



Work Zone Traffic Control & Pedestrian Safety



2018 NE Utility Conference
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Joshua Falk
Work Zone/Traffic Control Engineer



Work Zone Traffic Control Topics

- ▶ Utility Application / Permit (DT1553)
- ▶ Traffic Control Plan Requirements
- ▶ Lane Closure System Entries / 511 System
- ▶ Disruption of Traffic During Work Operations



Work Zone Traffic Control Topics

****Safety of both the utility workers and the traveling public are what we're striving to do and achieve during work operations****



Utility Application / Permit

▶ DT1553 Check-offs for V

DT1553: 12/2010

APPLICATION / PERMIT Wisconsin Dept
TO CONSTRUCT, OPERATE and MAINTAIN UTILITY FACILITIES ON HIGHWAY RIGHT-OF-WAY
§ 96.0531, 94.08, 95.15, 96.07(2), 96.16, 182.017 and such other applicable Wis. Stats.

1. Applicant (Utility facility owner) Name and Address: [Redacted]	2. Work Start Date: [Redacted]	3. Work Finish Date *: [Redacted]	6. Location Description (% section, town, line, range; provide Town: [Redacted] Village: [Redacted] City: [Redacted] County: [Redacted]
4. Is the work due to a WisDOT highway project? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5. Applicant Work Order (if any): [Redacted]	7. Work Location (Check/initial all that apply): <input type="checkbox"/> Town: [Redacted] <input type="checkbox"/> Village: [Redacted] <input type="checkbox"/> City: [Redacted] <input type="checkbox"/> County: [Redacted]	8. Hgt: [Redacted]
9. Facility Type (Check all that apply): Size (Diameter, kV, pressure, # fibers, etc.) <input type="checkbox"/> Telecom: [Redacted] <input type="checkbox"/> Electric: [Redacted] <input type="checkbox"/> Gas/Oil: [Redacted] <input type="checkbox"/> Water: [Redacted] <input type="checkbox"/> San Sewer: [Redacted] <input type="checkbox"/> Transmission: [Redacted] Service: Std <input type="checkbox"/> Distribution: [Redacted] Service: Exp	12. Proposed Work Methods (Check all that apply): <input type="checkbox"/> Trench <input type="checkbox"/> Plow <input type="checkbox"/> Casing <input type="checkbox"/> Rock blasting <input type="checkbox"/> Open cut pavement Bore: <input type="checkbox"/> Hydraulic (Auger/Jack) <input type="checkbox"/> Pneumatic (Mole) <input type="checkbox"/> Directional 1 (Manually tracked) <input type="checkbox"/> Directional 2 (Computer tracked) <input type="checkbox"/> Unknown (At this time)	13. Work Zone Description (Check all that apply): <input type="checkbox"/> Full road closure: detour <input type="checkbox"/> Full road closure: temporary <input type="checkbox"/> Lane closure: without flagging <input type="checkbox"/> Lane closure: with flagging <input type="checkbox"/> Lane encroachment (2 feet or less) <input type="checkbox"/> Intersection/roundabout <input type="checkbox"/> Shoulder/parking lane closure <input type="checkbox"/> Off shoulder: within clear zone <input type="checkbox"/> In R/W: outside clear zone <input type="checkbox"/> Near R/W line: within clear zone <input type="checkbox"/> Near R/W line: outside clear zone <input type="checkbox"/> Not applicable	
10. Facility Orientation (Check all that apply): <input type="checkbox"/> Crossing R/W <input type="checkbox"/> Underground <input type="checkbox"/> Parallel R/W <input type="checkbox"/> Overhead <input type="checkbox"/> Structure attachment	11. Work Types (Check all that apply): <input type="checkbox"/> New construction <input type="checkbox"/> Improve/repair existing <input type="checkbox"/> Removal <input type="checkbox"/> Maintenance <input type="checkbox"/> Discontinued, left in place <input type="checkbox"/> Joint installation	14. Is the proposed facility near a survey monument? (See HMM 09-15-30) <input type="checkbox"/> Yes (Call: 1-866-568-2034) <input type="checkbox"/> No	

