

ADA Transition Plans

March 17, 2010



Association of Pedestrian and Bicycle Professionals
Expertise for sustainable transportation



Today's webinar presenters

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Accessibility in the Public Right-of-Way: Legal Foundations of Access Planning

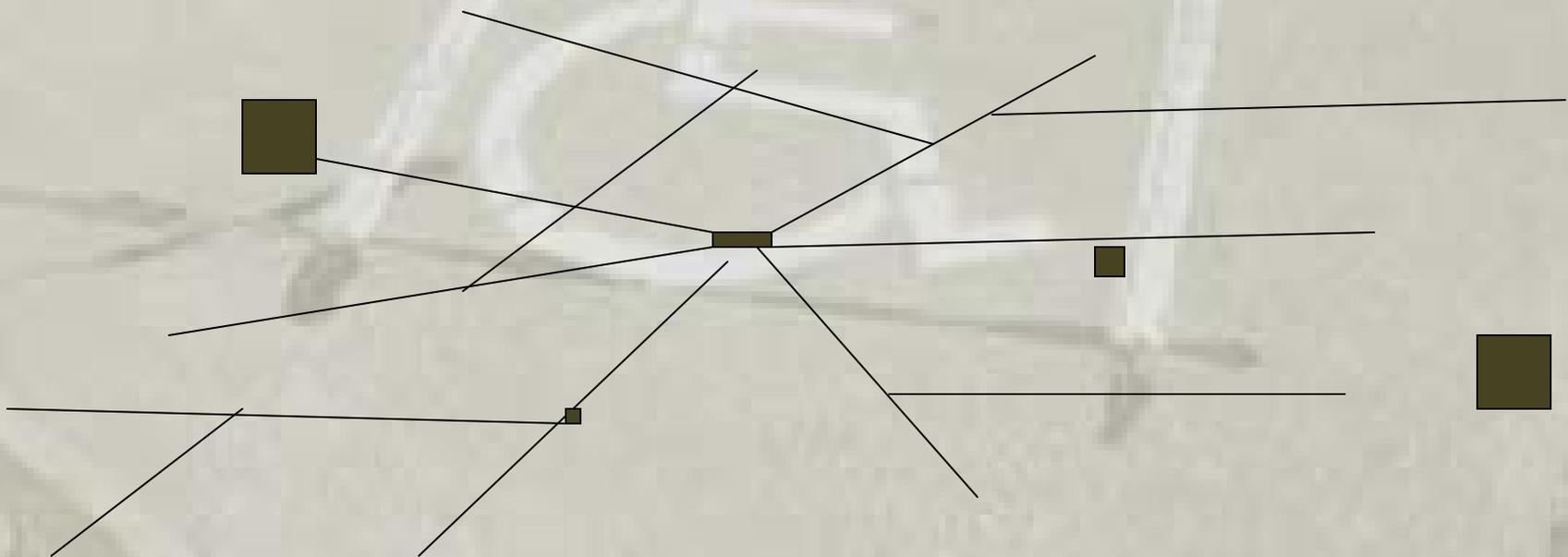
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The Americans with Disability Act (ADA) & the Rehabilitation Act Section 504 (Section 504)

- Public Entities' obligations to provide program access through:
 - Transition/Program Access plans

Definition: Public Rights-of-Way (PROW)

- The PROW is the network of streets and sidewalks creating public pedestrian access within a public entity's jurisdictional limits.



Definition: Authority

Statutes: U.S.C.: United States Code:

find text through www.gpo.gov and www.gpoaccess.gov/uscode

Regulations: C.F.R.: Code of Federal Regulations:

www.gpoaccess.gov/cfr/index.html; www.ada.gov;
www.dot.gov/regulations.html

Guidance:

USDOJ: www.ada.gov

Federal Highway Administration:

www.fhwa.dot.gov/civilrights/admin.htm#memorandums

Legal Context: ADA & Section 504:

“Nondiscrimination” General Rules

- In PROW, each public entity must ensure that pedestrian facilities meet Uniform Federal Accessibility Standards (UFAS) or ADA Accessibility Guidelines (ADAAG) standards: FHWA encourages ADAAG. 28 CFR 35.151(c); USDOJ Technical Assistance II-6.2100.
- Parallel requirements for accessibility. USDOJ Technical Assistance II-1.4100

Legal Context: ADA & Section 504:

Public Entity Responsibilities

- Primary method: Planning for Program Access:
 - Use planning processes, including program access plans, to ensure ADAAG compliant access for persons with disabilities to the public right-of-way. 28 C.F.R. §§ 35.105, 13.150; USDOJ Toolkit, Chapter 6, §4.
 - Planning processes: including pedestrian planning aspects of new planning rule for MPOs. 23 CFR Part 450 (effective 3/16/07).
 - Provide responsible employee and grievance procedures. 28 C.F.R. § 35.107.

Legal Context:

ADA & Section 504: Public Entity Responsibilities

- Secondary method: Projects:
 - New and alteration projects with pedestrian facilities in the scope of the project must meet ADAAG standards to the maximum extent feasible. 28 C.F.R. § 35.151.

ADA & Section 504: Planning:

Why require Program Access Plans

- To provide a method for a public entity to schedule and implement ADA-required improvements to existing streets and sidewalks in the PROW. 28 C.F.R. § 150(d).
- Required for curb ramp schedules (28 C.F.R. § 35.150(d)(2)), but may be used for the sidewalks and detectable warnings aspects for ADAAG compliance.

ADA & Section 504: Planning:
Plan General Requirements

- **Who:** Required for public entities with more than 50 employees. 28 C.F.R. § 35.105(c).
- **What:** Schedules construction of curb ramps with detectable warnings for pedestrian access to existing PROW sidewalks and street access points. 28 C.F.R. § 35.150(d)(2).
- **Where:** Public right-of-way pedestrian facilities, with priority given to government buildings, transportation areas, etc. (EX: courthouse). 28 C.F.R. § 35.150(d)(2).

ADA & Section 504: Program Access/Transition Plans:

How

The Program Access Plan schedule should:

- Identify existing facilities that limit access for persons with disabilities.
- Describe in detail methods to be used to make facilities accessible.
- Specify schedule for improving facilities by prioritizing needs of persons with disabilities in existing facilities.
- Indicate official responsible for implementation of plan.

28 C.F.R. § 35.150(d)(3).

ADA & Section 504: Program Access/Transition Plans:

Specific requirements

- Provide opportunity to interested persons and groups to participate in self-evaluation leading to the plan. 28 C.F.R. § 35.105(b).
- Make self-evaluation and plan available for public inspection:
 - Specific time frames and information required. 28 C.F.R. § 35.105(c) .

ADA & Section 504: Program Access/Transition Plans:

Cost Issues

- Cost analysis = Undue burden standard: only when improvement requires cost that, when compared to entire transportation program, would create an undue financial burden, may improvement be considered too costly.
 - Follow procedure at 28 C.F.R. § 35.150(a)(3).

ADA & Section 504: Program Access/Transition Plans:
Cost issues



ADA & Section 504: Program Access/Transition Plans:

Planning Issues

- Integrate program access plan with the Statewide Transportation Improvement Plan (STIP) and Transportation Improvement Plan (TIP)
- Incorporate improvement projects into program access plan as identified
- Identify facilities needing to be added:
 - As alteration projects occur
 - As maintenance projects occur

ADA & Section 504: Program Access/Transition Plans:

Timing and Updates

- Originally transition plan projects were to be completed by January 26, 1995. 28 C.F.R. § 35.150 (c).
- All public entities were to have transition plans by July 26, 1992 (28 C.F.R. § 35.150(d)), with self-evaluations governed by 28 C.F.R. § 35.105.
- DOJ Chapter 6 Toolkit: Reaffirmed need for program access planning:
www.usdoj.gov/crt/ada/pcatoolkit/chap6toolkit.htm

ADA & Section 504:

FHWA Responsibilities

- FHWA is responsible for oversight of federal, state and locality planning, design and construction processes for PROW accessibility, including program access plans.
- Oversight example: FHWA Division's Actions:
 - Review State and local program access plans and projects
 - ADA/Section 504 complaint processing

Accessibility in the Public Right-of-Way: Resources

- USDOJ Toolkit:
www.usdoj.gov/crt/ada/pcatoolkit/chap6toolkit.htm
- FHWA Guidance:
<http://www.fhwa.dot.gov/accessibility/index.cfm>

ADA & Section 504

Questions



Planning for Accessibility in the Public Right-of-Way

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APPENDIX

Legal Context:

Statutory language

Section 504: 29 USC § 794

“No otherwise qualified individual with a disability in the United States . . . Shall solely by reason of her or his disability, be **excluded from participation** in, be denied the benefits of, or be **subjected to discrimination** under any program or activity **receiving Federal financial Assistance** or under any program or activity conducted by any Executive agency . . .”

29 USC § 794 (a)

ADA: 42 USC 12111 et seq:

Title II, Part A:

“ . . . no qualified individual with a disability shall , by reason of such disability, be **excluded from participation** in or be denied the benefits of the services, programs, or activities of a **public entity**, or be **subjected to discrimination** by any such entity.”

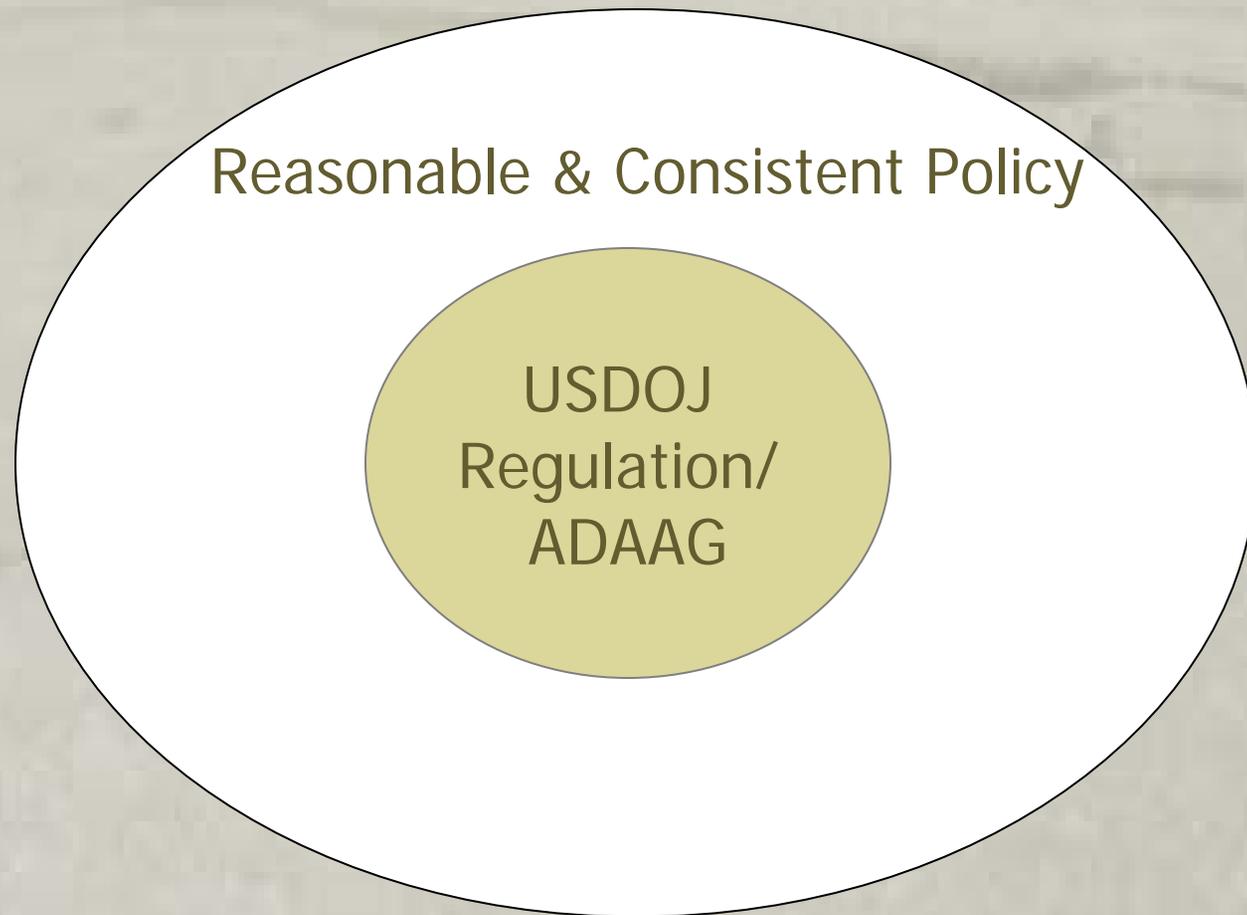
42 USC § 12132

Legal Context: ADA & Section 504:

“Nondiscrimination” Corollary

- Compliance requires that where public agencies provide pedestrian facilities, those facilities are to be accessible to persons with disabilities. 28 CFR 35.149 – 35.151
- Pedestrian curb ramps required in facility where it is legal to walk. USDOJ Toolkit, Chapter 6, §3, ¶4
- Therefore, review local law & remember:
 - Compliance does not require analysis of pedestrian need for placement of facilities.
 - Compliance does not require that public agencies provide sidewalks and curb ramps everywhere.

