

Steele County

Americans with Disabilities Act

Transition Plan for Public Right of Way

December 2020

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Introduction

Purpose and Need

The Americans with Disabilities Act (ADA), enacted on July 26, 1990, is a civil rights law prohibiting discrimination against individuals on the basis of disability. ADA consists of five titles outlining protections in the following areas:

1. Employment
2. State and local government services
3. Public accommodations
4. Telecommunications
5. Miscellaneous Provisions

Title II of ADA pertains to the programs, activities and services public entities provide. As a provider of public services and programs, the Steele County (County) must comply with this section of the ADA Act as it specifically applies to public service agencies. Title II of ADA Act provides that, “...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.”¹

Subject to Title II of ADA, Steele County must conduct a self-evaluation of its facilities and develop a transition plan to outline strategies to achieve compliance. The ADA Transition Plan (Plan) outlines policies and procedures for both the County to maintain compliance, and for community members to have a dialogue about accessibility issues. The County’s Plan provides a better understanding of the assets within Steele County and will help guide the County’s prioritization of ADA investment.

Additionally, progress on the Plan will ensure that the County maintains eligibility for State and Federal funding to support transportation projects.

Self-Evaluation

A key activity in developing the Plan is the self-evaluation. The self-evaluation inventories barriers in programs and activities that prevent persons with disabilities from reasonable access. The County completed its evaluation of County curb ramps, sidewalks, and traffic controls signals within the cities of Owatonna, Blooming Prairie, Medford, Ellendale, and unincorporated Hope (Somerset Township) in July 2020. This plan document pertains to public rights-of-way. Other infrastructure elements will be incorporated into stand-alone documents. The County’s ADA consultants, SRF Consulting Group, worked with County staff to provide professional services in

¹ ([42 USC, Sec. 12132](#); [28 CFR, Sec. 35.130](#))

completing the self-evaluation process. This consists of a field review of public right-of-way infrastructure alongside a review of policies and programs as shown in Figure 1.

Figure 1. Self-Evaluation Components



The self-evaluation provides an inventory of ADA compliance gaps and allows the County to catalog and prioritize future improvements. Public right-of-way are inventoried in an interactive, dynamic geographic database that will be delivered to the County for continuous monitoring and updates.

Plan Elements

The plan document is developed based on the outcome of the self-evaluation. In addition to the compliance assessment and progress report that the self-evaluation provides, several core elements will be incorporated into the Plan for public right-of-way.

Designating an ADA Coordinator

The County has identified a coordinator to oversee ADA policies and procedures and serve as the primary point of contact for ADA related issues. (Contact information is located in Appendix A).

Grievance Procedure

Under ADA, each agency is required to publish its responsibilities. A public notice will be documented in the plan. If users of County facilities and services believe the County has not provided reasonable accommodation, they have the right to file a grievance. A procedure for the prompt and equitable resolution of citizen complaints, concerns, comments, and other grievances is included in the Plan.

Public Outreach

The County recognizes that public participation is an important component in the development of this Plan. Input from the community will be gathered and used to help define priority areas for improvements within the jurisdiction of the County. Outreach for the ADA Transition Plan will be ongoing through public forums, council meetings, the County's website, and periodic newsletter mailings.

Monitoring

This Plan is designed to be continuously updated as warranted by conditions within Steele County. For example, updates will account for improvements and completed projects within the County as right-of-way is brought into compliance. Typically, these updates will be made to appendices and datasets included herein. Project prioritization and local policies may be updated based on community input and grievances. With each major update (as deemed necessary by the County staff), a summary of overall compliance will be included in the 5-year Capital Improvement Plan and a public comment period will be established to continue public outreach and provide input on local priorities and a dialog with community members.

Design Standards

All applicable design standards related to ADA are included in the Plan appendices.

Schedule and Budget

A projected schedule with defined milestones to achieve reasonable compliance is included in the Plan. Additionally, the County's Highway Capital Improvement Plan (CIP) is updated annually and will include budgetary estimates for anticipated projects, which may include ADA-related projects.

External Agency Coordination

Several other agencies are responsible for pedestrian facilities, such as bus stops, traffic signals, pedestrian curb ramps, and sidewalks within the jurisdiction of the County. The County will coordinate with those agencies to track and assist in the elimination of accessibility barriers along their routes. ADA contacts and interagency agreements will be provided for City, State, and regional authorities that are responsible for right-of-way in the County.

Project Timeline

To complete the Transition Plan document, data collection is required. This includes the following:

- Evaluation of existing curb ramps.
- Evaluation of existing sidewalks.
- Evaluation of existing pedestrian pushbuttons.
- Establishment of a Geographic Information System (GIS) database and reporting protocol.
- Notification and public comment on the Draft Plan.
- Final establishment of a working ADA Transition Plan Document.

This project will be completed throughout calendar year 2020. An outline of project processes and schedule is shown in Figure 2.

Figure 2. ADA Transition Plan Process



ADA and its Relationship to Other Laws

Title II of ADA is companion legislation to two previous federal statutes and regulations: the [Architectural Barriers Acts of 1968](#) and [Section 504 of the Rehabilitation Act](#) of 1973.

The Architectural Barriers Act of 1968 is a Federal law that requires facilities designed, built, altered or leased with Federal funds to be accessible. The Architectural Barriers Act marks one of the first efforts to ensure access to the built environment.

Section 504 of the Rehabilitation Act of 1973 is a Federal law that protects qualified individuals from discrimination based on their disability. The nondiscrimination requirements of the law apply to employers and organizations that receive financial assistance from any Federal department or agency. Title II of ADA extended this coverage to all state and local government entities, regardless of whether they receive federal funding or not.

Agency Requirements

Under Title II, Steele County must meet these general requirements:

- Must operate their programs so that, when viewed in their entirety, the programs are accessible to and useable by individuals with disabilities ([28 C.F.R. Sec. 35.150](#)).
- May not refuse to allow a person with a disability to participate in a service, program or activity simply because the person has a disability ([28 C.F.R. Sec. 35.130 \(a\)](#)).
- Must make reasonable modifications in policies, practices and procedures that deny equal access to individuals with disabilities unless a fundamental alteration in the program would result ([28 C.F.R. Sec. 35.130\(b\) \(7\)](#)).
- May not provide services or benefits to individuals with disabilities through programs that are separate or different unless the separate or different measures are necessary to ensure that benefits and services are equally effective ([28 C.F.R. Sec. 35.130\(b\)\(iv\) & \(d\)](#)).
- Must take appropriate steps to ensure that communications with applicants, participants and members of the public with disabilities are as effective as communications with others ([29 C.F.R. Sec. 35.160\(a\)](#)).
- Must designate at least one responsible employee to coordinate ADA compliance [[28 CFR Sec. 35.107\(a\)](#)]. This person is often referred to as the "ADA Coordinator." The public entity must provide the ADA coordinator's name, office address, and telephone number to all interested individuals [[28 CFR Sec. 35.107\(a\)](#)].
- Must provide notice of ADA requirements. All public entities, regardless of size, must provide information about the rights and protections of Title II to applicants, participants, beneficiaries, employees, and other interested persons [[28 CFR Sec. 35,106](#)]. The notice must include the identification of the employee serving as the ADA coordinator and must provide this information on an ongoing basis [[28 CFR Sec. 104.8\(a\)](#)].

- Must establish a grievance procedure. Public entities must adopt and publish grievance procedures providing for prompt and equitable resolution of complaints [[28 CFR Sec. 35.107\(b\)](#)]. This requirement provides for a timely resolution of all problems or conflicts related to ADA compliance before they escalate to litigation and/or the federal complaint process.

This document has been created to specifically cover accessibility within the public rights of way and does not include information on Steele County's programs and practices not related to public rights of way.

Transition Plan for Public Rights-of-Way

Public rights-of-way (ROW) in the County include roadways and their adjacent facilities that serve a transportation purpose. This includes sidewalks, curb ramps, driveways, and pedestrian pushbuttons located within the cities of Owatonna, Blooming Prairie, Medford, Ellendale, and unincorporated Hope (Somerset Township). Public rights-of-way do not include buildings, publicly accessible technology, recreational trails and facilities, and private property.

Self-Evaluation

Overview

The public ROW self-evaluation examines the condition of the County's Pedestrian Access Route/Pedestrian Circulation Route (PAR/PCR) and identifies potential need for PAR/PCR infrastructure improvements. This includes sidewalks, curb ramps, and pedestrian pushbuttons that are located within the County ROW. Any barriers to accessibility in the PAR/PCR identified during the self-evaluation are included in this Plan.

Summary

The County's Consultants completed the PAR/PCR inventory in July 2020. The complete PAR/PCR inventory includes all facilities within the county's jurisdiction organized by City in Figure 3.

Figure 3. County's ROW Inventory by City

Blooming Prairie	Ellendale	Hope (Somerset Township)	Medford	Owatonna
○122 curb ramps. ○Approximately, 2 miles of sidewalks.	○2 curb ramps. ○Approximately, .25 mile of sidewalks.	○12 curb ramps. ○Approximately, .10 mile of sidewalks.	○51 curb ramps. ○Approximately, 1.5 miles of sidewalks.	○636 curb ramps. ○Approximately, 8 miles of sidewalks. ○54 pedestrian pushbuttons (14 total Intersections)

The inventory considers the limitations of the physical terrain where existing physical or site constraint prohibits modification or addition of accessible features that comply fully with the ADA Standards. Therefore, areas where the slope of the terrain may not be modified to satisfy ADA requirements, especially along steep hills, the County will comply with the provisions of the ADA standards to the maximum extent feasible. Feasibility per the National Association of City Transportation Officials means, "Capable of being accomplished with a reasonable amount of effort, cost, or other hardship. With regard to ADA compliance, feasibility is determined on a case-by-case basis."

A detailed evaluation on how these facilities relate to ADA standards is found in Appendix B and will be updated periodically.

The PAR/PCR inventory also includes 54 pedestrian pushbuttons (14 total intersections) located within the County. See Appendix H for the County's signal evaluation reports, which were issued in 2020. The data obtained during the ADA self-evaluation of traffic signals will supplement the 2020 County signal evaluation report. Data obtained through the ADA self-evaluation provides more detailed and focused information related to the accessibility of the crossing signals, in addition to the more detailed information on the accessibility of the curb ramps at each intersection.

The cattle pass culvert under County State Aid Highway (CSAH) 28 at Beaver Lake Park, shown in Figure 4, was not a part of the PAR/PCR inventory collected in July 2020. However, the County has identified that it is not ADA compliant due to the slope of the trail leading to the entrance/exit of the culvert. The County is considering improvements within the next five years.

Figure 4. Cattle Pass Culvert



Field Manual for Data Collection

A field manual was developed to serve as a tool for the County's ROW data collection process. The Right-of-Way Field Review Inventory Manual includes all the materials used to conduct the field review of facilities and public ROW for the County's future reference. In Addition, SRF Consulting Group developed GIS data points and information to aid the County in prioritization of the ADA Transition Plan projects to coincide with Highway CIP projects and focus on establishing accessible corridors in high pedestrian traffic areas. The GIS database is an online cloud-based mapping application. The purpose of the GIS database is to house the inventory of all existing ADA locations within the County with the capability to update, add, and share information, as necessary. The database will serve as a management tool for the County. The field manual is included in Appendix C.

Policies and Practices

Previous Practices

The County has strived to provide accessible pedestrian features as part of the County's Highway CIP and new development projects. The County will continue to improve procedures to accommodate required methods of providing accessible pedestrian features.

Policy

The County's objective is to continue incorporating accessible pedestrian design features with development and Highway CIP projects. The County has adopted ADA design standards and procedures as listed in Appendix C. These standards and procedures will be updated periodically in accordance with ADA best management practices.

The County will respond to all accessibility inquiries and improvement requests appropriately. These requests and inquiries will be evaluated internally, and an appropriate response will be communicated to the requestor. This may include comment and/or consideration for implementation with related Highway CIP projects. The County will coordinate with external agencies to ensure that all new or altered pedestrian facilities within County jurisdiction are ADA compliant to the maximum extent feasible.

Requests for accessibility improvements can be submitted to the County's ADA Coordinator. Contact information for ADA Coordinator is located in Appendix A.

Maintenance and Alteration Projects Policy

Maintenance and alternation of pedestrian facilities within the public ROW will continue to follow the policies set forth by the County. The County's maintenance and alteration projects concerning pedestrian facilities along the public ROW are described in the Highway CIP's

definitions and will be adopted through the adoption of this Transition Plan. The policy can be found in Appendix C.

Snow and Ice Removal

According to the County's Snow and Ice Removal Policy, the County is not responsible for clearing winter maintenance of public sidewalks, trails, public parking areas, or other privately owned/operated areas where written contractual arrangements exist. These responsibilities fall to the local agencies through various interagency agreements. See External Agency Coordination for more information or contact the cities directly.

Improvement Schedule

Types of Improvements

The following are typical improvements to public ROW that can be made to correct deficiencies in accessibility:

- Intersection corner ADA improvement retrofits (stand-alone ADA improvement projects).
- Intersection corner ADA improvement as part of an adjacent capital project.
- Sidewalk ADA improvement retrofit (to include at grade crossings and sidewalk ramps).
- Sidewalk ADA improvement as part of an adjacent capital project (to include at grade crossings and sidewalk ramps).

Cost estimates of these improvements are included in Appendix D.

Priority Areas

The County will work with the public during the public comment period to determine priority areas for ADA improvements. These areas will be selected due to their proximity to specific land uses such as schools, commercial areas, public buildings, and from the receipt of public comments. Factors that determine this include, but are not limited to: severity of non-compliance, barriers to access a public program or service, feasibility of remedies, safety concerns, and whether a location receives high public use. Priority will also be given to locations that would most likely not be updated by other County programs. Further, priority will be given to any location where an improvement project or alteration was constructed after January 26, 1991 (marking the formalization of ADA requirements), and accessibility features were omitted. Resident requests and location are also considerations for prioritizing improvements. To best use public resources, the priority areas for planned improvements projects were identified in the completion of this plan. A preliminary list of priority areas identified during the inventory process within the County can be found in Appendix D.

Schedule

The County has set the following schedule goals for improving the deficiencies in accessibility of its pedestrian facilities within the County's ROW effective at the adoption of this plan:

- Baseline of the County's total existing PAR/PCR condition: 33% compliant
- After 10 years, 50% of PAR/PCR that were constructed after January 26, 1991, would be reasonably ADA compliant (100% compliance is not feasible given Minnesota's annual freeze-thaw cycles and pavement deterioration).
- After 10 years, 50% of PAR/PCR within the priority areas identified by the County staff would be reasonably ADA compliant.
- After 20 years, 75% of PAR/PCR within the jurisdiction of the County would be reasonably ADA compliant.
- After 30 years, 90% of PAR/PCR within the jurisdiction of the County (as identified in this plan) would be reasonably ADA compliant and fall within with County's monitoring program.

The 30-year time frame to achieve 90 percent accessibility and the required commitment of funding is framed as a policy goal. The availability of funding and future development trends in Steele County may affect how these projects are prioritized, and the timing of public ROW improvements may affect progress toward the compliance goal.

Methodology

ADA compliance will be achieved utilizing the following two methods:

1) Scheduled improvements to utilities and ROW

This type of project would include scheduled road reconstructions and/or new development projects.

2) ADA-Specific Improvement Projects.

This type of project would include standalone ADA improvement projects such as reconstruction of a pedestrian curb ramp and/or replacement of the APS system at a signalized intersection, separate from a road construction project.

These projects will be determined by the County's Highway CIP, or on a case by case basis determined by the ADA Coordinator and the County's grievance procedure. The County's 5-year Highway CIP is updated annually and available upon request at the Highway Department or available online on the [County's website](https://www.co.steele.mn.us), <https://www.co.steele.mn.us> under the Highway Department.

External Agency Coordination

External agencies with current ADA Transition Plans for ROW pedestrian facilities within the jurisdiction of the County include MnDOT and the City of Owatonna. The County will coordinate with those agencies to track and assist in the facilitation of eliminating accessibility barriers within the County. Additionally, this Plan supports the goals of other adopted documents that affect public ROW within the County, which includes specific cooperative agreements with MnDOT, and the Cities of Owatonna (including ride-systems available), Medford, Blooming Prairie, Ellendale, and unincorporated Hope (Somerset Township).

External Agency Plans may be found at the following links or made available by the County's ADA Coordinator:

MnDOT ADA Transition Plan, 2015

[http://www.dot.state.mn.us/ada/pdf/2014 TransitionPlanFinal.docx](http://www.dot.state.mn.us/ada/pdf/2014%20TransitionPlanFinal.docx)

City of Owatonna ADA Transition Plan

<https://www.ci.owatonna.mn.us/493/ADA-Transition-Plan>

ADA Coordinator

In accordance with 28 CFR 35.107(a), the County has identified an ADA Title II Coordinator to oversee the County policies and procedures. Contact information for this individual is located in Appendix A.

Public Outreach

The County recognizes that public participation is an important component developing this document. Input from the community will be gathered and used to help define priority areas for improvements within the jurisdiction of the County.

Public outreach for the creation of this document will consist of the following activities:

The ADA Transition Plan for Public ROW will be posted on the County's website and made available in a hard copy for public comment for approximately fourteen days prior to its recommendation for adoption. The draft version of the Plan will be distributed to key stakeholders including school administrators, local senior centers, businesses and service centers that have been identified as high priority areas for ROW improvements. The County will incorporate ADA into future Comprehensive Planning efforts. The County will make a reasonable effort to incorporate public comments into the final version of the report and will incorporate the Plan into parallel outreach efforts. A printed hard copy of the draft document is also available for review at Steele County Highway Department, 3000 Hoffman Dr NW, Owatonna, MN 55060.

Further information on the Public Outreach initiatives and a summary of the comments received can be found within Appendix E.

Grievance Procedure

Under the ADA, each agency is required to publish its responsibilities regarding the ADA. A draft of this public notice will be provided in Appendix F. If users of County facilities and services believe the County has not provided reasonable accommodation, they have the right to file a grievance.

To monitor the progress of compliance, the County, in accordance with 28 CFR 35.107(b), has established a grievance procedure for the prompt and equitable resolution of comments, concerns, or questions from the citizens of the County. The ADA grievance form is available online and at the Highway Department and can be returned to the ADA Coordinator. It may be used by anyone wishing to file a complaint, comment, or concern regarding discrimination based on disability. A sample of the Grievance Form can be found in Appendix F.

Appendices

A. Contact Information

B. Self-Evaluation Results

B-1: Right-of-Way Self-Evaluation Inventory

C. Agency ADA Design Standards and Procedures

C-1: Right-of-Way Field Review Inventory Manual

C-2: PROWAG

C-3: Maintenance and Alteration Projects Policy

D. Schedule / Budget Information

D-1: Cost Estimate for Right-of-Way

E. Public Outreach

E-1: Public Outreach Media Release

F. Grievance Procedure

G. Glossary of Terms

H. Supplementary County Resources

H-1: Signal Evaluation Reports – Summary

Appendix A – Contact Information

Steele County

ADA Coordinator, Assistant County Engineer

Name: Paul Sponholz

Address: 3000 Hoffman Dr NW, Owatonna, MN 55060

Phone: 507-444-7670

E-Mail: paul.sponholz@co.steele.mn.us

City of Owatonna

ADA Title II Coordinator

Name: Kris Busse

Address: 540 West Hills Circle, Owatonna, MN 55060

Phone: 507-774-7340

E-mail: Kris.busse@ci.owatonna.mn.us

Minnesota Department of Transportation

ADA Contact

Name: Kristie Billiar

Phone: 651-366-3174

E-Mail: Kristie.billiar@state.mn.us

Appendix B – Self-Evaluation Results

At the time of the ROW inventories, the County was following general ADA design guidance and procedures. This included a commitment to providing access to all users but does not have a formal policy or procedure to assign priority regarding ADA accessibility issues within the County. Implementing a method to assign priority will be a part of this Plan effort.

Public Right-of-Way

Data Collection for the PAR/PCR (County) self-evaluation was completed in July 2020. The self-evaluation was performed by the County’s consultants. The detailed inventory is found in B-1.

This initial self-evaluation of PAR/PCR yielded the following results:

Figure 5. Self-Evaluation Results for Public Right-of-Way

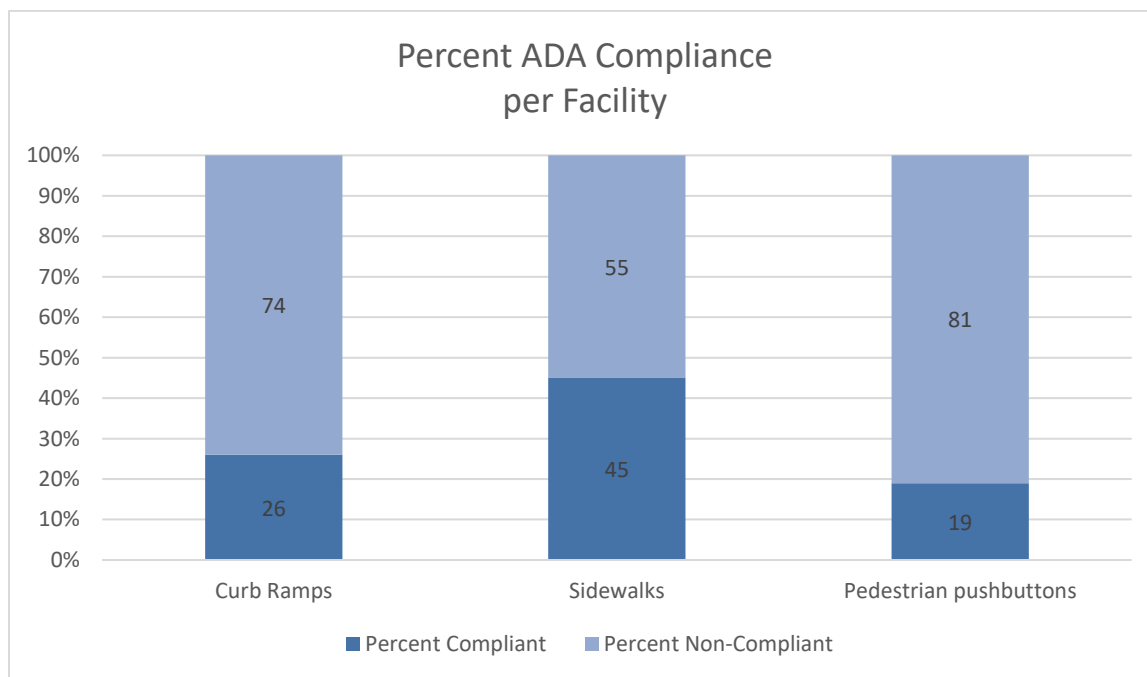


Chart Description: Twenty-six percent of curb ramps were ADA compliant. Forty-five percent of sidewalks were ADA compliant. Nineteen percent of pedestrian pushbuttons were ADA compliant.

B-1: Right-of-Way Self-Evaluation Inventory

OBJECTID	City	If walk/trail crosses curb, is there a curb ramp?	Is the Curb Ramp at a Driveway	Running slope <= 8.3%?	What is the running slope of the curb ramp?	Cross slope, excluding flares, <= 2%?	What is the cross slope of the curb ramp?	Curb ramp, excluding flares, at least 48in wide?	Landing >= 48in sq with cross slope <2% any dir?	What is the max landing slope?	Curb ramp flares slopes <= 10%?	Detectable warnings full width of the curb ramp?	Approx 75% of truncated domes in good condition?	Truncated domes contrast w/ adjacent surfaces?	Curb Ramp overall condition?	CR Characteristics	Notes	Compliant 1=Compliant
55	Blooming Prairie	Yes	Yes	Yes	2.3	No	2.7	Yes	Yes	2.0	N/A	N/A			Fair	Extensive cracking	No flares needed	0
56	Blooming Prairie	Yes	Yes	Yes	0.4	No	2.7	Yes	Yes	2.0	N/A	N/A			Fair	No flares needed		0
57	Blooming Prairie	No	No	Yes	0.0	1	0.4	Yes	Yes	0.4		No			Good	No flares		0
58	Blooming Prairie	Yes	No	No	10.3	1	1.1	No	Yes	1.9	No	No			Fair	Ponding		0
59	Blooming Prairie	Yes	No	No	12.7	1	0.6	Yes	Yes	1.7	No	No			Fair		Gap in elevation	0
60	Blooming Prairie	Yes	No	No	10.2	1	1.7	Yes	Yes	1.7	No	No			Good			0
61	Blooming Prairie	Yes	No	Yes	3.0	1	0.4	Yes	No	3.0		No			Fair	No flares	Some cracking	0
62	Blooming Prairie	Yes	No	Yes	4.8	No	2.5	Yes	Yes	2.0	No	No			Fair	Ponding	Some cracking	0
63	Blooming Prairie	Yes	No	Yes	8.3	1	1.9	Yes	Yes	2.0	No	No	Yes	Yes	Good		Small gap	0
64	Blooming Prairie	Yes	No	Yes	3.9	1	1.4	Yes	Yes	2.0	No	Yes	Yes	Yes	Good			0
65	Blooming Prairie	No	No	Yes	1.9	1	0.1	Yes	Yes	1.9		No			Good	No flares		0
66	Blooming Prairie	Yes	No	Yes	1.9	1	0.8	Yes	Yes	1.9	No	Yes	Yes	Yes	Good			0
67	Blooming Prairie	Yes	No	Yes	5.5	1	0.8	Yes	Yes	1.5	No	Yes	Yes	Yes	Good			0
68	Blooming Prairie	Yes	No	Yes	5.5	No	2.1	Yes	Yes	1.0	No	Yes	Yes	Yes	Fair	Ponding		0
69	Blooming Prairie	Yes	No	Yes	4.2	1	0.4	Yes	Yes	1.0	No	Yes	Yes	Yes	Good			0
70	Blooming Prairie	Yes	No	No	15.3	1	1.1	No	Yes	1.2		No			Poor	Ponding	Elevation gap	0
71	Blooming Prairie	No	No	Yes	0.4	1	1.1	No	Yes	1.1		No			Fair	Ponding		0
72	Blooming Prairie	No	No	Yes	4.7	1	1.2	No	Yes	1.5		No			Fair	No flares	Ponding	0
73	Blooming Prairie	Yes	No	No	18.2	1	0.9	No	Yes	1.4	No	No			Fair	Ponding	Elevation gap	0
74	Blooming Prairie	Yes	No	No	17.5	1	0.4	No	Yes	1.8	No	No			Fair	Some cracking	Elevation gap	0
75	Blooming Prairie	No	No	Yes	6.5	1	2.0	Yes	Yes	1.8		No			Fair	No flares		0
76	Blooming Prairie	No	No	Yes	0.8	1	2.0	Yes	Yes	2.0		No			Poor	Ponding		0
77	Blooming Prairie	Yes	No	No	12.0	1	0.7	Yes	Yes	1.8	No	No			Fair	Ponding	Elevation Gap	0
78	Blooming Prairie	Yes	No	No	12.8	No	2.8	No	Yes	2.0	No	No			Good	Some cracking		0
79	Blooming Prairie	No	No	Yes	3.5	1	1.5	Yes	Yes	2.0		No			Fair	No flares	Ponding and vegetation	0
80	Blooming Prairie	Yes	Yes	Yes	3.0	No	3.8	No	No	3.0		N/A			Good			0
81	Blooming Prairie	Yes	Yes	Yes	1.8	No	3.0	No	No	3.0		N/A			Fair	Some vegetation	Driveway	0
82	Blooming Prairie	Yes	Yes	Yes	2.9	No	5.8	No	No	3.6		N/A			Poor	Some ponding and vegetation		0
83	Blooming Prairie	Yes	Yes	Yes	1.2	No	3.9	Yes	No	3.9		N/A			Poor	Ponding	Sidewalk just disappears????	0
84	Blooming Prairie	Yes	No	No	12.5	1	1.5	Yes	Yes	1.9	No	No			Good			0
85	Blooming Prairie	Yes	No	No	11.6	1	0.0	Yes	Yes	1.9	No	No			Poor	Ponding		0
86	Blooming Prairie	Yes	No	No	11.0	No	3.1	Yes	No	2.2	No	No			Fair		Elevation Gap	0
87	Blooming Prairie	Yes	No	No	11.1	No	5.3	Yes	No	4.2	No	No			Fair	Some ponding and vegetation		0
88	Blooming Prairie	Yes	Yes	Yes	1.1	1	1.6	Yes	Yes	1.1		N/A			Good	No flares needed		1
89	Blooming Prairie	Yes	Yes	Yes	3.6	No	7.7	Yes	No	4.2		N/A			Fair	Ponding	Elevation gap	0
90	Blooming Prairie	Yes	Yes	Yes	3.4	0	11.2	Yes	No	8.7		N/A			Good	No flares needed		0
91	Blooming Prairie	Yes	Yes	Yes	6.8	No	6.1	Yes	No	3.4		N/A			Good	No flares needed		0
92	Blooming Prairie	Yes	Yes	Yes	5.2	No	6.3	Yes	No	3.3		N/A			Good	No flares needed		0
93	Blooming Prairie	Yes	Yes	Yes	4.5	No	5.7	Yes	No	5.9		N/A			Good	No flares needed		0
94	Blooming Prairie	Yes	No	Yes	0.3	No	2.9	Yes	Yes	1.7	Yes	Yes	Yes	Yes	Good			0
95	Blooming Prairie	Yes	No	Yes	0.0	1	1.0	Yes	Yes	1.0	Yes	Yes	Yes	Yes	Fair	Ponding		1
96	Blooming Prairie	Yes	No	Yes	1.6	1	0.1	Yes	Yes	1.6	Yes	Yes	Yes	Yes	Good	Ponding		1
97	Blooming Prairie	Yes	No	Yes	1.7	1	0.6	Yes	Yes	1.7	Yes	Yes	Yes	Yes	Fair	Ponding		1
98	Blooming Prairie	No	No	Yes	2.2	No	2.1	No	No	2.2		No			Good			0
99	Blooming Prairie	Yes	No	Yes	6.4	1	0.9	Yes	Yes	1.3	No	No			Good	Some vegetation		0
100	Blooming Prairie	Yes	No	Yes	6.0	1	0.0	Yes	Yes	1.0	No	No			Fair	Ponding	Elevation gap	0
101	Blooming Prairie	Yes	No	Yes	5.7	1	1.4	Yes	Yes	0.4	No	No			Fair	Ponding		0
102	Blooming Prairie	Yes	No	Yes	6.4	1	1.8	Yes	Yes	1.2	Yes	No			Fair	Ponding	Elevation Gap	0
103	Blooming Prairie	No	No	Yes	3.4	1	0.5	Yes	Yes	2.0		No			Good	No flares		0
104	Blooming Prairie	Yes	No	Yes	3.8	1	0.5	Yes	Yes	0.9	Yes	Yes	Yes	Yes	Good	Ponding		1
105	Blooming Prairie	Yes	No	Yes	3.1	1	0.4	Yes	Yes	0.9	Yes	Yes	Yes	Yes	Fair	Ponding		1
106	Blooming Prairie	Yes	No	Yes	1.1	1	0.0	Yes	Yes	1.1	Yes	Yes	Yes	Yes	Good	Ponding		1
107	Blooming Prairie	Yes	No	Yes	2.7	1	0.0	Yes	Yes	0.8	Yes	Yes	Yes	Yes	Fair	Some ponding and vegetation		1
108	Blooming Prairie	Yes	No	Yes	3.3	1	1.1	Yes	Yes	0.4	Yes	Yes	Yes	Yes	Good	Ponding		1
109	Blooming Prairie	Yes	No	Yes	1.3	1	0.6	Yes	Yes	1.3	Yes	Yes	Yes	Yes	Fair	Ponding		1
110	Blooming Prairie	Yes	No	Yes	4.1	1	0.4	Yes	Yes	0.3	Yes	Yes	Yes	Yes	Good			1
111	Blooming Prairie	Yes	No	Yes	2.3	1	0.3	Yes	Yes	0.3	Yes	Yes	Yes	Yes	Good	Ponding		1
112	Blooming Prairie	Yes	No	Yes	3.0	1	0.3	Yes	Yes	0.7	Yes	Yes	Yes	Yes	Good	Ponding		1
113	Blooming Prairie	Yes	No	Yes	1.3	1	1.2	Yes	Yes	1.2	Yes	Yes	Yes	Yes	Good			1
114	Blooming Prairie	Yes	No	Yes	5.5	1	0.1	Yes	Yes	1.2	Yes	No			Fair	Ponding		0
115	Blooming Prairie	Yes	No	Yes	1.9	1	0.2	Yes	Yes	1.9	Yes	Yes	Yes	Yes	Good	Ponding		1
116	Blooming Prairie	Yes	No	Yes	3.1	1	0.0	Yes	Yes	0.6	Yes	Yes	Yes	Yes	Good	Ponding		1
117	Blooming Prairie	Yes	No	Yes	3.4	1	0.6	Yes	Yes	1.1	Yes	Yes	Yes	Yes	Good	Some ponding and vegetation		1
118	Blooming Prairie	Yes	No	Yes	0.6	1	1.1	Yes	Yes	1.1	Yes	Yes	Yes	Yes	Good			1
119	Blooming Prairie	Yes	No	Yes	5.0	1	1.0	Yes	Yes	1.0	Yes	Yes	Yes	Yes	Good			1
120	Blooming Prairie	Yes	No	Yes	1.8	1	0.3	Yes	Yes	1.8	Yes	Yes	Yes	Yes	Good	Ponding		1
121	Blooming Prairie	Yes	No	Yes	0.8	1	1.0	Yes	Yes	1.0	Yes	Yes	Yes	Yes	Good			1
122	Blooming Prairie	Yes	No	Yes	0.6	1	0.1	Yes	Yes	0.6	Yes	Yes	Yes	Yes	Good	Some ponding and vegetation		1
123	Blooming Prairie	No	Yes	Yes	3.5	1	1.6	Yes	Yes	0.9	Yes	Yes	Yes	Yes	Good	Ponding		0
124	Blooming Prairie	Yes	No	Yes	4.8	1	1.1	Yes	Yes	0.9	No	Yes	Yes	Yes	Fair	Ponding		0
125	Blooming Prairie	Yes	No	Yes	2.3	1	0.3	Yes	Yes	0.7	Yes	Yes	Yes	Yes	Fair	Some ponding and vegetation		1
126	Blooming Prairie	Yes	No	Yes	4.1	1	0.8	Yes	Yes	0.7	Yes	Yes	Yes	Yes	Fair	Ponding		1
127	Blooming Prairie	Yes	No	Yes	0.1	1	0.1	Yes	Yes	0.8		Yes	Yes	Yes	Good			1
128	Blooming Prairie	Yes	No	Yes	0.1	1	0.7	Yes	Yes	0.7		Yes	Yes	Yes	Good			1
129	Blooming Prairie	Yes	No	Yes	0.8	1	1.0	Yes	Yes	1.0	Yes	Yes	Yes	Yes	Fair	Ponding		1
130	Blooming Prairie	Yes	No	Yes	2.6	No	2.3	Yes	Yes	0.8	Yes	Yes	Yes	Yes	Fair	Ponding		0
131	Blooming Prairie	Yes	No	Yes	3.2	1	0.9	Yes	Yes	0.8	Yes	Yes	Yes	Yes	Good	Ponding		1
132	Blooming Prairie	Yes	No	Yes	0.9	1	1.3	Yes	Yes	1.3	Yes	Yes	Yes	Yes	Good	Ponding		1
133	Blooming Prairie	Yes	No	Yes	2.6	1	0.1	Yes	Yes	1.2	Yes	Yes	Yes	Yes	Fair	Ponding		1
134	Blooming Prairie	Yes	No	Yes	3.5	1	0.1	Yes	Yes	0.7	Yes	Yes	Yes	Yes	Good	Ponding		1
135	Blooming Prairie	Yes	No	Yes	1.7	1	0.2	Yes	Yes	1.7	Yes	Yes	Yes	Yes	Good	Ponding		1

OBJECTID	City	If walk/trail crosses curb, is there a curb ramp?	Is the Curb Ramp at a Driveway	Running slope <= 8.3%?	What is the running slope of the curb ramp?	Cross slope, excluding flares, <= 2%?	What is the cross slope of the curb ramp?	Curb ramp, excluding flares, at least 48in wide?	Landing >= 48in sq with cross slope <2% any dir?	What is the max landing slope?	Curb ramp flares slopes <= 10%?	Detectable warnings full width of the curb ramp?	Approx 75% of truncated domes in good condition?	Truncated domes contrast w/ adjacent surfaces?	Curb Ramp overall condition?	CR_Characteristics	Notes	Compliant 1=Compliant
136	Bloomington	Yes	No	Yes	5.5	1	1.3	Yes	Yes	1.6	Yes	Yes	Yes	Yes	Good	Ponding		1
137	Bloomington	Yes	No	Yes	1.7	1	0.3	Yes	Yes	1.7	Yes	Yes	Yes	Yes	Good			1
138	Bloomington	Yes	No	Yes	1.9	1	0.3	Yes	Yes	1.9	Yes	Yes	Yes	Yes	Good			1
139	Bloomington	Yes	No	Yes	3.4	1	0.7	Yes	Yes	0.9	Yes	Yes	Yes	Yes	Fair	Ponding		1
140	Bloomington	Yes	No	Yes	3.6	1	0.3	Yes	Yes	0.9	Yes	Yes	Yes	Yes	Good			1
141	Bloomington	No	No	Yes	3.2	1	1.0	Yes	Yes	1.2		No			Good	Some vegetation		0
142	Bloomington	Yes	No	Yes	4.0	1	0.5	Yes	Yes	1.0	Yes	Yes	Yes	Yes	Good	Some ponding and vegetation		1
143	Bloomington	Yes	No	Yes	3.3	1	0.6	Yes	Yes	1.1	Yes	Yes	Yes	Yes	Good			1
144	Bloomington	Yes	No	Yes	3.3	1	0.4	Yes	Yes	0.7	Yes	Yes	Yes	Yes	Good	Ponding		1
145	Bloomington	Yes	No	Yes	3.6	1	0.7	Yes	Yes	0.7	Yes	Yes	Yes	Yes	Good	Ponding		1
146	Bloomington	No	No	Yes	3.0	1	0.5	Yes	Yes	0.5		No			Good	No flares		0
147	Bloomington	No	No	Yes	0.7	0	0.2	Yes	Yes	0.7		No			Good			0
148	Bloomington	Yes	No	Yes	3.1	1	0.3	Yes	Yes	0.7	Yes	Yes	Yes	Yes	Good			1
149	Bloomington	Yes	No	Yes	1.0	1	0.4	Yes	Yes	1.0	Yes	Yes	Yes	Yes	Good			1
150	Bloomington	Yes	No	Yes	2.7	1	0.4	Yes	Yes	0.8	Yes	Yes	Yes	Yes	Good			1
276	Bloomington	Yes	No	Yes	4.5	1	0.9	No	Yes	0.8	No	No			Fair	Some cracking		0
277	Bloomington	Yes	Yes	Yes	0.9	1	0.1	Yes	Yes	0.9	Yes	N/A			Poor	Extensive cracking	Only flare on one side	0
278	Bloomington	Yes	Yes	Yes	0.5	1	1.1	Yes	Yes	1.1	Yes	N/A			Fair		Gap in elevation	1
279	Bloomington	Yes	No	Yes	3.4	1	0.2	Yes	Yes	0.9	Yes	No			Fair	Some ponding and vegetation		0
280	Bloomington	Yes	No	No	8.8	1	0.8	Yes	Yes	0.9	No	No			Fair	Some ponding and vegetation	Gap in elevation	0
281	Bloomington	Yes	No	Yes	4.7	1	1.3	Yes	Yes	0.2	No	No			Fair	Heavy vegetation		0
282	Bloomington	Yes	No	Yes	5.5	1	0.7	Yes	Yes	0.2	No	No			Good	Some vegetation		0
283	Bloomington	Yes	Yes	Yes	0.0	1	0.9	Yes	Yes	0.8	Yes	N/A			Fair	Some vegetation	Only one flare, small gap in elevation	1
284	Bloomington	Yes	Yes	Yes	0.5	1	0.5	Yes	Yes	0.6	Yes	N/A			Fair	Some ponding and vegetation		1
285	Bloomington	No	No	Yes	0.4	1	0.9	Yes	Yes	0.9		No			Fair	Heavy vegetation		0
286	Bloomington	Yes	No	No	10.1	1	0.5	Yes	Yes	0.1	No	No			Fair	Heavy vegetation		0
287	Bloomington	Yes	No	Yes	5.8	1	0.8	Yes	Yes	0.5	No	No			Good			0
288	Bloomington	No	No	Yes	0.1	1	0.0	Yes	Yes	0.1		No			Good	No flares		0
289	Bloomington	Yes	No	Yes	5.7	1	0.6	Yes	No	2.6	Yes	No	Yes	Yes	Good			0
290	Bloomington	Yes	No	Yes	4.0	1	0.5	Yes	Yes	0.6	Yes	No	Yes	Yes	Fair	Some vegetation		0
291	Bloomington	Yes	No	Yes	5.1	No	4.8	Yes	Yes	1.3	Yes	No			Fair	Some cracking and vegetation		0
292	Bloomington	Yes	No	Yes	3.8	1	1.1	Yes	Yes	1.7	No	No			Fair	Ponding		0
293	Bloomington	Yes	No	Yes	6.5	1	0.9	Yes	Yes	0.5		No			Poor	Ponding	Gap in elevation	0
294	Bloomington	Yes	No	Yes	0.5	1	1.2	Yes	Yes	1.2		No			Fair	Some cracking and vegetation	No flares	0
295	Bloomington	Yes	Yes	Yes	1.5	No	2.4	Yes	No	2.4		N/A			Fair	Ponding		0
296	Bloomington	Yes	Yes	Yes	0.0	1	1.6	Yes	Yes	1.6		N/A			Fair	No flares needed	Ponding	1
297	Bloomington	Yes	No	Yes	5.3	1	0.7	Yes	Yes	1.9	Yes	No			Poor	Heavy vegetation	Appears to only have 1 flare	0
298	Bloomington	Yes	No	Yes	1.5	No	3.8	No	Yes	1.9	No	No			Poor	Ponding		0
299	Bloomington	Yes	Yes	Yes	1.9	1	1.6	No	Yes	1.6		N/A			Fair	Some vegetation		0
300	Bloomington	Yes	Yes	Yes	4.6	1	1.1	Yes	Yes	1.0		N/A			Good			1
301	Bloomington	Yes	No	Yes	2.7	No	3.3	Yes	No	2.7	Yes	No	Yes	Yes	Good	Some vegetation		0
262	Ellendale	Yes	Yes	Yes	7.1	No	5.9	Yes	No	7.1		N/A			Good	No flares needed		0
263	Ellendale	Yes	Yes	Yes	2.2	1	2.0	Yes	No	2.2		N/A			Good	No flares needed		0
264	Hope	Yes	Yes	Yes	0.9	No	2.7	Yes	Yes	0.7		N/A			Good	No flares needed	Some vegetation	0
265	Hope	Yes	Yes	Yes	0.3	No	3.5	Yes	No	2.6		N/A			Good	No flares needed		0
266	Hope	Yes	Yes	Yes	2.4	No	2.1	Yes	Yes	1.6		N/A			Good	No flares needed	Some vegetation	0
267	Hope	Yes	Yes	Yes	2.8	1	1.7	Yes	Yes	0.8		N/A			Good	No flares needed	Some vegetation	1
268	Hope	Yes	No	Yes	3.4	1	0.2	Yes	Yes	1.0	Yes	No			Fair	Ponding		0
269	Hope	Yes	Yes	Yes	2.7	1	1.9	Yes	Yes	1.9		N/A			Good	No flares needed		1
270	Hope	Yes	Yes	Yes	1.6	1	1.5	Yes	Yes	1.6		N/A			Good	No flares needed	Some vegetation	1
271	Hope	Yes	Yes	Yes	1.8	1	1.9	Yes	Yes	1.9		N/A			Good	No flares needed	Some vegetation	1
272	Hope	Yes	Yes	Yes	1.9	No	2.2	Yes	Yes	1.7		N/A			Good	No flares needed	Some vegetation	0
273	Hope	Yes	Yes	Yes	4.2	1	1.8	Yes	N/A	N/A		N/A			Good	No flares needed		1
274	Hope	Yes	Yes	Yes	1.7	No	3.6	Yes	No	2.5		N/A			Good	No flares needed	Some ponding	0
275	Hope	Yes	No	Yes	1.8	1	0.2	Yes	Yes	1.8	Yes	No			Fair	Some ponding and vegetation		0
4	Medford	Yes	No	Yes	0.3	1	1.5	Yes	Yes	1.5	Yes	Yes	Yes	Yes	Good	Some vegetation		1
5	Medford	Yes	No	Yes	0.5	1	0.9	Yes	Yes	0.9	Yes	Yes	Yes	Yes	Good	Some ponding and vegetation		1
6	Medford	Yes	No	Yes	1.2	1	1.0	Yes	Yes	1.2	Yes	Yes	Yes	Yes	Good			1
7	Medford	Yes	No	Yes	0.9	1	1.9	Yes	Yes	1.9	Yes	Yes	Yes	Yes	Good	Some vegetation		1
8	Medford	Yes	Yes	Yes	3.7	1	1.1	Yes	Yes	1.3		N/A			Good			1
9	Medford	Yes	Yes	Yes	2.4	1	1.6	Yes	Yes	1.6		N/A			Good			1
10	Medford	Yes	No	Yes	0.9	1	1.3	Yes	Yes	1.3	Yes	Yes	Yes	Yes	Good			1
11	Medford	Yes	No	Yes	0.6	1	1.8	Yes	Yes	1.8	Yes	Yes	Yes	Yes	Good			1
12	Medford	Yes	Yes	Yes	0.1	1	0.9	Yes	Yes	0.9	Yes	Yes	Yes	Yes	Good	Ponding		1
13	Medford	Yes	No	Yes	0.7	1	1.3	Yes	Yes	1.3	Yes	Yes	Yes	Yes	Good			1
14	Medford	Yes	No	Yes	8.3	1	0.8	Yes	Yes	2.0	Yes	Yes	Yes	Yes	Fair	Some ponding and vegetation		1
15	Medford	Yes	No	Yes	1.5	1	1.4	Yes	Yes	1.5	Yes	Yes	Yes	Yes	Poor	Some ponding and vegetation		0
16	Medford	Yes	No	Yes	0.1	1	1.2	Yes	Yes	1.2	No	Yes	Yes	Yes	Good	Some vegetation		0
17	Medford	Yes	No	Yes	1.5	1	0.2	Yes	Yes	1.5	No	Yes	Yes	Yes	Good	Some ponding and vegetation		0
18	Medford	Yes	No	Yes	0.2	1	0.8	Yes	Yes	0.8	No	Yes	Yes	Yes	Fair	Heavy vegetation		0
19	Medford	Yes	No	Yes	6.6	1	0.4	Yes	Yes	1.2	No	Yes	Yes	Yes	Good	Some vegetation	Median	0
20	Medford	Yes	No	Yes	0.2	1	1.4	Yes	Yes	1.2	No	Yes	Yes	Yes	Fair	Ponding		0
21	Medford	Yes	No	Yes	5.5	1	0.1	Yes	Yes	1.5	No	Yes	Yes	Yes	Fair	Some ponding and vegetation		0
22	Medford	Yes	No	Yes	1.9	1	1.0	Yes	Yes	1.9	No	Yes	Yes	Yes	Poor	Some ponding and vegetation		0
23	Medford	Yes	No	Yes	2.7	1	1.6	Yes	No	2.7		No			Good			0
24	Medford	Yes	No	Yes	2.7	1	1.5	Yes	No	2.7	No	No			Good			0
25	Medford	Yes	No	Yes	1.9	1	0.7	Yes	Yes	1.9	No	Yes	Yes	Yes	Fair	Heavy vegetation		0
26	Medford	Yes	No	Yes	5.0	1	0.8	Yes	No	4.0	Yes	No			Fair	Some ponding and vegetation		0
27	Medford	Yes	No	Yes	1.0	1	1.5	Yes	Yes	1.5	No	Yes	Yes	Yes	Poor	Some ponding and vegetation		0
28	Medford	Yes	No	Yes	0.4	1	1.1	Yes	Yes	1.1	No	Yes	Yes	Yes	Good	Some ponding and vegetation		0
29	Medford	Yes	No	Yes	0.2	1	0.2	Yes	Yes	0.2	No	Yes	Yes	Yes	Fair	Ponding		0

OBJECTID	City	If walk/trail crosses curb, is there a curb ramp?	Is the Curb Ramp at a Driveway	Running slope <= 8.3%?	What is the running slope of the curb ramp?	Cross slope, excluding flares, <= 2%?	What is the cross slope of the curb ramp?	Curb ramp, excluding flares, at least 48in wide?	Landing >= 48in sq with cross slope <2% any dir?	What is the max landing slope?	Curb ramp flares slopes <= 10%?	Detectable warnings full width of the curb ramp?	Approx 75% of truncated domes in good condition?	Truncated domes contrast w/ adjacent surfaces?	Curb Ramp overall condition?	CR Characteristics	Notes	Compliant 1=Compliant
30	Medford	Yes	No	Yes	2.4	1	0.2	Yes	Yes	1.3	No	Yes	Yes	Yes	Poor	Ponding	complain about large gap in sidewalk and said the it caused d	0
31	Medford	Yes	No	Yes	1.0	No	2.6	Yes	Yes	2.0	Yes	Yes	Yes	Yes	Good	Ponding		0
32	Medford	Yes	Yes	Yes	4.0	No	2.8	Yes	Yes	1.7		N/A			Good	No flares needed		0
33	Medford	Yes	Yes	Yes	1.6	No	3.0	Yes	Yes	2.0		N/A			Good			0
34	Medford	Yes	No	Yes	5.8	No	8.0	Yes	Yes	2.0	No	No			Fair	Ponding		0
35	Medford	Yes	No	No	11.2	No	7.6	Yes	Yes	1.6	No	No			Poor	Some ponding and vegetation		0
36	Medford	Yes	No	Yes	0.5	1	0.4	Yes	Yes	0.5	No	No			Poor	No flares		0
37	Medford	Yes	No	No	9.8	1	1.0	Yes	Yes	2.0	Yes	Yes	Yes	Yes	Fair		Gap in curb	0
38	Medford	Yes	No	Yes	4.2	1	1.6	Yes	Yes	1.7	Yes	Yes	Yes	Yes	Fair	Ponding		1
39	Medford	Yes	No	Yes	5.7	1	0.5	Yes	Yes	1.8	No	No			Fair	Some ponding and vegetation		0
40	Medford	Yes	No	Yes	5.8	1	0.6	Yes	Yes	1.8	No	No			Poor	Some ponding and vegetation		0
41	Medford	Yes	No	No	9.9	No	2.2	No	Yes	1.6	No	No			Fair	Some vegetation		0
42	Medford	Yes	No	No	11.5	1	1.8	Yes	Yes	1.3	No	No			Fair	Some ponding and vegetation		0
43	Medford	Yes	No	Yes	19.2	1	0.1	Yes	Yes	0.7	No	No			Poor	Some ponding and vegetation		0
44	Medford	Yes	No	No	13.6	1	1.4	Yes	Yes	0.7	No	No			Fair	Some vegetation		0
45	Medford	Yes	No	No	16.1	1	1.2	No	N/A	N/A	No	No			Poor	Dirt	Grass	0
46	Medford	Yes	No	No	9.2	No	3.1	No	Yes	1.4	No	No			Good	Some vegetation		0
47	Medford	Yes	No	No	10.8	No	5.1	Yes	Yes	1.9	No	No			Poor	Extensive cracking		0
48	Medford	Yes	No	No	12.5	No	3.3	No	No	2.7	No	No			Fair	Some ponding and vegetation	Curb ramp facing the wrong way	0
49	Medford	No	No	No	14.3	1	0.7	No	0	14.3		No			Poor	No flares		0
50	Medford	Yes	No	Yes	6.4	No	2.6	Yes	Yes	2.0	Yes	No			Fair	Heavy vegetation	Ponding	0
51	Medford	Yes	No	No	9.4	No	3.1	Yes	No	7.0	Yes	No			Fair	Some ponding and vegetation		0
52	Medford	Yes	No	Yes	2.4	1	0.2	Yes	Yes	1.2	Yes	No			Fair	Some vegetation		0
53	Medford	Yes	No	No	10.5	1	0.0	Yes	No	5.3	Yes	No			Poor	Ponding	Bad ponding	0
54	Medford	Yes	No	Yes	4.5	1	0.7	Yes	No	4.5		No			Good	No flares		0
151	Owatonna	Yes	No	Yes	0.8	1	0.6	Yes	Yes	0.8	Yes	Yes	Yes	Yes	Good		Bit of a gap in the curb ramp	1
152	Owatonna	Yes	No	Yes	2.5	No	3.8	Yes	Yes	1.1	Yes	Yes	Yes	Yes	Good			0
153	Owatonna	Yes	No	Yes	0.2	1	0.1	Yes	Yes	0.2	Yes	Yes	Yes	Yes	Poor	Ponding	Literally a sand pit	0
154	Owatonna	Yes	No	Yes	1.1	1	0.2	Yes	Yes	1.1	Yes	Yes	Yes	Yes	Good	Ponding		1
155	Owatonna	Yes	No	Yes	0.4	1	0.3	Yes	Yes	0.4	Yes	Yes	Yes	Yes	Fair	Ponding		1
156	Owatonna	Yes	No	Yes	1.5	1	1.0	Yes	Yes	1.5	Yes	Yes	Yes	Yes	Good	Ponding		1
157	Owatonna	Yes	No	Yes	3.2	1	0.4	Yes	Yes	0.9	Yes	Yes	Yes	Yes	Good			1
158	Owatonna	Yes	No	Yes	0.3	1	0.5	Yes	Yes	0.5	Yes	Yes	Yes	Yes	Good	Ponding		1
159	Owatonna	Yes	No	Yes	7.5	No	2.7	Yes	No	3.3	Yes	No			Fair	Some vegetation	Gap in elevation	0
160	Owatonna	Yes	No	Yes	5.1	1	1.3	Yes	Yes	1.0	Yes	No			Good	Some vegetation		0
161	Owatonna	Yes	No	Yes	3.3	1	0.4	Yes	Yes	0.4	Yes	No			Good			0
162	Owatonna	Yes	No	Yes	5.3	1	0.9	Yes	Yes	1.5	Yes	No			Fair	Ponding		0
163	Owatonna	Yes	No	Yes	3.9	No	2.9	Yes	Yes	0.7	Yes	No			Good	Ponding		0
164	Owatonna	Yes	No	Yes	4.5	1	0.5	Yes	Yes	0.9	Yes	Yes			Fair			1
165	Owatonna	Yes	Yes	Yes	1.5	1	1.1	Yes	Yes	1.5	Yes	N/A			Good	No flares needed	Only one flare	1
166	Owatonna	Yes	Yes	Yes	3.4	No	4.2	Yes	Yes	1.3	Yes	N/A			Good		Only one flare	0
167	Owatonna	Yes	Yes	Yes	0.8	No	3.1	Yes	Yes	1.7	Yes	N/A			Fair	Extensive cracking		0
168	Owatonna	Yes	Yes	Yes	4.5	No	3.8	Yes	Yes	1.2	Yes	N/A			Good			0
169	Owatonna	Yes	Yes	Yes	1.3	No	2.5	Yes	Yes	1.4	Yes	N/A			Good			0
170	Owatonna	Yes	Yes	Yes	2.0	No	2.5	Yes	Yes	2.0	Yes	N/A			Fair	Some cracking	Hole in sidewalk	0
171	Owatonna	Yes	Yes	Yes	2.7	No	5.0	Yes	No	2.6	Yes	N/A			Good			0
172	Owatonna	Yes	Yes	Yes	1.8	No	4.0	Yes	Yes	1.8	Yes	N/A			Good			0
173	Owatonna	Yes	Yes	Yes	1.3	No	5.3	Yes	No	2.4		N/A			Good	No flares needed		0
174	Owatonna	Yes	Yes	Yes	1.2	No	5.1	Yes	No	2.2		N/A			Good	No flares needed		0
175	Owatonna	Yes	Yes	Yes	0.5	No	5.1	Yes	Yes	1.9		N/A			Good	No flares needed		0
176	Owatonna	Yes	Yes	Yes	2.2	No	4.7	Yes	Yes	2.0		N/A			Good	No flares needed		0
177	Owatonna	Yes	No	Yes	3.9	1	0.5	Yes	Yes	2.0	Yes	No			Fair	Some ponding and vegetation		0
178	Owatonna	Yes	No	Yes	5.0	No	2.3	Yes	Yes	1.6	Yes	No			Fair	Some ponding and vegetation		0
179	Owatonna	Yes	No	Yes	4.4	1	0.4	Yes	Yes	1.7	Yes	No			Good			0
180	Owatonna	Yes	Yes	Yes	0.5	No	3.8	Yes	Yes	1.2		N/A			Good	No flares needed		0
181	Owatonna	Yes	Yes	Yes	2.1	No	5.2	Yes	Yes	1.7		N/A			Poor	No flares needed and ponding		0
182	Owatonna	Yes	Yes	Yes	3.6	No	4.8	Yes	Yes	0.8		N/A			Good	No flares needed		0
183	Owatonna	Yes	Yes	Yes	1.8	No	4.7	Yes	Yes	0.8		N/A			Good	No flares needed		0
184	Owatonna	Yes	Yes	Yes	2.6	No	5.6	Yes	Yes	1.9		N/A			Good	No flares needed		0
185	Owatonna	Yes	Yes	Yes	1.8	No	4.6	Yes	Yes	1.6		N/A			Good	No flares needed and ponding		0
186	Owatonna	Yes	Yes	Yes	2.6	No	4.2	Yes	Yes	1.7		N/A			Good	No flares needed		0
187	Owatonna	Yes	Yes	Yes	2.2	No	4.5	Yes	No	2.6		N/A			Good	No flares needed		0
188	Owatonna	Yes	Yes	Yes	1.7	No	3.0	Yes	Yes	1.3		N/A			Good	No flares needed		0
189	Owatonna	Yes	Yes	Yes	2.0	No	5.0	Yes	Yes	0.8		N/A			Good	No flares needed		0
190	Owatonna	Yes	No	Yes	8.2	1	0.5	Yes	Yes	1.6	Yes	No			Good			0
191	Owatonna	Yes	No	Yes	7.8	1	0.6	Yes	Yes	0.5	Yes	No			Fair	Ponding		0
192	Owatonna	Yes	No	Yes	4.8	1	0.3	Yes	Yes	1.7	Yes	No			Good	Some vegetation		0
193	Owatonna	Yes	No	Yes	6.3	1	1.0	Yes	No	2.2	Yes	No			Good	Some vegetation		0
194	Owatonna	Yes	Yes	Yes	2.9	No	4.8	Yes	Yes	1.7		N/A			Good	No flares needed and ponding		0
195	Owatonna	Yes	Yes	Yes	4.1	No	5.4	Yes	No	2.2		N/A			Good	No flares needed		0
196	Owatonna	Yes	Yes	Yes	2.9	No	5.3	Yes	No	3.6		N/A			Good	No flares needed		0
197	Owatonna	Yes	Yes	Yes	2.9	No	4.3	Yes	No	2.9		N/A			Good	No flares needed		0
198	Owatonna	Yes	Yes	Yes	2.5	No	5.2	Yes	No	2.7		N/A			Fair	No flares needed		0
199	Owatonna	Yes	Yes	Yes	1.7	No	6.3	Yes	No	3.2		N/A			Good	No flares needed		0
200	Owatonna	Yes	Yes	Yes	3.5	No	6.1	Yes	No	2.4		N/A			Good	No flares needed		0
201	Owatonna	Yes	Yes	Yes	1.6	No	5.8	Yes	No	3.3		N/A			Good	No flares needed		0
202	Owatonna	Yes	Yes	Yes	3.0	No	4.4	Yes	Yes	1.8		N/A			Good	No flares needed		0
203	Owatonna	Yes	Yes	Yes	2.1	No	5.4	Yes	Yes	1.4		N/A			Good	No flares needed		0
204	Owatonna	Yes	Yes	Yes	2.8	No	5.3	Yes	Yes	1.4		N/A			Good	No flares needed		0
205	Owatonna	Yes	Yes	Yes	0.5	No	5.6	No	No	3.9		N/A			Fair	No flares needed and ponding		0
206	Owatonna	Yes	Yes	Yes	1.2	No	5.3	Yes	No	3.9		N/A			Good	No flares needed		0

