

Americans with  
Disabilities Act  
(ADA) Transition  
Plan for Public  
Rights of Way

Final - February  
2018





# Table of Contents

## Summary:

• Introduction.....	1
• Self-Evaluation.....	3
• Policies and Practices.....	4
• Improvement Schedule Priorities.....	4
• ADA Coordinator.....	6
• Implementation Schedule.....	7
• Public Outreach.....	7
• Grievance Procedure.....	7
• Monitor the Progress.....	8

## Appendices:

• A. Self-Evaluation Results.....	10
○ Sidewalk Results.....	10
○ Curb Ramp Results.....	10
○ Shared Use Path Results.....	11
○ Traffic Control Signal Results.....	11
○ Charts:	
➤ Traffic Signals that Met ADA Requirements at Time of Installation or had Improvements to Upgrade to ADA at Time of Upgrade.....	12
➤ Traffic Signals Requiring Pedestrian Signal Modification to Meet Current ADA Requirements.....	13
➤ Traffic Signals Requiring Rehabilitation or Replacement to Meet Current ADA Requirements.....	14
○ Bus Shelter and Stop Results.....	15
○ Sidewalk Conditions at DTA Bus Stops, 2017 (Map).....	16
• B. Schedule/Budget Information.....	17
• C. Public Outreach:	
○ Organizations Notified of Survey or Indicating Affiliation on the Survey Form.....	20
○ Press Release: City Seeks Public Input on Pedestrian Facilities.....	22
○ Public Meeting Sign-In Sheets.....	23
○ Resident Survey.....	26
○ Imagine Duluth 2035 Transportation Focus Group, Sign-In Sheets.....	37
○ Press Release: Duluth Pedestrian Facilities Draft Plan Ready for Public Input (Public Meeting Scheduled).....	39
○ Public Meeting Sign-In Sheets.....	40
○ Comment Form.....	43
○ TAC Meeting Sign-In Sheet and Summary.....	44
○ Comment Form Emails.....	47
○ Duluth Commission on Disabilities Letter of Support.....	51

- D. Public Notice and Grievance Procedure..... 52
  - Americans with Disabilities Act Title II Complaint Form..... 55
- E. Contact Information..... 56
- F. Agency ADA Design Standards and Procedures:
  - Design Procedures..... 57
  - Design Standards:
    - Public Rights-of-Way Accessibility Guidelines..... 59
    - Notice of Availability of Draft Public Rights-of-Way Accessibility Guidelines..... 60
      - Background..... 60
      - Discussion of Provisions: Draft Guidelines for Public Rights-of-Way..... 66
        - R1: Application and Administration..... 75
        - R2: Scoping Requirements..... 80
        - R3: Technical Provisions..... 89
        - R4: Supplementary Technical Provisions..... 106
- G. Glossary of Terms..... 123

# Introduction

## Transition Plan Need and Purpose

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 transportation services and programs, Duluth must comply with this section of the Act as it specifically applies to public service agencies. Title II of ADA 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." ([42 USC. Sec. 12132](#); [28 CFR. Sec. 35.130](#))

As required by Title II of [ADA, 28 CFR. Part 35 Sec. 35.105 and Sec. 35.150](#), Duluth has conducted a self-evaluation of its facilities within public rights of way and has developed this Transition Plan detailing how the organization will ensure that all of those facilities are accessible to all individuals. This document serves as a supplement to Duluth's existing Transition Plan covering buildings, services, programs and activities.

## 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, Duluth 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 Duluth's programs, practices, or building facilities not related to public rights of way.**

# Self-Evaluation

## Overview

The city of Duluth is required, under Title II of the Americans with Disabilities Act (ADA) and 28CFR35.105, to perform a self-evaluation of its current transportation infrastructure policies, practices, and programs. This self-evaluation will identify what policies and practices impact accessibility and examine how the City implements these policies. The goal of the self-evaluation is to verify that, in implementing Duluth's policies and practices, the department is providing accessibility and not adversely affecting the full participation of individuals with disabilities.

The self-evaluation also examines the condition of Duluth's Pedestrian Circulation Route/Pedestrian Access Route) (PCR/PAR) and identifies potential need for PCR/PAR infrastructure improvements. This will include the sidewalks, curb ramps, bicycle/pedestrian trails, traffic control signals and transit facilities that are located within the City rights of way. Any barriers to accessibility identified in the self-evaluation and the remedy to the identified barrier are set out in this transition plan.

## Summary

In 2017, Duluth updated the sidewalk condition data previously collected for the Duluth Sidewalk Study that was completed by the Duluth-Superior Metropolitan Interstate Council in August of 2012. The update was done by adding new sidewalk segments that had either been added or replaced since 2012. The update was accomplished using engineering project records on file, review of aerial photography since 2012, and some field verification. The city also performed an inventory and evaluation of other pedestrian facilities within its public right of way consisting of the following facilities:

- 403 miles of sidewalks (Duluth 353, St. Louis County 26, MnDOT 25)
- 5076 curb ramps (Duluth 4253, St. Louis county 382, MnDOT 441)
- 22.2 miles of shared use path
- 113 traffic control signals (This number includes shared legs with MnDOT and St. Louis County within city limits)
- 75 bus shelters
- 1500 bus stops (approximately)

The bus shelter compliance information was provided to the city by the Metropolitan Interstate Council on July 10, 2017 as part of their 2017 Bus Shelter Inventory for the Duluth Transit Authority. The number of bus stops and the corresponding sidewalk condition was provided by the Duluth Transit Authority (DTA). Due to the transition to new routes, the sidewalk condition at the stops will be ongoing until the new stops are in operation.

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



## Policies and Practices

### Previous Practices

Since the adoption of the ADA, Duluth has striven to provide accessible pedestrian features as part of the Duluth's capital improvement projects. As additional information was made available as to the methods of providing accessible pedestrian features, the City updated their procedures to accommodate these methods.

### Policy

Duluth's goal is to continue to provide accessible pedestrian design features as part of the city's capital improvement projects. The City has established ADA design standards and procedures as listed in Appendix F. These standards and procedures will be kept up to date with nationwide and local best management practices.

The City will consider and respond to all accessibility improvement requests. All accessibility improvements that have been deemed reasonable will be scheduled consistent with transportation priorities. The City will coordinate with external agencies to ensure that all new or altered pedestrian facilities within the City jurisdiction are ADA compliant to the maximum extent feasible.

Maintenance of pedestrian facilities within the public right of way will continue to be the responsibility of the adjacent property owner. The city is currently working on new policies and procedures to coordinate snow removal assistance to qualified residents from volunteers.

Requests for accessibility improvements can be submitted to Cindy Voigt, City Engineer. Contact information for Cindy Voigt is located in Appendix E.

## Improvement Schedule Priorities

### Sidewalk Priority Areas

Duluth has identified specific locations as priority areas for planned accessibility improvement projects. These areas have been selected due to their proximity to specific building uses on record with the St. Louis County Assessor. These building types include Public, Assisted Living or Nursing Home, Commercial District, Universities, School, Government Buildings, Hospital or Medical. For the School types, we reviewed all the completed and draft Safe Routes to School (SRTS) plans and included any areas with proposed sidewalk or ramp improvements. The priority areas as identified in the 2017 self-evaluation including the associated costs are included in Appendix B.

The priority areas are indicated on the attached map which is located here:

<http://www.duluthmn.gov/human-rights-office/> These areas include all sidewalk within a block of the building which is considered "poor", shown in red.

## **Curb Ramp Priority Areas**

The city has 3075 intersections that have sidewalk on at least one leg. Given the variability of when detectable warnings have been required by law, we have taken the position that any ramp that does not currently have detectable warnings should be replaced, even if the ramp may technically be in compliance. The curb ramp locations are indicated as a point on the attached “Duluth Draft Self-Assessment and Priority Areas for Sidewalk and Curb Ramp” map as either “domed” in green or “not domed” in red. Curb ramps will be upgraded or replaced as needed as the adjacent sidewalk segments are replaced, or as road improvements are completed. First priority will be given to installing curb ramps where none currently exist, which includes approximately 4,600 ramps, and installing any new ramps as may be necessary for bus shelters or stops. Second priority will be to install ramps at any location where an improvement project or alteration was constructed after January 26, 1991, and accessibility features were omitted. Third priority will be to upgrade existing ramps to include detectable warnings. In all cases, the priority for improvement will be based on the number of pedestrians in the area, or locations specifically requested by the disabled because they frequent that area.

## **Traffic Signal Priorities**

The city currently owns or maintains a portion of 113 traffic signals. The Traffic Signal and Street Lighting Branch of Public Works, made field observations of each signal to determine what type of pedestrian indications existed at each intersection. If the signal had Accessible Pedestrian Signals (APS) no upgrade is required. Some signals are new enough, and in good enough condition, that the signal can be retrofitted with a pedestrian button. Many other signals were more than 30 years old, and therefore need to be reconditioned or replaced in order to cost effectively install the APS systems. For all conditions, be it a retrofit, recondition, or replacement, we broke the work into the following 3 categories by alphabetical order:

- “High Priority” to be implemented within 0-5 years
- “Medium Priority” to be implemented within 6-10 years
- “Low Priority” to be implemented later than 10 years

The signals that are expected to be completed as part of a City, County or MnDOT project were automatically listed as “High Priority”. The traffic signal priorities and their estimated costs are included in Appendix B.

## **Transit Shelter and Bus Stop Priorities**

The Duluth Transit Authority maintains 75 shelters at over 1,500 stops. All of these shelters are slightly out of compliance based on one criteria or another, mainly due to bench height, although they are used frequently and don’t pose any hazard for use. The DTA will make improvements to the shelters and install sidewalk at selected stops based on use and need. Highly used shelters will be improved first, as well as at stops without shelters. The stops that have low areas that collect water and ice will be improved first. The city and DTA will coordinate this work to ensure effective use of our limited capital improvement funds.



## External Agency Coordination

Many other agencies are responsible for pedestrian facilities within the jurisdiction of Duluth. The City will coordinate with those agencies to track and assist in the facilitation of the elimination of accessibility barriers along their routes.

## Schedule

Duluth has set the following schedule goals for improving the accessibility of its pedestrian facilities within City jurisdiction:

- After 5 years, 100% of accessibility features that were constructed after January 26, 1991, would be ADA compliant.
- After 10 years, 100% of accessibility features within the priority areas identified by city staff would be ADA compliant.
- After 20 years, 50% of accessibility features within the jurisdiction of the city would be ADA compliant.

Given that 120 miles of Duluth's sidewalk is in poor condition and that 4600 new curb ramps need to be installed where none currently exist, the financial burden to the city is approximately \$70 million dollars. The schedule and priority for improvements will be as follows:

1. Install or retrofit as necessary any curb ramps adjacent to any maintenance or capital improvement project areas constructed after January 26, 1991.
2. Complete the work identified in the priority areas shown by the "Duluth Draft Self-Assessment and Priority Areas for Sidewalk and Curb Ramp" map.
3. Complete sidewalk and curb ramp improvements in other areas of the city as streets are improved or reconstructed. In addition, areas not programmed to be improved will have curb ramps and sidewalk maintenance funds dedicated separately, with improvements made to the areas of highest pedestrian use, or as determined by city staff.

Any one or all three priorities may occur in any individual year, depending on funding. Even though this funding framework will be more than 10 times the amount the city has been able to annually dedicate to sidewalk improvements in the recent past, the city will not be able to complete all the needed work within 20 years to comply with current ADA standards. The city proposes to implement these improvements by dedicating up to \$1 million dollars per year, or more, as additional funds may be available, in order to improve the sidewalk and curb ramp conditions so they are suitable for wheelchairs and pedestrians with rolling walkers.

## ADA Coordinator

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

# Implementation Schedule

## Methodology

Duluth will utilize two methods for upgrading pedestrian facilities to the current ADA standards. The first and most comprehensive of the two methods are the scheduled street and utility improvement projects. All pedestrian facilities impacted by these projects will be upgraded to current ADA accessibility standards. The second method is the stand alone sidewalk and ADA accessibility improvement projects. These projects will be incorporated into the Capital Improvement Program (CIP) on a case by case basis as identified in this transition plan or as determined by Duluth staff. The City CIP, which includes a detailed schedule and budget for specific improvements, is posted annually on the city web site located under the Finance Department/Budget/City of Duluth Capital Improvement Plan (CIP).

## Public Outreach

Duluth recognizes that public participation is an important component in the development of this document. Input from the community has been gathered and used to help identify areas needing improvements within the jurisdiction of the City.

Public outreach for the creation of this document consisted of the following activities in 2017:

Duluth Commission on Disabilities June 6, 2017.

Public Meetings held in 2017 to gather input were held June 6, City Center West, 4:00 pm, June 8, 6:00 pm Central Hillside Community Center and June 7, Portman Community Center 11:00 am. In addition, information on the plan was presented June 7 at the Transportation Planning Focus Group meeting held at City Hall at 5:00 pm.

Survey forms were distributed to the August 15, 2017 Metropolitan Interstate Council Technical Advisory Committee meeting, and to Duluth's US Postal Carriers.

Public Meetings held in 2017 to review survey results and draft plan were held August 29, at City Center West, at 10:00 am, August 30, at 6:00 pm at the Central Hillside Community center, and on August 31, at Portman Community Center at 2:00 pm.

Committee of the Whole Meeting with City Council will be held October 19, 2017 at 5:15 pm.

City Council will consider adopting Final Transition Plan on November 6, 2017 at 7:00 pm.

This document was also available for public comment. A summary of comments received and detailed information regarding the public outreach activities are located in Appendix C.

## Grievance Procedure

Under the Americans with Disabilities Act, each agency is required to publish its responsibilities in regards to the ADA. A draft of this public notice is provided in Appendix D. If users of Duluth



facilities and services believe the City has not provided reasonable accommodation, they have the right to file a grievance.

In accordance with 28 CFR 35.107(b), the City has developed a grievance procedure for the purpose of the prompt and equitable resolution of citizens' complaints, concerns, comments, and other grievances. This grievance procedure is outlined in Appendix D.

## **Monitor the Progress**

This document will continue to be updated as conditions within the City and DTA service area evolve. The appendices in this document will be updated periodically, while the main body of the document will be updated every 5 years with a future update schedule to be developed at that time. With each main body update, a public comment period will be established to continue the public outreach.

## **Appendices**

- A. Self-Evaluation Results**
- B. Schedule / Budget Information**
- C. Public Outreach**
- D. Grievance Procedure**
- E. Contact Information**
- F. Agency ADA Design Standards and Procedures**
- G. Glossary of Terms**



## Appendix A – Self-Evaluation Results

This initial self-evaluation of pedestrian facilities yielded the following results:

- 36% of sidewalks met accessibility criteria (Good condition)
- 49% of curb ramps meet current accessibility criteria (Include truncated domes)
- 50% intersections did not have any curb ramps (Including alley intersections)
- 100% of shared use paths met accessibility criteria
- 70% or 89 intersections have traffic control signals with push buttons that are accessible, or had the pedestrian indications on recall
- 21% or 24 intersections have traffic control signals with APS
- 0% of bus shelters met accessibility criteria
- 26% of bus stops had sidewalk in “good” condition

During 2017 city staff completed a high-level inventory of our accessibility infrastructure in order to determine where we comply, or not, with ADA. We did not review each element from a design perspective, because as infrastructure is replaced or installed, the city will follow the ADA requirements during construction. We focused on updating the sidewalk inventory, reviewing curb ramps for type of detectable warnings, and did a full inventory of the signal system. In addition, the MIC and DTA provided review on the bus shelter compliance and bus stop sidewalk condition information. Based on the results of the self-evaluation, the city will build on the results and program improvements and respond to reasonable accommodation requests in order to work towards full ADA compliance in our public right-of-way.

### Sidewalk Results

As a result of the sidewalk inventory update process in 2017, the city identified St. Louis County and MnDOT’s miles within city limits. The total miles of sidewalk within city limits including the other jurisdiction is 403 miles, which is 6 miles more than the 2012 inventory results. The total miles of sidewalk under the City’s jurisdiction is 352 miles. The sidewalk condition was categorized as either “Good”, “Fair”, or “Poor”, with “Poor” not meeting ADA requirements. The breakdown in condition is listed below:

- Good 128 miles or 36%
- Fair 104 miles or 29%
- Poor 120 miles or 34%

### Curb Ramp Results

Curb ramps were also reviewed both using aerial photography and field visits when necessary. For this portion of the self-evaluation, we decided that it was most important to determine where sidewalk existed but curb ramps did not so we could start eliminating the barriers. We also wanted to know which ramps did not have the most current standard of detectable warnings, which are truncated domes. Because curb ramps are very important to both able bodied and the disabled, we will program the installation of truncated domes, even if the ramp is compliant with the standards at the time of construction. Of the 3,075 intersections, which included intersections with alleys, 1,543 or 50% of the intersections are missing at least one

curb ramp. Of the intersections that have ramps, 2,088 or 49% have truncated domes, and 2,165 ramps or 51% do not. The number of curb ramps that don't comply with ADA is exaggerated because many ramps met the law at the time of installation, but don't have truncated domes, which is the current standard. The city has a long history of installing curb ramps since 1991, and installing domes beginning in 2004. We will continue to program funds to install or upgrade more ramps concurrently with capital improvement projects, and as separate dedicated projects on an annual basis.

## Shared use Path Results

Below is a summary of shared use paths within city limits, including those from other jurisdictions, including MnDOT turn back segments and the Department of Natural Resources (DNR). This portion of the self-assessment was the easiest to review because the paths were either constructed prior to 1991, or completed to ADA requirements in the past decade. Segments that need some maintenance and improvement include both the Clearwood Drive and the Waterfront Trail segments, two of the oldest on the list.

CONSTRUCTION				LENGTH
YEAR	LOCATION	FROM	TO	(MILES)
	MUNGER TRAIL (DNR)	Freemont	City Limits	4
2007	LAKEWALK I	27TH Ave. East	36th Ave. East	0.822
2009	LAKEWALK II	36th Ave. East	47th Ave. East	1.163
2010	LAKEWALK III	47th Ave. East	60th Ave. East	1.151
2013	LAKEWALK IV&V	60th Ave. East	61st Ave. East	0.544
2014	CROSS CITY PH I	Canal Park	Carlton/Superior	2.909
2015	LAKEWALK CONNECTION	29th Ave. East	Lakewalk	0.04
2015	CONGDON/CHESTER	Congdon Park Dr.	VERMILLION	0.57
2016	COLLEGE STREET	JUNCTION AVE.	Kenwood Ave.	0.53
2016	CROSS CITY PH IV	CITY ZOO	63RD Ave. West	1.09
2017	WATER STREET	20th Ave. East	23rd Ave. East	0.18
1988	I-35 Lakewalk	Canal Park	26th Ave East	2.97
1988	I-35 Lakewalk	6th Ave. West	I-35 Ped Bridge	0.47
1983	Clearwood Drive	Pecan	13th St.	0.33
1981-1988	Waterfront Trail	63 <sup>rd</sup> Ave. West	Spring Street	3.5
				<b>20.269</b>

## Traffic Control Signal Results

The self-evaluation of our 113 signalized intersections indicated that we have 24 intersections with APS, 41 without any push buttons, and the remaining intersections have various states of compliance based on when the signal was installed or upgraded. It should be noted that the Mesaba and 2<sup>nd</sup> Street intersection does not have a push button because it is an emergency signal activated by the Fire Department. The city also has 9 pedestrian cross walk "amber flashers" within city limits, two of which are owned by St. Louis County. These flashers assist with mid-block and intersection pedestrian crossings.



**Traffic Signals That Met ADA Requirements at Time of Installation or Had Improvements to Upgrade to ADA at Time of Upgrade**

Intersection I.D.	Location	Cost
26	2nd W. & Superior St.	\$0.00
25	3rd W. & Superior St.	\$0.00
169	6th E & 2nd St	\$0.00
72	10th E. & 1st St.	\$0.00
74	10th E. & 2nd St.	\$0.00
77	10th E. & 3rd St.	\$0.00
83	21st E. & 4th St. (2017 Construction)	\$0.00
140	40th E. & London Road	\$0.00
86	40th E. & Superior St.	\$0.00
2	72nd W. & Grand	\$0.00
1	Arbor & Grand	\$0.00
91	Arrowhead & Kenwood	\$0.00
117	Haines & Mall Drive (2017 Construction)	\$0.00
	Kenwood & Cleveland	\$0.00
115	Maple Grove & Burning Tree	\$0.00
114	Maple Grove & Mall Drive	\$0.00
42	Mesaba & 2nd St. (Emergency Signal Only)	\$0.00
3	Raleigh & Grand	\$0.00
110	TH53/194 & Cottonwood	\$0.00
167	TH53/194 & Maple Grove/Burning Tree (Kohl's)	\$0.00
112	TH194 & Mall Entrance (Cub)	\$0.00
111	TH194 (Central Entrance) & TH53 (Trinity)	\$0.00
113	Trinity & Mall Drive	\$0.00
	Woodland & Summit	\$0.00



**Traffic Signals Requiring Pedestrian Signal Modifications To Meet Current ADA Requirements**

Intersection I.D.	Location	Cost
<b>High Priority (0-5 Yrs)</b>		
46	1st W. & 2nd St.	\$16,500.00
45	2nd W. & 2nd St.	\$16,500.00
44	3rd W. & 2nd St.	\$16,500.00
61	5th W. & I35 (2019 MnDOT)	\$16,500.00
21	5th W. & Michigan St. (2019 MnDOT)	\$16,500.00
68	6th E. & 9th St.	\$16,500.00
13	40th W. & Grand	\$16,500.00
5	57th W. & Grand	\$16,500.00
93	College & Junction	\$16,500.00
20	Garfield & Nelson (Goodwill)	\$16,500.00
92	Kenwood & College (2018 City)	\$16,500.00
60	Lake & I35 (2019 MnDOT)	\$16,500.00
58	Lake & Railroad	\$16,500.00
32	Mesaba & 1st St. (2019 MnDOT)	\$16,500.00
51	Mesaba & 3rd St. (2019 MnDOT)	\$16,500.00

**Subtotal: \$247,500.00**

<b>Medium Priority (6-10 Yrs)</b>		
65	6th E. & 3rd St.	\$16,500.00
17	24th W. & 3rd St.	\$16,500.00
12	44th W. & Grand	\$16,500.00
87	45th E. & Superior St.	\$16,500.00
11	46th W. & Grand	\$16,500.00
4	59th W. & Grand	\$16,500.00
99	Arrowhead & Carver	\$16,500.00
14	Carlton & Grand	\$16,500.00
6	Central & Bristol	\$16,500.00
8	Central & Grand	\$16,500.00
7	Central & Ramsey	\$16,500.00
19	Garfield & Superior St.	\$16,500.00
85	Hawthorne & Superior St.	\$16,500.00
52	Mesaba & 7th St. (2019 MnDOT)	\$16,500.00
107	Mesaba & Central Entrance	\$16,500.00
103	TH194 & Anderson/Myrtle	\$16,500.00
109	TH53/194 & North Mall Entrance (Penney's)	\$16,500.00
97	Woodland & Clover	\$16,500.00
98	Woodland & Kent	\$16,500.00
96	Woodland & St. Marie	\$16,500.00

**Subtotal: \$330,000.00**

<b>Low Priority (10+ Yrs)</b>		
69	10th E. & Superior St.	\$16,500.00
80	21st E. & London Road	\$16,500.00
84	26th E. & London Road	\$16,500.00
16	27th W. & Superior/Michigan	\$16,500.00
90	Arrowhead & Sawyer	\$16,500.00
166	Haines & Anderson	\$16,500.00
164	Haines & Piedmont/Hermantown	\$16,500.00
101	Trinity & Anderson	\$16,500.00
102	Trinity & Arlington	\$16,500.00

**Subtotal: \$148,500.00**

**Total: \$726,000.00**



**Traffic Signals Requiring Rehabilitation or Replacement To Meet Current ADA Requirements**

Intersection I.D.	Location	Cost
<b>High Priority (0-5 Yrs)</b>		
29	1st E. & Superior St. (Superior St. Project 2020)	\$225,000.00
37	1st W. & 1st St. (Possible Removal 2017)	\$225,000.00
27	1st W. & Superior St. (Superior St. Project 2020)	\$225,000.00
30	2nd E. & Superior St. (Superior St. Project 2019)	\$225,000.00
36	2nd W. & 1st St. (Possible Removal 2017)	\$225,000.00
54	2nd W. & 3rd St. (Possible Removal 2017)	\$225,000.00
31	3rd E. & Superior St. (Superior St. Project 2019)	\$225,000.00
35	3rd W. & 1st St. (Possible Removal 2017)	\$225,000.00
43	4th W. & 2nd St.	\$225,000.00
24	4th W. & Superior St. (Superior St. Project 2018)	\$225,000.00
23	5th W. & Superior St. (Superior St. Project 2018)	\$300,000.00
22	6th W. & Superior St. (Superior St. Project 2018)	\$225,000.00
70	12th E. & Superior St.	\$300,000.00
82	21st E. & 2nd St.	\$300,000.00
81	21st E. & Superior St.	\$300,000.00
10	46th W. & Colalillo	\$300,000.00
89	Arrowhead & Arlington (2019 County)	\$300,000.00
57	Canal Park & Railroad	\$225,000.00
9	Elinor & Grand	\$300,000.00
59	Lake & Buchanan	\$225,000.00
28	Lake & Superior St. (Superior St. Project 2020)	\$225,000.00
88	Rice Lake & Technology Dr (2019 County)	\$100,000.00
100	St. Marie & Carver	\$300,000.00
104	TH194 & Basswood	\$300,000.00
106	TH194 & Pecan	\$300,000.00
95	Woodland & Arrowhead (2019 County)	\$200,000.00
94	Woodland & Snively (2020 County)	\$100,000.00

**Subtotal: \$6,550,000.00**

<b>Medium Priority (6-10 Yrs)</b>		
39	1st E. & 1st St.	\$225,000.00
48	1st E. & 2nd St.	\$225,000.00
56	1st E. & 3rd St.	\$225,000.00
40	2nd E. & 1st St.	\$225,000.00
49	2nd E. & 2nd St.	\$225,000.00
41	3rd E. & 1st St.	\$225,000.00
50	3rd E. & 2nd St.	\$225,000.00
63	3rd E. & 3rd St.	\$225,000.00
38	Lake & 1st St.	\$225,000.00
47	Lake & 2nd St.	\$225,000.00
55	Lake & 3rd St.	\$225,000.00

**Subtotal: \$2,475,000.00**

<b>Low Priority (10+ Yrs)</b>		
34	4th W. & 1st St.	\$225,000.00
53	4th W. & 3rd St.	\$225,000.00
62	5th E. & 2nd St.	\$225,000.00
64	5th E. & 3rd St.	\$225,000.00
66	5th E. & 4th St.	\$225,000.00
33	5th W. & 1st St.	\$225,000.00
67	6th E. & 4th St.	\$225,000.00

**Subtotal: \$1,575,000.00**

**Total: \$10,600,000.00**

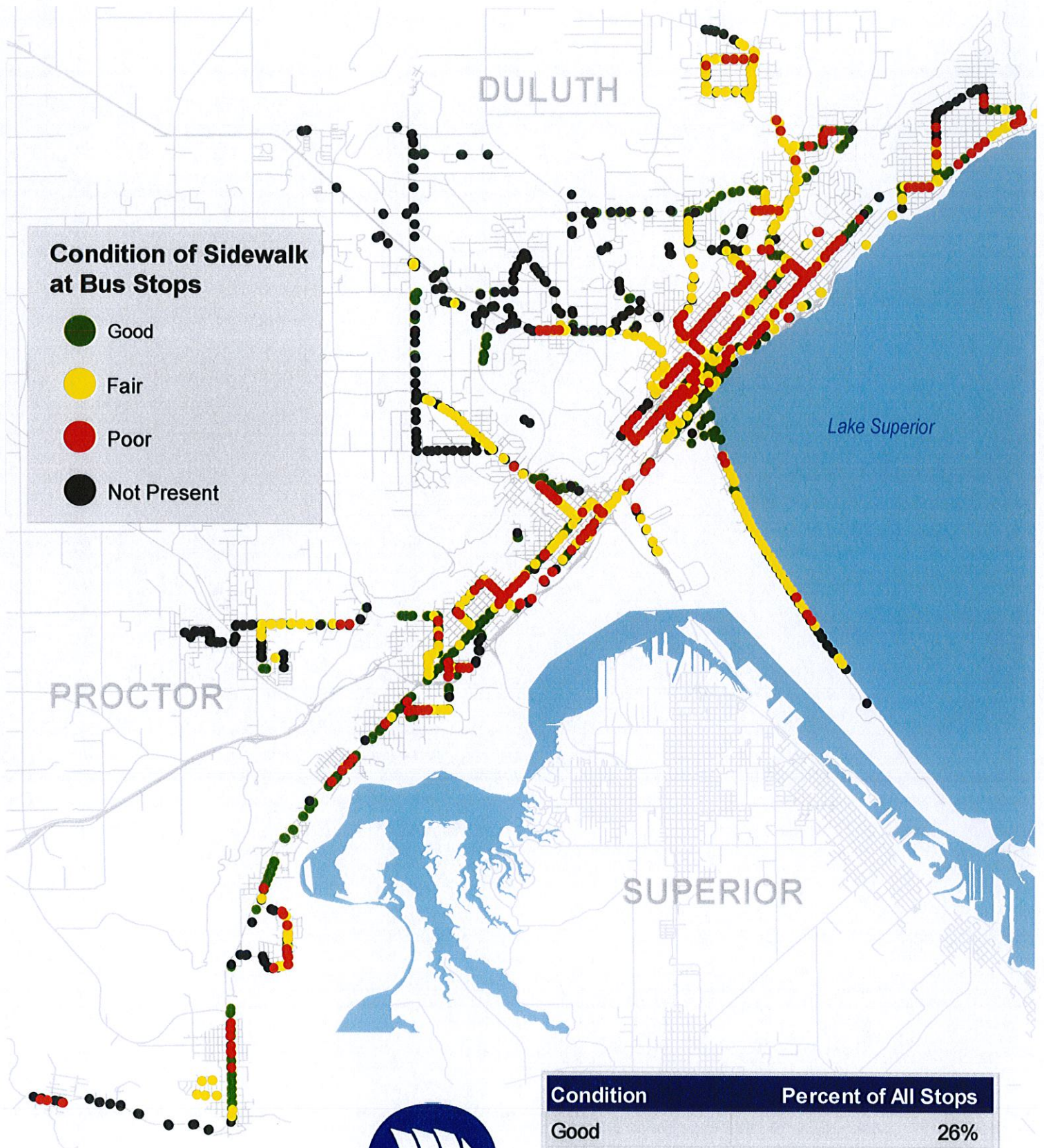
**Grand Total: \$11,326,000.00**

## **Bus Shelter and Stop Results**

Of the 75 existing bus shelters, none of the shelters meet all the required ADA requirements. The majority did not meet due to bench heights being slightly off of requirements. Of the over 1,500 bus stops, about half could use sidewalk or curb ramp improvements to improve accessibility.



