Illinois Route 31 from IL 176 to IL 120 - Phase I Study
Community Advisory Group (CAG) Meeting #5 Index

Meeting Date: November 20, 2014

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AGENDA

Illinois Route 31 Phase I Study:
Illinois Route 176 to Illinois Route 120
McHenry County

McHenry County College Shah Center
4100 W. Shamrock Lane
McHenry, Illinois 60050
Thursday, November 20, 2014

Community Advisory Group (CAG) Meeting #5

Agenda Item

I. Welcome

II. Project Update Since CAG Meeting #4 (May 2012)

III. Review Preferred Alternative

IV. Workshop: Preferred Alternative and Environmental Resources

VI. Recap and Future Meetings

(CAG Meeting Adjourned)

Introductions

- Illinois Department of Transportation
- STV Incorporated and Huff & Huff Incorporated
- Community Advisory Group (CAG) Members
  - » Please refer to list provided in Binder.
  - » Introduce yourself and state the community in which you live and/or which group and/or government agency you represent.

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Agenda

- Project Update Since CAG Meeting #4 (May 2012)
- Review Preferred Alternative
- Workshop
- Summary
- Next Steps

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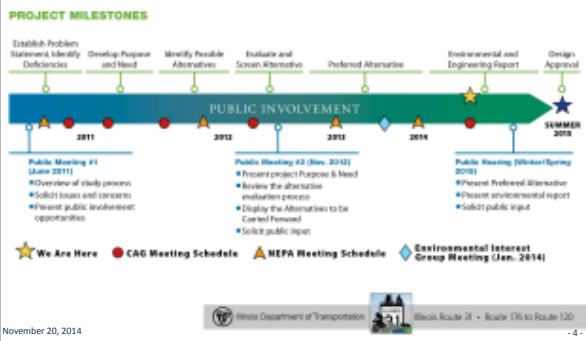
Phase I Study Schedule



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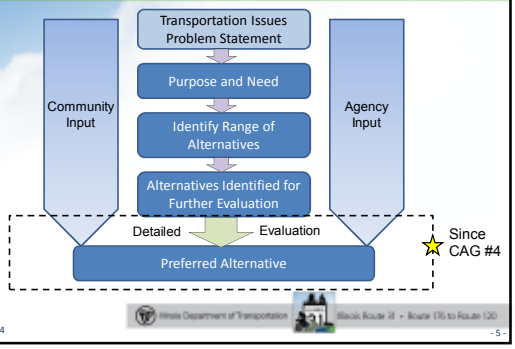
Alternative Development



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Project Update

- CAG Meeting #4
- Public Meeting #2
- Local Agency Coordination
- NEPA/404 Merger Meeting #3 – Alts Carried Forward
- Environmental Interest Group Meeting
- NEPA/404 Merger Meeting #4 – Preferred Alternative
- Technical and Environmental Studies

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Summary of CAG Meeting #4

- May 22, 2012
- Presented Alternatives to be Carried Forward and Access Management Workshop
- 20 Attendees
- Comments include:
  - » Exhibits were acceptable to present at public meeting; no intermediate build option for IL 120 intersection
  - » Preserve surrounding natural features, water quality, and recycle removed trees
  - » Speed enforcement in reduced speed areas
  - » Minimize impacts to environment, especially wetlands
  - » Access at specific driveways and side street locations were discussed

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Summary of Public Meeting #2

- November 15, 2012
- Presented Purpose and Need, Range of Alternatives, and Alternatives to be Carried Forward
- 69 Attendees
- 45 Comments; Variety of Topics:
  - » Impacts to properties / building removals / land acquisition procedures
  - » Barrier median restrict commercial access / request for median openings
  - » Favor improvements, especially inclusion of pedestrian accommodations
  - » Avoid tree impacts (especially old oak trees) where possible
  - » Impacts to environment / water quality
  - » Driveway access / design for specific properties

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Summary of Local Agency Coordination

