

GUIDING PRINCIPLES & PROCEDURES (GPP)

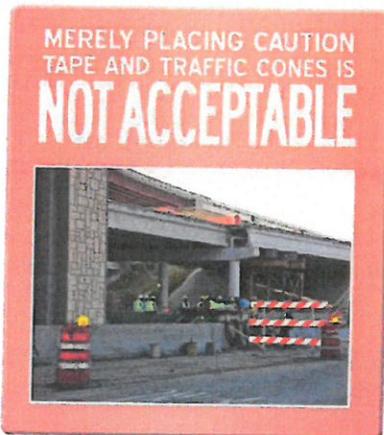
OF ACCESSIBILITY IN THE PUBLIC RIGHT-OF-WAY DURING CONSTRUCTION

BACKGROUND

Why the Need for Construction Guidelines in Public Right-of-Way? Local jurisdictions, and other entities covered by the ADA, must ensure that the facilities they build or alter are accessible to people with disabilities. (or allow to be built or altered by others)

The Americans with Disabilities Act (ADA) of 1990 is a civil rights statute that prohibits discrimination against people with disabilities. ADA implementing regulations for Title II prohibit discrimination in the provision of services, programs, and activities by state and local governments. Designing and constructing pedestrian facilities in the public right-of-way that are not usable by people with disabilities may constitute discrimination. Section 504 of the Rehabilitation Act of 1973 (504) includes similar prohibitions in the conduct of federally-funded programs.

A **permit or permission** to work in the public way is **required** whenever construction activities occur in the public rights-of-way of City of Lincoln. This guide is intended to give you a summary of what is required and what must be done to ensure pedestrian accessibility is maintained throughout the period of time construction is underway. This does not just apply to the final product, but accessibility must be maintained during the actual construction.



Construction in the public way can be particularly hazardous to pedestrians with either visual or mobility impairments. Therefore, it is critical that each construction site is properly and adequately protected with a barrier or barricade. Merely placing caution tape and traffic cones is not acceptable. The guidelines contained herein are based on the requirements of the MUTCD standards, chapter 6 (2003), the Access Board's Guidelines for Accessible Public Rights-of-Way (2005 Revised), and City of Lincoln's Traffic Control Guidelines for Street Construction, Maintenance, and Utility Operations (2010 edition).



Consider the following when laying out construction sites:

- » **Advanced warning and guidance signs**
- » **Adequate illumination and reflectors**
- » **Use of temporary walkways**
- » **Channeling and barricading to separate pedestrians from traffic**
- » **Adequate barricading to prevent visually impaired pedestrians from entering work zones**
- » **Wheelchair accessible alternate pedestrian circulation routes with appropriate signage**

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The information below outlines the City's responsibilities for meeting ADA requirements during construction. The City's responsibility includes making sure that when giving permission to others to work in the City Right of Way that these requirements are being met to the extent feasible. All working in the City Right of Way, including project managers, site supervisors, and design professionals, should ensure these are addressed before and during project work. Including in the documents prepared for future construction projects and permits.

US Department of Transportation Federal Highway Administration (FHWA)
- Manual on Uniform Traffic Control Devices (MUTCD)
<http://mutcd.fhwa.dot.gov/hdm/2003r1/part6/part6d.htm>

MUTCD Section 6D.02 Accessibility Considerations

Support: Additional information on the design and construction of accessible temporary facilities is found in publications listed in Section 1A.11 (see Documents 10 and 29 through 31).

Guidance:

The extent of pedestrian needs should be determined through engineering judgment or by the individual responsible for each TTC zone situation. This individual should be aware that the absence of a continuous pathway, including curb ramps and other accessible features, might preclude the use of the facility by pedestrians with disabilities.

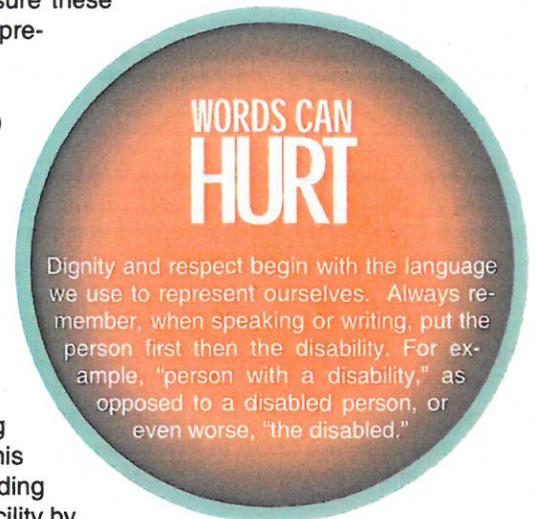
Standard:

When existing pedestrian facilities are disrupted, closed, or relocated in a Temporary Traffic Control (TTC) zone, the temporary facilities shall be detectable and include accessibility features consistent with the features present in the existing pedestrian facility.

