### NOTES:
1. This plan is used in conjunction with 2-lane freeway single right lane closure 4' max left shoulder shift traffic control plan (with PCMS in advance of lane closure taper removed).
2. See queue warning system (QWS) special provision or RFP for details.
3. Modifications to PCMS messages shall be accepted by the engineer.
4. Adjust QWS components to avoid conflicts with sequential arrow signs or other traffic control devices, narrow shoulders, and ramps.
5. Locate PCMSs per standard specification 1-10.3(3)C. PCMS may be placed on opposite shoulder but avoid ramp gories when located behind barrier/guardrail or within closure, transverse traffic drums, optional.
6. If system fails, see 'Queue warning system failure protocol' provision.
7. If traffic queues reach 5 miles, place additional PCMS at 5.5 miles. Relocate to remain 0.5± mile in advance of queue. Truck-mounted PCMS with 10-inch characters acceptable. Transverse traffic safety drums optional. Remove PCMS when dissipating queues are less than 5 miles. Added PCMS message traffic backups present / watch for slow traffic.

### Legend
- **Traffic Safety Drum**
- **Traffic Sensor**
- **Sequential Arrow Sign**
- **PCMS** Portable Changeable Message Sign

### 6-MILE QUEUE WARNING SYSTEM
FREEWAY (2 LANES): SINGLE RIGHT LANE CLOSURE, 4' MAX LEFT SHOULDER SHIFT

### Queue Location

<table>
<thead>
<tr>
<th>Traffic Sensors</th>
<th>PCMS 5</th>
<th>PCMS 4</th>
<th>PCMS 3</th>
<th>PCMS 2</th>
<th>PCMS 1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Queue Location</strong> (miles)</td>
<td>0.01 TO 0.9</td>
<td>0.91 TO 1.9</td>
<td>1.91 TO 2.9</td>
<td>2.91 TO 4.4</td>
<td>4.41+</td>
</tr>
<tr>
<td><strong>Traffic Condition</strong></td>
<td>FF FF FF FF FF</td>
<td>FF FF FF FF SL</td>
<td>FF SL SL SL</td>
<td>FF SL SL SL</td>
<td>SL SL SL SL</td>
</tr>
<tr>
<td><strong>Traffic Sensors</strong></td>
<td>FF FF FF FF FF</td>
<td>(Blank) (Blank) (Blank)</td>
<td>(Blank) (Blank) (Blank)</td>
<td>(Blank) (Blank) (Blank)</td>
<td>(Blank) (Blank) (Blank)</td>
</tr>
<tr>
<td><strong>Traffic Sensors</strong></td>
<td>None</td>
<td>LANE CLOSURE 3 MILES</td>
<td>LANE CLOSURE 3 MILES</td>
<td>LANE CLOSURE 3 MILES</td>
<td>LANE CLOSURE 3 MILES</td>
</tr>
<tr>
<td><strong>Traffic Sensors</strong></td>
<td>Downstream</td>
<td>Upstream</td>
<td>Upstream</td>
<td>Upstream</td>
<td>Upstream</td>
</tr>
</tbody>
</table>

### Traffic Conditions
- FF = Free Flow
- FF 35+ = Free Flow
- FF 60+ = Free Flow
- FF 100+ = Free Flow
- FF 140+ = Free Flow

### Queue Location

Queue location measured from here.

---

**Free Flow Region**

Region

**Regional Admin.**

**Revision**

**Date**

**FED.AID Proj.No.**

**WAH**

**WASH**

**TYPICAL TRAFFIC CONTROL PLANS**

**Washington State Department of Transportation**
FOR 5-MILE QUEUE WARNING SYSTEM
PCMS MESSAGES AND COMPONENT LAYOUT
SEE TC236, SHEET 0A.

SECTION

NOTES:
1. IF FEASIBLE, AVOID PLACING LANE CLOSURE OR LANE SHIFT TAPERS WITHIN OR IMMEDIATELY FOLLOWING HORIZONTAL CURVES.
2. DISTANCE INCREASES AS WORK AREA MOVES DOWNSTREAM.
3. RELOCATE RS2B2ST (WITH W23-6) AND W23-5 PRIOR TO EACH WORK CREW WITHIN WORK AREA.
4. IF USED, PLACE DEVICES TRANSVERSELY ACROSS CLOSED LACES AT 45° +/- AND 5' SPACING AT STRATEGIC LOCATIONS.
5. WHEN SHOULDER NARROWS, USE LANE SHIFTS (40' MIN SHIFT TAPER @ 15' MIN WIDTH) WITH W1-4 SIGNS 500' +/- PRIOR.
6. CONTACT WSDOT COMMERCIAL VEHICLE SERVICES AT LEAST 5 DAYS IN ADVANCE OF ROADWAY WIDTH RESTRICTIONS.
7. 28" TRAFFIC CONES MAY REMAIN IN PLACE THROUGHOUT THE 7 DAYS IN ADVANCE OF ROADWAY WIDTH RESTRICTIONS.
8. COVER ALL CONFLICTING SIGNAGE PER STANDARD SPEC 8-21.3(3).
9. DOWNSTREAM TAPER DEVICE SPACING IS 20'.
10. SIGNS OPTIONAL IF EXISTING SPEED LIMIT SIGNS PRESENT WITHIN 1500' +/- FOLLOWING THE DOWNSTREAM TAPER.
11. ADD "TRUCKS LEAVING HIGHWAY" AND "TRUCKS ENTERING HIGHWAY" (W21-30, 48"x48", 5' HEIGHT) SIGNS 500' +/- PRIOR TO WHERE CONSTRUCTION VEHICLES FREQUENTLY EXIT AND ENTER INTO THE OPEN LANE(S). ADJUST TO AVOID W1-4R SIGN.
12. SIGNS ARE BLACK ON ORANGE UNLESS OTHERWISE INDICATED.
13. PLAN IS APPLICABLE TO LANE CLOSURES OF 3 DAYS OR LESS.
14. BICYCLES PROHIBITED THROUGH WORK ZONE CONSIDER PROVIDING DETOUR ALTERNATIVE ROUTE OR SHUTTLE IN HIGH-USE LOCATIONS PERMITTING PERMANENT BICYCLE ACCESS.

