



Pedestrian element



7.1 Introduction

The Mid-America Regional Council promotes regional transportation investments that support a rising quality of life for everyone. Walking serves an integral and complementary purpose in the regional transportation system. Many trips begin or end by walking. Transportation investments that facilitate pedestrian activity support the policy framework of the LRTP.

Goal: Support a healthy, strong, regional economy

Investments in pedestrian-safe streets are wise. The benefits include: increased community unity, increased access to jobs and public transportation, increased citizen self-reliance, transportation options for those without a motor vehicle, stimulated local economy, improved citizen health through physical exercise, and improved roadway safety.

Goal: Maximized access to opportunity for all area residents

Walking provides citizens with a practically free means of transportation. Communities that provide direct pedestrian access to housing, jobs, community services and parks allow residents or visitors the greatest mobility. It is important to provide a continuous sidewalk system in developed areas, thereby increasing the mobility of citizens and maximizing access to community centers, transit stops, park, schools and places of work.

Goal: Support a quality built and natural environment

Air quality is a public health issue for the greater Kansas City region. Many trips by area residents are to destinations within two miles of home. These short trips account for a disproportionate share of auto emissions because a majority of pollution created by automobiles occurs in the first few minutes of operation, before pollution control devices can work effectively. If more trips were made by foot for short distances, this shift to non-motorized travel could have significant environmental benefits. Walking also reduces the transportation system's energy demands because it requires no fossil fuel consumption.

Goal: Promote the safety and well-being of the traveling public

The Road Information Program (TRIP) of Washington, D.C., a nonprofit research organization, reported that during 2000 Kansas City had one of the highest pedestrian urban fatality rates, with 14 deaths per 100,000 people. Pedestrian fatalities accounted for 12 percent of all vehicle-related fatalities. To counteract these statistics and achieve a goal of travel safety, local communities and state agencies must offer safe places to walk and design safe pedestrian crossings at intersections.

Walking fulfills a necessary and very complementary role in a balanced transportation system. The economic, social and environmental benefits of a walkable community go beyond achieving transportation objectives.

PEDESTRIAN ELEMENT ACTION TABLE

Transportation Outlook 2030 included an action plan at the closing of each chapter. This 2005 Update evaluates the progress made in each action item since the 2002 publication of *Transportation Outlook 2030*. The following table details the status of the Pedestrian Action Plan.

Transportation Outlook 2030 Actions	Status		Comments
	Planning	Implementing	
Regional bicycle/pedestrian coordinator	●	●	MARC has employed a Bicycle/Pedestrian Coordinator since 2000.
Bicycle/pedestrian advisory committee	●	●	BPAC meets bimonthly.
Regional promotion	●	●	Funded through Congestion Mitigation Air Quality program and listed in Transportation Improvement Program as #970032. Products and events include: Regional Bikeway Map 2004, College Bicycle Safety Brochure, 2nd Annual Bicycle Commuter Challenge, billboard campaign, and Favorite Places Survey.
Use of review criteria for Transportation Improvement Program	●	◐	Multimodal Level of Service has been incorporated in the Transportation Improvement Program review criteria. Improvements are needed in the review criteria for pedestrian needs at intersections.
Statewide pedestrian policies	◐	○	MARC continues to work closely with MoDOT through state officials and the Missouri Bicycle Pedestrian Advisory Committee. MARC continues to encourage Kansas to create a statewide bicycle/pedestrian committee.
Federal Surface Transportation Program (STP) fund flexibility	●	◐	MARC supports the use of STP funds for improvements that advance pedestrian needs. Pedestrian accommodations are not currently required in proposed projects.