OBJECTID	City	If walk/trail crosses curb, is there a curb ramp?	Is the Curb Ramp at a Driveway	Running slope <= 8.3%?	What is the running slope of the curb ramp?	Cross slope, excluding flares, <= 2%?	What is the cross slope of the curb ramp?	Curb ramp, excluding flares, at least 48in wide?	Landing >= 48in sq with cross slope <2% any dir?	What is the max landing slope?	Curb ramp flares slopes <= 10%?	Detectable warnings full width of the curb ramp?	Approx 75% of truncated domes in good condition?	Truncated domes contrast w/ adjacent surfaces?	Curb Ramp overall condition?	CR Characteristics	Notes	Compliant 1=Compliant
207	Owatonna	Yes	Yes	Yes	1.3	No	5.0	Yes	No	2.6		N/A			Fair	No flares needed and ponding		0
208	Owatonna	Yes	Yes	Yes	2.5	No	2.9	Yes	Yes	1.3		N/A			Good	No flares needed		0
209	Owatonna	Yes	Yes	Yes	1.7	No	3.0	Yes	Yes	1.6		N/A			Good	No flares needed and ponding		0
210	Owatonna	Yes	Yes	Yes	4.0	No	4.3	Yes	Yes	2.0		N/A			Fair	No flares needed	Cracking	0
211	Owatonna	Yes	Yes	Yes	3.1	No	4.6	Yes	Yes	2.0		Yes			Fair	No flares needed	Cracking	0
212	Owatonna	Yes	Yes	Yes	2.9	No	5.4	Yes	Yes	1.9		N/A			Good	No flares needed		0
213	Owatonna	Yes	Yes	Yes	2.4	No	3.6	Yes	No	2.5		N/A			Good	No flares needed		0
214	Owatonna	Yes	Yes	Yes	3.0	No	3.8	Yes	Yes	1.8		N/A			Good	No flares needed		0
215	Owatonna	Yes	Yes	Yes	1.3	No	3.4	Yes	No	2.6		N/A			Good	No flares needed		0
216	Owatonna	Yes	Yes	Yes	2.8	No	3.9	Yes	Yes	1.8		N/A			Good	No flares needed		0
217	Owatonna	Yes	Yes	Yes	2.3	No	4.4	Yes	No	2.3		N/A			Good	No flares needed		0
218	Owatonna	Yes	Yes	Yes	2.2	No	5.2	Yes	Yes	1.9		N/A			Good	No flares needed		0
219	Owatonna	Yes	Yes	Yes	1.4	No	5.2	Yes	No	2.9		N/A			Good	No flares needed		0
220	Owatonna	Yes	Yes	Yes	3.8	No	4.8	Yes	Yes	1.7		N/A			Good	No flares needed		0
221	Owatonna	Yes	Yes	Yes	1.0	No	3.0	Yes	No	3.4	Yes	N/A			Good		Only one flare	0
222	Owatonna	Yes	Yes	Yes	3.6	No	3.1	Yes	Yes	1.0		N/A			Good	Some cracking	Only one flare	0
223	Owatonna	Yes	Yes	Yes	1.7	No	2.4	Yes	Yes	1.0		N/A			Good		Only one flare	0
224	Owatonna	Yes	Yes	Yes	4.0	No	2.3	Yes	Yes	0.4	No	N/A			Good	Some cracking	Only one flare	0
225	Owatonna	Yes	Yes	Yes	3.0	No	2.7	Yes	Yes	0.3	No	N/A			Good		Only one flare	0
328	Owatonna	Yes	No	Yes	3.9	1	0.0	Yes	Yes	1.8	Yes	No			Good			0
329	Owatonna	Yes	Yes	Yes	6.8	No	2.6	Yes	Yes	0.9	Yes	N/A			Fair	Some vegetation		0
331	Owatonna	Yes	Yes	Yes	2.9	No	2.6	Yes	Yes	1.4		N/A			Good	No flares needed		0
332	Owatonna	Yes	Yes	Yes	4.6	1	2.0	Yes	Yes	1.8		N/A			Good	No flares needed		1
333	Owatonna	Yes	Yes	Yes	1.4	No	3.9	Yes	Yes	1.8		N/A			Good	No flares needed		0
334	Owatonna	Yes	Yes	Yes	1.7	No	4.0	No	No	3.0		N/A			Good	No flares needed		0
335	Owatonna	Yes	No	Yes	1.5	No	2.5	Yes	No	2.5		No			Fair	No flares	Crack	0
382	Owatonna	Yes	No	Yes	4.9	No	3.4	Yes	Yes	0.9	Yes	No			Good	Some cracking and vegetation		0
383	Owatonna	Yes	No	Yes	4.8	No	3.2	Yes	Yes	1.0	Yes	No			Good	Some cracking and vegetation		0
391	Owatonna	Yes	No	Yes	3.5	1	1.1	Yes	Yes	1.6	Yes	No			Fair	Some cracking	Manhole	0
392	Owatonna	Yes	No	Yes	4.0	1	1.3	Yes	Yes	1.6	Yes	No			Fair	Ponding		0
393	Owatonna	Yes	No	Yes	7.2	1	0.8	Yes	Yes	1.2	Yes	Yes	No	Yes	Good	Ponding		0
394	Owatonna	Yes	No	Yes	4.6	1	1.1	Yes	Yes	1.2	Yes	Yes	Yes	Yes	Fair	Ponding		1
395	Owatonna	Yes	No	Yes	4.0	1	0.9	Yes	Yes	1.5	Yes	Yes	Yes	Yes	Good	Ponding		1
396	Owatonna	Yes	No	Yes	6.9	1	1.4	Yes	Yes	1.5	Yes	Yes	Yes	Yes	Fair	Some ponding and vegetation		1
397	Owatonna	Yes	No	Yes	7.9	1	0.7	Yes	Yes	0.7	Yes	Yes	Yes	Yes	Fair		Gap in elevation	1
398	Owatonna	Yes	No	Yes	6.4	1	1.6	Yes	Yes	0.7	Yes	Yes	Yes	Yes	Good			1
399	Owatonna	Yes	No	Yes	3.3	1	0.4	Yes	Yes	1.4	Yes	No			Good			0
400	Owatonna	Yes	No	Yes	4.3	1	0.6	Yes	Yes	0.5	Yes	Yes	Yes	Yes	Good			1
401	Owatonna	Yes	No	Yes	3.0	1	0.7	Yes	Yes	0.6	Yes	Yes	Yes	Yes	Good			1
402	Owatonna	Yes	No	Yes	3.7	1	0.8	Yes	Yes	0.4	Yes	Yes	Yes	Yes	Good			1
403	Owatonna	Yes	No	Yes	6.5	1	0.9	Yes	Yes	1.4	Yes	Yes	Yes	Yes	Good			1
404	Owatonna	Yes	No	Yes	8.2	1	0.9	Yes	Yes	1.4	Yes	Yes	Yes	Yes	Fair		Gap in elevation	1
420	Owatonna	Yes	Yes	Yes	1.0	No	5.0	Yes	No	4.2		N/A			Good	No flares needed		0
421	Owatonna	Yes	Yes	Yes	0.6	No	5.5	Yes	No	3.5		N/A			Good	No flares needed		0
422	Owatonna	Yes	Yes	Yes	1.1	No	2.4	Yes	No	2.4		N/A			Good	No flares needed		0
423	Owatonna	Yes	No	Yes	2.3	1	1.4	Yes	No	2.3	Yes	Yes	Yes	Yes	Fair	Ponding		0
424	Owatonna	Yes	No	Yes	5.3	No	3.8	Yes	No	3.5	Yes	Yes	Yes	Yes	Good			0
425	Owatonna	Yes	No	Yes	4.2	1	0.5	Yes	Yes	0.8	Yes	Yes	Yes	Yes	Good			1
426	Owatonna	Yes	No	Yes	4.3	1	1.3	Yes	Yes	1.1	Yes	Yes	Yes	Yes	Good			1
427	Owatonna	Yes	No	Yes	2.0	No	5.6	Yes	Yes	1.9	Yes	Yes	Yes	Yes	Good			0
428	Owatonna	Yes	No	Yes	1.7	No	5.2	Yes	Yes	1.9	Yes	Yes	Yes	Yes	Good		Some cracking in warnings	0
429	Owatonna	Yes	No	Yes	5.7	No	3.4	Yes	No	2.4	Yes	Yes	Yes	Yes	Good			0
430	Owatonna	Yes	No	Yes	3.8	No	3.2	Yes	No	3.4	No	No			Fair		One flare, weird curb ramp	0
431	Owatonna	Yes	No	Yes	0.1	No	3.1	Yes	Yes	1.6	Yes	Yes	Yes	Yes	Good	Ponding		0
432	Owatonna	Yes	No	Yes	2.0	No	2.7	Yes	Yes	0.8	Yes	Yes	Yes	Yes	Good			0
433	Owatonna	Yes	Yes	Yes	2.6	No	3.3	Yes	Yes	1.9		N/A			Fair	No flares needed	Gap in elevation	0
434	Owatonna	Yes	Yes	Yes	1.6	No	3.6	Yes	Yes	1.7		N/A			Good	No flares needed		0
435	Owatonna	Yes	No	Yes	3.5	1	0.4	Yes	Yes	0.9	Yes	Yes	Yes	Yes	Fair	Ponding		1
437	Owatonna	Yes	No	Yes	5.8	1	0.5	Yes	Yes	0.5	Yes	Yes	Yes	Yes	Fair	Ponding		1
438	Owatonna	Yes	No	Yes	3.5	1	1.8	Yes	Yes	0.7	Yes	Yes	Yes	Yes	Fair	Ponding		1
439	Owatonna	Yes	Yes	Yes	1.0	No	2.7	Yes	Yes	1.5		N/A			Good	No flares needed		0
440	Owatonna	Yes	Yes	Yes	1.8	No	4.0	Yes	Yes	0.6		N/A			Fair	No flares needed	Ponding	0
441	Owatonna	Yes	No	Yes	3.6	1	0.7	Yes	Yes	1.7	Yes	No			Fair	Ponding	One flare	0
442	Owatonna	Yes	No	Yes	1.6	1	0.6	Yes	Yes	1.9	Yes	No			Fair	Ponding	One flare	0
443	Owatonna	Yes	No	Yes	3.0	1	0.8	Yes	Yes	1.9	No	Yes	Yes	Yes	Fair	Ponding		0
444	Owatonna	Yes	No	Yes	2.0	1	1.2	Yes	Yes	2.0		No			Good		One flare	0
445	Owatonna	Yes	No	Yes	5.9	No	2.8	Yes	No	2.6	No	Yes	Yes	Yes	Good			0
446	Owatonna	Yes	No	Yes	3.9	No	3.9	Yes	Yes	1.1	No	Yes	Yes	Yes	Fair	Ponding		0
447	Owatonna	Yes	No	Yes	7.7	1	1.0	Yes	Yes	0.5	Yes	No			Fair	Ponding		0
448	Owatonna	Yes	No	Yes	7.9	1	0.1	Yes	Yes	0.4	Yes	No			Poor	Ponding	Crack	0
449	Owatonna	Yes	No	Yes	5.2	1	1.0	Yes	Yes	1.0	Yes	No			Good			0
455	Owatonna	Yes	No	Yes	3.8	1	0.8	Yes	Yes	0.8	Yes	No			Fair	Ponding		0
456	Owatonna	Yes	No	Yes	5.3	1	0.4	Yes	Yes	1.3	No	No			Fair	Ponding		0
457	Owatonna	Yes	No	Yes	5.8	1	0.6	Yes	Yes	1.3	Yes	No			Poor	Heavy vegetation		0
465	Owatonna	Yes	Yes	Yes	1.2	No	3.4	Yes	Yes	1.8		N/A			Good	No flares needed		0
466	Owatonna	Yes	Yes	Yes	0.5	No	5.0	Yes	No	2.5		N/A			Good	No flares needed		0
467	Owatonna	Yes	No	No	10.1	1	1.3	Yes	Yes	1.4	Yes	Yes	Yes	Yes	Fair	Ponding		0
468	Owatonna	Yes	Yes	Yes	1.5	No	3.3	Yes	Yes	1.9		N/A			Good	No flares needed		0
469	Owatonna	Yes	Yes	Yes	0.6	No	3.5	Yes	Yes	0.7		N/A			Good	No flares needed		0
478	Owatonna	Yes	No	Yes	5.9	1	1.8	Yes	Yes	1.1	Yes	No			Fair	Some vegetation		0
479	Owatonna	Yes	No	No	8.4	No	2.1	Yes	No	2.6	Yes	No			Good			0

OBJECTID	City	If walk/trail crosses curb, is there a curb ramp?	Is the Curb Ramp at a Driveway	Running slope <= 8.3%?	What is the running slope of the curb ramp?	Cross slope, excluding flares, <= 2%?	What is the cross slope of the curb ramp?	Curb ramp, excluding flares, at least 48in wide?	Landing >= 48in sq with cross slope <2% any dir?	What is the max landing slope?	Curb ramp flares slopes <= 10%?	Detectable warnings full width of the curb ramp?	Approx 75% of truncated domes in good condition?	Truncated domes contrast w/ adjacent surfaces?	Curb Ramp overall condition?	CR Characteristics	Notes	Compliant 1=Compliant
480	Owatonna	Yes	No	Yes	2.7	No	3.9	Yes	Yes	2.0	Yes	No			Fair	Some vegetation		0
489	Owatonna	Yes	Yes	Yes	0.3	No	4.4	Yes	Yes	1.7	Yes	N/A			Good	No flares needed	One flare	0
490	Owatonna	Yes	No	Yes	4.2	1	1.3	Yes	Yes	1.7	Yes	No	Yes	Yes	Good		One flare, along driveway	0
491	Owatonna	Yes	Yes	Yes	2.2	No	3.9	Yes	Yes	1.7		N/A			Good	No flares needed		0
492	Owatonna	Yes	No	Yes	1.6	No	3.3	Yes	Yes	1.7	Yes	No	Yes	Yes	Good		Broken flare	0
493	Owatonna	Yes	No	Yes	2.2	No	3.7	Yes	Yes	1.9	Yes	Yes	Yes	Yes	Good			0
494	Owatonna	Yes	Yes	Yes	5.1	No	3.0	Yes	Yes	1.2		N/A			Good	No flares needed	Some veg	0
495	Owatonna	Yes	Yes	Yes	4.5	No	4.3	Yes	Yes	1.7		N/A			Good	No flares needed		0
496	Owatonna	Yes	Yes	Yes	2.8	No	2.4	Yes	Yes	1.1		N/A			Good	No flares needed		0
497	Owatonna	Yes	Yes	Yes	1.8	1	1.4	Yes	Yes	1.8		N/A			Good	No flares needed		1
498	Owatonna	Yes	No	Yes	5.5	1	2.0	Yes	Yes	0.8	Yes	No			Good			0
499	Owatonna	Yes	No	Yes	4.7	1	0.4	Yes	Yes	0.4	Yes	No			Good			0
500	Owatonna	Yes	Yes	Yes	5.0	No	4.1	Yes	Yes	1.0		N/A			Good	No flares needed		0
501	Owatonna	Yes	Yes	Yes	5.5	No	4.5	Yes	Yes	1.0		N/A			Good	No flares needed		0
502	Owatonna	Yes	Yes	Yes	4.5	No	5.1	Yes	Yes	1.2		N/A			Good	No flares needed	Some veg	0
503	Owatonna	Yes	Yes	Yes	4.2	No	5.5	Yes	Yes	1.4		N/A			Good	No flares needed	Some veg	0
504	Owatonna	Yes	Yes	Yes	4.6	No	4.7	Yes	Yes	1.6		N/A			Good	No flares needed		0
505	Owatonna	Yes	Yes	Yes	3.6	No	4.5	Yes	Yes	1.2		N/A			Fair	No flares needed	Some ponding	0
506	Owatonna	Yes	Yes	Yes	5.7	No	4.6	Yes	Yes	0.7		N/A			Good	No flares needed		0
507	Owatonna	Yes	Yes	Yes	5.5	No	5.8	Yes	Yes	1.9		N/A			Good	No flares needed		0
508	Owatonna	Yes	Yes	Yes	6.7	No	4.1	Yes	Yes	1.9		N/A			Good	No flares needed		0
509	Owatonna	Yes	Yes	Yes	4.9	No	4.9	Yes	Yes	1.2		N/A			Good	No flares needed	Some veg	0
510	Owatonna	Yes	Yes	Yes	4.9	No	4.3	Yes	Yes	1.5		N/A			Fair	No flares needed	Vegetation	0
511	Owatonna	Yes	Yes	Yes	5.7	No	5.5	Yes	Yes	1.3		N/A			Good	No flares needed		0
512	Owatonna	Yes	Yes	Yes	3.6	No	6.1	Yes	Yes	2.0		N/A			Good	No flares needed		0
513	Owatonna	Yes	Yes	Yes	7.2	No	6.3	Yes	Yes	2.0		N/A			Good	No flares needed		0
514	Owatonna	Yes	Yes	Yes	5.4	No	4.4	Yes	Yes	1.7		N/A			Good	No flares needed		0
515	Owatonna	Yes	Yes	No	10.4	No	8.3	Yes	Yes	2.0		N/A			Good	No flares needed		0
516	Owatonna	Yes	No	Yes	1.3	1	0.8	Yes	Yes	1.3	Yes	Yes	Yes	Yes	Good			1
517	Owatonna	Yes	No	Yes	2.6	1	0.3	Yes	Yes	0.9	Yes	Yes	Yes	Yes	Good			1
518	Owatonna	Yes	Yes	Yes	4.8	No	4.2	Yes	Yes	1.0		N/A			Good	No flares needed		0
519	Owatonna	Yes	Yes	Yes	5.8	No	2.7	Yes	Yes	1.4		N/A			Good	No flares needed		0
520	Owatonna	Yes	Yes	Yes	4.5	No	4.7	Yes	Yes	1.4		N/A			Good	No flares needed		0
521	Owatonna	Yes	Yes	Yes	5.5	No	5.7	Yes	Yes	2.0		N/A			Good	No flares needed		0
522	Owatonna	Yes	Yes	Yes	4.0	No	3.6	Yes	Yes	2.0		N/A			Good	No flares needed		0
523	Owatonna	Yes	Yes	Yes	6.0	No	5.8	Yes	No	2.3		N/A			Good	No flares needed		0
524	Owatonna	Yes	Yes	Yes	5.1	No	5.9	Yes	No	2.8		N/A			Good	No flares needed		0
525	Owatonna	Yes	Yes	Yes	4.7	No	6.5	Yes	No	2.7		N/A			Good	No flares needed		0
526	Owatonna	Yes	Yes	Yes	6.1	No	5.0	Yes	No	2.4		N/A			Good	No flares needed		0
527	Owatonna	Yes	Yes	Yes	5.6	No	5.9	Yes	Yes	1.2		N/A			Good	No flares needed		0
528	Owatonna	Yes	Yes	Yes	3.8	No	4.5	Yes	Yes	1.4		N/A			Good	No flares needed		0
529	Owatonna	Yes	Yes	Yes	4.2	No	5.0	Yes	Yes	2.0		N/A			Good	No flares needed		0
530	Owatonna	Yes	Yes	Yes	6.1	No	4.1	Yes	Yes	1.9		N/A			Good	No flares needed		0
531	Owatonna	Yes	Yes	Yes	4.0	No	3.2	Yes	Yes	1.2		N/A			Good	No flares needed		0
532	Owatonna	Yes	Yes	Yes	4.6	No	3.3	Yes	Yes	1.7		N/A			Fair	No flares needed	Ponding	0
533	Owatonna	Yes	Yes	Yes	2.9	No	4.5	Yes	Yes	1.5		N/A			Good	No flares needed		0
534	Owatonna	Yes	Yes	Yes	6.0	No	3.2	Yes	Yes	1.6		N/A			Good	No flares needed	Some veg	0
535	Owatonna	Yes	Yes	Yes	3.5	No	4.2	Yes	Yes	1.0		N/A			Good	No flares needed		0
536	Owatonna	Yes	Yes	Yes	7.3	No	5.0	Yes	Yes	1.6		N/A			Good	No flares needed		0
537	Owatonna	Yes	Yes	Yes	6.2	No	5.3	Yes	Yes	1.5		N/A			Good	No flares needed		0
538	Owatonna	Yes	Yes	Yes	6.2	No	2.2	Yes	Yes	1.5		N/A			Good	No flares needed		0
539	Owatonna	Yes	Yes	Yes	3.7	No	6.3	Yes	Yes	1.3		N/A			Good	No flares needed		0
540	Owatonna	Yes	No	Yes	1.7	1	1.4	Yes	Yes	1.7	Yes	Yes	Yes	Yes	Good			1
541	Owatonna	Yes	No	Yes	1.8	1	0.7	Yes	Yes	1.8	Yes	Yes	Yes	Yes	Good			1
542	Owatonna	Yes	Yes	Yes	5.4	No	4.4	Yes	Yes	1.0		N/A			Good	No flares needed		0
543	Owatonna	Yes	Yes	Yes	3.1	No	4.8	Yes	Yes	1.9		N/A			Good	No flares needed		0
544	Owatonna	Yes	Yes	Yes	6.5	No	4.4	Yes	Yes	1.6		N/A			Good	No flares needed		0
545	Owatonna	Yes	Yes	Yes	3.9	No	5.5	Yes	Yes	1.3		N/A			Good	No flares needed		0
546	Owatonna	Yes	Yes	Yes	8.0	No	4.4	Yes	Yes	1.5		N/A			Fair	No flares needed	Veg	0
547	Owatonna	Yes	Yes	Yes	4.0	No	4.5	Yes	Yes	0.9		N/A			Good	No flares needed		0
548	Owatonna	Yes	Yes	Yes	6.2	No	2.8	Yes	Yes	0.4		N/A			Good	No flares needed		0
549	Owatonna	Yes	Yes	Yes	5.2	No	5.6	Yes	Yes	0.4		N/A			Good	No flares needed		0
550	Owatonna	Yes	Yes	Yes	5.3	No	3.8	Yes	Yes	0.6		N/A			Good	No flares needed		0
551	Owatonna	Yes	Yes	Yes	5.6	No	5.6	Yes	Yes	0.5		N/A			Good	No flares needed		0
552	Owatonna	Yes	Yes	Yes	7.5	No	2.3	Yes	Yes	1.0		N/A			Good	No flares needed		0
553	Owatonna	Yes	Yes	Yes	3.6	No	4.4	Yes	Yes	0.7		N/A			Good	No flares needed		0
554	Owatonna	Yes	Yes	Yes	5.9	No	3.3	Yes	Yes	1.2		N/A			Good	No flares needed		0
555	Owatonna	Yes	Yes	Yes	4.5	No	3.3	Yes	Yes	1.1		N/A			Good	No flares needed		0
556	Owatonna	Yes	Yes	Yes	2.3	No	3.3	Yes	Yes	1.0		N/A			Good	No flares needed		0
557	Owatonna	Yes	Yes	Yes	6.1	No	6.0	Yes	Yes	1.2		N/A			Fair	No flares needed	Some veg	0
558	Owatonna	Yes	Yes	Yes	6.7	1	1.6	Yes	Yes	1.7		N/A			Good	No flares needed		1
559	Owatonna	Yes	Yes	Yes	5.4	No	4.0	Yes	Yes	1.0		N/A			Fair	No flares needed	Ponding	0
560	Owatonna	Yes	Yes	Yes	5.0	No	3.4	Yes	Yes	1.1		N/A			Good	No flares needed		0
561	Owatonna	Yes	Yes	Yes	3.9	No	4.0	Yes	Yes	0.5		N/A			Good	No flares needed		0
562	Owatonna	Yes	No	Yes	5.6	No	4.3	Yes	Yes	1.8	Yes	No			Good			0
563	Owatonna	Yes	No	Yes	6.4	No	3.6	Yes	Yes	1.4	Yes	No			Good			0
564	Owatonna	Yes	Yes	Yes	5.4	0	1.1	Yes	Yes	0.3		N/A			Good	No flares needed		1
565	Owatonna	Yes	Yes	Yes	4.6	No	2.1	Yes	Yes	0.6		N/A			Good	No flares needed		0
566	Owatonna	Yes	Yes	Yes	5.5	No	3.0	Yes	Yes	0.7		N/A			Good	No flares needed		0
567	Owatonna	Yes	Yes	Yes	3.7	No	4.2	Yes	Yes	1.6		N/A			Good	No flares needed		0
568	Owatonna	Yes	Yes	Yes	5.7	No	3.5	Yes	Yes	1.6		N/A			Good	No flares needed		0

OBJECTID	City	If walk/trail crosses curb, is there a curb ramp?	Is the Curb Ramp at a Driveway	Running slope <= 8.3%?	What is the running slope of the curb ramp?	Cross slope, excluding flares, <= 2%?	What is the cross slope of the curb ramp?	Curb ramp, excluding flares, at least 48in wide?	Landing >= 48in sq with cross slope <2% any dir?	What is the max landing slope?	Curb ramp flares slopes <= 10%?	Detectable warnings full width of the curb ramp?	Approx 75% of truncated domes in good condition?	Truncated domes contrast w/ adjacent surfaces?	Curb Ramp overall condition?	CR_Characteristics	Notes	Compliant 1=Compliant
569	Owatonna	Yes	Yes	Yes	5.1	No	3.9	Yes	Yes	1.2		N/A			Fair	No flares needed	Veg	0
570	Owatonna	Yes	No	Yes	4.7	1	2.0	Yes	Yes	0.8	Yes	No			Good			0
571	Owatonna	Yes	No	Yes	4.7	1	0.5	Yes	Yes	0.9	Yes	No			Fair	Some vegetation		0
572	Owatonna	Yes	Yes	Yes	6.1	No	3.4	Yes	Yes	1.2		N/A			Good	No flares needed		0
573	Owatonna	Yes	Yes	Yes	3.3	No	2.7	Yes	Yes	0.9		N/A			Good	No flares needed		0
574	Owatonna	Yes	Yes	Yes	4.8	No	4.4	Yes	Yes	1.5		N/A			Good	No flares needed		0
575	Owatonna	Yes	Yes	Yes	3.9	1	2.0	Yes	Yes	1.1		N/A			Good	No flares needed		1
576	Owatonna	Yes	No	Yes	5.0	1	1.7	Yes	Yes	1.6	Yes	No			Fair	Ponding		0
577	Owatonna	Yes	Yes	Yes	6.6	No	2.1	Yes	Yes	1.6	Yes	N/A			Fair	Ponding		0
626	Owatonna	Yes	No	Yes	6.1	1	2.0	Yes	Yes	1.5	Yes	No			Good	Some cracking		0
627	Owatonna	Yes	No	Yes	5.4	1	1.9	Yes	Yes	1.7	Yes	No			Fair	Some cracking	Gap in elevation and only one flare	0
628	Owatonna	Yes	No	Yes	6.9	1	0.9	Yes	Yes	0.8	Yes	No			Fair	Some cracking		0
629	Owatonna	Yes	No	Yes	3.5	1	1.2	Yes	Yes	1.9	Yes	No			Fair	Ponding	Gap in elevation	0
630	Owatonna	Yes	No	Yes	3.2	No	5.5	Yes	Yes	1.9	Yes	No			Fair		Flares broken	0
631	Owatonna	Yes	No	Yes	3.5	1	1.0	Yes	Yes	0.5	Yes	Yes	No	Yes	Good		Man hole	0
632	Owatonna	Yes	No	Yes	5.9	1	1.9	Yes	No	4.2	Yes	Yes	No	Yes	Good	Some cracking		0
633	Owatonna	Yes	No	Yes	4.9	1	1.0	Yes	Yes	1.8	Yes	No			Good		Broken flare	0
634	Owatonna	Yes	No	Yes	5.7	1	0.3	Yes	Yes	1.5	Yes	No			Good	Ponding	Crack and gap	0
635	Owatonna	Yes	No	Yes	4.2	No	3.0	Yes	No	2.3	Yes	No			Good			0
636	Owatonna	Yes	No	Yes	1.8	1	1.8	Yes	Yes	1.8	Yes	No			Good			0
637	Owatonna	Yes	Yes	Yes	5.3	No	3.0	Yes	Yes	2.0	Yes	N/A			Good			0
638	Owatonna	Yes	Yes	Yes	0.9	No	3.5	Yes	No	3.5		N/A			Good	No flares needed		0
639	Owatonna	Yes	Yes	Yes	6.0	No	3.9	Yes	No	3.8		N/A			Good	No flares needed		0
640	Owatonna	Yes	Yes	Yes	1.5	No	5.4	Yes	No	3.1		N/A			Good	No flares needed		0
641	Owatonna	Yes	Yes	Yes	6.9	No	4.7	Yes	No	3.6		N/A			Good	No flares needed		0
642	Owatonna	Yes	Yes	Yes	1.1	No	6.1	Yes	No	3.4		N/A			Good	No flares needed		0
643	Owatonna	Yes	Yes	Yes	6.6	No	5.2	Yes	No	3.5		N/A			Good	No flares needed		0
644	Owatonna	Yes	Yes	Yes	1.8	No	5.7	Yes	No	3.3		N/A			Good	No flares needed		0
645	Owatonna	Yes	Yes	Yes	8.1	No	4.6	Yes	No	2.9		N/A			Good	No flares needed		0
646	Owatonna	Yes	No	Yes	0.8	No	3.6	Yes	Yes	1.2	Yes	No			Good			0
647	Owatonna	Yes	No	No	10.5	No	6.7	Yes	No	2.8	Yes	No			Good			0
648	Owatonna	Yes	Yes	Yes	1.9	No	5.6	Yes	Yes	2.0		N/A			Fair	No flares needed	Gap in elevation , dirt	0
649	Owatonna	Yes	Yes	Yes	3.6	No	3.3	Yes	Yes	1.2		N/A			Good	No flares needed		0
650	Owatonna	Yes	Yes	Yes	2.1	No	5.7	Yes	Yes	1.7		N/A			Good	No flares needed		0
651	Owatonna	Yes	Yes	Yes	3.8	No	4.8	Yes	Yes	1.5		N/A			Good	No flares needed		0
652	Owatonna	Yes	Yes	Yes	2.1	No	4.8	Yes	Yes	2.0		N/A			Good	No flares needed		0
653	Owatonna	Yes	Yes	Yes	4.1	No	5.7	Yes	No	2.3		N/A			Good	No flares needed		0
654	Owatonna	Yes	Yes	Yes	4.3	No	5.1	Yes	Yes	1.5		N/A			Good	No flares needed		0
655	Owatonna	Yes	Yes	Yes	4.2	No	4.8	Yes	Yes	2.0		N/A			Good	No flares needed		0
656	Owatonna	Yes	Yes	Yes	3.3	No	6.1	Yes	No	2.5		N/A			Good	No flares needed		0
657	Owatonna	Yes	Yes	Yes	3.2	No	4.1	Yes	Yes	1.9		N/A			Good	No flares needed		0
658	Owatonna	Yes	Yes	Yes	4.4	No	2.8	Yes	Yes	1.9		N/A			Fair	No flares needed	Rocks	0
659	Owatonna	Yes	Yes	Yes	3.1	No	4.3	Yes	Yes	2		N/A			Fair	No flares needed	Rocks	0
660	Owatonna	Yes	Yes	Yes	4.9	No	3.4	Yes	No	3.2		N/A			Good	No flares needed		0
661	Owatonna	Yes	Yes	Yes	2.3	No	6.0	Yes	No	2.9		N/A			Good	No flares needed		0
662	Owatonna	Yes	Yes	Yes	5.4	No	5.6	Yes	No	2.9		N/A			Good	No flares needed		0
663	Owatonna	Yes	Yes	Yes	1.6	No	5.1	Yes	No	2.3		N/A			Good	No flares needed		0
664	Owatonna	Yes	Yes	Yes	6.3	No	4.9	Yes	No	2.8		N/A			Good	No flares needed		0
665	Owatonna	Yes	Yes	Yes	1.3	No	6.3	Yes	No	3.4		N/A			Good	No flares needed		0
666	Owatonna	Yes	Yes	Yes	7.0	No	5.1	Yes	No	3.2		N/A			Good	No flares needed		0
667	Owatonna	Yes	Yes	Yes	1.0	No	5.3	Yes	No	3.8		N/A			Good	No flares needed		0
668	Owatonna	Yes	Yes	Yes	7.4	No	5.2	Yes	No	3.0		N/A			Good	No flares needed		0
669	Owatonna	Yes	Yes	Yes	1.2	No	5.2	No	No	3.2		N/A			Good	No flares needed		0
670	Owatonna	Yes	Yes	Yes	8.1	No	5.8	Yes	No	3.7		N/A			Good	No flares needed		0
671	Owatonna	Yes	Yes	Yes	1.3	No	5.1	Yes	No	4.3		N/A			Good	No flares needed		0
672	Owatonna	Yes	No	No	9.0	No	4.0	Yes	No	3.8	Yes	No			Fair	Ponding	Flare broken	0
673	Owatonna	Yes	No	Yes	0.1	No	4.8	Yes	Yes	1.1	Yes	No			Good			0
674	Owatonna	Yes	Yes	Yes	8.1	No	2.5	Yes	No	3.3		N/A			Good	No flares needed	Crack	0
675	Owatonna	Yes	Yes	Yes	1.0	No	5.6	Yes	No	4.1		N/A			Good	No flares needed	Crack	0
676	Owatonna	Yes	No	Yes	5.4	No	2.3	Yes	Yes	2.0	Yes	No			Good			0
677	Owatonna	Yes	No	Yes	0.2	No	4.1	Yes	Yes	1.4	Yes	Yes	Yes	Yes	Good			0
678	Owatonna	Yes	Yes	Yes	1.4	No	5.1	Yes	No	2.7		N/A			Good	No flares needed		0
679	Owatonna	Yes	Yes	Yes	5.0	No	4.5	Yes	Yes	1.6		N/A			Good	No flares needed		0
680	Owatonna	Yes	Yes	Yes	4.8	1	0.9	Yes	Yes	1.9		N/A			Good	No flares needed		1
681	Owatonna	Yes	Yes	Yes	6.2	1	0.2	Yes	Yes	0.2		N/A			Good	No flares needed		1
682	Owatonna	Yes	Yes	Yes	3.1	No	3.9	Yes	Yes	1.1		N/A			Good	No flares needed		0
683	Owatonna	Yes	Yes	Yes	3.8	1	1.6	Yes	Yes	1.7		N/A			Good	No flares needed		1
684	Owatonna	Yes	No	Yes	5.0	1	0.3	Yes	Yes	1.8	Yes	No			Good			0
685	Owatonna	Yes	No	Yes	4.7	1	0.3	Yes	Yes	1.1	Yes	Yes	Yes	Yes	Fair	Ponding		1
686	Owatonna	Yes	No	Yes	4.0	1	2.0	Yes	Yes	0.9	Yes	No			Good			0
687	Owatonna	Yes	No	Yes	5.6	1	0.6	Yes	Yes	0.6	Yes	No			Good			0
688	Owatonna	Yes	No	Yes	3.9	1	1.4	Yes	Yes	0.8	Yes	No			Fair	Ponding		0
689	Owatonna	Yes	Yes	Yes	1.5	No	5.6	Yes	No	3.2		N/A			Good	No flares needed		0
690	Owatonna	Yes	Yes	Yes	3.7	1	1.6	No	No	3.7		N/A			Good	No flares needed		0
691	Owatonna	Yes	Yes	Yes	2.4	0	9.6	No	No	5.2		N/A			Fair	No flares needed	Some veg	0
692	Owatonna	Yes	No	Yes	5.6	1	1.7	Yes	No	3.5	Yes	No			Fair		One flare, attaches to driveway	0
693	Owatonna	Yes	No	Yes	2.1	No	2.2	Yes	Yes	1.9	Yes	No			Good			0
694	Owatonna	Yes	No	Yes	5.2	1	1.4	Yes	Yes	1.2	Yes	No			Good			0
695	Owatonna	Yes	No	No	8.8	No	2.5	Yes	Yes	1.9	Yes	No			Good		One flare and grate opening	0
696	Owatonna	Yes	No	Yes	7.6	1	1.8	Yes	Yes	2.0	Yes	No			Good			0
697	Owatonna	Yes	No	Yes	3.8	1	1.2	Yes	Yes	1.6	No	No			Good			0

OBJECTID	City	If walk/trail crosses curb, is there a curb ramp?	Is the Curb Ramp at a Driveway	Running slope <= 8.3%?	What is the running slope of the curb ramp?	Cross slope, excluding flares, <= 2%?	What is the cross slope of the curb ramp?	Curb ramp, excluding flares, at least 48in wide?	Landing >= 48in sq with cross slope <2% any dir?	What is the max landing slope?	Curb ramp flares slopes <= 10%?	Detectable warnings full width of the curb ramp?	Approx 75% of truncated domes in good condition?	Truncated domes contrast w/ adjacent surfaces?	Curb Ramp overall condition?	CR_Characteristics	Notes	Compliant 1=Compliant
710	Owatonna	Yes	No	Yes	0.0	1	0.7	Yes	Yes	0.7		Yes	Yes	Yes	Fair	No flares		1
711	Owatonna	Yes	No	Yes	0.8	1	0.1	Yes	Yes	0.8		Yes	Yes	Yes	Fair	No flares		1
712	Owatonna	Yes	No	Yes	1.3	1	0.8	Yes	Yes	1.3		Yes	Yes	Yes	Good	No flares		1
713	Owatonna	Yes	No	Yes	0.9	1	0.3	Yes	Yes	0.9		Yes	Yes	Yes	Fair	Ponding	Ponding or dirt	1
714	Owatonna	Yes	No	Yes	1.1	1	0.8	Yes	Yes	1.1		Yes	Yes	Yes	Fair	No flares	Ponding	1
715	Owatonna	Yes	No	Yes	0.8	1	0.9	Yes	Yes	0.9		Yes	Yes	Yes	Fair	No flares	Pounding	1
716	Owatonna	Yes	No	Yes	0.1	1	0.2	Yes	Yes	0.2		Yes	Yes	Yes	Fair	No flares	Ponding	1
717	Owatonna	Yes	No	Yes	0.6	1	1.0	Yes	Yes	1.0	Yes	Yes	Yes	Yes	Good	No flares	Some Dirt/ ponding, one flare	1
718	Owatonna	Yes	No	Yes	0.2	1	0.6	Yes	Yes	0.6		Yes	Yes	Yes	Good	No flares		1
719	Owatonna	Yes	Yes	Yes	5.3	No	2.4	Yes	Yes	1.7		N/A			Good	No flares needed		0
720	Owatonna	Yes	Yes	Yes	2.6	No	3.4	Yes	No	2.2		N/A		1	Good	No flares needed		0
721	Owatonna	Yes	Yes	Yes	7.9	No	4.8	Yes	Yes	1.8		N/A			Good	No flares needed		0
722	Owatonna	Yes	Yes	Yes	1.5	No	5.0	Yes	No	3.0		N/A			Good	No flares needed		0
723	Owatonna	Yes	Yes	Yes	6.8	No	4.6	Yes	No	3.1		N/A			Good	No flares needed		0
724	Owatonna	Yes	Yes	Yes	1.8	No	4.3	Yes	No	2.7		N/A			Fair	No flares needed	Some veg	0
725	Owatonna	Yes	Yes	No	8.9	No	3.7	Yes	No	3.3		N/A			Good	No flares needed	Some ruined pavement	0
726	Owatonna	Yes	Yes	Yes	1.1	No	3.3	Yes	No	3.1		N/A			Good	No flares needed		0
727	Owatonna	Yes	Yes	Yes	8.2	No	3.3	Yes	No	2.7		N/A			Good	No flares needed		0
728	Owatonna	Yes	Yes	Yes	1.4	No	4.0	Yes	No	3.6		N/A			Good	No flares needed		0
729	Owatonna	Yes	Yes	No	8.6	No	2.1	Yes	No	3.6		N/A			Good	No flares needed		0
730	Owatonna	Yes	Yes	Yes	1.3	No	2.4	Yes	No	3.4		N/A			Good	No flares needed		0
731	Owatonna	Yes	Yes	No	9.0	No	3.3	Yes	No	4.2		N/A			Good	No flares needed		0
732	Owatonna	Yes	Yes	Yes	1.4	No	2.9	Yes	No	2.9		N/A			Good	No flares needed	Crack	0
733	Owatonna	Yes	Yes	No	9.8	No	2.1	Yes	No	4.3		N/A			Good	No flares needed		0
734	Owatonna	Yes	Yes	Yes	0.3	No	2.7	Yes	No	4.1		N/A			Good	No flares needed		0
735	Owatonna	Yes	Yes	No	10.7	No	3.0	Yes	No	3.8		N/A			Good	No flares needed		0
736	Owatonna	Yes	Yes	Yes	0.5	No	2.6	No	No	2.6		N/A			Good	No flares needed		0
737	Owatonna	Yes	Yes	Yes	6.4	No	2.2	Yes	No	4.0		N/A			Fair	No flares needed	Crack	0
738	Owatonna	Yes	Yes	Yes	0.2	No	2.5	Yes	No	2.5		Yes			Good	No flares needed		0
739	Owatonna	Yes	Yes	Yes	6.2	1	1.8	Yes	No	3.1		N/A			Good	No flares needed		0
740	Owatonna	Yes	Yes	Yes	2.5	No	2.4	Yes	No	2.3		N/A			Good	No flares needed		0
741	Owatonna	Yes	Yes	Yes	6.3	No	4.4	Yes	No	2.4		N/A			Good	No flares needed		0
742	Owatonna	Yes	Yes	Yes	2.3	No	3.8	Yes	Yes	1.6		N/A			Good	No flares needed		0
743	Owatonna	Yes	Yes	Yes	5.6	No	3.3	Yes	Yes	1.4		N/A			Good	No flares needed		0
744	Owatonna	Yes	Yes	Yes	3.5	No	2.1	Yes	Yes	0.9		N/A			Good	No flares needed		0
745	Owatonna	Yes	Yes	Yes	5.3	No	2.9	Yes	Yes	1.1		N/A			Good	No flares needed		0
746	Owatonna	Yes	Yes	Yes	3.5	No	3.9	Yes	Yes	1.0		N/A			Good	No flares needed		0
747	Owatonna	Yes	No	Yes	6.3	1	0.1	Yes	Yes	0.8	Yes	No			Good			0
748	Owatonna	Yes	No	Yes	5.2	1	0.8	Yes	Yes	0.2	Yes	No			Good			0
749	Owatonna	Yes	Yes	Yes	3.3	No	2.3	Yes	Yes	1.8		N/A			Good	No flares needed		0
750	Owatonna	Yes	Yes	Yes	4.7	No	3.6	Yes	Yes	1.3		N/A			Good	No flares needed		0
751	Owatonna	Yes	Yes	Yes	3.9	No	3.4	Yes	Yes	1.6		N/A			Fair	No flares needed	Veg	0
752	Owatonna	Yes	Yes	Yes	5.8	No	3.4	Yes	Yes	1.5		N/A			Good	No flares needed		0
753	Owatonna	Yes	Yes	Yes	1.4	No	3.7	Yes	Yes	1.3		N/A			Good	No flares needed		0
754	Owatonna	Yes	Yes	Yes	5.6	No	4.1	Yes	Yes	1.4		N/A			Good	No flares needed		0
755	Owatonna	Yes	Yes	Yes	3.6	No	3.9	Yes	Yes	1.7		N/A			Good	No flares needed		0
756	Owatonna	Yes	Yes	Yes	5.4	No	4.1	Yes	Yes	1.7		N/A			Good	No flares needed		0
757	Owatonna	Yes	Yes	Yes	3.4	1	1.1	Yes	Yes	1.1		N/A			Good	No flares needed		1
758	Owatonna	Yes	Yes	Yes	6.0	No	3.4	Yes	Yes	1.3		N/A			Good	No flares needed		0
759	Owatonna	Yes	Yes	Yes	8.3	No	2.3	Yes	Yes	0.6		N/A			Good			0
760	Owatonna	Yes	No	No	11.1	No	3.3	Yes	Yes	1.8	No	No			Good			0
761	Owatonna	Yes	Yes	Yes	4.7	No	4.7	Yes	Yes	1.6		N/A			Good	No flares needed		0
762	Owatonna	Yes	Yes	Yes	3.8	No	4.1	Yes	No	2.1		N/A			Good	No flares needed		0
763	Owatonna	Yes	Yes	Yes	2.2	No	7.3	Yes	No	2.9		N/A			Good	No flares needed		0
764	Owatonna	Yes	Yes	Yes	5.3	No	3.2	Yes	Yes	1.2		N/A			Good	No flares needed		0
765	Owatonna	Yes	Yes	Yes	6.5	No	4.0	Yes	Yes	1.0		N/A			Good	No flares needed		0
766	Owatonna	Yes	Yes	Yes	3.4	No	3.5	Yes	Yes	1.7		N/A			Good	No flares needed		0
767	Owatonna	Yes	Yes	Yes	2.7	No	3.6	Yes	Yes	1.0		N/A			Good	No flares needed		0
768	Owatonna	Yes	Yes	Yes	2.2	No	2.7	Yes	No	2.5		N/A			Good	No flares needed		0
769	Owatonna	Yes	No	Yes	7.0	1	0.5	Yes	No	2.6		No			Fair	Ponding		0
770	Owatonna	Yes	No	Yes	5.0	1	0.4	Yes	0	1.4		No			Fair	Ponding		0
771	Owatonna	Yes	Yes	Yes	6.1	No	4.4	Yes	No	2.3		N/A			Good	No flares needed		0
772	Owatonna	Yes	Yes	Yes	2.7	No	3.2	Yes	Yes	1.1		N/A			Good	No flares needed		0
773	Owatonna	Yes	Yes	Yes	5.3	1	2.0	Yes	Yes	1.0		N/A			Good	No flares needed		1
774	Owatonna	Yes	Yes	Yes	2.9	1	1.8	Yes	Yes	1.3		N/A			Good	No flares needed		1
775	Owatonna	Yes	No	Yes	6.9	1	0.7	Yes	Yes	2.0	Yes	No			Good			0
776	Owatonna	Yes	No	Yes	6.5	1	0.4	Yes	No	2.8	Yes	No			Good			0
777	Owatonna	Yes	Yes	Yes	4.4	1	2.0	Yes	No	2.1		N/A			Good	No flares needed	Some veg	0
778	Owatonna	Yes	Yes	Yes	2.8	1	1.8	Yes	Yes	1.8		N/A			Good	No flares needed		1
779	Owatonna	Yes	Yes	Yes	3.2	No	3.9	Yes	Yes	1.7		N/A			Good	No flares needed		0
780	Owatonna	Yes	Yes	Yes	3.0	No	4.2	Yes	Yes	1.2		N/A			Fair	No flares needed	Some veg	0
781	Owatonna	Yes	No	Yes	2.6	No	2.9	Yes	Yes	1.5	Yes	Yes	Yes	Yes	Good		One flare	0
782	Owatonna	Yes	No	Yes	2.1	1	1.1	Yes	Yes	1.6	Yes	Yes	Yes	Yes	Good		One flare	1
783	Owatonna	Yes	No	Yes	1.5	No	2.4	Yes	Yes	1.7	Yes	Yes	Yes	Yes	Fair	Ponding	One flare	0
784	Owatonna	Yes	No	Yes	3.1	1	0.9	Yes	Yes	0.8	Yes	Yes	Yes	Yes	Good		One flare	1
785	Owatonna	Yes	Yes	Yes	4.2	No	3.1	Yes	Yes	1.1		N/A			Fair	No flares needed	Some veg	0
786	Owatonna	Yes	Yes	Yes	5.1	No	3.3	Yes	Yes	1.4		N/A			Good	No flares needed		0
787	Owatonna	Yes	Yes	Yes	4.3	No	3.5	Yes	Yes	1.6		N/A			Good	No flares needed		0
788	Owatonna	Yes	Yes	Yes	5.2	No	3.7	Yes	Yes	1.9		N/A			Good	No flares needed		0
789	Owatonna	Yes	Yes	Yes	3.5	No	4.9	Yes	Yes	1.9		N/A			Good	No flares needed		0
790	Owatonna	Yes	Yes	Yes	5.6	No	3.1	Yes	Yes	2.0		N/A			Fair	No flares needed	Some veg	0

OBJECTID	City	If walk/trail crosses curb, is there a curb ramp?	Is the Curb Ramp at a Driveway	Running slope <= 8.3%?	What is the running slope of the curb ramp?	Cross slope, excluding flares, <= 2%?	What is the cross slope of the curb ramp?	Curb ramp, excluding flares, at least 48in wide?	Landing >= 48in sq with cross slope <2% any dir?	What is the max landing slope?	Curb ramp flares slopes <= 10%?	Detectable warnings full width of the curb ramp?	Approx 75% of truncated domes in good condition?	Truncated domes contrast w/ adjacent surfaces?	Curb Ramp overall condition?	CR_Characteristics	Notes	Compliant 1=Compliant
791	Owatonna	Yes	Yes	Yes	3.5	No	3.3	Yes	Yes	1.3		N/A			Good	No flares needed		0
792	Owatonna	Yes	Yes	Yes	5.4	No	3.6	Yes	Yes	1.5		N/A			Good	No flares needed		0
793	Owatonna	Yes	Yes	Yes	0.2	No	5.2	Yes	No	2.5		N/A			Good	No flares needed		0
794	Owatonna	Yes	Yes	Yes	7.7	No	4.0	Yes	No	3.8		N/A			Good	No flares needed		0
795	Owatonna	Yes	Yes	Yes	0.6	No	3.5	Yes	No	3.5		N/A			Good	No flares needed		0
796	Owatonna	Yes	Yes	Yes	7.4	No	4.1	Yes	No	4.6		N/A			Good	No flares needed	Ponding	0
797	Owatonna	Yes	Yes	Yes	1.5	No	5.6	Yes	No	4.3		N/A			Good	No flares needed		0
798	Owatonna	Yes	Yes	Yes	7.1	1	1.2	Yes	No	3.9		N/A			Good	No flares needed		0
799	Owatonna	Yes	Yes	Yes	5.0	1	1.3	Yes	No	3.5	N/A	N/A			Fair	Some cracking and vegetation		0
800	Owatonna	Yes	No	No	9.1	1	1.9	Yes	No	2.8	Yes	No			Fair	Some cracking		0
801	Owatonna	Yes	Yes	Yes	0.6	No	2.2	Yes	No	2.2		N/A			Good	No flares needed		0
802	Owatonna	Yes	Yes	Yes	7.4	No	2.4	Yes	No	3.9		N/A			Good	No flares needed		0
803	Owatonna	Yes	Yes	Yes	0.0	No	4.8	Yes	No	3.0		N/A			Good	No flares needed		0
804	Owatonna	Yes	Yes	No	8.5	1	0.4	Yes	No	4.0		N/A			Good	No flares needed		0
805	Owatonna	Yes	Yes	Yes	0.6	No	3.9	Yes	No	3.0		N/A			Good	No flares needed		0
806	Owatonna	Yes	Yes	Yes	7.5	No	3.0	Yes	No	3.8		N/A			Good	No flares needed		0
807	Owatonna	Yes	No	Yes	5.7	1	1.1	No	Yes	0.9	Yes	No			Good		Gap in elevation	0
808	Owatonna	Yes	No	Yes	7.8	No	2.4	Yes	Yes	0.9	Yes	No			Good			0
809	Owatonna	Yes	No	Yes	5.4	1	0.9	Yes	Yes	1.5	Yes	No			Fair	Some cracking	Gap in elevation	0
810	Owatonna	Yes	No	Yes	7.0	1	0.1	Yes	Yes	1.4	Yes	No			Fair	Ponding		0
811	Owatonna	Yes	Yes	Yes	4.5	1	1.7	Yes	Yes	1.4	Yes	N/A			Good	Manhole		1
812	Owatonna	Yes	No	Yes	7.4	1	1.1	Yes	Yes	1.8	No	No			Fair	Some cracking	Gap in elevation	0
813	Owatonna	Yes	No	No	8.4	1	0.8	Yes	Yes	1.9	Yes	No			Fair	Ponding	Some cracking	0
814	Owatonna	Yes	No	Yes	7.7	1	1.7	Yes	Yes	1.9	Yes	No			Fair	Some cracking		0
815	Owatonna	Yes	No	Yes	6.6	1	0.7	Yes	Yes	1.1	Yes	Yes	Yes	Yes	Fair	Some cracking	Broken flare	1
816	Owatonna	Yes	No	Yes	5.6	1	0.6	Yes	Yes	0.8	Yes	No			Good			0
817	Owatonna	Yes	No	Yes	2.8	No	2.5	Yes	Yes	1.8	Yes	Yes	Yes	Yes	Good		Man hole and fire hydrant	0
818	Owatonna	Yes	No	Yes	6.5	1	0.1	Yes	Yes	0.8	Yes	No			Good			0
819	Owatonna	Yes	No	Yes	4.7	No	5.0	Yes	Yes	0.7	Yes	No			Good			0
820	Owatonna	Yes	No	Yes	4.6	No	4.5	Yes	Yes	0.6	Yes	No			Good			0
821	Owatonna	Yes	Yes	Yes	4.2	1	0.1	Yes	Yes	0.6	Yes	N/A			Good			1
822	Owatonna	Yes	No	Yes	7.2	1	0.8	Yes	Yes	1.8	Yes	No			Fair	Some vegetation		0
823	Owatonna	Yes	No	Yes	0.9	No	4.2	Yes	Yes	1.8	Yes	No			Good			0
824	Owatonna	Yes	No	Yes	2.1	No	2.2	Yes	Yes	1.0	Yes	No			Good			0
825	Owatonna	Yes	No	Yes	1.9	1	0.8	Yes	Yes	1.0	Yes	No			Good			0
826	Owatonna	Yes	No	Yes	5.9	1	0.7	Yes	No	2.3	No	No			Good		Man hole	0
827	Owatonna	Yes	No	Yes	2.2	No	4.3	Yes	No	2.3	No	No			Fair	Some vegetation		0
828	Owatonna	Yes	No	Yes	5.2	1	0.1	Yes	Yes	1.7	Yes	No			Fair	Ponding	Some veg	0
829	Owatonna	Yes	Yes	Yes	5.8	1	0.8	Yes	Yes	0.5	Yes	N/A			Good	Some vegetation		1
830	Owatonna	Yes	No	Yes	4.4	0	0.6	Yes	Yes	1.7	No	No			Fair	Heavy vegetation		0
831	Owatonna	Yes	No	Yes	0.6	1	0.6	Yes	Yes	0.6	No	No			Fair	Ponding		0
832	Owatonna	Yes	No	Yes	3.6	1	1.0	Yes	Yes	1.3	Yes	Yes	Yes	Yes	Good			1
833	Owatonna	Yes	No	Yes	5.5	1	0.2	Yes	Yes	1.0	Yes	No	Yes	Yes	Fair		Broken warnings , one flare	0
834	Owatonna	Yes	No	Yes	4.8	No	4.9	Yes	No	2.4	Yes	Yes	No	Yes	Fair	Ponding		0
835	Owatonna	Yes	No	Yes	3.8	No	2.4	Yes	Yes	1.0	Yes	No	No	Yes	Fair	Some vegetation	No dots on contrasted spot	0
836	Owatonna	Yes	No	Yes	3.5	1	0.7	Yes	Yes	0.8	Yes	Yes			Fair	Some vegetation	Some ponding	1
837	Owatonna	Yes	No	Yes	5.9	1	0.1	Yes	Yes	1.2	Yes	Yes	No	Yes	Fair	Some vegetation		0
838	Owatonna	Yes	Yes	Yes	3.0	1	0.7	Yes	No	3.0	Yes	N/A	Yes	Yes	Good	Some ponding and vegetation		0
839	Owatonna	Yes	No	Yes	2.8	1	2.0	Yes	Yes	1.8	Yes	Yes	Yes	Yes	Good			1
840	Owatonna	Yes	No	Yes	4.8	1	0.9	Yes	No	2.3	Yes	No			Good			0
841	Owatonna	Yes	No	Yes	4.2	1	1.4	Yes	Yes	1.8	Yes	No			Good			0
842	Owatonna	Yes	No	Yes	3.0	1	0.6	Yes	Yes	1.9	Yes	No			Good			0
843	Owatonna	Yes	No	No	9.6	1	0.8	Yes	No	2.9	Yes	No			Good			0
844	Owatonna	Yes	No	Yes	5.1	No	3.8	Yes	No	2.9	Yes	No			Good			0
845	Owatonna	Yes	No	Yes	0.5	1	1.4	Yes	Yes	1.4	Yes	No			Good			0
846	Owatonna	Yes	No	Yes	3.4	No	3.7	Yes	Yes	1.6	No	No			Good			0
847	Owatonna	Yes	No	Yes	1.1	No	2.2	Yes	Yes	1.8	Yes	Yes	No	Yes	Fair	Ponding		0
848	Owatonna	Yes	No	Yes	2.7	No	4.7	No	Yes	1.7	Yes	Yes	No	Yes	Fair	Some vegetation		0
849	Owatonna	Yes	No	Yes	0.9	No	3.4	Yes	Yes	1.7	Yes	Yes	No	Yes	Fair	Ponding		0
850	Owatonna	Yes	No	Yes	2.7	1	0.4	Yes	Yes	1.5	Yes	No			Good			0
851	Owatonna	Yes	No	Yes	5.6	No	2.8	Yes	Yes	2.0	Yes	No			Fair		Crack and small ponding	0
852	Owatonna	Yes	Yes	Yes	3.1	1	1.3	Yes	Yes	1.3		Yes			Good	No flares needed		1
853	Owatonna	Yes	Yes	Yes	4.7	1	1.3	Yes	No	2.4		N/A			Fair	No flares needed	Some cracking	0
854	Owatonna	Yes	Yes	Yes	5.0	No	5.0	Yes	No	3.6		N/A			Good	No flares needed		0
855	Owatonna	Yes	Yes	Yes	4.9	No	2.8	Yes	No	4.7		N/A			Good	No flares needed		0
856	Owatonna	Yes	Yes	Yes	2.2	No	7.0	Yes	No	4.5		N/A			Good	No flares needed		0
857	Owatonna	Yes	Yes	Yes	5.7	No	5.4	Yes	Yes	1.6		N/A			Good	No flares needed		0
858	Owatonna	Yes	No	Yes	2.3	1	0.4	Yes	Yes	0.8	Yes	Yes	Yes	Yes	Good	Ponding		1
859	Owatonna	Yes	No	Yes	4.4	1	1.0	Yes	Yes	0.6	Yes	Yes	Yes	Yes	Good			1
860	Owatonna	Yes	No	Yes	3.9	1	0.3	Yes	Yes	0.6	Yes	Yes	Yes	Yes	Good			1
861	Owatonna	Yes	Yes	Yes	1.9	0	1.9	Yes	Yes	1.9		N/A			Good	No flares needed		1
862	Owatonna	Yes	Yes	Yes	4.8	No	2.8	Yes	No	2.5		N/A			Good	No flares needed		0
863	Owatonna	Yes	No	Yes	8.3	No	3.5	No	No	2.8	No	No			Good		Man hole	0
864	Owatonna	Yes	No	Yes	4.0	1	0.4	No	Yes	1.3	Yes	No			Good			0
865	Owatonna	Yes	No	Yes	5.4	1	1.4	Yes	Yes	0.9	Yes	No			Good			0
866	Owatonna	Yes	No	Yes	3.4	1	0.3	Yes	Yes	1.9	Yes	Yes	Yes	Yes	Good			1
867	Owatonna	Yes	No	Yes	3.3	No	2.9	Yes	Yes	1.7	Yes	No			Good			0
868	Owatonna	Yes	No	Yes	6.5	No	2.7	Yes	Yes	1.4	Yes	No			Good			0
869	Owatonna	Yes	Yes	Yes	3.7	No	2.3	Yes	Yes	0.8		N/A			Fair	No flares needed	Gap in elevation	0
870	Owatonna	Yes	Yes	Yes	2.9	No	2.4	Yes	Yes	1.6		N/A			Good	No flares needed	Crack	0
871	Owatonna	Yes	No	Yes	1.6	1	0.5	Yes	Yes	1.6	Yes	Yes	Yes	Yes	Good			1

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872	Owatonna	Yes	No	Yes	0.8	1	1.0	Yes	Yes	1.0	Yes	Yes	Yes	Yes	Good			1
873	Owatonna	Yes	Yes	Yes	1.0	No	4.4	Yes	Yes	1.7		N/A			Good	No flares needed		0
874	Owatonna	Yes	Yes	Yes	3.3	No	3.5	Yes	No	3.4		N/A			Fair	No flares needed	Some ponding	0
875	Owatonna	Yes	No	Yes	5.0	No	2.4	Yes	No	3.9	Yes	No			Good		Broken flare	0
876	Owatonna	Yes	No	Yes	7.2	1	0.0	Yes	Yes	1.8	No	No			Fair	Ponding	Broken flares	0
877	Owatonna	Yes	No	No	9.1	1	1.1	Yes	Yes	0.8	Yes	No			Good			0
878	Owatonna	Yes	Yes	Yes	0.2	1	0.9	Yes	Yes	0.9		N/A			Good	No flares needed		1
879	Owatonna	Yes	Yes	Yes	5.1	No	3.6	Yes	No	3.2		N/A			Good	No flares needed		0
880	Owatonna	Yes	No	Yes	1.6	1	0.5	Yes	Yes	1.6	Yes	Yes	Yes	Yes	Good			1
881	Owatonna	Yes	No	Yes	3.7	1	0.4	Yes	Yes	0.9	Yes	Yes	Yes	Yes	Good			1
882	Owatonna	Yes	No	Yes	4.0	1	0.8	Yes	Yes	0.9	Yes	Yes	Yes	Yes	Good			1
883	Owatonna	Yes	Yes	Yes	1.8	No	4.0	Yes	No	3.1		N/A			Fair	No flares needed	Crack	0
884	Owatonna	Yes	Yes	Yes	4.0	0	1.7	Yes	No	4.0		N/A			Fair	No flares needed	Crack	0
885	Owatonna	Yes	No	Yes	2.8	1	0.2	Yes	Yes	1.8	Yes	Yes	Yes	Yes	Good			1
886	Owatonna	Yes	Yes	Yes	3.3	0	0.2	Yes	Yes	1.0	Yes	Yes	Yes	Yes	Fair	Some cracking		1
887	Owatonna	Yes	Yes	Yes	2.3	No	3.4	Yes	Yes	0.9		N/A			Good	No flares needed		0
888	Owatonna	Yes	Yes	Yes	1.5	No	2.2	Yes	Yes	2.0		N/A			Good	No flares needed		0
889	Owatonna	Yes	No	Yes	1.7	1	0.6	Yes	Yes	1.7	Yes	Yes	Yes	Yes	Good			1
890	Owatonna	Yes	No	Yes	1.8	1	1.1	Yes	Yes	1.8	Yes	Yes	Yes	Yes	Good			1
891	Owatonna	Yes	No	Yes	4.5	1	0.9	Yes	Yes	1.1	Yes	Yes	Yes	Yes	Good			1
892	Owatonna	Yes	No	Yes	4.9	1	0.1	Yes	Yes	0.6	Yes	Yes	Yes	Yes	Good			1
893	Owatonna	Yes	Yes	Yes	4.0	1	0.2	Yes	Yes	0.6	Yes	Yes	Yes	Yes	Good			1
894	Owatonna	Yes	No	Yes	4.1	1	0.4	Yes	Yes	0.8	Yes	Yes	Yes	Yes	Good			1
895	Owatonna	Yes	No	Yes	1.2	1	0.7	Yes	Yes	1.2	Yes	Yes	Yes	Yes	Good			1
896	Owatonna	Yes	No	Yes	2.3	1	0.5	Yes	Yes	0.7	Yes	Yes	Yes	Yes	Good			1
897	Owatonna	Yes	No	Yes	4.4	1	0.3	Yes	Yes	0.7	Yes	Yes	Yes	Yes	Good			1
898	Owatonna	Yes	No	Yes	4.1	1	0.2	Yes	Yes	1.3	Yes	Yes	Yes	Yes	Good			1
899	Owatonna	Yes	No	Yes	3.1	0	0.4	Yes	Yes	0.1	Yes	Yes	Yes	Yes	Good	Under construction	Dirty	1
900	Owatonna	Yes	Yes	Yes	1.9	1	0.9	Yes	Yes	0.9	Yes	Yes	Yes	Yes	Good	Under construction		1
901	Owatonna	Yes	No								No	Yes	Yes	Yes	Good	Under construction		0
902	Owatonna	Yes	No	Yes	1.2	1	0.7	Yes	Yes	1.2	Yes	Yes	Yes	Yes	Good	Under construction		1
903	Owatonna	Yes	No	Yes	0.7	1	0.2	Yes	Yes	0.7		Yes	Yes	Yes	Good	No flares needed	Train track	1
904	Owatonna	Yes	No	Yes	0.3	1	0.7	Yes	Yes	0.7		Yes	Yes	Yes	Good	No flares needed	Train	1
905	Owatonna	Yes	No	Yes	2.5	1	0.2	Yes	Yes	0.5	Yes	Yes	Yes	Yes	Good	Under construction		1
906	Owatonna	Yes	No	Yes	0.3	1	0.8	Yes	Yes	0.5	Yes	Yes	Yes	Yes	Good	Under construction		1
907	Owatonna	Yes	No	Yes	3.9	1	0.0	Yes	Yes	0.7	Yes	Yes	Yes	Yes	Good			1
908	Owatonna	Yes	No	Yes	1.4	1	0.6	Yes	Yes	1.4	Yes	Yes	Yes	Yes	Good	Under construction		1
909	Owatonna	Yes	No	Yes	3.8	1	0.8	Yes	Yes	0.8	Yes	Yes	Yes	Yes	Good	Under construction		1
910	Owatonna	Yes	No	Yes	2.6	1	0.2	Yes	Yes	0.9	Yes	Yes	Yes	Yes	Good	Under construction		1
911	Owatonna	Yes	No	Yes	4.0	1	0.4	Yes	Yes	0.6	Yes	Yes	Yes	Yes	Good	Ponding		1
912	Owatonna	Yes	No	Yes	3.7	1	0.8	Yes	Yes	0.6	Yes	Yes	Yes	Yes	Good	Under construction		1
913	Owatonna	Yes	Yes	Yes	0.7	No	6.6	Yes	No	3.8		N/A			Good	No flares needed		0
914	Owatonna	Yes	Yes	Yes	2.9	1	1.8	Yes	No	2.5		N/A			Good	No flares needed		0
915	Owatonna	Yes	Yes	Yes	0.3	No	4.8	No	No	2.5		N/A			Good	No flares needed		0
916	Owatonna	Yes	Yes	Yes	3.3	No	5.6	Yes	Yes	1.6		N/A			Good	No flares needed		0
917	Owatonna	Yes	Yes	Yes	1.4	No	5.3	Yes	Yes	1.0		N/A			Good	No flares needed		0
918	Owatonna	Yes	Yes	Yes	2.2	No	7.2	Yes	Yes	0.7		N/A			Good	No flares needed		0
919	Owatonna	Yes	Yes	Yes	1.4	No	3.9	Yes	Yes	1.9		N/A			Good	No flares needed		0
920	Owatonna	Yes	Yes	Yes	3.1	0	2.9	Yes	No	2.4		N/A			Good	No flares needed		0
921	Owatonna	Yes	No	Yes	0.8	1	0.9	Yes	Yes	0.9	Yes	Yes	Yes	Yes	Good			1
922	Owatonna	Yes	No	Yes	4.5	1	1.2	Yes	Yes	0.6	Yes	Yes	Yes	Yes	Good	Under construction		1
923	Owatonna	Yes	Yes	Yes	0.8	No	3.0	Yes	No	2.2		N/A			Fair	No flares needed		0
924	Owatonna	Yes	Yes	Yes	0.4	No	6.3	Yes	Yes	1.4		N/A			Good	No flares needed		0
925	Owatonna	Yes	Yes	Yes	3.0	No	3.1	Yes	Yes	1.3		N/A			Good	No flares needed		0
926	Owatonna	Yes	Yes	Yes	1.8	No	3.1	Yes	No	3.0		N/A			Good	No flares needed		0
927	Owatonna	Yes	No	Yes	5.4	1	0.5	Yes	Yes	0.5	Yes	No			Good			0
928	Owatonna	Yes	No	Yes	3.5	1	1.4	Yes	Yes	2.0	Yes	No			Good			0
929	Owatonna	Yes	No	Yes	6.5	No	3.5	Yes	No	2.4	Yes	No			Good		Grate openings	0
930	Owatonna	Yes	No	Yes	4.8	1	1.6	Yes	No	2.4	Yes	No			Good			0
931	Owatonna	Yes	No	Yes	4.0	1	0.8	Yes	Yes	1.0	Yes	No			Good			0
932	Owatonna	Yes	No	Yes	4.3	1	1.6	Yes	Yes	0.8	Yes	No			Good	Ponding		0
933	Owatonna	Yes	Yes	Yes	4.5	1	0.6	Yes	Yes	1.3	Yes	N/A			Good			1
934	Owatonna	Yes	No	Yes	5.2	1	0.4	Yes	Yes	0.2	Yes	No			Good			0
935	Owatonna	Yes	No	Yes	4.5	1	2.0	Yes	Yes	1.4	Yes	No			Good			0
936	Owatonna	Yes	Yes	Yes	2.0	1	1.5	Yes	Yes	2.0		N/A			Good	No flares needed		1
937	Owatonna	Yes	Yes	Yes	3.9	No	2.3	Yes	Yes	1.9		N/A			Good	No flares needed		0
938	Owatonna	Yes	Yes	Yes	0.5	No	5.0	Yes	No	2.2		N/A			Good	No flares needed		0
939	Owatonna	Yes	Yes	Yes	2.4	No	6.0	Yes	Yes	1.5		N/A			Good	No flares needed		0
940	Owatonna	Yes	Yes	Yes	0.0	No	2.8	Yes	Yes	1.5		N/A			Good	No flares needed		0
941	Owatonna	Yes	Yes	Yes	4.4	No	3.2	Yes	Yes	1.4		N/A			Good	No flares needed		0
942	Owatonna	Yes	No	Yes	2.8	1	0.4	Yes	No	2.3	Yes	No	Yes	Yes	Good		One flare	0
943	Owatonna	Yes	No	Yes	1.9	1	0.8	Yes	Yes	1.9	Yes	No	Yes	Yes	Good		One flare	0
944	Owatonna	Yes	No	Yes	0.8	1	0.0	Yes	Yes	0.8	Yes	No	Yes	Yes	Good		One flare, little ponding	0
945	Owatonna	Yes	No	Yes	0.9	1	1.0	Yes	Yes	1.0	Yes	No	Yes	Yes	Good		One flare	0
946	Owatonna	Yes	No	Yes	2.9	1	1.0	Yes	No	2.9	Yes	No	Yes	Yes	Good		One flare	0
947	Owatonna	Yes	No	Yes	1.1	No	2.5	Yes	Yes	0.7	Yes	Yes	Yes	Yes	Fair	Some vegetation		0
948	Owatonna	Yes	No	Yes	0.1	1	2.0	Yes	Yes	2.0	Yes	Yes	Yes	Yes	Fair		Gap in elevation	1
949	Owatonna	Yes	No	Yes	0.5	1	1.3	Yes	Yes	1.3	Yes	Yes	Yes	Yes	Good			1
950	Owatonna	Yes	No	Yes	4.2	1	1.0	Yes	Yes	0.9	Yes	Yes	Yes	Yes	Good			1
951	Owatonna	Yes	No	Yes	4.8	1	0.2	Yes	Yes	0.9	Yes	Yes	Yes	Yes	Good		Some ponding	1
952	Owatonna	Yes	Yes	Yes	5.0	No	5.9	Yes	Yes	2.0		N/A			Good	No flares needed		0

