A MnDOT Context Sensitive Solutions (CSS) Webinar

Maintaining Pedestrian Access Through Construction & Maintenance Work Zones

Your Destination...Our Priority

Webinar Presenters

- Jack Broz (Moderator) (Transportation Group Leader – H.R. Green Co.), jbroz@hrgreen.com
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- Kristie Billiar (ADA Implementation Coordinator – MnDOT), kristie.billiar@state.mn.us
- Todd Grugel (ADA Program Engineer – MnDOT), todd.grugel@state.mn.us
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A MnDOT Context Sensitive Solutions (CSS) Webinar

Maintaining Pedestrian Access Through Construction & Maintenance Work Zones

For more information and to view the webcast visit:

http://www.cts.umn.edu/contextsensitive

Understanding CSS

CSS is a collaborative, interdisciplinary approach that involves all stakeholders in providing a transportation facility that fits its setting. It is an approach that leads to preserving and enhancing scenic, aesthetic, historic, community, and environmental resources while improving or maintaining safety, mobility & infrastructure conditions.

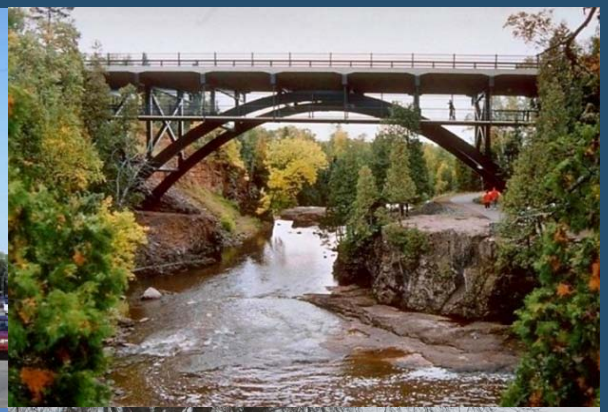
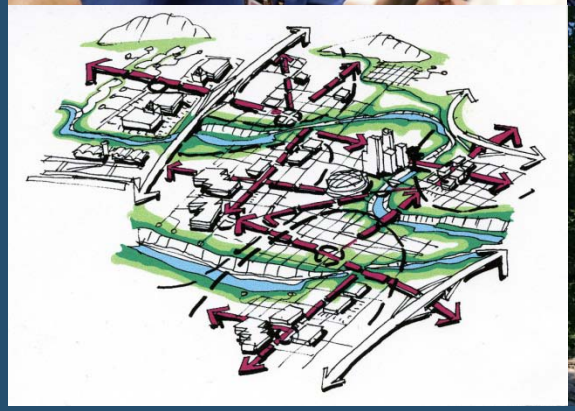
TH 38 from Grand Rapids to Effie

CSAH 3 Excelsior Blvd through St. Louis Park

Understanding CSS

Philosophy and Principles applying to Programs, Services, Planning, Project Development, Construction, Operations, and Maintenance …



Understanding CSS

Philosophy and Core Strategies






- Strive towards a shared stakeholder vision to provide a basis for decisions
- Demonstrate a comprehensive understanding of contexts
- Foster continuing communication and collaboration to achieve consensus
- Exercise flexibility and creativity to shape effective transportation solutions while preserving and enhancing community and natural environments






CSS Principles

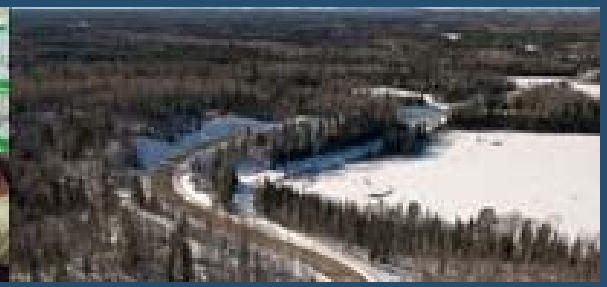
Original 15 Principles "Paraphrased"

- Use interdisciplinary teams
- Involve your stakeholders
- Seek broad public involvement
- Use a full range of communication strategies
- Seek consensus in determining purpose and need
- Address alternatives and all modes of transportation
- Seek safe facilities for all users
- Seek environmental harmony
- Address community and social issues
- Address aesthetic concerns and integrations
- Utilize a full range of design choices and flexibility
- Document all project decisions
- Track and meet all commitments
- Use agency resources effectively
- Create lasting value for communities and the public

CSS & MnDOT's Strategic Vision & Plan

CSS Designated as a Flagship Initiative in December 2009

- To integrate CSS as a business model
- To build customer relationships & trust
- To improve processes & decision-making
- To balance competing objectives
- To seek collaborative & right-sized solutions
- To improve return on investments
- To achieve more of the benefits of CSS



CSS Benefits – Agency Emphasis

Correlated To Applying CSS Principles (NCHRP Report 642)

01. Improved predictability of project delivery
02. Improved project scoping and budgeting
03. Improved long-term decisions and investments
04. Improved environmental stewardship
05. Optimized maintenance and operations
06. Increased risk management and liability protection
07. Improved stakeholder & public feedback
08. Increased stakeholder & public participation, ownership & trust
09. Decreased costs for overall project delivery
10. Decreased time for overall project delivery
11. Increased opportunities for partnering

CSS Benefits – User Emphasis

Correlated To Applying CSS Principles (NCHRP Report 642)

12. Minimized impact to human and natural environments
13. Improved mobility for users
14. Improved walk-ability and bike-ability
15. Improved safety (motorists, pedestrians, bicyclists)
16. Improved multi-modal options (including transit)
17. Improved community satisfaction
18. Improved quality of life for communities
19. Improved speed management
20. Design features appropriate to context
21. Minimized construction related disruption
22. Improved opportunities for economic development

Legal Overview

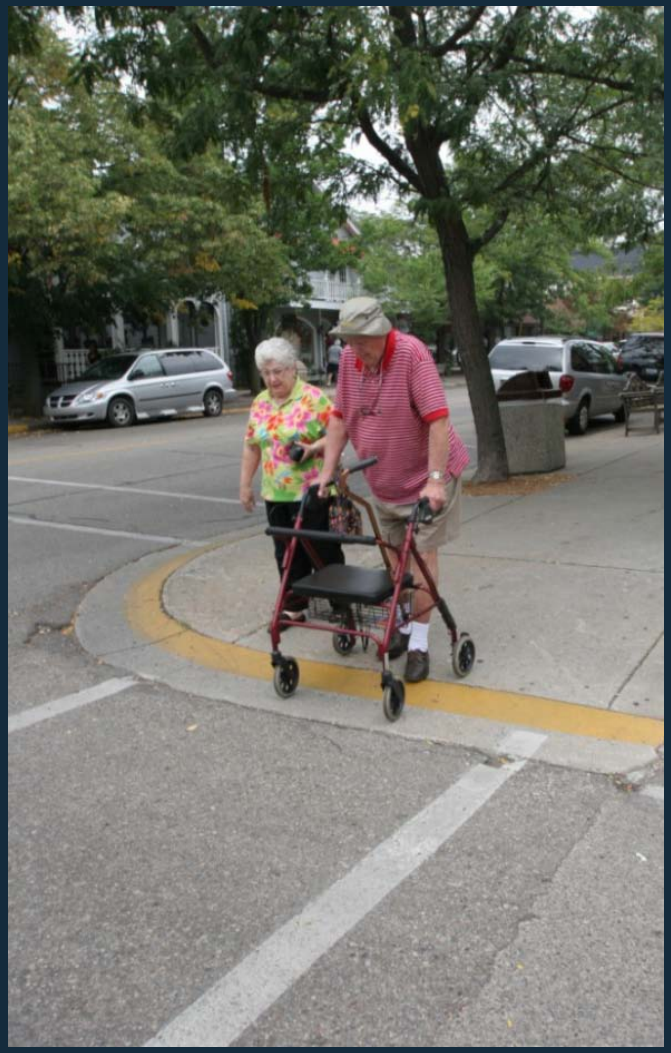
Kristie Billiar, ADA Implementation Coordinator

Legal Context: Key Laws

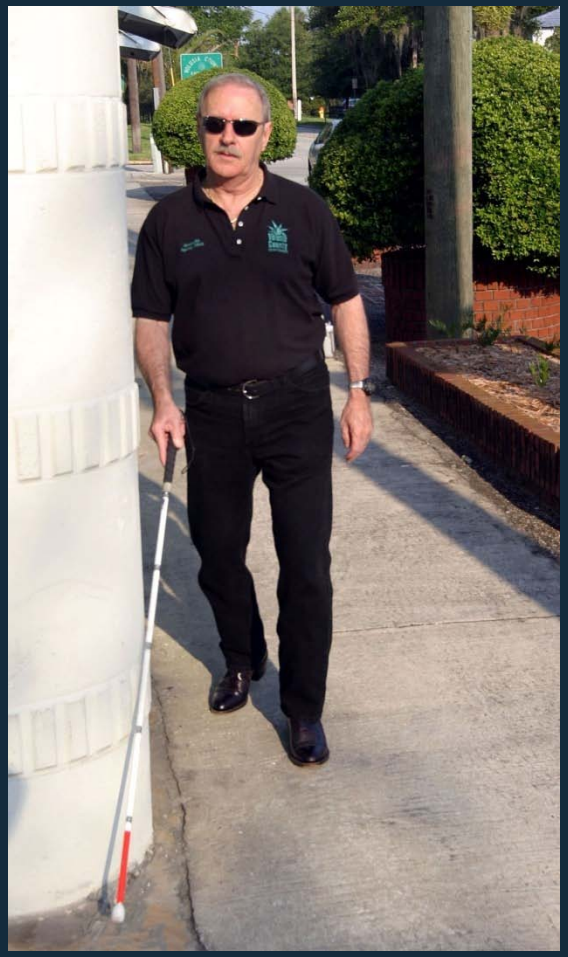
- Minnesota Human Rights Act
- Architectural Barriers Acts of 1968
- Section 504 of the Rehabilitation Act of 1973
- Americans with Disabilities Act of 1990 (ADA) – 5 Titles

Legal Context: **Section 504**

Section 504 governs all programs and operations of *recipients* and *sub-recipients* of federal funds.



Legal Context : ADA Title II



www.pedbikeimages.org / Dan Burden

Title II covers all state and local government entities

- regardless of federal funding received
- regardless of size

Legal Context: Section 504 & ADA

Federal law preempts state or local laws; accessibility requirements can not be reduced by state or local laws or administrative decisions.

Torts vs. Civil Rights

- Tort (Harm)
  - Liability is based on proof of harm (injury, damage, loss)
  - Person or property
  - Civil court filing or handled internally

Torts vs. Civil Rights

- Civil Rights (Equality)
  - Objective: To ensure equity in access to public services, programs and activities
  - Claims must show differential or disparate treatment, i.e., less or no access
  - Causal link to disability status

Title II of the ADA

Title II, Subpart A

- Prohibits state and local government agencies from discriminating against individuals with disabilities in access to and use of their services, programs or activities.

Title II Subpart B

- Prohibits state and local government transportation agencies from discriminating against individuals with disabilities in access to and use of their transportation services, programs or activities.

Both impact Mn/DOT as a state transportation agency

State and Local Responsibilities

- Wherever public agencies provide pedestrian facilities, those facilities are to be accessible to persons with disabilities.
- The accessibility of pedestrian facilities is required by ADA and is independent of funding sources.

