1. Insert spacing chart distances into layout.
2. Be aware if "End Road Work" signs are needed.
3. Consider the installation of a PCMS and/or G20-X2 or special signs if congestion is expected, if advance signing to divert traffic is needed, or other conditions determined by the Engineer.
4. Consider the installation of a PCMS and/or G20-X1 sign for seven day advance warning of restriction.
5. Determine if "End Road Work" signs are needed.

**Design Notes:**

- Typical application for reference only, not to be inserted into plan.
- When used, advisory signing shall be installed directly below or on the lower side nearest traffic side of signs.
- Consider the use of the motorcycle advisory plaque (W8-15P) when hazard is directed primarily to motorcyclists.
- Use the same warning signs and spacing's for both approaches to work area.
- The bump ahead sign may be omitted if the speed reduction needed to navigate the bump is 15 MPH or less.
- Use the appropriate warning sign for the roadway condition, i.e., grooved pavement, loose gravel, rough road, etc.
- When used, advisory plates shall be installed directly below or on the lower side nearest traffic side of signs.
- If 48"x48" advance warning signs will not fit on the left side because of a narrow median less than 6' fit to appendix A to determine if the left side signs can be eliminated. If left side signs are eliminated and additional "right lane closed" sign is used, and display the flashing arrowboard on the shoulder.
- Use the same warning signs and spacing's for both approaches to work area.
- Consider delineating raised structures (manhole covers, etc.).
- Refer to the crossroad and confirmation signing long term typical application for confirmating signs.
- When impacting pedestrian facilities, alternate pedestrian access routes must be provided. See Layouts 6J-24 and 6J-26 in the Minnesota manual on uniform traffic control devices.
- Contact appropriate road authority for signal timing, signal head location, characteristics, and possible turn restrictions before designing work at or near any signalized intersection.

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**Table of Distances:**

<table>
<thead>
<tr>
<th>Road Work</th>
<th>Spacing of Advance Warning Signs (L)</th>
<th>Spacing of Advance Warning Signs (L/2)</th>
<th>Buffer Space (L/3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(MPH)</td>
<td>FEET</td>
<td>FEET</td>
<td>FEET</td>
</tr>
<tr>
<td>0 - 30</td>
<td>25</td>
<td>300</td>
<td>300</td>
</tr>
<tr>
<td>35 - 50</td>
<td>325</td>
<td>300</td>
<td>200</td>
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<td>55</td>
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<td>500</td>
<td>425</td>
</tr>
<tr>
<td>70 - 75</td>
<td>1000</td>
<td>1000</td>
<td>825</td>
</tr>
</tbody>
</table>

*All distances based on 12 ft lane widths.*