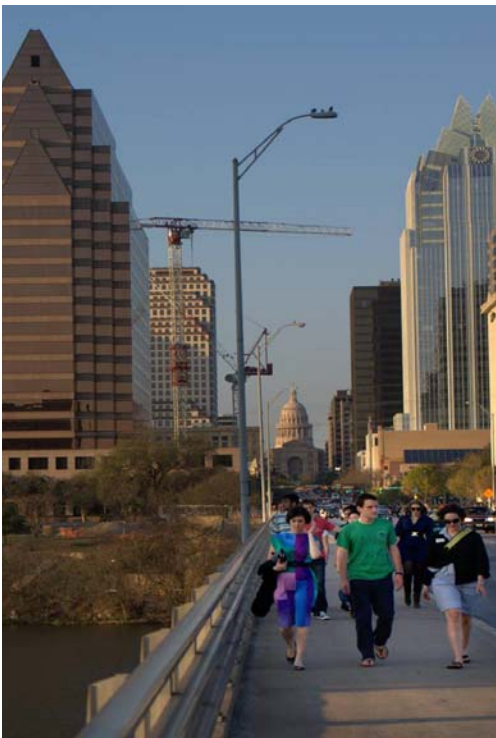


Sidewalk Master Plan



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Design Commission
Downtown Austin Alliance
Mayor's Committee for People with
Disabilities
Mayor's Fitness Council
Planning and Zoning Commission
Urban Transportation Commission
Zoning and Platting Commission





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Executive Summary

The City of Austin contracted with Lockwood, Andrews & Newnam (LAN) in 2003 to complete Phase I of a Pedestrian Infrastructure Management System (PIMS) to meet Austin's needs for assessing and prioritizing sidewalk infrastructure and to update the existing Transition Plan. The scope of the project was to create an interactive software tool that uses spatial analysis of a predetermined set of criteria to identify and rank absent sidewalks, as well as provide a Transition Plan to execute improvements. Phase I covered 31% of the City's area. In 2006, LAN began work on Phase II of the Pedestrian Master Plan to incorporate the entire City limits and further develop the prioritization matrix. The Phase II Matrix is more sophisticated and was developed through an extensive public process. The Phase II Matrix also includes an emphasis on components and elements that will improve pedestrian mobility for the ADA community.

The absent sidewalk matrix is divided into five parts: Pedestrian Attractor Score (PAS), Pedestrian Safety Score (PSS), Fiscal Availability Score, Neighborhood Plan Score, and Special Consideration Score. Points are awarded based on the following elements, with a higher score indicated a higher priority need for a sidewalk in the subject location.

The Pedestrian Attractor Score accounts for 50% of the base score. Points are awarded to a sidewalk segment based on the segment's proximity to pedestrian attractors such as schools, transit stops, government offices, etc.; median household income; residential population density; presence of existing facilities on the street; ADA Task Force and/or 311 citizen requests; proximity to a core transit corridor; and existence of bicycle lanes on the adjacent street.

The Pedestrian Safety Score accounts for 40% of the base score. Points are awarded based on the street classification, health status of the area, and occurrence of automobile / pedestrian incidents.

The Fiscal Availability Score accounts for 10% of the base score. Points are awarded if fiscal posting exists for the segment.

The Neighborhood Request score is added to the base score for sidewalk segments requested in an adopted neighborhood plan. This is an additional score since not all neighborhoods have adopted a plan. The score is based on the age of the plan, one point per year can be added with a maximum of 10 points.

The Special Consideration Score is also added to the base score and allows for consideration of specific areas known to attract a higher volume of pedestrian traffic than would be suggested by the surrounding criteria (i.e. Zilker Park). Additionally, the special consideration score may be awarded to absent sidewalk segments which serve to implement an indented trail system within the City's Trail Master Plan. Points are discretionary and must be approved by the Director of Public Works with a maximum of 10 points.

The PIMS tool integrates with ESRI's ArcGIS software and evaluates each sidewalk segment based on the criteria above. Every absent segment in the City is scored and then placed into five general categories: Very High, High, Medium, Low, and Very Low. These ranking categories will be used by the City to prioritize segments for future sidewalk programs.

In addition to the sidewalk priority matrix, Phase II included an update to the City's Title II ADA Transition Plan, including a field condition assessment for approximately 300 miles of existing sidewalk (13% of existing infrastructure). It is estimated that the City will require \$120 million to improve existing sidewalk infrastructure to ADA compliance and to complete the condition assessment. The Transition Plan includes a schedule for implementing improvements to existing infrastructure. The anticipated schedule to make the repairs is 15 years, spending \$5M for 2009 and 2010 and \$10M for each subsequent year. The funding source is expected to be future and existing bonds.





Pedestrian Infrastructure Management System (PIMS) and Absent Sidewalk Priority Matrix

PEDESTRIAN MASTER PLAN UPDATE

In November of 2000, the Austin City Council adopted a Pedestrian Master Plan as an answer to concerns related to a 1997 Austin Transportation Study (ATS) survey that found only 3% of Austin residents walked from home to work or school. The 1995 Nationwide Personal Transportation Survey reported that 50% of all trips made by respondents were less than 3 miles, which could reasonably be replaced with walking. The City of Austin recognized the need for a plan to provide a structured approach for improving pedestrian facilities.

The City's goal for their Pedestrian Master Plan was to "set forth policies that will encourage walking as a viable mode of transportation, improve pedestrian safety and enable people to walk to and from transit stops". Additionally, the plan identified that "inclusion of sidewalks and other pedestrian facilities in the transportation system are necessary to help control air pollution and traffic congestion, and increase the quality of life in Austin". The document covered justification for the adoption of such a plan, policies that outline criteria for proper pedestrian infrastructure, recommendations for facilities that need improvement, and a design guide to effectively follow through on the previously identified policies with compliance to standards set by the Americans with Disabilities Act.

A few years later, the City of Austin was prepared for an aggressive implementation plan with the purpose of identifying and prioritizing specific areas requiring new sidewalk infrastructure or sidewalk rehabilitation. The City needed a formal assessment of existing sidewalk conditions (including ADA compliance) together with an inventory of current City sidewalks in order to generate a priority list. This information would allow the City to prepare future budget allocations and institute a sidewalk installations and repairs program.

Lockwood, Andrews & Newnam, Inc. (LAN) of Austin was contracted in 2003 to complete Phase I of a Pedestrian Information Management System (PIMS) to meet Austin's needs for assessing and prioritizing sidewalk infrastructure. The scope of the project was to create an interactive software tool that uses spatial analysis of a predetermined set of criteria to identify and rank absent sidewalks, as well as to provide a transition plan to execute improvements. The tool would integrate with ESRI's ArcGIS 9.X software, currently used by the City of Austin GIS (Geographic Information Systems).

LAN provided updates to the existing 2000 Pedestrian Master Plan, as well as the City's ADA Transition Plan from the early 1990s. Phase I was completed in 2005. In 2006, LAN began work on Phase II of the Pedestrian Master Plan Update. This is that plan. The Phase I Matrix was more technically oriented whereas the Phase II Matrix is more sophisticated and included an extensive public process with a focus on ADA compliance.

The scope of Phase II outlined the creation of a "matrix", or table, of pedestrian related "criteria", organized into "elements" and scored using points multiplied by an element's "weight". Furthermore, these elements were grouped into a set of "scores", the sum of which would represent the overall "Base Score" for an absent sidewalk segment. The sidewalks would then be compared against each other to form a ranking system.

