NOTES:

1. This plan is used in conjunction with 2-lane freeway single left lane closure 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. 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. Add 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 LEFT LANE CLOSURE
NOT TO SCALE

QUEUE LOCATION MEASURED FROM HERE

<table>
<thead>
<tr>
<th>QUEUE LOCATION (miles)</th>
<th>PCMS 5</th>
<th>PCMS 4</th>
<th>PCMS 3</th>
<th>PCMS 2</th>
<th>PCMS 1</th>
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<td>4.41+</td>
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<td>0.01 to 0.9</td>
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<tr>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

TRAFFIC CONDITIONS:

- FF: Free Flow
- S: Slow Traffic
- B: Merge Traffic
- A: Stop Traffic

TRAFFIC SENSORS:

- None
- Slab
- Portable Changeable Message Sign

Additional notes include:

- Actual number of lanes may vary.
- Optional: Remove PCMS when dissipating queues are less than 5 miles.
- Wash 10+ inch characters acceptable. Transverse traffic safety drums relocate to remain 0.5+/- mile in advance of queue.
- Truck-mounted PCMS barrier/guardrail or within closure, transverse traffic drums optional.
- Opposite shoulder but avoid ramp-gores. When located behind barrier/guardrail or within closure, avoid ramp-gores.
- Traffic condition: Slowed, stopped, or merged traffic.
- Trigger speed: <35 mph, 35+ mph, or below.

---

ADDED PCMS MESSAGE:

TRAFFIC BACKUPS PRESENT / WATCH FOR SLOW TRAFFIC

IF TRAFFIC QUEUES REACH 5 MILES, PLACE ADDITIONAL PCMS AT 6.5 MILES.

IF SYSTEM FAILS, SEE 'QUEUE WARNING SYSTEM FAILURE PROTOCOL' PROVISION.

IF TRAFFIC QUEUES REACH 5 MILES, PLACE ADDITIONAL PCMS AT 6.5 MILES.

ADD PCMS MESSAGE 'TRAFFIC BACKUPS PRESENT - WATCH FOR SLOW TRAFFIC'.

---

REGIONAL ADM.:

REVISION:

DATE:
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.
4. IF USED, PLACE DEVICES TRANSVERSELY ACROSS CLOSED LANES.
5. COVER ALL CONFLICTING SIGNAGE PER STANDARD SPEC B21.3(3).
6. DOWNSTREAM TAPER OPTIONAL ACROSS LEFT LANE. DOWNSTREAM TAPER DEVICE SPACING IS 30'.
7. SIGNS OPTIONAL IF EXISTING SPEED LIMIT SIGNS PRESENT WITHIN 1500' FOLLOWING THE DOWNSTREAM TAPER.
8. ADD "TRUCKS LEAVING HIGHWAY" AND "TRUCKS ENTERING HIGHWAY" SIGNS 500' PRIOR TO WHERE CONSTRUCTION VEHICLES FREQUENTLY EXIT AND ENTER INTO THE OPEN LANE(S).
9. SIGNS ARE BLACK ON ORANGE UNLESS OTHERWISE INDICATED.
10. PLAN IS APPLICABLE TO LANE CLOSURES OF 3 DAYS OR LESS.
11. BICYCLES PROHIBITED THROUGH WORK ZONE; CONSIDER PROVIDING DETOUR ALTERNATIVE ROUTES, OR SHUTTLE IN HIGH-USE LOCATIONS PERMITTING PERMANENT BICYCLE ACCESS.

FREeways (2+ LANES): SINGLE LEFT LANE CLOSure
(60 MPH Work Zone Speed Limit)

NOT TO SCALE

LEGEND

1. TEMPORARY SIGN LOCATION
2. TEMPORARY SIGN LOCATION (5 MIN HEIGHT)
3. TRAFFIC SAFETY DRUM
4. QWS TRAFFIC SENSOR
5. RADAR SPEED DISPLAY SIGN (RSDS)
6. SEQUENTIAL ARROW SIGN
7. TRANSPORTABLE ATTENUATOR
8. PORTABLE CHANGEABLE MESSAGE SIGN

ACtUAL NUMBER OF LANEs MAY VARY.