- Village of Prairie Grove Coordination
  - » Received letter supporting 30' Raised Median option on April 5, 2013
  - » Requests inclusion of water quality features and low maintenance plantings
- City of McHenry Coordination Meetings:
  - » April 11, 2013 and October 15, 2013 (City Staff)
  - » March 12, 2014 (Public Works Committee – Open to Public)
- McHenry Major Concerns: IL 120 Intersection Impacts, Business Access, Unnamed Tributary Flooding
- Resolution of concerns:
  - » IL 120 Intersection Alternative A (Minimum Impact)
  - » Extended Flush Median / Two-Way Left Turn Lane (TWLTL) south to High Street
  - » Proposed Drainage Improvements at Tributary Crossing

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Summary of NEPA/404 Merger Meetings

- June 25, 2013 and June 25, 2014
  - » US Fish & Wildlife Service (USFWS), US Environmental Protection Agency (USEPA), US Army Corps of Engineers (USACE), IL Department of Natural Resources (IDNR), IL Department of Agriculture (IDOA)
- Reviewed Alternatives to be Carried Forward and Preferred Alternative
- Refinements to minimize impacts
  - » Studied 18' Raised Median vs. 28' Raised Median between River Birch and Ames
  - » Extend 28' Raised Median with 11' Lanes North to Bull Valley Road
  - » 11' Lanes continue through north section, Bull Valley to John Street
- Preferred Alternative Concurrence by USEPA, USACE, and IDNR. Pending USFWS and IDOA.

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Summary of Env. Interest Group Meeting

- January 15, 2014
- Presented Environmental Resources in Project Area, Minimization / Mitigation Efforts, and Best Management Practices (BMPs)
- 26 Attendees including:
  - » USEPA, USACE, USFWS, Silver and Sleepy Hollow Creeks Watershed Coalition, Sierra Club, Village of Prairie Grove, City of Crystal Lake, Land Conservancy of McHenry County, McHenry County Conservation District, Nunda Township, Terra Cotta Realty
- Comments / discussion include:
  - » Chloride impacts to groundwater and surface water
  - » Salt spray impacts to wetlands
  - » Two-stage channel design for Squaw Creak meandering (secondary filtration)
  - » Wetland mitigation at Sternes Fen
  - » Re-use of wood resources from tree removal

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Technical & Environmental Studies

- Intersection Design Studies (IDSs)
- Drainage / Hydraulic Studies
  - » Location Drainage Study (LDS)
  - » Sleepy Hollow Creek Hydraulic Report
  - » Unnamed Tributary to the Fox River Hydraulic Report
- Traffic Noise Analysis
- Tree Evaluation
- Environmental Surveys
  - » Eastern Prairie Fringed Orchid (EPFO)
  - » Blanding's Turtle
  - » Northern Long-Eared Bat (NLAB)
  - » Avian

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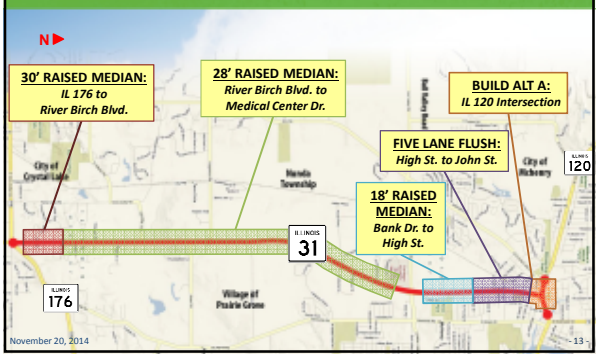
Preferred Alternative



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Preferred Alternative (South)

28' Raised Median River Birch Blvd. to South of Bull Valley Rd.
Key Features / Benefits
Two 11' Through Lanes in Each Direction
Barrier Median for Safety
28' Wide Median Accommodates Dual Left Turn Lanes
U-Turns Feasible at Median Breaks
Sidewalk and Shared-Use Path
Min Impacts to Environmental Resources – Retaining Walls at Various Locations
Outside Ditches or Swales
BMP Opportunities