Legal Context: ADA & Section 504:
Sources for Nondiscrimination Standards

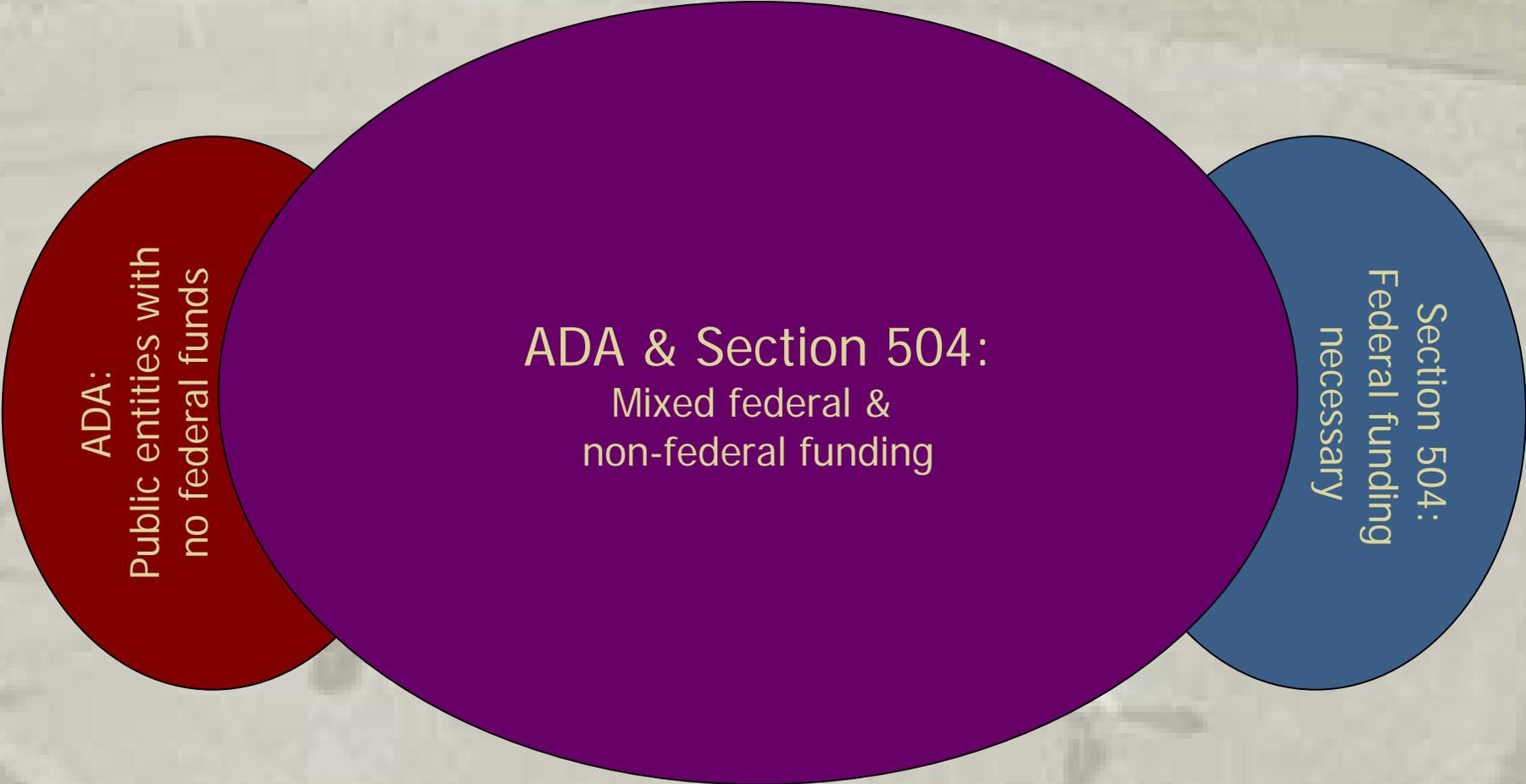


Legal Context: ADA & Section 504:

Enforcement

- Overlapping enforcement powers over public agencies:
 - (1) Section 504 covers public agencies spending federal funds.
 - (2) ADA Title II covers public agencies with power over PROW.

Legal Context: ADA & Section 504:
Enforcement



ADA:

Public entities with
no federal funds

ADA & Section 504:
Mixed federal &
non-federal funding

Section 504:
Federal funding
necessary

Legal Context: ADA & Section 504: Enforcement:

Ultimate Remedies

- Where noncompliance exists:
 - For Federal-aid recipient: FHWA can withhold federal money, after enforcement process required at 49 C.F.R. §§ 27.121 – 27.129. (Section 504)
 - For State or local government, regardless of federal funds: FHWA shall seek voluntary compliance agreement with public agency, and if voluntary negotiations are unsuccessful, shall send case to the Attorney General for appropriate action. 28 C.F.R. §§ 35.173 – 35.174. (ADA)

ADA & Section 504: Contractors' Obligations:

- Ensure new and alterations projects provide minimum required accessibility under ADAAG, 28 C.F.R. Part 36, App. A.
- Look to public facility program access plans to identify projects planned to include access.
- Minimum access considerations on street with pedestrian "facility"/legal access:
 - Curb ramp with detectable warnings, ADAAG § 4.7, 4.29
 - Consider sidewalks
 - Consider accessible pedestrian signals

ADA & Section 504: Contractors' Obligations:

- Work zone accessibility requirements:
 - Provide “temporary safe pedestrian passageways around a construction site”, ADAAG §4.1.1(1994) at 28 C.F.R. Part 36, Appendix A.
 - Safe passage does NOT include “structures, sites and equipment directly associated with the actual processes of construction, such as scaffolding, bridging, materials hoists, or construction trailers. . .” ADAAG §4.1.1(1994) at 28 C.F.R. Part 36, Appendix A.

ADA & Section 504: Contractors' Obligations:

- Before accepting contract:
 - Review proposal for facility accessibility obligations that must be built, determine who is responsible.
 - Can check public entities' program access plan.
 - Review proposal for work zone accessibility requirements, include costs in project estimate

ADA & Section 504: New Projects

- Design and construct all new facilities to be readily accessible to and useable by individuals with disabilities. 28 C.F.R. § 35.151(a).
 - At minimum, in the public right-of-way, meet ADAAG standards, including:
 - Curb ramps with detectable warnings. ADAAG §§ 4.7, 4.29.
 - Unobstructed sidewalks with accessible slope, width. ADAAG §§ 4.3 – 4.5.
 - Consider accessibility aids such as: accessible pedestrian signals and signs to facilitate safe street crossings. 23 U.S.C. § 217(g)(2).

ADA & Section 504:

Alteration Projects

- In an alteration project, a public entity must make accessible, any pedestrian facilities changed within the scope of the project to the maximum extent feasible. 28 C.F.R. § 35.151(b).
 - Maximum extent feasible = technical feasibility, not cost. ADAAG § 4.1.6(1)(j); USDOJ Technical Assistance II-6.3100(4).
 - Not primary method of improving accessibility.

ADA & Section 504:

Alteration Projects

- Scope of the project: Each altered element or space within the limits of the project shall meet ADAAG standards to the maximum extent feasible. PROW Guidelines (2005 Draft) § 202.3.
- No path-of-travel obligation: PROW analogous to electrical systems alteration discussed at ADAAG § 4.1.6(i).
- See Scope Q&A examples from draft PROW Guidelines.

ADA & Section 504: Alteration Projects

Scope Questions & Answers from Draft PROW Guidelines:

Question: One corner of an intersection is being altered by curb and gutter reconstruction and paired curb ramps are being installed as part of this project. The other three corners of the intersection are not being altered. Must curb ramps be provided at the unaltered corners as part of this work?

Answer: No. The scope of the project requires curb ramps only at the altered corner.

Question: A project will be undertaken to connect a series of sidewalk segments near a school. Must the existing segments of sidewalk be modified if they do not meet width or cross slope provisions?

Answer: Yes, to the maximum extent feasible within the scope of the project. Agencies are not required to expand a planned scope of work to include other items of accessibility.

Question: A new sidewalk is being built along an existing road that contains driveway access points. Must those driveways be modified if their cross slope exceeds 2%?

Answer: Yes, to the maximum extent feasible within the scope of the project.

ADA & Section 504:
Alteration Projects

Alteration Definition:

- A change to a facility in the public right-of-way that affects, or could affect, access or use of the facility, including changes to structure, grade, or use of the facility.
- Examples: reconstruction, major rehabilitation, widening, resurfacing (such as structural overlays and mill and fill), signal installation and upgrades.

ADA & Section 504: Alteration Projects

Maintenance is not an alteration.

Maintenance Definition:

- Activities intended to preserve the system, retard future deterioration, and maintain functional condition of the roadway without increasing structural capacity.
- Examples: Liquid applied sealing, thin surface treatments (nonstructural), joint repair, pavement patching (such as filling potholes), shoulder repair, signing, striping, minor signal upgrades, and repairs to drainage systems.

ADA & Section 504:

Alteration Projects

- When resurfacing of a street alters the usability of a street, curb ramps within scope of the alteration project must be improved to the maximum extent feasible to meet ADAAG standards (including detectable warnings) at the same time that the project occurs.

Kinney v. Yerusalim, 9 F.3d 1067, 1070, 1072 (3d Cir. 1993), *cert. denied*, 511 U.S. 1033 (1994); 28 C.F.R. § 35.151(b); ADAAG § 3.5 (alteration definition).

ADA & Section 504:

FHWA Responsibilities

- Regardless of funding source:
 - FHWA must investigate complaints and should investigate any cases where FHWA has reason to believe that accessibility problems exist.
- Training:
 - FHWA should provide and encourage accessibility training for Federal, State and local agencies.

ADA Enforcement: Lawsuits

- ADA allows individuals to enforce ADA obligations, including curb ramp obligations, through private action in federal district court against a public entity.

Lonberg v. City of Riverside

- 1997 - 2007: Ten years of litigation
- Reasoning: Exhibit A lists 189 curbs with multiple design flaws. Lack of accessibility violated precepts of 28 CFR §35.151, Barden v. City of Sacramento, & Kinney v. Yerusalim.
- Ruling: City of Riverside discriminated against plaintiff by failing to construct and alter compliant curb ramps and sidewalks.

Lonberg v. City of Riverside

- California Damage Award Calculations:

Total \$221,000.00

- 181 locations of unsafe curb ramps/no curb ramps used once between Sept. 4, 1996 and February 12, 2007
x \$1,000.00 statutory minimum damages for one offense of denied or unsafe access = \$181,000.00
- 8 locations of unsafe curb ramps/no curb ramps near plaintiff's home used at least one hundred times between Sept. 4, 1996 and February 12, 2007
x \$5,000.00 damages = \$40,000.00

Lonberg v. City of Riverside

- Damages awarded because City of Riverside's lack of curb ramp access harmed plaintiff's dignity and ability to become self-reliant member of society.

Accessibility in the Public Right-of-Way: Legal Update

- USDOJ Toolkit:
www.usdoj.gov/crt/ada/pcatoolkit/chap6toolkit.htm
- FHWA Guidance:
www.fhwa.dot.gov/civilrights/ada_memo_clarifications.htm and
www.fhwa.dot.gov/civilrights/ada_qa.htm
- Lonberg v. City of Riverside summary:
<http://www.latimes.com/news/printedition/california/la-me-sidewalks17may17,1,4740830.story?coll=la-headlines-pe-california>

ADA & Section 504:

Access Board Draft Guidance

Recommended source for reasonable policies on issues not governed by ADAAG standards.

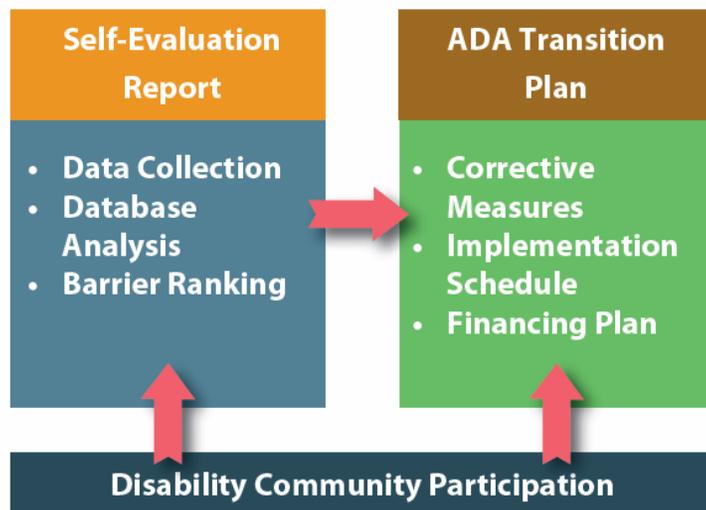
Notice of Availability (Nov. 23, 2005):

<http://www.access-board.gov/prowac/noa.htm>

PROW Draft Guidelines:

