (1)		
RURAL HIGHWAYS	60-65 MPH	800±
RURAL ROADS	45-55 MPH	500±

(1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERCHANGE RAMP, AT-GRADE INTERSECTIONS AND DRIVEWAYS.

LANE CLOSURE TAPER LENGTH = L						
LANE WIDTH	SPEED (MPH)	45	50	55	60	65
12'	L (feet)	540	600	680	720	800

Avoid reducing lane closure length on 45+ mph roadways.

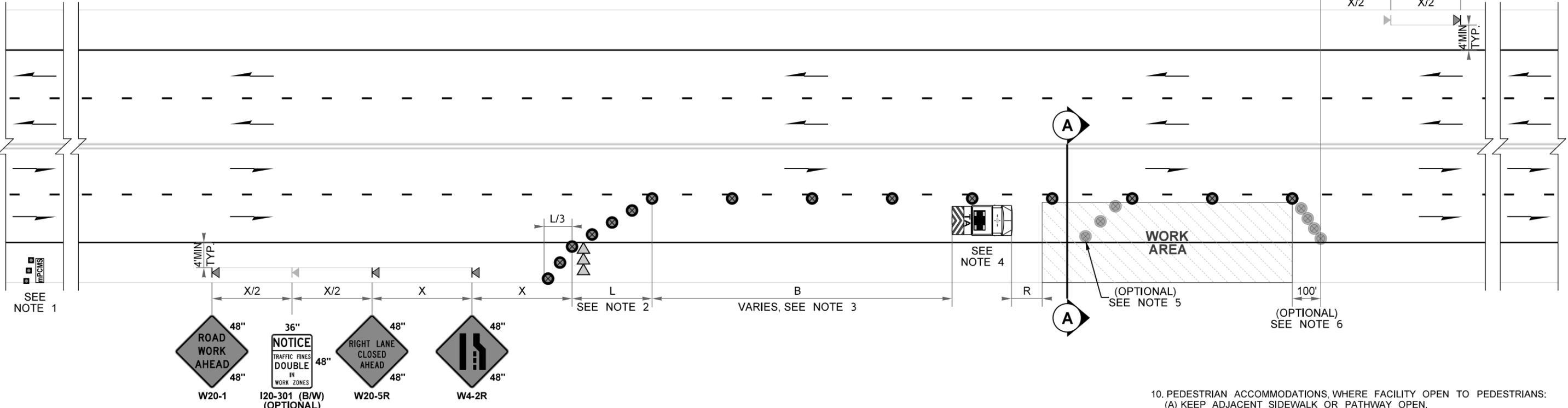
MAXIMUM CHANNELIZATION DEVICE SPACING (feet)		
MPH	TAPER	TANGENT
50 - 65	40	80
45	30	60

SHOULDER CLOSURE TAPER LENGTH = L/3						
SHOULDER WIDTH	SPEED (MPH)	45	50	55	60	65
< 6'	L/3 (feet)	60	80	80	80	80
6'		90	120	120	120	160
10'		150	200	200	200	240

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'

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.



NOTES:

- FULL-SIZE PCMS (11' x 6' DISPLAY) MAY BE USED IN LIEU OF mPCMS. PCMS MESSAGES MAY BE MODIFIED.
- IF FEASIBLE, AVOID PLACING LANE CLOSURE TAPER WITHIN OR IMMEDIATELY FOLLOWING HORIZONTAL AND VERTICAL CREST CURVES.
- DISTANCE INCREASES AS WORK AREA MOVES DOWNSTREAM.
- RED/WHITE OR BLACK/YELLOW CHEVRON PATTERN OK. ADDITIONAL TRANSPORTABLE ATTENUATORS MAY BE ADDED BEHIND EACH WORK CREW.
- IF USED, PLACE DEVICES TRANSVERSELY ACROSS CLOSED LANES AT 45°± AND 5' SPACING AT STRATEGIC LOCATIONS.
- IF USED, DOWNSTREAM TAPER DEVICE SPACING IS 20'.
- SIGNS ARE BLACK ON ORANGE UNLESS OTHERWISE INDICATED.
- PLAN IS APPLICABLE TO LANE CLOSURES OF 7 DAYS OR LESS.
- ADD W21-30 SERIES SIGNS (48"x48", 5' HEIGHT) 500± PRIOR TO FREQUENT CONSTRUCTION VEHICLE INGRESS/EGRESS INTO OPEN LANE(S).
- PEDESTRIAN ACCOMMODATIONS, WHERE FACILITY OPEN TO PEDESTRIANS:
 - KEEP ADJACENT SIDEWALK OR PATHWAY OPEN.
 - CLOSE ADJACENT SIDEWALK OR PATHWAY. PROVIDE PEDESTRIAN DETOUR, ALTERNATE ROUTE, OR FREE SHUTTLE (WORK TRUCK, VAN, OR BUS OK).
 - STOP WORK OPS. & ESCORT PEDESTRIANS THROUGH WORK AREA.
 - ENGINEER TO ACCEPT ANY ALTERNATIVE STRATEGIES.
- BICYCLIST ACCOMMODATIONS, WHERE FACILITY OPEN TO BICYCLES:
 - BICYCLES PROHIBITED VIA R5-6 SIGNS. PROVIDE SIGNED DETOUR OR ALTERNATIVE ROUTE.
 - BICYCLES PROHIBITED VIA R5-6 SIGN(S). PROVIDE FREE SHUTTLE (WORK TRUCK, VAN, OR BUS OK) + CONTACT INFORMATION/PHONE BOX/LABORER.
 - STOP WORK OPS & ESCORT BICYCLISTS THROUGH CLOSURE.
 - PROVIDE 4' TEMP BIKE LANE THROUGH CLOSURE, SEE SHEETS 2 OR 3.
 - ENGINEER TO ACCEPT ANY ALTERNATIVE STRATEGIES.

LEGEND:

- TEMPORARY SIGN LOCATION (1' MIN HEIGHT)
- TRAFFIC SAFETY DRUM
- SEQUENTIAL ARROW SIGN
- TRANSPORTABLE ATTENUATOR
- mPCMS mini PORTABLE CHANGEABLE MESSAGE SIGN (PCMS OK, SEE NOTE 1)

SINGLE RIGHT LANE CLOSURE (45+ MPH 4-LANE HIGHWAYS)
NOT TO SCALE



FILE NAME: C:\Users\LintzF\OneDrive - Washington State Department of Transportation\Desktop\Work Zone TCPs\361MLHwy45+1RtLane.dgn		REGION NO. STATE		FED.AID PROJ.NO.		Plot 1	
TIME: 2:19:18 PM		10	WASH			PLAN REF NO: TC361	
DATE: 5/1/2024						SHEET 1 OF 6 SHEETS	
PLOTTED BY: LintzF						TYPICAL TRAFFIC CONTROL PLANS	
DESIGNED BY:							
ENTERED BY:							
CHECKED BY:							
PROJ. ENGR.:							
REGIONAL ADM.:	REVISION	DATE	BY	DATE	P.E. STAMP BOX		

mPCMS	
1	2
RIGHT LANE CLOSURE	1 MILE AHEAD
2.0 SEC	2.0 SEC

FIELD LOCATE 1± MILE PRIOR TO CLOSURE TAPER PER STD. SPEC. 1-10.3(3)C.

