PCMS	
1	2
RIGHT LANE CLOSURE	50 MPH ZONE AHEAD
2.0 SEC	2.0 SEC

OR

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

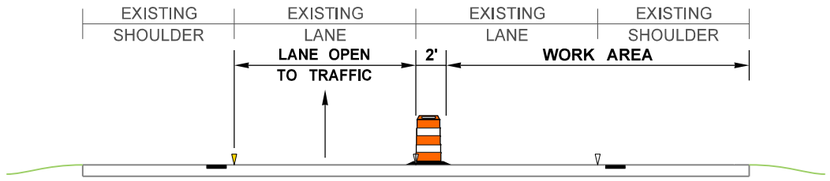
USE IF TRAFFIC BACKUPS EXPECTED, BUT NOT VERIFIED HOURLY BY TCS.

PCMS - ALT 2		
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 1.5± MILES PRIOR TO CLOSURE TAPER OR UPSTREAM OF EXPECTED MAXIMUM TRAFFIC QUEUE PER STANDARD SPECIFICATION 1-10.3(3)C.

FIELD LOCATE 1.5± MILES PRIOR TO CLOSURE TAPER PER STD. SPEC. 1-10.3(3)C.

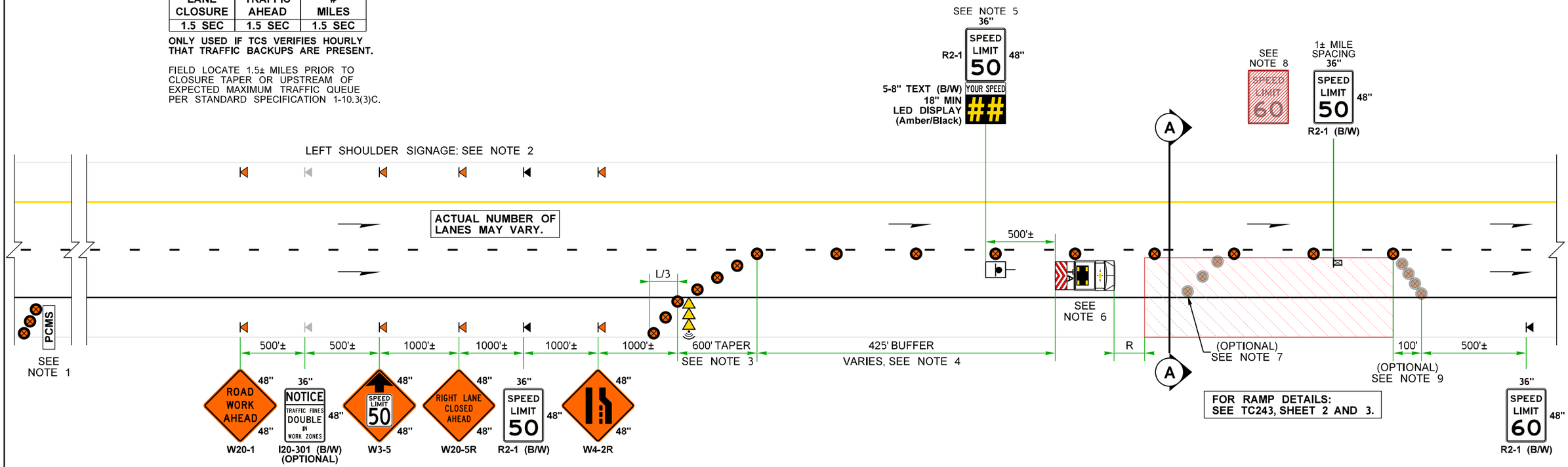


SECTION A-A

SHOULDER CLOSURE TAPER LENGTH = L/3	
SHOULDER WIDTH	L/3
< 6'	80'
6'	120'
10'	200'

STATIONARY TRANSPORTABLE ATTENUATOR ROLL AHEAD DISTANCE = R	
HOST VEHICLE WEIGHT	R
LESS THAN 22,000 lbs.	123'
22,000+ lbs.	100'

MAXIMUM CHANNELIZATION DEVICE SPACING (feet)		
MPH	TAPER	TANGENT
50	40	80



LEGEND:

- TEMPORARY SIGN LOCATION (1' MIN HEIGHT)
- TEMPORARY SIGN LOCATION (5' MIN HEIGHT)
- TRAFFIC SAFETY DRUM
- RADAR SPEED DISPLAY SIGN (RSDS)
- SMART SEQUENTIAL ARROW SIGN (CONNECTED)
- TRANSPORTABLE ATTENUATOR
- PCMS — PORTABLE CHANGEABLE MESSAGE SIGN

NOTES:

1. miniPCMS PERMITTED ON 2-LANE FREEWAYS.
2. ON 2-LANE FREEWAYS, LEFT SHOULDER SIGNAGE OPTIONAL IF PAVED SHOULDER WIDTH IS LESS THAN 6 FEET.
3. IF FEASIBLE, AVOID PLACING LANE CLOSURE OR LANE SHIFT TAPERS WITHIN OR IMMEDIATELY FOLLOWING HORIZONTAL CURVES.
4. BUFFER SPACE MAY BE ADJUSTED (±) BASED ON FIELD CONDITIONS. DISTANCE INCREASES AS WORK AREA MOVES DOWNSTREAM.
5. RELOCATE RSDS AS WORK ZONE MOVES DOWNSTREAM. IF ENGINEER ACCEPTS, ADDITIONAL RSDS MAY BE ADDED PRIOR TO EACH WORK CREW.
6. RED/WHITE OR BLACK/YELLOW CHEVRON PATTERN OK. ADDITIONAL TRANSPORTABLE ATTENUATORS MAY BE ADDED BEHIND EACH WORK CREW.
7. IF USED, PLACE DEVICES TRANSVERSELY ACROSS CLOSED LANES AT 45°± AND 5' SPACING AT STRATEGIC LOCATIONS.
8. COVER ALL CONFLICTING SIGNAGE PER STD. SPEC. 1-10.3(3)A. BLACK 1/8" ABS OR 1/4" PLYWOOD TEMP. SIGN COVER PERMITTED.
9. IF USED, DOWNSTREAM TAPER DEVICE SPACING IS 20'.
10. SIGNS ARE BLACK ON ORANGE UNLESS OTHERWISE INDICATED.
11. PLAN IS APPLICABLE TO LANE CLOSURES OF 7 DAYS OR LESS.

11. NOTIFY PUBLIC OF SPEED REDUCTION AT LEAST 3 DAYS PRIOR VIA PCMS: 50 MPH WZ SPEED LIMIT / BEGINS DAYOFWEEK MM/DD/YY @ 2.0 SEC.

12. ADD W21-30-SERIES SIGNS (48"x48", 5' HEIGHT) 500'± PRIOR TO FREQUENT CONSTRUCTION VEHICLES INGRESS/EGRESS INTO THE OPEN LANE(S).

13. BICYCLIST ACCOMMODATIONS, WHERE FACILITY OPEN TO BICYCLES:
(A) BICYCLES PROHIBITED VIA R5-501 & R5-6 SIGNS. PROVIDE SIGNED DETOUR OR ALTERNATIVE ROUTE.
(B) BICYCLES PROHIBITED VIA R5-501 & R5-6 SIGNS. PROVIDE FREE SHUTTLE (WORK TRUCK, VAN, OR BUS OK) + CONTACT INFORMATION OR PHONE BOX.
(C) ENGINEER TO ACCEPT ANY ALTERNATIVE STRATEGIES.

FREEWAY (2+ LANES): SINGLE RIGHT LANE CLOSURE (50 MPH WORK ZONE SPEED LIMIT)

NOT TO SCALE

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PROJ. ENGR.							
REGIONAL ADM.		REVISION	DATE	BY			

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	
JOB NUMBER		
CONTRACT NO.		LOCATION NO.

P.E. STAMP BOX — DATE

P.E. STAMP BOX — DATE

Washington State Department of Transportation

TYPICAL TRAFFIC CONTROL PLANS

Plot 1

PLAN REF NO TC243

SHEET 1A OF 3 SHEETS

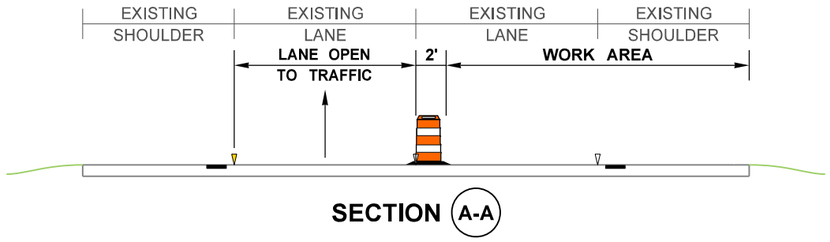
3-MILE QUEUE WARNING SYSTEM MESSAGES					
TRAFFIC SENSORS		PCMS 2		PCMS 1	
B	A	1	2	1	2
TRIGGER SPEED		2.0 SEC	2.0 SEC	2.0 SEC	2.0 SEC
35+ MPH	35+ MPH	■ ■ ■ ■	(Blank)	RIGHT LANE CLOSURE	50 MPH ZONE AHEAD
35+ MPH	< 35 MPH	LANE CLOSURE 3 MILES	TRAFFIC BACKUPS PRESENT	SLOW OR STOPPED TRAFFIC	NEXT 1.5 MILES
< 35 MPH	< 35 MPH	SLOW OR STOPPED TRAFFIC	NEXT 3 MILES	USE ALL LANES	TAKE TURNS AT MERGE

SEE QUEUE WARNING SYSTEM SPECIAL PROVISION OR RFP FOR DETAILS.

LOCATE PCMSs PER STD. SPEC 1-10.3(3)C. PCMS MAY BE PLACED ON OPPOSITE SHOULDER WHEN NEEDED, BUT AVOID RAMP GORES. WHEN PCMSs OR TRAFFIC SENSORS PLACED BEHIND BARRIER/GUARDRAIL OR WITHIN CLOSED LANE, TRANSVERSE TRAFFIC DRUMS ARE NOT REQUIRED.

ADJUST QWS COMPONENTS AS NEEDED TO AVOID CONFLICTS WITH TRAFFIC CONTROL DEVICES, NARROW SHOULDERS, RAMPS, OR TO MAINTAIN VISIBILITY OF SEQUENTIAL ARROW SIGN.

IN THE EVENT OF A SYSTEM FAILURE, SEE SPECIAL PROVISIONS OR RFP "QUEUE WARNING SYSTEM FAILURE PROTOCOL".

