IL Route 31 – IL Route 176 to IL Route 120
Strategic Regional Arterial (SRA)

Project Study Location

McHenry County

November 15, 2012
Adjacent Projects Within the Study Area

- Bull Valley/Charles Miller Road Improvement (Led by McHenry Co. DOT)
- IL31/IL 176 Intersection Reconstruction Project
CAG and Agency Coordination

US Army Corps of Engineers®

McHenry
Heart of the Fox River

Village of Prairie Grove

Illinois Department of Transportation
Purpose and Need

- Identified Needs
  - Improve Roadway Safety
  - Expand Roadway Capacity and Address Traffic Issues
  - Correct Existing Roadway Design Deficiencies
  - Improve Opportunities for Multimodal Connectivity
Safety Deficiencies

- Crash Statistics (2006-2009)
  - 913 Total Crashes
    - 34% of all Crashes were Injury Crashes
      - 6 Fatalities (3 head-on)
      - 350 Total Injuries
    - Majority of Crashes were Rear End Collisions
    - IL 176 to Gracy Road – Top 5% Crash Location
Capacity Deficiencies

- Corridor Level of Service Map
Other Noted Deficiencies

- Lack of Pedestrian and Bicycle Accommodations
- Vertical Sight Distance
  - IL Route 31 and Drake Drive
  - IL Route 31 South of Ames
- Intersection Sight Distance
  - Main Street and John Street
Bull Valley/ Miller Road Improvement
(Led by McHenry Co. Dept. of Trans.)

SOUTH SECTION:
IL Route 176 to Medical Center Dr.

NORTH SECTION:
Bank Dr. to John St.

IL 120 Intersection

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Range of Alternatives Considered

- **South Section (IL 176 to South of Bull Valley Rd.)**
  - 4-lane, 5-lane and 6-lane Options With Various Median Treatments
  - No-Build

- **North Section (North of Bull Valley Rd. to John Street)**
  - 4-lane and 5-lane Options With Various Median Treatments
  - One-way Arterial Pair (Couplet)
  - No-Build
  - Roundabout and Conventional Intersection Options

- **IL Route 120 Intersection**
  - Traditional Intersection Options
  - Roundabout Options
  - No-Build
Alternatives Evaluation Findings

- **Roundabouts vs. Signalized Intersections**
  - Signalized intersections exhibited better performance
    - Turning Patterns at Intersections
    - Large Traffic Volumes

- **Flush vs. Non-traversable Median**
  - Raised or depressed median has a 48% lower crash rate

- **On-Street Parking**
  - Elimination of on-street parking statistically shows a reduction in crashes by 26%
Alternatives To Be Carried Forward:
South Section (IL Route 176 to Medical Center Drive)

- No-Build Alternative
- 30’ Raised Median
  - 30’ Depressed Median and 10’ Outside Shoulder from Drake Drive and Veterans Parkway
Alternatives To Be Carried Forward:
South Section Comparative Analysis

<table>
<thead>
<tr>
<th>Key Features - Both Alternatives</th>
<th>Key Differences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Two Through Lanes in Each Direction</td>
<td><strong>30’ Raised Median</strong></td>
</tr>
<tr>
<td>30’ Wide Median Accommodates Dual Left Turn Lanes</td>
<td>C&amp;G Throughout</td>
</tr>
<tr>
<td>Shelf Provided for Sidewalk and Multi-Use Path</td>
<td>10’ Shoulder</td>
</tr>
<tr>
<td></td>
<td>Raised Median</td>
</tr>
<tr>
<td></td>
<td>Depressed Median</td>
</tr>
<tr>
<td></td>
<td>Narrower Cross Section</td>
</tr>
<tr>
<td></td>
<td>Wider Cross Section</td>
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<td></td>
<td>Lower Speed Limit</td>
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<td></td>
<td>Higher Speed Limit</td>
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</tbody>
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November 15, 2012

30’ Raised Median Option

30’ Depressed Median Option
Alternatives To Be Carried Forward:
North Section and IL Route 120 Intersection

- **North Section**
  - No Build Alternative
  - 18' Raised Median from Bank Drive to John Street

- **IL Route 120 Intersection**
  - No Build Alternative
  - Option #1 = Min Build / Re-stripe Alternative (No Median and 10' lanes @ IL 120)
  - Option #2 = Max Build (30' Median @ IL 120)

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Alternatives To Be Carried Forward:
North Section (Bank Drive to John Street)

18’ Raised Median Option

<table>
<thead>
<tr>
<th>Key Features</th>
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<tbody>
<tr>
<td>Turn Volumes Require Single Left at Intersections</td>
</tr>
<tr>
<td>Barrier Median Provides Greatest Safety Benefit</td>
</tr>
<tr>
<td>Multi-modal Enhancements Including Sidewalk and Shared-Use Path*</td>
</tr>
</tbody>
</table>

*Subject to local participation with funding and maintenance
Alternatives To Be Carried Forward:
IL Route 120 Intersection Comparative Analysis

<table>
<thead>
<tr>
<th>No-Build Option</th>
<th>Min-Build Option</th>
<th>Max-Build Option</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 2040 Delay = 175 sec. (LOS F)</td>
<td>Year 2040 Delay = 71 sec. (LOS E)</td>
<td>Year 2040 Delay = 35 sec. (LOS C)</td>
</tr>
<tr>
<td>Existing Delay = 52 sec. (LOS D)</td>
<td>Narrow 10’ Lanes</td>
<td>Standard 12’ Lanes</td>
</tr>
<tr>
<td>No Building Impacts</td>
<td>No Building Impacts</td>
<td>12 Building Impacts</td>
</tr>
<tr>
<td>Maintains On-Street Parking</td>
<td>Eliminates On-Street Parking</td>
<td>Eliminates On-Street Parking</td>
</tr>
<tr>
<td>No U-Turns Allowed</td>
<td>No U-Turns Allowed</td>
<td>U-Turns Allowed</td>
</tr>
<tr>
<td>No Shared-Use Path</td>
<td>No Shared-Use Path</td>
<td>Provisions for Shared-Use Path</td>
</tr>
</tbody>
</table>
Additional Information

- Review the Exhibits on Display
- Discuss with Project Team
- Review Project Brochure
Solicit Input

- Comment form
  - Submit today or via mail
- Project Website
  - See the “Contact Us” link
  - www.ilroute31.com

Please submit your comments by December 12, 2012 to be made part of the official meeting record.
Next Steps

- Review all public comments
- Modify design concepts, if necessary
- Select a Preferred Alternative
- Develop design concept in greater detail
  - Intersections
  - Drainage Analysis
  - Noise Studies
- Present to CAG and NEPA Agencies
- Hold Public Hearing

November 15, 2012
Thank You!
www.ILRoute31.com