The project also included updates to the existing Pedestrian Master Plan, collection of field condition data, creation of new data, collection of existing data, and a plan for the further development of the PIMS concept.





Table 1 Pedestrian Master Plan Timeline	
Year	Action
2000	Resolution No. 20080427-64 adopts the Pedestrian Master Plan
2003	Transportation, Planning and Sustainability Department initiates updates to 2000 plan
2005	Phase I of updated 2000 plan is completed
2006	Phase II of updated 2000 plan initiated
2007	Public process for Phase II plan conducted
2008	Phase II of 2000 plan completed

GIS DATABASE DEVELOPMENT OF EXISTING AND ABSENT PEDESTRIAN INFRASTRUCTURE

Raw existing sidewalk data was provided for Phase I and Phase II from aerial imagery flown in 2003 and 2006, respectively. Using this data as a template, a PIMS geodatabase was created along with a methodology for feature creation of new sidewalk segments¹, curb ramps, street intersections, street centerlines, and absent sidewalks. The raw sidewalk data along with existing City of Austin street centerline data were corrected to match current aerial imagery. Phase I completed 31% of the City and provided data for use in Phase II, which covers the entire City limits.

GIS METHOD TO SCORE AND PRIORITIZE PROJECTS

A GIS methodology was constructed to analytically compare and rank sidewalks against each other with the intent of instituting installation projects in an order based on this ranking system. Any number of criteria relating to an increase of pedestrian traffic could boost a sidewalk's rank. To make a fair and accurate assessment based on spatial location, a spatial query of the criteria existing near a sidewalk must be performed. To meet this end, a special program was developed to work within GIS to produce the output necessary to establish overall sidewalk "scores" which would determine project priority.

To serve as the backbone for such a program, LAN developed a scoring matrix to score and prioritize the need for new sidewalks in areas where none currently exist. The project prioritization aids in filling in missing sidewalk segments and providing connectivity in the system.

The matrix scores these potential sidewalks based on their proximity to certain criteria that would indicate a greater need for sidewalk infrastructure, i.e. areas near parking garages, or grocery stores, or areas in densely populated areas. Safety issues are also considered in the score, such as pedestrian/automobile incidents near absent/existing sidewalks, nearby street classification (higher traffic volume = higher priority), and local health data. Proximity to attractors and pedestrian safety form the basis for each matrix, but there are additional elements to each that are further described below. The matrix focuses on transportation with over 60% of the score being derived from transportation-related elements.

The premise of the matrix is that when all sidewalks have been scored, it will be possible to prioritize new sidewalks by assigning them a general classification relative to all other





scored sidewalks of their type. This final classification will recognize their importance using the five simplified terms “very high”, “high”, “medium”, “low”, and “very low”.

The methodology of the matrix was chosen because of its ability to provide consistent, unbiased prioritization results in an analytical, objective manner to the City of Austin for over 30,000 locations. Consistent data updates made by the City will assist in maintaining the integrity of the sidewalk score output in the future.

This tool is intended to be used as a foundation for sidewalk prioritization, and a first step for analysis of sidewalk programs. City staff will verify the data prior to assigning funding to rule out anomalies in the results. The Director of Public Works shall have final approval of project recommendations with signature input from this plan. Potential steps to creating each sidewalk program are as follows:

- Identify Very High Priorities using the Matrix;
- Conduct field assessment / verification;
- Solicit stakeholder input;
- Address safety concerns;
- Assess integration with Trails or Bicycle Master Plans; and
- Obtain signature approval from the Director of Public Works.

ABSENT SIDEWALK SCORING MATRIX

The absent sidewalk matrix is divided into five parts: Pedestrian Attractor Score (PAS), Neighborhood Plan Score, Fiscal Availability Score, Pedestrian Safety Score (PSS), and Special Consideration Score. The Neighborhood Plan can add an additional 10 points to the base score and can only be used when comparing projects within areas with adopted neighborhood plans.

1. The Pedestrian Attractor Score (**PAS**) accounts for 50% of the base score and includes the following elements:

45% of PAS; Proximity to pedestrian attractors such as schools, transit stops, government offices, etc. Points are awarded based on how many of these elements exist in a 1/8 or 1/4 mile buffer.

5% of PAS; Median Household Income uses 2000 U.S. Census data to identify sidewalk segments contained within a census tract that falls at or below Median Household Income (\$48,950).

25 % of PAS; Residential Population is based on the 2000 Census blocks and awards points based on the population within 1/2 mile buffer.

10% of PAS; Existing Facilities on Street awards points for arterial and collector streets if there are sidewalks on only one side of the street.

10% of PAS; Citizen/Organization Requests gives points if the sidewalk segment has been requested by either the ADA Task Force and/or a citizen request through the City of Austin 311 system.

2.5% of PAS; Core Transit Corridors allow for points to be awarded to sidewalks within 1/4 mile of designated thoroughfares.

2.5% of PAS; Bicycle Lanes add points if there are bicycle lanes on both sides of the street.

2. The Pedestrian Safety Score (**PSS**) accounts for 40% of the base score. This score looks at adjacent street characteristics, number of pedestrian incidents with





motor vehicles, and public health data for the area. This score makes no judgment about existing infrastructure or faulty facilities.

45% of PSS; Street Classification gives points to sidewalks based on the classification of adjacent streets, adding more points to streets with higher traffic volume and speed limits.

35% of PSS; Pedestrian Health Risk uses public health data to look at the health needs at a zip-code level. Points are awarded by higher points given to very high, medium, low, or very low health need areas respectively.

20% of PSS; Pedestrian/Automobile incidents awards points according the number of incidents adjacent to the sidewalk segment. This element provides an indicator of pedestrian activity and does not imply fault or negligence on any party. The data is multiplied per occurrence; so locations with multiple incidents receive higher scores.

3. The Fiscal Availability Score represents 10% of the base score. This score is awarded if fiscal posting exists for a portion of, or for the entire absent sidewalk segment.

4. The Neighborhood Request score is added to the base score for sidewalk segments requested in an adopted neighborhood plan. This is an additional score since not all neighborhoods have adopted a plan. The score is based on the age of the plan, one point per year can be added with a maximum of 10 points.

5. The Special Consideration Score is also added to the base score and allows for consideration of specific areas known to attract a higher volume of pedestrian traffic than would be suggested by the surrounding criteria (i.e. Zilker Park). The city's Safe Routes to School program is another candidate for addition of the Special Consideration Score. Additionally, the special consideration score may be awarded to absent sidewalk segments which serve to implement an indentified trail system within the City's Trail Master Plan. Points are discretionary and must be approved by the Director of Public Works or Director of Transportation with a maximum of 10 points.