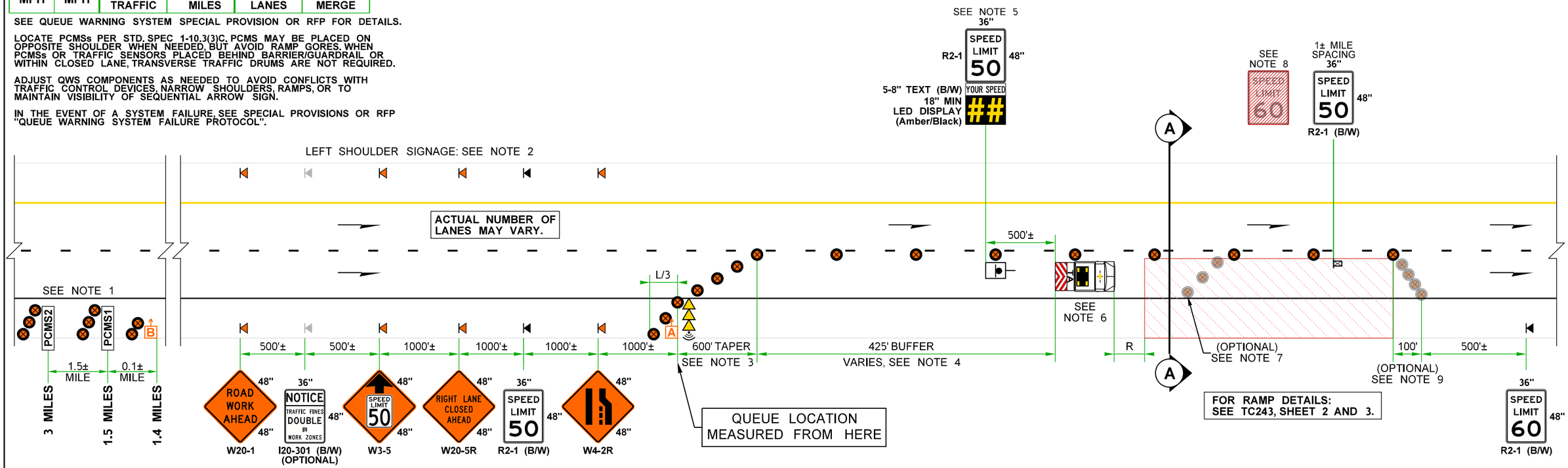


SECTION A-A

SHOULDER CLOSURE TAPER LENGTH = L/3	
SHOULDER WIDTH	L/3
< 6'	80'
6'	120'
10'	200'

STATIONARY TRANSPORTABLE ATTENUATOR ROLL AHEAD DISTANCE = R	
HOST VEHICLE WEIGHT	R
LESS THAN 22,000 lbs.	123'
22,000+ lbs.	100'

MAXIMUM CHANNELIZATION DEVICE SPACING (feet)		
MPH	TAPER	TANGENT
50	40	80



LEGEND:

- TEMPORARY SIGN LOCATION (1' MIN HEIGHT)
- TEMPORARY SIGN LOCATION (5' MIN HEIGHT)
- TRAFFIC SAFETY DRUM
- QWS TRAFFIC SENSOR
- RADAR SPEED DISPLAY SIGN (RSDS)
- SMART SEQUENTIAL ARROW SIGN (CONNECTED)
- TRANSPORTABLE ATTENUATOR
- PCMS — PORTABLE CHANGEABLE MESSAGE SIGN

NOTES:

1. miniPCMS PERMITTED ON 2-LANE FREEWAYS.
2. ON 2-LANE FREEWAYS, LEFT SHOULDER SIGNAGE OPTIONAL IF PAVED SHOULDER WIDTH IS LESS THAN 6 FEET.
3. IF FEASIBLE, AVOID PLACING LANE CLOSURE OR LANE SHIFT TAPERS WITHIN OR IMMEDIATELY FOLLOWING HORIZONTAL CURVES.
4. BUFFER SPACE MAY BE ADJUSTED (±) BASED ON FIELD CONDITIONS. DISTANCE INCREASES AS WORK AREA MOVES DOWNSTREAM.
5. RELOCATE RSDS AS WORK ZONE MOVES DOWNSTREAM. IF ENGINEER ACCEPTS, ADDITIONAL RSDS MAY BE ADDED PRIOR TO EACH WORK CREW.
6. RED/WHITE OR BLACK/YELLOW CHEVRON PATTERN OK. ADDITIONAL TRANSPORTABLE ATTENUATORS MAY BE ADDED BEHIND EACH WORK CREW.
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8. COVER ALL CONFLICTING SIGNAGE PER STD. SPEC. 1-10.3(3)A. BLACK 1/8" ABS OR 1/4" PLYWOOD TEMP. SIGN COVER PERMITTED.
9. IF USED, DOWNSTREAM TAPER DEVICE SPACING IS 20'.
10. SIGNS ARE BLACK ON ORANGE UNLESS OTHERWISE INDICATED.
11. PLAN IS APPLICABLE TO LANE CLOSURES OF 7 DAYS OR LESS.

11. NOTIFY PUBLIC OF SPEED REDUCTION AT LEAST 3 DAYS PRIOR VIA PCMS: 50 MPH WZ SPEED LIMIT / BEGINS DAYOFWEEK MM/DD/YY @ 2.0 SEC.

12. ADD W21-30-SERIES SIGNS (48"x48", 5' HEIGHT) 500'± PRIOR TO FREQUENT CONSTRUCTION VEHICLES INGRESS/EGRESS INTO THE OPEN LANE(S).

13. BICYCLIST ACCOMMODATIONS, WHERE FACILITY OPEN TO BICYCLES:
(A) BICYCLES PROHIBITED VIA R5-501 & R5-6 SIGNS. PROVIDE SIGNED DETOUR OR ALTERNATIVE ROUTE.
(B) BICYCLES PROHIBITED VIA R5-501 & R5-6 SIGNS. PROVIDE FREE SHUTTLE (WORK TRUCK, VAN, OR BUS OK) + CONTACT INFORMATION OR PHONE BOX.
(C) ENGINEER TO ACCEPT ANY ALTERNATIVE STRATEGIES.

FREEWAY (2+ LANES): SINGLE RIGHT LANE CLOSURE (50 MPH WORK ZONE SPEED LIMIT)

NOT TO SCALE

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PROJ. ENGR.							
REGIONAL ADM.		REVISION	DATE	BY			

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	
JOB NUMBER		
CONTRACT NO.		LOCATION NO.

P.E. STAMP BOX — DATE

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Washington State Department of Transportation

TYPICAL TRAFFIC CONTROL PLANS

Plot 2

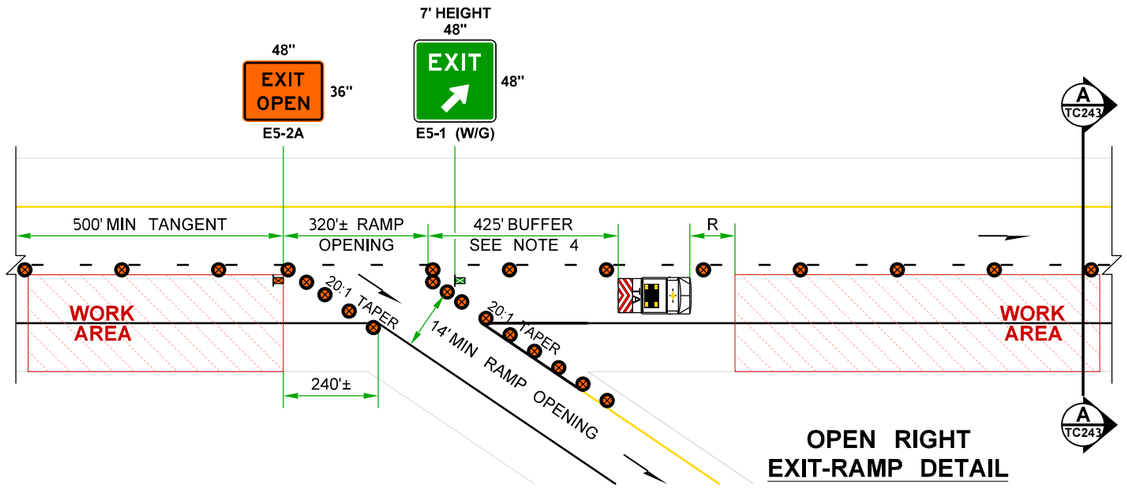
PLAN REF NO TC243

SHEET 1B OF 3 SHEETS

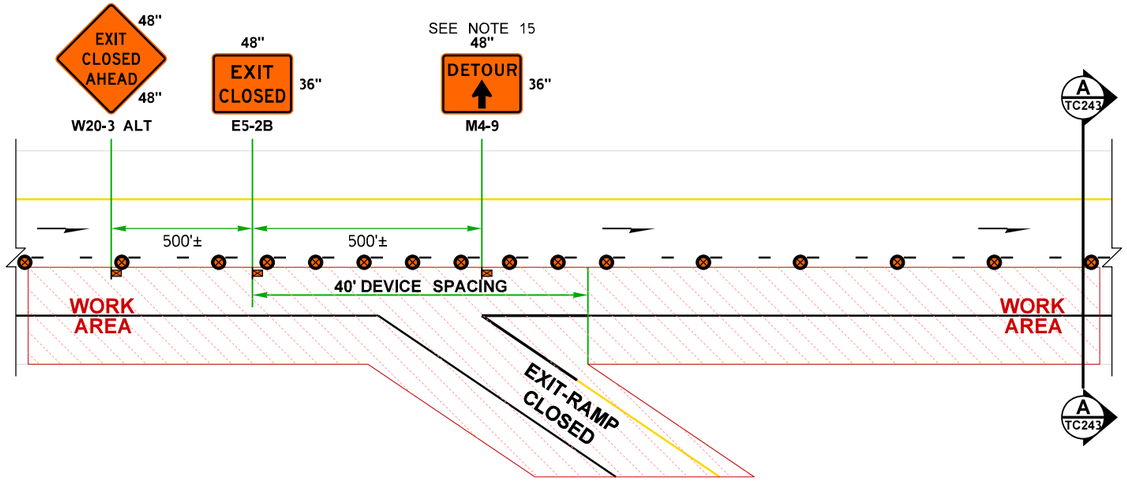
NOTES:

14. FOR LEGEND, TABLES, AND ADDITIONAL NOTES: SEE TC243, SHEET 1A OR 1B.

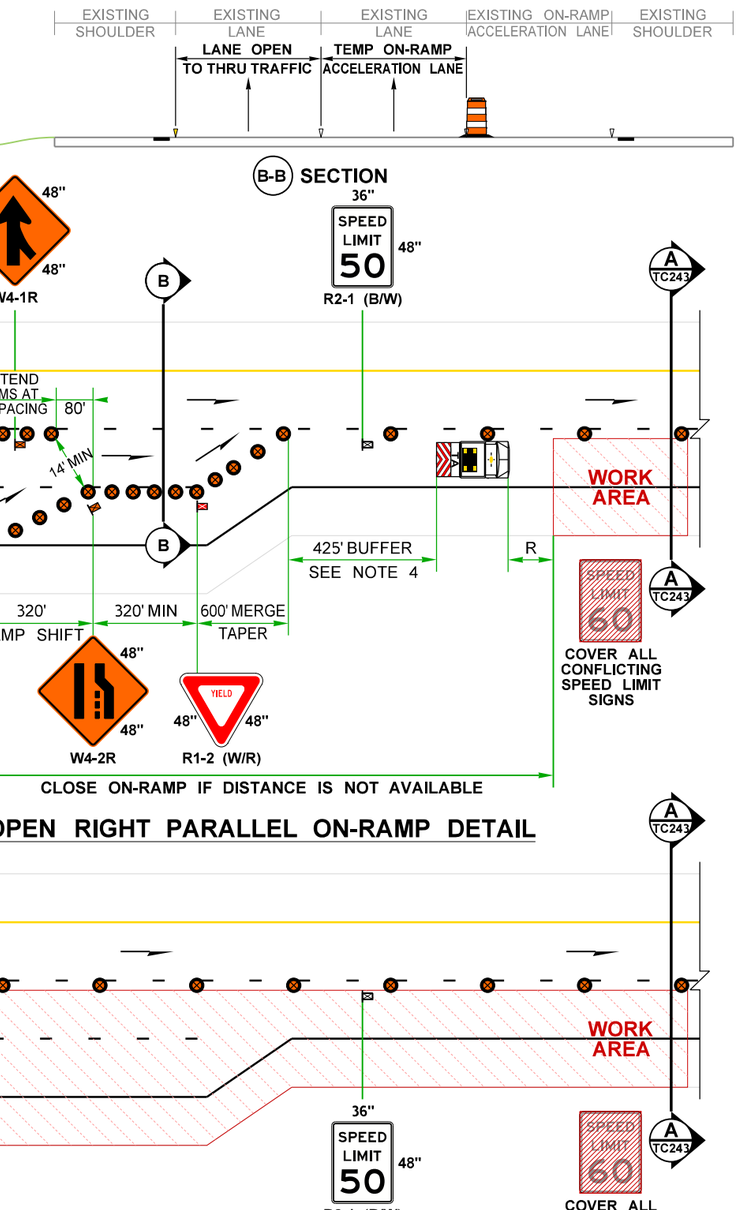
15. SEE DETOUR PLAN FOR ADDITIONAL RAMP CLOSURE DETOUR SIGNAGE.



