GUIDE LITE®
Light-Weight Snow-Plowable Raised Pavement Marker
Product Description Assembly Manual

TRINITY HIGHWAY
Ahead of the Curve™
GUIDE LITE®

Light-Weight Snow-Plowable Raised Pavement Marker

Product Description
Assembly Manual

2525 N. Stemmons Freeway
Dallas, Texas 75207

Important: These instructions are to be used only in conjunction with the assembly, maintenance, and repair of the GUIDE LITE® Light-Weight Snow-Plowable Raised Pavement Marker. These instructions are for standard assemblies specified by the appropriate highway authority only. In the event the specified system assembly, maintenance, or repair would result in a deviation from standard assembly instructions, contact the appropriate highway authority engineer. Trinity Highway representatives are available for consultation if required.

This manual must be available to the worker overseeing and/or assembling the product at all times. For additional copies, contact Trinity Highway directly at (888) 323-6374 or visit www.trinityhighway.com.

The instructions contained in this manual supersede all previous information and manuals. All information, illustrations, and specifications in this manual are based on the latest GUIDE LITE® system information available to Trinity Highway at the time of printing. We reserve the right to make changes at any time. Please contact Trinity Highway to confirm that you are referring to the most current instructions.

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Customer Service Contacts

Trinity Highway is committed to the highest level of customer service. Feedback regarding the GUIDE LITE®, its assembly procedures, supporting documentation, and performance is always welcome. Additional information can be obtained from the contact information below:

Trinity Highway

<table>
<thead>
<tr>
<th>Telephone:</th>
<th>(888) 323-6374 (USA) +1 (214) 589-8140 (International)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fax:</td>
<td>(800) 770-6755 (USA) +1 (214) 589-8423 (International)</td>
</tr>
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<td>E-mail:</td>
<td><a href="mailto:product.info@trin.net">product.info@trin.net</a></td>
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<tr>
<td>Internet:</td>
<td><a href="http://www.trinityhighway.com">www.trinityhighway.com</a></td>
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</table>

Important Introductory Notes

Proper assembly and placement of the GUIDE LITE® is critical to achieve desired marker performance. These instructions should be read in their entirety and understood before assembling GUIDE LITE®. These instructions are to be used only in conjunction with the assembly of GUIDE LITE®, and are for standard assemblies only as specified by the applicable highway authority. If you need additional information or have questions regarding GUIDE LITE®, please contact the highway authority that has planned and specified this assembly and, if needed, contact Trinity Highway’s Customer Service Department. This product must be placed in the location specified by the appropriate highway authority.
This product has been specified for use by the appropriate highway authority. No person should be permitted to assemble, maintain, or repair this system that does not possess the unique knowledge described above. These instructions are intended for an individual qualified to both read and accurately interpret them as written. These instructions are intended only for an individual experienced and skilled in the assembly of highway products that are specified and selected by the highway authority.

**Important:** Read safety instructions thoroughly and follow the assembly directions and suggested safe practices before assembling or maintaining the GUIDE LITE®. Please keep up-to-date instructions for later use and reference by anyone involved in the placement of the product.

**Warning:** Ensure that all of the GUIDE LITE® Danger, Warning, Caution, and Important statements are followed completely.

### Safety Rules for Assembly

**Important Safety Instructions**

This manual must be kept in a location where it is readily available to persons who assemble, maintain, or repair of the GUIDE LITE®. Additional copies of this manual are available from Trinity Highway by calling (888) 323-6374 or by email at product.info@trin.net. Please contact Trinity Highway if you have any questions concerning the information in this manual or about GUIDE LITE®. This manual may also be downloaded directly from the website listed below.

Always use appropriate safety precautions when operating power equipment and when moving heavy equipment or GUIDE LITE® components. Work gloves, eye protection, safety toe shoes, and back support should be used.

Safety measures incorporating traffic control devices specified by the highway authority must be used to provide safety for personnel while at the assembly, maintenance, or repair site.
Safety Symbols

This section describes safety symbols that may appear in the GUIDE LITE® manual. Read the manual for complete safety and assembly information.

