ACKNOWLEDGEMENTS

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In 2014, the City of Des Peres started working with Trailnet to create a 15-year plan for enhancing walking and biking improvements in streets in Des Peres. The Des Peres Bicycle and Pedestrian Master Plan will help the City make decisions to leverage the limited funding available for biking and walking, including:

- Prioritize investments in walking and biking based on cost, available right-of-way, and strengthening the overall network
- Encourage routine maintenance and upgrades to be used as opportunities to improve the biking and walking network
- Strengthen applications for state and federal funding
- Identify opportunities for encouragement, education, enforcement, and evaluation

The planning process was initiated in the beginning of 2014 and was finished in December 2015. The plan encompasses the City of Des Peres and connections to planned and existing routes in surrounding communities. The planning process was designed to help the residents of Des Peres develop a vision for bicycling and walking in their community. The outreach process included four meetings with the Planning Advisory Committee, several community engagement events, two work sessions with the Board of Aldermen, and a survey available online and on paper. A summary of each meeting and a copy of the survey questions can be found in the plan. The needs identified in the outreach process are integrated throughout the plan, including the planning priorities.
Public Outreach
- Community Survey
- Community Outreach Events
- 1st Planning Advisory Committee Meeting
- 2nd Planning Advisory Committee Meeting
- 3rd Planning Advisory Committee Meeting
- Public Review and Neighborhood Tours
- Final Advisory Committee Meeting
- Board of Aldermen Presentation

Planning Process

Existing Conditions Report

Plan Parameters and Priorities

Draft Bicycle and Pedestrian Master Plan

Early Action Project and Final Plan

Implementation

Data collection and analysis
- Existing infrastructure
- Current plans and policies
- Base mapping
- Priorities assessment
- Early action projects identification

Plan drafting and compilation
- Infrastructure map
- Design guidelines
- Phasing recommendations
- Pre-engineering cost estimates
- Funding sources
- Education, encouragement, enforcement, equity, and evaluation opportunities

trailnet.org
Des Peres is at the intersection of two important and historic roads, Manchester Road and Ballas Road, and thus has served regional traffic since it was settled. Looking back to the original founding of the community of Des Peres, it was a superbly pedestrian friendly place, as there were few other options at the time. However, there were no paved roads that could accommodate bicycles, which had not yet been invented. As the community grew, and the City of Des Peres was incorporated in 1934, the area profited from its strategic location in the St. Louis region.

As transportation changed and roads were added, Des Peres has remained a key location for transportation in the region. When I-270 was built in the 1960’s, it connected Des Peres to the region and helped stimulate development in the City. The residential, commercial, and office developments were built for people commuting by car, with large parking lots and easy access to fast roads.

Most of the residential neighborhoods were built for recreational walking, with some sidewalks, curvilinear streets, and neighborhood trails. These streets encouraged Des Peres residents to walk for fun and exercise. However, local destinations, including parks, stores, and the Lodge, were built along major roads, where they were cut off from easy access on foot or on bicycle. Over the decades, the transportation system in Des Peres expanded to handle car traffic efficiently and accommodate regional traffic on state routes. During this time, walking and bicycling access suffered due to limited opportunities to cross major roads and I-270. The limited opportunities discouraged walking and bicycling access to local destinations, including the businesses along Manchester Road.

Des Peres is a thriving community with a strong base of employment and commercial land use and high residential property values. The population and traffic levels are relatively stable, with growth coming from younger families with children replacing older families as the housing stock turns over. The recently completed Comprehensive Plan gives an in-depth assessment of Des Peres’ current and future growth. The following summary will focus on trends that are relevant to walking and bicycling in Des Peres.

Travel Patterns
According to the American Community Survey, most residents in Des Peres drive to get to work. The travel patterns reflect the transportation options available in Des Peres, which has a system that has been designed primarily for automobile transportation. Nonetheless, 3% of households in Des Peres do not have cars, and roughly 6% have fewer cars than workers.

Des Peres has a median household income of $121,471 and 97% of households have at least one car, indicating that most households have access to a car and can afford to use it. Walking and bicycling access is a question of recreation, rather than transportation, for most residents. Trailnet conducted an online survey of residents, and respondents reported walking and bicycling for recreation frequently, while rarely walking or bicycling
Pedestrian Recommendations

<table>
<thead>
<tr>
<th>Transportation Mode</th>
<th>Des Peres</th>
<th>St. Louis County</th>
</tr>
</thead>
<tbody>
<tr>
<td>Car, Truck, Van</td>
<td>87.8%</td>
<td>90.5%</td>
</tr>
<tr>
<td>Public Transportation</td>
<td>0.4%</td>
<td>2.5%</td>
</tr>
<tr>
<td>Walked</td>
<td>2.4%</td>
<td>1.5%</td>
</tr>
<tr>
<td>Bicycle</td>
<td>0%</td>
<td>0.3%</td>
</tr>
<tr>
<td>Taxicab, motorcycle, or other means</td>
<td>1.1%</td>
<td>0.8%</td>
</tr>
<tr>
<td>Worked at home</td>
<td>8.3%</td>
<td>4.4%</td>
</tr>
</tbody>
</table>

Over the 2.5 miles of I-270 within the City of Des Peres, there are only three ways to cross it; JJ Kelley Memorial Drive, Manchester Road, and Dougherty Ferry Road. However none of these connections include a safe, continuous, and separated pedestrian walkway that meets ADA requirements. For both JJ Kelley Memorial Drive and Manchester Road existing sidewalks do not connect to any pedestrian infrastructure west of I-270. Dougherty Ferry has a wide shoulder that has been converted to a bicycle lane with a pedestrian area separated by a curb. Throughout our public outreach, residents stated the high traffic speeds and volumes discouraged them from using these routes.

Residents also perceive Manchester Road as a barrier to walking and bicycling, especially at the interchange with I-270 and the section west of it. The section east of I-270 has mostly continuous sidewalks and four signalized crossings with pedestrian crosswalks. This area is considered somewhat dangerous and unpleasant, but is still used by people walking. West of I-270, Manchester resembles an expressway and does not have sidewalks along the westbound section. There is no direct, safe, and legal way for pedestrians to access the commercial destinations within the center island.

These barriers to walking and bicycling mean that for many residents of Des Peres, short trips to parks, grocery stores, or even the movie theatre, must involve a car. Increasing bicycle and pedestrian access to these destinations would increase the transportation choices available to Des Peres residents, allowing them to choose healthier and more environmentally friendly modes of transportation. Walking and bicycling access could also help those that cannot drive, due to age, physical abilities, or cost.

These major roads have encouraged commercial development and office uses in Des Peres as regional traffic moves through it. However, serving regional traffic has made it difficult for residents to walk or bicycle to local destinations within their own city. The two most salient barriers are I-270 and Manchester Road.

walking and bicycling for recreation frequently, while rarely walking or bicycling for transportation. Respondents also expressed the desire for more walking opportunities to recreational destinations such as parks or the Lodge.

Retail businesses may be considered “passive users” of the transportation system that rely on the transportation system to bring customers, goods, and employees. Retail in Des Peres is well served by Manchester and I-270 in terms of easy access for customers and the delivery of goods. However, many who work in Des Peres, including in retail businesses and the hospital, may not be able to easily afford a car with their wages. The West County Center bus serves the mall, but transit access along westbound Manchester is limited, as is transit access to the hospital. Lack of transit access could restrict the hiring options for these businesses if gas prices rise in the future.

These barriers to walking and bicycling mean that for many residents of Des Peres, short trips to parks, grocery stores, or even the movie theatre, must involve a car. Increasing bicycle and pedestrian access to these destinations would increase the transportation choices available to Des Peres residents, allowing them to choose healthier and more environmentally friendly modes of transportation. Walking and bicycling access could also help those that cannot drive, due to age, physical abilities, or cost.
Land Use
The two dominant forms of land use in Des Peres are residential suburban development and arterial commercial development. Both forms of land use were intentionally designed for cars as the main mode of transportation. Throughout the outreach process, residents expressed a desire to be able to walk or bicycle to local shops, schools, and parks. The current land uses present opportunities and challenges for improving walking and bicycling access.

Residential Suburban Development: Most residential neighborhoods in Des Peres feature curvilinear streets, with frequent cul-de-sacs or dead ends. This pattern of streets ensures lower traffic in neighborhoods, thereby encouraging recreational walking, however the indirect routes can discourage walking to destinations. Currently, formal and informal trails between neighborhoods exist. Strengthening and expanding this network of trails can make walking more convenient while still limiting car traffic in neighborhoods.

To reinforce a neighborhood feel and discourage cut-through traffic, many streets are quite narrow in Des Peres, effectively functioning as “yield streets.” On a yield street, cars traveling in opposite directions must yield to one another. The narrow streets limit options for retrofitting streets with sidewalks, without either removing parking on one side of the street or using the right-of-way that is currently treated as part of residents’ yards. The walking network in Des Peres can most feasibly be strengthened through traffic calming such as landscaped islands in neighborhoods or modern speed tables.

Arterial Commercial Development: Des Peres has a wide variety of office, commercial, and institutional (hospital) land uses located along arterial roads. The building designs reflect that most people arrive by car, typically with buildings set back from the road and with parking lots separating the main entrance from the sidewalk. The wide setbacks and large parking lots discourage walking along commercial streets in Des Peres, as many people perceive this design as unpleasant or unsafe for walking. Providing walking routes off of arterials can encourage recreational walking, but addressing the environment for people walking along arterials is crucial for allowing transportation choice when it comes to accessing commercial destinations.
Demographics
The recently completed Comprehensive Plan discusses the demographics of Des Peres in depth. The City of Des Peres has a stable population and any anticipated fluctuation will depend on the lifecycle of households, as children are born and move away from their parents, or as older families sell houses to younger families with children. As Des Peres is widely perceived as a stable community, ideal for raising children, it is reasonable to assume there will continue to be a substantial population of children into the future.

Improving walking and bicycling access can improve the quality of life for Des Peres residents of all ages. Currently, 18.1% of Des Peres residents are younger than 15 and 1.69% are older than 85. This means nearly 1 in 5 residents are unable to drive and are instead reliant on walking, bicycling, transit, and receiving rides from others.

National and Regional Trends
Across the country, and in the St. Louis region, recent trends indicate increasing interest in walking and bicycling. In the Urban Land Institute’s 2015 St. Louis Emerging Trends Report, 92% of respondents indicated that a bicycle and pedestrian friendly environment was important. With pedestrian friendly neighborhood streets and connectors, existing sidewalks, and walking trails in parks, Des Peres has competitive advantage compared to several similar municipalities in the region. By addressing the major barriers and linking the existing infrastructure into a network, Des Peres will be well poised to attract and retain residents interested in walking and bicycling.
The Planning Priorities guide all of the recommendations and prioritization that follow in this plan. The priorities were drafted by the Planning Advisory Committee based on the feedback received during the initial round of Public Outreach. City of Des Peres staff further analyzed the priorities. The following five priorities are the base of the Plan:

- Safety
- Connectivity
- Infrastructure for walking and biking
- Attractive walking and biking for all ages and abilities
- City policies and practices that support walking and biking

One group came to consensus easily over their top five issues:

- Connectivity and Access
- Traffic calming
- Safety
- Infrastructure improvements
- Education, Awareness, and Enforcement

The second group had a greater variety of responses, but followed a similar theme with their five priorities:

- Connectivity within the community and to the region
- Safety
- Safe Crossings
- Linking policy and practice
- Attractiveness for all ages and abilities

Both groups had similar concepts with different names. Linking policy and practice encompassed education, awareness, and enforcement, along with the potential for zoning code updates. Traffic calming and attractiveness to all ages and abilities both stressed slower, more welcoming streets. Finally, safe crossings were included as infrastructure for walking and biking.

Drafting the Priorities

The Planning Advisory Committee drafted the priorities after they reviewed the results of the initial public outreach. Each committee member was asked to make a list of their top five priorities for the bicycle and pedestrian plan in Des Peres. Each group then worked to group the priorities and come to consensus over a top five priorities. Finally the whole committee worked together to create the top five priorities for the plan. The discussion of priorities directly addressed the recurring themes in the survey and public outreach, including bike lanes, policy, education, awareness, and safety.
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OVERVIEW OF RELEVANT PLANS

Federal

Since March of 2010 the policy of the US Department of Transportation (DOT) Policy, which applies to every transportation agency, is to “incorporate safe and convenient walking and bicycling facilities into transportation projects.” Recommended actions most relevant to this plan are:

- Considering biking and walking equal to cars when designing and updating infrastructure
- Ensuring transportation options for people of all ages and abilities
- Making biking and walking part of doing business for the agency, by collecting data on biking and walking, performing regular maintenance on biking and walking facilities, and setting mode share targets.

The DOT also recommends going beyond minimum design standards to ensure that facilities are safe, comfortable, and able to accommodate increased demand. In August of 2013, the DOT demonstrated its commitment to exceeding standards by endorsing two design guidebooks that recommend higher standards for biking and walking: the National Association of City Transportation Officials’ Urban Bikeway Design Guide and the Institute of Transportation Engineers’ Designing Walkable Urban Thoroughfares: A Context Sensitive Approach.