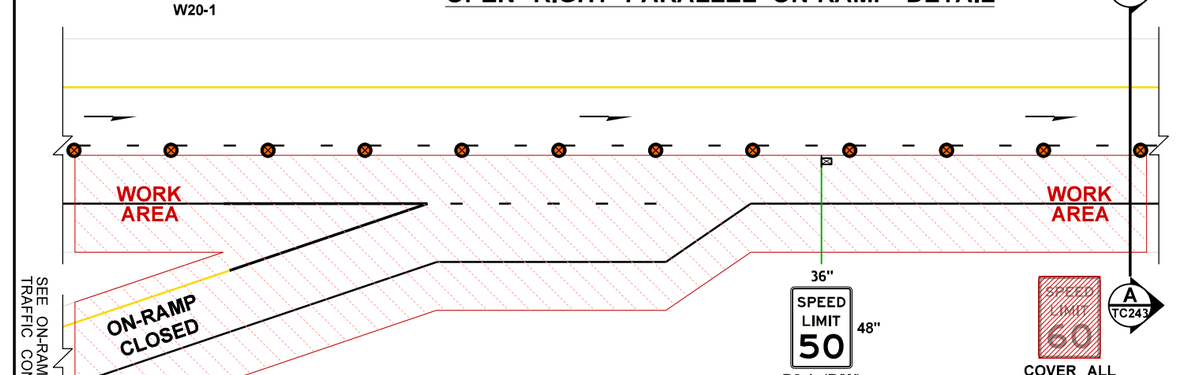
OPEN RIGHT EXIT-RAMP DETAIL



CLOSED RIGHT EXIT-RAMP DETAIL



OPEN RIGHT PARALLEL ON-RAMP DETAIL



CLOSED RIGHT ON-RAMP DETAIL

FREEWAY (2+ LANES): SINGLE RIGHT LANE CLOSURE (50 MPH WORK ZONE SPEED LIMIT)

NOT TO SCALE

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PROJ. ENGR.							
REGIONAL ADM.		REVISION	DATE	BY			

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Washington State Department of Transportation

TYPICAL TRAFFIC CONTROL PLANS

Plot 3

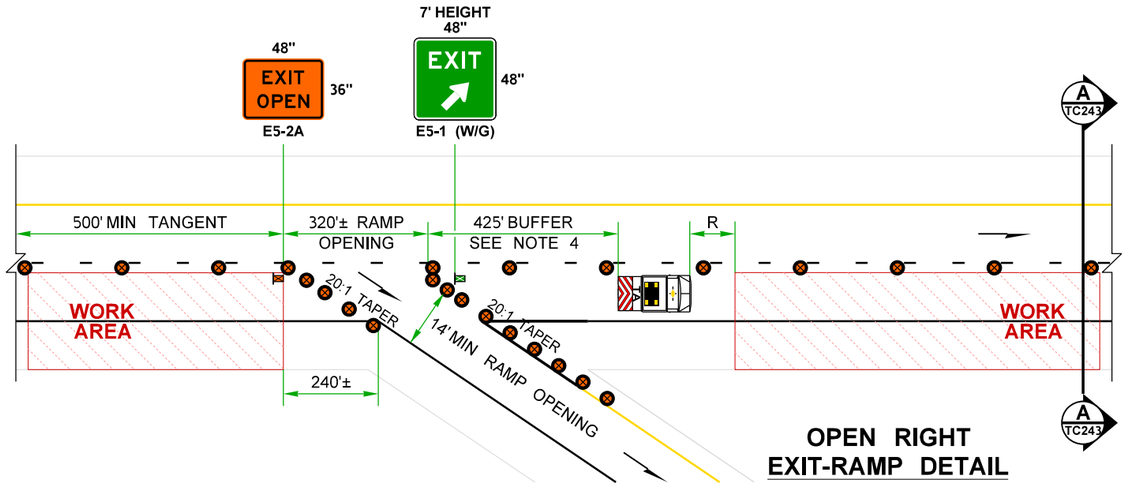
PLAN REF NO TC243

SHEET 2A OF 3 SHEETS

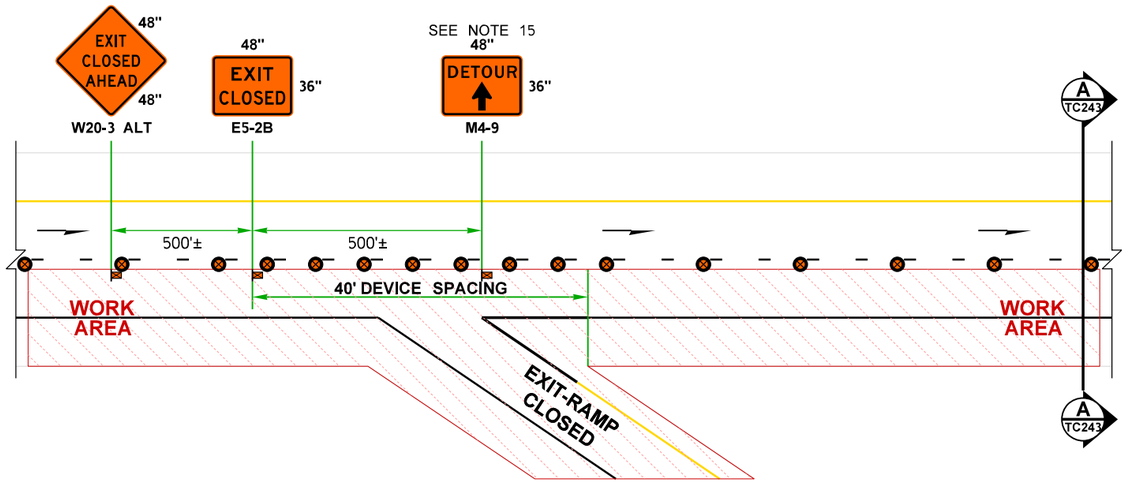
NOTES:

14. FOR LEGEND, TABLES, AND ADDITIONAL NOTES: SEE TC243, SHEET 1A OR 1B.

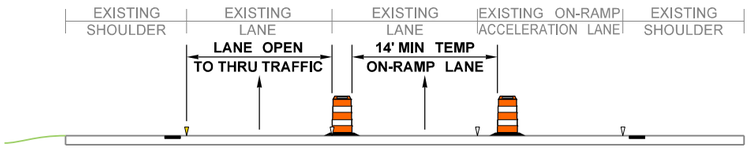
15. SEE DETOUR PLAN FOR ADDITIONAL RAMP CLOSURE DETOUR SIGNAGE.



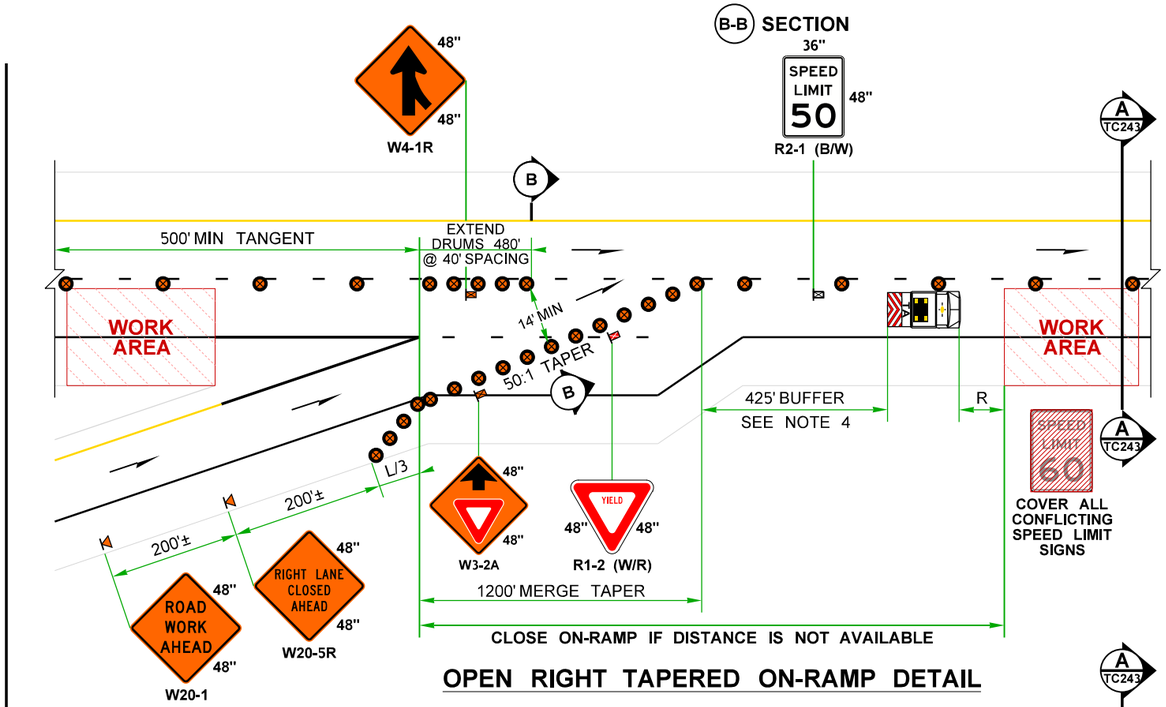
OPEN RIGHT EXIT-RAMP DETAIL



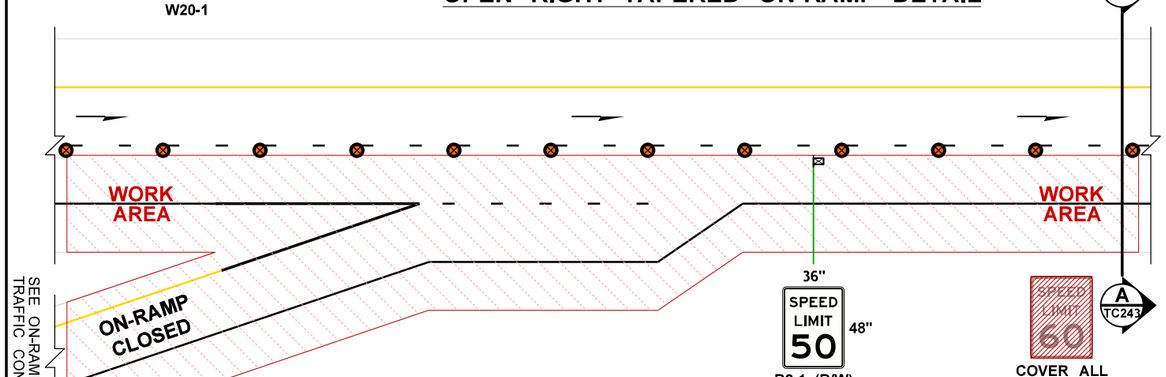
CLOSED RIGHT EXIT-RAMP DETAIL



B-B SECTION



OPEN RIGHT TAPERED ON-RAMP DETAIL



CLOSED RIGHT ON-RAMP DETAIL

FREEWAY (2+ LANES): SINGLE RIGHT LANE CLOSURE (50 MPH WORK ZONE SPEED LIMIT)

NOT TO SCALE

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DESIGNED BY								
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CHECKED BY								
PROJ. ENGR.								
REGIONAL ADM.		REVISION	DATE	BY				

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Washington State Department of Transportation

