

# Temporary Pedestrian Accommodations

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Statewide Work Zone Engineers

2025

**“to provide leadership in the development and operation of a safe and efficient transportation system.”**

## Course Objectives

- Participants will understand the laws and guidelines for accommodating pedestrians in work zones
- Participants will recognize the need for temporary pedestrian accommodation
- Participants will develop a temporary traffic control plan with pedestrians



# Course Contents

- Laws/Rules/Standards/Guidelines
- Project Scoping/Planning
  - Existing facilities
- Temporary Pedestrian Items (Spec. 644)
- Temporary Pedestrian Facility Design
  - How do we take the existing facilities and utilize them
- Issues seen in the field

Do not take any commentary as personal, we are all learning



# Laws/Rules



# Law

- Title II of the Americans with Disabilities Act of 1990
  - 28 CFR Part 35
  - 36 CFR Part 1190 Appendix
- Wisconsin State Statutes
  - 84.02(4)(e) Adoption of MUTCD by WisDOT
  - 349.065 Requirement for locals to follow above manual



# Requirements for Pedestrians

## 28 CFR 35.133

### § 35.133 Maintenance of accessible features.

- (a) A public entity shall maintain in operable working condition those features of facilities and equipment that are required to be readily accessible to and usable by persons with disabilities by the Act or this part.
- (b) This section does not prohibit isolated or temporary interruptions in service or access due to maintenance or repairs.
- (c) If the 2010 Standards reduce the technical requirements or the number of required accessible elements below the number required by the 1991 Standards, the technical requirements or the number of accessible elements in a facility subject to this part may be reduced in accordance with the requirements of the 2010 Standards.



# Requirements for Pedestrians

## 28 CFR 35.133

US Access Board Clarification:

*“An example of an isolated or temporary interruption in the public right-of-way is a watermain break that requires the sidewalk to be temporarily closed due to maintenance activity on the watermain.”*



# Requirements for Pedestrians

## Public Right-of-Way Accessibility Guidelines (PROWAG) 36 CFR Part 1190

### R303 Alternate Pedestrian Access Routes

<https://www.access-board.gov/prowag/complete.html#r303-alternate-pedestrian-access-routes>



# Requirements for Pedestrians

## WMUTCD 6D.01 Pedestrian Considerations 6P-28 – Typical Application 28 6P-29 – Typical Application 29

### Standard:

**03** If the TTC zone affects the movement of pedestrians, adequate pedestrian access and walkways shall be provided.



# Project Planning and Public Involvement



# Project Planning/Public Involvement

- Get aerial image showing pedestrian generators, residential to commercial, etc
  - Discuss how peds are currently using the network
  - Where they are coming from and where they are going
- Make a plan to visit the site to assist with identifying these groups
  - Identify field conditions that could impact use of temporary items
    - Terrain/Slopes
    - Landscaping/Trees/Building
    - It is okay to take pictures



# Questions to confirm with the public

- Who uses the right-of-way?
  - Motorized or non-motorized users?
- How is the road being used?
  - Industrial/commercial/agricultural
    - How do folks get to work?(Drive/Bike/Walk/Transit)
    - How many workers are there?
    - Health care facilities?
  - Residential
    - How dense?



# Are pedestrians present in the project location?

## What facilities exist and how will they be impacted?

- Is there sidewalk?
  - One or both sides?
- Curb ramps and crosswalks?
- Signals
  - Push buttons
  - Ped heads/Count down timers
  - Timing
- Transit?



# What extent will pedestrians be disrupted?

- Blocking or encroaching
  - The facility still exists
- Reconstructing
  - Existing facility removed
  - Replaced with temporary facility
  - Assess and mobility maintained
- Do we have the space for temporary items?
  - Temporary Limited Easements





# Maybe that doesn't apply to you, what about this?

- Who is working on the farms?
  - We are the Dairy State right?
- How are workers getting there?
  - Driving
  - Biking
  - Walking
- Where are they coming from?



# Example: What do we see?



# Let us look at a ped crash in a work zone!

- WIS 27
- August 29, 2022
- Ped struck by car, hit and run
- Ped walking on the side with traf
- Ped walked to the hospital w
- broken mirror and made the
- Should we have considered
- something for peds here?
- Is it possible we missed som



CREA

SCALE

# One more crash

- Marquette University
- City of Milwaukee
- Building 100
- Lane, 16th Street
- Lime scooter
- struck
- Driver
- scooter
- switch
- then d

ON SUNDAY, FEBRUARY 2ND, 2025 AT APPROXIMATELY 0354 HOURS, I, PO T. SIMANSON, BADGE #248, WAS DISPATCHED TO MUPD TO MEED WITH COOPER ST JOHN OLSON (M/W 05/13/03 920-579-1123) WHO WAS STRUCK BY A MOTOR VEHICLE WHILE RIDING A SCOOTER IN THE 600 BLOCK OF N 16TH STREET, IN THE CITY AND COUNTY OF MILWAUKEE, STATE OF WISCONSIN. OLSON STATED HE WAS RIDING THE LIME SCOOTER NORTHBOUND IN THE 600 BLOCK OF N 16TH STREET AND HE WAS STRUCK FROM BEHIND AND THAT WAS ALL HE KNEW. OLSON COMPLAINED OF LEFT CALF PAIN AND WAS CLEARED ON SCENE BY MFD.

I SPOKE TO WITNESS QUARTTERRI D WILDER (M/B 06/19/1979 414-933-6963). WILDER STATED A GRAY CHRYSLER 200 BEARING WI PLATE ATE5978 WAS TRAVELING NORTHBOUND IN FRONT OF HIS VEHICLE, BEHIND OLSON. WILDER STATED THE CHRYSLER STRUCK OLSON FROM BEHIND AND THE SCOOTER GOT STUCK UNDER THE VEHICLE. WILDER STATED THE VEHICLE STOPPED FURTHER DOWN THE ROAD AND A FRONT FEMALE PASSENGER EXITED AND WAS REMOVING THE SCOOTER FROM UNDER THE VEHICLE. WILDER STATED HE ADVISED THE FEMALE THEY STRUCK A PEDESTRIAN AND THE FEMALE ADVISED THE DRIVER OF THE VEHICLE WHO WILDER COULD NOT SEE DUE TO TINT. WILDER STATED HE TURNED HIS VEHICLE AROUND TO RETURN AND CHECK ON OLSON. WILDER STATED WHEN HE LOOKED BACK THE STRIKING VEHICLE WAS GONE.

UPON REVIEW OF MUPD SURVEILLANCE CAMERA FOOTAGE, OLSON IS SEEN RIDING A LIME SCOOTER, NORTHBOUND NEAR 604 N 16TH STREET, IN THE

Wisconsin Motor Vehicle Crash  
DT4000

This report does not include any CJIS data.

