

Construction Impacts to Active Transportation



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August, 2019

Overview

Development can affect the right-of-way (ROW) users' experience; lane and sidewalk closures impact accessibility, mobility, convenience, and safety for active transportation users, transit riders, and people driving cars. This overview addresses the existing regulations, deficiencies, and goals concerning the impact of construction on active transportation in the Ann Arbor area.

Existing Regulations

Federal, state, and local regulations govern the accommodations developers must make for pedestrians in and around a construction zone. The Manual on Uniform Traffic Control Devices (MUTCD), issued by the Federal Highway Administration and mandated for state adoption in 2010, sets pedestrian safety and accessibility standards for construction zones. The Michigan MUTCD (MMUTCD) conforms closely with the federal edition, with Part 6 requiring that:

- Advance notification of sidewalk closures be provided.
- Adequate pedestrian access and walkways be provided.
- Accessibility and detectability be maintained along the alternate pedestrian route, including accessibility features consistent with the features present in the existing pedestrian facility.
- A barrier that is detectable by a person with a visual disability be placed along the construction zone where pedestrians with visual disabilities normally use the closed sidewalk.

In addition to federal and state regulations, the City of Ann Arbor Code of Ordinances imposes additional requirements for pedestrian access in construction zones. The code prohibits the occupation of the public ROW with construction materials without first obtaining a construction and barricade permit from Planning and Development Services. Additionally, it specifies at least six feet of sidewalk space must be kept clear for pedestrian access and, if a free passageway is impracticable, a temporary plank sidewalk with substantial railings or a sidewalk shelter must be built. There are no set criteria for allowing the closure of a sidewalk, but rather each situation is reviewed on its own merits, including location, pedestrian impacts, type of street, type of construction, etc. The specifications for temporary pedestrian structures and direction are contained in the barricade permit requirements, which include:

- Maintaining pedestrian traffic at all times.
- Meeting or exceeding all Michigan Department of Transportation (MDOT) minimum requirements, and being in accordance with Part 6 of the current edition of the MMUTCD.
- Placing American with Disabilities Act (ADA)-approved barricades and reflective 'Sidewalk Closed-Cross Here' signs.
- Paying the set sidewalk occupancy fee of \$.05 [5 cents] per ft² per day.

Existing Deficiencies

Provisions for bicyclists and wheelchair users, populations that help compose active transportation, remain omitted from federal, state, and local regulations. In addition to regulatory gaps, inconsistencies persist in the enforcement of pedestrian access requirements, resulting in temporary pedestrian facilities with drastically varying quality and signage clarity. Active transportation accommodations and enforcement inconsistencies occur not only on a project-by-project basis, but also between private, university, utility, and city-led construction.

Goals and Guidance

The city has expressed its ambition to implement better active transportation accommodations in construction zones through the Pedestrian Safety and Access Task Force Report and the 2013 Non-Motorized Transportation Plan Update. Both guidance documents call for improved temporary non-motorized access through or around construction sites, including but not limited to pedestrian access. The Task Force Report recommends sidewalk diversion into, and partial closure of, the roadway or parking lane, rather than compensation for a closure with a cross-street detour. Additionally, the report suggests that ROW occupancy fees be adjusted to incentivize developers to keep pedestrian routes open (e.g., waiving the bagged parking meter fee if the parking spaces are being used to accommodate pedestrians).