The Cost of Non-Compliance

Non-compliance can be significant fiscally and in terms of public trust.

- FHWA can withhold funding for persistent non-compliance
- Fines and court awards can be tens of thousands of dollars, or more
- Attorney's fees (may be needed even if claim doesn't go to court)
- Poor public image
- Reputations of staff and elected officials may suffer

The Cost of Non-Compliance

Procedures

- Complaints can be filed with Mn/DOT, MDHR, FHWA, USDOT or DOJ.
- Lawsuits filed in state or Federal District Court
- FHWA can withhold federal money after unsuccessful efforts to achieve compliance.
- For state DOTs and local government entities, the FHWA will seek voluntary compliance; if unsuccessful, the matter is referred to DOJ.

Wrap-Up

Why should the public agencies look for the best and most consistent way to address and implement ADA?

- It is the law.
- It is the right thing to do.
- Everyone benefits!

Module 1:
Legal Overview

Questions?

Temporary Pedestrian Access Route (TPAR)

Todd Grugel, PE

ADA Program Engineer

todd.grugel@state.mn.us

651-366-3531

Start Doing Something

PROWAG

- 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.

PROWAG

Highlights of R302 Pedestrian Access Routes

Provide the following:

- Firm, stable, slip resistant surface
- 4’ minimum width
- Maximum allowable grades
    - 8% running slope
    - 2% cross slope
- Maximum ½” vertical deflections and horizontal gaps


SIDEWALK

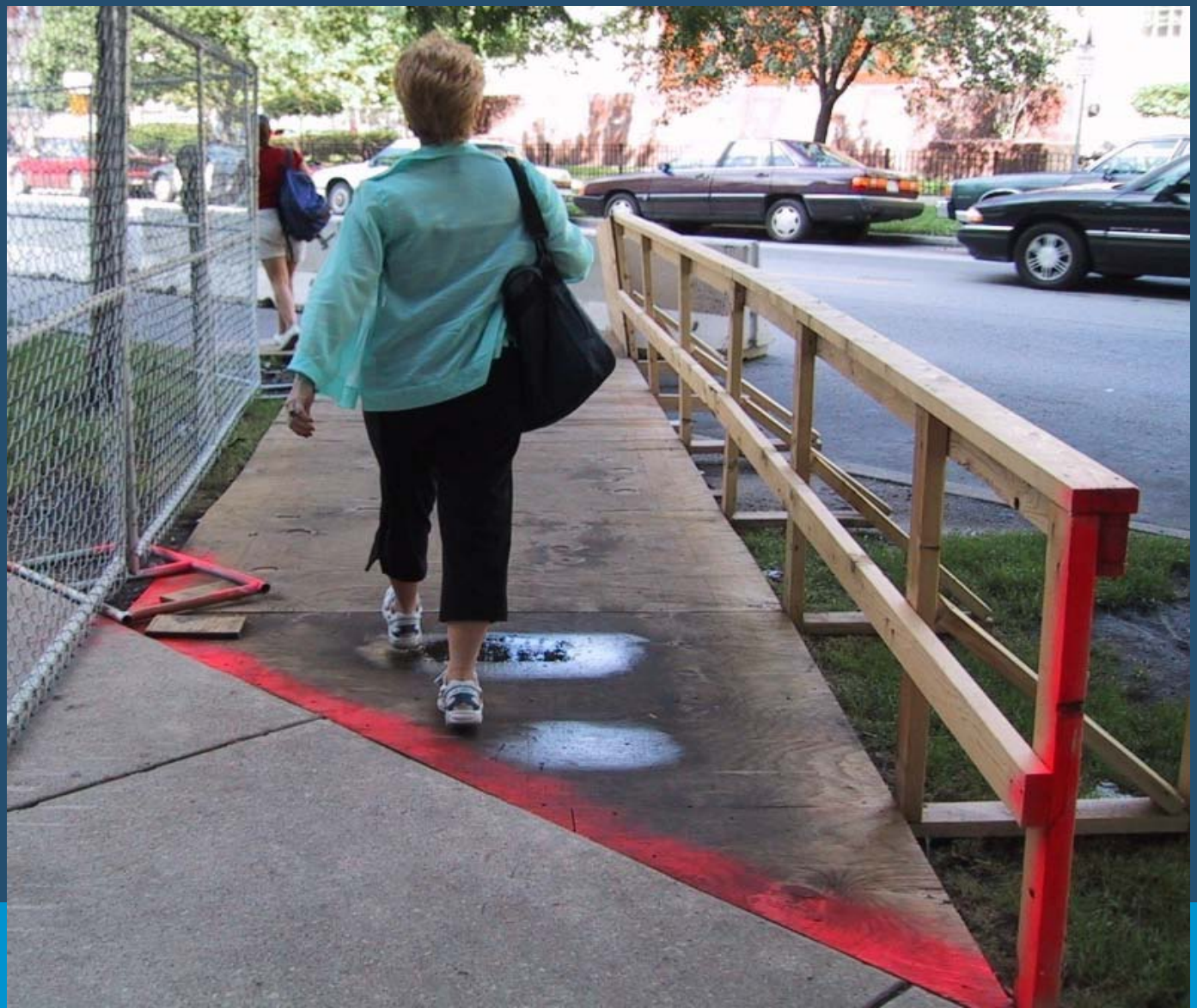
2009 Federal MUTCD

Chapter 6D.02 – Accessibility Considerations

- 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.

Provide Detection

- Side detection when temporary route is channelized and changes direction
- Temporary truncated domes at street crossings
- Provide effective safety barriers – define construction zone and potential hazards



Ineffective Barriers

- Ineffective barriers (plastic tape) around the site
- Fails to provide detection around site

Ineffective Barriers

PROWAG

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


09/07/2011


CAUTION
CAUTION
CAUTION
SONOTUBE
BROCK WHITE
10/05/2011

Detours

- Make sure detours are reasonable
  - Other side of street is reasonable
  - 1 block parallel is reasonable
  - Is 2-3 blocks parallel reasonable ???

- Reasonable can vary in different situations
- Long detours “feel good” but do they meet needs?

Taking a Lane


06.03.2008

TPAR Implementation

Traffic engineer and Project Engineer should look at the pedestrian needs on the project and put a concept of how to accommodate the needs in the plan and in the time and traffic.

TPAR Implementation

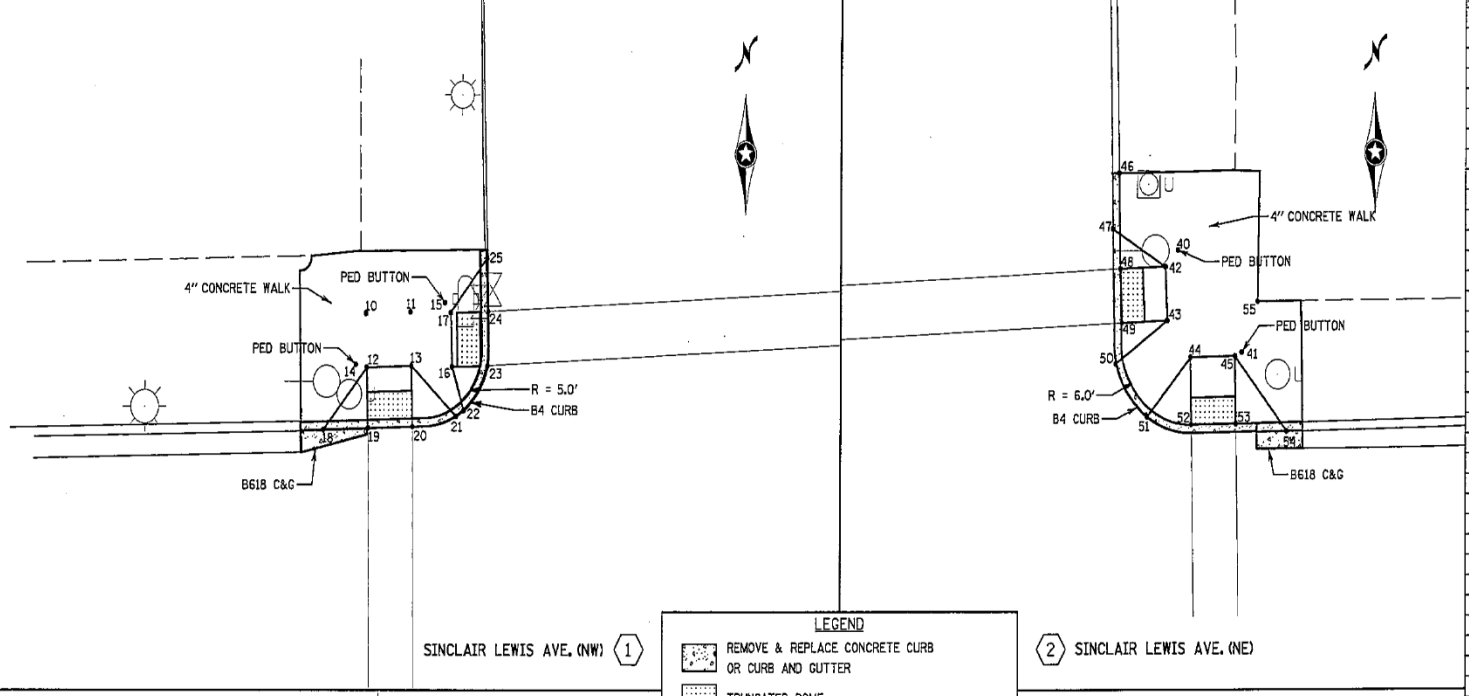
Options to consider:

1.) Making use of roadway lane, shoulder, or parking lane

2.) Crossing pedestrians to the other side of the street and then crossing them back