● = Achieved and Ongoing ◐ = In Progress ○ = Not Yet Planned/Implemented

Actions	P	I	Comments
MetroGreen greenway corridors	●	◐	The MetroGreen plan was updated and adopted in 2002. In 2003 MARC hired a MetroGreen Trails Planning Manager. In 2004 MARC organized the MetroGreen Alliance to help support and coordinate the plan. The Alliance includes the MetroGreen Civic Leadership Board, the MetroGreen Technical Advisory Group, and the Friends of MetroGreen.
Address bridge accessibility	◐	○	Appropriate pedestrian access on bridges remains an unresolved need.
Major Investment Studies	●	◐	MARC staff has been involved in studies of major corridors to ensure that pedestrian accommodation is addressed.
Public transit accommodations for pedestrians	●	◐	MARC, through its work on Smart Moves, has been working to address public transit accommodations for pedestrians.
Address pedestrian needs in local plans	●	◐	Based on MARC's 2003–04 Pedestrian Survey, 13 local governments have adopted local plans with pedestrian elements or considerations.
Coordination with Capital Improvement Plans	●	◐	MARC continues to encourage local agencies to incorporate pedestrian facilities and create comprehensive pedestrian networks.
Assess current conditions and develop action plan	●	○	MARC has begun collecting GIS sidewalk infrastructure data from local jurisdictions to assess current conditions.
Pedestrian criteria	●	◐	Multimodal Level of Service has been incorporated in the Transportation Improvement Program review criteria. Improvements are needed in the review criteria for pedestrian needs at intersections.
Creating Quality Places for pedestrian travel	●	◐	MARC is working with local community planners to promote adoption of pedestrian-friendly principles in local plans and ordinances. MARC sponsored workshops for planning commissioners in 2003 and 2004, with sessions focused on design guidelines. MARC continues to provide information on best practices on its Creating Quality Places' Web site at www.qualityplaces.marc.org .
Pedestrian network connectivity	●	○	MARC has begun collecting GIS sidewalk infrastructure data from local jurisdictions to map sidewalk connectivity. The Kansas City, Mo., Walkability Plan (adopted in 2003) provides the region an example of a comprehensive plan that addresses connectivity.
Mixed-Use development to accommodate walking	●	◐	Local governments, including Raytown and Kansas City, Mo., have used Creating Quality Places and Transit-Supportive Development information from MARC for their local plans and zoning code development.
<p>● = Achieved and Ongoing ◐ = In Progress ○ = Not Yet Planned/Implemented</p>			

7.2 Background

Walking is almost always required as part of some other trip (e.g., from the bus stop or parking lot to the employment location.) Yet pedestrian movements represent a frequently neglected component of the metropolitan transportation system. The *1990 National Personal Transportation Study* (NPTS) found that trips made exclusively by walking accounted for 7.2 percent of all trips reported. (Exclusive bicycle trips accounted for 0.7 percent of all trips.) Benefits from increased walking include improved air quality, reduced congestion of area roadways, transportation options for those without a motor vehicle, increased fitness, and additional recreational opportunities. In view of these considerations, the Federal Highway Administration established two overall goals in their report, the *National Bicycling and Walking Study* (NBWS), 1994:

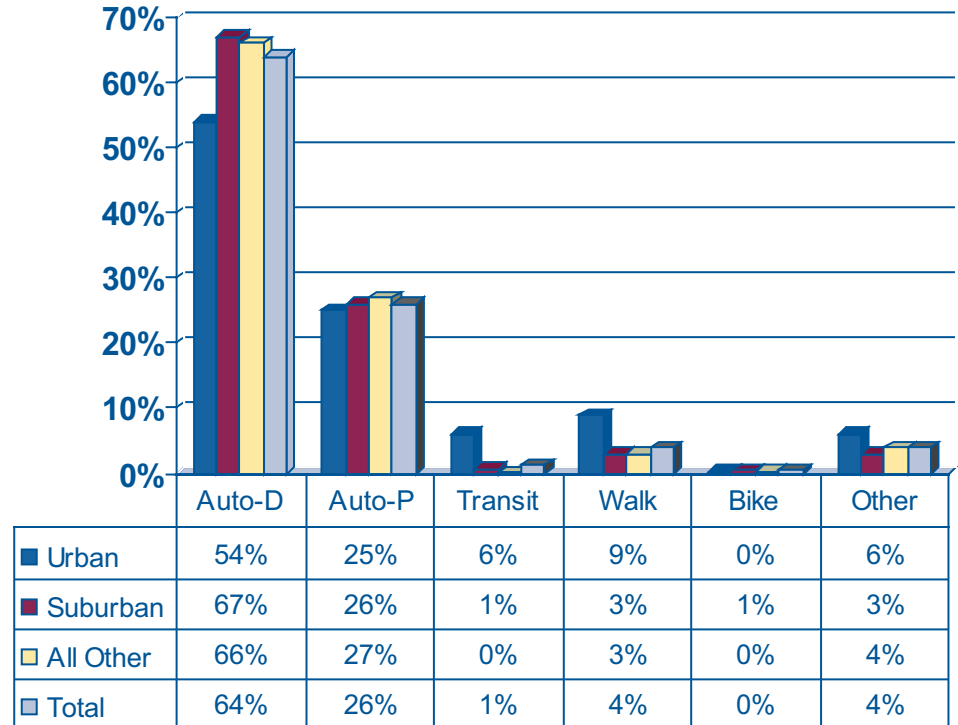
- Double the percentage of total trips made by bicycling and walking in the United States from 7.9 percent to 15.8 percent of all travel trips; and
- Simultaneously reduce by 10 percent the number of bicyclists and pedestrians killed or injured in traffic crashes.