Beyond Ann Arbor's goals and guidance documents, the MUTCD and the United States Access Board's *Proposed Accessibility Right-of-Way Guidelines* both issue recommendations for pedestrians and wheelchair users in construction zones (bicyclists are not included). The *Right-of-Way Guidelines* specify steps that can be taken to improve access for disabled individuals, ranging from people with sight impairments to those with assistive mobility devices, such as wheelchairs. The MUTCD provides guidance and concrete direction on how to improve active transportation users' experience in construction zones, recommending that:

- In general, pedestrian routes be preserved in urban and commercial suburban areas and alternative routing be discouraged.
- Pedestrians not be led into conflict with vehicles, equipment, and operations in and around the worksite and signage be provided if advanced road crossing is necessary.
- Pedestrians be provided with a convenient and accessible path that replicates the existing path as closely as possible.
- Pedestrian routes not be severed and/or moved for non-construction activities such as parking for vehicles and equipment.
- Adequate provisions be made for pedestrians with disabilities, including providing audible information devices.
- A smooth, continuous hard surface be provided throughout the entire length of the temporary pedestrian facility without curbs or abrupt changes in grade that could cause

- tripping or impede wheelchair use. The geometry and alignment of the facility should meet the applicable requirements of the ADA *Accessibility Guidelines for Buildings and Facilities*.
- Traffic control devices and other construction materials and features not intrude into the usable width of the sidewalk, temporary pathway, or other pedestrian facility.

By pursuing existing goals, incorporating local and federal recommendations, and making additional accommodations for bicycles, Ann Arbor can advance safety, convenience, and accessibility for people who walk, people who bike, and people who rely on assisted mobility devices.

Background Research

Local Regulations

Ann Arbor Code of Ordinances

- **4:21. - Right-of-way occupancy during construction.**
“No person shall occupy any street with any materials or equipment incidental to the construction, demolition or repair of any structure, without first obtaining a permit from the Planning and Development Services Manager or his/her designee, and without complying with all regulations regarding the erection of construction barricades on public property or public streets.”
(Ord. No. 21-76, 8-2-76; Ord. No. 31-99, § 1, 7-19-99; Ord. No. 43-04, § 19, 1-3-05)
- **4:22. - Pedestrian passage.**
“At least 6 feet of sidewalk space shall be kept clean and clear for the free passage of pedestrians and if the building operations are such that such free passageway is impracticable, a temporary plank sidewalk with substantial railings or sidewalk shelter built in accordance with Chapter 98 of this Code, shall be provided around such obstruction.”
(Ord. No. 21-76, 8-2-76)

Ann Arbor Barricade Permit

- **Barricade Permit Requirements**
“PLANS: Applicant must submit a site plan identifying the area to be occupied, all traffic control devices, and screening and safety devices to be used. Traffic and pedestrian control and access must be provided consistent with the requirements outlined in Attachment B. Street and/or sidewalk locations (to the nearest property address) and a scale must be included.”
- **Attachment B: Traffic and Pedestrian Control and Access (Appendix A)**
 - “The contractor shall maintain local vehicular and pedestrian traffic and access to all properties, private drives, etc., throughout the project at all times unless otherwise noted on the plans and arranged and approved in writing by the Public Services Administrator. Traffic control devices and personnel to control and direct traffic movement to residences along a road are the responsibility of the contractor. Traffic control shall meet or exceed all MDOT minimum requirements, and be in accordance with Part VI of the current edition of the Michigan Manual of Uniform Traffic Control Devices (MMUTCD).”
 - “Pedestrian traffic shall be maintained at all times. For maintaining normal pedestrian traffic while performing sidewalk and driveway repair, ADA longitudinal barricades shall be placed by the Contractor, as directed by the Public Services Administrator. Reflective ‘Sidewalk Closed-Cross Here’ signs shall be placed by the Contractor, as needed and as directed by the Public Services Administrator.”
- **Pricing**
Sidewalk Occupancy: \$.05 [5 cents] per ft² per day

State Regulations

Michigan Manual of Uniform Traffic Control Devices (MMUTCD) 2011

- No substantial additions to MUTCD Chapter 6D.01 and 6D.02 (p.561-564 of MMUTCD).

Federal Regulations

[Manual on Uniform Traffic Control Devices \(MUTCD\) 2009](#)

States must adopt the 2009 National MUTCD as their legal State standard for traffic control devices within two years from the effective date, January 15, 2010. Applies to all public streets, highways, or bicycle ways.

