



**INDIANA DEPARTMENT OF TRANSPORTATION
DIVISION OF MATERIALS AND TESTS**

**PROCEDURE FOR EVALUATION AND QPL REQUIREMENTS
FOR ADA COMPLIANT WORK ZONE DEVICES
ITM No. 958-21**

1.0 SCOPE

- 1.1 This procedure establishes the method that a device used to provide temporary access for pedestrians during highway construction is evaluated and is placed, maintained, or removed from the approval list.
- 1.2 Devices submitted for evaluation will be considered for approval under one of the following sub-lists: Temporary Curb Ramp, Temporary Accessible Pedestrian Path, Temporary Pedestrian Channelizer, or Audible Information Device.
- 1.3 This ITM may involve hazardous materials, operations, and equipment and may not address all of the safety problems associated with the use of the test method. The user of the ITM is responsible for establishing appropriate safety and health practices and determining the applicability of regulatory limitations prior to use.

2.0 REFERENCES

2.1 Industry Standards

ASTM F1637 Standard Practice for Safe Walking Surfaces

2.2 Other Standards

ADA Rules 2010 ADA Standards for Accessible Design, Title II
<https://www.ada.gov/regs2010/2010ADASTandards/2010ADASTandards.htm>

Indiana Manual on Uniform Traffic Control Devices (IMUTCD)

2011 Proposed Public Rights-of-Way Accessibility Guidelines (PROWAG)

3.0 TERMINOLOGY. Definitions for terms and abbreviations shall be in accordance with the Department's Standard Specifications, Section 101.

- 3.1 **Temporary Curb Ramp.** Temporary curb ramps provide a sloped access route from a permanent sidewalk or temporary accessible pedestrian pathway down to the vehicular roadway.
- 3.2 **Temporary Accessible Pedestrian Path.** Temporary Accessible Pedestrian Pathways are either permanent sidewalks used as a detour for a closed segment of

sidewalk, temporary sidewalk constructed per INDOT's Standard Specifications, or prefabricated surfaces that meet ADA requirements. This test method is the basis of approval for prefabricated surfaces.

- 3.3 Temporary Pedestrian Channelizer.** Temporary pedestrian barriers are used to separate pedestrians from either vehicular traffic or the work area. These barriers have detectable edge along the bottom of the barrier to aid disabled users.
- 3.4 Audible Information Devices.** Audible Information Devices provide sidewalk or crosswalk closure and detour or alternate route information to visually impaired pedestrians.
- 4.0 SIGNIFICANCE AND USE.** This ITM is used to evaluate, approve, maintain approval, and remove devices which are placed on the Department List of ADA Compliant Work Zone Devices. Each model will be evaluated separately.
- 5.0 SAMPLING.** Upon review and acceptance of the documentation required in Section 6.2 the manufacturer shall furnish, at no cost to the Department, a randomly selected production-run unit of each model to be evaluated for a physical inspection. The manufacturer shall deliver the test unit to the location (typically INDOT Traffic Management Center or the Indianapolis sub-district) determined by the Department.
- 6.0 SUBMITTAL**
- 6.1** The manufacturer shall submit the Preliminary Product Evaluation Form for each model to be considered for the approved list.
- 6.2** The following documentation regarding the proposed model shall be submitted with the Evaluation Form.
- 6.2.1** Model specifications and data sheets; the data sheet must indicate the material used.
- 6.2.2** MASH-16 or NCHRP 350 crash testing compliance report, temporary pedestrian channelizers only.
- 6.2.3** An invoice showing an initial zero-dollar amount (\$0.00) for the use of the evaluation sample device during the evaluation. The invoice shall also list the deferred cost of the device the Department would pay if the device is purchased instead of returned upon the successful completion of the evaluation.

The requestor is encouraged to submit any supporting documents and references as to the manufacturer's experience and performance history. This documentation should indicate experience in providing devices for public agency projects and attest to long term stability of the manufacturer.

7.0 EVALUATION. The evaluation will consist of two steps: the first is a review of the required documentation, then a physical inspection. For Audible Information Devices an operational demonstration is also required. The Department may waive the field test step if the model has already been satisfactorily demonstrated to the Department.

7.1 Submittal Documentation Review. The documentation provided with the Evaluation Form will be reviewed by the Office of Traffic Administration for completeness and to demonstrate the model meets or exceeds the requirements set forth in INDOT's Specifications. The documentation may also be reviewed by the ADA Technical Advisory Committee, the Work Zone Safety Office, the Materials & Tests Division, and the Traffic Design Office.

