

Muscatine Sidewalk Policy
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Introduction

A critical step towards improving the health and quality of life of the Muscatine community is to increase access to safe sidewalks for citizens to use for recreational purposes, or to walk or bike to their destinations. Of particular importance is providing the means for children to walk or bike to school more frequently. The City of Muscatine recognized the importance of this goal in its recently adopted Comprehensive Plan in the following statement:

“Members of the community should have the opportunity to travel safely to their destination by foot, bike, or by other non-motorized means. Children should be able walk or bike to their school safely. To achieve this goal critical routes for non-motorized travel, linking schools, parks, bus stops, most major employment and shopping centers, and are located within 400 feet of most residences in Muscatine will be identified. These routes will be made safe and attractive for travel by foot, bike, wheelchair, and all other forms of legal non-motorized travel.”

Purpose

The purpose of this document is to establish policy and guidelines for the inspection, replacement, and installation of sidewalks. In implementing the policy the City will: ensure that sidewalk construction conforms to the provisions of the Comprehensive Plan, ensure compliance with Federal ADA standards, and promote safe, walkable, and sustainable neighborhoods. This policy formalizes operational procedures and inspection documentation to maximize the effectiveness of City sidewalks and maximize public safety while maintaining fiscal responsibility. The City recognizes that it is not possible to maintain all sidewalks in perfect condition. The City also recognizes that certain user groups, primarily seniors and individuals with disabilities, are more sensitive to sidewalk problems than other users. An effective public education and feedback program is also important.

Definitions

ADA: Americans with Disabilities Act - accessibility guidelines.

Sidewalk: Any improved portion of the public right-of-way lying between the edge of the improved roadway and adjacent property line intended for the use of pedestrians.

City: Shall mean the City of Muscatine, Iowa.

Courtesy Walk: A private sidewalk which connects the public sidewalk to the street. New courtesy walk construction is prohibited, and existing courtesy walks will not be renewed.

Right-of-way: A general term denoting land, property or interest therein acquired for or devoted to a highway, street, alley, or easement.

Department: The community, section, or agency that operates the sidewalk improvement program.

Public Property: Shall mean the dedicated right-of-way which includes public highways, streets, alleys and easements.

Private Property: Shall mean any property not belonging to the City.

Street: A public thoroughfare in the City that is designed for public travel and transportation.

Driveway: An area of private property outside the sidewalk for the purpose of parking vehicles or access to remaining property or structures.

Driveway Approach: An area within the right-of-way located between the sidewalk and the edge of the improved roadway for the purpose of vehicular access to the driveway.

Owner: Shall mean the individuals holding title to the property.

Inspector: Shall mean any representative of the City designated to perform the inspections.

Responsibilities of the Adjoining Property Owner

Damaged Sidewalks Requiring Replacement:

It shall be the duty of every owner of a lot or piece of ground fronting on any street to keep and maintain in repair any sidewalks, whether permanent or temporary, which are, or shall be, laid along such street in front of such lot or piece of ground. Without limiting the generality of the foregoing, when one or more of the following conditions exists, sidewalks shall be replaced or repaired as indicated:

- A. If more than forty percent (40%) of the surface of any square section of the sidewalk has spalled out leaving a rough, uneven surface, that square section shall be replaced.
- B. If any square section has cracked into sections less than one square foot in area, that square section shall be replaced.
- C. If sections have settled or heaved to the extent that the resulting displacement at cracks and joints exceeds three-quarters inch (3/4") and/or creates a hazardous condition, such section or sections shall be replaced to eliminate such displacement or condition.
- D. If sidewalks have settled and adjacent soil has built up higher than the sidewalk or drainage is otherwise impeded to the extent that water accumulates on the sidewalk to a depth exceeding one-half inch (1/2") over an area of two (2) square feet or more, that section of sidewalk shall be replaced or the drainage otherwise improved to eliminate such accumulation of water.

Snow and Ice:

The occupant(s) of each and every building, dwelling, structure, or the owner of any unoccupied lot fronting upon any street or sidewalk, shall clear the entire public sidewalk in front of such building, dwelling, structure, or unoccupied lot, as the case may be, of all snow or ice within twenty-four (24) hours of termination of snowfall, and cause the same to be kept clear of snow and/or ice. If such ice is smooth and hard and not easily removed, such ice shall be covered with ashes, salt, sawdust, or other non-slippery substance sufficient enough to make the public sidewalk a safe passageway.

Whenever any snow or ice shall be allowed to remain upon any public sidewalk, permanent or temporary, within the City of Muscatine for more than a twenty-four (24) hour period of time, the City will attempt to notify the adjoining property owner of the violation as outlined in the City Code. If this attempt is unsuccessful or the owner fails to comply with the order of the City, the City shall cause the public sidewalk to be cleared, or made safe for passage by either private contract or City employees and equipment. The City will include the costs of treating the public sidewalk in an itemized statement, and if allowed by Council, shall by resolution assess the cost as a special assessment against the property, as outlined in the City Code.

Obstructions:

If a sidewalk has been heaved up by a tree's root, and it is judged that removing the root(s) could cause the tree to die or fall, it is recommended the tree, as well as the root, be removed. This is the responsibility of the adjoining property owner, but there is a possibility of getting financial assistance from the City's Parks and Recreation Department if the tree is listed as an eligible species. The program is administered by the Weed Park Maintenance office, and the section of City Code on tree planting policy is outlined in the Appendix for reference. Any places where defective sidewalks have been removed, the property owner must provide lighted barricades to warn pedestrians during the night until the job is finished. For those who cannot provide such equipment, the Public Works Department will rent the proper equipment for a daily fee plus deposit. This service is administered by the Public Works Department.

