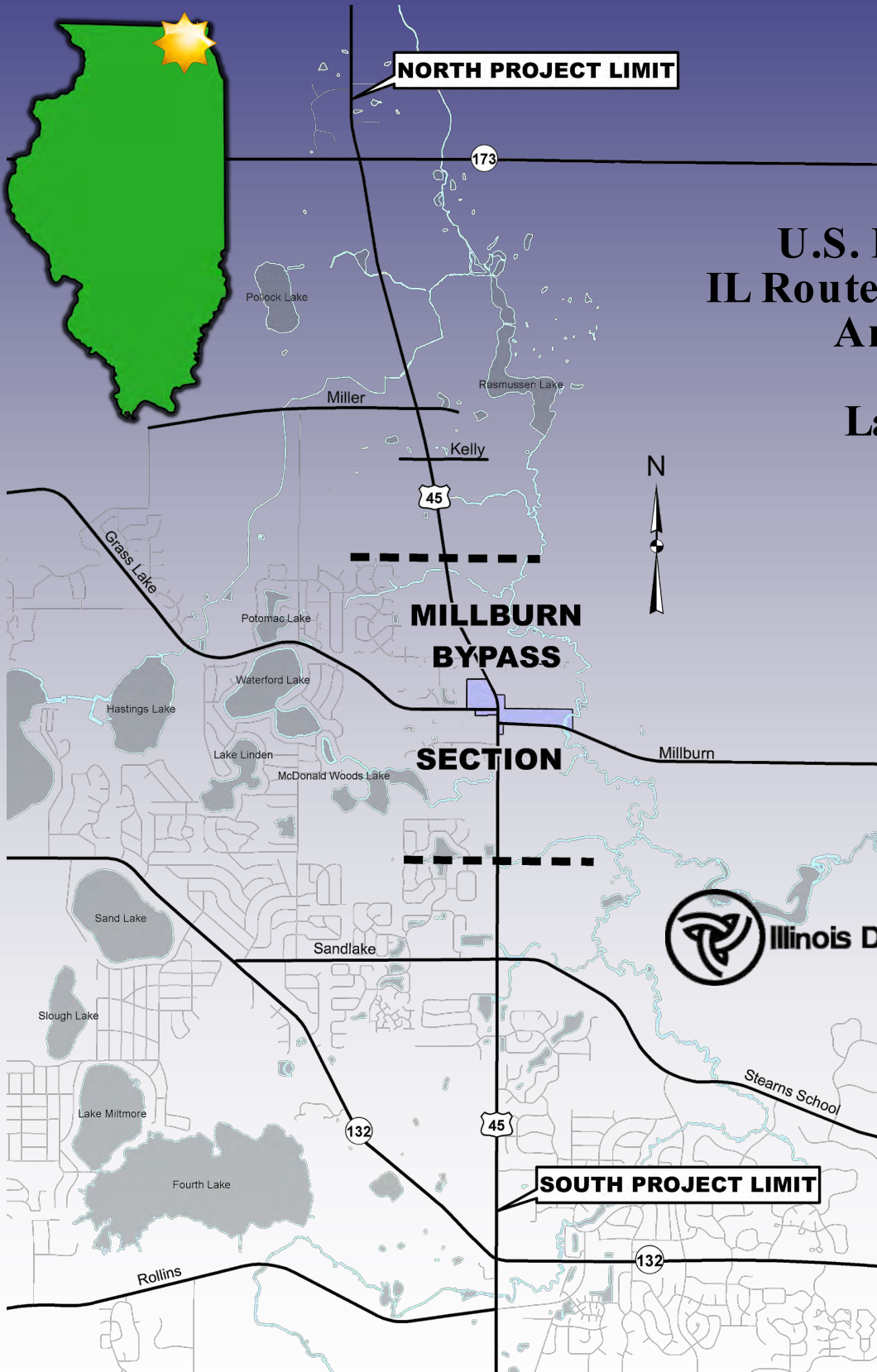


Environmental Assessment



**U.S. Route 45 (FAP 0344)
IL Route 132 to IL Route 173
And Millburn Bypass**

Lake County, Illinois



Illinois Department of Transportation



LakeCounty
Division of Transportation

FEBRUARY 2013

**U.S. ROUTE 45 (FAP ROUTE 0344)
IL ROUTE 132 to IL ROUTE 173, and MILLBURN BYPASS
P-91-666-09**

LAKE COUNTY, ILLINOIS

ENVIRONMENTAL ASSESSMENT

Submitted Pursuant to 42 USC 4332 (2)(c) and 49 USC 303
By the U.S. Department of Transportation
Federal Highway Administration
and the
Illinois Department of Transportation

Cooperating Agencies

Illinois Department of Natural Resources; Illinois Historic Preservation Agency; U.S. Army Corps of Engineers – Chicago District



For FHWA

02/28/2013

Date of Approval



For IDOT

2/28/2013

Date of Approval

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Abstract

The proposed action is an add lanes project of U.S. Route 45 from Illinois Route 132 to Illinois Route 173 in Lake County with a western bypass of U.S. Route 45 around the Millburn Historic District which is listed on the National Register of Historic Places (NRHP).

The proposed improvements along the six mile corridor include the following: one additional travel lane in each direction separated by a barrier median, western bypass of U.S. Route 45 around the Millburn Historic District, auxiliary turn lanes at curbed intersections, drainage improvements, and utility relocations.

Construction of the proposed action will require the acquisition of approximately 74.2 acres of right-of-way and 1.31 acres of temporary construction easements. This includes 33.6 acres of right-of-way and 0.16 acres of temporary construction easements for the Millburn Bypass portion of the project only. There will be 3 residential relocations with no business relocations. 30.8 acres of farmland will be impacted of which 30.4 acres is prime and unique farmland.

Impacts to wetlands and unvegetated waters of the U.S. total 0.38 acres and 0.28 acres respectively, all of which are outside of the Millburn Bypass area. Replacement is proposed to be provided within the Des Plaines River watershed. The Preferred Alternative appears to meet the requirements of the USACE Regional Permit Program (RPP) since these impacts do not exceed 0.25 acres at any single crossing and the cumulative wetland/waters of the U.S. impact does not exceed 1.0 acre.

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Introduction

This Environmental Assessment summarizes the analysis and investigations conducted for improvements to U.S. Route 45 from IL Route 132 to IL Route 173 in Lake County, Illinois to address existing and future capacity, mobility, safety and operational deficiencies. This includes a bypass of the Millburn Historic District, a National Register of Historic Places location. Refer to Appendix A, Exhibit 1 - Project Location Map and Exhibit 6 – Millburn Historic District.

The proposed action includes reconstruction of U.S. Route 45 within the project limits to meet the established project purpose and need. This includes two travel lanes in each direction at twelve feet wide separated by a curbed median that is typically twenty-two feet wide and varies depending on location, with auxiliary turn lanes at intersections. This also includes a U.S. Route 45 west bypass of the Millburn Historic District for approximately 1.5 miles from Country Place on the south to north of Independence Boulevard on the north. The project is located within the Villages of Lindenhurst and Old Mill Creek as well as unincorporated portions of Lake County within Antioch, Lake Villa, Newport and Warren Townships.

U.S. Route 45 as well as IL Route 173 and IL Route 132 are Strategic Regional Arterial (SRA) roadways and Class II truck routes under the jurisdiction of the Illinois Department of Transportation (IDOT). U.S. Route 45 serves as a vital north-south link from the Wisconsin border south to Chicago's northern suburbs. The intersecting roadways of Grass Lake Road, Millburn Road, and Sand Lake Road are minor arterials under the jurisdiction of Lake County Department of Transportation predominantly running east-west.

The project development process incorporated a Context Sensitive Solutions (CSS) project development approach. Through development of a Public Involvement Plan (PIP) for the project, stakeholders were provided a range of opportunities to be informed and provide input to the Project Study Group that was comprised of the Lake County Division of Transportation (LCDOT), the Illinois Department of Transportation (IDOT) and the Federal Highway Administration (FHWA). These stakeholder involvement opportunities included two public meetings, one public hearing (scheduled for 2013), a Community Advisory Group (CAG), and multiple individual meetings with communities, agencies, and organizations as discussed within this document.

With respect to a U.S. Route 45 bypass of the Millburn Historic District, an initial range of eighteen (18) potential alternatives were identified. Through a progressive alternatives development, evaluation, and screening process, which included multiple meetings with the CAG and individual agencies/organizations, the initial potential alternatives were first narrowed to nine (9) preliminary alternatives, then three (3) finalist alternatives as presented at Public Meeting #2, and then ultimately selection of the preferred west bypass alternative as described in this document. With respect to the sections of U.S. Route 45 north and south of the Millburn Bypass, the proposed improvements have been developed to a concept level of detail to establish an environmental footprint for improvements likely to be implemented by the year 2040 within the established logical termini (IL Route 132 and IL Route 173) for this project.

1.0 Purpose and Need for Action

1.1 Purpose of the Project

The purpose of the project is to provide an improved transportation system to address capacity, mobility, safety, and operational deficiencies along U.S. Route 45 from IL Route 132 to IL Route 173 in Lake County, Illinois (See Appendix A, Exhibit 1 Project Location Map).

1.2 Project Location

The project location is along U.S. Route 45 with a northern terminus at IL Route 173 and a southern terminus at IL Route 132, a distance of approximately 5.5 miles. Both of these intersections are signalized. U.S. Route 45 is an existing two lane roadway (one in each direction) within the project limits typically with shoulders and open ditch drainage as shown in Figure 1-1.

U.S. Route 45 as well as IL Route 173 and IL Route 132 are classified as Other Principal Arterials and are all under the jurisdiction of the Illinois Department of Transportation (IDOT). All three roadways are also classified as Strategic Regional Arterial (SRA) roadways and are on the National Highway System (NHS). These are roadways one step below the expressway system that typically carries both local and long distance trips, and higher amounts of truck traffic by virtue of their relationship and connection to the regional transportation system. U.S. Route 45 is a designated Class II Truck Route.



Figure 1-1. U.S. Route 45 North of Sand Lake Road

There are five signalized intersections within the project limits at IL Route 132, Sand Lake Road, Millburn Road, Grass Lake Road, and IL Route 173. Only the signalized intersections at Grass Lake Road and Millburn Road are coordinated where the signals are offset by approximately 330 feet.

With reference to Appendix A - Exhibit 1, Grass Lake Road, Millburn Road and Sand Lake Road are east-west Minor Arterials. Grass Lake Road and Millburn Road “tee” into U.S. Route 45 within the Millburn Historic District and proceed west and east respectively. The Millburn Historic District, listed on the National Register of Historic Places (NHRP), encompasses the intersections of U.S. Route 45 at Millburn Road and Grass Lake Road. Grass Lake Road serves the Village of Lindenhurst and Antioch with existing land use along Grass Lake Road currently developed with residential and commercial areas. Millburn Road serves the Village of Old Mill Creek with existing land use along Millburn Road, largely farm land and open space. Millburn Road “tees” into Hunt Club Road on the east which disperses traffic north and south. Sand Lake

Road connects with IL Route 132 on the west within the Village of Lindenhurst, and Stearns School Road on the east. Grass Lake Road (County Hwy A10), Millburn Road (County Hwy A14) and Sand Lake Road (County Hwy A74) are all under Lake County Division of Transportation (LCDOT) jurisdiction. Haven Lane, Heritage Drive and Independence Boulevard are under Village of Lindenhurst jurisdiction.

The project lies within the municipal boundaries of the Village of Lindenhurst predominantly on the west, and the Village of Old Mill Creek predominantly on the east. The project also lies within unincorporated areas of Lake County within Lake Villa, Newport, and Warren Townships. The U.S. Route 45 corridor traverses the Millburn Historic District which is wholly contained within the Village of Old Mill Creek as shown on Exhibit 6 (Appendix A). The Millburn Historic District as shown in Figure 1-2 is comprised of 18 historic buildings and was listed on the National Register of Historic Places (NRHP) in 1979. This area is locally known as the Central Millburn Historic District. There is an additional area to the south locally known as the Southern Millburn Historic District, which is not listed on the NRHP.

Existing land use along U.S. Route 45 within the project limits is a combination of agricultural, residential, light commercial, and recreational. The area west of U.S. Route 45 is predominantly residential subdivisions while the areas east of U.S. Route 45 are predominantly agricultural with some forested natural habitats along North Mill Creek. The Lake County Forest Preserve District (LCFPD) has several holdings along U.S. Route 45 with Raven Glen and Ethel's Woods north of Miller Road to the west and east of U.S. Route 45 respectively, and McDonald Woods south of Grass Lake Road to the west of U.S. Route 45.



Figure 1-2. U.S. Route 45 within Millburn Historic District

This project connects logical termini from IL Route 132 to IL Route 173 such that environmental issues can be evaluated on a broad scale. This project has independent utility and will function without any requirements for additional improvements elsewhere. The project will not restrict consideration of alternatives for other reasonably foreseeable transportation improvement initiatives to this facility or other adjacent facilities.

1.3 Project History

In the mid 1990s the Chicago Area Transportation Study (CATS) and the Northeastern Illinois Planning Commission (NIPC), now known collectively as the Chicago Metropolitan Agency for Planning (CMAP), adopted the 2010 Regional Transportation Plan (RTP), which was the first regional effort to identify a system of SRA roadways as essential components of the regional transportation system that operate one step below the expressway system. As a result of this designated system of SRA roadways, IDOT initiated a series of SRA feasibility studies to evaluate long term improvement needs and recommendations for these roadways. The U.S. Route

45 corridor from IL 120 (Belvidere Road) to the Illinois/Wisconsin border was designated as an SRA roadway in the 2010 RTP and remains a designated SRA roadway as part of the CMAP GO TO 2040 Comprehensive Regional Plan.

The IDOT SRA study for the U.S. Route 45 corridor was completed in 1995 and recommended the following primary improvements within the current project limits:

- From IL 132 to Miller Road, two through lanes in each direction with an 18 foot wide raised median within 120 feet of right-of-way.
- From Miller Road to IL 173, two through lanes in each direction with a 30 foot raised median within 120 feet of right-of-way.
- A west bypass of U.S. Route 45 to avoid the Millburn Historic District. IDOT subsequently recorded a west bypass alignment and purchased one parcel of property on Haven Lane.

In 1996, IDOT completed an Environmental Assessment (EA) and Combined Design Report (CDR) for U.S. Route 45 just south of this project, from IL Route 132 to IL Route 176. The proposed action as part of this previous EA included reconstruction of U.S. Route 45 to provide generally two lanes of traffic in each direction separated by a variable width median. This project is being implemented in stages with several sections completed and other sections under construction or anticipated for future construction.

Traffic volumes along U.S. Route 45 have increased considerably over the past 35 years due to regional growth in population and employment. This traffic growth history is shown in Table 1-1.

Table 1-1. U.S. Route 45 Historical Average Daily Traffic (ADT) Volumes

Location	Year					
	1974	1983	1988	1992	1996	2009
U.S. 45 - South of IL Route 173	3,200	4,500	5,600	6,700	7,000	8,900
U.S. 45 - North of Grass Lake Road	3,200	4,250	6,000	6,900	7,900	10,100
U.S. 45 - North of Sand Lake Road	5,200	6,500	8,600	10,700	11,500	16,000
U.S. 45 - North of IL Route 132	5,000	6,500	8,100	10,000	11,000	16,000

Based on this historic traffic growth, LCDOT initiated planning efforts that resulted in the Lake County “Year 2020 Transportation Priority Plan” which identified a system of roadway, transit and bikeway facilities needed by the year 2020. One of the transportation improvement focus areas was elimination of roadway bottlenecks in the County which included the intersection of U.S. Route 45 and Millburn Road/Grass Lake Road, locally known as the “Millburn Strangler”. Since this project was identified through the Lake County long range planning process as a much needed project, the County initiated preliminary engineering and environmental studies (i.e.; Phase I Engineering) with the County’s share of the Collar County Empowerment fund.

This project is included in the Fiscal Year (FY) 2010-2015 Transportation Improvement Program (TIP) endorsed by the Policy Committee of the Chicago Metropolitan Agency for Planning

(CMAP), the Metropolitan Planning Organization (MPO) for the region in which the project is located. The FY 2010-2015 TIP number for this project is 10-06-0020. The U.S. Route 45 at Millburn Road/Grass Lake Road section of the project is funded for construction as part of Lake County's 2010 to 2015 Highway Improvement Program. In addition, U.S. Route 45 from IL Route 132 to south of the Millburn Bypass is included in the IDOT Fiscal Year 2013 to 2018 Multi-Year Program as an Illinois Jobs Now project for Phase II engineering. The current Environmental Assessment study process began in January 2009.

1.3.1 Regional Growth

CMAP, with data from the 2010 U.S. Census Bureau and regional land use development information, prepared population and employment projections for the northeastern Illinois region. Table 1-2 shows population and employment growth for Lake County and municipalities adjacent to or near the project study area by the year 2040. Lake County is projected to grow 35.6 percent in population and 22.6 percent in employment by the year 2040. With the exception of Village of Lindenhurst population growth projections, all municipalities adjacent to or near the project study area are projected to have a higher population growth than the Lake County average.

Table 1-2. Projected Population and Employment Growth

Location	Population Growth			Employment Growth		
	2010	2040	% growth	2010	2040	% growth
Lake County	703,462	953,673	35.6	384,25	470,939	22.6
Lindenhurst	14,264	17,239	20.9	2,142	2,934	37.0
Old Mill Creek	178	5,058	2,741.6	1,183	1,388	17.3
Lake Villa	8,741	21,046	140.8	3,613	4,354	20.5
Antioch	14,430	26,624	84.5	5,226	6,055	15.9
Fox Lake	10,579	18,063	70.74	4,432	5,175	16.8
Gurnee	31,295	49,201	57.2	20,156	28,130	39.6

Note: Employment data are CMAP 2010 estimates.

Within the study area, the Village of Lindenhurst is projected to grow by 20.9 percent in population and 37.0 percent in employment from the year 2010 to the year 2040. The Village of Old Mill Creek, consistent with their comprehensive plans, is projected to grow by 2,741.6 percent in population and 17.3 percent in employment by 2040. The community northwest of the project area, the Village of Antioch, is anticipated to grow by 84.5 percent in population and 15.9 percent in employment by the year 2040. Based on these population/employment projections, travel demand is expected to increase by the year 2040.

1.4 Need for the Proposed Action

1.4.1 Capacity

Travel demand along U.S. Route 45 was evaluated for existing 2009 and projected 2040 conditions to determine existing and future travel performance. The 2009 traffic was obtained by actual field traffic counts and the 2040 traffic projections were prepared by CMAP based on the projected population and employment growth in the project area. A summary of the 2009 ADT and the projected 2040 (No-Build) ADT is included below in Table 1-3. The ADT represents the total traffic in both directions over a 24 hour period at a given location. The 2040 No-Build traffic volumes are the projected traffic volumes for the year 2040 with no improvements made to U.S. Route 45.

Another factor in travel performance is the mix of vehicles utilizing any given roadway. As noted above, the percentage of truck traffic is typically higher for SRA roadways by virtue of their relationship and connection to the regional transportation system. Based on IDOT Average Annual Daily Traffic (AADT) data, the percentage of truck traffic utilizing U.S. Route 45 within the project area, as a combination of single unit (SU) and multi unit (MU) trucks, ranges from approximately 8.5 percent to 14.5 percent depending on the time of day and the location.

Table 1-3. U.S. Route 45 Traffic Volumes (ADT)

Location	ADT	
	2009	2040 No-Build
U.S. Route 45 at IL Route 173		
North Leg	6,200	14,000
South Leg	8,900	19,000
East Leg	15,400	21,000
West Leg	16,300	23,000
U.S. Route 45 at Grass Lake Road		
North Leg	10,100	21,000
South Leg	16,000	27,000
East Leg	n/a	n/a
West Leg	9,700	18,000
U.S. Route 45 at Millburn Road		
North Leg	16,000	27,000
South Leg	16,000	30,000
East Leg	9,200	14,000
West Leg	n/a	n/a
U.S. Route 45 at Sand Lake Road		
North Leg	16,000	30,000
South Leg	16,000	30,000
East Leg	11,900	17,000
West Leg	11,800	15,000
U.S. Route 45 at IL Route 132		
North Leg	16,000	30,000

Location	ADT	
	2009	2040 No-Build
South Leg	19,500	28,000
East Leg	34,600	39,000
West Leg	19,400	24,000

The Highway Capacity Software (HCS–Version 5.5) computer program was used to analyze travel performance at the five existing signalized intersections within the project limits for the peak one hour morning (AM) and evening (PM) travel periods. The HCS software provides a measure of congestion called Level of Service (LOS). LOS is a letter grade from A (best) through F (worst) that represents the average amount of delay a single vehicle experiences at an intersection as expressed in seconds per vehicle (see Table 1-4). The HCS analysis was prepared for both existing 2009 and projected 2040 (No-Build) traffic volumes and vehicle mix (passenger cars and trucks) as shown in Table 1-5.

Table 1-4. Level Of Service (LOS) Definition

LOS	Average Delay
A	≤ 10
B	> 10 - 20
C	> 20 - 35
D	> 35 - 55
E	> 55 - 80
F	> 80

The IDOT Bureau of Design and Environment (BDE) manual requires a LOS C or better for an SRA roadway such as U.S. Route 45. In some circumstances, LOS D may be allowed in urban areas based on unavoidable design constraints or substantial potential adverse socio-economic or environmental impacts. Table 1-5 below provides the LOS for the five signalized intersections along U.S. Route 45 for 2009 existing conditions and projected 2040 (No-Build) conditions for the AM and PM peak hour travel periods.

Table 1-5. Intersection Level Of Service (LOS)

INTERSECTION	2009				2040 (No-Build)			
	LOS		DELAY		LOS		DELAY	
	AM	PM	AM	PM	AM	PM	AM	PM
U.S. 45 @ IL 173	E	D	57.4	49.2	F	F	141.9	139.4
U.S. 45 @ Grass Lake Rd.	C	E	27.5	63.0	F	F	127.1	287.6
U.S. 45 @ Millburn Rd.	F	C	86.9	34.1	F	F	403.0	216.5
U.S. 45 @ Sand Lake Rd.	D	D	36.5	38.5	F	F	96.9	112.1
U.S. 45 @ IL 132	C	C	32.6	31.9	D	F	42.3	92.1

As shown in Table 1-5 all of the intersections along U.S. Route 45 operate below the required LOS C in either the AM or PM peak hours for the year 2009, with exception of: U.S. Route 45 at Grass Lake Road (AM), U.S. Route 45 at Millburn Road (PM), and U.S. Route 45 at IL Route

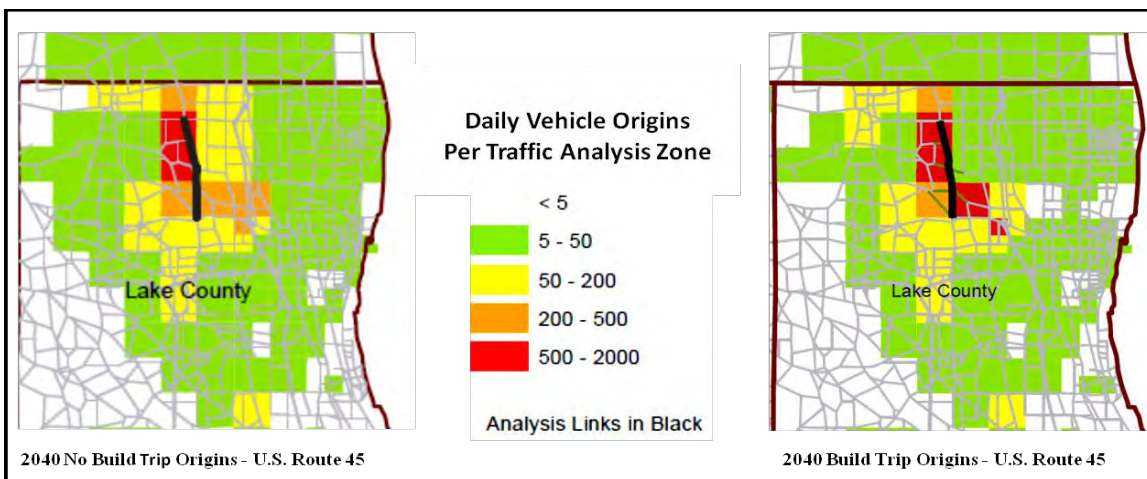
132 (AM &PM). The LOS degrades to F based on 2040 (No-Build) conditions for all of the five intersections in both the AM and PM peak hours with exception of the AM peak hour at the intersection of U.S. Route 45 with Illinois Route 132. The average delay increases substantially in several instances. On this basis, if no capacity improvements are made to U.S. Route 45 between IL Route 132 and IL Route 173, traffic congestion and motorist delay will continue to increase through the year 2040.