- **CH 6D – Temporary Traffic Control: Pedestrian and Worker Safety (Appendix B)**
 - “The needs and control of all road users (motorists, bicyclists, and pedestrians within the highway, or on private roads open to public travel (see definition in Section 1A.13), including persons with disabilities in accordance with the Americans with Disabilities Act of 1990 (ADA), Title II, Paragraph 35.130) through a TTC zone shall be an essential part of highway construction, utility work, maintenance operations, and the management of traffic incidents” (p.547).
 - Section 6D.01 Pedestrian Considerations (p.561)
“Standard: The various TTC provisions for pedestrian and worker safety set forth in Part 6 shall be applied by knowledgeable (for example, trained and/or certified) persons after appropriate evaluation and engineering judgment. Advance notification of sidewalk closures shall be provided by the maintaining agency. 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.”
 - 6D.02 Accessibility Considerations (p.563)
“Standard: 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. Where pedestrians with visual disabilities normally use the closed sidewalk, a barrier that is detectable by a person with a visual disability traveling with the aid of a long cane shall be placed across the full width of the closed sidewalk.”

Local Recommendations & Guides

[Pedestrian Safety and Access Task Force Report](#)

- **Objective No. 1) H. Provide Safe and Accessible Pedestrian Routes in all Construction Zones.** (p.12)
“The City should ensure through building codes, fees, policy and enforcement that a direct, safe and accessible pedestrian route is provided in all construction zones, including providing a protective shed where appropriate. All pedestrian construction routes should comply with the Michigan Manual of Uniform Traffic Control Devices (MMUTCD) and Americans with Disabilities Act (ADA) standards. When construction requires the relocation of a transit stop or interferes with access to transit in any manner, the City shall coordinate with the transit provider to ensure that safe and barrier free access is maintained during the entire course of construction. In accordance with best practices, when space is limited, a sidewalk diversion into the roadway on the same side of the street as the sidewalk should be provided rather than a sidewalk detour to the other side of a street. A pedestrian construction route should take precedent over on-street parking and all but one through motor vehicle lane in each direction when creating barrier free sidewalk diversions.”
- **Implementation Strategies – 3. Funding) B. Provide Incentives to Keep Pedestrian Routes Open During Construction.** (p.25)

“The City should re-evaluate the costs to developers for closing a pedestrian route for construction relative to the cost for keeping it open, and should adjust fees as necessary to give the developer an incentive to keep a pedestrian route open. The City should consider waiving the meter bag fee when metered parking spaces are being closed for the purpose of providing a place for pedestrians to walk at a construction site.”

[Transportation Master Plan Update 2009](#)

- **None found.**

[Non-Motorized Transportation Plan Update 2013](#)

- **3.2 ADA Compliance Issues** (p.107)
 - “At the writing of this plan, the ADA Transition Plan is being updated by City staff. The update will include evaluations of the City’s programs, services and facilities for compliance with Title II. This evaluation should incorporate guidance from the Comprehensive Non-Motorized Plan to support improved access for all pedestrians, including requirements that ensure accessible routes during construction.”
 - Policy recommendation: within one year “incorporate temporary non-motorized access into traffic control plans for construction projects.”

State Recommendations & Guides

[MDOT Americans with Disabilities Act Transition Plan 2018](#)

- “Michigan law ([MCL 41.288a 18a](#), [67.8](#), and [103.1](#)) assigns jurisdiction over sidewalks and related pedestrian facilities to cities, townships, and villages” (p.7).
- “When MDOT developed its ADA Transition Plan in 1994, the plan did not include sidewalks, curb ramps, or similar pedestrian facilities in the public right of way because MDOT does not own, operate, or maintain such facilities except in special circumstances (see section 1.4). Although MDOT is not responsible for such pedestrian facilities, MDOT’s roadway alteration projects provides a convenient opportunity to improve the accessibility of the adjacent pedestrian facilities. Therefore, MDOT amended its Transition Plan to include the evaluation and possible improvement of the curb ramps along its roadways when performing alteration projects” (p.18).

