Longmeadow Parkway
Traffic Projections and Financial Feasibility Study

Task Force Meeting
January 15, 2009
Study Update

- August 14\textsuperscript{th} Task Force Meeting
  - Update on Traffic Projections and Financial Feasibility Study presented by Kane County and WSA staff
  - The presentation summarized the study, including…
    - Overview of the project and the study
    - Socioeconomic profile of the study area
    - Past traffic pattern of Fox River crossings
    - Proposed toll collection system
    - Toll sensitivity analysis
    - Traffic and toll revenue forecasts
The Project

Fox River Crossings

- IL 62
- Longmeadow Parkway
- Main Street, Carpentersville
- IL 72
- I-90
Overview of the Study

- **Data Collection**
  - Identification of traffic profiles in the area
  - Traffic counts
  - Detailed highway reconnaissance
  - Travel time runs

- **Corridor Growth Analysis**
  - Traffic characteristics
  - Demographic and socioeconomic profiles

- **Travel Demand Modeling**
  - Travel demand model refinements and validation
  - Development of a toll diversion model

- **Traffic and Revenue Analysis**
  - Potential market area analysis
  - Toll sensitivity analysis
  - Toll transaction and revenue forecasts
Overview of the Study

• Toll Collection System/Operations Analysis
  – Optimum toll collection system
  – Recommendation of operations of the toll system
  – Toll schedule
  – Preliminary cost estimates for the toll system

• Capital and Operating Cost Estimates
  – Estimates for the cost items including engineering, ROW, construction, and roadway maintenance.

• Preliminary Financing Plan
  – Potential bonding capacity based on toll revenues
  – Identification of other potential sources of funding
Toll Collection Methods

- **I-PASS / Cash**
  - Toll collected primarily through the use of I-PASS
  - Cash collection for users without I-PASS

- **I-PASS / Video Tolling (Recommended)**
  - Toll collected primarily through the use of I-PASS
  - Options available for video tolling for users without I-PASS
    - Utilization of the Illinois Tollway’s 5-day grace period with an added premium
    - Registration of license plate number and toll payment using the registration with an added premium
    - Utilization of the Illinois Tollway’s Violation Processing Subsystem
Proposed Toll Collection System
Toll Revenue Forecasts

• Scenario 1
  – Huntley Rd to Algonquin Rd
  – Approx. 5.6 miles

• Scenario 2
  – Randall Rd to IL 25
  – Approx. 4 miles

• 40 year projection period with assumed opening year 2013
Toll Sensitivity Analysis

- Studied impact of various toll rates on revenue generation
- Tolls tested for sensitivity analysis (opening year of 2013)
  - Passenger car tolls

<table>
<thead>
<tr>
<th>Time Period</th>
<th>S1</th>
<th>S2</th>
<th>S3</th>
<th>S4</th>
<th>S5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peak</td>
<td>$0.50</td>
<td>$1.00</td>
<td>$1.50</td>
<td>$2.00</td>
<td>$2.50</td>
</tr>
<tr>
<td>Off-Peak</td>
<td>$0.50</td>
<td>$0.50</td>
<td>$1.00</td>
<td>$1.50</td>
<td>$2.00</td>
</tr>
</tbody>
</table>

- Differentiation of tolls by time period and vehicle type
- Tolls for future years were inflated using a nominal CPI of 2.5 percent annually and rounded to the nearest quarter
Toll Sensitivity Analysis

- Opening Year (2013)
Toll Net Revenue Forecasts

- A 2-year ramp-up period is assumed
- Tolls increase periodically

Passenger Car Toll of $1.50 for Peak and $1.00 for Off-Peak

Average Annual Net Revenue
Scenario 1: $7.2 million
Scenario 2: $4.3 million
Project Cost Estimates

• Estimated by five separate roadway segments
  – Huntley Road to Illinois Route 62
  – Randall Road to Illinois Route 25
  – Illinois Route 31 to Illinois Route 25
  – Randall Road to Illinois Route 62
  – Illinois Route 31 to Illinois Route 62