TYPICAL TRAFFIC CONTROL PLANS

Plot 4

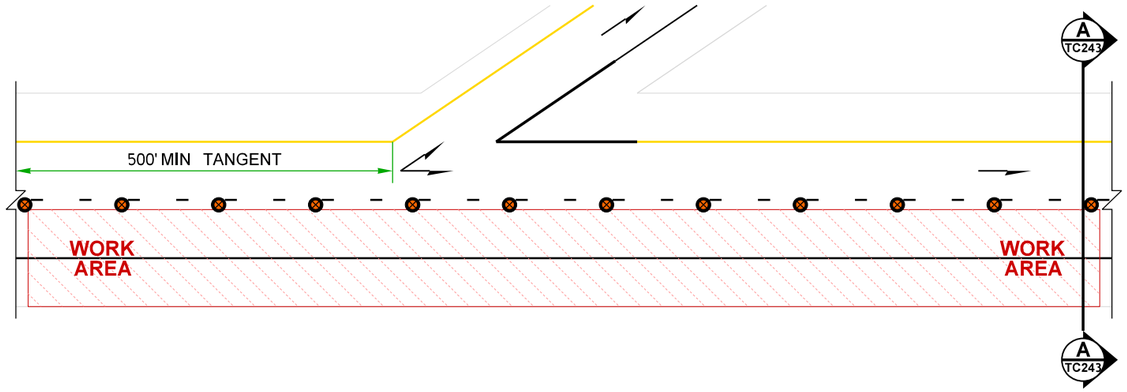
PLAN REF NO TC243

SHEET 2B OF 3 SHEETS

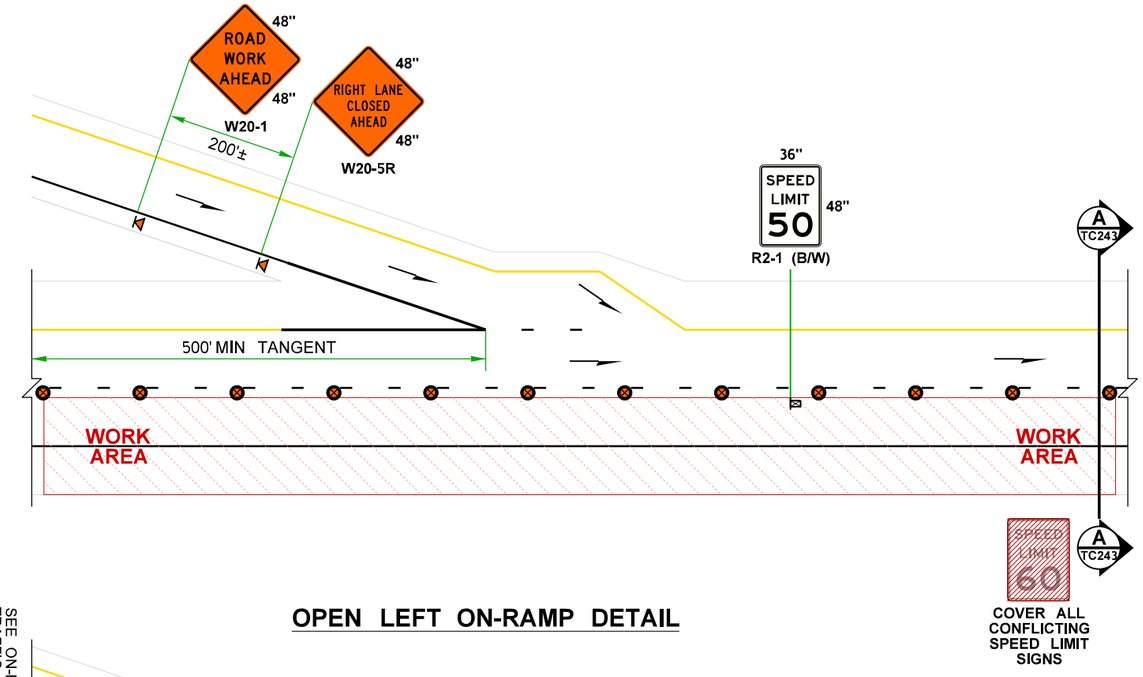
NOTES:

14. FOR LEGEND, TABLES, AND ADDITIONAL NOTES: SEE TC243, SHEET 1A OR 1B.

15. SEE DETOUR PLAN FOR ADDITIONAL RAMP CLOSURE DETOUR SIGNAGE.



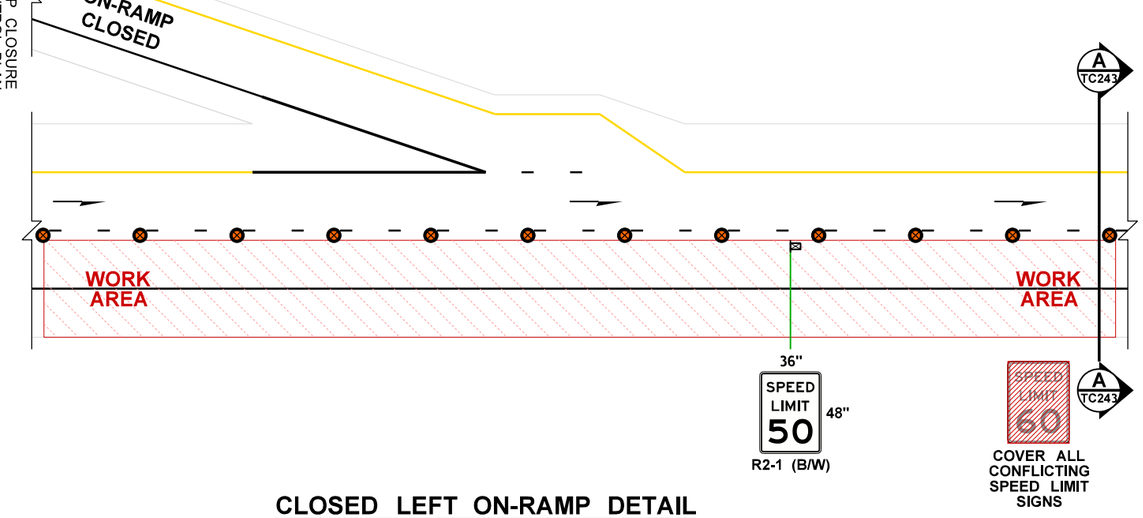
OPEN LEFT EXIT-RAMP DETAIL



COVER ALL CONFLICTING SPEED LIMIT SIGNS

OPEN LEFT ON-RAMP DETAIL

SEE ON-RAMP CLOSURE TRAFFIC CONTROL PLAN



COVER ALL CONFLICTING SPEED LIMIT SIGNS

CLOSED LEFT EXIT-RAMP DETAIL

LEFT EXIT-RAMPS ARE TO REMAIN OPEN

CLOSED LEFT ON-RAMP DETAIL

FREEWAY (2+ LANES): SINGLE RIGHT LANE CLOSURE (50 MPH WORK ZONE SPEED LIMIT)

NOT TO SCALE

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DESIGNED BY									
ENTERED BY									
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PROJ. ENGR.									
REGIONAL ADM.		REVISION	DATE	BY					

P.E. STAMP BOX — DATE

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Washington State Department of Transportation

TYPICAL TRAFFIC CONTROL PLANS

PCMS	
1	2
RIGHT LANE CLOSURE	50 MPH ZONE AHEAD
2.0 SEC	2.0 SEC

OR

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

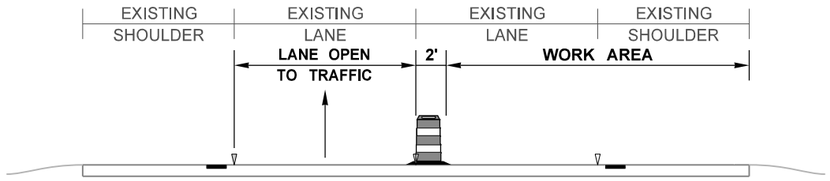
USE IF TRAFFIC BACKUPS EXPECTED, BUT NOT VERIFIED HOURLY BY TCS.

PCMS - ALT 2		
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 1.5± MILES PRIOR TO CLOSURE TAPER OR UPSTREAM OF EXPECTED MAXIMUM TRAFFIC QUEUE PER STANDARD SPECIFICATION 1-10.3(3)C.

FIELD LOCATE 1.5± MILES PRIOR TO CLOSURE TAPER PER STD. SPEC. 1-10.3(3)C.

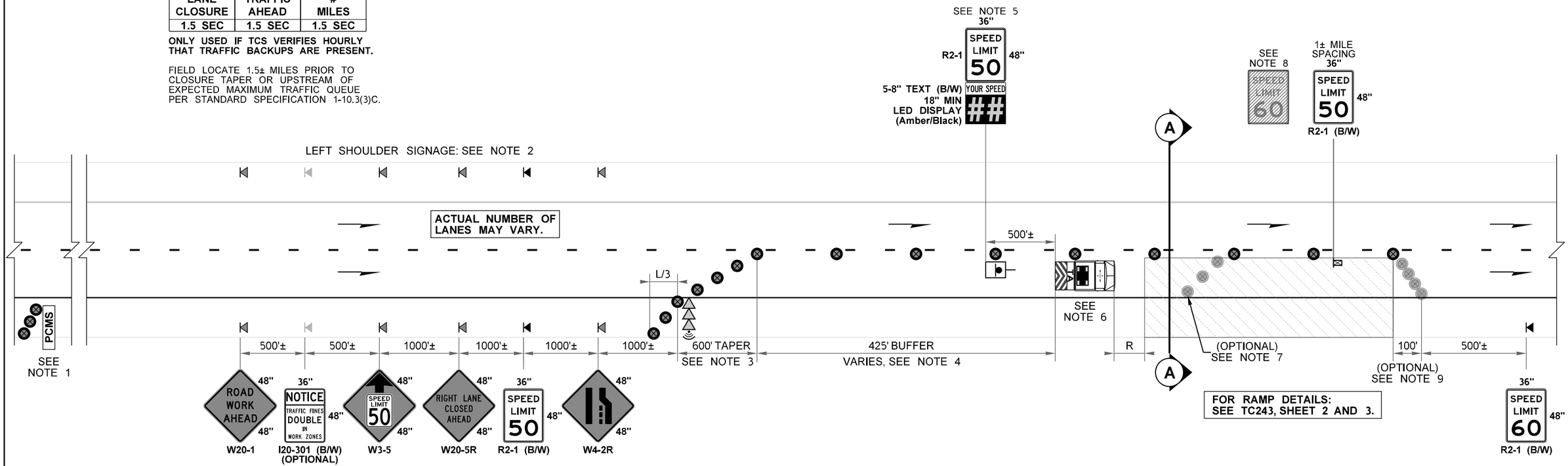


SECTION (A-A)

SHOULDER CLOSURE TAPER LENGTH = L/3	
SHOULDER WIDTH	L/3
< 6'	80'
6'	120'
10'	200'

STATIONARY TRANSPORTABLE ATTENUATOR ROLL AHEAD DISTANCE = R	
HOST VEHICLE WEIGHT	R
LESS THAN 22,000 lbs.	123'
22,000+ lbs.	100'

MAXIMUM CHANNELIZATION DEVICE SPACING (feet)		
MPH	TAPER	TANGENT
50	40	80



LEGEND:

- TEMPORARY SIGN LOCATION (1' MIN HEIGHT)
- TEMPORARY SIGN LOCATION (5' MIN HEIGHT)
- TRAFFIC SAFETY DRUM
- RADAR SPEED DISPLAY SIGN (RSDS)
- SMART SEQUENTIAL ARROW SIGN (CONNECTED)
- TRANSPORTABLE ATTENUATOR
- PCMS — PORTABLE CHANGEABLE MESSAGE SIGN