Crash Date **02/02/2025**

Crash Time **03:47 AM**

1 of 7

WISCONSIN  
L13MV9B5  
003172

## WISCONSIN MOTOR VEHICLE CRASH REPORT

MARQUETTE UNIVERSITY PD  
749 N 16 STREET  
MILWAUKEE, WI 53233  
(414) 288-7320

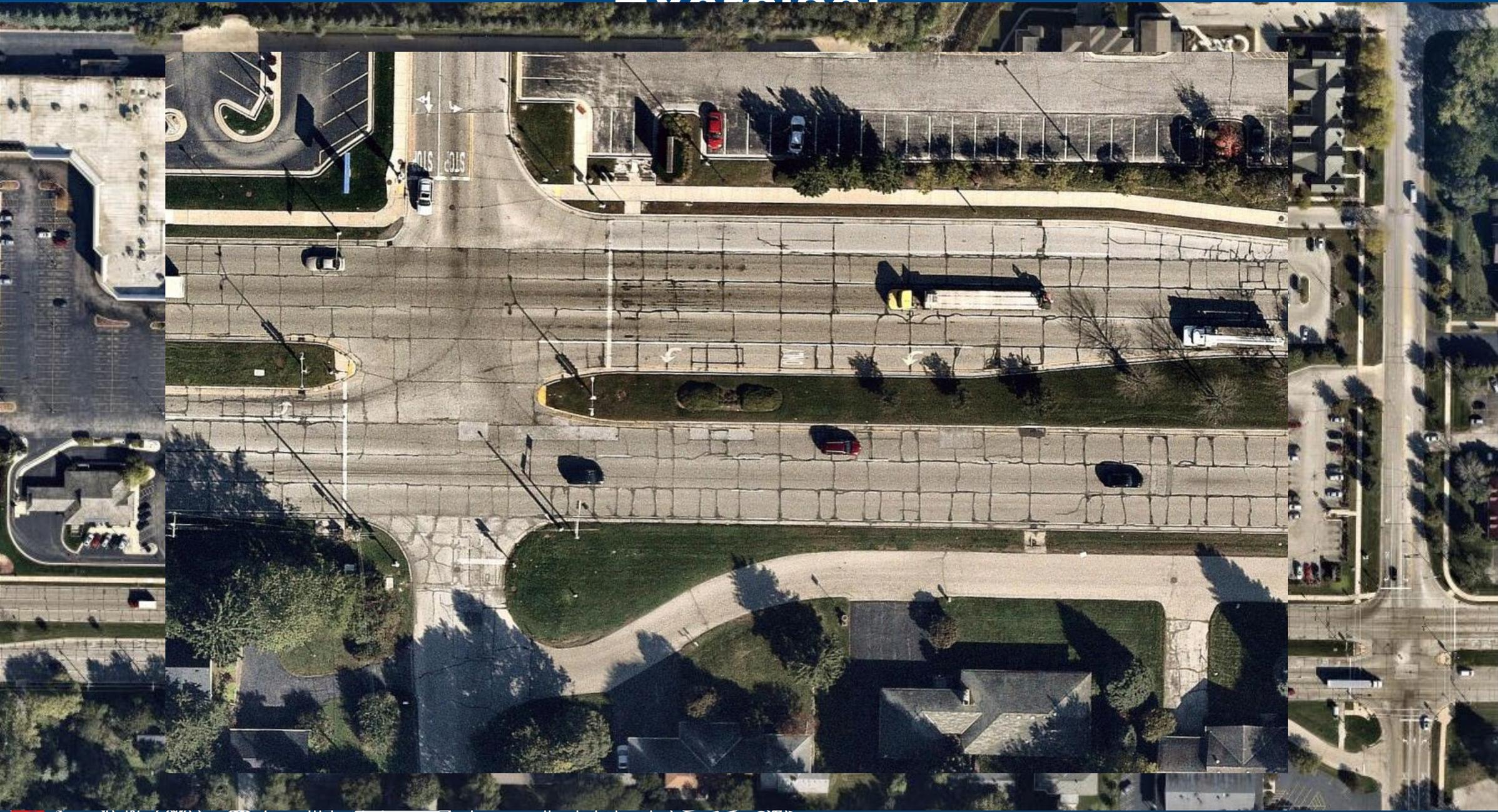
PARKING LANE. OLSON MOVES INTO THE BICYCLE LANE, SHARED BY TRAFFIC DUE TO CONSTRUCTION, AHEAD OF THE CHRYSLER 200 DUE TO AN UPCOMING BARRIER MARKING A PEDESTRIAN CROSSWALK. THE CHRYSLER STRIKES OLSON FROM BEHIND, CAUSING OLSON TO HIT THE WINDSHIELD AND FALL OFF THE VEHICLE BACK INTO THE PARKING LANE. THE CHRYSLER CONTINUES NORTHBOUND AND STOPS NEAR W WISCONSIN AVENUE WITH VISIBLE WINDSHIELD DAMAGE. A FEMALE PASSENGER AND FEMALE DRIVER EXIT THE VEHICLE BRIEFLY AND SWITCH SEATS BEFORE IT CONTINUES NORTH.



Google

Marquette Gymnasium

# Exercise



# Temporary Pedestrian Items & Design Details



# Temporary Pedestrian Surfaces

## Bid Items 644.1400-1499

- Temp. Ped. Surfaces
  - Matting on lawns, across work areas
  - Asphalt on built up areas
  - Multi-year accommodations
  - 2.1% cross slope
  - 1/4 -inch vertical difference, 1/2-inch gaps between max.



# Temporary Pedestrian Barricade

## Bid Item 644.1810

- Devices are from the APL
- Hand-trailing at the top
- Bottom railing for long-cane
- Needs space for support ballast on the back
- Can mount signs on barricade