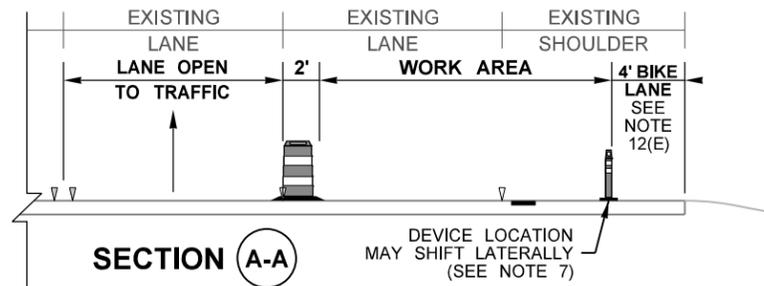
mPCMS - ALT 1		
1	2	3
RIGHT LANE CLOSURE	WATCH FOR SLOW TRAFFIC	NEXT # MILES
1.5 SEC	1.5 SEC	1.5 SEC

USE IF TRAFFIC BACKUPS EXPECTED, BUT NOT VERIFIED HOURLY BY TCS.

mPCMS		
1	2	3
RIGHT LANE CLOSURE	SLOW TRAFFIC AHEAD	NEXT # MILES
1.5 SEC	1.5 SEC	1.5 SEC

ONLY USED IF TCS VERIFIES HOURLY THAT TRAFFIC BACKUPS ARE PRESENT.

FIELD LOCATE 1± MILE PRIOR TO CLOSURE TAPER OR UPSTREAM OF EXPECTED MAXIMUM TRAFFIC QUEUE PER STD. SPEC. 1-10.3(3)C.



RECOMMENDED SIGN SPACING = X (1)		
RURAL HIGHWAYS	60-65 MPH	800±
RURAL ROADS	45-55 MPH	500±

(1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERCHANGE RAMPS, AT-GRADE INTERSECTIONS AND DRIVEWAYS.

LANE CLOSURE TAPER LENGTH = L						
LANE WIDTH	SPEED (MPH)	45	50	55	60	65
12'	L (feet)	540	600	680	720	800

Avoid reducing lane closure length on 45+ mph roadways.

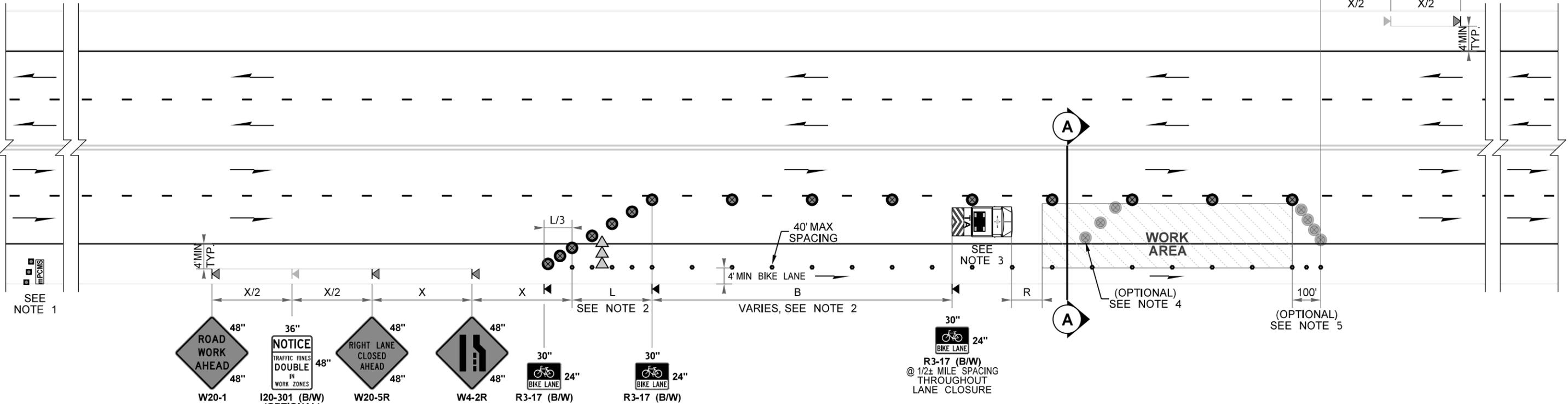
MAXIMUM CHANNELIZATION DEVICE SPACING (feet)		
MPH	TAPER	TANGENT
50 - 65	40	80
45	30	60

SHOULDER CLOSURE TAPER LENGTH = L/3						
SHOULDER WIDTH	SPEED (MPH)	45	50	55	60	65
< 6'	L/3 (feet)	60	80	80	80	80
6'		90	120	120	120	160
10'		150	200	200	200	240

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'

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.



NOTES:

- FULL-SIZE PCMS (11'x 6'DISPLAY) MAY BE USED IN LIEU OF mPCMS. PCMS MESSAGES MAY BE MODIFIED.
- IF FEASIBLE, AVOID PLACING LANE CLOSURE TAPER WITHIN OR IMMEDIATELY FOLLOWING HORIZONTAL AND VERTICAL CREST CURVES.
- DISTANCE INCREASES AS WORK AREA MOVES DOWNSTREAM.
- RED/WHITE OR BLACK/YELLOW CHEVRON PATTERN OK. ADDITIONAL TRANSPORTABLE ATTENUATORS MAY BE ADDED BEHIND EACH WORK CREW.
- IF USED, PLACE DEVICES TRANSVERSELY ACROSS CLOSED LANES AT 45± AND 5' SPACING AT STRATEGIC LOCATIONS.
- IF USED, DOWNSTREAM TAPER DEVICE SPACING IS 20'.
- 28" TRAFFIC CONE, 36" TRAFFIC CONE, 42" TALL CHANNELIZING DEVICE OK. DEVICE MAY SHIFT Laterally TO PROVIDE 4' MIN BIKE LANE.
- SIGNS ARE BLACK ON ORANGE UNLESS OTHERWISE INDICATED.
- PLAN IS APPLICABLE TO LANE CLOSURES OF 7 DAYS OR LESS.
- ADD W21-30 SERIES SIGNS (48"x48", 5' HEIGHT) 500± PRIOR TO FREQUENT CONSTRUCTION VEHICLE INGRESS/EGRESS INTO OPEN LANE(S).
- PEDESTRIAN ACCOMMODATIONS, WHERE FACILITY OPEN TO PEDESTRIANS: (A) KEEP ADJACENT SIDEWALK OR PATHWAY OPEN. (B) CLOSE ADJACENT SIDEWALK OR PATHWAY. PROVIDE PEDESTRIAN DETOUR, ALTERNATE ROUTE, OR FREE SHUTTLE (WORK TRUCK, VAN, OR BUS OK). (C) STOP WORK OPS. & ESCORT PEDESTRIANS THROUGH WORK AREA. (D) ENGINEER TO ACCEPT ANY ALTERNATIVE STRATEGIES.
- BICYCLIST ACCOMMODATIONS, WHERE FACILITY OPEN TO BICYCLES: (E) PROVIDE TEMP. 4' MIN BIKE LANE ON PAVED EDGE OF SHOULDER THROUGH CLOSURE.