1.4.2 Mobility

Whereas intersection capacity and LOS is a strict and important measure of traffic performance, mobility is a larger measure of the compatibility of a particular roadway link with overall travel desires (origins and destinations) in a given area. In order to understand the general travel desires and travel patterns in the project area, and assess the effect that potential improvements to U.S. Route 45 will have in this regard, a Select Link analysis was performed by CMAP for the overall project, and a separate Origin/Destination (O/D) study was performed by LCDOT for U.S. Route 45 at Millburn Road/Grass Lake Road within the Millburn Historic District.

The Select Link analysis utilizes the CMAP regional travel demand model, and available regional O/D trip information, to identify the geographical origins of traffic that would desire to use U.S. Route 45 within the project limits. The objective of this analysis is to identify possible mobility issues that may not be apparent by traffic counts and projections alone due to congested or constrained existing conditions that can cause motorists to seek alternate routes. The results of the CMAP 2040 Select Link analysis are included in Figure 1-3 below. This figure shows the volume of daily vehicle “trip origins” from adjacent geographical areas that would use this section of U.S. Route 45 based on projected 2040 No-Build and Build (improved U.S. Route 45) conditions. This information shows that under optimum travel conditions, a large portion of the vehicles that would use or desire to use this section of U.S. Route 45 have a regional travel pattern that is aligned in a northwest to southeast direction, and vice versa.

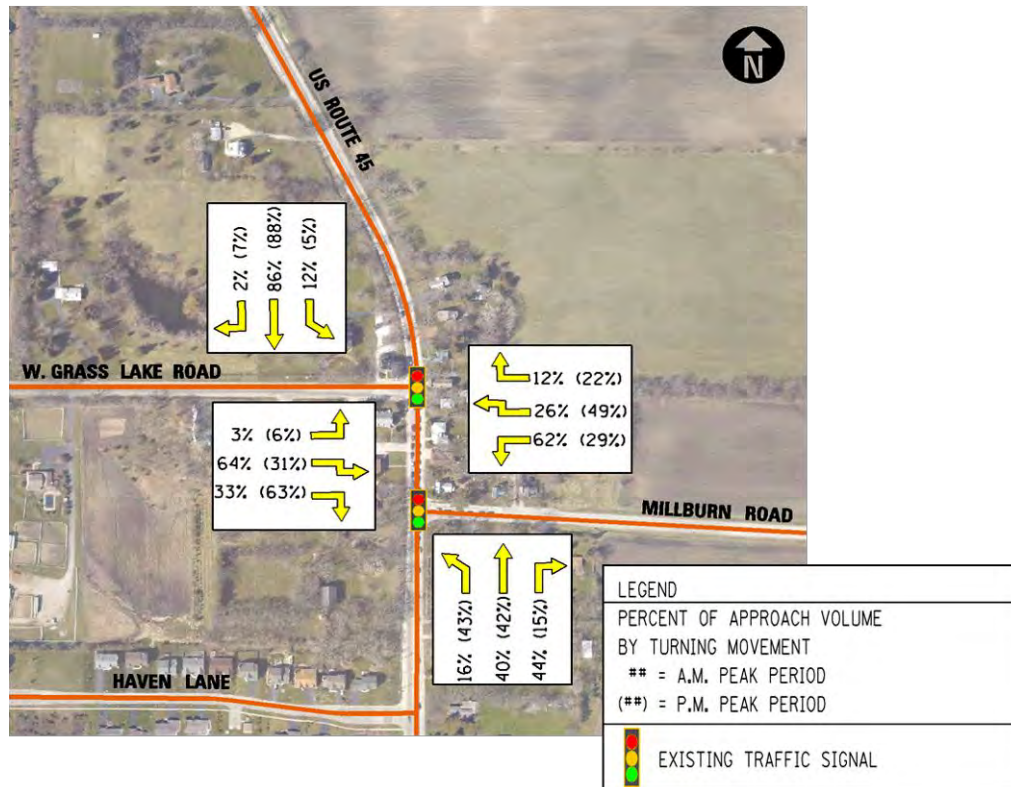
Figure 1-3. 2040 Trip Origins – U.S. Route 45 (Black)



The O/D study was performed at the existing offset intersections of Grass Lake Road and Millburn Road with U.S. Route 45 to compare this site specific information to the overall Select Link analysis performed, since this location experiences considerable congestion on a daily basis.

An O/D study helps determine the “path” vehicles travel through unique or complex conditions that, when coupled with traffic volumes, can highlight the cause of existing traffic congestion, and be used to ensure proposed design configurations are effective. Figure 1-4 below shows on a percentage basis how vehicles are traveling through these intersections as they approach from each direction.

Figure 1-4. Origin/Destination Study



Based on the O/D study, the following general observations were made:

- The majority of vehicles approaching this location from the north on U.S. Route 45 continue south on U.S. Route 45 during both the AM and PM peak periods.
- The majority of vehicles approaching this location from the west on Grass Lake Road continue east on Millburn Road in the AM and turn south on U.S. Route 45 in the PM.
- The majority of vehicles approaching this location from the east on Millburn Road turn south on U.S. Route 45 in the AM and continue west on Grass Lake Road in the PM.
- Vehicles approaching this location from the south on U.S. Route 45 either continue north on U.S. Route 45 and/or turn east on Millburn Road in the AM. In the PM, vehicles either turn west onto Grass Lake Road or continue north on U.S. Route 45. A minority of vehicles approaching this location turn west onto Grass Lake Road in the AM and turn east onto Millburn Road in the PM.

The results of the O/D study validate the Select Link analysis results showing a general regional northwest to southeast (and vice versa) travel pattern in the project area. Based on this regional travel pattern, it is likely that some of the east/west traffic crossing U.S. Route 45 at the Millburn Road/Grass Lake Road location, and potentially other locations does so to utilize other area north/south roadways and avoid existing U.S. Route 45 capacity constraints.

If no improvements are made to U.S. Route 45 by the year 2040, the amount of east/west traffic, including truck traffic, crossing U.S. Route 45 will likely continue to increase on lower classification roadways such as Grass Lake Road, Millburn Road and Sand Lake Road. This is likely to be alleviated to some degree by improvements to U.S. Route 45 that would be compatible with regional travel patterns.

1.4.3 Safety

Crashes that occurred along U.S. Route 45 within the project limits have been analyzed for the five year study period from 2006 to 2010. Crashes have been tabulated by year, crash type, fatal and severe injuries, and roadway conditions to ascertain overall trends and determine if any particular statistical overrepresentation exists that would warrant special countermeasure consideration.

The FHWA 2010 Illinois Five Percent Severe Crash Report was prepared based on statewide crash data from 2004 to 2008. This report identifies the most severe 5 percent crash locations throughout the State of Illinois in terms of roadway intersections and roadway sections. As part of this report, there were no intersections along U.S. Route 45 within the project limits identified within the top 5 percent of intersections with the most severe safety needs in the State of Illinois. An approximate 4.5 mile roadway section of IL Route 173, that crosses U.S. Route 45, was identified within the top 5 percent of roadway sections with the most severe safety needs in the State of Illinois in the 2008 and 2009 Five Percent Reports, but not the 2010 Five Percent Report.

Crash data for this project was obtained through the Lake County Traffic Crash Location System (TCLS), which is a compilation of all crash statistics and crash events within Lake County. As displayed below in Table 1-6, there were 562 total crashes along U.S. Route 45 from IL Route 132 to IL Route 173 during the five-year study period. The most predominant crash types were Rear End (43 percent), Turning (18 percent), Animal (10 percent), and Fixed Object (10 percent). During the study period there were zero Type K (fatality) crashes and 8 Type A (severe injury) crashes resulting in 13 severe injuries.

Table 1-6. Crash Summary - U.S. Route 45; IL Route 132 to IL Route 173

Year	Crash Type									Total Crashes	Severe Crashes	
	Rear End	Angle	Side swipe	Turning	Over Turned	Head On	Animal	Fixed Object	Other		Type K	Type A
2006	45	8	7	25	2	1	12	15	5	120	0	2
2007	63	12	9	26	1	1	19	12	3	146	0	3
2008	43	10	10	20	2	4	13	13	4	119	0	1
2009	47	7	5	19	0	0	7	9	1	95	0	1

Year	Crash Type									Total Crashes	Severe Crashes	
	Rear End	Angle	Side swipe	Turning	Over Turned	Head On	Animal	Fixed Object	Other		Type K	Type A
2010	41	10	3	10	1	0	6	10	1	82	0	1
Total	239	47	34	100	6	6	57	59	14	562	0	8
%	43%	8%	6%	18%	1%	1%	10%	10%	2%	100%		

Of the total 562 crashes during the study period, 368 crashes (65 percent) occurred at the five signalized intersections within the project limits, with 64 crashes (11 percent) occurring at non-signalized intersections and 130 crashes (23 percent) occurring along sections of U.S. Route 45 in between intersections. The intersections with the most crashes were at IL Route 132 (155 crashes), IL Route 173 (74 crashes), and Sand Lake Road (74 crashes). These three signalized intersections had a total of 303 crashes during the study period which accounted for 54 percent of all crashes. There were 65 crashes (12 percent) at the Millburn Road and Grass Lake Road signalized intersections.

Approximately 21 percent of the crashes occurred when the pavement was wet and 30 percent of the crashes occurred during night/dark conditions. In addition, approximately four percent of the crashes involved trucks (SU and MU) with none of these truck crashes being Type K or Type A crashes. These percentages are not considered to be an overrepresentation of these types of crash occurrence conditions such that specific countermeasures are warranted.

The high incidence of rear-end and turning crashes (43 percent of all crashes) is an indication of general congestion, particularly at the major signalized intersections where 65 percent of all crashes in the study area have occurred. If no improvements are made to U.S. Route 45, the overall crash incidents is expected to increase over time based on the projected growth and development within the project area, and the resulting increase in travel demand.

1.4.4 Operational Deficiencies

The existing roadway geometry was examined using current IDOT policies and standards. Areas where the need for improvement is greatest along U.S. Route 45 were identified in order to provide a basis for defining future roadway requirements capable of meeting future transportation demand. U.S. Route 45 north of Grass Lake Road is a transition area for posted speed limits from 55 mph to the north to 40 mph at the north end of the Millburn Historic District due to geometric constraints. The existing horizontal curve just north of Grass Lake Road has a radius of 1,130 feet with approximately 5.1 percent of super-elevation (i.e.; banking) which exceeds normal 4 percent maximum super-elevation for open suburban arterials (shoulders) likely to become closed suburban (curb and gutter) within the next 10 years. This geometry is sufficient for a speed of 45 mph, although the IDOT BDE design criteria for SRA roadways requires a 50 mph design speed.

Intersection sight distance is restricted for eastbound vehicles on Grass Lake Road approaching U.S. Route 45 due to the historic building in the northwest corner of this intersection. Sight distance to the north at this intersection is limited for vehicles making right turns onto U.S. Route 45 where there is a permitted right turn on red.

Pavement condition information for U.S. Route 45 was obtained from IDOT. Based on IDOT's Condition Rating Survey (CRS) for 2012, U.S. Route 45 within the project limits has a CRS rating of 5.1, which is indicative of pavement in "fair" condition that will likely necessitate improvement over the short term.

The intersections of U.S. Route 45 at Millburn Road (east) and Grass Lake Road (west) lie within the Millburn Historic District and are offset by approximately 330 feet. In addition to the results from the O/D study as noted above, the configuration with Millburn Road being located south of Grass Lake Road causes considerable conflict with opposing left turn vehicles on U.S. Route 45. Due to the limited right-of-way in this area, separate northbound and southbound left turn lanes cannot be provided. Although these separate signalized intersections operate as a "coordinated" signal system, there is substantially more traffic congestion than would otherwise occur under normal signal operations due to the need to "clear" the northbound and southbound left turn vehicles in between the intersections with each signal phase.

2.0 Alternatives

This section describes the alternatives considered for the U.S. Route 45 from 1,000 ft north of IL Route 132 to IL Route 173 including the Millburn Bypass. As discussed below, reasonable alternatives were evaluated based on their ability to satisfy the purpose and need for the project. Alternatives that did not satisfy the purpose and need for the project, or that would have unacceptable impacts in comparison to other alternatives were dismissed from further consideration as part of a multi-stepped alternatives development and evaluation process based on stakeholder input and engineering evaluation. The alternatives development and evaluation process was coordinated through the NEPA/404 Merger process. Refer to Appendix C for summaries of the NEPA/404 Merger meetings related to the alternatives development and evaluation process described below.

2.1 No-Build Alternative

The No-Build Alternative consists of no geometric or capacity improvements to the existing project corridor and intersections within the 2040 planning horizon. Only routine maintenance to keep U.S. Route 45 serviceable would be provided.

Although the No-Build Alternative would not require acquisition of any right-of-way and would avoid impacts to the natural environment and to agricultural, residential, and commercial properties, the existing traffic congestion and associated safety and traffic operational concerns, both within and outside of the Millburn Historic District, would not be addressed. As discussed in Chapter 1, with population and employment growth anticipated to be approximately 36 percent and 23 percent respectively in Lake County by the year 2040, traffic volumes are also expected to continue to increase along U.S. Route 45, and other east-west roadways that cross U.S. Route 45. The projected No-Build traffic volumes along U.S. Route 45 for the year 2040 will range from 14,000 to 39,000 vehicles per day.

As a result, the No-Build alternative would result in increased traffic congestion within the project corridor, which would result in increased travel delay costs affecting everyday commuters and businesses, and would be expected to result in a comparable increase in traffic safety issues. On this basis, the No-Build Alternative does not satisfy the purpose and need for the project.

2.2 Congestion Management Process

The provisions of *23 CFR 450.320(a) and (b)* places restrictions on the use of federal funds for projects in Transportation Management Areas (TMAs) designated as non-attainment for carbon monoxide and/or ozone. In these areas, federal funds may not be programmed for any project that will increase capacity for single occupancy vehicles (SOV) unless the project is addressed through a Congestion Management Process (CMP). The CMP is required to provide an appropriate analysis of alternatives to the proposal for adding SOV capacity, including all reasonable congestion management strategies. If the analysis demonstrates that other alternatives and/or congestion management strategies cannot fully satisfy the need for additional capacity and

that, therefore, the additional SOV capacity is warranted, the CMP must identify all reasonable strategies that will maintain the functional integrity of the additional lanes.

Individual projects involving addition of SOV capacity were evaluated, selected, and prioritized in the course of developing the Fiscal Year 2010-2015 TIP and the long range GO TO 2040 Comprehensive Regional Plan (CRP) for Northeastern Illinois. The development process for the TIP and RCP through the Chicago Metropolitan Agency for Planning (CMAP) constitutes the CMP for Northeastern Illinois. This process documents warranted projects for adding SOV capacity in Northeastern Illinois, and also documents that regional and/or project specific alternatives such as Transportation Demand Management (TDM) measures, High Occupancy Vehicle (HOV) measures, Transit Capital Improvements, Growth Management, Intelligent Transportation System (ITS) including traffic surveillance and incident management, would not obviate the need for adding SOV capacity. The Northeastern Illinois CMP is documented on the CMAP website at: <http://www.cmap.illinois.gov/congestion-management-process>

For this project, it has been determined that a stand-alone congestion management alternative will not satisfy the project purpose and need and, therefore, adding SOV capacity is warranted. The following reasonable project specific congestion management strategies have been incorporated into this project which will serve to enhance and sustain the overall transportation benefit from this project:

- A 10 feet wide bike path will be accommodated along the west side of U.S. Route 45, and a five feet wide sidewalk will be accommodated along the east side of U.S. Route 45.
- A 10 feet wide bike path and a five feet wide sidewalk will also be accommodated along the major cross routes within the limits of the proposed improvement.

On this basis, this project results from the CMP for Northeastern Illinois as a warranted project for adding SOV capacity and reasonable congestion management strategies have been incorporated into the project to sustain its effectiveness. Congestion management strategies alone will not satisfy the purpose and need for this project and therefore are not considered further in this document as stand-alone alternatives.

2.3 Build Alternatives

For purposes of distinguishing the discussion of the Millburn Bypass alternatives from the remainder of the project corridor, the discussion of alternatives is presented in three sections along U.S. Route 45. (Refer to Appendix A, Exhibit 1 - Project Location Map).

- The South Section is from 1,000 ft north of IL Route 132 to Country Place.
- The Central Section is from Country Place to north of Independence Boulevard, also referred to as the Millburn Bypass.
- The North Section is from north of Independence Boulevard to IL Route 173.

In order to accommodate the projected 2040 travel and capacity demand for U.S. Route 45, two through lanes in each direction are required, in addition to dedicated left and right turn auxiliary lanes. The typical roadway section includes two 12 feet wide travel lanes in each direction separated by a 22 feet wide barrier curbed median (widens to 30 feet at intersections as

necessary), accommodations for a 10 feet wide bike path along the west side of the roadway, and a five feet wide sidewalk along the east side of the roadway, within the proposed right-of-way, which varies in width as necessary. Major cross streets include Sand Lake Road (County Highway 74), Grass Lake Road (County Highway A10), Millburn Road (County Highway A14) and IL Route 173.

2.3.1 South Section – IL Route 132 to Country Place

The south project termini is 1,000 feet north of IL Route 132 where the proposed improvement will match the proposed improvement per a previous IDOT Environmental Assessment (i.e.; U.S. Route 45; IL Route 176 to IL Route 132), and extends north to Country Place, a distance of approximately 1.8 miles. This section includes one existing signalized intersection of Sand Lake Road with U.S. Route 45. Two Build Alternatives were considered in the South Section, both of which would provide two through lanes in each direction separated by a median as described above. South Alternative A maintains the existing roadway centerline alignment and includes symmetrical widening to both the east and west. South Alternative B includes a shift of the proposed centerline to the west for a portion of the South Section.

South Alternative A: As noted above, this alternative utilizes the existing roadway centerline and includes symmetrical widening to the east and west. Within the South Section, residential subdivisions exist along the east side of U.S. Route 45 from IL Route 132 to Sand Lake Road. The west side of U.S. Route 45 within these limits is predominantly undeveloped and/or agricultural land, with a residential subdivision near Falling Waters Boulevard set back from the roadway. This alternative would likely result in residential relocations as well as considerable acquisition of existing residential property. This alternative meets the purpose and need for the project.

South Alternative B: As noted above, this alternative includes a shift of the proposed centerline to the west within the central portion of the South Section. Development of a westward alignment shift reduces the impacts to existing residential properties and avoids any residential relocations. It also places the roadway further away from the existing residences, which is viewed as a positive with respect to traffic noise considerations. A 12 feet westward alignment shift occurs near Chatham Way and continues north through the Sand Lake Road intersection for several hundred feet. This alternative meets the purpose and need for the project.

While both Alternative A and B within the South Section meet the purpose and need for the project, Alternative B will result in fewer impacts to existing residential property in the South Section. On this basis, South Alternative B was selected as the preferred alternative within the South Section of the project. South Alternative A is not considered further in this document. South Alternative B is shown on Figure 2-1 and Figure 2-2.

Figure 2-1. South Section Alternative B

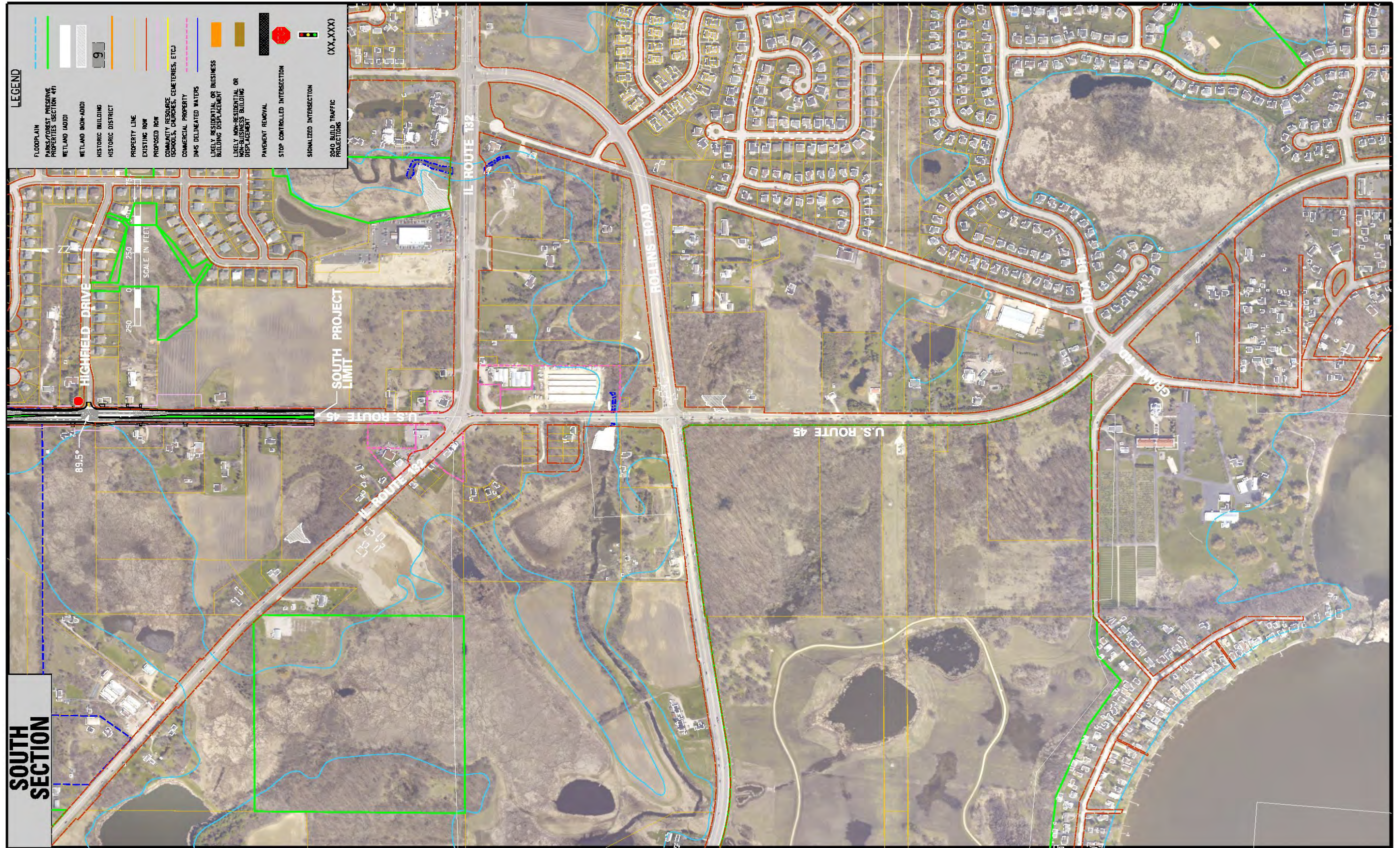
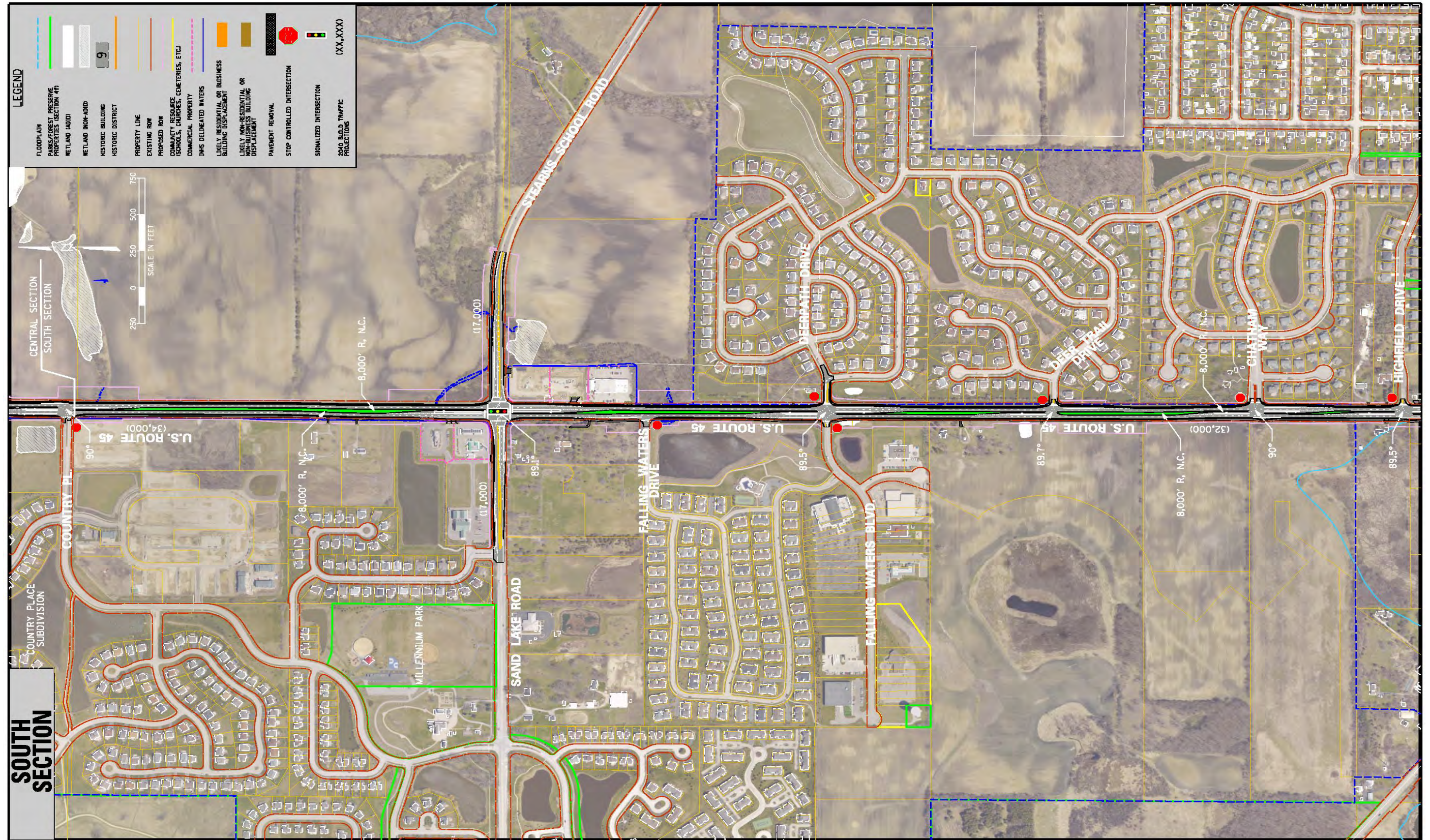


Figure 2-2. South Section Alternative B



2.3.2 Central Section – Country Place to North of Independence Blvd

The Central Section of the project area is from Country Place to north of Independence Boulevard, a distance of approximately 1.5 miles. This area comprises the area within which a U.S. Route 45 bypass of the Millburn Historic District was evaluated. The existing land use in this section consists of residential subdivisions, agricultural land, Lake County Forest Preserve (McDonald Woods), and the Millburn Historic District (Refer to Appendix A, Exhibit 6). The delineated Millburn Historic District includes 18 designated historic buildings in close proximity to the U.S. Route 45 at Grass Lake Road and Millburn Road intersections. Building #1 (Strang House) is located to the east along Millburn Road. Bypass Alternatives considered included a combination of north-south and east-west roadway realignment options.