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Safety Alert Symbol" /></td>
<td><strong>Safety Alert Symbol</strong>: Indicates Danger, Warning, Caution, or Important. Failure to read and follow the Danger, Warning, Caution, or Important indicators could result in serious injury or death to the workers and/or bystanders.</td>
</tr>
<tr>
<td><img src="image" alt="Warning Symbol" /></td>
<td><strong>Warning</strong>: Do not assemble, maintain, or repair the GUIDE LITE® until you have read this Manual thoroughly and completely understand it. Ensure that all Danger, Warning, Caution, and Important statements within the manual are completely followed. Please call Trinity Highway at (888) 323-6374 if you do not understand these instructions.</td>
</tr>
<tr>
<td><img src="image" alt="Warning Symbol" /></td>
<td><strong>Warning</strong>: Safety measures incorporating appropriate traffic control devices specified by the highway authority must be used to protect all personnel while at the assembly, maintenance, or repair site.</td>
</tr>
<tr>
<td><img src="image" alt="Warning Symbol" /></td>
<td><strong>Warning</strong>: Use only Trinity Highway parts that are specified herein for the GUIDE LITE® for assembling, maintaining, or repairing the GUIDE LITE®. Do not utilize or otherwise comingle parts from other systems even if those systems are other Trinity Highway systems. Such configurations have not been tested for use. Assembly, maintenance, or repairs using unspecified parts or accessories is strictly prohibited.</td>
</tr>
<tr>
<td><img src="image" alt="Warning Symbol" /></td>
<td><strong>Warning</strong>: Do NOT modify the GUIDE LITE® in any way.</td>
</tr>
<tr>
<td><img src="image" alt="Warning Symbol" /></td>
<td><strong>Warning</strong>: Ensure that your assembly meets all appropriate Manual on Uniform Traffic Control Devices (MUTCD) and local standards.</td>
</tr>
<tr>
<td><img src="image" alt="Warning Symbol" /></td>
<td><strong>Warning</strong>: Ensure that your assembly procedure meets all appropriate Occupational Safety and Health Administration (OSHA) and local standards.</td>
</tr>
</tbody>
</table>

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Limitations and Warnings

The GUIDE LITE® is intended to be assembled, and maintained in accordance with specific guidelines. It is important for the highway authority specifying the use of a highway product to select the most appropriate product configuration for its site specifications. Careful evaluation of the site lay out, vehicle population type and speed, traffic direction, and visibility are some of the elements that require evaluation in the selection of a highway product.

Recommended Materials

Materials Provided

GUIDE LITE® with or without reflective lens as indicated on purchase order.

Required Materials

Adhesive - Poly-Carb Mark 29.9 two-part epoxy system or equivalent. Adhesive used must meet AASHTO M237, Type IV specifications.

Optional Materials (if placing reflector elements onto marker or if performing reflector element field replacement)

Reflector - 3M Series RPM-190 or equivalent

Liquid Nails LN-602

4x4x6 wood block or similar object (used to support the marker body)

Recommended Tools

- Plunge cut saw equipment
- Stacked diamond saw blade set with shims. 18" diameter blades bordered by 20" diameter blades (see p. 11).
- Air Compressor (oil-free & 90 psi minimum) and Generator (5 kW)
- Adhesive dispensing equipment
- Calipers
- Tape measure
- Ruler
- Mallet

Note: The above list of tools is a general recommendation and should not be considered an exhaustive list. Depending on specific site conditions and the complexity of the assembly specified by the appropriate highway authority, the required tools may vary. Decisions as to what tools are needed to perform the assembly properly are in the sole discretion of the specifying highway authority and the authority's selected contractor performing the assembly of the system at the authority's specified assembly site.
Know Your GUIDE LITE®

Marker Retention Friction Tabs

The marker is lightweight (1.4 lbs) and tends to float in uncured adhesive. To keep the marker in position while the adhesive is setting up, four friction tabs are located on the sides of the marker. When the GUIDE LITE® is pressed into the road slot, the friction tabs grip the slot walls and prevent the marker from lifting.

Figure 1 – Location of the Four Marker Retention Friction Tabs
Figure 2 – Friction Tab

Detail A – Tab Side View
Figure 3 – Friction Tab Top View
As the marker is pressed or tapped into the slot, the friction tabs scrape away against the slot wall, providing a snug friction fit to prevent the marker from floating in the fresh liquid adhesive.

(Note: adhesive omitted from image for clarity)

Friction tab (highlighted portion) scrapes away when the marker is placed into the slot.
Slot Dimensions

Figure 5 - Section View Showing Slot Dimensions and Marker Position in Slot

**Important:** It is critical to set up the saw blade dado stack to within the specified tolerance range. If the slot is too narrow, then the marker will not sit low enough in the slot. If the slot is too wide, then the marker retention friction tabs will not engage, which would cause the marker to float in the wet adhesive.
Reflector Element Placement (as required)

If a GUIDE LITE® was ordered without the reflector element already attached, then follow the instructions in this section. Otherwise skip to Step 1 in the GUIDE LITE® Marker Placement Procedure section on page 13.

1. Remove the release paper from the bottom of the reflector, exposing the butyl pad.

2. Place an approximately 3/8” wide bead of Liquid Nails (LN 602) in the center of the butyl pad running end to end along the long axis (see Figure 6). Before using the adhesive, ensure that the ambient temperature and weather conditions are within the specifications recommended by the adhesive manufacturer. Be sure to follow all of the manufacturer's recommended procedures and guidelines for handling, and applying the adhesive.