<http://www.access-board.gov/prowac/draft.htm#304>

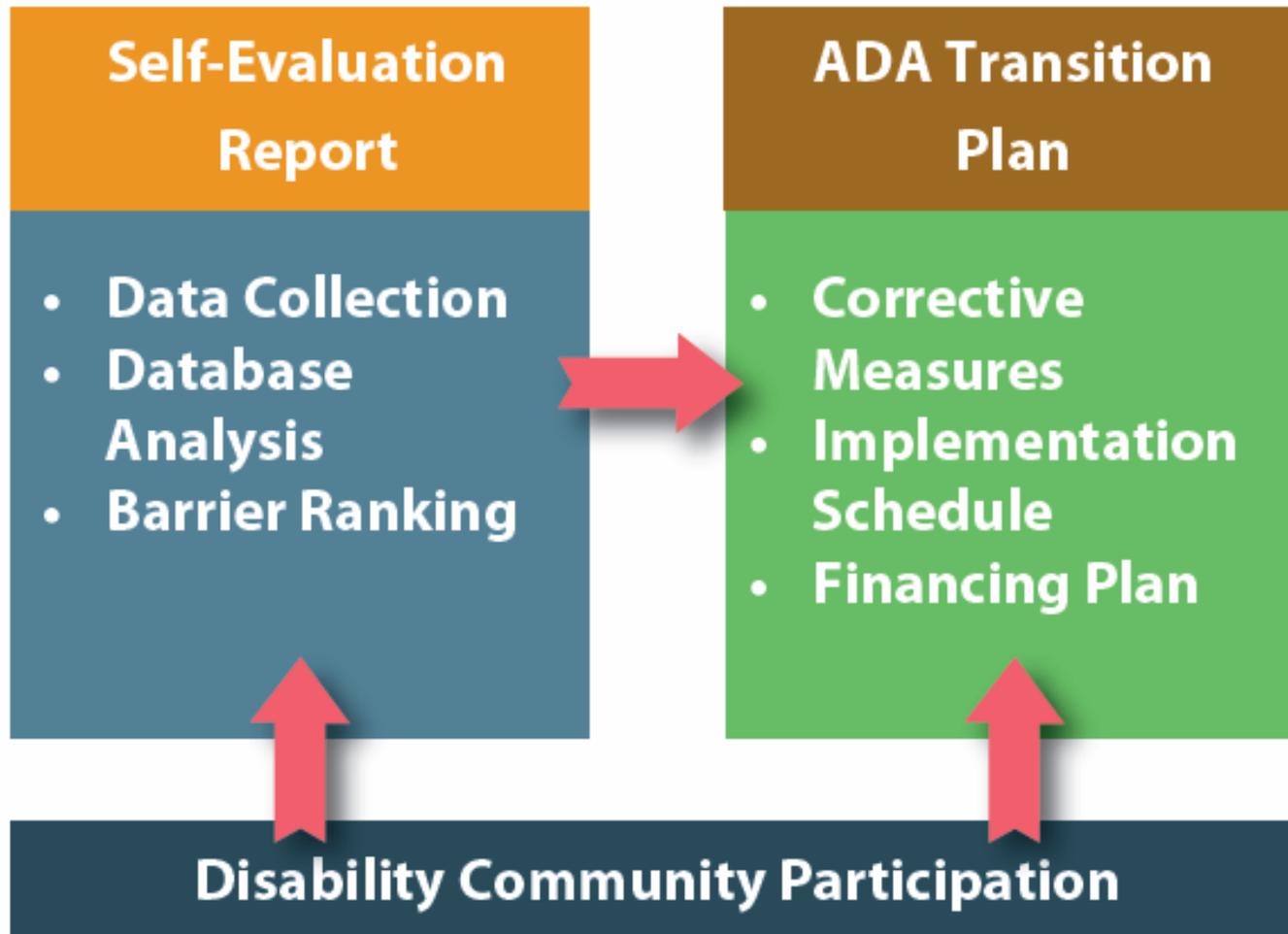
Bellevue's ADA Transition Plan: From Self-Evaluation to Corrective Measures:



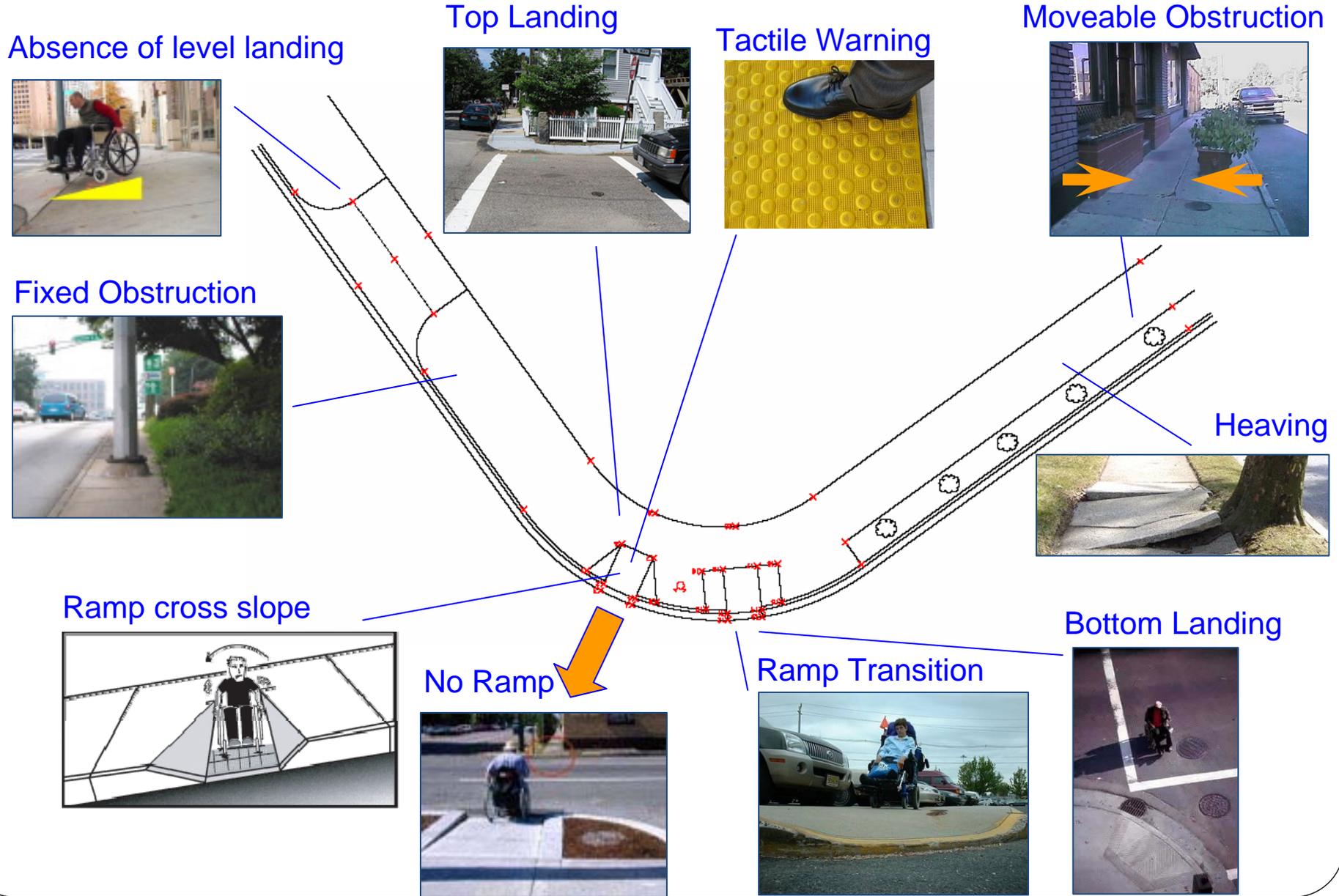
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apbp webinar, March 17, 2010

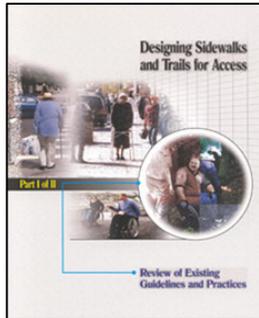
Title II Elements



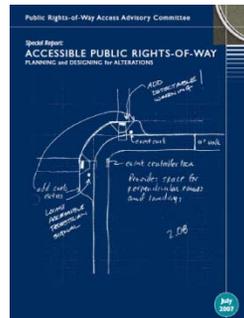
Sidewalk & Curb Ramp Inventory Overview



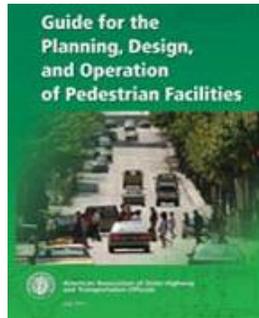
Guidance for Conducting an ADA Inventory



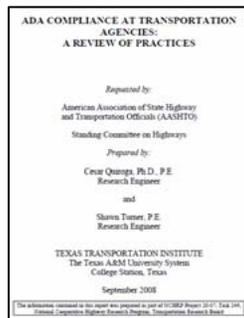
[FHWA \(1999\)](#)



[PROWAAC \(2007\)](#)



[AASHTO \(2004\)](#)



[NCHRP \(2008\)](#)



Reference reports



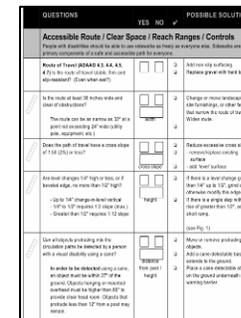
[Texas DOT](#)



[City of Sacramento](#)



[Maryland Highway](#)



[Florida DOT](#)

Inventory tools

Bellevue's Approach

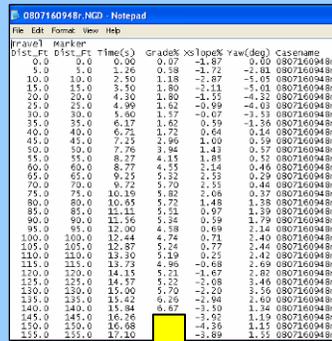
1

Data Collection

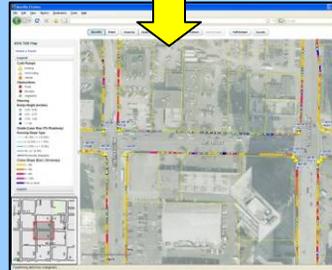


2

Database Analysis

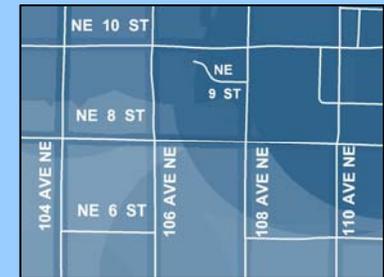


Travel Marker	Dist_Ft	Dist_Ft	Time(s)	Grade%	Xslope%	Yaw(deg)	Casename
0.0	0.0	0.00	0.07	-1.87	0.00	0.00	0807160948r
5.0	5.0	1.26	0.38	-1.72	-2.81	0.00	0807160948r
10.0	10.0	2.50	1.18	-2.87	-5.05	0.00	0807160948r
15.0	15.0	3.50	1.80	-1.11	-5.01	0.00	0807160948r
20.0	20.0	4.50	1.80	-1.55	-4.52	0.00	0807160948r
25.0	25.0	4.99	1.92	-0.99	-4.03	0.00	0807160948r
30.0	30.0	5.90	1.57	-0.87	-3.53	0.00	0807160948r
35.0	35.0	6.17	1.82	0.59	-3.36	0.00	0807160948r
40.0	40.0	6.71	1.72	0.64	0.14	0.00	0807160948r
45.0	45.0	7.12	2.99	1.00	0.58	0.00	0807160948r
50.0	50.0	7.76	3.94	1.43	0.17	0.00	0807160948r
55.0	55.0	8.37	4.15	1.85	0.52	0.00	0807160948r
60.0	60.0	8.77	4.15	1.14	0.46	0.00	0807160948r
65.0	65.0	9.25	5.52	1.53	0.29	0.00	0807160948r
70.0	70.0	9.72	5.70	2.35	0.46	0.00	0807160948r
75.0	75.0	10.19	5.82	2.08	0.37	0.00	0807160948r
80.0	80.0	10.65	5.72	1.48	1.38	0.00	0807160948r
85.0	85.0	11.11	5.51	0.99	1.29	0.00	0807160948r
90.0	90.0	11.95	5.84	0.59	1.79	0.00	0807160948r
95.0	95.0	12.00	4.58	0.69	2.14	0.00	0807160948r
100.0	100.0	12.44	4.74	0.71	2.40	0.00	0807160948r
105.0	105.0	12.87	5.24	0.77	2.44	0.00	0807160948r
110.0	110.0	13.10	5.19	0.25	2.42	0.00	0807160948r
115.0	115.0	13.73	4.99	-0.68	2.69	0.00	0807160948r
120.0	120.0	14.15	5.21	-1.87	2.82	0.00	0807160948r
125.0	125.0	14.57	5.12	-1.08	3.46	0.00	0807160948r
130.0	130.0	15.00	5.70	-2.20	2.50	0.00	0807160948r
135.0	135.0	15.42	6.69	-1.94	1.60	0.00	0807160948r
140.0	140.0	15.84	6.69	-1.50	1.34	0.00	0807160948r
145.0	145.0	16.26	6.67	-1.02	1.19	0.00	0807160948r
150.0	150.0	16.68	-4.36	1.15	0.87	0.00	0807160948r
155.0	155.0	17.10	-3.89	1.25	0.90	0.00	0807160948r



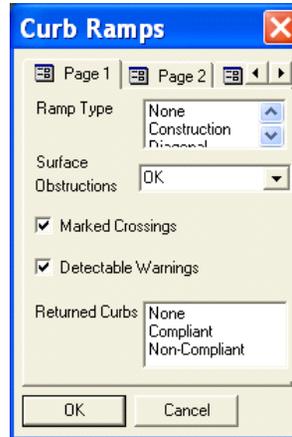
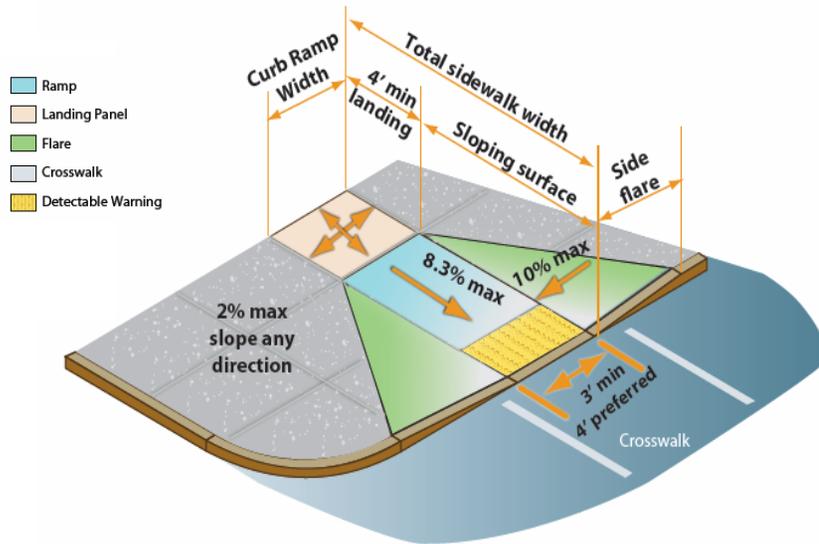
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Barrier Ranking



Disability Community Participation

ADA Curb Ramp Inventory



ADA Sidewalk Inventory

On January 22, 2004, in the case of *Barden v. Sacramento*, the 9th Circuit Court ruled that sidewalks were a "program" under ADA and must be made accessible to persons with disabilities.