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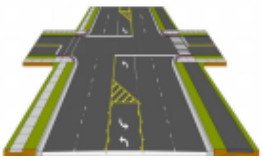
Preferred Alternative (North)



18' Raised Median North of Bull Valley Rd. to High St.	Five Lane Flush Median High St. to John St.
Key Features / Benefits	**Key Features / Benefits**
Two 11' Through Lanes in Each Direction	Two 11' Through Lanes in Each Direction
Turn Volumes Require Single Left at Intersections	Turn Volumes Require Single Left Turns (LT/TWLTL)
Barrier Median Provides Greatest Safety Benefit	Flush Median Addresses Business and Community Input
Includes Sidewalk and Shared-Use Path	Includes Sidewalk and Shared-Use Path

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Preferred Alternative (IL 120 Intersection)

Key Features
Minimum Impact Alternative – 2 Commercial Buildings (Damage to Remainder of Property)
Dual Left Turn Lanes With Barrier Median on East Leg
Narrow 10', 10.5', & 11' Lanes
Waukegan Road Cul-de-sac
Eliminates On-Street Parking
U-Turns Feasible Only for WB Traffic
Includes Sidewalk, But No Shared-Use Path

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Preferred Alternative

- Impact Avoidance and Minimizations
  - » Urban roadway section (Curb & Gutter)
  - » Alignment Shifts at Seep and Cemetery
  - » 11-foot Through and Turn Lanes
  - » Reduced Median Width
  - » Eliminate U-Turn Bump-Outs
  - » Retaining Walls
- Drainage and Best Management Practices (BMPs)
  - » Bioswales and Vegetated Ditches
  - » Infiltration Trench
  - » Wildlife Crossings (8 Locations)
    - Natural Bottom Waterway Crossings (4 Locations) & Embedded Box Culvert (4 Locations)
  - » Squaw Creek Meandering with Riffle Pools
  - » Detention / Water Quality Ponds
  - » Unnamed Tributary Improvements

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Preferred Alternative

- Environmental Impacts Summary:

Criteria	Impact Amount
Displacements / Structure Acquisition	1 - Residence 2 - Businesses
Right-of-way	61.8 acres
Wetlands	19 Sites, 1.44 acres
High Quality Aquatic Resources	4 Sites, 0.27 acres
Floodplains	6.68 acres
Threatened and Endangered Species	0
Oak Trees	59
Parklands (Section 4f)	0
Cultural Resources / Cemeteries (Section 106)	0

- Estimated Construction Cost: $66.9 Million (does not include land acquisition)

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Residential/Business Acquisitions

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Wetlands Impacts

Design has been modified to avoid wetland impacts where practicable.

- No seep wetland impacts
- No wetlands with FQI > 20 impacted
- 19 total wetlands impacted (1.4 ac)
- Four ADID/HQAR wetlands impacted (0.27 ac)
- Mitigation with USACE/Section 404 and the Illinois Interagency Wetland Policy Act

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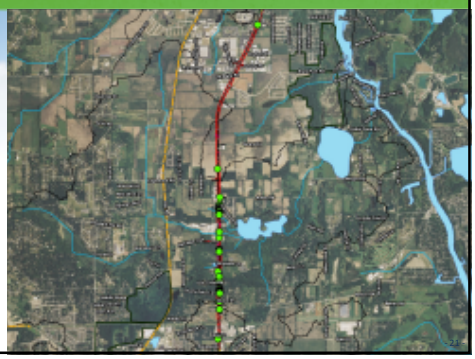
Oak Tree Impacts

- **59 Oak Tree Impacts**
- Approx. 5,400 total tree impacts
- Tree replacement will follow IDOT policy
  - Native IL species
  - Replacement ratio 1:1 or 3:1 seedlings
- Tree replacement locations to be coordinated with local jurisdictions



