Harris-Stowe State University
Anheuser-Busch School of Business

Transportation Asset Management Model
Economic Sustainability of Inner City Streets

Presented to
The Midcontinent Transportation Research Symposium
Ames, Iowa
August 19, 2015

Drs. F. Zakery, J. Eisel, R. Kamkwalala, Charles Sykes, A. Salaria
Student Researchers
Brandon Dickson, Jerimi Reed, Micah Stone
History

- Harris-Stowe State University traces its origin back to 1857. It is a member of HBCU institutions.
- HSSU is a diverse urban campus located in St. Louis, Missouri.
- Anheuser-Busch School of Business is the largest academic unit offering a total of 11 degree programs.
Project Description

• In 2014, HSSU was selected by the University of Iowa Institute for Transportation to join a consortium of six mid-western universities to undertake a U.S. Transportation grant.
Develop a sustainable asset management model for local urban municipalities, using a feasibility study of road conditions, needed repairs and associated cost with future projection for asset allocation.
Project Description Con....

• A technology driven model was developed to provide solutions to road transportation conditions and related preventive maintenance issues.

• The model could significantly improve and impact future transportation expenditures.
Designated Research Area

• Streets were identified using selection criteria including:
  - Location
  - Roads
  - Traffic
  - Safety
  - Utility
  - Demographics
Constituents

- Designated Wards:
  - Ward 5
  - Ward 6
  - Ward 19

- City of St. Louis Street Department

- Missouri Department of Transportation (MODOT)
Data Collection

• Data was collected from St. Louis City’s Central Corridor using the following criteria:
  - Ward designation
  - Distance surveyed
  - Number of necessary repairs
  - Missouri PASER evaluation of roadway conditions
  - Cost associated with each repair
Collection Sample-Beaumont Avenue
Dr. Martin Luther King to Locust and Olive Street to N. Market

Rated: 3
Collection Sample-T.E. Huntley Avenue
MLK to Delmar Blvd. and Washington Ave. to Olive St.

Rated: 6
Area Surveyed By Ward
Calculated Cost of Repairs

Repair costs were determined by the number of surveyed yards multiplied by the current cost of paving roads at $18 per yard*

<table>
<thead>
<tr>
<th>Ward</th>
<th>Yards</th>
<th>Cost ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>11,860</td>
<td>213,480</td>
</tr>
<tr>
<td>6</td>
<td>107,900</td>
<td>1,942,200</td>
</tr>
<tr>
<td>19</td>
<td>81,390</td>
<td>1,465,020</td>
</tr>
</tbody>
</table>

*Source: City of St. Louis Street Department
Research Application

• Sustainable budgeting
• Proactive strategies for street maintenance and repair
• Historical cost data
• Ward cooperation
Questions?

Thank You!