![Figure 6 - Bottom of Reflector with 3/8” Wide Bead of Liquid Nails LN-602 Applied]

3. Now, place the reflector into the marker body pocket. With the marker body supported by the wood block as shown in Figure 7, apply foot pressure (approximately 150 lbs) for 3 to 5 seconds. The Liquid Nails (LN 602) adhesive should flow out around the edges of the reflector as an indicator that the adhesive completely covers the entire bottom of the reflector. If any excess adhesive gets onto the reflector lens, wipe the lens clean using a moist cloth immediately.

![Figure 7 - Placing the Reflector onto the Guide Lite® Marker Body with the marker body center section fully supported by a wood block or similar object.]

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GUIDE LITE® Marker Placement Procedure

STEP 1 - Determine Marker Location
The marker shall be oriented so that the reflector face is perpendicular to the direction of traffic. Avoid placing markers where the snow plow will be traversing the roadway at right angles to the marker. The markers must be oriented so that the snow plow blade scrapes the marker rails in the longitudinal direction. Space the markers according to the engineering plans or as directed by the road authority.

Important: Place the marker at least 2" from any joint or crack in the pavement surface.

STEP 2 - Cut the Slot

Caution: Markers must be placed in a new saw cut slot. NEVER attempt to reuse an existing slot that previously held a marker.

Warning: Consult saw manufacturer's safety instructions before cutting marker slots.

Set up the saw blades per the dimensions shown on page 11. Cut the pavement with a single plunge cut to the depth shown on page 11. Check that the dimensions of the slot are within the specified tolerances (see p. 11).

STEP 3 - Check the Slot Dimensions Using a Marker
Place a marker in the slot to verify the slot dimensions are correct. Do NOT push or tap the marker down into the slot at this time as doing so will scrape away the marker retention friction tabs and interfere with proper marker placement.

With the marker placed gently in the slot, check that the leveling tabs are between 3/16" and 3/8" above the pavement surface (see Figure 8).

Figure 8 - Test Fitting the Marker in the Slot
STEP 4 - Clean the Slot
Blow any debris or contaminant from the slot using (90 psi) oil-free compressed air to ensure it is completely dry to bond with the adhesive. The surface must be free from oil, grease or any other contaminants.

STEP 5 - Apply the Adhesive
Before applying the adhesive, ensure that the ambient temperature and weather conditions are within the specifications recommended by the adhesive manufacturer. Follow all of the manufacturer's recommended procedures and guidelines for handling, mixing and applying the adhesive.
Dispense the adhesive so that there is enough to fill the slot to approximately 3/8" below the pavement surface. As the marker is set into place, some adhesive should squeeze out and around all marker edges. Adjust the amount of adhesive so there is enough to fill all of the spaces between the marker edges and the slot, but not so much that the adhesive spills onto the marker body or the reflector.

STEP 6 - Place the Marker
Place the marker into the adhesive-filled slot. Press the marker down by stepping on the rails or use a mallet on the rails to tap the marker in place. Step or tap until all four leveling tabs are resting flat on the pavement surface (see Figures 9 & 10). Check that the marker tips are below the pavement surface. Avoid stepping on or striking the reflector.

Caution: It is critical that all four leveling tabs are resting on the pavement surface.

Figure 9 - Ensure that all four leveling tabs are contacting the road surface. (adhesive not shown for clarity)
**Completed Marker Placement**

Protect the markers from traffic until the adhesive completely hardens. Consult adhesive manufacturer specifications for cure times and conditions.

![Completed Marker Placement](image)

**Figure 10 - Completed Marker**

**Reflector Field Replacement**

In the case where the reflector is missing or damaged and requires replacement, follow this procedure: 1) Pry the old reflector from the marker pocket. 2) Scrape the old adhesive from the marker pocket. Use only non-powered hand tools on the marker. 3) Place an approximately 3/8" wide bead of Liquid Nails (LN 602) in the center of the butyl pad running end to end along the long axis (see p. 12). Before using the adhesive, ensure that the ambient temperature and weather conditions are within the specifications recommended by the adhesive manufacturer. Follow all of the manufacturer's recommended procedures and guidelines for handling, and applying the adhesive. 4) Place the reflector into the marker pocket and apply foot pressure (approximately 150 lbs) for 3 to 5 seconds. The Liquid Nails (LN 602) adhesive should flow out around the edges of the reflector as an indicator that the adhesive completely covers the entire bottom of the reflector. If any excess adhesive gets onto the reflector lens, wipe the lens clean using a moist cloth.
Notes:
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