The 1995 NPTS found that trips made by walking fell to 5.4 percent of all trips. However, the *2001 National Household Travel Survey* (NHTS) found that trips made exclusively by walking increased to 8.7 percent of all trips. The first NBWS goal of doubling the percentage of walking trips has not been accomplished, although the number and percentage of walking trips has increased nationally. The second goal has been surpassed. Pedestrian related fatalities were down 17.3 percent from 1993 to 2003.

Generally, pedestrian trips cover relatively short distances and are most often made for personal, social or recreational purposes. The need for adequate pedestrian accommodations is particularly important for those too young to drive or for those who cannot afford to own a car. Children need and want safe routes to school and this group makes up a significant portion of the regional population. According to the U.S. Census 2000 report for the Metropolitan Statistical Area of Kansas City, Missouri/Kansas, 22.1 percent of the general population is 14 years old or younger.

Affordable transportation is a concern for many in the region. Thirteen percent of the population earns income at or below the poverty level and 6 percent of the population lives in households with no vehicles. (Source: U.S. Census Bureau, Census 2000) MARC conducted the *Kansas City Regional Household Travel Survey* (KCRHTS) in 2004. According to this survey, households without motor vehicles were most likely to reside in urban areas where income levels were lower. (Source: KCRHTS 2004, p. 20) This survey also recorded a significantly higher number of people walking in urban core areas over suburban and rural parts of the region. Pedestrian trips make up 9 percent of all trips in the urban areas and only 3 percent in the suburban areas. This is likely due to a combination of factors. The street grid system of urban core areas is based on smaller blocks and more connections. Sidewalks are more accessible, and the distance to destinations may be shorter due to land use proximities and higher densities. Socioeconomic factors may also be contributing to a higher rate of walking.

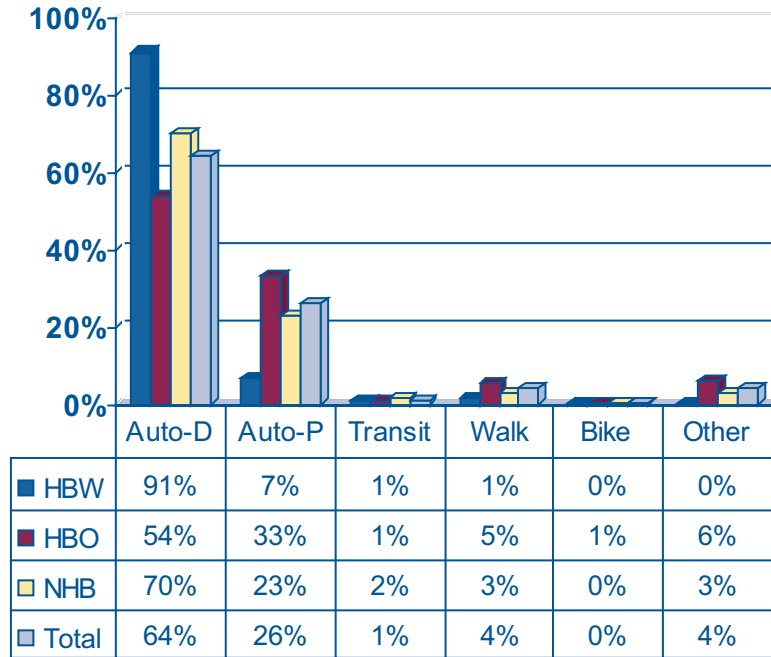
**FIGURE 7-1
TRAVEL MODE BY AREA OF RESIDENCE**