# Sidewalk Conditions at DTA Bus Stops, 2017



Condition	Percent of All Stops
Good	26%
Fair	28%
Poor	19%
Zero	27%



## Appendix B – Schedule / Budget Information

### Cost Information

#### Unit Prices

Construction costs for upgrading facilities can vary depending on each individual improvement and conditions of each site. Costs can also vary on the type and size of project the improvements are associated with. Listed below are representative 2017 costs for some typical accessibility improvements based on smaller scale retrofit type projects. If more work is done as part of a larger replacement or comprehensive capital improvement project, there can be a substantial cost savings. We chose to use the higher value to be conservative in our estimates.

Intersection corner ADA improvement retrofit: +/- \$5,000 per corner/ramp

Intersection corner ADA dome retrofit: +/- \$2,500 per corner/ramp

Traffic control signal APS upgrade retrofit: +/- \$ 16,500

Traffic control signal APS upgrade as part of full traffic control signal Rehabilitation: +/- \$225,000

Traffic control signal APS upgrade as part of full traffic control signal Replacement: +/- \$300,000

Sidewalk ADA improvement retrofit: +/- \$15.00 per SF

Bus Shelter ADA improvement retrofit: +/- \$3,500 per shelter

Bus Stop sidewalk improvement: +/- \$750 per stop

#### Improvement Schedule Priorities

Based on the results of the self-evaluation, the estimated costs associated with eliminating accessibility barriers by replacing sidewalk in “poor” condition in priority areas, making all SRTS improvements, installing curb ramps where none exist and upgrading all ramps to include truncated “domes”, retrofitting, reconditioning or replacing traffic control signals indicated as “high priority”, retrofitting all the bus shelters, and making sidewalk or curb ramp improvements at the bus stops with sidewalk in “poor” condition is as follows:

<b>Pedestrian Facility</b>	<b>Construction Cost</b>
Sidewalks	\$ 6,863,580
Curb Ramps	\$ 28,412,500
Traffic Control Signals	\$ 6,797,500
Bus Shelters (75 Ea @ \$3,500)	\$ 262,500
Bus Stops (700 Ea @ \$750)	\$ 525,000
Total for Priority Areas	\$ 42,861,080

Detailed locations and construction cost information is listed on the following pages.



<b>Sidewalk Priority Areas Based on Building Use</b>	<b>Construction Cost</b>
Assisted Living East Duluth	\$63,075
Assisted Living West Duluth	\$65,880
Central Entrance Commercial	\$17,400
Congdon Park Elementary School	\$127,350
Court House and City Hall	\$243,900
Denfeld High School	\$312,900
Duluth Art Institute	\$176,550
Duluth Montessori School	\$235,425
East High School	\$55,725
Essentia Health	\$225,225
Essentia Health and St. Luke's Clinic W	\$133,350
Gary Commercial	\$476,250
Laura MacArthur Elementary School	\$104,500
Lester Park Elementary School	\$289,725
Lincoln Park Middle School	\$255,950
Many Rivers Montessori School and Medical Building	\$125,100
Mars Lakeview Arena and MNDOT Govt	\$43,275
Medical Buildings on London Road and S 15th Ave E	\$32,025
Myers-Wilkins Elementary School	\$1,000,800
Neighborhood Complaint on 22AE and 6th St Alley	\$11,025
Nursing Home East Side	\$44,250
Ordean East Middle School	\$129,000
Piedmont Elementary School	\$589,650
Portman Recreation Center	\$121,575
Public Library On Woodland Ave and E Saint Marie St	\$89,175
Raleigh Edison Charter School	\$43,125
Saint James Catholic School	\$154,575
Saint John's School	\$172,875
Sill Arena	\$61,800
Spirit Mountain Commercial Area	\$281,925
St. Luke's	\$121,950
St. Michael's School	\$328,950
St. Scholastica	\$93,600
Stowe Elementary School	\$8,850
UMD	\$626,850
<b>TOTAL COST</b>	<b>\$6,863,580</b>

### **Entire Jurisdiction**

Based on the results of the self-evaluation, the estimated cost associated with providing ADA accessibility to current standards, within the entire jurisdiction, not just the priority areas, is \$89,387,225. This is greater than the minimum work as required by law of \$70 million, due to changes in standards since initial construction. Either amount is a significant investment for a city whose entire General Fund budget is \$83,000,000. Duluth is committed to addressing these ADA accessibility conditions as best it can within its financial constraints in the upcoming years. A systematic approach to providing accessibility will be taken in order to absorb the cost into the Duluth budget for improvements to the public right of way.



## Appendix C – Public Outreach

### Organizations Notified of Survey or Indicating Affiliation on the Survey Form

#### Organizations Represented

- Access North Center for Independent Living of Northeastern Minnesota
- The Arc Northland
- CHOICE, Unlimited
- City of Duluth
- Duluth Commission on Disabilities
- Duluth Housing and Redevelopment Authority
- Duluth Landlord Association
- Duluth Lighthouse Center for Vision Loss
- Duluth Planning Transportation Focus Group
- Duluth Public Schools District ISD709
- Duluth Regional Care Center
- Duluth Transit Authority
- Gateway Tower
- Grandview Manor
- Housing and Redevelopment Authority
- King Manor
- Lakeside Apartments
- Lutheran Social Service of Minnesota
- Metropolitan Interstate Council Technical Advisory Committee
- Portman Coffee Club
- Rainbow Senior Center
- St. Louis County Public Health & Human Services
- Trillium Services Inc.
- Tri-Towers Apartments
- United Development Achievement Center
- United States Postal Service
- University of Minnesota Duluth
- University of Minnesota Duluth Commission on Disabilities
- University of Minnesota Duluth Office of Disability Resources
- Vocational Rehabilitation Services
- Wheels on Trails

Our outreach strategy included press releases, e-mails to some the above groups, the on-line and printed survey, and public meetings. Gateway Tower’s manager also helped distribute the survey to organizations that assist those with disabilities, including Duluth Housing and Redevelopment Authority, Tri Towers, King Manor, Grandview Manor and Rainbow Community

Center. We notified and met with Duluth's Commission on Disabilities, which in turn helped spread the word about the upcoming meetings and notification of the survey. We met with ISD 709 regarding their various school sites as related to sidewalk improvements. We had staff at a booth for Duluth's Downtown Sidewalk Days where we notified people of the survey and asked them to contribute input on where sidewalk caused a barrier for them. We also posted the meeting notifications and the survey forms at all the public libraries. A copy of the draft transition plan was also posted on-line, along with the ADA Transition Plan comment form. A copy of the press releases, meeting sign in sheets, the survey form and results, and transition plan comment forms received are listed on the following pages.





**FOR IMMEDIATE RELEASE**  
**City of Duluth - Communications Office**

---

411 West First Street, Duluth, Minnesota 55802  
218-730-5230 | [www.duluthmn.gov](http://www.duluthmn.gov) | Emily Larson, Mayor

For more information contact Pakou Ly, Public Information Coordinator 218-730-5309

**DATE: 6/2/2017**

**SUBJECT: City Seeks Public Input on Pedestrian Facilities**

**BY: Pakou Ly, Communications Office**

---

[Duluth, MN] - The City of Duluth is working to determine priorities and connect people with opportunities through compliant pedestrian facilities within the public right of way. The City will be developing an American with Disabilities Act (ADA) Transition Plan for Public Rights of Way according to standards developed by the Federal Highway Administration. The plan establishes guiding principles that encompasses accessibility, safety, equity, health, and environment. The right of way is defined as sidewalks, curb ramp/curb cuts, traffic signals (push buttons, pedestrian indications, audible indications), and public transit stops. The plan will be developed, reviewed by the public and then will require City Council approval.

The City is engaging the public and the Commission on Disabilities to conduct a self-evaluation process to review existing conditions, identify gaps, evaluate its compliance of pedestrian facilities to meet the needs of community members and determine priorities for improvements. The information gathered will be used to draft the ADA Transition Plan for Public Right of Ways, which is reviewed every five years by the Federal Highway Administration.

Several opportunities have been scheduled to allow for the public to hear from and share their input with City staff. An online survey is also available until August 15 at <https://www.surveymonkey.com/r/PZPJ9YS>. Paper copies of the survey will also be available at the Duluth Public Libraries.

Public meetings are set up for:

- June 6, City Center West (5830 Grand Ave) at 4:00 pm,
- June 7, (two meetings) Portman Community Center (4032 McCulloch St.) at 11:00 am and Transportation Planning Focus Group meeting in Duluth City Hall Room 303 at 5:00 pm.
- June 8, Central Hillside Community Center (12 East 4th St.) at 6:00 pm

Public feedback will be compiled to draft the plan and will be made available again for public comment on the following dates:

- August 29, City Center West, 10:00 am
- August 30, Central Hillside Community Center at 6:00 pm
- August 31, Portman Community Center at 2:00 pm

A Committee of the Whole presentation is planned with the Duluth City Council for September followed by a public hearing and City Council adoption of the final ADA Transition Plan prior to October 2017.

Project contact: Cindy Voigt at 218-730-5200.

###

SIGN-IN SHEET  
ADA TRANSITION PLAN  
CITY PROJECT NO. 1651  
TUESDAY, JUNE 6, 2017, 4:00 PM  
CITY CENTER WEST

NAME	BUSINESS (IF APPLICABLE)
Lizzie	
Tiffany Erickson	DRCC



SIGN-IN SHEET  
ADA TRANSITION PLAN  
CITY PROJECT NO. 1651  
WEDNESDAY, JUNE 7, 2017, 11:00 AM  
PORTMAN COMMUNITY CENTER

NAME	BUSINESS (IF APPLICABLE)
5	FROM THE PORTMAN COFFEE CLUB

SIGN-IN SHEET  
ADA TRANSITION PLAN  
CITY PROJECT NO. 1651  
THURSDAY, JUNE 8, 2017, 6:00 PM  
CENTRAL HILLSIDE COMMUNITY CENTER

NAME	BUSINESS (IF APPLICABLE)
Connie Nylund	Stride (DTA)
SOPHIA PARR	DTA



## Resident Survey

In accordance with Federal Regulations (28 C.F.R., Part 35.105), public input is being sought regarding the need for, and priorities to be given to, transportation facilities within street right-of-way, in order to comply with the Americans with Disabilities Act of 1990 (ADA) and the Rehabilitation Act of 1973 (Section 504). Please take a few minutes to fill out this short survey in order for us to collect your input and comments on Duluth's pedestrian needs and priorities as related to public streets.

This survey and the public engagement process is hosted by the City of Duluth, Public Works and Utilities Department.

ADA Transition plan is focusing on elements within the street "right of way", which include sidewalks, curb cuts, traffic signals and transit shelters. This survey is not intended to gather information on streets as related to either vehicles or bikes.

### 1. Please rank the following improvements in order of priority from 1-5 for funding of ADA improvements, with each item receiving a ranking: 1 = Lowest Priority; 5 = Highest priority

<input type="text"/>	Improving the condition of existing residential neighborhood sidewalks
<input type="text"/>	Improving the condition of sidewalks in commercial areas
<input type="text"/>	Improving the amenities and accessibility of bus stops and shelters
<input type="text"/>	Installing more of and improving existing curb cuts to current standards
<input type="text"/>	Installing more accessible pedestrian signal indications, including count down timers and audible sounds

### 2. Rank the pedestrian locations in order of priority from 1-5 that should receive priority attention for ADA improvements: 1 = Lowest Priority; 5 = Highest priority

<input type="text"/>	Commercial districts including Downtown, Spirit Valley-West Duluth, Lincoln Park, Gary New Duluth, Lakeside or Miller Hill Mall area.
<input type="text"/>	Areas surrounding Hospital/clinic districts or elder care facilities
<input type="text"/>	Areas surrounding higher education facilities or civic facilities: i.e. the University of MN Duluth; Lake Superior College, St. Scholastica, libraries, public buildings
<input type="text"/>	Areas surrounding primary and secondary K-12 schools
<input type="text"/>	Residential neighborhood sidewalks

**3. Given the many commercial district areas, rank the locations in order of priority from 1-6 that should receive attention: 1 = Lowest Priority; 6 = Highest Priority**

<input type="text"/>	Downtown
<input type="text"/>	Spirit Valley-West Duluth
<input type="text"/>	Lincoln Park
<input type="text"/>	Gary New Duluth
<input type="text"/>	Lakeside
<input type="text"/>	Miller Hill Mall area

**4. Do existing sidewalk and curb cut conditions, or lack thereof, affect your accessibility to bus shelters and buses themselves?**

- No
- Yes, Please Explain

**5. Any Additional Comments?**

**6. Name of individual resident (optional) or agency represented**

Survey is also available online. Go to <http://www.duluthmn.gov/human-rights-office/> and click on the survey monkey link at the bottom: <https://www.surveymonkey.com/r/PZPJ9YS>

**Mail Completed form to:**

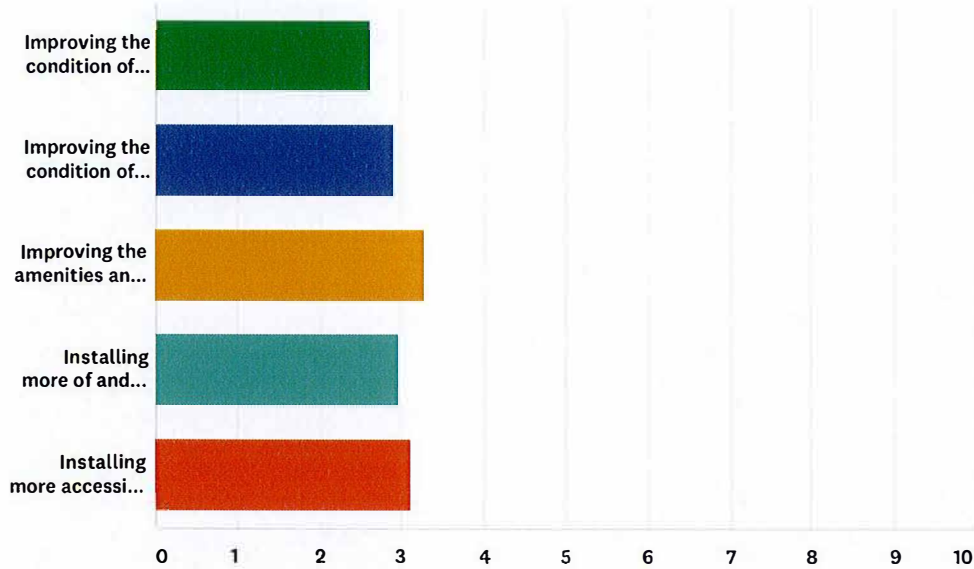
Cindy Voigt, PE City Engineer  
Room 211 City Hall  
411 West First Street  
Duluth, MN 55802



Resident Survey

Q1 Please rank the following improvements in order of priority from 1-5 for funding of ADA improvements, with each item receiving a ranking: 1 = Lowest Priority; 5 = Highest priority

Answered: 146 Skipped: 0

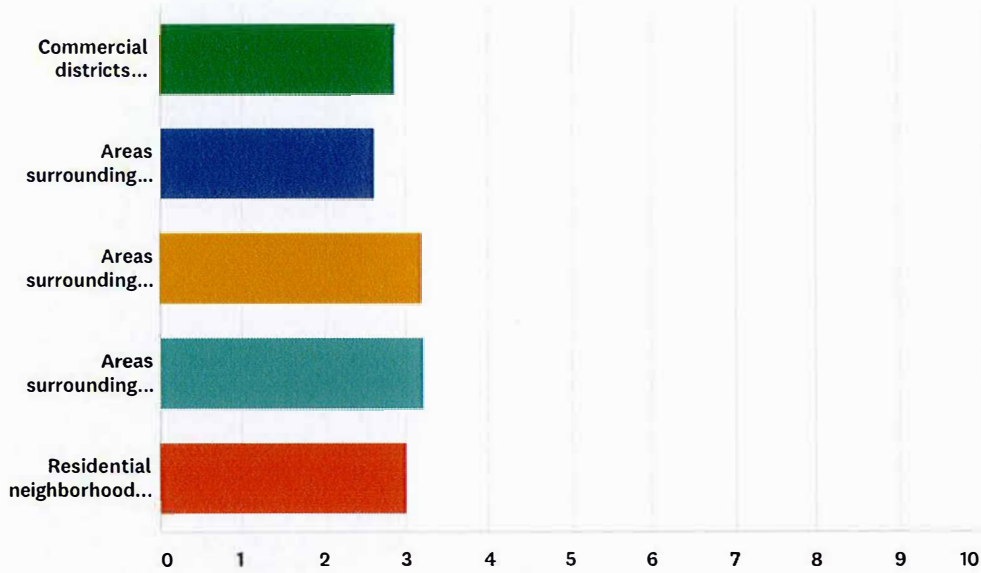


	1	2	3	4	5	TOTAL	SCORE
Improving the condition of existing residential neighborhood sidewalks	15.94% 22	17.39% 24	16.67% 23	13.04% 18	36.96% 51	138	2.62
Improving the condition of sidewalks in commercial areas	19.71% 27	19.71% 27	13.14% 18	27.01% 37	20.44% 28	137	2.91
Improving the amenities and accessibility of bus stops and shelters	19.86% 28	25.53% 36	26.24% 37	19.86% 28	8.51% 12	141	3.28
Installing more of and improving existing curb cuts to current standards	14.89% 21	18.44% 26	29.79% 42	22.70% 32	14.18% 20	141	2.97
Installing more accessible pedestrian signal indications, including count down timers and audible sounds	28.47% 41	16.67% 24	14.58% 21	18.06% 26	22.22% 32	144	3.11

Resident Survey

Q2 Rank the pedestrian locations in order of priority from 1-5 that should receive priority attention for ADA improvements: 1 = Lowest Priority; 5 = Highest priority

Answered: 146 Skipped: 0



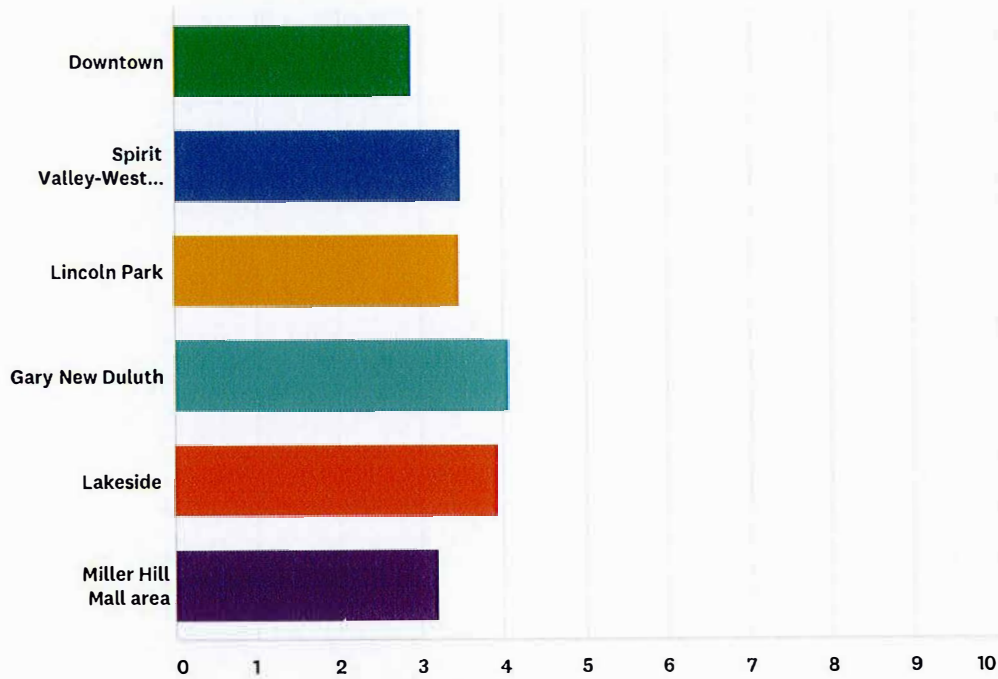
	1	2	3	4	5	TOTAL	SCORE
Commercial districts including Downtown, Spirit Valley-West Duluth, Lincoln Park, Gary New Duluth, Lakeside or Miller Hill Mall area.	18.84% 26	18.84% 26	18.12% 25	17.39% 24	26.81% 37	138	2.86
Areas surrounding Hospital/clinic districts or elder care facilities	12.41% 17	13.87% 19	22.63% 31	25.55% 35	25.55% 35	137	2.62
Areas surrounding higher education facilities or civic facilities: i.e. the University of MN Duluth; Lake Superior College, St. Scholastica, libraries, public buildings	25.55% 35	13.14% 18	29.20% 40	21.17% 29	10.95% 15	137	3.21
Areas surrounding primary and secondary K-12 schools	13.48% 19	37.59% 53	18.44% 26	19.86% 28	10.64% 15	141	3.23
Residential neighborhood sidewalks	29.17% 42	15.28% 22	11.11% 16	17.36% 25	27.08% 39	144	3.02



Resident Survey

Q3 Given the many commercial district areas, rank the locations in order of priority from 1-6 that should receive attention: 1 = Lowest Priority; 6 = Highest Priority

Answered: 144 Skipped: 2

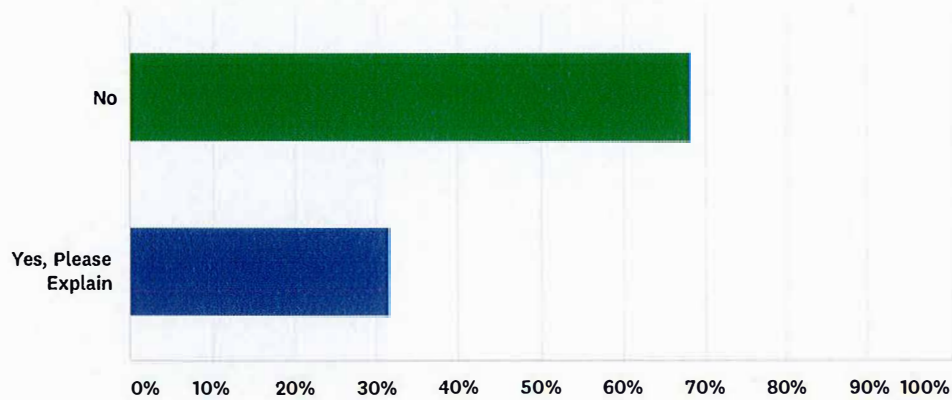


	1	2	3	4	5	6	TOTAL	SCORE
Downtown	21.01% 29	10.14% 14	5.80% 8	8.70% 12	8.70% 12	45.65% 63	138	2.89
Spirit Valley-West Duluth	3.68% 5	16.91% 23	31.62% 43	26.47% 36	14.71% 20	6.62% 9	136	3.49
Lincoln Park	7.30% 10	16.06% 22	23.36% 32	27.74% 38	20.44% 28	5.11% 7	137	3.47
Gary New Duluth	25.90% 36	19.42% 27	18.71% 26	16.55% 23	11.51% 16	7.91% 11	139	4.08
Lakeside	24.26% 33	25.00% 34	9.56% 13	15.44% 21	12.50% 17	13.24% 18	136	3.93
Miller Hill Mall area	18.06% 26	12.50% 18	12.50% 18	6.25% 9	30.56% 44	20.14% 29	144	3.21

Resident Survey

### Q4 Do existing sidewalk and curb cut conditions, or lack thereof, affect your accessibility to bus shelters and buses themselves?