For the Central Section of the project, given the numerous alternatives considered and the potential socio-economic and environmental impacts/concerns, Context Sensitive Solutions (CSS) project development procedures were utilized to actively seek and provide multiple opportunities for stakeholder input into the overall project development process. A key component of this stakeholder outreach was the establishment of the Community Advisory Group (CAG). The objective of the CAG was to provide input to the Project Study Group (LCDOT, IDOT, and the project consultant in coordination with the FHWA). The Project Study Group was responsible for making all project decisions. Refer to Chapter 4 for a detailed description of the overall agency coordination and public involvement procedures for this project, including a description of the CAG membership and proceedings, which played an integral role in the overall bypass alternatives development and evaluation process.

The alternatives development and evaluation process for the Central Section of the project was structured to work collaboratively with project stakeholders to ensure a full and reasonable range of alternatives was considered. *Initial Potential Bypass Alternatives* were identified based on initial project stakeholder coordination and agency scoping. The initial potential bypass alternatives were screened with respect to whether each would meet the project purpose and need, and/or whether any of the potential bypass alternatives would have obvious unacceptable social, economic, or environmental impacts. The *Preliminary Bypass Alternatives* remaining from this initial screening process were conceptually developed and comparatively evaluated with respect to transportation performance, environmental impacts/concerns, and cost. Based on input from project stakeholders including coordination with federal, state, and local agencies/organizations, the preliminary alternatives were further narrowed to the *Finalist Bypass Alternatives* for more detailed development and comparative evaluation. The finalist bypass alternatives were presented at a Public Meeting on September 2, 2010. The following presents a more detailed summary of the alternatives considered and the preferred alternative within the Central Section of the project.

2.3.2.1 Initial Potential Bypass Alternatives

Public Meeting #1 was held on March 3, 2009. At this public meeting, as well as the initial agency scoping meeting(s) and the initial CAG meeting, stakeholder input was gathered that led to the development of an initial range of 18 potential bypass alternatives.

The various north-south and east-west bypass components that in combination comprised the 18 potential bypass alternatives are shown on Figure 2-3. The three north-south components are labeled with an “A” (U.S. Route 45 west bypass components), “B” (U.S. Route 45 existing alignment components), and “C” (U.S. Route 45 east bypass components). The six east-west components are labeled from “1” to “6”. In general, each north-south bypass component was combined with each east-west bypass component to comprise the initial range of 18 potential bypass alternatives which are shown in Figure 2-4 through Figure 2-6. The exception to this is that alternatives A6, B6, and C6 varied as described below. Each of these 18 potential bypass alternatives is based on general location only and is not based on any engineering design work. The general location information assumed for the purposes of this initial stage of the overall alternatives development and evaluation process is as follows:

General location of the three north-south bypass components:

- The “A” or west bypass component is generally located along the previously platted centerline from the IDOT SRA Study from 1995.
- The “B” or existing U.S. Route 45 component would re-use the existing U.S. Route 45 alignment in combination with east-west bypass components.
- The “C” or east bypass component is generally located east of the heart of the Millburn Historic District, but west of North Mill Creek. This general north-south corridor bisects the defined boundaries of the Millburn Historic District as shown on Figures 2-2 and 2-5.

General location of the six east-west bypass components:

- Component 1 would re-use the existing alignments of Grass Lake Road and Millburn Road.
- Component 2 would include moving both Grass Lake Road and Millburn road to the north to avoid the heart of the Millburn Historic District, although both would pass through the historic district boundaries.
- Component 3 would include moving Millburn Road to the north to meet with Grass Lake Road at U.S. Route 45, passing through the Millburn Historic District.
- Component 4 would include moving Grass Lake Road to the south to meet with Millburn Road at U.S. Route 45, which would not pass through the Millburn Historic District.
- Component 5 would include moving Millburn Road to the south to meet with Haven Lane at U.S. Route 45.
- Component 6 varies depending on which north-south component it is combined with. In combination with north-south component A, east-west component 6 would include a “tee” intersection of Grass Lake Road at U.S. Route 45 and would not extend to the east. In combination with north-south component B, east-west component 6 would include a new roadway from Country Place extending east and north to Crawford Road. In combination with north-south component C, east-west component 6 would include a new roadway from Independence Boulevard extending east to the Wadsworth Road/Hunt Club Road intersection.

Figure 2-3. Initial Potential Bypass Alternatives

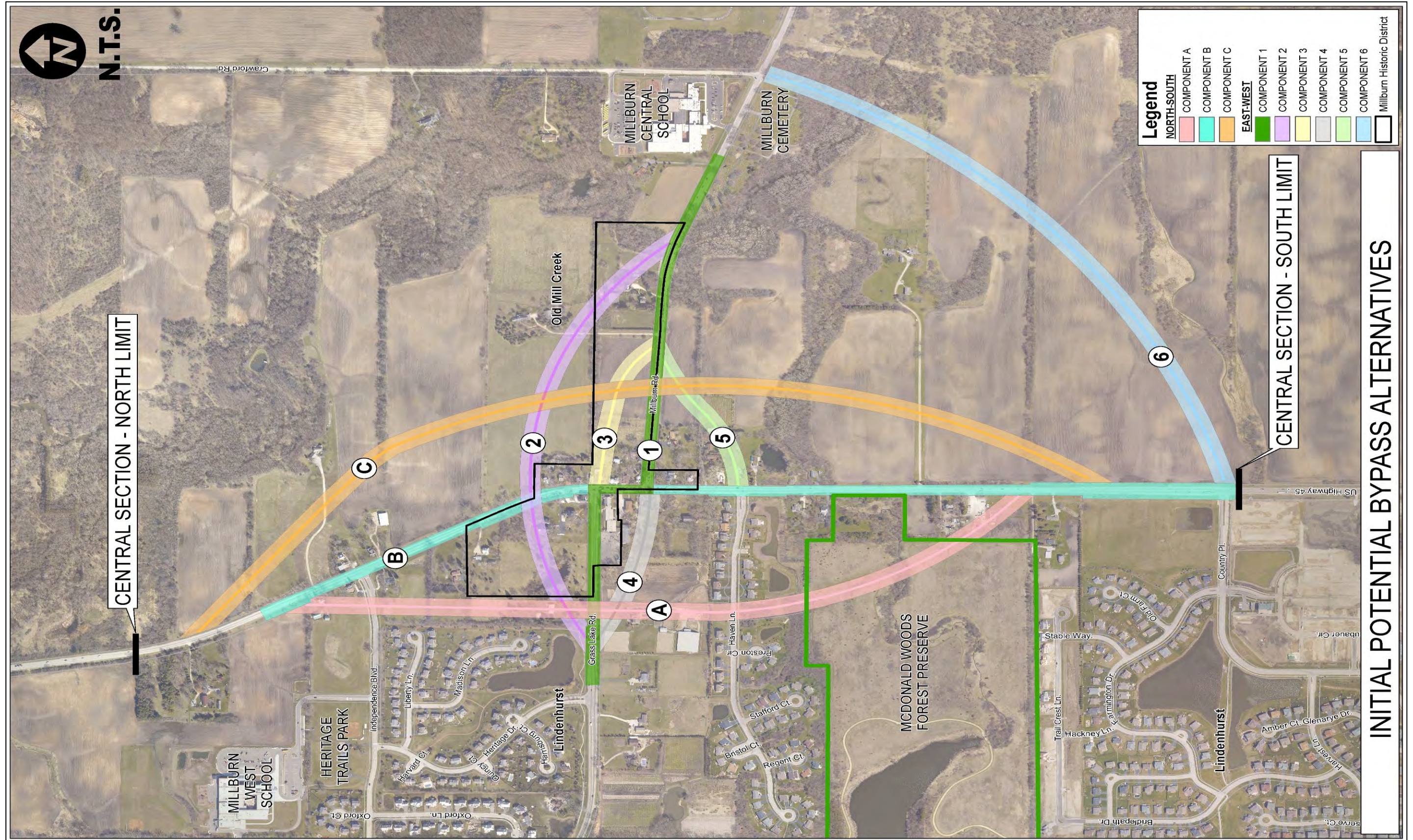


Figure 2-4. Potential West Bypass Alternatives

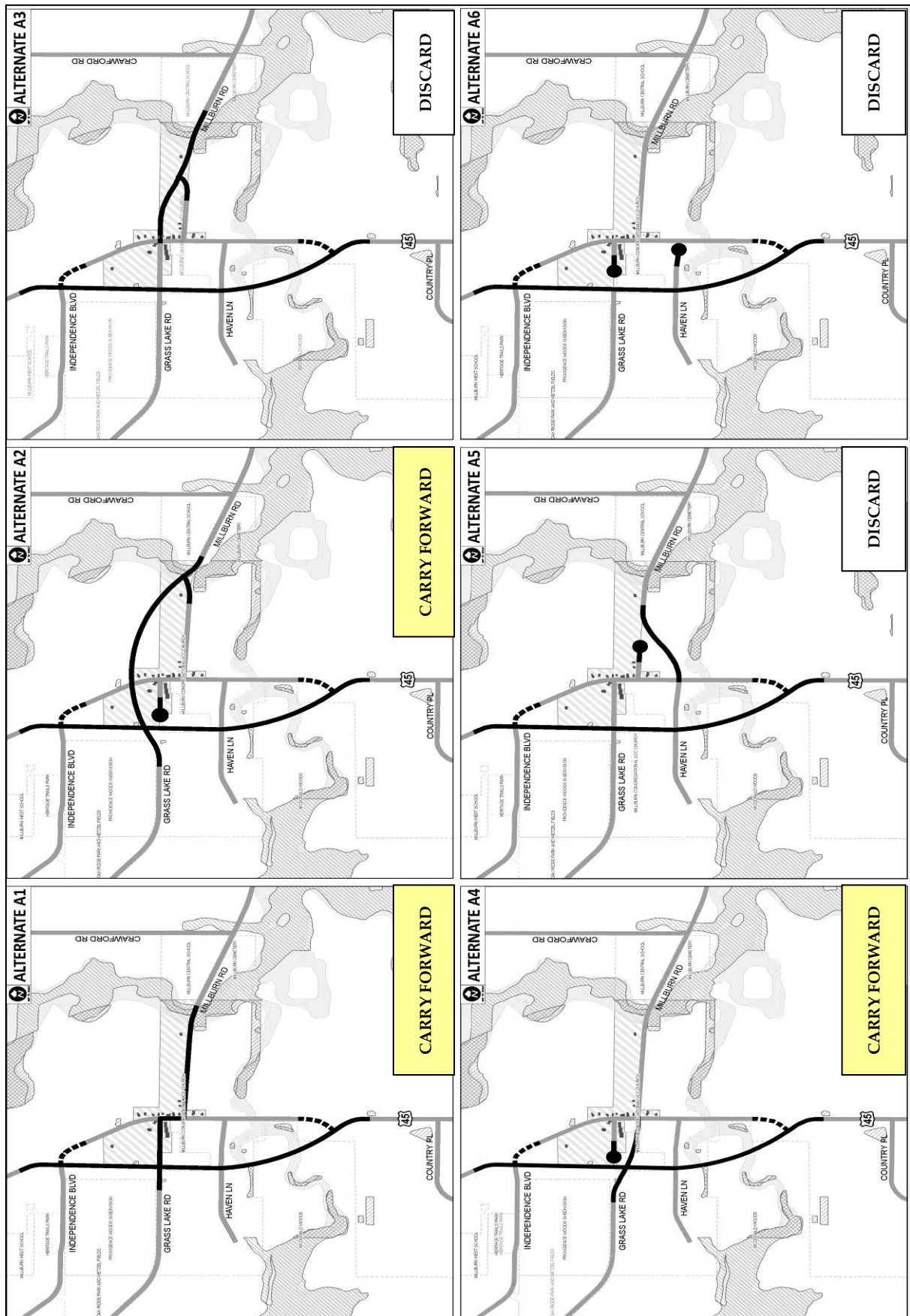


Figure 2-5. Potential Existing Alignment Alternatives

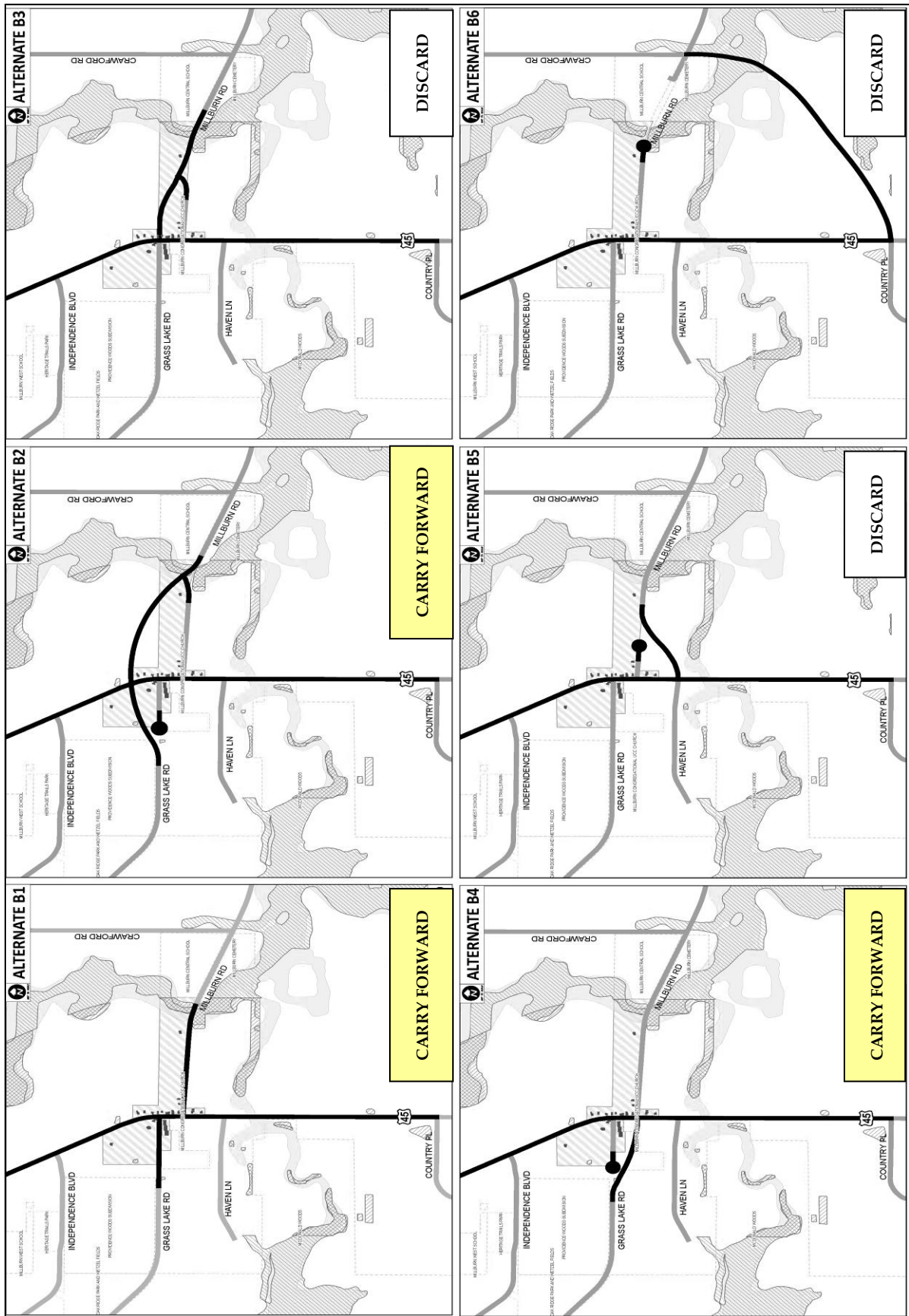


Figure 2-6. Potential East Bypass Alternatives



As part of a workshop held at CAG Meeting #2 on November 3, 2009, stakeholder input was gathered for the initial range of 18 potential bypass alternatives. Refer to Appendix C for the CAG Meeting #2 summary. Based on input received from the CAG and discussions with the Project Study Group, it was determined that 9 alternatives (A3, A5, A6, B3, B5, B6, C3, C5, C6) would not meet the project purpose and need, and/or would result in obvious and unacceptable impacts as compared to other similar alternatives that would avoid such impacts. This was largely based on the east-west components as follows:

- The “3” component would directly impact the “Martin Store” within the Millburn Historic District, which is considered a "structure of primary significance" as described in the national Register of Historic Places nomination form.
- The “5” component would not efficiently accommodate east-west travel demand and would draw regional traffic through a current local and residential road (Haven Lane).
- The “6” component would not efficiently accommodate east-west travel demand with disconnection of east-west routes. Alternative C6 was viewed as not meeting the project purpose and need as a stand-alone alternative.

On this basis, these 9 alternatives were dismissed from further consideration. This was also coordinated through the NEPA/404 Merger process for resource agency concurrence with dismissing these alternatives from further consideration. On this basis, the remaining 9 alternatives (A1, A2, A4, B1, B2, B4, C1, C2, C4) were carried forward as the Preliminary Bypass Alternatives for concept level engineering development and comparative evaluation.

2.3.2.2 Preliminary Bypass Alternatives

The preliminary bypass alternatives were conceptually developed based on the typical roadway cross section as described above, and based on applicable LCDOT and IDOT roadway design criteria. Each of the 9 preliminary bypass alternatives was reviewed by LCDOT and IDOT to ensure an acceptable concept level design for comparative evaluation.

The comparative evaluation was based on the following measurable criteria:

- Transportation Performance
- Environmental Resource Impacts
- Socio-Economic Impacts
- Construction Cost

The results of this comparative evaluation were presented in a Preliminary Impact Evaluation Matrix for the 9 preliminary bypass alternatives, which can be seen in Figure 2-7. The Preliminary Impact Evaluation Matrix was color coded to aid in showing the relative comparison of the 9 preliminary bypass alternatives within each of these criteria to the extent possible. This means that for each criteria (or sub criteria as appropriate), the best performing alternative was colored “green” as most favorable in comparison, and the worst performing alternative was colored “red” as least favorable in comparison.

Figure 2-7. Preliminary Impact Evaluation Matrix – PM 2 2030 Traffic

U.S. Route 45; IL Route 132 to IL Route 173
 Millburn Bypass Alternatives
 Preliminary Impact Evaluation Matrix
 PM 2 - 2030 Traffic

Impact Criteria	Impact Measure	Alternatives											
		Group A				Group B				Group C			
		1	2	4		1	2	4		1	2	4	
I. Transportation Performance													
Network - Total Delay ^e	hours	32	23	23	23	79	23	22	22	35	26	26	26
Network - Total Travel Time ^e	hours	88	81	77	77	128	78	70	70	94	78	78	90
Network - Number of Vehicle Stops ^e	number	2,940	2,482	2,314	2,314	3,612	2,372	2,109	2,109	4,186	2,814	2,814	2,795
Level Of Service (LOS) - Main Intersection ^e	seconds	C	C	C	C	F/C ^f	C	C	C	C	C	C	C
Pedestrian/Bicycle Accommodations ^e	scale	---	---	---	---	---	---	---	---	---	---	---	---
Transit Compatibility ^e	scale	---	---	---	---	---	---	---	---	---	---	---	---
Opportunities for Innovative Solutions ^e	scale	---	---	---	---	---	---	---	---	---	---	---	---
Safety	scale	---	---	---	---	---	---	---	---	---	---	---	---
II. Environmental Resources													
Water Resources													
Existing Detention Pond Impacts	acres	0.00	1.30	0.00	0.00	0.00	1.30	0.00	0.00	0.00	1.30	0.00	0.00
Impervious Area Increase	acres	10.85	14.60	11.95	11.95	2.64	6.67	3.85	3.85	11.77	16.67	13.19	13.19
Floodplain Impact	acres	0.49	0.49	0.49	0.49	0.42	1.02	0.42	0.42	0.45	1.05	0.46	0.46
Floodway Impact	acres	0.00	0.00	0.00	0.00	0.00	0.60	0.00	0.00	0.00	0.60	0.00	0.00
Wetlands													
ADID	acres	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Non-ADID	acres	0.02	0.05	0.00	0.00	0.00	0.08	0.05	0.05	0.00	0.07	0.04	0.04
Biological Resources													
T&E Species	number	0	0	0	0	0	0	0	0	0	0	0	0
Trees & Landscape ^e	number	---	---	---	---	---	---	---	---	---	---	---	---
Air Quality ^e	scale	---	---	---	---	---	---	---	---	---	---	---	---
Energy ^e	scale	---	---	---	---	---	---	---	---	---	---	---	---
Traffic Noise ^d	scale	4	5	4	4	3	4	3	3	2	4	4	2
Cultural Resources													
Historic District Impacts	acres	0.00	2.95	0.00	0.00	0.56	4.11	0.47	0.47	1.21	4.42	1.25	1.25
Historic Building Impacts (Res & Com)	number	0	0	0	0	9	9	9	9	0	0	0	0
Potential Archeological Resource Area ^a	acres	0.00	1.70	0.00	0.00	0.00	6.70	0.00	0.00	3.10	8.00	3.10	3.10
Cemetery Impacts ^e	acres	---	---	---	---	---	---	---	---	---	---	---	---
Special Lands													
Forest Preserve District & Park Impacts	acres	3.14	3.14	3.14	3.14	0.23	0.23	0.23	0.23	0.00	0.00	0.00	0.00
School Property Impacts	acres	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Farmland Impact	acres	1.92	5.40	1.92	1.92	2.13	6.16	2.13	2.13	13.26	17.07	11.49	11.49
Potential Special Waste Sites ^e	number	---	---	---	---	---	---	---	---	---	---	---	---
III. Socio-Economic Impacts													
Planned Land Use Compatibility	scale	2	4	2	2	5	5	5	5	3	4	4	3
Community Cohesion	scale	3	3	3	3	3	3	3	3	3	3	3	3
Residential Displacements	number	1	1	2	2	10	11	10	10	0	1	1	1
Business Displacements	number	1	1	1	1	2	2	2	2	0	0	0	0
ROW Acquisition	acres	16.60	25.00	19.84	19.84	5.74	17.69	8.93	8.93	18.04	27.65	17.71	17.71
Economic Impacts ^e	scale	---	---	---	---	---	---	---	---	---	---	---	---
Public Facilities and Services Impact	scale	2	2	2	2	2	2	2	2	2	2	2	2
Environmental Justice ^e	scale	---	---	---	---	---	---	---	---	---	---	---	---
IV. Cost													
Total Length of Improvement	miles	1.62	2.23	1.95	1.95	1.57	2.47	1.74	1.74	1.81	2.88	1.97	1.97
Length of Improvement - US Route 45	miles	1.26	1.23	1.26	1.26	1.27	1.26	1.27	1.27	1.35	1.35	1.35	1.35
Length of Improvement - County/Local Roads	miles	0.36	1.00	0.69	0.69	0.30	1.21	0.47	0.47	0.46	1.53	0.62	0.62
Estimated Construction Cost (Millions) ^b	dollars	12.70	16.30	14.70	14.70	11.70	18.30	12.50	12.50	12.58	20.34	13.53	13.53

Notes:

- ^a Based on available GIS data. IDOT environmental surveys ongoing.
- ^b Does not include the cost for property acquisition or engineering beyond Phase I.
- ^c Insufficient information to effectively evaluate at this time.
- ^d Reflects proximity to new potential noise receptors. Does not consider noise mitigation.
- ^e Reflects modeled travel performance during PM peak hours of travel for Build Condition with projected 2030 traffic.
- ^f Reflects the LOS of the two main intersections of Grass Lake Road and Millburn Road with US Route 45

Scale Key - Relative Potential Impacts
1 High Positive Impact
2 Moderate Positive Impact
3 Little to No Impact
4 Moderate Negative Impact
5 High Negative Impact

MATRIX KEY	RELATIVE COMPARISON
	Relatively Weak in Comparison
	Relatively Strong in Comparison
	No Significant Difference

Each Criteria has at least one Red Alternative (weakest in comparison to the other alternatives) and one Dark Green Alternative (strongest in comparison to the other alternatives). The colors for the remaining alternatives are determined relative to the strongest and weakest alternatives for each criteria.