Federal Recommendations & Guides

[United States Access Board – Proposed Accessibility Right-of-Way Guidelines](#)

- **R205 Alternate Pedestrian Access Routes** (p.22)

“Alternate pedestrian access routes must be provided when a pedestrian circulation path is temporarily closed by construction, alterations, maintenance operations, or other conditions. The alternate pedestrian access route must comply with the referenced MUTCD standards. The MUTCD standards require alternate pedestrian routes to be accessible and detectable, including warning pedestrians who are blind or have low vision about sidewalk closures. Proximity-actuated audible signs are a preferred means to warn pedestrians who are blind or have low vision about sidewalk closures.”

[Manual on Uniform Traffic Control Devices \(MUTCD\) 2009](#)

- **CH 6D – Temporary Traffic Control: Pedestrian and Worker Safety (Appendix B)**
 - Section 6D.01 Pedestrian Considerations (p.561)

“The following three items should be considered when planning for pedestrians in TTC zones:

 - Pedestrians should not be led into conflicts with vehicles, equipment, and operations.

- Pedestrians should not be led into conflicts with vehicles moving through or around the worksite.
- Pedestrians should be provided with a convenient and accessible path that replicates as nearly as practical the most desirable characteristics of the existing sidewalk(s) or footpath(s).

A pedestrian route should not be severed and/or moved for non-construction activities such as parking for vehicles and equipment. Consideration should be made to separate pedestrian movements from both worksite activity and vehicular traffic. Unless an acceptable route that does not involve crossing the roadway can be provided, pedestrians should be appropriately directed with advance signing that encourages them to cross to the opposite side of the roadway. In urban and suburban areas with high vehicular traffic volumes, these signs should be placed at intersections (rather than midblock locations) so that pedestrians are not confronted with midblock worksites that will induce them to attempt skirting the worksite or making a midblock crossing.”

Refer to App. B for additional guidance.

- 6D.02 Accessibility Considerations (p.563)

“The extent of pedestrian needs should be determined through engineering judgment or by the individual responsible for each TTC zone situation. Adequate provisions should be made for pedestrians with disabilities.

Because printed signs and surface delineation are not usable by pedestrians with visual disabilities, blocked routes, alternate crossings, and sign and signal information should be communicated to pedestrians with visual disabilities by providing audible information devices, accessible pedestrian signals, and barriers and channelizing devices that are detectable to pedestrians traveling with the aid of a long cane or who have low vision. If a pushbutton is used to provide equivalent TTC information to pedestrians with visual disabilities, the pushbutton should be equipped with a locator tone to notify pedestrians with visual disabilities that a special accommodation is available, and to help them locate the pushbutton.”

Appendix A – Barricade Permit Attachment B



City of Ann Arbor CUSTOMER SERVICE

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Attachment B: TRAFFIC AND PEDESTRIAN CONTROL AND ACCESS

The contractor shall maintain local vehicular and pedestrian traffic and access to all properties, private drives, etc., throughout the project at all times unless otherwise noted on the plans and arranged and approved in writing by the Public Services Administrator. Traffic control devices and personnel to control and direct traffic movement to residences along a road are the responsibility of the contractor. Traffic control shall meet or exceed all MDOT minimum requirements, and be in accordance with Part VI of the current edition of the Michigan Manual of Uniform Traffic Control Devices (MMUTCD).

The Contractor shall maintain two-way traffic on major streets, access for local traffic on local streets, and keep intersections open to traffic at all times, unless specifically authorized otherwise in writing by the Public Services Administrator.