SINGLE RIGHT LANE CLOSURE - TEMP. BIKE LANE @ CLOSED SHLDR (45+ MPH 4-LANE HIGHWAYS)
NOT TO SCALE

LEGEND:

- ◀ TEMPORARY SIGN LOCATION (1' MIN HEIGHT)
- ⊗ TRAFFIC SAFETY DRUM
- PORTABLE TUBULAR MARKER (SEE NOTE 2)
- ▶ SEQUENTIAL ARROW SIGN
- ▬ TRANSPORTABLE ATTENUATOR
- mPCMS mini PORTABLE CHANGEABLE MESSAGE SIGN (PCMS OK, SEE NOTE 1)



FILE NAME	C:\Users\LintzF\OneDrive - Washington State Department of Transportation\Desktop\Work Zone TCPs\361MLHwy45+1RtLane.dgn			REGION NO.	STATE	FED.AID PROJ.NO.	Plot 2
TIME	2:19:19 PM			10	WASH		PLAN REF NO
DATE	5/1/2024						TC361
PLOTTED BY	LintzF			JOB NUMBER			SHEET
DESIGNED BY				CONTRACT NO.			2
ENTERED BY				LOCATION NO.			OF
CHECKED BY							6
PROJ. ENGR.							SHEETS
REGIONAL ADM.	REVISION	DATE	BY				



TYPICAL TRAFFIC CONTROL PLANS

mPCMS	
1	2
RIGHT LANE CLOSURE	1 MILE AHEAD
2.0 SEC	2.0 SEC

FIELD LOCATE 1± MILE PRIOR TO CLOSURE TAPER PER STD. SPEC. 1-10.3(3)C.

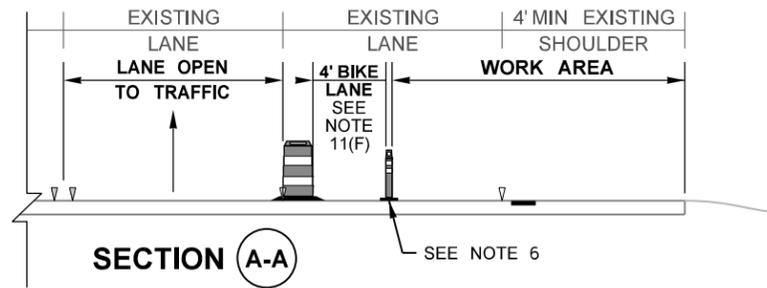
mPCMS - ALT 1		
1	2	3
RIGHT LANE CLOSURE	WATCH FOR SLOW TRAFFIC	NEXT # MILES
1.5 SEC	1.5 SEC	1.5 SEC

USE IF TRAFFIC BACKUPS EXPECTED, BUT NOT VERIFIED HOURLY BY TCS.

mPCMS		
1	2	3
RIGHT LANE CLOSURE	SLOW TRAFFIC AHEAD	NEXT # MILES
1.5 SEC	1.5 SEC	1.5 SEC

ONLY USED IF TCS VERIFIES HOURLY THAT TRAFFIC BACKUPS ARE PRESENT.

FIELD LOCATE 1± MILE PRIOR TO CLOSURE TAPER OR UPSTREAM OF EXPECTED MAXIMUM TRAFFIC QUEUE PER STD. SPEC. 1-10.3(3)C.



RECOMMENDED SIGN SPACING = X (1)		
RURAL HIGHWAYS	60-65 MPH	800±
RURAL ROADS	45-55 MPH	500±

(1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERCHANGE RAMPS, AT-GRADE INTERSECTIONS AND DRIVEWAYS.

LANE CLOSURE TAPER LENGTH = L						
LANE WIDTH	SPEED (MPH)	45	50	55	60	65
12'	L (feet)	540	600	680	720	800

Avoid reducing lane closure length on 45+ mph roadways.

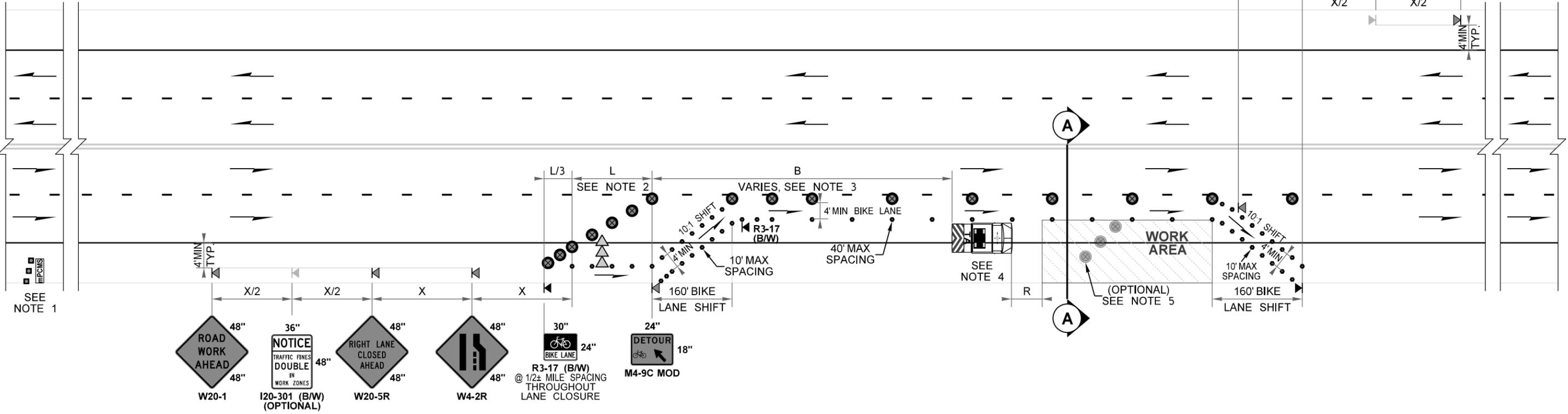
STATIONARY TRANSPORTABLE ATTENUATOR ROLL AHEAD DISTANCE = R			
HOST VEHICLE WEIGHT LESS THAN 22,000 lbs.	HOST VEHICLE WEIGHT 22,000+ lbs.		
45-55 MPH	60+ MPH	45-55 MPH	60+ MPH
123'	172'	100'	150'

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

SHOULDER CLOSURE TAPER LENGTH = L/3						
SHOULDER WIDTH	SPEED (MPH)	45	50	55	60	65
< 6'	L/3 (feet)	60	80	80	80	80
6'		90	120	120	120	160
10'		150	200	200	200	240



NOTES:

- FULL-SIZE PCMS (11' x 6' DISPLAY) MAY BE USED IN LIEU OF mPCMS. PCMS MESSAGES MAY BE MODIFIED.
- IF FEASIBLE, AVOID PLACING LANE CLOSURE TAPER WITHIN OR IMMEDIATELY FOLLOWING HORIZONTAL AND VERTICAL CREST CURVES.
- DISTANCE INCREASES AS WORK AREA MOVES DOWNSTREAM.
- RED/WHITE OR BLACK/YELLOW CHEVRON PATTERN OK. ADDITIONAL TRANSPORTABLE ATTENUATORS MAY BE ADDED BEHIND EACH WORK CREW.
- IF USED, PLACE DEVICES TRANSVERSELY ACROSS CLOSED LANES AT 45± AND 5' SPACING AT STRATEGIC LOCATIONS.
- 28" TRAFFIC CONE, 36" TRAFFIC CONE, 42" TALL CHANNELIZING DEVICE OK. DEVICE MAY SHIFT Laterally TO PROVIDE 4' MIN BIKE LANE.
- SIGNS ARE BLACK ON ORANGE UNLESS OTHERWISE INDICATED.
- PLAN IS APPLICABLE TO LANE CLOSURES OF 7 DAYS OR LESS.
- ADD W21-30 SERIES SIGNS (48"x48", 5' HEIGHT) 500± PRIOR TO FREQUENT CONSTRUCTION VEHICLE INGRESS/EGRESS INTO OPEN LANE(S).
- PEDESTRIAN ACCOMMODATIONS, WHERE FACILITY OPEN TO PEDESTRIANS: (A) KEEP ADJACENT SIDEWALK OR PATHWAY OPEN. (B) CLOSE ADJACENT SIDEWALK OR PATHWAY. PROVIDE PEDESTRIAN DETOUR, ALTERNATE ROUTE, OR FREE SHUTTLE (WORK TRUCK, VAN, OR BUS OK). (C) STOP WORK OPS. & ESCORT PEDESTRIANS THROUGH WORK AREA. (D) ENGINEER TO ACCEPT ANY ALTERNATIVE STRATEGIES.
- BICYCLIST ACCOMMODATIONS, WHERE FACILITY OPEN TO BICYCLES: (F) PROVIDE TEMP. 4' MIN BIKE LANE THROUGH LANE CLOSURE ADJACENT TO VEHICLE TRAFFIC.

**SINGLE RIGHT LANE CLOSURE - TEMP BIKE LANE @ CLOSED LANE
(45+ MPH 4-LANE HIGHWAYS)
NOT TO SCALE**

LEGEND:

- ◀ TEMPORARY SIGN LOCATION (1' MIN HEIGHT)
- ⊗ TRAFFIC SAFETY DRUM
- PORTABLE TUBULAR MARKER (SEE NOTE 7)
- ▶▶ SEQUENTIAL ARROW SIGN
- ▬ TRANSPORTABLE ATTENUATOR
- mPCMS mini PORTABLE CHANGEABLE MESSAGE SIGN (PCMS OK, SEE NOTE 1)



FILE NAME	C:\Users\LintzF\OneDrive - Washington State Department of Transportation\Desktop\Work Zone TCPs\361MLHwy45+1RtLane.dgn			REGION NO.	STATE	FED.AID PROJ.NO.	Plot 3
TIME	2:19:19 PM			10	WASH		PLAN REF NO
DATE	5/1/2024						TC361
PLOTTED BY	LintzF			JOB NUMBER			SHEET
DESIGNED BY				CONTRACT NO.			3
ENTERED BY				LOCATION NO.			OF
CHECKED BY							6
PROJ. ENGR.							SHEETS
REGIONAL ADM.	REVISION	DATE	BY	P.E. STAMP BOX	DATE	P.E. STAMP BOX	



TYPICAL TRAFFIC CONTROL PLANS

mPCMS	
1	2
RIGHT LANE CLOSURE	1 MILE AHEAD
2.0 SEC	2.0 SEC

FIELD LOCATE 1± MILE PRIOR TO CLOSURE TAPER PER STD. SPEC. 1-10.3(3)C.

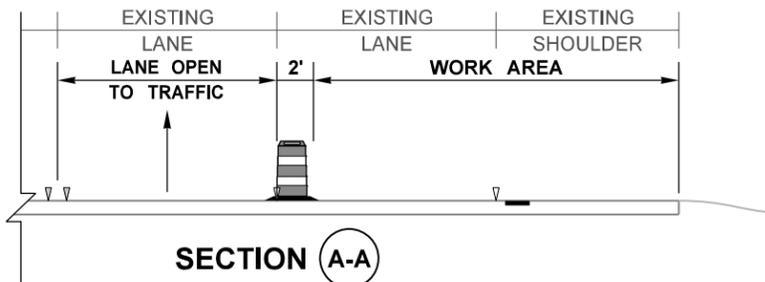
mPCMS - ALT 1		
1	2	3
RIGHT LANE CLOSURE	WATCH FOR SLOW TRAFFIC	NEXT # MILES
1.5 SEC	1.5 SEC	1.5 SEC

USE IF TRAFFIC BACKUPS EXPECTED, BUT NOT VERIFIED HOURLY BY TCS.

mPCMS		
1	2	3
RIGHT LANE CLOSURE	SLOW TRAFFIC AHEAD	NEXT # MILES
1.5 SEC	1.5 SEC	1.5 SEC

ONLY USED IF TCS VERIFIES HOURLY THAT TRAFFIC BACKUPS ARE PRESENT.

FIELD LOCATE 1± MILE PRIOR TO CLOSURE TAPER OR UPSTREAM OF EXPECTED MAXIMUM TRAFFIC QUEUE PER STD. SPEC. 1-10.3(3)C.



RECOMMENDED SIGN SPACING = X (1)		
RURAL HIGHWAYS	60-65 MPH	800±
RURAL ROADS	45-55 MPH	500±

(1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERCHANGE RAMP, AT-GRADE INTERSECTIONS AND DRIVEWAYS.

LANE CLOSURE TAPER LENGTH = L						
LANE WIDTH	SPEED (MPH)	45	50	55	60	65
12'	L (feet)	540	600	680	720	800

Avoid reducing lane closure length on 45+ mph roadways.

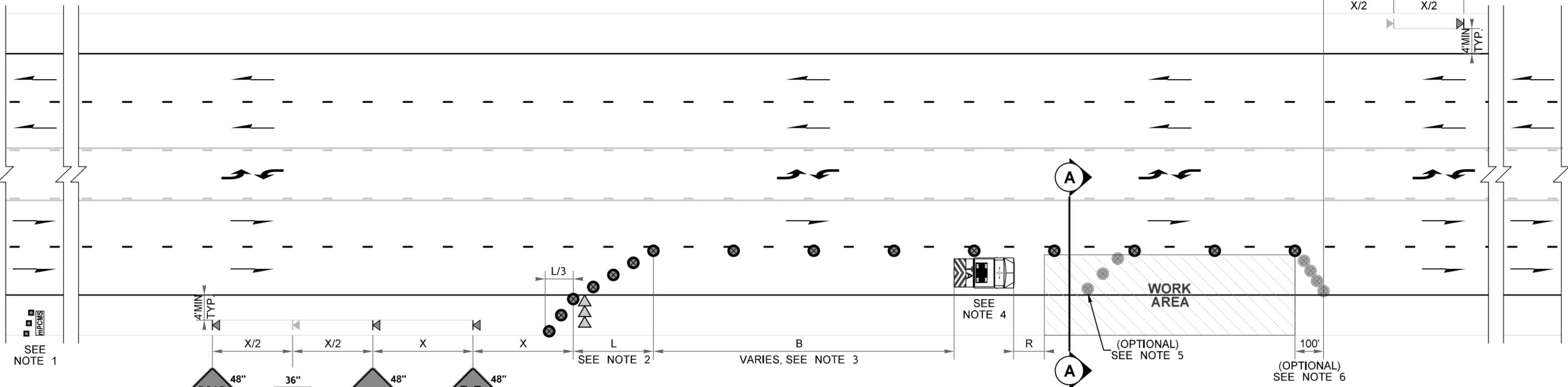
MAXIMUM CHANNELIZATION DEVICE SPACING (feet)		
MPH	TAPER	TANGENT
50 - 65	40	80
45	30	60