# Temporary Curb Ramp

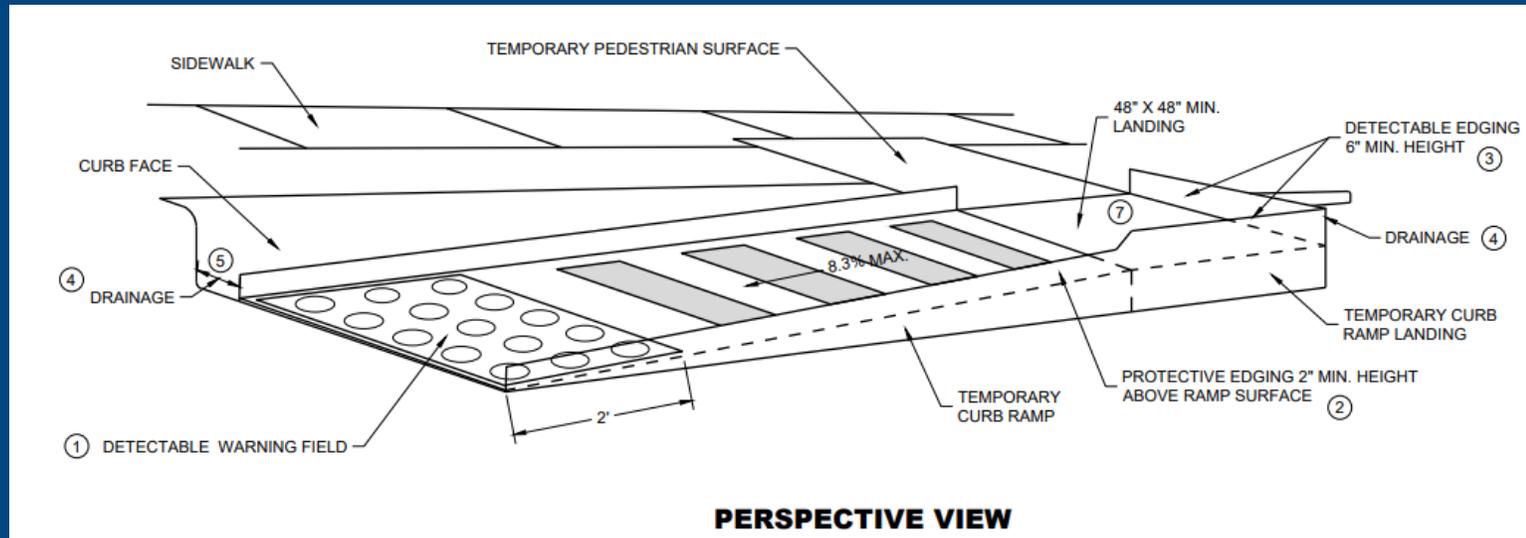
**Bid Item 644.1601**



# Temporary Curb Ramps

## Parallel

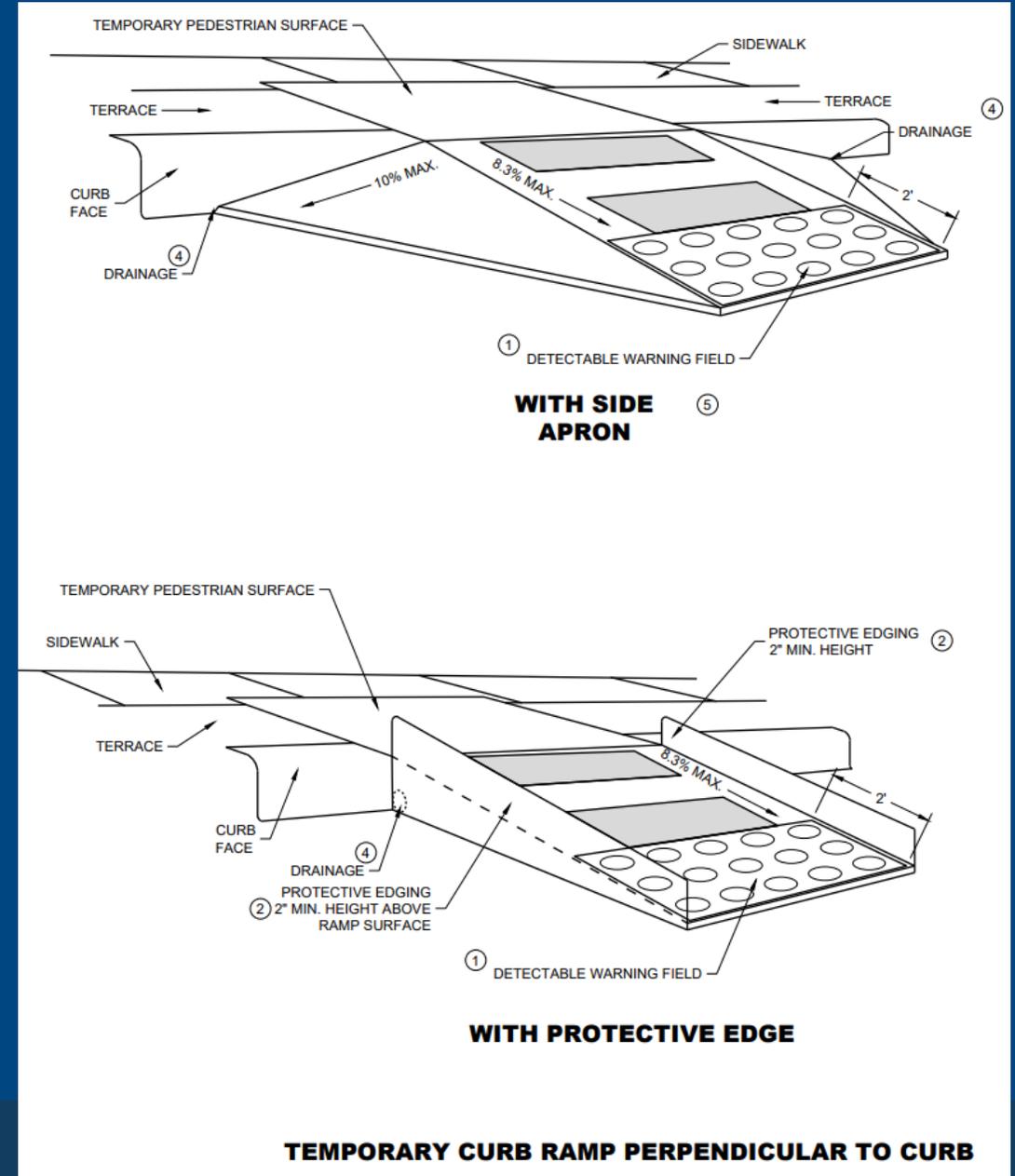
- Slope 8.3%
- Width min. 4 ft.
- Landing area
- Detectable warning field
  - When intersecting traffic
- Less intrusion into traffic



# Temporary Curb Ramps

## Perpendicular

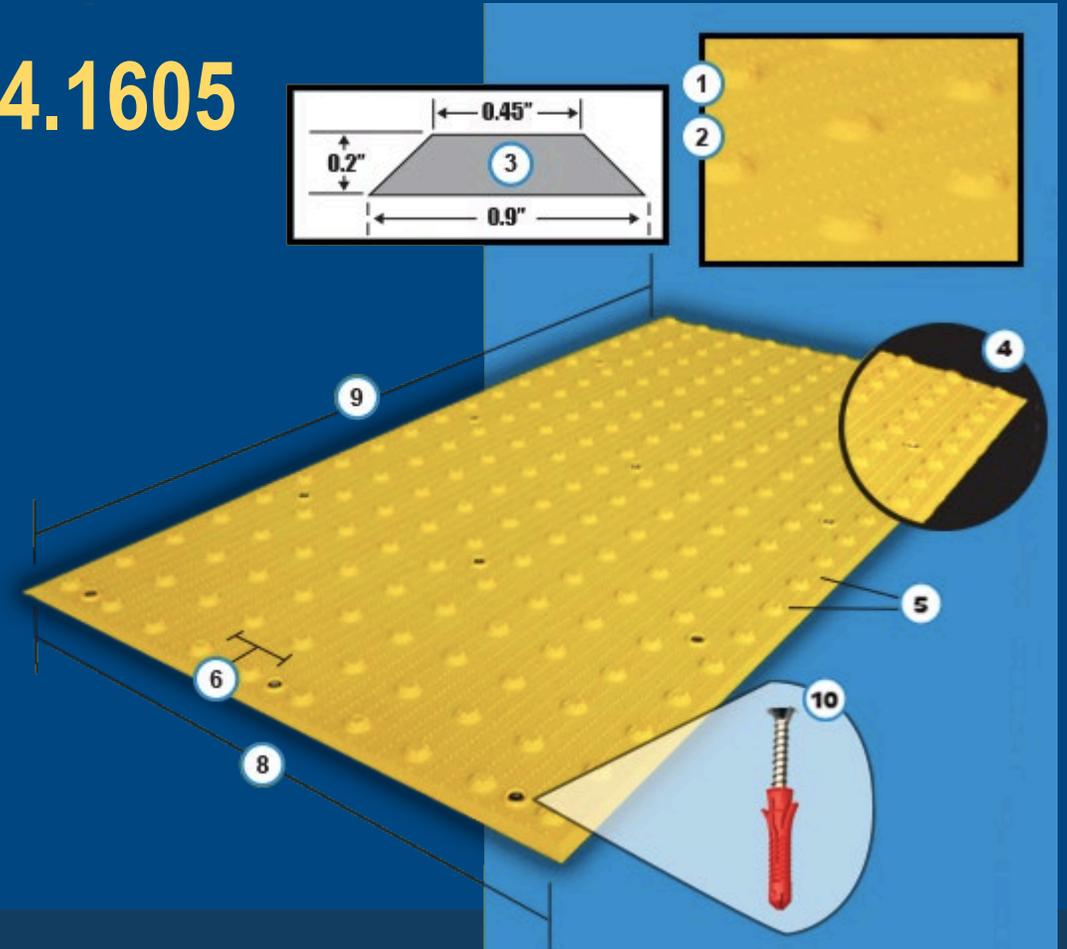
- Slope 8.3%
- Width min. 4 ft.
- Landing area
- Detectable warning field
  - When intersecting traffic



# Temporary Detectable Warning Field

## Bid Item 644.1605

- Placed in advance of crossing into traffic
- Surface applied
- May not be needed on all ramps



# Temporary Marking Crosswalk

643.3300-3399

- 6-inches wide parallel lines
- Paint
  - Existing surfaces that will be removed
- Epoxy
  - Only use if the rest of the project is using
- Tape
  - Use on final surfaces or existing surfaces that will remain after the project



# Traffic Control Signs

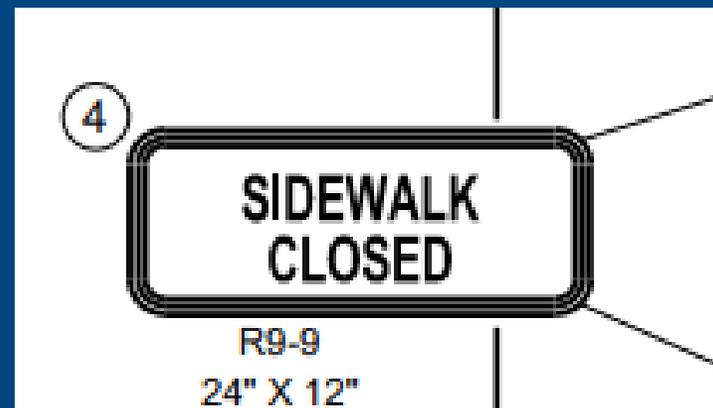
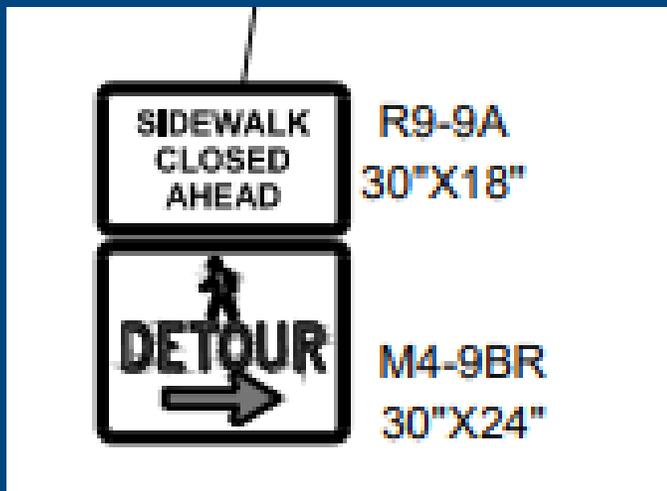
## Bid Item 643.0900

- Sign support incidental
  - Post mounted
  - Portable mounts
- Consider the sign message



# What does the sign say?

- Everyone close your eyes.....