TABLE 2

Table 2 Absent Sidewalk Master Plan - Scoring Matrix			
Pedestrian Attractors Score(PAS): 0 - 100		Base Score Weight 50%	
Element	Criteria	Proposed Points	
Proximity to Attractors Weight: 45%	<i>(Multiply Possible Points by number of attractors within specified radius)</i>	1/8 Mile	1/4 Mile
	State or Local Government Offices	10x	5x
	Commuter Rail Stations	10x	5x
	Transit Stop (Max. of 50 pts.)	9x	4.5x
	Major Grocery Stores	9x	4.5x
	Places of Public Accommodation (parks, libraries, etc.)	8x	4x
	Public or Private Schools	8x	4x
	Employers with > 250 Employees	8x	4x
	Public Housing	7x	3.5x
	Public Parking Garages	5x	2.5x
	Religious Institutions	5x	2.5x
	<i>(max 100 pts.)</i>		
Median Household Income Weight: 5%	Within a census tract at or below Median Household Income (n=\$48,950)		
	a) Yes	100	
	b) No	0	
Residential Population Weight: 25%	Total population residing within 1/2-mile radius of proposed project		
	a) Population >= 8,000	100	
	b) Population >= 4,000 and < 8,000	75	
	c) Population >= 1,000 and < 4,000	50	
	d) Population >= 500 and <1,000	25	
	e) Population < 500	0	
Existing Facilities on Street Weight: 10%	For arterials and collector streets, are there complete sidewalks on <u>both</u> sides of the street?		
	a) Yes	0	
	b) No	100	
	For local / residential streets, is there an existing complete sidewalk on either side of the street?		
	a) Yes	0	
	b) No	100	
Request Weight: 10%	Project requested by ADA Task Force		
	a) Yes	75	
	b) No	0	
	Project requested by citizen through 311		
	a) Yes	25	
	b) No	0	
Core Transit Corridors Weight: 2.5%	Is the sidewalk within a 1/4 mile of a Core Transit Corridor?		
	a) Yes	100	
	b) No	0	
Bicycle Lanes Weight: 2.5%	Are there bike lanes on both sides of the street?		
	a) Yes	100	
	b) No	0	



TABLE 2 CONTINUED

<u>Pedestrian Safety Score(PSS):</u> 0 - 100		
Base Score Weight 40%		
Street Classification <i>Weight: 45%</i>	a) Arterial b) Collector c) Residential	100 75 50
Pedestrian Health Status <i>Weight: 35%</i>	a) Very High b) High c) Moderate d) Low e) Very Low	100 75 50 25 0
Pedestrian/Automobile Incidents <i>Weight: 20%</i>	Number of incidents reported to APD involving pedestrians and motorized vehicles in previous 36 months multiplied by 10 <i>only applied to sidewalk on the street where the incident took place</i>	10X <i>(max 100 pts.)</i>
<u>Fiscal Availability Score(FAS):</u> 0-100		
Base Score Weight 10%		
Existing Fiscal Availability <i>Weight: 100%</i>	Is there fiscal posting for this block? a) Yes b) No	100 0
<u>Neighborhood Plan Score(NPS):</u> 0 - 100		
Addition to base score (max 10 points)		
Neighborhood Request <i>Weight: 100%</i>	Project requested via Adopted Neighborhood Plan - Age of Neighborhood Plan One point per year since the adoption of the neighborhood plan, up to 10 points	1 point / per year <i>(max 10 pts.)</i>
<u>Special Consideration</u> Score(SCS): 0 - 100		
Addition to base score (max 10 points)		
Special Consideration <i>Weight: 100%</i>	As approved by the Director of Public Works or Director of Transportation (Safe Routes to School, special recurring events, trail connectivity, or other) 10 point addition for absent sidewalk segments within 1/2 mile of location. a) Yes b) No	10 10 0



SIDEWALK PRIORITY RESULTS

The Exhibit 1 in Appendix A illustrates absent sidewalk scores for the City of Austin. The absent sidewalk matrix scoring range (0-100) is subdivided into five categories and is color coded for clarity. The categorical ranges are derived by a comparison algorithm that creates natural groupings within the score results. The scores are generated using the Absent Sidewalk Prioritization Matrix. The following table outlines the score range for each priority ranking as well as the color associated with the ranking in the exhibit.

Table 3 Priority Hierarchy Ranges		
	Rank	Color
Very High	> 59.01	Red
High	50.01 – 59.00	Navy
Medium	40.01 – 50.00	Green
Low	30.01 – 40.00	Orange
Very Low	< 30.00	Violet

The estimated cost to build-out the City’s sidewalk network is \$750 million. This is based on the approximately 3,500 linear miles of absent sidewalk and over 5,500 missing curb ramps. A cost of \$5.50/square foot of sidewalk, average 5’ sidewalk width, and \$1,000/ramp was used to develop this high-level estimate. The estimate also includes a 20% contingency and a 25% allowance for soft costs such as engineering, ROW, inspection, City management, etc.





PIMS TOOL MAINTENANCE PLAN

The City of Austin will be responsible for maintaining the PIMS tool by making updates to the GIS datasets. Each dataset is assigned an update schedule, and some update processes are more intensive than others. A “how-to” process document is included in the User Manual for step-by-step instructions to update every dataset in the PIMS tool.

The datasets directly related to sidewalk condition will need to be modified regularly as sidewalk infrastructure is replaced or repaired. Accurate and timely updates to these particular datasets are critical to the integrity of the PIMS tool, and will require a significant amount of time devoted to the task. They are listed below as “Continual Updates.”

Some datasets need to be updated annually, as there may not be significant changes or available data within a shorter time frame. There are two categories under “Annual Updates” following: Readily Available Datasets and Datasets Must be Created. The former are datasets that are already being created or updated by another entity, so they need to be collected and used to replace the old datasets in PIMS. “Datasets Must be Created” refers to datasets for which there is no readily available replacement. Updates to this data requires significantly more time and effort, as there is a process involved to create spatial data from other information sources.

The remaining datasets fall under the “Other” category and have varying update frequencies. As in the “Annual Updates” category, some datasets are listed as being readily available, and some will require additional resources.

It is anticipated that the maintenance and upkeep of these datasets will require one full time employee.





TABLE 4 - CITY OF AUSTIN PIMS TOOL DATASETS

CONTINUAL UPDATES

The following datasets noted with “continually” should be updated as any changes are made to the entity the dataset represents. The original file will be edited directly, but archives should be saved monthly.

- **Condition Flag Lines**
- **Condition Flag Points**
- **Curb Ramps**
- **Network (sidewalks)**

ANNUAL UPDATES

Datasets with an “annual” update status are likely to have a few updates over the span of a year, and as such should be checked annually. The entire dataset will be replaced with a new one. If there are no changes from the previous year, then it is not necessary to replace the existing file.

Readily Available Datasets:

- *Government Offices*
- *Major Employers*
- *Parks*
- *Public Accommodations*
- *Public Facilities*
- *Bicycle Lanes*
- *Rail Stops*
- *Transit Stops*

Datasets Must Be Created:

- **Accidents**
- **Religious Institutions**
- **Fiscal Posting**
- **Grocery Stores**
- **Neighborhood Plan Requests**
- **Parking**
- **Public Housing**
- **Request 311**

UPDATES - OTHER

The datasets below fall into as-needed update categories.