3.) Providing a reasonable detour

4.) Maintaining use of existing sidewalk through project staging



SINCLAIR LEWIS AVE. (NW) 1

2 SINCLAIR LEWIS AVE. (NE)

LEGEND

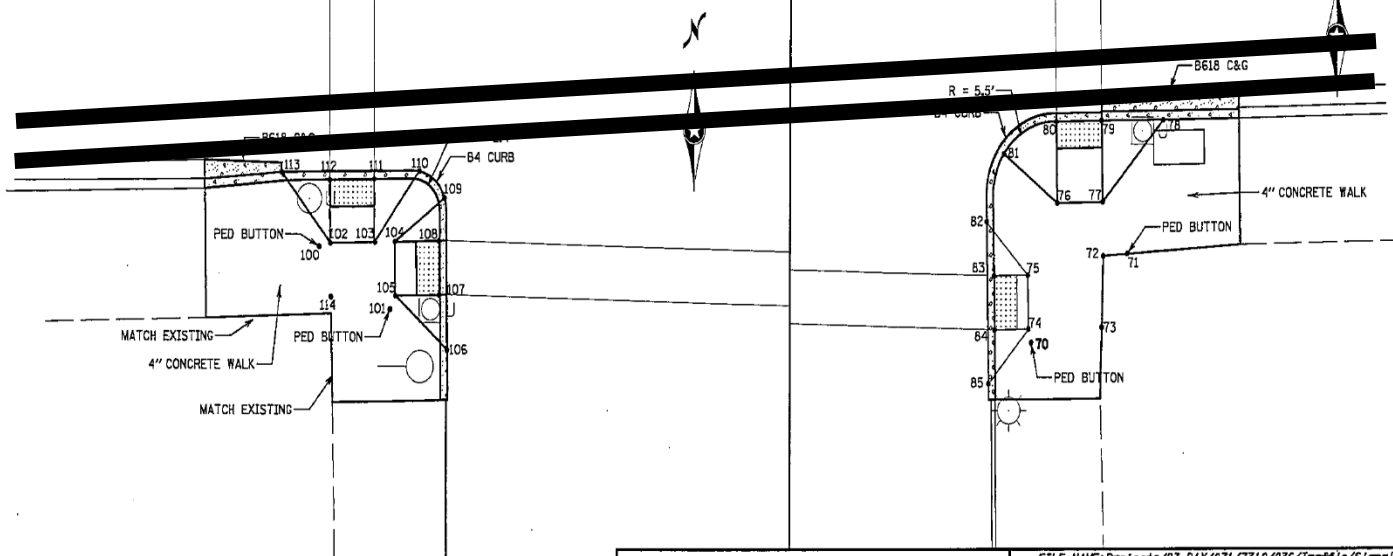
REMOVE & REPLACE CONCRETE CURB OR CURB AND GUTTER

TRUNCATED DOME

EXISTING CONCRETE WALK

SINCLAIR LEWIS AVE. (SW) 4

3 SINCLAIR LEWIS AVE. (SE)



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13	550,536.74	265,780.19	1,253.65
14	550,531.74	265,780.30	
15	550,539.74	265,784.86	
16	550,540.37	265,780.12	1,253.58
17	550,540.26	265,784.12	1,253.56
18	550,528.87	265,775.47	
19	550,532.87	265,775.58	1,253.27
20	550,536.87	265,775.69	1,253.29
21	550,540.74	265,776.44	
22	550,541.40	265,776.88	
23	550,543.51	265,780.18	1,253.33
24	550,543.56	265,784.19	1,253.30
25	550,543.45	265,788.19	
40	550,609.13	265,788.48	
41	550,614.88	265,780.90	
42	550,608.02	265,787.25	1,252.43
43	550,608.18	265,783.25	1,252.42
44	550,610.28	265,780.54	1,252.45
45	550,614.28	265,780.61	1,252.51
46	550,603.91	265,794.18	
47	550,603.34	265,790.06	
48	550,604.03	265,787.09	1,252.13
49	550,604.19	265,783.09	1,252.21
50	550,603.66	265,780.10	
51	550,606.37	265,776.09	
52	550,610.36	265,775.54	1,252.16
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75	550,608.61	265,713.19	1,252.98
76	550,611.27	265,718.53	1,253.06
77	550,615.27	265,718.60	1,252.98
78	550,621.29	265,725.36	
79	550,615.17	265,724.62	
80	550,611.17	265,724.56	
81	550,606.00	265,722.55	
82	550,604.94	265,717.16	
83	550,605.61	265,713.14	1,252.87
84	550,605.68	265,709.14	1,252.84
85	550,605.13	265,705.16	
100	550,532.37	265,714.32	
101	550,538.74	265,709.67	
102	550,533.33	265,714.59	1,253.86
103	550,537.33	265,714.62	1,253.85
104	550,539.16	265,714.68	1,253.85
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108	550,543.02	265,714.74	1,253.54
109	550,543.53	265,717.92	
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112	550,533.29	265,719.25	1,253.50
113	550,529.00	265,719.84	
114	550,533.44	265,710.59	1,253.94

PED RAMP DETAILS

CERTIFIED BY Robin T. DeSouza LIC. NO. 29968
LICENSED PROFESSIONAL ENGINEER

FILE NAME: Projects/03_BAX/071/7319/036/Traffic/Signals/731936_12th/731936_12th.dgn 26-OCT-2010

STATE PROJ. NO. 7319-36 (T.H. 71) SHEET NO. 7 OF 24 SHEETS

TPAR Implementation

When TPAR is not practical alternate construction staging and or pinch construction timelines so that pedestrian facilities are interrupted for as little time as possible.

Meeting the Needs

Without meeting all the criteria

“I Want To Do It Myself”

Where’s the accessible alternate route?


metrobus
202 637-7000
SIDEWALK CLOSED
CAUTION CAUTION CAUTION CAUTION CAUTION
SIDEWALK CLOSED
USE OTHER SIDE


DETOUR
DETOUR

Accommodating Pedestrians with Disabilities in Work Zones

CSS Webinar – 12/8/11

Ted Ulven & Ken E. Johnson
Work Zone and Pavement Marking Unit
MnDOT OTST

What we'll answer today…

- Why is this necessary?
- Is it really that bad?
- How will we accommodate pedestrians with disabilities?
- What guidance is available?

Caltrans Settlement

- In December 2009 two long-running ADA lawsuits were settled.
- $1.1 billion to be spent over 30 years to improve access.
- They will ensure that TPAR's around and through Work Zones are accessible.

MnDOT TPAR Workshop

- In June 2010 MnDOT and ATSSA held a workshop for Industry and Public Works.
- A focus group of disabled participants evaluated and commented on devices.
- What we learned was incorporated into the TPAR drawings we currently use.
- A report is on the MnDOT TPAR website.

MnDOT TPAR Workshop

Caltrans ADA Demo

- In June 2011 Caltrans and ATSSA held an ADA work zone device demonstration.
- 15 states and DC participated in evaluating the TPAR devices with a disabled partner.
- Products were improved based on experience from the MnDOT event.
- A training video will result from this effort.

Caltrans ADA Demo

2005 MN MUTCD

- Chapter 6A.1 – General (Standard)

The needs and control of all road users (motorists, bicyclists, and pedestrians within the highway, including persons with disabilities in accordance with the Americans with Disabilities Act of 1990 (ADA), Title II, Paragraph 35.130) through a temporary traffic control zone shall be an essential part of highway construction, utility work, maintenance operations, and the management of traffic incidents.

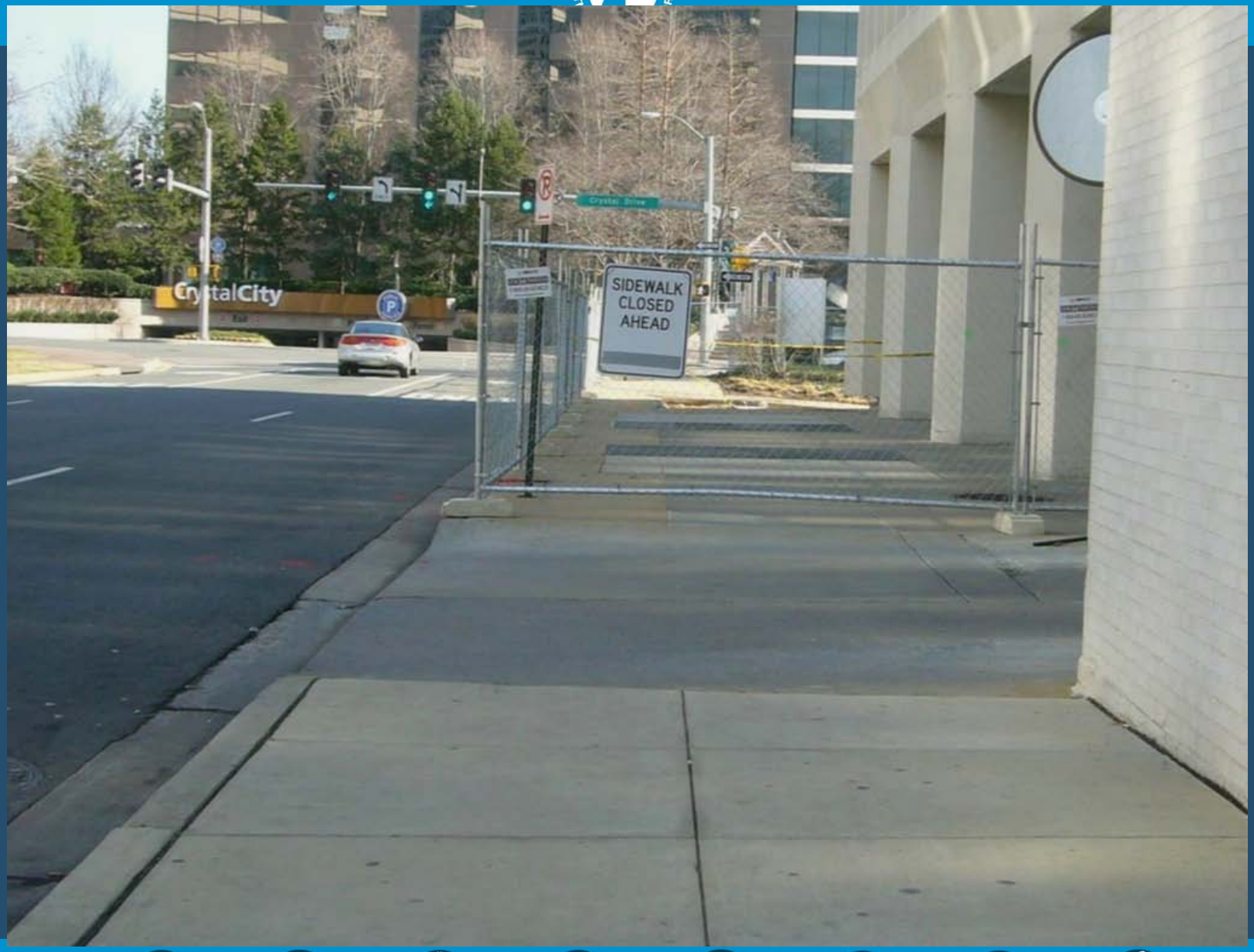
2009 Federal MUTCD

- Chapter 6D – Pedestrian and Worker Safety
  - If the Temporary Traffic Control (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.

Others can benefit, too

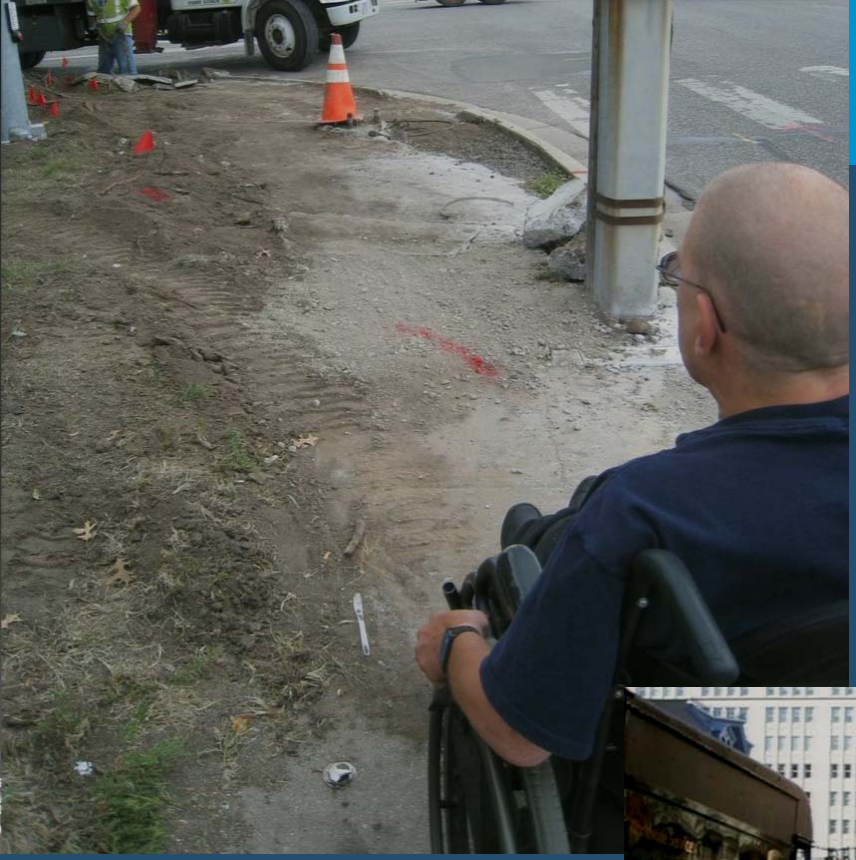
Is it really that bad?

