Outline Agenda

- Introduction of Participants
- Summary of Previous Stakeholder Involvement and Community Advisory Group Meetings
- Recommended Roadway Geometry
- Recommended Railroad Grade Separation Alternate
- Environmental Impacts and Mitigation Measures
- Water Quality and Best Management Practices (BMPs)
- Schedule
Introductions
Previous Community Advisory Group Meetings

- Seven Previous Meetings – Items Discussed
  - Stakeholder Involvement Plan
  - Community Context Audit
  - Problem Statement
  - Existing Traffic and Drainage
  - Applicable Design Criteria
  - Development of Alternatives
  - Complete Streets Policy
  - Grade Separation Options
Project Location

- Central Lake County
- Villages of Mundelein and Long Grove
- Townships
  - Freemont
  - Libertyville
  - Vernon
  - Ela
- Between IL Route 176 (Maple Ave) and IL Route 60 (Townline Rd)
Recommended Alternative

- **Roadway (Recommended)**
  - Two 11’ Lanes in Each Direction with Curb and Gutter
  - 18’ Raised Curb Median from IL 176 to Circle Drive and Maple Avenue to Diamond Lake Road
  - Two-Way Left Turn Lane from Circle Drive to Maple Avenue
  - 6 Signalized Intersection Improvements

- **Railroad (Recommended)**
  - Raise IL 60/83 over the RR (Roadway Overpass)

**NOTES**
NOTES
NOTES
Railroad Grade Separation

- IL Route 60/83 Grade Separation Would:
  - Reduce Excessive Traffic Delays and Queues
    - Significant Projected Increase in Train Traffic
    - Lengthy Freight Trains Block Crossing Repeatedly
  - Increase Safety for All Users
    - Conflicts between Trains and Roadway Users are Eliminated
  - Support Emergency Vehicle Response
    - Reduces Fire / Police / Ambulance Response Times
Railroad Grade Crossing Study

• Summary of Alternates Previously Considered
  • RR to Pass Over IL 60/83
  • Lower RR to Pass Under IL 60/83
  • Partially Raise RR and Lower IL 60/83
  • Partially Lower RR and Raise IL 60/83
  • RR Grade Remains and Lower IL 60/83 (Underpass)
  • **RR Grade Remains and Raise IL 60/83 (Overpass)**
  • Maintain At-Grade RR Crossing
### Recommended Railroad Crossing Alternate