Running Slope

1:20 (5%) max
ADAAG 4.8



Cross Slope

1:50 (2%) max
ADAAG 4.3.7



Displacement

1/4 inch max
ADDAG 4.5.2



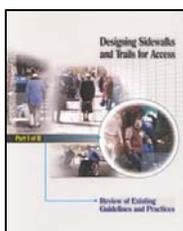
Protrusions

4" max (27" - 80")
ADDAG 4.4



Obstructions

36" clear width
ADDAG 4.3.3



FHWA guidance on grade and cross-slope:

“should be measured over 2 ft intervals, the approximate length of a wheelchair wheelbase, or a single walking pace.”

Technology Development Partnership

Project assessed the applicability of inertial profiling technologies in identifying existing sidewalk and ramp facilities that limit access for persons with disabilities.



U.S. Department of Transportation
Federal Highway Administration



Coordinated staffing & funding commitment from three agencies from three levels of government.

ULIP Technology



Sensor box includes:

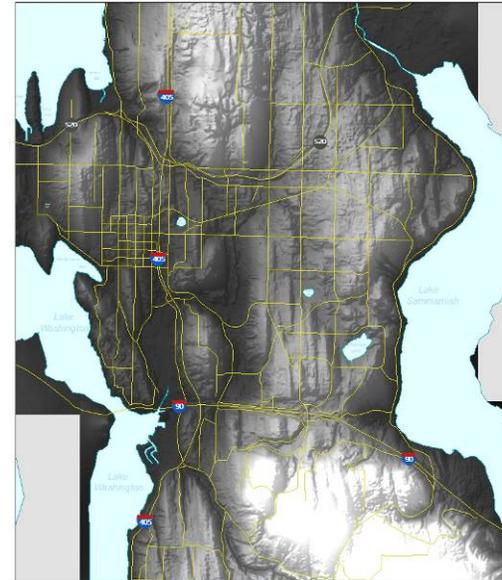
1. a displacement laser (texture/profile/height),
2. three accelerometers (inertial profiling),
3. a gyroscope (pitch, roll, yaw),
4. optical trigger (reference),
5. GPS (general location), and
6. a DMI (travel distance system).

Computer and data acquisition card are used for data capture.

Running Slope Analysis



Allow sidewalk running slope to match roadway grade.
- *PROWAG (not ADAAG)*



Digital Elevation Model

- 134 miles of our sidewalk facilities exceed 5% grade standard.
- 95 miles are attributable to the adjacency of the roadway grade.
- 39 miles of non-standard grade sidewalk surfaces are referenced in the City's Transition Plan document.

ADA Viewer Window

Identify/ Print
Toggle Bar

Navigation

Extents
Navigation

Locate by
Address

Legend/
Layers

The screenshot shows a web browser window titled "http://vcobinetdv17/ADATabs/ - Windows Internet Explorer". The browser address bar shows "http://vcobinetdv17/ADATabs/". The browser menu includes "File", "Edit", "View", "Favorites", "Tools", and "Help". The browser toolbar includes "SnagIt", "Page", "Tools", and "Live Search".

The main application window is titled "ADA Viewer" and contains a toolbar with the following buttons: "Identify", "Print", "Zoom In", "Zoom Out", "Pan", "Previous Extent", "Next Extent", "Full Extent", and "Locate".

The main display area shows an aerial map of a street intersection. The street names "NE 8TH ST", "106TH AVE NE", and "108TH AVE NE" are visible. The map is overlaid with various data points and lines, including "Curb ID # 728", "Curb ID # 726", "Curb ID # 725", "Curb ID # 674", "Curb ID # 673", and "Curb ID # 672". The map also shows "Obstructions" (Fixed, Movable, Vegetation) and "Changes in Level (inches)" (0.25-0.50, 0.51-0.75, 0.76-1.00, > 1.00). The "Legend" section includes "Curb Ramps" (Existing, Not Existing, Islands), "Obstructions", "Changes in Level (inches)", "Sidewalk Grade (percent)" (30 (5% - 8.33%), 6 (9.34% - 19%), 3 (12.1% - 12.5%), 96 (> 12.5%)), "Sidewalk Cross Slope (percent)" (2 - 4%, 4 - 5%, 6 - 8%, 8 - 10%, 10% or more), and "Layers".

A "Location Map" is shown in the bottom left corner, displaying a grid of streets with a red box indicating the current view area. The "Location Map" includes street names "106TH AVE NE", "108TH AVE NE", "109TH AVE NE", "110TH AVE NE", "111TH AVE NE", "112TH AVE NE", "113TH AVE NE", "114TH AVE NE", "115TH AVE NE", "116TH AVE NE", "117TH AVE NE", "118TH AVE NE", "119TH AVE NE", "120TH AVE NE", "121TH AVE NE", "122TH AVE NE", "123TH AVE NE", "124TH AVE NE", "125TH AVE NE", "126TH AVE NE", "127TH AVE NE", "128TH AVE NE", "129TH AVE NE", "130TH AVE NE", "131TH AVE NE", "132TH AVE NE", "133TH AVE NE", "134TH AVE NE", "135TH AVE NE", "136TH AVE NE", "137TH AVE NE", "138TH AVE NE", "139TH AVE NE", "140TH AVE NE", "141TH AVE NE", "142TH AVE NE", "143TH AVE NE", "144TH AVE NE", "145TH AVE NE", "146TH AVE NE", "147TH AVE NE", "148TH AVE NE", "149TH AVE NE", "150TH AVE NE".

The status bar at the bottom of the browser window shows "Local intranet" and "100%".

Location
Map

Legend

Curb Ramps

- Existing
- Not Existing
- Islands

Obstructions

- Fence
- Roofline
- Vegetation

Changes in Level (inches)

- 0.25 - 0.50
- 0.51 - 0.75
- 0.76 - 1.00
- > 1.00

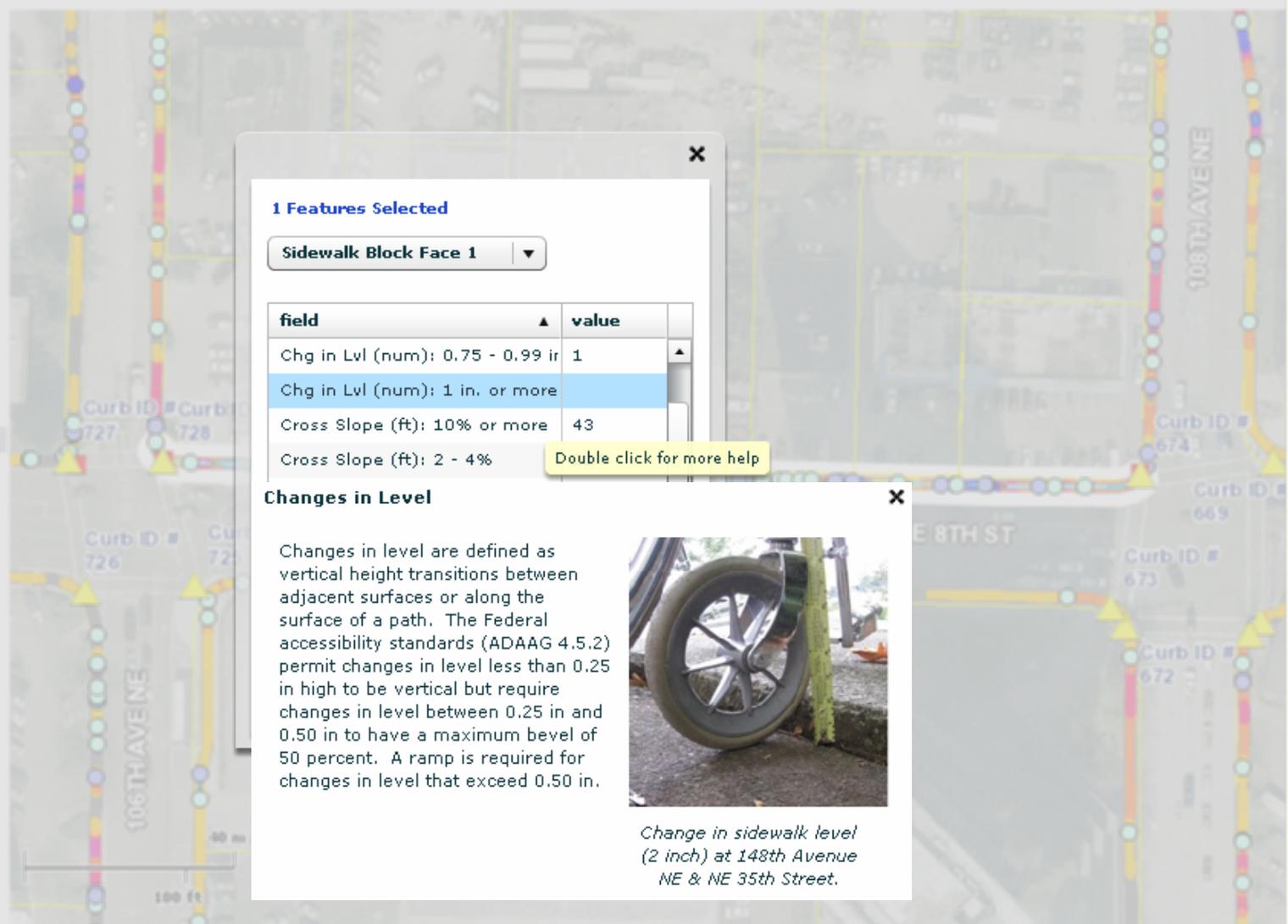
Sidewalk Grade (percent)

- 36 (0% - 4.2%)
- 5 (0.24% - 0.2%)
- 3 (1.2% - 0.25%)
- 10 (> 0.25%)

Sidewalk Cross Slope (percent)

- 2 - 0%
- 4 - 0%
- 6 - 0%
- 8 - 10%
- 10% or more

Layers



1 Features Selected

Sidewalk Block Face 1

field	value
Chg in Lvl (num): 0.75 - 0.99 in	1
Chg in Lvl (num): 1 in. or more	
Cross Slope (ft): 10% or more	43
Cross Slope (ft): 2 - 4%	

Double click for more help

Changes in Level

Changes in level are defined as vertical height transitions between adjacent surfaces or along the surface of a path. The Federal accessibility standards (ADAAG 4.5.2) permit changes in level less than 0.25 in high to be vertical but require changes in level between 0.25 in and 0.50 in to have a maximum bevel of 50 percent. A ramp is required for changes in level that exceed 0.50 in.

Change in sidewalk level (2 inch) at 148th Avenue NE & NE 35th Street.

ADA Viewer

Legend

Curb Ramps

- Existing
- Not Existing

Obstructions

- Fence
- Roofline
- Vegetation

Changes in Level (inches)

- 0.25 - 0.50
- 0.51 - 0.75
- 0.76 - 1.00
- > 1.00

Sidewalk Grade (percent)

- 36 (3% - 4.29%)
- 6 (0.24% - 0.2%)
- 3 (1.1% - 0.25%)
- 00 (> 0.2%)

Sidewalk Cross Slope (percent)

- 2 - 4%
- 4 - 5%
- 6 - 8%
- 8 - 12%
- 10% or more

Layers

4 Features Selected

Curb Ramps 1

field	value
Ramp Type	Diagonal
Ramp Running Slope	> 10%
Ramp Cross Slope	> 4%
Priority Score	125
Priority	Std: < 2% High Non-Std: 2%-4%, > 4%
Obstruction Type	ADAAG 4.8.6
Marked Crossing	Double click for more help
Landing Slope	> 2%
Landing Panel	>= 48 in

Close ADAAG Help

Ramp Panel Cross Slope

A curb ramp allows people who use wheelchairs and other wheeled devices to negotiate the elevation change between the roadway and the sidewalk without having to negotiate the curb. People with mobility impairments often have difficulty negotiating a grade and cross slope simultaneously. Since the grade of the ramp will be significant, the cross slope should be minimized. ADAAG 4.8.6 specifies that ramp panel cross slopes should not exceed 2%.

Steep ramp panel cross-slope at 128th Ave SE & SE 32nd Street.

Compliance vs. Accessibility

ADA tells us which features are non-standard ...



... But it doesn't tell us which of these non-standard features should be replaced first.

Community Outreach

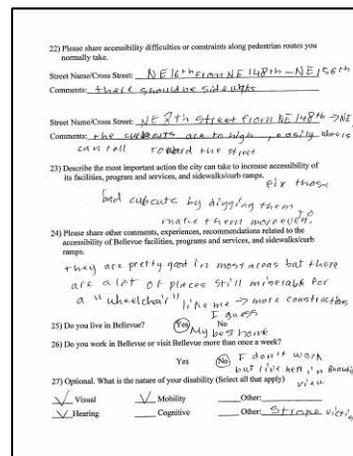


Engaged people with disabilities to ensure to that we fully understood their challenges and priorities.