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Traffic Noise

- Receptors in 43 areas were studied for potential noise impacts
  - » Future Build noise impacts projected for 22 receptors
  - » No barriers found "reasonable and feasible":
    - Building setbacks
    - Insufficient noise reductions
    - Cost effectiveness

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Workshop

- Review Preferred Alternative Plan
- Review Environmental Resource and BMP Map
- Report Back to Group for Summary and Next Steps

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Summary

- Preferred Alternative Plan and Environmental Resource Map developed through extensive coordination with Local Agencies and Environmental Interest Groups
- Public Concerns Addressed, as feasible
- Environmental and Property Impacts Minimized, as feasible
- Received Preferred Alternative Concurrence from NEPA/404 Agencies
- Project Purpose and Need met
- Any questions or comments?

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Next Steps

- Local Agency Meetings
- Environmental Assessment
- Public Hearing
  - » Anticipated Spring 2015
  - » Obtain public input on the preferred alternative
- Complete Phase I Study
  - » Address comments from pubic hearing
- Contract Plan Preparation (Phase II)
  - » Land Acquisition (Phase II) and Construction (Phase III) not in Department's FY 2015-2020 MYP

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SUMMARY

Illinois Route 31 Phase I Study:
Illinois Route 176 to Illinois Route 120
McHenry County

McHenry County College Shah Center
4100 W. Shamrock Lane
McHenry, Illinois 60050
Tuesday, May 22, 2012
1:00 p.m. to 3:00 p.m.

Community Advisory Group (CAG) Meeting #4

The purpose of the CAG meeting was to present a summary of CAG Meetings #1, #2, and #3 where the project Problem Statement and project Purpose and Need were developed; review the developed range of alternatives; present the alternatives evaluation process and findings; introduce alternatives to be carried forward for sections along the entire project; and conduct a workshop to receive feedback on the alternatives to be carried forward, as well as identify locations of potential median breaks, U-turn locations, planned access locations and consolidated driveway entrances (1"=50' scale plans of the various alternatives were provided).

Invited participants included stakeholders who signed up for the CAG or those who have attended CAG Meeting #1, #2, and/or #3. A total of 32 volunteers were invited to this CAG meeting.

This meeting was attended by **12** invited CAG members or other interested project stakeholders; and **8** members of the project study group were present to facilitate the meeting and answer any questions (See attached sign-in sheet).

The meeting began with a PowerPoint presentation, conducted by John Clark from STV Incorporated that included topics as noted below:

- **Welcome, Introductions, and Agenda**
    - Mr. Clark introduced the project team including IDOT, STV Incorporated, and Huff and Huff engineering and briefly explained their role on the project.
    - CAG and project team members introduced themselves – name, whom they represent (group and/or government agency), and/or which community they lived in.
    - All members were given a copy of the meeting agenda and a handout packet including a copy of the presentation, CAG Meeting #3 summary and informational packets concerning safe access.
    - Mr. Clark gave an overview of the Agenda for CAG Meeting #4 which included an overview of the previous 3 CAG meetings, project Problem Statement, project Purpose and Need, and the Range of Alternatives developed during (and after) the last Workshop from CAG Meeting #3.

- **Summary of CAG Meeting #3**
    - The summary of CAG Meeting #3 was presented. Mr. Clark noted that CAG members developed the project Problem Statement in the first CAG meeting which was used to develop the project Purpose and Need statement for CAG Meeting #2. In addition, regional development and key findings from the previous study were discussed. The meeting also included a workshop developing a Range of Alternatives.

- **Project Process – Alternatives to be Carried Forward**
    - The project development process was presented in a flow chart format to demonstrate how the project developed through the Problem Statement, the Purpose and Need, and the Range of Alternatives. The chart was highlighted to show that we are at the point of identifying alternatives for further evaluation (a.k.a. Alternatives to be Carried Forward).