OBJECTID	City	If walk/trail crosses curb, is there a curb ramp?	Is the Curb Ramp at a Driveway	Running slope <= 8.3%?	What is the running slope of the curb ramp?	Cross slope, excluding flares, <= 2%?	What is the cross slope of the curb ramp?	Curb ramp, excluding flares, at least 48in wide?	Landing >= 48in sq with cross slope <2% any dir?	What is the max landing slope?	Curb ramp flares slopes <= 10%?	Detectable warnings full width of the curb ramp?	Approx 75% of truncated domes in good condition?	Truncated domes contrast w/ adjacent surfaces?	Curb Ramp overall condition?	CR Characteristics	Notes	Compliant 1=Compliant
953	Owatonna	Yes	Yes	Yes	3.6	No	6.7	Yes	Yes	1.2		N/A			Good	No flares needed		0
954	Owatonna	Yes	No	Yes	0.5	1	1.2	Yes	Yes	1.2	Yes	Yes	Yes	Yes	Good			1
955	Owatonna	Yes	No	Yes	0.9	1	0.7	Yes	Yes	0.9	Yes	Yes	Yes	Yes	Good			1
956	Owatonna	Yes	Yes	Yes	2.4	No	2.5	Yes	Yes	1.5		N/A			Good	No flares needed		0
957	Owatonna	Yes	Yes	Yes	1.0	No	2.2	Yes	Yes	0.7		N/A			Good	No flares needed		0
958	Owatonna	Yes	No	Yes	1.9	1	0.9	Yes	Yes	1.9	Yes	Yes	Yes	Yes	Good			1
959	Owatonna	Yes	No	Yes	2.3	1	0.1	Yes	Yes	0.6	Yes	Yes	Yes	Yes	Good			1
960	Owatonna	Yes	No	Yes	4.5	1	0.6	Yes	Yes	0.7	Yes	Yes	Yes	Yes	Good			1
961	Owatonna	Yes	No	Yes	4.5	1	0.1	Yes	Yes	0.6	Yes	Yes	Yes	Yes	Good			1
962	Owatonna	Yes	Yes	Yes	3.1	1	0.2	Yes	Yes	1.2	Yes	Yes	Yes	Yes	Good			1
963	Owatonna	Yes	No	Yes	3.7	1	0.5	Yes	Yes	0.9	Yes	Yes	Yes	Yes	Good			1
964	Owatonna	Yes	No	Yes	3.0	1	0.9	Yes	Yes	1.5	Yes	No			Fair	Ponding		0
965	Owatonna	Yes	No	Yes	0.1	1	1.6	Yes	Yes	1.6	Yes	No			Good			0
966	Owatonna	Yes	No	Yes	6.2	No	2.4	Yes	Yes	1.6	Yes	No			Good			0
967	Owatonna	Yes	No	Yes	3.0	1	1.3	Yes	Yes	1.3	Yes	No			Fair	Some vegetation		0
968	Owatonna	Yes	No	Yes	5.1	1	0.8	Yes	Yes	0.6	Yes	Yes	Yes	Yes	Good			1
969	Owatonna	Yes	No	Yes	4.3	No	3.9	Yes	Yes	1.4	Yes	Yes	Yes	Yes	Fair	Ponding		0
970	Owatonna	Yes	Yes	Yes	2.3	No	3.2	Yes	Yes	0.9		N/A			Good	No flares needed		0
971	Owatonna	Yes	Yes	Yes	0.3	No	3.4	Yes	Yes	1.4		N/A			Good	No flares needed		0
972	Owatonna	Yes	No	Yes	5.9	1	0.3	Yes	Yes	1.6	Yes	Yes	Yes	Yes	Good	Some ponding and vegetation		1
973	Owatonna	Yes	No	Yes	4.1	1	1.1	Yes	Yes	1.5	Yes	Yes	Yes	Yes	Poor	Some ponding and vegetation		0
974	Owatonna	Yes	No	Yes	3.3	1	1.0	No	No	3.0	Yes	Yes	Yes	Yes	Fair	Some vegetation		0
975	Owatonna	Yes	No	Yes	6.0	1	1.0	Yes	Yes	1.6	Yes	Yes	Yes	Yes	Good			1
976	Owatonna	Yes	No	Yes	4.0	No	3.7	Yes	Yes	1.5	Yes	Yes	Yes	Yes	Good			0
977	Owatonna	Yes	No	Yes	3.8	No	3.1	Yes	Yes	1.0	Yes	Yes	Yes	Yes	Good		Some branches in the way	0
978	Owatonna	Yes	Yes	Yes	0.6	No	3.7	Yes	Yes	1.4		N/A			Good	No flares needed		0
979	Owatonna	Yes	Yes	Yes	1.7	No	4.8	Yes	Yes	2.0		N/A			Good	No flares needed		0
980	Owatonna	Yes	No	Yes	5.5	No	5.1	Yes	No	3.0	Yes	No			Fair	Some vegetation		0
981	Owatonna	Yes	No	Yes	4.8	1	0.4	Yes	No	2.3	Yes	No			Good			0
982	Owatonna	Yes	Yes	Yes	1.1	1	1.4	Yes	Yes	1.4		Yes	Yes	Yes	Good	No flares needed		1
983	Owatonna	Yes	Yes	Yes	1.1	1	1.1	Yes	Yes	1.1		Yes	Yes	Yes	Good	No flares needed		1
984	Owatonna	Yes	No	Yes	0.8	1	0.6	Yes	Yes	0.8	Yes	No			Poor	Dirt	Ponding?	0
985	Owatonna	Yes	No	Yes	1.8	1	0.4	Yes	Yes	1.8	Yes	No			Fair	Ponding	Ponding in front of aps and no flare on one side. Some veg	0
986	Owatonna	Yes	No	Yes	4.2	No	3.7	Yes	Yes	1.7	Yes	Yes	Yes	Yes	Fair	Some ponding and vegetation	Gap in elevation	0
987	Owatonna	Yes	No	Yes	2.3	No	2.2	Yes	Yes	1.5	Yes	No			Good			0
988	Owatonna	Yes	No	Yes	4.4	1	1.4	Yes	No	2.3	Yes	No			Fair	Some vegetation		0
989	Owatonna	Yes	No	Yes	1.4	No	3.1	Yes	Yes	2.0	Yes	No			Good			0
990	Owatonna	Yes	No	Yes	3.6	1	0.6	Yes	Yes	0.9	Yes	No			Fair	Ponding		0
991	Owatonna	Yes	No	Yes	1.5	1	0.7	Yes	Yes	1.5		Yes	Yes	Yes	Poor	No flares	Lots of rocks	0
992	Owatonna	Yes	No	Yes	0.5	1	0.6	Yes	Yes	0.6	Yes	Yes	Yes	Yes	Good		Some rocks	1
993	Owatonna	Yes	No	Yes	0.8	1	0.4	Yes	Yes	0.8	Yes	Yes	Yes	Yes	Fair	Ponding		1
994	Owatonna	Yes	No	Yes	0.4	1	0.5	Yes	Yes	0.5	Yes	Yes	Yes	Yes	Good		Some ponding/ sand	1
995	Owatonna	Yes	No	Yes	0.8	1	1.0	Yes	Yes	1.0	Yes	Yes	Yes	Yes	Good			1
996	Owatonna	Yes	No	Yes	0.2	1	0.0	Yes	Yes	0.0	Yes	Yes	Yes	Yes	Good			1
997	Owatonna	Yes	No	Yes	1.8	1	0.0	Yes	Yes	1.8		Yes	Yes	Yes	Good	No flares		1
998	Owatonna	Yes	No	Yes	0.1	1	0.5	Yes	Yes	0.5		Yes	Yes	Yes	Poor	No flares	Ponding/ lots of sand	0
999	Owatonna	Yes	No	Yes	1.7	1	0.4	Yes	Yes	1.7	Yes	Yes	Yes	Yes	Good			1
1000	Owatonna	Yes	Yes	Yes	0.8	No	3.5	Yes	Yes	1.2		N/A			Fair	No flares needed	Some veg	0
1001	Owatonna	Yes	Yes	Yes	0.1	No	3.2	Yes	Yes	1.3		N/A			Good	No flares needed		0
1002	Owatonna	Yes	Yes	Yes	0.3	1	1.0	Yes	Yes	1.0		N/A			Good	No flares needed		1
1003	Owatonna	Yes	Yes	Yes	0.6	1	0.6	Yes	Yes	0.6		N/A			Good	No flares needed		1
1004	Owatonna	Yes	No	Yes	0.3	1	0.7	Yes	Yes	0.7		No			Fair	No flares	Ponding	0
1005	Owatonna	Yes	No	Yes	3.8	1	0.2	Yes	Yes	0.9	Yes	Yes	Yes	Yes	Fair	Some ponding and vegetation	Gap	1
1006	Owatonna	Yes	No	Yes	5.0	No	3.2	Yes	No	5.0	No	No			Fair	Some vegetation		0
1007	Owatonna	Yes	No	Yes	2.5	1	1.5	Yes	No	2.6	Yes	No			Fair	Some ponding and vegetation		0
1008	Owatonna	Yes	No	Yes	0.8	1	0.0	Yes	Yes	0.8	Yes	Yes	Yes	Yes	Good			1
1009	Owatonna	Yes	No	Yes	5.2	1	0.7	Yes	Yes	0.6	Yes	Yes	Yes	Yes	Good			1
1010	Owatonna	Yes	No	Yes	0.7	1	0.2	Yes	Yes	0.7	Yes	Yes	Yes	Yes	Good			1
1011	Owatonna	Yes	No	Yes	0.1	1	0.8	Yes	Yes	0.8	Yes	Yes	Yes	Yes	Good			1
1012	Owatonna	Yes	No	Yes	4.3	1	0.2	Yes	Yes	0.7	Yes	Yes	Yes	Yes	Fair	Ponding		1
1013	Owatonna	Yes	No	Yes	2.3	1	0.8	Yes	Yes	0.7	Yes	Yes	Yes	Yes	Fair	Ponding		1
1014	Owatonna	Yes	No	Yes	0.6	1	0.7	Yes	Yes	0.7	Yes	Yes	Yes	Yes	Good			1
1015	Owatonna	Yes	No	Yes	0.6	1	0.6	Yes	Yes	0.6	Yes	Yes	Yes	Yes	Good			1
1016	Owatonna	Yes	No	Yes	1.9	1	1.0	Yes	Yes	1.9	Yes	Yes	Yes	Yes	Fair	Ponding		1
1017	Owatonna	Yes	No	Yes	1.0	1	0.6	Yes	Yes	1.0	Yes	Yes	Yes	Yes	Good			1
1018	Owatonna	Yes	No	Yes	1.7	1	1.4	Yes	Yes	1.7	Yes	Yes	Yes	Yes	Good			1
1019	Owatonna	Yes	No	Yes	1.9	1	0.9	Yes	Yes	1.9	Yes	Yes	Yes	Yes	Good			1
1020	Owatonna	Yes	No	Yes	4.0	1	0.7	Yes	Yes	0.5	Yes	Yes	Yes	Yes	Good			1
1021	Owatonna	Yes	No	Yes	1.3	1	0.9	Yes	Yes	1.3	Yes	Yes	Yes	Yes	Fair	Dirt		1
1022	Owatonna	Yes	No	Yes	0.7	1	1.2	Yes	Yes	1.2	Yes	Yes	Yes	Yes	Good			1
1023	Owatonna	Yes	No	Yes	0.9	1	1.1	Yes	Yes	1.1	Yes	Yes	Yes	Yes	Good			1
1024	Owatonna	Yes	No	Yes	3.8	No	2.6	Yes	Yes	1.6	Yes	No	Yes	Yes	Good		Man hole	0
1025	Owatonna	Yes	No	Yes	1.1	1	0.5	Yes	Yes	1.1	Yes	Yes	Yes	Yes	Fair	Some vegetation		1
1026	Owatonna	Yes	No	Yes	2.7	1	0.5	Yes	Yes	0.6	Yes	Yes	Yes	Yes	Fair	Some vegetation		1
1027	Owatonna	Yes	No	Yes	2.2	1	0.8	Yes	Yes	0.2	Yes	Yes	Yes	Yes	Good			1
1028	Owatonna	Yes	No	Yes	2.2	1	0.4	Yes	Yes	0.7	Yes	No	Yes	Yes	Good			0
1029	Owatonna	Yes	No	Yes	1.2	1	0.3	Yes	Yes	1.2	Yes	No	Yes	Yes	Fair	Some cracking		0
1030	Owatonna	Yes	Yes	Yes	2.4	No	2.8	Yes	No	2.4		N/A			Good	No flares needed		0
1031	Owatonna	Yes	Yes	Yes	2.0	No	4.5	Yes	Yes	1.4		N/A			Good	No flares needed		0
1032	Owatonna	Yes	Yes	Yes	2.4	No	3.5	Yes	Yes	1.1		N/A			Good	No flares needed		0
1033	Owatonna	Yes	Yes	Yes	1.2	No	2.9	Yes	Yes	1.6		N/A			Good	No flares needed		0

OBJECTID	City	If walk/trail crosses curb, is there a curb ramp?	Is the Curb Ramp at a Driveway	Running slope <= 8.3%?	What is the running slope of the curb ramp?	Cross slope, excluding flares, <= 2%?	What is the cross slope of the curb ramp?	Curb ramp, excluding flares, at least 48in wide?	Landing >= 48in sq with cross slope <2% any dir?	What is the max landing slope?	Curb ramp flares slopes <= 10%?	Detectable warnings full width of the curb ramp?	Approx 75% of truncated domes in good condition?	Truncated domes contrast w/ adjacent surfaces?	Curb Ramp overall condition?	CR_Characteristics	Notes	Compliant 1=Compliant
1034	Owatonna	Yes	Yes	Yes	3.6	1	1.3	Yes	Yes	0.4	Yes	Yes	Yes	Yes	Good		Man hole	1
1035	Owatonna	Yes	No	Yes	1.9	No	3.0	Yes	Yes	2.0	Yes	No	Yes	Yes	Good			0
1036	Owatonna	Yes	No	Yes	0.7	1	1.7	Yes	Yes	1.7	Yes	No	Yes	Yes	Fair	Some vegetation		0
1037	Owatonna	Yes	No	Yes	0.9	1	0.2	Yes	Yes	0.9	Yes	No	Yes	Yes	Good		One flare	0
1038	Owatonna	Yes	No	Yes	1.3	1	1.8	Yes	Yes	1.8	Yes	Yes	Yes	Yes	Good			1
1039	Owatonna	Yes	No	Yes	3.2	No	2.4	Yes	Yes	0.9	Yes	Yes	Yes	Yes	Good		Small man hole	0
1040	Owatonna	Yes	No	Yes	3.5	No	2.2	Yes	Yes	1.8	Yes	Yes	Yes	Yes	Good			0
1041	Owatonna	Yes	No	Yes	2.9	1	0.8	Yes	Yes	1.9	Yes	No	Yes	Yes	Good		Should be 2 curb ramps	0
1042	Owatonna	Yes	No	Yes	3.0	1	1.9	Yes	Yes	1.0	Yes	Yes	Yes	Yes	Good		Small man hole	1
1043	Owatonna	Yes	No	Yes	1.5	No	4.1	Yes	Yes	1.8	Yes	Yes	Yes	Yes	Good		Small man hole	0
1044	Owatonna	Yes	Yes	Yes	0.7	No	2.8	Yes	Yes	1.4		N/A			Good	No flares needed		0
1045	Owatonna	Yes	Yes	Yes	0.0	No	3.0	Yes	Yes	1.5		N/A			Good	No flares needed		0
1046	Owatonna	Yes	No	Yes	2.6	No	3.4	Yes	Yes	1.3	Yes	Yes	Yes	Yes	Fair	Some vegetation	Grate openings and gap by flare	0

TOTAL:	823
# Compliant:	214
% Compliant:	26%

OBJECTID	City	Is the route stable and slip-resistant?	Is the route at least 48in wide?	If >200ft x <60in, is there 60"x60" passing space?	If grates or openings, openings <= 0.5in?	Long dim of grate opening perpendicular to direction travel?	Running slope <= 5% or slope of parallel roadway?	What is the running slope?	Is the cross slope no steeper than 2%?	SW_Cross_slope	Are there no gaps in elevations or distances between concrete panels > 1.5?	Sidewalk overall condition	Are there any obstructions or ponding?	Does the sidewalk have any other characteristics?	Notes	Compliant 1=Compliant
2	Medford	Yes	Yes	N/A	N/A	N/A	Yes	0.7	Yes	1.8	Yes	Good				1
3	Medford	Yes	Yes	N/A	N/A	N/A	Yes	1.2	No	2.2	Yes	Good				0
4	Medford	Yes	Yes	N/A	N/A	N/A	Yes	0.8	Yes	1.0	Yes	Good				1
5	Medford	Yes	Yes	N/A	N/A	N/A	Yes	2.4	Yes	1.9	Yes	Good				1
6	Medford	Yes	Yes	N/A	N/A	N/A	Yes	1.9	Yes	0.5	Yes	Good				1
7	Medford	Yes	Yes	N/A	N/A	N/A	Yes	1.6	Yes	0.5	Yes	Good				1
8	Medford	Yes	Yes	N/A	N/A	N/A	Yes	0.3	Yes	0.7	No	Poor	Ponding	Some ponding and vegetation	Elevation gap getting on bridge	0
9	Medford	Yes	Yes	N/A	N/A	N/A	Yes	2.7	Yes	1.7	No	Good		Bridge		0
10	Medford	Yes	Yes	N/A	N/A	N/A	No	5.9	Yes	1.8	No	Poor	Ponding	Some ponding and vegetation	Bad elevation gap to bridge	0
11	Medford	Yes	Yes	N/A	N/A	N/A	Yes	3.0	No	2.9	Yes	Good				0
12	Medford	Yes	Yes	N/A	N/A	N/A	Yes	4.7	Yes	1.1	No	Good				0
13	Medford	Yes	Yes	N/A	N/A	N/A	Yes	1.2	Yes	1.8	Yes	Fair	Ponding	Bridge	Some ponding and vegetation on ends of bridge	1
14	Medford	Yes	Yes	N/A	N/A	N/A	Yes	0.2	No	2.7	Yes	Good				0
15	Medford	Yes	Yes	N/A	N/A	N/A	Yes	1.2	Yes	0.4	Yes	Good			Median	1
16	Medford	Yes	Yes	N/A	N/A	N/A	Yes	0.6	Yes	0.9	Yes	Fair		Some vegetation		1
17	Medford	Yes	Yes	N/A	N/A	N/A	Yes	2.7	Yes	1.7	Yes	Good				1
18	Medford	Yes	Yes	N/A	N/A	N/A	Yes	0.9	Yes	0.2	Yes	Fair		Heavy vegetation	Heavy vegetation in parts	1
19	Medford	Yes	Yes	N/A	N/A	N/A	Yes	2.7	Yes	0.0	Yes	Fair		Heavy vegetation		1
20	Medford	Yes	Yes	N/A	N/A	N/A	Yes	0.1	Yes	1.6	Yes	Good	Ponding	Ponding		1
21	Medford	Yes	Yes	N/A	N/A	N/A	Yes	0.8	Yes	1.8	Yes	Good				1
22	Medford	No	Yes	N/A	N/A	N/A	Yes	2.3	Yes	0.6	Yes	Poor		Heavy vegetation	Abandoned railroad tracks	0
23	Medford	Yes	Yes	N/A	N/A	N/A	Yes	0.8	No	6.6	Yes	Good				0
24	Medford	Yes	Yes	N/A	N/A	N/A	Yes	1.2	No	3.1	Yes	Good				0
25	Medford	Yes	Yes	N/A	N/A	N/A	Yes	0.2	Yes	1.3	Yes	Good	Obstruction	Low branches		1
26	Medford	Yes	Yes	N/A	N/A	N/A	Yes	1.7	No	3.4	No	Poor	Ponding	Some cracking and vegetation		0
27	Medford	Yes	Yes	N/A	N/A	N/A	Yes	4.5	Yes	0.4	Yes	Fair		Extensive cracking		1
28	Medford	Yes	Yes	N/A	N/A	N/A	Yes	0.7	Yes	0.9	Yes	Fair	Ponding	Ponding	One panel features ponding (depressed)	0
29	Medford	Yes	Yes	N/A	N/A	N/A	Yes	1.4	No	4.0	No	Good				0
30	Medford	Yes	Yes	N/A	N/A	N/A	Yes	1.0	No	2.7	Yes	Good				0
31	Medford	Yes	Yes	N/A	N/A	N/A	Yes	1.1	No	6.8	Yes	Good				0
32	Medford	Yes	Yes	N/A	N/A	N/A	No	6.8	No	2.2	Yes	Good		Some vegetation		0
33	Medford	Yes	Yes	N/A	N/A	N/A	Yes	4.1	No	2.2	Yes	Good				0
34	Medford	Yes	Yes	N/A	N/A	N/A	No	6.2	Yes	1.1	No	Good		Some vegetation		0
35	Medford	Yes	No	No	N/A	N/A	No	23.7	No	2.7	No	Fair		Some cracking and vegetation		0
36	Blooming Prairie	Yes	Yes	N/A	N/A	N/A	Yes	2.2	Yes	2.0	Yes	Good				1
37	Blooming Prairie	Yes	Yes	N/A	N/A	N/A	Yes	1.5	No	2.2	Yes	Fair		Extensive cracking	Driveway	0
38	Blooming Prairie	Yes	Yes	N/A	N/A	N/A	Yes	1.1	No	3.3	Yes	Good				0
39	Blooming Prairie	Yes	Yes	N/A	N/A	N/A	Yes	0.3	Yes	2.0	No	Fair				0
40	Blooming Prairie	Yes	Yes	N/A	N/A	N/A	Yes	0.8	Yes	0.5	Yes	Good				1
41	Blooming Prairie	Yes	Yes	N/A	N/A	N/A	Yes	1.1	Yes	1.1	Yes	Good		Some vegetation	Passing space	1
42	Blooming Prairie	Yes	No	Yes	N/A	N/A	Yes	0.3	Yes	0.3	Yes	Fair		Extensive cracking		0
43	Blooming Prairie	Yes	Yes	N/A	N/A	N/A	Yes	1.2	Yes	0.9	Yes	Good				1
44	Blooming Prairie	Yes	Yes	N/A	N/A	N/A	No	7.7	No	2.7	Yes	Poor		Some cracking and vegetation	Bad vegetation	0
45	Blooming Prairie	Yes	No	N/A	N/A	N/A	Yes	2.3	No	3.6	Yes	Fair		Heavy vegetation		0
46	Blooming Prairie	Yes	Yes	N/A	N/A	N/A	Yes	0.8	No	5.3	Yes	Good			Driveway	0
47	Blooming Prairie	Yes	No	N/A	N/A	N/A	Yes	0.8	No	3.7	Yes	Fair		Some vegetation		0
48	Blooming Prairie	Yes	Yes	N/A	N/A	N/A	Yes	0.6	No	5.1	No	Poor		Extensive cracking	Driveway	0
49	Blooming Prairie	Yes	Yes	N/A	N/A	N/A	Yes	0.2	Yes	1.6	No	Poor	Obstruction	Some vegetation		0
50	Blooming Prairie	Yes	No	N/A	N/A	N/A	Yes	0.5	No	7.3	Yes	Fair	Ponding	Ponding		0
51	Blooming Prairie	Yes	Yes	N/A	N/A	N/A	Yes	0.5	No	10.3	Yes	Good			Driveway	0
52	Blooming Prairie	Yes	Yes	N/A	N/A	N/A	Yes	0.2	No	7.6	Yes	Fair	Ponding	Ponding		0
53	Blooming Prairie	Yes	Yes	N/A	N/A	N/A	Yes	2.0	No	14.6	Yes	Good			Driveway	0
54	Blooming Prairie	Yes	Yes	N/A	N/A	N/A	Yes	0.3	No	3.3	Yes	Good				0
55	Blooming Prairie	Yes	Yes	N/A	N/A	N/A	Yes	0.7	No	13.3	Yes	Good			Driveway	0
56	Blooming Prairie	Yes	No	N/A	N/A	N/A	Yes	0.7	No	5.0	Yes	Good				0
57	Blooming Prairie	Yes	Yes	N/A	N/A	N/A	Yes	1.2	No	2.4	Yes	Good		Low branches		0
58	Blooming Prairie	Yes	Yes	N/A	N/A	N/A	Yes	0.9	No	2.4	Yes	Good		Some vegetation		0
59	Blooming Prairie	Yes	Yes	N/A	N/A	N/A	Yes	0.5	Yes	0.8	Yes	Good				1
60	Blooming Prairie	Yes	Yes	N/A	N/A	N/A	Yes	0.6	Yes	1.1	Yes	Good		Roots under pavement		1
61	Blooming Prairie	Yes	Yes	N/A	N/A	N/A	Yes	1.0	Yes	0.8	Yes	Good				1
62	Blooming Prairie	Yes	Yes	N/A	N/A	N/A	Yes	1.5	No	2.5	Yes	Good				0
63	Blooming Prairie	Yes	Yes	N/A	N/A	N/A	Yes	0.2	Yes	0.8	Yes	Good				1
64	Blooming Prairie	Yes	Yes	N/A	N/A	N/A	Yes	0.3	Yes	1.3	Yes	Good		Man hole		1
65	Blooming Prairie	Yes	Yes	N/A	N/A	N/A	Yes	0.1	Yes	1.8	No	Good		Some vegetation		0
66	Blooming Prairie	Yes	No	N/A	N/A	N/A	Yes	0.1	Yes	0.7	Yes	Good				0
67	Blooming Prairie	Yes	Yes	N/A	N/A	N/A	Yes	0.1	Yes	0.3	Yes	Good				1
68	Blooming Prairie	Yes	Yes	N/A	N/A	N/A	Yes	2.0	Yes	0.5	No	Poor	Obstruction		Train Tracks	0
69	Blooming Prairie	Yes	Yes	N/A	N/A	N/A	Yes	0.1	Yes	1.6	Yes	Good	Ponding	Excessive sand collected in walk	Excessive sand collected in walk	0
70	Blooming Prairie	Yes	Yes	N/A	N/A	N/A	Yes	3.3	No	2.7	Yes	Good				0

OBJECTID	City	Is the route stable and slip-resistant?	Is the route at least 48in wide?	If >200ft x <60in, is there 60"x60" passing space?	If grates or openings, openings <= 0.5in?	Long dim of grate opening perpendicular to direction travel?	Running slope <= 5% or slope of parallel roadway?	What is the running slope?	Is the cross slope no steeper than 2%?	SW_Cross_slope	Are there no gaps in elevations or distances between concrete panels > 1.5?	Sidewalk overall condition	Are there any obstructions or ponding?	Does the sidewalk have any other characteristics?	Notes	Compliant 1=Compliant
71	Blooming Prairie	Yes	Yes	N/A	N/A	N/A	Yes	0.5	Yes	0.7	Yes	Good				1
72	Blooming Prairie	Yes	Yes	N/A	N/A	N/A	Yes	1.5	Yes	0.9	Yes	Good				1
73	Blooming Prairie	Yes	Yes	N/A	N/A	N/A	Yes	0.7	Yes	0.8	Yes	Good				1
74	Blooming Prairie	Yes	Yes	N/A	N/A	N/A	Yes	0.2	Yes	0.9	Yes	Good				1
75	Blooming Prairie	Yes	Yes	N/A	N/A	N/A	Yes	0.0	Yes	1.0	Yes	Good				1
76	Blooming Prairie	Yes	Yes	N/A	N/A	N/A	Yes	0.0	Yes	1.0	Yes	Good				1
77	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.9	Yes	0.6	Yes	Good				1
78	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.9	Yes	0.6	Yes	Good		Ponding		1
79	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	4.3	Yes	0.4	Yes	Good				1
80	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.6	Yes	0.4	Yes	Good		Man hole		1
81	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.1	Yes	0.6	Yes	Good				1
82	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.8	Yes	1.1	Yes	Good				1
83	Owatonna	Yes	No	N/A	N/A	N/A	Yes	1.1	Yes	1.1	Yes	Good				0
84	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.3	Yes	0.9	Yes	Good				1
85	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.4	No	4.6	Yes	Fair		Man hole		0
86	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.0	Yes	1.4	Yes	Good				1
87	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.4	No	5.8	Yes	Good		Driveway		0
88	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.6	Yes	1.9	Yes	Good		Some vegetation		1
89	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.1	No	5.1	Yes	Good		Driveway		0
90	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.3	Yes	1.2	Yes	Good				1
91	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.0	Yes	1.4	Yes	Fair		Some vegetation		1
92	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.4	Yes	0.6	Yes	Good				1
93	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.0	No	3.9	Yes	Good		Driveway		0
94	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.5	Yes	0.7	Yes	Good				1
95	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.8	No	4.2	Yes	Good		Driveway		0
96	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.3	Yes	1.3	Yes	Good				1
97	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.4	No	5.3	Yes	Good		Driveway		0
98	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.2	Yes	1.7	Yes	Good				1
99	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.0	No	4.9	Yes	Good		Driveway		0
100	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.2	Yes	1.4	Yes	Fair		Man hole	Bad gap in elevation	1
101	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.8	No	4.1	Yes	Good		Driveway		0
102	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.1	Yes	1.4	Yes	Good				1
103	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.6	No	2.8	Yes	Good				0
104	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.6	No	4.4	Yes	Good		Driveway		0
105	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.1	No	3.7	Yes	Good				0
106	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.1	No	5.6	Yes	Good		Driveway		0
107	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.4	No	2.7	Yes	Good				0
108	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.8	No	6.0	Yes	Good		Driveway		0
109	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.6	No	2.5	Yes	Good				0
110	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.4	No	6.7	Yes	Good		Driveway		0
111	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.6	No	2.2	Yes	Good		Some vegetation		0
112	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.2	No	5.2	Yes	Fair	Ponding	Driveway		0
113	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.8	Yes	1.4	Yes	Good				1
114	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.1	No	5.6	Yes	Good		Driveway		0
115	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.7	No	3.9	Yes	Good				0
116	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.0	No	5.4	Yes	Good		Driveway		0
117	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.5	No	2.4	Yes	Good				0
118	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.3	No	3.8	Yes	Good		Driveway		0
119	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.3	Yes	0.9	Yes	Good	Ponding			1
120	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.6	No	4.4	Yes	Fair		Driveway	Cracking	0
121	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.1	Yes	1.9	Yes	Good				1
122	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.8	No	4.0	Yes	Good		Driveway		0
123	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.4	No	2.8	No	Good				0
124	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.3	No	4.5	Yes	Good		Driveway		0
125	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.0	No	2.1	Yes	Good				0
126	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.3	No	4.9	Yes	Good		Driveway		0
127	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.3	No	2.4	Yes	Good				0
128	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.2	No	5.2	Yes	Good		Driveway		0
129	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.5	No	2.8	Yes	Good		Man hole		0
130	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.1	No	4.7	Yes	Good		Driveway		0
131	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.3	Yes	1.0	Yes	Good				1
132	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.4	No	4.0	Yes	Good		Driveway		0
133	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.1	Yes	0.4	Yes	Good				1
134	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.1	No	2.8	Yes	Good		Driveway		0
135	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.0	Yes	0.6	No	Good				0
136	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.8	No	3.4	Yes	Good		Driveway		0
137	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.0	No	3.3	Yes	Good		Driveway		0
138	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.0	No	4.2	Yes	Good		Driveway		0
139	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.0	No	5.0	Yes	Good		Driveway		0

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170	Ellendale	Yes	Yes	N/A	N/A	N/A	Yes	3.3	No	4.8	Yes	Good		Driveway		0
171	Ellendale	Yes	Yes	N/A	N/A	N/A	Yes	5.2	No	2.4	Yes	Fair	Ponding	Some vegetation		0
172	Ellendale	Yes	Yes	N/A	N/A	N/A	Yes	1.0	Yes	1.2	Yes	Fair	Ponding	Some vegetation		1
173	Hope	Yes	Yes	N/A	N/A	N/A	Yes	0.2	Yes	0.4	Yes	Good		Some vegetation		1
174	Hope	Yes	Yes	N/A	N/A	N/A	Yes	0.3	No	3.2	Yes	Good		Driveway		0
175	Hope	Yes	Yes	N/A	N/A	N/A	Yes	0.3	No	2.4	Yes	Good		Some vegetation		0
176	Hope	Yes	Yes	N/A	N/A	N/A	Yes	0.2	No	2.5	Yes	Good		Driveway		0
177	Hope	Yes	Yes	N/A	N/A	N/A	Yes	0.6	Yes	0.8	Yes	Good	Obstruction			1
178	Hope	Yes	Yes	N/A	N/A	N/A	Yes	0.3	No	2.4	Yes	Good		Man hole		0
179	Hope	Yes	Yes	N/A	N/A	N/A	Yes	0.4	Yes	1.0	Yes	Good		Driveway		1
180	Hope	Yes	Yes	N/A	N/A	N/A	Yes	0.3	Yes	1.4	Yes	Good		Some vegetation		1
181	Hope	Yes	Yes	N/A	N/A	N/A	Yes	0.4	No	3.5	Yes	Good		Driveway		0
182	Hope	Yes	Yes	N/A	N/A	N/A	Yes	0.7	Yes	1.9	Yes	Good		Some vegetation		1
183	Hope	Yes	Yes	N/A	N/A	N/A	Yes	0.5	No	3.2	Yes	Good		Driveway		0
184	Hope	Yes	Yes	N/A	N/A	N/A	Yes	0.2	No	2.5	No	Good				0
185	Blooming Prairie	Yes	Yes	N/A	N/A	N/A	Yes	1.0	Yes	0.4	Yes	Good				1
186	Blooming Prairie	Yes	Yes	N/A	N/A	N/A	Yes	0.6	No	2.1	Yes	Good				0
187	Blooming Prairie	Yes	Yes	N/A	N/A	N/A	Yes	1.0	Yes	0.1	Yes	Good				1
188	Blooming Prairie	Yes	Yes	N/A	N/A	N/A	Yes	0.3	Yes	1.2	Yes	Good				1
189	Blooming Prairie	Yes	Yes	N/A	N/A	N/A	Yes	0.7	Yes	1.0	Yes	Poor		Pavement damage	Driveway	0
190	Blooming Prairie	Yes	Yes	N/A	N/A	N/A	Yes	0.2	Yes	0.5	Yes	Good				1
191	Blooming Prairie	Yes	Yes	N/A	N/A	N/A	Yes	0.3	Yes	0.7	Yes	Good				1
192	Blooming Prairie	Yes	Yes	N/A	N/A	N/A	Yes	0.4	Yes	1.3	Yes	Poor		Pavement damage	Driveway	0
193	Blooming Prairie	Yes	Yes	N/A	N/A	N/A	Yes	0.2	Yes	1.0	Yes	Fair	Obstruction	Some vegetation	Big garbage dumpster blocking path	1
194	Blooming Prairie	Yes	Yes	N/A	N/A	N/A	Yes	3.2	No	2.7	No	Fair				0
195	Blooming Prairie	Yes	No	N/A	N/A	N/A	Yes	0.0	Yes	2.0	No	Poor		Man hole		0
196	Blooming Prairie	Yes	Yes	N/A	N/A	N/A	Yes	0.1	Yes	1.1	Yes	Fair		Man hole	Some vegetation	1
197	Blooming Prairie	Yes	Yes	N/A	N/A	N/A	Yes	0.8	No	3.0	Yes	Good				0
198	Blooming Prairie	Yes	Yes	N/A	N/A	N/A	Yes	0.6	No	3.0	No	Fair		Extensive cracking	Driveway	0
199	Blooming Prairie	Yes	No	N/A	N/A	N/A	Yes	2.9	No	3.0	No	Fair		Some vegetation	Bad elevation gap	0
200	Blooming Prairie	Yes	No	N/A	N/A	N/A	Yes	2.8	No	4.0	No	Poor		Roots under pavement		0
201	Blooming Prairie	Yes	Yes	N/A	N/A	N/A	Yes	0.2	No	5.0	Yes	Good		Driveway		0
202	Blooming Prairie	Yes	Yes	N/A	N/A	N/A	Yes	1.3	Yes	0.8	Yes	Good				1
228	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.5	Yes	1.8	Yes	Good				1
229	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.6	No	2.9	Yes	Good		Driveway		0
230	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.8	Yes	1.6	Yes	Good				1
231	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.0	No	3.0	Yes	Fair	Ponding			0
232	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.6	No	4.9	Yes	Good		Driveway		0
271	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.2	Yes	1.2	Yes	Good				1
272	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.7	Yes	1.6	Yes	Good				1
273	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.2	Yes	0.9	Yes	Good				1
288	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.1	Yes	1.2	Yes	Good				1
289	Owatonna	Yes	Yes	N/A	N/A	N/A	No	9.3	Yes	0.2	Yes	Good			Random Steep slope	0
290	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	2.3	Yes	1.0	Yes	Fair		Some vegetation	Manhole	1
291	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.3	Yes	0.6	Yes	Fair	Ponding	Heavy vegetation	Panel dropped, sand accumulation	0
292	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.3	Yes	0.0	Yes	Poor			Dirt and rocks	0
293	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.5	Yes	1.4	Yes	Fair	Ponding	Heavy sand accumulation	Heavy sand accumulation	0
294	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.2	No	4.2	Yes	Good		Man hole		0
295	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.9	No	6.1	Yes	Good		Driveway		0
296	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.3	No	3.3	Yes	Good				0
297	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.1	No	4.1	No	Fair		Driveway	Cracking	0
298	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.6	Yes	1.6	Yes	Good				1
299	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.9	Yes	1.5	Yes	Good				1
300	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.1	Yes	1.7	Yes	Good				1
301	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.7	Yes	1.5	Yes	Good				1
302	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.4	No	2.2	Yes	Good				0
303	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.0	No	2.5	Yes	Good		Some cracking		0
304	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.2	No	3.9	Yes	Good		Driveway		0
305	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.0	Yes	1.3	Yes	Fair	Ponding	Heavy sand accumulation	Heavy sand accumulation	0
307	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.2	Yes	1.6	Yes	Good				1
308	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	3.4	No	3.1	Yes	Good				0
309	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.6	No	2.3	Yes	Good		Driveway		0
310	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.3	Yes	1.9	Yes	Good				1
311	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.4	Yes	0.5	Yes	Good		Some vegetation		1
312	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.2	Yes	1.3	Yes	Good				1
313	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.9	Yes	0.3	Yes	Good				1
314	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.8	Yes	1.3	Yes	Good				1
315	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.8	No	2.8	Yes	Good				0
316	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.3	Yes	0.4	Yes	Fair	Ponding			1

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322	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.4	Yes	0.5	Yes	Good	Obstruction			1
329	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.6	No	4.4	Yes	Good		Driveway		0
330	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.1	Yes	1.2	Yes	Good			Man hole	1
331	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.3	Yes	1.7	Yes	Good				1
332	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.3	No	3.5	Yes	Good		Driveway		0
333	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.3	Yes	1.8	Yes	Fair	Ponding	Heavy sand accumulation	Heavy sand accumulation	0
343	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	2.7	No	3.5	Yes	Good		Roots under pavement		0
353	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.6	No	4.3	Yes	Good		Driveway		0
354	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.2	Yes	0.8	Yes	Good	Obstruction	Electrical pole obstruction		0
355	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.6	Yes	1.4	Yes	Good			Obstruction but wide enough	1
356	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.0	No	4.0	Yes	Good		Driveway		0
357	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.2	Yes	0.9	Yes	Good				1
358	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.5	No	4.6	Yes	Good		Driveway		0
359	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.4	No	2.4	Yes	Good			Electrical poles but wide enough (and fire hydrant)	0
360	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.3	Yes	0.6	Yes	Good			Electrical pole but wide enough	1
361	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.4	No	3.4	Yes	Good		Driveway		0
362	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.0	Yes	0.8	Yes	Fair	Ponding	Heavy sand accumulation	Heavy sand accumulation	0
363	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.9	No	4.5	Yes	Good		Driveway		0
364	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.7	Yes	0.6	No	Good			Electrical pole but wide enough	0
365	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.5	No	3.9	Yes	Good		Driveway		0
366	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.6	Yes	0.9	Yes	Good			Electrical pole but wide enough	1
367	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.0	No	4.0	Yes	Good		Driveway		0
368	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.9	Yes	1.9	Yes	Good				1
369	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.3	No	4.3	Yes	Good		Driveway		0
370	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.9	Yes	0.8	Yes	Good			Electrical pole but wide enough	1
371	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.1	No	3.4	Yes	Good		Driveway		0
372	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.4	Yes	1.0	Yes	Good	Obstruction	Fire hydrant obstruction	Fire hydrant obstruction	0
373	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.3	No	4.3	Yes	Good		Driveway		0
374	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.1	Yes	0.9	Yes	Good			Electrical pole but wide enough	1
375	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.5	No	4.0	Yes	Good		Driveway		0
376	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.3	Yes	1.0	Yes	Good			Electrical pole but wide enough	1
377	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.6	No	2.3	Yes	Good			Electrical pole but wide enough	0
378	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.2	No	2.9	Yes	Good		Driveway		0
379	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.6	Yes	2.0	Yes	Good			Electrical pole but wide enough	1
380	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.2	No	4.0	Yes	Good		Driveway		0
381	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.7	Yes	2.0	Yes	Good				1
382	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.3	No	4.9	Yes	Good		Driveway		0
383	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.0	No	2.7	Yes	Fair	Ponding		Electrical pole but wide enough	0
384	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.7	No	6.0	Yes	Good		Driveway		0
385	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.2	No	2.9	Yes	Good	Obstruction		Fire hydrant obstruction	0
386	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.2	No	2.4	Yes	Good				0
387	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.3	No	5.0	Yes	Good		Driveway		0
388	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.6	Yes	1.2	Yes	Fair	Ponding	Some cracking		1
389	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.4	No	4.0	Yes	Good		Driveway		0
390	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.6	Yes	1.5	Yes	Good				1
391	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.3	No	3.7	Yes	Good		Driveway		0
392	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.3	Yes	1.0	Yes	Good				1
393	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.8	No	3.3	Yes	Good		Driveway		0
394	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.3	Yes	0.8	Yes	Good				1
395	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.7	No	3.9	Yes	Good		Driveway		0
396	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.7	Yes	0.5	Yes	Good				1
397	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.3	No	2.7	Yes	Good		Driveway		0
398	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.5	Yes	0.9	Yes	Good				1
399	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.7	No	3.6	Yes	Good		Driveway		0
400	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	4.5	Yes	0.1	Yes	Good				1
401	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	2.0	Yes	0.8	Yes	Good				1
402	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.3	No	4.5	Yes	Good		Driveway		0
403	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.6	Yes	0.7	Yes	Good				1
404	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	2.0	No	3.7	Yes	Good		Driveway		0
405	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.3	Yes	0.6	Yes	Good				1
406	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.0	No	2.9	Yes	Good		Driveway		0
407	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.2	Yes	0.3	Yes	Good				1
408	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.4	No	3.1	Yes	Good		Driveway		0
409	Owatonna	Yes	No	N/A	N/A	N/A	Yes	0.7	Yes	0.9	Yes	Good	Obstruction		Pole but grass goes on sidewalk making it less than 48 inch	0
410	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.8	No	2.9	Yes	Good		Driveway		0
411	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.5	Yes	1.0	Yes	Fair	Ponding			1
412	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.5	No	3.4	Yes	Good		Driveway		0

OBJECTID	City	Is the route stable and slip-resistant?	Is the route at least 48in wide?	If >200ft x <60in, is there 60"x60" passing space?	If grates or openings, openings <= 0.5in?	Long dim of grate opening perpendicular to direction travel?	Running slope <= 5% or slope of parallel roadway?	What is the running slope?	Is the cross slope no steeper than 2%?	SW_Cross_slope	Are there no gaps in elevations or distances between concrete panels > 1.5?	Sidewalk overall condition	Are there any obstructions or ponding?	Does the sidewalk have any other characteristics?	Notes	Compliant 1=Compliant
413	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.8	Yes	0.6	Yes	Good				1
414	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.8	No	3.7	Yes	Good		Driveway		0
415	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.3	Yes	1.3	Yes	Good				1
416	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.3	No	3.8	Yes	Good		Driveway		0
417	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.2	Yes	0.6	Yes	Good				1
418	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.7	No	2.6	Yes	Good		Driveway		0
419	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.0	Yes	1.5	Yes	Good				1
420	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.3	No	3.4	Yes	Good		Driveway		0
421	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.4	Yes	0.8	Yes	Good				1
422	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.7	Yes	0.7	Yes	Good				1
423	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.3	No	2.5	Yes	Good		Driveway		0
424	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.2	Yes	1.8	Yes	Good				1
425	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.2	No	4.5	Yes	Good		Driveway		0
426	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.7	Yes	1.6	Yes	Fair	Ponding	Heavy sand accumulation	Heavy sand accumulation	0
427	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.2	No	3.4	Yes	Good		Driveway		0
428	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.8	Yes	1.1	Yes	Fair		Some vegetation		1
429	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.6	Yes	1.0	Yes	Good				1
430	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.0	No	4.0	Yes	Good		Driveway		0
431	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.4	Yes	0.8	Yes	Fair	Ponding			1
432	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.3	No	2.8	Yes	Good		Driveway		0
433	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.9	Yes	1.2	Yes	Good				1
434	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.0	No	3.2	Yes	Good				0
475	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.2	No	2.9	Yes	Good				0
476	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.9	Yes	0.6	Yes	Good		Man hole		1
477	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.3	Yes	1.1	Yes	Fair		Some cracking		1
478	Owatonna	Yes	Yes	N/A	No	N/A	Yes	4.5	Yes	1.4	Yes	Good				0
479	Owatonna	Yes	Yes	N/A	N/A	N/A	No	5.8	Yes	1.0	Yes	Good			Wide driving	0
480	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.7	Yes	0.7	Yes	Fair		Some cracking and vegetation		1
481	Owatonna	Yes	Yes	N/A	No	No	Yes	1.1	Yes	0.1	No	Good			Train track	0
482	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.7	Yes	0.1	No	Fair		Man hole		0
483	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	3.4	Yes	0.4	Yes	Good		Man hole		1
484	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	4.0	No	3.5	Yes	Good		Driveway	Crack	0
485	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	3.8	No	2.3	Yes	Good				0
486	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	3.1	No	5.1	Yes	Good		Driveway		0
487	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	3.4	No	3.1	No	Good				0
488	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	3.6	No	5.2	Yes	Good		Driveway		0
489	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	3.6	No	3.0	Yes	Good		Some vegetation		0
490	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	2.6	No	4.8	Yes	Good		Driveway	Crack	0
491	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	3.3	No	2.3	Yes	Fair		Some vegetation		0
492	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.6	Yes	1.8	No	Poor		Man hole	Square gap	0
493	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.4	No	5.1	Yes	Good		Driveway		0
494	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.8	Yes	1.2	Yes	Good				1
495	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.4	No	5.2	Yes	Good		Driveway		0
496	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.0	Yes	0.7	Yes	Good				1
497	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.8	No	4.7	Yes	Good		Driveway		0
498	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.4	Yes	1.7	Yes	Good				1
499	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.1	No	4.1	Yes	Good		Driveway		0
500	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.6	Yes	1.6	Yes	Good		Some vegetation		1
501	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.3	Yes	1.6	Yes	Good		Man hole		1
502	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.0	No	4.3	Yes	Good		Driveway		0
503	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.1	No	2.1	Yes	Good				0
504	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.3	No	3.9	Yes	Fair		Driveway	Rocks	0
505	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.4	No	2.8	Yes	Good				0
506	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.5	No	5.5	Yes	Good		Driveway		0
507	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	2.1	No	2.1	Yes	Good				0
508	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.5	No	5.7	Yes	Good		Driveway		0
509	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	2.1	Yes	1.6	Yes	Good				1
510	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	2.3	No	6.1	Yes	Good		Driveway		0
511	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	3.0	No	3.4	Yes	Good				0
512	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	3.0	No	5.3	Yes	Good		Driveway		0
513	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	2.2	No	2.8	Yes	Good				0
514	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	3.3	No	6.3	Yes	Good		Driveway		0
515	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	3.5	No	3.5	Yes	Good				0
516	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	3.2	No	5.9	Yes	Good		Driveway		0
517	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	3.4	No	2.4	Yes	Good				0
518	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	3.8	Yes	1.8	Yes	Good				1
519	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	3.6	No	3.1	Yes	Good		Driveway		0
520	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	3.7	Yes	1.3	Yes	Good		Man hole		1
521	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.7	No	4.0	No	Fair	Ponding	Man hole		0

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522	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.1	No	5.4	Yes	Good		Driveway		0
523	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	2.3	Yes	1.7	Yes	Good				1
524	Owatonna	Yes	Yes	N/A	No	No	Yes	0.4	Yes	0.0	No	Good		Driveway	Train track	0
525	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.1	Yes	1.1	Yes	Good				1
526	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.8	No	2.9	Yes	Good		Driveway		0
527	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.4	Yes	0.4	Yes	Good				1
528	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.3	Yes	1.7	Yes	Good				1
529	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.0	Yes	0.5	Yes	Good				1
530	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.2	Yes	2.0	No	Fair	Obstruction	Some cracking	Man hole , bush	0
531	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	4.7	No	3.9	Yes	Good		Driveway		0
532	Owatonna	Yes	No	N/A	N/A	N/A	No	6.2	No	3.6	Yes	Fair		Some vegetation		0
533	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	4.5	No	6.9	Yes	Good		Driveway		0
534	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.3	No	2.5	Yes	Good				0
548	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.7	Yes	0.2	Yes	Good				1
549	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.2	Yes	0.3	Yes	Good				1
550	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.6	Yes	1.7	Yes	Good				1
551	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.4	No	4.3	Yes	Good		Driveway		0
552	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	2.2	No	2.1	Yes	Good				0
553	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.9	No	4.5	Yes	Good		Driveway		0
554	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	3.1	Yes	1.7	Yes	Good		Some cracking		1
555	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	2.5	No	3.5	Yes	Good		Driveway		0
556	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	4.3	Yes	1.4	Yes	Good		Some cracking	Electrical pole but wide enough	1
557	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	3.2	No	3.5	Yes	Good		Driveway		0
558	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	3.4	Yes	1.0	Yes	Fair		Some cracking		1
559	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	3.3	No	3.3	Yes	Good		Driveway		0
560	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	3.6	Yes	0.1	Yes	Good				1
561	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	3.6	No	2.3	Yes	Good		Driveway		0
562	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	2.9	Yes	0.4	No	Fair		Some vegetation		0
563	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	2.7	No	3.1	Yes	Good		Driveway		0
564	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	3.3	Yes	0.9	Yes	Fair		Some cracking and vegetation		1
565	Owatonna	Yes	Yes	N/A	N/A	N/A	No	5.4	No	3.0	Yes	Good		Driveway		0
566	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	4.2	No	2.8	Yes	Good		Driveway		0
567	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	4.8	Yes	0.3	Yes	Good				1
568	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	4.2	Yes	0.1	Yes	Fair		Some cracking		1
569	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	3.6	No	2.5	Yes	Good		Driveway		0
570	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	2.9	Yes	1.2	Yes	Good				1
571	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	2.8	No	2.5	Yes	Good		Driveway		0
572	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.6	Yes	0.6	Yes	Good				1
573	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.0	No	4.3	Yes	Good		Driveway		0
574	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.6	Yes	1.7	Yes	Good				1
575	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.5	No	3.1	Yes	Good		Driveway		0
576	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.3	Yes	1.0	Yes	Good				1
577	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.8	No	2.7	Yes	Good		Driveway		0
578	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.1	Yes	1.2	Yes	Fair	Ponding	Some vegetation		1
579	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.4	Yes	1.9	Yes	Good				1
580	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.7	No	3.4	Yes	Good		Driveway		0
581	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.1	Yes	1.0	Yes	Good				1
582	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.4	No	3.4	Yes	Good		Driveway		0
583	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.7	Yes	1.8	Yes	Good				1
584	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.0	No	3.4	Yes	Good		Driveway		0
585	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.6	Yes	1.7	Yes	Good				1
586	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.8	No	3.7	Yes	Good		Driveway		0
587	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.9	Yes	1.0	Yes	Good				1
588	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.9	No	2.3	Yes	Good		Driveway		0
589	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.7	Yes	1.4	Yes	Good				1
590	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.1	No	3.6	Yes	Good	Obstruction			0
591	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.2	No	4.2	Yes	Good		Driveway		0
592	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.6	Yes	1.4	Yes	Fair		Man hole		1
593	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.1	No	3.8	Yes	Good		Driveway		0
594	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.5	Yes	1.1	Yes	Good				1
595	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.4	Yes	1.3	Yes	Good				1
596	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.4	No	3.8	Yes	Good		Driveway		0
597	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.2	Yes	1.0	Yes	Good				1
598	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.4	No	2.8	Yes	Good		Driveway		0
599	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.3	No	2.2	Yes	Good				0
600	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.1	Yes	1.0	Yes	Good			Electrical pole but wide enough	1
601	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.5	No	3.8	Yes	Good		Driveway		0
602	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.0	Yes	0.8	Yes	Good				1
603	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.4	Yes	1.3	Yes	Good		Driveway		1

OBJECTID	City	Is the route stable and slip-resistant?	Is the route at least 48in wide?	If >200ft x <60in, is there 60"x60" passing space?	If grates or openings, openings <= 0.5in?	Long dim of grate opening perpendicular to direction travel?	Running slope <= 5% or slope of parallel roadway?	What is the running slope?	Is the cross slope no steeper than 2%?	SW_Cross_slope	Are there no gaps in elevations or distances between concrete panels > 1.5?	Sidewalk overall condition	Are there any obstructions or ponding?	Does the sidewalk have any other characteristics?	Notes	Compliant 1=Compliant
604	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.4	Yes	1.5	Yes	Good			Electrical pole and fire hydrant but wide enough	1
605	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.8	No	2.2	No	Good			Electrical pole but wide enough	0
606	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.5	Yes	1.1	Yes	Good		Driveway		1
607	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.3	No	2.4	No	Fair		Some vegetation	Electrical pole but wide enough	0
608	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.0	No	4.5	Yes	Good		Driveway		0
609	Owatonna	Yes	No	N/A	N/A	N/A	Yes	0.2	Yes	1.6	Yes	Good		Some vegetation	Where electrical pole is it's not wide enough, fire hydrant not wife enough	0
610	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.8	Yes	0.8	Yes	Good		Some vegetation		1
611	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.1	No	3.7		Good		Driveway		0
612	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.3	No	2.6	Yes	Good				0
613	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	2.0	No	4.2	Yes	Good		Driveway		0
614	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.8	Yes	1.3	Yes	Good			Electrical pole but wide enough	1
615	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.3	No	4.1	Yes	Good		Driveway		0
616	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.6	Yes	1.3	Yes	Good		Some vegetation		1
617	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.7	No	2.5	Yes	Good		Driveway		0
618	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	2.1	Yes	0.9	Yes	Good		Some vegetation	Electrical pole but wide enough	1
619	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.2	No	4.1	Yes	Good		Driveway	Crack	0
620	Owatonna	Yes	Yes	N/A	N/A	N/A	No	5.9	Yes	1.5	No	Fair	Ponding		Electrical pole but wide enough	0
621	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	3.8	No	4.1	Yes	Good		Driveway		0
622	Owatonna	Yes	Yes	Yes	N/A	N/A	Yes	3.2	No	2.4	No	Good	Obstruction		Electrical pole but wide enough, fire hydrant not wide enough	0
623	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	2.0	No	2.6	Yes	Good		Driveway		0
624	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	3.8	Yes	1.0	No	Fair		Some cracking and vegetation	Electrical pole but wide enough	0
625	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	2.5	Yes	1.3	No	Fair		Some cracking and vegetation	Electrical pole but wide enough	0
626	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	3.2	No	3.1	Yes	Good		Driveway		0
627	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	3.0	Yes	1.5	Yes	Good			Electrical pole but wide enough	1
628	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	2.4	No	4.0	Yes	Good		Driveway		0
629	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	3.8	Yes	0.8	Yes	Good				1
630	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	3.6	No	3.1	Yes	Good		Driveway		0
631	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	2.5	Yes	0.2	No	Good			Electrical pole but wide enough	0
632	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.6	Yes	0.2	Yes	Good				1
633	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.3	Yes	0.1	Yes	Good				1
634	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.1	Yes	1.1	Yes	Good				1
635	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.0	Yes	1.1	Yes	Good				1
636	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.4	Yes	2.0	Yes	Good		Man hole		1
637	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	3.4	Yes	0.9	Yes	Good				1
638	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	4.1	No	2.1	Yes	Good			Crack	0
639	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.3	Yes	0.3	Yes	Good				1
640	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.0	No	2.7	Yes	Fair	Ponding	Some cracking and vegetation		0
641	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	2.2	Yes	0.9	No	Fair	Ponding	Some vegetation		0
642	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.7	Yes	1.8	Yes	Good	Ponding	Heavy sand accumulation	Heavy sand accumulation	0
643	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	4.1	Yes	0.1	Yes	Fair		Some ponding and vegetation		1
644	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.0	Yes	1.1	Yes	Good				1
645	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.6	Yes	0.8	Yes	Good				1
646	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.5	Yes	1.2	Yes	Good				1
647	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.7	Yes	1.0	Yes	Good				1
648	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.4	Yes	1.1	Yes	Good				1
649	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.5	Yes	0.6	Yes	Good				1
650	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.1	Yes	1.1	Yes	Good			Crack/ pothole	1
651	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.3	Yes	0.8	No	Good	Ponding			0
652	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.5	Yes	0.9	Yes	Good				1
653	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	3.8	Yes	1.3	No	Poor	Ponding	Displaced slab	Some veg	0
654	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	3.2	Yes	0.9	Yes	Good	Ponding	Heavy sand accumulation	Heavy sand accumulation	0
655	Owatonna	Yes	Yes	N/A	N/A	N/A	No	5.7	Yes	1.5	Yes	Good				0
656	Owatonna	Yes	Yes	N/A	No	N/A	Yes	4.9	No	2.1	Yes	Good			Hexagon pavements	0
657	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.2	Yes	1.5	No	Fair	Ponding	Some cracking		0
658	Owatonna	Yes	Yes	N/A	No	No	Yes	3.3	Yes	1.4	No	Poor	Ponding	Man hole		0
659	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.8	No	2.1	No	Fair				0
660	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.1	No	3.2	Yes	Fair	Ponding	Driveway	Some cracking	0
661	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.8	No	2.9	Yes	Fair		Some cracking		0
662	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.9	No	5.3	Yes	Good		Driveway		0
663	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.1	No	4.5	Yes	Good				0
664	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.4	No	6.1	Yes	Good		Driveway		0
665	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.3	No	2.3	Yes	Fair		Some cracking	Man hole	0
666	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.8	Yes	0.5	Yes	Fair	Ponding			1
667	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.8	Yes	1.7	Yes	Fair		Driveway	Crack	1
668	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.0	No	2.6	Yes	Fair		Some cracking	Man hole	0
669	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.3	Yes	1.2	Yes	Good				1
670	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.7	No	5.0	No	Fair				0

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671	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.0	Yes	1.4	No	Fair	Ponding		Cars in sidewalk	0
672	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.2	No	4.0	Yes	Good		Man hole		0
673	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.2	Yes	1.8	Yes	Good		Driveway		1
674	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.1	Yes	1.9	Yes	Good				1
675	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.4	Yes	1.5	Yes	Good				1
676	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.3	No	3.2	No	Fair	Ponding	Driveway		0
677	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.6	No	3.1	Yes	Fair	Ponding			0
678	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	2.5	No	2.5	No	Good				0
679	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	2.2	No	5.9	Yes	Good		Man hole		0
680	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.1	Yes	1.4	No	Fair		Some cracking		0
681	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	2.5	No	3.6	Yes	Good		Driveway		0
682	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	2.9	Yes	1.9	Yes	Good				1
683	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.5	Yes	1.5	Yes	Good				1
684	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.3	No	2.3	Yes	Good		Driveway		0
685	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.0	No	3.0	Yes	Good				0
686	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.9	Yes	0.9	Yes	Good		Some cracking		1
687	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.6	No	2.4	Yes	Good		Driveway		0
688	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.0	Yes	1.2	Yes	Good				1
689	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	2.3	Yes	0.4	Yes	Good				1
690	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	3.4	Yes	0.4	Yes	Good				1
691	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.9	Yes	0.4	Yes	Good				1
692	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	2.3	Yes	0.7	Yes	Good				1
693	Owatonna	Yes	Yes	N/A	No	No	Yes	0.1	Yes	0.3	No	Good			Train track	0
694	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.3	No	2.6	Yes	Fair	Ponding			0
695	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	4.1	Yes	1.7	Yes	Good			Some dirt	1
696	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	2.9	No	3.3	Yes	Good				0
697	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	3.5	No	4.2	Yes	Good				0
698	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	4.6	Yes	0.6	Yes	Good				1
699	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.1	No	3.3	Yes	Good		Driveway		0
700	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	2.5	No	2.4	Yes	Fair		Some vegetation		0
701	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.5	No	6.1	Yes	Good		Driveway		0
702	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	2.0	Yes	1.4	Yes	Good				1
703	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.3	No	6.6	Yes	Good		Driveway		0
704	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.1	Yes	1.3	Yes	Good				1
705	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.5	No	4.2	Yes	Good		Driveway		0
706	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.5	Yes	1.6	Yes	Good				1
707	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.9	Yes	1.3	Yes	Good				1
708	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.6	No	5.1	Yes	Good				0
709	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.0	No	6.3	Yes	Good		Driveway		0
710	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.3	Yes	0.9	Yes	Good				1
711	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	2.0	No	4.7	Yes	Good		Driveway		0
712	Owatonna	Yes	Yes	N/A	No	No	Yes	2.5	Yes	0.8	No	Good				0
713	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.4	Yes	1.0	Yes	Good				1
714	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.5	Yes	1.2	Yes	Good				1
715	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.2	Yes	1.0	Yes	Good				1
716	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.5	Yes	1.3	Yes	Good				1
717	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.1	Yes	2.0	Yes	Good				1
718	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.3	Yes	1.4	Yes	Good				1
719	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.9	No	2.9	Yes	Good		Driveway		0
720	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.4	Yes	2.0	Yes	Good				1
721	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.2	No	5.5	Yes	Good		Driveway		0
722	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.0	Yes	1.5	Yes	Good				1
723	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.8	No	3.6	Yes	Good		Driveway		0
724	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.3	Yes	1.4	Yes	Good				1
725	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	4.5	No	2.3	Yes	Good				0
726	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	2.5	Yes	1.0	Yes	Good				1
727	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.4	Yes	1.2	Yes	Good		Man hole		1
728	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	2.5	No	4.3	Yes	Good				0
729	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.9	Yes	0.8	Yes	Good				1
730	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.0	Yes	0.4	Yes	Good				1
731	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	3.3	Yes	1.3	Yes	Good		Low branches		1
732	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	2.1	Yes	0.4	Yes	Good				1
733	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.3	No	5.7	Yes	Good		Driveway		0
734	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.7	Yes	1.9	Yes	Good		Man hole		1
735	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.1	Yes	1.7	Yes	Fair	Ponding		One crack	1
736	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.0	No	3.2	Yes	Good		Driveway		0
737	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.4	Yes	0.6	Yes	Good				1
738	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.2	Yes	1.8	Yes	Fair	Ponding	Heavy sand accumulation	Heavy sand accumulation	0
739	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.0	Yes	1.0	Yes	Good				1

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740	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.3	Yes	0.3	Yes	Fair	Ponding	Heavy sand accumulation	Heavy sand accumulation	0
741	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.4	Yes	0.7	Yes	Good				1
742	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.6	Yes	1.1	Yes	Good				1
743	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.2	Yes	0.7	Yes	Good				1
744	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.2	Yes	1.0	Yes	Good				1
745	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.1	Yes	1.2	Yes	Good				1
746	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.2	No	3.4	Yes	Fair		Some vegetation		0
747	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.4	Yes	1.0	Yes	Fair	Ponding			1
748	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.5	No	3.4	Yes	Good		Driveway		0
749	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.1	Yes	1.5	Yes	Fair	Ponding			1
750	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.5	No	3.5	Yes	Good		Low branches		0
751	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.6	Yes	1.2	Yes	Good				1
752	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.0	No	3.7	Yes	Fair				0
753	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.2	No	2.9	Yes	Good				0
754	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.5	Yes	1.1	Yes	Good				1
755	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.9	No	4.4	Yes	Good		Driveway		0
756	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.7	Yes	0.6	Yes	Good				1
757	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.2	Yes	0.6	Yes	Good				1
758	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	4.2	No	4.1	Yes	Fair	Ponding	Some cracking	Bump in sidewalk	0
759	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.2	Yes	0.9	Yes	Good		Man hole		1
760	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.1	Yes	0.4	Yes	Good				1
761	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.7	Yes	0.1	Yes	Good				1
762	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.3	Yes	0.3	Yes	Good				1
763	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.1	Yes	0.5	Yes	Good		Man hole	Sand under bridge	1
764	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	4.4	Yes	0.3	Yes	Fair	Ponding	Heavy sand accumulation	Heavy sand accumulation	0
765	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	2.2	Yes	0.8	Yes	Good			One bush in the way	1
766	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.0	Yes	1.3	Yes	Good				1
767	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.0	Yes	0.5	Yes	Good				1
768	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.4	Yes	1.0	Yes	Fair	Ponding	Some vegetation		1
769	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.7	No	2.9	Yes	Good		Driveway		0
770	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.3	Yes	0.1	Yes	Fair		Driveway	Rocky pavement	1
771	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	4.0	Yes	2.0	Yes	Fair		Ponding	Some rock from trail in sidewalk	1
772	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	4.0	No	3.0	Yes	Good				0
773	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.8	Yes	1.7	Yes	Good				1
774	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.9	No	2.3	Yes	Good				0
775	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.4	No	2.4	Yes	Good				0
776	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.9	Yes	0.7	Yes	Good				1
777	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.4	Yes	0.3	Yes	Good				1
778	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.2	Yes	1.0	Yes	Good				1
779	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.3	Yes	0.0	Yes	Good				1
780	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.1	Yes	0.2	Yes	Good				1
781	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	2.0	Yes	1.1	Yes	Good				1
782	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.5	Yes	0.9	Yes	Good				1
783	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.2	Yes	0.9	Yes	Good				1
784	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.3	Yes	1.7	Yes	Good				1
785	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.3	Yes	1.6	Yes	Good				1
786	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.4	No	2.2	Yes	Good				0
787	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	2.3	No	2.4	Yes	Good				0
788	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.3	No	4.6	Yes	Good		Driveway		0
789	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.3	Yes	1.1	Yes	Good				1
790	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.2	No	3.4	Yes	Good		Driveway		0
791	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.1	Yes	1.4	Yes	Good				1
792	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.2	Yes	1.2	Yes	Good				1
793	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.6	Yes	0.5	Yes	Good				1
794	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	1.7	Yes	0.9	Yes	Good				1
795	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.7	Yes	0.8	Yes	Good		Some cracking		1
796	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.7	Yes	0.4	Yes	Good		Some cracking	Small man hole	1
797	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.0	Yes	1.8	No	Fair		Some cracking	Gap in the cracks, small man hole	0
798	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.7	Yes	0.4	Yes	Good				1
799	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.6	No	3.6	Yes	Good		Driveway		0
800	Owatonna	Yes	Yes	N/A	N/A	N/A	Yes	0.5	Yes	1.1	Yes	Good				1

TOTAL:	609
# Compliant:	272
% Compliant:	45%

OBJECTID	City	Push button <= 5ft of outside edge of crosswalk?	Push button face oriented parallel w\ crosswalk?	4'x4' flat landing adjacent to each push button?	Push button btwn 1.5ft & 10ft from back of curb?	>= 10ft of separation between push buttons?	Push button mounted >=42in and <=48in?	Is a 4 foot PAR w/ 2% cross slope maintained?	Is there an audible walk indication?	Vibrotactile arrow present and correct dir?	Notes	Compliant 1=Compliant	County Signal ID
20	Owatonna	No	Yes	No	No	No	No	No	No	No		0	22
21	Owatonna	Yes	Yes	No	Yes	No	No	No	No	No		0	22
22	Owatonna	Yes	Yes	No	Yes	No	Yes	No	No	No		0	22
23	Owatonna	Yes	Yes	No	Yes	No	Yes	No	No	No		0	22
24	Owatonna	Yes	Yes	Yes	Yes	N/A	Yes	Yes	No	Yes		0	21
25	Owatonna	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Very quiet	1	21
27	Owatonna	Yes	Yes	Yes	Yes	N/A	Yes	Yes	No	Yes		0	21
28	Owatonna	Yes	Yes	No	Yes	N/A	Yes	No	No	No		0	16
29	Owatonna	Yes	Yes	Yes	Yes	N/A	Yes	Yes	No	No	Crack/ gap in elevation	0	16
30	Owatonna	Yes	Yes	No	Yes	N/A	Yes	No	No	No		0	15
31	Owatonna	Yes	Yes	No	Yes	N/A	Yes	No	No	No		0	15
34	Owatonna	Yes	Yes	Yes	Yes	N/A	Yes	No	No	No	Gap in elevation	0	15
35	Owatonna	Yes	Yes	No	Yes	N/A	Yes	No	No	No	Flat landing but fire hydrant	0	15
36	Owatonna	Yes	Yes	Yes	No	N/A	Yes	No	No	No		0	16
37	Owatonna	Yes	Yes	No	Yes	N/A	Yes	Yes	No	No		0	16
38	Owatonna	Yes	Yes	No	Yes	Yes	Yes	No	Yes	Yes	Quiet	0	4
39	Owatonna	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	West Leg never shows walking symbol	1	4
40	Owatonna	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	West Leg never shows walking symbol , South Leg never shows walking symbol	1	4
41	Owatonna	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	South Leg never shows walking symbol	1	4
42	Owatonna	Yes	Yes	Yes	Yes	N/A	Yes	Yes	Yes	Yes	Sign not visible	1	2
43	Owatonna	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Both don't speak, no visible sign on one	0	2
44	Owatonna	Yes	Yes	Yes	Yes	N/A	Yes	Yes	No	Yes	Sign not visible	0	2
48	Owatonna	Yes	Yes	No	Yes	N/A	Yes	No	No	No		0	17
49	Owatonna	Yes	Yes	No	Yes	N/A	Yes	No	No	No		0	17
50	Owatonna	Yes	Yes	No	Yes	N/A	Yes	No	No	No		0	17
51	Owatonna	Yes	Yes	No	Yes	N/A	Yes	No	No	No		0	17
53	Owatonna	No	Yes	No	No	N/A	Yes	No	No	No		0	18
54	Owatonna	Yes	Yes	No	Yes	N/A	No	No	No	No		0	18
55	Owatonna	Yes	Yes	No	Yes	N/A	Yes	No	No	No		0	19
56	Owatonna	Yes	Yes	No	Yes	Yes	Yes	No	No	No		0	19
57	Owatonna	Yes	Yes	No	Yes	N/A	Yes	No	No	No		0	19
58	Owatonna	Yes	Yes	No	Yes	N/A	Yes	No	No	No		0	19
59	Owatonna	Yes	Yes	No	Yes	N/A	No	No	No	No		0	18
60	Owatonna	Yes	Yes	No	Yes	N/A	Yes	No	No	No		0	18
61	Owatonna	Yes	Yes	No	Yes	N/A	Yes	No	No	No		0	8
62	Owatonna	Yes	Yes	No	Yes	N/A	Yes	No	No	No		0	8
63	Owatonna	Yes	No	No	Yes	N/A	No	No	No	No	In a fence	0	8
64	Owatonna	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		1	9
65	Owatonna	Yes	Yes	No	Yes	Yes	Yes	No	Yes	Yes		0	9
66	Owatonna	Yes	Yes	No	Yes	N/A	Yes	No	No	No		0	8
67	Owatonna	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes		0	9
68	Owatonna	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes		0	9
69	Owatonna	Yes	Yes	No	Yes	N/A	Yes	Yes	No	No		0	7
70	Owatonna	Yes	Yes	No	Yes	N/A	Yes	No	No	No		0	7
71	Owatonna	Yes	Yes	No	Yes	N/A	Yes	No	No	No		0	7
72	Owatonna	Yes	Yes	No	Yes	N/A	Yes	No	No	No		0	7
73	Owatonna	Yes	Yes	No	Yes	N/A	Yes	No	No	No		0	6
74	Owatonna	Yes	Yes	No	Yes	N/A	Yes	No	No	No		0	6
75	Owatonna	Yes	Yes	No	Yes	N/A	No	No	No	No		0	6
76	Owatonna	Yes	Yes	No	Yes	N/A	No	No	No	No		0	6
77	Owatonna	Yes	Yes	Yes	Yes	N/A	Yes	Yes	Yes	Yes		1	5
78	Owatonna	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		1	5
79	Owatonna	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		1	5
80	Owatonna	Yes	Yes	Yes	Yes	N/A	Yes	Yes	Yes	Yes		1	5

TOTAL:	54
# Compliant:	10
% Compliant:	19%

Appendix C – Agency ADA Design Standards and Procedures

Design Procedures

Intersection Corners

Curb ramps or blended transitions will attempt to be constructed or upgraded to achieve compliance within all capital improvement projects. There may be limitations which make it technically infeasible for an intersection corner to achieve full accessibility within the scope of any project. Those limitations will be noted, and those intersection corners will remain on the transition plan. As future projects or opportunities arise, those intersection corners shall continue to be incorporated into future work. Regardless of whether full compliance can be achieved, each intersection corner shall be made as compliant as possible in accordance with the judgment of the County.