NOTES:

1. miniPCMS PERMITTED ON 2-LANE FREEWAYS.
2. ON 2-LANE FREEWAYS, LEFT SHOULDER SIGNAGE OPTIONAL IF PAVED SHOULDER WIDTH IS LESS THAN 6 FEET.
3. IF FEASIBLE, AVOID PLACING LANE CLOSURE OR LANE SHIFT TAPERS WITHIN OR IMMEDIATELY FOLLOWING HORIZONTAL CURVES.
4. BUFFER SPACE MAY BE ADJUSTED (±) BASED ON FIELD CONDITIONS. DISTANCE INCREASES AS WORK AREA MOVES DOWNSTREAM.
5. RELOCATE RSDS AS WORK ZONE MOVES DOWNSTREAM. IF ENGINEER ACCEPTS, ADDITIONAL RSDS MAY BE ADDED PRIOR TO EACH WORK CREW.
6. RED/WHITE OR BLACK/YELLOW CHEVRON PATTERN OK. ADDITIONAL TRANSPORTABLE ATTENUATORS MAY BE ADDED BEHIND EACH WORK CREW.
7. IF USED, PLACE DEVICES TRANSVERSELY ACROSS CLOSED LANES AT 45°± AND 5' SPACING AT STRATEGIC LOCATIONS.
8. COVER ALL CONFLICTING SIGNAGE PER STD. SPEC. 1-10.3(3)A. BLACK 1/8" ABS OR 1/4" PLYWOOD TEMP. SIGN COVER PERMITTED.
9. IF USED, DOWNSTREAM TAPER DEVICE SPACING IS 20'.
10. SIGNS ARE BLACK ON ORANGE UNLESS OTHERWISE INDICATED.
11. PLAN IS APPLICABLE TO LANE CLOSURES OF 7 DAYS OR LESS.

11. NOTIFY PUBLIC OF SPEED REDUCTION AT LEAST 3 DAYS PRIOR VIA PCMS: 50 MPH WZ SPEED LIMIT / BEGINS DAYOFWEEK MM/DD/YY @ 2.0 SEC.

12. ADD W21-30-SERIES SIGNS (48"x48", 5' HEIGHT) 500'± PRIOR TO FREQUENT CONSTRUCTION VEHICLES INGRESS/EGRESS INTO THE OPEN LANE(S).

13. BICYCLIST ACCOMMODATIONS, WHERE FACILITY OPEN TO BICYCLES:
(A) BICYCLES PROHIBITED VIA R5-501 & R5-6 SIGNS. PROVIDE SIGNED DETOUR OR ALTERNATIVE ROUTE.
(B) BICYCLES PROHIBITED VIA R5-501 & R5-6 SIGNS. PROVIDE FREE SHUTTLE (WORK TRUCK, VAN, OR BUS OK) + CONTACT INFORMATION OR PHONE BOX.
(C) ENGINEER TO ACCEPT ANY ALTERNATIVE STRATEGIES.

FREEWAY (2+ LANES): SINGLE RIGHT LANE CLOSURE (50 MPH WORK ZONE SPEED LIMIT)

NOT TO SCALE

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DESIGNED BY					CONTRACT NO.		LOCATION NO.
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CHECKED BY							
PROJ. ENGR.							
REGIONAL ADM.		REVISION	DATE	BY			

P.E. STAMP BOX — DATE

P.E. STAMP BOX — DATE

Washington State Department of Transportation

TYPICAL TRAFFIC CONTROL PLANS

Plot 1

PLAN REF NO TC243

SHEET 1A OF 3 SHEETS

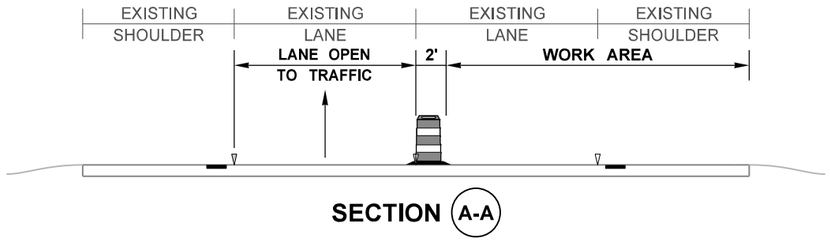
3-MILE QUEUE WARNING SYSTEM MESSAGES					
TRAFFIC SENSORS		PCMS 2		PCMS 1	
B	A	1	2	1	2
TRIGGER SPEED		2.0 SEC	2.0 SEC	2.0 SEC	2.0 SEC
35+ MPH	35+ MPH	■ ■ ■ ■	(Blank)	RIGHT LANE CLOSURE	50 MPH ZONE AHEAD
35+ MPH	< 35 MPH	LANE CLOSURE 3 MILES	TRAFFIC BACKUPS PRESENT	SLOW OR STOPPED TRAFFIC	NEXT 1.5 MILES
< 35 MPH	< 35 MPH	SLOW OR STOPPED TRAFFIC	NEXT 3 MILES	USE ALL LANES	TAKE TURNS AT MERGE

SEE QUEUE WARNING SYSTEM SPECIAL PROVISION OR RFP FOR DETAILS.

LOCATE PCMSs PER STD. SPEC 1-10.3(3)C. PCMS MAY BE PLACED ON OPPOSITE SHOULDER WHEN NEEDED, BUT AVOID RAMP GORES. WHEN PCMSs OR TRAFFIC SENSORS PLACED BEHIND BARRIER/GUARDRAIL OR WITHIN CLOSED LANE, TRANSVERSE TRAFFIC DRUMS ARE NOT REQUIRED.

ADJUST QWS COMPONENTS AS NEEDED TO AVOID CONFLICTS WITH TRAFFIC CONTROL DEVICES, NARROW SHOULDERS, RAMPS, OR TO MAINTAIN VISIBILITY OF SEQUENTIAL ARROW SIGN.

IN THE EVENT OF A SYSTEM FAILURE, SEE SPECIAL PROVISIONS OR RFP "QUEUE WARNING SYSTEM FAILURE PROTOCOL".

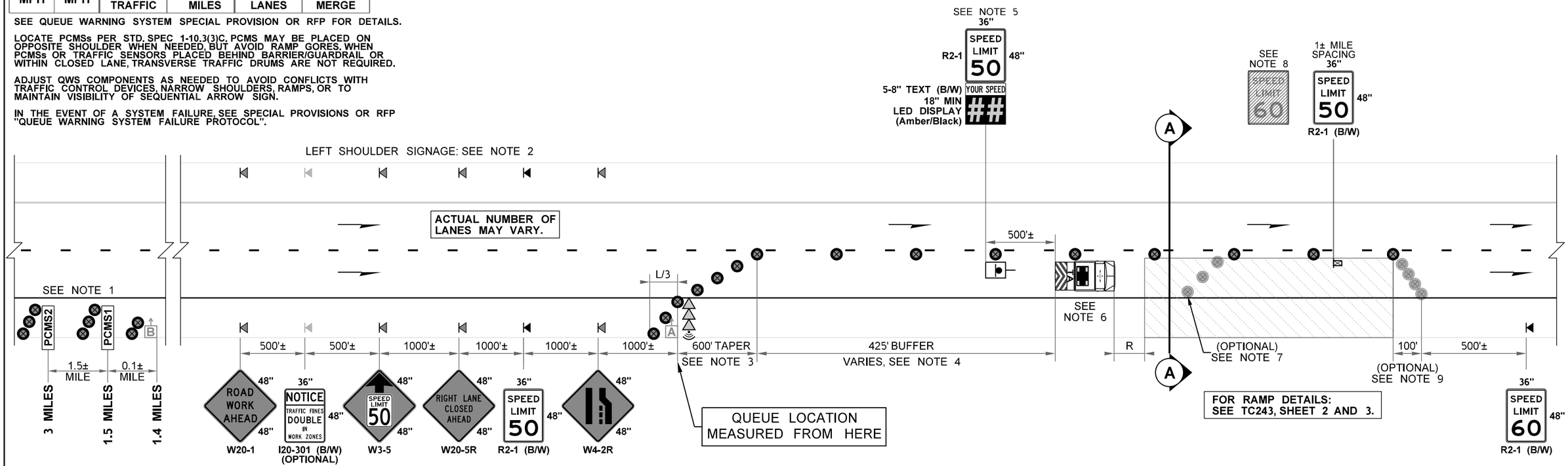


SECTION A-A

SHOULDER CLOSURE TAPER LENGTH = L/3	
SHOULDER WIDTH	L/3
< 6'	80'
6'	120'
10'	200'

STATIONARY TRANSPORTABLE ATTENUATOR ROLL AHEAD DISTANCE = R	
HOST VEHICLE WEIGHT	R
LESS THAN 22,000 lbs.	123'
22,000+ lbs.	100'

MAXIMUM CHANNELIZATION DEVICE SPACING (feet)		
MPH	TAPER	TANGENT
50	40	80



LEGEND:

- TEMPORARY SIGN LOCATION (1' MIN HEIGHT)
- TEMPORARY SIGN LOCATION (5' MIN HEIGHT)
- TRAFFIC SAFETY DRUM
- QWS TRAFFIC SENSOR
- RADAR SPEED DISPLAY SIGN (RSDS)
- SMART SEQUENTIAL ARROW SIGN (CONNECTED)
- TRANSPORTABLE ATTENUATOR
- PCMS — PORTABLE CHANGEABLE MESSAGE SIGN

NOTES:

1. miniPCMS PERMITTED ON 2-LANE FREEWAYS.
2. ON 2-LANE FREEWAYS, LEFT SHOULDER SIGNAGE OPTIONAL IF PAVED SHOULDER WIDTH IS LESS THAN 6 FEET.
3. IF FEASIBLE, AVOID PLACING LANE CLOSURE OR LANE SHIFT TAPERS WITHIN OR IMMEDIATELY FOLLOWING HORIZONTAL CURVES.
4. BUFFER SPACE MAY BE ADJUSTED (±) BASED ON FIELD CONDITIONS. DISTANCE INCREASES AS WORK AREA MOVES DOWNSTREAM.
5. RELOCATE RSDS AS WORK ZONE MOVES DOWNSTREAM. IF ENGINEER ACCEPTS, ADDITIONAL RSDS MAY BE ADDED PRIOR TO EACH WORK CREW.
6. RED/WHITE OR BLACK/YELLOW CHEVRON PATTERN OK. ADDITIONAL TRANSPORTABLE ATTENUATORS MAY BE ADDED BEHIND EACH WORK CREW.
7. IF USED, PLACE DEVICES TRANSVERSELY ACROSS CLOSED LANES AT 45°± AND 5' SPACING AT STRATEGIC LOCATIONS.
8. COVER ALL CONFLICTING SIGNAGE PER STD. SPEC. 1-10.3(3)A. BLACK 1/8" ABS OR 1/4" PLYWOOD TEMP. SIGN COVER PERMITTED.
9. IF USED, DOWNSTREAM TAPER DEVICE SPACING IS 20'.
10. SIGNS ARE BLACK ON ORANGE UNLESS OTHERWISE INDICATED.
11. PLAN IS APPLICABLE TO LANE CLOSURES OF 7 DAYS OR LESS.

11. NOTIFY PUBLIC OF SPEED REDUCTION AT LEAST 3 DAYS PRIOR VIA PCMS: 50 MPH WZ SPEED LIMIT / BEGINS DAYOFWEEK MM/DD/YY @ 2.0 SEC.

12. ADD W21-30-SERIES SIGNS (48"x48", 5' HEIGHT) 500'± PRIOR TO FREQUENT CONSTRUCTION VEHICLES INGRESS/EGRESS INTO THE OPEN LANE(S).