# Temporary Audible Message Devices

- Allows vision impaired the ability to understand a message a sign would provide
- Added to temporary pedestrian route plans at decision points
- Motion activated, with preloaded message



# PROWAG 303.2 requirement

Signs identifying alternate *pedestrian access routes* shall be provided in advance of decision points and shall comply with R410. Proximity actuated audible signs or other non-visual means within the *public right-of-way* of conveying the information that identifies the alternate *pedestrian access route* shall also be provided.

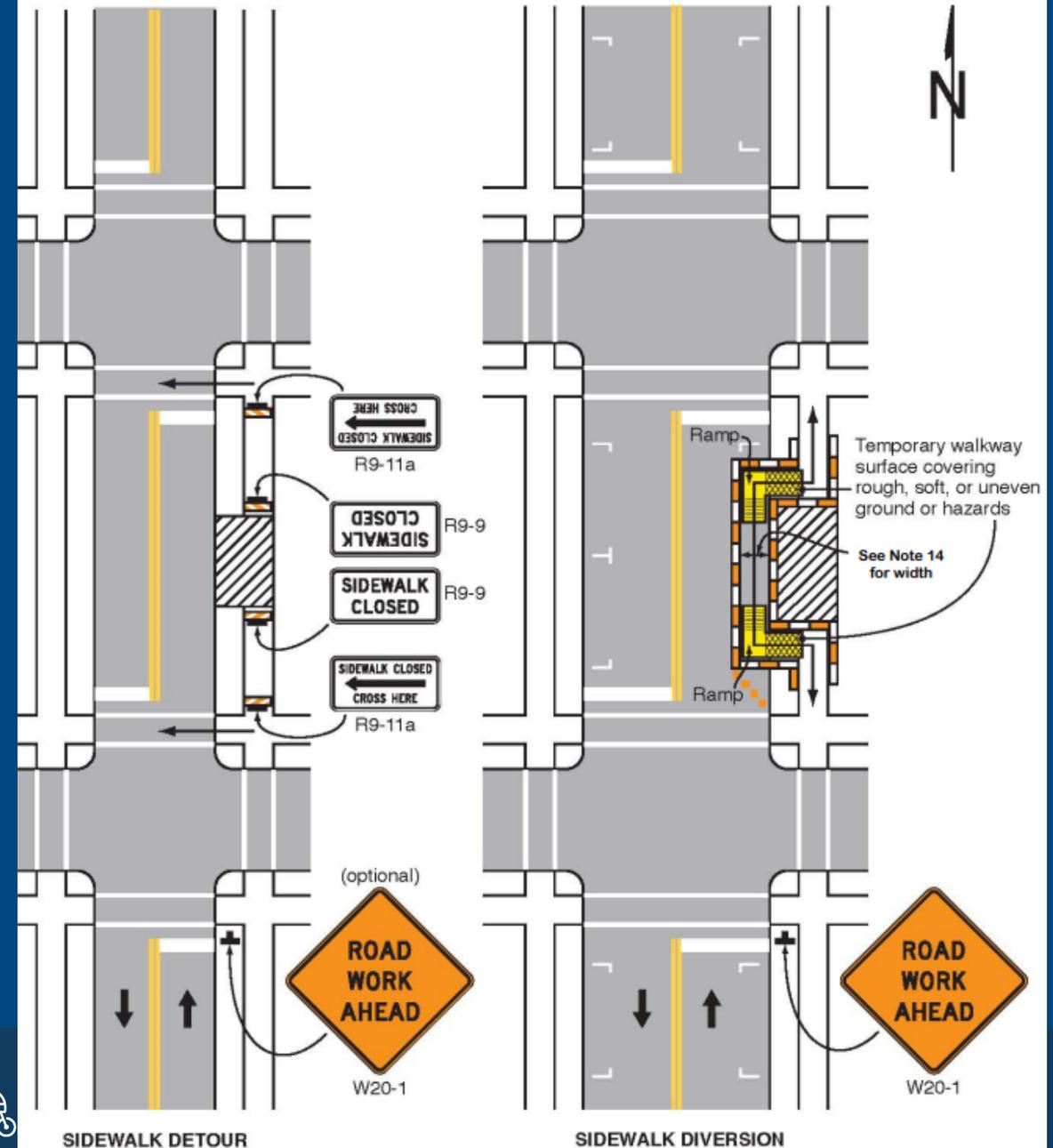


# 2023 MUTCD TA-28 & 29

5. SIDEWALK CLOSED CROSS HERE signs shall include audible information devices to provide adequate communication to pedestrians with vision disabilities.

6. Audible information devices shall be provided where midblock sidewalk closings and changed crosswalk areas cause inadequate communication to be provided to pedestrians with vision disabilities

Figure 6P-28. Sidewalk Detour or Diversion (TA-28)



# Estimating Costs

stp-644-190 Temporary Audible Message Devices, Item 644.1900.S

MnDOT, Audible Message Devices 2563.613/01150 Bid Item.

- Prices \$1 to \$12/DAY.
- Typically \$2 to \$5/DAY regardless of the quantity



# Designing Temporary Pedestrian Facilities



# Who are we designing for?

- Pedestrians of all ages
- Visually impaired
- Wheelchair bound
  - Motor scooters
- Bicycles



# Do we have options for pedestrians?



## Duration

WMUTCD →

	Mobile	Short Duration	Short-term	Intermediate	Long-term
	Always moving	Up to 1 hour	More than 1 hour within a single daylight period	Up to 3 days	More than 3 days
<b>No impacts</b>  Pedestrian Paths either do not exist on a project or work from a project does not impact pedestrian travel	Nothing required for pedestrians	Nothing required for pedestrians	Nothing required for pedestrians	Nothing required for pedestrians - Confirm during construction	Nothing required for pedestrians - Confirm during construction
<b>Encroachment</b>  Restricting the pedestrian path to less than the normal existing width but leaving at least 4 feet of width	Move object/work encroaching, pedestrian flagging	Move object/work encroaching, pedestrian flagging	Pedestrian Flagging  Detour	Pedestrian Flagging  Detour	Pedestrian Flagging  Detour  Temp. Facility
<b>Blockage</b>  The existing pedestrian path is intact but is not passable because of the following: existing path has less than 4 feet of width or work on the pathway or to something off of the pathway. Material or equipment is easily moved.	Move object/work encroaching, pedestrian flagging	Pedestrian Flagging  Detour	Pedestrian Flagging  Detour  Temp. Facility	Pedestrian Flagging  Detour  Temp. Facility	Pedestrian Flagging  Detour  Temp. Facility
<b>Reconstruction</b>  The existing path has been removed and is being reconstructed. The facility is not passable.	N/A - Unlikely a pathway is able to be reconstructed in this timeframe		May not be feasible  Detour  Temp. Facility	Detour  Temp. Facility	Detour  Temp. Facility