In September of 2014, the DOT announced the Safer People, Safer Streets Initiative, which seeks to improve research and data collection on pedestrian and bicycle safety and do more to encourage local government officials to improve pedestrian and bicycle infrastructure. By collecting data on pedestrian and bicycle safety, cities can better identify opportunities for infrastructure improvements. Properly planned infrastructure improvements can improve safety and encourage more people to walk or bike in a city. Without better data collection and infrastructure improvements, cities will remain largely unsafe for bicyclists and pedestrians. As part of this initiative, DOT Secretary Foxx launched the Mayor’s Challenge for Safer People, Safer Streets. This Challenge encourages Mayors to implement Complete Streets policy, collect bicycle and pedestrian data, and encourage safe road behaviors.

In the 21st century, the DOT has shown a steady move towards higher level of design standards for biking and walking. In the context of this plan, it is prudent to assume the trend will continue, and strive for design solutions that will match DOT policy now and in the near future.
State

In 2011, the State of Missouri adopted a Complete Streets resolution. Accordingly, the Missouri Department of Transportation (MoDOT) actively works to incorporate bicycle and pedestrian facilities into projects. Municipalities can partner with MoDOT to improve biking and walking access during routine maintenance of MoDOT facilities by showing demand and a plan to enhance connectivity for biking and walking throughout the community. MoDOT operates Manchester Road (100) within Des Peres. Additionally, MoDOT operates I-270, which is partially within the boundaries of the City, but is a separated highway for motor vehicles only.

In 2013, MoDOT updated their long range transportation plan, with MoDOT on the Move. Two of the four goals are directly related to walking and biking transportation:

- Keep all travelers safe, no matter the mode of transportation
- Give Missourians better transportation choices

In support of these goals, the plan states that road projects are evaluated for demand and need, and bicycling and walking facilities are integrated into projects when needed. Specific treatments mentioned are upgrading signs, signals, lighting, and sidewalks or bicycle lanes.

The plan focuses on the financial implications of the decline in demand for car travel, and the concomitant increase in demand for passenger rail, transit, walking and bicycling.
Regional

Moving Transit Forward, Bi-State Development Agency (Metro Transit)
In the next 5 to 10 years, there are no foreseeable major transit projects in the planning area. Metro Transit’s St. Louis Rapid Transit Connector Study identified a bus rapid transit line along I-64 as one of two high priority bus rapid transit lines. While this route falls outside of the study area, it could potentially improve transit access to Des Peres.

Transportation Improvement Plan 2015 - 2018, East West Gateway Council of Governments
The 2016 - 2019 Transportation Improvement Plan includes updates to the Oak Drive Bridge over Two-Mile Creek in 2017. The plan also includes signalization improvements along Manchester/Route 100.

Connected 2045, East West Gateway Council of Governments
The Connected 2045 Plan includes few infrastructure improvements that affect Des Peres. The plan recommends adding lanes along the stretch of I-270 between Manchester Road and Gravois in 2036 – 2045. This plan also includes the addition of vehicle lanes along I-270 from Manchester Road to I-64 in the Illustrative Tier I.

Gateway Bike Plan, The Great Rivers Greenway
The Gateway Bike Plan focuses on connecting the region through bike routes. The emphasis is on supplementing existing multi-use paths and future paths planned by Great Rivers Greenway, the regional recreation tax district.

The Gateway Bike Plan includes plans for on-street bicycle facilities along the following streets:

1. Bike lanes along Manchester Road from Ballas to the eastern city limit
2. Buffered bike lanes along Manchester Road from the western city limit to Ballas
3. Paved shoulder along Ballas road from Manchester Road to northern city limit
4. Paved shoulder along Dougherty Ferry Road
5. Climbing lane along Des Peres Road from Dougherty Ferry Road to Manchester Road
St. Louis County Bicycle Facilities Plan, Saint Louis County Highways and Traffic

The St. Louis County Bicycle Facilities Plan applies to the following roads in the study area that are maintained by St. Louis County:

- Ballas Road
- Dougherty Ferry Road
- Barrett Station Road
- J.J. Kelley Memorial Drive

The Bicycle Facilities Plan sets design guidance for experienced commuter cyclists. The Bicycle Facilities Plan allows for wide outside lanes (13’ to 15’’) or bike lanes to be used as bicycle facilities. Arterial and major collector roads with a minimum 14’ wide outside lanes can be signed with Bike Route signs following the MUTCD design. Roads with speeds over 35 mph are not recommended for shared travel.

St. Louis County has also recently created a Road Diet Policy that sets guidelines for when streets can be considered for a reduction in lanes in order to make space for bike lanes. St. Louis County continues to update its policies in order to implement Complete Streets.
Des Peres

2015 Comprehensive Plan
Des Peres’ 2015 Comprehensive Plan is an update from its 2003 Comprehensive Plan and it includes updates related to population growth, socioeconomic changes and development needs. The city currently has bike lanes along Ballas Road and the portion of Manchester Road west of I-270. On streets without bicycle infrastructure, cyclists can ride in traffic or on the shoulder of roads marked with share-the-road signs. There are also off-street bicycle trails in Des Peres’ various parks.

Des Peres is planning to resurface 7 to 8 street segments, which represent an opportunity for adding on-street bike lanes or sharrows. The city is also repairing 1,000 feet of sidewalks.

Parks Master Plan
Des Peres has master plans for its four city parks, Des Peres Park, Harwood Park, Pioneer Park, and Sugar Creek Park. Each park already includes extensive bicycle and pedestrian trails; however, the city has proactively identified opportunities to expand their trail networks. The city has also done a good job of identifying ways to make its parks more inviting to visitors. Specific improvements to Des Peres parks are as follows:

• **Des Peres Park**
Des Peres Park currently has a trail that loops around the lake and connects with several of the park’s amenities. The Des Peres Park comprehensive plan includes a guideline for trails in the park to be 6 feet wide and paved with asphalt. Des Peres has identified a need to improve the signs identifying pedestrian entrances to the park.

• **Pioneer Park**
Pioneer Park currently includes a paved walking trail, but the city plans to expand the trail to a width of 6 to 8 feet that loops around a greater area of the park.

• **Sugar Creek Park**
Sugar Creek Park currently has paved and wood chip walking trails that loop throughout a large area of the park. The trails are currently in good condition, but the city plans to make improvements for a better and more inviting experience for bicyclists and pedestrians. The city plans to extend its trail north to run closer along Sugar Creek and implement improvements that would make the trails more inviting to park users.

Engage Des Peres
Engage Des Peres was a public outreach effort to collect input from residents as Des Peres updated their comprehensive plan. Through polling a sample of residents, this effort found bike commuting, higher fuel prices, and increasing obesity rates were among residents’ highest priorities. Adding more bicycle and pedestrian infrastructure to the city would be a great way to address each of these priorities. Adding bicycle lanes and multi-use paths provide residents with a safe channel for travel that is cheaper and healthier than driving.

24% of respondents indicated that Des Peres should “support high quality recreational centers and playgrounds.” Over 19% of respondents indicated that improving “public safety and access along Manchester Road” is a top priority for Des Peres.

2014 Des Peres Community Survey
In March of 2014, the city of Des Peres in collaboration with ETC institute conducted a survey with over 600 residents of Des Peres. This survey uncovered that residents feel the city should emphasize “the flow of traffic and ease of getting around the city.” The survey also found that residents would like more “availability of pedestrian walkways/sidewalks” and more “walking and bike trails.”
Review of City Ordinances

In the city ordinances, Section 14-432, the City of Des Peres states that bicyclists are not permitted to use the roadway when there is a bicycle pathway adjacent to a roadway.

According to Missouri state laws on bicycling in traffic, bicyclists are required to ride to the right side of a street and are also permitted to ride on the shoulders of roads. Bicyclists, however, are not required to ride on the shoulder of roads according to Missouri state ordinance 307.191.

The City of Des Peres should update Section 14-432 in accordance with the state’s law. This ordinance may be especially onerous, inconveniencing and even discouraging cyclists from riding on Des Peres’ streets:


SUMMARY OF COMMUNITY SURVEY

Summary

An online survey was made available on the Des Peres website and Trailnet website. Paper copies were also available during public outreach events. The questions focused on transportation preferences. Overall, 70 responses were received. Due to the collection method, the survey is not representative of Des Peres residents.

Transportation Habits

The survey respondents reported using several modes of transportation; driving a car was overwhelmingly the most common form of daily transportation, with 56 of respondents reporting driving everyday. However, over half (47) of the respondents reported walking at least a few times a week. Bicycling was less common, though half of respondents (37) reported bicycling at least a few times a month.

When asked why they walk, most respondents indicated it was for fitness (40), to exercise pets (24) or to spend time with friends or family (23). These recreational trips seem to be the bulk of the trips, while cars are used for daily transportation needs. The respondents expressed a desire in walking for a greater variety of reasons, including going to local stores, where 31 respondents would like to walk for this reason while 15 currently do. Going to parks had a similar discrepancy between behavior and desire, with 30 wanting to walk to parks, and 21 currently doing so.

The trends for bicycling were almost identical, with fitness (32), spending time with friends or family (20), and going to parks (11), as the most common reasons for bicycling. Similarly, respondents expressed a desire to bicycle for transportation to work, school, parks, and stores, though few reported doing so. Nineteen respondents want to bike to work in the future, but right now, none do.

When asked what they would like to change in terms of transportation in 10 years, 51 respondents said they would like to bike more, 50 said they would like to walk more, and 34 said they would like to drive less. The responses suggest there is unmet demand for walking and biking facilities in Des Peres, especially in terms of accessing community and commercial destinations. Safe and comfortable walking and biking facilities can allow residents more choices when it comes to transportation modes.

Over a third of respondents also expressed interest in using transit more frequently. Currently, only one bus line serves Des Peres, running along Manchester. The low use of transit is to be expected given the lack of frequent transit options. One of the comments noted how difficult it was to use transit, as parts of Manchester are very hard to cross on foot to get to the bus stops. Ensuring safe crossings to bus stops will help Des Peres residents and businesses that employ people who commute via transit.
Why do you walk now? Why would you like to walk in the future? Check any reasons that apply you.

<table>
<thead>
<tr>
<th>Reason</th>
<th>Currently I walk</th>
<th>I would like to walk</th>
</tr>
</thead>
<tbody>
<tr>
<td>To go to work</td>
<td>16</td>
<td>2</td>
</tr>
<tr>
<td>To go to school</td>
<td>16</td>
<td>4</td>
</tr>
<tr>
<td>To go to local stores</td>
<td>15</td>
<td>31</td>
</tr>
<tr>
<td>To go to parks</td>
<td>30</td>
<td>21</td>
</tr>
<tr>
<td>To go to transit stops</td>
<td>19</td>
<td>16</td>
</tr>
<tr>
<td>For fun or fitness</td>
<td>16</td>
<td>40</td>
</tr>
<tr>
<td>To exercise pets</td>
<td>7</td>
<td>24</td>
</tr>
<tr>
<td>To spend time with friends or</td>
<td>15</td>
<td>23</td>
</tr>
</tbody>
</table>

Transportation Habits

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Walk</th>
<th>Bike</th>
<th>Transit</th>
<th>Drive a car</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily</td>
<td>29</td>
<td>12</td>
<td>18</td>
<td>1</td>
</tr>
<tr>
<td>A few times a week</td>
<td>6</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>A few times a month</td>
<td>2</td>
<td>15</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>A few times a year</td>
<td>17</td>
<td>12</td>
<td>17</td>
<td>0</td>
</tr>
<tr>
<td>Never</td>
<td>17</td>
<td>15</td>
<td>17</td>
<td>1</td>
</tr>
</tbody>
</table>
**Figure 3**

Why do you bike now? Why would you like to bike in the future? Check any reasons that apply you.

- To go to work: 19, 0
- To go to school: 9, 0
- To go to local stores: 26, 7
- To go to transit stops: 27, 13
- To go to parks: 32, 11
- For fun or fitness: 18, 17
- To spend time with friends or family: 20, 18

Legend:
- I would like to bike for this reason
- Currently, I bike for this reason

**Figure 4**

Imagine your life in ten years- is there anything you would like to change in terms of transportation?

- I would like to walk: 50, 16, 0
- I would like to bike: 51, 14, 1
- I would like to take transit: 31, 27, 4
- I would like to drive a car: 30, 34, 2

Legend:
- More
- Neither more nor less
- Less
Walking Environment

Respondents were divided over the walking environment in Des Peres. Almost half of respondents (35) disagreed with the statement “It is easy to walk in Des Peres.” Statements about being safe or enjoyable were viewed more favorably, but still had polarized responses with almost half of respondents not seeing Des Peres as safe or enjoyable.

The survey responses echo the uneven walkability of Des Peres. Most neighborhoods have walkable streets with slow traffic. However, the busier roads, especially Manchester, can be barriers for walking, with high speeds and narrow sidewalks. As the busiest streets in Des Peres are operated by the Missouri Department of Transportation, improving pedestrian safety and comfort will require partnership.

Encouraging Walking

When asked what their barriers were to walking, respondents selected lack of sidewalks (44) and crossing busy roads (41) most frequently. Increasing sidewalks and safe crossings for pedestrians can help turn the existing sidewalk infrastructure into a viable network for Des Peres residents to walk to parks, stores, and just for exercise. When asked what changes could help them to walk more, two thirds of respondents indicated more walking and biking paths, and two thirds indicated more sidewalks.

What changes would help you to walk more often?