Specifications for New Sidewalks and Replacement of Damaged Sidewalks:

In reference to construction standards, both Muscatine's City Code¹ and their internal document on sidewalk repair provides explicit specifications on both the construction of new sidewalks and the replacement of damaged sidewalks. Regarding sidewalk design, the Iowa Statewide Urban Design and Specifications (SUDAS) Manual contains a thorough overview of design standards for both sidewalks and ADA compliant curb ramps at sidewalk intersections. Both are available online and/or in the Public Works Department. The standard must be followed for all new and replaced sidewalks.

Existing Sidewalk Network and Curb Ramps

The Muscatine Area Geographic Information Consortium (MAGIC), <http://magic-gis.com/magic/>, provides online access to the location of the existing sidewalk network and existing curb ramps that are in the City of Muscatine. Curb ramps are critical to providing access between the sidewalk and the street for people who have disabilities. Whenever new sidewalk construction or extensive sidewalk repair occurs on a section of a street that includes its curb ramps, then those curb ramps will be upgraded to be ADA compliant. Also, whenever street resurfacing or reconstruction occurs adjacent to an uncompliant ramp, the curb ramp shall be made compliant, if possible. If it is not possible, an alternative access point will be established. The City will complete a certain percentage of new ADA ramps every year depending on city funding available.

¹ City of Muscatine, City Code: Title 3, Chapter 7, "Public Ways and Property – Sidewalks."

New Sidewalk Construction

The City of Muscatine defines the requirement for new sidewalks in the following four ways.²

- A. New property developments, such as subdivisions, are covered under Planning and Zoning requirements. As a new house is constructed, a sidewalk is installed by the developer after heavy equipment finishes deliveries and prior to issuance of an Occupancy Permit.
- B. The City shall approach every transportation improvement project as an opportunity to improve or construct needed sidewalks within the project corridor. Sidewalk improvements and construction will be made into an integral part of the larger transportation improvement project.
- C. The City annually allocates a portion of its Road Use Tax Funds from the State of Iowa for the construction of new sidewalks. The new sidewalks using these funds will be of highest priority using the criteria set forth in this policy. The cost of sidewalk construction must fit within a given years allocation.
- D. The City Council may order installation of sidewalks. A policy was established by the City Council in 1981 which included an order of priority along with factors to take into consideration when developing priorities.

Complete Street Design

When prioritizing and designing large-scale sidewalk construction projects, the City will follow the principles of their “Complete Street” policy, which is outlined in the Appendix for reference. A complete street is a safe, accessible, and convenient street for all users regardless of transportation, mode, age, or physical ability. Complete streets adequately provide for bicyclists, pedestrians, transit riders, and motorists, by matching the needs of travelers to the users surrounding a street.³ The Iowa SUDAS (Statewide Urban Design and Specifications) Design Manual will be used as reference for the physical design of sidewalks, including the recommended sidewalk width of five feet⁴, for any new subdivisions, and any new construction of city or private property when the entire block is being redone, with the only exceptions granted by city discretion during the permitting process if it be unclear that a five foot minimum width or other standards would not apply. Excerpts from the Iowa SUDAS Design Manual, Ch. 12A: Sidewalks, is included in the Appendix for reference, and can also be found in its entirety online: <http://www.iowasudas.org/>.

² Childs, R.L. “Sidewalks Memo.” City Memorandum. January 2, 2002.

³ Fangman, Andrew. “Complete Street Policy.” City Memorandum. November 14, 2013.
<http://www.muscatineiowa.gov/DocumentCenter/View/10034>

⁴ Iowa Statewide Urban Design and Specifications: Design Manual.” Ch. 12A-2, p. 7. SUDAS 2013 Edition.

Additionally, any of the following conditions below grant the City of Muscatine an exemption to the Complete Streets Policy for sidewalk construction along a particular section of street.

- Severe topographic constraints exist.
- Cost of sidewalks, including potential right-of-way acquisition, for a particular mode is excessively disproportionate to the need and potential benefit of a specific sidewalk.
- Project involves only ordinary maintenance activities designed to keep assets in acceptable condition, such as cleaning, sealing, spot repairs, patching and surface treatments.
- Scarcity of population, travel, and attractors, both existing and future, indicate an absence of need for accommodation of non-motorized users.
- A reasonable and equivalent project along the same corridor already exists or is planned.
- Non-motorized users are prohibited on the roadway.
- Immediate connections to high speed facilities where no pedestrian facilities exist or are planned.
- Conflicts exist with Federal aid requirements.

Criteria for the Prioritization of Sidewalk Construction Projects

The City's goal is for all members of the community to have the opportunity to travel safely to their destination by foot, bike, or by other non-motorized means. Improvements to the City's sidewalk network will be one of the primary means of achieving this goal. However, with budgetary and physical constraints, this goal will take a significant amount of time to fully achieve. Therefore, the City will prioritize sidewalk improvements in a manner that provides the greatest short and medium term benefits. The Comprehensive Plan recognized the need to prioritize sidewalk improvements by establishing an initial target of creating a sidewalk network that allows all children to walk to school safely. The Comprehensive Plan further directs that initial work will be established on improving the sidewalk focus on safe routes for non-motorized travel that radiate out from schools to the residential areas that they serve. Then these school-centered networks of safe routes for non-motorized travel will be linked together to form a community-wide network of routes for non-motorized travel. Further criteria which will be used in establishing priority of projects to address gaps in sidewalk network are as follows:

- Existing level of non-motorized traffic
- Continuity with existing sidewalks
- Presence or absence of viable alternate routes for non-motorized traffic
- Proximity to shopping areas, parks, recreation areas or schools

Funding Approach

Funding for an annual sidewalk inspection and construction process will be on a regular and predictable basis, with total sidewalk replacement required only if non-compliant with City Code. Total sidewalk replacement will be completed at the adjoining owner's expense. A general outline of sidewalk construction projects and cost responsibilities is provided below:

Sidewalk Construction Project	Project Cost and Party Responsible
Repairing Defective Sidewalks	The City will remove defective sidewalks (per the City Code) upon request, and the homeowner is responsible for the replacement and new installation at their own cost.
Construction of New ADA Ramps	The City will complete a certain percentage of new ADA ramps per year, depending on the funding that is available.
Major New Sidewalk Projects	Major new projects are completed at the City's expense, however adjacent property owner will then assume maintenance responsibility going forward.
Addressing Gaps in the Sidewalk Network	The City will complete existing sidewalk gaps based on priority and funding availability annually.
New Subdivision Construction	Sidewalks for new property developments, such as subdivisions, are installed by the developer at their own cost.