Readily Available Datasets:

- *Census Blocks (every 10 yrs)*
- *Median Income (every 10 yrs)*
- *Streets (as available)*

Datasets Must Be Created:

- **Health Status (every 2 yrs)**
- **Core Transit Corridors (if change approved by Council)**
- **ADA Task Force (as needed)**





TABLE 5 - CITY OF AUSTIN PIMS TOOL MAINTENANCE PLAN

Dataset Name	Create Dataset	Update PIMS
Condition Flag Lines	---- Continually Updated -----	COA CTM
Condition Flag Points	---- Continually Updated -----	COA CTM
Curb Ramps	---- Continually Updated -----	COA CTM
Network (sidewalks)	---- Continually Updated -----	COA CTM
Government Offices	COA CTM	COA CTM
Major Employers	COA CTM	COA CTM
Parks	COA CTM	COA CTM
Public Accommodations	COA CTM	COA CTM
Public Facilities	COA CTM	COA CTM
Bicycle Lanes	COA CTM	COA CTM
Rail Stops	CapMetro	COA CTM
Transit Stops	CapMetro	COA CTM
Accidents	LAN	COA GIS Analyst
Religious Institutions	LAN	COA GIS Analyst
Fiscal Posting	LAN	COA GIS Analyst
Grocery Stores	LAN	COA GIS Analyst
Neighborhood Plan Requests	LAN	COA GIS Analyst
Parking	LAN	COA GIS Analyst
Public Housing	LAN	COA GIS Analyst
Request 311 (table)	LAN	COA GIS Analyst
Census Blocks	U.S. Census Bureau	COA GIS Analyst
Median Income	U.S. Census Bureau	COA GIS Analyst
Streets	City of Austin Addressing	COA GIS Analyst
Health Status	LAN	COA GIS Analyst
Core Transit Corridors	LAN	COA GIS Analyst
ADA Task Force	LAN	COA GIS Analyst

*Entities listed in gray are subject for evaluation, and may be overwritten.

COA = City of Austin

CTM = Communication and Technology Management

LAN = Lockwood, Andrews & Newnam, Inc.

Create Dataset- Person/Organization responsible for creation of the feature class required to run PIMS.

Update PIMS- Person/Organization responsible for replacing or updating the existing dataset in PIMS tool with new dataset.



PUBLIC INPUT AND REVIEW

The Public Works Department Bicycle and Pedestrian program along with LAN conducted an extensive series of public presentations from May 2007 through May 2008 to gain insight and apply citizen input into the PIMS tool development and absent sidewalk matrix design. This process resulted in numerous modifications of the matrix to further refine stakeholders' requirements and also gave the development team practical knowledge of the public's desire for transparent processes in the expenditure of sidewalk infrastructure funds. The public process included the following stakeholders, boards, and commissions with the major items of input those groups provided.

ADAPT

- Submission of list of priority projects

MAYOR'S FITNESS COUNCIL

- Public Health data weighting changes
- Addition of Grocery Stores as a Pedestrian Attractor

ADA TASK FORCE AND ADAPT

- Public Health data weighting changes
- Transit stop weight element changed

URBAN TRANSPORTATION COMMISSION

- Inclusion of Safe Routes to School (SRTS) information
- Sidewalk gap equitably

COMPREHENSIVE SUBCOMMITTEE (PLANNING COMMISSION)

- Pedestrian/Automobile Incidents element
- Gap analysis
- Including Safe Routes to School

MAYOR'S COMMITTEE FOR PEOPLE WITH DISABILITIES

- Addition of Grocery Stores as a Pedestrian Attractor
- ADA Task Force weighting modification

AUSTIN NEIGHBORHOOD COUNCIL

- Formation of a focus group to further encourage public comment

ZONING AND PLATTING COMMISSION

- Question on creation of sidewalk matrix dataset

DESIGN COMMISSION

- Changed name to Sidewalk Master Plan to better reflect the scope of the project due to multiple comments for the plan to address the pedestrian environment beyond sidewalks.
- Core Transit Corridors added as element
- Proximity to parkland

DIRECTOR OF PUBLIC WORKS

- Added median household income as an element





PEDESTRIAN INFRASTRUCTURE MANAGEMENT SYSTEM (PIMS) TOOL

The PIMS tool is a culmination of efforts to provide a simple, interactive and informative method for scoring existing or absent sidewalk condition from a dynamic collection of datasets which will ensure accurate results, even in the future. The tool was developed as an extension to work inside ESRI's ArcMap GIS software, using datasets saved in a file geodatabase. Functionality includes the ability to select a single sidewalk and score it, select multiple sidewalks and export results as a batch, add a special consideration score to a sidewalk, create blockfaces for connected sidewalk sets, or estimate project cost with a construction calculator.

CONCLUSION

The Sidewalk Master Plan replaces any previous Pedestrian or Sidewalk Plan and provides an update to the City's 1995 ADA Transition Plan (Right of Way portion only).

The Sidewalk Master Plan provides guidance on creating an accessible and walkable City and allows for prioritization and planning of future sidewalk projects and associated funding to improve connectivity. It also provides the basis for which other City initiatives concerning the pedestrian realm can build upon. It assists the City in responding to requests with an analytical, objective review. Additionally, it serves to assist other City departments such as development review planners to more easily assess pedestrian infrastructure when considering sidewalk variances and waivers.

The incorporation of public health data into the Matrix is progressive and consistent with a national trend in city planning which looks at the affect of the built environment on public health. The Public Works Department and the Austin/Travis County Health and Human Services Department proudly partnered on this portion.

The Sidewalk Prioritization Matrix represents input from various community stakeholders as well as City boards and commissions. LAN coordinated with multiple City departments including Public Works, Neighborhood Planning and Zoning, and the Communications and Technology Management (CTM) department, as well as the Captial Metro Transit Authority (CapMetro), the Texas Department of Transportation (TxDOT), and the ADA Task Force to access data necessary to complete the study. Solicitation of input for the Matrix was also obtained by placing information at all City libraries and on the City of Austin Bicycle & Pedestrian Program website.

Lastly, in April 2008, the Austin City Council adopted Resolution No. 20080427-64 related to the need for master trail planning as an asurer to both open space and transportation needs. It is important to recognize that the City's sidewalk system will play an important role in realizing an off-road multiuse trail system. It is likely that, in many areas, sidewalks will provide the only viable way to fill gaps in the system. Appendix B of this plan contains the desired trail network for the City. Exhibit 2 shall be reviewed prior to CIP sidewalk project selection by the Bicycle and Pedestrian Program and shall be considered by the Director of Public Works for points per the Special Consideration Add-on Score.





ADA Transition Plan

ADA regulations require that Cities with over 50 employees develop a Transition Plan. This Sidewalk Master Plan updates the City of Austin’s Transition Plan as required.

CHRONOLOGY OF DISABILITY NON-DISCRIMINATION

Below is a chronology of the development of the ADA and Transition Plan requirements.

- **1973**-Most programs and activities of State and local governments are recipients of Federal financial assistance from one or more Federal funding agencies and, therefore, are covered by section 504 of the **Rehabilitation Act of 1973**, as amended (29 U.S.C. 794) (“section 504”), which prohibits discrimination on the basis of handicap in federally assisted programs and activities.
- **1990**-The landmark Americans with Disability Act of 1990 (ADA) was signed into law by George W. Bush, which provides comprehensive civil rights protections to qualified individuals with disabilities in the areas of employment, public accommodations, State and local government services, and telecommunications. Because title II of the ADA essentially extends the nondiscrimination mandate of section 504 to those State and local governments that do not receive Federal financial assistance, this rule hews closely to the provisions of existing section 504 regulations.
- **1992**- Title II of the ADA took effect on **January 26, 1992** and covers programs, activities, and services of public entities. Title II requires the need for a transition plan.
- **1992**-Where physical modifications are necessary to achieve program accessibility, a public entity with 50 or more employees must develop a Transition Plan by **July 26, 1992**.

REQUIREMENTS OF A TRANSITION PLAN

Existence of an adequate Transition Plan may reduce a municipality’s exposure of liability. The ADA regulations require a Transition Plan to contain the following elements:

1. A list of physical barriers in the public entity’s facilities that limit the accessibility of its programs, services, or activities to individuals with disabilities; a detailed description of the methods to be utilized to remove these barriers and make the facilities accessible;
2. The schedule for taking the necessary steps to achieve compliance with Title II;
3. The name of the official responsible for the plan’s implementation;
4. The proposed funding source for improvements; and
5. The opportunity for the disability community and other interested parties to participate in the development of the Transition Plan.