<table>
<thead>
<tr>
<th>Change</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>More biking and walking paths</td>
<td>48</td>
</tr>
<tr>
<td>More sidewalks</td>
<td>48</td>
</tr>
<tr>
<td>Safer ways to cross the street</td>
<td>40</td>
</tr>
<tr>
<td>More signs marking walking routes and destinations</td>
<td>24</td>
</tr>
<tr>
<td>More street lights</td>
<td>21</td>
</tr>
<tr>
<td>Sidewalks in better condition</td>
<td>20</td>
</tr>
<tr>
<td>Slower Traffic</td>
<td>13</td>
</tr>
<tr>
<td>More sidewalk ramps</td>
<td>11</td>
</tr>
</tbody>
</table>

What prevents you from walking more?

<table>
<thead>
<tr>
<th>Reason</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crossing Busy Roads</td>
<td>44</td>
</tr>
<tr>
<td>Lack of Sidewalks</td>
<td>41</td>
</tr>
<tr>
<td>Fast Cars</td>
<td>23</td>
</tr>
<tr>
<td>Uneven and Poorly Maintained Sidewalks</td>
<td>19</td>
</tr>
<tr>
<td>Lack of Time</td>
<td>18</td>
</tr>
<tr>
<td>Not Enough Street Lighting</td>
<td>17</td>
</tr>
<tr>
<td>Rude drivers</td>
<td>16</td>
</tr>
<tr>
<td>Weather</td>
<td>11</td>
</tr>
<tr>
<td>Lack of Sidewalk Ramps</td>
<td>8</td>
</tr>
<tr>
<td>Trash or debris on the sidewalk or shoulder</td>
<td>6</td>
</tr>
<tr>
<td>Hills</td>
<td>3</td>
</tr>
<tr>
<td>Physical Ability</td>
<td>3</td>
</tr>
<tr>
<td>Crime</td>
<td>1</td>
</tr>
</tbody>
</table>

Walking Accessories

Respondents were asked whether they used canes, wheelchairs, strollers, or other walking accessories and their experience using such devices. People using such devices typically depend on accessible ramps and smooth sidewalks in order to walk safely. Overall, seven respondents reported using a stroller, three used canes or walking sticks, and one used a walker sometimes. Respondents using a walking accessory were slightly more positive towards the walking experience in Des Peres than the survey responses about walking in general. Four respondents agreed or slightly agreed that it was easy to use their walking accessory, while three were neutral. Five respondents disagreed or strongly disagreed that it was safe to use their walking accessory in Des Peres. The open-ended questions highlighted the dangers of disconnected sidewalks and busy roads for people using walking accessories.
How do you feel about the following statements?

- Strongly disagree
- Disagree
- Slightly disagree
- Neutral
- Slightly agree
- Agree
- Strongly agree

**Figure 5**

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Slightly Disagree</th>
<th>Neutral</th>
<th>Slightly Agree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>It is easy to walk in Des Peres.</td>
<td>8</td>
<td>5</td>
<td>3</td>
<td>1</td>
<td>11</td>
<td>11</td>
<td>1</td>
</tr>
<tr>
<td>It is safe to walk in Des Peres.</td>
<td>5</td>
<td>8</td>
<td>2</td>
<td>1</td>
<td>17</td>
<td>14</td>
<td>6</td>
</tr>
<tr>
<td>It is enjoyable to walk in Des Peres.</td>
<td>6</td>
<td>11</td>
<td>10</td>
<td>5</td>
<td>13</td>
<td>13</td>
<td>3</td>
</tr>
</tbody>
</table>

**Figure 6**

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Slightly Disagree</th>
<th>Neutral</th>
<th>Slightly Agree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>It is easy to use my walking accessory in Des Peres.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>It is safe to use my walking accessory in Des Peres.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>It is enjoyable to use my walking accessory in Des Peres.</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>
Bicycling Environment

Respondents were asked how comfortable they are bicycling, and the seven that reported they would never ride a bicycle were not asked any further bicycling questions. The responses about bicycling conditions in Des Peres were less divided than responses for walking conditions. Most respondents disagreed with the statements that it is easy, safe, and enjoyable to ride a bicycle in Des Peres. These responses echo the feedback received throughout the public outreach process- bicycling is pleasant on neighborhood streets in Des Peres, but major roads pose barriers to longer trips.

As mentioned in the Transportation Habits section, 51 of the respondents reported wanting to bicycle more in the future. When asked what prevents them from bicycling more now, lack of bike infrastructure (37) and crossing busy roads (36) were the two most common answers, followed by fast cars (30) and rude drivers (24). These responses suggest that the City of Des Peres may be able to help residents achieve their desire to bike more by addressing infrastructure, street crossings, and speeding.

What prevents you from bicycling more?

<table>
<thead>
<tr>
<th>Reason</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of bike infrastructure</td>
<td>37</td>
</tr>
<tr>
<td>Crossing busy roads</td>
<td>36</td>
</tr>
<tr>
<td>Fast Cars</td>
<td>30</td>
</tr>
<tr>
<td>Rude drivers</td>
<td>24</td>
</tr>
<tr>
<td>Uneven and poorly maintained pavement</td>
<td>18</td>
</tr>
<tr>
<td>Not sure how to bicycle on streets</td>
<td>11</td>
</tr>
<tr>
<td>Weather</td>
<td>11</td>
</tr>
<tr>
<td>Not enough street lighting</td>
<td>10</td>
</tr>
<tr>
<td>Hills</td>
<td>9</td>
</tr>
<tr>
<td>Trash and debris on the sidewalk or shoulder</td>
<td>7</td>
</tr>
<tr>
<td>Lack of ramps</td>
<td>5</td>
</tr>
<tr>
<td>Crime</td>
<td>1</td>
</tr>
<tr>
<td>Physical ability</td>
<td>1</td>
</tr>
</tbody>
</table>

Encouraging Bicycling

Similar to walking, the most often cited reasons for bicycling were recreational, including for fun or fitness. No one reported going to school, work, or transit stops by bike, though several people expressed desire to use a bicycle for these purposes. When asked what would help them to bicycle more, respondents indicated more walking and biking paths (46) and more bike lanes (40) would help them to be more active. These responses are consistent with comments received during public comments. There seems to be an unmet demand for more separated bicycling infrastructure in Des Peres. It should be noted that one of the existing bicycle lanes in Des Peres, on the west bound section of Manchester, west of 270, is not designed to current standards and is reported to be filled with debris.

What changes would help you to bicycle more often?

<table>
<thead>
<tr>
<th>Change</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>More biking and walking paths</td>
<td>46</td>
</tr>
<tr>
<td>More bike lanes</td>
<td>34</td>
</tr>
<tr>
<td>Safer ways to cross the street</td>
<td>33</td>
</tr>
<tr>
<td>More signs showing biking routes and destinations</td>
<td>30</td>
</tr>
<tr>
<td>More signs that show people on bikes can use the street</td>
<td>28</td>
</tr>
<tr>
<td>Slower traffic</td>
<td>19</td>
</tr>
<tr>
<td>Education on how to bicycle on streets</td>
<td>12</td>
</tr>
<tr>
<td>Better street lights</td>
<td>11</td>
</tr>
</tbody>
</table>

(table 3, table 4)
Transportation Priorities

The survey concluded with two questions about transportation priorities. Respondents were asked how important different trips should be considered, based on the destination. Going to parks and trails seemed to be the highest priority for respondents, with 30 respondents calling it very important and another 17 considering it important. Going to school was the second highest priority, with 39 considering it important or very important. While the question asked about walking, biking, driving, and taking transit, the high value on trips to trails and parks suggests many respondents were thinking more about walking and biking, rather than priorities for the entire transportation system in Des Peres.

Respondents were also asked to rank four competing priorities in transportation—volume, speed, safety, and cost. Safety was by far the highest priority for respondents, with 40 of 55 ranking it the highest priority. Speed and volume had the same average of ranking (2.59), though more respondents placed speed as a first (6) or second (20) priority, compared to volume, which was ranked as a top one or two priority by only 23 respondents. Cost was by far the lowest priority, with 38 respondents ranking it fourth, and only three ranking it as a first priority.

Conclusions

Overall, the survey was consistent with public comments during the outreach period. Residents of Des Peres seem to want to walk and bike more frequently, and to expand the purpose of their walking and biking trips, to include local destinations such as parks. Safety was a high priority for transportation, while cost was not of great as a concern. Residents identify busy roads, especially Manchester and I-270 as barriers. The City of Des Peres must work with their partners at MoDOT and St. Louis Highways and Traffic in order to create a complete network of walking and biking infrastructure that can meet the desires of their residents.
First Round of Public Outreach

The first round of public outreach for the Des Peres Bicycle and Pedestrian Master Plan took place from June 13, 2014 through July 18, 2014. The public outreach consisted of a survey and three pop-up tabling events.

The first round of public outreach emphasized gathering comments and opinions from the public to better understand community values and priorities for transportation in Des Peres. The pop-up tabling events captured public comments in the following ways:

- poster poll of six questions
- maps of Des Peres, for residents to draw favorite routes and barriers on
- comment cards
- paper copies of the online surveys
- surveys designed for children 6 through 16

In addition to capturing public comments, the public was able to talk to the planning team about the process. We provided fliers on the process itself and fliers with information about different forms of walking and biking infrastructure. Overall, we interacted with over 30 people based on the number of stickers on the poster polls. The results from the process are summarized below.

Events

The pop-up tabling events were conceived as a chance to take the materials typically found in an Open House to public events, in order to get both a larger and a wider audience for the public outreach. The tabling events were publicized on Trailnet’s website and Des Peres’ website, as well as in emails. The pop-up tabling events took place at popular social events in Des Peres, which gave us the chance to talk with residents who may not have otherwise come to a traditional Open House. The events were:

- Des Peres Summer Concert Series Kick Off, June 13
- Des Peres Summer Solstice Party, June 20
- 9th Annual Dive-In Movie, July 18

The events drew residents of all ages, especially families with children. The Solstice Party was the most successful in terms of gathering input. While the Concert Series was very well attended, many people were not from Des Peres or were too engaged in the concert to give feedback. The Dive-In Movie also had many non-residents in attendance, though some families from Kirkwood gave input.
**Poster Poll**

The informal poster poll asked residents to place stickers along a scale with seven marks between two opposite choices. Each choice was illustrated with a photo. At the end of the event, the stickers were counted and assigned to the mark it was closest to. When the stickers were halfway between two marks, they were assigned to the mark to the right on the poster (lower on the scale on these graphs). Both the survey collection and counting methodology can only give a general impression of the opinions expressed. They do not represent a rigorous survey process.

**Comment Cards**

Comment cards were provided at all of the events. For the most part, residents preferred to note their comments on the maps. The two comments received were:

- At the end of Montour, off of Lindeman, there are lots of bikes. It should be cleared and trimmed regularly.
- Don’t even consider Manchester, it’s too busy. Look at Barrett Station and Dougherty Ferry.
If travel time is the same, I’d like car traffic to be controlled through...

- Roundabouts and traffic calming, to keep all traffic moving
- Long green signals on traffic lights to keep traffic moving

The highest priority for the transportation system should be...

- Keeping up with the growing demand for walking and
- Keeping everything pretty much the same

The transportation budget should be spent on...

- Infrastructure and maintenance for walking and biking
- Infrastructure and maintenance for car travel
Mapping Comments

Residents were invited to give written comments through a map of Des Peres and through comment cards. When residents were hesitant to draw on the maps, the planning team recorded the residents’ comments on the maps. In order to improve clarity, residents were asked to use color-coded markers, though not all residents did. At the Dive-In Movie, residents marked pleasant and unpleasant routes, but did not write any comments.

Concert Series Map Comments

• South of Big Bend not too good for bicycling (at Big Bend and Barrett Station Road).
• Too much cut-through traffic from Chesterfield Along Des Peres Road to Dougherty Ferry and 270. Drivers are trying to avoid Manchester and 270.
• Barrett Station Road has turn lane, but with almost nowhere to turn. Lots of bike traffic.
• Des Peres Road- this road is awful. Too much traffic, no room for bike lanes.
• Dougherty Ferry between Ballas and Lindemann-infamous due to potholes.
• Barrett station road is nice north of Manchester. Bicyclists cut around the gate to get to Mason and Creve Coeur Lake.
• Wide grates on Manchester- dangerous for cyclists.
• Des Peres Road south of Manchester has the note- why not close it to local traffic?
• Manchester and the intersection of 270 is marked “God-awful bike ride.”
• Manchester is marked “No one in their right mind rides on Manchester east of 270.”
• Ballas is marked with a note that there is a lot of bike traffic on Ballas.
• A resident requested a bicycle bridge over Manchester at 270.
• The area south of St. Clement Grade School is marked “Great bicycle and pedestrian cut-throughs.” The area has several paths connecting dead end streets.

Solstice Party Map Comments

• The intersection of Barrett Station Road and Dougherty Ferry Road is circled in red to indicate danger, with the following comments:
  o Bike lane makes it more dangerous
  o sidewalk doesn’t feel safe.
  o I will not bike south of here.
• Dougherty Ferry Road is highlighted in red to indicate danger, with the explanation, “Should be a designated bike lane, as people walking wear headphones.”
• A resident indicated issues in the neighborhood northeast of Carman Road.
• A resident said it would be nice to have a bike path along the outer road of 270.
• The interchange at Manchester and 270 is circled in red to indicate danger, with the note: Manchester = Manslaughter.
• A resident noted it is hard to cross Manchester to get to Sam’s Club.
• Another noted that there is no safe way to cross Manchester to get to Trader Joe’s.
• A resident in the neighborhood south of Manchester and west of Lodge Des Peres noted that there is no safe way to access Schnuck’s or Des Peres Park.
• Another resident noted that crossing Manchester is the toughest.
• A resident on Pardoroyal noted the neighborhood needs sidewalks.
• Ballas road is highlighted in red for danger with a note that it needs bikelanes.
• A resident noted that Clayton Road has the best potential for bike lanes, due to its width. However, Clayton Road is not in Des Peres.