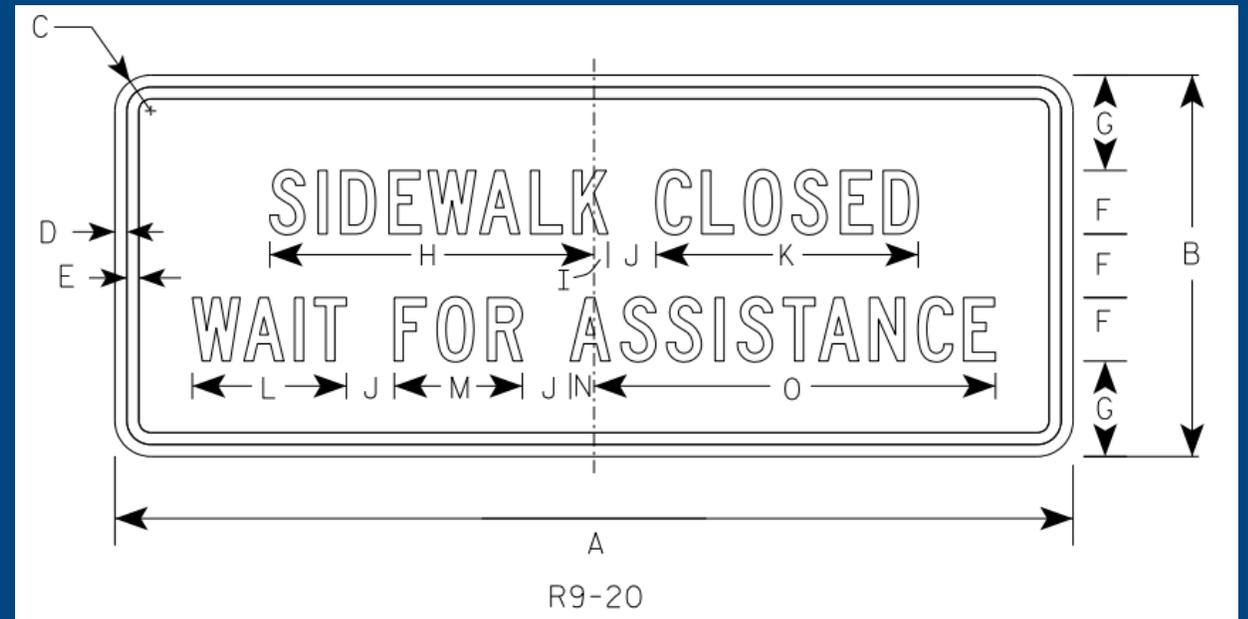
Construction Impact to Pedestrian Travel



# Pedestrian Flagging

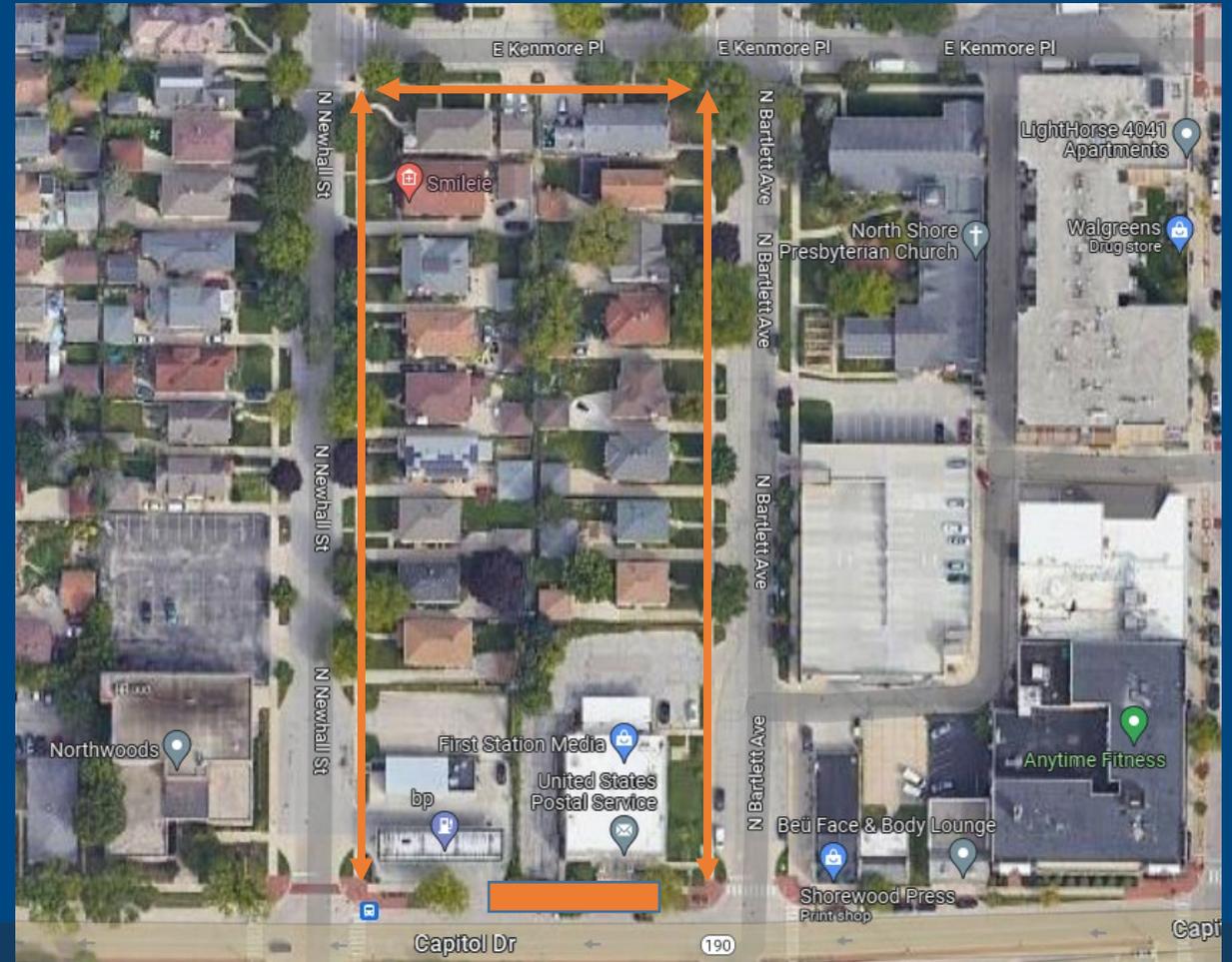
## Shepherding

- Contractors stop pedestrians from entering the work area
- Work stops
- Contractors let pedestrians pass
- Work resumes



# Pedestrian Detour

- Allows peds a way around
  - Opposite side
  - Around the block
- Requires blocking work area
- Advance warning



# Question

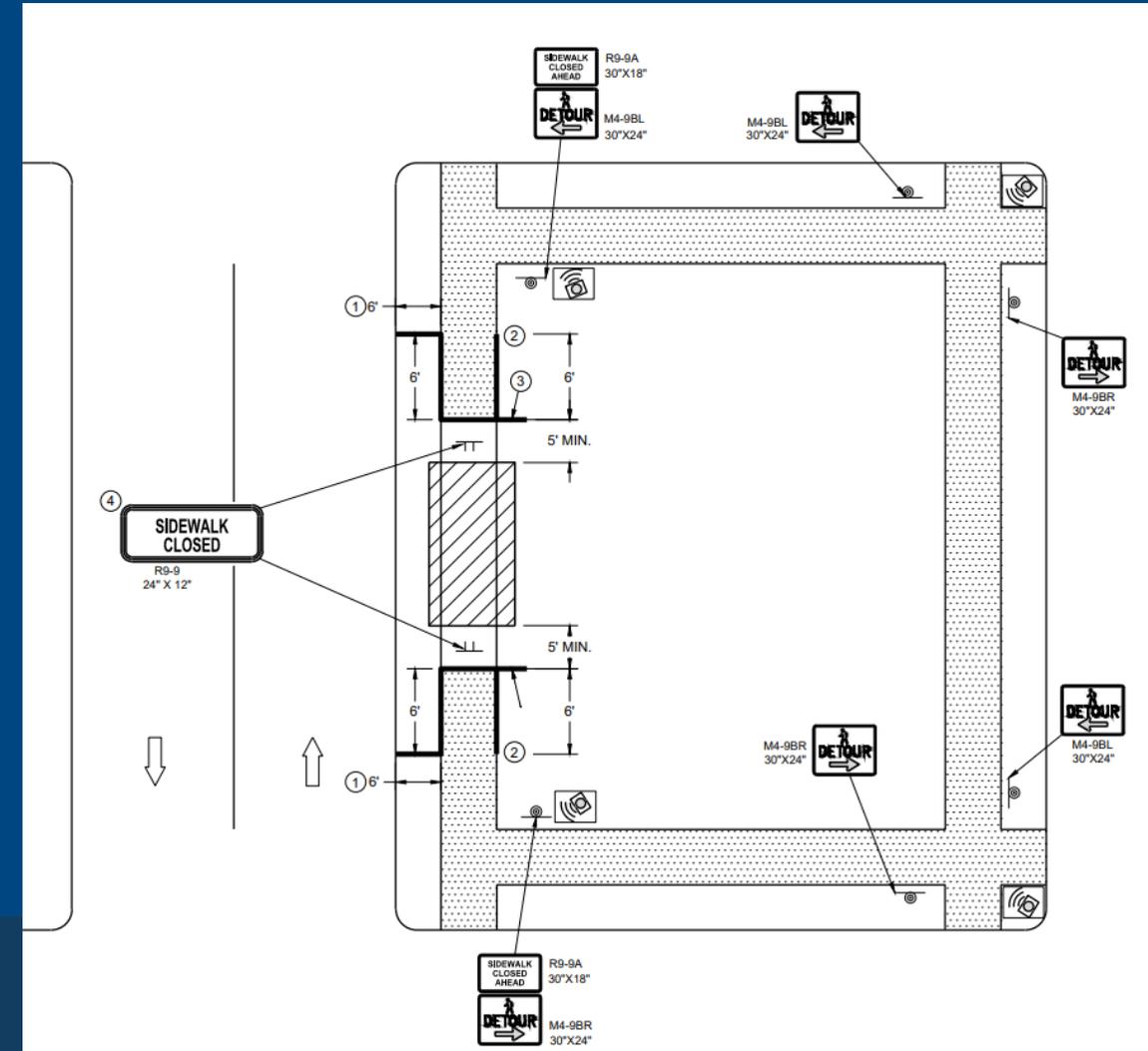
How far out of the way would you go for a pedestrian detour?