Guidance:

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 process. Pedestrians should be provided with a reasonably safe, convenient, and accessible path that replicates as much as practical the desirable characteristics of the existing pedestrian facilities.
- B. Access to temporary transit stops should be provided.
- C. 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.
- D. 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 adhere to the provisions of Section 6F.68.
- E. 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).



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F. 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 1500 mm (60 in) throughout the entire length of the pedestrian pathway, a 1500 x 1500 mm (60 x 60 in) passing space should be provided at least every 60 m (200 ft), to allow individuals in wheelchairs to pass.

G. Signs and other devices mounted lower than 2.1 m (7 ft) above the temporary pedestrian pathway should not project more than 100 mm (4 in) into accessible pedestrian facilities.

FHWA - Designing Sidewalks and Trails for Access, Part II of II: Best Practices Design Guide, Ch. 10
(<http://www.fhwa.dot.gov/download/hep/environment/11chapter10.pdf>)

Sidewalk Maintenance and Construction Site Safety; p. 10-8

"A continuous route for all pedestrians must be maintained at all times. It is not acceptable to simply close a sidewalk without identifying an alternate circulation route. The alternate route must enable pedestrians to bypass the construction site without retracing their steps or going significantly out of their way. ... When a temporary route is established, it must be accessible to people with disabilities. Information sources should be used to provide advance warning to pedestrians of the presence of the sidewalk construction site and to clearly mark the alternate circulation route available. ... It is particularly important to ensure that all information sources are accessible to people with vision and cognitive impairments ..." This is followed by a series of implementation measures to properly delineate the alternate route.

Access Board: Accessible Rights-of-Way: A Design Guide - 3.7.2 Temporary Access
<http://www.access-board.gov/prowac/draft.htm>

In locations where a continuous sidewalk or street crossing route cannot be provided for pedestrians—for example, when construction barricades intervene—an alternate route should be available. This may require temporary walkways and curb ramps to maintain access to addresses along a sidewalk obstructed for more than a short time

Sidewalk barriers should be detectable by blind pedestrians or those who have low vision. Plastic tape, movable cones, and print signs at a sidewalk excavation will not generally provide adequate notice or protection. Accessibility provisions for protruding objects and construction barrier criteria in MUTCD offer helpful guidance in this area.

REVISED DRAFT GUIDELINES FOR ACCESSIBLE PUBLIC RIGHTS-OF-WAY (11-23-05)

R205 Alternate Pedestrian Access Route

When an existing pedestrian access route is blocked by construction, alteration, maintenance, or other temporary conditions, an alternate pedestrian access route complying to the maximum extent feasible with R301, R302, and Section 6D.01 and 6D.02 of the MUTCD (incorporated by reference; see R104.2.1) shall be provided.

Advisory R205 Alternate Pedestrian Access Route. Same-side travel is preferred because it does not increase pedestrian exposure and risk of accident consequent upon added street crossings. A route that uses vehicle lane width may be shorter, safer, and more usable than one that requires two street crossings, even if the roadway surface is imperfect. Part 6D.01 of the MUTCD requires alternate routes to provide the best elements of accessibility provided in the pedestrian circulation route before its disruption.

R302 Alternate Circulation Path

R302.1 General. Alternate circulation paths shall comply with R302 and shall contain a pedestrian access route complying with R301.

Advisory R302.1 General. Temporary routes are alterations to an existing developed pedestrian environment and are required to achieve the maximum accessibility feasible under existing conditions.

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R302.2 Location. To the maximum extent feasible, the alternate circulation path shall be provided on the same side of the street as the disrupted route.

Advisory R302.2 Location. Where it is not feasible to provide a same-side alternate circulation path and pedestrians will be detoured, section 6D.02 of the MUTCD specifies that the alternate path provide a similar level of accessibility to that of the existing disrupted route. This may include the incorporation of accessible pedestrian signals (APS), curb ramps, or other accessibility features.

R302.3 Protection. Where the alternate circulation path is exposed to adjacent construction, excavation drop-offs, traffic, or other hazards, it shall be protected with a pedestrian barricade or channelizing device complying with R302.4.

