CURRENT SIDEWALK POLICIES & MAINTENANCE

City of Cedar Rapids

City Sidewalk System

Introduction

The sidewalk system is one mode of transportation widely used for easy access to neighborhoods, schools, businesses and parks. Sidewalks enhance safety by separating vehicles and pedestrians. They are also used by many for recreation such as walking, jogging, and (youth) playing. A comprehensive plan is needed to prioritize additions to the existing system.

City Sidewalk System Defined

The City sidewalk system is defined as all walkways constructed on City-owned right-of-ways for the purpose of general public pedestrian travel. The sidewalk system includes concrete sidewalks, brick sidewalks, and sidewalk access ramps. The City sidewalk system does not include streetscape, private or public driveway approaches that are constructed in the right-of-way for vehicle access. For the purpose of this report, streetscape is defined as sidewalk areas made up of a mixture of surfaces (concrete, asphalt, and brick pavers) and various amenities such as railings, planters, garbage cans, etc. Also not included are private-use sidewalks that may be constructed between the City sidewalk and the curb in front of residences and businesses.

Background

Quantity, Composition, and Condition of Existing Sidewalks

Quantity of Sidewalk

As of January 2000, the City had approximately 500 miles of sidewalks based on an aerial map review. Although sidewalks are now required in all new subdivisions, many miles of streets within the City are currently without sidewalks as shown on the sidewalk section maps. (See Appendix F: Figure 5)

Sidewalk Composition

Cedar Rapids' sidewalks are diverse in terms of type, size and age. Although most of the sidewalk has been constructed of concrete, a small portion of brick sidewalk remains in the system. Brick sidewalk requires replacement to meet current ADA requirements. The concrete sidewalk widths are generally 4 foot wide in residential areas, 5 foot wide along collector streets and 6 foot wide along arterial streets. The age of the City's sidewalks is difficult to ascertain and varies significantly by location, but typically was installed at the same time as the street paving.

Sidewalk Condition

A sidewalk survey was started in the summer of 2008 to determine the condition of the City's existing sidewalk system. Its purpose was to determine the approximate length of City sidewalk and the approximate length of sidewalk in need of replacement. The sidewalk survey uses the following criteria to evaluate sidewalk condition. Any sidewalk section that meets the criteria will be listed for replacement.

- Buckled (raised by tree roots or frost 1-1/8 inch or more)
- Settled or sunken (1-1/8 inch or more due to poor base or backfill)
- Extreme side slope (more than ½ inch per foot)
- Wrong side slope (slopes away from curb and gutter rather than toward curb and gutter)
- Poor drainage (water ponding problem)
- Broken (more than two pieces in one slab)
- Surface deterioration with spalled or missing material to a depth of ½ inch and equal in area to a 12-inch circle
- Undermining (water removes material from beneath the sidewalk creating a void; this lack of support causes the sidewalk to crack and / or collapse)

Current Sidewalk Service Activities

Sidewalk Repair Program (CIP Projects)

Currently, sidewalks and handicap ramps are repaired and installed as part of the yearly Sidewalk Repair program. Citizens call in locations that they consider in need of repair. Staff then documents the locations in a spreadsheet, performs a site visit and draws up the needed repair. Sites with estimated repair costs are picked equally from each quadrant of the City to add up to the allocated yearly repair budget. The FY2009/2010 budget was $205,000.

Table 1 summarizes the last 5 years expenditure on sidewalk repairs and the total amount of sidewalk repairs performed.

Table 1
SIDEWALK REPAIR BUDGET

Year	Number of Repairs and Ramps	Cost
2004	149	$120,800
2005	179	$152,500
2006	163	$176,200
2007	239	$208,100
2008	190	$195,200
Total	920	$852,800

Temporary Repairs – Asphalt

The Public Works Department receives 80 to 150 requests for sidewalk tripping hazard repairs each year. These tripping hazards develop when adjacent sidewalk panels move vertically in relation to each other and create an abrupt edge. This edge can trip pedestrians. The standard for classifying this as a trip hazard is generally a difference of more than 1-1/8 inch between the adjacent surfaces. Asphalt repairs are made when requests are received in order to eliminate hazards and protect the City from liability. Temporary asphalt repairs can be made much quicker than permanent concrete repairs. When conditions cause a sidewalk panel to move on one end and create a tripping hazard, another tripping hazard often occurs nearby. This happens because the panel, or another nearby panel, rotates (moving on both ends) with a hazard on both ends. That means that the service requests will require multiple asphalt repairs. The 80 to 150 requests once inspected may require more repair areas to be added to the list due to proximity to the repair request. Whenever a sidewalk repair request for a tripping hazard is received, the area is inspected and an asphalt repair is performed within one week to all locations that have a tripping hazard of 1-1/8 inch or greater. These locations are then added to the list for permanent repairs. Permanent repairs will be made in conjunction with the Sidewalk Repair and Ramp Program that currently has about a two -year backlog for repairs.

Other Sidewalk Maintenance Activities

Property owners are required to undertake any routine sidewalk maintenance activities such as sweeping, litter pick up, and snow removal. The City does not provide these services except on a limited basis where violations to the City's ordinances exist. City staff does provide sweeping, weeding and snow removal from sidewalks adjacent to City-owned properties.