- a) Across the street
- b) Around the block
- c)  $\frac{1}{4}$  mile
- d)  $\frac{1}{2}$  mile
- e) 1 mile



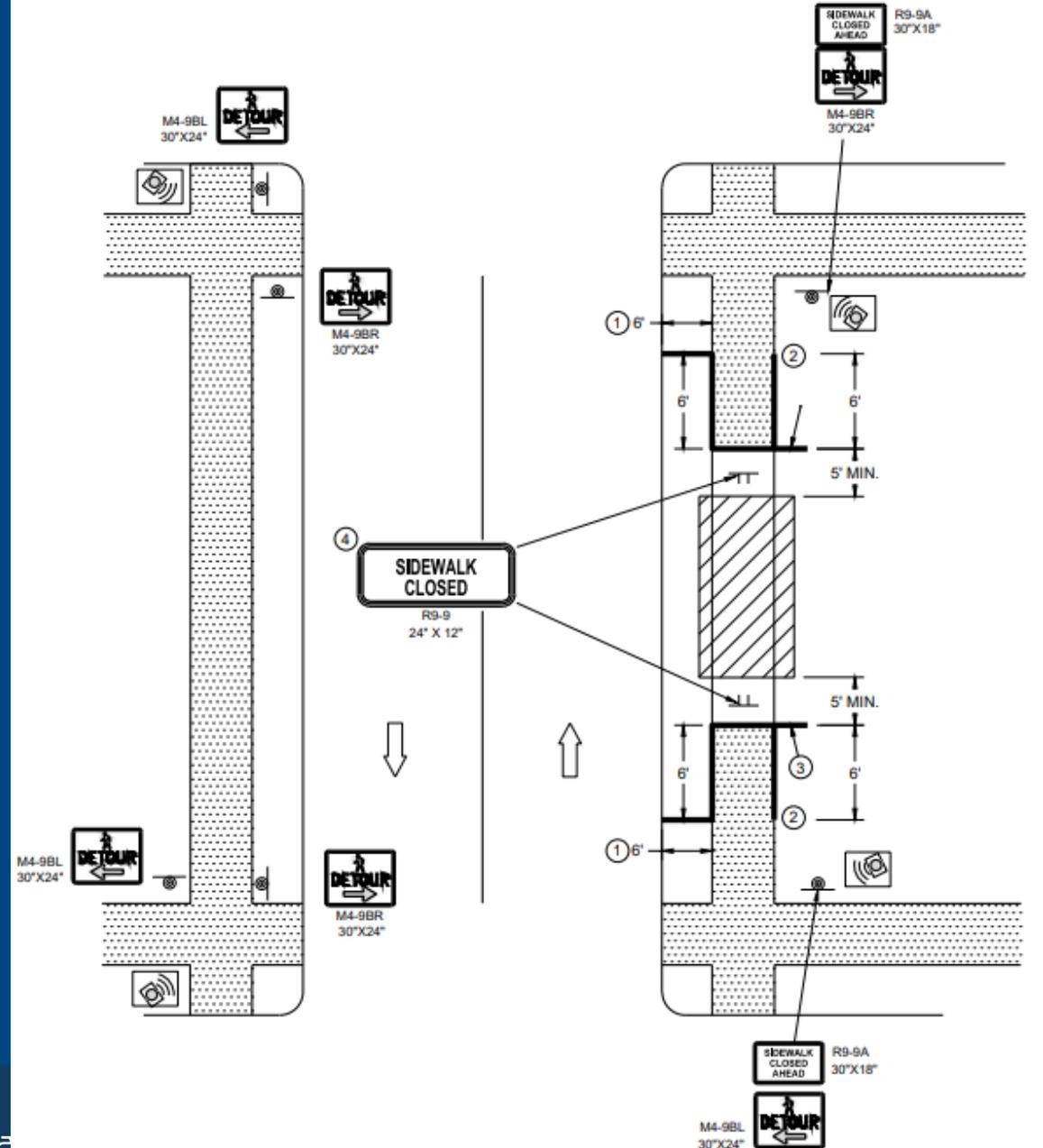
# Pedestrian Detour Requirements

- Same characteristics
- A reasonable distance
  - Visually impaired
  - Using wheel chair
- Routing Signs
- TAMD at the decision points



# SDD 15D30

- Temporary Pedestrian Barricades redirect people at the closure point.
  - To close off work area
  - Space for ballast



# WisDOT FDM 11-50-31 Messaging

## Message format:

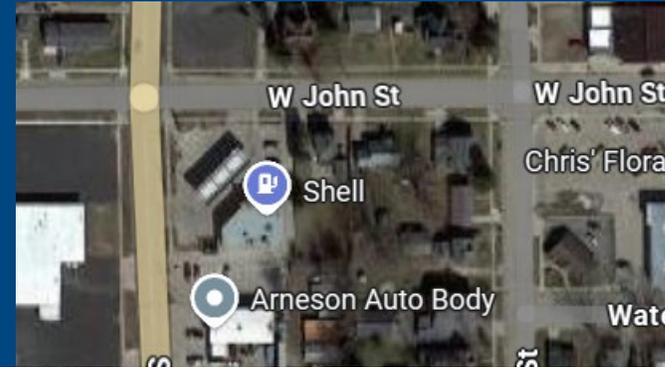
Attention [direction][street name] pedestrians. Sidewalk closed ahead for [number] blocks. Alternate path on opposite side of road. Cross to the other side at next intersection and continue [number] blocks.

[Microsoft Word - Messages for audible information devices\\_7-2011.docx](#)