Answered: 142 Skipped: 4



ANSWER CHOICES	RESPONSES	
No	68.31%	97
Yes, Please Explain	31.69%	45
<b>TOTAL</b>		<b>142</b>

#	YES, PLEASE EXPLAIN	DATE
1	No Sidewalks at mill mall area	8/21/2017 12:27 PM
2	lack of indicators or colors impact ability to see curbs , contrast is very important	8/15/2017 1:01 PM
3	not easy to access for people with low vision or ADA needs	8/15/2017 9:57 AM
4	Stoller	8/11/2017 6:38 PM
5	If they are destroyed. Or covered in snow and not plowed etc.	8/11/2017 9:45 AM
6	Curbs do not extend enough to view traffic for on coming cars, on coming pedestrians	8/11/2017 9:16 AM
7	Broken up sidewalks force one to use streets- dangerous	8/9/2017 10:29 AM
8	Snow in winter	8/9/2017 10:24 AM
9	It is too hard to keep lifting my walker.	8/9/2017 9:47 AM
10	By Tri-Towers	8/9/2017 9:45 AM
11	Rough	8/9/2017 9:28 AM
12	Walk them yourself	8/9/2017 9:22 AM
13	Major tripping hazards	8/7/2017 3:30 PM
14	n/a	8/7/2017 10:51 AM
15	n/a	8/7/2017 10:15 AM
16	I have many client that work on bussing skill. Most clients have trouble with walking.	8/7/2017 9:49 AM
17	In winter, lack of snow removal prevents bus stop access completely. Also poor sidewalks or lack of curb cuts also prevents bus access.	8/7/2017 9:42 AM
18	But I don't like tripping on uneven contrete.	8/7/2017 9:30 AM
19	Sidewalks are broken, uneven, and bricks need to be replaced.	8/7/2017 9:02 AM

## Resident Survey

20	some bus stops are located in inaccessible areas, with minimal to no sidewalks. As a blind pedestrian, this is difficult for me, especially on Central Entrance and up at the Miller Hill Mall area, however other locations as well. Also, bus stops are very difficult to nearly impossible to find, as they are not located in uniform locations, and most do not have shelters. Please add an audible indicator with chirps or another way of identifying bus stops. Also, please make bus announcements of routes louder... much louder.	7/10/2017 2:03 PM
21	As a commuter, these are also important.	7/5/2017 11:13 AM
22	Central Entrance is dangerous for me to cross to get to the proper bus stop. It is also dangerous when I'm trying to get off the buss and I'm stuck walking on the street in the winter because there's no sidewalks on some stretches.	7/3/2017 9:38 AM
23	There does not seem to be enough bus shelters in the entire Duluth area. As I am sure the city is aware of a majority of the sidewalks are in poor condition for pedestrians walking and are even worse for those in wheelchairs or have mobility issues.	6/26/2017 2:16 PM
24	but only because I have no mobility restrictions right now	6/14/2017 2:43 PM
25	Cut outs don't work when they drop you into a hole in street!	6/14/2017 9:49 AM
26	not enough curb cuts directly in front of pick up areas.	6/14/2017 9:24 AM
27	I'M NOT SURE	6/13/2017 1:27 PM
28	This is the 2nd summer in a row that the Duluth Transportation Center is useless.	6/13/2017 9:16 AM
29	Some sidewalks in residential areas are in very bad shape and can hinder access to the bus stops.	6/12/2017 2:47 PM
30	Yes, I work with people with disabilities and they often have difficulty navigating curb cuts and sidewalks that are poor repair.	6/12/2017 1:19 PM
31	There is a lack of side walks in some areas	6/12/2017 10:03 AM
32	Sidewalk conditions in residential areas are are of utmost concern.	6/6/2017 9:01 AM
33	Rough neighborhood sidewalks leading to bus stops are terrible.	6/5/2017 9:55 PM
34	It makes it a very difficult for me to get my bike on and off the bus	6/5/2017 8:47 PM
35	I am legally blind, and while unapparent at first glance, I often cannot see depth changes and find current curb cuts (or the metal groove plates) to be extremely helpful when I am walking. There is nothing that scares me more than taking a step down when unexpected, or tripping up unexpectedly.	6/5/2017 5:09 PM
36	Personally curb cuts are not an issue for me. I KNOW they are for many others. (They are a little tenuous when icy so I avoid them) Needed though! Sidewalks to some bus locations. Safe walking by the mall to get from store to store and to SAFE bus stops is occasionally an issue. I'm sorry for not having exact examples. Some places I struggled with when I first moved here and just don't go. Or, go with a car.	6/5/2017 9:33 AM
37	We have to go to the mid-block to get on sidewalk on some streets that do not have cuts. It is also important to get to all the stores and facilities, not just the bus! Other people can get to all the facilities, but we can not!	6/3/2017 12:28 PM
38	makes it more difficult	6/2/2017 6:31 PM
39	There are no sidewalks on my street and at least people using wheelchairs!	6/2/2017 4:24 PM
40	No sidewalks	6/2/2017 3:54 PM
41	Curb cuts make crossing streets difficult because they are so narrow.	6/2/2017 3:19 PM
42	Poor sidewalk conditions, non-existent sidewalks are a huge problem	6/2/2017 12:57 PM
43	Im on wheels sometimes.	6/2/2017 12:44 PM
44	difficult for anyone, disabled or not to get to bus shelters or buses.	6/2/2017 12:20 PM
45	Indirect sidewalks, missing segments, and safe crossings are a big concern and make it difficult to get to the bus. Lack of lighting is also a huge safety concern. Maintenance is also big issue. Many sidewalks are very poorly maintained in the winter, are not swept in the spring, and have vegetation growing on and around them.	6/2/2017 9:54 AM



## Resident Survey

### Q5 Any Additional Comments?

Answered: 67   Skipped: 79

#	RESPONSES	DATE
1	Make sure a viable & enforced policy is in place for snow removal & ice treatment in all ADA zones/areas. without this, many days will not serve the intended population, and thus not fully use the public investment	8/21/2017 12:25 PM
2	request high contrast paint to mark edges of curbs, crosswalks	8/15/2017 5:18 PM
3	The downtown sidewalks that consist of bricks and their steep slope to the street make it virtually impossible to walk - if you use a support cane and have a prosthetic leg. Traveling these sidewalks is so stressful and difficult that I avoid the downtown area unless absolutely forced to go there.	8/15/2017 1:54 PM
4	You lost above is ridiculous. You can't just pick a favorite area of town. Which area of town needs it the most? Fix that area first. It's common logic. Also, fix areas with young children and elderly before anywhere else.	8/11/2017 9:45 AM
5	Pedestrians are ignored by drivers - often cutting them off from crossing. I see that especially on 4th street	8/11/2017 9:16 AM
6	Not handicapped	8/10/2017 12:40 PM
7	I live in Gary and have injured both heels running on broken up sections of sidewalk -- hear it and do something. City is not responsive.	8/9/2017 10:29 AM
8	Like East 4th - It's nice	8/9/2017 10:27 AM
9	Keep shelter (DTA) plowed for wheelchair & ramps; need more ramps	8/9/2017 10:24 AM
10	Even with the information from these surveys, it will still take 10+ years for anything to be done.	8/9/2017 9:34 AM
11	More bus shelters would be nice.	8/9/2017 9:30 AM
12	Needs improvements	8/9/2017 9:28 AM
13	The bus stop at the Residence Inn at West Central Entrance and West Myrte Street needs a paved path from the bus sign to the sidewalk over the storm drainage ditch.	8/9/2017 9:19 AM
14	The sidewalks are either non existent or are in need of serious repair in Duluth	8/7/2017 3:30 PM
15	None	8/7/2017 10:49 AM
16	No	8/7/2017 9:57 AM
17	Sidewalks & curb cuts allows or prevents me from access to the community. This is my Olmstead Rights and we need to fix this. Perhaps contact the Olmstead implementation office for funding.	8/7/2017 9:42 AM
18	Residential sidewalks in poor condition make walking with stroller difficult so I imagine it's also tough for wheelchairs. Shopping areas could be more pedestrian friendly- for example Superior Street Super One/Walgreens/Ace area.	8/7/2017 9:12 AM
19	All the city cares about is tourists. Residents are on the back burner. The city is tourist geared- nothing else matters. I know for a fact- I fell on a city sidewalk- I went thru hell!	8/7/2017 9:02 AM
20	The amount of time to cross the street at the crosswalk at 6th Ave. E. and 8th St. is too short and can be dangerous.	8/1/2017 3:58 PM
21	Safe road crossings along some streets such as London Rd or Hwy 53 are severely lacking.	7/21/2017 4:49 PM
22	Call me, and I would be happy to help and to identify needs. My name is Nimer Jaber. My number is 218-606-0475. Please give strong consideration to Mesaba and 1st street... or Mesaba and other intersections.	7/10/2017 2:03 PM
23	Many sidewalk throughout Duluth are in grave need of repair. Especially in Lincoln Park and other West Duluth neighborhoods. The sidewalks can be very uneven and hard to navigate.	7/6/2017 12:43 PM
24	Me and my kids have fallen many times as non-disabled people using the sidewalks in West Duluth. I've also seen wheel-chair bound individuals get stuck on sidewalks.	7/5/2017 11:13 AM

## Resident Survey

25	The handicap access to St.Mary's needs to be resurfaced. I have a client that I have taken to visit patients and the road is very hazardous to get to the door.	6/26/2017 7:42 PM
26	Duluth has a lot of hiking trails and paths which is nice but creating more sidewalks would be nice. You see so many people who have to walk on the street in high traffic areas. Which is extremely dangerous.	6/26/2017 2:16 PM
27	it does for those with mobility issues	6/20/2017 9:25 PM
28	Regarding the above question, in the winter having sidewalks properly shoveled makes a big difference as to whether a bus shelter is accessible or not, regardless if it has a curb cut.	6/14/2017 3:58 PM
29	Do not use the bus system	6/14/2017 3:36 PM
30	I can tell that they need attention and that could be a concern for me personally at any time.	6/14/2017 2:43 PM
31	Uneven sidewalks make people drive their wheelchairs in the street. This is dangerous.	6/14/2017 9:49 AM
32	shelter has been removed at Riverside dr the main parking area for ADA riders.	6/14/2017 9:24 AM
33	In the winter, there should be more of an effort to clear the sidewalks where there are handicap signs. It is extremely difficult for a person with a disability to get out of their car and getting into a wheelchair at a handicap sign when there are high snow banks.	6/14/2017 7:40 AM
34	There are 2 apt buildings on either side of Haines Road at the corner of Haines Rd and Maple Grove Rd. I see people in wheelchairs navigating this area to get to the commercial district and see that they are risking life and limb due to the lack of a safe space for their wheelchairs to go especially in the winter when sidewalks are not cleared. I notice this also this near Pennel Park at the corner of Central Entrance and Arlington Ave.	6/13/2017 1:27 PM
35	Allowing parking to close to corners affects visibility for cars and people walking that are trying to cross. In every other town across MN you can NOT park so close to a corner. The one ways in Duluth are the worst. I have seen more cars and walkers almost get hit due to having to be so far out before they have visibility of the situation. Also the city and/or business owners should not be allowed to pile snow in handicap parking on Superior St. I watched on several occasions people trying to pull into handicap parking spots that were not available due to piles of snow.	6/13/2017 10:44 AM
36	There is not enough safe and accessible pedestrian access along the central entrance corridor	6/12/2017 2:09 PM
37	Many of the residential area sidewalks in New Duluth are deteriorating forcing wheelchair access on to the street.	6/12/2017 2:09 PM
38	Question 2 took much thought but I still am not sure if I truly answered in a way which reflected need :) I feel all are high priority.	6/9/2017 11:04 AM
39	Snow removal should be VERY high on any list. As well as possible salt applied on public sidewalks where folks are forced onto main corridors to walk due to ice after snow is removed.	6/7/2017 9:59 PM
40	It is my feeling that the accessibility around downtown and public institutions is adequate, but that residential neighborhoods need a lot of attention. To get around one has to use the street instead of the sidewalk.	6/7/2017 9:40 AM
41	The pedestrian spaces along west 1st Street from Mesabi to Piedmont needs serious attention, walkers are in the street much of the route on a curvy road with short visibility for vehicles.	6/7/2017 6:08 AM
42	Hard to rank things when they are all valuable and important.	6/6/2017 10:27 AM
43	Residential sidewalks make up the majority of pedestrian connections throughout the City, yet very few property owners/managers understand that it's their responsibility to maintain their section of sidewalk, particularly during the summertime. (They get the snow removal portion, but what about sidewalk edging, sweeping, buckling, etc.?) Better communication about the sidewalk system and how its functions is desperately needed.	6/6/2017 9:01 AM
44	I believe the highest priority should be in the areas that get the highest traffic.	6/5/2017 9:48 PM
45	I have a difficult time reading the hand schedules for all the bus routes and where my bus is coming from west end buy Kmart to forty avenue West and the same way from 21st avenue west	6/5/2017 8:47 PM
46	I live in lakeside, so I have a slight bias toward the side walks going down Superior Street. I would like those sidewalks to be revamped if the money speaks.	6/5/2017 5:45 PM



## Resident Survey

47	I would love to see a few more pedestrian walkway stripes (crosswalks) across busier streets 2nd/3rd streets where there are NO traffic lights and I often am waiting forever to cross the street safely.	6/5/2017 5:09 PM
48	Clearing of snow! If we can pick up litter with safe team \$, why can't we clear snow from intersections?	6/5/2017 4:09 PM
49	Plowing sidewalks in the winter is also very important for ease of access. 6thAve E especially is a nightmare all winter--snow and ice, on a big hill next to a very busy street with no boulevard. Several bus routes go down 6th and many pedestrians need to access it safely.	6/5/2017 3:28 PM
50	striping of major pedestrian crosswalks in high density neighborhoods where most folks rely on pedestrian mode of transit. People who walk are usually the most disenfranchised & most vulnerable of our community, children, babies in strollers, elders, people with mobility challenges, people with out personal vehicles.	6/5/2017 10:12 AM
51	No	6/5/2017 10:00 AM
52	Nice to have shelters where there isn't easy inside access. St. Scholastica. A warming light? Or, something to let folks know the bus is coming in real time if people need to wait inside. I need to address the accessible lights. A. Putting the button completely in a hard to get to place does NOT serve folks who can not see or are in wheel chairs. There are a few that, if you don't know that corner, even as a sighted person, are easy to miss. 6th ave and 2nd st or third street is one. You have to climb a steep hill to push the button only to comeback down to cross the street. No chair could do this. No blind person is gonna find this. The two buttons are off set and it seems very silly. Also... can we JUST have walk lights that ALWAYS go on. It is less than desirable missing the timing for pushing the walk button. Waiting through a cycle. Not sure if it is safe to walk or there is some arrow allowing cars to go. I see people dash and it isn't always safe. Waiting in the cold through another cycle OR.. when you are fearing missing your bus is not helpful. Can it ALWAYS say walk or don't walk and then the buttons for accessibility for the speaking/beeping option? Downtown on Superior and 3rd west... another street that is maddening if one misses the light and don't feel comfortable just dashing hoping it isn't too far in the cycle, or again, there isn't some arrow I'm missing that would make it dangerous for me to walk. The always give a walk sign. That would be number one if that is part of the accessibility" changes. Thank you for asking. KEEP talking to folks who walk. I'm sorry but for those of you who drive everywhere, there are things that you do not have to deal with. We talk about making this a more pedestrian friendly town for our resident... beyond just the lake walk option to encourage fitness, etc. Look forward to seeing that happen.	6/5/2017 9:33 AM
53	Please consider prioritizing the Kenwood area for sidewalks, bike lanes and pedestrian safety by adding back street parking. With the addition of several restaurants and coffee shops, it would be great to make the Kenwood area for all pedestrians.	6/5/2017 6:19 AM
54	Lack of sidewalks on skyline parkway at Chester Bowl going towards downtown. It is a high pedestrian area and no sidewalks with blind corners for drivers that cannot see the walkers/runners on the narrow road.	6/4/2017 12:22 AM
55	I am not disabled but do know that my elderly parents are terrified of walking uneven and crumbling sidewalks.	6/3/2017 8:12 PM
56	1. West Duluth needs to improve access to road crossings of the highway, as it heads towards Fond du Lac. The existing crossings are very dangerous for slow people walkers and wheelchairs ! 2. Paint markings are not clear at many spots in Duluth, as they have NOT been maintained or repainted regularly. 3. Snow in winter is a major problem, as access is eliminated like to the Government Building and others. 4. Wheelchair access is to major Cross City Trail is limited in summer, and impossible in winter because of not cleaning snow from access points.	6/3/2017 12:28 PM
57	What is equally important is having the police department enforce stopping at stop signs for vehicles--stopping and, yes, yielding to pedestrians. Why isn't this being done!	6/2/2017 6:31 PM



## Resident Survey

58	<p>Curb cuts at street crossings are insufficient. They are often too narrow, and face towards the center of the intersection (WTF?!?) instead of the direction that people are crossing. Curb cuts should encompass the ENTIRE RADIUS of the intersection corner, not just a cutout in the middle. And let's just get rid of hard curbs altogether when the opportunity presents itself and standardize on soft curbs which are more friendly to disabled people, elderly, and bicyclists. Duluth is one of the WORST cities I have ever seen when it comes to disability access. It seems like the mantra here is to prioritize car infrastructure to the detriment of everyone and everything else. Has anybody in the planning and engineering department EVER considered what it must be like to get around Duluth in a wheelchair or as a blind person? It's IMPOSSIBLE due to the lack of proper infrastructure accommodations, and the lack of maintenance or enforcement of existing sidewalks (snow/ice in winter, cracks/heaves, too narrow, bushes and tree limbs impeding access, etc which the city JUST COMPLETELY IGNORES). And you can't say "Oh, that was back then! We're different now" when even the new construction on E 4th St is totally f---ed up when it comes to disability access. And if I have to explain to you what you did wrong, you're part of the problem. Stop designing things like it's the 1950's. We don't live in that world anymore. It is really unconscionable. Get your act together, Duluth!</p>	6/2/2017 3:19 PM
59	<p>I got a ticket once for parking wrong side in a neighborhood. It would be easier to make a 2 hr exception.. than fix all the neighborhoods that lack curb cuts for wheelchair users.</p>	6/2/2017 12:44 PM
60	<p>Designate pedestrian walking lake on Lake Ave/Superior St. intersection</p>	6/2/2017 12:36 PM
61	<p>As a disabled citizen myself, the sidewalks are in deplorable condition to try and walk on using a walker or even using a motorized scooter/wheelchair.</p>	6/2/2017 12:20 PM
62	<p>I am an able bodied person but am an ally for people that are mobility challenged. I believe that improvements should be make first in the spaces that receive the most traffic.</p>	6/2/2017 11:20 AM
63	<p>Having access to employment often means a job is located along a busy roadway. Many people depend on jobs along unsafe roadways and do not have access to a car. They risk their lives running across multiple lanes of traffic just to be able to get to the other side of the street. Without safe crossings or at least some lighting at night, this can be a deadly scenario - and it has been for some. Roadways I think are the most paramount to changing first are: Central Entrance and everything by the Mall (many, many job opportunities), Grand Avenue, 6th Ave E, Mesaba Ave, London Rd, Superior St downtown, the rest of downtown, and other portions of Superior St.</p>	6/2/2017 9:54 AM
64	<p>Part of this policy should include regulations for construction. Many times sidewalks are closed/blocked off mid-block for construction without adequate signage. So someone who doesn't want to walk in the street or who needs a curbcut to get off the sidewalk would have to turn around and backtrack to the nearest intersection. Pedestrians should be given priority. Take away street parking temporarily to create a protected ADA compliant pedestrian walkway safely in the street if construction needs to close the sidewalks. I also see construction signs (ex: road work ahead, slow down) placed in the middle of sidewalks all the time, making the sidewalk impassable. That is just unacceptable and there is no reason for it, there are plenty of alternative locations to put signs like that, but we as a City don't enforce or prioritize the protection of pedestrians. I see construction/maintenance vehicles that park on the sidewalk to do work (ex: on traffic lights or light poles). Why can't they park on the street and temporarily block one lane of traffic? And one last issues I see often is that cars have to pull into the crosswalk to see if there is oncoming traffic when they are making turns, usually because parked cars block the view (also an issue for pedestrians crossing the street). Design better intersections so that we don't have cars stopped in the crosswalks. We as a City care more about inconveniencing car drivers than protecting the lives of pedestrians. I hope a change in attitude regarding pedestrians comes from this project. We need to prioritize pedestrians, that will make the streets safer for all users.</p>	6/2/2017 9:37 AM
65	<p>At this time I do not require ADA accessibility but answering as I've seen people with ADA issues. Thank you!</p>	6/2/2017 9:28 AM
66	<p>I think the Public Safety Building needs to have an assistive button for opening the doors to the lobby!!!!</p>	6/2/2017 8:58 AM
67	<p>Spending money on curb cuts and ramps that lead nowhere or in areas of low pedestrian use is a waste of money. Mn/DOT's work on the TH 53 corridor in Hermantown is a good example of wasted money on ADA improvements where there is basically zero pedestrian traffic</p>	6/2/2017 8:55 AM



**IMAGINE DULUTH 2035 FORWARD TOGETHER**  
**Transportation Focus Group Meeting #3**  
**June 7, 2017 – 5:00 P.M.**

**SIGN-IN SHEET**

<b>NAME (PRINT PLEASE)</b>	<b>ORGANIZATION OR AFFILIATION (IF APPLICABLE)</b>
Robertta Cich	Arc Northland
Darrin Jackson	
SOPHIA PARE	DTA
Josh Gorham	SILC PH
Kate Ferguson	DSPA
Russell Huberman	ARC DC
MIKE CASEY	DULUTH BIKES
Ken Rochter	NSSB / NLX
KRAIG DECKER	
Terry Guggenbuehl	Planning Commission
RON CHICKA	MIC
Chris Padden	MIC
Angus Vaughan	
Carmel DeMaioribus	
NICK DEMATORIBUS	
Lristi Hank	LACE SUPERIOR COLLEGE / SUSTAINABLE TRIP PORT
RAUND SCHOLDERMAN	DULUTH BIKES / BIRD MV
Ben Garland	
ZACK FILIPOVICH	CITY COUNCIL

The information you provide on this sign-in sheet is classified as public data under the Minnesota Government Data Practices Act. Public data must be provided to any person or entity that requests it.





**IMAGINE DULUTH 2035 FORWARD TOGETHER**  
**Transportation Focus Group Meeting #3**  
**June 7, 2017 – 5:00 P.M.**

**SIGN-IN SHEET**

<b>NAME (PRINT PLEASE)</b>	<b>ORGANIZATION OR AFFILIATION (IF APPLICABLE)</b>
Hadrian DeMarribus	
Dennis Jensen	DTA
Elyssa Hansen	DC Council
Barb Russ	Council
LISA AUSTIN	MnDOT
Shawna Muller	Zeitgeist
Michael Latsch	Duluth Bikes

**The information you provide on this sign-in sheet is classified as public data under the Minnesota Government Data Practices Act. Public data must be provided to any person or entity that requests it.**





FOR IMMEDIATE RELEASE  
City of Duluth - Communications Office

411 West First Street, Duluth, Minnesota 55802  
218-730-5230 | [www.duluthmn.gov](http://www.duluthmn.gov) | Emily Larson, Mayor

For more information contact Pakou Ly, Public Information Coordinator 218-730-5309

**DATE:** 8/28/2017

**SUBJECT:** Duluth Pedestrian Facilities Draft Plan Ready for Public Input, Public Meetings Scheduled

**BY:** Pakou Ly, Communications Office

---

**Duluth Pedestrian Facilities Draft Plan Ready for Public Input  
(Public Meetings Scheduled)**

[Duluth, MN] - The City of Duluth is working to determine priorities and connect people with opportunities through compliant pedestrian facilities within the public right of way. The City is developing an American with Disabilities Act (ADA) Transition Plan for Public Rights of Way according to standards developed by the Federal Highway Administration. The plan establishes guiding principles that encompasses accessibility, safety, equity, health, and environment. The right of way is defined as sidewalks, curb ramp/curb cuts, traffic signals (push buttons, pedestrian indications, audible indications), and public transit stops. A draft plan was developed with public input provided over the past two months and is now going to be available for public review.

The City engaged the public and the Duluth Commission on Disabilities to conduct a self-evaluation process to review existing conditions, evaluate our compliance with ADA in order to meet the needs of community members and determine priorities for improvements. The information gathered is being used to draft the ADA Transition Plan for Public Right of Ways, of which a final plan is submitted to the Federal Highway Administration.

Several opportunities for public input have already taken place this summer with more to follow in the coming weeks. These opportunities allow for the public to hear from and share their input with City staff. Paper copies of the draft plan will be provided at the meetings, on the City's website and at the Duluth Public Libraries. The draft plan will be discussed and made available at the following public meetings:

- August 29, City Center West/West Duluth Public Library, 10:00 am
- August 30, Central Hillside Community Center at 6:00 pm
- August 31, Portman Community Center (Lakeside) at 2:00 pm

A Committee of the Whole presentation is planned with the Duluth City Council for October 19 followed by City Council adoption of the final ADA Transition Plan in early November.

A map identifying pedestrian facilities and public comment form is available online at <http://www.duluthmn.gov/human-rights-office/>

Project contact: Cindy Voigt at 218-730-5200.

###

SIGN-IN SHEET  
CITY OF DULUTH ADA TRANSITION PLAN  
CITY PROJECT NO. 1651  
TUESDAY, AUGUST 29, 2017 AT 10:00 A.M.  
CITY CENTER WEST

NAME	BUSINESS (IF APPLICABLE)
Katie Kaz	Miller Hill Mall

SIGN-IN SHEET  
CITY OF DULUTH ADA TRANSITION PLAN  
CITY PROJECT NO. 1651  
WEDNESDAY, AUGUST 30, 2017 AT 6:00 P.M.  
CENTRAL HILLSIDE COMMUNITY CENTER

NAME	BUSINESS (IF APPLICABLE)
Ben Garland	
Benjamin Kern	



SIGN-IN SHEET  
CITY OF DULUTH ADA TRANSITION PLAN  
CITY PROJECT NO. 1651  
THURSDAY, AUGUST 31, 2017 AT 2:00 P.M.  
PORTMAN COMMUNITY CENTER

NAME	BUSINESS (IF APPLICABLE)
Rod Jones	—

CITY OF DULUTH ADA DRAFT TRANSITION PLAN  
COMMENT FORM  
CITY PROJECT NO. 1651

Comments:

Name of individual resident or agency represented (optional):

Please return this form to:

City of Duluth Engineering Division  
City Hall, Room 211  
411 West First Street  
Duluth, MN 55802

For more information, please contact:

Cindy Voigt  
(218)730-5200  
cvoigt@duluthmn.gov



# TAC Meeting

## Sign In Sheet

August 15, 2017



Name	Representing	E-mail (Only if I don't have one or it has changed)
Jim Faldesi	St. Louis County	
BOBBI REZLAFF	MNDOT	
Tom Werner	DAA	
Dana Ryan	WisDOT	
Jason DiPazzi	MSA	jdi.pazzi@msa-mn.com
Chris Lee	Duluth	
Emilie Voight	Duluth	evoight@duluthmn.gov
CINDY VOIGT	DULUTH	
Shannon Muller	ROPAC	
Cari Pedersen	City of Duluth	

(PLEASE TURN SHEET OVER WHEN FULL)



## Cindy Voigt

---

**From:** Barb Peterson <BPeterson@ardc.org>  
**Sent:** Tuesday, August 29, 2017 1:37 PM  
**To:** Cindy Voigt  
**Subject:** RE: 8.15 TAC meeting Summary  
**Attachments:** TAC mtg Sign In Sheet - Aug 15 2017.pdf

Here you go – you will note that Todd Janigo, John McDonald and Dennis Jensen did not sign in but attended the meeting. If you need anything else please let me know.