If it is expected that road closure will be necessary during certain construction operations, this shall be minimized as much as possible and limited to a maximum of 500 feet at any time, and a time duration of 48 hours maximum. Approval for such road closure must be obtained in writing by the Contractor from the Public Services Administrator prior to the closure. The Contractor shall notify each residence in writing a minimum of two days prior to such closure. A copy of this notice shall be supplied to the Public Services Administrator, Customer Service Unit, Police and Fire Departments, Ann Arbor Transportation Authority (AATA), Ann Arbor Public Schools, and U.S. Postal Service, a minimum of two working days prior to the closure. Emergency access to all residences must be maintained at all times. The Contractor shall obtain a Lane Closure Permit from the Project Management Unit, a minimum of two working days in advance of any street closing or restriction of traffic.

Pedestrian traffic shall be maintained at all times. For maintaining normal pedestrian traffic while performing sidewalk and driveway repair, **ADA longitudinal barricades** shall be placed by the Contractor, as directed by the Public Services Administrator. Reflective "Sidewalk Closed-Cross Here" signs shall be placed by the Contractor, as needed and as directed by the Public Services Administrator.

Parking violation citations issued to the Contractor, subcontractors and material suppliers, including their employees, shall be enforced under the appropriate section(s) of the City Code.

Existing City owned signs which are damaged by the contractor during the course of construction will be repaired by the City at the Contractor's expense.

The Contractor shall temporarily cover conflicting traffic and/or parking signs only when directed by the Public Services Administrator. In addition, the Contractor shall submit a plan to the Public Services Department indicating the signs to be covered, for review and approval by the Public Services Administrator. Where there is metered parking, the Contractor shall obtain, install and maintain at the Contractor's expense meter bags from Republic Parking (734) 761-7235.

CHAPTER 6D. PEDESTRIAN AND WORKER SAFETY

Section 6D.01 Pedestrian Considerations

Support:

- 01 A wide range of pedestrians might be affected by TTC zones, including the young, elderly, and people with disabilities such as hearing, visual, or mobility. These pedestrians need a clearly delineated and usable travel path. Considerations for pedestrians with disabilities are addressed in Section 6D.02.

Standard:

- 02 **The various TTC provisions for pedestrian and worker safety set forth in Part 6 shall be applied by knowledgeable (for example, trained and/or certified) persons after appropriate evaluation and engineering judgment.**
- 03 **Advance notification of sidewalk closures shall be provided by the maintaining agency.**
- 04 **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.**

Option:

- 05 If establishing or maintaining an alternate pedestrian route is not feasible during the project, an alternate means of providing for pedestrians may be used, such as adding free bus service around the project or assigning someone the responsibility to assist pedestrians with disabilities through the project limits.

Support:

- 06 It must be recognized that pedestrians are reluctant to retrace their steps to a prior intersection for a crossing or to add distance or out-of-the-way travel to a destination.

Guidance:

- 07 *The following three items should be considered when planning for pedestrians in TTC zones:*
- A. *Pedestrians should not be led into conflicts with vehicles, equipment, and operations.*
 - B. *Pedestrians should not be led into conflicts with vehicles moving through or around the worksite.*
 - C. *Pedestrians should be provided with a convenient and accessible path that replicates as nearly as practical the most desirable characteristics of the existing sidewalk(s) or footpath(s).*
- 08 *A pedestrian route should not be severed and/or moved for non-construction activities such as parking for vehicles and equipment.*
- 09 *Consideration should be made to separate pedestrian movements from both worksite activity and vehicular traffic. Unless an acceptable route that does not involve crossing the roadway can be provided, pedestrians should be appropriately directed with advance signing that encourages them to cross to the opposite side of the roadway. In urban and suburban areas with high vehicular traffic volumes, these signs should be placed at intersections (rather than midblock locations) so that pedestrians are not confronted with midblock worksites that will induce them to attempt skirting the worksite or making a midblock crossing.*

Support:

- 10 Figures 6H-28 and 6H-29 show typical TTC device usage and techniques for pedestrian movement through work zones.