- December 2007: 3 Focus Groups
- April 2009: Field tour in partnership with King County
- May 2009: ADA Accessibility Open House
- June 2009: Written survey with more than 100 responses



Poster at Open House

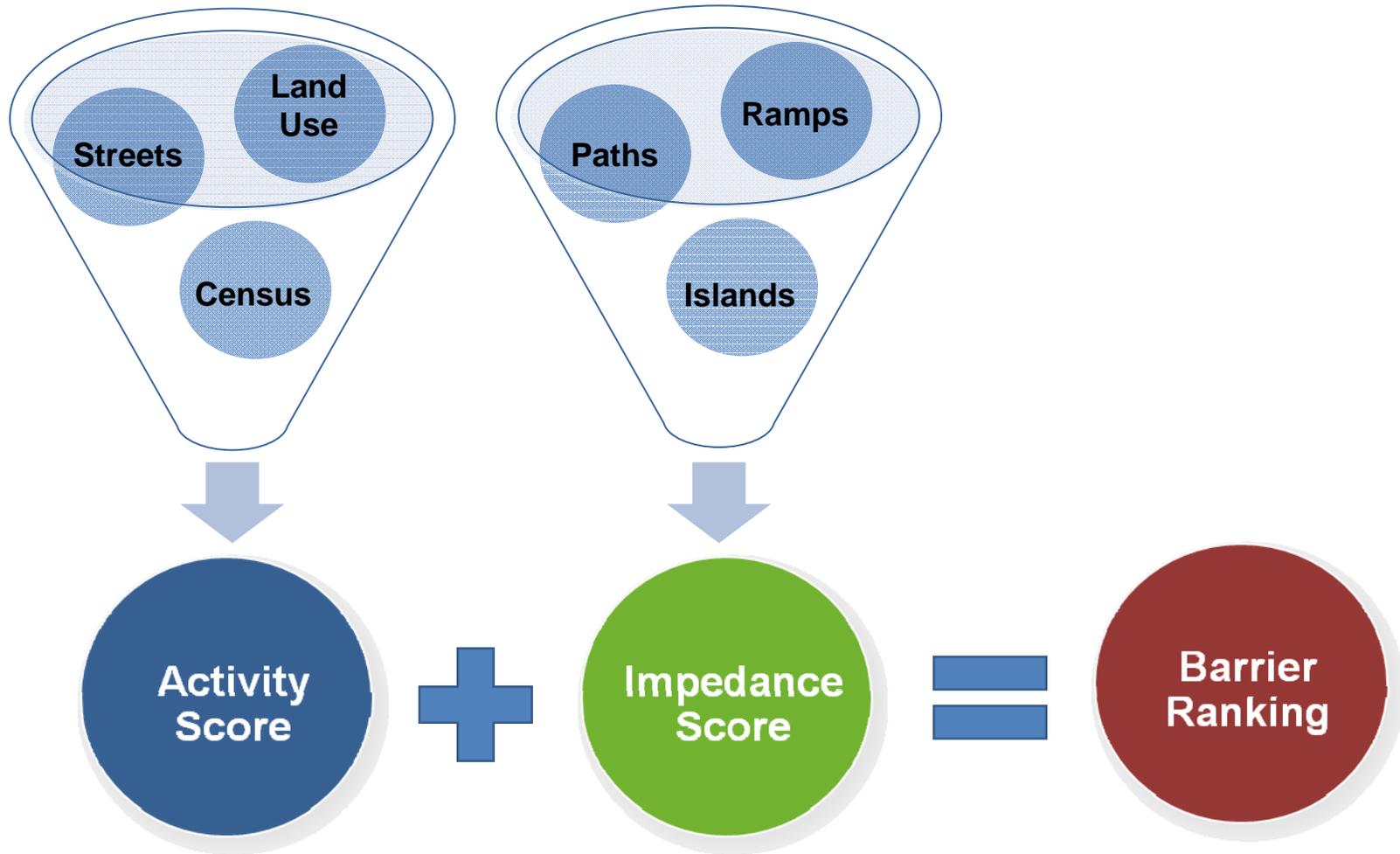


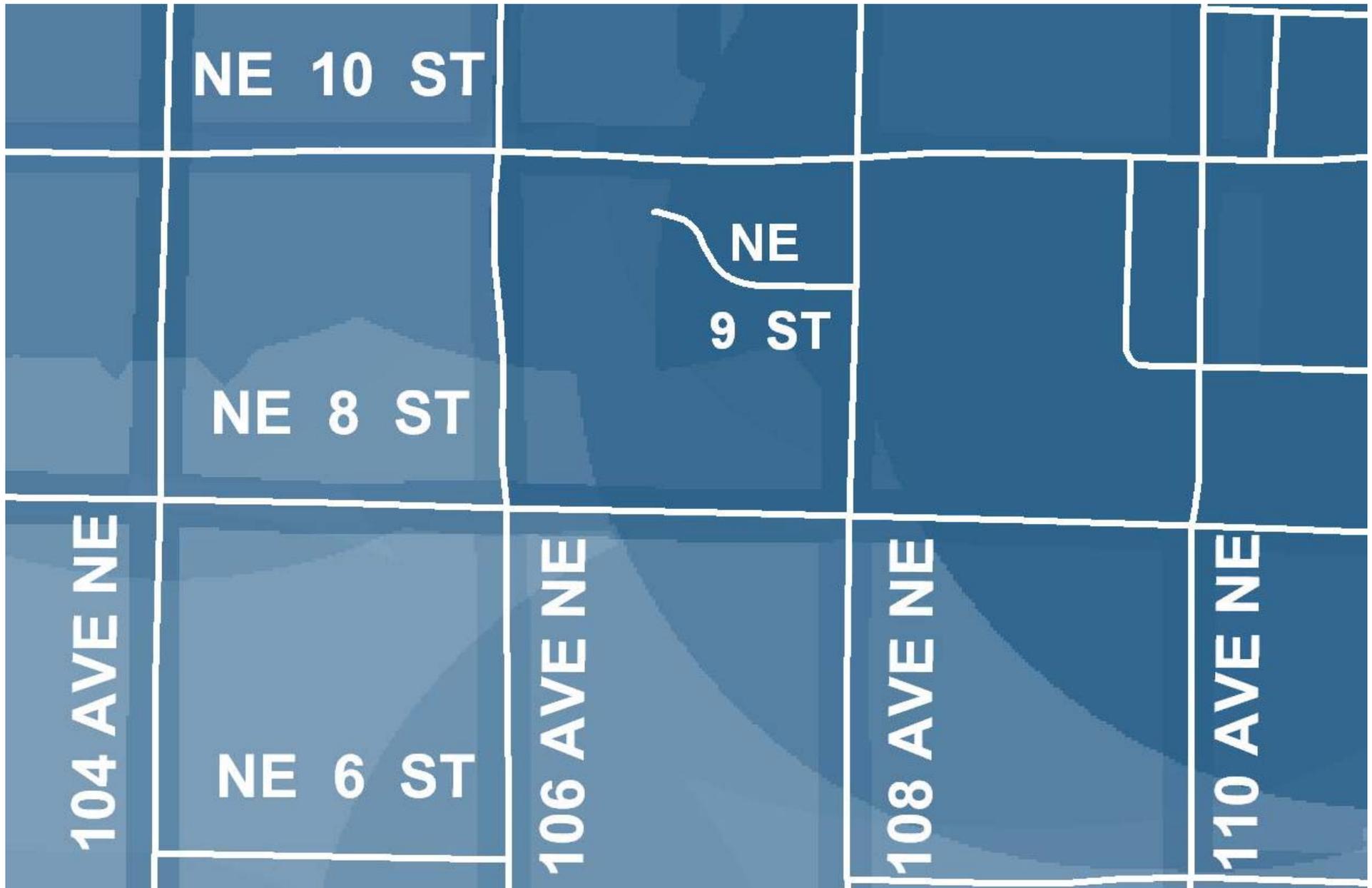
Mail-Back Survey



Ramp Assessments

Barrier Ranking Analysis



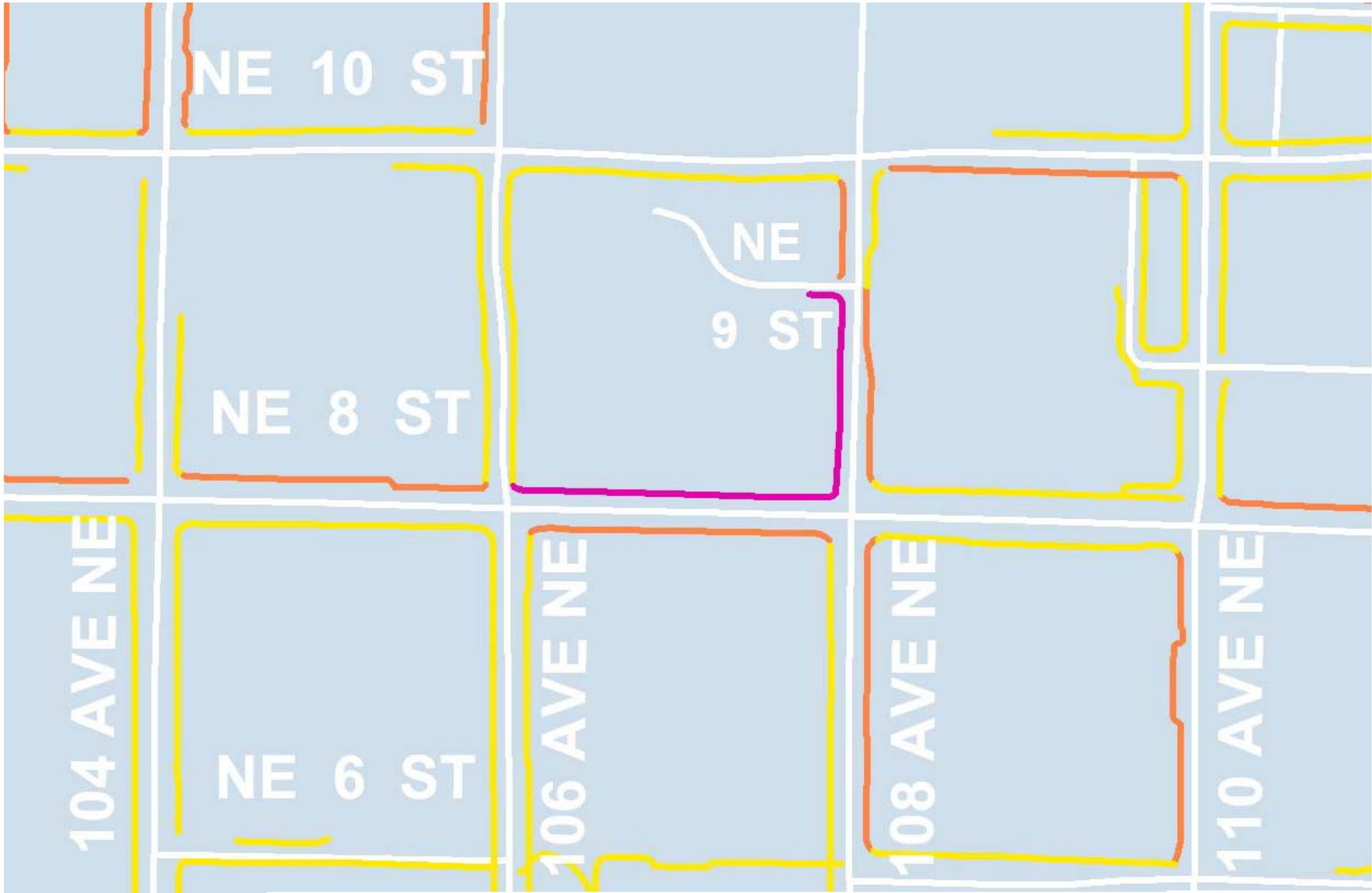


Activity Score

Legend

Value

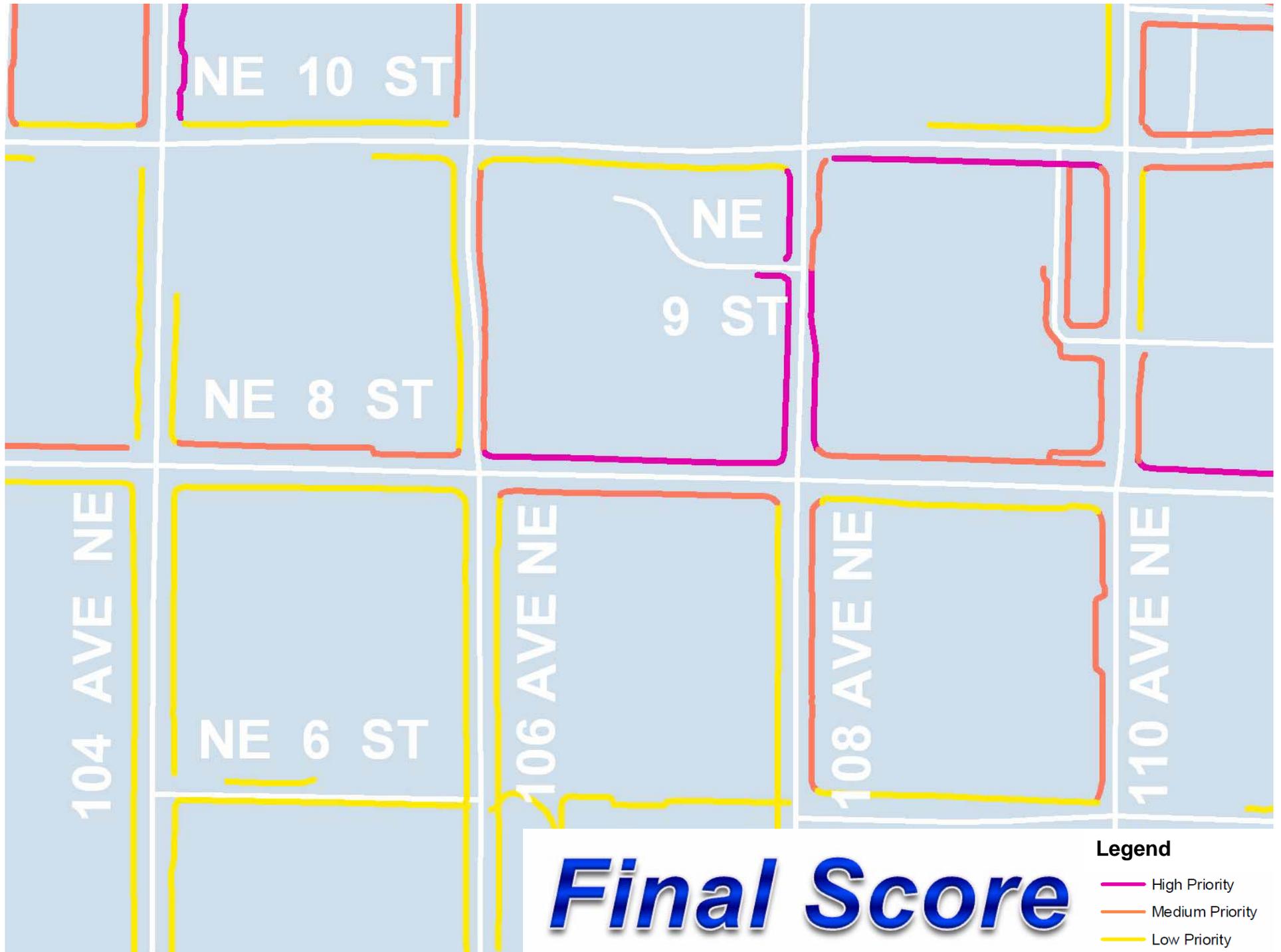




Impedance Score

Legend

- High Priority
- Medium Priority
- Low Priority



Final Score

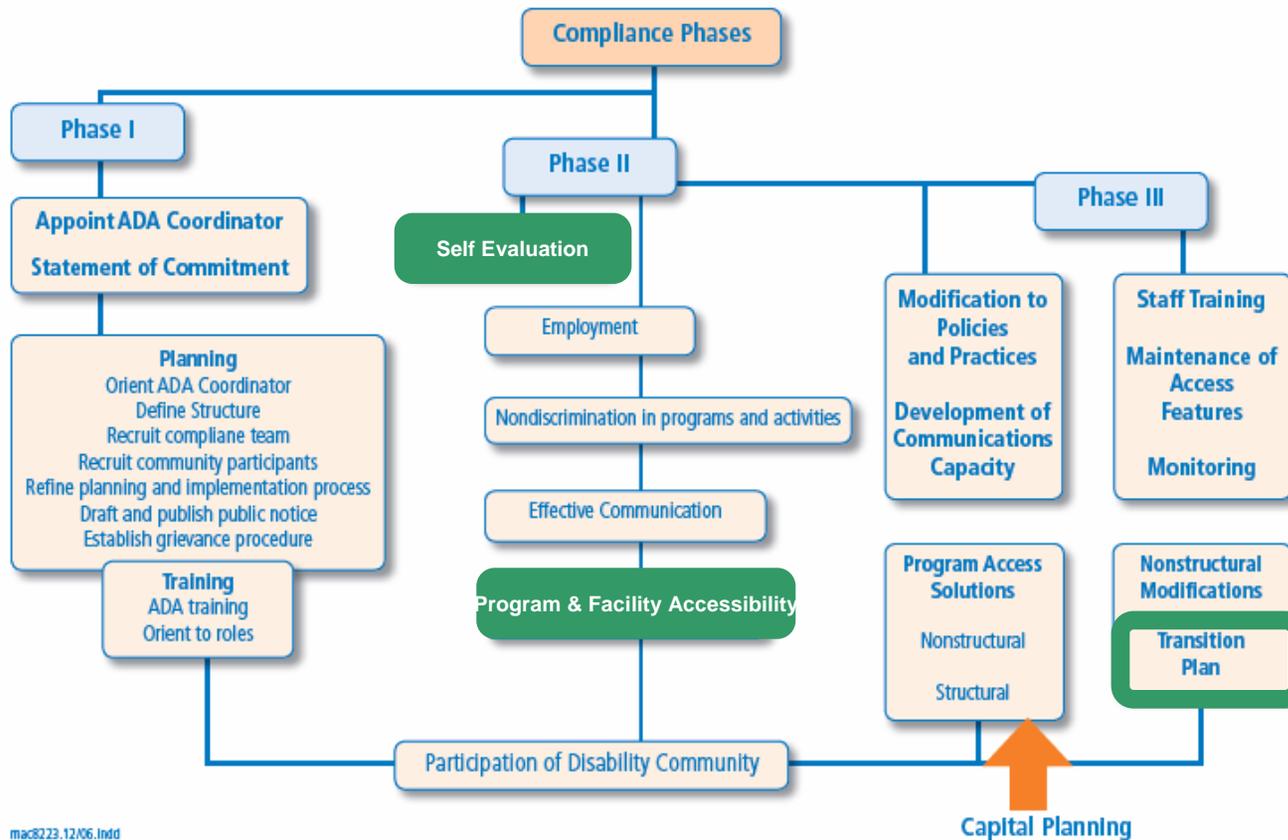
- Legend**
- High Priority
 - Medium Priority
 - Low Priority

Corrective Measures

Barrier	Corrective Measure	Individual Cost (design, construct, inspect)	Number	Total Cost
Curb Ramp	Replace Install, if missing	\$7,150	4,586	\$32,789,900
Fixed Obstruction	Remove Compliant bypass	\$13,000	226	\$2,938,000
¼” Heave	Bevel edge	\$40	20,002	\$800,080
½” Heave	Asphalt patch “ramp”	\$30	7,014	\$210,420
¾” Heave	Replace panel(s)	\$2,500	542	\$13,550,000
Running Slope	Regrade or plateau Replace panels Walls, as needed	\$26,000/10ft	200,640 feet	\$521,664,000
Cross Slope	Replace panel	\$3,250/10 foot	1,119,360 feet	\$363,792,000

\$935,744,400

ADA Transition Plan Development

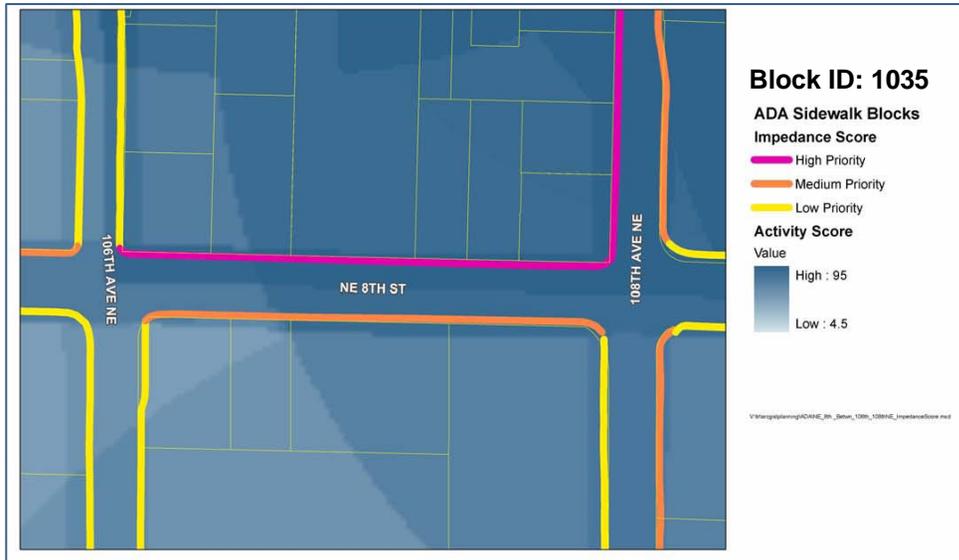


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2010 Timeline

1. PROW Plan – Draft (Q1) & Final (Q2)
2. Program & Services Plan – Draft (Q3) & Final (Q4)
3. Facilities Plan – Draft (Q3) & Final (Q4)

NE 8th Street Widening Project



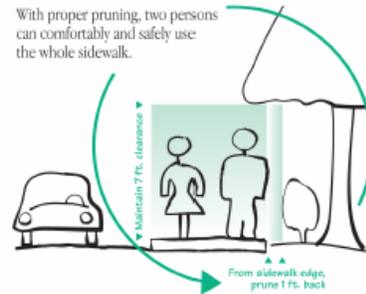
- Summer 2009 - A new sidewalk and curb ramps were built next to the new westbound lane.
- Project enhanced pedestrian facilities by removing fixed obstructions and improving sidewalk surface conditions (both changes in level and slope variations).
- Addressed barriers to accessibility in a downtown Bellevue location that has high volumes of pedestrian usage.



Corrective Measures



With proper pruning, two persons can comfortably and safely use the whole sidewalk.



Keep it Neighborly CLEAR THE WALKWAY!

In our northwest climate, trees and shrubs grow quickly. Overgrown plants and low hanging branches can lead to head and eye injuries, or can force pedestrians to sidestep into oncoming traffic. To improve the safety of your sidewalk, be sure to:

- Prune trees to a seven foot vertical clearance.
- Prune one foot back from the edge of the sidewalk. The extra space allows your neighbors to use all of the sidewalk space more effectively and safely.
- Sweep away fallen leaves and other debris.