*Barb*

---

**From:** Cindy Voigt [mailto:cvoigt@DuluthMN.gov]  
**Sent:** Tuesday, August 29, 2017 1:28 PM  
**To:** Barb Peterson <BPeterson@ardc.org>  
**Subject:** RE: 8.15 TAC meeting Summary

I just need a scan of the sign in sheet.

---

**From:** Barb Peterson [mailto:BPeterson@ardc.org]  
**Sent:** Tuesday, August 29, 2017 11:40 AM  
**To:** Cindy Voigt <cvoigt@DuluthMN.gov>  
**Subject:** 8.15 TAC meeting Summary

Hi Cindy, attached is the meeting summary from the TAC meeting. If you have any questions or need something else included please let me know.

*Barb*

**Barb Peterson**  
Administrative Assistant  
Duluth-Superior  
Metropolitan Interstate Council  
218.529.7541  
[bpeterson@ardc.org](mailto:bpeterson@ardc.org)  
[www.dsmic.org](http://www.dsmic.org)



## MIC Transportation Advisory Committee August 15, 2017 Meeting Summary

- **Transit Development Plan (TDP) Update, *Dennis Jensen***

Dennis stated that the TDP is nearing completion. He also announced that his last day at the DTA was going to be November 3<sup>rd</sup> – he is retiring after 37 years at the DTA.

### 9. Project Updates – (please see agenda item descriptions included in the meeting materials)

- Canosia Township Trails Plan, *Chris Belden*
- MIC Area-wide Bike Plan, *James Gittemeier*
- Cindy Voigt, City of Duluth took a moment to ask that everyone complete the Resident Survey she distributed and return it to her. You can also find it on line at: [Duluth's Pedestrian Needs](#)  
The survey results will be made part of the ADA Transition Plan.

### 10. Adjournment

With no further agenda items or discussions, Vice-Chair Janigo adjourned the meeting at 3:30 pm.

## **Cindy Voigt**

---

**From:** City of Duluth MN  
**Sent:** Friday, September 01, 2017 10:25 PM  
**To:** Cindy Voigt  
**Subject:** the form Human Rights - ADA COMMENT FORM was submitted

the form Human Rights - ADA COMMENT FORM was submitted, this is the list of values it contained, you can turn this email off under workflows in Umbraco Contour

**Name::**

Lyn C Pegg

**Phone::**

2183483048

**Email::**

carolynpegg@yahoo.com

**Comments::**

Hi Carl -

When we talked briefly the other evening at the Mayors Reception I mentioned an article that I had seen about racial inequalities in MN . Here's the link to that article!

<http://minnesota.cbslocal.com/2017/08/22/minnesota-racial-inequality/>

Hope you have a great Labor Day weekend!

Lyn

**Name of individual resident or agency represented:**



## **Cindy Voigt**

---

**From:** City of Duluth MN  
**Sent:** Thursday, August 31, 2017 8:15 AM  
**To:** Cindy Voigt  
**Subject:** the form Human Rights - ADA COMMENT FORM was submitted

the form Human Rights - ADA COMMENT FORM was submitted, this is the list of values it contained, you can turn this email off under workflows in Umbraco Contour

**Name::**  
Linda Papison  
**Phone::**  
218.728.0439  
**Email::**  
lindap480@gmail.com

**Comments::**  
Just saw a presentation at LSC by Keith Hamre where the preferred mode of transportation by so many folks is neither public or with a car. So many walkers, very little city support for that. I have been bringing up my concern with the piece of Skyline Parkway that approaches Chester Bowl from the west. There are a significant number of walkers on Skyline, and this is a potentially very dangerous area because of the gap in sidewalk all the way down to Kenwood, but especially the area from the existing sidewalk to Chester Parkway.

**Name of individual resident or agency represented:**

## **Cindy Voigt**

---

**From:** City of Duluth MN  
**Sent:** Tuesday, September 05, 2017 9:37 PM  
**To:** Cindy Voigt  
**Subject:** the form Human Rights - ADA COMMENT FORM was submitted

the form Human Rights - ADA COMMENT FORM was submitted, this is the list of values it contained, you can turn this email off under workflows in Umbraco Contour

**Name::**

Karen J

**Phone::**

**Email::**

Kleejoh@yahoo.com

**Comments::**

I'm happy to see pedestrian traffic being focused on.

Too much has been done with bike lanes! I feel bike lanes make it more difficult for both pedestrians and traffic! Bicyclists know the rules of the road..follow them! They don't need a special lane!!

Pedestrians need to have it easier..for the blind, disabled..everyone!!

Thank you so much for looking at this situation!

Karen

**Name of individual resident or agency represented:**

## Cindy Voigt

---

**From:** ben.garland@gmail.com on behalf of Ben Garland <ben@bengarland.com>  
**Sent:** Monday, October 16, 2017 7:08 PM  
**To:** Cindy Voigt  
**Subject:** ADA Transition Plan

Hi Cindy,

Thanks for all of the great work you are doing to incorporate ADA into city policy. I have just a few comments.

1) I think the Commission on Disabilities should be given the opportunity to advise and comment on ALL upcoming projects relating to public streets, public buildings, and housing developments at the beginning of the planning process. The COD should be seen as the go-to source of information for ADA implementation.

2) Meeting the ADA standards should not be seen as synonymous with meeting the actual needs of disabled individuals. The standards are a bare minimum baseline. Duluth should strive to greatly exceed the standards using current best practices.

3) I would like to see some sort of ADA training done for everyone who works for the City planning and engineering departments. Ideally this would involve live demonstrations with disabled persons showing City employees how our public infrastructure is experienced by those with disabilities. It's one thing to do a Powerpoint training about ADA standards, and quite another to get to know a disabled person and see first hand how they navigate doorways, ramps, curb cuts, crosswalks, sidewalks, etc.

4) Don't forget that meeting the needs of disabled individuals does not mean just those with physical disabilities. Our built environment can also significantly impact individuals with mental disabilities as well (developmental disabilities, autism, PTSD, dementia, etc).

Thanks!  
Ben.



December 29, 2017

**TO:** Duluth City Council  
**FROM:** Ann Roscoe, Chair, Commission on Disabilities  
**RE:** ADA Transition Plan *Ann Roscoe*

The Duluth Commission on Disabilities works to ensure that people with disabilities have equal access to and can participate fully in the community. We have appreciated the opportunity to review and provide input into the ADA Transition plan. The Commission on Disabilities supports Duluth's 2018 ADA Transition Plan.

## Appendix D – Public Notice and Grievance Procedure

As part of the ADA requirements the City of Duluth has posted the following notice outlining its ADA requirements:

### Public Notice



## NOTICE UNDER THE AMERICANS WITH DISABILITIES ACT

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

**Employment:** The City 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 ADA.

**Effective Communication:** Upon request, the City will endeavor to provide aids and services to qualified persons with disabilities to assist them in participating in City programs, services, and activities, including qualified sign language interpreters, documents in Braille, and other ways of making information and communications more accessible to people with speech, hearing, or vision impairments.

**Modifications to Policies and Procedures:** The City will make reasonable modifications to policies and programs to assist people with disabilities to engage in all of its programs, services, and activities. For example, individuals with service animals are welcomed in City 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 program, service, or activity of the City should contact the office of Carl Crawford, City of Duluth ADA Coordinator, City Hall, Room 407, 411 West First Street, Duluth, MN 55802, telephone: (218) 730-5291, as soon as possible but no later than 48 hours before the scheduled event.

The City will not charge individuals with a disability or any group of individuals with disabilities for 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.

The ADA does not require the City to take any action that would fundamentally alter the nature of its programs or services, or impose an undue financial or administrative burden.

Complaints that a program, service, or activity of the City is not accessible to persons with disabilities should be directed to Carl Crawford, City of Duluth ADA Coordinator, City Hall, Room 407, 411 West First Street, Duluth, MN 55802, telephone: (218) 730-5291.



## **City of Duluth Grievance Procedure under the Americans with Disabilities Act**

This Grievance Procedure is established to meet the requirements of the Americans with Disabilities Act of 1990 ("ADA"). It may be used by anyone who wishes to file a complaint alleging discrimination on the basis of disability in the provision of services, activities, programs, or benefits by the City of Duluth ("City"). The City's Personnel Policy governs employment-related complaints of disability discrimination.

The complaint should be in writing and contain information about the alleged discrimination such as name, address, phone number of complainant and location, date, and description of the alleged discrimination. Alternative means of filing complaints, such as personal interviews or a tape recording of the complaint, will be made available for persons with disabilities upon request.

The complaint should be submitted by the grievant, or the grievant's designee, as soon as possible but no later than 60 calendar days after the alleged violation to:

**City of Duluth ADA Coordinator  
City Hall, Room 407  
411 West First Street  
Duluth, MN 55802  
(218) 730-5291**

Within 15 calendar days after receipt of the complaint, the ADA Coordinator will endeavor to schedule a meeting with the complainant to discuss the complaint and the possible resolutions. Within 15 calendar days of the meeting, the ADA Coordinator will respond in writing, and where appropriate, in a format accessible to the complainant, such as large print, Braille, or audio tape. The response will explain the position of the City and may offer options for resolution of the complaint.

If the response by the ADA Coordinator does not satisfactorily resolve the issue, the complainant may appeal the decision within 15 calendar days after receipt of the response to the City's Chief Administrative Officer ("CAO"), or the CAO's designee.

Within 15 calendar days after receipt of the appeal, the CAO, or the CAO's designee, will endeavor to schedule a meet with the complainant to discuss the complaint and possible resolutions. Within 15 calendar days after the meeting, the CAO, or the CAO's designee, will respond in writing, and, where appropriate, in a format accessible to the complainant, with a final resolution of the complaint.



# Americans with Disabilities Act Title II Complaint Form

Note: if you need this document in another format or language, please contact the City of Duluth ADA Coordinator

**Complainant Information** (please print or type)

Name \_\_\_\_\_  
Address \_\_\_\_\_  
City, ST Zip \_\_\_\_\_  
Phone \_\_\_\_\_  
Email \_\_\_\_\_

**Individual discriminated against (if other than complainant) information** (please print or type)

Name \_\_\_\_\_  
Address \_\_\_\_\_  
City, ST Zip \_\_\_\_\_  
Phone \_\_\_\_\_  
Email \_\_\_\_\_

**Date(s) of alleged Violation:** \_\_\_\_\_

**Describe violation and city department involved** (please attach copies of any documentation):

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**What efforts have been made to resolve this complaint:**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Has complaint been filed with State or Federal Agency? :  Yes  No

Name of Agency: \_\_\_\_\_ Date Filed: \_\_\_\_\_

Contact Person: \_\_\_\_\_

**Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

Return to ADA Coordinator  
Human Rights Office, Room 407  
411 West First Street  
Duluth, MN 55802  
(218) 730-5291

## **Appendix E – Contact Information**

### **ADA Title II Coordinator**

Name: Carl Crawford, Human Rights Officer

Address: 411 West First Street, Room 407 City Hall, Duluth MN 55802

Phone: 218-730-5291

Fax: 218-730-5904

E-mail: [ccrawford@duluthmn.gov](mailto:ccrawford@duluthmn.gov)

### **Public Right of Ways ADA Implementation Coordinator**

Name: Cindy Voigt, PE, City Engineer

Address: 411 West First Street, Room 211 City Hall, Duluth MN 55802

Phone: 218-730-5200

Fax: 218-730-5907

E-mail: [cvoigt@duluthmn.gov](mailto:cvoigt@duluthmn.gov)

### **Sidewalk Complaints or Requests**

Name: Paul Wictor, Senior Engineering Technician

Address: 411 West First Street, Room 211 City Hall, Duluth MN 55802

Phone: 218-730-5085

Fax: 218-730-5907

E-mail: [pwictor@duluthmn.gov](mailto:pwictor@duluthmn.gov)



# Appendix F – 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 or not, each intersection corner shall be made as compliant as possible in accordance with the judgment of City staff.

### Sidewalks / Shared Use Paths

Sidewalks and shared use paths 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 paths 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 of whether full compliance can be achieved or not, every sidewalk or path shall be made as compliant as possible in accordance with the judgment of City staff.

### 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 of whether 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 City staff.

### Bus Shelters

Bus shelters will attempt to be constructed or upgraded to achieve compliance within transit capital improvement projects. There may be limitations which make it technically infeasible for individual bus shelters 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 of whether full compliance can be achieved or not, each bus shelter and existing sidewalk at stop locations shall be made as compliant as possible in accordance with the judgment of DTA staff.

### **Other Transit Facilities**

Additional transit facilities are present within the limits of Duluth. Those facilities fall under the jurisdiction of the Duluth Transit Authority. Duluth will work with the Duluth Transit Authority to ensure that those facilities meet all appropriate accessibility standards.

### **Other policies, practices and programs**

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

### **Design Standards**

Duluth has PROWAG, as adopted by the Minnesota Department of Transportation (MnDOT), as its design standard. A copy of this document is included in the following pages of this appendix.

# Public Rights-of-way Accessibility Guidelines (PROWAG)

Mn/DOT has adopted PROWAG with the following modifications:

R301.7.3 Flangeway Gaps at Non-Freight Rail Crossings – deleted.

R301.7.4 Flangeway Gaps at Freight Rail Crossings – deleted.

R305.2.2.1 Crossings with Stop Control – modified to desirable not maximum.

R305.2.2.2 Crossings without Stop Control – modified to desirable not maximum.

R305.6.2 Signals – deleted.

R305.7 Channelized Turn Lanes at Intersections – deleted.

The City of Duluth has adopted PROWAG with the above modifications and the following modification:

R308.2.1 Wide Walkways- deleted.

The following version of PROWAG has been revised from its original state to reflect these modifications.



## **NOTICE OF AVAILABILITY OF DRAFT PUBLIC RIGHTS-OF-WAY ACCESSIBILITY GUIDELINES**

The Americans with Disabilities Act (ADA) recognizes and protects the civil rights of people with disabilities and is modeled after earlier landmark laws prohibiting discrimination on the basis of race and gender. To ensure that buildings and facilities are accessible to and usable by people with disabilities, the ADA establishes accessibility requirements for State and local government facilities, places of public accommodation, and commercial facilities. Under the ADA, the Access Board has developed and continues to maintain design guidelines for accessible buildings and facilities known as the ADA Accessibility Guidelines (ADAAG). ADAAG covers a wide variety of facilities and establishes minimum requirements for new construction and alterations.

The Board maintains a similar responsibility for accessibility guidelines under the Architectural Barriers Act (ABA). The ABA requires access to certain facilities designed, built, altered, or leased with Federal funds. Like ADAAG, the Board's ABA accessibility guidelines apply to new construction and alterations.

The Board's guidelines become enforceable when they are adopted by the standard setting agency for the ADA and the ABA. The agencies responsible for standards under the ADA are the Department of Justice (DOJ) and the Department of Transportation (DOT). The agencies responsible for standards under the ABA are the General Services Administration (GSA), the Department of Defense (DOD), the Department of Housing and Urban Development (HUD), and the United States Postal Service (USPS).

The Board plans to undertake rulemaking to supplement its ADA and ABA accessibility guidelines, which primarily cover facilities on sites, by adding new provisions specific to public rights-of-way. The Board's aim is to ensure that access for persons with disabilities is provided wherever a pedestrian way is newly built or altered, and that the same degree of convenience, connection, and safety afforded the public generally is available to pedestrians with disabilities. The guidelines would not require alterations to existing public rights-of-way, but would apply where a pedestrian route or facility is altered as part of a planned project to improve existing public rights-of-way.

### **BACKGROUND**

#### **The Need for Guidelines on Public Rights-of-Way**

Local jurisdictions, and other entities covered by the ADA or ABA, must ensure that the facilities they build or alter are accessible to people with disabilities. The Board's ADA and ABA accessibility guidelines specify the minimum level of accessibility in new construction and alteration projects and serve as the basis for enforceable standards maintained by other agencies. Currently, the Board's guidelines, like the industry standards from which they derive, focus mainly on facilities on sites. While they address certain features common to public sidewalks, such as curb ramps, accessible routes, ground and floor surfaces, and bus stops and shelters, further guidance is necessary to address conditions unique to public rights-of-way. Various

constraints posed by space limitations at sidewalks, roadway design practices, slope, and terrain raise valid questions on how and to what extent access can be achieved. Access for blind pedestrians at street crossings and wheelchair access to on-street parking are typical of the issues for which additional guidance is needed. In addition, new trends in roadway design, such as the growing use of traffic roundabouts, pose additional challenges to access, while various technological innovations, particularly those pertaining to pedestrian signaling devices, offer new solutions.

The Board previously proposed guidelines for public rights-of-way under the ADA which were published for public comment in 1992 and 1994. Based on the comments received, the Board determined that it should further coordinate with the transportation industry and State and local governments before continuing its rulemaking. Consequently, the Board undertook an outreach and training program on accessible public rights-of-way. Under this program, the Board developed a series of videos, an accessibility checklist, and a design guide on accessible public rights-of-way. In addition, the Board sponsored research on tactile warnings at street crossings, accessible pedestrian signals, and traffic roundabouts. The Board has made this information widely available to the public. The interest in these materials has underscored the need for criteria for public rights-of-way that are definitive and enforceable so that local jurisdictions and others are clear on their obligations when constructing or altering streets and sidewalks.

### **Public Rights-of-Way Access Advisory Committee**

In resuming its rulemaking effort, the Board chartered an advisory committee in 1999 to develop recommendations on guidelines for accessible public rights-of-way. Use of advisory committees has become a standard practice in the Board's process for developing and updating design requirements. Through such committees, interested groups, including those representing designers, industry, and people with disabilities, play a substantive role in recommending to the Board the content of the guidelines to be developed. These committees provide significant sources of expertise while enhancing the level of consensus among stakeholders in advance of proposing a rule for public comment.

The Public Rights-of-Way Access Advisory Committee was composed of 33 members representing disability organizations, public works departments, transportation and traffic engineering groups, design professionals and civil engineers, government agencies, and standards-setting bodies. The committee coordinated its efforts with leading trade organizations represented on the committee, such as the American Association of State Highway and Transportation Officials, and federal agencies, such as the Federal Highway Administration, to ensure that its recommendations were consistent with generally accepted practice among design professionals. The committee organized several subcommittees focused on key issue areas. The subcommittee structure enabled members to continue work on a tight time schedule between meetings of the full committee and allowed for greater public participation in the process.

The advisory committee met regularly over a year's time, usually in Washington, D.C. but also in Austin and San Francisco. Its work culminated in the issuance of a report, "Building a True Community," which was submitted to the Board in January 2001 (<http://www.access-board.gov/prowac/commrept/index.htm>). The committee's report provides criteria for the construction or alteration of public rights-of-way that reflects the broad spectrum of expertise

represented by committee members. The report follows a "toolbox" approach to the establishment of guidelines designed to facilitate implementation and to promote an understanding of the needs of all users of public rights-of-ways. The report comprehensively covers the various components of public streets and sidewalks and provides criteria for sidewalks, street fixtures and furnishings, street crossings, vehicular ways, parking, and other components of public rights-of-way. In addition, the report includes advisory notes, figures, and discussion of issues that merit further study or special attention in the Board's rulemaking.

### **June 17, 2002 Release of Draft Guidelines**

An ad hoc group of Board members reviewed the committee's report in depth and crafted a set of draft guidelines based on the committee's recommendations. Because the draft guidelines departed from the advisory committee's report in several areas, the Board made an advance draft of the guidelines available for comment by the public. The notice of availability of the draft guidelines was published in the Federal Register on June 17, 2002. The Board requested information and feedback on the draft guidelines, including usability and cost data. In addition to seeking written comment, the Board held a public hearing in Portland, Oregon.

Over 1,400 comments were received from the public in response to the publication of the draft. Of this total, almost 900 comments were tabulated from persons with disabilities and groups representing them; the great preponderance of comments in this category came from people who indicated that they were blind or had low vision. Slightly over 200 comments were submitted by respondents from the transportation industry: design engineers and consultants, State and local government departments of transportation, and the organizations and groups that represent them. Another 100 were received from State and local government administrative agencies. Comments are posted on the Board's website at <http://www.access-board.gov/prowac/comments/index.htm>.

Almost all of the commenters from the two major blindness organizations, the American Council of the Blind (ACB) and the National Federation of the Blind (NFB), and persons who were not affiliated with either organization addressed only the use of detectable warnings and/or accessible pedestrian signals (APS) and virtually all of them supported the requirement for these features in at least some locations (detectable warnings at islands and medians and at all low-slope sidewalk connections to the street; APS at complex intersections, irregular intersections, intersections with compound turning movements, and intersections with leading pedestrian intervals). Some commenters misunderstood the effect of the scoping provisions for these features, believing that all intersections would have to be retrofitted at tremendous cost. In fact, only future new projects would be subject to these guidelines. With respect to APS in particular, only pedestrian crossings that provide pedestrian signals would be required to include APS. Some commenters, expressing concerns about the noise output of APS, were apparently unfamiliar with the quiet, pedbutton-integrated devices now available in the United States (these devices are installed at the departure curb, near the listening user, rather than overhead).

Ten key issues from comment were identified for detailed analysis: crosswalk width; on-street parking; walking speed and pedestrian signal phase timing; elevators at pedestrian overpasses and underpasses; same-side alternate circulation routes; cross slope in crosswalks; detectable warnings; accessible pedestrian signals; roundabouts and roundabout signalization; and



alterations. These issues have been addressed in this second draft. Changes include the following:

- referenced Manual on Uniform Traffic Control Devices (MUTCD) for crosswalk width;
- reduced scoping in on-street parking to be consistent with parking lots;
- set walking speed at 3.5 fps (consistent with new recommendations currently under consideration by the National Committee on Uniform Traffic Control Devices);
- eliminated the provision requiring elevators to provide pedestrian access at overpasses and underpasses (either ramps, lifts, or elevators may be used);
- modified scoping and technical provisions for alternate circulation routes to be consistent with current MUTCD requirements and alterations requirements, which would permit opposite side routes if same-side routes are not feasible;
- provided relief (up to 5%) for maximum cross slope limits in pedestrian crosswalks at midblock and through-street locations where the roadway slope will necessarily exceed 2%;
- clarified the placement of detectable warnings on curb ramps, landings, and blended transitions;
- clarified the scoping in new construction and alterations of accessible pedestrian signals (APS);
- limited pedestrian signalization at roundabouts and channelized turn lanes to pedestrian crossings (to the splitter) of two lanes of traffic or more; and
- clarified the scope of alterations to include only that work included in the limits, boundaries, or scope of a planned project; clarified that there is no obligation in the guidelines to expand the scope or limits of a project to include other or adjacent work.

Other changes included the addition of significant advisory material throughout the document. Advisory notes are for informational purposes only.

The Board also considered industry recommendations that the guidelines be re-formatted to use transportation metrics and language and to be better coordinated with industry standards and documents, particularly the Manual on Uniform Traffic Control Devices (MUTCD).

This draft is now formatted as a stand-alone document that expresses its dimensioning requirements first in international units, as is done in other industry documents. Its provisions have been harmonized with current MUTCD standards, support, options, and guidance. Industry terms and phrases have been adopted, and industry practices recognized where feasible.

The Board is placing the revised draft in the docket to facilitate the gathering of cost data necessary for the next step in this rulemaking which is the preparation of a regulatory assessment for government review and approval prior to issuing a Notice of Proposed Rulemaking (NPRM). In order to develop an accurate picture of the potential costs and benefits of this rulemaking, the Board must work closely with the transportation industry representatives who have data on both current cost and industry practices and the knowledge and skills to assess potential effects.

The Board is not seeking comments on this draft. Readers will have an opportunity to provide input when the NPRM is published. Additional figures will be included in the NPRM.

## **Rulemaking Process**

The Board reviewed the comments received to the draft guidelines and revised the guidelines in accordance with the comments received. The revisions are briefly discussed below in the section-by-section analysis.

The proposed rule will provide another opportunity for public comment on the guidelines. The Board will then proceed to finalize the guidelines based on public comments received in response to the proposed rule. The Board's guidelines serve as the basis for enforceable standards maintained by other agencies under the ADA and the ABA. The Department of Justice and the Department of Transportation maintain standards based on the Board's guidelines that apply to facilities covered by the ADA. Design standards for federally funded facilities covered by the ABA are maintained by the Department of Defense, the Department of Housing and Urban Development, the General Services Administration, and the U.S. Postal Service. These enforceable standards must be consistent with the Board's guidelines.

## **Relationship to ADA and ABA Accessibility Guidelines/Format**

On July 23, 2004, the Board completed an update of ADAAG, the first comprehensive revision of the document since its publication in 1991. The revised ADAAG features a new format and numbering system and a host of updated scoping and technical provisions. On the same date, the Board updated its ABA Accessibility Guidelines along similar lines so that both of the documents are more consistent. The revised ADA and ABA Accessibility Guidelines may be found on the Board's website at <http://www.access-board.gov/news/ada-aba.htm>.

The draft guidelines for public rights-of-way published on June 17, 2002 were formatted to supplement the ADA and ABA guidelines and not as a stand-alone document. The guidelines were intended to ultimately comprise a new chapter on public rights-of-way. The current draft guidelines made available in this document are now formatted as a stand-alone document using transportation industry standards, terms, and measures in response to recommendations in industry comments. The document is identified by the prefix R in its provisions and has four chapters:

Chapter R1: Application and Administration covers purpose, effect on existing facilities, equivalent facilitation, conventions, figures, units of measurement, referenced documents, and definitions, harmonized with transportation industry usage.

Chapter R2: Scoping Requirements address what items of new construction and alteration are covered by this document and references technical sections that follow in Chapters R3 and R4. Key scoping provisions in R2 include: R204 Pedestrian Access Route; R205 Alternate Pedestrian Access Route; R206 Pedestrian Crossings; R207 Curb Ramps and Blended Transitions; R208 Accessible Pedestrian Signals; R209 Protruding Objects; R210 Pedestrian Signs; R211 Street Furniture; R212 Bus Stops; R213 Stairways; R214 Handrails; R215 Vertical Access; R216 On-street Parking; R217 Passenger Loading Zones; R218 Call Boxes; R219 Transit Platforms; R220 Escalators; R221 Detectable Warning Surfaces; and R222 Doors, Doorways, and Gates.

Coverage extends to temporary as well as permanent facilities. Chapter R2 also includes special provisions for historic facilities and contains a limited series of general exemptions from accessibility.

Chapter R3: Technical Provisions contains detailed specifications for new construction and alterations scoping in Chapter R2. Construction detailed in Chapter R3 is specific to public sidewalk, street crossing, and roadway projects, and covers the building blocks of pedestrian accessibility: the pedestrian access route (analogous to the accessible route on a site), curb ramps and blended transitions, pedestrian crossings (including those at roundabouts and channelized turn lanes), pedestrian signals, street furniture, and parking.

Chapter R4: Supplementary Technical Provisions include specifications adapted from the ADA and ABA Accessibility Guidelines (2004) for rights-of-way application, including such features as maneuvering clearances at doorways; drinking fountain, and telephone provisions; reach ranges; operable parts; handrails; and other items of broader application.