The other alternatives were colored light green, yellow, or orange to show each as more favorable or less favorable in relative comparison to all of the alternatives, as described on the Impact Evaluation Matrix. If there were no notable differences between the 9 preliminary bypass alternatives for any given criteria, each alternative was colored gray.

For transportation performance, the Synchro 7 computer program was utilized to perform an analysis of the unique roadway network within the bypass area that would be created by each preliminary bypass alternative. This analysis was performed for the peak evening travel hour. The primary information gathered from this analysis included total travel time and total travel delay through each network, the number of vehicle stops necessary within each network, and the performance of the main intersection created by each network (i.e.; U.S. Route 45 at Grass Lake Road and/or Millburn Road) for the peak evening travel hour. At this stage of the alternatives development and evaluation process, the transportation performance evaluation was based on projected year 2030 traffic volumes for this project as provided by CMAP.

As part of a workshop held at CAG Meeting #3 on April 27, 2010 stakeholder input was gathered for the 9 preliminary bypass alternatives. Refer to Appendix C for the CAG Meeting #3 summary. Based on input received from the CAG and discussions with the Project Study Group, it was determined that six alternatives (A2, B1, B2, B4, C1, C2) would be dismissed from further consideration as shown in Table 2-1.

The preliminary bypass alternatives A2, B2, and C2 would meet the purpose and need for the project but were dismissed based on the higher costs resulting from greater length of the east-west component “2”, as well as impacts to the north and east portions of the Millburn Historic District and Historic Buildings. These alternatives also have less desirable roadway geometry as compared to the other remaining alternatives.

Preliminary bypass alternatives B1 and B4 would meet the purpose and need for the project, but would each have substantial impacts to the Millburn Historic District including relocation of nine of the 18 historic buildings due to the required widening of U.S. Route 45 through the Historic District.

Preliminary bypass alternative C1 would meet the purpose and need for the project, but would have less favorable transportation performance as compared to the other remaining alternatives due to east-west travel through the Millburn Historic District still being required to access a new U.S. Route 45 east preliminary bypass.

On this basis, preliminary bypass alternatives A1, A4, and C4 were carried forward as the Finalist Bypass Alternatives for presentation at Public Meeting #2 for general public review and comment. The Finalist Bypass Alternatives were discussed with the CAG at the 4th CAG meeting on August 19, 2010. The Finalist Bypass Alternatives were also coordinated through the NEPA/404 Merger process for resource agency concurrence to be shown at Public Meeting #2 (Refer to Chapter 4 and Appendix C).

Table 2-1. CAG 3 Results

Alternative Considered	CAG Group Recommendation			CAG Group Comments	Carry Forward
	1	2	3		
A1	+	-	+	CAG Group 1 felt that the A1 was advantageous since best matches travel patterns. CAG Group 2 felt that A1 was undesirable due to potential noise and forest preserve impacts. CAG Group 3 felt A1 would work well since most traffic would use the west bypass.	Y
A2	+	-	-	Same comment from CAG Group 1 per above relative to transportation, but with concerns for Historic District impacts and cost. CAG Groups 2 and 3 felt that the E-W "2" options in general were too expensive with better transportation options available.	N
A4	U	+	+	CAG Group 1 was undetermined with respect to A4 due to the residential displacements involved. CAG Groups 2 and 3 felt that A4 was a preferred transportation alternative and should be considered further.	Y
B1	-	-	-	All CAG groups felt that B1 should be dropped from further consideration due to the substantial resulting impacts to the Millburn Historic District, including displacement of 9 historic buildings.	N
B2	-	-	-	All CAG groups felt that B2 should be dropped from further consideration due to the substantial resulting impacts to the Millburn Historic District, including displacement of 9 historic buildings.	N
B4	-	-	U	CAG groups 1 and 2 felt that B3 should be dropped from further consideration. CAG group 3 initially felt this alternative should be carried forward without additional travel lanes. However, it was explained that maintaining one travel lane in each direction on US 45 would not meet the project Purpose and Need.	N
C1	U	-	-	CAG Group 1 felt that C1 had fewer residential impacts, but would cost more and was uncertain with respect to a recommendation. CAG Groups 2 and 3 felt that C1 does not address the east-west movement and was poor with respect to transportation performance.	N
C2	+	-	-	CAG Groups 2 and 3 felt that the E-W "2" options in general were too expensive with better transportation options available. CAG Group 1 felt that C2 was viable but with concerns with the higher cost and property impacts to the Historic District.	N
C4	+	+	+	All CAG Groups felt that C4 was comparatively strong with respect to impacts and transportation performance and should be considered further.	Y

Legend: "+" = Preferred with respect to further consideration; "U" = Uncertain with respect to further consideration; "-" = Undesirable with respect to further consideration.

2.3.2.3 Finalist Bypass Alternatives

The three Finalist Bypass Alternatives A1, A4, and C4, were further developed to a greater level of detail, with the comparative evaluation updated accordingly for Public Meeting #2 which was held on September 2, 2010. The 3 Finalist Bypass Alternatives are shown in Figure 2-8 (A1), Figure 2-9 (A4), and Figure 2-10 (C4). The resulting Finalist Impact Evaluation Matrix as shown at Public Meeting #2 is shown in Figure 2-11. Refer to Section 4.4 and Appendix C for a summary of the results of Public Meeting #2.

At the time of Public Meeting #2, the design of the three Finalist Bypass Alternatives and the associated Impact Evaluation Matrix was based on 2030 traffic projections. However, subsequent to Public Meeting #2, in early 2011, updated year 2040 traffic projections were received from CMAP. On this basis, the analysis of each of the three Finalist Bypass Alternatives was updated based on the 2040 traffic projections, and any resulting design updates were included for each alternative. The resulting updated Finalist Impact Evaluation Matrix is shown in Figure 2-12.

Figure 2-8. Finalist Bypass Alternative A1

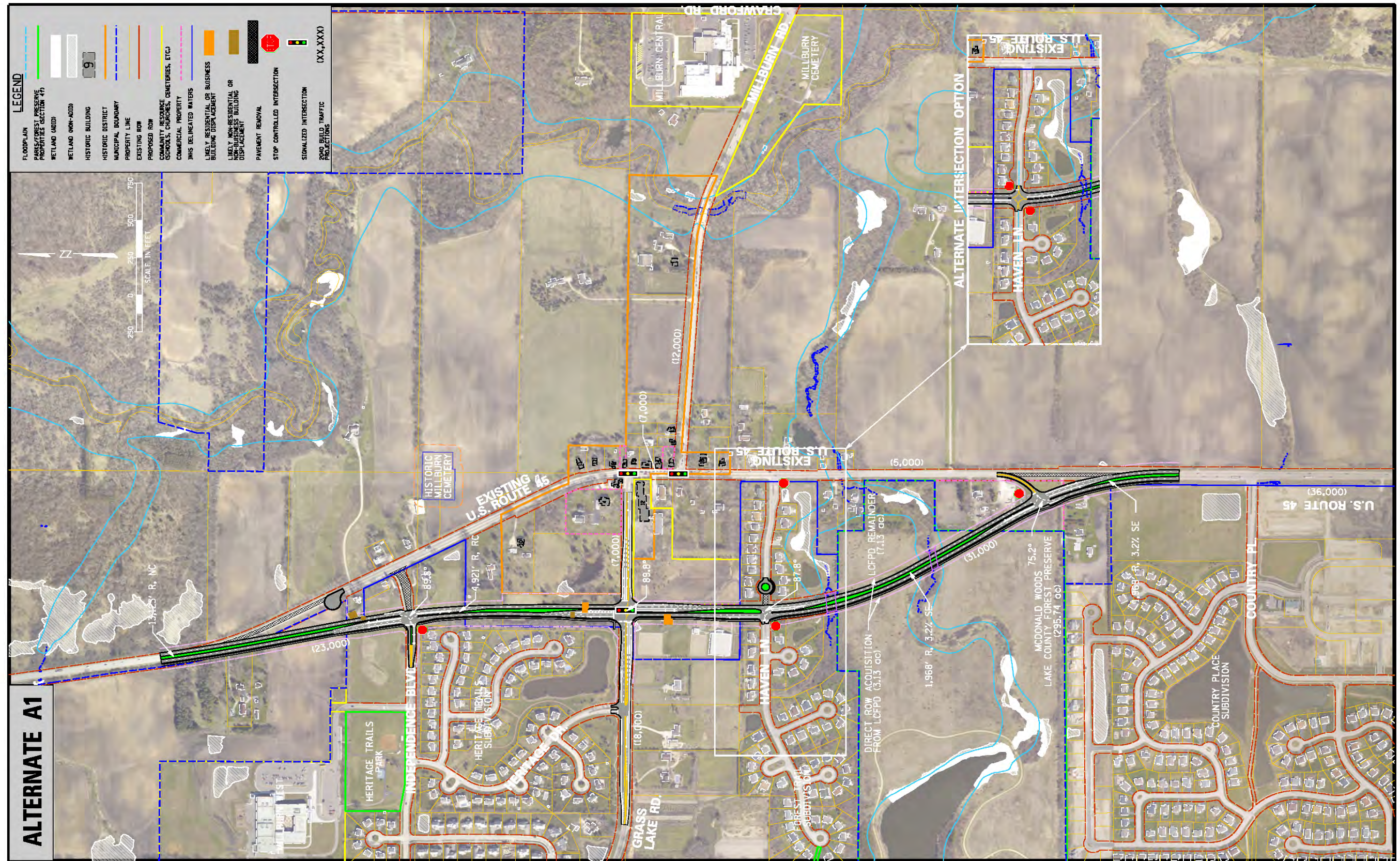


Figure 2-9. Finalist Bypass Alternative A4

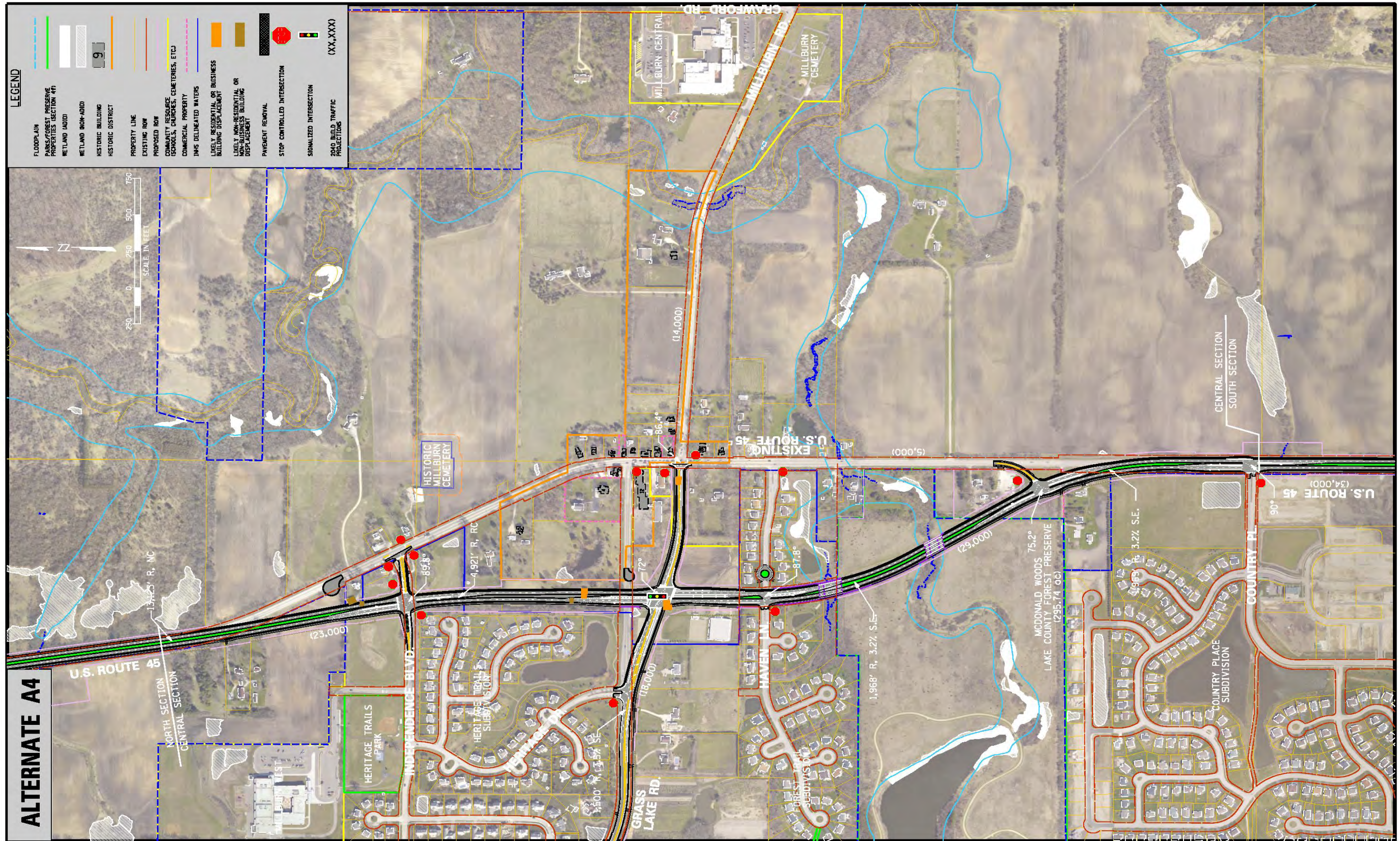


Figure 2-10. Finalist Bypass Alternative C4



Figure 2-11. Finalist Alternatives Impact Evaluation Matrix – PM 2 2030 Traffic

U.S. Route 45; IL Route 132 to IL Route 173
 Millburn Bypass Alternatives
 Finalist Impact Evaluation Matrix
 PM 2 - 2030 Traffic

Impact Criteria	Impact Measure	Alternatives			
		A1	A4	C4	
I. Transportation Performance					
Network Performance					
Total Delay ^e	hours	32	25	26	
Total Travel Time ^e	hours	88	77	90	
Number of Vehicle Stops ^e	number	2,940	2,314	2,795	
Level Of Service (LOS) – Main Intersection ^e	seconds	C	C	C	
Pedestrian/Bicycle Accommodations^e	scale	---	---	---	
Transit Compatibility^e	scale	---	---	---	
Opportunities for Innovative Solutions^e	scale	---	---	---	
Safety	scale	---	---	---	
II. Environmental Resources					
Water Resources					
Existing Detention Pond Impacts	acres	0.00	0.00	0.00	
Impervious Area Increase	acres	10.85	11.95	11.38	
Floodplain Impact	acres	0.49	0.49	0.46	
Floodway Impact	acres	0.00	0.00	0.00	
Wetlands					
ADID	acres	0.00	0.00	0.00	
Non-ADID	acres	0.02	0.00	0.04	
Biological Resources					
T&E Species	number	0	0	0	
Trees & Landscape ^e	number	---	---	---	
Air Quality^e	scale	---	---	---	
Energy^e	scale	---	---	---	
Traffic Noise^d	scale	4	4	2	
Cultural Resources					
Historic District Impacts	acres	0.00	0.00	1.23	
Historic Building Impacts (Res & Com)	number	0	0	0	
Potential Archeological Resource Area ^a	acres	0.00	0.00	3.10	
Cemetery Impacts ^e	acres	0.00	0.00	0.00	
Special Lands					
Forest Preserve District & Park Impacts	acres	3.14	3.14	0.00	
School Property Impacts	acres	0.00	0.00	0.00	
Farmland Impact	acres	1.92	1.92	11.49	
Potential Special Waste Sites^e	number	---	---	---	
III. Socio-Economic Impacts					
Planned Land Use Compatibility					
Community Cohesion	scale	2	2	3	
Residential Displacements	scale	3	3	3	
Business Displacements	number	1	2	1	
Total ROW Acquisition	number	1	1	0	
Public (Forest Preserves, Parks)	acres	16.87	19.84	17.71	
Community Resources (Church)	acres	3.14	3.14	0.00	
Residential/Commercial	acres	0.34	1.34	1.34	
Farmland	acres	11.88	13.44	4.88	
Economic Impacts^e	acres	1.92	1.92	11.49	
Public Facilities and Services Impact	scale	---	---	---	
Environmental Justice^e	scale	2	2	2	
IV. Cost					
Total Length of Improvement	miles	3.63	1.95	1.93	
Length of Improvement – US Route 45	miles	1.26	1.26	1.35	
Length of Improvement – County/Local Roads	miles	0.36	0.69	0.62	
Estimated Construction Cost (Millions)^b	dollars	12.70	11.70	13.53	

Notes:

- ^a Based on available GIS data. IDOT environmental surveys ongoing.
- ^b Does not include the cost for property acquisition or engineering beyond Phase I.
- ^c Insufficient information to effectively evaluate at this time.
- ^d Reflects proximity to new potential noise receptors. Does not consider noise mitigation.
- ^e Reflects modeled travel performance during PM peak hours of travel for Build Condition with projected 2030 traffic.
- ^f Reflects the LOS of the two main intersections of Grass Lake Road and Millburn Road with US Route 45

Scale Key - Relative Potential Impacts	
1	High Positive Impact
2	Moderate Positive Impact
3	Little to No Impact
4	Moderate Negative Impact
5	High Negative Impact

MATRIX KEY	
	RELATIVE COMPARISON
	Relatively Weak in Comparison
	↕
	Relatively Strong in Comparison
	No Significant Difference

Each Criteria has at least one Red Alternative (weakest in comparison to the other alternatives) and one Dark Green Alternative (strongest in comparison to the other alternatives). The colors for the remaining alternatives are determined relative to the strongest and weakest alternatives for each criteria.

U.S. Route 45; IL Route 132 to IL Route 173
Millburn Bypass Alternatives
Finalist Impact Evaluation Matrix^j
CAG 5 - July 26th, 2011

2040 Traffic

Impact Criteria	Impact Measure	Alternatives			
		A1	A4	A4	C4
I. Transportation Performance					
Network Performance					
Total Delay ^g	hours	39	32	32	39
Total Travel Time ^g	hours	107	99	99	116
Number of Vehicle Stops ^g	number	3,146	3,245	3,245	3,377
Level Of Service (LOS) & Delay (Sec) - Main Intersection ^g	seconds	D (36.6)	C (31.7)	C (31.7)	D (37.6)
Pedestrian/Bicycle Accommodations ^h	scale	---	---	---	---
Transit Compatibility ^g	scale	---	---	---	---
Opportunities for Innovative Solutions ^g	scale	---	---	---	---
Safety	scale	---	---	---	---
II. Environmental Resources					
Water Resources					
Existing Detention Pond Impacts	acres	0.00	0.00	0.00	0.00
Impervious Area Increase	acres	10.85	11.95	11.95	11.38
Floodplain Impact	acres	0.49	0.49	0.49	0.46
Floodway Impact	acres	0.00	0.00	0.00	0.00
Stream Crossings ^g	number	2	2	2	1
Stream Impact ^g	acres	0.042	0.042	0.042	0.035
Wetlands^g					
ADID	acres	0.00	0.00	0.00	0.00
Non-ADID	acres	0.02	0.00	0.00	0.04
Biological Resources					
T&E Species	number	0	0	0	0
Trees & Landscape ^g	number	---	---	---	---
Air Quality ^g	scale	---	---	---	---
Energy ^g	scale	---	---	---	---
Traffic Noise ^d	scale	---	---	---	---
Cultural Resources					
Historic District Impacts	acres	0.00	0.00	0.00	1.25
Historic Building Impacts (Res & Com)	number	0	0	0	0
Potential Archeological Resource Area ^a	acres	0.00	0.00	0.00	3.10
Cemetery Impacts ^g	acres	0.00	0.00	0.00	0.00
Special Lands					
Forest Preserve District & Park Impacts	acres	3.14	3.14	3.14	0.00
School Property Impacts	acres	0.00	0.00	0.00	0.00
Farmland Impact	acres	1.92	1.92	1.92	11.49
Potential Special Waste Sites ^g	number	---	---	---	---
III. Socio-Economic Impacts					
Planned Land Use Compatibility					
Community Cohesion	scale	---	---	---	---
Residential Displacements	scale	---	---	---	---
Business Displacements	number	2	3	3	3
Total ROW Acquisition	number	0	0	0	0
Public (Forest Preserves, Parks)	acres	16.60	19.84	19.84	17.71
Community Resources (Church)	acres	3.14	3.14	3.14	0.00
Residential/Commercial	acres	0.34	1.09	1.09	0.79
Farmland	acres	11.88	13.44	13.44	4.88
Economic Impacts ^g	acres	1.92	1.92	1.92	11.49
Public Facilities and Services Impact ^g	scale	---	---	---	---
Environmental Justice ^g	scale	2	2	2	2
IV. Cost					
Total Length of Improvement					
Length of Improvement - US Route 45	miles	1.62	1.62	1.62	1.97
Length of Improvement - County/Local Roads	miles	1.26	1.26	1.26	1.35
Estimated Construction Cost (Millions) ^b	miles	0.36	0.69	0.69	0.62
Estimated Construction Cost (Millions)					
Public (Forest Preserves, Parks)	dollars	12.70	14.70	14.70	13.80

Notes:

- ^a Based on available GIS data. IDOT environmental surveys ongoing.
- ^b Does not include the cost for property acquisition or engineering beyond Phase I.
- ^c Insufficient information to effectively evaluate at this time.
- ^d Reflects proximity to new potential noise receptors. Does not consider noise mitigation.
- ^e Reflects modeled travel performance during PM peak hour of travel for Build Condition with projected 2040 traffic.
- ^f Reflects the LOS of the two main intersections of Grass Lake Road and Millburn Road with US Route 45.
- ^g Reflects INHS field surveyed data (not including ADID wetlands)
- ^h Based on proximity to existing and planned ped/bike facilities

^j The Finalist Alternatives evaluation matrix has been updated to reflect new information since the Public Meeting in September 2010. The most notable new information includes transportation performance based on updated year 2040 traffic projections received from CMAP, and updated impacts due to alignment refinements for the Finalist Alternatives. For purposes of distinguishing the Finalist Alternatives, consistent with the final evaluation matrix presented at the Public Meeting, the associated color coding has been adjusted for relative comparison of only the Finalist Alternatives.