• Estimated by four build alternatives
  – Alternative 1: 4-lane roadway section with 4-lane bridge
  – Alternative 2: 2-lane roadway section with 4-lane bridge
  – Alternative 3: 2-lane roadway section with 2-lane bridge
  – Alternative 4: 2-lane roadway section with 2-lane bridge deck and a 4-lane bridge substructure
<table>
<thead>
<tr>
<th>Scenario</th>
<th>Total For Construction Planning With Escalation**</th>
<th>Land Acquisition With Escalation*</th>
<th>Phase II Engineering With Escalation*</th>
<th>Phase III Engineering With Escalation**</th>
<th>PROJECT TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Huntley to IL 62</td>
<td>$141.69</td>
<td>$3.96</td>
<td>$10.09</td>
<td>$14.17</td>
<td>$169.91</td>
</tr>
<tr>
<td>Alternative 1</td>
<td>$117.68</td>
<td>$3.96</td>
<td>$8.38</td>
<td>$11.77</td>
<td>$141.79</td>
</tr>
<tr>
<td>Alternative 2</td>
<td>$96.71</td>
<td>$3.96</td>
<td>$6.89</td>
<td>$9.67</td>
<td>$117.23</td>
</tr>
<tr>
<td>Alternative 3</td>
<td>$92.13</td>
<td>$3.96</td>
<td>$6.56</td>
<td>$9.21</td>
<td>$111.87</td>
</tr>
<tr>
<td>Alternative 4</td>
<td>$85.65</td>
<td>$3.96</td>
<td>$6.10</td>
<td>$8.57</td>
<td>$104.28</td>
</tr>
<tr>
<td>Randall to IL 25</td>
<td>$111.68</td>
<td>$3.96</td>
<td>$8.38</td>
<td>$11.77</td>
<td>$141.79</td>
</tr>
<tr>
<td>Alternative 1</td>
<td>$98.72</td>
<td>$3.96</td>
<td>$7.03</td>
<td>$9.87</td>
<td>$119.59</td>
</tr>
<tr>
<td>Alternative 2</td>
<td>$76.73</td>
<td>$3.96</td>
<td>$5.46</td>
<td>$7.67</td>
<td>$93.83</td>
</tr>
<tr>
<td>Alternative 3</td>
<td>$81.31</td>
<td>$3.96</td>
<td>$5.79</td>
<td>$8.13</td>
<td>$99.19</td>
</tr>
<tr>
<td>Alternative 4</td>
<td>$85.65</td>
<td>$3.96</td>
<td>$6.10</td>
<td>$8.57</td>
<td>$104.28</td>
</tr>
<tr>
<td>IL 31 to IL 25</td>
<td>$131.43</td>
<td>$3.96</td>
<td>$9.36</td>
<td>$13.14</td>
<td>$157.89</td>
</tr>
<tr>
<td>Alternative 1</td>
<td>$108.21</td>
<td>$3.96</td>
<td>$7.70</td>
<td>$10.82</td>
<td>$130.69</td>
</tr>
<tr>
<td>Alternative 2</td>
<td>$86.21</td>
<td>$3.96</td>
<td>$6.14</td>
<td>$8.62</td>
<td>$104.93</td>
</tr>
<tr>
<td>Alternative 3</td>
<td>$90.79</td>
<td>$3.96</td>
<td>$6.46</td>
<td>$9.08</td>
<td>$110.29</td>
</tr>
<tr>
<td>Alternative 4</td>
<td>$99.12</td>
<td>$3.96</td>
<td>$7.06</td>
<td>$9.91</td>
<td>$120.05</td>
</tr>
<tr>
<td>Randall to IL 62</td>
<td>$131.43</td>
<td>$3.96</td>
<td>$9.36</td>
<td>$13.14</td>
<td>$157.89</td>
</tr>
<tr>
<td>Alternative 1</td>
<td>$108.21</td>
<td>$3.96</td>
<td>$7.70</td>
<td>$10.82</td>
<td>$130.69</td>
</tr>
<tr>
<td>Alternative 2</td>
<td>$86.21</td>
<td>$3.96</td>
<td>$6.14</td>
<td>$8.62</td>
<td>$104.93</td>
</tr>
<tr>
<td>Alternative 3</td>
<td>$90.79</td>
<td>$3.96</td>
<td>$6.46</td>
<td>$9.08</td>
<td>$110.29</td>
</tr>
<tr>
<td>Alternative 4</td>
<td>$99.12</td>
<td>$3.96</td>
<td>$7.06</td>
<td>$9.91</td>
<td>$120.05</td>
</tr>
<tr>
<td>IL 31 to IL 62</td>
<td>$66.60</td>
<td>$3.96</td>
<td>$4.74</td>
<td>$6.66</td>
<td>$81.97</td>
</tr>
<tr>
<td>Alternative 1</td>
<td>$62.03</td>
<td>$3.96</td>
<td>$4.42</td>
<td>$6.20</td>
<td>$76.60</td>
</tr>
<tr>
<td>Alternative 2</td>
<td>$57.30</td>
<td>$3.96</td>
<td>$4.08</td>
<td>$5.73</td>
<td>$71.07</td>
</tr>
<tr>
<td>Alternative 3</td>
<td>$52.72</td>
<td>$3.96</td>
<td>$3.75</td>
<td>$5.27</td>
<td>$65.71</td>
</tr>
<tr>
<td>Alternative 4</td>
<td>$45.70</td>
<td>$3.96</td>
<td>$3.46</td>
<td>$4.95</td>
<td>$54.21</td>
</tr>
</tbody>
</table>