Is it really that bad?


CrystalCity
SIDEWALK
CLOSED
AHEAD


DO NOT
WALK IN STREET
PLEASE USE
OTHER SIDEWALK
EWALK
LOSED
The Washington Post


SIDEWALK
CLOSED



How will we accommodate in Work Zones?

Tech Memo 10-02-TR-01: *Public Rights of Way Accessibility Guidance (see document)*

- Draft PROWAG of 2005 is primary guidance for accessible facility design on Mn/DOT projects

Public Rights of Way Accessibility Guidelines

When an existing pedestrian access route is blocked by construction, alteration, maintenance, or other temporary conditions, an alternate pedestrian access route … shall be provided.

How will we accommodate?

- Follow:
  - Tech Memo 10-02-TR-01, by reference PROWAG
  - Standards listed in MnMUTCD
    - Including the Field Manual
- Expected to be in TCP of PS&E
  - Long term accommodation
- Boilerplate Special Provision – S-270
  - Temporary Pedestrian Access Control

What guidance in available?

- Mn/DOT TPAR website
  - Google mndot tpar
  - Contains links to PROWAG
  - Contains information gleaned from feedback gathered at TPAR Workshop and Demo
    - Hosted by Mn/DOT, National ATSSA, and the Northland Chapter of ATSSA in June 2010
- Intend to add
  - TPAR Design Guidance (currently working on draft)
  - Approved Products List Devices

Major elements of TPAR

- Increased awareness of the issue
- At minimum, provide equivalent level of accessibility
- Consider impacts to pedestrian routes in early stages of project development, even in Scoping
- Include TPAR in Traffic Control Plan
- Consider staging to minimize impacts to PAR and to implement TPAR
- Attended versus unattended work zones

Possible tools

- ADA Coordinator: Cedar BRT
  - Responsible for and perform the accessible route management
    - Ensure the accessible devices are working as required
    - Provide sufficient surveillance of the accessible devices
    - On call and available within 45 minutes of notification
    - Preparing and revising the accessible route plan as required
    - Maintain a Project Accessible Route Diary
  - Dakota County feels that this is working well
  - Hard to estimate – the costs could be huge

2010 TEMPORARY PEDESTRIAN ACCESS ROUTE STUDY

September, 2010

People with physical disabilities as well as people who as professionals provide Orientation and Mobility Training for this community met in St. Paul, MN in June 2010. The purpose was to visit and discuss their reactions to an exhibit of devices which are being designed to provide safe transport in temporary pedestrian detour situations.

The findings (per Mn/DOT Market Research via Independent Consultant) from this qualitative research study support these KEY LEARNINGS about TPARs:

There are three "over-arching themes" in addition to specific reactions to 16 devices: Trainers and those people with physical disabilities agreed nearly unanimously that temporary pedestrian detours need:

1. **Standards** that are shared with them so that they can teach/navigate on their own, knowing what to expect and having one source to call for questions, reports/updates.

2. This **communication** with them as a community may go through several channels such as state/city/private agencies specific to all of the groups represented (and some not present -such as people with cognitive disabilities). It should include dates or anticipated work on local sidewalks, signage "at" the site for both sighted and unsighted, hearing and non-hearing, with info that tells them what lies ahead so they can make an informed decision on whether or not to continue.

3. Last but not least, most participants totally **dislike asking for help**: they ask that Mn/DOT create a temporary sidewalk which they can travel on their own, the majority of the time. ***"Make it so I can do it myself!"*** – was often heard.

Detailed findings on device types: *(see full consultant's report for more info)*
Preferences from people with disabilities/Trainers for temporary pedestrian detours:

- A sufficiently wide walkway (minimum 48") to allow for safe passage of wheelchairs/motorized carts & service animals if walking alongside. Channelizing devices along the walkway are sturdy & stable: will not tip if one loses their balance and falls into them. Devices are straight up and down versus angled; ones that are free of anything protruding from the sides or from openings along the bottom edge – holes, etc. causing a cane or a walker leg to catch and potentially disorient or "trip-up" a person. A continuous railing on the top to allow someone to place their hand on the railing and move their hand along the railing without encountering gaps, slivers or materials too hot or cold to the touch. Orange and white stripes are preferred on rails and barrier sides.
- Surfaces and temporary ramps free of movement/vibrations, made of materials that won't become slippery when wet/frosty, and *not* cause glaring from the sun or other bright light. Again: temperature plays a role – potentially causing injury to the paws of a service animal.
- Transitions between 2 surfaces, perhaps logically so, must be smooth, sturdy & made of non-slippery materials, especially to accommodate elevation changes. If using ramps, must be as wide as the detour walkway surface with an ideal slope of 8 percent or flatter.

Market Research for Office of Traffic, Safety and Technology, Mn/DOT

Central Location Test of safety devices at U of MN June 23-24, 2010; followed by Focus Groups of:

- **5 Orientation & Mobility Trainers**
- **14 people with physical disabilities of many types**

Caveat: - qualitative research is exploratory; directional learnings are uncovered and are best used in combination with technical or quantitative research. These findings may not be projectable to the targeted population as a whole.

For More Information Contact:
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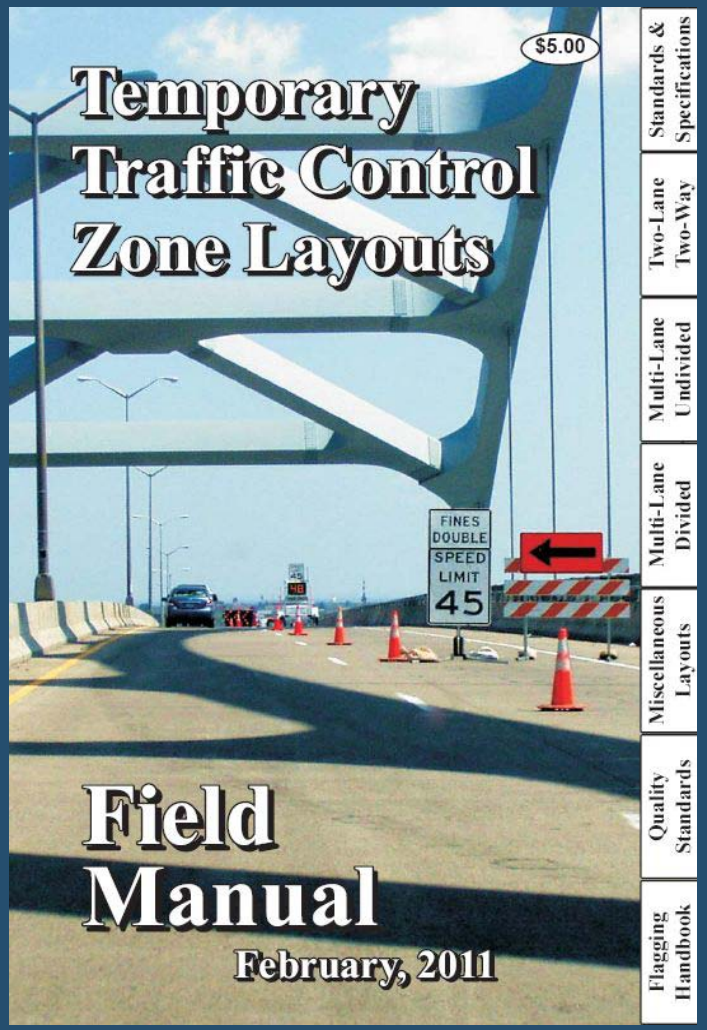
Market Research/PARI
651.366.3771
chris.mcmahon@state.mn.us

What guidance in available?

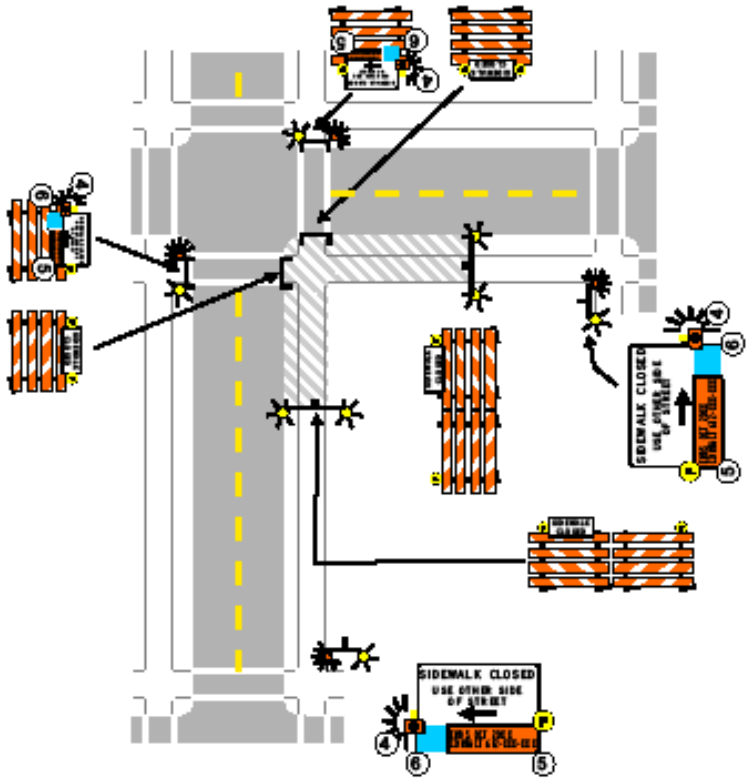
2011 Field Manual Layouts

- Typically thought of as for 3 days or less, but TPAR diagrams are useful for longer impacts (pictorial representation of PROWAG)
- Review each sheet



Detour

- When pedestrian features impacted, maintain same level of accessibility
- Sign message should include:
  - Duration of impact
  - Project contact number
  - If it meets minimums of TPAR
    - Symbol of Accessibility
- Audible or tactile message device should be provided. When used:
  - Same as sign
  - Physical description
- Document conditions that don't meet recommended standards
- Cover Pedestrian Traffic Signal Displays if crosswalk closed



A flasher mounted on the sign or barricade shall be used on all nighttime sidewalk closures.