Advisory R302.3 Protection. When it is necessary to block travel at the departure curb to close a crosswalk that is disrupted by excavation, construction, or construction activity, care must be taken to preserve curb ramp access to the perpendicular crosswalk. This may require additional pedestrian channelization if only a single diagonal curb ramp serves the corner.

Figures 6H-28 and 6H-29 of the MUTCD specify notification signage for pedestrian closings and detours. Audible signage triggered by proximity switches can provide information to pedestrians who do not use print signs.

R302.4 Pedestrian Barricades and Channelizing Devices. Pedestrian barricades and channelizing devices shall be continuous, stable, and non-flexible and shall consist of a wall, fence, or enclosures specified in section 6F-58, 6F-63, and 6F-66 of the MUTCD (incorporated by reference; see R104.2.4).

R302.4.1 Detectable Base. A continuous bottom edge shall be provided 150 mm (6 in) maximum above the ground or walkway surface.

R302.4.2 Height. Devices shall provide a continuous surface or upper rail at 0.9 m (3.0 ft) minimum above the ground or walkway surface. Support members shall not protrude into the alternate circulation path.

IMPORTANT

ALL DESIGN PROJECT MANAGERS SHOULD ENSURE THE ABOVE REQUIREMENTS ARE ADDRESSED IN DURING PROJECT DEVELOPMENT, DECISIONS RECORDED IN THE PROJECT FILE AND DEALT WITH IN THE SPECIAL PROVISIONS PREPARED FOR CONSTRUCTION PROJECTS!

ALL CONSTRUCTION PROJECT MANAGERS SHOULD ENSURE THE ABOVE REQUIREMENTS ARE ADDRESSED IN SPECIAL PROVISIONS AND ADHERED TO DURING PROJECT CONSTRUCTION, DEALT WITH REGARDING ANY CHANGES DURING CONSTRUCTION, AND DECISIONS RECORDED IN THE PROJECT FILE!

ALL OTHERS, INCLUDING BUT NOT LIMITED TO SITE SUPERVISORS, DESIGN PROFESSIONALS, CONTRACTORS, PERMIT ISSUERS, PERMIT HOLDERS, UTILITY REPRESENTATIVES SHOULD ENSURE THE ABOVE REQUIREMENTS ARE ADDRESSED IN CONSTRUCTION DOCUMENTS, PERMITS, PROJECT SPECIAL PROVISIONS, AND ARE ADHERED TO DURING PROJECT CONSTRUCTION, DEALT WITH REGARDING ANY CHANGES DURING CONSTRUCTION, AND DECISIONS ARE BOTH COMMUNICATED TO THE CITY AND DOCUMENTED BY ALL.

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document
your
decisions.
if it's not written down and
able to be found, then it
didn't happen!

THE IMPORTANCE OF DOCUMENTING DECISIONS

If the using public believes that a more accessible result might have been achieved, designers may have to defend their decision-making in court. If reasonable care can be demonstrated, then accessible design carries no more risks for public agencies than the design of other roadway features. A few states have a regulatory agency that reviews the design and construction of pedestrian elements to ensure accessibility. They may also have the authority to approve deviations to any state accessibility standards. However, Federal or private litigants are not bound by state or local approvals and may challenge such a decision in a complaint to Department of Justice (DOJ) or FHWA or an action in court. The best guidance is to approach accessible design and

construction with the same care and commitment as all agency initiatives and to document staff training, planning and design procedures, and decision-making processes.

Some recent court decisions place the direct responsibility/liability for compliance on the owner, not the design and construction team, therefore the City must have documentation from the design and construction team to ensure requirements have been addressed or what could be a quick review may stall as a detailed comprehensive review must that place to limit City exposure.

Keep track of everything
considered. Document
the analysis work,
findings, and decisions.
Save them in the
permanent project
record file.

- Members of the PROWAAC make the following recommendations:
- Expand the depth of the analysis and think outside the box.
- Seek assistance from people with disabilities in the community. Consider their opinions and recommendations. Get input, advice, and support from local advisory committees.
- Recognize that sometimes the first solution to a problem will not often be the best. Look hard and wide for creative solutions.
- Select the solution that best balances the needs of all users: people who use wheelchairs, people who have vision impairments, and other pedestrians, young and old. Avoid solutions where roadway improvements are fully realized at the expense of pedestrian accessibility.
- Network with others. Consult with peers in other agencies and firms. Share ideas and solutions.
- Attend continuing education classes that focus on accessible design.
- Develop, adopt, and use a standard method of site review.
- Be prepared to defend your decisions in a potentially adversarial situation.