- **Review of Project Purpose and Need**
    - The updated and approved Project Purpose and Need statements were presented to the CAG members at CAG Meeting #4. The PSG noted that these statements were revised to meet the approval of the FHWA / NEPA review committee.
        - The updated Project Purpose was presented as the following: "*The purpose of the proposed project is to improve safety, address roadway capacity and mobility, correct existing geometric deficiencies and encourage multi-modal transportation along IL Route 31 from the intersection of IL Route 176 to the intersection of IL Route 120, in eastern McHenry County.*"
        - The updated Project Need Statements were presented as the following: "*Improve Roadway Safety, Expand Roadway Capacity and Address Traffic Issues, Correct Existing Roadway Design Deficiencies, and Improve opportunities for multimodal connectivity.*"
        - CAG members asked questions regarding what had changed in these statements and why accessibility was removed from the Purpose and Need
            - There were a few changes to the Project Purpose statement since the last CAG meeting. The wording of "*proposed action*" was changed to "*proposed project*" and the wording of "*addressing safety*" was changed to "*improve safety*." In addition, the word "*capacity*" was expanded to "*address roadway capacity and mobility*" and the statement "*multi-modal transportation, and geometric deficiencies*" was modified to "*correct existing geometric deficiencies and encourage multi-modal transportation*."
            - There was also a minor change to the Project Need statements, mainly the statement "*Expand Roadway Mobility (Capacity and Accessibility)*" was modified to "*Expand Roadway Capacity and Address Traffic Issues*." Through the FHWA / NEPA review process it was determined that the term "*mobility*" would be added to the Project Purpose statement, as opposed to the Project Need statements.
            - It was noted by Mr. Clark that as discussed during CAG Meeting #3, reduce environmental impacts / address water quality issues was not included in the Purpose and Need statements since the FHWA does not consider these needs to be appropriate for inclusion. Regardless of inclusion in the Purpose and Need, environmental impacts and water quality impacts will be analyzed and minimized by this project. Because this is required by law in

the NEPA process, there is no need to incorporate the statements into the Purpose and Need.

- Similarly, the term "*accessibility*" was not specifically included in the Purpose and Need statements. The NEPA review process determined that accessibility would be covered by the statement "*address roadway capacity and mobility*" in the Project Purpose. By addressing roadway capacity and mobility, accessibility to IL Route 31 would also be improved. A CAG member questioned why the statement "*maintain full access to all properties*" was not included in the Purpose and Need. The request to include a statement to "*maintain full access to all properties*" was discussed in detail during the previous CAG meeting and was well documented in CAG Meeting #3 Summary. It was reiterated that the PSG will follow design guidelines to provide access for all properties, although this access may not be exactly in the same format as it is for existing conditions. Each access will be studied and designed on a case by case basis, per IDOT BDE and FHWA guidelines.

- **Range of Alternatives – South Section & North Section**
  - Mr. Clark explained the range of alternatives as developed through input from previous CAG meetings from the PSG and CAG members. The south Section of the project as defined as Route 31 from IL Route 176 to Bull Valley Road had the following alternatives:
    - **6-lane with 30' & 50' Depressed Median and 10' Outside Shoulders**
    - **6-lane with 18'-22' Raised Barrier Median**
    - **4-lane with 18'-22' Raised Barrier Median**
    - **4-lane with 18'-22' Raised Barrier Median and 10' Outside Shoulders**
    - **5-lane with Bi-directional TWLTL**
    - **4-lane with 30' Raised Barrier Median**
    - **4-lane with 30' Depressed Median and 10' Outside Shoulders**
    - **No-Build Alternative**
  - Mr. Clark noted that during the alternatives evaluation process, the "6-lane" alternatives were dismissed due to much larger footprints and additional environmental impacts. This larger footprint would result in additional building displacements, as well as wetland impacts. Alternatives involving 4 lanes meet the Purpose and Need without these additional impacts and signalized intersections will operate with an acceptable LOS with two through lanes in each direction. The "18'-22' median" alternatives simply did not allow for the accommodation of needed future dual left turn lanes along many intersections in the project. The ability for an alternative to accommodate dual left turn lanes is important to support future developments and improve the longevity of the improvement. The remaining alternatives were further analyzed (as discussed later in the presentation), and will be taken through a detailed evaluation.
  - Similarly, Mr. Clark presented the range of alternatives developed as they relate to the north section of the project. The listed range of alternatives were as follows:
    - **4-lane with 6'-8' Landscaped/Planter Median**
    - **4-lane with 18'-22' Raised Barrier Median**
    - **4-lane with 30' Raised Barrier Median**
    - **5-lane with Bi-directional TWLTL**