SHOULDER CLOSURE TAPER LENGTH = L/3						
SHOULDER WIDTH	SPEED (MPH)	45	50	55	60	65
< 6'	L/3 (feet)	60	80	80	80	80
6'	L/3 (feet)	90	120	120	120	160
10'	L/3 (feet)	150	200	200	200	240

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'

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.



NOTES:

- FULL-SIZE PCMS (11' x 6' DISPLAY) MAY BE USED IN LIEU OF mPCMS. PCMS MESSAGES MAY BE MODIFIED.
- IF FEASIBLE, AVOID PLACING LANE CLOSURE TAPER WITHIN OR IMMEDIATELY FOLLOWING HORIZONTAL AND VERTICAL CREST CURVES.
- DISTANCE INCREASES AS WORK AREA MOVES DOWNSTREAM.
- RED/WHITE OR BLACK/YELLOW CHEVRON PATTERN OK. ADDITIONAL TRANSPORTABLE ATTENUATORS MAY BE ADDED BEHIND EACH WORK CREW.
- IF USED, PLACE DEVICES TRANSVERSELY ACROSS CLOSED LANES AT 45°± AND 5' SPACING AT STRATEGIC LOCATIONS.
- IF USED, DOWNSTREAM TAPER DEVICE SPACING IS 20'.
- SIGNS ARE BLACK ON ORANGE UNLESS OTHERWISE INDICATED.
- PLAN IS APPLICABLE TO LANE CLOSURES OF 7 DAYS OR LESS.
- ADD W21-30 SERIES SIGNS (48"x48", 5' HEIGHT) 500± PRIOR TO FREQUENT CONSTRUCTION VEHICLE INGRESS/EGRESS INTO OPEN LANE(S).

- PEDESTRIAN ACCOMMODATIONS, WHERE FACILITY OPEN TO PEDESTRIANS:
 - KEEP ADJACENT SIDEWALK OR PATHWAY OPEN.
 - CLOSE ADJACENT SIDEWALK OR PATHWAY. PROVIDE PEDESTRIAN DETOUR, ALTERNATE ROUTE, OR FREE SHUTTLE (WORK TRUCK, VAN, OR BUS OK).
 - STOP WORK OPS. & ESCORT PEDESTRIANS THROUGH WORK AREA.
 - ENGINEER TO ACCEPT ANY ALTERNATIVE STRATEGIES.
- BICYCLIST ACCOMMODATIONS, WHERE FACILITY OPEN TO BICYCLES:
 - BICYCLES PROHIBITED VIA R5-6 SIGNS. PROVIDE SIGNED DETOUR OR ALTERNATIVE ROUTE.
 - BICYCLES PROHIBITED VIA R5-6 SIGN(S). PROVIDE FREE SHUTTLE (WORK TRUCK, VAN, OR BUS OK) + CONTACT INFORMATION/PHONE BOX/LABORER.
 - STOP WORK OPS & ESCORT BICYCLISTS THROUGH CLOSURE.
 - PROVIDE 4' TEMP BIKE LANE THROUGH CLOSURE, SEE SHEETS 2 OR 3.
 - ENGINEER TO ACCEPT ANY ALTERNATIVE STRATEGIES.



SINGLE RIGHT LANE CLOSURE (45+ MPH 4-LANE HIGHWAYS)
NOT TO SCALE

FILE NAME	C:\Users\LintzF\OneDrive - Washington State Department of Transportation\Desktop\Work Zone TCPs\361MLHwy45+1RtLane.dgn		
TIME	2:19:20 PM		
DATE	5/1/2024		
PLOTTED BY	LintzF		
DESIGNED BY			
ENTERED BY			
CHECKED BY			
PROJ. ENGR.			
REGIONAL ADM.			
	REVISION	DATE	BY

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	
JOB NUMBER		
CONTRACT NO.	LOCATION NO.	
	DATE	DATE
	P.E. STAMP BOX	P.E. STAMP BOX



Plot 4
PLAN REF NO TC361
SHEET 4 OF 6 SHEETS
TYPICAL TRAFFIC CONTROL PLANS

mPCMS	
1	2
RIGHT LANE CLOSURE	1 MILE AHEAD
2.0 SEC	2.0 SEC

FIELD LOCATE 1± MILE PRIOR TO CLOSURE TAPER PER STD. SPEC. 1-10.3(3)C.

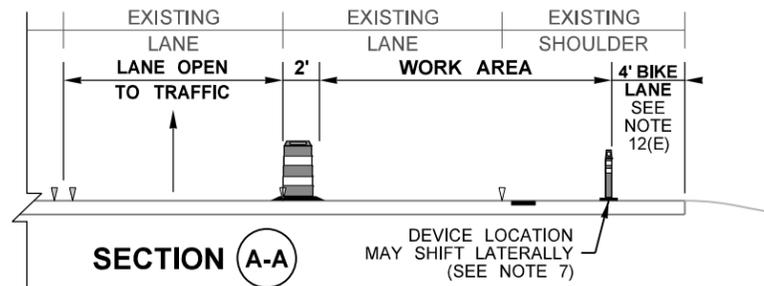
mPCMS - ALT 1		
1	2	3
RIGHT LANE CLOSURE	WATCH FOR SLOW TRAFFIC	NEXT # MILES
1.5 SEC	1.5 SEC	1.5 SEC

USE IF TRAFFIC BACKUPS EXPECTED, BUT NOT VERIFIED HOURLY BY TCS.

mPCMS		
1	2	3
RIGHT LANE CLOSURE	SLOW TRAFFIC AHEAD	NEXT # MILES
1.5 SEC	1.5 SEC	1.5 SEC

ONLY USED IF TCS VERIFIES HOURLY THAT TRAFFIC BACKUPS ARE PRESENT.

FIELD LOCATE 1± MILE PRIOR TO CLOSURE TAPER OR UPSTREAM OF EXPECTED MAXIMUM TRAFFIC QUEUE PER STD. SPEC. 1-10.3(3)C.



RECOMMENDED SIGN SPACING = X (1)		
RURAL HIGHWAYS	60-65 MPH	800±
RURAL ROADS	45-55 MPH	500±

(1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERCHANGE RAMPS, AT-GRADE INTERSECTIONS AND DRIVEWAYS.