The recommendations above provide no guarantee that a project design will not be challenged. There will always be someone with a second opinion or a better design solution. However, if the scope of the project is clearly defined, research is adequate, and the method of selecting the preferred alternative is clearly documented, the solution can be adequately defended. It is the designer's responsibility to develop the expertise needed to evaluate potential alternatives before confirming an engineering solution. Note that cost cannot be the basis for eliminating workable alternatives in a planned alteration (however, there is a cost defense related to program access improvements; see 28 CFR 35.150(a)(3) of the Title II regulation).

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It is undesirable to close sidewalks or pathways during construction. This should be the last option. When the work area encroaches upon a sidewalk, pedestrian walkway or cross walk area, special considerations must be given to the pedestrian's safety. A maximum effort must be made to provide and maintain an accessible, safe, clearly defined and convenient pedestrian way separate from the work area.

Examples:

The following photographs present examples of incomplete and inappropriate barricading, advanced warning, and signage:



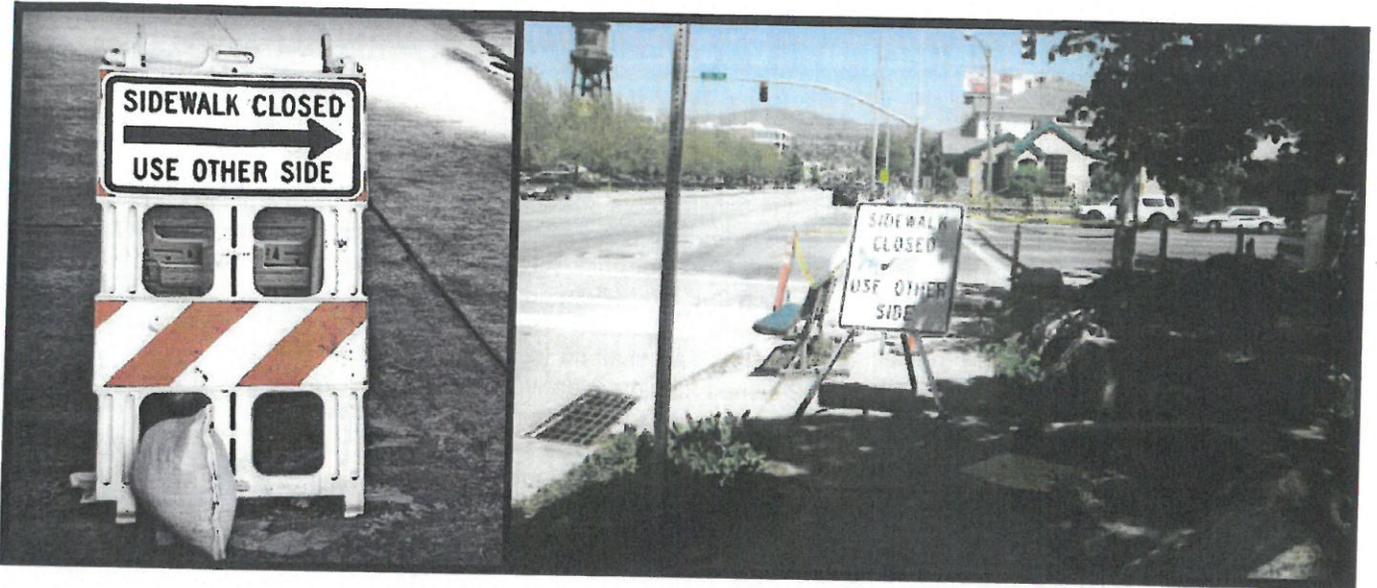
The removal, even for only a short time, of a pedestrian access route, curb ramp, or pedestrian crossing may severely limit or totally preclude a person with a disability from navigating in the public right of way. It may also preclude access to buildings, facilities, or sites on adjacent properties.



Can you count the number of violations? This is a very busy street with no marked cross-walk. There is no alternate circulation path, no barricading, and no provisions made for pedestrians.

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Where's the advanced warning and alternate circulation route? These are far from being acceptable warnings. How does someone actually get to the "other side"?



Does this look safe? How would a person with a visual disability navigate this construction site?



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HOW CAN YOU PROVIDE AN ALTERNATE CIRCULATION PATH FOR PEDESTRIANS IN THE CITY OF LINCOLN?