Scale Key - Relative Potential Impacts
1 High Positive Impact
2 Moderate Positive Impact
3 Little to No Impact
4 Moderate Negative Impact
5 High Negative Impact

MATRIX KEY	RELATIVE COMPARISON
	Relatively Weak in Comparison
	Relatively Strong in Comparison
	No Significant Difference

Where a notable range of impacts or transportation performance is judged to exist for a given criteria, the alternate with the worst transportation performance or greatest impact is colored red (weakest in comparison). The alternate with the best transportation performance or least impact is colored green (strongest in comparison). The colors for all alternatives are determined based on numerical scale from the strongest to the weakest alternatives for each criteria. Where no notable differences are judged to exist, each alternate is colored gray.

Also subsequent to Public Meeting #2, additional coordination was required with the Illinois Historic Preservation Agency (IHPA) and the FHWA to determine the eligibility of the Druce-Hoffman Property for the National Register of Historic Places (NHRP). This property would be impacted by the realignment of Grass Lake Road associated with Finalist Bypass Alternatives A4 and C4. It was ultimately concluded in a letter from IHPA to FHWA dated May 24, 2011 that the Druce-Hoffman property is not eligible for the NRHP (Refer to discussion in Section 3.3.3 and Appendix B).

A summary of the three Finalist Bypass Alternatives is presented below:

Alternative A1

Alternative A1 includes a west bypass of U.S. Route 45 from approximately Country Place on the south to Independence Boulevard on the north. The north-south alignment of the west bypass is consistent with the previously platted and recorded west bypass alignment resulting from the IDOT SRA study in 1995. Alternative A1 is adjacent to the east side of the Heritage Trail Subdivision between Grass Lake Road and Independence Boulevard. The distance between the proposed west edge of pavement and the first row of homes in the subdivision ranges from approximately 75 feet to 185 feet with much of the area in between having a dense population of trees and some shrubs. South of Grass Lake Road, Alternative A1 traverses the Forest Trail Subdivision (Haven Lane) and the northeast portion of the McDonald Woods Forest Preserve. Where it crosses Haven Lane, Alternative A1 utilizes the previous right-of-way purchased by the State of Illinois for the west bypass. The distance between the proposed edge of pavement and the four residences adjacent to the U.S. Route 45 bypass within the Forest Trail subdivision ranges from approximately 54 feet to 140 feet.

For Alternative A1, Grass Lake Road and Millburn Road remain on existing alignments with geometric improvements including the addition of left and right turn lanes at the new intersection with the U.S. Route 45 bypass. Haven Lane will be cul-de-saced on the east side of U.S. Route 45 bypass and the west leg will remain stop controlled with full access as a “tee” intersection.

Alternative A4

Alternative A4 includes the same north-south alignment as A1 for the U.S. Route 45 bypass. However, Alternative A4 includes a realignment of Grass Lake Road to the south to meet the intersection of Millburn Road at existing U.S. Route 45. The Grass Lake Road re-alignment creates a new signalized intersection with the U.S. Route 45 bypass and swings south of the Millburn Historic District and Millburn Congregational Church. No improvements are needed for Millburn Road east of existing U.S. Route 45.

Alternative C4

Alternative C4 includes a U.S. Route 45 east bypass of the Millburn Historic District, generally within the same limits from Country Place on the south to Independence Boulevard on the north. Alternative C4 bisects the east portion of the Millburn Historic District in between the Strang House (#1 historic building) and the remainder of the historic buildings to

the west. Similar to Alternative A4, Alternative C4 includes a realignment of Grass Lake Road to the south to meet the intersection of Millburn Road at existing U.S. Route 45. The main intersection created by Alternative C4 is the U.S. Route 45 bypass at Millburn Road.

Subsequent to the 3rd CAG meeting the north portion of the Alternative C4 alignment was shortened and moved to the west in order to avoid the identified Historic Millburn Cemetery (Refer to Section 3.3.1 and Figure 2-10). This modification was coordinated with the Project Study Group to ensure design concurrence. This modification to Alternative C4 was discussed with the CAG at the CAG 4 meeting on August 19, 2010 (Refer to Appendix C) and was presented at Public Meeting #2.

A comparative analysis of the Finalist Bypass Alternatives was performed with respect to transportation performance with updated year 2040 traffic, environmental resource impacts, socio-economic impacts, and design/cost considerations as shown in Figure 2-12. This information along with other distinguishing factors resulting from this comparative analysis is summarized below.

Transportation Performance

Based on the analysis of year 2040 travel performance for all vehicles in the study area during the peak evening travel period, the west bypass Alternative A4 would have superior performance with the lowest cumulative travel time (99 hours as compared to 107 and 116 hours for Alternatives A1 and C4 respectively), the lowest cumulative travel delay (32 hours as compared to 39 hours for Alternatives A1 and C4), and the best level of service (LOS) for the main intersection of the U.S. Route 45 bypass and Grass Lake Road and/or Millburn Road (LOS C as compared to LOS D for Alternatives A1 and C4). The west bypass alternatives are also most compatible with the predominant northwest/southeast regional travel patterns in the study area as discussed in the project Purpose and Need statement (see Chapter 1). These are considered by the Project Study Group as important transportation performance measures that distinguish Alternative A4.

Environmental Resource Impacts

The east bypass Alternative C4 is the only finalist alternative that would require approximately 1.25 acres of property acquisition from the Millburn Historic District, which is on the National Register of Historic Places. In addition, Alternative C4 would separate the building of primary importance within the Millburn Historic District (The Strang House) from the remainder of the historic district buildings within the National Register of Historic Places boundaries (refer to Appendix A, Exhibit 6 – Millburn Historic District Map). The west bypass Alternative A4 is the only finalist alternative that would have no impact on the Millburn Historic District. The Project Study Group considers this a distinguishing factor for the finalist alternatives.

Both the west bypass Alternative A4 and the east bypass Alternative C4 would result in three residential relocations. Alternative A4 would have no wetland impacts and Alternative C4 would have minor wetland impacts. Alternative C4 would impact approximately 11.5 acres of active prime farmland and Alternative A4 would impact approximately two acres of active prime farmland.

Based on proximity, and as discussed in multiple coordination meetings with the LCFPD, a west bypass is most compatible with the regional trail objectives of the LCFPD (Refer to Appendix A - Exhibit 5), and connectivity thereof to McDonald Woods and other Lake County Forest Preserves to the north and south. In addition, it was determined by the LCFPD that a west bypass would not adversely affect the overall recreation activities of McDonald Woods, would traverse only low quality areas within McDonald Woods, and would not affect facility access. This is consistent with the previous LCFPD resolution adopted in 1994 in support of a west bypass. On this basis, both the LCFPD and the FHWA granted a *de minimis* impact finding for a west bypass use of McDonald Woods. The Project Study Group considers this is a distinguishing factor for the finalist alternatives.

Design Considerations

U.S. Route 45 is designated as a Strategic Regional Arterial (SRA) roadway, which means it inherently serves high volume regional and local traffic. On this basis, roadway design is an important consideration, particularly in light of some of the existing design deficiencies cited in Chapter 1, such as the existing curve of U.S. Route 45 north of Grass Lake Road. While each of the finalist alternative designs is considered viable, the location and reverse curve design of Alternative C4 north of Millburn Road was required to avoid wetlands and the identified Historic Millburn Burial Site. The reverse curve design is a less desirable feature of Alternative C4. This also resulted in less than desirable intersection spacing between the Alternative C4 main intersection (U.S. Route 45 bypass and Millburn Road) and existing U.S. Route 45 which are not concerns with the west bypass finalist alternatives. The Project Study Group considers these as distinguishing factors for the finalist alternatives, particularly looking out to and beyond the year 2040 planning horizon.

Compatibility with Transportation and Land Use Plans

Both east and west bypass alternatives have been discussed since the early 1990s as part of the previous Strategic Regional Arterial study by the Illinois Department of Transportation. As a result of these previous planning efforts, a west bypass alignment and right-of-way was recorded in 1995. As noted above, a west bypass alternative was approved by resolution from the LCFPD and by resolution of the Lake County Board in 1994. An intergovernmental agreement was executed in 1995 between Lake County, the LCFPD, the Village of Lindenhurst, the Lindenhurst Sanitary District, and Westfield Homes of Illinois, Inc. that acknowledges the cooperative planning efforts and mutual support for a west bypass of U.S. Route 45. The initial phase of the Heritage Trails subdivision was being planned during this same timeframe. The Heritage Trails subdivision appropriately backs up to the recorded west bypass right-of-way with additional buffer area. The Forest Trails subdivision was recorded in 1997 and incorporated the west bypass right-of-way, which was owned by the State of Illinois at the time. A west bypass is compatible with these previous planning efforts, and as noted above comprises two of the three Finalist Bypass Alternatives that emerged from the initial 18 potential bypass considered with the current study. The Project Study Group considers this is a distinguishing factor for the finalist alternatives.

On the above basis, while all three Finalist Bypass Alternatives would meet the purpose and need for the project, in consideration of input from all stakeholders and the factors outlined above, the Project Study Group identified west bypass Alternative A4 as the preferred bypass alternative for the Central Section of the project in the vicinity of the Millburn Historic District. This was presented to the CAG on July 27, 2011 and also coordinated with the resource agencies both through the NEPA/404 Merger process (Refer to Chapter 4 and Appendix C) and separate agency meetings.

2.3.3 North Section – North of Independence Blvd to IL Route 173

The North Section of the project extends from north of Independence Boulevard to the IL Route 173 intersection, a distance of approximately 2.7 miles. This section includes one existing signalized intersection of IL Route 173 with U.S. Route 45. Two Build Alternatives were considered in the North Section, both of which would provide two through lanes in each direction separated by a median. North Alternative A maintains the existing roadway centerline alignment and includes symmetrical widening to both the east and west. North Alternative B includes a shift of the proposed centerline in the vicinity of the Raven Glen and Ethel's Woods Forest Preserves.

North Alternative A: As noted above, this alternative utilizes the existing roadway centerline and includes symmetrical widening to the east and west. Within the North Section, the Raven Glen and Ethyl's Woods Forest Preserves are adjacent to U.S. Route 45 at and north of Miller Road. The Raven Glen Forest Preserve abuts the U.S. Route 45 existing right-of-way for approximately 5,400 feet and the Ethel's Woods Forest Preserve abuts the U.S. Route 45 right-of-way for approximately 600 feet. Based on the proposed typical section of U.S. Route 45, keeping the proposed improvement on existing alignment would require land acquisition from both forest preserves and would impact two commercial structures at the IL 173 intersection along the west side of U.S. Route 45. Open Land Trust (OLT) funds were used to purchase a portion of Ethyl Woods Forest Preserve and Land and Water Conservation Fund (LAWCON) funds were used to purchase a portion of Raven Glen Forest Preserve. Although North Alternative A meets the purpose and need for the project, the impacts to the forest preserve property and the commercial buildings can be avoided with alignment shifts. On this basis, North Alternative A is not considered further in this document.

North Alternative B: As noted above, this alternative includes a shift of the proposed centerline to minimize impacts to forest preserve property and existing commercial buildings. North Alternative B shifts the proposed centerline alignment to the west near Miller Road to avoid property acquisition from a portion of the Ethyl's Woods Forest Preserve that was purchased with Federal OLT funding. As a result, some right-of-way acquisition is required along the west side of U.S. Route 45 within the Raven Glen Forest Preserve from Miller Road northward to Hasting's Creek. Just north of Ethyl's Woods the proposed centerline is shifted approximately 15 feet east of the existing centerline in order to hold the west right-of-way line and avoid further property acquisition from the Raven Glen Forest Preserve. Near the IL Route 173 intersection the proposed centerline is shifted approximately 20 feet east of the existing centerline to avoid the two existing commercial properties on the west side of the intersection. North Alternative B meets the purpose and need of the project and is preferred

over North Alternative A since it minimizes impacts to forest preserve property and existing commercial buildings.

While both North Alternative A and B meet the purpose and need for the project, North Alternative B will result in fewer impacts to forest preserve property and avoids impacts to existing commercial buildings. On this basis, North Alternative B was selected as the preferred alternative within the North Section of the project. North Alternative B is shown on Figure 2-13 and Figure 2-14.

2.4 Preferred Alternative

On the above basis, the Preferred Alternative includes a combination of Build Alternatives including South Alternative B, Central Alternative A4 (West Bypass), and North Alternative B, resulting in approximately six miles of improvement along U.S. 45. The typical roadway section for the Preferred Alternative from IL Route 132 to IL Route 173 includes two 12 foot wide travel lanes in each direction separated by a 22 foot wide barrier curbed median (widens to 30 feet at intersections if required), accommodations for a 10 foot wide bike path along the west side of the roadway, and a five foot wide sidewalk along the east side of the roadway. The environmental resources, impacts, and mitigation associated with the Preferred Alternative are discussed in detail within Chapter 3.

Figure 2-13. North Section Alternative B

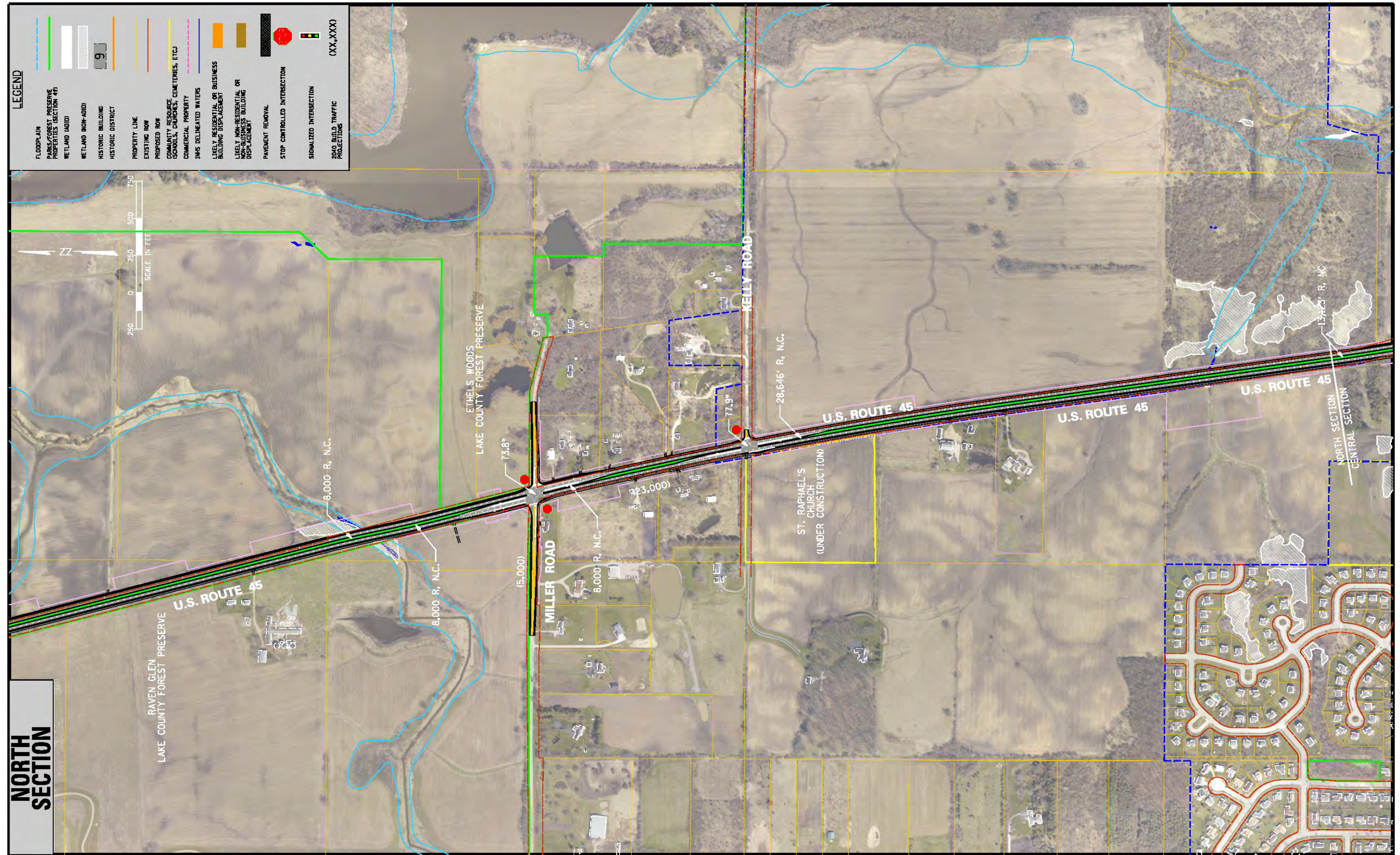
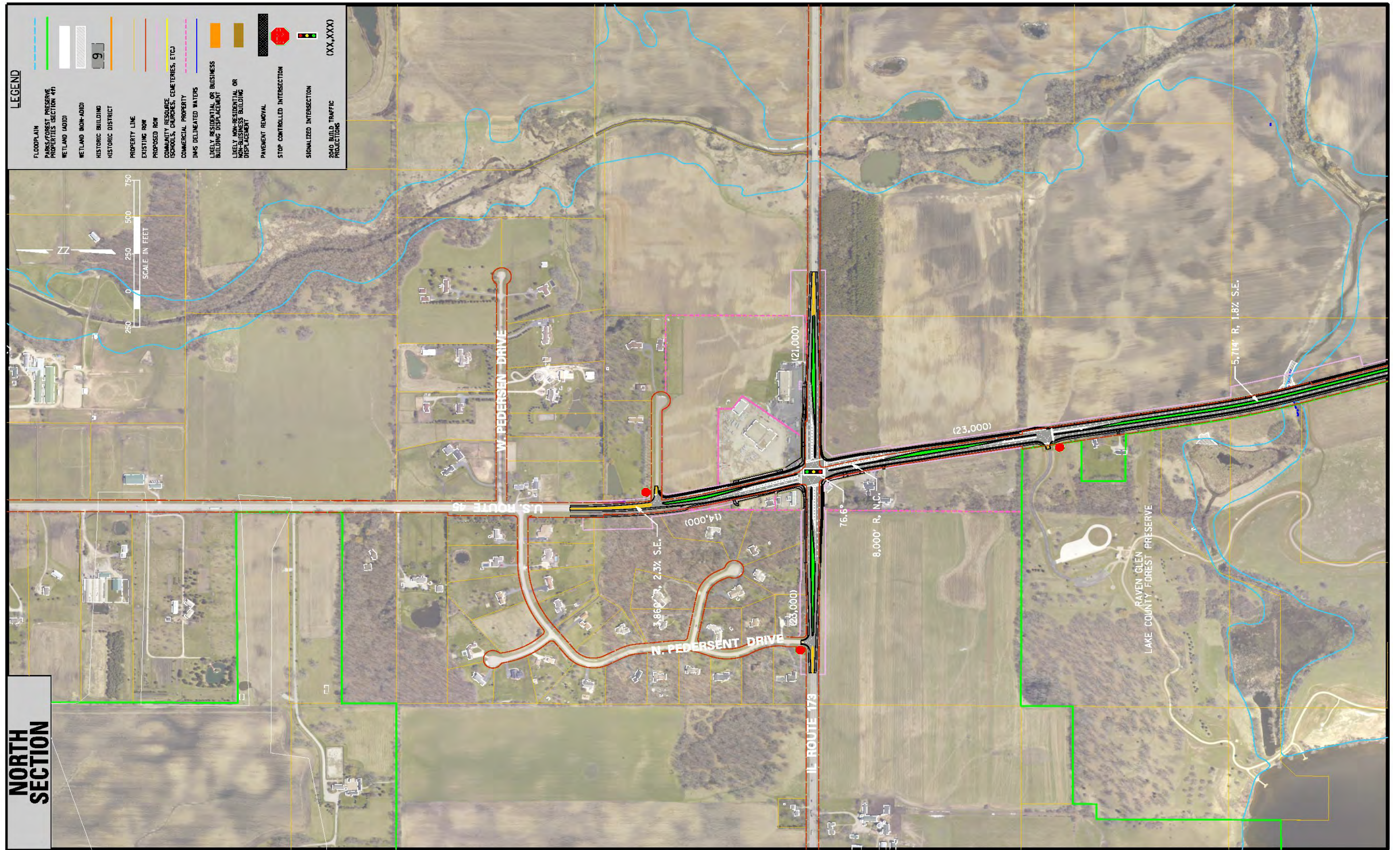


Figure 2-14. North Section Alternative B



3.0 Environmental Resources, Impacts, and Mitigation

The project area was inventoried for environmental resources. The Environmental Resources Map (refer to Appendix A - Exhibit 2) identifies all sensitive cultural, natural, physical, and socio-economic resources in the study area. Resources potentially impacted by the proposed action or that require discussion pursuant to applicable laws and regulations are addressed in this Chapter.

This Chapter presents the environmental resources within the project area as well as impacts and proposed mitigation strategies associated with the Preferred Alternative, as described in Chapter 2.

3.1 Socio / Economic

Demographic information for the project area was obtained via the U.S. Census 2010 and the American Community Survey (2005 – 2009 data). The project area is located within several municipalities and townships. The demographic characteristics for the core communities within the project area and the townships in unincorporated Lake County as compared to Lake County and the State of Illinois are included in Table 3-1 below.

Table 3-1. Demographics for the Core Communities and Townships within the U.S. Route 45 Project Area Compared to Lake County and the State of Illinois

Characteristic	Jurisdiction								
	Lindenhurst	Old Mill Creek	Antioch Township	Avon Township	Lake Villa Township	Newport Township	Warren Township	Lake County	State of Illinois
Demographics									
Median Age	38	47	40.3	32.3	37.1	41.7	36.4	36.7	36.6
Total Population	14,462	178	27,745	65,001	40,276	6,770	64,841	703,462	12,830,632
White	83%	76%	87%	56%	78%	66%	61%	63%	62%
Hispanic or Latino	6%	7%	6%	24%	9%	11%	14%	17%	13%
Black or African American	2%	4%	2%	3%	3%	8%	7%	6%	13%
American Indian or Alaska Native	< 1%	4%	< 1%	1%	< 1%	< 1%	< 1%	< 1%	< 1%
Asian	4%	0%	2%	4%	4%	7%	9%	5%	4%
Native Hawaiian or Pacific Islander	< 1%	0%	< 1%	< 1%	< 1%	< 1%	< 1%	< 1%	< 1%
Other Race	2%	7%	1%	10%	4%	5%	6%	7%	6%
Two or More Races	2%	2%	2%	2%	2%	2%	3%	2%	2%

Characteristic	Jurisdiction								
	Lindenhurst	Old Mill Creek	Antioch Township	Avon Township	Lake Villa Township	Newport Township	Warren Township	Lake County	State of Illinois
67 years or older	11%	19%	15%	8%	10%	17%	10%	14%	17%
Income and Poverty									
Median Household Income ^a	\$97,451	\$115,417	\$72,212	\$65,951	\$87,929	\$87,778	\$78,009	\$78,423	\$55,222
Percentage of Population with Incomes Below Poverty Level ^{a,b}	1.9%	3.6%	5.6%	11.7%	3.4%	2.3%	5.3%	6.7%	12.4%

Source: U.S. Bureau of Census, 2000 and 2010

^a American Community Survey, 2005 - 2009

^b The 2000 Census Poverty Level for a family of four is \$17,029. The Health and Human Services 2012 Poverty Guideline for a family of four is \$23,050.

Avon and Warren Townships are the largest-populated townships in the project area. Three of the five townships and both municipalities in the project area have similar minority populations to those of Lake County and the State of Illinois. The two townships that have minority populations larger than those of the county and the state are Avon and Warren Townships. Avon Township, near the southwest portion of the project area, reported nearly one-quarter of its population as Hispanic or Latino (in comparison, Lake County reported 17 percent of its population as Hispanic or Latino). Warren Township, in the southeast portion of the project area, reported one-quarter of its population as minority populations (excluding Hispanic or Latino populations).

In 2010, Lake County reported 20 percent of its population as a minority race or ethnicity (excluding Hispanic or Latino populations). Warren Township has a higher concentration of Asian persons (nine percent of total population) as compared to Lake County (five percent of total population). Additionally, the Village of Old Mill Creek and Newport Township, both in the northeast section of the project area, reported the highest median ages, the largest percentages of persons over the age of 67, and have some of the highest median incomes among the project area jurisdictions.

