Temporary Traffic Control on Low Volume Roads Accommodating Pedestrians in Work Zones

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Technical Advisory Panel (TAP) Membership

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Temporary Traffic Control
What is the Problem?

- Temporary Traffic Controls need to be uniform and consistent on all road systems between counties, cities and state.
- As drivers travel they don’t know or care whose road they are on.
- Meeting driver expectations = safety
- Violating driver expectations = crashes
What is the Need?

- The Field Manual for Temporary Traffic Control Layouts contains applications for all roadway systems in Minnesota.
- Difficult to find appropriate standards for low volume local roads.
Temporary Traffic Control - Low Volume Roads

What is the Need?

Layouts exist that address low volume roads are included with higher level systems and hard to find and apply.

What is the Goal?

• To better use the MN MUTCD Field Manual
• Provide recommendations to update the Field Manual
• Update Circuit Training and Assistance Program (CTAP) Training
Final Deliverables

• Cross reference common maintenance activities to work zone layouts to consider.

• Develop questions to assist in interpreting the Field Manual layout and adjustments for the respective field conditions.
Easier to Use the Field Manual

What is the Solution?

Temporary Traffic Control Layout Selection by Maintenance Activity

Low Volume Urban Residential Street - January 2016

The intent of this document is to help local agencies identify the appropriate work zone layout based on the maintenance activity that will be performed. This document is intended to be used as supplemental guidance to the Temporary Traffic Control Zone Layouts Field Manual (dated January 2016). The information provided here does not replace or override anything within the field manual. Agencies must follow the standards and guidance contained in the Minnesota Manual on Uniform Traffic Control Devices (MN MnUDC), including the Field Manual.

Criteria to use this document:

- Urban Residential Street
- Low Volume (60 mph ADT)
- Mobile, Short Duration or Short Term work only
- Attended work zones
- 30 mph or less

This guidance was developed to aid in selecting appropriate temporary traffic controls for maintenance work on streets commonly referred to as residential streets. While the The Minnesota Manual on Uniform Traffic Control Devices (MN MnUDC), and Minnesota Statutes do not specifically define these streets, these guidelines were developed for streets with a speed limit of 30 mph or less, that have a traffic volume less than 600 ADT, and have low (i.e., business or commercial) development. Many of these residential streets have limited pavement width and consideration should be given to working with local law enforcement to ensure parking on the streets where work is being performed. This will facilitate being able to provide safe passage of vehicles while working space is excluded for workers, equipment and materials. The MN MnUDC contains requirements to provide a minimum of 10 feet wide lanes for the passage of vehicles.

How to use this document:

1. Identify your maintenance activity and work duration
2. Use the matrix on page 3 to select a layout to consider
3. Read the box that corresponds with the suggested layout on the following pages
4. Read the “How to Use the Field Manual” section and the questions under the section “Is this the appropriate layout?”
5. If the layout is not appropriate, use the guidance provided to identify a better layout
6. Once the appropriate layout is identified, use the Field Manual for guidance on how to set up the work zone in the field, and the “Minimum Required Devices” section as guidance on the minimum devices needed when using the layout.
Field Manual Layout Selection Process

1. Rural Highway or Urban Residential Street
2. Find your Maintenance Activity
3. Determine Duration
4. Select Appropriate Layout in Guide
5. Follow Guidance
6. Find and Use Layout from the Field Manual
Temporary Traffic Control - Low Volume Roads

What is the Final Solution?

Letter with recommendations to the Minnesota Committee on MN MUTCD for consideration:

• Application of channelizing devices on low volume roads.

• Refining requirements and device spacing on low volume low speed residential streets.

• Providing a new section in the Field Manual for low volume rural highways.
Recommend that the MN MUTCD contain provisions to omit channelizers under specific circumstances:

- Short work zones
- Flagger instructions
- Minimal risk to workers and motorists
Mobile closure on low speed streets

- Field Manual allows up to 15 closures with minimal traffic control
- Low speed and high speed are the same layout
- Recommend a low speed layout with fewer devices and requirements.
Device spacing on residential streets

Recommend the spacing charts for low volume low speed streets be revised to allow 100 foot spacing.

<table>
<thead>
<tr>
<th>Posted Speed Limit Prior to Work Starting (mph)</th>
<th>Advance Warning Sign Spacing (A) feet</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-30</td>
<td>&lt; 400 ADT 100</td>
</tr>
<tr>
<td></td>
<td>All Other Roads 250</td>
</tr>
<tr>
<td>35-40</td>
<td>325</td>
</tr>
</tbody>
</table>
Parking lane use on low volume streets

Recommend revising the Field Manual so “All signs, barricades and channelizing devices may be omitted when the work occupies an isolated parking lane location for less than one hour and it has little or no interference with traffic.”
Resources

http://dotapp7.dot.state.mn.us/projectPages/pages/projectDetails.jsf?id=5953&type=PROJECT
What is a TPAR?

Alternate Pedestrian Route
Temporary ped facility that contains accessibility features consistent with impacted ped facility.

Pedestrian Access Route
A continuous and unobstructed walkway within a pedestrian circulation path that provides accessibility.

Temporary Pedestrian Access Route
Temporary PAR (that is fully accessible)
Impairments that affect the ability to access programs, services, and facilities

- Physical/Orthopedic - Requiring use of wheelchair, walker, cane, or prosthetic device
- Physical/Medical - Heart/Lung conditions, diabetes
- Visual - Blind, low vision, lack of depth perception
- Hearing - Deaf, Hearing impaired
- Cognitive/Neurological - Autism, Brain injury
Why is this necessary?

When an existing pedestrian access route is blocked by construction, alteration, maintenance, or other temporary conditions, an alternate pedestrian access route ... shall be provided.
The needs and control of all road users (motorists, bicyclists, and pedestrians within the highway, or on private roads open to public travel, including persons with disabilities in accordance with the Americans with Disabilities Act of 1990 (ADA), Title II, Paragraph 35.130) through a temporary traffic control zone shall be an essential part of highway construction, utility work, maintenance operations, and the management of traffic incidents.
If the TTC zone affects the movement of pedestrians, adequate pedestrian access and walkways shall be provided. If the TTC zone affects an accessible and detectable pedestrian facility, the accessibility and detectability shall be maintained along the alternate pedestrian route (APR).
When existing pedestrian facilities are disrupted, closed or relocated in a TTC zone, the temporary facilities **shall** be detectable and **include accessibility features** consistent with the features present in the existing pedestrian facility.

*Regardless – goal is to meet TPAR requirements, if you can’t then this is the minimum standard.*
In December 2009 two long-running ADA lawsuits were settled.

- $1.1 billion to be spent over 30 years to improve access.
- They will ensure that TPARs around and through Work Zones are accessible.
Sum up - Why?

ADA - civil right issue

MN MUTCD - tort liability

Right thing to do
Others benefit too
What guidance is available?

http://www.dot.state.mn.us/trafficeng/workzone/apr.html
What guidance is available?

- **2014 Field Manual Layouts**
  - Up to 3 days - very similar to Long Term

- **MN MUTCD Long Term Work Zone Layouts**
  - 6J-24a&b and 6J-25a&b
  - Likely to be incorporated into plan
Overview of APR & TPAR

Be aware of the need.
Evaluate pedestrian routes and needs in early stages of project development.
At minimum, provide equivalent level of accessibility during construction.
Consider if you need to include a full TPAR.
Document conditions that don’t meet recommended standards.
Include Peds in Traffic Control Plan.
Questions and Answers
Contact Information

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