The alternate circulation path shall have a desired minimum width of 48 inches (36 inches is the absolute minimum if that is the only feasible possibility) and parallel the disrupted pedestrian access route when practicable. Barricades and channelizing devices shall be continuous, stable, non-flexible, and shall consist of a wall, fence, or enclosure specified in section 6F of the MUTCD. A solid toe rail should be attached such that the bottom edge is 6 inches maximum above the walkway surface. The top rail shall be parallel to the toe rail and shall be located 36 inches minimum and 42 inches maximum above the walkway surface. If drums, cones, or tubular markers

are used to channelize pedestrians, they shall be located such that there are no gaps between the bases of the devices in order to create a continuous bottom, and the height of each individual device shall be no less than 36 inches.



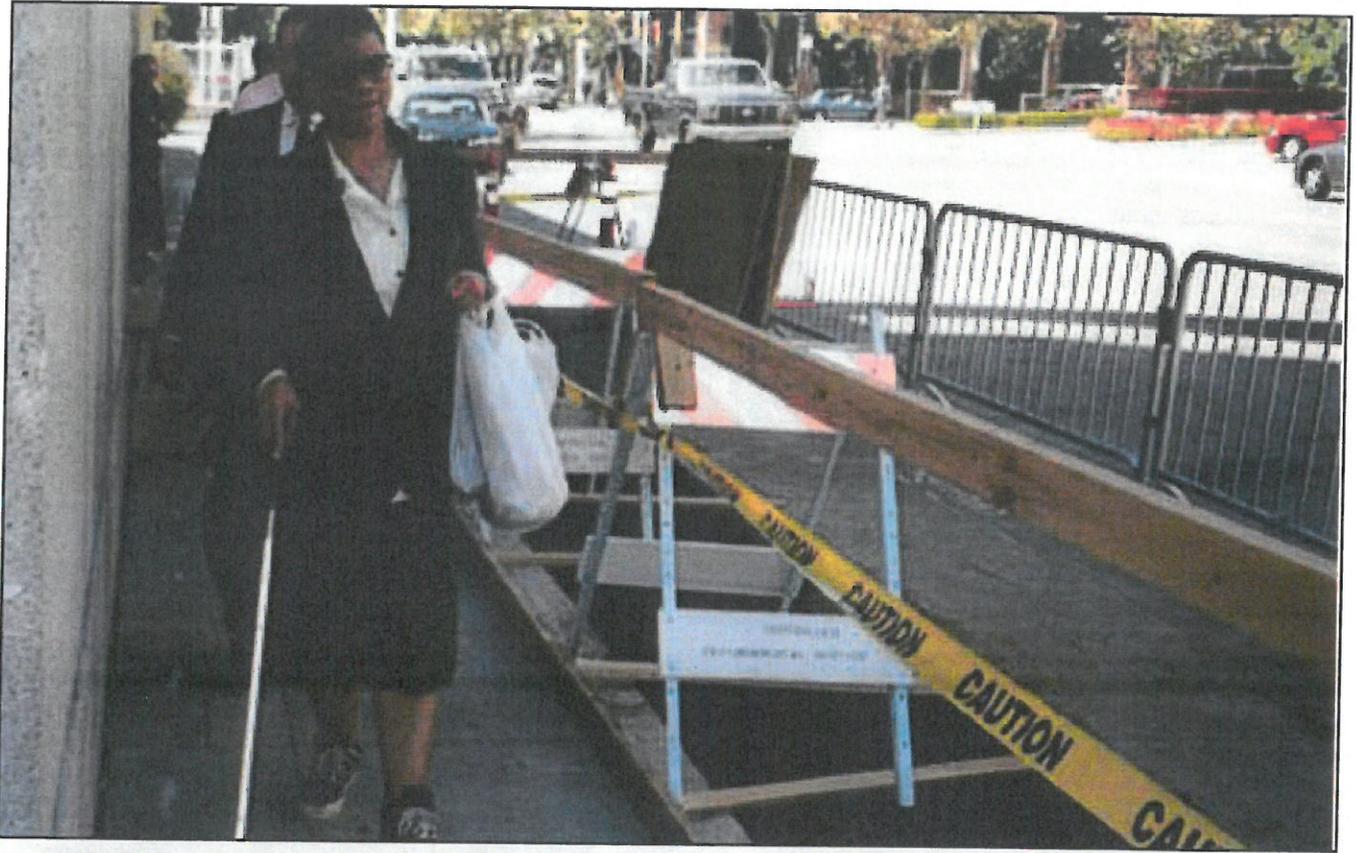
MUTCD: Section 6F.68 Detectable Edging for Pedestrians

Individual channelizing devices, tape or rope used to connect individual devices, other discontinuous barriers and devices, and pavement markings are not detectable by persons with visual disabilities and are incapable of providing detectable path guidance on temporary or realigned sidewalks or other pedestrian facilities.