13. BICYCLIST ACCOMMODATIONS, WHERE FACILITY OPEN TO BICYCLES:
(A) BICYCLES PROHIBITED VIA R5-501 & R5-6 SIGNS. PROVIDE SIGNED DETOUR OR ALTERNATIVE ROUTE.
(B) BICYCLES PROHIBITED VIA R5-501 & R5-6 SIGNS. PROVIDE FREE SHUTTLE (WORK TRUCK, VAN, OR BUS OK) + CONTACT INFORMATION OR PHONE BOX.
(C) ENGINEER TO ACCEPT ANY ALTERNATIVE STRATEGIES.

FREEWAY (2+ LANES): SINGLE RIGHT LANE CLOSURE (50 MPH WORK ZONE SPEED LIMIT)

NOT TO SCALE

FILE NAME	C:\Users\LIntzF\OneDrive - WashIngton State Department of TransportatIon\Desktop\Work Zone TCPs\243Fwy1RtLane60to50WZSL.dgn						Plot 2
TIME	7:53:12 AM				REGION NO. 10	STATE WASH	FED.AID PROJ.NO.
DATE	1/8/2024						PLAN REF NO TC243
PLOTTED BY	LintzF				JOB NUMBER		
DESIGNED BY							SHEET 1B OF 3 SHEETS
ENTERED BY							
CHECKED BY					CONTRACT NO.	LOCATION NO.	
PROJ. ENGR.							
REGIONAL ADM.		REVISION	DATE	BY			

P.E. STAMP BOX — DATE

P.E. STAMP BOX — DATE

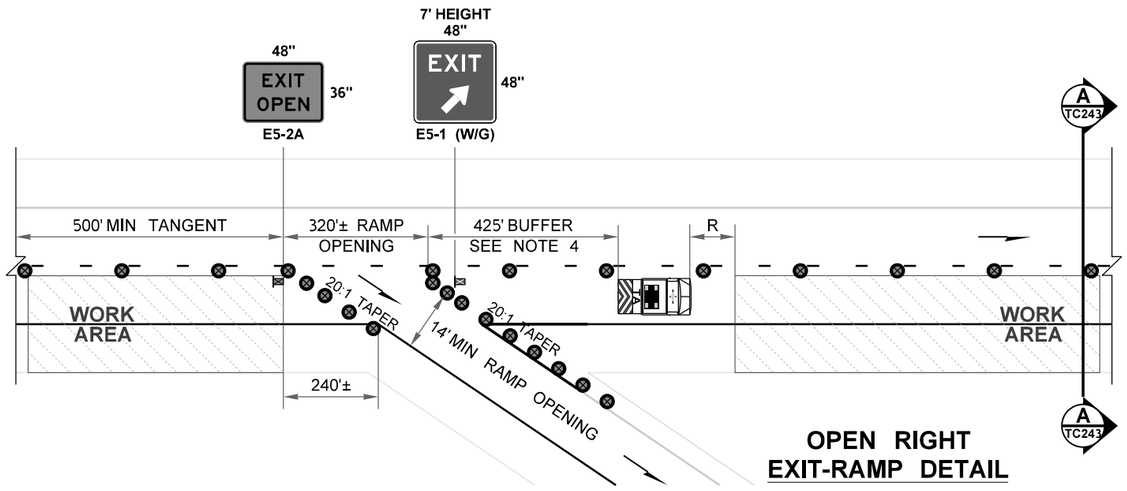
Washington State Department of Transportation

TYPICAL TRAFFIC CONTROL PLANS

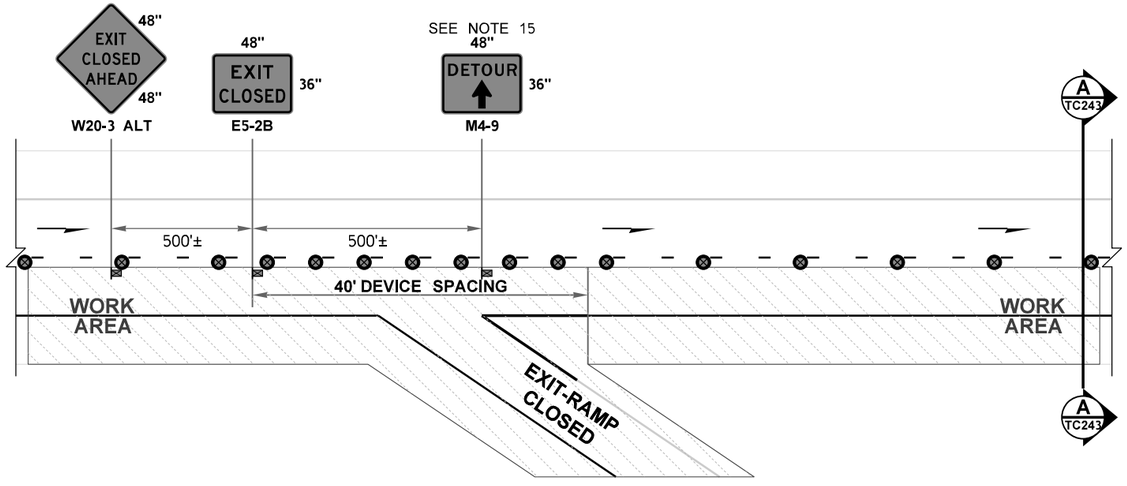
NOTES:

14. FOR LEGEND, TABLES, AND ADDITIONAL NOTES: SEE TC243, SHEET 1A OR 1B.

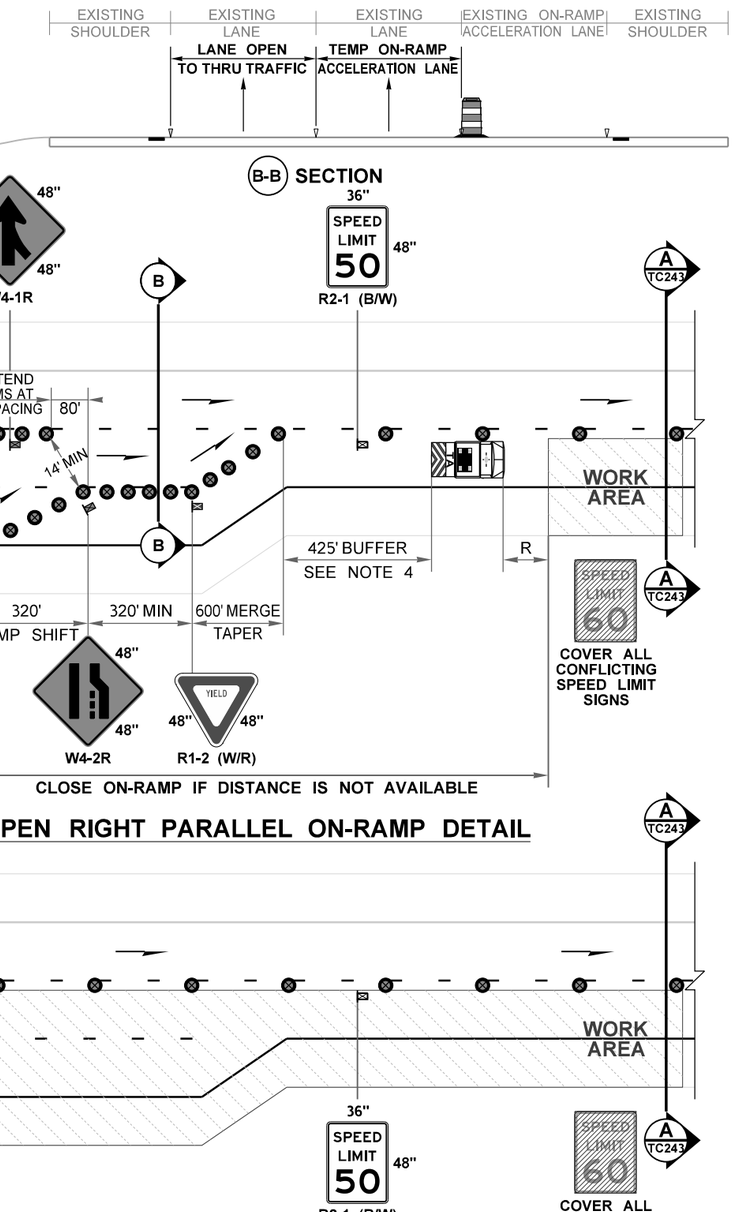
15. SEE DETOUR PLAN FOR ADDITIONAL RAMP CLOSURE DETOUR SIGNAGE.



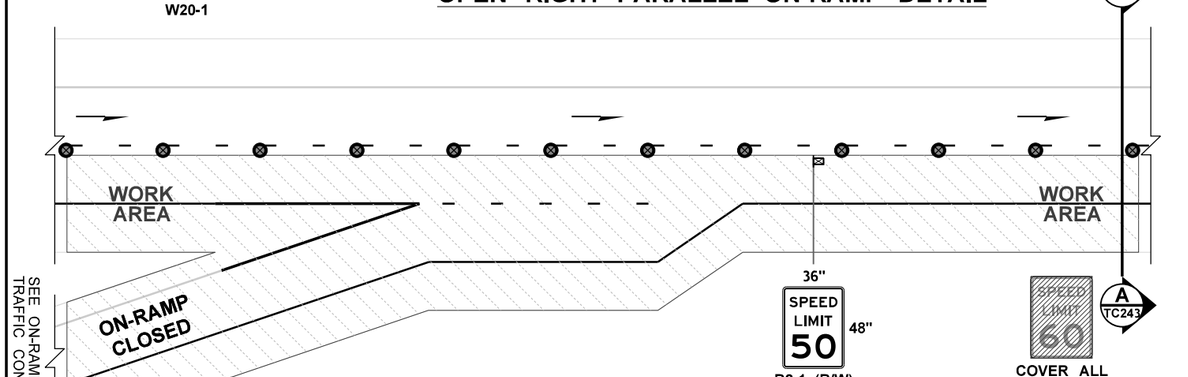
OPEN RIGHT EXIT-RAMP DETAIL



CLOSED RIGHT EXIT-RAMP DETAIL



OPEN RIGHT PARALLEL ON-RAMP DETAIL



CLOSED RIGHT ON-RAMP DETAIL

FREEWAY (2+ LANES): SINGLE RIGHT LANE CLOSURE (50 MPH WORK ZONE SPEED LIMIT)

NOT TO SCALE

FILE NAME	C:\Users\LIntzF\OneDrive - Washington State Department of Transportation\Desktop\Work Zone TCPs\243Fwy1RtLane60to50WZSL.dgn				REGION NO.	STATE	FED.AID PROJ.NO.	Plot 3
TIME	7:53:13 AM				10	WASH		PLAN REF NO TC243
DATE	1/8/2024				JOB NUMBER			
PLOTTED BY	LintzF							SHEET 2A OF 3 SHEETS
DESIGNED BY					CONTRACT NO.		LOCATION NO.	
ENTERED BY								
CHECKED BY								
PROJ. ENGR.								
REGIONAL ADM.		REVISION	DATE	BY				