        - **No-Build Alternative**
    - During the alternatives evaluation process, the "6'-8' Median" option was dismissed since this option would not allow for a left turn lane to fit within its width, where required at intersections and median break locations. The 30' median alternative was dismissed as a typical section because dual lefts are not required throughout most of the north section; however, this alternative was considered while developing options for intersection geometry for IL Route 120. The Two Way Left Turn Lane (TWLTL) alternative was dismissed because there was not an identified need for continuous access to driveways until you move north into the limits of the downtown McHenry area. This downtown area (north of Lillian Street / Grove Avenue) is controlled by the geometry requirements of the intersection at IL Route 120. The remaining alternatives include the "18'-22' Median" alternative and the "No-Build" alternative. The remaining alternatives were further analyzed and developed to be carried forward (as discussed later in the presentation), and will be taken through a detailed evaluation.

- **Alternative Development Process / Purpose and Need Screening**
    - A flow chart was shown to demonstrate how a project moves from a full range of alternatives into a preferred alternative. Within this flow chart, a region was highlighted to show the work that has been completed on the full range of alternatives. Mr. Clark explained that the remaining alternatives not eliminated from the initial evaluation would be looked at in detail, and includes a screening of the alternatives' ability to meet the Purpose and Need of the project.
    - The Purpose and Need screening involves meeting the requirement to:
        - Improve Safety
        - Expand Roadway Capacity and Mobility
        - Correct Existing Design Deficiencies
        - Improve Multimodal connectivity

      In order to define whether or not an alternative met these points, detailed analyses were performed for each alternative and were explained in detail on the proceeding slides.

- **Safety Analysis**
    - Used methodologies of the Highway Safety Manual (HSM) 2010 on a representative section of the project. The analysis takes known elements of the roadway including the number of vehicles per day; roadway segment length, geometric configuration including the number of lanes; median type; number of driveways; roadside fixed object density; speed limit; and presence of other roadway features (i.e. lighting, on-street parking, and auto speed enforcement). All this data is then used to predict how many accidents should occur on the defined highway section. The formulas and methods utilized by the HSM were generated using national crash information and statistical data.
    - Mr. Clark explained that the analysis is relative. The analysis will determine if one alternative is safer than the existing "No-Build" and which alternative is safer than other alternatives.
    - In summary, the analysis determined that the TWLTL Alternative would increase crash frequency by 92% over the no build alternative or by 193% over raised/depressed median alternatives. Similarly, the addition of on-street parking to any alternative would increase crash frequency by 35% regardless of the median type chosen.

- **Expand Roadway Capacity and Mobility Analysis**

- Used methodologies of the Highway Capacity Software (HCS) and Synchro to analyze Level of Service (LOS). Comparisons were made between existing 2009 traffic volumes and projected 2040 traffic volumes.
- The comparison of alternatives focused on intersection analysis since all alternatives involved 4 lanes of through traffic (2 in each direction) through the project limits while the "No-Build" alternative maintains 2 lanes of through traffic. This analysis also investigated the feasibility of a roundabout at both the IL Route 120 and Lillian Street/Grove Avenue intersections.
- In summary, the analysis determined that roundabouts could not be designed to meet traffic demands and cannot easily allow for multimodal use. Traffic demands at the two intersections involve a high percentage of left turning movements. High left turn movements are important to the function of a roundabout because a vehicle spends the most time within a roundabout while maneuvering through a left turn movement. The intersection modeling shows that the vehicle occupancy for the IL Route 120 roundabout is so severe (due to the high volume of left turns), that vehicle backups extend into the nearby railroad crossing west of the intersection, as well as to the adjacent signalized intersections at Crystal Lake Road and IL 31 (Richmond Road). Multimodal accommodations are limited because a roundabout utilizes free flow vehicular movements. Without designated pedestrian traffic signals or grade separated crossings, pedestrians and bicyclists would have difficulty maneuvering the intersection. Additionally, the analysis provided relative comparisons between alternatives to be considered further, including the "No-Build" alternative. The projected Level of Service (LOS) values and vehicle delays can be weighed against the potential impacts of constructing the alternative.