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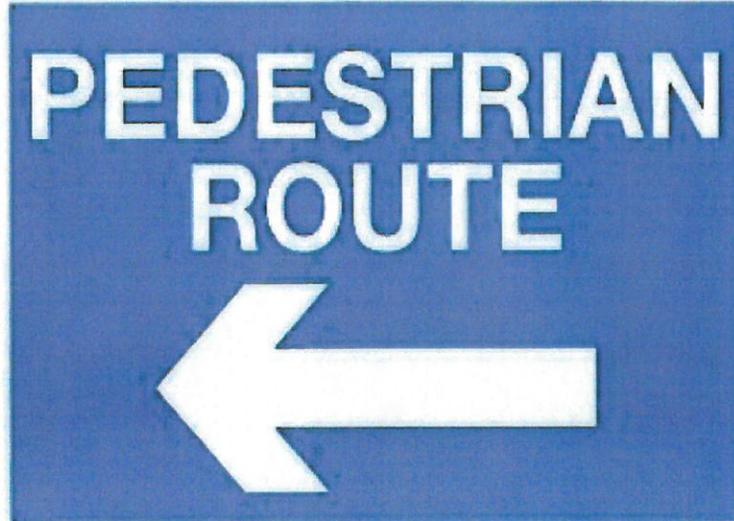


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WARNINGS & SIGNAGE

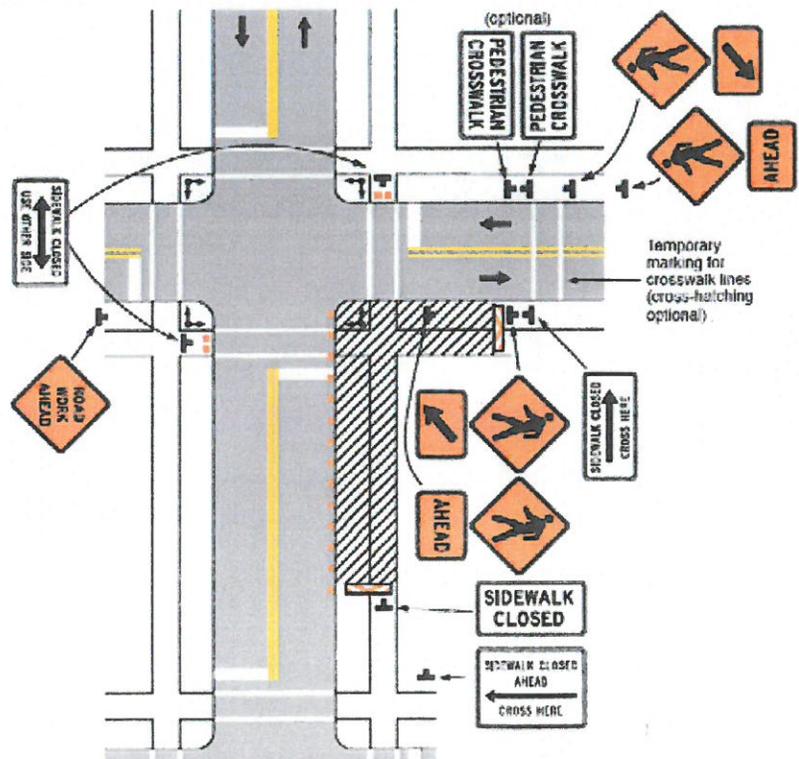
- Warnings shall be located at both the near side and the far side of the intersection preceding a temporarily, completely blocked pedestrian access route.
- Signage shall be located at the intersection preceding the blocked way. Where directional signage or warnings are provided, they should be located to minimize backtracking, especially if there is no safe refuge at a corner under construction.
- In some cases, this could mean locating a warning or sign at the beginning of a route, not just at the inaccessible site.