3.1.1 Community Characteristics and Cohesion

The project area includes areas within the Villages of Lindenhurst and Old Mill Creek, as well as unincorporated portions of Lake County. The central portion of the project area generally lies within the municipal boundaries of the Village of Lindenhurst predominantly on the west side of U.S. Route 45 and the Village of Old Mill Creek predominantly on the east. The Preferred Alternative generally follows the municipal limits.

Existing land use along U.S. Route 45 within the project area is a combination of agricultural, residential, light commercial, and recreational. Land use adjacent to the west side of U.S. Route 45 includes four residential subdivisions located within the Village of Lindenhurst. An additional residential subdivision is located adjacent to the east side of U.S. Route 45, south of Sand Lake Road/Stearns School Road in unincorporated Warren Township. The majority of residential areas

within the project area are recently-developed subdivisions (within the past 10 to 15 years); the remainder of residential uses includes rural residential homes on large lots. Most subdivisions were designed to one side of U.S. Route 45 or the other, with little opportunity for interaction across U.S. Route 45. As the subdivisions are already divided by U.S. Route 45, the proposed project is not anticipated to further impair community cohesiveness. The rural residential lots currently divided by U.S. Route 45 have diminished opportunities for neighborhood interaction because U.S. Route 45 is currently a higher volume two-lane highway with no pedestrian facilities and because the rural residential lots along U.S. Route 45 are spaced apart. The Preferred Alternative will accommodate a 10 foot wide bike path along the west side of U.S. Route 45, and a five foot wide sidewalk along the east side of U.S. Route 45 for the full project limits. Implementation and use of the trails/sidewalks are anticipated to generally improve community cohesion in the project area.

Within the central section of the project area, as part of the 1995 Strategic Regional Arterial (SRA), IDOT recorded a West Bypass alignment and purchased one parcel of property on Haven Lane within the Forest Trail Subdivision. The recorded alignment was taken into consideration when the two residential subdivisions that are located immediately adjacent to the Preferred Alternative in this area (i.e., Heritage Trails and Forest Trail) were designed. Despite the planning and the recorded alignment, the Forest Trail Subdivision would be bisected by the proposed West Bypass at Haven Lane.

Public services and facilities within the project area are primarily located near the residential subdivisions and/or near the Millburn Historic District. Other public services and facilities within (or immediately adjacent to the project study area) include various municipal parks, a church, a synagogue, schools/early learning centers, and a cemetery. The majority of these facilities provide places for people to congregate and/or create a sense of community and well-being. Access to these facilities by foot, bicycle, or from local streets is not anticipated to change substantially from existing conditions, and is actually anticipated to improve with the implementation of the Preferred Alternative including accommodations for a bike path and sidewalks.

The Preferred Alternative may cause adverse impacts to community cohesion along residential areas to the east and west of the bypass and within the Forest Trail Subdivision. Possible adverse effects may be perceived by area residents as a result of the visual impact and the new traffic noise associated with the bypass. Pedestrian access is proposed via accommodations for a bike path and sidewalk that will connect via a cross walk at the proposed traffic signal at Grass Lake Road, approximately 600 feet north of the subdivision. No homes or businesses will be relocated within this subdivision as none were built within the area previously acquired by the State of Illinois for a potential future roadway. Vehicle access to the east portion of the subdivision is proposed to remain as full ingress and egress via existing U.S. Route 45. Vehicle access to the west portion of the subdivision is proposed to remain as full ingress and egress via the bypass.

Community cohesion in the areas adjacent to existing U.S. Route 45 in the bypass area will be enhanced due to traffic redistribution onto the new bypass roadway. The area is characteristic of an older residential neighborhood and includes the Millburn Historic District.

3.1.2 Environmental Justice

Potential disproportionate impacts to low-income and minority populations were evaluated in accordance with Executive Order 12898 “Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations.” To determine the presence of potential environmental justice areas, poverty, income, and minority population data for the Census tracts affected by the proposed action (shown in Table 3-2) were analyzed. The Census tracts can be seen on Exhibit 3 in Appendix A. The minority population data was obtained from the 2010 Census. Year 2010 poverty and income data was not available at the time of analysis; years 2005 - 2009 poverty and income data from the American Community Survey was used for analysis.

Table 3-2. Race, Minority, and Poverty Data for Census Tracts within the U.S. Route 45 Project Area

Characteristic	Lake County Census Tract (2010)								
	8611.06	8610.07	8608.10	8608.11	8610.09	8616.04	8660 ^a	8616.09 ^b	8610.14
Race and Minority									
Total Population	8,288	4,370	7,231	4,169	5,154	5,745	6,785	4,844	3,749
Population Percentage: White	77%	85%	82%	85%	80%	70%	66%	57%	77%
Population Percentage: Hispanic or Latino	10%	5%	7%	5%	7%	8%	11%	8%	10%
Population Percentage: Other Minority ^c	13%	10%	11%	10%	13%	22%	23%	36%	13%
Income and Poverty									
Median Household Income ^d	\$94,797	\$117,992	\$62,760	\$87,643	\$95,926	\$97,917	\$101,964	\$115,154	\$91,154
Percentage of Population with Incomes Below Poverty Level ^{d,e}	2.5%	1.4%	7.8%	1.3%	2.5%	4.5%	5.1%	3.0%	0.9%

Source: U.S. Bureau of Census, 2000 and 2010.

^a Tract 8660 was part of Tract 8607.01 in the 2000 Census.

^b Tract 8616.09 was part of Tract 8616.05 in the 2000 Census.

^c Includes the following races: Black or African American, American Indian/Alaska Native, Asian, Native Hawaiian/Other Pacific Islander, Some Other Race, and Two or More Races.

^d American Community Survey, 2005 – 2009.

^e The 2000 Census Poverty Level for a family of four is \$17,029. The Health and Human Services 2012 Poverty Guideline for a family of four is \$23,050.

Potential environmental justice areas were determined through the comparison of tract level data in Table 3-2 to the township, municipality, county, and state data presented in Table 3-1. The proportions of median household incomes and those in poverty within the affected Census tracts are similar to those of the project area townships and municipalities. Most of the Census tracts have higher median household incomes and lower percentages of those with incomes below poverty level than the studied townships and municipalities. An exception is Census Tract

8608.10 in Antioch Township, in the northwest portion of the study area. This tract has slightly lower median household income and slightly higher poverty levels than those of Antioch Township. However, the tracts south of this area have much higher incomes than the township average, and it is recognized that these data points likely skew the township average towards higher incomes and lower poverty levels.

The percentages of minority (both Hispanic or Latino and other minorities) populations in most Census tracts studied is less than or similar to those for the project area townships. The tracts and townships have smaller proportions of minority populations than Lake County. An exception is Census Tract 8616.09 in Warren Township, which reported a slightly lower percentage of white persons (57 percent) as compared to Warren Township (61 percent). The minority populations within this Census tract do not follow the trends of the township, as the tract has lower concentrations of Hispanic and Latino persons than the township and has a higher concentration of Asian persons (approximately 24 percent of the tract population) as compared to the township (approximately 11 percent of the township population).

From the information presented above, it was determined that the only potential environmental justice area within the project is Census Tract 8616.09 in Warren Township, in the extreme southeast portion of the project area. However, the proposed action will not include the acquisition of homes or businesses in this area, and the action does not result in disproportionately high and adverse impacts upon this group.

3.1.3 Title VI and Other Protected Groups

The demographic assessment of the immediate project and the municipalities and townships near the project showed minority and age population variation as compared to Lake County and the State of Illinois.

Title VI of the Civil Rights Act of 1964 and related statutes assure that individuals are not excluded from participation in, denied the benefit of, or subjected to discrimination on the basis of race, age, color, national origin, sex, disability or religion as part of any federally funded program. No groups or individuals have been excluded from participation in public involvement activities, denied the benefit of the project, or subjected to discrimination in any way on the basis of race, color, age, sex, national origin, disability, or religion. The project will follow “Americans with Disabilities Act Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way” (36 CFR Part 1190), to ensure the project meets the goals of the Americans with Disabilities Act (ADA).

3.1.4 Public Services and Facilities

Public services and facilities within (or immediately adjacent to the project study area) include various municipal parks, forest preserves, a church, a synagogue, schools/early learning center, and a cemetery (refer to Appendix A, Exhibit 2 - Environmental Resources Map). Potential impacts to these public services and facilities are discussed below (see Section 3.13 for discussion regarding impacts to forest preserve properties).

The Millburn Congregational United Church of Christ (Millburn UCC) and the Millburn Church Early Learning Center are located near the southwest corner of Grass Lake Road and U.S. Route 45. The church building and parking lot are located within the Millburn Historic District. A separate adjacent parcel located to the south and west is also owned by the church. This parcel includes the Early Learning Center to the south and open space to the west (which is currently used for agricultural purposes). The Preferred Alternative will impact approximately 3.0 acres at the west side of the open space Millburn UCC parcel. Potential impacts have been coordinated with Millburn UCC (see Chapter 4). Except as noted in this section, no other public services or facilities will be affected by the proposed project.

The roadways in the area are used by school buses, and emergency vehicles (e.g., fire, police, and ambulance). Emergency services, such as fire and police, throughout the project corridor and adjacent area are provided by local municipalities, townships, and/or Lake County.

Pace Route 570 operates through the intersection of U.S. Route 45 and IL Route 132 in an east-west direction at the south project limits. Current bus stop locations include westbound and eastbound stops at the northwest and southeast corners of the U.S. Route 45/IL Route 132 intersection, respectively – with a peak number of buses through the intersection at 2 per hour. This bus route offers service between Gurnee Mills and Lakeland Plaza in Fox Lake. It provides multiple connecting bus route and Chicago Transit Authority (CTA)/Metra train route opportunities. No known additional Pace Bus Service is planned within or through the project area at this time, and based on coordination with Pace, there is no need for a shelter pad or bus turnout at this time.

There are several school bus routes serving Millburn Central and Millburn West schools that traverse the project area. The proposed improvements will eliminate existing zig-zag turns through the congested historic district and ultimately improve overall bus service.

Services provided by public transit providers, school buses, and/or emergency vehicles may be temporarily disrupted during construction, but will ultimately be improved with completion of the project. This project has been presented at two public meetings, coordinated through a Community Advisory Group, and discussed at individual community meetings (see Chapter 4). Other than the temporary disruption of traffic movement during construction, no negative impacts to public facilities and services are anticipated as a result of the proposed project.

3.1.5 Change in Travel Patterns

With the proposed action, mobility/accessibility through the project study area will be improved.

The roadway network serving the project study area is comprised of a mix of Other Principal Arterials (i.e., U.S. Route 45, IL Route 173, and IL Route 132), east-west Minor Arterials and/or Strategic Regional Arterials (i.e., Grass Lake Road, Millburn Road, and Sand Lake Road), and local streets. U.S. Route 45, IL Route 173, and IL Route 132 (east of U.S. Route 45) are also designated Class II Truck Routes. The federal and state routes within the study area typically carry both local and long distance trips, and include higher amounts of truck traffic due to their relationship and connection to the regional transportation system.

As discussed in Section 1, there is a northwest to southeast (and vice versa) regional travel pattern through the project area. For many communities in northeast Illinois and southeast Wisconsin, U.S. Route 45 serves as a vital north-south link from the Wisconsin border south to Chicago's northern suburbs. Based on 2009 traffic counts, up to 16,000 vehicles per day travel on existing U.S. Route 45 through the Central Section of the project area. The traffic volume increases to approximately 19,500 vehicles per day in the South Section of the project near the U.S. Route 45/IL Route 132 intersection. The traffic volume is anticipated to continue to increase in the future as the region continues to grow. Based on the origin-destination (O/D) study for this project, it is anticipated that a large portion of the vehicles that use or desire to use this section of U.S. Route 45 will continue to have a regional travel pattern that is aligned in a northwest to southeast direction, and vice versa, under a 2040 Build scenario.

A barrier curbed median is proposed for the entire project limits along U.S. Route 45 with median breaks at dedicated local streets and other major access points where practical and feasible. The barrier curbed median may require some property owners with access points directly on U.S. Route 45 to make u-turns associated with ingress/egress to their property. The proposed improvement plan is designed to accommodate u-turns at median openings where practical and feasible.

Within the central section of the project, the U.S. Route 45 intersections at Millburn Road and Grass Lake Road experience considerable traffic congestion on a daily basis. Both of these roads "tee" into U.S. Route 45 at signalized intersections spaced approximately 330 feet apart under existing conditions. The close proximity of these intersections, along with the traffic volume and the limited capacity on U.S. Route 45, substantially affects mobility on this existing two-lane roadway (one lane each direction). Based on the northwest/southeast regional travel pattern, it is also likely that some of the east/west traffic crossing U.S. Route 45 does so to access other north/south roadways in the area and avoid congestion on existing U.S. Route 45. Existing U.S. Route 45 will be connected to the Preferred Bypass Alternative at the north end near Independence Boulevard, and at the south end north of Country Place. Access points to the two residential subdivisions within the central section of the project will remain as full access points from either existing U.S. Route 45 or the Preferred Bypass Alternative for the Forest Trail subdivision, or from either Grass Lake Road or Independence Boulevard for the Heritage Trails subdivision. Some minor additional travel within the central section of the project may be required for residents or businesses with access points on existing U.S. Route 45 in order to gain access to the Preferred Bypass Alternative.

3.1.6 Relocations (Business and Residential)

The Preferred Alternative would result in three residential relocations. (refer to Appendix A, Exhibit 2 - Environmental Resources Map). No business relocations will occur.

Homes for sale within the Villages of Lindenhurst and Old Mill Creek were reviewed in February 2013 at the websites www.illinoisrealstate.com and www.trulia.com. Based on this review, the three displaced residents could relocate to similar replacement single-family housing within the project area. There were up to 206 residential properties listed for sale ranging in size from 900 to 4,700 square feet, in price range from \$50,000 to \$1,100,000, and in property size from 0.21 acres to 5.0 acres.

For each of the three residential relocations, the remaining property may also be sufficient for relocation or replacement of the residence on the property. Property owners will be paid fair market value for all private property purchased and would be provided with relocation assistance. If it is determined that comparable replacement housing cannot be provided in the project area, then housing of last resort would be provided, if necessary.

There is no public subsidized housing affected by the Preferred Alternative. Residences would be relocated in accordance with the “Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended”, and IDOT’s *Land Acquisition Procedures Manual* (IDOT, 2011). Participation under the state and federal policies is without discrimination.

3.1.7 Economic Impacts

Agriculture is one of the primary land uses adjacent to the U.S. Route 45 project corridor, as well as, residential, light commercial and recreational. Near the project corridor, the light commercial is generally concentrated along U.S. Route 45 near IL Route 132, Sand Lake Road, and IL Route 173.

The proposed project will improve the capacity, mobility, safety, and existing operational deficiencies along U.S. Route 45. Travel efficiency to and from surrounding businesses will be improved, which will result in potential positive effects to the local economy. This includes potential positive effects for the businesses within the Millburn Historic District. Under existing conditions, access to businesses within the Historic District is relatively limited, particularly during peak travel periods, due to traffic congestion and associated potential safety concerns. The bypass is being located only 920 feet to the west of existing U.S. Route 45 at the furthest point and will border the western boundary Millburn Historic District.

No businesses or tax based loss will occur as a result of the proposed project. The only potential parking impact that has been identified would be at the southwest quadrant of the U.S. Route 45 and IL Route 173 intersection. The potential impact would affect approximately 7900 square feet of a gravel parking lot located on private property, outside of the existing right-of-way. There are currently no defined parking stalls at this lot. It is anticipated that mitigation will include expanding the existing parking area to the east. No on-street parking impacts are anticipated. No negative economic impacts will be associated with the proposed improvements.

3.1.8 Land Use

Existing land use along U.S. Route 45 within the project area is primarily agricultural with a combination of residential, light commercial, and recreational use. Land use adjacent to the west side of U.S. Route 45 includes four residential subdivisions located within the Village of Lindenhurst. An additional residential subdivision is located adjacent to the east side of U.S. Route 45 south of Sand Lake Road/Stearns School Road in unincorporated Lake County. The areas east of U.S. Route 45 are predominantly agricultural with some forested areas along North Mill Creek and its tributaries. The Lake County Forest Preserve District (LCFPD) and local park districts also have several holdings near U.S. Route 45 in the proximity of the proposed project (refer to Appendix A, Exhibit 4 - Existing and Comprehensive Land Use Plan).

The Millburn Historic District (a National Register Historic Place) is located within the central section of the project area near the intersections of Grass Lake Road and Millburn Road in the Village of Old Mill Creek. The majority of the historic buildings within the Historic District are residential structures.

Based on a review of local zoning maps and comprehensive plans, future land use in the vicinity of the U.S. Route 45 corridor is anticipated to be predominantly residential followed by smaller areas of commercial, industrial, agricultural, open space, and institutional land uses. Access to the area is already provided. With the proposed project’s improvements to capacity, mobility, and safety, it is possible that land use conversion will occur based on improved development potential. The project is consistent with regional and local land use plans, and is not anticipated to induce any major development or development change that is not already in the foreseeable planning stage.

3.1.9 Growth and Economic Development

The Chicago Metropolitan Agency for Planning (CMAP), with data from the 2010 U.S. Census Bureau and regional land use development information, prepares population and employment projections for the northeastern Illinois region. Table 3-3 shows population and employment growth for Lake County and municipalities adjacent to or near the project study area by the year 2040. In general, population and employment growth within and adjacent to the project study area are projected to increase by the year 2040 as a result of planned development. In general, all municipalities adjacent to or near the project study area are projected to have substantially higher population growth than the Lake County average (with the exception of population growth for the Village of Lindenhurst). Employment opportunities are also anticipated to increase, albeit not as rapidly as the population in this area. This projected growth is anticipated to result in an increase in associated travel demand.

Table 3-3. Projected Population and Employment Growth

Location	Population Growth			Employment Growth		
	2010	2040	% growth	2010	2040	% growth
Lake County	703,462	953,673	35.6	384,259	470,939	22.6
Lindenhurst	14,264	17,239	20.9	2,142	2,934	37.0
Old Mill Creek	178	5,058	2,741.6	1,183	1,388	17.3
Lake Villa	8,741	21,046	140.8	3,613	4,354	20.5
Antioch	14,430	26,624	84.5	5,226	6,055	15.9
Fox Lake	10,579	18,063	70.7	4,432	5,175	16.8
Gurnee	31,295	49,201	57.2	20,156	28,130	39.6

On this basis, roadway improvements to ensure effective mobility to and through the project study area after the development is completed, is an essential goal/objective of LCDOT and IDOT for this area. The anticipated growth in this area will add considerable travel demand to the existing roadway network, with an increased potential of adverse travel to access the arterial roadway network, and a resulting increased incidence of cut-through traffic on local residential streets in the project study area.

Dependable transportation is important in helping to retain existing business and attract new business to an area. With the proposed project and its resultant capacity, mobility, and safety improvements, it is likely that economic growth will occur based on improved development potential. This, in turn, could enhance redevelopment potential of underutilized properties, stimulate land use change, and create potential development and redevelopment opportunities throughout the project area, including within the Millburn Historic District.

3.1.10 Pedestrian and Bicycle Facilities

Based on the Lindenhurst Community Pedestrian and Bike Trail Comprehensive Plan (2008), the project site lies near a number of existing and planned trails. Trails exist within forest preserves near the study area and also adjacent to some of the residential subdivisions located west of U.S. Route 45.

The LCFPD has plans to extend Millennium Trail (a planned 35-mile regional trail) to connect central, western, and northern Lake County communities and forest preserves. The plans include extending Millennium Trail from McDonald Woods Forest Preserve east across U.S. Route 45 to connect to the northern section of the Des Plaines River Trail near Wadsworth, Illinois (refer to Appendix A - Exhibit 5). Plans for the Millennium Trail system also include an underpass/tunnel crossing under Grass Lake Road to connect McDonald Woods Forest Preserve/Forest View Park on the south with Oak Ridge Park & Wetzel Fields on the north, and extending a section of the Millennium Trail system to Raven Glen and Ethel's Woods near Miller Road, and to the Mill Creek Forest Preserve to the southeast.

The Preferred Alternative will provide accommodations for a 10 feet wide bike path along the west side of U.S. Route 45 and a five feet wide sidewalk along the east side of U.S. Route 45 for the full project limits. With reference to Exhibit 5 (Appendix A), LCFPD anticipates utilizing these accommodations within the U.S. Route 45 right-of-way to make connections to other LCFPD holdings to the north and south. A trail/sidewalk will also be provided within the study area along the roads that cross U.S. Route 45, such as Grass Lake Road, Stearns School Road, and IL Route 173. These trails/sidewalks will improve community cohesion, provide links to existing trail systems, and/or opportunities for future trail connections.

Based on proximity, the Preferred Alternative is most compatible with regional trail objectives of the LCFPD, and connectivity to McDonald Woods. The LCFPD envisions providing a connection between the existing path within McDonald Woods and the proposed path along the west side of the Preferred Alternative. In addition, it was determined by the LCFPD that a West Bypass would not adversely affect the overall recreation activities of McDonald Woods; would traverse only low quality areas of the preserve, and would not affect facility access. On this basis, the Federal Highway Administration (FHWA) approved a *de minimis* impact finding for the proposed use of McDonald Woods (see Section 3.13).

3.2 Agricultural Resources

As previously stated, existing land use along the U.S. Route 45 project corridor is primarily agricultural, most notably on the east side of the existing alignment. Based on a review of soils

information from the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS), prime farmland or farmland of statewide importance is mapped within and adjacent to the project corridor. There is no unique farmland along the project corridor. A comparison of the Centennial Farm list and Sesquicentennial Farm list yielded no matches within the project corridor (<http://www.agr.state.il.us/marketing/centfarms/>). No Sesquicentennial Farms were reported for Lake County, Illinois.

In order to accommodate the projected 2040 travel and capacity demand for U.S. Route 45, two through lanes in each direction are required, in addition to dedicated left and right turn auxiliary lanes. The typical roadway section includes two 12 foot wide travel lanes in each direction separated by a 22 foot wide barrier curbed median to provide a safe area for turning traffic deceleration and storage (widens to 30 feet at intersections, if required). Accommodations for a 10 foot wide bike path along the west side of the roadway and a five foot wide sidewalk along the east side of the roadway will be provided within the proposed right-of-way in accordance with Illinois Complete Streets Law.

To construct the improvements, 74.2 acres of additional right-of-way is required and would include the acquisition of approximately 30.8 acres of farmland; the majority of which is prime farmland (30.4 acres). Approximately 0.4 acres of statewide and local important farmland will be acquired. Potential impacts to agricultural land have been minimized where practicable and feasible. The Preferred Alternative includes a West Bypass of the Millburn Historic District. The West Bypass traverses predominantly open space (including a previously recorded roadway corridor) and forest preserve property. Various alternatives were considered throughout project development, including an East Bypass of the Millburn Historic District, which would have resulted in substantially greater impacts to prime farmland. A summary of this project's alternatives process is included in Chapter 2, Alternatives.

Based on a review of local zoning maps and comprehensive plans prepared by communities and Lake County, future land use in the vicinity of the U.S. Route 45 corridor is already anticipated to be converted to predominantly residential with smaller areas of commercial, industrial, agricultural, open space, and institutional land uses (refer to Appendix A, Exhibit 4 - Existing and Comprehensive Land Use Plan). Access to the area is already provided. The project is consistent with regional and local land use plans, and is not anticipated to induce any major development or development change that is not already in the foreseeable planning stage.

Potential impacts to agricultural land as a result of the proposed project have been coordinated with the NRCS and the Illinois Department of Agriculture (IDOA). In a letter dated May 2, 2012, IDOA stated that the Preferred Alternative complies with IDOT's Agricultural Land Preservation Policy and the Farmland Preservation Act (505 ILCS 75/1 et seq.). A copy of the IDOA determination letter and a completed copy of USDA NRCS Form AD-1006 are included in Appendix B.

3.3 Cultural Resources

On January 14, 2013, a Conditional No Adverse Effect finding for Cultural Resources was received for the project based on the avoidance of impacts to archeological and architectural

properties by the preferred alignment (refer to Appendix B). This finding cleared the project for Phase I Design Approval conditioned on submittal of preliminary and final design plans to the State Historic Preservation Officer (SHPO) for comment and approval (refer to Section 3.16 – Commitments).

3.3.1 Archaeological

Fourteen archaeological sites were recorded within the project study area by the Illinois State Archeological Survey (ISAS) at the University of Illinois. All but two of these sites represent surface scatters of prehistoric lithics and 19th and 20th century historic debris, and are unlikely to yield important information about prehistory or history.