This document includes an update to the City’s Transition Plan with respect to the ROW only. The update includes cost estimates and scheduling to improve the City’s existing infrastructure to ADA compliance.





GPS SIDEWALK FIELD ASSESSMENT

A field survey of sidewalk and curb ramp condition was conducted for priority corridors within the City. Field assessment areas were chosen based on areas with a high density of attractors and existing sidewalks. The assessment areas are shown in Exhibit 3. The condition data was collected using custom data collection software on Global Positioning System (GPS) enabled handheld devices. Sidewalks and curb ramps were evaluated to determine ADA and TAS compliance, as well as inspected for degradation, quality, and feasibility as a passageway (no permanent obstructions). A detailed data dictionary of the field assessment project can be found in Appendix C.

UPDATE TO TRANSITION PLAN

The following sections provide an update to the City of Austin’s Transition Plan.

Inventory of Physical Barriers (in the ROW only). A desktop inventory of existing and absent sidewalks based on aerial imagery was completed for the City limits in 2007. Of these, a condition assessment to identify barriers has been completed on approximately 300 miles of the existing 2,400 miles of sidewalk (approximately 13% of the existing sidewalk network). This data was collected using a Global Positioning System and walking the existing sidewalks and is included in the delivery of the PIMS. The estimated cost to upgrade the ADA/TAS deficiencies within the area included in the condition assessment is \$15M. The straight-line extrapolated cost for the complete City is \$115M.

This plan also includes provision to complete the condition assessment that is required to review compliancy of the existing sidewalk network. It is anticipated that approximately \$1M will be required to complete the condition assessment for the City limits.

The assumptions and unit costs used to calculate these estimates are located in Appendix D.

Schedule for improvements. Based on case precedent, the recommendation of staff is to spend approximately \$5M/year for two years and \$10M/year for 13 years over the next 15 years to complete the condition assessment and upgrade the deficient infrastructure. This money is assumed to be acquired through bonds. However, this plan does not preclude the City from securing funds through other sources for use in improving accessibility on existing infrastructure.

The following table outlines a recommended spending strategy based on today’s known potential funding sources. It uses a combination of existing bond monies from the Concrete Repair and the Street Reconstruction Bond Programs. In addition to monies required to repair the existing infrastructure, it is anticipated that approximately \$1M will be required to complete the condition assessment for the City limits. This condition assessment is recommended to be completed within the first two years of this plan.





Table 6 ¹ ADA Transition Plan Required Spending (\$M)							
	2009	2010	2011	2012	2013	2014 . . . 2021	Total
2006 Bonds*	1	1	1	1	1	0	5
Future Bonds	4	4	9	9	9	10/year	115
Total	5	5	10	10	10	80	120
*Includes Concrete Repair and Street Reconstruction Programs							
Estimates are in current 2008 dollars, not adjusted for inflation							

Person responsible for implementation. The Transition Plan will be implemented by the COA Director of Public Works or Director of Transportation in consultation with the COA ADA/504 Coordinator.

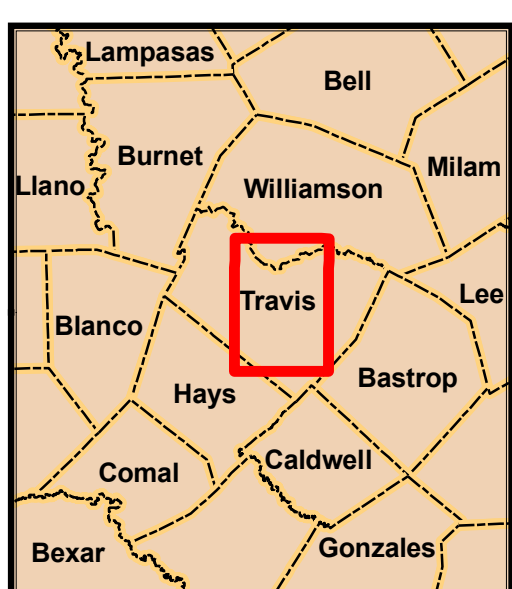
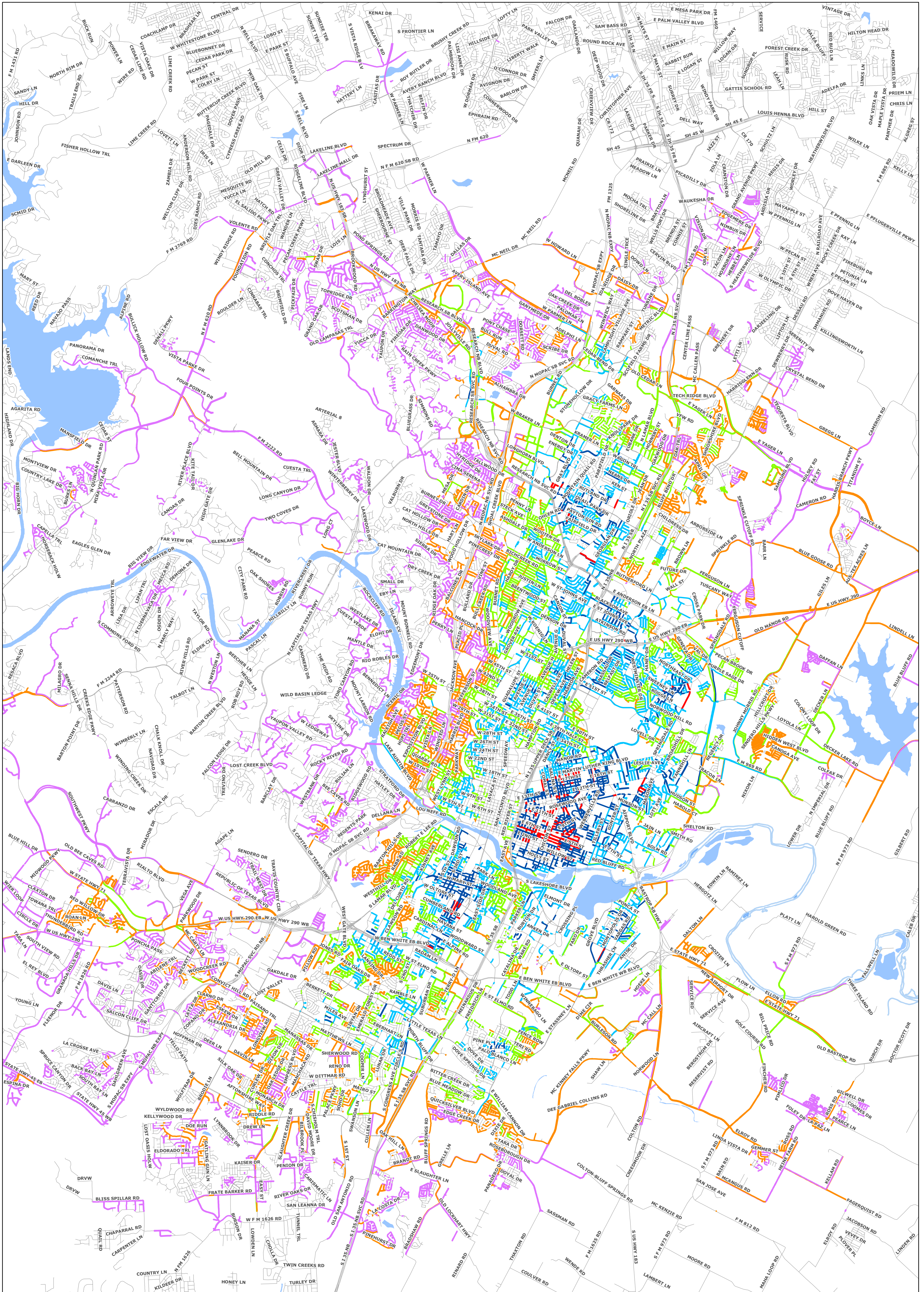
Proposed funding source. As discussed above, the proposed funding source is a combination of existing and future bonds.