LANE CLOSURE TAPER LENGTH = L						
LANE WIDTH	SPEED (MPH)	45	50	55	60	65
12'	L (feet)	540	600	680	720	800

Avoid reducing lane closure length on 45+ mph roadways.

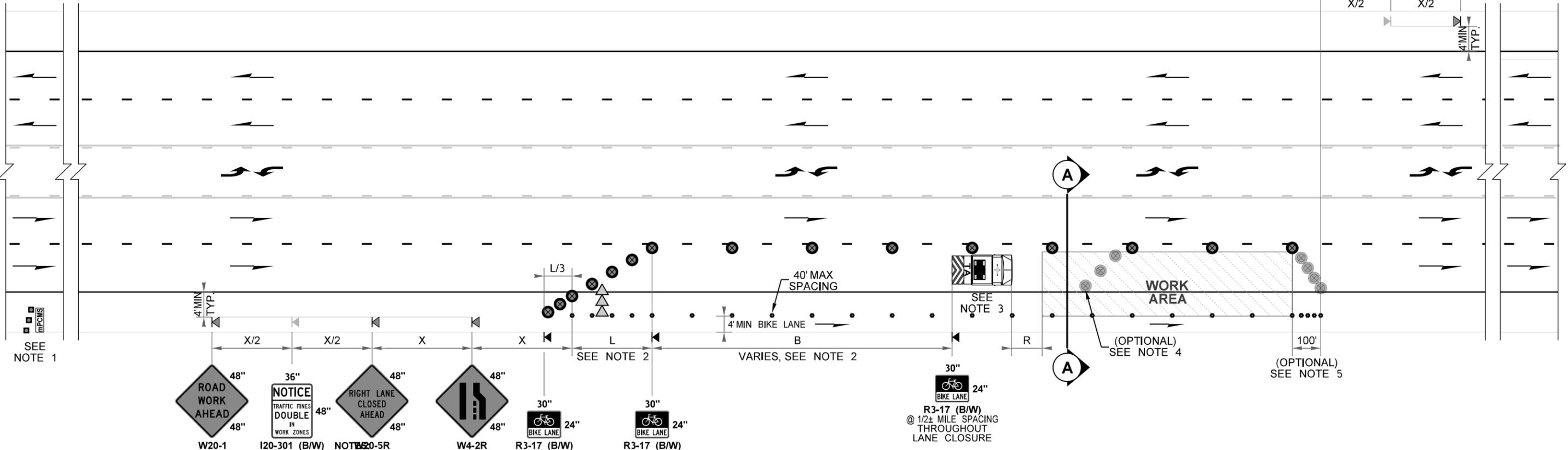
MAXIMUM CHANNELIZATION DEVICE SPACING (feet)		
MPH	TAPER	TANGENT
50 - 65	40	80
45	30	60

SHOULDER CLOSURE TAPER LENGTH = L/3						
SHOULDER WIDTH	SPEED (MPH)	45	50	55	60	65
< 6'	L/3 (feet)	60	80	80	80	80
6'	L/3 (feet)	90	120	120	120	160
10'	L/3 (feet)	150	200	200	200	240

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'

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.



- LEGEND:**
- ◀ TEMPORARY SIGN LOCATION (1' MIN HEIGHT)
 - ⊗ TRAFFIC SAFETY DRUM
 - PORTABLE TUBULAR MARKER (SEE NOTE 2)
 - ▶▶ SEQUENTIAL ARROW SIGN
 - ▬ TRANSPORTABLE ATTENUATOR
 - mPCMS mini PORTABLE CHANGEABLE MESSAGE SIGN (PCMS OK, SEE NOTE 1)

- FULL-SIZE PCMS (11'x 6' DISPLAY) MAY BE USED IN LIEU OF mPCMS. PCMS MESSAGES MAY BE MODIFIED.
- IF FEASIBLE, AVOID PLACING LANE CLOSURE TAPER WITHIN OR IMMEDIATELY FOLLOWING HORIZONTAL AND VERTICAL CREST CURVES.
- DISTANCE INCREASES AS WORK AREA MOVES DOWNSTREAM.
- RED/WHITE OR BLACK/YELLOW CHEVRON PATTERN OK. ADDITIONAL TRANSPORTABLE ATTENUATORS MAY BE ADDED BEHIND EACH WORK CREW.
- IF USED, PLACE DEVICES TRANSVERSELY ACROSS CLOSED LANES AT 45°± AND 5' SPACING AT STRATEGIC LOCATIONS.
- IF USED, DOWNSTREAM TAPER DEVICE SPACING IS 20'.
- 28" TRAFFIC CONE, 36" TRAFFIC CONE, 42" TALL CHANNELIZING DEVICE OK. DEVICE MAY SHIFT LATERALLY TO PROVIDE 4' MIN BIKE LANE.
- SIGNS ARE BLACK ON ORANGE UNLESS OTHERWISE INDICATED.
- PLAN IS APPLICABLE TO LANE CLOSURES OF 7 DAYS OR LESS.
- ADD W21-30 SERIES SIGNS (48"x48", 5' HEIGHT) 500± PRIOR TO FREQUENT CONSTRUCTION VEHICLE INGRESS/EGRESS INTO OPEN LANE(S).

- PEDESTRIAN ACCOMMODATIONS, WHERE FACILITY OPEN TO PEDESTRIANS:
 - (A) KEEP ADJACENT SIDEWALK OR PATHWAY OPEN.
 - (B) CLOSE ADJACENT SIDEWALK OR PATHWAY. PROVIDE PEDESTRIAN DETOUR, ALTERNATE ROUTE, OR FREE SHUTTLE (WORK TRUCK, VAN, OR BUS OK).
 - (C) STOP WORK OPS. & ESCORT PEDESTRIANS THROUGH WORK AREA.
 - (D) ENGINEER TO ACCEPT ANY ALTERNATIVE STRATEGIES.
- BICYCLIST ACCOMMODATIONS, WHERE FACILITY OPEN TO BICYCLES:
 - (E) PROVIDE TEMP. 4' MIN BIKE LANE ON PAVED EDGE OF SHOULDER THROUGH CLOSURE.

SINGLE RIGHT LANE CLOSURE - TEMP. BIKE LANE @ CLOSED SHLDR (45+ MPH 4-LANE HIGHWAYS)

NOT TO SCALE



FILE NAME: C:\Users\LintzF\OneDrive - Washington State Department of Transportation\Desktop\Work Zone TCPs\361MLHwy45+1RtLane.dgn		REGION NO. 10		STATE WASH		FED.AID PROJ.NO.	
TIME: 2:19:20 PM	DATE: 5/1/2024	JOB NUMBER		CONTRACT NO.		LOCATION NO.	
PLOTTED BY: LintzF	DESIGNED BY:	DATE		BY		DATE	
ENTERED BY:	CHECKED BY:	REVISION		DATE		BY	
PROJ. ENGR.	REGIONAL ADM.	DATE		BY		DATE	

Washington State
Department of Transportation

Plot 5
PLAN REF NO
TC361

SHEET
5
OF
6
SHEETS

TYPICAL TRAFFIC CONTROL PLANS

mPCMS	
1	2
RIGHT LANE CLOSURE	1 MILE AHEAD
2.0 SEC	2.0 SEC

FIELD LOCATE 1± MILE PRIOR TO CLOSURE TAPER PER STD. SPEC. 1-10.3(3)C.