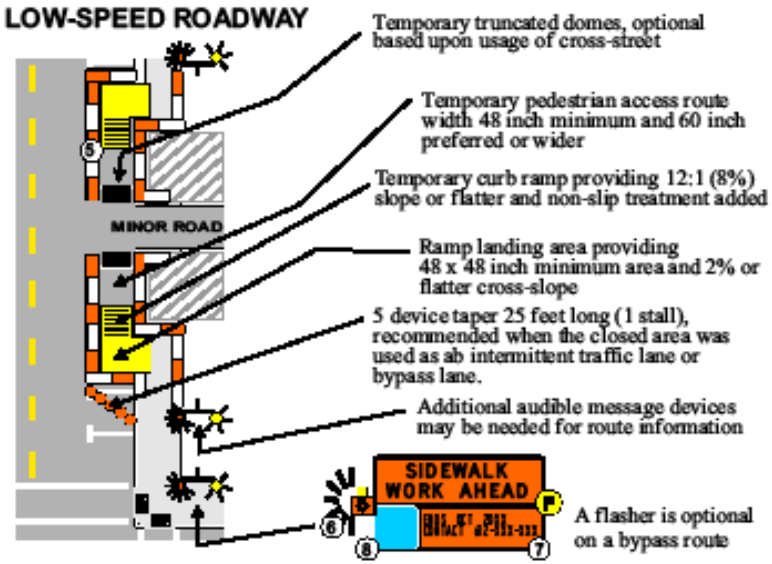
CROSSWALK CLOSURES AND PEDESTRIAN DETOURS
LAYOUT 84b

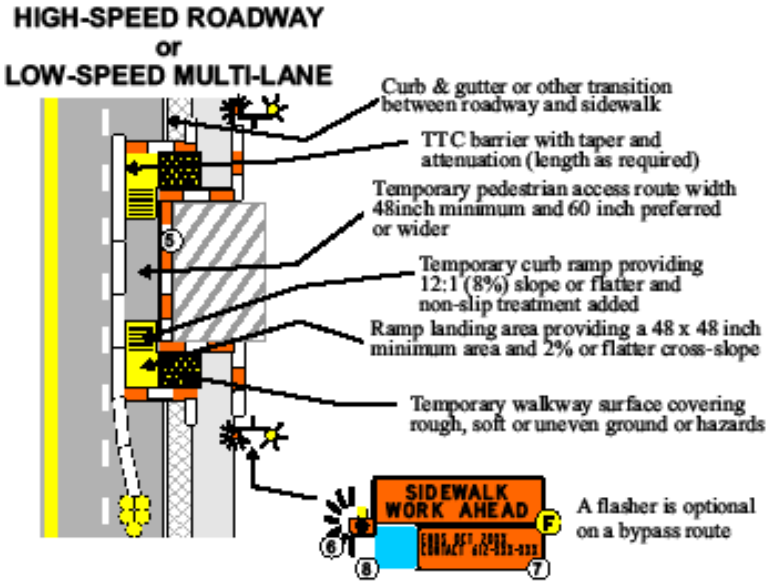
3 DAYS or LESS

LAYOUT 84a & b

Bypass

- Same as Detour
- Temporary truncated domes are optional depending on cross-street
- TPAR width
  - 60” preferred
  - 48” minimum
    - 60” required every 200’
- Temporary curb ramps
  - 12:1 slope or flatter
  - Firm, stable and slip resistant
- High-speed and/or high volume
  - Barrier with taper and attenuation should be used





SIDEWALK BY-PASS
LAYOUT 85b

3 DAYS or LESS

LAYOUT 85a & b

Devices

- Keep walkway free
  - Ballast behind channelizer
  - Any support into walkway
    - Maximum ½” with bevelling
    - Not extend into 48” min clear
- Detectable edges for long canes
  - 2” maximum above surface (drainage)
  - 6” minimum height
- Railings or other objects (phones)
  - May extend into clear a max of 4” when 27” minimum above surface
- Hand guidance (when included)
  - Continuous at 36”-38” above surface
  - Minimum interference to hands/fingers
- Should interlock to close gaps
- Free from sharp or rough edges
- Positive protection - crashworthy

Detectable Edge using a Longitudinal Channelizer

Detectable Edge shown on a railing system

NOTES:

1. To prevent any tripping hazard to pedestrians, ballast shall be located behind or internal to the device. Any support on the front of the device shall not extend into the 48 in. minimum walkway clear space and shall have 0.5 in. maximum height above the walkway surface with approved beveling (see note #9 on page 6K-xxxi for beveling details).
2. Detectable edges for long canes shall be continuous and 6 in. min high above the walkway surface and have color or markings contrasting with the walkway surface.
3. Devices shall not block water drainage from the walkway. A gap height or opening from the walkway surface up to 2 in. maximum height is allowed for drainage purposes.
4. Railings or other objects may protrude a maximum of 4 in. into the walkway clear space when located 27 in. minimum above the walkway surface.
5. Longitudinal channelizing devices for pedestrians shall be 32 in. high or greater.
6. When hand guidance is required, the top rail or top surface shall:
   - be in a vertical plane perpendicular to the walkway above the detectable edge,
   - be continuous at a height of 36 to 38 in. above the walkway surface, and
   - be supported with minimal interference to the pedestrian's hands or fingers.
7. All devices shall be free of sharp or rough edges, and fasteners (bolts) shall be rounded to prevent harm to hands, arms or clothing of pedestrians.
8. All devices used to channelize pedestrian flow should interlock such that gaps do not allow pedestrians to stray from the channelized path.
9. Any pedestrian devices used to provide positive protection (traffic or hazard) for pedestrians or workers shall meet crashworthy requirements appropriate for the barriers' application.

Type IV Sidewalk Barricade

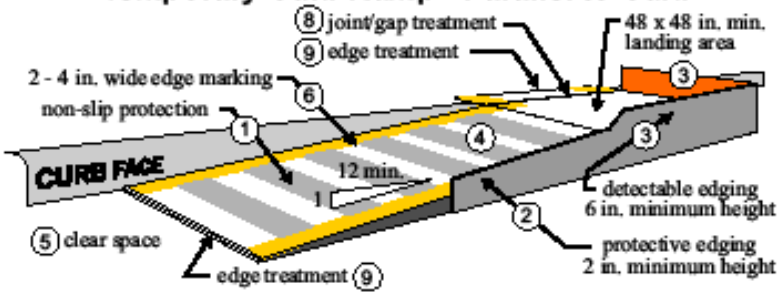
Typical ADA Pedestrian Devices

Refer to the Mn/DOT TPAR website for additional standards, guidance, and options for designing temporary pedestrian access routes.
http://www.dot.state.mn.us/trafficeng/workzone/tpar.html

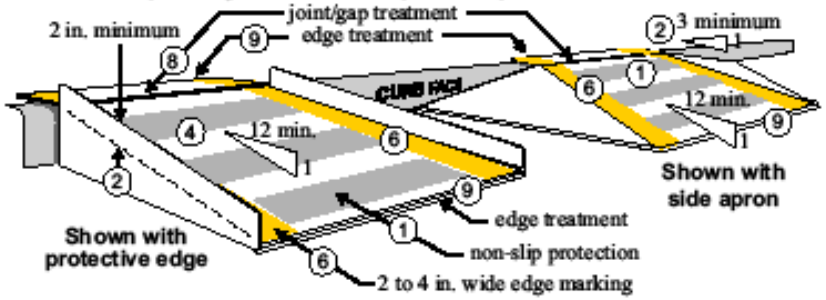
Devices - Ramps

- 48” minimum width
- Firm, stable and non-slip
- >6” vertical drop or side slope >1:3
  - 2” min height protective edging
  - Consider when >3” vertical drop
- Ramp turns
  - 6” min height detectable edging
  - Contrasting color
- 2% maximum cross-slope
- 48”x48” clear space at top and bottom
- *Walkway edge marking 2”-4”*
- Lateral joints or gaps < ½”
- Surface height changes < ½”
  - Lateral edges can be vertical up to ¼”, then bevel between ¼” and ½”
- Allow drainage

Temporary Curb Ramp - Parallel to Curb



Temporary Curb Ramp - Perpendicular to Curb



NOTES:

1. Curb ramps shall be 48 in. minimum width with a firm, stable and non-slip surface.
2. Protective edging with a 2 in. minimum height shall be installed when the curb ramp or landing platform has a vertical drop of 6 in. or greater or has a side apron slope steeper than 1:3 (33%). Protective edging should be considered when curb ramps or landing platforms have a vertical drop of 3 in. or more.
3. Detectable edging with 6 in. minimum height and contrasting color shall be installed on all curb ramp landings where the walkway changes direction (turns).
4. Curb ramps and landings should have a 1:50 (2%) max cross-slope.
5. Clear space of 48 x 48 in. minimum shall be provided above and below the curb ramp.
6. The curb ramp walkway edge shall be marked with a contrasting color 2 to 4 in. wide marking. The marking is optional where color contrasting edging is used.
7. Water flow in the gutter system shall have minimal restriction.
8. Lateral joints or gaps between surfaces shall be less than 0.5 in. width.
9. Changes between surface heights should not exceed 0.5 in. Lateral edges should be vertical up to 0.25 in. high, and beveled at 1:2 between 0.25 in. and 0.5 in. height.

Typical ADA Pedestrian Devices

Refer to the Mn/DOT TPAR website for additional standards, guidance, and options for designing temporary pedestrian access routes.
http://www.dot.state.mn.us/trafficeng/workzone/tpar.html

Thoughts from Construction

- Make sure the inspectors have a passion for this
- Be clear in the plan, specs, and special provisions
  - PROWAG and Field Manual say “firm, stable, and slip resistant”
  - Special provision “hard surfaced using hot mix bituminous or *PCC* or other material approved *by the engineer*”
  - Include staging of pedestrian routes
  - Be specific on locations of crossings, bypasses and detours

It can be done

- Things to watch for
- Examples of good (relatively)
- Suggestions for improvement?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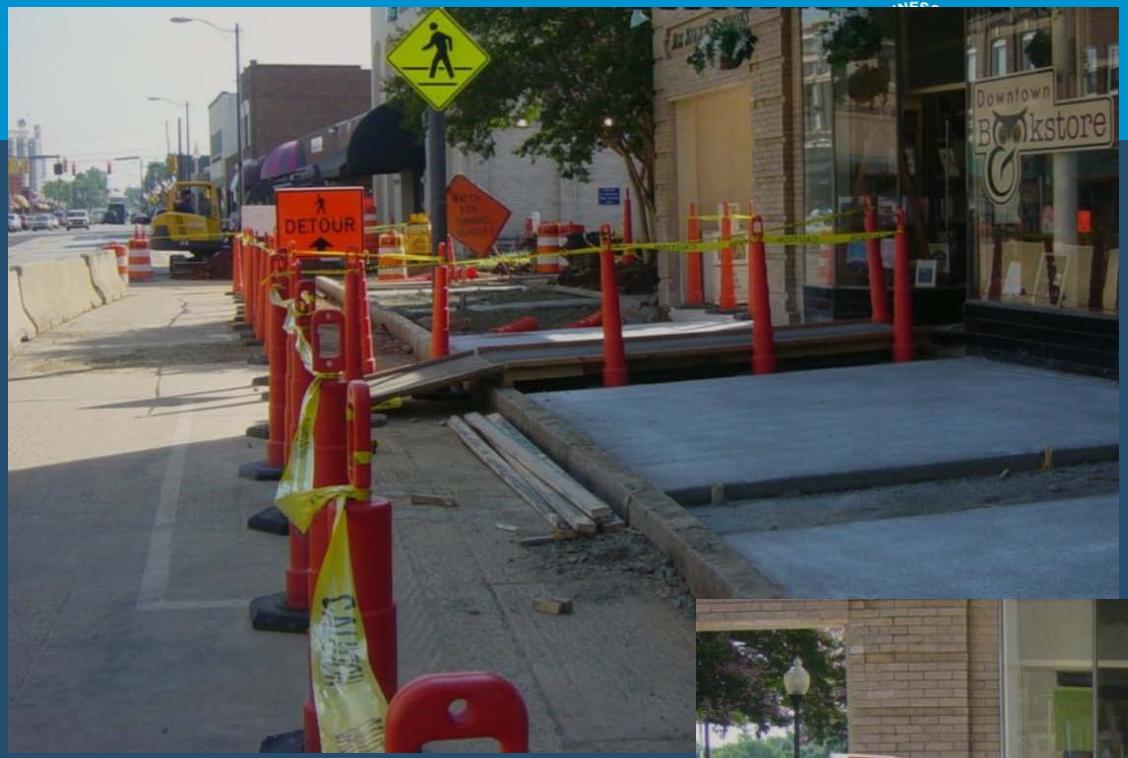
WALKWAY
WaLk


