## Temporary Traffic Control Distance Charts

<table>
<thead>
<tr>
<th>Posted Speed Limit Prior to Work Starting (mph)</th>
<th>Advance Warning Sign Spacing (A) feet</th>
<th>Decision Sight Distance (D) feet</th>
<th>Taper Length (12 ft lane) (L) feet</th>
<th>Shifting Taper (L/2) feet</th>
<th>Typical Shoulder Taper (L/3) feet</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 30</td>
<td>250</td>
<td>550</td>
<td>200</td>
<td>100</td>
<td>75</td>
</tr>
<tr>
<td>35 - 40</td>
<td>325</td>
<td>700</td>
<td>325</td>
<td>175</td>
<td>125</td>
</tr>
<tr>
<td>45 - 50</td>
<td>600</td>
<td>900</td>
<td>600</td>
<td>300</td>
<td>200</td>
</tr>
<tr>
<td>55</td>
<td>750</td>
<td>1200</td>
<td>700</td>
<td>350</td>
<td>250</td>
</tr>
<tr>
<td>60 - 65</td>
<td>1000</td>
<td>1400</td>
<td>800</td>
<td>400</td>
<td>275</td>
</tr>
<tr>
<td>70 - 75</td>
<td>1200</td>
<td>1600</td>
<td>900</td>
<td>450</td>
<td>300</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Posted Speed Limit Prior to Work Starting (mph)</th>
<th>Buffer Space (B) feet</th>
<th>Shadow Vehicle Following Distance (F) feet</th>
<th>Protection Vehicle Roll-Ahead Buffer Distance (with or without TMA) (R) feet</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 30</td>
<td>200</td>
<td>250 - 550</td>
<td>100</td>
</tr>
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<td>35 - 40</td>
<td>305</td>
<td>325 - 700</td>
<td>100</td>
</tr>
<tr>
<td>45 - 50</td>
<td>425</td>
<td>600 - 900</td>
<td>175</td>
</tr>
<tr>
<td>55</td>
<td>500</td>
<td>750 - 1200</td>
<td>175</td>
</tr>
<tr>
<td>60 - 65</td>
<td>650</td>
<td>1000 - 1400</td>
<td>225</td>
</tr>
<tr>
<td>70 - 75</td>
<td>820</td>
<td>1200 - 1600</td>
<td>225</td>
</tr>
</tbody>
</table>

### Type A channelizing devices are typically used in attended temporary traffic control zones.*

**TYPE A CHANNELIZERS:**

- **TUBULAR MARKERS**
  - 36 inch minimum
  - **DAYTIME LOW SPEED ONLY**
  - **CONES**
  - 18 inch minimum

- **WEIGHTED CHANNELIZERS**
  - 42 inch minimum

### Type B channelizing devices shall be used if the temporary traffic control zone will be installed for more than 12 hours or if it is left unattended. *

**TYPE B CHANNELIZERS:**

- **VERTICAL PANEL**
- **TYPE I BARRICADE**
- **TYPE II BARRICADE**
- **DRUM**
- 270 square inch minimum of retroreflective sheeting surface

* See the MN MUTCD, Part 6F for more details on application restrictions.

**Figure 6J-2** Temporary Traffic Control Devices and Distance Charts
NOTES:
1. See page iii for Temporary Traffic Control Distance Charts.
2. Traffic controls are shown for only one approach.
3. Supplemental delineation (such as chevrons, down arrows, etc.) may be required in the bypass.
4. Design of the bypass shall be as directed by the engineer or as shown in the plans.
5. Optional distance plaques and “BYPASS AHEAD” signs may be included in the advance signing sequence.
6. Install wet reflective edge lines thru the transition and 250 feet past the tangent areas.

TYPICAL CROSSOVER TO TWO-LANE, TWO-WAY OPERATIONS MULTILANE DIVIDED ROAD
NOTES:
1. See page iii for Temporary Traffic Control Distance Charts.
2. Traffic controls are shown for only one approach.
3. Supplemental delineation (such as chevrons, down arrows, etc.) may be required in the bypass.
4. Install wet reflective edge lines thru the transition and 250 feet past the tangent areas.

Use appropriate left lane closure

End transition area wet reflective edge lines

Remove or Cover Conflicting Markings and Install Temporary Markings (see Layout 6J-1)

Variable with no speed reduction

TYPICAL CROSSOVER FROM A TWO-LANE, TWO-WAY OPERATION MULTILANE DIVIDED ROAD

LONG TERM LAYOUT 6J-5
TWO-LANE, TWO-WAY OPERATION
AT EXIT RAMP ACROSS CLOSED ROADWAY

LONG TERM LAYOUT 6J-7

NOTES:
1. See page iii for Temporary Traffic Control Distance Charts.
2. The design of the deceleration lane and exit ramp shall be as directed by the engineer or as shown in the plans.
3. Supplemental delineation (such as chevrons, down arrows, etc.) may be required for the ramp.