Service Request

Sidewalks generate between 80-150 service requests annually. The majority of service requests are for tripping hazards. Following is a list of other sidewalk service request types and their descriptions:

- Accessibility request (handicap ramps)
- Graffiti removal

Sidewalk Accessibility

Requests to provide accessible routes along City sidewalks are prioritized and completed as part of the yearly sidewalk repair program. Each year, one to three requests are received and completed as part of the yearly CIP Sidewalk Repair and Ramp projects.

Graffiti Removal

Graffiti removal from sidewalks is sometimes required. Gang signs, vulgar words, or inappropriate messages are occasionally painted onto sidewalk surfaces. When found, Public Works employees place a high priority on removing the graffiti. Quick removal is thought to be a deterrent to future additional graffiti. Removal is accomplished by use of chemicals, power washing, abrasives, or a combination. Requirement for this activity varies significantly from year to year.

Material Disposal

The activities of the Public Works Department sidewalk repairs generate waste materials. This material consists of dirt, brick, concrete, and asphalt materials that are excavated as repairs are made. This material is disposed of as part of the contracts in the CIP program.

Adjacent Communities

Cities located adjacent to Cedar Rapids were contacted to determine the existence and substance of their sidewalk construction programs. This was done to ensure walkway connectivity to other jurisdictions and to compare project prioritization methodologies. The communities contacted had no formal Sidewalk Master Plan or Pedestrian Master Plan in place, but all agreed better planning for pedestrian facilities is desirable.

City of Hiawatha

The City of Hiawatha does not have a formal Sidewalk Master Plan in place. Hiawatha completed a major sidewalk development project about 7 years ago that incorporated corridors with no sidewalks near schools and installed sidewalks on those routes. Since that project, the City has not completed significant sidewalk development except in new subdivisions where sidewalks are a requirement. Hiawatha does respond to resident complaints and does patch maintenance work where necessary. Currently, the City has no formal Sidewalk Inspection Program and there is no process in place to recommend where sidewalks should go. Generally, if there are areas identified that need new sidewalks or sidewalk replacement, City Engineers work on recommendations and present them to the City Council for funding.

City of Marion

The City of Marion did not provide current details about their sidewalk replacement program.

City of Robins

The City of Robins does not have a formal Sidewalk Master Plan. Robins puts sidewalks in on an as-needed basis. The City Council determines where sidewalks are most needed and then adds it to their 5 year plan. In all new developments, walks are designed and constructed in accordance with the Cedar Rapids Metro Area design standards and construction specifications.

EXISTING WALKS

Data Collection and Inventory of Existing Walks

Field data was collected in the summer of 2008. Cedar Rapids staff walked the majority of all sidewalks and then rated each segment. Data collected was noted as follows:

- Existing sidewalks were given a rating from 7-1 (Superior-Worst)

Table 2
INVENTORY OF EXISTING WALKS

Rating	Number of Segments	Percentage
7	369	5.6%
6	1,595	24.0%
5	1,895	28.6%
4	1,481	22.3%
3	364	5.5%
2	88	1.3%
1	15	0.2%
No Rating	832	12.5%
TOTAL	**6,639**	**100%**

No Sidewalk	4,285

- Areas with no sidewalk
- Each area of rated sidewalk had a list of issues* that pertained to that segment. Those issues are as follows:

SP = Spalling	UM = Undermining
SW = Sidewalk	MJ = Mudjacking
CR = Cracking	WV = Water Valve
TH = Trip Hazard	ST = Sewer Trench
TR = Tree Root	HD = Horizontal Differential
CS = Cross Slope	Ponding
OB = Obstruction	Overgrowth

It should be noted that obstructions in sidewalks or standard walkways were not collected.

**Data available from the City of Cedar Rapids Public Works Department.*

An inventory of walkway facilities on roadways in Cedar Rapids, which consisted of approximately 11,000 segments was conducted. Off-road trails and paths were not walked.

See the following figures in Appendix F:

Figure 12 - Sidewalk Map
Figure 13 - Rated Sidewalk Map
Figure 14 - Sidewalk Inspection Zones

Table 3
MAINTENANCE OF EXISTING SIDEWALKS

Priority	Number of Segments	Percent of Total	Estimated Length	Estimated Cost
High	103	1.6%	51,463	$4,219,966
Moderate	1,845	27.8%	977,958	$80,192,556
Low	3,859	58.1%	1,845,667	$151,344,694
Unknown	832	12.5%	369,860	$30,328,520
Total	**6,639**	**100%**		

SIDEWALK RAMPS

The City of Cedar Rapids must comply with all ADA (Americans with Disabilities Act) requirements. Along with inventorying areas with and without sidewalk, there is a separate inventory of deficiencies, or lack of accessible ramps and ramps that do not meet ADA standards. Any of these ramps on Iowa DOT routes qualify for funding assistance. The City should apply for funding through the Iowa DOT, and ramps awarded grants should be placed on a higher priority list to be replaced/installed. The goal should be to provide accessible ramps in all locations as soon as possible.

There are approximately 10,000 total ramps in Cedar Rapids.

Table 4
AMERICANS WITH DISABILITIES ACT (ADA) COMPLIANT RAMPS

Priority	Number of Ramps	Estimated Cost
A. High (no ramp or no receiving ramp)	3,135	$3,135,000
B. Medium (non-compliant)	4,956	$4,956,000
C. Low (compliant)	2,171	—
Total	10,262	