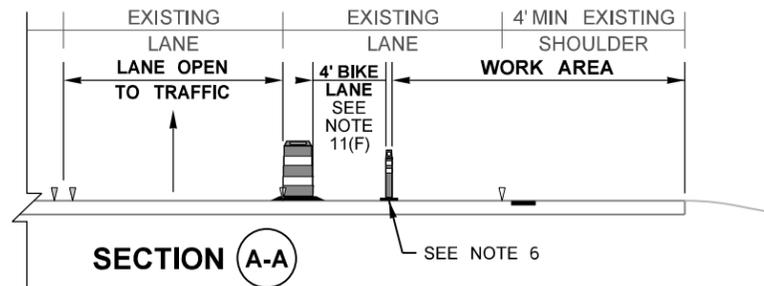
mPCMS - ALT 1		
1	2	3
RIGHT LANE CLOSURE	WATCH FOR SLOW TRAFFIC	NEXT # MILES
1.5 SEC	1.5 SEC	1.5 SEC

USE IF TRAFFIC BACKUPS EXPECTED, BUT NOT VERIFIED HOURLY BY TCS.

mPCMS		
1	2	3
RIGHT LANE CLOSURE	SLOW TRAFFIC AHEAD	NEXT # MILES
1.5 SEC	1.5 SEC	1.5 SEC

ONLY USED IF TCS VERIFIES HOURLY THAT TRAFFIC BACKUPS ARE PRESENT.

FIELD LOCATE 1± MILE PRIOR TO CLOSURE TAPER OR UPSTREAM OF EXPECTED MAXIMUM TRAFFIC QUEUE PER STD. SPEC. 1-10.3(3)C.



RECOMMENDED SIGN SPACING = X (1)		
RURAL HIGHWAYS	60-65 MPH	800±
RURAL ROADS	45-55 MPH	500±

(1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERCHANGE RAMPS, AT-GRADE INTERSECTIONS AND DRIVEWAYS.

LANE CLOSURE TAPER LENGTH = L						
LANE WIDTH	SPEED (MPH)	45	50	55	60	65
12'	L (feet)	540	600	680	720	800

Avoid reducing lane closure length on 45+ mph roadways.

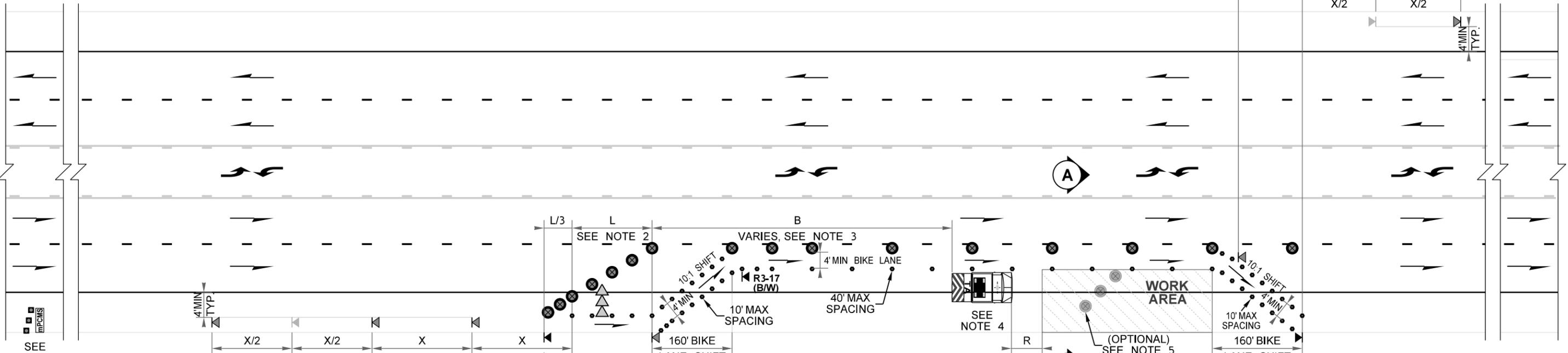
STATIONARY TRANSPORTABLE ATTENUATOR ROLL AHEAD DISTANCE = R			
HOST VEHICLE WEIGHT LESS THAN 22,000 lbs.	HOST VEHICLE WEIGHT 22,000+ lbs.		
45-55 MPH	60+ MPH	45-55 MPH	60+ MPH
123'	172'	100'	150'

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

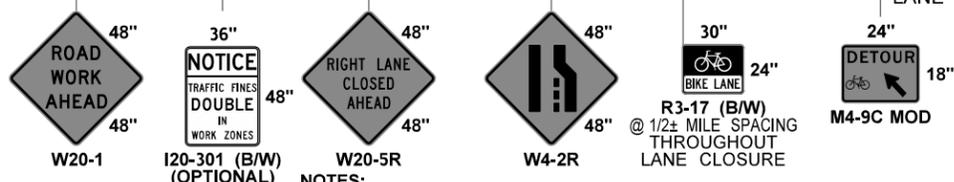
Buffer space may be adjusted (±) based on field conditions.

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

SHOULDER CLOSURE TAPER LENGTH = L/3						
SHOULDER WIDTH	SPEED (MPH)	45	50	55	60	65
< 6'	L/3 (feet)	60	80	80	80	80
6'		90	120	120	120	160
10'		150	200	200	200	240



SEE NOTE 1



NOTES:

- FULL-SIZE PCMS (11' x 6' DISPLAY) MAY BE USED IN LIEU OF mPCMS. PCMS MESSAGES MAY BE MODIFIED.
- IF FEASIBLE, AVOID PLACING LANE CLOSURE TAPER WITHIN OR IMMEDIATELY FOLLOWING HORIZONTAL AND VERTICAL CREST CURVES.
- DISTANCE INCREASES AS WORK AREA MOVES DOWNSTREAM.
- RED/WHITE OR BLACK/YELLOW CHEVRON PATTERN OK. ADDITIONAL TRANSPORTABLE ATTENUATORS MAY BE ADDED BEHIND EACH WORK CREW.
- IF USED, PLACE DEVICES TRANSVERSELY ACROSS CLOSED LANES AT 45°± AND 5' SPACING AT STRATEGIC LOCATIONS.
- 28" TRAFFIC CONE, 36" TRAFFIC CONE, 42" TALL CHANNELIZING DEVICE OK. DEVICE MAY SHIFT LATERALLY TO PROVIDE 4' MIN BIKE LANE.
- SIGNS ARE BLACK ON ORANGE UNLESS OTHERWISE INDICATED.
- PLAN IS APPLICABLE TO LANE CLOSURES OF 7 DAYS OR LESS.
- ADD W21-30 SERIES SIGNS (48"x48", 5' HEIGHT) 500± PRIOR TO FREQUENT CONSTRUCTION VEHICLE INGRESS/EGRESS INTO OPEN LANE(S).
- PEDESTRIAN ACCOMMODATIONS, WHERE FACILITY OPEN TO PEDESTRIANS: (A) KEEP ADJACENT SIDEWALK OR PATHWAY OPEN. (B) CLOSE ADJACENT SIDEWALK OR PATHWAY. PROVIDE PEDESTRIAN DETOUR, ALTERNATE ROUTE, OR FREE SHUTTLE (WORK TRUCK, VAN, OR BUS OK). (C) STOP WORK OPS. & ESCORT PEDESTRIANS THROUGH WORK AREA. (D) ENGINEER TO ACCEPT ANY ALTERNATIVE STRATEGIES.
- BICYCLIST ACCOMMODATIONS, WHERE FACILITY OPEN TO BICYCLES: (F) PROVIDE TEMP. 4' MIN BIKE LANE THROUGH LANE CLOSURE ADJACENT TO VEHICLE TRAFFIC.