Sidewalks / Trails

Sidewalks and trails will attempt to be constructed or upgraded to achieve compliance within all capital improvement projects. There may be limitations which make it technically infeasible for segments of sidewalks or trails to achieve full accessibility within the scope of any project. Those limitations will be noted, and those segments will remain on the transition plan. As future projects or opportunities arise, those segments shall continue to be incorporated into future work. Regardless on if full compliance can be achieved or not, every sidewalk or trail shall be made as compliant as possible in accordance with the judgment of the County.

Traffic Control Signals

Traffic control signals will attempt to be constructed or upgraded to achieve compliance within all capital improvement projects. There may be limitations which make it technically infeasible for individual traffic control signal locations to achieve full accessibility within the scope of any project. Those limitations will be noted, and those locations will remain on the transition plan. As future projects or opportunities arise, those locations shall continue to be incorporated into future work. Regardless on if full compliance can be achieved or not, each traffic signal control location shall be made as compliant as possible in accordance with the judgment of the County.

Other policies, practices and programs

Policies, practices and programs not identified in this document will follow the applicable ADA standards.

Design Standards

For public ROW facilities, the County has PROWAG, as adopted by the Minnesota Department of Transportation (MnDOT), as its design standard. A copy of this document is included in C-2.

C-1: Right-of-Way Field Review Inventory Manual

**ADA
Transition
Plan**

**Steele County
Minnesota**

Inventory Manual

October, 2020

ADA Transition Plan

Steele County Minnesota

Inventory Manual

Client
Steele County

Consultant Team
SRF Consulting Group, Inc.



Inventory Approach

1. Public Right-of-Way Inventory **8-14**

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» Curb Ramp	11
» Accessible Pedestrian Signals (APS)	13

Inventory Approach

- » This guide serves as a tool for the inventory approach, clarifying the inventory process through general guidance, definitions, enhanced questions, imagery and diagrams.
 - » Take pictures of everything.
 - » It is important to be consistent across the county in your interpretation of the questions.
-

Chapter 1 **Public Right-of-Way Inventory**

Definitions

Inventory Questions

- » Sidewalk
- » Curb Ramp
- » Accessible Pedestrian Signals (APS)

Definitions

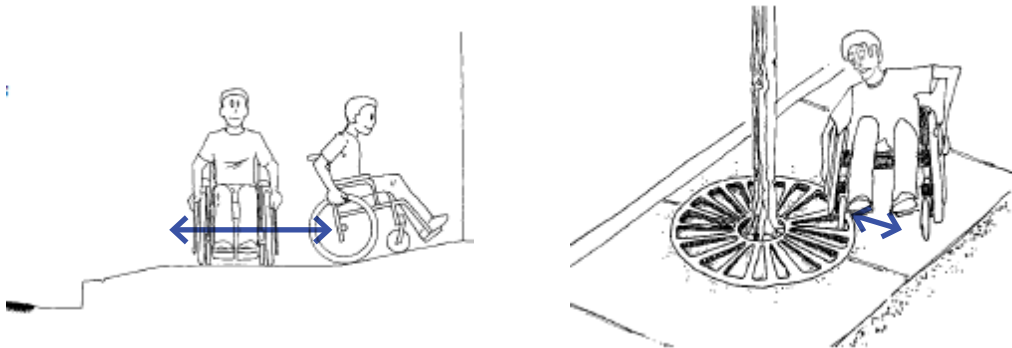
Term	
Cross slope	The slope that is perpendicular to the direction of travel.
Edge protection	A raised curb, wall, railing, or other structure that defines the edge of a travel surface and helps keep people and assistive devices from inadvertently falling off the edge.
Openings	Gaps in the surface of a route. Gaps include spaces between the planks on a boardwalk or in a drainage grate. Openings that are big enough for wheels, cane or crutch tips, or shoe heels to drop through are hazards that shouldn't be designed in pedestrian routes.
Pedestrian Access Route (PAR)	A continuous unobstructed path, at least 48" wide, connecting all accessible elements and spaces of a building or facility. Accessible routes may also include parking access aisles, curb ramps, crosswalks at vehicular ways, walks, ramps, and lifts.
Ramp	A walking surface that has a running slope of > 5%.
Running slope	The slope that is parallel to the direction of travel.

General Guidance

- » Establish a data point as the sidewalk/trail travels away from an intersection corner.
- » Place at least one data point mid block, or at any apparent deviation of standards.
- » Any critical deviation of sidewalk condition that presents tripping or falling hazards should be reported to the project manager by email at the end of the day.

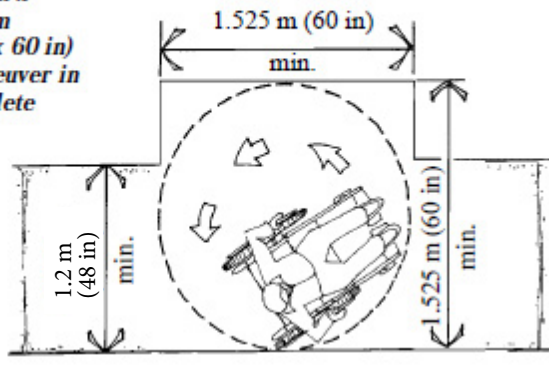
#	Expanded Question	Notes
1	Choose feature location. Choose From Options	
2	Is the route stable, firm and slip-resistant? Yes/No	
3	Is the route $\geq$ 48 inches wide? (Take measurement at narrowest dimension.) Yes/No	S3
4	If route is <200 inches long and <60 inches wide, is there a 60 inch X 60 inch passing spaces? Yes/No	S4
5	If there are grates or openings on the route, are the openings $\leq$ 0.5 inches? Look for excessively wide sidewalk joints and areas around utilities. Openings should be perpendicular to the dominate direction of travel. Yes/No	S5
6	Is the long dimension of the grate opening perpendicular to the dominant direction of travel? Yes/No	
7	Is the running slope no steeper than 1:20 (5%) or the slope of the parallel roadway? Measurement taken in the direction of travel. Yes/No	
8	Is the cross slope of the sidewalk no greater than 1:48 (2%)? Measurement taken perpendicular to the direction of travel. Review changes in slope in vicinity of driveways. Yes/No	S8
9	What is the overall condition of the sidewalk? Poor/Fair/Good	

S3

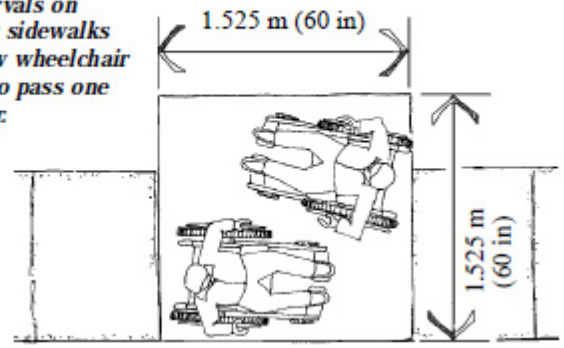


S4

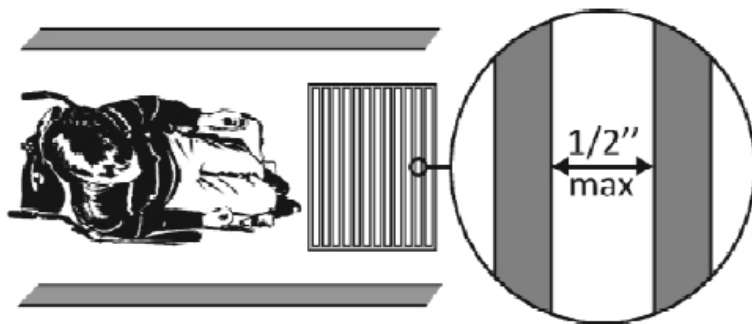
Wheelchair users require 1.525 m x 1.525 m (60 in x 60 in) to maneuver in a complete circle.



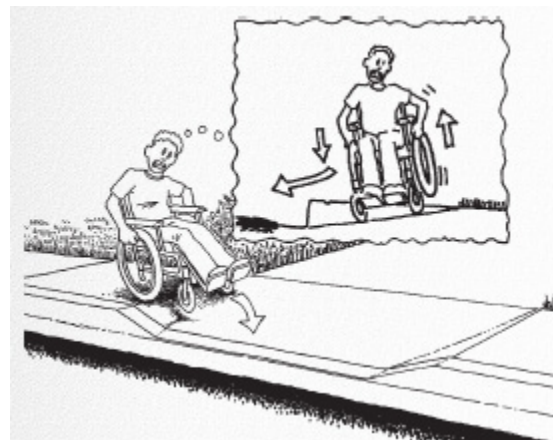
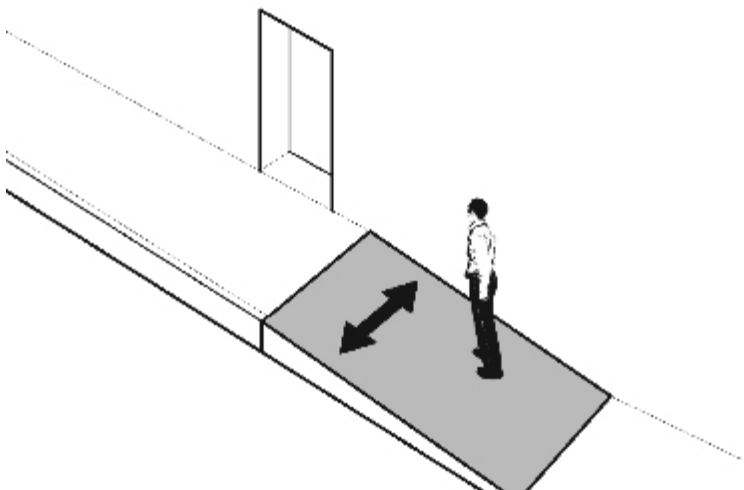
Passing spaces should be included at intervals on narrow sidewalks to allow wheelchair users to pass one another.



S5



S8



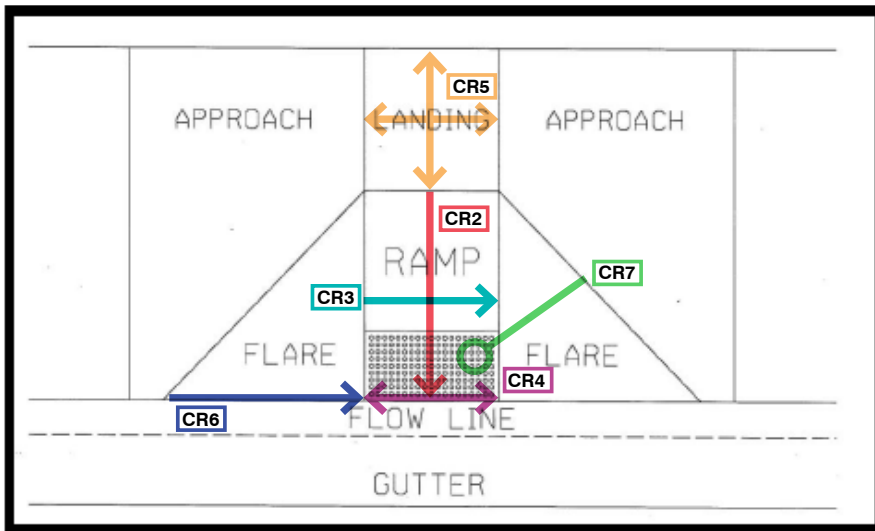
Curb Ramp

General Guidance

- » Place a data point on the location of the curb ramp. If multiple curb ramps are located in a relatively small area, be sure that points do not overlap and that it is obvious which data point corresponds to each ramp.
- » If more than one path ties into the same curb ramp, evaluate the landing on both paths.

#	Expanded Question	Notes
1	If the sidewalk/trail crosses a curb, is there a curb ramp? Yes/No	
2	Is the running slope of the curb ramp no steeper than 8.3% (1:12)? Yes/No	CR2
3	Is the cross slope of the ramp, excluding flares, no steeper than 2%? Yes/No	CR3
4	Is the curb ramp, excluding flares, at least 48 inches wide? Yes/No	CR4
5	If the slope of the ramp exceeds 5.0% or there is a change of direction in the PAR, is there a landing at least 48 inches square with a cross slope <2% in any direction? Yes/No	CR5
6	If there are curb ramp flares, are the slopes of the flares no steeper than 1:10? (i.e. for every inch of height change there are at least 10 inches of flare run) Note: paved flares adjacent to a non-walkable surface must be no steeper than 1:6 (17%). Yes/No	CR6
7	Does the curb ramp have detectable warnings that extend the full width of the curb ramp? Yes/No	CR7
8	Are approximately 75% of the truncated domes in good condition? Look for individual domes sheared off by snowplows, etc. Yes/No	
9	Do the truncated domes contrast visually with adjacent walking surfaces? Yes/No	
10	What is the overall condition of the curb ramp? Look for cracks, drainage issues such as sand in gutter, etc. Poor/Fair/Good	

CR2 - 7



CR6

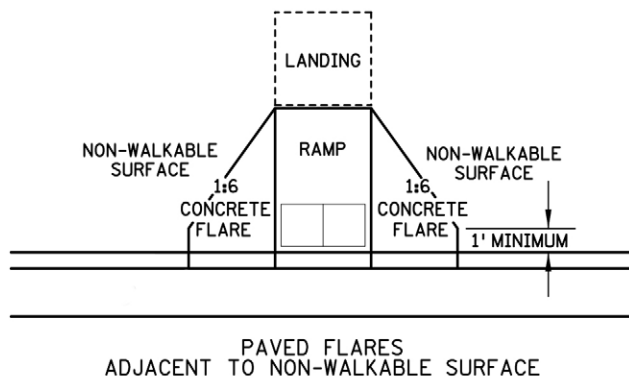


Photo Credit: MnDOT Standard Plan 5-297.250

Accessible Pedestrian Signals (APS)

#	Expanded Question	Notes
1	Is the push button station located within 5 feet of the projected outside edge of the sidewalk? Yes/No	A1
2	Is the push button face oriented parallel with the crosswalk? Yes/No	
3	Is there a minimum 48" X 48" landing (slope not greater than 2% in any direction) adjacent to each push button? Yes/No	A3
4	Is the push button station located between 1.5 and 10 feet from the back of the curb - measured in the direction of travel? Yes/No	A4
5	Is there at least 10 feet of separation between push buttons? Yes/No	A5
6	Is the push button mounted at a height of approximately 42", but not greater than 48" above the sidewalk? Yes/No	A6
7	Is a 48" PAR, with a 2% maximum cross slope, maintained to and around the push button? Yes/No	
8	Is there an audible walk indication equivalent to the visual walk signal? Yes/No	
9	Is there a vibrotactile (vibratory and tactile) arrow on the face of the push button that points in the correct direction of travel? Yes/No	

A1, A3-A6

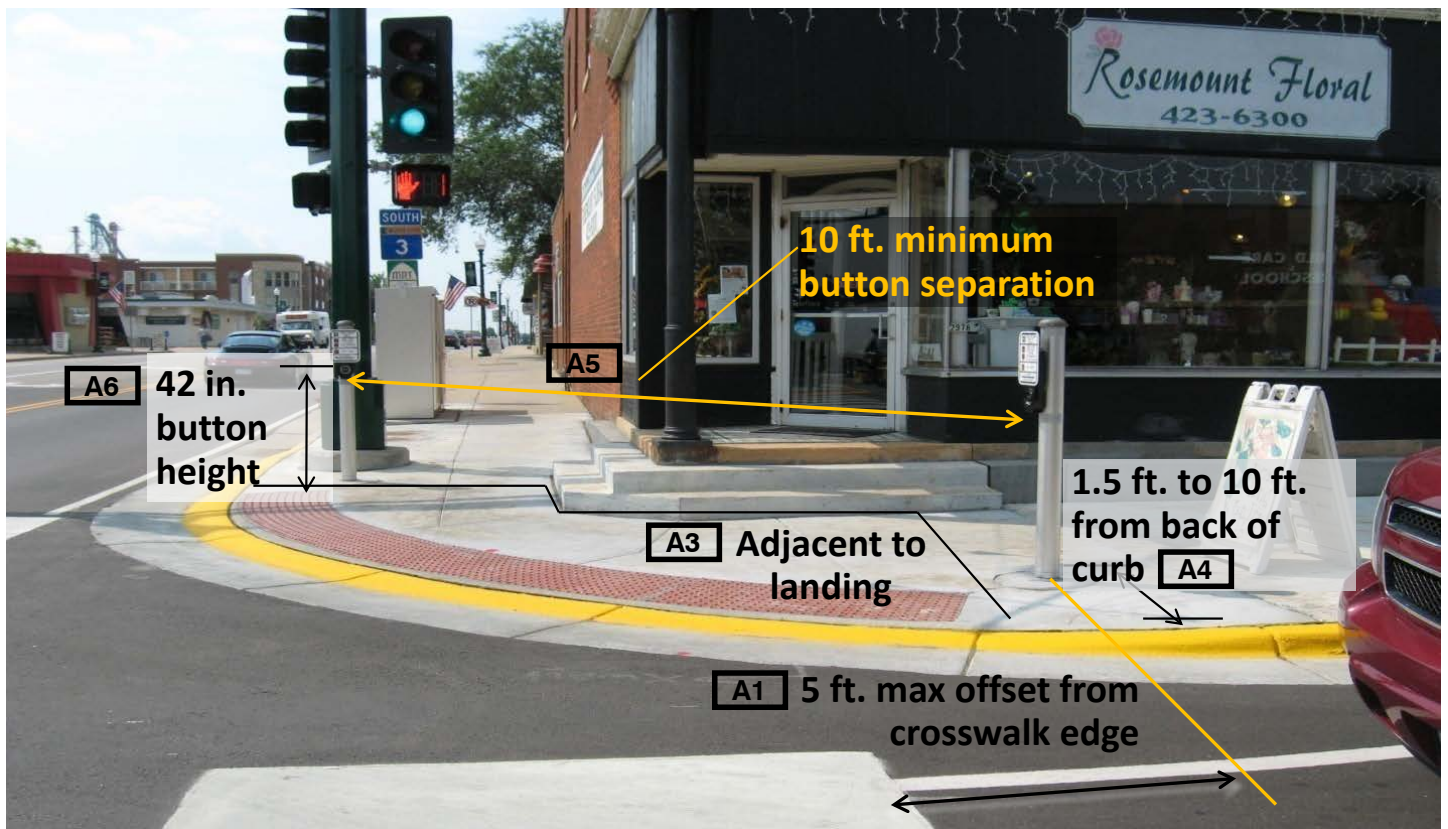


Photo Credit: MnDOT ADA Training

C-2: PROWAG



Proposed Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way

July 26, 2011

UNITED STATES ACCESS BOARD
A FEDERAL AGENCY COMMITTED TO ACCESSIBLE DESIGN



UNITED STATES ACCESS BOARD
A FEDERAL AGENCY COMMITTED TO ACCESSIBLE DESIGN

1331 F Street, N.W. Suite 1000 • Washington, D.C. 20004-1111
(800) 872-2253 (voice) • (800) 993-2822 (TTY) • Fax: (202) 272-0081
Website: www.access-board.gov • E-mail: ta@access-board.gov

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ARCHITECTURAL AND TRANSPORTATION BARRIERS COMPLIANCE BOARD

36 CFR Part 1190

[Docket No. ATBCB 2011-04]

RIN 3014-AA26

Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way

AGENCY: Architectural and Transportation Barriers Compliance Board.

ACTION: Notice of Proposed Rulemaking.

SUMMARY: The Architectural and Transportation Barriers Compliance Board is proposing accessibility guidelines for the design, construction, and alteration of pedestrian facilities in the public right-of-way. The guidelines ensure that sidewalks, pedestrian street crossings, pedestrian signals, and other facilities for pedestrian circulation and use constructed or altered in the public right-of-way by state and local governments are readily accessible to and usable by pedestrians with disabilities. When the guidelines are adopted, with or without additions and modifications, as accessibility standards in regulations issued by other federal agencies implementing the Americans with Disabilities Act, Section 504 of the Rehabilitation Act, and the Architectural Barriers Act, compliance with the accessibility standards is mandatory.

DATES: Submit comments by November 23, 2011. Hearings will be held on the proposed guidelines on September 12, 2011 from 9:30 to 11:30 a.m. in Dallas, TX; and on November 9, 2011 from 9:30 to 11:30 a.m. in Washington, DC.

ADDRESSES: Submit comments by any of the following methods:

- Federal eRulemaking Portal: <http://www.regulations.gov>. Follow the instructions for submitting comments. Regulations.gov ID for this docket is ATBCB-2011-0004.
- E-mail: row@access-board.gov. Include docket number ATBCB 2011-04 in the subject line of the message.
- Fax: 202-272-0081.
- Mail or Hand Delivery/Courier: Office of Technical and Informational Services, Access Board, 1331 F Street, NW, Suite 1000, Washington, DC 20004-1111.

All comments will be posted without change to <http://www.regulations.gov>, including any personal information provided.

The hearing locations are the Sheraton Dallas (San Antonio A Ballroom), 400 North Olive Street, Dallas, TX 75201; and the Access Board Conference Room, 1331 F Street, NW, Suite 800, Washington, DC 20004.

FOR FURTHER INFORMATION CONTACT: Scott Windley, Office of Technical and Information Services, Architectural and Transportation Barriers Compliance Board, 1331 F Street NW, Suite 1000,

Washington, DC 20004-1111. Telephone (202) 272-0025 (voice) or (202) 272-0028 (TTY). E-mail address row@access-board.gov.

SUPPLEMENTARY INFORMATION:

Availability of Proposed Guidelines with Figures

The proposed guidelines will be codified as an appendix to 36 CFR part 1190. In the past, the Architectural and Transportation Barriers Compliance Board (Access Board) submitted “camera ready” copy (i.e., images) of its guidelines to the Federal Register for the appendices since the guidelines included figures that illustrate the requirements in the guidelines. The appendices were not word searchable when viewed online because they are images. After discussions with the Office of the Federal Register, the Access Board has decided to submit the proposed guidelines as a Word document with only one image, the International Symbol of Accessibility (Figure R411), so the appendix will be word searchable when viewed on-line. A copy of the proposed guidelines with figures is available on the Access Board website at: <http://www.access-board.gov/prowac/nprm.htm>. Except for the International Symbol of Accessibility (Figure R411), the figures are for illustration purposes only and do not establish requirements. The copy of the proposed guidelines on the Access Board website also sets out advisory sections in shaded boxes, and indents subsections under the main sections.

Introduction

The Access Board is an independent federal agency established by section 502 of the Rehabilitation Act (29 U.S.C. 792).¹ The Access Board is responsible for developing accessibility guidelines for the design, construction, and alteration of facilities to ensure that they are readily accessible to and usable by individuals with disabilities. The Access Board’s guidelines play an important part in the implementation of three laws that require newly constructed and altered facilities to be accessible to individuals with disabilities: the Americans with Disabilities Act, Section 504 of the Rehabilitation Act, and the Architectural Barriers Act. As further discussed under the Statutory and Regulatory Background, these laws require other federal agencies to issue regulations which include accessibility standards for the design, construction, and alteration of facilities. The regulations issued by the other federal agencies to implement these laws adopt, with or without additions and modifications, the Access Board’s guidelines as accessibility standards. When the Access Board’s guidelines are adopted, with or without additions and modifications, as accessibility standards in regulations issued by other federal agencies implementing these laws, compliance with the accessibility standards is mandatory.

Statutory and Regulatory Background

Americans with Disabilities Act

1. The Access Board consists of 13 members appointed by the President from the public, a majority of which are individuals with disabilities, and the heads of 12 federal agencies or their designees whose positions are Executive Level IV or above. The federal agencies are: The Departments of Commerce, Defense, Education, Health and Human Services, Housing and Urban Development, Interior, Justice, Labor, Transportation, and Veterans Affairs; General Services Administration; and United States Postal Service.

The Americans with Disabilities Act (42 U.S.C. 12101 et seq.) is a federal civil rights law that prohibits discrimination against individuals with disabilities. Title II of the Americans with Disabilities Act covers state and local governments.² The Department of Justice is responsible for issuing regulations to implement Title II of the Americans with Disabilities Act, except for the public transportation parts.³ The regulations issued by the Department of Justice include accessibility standards for the design, construction, and alteration of facilities (other than facilities used in the provision of public transportation covered by regulations issued by the Department of Transportation).⁴ The Department of Justice's accessibility standards adopt, with additions and modifications, the Access Board's current guidelines, which are discussed below under the Need for Rulemaking.⁵ See 28 CFR 35.104 and 35.151.

The Department of Transportation is responsible for issuing regulations to implement the public transportation parts of Title II of the Americans with Disabilities Act.⁶ The regulations issued by the Department of Transportation include accessibility standards for the design, construction, and alteration of facilities used in the provision of public transportation covered by the public transportation parts of Title II of the Americans with Disabilities Act. The Department of Transportation's accessibility standards adopt, with additions and modifications, the Access Board's current guidelines, which are discussed below under the Need for Rulemaking. See 49 CFR 37.9 and Appendix A to 49 CFR part 37.

The Department of Justice is responsible for overall enforcement of Title II of the Americans with Disabilities Act. The Department of Justice has designated the Department of Transportation as the federal agency responsible for investigating complaints and conducting compliance reviews "relating to programs, services, and regulatory activities relating to transportation, including highways." See 28 CFR 35.190 (b) (8).

Section 504 of the Rehabilitation Act

2. Other titles of the Americans with Disabilities Act cover employers (Title I), private entities that own, lease, or operate places of public accommodation and commercial facilities (Title III), and telecommunications (Title IV). This preamble focuses on Title II because pedestrian facilities in the public right-of-way are constructed and altered by state and local governments.
3. Title II of the Americans with Disabilities Act contains two subtitles. Subtitle A applies to all state and local government programs, services, and activities. Subtitle B contains two parts. Subtitle B, Part I applies to designated public transportation provided by state and local governments by bus, rail, or other conveyance (other than aircraft or intercity or commuter rail) as a general or special service (including charter service) to the general public on a regular and continuing basis. Subpart B, Part II applies to public transportation provided by the National Railroad Passenger Corporation and commuter authorities by intercity and commuter rail. The Department of Justice is responsible for issuing regulations to implement Subtitle A of Title II, except for matters within the scope of authority of the Department of Transportation under Parts I and II of Subtitle B of Title II. See 42 U.S.C. 12134. The Department of Transportation is responsible for issuing regulations to implement Parts I and II of Subtitle B of Title II. See 42 U.S.C. 12149 and 12164.
4. Subtitle A of Title II of the Americans with Disabilities Act requires that the regulations issued by the Department of Justice include accessibility standards that are "consistent with the minimum guidelines and requirements issued by the Architectural and Transportation Barriers Compliance Board." 42 U.S.C. 12134(c). The accessibility standards issued by the Department of Justice can include additional or modified requirements provided they are consistent with the Access Board's guidelines.

Section 504 of the Rehabilitation Act (29 U.S.C. 794) (hereinafter referred to as “Section 504”) prohibits discrimination against individuals with disabilities under any program or activity receiving federal financial assistance. The term “program or activity” includes all the operations of a state or local government entity that receives federal financial assistance directly or indirectly from the federal government. See 29 U.S.C. 794 (b). Each federal agency that provides federal financial assistance is responsible for issuing regulations to implement Section 504 that are consistent with requirements established by the Department of Justice. See Executive Order 12250 in Appendix A to 28 CFR part 41. The Department of Justice requires facilities designed, constructed, or altered by recipients of federal financial assistance to be accessible to individuals with disabilities. See 28 CFR 41.58.

The Department of Transportation provides federal financial assistance to state and local governments for the development of transportation networks, including pedestrian facilities in the public right-of-way.⁷ The regulations issued by the Department of Transportation to implement Section 504 require facilities designed, constructed, or altered by recipients of federal financial assistance from the Department to comply with accessibility standards included in the Department’s regulations implementing the public transportation parts of Title II of the Americans with Disabilities Act, or the Uniform Federal Accessibility Standards. See 49 CFR §27.3. As discussed above, the accessibility standards included in the Department of Transportation regulations implementing the public transportation parts of Title II of the Americans with Disabilities Act adopt, with additions and modifications, the Access Board’s current guidelines, which are discussed below under the Need for Rulemaking. See 49 CFR 37.9 and Appendix A to 49 CFR part 37.

The Department of Transportation is responsible for investigating complaints and conducting compliance reviews under Section 504 relating to recipients of federal financial assistance from the Department. See 49 CFR 27.121 and 27.123.

Architectural Barriers Act

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5. In September 2010, the Department of Justice issued regulations with revised accessibility standards for Titles II and III of the Americans with Disabilities Act (DOJ 2010 Standards). See 75 FR 56164 (September 15, 2010). Compliance with the DOJ 2010 Standards is required on or after March 15, 2012. State and local governments are permitted to comply with earlier standards (DOJ 1991 Standards without the elevator exception or UFAS) or the DOJ 2010 Standards between September 15, 2010 and March 14, 2012. Additional information on the applicable standards and their effective dates is available on the Department of Justice website at: http://www.ada.gov/revised_effective_dates-2010.htm. The DOJ 2010 Standards are available on the Department of Justice website at: http://www.ada.gov/2010ADASTandards_index.htm.
 6. Parts I and II of Subtitle B of Title II of the Americans with Disabilities Act require that the regulations issued by the Department of Transportation include accessibility standards that are “consistent with the minimum guidelines and requirements issued by the Architectural and Transportation Barriers Compliance Board.” 42 U.S.C. 12149 (b) and 12163. The accessibility standards issued by the Department of Transportation can include additional or modified requirements provided they are consistent with the Access Board’s guidelines.
 7. See Department of Transportation “Policy Statement on Bicycle and Pedestrian Accommodation Regulations and Recommendations” at: <http://www.dot.gov/affairs/2010/bicycle-ped.html>.
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The Architectural Barriers Act (42 U.S.C. 4151 et seq.) requires certain facilities financed with federal funds to be accessible to individuals with disabilities. The Architectural Barriers Act covers facilities financed in whole or part by a federal grant or loan where the federal agency that provides the grant or loan is authorized to issue standards for the design, construction, or alteration of the facilities.⁸ See 42 U.S.C. 4151 (3). The General Services Administration is required to issue accessibility standards for facilities covered by the Architectural Barriers Act.⁹ See 42 U.S.C. 4156. The accessibility standards issued by the General Services Administration adopt, without any additions or modifications, the Access Board's current guidelines, which are discussed below under the Need for Rulemaking. See 41 CFR 102-76.65.

The Access Board is responsible for enforcing the Architectural Barriers Act. See 29 U.S.C. 792 (b) (1) and (e).

Need for Rulemaking

This section discusses the Congressional findings in the Americans with Disabilities Act that establish the need for accessibility guidelines, the Access Board's current accessibility guidelines, and why the Access Board is proposing to issue accessibility guidelines for pedestrian facilities in the public right-of-way.

Congressional Findings of Discrimination

The Americans with Disabilities Act was enacted in 1990 by overwhelming bipartisan majorities in the House of Representatives (377 – 28) and in the Senate (91 – 6).¹⁰ Congress compiled an extensive record of the discrimination experienced by individuals with disabilities in critical areas such as employment, public accommodations, state and local government services, and transportation. Congress found that “despite some improvements such forms of discrimination against individuals with disabilities continue to be a serious and pervasive social problem.” 42 U.S.C. 12101 (a) (2). Among the forms of discrimination that Congress found to be a continuing problem are “the discriminatory effects of architectural, transportation, and communication barriers.” 42 U.S.C. 12101 (a) (5). Congress found that “the continuing existence of unfair and unnecessary discrimination and prejudice denies people with disabilities the opportunity to compete on an equal basis and to pursue those opportunities for which our free society is justifiably famous, and costs the United States billions of dollars in unnecessary expenses resulting from dependency and nonproductivity.” 42 U.S.C. 12101 (a) (9). Congress declared that “the Nation's proper goals regarding individuals with disabilities are to ensure equality of opportunity, full

8. The Architectural Barriers Act also covers facilities constructed, altered, or leased by federal agencies; and facilities constructed or altered by the Washington Metropolitan Area Transit Authority. See 42 U.S.C. 4151 (1), (2), and (4).

9. The accessibility standards issued by the General Services Administration apply to all facilities covered by the Architectural Barriers Act, except for postal, military, and residential facilities. The United States Postal Service is responsible for issuing accessibility standards for postal facilities; the Department of Defense is responsible for issuing accessibility standards for military facilities; and the Department of Housing and Urban Development is responsible for issuing accessibility standards for residential facilities. See 42 U.S.C. 4153, 4154, and 4154a.

10. 101 Cong. Rec. H4629 and 4630 (July 12, 1990); 101 Cong. Rec. S9695 (July 13, 1990).

participation, independent living, and economic self-sufficiency for such individuals.” 42 U.S.C. 12101 (a) (8).

The purpose of the Americans with Disabilities Act is “to provide a clear and comprehensive national mandate for the elimination of discrimination against individuals with disabilities” and “to provide clear, strong, and consistent, enforceable standards addressing discrimination against individuals with disabilities.” 42 U.S.C. 12101 (b) (1) and (2). Congress directed the Access Board to supplement the accessibility guidelines developed earlier for the Architectural Barriers Act to include “additional requirements, consistent with this Act, to ensure that buildings, facilities, rail passenger cars, and vehicles are accessible in terms of architecture and design, transportation, and communication, to individuals with disabilities.” 42 U.S.C. 12204 (b).

Current Guidelines Developed Primarily for Buildings and Facilities on Sites

The Access Board’s current accessibility guidelines were issued in 2004 and are known as the Americans with Disabilities Act and Architectural Barriers Act Accessibility Guidelines (hereinafter referred to as “2004 ADA and ABA Accessibility Guidelines”).¹¹ 69 FR 44083 (July 23, 2004). The 2004 ADA and ABA Accessibility Guidelines revised and updated the Americans with Disabilities Act Accessibility Guidelines, which were issued by the Access Board in 1991 (hereinafter referred to as “1991 ADAAG”). 56 FR 35408 (July 26, 1991). The requirements in the 1991 ADAAG and 2004 ADA and ABA Accessibility Guidelines were developed primarily for buildings and facilities on sites.¹² Some of the requirements can be readily applied to pedestrian facilities in the public right-of-way. However, other requirements need to be adapted for pedestrian facilities in the public right-of-way.

11. The 2004 ADA and ABA Accessibility Guidelines are codified in 36 CFR part 1191 and consist of six appendices:

- Appendix A is the Table of Contents to the guidelines;
- Appendix B contains ADA Chapters 1 and 2, which include application and scoping requirements for the design, construction, and alteration of facilities covered by the Americans with Disabilities Act;
- Appendix C contains ABA Chapters 1 and 2, which include application and scoping requirements for the design, construction, and alteration of facilities covered by the Architectural Barriers Act;
- Appendix D contains Chapters 3 through 10, which include common technical requirements for the design, construction, and alteration of facilities covered by the Americans with Disabilities Act or the Architectural Barriers Act;
- Appendix E contains the index of terms and list of figures included in the guidelines; and
- Appendix F contains additions and modifications to the guidelines issued by the Department of Transportation.

The DOJ 2010 Standards and the Department of Transportation standards for transportation facilities used in the provision of transportation services covered by the transportation parts of Title II of the ADA and facilities covered by Section 504 adopt Appendices B and D, with additions and modifications. The General Services Administration standards for facilities covered by the Architectural Barriers Act adopt Appendices C and D, without additions and modifications.

12. The term “site” is defined in the 1991 ADAAG (see 3.5) and 2004 ADA and ABA Accessibility Guidelines (see 106.5 and F106.5) as a “parcel of land bounded by a property line or a designated portion of a public right-of-way.”

Proposed Guidelines Developed Specifically for Pedestrian Facilities in the Public Right-of-Way

The proposed guidelines are developed specifically for pedestrian facilities in the public right-of-way and address conditions and constraints that exist in the public right-of-way. As discussed below under the Major Issues, the requirements in the proposed guidelines make allowances for typical roadway geometry and permit flexibility in alterations to existing facilities where existing physical constraints make it impractical to fully comply with new construction requirements. The proposed guidelines also include requirements for elements and facilities that exist only in the public right-of-way such as pedestrian signals and roundabouts.

Rulemaking History

The Access Board began developing accessibility guidelines for pedestrian facilities in the public right-of-way shortly after the Americans with Disabilities Act was enacted in 1990. Proposed guidelines for state and local government facilities, including pedestrian facilities in the public right-of-way, were initially issued in 1992. 57 FR 60612 (December 21, 1992). Interim guidelines were issued in 1994. 59 FR 31676 (June 20, 1994). Final guidelines were issued in 1998, but did not include requirements for pedestrian facilities in the public right-of-way because comments submitted on the proposed and interim guidelines demonstrated a need for additional research, as well as education and outreach. 63 FR 2000 (January 13, 1998).

The Access Board subsequently sponsored research on accessible pedestrian signals and pedestrian pushbuttons, detectable warning surfaces, and pedestrian facilities at roundabouts.¹³ The Access Board also produced a series of videos, a design guide, and an accessibility checklist for pedestrian facilities in the public right-of-way, and conducted training programs around the country. The Access Board coordinated its work with organizations representing state and local government transportation officials and other transportation industry professionals, including the American Association of State Highway and Transportation Officials, Institute of Transportation Engineers, National Committee on Uniform Traffic Control Devices, and Transportation Research Board.

The Access Board established a federal advisory committee in 1999 to recommend accessibility guidelines for pedestrian facilities in the public right-of-way. The advisory committee included representatives of state and local governments, the transportation industry, disability organizations, and other interested groups.¹⁴ The advisory committee provided significant sources of expertise and produced consensus recommendations for accessibility guidelines for pedestrian facilities in the public right-of-way. The advisory committee presented its recommendations, "Building a True Community: Final Report of the Public Rights-of-Way Access Advisory Committee", to the Access Board in 2001.¹⁵

The Access Board developed draft accessibility guidelines for pedestrian facilities in the public right-of-way based on the advisory committee's recommendations, and made the draft guidelines available for public review and comment in 2002.¹⁶ 67 FR 41206 (June 17, 2002). The Access Board revised the

13. The reports on the research sponsored by the Access Board and technical assistance materials on accessible design of pedestrian facilities in the public right-of-way are available on the Access Board website at: <http://www.access-board.gov/prowac/index.htm>.

draft guidelines in 2005 and made the revised draft guidelines available for public review to facilitate the gathering of data for a regulatory assessment of the potential costs and benefits of the guidelines. 70 FR 70734 (November 23, 2005). The Access Board entered into an interagency agreement with the Volpe National Transportation Systems Center (Volpe Center) to gather data and prepare cost estimates for the regulatory assessment.¹⁷

Major Issues

Transportation officials who commented on the 2002 draft guidelines raised some major issues that are addressed below.

Alterations to Existing Facilities

The draft guidelines required alterations to existing facilities to comply with the requirements for new construction to the maximum extent feasible. Most of the improvements in the public right-of-way involve alterations to existing facilities. Transportation officials noted that the meaning of the term “to the maximum extent feasible” was not clear and wanted additional guidance on how to apply the guidelines when existing facilities are altered.

The proposed guidelines clarify that where elements, spaces, or facilities are altered, each altered element, space, or facility within the scope of the project must comply with the applicable requirements for new construction (see R202.3). The phrase “within the scope of the project” is intended to focus on whether the alteration project presents an opportunity to design the altered element, space, or facility in an accessible manner. It is not intended for additional work to be done outside the scope of the project. For example, if an alteration project involves only installing pedestrian signals at existing intersections and there are no detectable warning surfaces on the curb ramps at the intersections, the proposed

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14. The following organizations were members of the advisory committee: AARP, America Walks, American Association of State Highway and Transportation Officials, American Council of the Blind, American Institute of Architects, American Public Transit Association, American Public Works Association, Association for Education and Rehabilitation of the Blind and Visually Impaired, Bicycle Federation of America, Californians for Disability Rights, Canadian Standards Association (Technical Committee on Barrier-Free Design), City of Birmingham (Department of Planning, Engineering and Permits), Council of Citizens with Low Vision International, Disability and Business Technical Assistance Centers, Disability Rights Education and Defense Fund, Federal Highway Administration, Hawaii Commission on Persons with Disabilities, Hawaii Department of Transportation, Institute of Traffic Engineers, Los Angeles Department of Public Works (Bureau of Street Services), Massachusetts Architectural Access Board, Municipality of Anchorage, National Center for Bicycling and Walking, National Council on Independent Living, National Federation of the Blind, New York State Department of Transportation, Paralyzed Veterans of America, Portland Office of Transportation, San Francisco Mayor’s Office on Disability, State of Alaska, TASH, Texas Department of Transportation, and The Seeing Eye.
 15. The advisory committee report is available on the Access Board website at: <http://www.access-board.gov/prowac/commrept/index.htm>.
 16. The 2002 and 2005 draft guidelines and comments submitted on the 2002 draft guidelines are available on the Access Board website at: <http://www.access-board.gov/prowac/index.htm>.
 17. Volpe Center, “Cost Analysis of Public Rights-of-Way Accessibility Guidelines” (November 29, 2010). The document is available in the rulemaking docket (ATBCB-2011-0004) at: <http://www.regulations.gov>.

guidelines would require accessible pedestrian signals and pedestrian pushbuttons to be provided at the intersections because they are within the scope of the project, but would not require detectable warning surfaces to be provided on the curb ramps because they are not within the scope of the project. The proposed guidelines also clarify that where elements are altered or added to existing facilities but the pedestrian circulation path to the altered or added elements is not altered, the pedestrian circulation path is not required to comply with the proposed requirements for pedestrian access routes (see R202.1). For example, if a new bench is installed on a sidewalk that has a cross slope exceeding 2 percent, the sidewalk is not required to be altered to reduce the cross slope because the bench is installed on the sidewalk.

In addition, the proposed guidelines recognize that it is not always possible for altered elements, spaces, or facilities to fully comply with new construction requirements because of existing physical constraints. Where existing physical constraints make it impracticable for altered elements, spaces, or facilities to fully comply with the requirements for new construction, compliance is required to the extent practicable within the scope of the project (see R202.3.1). Existing physical constraints include, but are not limited to, underlying terrain, right-of-way availability, underground structures, adjacent developed facilities, drainage, or the presence of a notable natural or historic feature. The proposed guidelines permit flexibility in alterations to existing facilities where needed.

Existing Facilities That Are Not Altered

Transportation officials expressed concern about application of the draft guidelines to existing facilities that are not altered. The proposed guidelines clarify that the guidelines do not address existing facilities unless they are included within the scope of an alteration undertaken at the discretion of a covered entity (see R101.2).

The Department of Justice regulations implementing Title II of the Americans with Disabilities Act contain requirements for state and local governments regarding program accessibility and existing facilities. See 28 CFR 35.150. The Department of Transportation regulations implementing Section 504 also contain requirements for recipients of federal financial assistance from the Department regarding compliance planning. See 49 CFR 27.11 (c). The Access Board acknowledges that transportation officials are concerned about their obligations under the Title II of the Americans with Disabilities Act and Section 504 for existing facilities that are not altered, but the Access Board does not have the authority to address the application of the proposed guidelines to existing facilities that are not altered. When the Department of Justice and Department of Transportation conduct rulemaking to include accessibility standards for pedestrian facilities in the public right-of-way in regulations implementing Title II of the Americans with Disabilities Act and Section 504, they will address the application of the accessibility standards to existing facilities that are not altered. Comments concerning existing facilities that are not altered should be directed to the Department of Justice and Department of Transportation when they conduct rulemaking to include accessibility standards for pedestrian facilities in the public right-of-way in regulations implementing Title II of the Americans with Disabilities Act and Section 504.

Allowances for Typical Roadway Geometry

The 1991 ADAAG and 2004 ADA and ABA Accessibility Guidelines specify a maximum running slope of 5 percent and maximum cross slope of 2 percent for walking surfaces on accessible routes. The draft

guidelines adapted these requirements for pedestrian access routes in the public right-of-way and made an allowance for typical roadway geometry by permitting the grade of pedestrian access routes within sidewalks to equal the general grade established for the adjacent street or highway. The draft guidelines also permitted the cross slope of pedestrian access routes within midblock pedestrian street crossings and of curb ramps at midblock pedestrian street crossings to equal the street or highway grade.

Transportation officials recommended that additional allowances be made for typical roadway geometry. The proposed guidelines include the following allowances for typical roadway geometry:

- The grade of pedestrian access routes within sidewalks is permitted to equal the general grade established for the adjacent street or highway (see R302.5).
- A maximum cross slope of 5 percent is permitted for pedestrian access routes within pedestrian street crossings without yield or stop control where vehicles can proceed through the intersection without slowing or stopping (see R302.6.1).
- The cross slope of pedestrian access routes within midblock pedestrian street crossings is permitted to equal the street or highway grade (see R302.6.2).
- The cross slope of curb ramps, blended transitions, and turning spaces at pedestrian street crossings without yield or stop control where vehicles can proceed through the intersection without slowing or stopping, and at midblock pedestrian street crossings are permitted to equal the street or highway grade (see R304.5.3).
- Clear spaces required at accessible pedestrian signals and pedestrian pushbuttons and at other accessible elements are permitted to have a running slope consistent with the grade of the adjacent pedestrian access route (see R404.2).

A maximum grade of 5 percent and maximum cross slope of 2 percent are required otherwise for pedestrian access routes within sidewalks and pedestrian street crossings (see R302.5 and R302.6).

Overview of Proposed Guidelines

The proposed guidelines apply to pedestrian facilities in the public right-of-way. The proposed guidelines define the public right-of-way to mean “public land or property, usually in interconnected corridors, that is acquired for or dedicated to transportation purposes” (see R105.5). The proposed guidelines ensure that the following facilities for pedestrian circulation and use located in the public right-of-way are readily accessible to and usable by pedestrians with disabilities:

- Sidewalks, pedestrian overpasses and underpasses, and other pedestrian circulation paths, including requirements for pedestrian access routes, alternate pedestrian access routes when pedestrian circulation paths are temporarily closed, and protruding objects along or overhanging pedestrian circulation paths;
- Pedestrian street crossings, medians, and pedestrian refuge islands, including requirements for curb ramps or blended transitions, and detectable warning surfaces;
- Pedestrian street crossings at roundabouts, including requirements for detectable edge treatments where pedestrian crossing is not intended, and pedestrian activated signals at multi-lane pedestrian street crossings;
- Pedestrian street crossings at multi-lane channelized turn lanes at roundabouts and at other signalized intersections, including requirements for pedestrian activated signals;

- Pedestrian signals, including requirements for accessible pedestrian signals and pedestrian pushbuttons;
- Transit stops and transit shelters for buses and light rail vehicles, including requirements for boarding and alighting areas at sidewalk or street level, boarding platforms, and route signs;
- Pedestrian at-grade rail crossings, including requirements for flangeway gaps;
- On-street parking that is marked or metered, and passenger loading zones;
- Pedestrian signs, including requirements for visible characters on signs and alternative requirements for audible sign systems and other technologies;
- Street furniture for pedestrian use, including drinking fountains, public toilet facilities, tables, counters, and benches; and
- Ramps, stairways, escalators, handrails, doors, doorways, and gates.

Use of Mandatory Language in Proposed Guidelines

The proposed guidelines use the mandatory language “shall” and “requirement” because the guidelines are intended to be adopted, with or without additions and modifications, as accessibility standards in regulations issued by other federal agencies implementing Title II of the Americans with Disabilities Act, Section 504, and the Architectural Barriers Act. In this regard, the proposed guidelines are analogous to model codes. Model codes use mandatory language but compliance with model codes is not mandatory until they are adopted by a state or local government. When the Access Board’s guidelines are adopted, with or without additions and modifications, as accessibility standards in regulations issued by other federal agencies implementing Title II of the Americans with Disabilities Act, Section 504, and the Architectural Barriers Act, compliance with the accessibility standards is mandatory. The other federal agencies will conduct separate rulemakings to include accessibility standards for pedestrian facilities in the public right-of-way in regulations implementing Title II of the Americans with Disabilities Act, Section 504, and the Architectural Barriers Act. The other federal agencies will establish the effective dates for compliance with the accessibility standards when they complete their rulemakings. The other federal agencies may permit use of the proposed guidelines as best practices pending the completion of their rulemakings. However, the proposed guidelines are not legally enforceable until adopted, with or without additions and modifications, as accessibility standards by other federal agencies in regulations implementing Title II of the Americans with Disabilities Act, Section 504, and the Architectural Barriers Act.

Impacts on State and Local Governments

When the proposed guidelines are adopted, with or without additions and modifications, as accessibility standards by other federal agencies in the regulations implementing Title II of the Americans with Disabilities Act, Section 504, and the Architectural Barriers Act, the accessibility standards will apply to units of state and local government that construct streets and highways.¹⁸ For ease of reference, these

18. Private entities that design, construct, or alter places of public accommodation or commercial facilities on sites are required to comply with accessibility standards included in regulations issued by the Department of Justice to implement Title III of the Americans with Disabilities Act. See 28 CFR 36.401 through 36.406. State or local laws may require sites with frontage on the public right-of-way or frontage that will revert to the public right-of-way to make frontage improvements in accordance with state or local standards which contain accessibility requirements that are similar to the proposed guidelines.

state and local governmental units are referred to as “state and local transportation departments” in this preamble but may go by different names (e.g., public works departments, or highway or streets departments) in their respective jurisdictions. State and local transportation departments may be required to comply with three accessibility standards. For example, a state or local transportation department that finances the design, construction, or alteration of a pedestrian facility in the public right-of-way with a federal grant or loan from the Department of Transportation would be required to comply with the accessibility standards issued by the Department of Justice in regulations implementing Title II of the Americans with Disabilities Act, the accessibility standards issued by the Department of Transportation in regulations implementing Section 504, and the accessibility standards issued by the General Services Administration in regulations implementing the Architectural Barriers Act. All three accessibility standards would be basically uniform because they adopt the proposed guidelines, but may vary to the extent that Department of Justice, Department of Transportation, and General Services Administration include additions or modifications to the proposed guidelines in their accessibility standards.

The Access Board prepared a regulatory assessment of the potential costs and benefits of the proposed guidelines. The regulatory assessment is available in the regulatory docket at <http://www.regulations.gov> and on the Access Board website at: <http://www.access-board.gov/prowac/index.htm>. The proposed guidelines are compared to a baseline to assess their potential costs and benefits. The baseline is how state and local transportation departments would design and construct pedestrian facilities in the public right-of-way in the absence of the proposed guidelines. All state transportation departments maintain design manuals and standard drawings for improvements in the public right-of-way.¹⁹ Most local transportation department also maintain design manuals and standard drawings for improvements in the public right-of-way that are consistent with the design manuals and standard drawings maintained by their state transportation departments. State and local transportation departments use publications issued by the American Association of State and Highway Transportation Officials (AASHTO) in their design manuals and standard drawings, including the “Policy on Geometric Design of Highways and Streets” (2004) (commonly referred to as the “AASHTO Green Book”) and the “Guide for the Planning, Design, and Operation of Pedestrian Facilities” (2004) which incorporate accessibility in the design of sidewalks and other pedestrian facilities.²⁰ The Federal Highway Administration as part of its stewardship and oversight responsibilities has also worked with state transportation departments to incorporate accessibility in their design manuals and standards drawings. The Federal Highway Administration has issued guidance that the accessibility standards in the Department of Justice regulations implementing Title II of the Americans with Disabilities Act and the Department of Transportation regulations implementing Section 504 “are to be used to the extent feasible” for the design of pedestrian facilities in the public right-of-way until new accessibility standards

19. Links to the design manuals and standard drawings maintained by state transportation departments are available on the Federal Highway Administration website at: <http://www.fhwa.dot.gov/programadmin/statemanuals.cfm> and <http://www.fhwa.dot.gov/programadmin/statestandards.cfm>.

20. The AASHTO “Policy on Geometric Design of Highways and Streets” and “Guide for the Planning, Design, and Operation of Pedestrian Facilities” incorporate accessibility in the design of sidewalks, including minimum clear width, passing spaces, grade, cross slope, protruding objects, and surface treatments; curb ramps, including detectable warning surfaces; pedestrian overpasses and underpasses; and transit stops and transit shelters.

are adopted for these facilities.²¹ The Federal Highway Administration has also issued guidance that the 2005 draft of the proposed guidelines for pedestrian facilities in the public right-of-way “are the currently recommended best practices, and can be considered the state of the practice that could be followed for areas not fully addressed” in the existing accessibility standards.²²

In the absence of the proposed guidelines, the regulatory assessment assumes that state and local transportation departments will use the revised accessibility standards in the Department of Justice regulations implementing Title II of the Americans with Disabilities Act (hereinafter referred to as “DOJ 2010 Standards”) to the extent feasible when designing, constructing, or altering pedestrian facilities in the public right-of-way, consistent with the guidance issued by the Federal Highway Administration, as well as other applicable standards and industry practices.²³ An analysis of the proposed guidelines compared to the DOJ 2010 Standards, other applicable standards, and industry practices is included in the appendix to the regulatory assessment. The analysis consists of three tables.

Table 1. Proposed Guidelines Contain Same Requirements as in DOJ 2010 Standards

Table 1 analyzes requirements in the proposed guidelines that are the same as requirements in the DOJ 2010 Standards.²⁴ The requirements in the proposed guidelines in Table 1 will have no impacts on state and local transportation departments compared to the requirements in the DOJ 2010 Standards because the requirements are the same.

Table 2. Proposed Guidelines Adapt Requirements in DOJ 2010 Standards

Table 2 analyzes requirements in the proposed guidelines that adapt requirements in the DOJ 2010 Standards to allow for conditions and constraints in the public right-of-way.²⁵ The requirements in the proposed guidelines in Table 2 do not establish greater requirements for accessibility in the public right-

21. See Federal Highway Administration, Office of Program Administration, “Pedestrians and Accessible Design” at: <http://www.fhwa.dot.gov/programadmin/pedestrians.cfm>. When the guidance was issued, the applicable accessibility standards in the Department of Justice regulations implementing Title II of the Americans with Disabilities Act and the Department of Transportation regulations implementing Section 504 adopted the 1991 ADAAG and permitted the Uniform Federal Accessibility Standards to be used.

22. See Federal Highway Administration, “Public Rights-of-Way Access Advisory” (January 23, 2006) at: <http://www.fhwa.dot.gov/environment/bikeped/prwaa.htm>.

23. See footnote 5 regarding the DOJ 2010 standards and effective dates.

24. The requirements analyzed in Table 1 include: drinking fountains, public toilet facilities, tables, counters, passenger loading zones, ramps, stairways, handrails, doors, doorways, gates, operable parts, clear spaces, knee and toe clearance, and reach ranges.

25. The requirements analyzed in Table 2 include: sidewalks and other pedestrian circulation paths, pedestrian street crossings, pedestrian overpasses and underpasses, pedestrian at-grade rail crossings, curb ramps and blended transitions, protruding objects, transit stops and transit shelters used by buses and light rail vehicles, on-street parking, and escalators. The requirements for transit stops and transit shelters used by buses and light vehicles are compared to the accessibility standards in the Department of Transportation regulations implementing the public transportation parts of Title II of the Americans with Disabilities Act.

of-way than the requirements in the DOJ 2010 Standards and industry practices. Some of the requirements in the proposed guidelines in Table 2 establish lesser requirements for accessibility in the public right-of-way than the requirements in the DOJ 2010 Standards. For example, where the pedestrian access route in a sidewalk is contained within the street or highway right-of-way, the grade of the pedestrian access route is permitted to equal the general grade established for the adjacent street or highway to allow for typical roadway geometry instead of the running slope requirements for accessible routes on sites. The requirements in the proposed guidelines in Table 2 will have no impacts on state and local transportation departments compared to the requirements in the DOJ 2010 Standards and industry practices, except for the 2 percent maximum cross slope requirement for pedestrian access routes contained within pedestrian street crossings with stop or yield control where vehicles slow or stop before proceeding through the intersection (see R204.3 and R302.6). This requirement will have more than minimal impacts on the design and construction of new tabled intersections in hilly urban areas that contain pedestrian street crossings with stop or yield control. The impacts are analyzed in the regulatory assessment and discussed below under Cross Slope (R302.6) in the Section-by-Section Analysis.

Table 3. Proposed Guidelines Contain Requirements Not in DOJ 2010 Standards

Table 3 analyzes requirements in the proposed guidelines for which there are no corresponding requirements in the DOJ 2010 Standards.²⁶ The requirements in the proposed guidelines in Table 3 are compared to other applicable accessibility standards and the 2009 edition of Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD). Where the requirements in the proposed guidelines in Table 3 are the same as the requirements in other applicable accessibility standards or the MUTCD, the requirements will have no impacts on state and local transportation departments. Where a requirement in the proposed guidelines in Table 3 differs from a corresponding requirement in other applicable accessibility standards or there is no corresponding requirement in other applicable accessibility standards, the analysis used the following factors to identify whether the requirement will have more than minimal impacts on state and local transportation departments:

- Whether the requirement can be easily incorporated into the design of the element or facility?
- Whether the requirement adds features to the element or facility?
- Whether the requirement reduces space needed for other purposes?
- What are the additional costs due to the requirement compared to the total design and construction costs for the element or facility?

A requirement that can be easily incorporated into the design of an element or facility, and does not add features to the element or facility or reduce space needed for other purposes will have minimal impacts on state and local transportation departments. A requirement that cannot be easily incorporated into the design of an element or facility, adds features to the element or facility, or reduces space needed for other purposes and that results in additional costs compared to the total design and construction costs of

26. The requirements analyzed in Table 3 include: alternate pedestrian access routes, pedestrian signal phase timing, accessible pedestrian signals and pedestrian pushbuttons, pedestrian street crossings at roundabouts, detectable warning surfaces on curb ramps and blended transitions at pedestrian street crossings, detectable warning surfaces on pedestrian at-grade rail crossings not located within a street or highway, pedestrian signs, and benches.

the element or facility which are not negligible (i.e., are worth considering) will have more than minimal impacts on state and local transportation departments.

The analysis identified three requirements in the proposed guidelines in Table 3 that will have more than minimal impacts on state and local transportation departments:

- Detectable warning surfaces on curb ramps and blended transitions at pedestrian street crossings (see R208.1 and R305);
- Accessible pedestrian signals and pedestrian pushbuttons (see R209); and
- Pedestrian activated signals at roundabout intersections with multi-lane pedestrian street crossings (see R206 and R306.3.2).

The impacts of these requirements are analyzed in the regulatory assessment and are discussed below under the relevant requirements in the Section-by-Section Analysis.

Question 1. Comments are requested on whether other requirements in the proposed guidelines will have more than minimal impacts on state and local transportation departments, in addition to the requirements identified in Tables 2 and 3. Comments should:

- Identify the requirement by section number or other information that identifies the specific requirement;
- Explain why the requirement will have more than minimal impacts using the factors described above or other appropriate factors; and
- Provide estimates of the additional costs due to the requirement compared to the total design and construction costs for the element or facility.

Question 2. Comments are requested on whether the requirements in the proposed guidelines have any unintended positive or negative consequences.

Question 3. Comments are requested on alternative regulatory approaches for achieving the objectives of the Americans with Disabilities Act, Section 504, and Architectural Barriers Act to eliminate the discriminatory effects of architectural, transportation, and communication barriers in the design and construction of pedestrian facilities in the public right-of-way.

Section-by-Section Analysis

The proposed guidelines consist of four chapters. Chapter R1 addresses the application and administration of the proposed guidelines. Chapter R2 contains scoping requirements. Chapter R3 contains technical requirements. Chapter R4 contains supplementary technical requirements, which are the same as in the 2004 ADA and ABA Accessibility Guidelines with a few exceptions. The sections in each chapter are discussed below. Sections marked as “advisory” contain advisory information related to the preceding section. Advisory sections do not establish mandatory requirements. Some advisory sections reference related mandatory requirements to alert readers about those requirements.