FREEWAY (2 LANES): SINGLE RIGHT LANE CLOSURE, 4' MAX LEFT SHOULDER SHIFT (55 MPH WORK ZONE SPEED LIMIT, 40 MPH ADVISORY SPEED)

NOT TO SCALE

LEGEND:
1. TEMPORARY SIGN LOCATION
2. TEMPORARY SIGN LOCATION (MIN. HEIGHT)
3. 28" REFLECTIVE TRAFFIC CONE
4. TRAFFIC SAFETY DRUM
5. RS2B2ST (OPTIONAL)
6. QWS TRAFFIC SENSOR
7. RADAR SPEED DISPLAY SIGN (RSDS)
8. SEQUENTIAL ARROW SIGN
9. TRANSPORTABLE ATTENUATOR
10. PORTABLE CHANGABLE MESSAGE SIGN

SEE NOTE 1 SEE NOTE 2
SEE NOTE 4 (OPTIONAL)
SEE NOTE 5 & 6
SEE NOTE 3
SEE NOTE 8
SEE NOTE 9
SEE NOTE 10
SEE NOTE 11
SEE TC236, SHEET 0B

DATE: 7/18/23
PLotted BY: 10 Wash
DESIGNED BY: Haapala & Lintz
CHECKED BY: S. Haapala
PLOTTED BY: S. Haapala
REGIONAL ADM.: SONA

REVISION DATE 08/03/23

Washington State Department of Transportation
TYPICAL TRAFFIC CONTROL PLANS

TC236
THE 3-MILE QUEUE WARNING SYSTEM MESSAGES

LOCATION PER RST O SPEC 1-10.X3.XC.PCMS MAY BE PLACED ON OPPOSITE SHOULDER WHEN NEEDED BUT AVOID RAMPS OR TRAFFIC CONFLICTS WITH TRAFFIC CONTROL DEVICES, NARROW SHOULDER, RAMPS, OR TO AVOID QWS COMPONENTS AS NEEDED TO AVOID CONFLICTS WITH PCMS OR TRAFFIC SENSORS PLACED BEHIND BARRIER/GUARDRAIL OR OPPOSITE SHOULDER WHEN NEEDED. SEE QUEUE WARNING SYSTEM SPECIAL PROVISION OR RFP FOR DETAILS.

IN THE EVENT OF A SYSTEM FAILURE SEE SPECIAL PROVISIONS OR RFP FOR DETAILS.

STATIONARY TRANSPORTABLE ATTENUATOR ROLL AHEAD DISTANCE = R

HOST VEHICLE WEIGHT

9.900 TO 22,000 lbs

FOR RAMP DETAILS SEE TC236 SHEET 2 AND 3.

REGIONAL ADM

PROJ. ENGR

FED.AID PROJ NO.

DATE

CHECKED BY

DATE PLOTTED BY

DESIGNED BY

ENTRY NO.

REGIONAL ADM

REVISION DATE

TIME

LONGITUDE

LATITUDE

FED.AID PROJ NO.

DATE

CHECKED BY

DATE PLOTTED BY

DESIGNED BY

ENTRY NO.

REGIONAL ADM

REVISION DATE

TIME

LONGITUDE

LATITUDE

FED.AID PROJ NO.
NOTES:
1. FOR LEGEND, TABLES, AND ADDITIONAL NOTES SEE TC216, SHEET 0B, 1A, OR 1B.
2. FOR RIGHT LANE DETAILS FOR A SINGLE RIGHT LANE CLOSURE (WITHOUT SHOULDER SHIFT) SEE TC107, SHEET 2B. ADD R2-1 (55) SIGN AFTER ON-RAMP MERGES NEAR COVERED EXISTING SPEED LIMIT SIGN.
3. SEE DETOUR PLAN FOR ADDITIONAL RAMP CLOSURE DETOUR SIGNAGE.