See page iii for Temporary Traffic Control Distance Charts.

The design of the deceleration lane and exit ramp shall be as directed by the engineer or as shown in the plans.

Supplemental delineation (such as chevrons, down arrows, etc.) may be required for the ramp.
NOTES:
1. See page iii for Temporary Traffic Control Distance Charts.
2. The design of the acceleration lane and entrance ramp shall be as directed by the engineer or as shown in the plans.
3. Supplemental delineation (such as chevrons, down arrows, etc.) may be required for the ramp.
4. The advance warning sign spacing is dependent on the ramp length and the location of inplace signing. The spacing should be as long as is practical.
5. Remove conflicting pavement markings and install temporary markings (see Figure 6J-1).
6. When an adequate acceleration lane is provided, this sign should be omitted.
NOTES:
1. See page iii for Temporary Traffic Control Distance Charts.
2. Leave room for a proper radius at intersections.
3. Remove conflicting signing such as “ONE WAY”, “DO NOT ENTER”, etc.
4. Remove or cover conflicting striping such as stop bars, crosswalks, etc.

OPTIONAL

NOTES:
1. See page iii for Temporary Traffic Control Distance Charts.
2. Leave room for a proper radius at intersections.
3. Remove conflicting signing such as “ONE WAY”, “DO NOT ENTER”, etc.
4. Remove or cover conflicting striping such as stop bars, crosswalks, etc.

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1. See page iii for Temporary Traffic Control Distance Charts.
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OPTIONAL

NOTES:
1. See page iii for Temporary Traffic Control Distance Charts.
2. Leave room for a proper radius at intersections.
3. Remove conflicting signing such as “ONE WAY”, “DO NOT ENTER”, etc.
4. Remove or cover conflicting striping such as stop bars, crosswalks, etc.
NOTES:
1. See page iii for Temporary Traffic Control Distance Charts.
2. The minimum lane width shall be 10 feet.
3. The curve advisory speed will be determined by the Road Authority at the time of installation.
4. The bypass sign should be used when the tangent length is 600 feet or less.
5. Omit if the bypass sign is used.
6. Install continuous solid wet reflective lane lines through the bypass if the tangent is 600 feet or less.

End temporary wet reflective 4-inch white solid line
Temporary wet reflective white edge line
Temporary wet reflective yellow edge line
Remove or cover conflicting pavement markings and install temporary pavement markings
Begin temporary wet reflective 4-inch white solid line

MULTIPLE LANE SHIFT
MULTILANE DIVIDED ROAD

LONG TERM LAYOUT 6J-14
NOTES:
1. See page iii for Temporary Traffic Control Distance Charts.
2. The closed road volume should be below 800-1000 vehicles per hour.
3. Supplemental delineation such as chevrons, down arrows, etc. may be required in the bypass.

Law enforcement officer is to direct traffic as needed.

Variable: prior to lane closure

use the appropriate devices and spacing for a lane closure

ROAD CLOSURE AT INTERCHANGE

SHORT TERM
LONG TERM

LAYOUT 6J-15

January, 2014
NOTES:
1. See page iii for Temporary Traffic Control Distance Charts.
2. Typical traffic control is shown for one approach only.
3. Supplemental delineation (such as chevrons, down arrows, etc.) may be required on the bypass.
4. The exact location of No Passing Zones is to be determined by the Road Authority. If the distance from an inplace No Passing Zone is less than the following, the zones shall be connected with a solid yellow line:
   - 35 mph or less - 500 feet
   - 40 - 50 mph - 600 feet
   - 55 mph or greater - 800 feet
See page iii for Temporary Traffic Control Distance Charts.
NOTES:
1. See page iii for Temporary Traffic Control Distance Charts.
2. Detour signing is shown for one direction only. The other direction shall be similar.
3. See Long Term Layout 6J-20 for devices and spacing.
4. Use this sign when it is 2 miles or greater to the road closure.
NOTES:
1. See page iii for Temporary Traffic Control Distance Charts.
2. A M4-9 Detour Sign with an advance turn arrow may be used in advance of a turn. On multi-lane streets, such signs should be used.
3. See Long Term Layout 6J-20 for devices and spacing.
NOTES:
1. See page iii for Temporary Traffic Control Distance Charts.
2. Additional “DO NOT ENTER” signs may be desirable at intersections with intervening streets.
3. For sidewalk and crosswalk closures, see Layouts 6K-24 and 6K-25.
4. Additional side street signs may be required.

DETOUR FOR ONE TRAVEL DIRECTION

OPTIONAL END DETOUR

ROAD CLOSED THRU TRAFFIC TO NORTH

ROAD CLOSED AHEAD

DO NOT ENTER

MAIN ST DETOUR

MAIN ST DETOUR

MAIN ST DETOUR

MAIN ST NORTHERN DETOUR

ROAD CLOSED AHEAD

DETOUR AHEAD

LAYOUT 6J-19

January, 2014
NOTES:
1. See page iii for Temporary Traffic Control Distance Charts.
2. All devices are shown for one direction. Devices for the other direction should be similar.
3. The Road Authority will determine if a detour is required and specify the detour route.
4. Advance warning signs should be used seven days in advance of the closure.
5. Install at the last driveway or intersection beyond which there is no public access.