- Add to plan sheets



# Exercise: Develop Detour and TAMM Messages



Following route



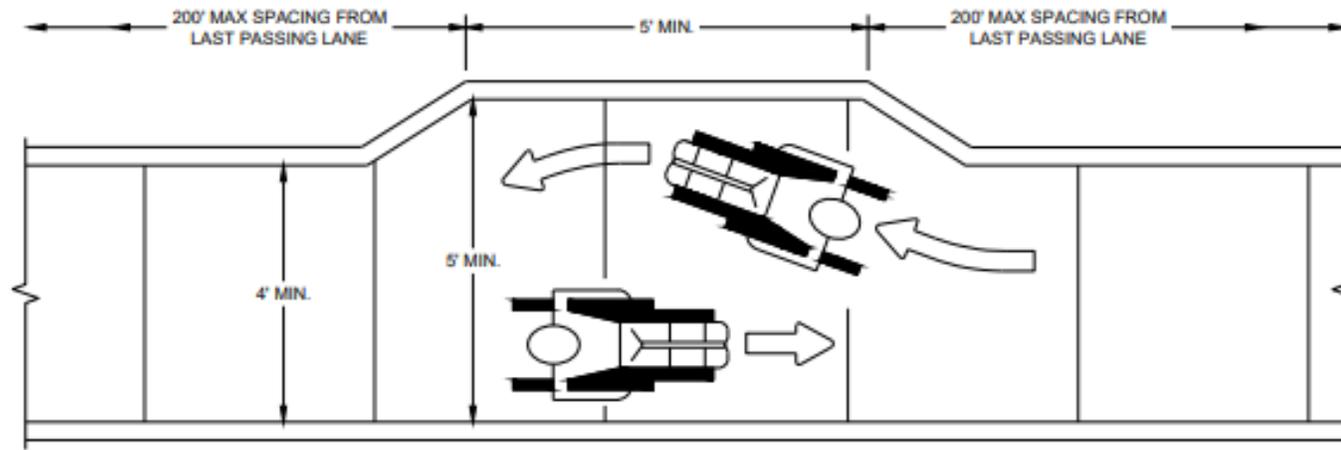
# Temporary Pedestrian Facilities

## Items we place to maintain access

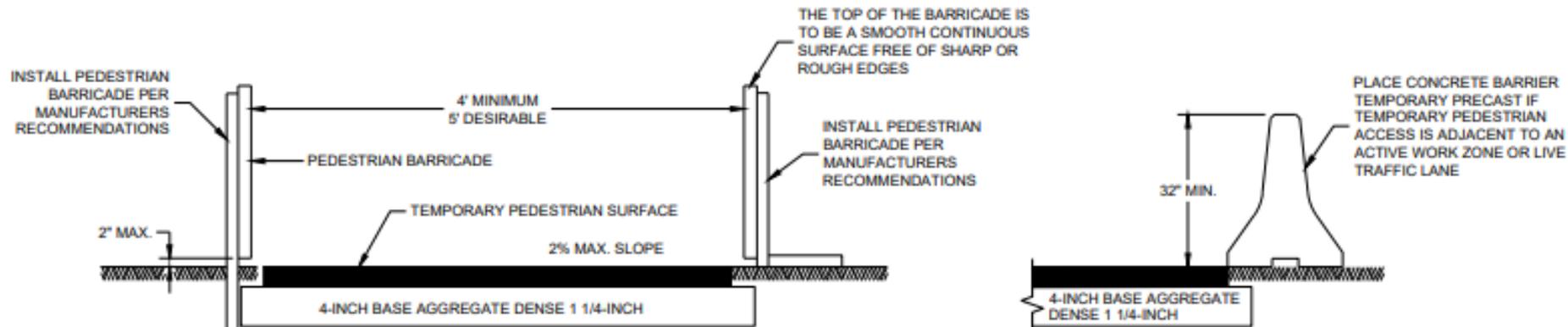
- By-pass
  - Temporary Surface
- Temporary Curb Ramps
- Temporary Bus Stops
- Temporary Crosswalks



# Temporary Pedestrian Plans



**NARROW SIDEWALK PASSING DETAIL**



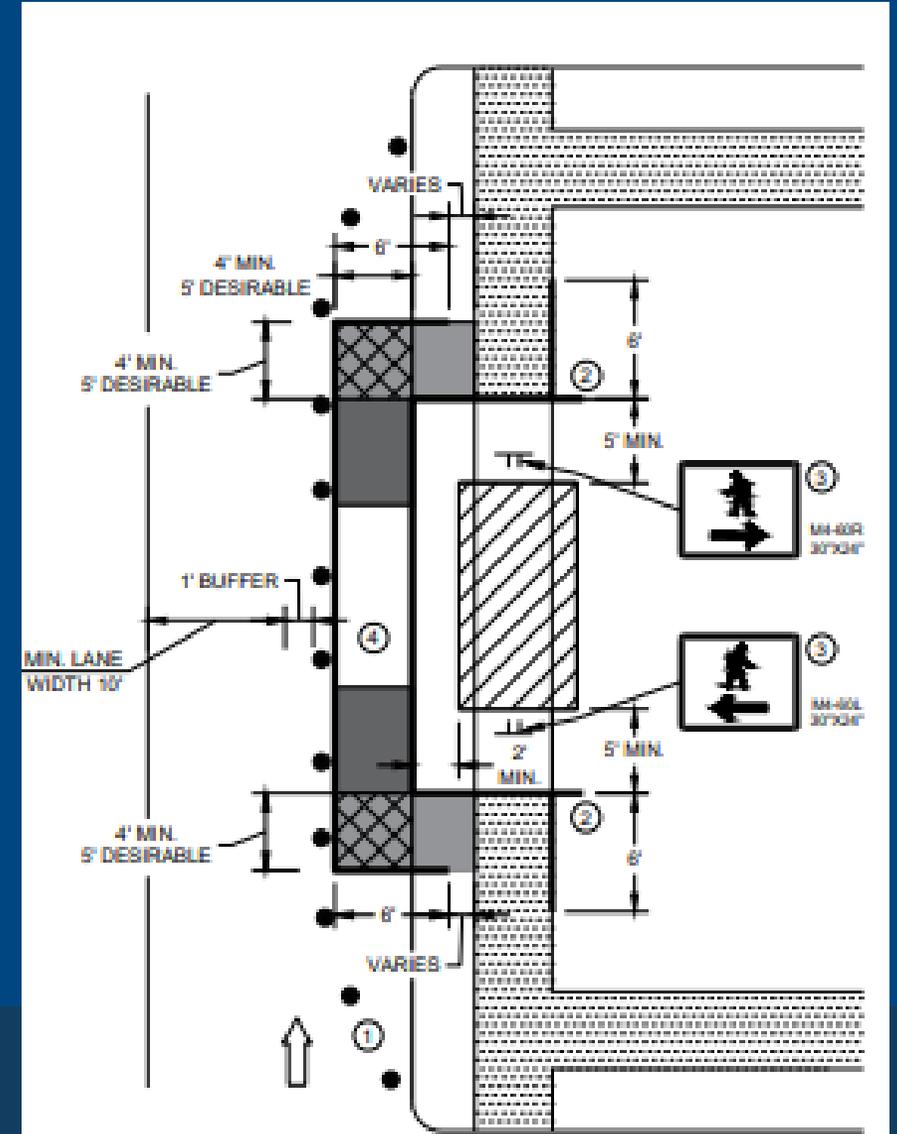
**TEMPORARY PEDESTRIAN ACCESS**

# Sidewalk By-Pass

## On street

Requires:

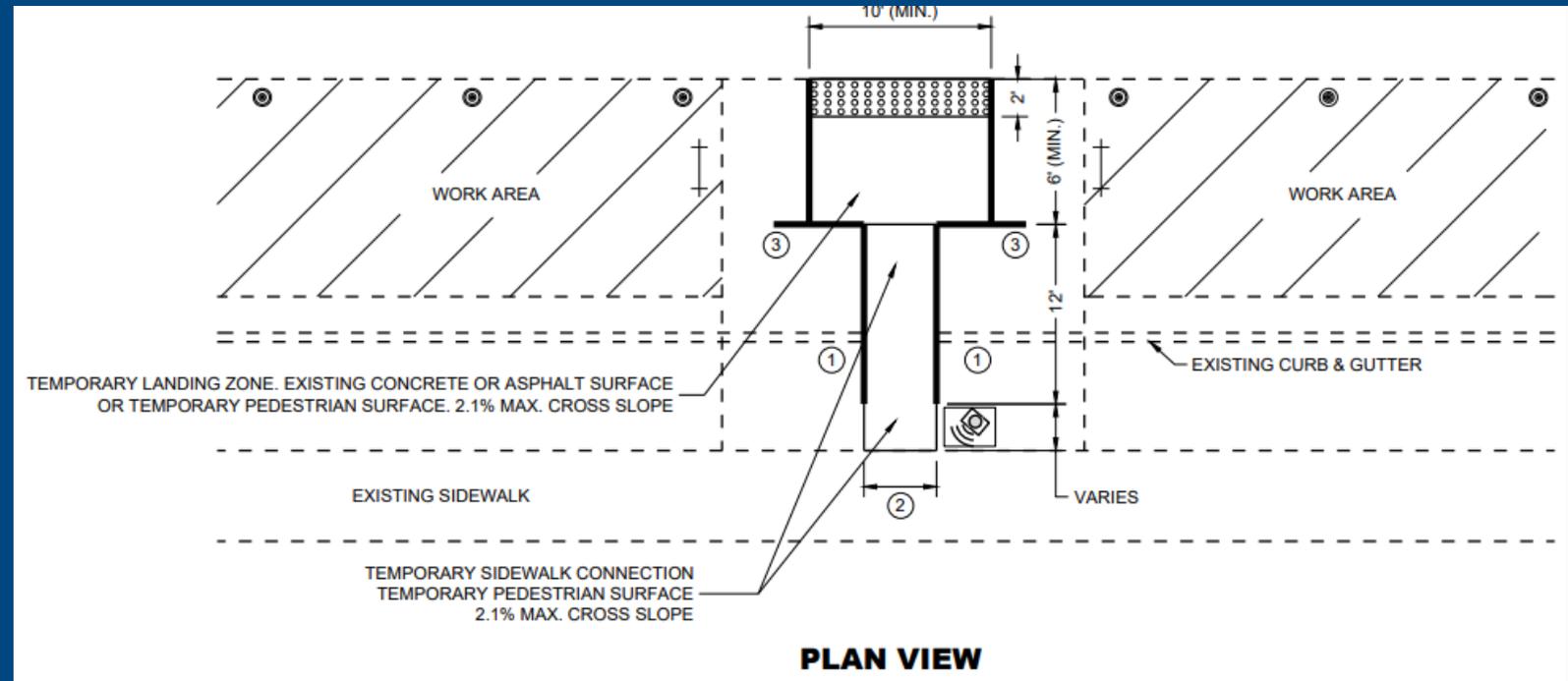
- Space in the road
  - Existing cross slope is okay
- Temp. Curb Ramps
- Surface to cover terrace area
- Temporary Pedestrian Barricade