FREEWAY (2 LANES): SINGLE RIGHT LANE CLOSURE, 4' MAX LEFT SHOULDER SHIFT (55 MPH WORK ZONE SPEED LIMIT, 40 MPH ADVISORY SPEED)

NOT TO SCALE

TYPICAL TRAFFIC CONTROL PLANS

NOTES:
1. FOR LEGEND, TABLES, AND ADDITIONAL NOTES SEE TC216, SHEET 0B, 1A, OR 1B.
2. FOR RIGHT LANE DETAILS FOR A SINGLE RIGHT LANE CLOSURE (WITHOUT SHOULDER SHIFT) SEE TC107, SHEET 2B. ADD R2-1 (55) SIGN AFTER ON-RAMP MERGES NEAR COVERED EXISTING SPEED LIMIT SIGN.
3. SEE DETOUR PLAN FOR ADDITIONAL RAMP CLOSURE DETOUR SIGNAGE.

FREEWAY (2 LANES): SINGLE RIGHT LANE CLOSURE, 4' MAX LEFT SHOULDER SHIFT (55 MPH WORK ZONE SPEED LIMIT, 40 MPH ADVISORY SPEED)

NOT TO SCALE

TYPICAL TRAFFIC CONTROL PLANS

NOTES:
1. FOR LEGEND, TABLES, AND ADDITIONAL NOTES SEE TC216, SHEET 0B, 1A, OR 1B.
2. FOR RIGHT LANE DETAILS FOR A SINGLE RIGHT LANE CLOSURE (WITHOUT SHOULDER SHIFT) SEE TC107, SHEET 2B. ADD R2-1 (55) SIGN AFTER ON-RAMP MERGES NEAR COVERED EXISTING SPEED LIMIT SIGN.
3. SEE DETOUR PLAN FOR ADDITIONAL RAMP CLOSURE DETOUR SIGNAGE.

FREEWAY (2 LANES): SINGLE RIGHT LANE CLOSURE, 4' MAX LEFT SHOULDER SHIFT (55 MPH WORK ZONE SPEED LIMIT, 40 MPH ADVISORY SPEED)

NOT TO SCALE

TYPICAL TRAFFIC CONTROL PLANS

NOTES:
1. FOR LEGEND, TABLES, AND ADDITIONAL NOTES SEE TC216, SHEET 0B, 1A, OR 1B.
2. FOR RIGHT LANE DETAILS FOR A SINGLE RIGHT LANE CLOSURE (WITHOUT SHOULDER SHIFT) SEE TC107, SHEET 2B. ADD R2-1 (55) SIGN AFTER ON-RAMP MERGES NEAR COVERED EXISTING SPEED LIMIT SIGN.
3. SEE DETOUR PLAN FOR ADDITIONAL RAMP CLOSURE DETOUR SIGNAGE.

FREEWAY (2 LANES): SINGLE RIGHT LANE CLOSURE, 4' MAX LEFT SHOULDER SHIFT (55 MPH WORK ZONE SPEED LIMIT, 40 MPH ADVISORY SPEED)

NOT TO SCALE

TYPICAL TRAFFIC CONTROL PLANS

NOTES:
1. FOR LEGEND, TABLES, AND ADDITIONAL NOTES SEE TC216, SHEET 0B, 1A, OR 1B.
2. FOR RIGHT LANE DETAILS FOR A SINGLE RIGHT LANE CLOSURE (WITHOUT SHOULDER SHIFT) SEE TC107, SHEET 2B. ADD R2-1 (55) SIGN AFTER ON-RAMP MERGES NEAR COVERED EXISTING SPEED LIMIT SIGN.
3. SEE DETOUR PLAN FOR ADDITIONAL RAMP CLOSURE DETOUR SIGNAGE.

FREEWAY (2 LANES): SINGLE RIGHT LANE CLOSURE, 4' MAX LEFT SHOULDER SHIFT (55 MPH WORK ZONE SPEED LIMIT, 40 MPH ADVISORY SPEED)

NOT TO SCALE

TYPICAL TRAFFIC CONTROL PLANS
TRAFFIC CONTROL PLAN
SEE ON-RAMP CLOSURE CLOSED
ON-RAMP
CLOSED LEFT EXIT-RAMP DETAIL
LEFT EXIT-RAMPS ARE TO REMAIN OPEN

OPEN LEFT EXIT-RAMP DETAIL

NOT TO SCALE

CLOSED LEFT EXIT-RAMP DETAIL

FREEWAY (2 LANES): SINGLE RIGHT LANE CLOSURE, 4' MAX LEFT SHOULDER SHIFT (55 MPH WORK ZONE SPEED LIMIT, 40 MPH ADVISORY SPEED)

NOT TO SCALE

FILE NAME: C:sers\LintzF\Desktop\TC236\TC236-1.ADW
DATE: 2/18/2022
TIME: 7:39:10 AM