TYPICAL SIGNING FOR ROAD CLOSURE
NOTES:
1. See page iii for Temporary Traffic Control Distance Charts.
2. Advance warning signs should be used seven days in advance of the closure.
3. Cover all directional signing for the closed ramp.

**ENTRANCE RAMP CLOSURES**

LONG TERM LAYOUT 6J-21
TYPICAL ADVANCE SIGNING

LONG TERM

LAYOUT 6J-23

December, 2011
NOTES:

1. When crosswalks, sidewalks or other pedestrian facilities are blocked, closed or relocated, temporary facilities shall include accessibility features consistent with the features present in the existing pedestrian facility.

2. The examples show only key typical dimensions. Refer to the MnDOT "Temporary Pedestrian Access Route" (TPAR) website (http://www.dot.state.mn.us/trafficeng/workzone/tpar.html) for standards, guidance and options when blocking, closing, or relocating pedestrian facilities.

3. Only traffic control devices controlling pedestrian flows are shown. Other devices may be needed to control traffic on the streets.

4. An approved audible message device or tactile message should be provided for sight-impaired pedestrians. When used, a message device should provide a complete physical description of the temporary pedestrian detour including duration, length of (and/or distance to) the bypass, any restrictions or hazards and project information as listed in note 5 below. The number and location of devices should be determined for each project prior to starting work. Devices may be placed prior to sidewalk work to warn regular users of the planned work.

5. Typical sign message for a temporary pedestrian detour should include information such as the duration of the walkway restrictions (beginning and/or end dates) and a project contact number for 24/7 questions or reporting hazards.

6. The International Symbol of Accessibility should be displayed when any walkway through a work zone has been determined to be TPAR compliant. The Symbol of Accessibility shall not be displayed if persons with disabilities should not use the primary temporary pedestrian detour. The reason for the non-compliance should be posted and an alternate route should be posted when the primary temporary pedestrian detour is non-compliant to TPAR standards.

7. Conditions that are beyond recommended standards should be documented. A walkway is non-compliant if it is missing key ADA elements such as curb ramp(s), truncated domes, and detectable edging. Other restrictions or hazards may include insufficient width or pinch-point widths, traffic conflicts, steep grades, non-continuous railings, tripping hazards, or uneven/rough/soft surface conditions, etc.

8. Pedestrian traffic signal displays controlling closed crosswalks shall be covered. Temporary pedestrian signals should be considered when creating a new crossing location.

9. Curb marking shall be prohibited for a minimum of 30 feet in advance of the mid-block pedestrian crossing. Crosswalk marking shall be installed and conflicting marking removed or covered. Curb ramps with detectable warnings shall be provided to transition from the sidewalk to the crosswalk.

10. Pedestrian detour trailblazing signs should be used if the pedestrian detour is located someplace other than across the street from the sidewalk closure.

CROSSWALK CLOSURES AND PEDESTRIAN DETOURS

LONG TERM LAYOUT 6J-24a
CROSSWALK CLOSURES AND PEDESTRIAN DETOURS

LONG TERM LAYOUT 6J-24b

PROJECT CONTACT 612-XXX-XXX

ENDS OCT 20XX
CONTACT 612-XXX-XXX
LONG TERM LAYOUT 6J-25b

SIDEWALK BYPASS

LOW-SPEED ROADWAY

Temporary truncated domes, optional based upon usage of cross-street
TPAR width of 60 inches is preferred. If width is 48 inch, then at least one 60 x 60-inch passing space is required for every 200 feet of length.

Temporary curb ramp providing 12:1 (8%) slope or flatter and non-slip treatment added

Ramp landing area providing 48 x 48 inch minimum area and 2% or flatter cross-slope

5 device taper 25 feet long (1 stall), recommended when the closed area was used as ab intermittent traffic lane or bypass lane.

Additional audible message devices may be needed for route information

HIGH-SPEED ROADWAY or LOW-SPEED MULTI-LANE

Curb & gutter or other transition between roadway and sidewalk

TTC barrier with taper and attenuation (length as required)
TPAR width of 60 inches is preferred. If width is 48 inch, then at least one 60 x 60-inch passing space is required for every 200 feet of length.

Temporary curb ramp providing 12:1 (8%) slope or flatter and non-slip treatment added

Ramp landing area providing a 48 x 48 inch minimum area and 2% or flatter cross-slope

Temporary walkway surface covering rough, soft or uneven ground or hazards

SIDEWALK WORK AHEAD
ENDS OCT 20XX
CONTACT 612-XXX-XXX

LONG TERM LAYOUT 6J-25b

January, 2014