BARRICADE LOCATIONS

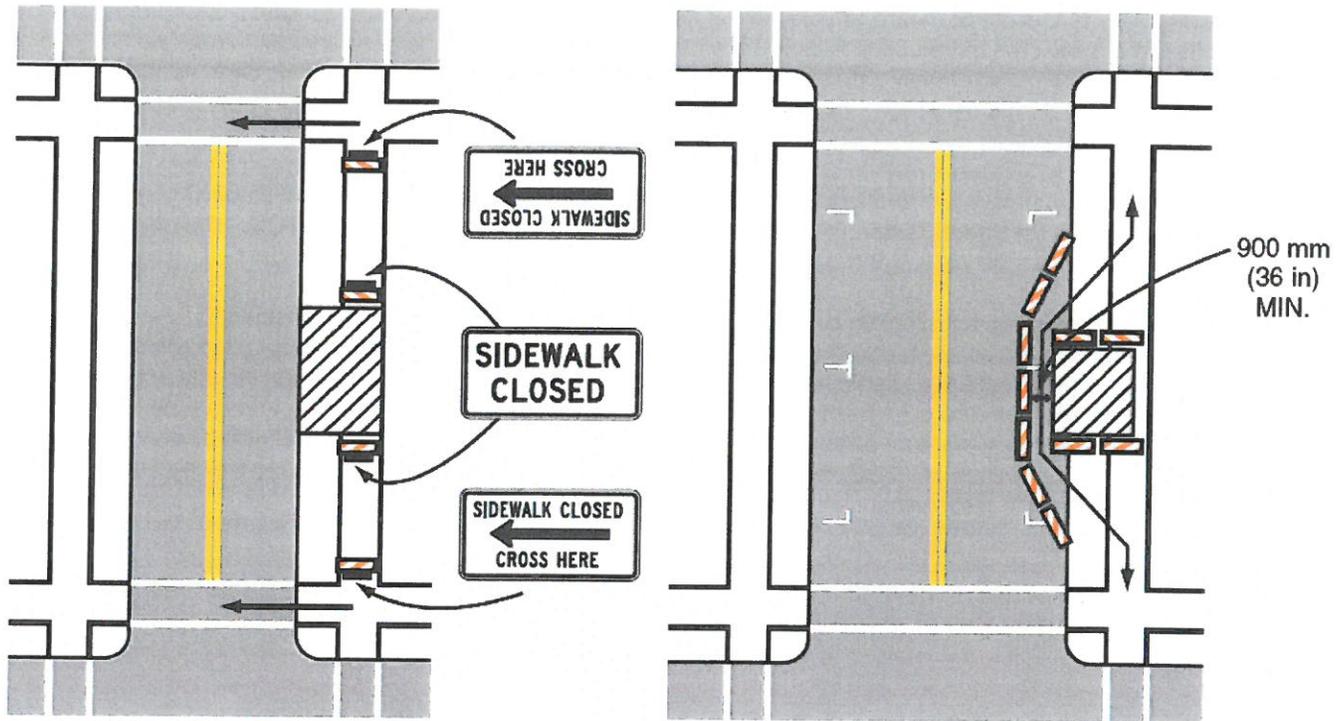
Barricades shall be considered at the following locations:

- Between the pedestrian access route and any adjacent construction site
- Between the alternate circulation path and any adjacent construction site
- Between the alternate circulation path and the vehicular way, if the alternate circulation path is diverted into the street
- Between the alternate circulation path and any protruding objects, drop-offs, or other hazards to pedestrians
- At any curb ramp of an intersection, if the opposite curb ramp is temporarily and completely blocked, and no adjacent alternate circulation path is provided



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ADDITIONAL OBLIGATIONS

- No construction signs, equipment, or materials shall be stored or placed on the path of travel.
- Construction barriers shall be maintained in a sound, neat and clean condition. Including repair of all vandalism and removal all graffiti.
- Public walkways adjoining the construction site shall be clean of accumulated mud, trash, and debris.
- Construction operations shall not occupy public sidewalks except where pedestrian protection is provided.
- All barriers and signage shall be removed promptly upon completion of the work in accordance with applicable regulatory requirements.
- Review and follow the "Accommodation of Pedestrians and Cyclists" Special Provisions, Chapter 15 of the City of Lincoln Standard Specifications for Municipal Construction, or other pertinent local, state, and federal regulations.