Washington State Department of Transportation

TYPICAL TRAFFIC CONTROL PLANS

TC236-1

1. FOR LEGEND, TABLES, AND ADDITIONAL NOTES SEE TC236, SHEET 0B, 1A, OR 1B.
2. FOR RIGHT RAMP DETAILS FOR A SINGLE RIGHT LANE CLOSURE WITHOUT SHOULDER SHIFT SEE TC107, SHEET 3. ADD R2-1 (35) SIGN AFTER ON-RAMP MERGES NEAR COVERED EXISTING SPEED LIMIT SIGN.
3. SEE DETOUR PLAN FOR ADDITIONAL RAMP CLOSURE DETOUR SIGNAGE.
NOTES:
1. THIS PLAN IS USED IN CONJUNCTION WITH 2-LANE FREEWAY SINGLE RIGHT LANE CLOSURE, 4' MAX LEFT SHOULDER SHIFT TRAFFIC CONTROL PLAN (WITH PCMS IN ADVANCE OF LANE CLOSURE TAPER REMOVED).
2. SEE QUEUE WARNING SYSTEM (QWS) SPECIAL PROVISION OR RFP FOR DETAILS.
3. MODIFICATIONS TO PCMS MESSAGES SHALL BE ACCEPTED BY THE ENGINEER.
4. ADJUST QWS COMPONENTS TO AVOID CONFLICTS WITH SEQUENTIAL ARROW SIGNS OR OTHER TRAFFIC CONTROL DEVICES, NARROW SHOULDERS, AND RAMPS.
5. LOCATE PCMSs PER STANDARD SPECIFICATION 1-10.3(3)C. PCMS MAY BE PLACED ON OPPOSITE SHOULDER BUT AVOID RAMP GORES. WHEN LOCATED BEHIND BARRIER/GUARDRAIL OR WITHIN CLOSURE, TRANSVERSE TRAFFIC DRUMS OPTIONAL.
6. IF SYSTEM FAILS, SEE 'QUEUE WARNING SYSTEM FAILURE PROTOCOL' PROVISION.
7. IF TRAFFIC QUEUES REACH 5 MILES, PLACE ADDITIONAL PCMS AT 6.5 MILES.
8. IF TRAFFIC QUEUES REACH 4 MILES, PLACE ADDITIONAL PCMS AT 5.5 MILES.
9. IF TRAFFIC QUEUES REACH 3 MILES, PLACE ADDITIONAL PCMS AT 4.5 MILES.
10. IF TRAFFIC QUEUES REACH 2 MILES, PLACE ADDITIONAL PCMS AT 1.5 MILES.
11. IF TRAFFIC QUEUES REACH 1 MILE, PLACE ADDITIONAL PCMS AT 0.5 MILES.
12. IF TRAFFIC QUEUES REACH 0 MILE, COMPLETE CLOSURE AND USE PCMS AT 0.5 MILES.
13. IF TRAFFIC QUEUES REACH 2.9 MILES, PLACE ADDITIONAL PCMS AT 2 MILES.
14. IF TRAFFIC QUEUES REACH 1.9 MILES, PLACE ADDITIONAL PCMS AT 1 MILE.
15. IF TRAFFIC QUEUES REACH 0.9 MILES, PLACE ADDITIONAL PCMS AT 0.5 MILES.
16. IF TRAFFIC QUEUES REACH 0 MILES, COMPLETE CLOSURE AND USE PCMS AT 0.5 MILES.
17. IF TRAFFIC QUEUES REACH 4.4 MILES, PLACE ADDITIONAL PCMS AT 3 MILES.
18. IF TRAFFIC QUEUES REACH 1.5 MILES, PLACE ADDITIONAL PCMS AT 1 MILE.
19. IF TRAFFIC QUEUES REACH 0.4 MILES, COMPLETE CLOSURE AND USE PCMS AT 0.5 MILES.
20. IF TRAFFIC QUEUES REACH 4.5 MILES, PLACE ADDITIONAL PCMS AT 4 MILES.
21. IF TRAFFIC QUEUES REACH 2 MILES, PLACE ADDITIONAL PCMS AT 1 MILE.
22. IF TRAFFIC QUEUES REACH 0.4 MILES, COMPLETE CLOSURE AND USE PCMS AT 0.5 MILES.
23. IF TRAFFIC QUEUES REACH 4.4 MILES, PLACE ADDITIONAL PCMS AT 3 MILES.
24. IF TRAFFIC QUEUES REACH 1.5 MILES, PLACE ADDITIONAL PCMS AT 1 MILE.
25. IF TRAFFIC QUEUES REACH 0.4 MILES, COMPLETE CLOSURE AND USE PCMS AT 0.5 MILES.
26. IF TRAFFIC QUEUES REACH 4.5 MILES, PLACE ADDITIONAL PCMS AT 4 MILES.
27. IF TRAFFIC QUEUES REACH 2 MILES, PLACE ADDITIONAL PCMS AT 1 MILE.