## **DISCUSSION OF PROVISIONS**

### **DRAFT GUIDELINES FOR PUBLIC RIGHTS-OF-WAY**

Clarifications, modifications, and changes that have been incorporated in this draft in response to public comment from industry, consumers, and State and local government agencies are briefly discussed below.

#### **R1: APPLICATION AND ADMINISTRATION**

R104.2.1 MUTCD. This draft references the 2003 edition of the Manual on Uniform Traffic Control Devices (MUTCD). The Access Board works closely with the MUTCD team at the Federal Highway Administration (FHWA) to harmonize standards and advisory material and to sponsor needed research. Changes in future MUTCD provisions for accessible pedestrian signals, markings (including detectable warnings), and temporary traffic zones are in process. A joint FHWA/ American Traffic Safety Services Association (ATSSA)/Access Board demonstration project identified desirable characteristics for pedestrian channelizing devices. FHWA research projects on pedestrian usability at roundabouts and contrast in detectable warnings are underway, and the Board has proposed a FY 2006 project on pedestrian demand signals for use at multi-lane roundabout crossings.

R105 Definitions. This draft uses definitions drawn from key industry references where they exist.

#### **R2: SCOPING REQUIREMENTS**

R201 Application. Text and advisory material has been added to clarify the application of these guidelines to new or altered work (permanent or temporary) put in place within the scope or limits of a planned project in the public right-of-way.

Other requirements, including those for existing facilities, maintenance of accessible features, and effective communication that derive from the ADA title II implementing regulations (28 CFR part 35) or Federal highway-aid funding (49 CFR part 27), are not addressed in these guidelines for new construction and alteration. Advisory notes have been added to clarify this difference.

This draft now includes a reference to the revised ADA and ABA Accessibility Guidelines (36 CFR part 1191) to cover buildings and facilities newly constructed or altered within the public right-of-way.

R202 Alterations and Additions to Existing Facilities. Text and advisory notes have been added to this draft to clarify the application of new construction guidelines to an alteration project. New work put in place within an existing developed right-of-way must comply with these guidelines to the maximum extent feasible; see Advisory R202.3. Transitional segments that connect undisturbed improvements with new work can facilitate compliance (R202.1.1). Where items are placed within an existing developed streetscape and the circulation route is not altered, items required to be accessible shall be located for optimal usability and access (R202.1.2).

An alteration is a change in a space or element that affects, or could affect, the accessibility or usability of that space or element. In general, when a feature in the public right-of-way is altered, the requirements for new construction in this document must be applied to the maximum extent feasible within the scope or boundary of the project that has been planned. This document does not contain a ‘path of travel’ obligation to expand a given scope of work to include other items or elements that are adjacent to the alteration project nor does it cover an agency’s obligations to achieve program access in its existing facilities that are not being altered.

In response to the comments received, the Board has developed answers to frequently asked questions regarding the application of the alterations requirements. Those questions and the Board’s responses have been included at the end of this discussion.

R204 Pedestrian Access Route (technical provisions at R301). This draft clarifies the requirement for a 1.2-meter-wide (4 ft) accessible route of travel within a pedestrian circulation path, which may be a wider sidewalk, shoulder (if pedestrian use is not prohibited), shared street, or street crossing. A provision requiring periodic passing spaces 1.5 m (5 ft) in width, omitted in the first draft, has been re-instituted. Because of the constraints imposed by right-of-way width, the pedestrian access route (PAR) is relieved of the slope limits that would apply to an accessible route on a site provided it matches the general grade of the adjacent roadway (R301.4). Where the PAR is supported by structure, as in an underpass, overpass, or bridge, this draft requires compliance with ADAAG requirements for ramps.

Technical provisions in the June 2002 draft that would have required a 30-inch separation between changes in level in the PAR have been replaced in this draft with provisions requiring a planar surface (R305.1) and limiting surface discontinuities (R301.5.2). An advisory note discourages the use of heavily textured, rough, or excessively chamfered unit pavings. Research undertaken by the Research and Rehabilitation Training Center (RRTC) at the University of Pittsburgh, under contract to a group of unit masonry associations, measured the vibration effects of various chamfer spacings on wheeled mobility devices and found that chamfers of less than 1.25 mm (.5 in), if flush, were not distinguishable from cast-in-place concrete sidewalks with a broom finish.

A series of related provisions in the June 2002 draft has been reorganized into R301.7 Horizontal Openings, which now includes walkway joints, gratings, flangeway gaps at rail crossings, and sill gaps at elevators and lifts. (Platform and car gaps at transit facilities are addressed at 36 CFR part 1191).

R205 Alternate Pedestrian Access Route. This draft clarifies that the establishment of an alternate pedestrian route is an alteration that must comply to the maximum extent feasible with technical provisions for the pedestrian access route, including curb ramps or blended transitions. MUTCD requirements and advisory material at Part 6D.01 and 6D.02 are referenced and an advisory note added to highlight the safety benefits of same-side alternate routes. Specifications for pedestrian channelizing devices and barricades at 302.4 include a reference to the MUTCD.

R206 Pedestrian Crossings (technical provisions at R305). This draft omits a provision in the June 2002 draft that would have required 2.4 m-wide (8 ft) markings at crosswalks. The MUTCD minimum of 1.8 m (6 ft) has been proposed at 305.2.1 of this draft.

Measurements on which pedestrian signal phase timing are based have been modified in response to industry comment. Calculations now proposed in R305.3 in the current draft would require the distance to be the full street width and the pedestrian walking speed to be 1.1 m/s (3.5 fps).

The June 2002 draft also proposed that the approaches to overpasses and underpasses be provided with elevators where the grade change was 1.5 m (5 ft) or greater. Both industry and persons with disabilities opposed this requirement with persons with disabilities expressing a preference for ramps, even if lengthy, to ensure the availability of a crossing. Elevators in single installations provide no access at all when out of service. Industry expressed concerns about cost and maintenance requirements. The current draft applies ramp provisions at R305.5 (but permits elevators, LULAs, and lifts).

Newly available research and the comments of both industry and consumer representatives confirm the Access Board's concerns about the usability of pedestrian crossings at roundabouts and channelized turn lanes. However, access to additional data has indicated that well-designed roundabouts and channelized turn lanes with single-lane crossings can provide cues that make non-visual use possible. Accordingly, this draft (R305.6.2) provides that signals (including accessible pedestrian signal features) be required only at multi-lane pedestrian crossings of roundabouts. The Board does not prescribe the signal operation here and has proposed that FHWA conduct research to identify appropriate technologies. Two-head signals that flash amber, then flash red and go to steady red, are in use in Australia and the United Kingdom. US motorists are familiar with pre-emptive signals installed for emergency vehicles. Utah has at least one roundabout that uses standard railway gates across the roadway when light rail cars pass through the roundabout. The Board believes that the occasional use of a properly-designed pedestrian demand signal may actually reduce delay at pedestrian crossings.

R207 Curb Ramps and Blended Transitions (technical provisions at R303). Additional text, advisory, and illustrations have been added to this draft to describe curb ramp types (perpendicular, parallel, and their combination) and to distinguish them from blended transitions, for which a definition has now been provided at R105. Blended transitions are connections between the PAR and the street that have a running slope of 1:20 or less. Level landings, gently sloped transitions, and raised crosswalks fall into this category. Parallel and perpendicular curb ramps have a running slope between 1:20 and 1:12 (steeper slopes are not permitted in new construction).

Non-visual wayfinding cues can be provided by the orientation of curb ramps, particularly if they are in-line with the path of pedestrian travel along a sidewalk. Curb ramps installed at tangent points rather than on the corner radius provide more usable cues and locate the shortest crossing point. The Access Board is collaborating with the Institute of Transportation Engineers (ITE) on a project to standardize sidewalk/ramp/crossing schemes for optimal non-visual cuing based



upon a range of corner radii and attached/separated sidewalk configurations. An advisory note (R303.1) in this draft notes the benefits for pedestrians.

Cross slope provisions at midblock curb ramps (R303) have been revised in response to industry comment to permit warping to meet roadway grade. Similar changes have been made to technical provisions at pedestrian crossings (R305.2.2). Crossings of streets without stop control would be permitted a 1:20 maximum cross slope.

Running slope limits at crosswalks (R305.2.3) are maintained at 1:20 maximum in this draft. Many commenters noted that design practices that approach this limit in new construction may have to mill the roadway crown before resurfacing in order to retain usable crossings.

R208 Accessible Pedestrian Signals (technical provisions at R306). APS provisions in this draft differ only slightly from those of the June 2002 draft. Many commenters to the June 2002 draft expressed concerns about the costs of retrofitting intersections with APS, which is not required by these or prior proposals, which guide only new construction and alterations. Where new pedestrian signals are being installed or added, scoping in this document would require that they incorporate audible and vibrotactile features.

Comments from disability organizations and individuals to the June 2002 draft were diverse. Many who believed that retrofitting was required objected to what they understood to be excessive cost. And even those who did not support a general requirement that all future pedestrian signals incorporate audible and vibrotactile formats nevertheless saw the need for them at certain types of intersections including irregular crossings, lengthy crossings, and at complex intersections with multiple vehicle turning phases or leading pedestrian interval phasing. Although many responders noted the utility of non-visual cues, a clear majority of commenters who identified themselves as blind supported universal pedestrian signals.

R209 Protruding Objects (technical provisions at R401). Advisory notes have been added at several places in this document to remind users of the need to consider projections into the pedestrian circulation route when coordinating the placement of improvements, appurtenances, utilities, or street furniture. Comments from disability organizations and individuals identified blocked or compromised pedestrian routes as a major barrier to independent travel. Protruding objects provisions in this draft have been revised only to accommodate the new format and add advisory information.

R210 Pedestrian Signs (technical provisions at R409). An advisory note has been added to clarify requirements for visual legibility in signs that indicate sidewalk closure, pedestrian detour, and tourist route signage covered in MUTCD. Braille street name signage is required only on APS pedbuttons (R306.4.2).

Signage provisions in this draft have been revised only to accommodate the new format and add advisory information.

R211 Street Furniture (technical provisions at R307). Advisory notes have been added at several places in this document to remind users of the need to consider the dimensions and use of

pedestrian circulation routes when coordinating the placement of improvements, appurtenances, utilities, or street furniture. Comments from disability organizations and individuals identified blocked or compromised pedestrian routes as a major barrier to independent travel.

Street furniture provisions in this draft have been revised only to accommodate the new format and add advisory information.

R212 Bus Stops (technical provisions at R410.2). An advisory note has been added to clarify the difference between establishing a bus stop by installing signage (signage must comply with R210.2) and constructing a bus stop (boarding/alighting areas, if provided, must comply with R410, bus shelters with R410.2).

Bus stop provisions in this draft have been revised only to accommodate the new format and add advisory information.

R213 Stairways (technical provisions at R407). Stairway provisions in this draft have been revised only to accommodate the new format.

R214 Handrails (technical provisions at R408). Handrail provisions in this draft have been revised only to accommodate the new format and add an advisory note on alterations and protruding objects.

R215 Vertical Access (technical provisions in ADAAG). Vertical access provisions in this draft have been revised only to accommodate the new format and add an advisory note on elevator use in extremes of terrain.

R216 On-Street Parking (scoping at Table R216; technical provisions at R308). Table R216 in this draft has been adapted from the table in ADAAG based upon the overall number of spaces provided within a block (or analog). Commenters strongly objected to scoping based upon the numbers of parking spaces on a block face, which could, in many places, require very high numbers of spaces disproportionate to those required in lots.

Additionally, this draft clarifies when, in new construction or alterations, the presence of a sidewalk or border wider than 4.3 m (14 ft) can accommodate an access aisle that is indented into the curb for protected transfer space, a construction that is similar to that of an on-street loading zone provided at an office, hotel, convention center, arena, or airport (R308.2.1).

Advisory notes have been added at several places in this section to convey additional information about indented, end-of-block, perpendicular or angled spaces, and signage.

R218 Call Boxes (technical provisions at R309). Call box provisions in this draft have been revised only to accommodate the new format and add an advisory note at R309.1 about the applicability of accessible call box technology to other types of communications systems, such as on-street security systems.

R219 Transit Platforms (technical provisions at R414). Transit provisions from the ADA and ABA Accessibility Guidelines (204) have been newly incorporated in this draft.

R220 Escalators. Escalator provisions in this draft have been revised only to accommodate the new format.

R221 Detectable Warning Surfaces (technical provisions at R304). Transportation industry and State and local government agency commenters expressed concern about the durability, maintainability, and contrast of detectable warning materials required at curb ramps and blended transitions in the June 2002 draft. Recent research by several State departments of transportation and by the Transportation Research Board identified several high-performing products suitable for both new construction and alterations. Approximately 20 manufacturers now produce detectable warning products in metal, concrete, tile, pavers, resilient sheets, and membrane types. The FHWA is currently overseeing human factors research intended to test the contrast effectiveness of 13 different detectable warning colors when viewed by people who have low vision.

Comments from disability organizations and individuals were divided in much the same way as consumer comments on accessible pedestrian signals. Many expressed concern about cost but, valued detectable warnings as a way to provide a cue at certain locations such as pedestrian waiting areas at roadway medians, islands, and roundabout splitter islands and at low-slope blended transitions to street crossings. A majority of these commenters favored the June 2002 draft provision requiring detectable warnings at flush transitions between sidewalks and street crossings.

The rows of domes in the detectable warning material (technical provisions at R304.2.2) must be aligned with the path of wheelchair travel, which is required to be perpendicular to the grade break at the toe of the ramp to permit tracking between dome rows. On blended transitions, dome orientation is not significant.

A new advisory note (R304.1.1) covers the use of radial dome patterns.

Detectable warnings provisions in this draft have also been clarified with respect to their permitted setback from the grade break marking the face of a curb. One corner of the detectable warning must be within 205 mm (8 in) of the grade break; no other point on the leading edge of the detectable warning may be more than 1.5 m (5 ft) from the grade break (R304.2.1).

R222 Doors, Doorways, and Gates (technical provisions at R411). These provisions have been added to this draft from the ADA and ABA Accessibility Guidelines (2004). Because public sidewalks serve the entrances and other facilities of abutters covered by title III of the ADA, coordination of slope, cross slope, and maneuvering space requirements is typically required. In many places, developers provide sidewalk improvements as part of a project. State and local governments must include accessibility compliance in such work.

## **TECHNICAL ASSISTANCE Q&A FOR ALTERATIONS PROJECTS**

Alterations are projects planned for implementation by a jurisdiction. Program access obligations for existing facilities are not a part of the Board's accessibility guidelines, and the Board's responses to the following questions do not address program access issues (see title II of the ADA at 28 CFR 35.149 and 35.151).

## **CURB RAMPS**

**Question:** A multi-block length of roadway is being resurfaced. The corners have curb ramps that meet some but not all of the current specifications; for example the cross slope may be too steep or the curb ramps do not have detectable warnings. Must the curb ramps be reconstructed as part of the resurfacing project?

**Answer:** Yes, if it is technically feasible to provide complying features. The work should be done at the same time the resurfacing is being done.

**Question:** New curb ramps are being installed at an existing developed corner. New construction standards require the curb ramp to be within the crosswalk, but an existing underground utility vault is located where the ramp should be. Must the utility vault be moved?

**Answer:** The scope of this project will determine the answer. If utilities are being moved for other reasons within the project limits, it may be possible to alter or relocate the vault. If project construction will not involve the vault, it may be technically infeasible to locate the curb ramp optimally. It may be possible to widen the crosswalk markings to include the curb ramp.

**Question:** What if the curb ramp can be placed over the vault, but the access cover would be located on the curb ramp?

**Answer:** If the access cover must be located on the curb ramp, it should meet the surface requirements of the pedestrian access route.

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

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

## **SIDEWALKS**

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

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

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

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



**Question:** A city is rebuilding a sidewalk along Main Street. The distance between the edge of the right-of-way and the existing road does not provide sufficient room for a 4-foot-wide pedestrian access route. Does the municipality have to acquire more right-of-way on private property or narrow the roadway to provide the necessary space?

**Answer:** No, these guidelines do not require the municipality to obtain right-of-way or to narrow roadways. A municipality may decide to do either for other reasons (for instance, the roadway may be narrowed as a larger traffic calming effort or as part of a larger project in the roadway).

## **SIGNALS**

**Question:** Curb ramps are being installed at a signalized intersection as part of a roadway improvement project. Existing pedestrian signals are pedestrian actuated but the pushbuttons are not accessible or placed in accessible locations. Must accessible pedestrian signals be installed at the existing pedestrian signals?

**Answer:** If work on pedestrian pushbuttons is not planned as part of this project, there is no need to expand its scope to include APS.

**Question:** The pedestrian signals in a corridor are being replaced with new combined count-down signals. Must APS be included in the new system?

**Answer:** Yes. The installation of a new system is an alteration that requires compliance with the new construction guidelines to the maximum extent feasible. However, the addition of a new feature, such as a countdown face or larger display, to an existing installed system does not require that the scope of work be expanded to include other features.

**Question:** Count-down signal displays are being added to the existing pedestrian signal heads at an intersection, but the software and signal controller are not being altered. Must APS be installed?

**Answer:** No, simply adding a display to the existing WALK/DON'T WALK signal would not involve the system changes needed to implement APS.

**Question:** An intersection is being signalized and will include APS. The installation of stub poles on the existing sidewalks to mount the new pedbuttons will not involve disturbing the roadway or sidewalk. Must curb ramps be installed if none existed?

**Answer:** No. This is a project to install pedbuttons; it is not an alteration to the sidewalk or street that would require the installation of curb ramps, as required by 28 CFR 35.151(e).

**Question:** The pushbutton on an existing pedestrian signal is being replaced with a sturdier model. Must APS be installed?

**Answer:** No, but the new pushbutton must meet applicable requirements (i.e., location, height, operable parts).

**Question:** An intersection with sidewalks and pedestrian signals is being widened to include a right turn lane. Must APS be installed as a consequence of the widening project?

**Answer:** No, installing APS is not within scope of the project. Any new pedestrian pushbuttons installed in the course of the work must meet applicable requirements. Note that this project is an alteration to the street and sidewalk and thus must provide compliant curb ramps.

#### **GENERAL**

**Question:** The local public transit agency has designated a bus stop by placing a sign in the ground along a roadway with no sidewalk. Must a concrete or other improved surface be installed?

**Answer:** No, the placement of a bus stop sign alone does not require other site improvements. When other site improvements are provided they should meet the applicable access requirements.

## CHAPTER R1: APPLICATION AND ADMINISTRATION

### R101 Purpose

**R101.1 General.** This document contains scoping and technical requirements for accessibility to facilities for pedestrian circulation and use located in the public right-of-way. Advisory notes are for informational purposes only. These requirements are to be applied during the design, construction, additions to, and alterations of facilities in the public right-of-way to the extent required by regulations issued by Federal agencies.

*Advisory R101.1 General. Access requirements are also addressed in the Manual on Uniform Traffic Control Devices (MUTCD), FHWA/US DOT, 2003 (<http://mutcd.fhwa.dot.gov>). MUTCD is a reference standard in this guideline.*

*Key transportation industry guidance documents also address accessibility in the public right-of-way and can provide useful information on design and construction. They include 'Guide for the Planning, Design, and Operation of Pedestrian Facilities', American Association of State Highway and Transportation Officials, July 2004 ([www.aashto.org](http://www.aashto.org)) and 'Designing Sidewalks and Trails for Access', FHWA/US DOT September 2001 (<http://www.fhwa.dot.gov/environment/sidewalk2/index.htm>).*

**R101.2 Effect on Existing Facilities.** This document does not address existing facilities unless they are included in the scope of an alteration undertaken at the discretion of a covered entity. The U.S. Department of Justice and U.S. Department of Transportation have issued and enforce separate regulations for existing facilities subject to their requirements for program accessibility under the Americans with Disabilities Act.

*Advisory R101.2 Effect on Existing Facilities. The U.S. Department of Justice ADA regulations require that the usability of accessible features be maintained (28 CFR §35.133 and §36.211).*

*Federal agencies and entities receiving federal funds may also have an obligation for program accessibility under section 504 of the Rehabilitation Act of 1973 as amended. For example, state departments of transportation that receive Federal-aid Highway funds must comply with program accessibility requirements issued by the U.S. Department of Transportation at 49 CFR part 27.*

### R102 Equivalent Facilitation

Nothing in these requirements prevents the use of designs, products, or technologies as alternatives to those prescribed, provided they result in substantially equivalent or greater accessibility and usability.

## **R103 Conventions**

**R103.1 Dimensions.** Dimensions that are not stated as "maximum" or "minimum" are absolute.

**R103.1.1 Construction and Manufacturing Tolerances.** All dimensions are subject to conventional industry tolerances except where the requirement is stated as a range with specific minimum and maximum end points.

*Advisory R103.1.1 Construction and Manufacturing Tolerances. Conventional industry tolerances recognized by this provision include those for field conditions and those that may be a necessary consequence of a particular manufacturing process. Recognized tolerances are not intended to apply to design work.*

*Information on specific tolerances may be available from industry or trade organizations, code groups and building officials, and published references.*

**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 shall be permitted.

**R103.3 Figures.** Unless specifically stated otherwise, figures are provided for informational purposes only.

**R103.4 Units of Measurement.** Measurements are presented in this document in both metric and U.S. customary units and were developed independently within each system. The relationship between the metric and U.S. customary values is neither an exact (soft) conversion nor a completely rationalized (hard) conversion. The metric values are those that would have been used had the requirements been presented exclusively in metric units; the U.S. customary values are those that would have been used had the requirements been presented exclusively in U.S. customary units. Therefore, the user is advised to work entirely in one system and not attempt to convert directly between the two.

## **R104 Referenced Guidelines and Standards**

**R104.1 General.** The guidelines and 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 these guidelines and standards for incorporation by reference in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies of the referenced guidelines and standards may be inspected at the Architectural and Transportation Barriers Compliance Board, 1331 F Street, NW, Suite 1000, Washington, DC 20004; at the Department of Justice, Civil Rights Division,



Disability Rights Section, 1425 New York Avenue, NW, Washington, DC; at the Department of Transportation, 400 Seventh Street, SW, Room 10424, Washington DC; or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call (202) 741-6030, or go to:

[http://www.archives.gov/federal\\_register/code\\_of\\_federal\\_regulations/ibr\\_locations.html](http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html).

**R104.2 Referenced Guidelines and Standards.** The specific edition of the guidelines and standards listed below are referenced in this document. Where differences occur between this document and the reference, this document applies.

**R104.2.1 MUTCD.** Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD), 2003 edition. Copies of the referenced standard may be obtained on-line from the Federal Highway Administration at <http://mutcd.fhwa.dot.gov>. (see R205 and R302.4).

**R104.2.2 ANSI/BHMA.** Copies of the referenced standards may be obtained from the Builders Hardware Manufacturers Association, 355 Lexington Avenue, 17<sup>th</sup> floor, New York, NY 10017 (<http://www.buildershardware.com>).

ANSI/BHMA A156.10-1999 American National Standard for Power Operated Pedestrian Doors (see R411.3).

ANSI/BHMA A156.19-1997 American National Standard for Power Assist and Low Energy Power Operated Doors (see R411.3).

ANSI/BHMA A156.19-2002 American National Standard for Power Assist and Low Energy Power Operated Doors (see R411.3).

**R104.2.3 ASME.** Copies of the referenced standard may be obtained from the American Society of Mechanical Engineers, Three Park Avenue, New York, NY 10016 (<http://www.asme.org>).

ASME A17.1-2000 Safety Code for Elevators and Escalators, including ASME A17.1a-2002 Addenda and ASME A17.1b-2003 Addenda (see R220; R305.5.5).

## **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 Guidelines and Standards.** Terms not defined in R105.5 or in regulations issued by Federal agencies, but specifically defined in a referenced guideline or standard, shall have the specified meaning from the referenced guideline or standard unless otherwise stated.

**R105.3 Undefined Terms.** The meaning of terms not specifically defined in R105.5 or in regulations issued by Federal agencies or in referenced guidelines and 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 part.

**Accessible Pedestrian Signal.** 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.

**Blended Transition.** A connection with a grade of 5 percent or less between the level of the pedestrian walkway and the level of the crosswalk.

**Channelization.** The separation or regulation of conflicting traffic movements into definite paths of travel by devices such as cones, tubular markers, vertical panels, drums, barricades, temporary raised islands and barriers, to facilitate the orderly movements of traffic, to separate vehicles and pedestrians, and to protect them from construction or hazardous areas.

**Channelized Intersection.** An at-grade intersection in which traffic is directed into definite paths by islands.

**Crosswalk.** (Shall have the meaning in MUTCD Section 1A13.18).

**Cross Slope.** The grade that is perpendicular to the direction of accessible pedestrian travel. On a sidewalk, shoulder, or blended transition, it is measured perpendicular to the curb line or edge of the street or highway; on a curb ramp, it is measured perpendicular to the running grade.

**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 perpendicular or parallel ramp and its landing that cuts through or is built up to the curb.

**Detectable Warning.** A surface feature of truncated dome material built in or applied to the walking surface to advise of an upcoming change from pedestrian to vehicular way.

**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 a public right-of-way.

**Grade Break.** The meeting line of two adjacent surface planes of different grade.

**Highway.** (Shall have the meaning in MUTCD Section 1A13.32).

**Intersection.** (Shall have the meaning in MUTCD Section 1A13.39).

**Island.** (Shall have the meaning in MUTCD Section 1A13.40).

**Median.** (Shall have the meaning in MUTCD Section 1A13.48).

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

**Pedestrian.** (Shall have the meaning in MUTCD Section 1A13.55).

**Pedestrian Access Route.** A continuous and unobstructed walkway within a pedestrian circulation path that provides accessibility.

**Pedestrian Circulation Path.** A prepared exterior or interior way of passage provided for pedestrian travel.

**Pushbutton Locator Tone.** A repeating sound that identifies the pushbutton location and indicates the need to actuate pedestrian timing.

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

**Roundabout Intersection.** (Shall have the meaning in MUTCD Section 1A13.68).

**Running Slope.** The grade that is parallel to the direction of travel, expressed as a ratio of rise to run or as a percent.

**Sidewalk.** (Shall have the meaning in MUTCD Section 1A13.73).

**Splitter Island.** A flush or raised island that separates entering and exiting traffic in a roundabout intersection.

**Street.** (Shall have the meaning in MUTCD Section 1A13.84).

**Street Furniture.** Sidewalk equipment or furnishings.

**Vibrotactile.** A vibrating surface, located on the accessible pedestrian signal button, that communicates information through touch.

**Walk Interval.** That phase of a traffic signal cycle during which the pedestrian is to begin crossing, typically indicated by a WALK message or the walking person symbol and its audible equivalent.

**Walkway.** The continuous portion of the pedestrian access route that is connected to street crossings by curb ramps or blended transitions.

## CHAPTER R2: SCOPING REQUIREMENTS

### R201 Application

**R201.1 Scope.** All newly designed and newly constructed facilities located in the public right-of-way shall comply with these requirements. All altered portions of existing facilities located in the public right-of-way shall comply with these requirements to the maximum extent feasible.