Regular Sidewalk Inspection

It is important that the city conducts regular sidewalk inspection to continually assess the condition of existing sidewalks, and pinpoint where sidewalks are damaged to the point of noncompliance to City Code. An inventory of current sidewalk conditions will be established in tandem with the sidewalk inspections that are conducted.

Relatedly, it should be noted that any time an existing sidewalk faces alteration beyond regular maintenance, then its curb ramps must also be upgraded to be ADA compliant.

Purpose:

Currently, the City of Muscatine only conducts sidewalk inspections as a reaction to complaints received about specific locations in dire need of enforcement actions. By conducting regular sidewalk inspection, the identification and maintenance of noncompliant, unsafe, and ineffective sidewalk sections will remain proactive and action-oriented.

Inspection and Inventory:

The Public Works Department will divide the City into separate sections, and will inspect an entire section within one year's time. The Department will then rotate their inspection to another section in the following year, and so on, ensuring a systematic approach wherein every portion of the city is inspected at least once every ten years. An inventory of all sidewalks will be maintained by the Department of Public Works, which will include a history of inspections and conditions information.

Public Concerns:

Citizen concerns related to sidewalks or curbs will be documented by the City of Muscatine and directed to either the Director of Public Works or the City Engineer. All concerns will be investigated in a timely manner considering manpower and workload.

Priority:

- **Priority 1:** Locations that are damaged are an immediate serious safety concern, and are considered to be non-compliant with the City Code and shall be replaced by the adjacent owner at their own expense.
- **Priority 2:** Locations that have a condition of Poor or Average or where the inspector determines that the problem is not an immediate safety concern, and may benefit from particular repair methods.
- **Priority 3:** Locations that have a condition of Fair or New or where the inspector determines that the problem is not a safety concern, and may or may not benefit from particular repair methods.

Priority Actions:

- If a Priority 1 hazard is identified during an inspection, the hazard will be marked and the City Engineer, or his/her designee, will notify the owner in accordance with existing codes to require replacement.
- If a Priority 2 hazard is identified during an inspection, the hazard will be marked and the City Engineer, or his/her designate, will receive a report of the hazard once scheduled inspections are complete, which may be directed to the owner if they may benefit from a particular repair method.
- If a Priority 3 hazard is identified during an inspection, a report of the hazard will be submitted to the City Engineer, or his/her designee, once scheduled inspections are complete, which may be directed to the owner if they may benefit from a particular repair method.

Replacement and Repairs:

- Priority 1 problems, as confirmed by the City Engineer, or his/her designate, will be replaced by the owners in accordance with existing codes that require replacement.
- Priority 2 problems, as confirmed by the City Engineer, or his/her designate, will be repaired as soon as practical for the owner (or City, if public property). These properties are still compliant with City Code, but may benefit from sidewalk repair best practices.
- Priority 3 problems, as confirmed by the City Engineer, or his/her designate, may be delayed for several years, depending on the severity of the damage.

Figure 1: Sidewalk Surface Deficiencies⁵



- **Displacement or heaving:** when the edges of sidewalk squares are vertically offset. This can be caused by frost, tree roots and other factors. It should be noted that the Muscatine City Code has regulations on tree planting in public ways, including a right-of-way approved tree planting list.⁶
- **Cracks** occur in sidewalk squares and can be a tripping hazard. Minor cracks may not be a problem but when they begin letting water in and grass grow up through them, they can grow into a tripping hazard.
- **Spalling** occurs when extreme temperatures, salt and other de-icing chemicals weaken the surface of concrete, masonry, or brick, causing it to chip, pit, and scar. Spalling can be recognized by distinct deformity on the surface, with chips, craters and broken pieces.
- **Obstructions** such as bushes, grass, flowers, fences or low-hanging tree limbs can interfere with accessibility for people walking or using wheeled transportation. Anything that penetrates into the sidewalk space or is within a minimum height limit of 8 feet is considered

⁵ Duluth Sidewalk Study." Duluth-Superior Metropolitan Interstate Council. August 2012.

⁶ City of Muscatine, City Code: Title 3, Chapter 11, "Public Ways and Property – Trees and Shrubs."

an obstruction. According to ADA requirements, sidewalks must be constructed to allow the minimum width requirement of 36 inches between the edge of an obstruction and the edge of the sidewalk. In some cases, if a sidewalk cannot be constructed to comply with this guideline, the obstruction may need to be removed or relocated.

Sidewalk Repair Best Practices:

1. Crack filling

Crack filling is done primarily to seal concrete cracks to prevent moisture from penetrating the base, causing additional crack widening and uneven settlement. Crack filling is appropriate for longitudinal cracks where separation is less than 12mm (½”) and differential settlement has not occurred. Cracks are routed or sand blasted, and then filled with a sealant. Crack filling is usually done on an area basis as crews and budget are available.

2. Mud jacking

Mud jacking is used to correct differential settlement between concrete panels. It is appropriate where individual panels are in relatively good condition but have settled adjacent to one another.

3. Concrete Planing

Concrete planing is a recently perfected technology which is used to plane up to 20mm (¾”) of concrete to flatten out trip edges. Planing is done on a contract basis, paid by the meter of “Trip Edge” removed, and done on a location-by-location basis.