- Trim vegetation obstructing driveways or intersections to increase visibility of pedestrians and street signs.

Be neighborly - keep your sidewalk clear (BCC 14.06.010).

For more information, call the City of Bellevue Transportation Department at (425) 452-6856.

For technical information on how to properly prune, contact Bellevue's Parks and Community Services Department, Resource Management Division at (425) 452-6855.



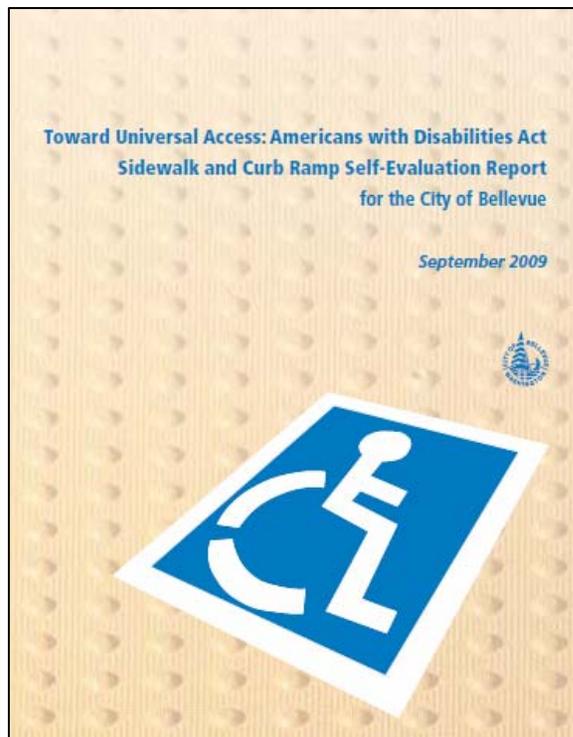
Curb Ramp Improvements



From 2007 through 2009, Bellevue will have spent more than \$2 million to upgrade nearly 300 curb ramps citywide.

For More Information

The ADA Sidewalk and Curb Ramp Self-Evaluation Report is located at: <http://www.bellevuewa.gov/accessibility-reports.htm>



“Efforts such as those at the City of Bellevue, Washington, that rely on the collection of large datasets at extremely fine spatial and temporal disaggregation levels have the potential to significantly automate the identification of non-compliant locations in the field.”

NCHRP 20-07 Task 249

- Texas Transportation Institute

Thank you

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Senior Transportation Planner

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floewenherz@bellevuewa.gov

Phone: 425.452.4077



State DOT Transition Plans, Standards & Training

APBP Webinar

ADA Transition Plans

March 17, 2010

Craig Williams, AICP



What we'll cover

- ✓ Guide for State Transition Plans
 - ✓ Content & Best Practices
- ✓ Importance of Adopting Standards
- ✓ Importance of Training
 - ✓ Bringing your staff and consultants on board



Transition Plan Guidance for State DOTs

- NCHRP Task 232:
 - Development of a Guide to Update ADA Transition Plans (FY 2006)
 - Final Document issued May 2009
 - ADA Transition Plans:
A Guide to Best Management Practices
 - <http://144.171.11.40/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=1247>
- Surveyed all 50 states

Applicability to State DOTs

- The requirements of the ADA apply to all public entities or agencies, no matter the size.
- The transition plan formal procedures, as outlined in 28 C.F.R. section 35.150, only govern those public entities with more than 50 employees.
- This includes State Departments of Transportation (DOT) and the extensive public transportation systems that they manage.
- The development or updating of a Transition Plan is now an ongoing activity or a goal at many Departments.
- The principal challenge to State DOTs is the overall size and geographic extent of the facilities they manage. These can involve thousands of miles of public rights-of-way.