FREEWAY (2+ LANES): SINGLE LEFT LANE CLOSURE
(60 MPH WORK ZONE SPEED LIMIT)
2. DISTANCE INCREASES AS WORK AREA MOVES DOWNSTREAM.

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 R2-1) PRIOR TO EACH WORK TAPER.

4. IF USED, PLACE DEVICES TRANSVERSELY ACROSS CLOSED LANES AT 45°-/+ AND SPACING AT STRATEGIC LOCATIONS.

5. COVER ALL CONFLICTING SIGNAGE PER STANDARD SPEC B21.3(3).

6. DOWNSTREAM TAPER OPTIONAL ACROSS LEFT LANE. DOWNSTREAM TAPER DEVICE SPACING IS 20'.

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

8. ADD “TRUCKS LEAVING HIGHWAY” AND “TRUCKS ENTERING HIGHWAY” (W21-30, 48”x48”, 5’ HEIGHT) SIGNS 500’ +/- PRIOR TO TAPER.

9. SIGNS ARE BLACK ON ORANGE UNLESS OTHERWISE INDICATED.

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

11. BICYCLES PROHIBITED THROUGH WORK ZONE; CONSIDER PROVIDING DETOUR ALTERNATIVE ROUTE, OR SHUTTLE IN HIGH-USE LOCATIONS PERMITTING PERMANENT BICYCLE ACCESS.
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 R2-1) PRIOR TO EACH WORK CREW WITHIN WORK AREA.

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

5. COVER ALL CONFLICTING SIGNAGE PER STANDARD SPEC 8-21.3(3).

6. DOWNSTREAM TAPER OPTIONAL ACROSS LEFT LANE.

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

8. ADD "TRUCKS LEAVING HIGHWAY" AND "TRUCKS ENTERING HIGHWAY" (W21-30, 48"x48", 5' HEIGHT) SIGNS 500' +/- PRIOR TO TAPERS WITHIN OR IMMEDIATELY FOLLOWING HORIZONTAL CURVES. WHERE CONSTRUCTION VEHICLES FREQUENTLY EXIT AND ENTER HIGHWAY, PROVIDING DETOUR, ALTERNATIVE ROUTE, OR SHUTTLE IN HIGH-USE LOCATIONS PERMITTING PERMANENT BICYCLE ACCESS.

9. SIGNS ARE BLACK ON ORANGE UNLESS OTHERWISE INDICATED.

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

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

NOTES:

FIELD LOCATE 1.5 +/- MILES PRIOR TO FIRST LANE CLOSURE TAPER.

REMOVE PHASE 3 WHEN TRAFFIC QUEUES NO LONGER PRESENT. INCREASE DISPLAY TO 2.0 SEC.

LOCATE PCMS PER WSDOT STANDARD SPEC. 1-10.3(3)(C).

NOT TO SCALE
NOTES:
1. FOR LEGEND, TABLES, AND ADDITIONAL NOTES SEE TC220, SHEET 0A, 1A, OR 1B.
2. SEE DETOUR PLAN FOR ADDITIONAL RAMP CLOSURE DETOUR SIGNAGE.

FREEWAY (2+ LANES): SINGLE LEFT LANE CLOSURE (60 MPH WORK ZONE SPEED LIMIT)

NOT TO SCALE
NOTES:
1. FOR LEGEND, TABLES, AND ADDITIONAL NOTES, SEE TC220, SHEET 0B, 1A, OR 1B.
2. SEE DETOUR PLAN FOR ADDITIONAL RAMP CLOSURE DETOUR SIGNAGE.