<table>
<thead>
<tr>
<th>AT-GRADE CROSSING</th>
<th>IL 60/83 HIGHWAY OVERPASS</th>
<th>IL 60/83 HIGHWAY UNDERPASS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Daily Train/Car Risk Exposure Volume (ADT x Trains/Day)</strong></td>
<td></td>
<td>0</td>
</tr>
<tr>
<td><strong>Railroad Blockage</strong></td>
<td></td>
<td>All Vehicular Delay due to Rail Traffic Eliminated at Crossing</td>
</tr>
<tr>
<td><strong>Vehicle Delay</strong></td>
<td></td>
<td>Requires Permanent Closure of Maple Avenue</td>
</tr>
<tr>
<td><strong>Property Access Impacts</strong></td>
<td></td>
<td>Multiple Access Driveways are Impacted with Possible Full Acquisition</td>
</tr>
<tr>
<td><strong>Right-Of-Way / Easements</strong></td>
<td></td>
<td>Elimination of Blockages and Vehicular Delays</td>
</tr>
<tr>
<td><strong>Emergency Services</strong></td>
<td></td>
<td>Greatly Improves Emergency Response Times</td>
</tr>
<tr>
<td><strong>Less Favorable Option as Blockages and Vehicular Delays Still Exist</strong></td>
<td></td>
<td>Some Acreage Disturbance</td>
</tr>
<tr>
<td><strong>Less Favorable Option as Blockages and Vehicular Delays Still Exist</strong></td>
<td></td>
<td>ミノ性 Impacts to Diamond Lake Road Intersection</td>
</tr>
<tr>
<td><strong>IL 60/83 HIGHWAY OVERPASS</strong></td>
<td></td>
<td>Traffic at Intersection is Eliminated</td>
</tr>
<tr>
<td><strong>Construction Impacts Minimized</strong></td>
<td></td>
<td>Temporary Active Warning Devices Required During Construction</td>
</tr>
<tr>
<td><strong>Construction Impacts Minimized</strong></td>
<td></td>
<td>نهائيا Active Warning Devices Required in Proposed Condition</td>
</tr>
<tr>
<td><strong>Proposed Closed Storm Sewer System</strong></td>
<td></td>
<td>Overhead Structure Requires Maintenance</td>
</tr>
<tr>
<td><strong>No Pump Station or Bridge Structure Required</strong></td>
<td></td>
<td>Bridge</td>
</tr>
<tr>
<td><strong>Maintenance of At-Grade Railroad Crossing, Gates and Warning Devices Required</strong></td>
<td></td>
<td>Approx. 3,200 feet of Retaining Walls</td>
</tr>
<tr>
<td><strong>Construction Duration</strong></td>
<td></td>
<td>Three Main Stages, Two Pre-Stages</td>
</tr>
<tr>
<td><strong>Temp crossing signals and gates required</strong></td>
<td></td>
<td>Temp crossing signals and gates required</td>
</tr>
<tr>
<td><strong>Duration of Construction 34 months</strong></td>
<td></td>
<td>Diamond Lake Road Temporary Closures / Detour</td>
</tr>
<tr>
<td><strong>Constructability</strong></td>
<td></td>
<td>Duration of Construction 36 months</td>
</tr>
<tr>
<td><strong>Standard Construction Methods</strong></td>
<td></td>
<td>Four Main Stages; Divided into Nine Sub-Stages Each</td>
</tr>
<tr>
<td><strong>Utilities</strong></td>
<td></td>
<td>Temp crossing signals and gates required; Diamond Lake Road Temporary Closures; Duration of Construction 48 months</td>
</tr>
<tr>
<td><strong>Overhead Utility Relocation Required</strong></td>
<td></td>
<td>Complex Construction Methods</td>
</tr>
<tr>
<td><strong>Construction Cost</strong></td>
<td></td>
<td>Underpass Lighting Required</td>
</tr>
<tr>
<td><strong>$5$$5$$5$$5$$5$</strong></td>
<td></td>
<td>Potential Utility Impacts</td>
</tr>
</tbody>
</table>

**COLOR KEY:**
- SMALL IMPACT / MAGNITUDE
- MODERATE IMPACT / MAGNITUDE
- LARGE IMPACT / MAGNITUDE

[Image: Illinois Department of Transportation]

**NOTES**
Recommended Railroad Crossing Alternate

IL 60/83 Over the Railroad (Overpass)

Minimum Clearance 23”-0”

IL 60/83 Passes Over The Existing Railroad

Existing Wisconsin Central Limited RR (2 Tracks)

NOTES
Property Displacements

NOTES

Existing Wetland
(Not Impacted)
Land Acquisition Types

- **Fee Simple**
  - Acquisition of all rights and interest

- **Permanent Easement**
  - Ownership is retained by property owner
  - IDOT is allowed use of property to construct and maintain facilities

- **Temporary Easement**
  - Ownership is retained by property owner
  - IDOT is allowed to construct minor improvements
Land Acquisition Procedures

• Determine Ownership
  • Prepare Property Description / Plat of Survey
• Independent Appraisal
• Negotiation
• Condemnation
• Relocation Assistance When Building Acquired
  • Advisory/Referral Services
  • Replacement Housing Payments
  • Reimburse Moving Expenses
Wetlands

- 5 Wetlands / Waters of the US Impacted
- Total Impacted Area - 0.2 acres
- Wetland mitigation likely to occur at a 1.5:1 ratio
# Public Lands – Section 4(f) Impacts