As identified in a report by ISAS dated July 16, 2010, two sites warrant avoidance, the D.B. Taylor site (11L 870) and the Old Millburn Cemetery (11L 857). ISAS personnel conducted archival document research, informant interviews, and a magnetometer survey to identify the cemetery boundaries. As a result of these investigations, the cemetery boundaries (along with a 50 foot buffer) were delineated allowing for avoidance of the area by the proposed U.S. 45 Route bypass. Impacts to the unmarked cemetery as a result of the proposed U.S. Route 45 improvements are not anticipated. Impacts to the D.B. Taylor site are not anticipated.

3.3.2 Historic Bridges

Based on a review of the Illinois Historic Bridge Survey, there are no known historic bridges involved with the project. No impacts to historic bridges are anticipated.

3.3.3 Historic Districts and Buildings

The U.S. Route 45 Preferred Alternative bypasses the Millburn Historic District, which is wholly contained within the Village of Old Mill Creek (refer to Appendix A, Exhibit 2 - Environmental Resources Map). The Millburn Historic District is comprised of 18 historic buildings and was listed on the National Register of Historic Places (NRHP) in 1979. This area is locally known as the Central Millburn Historic District. Impacts to the NRHP Central Millburn Historic District are not anticipated with the Preferred Alternative.

The Druce-Hoffman Farmstead, which is located immediately west of the existing Millburn Road and U.S. Route 45 intersection, was evaluated for National Register eligibility by the SHPO and determined to be ineligible (refer to Appendix B, letter dated May 24, 2011). The farmstead will likely be impacted by the Preferred Alternative.

Based on documentation prepared by IDOT and a draft NRHP nomination for the Druce-Hoffman Farmstead provided to IHPA (prepared by others), the Illinois SHPO and FHWA agreed that the Druce-Hoffman Farmstead is not eligible for the NRHP based on historical significance. In addition, based on the Architectural Report prepared by John N. Vogel, PhD, of Heritage Research (refer to Appendix B), it was also determined that the residence and associated outbuildings do not meet the criteria for listing on the Nation Register based on Architectural Significance.

3.4 Air Quality

3.4.1 Air Quality Conformity

The National Ambient Air Quality Standards (NAAQS), established by the U.S. Environmental Protection Agency (USEPA), set maximum allowable concentration limits for six criteria air pollutants. Areas in which air pollution levels persistently exceed the NAAQS may be designated as “nonattainment.” States where a nonattainment area is located must develop and implement a State Implementation Plan (SIP) containing policies and regulations that will bring about attainment of the NAAQS. Areas that had been designated as nonattainment, but that have attained the NAAQS for the criteria pollutant(s) associated with the nonattainment designation, will be designated as maintenance areas.

All areas of Illinois currently are in attainment of the standards for four of the six criteria pollutants: carbon monoxide, nitrogen dioxide, sulfur dioxide, and lead. For the eight-hour ozone and particulate matter (PM)_{2.5} standards, Cook, DuPage, Kane, Lake, McHenry, and Will Counties, as well as Aux Sable and Goose Lake Townships in Grundy County and Oswego Township in Kendall County, have been designated as nonattainment areas.

The Lake Calumet area and Lyons Township in Cook County have been designated as a maintenance area for the particulate matter (PM)₁₀ standard. In addition, Oglesby and several adjacent townships in LaSalle County and Granite City Township and Nameoki Township in Madison County have been designated as maintenance areas for the PM₁₀ standard. All other areas of Illinois currently are in attainment for the ozone and PM₁₀ standards.

This project is included in the FY 2010 - 2015 Transportation Improvement Program (TIP) endorsed by the Metropolitan Planning Organization Policy Committee of the Chicago Metropolitan Agency for Planning (CMAP) for the region in which the project is located. Projects in the TIP are considered to be consistent with GO TO 2040, the 2040 regional transportation plan endorsed by CMAP. The project is within the fiscally constrained portion of the plan.

On October 25, 2010, the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) determined that the 2040 regional transportation plan conforms with the State Implementation Plan (SIP) and the transportation-related requirements of the 1990 Clean Air Act Amendments. On October 22, 2012, the FHWA and the FTA determined that the TIP also conforms with the SIP and the Clean Air Act Amendments. These findings were in accordance with 40 CFR Part 93, "Determining Conformity of Federal Actions to State or Federal Implementation Plans."

The project's design concept and scope are consistent with the project information used for the TIP conformity analysis. Therefore, this project conforms to the existing State Implementation Plan and the transportation-related requirements of the 1990 Clean Air Act Amendments.

The TIP number for this project is 10-06-0020.

This project is not an air quality concern under 40 CFR 93.123(b)(1). Based on 2009 traffic counts, there is approximately eight percent truck traffic along this section of U.S. Route 45 on

average. Because this project is absent any site specific truck traffic growth factors (e.g., new intermodal site within the project limits or industrial developments), the percentage of truck traffic along U.S. Route 45 within the project limits is anticipated to remain near eight percent. The projected year 2040 annual average daily traffic (AADT) will be less than 125,000. Therefore, a substantial number (or increase) of diesel vehicles is not anticipated as a result of this project. Based on 2040 traffic projections and anticipated percentage of truck traffic, it has been determined that the project will not cause or contribute to any new localized PM_{2.5} or PM₁₀ violations or increase the frequency or severity of any PM_{2.5} or PM₁₀ violations. USEPA has determined that such projects meet the Clean Air Act's requirements without any further Hot-Spot analysis.

3.4.2 Microscale Analysis

A COSIM 4.0 pre-screen carbon monoxide analysis was completed for the proposed project at the intersection of U.S. Route 45 and Sand Lake Road/Stearns School Road, which was the location of the critical sensitive receptor at a signalized intersection. The results from this proposed roadway improvement indicate that a COSIM 4.0 air quality analysis is not required, as the results for the worst-case receptor are below the 8-hour average NAAQS for CO of 9.0 ppm, which is necessary to protect the public health and welfare (see Appendix B).

3.4.3 Mobile Source Air Toxics

This project was evaluated in accordance with the updated interim guidance issued by FHWA in December 2012 concerning mobile source air toxics (MSAT) analysis for highway projects. This project is considered a minor widening project that will improve operations of the existing highway without adding substantial new capacity (i.e., year 2040 traffic volumes are projected to be less than 140,000 AADT) or without creating a facility that is likely to meaningfully increase MSAT emissions. As such, this type of project has low potential for MSAT effects.

The *Clean Air Act* identified 188 air toxics, also known as hazardous air pollutants. The USEPA has assessed this expansive list of toxics and identified a group of 93 compounds emitted from mobile sources, listed in the USEPA Integrated Risk Information System (IRIS). In addition, USEPA identified seven compounds with significant contributions from mobile sources that are among the national and regional-scale cancer risk drivers from their 1999 National Air Toxics Assessment (NATA). These are acrolein, benzene, 1,3-butadiene, diesel particular matter plus diesel exhaust organic gases (diesel PM), formaldehyde, naphthalene, and polycyclic organic matter. While FHWA considered these to be the priority MSATs, the list is subject to change and may be revised in future rules.

In FHWA's view, information is incomplete or unavailable to credibly predict the project-specific health impacts due to changes in MSAT emissions associated with a proposed set of highway alternatives. The outcome of such an assessment, adverse or not, would be influenced more by the uncertainty introduced into the process through assumption and speculation rather than any genuine insight into the actual health impacts directly attributable to MSAT exposure associated with a proposed action.

USEPA Role – USEPA is responsible for protecting the public health and welfare from any known or anticipated effect of an air pollutant. They are the lead authority for administering the Clean Air Act and its amendments and have specific statutory obligations with respect to hazardous air pollutants and MSAT. The USEPA is in the continual process of assessing human health effects, exposures, and risks posed by air pollutants. They maintain the IRIS, which is “a compilation of electronic reports on specific substances found in the environment and their potential to cause human health effects.” The IRIS can be accessed through the USEPA website. Each report contains assessments of non-cancerous and cancerous effects for individual compounds and quantitative estimates of risk levels from lifetime oral and inhalation exposures with uncertainty spanning perhaps an order of magnitude.

Role of Other Organizations – Other organizations are also active in the research and analyses of the human health effects of MSAT, including the Health Effects Institute (HEI). Two HEI studies are summarized in Appendix D of FHWA’s Interim Guidance Update on Mobile Source Air Toxic Analysis in NEPA Documents. Among the adverse health effects linked to MSAT compounds at high exposures are cancer in humans in occupational settings; cancer in animals; and irritation to the respiratory tract, including the exacerbation of asthma. Less obvious is the adverse human health effects of MSAT compounds at current environmental concentrations or in the future as vehicle emissions substantially decrease. See research reports available through the HEI website.

Problems with Modeling Methodologies – The methodologies for forecasting health impacts include emissions modeling, dispersion modeling, exposure modeling, and then final determination of health impacts; each step in the process building on the model predictions obtained in the previous step. All are encumbered by technical shortcomings or uncertain science that prevents a more complete differentiation of the MSAT health impacts among a set of project alternatives. These difficulties are magnified for lifetime (i.e., 70 year) assessments, particularly because unsupportable assumptions would have to be made regarding changes in travel patterns and vehicle technology (which affects emissions rates) over that time frame, because such information is unavailable.

It is particularly difficult to reliably forecast 70-year lifetime MSAT concentrations and exposure near roadways; to determine the portion of time that people are actually exposed at a specific location; and to establish the extent attributable to a proposed action, especially given that some of the information needed is unavailable.

MSAT Toxicity Estimates – There are considerable uncertainties associated with the existing estimates of toxicity of the various MSAT, because of factors such as low-dose extrapolation and translation of occupational exposure data to the general population, a concern expressed by HEI. As a result, there is no national consensus on air dose-response values assumed to protect the public health and welfare for MSAT compounds, and in particular for diesel PM. The USEPA and the HEI have not established a basis for quantitative risk assessment of diesel PM in ambient settings.

Level of Risk – There is also the lack of a national consensus on an acceptable level of risk. The current context is the process used by the USEPA, as provided by the Clean Air Act, to determine whether more stringent controls are required in order to provide an ample margin of

safety to protect public health or to prevent an adverse environmental effect for industrial sources subject to the maximum achievable control technology standards (e.g., benzene emissions from refineries). The decision framework is a two-step process. The first step requires USEPA to determine a “safe” or “acceptable” level of risk due to emissions from a source, which is generally no greater than approximately 100 in a million. Additional factors are considered in the second step, the goal of which is to maximize the number of people with risks less than 1 in a million due to emissions from a source. The results of this statutory two-step process do not guarantee that cancer risks from exposure to air toxics are less than 1 in a million; in some cases, the residual risk determination could result in maximum individual cancer risks that are as high as approximately 100 in a million. In a June 2008 decision, the U.S. Court of Appeals for the District of Columbia Circuit upheld USEPA’s approach to addressing risk in its two-step decision framework. Information is incomplete or unavailable to establish that even the largest of highway projects would result in levels of risk greater than safe or acceptable.

Because of the limitations in the methodologies for forecasting health impacts described, any predicted difference in health impacts between alternatives is likely to be much smaller than the uncertainties associated with predicting the impacts. Consequently, the results of such assessments would not be useful to decision makers, who would need to weigh this information against project benefits (e.g., reducing traffic congestion, crash rates, and fatalities plus improved access for emergency response) that are better suited for quantitative analysis.

Qualitative Analysis – For each alternative considered in this Environmental Assessment (EA), the amount of MSAT emitted would be proportional to the vehicle miles traveled (VMT), assuming that other variables such as fleet mix are the same for each alternative. The VMT estimated for each of the Build Alternatives is slightly higher than that for the No-Build Alternative, because the additional capacity increases the efficiency of the roadway and attracts rerouted trips from elsewhere in the transportation network. This increase in VMT would lead to higher MSAT emissions for the Preferred Alternative along the highway corridor, along with a corresponding decrease in MSAT emissions along the parallel routes. The emissions increase is offset somewhat by lower MSAT emission rates due to increased speeds; according to USEPA’s MOVES2010b model, emissions of all of the priority MSAT decrease as speed increases. Because the estimated VMT under each of the Alternatives are nearly the same, it is expected there would be no appreciable difference in overall MSAT emissions among the various alternatives. Also, regardless of the alternative chosen, emissions will likely be lower than present levels in the design year as a result of USEPA’s national control programs that are projected to reduce annual MSAT emissions by over 80 percent between 2010 and 2050. Local conditions may differ from these national projections in terms of fleet mix and turnover, VMT growth rates, and local control measures. However, the magnitude of the USEPA-projected reductions is so great (even after accounting for VMT growth) that MSAT emissions in the study area are likely to be lower in the future in nearly all cases.

The additional travel lanes contemplated as part of the project alternatives will have the effect of moving some traffic closer to nearby homes, schools, and businesses; therefore, under each alternative there may be localized areas where ambient concentrations of MSAT could be higher than the No-Build Alternative. With the Central Section of the project, the localized increases in MSAT concentrations would likely be most pronounced along the west realignment of U.S.

Route 45 (i.e., West Bypass). In contrast, decreases in MSAT along existing U.S. 45 through the central section would also occur as a result of shifting the alignment west, away from approximately 20 residences adjacent to the roadway. However, the magnitude and the duration of these potential increases and decreases as compared to the No-Build alternative cannot be reliably quantified due to incomplete or unavailable information in forecasting project-specific MSAT health impacts.

In summary, when a highway is widened, the localized level of MSAT emissions for the Build Alternative could be higher relative to the No-Build Alternative, but this could be offset due to increases in speeds and reductions in congestion, which are associated with lower MSAT emissions. Also, MSAT will be lower in other locations when traffic shifts away from them. However, on a regional basis, USEPA's vehicle and fuel regulations, coupled with fleet turnover, will over time cause substantial reductions that, in almost all cases, will cause region-wide MSAT levels to be substantially lower than today.

3.4.4 Construction-Related Particulate Matter

Demolition and construction activities can result in short-term increases in fugitive dust and equipment-related particulate emissions in and around the project area. (Equipment-related particulate emissions can be minimized if the equipment is well maintained.) The potential air quality impacts will be short-term, occurring only while demolition and construction work is in progress and local conditions are appropriate.

The potential for fugitive dust emissions typically is associated with building demolition, ground clearing, site preparation, grading, stockpiling of materials, on-site movement of equipment, and transportation of materials. The potential is greatest during dry periods, periods of intense construction activity, and during high wind conditions.

The Department's Standard Specifications for Road and Bridge Construction include provisions on dust control. Under these provisions, dust and airborne dirt generated by construction activities will be controlled through dust control procedures or a specific dust control plan, when warranted. The contractor and the Department will meet to review the nature and extent of dust-generating activities and will cooperatively develop specific types of control techniques appropriate to the specific situation. Techniques that may warrant consideration include measures such as minimizing track-out of soil onto nearby publicly-traveled roads, reducing speed on unpaved roads, covering haul vehicles, and applying chemical dust suppressants or water to exposed surfaces, particularly those on which construction vehicles travel. With the application of appropriate measures to limit dust emissions during construction, this project will not cause any substantial, short-term particulate matter air quality impacts.

In addition to dust control, IDOT has developed Special Provisions to reduce diesel exhaust air pollution from construction activities. These Special Provisions include: the use of cleaner burning diesel fuel (e.g., Ultra Low Sulfur Diesel Fuel), idling reduction requirements for construction equipment, and installation of retrofit emission control devices for older diesel fuel powered construction equipment. The Special Provisions can be found at <http://www.dot.state.il.us/airquality.html>. Contractor/subcontractor adherence to the Special

Provisions will reduce diesel exhaust air pollution during construction activities associated with this project.

3.5 Noise

3.5.1 Traffic Noise

The criteria used to evaluate noise impacts are contained in Title 23 CFR 772, Procedures for Abatement of Highway Traffic Noise and Construction Noise, and the IDOT Bureau of Design and Environment Manual, Chapter 26, “Noise Analysis”. A traffic noise impact occurs if predicted peak-hour traffic noise levels approach or exceed the Noise Abatement Criteria (NAC) as shown in Table 3-4, or if predicted levels are substantially higher than existing noise levels. IDOT defines “approach” as within 1 dB(A) of the NAC, and “substantially higher” as an increase of greater than 14 dB(A). The NAC are not design criteria or targets, but are noise impact thresholds for determining when consideration of noise abatement measures may be warranted. The proposed improvement is considered a Type I Project for Highway Traffic Noise because it includes a substantial horizontal alteration and/or the addition of through traffic lanes. Type I projects require a Traffic Noise Analysis and consideration of Noise Abatement. The NAC for all receptors adjacent to the proposed improvement is 67 dB(A) since all Activity Category B or C per Table 3-4.

Table 3-4. Noise Abatement Criteria

Activity Category ¹	$L_{eq}(h)$ ²	Evaluation Location	Activity Description
A	57	Exterior	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	67	Exterior	Residential.
C	67	Exterior	Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails and trail crossings.
D	52	Interior	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios.
E	72	Exterior	Hotels, motels, offices, restaurants/bars, and other developed lands, properties or activities not included in A-D or F.
F	---	---	Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities,

Activity Category ¹	L _{eq} (h) ²	Evaluation Location	Activity Description
			shipyards, utilities (water resources, water treatment, electrical), and warehousing.
G	---	---	Undeveloped lands that are not permitted.

¹ Residential = Category B, Commercial = Category E or F, Industrial and Agricultural = Category F, Open Space = Category G, and Institutional = Category C.

² L_{eq}(h) = Hourly Weighted Sound Equivalent in dB(A).

A Traffic Noise Technical Report was completed in May 2012. As part of the noise study, 38 representative receptors (R) were selected for the study area, which included single family residences, a multi-family residence, a daycare facility, and a trail. Each receptor is associated with a common noise environment (CNE) that it represents. The receptors within the CNE will have similar traffic noise levels as the selected representative receptor. The receptor and CNE locations are shown on the Exhibit 2 (Appendix A).

FHWA Traffic Noise Model (TNM) 2.5 was used to predict the existing (2011) and future (2040) Build and No-Build traffic noise levels for representative receptors (see Table 3-5). Based on TNM, existing 2011 traffic noise levels range from 45 dB(A) to 72 dB(A). The projected No-Build 2040 traffic noise levels range from 47 dB(A) to 74 dB(A). Generally, receptor noise levels increase between 2 dB(A) and 3 dB(A) from the existing scenario due to an increase in traffic volumes.

The projected Build 2040 traffic noise levels range from 47 dB(A) to 69 dB(A) (see Table 3-5). The projected Build 2040 traffic noise levels decrease between 1 dB(A) and 12 dB(A) from the existing condition at nine receptors (R10, R12, R13, R18, R19, R21, R22, R24, and R25) generally located near existing U.S. Route 45 east of the Preferred Alternative. Six receptors (R14-R17, R20, and R23) located near the Preferred Alternative increase between 6 dB(A) and 14 dB(A) from the existing condition due to the shift of U.S. Route 45 closer to their location. The remaining receptors increase between 0 dB(A) and 5 dB(A) from existing conditions. The increase in traffic noise at these locations is due to a shift of U.S. Route 45 towards the receptors due to the widening of U.S. Route 45 and an increase in traffic volumes in the project corridor. Nine receptor locations have impacts (approach, meet, or exceed the FHWA NAC), and warrant consideration of traffic noise abatement.

Table 3-5. Traffic Noise Modeling Results

Receptor/CNE	Receptor Type	NAC	Nearest Existing Roadway	Distance from Nearest Existing Roadway Centerline (ft)	Represented Receptors	Existing 2011 Noise Level dB(A)	No-Build 2040 Noise Level dB(A)	Build 2040 Noise Level dB(A)	Increase in Noise Levels from Existing to Build 2040 dB(A)
R1/CNE1	SFR	67	U.S. Route 45	110	3	64	66	<u>69</u>	5
R2/CNE2	SFR	67	U.S. Route 45	95	5	64	66	<u>69</u>	5
R3/CNE3	SFR	67	U.S. Route 45	135	9	59	61	64	5
R4/CNE4	SFR	67	U.S. Route 45	130	12	61	64	<u>66</u>	5
R5/CNE5	SFR	67	U.S. Route 45	115	22	63	66	<u>68</u>	5

Receptor/CNE	Receptor Type	NAC	Nearest Existing Roadway	Distance from Nearest Existing Roadway Centerline (ft)	Represented Receptors	Existing 2011 Noise Level dB(A)	No-Build 2040 Noise Level dB(A)	Build 2040 Noise Level dB(A)	Increase in Noise Levels from Existing to Build 2040 dB(A)
R5A/CNE5A	Daycare Facility	67	U.S. Route 45	210	1	58	60	63	5
R6/CNE6	MFR	67	U.S. Route 45	480	22	54	56	57	3
R7/CNE7	SFR	67	U.S. Route 45	200	3	60	62	64	4
R8/CNE8	SFR	67	U.S. Route 45	275	1	57	59	62	5
R9/CNE9	SFR	67	U.S. Route 45	185	2	59	61	64	5
R10/CNE10	SFR	67	U.S. Route 45	110	1	64	66	63	-1
R10A/CNE10 A	Trail	67	U.S. Route 45	1,750	1	45	47	50	5
R11/CNE11	SFR	67	U.S. Route 45	1,475	1	46	48	47	1
R12/CNE12	SFR	67	U.S. Route 45	110	2	62	65	56	-6
R13/CNE13	SFR	67	U.S. Route 45	220	3	58	60	55	-3
R14/CNE14	SFR	67	Haven Lane	90	4	54	56	66	12
R15/CNE15	SFR	67	Haven Lane	65	5	56	58	67	11
R16/CNE16	SFR	67	Haven Lane	60	5	54	56	68	14
R17/CNE17	SFR	67	Haven Lane	85	5	55	58	66	11
R18/CNE18	SFR	67	U.S. Route 45	80	8	66	68	60	-6
R19/CNE19	SFR	67	U.S. Route 45	60	8	67	69	60	-7
R20/CNE20	SFR	67	Grass Lake Rd	235	4	55	57	61	6
R21/CNE21	SFR	67	U.S. Route 45	40	10	72	74	60	-12
R22/CNE22	SFR	67	U.S. Route 45	145	5	66	68	57	-9
R23/CNE23	SFR	67	Independence Dr	330	10	52	54	66	14
R24/CNE24	SFR	67	U.S. Route 45	60	2	67	70	59	-8
R25/CNE25	SFR	67	U.S. Route 45	65	3	58	61	55	-3
R26/CNE26	SFR	67	U.S. Route 45	285	1	53	55	58	5
R27/CNE27	SFR	67	U.S. Route 45	100	2	56	59	60	4
R28/CNE28	SFR	67	U.S. Route 45	120	2	58	61	61	3
R29/CNE29	SFR	67	U.S. Route 45	130	3	58	60	61	3
R30/CNE30	SFR	67	U.S. Route 45	220	1	54	57	57	3
R31/CNE31	SFR	67	U.S. Route 45	160	1	57	60	60	3
R32/CNE32	SFR	67	U.S. Route 45	115	1	62	64	63	1
R33/CNE33	SFR	67	IL Route 173	115	6	63	65	64	1
R34/CNE34	SFR	67	U.S. Route 45	100	3	64	66	64	0
R35/CNE35	SFR	67	U.S. Route 45	115	2	59	62	61	2
R36/CNE36	SFR	67	U.S. Route 45	125	1	59	61	62	3

SFR = Single Family Residence

MFR = Multi-Family Residence

Boldface/underline indicates the noise levels approach, equal, or exceed the NAC in the 2040 Build condition

The most feasible noise barrier for this project would be in the form of a noise abatement wall. An effective noise barrier must be tall enough to break the line-of-sight between the receptor and the source of noise. The length of an effective noise barrier typically extends beyond the last receptor four times the distance between the receptor and noise barrier.

The feasibility evaluation is a combination of acoustical and engineering factors considered in the evaluation of a noise abatement measure. The acoustical portion of the IDOT policy, as required by FHWA regulations, considers noise abatement to be feasible if it achieves at least a 5 dB(A) traffic noise reduction at an impacted receptor.

A noise abatement measure is determined to be reasonable when all three of the following reasonableness evaluation factors are met:

- Cost effectiveness of the highway traffic noise abatement measure.
- Achievement of IDOT’s noise reduction design goal.
- Consideration of the viewpoints of the benefited receptors (property owners and residents) if all other criterion are achieved.

A noise abatement measure is considered cost-effective to construct if the noise wall construction cost per benefited receptor is less than the allowable cost per benefited receptor. A benefited receptor is any receptor that is afforded at least a 5 dB(A) traffic noise reduction from the proposed noise abatement measure. The FHWA regulations allow each State Highway Authority to establish cost criteria for determining cost effectiveness.