**NOTE 1** Alternative 1: 4-Lane Section w/4-Lane Bridge
Alternative 2: 2-Lane Section w/4-Lane Bridge
Alternative 3: 2-Lane Section w/2-Lane Bridge
Alternative 4: 2-Lane Section w/4-Lane Bridge Substructure

**NOTE 2** Escalation Breakdowns
* Cost escalated at 6%/year, split 50% between years 2009 and 2010
** Cost escalated at 6%/year, split 50% between years 2011 and 2012
Recommendations & Conclusion

• Recommendations
  – Build Entire Corridor: Huntley Road to IL62
  – Toll Scenario 3: a $1.50 passenger car toll for peak periods; a $1.00 for off-peak periods
  – Initial Construction of a 2-lane roadway cross-section with 4-lane bridge substructure ~ $117 M

• Bonding Capacity
  – Utilize the General Obligation Alternate Bonds
  – 30 years to maturity to generate bond proceeds between $70 million to $75 million (market conditions will effect principal amount)
Recommendations & Conclusion

• Project Costs
  – Huntley Road to IL 62 (Alternative 4) ~ $117 million
  – Toll-eligible section - IL 31 to IL 62 ~ $82 million
  – Remaining section - Huntley Road to IL 31 ~ $35 million

• Other Funding Sources
  – $4 million Federal earmark (ROW acquisition proceeding)
  – Seek additional Federal & State funds
  – County impact fees / sales tax
  – Permit Improvements by developers

• The toll facility remains until the initial construction bonds are fully repaid and future widening / maintenance endowment funds are established
Next Steps

- Finalize Traffic Projections and Financial Feasibility Study
- Conduct Public Meeting to finalize Technical Memorandum
- Develop project recommendation for submittal to the Kane County Board for consideration
- Submit to FHWA final Technical Memorandum and public meeting comments for concurrence that a supplement to FEIS is not required
Next Steps

- Continue ROW acquisition
- Complete Phase I Engineering
- Further investigation of financing alternatives
- Secure additional Federal, State, and other fund sources
- Execute the Federal Section 129 Agreement
- Execute Letter of Intent and Letter of Understanding with Illinois Tollway