4. Replacement

Sidewalk replacement is appropriate if severe damage has occurred to the sidewalk which cannot be corrected by one of the methods described above. Replacement is most cost effective when done on an area basis, but replacement at individual locations is sometimes necessary.

Interpretation:

The City of Muscatine acknowledges that all sidewalks cannot be maintained in perfect condition due to fiscal and practical constraints. The timing and scope of sidewalk and curb rehabilitation will be planned at the discretion of the City Engineer, within the scope of the current operating budget, to balance sidewalk safety and appearance with other Public Works priorities. The aim of this policy is to maintain the City of Muscatine’s sidewalks and curbs in as safe a condition as practical, in balance with fiscal reality and other priorities. The Iowa SUDAS guidelines shall be the current direction for design and specifications when constructions or repairs are done.

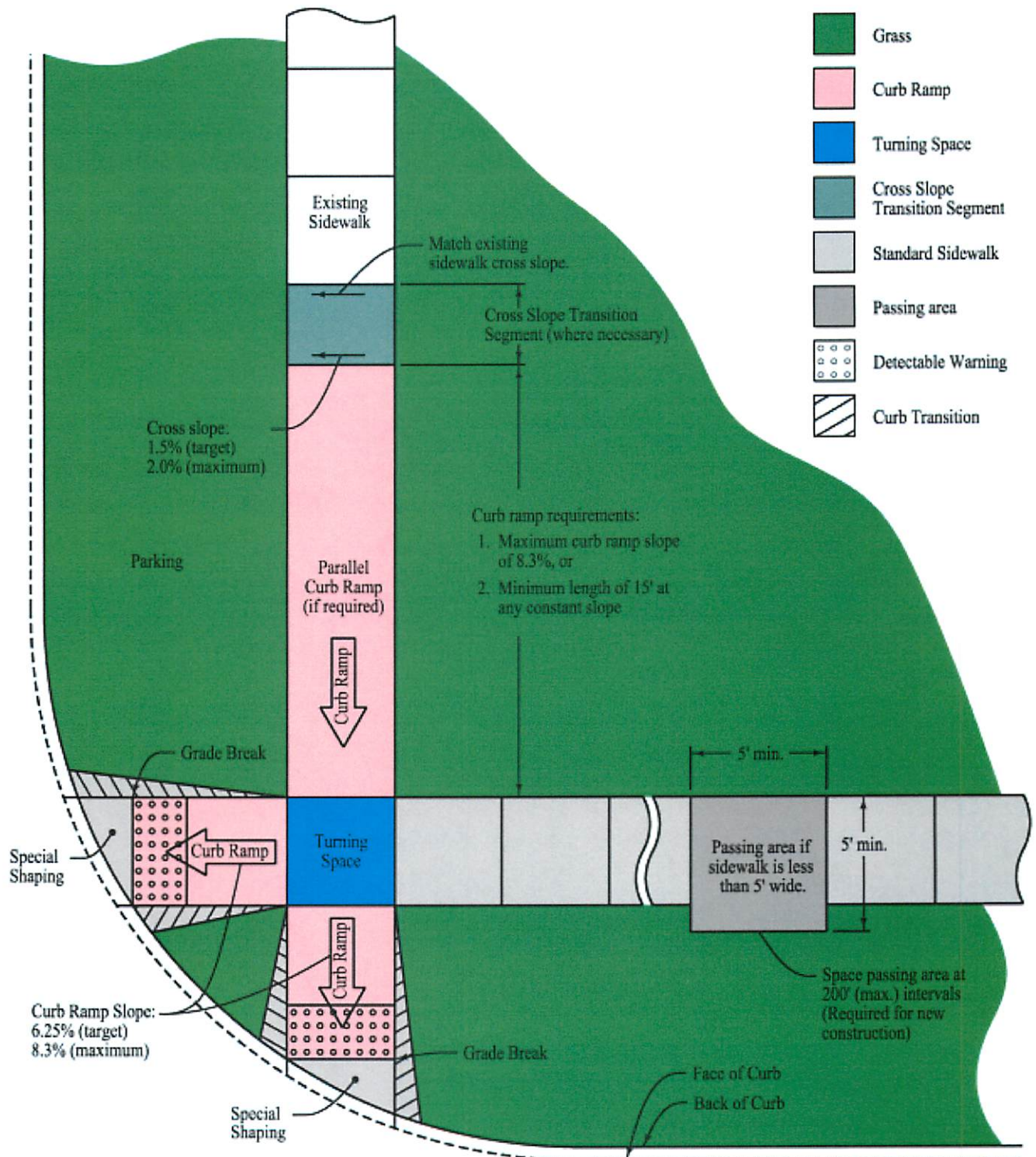
Appendix A: Iowa Statewide Urban Design and Specifications (SUDAS)

The following guidelines are copied from Iowa Statewide Urban Design and Specifications (SUDAS). The language for both General Sidewalk Requirements and Accessible Sidewalk Requirements originates from Chapter 12 of the SUDAS Design Manual, whereas the more technical schematics and specifications for handling stems from Section 7030 of the SUDAS Specifications Manual. Both the Design and Specifications Manual can be found in its entirety online at <http://www.iowasudas.org/>.

General Sidewalk Requirements

Sidewalks are an integral component of the transportation system. They provide a designated area, separated from the roadway, for pedestrians to use for both travel and recreation. Along roadways where pedestrians are present or anticipated, consideration should be given to constructing sidewalks on both sides of the road to minimize conflicts between vehicles and pedestrians. Where sidewalks are provided, they must be constructed so they are accessible to all potential users, including those with disabilities. Design standards for pedestrian access routes are provided in Section 12A-2 of the SUDAS Design Manual.