*Advisory R201.1 Scope. This document (see R101.1 General) covers facilities for pedestrian circulation and use in the right-of-way. Examples of facilities include, but are not limited to, walkways and sidewalks, street or highway shoulders where pedestrians are not prohibited, crosswalks, islands and medians, overpasses and underpasses, on-street parking spaces and loading zones, and equipment, signals, signs, street furniture, and other appurtenances provided for pedestrians. Examples of facilities not included are manholes and utility vaults.*

*These requirements are to be applied to all areas of a facility within the scope or limits of the planned project unless expressly exempted or limited with respect to the number of multiple elements required to be accessible. For example, not all benches are required to be accessible; those that are not required to be accessible are not required to comply with these requirements or to be served by a pedestrian access route.*

**R201.2 Temporary and Permanent Facilities.** These requirements shall apply to temporary and permanent facilities.

*Advisory R201.2 Temporary and Permanent Facilities. Temporary facilities covered by these requirements include, but are not limited to, temporary routes around work zones, portable toilets in the public right-of-way, sidewalk vending facilities, street fair booths, performance stages and reviewing stands, and the pedestrian access routes that serve them. As permitted in R203.1.1, structures and equipment directly associated with the actual processes of construction are not required to be accessible.*



*Elements are often placed on a sidewalk without coordination by different agencies or entities. The U.S. Department of Justice ADA regulations require that the usability of accessible features be maintained (28 CFR §35.133 and §36.211).*

**R201.3 Requirements for Buildings and Structures.** Buildings, structures, and similar facilities constructed in the public right-of-way but not specified in this document shall comply with the applicable requirements in 36 CFR part 1191 (the ADA and ABA Accessibility Guidelines).

**R201.3.1 Buildings and Structures Covered by the Americans with Disabilities Act.** Buildings, structures, and similar facilities covered by the Americans with Disabilities Act (ADA) shall comply with Appendices B and D to 36 CFR part 1191 (the ADA and ABA Accessibility Guidelines).

**R201.3.2 Buildings and Structures Covered by the Architectural Barriers Act.** Buildings, structures, and similar facilities covered by the Architectural Barriers Act (ABA) shall comply with Appendices C and D to 36 CFR part 1191.

## **R202 Alterations and Additions to Existing Facilities**

**R202.1 General.** Additions and alterations to existing facilities shall comply with R202.

*Advisory R202.1 General. Alterations include, but are not limited to, renovation, rehabilitation, reconstruction, historic restoration, resurfacing of circulation paths or vehicular ways, or changes or rearrangement of structural parts or elements of a facility.*

*The U.S. Department of Justice Title II regulation at 28 CFR 35.151(e) requires that curb ramps be installed whenever pedestrian walkways on sidewalks and across streets are newly constructed or altered. A 1993 case, Kinney v. Yerusalim, 9 F.3d 1067 (3d Cir. 1993), cert. denied, 511 U.S. 1033 (1994), held that resurfacing of a street constitutes an alteration that requires the installation of curb ramps (for text see <http://www.ada.gov/deldot.htm>).*

*Pavement patching and liquid-applied sealing, lane restriping, and short-term maintenance activities are not alterations.*

**R202.1.1 Transitional Segments.** Transitional segments connecting to existing unaltered segments shall comply with R301 to the maximum extent feasible.

*Advisory R202.1.1 Transitional Segments. It is often possible to construct transitional segments that blend between existing undisturbed facilities and newly-altered elements. This may permit the work of the alteration to more nearly meet the new construction standards. At a later time, when other walkway segments are altered, the non-complying transitional segments can be removed and replaced with complying work.*

**R202.1.2 Added Elements.** Where elements are added and the circulation path is not altered, a pedestrian access route is not required.

*Advisory R202.1.2 Added Elements. This provision does not eliminate the requirements specified for a particular element. For example, a bench that is installed on an existing sidewalk must have the necessary clearances and clear floor space specified in section 307. Where possible added elements should connect to an existing pedestrian access route.*

**R202.2 Additions.** Each addition to an existing facility shall comply with the requirements for new construction. Where an existing pedestrian circulation path is extended, the extension shall contain a pedestrian access route complying with R301.

**R202.3 Alterations.** Where existing elements or spaces are altered, each altered element or space within the limits or scope of the project shall comply with the applicable requirements for new construction to the maximum extent feasible.

*Advisory R202.3 Alterations. From the U.S. Department of Justice title III regulation at 28 CFR 36.402 Alterations: "The phrase 'to the maximum extent feasible,' ... applies to the occasional case where the nature of an existing facility makes it virtually impossible to comply fully with applicable accessibility standards through a planned alteration. In these circumstances, the alteration shall provide the maximum physical accessibility feasible. Any altered features of the facility that can be made accessible shall be made accessible. If providing accessibility in conformance with this section to individuals with certain disabilities (e.g., those who use wheelchairs) would not be feasible, the facility shall be made accessible to persons with other types of disabilities (e.g., those who use crutches, those who have impaired vision or hearing, or those who have other impairments)."*

*Existing conditions (e.g., underlying terrain, right-of-way availability, underground structures, adjacent developed facilities, drainage, the presence of a notable natural or historic feature) may limit choices in an alterations project. In determining the maximum feasible accessibility that can be achieved for pedestrians with disabilities within a given alterations project, covered entities may consider constructability limits commensurate with those of the project as a whole.*

*There is no 'path-of-travel' obligation in these guidelines; covered entities shall apply the guidelines to achieve the maximum feasible accessibility within the limits of the planned project boundary or scope. However, 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 it, accessible. When undertaking right-of-way alterations, jurisdictions should consult their transition plans to determine if related work has been identified as needed to achieve program accessibility in existing facilities at the same location.*

*Most rights-of-way work occurs as an alteration in a complex environment also regulated for vehicle operation and safety and subject to the well-established industry practice of applying 'engineering judgment'. These techniques can also be used to evaluate the feasibility of accessibility solutions.*

**R202.3.1 Prohibited Reduction in Required Access.** 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 R202.3.1 Prohibited Reduction in Access. Sidewalk improvements that correct existing excessive cross slope should be carefully planned to avoid the imposition of barriers elsewhere, as, for example, creating excessive slope in a curb ramp or adding a step at an existing building entrance. Solutions that have been successfully implemented include:*

- 1) split sidewalks that serve entrances and roadway at separate levels;*
- 2) sidewalk widths of greater cross slope at street edge, with a pedestrian access route at lesser cross slope along building entrances;*
- 3) a pedestrian access route along the curb, with ramped entrances along the shop fronts.*

*Where facilities are newly-constructed or altered along an existing sidewalk, it may not always be possible to provide the required level landing at an entrance or other feature required to be accessible without altering the sidewalk. Often, the jurisdiction will require the developer of a new or altered facility on a site served by the sidewalk to redesign and replace the public sidewalk as a part of the permit for construction. Careful coordination between public and private planning is the usual practice.*

**R202.3.2 Extent of Application.** An alteration of an existing element, space, or area of a facility shall not impose a requirement for accessibility greater than required for new construction.

**R202.3.3 Alterations to Qualified Historic Facilities.** Where the State Historic Preservation Officer or Advisory Council on Historic Preservation determines that compliance with these requirements would threaten or destroy the historic significance of a qualified facility or element, compliance shall be required to the maximum extent that does not threaten or destroy the historic significance.

*Advisory R202.3.3 Alterations to Qualified Historic Facilities. It is the element or facility subject to the alteration which must have historic significance. Furthermore, it must be determined that compliance with these requirements would threaten or destroy the historic significance, not merely alter the appearance.*

**R202.3.3.1 Historic District.** Location of the facility or element within an historic district is not a sufficient condition for qualification as an historic facility.

*Advisory R202.3.3.1 Historic District. Altered street crossings, sidewalks, and pedestrian facilities that are not historic but are merely located in historic areas must meet new construction requirements to the maximum extent feasible.*

**R202.3.3.2 Reproductions or Replications.** Reproductions or replications of historic facilities shall not qualify as historic facilities.

### **R203 General Exceptions**

**R203.1 General.** Facilities, sites, spaces, and elements are exempt from these requirements to the extent specified by R203.

**R203.1.1 Construction Sites.** Structures and sites directly associated with the actual processes of construction, including but not limited to, scaffolding, bridging, materials hoists, materials storage, portable toilet units provided for use exclusively by construction personnel, and construction trailers, shall not be required to comply with this part.

**R203.1.2 Limited Access Spaces.** Spaces accessed only by ladders, catwalks, crawl spaces, or very narrow passageways shall not be required to comply with this part.

**R203.1.3 Machinery Spaces.** Spaces or elements frequented only by service personnel for maintenance, repair, or occasional monitoring of equipment shall not be required to comply with this part. Machinery spaces include, but are not limited to, elevator pits or elevator penthouses; mechanical, electrical or communications equipment cabinets and vaults; electric substations and transformer vaults; and highway and tunnel utility facilities.

**R203.1.4 Single Occupant Structures.** Single occupant structures accessed only by passageways below grade or elevated above standard curb height, including but not limited to toll booths that are accessed only by underground tunnels, shall not be required to comply with this part.

### **R204 Pedestrian Access Route**

Pedestrian circulation paths shall contain a pedestrian access route complying with R301 which connects to facilities, elements, and spaces required to be accessible by Chapter R2 and to accessible routes required to connect to public streets and sidewalks by section 206.2.1 of appendix B to 36 CFR part 1191 (the ADA and ABA Accessibility Guidelines) or section F206.2.1 of appendix C of 36 CFR 1191 (the ADA and ABA Accessibility Guidelines). Where a pedestrian circulation path is provided in the street, along a highway, or within a shoulder, it shall contain a pedestrian access route.



*Advisory R204 Pedestrian Access Route. The pedestrian access route is a portion of the general pedestrian circulation path, which may include walkways, sidewalks, street crossings and crosswalks, and overpasses and underpasses, courtyards, elevators, platform lifts, stairs, ramps and landings. Where sidewalks are not provided, pedestrian circulation paths maybe provided in the street, highway, or shoulder unless pedestrian use is prohibited. This provision does not require a pedestrian access route if a pedestrian circulation path is not provided. -*

### **R205 Alternate Pedestrian Access Route**

When an existing pedestrian access route is blocked by construction, alteration, maintenance, or other temporary conditions, an alternate pedestrian access route complying to the maximum extent feasible with R301, R302, and Section 6D.01 and 6D.02 of the MUTCD (incorporated by reference; see R104.2.1) shall be provided.

*Advisory R205 Alternate Pedestrian Access Route. Same-side travel is preferred because it does not increase pedestrian exposure and risk of accident consequent upon added street crossings. A route that uses vehicle lane width may be shorter, safer, and more usable than one that requires two street crossings, even if the roadway surface is imperfect. Part 6D.01 of the MUTCD requires alternate routes to provide the best elements of accessibility provided in the pedestrian circulation route before its disruption.*

### **R206 Pedestrian Crossings**

Where a pedestrian street or rail track crossing is provided, it shall contain a pedestrian access route complying with R301 and the applicable provisions of R305. Where a pedestrian rail crossing is not contained within a street or highway, a detectable warning shall be provided in compliance with R304.

*Advisory R206 Pedestrian Crossings. When tracks are located in a street or highway that has a pedestrian route, the detectable warnings at the curb ramps make a second set of detectable warnings at the rail unnecessary in most applications. When rail tracks are not associated with a street or highway, they must have detectable warnings across the pedestrian access route on either side.*

### **R207 Curb Ramps and Blended Transitions**

A curb ramp or blended transition complying with R303, or a combination of curb ramps and blended transitions, shall connect the pedestrian access route to each pedestrian street crossing within the width of each crosswalk.

### **R208 Accessible Pedestrian Signals (APS)**

Where pedestrian signals are provided at pedestrian street crossings, they shall comply with R306.

### **R209 Protruding Objects**

Protruding objects along or overhanging any portion of a pedestrian circulation path shall comply with R401 and shall not reduce the clear width required for pedestrian access routes.

*Advisory R209 Protruding Objects. Banners, awnings, tree branches, and temporary street or highway signs may also be hazards if not placed or maintained properly.*

## **R210 Pedestrian Signs**

**R210.1 General.** Signs designed primarily for pedestrian use shall comply with R210.

**R210.2 Bus Route Identification.** Bus route identification signs shall comply with R409.5.1 through R409.5.4, and R409.5.7 and R409.5.8. In addition, to the maximum extent practicable, bus route identification signs shall comply with R409.5.5. Bus route identification signs located at bus shelters shall provide raised and braille characters complying with R409.2, and shall have rounded corners. Signs shall not be required to comply with R409.2 where audible signs are user- or proximity-actuated or are remotely transmitted to a portable receiver carried by an individual. Bus schedules, timetables and maps that are posted at the bus stop or bus shelter are not required to comply.

**R210.3 Directional, Informational, and Warning Signs.** Directional, informational, and warning signs shall comply with R409.5.

*Advisory R210.3 Directional, Informational, and Warning Signs. This provision applies legibility criteria to text signs. Examples of covered signs include, but are not limited to, sidewalk closure and pedestrian detour signing required by MUTCD, tourist information signing, and pedestrian route signing along an historic trail. Standard highway street-name signage is not covered by this part.*

*Braille identification of street names is a required feature where APS are provided (see R306).*

*A proximity-, -user-, or button-activated audible sign can provide this information in audible formats for pedestrians who don't read print. Such devices are now being manufactured for rights-of-way applications.*

## **R211 Street Furniture**

Street furniture intended for use by pedestrians and installed on or adjacent to a pedestrian circulation path shall comply with R307.

*Advisory R211 Street Furniture. This scoping applies usability and operability criteria to certain items intended for pedestrian use in the public right-of-way. Where multiple items of a single type are provided at a single location, only a proportion may be required to be accessible and to be located on a pedestrian access route. Types of street furniture for which usability and operational criteria are provided include elements such as drinking fountains; public telephones; public toilet facilities; and tables, counters, and benches in R211; parking meters in R308.6; bus stops and shelters in R212; and signage, including bus stop signage, in R210. Where applicable, usability and operability provisions shall be satisfied in the design and construction of other items installed on or along a public right-of-way for pedestrian use (see sections R307, R401, and R405).*

*Some items intended for pedestrian use are installed on private property bounded by a public right-of-way and are intended for use from the right-of-way. Such items include wall-mounted ATMs, overnight mail kiosks, and walk-up service windows. Other items may be placed within a public sidewalk under the terms of a public space permit, such as the tables, chairs, and enclosures used by sidewalk cafes and restaurants or sidewalk vending carts and machines. The ADA and ABA Accessibility Guidelines cover these street furniture items, which should not be permitted to intrude on the required pedestrian access route or to violate protruding objects provisions.*

*Some street furniture, such as fire hydrants, signal control boxes, signal and sign poles, and overhead awnings and signs, is not intended for pedestrian operation. These and similar items shall not intrude on the required pedestrian access route or violate protruding objects provisions (see sections R301 and R401).*

*The location of bicycle racks on a public sidewalk should consider their footprint in use, since a bicycle carelessly fixed to a rack can become a barrier to accessible travel along a pedestrian access route or a protruding object along it.*

*Careful coordination is required between agencies and divisions authorized to install items on and along sidewalks in order to avoid inadvertent conditions that may constitute barriers. The U.S. Department of Justice ADA regulations require that the usability of accessible features be maintained (28 CFR §35.133 and §36.211).*

## **R212 Bus Stops**

Where provided, bus boarding and alighting areas shall comply with R410. Where provided, bus shelters shall comply with R410.2.

*Advisory R212 Bus Stops. Where bus stops are marked along existing streets by the placement of signage, benches, or shelters, other features necessary to accessibility, such as surface improvements and curb ramps, will be subject to the program access requirements of the U.S. Department of Justice title II regulation at 28 CFR 35.151 or the U.S. Department of Transportation 504 regulation at 49 CFR Part 27. Transportation, public works, and transit agencies should consider including needed improvements in their transition plans and other program accessibility planning.*

*Furthermore, the placement of such items is subject to usability and protruding objects provisions that apply to street furniture. Bus stop benches and shelters shall not intrude into an existing pedestrian access route.*

*Signage required at bus stops is scoped at R210.2 Bus Route Identification.*

**R213 Stairways**

Where provided on a pedestrian circulation path, stairways shall comply with R407. Stairways shall not be part of a pedestrian access route.

**R214 Handrails**

Where provided, handrails shall comply with R408.

*Advisory R214 Handrails. It may not be feasible to install handrails with fully complying features on existing developed rights-of-way if the full horizontal handrail extension would narrow a required pedestrian access route or be a hazard to cross traffic. Handrail design should not constitute a protruding object (see R401).*

**R215 Vertical Access**

Where provided, elevators, limited-use/limited-application elevators, and platform lifts shall comply with the applicable requirements in section 407, 408, and 410 of Appendix D to 36 CFR part 1191 (the ADA and ABA Accessibility Guidelines) and shall provide for independent operation. Vertical access shall remain unlocked during the operating hours of the facility served.

*Advisory R215 Vertical Access. Elevators in public and private buildings accessible from the public right-of-way have been successfully used to provide low-effort routes between sidewalk levels in hilly terrain.*

**R216 On-Street Parking**

Where on-street parking is marked or metered, accessible parking spaces complying with R308 shall be provided on the block perimeter in accordance with Table R216.

*Advisory R216 On-Street Parking. Accessible on-street parking spaces are best located where the street has the least crown and grade and close to key destinations. Adjacent sidewalk space should be free of obstructions (including curb ramps) to permit deployment of a van side-lift.-*

<b>Table R216 Accessible Parking Spaces</b>	
<b>Total Number of Marked or Metered Parking Spaces on the Block Perimeter</b>	<b>Minimum Required Number of Accessible Parking Spaces</b>
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% of total

**R217 Passenger Loading Zones**

Where passenger loading zones are provided, a minimum of one passenger loading zone complying with R412 shall be provided in every continuous 30 m (100 ft) of loading zone space or fraction thereof.

**R218 Call Boxes**

Where provided, roadside call boxes shall comply with R309.

**R219 Transit Platforms**

Where provided, transit platforms shall comply with R414.

**R220 Escalators**

Where provided, escalators shall comply with sections 6.1.3.5.6 and 6.1.3.6.5 of ASME A17.1 (incorporated by reference; see 104.2.2).

**R221 Detectable Warning Surfaces**

Detectable warning surfaces shall comply with R304.

*Advisory R221 Detectable Warning Surfaces. Detectable warning surfaces are required where curb ramps, blended transitions, or landings provide a flush pedestrian connection to the street. Sidewalk crossings of residential driveways should not generally be provided with detectable warnings, since the pedestrian right-of-way continues across most driveway aprons and overuse of detectable warning surfaces should be avoided in the interests of message clarity. However, where commercial driveways are provided with traffic control devices or otherwise are permitted to operate like public streets, detectable warnings should be provided at the junction between the pedestrian route and the street.*

**R222 Doors, Doorways, and Gates**

Where provided, doors, doorways, and gates shall comply with R411.

**CHAPTER R3: TECHNICAL PROVISIONS**

**R301 Pedestrian Access Route**

**R301.1 General.** Pedestrian access routes shall comply with R301 and shall connect pedestrian elements and facilities required to be accessible.

**R301.2 Components.** Pedestrian access routes shall consist of one or more of the following components: walkways, ramps, curb ramps (excluding flared sides) and landings, blended transitions, crosswalks, and pedestrian overpasses and underpasses, elevators, and platform lifts. Stairways and escalators shall not be part of a pedestrian access route. All components of a pedestrian access route shall comply with the applicable portions of this document.

### **R301.3 Width.**

**R301.3.1 Continuous Width.** The minimum continuous and unobstructed clear width of a pedestrian access route shall be 1.2 m (4.0 ft), exclusive of the width of the curb.

*Advisory R301.3.1 Continuous Width. The pedestrian access route provides a minimum accessible route of passage within a sidewalk or other walkway that may not comprise the full width of the pedestrian circulation route, particularly in urban areas. Industry-recommended sidewalk widths can be found in 'Guide for the Planning, Design, and Operation of Pedestrian Facilities', American Association of State Highway and Transportation Officials, July 2004 ([www.aashto.org](http://www.aashto.org)). The minimum width must be maintained without obstruction.*

*Where a pedestrian access route turns or changes direction, it should accommodate the continuous passage of a wheelchair or scooter. As with street or highway design for vehicles, additional maneuvering width or length may be needed at recesses and alcoves, doorways and entrances, and along curved or angled routings, particularly where the grade exceeds 5%. Individual segments of pedestrian access routes should have a minimum straight length of 1.2 m (4.0 ft).*

*Street furniture, including fixed or movable elements such as newspaper and sales racks, cafe seating and tables, bus shelters, vender carts, sidewalk sculptures, and bicycle racks, shall not reduce the required width of the pedestrian access route.*

*Provisions for protruding objects apply across the entire width of the pedestrian circulation path, not just the pedestrian access route.*

**R301.3.2 Width at Passing Spaces.** Walkways in pedestrian access routes that are less than 1.5 m (5.0 ft) in clear width shall provide passing spaces at intervals of 61 m (200 ft) maximum. Pedestrian access routes at passing spaces shall be 1.5 m (5.0 ft) wide for a distance of 1.5m (5.0 ft).

**R301.3.3 Width at Elevators and Lifts.** The pedestrian access route at elevators and platform lifts shall be permitted to comply with the applicable requirements of section 407, 408, and 410 of Appendix D to 36 CFR part 1191 (the ADA and ABA Accessibility Guidelines).

**R301.3.4 Width at Doors, Doorways, and Gates.** The pedestrian access route through doors, doorways, and gates shall be permitted to comply with R411.2.3.

#### **R301.4 Walkway Grade and Cross Slope.**

**R301.4.1 Cross Slope.** The cross slope of the walkway of a pedestrian access route shall be 2 percent maximum.

**R301.4.2 Street or Highway Grade.** Where the walkway of a pedestrian access route is contained within a street or highway border, its grade shall not exceed the general grade established for the adjacent street or highway.

**R301.4.3 Supported Slope.** Where the walkway of a pedestrian access route is supported by a structure, it shall comply with R305.5.

*Advisory R301.4.3 Supported Slope. This provision covers pedestrian access routes on bridges, overpasses, underpasses and similar facilities.*

**R301.5 Surface.** The surface of the pedestrian access route shall be firm, stable and slip resistant.

*Advisory R301.5 Surface. The U.S. Department of Justice ADA regulations require that the usability of accessible features be maintained (28 CFR §35.133 and §36.211).-*

**R301.5.1 Vertical Alignment.** Vertical alignment shall be planar within curb ramp runs, blended transitions, landings, and gutter areas within the pedestrian access route, and within clear spaces required for accessible pedestrian signals, street furniture, and operable parts. Grade breaks shall be flush. Where the pedestrian access route crosses rail tracks at grade, the surface of the pedestrian access route shall be level and flush with the top of the rail at the outer edges of the rail. The surface between the rails shall be aligned with the top of the rail.

**R301.5.2 Surface Discontinuities.** Surface discontinuities shall not exceed 13 mm (0.50 in) maximum. Vertical discontinuities between 6.4 mm (0.25 in) and 13 mm (0.5 in) maximum shall be beveled at 1:2 minimum. The bevel shall be applied across the entire level change.

*Advisory R301.5.2 Surface Discontinuities. Surfaces with individual units laid out of plane and those that are heavily textured, rough, or chamfered, will greatly increase rolling resistance and will subject pedestrians who use wheelchairs, scooters, and rolling walkers to the stressful (and often painful) effects of vibration. It is highly desirable to minimize surface discontinuities; when discontinuities on the pedestrian access route are unavoidable, they should be widely separated.*

#### **R301.7 Horizontal Openings.**

**R301.7.1 Walkway Joints and Gratings.** Openings shall not permit passage of a sphere more than 13 mm (0.5 in) in diameter. Elongated openings shall be placed so that the long dimension is perpendicular to the dominant direction of travel.

**R301.7.2 Clearances at Elevator and Platform Lift Sills.** Clearances between elevator car platform sills and associated hoistways and between a platform lift sill and any landing shall comply with the applicable requirements in sections 407.4.3, 408.4.3, and 410.4 of Appendix D to 36 CFR part 1191 (the ADA and ABA Accessibility Guidelines).

~~**R301.7.3 Flangeway Caps at Non-Freight Rail Crossings.** Openings for wheel flanges at pedestrian crossings of non-freight rail track shall be 64 mm (2.5 in) maximum.~~

~~**R301.7.4 Flangeway Gaps at Freight Rail Crossings.** Openings for wheel flanges at pedestrian crossings of freight rail track shall be 75 mm (3 in) maximum.~~

## **R302 Alternate Circulation Path**

**R302.1 General.** Alternate circulation paths shall comply with R302 and shall contain a pedestrian access route complying with R301.

*Advisory R302.1 General. Temporary routes are alterations to an existing developed pedestrian environment and are required to achieve the maximum accessibility feasible under existing conditions.*

**R302.2 Location.** To the maximum extent feasible, the alternate circulation path shall be provided on the same side of the street as the disrupted route.

*Advisory R302.2 Location. Where it is not feasible to provide a same-side alternate circulation path and pedestrians will be detoured, section 6D.02 of the MUTCD specifies that the alternate path provide a similar level of accessibility to that of the existing disrupted route. This may include the incorporation of accessible pedestrian signals (APS), curb ramps, or other accessibility features.*

**R302.3 Protection.** Where the alternate circulation path is exposed to adjacent construction, excavation drop-offs, traffic, or other hazards, it shall be protected with a pedestrian barricade or channelizing device complying with R302.4.

*Advisory R302.3 Protection. When it is necessary to block travel at the departure curb to close a crosswalk that is disrupted by excavation, construction, or construction activity, care must be taken to preserve curb ramp access to the perpendicular crosswalk. This may require additional pedestrian channelization if only a single diagonal curb ramp*



*serves the corner.*

*Figures 6H-28 and 6H-29 of the MUTCD specify notification signage for pedestrian closings and detours. Audible signage triggered by proximity switches can provide information to pedestrians who do not use print signs.*

**R302.4 Pedestrian Barricades and Channelizing Devices.** Pedestrian barricades and channelizing devices shall be continuous, stable, and non-flexible and shall consist of a wall, fence, or enclosures specified in section 6F-58, 6F-63, and 6F-66 of the MUTCD (incorporated by reference; see R104.2.4).

**R302.4.1 Detectable Base.** A continuous bottom edge shall be provided 150 mm (6 in) maximum above the ground or walkway surface.

**R302.4.2 Height.** Devices shall provide a continuous surface or upper rail at 0.9 m (3.0 ft) minimum above the ground or walkway surface. Support members shall not protrude into the alternate circulation path.

### **R303 Curb Ramps and Blended Transitions**

**R303.1 General.** Curb ramps and blended transitions shall comply with R303.

*Advisory R303.1 General. Curb ramps can be a key source of wayfinding information for pedestrians who travel without vision cues if they are installed in-line with the direction of pedestrian travel at crossings. This is most easily accomplished by locating the ramp at the tangent point of the curb return, using either a small curb radius in an attached sidewalk or, in larger radii, a border or setback from the street edge. The Institute of Transportation Engineers ([www.ite.org](http://www.ite.org)) has undertaken an industry-wide effort to develop and standardize intersection plans that optimize wayfinding. The challenge for practitioners is to provide usability for pedestrians in wheelchairs and scooters with a rectangular ramp plan that can also be directional.*

**R303.2 Types.** Perpendicular curb ramps shall comply with R303.2.1 and R303.3; parallel curb ramps shall comply with R303.2.2 and R303.3; blended transitions shall comply with R303.2.3 and R303.3.