The Access Board is committed to writing guidelines that are clear, concise, and easy to understand so that persons who use the guidelines know what is required. If any of the proposed guidelines are

ambiguous or not clear, point out the problematic language in your comments so it can be improved in the final guidelines.

Chapter R1: Application and Administration

R101 Purpose

The proposed guidelines contain scoping and technical requirements to ensure that facilities for pedestrian circulation and use located in the public right-of-way are readily accessible to and usable by pedestrians with disabilities. When the guidelines are adopted, with or without additions and modifications, as accessibility standards in regulations issued by other federal agencies implementing Title II of the Americans with Disabilities Act, Section 504, and the Architectural Barriers Act, compliance with the accessibility standards is mandatory.

The proposed guidelines do not address existing facilities unless they are included within the scope of an alteration to an existing facility undertaken at the discretion of a covered entity. The Department of Justice regulations implementing Title II of the Americans with Disabilities Act contain requirements for state and local governments regarding program accessibility and existing facilities. See 28 CFR 35.150. The Department of Transportation regulations implementing Section 504 also contain requirements for recipients of federal financial assistance from the Department regarding compliance planning. See 49 CFR 27.11 (c). As discussed above under the Major Issues, transportation officials who commented on the 2002 draft guidelines expressed concern about existing facilities that are not altered. When the Department of Justice and Department of Transportation conduct rulemaking to include accessibility standards for pedestrian facilities in the public right-of-way in regulations implementing Title II of the Americans with Disabilities Act and Section 504, they will address the application of the accessibility standards to existing facilities that are not altered. Comments concerning existing facilities that are not altered should be directed to the Department of Justice and Department of Transportation when they conduct rulemaking to include accessibility standards for pedestrian facilities in the public right-of-way in regulations implementing Title II of the Americans with Disabilities Act and Section 504.

R102 Equivalent Facilitation

The use of alternative designs, products, or technologies that result in substantially equivalent or greater accessibility and usability than the proposed guidelines is permitted.

R103 Conventions

Conventional industry tolerances apply where dimensions are not stated as a range. Where the required number of accessible facilities or elements is based on ratios or percentages and remainders or fractions result, the next greater whole number is required. Where the required size or dimension of a facility or element is based on ratios or percentages, rounding down for values less than one half is permitted. Measurements are stated in metric and U.S. customary units, and each system of measurement is to be used independently of the other.

R104 Referenced Standards

The proposed guidelines incorporate by reference certain standards in the 2009 edition of the Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD). The referenced MUTCD standards are discussed below under the relevant requirements regarding the provision of alternate pedestrian access routes when a pedestrian circulation path is temporarily closed, the provision of accessible pedestrian signals and pedestrian pushbuttons, and pedestrian signal phase timing. The MUTCD is available on the Federal Highway Administration website at: <http://mutcd.fhwa.dot.gov>.

R105 Definitions

The proposed guidelines incorporate the MUTCD definitions for the following terms: highway, intersection, island, median, pedestrian, roundabout, sidewalk, splitter island, and street. The proposed guidelines define the following terms: accessible, alteration, blended transition, cross slope, curb line, curb ramp, element, facility, grade break, operable part, pedestrian access route, pedestrian circulation path, public right-of-way, qualified historic facility, running slope, and vertical surface discontinuities. These definitions are discussed in the sections where the terms are used. Collegiate dictionaries are used to determine the meaning of terms that are not defined in the proposed guidelines, referenced MUTCD standards, or regulations issued by federal agencies that adopt the proposed guidelines as accessibility standards. Singular and plural words, terms, and phrases are used interchangeably.

Chapter R2: Scoping Requirements

Scoping requirements specify what pedestrian facilities must comply with the proposed guidelines. Some of the scoping requirements are triggered where certain pedestrian facilities are provided such as pedestrian signals (see R209), street furniture (see R212), transit stops and transit shelters (see R213), on-street parking (see R214), and passenger loading zones (see R215). The scoping requirements reference the technical requirements that each pedestrian facility must comply with in order to be considered accessible. The technical requirements are discussed in Chapters R3 and R4.

R201 Application

The proposed guidelines apply to newly constructed facilities, altered portions of existing facilities, and elements added to existing facilities for pedestrian circulation and use located in the public right-of-way. The proposed guidelines apply to both permanent and temporary facilities in the public right-of-way. An advisory section provides examples of temporary facilities in the public right-of-way that are covered by the scoping requirements (e.g., temporary pedestrian circulation routes around work zones and portable public toilets).

Buildings and structures in the public right-of-way that are not covered by the proposed guidelines must comply with the applicable requirements in the 2004 ADA and ABA Accessibility Guidelines. An advisory section provides examples of buildings and structures in the public right-of-way that are not covered by the proposed guidelines and must comply with the applicable requirements in the 2004 ADA and ABA Accessibility Guidelines (e.g., towers and temporary performance stages and reviewing stands).

R202 Alterations and Elements Added to Existing Facilities

The proposed guidelines apply to alterations and elements added to existing facilities. Alterations are changes to an existing facility that affect or could affect pedestrian access, circulation, or use (see R105.5). Alterations include, but are not limited to, resurfacing, rehabilitation, reconstruction, historic restoration, or changes or rearrangement of structural parts or elements of a facility. The Department of Justice and Department of Transportation may provide guidance on the meaning of the word “resurfacing” when they conduct rulemaking to include accessibility standards for pedestrian facilities in the public right-of-way in regulations implementing Title II of the Americans with Disabilities Act and Section 504. Comments requesting guidance on the meaning of the term “resurfacing” should be directed to the Department of Justice and Department of Transportation when they conduct rulemaking to include accessibility standards for pedestrian facilities in the public right-of-way in regulations implementing Title II of the Americans with Disabilities Act and Section 504.

Where elements are altered or added to existing facilities but the pedestrian circulation path to the altered or added elements is not altered, the pedestrian circulation path is not required to comply with the proposed requirements for pedestrian access routes. For example, if a new bench is installed on an existing sidewalk that has a cross slope exceeding 2 percent, the sidewalk is not required to be altered to reduce the cross slope because the bench is installed on the sidewalk. Advisory information recommends that, where possible, added elements should be located on an existing pedestrian access route. This provision is based on similar provisions in the 2004 ADA and ABA Accessibility Guidelines which do not require the circulation path to altered elements or spaces to comply with the requirements for accessible routes where the circulation path to the altered elements or spaces is not altered (see 202.3, Exception 1; and F202.3, Exception 1).

Where existing physical constraints make it impractical for altered elements, spaces, or facilities to fully comply with new construction requirements, compliance is required to the extent practicable within the scope of the project. Existing physical constraints include, but are not limited to, underlying terrain, right-of-way availability, underground structures, adjacent developed facilities, drainage, or the presence of a notable natural or historic feature.

The 2004 ADA and ABA Accessibility Guidelines (see 202.4 and F202.4) and the Department of Justice regulations implementing Title II of the Americans with Disabilities Act (see 28 CFR 35.151 (b)) include an additional requirement for facilities on sites whereby an alteration that affects or could affect the usability of or access to an area containing a “primary function” must be made so as to ensure that, to the maximum extent feasible, the “path of travel” to the altered area is accessible, unless the additional cost and scope of the alterations to provide an accessible “path of travel” are disproportionate to the cost of the alteration to the “primary function” area. The Department of Justice regulations define the terms “primary function” and “path of travel.” See 28 CFR 35.151 (b) (4) (i) and (ii). According to the Department of Justice regulations, a “primary function” is a major activity for which the facility is intended. “Primary function” areas include the dining area of a cafeteria, the meeting rooms in a conference center, as well as offices and other work areas in which the activities of the public entity using the facility are carried out. Mechanical rooms, boiler rooms, supply storage rooms, employee lounges or locker rooms, janitorial closets, entrances, and corridors are not “primary function” areas. Restrooms are not “primary function” areas unless the provision of restrooms is a primary purpose of the area (e.g., restrooms in highway rest stops). Alterations to windows, hardware, controls, electrical outlets, and signage are not alterations that affect the usability of or access to a “primary function” area.

The Department of Justice regulations further state that a “path of travel” includes a continuous, unobstructed way of pedestrian passage by means of which the altered area may be approached, entered, and exited, and which connects the altered area with an exterior approach (including sidewalks, streets, and parking areas), an entrance to the facility, and other parts of the facility. An accessible “path of travel” may consist of walks and sidewalks; curb ramps and other interior or exterior pedestrian ramps; clear floor paths through lobbies, corridors, rooms, and other improved areas; parking access aisles; elevators and lifts; or a combination of these elements; and also includes the restrooms, telephones, and drinking fountains serving the altered area.

The Department of Justice regulations deem the additional cost of alterations to provide an accessible “path of travel” to the altered area disproportionate when it exceeds 20 percent of the cost of the alteration to the “primary function” area. See 28 CFR 35.151 (b) (4) (iii). When the additional cost of alterations to provide an accessible “path of travel” to the altered area is disproportionate, the Department of Justice regulations require the “path of travel” to be made accessible to the extent that it can be made accessible without incurring disproportionate costs (i.e., an amount equal to 20 percent of the cost of the alteration to the “primary function” area must be expended to provide an accessible “path of travel” to the altered area). See 28 CFR 35.151 (b) (4) (iv). A similar requirement is not included in the proposed guidelines because of the uncertainty how the terms “primary function” and “path of travel” as defined in the Department of Justice regulations for facilities on sites would apply to pedestrian facilities in the public right-of-way. Revising the definitions of “primary function” and “path of travel” to apply to pedestrian facilities in the public right-of-way will not necessarily result in additional accessibility. For example, if an area that contains a “primary function” is defined to include sidewalks, an accessible “path of travel” would be required to the altered sidewalks, which in effect would require the cost and scope of planned sidewalk alteration projects to be increased by 20 percent. Sidewalk alteration projects can be planned to take into account the additional 20 percent scope and cost of work. For example, if a 5 block sidewalk alteration project would be planned in the absence of a requirement for an accessible “path of travel” to the altered sidewalks, imposing a requirement for an accessible “path of travel” to the altered sidewalks could result in a 4 block sidewalk alteration project being planned and the additional 20 percent scope and cost of work would result in a 5 block sidewalk alteration project.

Transitional segments of pedestrian access routes must connect to unaltered segments of existing pedestrian circulation paths and comply with the technical requirements for pedestrian access routes to the extent practicable. Alterations must not decrease or have the effect of decreasing the accessibility of a facility or an accessible connection to an adjacent building or site below the requirements for new construction in effect at the time of the alteration.

Where the State Historic Preservation Officer or Advisory Council on Historic Preservation determines that compliance with a requirement would threaten or destroy historically significant features of a qualified historic facility, compliance is required to the extent that it does not threaten or destroy historically significant features of the facility. A qualified historic facility is a facility that is listed in or is eligible for listing in the National Register of Historic Places, or is designated as historic under state or local law (see R105.5)

R203 Machinery Spaces

Vaults, tunnels, and other spaces used by service personnel only are not required to comply with the proposed guidelines.

R204 Pedestrian Access Routes

A pedestrian access route is a continuous and unobstructed path of travel provided for pedestrians with disabilities within or coinciding with a pedestrian circulation path in the public right-of-way (see R105.5). Pedestrian access routes in the public right-of-way ensure that the transportation network used by pedestrians is accessible to pedestrians with disabilities. Pedestrian access routes in the public right-of-way are analogous to accessible routes on sites in that they connect to accessible elements, spaces, and facilities in the public right-of-way, including accessible pedestrian signals and pedestrian pushbuttons, accessible street furniture, accessible transit stops and transit shelters, accessible on-street parking spaces and parking meters and parking pay stations serving those parking spaces, and accessible passenger loading zones. Pedestrian access routes in the public right-of-way also connect to accessible routes at building and facility site arrival points.²⁷

Pedestrian access routes must be provided within:

- Sidewalks and other pedestrian circulation paths located in the public right-of-way;
- Pedestrian street crossings and at-grade rail crossings, including medians and pedestrian refuge islands; and
- Overpasses, underpasses, bridges, and similar structures that contain pedestrian circulation paths.

Where an overpass, underpass, bridge, or similar structure is designed for pedestrian use only and the approach slope to the structure exceeds 5 percent, a ramp, elevator, limited use/limited application elevator, or platform lift must be provided. Elevators and platform lifts must be unlocked during the operating hours of the facility served.

An advisory section notes that the Federal Highway Administration has issued guidance on the obligations of state and local governments to keep pedestrian access routes open and usable throughout the year, including snow and debris removal.

R205 Alternate Pedestrian Access Routes

Alternate pedestrian access routes must be provided when a pedestrian circulation path is temporarily closed by construction, alterations, maintenance operations, or other conditions. The alternate pedestrian access route must comply with the referenced MUTCD standards. The MUTCD standards require alternate pedestrian routes to be accessible and detectable, including warning pedestrians who are blind or have low vision about sidewalk closures. Proximity-actuated audible signs are a preferred means to warn pedestrians who are blind or have low vision about sidewalk closures.

R206 Pedestrian Street Crossings

27. The ADA and ABA Accessibility Guidelines require accessible routes on sites to connect to site arrival points, including public streets and sidewalks (see 206.2.1 and F206.2.1).

Pedestrian street crossings must comply with technical requirements in Chapter R3 that reference MUTCD standards for pedestrian signal phase timing. The technical requirements in Chapter R3 also include requirements for roundabouts and multi-lane channelized turn lanes.

R207 Curb Ramps and Blended Transitions

Curb ramps, blended transitions, or a combination of curb ramps and blended transitions must connect the pedestrian access routes at each pedestrian street crossing. Curb ramps and blended transitions must be wholly contained within the pedestrian street crossings served. Typically, two curb ramps must be provided at each street corner. In alterations where existing physical constraints prevent two curb ramps from being installed at a street corner, a single diagonal curb ramp is permitted at the corner.

R208 Detectable Warning Surfaces

Detectable warning surfaces consist of small truncated domes built in or applied to a walking surface that are detectable underfoot. On pedestrian access routes, detectable warning surfaces indicate the boundary between a pedestrian route and a vehicular route where there is a flush rather than a curbed connection for pedestrians who are blind or have low vision. Detectable warning surfaces are not intended to provide wayfinding for pedestrians who are blind or have low vision. An advisory section provides information on streetscape designs that can make wayfinding easier. Detectable warning surfaces must be provided at the following locations on pedestrian access routes and at transit stops:

- Curb ramps and blended transitions at pedestrian street crossings;
- Pedestrian refuge islands;
- Pedestrian at-grade rail crossings not located within a street or highway;
- Boarding platforms at transit stops for buses and rail vehicles where the edges of the boarding platform are not protected by screens or guards; and
- Boarding and alighting areas at sidewalk or street level transit stops for rail vehicles where the side of the boarding and alighting areas facing the rail vehicles is not protected by screens or guards.

Detectable warning surfaces are not required at pedestrian refuge islands that are cut-through at street level and are less than 1.8 meters (6 feet) in length in the direction of pedestrian travel because detectable warning surfaces must extend 610 millimeters (2 feet) minimum on each side of the island and be separated by a 610 millimeters (2 feet) minimum length of island without detectable warning surfaces (see R305.1.4 and R305.2.4). Installing detectable warning surfaces at cut-through pedestrian islands that are less than 1.8 meters (6 feet) in length would compromise the effectiveness of detectable warning surfaces. An advisory section recommends that where a cut-through pedestrian island is less than 1.8 meters (6 feet) in length and the pedestrian street crossing is signalized, the signal should be timed for a complete crossing of the street.

Comments from Individuals Who Are Blind or Have Low Vision

The National Federation of the Blind was a member of the advisory committee that recommended the proposed guidelines, but filed a minority report recommending detectable warning surfaces should be required only on curb ramps with slopes of 6.6 percent or less, and at medians and pedestrian refuge

islands. Comments on the 2002 draft guidelines from individuals who identified themselves as blind or having low vision supported requiring detectable warning surfaces on all curb ramps by a margin of 2:1.

Detectable Warning Surfaces on Curb Ramps

When the Access Board issued the 1991 ADAAG, the guidelines contained a requirement for detectable warning surfaces on curb ramps. The requirement was temporarily suspended between 1994 and 2001 pending additional research and review of issues relating to requirement. The Access Board deferred addressing detectable warning surfaces on curb ramps in the 2004 ADA and ABA Accessibility Guidelines pending completion of the guidelines for pedestrian facilities in the public right-of-way. As a result of these actions, there are different requirements for detectable warning surfaces on curb ramps in the accessibility standards included the regulations issued by the Department of Justice implementing Title II of the Americans with Disabilities Act and by the Department of Transportation implementing Section 504.

When the Department of Justice initially issued regulations in 1991 implementing Title II of the Americans with Disabilities Act, the regulations required state and local governments to use accessibility standards (hereinafter referred to as the “DOJ 1991 Standards”) that included the 1991 ADAAG which contained a requirement for detectable warning surfaces on curb ramps, or the Uniform Federal Accessibility Standards (UFAS) which did not contain a requirement for detectable warning surfaces on curb ramps.²⁸ When the Department of Justice adopted the DOJ 2010 Standards, those standards included the 2004 ADA and ABA Accessibility Guidelines which do not contain a requirement for detectable warning surfaces on curb ramps.

The Department of Transportation regulations implementing Section 504 require state and local governments that receive federal financial assistance directly or indirectly from the Department to use accessibility standards that include the 2004 ADA and ABA Accessibility Guidelines, as modified by the Department, or UFAS. See 49 CFR 27.3 (b). The Department of Transportation modified the 2004 ADA and ABA Accessibility Guidelines by retaining certain requirements from the 1991 ADAAG, including the requirement for detectable warning surfaces on curb ramps. See 406.8 in Appendix A to 49 CFR part 37.

State and local transportation departments will be affected differently by the requirement in the proposed guidelines for detectable warning surfaces on curb ramps depending on the accessibility standards that they use for curb ramps in the public right-of-way. The Access Board reviewed the standard drawings for the design of curb ramps on state transportation department websites and found that the transportation departments in all 50 states and the District of Columbia specify detectable warning surfaces on curb ramps in the standard drawings.²⁹ Most local transportation departments use standard drawings for the design of curb ramps that are consistent with the standard drawings maintained by their

28. UFAS was issued in 1984 by the General Services Administration and other federal agencies responsible for issuing accessibility standards for facilities covered by the Architectural Barriers Act. See 49 FR 31528 (August 7, 1984).

29. Links to each state transportation department’s standard drawings that specify detectable warning surfaces on curb ramps are available on the Access Board website at: <http://www.access-board.gov/prowac/index.htm>.

state transportation departments. These state and local transportation departments use either the DOJ 1991 Standards, which include the 1991 ADAAG requirement for detectable warning surfaces on curb ramps, or the Department of Transportation accessibility standards, which include the 2004 ADA and ABA Accessibility Guidelines as modified by the Department to include the requirement from the 1991 ADAAG for detectable warning surfaces on curb ramps.³⁰

Governmental Units Affected

State and local transportation departments are divided into four groups for the purpose of evaluating the impacts of the requirement in the proposed guidelines for detectable warning surfaces on curb ramps:

- Group 1 consists of state and local transportation departments that use UFAS for curb ramps as currently permitted by the Department of Justice and Department of Transportation regulations implementing Title II of the Americans with Disabilities Act and Section 504. UFAS did not contain a requirement for detectable warning surfaces on curb ramps. The Access Board is not aware of any state or local transportation departments that use UFAS. The Department of Justice regulations do not permit the use of UFAS on or after March 15, 2012. See 28 CFR 35.151 (c) (3). Thus, Group 1 will cease to exist as of March 15, 2012, and any state and local transportation departments currently in Group 1 will fall into one of the other groups.

Question 4. The Access Board seeks information on whether any state and local transportation departments currently use UFAS for curb ramps in the public right-of-way.

- Group 2 consists of state and local transportation departments that receive federal financial assistance directly or indirectly from the Department of Transportation. State and local transportation departments in Group 2 are required to comply with the accessibility standards in the Department of Justice regulations implementing Title II of the Americans with Disabilities Act and the Department of Transportation regulations implementing Section 504. Where the requirements in the accessibility standards in the Department of Justice and Department of Transportation regulations differ, the more stringent requirement must be used. Excluding any state and local transportation departments in Group 1, state and local transportation departments in Group 2 must comply with the requirement for detectable warning surfaces on curb ramps in the Department of Transportation regulations because it is the more stringent requirement. All state transportation departments and most local transportation departments are in Group 2 and specify detectable warning surfaces on curb ramps in their standard drawings. The requirement in the proposed guidelines for detectable warning

30. The DOJ 1991 Standards require detectable warning surfaces to extend the full width and depth of the curb ramp (see 4.7.7, Appendix E to 28 CFR part 36). The Department of Transportation standards require detectable warning surfaces to extend the full width of the curb ramp (exclusive of flared sides) and either the full depth of the curb ramp or 24 inches deep minimum measured from the back of the curb on the ramp surface (see 406.8, Appendix A to 49 CFR part 37). Guidance issued by the Department of Justice permits the use of the Department of Transportation standards for detectable warning surfaces on curb ramps. See Department of Justice, "ADA Best Practices Tool Kit for State and Local Governments, Curb Ramps and Pedestrian Crossings" (May 7, 2006) at: <http://www.ada.gov/pcatoolkit/toolkitmain.htm>.

surfaces on curb ramps will not have any impacts on state and local transportation departments in Group 2.

- Group 3 consists of local transportation departments that do not receive federal financial assistance directly or indirectly from the Department of Transportation. Local transportation departments in Group 3 are required to comply only with the accessibility standards in the Department of Justice regulations implementing Title II of the Americans with Disabilities Act. Excluding any local transportation departments in Group 1, local transportation departments in Group 3:
 - a) Used the DOJ 1991 Standards, which include the 1991 ADAAG and contain a requirement for detectable warning surfaces on curb ramps, before September 15, 2010. See 28 CFR 35.151 (c) (1).
 - b) Are permitted to use the DOJ 1991 Standards, which include the 1991 ADAAG and contain a requirement for detectable warning surfaces on curb ramps, or the DOJ 2010 Standards, which include the 2004 ADA and ABA Accessibility Guidelines and do not contain a requirement for detectable warnings on curb ramps, between September 15, 2010 and March 14, 2012. See 28 CFR 35.151 (c) (2).
 - c) Must use the DOJ 2010 Standards, which include the 2004 ADA and ABA Accessibility Guidelines and do not contain a requirement for detectable warnings on curb ramps, on or after March 15, 2012. See 28 CFR 35.151 (c) (3).

Thus, local transportation departments in Group 3 were required to provide detectable warning surfaces on curb ramps before September 15, 2010; may or may not be required to provide detectable warning surfaces on curb ramps between September 15, 2010 and March 14, 2012 depending on the accessibility standard they use (DOJ 1991 Standards or DOJ 2010 Standards); and are not required to provide detectable warning surfaces on curb ramps on or after March 15, 2012 pending the future adoption of accessibility standards for pedestrian facilities in the public right-of-way by the Department of Justice.

Question 5. The Access Board seeks information on whether local transportation departments in Group 3 will continue or discontinue providing detectable warning surfaces on curb ramps in the public right-of-way pending the future adoption of accessibility standards for pedestrian facilities in the public right-of-way by the Department of Justice.

- Group 4 consists of state and local transportation departments that do not comply with accessibility standards for curb ramps in the public right-of-way. The Department of Justice and Federal Highway Administration have provided guidance on accessibility standards that apply to curb ramps in the public right-of-way, including the requirement for detectable warning surfaces.³¹ Despite the guidance provided by the Department of Justice and the Federal Highway Administration on the accessibility standards that apply to curb ramps in the public right-of-way, there may be state and local transportation departments that do not comply with the standards.

31. See Department of Justice, "ADA Best Practices Tool Kit for State and Local Governments, Curb Ramps and Pedestrian Crossings" (May 7, 2006) at: <http://www.ada.gov/pcatoolkit/toolkitmain.htm>; and Federal Highway Administration, "Information on Detectable Warnings" (May 6, 2002) at: <http://www.fhwa.dot.gov/environment/bikeped/dwm.htm>.

Question 6. Comments are requested on whether the future adoption of accessibility standards for pedestrian facilities in the public right of way by the Department of Justice and Department of Transportation in regulations implementing Title II of the Americans with Disabilities Act and Section 504 will have a positive or negative effect, or no effect on the compliance rates of state and local transportation departments, particularly with respect to providing detectable warning surfaces on curb ramps.

Question 7. The Access Board seeks information on the number of curb ramps that are constructed or altered on an annual basis in the public right-of-way by state and local transportation departments.

Costs to Provide Detectable Warning Surfaces on Curb Ramps

Detectable warning surfaces are available in a variety of materials. The Volpe Center gathered data from local transportation departments and vendors on various detectable warning materials and estimated the costs of 8 square feet of the materials for a typical curb ramp as shown in the table below. The estimates do not include installation costs.

Detectable Warning Surfaces	Materials Costs for Typical Curb Ramp
Concrete pavers	\$48 to \$80
Brick pavers	\$128
Polymer and composite materials	\$120 to \$200
Stainless steel or cast iron products	\$240

Question 8. The Access Board seeks additional information on the costs for detectable warning materials (8 square feet) and installation of the materials on a typical curb ramp.

Detectable Warning Surfaces on Boarding Platforms Used by Buses and Rail Vehicles, and Boarding and Alighting Areas Used by Rail Vehicles

The 1991 ADAAG and 2004 ADA and ABA Accessibility Guidelines contain a requirement for detectable warning surfaces on rail platforms.³² The proposed guidelines adapt this requirement to transit stops in the public right-of-way, and require detectable warning surfaces on boarding platforms at transit stops for buses and rail vehicles (i.e., raised platforms used for level boarding by bus rapid transit systems and light rail systems) and at boarding and alighting areas at sidewalk or street level transit stops for rail vehicles. Detectable warning surfaces are not required where the edges of the boarding platform or the boarding and alighting areas facing the rail vehicles are protected by screens or guards.

Durability and Maintenance of Detectable Warning Surfaces

Transportation officials who commented on the 2002 draft guidelines expressed concern about the durability and maintenance of detectable warning surfaces. The National Cooperative Highway

32. See 1991 ADAAG, 10.3.1 (8); and 2004 ADA and ABA Accessibility Guidelines, 810.5.2.

Research Program (NCHRP) has conducted two studies on the durability and maintenance of detectable warning surfaces. The first study was completed in 2005 and reviewed performance information submitted by state and local transportation departments.³³ The performance information was limited in terms of the products reviewed and time period of review (about 2 years). The study noted that there were new promising detectable warning products on the market, and recommended that test methods be developed for evaluating the long-term performance and durability of the products. The second study was completed in 2010 and recommended procedures for testing and evaluating detectable warning products.³⁴ The test methods can be used by state and local transportation departments to select detectable warning products that will provide long-term performance and durability under different environmental conditions. Many state and local transportation departments have evaluated and approved detectable warning products that are suited to their environments.

R209 Accessible Pedestrian Signals and Pedestrian Pushbuttons

An accessible pedestrian signal and pedestrian pushbutton is an integrated device that communicates information about the WALK and DON'T WALK intervals at signalized intersections in non-visual formats (i.e., audible tones and vibrotactile surfaces) to pedestrians who are blind or have low vision. The pedestrian pushbutton has a locator tone for detecting the device and a tactile arrow to indicate which pedestrian street crossing is served by the device. The MUTCD contains standards for accessible pedestrian signals and pedestrian pushbuttons, but does not require that they be provided. The proposed guidelines require accessible pedestrian signals and pedestrian pushbuttons to be provided when new pedestrian signals are installed. For existing pedestrian signals, the proposed guidelines require accessible pedestrian signals and pedestrian pushbuttons to be provided when the signal controller and software are altered, or the signal head is replaced. Accessible pedestrian signals and pedestrian pushbuttons must comply with the referenced standards in the MUTCD and the technical requirements for operable parts in Chapter R4. Technical assistance and training on the installation of accessible pedestrian signals and pedestrian pushbuttons is available from the Access Board and transportation industry professional associations.³⁵

Comments from Individuals Who Are Blind or Have Low Vision

The National Federation of the Blind was a member of the advisory committee that recommended the proposed guidelines, but filed a minority report recommending that state and local governments consult with the local blind community to determine whether to provide accessible pedestrian signals and

33. "Synthesis of Maintenance and Durability Information for Detectable Warnings on Sidewalks" March 2005 at: <http://maintenance.transportation.org/Documents/DetectableWarning20-7%28177%29.pdf>.

34. "Procedures for Testing and Evaluating Detectable Warning Systems" March 2010 at: http://online-pubs.trb.org/onlinepubs/nchrp/nchrp_rpt_670.pdf.

35. Technical assistance and training on the installation of accessible pedestrian signals are available on the following websites:

Access Board at: <http://www.access-board.gov/research/pedestrian-signals/bulletin.htm>;

Accessible Design for the Blind: http://www.accessforblind.org/aps_abt.html;

Institute of Transportation Engineers at: <http://www.ite.org/education/olg.asp>;

National Highway Cooperative Research Program at: <http://www.apsguide.org/>; and

Transportation Research Board at: <http://www.trb.org/Main/Public/Blurbs/159938.aspx>.

pushbuttons on an intersection-by-intersection basis. Comments on the 2002 draft guidelines from individuals who identified themselves as blind or having low vision supported providing accessible pedestrian signals and pushbuttons at each signalized intersection where pedestrian signals are newly installed or replaced by a margin of 2:1.

Governmental Units Affected

The Transportation Equity Act for the 21st Century (TEA-21) directed that audible traffic signals be included in transportation plans and projects where appropriate. See 23 U.S.C. 217 (g). Some state and local transportation departments currently provide accessible pedestrian signals and pedestrian pushbuttons when pedestrian signals are newly installed or replaced at signalized intersections. The requirement in the proposed guidelines for accessible pedestrian signals and pedestrian pushbuttons will have impacts on state and local transportation departments that do not currently provide accessible pedestrian signals and pedestrian pushbuttons when pedestrian signals are newly installed or replaced at signalized intersections.

Question 9. The Access Board seeks information on how many state and local transportation departments currently provide accessible pedestrian signals and pedestrian pushbuttons when pedestrian signals are newly installed or replaced at signalized intersections.

Costs to Provide Accessible Pedestrian Signals and Pedestrian Pushbuttons

The Volpe Center estimated the additional cost for an accessible pedestrian pushbutton compared to conventional pushbutton is \$350 per unit. For a typical intersection with four crosswalks, two accessible pedestrian pushbuttons would be required at each corner for a total of eight units per intersection and a total additional cost of \$2,800 for the eight units. The cost of the units is expected to decrease as a result of the proposed guidelines due to greater standardization of customer requirements and increased orders. The total additional cost to provide accessible pedestrian signals and pedestrian pushbuttons, including labor and other equipment such as stub poles and conduit, will vary by location. The Volpe Center estimated that the total additional costs are \$3,600 per intersection based on a published cost study and interviews with local transportation departments.

Question 10. The Access Board seeks information from state and local transportation departments that currently provide accessible pedestrian signals and pedestrian pushbuttons on the additional costs to provide the accessible pedestrian signals and pedestrian pushbuttons.

The Volpe Center estimated that pedestrian signals are newly installed or replaced at 13,095 signalized intersections on an annual basis based on the following assumptions:

- There are over 300,000 existing signalized intersections in the United States using a rule-of-thumb of one signalized intersection per 1,000 population.³⁶
- There are 2,550 new signalized intersections in the United States each year based on the US Census Bureau forecast of future population growth (0.85 percent).

36. See MUTCD "Frequently Asked Questions – Part 4 – Highway Traffic Signals" at: http://mutcd.fhwa.dot.gov/knowledge/faqs/faq_part4.htm.

- Ninety (90) percent of new and existing signalized intersections in the United States provide pedestrian signals.
- The life cycle or replacement rate for existing pedestrian signals is 25 years.

The Volpe Center estimated that the total annual costs are \$47 million for requiring accessible pedestrian signals and pedestrian pushbuttons when pedestrian signals are newly installed or replaced at signalized intersections.

Question 11. Comments are requested on the assumptions used to estimate the total annual costs for requiring accessible pedestrian signals and pushbuttons when pedestrian signals are newly installed or replaced at signalized intersections.

R210 Protruding Objects

Objects that protrude into pedestrian circulation paths can be hazardous for pedestrians, especially pedestrians who are blind or have low vision. Objects along or overhanging any portion of a pedestrian circulation path must comply with the technical requirements for protruding objects in Chapter R4. Objects also must not reduce the clear width required for pedestrian access routes. An advisory section provides examples of street furniture and other objects that must comply with these requirements, and notes that the AASHTO “Guide for the Planning, Design, and Operation of Pedestrian Facilities” recommends that local governments regulate the use of sidewalks by private entities for activities such as outdoor dining, vending carts and stands, and street fairs under an encroachment permit process that addresses accessibility, including protruding objects and maintaining the clear width of pedestrian access routes.

R211 Signs

Signs that provide directions, warnings, or other information for pedestrians only and signs that identify routes served by transit stops must comply with the technical requirements for visual characters in Chapter R4. An advisory section provides examples of signs that are required and are not required to comply with the technical requirements for visual characters in Chapter R4. Signs displaying the International Symbol of Accessibility must be provided at accessible parking spaces and accessible passenger loading zones.

The 2004 ADA and ABA Accessibility Guidelines contain similar requirements for transit signs (see 810.4 and 810.6). In the 2004 ADA and ABA Accessibility Guidelines, characters on bus route signs must comply with the technical requirements for character height “to the maximum extent practicable.”³⁷ The phrase “to the maximum extent practicable” was intended to provide flexibility where there are restrictions on the size of signs. A similar provision is not included in the proposed guidelines because it is almost always practicable to comply with the technical requirements for character height.

37. The 2004 ADA and ABA Accessibility Guidelines also do not require bus route signs to comply with the technical requirements for minimum height above the ground and line spacing (see 703.5.6, 703.5.9, and 810.4).

Audible sign systems and other technologies are widely used today to transmit information and are more usable by pedestrians who are blind or have low vision.³⁸ Where audible sign systems and other technologies are used to transmit information equivalent to the information contained on signs, the signs are not required to comply with the technical requirements for visual characters in Chapter R4.

Question 12. The Access Board seeks information on technologies that are currently used or are under development to transmit information that is equivalent to the information contained on pedestrian signs and transit signs provided in the public right-of-way.

R212 Street Furniture

Drinking fountains, public toilet facilities, tables, and counters must comply with applicable requirements in the 2004 ADA and ABA Accessibility Guidelines. Where multiple single-user public toilet facilities are clustered at a single location, at least 5 percent, but no less than one, of the toilet facilities in each cluster must be accessible and identified by the International Symbol of Accessibility. At least 50 percent, but no less than one, of benches at each location must provide a clear space for a wheelchair adjacent to the bench. Benches at tables are not required to comply.

R213 Transit Stops and Transit Shelters

Transit stops and transit shelters must comply with the technical requirements for transit stops and transit shelters in Chapter R3. Transit stops in the public right-of-way typically serve fixed route bus systems, including bus rapid transit systems, and light rail transit systems. An advisory section notes that the Federal Highway Administration has issued guidance on the obligation of state and local transportation departments, metropolitan planning organizations, and transit agencies to coordinate the planning and funding of accessibility improvements to transit systems and facilities.

R214 On-Street Parking Spaces

Where on-street parking is provided on the block perimeter and the parking is marked or metered, a minimum number of parking spaces must be accessible and comply with the technical requirements for parking spaces in Chapter R3. For every 25 parking spaces on the block perimeter up to 100 spaces, one parking space must be accessible. For every additional 50 parking spaces on the block perimeter between 101 and 200 spaces, an additional parking space must be accessible. Where more than 200 parking spaces are provided on the block perimeter, 4 percent of the parking spaces must be accessible. Metered parking includes parking metered by parking pay stations. Where parking is metered by parking pay stations and the parking is not marked, each 6.1 meters (20 feet) of the block perimeter where parking is permitted is counted as one parking space for determining the minimum number of accessible parking spaces.

R215 Passenger Loading Zones

38.The ANSI approved standard “ICC A117.1-2009: Accessible and Usable Buildings and Facilities” includes technical requirements for remote infrared audible sign systems (see 703.8).

Where passenger loading zones are provided, at least one passenger loading zone for each 30 meters (100 feet) of continuous loading zone space or fraction thereof must be accessible and comply with the technical requirements for passenger loading zones in Chapter R3.

R216 Stairways and Escalators

Stairways on pedestrian circulation paths must comply with technical requirements for stairways in Chapter R4. Escalators on pedestrian circulation paths must comply with the applicable technical requirements in the 2004 ADA and ABA Accessibility Guidelines. Stairways and escalators cannot be part of a pedestrian access route.

R217 Handrails

Handrails are not required on pedestrian circulation paths. However, if handrails are provided on pedestrian circulation paths, the handrails must comply with the technical requirements for handrails in Chapter R4.

R218 Doors, Doorways, and Gates

Doors, doorways, and gates to pedestrian facilities such as transit shelters must comply with applicable technical requirements in the 2004 ADA and ABA Accessibility Guidelines.

Chapter R3: Technical Requirements

Technical requirements specify what design criteria elements, spaces, and facilities must comply with in order to be considered accessible.

R301 General

The technical requirements in Chapter R3 apply where required by the scoping requirements in Chapter R2, or where referenced by another technical requirement in Chapters R3 or R4.

R302 Pedestrian Access Routes

General (R302.1)

The technical requirements for pedestrian access routes are contained in R302, and adapt the technical requirements for accessible routes in the 2004 ADA and ABA Accessibility Guidelines to the public right-of-way. In alterations where existing physical constraints make it impractical to fully comply with the technical requirements, compliance is required to the extent practicable within the scope of the project (see R202.3.1).

Components (R302.2)

The components of pedestrian access routes and the technical requirements for each component are listed in R302.2. Sidewalks and other pedestrian circulation paths, pedestrian street crossings, and pedestrian overpasses and underpasses and similar structures must comply with all the technical

requirements in R302.3 through R302.7. Curb ramps and blended transitions must comply with the technical requirements in R302.7 and R304. Ramps must comply with the technical requirements in R407. Elevators, limited use/limited application elevators, platform lifts, and doors, doorways, and gates must comply with applicable technical requirements in the 2004 ADA and ABA Accessibility Guidelines.

Continuous Width (R302.3)

The continuous clear width of pedestrian access routes (exclusive of the width of the curb) must be 1.2 meters (4 feet) minimum, except for medians and pedestrian refuge islands where the clear width must be 1.5 meters (5 feet) minimum in order to allow for passing space. The AASHTO "Guide for the Planning, Design, and Operation of Pedestrian Facilities" recommends that sidewalks be wider than 1.2 meters (4 feet), particularly in urban areas. Where sidewalks are wider than 1.2 meters (4 feet), only a portion of the sidewalk is required to comply with the technical requirements in R302.3 through R302.7.

The advisory committee recommended a minimum width of 1.5 meters (5 feet) for pedestrian access routes. The proposed guidelines specify a minimum width of 1.2 meters (4 feet) in order to allow for street furniture and other objects that may be located on sidewalks. R210 prohibits street furniture and other objects from reducing the clear width required for pedestrian access routes. A minimum width of 1.2 meters (4 feet) will accommodate turns at intersections and building entrances. Advisory information recommends additional maneuvering clearance at turns or changes in direction, recesses and alcoves, building entrances, and along curved or angled routes, particularly where the grade exceeds 5 percent.

Passing Spaces (R302.4)

Where the clear width of pedestrian access routes is less than 1.5 meters (5 feet), passing spaces must be provided at intervals of 61 meters (200 feet) maximum. Passing spaces must be 1.5 meters (5 feet) minimum by 1.5 meters (5 feet) minimum. Passing spaces are permitted to overlap pedestrian access routes.

Grade (R302.5)

Grade is the slope parallel to the direction of pedestrian travel. Grade is calculated by dividing the vertical change in elevation by the horizontal distance covered, and is expressed as a percent. Where pedestrian access routes are contained within a street or highway right-of-way, the grade of the pedestrian access route is permitted to equal the general grade established for the adjacent street or highway, except that where pedestrian access routes are contained within pedestrian street crossings a maximum grade of 5 percent is required. This is consistent with the AASHTO "Policy on Geometric Design of Highways and Streets" which recommends that the sidewalk grade follow the grade of adjacent roadways, and also recommends maximum cross slopes for roadways. Where pedestrian access routes are not contained within a street or highway right-of-way, a maximum grade of 5 percent is required.

Cross Slope (R302.6)

Cross slope is the slope perpendicular to the direction of pedestrian travel (see R105.5). On a sidewalk, cross slope is measured perpendicular to the curb line or edge of the street or highway. Cross slope

impedes travel by pedestrians who use wheeled mobility devices since energy must be expended to counteract the perpendicular force of the cross slope. Cross slope makes it more difficult for pedestrians who use wheelchairs to travel on uphill slopes and to maintain balance and control on downhill slopes. Cross slope also negatively affects pedestrians who use braces, lower limb prostheses, crutches, or walkers, as well as pedestrians who have gait, balance, or stamina impairments. The maximum cross slope permitted on accessible routes in the 2004 ADA and ABA Accessibility Guidelines is 2 percent. In exterior environments, a maximum cross slope of 2 percent is generally accepted as adequate to allow water to drain off paved walking surfaces.

A maximum cross slope of 2 percent is specified for pedestrian access routes, except for pedestrian access routes contained within certain pedestrian street crossings in order to allow for typical roadway geometry. A 5 percent maximum cross slope is specified for pedestrian access routes contained within pedestrian street crossings without yield or stop control to avoid any unintended negative impacts on the control and safety of vehicles, their occupants, and pedestrians in the vicinity of the intersection. Pedestrian street crossings without yield or stop control are crossings where there is no yield or stop sign, or where there is a traffic signal that is designed for the green phase. At pedestrian street crossings without yield or stop control vehicles can proceed through the intersection without slowing or stopping. The cross slope of pedestrian access routes contained within midblock pedestrian street crossings is permitted to equal the street or highway grade.

Question 13. Comments are requested on whether the description of pedestrian street crossings without yield or stop control is clear, or whether there is a better way to describe such crossings?

In new construction, where pedestrian access routes within sidewalks intersect at corners, the 2 percent maximum cross slope requirement will result in level corners (i.e., the slope at the corners will not exceed 2 percent in each direction of pedestrian travel). The level corners will provide a platform for providing level spaces for curb ramps and blended transitions, pedestrian street crossings, and accessible pedestrian signals and pedestrian pushbuttons.

Newly Constructed Tabled Intersections That Contain Pedestrian Street Crossings With Yield or Stop Control

The 2 percent maximum cross slope requirement applies to pedestrian access routes within pedestrian street crossings with yield or stop control where vehicles slow or stop before proceeding through the intersection. The cross slope of the pedestrian access route within the pedestrian street crossing is the longitudinal grade of the street being crossed, and the 2 percent maximum cross slope requirement will impact the vertical alignment of streets in the vicinity of the intersection. In new construction, street intersections in hilly urban areas are typically cut-and-filled to produce relative flat or tabled intersections. Where pedestrian street crossings with yield or stop control are provided at newly constructed tabled intersections, the tabling would be extended to the pedestrian street crossings to comply with the 2 percent maximum cross slope for pedestrian access routes within the pedestrian street crossings.

Question 14. The Access Board seeks information on the current design policies and practices of state and local transportation departments with respect to tabling newly constructed intersections in hilly urban areas, and particularly whether the tabling is extended to pedestrian street crossings with yield or stop control.

In new construction, extending the tabling of intersections to pedestrian street crossings with yield or stop control involves additional costs for site preparation, grading, and earthwork. The Volpe Center roughly estimated the additional costs to extend the tabling to pedestrian street crossings with yield or stop control to be \$60,000 per intersection based on information provided by a transportation official to the Access Board. The costs will vary by site.

Question 15. The Access Board seeks information on the additional costs to extend the tabling of newly constructed intersections in hilly urban areas to pedestrian street crossings with yield or stop control.

Question 16. The Access Board seeks information on number of tabled intersections which contain pedestrian street crossings with yield or stop control that are newly constructed in hilly urban areas on an annual basis by state and local transportation departments.

Surfaces (R302.7)

The proposed technical requirements for surfaces apply to pedestrian access routes, including curb ramps and blended transitions, and accessible elements and spaces that connect to pedestrian access routes. An advisory section lists the accessible elements and spaces that connect to pedestrian access routes and are required to comply with the technical requirements for surfaces.

The surfaces of pedestrian access routes and the surfaces at accessible elements and spaces that connect to pedestrian access routes must be firm, stable, and slip resistant. Vertical alignment of surfaces within pedestrian access routes (including curb ramp runs, blended transitions, turning spaces, and gutter areas within pedestrian access routes) and within the surfaces at accessible elements and spaces that connect to pedestrian access routes must be generally planar. Grade breaks (i.e., the line where two surface planes with different grades meet, see R105.5) must be flush. Where pedestrian access routes cross rails at grade, the pedestrian access route must be level and flush with the top of the rail at the outer edges of the rails, and the surfaces between the rails must be aligned with the top of the rail.

Vertical surface discontinuities (i.e., vertical difference in level between two adjacent surfaces, see R105.5) must be 13 millimeters (0.5 inch) maximum. Vertical surface discontinuities between 6.4 millimeters (0.25 inch) and 13 millimeters (0.5 inch) must be beveled with a slope not steeper than 50 percent, and the bevel must be applied across the entire vertical surface discontinuity. Horizontal openings in gratings and joints must not permit the passage of a sphere more than 13 millimeters (0.5 inch) in diameter. Elongated openings in gratings must be placed so that the long dimension is perpendicular to the dominant direction of travel.

Flangeway gaps at pedestrian at-grade rail crossings must be 64 millimeters (2.5 inches) maximum on non-freight rail track, and 75 millimeters (3 inches) maximum on freight rail track. These are the typical gaps required to allow passage of train wheel flanges. The flangeway gaps are wider than the maximum gap allowed for horizontal openings in other surfaces. These wider flangeway gaps pose a potential safety hazard to pedestrians who use wheelchairs because the gap can entrap the wheelchair casters.³⁹ The Federal Railroad Administration is sponsoring research to develop materials or devices that will fill the flangeway gap under light loads of a wheelchair but will compress or retract when a train wheel

flange passes over it.⁴⁰ The materials or devices will be tested under heavy and light train loads for safety, effectiveness, durability, and cost.

Question 17. The Access Board seeks information on materials and devices that fill the flangeway gap, and any related research and sources of expertise.

R303 Alternate Pedestrian Access Routes (See R205)

In the 2005 draft of the proposed guidelines, the technical requirements for alternate pedestrian access routes were contained in Chapter R3. The proposed guidelines reference MUTCD standards for alternate pedestrian access routes in the scoping requirements at R205. This section heading is included in Chapter R3 of the proposed guidelines to notify readers who were familiar with the 2005 draft of the proposed guidelines where to find the requirements for alternate pedestrian access routes. This section heading will not be included in the final guidelines.

R304 Curb Ramps and Blended Transitions

General (R304.1)

Curb ramps are ramps that are cut through or built up to the curb (see R105.5). Curb ramps can be perpendicular or parallel, or a combination of parallel and perpendicular ramps. Blended transitions are raised pedestrian street crossings, depressed corners, or similar connections between the pedestrian access route at the level of the sidewalk and the level of the pedestrian street crossing that have a grade of 5 percent or less (see R105.5).

The technical requirements for curb ramps and blended transitions are contained in R304 and adapt the technical requirements for curb ramps in the 2004 ADA and ABA Accessibility Guidelines to the public right-of-way. In alterations where existing physical constraints make it impractical to fully comply with the technical requirements, compliance is required to the extent practicable within the scope of the project (see R202.3.1).

Perpendicular Curb Ramps (R304.2)

39. For additional information on the potential safety hazard of flangeway gaps, see “Wheelchair Safety at Rail Level Crossings, International Review Working Paper” (2003) at [http://www.transport.vic.gov.au/DOI/DOIElect.nsf/\\$UNIDS+for+Web+Display/43D9BDF138FFE9F9CA256D630011A607/\\$FILE/Rail_Crossing_Disability_Access-International_Review.pdf](http://www.transport.vic.gov.au/DOI/DOIElect.nsf/$UNIDS+for+Web+Display/43D9BDF138FFE9F9CA256D630011A607/$FILE/Rail_Crossing_Disability_Access-International_Review.pdf); and “Rail Crossing Disability Access Kit” (2003) available at: [http://www.transport.vic.gov.au/DOI/DOIElect.nsf/\\$UNIDS+for+Web+Display/E995EA3FEB44F07CCA256D630011AD71/\\$FILE/Rail_Crossing_Disability_Access-Toolkit.pdf](http://www.transport.vic.gov.au/DOI/DOIElect.nsf/$UNIDS+for+Web+Display/E995EA3FEB44F07CCA256D630011AD71/$FILE/Rail_Crossing_Disability_Access-Toolkit.pdf).

40. For announcement of award of research contact in 2010, see <http://www.volpe.dot.gov/sbir/ph1rec10.html> and <http://www.integran.com/news/IT%20USA%20DOT%20Flangeway%20Gap%20SBIR%20-%20100323.pdf>. The Transportation Research Board has also developed research need statements for reducing flangeway gaps at railroad crossings. See “Wheelchairs Crossing Flangeway Gaps at Railroad Crossings” (2007); and “Reducing Flangeway Gaps at Railroad Crossings to Better Accommodate Pedestrians” (2008). The research need statements are available at: <http://rns.trb.org/dproject.asp?n=13462> and <http://rns.trb.org/dproject.asp?n=17644>.

Perpendicular curb ramps have a running slope that cuts through or is built up to the curb at right angles or meets the gutter grade break at right angles where the curb is curved. On corners with a large curb radius, it will be necessary to indent the gutter grade break on one side of the curb ramp in order for the curb ramp to meet the gutter grade break at right angles.

A turning space must be provided at the top of perpendicular curb ramps. The turning space must be 1.2 meters (4 feet) minimum by 1.2 meters (4 feet) minimum, and is permitted to overlap other turning spaces and clear spaces. Where the turning space is constrained at the back of the sidewalk, the turning space must be 1.2 meters (4 feet) minimum by 1.5 meters (5 feet) minimum, with the 1.5 meters (5 feet) dimension provided in the direction of the ramp run.

A minimum running slope of 5 percent and a maximum running slope of 8.3 percent are specified for perpendicular curb ramps, and the ramp length is limited to 4.5 meters (15 feet). A maximum running slope of 2 percent is specified for the turning space at the top of the curb ramp. The running slope is measured parallel to the direction of pedestrian travel.

A maximum slope of 10 percent is specified for the flared sides of perpendicular curb ramps where a pedestrian circulation path crosses the curb ramp. The flared sides are part of the pedestrian circulation path, but are not part of the pedestrian access route. The slope of the flared sides is measured parallel to the curb line. The 10 percent maximum slope for the flared sides is the same as in the 2004 ADA and ABA Accessibility Guidelines (see 403.6). Transportation officials have reported that the 10 percent maximum slope for the flared sides can make it difficult to provide two perpendicular curb ramps at some street corners due to the width of the flared sides at the base of the curb ramp. The Access Board is considering increasing the maximum slope for the flared sides to 12.5 percent or 16.7 percent to address this issue.

Question 18. Comments are requested on whether the maximum slope for the flared sides of perpendicular curb ramps should be increased from 10 percent to 12.5 percent or 16.7 percent, and what impact such a change would have on providing two perpendicular curb ramps at street corners. Comments are also requested on any public safety issues that may arise from increasing the maximum slope for the flared sides from 10 percent to 12.5 percent or 16.7 percent.

Parallel Curb Ramps (R304.3)

Parallel curb ramps have a running slope that is in-line with the direction of sidewalk travel and lower the sidewalk to a level turning space where a turn is made to enter the pedestrian street crossing.

A turning space must be provided at the bottom of parallel curb ramps. The turning space must be 1.2 meters (4 feet) minimum by 1.2 meters (4 feet) minimum, and is permitted to overlap other turning spaces and clear spaces. Where the turning space is constrained on two or more sides, the turning space must be 1.2 meters (4 feet) minimum by 1.5 meters (5 feet) minimum, with the 1.5 meters (5 feet) dimension provided in the direction of the pedestrian street crossing.

A minimum running slope of 5 percent and a maximum running slope of 8.3 percent are specified for parallel curb ramps, and the ramp length is limited to 4.5 meters (15 feet). A maximum running slope of

2 percent is specified for the turning space at the bottom of the curb ramp. The running slope is measured parallel to the direction of pedestrian travel.

Blended Transitions (R304.4)

A maximum running slope of 5 percent is specified for blended transitions. The running slope is measured parallel to the direction of pedestrian travel.

Common Requirements (R304.5)

The clear width of curb ramp runs (excluding flared sides), blended transitions, and turning spaces must be 1.2 meters (4 feet) minimum. Grade breaks at the top and bottom of curb ramp runs must be perpendicular to the direction of the ramp run. Grade breaks are not permitted on the surface of ramp runs and turning spaces. Surface slopes that meet at grade breaks must be flush. A maximum cross slope of 2 percent is specified for curb ramps, blended transitions, and turning spaces. At pedestrian street crossings without yield or stop control and at midblock pedestrian street crossings, the cross slope is permitted to equal the street or highway grade. The cross slope is measured perpendicular to the direction of pedestrian travel. A maximum counter slope of 5 percent is specified for the gutter or street at the foot of curb ramp runs, blended transitions, and turning spaces. A clear space must be provided beyond the bottom of the grade break that is within the width of the pedestrian street crossing and wholly outside the parallel vehicle traffic lane. The clear space must be 1.2 meters (4 feet) minimum by 1.2 meters (4 feet) minimum.

R305 Detectable Warning Surfaces

Detectable warning surfaces consist of truncated domes aligned in a square or radial grid pattern. The dimensions for dome size and dome spacing are the same as in the 2004 ADA and ABA Accessibility Guidelines. The detectable warning surfaces must contrast visually with adjacent gutter, street or highway, or pedestrian access route surface, either light-on-dark or dark-on-light. The detectable warning surfaces must extend 610 millimeters (2 feet) minimum in the direction of pedestrian travel. At curb ramps and blended transitions, detectable warning surfaces must extend the full width of the ramp run (excluding flared sides), blended transition, or turning space. At pedestrian at-grade rail crossings not located within a street or highway, detectable warning surfaces must extend the full width of the crossing. At boarding platforms for buses and rail vehicles, detectable warning surfaces must extend the full length of the public use areas of the platform. At boarding and alighting areas at sidewalk or street level transit stops for rail vehicles, detectable warning surfaces must extend the full length of the transit stop. The proposed technical requirements specify where detectable warning surfaces must be placed on perpendicular curb ramps, parallel curb ramps, blended transitions, pedestrian refuge islands, pedestrian at-grade rail crossings, boarding platforms for buses and rail vehicles, and boarding and alighting areas at sidewalk or street level transit stops for rail vehicles.

R306 Pedestrian Street Crossings

The technical requirements in R306 address pedestrian signal phase timing and pedestrian street crossings at roundabouts and multi-lane channelized turn lanes.

Pedestrian Signal Phase Timing

Pedestrian signal phase timing must comply with referenced MUTCD standards and use a pedestrian clearance time that is calculated based on pedestrian walking speed of 1.1 meters/second (3.5 feet/second) or less.

Roundabouts

A roundabout is a circular intersection with yield control at entry, which permits a vehicle on the circulatory roadway to proceed, and with deflection of the approaching vehicle counter-clockwise around a central island (MUTCD section 1A.13). Pedestrian street crossings at roundabouts can be difficult for pedestrians who are blind or have low vision to identify because the crossings are located off to the side of the pedestrian circulation path around the street or highway. Where sidewalks are flush against the curb at roundabouts and pedestrian street crossing is not intended, a continuous and detectable edge treatment must be provided along the street side of the sidewalk at roundabouts. Detectable warning surfaces must not be used for edge treatment. Where chains, fencing, or railings are used for edge protection, the bottom edge of the treatment must be 380 millimeters (15 inches) maximum above the sidewalk to be detectable by cane.

The continuous traffic flow at roundabouts removes many of the audible cues that pedestrians who are blind use to navigate pedestrian street crossings. At roundabouts with multi-lane pedestrian street crossings, a pedestrian activated signal must be provided for each multilane segment of each crossing, including the splitter island (i.e., median island used to separate opposing directions of traffic entering and exiting a roundabout, MUTCD section 1A.13). Transportation officials who commented on the 2002 draft guidelines expressed concern that signalization of roundabouts would interfere with the flow of traffic at roundabout intersections. Pedestrian Hybrid Beacons can be used at roundabouts. See MUTCD sections 4F.01 through 4F.03. Pedestrian Hybrid Beacons are traffic signals that consist of a yellow signal centered below two horizontally aligned red signals. The signals are normally dark (i.e., not illuminated). The signals are initiated only upon pedestrian activation and can be timed to minimize the interruption of traffic. The signals cease operation after the pedestrian clears the crosswalk. When activated by a pedestrian, the following signals are displayed to drivers: a flashing yellow signal, then a steady yellow signal, then two steady red signals during the pedestrian walk interval, and then alternating flashing red signals during the pedestrian clearance interval. The following signals are displayed to pedestrians: a steady upraised hand (symbolizing DON'T WALK) when the flashing or steady yellow signal is operating, then a walking person (symbolizing WALK) when the steady red signals are operating, and then a flashing upraised hand (symbolizing DON'T WALK) when the alternating flashing red signals are operating. Transportation officials may request permission from the Federal Highway Administration to experiment with alternative signals at roundabouts (see MUTCD section 1A.10).⁴¹

41. The Federal Highway Administration has granted interim approval to Rectangular Flashing Rapid Beacons, which can be used at roundabouts. However, Rectangular Flashing Rapid Beacons do not provide positive indication to drivers to stop and positive indication to pedestrians that the walk interval has been actuated. Rectangular Flashing Rapid Beacons do not meet MUTCD standards for accessible pedestrian signals and pedestrian pushbuttons.

Multi-Lane Channelized Turn Lanes

Pedestrian activated signals must be provided at pedestrian street crossings at multi-lane channelized turn lanes at roundabouts and other signalized intersections. The pedestrian activated signals must comply with MUTCD standards for accessible pedestrian signals and pedestrian pushbuttons.

Governmental Units Affected

The requirement for pedestrian activated signals at roundabouts with multi-lane pedestrian street crossings will affect state and local transportation departments that construct new roundabouts with multi-lane pedestrian street crossings. The Volpe Center estimated that state and local transportation departments construct 27 new roundabouts with multi-lane pedestrian street crossings on an annual basis.⁴²

Costs to Provide Pedestrian Activated Signals at Roundabouts with Multi-Lane Pedestrian Street Crossings

The Volpe Center estimated the cost to provide pedestrian activated signals at new roundabouts with multi-lane pedestrian street crossings to range from \$90,000 to \$230,000 per roundabout, and the total annual costs for requiring pedestrian activated signals at new roundabouts with multi-lane pedestrian street crossings to range from \$2.4 million to \$6.2 million.

Question 19. The Access Board seeks additional information on the number of roundabouts with multi-lane pedestrian street crossings that are newly constructed on an annual basis by state and local transportation departments, and the costs to provide pedestrian activated signals at newly constructed roundabouts with multi-lane pedestrian street crossings.

R307 Accessible Pedestrian Signals and Pedestrian Pushbuttons (See R209)

In the 2005 draft of the proposed guidelines, the technical requirements for accessible pedestrian signals and pedestrian pushbuttons were contained in Chapter R3. The proposed guidelines reference MUTCD standards for accessible pedestrian signals and pedestrian pushbuttons in the scoping requirements at R209. This section heading is included in Chapter R3 of the proposed guidelines to notify readers who were familiar with the 2005 draft of the proposed guidelines where to find the requirements for accessible pedestrian signals and pedestrian pushbuttons. This section heading will not be included in the final guidelines.

R308 Transit Stops and Transit Shelters

42. The Volpe Center used the roundabout database at: <http://roundabout.kittelson.com/> to estimate the number of new roundabouts with multi-lane pedestrian street crossings that are constructed on an annual basis. During the five year period between 2005 and 2009, 435 new roundabouts were constructed, of which 117 were multi-lane. The data was adjusted for a small number of roundabouts that are listed in the database as having an “unknown” number of lanes and for roundabouts that do have any pedestrian facilities (i.e., sidewalks and pedestrian street crossings).

The technical requirements for transit stops and transit shelters are contained in R308 and adapt the technical requirements for transit facilities in the 2004 ADA and ABA Accessibility Guidelines to the public right-of-way.

Transit Stops (R308.1)

Boarding and alighting areas at sidewalk or street level transit stops must be 2.4 meters (8 feet) minimum measured perpendicular to the street or highway, and 1.5 meters (5 feet) minimum measured parallel to the street or highway. The grade of the boarding and alighting area parallel to the street or highway must be equal to street or highway grade to the extent practicable. The grade of the boarding and alighting area perpendicular to the street or highway must not exceed 2 percent. Where transit stops serve vehicles with more than one car, boarding and alighting areas serving each car must comply with these requirements.

Boarding platforms at transit stops must be positioned to coordinate with vehicles to minimize the vertical and horizontal gaps. The slope of boarding platforms must not exceed 2 percent in any direction. Where boarding platforms serve vehicles operating on existing track or existing street or highway, the slope of the platform parallel to the track or street or highway is permitted to equal the grade of the track or street or highway.

The surfaces of boarding and alighting areas and boarding platforms must comply with the technical requirements for surfaces (see R302.7). Boarding and alighting areas and boarding platforms must be connected to streets, sidewalks, or pedestrian circulation paths by a pedestrian access route.

Transit Shelters (R308.2)

Transit shelters must be connected by a pedestrian access route to boarding and alighting areas or boarding platforms. A clear space (see R404) must be provided entirely within the transit shelter. Where seating is provided within transit shelters, the clear space must be located either at the end of a seat, or not overlap the area within 460 millimeters (1.5 feet) from the front edge of the seat in order to not interfere with others using the seating. Environmental controls within transit shelters must be proximity actuated. Protruding objects within transit shelters must comply with the technical requirements for protruding objects (see R402).

The Access Board is considering whether to require a turning space in transit shelters. Transit shelter designs vary. Some transit shelters are enclosed on three or four sides, with an opening for ingress and egress. The turning space would be based on the 2004 ADA and ABA Accessibility Guidelines (see 304.3).⁴³ The turning space would be permitted to overlap the clear space within the transit shelter and

43. The 2004 ADA and ABA Accessibility Guidelines require a turning space to be either a circular space 1.5 meters (5 feet) minimum in diameter, or a T-shaped space within a square with sides 1.5 meters (5 feet) minimum where the arms and base of the T-shaped space are 915 millimeters (3 feet) minimum. Each arm of the T-shaped space must be clear of obstructions 305 millimeters (1 foot) minimum in each direction, and the base must be clear of obstructions 610 millimeters (2 feet) minimum. A circular space is permitted to include knee and toe clearance. A T-shaped space is permitted to include knee and toe clearance only at the end of either the base or one arm.

the pedestrian access route, but would not be permitted to overlap the area within 460 millimeters (1.5 feet) from the front edge of seats in the transit shelter in order to not interfere with others using the seating. The portion of the turning space that does not overlap the clear space would be permitted to be outside the transit shelter.

Question 20. Comments are requested on whether a turning space should be required in transit shelters and what impact such a requirement would have on the design and placement of transit shelters?

R309 On-Street Parking Spaces

General (R309.1)

The technical requirements for accessible on-street parking spaces are contained in R309 and adapt the technical requirements for accessible parking spaces in the 2004 ADA and ABA Accessibility Guidelines to the public right-of-way.

Parallel Parking Spaces (R309.2)

Where the adjacent sidewalk or available right-of-way is more than 4.3 meters (14 feet) wide, an access aisle must be provided at street level for the entire length of each accessible parallel parking space. The access aisle must be 1.5 meters (5 feet) wide minimum and connect to a pedestrian access route. The access aisle must not encroach on the vehicular travel lane and comply with the technical requirements for surfaces (see R302.7). In alterations where the street or sidewalk adjacent to the parking spaces is not altered, an access aisle is not required provided the parking spaces are located at the end of the block face.

Where the adjacent sidewalk or available right-of-way is less than or equal to 4.3 meters (14 feet) wide, an access aisle is not required, but accessible parallel parking spaces must be located at the end of the block face.

Perpendicular and Angled Parking Spaces (R309.3)

An access aisle must be provided at street level for the entire length of each accessible perpendicular or angled parking space. The access aisle must be 2.4 meters (8 feet) wide minimum to accommodate vans with lifts, and connect to a pedestrian access route. Two accessible parking spaces are permitted to share a common access aisle. The access aisle must be marked to discourage parking in the aisle and comply with the technical requirements for surfaces (see R302.7).

Curb Ramps and Blended Transitions (R309.4)

Curb ramps or blended transitions must connect the access aisle serving each accessible on-street parking space to the pedestrian access route. Curb ramps are not permitted within the access aisle. Parking spaces at the end of block face can be served by curb ramps or blended transitions at the pedestrian street crossing. Detectable warning surfaces are not required on curb ramps and blended transitions that connect the access aisle to the sidewalk, including where the sidewalk is at the same

level as the parking spaces, unless the curb ramps and blended transitions also serve pedestrian street crossings.

Parking Meters and Parking Pay Stations (R309.5)

Operable parts of parking meters and parking pay stations that serve accessible on-street parking spaces must comply with technical requirements for operable parts in Chapter R4. Displays and information must be visible from a point located 1 meter (3.3 feet) maximum above the center of the clear space in front of the parking meter or parking pay station. At accessible parallel parking spaces, parking meters must be located at the head or foot of the space.

R310 Passenger Loading Zones

The technical requirements for accessible passenger loading zones are the same as in the 2004 ADA and ABA Accessibility Guidelines. A vehicular pull-up space 2.4 meters (8 feet) wide minimum and 6.1 meters (20 feet) long minimum must be provided at accessible passenger loading zones. An access aisle must be provided at the same level as the vehicle pull-up space. The access aisle must be 1.5 meters (5 feet) wide minimum, extend the entire length of the vehicle pull-up space, and connect to the pedestrian access route. The access aisle must be marked to discourage parking in the aisle and comply with the technical requirements for surfaces (see R302.7).