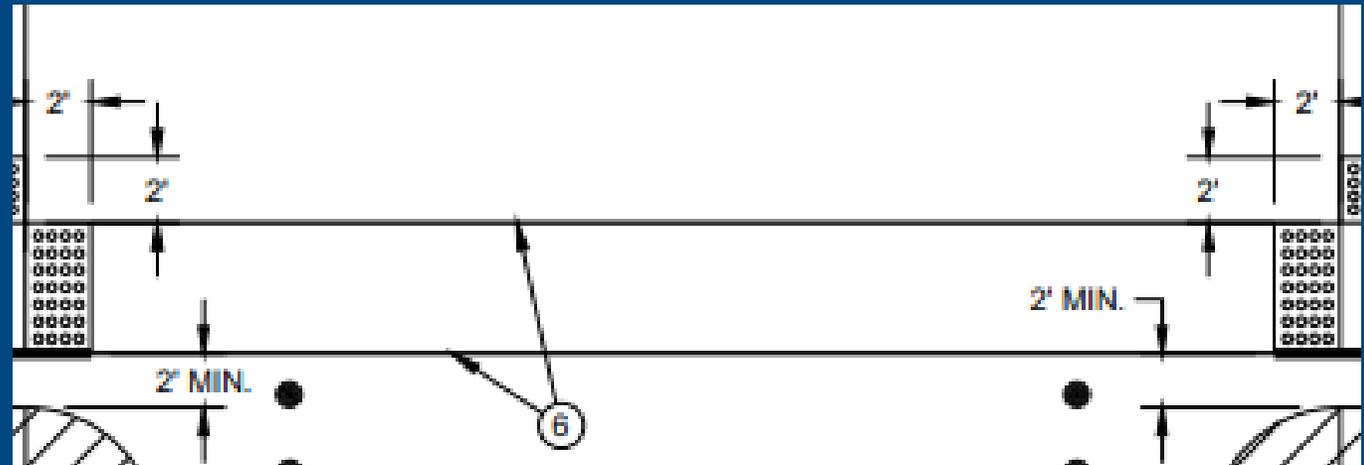
# Temporary Bus Stop

- Temp. Ped. Surface
- Temp. Barricade
- Work with transit provider
- Updated needed on the depth, min. 5-ft x 8-ft



# Temporary Crosswalks

- 6-inch white temp. markings
  - Tape if on existing/permanent surface
- Preceded by temporary detectable warning fields if necessary
- Temp. Ped Surface if crossing work areas
- If crosswalk is displaced/new









# Signals

## What to do when we have signals?

- Do you have a ped head?
  - Make sure to put maintaining it in the contract
- Do you have push buttons?
  - Make sure they get moved if necessary
- Timing



# Design Priorities

## CHANCE OF A PEDESTRIAN BEING KILLED OR SEVERELY INJURED IN A CAR ACCIDENT

### PEDESTRIAN CRASH MORTALITY RATES BY VEHICLE BODY TYPE

Speed (mph)	Sedan	Pickup/SUV/ Minivan	Bus/Tractor Trailer/Semitruck
25	4.4%	6.8%	10.1%
30	6.8%	10.4%	15.2%
45	22.9%	32.0%	42.1%
55	43.0%	54.5%	64.9%
65	65.7%	75.2%	82.4%
55	34.9%	43.0%	77.9%
65	20.9%	65.7%	86.6%
70	14.5%	75.3%	89.8%

Source: CRSS 2016-2020



# Design Considerations

## Do not focus on just vehicles or pedestrians/bicyclists

- Design the WZ for the speed you want the vehicles driving
  - We can make drivers feel the need to slow down
  - Narrow the lanes
  - Consider a speed reduction, it is possible



# Design Considerations

- Separate vehicle traffic from pedestrian traffic
- Separate pedestrian traffic from the work space
- Positive Protection
  - Temporary concrete barrier, may work in some locations
  - Could be more of a hazard itself



# Concrete Barrier Temporary Precast

**Type of Barrier Required Between Vehicle Traffic and Pedestrians**

<b>Speed (mph)</b>	45 and greater	None*	Temporary Pedestrian Barricade	Temporary Concrete Barrier	Temporary Concrete Barrier
	40 to 30	None*	Temporary Pedestrian Barricade	Temporary Pedestrian Barricade	Temporary Concrete Barrier
	25 and less	None*	Temporary Pedestrian Barricade	Temporary Pedestrian Barricade	Temporary Pedestrian Barricade
		<1	Up to 3	Up to 14	14<
		<b>Duration (Days)</b>			

\*If the work is moving and pedestrian shepherding is being used. If a detour route has been established the normal route should be blocked with temporary pedestrian barricades on each end of the closure.

# Mode Switch

## Can pedestrians become riders?

- Are transit routes available?
- County resources?
- Taxi services?
- Dedicated shuttle



# Can temporary facilities be disrupted or closed?

Yes

- If work needs to be done in an area that has temp. ped facilities as long as mobility is maintained
- Communicate with residents
- Return temp. facilities when complete



# Exercise: Design Temporary Pedestrian accommodations



# Temporary Pedestrian Plans

## DO NOT JUST INSERT SDD's

- Use the SDD's as a design guide
- Think about how to treat each location
- Incorporate into the staging
- Think about the work taking place
- Cost cannot be used as a reason not to provide
- Contractors will not just figure it out



# No options available?

## Document that we have made a good faith effort to provide

1. Determine where the existing pedestrian facilities and routes are. This includes sidewalks, curb ramps, bus stops. (Attach map/drawing)
  - Highlight existing sidewalks and walkways
  - Highlight crosswalks
  - Call out curb ramps
  - Show bus stops
2. Identify where the pedestrian facilities will be disrupted during construction on map/drawing.



# No options available?

## Document that we have made a good faith effort to provide

3. Determine how pedestrian access and mobility can be maintained. Document the reasons why something cannot (is impractical?) be used.

a) Can pedestrian shepherding maintain access and mobility?

b) Can a detour of the pedestrian route maintain access and mobility?

c) Will a by-pass for the pedestrian route maintain access and mobility?

a) Will the by-pass use the street or the property?

d) Will a mode change maintain access and mobility?

a) Are there any local resources such as, County or Municipal Aging and Disability Centers, that have been contacted?

b) Are there any taxi services in the area that can provide an on-call service? (The area would be the immediate service area for a taxi.)



# No options available?

## Document that we have made a good faith effort to provide

### 4. What non-standard options can maintain access and mobility?

- At this step all standard methods for maintaining accessibility must be **exhausted and documented**. Determine the most reasonable methods for maintaining access and mobility.



# Feedback from the Field



# Installation of Devices



# Storage of Items



# Sidewalk Closures



# Lack of Accommodations



# Diversions for Curb Ramp Replacements



# Placement of Equipment