*Advisory R303.2 Types. This provision permits a combination of ramps and blended transitions.*

*It will sometimes be necessary to limit the run of a parallel or perpendicular ramp in order to avoid 'chasing grade' indefinitely. In new construction at standard curb heights, required level landings can provide a datum for measuring most curb ramp slopes.*

*Limiting new ramps to an 8.3% slope on steep routes will result in a slight increase in grade on the balance of the route, but will facilitate street crossing and a timely and manageable ascent to the sidewalk, particularly important when crossing in traffic. =*

**R303.2.1 Perpendicular Curb Ramps.** Perpendicular curb ramps shall 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.

**R303.2.1.1 Running Slope.** The running slope 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).

**R303.2.1.2 Cross Slope.** The cross slope at intersections shall be 2 percent maximum. The cross slope at midblock crossings shall be permitted to be warped to meet street or highway grade.

**R303.2.1.3 Landing.** A landing 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 landings and clear space. Running and cross slopes at intersections shall be 2 percent maximum. Running and cross slope at midblock crossings shall be permitted to be warped to meet street or highway grade.

**R303.2.1.4 Flares.** Flared sides with a slope of 10 percent maximum, measured parallel to the curb line, shall be provided where a pedestrian circulation path crosses the curb ramp.

*Advisory R303.2.1.4 Flares. Sides of ramps may be returned, providing useful directional cues, if protected from cross travel by landscaping, street furniture, poles, or equipment.*

**R303.2.2 Parallel Curb Ramps.** Parallel curb ramps shall comply with R303.2.2, and shall have a running slope that is in-line with the direction of sidewalk travel.

**R303.2.2.1 Running Slope.** The running slope 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).

**R303.2.2.2 Cross Slope.** The cross slope shall be 2 percent maximum.

**R303.2.2.3 Landing.** A landing 1.2 m (4.0 ft) minimum by 1.2 m (4.0 ft) minimum shall be provided at the bottom of the ramp run and shall be permitted to overlap other landings and clear floor or ground space. Running slope and cross slopes at intersections shall be 2 percent maximum. Running and cross slope at midblock crossings shall be permitted to be warped to meet street or highway grade.

**R303.2.2.4 Diverging Sidewalks.** Where a parallel curb ramp does not occupy the entire width of a sidewalk, drop-offs at diverging segments shall be protected.

**R303.2.3 Blended Transitions.** Blended transitions shall comply with R303.3. Running slope shall be 5 percent maximum and cross slope shall be 2 percent maximum.

**R303.3 Common Elements.** Curb ramps and blended transitions shall comply with R303.3.

**R303.3.1 Width.** The clear width of landings, blended transitions, and curb ramps, excluding flares, shall be 1.2 m (4.0 ft) minimum.

**R303.3.2 Detectable Warnings.** Detectable warning surfaces complying with R304 shall be provided, where a curb ramp, landing, or blended transition connects to a street.

**R303.3.3 Surfaces.** Surfaces of curb ramps, blended transitions, and landings shall comply with R301. Gratings, access covers, and other appurtenances shall not be located on curb ramps, landings, blended transitions, and gutters within the pedestrian access route.

**R303.3.4 Grade Breaks.** Grade breaks at the top and bottom of perpendicular curb ramps shall be perpendicular to the direction of ramp run. At least one end of the bottom grade break shall be at the back of curb. Grade breaks shall not be permitted on the surface of curb ramps, blended transitions, landings, and gutter areas within the pedestrian access route. Surface slopes that meet at grade breaks shall be flush.

**R303.3.5 Counter Slopes.** The counter slope of the gutter or street at the foot of a curb ramp, landing, or blended transition shall be 5 percent maximum.

**R303.3.6 Clear Space.** Beyond the curb face, a clear space of 1.2 m (4.0 ft) minimum by 1.2 m (4.0 ft) minimum shall be provided within the width of the crosswalk and wholly outside the parallel vehicle travel lane.

## **R304 Detectable Warning Surfaces**

**R304.1 General.** Detectable warnings shall consist of a surface of truncated domes aligned in a square or radial grid pattern and shall comply with R304.

**R304.1.1 Dome Size.** Truncated domes in a detectable warning surface shall have a base diameter of 23 mm (0.9 in) minimum to 36 mm (1.4 in) maximum, a top diameter of 50 percent of the base diameter minimum to 65 percent of the base diameter maximum, and a height of 5 mm (0.2 in).

*Advisory R304.1.1 Dome Size. Where domes are arrayed radially, they may differ in diameter within the ranges specified.*

**R304.1.2 Dome Spacing.** Truncated domes in a detectable warning surface 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.

*Advisory R304.1.2 Dome Spacing. Where domes are arrayed radially, they may differ in center-to-center spacing within the range specified.*

**R304.1.3 Contrast.** Detectable warning surfaces shall contrast visually with adjacent gutter, street or highway, or walkway surface, either light-on-dark or dark-on-light.

*Advisory R304.1.3 Contrast. Contrast may be provided on the full ramp surface but should not extend to the flared sides. Many pedestrians use the visual contrast at the toe of the ramp to locate the curb ramp opening from the other side of the street.*

**R304.1.4 Size.** Detectable warning surfaces shall extend 610 mm (24 in) minimum in the direction of travel and the full width of the curb ramp (exclusive of flares), the landing, or the blended transition.

## **R304.2 Location and Alignment.**

**R304.2.1 Perpendicular Curb Ramps.** Where both ends of the bottom grade break complying with R303.3.4 are 1.5 m (5.0 ft) or less from the back of curb, the detectable warning shall be located on the ramp surface at the bottom grade break. Where either end of the bottom grade break is more than 1.5 m (5.0 ft) from the back of curb, the detectable warning shall be located on the lower landing.



*Advisory R304.2.1 Perpendicular Curb Ramps. Detectable warnings are intended to provide a tactile equivalent underfoot of the visible curbline; those placed too far from the street edge because of a large curb radius may compromise effective crossing analysis.*

**R304.2.2 Landings and Blended Transitions.** The detectable warning shall be located on the landing or blended transition at the back of curb.

**R304.2.3 Alignment.** The rows of truncated domes in a detectable warning surface shall be aligned to be perpendicular or radial to the grade break between the ramp, landing, or blended transition and the street.

*Advisory R304.2.3 Alignment. Where a ramp, landing, or blended transition provides access to the street continuously around a corner, the vertical rows of truncated domes in a detectable warning surface should be aligned to be perpendicular or radial to the grade break between the ramp and the street for a 1.2 meter-wide (4.0 ft) width for each crosswalk served.*

**R304.2.3 Rail Crossings.** The detectable warning surface shall be located so that the edge nearest the rail crossing is 1.8 m (6 ft) minimum and 4.6 m (15 ft) maximum from the centerline of the nearest rail. The rows of truncated domes in a detectable warning surface shall be aligned to be parallel with the direction of wheelchair travel.

## **R305 Pedestrian Crossings**

**R305.1 General.** Pedestrian crossings shall comply with R305.

**R305.2 Crosswalks.** Crosswalks shall comply with R305.2 and shall contain a pedestrian access route that connects to departure and arrival walkways through any median or pedestrian refuge island.

**R305.2.1 Width.** Marked crosswalks shall be 1.8 m (6 ft) wide minimum.

**R305.2.2 Cross Slope.**

**R305.2.2.1 Crossings with Stop Control.** The cross slope shall be 2 percent ~~maximum~~ desirable.

**R305.2.2.2 Crossings without Stop Control.** The cross slope shall be 5 percent ~~maximum~~ desirable.

**R305.2.2.3 Midblock Crossings.** The cross slope at midblock crossings shall be permitted to be warped to meet street or highway grade.

**R305.2.3 Running Slope.** The running slope shall be 5 percent maximum, measured parallel to the direction of pedestrian travel in the crosswalk.

**R305.3 Pedestrian Signal Phase Timing.** All pedestrian signal phase timing shall be calculated using a pedestrian walk speed of 1.1 m/s (3.5 ft/s) maximum. The crosswalk distance used in calculating pedestrian signal phase timing shall include the entire length of the crosswalk.

**R305.4 Medians and Pedestrian Refuge Islands.** Medians and pedestrian refuge islands in crosswalks shall comply with R305.4 and shall contain a pedestrian access route, including passing space, complying with R301 and connecting to each crosswalk.

**R305.4.1 Length.** Medians and pedestrian refuge islands shall be 1.8 m (6.0 ft) minimum in length in the direction of pedestrian travel.

*Advisory R305.4.1 Length. The edges of cut-throughs and curb ramps are useful as cues to the direction of a crossing. This should be considered when planning an angled route through a median or island. Curb ramps in medians and islands can add difficulty to the crossing for some users. There are many factors to consider when deciding whether to ramp or cut-through a median or island. Those factors may include slope and cross slope of road, drainage, and width of median or island.*

**R305.4.2 Detectable Warnings.** Medians and pedestrian refuge islands shall have detectable warnings complying with R304 at curb ramps and blended transitions. Detectable warnings at cut-through islands shall be located at the curbline in-line with the face of curb and shall be separated by a 61 cm (2.0 ft) minimum length of walkway without detectable warnings. Where the island has no curb, the detectable warning shall be located at the edge of roadway.

**R305.5 Pedestrian Overpasses and Underpasses.** Pedestrian overpasses and underpasses shall comply with R305.5.

**R305.5.1 Pedestrian Access Route.** Pedestrian overpasses and underpasses shall contain a pedestrian access route complying with R301.

**R305.5.2 Approach.** Where the approach slope exceeds 5 percent, the approach shall be a ramp 1.2 m (4.0 ft) minimum in width complying with R406 or an elevator, a limited use/limited application elevator, or platform lift complying with the applicable requirements in section 407, 408, and 410 of Appendix D to 36 CFR part 1191 (the ADA and ABA Accessibility Guidelines) and providing for independent operation.

*Advisory R305.5.2 Approach. This provision leaves the decision of type of accessible vertical access up to the jurisdiction. Long ramps can present difficulties for some persons with disabilities and may require snow clearance. Elevators or lifts entail a maintenance obligation.*

**R305.5.3 Stairs.** Stairs shall comply with R407.

**R305.5.4 Escalators.** Escalators shall comply with sections 6.1.3.5.6 and 6.1.3.6.5 of ASME A17.1 (incorporated by reference; see R104.2.3) and shall have a clear width of 82 cm (32 in) minimum.

**R305.6 Roundabout Intersections.** Where pedestrian facilities are provided at roundabout intersections, they shall comply with R305.6 and shall contain a pedestrian access route complying with R301.

**R305.6.1 Separation.** If walkways are curb-attached, there shall be a continuous and detectable edge treatment along the street side of the walkway wherever pedestrian crossing is not intended. Where chains, fencing, or railings are used, they shall have a bottom element 38 cm (15 in) maximum above the pedestrian access route.

*Advisory R305.6.1 Separation. Because the pedestrian crossings are located off to the side of the pedestrian route around the street or highway and noise from continuously circulating traffic may mask useful audible cues. Carefully delineated crosswalk approaches with plantings, low enclosures, curbs, or other defined edges can be effective in identifying the crossing location(s). European and Australian roundabout intersections extend a 6- cm (24-inch) width of tactile surface treatment from the centerline of the ramp or blended transition across the full width of the sidewalk to provide an underfoot cue. Several manufacturers make a surface of raised bars for this use. The detectable warning surface should not be used, since it indicates the edge of a street or highway.*

*Schemes that remove cyclists from the circulating 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 the pedestrian crossing may provide false cues about the location of a crossing to pedestrians who are using the edge of the sidewalk for wayfinding. Designers should consider ways to mitigate this hazard.*

~~**R305.6.2 Signals.** At roundabouts with multi-lane crossings, a pedestrian activated signal complying with R306 shall be provided for each segment of each crosswalk, including the splitter island. Signals shall clearly identify which crosswalk segment the signal serves.~~

*Advisory R305.6.2 Signals. There are many suitable demand signals for this application. Crossings at some roundabout intersections in Australia and the United Kingdom*

*incorporate such systems, in which the driver first sees a flashing amber signal upon pedestrian activation and then a solid red while the pedestrian crosses to the splitter island (there is no green). These types of signals are also used in some U.S. cities at pedestrian crossings of arterial street or highways. The pedestrian pushbutton should be identifiable by a locator tone, and an accessible pedestrian signal incorporated to provide audible and vibrotactile notice of the gap created by the red signal. If properly signed, it need only be used occasionally by those who do not wish to rely solely on visual gap selection.*

*Roundabout intersections with single-lane approach and exit legs are not required to provide signals.*

~~**R305.7 Channelized Turn Lanes at Intersections.** Where pedestrian crosswalks are provided at multi-lane right or left channelized turn lanes at intersections with pedestrian signal indications, a pedestrian activated signal complying with R306 shall be provided.~~

*Advisory R305.7 Channelized Turn Lanes at Intersections. Accessible pedestrian signal devices installed at splitter and ‘pork chop’ islands must be carefully located and separated so that signal spillover does not give conflicting information about which crossing has the WALK indication displayed.*

*Additional guidance on signal types is provided in Advisory R305.6.2.*

## **R306 Accessible Pedestrian Signals (APS)**

**R306.1 General.** Pedestrian signals shall comply with R306.

**R306.2 Pedestrian Signals.** Each crosswalk with pedestrian signal indication shall have an accessible pedestrian signal which includes audible and vibrotactile indications of the WALK interval. Where a pedestrian pushbutton is provided, it shall be integrated into the accessible pedestrian signal and shall comply with R306.2.

*Advisory R306.2 Pedestrian Signals. Signals should generally sound and vibrate throughout the WALK interval. Where signals rest in WALK, audible operation may be limited to a repetition at short intervals rather than continuous sounding for several minutes.*

**R306.2.1 Location.** Accessible pedestrian signals shall be located so that the vibrotactile feature can be contacted from the level landing serving a curb ramp, if provided, or from a clear floor or ground space that is in line with the crosswalk line adjacent to the vehicle stop line.

**R306.2.1.1 Crossings.** Accessible pedestrian signal devices shall be 3.0 m (10.0 ft) minimum from other accessible pedestrian signals at a crossing. The control face of the accessible pedestrian signal shall be



installed to face the intersection and be parallel to the direction of the crosswalk it serves.

**R306.2.1.2 Medians and Islands.** Accessible pedestrian signals located in medians and islands shall be 1.5 m (5.0 ft) minimum from other accessible pedestrian signals.

**R306.2.2 Reach and Clear Floor or Ground Space.** Accessible pedestrian pushbuttons shall be located within a reach range complying with R404. A clear floor or ground space complying with R402 shall be provided at the pushbutton and shall connect to or overlap the pedestrian access route.

**R306.2.3 Audible Walk Indication.** The audible indication of the WALK interval shall be by tone or speech message.

**R306.2.3.1 Tones.** Tones shall consist of multiple frequencies with a dominant component at 880 Hz. The duration of the tone shall be 0.15 s and shall repeat at intervals of 0.15 s.

*Advisory R306.2.3.1 Tones. Many new accessible pedestrian signal installations in the US use speech messages, which are perceived as being more user-friendly than tones. However, such messages may not be intelligible under high-ambient-noise conditions or to non-English speakers. Electronic tones are more universal and unambiguous. Section 4E.06 of the MUTCD specifies content of speech messages.*

**R306.2.3.2 Volume.** Tone or voice volume measured at 92 cm (3.0 ft) from the pedestrian signal device shall be 2 dB minimum and 5 dB maximum above ambient noise level in standard operation and shall be responsive to ambient noise level changes.

*Advisory R306.2.3.2 Volume. Where additional volume or beaconing features are available on pedestrian activation, they will momentarily exceed volume limits.*

**R306.3 Pedestrian Pushbuttons.** Pedestrian pushbuttons shall comply with R306.3.

**R306.3.1 Operation.** Pedestrian pushbuttons shall comply with R405.4.

**R306.3.2 Pushbutton Locator Tone.** Pedestrian pushbuttons shall incorporate a locator tone at the pushbutton. Pushbutton locator tone volume measured at 92 cm (3.0 ft) from the pushbutton shall be 2 dB minimum and 5 dB maximum above ambient noise level and shall be responsive to ambient noise level changes. The duration of the locator tone shall be 0.15 s maximum and shall repeat at intervals of one second. The locator tone shall operate during the DON'T WALK and flashing DON'T WALK intervals only and shall be deactivated when the pedestrian signal is not operative.

**R306.3.3 Size and Contrast.** Pedestrian pushbuttons shall be a minimum of 0.5 cm (2 in) across in one dimension and shall contrast visually with their housing or mounting.

**R306.3.4 Optional Features.** An extended button press shall be permitted to activate additional features. Buttons that provide additional features shall be marked with three braille dots forming an equilateral triangle in the center of the pushbutton.

**R306.4 Directional Information and Signs.** Pedestrian signal devices shall provide tactile and visual signs complying with 306.4 on the face of the device or its housing or mounting to indicate crosswalk direction and the name of the street containing the crosswalk served by the pedestrian signal.

**R306.4.1 Arrow.** Signs shall include a tactile arrow aligned parallel to the crosswalk direction. The arrow shall be raised 0.8 mm (.03 inch) minimum and shall be 4 mm (1.5 in) minimum in length. The arrowhead shall be open at 45 degrees to the shaft and shall be 33 percent of the length of the shaft. Stroke width shall be 10 percent minimum and 15 percent maximum of arrow length. The arrow shall contrast with the background.

**R306.4.2 Street Name.** Accessible pedestrian signals (APS) shall include street name information aligned parallel to the crosswalk direction and shall comply with R409.3 or shall provide street name information in audible format.

**R306.4.3 Crosswalk Configuration.** Where provided, graphic indication of crosswalk configuration shall be tactile.

## **R307 Street Furniture**

**R307.1 General.** Street furniture shall comply with R307.

*Advisory R307.1 General. Elements are often placed on a sidewalk without coordination by different agencies or entities. Covered entities must ensure that the usability of the pedestrian access route is maintained.*

*Where items are added to an existing developed streetscape and the pedestrian walkway is not being replaced or altered within the scope of the project, locations should be carefully selected for minimum slope and cross slope and adequate width and maneuvering space to optimize usability.*

**R307.2 Clear Floor or Ground Space.** Street furniture shall have clear space complying with R402 and shall be connected to the pedestrian access route.

**R307.3 Drinking Fountains.** Where drinking fountains are provided, they shall comply with R413.

**R307.4 Public Telephones.** Where public telephones are provided, they shall comply with R307.4.

**R307.4.1 Single Telephone.** Where a single public telephone is provided, it shall comply with sections 704.2 and 704.4 of Appendix D to 36 CFR part 1191 (the ADA and ABA Accessibility Guidelines).

**R307.4.2 Multiple Telephones.** Where a bank of public telephones is provided, at least one telephone shall comply with section 704.2 of Appendix D to 36 CFR part 1191, and at least one additional telephone shall comply with section 704.4 of Appendix D to 36 CFR part 1191 (the ADA and ABA Accessibility Guidelines).

**R307.4.3 Volume Controls.** All public telephones shall provide volume controls complying with section 704.3 of Appendix D to 36 CFR 1191.

**R307.5 Public Toilet Facilities.** Permanent or portable public toilet facilities shall comply with section 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 (the ADA and ABA Accessibility Guidelines). Operable parts, dispensers, receptacles, or other equipment shall comply with R405. Where multiple single-user toilet facilities are clustered at a single location, at least 5 percent, but no fewer than one single-user toilet at each cluster shall comply with section 603 of Appendix D to 36 CFR part 1191 and shall be identified by the International Symbol of Accessibility complying with R409.7.2.1.

**R307.6 Tables, Counters, and Benches.** Tables, counters, and benches shall comply with R307.6.

**R307.6.1 Tables.** Where tables are provided in a single location, at least 5 percent but no fewer than one, shall comply with section 902 of Appendix D to 36 CFR part 1191 (the ADA and ABA Accessibility Guidelines).

**R307.6.2 Counters.** Where provided, counters shall comply with section 904 of Appendix D to 36 CFR part 1191 (the ADA and ABA Accessibility Guidelines).

**R307.6.3 Benches.**

**R307.6.3.1 Clear Space for Wheelchairs at Benches.** Where benches without tables are provided at a single location, at least 50 percent, but no fewer than one, shall provide clear space complying with R402 positioned at the end of the bench seat and located for shoulder-to-shoulder seating.

**R307.6.3.2 Benches.** Where benches without tables are provided at a single location, at least 50 percent, but no fewer than one, shall have a seat

height at the front edge of 43 cm (17 in) minimum and 49 cm (19 in) maximum above the ground or floor space.

*Advisory R307.6.3.2 Benches. Benches will be most useful if they have full back support and armrests to assist in sitting and standing.*

## **R308 On-Street Parking**

**R308.1 General.** On-street parking spaces shall comply with R308.

### **R308.2 Parallel Parking Spaces.**

~~**R308.2.1 Wide Walkways.** Where the width of the adjacent walkway exceeds 4.3 m (14 ft), an access aisle at least 1.5 m (5.0 ft) wide shall be provided at street level the full length of the parking space and shall connect to a pedestrian access route serving the space. The access aisle shall not encroach on the vehicular travel lane.~~

*Advisory R308.2.1 Wide Walkways. The walkway adjacent to an accessible parallel parking space should be free of obstructions such as signage, plantings, or equipment that would preclude deployment of a vehicle side-lift onto the access aisle or walkway.*

*A vehicle may park at the curb or at the parking lane boundary in order to locate the access aisle for individual use.*

**R308.2.2 Narrow Walkways.** An access aisle is not required where the width of the adjacent walkway is less than or equal to 4.3 m (14 ft). When an access aisle is not provided, the parking space shall be located at either end of the block face.

*Advisory R308.2.2 Narrow Walkways. An end-of-block space can be served by the curb ramps at the street crossing.*

**R308.3 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 serving the space. Access aisles shall be marked so as to discourage parking in them.

*Advisory R308.3 Perpendicular or Angled Parking Spaces. All accessible angled and perpendicular on-street parking is treated as van parking with wide access aisles. In many cases, two spaces on either side of a single access aisle will satisfy scoping requirements. Where backing into the space (to locate the access aisle on the side needed) is not permitted, an access aisle for each accessible space should be provided.*



**R308.4 Curb Ramps or Blended Transitions.** A curb ramp or blended transition complying with R303 shall connect the access aisle to the pedestrian access route.

**R308.5 Signs.** Parking space identification signs shall include the International Symbol of Accessibility complying with R409.5.10. Signs shall be located at the head or foot of the parking space so as not to interfere with the operation of a side lift or a passenger side transfer.

*Advisory R308.5 Signs. Accessible parallel parking spaces located at the foot of a block can serve vans that have rear lifts or cars with scooter platforms.*

**R308.6 Parking Meters.** Where parking meters are provided, they shall comply with R308.6. Operable parts shall comply with R405.

**R308.6.1 Meters at Parking Spaces.** A parking meter shall be located at the head or foot of a parallel parking space so as not to interfere with the operation of a side lift or a passenger side transfer.

**R308.6.2 Remote Meters.** Where payment for parking in a space is included in a centralized collection box or paying station, the space shall be connected to the centralized collection point with a pedestrian access route.

**R308.6.3 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 floor space in front of the meter.

## **R309 Call Boxes**

**R309.1 General.** Call boxes shall comply with R309. Where provided, labeling shall comply with R409.2 and R409.3.

*Advisory R309.1 General. These provisions may be helpful in making other types of emergency communication devices accessible such as on street security phone systems.*

## **R309.2 Operable Parts.**

**R309.2.1 Electronic Operation.** Operable parts shall comply with R405.

**R309.2.2 Mechanical Operation.** Operable parts shall comply with R404 and R405.2. Mechanically operated systems in which the signal is initiated by a lever pull shall be permitted to have an activating force of 53.4 N (12 lbs) maximum.

**R309.3 Edge Protection.** Edge protection complying with R406.8 shall be provided where the use area at the call box is adjacent to an abrupt level change.

**R309.4 Motor Vehicle Turnouts.** Where provided, a motor vehicle turnout shall have a minimum paved area of 4.9 m (16 ft) wide minimum and 7.0 m (23 ft) long minimum and shall connect to the clear space at the call box with a pedestrian access route complying with R301. Where shoulder texturing is used, it shall be discontinued at the turnout.

**R309.5 Two-Way Communication.** Where provided, two-way voice communication shall comply with R309.5, and with sections 708.2 and 708.3 of Appendix D to 36 CFR part 1191 (the ADA and ABA Accessibility Guidelines).

**R309.5.1 Volume Controls.** Volume controls complying with section 704.3 of Appendix D to 36 CFR part 1191 (the ADA and ABA Accessibility Guidelines) shall be provided.

**R309.5.2 TTY.** A TTY complying with section 704.4 of Appendix D to 36 CFR part 1191 (the ADA and ABA Accessibility Guidelines) shall be provided.

## **CHAPTER R4: SUPPLEMENTARY TECHNICAL PROVISIONS**

### **R401 Protruding Objects**

**R401.1 General.** Protruding objects on sidewalks and other pedestrian circulation paths shall comply with R401 and shall not reduce the clear width required for pedestrian access routes.

*Advisory R401.1 General. Banners, awnings, tree branches, sidewalk sculpture, and temporary street or highway signs can become protruding objects if not placed or maintained properly.*

**R401.2 Protrusion Limits.** Objects with leading edges more than 685 mm (27 in) and not more than 2 m (80 in) above the finish surface or ground shall protrude 100 mm (4 in) maximum horizontally into the pedestrian circulation path.

**R401.3 Post-Mounted Objects.** Objects mounted on free-standing posts or pylons, 685 mm (27 inches) minimum and 2030 mm (80 inches) maximum above the finish surface or ground, shall overhang circulation paths 100 mm (4 inches) maximum beyond the post or pylon base measured 150 mm (6 inches) minimum above the finish surface or ground. Where a sign or other obstruction is mounted between posts or pylons and the clear distance between the posts or pylons is greater than 305 mm (12 in), the lowest edge of such sign or obstruction shall be 685 mm (27 in) maximum or 2 m (80 in) minimum above the finish surface.

**R401.4 Reduced Vertical Clearance.** Guardrails or other barriers shall be provided where the vertical clearance is less than 2 m (80 in) high. The leading edge of such

guardrail or barrier shall be located 685 mm (27 in) maximum above the finish surface or ground.

## **R402 Clear Space**

**R402.1 General.** Clear space at accessible pedestrian signals (APS), street furniture, and operable parts shall comply with R402.

**R402.2 Surface Characteristics.** Surfaces of clear spaces shall comply with R301.5 and shall have a slope and cross slope of 2 percent maximum.

**R402.3 Size.** The clear space shall be 760 mm (30 in) minimum by 1220 mm (48 in) minimum.

**R402.4 Knee and Toe Clearance.** Unless otherwise specified, clear space shall be permitted to include knee and toe clearance complying with R403.

**R402.5 Position.** Unless otherwise specified, clear space shall be positioned for either forward or parallel approach to an element.

**R402.6 Approach.** One full unobstructed side of the clear space shall adjoin a pedestrian access route or adjoin another clear space.

**R402.7 Maneuvering Space.** Where a clear space is located in an alcove or otherwise confined on all or part of three sides, additional maneuvering space shall be provided in accordance with R402.7.1 and R402.7.2.