<table>
<thead>
<tr>
<th>Public Land</th>
<th>Land Acquisition (acres)</th>
<th>Temporary Easement (acres)</th>
<th>Permanent Easement (acres)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MUNDELEIN PARK AND RECREATION DISTRICT</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>John Wiech Park</td>
<td>0.04</td>
<td>0.03</td>
<td>None</td>
</tr>
<tr>
<td>Diamond Lake Sports Complex</td>
<td>0.32</td>
<td>0.01</td>
<td>None</td>
</tr>
<tr>
<td>Orchard View Park</td>
<td>0.09</td>
<td>0.09</td>
<td>0.04</td>
</tr>
<tr>
<td><strong>LAKE COUNTY FOREST PRESERVE DISTRICT</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Country Side Golf Course</td>
<td>0.89</td>
<td>0.15</td>
<td>None</td>
</tr>
</tbody>
</table>

NOTES
Noise Analysis – Project Type

- **Type I Project – IL 60/83**
  - New Roadway Construction
  - New Travel Lanes
  - Substantial Roadway Alteration

- **Type II Project**
  - Applies to Existing Roadways
  - Retrofitting
  - IDOT Has No Type II Program

**NOTES**
Noise Analysis Process

- 1) Identify Noise Receptor Locations
- 2) Determine Traffic Noise Level
  - Modeling
  - Validated by Field Monitoring
- 3) Traffic Noise Impact Identification
- 4) Traffic Noise Abatement Analysis
A receptor is an outdoor area of frequent human use along the roadway.
## FHWA Noise Abatement Criteria

<table>
<thead>
<tr>
<th>Activity Category</th>
<th>Noise dB(A)</th>
<th>Description of Activity Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>57</td>
<td>Serene Lands in which serenity and quiet are of extraordinary significance; rarely applies (Tomb of the Unknown Soldier)</td>
</tr>
<tr>
<td>B</td>
<td>67</td>
<td>Residential</td>
</tr>
<tr>
<td>C</td>
<td>67</td>
<td>Hospitals, Schools, Places of Worship, Parks, Forest Preserves</td>
</tr>
<tr>
<td>D</td>
<td>52 (interior)</td>
<td>Hospitals, Libraries, Places of Worship, Schools, Institutions</td>
</tr>
<tr>
<td>E</td>
<td>72</td>
<td>Hotels, Motels, Offices, Restaurants</td>
</tr>
<tr>
<td>F</td>
<td>None</td>
<td>Agriculture, Airports, Industrial, Retail, Utilities</td>
</tr>
<tr>
<td>G</td>
<td>None</td>
<td>Undeveloped Lands</td>
</tr>
</tbody>
</table>
Common Noise Levels

**SOUND LEVEL (dB(A))**

- 90: food blender at 3 feet
- 80: freight train at 100 feet
- 72 dB(A): NAC: Category E
- 67 dB(A): NAC: Category B & C
- 60: library, quiet urban nighttime
- 50
- 40
- 30
- 20
- 10
- 3: threshold of human hearing

**NOTES**
Interior vs. Exterior Noise

- IDOT and FHWA stipulate that outdoor areas of frequent human use be given primary consideration.
- Interior noise for private residences not studied (Cat B).
- Interior noise levels are evaluated only if no exterior use areas are identified for those lands in Category D.
Traffic Noise Level Determination

- Noise calculated at the **Worst-Case** receptor locations
- Predicted Traffic Noise Levels are estimated by using FHWA Traffic Noise Model (TNM)
- Scenarios: Existing, Future-No Build, Future-Build
- Existing noise levels validated with field monitoring