28. IF TRAFFIC QUEUES REACH 0.4 MILES, COMPLETE CLOSURE AND USE PCMS AT 0.5 MILES.
29. IF TRAFFIC QUEUES REACH 4.4 MILES, PLACE ADDITIONAL PCMS AT 3 MILES.
30. IF TRAFFIC QUEUES REACH 1.5 MILES, PLACE ADDITIONAL PCMS AT 1 MILE.
31. IF TRAFFIC QUEUES REACH 0.4 MILES, COMPLETE CLOSURE AND USE PCMS AT 0.5 MILES.
32. IF TRAFFIC QUEUES REACH 4.5 MILES, PLACE ADDITIONAL PCMS AT 4 MILES.
33. IF TRAFFIC QUEUES REACH 2 MILES, PLACE ADDITIONAL PCMS AT 1 MILE.
34. IF TRAFFIC QUEUES REACH 0.4 MILES, COMPLETE CLOSURE AND USE PCMS AT 0.5 MILES.
35. IF TRAFFIC QUEUES REACH 4.4 MILES, PLACE ADDITIONAL PCMS AT 3 MILES.
36. IF TRAFFIC QUEUES REACH 1.5 MILES, PLACE ADDITIONAL PCMS AT 1 MILE.
37. IF TRAFFIC QUEUES REACH 0.4 MILES, COMPLETE CLOSURE AND USE PCMS AT 0.5 MILES.
38. IF TRAFFIC QUEUES REACH 4.5 MILES, PLACE ADDITIONAL PCMS AT 4 MILES.
39. IF TRAFFIC QUEUES REACH 2 MILES, PLACE ADDITIONAL PCMS AT 1 MILE.
40. IF TRAFFIC QUEUES REACH 0.4 MILES, COMPLETE CLOSURE AND USE PCMS AT 0.5 MILES.
41. IF TRAFFIC QUEUES REACH 4.4 MILES, PLACE ADDITIONAL PCMS AT 3 MILES.
42. IF TRAFFIC QUEUES REACH 1.5 MILES, PLACE ADDITIONAL PCMS AT 1 MILE.
43. IF TRAFFIC QUEUES REACH 0.4 MILES, COMPLETE CLOSURE AND USE PCMS AT 0.5 MILES.
44. IF TRAFFIC QUEUES REACH 4.5 MILES, PLACE ADDITIONAL PCMS AT 4 MILES.
45. IF TRAFFIC QUEUES REACH 2 MILES, PLACE ADDITIONAL PCMS AT 1 MILE.
46. IF TRAFFIC QUEUES REACH 0.4 MILES, COMPLETE CLOSURE AND USE PCMS AT 0.5 MILES.
47. IF TRAFFIC QUEUES REACH 4.4 MILES, PLACE ADDITIONAL PCMS AT 3 MILES.
48. IF TRAFFIC QUEUES REACH 1.5 MILES, PLACE ADDITIONAL PCMS AT 1 MILE.
49. IF TRAFFIC QUEUES REACH 0.4 MILES, COMPLETE CLOSURE AND USE PCMS AT 0.5 MILES.
50. IF TRAFFIC QUEUES REACH 4.5 MILES, PLACE ADDITIONAL PCMS AT 4 MILES.
51. IF TRAFFIC QUEUES REACH 2 MILES, PLACE ADDITIONAL PCMS AT 1 MILE.
52. IF TRAFFIC QUEUES REACH 0.4 MILES, COMPLETE CLOSURE AND USE PCMS AT 0.5 MILES.
53. IF TRAFFIC QUEUES REACH 4.4 MILES, PLACE ADDITIONAL PCMS AT 3 MILES.
54. IF TRAFFIC QUEUES REACH 1.5 MILES, PLACE ADDITIONAL PCMS AT 1 MILE.
55. IF TRAFFIC QUEUES REACH 0.4 MILES, COMPLETE CLOSURE AND USE PCMS AT 0.5 MILES.
56. IF TRAFFIC QUEUES REACH 4.5 MILES, PLACE ADDITIONAL PCMS AT 4 MILES.
57. IF TRAFFIC QUEUES REACH 2 MILES, PLACE ADDITIONAL PCMS AT 1 MILE.
58. IF TRAFFIC QUEUES REACH 0.4 MILES, COMPLETE CLOSURE AND USE PCMS AT 0.5 MILES.
59. IF TRAFFIC QUEUES REACH 4.4 MILES, PLACE ADDITIONAL PCMS AT 3 MILES.
60. IF TRAFFIC QUEUES REACH 1.5 MILES, PLACE ADDITIONAL PCMS AT 1 MILE.
61. IF TRAFFIC QUEUES REACH 0.4 MILES, COMPLETE CLOSURE AND USE PCMS AT 0.5 MILES.
FOR 6-MILE QUEUE WARNING SYSTEM
PCMS MESSAGES AND COMPONENT LAYOUT
SEE TC236, SHEET 0A.

