Memorandum
Lawrence-Douglas County
Metropolitan Planning Organization

TO: Collin Bielser, Baldwin City, KS
CC: L-DC MPO Technical Advisory Committee
FROM: Jessica Mortinger, Transportation Planner
DATE: January 7, 2015
RE: Sidewalk Inventory

Project Description
The MPO as part of the Regional Pedestrian Planning process worked with local volunteers and staff in your community to create a basic sidewalk inventory. The entire sidewalk network was inventoried. Volunteers and staff walked and/or bicycled all sidewalks locations within the city and as they encountered a defect recorded it (see map on p.3). Large areas with multiple overlapping defects were marked with replacement required. Also noted were “gaps” or missing sidewalk and ADA ramp information. This GIS inventory data was collected based on the visual observations during the field assessment of the built environment related to the following categories:

- Vertical Deflection less than or equal to 1"
- Vertical Deflection more than 1"
- Horizontal Gap
- Tree Roots
- Cross Slope
- Brick Reset
- Manhole
- Missing Sidewalk
- End of Sidewalk
- ADA Compliant Ramp
- Not ADA Compliant Ramp
- Ramp Does not Exist
- Replacement Required (multiple defects)

A photo inventory of each of these categories is included starting on p.8.

Findings
Total summary of defects and breakdown of quantities are listed below. In total 7,955 linear feet of defects were identified. While sidewalks vary in width depending on their location we assumed an average of 5’ width to calculate quantities and cost. The estimated cost for repairs of defects on existing sidewalks is $238,650. This number is based on an average of $6.00 / SF. We know that some areas will cost more to repair due to issues currently not identified, such as, property acquisition, the difference in cost to replace/repair brick sidewalks, slope and cross slope, retaining walls, tree removal, storm sewer, utility relocation, and sprinklers for example. It also does not address ADA ramp issues. Therefore, this estimate should be viewed as a starting point planning level cost that will increase as the engineering work for these repairs is completed.

The inventory process identified locations where sidewalks were never constructed (either one side or both sides of the street) or long stretches where sidewalk currently does not exist. The total linear feet of missing sidewalk is 256,599 LF or 48.6 miles (see map on p.4). The estimated cost to place  

<table>
<thead>
<tr>
<th>Sidewalk Defect</th>
<th>Linear Feet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Replacement Required (multiple defects)</td>
<td>3,710</td>
</tr>
<tr>
<td>Vertical Deflection less than or equal to 1&quot;</td>
<td>1,156</td>
</tr>
<tr>
<td>Vertical Deflection more than 1&quot;</td>
<td>965</td>
</tr>
<tr>
<td>Horizontal Gap</td>
<td>25</td>
</tr>
<tr>
<td>Tree Roots</td>
<td>821</td>
</tr>
<tr>
<td>Cross Slope</td>
<td>100</td>
</tr>
<tr>
<td>Brick Reset*</td>
<td>1,172</td>
</tr>
<tr>
<td>Manhole</td>
<td>6</td>
</tr>
<tr>
<td>Total Linear Feet of Defects</td>
<td>7,955</td>
</tr>
<tr>
<td>Existing Linear Feet of Sidewalk</td>
<td>86,148</td>
</tr>
<tr>
<td>% of Existing Sidewalk Defective</td>
<td>9.23%</td>
</tr>
<tr>
<td>Missing Sidewalk</td>
<td>256,599</td>
</tr>
</tbody>
</table>

* Construction costs would be calculated differently.
sidewalk on both sides of all streets in these locations based on an average of 5’ width is $7,697,970.

The inventory identified 220 ADA ramps in total, 132 are currently ADA compliant, 88 are not ADA complaint and another 630 possible sidewalk crossings locations were identified as having no ramp. The average cost to place an ADA ramp is approximately $800. This does not account for any property acquisition, slope issues, retaining wall or realignment. Given the inventory (see map on p.5) we have estimated 718 locations for an approximate cost for repairs/construction of $574,400.

Including all three of these areas of sidewalk repair and/or construction the estimated cost today to create a complete sidewalk system in Baldwin City is $8,511,020. Of that total the amount needed to repair existing sidewalks and provide or upgrade ramps where needed is only $309,050 (88 ramps at $800 each plus $238,650 repair costs for existing defects).

Some of the fixes to improve pedestrian access include clearing brush and/or tree growth from the space over the sidewalk. These defects (see map on p.6) will vary from season to season, but for the 2015 spring/summer seasons, landscaping maintenance should be explored as cheap solutions to clean up the pedestrian environment. These expenses are not included in the estimates above.

**Next Steps**
Baldwin City cannot fund that entire $8.5 million cost in one year. However, this information does provide a basis for the city to plan and prioritize its sidewalk improvements so that some work can be accomplished each year towards the goal of providing a pedestrian facility network throughout the city.

Sidewalk work can be organized from year to year in various ways (around neighborhoods or zones, along corridors connecting important sites in town, based on the defect type and severity, complaint driven prioritization, etc.), and each method to how you organize and schedule sidewalk work has its own pros and cons and cost impacts. The project and scheduling details will need to be decided later. Baldwin City officials should review this sidewalk inventory, acknowledge the magnitude of the sidewalk needs, and after public discussion make a decision to improve its sidewalk network as feasible.
2014 Baldwin City Sidewalk Inventory - Existing Sidewalk Segments
2014 Baldwin City Sidewalk Inventory - Ramps

Baldwin City Schools
- Ramp - ADA Compliant
- Ramp - Does not Exist
- Ramp - Not ADA Compliant

Parks

Date: 1/7/2016

The map represents a partial inventory of existing ramps in Baldwin City. This inventory is based on known data and may not be complete. The information provided may change over time due to various factors such as construction, maintenance, or changes in the city's accessibility guidelines. It is important to note that the map is a snapshot as of January 7, 2016, and the actual number of ramps may vary. For the most accurate and up-to-date information, please refer to the Baldwin City Planning Department's website or contact the city directly.
2014 Sidewalk Inventory—Photo Guide

The Sidewalk Inventory Tool was developed by the City of Lawrence in 2014 to update the sidewalk inventory for budget purposes. The City of Lawrence has an extensive pedestrian network consisting primarily of sidewalks, Shared use paths (both within road right-of-way and in off-road corridors), and recreational trails. This GIS inventory data was collected based on the visual observations during the field assessment of the built environment related to the following categories:

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The following pages are a photo inventory picturing examples of each of the categories used in the identification process found in Douglas County.

**Vertical Deflection more than 1”**
Vertical Deflection less than or equal to 1"

Tree Roots
Cross Slope

Brick Reset Required?
End of Sidewalk

Missing Sidewalk

ADA Compliant Ramp
2014 Sidewalk Inventory—Photo Guide

Not ADA Compliant Ramp

Ramp Does not Exist