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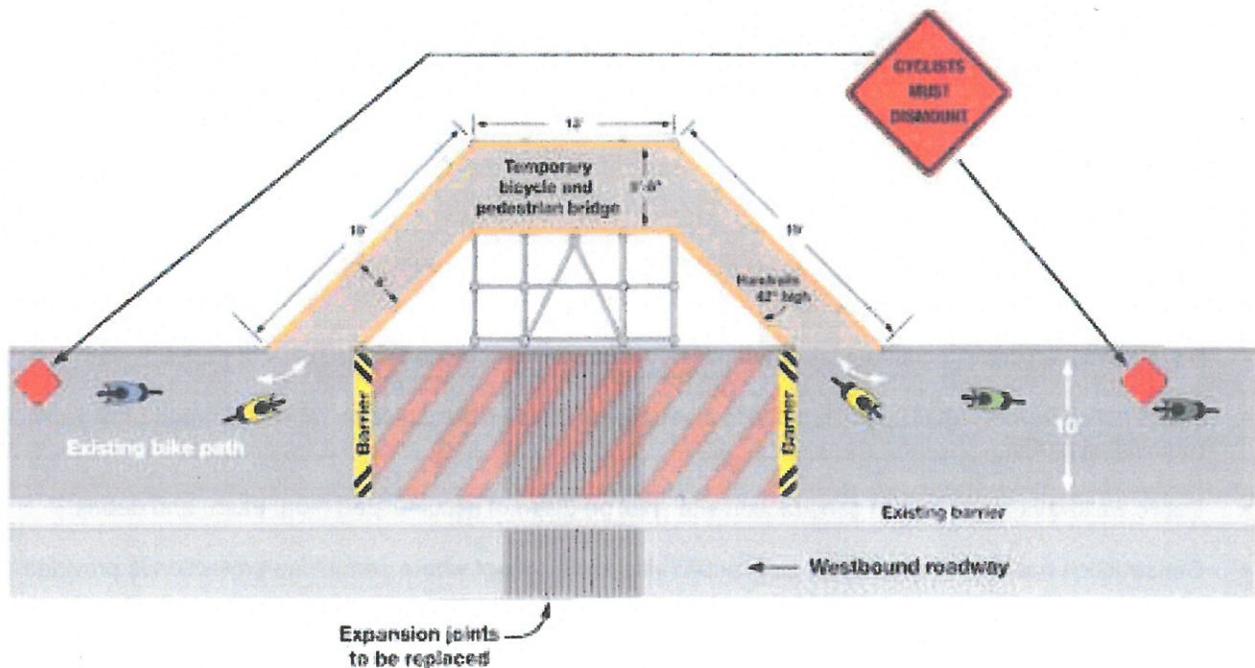
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TEMPORARY TRAFFIC CONTROL PLANS

Chapter 15 of the City of Lincoln Standard Specifications for Municipal Construction address Traffic Control Plans (TCP). A TCP describes the measures to be used for facilitating users through a work zone or an incident area and play a vital role in providing continuity of reasonably safe and efficient road user flow when a work zone, incident, or other event temporarily disrupts normal road user flow. Important auxiliary provisions that cannot conveniently be specified on project plans can easily be incorporated into Special Provisions or general notes.

TCPs range in scope from being very detailed to simply referencing typical drawings contained in the City of Lincoln's Traffic Control Guidelines for Street Construction, Maintenance, and Utility Operations or MUTCD. The degree of detail in the TCP depends entirely on the nature and complexity of the situation.

The TCP will include provisions for effective continuity of accessible circulation paths for pedestrians. Where existing pedestrian routes are blocked or detoured, information should be provided about alternate routes that are usable by pedestrians with disabilities, particularly those who have visual disabilities. This must include access to temporary bus stops, reasonably safe travel across intersections, and other routing issues. Barriers and channelizing devices that are detectable by people with visual disabilities must be provided. Include provisions for effective continuity of transit service. Provide for features such as accessible temporary bus stops, pull-outs, and satisfactory waiting area for transit patrons, including people with disabilities.



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CONCLUDING STATEMENT

It is the policy of the City of Lincoln that a safe and accessible path of travel will be provided for all pedestrians, including those with disabilities, around and/or through construction sites.

It is recognized that there are various types of construction activities, including both short-term and long-term projects. Some barricading systems are more appropriate for certain types of construction than others. When erecting barricades, the contractor shall be conscious of the special needs of pedestrians with physical disabilities. Contractors shall provide protection for pedestrians consistent with all local, state, and federal codes, including the Americans with Disabilities Act.

REFERENCE DOCUMENTS

MUTCD (2003 Edition)
<http://mutcd.fhwa.dot.gov/>

Accessible Public Rights-of-Way Guidelines
<http://www.access-board.gov/prowac/>

Special Report: Accessible Public Rights-of-Way Planning and Design for Alterations: August 2007.
www.access-board.gov/prowac/alterations/guide.htm

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