- **Roadway Deficiencies and Multimodal Connectivity**
  - Regardless of the alternatives chosen, Mr. Clark explained how these two identified needs would be addressed but may be limited by natural features (topography) or existing conditions (buildings). Mr. Clark presented potential exceptions to addressing roadway deficiencies and multimodal connectivity. These exceptions include potential limited sight distance created by existing buildings, as well as the inability to provide a continuous shared-use path, also due to the existing buildings in the McHenry downtown area. The development of alternatives to be carried forward will investigate the correction or mitigation of the stated exceptions.

- **Alternatives to be Carried Forward**
  - The results of the Purpose and Need screening has narrowed the range of alternates, eliminating options related to roundabouts and TWLTL medians. This reduction now presents the south section with two options (a 30' raised curb and a 30' depressed median). The north section alternatives were reduced to only the 18' median option; however, many design alternatives exist for the intersection at IL Route 120. These alternatives included three options (Restripe, 30' Median, 18' Median). The intersection alternatives for the IL Route 120 intersection are categorized as "North Section" alternatives. For all alternative analysis, the "No-Build" alternative is also an alternative for alternatives to be carried forward, based on NEPA guidelines.

- **Workshop on Alternatives to be carried further**

- What will be accomplished during this workshop? Mr. Clark explained that the alternatives to be carried forward were drawn up and printed for the CAG members to review and provide comments and feedback.
- Topics covered during discussion included the identification of locations for potential median breaks, U-turn locations, and possible driveway consolidations.
- A summary of the workshop's feedback is provided at the end of this summary

- **Next Steps and Future Meetings**
  - Next Steps: Ongoing Engineering Project Development Activities (further refinement of alternatives, preparation for Public Meeting #2 and NEPA/404 meeting).
  - Future Public Meeting #2 tentatively scheduled for late July 2012 (subsequently revised to Fall 2012). This meeting will formally present the Purpose and Need, Range of Alternatives, Evaluation Criteria, and the Alternatives to be Carried Forward, as well as obtain input on the presented materials.

Workshop Comments and Alternative Development concepts:

The workshop generated many discussions relating the selected alternatives drawn up on the provided exhibits. A summary of the CAG member's discussions and comments are listed below:

- **General**
  - The PSG should make use of natural features. Existing profiles, ditches, and rivers was noted. The desire to enhance natural features was also recommended if it could improve the project or help mitigate anticipated environmental impacts.
  - When detailed construction documents are being drafted, it was desired to have special provisions or specifications covering the removal of larger (heritage) trees. The CAG requested that these trees be re-used/recycled in manufacturing. Avoiding contractor burning and mulching of these trees was desired.
  - In preparation for the Public Meeting, the CAG agreed that exhibits showing option #1 and option #2 side by side were easier to read over separate exhibits showing more of the same exhibit. It was mentioned that this implementation may not be possible for the north section exhibits.