FREEWAY (2+ LANES): SINGLE LEFT LANE CLOSURE (60 MPH WORK ZONE SPEED LIMIT)
NOT TO SCALE

FILE NAME: TC220HEET0B
TIME: 12:47:36 PM
DATE: 3/4/2022
ENTERED BY: LINTZ
CHECKED BY: HAAAPALA
PROJ. ENGR.: F. LINTZ
REGIONAL ADM.: S. HAAAPALA

WASHINGTON STATE
DEPARTMENT OF TRANSPORTATION
TYPICAL TRAFFIC CONTROL PLANS
NOTES:
1. FOR LEGEND, TABLES, AND ADDITIONAL NOTES. SEE TC220, SHEET 0B, 1A, OR 1B.
2. SEE DETOUR PLAN FOR ADDITIONAL RAMP CLOSURE DETOUR SIGNAGE.

SEE DETOUR PLAN FOR ADDITIONAL RAMP CLOSURE DETOUR SIGNAGE.

SEE NOTE 2

FREEWAY (2+ LANES): SINGLE LEFT LANE CLOSURE (60 MPH WORK ZONE SPEED LIMIT)

NOT TO SCALE

WASHINGTON STATE
DEPARTMENT OF TRANSPORTATION

TC220

TYPICAL TRAFFIC CONTROL PLANS

FILE: E:\Users\LintzF\OneDrive - Washington State Department of Transportation\Desktop\Work Zone TCPs\220 Fwy1 Lt Lane 70 to 60 WZ SL.dgn
DATE: 3/4/2022 12:47:37 PM

CONTACT US
LICENSE NO.

P. E. STAMP BOX

DATE

P. E. STAMP BOX

DATE

PAGE 3 OF 3

FREEWAY (2+ LANES): SINGLE LEFT LANE CLOSURE (60 MPH WORK ZONE SPEED LIMIT)
**NOTES:**

1. THIS PLAN IS USED IN CONJUNCTION WITH 2-LANE FREEWAY SINGLE LEFT LANE CLOSURE 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 PCMS PER STANDARD SPECIFICATION 1-10.3(3)C. PCMS MAY BE PLACED ON OPPOSITE SHOULDER BUT AVOID RAMP GORES.

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.

OPTIONAL. REMOVE PCMS WHEN DISSIPATING QUEUES ARE LESS THAN 5 MILES.

TRANSVERSE TRAFFIC SAFETY DRUMS RELOCATE TO REMAIN 0.5+/- MILE IN ADVANCE OF QUEUE. TRUCK-MOUNTED PCMS OR OTHER TRAFFIC CONTROL DEVICES, NARROW SHOULDERS, AND RAMPS.

NOT TO SCALE

**LEGEND**

- **TRAFFIC SAFETY DRUM**
- **TRAFFIC SENSOR**
- **SEQUENTIAL ARROW SIGN**
- **PCMS:** PORTABLE CHANGEABLE MESSAGE SIGN

**REGIONAL ADM.**
**REVISION**
**DATE**

**DESIGNER:** W. D. LINTZ & S. HAAPALA
**ENTERED BY:** W. D. LINTZ
**CHECKED BY:** W. D. LINTZ
**MANAGER:** C. A. WAPPLER

**TYPICAL TRAFFIC CONTROL PLANS**

**WASHINGTON STATE**
Department of Transportation

**TC220**

**FREEWAY (2 LANES): SINGLE LEFT LANE CLOSURE**

**NOT TO SCALE**

### QUEUE LOCATION

<table>
<thead>
<tr>
<th>LOCATION (miles)</th>
<th>TRAFFIC SENSORS</th>
<th>PCMS 5</th>
<th>PCMS 4</th>
<th>PCMS 3</th>
<th>PCMS 2</th>
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<tr>
<td>0.01 TO 0.9</td>
<td>FF FF FF FF SL</td>
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<td>(Blank)</td>
<td>(Blank)</td>
<td>LANE CLOSURE</td>
<td>TRAFFIC BACKUPS PRESENT</td>
</tr>
<tr>
<td>0.91 TO 1.9</td>
<td>FF FF FF SL SL SL</td>
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<td>(Blank)</td>
<td>(Blank)</td>
<td>LANE CLOSURE</td>
<td>TRAFFIC BACKUPS PRESENT</td>
</tr>
<tr>
<td>1.91 TO 2.9</td>
<td>FF FF SL SL SL SL</td>
<td>(Blank)</td>
<td>(Blank)</td>
<td>(Blank)</td>
<td>SLOW OR STOPPED TRAFFIC</td>
<td>NEXT 2 MILES</td>
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<tr>
<td>2.91 TO 4.4</td>
<td>FF SL SL SL SL SL</td>
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<td>SLOW OR STOPPED TRAFFIC</td>
<td>NEXT 2 MILES</td>
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<tr>
<td>4.41+</td>
<td>SL SL SL SL SL SL</td>
<td>SLOW OR STOPPED TRAFFIC</td>
<td>NEXT 6 MILES</td>
<td>LANE CLOSURE</td>
<td>TRAFFIC BACKUPS PRESENT</td>
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</tbody>
</table>