**R402.7.1 Forward Approach.** Alcoves shall be 915 mm (36 in) wide minimum where the depth exceeds 610 mm (24 in).

**R402.7.2 Parallel Approach.** Alcoves shall be 1525 mm (60 in) wide minimum where the depth exceeds 380 mm (15 in).

## **R403 Knee and Toe Clearance**

**R403.1 General.** Where space beneath an element is included as part of clear space, the space shall comply with R403. Additional space shall not be prohibited beneath an element but shall not be considered as part of the clear space.

*Advisory R403.1 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 for required maneuvering space, care should be taken to ensure the space is clear of any obstructions.*

## **R403.2 Toe Clearance.**

**R403.2.1 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 R403.2.

**R403.2.2 Maximum Depth.** Toe clearance shall extend 635 mm (25 in) maximum under an element.

**R403.2.3 Minimum Required Depth.** Where toe clearance is required at an element as part of a clear space, the toe clearance shall extend 430 mm (17 in) minimum under the element.

**R403.2.4 Additional Clearance.** Space extending more than 150 mm (6 in) beyond the available knee clearance at 230 mm (9 in) above the finish surface shall not be considered toe clearance.

**R403.2.5 Width.** Toe clearance shall be 760 mm (30 in) wide minimum.

### **R403.3 Knee Clearance.**

**R403.3.1 General.** Space under an element between 230 mm (9 in) and 685 mm (27 in) above the finish surface shall be considered knee clearance and shall comply with R403.3.

**R403.3.2 Maximum Depth.** Knee clearance shall extend 635 mm (25 in) maximum under an element at 230 mm (9 in) above the finish surface.

**R403.3.3 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 (27 in) above the finish surface.

**R403.3.4 Clearance Reduction.** Between 230 mm (9 in) and 685 mm (27 in) above the finish surface, the knee clearance shall be permitted to reduce at a rate of 25 mm (one inch) in depth for each 150 mm (6 in) in height.

**R403.3.5 Width.** Knee clearance shall be 760 mm (30 in) wide minimum.

### **R404 Reach Ranges**

**R404.1 General.** Reach ranges shall comply with R404.

#### **R404.2 Forward Reach.**

**R404.2.1 Unobstructed.** Where a forward reach is unobstructed, the high forward reach shall be 1220 mm (48 in) maximum and the low forward reach shall be 380 mm (15 in) minimum above the finish surface.



**R404.2.2 Obstructed High Reach.** Where a high forward reach is over an obstruction, the clear space shall extend beneath the element for a distance not less than the required reach depth over the obstruction. The high forward reach shall be 1220 mm (48 in) maximum where the reach depth is 510 mm (20 in) maximum. Where the reach depth exceeds 510 mm (20 in), the high forward reach shall be 1120 mm (44 in) maximum and the reach depth shall be 635 mm (25 in) maximum.

### **R404.3 Side Reach.**

**R404.3.1 Unobstructed.** 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 (48 in) maximum and the low side reach shall be 380 mm (15 in) 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.

**R404.3.2 Obstructed High Reach.** Where a clear space allows a parallel approach to an element and the high side reach is over an obstruction, the height of the obstruction shall be 865 mm (34 in) maximum and the depth of the obstruction shall be 610 mm (24 in) maximum. The high side reach shall be 1220 mm (48 in) maximum for a reach depth of 255 mm (10 in) maximum. Where the reach depth exceeds 266 mm (10 in), the high side reach shall be 1170 mm (46 in) maximum for a reach depth of 610 mm (24 in) maximum.

### **R405 Operable Parts**

**R405.1 General.** Operable parts shall comply with R405.

**R405.2 Clear Space.** A clear space complying with R402 shall be provided.

**R405.3 Height.** Operable parts shall be placed within one or more of the reach ranges specified in R404.

**R405.4 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.

### **R406 Ramps**

**R406.1 General.** Ramps shall comply with R406.

**R406.2 Slope.** Ramp runs shall have a running slope between 5 percent minimum and 8.3 percent maximum.

*Advisory R406.2 Slope. To accommodate the widest range of users, provide ramps with*

*the least possible running slope and, wherever possible, accompany ramps with stairs for use by those individuals for whom distance presents a greater barrier than steps, for example, people with heart disease or limited stamina.*

**R406.3 Cross Slope.** Cross slope of ramp runs shall be 2 percent maximum.

**R406.4 Surfaces.** Ramp run surfaces shall comply with R301.5.

**R406.5 Rise.** The rise for any ramp run shall be 76 cm (30 in) maximum.

**R406.6 Landings.** Ramps shall have landings at the top and the bottom of each ramp run. Landings shall comply with R406.6.

**R406.6.1 Slope.** Perpendicular and parallel ramp landing slopes shall be 2 percent maximum.

**R406.6.2 Width.** The landing clear width shall be at least as wide as the widest ramp run leading to the landing.

**R406.6.3 Length.** The landing clear length shall be 1.5 m (5.0 ft) long minimum.

**R406.6.4 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.

**R406.7 Handrails.** Ramp runs with a rise greater than 15 cm (6 in) shall have handrails complying with R408.

**R406.8 Edge Protection.** Edge protection complying with R406.8.1 or R406.8.2 shall be provided on each side of ramp runs. Edge protection shall not be required on curb ramps and their landings.

**R406.8.1 Extended Ramp Surface.** The surface of the ramp run or landing shall extend 31 cm (12 in) minimum beyond the inside face of a handrail complying with R408.

*Advisory R406.8.1 Extended Ramp Surface. The extended surface prevents wheelchair casters and crutch tips from slipping off the ramp surface.*

**R406.8.2 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 ramp surface.

## **R407 Stairways**

**R407.1 General.** Stairways shall comply with R407.

**R407.2 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 28 cm (11 in) deep minimum.

**R407.3 Open Risers.** Open risers are not permitted.

**R407.4 Tread Surface.** Stairway treads shall comply with R301.5. Stairway treads shall have a 51 mm (2 in) minimum wide strip that contrasts visually with the tread and riser. The strip shall be located at the front of each tread and run the full width of the tread.

**R407.5 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.

**R407.6 Handrails.** Stairs shall have handrails complying with R408.

## **R408 Handrails**

**R408.1 General.** Handrails provided along walking surfaces complying with R301, required at ramps complying with R406, and required at stairs complying with R407 shall comply with R408.

*Advisory R408.1 General. Handrails are required on ramp runs with a rise greater than 150 mm (6 in) and on certain stairways. Handrails are not required on walking surfaces with running slopes less than 5 percent. However, if handrails are provided on walking surfaces with running slopes less than 5 percent, they must comply with R408. Sections R408.2, R408.3, and R408.10 do not apply to handrails provided on walking surfaces with running slopes less than 5 percent as those sections only reference requirements for ramps and stairs.*

**R408.2 Where Required.** Handrails shall be provided on both sides of stairs and ramps.

**R408.3 Continuity.** Handrails shall be continuous within the full length of each stair flight or ramp run. Inside handrails on switchback or dogleg stairs and ramps shall be continuous between flights or runs.

**R408.4 Height.** Top of gripping surfaces of handrails shall be 87 cm mm (34 in) minimum and 97 cm (38 in) maximum vertically above walking surfaces, stair nosings, and ramp surfaces. Handrails shall be at a consistent height above walking surfaces, stair nosings, and ramp surfaces.

**R408.5 Clearance.** Clearance between handrail gripping surfaces and adjacent surfaces shall be 38 mm (1.5 in) minimum.

**R408.6 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 R408.6 Gripping Surface. People with disabilities, older people, and others benefit from continuous gripping surfaces that permit users to reach the fingers outward or downward to grasp the handrail.*

**R408.7 Cross Section.** Handrail gripping surfaces shall have a cross section complying with R408.7.1 or R408.7.2.

**R408.7.1 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.

**R408.7.2 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.

**R408.8 Surfaces.** Handrail gripping surfaces and any surfaces adjacent to them shall be free of sharp or abrasive elements and shall have rounded edges.

**R408.9 Fittings.** Handrails shall not rotate within their fittings.

**R408.10 Handrail Extensions.** Handrail gripping surfaces shall extend beyond and in the same direction of stair flights and ramp runs in accordance with R408.10. Extensions shall not be required for continuous handrails at the inside turn of switchback or dogleg stairs and ramps.

**R408.10.1 Top and Bottom Extension at Ramps.** Ramp handrails shall extend horizontally above the landing for 31 cm (12 in) 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.

**R408.10.2 Top Extension at Stairways.** At the top of a stair flight, handrails shall extend horizontally above the landing for 31 cm (12 in) 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.

**R408.10.3 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. Extension shall return to a wall, guard, or the landing surface, or shall be continuous to the handrail of an adjacent stair flight.

## **R409 Signs**

**R409.1 General.** Signs shall comply with R409. Where both visual and tactile characters are required, either one sign with both visual and tactile characters, or two separate signs, one with visual, and one with tactile characters, shall be provided.

**R409.2 Raised Characters.** Raised characters shall comply with R409.2 and shall be duplicated in braille complying with R409.3. Raised characters shall be installed in accordance with R409.4.

*Advisory R409.2 Raised Characters. Signs that are designed to be read by touch should not have sharp or abrasive edges.*

**R409.2.1 Depth.** Raised characters shall be 0.8 mm (.03 in) minimum above their background.

**R409.2.2 Case.** Characters shall be uppercase.

**R409.2.3 Style.** Characters shall be sans serif. Characters shall not be italic, oblique, script, highly decorative, or of other unusual forms.

**R409.2.4 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".

**R409.2.5 Character Height.** Character height measured vertically from the baseline of the character shall be 16 mm (0.625 in) minimum and 51 mm (2 in) maximum based on the height of the uppercase letter "I". Where separate raised and visual characters with the same information are provided, raised character height shall be permitted to be 13 mm (0.5 in) minimum.

**R409.2.6 Stroke Thickness.** Stroke thickness of the uppercase letter "I" shall be 15 percent maximum of the height of the character.

**R409.2.7 Character Spacing.** Character spacing shall be measured between the two closest points of adjacent raised characters within a message, excluding word spaces. Where characters have rectangular cross sections, spacing between individual raised characters shall be 3.2 mm (0.125 in) minimum and 4 times the raised character stroke width maximum. Where characters have other cross sections, spacing between individual raised characters shall be 1.6 mm (.625 in)



minimum and 4 times the raised character stroke width maximum at the base of the cross sections, and 3.2 mm (0.125 in) minimum and 4 times the raised character stroke width maximum at the top of the cross sections. Characters shall be separated from raised borders and decorative elements 9.5 mm (.375 in) minimum.

**R409.2.8 Line Spacing.** Spacing between the baselines of separate lines of raised characters within a message shall be 135 percent minimum and 170 percent maximum of the raised character height.

**R409.3 Braille.** Braille shall be contracted (Grade 2) and shall comply with R409.3 and R409.4.

**R409.3.1 Dimensions and Capitalization.** Braille dots shall have a domed or rounded shape and shall comply with Table R409.3.1. The indication of an uppercase letter or letters shall only be used before the first word of sentences, proper nouns and names, individual letters of the alphabet, initials, and acronyms.

**R409.3.1 Braille Dimensions**

Measurement Range	Minimum in Millimeters Maximum in Millimeters
Dot base diameter	1.5 mm (0.059 in) to 1.6 mm (0.063 in)
Distance between two dots in the same cell <sup>1</sup>	2.3 mm (0.090 in) to 2.5 mm (0.100 in)
Distance between corresponding dots in adjacent cells <sup>1</sup>	6.1 mm (0.241 in) to 7.6 mm (0.300 in)
Dot height	0.6 mm (0.025 in) to 0.9 mm (0.037 in)
Distance between corresponding dots from one cell directly below <sup>1</sup>	10 mm (0.395 in) 10.2 mm to (0.400 in)

1. Measured center to center.

**R409.3.2 Position.** Braille shall be positioned below the corresponding text. If text is multi-lined, braille shall be placed below the entire text. Braille shall be separated 9.5 mm (.375 in) minimum from any other tactile characters and 9.5 mm (.375 in) minimum from raised borders and decorative elements. Braille provided on elevator car controls shall be separated 4.8 mm (.1875 in) minimum and shall be located either directly below or adjacent to the corresponding raised characters or symbols.

**R409.4 Installation Height and Location.** Signs with tactile characters shall comply with R409.4.

**R409.4.1 Height Above Finish Floor or Ground.** Tactile characters on signs shall be located 1.2 m (4.0 ft) minimum above the finish floor or ground surface, measured from the baseline of the lowest tactile character and 1.5 m (5.0 ft) maximum above the finish floor or ground surface, measured from the baseline of the highest tactile character. Tactile characters for elevator car controls shall not be required to comply with R409.4.1.

**R409.5 Visual Characters.** Visual characters shall comply with R409.5. Where visual characters comply with R409.2 and are accompanied by braille complying with R409.3, they shall not be required to comply with R409.5.2 through R409.5.9.

**R409.5.1 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 R409.5.1 Finish and Contrast. Signs are more legible for persons 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.*

**R409.5.2 Case.** Characters shall be uppercase or lowercase or a combination of both.

**R409.5.3 Style.** Characters shall be conventional in form. Characters shall not be italic, oblique, script, highly decorative, or of other unusual forms.

**R409.5.4 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".

**R409.5.5 Character Height.** Minimum character height shall comply with Table R409.5.5. 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".

**R409.5.5 Visual Character Height**

Height to Finish Floor or Ground 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	less than 1.8 m (6 ft)	16 mm (0.625 in)
	1.8 m (6 ft) and	16 mm (0.625 in), plus 3.2 mm (0.125

(5.8 ft)	greater	in) per 0.3 m (one ft) of viewing distance above 1.8 m (6 ft)
Greater than 1.8 m (5.8 ft) to less than or equal to 3.0 m (10 ft)	less than 4.6 m (15 ft)	51 mm (2 in)
	4.6 m (15 ft) and greater	51 mm (2 in), plus 3.2 mm (0.125 in) per 0.3 m (12 in) of viewing distance above 4.6 m (15 ft)
greater than 3.0 m (10 ft)	less than 6.4 m (21 ft)	75 mm (3 in)
	6.4 m (21 ft) and greater	75 mm (3 in), plus 3.2 mm (0.125 in) per 0.3 m (12 in) of viewing distance above 6.4 m (21 ft)

**R409.5.6 Height from Finish Floor or Ground.** Visual characters shall be 1.0 m (3.25 ft) minimum above the finish floor or ground. Visual characters indicating elevator car controls shall not be required to comply with R409.5.6.

**R409.5.7 Stroke Thickness.** Stroke thickness of the uppercase letter "I" shall be 10 percent minimum and 30 percent maximum of the height of the character.

**R409.5.8 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.

**R409.5.9 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.

**R409.5.10 The International Symbol of Accessibility.** The International Symbols of Accessibility shall comply with Figure 409.5.10.



**Figure R409.5.10  
International Symbol of Accessibility**

## **R410 Bus Stops**

**R410.1 Bus Boarding and Alighting Areas.** Bus boarding and alighting areas shall comply with R410.

*Advisory R410.1 Bus Boarding and Alighting Areas. At bus stops where a shelter is provided, the bus stop pad can be located either within or outside of the shelter.*

**R410.1.1 Surface.** Bus stop boarding and alighting areas shall have a firm, stable, and slip resistant surface.

**R410.1.2 Dimensions.** Bus stop boarding and alighting areas shall provide a clear length of 2.4 m (8.0 ft) minimum, measured perpendicular to the curb or vehicle street or highway edge, and a clear width of 1.5 m (5.0 ft) minimum, measured parallel to the vehicle street or highway.

**R410.1.3 Connection.** Bus stop boarding and alighting areas shall be connected to streets, sidewalks, or pedestrian paths by a pedestrian access route complying with R301.

**R410.1.4 Grade.** Parallel to the street or highway, the grade of the bus stop boarding and alighting area shall be the same as the street or highway, to the maximum extent practicable. Perpendicular to the street or highway, the grade of the bus stop boarding and alighting area shall not be steeper than 2 percent.

**R410.2 Bus Shelters.** Bus shelters shall provide a minimum clear space complying with R402 entirely within the shelter. Bus shelters shall be connected by pedestrian access route complying with R301 to a boarding and alighting area complying with R410.1.

## **R411 Doors, Doorways, and Gates**

**R411.1 General.** Doors, doorways, and gates that are part of a pedestrian access route shall comply with R411.

*Advisory R411.1 General. This section provides information on minimum width and maneuvering space requirements for doors, doorways, and gates. For additional requirements for accessible doors, doorways, and gates, see 36 CFR part 1191 Appendix D Section 404 (the ADA and ABA Accessibility Guidelines).*

**R411.2 Manual Doors, Doorways, and Manual Gates.** Manual doors and doorways and manual gates intended for user passage shall comply with R411.2.

**R411.2.1 Revolving Doors, Gates, and Turnstiles.** Revolving doors, revolving gates, and turnstiles shall not be part of a pedestrian access route.

**R411.2.2 Double-Leaf Doors and Gates.** At least one of the active leaves of doorways with two leaves shall comply with R411.2.3 and R411.2.4.

**R411.2.3 Clear Width.** Door openings shall provide a clear width of 82 cm (32 in) minimum. Clear openings of doorways with swinging doors shall be measured between the face of the door and the stop, with the door open 90 degrees. Openings more than 61 cm (24 in) deep shall provide a clear opening of 92 cm (36 in) minimum. There shall be no projections into the required clear opening width lower than 87 cm (34 in) above the finish floor or ground. Projections into the clear opening width between 87 cm (34 in) and 2 m (6.7 ft) above the finish floor or ground shall not exceed 100 mm (4 in).

**R411.2.4 Maneuvering Clearances.** Minimum maneuvering clearances at doors and gates shall comply with R411.2.4. Maneuvering clearances shall extend the full width of the doorway and the required latch side or hinge side clearance.

**R411.2.4.1 Swinging Doors and Gates.** Swinging doors and gates shall have maneuvering clearances complying with Table R411.2.4.1.

**R411.2.4.1 Maneuvering Clearances at Manual Swinging Doors and Gates**

Type of Use		Minimum Maneuvering Clearance	
Approach Direction	Door or Gate Side	Perpendicular to Doorway	Parallel to Doorway (beyond latch side unless noted)
From front	Pull	153 cm (60 in)	46 cm (18 in)
From front	Push	122 cm (48 in)	0 mm (0 in) <sup>1</sup>
From hinge side	Pull	153 cm (60 in)	92 cm (36 in)
From hinge side	Pull	137 cm (54 in)	107 cm (42 in)
From hinge side	Push	107 cm (42 in) <sup>2</sup>	56 cm (22 in) <sup>3</sup>
From latch side	Pull	122 cm (48 in) <sup>4</sup>	61 cm (24 in)
From latch side	Push	107 cm (42 in) <sup>4</sup>	61 cm (24 in)

1. Add 305 cm (12 in) if closer and latch are provided.
2. Add 150 mm (6 in) if closer and latch are provided.
3. Beyond hinge side.
4. Add 150 mm (6 in) if closer is provided.

**R411.2.4.2 Doorways without Doors or Gates, Sliding Doors, and Folding Doors.** Doorways less than 92 cm (36 in) wide without doors or gates, sliding doors, or folding doors shall have maneuvering clearances complying with Table R411.2.4.2.

**R411.2.4.2 Maneuvering Clearances at Doorways without Doors or Gates, Manual Sliding Doors, and Manual Folding Doors**

Approach Direction	Minimum Maneuvering Clearance	
	Perpendicular to Doorway	Parallel to Doorway (beyond stop/latch side unless noted)
From Front	122 cm (48 in)	0 mm (0 in)



From side <sup>1</sup>	107 cm (42 in)	0 mm (0 in)
From pocket/hinge side	107 cm (42 in)	56 cm (22 in) <sup>2</sup>
From stop/latch side	107 cm (42 in)	61 cm (24 in)

1. Doorway with no door only.
2. Beyond pocket/hinge side.

**R411.2.4.3 Recessed Doors and Gates.** Maneuvering clearances for forward approach shall be provided when any obstruction within 46 cm (18 in) of the latch side of a doorway projects more than 205 mm (8 in) beyond the face of the door, measured perpendicular to the face of the door or gate.

*Advisory R411.2.4.3 Recessed Doors and Gates. A door can be recessed due to wall thickness or because of the placement of casework and other fixed elements adjacent to the doorway. This provision must be applied wherever doors are recessed.*

**R411.2.4.4 Floor or Ground Surface.** Floor or ground surface within required maneuvering clearances shall comply with R301.5.

**R411.2.5 Doors in Series and Gates in Series.** The distance between two hinged or pivoted doors in series and gates in series shall be 1.2 m (48 in) minimum plus the width of doors or gates swinging into the space.

**R411.2.6 Door and Gate Hardware.** Handles, pulls, latches, locks, and other operable parts on doors and gates shall comply with R405. Operable parts of such hardware shall be 87 cm (34 in) minimum and 122 cm (48 in) maximum above the finish floor or ground. Where sliding doors are in the fully open position, operating hardware shall be exposed and usable from both sides.

## **R412 Passenger Loading Zones**

**R412.1 General.** Passenger loading zones shall comply with R412.

**R412.2 Vehicle Pull-Up Space.** Passenger loading zones shall provide a vehicular pull-up space 2.4 m (8 ft) wide minimum and 6.1 m (20 ft) long minimum.

**R412.3 Access Aisle.** Passenger loading zones shall provide access aisles complying with R412 adjacent to the vehicle pull-up space. Access aisles shall adjoin a pedestrian access route and shall not overlap the vehicular way.

**R412.3.1 Width.** Access aisles serving vehicle pull-up spaces shall be 1.5 m (5.0 ft) wide minimum.

**R412.3.2 Length.** Access aisles shall extend the full length of the vehicle pull-up spaces they serve.

**R412.3.3 Marking.** Access aisles shall be marked so as to discourage parking in them.

**R412.4 Floor and Ground Surfaces.** Access aisles serving vehicle pull-up spaces shall comply with R301.5. Access aisles shall be at the same level as the vehicle pull-up space they serve.

**R412.5 Vertical Clearance.** Vehicle pull-up spaces, access aisles serving them, and a vehicular route to and from the passenger loading zone shall provide a vertical clearance of 3 m (9.5 ft) minimum.

### **R413 Drinking Fountains**

**R413.1 General.** Drinking fountains shall comply with R401 and R413.

**R413.2 Clear Floor Space.** Units shall have a clear space complying with R402 positioned for a forward approach and centered on the unit. Knee and toe clearance complying with R403 shall be provided.

**R413.3 Operable Parts.** Operable parts shall comply with R405.

**R413.4 Spout Height.** Spout outlets shall be 92 cm (36 in) maximum above the finish floor or ground.

**R413.5 Spout Location.** The spout shall be located 38 cm (15 in) minimum from the vertical support and 125 mm (5 in) maximum from the front edge of the unit, including bumpers.

**R413.6 Water Flow.** The spout shall provide a flow of water 100 mm (4 in) high minimum and shall be located 125 mm (5 in) maximum from the front of the unit. The angle of the water stream shall be measured horizontally relative to the front face of the unit. Where spouts are located less than 75 mm (3 in) of the front of the unit, the angle of the water stream shall be 30 degrees maximum. Where spouts are located between 75 mm (3 in) and 125 mm (5 in) maximum from the front of the unit, the angle of the water stream shall be 15 degrees maximum.

*Advisory R413.6 Water Flow. The purpose of requiring the drinking fountain spout to produce a flow of water 4 inches (100 mm) high minimum is so that a cup can be inserted under the flow of water to provide a drink of water for an individual who, because of a disability, would otherwise be incapable of using the drinking fountain.*

**R413.7 Drinking Fountains for Standing Persons.** Spout outlets of drinking fountains for standing persons shall be 97 cm (38 in) minimum and 109 cm (43 in) maximum above the finish floor or ground.

## **R414 Rail Platforms**

**R414.1 General.** Rail platforms shall comply with R414. In light rail, commuter rail, and intercity rail systems, platforms shall provide level-entry boarding where structurally and operationally practicable.

**R414.2 Slope.** Rail platforms shall not exceed a slope of 2 percent in all directions. Where platforms serve vehicles operating on existing track or track laid in existing street or highway, the slope of the platform parallel to the track shall be permitted to be equal to the slope (grade) of the street or highway or existing track.

**R414.3 Detectable Warnings.** Platform boarding edges not protected by platform screens or guards shall have detectable warnings complying with R304 along the full length of the public use area of the platform.

**R414.4 Platform and Vehicle Floor Coordination.** Station platforms shall be positioned to coordinate with vehicles in accordance with the applicable requirements of 36 CFR part 1192 (ADA Accessibility Guidelines for Transportation Vehicles). Low-level platforms shall be 205 mm (8 in) minimum above top of rail. Where vehicles are boarded from sidewalks or street-level, low-level platforms shall be permitted to be less than 205 mm (8 in).

*Advisory R414.4 Platform and Vehicle Floor Coordination. The height and position of a platform must be coordinated with the floor of the vehicles it serves to minimize the vertical and horizontal gaps, in accordance with the ADA Accessibility Guidelines for Transportation Vehicles (36 CFR part 1192). The vehicle guidelines, divided by bus, van, light rail, rapid rail, commuter rail, intercity rail, are available at [www.access-board.gov](http://www.access-board.gov). The preferred alignment is a high platform, level with the vehicle floor. In some cases, the vehicle guidelines permit use of a low platform in conjunction with a lift or ramp. Most such low platforms must have a minimum height of eight inches above the top of the rail. Some vehicles are designed to be boarded from a street or the sidewalk along the street. The exception permits those boarding areas to be less than eight inches high.*

## **R415 Rail Station Signs**

**R415.1 General.** Rail station signs shall comply with R415.

*Advisory R415.1 General. Emerging technologies such as audible sign systems using infrared transmitters and receivers may provide greater accessibility in the transit environment than traditional braille and raised letter signs. The transmitters are placed*

*on or next to print signs and transmit their information to an infrared receiver that is held by a person. By scanning an area, the person will hear the sign. This means that signs can be placed well out of reach of pedestrians, even on parapet walls and on walls beyond barriers. Additionally, such signs can be used to provide wayfinding information that cannot be efficiently conveyed on braille signs.*

**R415.2 Entrances.** Where signs identify a station or its entrance, at least one sign at each entrance shall comply with R409.2 and shall be placed in uniform locations to the maximum extent practicable. Where signs identify a station that has no defined entrance, at least one sign shall comply with R409.2 and shall be placed in a central location. Tactile signs shall not be required where audible signs are remotely transmitted to hand-held receivers, or are user- or proximity-actuated.

**R415.3 Routes and Destinations.** Lists of stations, routes and destinations served by the station which are located on boarding areas, platforms, or mezzanines shall comply with R409.5. Signs covered by this requirement shall, to the maximum extent practicable, be placed in uniform locations within the system. Where sign space is limited, characters shall not be required to exceed 75 mm (3 in). At least one tactile sign identifying the specific station and complying with R409.2 shall be provided on each platform or boarding area. Tactile signs shall not be required where audible signs are remotely transmitted to hand-held receivers, or are user- or proximity-actuated. Route maps are not required to comply.

**R415.4 Station Names.** Stations covered by this section shall have identification signs complying with R409.5. Signs shall be clearly visible and within the sight lines of standing and sitting passengers from within the vehicle on both sides when not obstructed by another vehicle.



## Appendix G – Glossary of Terms

**ABA:** See Architectural Barriers Act.

**ADA:** See Americans with Disabilities Act.

**ADA Transition Plan:** Mn/DOT'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

**DTA:** Duluth Transit Authority.



**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.

**Right of Way:** 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.