Source: Kansas City Regional Household Travel Survey 2004, p. 37
 Note: Auto Driver Only (Auto-D), and Auto Passenger (Auto-P)

In general, people in the urban core area were much more likely to walk somewhere if the purpose of the trip was not work-based. This is probably due to the distance involved with work-based trips as opposed to shorter distances for other trip purposes. Area residents are more likely to walk somewhere once they get to work because trips during the day, such as to lunch, may be closer and more walkable distances. The urban core is beginning to see a shift in demographics due to residential infill (loft apartments and condominiums). The increase of population density and mixed-use development should increase work-based pedestrian trips in this category.

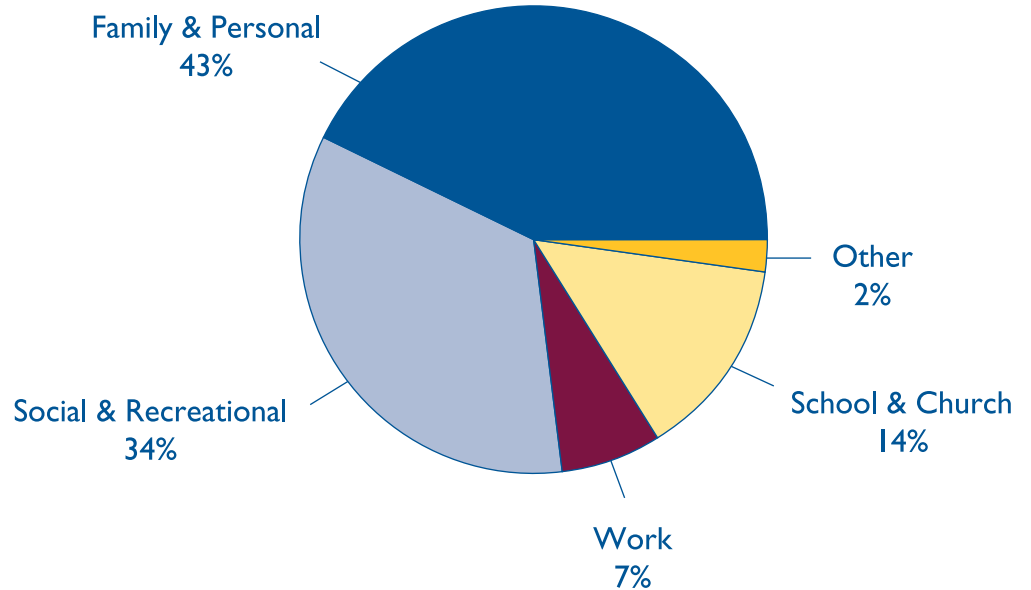
**FIGURE 7-2
TRAVEL MODE BY TRIP PURPOSE**



Source: Kansas City Regional Household Travel Survey 2004, p. 37
 Note: Auto Driver Only (Auto-D), Auto Passenger (Auto-P), Home Based Work (HBW), Home Based Other (HBO) and Non-Home Based (NHB)

The 1995 National Personal Travel Survey indicates that there are approximately 56 million daily walk trips in the United States. Family and personal business accounts for 43 percent of all walk trips, with another 34 percent for social and recreational purposes, and 14 percent for going to school or church. Equally as important, pedestrian trips are often the means by which people transfer between various transportation modes, and nearly all trips involve at least some pedestrian component. Consideration of pedestrian travel must be an essential element of intermodal transportation planning.

**FIGURE 7-3
WALK TRIPS**



Source: Nationwide Personal Transportation Survey 1995

Pedestrian travel is among the most healthful and environmentally benign forms of urban transportation, consuming no petroleum products and producing no air pollutant emissions. Walking trips often replace short distance motor-vehicle trips, which are the least fuel efficient and generate the most air pollution per mile traveled.

The final report on the federally sponsored *National Bicycle and Walking Study* established a goal of “doubling the current percentage (from 7.9 percent to 15.8 percent) of total trips made by bicycling and walking.” The report notes that:

“As more of America’s cities are faced with the environmental, traffic, health, land-use and safety problems that come with increased automobile dependency, they must find alternative ways to meet transportation needs without sacrificing the quality of their living environment. Promoting ... walking can be among the most cost-effective ways to meet these needs.”