**FREEWAY BACKUPS PRESENT**

**WATCH FOR SLOW TRAFFIC**

---

**FREEWAY (2 LANES): SINGLE LEFT LANE CLOSURE**

**NOT TO SCALE**

**FREEWAY BACKUPS PRESENT**

**WATCH FOR SLOW TRAFFIC**
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.
4. IF USED, PLACE DEVICES TRANSVERSELY ACROSS CLOSED LANES TAPERS WITHIN OR IMMEDIATELY FOLLOWING HORIZONTAL CURVES.
5. COVER ALL CONFLICTING SIGNAGE PER STANDARD SPEC 8-21.3(3).
6. DOWNSTREAM TAPER OPTIONAL ACROSS LEFT LANE.
7. SIGNS OPTIONAL IF EXISTING SPEED LIMIT SIGNS PRESENT WITHIN 1500' +/- FOLLOWING THE DOWNSTREAM TAPER.
8. 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).
9. SIGNS ARE BLACK ON ORANGE UNLESS OTHERWISE INDICATED.
10. PLAN IS APPLICABLE TO LANE CLOSURES OF 3 DAYS OR LESS.
11. BICYCLES PROHIBITED THROUGH WORK ZONE; CONSIDER PROVIDING DETOUR ALTERNATIVE ROUTE, OR SHUTTLE IN HIGH-USE LOCATIONS PERMITTING PERMANENT BICYCLE ACCESS.

PCMS MESSAGES AND COMPONENT LAYOUT FOR 6-MILE QUEUE WARNING SYSTEM

- PORTABLE CHANGEABLE MESSAGE SIGN
- TRANSPORTABLE ATTENUATOR
- SEQUENTIAL ARROW SIGN
- RADAR SPEED DISPLAY SIGN (RSDS)
- QWS TRAFFIC SENSOR
- TEMPORARY SIGN LOCATION (5' MIN HEIGHT)
- TEMPORARY SIGN LOCATION (6' MIN HEIGHT)
- TRAFFIC SAFETY DRUM
- PCMS PORTABLE ATTENUATOR
- PCMS PORTABLE CHANGEABLE MESSAGE SIGN

NOT TO SCALE

FREEWAY (2+ LANES): SINGLE LEFT LANE CLOSURE
(60 MPH WORK ZONE SPEED LIMIT)

WASHINGTON STATE DEPARTMENT OF TRANSPORTATION

TYPICAL TRAFFIC CONTROL PLANS

REGIONAL ADM. REVISION DATE 12/2022
LEGEND:

1. TEMPORARY SIGN LOCATION
2. TEMPORARY SIGN LOCATION (MIN HEIGHT)
3. TRAFFIC SAFETY DRUM
4. TRAFFIC SAFETY SIGN
5. RADAR SPEED DISPLAY SIGN (RSD)
6. SEQUENTIAL ARROW SIGN
7. TRANSPORTABLE ATTENUATOR
8. PCMS (PORTABLE CHANGABLE MESSAGE SIGN)

