

Yodock Waterfilled Barrier Wall

Quick reference installation guide
June 2002

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* This guide is only a reference, See full Installation Manual for detailed product information.

DEPLOYMENT AND RETRIEVAL

Site Considerations

Before any work zone devices are deployed, a qualified engineer should develop a detailed traffic control plan. Special site considerations, including but not limited to, are outlined below:

Design speed at work zone location, i.e. 60 mph, 45 - 60 mph, or 45 mph and less. If design speeds exceed 45 mph, Model 2001 should be specified and deployed. If design speeds are 45 mph or less, Model 2001M is appropriate.

Allowable deflections upon impact by errant vehicles. The NCHRP Report 350 crash tests are at severe angles and speeds, however, likely impact angles and speeds should be considered and deflections accounted for.

Appropriate termination or protection of end segments. The AASHTO Roadside Design Guide provides guidance on appropriate termination or protection of temporary concrete barriers and similar guidelines should be followed.

Release of water ballast should be evaluated. In most cases problems should not be created for motorists or work zone workers. If these issues are problematic, consideration should be given to capture of water ballast.

Are freezing conditions likely? Contact vendor if condition is likely.

Can units be deployed with small hoists or fork lifts? Pre-assembly of steel tubular members may expedite the installation process.

Pre-Installation

Ease of installation and safety can be enhanced by a well equipped and well informed installation crew. Consider some of the following points prior to actual site installation.

Familiarize the crew with site location, layout and orientation.

Conduct a survey of anticipated parts needed. Verify adequate number of barriers and steel components are readily available. Verify all units have plugs and caps (if caps are required). Have extra bolting hardware available, assure proper Grade bolts are used.

Have proper tools for installation of steel hardware, i.e. wrenches, sockets, and air tools, if being used.

Inspect all units for cracks and damage that may cause leakage. Discard damaged units and replace.

Train crew in off-site location as to proper installation techniques.

Check for adequate water supply. Assume 100 gallons for each Model 2001M unit to be filled and 200 gallons for each Model 2001 unit to be filled.

Tools and Equipment

1. Impact wrench or ratchet with 1 1/8" & 1 1/4" socket
2. Large crescent wrench or 1 1/4" box wrench
3. Gloves
4. Ample water supply with a means of filling units once deployed
5. Small sledge hammer

Installation

Good planning always minimizes installation time. It may be desirable to pre-assemble units in yard before proceeding to installation site. It may be necessary to have a small forklift or backhoe on site for placement of the units if the railing is pre-installed. Pre-assembled units can be connected together into sections of up to 6 units. These sections can be transported to the installation site, reducing the installation of individual units on site. If you choose to assemble the units on-site, please follow the procedure outlined below.

1. Place plastic units in the approximate installation location with a minimum of 1' between the units. (See Figure)



2. Assemble one side of the railing system by placing Long (9") bolts through the square tube, wooden spacer block, and support channel. Place washer and nut on bolt in channel section. It may be helpful to not tighten nuts at this time. (See Figure)



3. Place assembled tubular railing through fork holes. (See Figure)



4. Attach opposite side railing with long (9") bolts. Place bolt through the tubular railing, wooden block and support channel. Secure with nut and washer. (See Figure)



5. Insert coupler tube and secure with Grade 8 hex headed bolt on both sides of unit. Place washer under head of bolt as well as the nut. (See Figure)



6. Slide adjacent units together and repeat Step 5. (See Figure)



7. Tighten all previously installed bolts and nuts.
8. Repeat Steps 1 through 7 until desired number of units are assembled.
9. Fill units with water.
10. Check for leaks and replace as necessary.



The ends of the installations should be protected with crash attenuation devices or flared away from possible vehicle impacts. The traffic engineer determines guidance for proper flare rates and distances.

If problems are encountered, please contact The Yodock Wall Company, Inc. at 888-496-3625.