Opportunity for disabled community input. The disabled community was included in the public process for input on the Sidewalk Prioritization Matrix. The City presented several times to the ADA Task Force, ADAPT, and the Mayor’s Committee for People with Disabilities. In addition, the City Bicycle and Pedestrian Program will meet no less than once per year in the future with the disabled community to provide updates and solicit input.

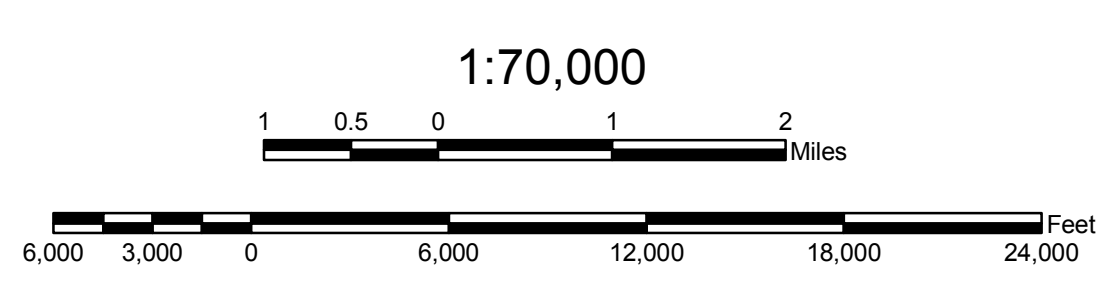




City of Austin Pedestrian Plan Absent Sidewalk Scoring Results



Projection: Lambert Conformal Conic
(Central Texas StatePlane - FIPS 4203)
Units: Feet
Datum: NAD83
Central Meridian: -100.333333
Standard Parallel 1: 30.116667
Standard Parallel 2: 31.883333
Latitude Of Origin: 29.666667
False Easting: 2296583.333333
False Northing: 9842500.000000
Created by: Richard McEntee
LAN - Austin
September, 2008



Lockwood, Andrews & Newnam Inc. makes no representations or warranties regarding accuracy or completeness of the information depicted on this map or the data from which it was produced. This map is NOT suitable for survey purposes and does not purport to depict or establish boundaries between land owners or locations of utility infrastructure where survey data is available and field locations have been established.



PIMS Absent Sidewalk Score	
—	20.00 - 30.00 (Low)
—	30.01 - 40.00 (Med. Low)
—	40.01 - 50.00 (Medium)
—	50.01 - 60.00 (Med. High)
—	60.01 - 70.00 (High)
—	> 70.01 (Very High)
—	Roads
—	Waterbodies

NOTE: PIMS Score values < 20.0 (Very Low) have been omitted to enhance higher score groupings

Sidewalk Condition Assessment – ADA Data Dictionary

Flag Type: ADA Sidewalk – Type 1

Required data entry:

ADADesc1	Description of Sidewalk ADA issue
ADADesc2 (if applicable)	"
ADADesc3 (if applicable)	"
ADADesc4 (if applicable)	"
ADADesc5 (if applicable)	"
CondLength (if noted below)	If entire segment enter "999"

ADADesc* for Sidewalk Flags

<u>Problem</u>	<u>Description</u>
1- Cross slope 2.1-4%	Cross slope is 2.1-4%...also enter the CondLength
2- Cross slope 4.1-6%	Cross slope is 4.1-6%...also enter the CondLength
3- Cross slope >6%	Cross slope is > 6%...also enter the CondLength
4- Pt width <36"	A single point usually around an obstacle has a passing width less than 36"
5- Edge chg > ¼"	Vertical edge change is greater than ¼ inch
6- Cont Width <36"	A continuous length of sidewalk is narrower than 36"...also enter the CondLength
7- Vert. Clear	Vertical clearance is less than 80" (7 feet)...also enter CondLength
8- > Road slope	The sidewalk slope exceeds the slope of the road...also enter CondLength
9- Obst Wid <48"	The radius around object less than 48" in width is less than 48"
10- No pass space	No passing space on sidewalks greater than 200' long...also enter CondLength
11- Pass int >200'	Interval between passing spaces is greater than 200'...also enter CondLength
12- Grate does not meet ADA standards	Spaces are wider than ½" or openings are not parallel to travel direction

Flag Type: ADA Ramp – Type 2

Required data entry:

ADADesc1	Description of Ramp ADA issue
ADADesc2 (if applicable)	"
ADADesc3 (if applicable)	"
ADADesc4 (if applicable)	"
ADADesc5 (if applicable)	"

ADADesc* for Ramp Flags

<u>Problem</u>	<u>Description</u>
1- Slope 8.1-9%	Slope of ramp face is 8.1-9%
2- Slope 9.1-12%	Slope of ramp face is 9.1-12%
3- Slope > 12%	Slope of ramp face is > 12%
4- X slope 2.1-4%	Cross slope of ramp face is 2.1-4%
5- X slope 4.1-6%	Cross slope of ramp face is 4.1-6%
6- X slope 6%	Cross slope of ramp face is > 6%
7- No ramp	No ramp
8- Flare > 10%	Angle of necessary flare is greater than 10%
9- No flares	Flares are missing where required
10- Edge chg > ¼"	Vertical edge change at roadbed or sidewalk is greater than ¼ inch
11- No discernable Surface	Ramp face is not a different material/color than the sidewalk
12- No landing/Landing not regulation	Landing missing or not 4'x4'
13- Width < 36"	Ramp face width is less than 36"
14- Rise > 30"	The height from the bottom to the top of the ramp is greater than 30" without a level landing area
15- Lng Rp Width < 44"	Ramp longer than X' is less than 44" wide
16- No handrails	Ramp longer than X' is missing handrails

Flag Type: ADA Driveway – Type 3

Required data entry:

ADADesc1-5	Description of Driveway ADA issue
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ADADesc* for Driveway Flags

<u>Problem</u>	<u>Description</u>
1- X slope 2.1-4%	Cross slope of driveway is 2.1-4%
2- X slope 4.1-6%	Cross slope of driveway is 4.1-6%
3- X slope > 6%	Cross slope of driveway > 6%
4- Edge chg > ¼"	Vertical edge change is greater than ¼"
5- Vert. clear	Vertical clearance is less than 80" (7')
6- Trans. Slope > 5%	Slope of transition between sidewalk and driveway is > 5%

Ramp Type

Collect a point for all ramps. Specify the type of ramp in the **RampType** field.