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 R2-1) PRIOR TO EACH WORK CREW WITHIN WORK AREA.
4. IF USED, PLACE DEVICES TRANSVERSELY ACROSS CLOSED LANES AT 45° +/- AND 5' SPACING AT STRATEGIC LOCATIONS.
5. COVER ALL CONFLICTING SIGNAGE PER STANDARD SPEC B21.3(3).
6. DOWNSTREAM TAPER OPTIONAL ACROSS LEFT LANE.
7. SIGNS OPTIONAL IF EXISTING SPEED LIMIT SIGNS PRESENT WITHIN 1500' FOLLOWING THE DOWNSTREAM TAPER DEVICE SPACING.
8. ADD "TRUCKS LEAVING HIGHWAY" AND "TRUCKS ENTERING HIGHWAY" (90° ± 45°) SIGNS 100' +/- PRIOR TO WHERE CONSTRUCTION VEHICLES FREQUENTLY EXIT AND ENTER INTO THE OPEN LANE(S).
9. SIGNS ARE BLACK ON ORANGE UNLESS OTHERWISE INDICATED.
10. PLAN IS APPLICABLE TO LANE CLOSURES OF 3 DAYS OR LESS.
11. BICYCLES PROHIBITED THROUGH WORK ZONE: CONSIDER PROVIDING DETOUR ALTERNATIVE ROUTS OR SHUTTELE IN HIGH-USE LOCATIONS PERMITTING PERMANENT BICYCLE ACCESS.

FREEWAY (2+ Lanes): SINGLE LEFT LANE CLOSURE
(60 MPH WORK ZONE SPEED LIMIT)

NOT TO SCALE

Washington State Department of Transportation

TYPICAL TRAFFIC CONTROL PLANS

TC220
NOTES:
1. IF FEASIBLE, AVOID PLACING LANE CLOSURE OR LANE SHIFTS 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 R2-1) PRIOR TO EACH WORK CREW WITHIN WORK AREA.
4. IF USED, PLACE DEVICES TRANSVERSELY ACROSS CLOSED LANES.
5. COVER ALL CONFLICTING SIGNAGE PER STANDARD SPEC 8-21.3.
6. DOWNSTREAM TAPER OPTIONAL ACROSS LEFT LANE. DOWNSTREAM TAPER DEVICE SPACING IS 20′.
7. SIGNS OPTIONAL IF EXISTING SPEED LIMIT SIGNS PRESENT WITHIN 1500′ FOLLOWING THE DOWNSTREAM TAPER.
8. ADD “TRUCKS LEAVING HIGHWAY” AND “TRUCKS ENTERING HIGHWAY” (W21-30, 48"x48", 5′ HEIGHT) SIGNS 500′ PRIOR TO WORK ZONE.
9. SIGNS ARE BLACK ON ORANGE UNLESS OTHERWISE INDICATED.
10. PLAN IS APPLICABLE TO LANE CLOSURES OF 3 DAYS OR LESS.
11. BICYCLES PROHIBITED THROUGH WORK ZONE. CONSIDER PROVIDING DETOUR ALTERNATIVE ROUTE OR SHUTTLE IN HIGH-USE LOCATIONS PERMITTING PERMANENT BICYCLE ACCESS.

LEGEND:
1. TEMPORARY SIGN LOCATION
2. TEMPORARY SIGN LOCATION (MIN. HEIGHT)
3. TRAFFIC SAFETY DRUM
4. Radar Speed Display Sign (RSDS)
5. Sequential Arrow Sign
6. Portable Changeable Message Sign

FREEWAY (2+ LANES): SINGLE LEFT LANE CLOSURE
(60 MPH WORK ZONE SPEED LIMIT)

NOT TO SCALE
NOTES:
1. FOR LEGEND, TABLES, AND ADDITIONAL NOTES: SEE TC220, SHEET 0B, 1A, OR 1B.
2. SEE DETOUR PLAN FOR ADDITIONAL RAMP CLOSURE DETOUR SIGNAGE.

FREeways (2+ Lanes): Single Left Lane Closure (60 MPH Work Zone Speed Limit)

1. FOR LEGEND, TABLES, AND ADDITIONAL NOTES: SEE TC220, SHEET 0B, 1A, OR 1B.

FREEWAY (2+ LANES): SINGLE LEFT LANE CLOSURE (60 MPH WORK ZONE SPEED LIMIT)

NOT TO SCALE
NOTES:
1. FOR LEGEND, TABLES, AND ADDITIONAL NOTES, SEE TC220, SHEET 0B, 1A, OR 1B.
2. SEE DETOUR PLAN FOR ADDITIONAL RAMP CLOSURE DETOUR SIGNAGE.