Chapter R4: Supplementary Technical Requirements

Chapter R4 contains supplementary technical requirements that are the same as in the 2004 ADA and ABA Accessibility Guidelines unless otherwise noted below.

R401 General

The supplementary technical requirements in Chapter R4 apply where required by scoping requirements in Chapter R2, or where referenced by another technical requirement in Chapters R3 or R4.

R402 Protruding Objects

Objects with leading edges between 685 millimeters (2.25 feet) and 2 meters (6.7 feet) above the finish surface must not protrude into pedestrian circulation paths more than 100 millimeters (4 inches). Post-mounted objects such as signs that are between 685 millimeters (2.25 feet) and 2 meters (6.7 feet) above the finish surface must not overhang pedestrian circulation paths more than 100 millimeters (4 inches) measured horizontally from the base of the post. The post base must be 64 millimeters (2.5 inches) thick minimum. Where objects are mounted between posts and the clear distance between the posts is more than 305 millimeters (1 foot), the lowest edge of the object must be 685 millimeters (2.25 feet) minimum or 2 meters (6.7 feet) maximum above the finish surface. The requirement for post-mounted objects differs from the 2004 ADA and ABA Accessibility Guidelines but is consistent with the MUTCD which requires the bottom of signs installed on the sidewalk to be 7 feet minimum above the sidewalk, and the bottom of secondary signs (i.e., signs mounted below another sign) that are lower than 7 feet above the sidewalk to project not more than 4 inches into the sidewalk (see MUTCD section 2A.18).

Guardrails or other barriers to pedestrian travel must be provided where the vertical clearance on pedestrian circulation paths is less than 2 meters (6.7 feet) high. The leading edge of the guardrail or barrier must be 685 millimeters (2.25 feet) maximum above the finish surface.

R403 Operable Parts

An operable part is a component of an element used to insert or withdraw objects, or to activate, deactivate, or adjust the element (see R105.5). The technical requirements for operable parts apply to operable parts on accessible pedestrian signals and pedestrian pushbuttons (see R209) and parking meters and parking pay stations that serve accessible parking spaces (see R309.5). A clear space must be provided at operable parts (see R404). Operable parts must be located within the reach ranges (see R406). Operable parts must be operable with one hand and not require tight grasping, pinching, or twisting of the wrist. The force required to activate operable parts must be no more than 22 newtons (5 pounds).

R404 Clear Spaces

Clear spaces are required at operable parts (see R403.2), including accessible pedestrian signals and pedestrian pushbuttons (see R209) and parking meters and parking pay stations that serve accessible parking spaces (see R309.5). Clear spaces are also required at benches (see R212.6) and within transit shelters (see R308.2). Clear spaces must be 760 millimeters (2.5 feet) minimum by 1220 millimeters (4 feet) minimum. Additional maneuvering space must be provided where an element is confined on all or part of three sides. Clear spaces are permitted to include knee and toe clearance and to be positioned for either forward or parallel approach to an element, unless another requirement specifies otherwise. The running slope of clear spaces is permitted to be consistent with the grade of the adjacent pedestrian access route. This requirement differs from the 2004 ADA and ABA Accessibility Guidelines which does not permit slopes steeper than 2 percent at clear spaces. A 2 percent maximum cross slope is specified for clear spaces. Clear spaces must comply with the technical requirements for surfaces (see R302.7).

R405 Knee and Toe Clearance

The technical requirements for knee and toe clearance apply where space beneath an element is included as part of the clear space.

R406 Reach Ranges

Forward and side reach ranges must be between 380 millimeters (1.25 feet) and 1220 millimeters (4 feet) above the finish surface. The requirements for reach ranges differ from the 2004 ADA and ABA Accessibility Guidelines in that forward reach over an obstruction is not permitted, and side reach over an obstruction is permitted where the depth of the obstruction between the clear space and the element is 225 millimeters (10 inches) maximum.

R407 Ramps

R408 Stairways

R409 Handrails

R410 Visual Characters on Signs

R411 International Symbol of Accessibility

The technical requirements ramps, stairways, handrails, visual characters on signs, and the International Symbol of Accessibility are the same as in the 2004 ADA and ABA Accessibility Guidelines.

Other Issues

Rollability and Smoothness of Walking Surfaces

Rollability refers to the ease and comfort with which pedestrians using wheelchairs and other wheeled mobility devices can travel on walking surfaces. Rough or jointed walking surfaces can cause pedestrians using wheelchairs and other wheeled mobility devices to expend extra energy or pushing effort that makes it more difficult for them to use the walking surface, and the resulting surface vibration can cause discomfort or pain that may prevent them from using the walking surface all together. There are smoothness measures for road surfaces but no similar measures for walking surfaces. The Access Board is sponsoring preliminary research that will produce a plan for a test protocol and instrumentation to measure the rollability and smoothness of walking surfaces and to establish an index of surface vibration.

Question 21. The Access Board seeks information on related research and sources of expertise on measuring the rollability and smoothness of walking surfaces, including information from the medical community on the effects of surface vibration on individuals with disabilities.

Shared Streets

A shared street is a common space designed for use by pedestrians, bicyclists, and vehicles.⁴⁴ Shared streets typically do not have curbs and delineated sidewalks. Vehicles typically travel at low speeds on shared streets. Trees, planters, parking areas, and other obstacles may be placed on shared streets to slow vehicles. Shared streets can be in a commercial area or residential area. Shared streets are difficult for pedestrians who are blind or have low vision to navigate because of the absence of curbs and clearly delineated sidewalks.⁴⁵ The Pedestrian Accessibility and Movement Environment Laboratory at

44. The Pedestrian and Bicycle Information Center provides information on shared streets on its website at: <http://www.walkinginfo.org/engineering/calming-street.cfm>.

45. Focus groups and surveys of pedestrians who are blind or have low vision commissioned by the Guide Dogs for the Blind Association in the United Kingdom and Netherlands document the difficulties that these pedestrians have using shared streets. See "The Impact of Shared Surface Streets and Shared Use Pedestrian/Cycle Paths on the Mobility and Independence of Blind and Partially Sighted People" (2010) available at: http://gdbass.net/efficiency.co.uk/fileadmin/sharedsurfaces/user/documents/TNS_Report_Text_version_Impact_of_shared_surface_streets_and_shared_use_paths_GD_2010.doc ; "Shared Surface Street Design Research Project, The Issues: Report of Focus Groups" (2006) at http://community.stroud.gov.uk/documents/23_Shared_Surface_Street_Design_Research_Project.pdf ; and "Shared Surface Street Design: Report of Focus Groups Held in Holland" (2006) at http://www.alan-hunt.co/pdf/Report_of_Holland_Focus_Groups.pdf.

University College London has conducted limited research on the use of tactile surfaces to delineate the space on shared streets that is to be used exclusively by pedestrians, and not vehicles.⁴⁶ The tactile surfaces tested included raised truncated domes that, in the United States, are used as detectable warning surfaces on curb ramps and blended transitions to indicate the boundary between the pedestrian route and the vehicular route at pedestrian street crossings. Using detectable warning surfaces to facilitate wayfinding along shared streets would be expanding the use of such surfaces.

Question 22. The Access Board seeks information on the design of shared streets in the United States, and whether tactile surfaces or other design features are used to facilitate wayfinding along shared streets. The Access Board also seeks information about other research that is planned or underway on the use of tactile surfaces or other design features to facilitate wayfinding along shared streets.

Regulatory Process Matters

Executive Orders 12866 and 13563

The Office of Management and Budget has reviewed this proposed rule pursuant to Executive Orders 12866 and 13563.⁴⁷ The Access Board prepared a regulatory assessment of the potential costs and benefits of the proposed rule. The regulatory assessment is available on the Access Board website at: <http://www.access-board.gov/prowac/index.htm>, and is also available in the regulatory docket at <http://www.regulations.gov>. The information in the regulatory assessment is discussed in the preamble under Impacts on State and Local Governments and under the relevant requirements in the Section-by-Section Analysis. The information in the regulatory assessment is also summarized in the tables below. As indicated in the tables below, the regulatory assessment does not include estimates of the total annual costs for two of the requirements in the proposed guidelines that will have more than minimal impacts because information is not available to estimate the costs. Questions are included in the preamble seeking additional information to assist the Board to estimate the total annual costs of these two

46. "Shared Space Delineators, Are They Detectable?" (2010) available at: http://www.tap.iht.org/objects_store/201004/TfL%20Report%2020100415.pdf. See also "Testing Proposed Delineators to Demarcate Pedestrian Paths in a Shared Space Environment, Report of Design Trials Conducted at University College London" (2008) available at: <http://www.homezones.org.uk/public/downloads/news/Exec%20Summary%20&%20Full%20Report%20of%20design%20trials%20at%20UCL%20PAMELA%200108.pdf>.

47. Executive Orders 12866 and 13563 establish and reaffirm principles of regulation that direct federal agencies among other things to: "(1) propose or adopt a regulation only upon a reasoned determination that its benefits justify its costs (recognizing that some benefits and costs are difficult to quantify); (2) tailor its regulations to impose the least burden on society, consistent with obtaining regulatory objectives, taking into account, among other things, and to the extent practicable, the costs of cumulative regulations; (3) select, in choosing among alternative regulatory approaches, those approaches that maximize net benefits (including potential economic, environmental, public health and safety, and other advantages; distributive impacts; and equity); (4) to the extent feasible, specify performance objectives, rather than specifying the behavior or manner of compliance that regulated entities must adopt; and (5) identify and assess available alternatives to direct regulation, including providing economic incentives to encourage the desired behavior, such as user fees or marketable permits, or providing information upon which choices can be made by the public." Executive Order 13563, section 1 (b).

requirements and to refine the cost estimates for the other requirements in the proposed guidelines. Consequently, the Access Board has not determined whether the proposed guidelines are an economically significant regulatory action.⁴⁸ The Access Board will analyze the information received in response to the questions in the preamble. When the final guidelines are issued, the Access Board will revise the regulatory assessment and determine whether the guidelines are an economically significant regulatory action.

Baseline

All state transportation departments and most local transportation departments maintain design manuals and standard drawings for improvements in the public right-of-way. The local transportation department design manuals and standard drawings are generally consistent with their state transportation department design manuals and standard drawings. State and local transportation departments use publications issued by the American Association of State and Highway Transportation Officials (AASHTO) in their design manuals and standard drawings, including the “Policy on Geometric Design of Highways and Streets” (2004) (commonly referred to as the “AASHTO Green Book”) and the “Guide for the Planning, Design, and Operation of Pedestrian Facilities” (2004) which incorporate accessibility in the design of sidewalks and other pedestrian facilities.⁴⁹ The Federal Highway Administration as part of its stewardship and oversight responsibilities has also worked with state transportation departments to incorporate accessibility in their design manuals and standards drawings. The Federal Highway Administration has issued guidance that the accessibility standards in the Department of Justice regulations implementing Title II of the Americans with Disabilities Act and the Department of Transportation regulations implementing Section 504 are to be used to the extent feasible for the design of pedestrian facilities in the public right-of-way until new accessibility standards are adopted for these facilities.

In the absence of the proposed guidelines, the regulatory assessment assumes that state and local transportation departments will use the DOJ 2010 Standards in the Department of Justice regulations implementing Title II of the Americans with Disabilities Act to the extent feasible when designing, constructing, or altering pedestrian facilities in the public right-of-way, consistent with the guidance issued by the Federal Highway Administration, as well as other applicable standards and industry practices. An analysis of the proposed guidelines compared to the DOJ 2010 Standards, other applicable standards, and industry practices is included in the appendix to the regulatory assessment. The analysis identified four requirements in the proposed guidelines that will have more than minimal impacts on state and local transportation departments. The factors used to identify whether the requirements in the proposed guidelines will have more than minimal impacts are discussed in the regulatory assessment and in the preamble under Impacts on State and Local Governments. The four requirements in the proposed guidelines that will have more than minimal impacts on state and local transportation departments are summarized in the table below, along with a description of the

48. A regulatory action is economically significant if it is anticipated to “[h]ave an annual effect on the economy of \$100 million or more” or to “adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal government communities.” Executive Order 12866, section 2 (f) (1).

49. See footnote 20 for additional information on the AASHTO publications and accessibility.

governmental units affected by proposed requirements and questions in the preamble to the proposed guidelines that seek additional information on the governmental units affected.

Requirements in Proposed Guidelines That Will Have More Than Minimal Impacts on State and Local Transportation Departments

Requirement	Governmental Units Affected
Detectable warning surfaces required on newly constructed and altered curb ramps and blended transitions at pedestrian street crossings (R208.1 and R305)	Will affect state and local transportation departments that do not currently provide detectable warning surfaces on curb ramps All state transportation departments currently specify detectable warning surfaces on curb ramps in their standard drawings; most local transportation departments maintain standard drawings that are consistent with standard drawings maintained by their state transportation departments Questions 4, 5, and 6 in preamble seek information on state and local transportation departments that do not currently provide detectable warning surfaces on curb ramps
Accessible pedestrian signals and pushbuttons required when pedestrian signals newly installed or replaced at signalized intersections (R209)	Will affect state and local transportation departments that do not currently provide accessible pedestrian signals and pedestrian pushbuttons when pedestrian signals are newly installed or replaced at signalized intersections Some state and local transportation departments currently provide accessible pedestrian signals and pedestrian pushbuttons when pedestrian signals are newly installed or replaced at signalized intersections; TEA-21 (23 U.S.C. 217 (g)) directed that audible traffic signals be included in transportation plans and projects where appropriate Question 9 in preamble seeks information on state and local transportation departments that currently provide accessible pedestrian signals and pedestrian pushbuttons when pedestrian signals are newly installed or replaced at signalized intersections

Requirements in Proposed Guidelines That Will Have More Than Minimal Impacts on State and Local Transportation Departments

Requirement	Governmental Units Affected
Maximum cross slope of 2 percent required on pedestrian access routes, including within pedestrian street crossings with yield or stop control (R204.3 and R302.6)	Will affect state and local transportation departments that construct new tabled intersections in hilly urban areas which contain pedestrian street crossings with yield or stop control Question 14 in preamble seeks information on the current design policies and practices of state and local transportation departments with respect to tabling newly constructed intersections in hilly urban areas, particularly with respect to extending the tabling to pedestrian street crossings with yield or stop control
Pedestrian activated signals required at roundabouts with multi-lane pedestrian crossings (R206 and R306.3.2)	Will affect state and local transportation departments that construct new roundabouts with multi-lane pedestrian street crossings

The Access Board entered into an interagency agreement with the Volpe National Transportation Systems Center (Volpe Center) to gather data and prepare cost estimates for the regulatory assessment. The cost estimates prepared by the Volpe Center are summarized in the table below, along with questions in the preamble to the proposed guidelines that seek additional information to refine the cost estimates.

Estimated Total Annual Costs for Requirements That Will Have More Than Minimal Impacts on State and Local Transportation Departments

Requirement	Additional Costs Per Element or Facility Due to Requirement	Number of Elements or Facilities Constructed or Altered on Annual Basis	Total Annual Costs for Requirement
Detectable warning surfaces required on newly constructed and altered curb ramps and blended transitions at pedestrian street crossings (R208.1 and R305)	\$48 to \$240 for detectable warning materials for typical curb ramp Question 8 in preamble seeks additional information on costs for detectable warning materials and installation of the materials on typical curb ramp	No information available Question 7 in preamble seeks information on number of curb ramps that are constructed or altered on an annual basis in the public right-of-way	No estimate provided Total annual costs will depend on number of state and local transportation departments that do not currently provide detectable warning surfaces on curb ramps, and number of curb ramps that they construct or alter on an annual basis
Accessible pedestrian signals and pushbuttons required when pedestrian signals newly installed or replaced at signalized intersections (R209)	\$3,600 per signalized intersection Question 10 in preamble seeks additional information on costs for providing accessible pedestrian signals and pedestrian pushbuttons at signalized intersections	Pedestrian signals newly installed or replaced at 13,095 signalized intersections on an annual basis	\$47 million

Estimated Total Annual Costs for Requirements That Will Have More Than Minimal Impacts on State and Local Transportation Departments

Requirement	Additional Costs Per Element or Facility Due to Requirement	Number of Elements or Facilities Constructed or Altered on Annual Basis	Total Annual Costs for Requirement
Maximum cross slope of 2 percent required on pedestrian access routes, including within pedestrian street crossings with yield or stop control (R204.3 and R302.6)	\$60,000 per tabled intersection Question 15 in preamble seeks additional information on costs to extend tabling of newly constructed intersections in hilly urban areas to pedestrian street crossings with yield or stop control	No information available Question 16 in preamble seeks information on number of tabled intersections which contain pedestrian street crossings with yield or stop control that are newly constructed in hilly urban areas on an annual basis	No estimate provided Total annual costs will depend on number of tabled intersections which contain pedestrian street crossings with yield or stop control that are newly constructed in hilly urban areas on an annual basis
Pedestrian activated signals required at roundabouts with multi-lane pedestrian crossings (R206 and R306.3.2)	\$90,000 to \$230,000 per roundabout Question 19 in preamble seeks additional information on costs to provide pedestrian activated signals at roundabouts with multi-lane pedestrian crossings	27 new roundabouts with multi-lane pedestrian street crossings constructed on an annual basis	\$2.4 million to \$6.2 million

Benefits

The proposed guidelines will benefit pedestrians with disabilities. The U.S. Census Bureau reports that 54.4 million Americans, about one in five U.S. residents, reported some level of disability in 2005.⁵⁰ The number of individuals with disabilities is almost equal to the combined total population of California and Florida. The U.S. Census Bureau provides this breakdown of the population of people aged 15 and older:

- 27.4 million (11.9 percent) had difficulty with ambulatory activities of the lower body;

50. "Americans with Disabilities: 2005" (2008) available on the web at: <http://www.census.gov/prod/2008pubs/p70-117.pdf>.

- 22.6 million people (9.8 percent) had difficulty walking a quarter of a mile;
- 21.8 million (9.4 percent) had difficulty climbing a flight of stairs;
- 10.2 million (4.4 percent) used a cane, crutches, or walker to assist with mobility;
- 3.3 million (1.4 percent) used a wheelchair or other wheeled mobility device; and
- 7.8 million (3 percent) had difficulty seeing words or letters in ordinary newspaper print, including 1.8 million who are completely unable to see.

Executive Order 13563 states that to the extent permitted by law federal agencies must “propose or adopt a regulation only upon a reasoned determination that its benefits justify its costs (recognizing that some benefits and costs are difficult to quantify)” and that “where appropriate and permitted by law, each agency may consider and (discuss qualitatively) values that are difficult or impossible to quantify, including equity, human dignity, fairness, and distributive impacts.” The proposed guidelines promote important societal values that are difficult or impossible to quantify. As discussed above under the Need for Rulemaking, when enacting the Americans with Disabilities Act, Congress found “the discriminatory effects of architectural, transportation, and communication barriers” to be a continuing problem that “denies people with disabilities the opportunity to compete on an equal basis and to pursue those opportunities for which our free society is justifiably famous, and costs the United States billions of dollars in unnecessary expenses resulting from dependency and nonproductivity.” 42 U.S.C. 12101 (a) (5) and (9). Congress declared that “the Nation’s proper goals regarding individuals with disabilities are to assure equality of opportunity, full participation, independent living, and economic self-sufficiency.” 42 U.S.C. 12101 (a) (8). The proposed guidelines promote the goals declared by Congress by eliminating the discriminatory effects of architectural, transportation, and communication barriers in the design and construction of pedestrian facilities in the public right-of-way. The proposed guidelines are also important to achieving the benefits of the other parts of the Americans with Disabilities Act. As the House Report for the Americans with Disabilities Act stated, “[t]he employment, transportation, and public accommodation sections . . . would be meaningless if people who use wheelchairs were not afforded the opportunity to travel on and between the streets.” H.R. 485, 101st Cong., 2d Sess. 84 (1990).

Question 23. Comments are requested on whether the proposed guidelines have other quantitative or qualitative benefits in addition to those discussed above.

Regulatory Flexibility Act: Initial Regulatory Flexibility Analysis

The impacts of the proposed guidelines on small governmental jurisdictions with a population of less than 50,000 are discussed below. This information is required by the Regulatory Flexibility Act (5 U.S.C. §603).

Reasons for issuing proposed accessibility guidelines

The Access Board’s current accessibility guidelines, the 2004 ADA and ABA Accessibility Guidelines, were developed primarily for buildings and facilities on sites. Some of the requirements in the 2004 ADA and ABA Accessibility Guidelines can be readily applied to pedestrian facilities in the public right-of-way, but other requirements need to be adapted for pedestrian facilities in the public right-of-way. The proposed guidelines are developed specifically for pedestrian facilities in the public right-of-way and address conditions and constraints that exist in the public right-of-way.

Objectives of, and legal basis for, proposed accessibility guidelines

The Access Board is required to issue accessibility guidelines by the Americans with Disabilities Act (42 U.S.C. §12204) and Section 502 of the Rehabilitation Act (29 U.S.C. §792) to ensure that newly constructed and altered facilities are readily accessible to and usable by pedestrians with disabilities.

Small governmental jurisdictions affected by proposed accessibility guidelines

The number of small governmental jurisdictions with a population less than 50,000 affected by the proposed guidelines is shown in the table below.

Governmental Jurisdictions	Population Less Than 50,000
County	2,178
Municipal	18,824
Town or Township	16,371
Total	37,375

Source: US Census Bureau 2002 Census of Governments available at: <http://www.census.gov/prod/2003pubs/gc021x1.pdf>.

Almost 70 percent of municipal governments (13,038) and more than 75 percent of towns and townships (12,331) have a population of less than 2,500. Many of these small governmental jurisdictions are located in rural areas, which generally do not construct pedestrian transportation networks (e.g., sidewalks, pedestrian street crossings, and pedestrian signals).

Compliance requirements

The proposed accessibility guidelines address the design, construction, and alteration of pedestrian facilities in the public right-of-way, including sidewalks, pedestrian street crossings, pedestrian overpasses and underpasses, curb ramps and blended transitions at pedestrian street crossings, pedestrian signals, street furniture (i.e., drinking fountains, public toilet facilities, tables, counters, and benches), pedestrian signs, transit stops and transit shelters for buses and light rail vehicles, on-street parking that is marked or metered, and passenger loading zones. The Section-by-Section Analysis of the preamble describes the proposed accessibility guidelines. Compliance with the proposed accessibility guidelines is not mandatory until they are adopted, without or without additions and modifications, as accessibility standards by other federal agencies. There are no reporting or recordkeeping requirements.

Other federal rules

The Department of Justice, Department of Transportation, and General Services Administration are responsible for issuing accessibility standards that are consistent with the accessibility guidelines issued by the Access Board and are expected to conduct rulemaking to adopt the proposed guidelines, with or

without additions and modifications, as accessibility standards in regulations implementing Title II of the Americans with Disabilities Act (28 CFR part 36 and 49 CFR part 37), Section 504 of the Rehabilitation Act (49 CFR part 27), and the Architectural Barriers Act (41 CFR part 102). Additional information on these laws and regulations is provided under the Statutory and Regulatory Background in the preamble to the proposed guidelines.

Significant alternatives which minimize any significant economic impacts on small entities

The regulatory assessment analyzes the following four requirements in the proposed guidelines that will have more than minimal impacts on state and local transportation departments:

- Detectable warning surfaces required on newly constructed and altered curb ramps and blended transitions at pedestrian street crossings (see R208.1 and R305). Detectable warning surfaces consist of small truncated domes that are detectable underfoot. Where curb ramps or blended transitions are provided at pedestrian street crossings, detectable warning surfaces indicate the boundary between a pedestrian route and a vehicular route for pedestrians who are blind or have low vision in place of the missing curb.
- Accessible pedestrian signals and pedestrian pushbuttons required when pedestrian signals newly installed or replaced at signalized intersections (see R209). Accessible pedestrian signals and pedestrian pushbuttons communicate the information about the WALK and DON'T WALK intervals at signalized intersections in non-visual formats (i.e., audible tones and vibrotactile surfaces) to pedestrians who are blind or have low vision.
- Maximum cross slope of 2 percent required on pedestrian access routes, including within pedestrian street crossings with yield or stop control. Cross slope is the slope perpendicular to the direction of pedestrian travel. Cross slope impedes travel by pedestrians who use wheeled mobility devices since energy must be expended to counteract the perpendicular force of the cross slope. The 2 percent maximum cross slope required on pedestrian access routes has more than minimal impacts on the construction of new tabled intersections in hilly urban areas that contain pedestrian street crossings with yield or stop control where vehicles slow or stop before proceeding through the intersection.
- Pedestrian activated signals at roundabouts with multi-lane pedestrian street crossings. A roundabout is a circular intersection with yield control at entry, which permits a vehicle on the circulatory roadway to proceed, and with deflection of the approaching vehicle counter-clockwise around a central island. Pedestrian activated signals are required at roundabouts with multi-lane pedestrian street crossings to facilitate crossing by pedestrians who are blind or have low vision. Small governmental jurisdictions with a population less than 50,000 are not likely to construct roundabouts with multi-lane pedestrian street crossings and will not be affected by this requirement.

There are no significant alternatives that will minimize any significant impacts of these requirements on small governmental jurisdictions and achieve the objectives of the Americans with Disabilities Act, Section 504 of the Rehabilitation Act, and the Architectural Barriers Act to eliminate the discriminatory effects of architectural, transportation, and communication barriers in the design and construction of pedestrian facilities in the public right-of-way.

Executive Order 13132: Federalism

The proposed rule adheres to the fundamental federalism principles and policy making criteria in Executive Order 13132. The proposed rule is issued under the authority of the Americans with Disabilities Act, civil rights legislation that was enacted by Congress pursuant to its authority to enforce the Fourteenth Amendment to the U.S. Constitution and to regulate commerce. The Americans with Disabilities Act was enacted “to provide a clear and comprehensive national mandate for the elimination of discrimination against individuals with disabilities.” 42 U.S.C. §12101 (b) (1). The Americans with Disabilities Act recognizes the authority of State and local governments to enact and enforce laws that “provide for greater or equal protection for the rights of individuals with disabilities than are afforded by this chapter.” 42 U.S.C. §12201 (b). The proposed rule is based on the recommendations of a federal advisory committee which included representatives of state and local governments. The Access Board made drafts of the proposed rule available for public review and comment. State and local governments provided comments on the drafts of the proposed rule.

Unfunded Mandates Reform Act

The Unfunded Mandates Reform Act does not apply to proposed or final rules that enforce constitutional rights of individuals or enforce statutory rights that prohibit discrimination on the basis of race, color, sex, national origin, age, handicap, or disability. Since the proposed rule is issued under the Americans with Disabilities Act, which prohibits discrimination on the basis of disability, an assessment of the rule’s effect on State, local, and tribal governments, and the private sector is not required by the Unfunded Mandates Reform Act.

List of Subjects in 36 CFR Part 1190

Buildings and facilities, Civil rights, Individuals with disabilities, Transportation.

Nancy Starnes,

Chair.

For the reasons stated in the preamble, the Access Board proposes to add part 1190 to title 36 of the Code of Federal Regulations to read as follows:

PART 1190 –ACCESSIBILITY GUIDELINES FOR PEDESTRIAN FACILITIES IN THE PUBLIC RIGHT-OF-WAY

Sec.

1190.1 Accessibility guidelines.

Appendix to part 1190 – Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way

Authority: 29 U.S.C. 792 and 42 U.S.C. 12204.

§ 1190.1 Accessibility Guidelines.

The accessibility guidelines for pedestrian facilities in the public right-of-way are set forth in the appendix to this part. When the guidelines are adopted, with or without additions and modifications, as accessibility standards in regulations issued by other federal agencies implementing the Americans with Disabilities Act, Section 504 of the Rehabilitation Act, and the Architectural Barriers Act, compliance with the accessibility standards is mandatory. A copy of the guidelines with figures is available on the Access Board website at: <http://www.access-board.gov/prowac/nprm.htm>. Except for the International Symbol of Accessibility in Figure R411, which is included in the appendix to this part, the figures are for illustration purposes only and do not establish requirements.

CHAPTER R1: APPLICATION AND ADMINISTRATION

R101 Purpose

R101.1 General. This document contains scoping and technical requirements to ensure that facilities for pedestrian circulation and use located in the public right-of-way are readily accessible to and usable by pedestrians with disabilities. Compliance with this document is mandatory when required by regulations issued by federal agencies that include accessibility standards for the design, construction, and alteration of pedestrian facilities in the public right-of-way.

Advisory R101.1 General. Sections marked as “advisory” contain advisory information related to the preceding section. Advisory sections do not establish mandatory requirements. Some advisory sections reference related mandatory requirements to alert readers about those requirements.

R101.2 Effect on Existing Facilities. This document does not address existing facilities unless the facilities are included within the scope of an alteration undertaken at the discretion of a covered entity.

Advisory R101.2 Effect on Existing Facilities. The Department of Justice regulations implementing Title II of the Americans with Disabilities Act contain requirements for state and local governments regarding program accessibility and existing facilities. See 28 CFR 35.150. The Department of Transportation regulations implementing Section 504 of the Rehabilitation Act also contain requirements for recipients of federal financial assistance from the Department regarding compliance planning. See 49 CFR 27.11 (c).

R102 Equivalent Facilitation. The use of alternative designs, products, or technologies that result in substantially equivalent or greater accessibility and usability than the requirements in this document is permitted.

R103 Conventions

R103.1 Conventional Industry Tolerances. Dimensions are subject to conventional industry tolerances except where dimensions are stated as a range.

Advisory R103.1 Conventional Industry Tolerances. Conventional industry tolerances include tolerances for field conditions and tolerances that may be a necessary consequence of a particular manufacturing process. Conventional industry tolerances do not apply to design work.

R103.2 Calculation of Percentages. Where the required number of elements or facilities to be provided is determined by calculations of ratios or percentages and remainders or fractions result, the next greater whole number of such elements or facilities shall be provided. Where the determination of the required size or dimension of an element or facility involves ratios or percentages, rounding down for values less than one half is permitted.

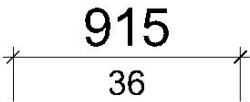
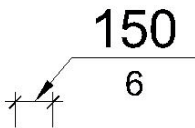
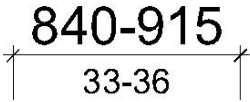
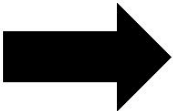
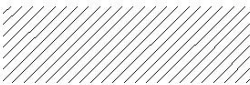
Convention	Description
	dimension showing International System of Units (in millimeters unless otherwise specified) above the line and US customary units (in inches unless otherwise specified) below
	dimension for small measurements
	dimension showing a range with minimum - maximum
min	minimum
max	maximum
>	greater than
≥	greater than or equal to
<	less than
≤	less than or equal to
-----	boundary of clear floor space or maneuvering clearance
-----Ⓢ	centerline
-----	a permitted element or its extension
	direction of travel or approach
	a highlighted element in elevation or plan
	location zone of element, control or feature

Figure R103
Graphic Convention for Figures

R103.3 Units of Measurement. Measurements are stated in metric and U.S. customary units. The values stated in each system (metric and U.S. customary units) may not be exact equivalents, and each system shall be used independently of the other.

Advisory R103.3 Units of Measurement. Users should work entirely within one system of measurement, either metric or U.S. customary units. Combining values from the two systems may result in non-compliance.

R104 Referenced Standards

R104.1 Incorporation by Reference. The specific editions of the standards listed in R104.2 are incorporated by reference in this document and are part of the requirements to the prescribed extent of each such reference. The Director of the Federal Register has approved the standards for incorporation by reference in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies of the referenced standards may be inspected at the Access Board, 1331 F Street, NW, Suite 1000, Washington, DC 20004; or at the National Archives and Records Administration (NARA). For information on the availability of the referenced standards at NARA, call (202) 741-6030, or go to: http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.

R104.2 MUTCD. The portions of the Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD), 2009 Edition, that are incorporated by reference in this document consist of definitions (see R105.2) and standard statements, as defined in section 1A.13 of the MUTCD (see R205, R209, and R306.3). Guidance, option, and support statements, as defined in section 1A.13 of the MUTCD, shall be used to assist in the interpretation of the standard statements. Where there are differences between this document and the referenced standards, this document applies. The MUTCD is available on the Federal Highway Administration website at <http://mutcd.fhwa.dot.gov>. Printed copies may be purchased from the American Association of State Highway and Transportation Officials, 444 N Capitol Street, NW, Washington, DC 20001 (<http://www.transportation.org/>).

Advisory R104.2 MUTCD. MUTCD definitions and standard statements are referenced in the following sections of this document:

- R105.2 references definitions in section 1A.13 of the MUTCD;
- R205 references standard statements in sections 6D.01, 6D.02, 6G.05, 6F.63, 6F.68, and 6F.71 of the MUTCD for providing alternate pedestrian access routes when a pedestrian circulation path is temporarily closed;
- R209 references standard statements in sections 4E.08 through 4E.13 of the MUTCD for accessible pedestrian signals and pedestrian pushbuttons; and
- R306.2 references standard statements in section 4E.06 of the MUTCD for pedestrian signal phase timing.

R105 Definitions

R105.1 General. For the purpose of this document, the terms defined in R105.5 have the indicated meaning.

R105.2 Terms Defined in Referenced Standards. Terms used in specific sections of the MUTCD that are incorporated by reference in this document shall have the meaning specified in section 1A.13 of the MUTCD (incorporated by reference, see R104.2). In addition, the following terms shall have the meaning specified in section 1A.13 of the MUTCD (incorporated by reference, see R104.2): highway, intersection, island, median, pedestrian, roundabout, sidewalk, splitter island, and street.

R105.3 Undefined Terms. The meaning of terms not specifically defined in R105.5, the referenced standards, or regulations issued by Federal agencies that adopt this document as accessibility standards shall be as defined by collegiate dictionaries in the sense that the context implies.

R105.4 Interchangeability. Words, terms, and phrases used in the singular include the plural and those used in the plural include the singular.

R105.5 Defined Terms.

Accessible. Describes a facility in the public right-of-way that complies with this document.

Alteration. A change to a facility in the public right-of-way that affects or could affect pedestrian access, circulation, or use. Alterations include, but are not limited to, resurfacing, rehabilitation, reconstruction, historic restoration, or changes or rearrangement of structural parts or elements of a facility.

Blended Transition. A raised pedestrian street crossing, depressed corner, or similar connection between the pedestrian access route at the level of the sidewalk and the level of the pedestrian street crossing that has a grade of 5 percent or less.

Cross Slope. The grade that is perpendicular to the direction of pedestrian travel.

Curb Line. A line at the face of the curb that marks the transition between the curb and the gutter, street, or highway.

Curb Ramp. A ramp that cuts through or is built up to the curb. Curb ramps can be perpendicular or parallel, or a combination of parallel and perpendicular ramps.

Element. An architectural or mechanical component of a building, facility, space, site, or public right-of-way.

Facility. All or any portion of buildings, structures, improvements, elements, and pedestrian or vehicular routes located in the public right-of-way.

Grade Break. The line where two surface planes with different grades meet.

Operable Part. A component of an element used to insert or withdraw objects, or to activate, deactivate, or adjust the element.

Pedestrian Access Route. A continuous and unobstructed path of travel provided for pedestrians with disabilities within or coinciding with a pedestrian circulation path.

Pedestrian Circulation Path. A prepared exterior or interior surface provided for pedestrian travel in the public right-of-way.

Public Right-of-Way. Public land or property, usually in interconnected corridors, that is acquired for or dedicated to transportation purposes.

Qualified Historic Facility. A facility that is listed in or eligible for listing in the National Register of Historic Places, or designated as historic under an appropriate state or local law.

Running Slope. The grade that is parallel to the direction of pedestrian travel.

Vertical Surface Discontinuities. Vertical differences in level between two adjacent surfaces.

CHAPTER R2: SCOPING REQUIREMENTS

R201 Application

R201.1 Scope. All newly constructed facilities, altered portions of existing facilities, and elements added to existing facilities for pedestrian circulation and use located in the public right-of-way shall comply with the requirements in this document.

Advisory R201.1 Scope. The requirements in this document are to be applied to all areas of a facility within the scope of the project. Where multiple features of the same type are provided, such as on-street parking spaces, and a percentage of the features are required to be accessible, only the required number of features must comply with the technical requirements in this document and be connected to a pedestrian access route. Where elements are provided on a site that is a designated portion of a public right-of-way, the elements are required to comply with the applicable requirements in this document instead of the requirements in the Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities and the Architectural Barriers Act Accessibility Guidelines (36 CFR part 1191).

R201.2 Temporary and Permanent Facilities. The requirements in this document shall apply to temporary and permanent facilities in the public right-of-way.

Advisory R201.2 Temporary and Permanent Facilities. Temporary pedestrian circulation paths around work zones and portable public toilets are examples of temporary facilities in the public right-of-way that are covered by the requirements in this document.

R201.3 Buildings and Structures. Buildings and structures in the public right-of-way that are not covered by the requirements in this document shall comply with the applicable requirements in 36 CFR part 1191.

Advisory R201.3 Buildings and Structures. Towers and temporary performance stages and reviewing stands are examples of structures that may be provided in the public right-of-way and are not covered by the requirements in this document. These structures are required to comply with the applicable requirements in the Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities and the Architectural Barriers Act Accessibility Guidelines (36 CFR part 1191).

R202 Alterations and Elements Added to Existing Facilities

R202.1 General. Alterations and elements added to existing facilities shall comply with R202. Where elements are altered or added and the pedestrian circulation path to the altered or added elements is not altered, the pedestrian circulation path is not required to comply with R204.

Advisory R202.1 General. Where possible, added elements should be located on an existing pedestrian access route.

R202.2 Added Elements. Where elements are added to existing facilities, the added elements shall comply with the applicable requirements for new construction.

R202.3 Alterations. Where existing elements, spaces, or facilities are altered, each altered element, space, or facility within the scope of the project shall comply with the applicable requirements for new construction.

Advisory R202.3 Alterations. The alteration of multiple elements or spaces within a facility may provide a cost-effective opportunity to make the entire facility or a significant portion of the facility accessible.

R202.3.1 Existing Physical Constraints. Where existing physical constraints make it impracticable for altered elements, spaces, or facilities to fully comply with the requirements for new construction, compliance is required to the extent practicable within the scope of the project. Existing physical constraints include, but are not limited to, underlying terrain, right-of-way availability, underground structures, adjacent developed facilities, drainage, or the presence of a notable natural or historic feature.

R202.3.2 Transitional Segments. Transitional segments of pedestrian access routes shall connect to existing unaltered segments of pedestrian circulation paths and shall comply with R302 to the extent practicable.

R202.3.3 Reduction in Access Prohibited. An alteration shall not decrease or have the effect of decreasing the accessibility of a facility or an accessible connection to an adjacent building or site below the requirements for new construction in effect at the time of the alteration.

Advisory R202.3.3 Reduction in Access Prohibited. Sidewalk improvements that correct existing excessive cross slope should be carefully planned to avoid creating excessive slope in curb ramps or adding a step at existing building entrances. Solutions may include:

- Split sidewalks that serve building entrances and street or highway at separate levels;
- Sidewalks with greater cross slope along the curb and pedestrian access routes with lesser cross slope along building fronts;
- Pedestrian access routes along the curb and ramped entrances to buildings.

R202.3.4 Alterations to Qualified Historic Facilities. Where the State Historic Preservation Officer or Advisory Council on Historic Preservation determines that compliance with a requirement would threaten or destroy historically significant features of a qualified historic facility, compliance shall be required to the extent that it does not threaten or destroy historically significant features of the facility.

Advisory R202.3.4 Alterations to Qualified Historic Facilities. Where there is a federal agency “undertaking”, as defined in 36 CFR 800.16 (y), the requirements in section 106 of the National Historic Preservation Act (16 U.S.C. 470f) and 36 CFR part 800 apply. Location of a facility within an historic district by itself does not excuse compliance with the requirements in this document. The State Historic Preservation Officer or Advisory Council on Historic Preservation must determine that compliance would threaten or destroy historically significant features of the facility. Reproductions or replications of historic facilities are not qualified historic facilities.

R203 Machinery Spaces. Vaults, tunnels, and other spaces used by service personnel only for maintenance, repair, or monitoring are not required to comply with this document.

R204 Pedestrian Access Routes

R204.1 General. Pedestrian access routes shall be provided in accordance with R204 and shall comply with R302.

Advisory R204.1 General. The Federal Highway Administration (FHWA) has issued guidance on the obligations of state and local governments to keep pedestrian access routes open and usable throughout the year, including snow and debris removal. The guidance is available at FHWA’s website:

http://www.fhwa.dot.gov/civilrights/programs/ada_sect504qa.htm.

R204.2 Sidewalks. A pedestrian access route shall be provided within sidewalks and other pedestrian circulation paths located in the public right-of-way. The pedestrian access route shall connect to accessible elements, spaces, and facilities required by this document and to accessible routes required by section 206.2.1 of appendix B to 36 CFR part 1191 or section F206.2.1 of appendix C to 36 CFR 1191 that connect building and facility entrances to public streets and sidewalks.

Advisory R204.2 Sidewalks. The accessible elements, spaces, and facilities located in the public right-of-way that pedestrian access routes must connect to include accessible pedestrian signals and pedestrian pushbuttons (see R209), street furniture (see R212), boarding and alighting areas and boarding platforms at transit stops (see R213 and R308.1.3.2), transit shelters (see R213 and R308.2), accessible on-street parking spaces (see R214 and R309), parking meters and parking pay stations serving accessible parking spaces (see R309.5), and accessible passenger loading zones (see R215 and R310).

R204.3 Pedestrian Street Crossings. A pedestrian access route shall be provided within pedestrian street crossings, including medians and pedestrian refuge islands, and pedestrian at-grade rail crossings. The pedestrian access route shall connect departure and arrival sidewalks.

R204.4 Pedestrian Overpasses and Underpasses. A pedestrian access route shall be provided within overpasses, underpasses, bridges, and similar structures that contain pedestrian circulation paths. Where an overpass, underpass, bridge, or similar structure is designed for pedestrian use only and the approach slope to the structure exceeds 5 percent, a ramp, elevator, limited use/limited application

elevator, or platform lift shall be provided. Elevators and platform lifts shall be unlocked during the operating hours of the facility served.

Advisory R204.4 Pedestrian Overpasses and Underpasses. Where an overpass, underpass, bridge, or similar structure is designed for both pedestrian and vehicle use and the pedestrian access route is contained within the street or highway right-of-way, the grade of the pedestrian access route must not exceed the general grade established for the adjacent street or highway (see R302.5). Where the pedestrian access route is not contained within the street or highway right-of-way, the grade of the pedestrian access route must be 5 percent maximum (see R302.5). Where pedestrian overpasses or underpasses provide an alternative pedestrian circulation path to street level crossings, both the pedestrian overpass or underpass and the street level crossing must contain a pedestrian access route. State and local governments can provide a ramp, elevator, or lift at overpasses and underpasses designed for pedestrian use only. Long ramps present difficulties for some pedestrians with disabilities and can require snow clearance. Elevators or lifts can require maintenance.

R205 Alternate Pedestrian Access Routes. When a pedestrian circulation path is temporarily closed by construction, alterations, maintenance operations, or other conditions, an alternate pedestrian access route complying with sections 6D.01, 6D.02, and 6G.05 of the MUTCD (incorporated by reference, see R104.2) shall be provided. Where provided, pedestrian barricades and channelizing devices shall comply with sections 6F.63, 6F.68, and 6F.71 of the MUTCD (incorporated by reference, see R104.2).

Advisory R205 Alternate Pedestrian Access Routes. Section 6G.05 of the MUTCD recommends that whenever possible work should be done in a manner that does not create a need to detour pedestrians from existing pedestrian routes. Extra distance and additional pedestrian street crossings add complexity to a trip and increase exposure of risk to accidents. Sections 6D.01 and 6G.05 of the MUTCD require alternate pedestrian routes to be accessible and detectable, including warning pedestrians who are blind or have low vision about sidewalk closures. Proximity-actuated audible signs are a preferred means to warn pedestrians who are blind or have low vision about sidewalk closures.

R206 Pedestrian Street Crossings. Pedestrian street crossings shall comply with R306.

Advisory R206 Pedestrian Street Crossings. All pedestrian street crossings must be accessible to pedestrians with disabilities. If pedestrian crossing is prohibited at certain locations, "No Pedestrian Crossing" signs should be provided along with detectable features, such as grass strips, landscaping, planters, chains, fencing, railings, or other barriers.

R207 Curb Ramps and Blended Transitions

R207.1 General. A curb ramp, blended transition, or a combination of curb ramps and blended transitions complying with R304 shall connect the pedestrian access routes at each pedestrian street

crossing. The curb ramp (excluding any flared sides) or blended transition shall be contained wholly within the width of the pedestrian street crossing served.

R207.2 Alterations. In alterations where existing physical constraints prevent compliance with R207.1, a single diagonal curb ramp shall be permitted to serve both pedestrian street crossings.

R208 Detectable Warning Surfaces

R208.1 Where Required. Detectable warning surfaces complying with R305 shall be provided at the following locations on pedestrian access routes and at transit stops:

1. Curb ramps and blended transitions at pedestrian street crossings;
2. Pedestrian refuge islands;
3. Pedestrian at-grade rail crossings not located within a street or highway;
4. Boarding platforms at transit stops for buses and rail vehicles where the edges of the boarding platform are not protected by screens or guards; and
5. Boarding and alighting areas at sidewalk or street level transit stops for rail vehicles where the side of the boarding and alighting areas facing the rail vehicles is not protected by screens or guards.

Advisory R208.1 Where Required. On pedestrian access routes, detectable warning surfaces indicate the boundary between pedestrian and vehicular routes where there is a flush rather than a curbed connection. Detectable warning surfaces should not be provided at crossings of residential driveways since the pedestrian right-of-way continues across residential driveway aprons. However, where commercial driveways are provided with yield or stop control, detectable warning surfaces should be provided at the junction between the pedestrian route and the vehicular route. Where pedestrian at-grade rail crossings are located within a street or highway, detectable warning surfaces at the curb ramps or blended transitions make a second set of detectable warning surfaces at the rail crossing unnecessary.

Detectable warning surfaces are not intended to provide wayfinding for pedestrians who are blind or have low vision. Wayfinding can be made easier by:

- Sidewalks that provide a clear path free of street furniture;
- Visual contrast between walking and non-walking areas (e.g., planted borders);
- Route edges that are clear and detectable by cane;
- Direct pedestrian street crossings and curb ramps that are in-line with direction of travel;
- Small corner radiuses that permit pedestrian street crossings to be as short and direct as possible;
- Orthogonal intersections that facilitate navigation using parallel and perpendicular vehicle sound cues;
- and barriers where pedestrian travel or crossing is not permitted.

R208.2 Where Not Required. Detectable warning surfaces are not required at pedestrian refuge islands that are cut-through at street level and are less than 1.8 meters (6.0 ft) in length in the direction of pedestrian travel.

Advisory R208.2 Where Not Required. Detectable warning surfaces are not required at cut-through pedestrian refuge islands that are less than 1.8 meters (6.0 ft) in length because detectable warning surfaces must extend 610 millimeters (2.0 ft) minimum on each side of the island and be separated by 610 millimeters (2.0 ft) minimum length of island without detectable warning surfaces (see R305.1.4 and R305.2.4). Installing detectable warning surfaces at cut-through pedestrian islands that are less than 1.8 meters (6.0 ft) in length would compromise the effectiveness of detectable warning surfaces. Where a cut-through pedestrian refuge island is less than 1.8 m (6.0 ft) in length and the pedestrian street crossing is signalized, the signal should be timed for a complete crossing of the street.

R209 Accessible Pedestrian Signals and Pedestrian Pushbuttons

R209.1 General. Where pedestrian signals are provided at pedestrian street crossings, they shall include accessible pedestrian signals and pedestrian pushbuttons complying with sections 4E.08 through 4E.13 of the MUTCD (incorporated by reference, see R104.2). Operable parts shall comply with R403.

Advisory R209 Accessible Pedestrian Signals and Pedestrian Pushbuttons. An accessible pedestrian signal and pedestrian pushbutton is an integrated device that communicates information about the WALK and DON'T WALK intervals at signalized intersections in non-visual formats (i.e., audible tones and vibrotactile surfaces) to pedestrians who are blind or have low vision.

R209.2 Alterations. Existing pedestrian signals shall comply with R209.1 when the signal controller and software are altered, or the signal head is replaced.

R210 Protruding Objects. Objects along or overhanging any portion of a pedestrian circulation path shall comply with R402 and shall not reduce the clear width required for pedestrian access routes.

Advisory R210 Protruding Objects. Protruding objects can be hazardous for pedestrians, especially pedestrians who are blind or have low vision. The requirements for protruding objects in R402 apply across the entire width of the pedestrian circulation path, not just the pedestrian access route. In addition, objects must not reduce the clear width required for pedestrian access routes. State and local governments must comply with the requirements for protruding objects and maintain the clear width of pedestrian access routes when installing or permitting the installation of street furniture on sidewalks, including street lights, utility poles and equipment cabinets, sign posts and signs, parking meters, trash receptacles, public telephones, mailboxes, newspaper vending machines, benches, transit shelters, kiosks, bicycle racks, planters and planted trees, and street sculptures. The American Association of State Highway and Transportation Officials (AASHTO) recommends that local governments use an encroachment permit process to regulate the use of sidewalks by private entities for activities such as outdoor dining, vending carts and stands, and street fairs in order to control protruding objects and maintain the clear width of pedestrian access routes. See AASHTO, Guide for the Planning, Design, and Operation of Pedestrian Facilities (2004), section 3.2.3.

R211 Signs

R211.1 General. Signs shall comply with R211. Where audible sign systems and other technologies are used to provide information equivalent to the information contained on pedestrian signs and transit signs, the signs are not required to comply with R211.2 and R211.3.

Advisory R211.1 General. Audible sign systems and other technologies that provide information equivalent to the information contained on signs are more usable by pedestrians who are blind or have low vision. Remote infrared audible signs that transmit information to portable devices that are carried by and audible only to the user are an example of audible sign systems and other technologies.

R211.2 Pedestrian Signs. Signs, other than transit signs, that provide directions, warnings, or other information for pedestrians only shall comply with R410.

Advisory R211.2 Pedestrian Signs. Pedestrian route signs along an historic trail, sidewalk closure and pedestrian detour signs, and tourist information signs are examples of signs that provide directions, warnings, or other information for pedestrians only. Signs provided for motorists and pedestrians such as highway and street name signs are not required to comply with R410.

R211.3 Transit Signs. Signs that identify the routes served by transit stops shall comply with R410.

Advisory R211.3 Transit Signs. Transit schedules, timetables, and maps are not required to comply with R410.

R211.4 Accessible Parking Space and Passenger Loading Zone Signs. Accessible parking spaces and accessible passenger loading zones shall be identified by signs displaying the International Symbol

of Accessibility complying with R411. At accessible parallel parking spaces and accessible passenger loading zones, the signs shall be located at the head or foot of the parking space or passenger loading zone.

R212 Street Furniture

R212.1 General. Where provided, street furniture shall comply with the applicable requirements in R212.

R212.2 Drinking Fountains. Drinking fountains shall comply with sections 602.1 through 602.6 of Appendix D to 36 CFR part 1191.

R212.3 Public Toilet Facilities. Public toilet facilities shall comply with sections 206.2.4 and 603 of Appendix D to 36 CFR part 1191. At least one fixture of each type provided shall comply with sections 604 through 610 of Appendix D to 36 CFR part 1191. Where multiple single-user public toilet facilities are clustered at a single location, at least 5 percent, but no less than one, of single-user toilets at each cluster shall comply with R212.3 and shall be identified by the International Symbol of Accessibility complying with R411.

R212.4 Tables. At least 5 percent, but no less than one, of tables at each location shall comply with section 902 of Appendix D to 36 CFR part 1191.

R212.5 Counters. Counters shall comply with section 904 of Appendix D to 36 CFR part 1191.

R212.6 Benches. At least 50 percent, but no less than one, of benches at each location shall provide clear space complying with R404 adjacent to the bench. The clear space shall be located either at one end of the bench or shall not overlap the area within 460 mm (1.5 ft) from the front edge of the bench. Benches at tables are not required to comply.

Advisory R212.6 Benches. Benches that provide full back support and armrests to assist in sitting and standing are more usable by pedestrians with disabilities.

R213 Transit Stops and Transit Shelters. Where provided, transit stops and transit shelters shall comply with R308.

Advisory R213 Transit Stops and Transit Shelters. Transit stops in the public right-of-way typically serve fixed route bus systems, including bus rapid transit systems, and light rail transit systems. Signs that identify the routes served by the transit stop must comply with the technical requirements for visual characters on signs unless audible sign systems or other technologies are used to provide the information (see R211 and R410). The Federal Highway Administration (FHWA) has issued guidance on the obligations of state transportation departments, metropolitan planning organizations, and transit agencies to coordinate the planning and funding of accessibility improvements to transit systems and facilities. The guidance is available at FHWA's website:
http://www.fhwa.dot.gov/civilrights/memos/ada_memo_clarificationa.htm.

R214 On-Street Parking Spaces. Where on-street parking is provided on the block perimeter and the parking is marked or metered, accessible parking spaces complying with R309 shall be provided in accordance with Table R214. Where parking pay stations are provided and the parking is not marked, each 6.1 m (20.0 ft) of block perimeter where parking is permitted shall be counted as one parking space.

Table R214 On-Street Parking Spaces

Total Number of Marked or Metered Parking Spaces on the Block Perimeter	Minimum Required Number of Accessible Parking Spaces
1 to 25	1
26 to 50	2
51 to 75	3
76 to 100	4
101 to 150	5
151 to 200	6
201 and over	4 percent of total

Advisory R214 On-Street Parking Spaces. The MUTCD contains provisions for marking on-street parking spaces (see section 3B.19). Metered parking includes parking metered by parking pay stations. Where parking on part of the block perimeter is altered, the minimum number of accessible parking spaces required is based on the total number of marked or metered parking spaces on the block perimeter.

R215 Passenger Loading Zones. Where passenger loading zones other than transit stops are provided, at least one accessible passenger loading zone complying with R310 shall be provided for each 30 m (100.0 ft) of continuous loading zone space or fraction thereof.

R216 Stairways and Escalators. Where provided on pedestrian circulation paths, stairways shall comply with R408 and escalators shall comply with section 810.9 of Appendix D to 36 CFR part 1191. Stairways and escalators shall not be part of a pedestrian access route.

R217 Handrails. Where provided on pedestrian circulation paths, handrails shall comply with R409.

R218 Doors, Doorways, and Gates. Where provided at pedestrian facilities, doors, doorways, and gates shall comply with section 404 of Appendix D to 36 CFR part 1191.

Advisory R218 Doors, Doorways, and Gates. Enclosed transit shelters are an example of pedestrian facilities where doors and doorways are provided.

CHAPTER R3: TECHNICAL REQUIREMENTS

R301 General

R301.1 Scope. The technical requirements in Chapter 3 shall apply where required by Chapter 2 or where referenced by a requirement in this document.

R302 Pedestrian Access Routes

R302.1 General. Pedestrian access routes shall comply with R302.

R302.2 Components. Pedestrian access routes shall consist of one or more of the following components:

1. Sidewalks and other pedestrian circulation paths, or a portion of sidewalks and other pedestrian circulation paths, complying with R302.3 through R302.7;
2. Pedestrian street crossings and at-grade rail crossings complying with R302.3 through R302.7, and R306;
3. Pedestrian overpasses and underpasses and similar structures complying with R302.3 through R302.7;
4. Curb ramps and blended transitions complying with R302.7 and R304;
5. Ramps complying with R407;
6. Elevators and limited use/limited application elevators complying with sections 407 or 408 of Appendix D to 36 CFR part 1191;
7. Platform lifts complying with section 410 of Appendix D to 36 CFR part 1191; and
8. Doors, doorways, and gates complying with section 404 of Appendix D to 36 CFR part 1191.

Advisory R302.2 Components. The technical requirement for elevators, limited use/limited application elevators, platform lifts, and doors, doorways, and gates are contained in the Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities and the Architectural Barriers Act Accessibility Guidelines (36 CFR part 1191).

R302.3 Continuous Width. Except as provided in R302.3.1, the continuous clear width of pedestrian access routes shall be 1.2 m (4.0 ft) minimum, exclusive of the width of the curb.

Advisory R302.3 Continuous Width. The continuous clear width requirements in R302.3 apply to sidewalks and other pedestrian circulation paths, pedestrian street crossings and at-grade rail crossings, and pedestrian overpasses and underpasses and similar structures (see R302.2). Clear width requirements are contained in R304.5.1 for curb ramps and blended transitions, and in R407.4 for ramps. Where sidewalks are wider than 1.2 m (4.0 ft), only a portion of the sidewalk is required to comply with the requirements in R302.3 through R302.7. Additional maneuvering space should be provided at turns or changes in direction, transit stops, recesses and alcoves, building entrances, and along curved or angled routes, particularly where the grade exceeds 5 percent. R210 prohibits street furniture and other objects from reducing the minimum clear width of pedestrian access routes.

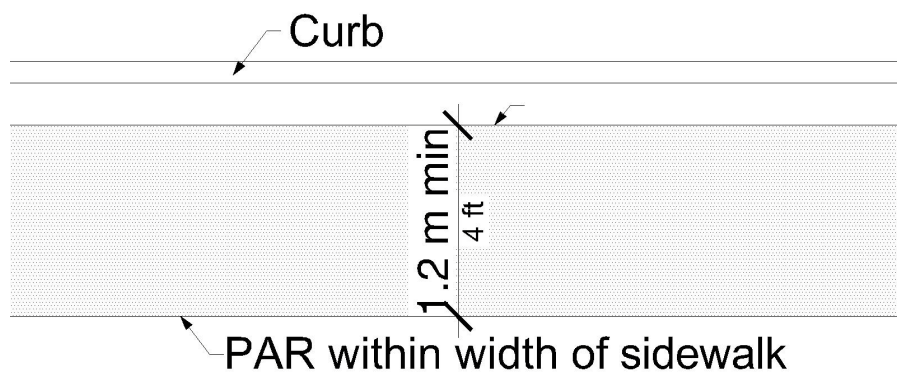


Figure R302.3
Continuous Width

R302.3.1 Medians and Pedestrian Refuge Islands. The clear width of pedestrian access routes within medians and pedestrian refuge islands shall be 1.5 m (5.0 ft) minimum.

R302.4 Passing Spaces. Where the clear width of pedestrian access routes is less than 1.5 m (5.0 ft), passing spaces shall be provided at intervals of 61 m (200.0 ft) maximum. Passing spaces shall be 1.5 m (5.0 ft) minimum by 1.5 m (5.0 ft) minimum. Passing spaces are permitted to overlap pedestrian access routes.

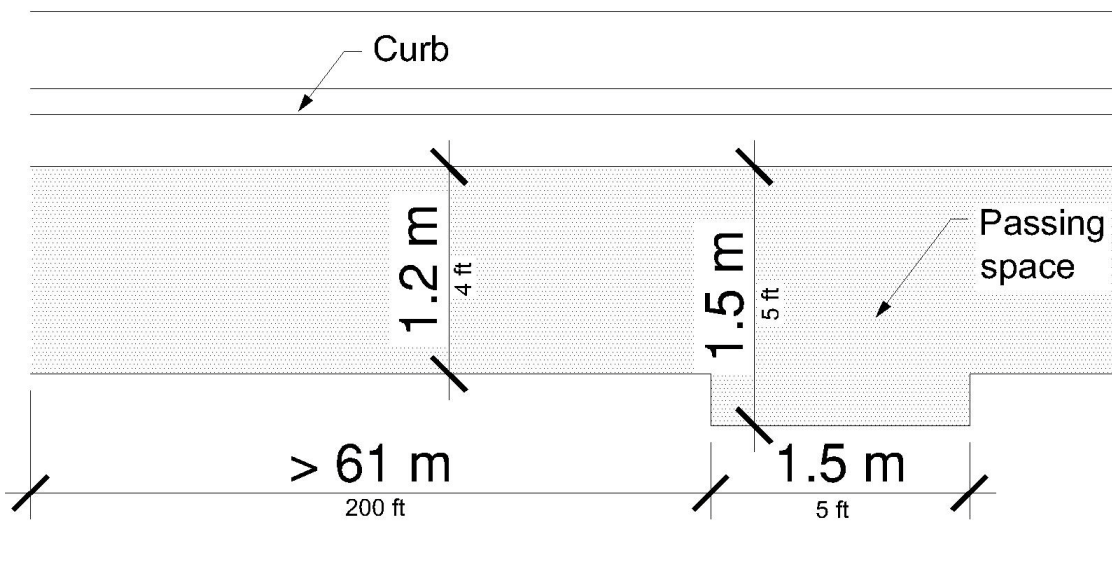


Figure R302.4
Passing Spaces

R302.5 Grade. Except as provided in R302.5.1, where pedestrian access routes are contained within a street or highway right-of-way, the grade of pedestrian access routes shall not exceed the general grade established for the adjacent street or highway. Where pedestrian access routes are not contained within a street or highway right-of-way, the grade of pedestrian access routes shall be 5 percent maximum.

Advisory R302.5 Grade. The grade requirements in R302.5 apply to sidewalks and other pedestrian circulation paths, pedestrian street crossings and at-grade rail crossings, and pedestrian overpasses and underpasses and similar structures (see R302.2). The grade of the pedestrian access route is measured parallel to the direction of pedestrian travel. Running slope requirements are contained in R304.2.2 for perpendicular curb ramps, in R304.3.2 for parallel curb ramps, in R304.4.1 for blended transitions, and in R407.2 for ramps.

R302.5.1 Pedestrian Street Crossings. Where pedestrian access routes are contained within pedestrian street crossings, the grade of the pedestrian access route shall be 5 percent maximum.

R302.6 Cross Slope. Except as provided in R302.6.1 and R302.6.2, the cross slope of pedestrian access routes shall be 2 percent maximum.

Advisory R302.6 Cross Slope. The cross slope requirements in R302.6 apply to sidewalks and other pedestrian circulation paths, pedestrian street crossings and at-grade rail crossings, and pedestrian overpasses and underpasses and similar structures (see R302.2). The cross slope of the pedestrian access route is measured perpendicular to the direction of pedestrian travel. Cross slope requirements are contained in R304.5.3 for curb ramps and blended transitions, and in R407.3 for ramps.

R302.6.1 Pedestrian Street Crossings Without Yield or Stop Control. Where pedestrian access routes are contained within pedestrian street crossings without yield or stop control, the cross slope of the pedestrian access route shall be 5 percent maximum.

Advisory R302.6.1 Pedestrian Street Crossings Without Yield or Stop Control. Pedestrian street crossings without yield or stop control are crossings where there is no yield or stop sign, or where there is a traffic signal that is designed for the green phase. At pedestrian street crossings without yield or stop control, vehicles can proceed through the intersection without slowing or stopping. Where pedestrian access routes are contained within pedestrian street crossings with yield or stop control, the cross slope of the pedestrian access route must be 2 percent maximum (see R302.6). At pedestrian street crossings with yield or stop control, vehicles slow or stop before proceeding through the intersection.

R302.6.2 Midblock Pedestrian Street Crossings. Where pedestrian access routes are contained within midblock pedestrian street crossings, the cross slope of the pedestrian access route shall be permitted to equal the street or highway grade.

R302.7 Surfaces. The surfaces of pedestrian access routes and elements and spaces required to comply with R302.7 that connect to pedestrian access routes shall be firm, stable, and slip resistant and shall comply with R302.7.

Advisory R302.7 Surfaces. The surface requirements in R302.7 apply to sidewalks and other pedestrian circulation paths, pedestrian street crossings and at-grade rail crossings, pedestrian overpasses and underpasses and similar structures, and curb ramps and blended transitions (see R302.2). The surface requirements in R302.7 also apply to surfaces at the following accessible elements and spaces that connect to pedestrian access routes:

- Clear spaces (see R404.2), including clear spaces at operable parts (see R403.2) such as accessible pedestrian signals and pedestrian pushbuttons (see R209), clear spaces at street furniture such as benches (see R212.6), and clear spaces within transit shelters (see R308.2);
- Boarding and alighting areas and boarding platforms at transit stops (see R308.1.3.1);
- Access aisles at accessible parking spaces (see R309.2.1 and R309.3) and accessible passenger loading zones (see R310.3.4); and ramp runs and landings (see R407.7).

R302.7.1 Vertical Alignment. Vertical alignment shall be generally planar within pedestrian access routes (including curb ramp runs, blended transitions, turning spaces, and gutter areas within pedestrian access routes) and surfaces at other elements and spaces required to comply with R302.7 that connect to pedestrian access routes. Grade breaks shall be flush. Where pedestrian access routes cross rails at grade, the pedestrian access route surface shall be level and flush with the top of rail at the outer edges of the rails, and the surface between the rails shall be aligned with the top of rail.

Advisory R302.7.1 Vertical Alignment. Pedestrian access route surfaces must be generally planar and smooth. Surfaces should be chosen for easy rollability. Surfaces that are heavily textured, rough, or chamfered and paving systems consisting of individual units that cannot be laid in plane will greatly increase rolling resistance and subject pedestrians who use wheelchairs, scooters, and rolling walkers to the stressful and often painful effects of vibration. Such materials should be reserved for borders and decorative accents located outside of or only occasionally crossing the pedestrian access route. Surfaces should be designed, constructed, and maintained according to appropriate industry standards, specifications, and recommendations for best practice.

R302.7.2 Vertical Surface Discontinuities. Vertical surface discontinuities shall be 13 mm (0.5 in) maximum. Vertical surface discontinuities between 6.4 mm (0.25 in) and 13 mm (0.5 in) shall be beveled with a slope not steeper than 50 percent. The bevel shall be applied across the entire vertical surface discontinuity.

Advisory R302.7.2 Vertical Surface Discontinuities. The allowance for vertical surface discontinuities is for occasional expansion joints and objects such as utility covers, vault frames, and gratings that cannot be located in another portion of the sidewalk outside the pedestrian access route. However, objects such as utility covers, vault frames, and gratings should not be located on curb ramp runs, blended transitions, turning spaces, or gutter areas within the pedestrian access route. This may not always be possible in alterations, but should be avoided wherever possible. Vertical surface discontinuities between unit pavers should be minimized.