This review will verify the following for each device type:

7.1.1 Temporary Curb Ramps:

7.1.1.1 Shall be a minimum of 48" wide

7.1.1.2 Shall have edge support or has a flare rate of 2.00% or less for curb heights less than 6 in.

7.1.1.3 Edge support shall be a minimum 4" in height

7.1.1.4 Rails or other barriers, if applicable, shall project no more than 4" into the curb surface.

7.1.1.5 Vertical pickets, if applicable, shall be spaced no greater than 4"

7.1.1.6 Shall have a loading capacity of 750 lbs.

7.1.1.7 Sections of the temporary curb ramp shall weigh no more than 50 lbs.

7.1.2 Temporary Pedestrian Access Route.

7.1.2.1 Shall be a minimum of 48" wide

7.1.2.2 The surface shall not be made of plywood

7.1.2.3 The surface shall be firm

7.1.2.4 The surface shall be stable

7.1.2.5 The surface shall be slip resistant

7.1.3 Temporary Pedestrian Channelizer.

- 7.1.3.1 The channelizer shall have a minimum height of 32 in. and a maximum of 38 in.
- 7.1.3.2 The channelizer shall have a continuous handrail edging no greater than 2" below the top of the support device.
- 7.1.3.3 The handrail edging shall be mounted so that it is a minimum of 2" from the vertical surface of the support.
- 7.1.3.4 The handrail edging shall have strips of alternating orange and white reflective sheeting or surface oriented vertically or at a 45° angle.
- 7.1.3.5 The channelizer shall have a continuous detection plate no greater than 2" above the bottom of the support device.
- 7.1.3.6 The detection plate shall be a minimum 8" in height.
- 7.1.3.7 The detection plate shall have strips of alternating orange and white reflective sheeting or painted surface oriented vertically or at a 45° angle.
- 7.1.3.8 A gap height or opening from the walkway surface for drainage mat be provided but shall be no more than 2 in. in height.
- 7.1.3.9 Pedestrian channelizers shall be free of sharp or rough edges, and fasteners shall be rounded to prevent harm to hand, arms or clothing of pedestrians.

7.1.4 Audible Information Devices.

- 7.1.4.1 The device shall be capable of on-site message programming.
- 7.1.4.2 The device shall have a built-in speaker for broadcasting.
- 7.1.4.3 The device shall have a minimum 60 second message duration
- 7.1.4.4 The device shall have a built-in sensor that detect pedestrians at a minimum range of 15 ft,
- 7.1.4.5 The device shall be battery powered.
- 7.1.4.6 The device shall be mountable on channelizing devices, pedestrian barriers, or on an independent support post.

7.2 Physical Inspection/Operational Demonstration. Once all the required

documentation is reviewed and found to be acceptable the following will be verified by INDOT

7.2.1 Temporary Curb Ramp

7.2.1.1 is a minimum of 48" wide

7.2.1.2 has edge support or has a flare rate of 2.00% or less for curb heights less than 6 in.

7.2.1.3 Edge supports are a minimum 4" in height

7.2.1.4 Rails or other barriers, if applicable, project no more than 4" into the curb surface

7.2.1.5 Vertical pickets, if applicable, are spaced no greater than 4"

7.2.1.6 Have a loading capacity of 750 lbs.

7.2.1.7 Individual sections weigh no more than 50 lbs.

7.2.2 Temporary Pedestrian Access Route.

7.2.2.1 Shall be a minimum of 48" wide

7.2.2.2 The surface shall not be made of plywood

7.2.2.3 The surface shall be firm

7.2.2.4 The surface shall be stable

7.2.2.5 The surface shall be slip resistant

7.2.3 Temporary Pedestrian Channelizer.

7.2.3.1 The channelizer shall have a minimum height of 32 in. and a maximum of 38 in.

7.2.3.2 The channelizer shall have a continuous handrail edging no greater than 2" below the top of the support device.

7.2.3.3 The handrail edging shall be mounted so that it is a minimum of 2" from the vertical surface of the support.

7.2.3.4 The handrail edging shall have strips of alternating orange and white sheeting or painted surface oriented vertically or at a 45° angle.

7.2.3.5 The channelizer shall have a continuous detection plate no greater than 2” above the bottom of the support device.

7.2.3.6 The detection plate shall be a minimum 8” in height.

7.2.3.7 The detection plate shall have strips of alternating orange and white sheeting or painted surface oriented vertically or at a 45° angle.

7.2.3.8 A gap height or opening from the walkway surface for drainage mat be provided but shall be no more than 2 in. in height.

7.2.3.9 Pedestrian channelizers shall be free of sharp or rough edges, and fasteners shall be rounded to prevent harm to hand, arms or clothing of pedestrians.

7.2.4 Audible Information Devices. For this device the manufacturer at their discretion shall demonstrate either in person or virtually these performance requirements. The manufacturer must still provide a unit for physical examination by INDOT even if the operational demonstration is to be remote.

7.2.4.1 The device shall be capable of on-site message programming.

7.2.4.2 The device shall have a built-in speaker for broadcasting.

7.2.4.3 The device shall have a minimum 60 second message duration

7.2.4.4 The device shall have a built-in sensor that detect pedestrians at a minimum range of 15 ft.

7.2.4.5 The device shall be battery powered.

7.2.4.6 The device shall be mountable on channelizing devices, pedestrian barriers, or on an independent support post.

8.0 REPORT. A final report will include the notations and findings from the evaluation review including the submittal documentation review and the physical inspection or operational demonstration.