Figure 2: Standard Sidewalk and Curb Ramp Elements

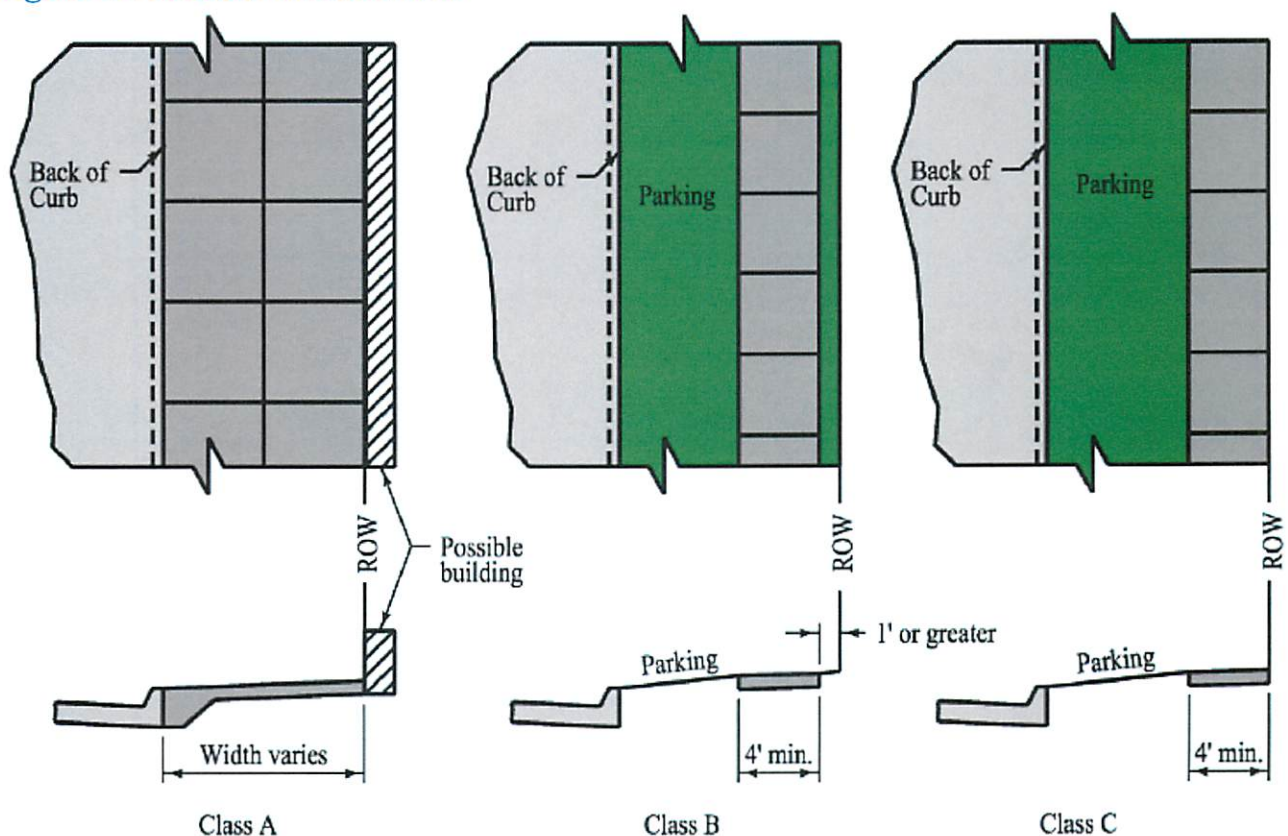


Source: "Iowa Statewide Urban Design and Specifications: Design Manual", Ch. 12A-1 (Sidewalks).

SUDAS identifies three classes of sidewalks, which are described below. Class B and C sidewalks provide a grass strip between the back of curb and the sidewalk, often referred to as the “parking.”

1. **Class A:** Class A sidewalks begin at the back of curb and generally extend to the right-of-way line. These types of sidewalks are typical in downtown areas. Consideration must be given to the location of signs, street lighting, utilities, mailboxes, snow storage, and other obstacles when utilizing Class A sidewalk.
2. **Class B:** Class B sidewalks are constructed with the back edge of the sidewalk 1 foot or more off of the right-of-way line.
3. **Class C:** Class C sidewalks have the back edge of the sidewalk on the right-of-way line.

Figure 3: Classes of Sidewalk



Source: “Iowa Statewide Urban Design and Specifications: Design Manual”, Ch. 12A-1 (Sidewalks).

Construction Requirements

1. Sidewalk Thickness: Sidewalks should be constructed of PCC with a minimum thickness of 4 inches. Where sidewalks cross driveways, the minimum thickness is 6 inches, or the thickness of the driveway, whichever is greater.

2. Obstructions: All obstructions are to be removed or relocated except for those that are impractical to move. In new development areas, these items should never occur, but in older, established areas, they will have to be addressed. In the case where the sidewalk is shifted to avoid an obstacle, use of a minimum 2:1 taper to and from the obstruction with a straight section adjacent to the obstruction should be considered. Flatter tapers may be used if space is available and user volume is high.

3. Construction Tolerances: Dimensions are subject to conventional industry tolerances except where dimensions are stated as a range, minimum, or maximum. Conventional industry tolerances include tolerances for field conditions and tolerances that may be a necessary consequence of a particular manufacturing process. Conventional industry tolerances do not apply to design work; see PROWAG R103.1. Designing features to the target values, rather than the allowable maximum or minimum, allows for appropriate construction tolerances and field adjustment during construction while maintaining compliance with PROWAG.

Accessible Sidewalk Design

It has been common practice to place the responsibility for sidewalk ramp layout on the contractor or construction inspector. This has resulted in the sidewalk, curb ramps, driveway crossings, etc. being designed in the field, often with mixed accessibility results. As public right-of-way accessibility comes under greater scrutiny, it is increasingly important that newly constructed or altered sidewalks meet accessibility requirements. Therefore, sidewalks, curb ramps, and street crossings shall be included as part of the design process and the details of those designs shall be included in the contract documents as appropriate. Projects reviewed or let by the Iowa DOT will require use of S sheets according to the Iowa DOT Design Manual Section 1F-18.