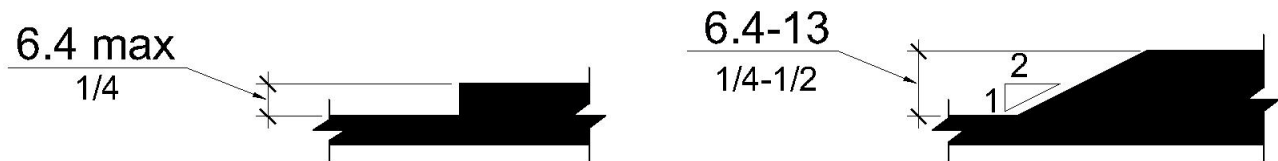


Figure R302.7.2
Vertical Surface Discontinuities

R302.7.3 Horizontal Openings. Horizontal openings in gratings and joints shall not permit passage of a sphere more than 13 mm (0.5 in) in diameter. Elongated openings in gratings shall be placed so that the long dimension is perpendicular to the dominant direction of travel.

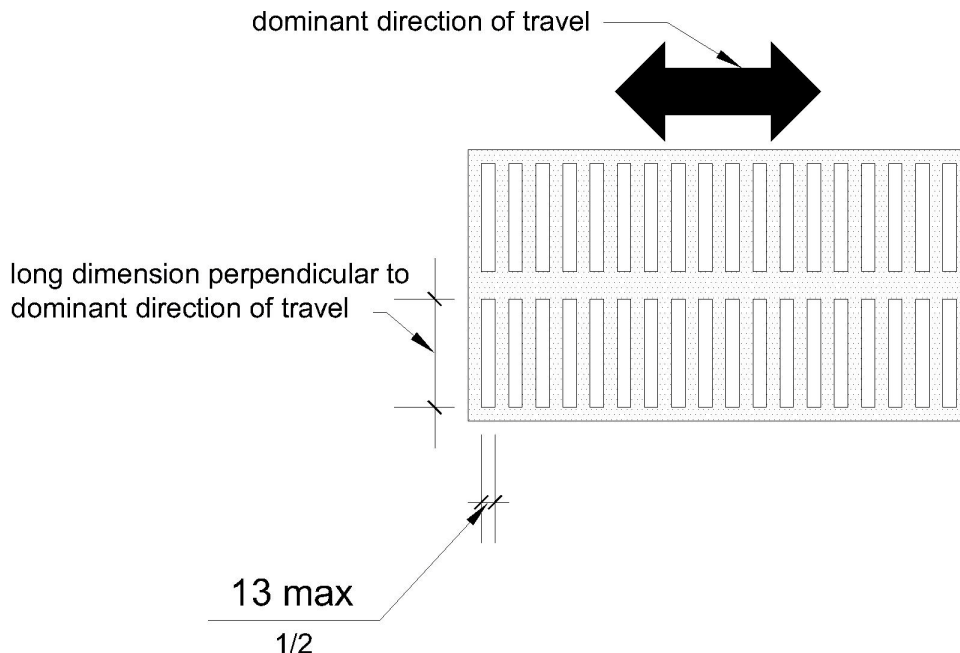


Figure R302.7.3
Horizontal Openings

R302.7.4 Flangeway Gaps. Flangeway gaps at pedestrian at-grade rail crossings shall be 64 mm (2.5 in) maximum on non-freight rail track and 75 mm (3 in) maximum on freight rail track.

Advisory R302.7.4 Flangeway Gaps. Flangeway gaps are necessary to allow the passage of train wheel flanges. Flangeway gaps pose a potential hazard to pedestrians who use wheelchairs because the gaps can entrap the wheelchair casters.

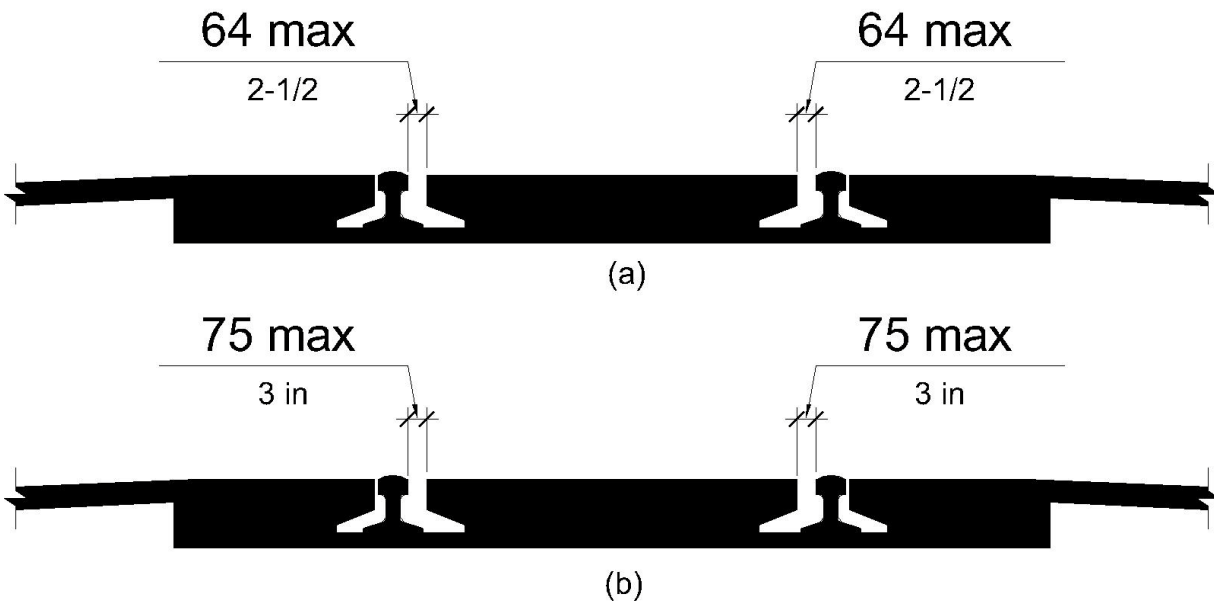


Figure R302.7.4
Flangeway Gaps

R303 Alternate Pedestrian Access Routes (See R205)

R304 Curb Ramps and Blended Transitions

R304.1 General. Curb ramps and blended transitions shall comply with R304.

Advisory R304.1 General. There are two types of curb ramps:

- Perpendicular curb ramps have a running slope that cuts through or is built up to the curb at right angles or meets the gutter break at right angles where the curb is curved. On large corner radiuses, it will be necessary to indent the gutter break on one side of the curb ramp in order for the curb ramp to meet the gutter break at right angles.
- Parallel curb ramps have a running slope that is in-line with the direction of sidewalk travel and lower the sidewalk to a level turning space where a turn is made to enter the pedestrian street crossing.

Advisory R304.1 General (continued). Perpendicular curb ramps can be provided where the sidewalk is at least 3.7 m (12.0 ft) wide. Parallel curb ramps can be provided where the sidewalk is at least 1.2 m (4.0 ft) wide. Parallel and perpendicular curb ramps can be combined. A parallel curb ramp is used to lower the sidewalk to a mid-landing and a short perpendicular curb ramp connects the landing to the street. Combination curb ramps can be provided where the sidewalk is at least 1.8 m (6.0 ft) wide.

Blended transitions are raised pedestrian street crossings, depressed corners, or similar connections between pedestrian access routes at the level of the sidewalk and the level of the pedestrian street crossing that have a grade of 5 percent or less. Blended transitions are suitable for a range of sidewalk conditions.

R304.2 Perpendicular Curb Ramps. Perpendicular curb ramps shall comply with R304.2 and R304.5.

R304.2.1 Turning Space. A turning space 1.2 m (4.0 ft) minimum by 1.2 m (4.0 ft) minimum shall be provided at the top of the curb ramp and shall be permitted to overlap other turning spaces and clear spaces. Where the turning space is constrained at the back-of-sidewalk, the turning space shall be 1.2 m (4.0 ft) minimum by 1.5 m (5.0 ft) minimum. The 1.5 m (5.0 ft) dimension shall be provided in the direction of the ramp run.

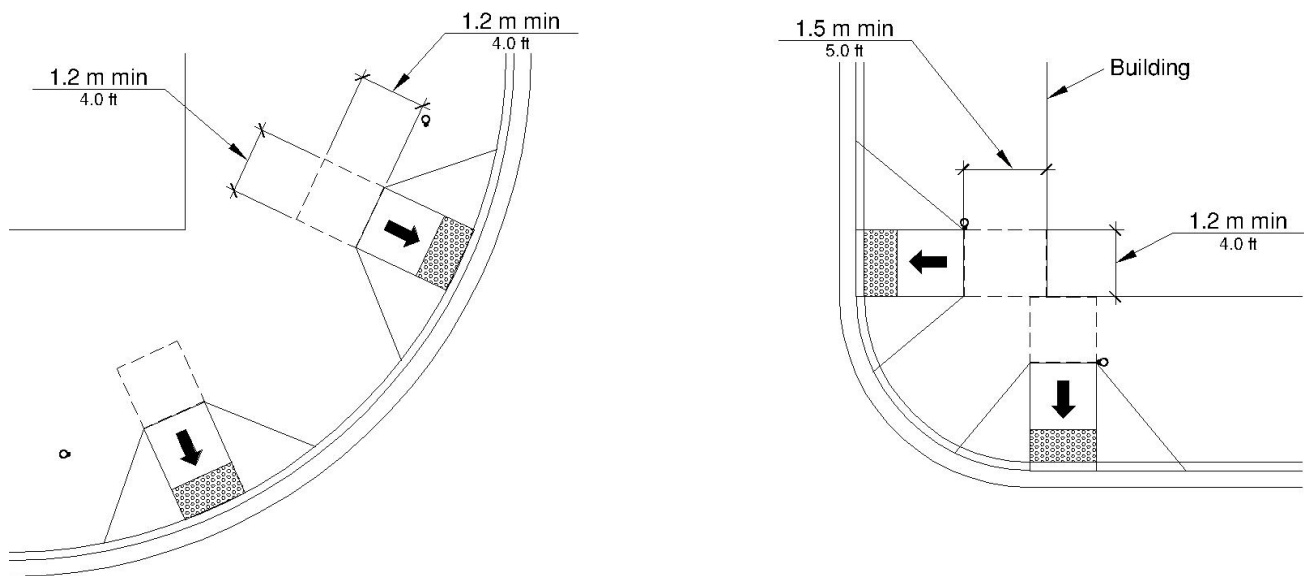


Figure R304.2.1
Turning Space

R304.2.2 Running Slope. The running slope of the curb ramp shall cut through or shall be built up to the curb at right angles or shall meet the gutter grade break at right angles where the curb is curved. The running slope of the curb ramp shall be 5 percent minimum and 8.3 percent maximum but shall not require the ramp length to exceed 4.5 m (15.0 ft). The running slope of the turning space shall be 2 percent maximum.

R304.2.3 Flared Sides. Where a pedestrian circulation path crosses the curb ramp, flared sides shall be sloped 10 percent maximum, measured parallel to the curb line.

Advisory R304.2.3 Flared Sides. The flared sides are part of the pedestrian circulation path, but are not part of the pedestrian access route. Curb ramps whose sides have returned curbs provide useful directional cues where they are aligned with the pedestrian street crossing and are protected from cross travel by landscaping, street furniture, chains, fencing, or railings.

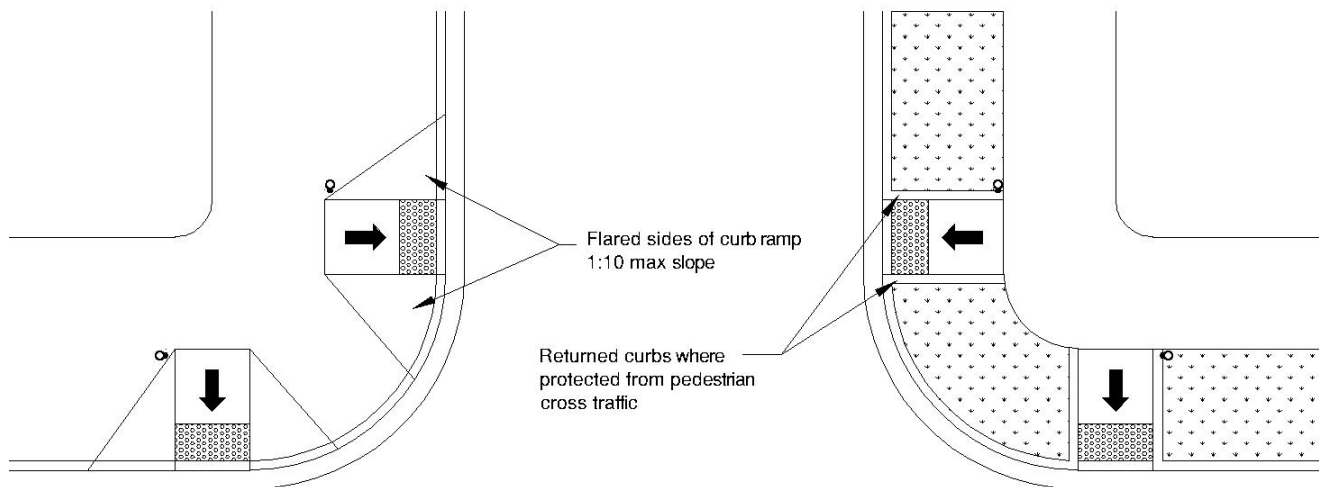


Figure R304.2.3
Flared Sides

R304.3 Parallel Curb Ramps. Parallel curb ramps shall comply with R304.3 and R304.5.

R304.3.1 Turning Space. A turning space 1.2 m (4.0 ft) minimum by 1.2 m (4.0 ft) minimum shall be provided at the bottom of the curb ramp and shall be permitted to overlap other turning spaces and clear spaces. If the turning space is constrained on 2 or more sides, the turning space shall be 1.2 m (4.0 ft) minimum by 1.5 m (5.0 ft). The 1.5 m (5.0 ft) dimension shall be provided in the direction of the pedestrian street crossing.

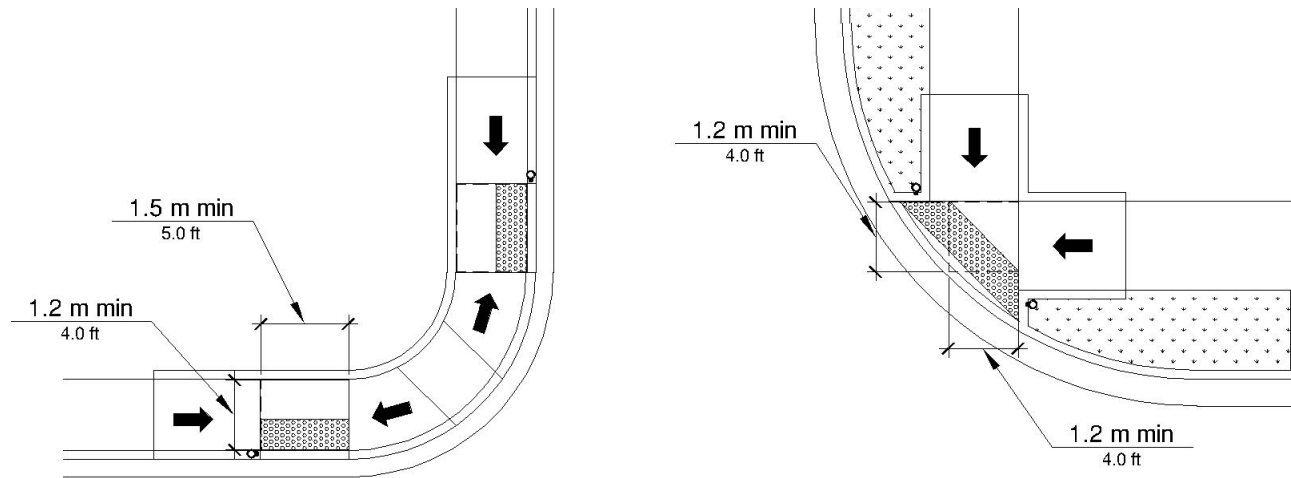


Figure R304.3.1
Turning Space

R304.3.2 Running Slope. The running slope of the curb ramp shall be in-line with the direction of sidewalk travel. The running slope of the curb ramp shall be 5 percent minimum and 8.3 percent maximum but shall not require the ramp length to exceed 4.5 m (15.0 ft) minimum. The running slope of the turning space shall be 2 percent maximum.

R304.4 Blended Transitions. Blended transitions shall comply with R304.4 and R304.5.

R304.4.1 Running Slope. The running slope of blended transitions shall be 5 percent maximum.

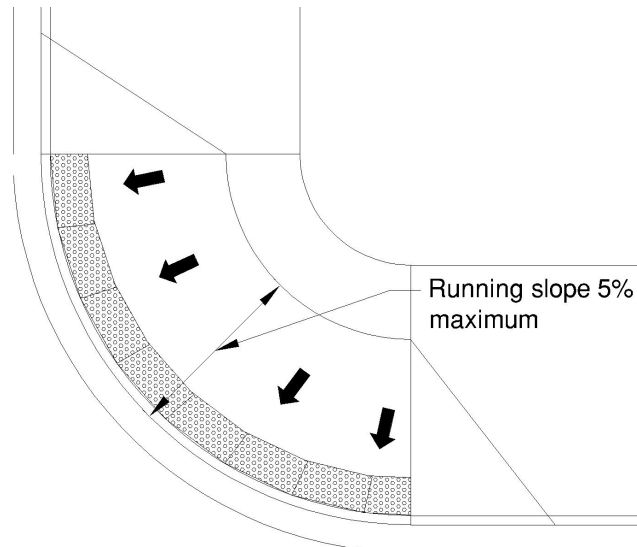


Figure R304.4.1
Running Slope

R304.5 Common Requirements. Curb ramps and blended transitions shall comply with R304.5.

R304.5.1 Width. The clear width of curb ramp runs (excluding any flared sides), blended transitions, and turning spaces shall be 1.2 m (4.0 ft) minimum.

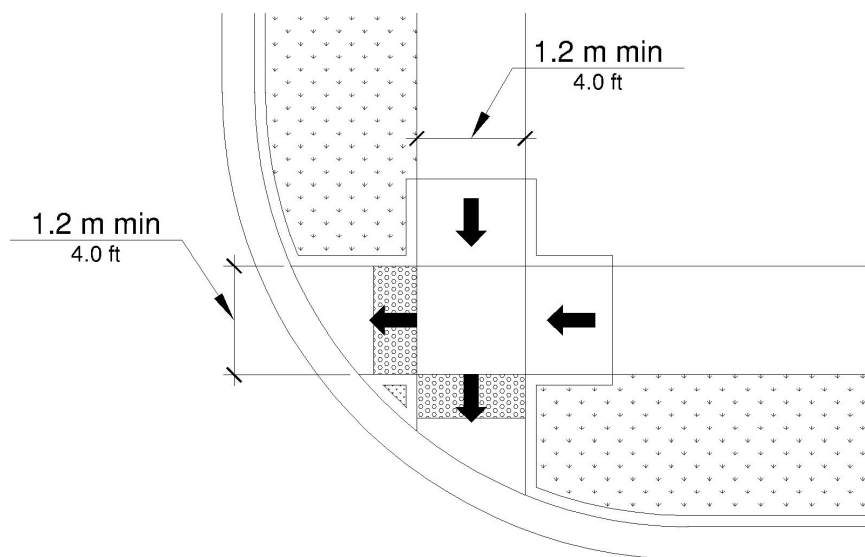


Figure R304.5.1
Width

R304.5.2 Grade Breaks. Grade breaks at the top and bottom of curb ramp runs shall be perpendicular to the direction of the ramp run. Grade breaks shall not be permitted on the surface of ramp runs and turning spaces. Surface slopes that meet at grade breaks shall be flush.

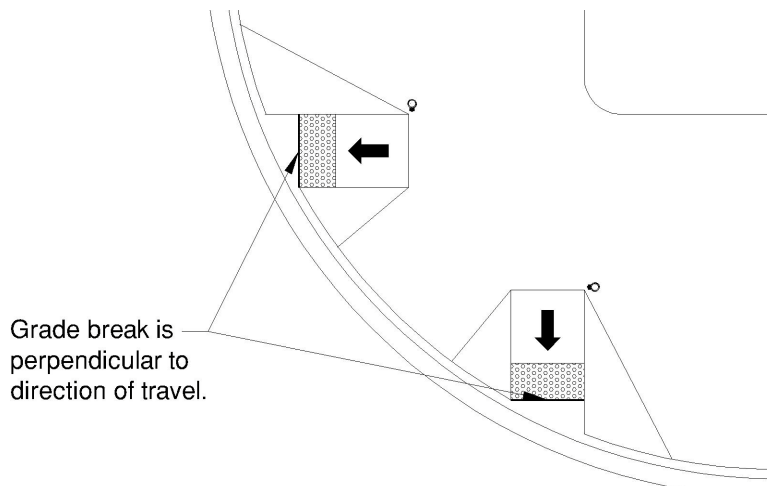


Figure R304.5.2
Grade Breaks

R304.5.3 Cross Slope. The cross slope of curb ramps, blended transitions, and turning spaces shall be 2 percent maximum. At pedestrian street crossings without yield or stop control and at midblock pedestrian street crossings, the cross slope shall be permitted to equal the street or highway grade.

Advisory R304.5.3 Cross Slope. Pedestrian street crossings without yield or stop control are crossings where there is no yield or stop sign, or where there is a traffic signal that is designed for the green phase. At pedestrian street crossings without yield or stop control, vehicles can proceed through the intersection without slowing or stopping.

R304.5.4 Counter Slope. The counter slope of the gutter or street at the foot of curb ramp runs, blended transitions, and turning spaces shall be 5 percent maximum.

R304.5.5 Clear Space. Beyond the bottom grade break, a clear space 1.2 m (4.0 ft) minimum by 1.2 m (4.0 ft) minimum shall be provided within the width of the pedestrian street crossing and wholly outside the parallel vehicle travel lane.

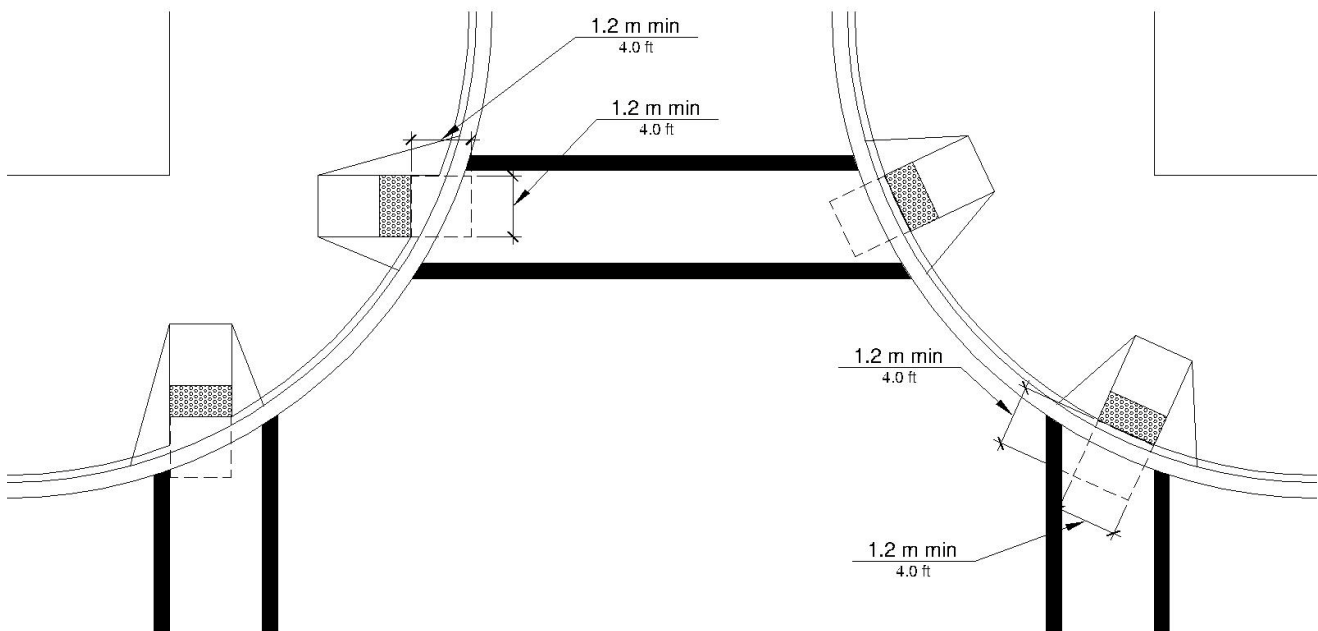


Figure R304.5.5
Clear Space

R305 Detectable Warning Surfaces

R305.1 General. Detectable warning surfaces shall consist of truncated domes aligned in a square or radial grid pattern and shall comply with R305.

R305.1.1 Dome Size. The truncated domes shall have a base diameter of 23 mm (0.9 in) minimum and 36 mm (1.4 in) maximum, a top diameter of 50 percent of the base diameter minimum and 65 percent of the base diameter maximum, and a height of 5 mm (0.2 in).

Advisory R305.1.1 Dome Size. Where the truncated domes are arrayed radially, they may differ in diameter and center-to-center spacing within the ranges specified in R305.1.1 and R305.1.2.

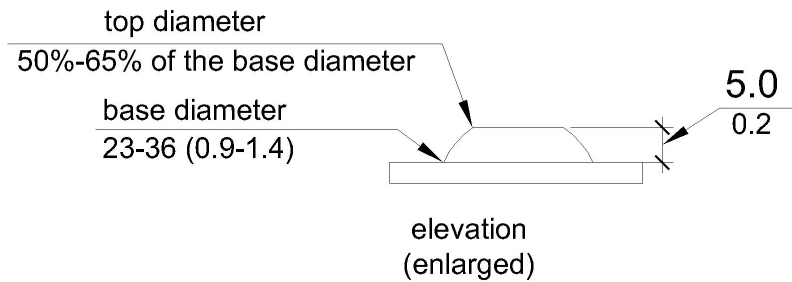


Figure R305.1.1
Dome Size

R305.1.2 Dome Spacing. The truncated domes shall have a center-to-center spacing of 41 mm (1.6 in) minimum and 61 mm (2.4 in) maximum, and a base-to-base spacing of 17 mm (0.65 in) minimum, measured between the most adjacent domes.

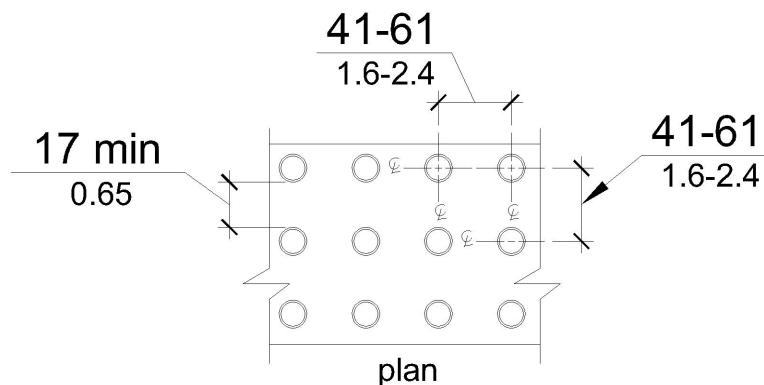


Figure R305.1.2
Dome Spacing

R305.1.3 Contrast. Detectable warning surfaces shall contrast visually with adjacent gutter, street or highway, or pedestrian access route surface, either light-on-dark or dark-on-light.

Advisory R305.1.3 Contrast. Visual contrast may be provided on the full surface of the curb ramp but should not extend to flared sides. Visual contrast also helps pedestrians who use wheelchairs to locate the curb ramp from the other side of the street.

R305.1.4 Size. Detectable warning surfaces shall extend 610 mm (2.0 ft) minimum in the direction of pedestrian travel. At curb ramps and blended transitions, detectable warning surfaces shall extend the full width of the ramp run (excluding any flared sides), blended transition, or turning space. At pedestrian at-grade rail crossings not located within a street or highway, detectable warnings shall extend the full width of the crossing. At boarding platforms for buses and rail vehicles, detectable warning surfaces shall extend the full length of the public use areas of the platform. At boarding and alighting areas at sidewalk or street level transit stops for rail vehicles, detectable warning surfaces shall extend the full length of the transit stop.

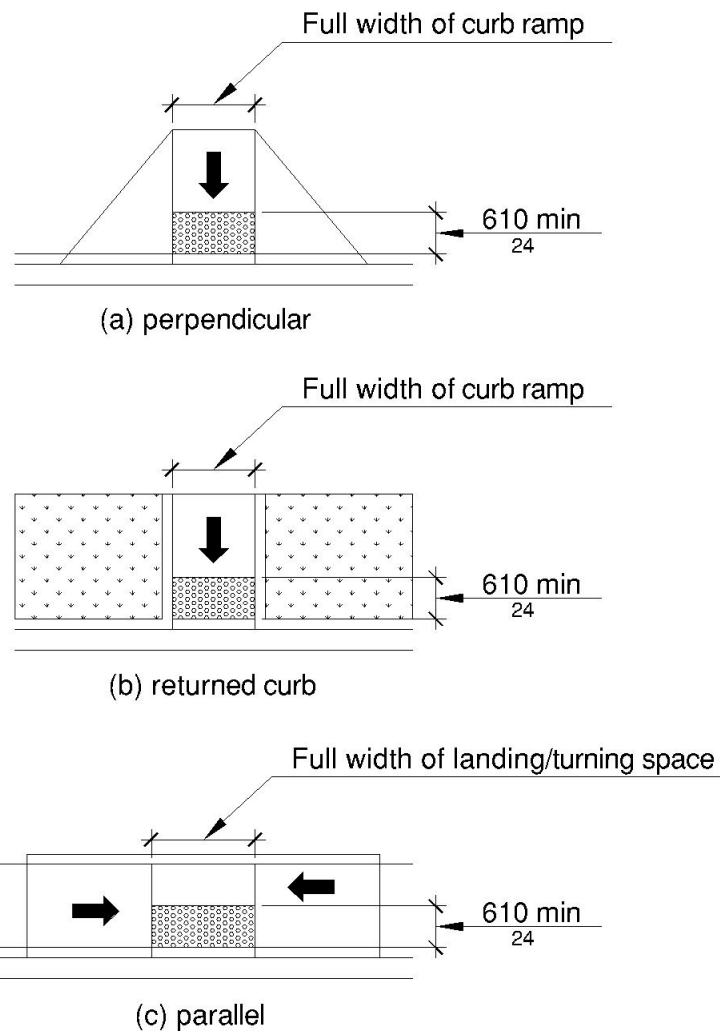


Figure R305.1.4
Size

R305.2 Placement. The placement of detectable warning surfaces shall comply with R305.2.

Advisory R305.2 Placement. Some detectable warning products require a concrete border for proper installation. The concrete border should not exceed 51 mm (2 in). Where the back of curb edge is tooled to provide a radius, the border dimension should be measured from the end of the radius.

R305.2.1 Perpendicular Curb Ramps. On perpendicular curb ramps, detectable warning surfaces shall be placed as follows:

1. Where the ends of the bottom grade break are in front of the back of curb, detectable warning surfaces shall be placed at the back of curb.
2. Where the ends of the bottom grade break are behind the back of curb and the distance from either end of the bottom grade brake to the back of curb is 1.5 m (5.0 ft) or less, detectable warning surfaces shall be placed on the ramp run within one dome spacing of the bottom grade break.
3. Where the ends of the bottom grade break are behind the back of curb and the distance from either end of the bottom grade brake to the back of curb is more than 1.5 m (5.0 ft), detectable warning surfaces shall be placed on the lower landing at the back of curb.

Advisory R305.2.1 Perpendicular Curb Ramps. Detectable warning surfaces are intended to provide a tactile equivalent underfoot of the visible curb line. If detectable warning surfaces are placed too far from the curb line because of a large curb radius, the location may compromise effective crossing. Detectable warning surfaces should not be placed on paving or expansion joints. The rows of truncated domes in detectable warning surfaces should be aligned perpendicular to the grade break between the ramp run and the street so pedestrians who use wheelchairs can "track" between the domes. Where detectable warning surfaces are provided on a surface with a slope that is less than 5 percent, dome orientation is less critical.

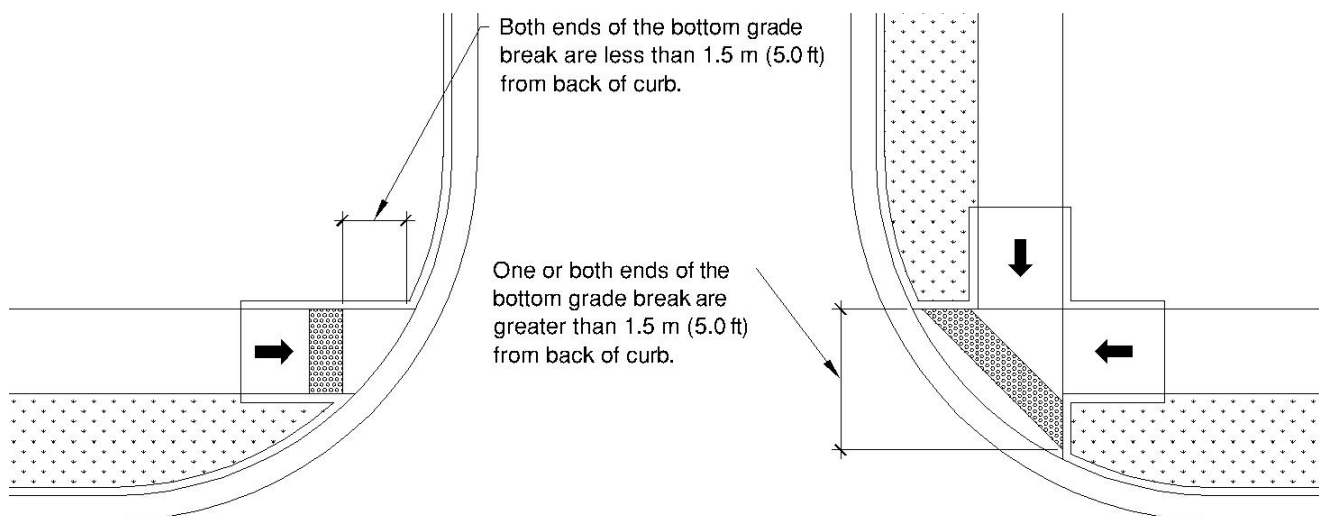


Figure R305.2.1
Perpendicular Curb Ramps

R305.2.2 Parallel Curb Ramps. On parallel curb ramps, detectable warning surfaces shall be placed on the turning space at the flush transition between the street and sidewalk.

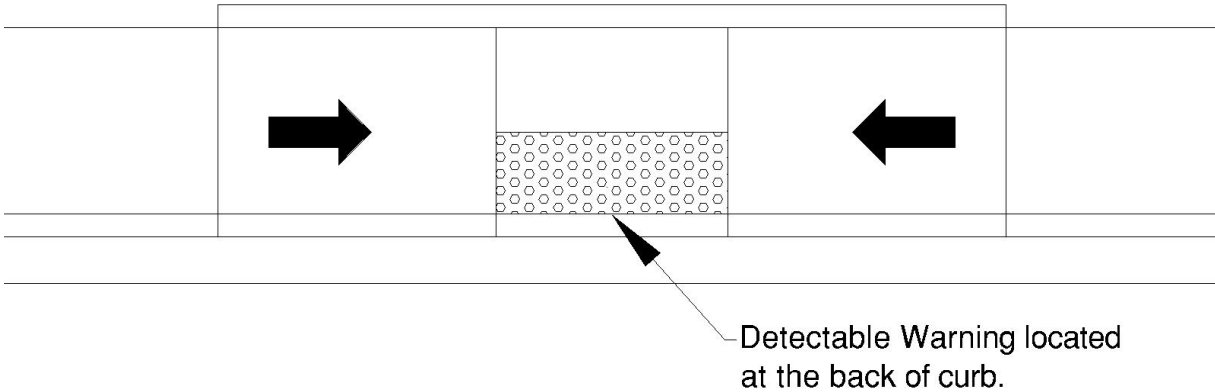


Figure R305.2.2
Parallel Curb Ramps

R305.2.3 Blended Transitions. On blended transitions, detectable warning surfaces shall be placed at the back of curb. Where raised pedestrian street crossings, depressed corners, or other level pedestrian street crossings are provided, detectable warning surfaces shall be placed at the flush transition between the street and the sidewalk.

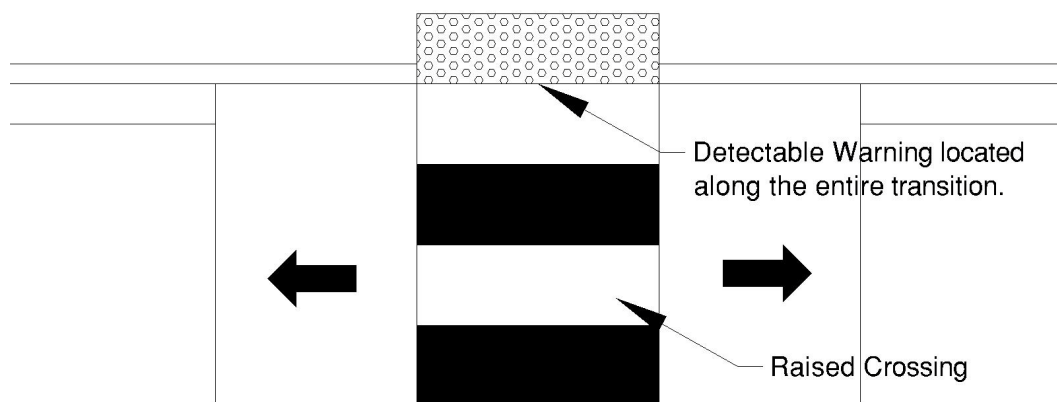


Figure R305.2.3
Blended Transitions

R305.2.4 Pedestrian Refuge Islands. At cut-through pedestrian refuge islands, detectable warning surfaces shall be placed at the edges of the pedestrian island and shall be separated by a 610 mm (2.0 ft) minimum length of surface without detectable warnings.

Advisory R305.2.4 Pedestrian Refuge Islands. The edges of cut-through pedestrian refuge islands can provide useful cues to the direction of the crossing.

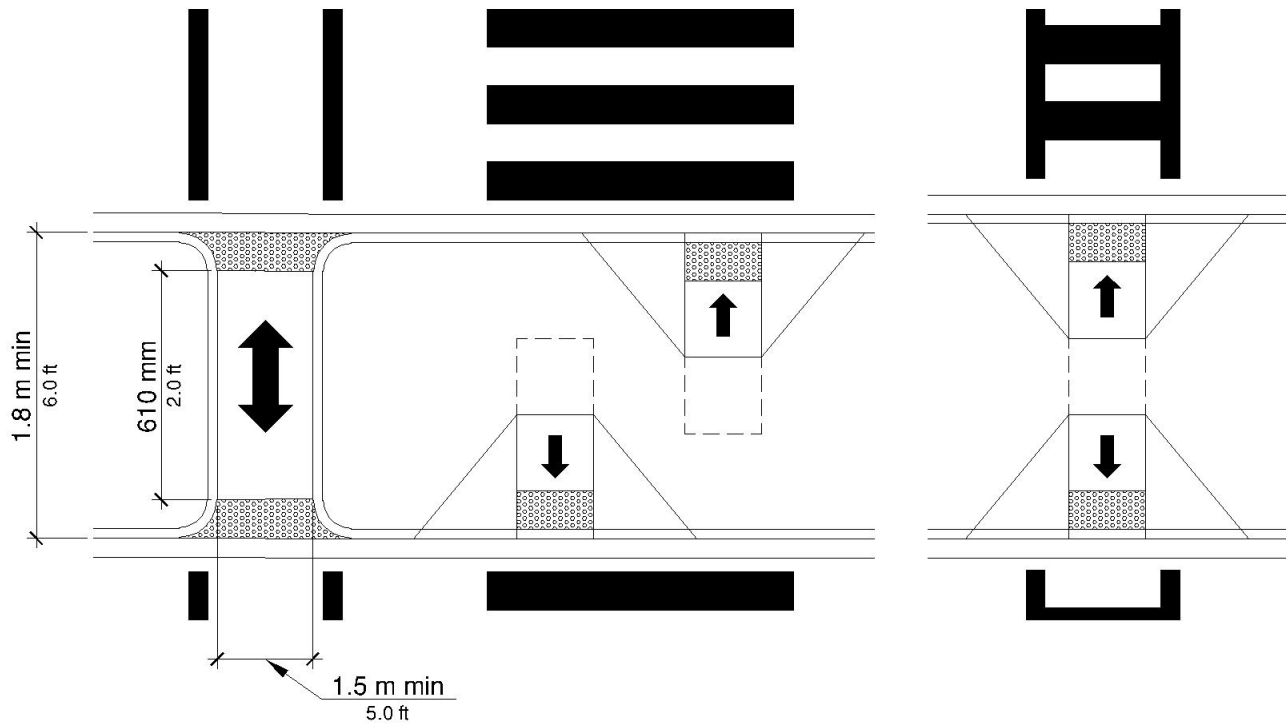


Figure R305.2.4
Pedestrian Refuge Islands

R305.2.5 Pedestrian At-Grade Rail Crossings. At pedestrian at-grade rail crossings not located within a street or highway, detectable warning surfaces shall be placed on each side of the rail crossing. The edge of the detectable warning surface nearest the rail crossing shall be 1.8 m (6.0 ft) minimum and 4.6 m (15.0 ft) maximum from the centerline of the nearest rail. Where pedestrian gates are provided, detectable warning surfaces shall be placed on the side of the gates opposite the rail.

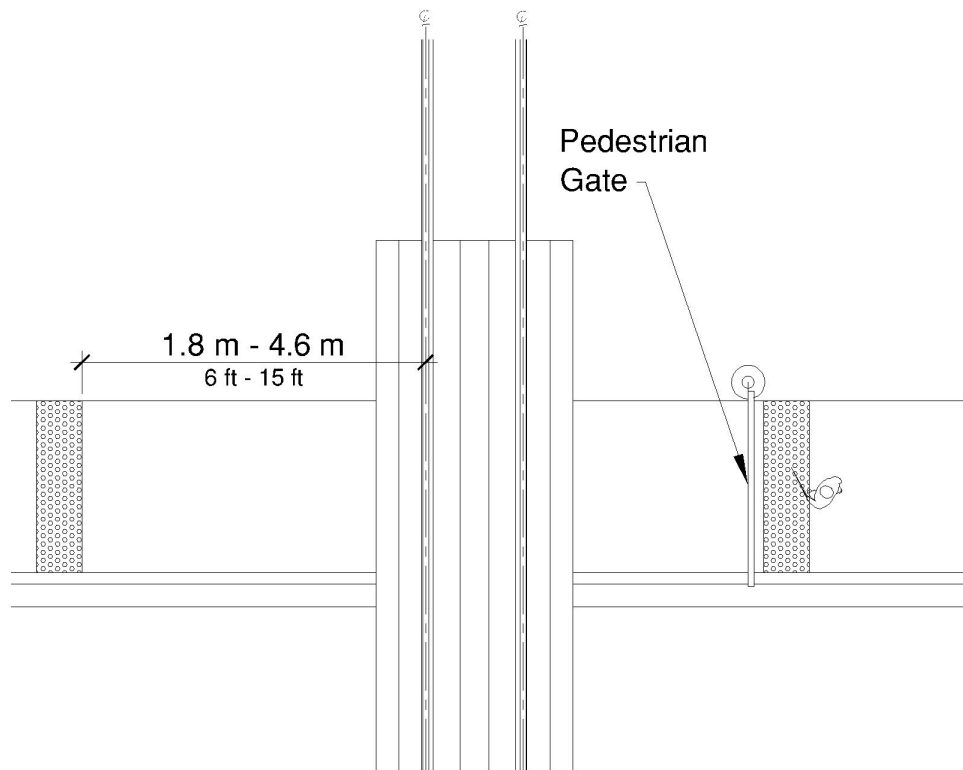


Figure R305.2.5
Pedestrian At-Grade Rail Crossings

R305.2.6 Boarding Platforms. At boarding platforms for buses and rail vehicles, detectable warning surfaces shall be placed at the boarding edge of the platform.

R305.2.7 Boarding and Alighting Areas. At boarding and alighting areas at sidewalk or street level transit stops for rail vehicles, detectable warning surfaces shall be placed at the side of the boarding and alighting area facing the rail vehicles.

R306 Pedestrian Street Crossings

R306.1 General. Pedestrian street crossings shall comply with R306.

R306.2 Pedestrian Signal Phase Timing. All pedestrian signal phase timing shall comply with section 4E.06 of the MUTCD (incorporated by reference, see R104.2) and shall be based on a pedestrian clearance time that is calculated using a pedestrian walking speed of 1.1 m/s (3.5 ft/s) or less.

R306.3 Roundabouts. Where pedestrian facilities are provided at roundabouts, they shall comply with R306.3.

Advisory R306.3 Roundabouts. Pedestrian street crossings at roundabouts can be difficult for pedestrians who are blind or have low vision to identify because the crossings are located off to the side of the pedestrian circulation path around the street or highway. The continuous traffic flow at roundabouts removes many of the audible cues that pedestrians who are blind use to navigate pedestrian street crossings. Water fountains and other features that produce background noise should not be placed in the middle island of a roundabout because pedestrians who are blind use auditory cues to help detect gaps in traffic. Multi-lane pedestrian street crossings at roundabouts involve an increased risk of pedestrian exposure to accident.

R306.3.1 Separation. Where sidewalks are flush against the curb and pedestrian street crossing is not intended, a continuous and detectable edge treatment shall be provided along the street side of the sidewalk. Detectable warning surfaces shall not be used for edge treatment. Where chains, fencing, or railings are used for edge treatment, they shall have a bottom edge 380 mm (15 in) maximum above the sidewalk.

Advisory R306.3.1 Separation. Carefully delineated pedestrian street crossing approaches with plantings or other defined edges provide effective non-visual cues for identifying pedestrian street crossings at roundabouts. European and Australian roundabouts provide a 610 mm (24 inch) width of tactile surface treatment from the centerline of the curb ramp or blended transition across the full width of the sidewalk to provide an underfoot cue for identifying pedestrian street crossings. Detectable warning surfaces should not be used to guide pedestrians who are blind or have low vision to pedestrian street crossings because detectable warning surfaces indicate the flush transition between the sidewalk and the street or highway. Schemes that remove cyclists from the street or highway by means of a ramp that angles from the curb lane to the sidewalk and then provide re-entry by means of a similar ramp beyond pedestrian street crossings can provide false cues to pedestrians who are using the edge of the sidewalk for wayfinding about the location of pedestrian street crossings.

R306.3.2 Pedestrian Activated Signals. At roundabouts with multi-lane pedestrian street crossings, a pedestrian activated signal complying with R209 shall be provided for each multi-lane segment of each pedestrian street crossing, including the splitter island. Signals shall clearly identify which pedestrian street crossing segment the signal serves.

Advisory R306.3.2 Pedestrian Activated Signals. Roundabouts with single-lane approach and exit legs are not required to provide pedestrian activated signals. Pedestrian activated signals must comply with the requirements for accessible pedestrian signals and pedestrian pushbuttons (see R209). Pedestrian activated signals installed at splitter islands should be carefully located and separated so that signal spillover does not give conflicting information about which pedestrian street crossing has the WALK indication displayed. Pedestrian Hybrid Beacons can be used at roundabouts (see MUTCD sections 4F.01 through 4F.03). Pedestrian Hybrid Beacons are traffic signals that consist of a yellow signal centered below two horizontally aligned red signals. The signals are normally not illuminated. The signals are initiated only upon pedestrian activation and can be timed to minimize the interruption of traffic. The signals cease operation after the pedestrian clears the crosswalk. When activated by a pedestrian, the following signals are displayed to drivers: a flashing yellow signal, then a steady yellow signal, then two steady red signals during the pedestrian walk interval, and then alternating flashing red signals during the pedestrian clearance interval. The following signals are displayed to pedestrians: a steady upraised hand (symbolizing DON'T WALK) when the flashing or steady yellow signal is operating, then a walking person (symbolizing WALK) when the steady red signals are operating, and then a flashing upraised hand (symbolizing DON'T WALK) when the alternating flashing red signals are operating.

R306.4 Channelized Turn Lanes at Roundabouts. At roundabouts with pedestrian street crossings, pedestrian activated signals complying with R209 shall be provided at pedestrian street crossings at multi-lane channelized turn lanes.

R306.5 Channelized Turn Lanes at Other Signalized Intersections. At signalized intersections other than roundabouts with pedestrian street crossings, pedestrian activated signals complying with R209 shall be provided at pedestrian street crossings at multi-lane channelized turn lanes.

R307 Accessible Pedestrian Signals and Pedestrian Pushbuttons (See R209)

R308 Transit Stops and Transit Shelters

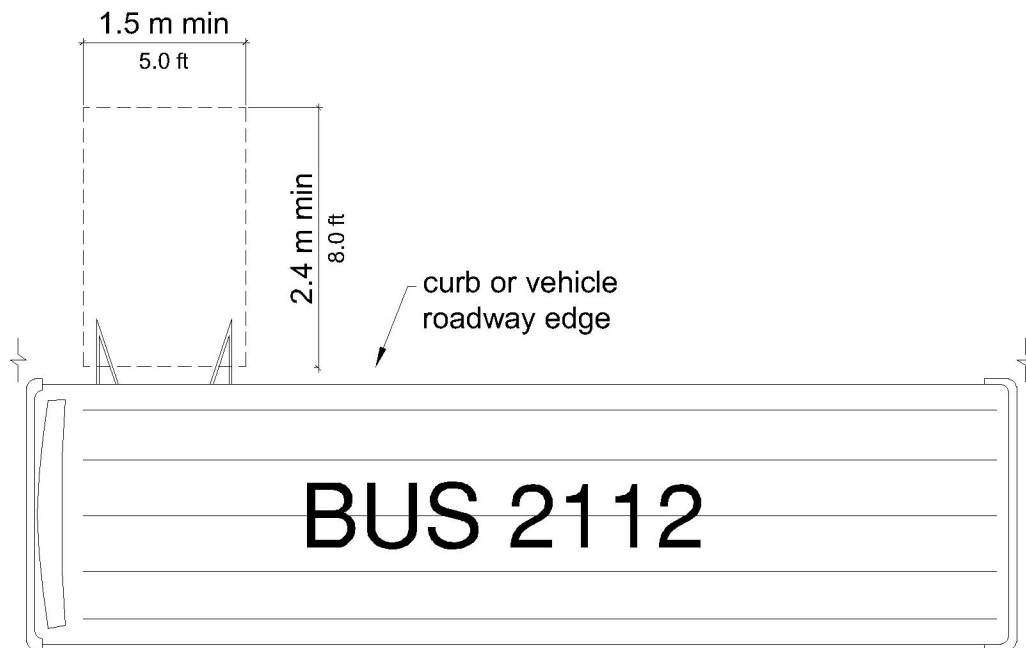
R308.1 Transit Stops. Transit stops shall comply with R308.1.

Advisory R308.1 Transit Stops. Transit stops should be located so that there is a level and stable surface for boarding vehicles. Locating transit stops at signalized intersections increases the usability for pedestrian with disabilities. Where security bollards are installed at transit stops, they must not obstruct the clear space at boarding and alighting areas or reduce the required clear width at pedestrian access routes (see R210).

R308.1.1 Boarding and Alighting Areas. Boarding and alighting areas at sidewalk or street level transit stops shall comply with R308.1.1 and R308.1.3. Where transit stops serve vehicles with more than one car, boarding and alighting areas serving each car shall comply with R308.1.1 and R308.1.3.

Advisory R308.1.1 Boarding and Alighting Areas. Where a transit shelter is provided, the boarding and alighting area can be located either within or outside of the shelter.

R308.1.1.1 Dimensions. Boarding and alighting areas shall provide a clear length of 2.4 m (8.0 ft) minimum, measured perpendicular to the curb or street or highway edge, and a clear width of 1.5 m (5.0 ft) minimum, measured parallel to the street or highway.



**Figure R308.1.1.1
Dimensions**

R308.1.1.2 Grade. Parallel to the street or highway, the grade of boarding and alighting areas shall be the same as the street or highway, to the extent practicable. Perpendicular to the street or highway, the grade of boarding and alighting areas shall not be steeper than 2 percent.

R308.1.2 Boarding Platforms. Boarding platforms at transit stops shall comply with R308.1.2 and R308.1.3.

R308.1.2.1 Platform and Vehicle Floor Coordination. Boarding platforms shall be positioned to coordinate with vehicles in accordance with the applicable requirements in 49 CFR parts 37 and 38.

Advisory R308.1.2.1 Platform and Vehicle Floor Coordination. The Department of Transportation regulations (49 CFR parts 37 and 38) require the height of the vehicle floor and the station platform to be coordinated so as to minimize the vertical and horizontal gaps.

R308.1.2.2 Slope. Boarding platforms shall not exceed a slope of 2 percent in any direction. Where boarding platforms serve vehicles operating on existing track or existing street or highway, the slope of the platform parallel to the track or the street or highway is permitted to be equal to the grade of the track or street or highway.

R308.1.3 Common Requirements. Boarding and alighting areas and boarding platforms shall comply with R308.1.3.

R308.1.3.1 Surfaces. The surfaces of boarding and alighting areas and boarding platforms shall comply with R302.7.

Advisory R308.1.3.1 Surfaces. Detectable warning surfaces are required at boarding and alighting areas for rail vehicles and at boarding platforms for buses and rail vehicles (see R208).

R308.1.3.2 Connection. Boarding and alighting areas and boarding platforms shall be connected to streets, sidewalks, or pedestrian circulation paths by pedestrian access routes complying with R302.

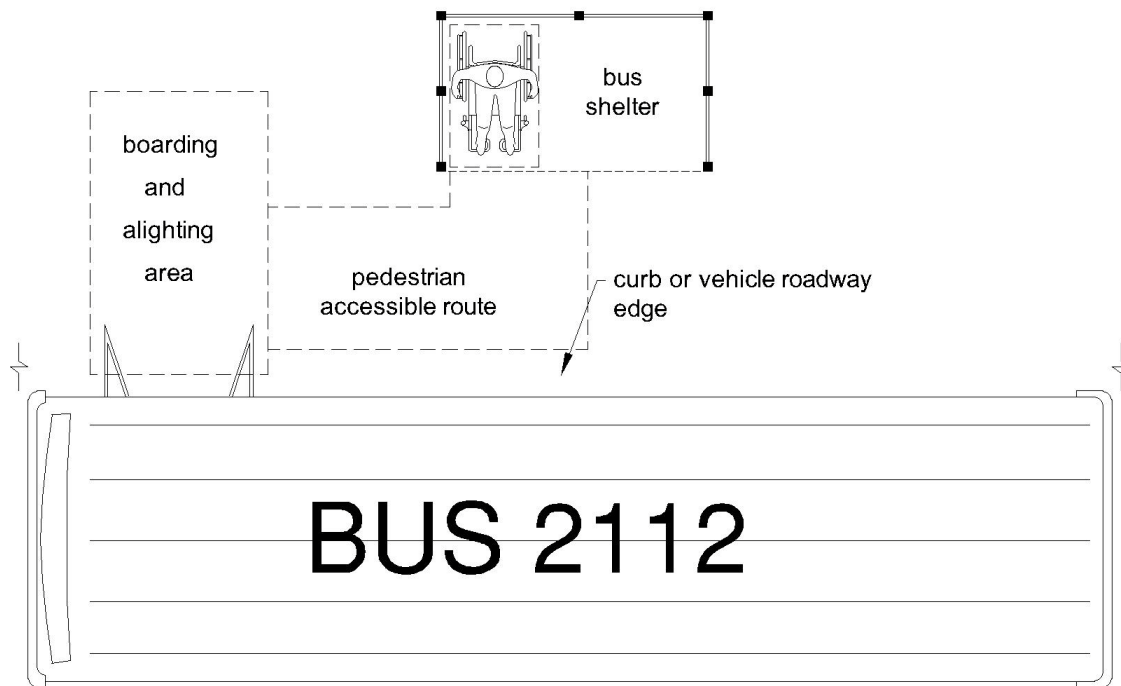


Figure R308.1.3.2
Connection

R308.2 Transit Shelters. Transit shelters shall be connected by pedestrian access routes complying with R302 to boarding and alighting areas or boarding platforms complying with R308.1. Transit shelters

shall provide a minimum clear space complying with R404 entirely within the shelter. Where seating is provided within transit shelters, the clear space shall be located either at one end of a seat or shall not overlap the area within 460 mm (1.5 ft) from the front edge of the seat. Environmental controls within transit shelters shall be proximity-actuated. Protruding objects within transit shelters shall comply with R402.

Advisory R308.2 Transit Shelters. The clear space must be located entirely within the transit shelter and not interfere with other persons using the seating.

R309 On-Street Parking Spaces

R309.1 General. On-street parking spaces shall comply with R309.

Advisory R309.1 General. R214 specifies how many accessible parking spaces must be provided on the block perimeter where on-street parking is marked or metered. Accessible parking spaces must be identified by signs displaying the International Symbol of Accessibility (see R211.3 and R411). Accessible parking spaces should be located where the street has the least crown and grade and close to key destinations.

R309.2 Parallel Parking Spaces. Parallel parking spaces shall comply with R309.2.

Advisory R309.2 Parallel Parking Spaces. The sidewalk adjacent to accessible parallel parking spaces should be free of signs, street furniture, and other obstructions to permit deployment of a van side-lift or ramp or the vehicle occupant to transfer to a wheelchair or scooter. Accessible parallel parking spaces located at the end of the block face are usable by vans that have rear lifts and cars that have scooter platforms.

R309.2.1 Wide Sidewalks. Where the width of the adjacent sidewalk or available right-of-way exceeds 4.3 m (14.0 ft), an access aisle 1.5 m (5.0 ft) wide minimum shall be provided at street level the full length of the parking space and shall connect to a pedestrian access route. The access aisle shall comply with R302.7 and shall not encroach on the vehicular travel lane.

Advisory R309.2.1 Wide Sidewalks. Vehicles may park at the curb or at the parking lane boundary and use the space required by R309.2.1 on either the driver or passenger side of the vehicle to serve as the access aisle.

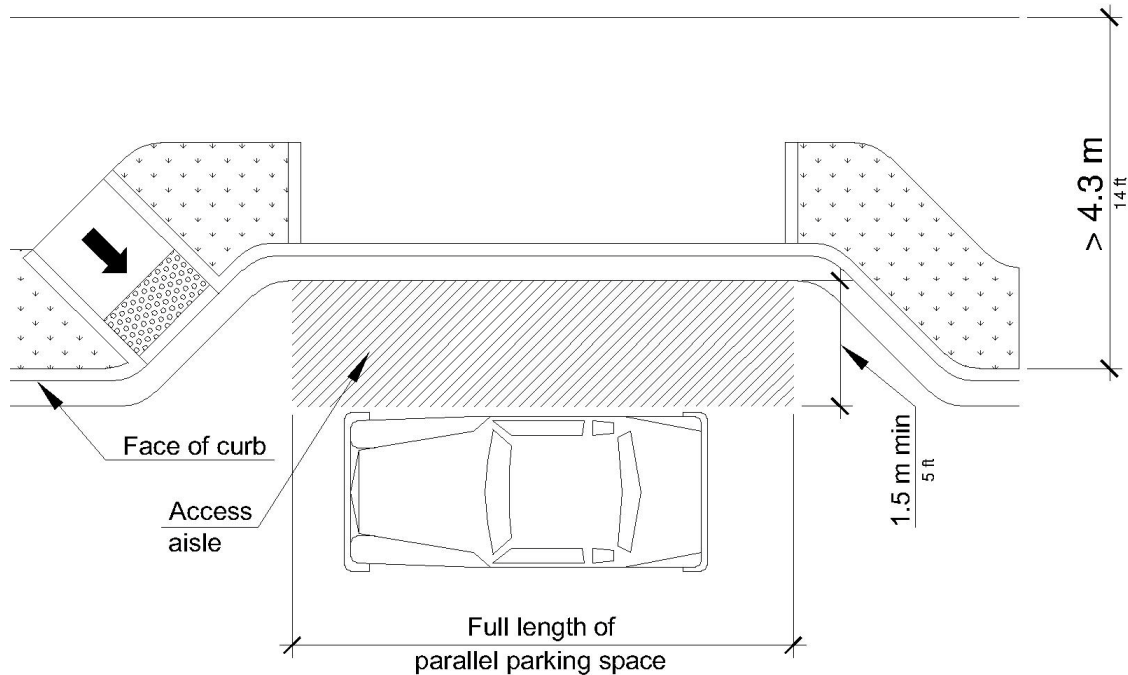


Figure R309.2.1
Wide Sidewalks

R309.2.1.1 Alterations. In alterations where the street or sidewalk adjacent to the parking spaces is not altered, an access aisle shall not be required provided the parking spaces are located at the end of the block face.

R309.2.2 Narrow Sidewalks. An access aisle is not required where the width of the adjacent sidewalk or the available right-of-way is less than or equal to 4.3 m (14.0 ft). When an access aisle is not provided, the parking spaces shall be located at the end of the block face.

Advisory R309.2.2 Narrow Sidewalks. Vehicle lifts or ramps can be deployed on a 2.4 m (8.0 ft) sidewalk if there are no obstructions.

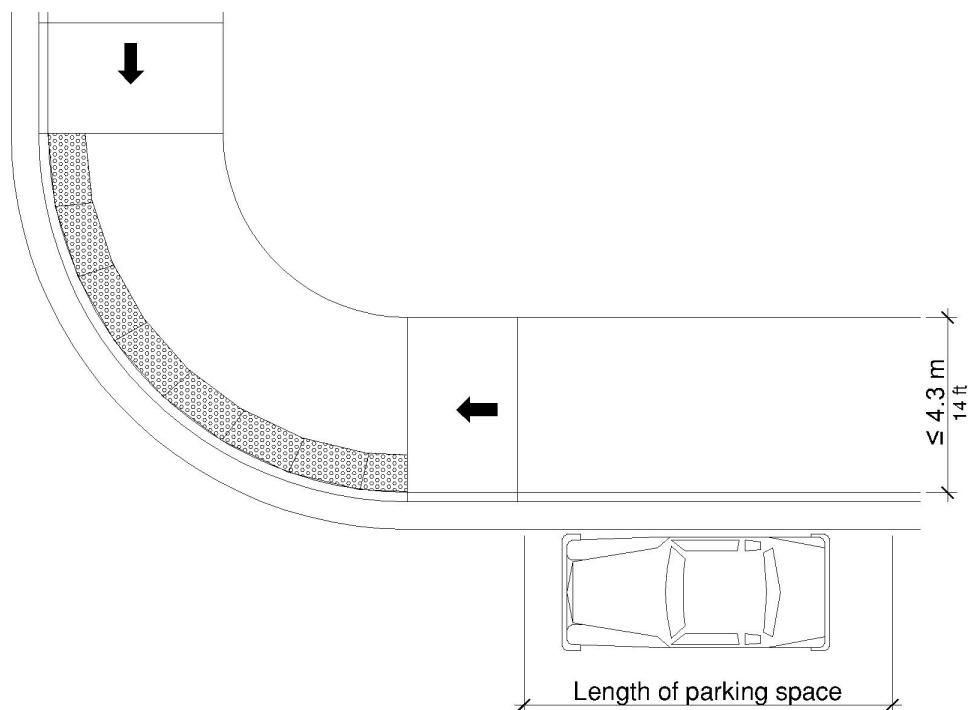


Figure R309.2.2
Narrow Sidewalks

R309.3 Perpendicular or Angled Parking Spaces. Where perpendicular or angled parking is provided, an access aisle 2.4 m (8.0 ft) wide minimum shall be provided at street level the full length of the parking space and shall connect to a pedestrian access route. The access aisle shall comply with R302.7 and shall be marked so as to discourage parking in the access aisle. Two parking spaces are permitted to share a common access aisle.

Advisory R309.3 Perpendicular or Angled Parking Spaces. Perpendicular and angled parking spaces permit the deployment of a van side-lift or ramp.

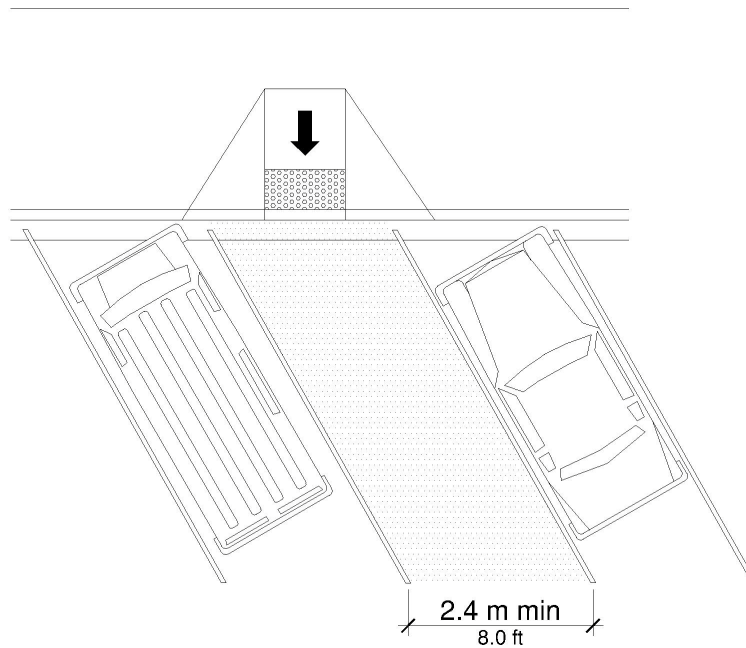


Figure R309.3
Perpendicular or Angled Parking Spaces

R309.4 Curb Ramps or Blended Transitions. Curb ramps or blended transitions complying with R304 shall connect the access aisle to the pedestrian access route. Curb ramps shall not be located within the access aisle.

Advisory R309.4 Curb Ramps or Blended Transitions. At parallel parking spaces, curb ramps and blended transitions should be located so that a van side-lift or ramp can be deployed to the sidewalk and the vehicle occupant can transfer to a wheelchair or scooter. Parking spaces at the end of the block face can be served by curb ramps or blended transitions at the pedestrian street crossing. Detectable warning surfaces are not required on curb ramps and blended transitions that connect the access aisle to the sidewalk, including where the sidewalk is at the same level as the parking spaces, unless the curb ramps and blended transitions also serve pedestrian street crossings (see R208).