### TABLE 5 – PREDICTED TRAFFIC NOISE LEVELS

<table>
<thead>
<tr>
<th>Receptor</th>
<th>Activity Category</th>
<th>FHWA NAC $L_{eq} h$ dB(A)</th>
<th>2008 Predicted $L_{eq} h$ dB(A)</th>
<th>2040 No-Build $L_{eq} h$ dB(A)</th>
<th>2040 Proposed (Without Abatement) $L_{eq} h$ dB(A)</th>
<th>Increase from Existing to Proposed $L_{eq} h$ dB(A)</th>
<th>Impacted Receptor</th>
</tr>
</thead>
<tbody>
<tr>
<td>R1</td>
<td>C</td>
<td>67</td>
<td>63</td>
<td>64</td>
<td>62</td>
<td>-1</td>
<td>NO*</td>
</tr>
<tr>
<td>R2</td>
<td>B</td>
<td>67</td>
<td>69</td>
<td>70</td>
<td>71</td>
<td>2</td>
<td>YES</td>
</tr>
<tr>
<td>R3</td>
<td>C</td>
<td>67</td>
<td>65</td>
<td>66</td>
<td>68</td>
<td>3</td>
<td>YES</td>
</tr>
<tr>
<td>R4</td>
<td>C</td>
<td>67</td>
<td>65</td>
<td>67</td>
<td>70</td>
<td>5</td>
<td>YES</td>
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<tr>
<td>R5</td>
<td>B</td>
<td>67</td>
<td>65</td>
<td>66</td>
<td>67</td>
<td>2</td>
<td>YES</td>
</tr>
<tr>
<td>R6</td>
<td>B</td>
<td>67</td>
<td>64</td>
<td>65</td>
<td>68</td>
<td>4</td>
<td>YES</td>
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<tr>
<td>R7</td>
<td>B</td>
<td>67</td>
<td>65</td>
<td>66</td>
<td>67</td>
<td>2</td>
<td>YES</td>
</tr>
<tr>
<td>R8</td>
<td>C</td>
<td>67</td>
<td>65</td>
<td>66</td>
<td>70</td>
<td>5</td>
<td>YES</td>
</tr>
<tr>
<td>R9</td>
<td>B</td>
<td>67</td>
<td>57</td>
<td>58</td>
<td>60</td>
<td>3</td>
<td>NO</td>
</tr>
</tbody>
</table>

NOTES
Feasibility & Reasonableness Policy

- **Feasibility**
  - Abatement must achieve at least 5 dB(A) traffic noise reduction
  - Abatement must be feasible to construct

- **Reasonableness**
  - Generally, noise abatement cost must be < $24,000* per benefitted receptor
  - Must achieve at least an 8 dB(A) noise reduction at a benefitted receptor

*Adjustment factors can increase the allowable cost per benefitted receptor
IL 60/83 Potential Noise Walls

- **239** Sensitive Receptors Identified and Studied
- **17** Noise Abatement Walls Studied
- **5** Noise Abatement Walls are Feasible & Reasonable
- Wall Heights **10 – 12.5 Feet**
- **1 ¼ Miles** of Potential New Noise Walls
- **105** Benefitted Receptors
- Recommended Walls **AFTER** the Viewpoint Solicitation
Viewpoints Solicitation

• **Benefited Receptors Rental Properties**
  – One Vote For Tenant
  – One Vote For Owner (per unit)

• **Receptors that share property line with IL 60/83**
  – Receive Two (2) Votes

• **Benefitted Receptors** will be contacted up to 2 times to maximize response rate

• Response goal per barrier is **33%**

• Abatement wall is likely to be implemented if **majority vote is in favor**

**NOTES**
Notes:
IDOT Current Typical Example Walls
Advantages of BMPs

- Improves Overall Water Quality
- Minimizes Soil Erosion
- Controls Stormwater Runoff – Captures Soil Sediment and Roadway Pollutants
Locations of BMPs
Schedule / Funding

**Schedule**

- Community Advisory Group Meeting No. 7 – 6/18/13
- Public Meeting No. 2 – 10/22/13
- Community Advisory Group Meeting No. 8 – 11/17/16
- Public Hearing – Spring 2017 (Target)
- Design Approval – June 2017 (Target)

**Funding Status**

- Phase II and Phase III are not currently included in the Department’s FY 2017-2022 Proposed Highway Improvement Program
  - Phase II - Contract Plan Preparation & Land Acquisition
  - Phase III - Construction

NOTES
Next Steps

- Give Consideration to Feedback from this Meeting
- Refine Design, as Applicable
- Present Recommended Alternate to the Public Spring 2017 (Target)
- Project Website: [www.ilrte6083study.com](http://www.ilrte6083study.com)

NOTES
Project Workshop Working Session

Review Recommended Improvements with Meeting Participants

NOTES
Questions

- Questions and Comments
- Group Discussion to Follow