While pedestrian mobility was addressed in the 1999 LRTP for the Kansas City metropolitan area, there were few specific recommendations to improve conditions for pedestrians. *Transportation Outlook 2030 Update* includes an expanded assessment of pedestrian needs to ensure that transportation plans and programs provide pedestrian accommodation as part of the region’s surface transportation facilities.

7.3 Issues Opportunities & Constraints

7.3.1 Pedestrian Measures

Communities in the region are now seeking ways to measure current walking conditions and plan for future improvements. The Kansas City, Mo., Walkability Plan combined five measures to evaluate walkability at the macro level. The measures include:

- Directness: trip length or how far off of a direct line a pedestrian must walk to reach a destination;
- Continuity: the presence of sidewalks;
- Street Crossings: difficulty of crossing based on number of lanes, lane widths, signalization, etc.;
- Visual Interest and Amenities: how comfortable and attractive the walking environment is; and
- Security: feeling of security based on lighting, sight lines, distance from traffic, and perception of crime.

Kansas City, Mo., is currently using these measures to review development projects. Some communities in the region are beginning to collect and maintain information about sidewalks, street crossings and other related pedestrian facilities.

7.3.2 Geographic Information Systems

A geographic information system (GIS) is a computer-based tool for mapping and analyzing spatial data. GIS technology provides an effective tool to evaluate pedestrian systems; complex spatial relationships between land use, demographics and pedestrian systems can be displayed using thematic maps. A variety of useful attribute data may include year of construction, condition and width. This data may be combined with demographics like population density and land-use layers to determine the priority pedestrian improvements. GIS may be used to answer a variety of questions like: does the network provide the shortest possible route; or is the network free of gaps and barriers?

7.3.3 Barrier Elimination

Among the most significant impediments to pedestrian travel are the barriers posed by the transportation infrastructure itself. Major transportation facilities like freeways and bridges can create pedestrian barriers between neighborhoods, and often make no provision for pedestrian access. Efforts to overcome these obstacles — with pedestrian overpasses, for example — can significantly increase pedestrian trip lengths and result in facilities being underused.

Another factor limiting pedestrian transportation is the lack of sidewalks along urban streets to accommodate pedestrian travel. This lack of facilities is often because the roadways were built prior to urban development occurring, or because local development policies and standards did not require them. The LRTP supports consideration of pedestrian access needs in the design and implementation of all transportation facilities and accommodation wherever possible.

Poor sidewalk conditions can be another barrier to walking. Uneven sidewalks, cracked or broken surfaces, narrow walkways and the absence of intersection ramps deter some pedestrians and prohibit their use by others.

The natural environment can be a barrier. The topography of land sometimes creates slopes that are difficult for pedestrians to maneuver. Stairways, ramps and elevators may be appropriate design countermeasures to overcome challenging topography. Rivers and bodies of water are also barriers to pedestrians. The Kansas City region is fortunate to be located at the confluence of the Kansas and Missouri Rivers. While these rivers are regional treasures, they also pose obstacles to pedestrian connections. It is important that all reconstructed and newly constructed bridges in the region accommodate safe crossings for pedestrians. As the MetroGreen network of trails and greenways develops, pedestrian river crossings will become increasingly critical.

7.3.4 Urban Design

Traditional urban planning and design techniques often contributed to an urban form that makes walking trips difficult, if not impossible. Suburban single-family housing development patterns typically limit direct access to arterial and collector streets for pedestrians. Suburban development built after World War II is characterized by long distances between residences, schools, retail centers and office parks.

Nationally, recent innovations in urban design techniques have emphasized better integration of land uses, greater emphasis on shorter trips for many purposes, and improved access for bicycles and pedestrians. These development patterns include mixed-use development, higher density development, parking placed to the rear of development, and building design and placement oriented to the street. Such development patterns, if used in the Kansas City area, could result in more mobility choices and would be more easily served by public transportation. Improving pedestrian access to transit services is an important need in metropolitan Kansas City. Many transit stops are not served by sidewalks or facilities to protect riders from weather or traffic while waiting for buses.

