Advance Warning Signs

All work zone signing (ground or truck mounted) shall conform to the NMUTCD and NYS Supplement. Special conditions or emergencies may require additional signing. Refer to the MUTCD and the NYS Supplement for guidance on the proper location, message, spacing, sequence, mounting height and size of signs used for traffic control.

Materials
Rigid and flexible "roll-up" signs may be used for mobile, short duration and short term stationary work. Rigid signs must be mounted at least 5 feet above grade (7 feet where there are pedestrians or parked cars) for visibility and to avoid windshield penetration if they are impacted. Flexible signs must be mounted at least one foot above grade. Mesh signs shall not be used. Use retro reflectorized rigid signs for night work because they present a flat, uniform reflective surface. Sign stands/posts must meet NCHRP 350 crash testing standards. Ex: Breakaway posts and hinges.

Installation
All signs should face at approximately right angles to on-coming traffic and be as close to vertical as possible to avoid reflecting sun glare into the driver’s eye. In mobile and short duration work zones, signs may be mounted on vehicles. Orange flags can be mounted on warning signs to enhance their visibility.

Credibility
Signs shall be maintained, clean and with the legend fully intact. They shall remain in place only when needed. Signs which do not reflect actual conditions promote driver disobedience of all signs and therefore should be covered, removed or turned away so they are not visible to traffic in any travel lane. Sign covers must be opaque, and cover the sign face completely. Partially visible signs may divert attention away from traffic and other devices.

If unneeded signs are to be stored at roadside, try to store them out of the clear zone or as far from traffic as practical. If stored close to traffic, lay the signs flat and fold up the legs of the sign supports.

Where operations are performed in stages, only use those devices that apply to the conditions present during the stage in progress. Signs set up over a long distance should be periodically checked.
Guidance for Proper Signing

- Install one or more work zone warning signs whenever the work results in a changed condition which may require a higher level of driver caution. One sign (usually “Road Work Ahead”) may be adequate for minor changes such as removed guide rail, removed edge line or roadside work which does not encroach on the shoulder or travel lane. Use “Road Work Ahead” as the first sign in a warning sign series on minor side roads where distance information is not necessary. Use more signs as the impact on traffic increases. For work which obstructs traffic, a 3 sign series is typical. The first sign is a general warning sign to get the motorist's attention. The second sign warns of the specific condition and the third sign advises the driver of any action to be taken.

- General warning signs such as “Road Work XX Ft” should be limited to the first sign of a series. Subsequent warning signs in that series should identify specific conditions. Use signs shown in the MUTCD/WZTCM for lane and shoulder closure, alignment and intersection signs, flagger and worker symbol signs, road closed, detour, etc.

- Location of advance warning signs should consider exiting and entering traffic. Advance posting distances indicated in the MUTCD and WZTCM are starting points and should be adjusted as appropriate for site specific conditions. Avoid starting a warning sign series upstream from a major exit or intersection, except when it is desirable to divert traffic off the route at that point or where the intersection is within 1000 feet of the work site.

- Where single advance warning signs are provided on ramps or minor intersecting roads, the “Ahead” wording rather than a specific distance is preferred because it is easier to adapt to site conditions and reduces sign inventory needs.

- Warning signs must be located to provide adequate visibility distance to drivers; not blocked by foliage, roadway features, or other signs and traffic control devices; and not located where glare from light sources behind the sign may reduce visibility. Actual distance from a warning sign to the condition should be close to the stated distance on the sign, but accuracy should not be at the expense of sign visibility.

- Signs must be adequately spaced to provide time for the driver to read each one. Sign spacing varies with the type of highway and the prevailing speeds and is specified in the MUTCD and WZTCM. See Advance Warning Sign Spacing Table on the next page for details.
ADVANCE WARNING SIGNS
(Typically a 3 Step Process)

SIGN #3
Gets Drivers Attention
ROAD WORK AHEAD

SIGN #2
Tell Driver of problem to expect
RIGHT LANE CLOSED 1 MILE

SIGN #1
Instructs Driver of what action needs to be taken to avoid problem
Shoulder/Lane Taper OR Point of Restriction

See table Below for A, B, and C distances.

<table>
<thead>
<tr>
<th>Road Type</th>
<th>Distance Between Signs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
</tr>
<tr>
<td>Urban (30 MPH or Less)</td>
<td>100 Ft.</td>
</tr>
<tr>
<td>Urban (35-40 MPH)</td>
<td>200 Ft.</td>
</tr>
<tr>
<td>Urban (45 MPH or Greater)</td>
<td>350 Ft.</td>
</tr>
<tr>
<td>Rural</td>
<td>500 Ft.</td>
</tr>
<tr>
<td>Expressway/Freeway</td>
<td>1,000 Ft.</td>
</tr>
</tbody>
</table>

**URBAN:** (Meets one or more of the following criteria)
- Sidewalks
- Bicycle Usage
- Curbing
- Closed Drainage Systems
- Driveway densities greater than 24 driveways/ mile
- Minor Commercial Driveways densities greater than 10 driveways/mile or greater
- Major Commercial Driveways
- Numerous ROW Constraints
- High Density of Cross Streets
- 85th percentile speeds of 45 MPH or less

**RURAL:** Any area not exhibiting more than one of the above characteristics.

**EXPRESSWAY:** Divided Highway for through traffic with full or partial control of access and generally with grade separations at major crossroads.

**FREeways/INTERSTATE:** Local or interregional high-speed, divided, high-volume facilities with full or partial control of access.
Height and Lateral Location of Signs - Typical Applications

RURAL DISTRICT

ROAD WORK AHEAD

1.8 to 3.7 m (6 to 12 ft)
Not less than 1.5 m (5 ft)

RURAL DISTRICT WITH ADVISORY SPEED PLATE

DETOUR 500 FT
1.8 to 3.7 m (6 to 12 ft)
Not less than 1.8 m (6 ft)

DETOUR 150 m
Not less than 1.2 m (4 ft)
Paved Shoulder

URBAN DISTRICT

ROAD CLOSED 500 FT
Not less than 0.6 m (2 ft)
Not less than 2.1 m (7 ft)

ROAD CLOSED 150 m

URBAN DISTRICT

RIGHT LANE CLOSED 1000 FT
Not less than 0.6 m (2 ft)
Not less than 2.1 m (7 ft)

RIGHT LANE CLOSED 300 m
Methods of Mounting Signs Other Than on Posts

High-Level Warning Device (Flag Tree)

Orange Flag (optional)

PORTABLE AND TEMPORARY MOUNTINGS

UTILITY WORK AHEAD

0.3 m (1 ft) MIN. above the traveled way

Flasher (optional)

BARRICADES