Key

- Curb Ramp
- Turning Space
- Detectable Warning

PERPENDICULAR CURB RAMP
(For Class A Sidewalk)

PARALLEL CURB RAMP
(For Class A Sidewalk)

PERPENDICULAR AND PARALLEL CURB RAMP
(For Class B or C Sidewalk)

- ① **Perpendicular Curb Ramp:** Target running slope of 6.25% with maximum running slope of 8.3%. Match pedestrian street crossing cross slope at back of curb. At mid-block crossings, cross slope may exceed 2.0% to match roadway grade.
- ② **Parallel Curb Ramp:** Target cross slope of 1.5% with a maximum cross slope of 2.0%. The length of the parallel ramp is not required to exceed 15 feet, regardless of resulting slope. Do not exceed 8.3% slope for parallel ramps shorter than 15 feet.
- ③ **Turning Space:** Target slope of 1.5%, with a maximum slope perpendicular to the travel directions of 2.0%. At mid-block crossings, cross slope of landing may exceed 2.0% to match roadway grade. Minimum 4 feet by 4 feet.
- ④ **Flare (10:1 max)** required if ramp is contiguous with sidewalk.

Source: "Iowa Statewide Urban Design and Specifications: Specifications Manual", Section 7030.206

Appendix B: Muscatine Tree Policy

Title 3 – Public Ways and Property Chapter 11 – Trees and Shrubs

SECTIONS:

- 3-11-1 Removal and Trimming of Dangerous Tree; Compliance
- 3-11-2 Abutting Property Owners
- 3-11-3 Notice to Trim; Failure to Comply
- 3-11-4 Trimming by City; Recovery of Cost
- 3-11-5 Liability Insurance; Tree Removal
- 3-11-6 Obstructing Streets; Barricades
- 3-11-7 Removal of Debris
- 3-11-8 Street Trees (Existing)
- 3-11-9 Street Trees (New)
- 3-11-10 New Street Trees (City Program)
- 3-11-11 Injuring; Defacing; Removing
- 3-11-12 Reserved

3-11-1 Removal and Trimming of Dangerous Tree: Compliance.

- A. If the City deems any shade, ornamental, or other tree situated on private property in the City to be diseased or dead, it shall cause to be served a notice upon the owner, in accordance with the most recently enacted Code of Iowa, if known within the City, or if not, then upon the occupant of the lot, to cut down such tree and remove the same and all debris therefrom. Said tree and debris shall be hauled to an area designated or approved by the City and/or the Iowa Department of Water, Air, and Waste Management.
- B. If such notice is not complied with within ten (10) days, the City shall cause to be cut down or remove such tree and the cost of cutting down and removing shall be certified to the County Treasurer and be assessed against the real estate in the same manner as a property tax.
- C. All diseased trees shall be sprayed, if required by the City, at the site of their cutting down or removal before being hauled or transported through the City to an approved disposal site.
- D. The General Manager of any utility shall have the authority to trim any tree which interferes with utility property and equipment, after notification and approval by the City.
- E. The City shall have authority to trim any tree, located on private property, which interferes with the proper distribution of light from street lights or signs following notification to the property owner in accordance with Sections 3-11-3 and 3-11-4 of this Chapter.

3-11-2 Abutting Property Owners. Any person owning any real estate within the City with trees located upon said real estate or located in the street right-of-way (including parkings)

adjacent to said real estate, shall trim such trees in such manner that no overhanging branches thereof shall in any way obstruct any such street or sidewalk below the height of ten feet (10') above the surface of the sidewalk and fourteen feet (14') from the surface of the street.

3-11-3 Notice to Trim: Failure to Comply. Any person or owner of property as described in this Chapter who shall have been served by the City with a notice by Certified Mail, and shall not comply with the notice within ten (10) days of the receipt of the notice, shall be guilty of a misdemeanor and subject to penalty of a fine not to exceed one hundred dollars (\$100.00), or by imprisonment not to exceed thirty (30) days.

3-11-4 Trimming by City: Recovery of Cost. When the owner or occupant of real property in the City having trees upon or in front of the same, the branches of which overhang the street or any part thereof, and having had notice to trim the same and fails or refuses to comply therewith for more than ten (10) days after service of notice, then it shall be lawful for the City to trim such trees to the height provided in Section 3-11-2 of this Chapter and certify the cost of the same to the County Treasurer to be assessed against the real estate in the same manner as a property tax.

3-11-5 Liability Insurance: Tree Removal. All persons and/or corporations engaged in removal of trees within the City R.O.W. shall obtain a license in accordance with Title 5, Chapter 15 of this Code and present a copy of an insurance policy for liability insurance in the amount prescribed in Title 5, Chapter 15 of this Code.

3-11-6 Obstructing Streets: Barricades.

- A. Before any street or thoroughfare can be shut off or blocked in any way for tree removal, permission must be granted by the City.
- B. Streets when barricaded or shut off must be barricaded by proper barricades appropriately marked and readily seen by all.
- C. All persons, and/or corporations barricading any street or thoroughfare for the purpose of trimming or removing any tree shall first notify the City of Muscatine Police and Fire Departments stating the location and time period that such street or thoroughfare will be closed.
- D. No street or thoroughfare shall be closed for the purpose of removing any tree unless the required permit is secured as provided in this Chapter.

3-11-7 Removal of Debris. Removal of debris, stumps, logs, etc. shall be made upon or in trucks and no hauling shall be allowed hanging from outside by booms or dragging from such vehicle.

3-11-8 Street Trees (Existing).