Implementation of these land-use development strategies require action by local government agencies and private developers, but are supported by the LRTP.

7.3.5 Funding

Pedestrian facilities associated with roadways are eligible for funding under various federal transportation program categories, including the Transportation Enhancement program. However, there is no funding source specifically earmarked for pedestrian-related projects. Few, if any, pedestrian projects were submitted for inclusion in the LRTP. The Pedestrian Element does not propose to earmark funding for such projects, but supports inclusion of design and funding for pedestrian accommodation as other transportation improvements are planned. The funding priority decision making process should require that roadway improvement projects address pedestrian accommodation, unless reasonable justification to not do so is provided.

There are a variety of other funding options both at the state and local government level. Communities can pass development ordinances that require sidewalks at the time of development. General revenue funds are also commonly used. Property tax is the principal source of local revenue and is routinely appropriated for transportation purposes. A third option is the formation of a special benefit district. Special districts are designated areas where properties are assessed a fee to finance the costs of capital improvements. Special districts can be created for commercial or residential properties. There are several types of special districts, some of which have the power to issue bonds.

7.3.6 Planning

As noted above, pedestrian issues have not been embodied in MARC's previous transportation plans in the past other than in a cursory fashion. The LRTP proposes that the region pursue a more thorough pedestrian planning effort over the next five years, leading to the development of an extensive pedestrian component for future inclusion in the LRTP.

7.3.7 Americans with Disabilities Act

The Americans with Disabilities Act (ADA) contains provisions that, in many cases, require features that facilitate access for persons with disabilities. Such facilities include sidewalks, curb cuts and other accommodations that also provide general pedestrian access to public buildings, intermodal transportation facilities, and transit buses. Local governments are in various stages of ADA implementation.

7.4 Analysis

MARC has surveyed cities and counties about local regulations and practices affecting pedestrian facilities. In 1997, MARC issued a report on local regulations and practices affecting pedestrian accommodations. A total of 23 communities responded to the 1997 survey. In the fall of 2003, a second survey was conducted of local communities in the Kansas City metropolitan area. The survey collected information on current local plans, regulations and practices related to pedestrian transportation. A total of 16 communities responded to the survey. Many communities are considering pedestrian needs as part of local transportation, trails and capital improvement plans.

7.4.1 Current Plans

Most area communities have adopted comprehensive plans and/or park and open space plans. Some have addressed pedestrian needs or stated pedestrian-related visions in the plans. Most communities address pedestrian transportation as part of the comprehensive plan, rather than part of the local transportation system. Kansas City, Mo., completed a Walkability Plan, a follow-up plan to FOCUS Kansas City.

7.4.2 Capital Improvement Plans

There was a range of responses from communities about the inclusion of line items for pedestrian facilities in their capital improvement plans. Seventy-three percent of

communities include a line item for sidewalk repair, and 80 percent have budgeted for new sidewalks. Fifty-three percent of communities have budgeted for greenway development; fewer have budgeted for maintenance. Thirty-three percent of the communities reported to have budgeted for ADA accommodation improvements.