* NOTE: If the work described is not completed by the "Work Finish Date" specified, this permit is null and void, and the work is completed unless authorized through a subsequent permit or an approved time extension. **ANY PERMIT ISSUED**

18. Utility Person Responsible for Construction (Area Code) Telephone Number: [Redacted]	19. Utility or Project 24/7 Emergency Contact (Area Code) Telephone Number: [Redacted]
20. Is the utility a member of Diggers Hotline? <input type="checkbox"/> Yes <input type="checkbox"/> No, provide line-locate number: [Redacted]	21. Provide additional project work details, if needed (Continue on back or include separate page): [Redacted]
22. If not employed by applicant, authorized representative's company name and address: [Redacted]	

(Signature of Authorized Representative - If filed via computer, Brush Script font) (Date):
[Redacted]

13. Work Zone Description (Check all that apply)

- ☐ Full road closure: detour
- ☐ Full road closure: temporary
- ☐ Lane closure: without flagging
- ☐ Lane closure: with flagging
- ☐ Lane encroachment (2 feet or less)
- ☐ Intersection/roundabout
- ☐ Shoulder/parking lane closure
- ☐ Off shoulder: within clear zone
- ☐ In R/W: outside clear zone
- ☐ Near R/W line: within clear zone
- ☐ Near R/W line: outside clear zone
- ☐ Not applicable

REVISIONS MADE TO DRAWINGS OF OTHER PAGES

Lane Closure System notification required: [HMM 09-15-60](#)

Insurance or performance bond required



THE 3 DA
Region contact, name, office address, telephone number, fax number, email address, and website:
[Redacted]

It is understood and agreed that approval is subject to full compliance with the pertinent statutes, as well as regulations of other jurisdictional agencies, which are restrictive, and with the Wisconsin Department of Transportation's Utility Accommodation Policy (UAP), current edition <http://www.wisconsin.gov/Pages/doing-business/real-estate/utility-accommodation-policy.aspx>