9.0 QPL

9.1 Consideration for Inclusion of ADA Compliant Work Zone Devices. The model may be placed on the appropriate QPL when the following conditions are met:

- 9.1.1 A potential net benefit to the Department is realized by inclusion of the item on the QPL.
- 9.1.2 The physical review and operational demonstration (if required) is completed with satisfactory results.
- 9.1.3 The required documentation is submitted and acceptable.

9.2 Maintaining Standing on QPL.

- 9.2.1 The Division of Traffic Administration shall be notified each time any update or revision of the model is made, and the changes and benefits of the change shall be submitted. The Department will determine if and to what extent a revision is to be placed into field operation and may fully re-evaluate any model revision.
- 9.2.2 If the manufacturer makes any changes to an approved model to correct a safety issue, the Department shall be notified immediately. The manufacturer shall correct all existing equipment purchased by the Department either directly, by contract, or through agreement prior to the change being incorporated at the manufacturer's production level.
- 9.2.3 A design change to an approved model will require a submittal of documented changes. At the discretion of the Department, resubmission of the model for testing and evaluation may be required. Permanent addition or removals of component parts are examples of items that are considered to be design changes.

9.3 Removal from QPL. The Department reserves the right to remove models from the qualified products list for, but not limited to, the following reasons: .

- 9.3.1 Changes in the components or production process that fail testing and/or evaluation.
- 9.3.2 Recurring similar product failures indicative of a manufacturer's defect
- 9.3.3 Failure to provide or notify the Department of the items required in Section 9.2 above.

9.4 The Department may choose to limit the number of models on any of the sub lists.

**INDIANA DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING DIVISION
PRELIMINARY INFORMATION FOR PRODUCT MATERIAL EVALUATION**

Trade Name _____ Date _____

Manufacturer _____ Patented? Yes _____ No _____ Applied for _____

Address _____
Street No (P. O. Box) _____ City _____ State _____ Zip Code _____

Representative _____ Phone No () _____

Address _____
Street No (P. O. Box) _____ City _____ State _____ Zip Code _____

Product Information _____

Materials Composition _____

** Is this product considered HAZARDOUS MATERIAL when disposing of non-used or surplus materials? Yes _____ No _____

** What is the shelf life of this material? Years _____ Months _____ N/A _____

Recommended Use-Primary _____

Recommended Use-Alternate _____

Advantages and/or Benefits _____

** Material specifications by manufacturer, installation/operation manual, maintenance manual, literature, test results, guarantee, hazardous material data sheets, plan, picture, or sketch are required to be submitted with this form. For electronic devices, the schematic diagram, parts list, and parts layout diagram are required to be submitted for each printed circuit board within the device.

Meets following specifications:

AASHTO _____

ASTM _____

OTHER _____

Use by highway authorities or similar agencies in other states.

Agency	Years Used	Remarks
_____	_____	_____
_____	_____	_____
_____	_____	_____

** Has product ever been evaluated by and rejected for use by a governmental agency?

Yes _____ No _____ If yes, by what agency and for what reason?

Will demonstration be provided? Yes _____ No _____

Availability: Seasonal _____ Non-seasonal _____ Delivery at site _____

After receipt of order, are quantities limited? Yes _____ No _____

** Will FREE SAMPLES be furnished? Yes _____ No _____

If yes, Quantity Furnished _____

** If the sample is salvageable, do you desire to have it returned? Yes _____ No _____

(Desired return of salvageable samples will be at the supplier's expense. The manufacturer agrees upon the return of salvageable samples, such samples may be damaged or non-operable. Normal care will be taken that the samples, when returned, are in operable condition; however, INDOT does not guarantee that the returned samples will be operable.)

Will laboratory analysis be furnished? Yes _____ No _____

** Approximate cost _____ Royalty Cost _____

When was the product introduced to the market? _____

This product is an alternate for what product? _____

Will warranty be provided? Yes _____ No _____ If yes, for how long? _____

Background of company, including principal products _____

What offices of the Indiana Department of Transportation have been contacted?

Additional Information _____

(Attach additional sheets as necessary)

Person furnishing information _____
Name Title

Address _____
Street No (P. O. Box) City State Zip Code

Items marked ** MUST BE RESPONDED TO or further consideration may not be given for this product.

Please mail this form to: Director, Traffic Administration Division
Indiana Department of Transportation
100 N Senate Ave, Room N758-TE
Indianapolis, IN 46204

If INDOT elects to evaluate your product, the equipment will be shipped to:

Traffic Evaluations
Indiana Department of Transportation
8620 E. 21st Street
Indianapolis, IN 46219