Dive-In Movie Tabling Map Comments

The following streets were marked in red to indicate dangerous or unpleasant places for walking and biking:
• Highland from the city limits to Dougherty Ferry
• Dougherty Ferry from Highland through Kirkwood
• Rayner Road (in Kirkwood)
• Manchester, east of I-270
• Manchester, west of I-270
The following streets were marked in green and purple to indicate pleasant or safe places for walking and biking:

- Beaver Dam, and all of the smaller streets that lead into and out of it
- N Ballas Rd (north of Manchester)
- The path in Des Peres City Park
- Bansbach from the park to Deutschmann
- Bopp from Manchester to Eckelmann
- Eckelmann from Balls to Bopp
- Claychester
- Fawnvalley
- Harwood
- Nana
- Tallie

Summary of Public Outreach and Early Action Project

On May 3, 2015 the planning team worked with the City of Des Peres to host a Bike Rodeo and Plan Review event in conjunction with the annual Monster Machines event. Aaron Kaminski, Jayne Lundstrom, and the following volunteers from the Planning Advisory Committee helped make the event a success: Elizabeth Hampton, Michael Lohuis, Cynthia and David Kardesch, Tina Nelson, and Alan Ritter.

The Bike Rodeo featured helmet fittings, a balance course, and an opportunity for children to practice the rules of the road. As the Early Action Project, it was an opportunity for residents to experience one of the plan recommendations (increased bicycle education) and to have fun while being active in Des Peres. Over 20 children attended the bike rodeo, and several children got safe, new helmets.

The Plan Review was held in conjunction with a bike rodeo and Monster Machines in order to ensure a high number of residents were able to talk to the planning team. The plan review section had several maps showing the proposed routes, with information about different types of bicycle and pedestrian infrastructure. Residents were invited to draw on maps, talk to the planning team, and submit comments. There was also information about upcoming outreach and plan review opportunities.

The planning team and Planning Advisory Committee members talked to residents throughout the event and received very constructive and insightful feedback. Most of the residents were excited that Des Peres is looking at improving walking and bicycling. The negative comments were targeted at changing specific recommendations or enhancing recommendations to include upgraded infrastructure.

The comments from the event are recorded below. Throughout the event, the planning team and volunteers recorded comments on the maps in addition to a few residents writing directly on the maps themselves.

Comment cards
1. Looks really great- Thank you. I will spread the word to neighbors and friends.
2. Great Plan!
3. One comment card containted the following:
   a. Hollyhead to Kenroyal
   b. Connect Beaver Dam to Bittersweet
   c. Neighborhood Trail from Barrett Pkwy to Phantom and Bittersweet Woods Conversation Area- under utility
   d. Sidewalk Bonroyal Pardroyal
   e. Utility pathway: Barrett Pkwy to Sugar Creek Park

Comments on Maps

Neighborhood Trails Map
- Proposed neighborhood trail near poweline starred, “Yes”
- Note on trail next to Phantom Forest, “Connect to Camberwell or Hollyhead?”

Neighborhood Greenways Map
- Arrows from Cedaroyal to Topping to Dontaos Drive
- Arrows from Cedaroyal to Dunroyal, with note “Connect Common grounds off of Topping Road”
- “Connect Fairoyal to Beaver Dam or Hollyhead” with dashes from Kenyroal to Hollyhead,
Dashes from Bittersweet Woods to Beaver Dam, and dashes from Bittersweet Woods to Phantom Forest. And dashes from Sugar Creek to Whitehorse.

**Sidewalk Map**
- Arrows from Cedaroyal to Viewroyal or Dunroyal
- Arrows from Dunroyal to Topping to Minarca
- Arrows from East Royal to Hollyhead
- “Harwood Hills- no sidewalks!”

**Multi Use Paths Map**
- Line continuing proposed trail south of I-270, “Trail here!”

**Pedestrian Routes**
- Note saying “Please!” along proposed neighborhood trail near power line
- Possible existing connection noted along Gateroyal and Fairoyal
- Connections drawn from Cedaroyal to Viewroyal and Dunroyal with the note, “Connect these!” Also a connection from Dunroyal to Dontaos Drive.
- Note “Connect the parks” with arrows between Phantom Forest, Bittersweet Woods, and Sugar Creek Park.
- Note at St. Clement Grade School, “Badly need sidewalks for kids going to school.”
- Note at Manchester and Lockett, “Kids hate crossing Manchester on way to Kirkwood High School.”
- Note between Nicholas and Des Peres Park, “Needs crossing, have to run across.”
- Note at proposed I-270 bridge- Bridges are nicer than tunnels; better view.

**Bicycle Routes Map**
- In Town and Country, “Great plans! Will Town and Country be involved for Des Peres Road?”
- Lines between Eastroyal and Beaver Dam, between Bittersweet Woods and Phantom Forest, “Connect the neighborhoods.”
- Note near Roger and Grupp, “Connections to Lodge needed without using Manchester.”
- Note near Manchester, “Better Bus Stops, Seats.”

The following comments were noted as for the Pedestrian section:
- “Cars need to check both ways for pedestrians at driveways on Manchester”
- “Make Pizza Hut look better.”
- “Access to Pioneer Park from Lorien area”
- “Traffic Lights by Reliance, Bank of America or Lockett? “x” access to Harwood Park”
- Woodgate and Manchester- “Better crossing here.”

**Summary of Walking Tours**
A public outreach event for the Des Peres Bicycle and Pedestrian Master Plan took place on May 23, 2015. The outreach event consisted of six walking tours around various neighborhoods to understand the needs of the residents and to receive feedback on the proposed plan.

The tours were conducted in the following areas:
- Harwood Hills and Hickory Hills and Bayberry Hills
- Manhattan Heights
- Connecting across I-270 East and I-270 West
- Connecting neighborhood trails in Royal Acres

The event attracted a total of 56 residents to come and offer their feedback on the proposed plan. The event was advertised through fliers at the Lodge, City Hall, and on the City Website, as well as linked to on the City’s Facebook page. The draft plan was also linked to through the City’s website and on the City’s Facebook Page. Trailnet helped to promote the event by handing out fliers at the Monster Machines and Bike Rodeo event, in addition to sending out a targeted email to people who had previously expressed interest in the plan.

**Overall Analysis**
Residents were positive towards the overall Des Peres Bicycle and Pedestrian Master Plan. Residents expressed interest primarily within their neighborhood and how the plan would affect them directly. Some residents felt uncertain about the proposed plan changes, while others were quite excited for the changes in their community. The walking tours were successful in bringing in greater
age diversity and a greater diversity of opinions, while the Monster Machines event attracted families with younger children, who were overwhelmingly positive towards the plan. The concerns and comments raised by residents will be reviewed in the future and noted for future proposed plans.

**Harwood Hills and Hickory Hills and Bayberry Hills**

Two people attended the Hardwood Hills and Hickory Hills walking tour and continued to tour the Bayberry Hills neighborhood. Residents shared the streets felt crowded at times because of lawn service trailers parked on the streets. Residents raised concerns of safety by noticing strangers walking through neighborhood at night and many cars blocking walking paths on the street with parking. One resident expressed interest in prioritizing lighting issues within the neighborhood over sidewalks. There used to be electric lights in lawns, but they have been removed over the years by private homeowners. There have been recorded fights over parking at local schools, which police have been called to address. Traffic calming islands have been damaged as well in the past. Residents expressed concern as well of speeding within the neighborhood of 5-10 mph over the speed limit.

Fawnvalley Drive was widened by several feet to accommodate the community’s desires several years ago. The traffic calming islands have been updated with landscaping boulders in place of the original concrete posts. Residents are concerned that construction workers are starting too early in the morning and the construction teardowns are causing danger within the neighborhood as large trucks are driving though the neighborhood into the late afternoon (around 3pm).

Residents shared ideas of using solar lighting in the future and installing slate pavers as potential bicycle lanes. Residents liked the idea of adding in more benches and a micro park. The residents were excited for potential improvements to walking safety in their neighborhood.

There were reports of a pedestrian being struck on Manchester near Chick-Fil-A during the walking tour.

**Manhattan Heights**

Zero people attended the Manhattan Heights walking tour.

**Connecting across I-270 East**

Eleven people attended the walking tour about the viaduct as an option to connect residents across I-270 East. Residents raised concerns that eminent domain would be used to construct the trail and residents would not be allowed to voice their concerns. Residents of Applewood, a local residential neighborhood, shared their needs to reach 100% consensus for all decisions and there were several people that will oppose the proposed trail. Residents stated deer use the culvert and it would take away access for them. Some residents want the culvert to be blocked as children will travel through it and it would be dangerous for them.

Residents were curious to learn if the proposed plan would increase bicycle and pedestrian traffic in the area. They were concerned about removing turn lanes on Ballas Road by the schools as many residents said parents relied on the turn lanes to drop off their children at school. Residents shared Ballas Road is an important connector for traffic as well during holiday season shopping at the mall. Residents believe any path added should be added to the south side of Ballas Road. Also, residents noted a sidewalk along Manchester Road is needed over I-270.

Overall, residents felt they did not know about the walking tours prior to a few days before the event. Residents shared there was not enough signage and there was no information about it in the newsletters. Residents explained they do not all have access to email. Beyond the specific recommendations to for their neighborhood, residents were supportive or neutral towards the rest of the plan.

**Connecting across I-270 West**

Five residents attended the walking tour about the viaduct as an option to connect residents across I-270 West. Residents were supportive of improving walking and biking acces in Des Peres in general, but expressed concern about using the viaduct as a way to cross I-270. Residents were worried about
flooding and the dangers of constructing a viaduct out of the culvert to connect residents across I-270. Residents were concerned for the safety of their children as well if they were to be around the viaduct on days with bad weather. The residents of homes near the viaduct were concerned because individuals passing through the viaducts are able to see within the backyard of homes. Residents were curious to know if there would be more policing around the area if the viaduct were constructed. Residents were positive to the idea of using a bridge to cross over I-270 instead of using the viaduct. Based on the residents’ concerns on both sides of the viaduct, the plan will recommend pursuing a bridge rather than using the existing viaduct as a way to cross I-270.

Connecting neighborhood trails in Royal Acres
There were thirty-eight residents, including five children, plus one dog that attended the walking tour in Royal Acres to discuss the proposed neighborhood trail. Residents worked to promote walking tours within the neighborhood themselves by creating their own signage with balloons. A resident shared that they had called Trailnet and heard Des Peres was not one of our plans so was confused why they could not find information on it. Residents shared that the event was not publicly advertised and no one seemed to know about the proposed plan.

Residents shared they have never seen anyone traveling along the deer path that is part of the proposed neighborhood trail. Residents shared if we were to put in the neighborhood trail that it would destroy the habitat for the deer. Resident shared the trail would be dirty and muddy. Residents were concerned the trail would increase crime in the area.

Residents expressed concerns that the neighborhood trail would cause home values to drop. However, other residents also shared they did not think this was true and it would only improve future home values. Residents asked if Trailnet was working with Ameren on this project as residents were upset when Ameren recently cut down large trees along the power lines near the proposed trail. Residents that were positive towards the trail were interested in a quiet walking trail and thought it would be a good way to connect the community together. Residents who were unhappy with the trail were worried the trail would eliminate their access to use the space recreationally. The community members had a lively debate over the potential benefits or drawbacks of a neighborhood trail.
Four E’s Recommendations

While infrastructure changes are vital to improving walking and bicycling in a community, it is equally important to have supportive policies and culture in order to encourage safe walking and bicycling. The following recommendations for education, encouragement, enforcement, and evaluation directly impact three of the five planning priorities:

- Safety
- Attractive walking and bicycling for all ages and abilities
- City policies and practices that support walking and bicycling

The Four E’s are:

Education
Encouragement
Enforcement
Evaluation and Implementation

Education Recommendations

For people who are interested in bicycling, education on best commuting routes or on-road cycling can help them make bicycling a habit. For people walking, it is important to understand how to walk safely, including children walking to and from school.

Continue classes at the Lodge

It is important to encourage safe and confident bicycling by providing education to residents in Des Peres. Though most adults know how to drive a car, they have never learned the rules of the road in terms of cycling. The proper knowledge and skills make bicycle commuting safer, more relaxed, and more enjoyable.

Des Peres is already a leader in the region as the Lodge has a League Certified Bicycle Safety Instructor on staff and the Lodge offers bicycle safety classes. The Lodge should continue to offer classes and the City of Des Peres should consider having a police officer trained as a League Certified Instructor as well.

Safety Literature for All Roadway Users

In order to share the roads safely, pedestrians, cyclists and drivers must understand the laws and statutes at the local and state level. Distributing safety literature at civic buildings, recreational centers, local shops, or even as a law enforcement warning, helps the public learn about traffic laws in a cost-effective way. Safety literature should be easy to read, concise, and visually appealing in order to reach the widest audience possible.
Encouragement Recommendations

Encouragement allows residents to share in the joy of bicycling and walking. Creating a safe and positive environment for residents to try out active transportation is a powerful tool in becoming more bikeable and walkable. The following programs are recommendations based on the responses in the community survey, along with national best practices for encouraging walking and bicycling.