SECTION A-A

NOTES:
1. IF FEASIBLE, AVOID PLACING LANE CLOSURE OR LANE SHIFT TAPERS WITHIN OR IMMEDIATELY FOLLOWING HORIZONTAL CURVES.
2. DISTANCE INCREASES AS WORK AREA MOVES DOWNSTREAM.
3. RELOCATE RSBS AS WORK AREA MOVES DOWNSTREAM.
4. IF USED, PLACE DEVICES TRANSVERSELY ACROSS CLOSED LANES.
5. WHEN SHOULDER NARROWS, USE LANE SHIFTS (40' MIN SHIFT TAPER @ 16' MIN WIDTH) WITH W1-4 SIGNS 500' +/- PRIOR.
6. CONTACT WSDOT COMMERCIAL VEHICLE SERVICES AT LEAST 5-8' TIME (B/W) PRIOR TO EACH WORK CREW WITHIN WORK AREA.
7. 28" TRAFFIC CONES MAY REMAIN IN PLACE THROUGHOUT THE PROJECT (THEY DO NOT HAVE TO BE REMOVED DAILY/NIGHTLY).
8. COVER ALL CONFLICTING SIGNAGE PER STANDARD SPEC 8-21.3(3).
9. DOWNSTREAM TAPER OPTIONAL ACROSS RIGHT LANE, BUT FIRST TAPER @ 16' MIN WIDTH) WITH W1-4 SIGNS 500' +/- PRIOR.
10. SIGNS OPTIONAL IF EXISTING SPEED LIMIT SIGNS PRESENT WITHIN 1500' +/- FOLLOWING THE DOWNSTREAM TAPER.
11. ADD "TRUCKS LEAVING HIGHWAY" AND "TRUCKS ENTERING HIGHWAY" (W21-3, 48"x48", 5' HEIGHT) SIGNS 500' +/- PRIOR TO WHERE CONSTRUCTION VEHICLES FREQUENTLY EXIT AND ENTER INTO THE OPEN LANE(S). ADJUST TO AVOID W1-4R SIGN.
12. SIGNS ARE BLACK ON ORANGE UNLESS OTHERWISE INDICATED.
13. PLAN IS APPLICABLE TO LANE CLOSURES OF 3 DAYS OR LESS.
14. BICYCLES PROHIBITED THROUGH WORK ZONE.

FREEWAY (2 LANES): SINGLE RIGHT LANE CLOSURE, 4' MAX LEFT SHOULDER SHIFT
(55 MPH WORK ZONE SPEED LIMIT, 40 MPH ADVISORY SPEED)

NOT TO SCALE
### 3-MILE QUEUE WARNING SYSTEM MESSAGES

**TRAFFIC SENSORS**

- **PCMS 1**
- **PCMS 2**
- **PCMS 3**

**Trigger Speed**

- **35+ MPH**
- **< 35 MPH**

**Right Lane Closure**

- 3 miles ahead
- 12 wide
- Shoulder driving
- Turnmage

**Slow or Stopped Traffic**

- Next 3 miles
- Use both lanes
- Take turns at merge

May remain in place (see note 7)

---

### Trigger Speed

- **3.0 SEC**
- **1000' **
- **2.0 SEC**
- **1000' **

**NOTE:**

- **1.5 +/- MILE**
- **3 MILES**
- **PCMS 2**

---

### Typical Traffic Control Plans

**FREEWAY (2 LANE): SINGLE RIGHT LANE CLOSURE, 4' MAX LEFT SHOULDER SHIFT**

- **55 MPH WORK ZONE SPEED LIMIT, 40 MPH ADVISORY SPEED**

**NOT TO SCALE**

---

### Typical Traffic Control Plans

**STATIONARY TRANSPORTABLE ATTENUATOR ROLL AHEAD DISTANCE = R**

- **HOST VEHICLE WEIGHT**
- **9,900 TO 22,000 lbs.**
- **123'**
- **22,001+ lbs.**
- **100'**

---

### Washington State Department of Transportation

TYPICAL TRAFFIC CONTROL PLANS
NOTES:

1. IF FEASIBLE, AVOID PLACING LANE CLOSURE OR LANE SHIFT TAPERS WITHIN OR IMMEDIATELY FOLLOWING HORIZONTAL CURVES.

2. DISTANCE INCREASES AS WORK AREA MOVES DOWNSTREAM.

3. RELOCATE RSDS AS WORK AREA MOVES DOWNSTREAM. ENGINEER MAY ORDER ADDITIONAL RSDS (WITH W23-6 AND W23-5) PRIOR TO EACH WORK CREW WITHIN WORK AREA.

4. IF USED, PLACE DEVICES TRANSVERSELY ACROSS CLOSED LANES.

5. WHEN SHOULDER NARROWS, USE LANE SHIFTS (40' MIN SHIFT TAPER @ 10' MIN WIDTH) WITH W1-4 SIGNS +/-5 PRIOR.

6. CONTACT WSDOT COMMERCIAL VEHICLE SERVICES AT LEAST 7 DAYS IN ADVANCE OF ROADWAY WIDTH RESTRICTIONS.

7. SIGNS OPTIONAL IF EXISTING SPEED LIMIT SIGNS PRESENT WITHIN 1500' +/- FOLLOWING THE DOWNSTREAM TAPER.

8. COVER ALL CONFLICTING SIGNAGE PER STANDARD SPEC 8-21.3.

9. DOWNSTREAM TAPER OPTIONAL ACROSS RIGHT LANE, BUT FIRST 40' REQUIRED. DOWNSTREAM TAPER DEVICE SPACING IS 2'.

10. SIGNS OPTIONAL IF EXISTING SPEED LIMIT SIGNS PRESENT WITHIN 1500' +/- FOLLOWING THE DOWNSTREAM TAPER.

11. ADD "TRUCKS LEAVING HIGHWAY" AND "TRUCKS ENTERING HIGHWAY" (W21-30, 48"x48", 5' HEIGHT) SIGNS +/-5 PRIOR TO WHERE CONSTRUCTION VEHICLES FREQUENTLY EXIT AND ENTER INTO THE OPEN LANE(S), ADJUST TO AVOID W1-4R SIGN.