P.E. STAMP BOX — DATE

P.E. STAMP BOX — DATE

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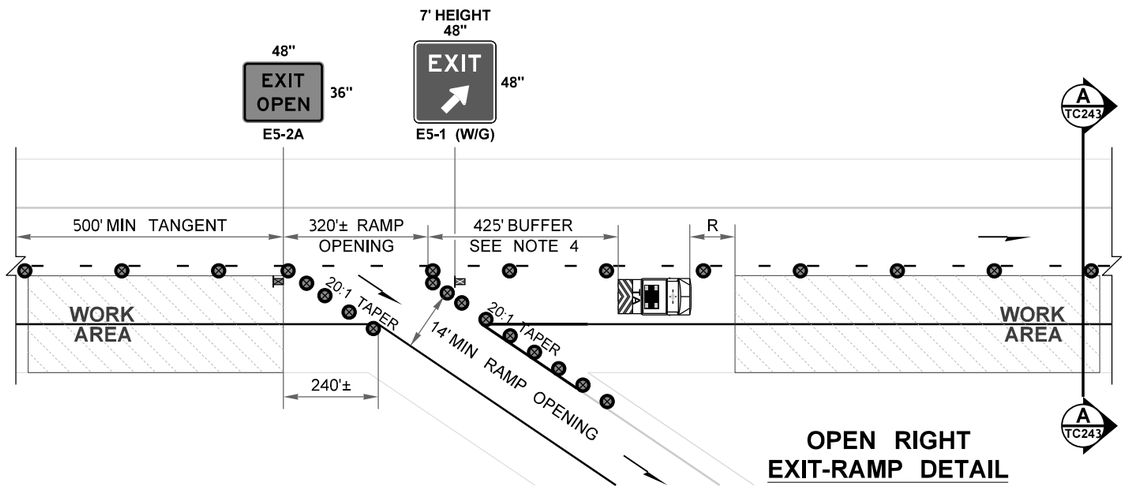
TYPICAL TRAFFIC CONTROL PLANS

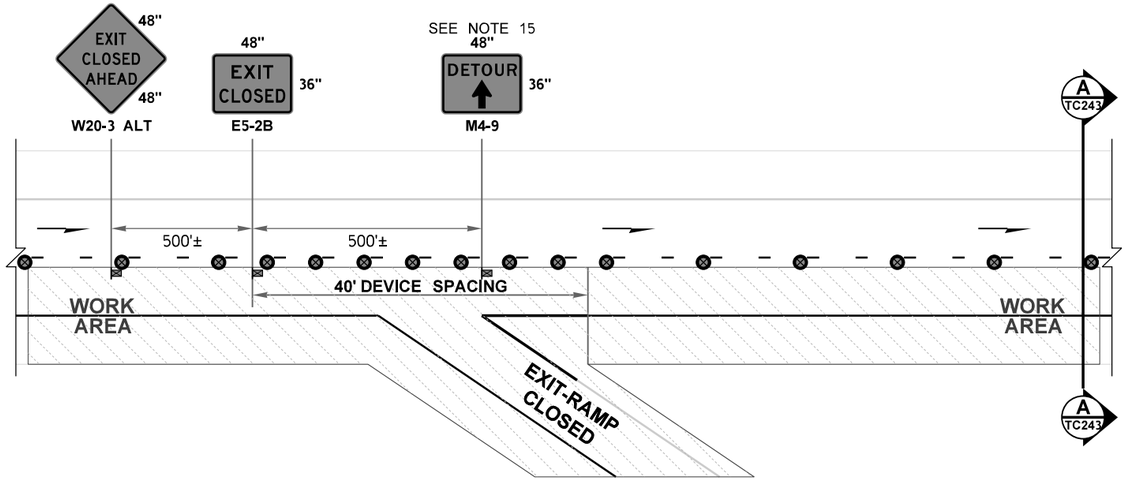
NOTES:

14. FOR LEGEND, TABLES, AND ADDITIONAL NOTES: SEE TC243, SHEET 1A OR 1B.

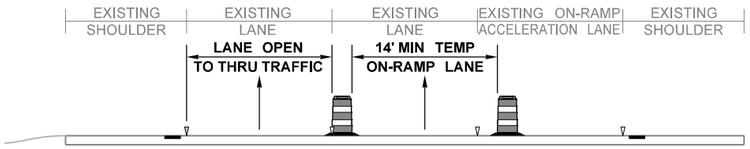
15. SEE DETOUR PLAN FOR ADDITIONAL RAMP CLOSURE DETOUR SIGNAGE.



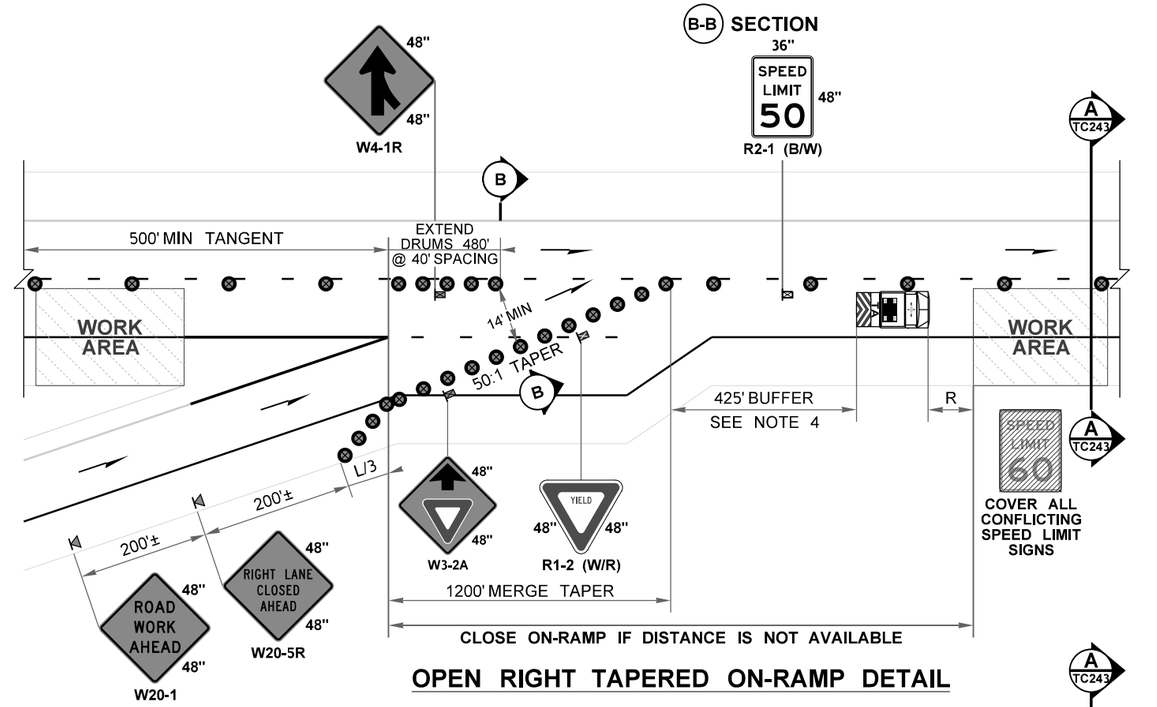
OPEN RIGHT EXIT-RAMP DETAIL



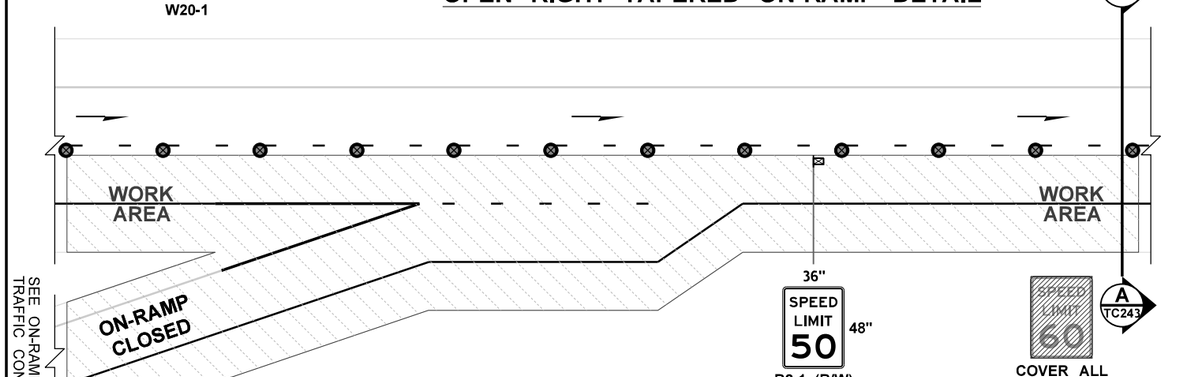
CLOSED RIGHT EXIT-RAMP DETAIL



B-B SECTION



OPEN RIGHT TAPERED ON-RAMP DETAIL



CLOSED RIGHT ON-RAMP DETAIL

FREEWAY (2+ LANES): SINGLE RIGHT LANE CLOSURE (50 MPH WORK ZONE SPEED LIMIT)

NOT TO SCALE

FILE NAME	C:\Users\LIntzF\OneDrIve - WashIngton State Department of TransportatIon\Desktop\Work Zone TCPs\243Fwy1RtLane60to50WZSL.dgn				REGION NO.	STATE	FED.AID PROJ.NO.	Plot 4
TIME	7:53:13 AM				10	WASH		PLAN REF NO TC243
DATE	1/8/2024				JOB NUMBER			
PLOTTED BY	LintzF							SHEET 2B OF 3 SHEETS
DESIGNED BY					CONTRACT NO.		LOCATION NO.	
ENTERED BY								
CHECKED BY								
PROJ. ENGR.								
REGIONAL ADM.		REVISION	DATE	BY				

P.E. STAMP BOX — DATE

P.E. STAMP BOX — DATE

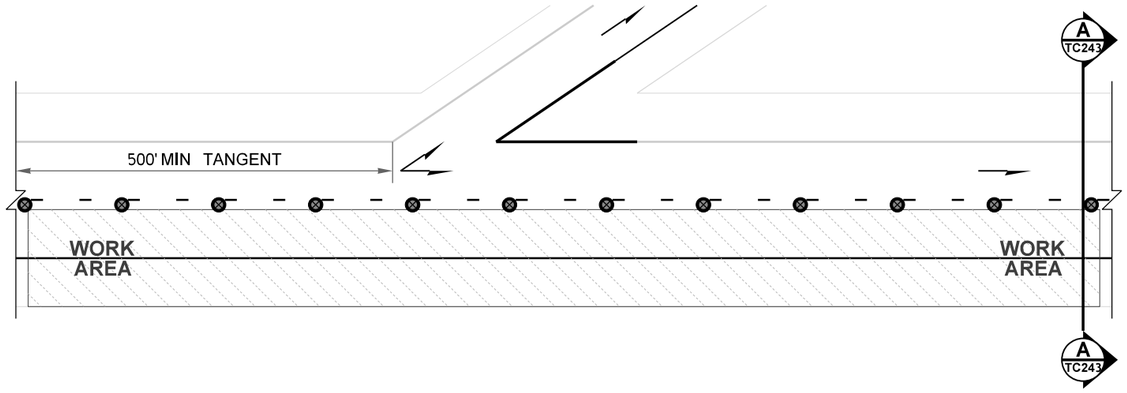
Washington State Department of Transportation