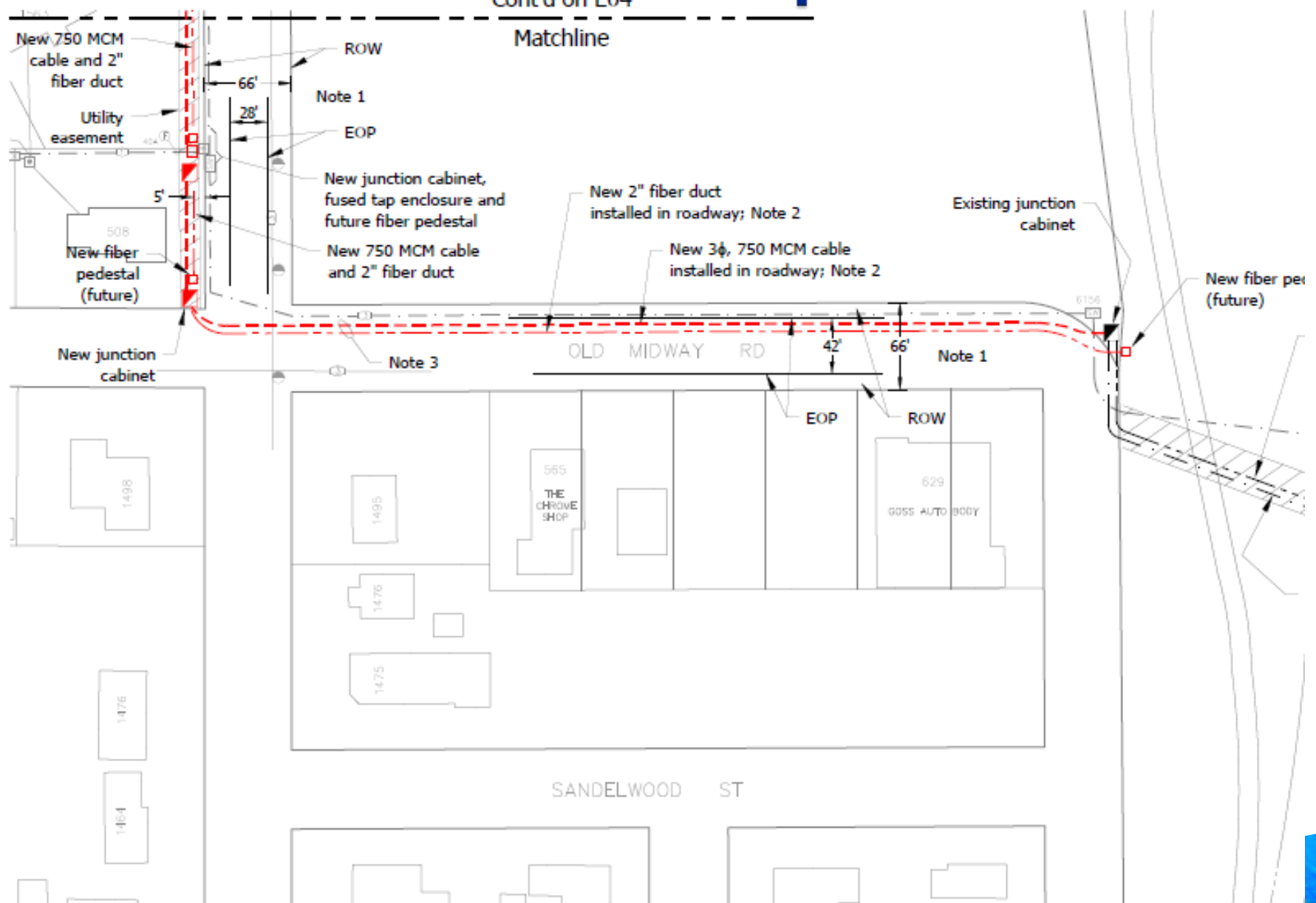
<input type="checkbox"/> Insurance or performance bond required	Date Application Derived: [Redacted]
<input type="checkbox"/> Joint installation - See permit(s) # [Redacted]	Permit Issuance Date: [Redacted]
<input type="checkbox"/> Private utility (Non-public ownership and/or use)	Permit Extension Date: [Redacted]
<input type="checkbox"/> Expedited Service Connection Permit	
<input type="checkbox"/> This permit voids & supersedes # [Redacted] issued: [Redacted]	

Traffic Control Plan Requirements

- ▶ Resources to utilize in plan development
 - Work Zone Safety– Guidelines for Construction, Maintenance & Utility Operations Flipbook
 - Standard Detail Drawings
 - Traffic Control Subcontractor
- ▶ LABEL all facility install/removal offset dimensions from edge of pavement or CL of roadway
- ▶ Minimum lane width of 11' must be maintained for all state highways



Traffic Control Plan Requirements



Lane Closure System Entries/511 System

- ▶ HMM 9-15-60 covers steps required to follow prior to doing any work
 - LCS entry required for any work impacting traffic
 - Shoulder/Parking Lane Closures
 - Lane Closures
 - Flagging Ops
 - Lane Shifts
 - Full Closures
- ▶ Advanced notification lead times for LCS entry
 - 7 days for anything impacting traffic and having less than 16' total available pavement width during work
 - 3 days for anything impacting traffic and having 16' or greater total available pavement width during work