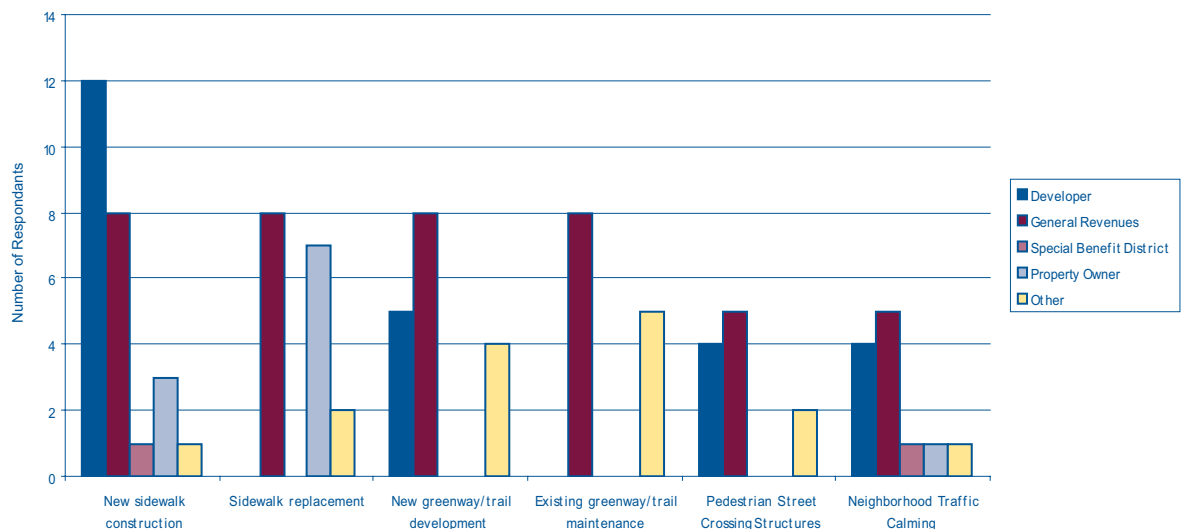
A majority of communities rely on developer and general revenue funds to finance pedestrian facilities. Forty-eight percent of responding communities require developer participation to fund new pedestrian facilities. Thirty-two percent of the communities use general revenues, 12 percent require property owner participation, 4 percent identified special benefit districts, and 4 percent identified other sources.

Communities often find difficulty in budgeting revenues for sidewalk replacement. Forty-seven percent use general revenues to fund the replacement of existing pedestrian facilities. Forty-one percent of communities require the property owner to fund the replacement facilities, and 12 percent identified other revenue sources.

Forty-seven percent of communities reported using general revenue to fund greenway development, 29 reported requiring developer funding, and 34 percent reported other sources. Sixty-two percent of communities fund greenway maintenance through general revenues and 38 reported funding from other sources. Forty-five percent of communities report using general revenues to fund pedestrian crossing structures. Thirty-six percent report funding comes from developers for pedestrian crossings. The remaining 18 percent was attributed to other funding sources.

Forty-two percent of communities reported using general revenues to fund neighborhood traffic calming improvements. Another 33 percent reported funding from developers. The remaining 24 percent were divided equally among special benefit districts, property owners and the category of “other.” Figure 7-4 summarizes the funding sources for the various facilities.

**FIGURE 7-4
SOURCES OF FUNDING**



7.4.3 Current Design Codes and Regulations

For residential subdivisions, most communities require 4-foot-wide concrete sidewalks on one side of the street. While not the common standard in metropolitan Kansas City, 5-foot sidewalks are recommended by AASHTO and KDOT and required by MoDOT.

Most communities now require pedestrian facilities to the front door or sidewalk of retail and office development from arterial and collector streets. Some communities even require pedestrian facilities between buildings and through parking lots for both retail and office development.

Over half of the communities require connecting sidewalks between subdivisions: Blue Springs, Fairway, Grandview, Jackson County, Leavenworth, Leawood, Overland Park, Platte City, Richmond, Blue Springs, Leawood and Mission have subdivision ordinances that require sidewalk links or connections to common public areas, such as parks, shopping areas and neighborhood schools.

All but three of the communities have used some form of traffic calming to reduce traffic speeds. Communities, such as Overland Park, are beginning to develop formal traffic-calming policies. Several communities and agencies have installed roundabouts, including Olathe and MoDOT. Cul-de-sacs, reduced speed limits and medians are most often used by area communities. Unfortunately, cul-de-sacs typically do not provide pedestrian connections, thereby reducing the directness of pedestrian trips.

MARC will continue its efforts to address pedestrian transportation needs in the Kansas City region, working in cooperation with area local governments. Specific actions include:

7.5.1 Regional Leadership

1. **Regional Bicycle/Pedestrian Coordinator.** MARC will continue to maintain the regional bicycle/pedestrian coordinator position to assist advisory committees and local governments in developing of pedestrian plans and implementing improvements and safety education programs.
2. **Bicycle/Pedestrian Advisory Committee.** MARC will continue to support the Bicycle/Pedestrian Advisory Committee (BPAC). BPAC will advise the Total Transportation Policy Committee (TTPC) on annual objectives for MARC to preserve and promote opportunities for walking and bicycling. BPAC will encourage consideration of walking in the work of other modal committees.
3. **Regional Promotion.** MARC will continue to promote walking as an alternative for short-distance trips. Promotional efforts will address safety and personal health in addition to the transportation and environmental benefits and challenges for pedestrians.