Family walks and rides
Community rides and walks encourage residents to be active and get to know each other in a friendly and supportive environment. Community rides or walks help residents to discover the joy of being active and help strengthen community. Events have designated routes, typically loops, which end at the starting place. The pace should be accessible for participants of all ages and abilities. The City of Des Peres could organize family walks and rides using either the Lodge or Des Peres Park as starting points. Organizing a community ride or walk is a great way to get volunteers involved in promoting walking and bicycling, while building community support.

Online resources:
Walkinginfo.org has several ideas for promoting walking, including examples of successful programs:  http://www.walkinginfo.org/promote/strategies.cfm

National Bike To Work Day activities
National Bike Month is in May. The City can encourage residents and employees of all ages to bike in and around Des Peres for transportation and recreational purposes during National Bike Month. The City of Des Peres can work with major employers to encourage biking to work by providing maps, information, or even hosting a “refueling station” with coffee.

Other common events include family group rides, adult and children cycling classes, and bike-to-school days. The League of American Bicyclists has a number of valuable online resources to help make local efforts successful, including an event organizing handbook, a calendar linking to local events and activities, and tips for people interested in commuting to work.

Online Resource:
Trailnet Bike to Work Day resources: http://trailnet.org/work/bicycling/bike-work-day-month/
League of American Bicyclists: http://bikeleague.org/content/plan-bike-month-event
Enforcement Recommendations

Enforcement programs often focus on reducing crashes and conflicts between people walking, bicycling, and driving. Common themes are:

- Speed limit enforcement programs
- Distribution of local and state bicycle and pedestrian laws
- Raising awareness of the rights and responsibilities of all road users

Research shows that the higher the speed, the more severe the crash will be when a vehicle collides with a pedestrian or bicycle (See Figure 17). With effective enforcement, motorists tend to stop speeding, creating a safer environment for all roadway users.

Law enforcement officers are the only ones who can enforce laws for bicyclists, pedestrians, and motorists to improve safety. They also come in contact with roadway users on a daily basis. This puts law enforcement officers in a unique position to assist with and add credibility to community efforts to encourage bicycling and walking and improve safety.

Enforcement programs can be very effective in changing roadway behaviors, but can be seen as unpopular with the public. Efforts that involve education first, such as distribution of safety information instead of tickets, or speed radar trailers, should be a part of any enforcement program or campaign.

Bicycle Patrols

The City of Des Peres Police Department already has bicycles and officers trained to use them. Looking for opportunities to use the bicycles during patrols, especially at community events, can help raise the visibility of, and respect for, people bicycling in Des Peres.

Law Officer Training on Bicycle and Pedestrian Laws

It is important for law enforcement officers to be trained on pedestrian and bicycle laws and rules in order to properly enforce the laws. Officers play a critical role in assuring all roadway users obey laws. This will prevent crashes and create safer roadways for all users.

State of Missouri Statues, including traffic rules for motorists, bicyclists, and pedestrians can be found at: http://www.moga.mo.gov/statutes/C300.HTM.

All Missouri law enforcement officers should be familiar with the rules as to enforce them lawfully.

There are several resources for training law officers. The National Highway Traffic Safety Administration offers free on-line resources including videos for officer training on pedestrian and bicycle laws.


Positive Tickets

Officers can reinforce good behavior and reward people for doing the right thing by giving them positive tickets. Officers can reward people walking, bicycling, and driving with such tickets.
Vehicle speed and death in pedestrian crashes

![Graph showing the relationship between vehicle speed and the percent chance that a person walking will die when struck by a vehicle traveling at a given speed.](image)

figure 17

Evaluation and Implementation
Recommendations

Evaluation is an opportunity to monitor success and ensure continued high quality and continuous implementation. The following recommendations focus on making walking and bicycling a way of doing business for the City of Des Peres and on celebrating the successes of the City.

Annual bicycle and pedestrian counts
Biking and walking counts are an annual inventory of how many people are using active transportation in the community and can track progress over time. The national American Community Survey contains some data on transportation, but it is infrequent and the margin of error increases in communities with smaller populations. The National Project for Bicycle and Pedestrian Documentation coordinates an annual nation wide count. The methodology has been designed to be easy for volunteers to use. Counting locations and protocol for Des Peres will be created as part of the planning process.

Ongoing Bicycle and Pedestrian Advisory Committee
An ongoing Bicycle and Pedestrian Advisory Committee (BPAC) should be formed to oversee implementation of the plan. The membership can be based on the Planning Advisory Committee formed for the planning process. With quarterly meetings, the BPAC can help to implement the plan. At a minimum, the BPAC could consider the following tasks:

• Set an annual work plan, with a maximum of three objectives to accomplish per year
• At the end of every year, write a short annual summary of progress and the two to three objectives to be achieved within the first year, to be shared with the community
• Lead a follow-up online survey, five years after plan implementation begins, to monitor changes in perceptions of walking and bicycling in Des Peres

Online Resources
The League of American Bicyclists has a report on best practices for bicycle and pedestrian advisory committees:

• http://www.advocacyadvance.org/site_images/content/why_bike_ped_staff_april_2010.pdf

Pedestrian and bicycle questions in community survey
The City of Des Peres conducts a community wide survey every two years. This survey is an excellent opportunity to establish community interest in, or satisfaction with, walking and bicycling initiatives. The survey can also be used to assess the rate of walking and bicycling for transportation and recreation in Des Peres, as American Community Survey data has large margins of error when it comes to walking and bicycling data.

Seek Bicycle Friendly Community and Walking Friendly Community status
The Bicycle Friendly and Walk Friendly programs are free and help communities receive national and regional attention for their achievements. Both programs honor cities with different levels of awards: Bronze, Silver, Gold, or Platinum, and honorable mentions. The Bicycle Friendly program has recently introduced Diamond level as the highest level possible. The programs are designed to be easy to use for the communities, with comprehensive websites and online applications.
To apply for a Bicycle or Walk Friendly Designation, the City should:

- Review the application online, and decide which objectives need to be completed before the community will be ready to go for bronze
- When the community is ready, a City staff person will complete and submit the application.

**Online Resources:**

- League of American Bicyclists Bicycle Friendly Program: http://www.bikeleague.org/content/communities
- Walk Friendly Communities: http://www.walkfriendly.org/
Pedestrian Recommendations

The following section proposes recommendations for how to connect and strengthen the existing walking network. Multi-use paths are included in the walking infrastructure section, as walking appeals to a wider cross section of the population, as compared to bicycling, so it is reasonable to expect the paths to be used for walking more than bicycling.

The table shows recommendations prioritized based on the planning principles. Each recommended segment was evaluated based on how well it fulfills the four infrastructure related principles of the plan:

- Safety
- Connectivity
- Infrastructure for walking and biking
- Attractive walking and biking for all ages and abilities

In addition to the planning principles, cost was considered in the prioritization. Please see Appendix E for more information on the prioritization methodology.

The prioritization is meant as a guide only; if the opportunity to implement a recommended project comes available, the project should be pursued. If a higher priority project takes several years to implement due to cost or logistics, it should not preclude the City from pursuing the lower-ranked projects that could be implemented sooner.
Pedestrian Recommendations

<table>
<thead>
<tr>
<th>Project Type</th>
<th>Project Location</th>
<th>Distance (miles)</th>
<th>Cost</th>
<th>Prioritization Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multi-use Path</td>
<td>Dougherty Ferry</td>
<td>1.010</td>
<td>$286,400</td>
<td>300</td>
</tr>
<tr>
<td>Multi-use Path</td>
<td>Des Peres</td>
<td>0.382</td>
<td>$108,300</td>
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</tr>
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<td>Multi-use Path</td>
<td>Manchester</td>
<td>1.176</td>
<td>$333,600</td>
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<td>Multi-use Path</td>
<td>Movie Drive</td>
<td>0.067</td>
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<td>Harwood</td>
<td>0.102</td>
<td>$28,900</td>
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<td>Sidewalk Connection</td>
<td>Walie</td>
<td>0.220</td>
<td>$34,100</td>
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<tr>
<td>Sidewalk &amp; Planting Improvements</td>
<td>Manchester</td>
<td>1.050</td>
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<td>Sidewalk Connection</td>
<td>Grandview</td>
<td>0.161</td>
<td>$25,000</td>
<td>120</td>
</tr>
<tr>
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<td>Lilian</td>
<td>0.147</td>
<td>$22,800</td>
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<td>Manhattan</td>
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<td>120</td>
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<td>Sidewalk Connection</td>
<td>Sarala</td>
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<td></td>
<td></td>
<td></td>
<td><strong>TOTAL:</strong></td>
<td><strong>$3,266,500</strong></td>
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Cost Estimates of Pedestrian Facilities

Cost estimates are based on "Costs for Pedestrian and Bicyclist Infrastructure Improvements," a report produced for the Federal Highway Administration by the UNC Highway Safety Research Center in October 2013. Costs are based on median prices for similar projects and assume a 3% rate of inflation.

<table>
<thead>
<tr>
<th>Infrastructure Type</th>
<th>Description</th>
<th>Length (miles)</th>
<th>Cost</th>
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<tr>
<td>Pedestrian</td>
<td>Sidewalk Gap</td>
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<td>Pedestrian</td>
<td>Sidewalk and Plantings</td>
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<td>$1,130,000</td>
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<tr>
<td>Multi-Use</td>
<td>Multi-use Path</td>
<td>1</td>
<td>$283,600</td>
</tr>
</tbody>
</table>

table 5

table 6
Bicycle Recommendations

The following section proposes recommendations for how to connect and strengthen the existing bicycling network. Multi-use paths are included in the walking infrastructure section, as walking appeals to a wider cross section of the population, as compared to bicycling, so it reasonable to expect the paths to be used for walking more than bicycling.

The table shows recommendations prioritized based on the planning principles. Each recommended segment was evaluated based on how well it fulfills the four infrastructure related principles of the plan:

- Safety
- Connectivity
- Infrastructure for walking and biking
- Attractive walking and biking for all ages and abilities

In addition to the planning principles, cost was considered in the prioritization. Please see Appendix C for more information on the prioritization methodology.

The prioritization is meant as a guide only; if the opportunity to implement a recommended project becomes available, the project should be pursued. If a higher priority project takes several years to implement due to cost or logistics, it should not preclude the City from pursuing the lower-ranked projects that could be implemented sooner.

Bicycle lanes created through road diets or lane diets should be implemented when streets are scheduled for repaving. They have been included in the prioritization, but overall they should be done based on the street paving schedule to save money.
Bicycle Recommendations

<table>
<thead>
<tr>
<th>Project Type</th>
<th>Project Location</th>
<th>Distance (miles)</th>
<th>Cost</th>
<th>Prioritization Score</th>
</tr>
</thead>
<tbody>
<tr>
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<td>Bicycle Lane</td>
<td>Dougherty Ferry</td>
<td>0.368</td>
<td>$35,800</td>
<td>150</td>
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<td>Bicycle Lane</td>
<td>Manchester</td>
<td>1.047</td>
<td>$101,900</td>
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<tr>
<td>Bicycle Lane</td>
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<td>0.178</td>
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<td>Bicycle Lane</td>
<td>Manchester</td>
<td>0.373</td>
<td>$36,300</td>
<td>100</td>
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</table>

TOTAL: $352,400

Cost Estimates of Bicycle Facilities

<table>
<thead>
<tr>
<th>Infrastructure Type</th>
<th>Length (miles)</th>
<th>Cost</th>
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</thead>
<tbody>
<tr>
<td>Bicycle Lane</td>
<td>1</td>
<td>$ 97,200</td>
</tr>
<tr>
<td>Multi-Use Path</td>
<td>1</td>
<td>$ 283,600</td>
</tr>
</tbody>
</table>

table 7

44
Funding Sources

Bicycle and pedestrian improvements can be funded through a variety of federal and local sources. Federal funds are well suited to higher cost infrastructure projects, such as sidewalks or multiuse side paths. Improvements that involve mainly paint, such as Shared Lane Markings, could be implemented through routine maintenance, set-aside funds, or grouped as one federal funding application. The City of Des Peres should plan for the cost of ongoing maintenance for maintenance and paint, as grants for maintenance are rare.

Federal Funding Sources

Moving Ahead for Progress in the 21st Century, MAP-21 was extended while this plan was being drafted. It is probable that a new funding bill will replace MAP-21, instituting new rules for funding. It is reasonable to expect that many of the same funding opportunities will exist under a new transportation bill, however the names or performance measures may change slightly. In addition to funding sources through Map-21, there are other federal funding options. Federal funding sources are described below in more detail, including contact information for each source.
Federal funding opportunities administered by East West Gateway Council of Governments

As part of the Transportation Improvement Plan, East West Gateway Council of Governments (East West Gateway), administers several federal transportation funds. The programs are described:

**Congestion Mitigation and Air Quality Improvement Program (CMAQ)**

The CMAQ Program is a flexible funding source to State and local governments for transportation projects and programs to help meet the requirements of the Clean Air Act. Projects eligible for CMAQ include walking and biking transportation infrastructure and programs encouraging walking and biking. In order to apply for the funding, an agency must demonstrate a project’s impact on emissions. Applications are typically made available in December and are due in February on an annual basis.

**Surface Transportation Program (STP)**

The Surface Transportation Program provides flexible funding that may be used by States and localities for projects to preserve or improve conditions and performance on any Federal-aid highway, bridge projects on any public road, facilities for nonmotorized transportation, transit capital projects and public bus terminals and facilities. The funds can be used for walking and biking infrastructure, including on local roads. Applications are typically made available in December and are due in February on an annual basis.