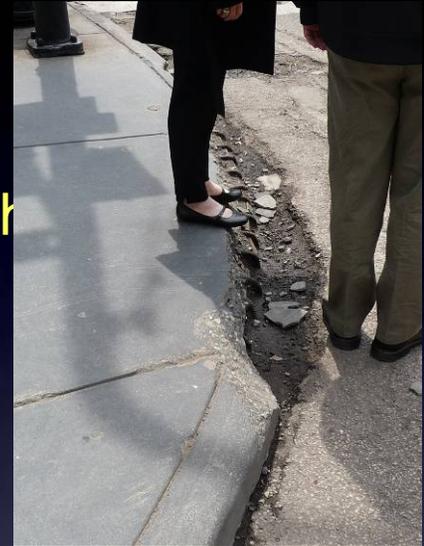
Transition Plans are required to cover all facilities under an agency's control

- Including buildings that may be owned by the DOT, such as district offices, welcome centers, rest stops, airport terminals, and other types of buildings associated with transportation activities.
- **Pedestrian facilities in DOT-managed public rights-of-way, such as sidewalks, pedestrian paths, curb ramps, street crossings, driveway crossings, crosswalks, median crossings, public transit stops, and pedestrian activated signal systems.**



Transition Plan elements

- Self evaluation
 - identify physical obstacles that limit the accessibility of facilities to individuals with disabilities
- Describe the methods to be used to make the facilities accessible
- Provide a schedule for making the access modifications
- Identify the public officials responsible for implementation
- Update periodically
 - until all accessibility barriers are removed



SELF-EVALUATION CHECKLIST	
ISSUE	Possible Barriers
Sidewalk and Pathway Clear Width	Narrow, Below Guidelines
Sidewalk and Pathway Cross Slope	Steepness, Irregularity, Variability, Warping
Landings Along Sidewalks and Pathways	Less Than 4 feet by 4 feet
Sidewalk and Pathway Grade	Steepness, Angle Points
Materials and Finishes	Deterioration of Surfaces, Deterioration of Markings, Appropriateness of material (ex. Cobblestones)
Gratings	Grating Type, Grate Opening Orientation
Discontinuities	Missing Sections, Gaps, Drops, Steps
Detectable Warning System	Missing, Inappropriate Materials, Inadequate Size, Wrong Location
Obstructions	Signs, Mail Boxes, Fire Hydrants, Benches, Telephones, Traffic Signal Poles, Traffic Signal Controller Boxes, Newspaper Boxes, Drainage Structures, Tree Grates, Pole Mounted Objects, Standing Water, Snow or Ice
Traffic Signal Systems	Lack of Provision for the Visually Impaired such as APS, Inadequate Time Allowed, Inoperable Buttons, Inaccessible Buttons
Curb Ramp	Missing, Doesn't Fall within Marked Crosswalk, Doesn't Conform to Guidelines
Curb Ramp Flares	Missing Where Required, Too Steep



Standards set for each of these issues can be found in the US Architectural and Transportation Barriers Compliance Board's Accessible Rights-of-Way: A Design Guide, Chapter 3 "Best Practices in Accessible Rights-of-Way Design and Construction". www.access-board.gov/prowac/guide/PROWGuide.htm

Steps to Compliance

- (1) Designating an ADA Coordinator
- (2) Providing notice to the public about ADA requirements
- (3) Establishing a grievance procedure
- (4) Developing internal design standards, specifications, and details
- (5) Assigning personnel for the development and completion
- (6) Approving a schedule and budget
- (7) Monitoring the progress on implementation

The Importance of Adopting Design Standards

- AASHTO and MUTCD are guidelines for states to use
 - to determine best design
 - to direct what they should use in their own state or locality
- Standards are the backbone of ensuring better design
- Extremely important to update standards



Status of State DOT Compliance with PROWAG

- Access Board: 44 states are in substantial compliance with PROWAG
- Proactive example: Michigan DOT
 - APBP was asked to deliver Designing Pedestrian Facilities for Accessibility (DPFA) courses to MDOT staff

What prompted MDOT's action?

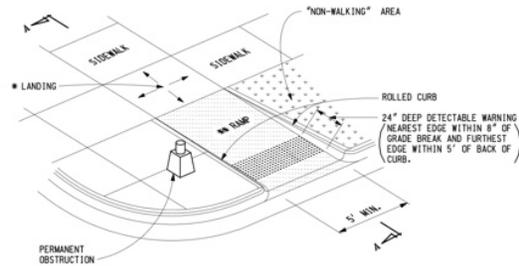
- Approached by Michigan Paralyzed Veterans of America (MPVA) (2005)
 - regarding MDOT's sidewalk ramp standards
- MPVA had approached local agencies (via litigation) to comply with ADA requirements
- Local agencies would reply that they follow MDOT standards

What prompted MDOT's action?

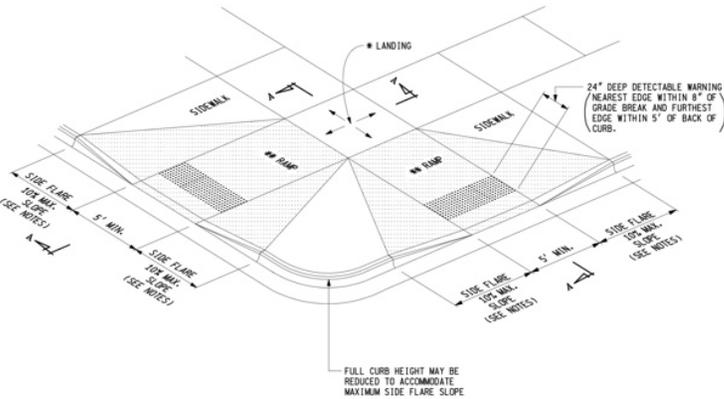
- MPVA reported that MDOT's standards were silent on cross slope and counter slope.
- The partnering with MPVA prompted further investigation of ADAAG requirements and subsequently adoption of the Draft PROWAG principles.
- MDOT chose to update their standards based on these draft guidelines prior to FHWA's 2006 endorsement of their use.

MDOT Sidewalk Ramp Details

- * MAXIMUM LANDING SLOPE IN ANY DIRECTION IS 2.0%. MINIMUM LANDING DIMENSIONS 5' x 5'.
- ** MAXIMUM CROSS SLOPE ON RAMP IS THE SAME AS THAT FOR SIDEWALK (2.0%). RUNNING SLOPE 5% - 7% (8.3% MAXIMUM).



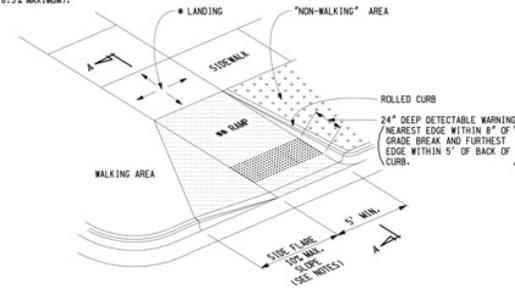
SIDEWALK RAMP TYPE R
(ROLLED SIDES)



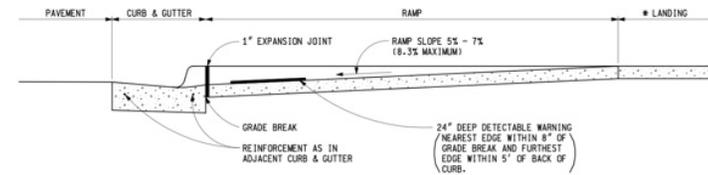
SIDEWALK RAMP TYPE F
(FLARED SIDES, TWO RAMPS SHOWN)

	DEPARTMENT DIRECTOR Kirk T. Staude	MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN FOR		
	PREPARED BY DESIGN DIVISION DRAWN BY: <u>B.L.L.</u> CHECKED BY: <u>M.L.P.</u>	APPROVED BY: _____ ENGINEER OF DELIVERY	SIDEWALK RAMP AND DETECTABLE WARNING DETAILS	
	APPROVED BY: _____ ENGINEER OF DEVELOPMENT	F.R.W.A. APPROVAL	2-19-2008 PLAN DATE	R-28-F SHEET 1 OF 7

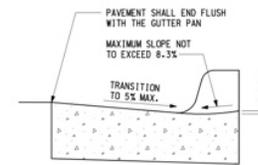
- * MAXIMUM LANDING SLOPE IN ANY DIRECTION IS 2.0%. MINIMUM LANDING DIMENSIONS 5' x 5'.
- ** MAXIMUM CROSS SLOPE ON RAMP IS THE SAME AS THAT FOR SIDEWALK (2.0%). RUNNING SLOPE 5% - 7% (8.3% MAXIMUM).



SIDEWALK RAMP TYPE RF
(ROLLED / FLARED SIDES)

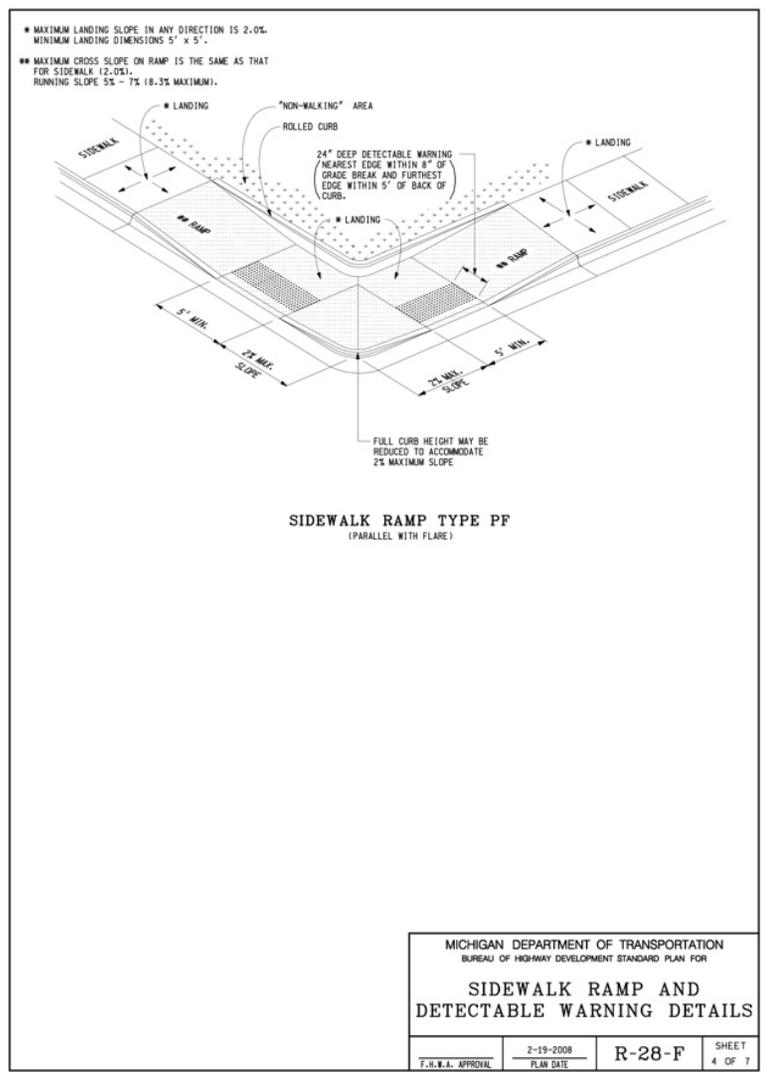
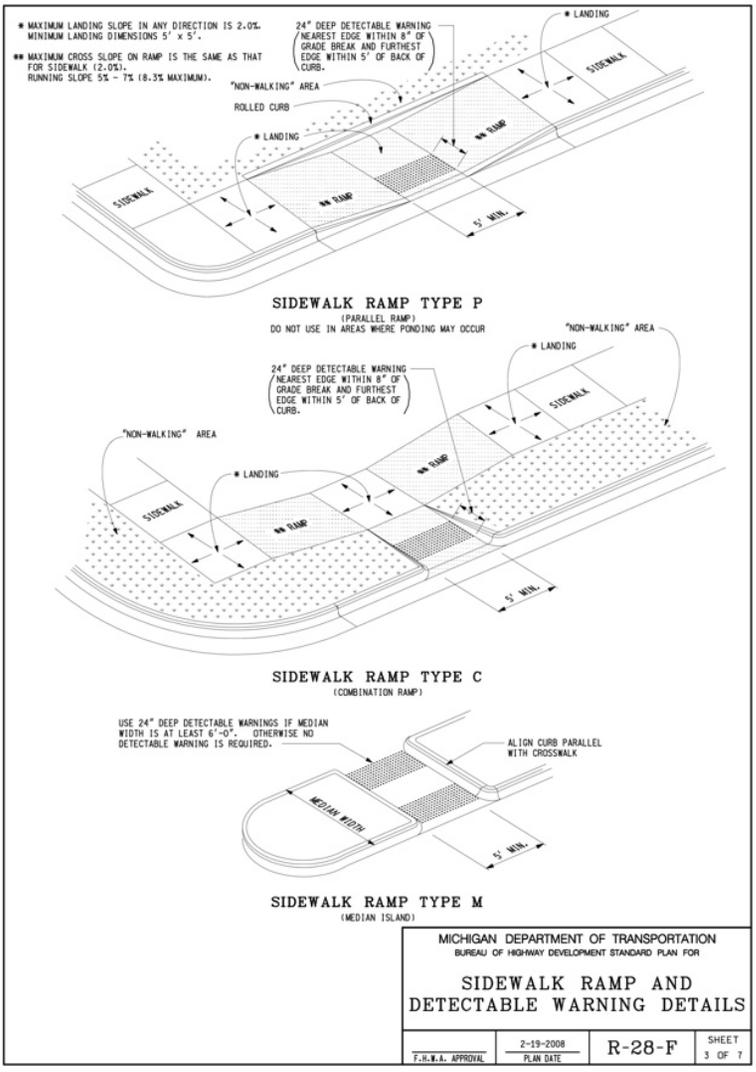


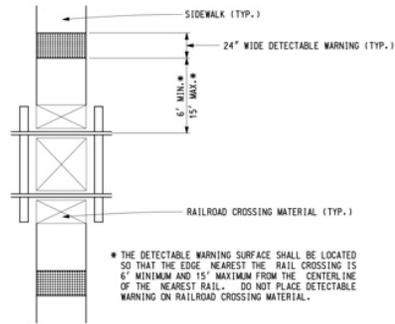
SECTION A-A
(TYPICAL ALL RAMP DETAILS)



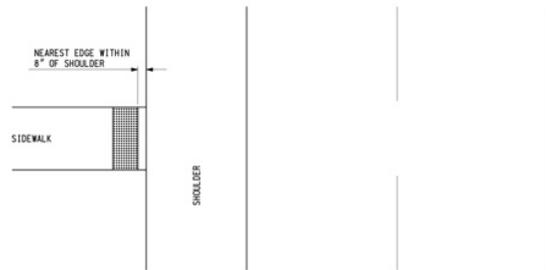
SECTION THROUGH CURB CUT
(TYPICAL ALL RAMP TYPES)

MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN FOR			
SIDEWALK RAMP AND DETECTABLE WARNING DETAILS			
F.R.W.A. APPROVAL	2-19-2008 PLAN DATE	R-28-F	SHEET 2 OF 7





SIDEWALK RAMP TYPE RR
(DETECTABLE WARNING AT RAILROAD CROSSING)



SIDEWALK RAMP TYPE FS
(DETECTABLE WARNING AT FLUSH SHOULDER)

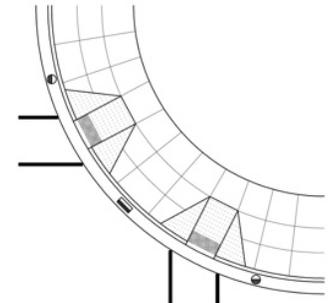
MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN FOR

**SIDEWALK RAMP AND
DETECTABLE WARNING DETAILS**

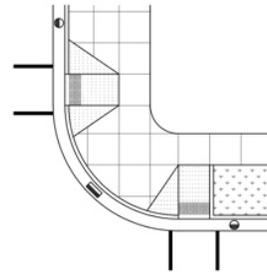
F.H.K.A. APPROVAL	2-19-2008 PLAN DATE	R-28-F	SHEET 5 OF 7
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LEGEND

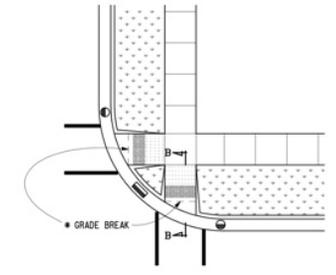
- SIDEWALK RAMP
- "NON-WALKING" AREA
- CROSSWALK MARKING
- PREFERRED LOCATION OF DRAINAGE INLET (TYP.)
- ALTERNATE LOCATION OF DRAINAGE INLET (TYP.)