- 1- Type 1 – Ramp has 2 flares and is perpendicular to street
- 2- Type 1A – Ramp has 1 flare and is perpendicular to street
- 3- Type 1B – Ramp has no flares and is perpendicular to street
- 4- Type 2 – Ramp is multi-direction (sends pedestrian into intersection)

Sidewalk Condition Assessment – Maintenance Data Dictionary

General Sidewalk Data

swCondition - Condition (1- Excellent, 2- Good, 3- Passable, 4- Limited Spot Failures, 5- Failed, 6- No Sidewalk)

swCondLength - Length of segment in same condition rating (ft)

swCondWidth - Width (ft)

Other Sidewalk Information

swFaulting - Faulting (1- Severe, 2- Moderate, 3- Minor)

swDistortion - Distortion (1- Severe, 2- Moderate, 3- Minor)

swSunken - Sunken Sdkw @ InletTop (1- Severe, 2- Moderate, 3- Minor)

swFailCause - Primary Cause(s) of Failures (1- Unstable soils, 2- Erosion, 3- Utilities, 4- Poor Concrete Condition, 5- Tree Roots, 6- Water, 7- Thickness, 8- Unknown)

swRepArea - Estimate of Repair Areas Required (sq ft)

Temporary Repairs Completed? (1- Yes, 2- No)

Comments **Notes**

Related Data - Only As Necessary

swNSMaterials - Non-Standard Materials? (1- Bricks, 2- Pavers, 3- Granite, 4- Asphalt, 5- Other **Notes**)

swADAAccess - ADA accessible path? (Y- Yes, P- Passable, N- No)
If no, list Obstructions: **Notes**

swIllegal - Illegal use of sidewalk? (Y- Yes, P- Possible, N- No)
Observation: **Notes**

swSteepSlope - Steep Slope? (Y- Yes, M- Moderate, F- Flat)

swSchoolZn - School Zone? (Y- Yes, C- Close, N- No)

swChildSafeZn - Child Safety Zone? (Y- Yes, C- Close, N- No)

Commentary of Assessment Items

General Sidewalk Data

Condition: None is used for missing sidewalk areas adjacent to existing.

Other Sidewalk Information

Faulting, Distortion, and Sunken at [drainage] Inlet Top will all be rated using: Severe – frequent faulting or distortions > 4", Moderate – typical faulting or distortions > 2", Minor – typical faulting or distortions between ½" and 2")

Poor Condition is the primary cause of failure in old, broken concrete if no other causes apply. Underground water or springs can cause failures or slipping hazards. The thickness cause implies that the sidewalk is too thin for that location or was improperly constructed.

Repairs: square feet of remove and replace. Including non-standard or temporary asphalt sidewalk repairs which need a permanent concrete fix.

Related Data – Only As Necessary

Sidewalks are assumed to be concrete if no other material is noted. Non-standard materials are common in CBD

Standard ADA accessible path: Passable means it is smooth and wide enough overall (36" minimum) when including the surrounding hardscape elements or ground. Problems can be benches, trees, signs, anchor bolts, poles, or other utility appurtenances. Obstructions do not include damaged sidewalk such as cracks and depressions.

Illegal use of sidewalks by cars, trucks, or construction equipment may be evident and recoverable.

Steep Slope>5%; Moderate>2%; Flat<=2%

Special attention may be given to sidewalks in school zones.
Yes implies a school within 1 block or 500' of that location, Close implies a school within 4 blocks or 2,000' of that location.

Child Safety Zone could imply park area or common play area.

Assessment Items (cont'd)

Driveways

drCondition - Condition (1- Good, 2- Fair, 3- Broken, 4- Distorted, 5- Missing)

drADAAccess - ADA Accessible? (Y- Yes, P- Passable, N- No)

drRepArea - Estimate of Driveway Repairs Required (sq ft)

Sidewalk Ramps

rpADAAccess - Standard ADA ramp? (Y- Yes, P- Passable, N- No)

rpCondition - Condition (1- Broken, 2- Distorted, or 3- Missing)

rpDrainage - Drainage problems at ramp? (1- Severe, 2- Moderate, 3- None)

rpRepArea - Estimate of Ramp Repairs Required (sq ft)

Inlet Tops

InCondition - Condition (1- Broken, 2- Uneven, 3- MH Lid Problem)

InRepArea - Estimate of Inlet Repairs Required (sq ft)

Other Maintenance Required

Overgrowth - Overgrown with Weeds, Brush, or Trees? (1- Severe, 2- Moderate, 3- Minor)

OvTrimArea - Estimate of Clearing and Trimming Required (sq ft)

Commentary (cont'd)

Driveways

Driveways only noted if there is a problem.

Continuous ADA accessible path across driveway?

Sidewalk Ramps

Note all missing Sidewalk Ramps and Curb Cuts.

Ramp Condition is only noted if there is a problem.

Passable ramp does not meet ADA exactly, but functions well.

Inlet Tops

Inlet tops only noted if there is a problem.

Other Maintenance Required

Overgrown areas may require grass removal, brush clearing, and/or tree trimming. Responsibility for the area may be PARD.

Severe areas need immediate attention. Moderate areas are still passable, but getting marginal.

**TASB Condition Assessment
Cost Estimate
Assumptions**

Problem	Repair Strategy	Unit	Unit Cost	Area assumptions (if length and width were not included in the data)
Sidewalks				
1 - Cross slope 2.1-4%	Remove and Rebuild Sidewalk	SF	\$14	Assumed 50 sf (5' wide by 10' long - 2 panels)
2 - Cross slope 4.1 - 6%	Remove and Rebuild Sidewalk	SF	\$14	Assumed 50 sf (5' wide by 10' long - 2 panels)
3 - Cross slope > 6%	Remove and Rebuild Sidewalk	SF	\$14	Assumed 50 sf (5' wide by 10' long - 2 panels)
4 - Pt width <36"	Add Sidewalk Width	SF	\$14	Assumed 15 sf (3' wide by 5' long)
5 - Edge chg > 1/4 "	Remove and Rebuild Sidewalk	SF	\$14	Assumed 50 sf (5' wide by 10' long - 2 panels)
6 - Cont Width <36"	Add Sidewalk Width	SF	\$14	Assumed 30 sf (3' wide by 10' long)
7 - Vertical Clearance	Clear Vegetation	LF	\$7.50	Assumed 5'
8 - Sidewalk > Road Slope	Remove and Rebuild Sidewalk	SF	\$14	Assumed 500 sf (5' wide by 100' long)
9 - Obst Wid <48"	Add Sidewalk Width	SF	\$14	Assumed 40 sf (4' wide by 10' long)
10 - No pass space	Add Sidewalk Width	SF	\$14	Assumed 30 sf (3' wide by 10' long)
11 - Pass int >200'	Add Sidewalk Width	SF	\$14	Assumed 30 sf (3' wide by 10' long)
12 - Grate doesn't meet standards	Grate Adjustment	EA	\$250	
Driveways				
1 - Cross slope 2.1 - 4%	Rehab Driveway	SF	\$14	Assumed 80 sf (4' wide by 20' long)
2 - Cross slope 4.1 - 6%	Rehab Driveway	SF	\$14	Assumed 80 sf (4' wide by 20' long)
3 - Cross slope >6%	Rehab Driveway	SF	\$14	Assumed 80 sf (4' wide by 20' long)
4 - Edge chg >1/4"	Remove and Rebuild Sidewalk	SF	\$14	Assumed 25 sf (5' wide by 5' long - 1 panel)
5 - Vertical Clearance	Clear Vegetation	LF	\$7.50	Assumed 5'
6 - Trans. Slope >5%	Build Ramp	EA	\$2,532	Assumed 1 per driveway
Ramps				
1 - Slope 8.1 - 9%	Build Ramp	EA	\$2,532	
2 - Slope 9.1 - 12%	Build Ramp	EA	\$2,532	
3 - Slope >12%	Build Ramp	EA	\$2,532	
4 - Cross slope 2.1 - 4%	Build Ramp	EA	\$2,532	
5 - Cross slope 4.1 - 6%	Build Ramp	EA	\$2,532	
6 - Cross slope >6%	Build Ramp	EA	\$2,532	
7 - No ramp	Build Ramp	EA	\$2,532	
8 - Flare >10%	Remove and Rebuild Sidewalk	SF	\$14	Assumed 30 sf (5' wide by 6' tall triangle on each side)
9 - No flares	Add Sidewalk Width	SF	\$14	Assumed 30 sf (5' wide by 6' tall triangle on each side)
10 - Edge chg > 1/4"	Remove and Rebuild Sidewalk	SF	\$14	Assumed 25 sf (5' wide by 5' long - 1 panel)
11 - No discernable surface	Granite Pavers	SF	\$25	Assumed 30 sf (5' wide by 6' tall)
12 - No landing	Add Sidewalk Width	SF	\$14	Assumed 52 sf (add two 4x4 panels on either side and one 4x5 panel behind ramp)
13 - Width <36"	Build Ramp	EA	\$2,532	
14 - Rise >30"	Build Ramp	EA	\$2,532	
15 - Lng rp Width <44"	Add Sidewalk Width	SF	\$14	Assumed 30 sf (3' wide by 10' long)
16 - No handrails	Add Handrails	LF	\$75	Assumed 20'