12. SIGNS ARE BLACK ON ORANGE UNLESS OTHERWISE INDICATED

13. PLAN IS APPLICABLE TO LANE CLOSURES OF 3 DAYS OR LESS.

14. BICYCLES PROHIBITED THROUGH WORK ZONE; PROVIDING DETOUR, ALTERNATIVE ROUTE, OR SHUTTLE IN HIGH-USE LOCATIONS PERMITTING PERMANENT BICYCLE ACCESS.

FREEWAY (2 LANES): SINGLE RIGHT LANE CLOSURE, 4' MAX LEFT SHOULDER SHIFT (55 MPH WORK ZONE SPEED LIMIT, 40 MPH ADVISORY SPEED)

NOT TO SCALE
NOTES:
1. FOR LEGEND, TABLES AND ADDITIONAL NOTES SEE TC236, SHEET 0B, 1A, OR 1B.
2. FOR RIGHT RAMP DETAILS FOR A SINGLE RIGHT LANE CLOSURE WITHOUT SHOULDER SHIFT SEE TC107, SHEET 2A. ADD R2-1 (55) SIGN AFTER ON-RAMP MERGES NEAR COVERED SPEED LIMIT SIGN
3. SEE DETOUR PLAN FOR ADDITIONAL RAMP CLOSURE DETOUR SIGNAGE.

CLOSED RIGHT EXIT-RAMP DETAIL

FREEWAY (2 LANES): SINGLE RIGHT LANE CLOSURE, 4' MAX LEFT SHOULDER SHIFT (55 MPH WORK ZONE SPEED LIMIT, 40 MPH ADVISORY SPEED)

NOT TO SCALE
NOTES:
1. FOR LEGEND, TABLES, AND ADDITIONAL NOTES SEE TC236, SHEET 0B, 1A, OR 1B.
2. FOR RIGHT RAMP DETAILS FOR A SINGLE RIGHT LANE CLOSURE WITHOUT SHOULDER SHIFT SEE TC107, SHEET 2B. ADD R2-1 (55) SIGN AFTER ON-RAMP MERGES NEAR COVERED EXISTING SPEED LIMIT SIGN.
3. SEE DETOUR PLAN FOR ADDITIONAL RAMP CLOSURE DETOUR SIGNAGE.

WRITABLE AREA:

CLOSSED RIGHT EXIT-RAMP DETAIL

FREEWAY (2 LANES): SINGLE RIGHT LANE CLOSURE, 4' MAX LEFT SHOULDER SHIFT (55 MPH WORK ZONE SPEED LIMIT, 40 MPH ADVISORY SPEED)

WASHINGTON STATE DEPARTMENT OF TRANSPORTATION

TYPICAL TRAFFIC CONTROL PLANS

FILE NAME: afile/arc/arcfile
TIME: 7/3/14 AM
DATE: 7/3/14

TO SCALE

NOTES:
1. FOR LEGEND, TABLES, AND ADDITIONAL NOTES SEE TC236, SHEET 0B, 1A, OR 1B.
2. FOR RIGHT RAMP DETAILS FOR A SINGLE RIGHT LANE CLOSURE WITHOUT SHOULDER SHIFT SEE TC107, SHEET 2B. ADD R2-1 (55) SIGN AFTER ON-RAMP MERGES NEAR COVERED EXISTING SPEED LIMIT SIGN.
3. SEE DETOUR PLAN FOR ADDITIONAL RAMP CLOSURE DETOUR SIGNAGE.

WRITABLE AREA:

CLOSSED RIGHT EXIT-RAMP DETAIL

FREEWAY (2 LANES): SINGLE RIGHT LANE CLOSURE, 4' MAX LEFT SHOULDER SHIFT (55 MPH WORK ZONE SPEED LIMIT, 40 MPH ADVISORY SPEED)

WASHINGTON STATE DEPARTMENT OF TRANSPORTATION

TYPICAL TRAFFIC CONTROL PLANS

FILE NAME: afile/arc/arcfile
TIME: 7/3/14 AM
DATE: 7/3/14

TO SCALE

NOTES:
1. FOR LEGEND, TABLES, AND ADDITIONAL NOTES SEE TC236, SHEET 0B, 1A, OR 1B.
2. FOR RIGHT RAMP DETAILS FOR A SINGLE RIGHT LANE CLOSURE WITHOUT SHOULDER SHIFT SEE TC107, SHEET 2B. ADD R2-1 (55) SIGN AFTER ON-RAMP MERGES NEAR COVERED EXISTING SPEED LIMIT SIGN.
3. SEE DETOUR PLAN FOR ADDITIONAL RAMP CLOSURE DETOUR SIGNAGE.