Guidance:

- 11 *To accommodate the needs of pedestrians, including those with disabilities, the following considerations should be addressed when temporary pedestrian pathways in TTC zones are designed or modified:*
- A. *Provisions for continuity of accessible paths for pedestrians should be incorporated into the TTC plan.*
 - B. *Access to transit stops should be maintained.*
 - C. *A smooth, continuous hard surface should be provided throughout the entire length of the temporary pedestrian facility. There should be no curbs or abrupt changes in grade or terrain that could cause tripping or be a barrier to wheelchair use. The geometry and alignment of the facility should meet the applicable requirements of the "Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities (ADAAG)" (see Section 1A.11).*
 - D. *The width of the existing pedestrian facility should be provided for the temporary facility if practical. Traffic control devices and other construction materials and features should not intrude into the usable width of the sidewalk, temporary pathway, or other pedestrian facility. When it is not possible to maintain a minimum width of 60 inches throughout the entire length of the pedestrian pathway, a 60 x 60-inch passing space should be provided at least every 200 feet to allow individuals in wheelchairs to pass.*

- E. *Blocked routes, alternate crossings, and sign and signal information should be communicated to pedestrians with visual disabilities by providing devices such as audible information devices, accessible pedestrian signals, or barriers and channelizing devices that are detectable to the pedestrians traveling with the aid of a long cane or who have low vision. Where pedestrian traffic is detoured to a TTC signal, engineering judgment should be used to determine if pedestrian signals or accessible pedestrian signals should be considered for crossings along an alternate route.*
- F. *When channelization is used to delineate a pedestrian pathway, a continuous detectable edging should be provided throughout the length of the facility such that pedestrians using a long cane can follow it. These detectable edgings should comply with the provisions of Section 6F.74.*
- G. *Signs and other devices mounted lower than 7 feet above the temporary pedestrian pathway should not project more than 4 inches into accessible pedestrian facilities.*

Option:

- 12 Whenever it is feasible, closing off the worksite from pedestrian intrusion may be preferable to channelizing pedestrian traffic along the site with TTC devices.

Guidance:

- 13 *Fencing should not create sight distance restrictions for road users. Fences should not be constructed of materials that would be hazardous if impacted by vehicles. Wooden railing, fencing, and similar systems placed immediately adjacent to motor vehicle traffic should not be used as substitutes for crashworthy temporary traffic barriers.*
- 14 *Ballast for TTC devices should be kept to the minimum amount needed and should be mounted low to prevent penetration of the vehicle windshield.*
- 15 *Movement by work vehicles and equipment across designated pedestrian paths should be minimized and, when necessary, should be controlled by flaggers or TTC. Staging or stopping of work vehicles or equipment along the side of pedestrian paths should be avoided, since it encourages movement of workers, equipment, and materials across the pedestrian path.*
- 16 *Access to the work space by workers and equipment across pedestrian walkways should be minimized because the access often creates unacceptable changes in grade, and rough or muddy terrain, and pedestrians will tend to avoid these areas by attempting non-intersection crossings where no curb ramps are available.*

Option:

- 17 A canopied walkway may be used to protect pedestrians from falling debris, and to provide a covered passage for pedestrians.

Guidance:

- 18 *Covered walkways should be sturdily constructed and adequately lighted for nighttime use.*
- 19 *When pedestrian and vehicle paths are rerouted to a closer proximity to each other, consideration should be given to separating them by a temporary traffic barrier.*
- 20 *If a temporary traffic barrier is used to shield pedestrians, it should be designed to accommodate site conditions.*

Support:

- 21 Depending on the possible vehicular speed and angle of impact, temporary traffic barriers might deflect upon impact by an errant vehicle. Guidance for locating and designing temporary traffic barriers can be found in Chapter 9 of AASHTO's "Roadside Design Guide" (see Section 1A.11).