7.5 Action Plan



4. Use of Review Criteria for Transportation Improvement Program. MARC will determine how to better connect the policy recommendations in the LRTP with the TIP. MARC will encourage local communities to include significant pedestrian projects in the TIP and develop review criteria that require pedestrian consideration in all transportation projects, unless the project sponsor provides reasonable justification otherwise. MARC will advance review criteria that rewards the inclusion of pedestrian crossings and intersection improvements that advance pedestrian safety.
5. Policies. MARC will develop regional policies and encourage the state Departments of Transportation to develop statewide policies that consider pedestrian accommodation in all federal and state-supported transportation investments.
6. Federal Surface Transportation (STP) Program Fund Flexibility. MARC supports using federal STP funds for improvements and programs that advance pedestrian safety and accommodate pedestrian needs — particularly projects associated with roadway construction/reconstruction and intersection improvements. The TTPC and MARC programming committees should require project sponsors to include pedestrian accommodations in proposed projects, unless reasonable justification is given for why pedestrians cannot be accommodated.
7. MetroGreen Greenway Corridors. MARC will provide leadership in promoting the implementation of MetroGreen, a 1,000-mile system of greenways and trails linking the seven-county region. MARC will encourage local communities to build the MetroGreen system and link local trails that are not part of MetroGreen. MARC will encourage local communities to link trails to business and retail activity centers, mixed-use development, neighborhoods, recreational parks, historic/cultural resources and schools. MARC will support the development of the MetroGreen Alliance, including the MetroGreen Civic Leadership Board, the MetroGreen Technical Advisory Group, and the Friends of MetroGreen.
8. Address Bridge Accessibility. MARC will lead the formation of a River Crossing Task Force to develop policy/planning guidance for the region on how to accommodate bicycle/pedestrian crossings of the Kansas and Missouri Rivers.
9. Major Investment Studies. MARC will include pedestrian interests or representation from the Bicycle/Pedestrian Advisory Committee in Major Investment Studies, environmental impact studies, or other special study processes. MARC will encourage studies to consider pedestrian needs.
10. Public Transit Accommodations for Pedestrians. MARC will develop design guidelines to integrate pedestrian needs into transit plans. MARC will work with area transit agencies to explore how access to transit services might be enhanced by improving the pedestrian environment around transit stops throughout the region. MARC will work to further pedestrian and public transit design integration through the development of the Smart Moves Plan.

7.5.2 Local Pedestrian Planning

1. **Address Pedestrian Needs in Local Plans.** MARC will encourage local governments and developers to address pedestrian needs and accommodations—especially elderly, youth and the disabled — in local transportation, parks and recreation, and land-use plans.
2. **Coordination with Capital Improvement Plans.** Local agencies should coordinate pedestrian networks with other planned transportation improvements. Examples include roadway improvement projects in the Capital Improvement Plan of each community. Transportation improvements might include links across physical barriers, intersection design accommodations, pedestrian signal timing, and mid-block crossings.
3. **Assess Current Conditions and Develop Action Plan.** Communities should explore opportunities to enhance pedestrian amenities in areas that would yield high returns on investment. MARC will assess current conditions (or provide tools for local communities to do so), including an evaluation of pedestrian fatality locations. Communities should, based on assessments, develop strategies to improve pedestrian safety by installing traffic-calming or other appropriate traffic control devices. Communities should adopt maintenance strategies and schedules for pedestrian facilities.
4. **Pedestrian Criteria.** MARC will continue to strengthen criteria for evaluating pedestrian accommodations in projects being considered for the TIP or for funding priority.
5. **Creating Quality Places for Pedestrian Travel.** MARC will promote urban design strategies to emphasize development that supports pedestrian travel.
6. **Pedestrian Network Connectivity.** MARC will encourage local governments to plan and support the completion of a continuous and connected sidewalk system that provides a high level of directness.
7. **Mixed-Use Development to Accommodate Walking.** Local communities should promote mixed-use development that allows for walkable distances 1/8 mile or less to important destinations like work places, community centers, retail shopping, transit stops, schools, open space and linear park systems.