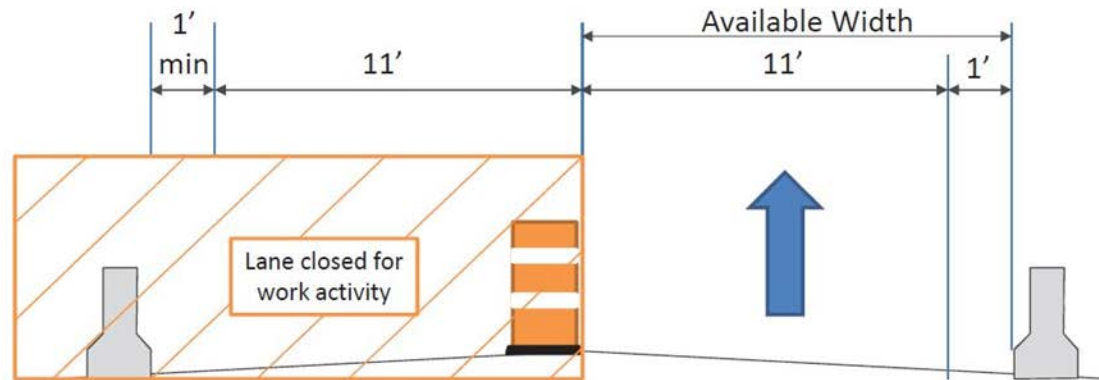
Lane Closure System Entries/511 System

► 7 day notification required - Example

Width Restrictions and Lane Closure System

Example 2

1 Lane Open



LCS Entry → Available Width - 1' Buffer = 11' Effective Width

Width Signing → 11' Max Width

Available width < 16':

Width warning sign(s) required.

Recommend 2 Locations:

- One in WZTC advanced warning area
- One at location where a wide load could exit with supplemental **XX AHEAD** sign below

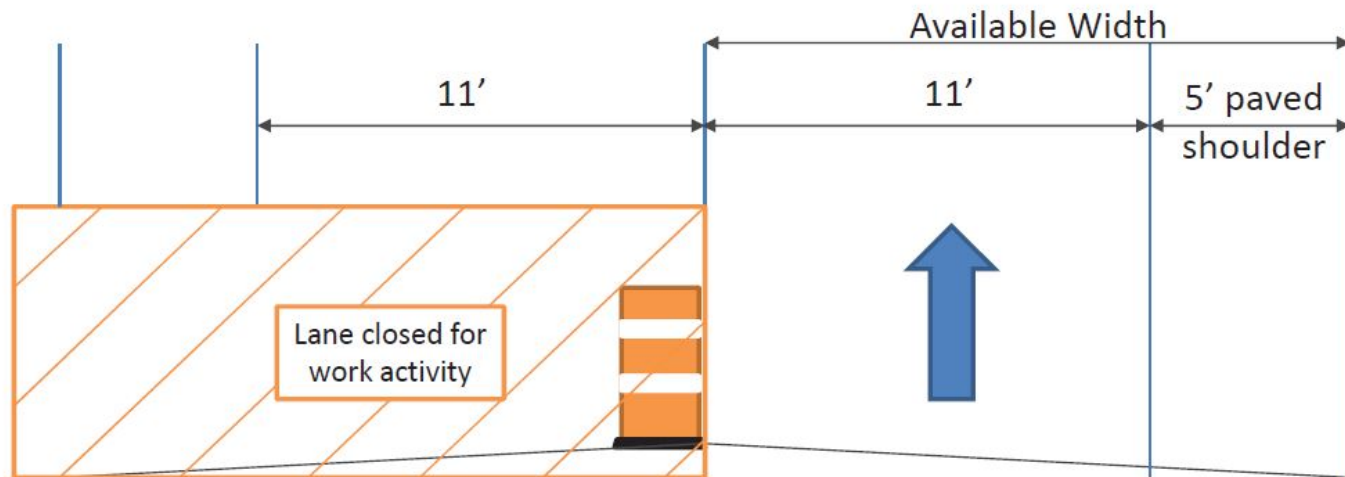
Lane Closure System Entries/511 System

- ▶ 3 day notification required - Example

Width Restrictions and Lane Closure System

Example 3

1 Lane Open



LCS Entry → Available Width' - 1' Buffer = 15' Effective Width

Available Width ≥ 16: No Width Signing Required

Lane Closure System Entries/511 System

- ▶ Reasoning for required LCS entries
 - Feeds our 511 statewide system and let's traveling public know what closures are coming up and/or happening
 - Traveling public ultimately only sees it as traffic impedance
 - Central Office Freight Permitting
 - Width Restricted Locations for OSOW loads
 - Coordination with any other possible roadway projects
- Entries need to be made by the permitting utility