SINGLE RIGHT LANE CLOSURE - TEMP BIKE LANE @ CLOSED LANE (45+ MPH 4-LANE HIGHWAYS)

NOT TO SCALE



LEGEND:

- ◀ TEMPORARY SIGN LOCATION (1' MIN HEIGHT)
- ⊗ TRAFFIC SAFETY DRUM
- PORTABLE TUBULAR MARKER (SEE NOTE 7)
- ▶▶ SEQUENTIAL ARROW SIGN
- ▬ TRANSPORTABLE ATTENUATOR
- mPCMS mini PORTABLE CHANGEABLE MESSAGE SIGN (PCMS OK, SEE NOTE 1)

FILE NAME: C:\Users\LintzF\OneDrive - Washington State Department of Transportation\Desktop\Work Zone TCPs\361MLHwy45+1RtLane.dgn		REGION NO. STATE		FED.AID PROJ.NO.				Plot 6	
TIME: 2:19:21 PM	DATE: 5/1/2024	10	WASH					PLAN REF NO: TC361	
PLOTTED BY: LintzF	DESIGNED BY:	JOB NUMBER		LOCATION NO.		TYPICAL TRAFFIC CONTROL PLANS		SHEET 6 OF 6 SHEETS	
ENTERED BY:	CHECKED BY:	CONTRACT NO.		DATE					
PROJ. ENGR.	REGIONAL ADM.	REVISION	DATE	BY	DATE				

WORK ZONE MICROSTATION CELLS: Updated work zone cells incorporated (May 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 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>

PLOT USAGE EXPLANATION:

- Plot 1:** Single right lane closure maintaining existing speed limit on 4-lane highways with single PCMS in advance for queue mitigation.
- Plot 2:** Single right lane closure maintaining existing speed limit on 4-lane highways with single PCMS in advance for queue mitigation with 4' temporary bicycle lane along edge of paved shoulder alternative.
- Plot 3:** Single right lane closure maintaining existing speed limit on 4-lane highways with single PCMS in advance for queue mitigation with 4' temporary bicycle lane between open travel lane and work area.
- Plot 4:** Single right lane closure maintaining existing speed limit on 5-lane highways with single PCMS in advance for queue mitigation.
- Plot 5:** Single right lane closure maintaining existing speed limit on 5-lane highways with single PCMS in advance for queue mitigation with 4' temporary bicycle lane along edge of paved shoulder alternative.
- Plot 6:** Single right lane closure maintaining existing speed limit on 5-lane highways with single PCMS in advance for queue mitigation with 4' temporary bicycle lane between open travel lane and work area.
- Plot 11:** Single right lane closure maintaining existing speed limit on 4-lane highways with 3-mile queue warning system in advance for queue mitigation.
- Plot 12:** Single right lane closure maintaining existing speed limit on 4-lane highways with 3-mile queue warning system in advance for queue mitigation with 4' temporary bicycle lane along edge of paved shoulder alternative.
- Plot 13:** Single right lane closure maintaining existing speed limit on 4-lane highways with 3-mile queue warning system in advance for queue mitigation with 4' temporary bicycle lane between open travel lane and work area.
- Plot 14:** Single right lane closure maintaining existing speed limit on 5-lane highways with 3-mile queue warning system in advance for queue mitigation.
- Plot 15:** Single right lane closure maintaining existing speed limit on 5-lane highways with 3-mile queue warning system in advance for queue mitigation with 4' temporary bicycle lane along edge of paved shoulder alternative.
- Plot 16:** Single right lane closure maintaining existing speed limit on 5-lane highways with 3-mile queue warning system in advance for queue mitigation with 4' temporary bicycle lane between open travel lane and work area.

OTHER QUEUE MITIGATION PLANS: Available in 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>)

- 6-Mile Queue Warning System:** See TC155; modify to needed highway configuration.
- 6-Mile Smart Work Zone System:** See TC165; modify to needed highway configuration.
- 9-Mile Smart Work Zone System:** See TC175; modify to needed highway configuration.

DESIGNER NOTES:

- A. Contact Region Transportation Operations to determine if a queuing mitigation system is needed; and if so, which one is appropriate.
- B. 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"**.
- C. Portable Changeable Message Signs (PCMSs) are optional per MUTCD Section 6F.60 and Section 6H and are used to supplement signage and inform motorists of unexpected situations. Thus, if no work zone congestion or queuing is expected, all PCMSs on Sheet 1-6 may be deleted (just using the temporary signage in advance of lane closure); it's also acceptable to delete the two PCMS-ALT messages and use the PCMS message if desired.
- D. 48"x48" diamond-shaped work zone signs used on 45+ mph multilane highways. On multilane highways, 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.
- E. When positioned behind channelizing devices, temporary signs should be mounted at 5' minimum. The signs behind portable tubular markers may still be mounted at a height of 1-foot.
- 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 tangents, but traffic safety drums should be used on tapers on 45+ mph multilane highways (vertical panel channelizing devices prohibited). Portable tubular markers may be used to delineate temporary bicycle lane. 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 standard practice at WSDOT to use sequential arrow signs for lane closures on multilane highways.
- 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.
- J. 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. Per MUTCD, the downstream taper is optional. Eliminating it allows construction vehicles to accelerate out of work area into reopened lane to minimize traffic impacts and increase safety--except when the temporary bicycle lane is shifted adjacent to the travel lane.

RIGHT SHOULDER CLOSURE (45+ MPH MULTILANE HIGHWAYS)

FILE NAME C:\Users\LintzF\OneDrive - Washington State Department of Transportation\Desktop\Work Zone TCPs\361MLHwy45+1RtLane.dgn				FED.AID PROJ.NO.		 <p>Washington State Department of Transportation</p>	<p>INFORMATIONAL USE ONLY</p> <p>DO NOT INCLUDE THIS SHEET IN CONTRACT PS&Es or TCP SUBMITTALS.</p>	Plot 7
TIME 2:19:21 PM				REGION NO. 10	STATE WASH			PLAN REF NO. TC361
DATE 5/1/2024				JOB NUMBER		<p>DESIGNER GUIDANCE</p>	SHEET	
PLOTTED BY LintzF				CONTRACT NO.			OF	
DESIGNED BY				LOCATION NO.			SHEETS	
ENTERED BY				DATE	DATE			
CHECKED BY				P.E. STAMP BOX	P.E. STAMP BOX			
PROJ. ENGR.								
REGIONAL ADM.	REVISION	DATE	BY					