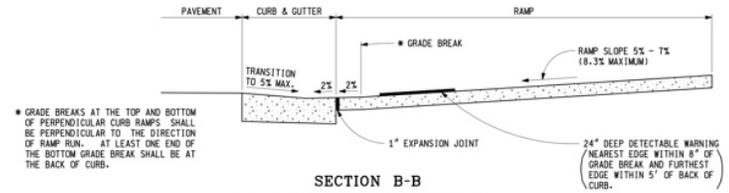
SIDEWALK RAMP PERPENDICULAR TO RADIAL CURB (TYPE F SHOWN)
(USE WITH RADIAL CURB WHEN THE CROSSWALK AND SIDEWALK RAMP ARE NOT ALIGNED)



SIDEWALK RAMP PERPENDICULAR TO TANGENT CURB
(TYPE F AND TYPE RF SHOWN)



SIDEWALK RAMP LOCATED IN RADIUS, WITH ORIENTATION AS DESCRIBED IN SECTION B-B (TYPE R SHOWN)

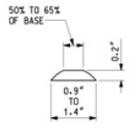


SECTION B-B
SIDEWALK RAMP ORIENTATION

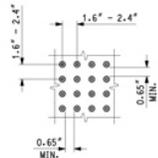
MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN FOR

**SIDEWALK RAMP AND
DETECTABLE WARNING DETAILS**

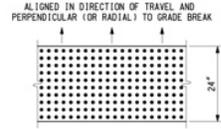
F.H.K.A. APPROVAL	2-19-2008 PLAN DATE	R-28-F	SHEET 6 OF 7
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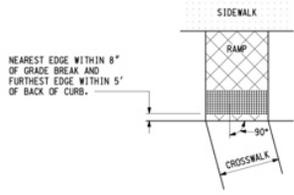
DOME SECTION



DOME SPACING



DOME ALIGNMENT



DETECTABLE WARNING DETAILS

NOTES:

DETAILS SPECIFIED ON THIS PLAN APPLY TO ALL CONSTRUCTION, RECONSTRUCTION, OR ALTERATION OF STREETS, CURBS, OR SIDEWALKS BY ALL PUBLIC AGENCIES AND BY ALL PRIVATE ORGANIZATIONS CONSTRUCTING FACILITIES FOR PUBLIC USE.

SIDEWALK RAMP ARE TO BE LOCATED AS SPECIFIED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

RAMP SHALL BE PROVIDED AT ALL CORNERS OF AN INTERSECTION WHERE THERE IS EXISTING OR PROPOSED SIDEWALK AND CURB. RAMP SHALL ALSO BE PROVIDED AT WALK LOCATIONS IN MID-BLOCK IN THE VICINITIES OF HOSPITALS, MEDICAL CENTERS, AND LARGE ATHLETIC FACILITIES.

SURFACE TEXTURE OF THE RAMP SHALL BE THAT OBTAINED BY A COARSE BROOMING, TRANSVERSE TO THE SLOPE OF RAMP.

SIDEWALK SHALL BE RAMPED WHERE THE DRIVEWAY CURB IS EXTENDED ACROSS THE WALK.

CARE SHALL BE TAKEN TO ASSURE A UNIFORM GRADE ON THE RAMP, FREE OF SAGS AND SHORT GRADE CHANGES. WHERE CONDITIONS PERMIT, IT IS DESIRABLE THAT THE SLOPE OF THE RAMP BE IN ONLY ONE DIRECTION, PARALLEL TO THE DIRECTION OF TRAVEL.

RAMP WIDTH SHALL BE INCREASED, IF NECESSARY, TO ACCOMMODATE SIDEWALK SNOW REMOVAL EQUIPMENT NORMALLY USED BY THE MUNICIPALITY.

IF POSSIBLE, DRAINAGE STRUCTURES SHOULD NOT BE PLACED IN LINE WITH RAMP. EXCEPT WHERE EXISTING DRAINAGE STRUCTURES ARE BEING UTILIZED IN THE NEW CONSTRUCTION, LOCATION OF THE RAMP SHOULD TAKE PRECEDENCE OVER LOCATION OF DRAINAGE STRUCTURE.

THE SLOPE OF THE GUTTER PAN SHALL BE TRANSITIONED TO A MAXIMUM OF 5% IN THE AREA OF THE CURB OUT OF THE SIDEWALK RAMP. MAINTAIN THE NORMAL GUTTER PAN SLOPE ACROSS THE DRAINAGE STRUCTURE INLETS.

THE TOP OF THE JOINT FILLER FOR ALL RAMP TYPES SHALL BE FLUSH WITH THE ADJACENT CONCRETE.

CROSSWALK AND STOP LINE MARKINGS, IF USED, SHALL BE SO LOCATED AS TO STOP TRAFFIC SHORT OF RAMP CROSSINGS. SPECIFIC DETAILS FOR MARKING APPLICATIONS ARE GIVEN IN THE "MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES".

DETECTABLE WARNINGS SHALL EXTEND THE FULL WIDTH OF THE CURB RAMP. THEY SHALL BE LOCATED SO THAT THE NEAREST EDGE OF THE DETECTABLE WARNING IS WITHIN 8" OF THE GRADE BREAK AND THE FURTHEST EDGE WITHIN 5' OF THE BACK OF CURB.

FLARED SIDES WITH A SLOPE OF 10% MAXIMUM, MEASURED ALONG THE CURB LINE, SHALL BE PROVIDED WHERE A CIRCULATION PATH CROSSES THE SIDEWALK RAMP. FLARED SIDES ARE NOT REQUIRED WHERE THE EDGES OF A SIDEWALK RAMP ARE PROTECTED BY LANDSCAPING OR OTHER BARRIERS TO TRAVEL BY WHEELCHAIR USERS OR PEDESTRIANS ACROSS THE EDGE OF THE SIDEWALK RAMP.

MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN FOR			
SIDEWALK RAMP AND DETECTABLE WARNING DETAILS			
T.H.W.A. APPROVAL	2-19-2008 PLAN DATE	R-28-F	SHEET 7 OF 7

The current version of MDOT's Ramp Standards can be found here:

<http://mdotwas1.mdot.state.mi.us/public/design/files/englishstandardplans/files/R028F.pdf>

Status of MDOT's Transition Plan

- Initial Transition Plan in place since 1994
- Recently updated plan:
 - Focus:
 - Current status
 - Curb ramp goals
 - Training efforts



MDOT Training Efforts

- In 2007, asked MDOT Non-motorized Technical Advisory Committee what training they wanted
- Asked for ADA/PROWAG training for each region
- MDOT created program to train staff
 - partnered with APBP to coordinate “Designing Pedestrian Facilities for Accessibility”



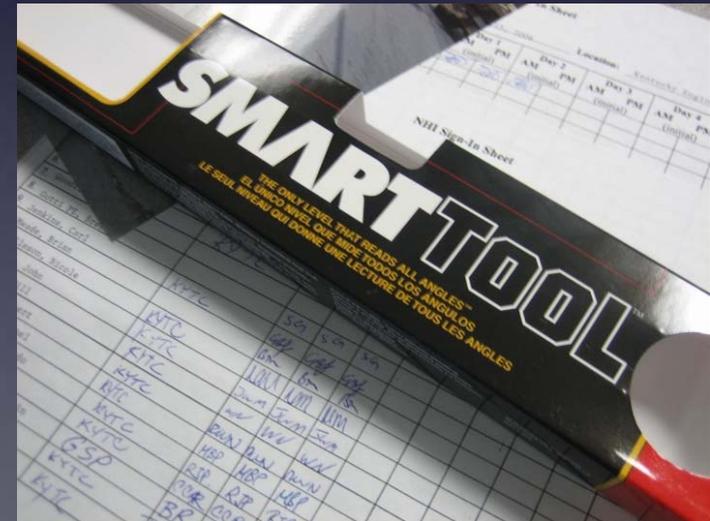
MDOT Training to Date

- Conducted 16 sessions in 14 locations
 - 10 sessions in 2008
 - 4 sessions in 2009
- Staff trained
 - 490 MDOT and
 - 70 local staff



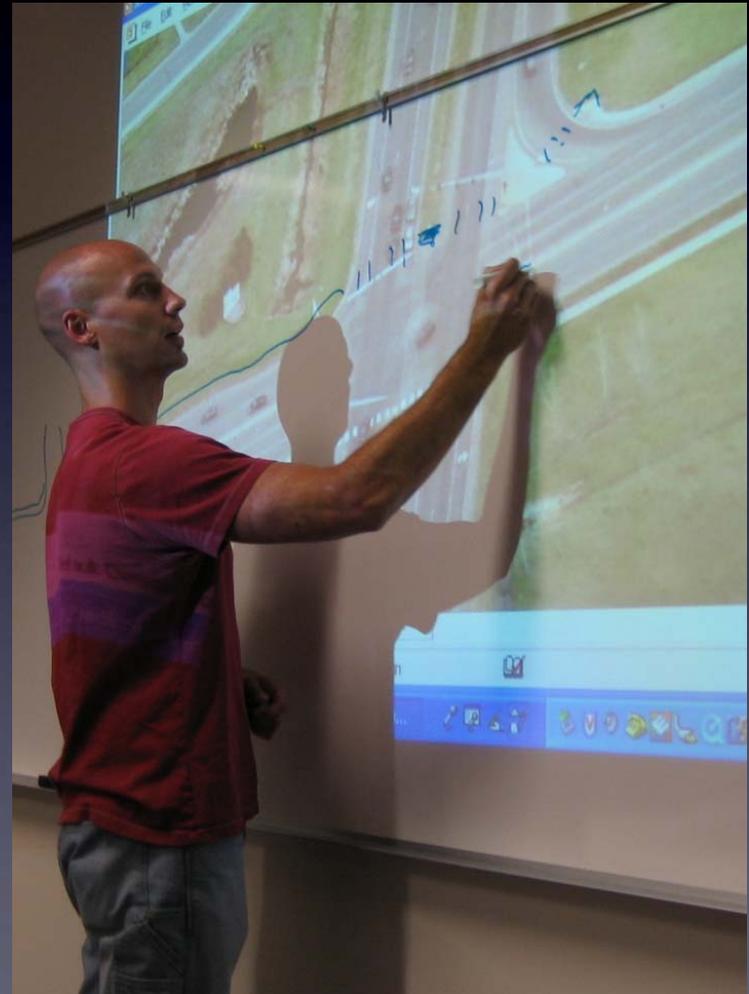
Other Michigan ADA Training

- MPO (Southeast Michigan) partner session
- City (Detroit) partner session
- Consultants - ACEC hosted two



Future training for MDOT?

- Surveys indicate need for more sessions
- Partnering with MPOs for 3 more in 2010



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(LYKAH = Leave Your Keys At Home)™

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*"An excellent course.
Great insight into the
needs ... of the
pedestrian."*

- Idaho DOT participant

*"Field exercise was
an eye opening
experience.
Excellent use of
slides and videos."*

*- Houston-Galveston Area
Council participant*

Federal Highway
Administration
www.fhwa.dot.gov

U.S. Access Board
www.access-board.gov

In collaboration with



Association of Pedestrian
and Bicycle Professionals
P.O. Box 93
Cedarburg, WI 53012

Designing Pedestrian Facilities for Accessibility

• *Newly updated!*

• *Increase your understanding of Public Right-of-Way
Accessibility Guidelines (PROWAG) and FHWA ADA policies*

• *Take home useful resource documents*

Subjects Covered

Legal Policies • Sidewalk Design • Crossings • Intersections • Curb Ramps
Construction • Pedestrian Signals • Maintenance • Temporary Traffic Control



Team Instruction

- Trained APBP instructor
- US Access Board instructor*
- Local ADA expert (if available)

**Optional for additional fee*



Field Exercises

- Walking audits
- Wheelchairs – experience slopes, cross-slopes, and ramps
- Vision degraders – decision making about street crossing



Classroom Interaction

- Discuss best practices for new design and retrofits
- Group problem-solving exercise
- Compare local design standards

Optimal class size
30 - 35 participants

1 day \$3,750

1.5 day \$4,500

For more
information and
scheduling, contact
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