Standard:

- 22 **Short intermittent segments of temporary traffic barrier shall not be used because they nullify the containment and redirective capabilities of the temporary traffic barrier, increase the potential for serious injury both to vehicle occupants and pedestrians, and encourage the presence of blunt, leading ends. All upstream leading ends that are present shall be appropriately flared or protected with properly installed and maintained crashworthy cushions. Adjacent temporary traffic barrier segments shall be properly connected in order to provide the overall strength required for the temporary traffic barrier to perform properly.**
- 23 **Normal vertical curbing shall not be used as a substitute for temporary traffic barriers when temporary traffic barriers are needed.**

Option:

- 24 Temporary traffic barriers or longitudinal channelizing devices may be used to discourage pedestrians from unauthorized movements into the work space. They may also be used to inhibit conflicts with vehicular traffic by minimizing the possibility of midblock crossings.

Support:

- 25 A major concern for pedestrians is urban and suburban building construction encroaching onto the contiguous sidewalks, which forces pedestrians off the curb into direct conflict with moving vehicles.

Guidance:

- 26 *If a significant potential exists for vehicle incursions into the pedestrian path, pedestrians should be rerouted or temporary traffic barriers should be installed.*

Support:

- 27 TTC devices, jersey barriers, and wood or chain link fencing with a continuous detectable edging can satisfactorily delineate a pedestrian path.

Guidance:

- 28 *Tape, rope, or plastic chain strung between devices are not detectable, do not comply with the design standards in the "Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities (ADAAG)" (see Section 1A.11), and should not be used as a control for pedestrian movements.*
- 29 *In general, pedestrian routes should be preserved in urban and commercial suburban areas. Alternative routing should be discouraged.*
- 30 *The highway agency in charge of the TTC zone should regularly inspect the activity area so that effective pedestrian TTC is maintained.*

Section 6D.02 Accessibility Considerations**Support:**

- 01 Additional information on the design and construction of accessible temporary facilities is found in publications listed in Section 1A.11 (see Publications 12, 38, 39, and 42).

Guidance:

- 02 *The extent of pedestrian needs should be determined through engineering judgment or by the individual responsible for each TTC zone situation. Adequate provisions should be made for pedestrians with disabilities.*

Standard:

- 03 **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. Where pedestrians with visual disabilities normally use the closed sidewalk, a barrier that is detectable by a person with a visual disability traveling with the aid of a long cane shall be placed across the full width of the closed sidewalk.**

Support:

- 04 Maintaining a detectable, channelized pedestrian route is much more useful to pedestrians who have visual disabilities than closing a walkway and providing audible directions to an alternate route involving additional crossings and a return to the original route. Braille is not useful in conveying such information because it is difficult to find. Audible instructions might be provided, but the extra distance and additional street crossings might add complexity to a trip.

Guidance:

- 05 *Because printed signs and surface delineation are not usable by pedestrians with visual disabilities, blocked routes, alternate crossings, and sign and signal information should be communicated to pedestrians with visual disabilities by providing audible information devices, accessible pedestrian signals, and barriers and channelizing devices that are detectable to pedestrians traveling with the aid of a long cane or who have low vision.*

Support:

- 06 The most desirable way to provide information to pedestrians with visual disabilities that is equivalent to visual signing for notification of sidewalk closures is a speech message provided by an audible information device. Devices that provide speech messages in response to passive pedestrian actuation are the most desirable. Other devices that continuously emit a message, or that emit a message in response to use of a pushbutton, are also acceptable. signing information can also be transmitted to personal receivers, but currently such receivers are not likely to be carried or used by pedestrians with visual disabilities in TTC zones. Audible information devices might not be needed if detectable channelizing devices make an alternate route of travel evident to pedestrians with visual disabilities.

Guidance:

- 07 *If a pushbutton is used to provide equivalent TTC information to pedestrians with visual disabilities, the pushbutton should be equipped with a locator tone to notify pedestrians with visual disabilities that a special accommodation is available, and to help them locate the pushbutton.*