- [http://www.ewgateway.org/TIPAppInfo/tipappinfo.htm](http://www.ewgateway.org/TIPAppInfo/tipappinfo.htm)
- [http://www.fhwa.dot.gov/map21](http://www.fhwa.dot.gov/map21)

**Safe Routes to School Program (SRTS)**

The SRTS Program was formerly an independent funding round focused on safe walking and bicycling to schools. With MAP 21, the program was rolled into the Transportation Alternatives Program as a potential funding category.

- [http://www.fhwa.dot.gov/map21](http://www.fhwa.dot.gov/map21)
- [http://www.fhwa.dot.gov/map21/guidance/guidetap.cfm](http://www.fhwa.dot.gov/map21/guidance/guidetap.cfm)
- [http://epg.modot.org/index.php?title=136.3_Federal_Aid_Basics#136.3.8.6_Safe_Routes_to_School_.28SRTS.29](http://epg.modot.org/index.php?title=136.3_Federal_Aid_Basics#136.3.8.6_Safe_Routes_to_School_.28SRTS.29)
Transportation Alternatives Program (TAP)

The Transportation Alternatives Program is a new funding program under MAP-21. TAP provides for a variety of alternative transportation projects that were previously eligible activities under separately federally funded programs. This program is funded at a level equal to two percent of the total of all MAP-21 authorized Federal-aid highway and highway research funds, with the amount for each State set aside from the State's formula apportionments. Pedestrian, bicycle, trails, and safe routes to school programs are eligible for TAP funding. Specifically,

- Construction, planning, and design of on-road and off-road trail facilities for pedestrians, bicyclists, and other non-motorized forms of transportation.
- Construction, planning, and design of infrastructure-related projects and systems that will provide safe routes for non-drivers, including children, older adults, and individuals with disabilities to access daily needs.

East West Gateway typically does not have adequate funding to distribute TAP funds every year. As a round of TAP funding will be obligated in October 2015, the next round of applications for TAP funding should be expected in 2017.

- [http://www.fhwa.dot.gov/map21](http://www.fhwa.dot.gov/map21)
- [http://www.fhwa.dot.gov/map21/qandas/qatap.cfm#tap](http://www.fhwa.dot.gov/map21/qandas/qatap.cfm#tap)
- [http://ewgateway.org/TransAlternatives/transalternatives.htm](http://ewgateway.org/TransAlternatives/transalternatives.htm)
Federal funding opportunities administered by state and federal agencies

1. State and Community Highway Safety Grant Program (Section 402)
2. Highway Safety Improvement Program (HSIP)
3. Recreational Trails Program (RTP)
4. Environmental Protection Agency
5. Alliance for Biking and Walking (resource for information)

State and Community Highway Safety Grant Program (Section 402)

Section 402 funds are used to support State and community programs to reduce deaths and injuries. Pedestrian safety has been identified as a national priority. Section 402 funds can be used for a variety of safety initiatives including conducting data analyses, developing safety education programs, and conducting community-wide pedestrian safety campaigns. The funds must be consistent with the State Highway Safety Plan.


Highway Safety Improvement Program (HSIP)

The HSIP emphasizes a data-driven, strategic approach to improving highway safety on all public roads that focuses on performance. Eligible projects include safety improvements for all roadway users.


The Missouri Department of Transportation oversees the distribution of HSIP funds, with an emphasis on proactive, system wide improvements. Projects should align with Missouri’s Blueprint to Arrive Alive (Strategic Highway Safety Plan). In 2014, MoDOT worked with St. Louis County to create a County-level Strategic Highway Safety Plan. The final document includes pedestrian safety improvements that align with MoDOT’s overall Strategic Highway Safety Plan.

**Environmental Protection Agency**

The Environmental Protection Agency offers a variety of grants that address community health. Grants may help fund green infrastructure that can also be used to enhance walkability and bikeability. These broad-based community grants require significant collaboration with local coalitions. Trailnet is available to partner and help with community engagement on this type of grant. As grants opportunities are always evolving, the EPA website should be checked regularly.

- [http://www2.epa.gov/home/grants-and-other-funding-opportunities](http://www2.epa.gov/home/grants-and-other-funding-opportunities)

**Recreational Trails Program (RTP)**

The RTP is a program incorporated into the MAP-21, Transportation Alternatives Program. However, funding for this program is administered by the Missouri Department of Natural Resources, a division of the State Parks. Grants are available for trail development and renovation. Projects require a minimum of a 20% local match.

- [https://mostateparks.com/page/61220/recreational-trails-program-rtp-grants](https://mostateparks.com/page/61220/recreational-trails-program-rtp-grants)

**The Alliance for Biking and Walking**

The Alliance for Biking and Walking has several resources for identifying federal funding for local bicycle and pedestrian infrastructure improvements. Learn more about federal funding here:

Local Funding Sources
Local funding for bicycle and pedestrian projects and programs is an important component when considering developing new facilities. Many federal programs require a local match, the below funding sources can be used to fund projects in full or to be used as a local match when using federal funds.

Local Option Economic Development Sales Taxes
Cities in the State of Missouri have the option to impose a local sales tax of not more than one half per cent to be used to fund projects including pedestrian improvements related to stormwater management (sidewalks, curbs, gutters, etc.)

Capital Improvement Budget Set-Aside
Des Peres could make a policy decision to set-aside a percentage of capital improvement budgets to fund bicycle and pedestrian projects. These projects could be incorporated into other road work being done or stand-alone projects. These funds can be leveraged as a local match to secure federal funds.

Other Local Options
A few other local funding options including the creation of a Community Improvement or Neighborhood Improvement District or assessing development fees are also possible to fund improvements. Information on these funding options can be found at:

- http://www.missouridevelopment.org/community%20services/Local%20Finance%20Initiatives.html
Private Funding Sources
Several national and state foundations provide grants for pedestrian and bicycle projects. These grants can play a significant role in funding projects and providing match for federal funds.

People for Bikes Grant Program
People for Bikes is a national organization dedicated to putting more people on bikes. The organization funds multi-use trails with a strong desire to leverage federal funding.

- http://www.peopleforbikes.org/pages/community-grants

Robert Wood Johnson Foundation (RWJF)
The RWJF offers a wide range of funding opportunities to promote healthy and active living. The website offers details on various grants and calls for proposals.

National Park Service – Rivers, Trails, and Conservation Assistance Program

The National Park Service does not offer funding, but the City of Des Peres can apply to receive technical assistance and support for finding funding sources for recreational trails or conservation projects.

- [http://www.nps.gov/orgs/rtca/index.htm](http://www.nps.gov/orgs/rtca/index.htm)
CONCLUSION

The City of Des Peres is a strong community with great potential for better walking and bicycling. Manchester Road and I-270 are the main challenges for walking and bicycling in the community. By adding connections between existing infrastructure and low traffic streets, the City of Des Peres can enhance quality of life and increase transportation choice. The enthusiasm for walking and bicycling in Des Peres was evident throughout the planning process, with high levels of engagement and support from the residents, staff, and elected officials of Des Peres.
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APPENDIX A: COMMITTEE RECOMMENDATIONS
## Pedestrian Recommendations

<table>
<thead>
<tr>
<th>Project Type</th>
<th>Project Location</th>
<th>Distance (miles)</th>
<th>Prioritization Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multi-use Path</td>
<td>Dougherty Ferry</td>
<td>1.010</td>
<td>240</td>
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<tr>
<td>Multi-use Path</td>
<td>Crossing I-270</td>
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<td>Bridge to West County Mall</td>
<td>0.089</td>
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<td>Des Peres</td>
<td>0.503</td>
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<td>J J Kelley Memorial Dr</td>
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<td>J J Kelley Memorial Dr</td>
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<tr>
<td>Sidewalk &amp; Planting Improvements</td>
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<td>150</td>
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<td>Sidewalk Connection</td>
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**TOTAL** $11,205,000
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**TOTAL** $1,875,000
APPENDIX B: SUMMARIES OF PLANNING ADVISORY COMMITTEE MEETINGS

Planning Advisory Committee Meetings

Meeting #1: August 20, 2014
Meeting #2: November 5, 2014
Meeting #3: March 11, 2015
Meeting #4: July 20, 2015
## Planning Advisory Committee Meeting #1: August 20, 2014

### Location:
The Lodge Des Peres

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<td>Marielle Brown</td>
<td>Trailnet</td>
</tr>
<tr>
<td>Melissa Chapnick</td>
<td>Trailnet</td>
</tr>
</tbody>
</table>

### Summary:

Doug Harms, Des Peres City Administrator, opened the meeting and welcomed the committee members on behalf of the Honorable Richard G. Lahr, Mayor of Des Peres. After introductions from the committee members, Marielle Brown, Trailnet Bicycle and Pedestrian Planning Manager, led a presentation on the planning process and public engagement.

The presentation began with a discussion on what makes a place walkable and bikeable. The committee mentioned the following:

**Walkability:**
- Wide sidewalks
- Crosswalks
- Commercial destinations
- Accessibility
- Safety

**Bikeability:**
- Greenways and parks
- Bike lanes or separated paths
- Culture of respect between people biking and driving
- Traffic speed
- More bicyclists on the road

The difficulty of crossing Manchester was mentioned during the conversation. The presentation continued with an overview of how the planning process could help enhance walking and biking in Des Peres.
The committee also discussed existing conditions in Des Peres, including popular destinations and barriers. Committee members and the planning team wrote and drew on a map of Des Peres to help inform the existing conditions maps and report, with the following notes:

**Map Comments**

The following larger streets were marked in blue and green to indicate favorable places to walk and bike:
- Barrett Station Road between Dougherty Ferry Road and Barrett Parkway
- Barrett Parkway
- Des Peres Road north of Manchester
- Ballas Road north of Manchester
- J.J. Kelley Memorial Drive as it crosses 270. There is a cut-through from Nicholas Lane that is marked.
- Lindeman Road
- Lockett
- Dougherty Ferry from Barrett Station to Ballas (it is also marked in red to indicate unsafe by a different committee member)

Many other subdivision streets were marked in blue and green to indicate a safe or pleasant route. The highlighted streets often connected to parks, schools, or pedestrian cut-throughs. These streets are designed to carry only local traffic and serve neighborhoods. The map of cut-throughs and safe streets marked down by committee members will help in establishing a network of walkable and bikeable routes.

The following routes were marked in red to indicate a dangerous or unpleasant route:
- Manchester
- Des Peres Road between Manchester and J.J. Kelley Memorial Drive
- Ballas Road south of Manchester (it also marked in blue to indicate a pleasant or safe route by a different committee member).
- Dougherty Ferry between Ballas and Barrett Station Road

The following comments were written directly on a map:
- Dougherty Ferry between Barrett Station and Des Peres needs regular street sweeping.
- Need pedestrian crosswalks across Des Peres Road
- There are cut-through all over Des Peres
- “Round-about?” suggested at the intersection of Old Des Peres Road and Des Peres Road.
- “Too much car speed and volume from Manchester to Dougherty Ferry. Not obeyed specific times of day” noted along Des Peres Road.
- No good pedestrian crossing at Manchester and Ballas.
- Manchester and Grupp pedestrian cross light too short.
- At Bopp and Manchester the following remarks are recorded, “No painted cross walk; signal can not be tripped by bicycles; short crossing phase.”
- Locket needs protection at Manchester. Manchester traffic is through at Lockett.
- A pedestrian bike path is marked between Oak Valley Drive and Twin Fawns Drive, just east of the Des Peres City Limit.
- Pedestrian Bridge Claychester (Across creek) is marked at Claychester and Fawnvalley

Committee members also discussed the need for sidewalks that are ADA compliant and wide enough for two people to walk on. Committee members also mentioned the need for sidewalks on both sides of streets, and ramps when sidewalks end. Manchester needs safe walking and riding from Des Peres Road, and Des Peres Road needs safe ways to cross from the east to west side.

The committee meeting ended with a brief discussion of how to spread the word about the plan, including the upcoming St. Louis Night Out on Tuesday, October 7 at various neighborhood block parties. The next meeting date will be arranged within the next couple of weeks.
Planning Advisory Committee Meeting #2: November 5, 2014

Attendees:
Margaret Amend, Parks and Recreation Board
Phil Bayes, Resident
Elizabeth Hampton, Resident
Cynthia Kardesch, Planning and Zoning Board
Peter Kelly, Resident
Mike Lohuis, Resident
Carol Moore, Resident
Tina Nelson, Resident
Janna Pearman Jacobs, Resident
Allan Ritter, BSA Troop 313
Barbara Sheinbein, Resident
Paul Vatterot, Resident
Douglas Harms, Des Peres Resident and City Administrator
Aaron Kaminiski, Parks and Recreation
Marielle Brown, Trailnet
Melissa Chapnick, Trailnet

Review of public input
Attendees were split into two smaller discussion groups to talk about survey results. The discussion focused on three questions:

- What surprised you?
- What recurring themes did you see?
- What was not addressed that should have been?

Both groups were surprised by how many people were walking and biking for recreation and how many expressed interest in walking and biking to destinations, such as shopping or parks. Access to transit for people living or working in Des Peres was also a concern. Committee members observed that a lot of biking and walking occurs in parks as opposed to on streets. Members also discussed the difficulties that Des Peres faces as the major roads are operated by Missouri Department of Transportation.

A major recurring theme was Manchester and 270 dividing Des Peres. Members discussed the difficulties in crossing Manchester due to lack of crosswalks and signals and the difficulty in walking, biking or driving along it because of fast traffic and curb cuts. Bridges, tunnels, and crosswalks were suggested as potential, if costly, solutions.