Disruption of Traffic During Work Operations

- ▶ Types of Traffic Disruption
 - Shoulder/Parking Lane Closure
 - Lane Closure w/ Flagging Ops
 - Lane Closure w/o Flagging Ops
 - Lane Shifts
 - Temp Full Roadway Closure

Disruption of Traffic During Work Operations

- ▶ Shoulder/Parking Lane Closure
 - Follow SDD or Work Zone Safety flipbook layout
 - Make sure not to encroach over the travel way edgeline by more than 1 foot
 - Upgrade to a lane closure/flagging ops if greater than a foot
 - Need to maintain 11' travel lane width from edge of nearest TC device to centerline markings

Disruption of Traffic During Work Operations

▶ Flagging Operations

- Follow guidelines laid out in Flagger's Handbook
- Flaggers visible at all times with proper safety equipment
- Advanced signage is in place and in acceptable condition
- Work area is properly defined and delineated with proper TC devices

Disruption of Traffic During Work Operations

► Flagging Operations



Disruption of Traffic During Work Operations

▶ Lane Closure

- Follow SDD or Work Zone Safety flipbook layouts for that particular closure configuration
- Any night work cones/drums are required to have 2 reflective bands
- Arrow boards are required for any lane closures in posted speed limits 35 mph and greater

Disruption of Traffic During Work Operations

▶ Lane Shifts

- Follow Work Zone Safety flipbook layout
- Only to be utilized for 2-lane roadways with a posted speed of 35 mph or less
- Used to keep 2-way operations functional during work
- Must maintain 11' lanes for each direction of travel on a paved surface

Disruption of Traffic During Work Operations

- ▶ Lane Shifts



Disruption of Traffic During Work Operations

- ▶ Temp Full Roadway Closures
 - To be utilized for any OH line removal/install crossing any state highways
 - Allowed for up to 20 minutes
 - 2-lane roadways flaggers can be utilized
 - 4-lane+ roadways State Patrol or County Sheriff's needs to be contacted for assistance in full rolling closures

Pedestrian Safety Topics

- ▶ Why Pedestrian Accommodations Are Needed
- ▶ Pedestrian Safety in Work Zones
- ▶ Types of Impacts



Why Pedestrian Accommodations Are Needed

- ▶ Per The Manual on Uniform Traffic Control Devices (MUTCD), Section 6A.01 states “The needs and control of all road users (motorists, bicyclists and pedestrians within the highway, or on private roads open to public travel, including persons with disabilities in accordance with the Americans with Disabilities Act of 1990 (ADA), through a Temporary Traffic Control zone (TTC) shall be an essential part of highway construction, utility work, maintenance operations, and the management of traffic incident.”



Pedestrian Safety in Work Zones

- ▶ Need to provide “reasonable and practical” pedestrian accommodations
- ▶ All pedestrians need protection from potential injury and must be provided a smooth, firm, stable, slip-resistant and continuous hard surface with a clearly delineated travel path (without abrupt changes in grade or terrain).