- A. All existing trees located within the public right-of-way as of the effective date of this Section shall be the responsibility of the adjacent property owner.

1. Exception. Any street tree which is diseased, dead, or otherwise poses an immediate threat to the public health and welfare shall be the responsibility of the City.
- B. It shall be the duty and right of the adjacent property owner to trim, remove, treat, or otherwise maintain all existing street trees in a manner that promotes the public health, safety, and welfare and in accordance with the provisions of this Chapter.
- C. Any person or corporation removing any existing street tree shall obtain a permit to do so from the City in accordance with Title 5, Chapter 15 of this Code for the purpose of initiating a City-wide inventory. The Tree Removal Permit shall be provided at no charge to the applicant.
- D. Nothing contained in this Chapter shall be construed so as to prevent the immediate removal and/or trimming by officers of the City of any tree from the streets, when in the judgment of the City, such removal or trimming is necessary for the purpose of making street improvements or to eliminate obstructions of public signs which, by design, promote safety of persons or property.

3-11-9 Street Trees (New).

- A. As of the effective date of this Section, all proposals to plant trees in the public right-of-way shall require a permit from the City in accordance with Title 5, Chapter 15 of this Code.
- B. The permit application provided by the City shall state the applicant's name, address, type of tree to be planted, exact location, and any additional information that may be needed by the City to determine whether the application should or should not be approved.
- C. The application shall be recommended for approval or disapproval by the City prior to issuance. Failure to secure a positive recommendation by the City shall constitute a denial of the application.
- D. Permit Requirements:
 1. The permit shall state that the applicant agrees to plant the street tree(s) in accordance with the requirements of this Chapter.
 2. The permit shall state that the applicant will plant a specific type of tree which shall be an approved species for street trees; a list of which shall be provided to the applicant upon request.
 3. The permit shall state that once the street tree is planted, it becomes the property of the City of Muscatine and the applicant agrees to relinquish all interest in said tree. The permit shall state that the owner agrees to donate the tree to the City, at the applicant's expense, and that the applicant agrees to adhere to the provisions of Title 3, Chapter 11, Section 8 of this Code.
 4. The permit shall include a provision which indemnifies the City from any and all claims for damage to private and public property as a result of the permit to plant a street tree.

3-11-10 New Street Trees {City Program}.

- A. The City may, at its discretion and with the approval of the City Council, initiate a program for the purpose of planting, maintaining, trimming, and removal of new street trees.
- B. It shall be the policy of the City to notify abutting property owners before planting any street tree in front of any residential structure in the City.
- C. The owner of the abutting property shall be required to sign a permit in accordance with Section 11 of this Chapter, except the, tree will be planted by the City at no expense to the abutting residential property owner.

3-11-11 Injuring: Defacing: Removing. Any person who shall willfully, maliciously, or negligently, in any manner, injure, deface, remove, or destroy any street tree or boxing placed around the same, or any shrub upon any public grounds and right of ways shall be deemed guilty of a misdemeanor, and shall reimburse the City for any costs incurred by such action if directed to do so by the Iowa District Court for Muscatine County.

3-11-12 Reserved.

Right-of-Way Tree Planting List for the City of Muscatine

All trees will be planted so they will not impede traffic or pedestrians, travel or create a safety issue with street sign visibility or create a blind spot.

Trees permitted for right-of-ways with 4 to 6 or more feet of space between side walk and road:

- Ornamental Pear: Cleveland Select, Valiant, Trinity
- Japanese Tree Lilac
- Single Stem Serviceberry
- Narrow Vase Shaped Crab Apples: Adirondack and Marilee

Trees permitted for right-of-ways with 6 or more feet of space between side walk and road:

- Ornamental Pear Cleveland Select, Red Spire
- Japanese Tree Lilac
- Single Stem Serviceberry
- Maple Sugar
- Maple Black Maple Red Hackberry
- Honey Locust (seedless thornless)
- Gingko (male species only) London Plane Tree
- Oak Swamp White
- Oak White
- Oak Bur
- Oak Red
- Oak Scarlet
- Oak English
- Linden American Linden Little Leaf Zelkova
- Beech
- Elm, Princeton
- Tulip Tree
- Iron Wood

Trees not listed on this list must have the approval of staff.

Appendix C: Muscatine Complete Street Policy

To improve both Muscatine's quality of life and image by providing a safe and attractive environment for street users of all ages and abilities such as motorists, pedestrians, bicyclists, mass transit, children, senior citizens, individuals with disabilities, freight carriers, emergency responders and adjacent land users.

- o The design, operation and maintenance of the City of Muscatine's street network will create a connected grid of streets accommodating a safe, easily accessible, convenient, comfortable, and visually appealing manner for users of all ages and abilities, including motorists, pedestrians, bicyclists, mass transit, children, senior citizens, individuals with disabilities, freight carriers, emergency responders and adjacent land users.
- o Implementation of the Complete Street Policy will guide the planning, funding, design, construction, operation, and maintenance of all new and modified streets in the City of Muscatine. The City shall approach every transportation improvement project phase as an opportunity to create safer, more accessible streets for all users. These phases include, but are not limited to: planning, programming, design, right-of-way acquisition, construction, construction engineering, reconstruction, operation and maintenance. Other changes to streets and rights-of-way, including capital improvements, and major maintenance, should also be considered.
- o When any of the conditions listed below exist in a specific project location, an exemption to the Complete Streets Policy may be granted. For an exemption to be granted a determination that incorporating new bicycle, pedestrian, and or public transit facilities is impracticable and/or undesirable must be made. This determination may occur during the budget and capital improvements program approval process or when project plans and specifications are being prepared. Any granted exemptions will be explained in writing with supporting data that indicates the reason for granting the exemption.
 - o Non-motorized users are prohibited on the roadway.
 - o Severe topographic constraints exist.
 - o An absence of current and/or future need for a particular type of user.
 - o The cost of accommodations, including potential right-of-way acquisition, for a particular mode is excessively disproportionate to the need and potential benefit of a project.
 - o The project involves ordinary maintenance activities designed to keep assets in acceptable condition, such as

cleaning, sealing, spot repairs, patching and surface treatments.