EMBODIED HEALTH
34
VEX•179


SIDEWALK
CLOSED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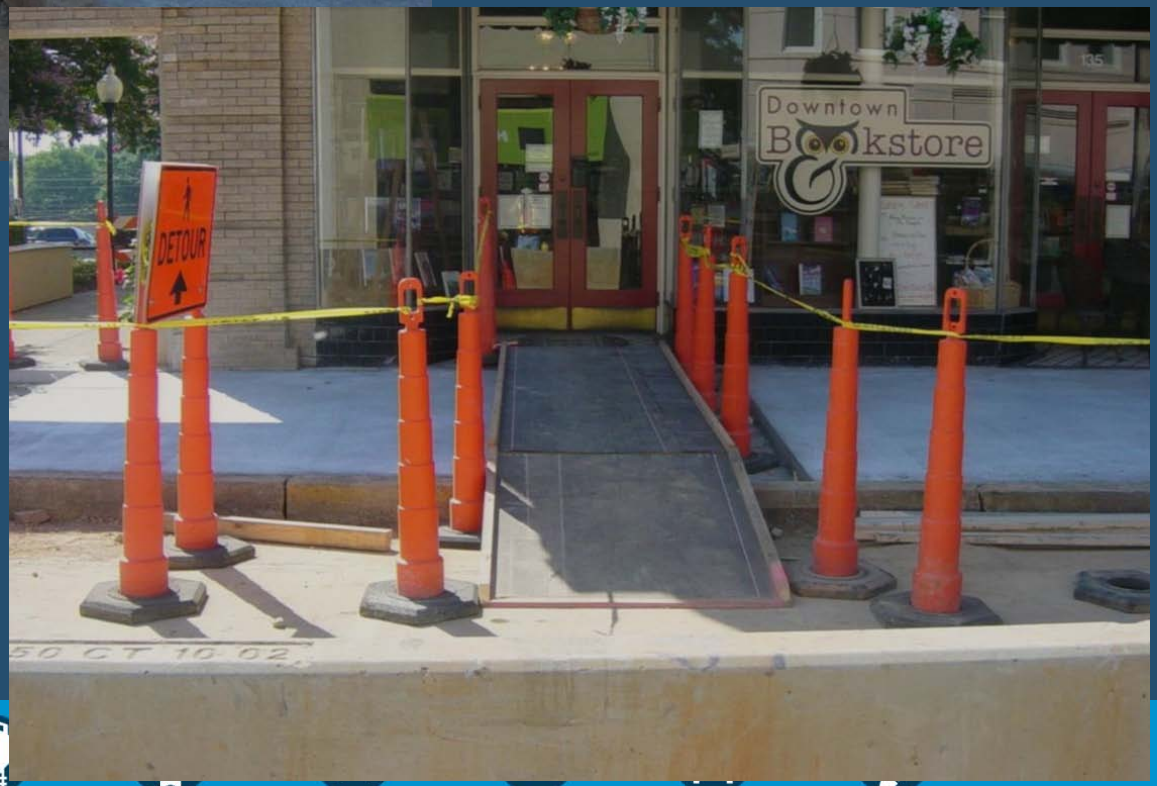
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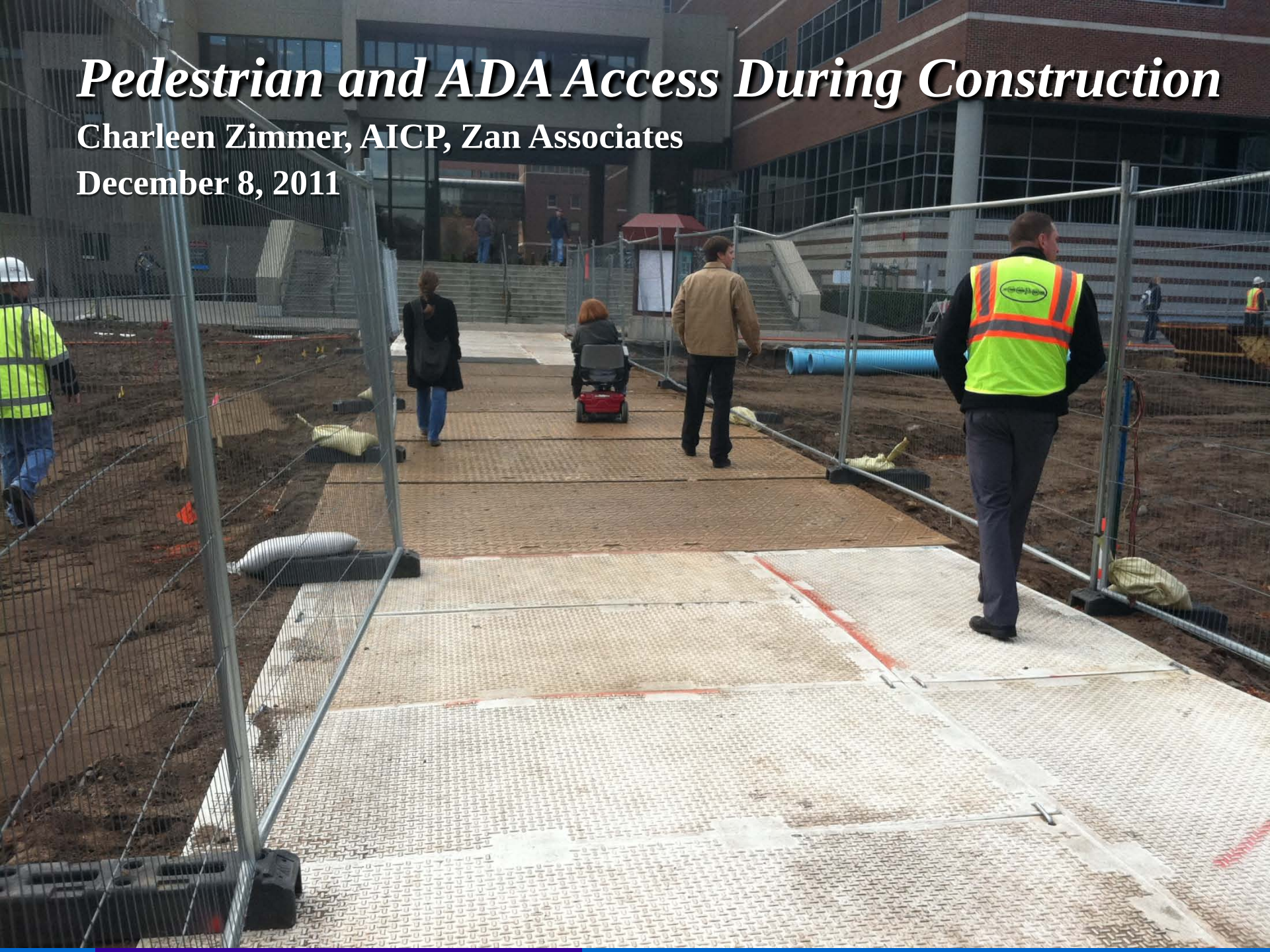
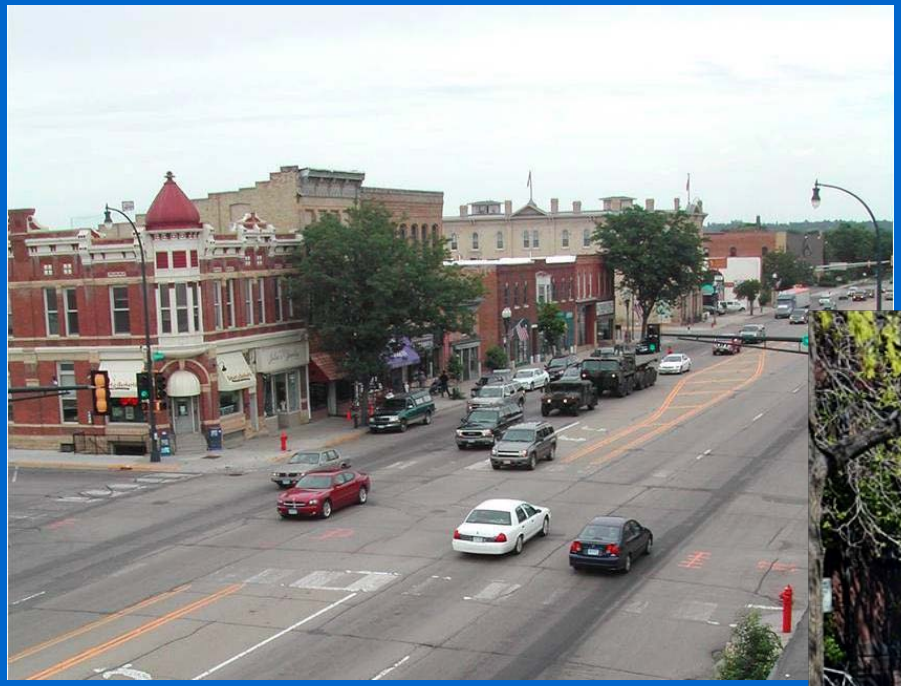
Pedestrian and ADA Access During Construction