R309.5 Parking Meters and Parking Pay Stations. Parking meters and parking pay stations that serve accessible parking spaces shall comply with R309.5. Operable parts shall comply with R403.

R309.5.1 Location. At accessible parallel parking spaces, parking meters shall be located at the head or foot of the parking space.

Advisory R309.5.1 Location. Locating parking meters at the head or foot of the parking space permits deployment of a van side-lift or ramp or the vehicle occupant to transfer to a wheelchair or scooter.

R309.5.2 Displays and Information. Displays and information shall be visible from a point located 1.0 m (3.3 ft) maximum above the center of the clear space in front of the parking meter or parking pay station.

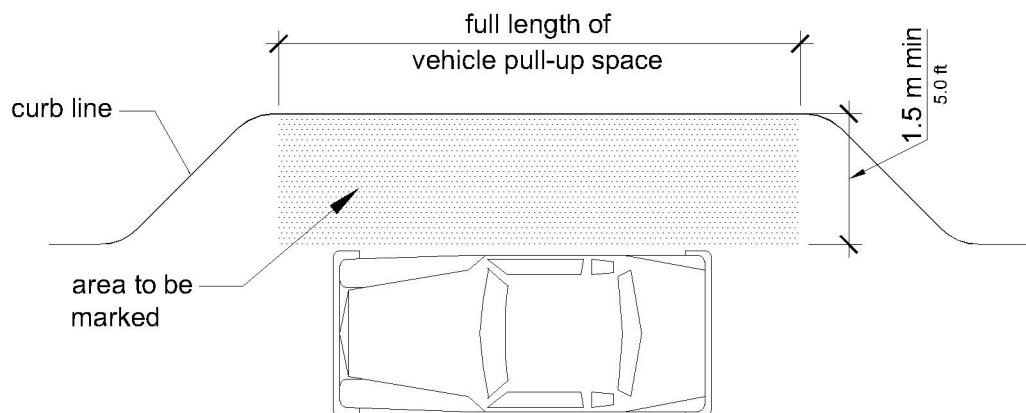
R310 Passenger Loading Zones

R310.1 General. Passenger loading zones shall comply with R310.

Advisory R310.1 General. Accessible passenger loading zones must be identified by signs displaying the International Symbol of Accessibility (see R211.3 and R411).

R310.2 Vehicle Pull-Up Space. Passenger loading zones shall provide a vehicular pull-up space 2.4 m (8.0 ft) wide minimum and 6.1 m (20.0 ft) long minimum.

R310.3 Access Aisle. Passenger loading zones shall provide access aisles complying with R310.3 adjacent to the vehicle pull-up space. Access aisles shall be at the same level as the vehicle pull-up space they serve and shall not overlap the vehicular travel lane. Curb ramps or blended transitions complying with R304 shall connect the access aisle to the pedestrian access route. Curb ramps are not permitted within the access aisle.



**Figure R310.3
Access Aisle**

R310.3.1 Width. Access aisles serving vehicle pull-up spaces shall be 1.5 m (5.0 ft) wide minimum.

R310.3.2 Length. Access aisles shall extend the full length of the vehicle pull-up spaces they serve.

R310.3.3 Marking. Access aisles shall be marked so as to discourage parking in them.

R310.3.4 Surfaces. Access aisle surfaces shall comply with R302.7.

CHAPTER R4: SUPPLEMENTARY TECHNICAL REQUIREMENTS

R401 General

R401.1 Scope. The supplemental technical requirements in Chapter 4 shall apply where required by Chapter 2 or where referenced by a requirement in this document.

R402 Protruding Objects

R402.1 General. Protruding objects shall comply with R402.

R402.2 Protrusion Limits. Objects with leading edges more than 685 mm (2.25 ft) and not more than 2 m (6.7 ft) above the finish surface shall protrude 100 mm (4 in) maximum horizontally into pedestrian circulation paths.

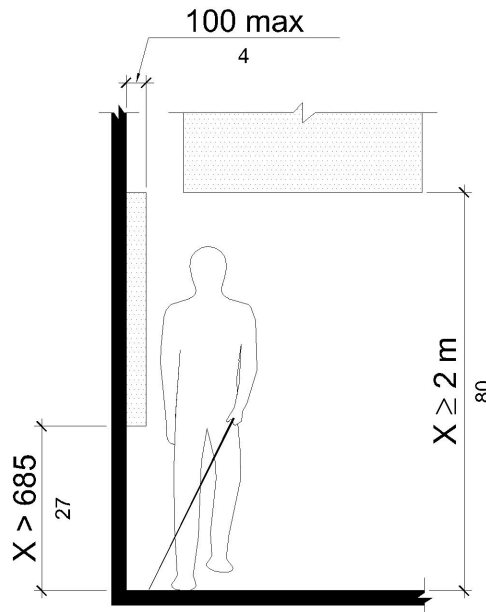


Figure R402.2
Protrusion Limits

R402.3 Post-Mounted Objects. Where objects are mounted on free-standing posts or pylons and the objects are 685 mm (2.25 ft) minimum and 2030 mm (6.7 ft) maximum above the finish surface, the objects shall overhang pedestrian circulation paths 100 mm (4 in) maximum measured horizontally from the post or pylon base. The base dimension shall be 64 mm (2.5 in) thick minimum. Where objects are mounted between posts or pylons and the clear distance between the posts or pylons is greater than 305 mm (1.0 ft), the lowest edge of the object shall be 685 mm (2.25 ft) maximum or 2 m (6.7 ft) minimum above the finish surface.

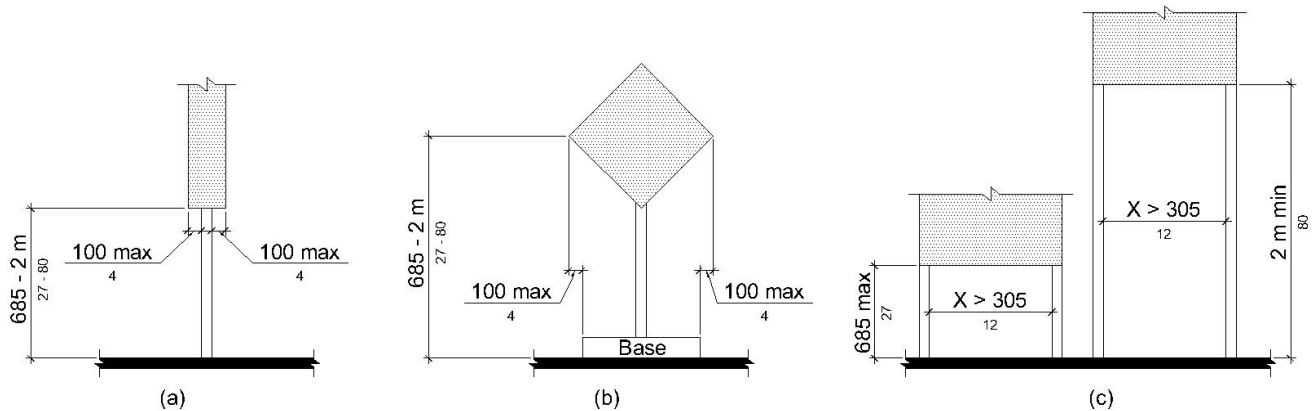


Figure R402.3
Post-Mounted Objects

R402.4 Reduced Vertical Clearance. Guardrails or other barriers to pedestrian travel shall be provided where the vertical clearance is less than 2 m (6.7 ft) high. The leading edge of the guardrail or barrier shall be located 685 mm (2.25 ft) maximum above the finish surface.

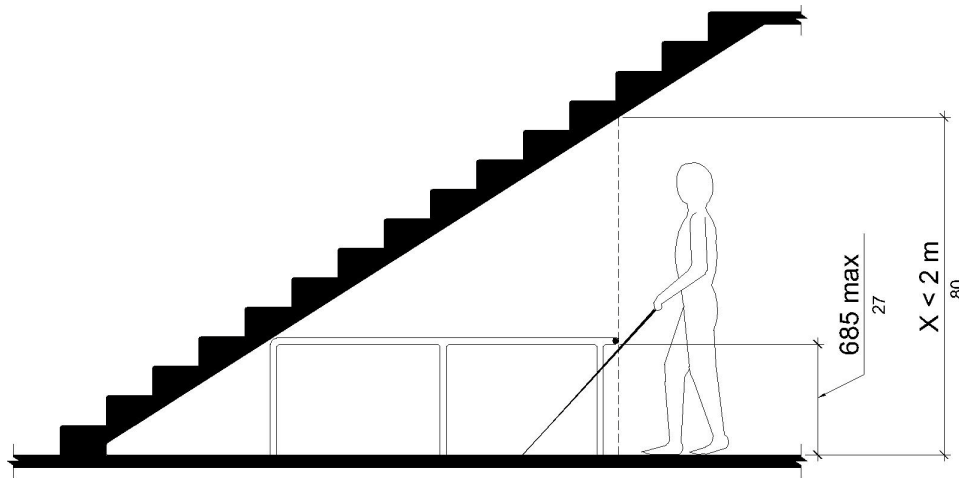


Figure R402.4
Reduced Vertical Clearance

R403 Operable Parts

R403.1 General. Operable parts shall comply with R403.

Advisory R403.1 General. Operable parts on accessible pedestrian signals and pedestrian pushbuttons (see R209) and parking meters and parking pay stations that serve accessible parking spaces (see R309.5) must comply with R403.

R403.2 Clear Space. A clear space complying with R404 shall be provided at operable parts.

R403.3 Height. Operable parts shall be placed within one or more of the reach ranges specified in R406.

R403.4 Operation. Operable parts shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist. The force required to activate operable parts shall be 22 N (5 lbs) maximum.

R404 Clear Spaces

R404.1 General. Clear spaces shall comply with R404.

Advisory R404.1 General. Clear spaces are required at operable parts (see R403.2), including accessible pedestrian signals and pedestrian pushbuttons (see R209) and parking meters and parking pay stations that serve accessible parking spaces (see R309.5). Clear spaces are also required at benches (see R212.6) and within transit shelters (see R308.2).

R404.2 Surfaces. Surfaces of clear spaces shall comply with R302.7 and shall have a running slope consistent with the grade of the adjacent pedestrian access route and cross slope of 2 percent maximum.

R404.3 Size. Clear spaces shall be 760 mm (2.5 ft) minimum by 1220 mm (4.0 ft) minimum.

R404.4 Knee and Toe Clearance. Unless otherwise specified, clear spaces shall be permitted to include knee and toe clearance complying with R405.

R404.5 Position. Unless otherwise specified, clear spaces shall be positioned for either forward or parallel approach to an element.

R404.6 Approach. One full unobstructed side of a clear space shall adjoin a pedestrian access route or adjoin another clear space.

R404.7 Maneuvering Space. Where a clear space is confined on all or part of three sides, additional maneuvering space shall be provided in accordance with R404.7.1 and R404.7.2.

R404.7.1 Forward Approach. The clear space and additional maneuvering space shall be 915 mm (3.0 ft) wide minimum where the depth exceeds 610 mm (2.0 ft).

R404.7.2 Parallel Approach. The clear space and additional maneuvering space shall be 1525 mm (5.0 ft) wide minimum where the depth exceeds 380 mm (1.25 ft).

R405 Knee and Toe Clearance

R405.1 General. Where space beneath an element is included as part of a clear space, the space shall comply with R405. Additional space shall not be prohibited beneath an element but shall not be considered as part of the clear space.

Advisory R405.1 General. Clearances are measured in relation to the usable clear space, not necessarily to the vertical support for an element. When determining clearance under an object, care should be taken to ensure that the space is clear of any obstructions.

R405.2 Toe Clearance

R405.2.1 General. Space under an element between the finish surface and 230 mm (9 in) above the finish surface shall be considered toe clearance and shall comply with R405.2.

R405.2.2 Maximum Depth. Toe clearance shall extend 635 mm (2.1 ft) maximum under an element.

R405.2.3 Minimum Required Depth. Where toe clearance is required at an element as part of a clear space, the toe clearance shall extend 430 mm (1.4 ft) minimum under the element.

R405.2.4 Width. Toe clearance shall be 760 mm (2.5 ft) wide minimum.

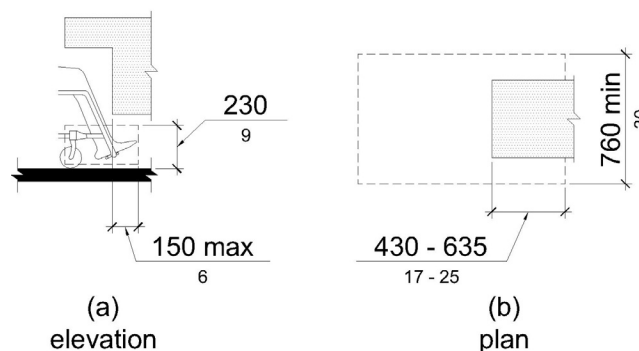


Figure R405.2
Toe Clearance

R405.3 Knee Clearance

R405.3.1 General. Space under an element between 230 mm (9 in) and 685 mm (2.25 ft) above the finish surface shall be considered knee clearance and shall comply with R405.3.

R405.3.2 Maximum Depth. Knee clearance shall extend 635 mm (2.1 ft) maximum under an element at 230 mm (9 in) above the finish surface.

R405.3.3 Minimum Required Depth. Where knee clearance is required under an element as part of a clear space, the knee clearance shall be 280 mm (11 in) deep minimum at 230 mm (9 in) above the finish surface, and 205 mm (8 in) deep minimum at 685 mm (2.25 ft) above the finish surface.

R405.3.4 Clearance Reduction. Between 230 mm (9 in) and 685 mm (2.25 ft) above the finish surface, the knee clearance shall be permitted to reduce at a rate of 25 mm (1 in) in depth for each 150 mm (6 in) in height.

R405.3.5 Width. Knee clearance shall be 760 mm (2.5 ft) wide minimum.

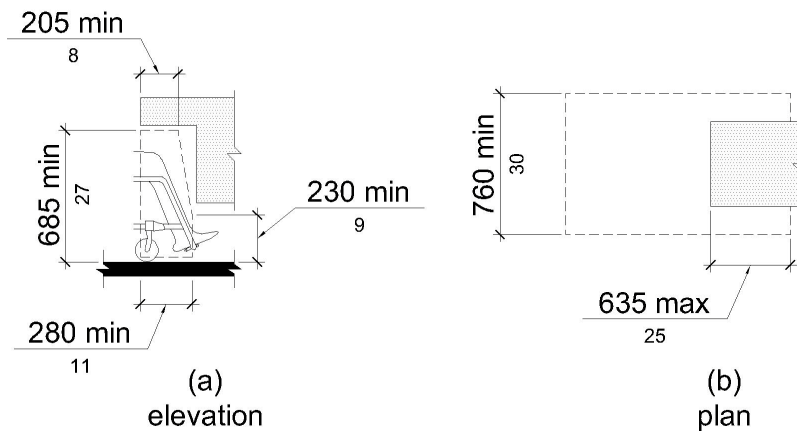


Figure R405.3
Knee Clearance

R406 Reach Ranges

R406.1 General. Reach ranges shall comply with R406.

R406.2 Unobstructed Forward Reach. Where a forward reach is unobstructed, the high forward reach shall be 1220 mm (4.0 ft) maximum and the low forward reach shall be 380 mm (1.25 ft) minimum above the finish surface. Forward reach over an obstruction is not permitted.

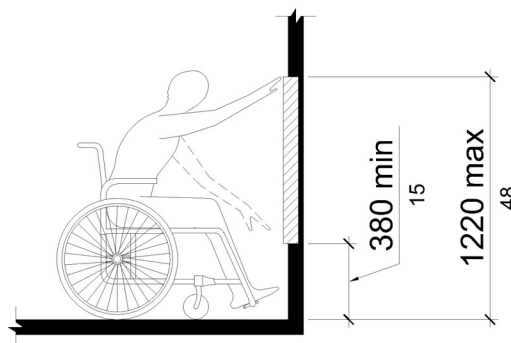


Figure R406.2
Unobstructed Forward Reach

R406.3 Unobstructed Side Reach. Where a clear space allows a parallel approach to an element and the side reach is unobstructed, the high side reach shall be 1220 mm (4.0 ft) maximum and the low side reach shall be 380 mm (1.25 ft) minimum above the finish surface. An obstruction shall be permitted between the clear space and the element where the depth of the obstruction is 255 mm (10 in) maximum.

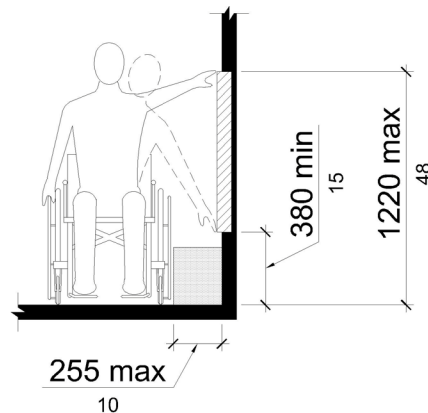


Figure R406.3
Unobstructed Side Reach

R407 Ramps

R407.1 General. Ramps shall comply with R407.

R407.2 Running Slope. Ramp runs shall have a running slope between 5 percent minimum and 8.3 percent maximum.

Advisory R407.2 Running Slope. Ramps with the least possible running slope accommodate the widest range of users. Providing stairways along with ramps, where possible, benefits pedestrians with heart disease, limited stamina, and others for whom distance presents a greater barrier than steps.

R407.3 Cross Slope. The cross slope of ramp runs shall be 2 percent maximum.

R407.4 Width. The clear width of a ramp run and, where handrails are provided, the clear width between handrails shall be 915 mm (3.0 ft) minimum.

R407.5 Rise. The rise for any ramp run shall be 760 mm (2.5 ft) maximum.

R407.6 Landings. Ramps shall have landings at the top and the bottom of each ramp run. Landings shall comply with R407.6.

R407.6.1 Slope. Landing slopes shall be 2 percent maximum in any direction.

R407.6.2 Width. The landing clear width shall be at least as wide as the widest ramp run leading to the landing.

R407.6.3 Length. The landing clear length shall be 1.5 m (5.0 ft) long minimum.

R407.6.4 Change in Direction. Ramps that change direction between runs at landings shall have a clear landing 1.5 m (5.0 ft) minimum by 1.5 m (5.0 ft) minimum.

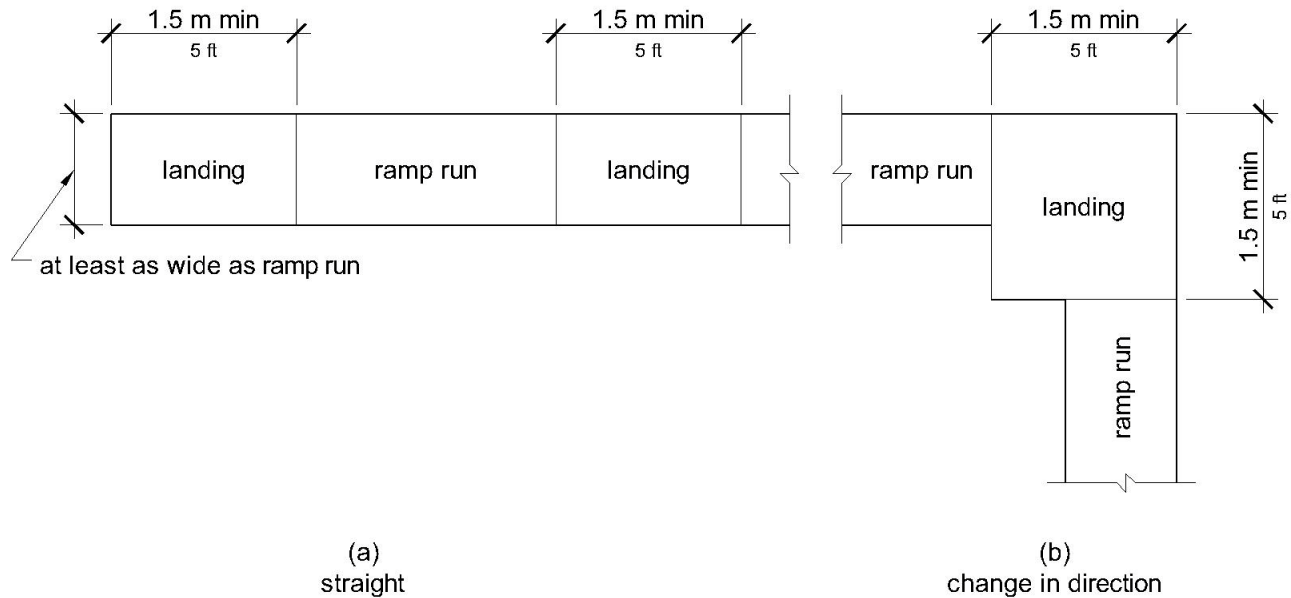


Figure R407.6
Landings

R407.7 Surfaces. Surfaces of ramp runs and landings shall comply with R302.7.

R407.8 Handrails. Ramp runs with a rise greater than 150 mm (6 in) shall have handrails complying with R409.

R407.9 Edge Protection. Edge protection complying with R407.9.1 or R407.9.2 shall be provided on each side of ramp runs and ramp landings.

R407.9.1 Extended Ramp Surface. The surface of the ramp run or landing shall extend 305 mm (1.0 ft) minimum beyond the inside face of a handrail complying with R409.

Advisory R407.9.1 Extended Ramp Surface. The extended surface prevents wheelchair casters and crutch tips from slipping off the ramp surface.

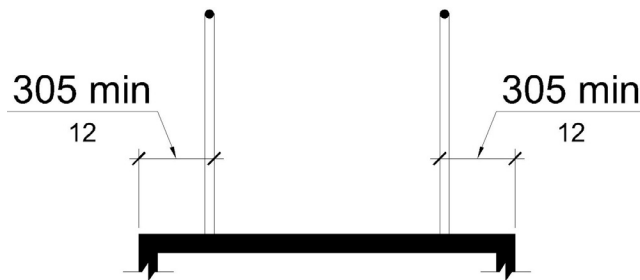


Figure R407.9.1
Extended Ramp Surface

R407.9.2 Curb or Barrier. A curb or barrier shall be provided that prevents the passage of a 100 mm (4 in) diameter sphere, where any portion of the sphere is within 100 mm (4 in) of the finish surface.

R408 Stairways

R408.1 General. Stairways shall comply with R408.

R408.2 Treads and Risers. All steps on a flight of stairs shall have uniform riser heights and uniform tread depths. Risers shall be 100 mm (4 in) high minimum and 180 mm (7 in) high maximum. Treads shall be 280 mm (11 in) deep minimum.

R408.3 Open Risers. Open risers are not permitted.

R408.4 Tread Surface. Stairway treads shall comply with R302.7. Changes in level are not permitted.

R408.5 Nosings. The radius of curvature at the leading edge of the tread shall be 13 mm (0.5 inch) maximum. Nosings that project beyond risers shall have the underside of the leading edge curved or beveled. Risers shall be permitted to slope under the tread at an angle of 30 degrees maximum from vertical. The permitted projection of the nosing shall extend 38 mm (1.5 in) maximum over the tread below.

R408.6 Handrails. Stairways shall have handrails complying with R409.

R409 Handrails

R409.1 General. Handrails required at ramps and stairways, and handrails provided on pedestrian circulation paths shall comply with R409.

Advisory R409.1 General. Handrails are required on ramp runs with a rise greater than 150 mm (6 in) (see R407.8) and stairways (see R408.6). Handrails are not required on pedestrian circulation paths. However, if handrails are provided on pedestrian circulation paths, the handrails must comply with R409 (see R217). The requirements in R409.2, R409.3, and R409.10 apply only to handrails at ramps and stairways, and do not apply to handrails provided on pedestrian circulation paths.

R409.2 Where Required. Handrails shall be provided on both sides of ramps and stairways.

R409.3 Continuity. Handrails shall be continuous within the full length of each ramp run or stair flight. Inside handrails on switchback or dogleg ramps and stairways shall be continuous between ramp runs or stair flights.

R409.4 Height. Top of gripping surfaces of handrails shall be 865 mm (2.8 ft) minimum and 965 mm (3.2 ft) maximum vertically above walking surfaces, ramp surfaces, and stair nosings. Handrails shall be at a consistent height above walking surfaces, ramp surfaces, and stair nosings.

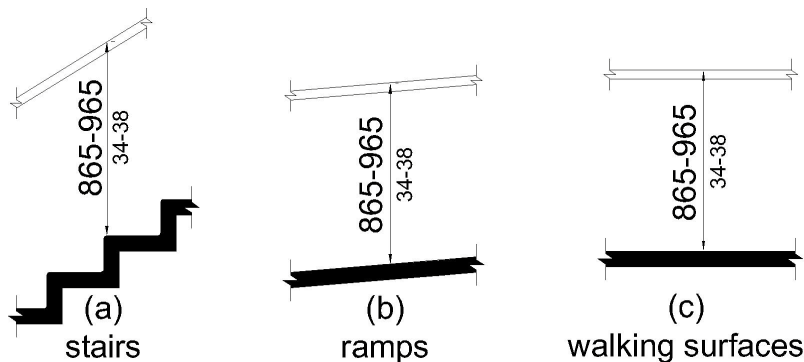


Figure R409.4
Height

R409.5 Clearance. Clearance between handrail gripping surfaces and adjacent surfaces shall be 38 mm (1.5 in) minimum.

R409.6 Gripping Surface. Handrail gripping surfaces shall be continuous along their length and shall not be obstructed along their tops or sides. The bottoms of handrail gripping surfaces shall not be obstructed for more than 20 percent of their length. Where provided, horizontal projections shall occur 38 mm (1.5 in) minimum below the bottom of the handrail gripping surface.

Advisory R409.6 Gripping Surface. Pedestrians with disabilities and others benefit from continuous gripping surfaces that permit users to reach the fingers outward or downward to grasp the handrail.

R409.7 Cross Section. Handrail gripping surfaces shall have a cross section complying with R409.7.1 or R409.7.2. Where expansion joints are necessary for large spans of handrails, the expansion joint is permitted to be smaller than the specified cross section diameters for a 25mm (1 in) length.

R409.7.1 Circular Cross Section. Handrail gripping surfaces with a circular cross section shall have an outside diameter of 32 mm (1.25 in) minimum and 51 mm (2 in) maximum.

R409.7.2 Non-Circular Cross Sections. Handrail gripping surfaces with a non-circular cross section shall have a perimeter dimension of 100 mm (4 in) minimum and 160 mm (6.25 in) maximum, and a cross-section dimension of 57 mm (2.25 in) maximum.

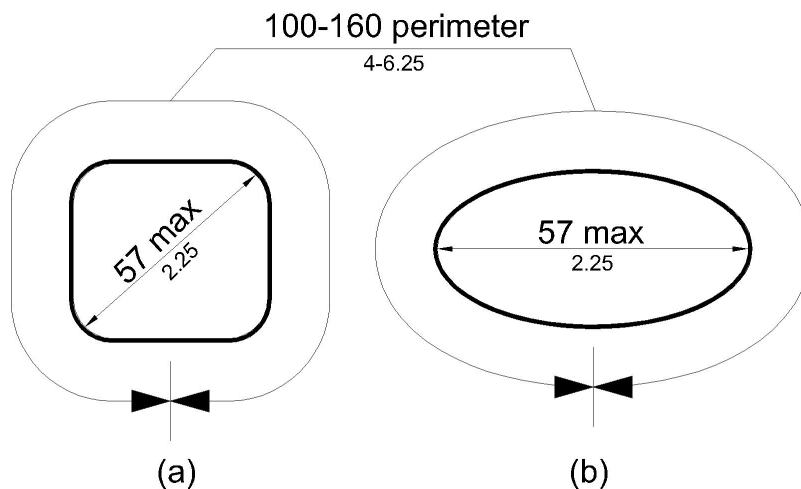


Figure R409.7.2
Non-Circular Cross Sections

R409.8 Surfaces. Handrail gripping surfaces and any surfaces adjacent to them shall be free of sharp or abrasive elements and shall have rounded edges.

R409.9 Fittings. Handrails shall not rotate within their fittings. Where expansion joints are necessary for large spans of handrails, the expansion joint is permitted to rotate in its fitting.

R409.10 Handrail Extensions. Handrail gripping surfaces shall extend beyond and in the same direction of ramp runs and stair flights in accordance with R409.10. Extensions shall not be required for continuous handrails at the inside turn of switchback or dogleg ramps and stairways. In alterations where handrail extensions would reduce the clear width required for pedestrian access routes, handrail extensions shall not be required.

R409.10.1 Top and Bottom Extension at Ramps. Ramp handrails shall extend horizontally above the landing for 305 mm (1.0 ft) minimum beyond the top and bottom of ramp runs. Extensions shall return to a wall, guard, or the landing surface, or shall be continuous to the handrail of an adjacent ramp run.

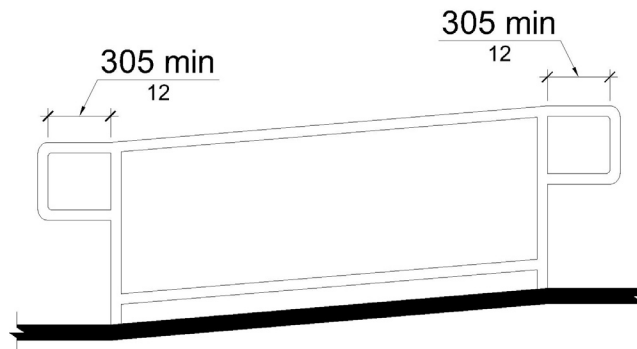


Figure R409.10.1
Top and Bottom Extension at Ramps

R409.10.2 Top Extension at Stairways. At the top of a stair flight, handrails shall extend horizontally above the landing for 305 mm (1.0 ft) minimum beginning directly above the first riser nosing. Extensions shall return to a wall, guard, or the landing surface, or shall be continuous to the handrail of an adjacent stair flight.

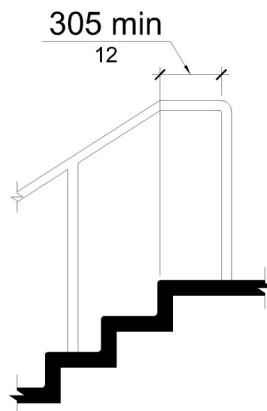


Figure R409.10.2
Top Extension at Stairways

R409.10.3 Bottom Extension at Stairways. At the bottom of a stair flight, handrails shall extend at the slope of the stair flight for a horizontal distance at least equal to one tread depth beyond the last riser nosing. Extensions shall return to a wall, guard, or the landing surface, or shall be continuous to the handrail of an adjacent stair flight.

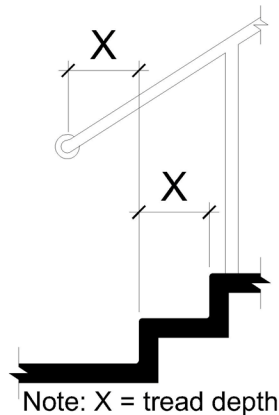


Figure R409.10.3
Bottom Extension at Stairways

R410 Visual Characters on Signs

R410.1 General. Visual characters on signs shall comply with R410.

R410.2 Finish and Contrast. Characters and their background shall have a non-glare finish. Characters shall contrast with their background with either light characters on a dark background or dark characters on a light background.

Advisory R410.2 Finish and Contrast. Signs are more legible for pedestrians with low vision when characters contrast as much as possible with their background. Additional factors affecting the ease with which the text can be distinguished from its background include shadows cast by lighting sources, surface glare, and the uniformity of the text and its background colors and textures.

R410.3 Case. Characters shall be uppercase or lowercase or a combination of both.

R410.4 Style. Characters shall be conventional in form. Characters shall not be italic, oblique, script, highly decorative, or of other unusual forms.

R410.5 Character Proportions. Characters shall be selected from fonts where the width of the uppercase letter "O" is 55 percent minimum and 110 percent maximum of the height of the uppercase letter "I".

R410.6 Character Height. Minimum character height shall comply with Table R410.2.5. Viewing distance shall be measured as the horizontal distance between the character and an obstruction preventing further approach towards the sign. Character height shall be based on the uppercase letter "I".

Table R410.6 Visual Character Height

Height to Finish Surface from Baseline of Character	Horizontal Viewing Distance	Minimum Character Height
1.0 m (3.3 ft) to less than or equal to 1.8 m (5.8 ft)	Less than 1.8 m (6.0 ft)	16 mm (0.625 in)
	1.8 m (6.0 ft) and greater	16 mm (0.625 in), plus 3.2 mm (0.125 in) per 0.3 m (1.0 ft) of viewing distance above 1.8 m (6.0 ft)
Greater than 1.8 m (5.8 ft) to less than or equal to 3.0 m (10.0 ft)	Less than 4.6 m (15.0 ft)	51 mm (2 in)
	4.6 m (15.0 ft) and greater	16 mm (0.625 in), plus 3.2 mm (0.125 in) per 0.3 m (1.0 ft) of viewing distance above 1.8 m (6.0 ft)
Greater than 3.0 m (10.0 ft)	Less than 6.4 m (21.0 ft)	75 mm (3 in)
	6.4 m (21.0 ft) and greater	75 mm (3 in), plus 3.2 mm (0.125 in) per 0.3 m (1.0 ft) of viewing distance above 6.4 m (21.0 ft)

R410.7 Height from Finish Surface. Visual characters shall be 1.0 m (3.25 ft) minimum above the finish surface.

R410.8 Stroke Thickness. Stroke thickness of the uppercase letter "I" shall be 10 percent minimum and 30 percent maximum of the height of the character.

R410.9 Character Spacing. Character spacing shall be measured between the two closest points of adjacent characters, excluding word spaces. Spacing between individual characters shall be 10 percent minimum and 35 percent maximum of character height.

R410.10 Line Spacing. Spacing between the baselines of separate lines of characters within a message shall be 135 percent minimum and 170 percent maximum of the character height.

R411 International Symbol of Accessibility. The International Symbol of Accessibility shall comply with Figure 411. The symbol and its background shall have a non-glare finish. The symbol shall contrast with its background with either a light symbol on a dark background or a dark symbol on a light background.



Figure R411
International Symbol of Accessibility

Appendix D –Schedule/Budget Information

Cost Information

Costs for upgrading ROW can vary depending on each individual improvement and conditions of each site. Costs can also vary on the type and size of the ADA improvements. Listed below are representative 2020 costs for typical accessibility improvements:

Table 1 Public Right-of-Way Unit Prices

	Project Cost
Intersection corner ADA improvement retrofit (per corner)	\$4,000 - \$6,000
Sidewalk ADA improvement retrofit (50 linear feet of 5' wide sidewalk replaced per sidewalk data point)	\$15.00 per SF
Single pedestrian pushbutton station replacement (each)	\$2500

For estimating purposes, the cost to improve a single curb ramp on an intersection corner was estimated to be \$5000. Cost estimates for the improvements are based on 2020 construction costs and include contingency for engineering and oversight. D-1 includes a summary of the total cost estimate for public ROW.

Priority Areas

The County has established the following criteria to define priority levels. The County will consider all ADA improvement requests as received, which may affect the prioritization level of a specific project when appropriate.

Category 1A (Highest Priority):

- No curb ramp where sidewalk or pedestrian path exists and location near a medical center, school, transit facility, government building, non-auto dependent household, or similar facility.

Category 1B:

- Existing curb ramp with a noncompliant running slope or multiple sources of non-compliance and location near a medical center, school, transit facility, government building or similar facility.

Category 2A:

- No curb ramp where a sidewalk or pedestrian path exists (not located near a medical center or similar facility).

Category 2B:

- An existing curb ramp with a running slope greater than 12% or a cross slope greater than 3% or lack of level landing (not located near a medical center or similar facility).

Category 3:

- No curb ramp where a striped crosswalk exists.

Category 4:

- One curb ramp per corner and another is needed to serve the other crossing direction.

Category 5A:

- An existing curb ramp with an insufficient landing.

Category 5B:

- An existing curb ramp with obstructions in the ramp or the landing.

Category 5C:

- An existing curb ramp with any of the following conditions:
 - A running slope greater than 8.3%
 - A cross slope greater than 2%
 - A width less than 48 inches
- No flush transition or median, or island crossings that are inaccessible.
- Detectable Warnings do not extend the full width of the sidewalk.

Category 5D:

- An existing curb ramp with returned curbs where pedestrian travel across the curb is not permitted.

Category 5E:

- An existing diagonal curb ramp without the 48-inch extension in the crosswalk.

Category 5F:

- An existing curb ramp without truncated dome texture contrast or without color contrast.

Category 6 (Lowest Priority):

- The pedestrian pushbutton is not accessible from the sidewalk or from the ramp.

The County will establish high priority areas for accessibility improvement projects based on the proximity to schools, commercial areas, senior care facilities, government services, and medical care facilities.

The County's 2020 traffic signal evaluation project identified 6 County-owned and operated signals that are recommended for full replacement in the next 5-10 years, and all 6 of these intersections feature non-compliant curb ramps. The signalized intersections along Main Street in Owatonna feature 5 of the 6 intersections identified for full replacement. By prioritizing Main Street for improvements in the next 5-10 years, the County can address curb ramp, sidewalk, and signal-related accessibility deficiencies.

Entire Jurisdiction

Based on the results of the ROW self-evaluation, the estimated costs associated with providing ADA accessibility within the entire jurisdiction is \$4,419,000. The County will likely benefit from economy of scale when larger ROW reconstructions occur.

The County will continue to incorporate ADA best practices and standards with Highway CIP projects and as part of stand-alone projects.

D-1: Cost Estimate for Right-of-Way

Steele County ADA - Cost Estimates for Right-of-Way

System Correction	Unit Cost	Unit	# of non-compliant points collected	Total points inventoried	% Compliant	Cost
Replace Existing Curb Ramp	\$ 5,000.00	EA	609	823	26%	\$ 3,045,000.00
Replace Sidewalk*	\$ 15.00	SF	337	609	45%	\$ 1,263,750.00
Replace Pedestrian Pushbutton	\$2,500	EA	44	54	19%	\$ 110,000.00
TOTAL:			990	1486	33%	\$ 4,418,750.00

*Assumes 50 LF of 5-ft wide sidewalk replaced (total of 250 SF) per sidewalk data point.

Appendix E – Public Outreach

The County recognizes that providing an opportunity for review and comment is an important part of this Plan. Comments will be recorded and, if feasible, modifications to the document content and prioritization of improvements will be made.

As part of the Plan development process, the County will post the Plan document on the County's Highway section of its website <https://www.co.steele.mn.us>, and the Plan will be made available for public comment. Additionally, a printed copy of the Plan will be made available at the Highway Department.

A link to the plan was also distributed via email to school districts, medical facilities, and other public agencies with facilities along or access to the County's ROW. The following is a list of Stakeholders and the text that was included in the email notice.

Stakeholder Contact List

- Schools
 - Blooming Prairie High School
 - Blooming Prairie School District
 - McKinley Elementary School
 - Medford Public School
 - Medford School District
 - NRHEG School District
 - Owatonna Christian School
 - Owatonna School District
- Medical Facilities
 - Owatonna Hospital
- Other Public Agencies
 - Cities
 - Blooming Prairie
 - Ellendale
 - Medford
 - Owatonna
 - Hope (Somerset Township)
 - Steele County Courthouse
 - Steele County Public Health
 - Cedar Valley Services

Email Notice

To whom it may concern:

Steele County is seeking input from the public on the draft ADA Transition Plan to support accessibility for people using its facilities. We invite you to review the draft version of the Plan, as it is being finalized. You may view the draft by using the following link to the County's website:

[Insert web hyperlink]

Feel free to distribute this notice to your colleagues or others that may find this plan to be of interest. The purpose of this notice is to introduce the ADA Transition Plan to the public and inform those that work in "priority areas" related to accessibility about the County's work thus far. Any comments that you provide may be incorporated into the final version of the Plan, and help Steele County to identify key areas for improvement, including curb ramps, sidewalks, and pedestrian pushbuttons.

If you need a reasonable accommodation, assistance, or require more information please contact Steele County ADA Coordinator, Paul Sponholz, using the contact information below.

Thank you for your input,

Steele County

ADA Coordinator

Name: Paul Sponholz, Assistant County Engineer

Address: 3000 Hoffman Dr NW, Owatonna, MN 55060

Phone: 507-444-7670

E-Mail: paul.sponholz@co.steele.mn.us

Record of Public Outreach Summary

The County sent out a Media Release and made the Plan available to the public for review during a virtual open house, which was available from November 17 – 29, 2020. During this time, one comment was received regarding a specific location. The County is in the process of working with the Commenter to address the request.

E-1: Public Outreach Media Release



STEELE COUNTY HIGHWAY DEPARTMENT

PO Box 890 • 3000 Hoffman Dr NW • Owatonna, MN 55060-0890
(507) 444-7670

November 17, 2020

MEDIA RELEASE

For Immediate Release

For more information contact:
Paul Sponholz
507-444-7670
paul.sponholz@co.steele.mn.us

STEELE COUNTY ADOPTING ADA TRANSITION PLAN

Owatonna, Minn. – The Steele County Highway Department is creating a Transition Plan to make pedestrian facilities accessible per the requirements of the Americans with Disabilities Act (ADA). Steele County invites the public to participate in an open house to review the county's progress and provide feedback. Due to the COVID-19 restrictions of in-person public events, the open house will be held online November 17 until November 29.

To participate in the open house and view the draft of the plan, the public can go to this link: www.co.steele.mn.us/ada_transition. The public will then be able to provide feedback to or ask questions of project staff via email or phone. If someone needs a reasonable accommodation, assistance, or require more information, they should contact the Steele County Highway Department.

Over the past several months, the County has evaluated the sidewalks, trails, curb ramps, and traffic signals within Steele County for compliance with accessibility guidelines. The Transition Plan lays out a strategy for correcting non-complaint infrastructure.

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Appendix F – Grievance Procedure

Under the ADA, each agency is required to publish its responsibilities regarding the ADA. A draft of this public notice is provided in Appendix E. If users of public ROW believe the County has not provided reasonable accommodation, they have the right to file a grievance.

In accordance with 28 CFR 35.107 (b), the County has developed the following grievance procedure for the prompt and equitable resolution of citizen complaints, concerns, comments, and other grievances.

The County understands that members of the public may desire to contact staff and discuss ADA issues prior to or without filing a formal grievance. Members of the public wishing to contact the staff to discuss concerns regarding County facilities should contact the ADA Coordinator, listed in Appendix A. Contacting the ADA Coordinator to informally discuss ADA issues is strongly encouraged and does not limit the ability or right to file a formal grievance later.

If the complainant and/or third-party representative should file a formal grievance, the Grievance Form found in this Appendix should be filed as soon as possible, but no later than 60 calendar days after the alleged discrimination. Upon receipt of a completed Grievance Form, the ADA Coordinator will review the information in a timely manner and contact the complainant in order to attempt to find a resolution to the complaint. If the complainant is not satisfied with the resolution proposed by the ADA Coordinator, then within 10 days, the complainant may make a written appeal to the County Administrator, who shall have final decision-making authority regarding the complaint. Grievances must be resolved within a reasonable timeframe.

As per ADA requirements, the County has posted a notice outlining its responsibilities. This notice can be found in this Appendix.

The County appreciates and welcomes your comments. To provide feedback, please complete the grievance form located in the following pages, or contact the ADA Coordinator listed in Appendix A.

Those wishing to file a formal written grievance with the County may do so by one of the following methods:

Internet

Visit the County's website, www.co.steele.mn.us under the Highway Department and click the "ADA" link to the **ADA Grievance Form**. Download the form and fill it out. Then mail or email it to the ADA Coordinator as shown in Appendix A. A copy of The Grievance Form is included in this Appendix.

Telephone

Contact the ADA Coordinator listed in the Contact Information section of Appendix A to submit an oral grievance. The ADA Coordinator will utilize the Internet method above to submit the grievance on behalf of the person filing the grievance.

Paper Submittal

Contact the ADA Coordinator listed in the Contact Information section of Appendix A to request a paper copy of the County's grievance form, complete the form, and return it to the ADA Coordinator. The ADA Coordinator or County staff person will then utilize the Internet method above to submit the grievance on behalf of the person filing the grievance.

Public Notice

In accordance with the requirements of Title II of the Americans with Disabilities Act (ADA) of 1990, Steele County will not discriminate against qualified individuals with disabilities on the basis of disability in County services, programs, or activities.

Employment: The County does not discriminate on the basis of disability in its hiring or employment practices and complies with all regulations promulgated by the U.S. Equal Employment Opportunity Commission under title I of the Americans with Disabilities Act (ADA).

Effective Communication: The County will generally, upon request, provide appropriate aids and services leading to effective communication for qualified persons with disabilities so they can participate equally in the County's programs, services, and activities, including qualified sign language interpreters, documents in Braille, and other ways of making information and communications accessible to people who have speech, hearing, or vision impairments.

Modifications to Policies and Procedures: The County will make all reasonable modifications to policies and programs to ensure that people with disabilities have an equal opportunity to enjoy all County programs, services, and activities. For example, individuals with service animals are welcome in County offices, even where pets are generally prohibited.

Anyone who requires an auxiliary aid or service for effective communication, or a modification of policies or procedures to participate in a County program, service, or activity, should contact the ADA Coordinator as soon as possible, but no later than 48 hours before the scheduled event.

The ADA does not require the County to take any action that would fundamentally alter the nature of its programs or services or impose an undue financial or administrative burden.

The County will not place a surcharge on an individual with a disability or any group of individuals with disabilities to cover the cost of providing auxiliary aids/services or reasonable modifications of policy, such as retrieving items from locations that are open to the public but are not accessible to persons who use wheelchairs.

ADA Grievance Form

Please fill out this form completely, in black ink or type. If you need any accommodation or assistance in completing this form, please contact the ADA Coordinator, Paul Sponholz at 507-444-7670. Sign and return to: Steele County Highway Department, PO Box 890, 3000 Hoffman Dr NW, Owatonna, MN 55060 - 0890.

Section I – Discrimination Description

Date of Alleged Discrimination (Month, Day, Year): _____

Have efforts been made to resolve this complaint? Yes ☐ No ☐

If yes, what is the status of the grievance? _____

Has the complaint been filed with the Department of Justice or any other Federal, State or local civil rights agency or court? Yes ☐ No ☐

If Yes:

Agency or Court: _____

Contact Name: _____ Contact Title: _____

Agency Name: _____ Phone: _____

Description of Grievance/Discrimination: _____

Section II – Complainant Information

Complainant Name: _____

Street Address: _____

City: _____ State: _____ Zip: _____

Home Phone: _____ Work Phone: _____

Mobile Phone: _____ Email: _____

Preferred method of communication: Mail ☐ Email ☐ Phone ☐

Section III – Completed by

Are you filling this complaint out on your own behalf? Yes ☐ No ☐

If Yes, complete **Section III**

If No, please supply the name and relationship of the person for whom you are complaining:

First and last name of person for whom you are filling: _____

Relationship of the person for whom you are filling: _____

Please explain why you have filed for a third party: _____

Please confirm that you have obtained the permission of the

aggrieved party, if you are filing on behalf of a third party. Yes ☐ No ☐

Section IV – Previous

Have you previously filled an ADA complaint with this agency? Yes ☐ No ☐

Section VI – Remedy Sought

State the specific remedy sought to resolve the issues (s): _____

You may attach any written or other information that you this is relevant to your complaint.

Signature: _____ Date: _____

I sincerely and truly declare and affirm that the facts contained herein are complete, accurate, and true to the best of my knowledge and belief. Further, I declare and affirm that my statement has been made by me voluntarily without persuasion, coercion, or promise of any kind.

Appendix G – Glossary of Terms

ABA: See Architectural Barriers Act.

ADA: See Americans with Disabilities Act.

ADA Transition Plan: MnDOT's transportation system plan that identifies accessibility needs, the process to fully integrate accessibility improvements into the Statewide Transportation Improvement Program (STIP), and ensures all transportation facilities, services, programs, and activities are accessible to all individuals.

ADAAG: See Americans with Disabilities Act Accessibility Guidelines.

Accessible: A facility that provides access to people with disabilities using the design requirements of the ADA.

Accessible Pedestrian Signal (APS): A device that communicates information about the WALK phase in audible and vibrotactile formats.

Alteration: A change to a facility in the public right-of-way that affects or could affect access, circulation, or use. An alteration must not decrease or have the effect of decreasing the accessibility of a facility or an accessible connection to an adjacent building or site.

Americans with Disabilities Act (ADA): The Americans with Disabilities Act; Civil rights legislation passed in 1990 and effective July 1992. The ADA sets design guidelines for accessibility to public facilities, including sidewalks and trails, by individuals with disabilities.

Americans with Disabilities Act Accessibility Guidelines (ADAAG): contains scoping and technical requirements for accessibility to buildings and public facilities by individuals with disabilities under the Americans with Disabilities Act (ADA) of 1990.

APS: See Accessible Pedestrian Signal.

Architectural Barriers Act (ABA): Federal law that requires facilities designed, built, altered or leased with Federal funds to be accessible. The Architectural Barriers Act marks one of the first efforts to ensure access to the built environment.

Capital Improvement Program (CIP): The CIP for the Transportation Department includes an annual capital budget and a five-year plan for funding the new construction and reconstruction projects on the county's transportation system.

Detectable Warning: A surface feature of truncated domes, built in or applied to the walking surface to indicate an upcoming change from pedestrian to vehicular way.

DOJ: See United States Department of Justice

Federal Highway Administration (FHWA): A branch of the US Department of Transportation that administers the federal-aid Highway Program, providing financial assistance to states to construct and improve highways, urban and rural roads, and bridges.

FHWA: See Federal Highway Administration

Pedestrian Access Route (PAR): A continuous and unobstructed walkway within a pedestrian circulation path that provides accessibility.

Pedestrian Circulation Route (PCR): A prepared exterior or interior way of passage provided for pedestrian travel.

PROWAG: An acronym for the *Guidelines for Accessible Public Rights-of-Way* issued in 2005 by the U. S. Access Board. This guidance addresses roadway design practices, slope, and terrain related to pedestrian access to walkways and streets, including crosswalks, curb ramps, street furnishings, pedestrian signals, parking, and other components of public rights-of-way.

Retrofit: The installation of ADA-compliant infrastructure to correct non-compliant elements within an existing transportation system without replacing the entirety of the existing infrastructure.

Right of Way (ROW): A general term denoting land, property, or interest therein, usually in a strip, acquired for the network of streets, sidewalks, and trails creating public pedestrian access within a public entity's jurisdictional limits.

Section 504: The section of the Rehabilitation Act that prohibits discrimination by any program or activity conducted by the federal government.

Uniform Accessibility Standards (UFAS): Accessibility standards that all federal agencies are required to meet; includes scoping and technical specifications.

United States Access Board: An independent federal agency that develops and maintains design criteria for buildings and other improvements, transit vehicles, telecommunications equipment, and electronic and information technology. It also enforces accessibility standards that cover federally funded facilities.

United States Department of Justice (DOJ): The United States Department of Justice (often referred to as the Justice Department or DOJ), is the United States federal executive department responsible for the enforcement of the law and administration of justice.

Appendix H – Supplementary County Resources



Building a Better World
for All of Us®

May 26, 2020

RE: Steele County, Minnesota
City of Owatonna
Traffic Signal Field Analysis
SEH No. 153593

Mr. Paul Sponholz, PE
Assistant County Engineer
Steele County Highway Department
PO Box 890
3000 Hoffman Drive NW
Owatonna, Minnesota 55060

Dear Mr. Sponholz:

The Steele County Highway Department, in conjunction with the City of Owatonna, retained Short Elliott Hendrickson Inc. (SEH) to provide assistance with determining projected budgeting and planning for future traffic signal maintenance and improvements throughout the City of Owatonna. Currently, the City/County has a total of 19 City and/or County owned and operated traffic signal systems under their jurisdiction. The locations of these signal systems are summarized as follows:

1. Hoffman Drive (CSAH 2) at 24th Avenue NW
2. Hoffman Drive (CSAH 2) at 21st Avenue NW
3. 21st Avenue NW at West Frontage Road
4. Hoffman Drive (CSAH 2) at East Interstate 35 Ramps
5. Hoffman Drive (CSAH 2/45) at State Avenue/CSAH 45
6. Hoffman Drive (CSAH 45) at North Street
7. Hoffman Drive (CSAH 45) at Rose Street (CSAH 19)/Glendale Street
8. Rose Street (CSAH 19) at Cedar Avenue
9. West Bridge Street at Park Drive
10. West Bridge Street at West Interstate 35 Ramps
11. West Bridge Street at Allan Avenue/Florence Avenue
12. West Bridge Street at State Avenue
13. Main Street (CSAH 48) at Oak Avenue (CSAH 45)
14. Main Street (CSAH 48) at West Park Square
15. Main Street (CSAH 48) at Elm Avenue
16. Main Street (CSAH 48) at Grove Avenue
17. Main Street (CSAH 48) at Lincoln Avenue
18. Cedar Avenue (CSAH 45) at Hy-Vee Entrance
19. Cedar Avenue (CSAH 45) at 18th Street

Engineers | Architects | Planners | Scientists

Short Elliott Hendrickson Inc., 3535 Vadnais Center Drive, St. Paul, MN 55110

SEH is 100% employee-owned | sehinc.com | 651.490.2000 | 800.325.2055 | 888.908.8166 fax

In January-May 2020, the County had SEH complete a detailed field analysis of these signal systems. SEH also completed traffic counts at each intersection along with a review of signal timing that will be discussed and coordinated with the County in a future document and in future field work on each signal system.

In general, many of the existing signal systems are either beginning to show their age and are in need of significant upgrades; or have portions of the signal system/intersection that are not up to current State signal and ADA design standards and may need to be considered for minor upgrades over time.

Review of Traffic Counts and Warrant Analysis

As part of our review of each intersection, we also reviewed traffic count data obtained in January-February 2020 by SEH for each intersection approach and compared these counts with the warrants for signalization as listed in the Minnesota Manual on Uniform Traffic Control Devices (MnMUTCD).

The following 6 signal systems are able to fully meet MnMUTCD warrants for signalization:

- Hoffman Drive (CSAH 2) at 21st Avenue NW
- Hoffman Drive (CSAH 2) at East Interstate 35 Ramps
- Hoffman Drive (CSAH 2/45) at State Avenue/CSAH 45
- Hoffman Drive (CSAH 45) at North Street
- Main Street (CSAH 48) at Oak Avenue (CSAH 45)
- Cedar Avenue (CSAH 45) at 18th Street

Signal systems that do not fully meet MnMUTCD warrants for signalization but are able to meet at least 60% of either Warrant 1A (Minimum Vehicular Volume) or Warrant 1B (Interruption of Continuous Flow) and thus be considered as justified and not requiring removal including the following 8 signal systems:

- Hoffman Drive (CSAH 2) at 24th Avenue NW
- Hoffman Drive (CSAH 45) at Rose Street (CSAH 19)/Glendale Street
- West Bridge Street at Park Drive
- West Bridge Street at West Interstate 35 Ramps
- West Bridge Street at Allan Avenue/Florence Avenue
- West Bridge Street at State Avenue
- Main Street (CSAH 48) at Grove Avenue
- Cedar Avenue (CSAH 45) at Hy-Vee Entrance

The following 5 signal systems were not able to meet at least 60% of Warrants 1A or 1B and thus may need to be considered for removal:

- 21st Avenue NW at West Frontage Road
- Rose Street (CSAH 19) at Cedar Avenue
- Main Street (CSAH 48) at West Park Square
- Main Street (CSAH 48) at Elm Avenue
- Main Street (CSAH 48) at Lincoln Avenue

For the 5 signal systems that do not meet at least 60% of MnMUTCD Signal Warrants 1A or 1B, there may be other circumstances at each intersection (heavy commercial/office development, higher pedestrian volumes, geometric issues, etc.) that can justify maintaining a signal system at these locations.

Field Review

As part of the process to determine the condition and needs at each of the above mentioned signalized intersections, we performed a detailed field review of these 19 signal systems between January 23-30, 2020 along with subsequent site visits to review other items and confirm conditions of previously reviewed items in April-May 2020. Items reviewed at each signal system included but were not limited to the following:

1. Overall general condition of signal components and age of each system.
2. Presence of components at each signal system and intersection that meet ADA requirements for access to the signal system and intersection.
3. Presence of current standard signal components, such as ADA compliant pedestrian push buttons, LED pedestrian signal indications with “countdown timer” indications, LED vehicular signal lenses, APS (audible) pedestrian push buttons, “Flashing Yellow Arrow” signal operations, etc.
4. Paint condition of signal system and the need for repainting in the near future.
5. Current maintenance items that need to be addressed by the City/County to ensure that each signal system is fully operational and in good working condition.

Individual Intersection Evaluations

With regards to current condition and our recommendations, we have broken up our analysis into recommended minor improvements as well as our observations of each signal system. Maintenance and potential future improvements are listed with an estimated construction cost and how the improvement would be required to be enacted (by City/County forces, or by a separate contractor).

Some items are more critical than others and are recommended to be addressed as soon as possible. Other items can be addressed by adding them to other City/County roadway and signal projects in the future, to be able to save costs on work items by including them on larger projects that are let during the construction season.

With regards to specific needs at each signal system, please note the following:

1. ADA Compliance Notes

With regards to ADA (Americans with Disabilities Act) requirements, the Federal and Minnesota Manuals on Uniform Traffic Control Devices (MnMUTCD), and PROWAG (Public Right of Way Accessibility Guidance), existing intersections without ADA compliant pedestrian curb ramps and accessible sidewalks are not required to have these upgraded to the newer ADA standards unless other significant sidewalk and/or road work is completed at these locations. However, the City/County is required to at least have a transition plan in-place for upgrading curb ramps to ADA compliance.

Work to upgrade signal systems to include the APS (Accessible Pedestrian Systems) audible pedestrian push buttons system either has already been completed or will be completed in 2020 by others at 6 of the 19 signal systems listed above. For the remaining 13 signal systems, we recommend that the City/County program and budget for upgrading these signal systems over the

next few years so that signal systems throughout the City have these capabilities and there is consistency in operation of pedestrian detection.

We also recommend that the City/County consider including the APS system with any new signal system installations or full signal replacements (as well as with significant signal revision work) to ensure that these signal systems will be in compliance with recommended ADA and PROWAG standards.

2. Flashing Yellow Arrow Operation

With regards to the use of “Flashing Yellow Arrow” left turn phasing, the State is recommending that any new signal system with protected or protected/permissive left turn phasing instead include the “flashing yellow arrow” operation. Implementing this operation for existing signal systems is being incorporated at many locations throughout the State as budget allows. We recommend including the use of the “flashing yellow arrow” operation for any new, replaced, or significantly revised signal system where the controller and controller cabinet are being upgraded or replaced as part of that work.

For existing signal systems, we recommend consideration of this modification but note that this change in operations on an existing signal system is often an expensive endeavor. Several traffic signal controller units within existing City traffic signals are incapable of operating the “flashing yellow arrow” without upgrade to a newer controller unit. Similarly, some of the controller cabinets within the City are also too old to be able to accommodate “flashing yellow arrow” operation (cabinets greater than 20 years old are generally considered by the State and the industry as being too old for use of this operation) and would require full replacement. A typical new compatible controller unit is estimated to cost between \$5,000 and \$7,000 while a new TS-2 controller cabinet capable of operating the “flashing yellow arrow” is estimated to cost around \$25,000 (including labor to install the new cabinet). Add in additional overhead signal heads that are needed to allow for this operation, and the cost to upgrade an existing signal system to “flashing yellow arrow” can often exceed \$50,000 or more. Thus, careful consideration is needed when contemplating upgrading a signal system to have the “flashing yellow arrow” operation.

3. Painting

Signal systems generally should be considered for full re-painting approximately every 8-10 years in order to address peeling and rusting issues and be able to keep these poles in use until the end of the overall signal system lifespan. At this time, we estimate that a number of the City/County owned signal systems will be in need of re-painting over the next 5 years. Painting costs are typically approaching \$8,000 to \$10,000 per intersection based on recent bid costs if a private contractor is used for these services. These intersections could also be programmed for painting by City or County forces as well.

4. Signal Replacement

In general, all of the City/County owned and operated traffic signal systems are in fair/good condition and would not require significant replacement work for several years. Note that a signal system typically has a useful lifespan of approximately 30-40 years before replacement is

recommended to address age of system, potential concerns about structural soundness of various components, and upgrading to current design standards.

The following signal systems are either approaching or exceeding the 30-40 year lifespan and thus are recommended to be considered for full replacement in the next 5-10 years:

- Hoffman Drive (CSAH 45) at North Street
- West Bridge Street at Allan Avenue/Florence Avenue
- West Bridge Street at State Avenue
- Main Street (CSAH 48) at Oak Avenue (CSAH 45)
- Main Street (CSAH 48) at West Park Square
- Main Street (CSAH 48) at Elm Avenue

5. LED Indication Upgrades

All City/County owned traffic signal systems have previously had all vehicle and pedestrian signal indications upgraded to LED indications, with only the upgrading to have “countdown timer” pedestrian indications needed at several locations.

6. Video Detection

Of note is that upgrading all 3-4 intersection approaches at a signal system to have video vehicular detection typically costs around \$35,000 to \$40,000 per intersection to complete (labor included). For a new signal system, this cost is similar to the costs of having in-pavement vehicular detection installed (which includes additional handholes and conduit needed to reach advance detection areas). For an existing signal system, this would be an added cost and would have all existing advance detection components be abandoned in-place. However, there are significant benefits to having video detection retroactively added to a signal system including flexibility in detector placements to address current and future traffic patterns, the ability to maintain vehicular detection when construction is ongoing (including mill and overlay work that impacts existing loops in pavement), and the ability to revise detection areas when lanes are closed for area construction.

Video detection does require additional maintenance versus in-pavement detectors (including periodic re-aiming of cameras and cleaning of camera lenses). In-pavement vehicular detection often does not require any on-going maintenance unless wiring or in-pavement detectors are disturbed by area construction, rodents in handholes chew through wiring, or there is standing water in handholes that can damage loop detector wiring and splicing over time.

7. Battery Back-Up Service

Battery back-up service cabinet capabilities exist for 17 of the 19 signal systems, with only the 2 signals at the Interstate 35 ramps not having batteries or inverters installed within existing back-up ready cabinets. At several locations, battery back-up systems were either found to not be working or require new batteries. We are in contact with Mobotrex (the supplier of the original battery back-up systems) to diagnose issues at several locations and will follow-up with the City/County and Mobotrex to help address these issues.

8. Emergency Vehicle Preemption (EVP)

All signal systems within the City of Owatonna have siren-activated EVP components, which include microphone detectors mounted on traffic signal mast arms, mast arm poles, and pedestal poles. Also included are confirmation lights facing each approach that show oncoming emergency vehicle drivers that their call has been recognized by the signal system. Siren-activated EVP systems do not require any additional emergency vehicle equipment, but can pose problems with detection depending on where the emergency vehicle is coming from.

Siren-activated EVP systems were installed between 2006-2008 on all signal systems and have a 10-year warranty on components which has expired at all locations. From our field review, we noted several locations where these systems are not operational which has also been confirmed by City emergency staff. Thus, repairs to either cabinet components or the microphone detectors themselves, or re-programming in the signal cabinets are needed to make these systems fully operational.

Another option for EVP on each signal system is the more commonly used optically programmed EVP system. These systems are activated based on line-of-sight of signal pole or mast arm mounted detectors from an emergency vehicle mounted strobe light that needs to be purchased separately and installed on each emergency vehicle for the system to operate. These systems are able to recognize detection from a line-of-sight distance of up to 2,000 feet and have been very reliable. Maintenance on these systems typically includes re-aiming of the pole and mast arm mounted detectors and changing of confirmation lights (similar to the siren-activated systems). These systems have been known to work well for more than 20 years and generally do not require much maintenance.

If the City/County were to consider replacing the siren-activated EVP systems with an optically programmed EVP system, existing cables at each signal system should be able to be reused for either system. Detectors would need to be replaced as would controller cabinet cards. In some cases, advance detection (via advance and separate pedestal pole mounted installations) would be required with the optically programmed systems where there are significant curves on an approach to an intersection.

For each individual signal system analysis, we noted where advance detection would be required and estimated costs to convert an EVP system from siren-activated to optically programmed. Note that these estimated costs do NOT include the cost of emergency vehicle mounted emitters ("strobe lights").

Based on a conversation with a local supplier of the Opticom EVP systems, current estimated cost to purchase an emitter ranges between \$750 per emitter (for a basic emitter that does not have a separate vehicle ID that can be used to trace which vehicles are activating an EVP system) to \$1,050 per emitter (for an emitter with vehicle ID capabilities). Mounting hardware and work to install these emitters are fairly minor items. Note that emitters would be required to be installed on ALL emergency vehicles that the City or County uses to activate this type of system.

In general, we are strong proponents of the optically programmed EVP systems as these are much more reliable and provide good preemption capabilities. The siren-activated systems are less

expensive and work well in areas with good range for picking up a siren but have their limitations on overall range and advance detection.

Should the City or County be interested in changing to an optically programmed EVP system, we can work with both agencies to design these modifications and determine equipment needs for each location. For now, we continue to work with the SONEM system supplier to diagnose problems with each siren-activated system and hopefully will be able to assist each agency soon with items needed to address issues at several locations.

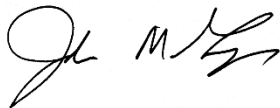
Conclusion

With each individual intersection analysis, we included a summary section listing recommended replacements and improvements that the City/County should prioritize when funds are available. Estimated improvement costs include all known indirect costs needed to implement that improvement.

Note however that design costs for plan preparation and bidding of these potential work items are not included given that these costs can vary significantly depending on what is included in each proposed project. Typical design and construction costs for a set number of signal improvements can run between \$5,000 and \$10,000 per project. ADA curb ramp design work would likely add another \$8,000 to \$10,000 per intersection to survey the intersection and develop detailed ADA plans.

Please review the above mentioned information and the attached intersection-specific information at your convenience and let us know if you have any specific comments or questions related to these items. Feel free to either call me at 651.402.4383 or email me at jgray@sehinc.com to discuss further as needed and/or if you wish for us to follow up on specific maintenance items on behalf of the City or County. Thank you.

Sincerely,
Short Elliott Hendrickson, Inc.

A handwritten signature in black ink, appearing to read 'J M Gray', with a stylized flourish at the end.

John M. Gray, PE
Project Engineer

c: Kyle Skov, City of Owatonna