Pedestrian Safety in Work Zones



Pedestrian Safety in Work Zones



Pedestrian Safety in Work Zones



Pedestrian Safety in Work Zones



Pedestrian Safety in Work Zones



Types of Impacts

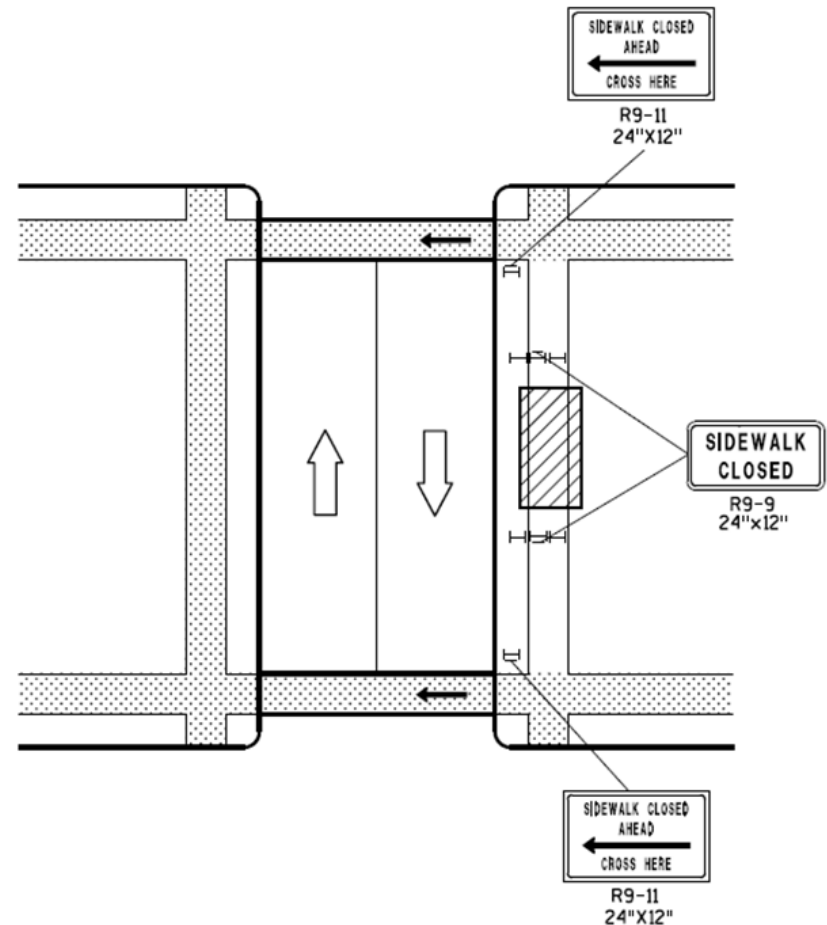
- ▶ Sidewalk Detour
- ▶ Crosswalk Closure
- ▶ Sidewalk Diversion



Types of Impacts

► Sidewalk Detour

- Additional advanced warning signage may be necessary
- May be necessary to allow pedestrians to travel to the closure points to all access to businesses or residences