Charleen Zimmer, AICP, Zan Associates

December 8, 2011



Two Case Studies



Hwy 169 – Saint Peter

**Central LRT –
University of MN**

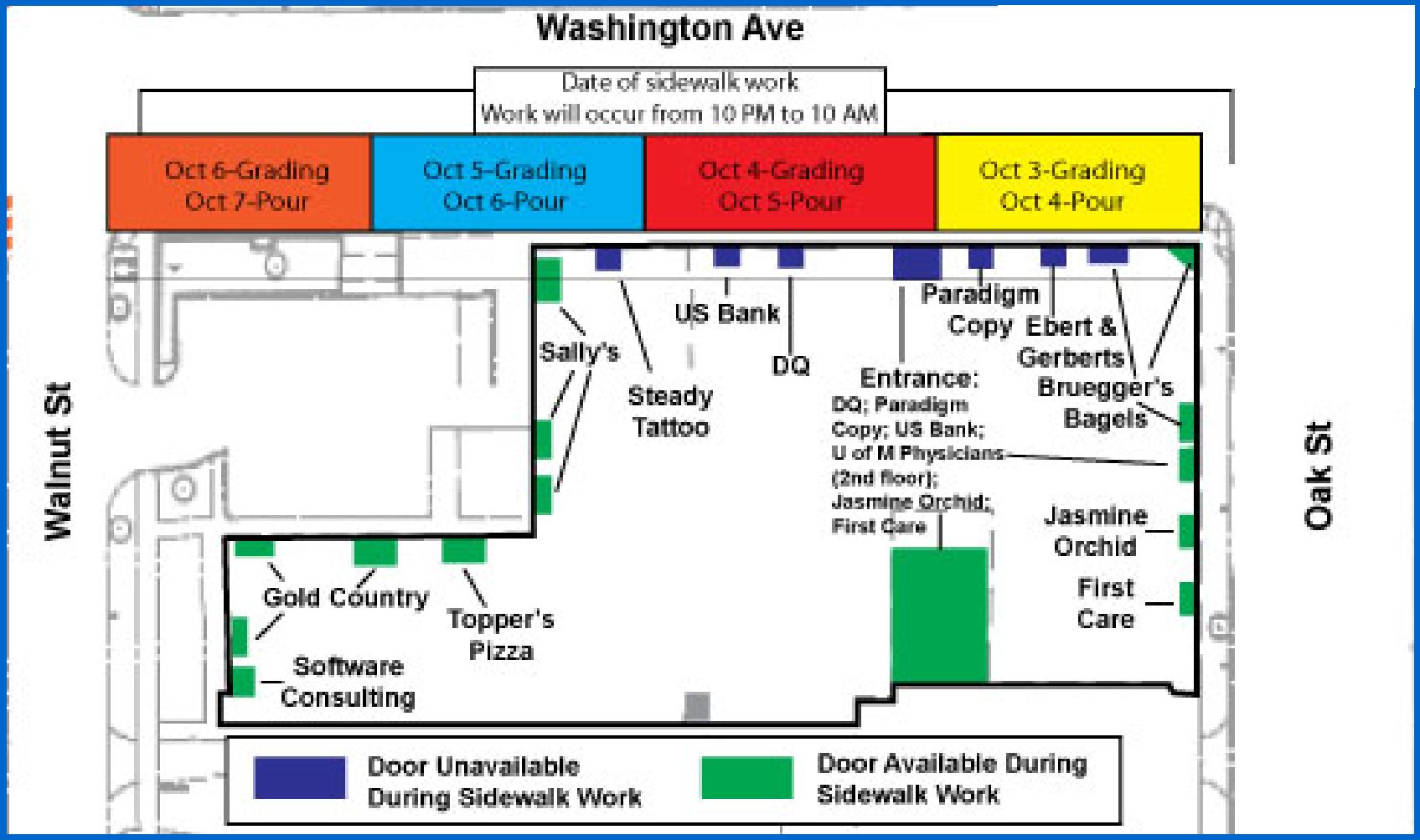
Construction Staging

Hwy 169 – Closed Through Downtown

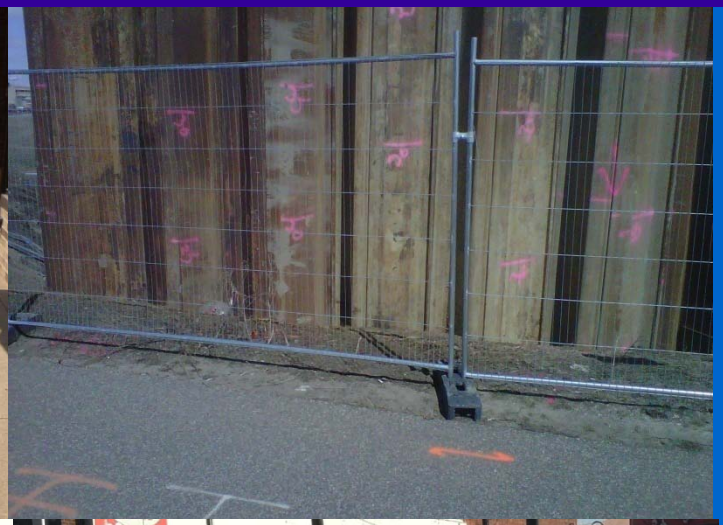
Construction Staging

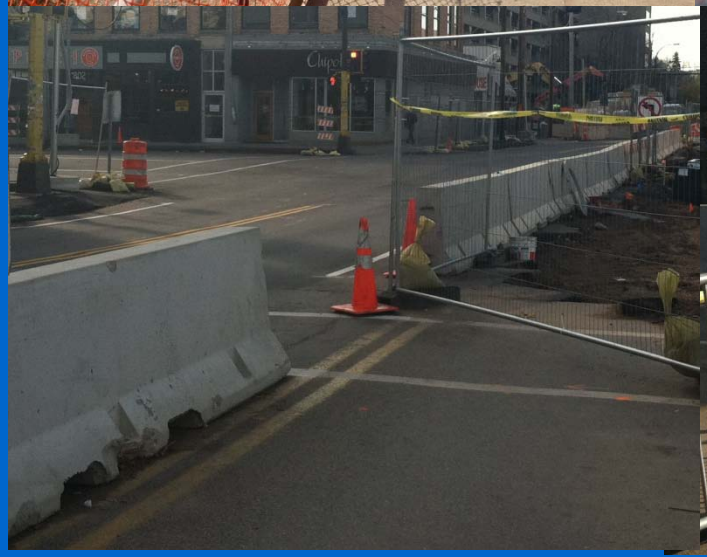
Sidewalk Construction Staging

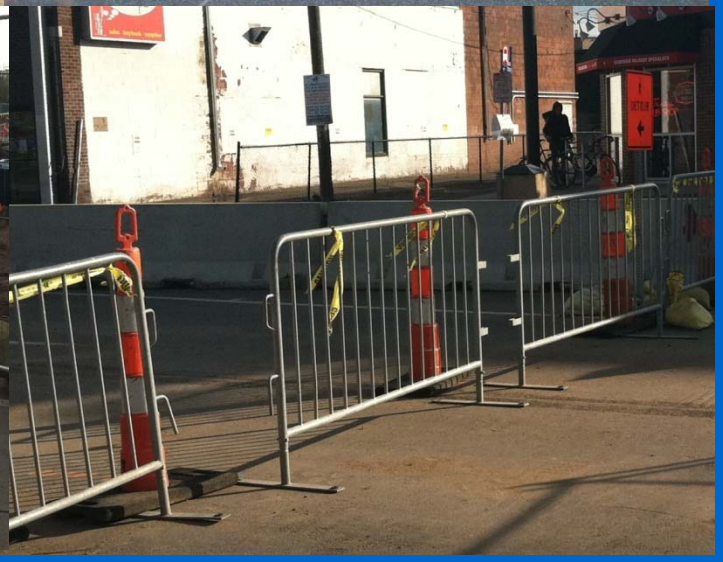
Sidewalk Construction Staging



Work Zone Fencing

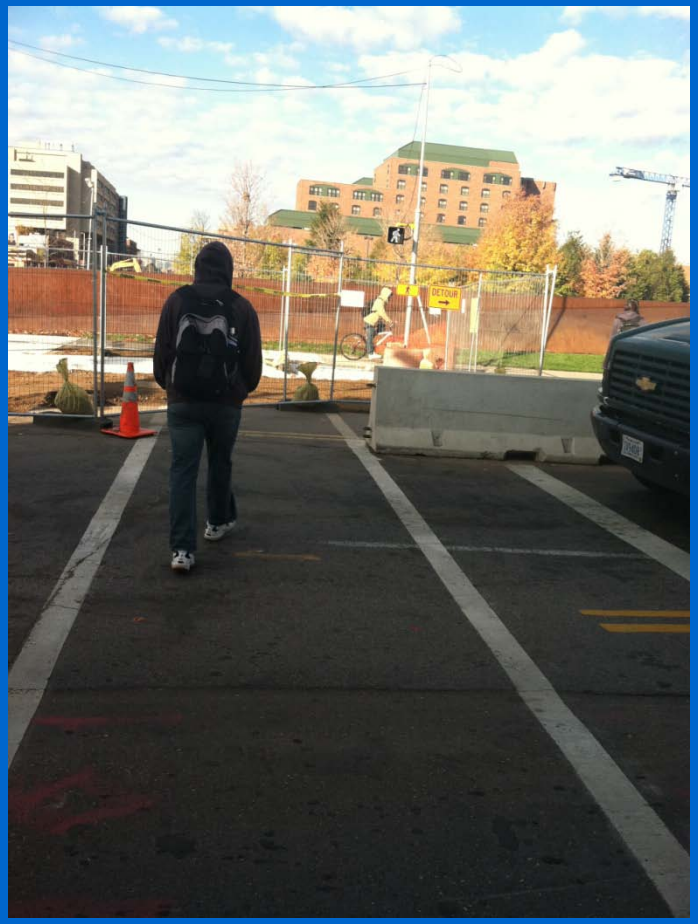




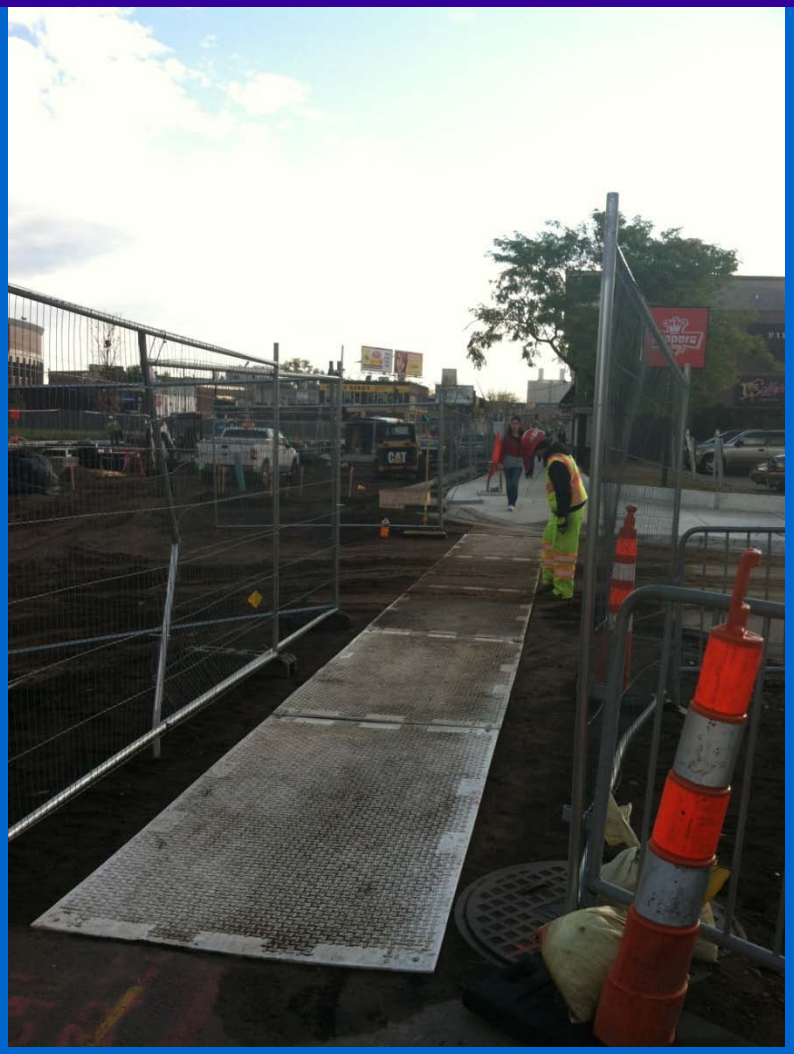


Pedestrian Detour Signing

Sidewalk Detour Signing/Striping



Access Across Work Zone

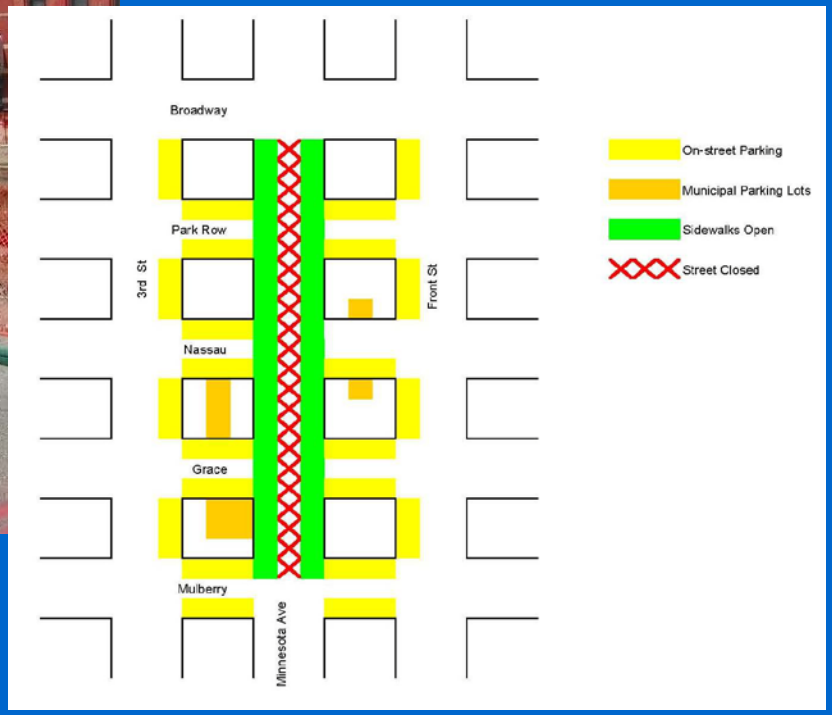


Temporary Curb Ramps

Access to Buildings

Access to Buildings

Back Door Access



Education and Information

DISCOVER Saint Peter

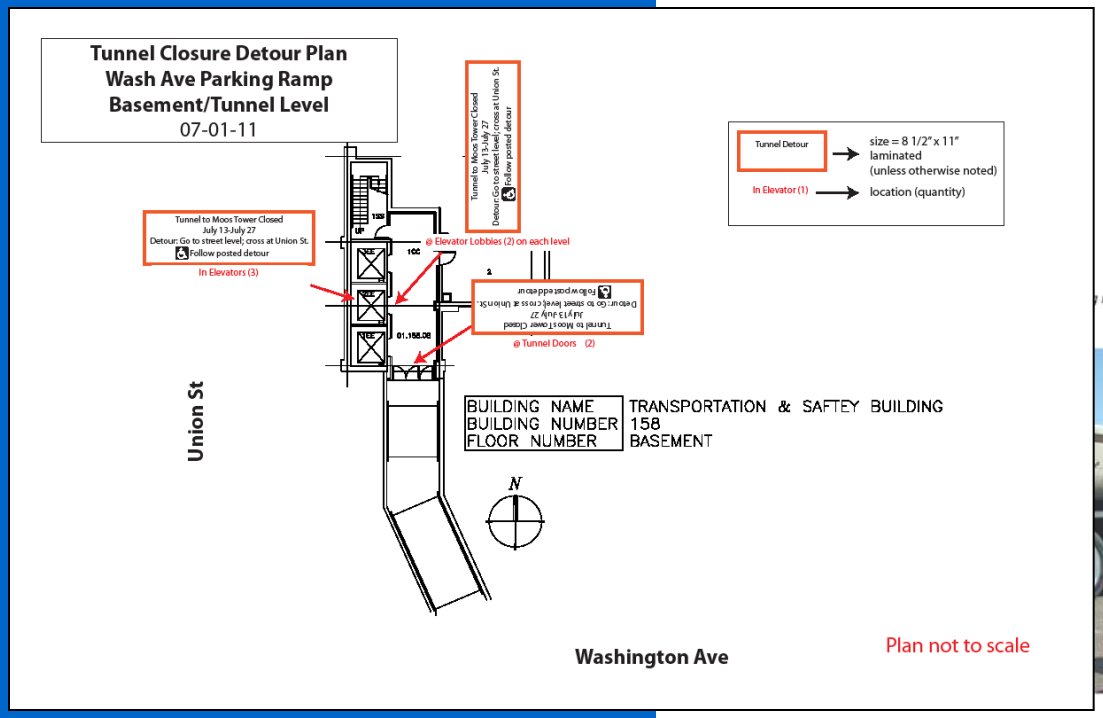
Hwy 169 Saint Peter

Saint Peter Kids Learn Why "Road Safety Matters"

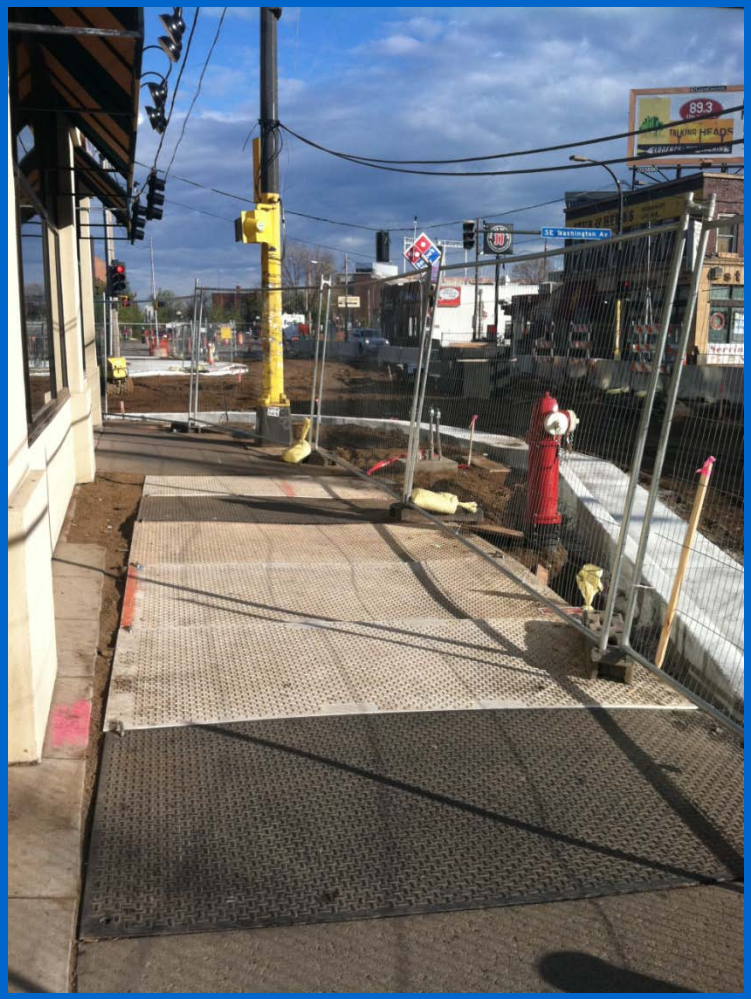