- **South Section (IL Route 176 to Bull Valley Road)**
  - The existing speed limit is mostly 50 to 55 mph in this section. A speed limit of 45 miles per hour was preferred over faster speed limits (50 and 55). Option #1 (30' Raised Median) would have a maximum speed limit of 45 mph. Speed enforcement by the local police departments would be an important aspect if the speed limit is lowered.
  - The water quality benefit of Option #2 (30' Depressed Median) was desirable but the additional pavement required for shoulders was a concern.
  - Option #2 would have outside paved shoulders which could serve as an alternative means for cyclists as well as provide a footprint for future expansion of IL Route 31 to three through lanes in each direction, if warranted by traffic projections past 2040.
  - A minimal impact to the environment, especially adjacent wetlands, was desired. This included physical areas of impact as well as the modified drainage patterns for outfall locations and times of concentrations. Regardless of which Option was selected through the environmental sensitive areas, the PSG should consider options (i.e. retaining walls) to minimize overall impacts.
  - A desire to modify the limits of the depressed median alternative (Option #2) was expressed. The idea of beginning Option #2 beyond the environmentally sensitive areas was expressed. The PSG noted that an option's typical section cannot alternate too frequently and that a chosen typical section should remain typical for at least a mile or two.
  - If Option #1 was chosen throughout the project limits for areas currently posted higher than 45 mph, the CAG agreed that it would be necessary to provide physical space for enforcement officers to enforce the lowered speed limit.

- Due to similarities between Option #1 and Option #2, the CAG mentioned that the option which has the least construction and maintenance costs would be preferred.
- A sight distance problem at the Drake Drive was noted by a CAG member. The PSG responded that they are aware of the existing problem and would investigate its correction, regardless of which Option would be selected.
- Access to TC Industries was discussed. It was noted that the Half Mile Trail intersection provides primary access to TC Industries and that access would be improved by the installation of a new traffic signal at the intersection and channelized turn lanes for each intersection approach. NB dual left turn lanes would satisfy heavy peak hour traffic volumes for TC Industries employees and visitors. In addition, the installation of a median opening north of the TC Industries property (approximately ¼ mile north of Half Mile Trail) would be considered to provide access to existing driveways.
- It was noted by a CAG member that the installation of median openings and u-turn locations in the environmentally sensitive areas should be avoided as much as possible, since they require the construction of wider pavement areas to accommodate the u-turn vehicles.
- The presence of physical constraints or "pinch points" in the area north of Half Mile Trail was discussed. The roadway alignment was shifted east to avoid impacts to TC Industries located along the west side of the road, but the shift is limited by the presence of the waste water treatment plant located along the east side of the road. These constraints are an issue for both Options #1 and #2, but more significant for Option #2 due to the wider roadway footprint. A similar "pinch point" location was noted in the area near Gracy Road. The cemetery on the east side of IL Route 31, south of Gracy Road, and the residential property on the west side of IL Route 31, north of Gracy Road create constraints on a shift in the roadway alignment.

- **North Section (Bull Valley Road to IL Route 120)**
  - Many concerns were brought up throughout the CAG meeting about the feasibility of roundabouts at the intersection of IL Route 31 and IL Route 120. By the end of the meeting, the CAG agreed that the need to further investigate a roundabout option was no longer warranted.
  - The CAG expressed how Option #2 (Max Build) and Option #3 (Intermediate Build) had very similar impacts and it became unanimous that Option #3 was not a preferred option.
  - CAG members expressed that Options #1 and #2 each have great and not so great aspects. Option #1 would provide no impacts to adjacent properties but it would provide limited improvement to traffic operations at the IL Route 31 and IL Route 120 intersection. Option #2 has several potential impacts to adjacent buildings and would change the character of the area, but would improve the intersection operations now, as opposed to having to make improvements in future. The CAG members agreed that the greatest weight to selection of a preferred alternative would rest with the City of McHenry and input from adjacent property owners at the next Public Meeting.

- Any option for the intersection of Route 31 and Route 120 should consider the impacts of blocking the intersection at Main Street. The community hosts a parade once a year that runs on Main Street through the intersection at Route 31. It was advised that we take this parade into consideration.
- City of McHenry CAG member noted that improvements to the intersection of IL Route 31 / IL Route 120 with 3rd Street / Millstream Drive are planned by the city to add pavement markings and signage to convert the cross streets to right-in-right-out.