FREEWAY (2+ LANES): SINGLE LEFT LANE CLOSURE (60 MPH WORK ZONE SPEED LIMIT)
NOT TO SCALE

1. SEE DETOUR PLAN FOR ADDITIONAL RAMP CLOSURE DETOUR SIGNAGE.
NOTES:
1. FOR LEGEND, TABLES, AND ADDITIONAL NOTES, SEE TC220, SHEET 0A, OR 1B.
2. SEE DETOUR PLAN FOR ADDITIONAL RAMP CLOSURE DETOUR SIGNAGE.

FREEWAY (2+ LANES): SINGLE LEFT LANE CLOSURE (60 MPH WORK ZONE SPEED LIMIT)

NOT TO SCALE

TC220

Sheet

Washington State Department of Transportation

TYPICAL TRAFFIC CONTROL PLANS
A. These typical traffic control plans may be modified for site specific situations and/or WSDOT Region Traffic Operations standard practices.

B. Sheets 3A & 3B needed only when ramps are present on the left side of freeway.

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

D. For this to function properly (otherwise it will print out as a solid black glob); DESIGNERS MUST FIRST UPDATE THEIR COLOR TABLE AND THEN accept it.

E. See MUTCD Table 6F-1 for additional temporary sign size information. Work zone signs are usually smaller than those used permanently.

F. WSDOT best practice is to place a transportable attenuator (TA) in the closed lane adjacent to traffic in advance of the work area (roll ahead distance provided below) for freeway applications. This may be modified to account for additional TAs at the end of each lane closure. TA placement provides a visible, transparent, and effective barrier to protect traffic and construction workers.

G. Per WSDOT 69-95-300, all sign spacing may be adjusted to accommodate interchange ramps. Among interchange ramps, sign spacing is typically 200' +/-, even in suburban and rural areas. However, this balance must be adjusted for site conditions.

H. When passing through channelization devices, temporary signs should be mounted at 3' minimum. Per MUTCD 6H-42 Note 4 (Standard), a temporary "EXIT" sign must be mounted 7 minimum (when located in the temporary area).

I. The work zone design speed is typically the posted speed limit (work zone speed limit when in effect). For split speed limits (SPEED LIMIT 70 TRUCKS 60), use the higher 70 mph for work zone design. For Typical TCP, the work zone design speed is 60 mph and is used for sign spacing, tapers, channelization device spacing, buffer, and roll ahead distances.

J. Channelization devices types may be modified (vertical panel channelization devices prohibited). Traffic safety drums are recommended on freeway lane closure/lane shift tapers; however, on the freeway tangent sections 42’ tall channelization devices, 36’ traffic cones, or 28’ traffic cones may be used. Warning lights on channelization devices is being phased out in Washington. Contact Region Traffic Operations for information regarding their use.

K. Maximum channelization device spacing table is based on WSDOT 69-95-301 and may ALWAYS be reduced.

L. Taper lengths assume 13-foot lanes & rounded up based on channelization device spacing (to simplify setup for field crews). Acceptable to calculate minimum taper lengths per MUTCD Tables 6C-3 AND 6C-4, which is Guidance per MUTCD 6C.08, Paragraph 04. Reducing lane closure/lane shift tapers; however, on the freeway tangent sections 42’ tall channelization devices, 36’ traffic cones, or 28’ traffic cones may be used.

M. Warning lights on channelization devices is being phased out in Washington. Contact Region Traffic Operations for information regarding their use.

N. Per MUTCD Section 6C.06, longitudinal buffer spaces are optional. Using longitudinal buffer spaces listed in MUTCD 6C-2 is recommended as best practice when feasible, but may be adjusted for field conditions.

O. The lateral buffer (transverse distance between soon travel lanes and work area) is recommended as 3 feet on stationary freeway lane closures, but may be adjusted based on engineering judgment. Actual work area limits may be modified.