TYPICAL TRAFFIC CONTROL PLANS

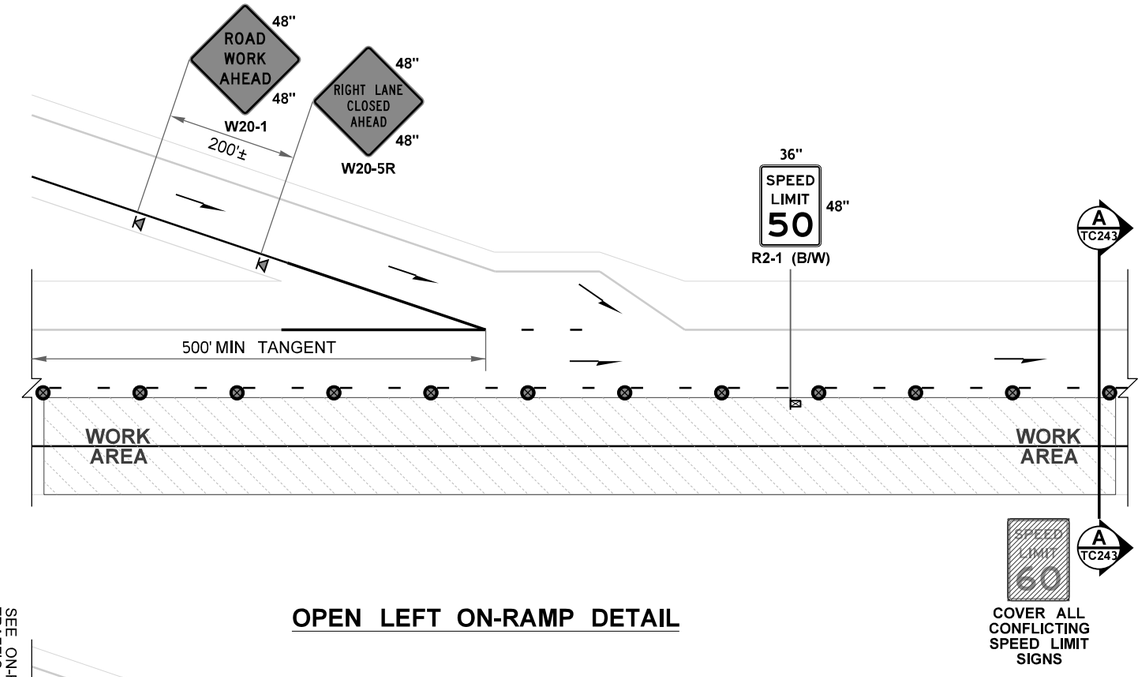
NOTES:

14. FOR LEGEND, TABLES, AND ADDITIONAL NOTES: SEE TC243, SHEET 1A OR 1B.

15. SEE DETOUR PLAN FOR ADDITIONAL RAMP CLOSURE DETOUR SIGNAGE.



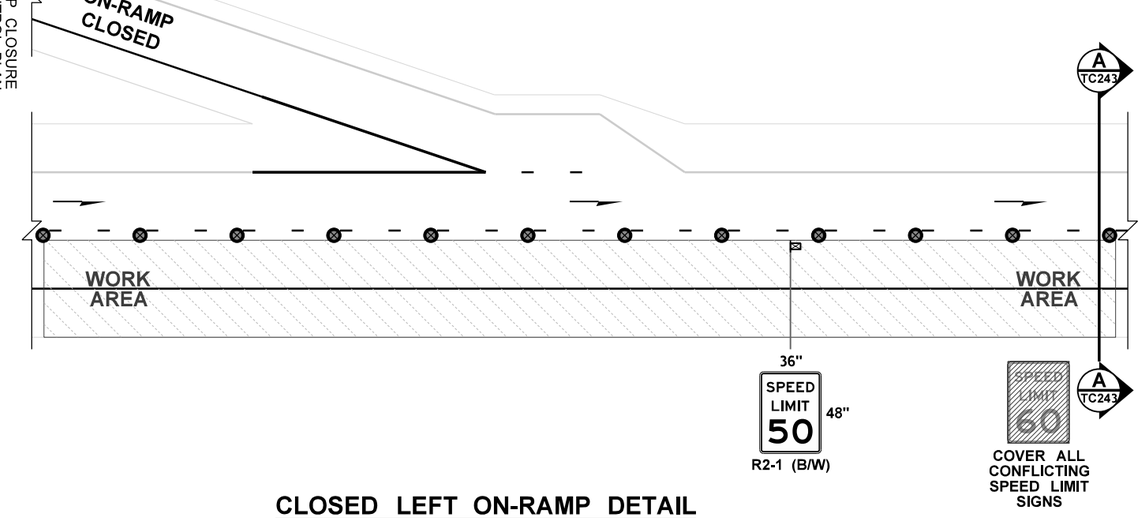
OPEN LEFT EXIT-RAMP DETAIL



COVER ALL CONFLICTING SPEED LIMIT SIGNS

OPEN LEFT ON-RAMP DETAIL

SEE ON-RAMP CLOSURE TRAFFIC CONTROL PLAN



COVER ALL CONFLICTING SPEED LIMIT SIGNS

CLOSED LEFT EXIT-RAMP DETAIL

LEFT EXIT-RAMPS ARE TO REMAIN OPEN

CLOSED LEFT ON-RAMP DETAIL

FREEWAY (2+ LANES): SINGLE RIGHT LANE CLOSURE (50 MPH WORK ZONE SPEED LIMIT)

NOT TO SCALE

FILE NAME	C:\Users\LIntzF\OneDrIve - WashIngton State Department of TransportatIon\Desktop\Work Zone TCPs\243Fwy1RtLane60to50WZSL.dgn				REGION NO.	STATE	FED.AID PROJ.NO.
TIME	7:53:14 AM				10	WASH	
DATE	1/8/2024				JOB NUMBER		
PLOTTED BY	LintzF						
DESIGNED BY					CONTRACT NO.	LOCATION NO.	
ENTERED BY							
CHECKED BY							
PROJ. ENGR.							
REGIONAL ADM.		REVISION	DATE	BY			

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Washington State Department of Transportation

TYPICAL TRAFFIC CONTROL PLANS

Plot 5

PLAN REF NO TC243

SHEET 3 OF 3 SHEETS

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 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 freeway lane closure with 50-mph work zone speed limit including a single PCMS in advance for queue mitigation.

Plot 2: 3-Mile Queue Warning System version of single right freeway lane closure with 50-mph work zone speed limit.

Plot 3: Right ramp details, including parallel on-ramp, within single right freeway lane closure with 50-mph work zone speed limit.

Plot 4: Right ramp details, including tapered on-ramp, within single right freeway lane closure with 50-mph work zone speed limit.

Plot 5: Left ramp details within single right freeway lane closure with 50-mph work zone speed limit.

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: Plan now separated; see TC155.

6-Mile Smart Work Zone System: See TC165.

9-Mile Smart Work Zone System: See TC175.

DESIGNER NOTES:

A. Contact Region Transportation Operations to determine if a queuing mitigation system is needed; and if so, which one is appropriate.

B. Contact Region Transportation Operations to determine if Parallel (Sheet 2A) and/or Tapered (Sheet 2B) temporary left on-ramps are used.

C. This Typical TCP is not applicable when HOV-restricted or Express Toll Lane(s) are present. Contact Region Transportation Operations for additional guidance.

D. Per WSDOT Executive Order E1060 (https://wwwi.wsdot.wa.gov/publications/policies/fulltext/1060.pdf); speed limit reductions and advisory speeds must be approved for work zones. Submit speed reduction reductions & advisory speed requests for work zones through WSDOT Region Transportation Operations. See Traffic Manual Section 5-18 for additional information for documentation and notification requirements.

E. 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".

F. Portable Changeable Message Signs (PCMSs) are optional per MUTCD Section 6F.50 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 1A 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.

G. 48"x48" diamond-shaped work zone signs used on freeway mainlines and ramps. Per MUTCD 6H-33, gating temporary signs on both shoulders is Guidance on divided highways and Optional per MUTCD Section 6F.03 P02. Based on engineering judgement, signs on left shoulders is optional on 2-lane freeways with shoulders less than 6' because it is difficult for work crews to install/remove safely and is less critical to have signs gated than on 3-lane or more freeways. If signs are barrier-mounted separating 2-way traffic or on narrow shoulders, a special rectangular-shaped 24"x48" sign should be used. See MUTCD Table 6F-1 for additional temporary sign size information.

H. Freeway mainline sign spacing may be reduced down to 1000' +/- based on engineering judgement and down to 500' +/- if near interchanges. Along ramps, 200' +/- sign spacing typical but may be reduced farther.

I. When positioned behind channelization devices, temporary signs should be mounted at 5' minimum. Per MUTCD 6H-42 Note 4 (Standard), a temporary "EXIT" sign shall be mounted 7' minimum when located in the temporary gore.

J. Work zone traffic control layout for this Typical TCP is based on 50 mph regulatory work zone speed limit.

DESIGNER NOTES (continued):

K. Traffic safety drums required on freeway lane closure and lane shift tapers and recommended on tangents per Design Manual 1010.07. On tangents 42" tall channelization devices, 36" traffic cones, & 28" traffic cones allowable (vertical panel channelization devices prohibited). Warning lights on channelization devices being phased out in Washington. Contact Region Transportation Operations for information regarding their standard practices.

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

M. Sequential arrow signs (arrow boards) are required at each freeway lane closure taper per MUTCD Standard Note 6 on TA-33.

N. Smart sequential arrow signs ("smart arrow boards") are now required on freeways in Washington on new Construction projects (existing projects can still use the conventional sequential arrow sign). Smart sequential arrow signs have communication capabilities--old arrow boards can be retrofitted--to broadcast the status of the arrow display with third-party vendors like Google Maps/Waze and Traffic Management Centers. Include the following General Special Provisions for Materials, Specification, Measurement, and Payment. https://wsdot.wa.gov/publications/fulltext/projectdev/gspspdf/egsp1.pdf
* 1-10.3(3)B(9-35.4).GR1 (Smart Sequential Arrow Sign Materials GSP)
* 1-10.3(3)B(9-35.4).OPT1.2025.GR1 (Smart Sequential Arrow Sign Specifications GSP)
* Measurement and Payment are still hourly per "SEQUENTIAL ARROW SIGN". No new bid item developed.

O. Radar speed display signs are typical practice for freeway lane closures with speed limit reductions. When used, include the following General Special Provisions for Materials, Specification, Measurement, and Payment. https://wsdot.wa.gov/publications/fulltext/projectdev/gspspdf/egsp1.pdf
* 1-10.3(3).OPT2.GR1 (Radar Speed Display Sign Specification GSP)
* 1-10.3(3)(9-35.8).GR1 (Radar Speed Display Sign Materials GSP)
* 1-10.3(3)(9-35.8).OPT1.2025.GR1 (Radar Speed Display Sign Specifications GSP, will be placed in 2025 Standard Specifications)
* 1-10.4(2).OPT3.GR1 (Radar Speed Display Sign Measurement GSP, if not Lump Sum) "HOUR"
* 1-10.5(2).OPT2.GR1 (Radar Speed Display Sign Payment GSP, if not Lump Sum) "HOUR"

P. 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.

Q. The lateral buffer (transverse distance between open travel lanes and work area) is typically 2 feet on freeways. Actual work area limits may be modified.

R. Per MUTCD Figure 6C-2, 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.

S. A 20:1 tapered temporary exit-ramp is typical, but 15:1 is acceptable. The exit-ramp travel way width may range from 12 to 16 feet.

T. The on-ramp shift may occur across the paved on-ramp gore at "L/2", but verify the gore's cross-slope is traversable, pavement thickness adequate, and catch basin & ITS boxes are traffic bearing types. This Typical TCP begins the ramp shift at the end of the marked gore for simplicity.

U. Two types of temporary on-ramp configurations, parallel and tapered. Parallel on-ramp uses a L/2 per lane ramp shift, L/2 MIN acceleration pocket that may be extended when space allows, and L ramp merge taper based on MUTCD Guidance Figure 6H-44. However, a L/2 ramp merge taper is allowable based on engineering judgment, see WSDOT Design Manual Exhibit 1360-17 for guidance. Tapered on-ramp uses a single 50:1 taper (for all speeds) from the end of the marked gore to the end of the merge, see WSDOT Design Manual Exhibit 1360-16 for guidance.

V. Ramp detour signage is recommended by MUTCD 6C.09, but using alternative routes is acceptable. Contact Region Transportation Operations for their standard practice. Recommended to use route-specific detour signage for significant ramp closures.

FREEWAY (2+ LANES): SINGLE RIGHT LANE CLOSURE (50 MPH WORK ZONE SPEED LIMIT)

INFORMATIONAL USE ONLY

DO NOT INCLUDE THIS SHEET IN CONTRACT PS&Es or TCP SUBMITTALs.

DESIGNER GUIDANCE

Plot 6

TC243