Considering the crowd (about 150 families) that showed up at the "Road Safety Matters" event on Tuesday, August 18th, it was pretty apparent that road safety matters to the families in and around Saint Peter. The City of Saint Peter and Mn/DOT coordinated the "Road Safety Matters" event in preparation for the upcoming school year, as well as to educate everyone about pedestrian safety and staying safe near construction work zones.

Above: Officer Melinda Meyer helps a boy into a safety vest before an interactive walk to the Highway 169 construction site. Children were allowed to keep the vests.

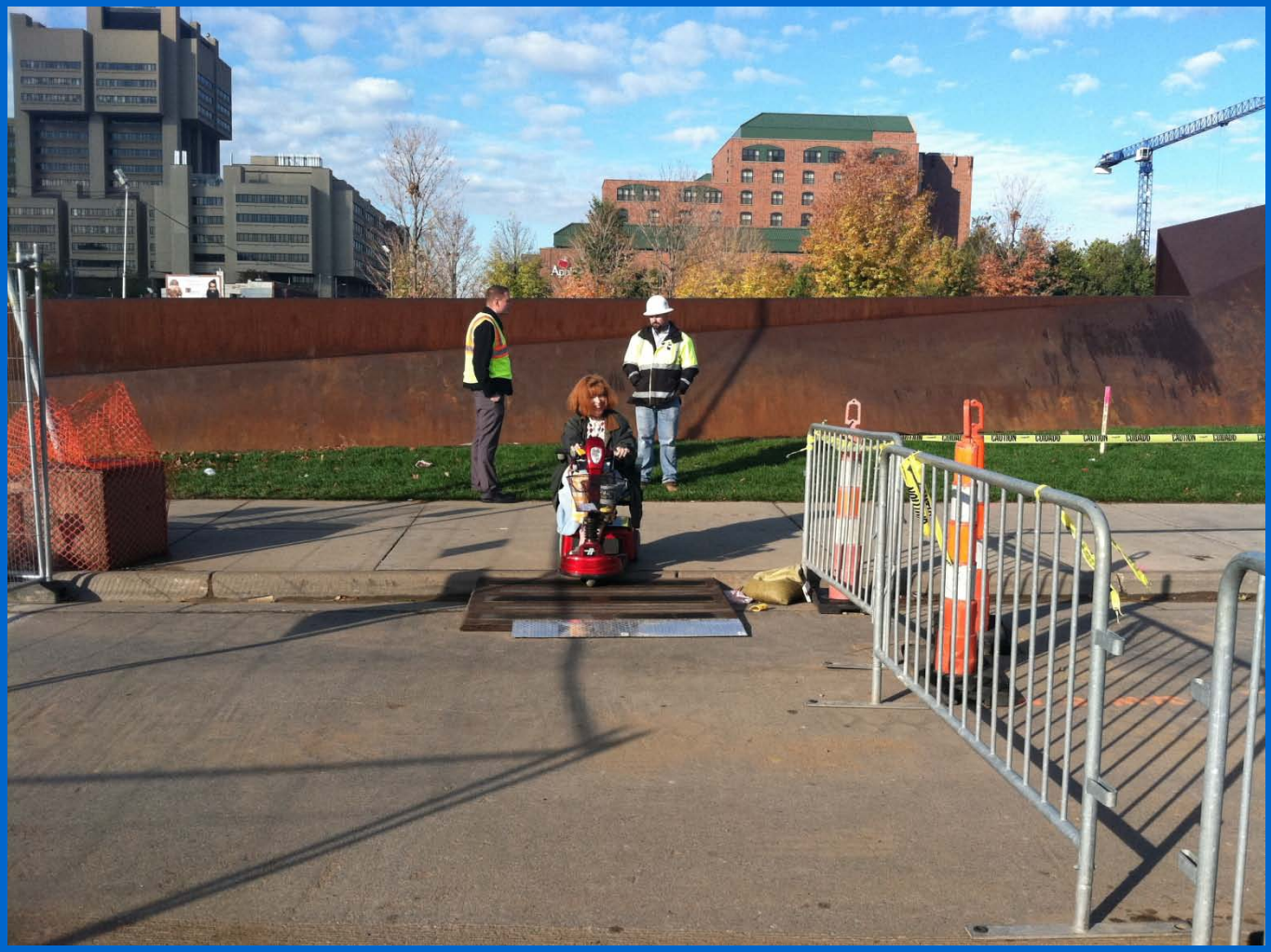
Left: Children lined up to sit behind the wheel and honk the horns of the different construction vehicles lined up in the parking lot of the Saint Peter Community Center.



All About the Details



Daily Vigilance



A MnDOT Context Sensitive Solutions (CSS) Webinar

Maintaining Pedestrian Access Through Construction & Maintenance Work Zones

Audience questions?

For more information and to view the webcast visit:
http://www.cts.umn.edu/contextsensitive