P. WSDOT best practice is to place a transportable attenuator (TA) in the closed lane adjacent to traffic in advance of the work area (roll ahead distance provided below) for freeway applications. This may be modified to account for additional TAs at the end of each lane closure. TA placement provides a visible, transparent, and effective barrier to protect traffic and construction workers.

Q. Place channelization devices transverse (45’ and 50’ spacing) is an effective strategy to move errant drivers back out of closed lanes.

R. Per MUTCD Figure 6C-2, the downstream taper is optional across the reopened left lane. Eliminating the downstream taper allows construction vehicles (especially heavily loaded semi trucks) to accelerate straight out of the work area into the reopened left lane with minimal traffic impacts.

S. Metered lane closure/lane shift tapers; however, on the freeway tangent sections 42’ tall channelization devices, 36’ traffic cones, or 28’ traffic cones may be used. Warning lights on channelization devices is being phased out in Washington. Contact Region Traffic Operations for information regarding their use.

T. Use Plot 6 and/or Plot 7 (if ramps on left side are present only; depends on whether Region uses Parallel and/or Tapered on-ramps).

U. Use Plot 5.

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

W. Per MUTCD Figure 6C-2, the downstream taper is optional across the reopened left lane. Eliminating the downstream taper allows construction vehicles (especially heavily loaded semi trucks) to accelerate straight out of the work area into the reopened left lane with minimal traffic impacts.

X. Use Plot 4 (Typical 3-Phase PCMS).

Y. Use Plot 5.

Z. Use Plot 6 and/or Plot 7 (if ramps on left side are present only; depends on which Region uses Parallel and/or Tapered on-ramps).

**FREEWAY (2+ LANES): SINGLE LEFT LANE CLOSURE (60 MPH WORK ZONE SPEED LIMIT)**

| TIME | WORK ZONE SPEED LIMIT | TAPER | FED.AID PROJ.NO. | CONTRACT NO. | STATE | LOCATION NO. | DESIGNED BY | DRAWN BY | CHECKED BY | REVISION | INSTALLED | REFERENCE | PROJECT # | DESIGNER NOTES | LOCATION | SHEETS | OF | PLOT NUMBER | SUBMITTED TO | STATE DEPARTMENT OF TRANSPORTATION | DATE | DEPARTMENT OF TRANSPORTATION |
|------|-----------------------|-------|------------------|--------------|--------|--------------|-------------|----------|------------|----------|----------|-----------|-----------|-----------|----------------|----------|--------|---|-------------|---------------|------------------|-------|------------------|
|      |                       |       |                  |              |        |              |             |          |            |          |          |           |           |           |                |          |        |   |             |                |                  |        |                  |

**FILE NAME:** 2022Fwy1LtLane70to60WZSL.dgn

**LOCATION:** Department of Transportation

**DATE:** 3/4/2022

**CONTRACT NO.:** C:\Users\LintzF\OneDrive - Washington State Department of Transportation\Desktop\Work Zone TCPs\220Fwy1LtLane70to60WZSL.dgn

**PLAN REF NO.:** PLAN REF NO

**SHEETS:**

**OF SHEETS:**

**PLAN REF NO.:** PLAN REF NO

**SHEETS:**

**OF SHEETS:**

**PLotted by:** LINTERN

**Designed by:** LINTERN

**Checked by:** LINTERN

**Drawing Date:** 3/4/2022

**Revision Date:** 3/4/2022

**Project Name:** TC220

**Designer Notes:**

**Other Work Zone Speed Limit Policy and Approval Requirements:**

For WSDOT Executive Order 1190.03 (https://wsdot.wa.gov/policies/policies/fulltext/1190.03.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.

WSDOT Project Delivery Memo #19-01-01 (https://wsdot.wa.gov/policies/policies/fulltext/ProjectDelivery/Memo/Memo19-01-01.pdf) provides policy for variable traffic regulatory work zone speed limits and advisory speeds.

Contact WSDOT Traffic Operations for additional information.