### Designer Notes (Remove from Layout before inserting in Plan):

1. Insert spacing chart distances into layouts and remove chart whenever practical.

2. For the placement of advance warning signs, see Layout 36, "Right Lane Closure".

3. For the placement of advance warning signs, see Layout 37, "Left Lane Closure".

4. Consider the installation of a PCMS and/or G20-X2 or Special Sign if congestion is expected, if advance signage to divert traffic is needed, or if the engineer determines it to be desirable.

5. Consider the installation of a PCMS and/or G20-X1 sign (modified) or G20-X2 sign for seven day advance warning of restriction.

6. For any excavation or drop-off in excess of 12 in., see the Minnesota Manual on Uniform Traffic Control Devices Section 6F.85 "Temporary Traffic Barriers".

7. For closures greater than 1000 ft., see Layout 70 "Lane Closure Extension".

8. For any engineering or drop-off in excess of 12 in., see the Minnesota Manual on Uniform Traffic Control Devices Section 6F.85 "Temporary Traffic Barriers".

9. Select appropriate material for temporary markings, see Stripping Key.

10. Remove conflicting markings. Determine quantity of markings to be removed or covered for pay item quantities.

11. Contact appropriate road authority for signal timing modifications and possible turn restrictions before beginning work at any signalized intersection.

12. Cover or modify all directional signage affected by any turn restrictions, include sign modifications, cover or removals in traffic control plan.

13. Spacing for surface mounted delineators are 2 feet for 25'. In advance of both corners and intersections.

14. Spacing for surface mounted delineators may be increased to 2' when greater than 250' from corners and intersection.

15. Use reverse turn sign (R1-3) if advisory speed is 30 mph or less.

16. When impacting pedestrian facilities, temporary pedestrian access routes must be provided, see Layout 6J-24 and 6J-25 for guidance.

17. The flashing arrow board shall be used when the posted speed limit is 45 mph or greater, and shall be placed fully on the shoulder. If there is no shoulder, or the shoulder is too narrow, place the flashing arrow board at the end of the taper in lieu of the Type III Baricade Assembly.

<table>
<thead>
<tr>
<th>NOTE 15</th>
</tr>
</thead>
<tbody>
<tr>
<td>IF SPACE PERMITS, ADVISORY SPEED TO BE DETERMINED IN THE FIELD BY ROAD AUTHORITY</td>
</tr>
</tbody>
</table>

### Table: Spacing of Channelizing Devices

<table>
<thead>
<tr>
<th>Speed Limit</th>
<th>Spacing of Devices</th>
<th>Decision Height</th>
<th>Taper Length (L)</th>
<th>Buffer (B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 30</td>
<td>25</td>
<td>55</td>
<td>300</td>
<td>200</td>
</tr>
<tr>
<td>35 - 40</td>
<td>325</td>
<td>120</td>
<td>300</td>
<td>200</td>
</tr>
<tr>
<td>45 - 50</td>
<td>600</td>
<td>550</td>
<td>600</td>
<td>425</td>
</tr>
<tr>
<td>55</td>
<td>750</td>
<td>1200</td>
<td>700</td>
<td>500</td>
</tr>
<tr>
<td>60 - 65</td>
<td>1000</td>
<td>1400</td>
<td>800</td>
<td>620</td>
</tr>
<tr>
<td>70 - 75</td>
<td>1000</td>
<td>1600</td>
<td>900</td>
<td>820</td>
</tr>
</tbody>
</table>

### Diagram: Double Lane Closure at Intersection

- **Note 3**: Insert spacing chart distances into layouts and remove chart whenever practical.
- **Note 4**: For the placement of advance warning signs, see Layout 36, "Right Lane Closure".
- **Note 5**: For the placement of advance warning signs, see Layout 37, "Left Lane Closure".
- **Note 6**: Consider the installation of a PCMS and/or G20-X2 or Special Sign if congestion is expected, if advance signage to divert traffic is needed, or if the engineer determines it to be desirable.
- **Note 7**: Consider the installation of a PCMS and/or G20-X1 sign (modified) or G20-X2 sign for seven day advance warning of restriction.
- **Note 8**: For any excavation or drop-off in excess of 12 in., see the Minnesota Manual on Uniform Traffic Control Devices Section 6F.85 "Temporary Traffic Barriers".
- **Note 9**: For closures greater than 1000 ft., see Layout 70 "Lane Closure Extension".
- **Note 10**: For any engineering or drop-off in excess of 12 in., see the Minnesota Manual on Uniform Traffic Control Devices Section 6F.85 "Temporary Traffic Barriers".
- **Note 11**: Select appropriate material for temporary markings, see Stripping Key.
- **Note 12**: Remove conflicting markings. Determine quantity of markings to be removed or covered for pay item quantities.
- **Note 13**: Contact appropriate road authority for signal timing modifications and possible turn restrictions before beginning work at any signalized intersection.
- **Note 14**: Cover or modify all directional signage affected by any turn restrictions, include sign modifications, cover or removals in traffic control plan.
- **Note 15**: Spacing for surface mounted delineators are 2 feet for 25'. In advance of both corners and intersections.
- **Note 16**: Spacing for surface mounted delineators may be increased to 2' when greater than 250' from corners and intersection.
- **Note 17**: Use reverse turn sign (R1-3) if advisory speed is 30 mph or less.

### Diagram: Double Lane Closure at Intersection Multi-Lane Undivided Road

- **Note 1**: Insert spacing chart distances into layouts and remove chart whenever practical.
- **Note 2**: For the placement of advance warning signs, see Layout 3, "Left Lane Closure".
- **Note 3**: For the placement of advance warning signs, see Layout 3T, "Left Lane Closure".
- **Note 4**: Consider the installation of a PCMS and/or G20-X2 or Special Sign if congestion is expected, if advance signage to divert traffic is needed, or if the engineer determines it to be desirable.
- **Note 5**: Consider the installation of a PCMS and/or G20-X1 sign (modified) or G20-X2 sign for seven day advance warning of restriction.
- **Note 6**: For any excavation or drop-off in excess of 12 in., see the Minnesota Manual on Uniform Traffic Control Devices Section 6F.85 "Temporary Traffic Barriers".
- **Note 7**: For closures greater than 1000 ft., see Layout 6J-24 and 6J-25 for guidance.
- **Note 8**: For any engineering or drop-off in excess of 12 in., see the Minnesota Manual on Uniform Traffic Control Devices Section 6F.85 "Temporary Traffic Barriers".
- **Note 9**: Select appropriate material for temporary markings, see Stripping Key.
- **Note 10**: Remove conflicting markings. Determine quantity of markings to be removed or covered for pay item quantities.
- **Note 11**: Contact appropriate road authority for signal timing modifications and possible turn restrictions before beginning work at any signalized intersection.
- **Note 12**: Cover or modify all directional signage affected by any turn restrictions, include sign modifications, cover or removals in traffic control plan.
- **Note 13**: Spacing for surface mounted delineators are 2 feet for 25'. In advance of both corners and intersections.
- **Note 14**: Spacing for surface mounted delineators may be increased to 2' when greater than 250' from corners and intersection.
- **Note 15**: Use reverse turn sign (R1-3) if advisory speed is 30 mph or less.
- **Note 16**: When impacting pedestrian facilities, temporary pedestrian access routes must be provided, see Layout 6J-24 and 6J-25 for guidance.
- **Note 17**: The flashing arrow board shall be used when the posted speed limit is 45 mph or greater, and shall be placed fully on the shoulder. If there is no shoulder, or the shoulder is too narrow, place the flashing arrow board at the end of the taper in lieu of the Type III Baricade Assembly.