- Scarcity of population, travel, and attractors, both existing and future, indicate an absence of need for accommodation of non-motorized users.

- Where a reasonable and equivalent project along the same corridor already exists or is planned.
- o Transportation infrastructure serving non-motorized user should be linked to form a comprehensive community-wide network of routes for non-motorized travel that allow for members of the community to travel safely from their home to their destination by foot, bike, or by other non-motorized means and for children to be able to walk or bike to school safely.
- o The City of Muscatine will work with the Iowa Department of Transportation to upgrade state highways to complete standards, excluding all divided four lane, limited access highways such as, U.S. 61 and the U.S. 61 Bypass.
- o For a privately constructed street to be accepted by the City of Muscatine it must be built in compliance with complete street standards.
- o The City of Muscatine shall follow accepted or adopted design standards and use the best and latest design standards available in urban design and street design, construction, operations and maintenance. When implementing this complete streets goal the City will be not be precluded from considering innovative or nontraditional design options where a comparable level of safety for users is present or provided.
- o Design street pavement widths to the minimum necessary.
- o Maximize the number of transportation options available with the public right of way.
- o Where physical conditions warrant, plant trees whenever a street is newly constructed, reconstructed, or relocated.
- o To further the Complete Streets policy factors that should be given consideration during the development of a transportation project include the following:
 - Whether the corridor provides a primary access to a significant destination such as a park or recreational area, a school, a shopping / commercial area, or an employment center;
 - Whether the corridor provides access across a natural or man-made barrier such as a river, creek, divided highway, or railroad;
 - Whether the corridor is in an area where a relatively high number of users of non-motorized transportation modes can be anticipated;
 - Whether a road corridor provides important continuity or connectivity links for an existing trail or safe route for non-motorized travel network; or

- Whether nearby routes that provide a similar level of convenience and connectivity already exist.
- o The City of Muscatine shall put into place performance standards with measurable benchmarks reflecting the ability of users to travel in safety and comfort. Performance standards may include: miles of new bicycle facilities or sidewalks, percentage of streets with tree canopy and low design speeds, public participation, street lighting, or others.
- o Update all necessary and appropriate codes, standards and ordinances to ensure that design components for all new or modified streets further the Complete Streets Policy.
- o The City of Muscatine will examine all planned capital improvements projects to determine if they can be leveraged to advance the Complete Streets Policy.
- o The City of Muscatine, working with community members and stakeholders, will identify and map critical routes for non-motorized travel linking schools, parks, bus stops, most major employment and shopping centers, and residential areas.
- o A detailed implementation plan will be developed to make the identified critical routes for non-motorized travel safe. The detailed implementation plan will include a list of capital improvement projects addressing the gaps and deficiencies. The implementation plan will also detail the sequence and location in which inspection and maintenance of existing sidewalks and capital improvement projects need to be completed in order to build a network of critical routes for non-motorized travel outward from each school and the ultimately link then together into a community-wide network of safe routes for non-motorized travel.
- o The Complete Streets Policy will be supported by and integrated into the City's Pedestrian and Bicycle Master Plan.

Bibliography

- Burden, Dan. "Toward Health and Well-Being in Muscatine: Built Environment – Opportunities for Change." Sponsored by Wellmark. Walkable and Livable Communities Institute.
- Childs, R.L. "Sidewalks Memo." City Memorandum. January 2, 2002.
- "City of Muscatine, IA Comprehensive Plan," City of Muscatine. Prepared by Bucher, Willis & Ratliff. 2012-3.
- City of Muscatine, City Code: Title 3, Chapter 7, "Public Ways and Property – Sidewalks." Web Access: <http://www.muscatineiowa.gov/DocumentCenter/Home/View/565>
- City of Muscatine, City Code: Title 3, Chapter 11, "Public Ways and Property – Trees and Shrubs." Web Access: <http://muscatineiowa.gov/DocumentCenter/Home/View/555>
- Duluth Sidewalk Study." Duluth-Superior Metropolitan Interstate Council. August 2012.
- Improving Pedestrian Access to Transit: An Advocacy Handbook, Walk Boston, 1998.
- "Information on Sidewalk Inspection and Repair." Internal Document. City of Muscatine, Public Works Department. Revised 2/3/06.
- "Iowa Statewide Urban Design and Specifications: Design Manual." Ch. 12A (Sidewalks). Iowa Department of Transportation. SUDAS 2013 Edition (Revised 09/20/2012).
- Fangman, Andrew. "Complete Street Policy." City Memorandum. November 14, 2013. <http://www.muscatineiowa.gov/DocumentCenter/View/10034>
- Muscatine Pedestrian and Bicycle Master Plan, University of Iowa: The Iowa Initiative for Sustainable Communities. Spring 2014. Prepared by Jeremy Kaemmer, Yuan Zhang, and Charlie Nichols.
- "Proposed Sidewalk Construction Prioritization Policy." Mt. Pleasant Planning Commission. Jan. 8, 2004.
- "Sidewalk – Curb Inspection and Maintenance Policies." Risk Management Manual: Best Practices. Association of Bay Governments PLAN. Web Access: <http://plan.abag.ca.gov/members/rmm-bp.html>
- "Sidewalk Inspection Program & Guidelines." Summer 2006 Model Policy. Michigan Municipal Risk Management Authority. http://www.mmrma.org/uploadcache/sidewalk_inspection.pdf
- "Sidewalks, Curbs and Public Pedestrian Easements." Ordinance No. 2012-03. Borough of Chambersburg, PA Franklin County. Web: <http://ecode360.com/10695067>