WRITABLE AREA:

CLOSSED RIGHT EXIT-RAMP DETAIL

FREEWAY (2 LANES): SINGLE RIGHT LANE CLOSURE, 4' MAX LEFT SHOULDER SHIFT (55 MPH WORK ZONE SPEED LIMIT, 40 MPH ADVISORY SPEED)

WASHINGTON STATE DEPARTMENT OF TRANSPORTATION

TYPICAL TRAFFIC CONTROL PLANS

FILE NAME: afile/arc/arcfile
TIME: 7/3/14 AM
DATE: 7/3/14

TO SCALE

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WRITABLE AREA:

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FREEWAY (2 LANES): SINGLE RIGHT LANE CLOSURE, 4' MAX LEFT SHOULDER SHIFT (55 MPH WORK ZONE SPEED LIMIT, 40 MPH ADVISORY SPEED)

WASHINGTON STATE DEPARTMENT OF TRANSPORTATION

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WRITABLE AREA:

CLOSSED RIGHT EXIT-RAMP DETAIL

FREEWAY (2 LANES): SINGLE RIGHT LANE CLOSURE, 4' MAX LEFT SHOULDER SHIFT (55 MPH WORK ZONE SPEED LIMIT, 40 MPH ADVISORY SPEED)

WASHINGTON STATE DEPARTMENT OF TRANSPORTATION

TYPICAL TRAFFIC CONTROL PLANS

FILE NAME: afile/arc/arcfile
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3. SEE DETOUR PLAN FOR ADDITIONAL RAMP CLOSURE DETOUR SIGNAGE.

WRITABLE AREA:
TRAFFIC CONTROL PLAN
SEE ON-RAMP CLOSURE CLOSED

C L O S E D
O N - R A M P

CLOSED LEFT EXIT-RAMP DETAIL
LEFT EXIT-RAMPS ARE TO REMAIN OPEN

OPEN LEFT EXIT-RAMP DETAIL

FREEWAY (2 LANES): SINGLE RIGHT LANE CLOSURE, 4' MAX LEFT SHOULDER SHIFT (55 MPH WORK ZONE SPEED LIMIT, 40 MPH ADVISORY SPEED)

NOT TO SCALE

FILE NAME: C:\Users\LintzF\OneDrive - Washington State Department of Transportation\Desktop\Work Zone TC236-1RtLanes4MaxLtShift70to55WZSL40Adv.dgn

DATE: 2/18/2022
TIME: 7:39:14 AM
LOCATION NO.: 10
STATE: WASH
REGION: 3
REGIONAL ADM.: F. LINTZ
S. HAAPALA
TYPICAL TRAFFIC CONTROL PLANS

1. FOR LEGEND, TABLES, AND ADDITIONAL NOTES SEE TC236, SHEET 0B, 1A, OR 1B.
2. FOR RIGHT RAMP DETAILS FOR A SINGLE RIGHT LANE CLOSURE WITHOUT SHOULDER SHIFT SEE TC107, SHEET 3. ADD R2-1 (55) SIGN AFTER ON-RAMP MERGES NEAR COVERED EXISTING SPEED LIMIT SIGN.
3. SEE DETOUR PLAN FOR ADDITIONAL RAMP CLOSURE DETOUR SIGNAGE.

3. SEE DETOUR PLAN FOR ADDITIONAL RAMP CLOSURE DETOUR SIGNAGE.
UPDATING WORK ZONE MICROSTATION CELLS:

1. Contact WSDOT Region Traffic Operations to determine if a queuing mitigation system is needed, and which one is appropriate.

2. Contact WSDOT Region Traffic Operations for additional information. Per WSDOT Executive Order E1060.03 (https://wwwi.wsdot.wa.gov/publications/policies/fulltext/1060.pdf), reduced variable regulatory work zone speed limits and advisory speeds must be approved by the Region Administrator (often delegated to the Region Traffic Engineer) prior to implementation.

3. To discourage work zone intrusion, device spacing is reduced by one-half approaching and at closed exit ramps.


5. Use Plot 5 and/or Plot 6 (depending on whether Region uses Parallel and/or Tapered on-ramps). Use Plot 5 (if ramps on left side are present only).

6. Use Plot 6 (if ramps on left side are present only).

7. Use Plot 6 (if ramps on left side are present only).

8. Use Plot 7 (if ramps on left side are present only).

Fast lane closures are typically a last resort to make closures “fit” and based on engineering judgement.

PER WSDOT Executive Order E1060.03 (https://wwwi.wsdot.wa.gov/publications/policies/fulltext/1060.pdf), reduced variable regulatory work zone speed limits and advisory speeds must be approved by the Region Administrator (often delegated to the Region Traffic Engineer) prior to implementation.

Contact WSDOT Region Traffic Operations for additional guidance.

1. Use Plot 7 (if ramps on left side are present only).

2. Use Plot 7 (if ramps on left side are present only).

3. Use Plot 7 (if ramps on left side are present only).

5. Use Plot 7 (if ramps on left side are present only).

WASHINGTON State Department of Transportation