Safety issues including traffic speed and lighting were a recurring theme. Many committee members talked about the desire for separated infrastructure for walking and biking. Overall, there was consensus that connectivity, safety, and attractiveness were concerns for people walking and biking in Des Peres.

Committee members offered several insights on issues that were not addressed, including policy level issues such planning for walking and biking safety with new development and updating the code to include bicycle parking at new businesses. Connectivity to regional trails and infrastructure was also important for committee members. Des Peres has an existing network of trails connecting subdivisions that should be considered during the plan.

Community priorities
Each member was asked to make a list of their top five priorities for the bicycle and pedestrian plan in Des Peres. Each group then worked to group the priorities and come to consensus over a top five priorities. Finally the whole committee worked together to create the top five priorities for the plan. These priorities will guide all of the plan recommendations and prioritization. Bike lanes, policy, education, awareness, safety- the discussion of priorities directly addressed the recurring themes in the survey and public outreach.
One group came to consensus easily over their top five issues:
- Connectivity and Access
- Traffic calming
- Safety
- Infrastructure improvements
- Education, Awareness, and Enforcement

The second group had a greater variety of responses, but followed a similar theme with their five priorities:
- Connectivity within the community and to the region
- Safety
- Safe Crossings
- Linking policy and practice
- Attractiveness for all ages and abilities

Both groups had similar concepts with different names. Linking policy and practice encompassed education, awareness, and enforcement, along with the potential for zoning code updates. Traffic calming and attractiveness to all ages and abilities both stressed slower, more welcoming streets. Finally, safe crossings could be included as infrastructure for walking and biking. The finalized priorities are:
- Safety
- Connectivity
- Infrastructure for walking and biking
- Attractive walking and biking for all ages and abilities
- City policies and practices that support walking and biking

**Early Action Project**
- There was not adequate time to discuss the Early Action Project and it will be addressed at the next Planning Advisory Committee Meeting.
Planning Advisory Committee Meeting #3: March 11, 2015

Attendees:
Margaret Amend, Resident
Elizabeth Hampton, Resident
Rosanne Leak, Resident
Mike Lohuis, Resident
Tina Nelson, Resident
Barbara Sheinbein, Resident
Tobi Moriarty, St. Louis County Traffic and Highways
Michelle Voegele, Missouri Department of Transportation
Douglas Harms, Des Peres Resident and City Administrator
Aaron Kaminiski, Parks and Recreation
Marielle Brown, Trailnet
Cindy Mense, Trailnet

The meeting had two major objectives- to review the early action project and to review the draft recommendations.

Review of Early Action Project
Marielle Brown presented the Early Action Project plan. The planning team will work with Des Peres to host a bicycle rodeo for young children at the Monster Machines event in Des Peres City Park on May 2nd. At the same time, the public will have an opportunity to review the plan by looking at maps and posters, in addition to talking to the planning team. Help from the Planning Advisory Committee in promoting the event and helping it to run will be key for success.

Residents will also have an opportunity to give feedback on the plan through a series of small, informal neighborhood meetings. On May 23rd, the planning team will set up a series of 30 minute talks in 4 to 6 neighborhoods in Des Peres to discuss plan recommendations. The planning team needs the help of the Planning Advisory Committee to select the locations.

Education, Encouragement, Enforcement, and Evaluation Recommendations
Marielle Brown presented recommendations for encouragement, education, enforcement, and evaluation. The committee had the following recommendations:
• Coordinate education recommendations with Kirkwood Pedestrian and Bicycle Master Plan
• Walking and biking maps should be 8.5 x 11 for home download
• Walking and biking maps should include mileage
• Digital maps and navigation instructions would be incredibly helpful
• Enforcement- the City of Des Peres Police Department has two bicycles and officers that are trained to ride bicycles. However, segways have been more practical and popular for policing at community events.
• In order to have effective evaluation, base line numbers are very important. When it comes to walking and bicycling numbers, the American Community Survey has too large of a margin of error to be useful outside of the largest cities.
• Questions about walking and biking can be incorporated into the community attitudes survey every two years
• Des Peres can participate in the regional walk and bike counts in the fall as well

These suggestions will be used to update the draft 4 E’s recommendations and the updates will be shared with the Planning Advisory Committee once they are completed.

Engineering recommendations
Maps of the draft walking and bicycling recommendations were presented to the committee and discussed as a group. The following recommendations will be considered in updating the draft plan:
• A bicycle and pedestrian bridge over I-270 south of West County Mall should be considered; the proposed path using the existing viaduct could have issues with drainage and sightlines;
• There is another viaduct under I-270 south of Dougherty Ferry;
• Walking paths in the parks should be included on the map;
• The plan should address improved access to West County Mall;
• The plan should incorporate widened sidewalks, trees, and other Great Streets elements along Manchester;
• Can Lockett be connected to Fawnvalley Drive via sidewalks and connectors?
• Right turn lanes on Bopp difficult to navigate for people who can not see well; the volume of traffic is too heavy to determine car movement for the blind
• Pedestrian signals with rhythmic beeping help people who can not see to orient themselves while crossing streets
• At Lindemann, heading north across Manchester car go right without stopping so walking east on Manchester can be dangerous; the turn lanes keep traffic moving too fast
• It is hard to access Dierberg’s for people who can not see well
Planning Advisory Committee Meeting #4: July 20, 2015

Attendees
Phil Bayes, Resident  
Cynthia Kardesch, Resident  
Rosanne Leake, Resident  
Mike Lohuis, Resident  
The Honorable Richard G Lahr, Mayor of Des Peres  
Alderman Jim Kleinschmidt  
Douglas Harms, City Administrator  
Steve Meyer, Director of Public Works  
Brian Schaffer, Director of Parks and Recreation  
Jennifer Gray, Assistant City Administrator  
Aaron Kaminiski, Recreation Facility Specialist  
Karen Yeomans, MoDOT  
Marielle Brown, Trailnet  
Grace Kyung, Trailnet

Summary
The objective of the meeting was to review the draft plan and recommendations. Marielle Brown, Planning Manager at Trailnet, reviewed the updates to the recommendations, including the removal of the trails near the I-270 and the neighborhood trail in the Ameren easement. The final plan also includes a recommendation for a short path connection along the Harwood Road right-of-way and a walking path on the northern section of the Harwood Road right-of-way. Concerns about liability and maintenance were brought up.

The Planning Advisory Committee discussed several other updates to the final plan, including:

- Removing the recommendation for a sidewalk along Highland due to concerns over feasibility and cost;
- Removing the recommendation for a sidewalk along Pointe Drive as it is on private right-of-way;
- Including more information about the lighting recommendations for Harwood Hills;
- Including a recommendation for the zoning code to address bicycle and pedestrian access to commercial destinations;
- Adding a recommendation for an annual bike rodeo to the education recommendations;
- Addressing bicycle and pedestrian access to the proposed bridge over I-270.

The committee also made several suggestions on wording and typos in the draft plan content. Based on this feedback, the planning team will update and finalize the plan.

The committee also brought up the local opposition to including certain paths in the walking and bicycling map. This planning team will discuss this issue further with the City staff.

The meeting concluded with Aaron Kaminski distributing gifts to the committee members to thank them for their hard work throughout this planning process.
APPENDIX C: PRIORITIZATION METHODOLOGY
### What prevents you from bicycling more?

<table>
<thead>
<tr>
<th>Planning Principle</th>
<th>Scoring</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Safety</strong></td>
<td>1.1</td>
<td></td>
</tr>
<tr>
<td>Recommendation will have a traffic calming effect by narrowing the lanes (yes =1, no=0)</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td><strong>Connectivity</strong></td>
<td>2.1</td>
<td>25</td>
</tr>
<tr>
<td>Connects existing sidewalks (yes=1; no=0)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>On a direct route to a regional multi-use path (yes=1; no=0)</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>Improves pedestrian access along or across a major road (yes= 1; no=0)</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>Route provides access to school (yes=1; no=0)</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>Direct access to a commercial area (yes=1; no=0)</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Route provides access to community facilities (city hall, recreation center, hospital) (yes=1; no=0)</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Route provides access to a park (yes=1; no=0)</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>Route provides access to a commercial area (yes=1; no=0)</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Infrastructure for Walking and Biking</td>
<td>3.1</td>
<td>40</td>
</tr>
<tr>
<td>Recommendation is considered a facility in 2012 AASHTO or offers separated space for walking</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Attractive Walking and Biking for all ages and abilities</strong></td>
<td>4.1</td>
<td>15</td>
</tr>
<tr>
<td>Bicycle Level of Traffic Stress created by recommendation (4=0, 3=1, 2=2, 1=3) (Bicycle only)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pedestrian facilities and ADA guidelines (follows guidelines = 0, exceeds guidelines = 1, substantially exceeds guidelines = 2) (Pedestrian only)</td>
<td>60</td>
<td></td>
</tr>
<tr>
<td><strong>Feasibility</strong></td>
<td>5.1</td>
<td>15</td>
</tr>
<tr>
<td>Multiple funding sources possible (yes=1, no=0)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>One Side: Cost (4 = under $80,000; 3 = $80,001 to $160,000; 2= $160,001 to $320,000; 1= $320,001 to $640,000; 0= over $640,000)</td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>
This appendix identifies and details a wide variety of types of walking and bicycling infrastructure that could be used to create a walkable and bikeable environment. They are:

1. **Intersections**
2. **Bicycle Lanes**
3. **Mid Block Crosings**
4. **Neighborhood Greenways**
5. **Neighborhood Trails**
6. **Shared Use Path**
7. **Road Diet**
8. **Bridges**
9. **Sidewalks**
10. **Traffic Calming**

### 1. Intersections

Throughout the public engagement process, Des Peres residents expressed interest in enhanced intersection design to increase safety and comfort. At intersections, people walking, biking, and driving have to negotiate with traffic coming from multiple directions. The complexity of intersections necessitates a careful design approach taking into account volume, lane configuration, and speeds. The following treatments are recommended as potential solutions for intersections in Des Peres.

**High Visibility Crosswalks**

Crosswalks with thick lines perpendicular to the pedestrian’s path, as opposed to the traditional parallel lines, increase visibility for people driving. High Visibility Crosswalks are appropriate for any place where crosswalks should be used. High visibility crosswalks should be used near schools, and other destinations that draw a high volume of pedestrians. High visibility crosswalks can be used at signalized intersections, at mid-block crossings, and at stop-controlled intersections. To avoid slippery crosswalks, the following options should be considered:

- Inlay tape installed when constructing or repaving streets
- Thermoplastic for rougher pavement
- A unpainted channel in the center of the high-visibility crosswalk.

On streets with more than three lanes, or with high volumes or speed, crosswalks alone will not improve safety.

### Pedestrian safety islands

On streets with more than two lanes, pedestrian safety islands, or medians, can enhance safety and allow pedestrians to cross the street in two stages. Safety islands are especially important for intersections near schools, childcare facilities, and retirement homes, or other locations that are likely to attract pedestrians that may walk more slowly than the general population. Medians can also help to calm traffic by narrowing the lane width. The pedestrian safety island should be defined by concrete, but the area where the pedestrians stand does not have to be raised above street level.
Restrict right turn on red
Restricting right turns on red signals improves pedestrian safety with relatively low costs. Right turns on red can increase pedestrian crashes, as drivers may not yield to the pedestrians, though they are legally required to do so. The restriction should be considered as a possible solution near schools or other locations where there are a high number of pedestrians.

Right-sizing intersections
Safety for all users can be improved by retrofitting intersections to include more pedestrian space and a context-sensitive design speed. Intersections that have excess space for motor vehicles, such as wide lanes and corner radii designed for high speeds, encourage fast driving. In residential neighborhoods intersections with wide corner radii and long pedestrian crossing distances offer an opportunity to improve safety and increase compliance with traffic laws at a relatively low cost. Every intersection is unique and will have a different solution; all road projects in residential neighborhoods or downtown should be seen as an opportunity to right-size intersections. Tools include pedestrian safety islands and curb extensions.

Signal timing
Signal timing offers an inexpensive way of enhancing walking and biking safety and comfort. Signals should be timed to provide adequate time for pedestrians to cross the street. The MUTCD requires a minimum of 7 seconds for the initial walk phase.

The entire walk phase should allow a pedestrian to cross the street at an average of 3.5 feet per second or less (4E.06). Lower speed calculations should be used near schools, retirement homes, or other places where pedestrians may walk more slowly than the general population.

Resources
• The Urban Street Design Guide
  • http://nacto.org/usdg/intersection-design-elements/crosswalks-and-crossings/conventional-crosswalks/
  • http://nacto.org/usdg/pedestrian-safety-islands/
  • http://nacto.org/usdg/intersection-design-elements/intersection-design-elements/corner-radii/
• The FHWA Pedestrian Safety and Countermeasure Selection System: http://www.pedbikesafe.org/PEDSAFE/countermeasures_detail.cfm?CM_NUM=49
2. Bicycle Lanes

Bicycle lanes are defined by solid white lines 5’ or more from the edge of the roadway. Painted bicycle symbols show the lanes are reserved for the exclusive use of bicyclists.

Bicycle lanes improve safety and create a comfortable space for bicyclists of all levels. Cities in the United States with more developed bike lane networks tend to have higher rates of cycling and lower bicycle crash rates.

Bicycle lanes are most useful on streets with volumes over 3,000 ADT and speed limits under 35 mph. They may not be appropriate for roads with frequent, high-traffic driveways.