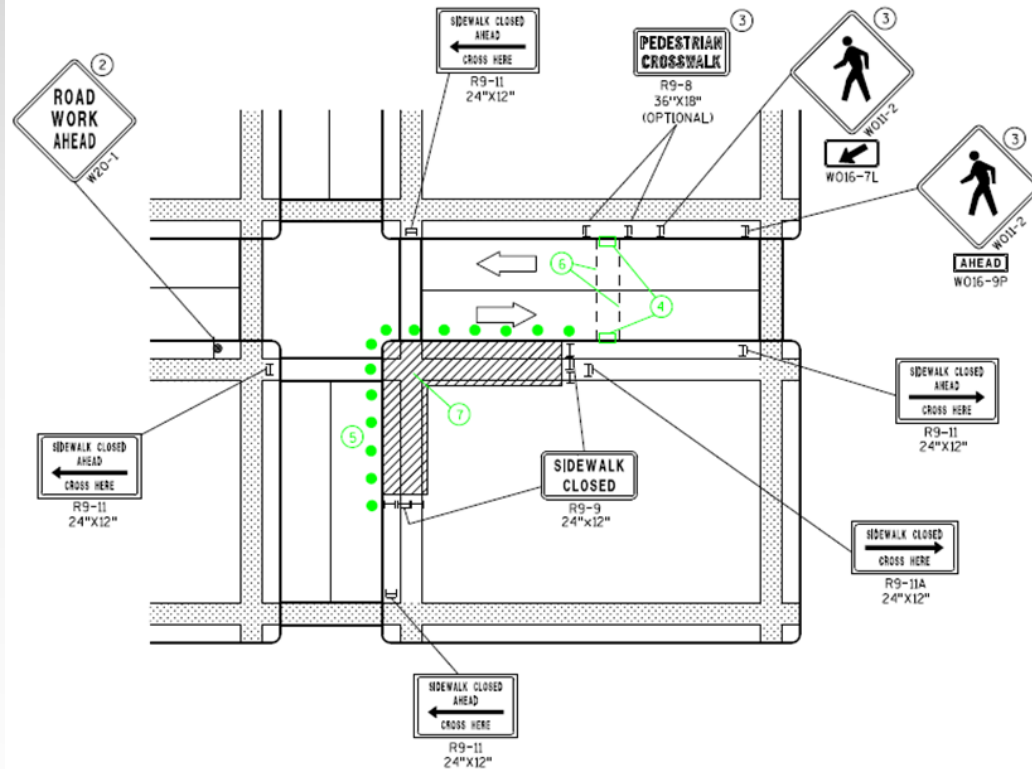
MID-BLOCK SIDEWALK CLOSURE



Types of Impacts

► Crosswalk Closure

- Additional advanced warning signage may be necessary
- Pedestrian signals should be deactivated for closed crosswalks



CORNER SIDEWALK CLOSURE WITH TEMPORARY CROSSWALK

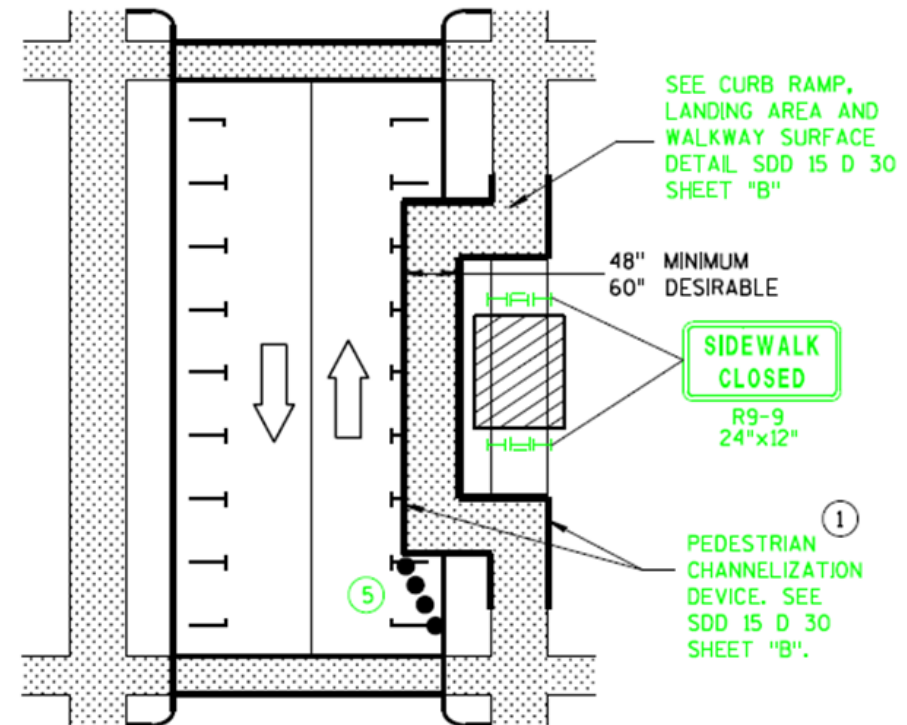


Types of Impacts

► Sidewalk Diversion

- Additional advanced warning signage may be necessary
- Transition signing may be necessary to guide or direct pedestrians

NOTE: MAY BE USED ON ROADWAY WITH POSTED SPEED OF LESS THAN 40 MPH.



**MID-BLOCK SIDEWALK CLOSURE
WITH TEMPORARY WALKWAY**





Questions?

► Contact Information

- Joshua Falk
Work Zone/TC Engineer
joshua.falk@dot.wi.gov
920-366-8033