**City of Austin Transition Plan
Inventory of Existing / Absent Sidewalks and Ramps**

RAMPS	Type Codes							
	Blank	0	1	1A	1B	2	3	TOTAL
Outside City	42	1,163	441	-	-	505	364	2,515
CBD	73	-	782	234	173	365	-	1,627
Central	504	-	83	18	35	34	-	674
E Margin	75	339	220	-	-	145	132	911
East	780	-	307	75	82	373	-	1,617
Far North	322	1,118	682	5	11	862	267	3,267
Far South	237	292	184	-	-	237	193	1,143
Holly St	140	-	43	19	41	104	-	347
Northeast	437	4	7	-	-	27	1	476
Northwest I	604	-	-	-	-	-	-	604
Northwest II	895	-	-	-	-	10	-	905
Southeast	509	-	-	-	-	-	-	509
Southwest	592	-	3	-	5	3	-	603
W Margin	118	1,930	386	-	353	448	-	3,235
West	288	4	2	-	-	32	13	339
TOTAL	5,616	4,850	3,140	351	700	3,145	970	18,772

SIDEWALKS	Type Codes						TOTAL	TOTAL
	0	1	2	3	4	5	FEET	MILES
	Absent SW	Existing SW	Driveway	Marked Xing	Unmarked Xing	Other/Unknown		
CBD	34,330	246,632	30,165	34,769	15,740	140	361,776	68.5
Central	283,991	278,665	39,607	13,497	22,293	107	638,160	120.9
E Margin	1,637,159	564,085	101,481	8,737	31,362	62	2,342,886	443.7
East	791,674	483,639	68,788	15,002	50,312	104	1,409,520	267.0
Far North	3,371,144	2,884,844	548,938	48,876	127,549	255	6,981,606	1,322.3
Far South	1,250,881	1,537,942	332,097	24,557	45,784	108	3,191,369	604.4
Holly St	70,157	92,371	12,802	2,522	8,314	-	186,166	35.3
Northeast	738,231	230,950	35,225	8,097	18,899	39	1,031,442	195.3
Northwest I	440,667	204,796	36,469	8,462	21,715	188	712,296	134.9
Northwest II	854,336	341,306	69,267	13,221	32,135	79	1,310,345	248.2
Southeast	395,924	291,734	36,914	8,029	22,214	95	754,910	143.0
Southwest	600,393	261,798	51,196	12,107	25,604	109	951,206	180.2
W Margin	6,262,147	2,940,879	515,604	30,962	97,482	325	9,847,398	1,865.0
West	1,325,699	393,756	53,660	9,801	23,700	65	1,806,681	342.2
TOTAL FEET	18,056,734	10,753,398	1,932,215	238,638	543,102	1,675	31,525,762	
TOTAL MILES	3,419.8	2,036.6	365.9	45.2	102.9	0.3		5,970.8

"Margin" refers to areas inside the City limits but not within the other 12 named areas.

**TASB / ADA Condition Assessment
Cost Estimate
Based on Limited Field Assessment (13%)**

Description	Work Order Item	Qty	Unit	Unit Price	Cost
Sidewalks					
Sidewalk exceeds 2% cross-slope	R&R Sidewalk	405,474	SF	\$ 14.00	\$ 5,676,636.00
Passing width < 36"	Add SW Width	702	SF	\$ 14.00	\$ 9,828.00
Edge chg > 1/4"	R&R Sidewalk	76,150	SF	\$ 14.00	\$ 1,066,100.00
Continuous length < 36"	Add SW Width	5,496	SF	\$ 14.00	\$ 76,944.00
Vert Clear < 80"	Clear Vegetation	785	LF	\$ 7.50	\$ 5,887.50
Sidewalk slope > Road Slope	R&R Sidewalk	24,576	SF	\$ 14.00	\$ 344,064.00
Obstacle Width < 48"	Add SW Width	4,420	SF	\$ 14.00	\$ 61,880.00
No pass space	Add SW Width	486	SF	\$ 14.00	\$ 6,804.00
Grate does not meet ADA standards	Grate Adjustment	2	EA	\$ 250.00	\$ 500.00
Subtotal Sidewalks					\$ 7,248,643.50
Ramps					
Slope exceeds 8%	R&R Ramp	448	EA	\$ 2,532.00	\$ 1,134,336.00
Cross slope exceeds 2%	R&R Ramp	146	EA	\$ 2,532.00	\$ 369,672.00
No ramp	Build Ramp	249	EA	\$ 2,532.00	\$ 630,468.00
Flare >10%	R&R Sidewalk	3,450	SF	\$ 14.00	\$ 48,300.00
No flares	Add SW Width	3,570	SF	\$ 14.00	\$ 49,980.00
Edge chg > 1/4"	R&R Sidewalk	200	SF	\$ 14.00	\$ 2,800.00
No discernable surface	Add Granite Pavers	4,800	SF	\$ 25.00	\$ 120,000.00
No landing	Add SW Width	260	SF	\$ 14.00	\$ 3,640.00
No handrails	Add Handrails	40	LF	\$ 75.00	\$ 3,000.00
Subtotal Ramps					\$ 2,362,196.00
Driveways					
Cross slope >2%	Rehab Driveway	125,536	LF	\$ 14.00	\$ 1,757,504.00
Edge chg > 1/4"	R&R Sidewalk	3,900	SF	\$ 14.00	\$ 54,600.00
Trans slope > 5%	Build Ramp	40	EA	\$ 2,352.00	\$ 94,080.00
Subtotal Driveways					\$ 1,906,184.00
Total ADA Sidewalk Improvements					\$ 11,517,023.50
Total Linear Feet of Existing Sidewalk:		2,167			
Total Linear Feet included in Field Assessment:		285			
Percentage of Sidewalk included in Field Assessment:		13%			
City-wide Extrapolated Construction Cost:		\$90M			
City-wide Extrapolated Total Cost:		\$115M			