Bicycle lanes should be 5’ or wider. They are defined by solid white lines with bicycle markings and arrows placed in the lanes. Bike lanes can be continued through intersections using dotted lines. They should not be placed to the right of right turn only lanes.

Bicycle lanes can be retrofitted onto existing streets that are below capacity through narrowing traffic lanes (a lane diet), or removing traffic lanes (a road diet).

Using the street

Motorists may not drive in the bicycle lanes. Motorists should check for bicyclists when turning left or right.

Bicyclists should be aware of motor vehicles turning at intersections. Bicyclists are not required to ride in the bicycle lanes.

Resources

- Manual on Uniform Traffic Control Devices, 2009 (US Department of Transportation): Section 9C.04 Markings for Bicycle Lanes
  - 4.6 Bicycle Lanes
  - 4.7 Bicycle Lane Markings and Signs
  - 4.8 Bicycle Lane at Intersections
  - 4.9 Retrofitting Bicycle Facility on Existing Streets and Highways
3. Mid Block Crossings

A mid block crossing is a safe pedestrian or bicycle crossing that is not at an intersection used by motor vehicles. Mid-block crossings improve safety in places where it is likely that people walking will want to cross the street. When people are walking across the street frequently without a crossing, it can create danger and uncertainty for all road users. Long blocks and infrequent crossings can also cause minutes of delay for people walking out of their way to use a crossing signal.

Mid-block crossings are appropriate in places where a pedestrian “desire line” crosses the street in the middle of the block. Common pedestrian destinations including schools, parks, libraries, bus stops, and shops often entice pedestrians to cross the street away from a crossing. In areas of towns with longer blocks (over 400 ft long), mid-block crossings should be considered to provide pedestrians with a safe way to cross the street.

On low traffic, residential streets a high visibility crosswalk may be sufficient. On higher volume or higher speed streets, mid-block crossings should be designed to ensure safety for all users. Options include:

- Raised crossings, which improve visibility of pedestrians, while also slowing car traffic. Raised crossings are appropriate on neighborhood streets. Their design must take into account drainage and emergency access.
- Pedestrian safety islands, which allow people to cross in two phases. These are appropriate on higher traffic streets, and can also have a traffic calming effect. For more information, see pg 43.
- Rectangular rapid flash beacons (RRFB), which are appropriate for streets with higher traffic volumes. An RRFB consists of two poles with flashing lights activated by a pedestrian. The RRFB signals drivers to yield to the pedestrian. The drivers can proceed once the pedestrian has cleared the intersection.
- High intensity crosswalk beacons (HAWK), which are appropriate on the busiest and fastest streets. A HAWK or Pedestrian Hybrid Beacon, is hung overhead, like a traffic signal, and is based on beacons used at railroad crossings. When a pedestrian activates a HAWK, it flashes yellow and then turns solid red, as the pedestrian crosses the street. The HAWK continues to flash red as the pedestrian crosses, allowing drivers to proceed through the intersection once it is cleared, as opposed to a traditional signal.

Resources
- Interim approval for RRFBs: http://mutcd.fhwa.dot.gov/resources/interim_approval/ia11/fhwamemo.htm
4. Neighborhood Greenways

Neighborhood greenways, or bicycle boulevards, are streets that are designed for people biking and driving to share the street safely. They are neighborhood streets with low volume and low speed where signs and traffic calming help people to feel safe walking and biking.

Many neighborhood streets already serve as popular walking and biking routes. Neighborhood greenways are a low-cost way to leverage these existing routes into a safe, connected network for people of all ages and abilities.

Neighborhood greenways are most appropriate for local streets with less than 3,000 vehicles per day. Ideally traffic will be less than 1,5000 vehicles per day. The street should have good pavement and should be prioritized for repaving, as the quality of pavement impacts bicyclists.

The essential features of a neighborhood greenway are signs and pavement markings to designate the route and a posted speed of 20 mph, with traffic calming designed to reduce speeds to 20 mph. Traffic diversion can be used to ensure traffic volumes under 3,000 vehicles per day. At intersections with neighborhood streets, a two-way stop should be used, giving priority to the neighborhood greenway in order to allow bicyclists to proceed safely and comfortably. At intersections with major streets, protected crossing treatments should be used for safety and convenience.

Using the street
Drivers should use the street for local travel only and respect the priority of bicyclists.

Resources
5. Footpath

Footpaths are pathways that travel through federal, state, or local parks.

Footpaths connect community residents with nature in a manner that does not disrupt the local environment.

The recommended trail areas in Des Peres currently feature vegetation, grass, and trees. Trails developed within this area should be low impact to preserve the vegetation. It is recommended to use natural trails.

An engineering analysis may be needed to further develop a footpath plan. Another option is to use a local landscape architect to further define the footpath. Footpaths can also be developed using volunteers and nature trail design guidelines. Trail guidelines can be found here:


The cost of new trail construction is difficult to generalize because of the many variables that are involved including trail surface, width, location, and topography. In general, crushed rock and natural trails are the least expensive to build.

**Resources**

6. Shared Use Path

Shared use paths are for people walking, bicycling, skating, or using other forms of nonmotorized transportation. Paths can be in a separated right-of-way, such as Grant’s Trail, or adjacent to a roadway.

Sidepaths are shared use paths that travel alongside roads where bicyclists and pedestrians may otherwise feel discouraged to travel.

Shared use paths create dedicated space for pedestrians and bicyclists. Shared use paths complement the on-street system by providing connectivity to destinations and increase the sense of safety for many users.

Sidepaths along roads or freeways provide bicyclists and pedestrians a clear separation from cars and, thus, an increased sense of safety.

Shared use paths can be used to provide convenient access to destinations, such as parks and schools. Paths can be popular recreation destinations as well. However, acquiring the right-of-way and funding needed for paths can be quite challenging.

Sidepaths are most appropriate alongside roadways with minimal road crossings or driveways. Sidepaths generally allow for bicyclist and pedestrian traffic in both directions, however, it may be appropriate for a sidepath to be a one-way route on either side of the road or freeway.

The design of the path should be based on the expected users and should comply with the most current version of the Americans with Disabilities Act (ADA). For paths that are adjacent to a roadway, the path can follow the slope of the roadway. Trail crossing signs (MUTCD W11-15 and W11-15p) should be used in advance of all intersections. The Guide for the Development of Bicycle Facilities, Fourth Edition (AASHTO) provides a detailed engineering guide for the construction of paths.

For sidepaths, the AASHTO Guide for the Development of Bicycle Facilities recommends 5 feet of separation between the sidepath and the edge of the roadway. Sidewalks should not be used as substitutes for sidepaths.

Using the street
Motorists must watch for through traffic coming from the left and right when making turns.

Pedestrians have the right of way, but should be aware of bicyclists. They must be careful when crossing streets and driveways.

Bicyclists must yield to pedestrians and give audible signal when passing. They must be careful when crossing streets and driveways.
7. Road Diet

A road diet allows for easier left turns for people driving, reduces the number of motor vehicles exceeding the speed limit, increases safety for all modes, and makes room for people walking and biking.

A classic road diet is restriping four lanes of traffic to create two through lanes of traffic and a center turn lane. Road diets can also take other forms, such as restriping unwarranted turn lanes. Kirkwood Rd. in downtown Kirkwood is an example.

A road diet may be appropriate on streets with traffic volumes or turning volumes that are below the threshold where turn lanes or extra lanes are generally considered to be needed. On four-lane roads with less than 20,000 ADT, a three lane road diet can improve traffic flow through the center turn lane, while giving room to people biking and walking.

A four lane roadway can be restriped to two traffic lanes. This creates room for parking or bicycle lanes, as well as left turn lanes at intersections.

Resources

8. Bridges

A shared use path over a bridge permits travel of bicyclists and pedestrians across obstacles such as freeways or waterways.

Shared use paths over bridges maintain the connectivity of existing bicycle and pedestrian facilities across otherwise impassable waterways or roadways. In some instances, share use path bridges can even offer pedestrians and bicyclists a scenic view.

Separate bicycle and pedestrian bridges are appropriate when existing bridge infrastructure does not safely accommodate bicyclists or pedestrians.

Clearance of 2 feet on either side of the pathway is recommended. Additionally, in cases of emergencies, bridge design should take into consideration providing access for emergency vehicles. Bridge pathways should accommodate emergency vehicles in terms of width and height. AASHTO also recommends a minimum side barrier or railing of 4 feet on either side of the pathway when crossing over roadways. Vertical railings should align close enough to prevent objects 6 inches or larger from passing through.

Resources

9. Sidewalks

Sidewalks are elevated from the roadway by several inches, separated from the street by a curb, and made of concrete.

Sidewalks improve safety and comfort for pedestrians.

Sidewalks give pedestrians safe and comfortable space on virtually any roadway.

Sidewalks should be a minimum of 5' wide. Street furniture or light posts should be placed to preserve at least a 48” continuous through path. Each intersection should have a sidewalk ramp (see ADA guidelines for more information). When possible, sidewalks should be on both sides of the street. If it is only possible to provide sidewalks on one side of the street, it is important to ensure that the sidewalk is provided on the same side along the length of the street. Every time a pedestrian crosses the street, it increases the chances of a crash.

Resources
10. Traffic Calming

Traffic calming can improve safety, reduce noise in neighborhood streets, and enhance walking and biking friendliness when there is not enough right-of-way to add separate facilities. During public meetings, and through the public survey, several residents reported that they felt drivers were speeding on neighborhood streets. The perception that people are driving dangerously fast on local streets can prevent people from walking or biking for transportation or recreation.

Well-designed traffic calming should be implemented as the last step in a phased approach to lowering speeds on neighborhood streets. The following process outlines steps that should be taken before considering traffic calming:

1. Establish need: If residents perceive speeding on their streets, the first step is to establish that drivers are exceeding the speed limit. Speed should be monitored during peak hours and off-peak hours to determine if speeds exceed the speed limit, and by how much.

2. Speed monitor trailer: If speeding is determined to be a problem, the City should place their speed monitor trailer along the street, in order to raise awareness of speeding behavior. The trailers allow drivers to monitor their own speed and self-correct. The speed monitor can be placed on the street for as long as the City and the neighbors feel it is appropriate. Three months after the speed trailer is removed, speeds should be monitored to determine if the trailer had a lasting effect.

3. Neighborhood efforts: If speeding persists on the street, the City should encourage residents to raise awareness of speeding issues by placing ready-made signs in their yards asking drivers to slow down. Speeds should be monitored three months after the signs were installed to determine if they have had a lasting effect.

4. Spot enforcement: If speeding persists, an officer should monitor speeds on the street, and issue warnings or tickets as necessary. Speeds should be monitored three months after the spot enforcement activities in order to determine if they have had a lasting effect.

5. Traffic calming: If the previous steps have not had a lasting impact in reducing speeds, physical traffic calming should be considered. Traffic calming generally works to slow speeds by diverting drivers from a straight line of travel, either horizontally (like speed tables) or vertically (like an extra curve). This guide will list a number of possible traffic calming techniques that can be used. Many communities have funded traffic calming by combining it with green infrastructure, such as rain gardens. The Funding Sources Guide has more information on green infrastructure grants.

Options for Traffic Calming

The following traffic calming techniques can be considered in Des Peres on neighborhood streets if other options to reduce speeding have been exhausted. The options are listed in order of...
effectiveness. The first option is the lowest cost, while the cost of curb extensions or mini-roundabouts depends largely on the size and material used.

**Centerlines:** One of the simplest traffic calming approaches is to leave streets free of centerlines unless they are warranted. When centerlines are not present, drivers tend view the street as shared space, and slow down in order to be able to negotiate with oncoming traffic. As drivers often hesitate to cross centerlines when passing people on bicycles, streets without centerlines can be more bicycle-friendly as well. Currently, Des Peres has many residential streets without centerlines that function well.

When streets are scheduled for resurfacing, it creates the opportunity to evaluate if streets meet the warrant for centerline striping. The MUTCD establishes that centerline markings shall be placed on streets with an Average Daily Traffic (ADT) of 6,000 or greater (Section 3B.01). For collectors with less than 6,000 ADT and a traveled way of 20' or more, centerlines may not be necessary. This treatment may not be appropriate for streets with curves.

**Curb extensions:** Curb extensions help to slow traffic, by narrowing driving lanes, and encouraging drivers to slow down in order to negotiate the tighter lanes. Curb extensions can also shorten pedestrian crossing distance and increase visibility of pedestrians crossing the street. Curb extensions can take multiple forms, from the bulb-outs to a simple extension that tightens the curb radii, in order to discourage fast turning movements.

**Mini Roundabout:** Mini Roundabouts are often used to enhance the aesthetics of a neighborhood, in addition to traffic calming. Mini roundabouts require drivers to turn out slightly out of a straight path of travel, thereby slowing. Unlike full-size roundabouts, they do not require additional right-of-way. A mini roundabout, typically with planters or a rain garden, is placed in the middle of the intersection. Traffic circulates through the intersection in one lane, and yields upon entry to the intersection. Mini-roundabouts can reduce crashes and slow speeds on local streets.

**Resources**
- The City of Alameda, summary of centerline removal approaches: http://www.acgov.org/pwa/programs/traffic/measures.htm#1A
- The Urban Street Design Guide: http://nacto.org/usdg/intersections/ minor-intersections/mini-roundabout/
- The Urban Street Design Guide: http://nacto.org/usdg/street-design-elements/curb-extensions/