IDOT policy establishes the actual cost per benefited receptor shall be based on a noise wall cost of \$25 per square foot, which includes engineering, materials, and construction. The base value allowable cost per benefited receptor is \$24,000 per benefited receptor, which can be increased based on three factors as summarized below, which are considered for all benefited receptors:

- The absolute noise level of the benefited receptors in the design year build scenario before noise abatement as shown in Table 3-6.
- The incremental increase in noise level between the existing noise level at the benefited receptor and the predicted build noise level before noise abatement as shown in Table 3-7.
- The date of development compared to the construction date of the highway as shown in Table 3-8.

Table 3-6. Absolute Noise Level Consideration

Predicted Build Noise Level Before Noise Abatement	Dollars Added to Base Value Cost per Benefited Receptor
Less than 70 dB(A)	\$0
70 to 74 dB(A)	\$1,000
75 to 79 dB(A)	\$2,000
80 dB(A) or greater	\$4,000

Table 3-7. Increase in Noise Level Consideration

Incremental Increase in Noise Level Between the Existing Noise Level and the Predicted Build Noise Level Before Noise Abatement	Dollars Added to Base Value Cost per Benefited Receptor
Less than 5 dB(A)	\$0
5 to 9 dB(A)	\$1,000
10 to 14 dB(A)	\$2,000
15 dB(A) or greater	\$4,000

Table 3-8. New Alignment / Construction Date Consideration

Project is on new alignment OR the receptor existed prior to the original construction of the highway	Dollars Added to Base Value Cost per Benefited Receptor
No for both	\$0
Yes for either	\$5,000

Note: No single optional reasonableness factor shall be used to determine that a noise abatement measure is unreasonable.

The IDOT noise reduction design goal is to achieve an 8 dB(A) traffic noise reduction at a minimum of one benefited receptor. If a noise abatement option is feasible, achieves the cost-effective criterion, and achieves the IDOT noise reduction design goal, the benefited receptors will be solicited for their opinion on the construction of the noise wall.

TNM was used to perform the noise wall feasibility and reasonability check. When determining if an abatement measure is feasible and reasonable, the noise reductions achieved, number of residences benefited, total cost, and total cost per residence benefited are considered.

Nine noise abatement walls were evaluated as shown in Table 3-9 and Table 3-10. This included three variations in the R23 area adjacent to the Heritage Trails Subdivision: Barrier 7-1 was evaluated along the proposed right-of-way, Barrier 7-2 is along the proposed edge-of-pavement, and Barrier 7-3 is along the residential property line, which assumes acquisition of the land between the current proposed right-of-way and the residential property line. The noise walls in the remaining locations were modeled along the proposed right-of-way. All of the noise walls are considered feasible noise abatement measures since each provides at least a 5-dBA traffic noise reduction at an impacted receptor. Additionally, each of the noise walls would be considered reasonable based on the noise reduction design goal since each would provide at least an 8 dB(A) traffic noise reduction for at least one benefited receptor.

Table 3-9. Adjusted Allowable Cost per Benefited Receptor

CNE / Receptor	Barrier Name	Benefited Receptors	Adjustment Factor Range	Average Adjustment Factor	Adjusted Allowable Cost per Benefited Receptors
CNE1 / R1	B1	1	\$1,000	\$1,000	\$25,000
CNE2 / R2	B2	1	\$1,000	\$1,000	\$25,000
CNE4 / R4	B3	8	\$0 to \$1,000	\$375	\$24,375
CNE5 / R5	B4	9	\$0 to \$1,000	\$556	\$24,556
CNE14 / R14 ¹	B5	4	\$6,000 to \$7,000	\$6,500	\$30,500
CNE17 / R17 ¹					
CNE15 / R15 ²	B6	4	\$6,000 to \$9,000	\$7,250	\$31,250
CNE16 / R16 ²					
CNE23 / R23	B7-1	7	\$6,000 to \$7,000	\$6,857	\$30,857
CNE23 / R23	B7-2	7	\$6,000 to \$7,000	\$6,714	\$30,714
CNE23 / R23	B7-3	8	\$6,000 to \$7,000	\$6,750	\$30,750

¹ CNEs 14 and 17 share a common noise wall.

² CNEs 15 and 16 share a common noise wall.

Table 3-10. Noise Wall Cost Reasonableness Evaluation

Barrier / CNE	Benefited Receptors	Length, ft	Height, ft	Total Noise Wall Cost	Actual Cost per Benefited Receptor	Adjusted Allowable Cost per Benefited Receptor
B1 / CNE1	1	302	10	\$75,500	\$75,500	\$25,000
B2 / CNE2	1	498	12	\$149,400	\$149,400	\$25,000
B3 / CNE4	8	906	14	\$317,100	\$39,638	\$24,375
B4 / CNE5	9	1,100	12	\$330,000	\$36,667	\$24,556
B5 / CNE14 & CNE17	4	702	12	\$210,600	\$52,650	\$30,500
B6 / CNE15 & CNE16	4	902	15	\$338,250	\$84,563	\$31,250
B7-1 / CNE23	7	1,093	14	\$382,550	\$54,650	\$30,857
B7-2 / CNE23	7	1,201	14	\$420,350	\$60,050	\$30,714
B7-3 / CNE23	8	1,193	13	\$387,725	\$48,466	\$30,750

The nine noise walls were evaluated for cost-effectiveness. The noise walls would range in cost from approximately \$75,500 to \$420,350, and have a cost per benefited receptor (a receptor receiving at least a 5 dB(A) reduction) of \$36,667 to \$149,400 which exceeds IDOT’s adjusted allowable cost per benefited receptor of approximately \$24,375 to 31,250. On this basis, it was determined that the cost of noise abatement to achieve the noise abatement design goal of at least 8dB(A) for at least one benefited receptor would exceed IDOT’s cost-effectiveness criterion regardless of the wall location. None of the feasible noise walls are economically reasonable, as each has an actual cost per benefited receptor that exceeds the adjusted allowable cost per benefited receptor. Therefore, noise walls will not be implemented as part of this project.

Within the central section of the project, the Preferred Alternative is adjacent to the east boundary of the Heritage Trails subdivision, within the Village of Lindenhurst. As a result of the traffic noise analysis, it was determined that the 7 first-row residences along the east boundary of the Heritage Trails Subdivision will experience an increase in traffic noise, with the increases ranging from 4 dB(A) to 14 dB(A) based on projected traffic volumes for the year 2040. It was also determined that although there is a 30 to 50 feet wide additional buffer area in between the Preferred Alternative and the Heritage Trails subdivision, an earthen berm at the required height (13 to 14 feet) to achieve the noise reduction design goal could not be provided in this area since the width of the berm (minimum 6 feet wide top, 3:1 side slopes, drainage areas at toe of slopes) would exceed the available space. In addition, providing a berm in this area would require the removal of a substantial number of existing trees and other vegetation. Additional landscaping will be considered in this area and near the Forest Trail subdivision, to the extent practical and feasible based on available right-of-way and in consideration of safety and sight distance, to enhance the visual barrier in between these residential areas and the Preferred Bypass Alternative. However, landscaping is not an effective noise abatement measure.

Coordination with local officials having jurisdiction over adjacent undeveloped lands within the project area has occurred. A meeting was held with the Village of Lindenhurst and letters were sent to the Village of Lindenhurst, the Village of Old Mill Creek, and the Land County Planning Department to provide the results of the traffic noise study, and to provide information on estimated future noise levels that may be useful with respect to protecting future land development from being incompatible with anticipated future traffic noise levels. Copies of these meeting summaries and letters are provided in Appendix C.

3.5.2 Construction Noise

Trucks and machinery used for construction produce noise which may affect some land uses and activities during the construction period. Residents along the alignment will, at some time, experience perceptible construction noise from implementation of the project. To minimize or eliminate the effect of construction noise on these receptors, mitigation measures have been incorporated into IDOT's *Standard Specifications for Road and Bridge Construction* as Article 107.35.

Construction noise can vary greatly depending on the equipment being used, the condition of the equipment, and the activities being conducted. Noise levels also depend on the time and duration of the construction activity. Construction noise abatement can be accomplished by construction staging, sequencing of operations, or alternative construction methods. Construction staging and sequencing of operations will be performed to minimize construction noise to the extent practicable. For example, louder construction operations in the vicinity of occupied residences will be performed during the day and not during the night (when people are more sensitive to loud noise), in accordance with the IDOT standard specifications. In addition, all engines and engine driven equipment used for hauling or construction shall be equipped with an adequate muffler. Proposed construction methods for a project are typically determined in the final engineering design. Alternative construction methods will be evaluated at that time and used as practicable and feasible for this project.

3.6 Natural Resources

3.6.1 Upland Plant Communities

Table 3-11 summarizes the mapped land cover within the project corridor, which is the result of the Illinois Interagency Landscape Classification Project (IILCP).¹

Table 3-11. Land Cover Mapped in the Project Corridor

Cover Type	Acres ^{a, b}	Percent of Total Land Cover within Project Corridor ^b
Agriculture		
Corn	11.5	7.3
Other small grains and hay	1.4	0.9
Rural grassland	27.8	17.7
Soybean	2.0	1.3
Winter wheat	0.1	0.1
<i>Total</i>	<i>42.8</i>	<i>27.2</i>
Forested Land		
Upland	11.1	7.1
Partial canopy/savannah upland	5.0	3.2
<i>Total</i>	<i>16.1</i>	<i>10.2</i>
Urban and Built-up Land		
High density	5.8	3.7
Low/medium density	42.3	26.9
Urban open space	47.8	30.4
<i>Total</i>	<i>95.9</i>	<i>61.0</i>
Wetland		
Shallow marsh/Wet meadow	2.5	1.6
Grand Total	157.3	100.0
<i>Source: USDA National Agriculture Statistics Service, et al., 2002.</i>		
^a Land cover acreages for this table were calculated for the project corridor based on data from the <i>Land Cover of Illinois 1999–2000</i> .		
^b The percentages/acreages provided in this table may vary from totals provided by different sources found in other tables in this document. Totals may vary due to rounding.		

Existing land use along U.S. Route 45 within the project limits consists of agricultural, residential, light commercial, and recreational. Land use west of U.S. Route 45 includes several residential subdivisions while the land use east of U.S. Route 45 is predominantly agricultural with some forested natural habitats along North Mill Creek. The LCFPD has several holdings along U.S. Route 45 within Raven Glen and Ethel’s Woods north of Miller Road to the west and east of U.S. Route 45 respectively, and McDonald Woods south of Grass Lake Road to the west of U.S. Route 45.

At the end of June/early July 2009, Illinois Natural History Survey (INHS) conducted a botanical survey of the U.S. Route 45 study area. A search was conducted for rare, threatened, and endangered plant species throughout the study area and the natural quality of the vegetation was

¹ IILCP includes the following agencies: USDA National Agricultural Statistics Service, IDOA, and Illinois Department of Natural Resources (IDNR).

evaluated. The INHS botanical survey determined that, most remaining habitats in the study area are highly degraded. Remaining natural habitats include degraded wetlands, including marsh and floodplain forest. A concentration of somewhat less degraded habitat is located north of Independence Boulevard and east of existing U.S. Route 45 near wetland sites 9 and 10 (refer to Appendix A, Exhibit 2 - Environmental Resources Map). Wetland impacts are discussed in Section 3.10. Agricultural land is discussed in Section 3.2. Impacts to prairie areas and trees/wooded areas are discussed below.

Prairie Areas – No roadside prairies were identified within the study area along existing U.S. Route 45 based on a review of the *Inventory of Roadside Prairies – IDOT District 1*, prepared by INHS, dated April 2004.

INHS identified an old field/shrubland (near wetland sites 9 and 10 on the east side of existing U.S. Route 45) with local concentrations of prairie species during their June/July 2009 field visits. Based on species composition, this area may have been a prairie remnant, or previously cultivated land that was recolonized by several prairie species, followed by extensive periods of land use as pasture for domestic livestock. Since INHS classified this area as an old field/shrubland, it is not discussed further.

An approximate 28 acre grassland is located within the McDonald Woods Forest Preserve south of the Millburn Creek riparian corridor. The Preferred Alternative will impact approximately 1.2 acres at the east side of this grassland. The grassland appears to include restored prairie dominated by Indian grass (*Sorghastrum nutans*) and big bluestem (*Andropogon gerardii*). Based on an August 2011 field observation (by Christopher B. Burke Engineering, Ltd. [CBBEL]), this grassland area had a native Floristic Quality Index (FQI) of 18.8, which is indicative of fair to moderate floristic quality. Two native plant species were identified that had indices of conservatism greater than seven (i.e., yellowish gentian [*Gentiana flavida*] and sweet black-eyed Susan [*Rudbeckia subtomentosa*]).

An approximate 25 acre early successional restored prairie is located north of the Millburn Creek riparian corridor within McDonald Woods Forest Preserve. This early successional area includes a shrubland pocket and scattered shrubs/woody invasive species, including common buckthorn (*Rhamnus cathartica*) and amur honeysuckle (*Lonicera maackii*). The prairie matrix is dominated by Indian grass. Based on an August 2011 field observation (by CBBEL), this area had a native FQI of 14.4, which is indicative of fair to moderate floristic quality. One native plant species was identified that had an index of conservatism greater than seven (i.e., wild quinine [*Parthenium integrifolium*]). The Preferred Alternative will impact approximately 1.5 acres at the east side of this early successional restored prairie. In addition to a shrubland pocket, the West Bypass corridor in this location also includes an existing mowed grass trail and Village of Lindenhurst permanent easement containing two fire hydrants, watermain, and sanitary sewer.

Both of the aforementioned areas identified within McDonald Woods Forest Preserve are fragmented by an actively used multi-use path near McDonald Lake. On April 4, 2011, LCFPD concurred that a "West Bypass will not adversely affect the overall recreation activities, features, and attributes of McDonald Woods." FHWA approved a *de minimis* impact finding for impacts to McDonald Woods on June 8, 2011 (see Section 3.13).

During the final stabilization phase of construction, an evaluation will be made to determine if topsoil (containing native seedbank) scraped from impacted prairie areas can be stockpiled and re-spread within the right-of-way (or other approved location).

Wooded Areas – Based on the tree study completed for this project, two woodland types dominate the project corridor: closed woodland and wooded fencerows. Much of the closed woodland consists of relatively small, scattered wooded lots with several larger closed woodland areas located off-site (but extending into the project corridor). There are no dense, unfragmented woodland sites that exceed 20 acres within the project corridor. The wooded fencerows consist of narrow treelines primarily containing one row of trees and shrubs between the existing roadway and adjacent open fields.

Three large closed woodland areas greater than 20 acres in size were identified adjacent to the project corridor. These large wooded areas are located primarily outside of the project corridor, but extend slightly into the project right-of-way limits. The three large closed woodland areas are located (1) on the west side of U.S. Route 45 to the north of Route 173; (2) on the east side of U.S. Route 45 to the north of Independence Boulevard; and, (3) on the east side of U.S. Route 45 to the south of Stearns School Road. In general, the closed woodlands consist of small wooded areas that border residential homes, commercial development, arterial roadways, and open fields. The closed woodlands are generally fragmented, degraded, and low to moderate quality. These areas are dominated by small and moderately sized stems, with the majority of stems ranging in size from six to 24 inches in diameter at breast height (DBH). In general, these woodlands are dominated by silver maple (*Acer saccharinum*), black walnut (*Juglans nigra*), green ash (*Fraxinus pennsylvanica sub.*), American elm (*Ulmus americana*), basswood (*Tilia americana*), bur oak (*Quercus macrocarpa*), Norway maple (*Acer platanoides*) and black cherry (*Prunus serotina*). The closed woodlands contain a number of specimen trees as defined by being located sporadically throughout the closed woodlands, being greater than 25 inches DBH, being of higher quality in condition and form, and including species such as bur oaks, black walnuts, and silver maples.

In the project corridor, wooded fencerows are found within the existing U.S. Route 45 road right-of-way and along existing arterial roadways. The narrow treelines generally contain one row of trees mixed with shrubs and herbaceous vegetation. The distance between trees and the tree density varies considerably. Based on the tree study, the fencerows are generally degraded, highly fragmented, and consist of lower-quality areas; however, there are sporadic individual trees of higher quality located adjacent to the existing roadways. In general, the wooded fencerows are dominated by box elder (*Acer negundo*), white mulberry (*Morus alba*), black locust (*Robinia pseudoacacia*), silver maple, green ash, and bur oak. The wooded fencerows also contain numerous smaller shrubs including common buckthorn and gray dogwood (*Cornus racemosa*). The understory is dominated by tall goldenrod (*Solidago altissima*), fescue (*Festuca spp.*), Hungarian brome (*Bromus inermis*) and early colonizing species. The wooded fencerows also contain a number of specimen trees defined as being greater than 25 inches DBH, being of higher quality in condition and form, and which includes species such as bur oaks, black walnuts, and silver maples.

Woodland impacts associated with the proposed project include vegetation removal and potential impacts due to root zone encroachment, soil compaction and hydrologic modification. Impacts could be either direct or indirect. Direct woodland impacts would result from roadway construction, pavement widening, grading for drainage and the construction of stormwater management facilities. Indirect impacts could result from root zone encroachment due to adjacent construction activities, soil compaction, change in hydrology, further fragmentation of woodland resources, and increased edge effect for remaining fragmented woodland.

Based on the results of a tree study completed for this project, and the current limits of the roadway improvement right-of-way, approximately 3,334 trees would be directly impacted by the project. This would include approximately 1,530 trees greater than or equal to six inches DBH within the existing U.S. Route 45 right-of-way and arterial road rights-of-way. Approximately 1,336 trees would be directly impacted within the proposed bypass construction area, including approximately 854 trees greater than or equal to six inches DBH outside forest preserve property. As required by LCFPD, all trees greater than 1 inch DBH on forest preserve property were identified within the West Bypass corridor. Approximately 482 trees greater than or equal to one inch DBH will be impacted within the McDonalds Woods Forest Preserve property. Total impacted trees also include approximately 468 trees between one and five inches DBH at Raven Glen Forest Preserve in the northern section of the project area.

The vast majority of closed woodland and fencerow woodland losses would consist of small impacts to the edge of off-site woodlands that extend slightly into the project corridor and to narrow treelines between the existing roadway and adjacent fields. In general, the woodland edges that would be impacted by the proposed project are highly degraded and appear to have been adversely affected by adjacent land uses and urbanization in the existing condition. Forest edge does provide some wildlife habitat, windbreaks, shading, and air quality benefits. Due to the adaptability and hardiness of these lower-quality tree species, remaining trees not directly impacted by the proposed project are likely to survive and continue to provide woodland functions in the post-construction condition.

Efforts will be made to preserve specimen trees and trees that function as screening, as practical and feasible. Tree and vegetation replacement would be guided by IDOT Policy D&E-18, Preservation and Replacement of Trees, and Chapter 59 (“Landscape Design”) of the BDE Manual, where practicable and feasible. Replacement for trees on forest preserve property will be coordinated with the LCFPD.

Invasive Species – Due to the presence of emerald ash borer (*Agrilus planipennis*) in Illinois, including Lake County, no varieties of ash trees (*Fraxinus* spp.) will be planted in the project corridor. The removal and disposition of ash trees will comply with USDA/IDOA quarantine restrictions.

Based on the USDA – NRCS *Noxious Weeds List for Illinois*, there are nine noxious weeds listed for Illinois. These include plants, such as common ragweed (*Ambrosia artemisiifolia*) and Canada thistle (*Cirsium arvense*). Additional invasive plant species dominate plant communities in the project corridor, such as common buckthorn in upland habitats and reed canary grass (*Phalaris arundinacea*) and narrow-leaved cattail (*Typha angustifolia*) in the wetlands. Erosion control and landscaping best practices will be used to minimize the spread of invasive plant species.

To the extent practicable, earthwork, landscaping, and erosion control will follow applicable sections of the IDOT *Standard Specification for Road and Bridge Construction* and Chapter 59 (*Landscape Design*) of the *BDE Manual*. Seed mixes will be required to meet purity/noxious weed seed requirements. Herbicides and/or other weed control methods will be used to control invasive and noxious plant species within the rights-of-way during operation of the facility.

3.6.2 Wildlife Resources

Lake County Forest Preserves (e.g., McDonald Woods, Raven Glen, and Ethel's Woods) and undeveloped open space (predominantly east of existing U.S. Route 45) comprise the most important wildlife habitat along and near the project corridor. The undeveloped open space east of U.S. Route 45 includes the North Mill Creek (and tributaries) wooded riparian environment, wetland, buffer, and other adjacent wooded areas. Available lists of wildlife were obtained from the LCFPD for the three adjacent preserves. Based on these wildlife lists, 96 species of birds, 18 species of mammals, five species of amphibians, and five species of reptiles have been observed in these preserves. Of those species, 24 birds, one mammal (northern river otter [*Lontra canadensis*]), one amphibian (blue-spotted salamander [*Ambystoma laterale*]), and one reptile (smooth green snake [*Liochlorophis vernalis*]) are listed as "Species in Greatest Need of Conservation for Illinois."²

Wildlife can be affected by transportation projects constructed on new or existing alignment that results in a loss of habitat and cover type, disruption of habitat continuity, and creation of barriers to wildlife movement. Transportation improvement projects can lead to direct and indirect wildlife impacts, such as wildlife/vehicle collisions (direct impact) and increased competition due to habitat reduction (indirect impact). Construction (e.g., grading and equipment operation) could also result in wildlife impacts, as can traffic and construction noise. Many mobile wildlife species would avoid harm due to construction operations, but some mortality is expected, especially to small mammals, amphibians, and reptiles that may be present in construction areas.

Sixty-six neotropical migrants³ are included on the LCFPD wildlife lists. Neotropical migrants may use the habitats found in (and adjacent to) the project corridor (e.g., wetlands, grasslands, woodlands, and shrublands) for breeding. There would be some loss of bird nesting and foraging areas as a result of this project because of conversion of undeveloped land within the proposed right-of-way to highway use. Some neotropical migrant birds require forested stands of a sufficiently large size and are not found in smaller wooded areas, even if suitable habitat is present. Some species rely on large stands of mature forests for breeding and could be affected by the displacement and fragmentation of forest habitat. Large wooded stands are associated with the North Mill Creek riparian corridor found east of U.S. Route 45. The Preferred Alternative would route traffic further away from this riparian corridor, thus reducing potential indirect effects (e.g., noise) on birds that use this wooded habitat. The Preferred Alternative would not fragment a continuous forested parcel or wooded riparian corridor larger than 20 acres. However, some forest edge takes are anticipated. Forest edge does not provide quality nesting habitat for neotropical migrant birds, compared to forest interior habitat.

² Based on Appendix I of *The Illinois Comprehensive Wildlife Conservation Plan & Strategy* (Illinois Wildlife Action Plan) (IDNR, 2005).

³ Based on a list of neotropical migrants provided by Cotton et al., 2009, and USFWS – Division of Bird Habitat Conservation, last updated November 2009. The migratory bird lists include both nearctic and neotropical migrants; no distinction is made between the two types.

During a follow-up NEPA/404 Merger meeting on July 11, 2011, the U.S. Fish and Wildlife Service (USFWS) expressed concern about the potential effects of the proposed project on grassland birds (refer to Section 4.2.1 and Appendix C). McDonald Woods contains one relatively small fragmented grassland, and one fragmented early successional restored prairie that would be impacted by the Preferred Alternative. The bird list provided by the LCFPD for McDonald Woods includes grassland birds, such as bobolink (*Dolichonyx oryzivorus*) and eastern meadowlark (*Sturnella magna*). However, the bird list was for the entire preserve, which is roughly 300 acres in size and contains a State-designated wetland/open water Natural Area (McDonald Woods Marsh Natural Area) near the center of the preserve and a large woodland at the west end of the preserve. The majority of the birds on the LCFPD bird list are woodland or wetland species.

The grassland and early successional restored prairie area near the Preferred Alternative corridor are relatively small in size (each approximately 28 acres or less), fragmented, and include actively used multi-use paths, mowed trails, and/or utilities. The preserve (including these areas) is surrounded by development, including roads and residences. Grassland birds may potentially use these relatively small grassland/restored prairie areas for nesting, resting, or foraging, but the use is anticipated to be limited. Some grassland birds, such as bobolinks, meadowlarks, and savannah sparrows (*Passerculus sandwichensis*) are sensitive to habitat fragmentation and are most often found on large grassland tracts. Other grassland birds, such as the field sparrow (*Spizella pusilla*) (which is also a shrubland species), do not breed close to human habitation.

Large tracts of grassland habitat (e.g., 250 acres or larger) have the most potential to benefit the greatest number of grassland bird species (accommodating area-sensitive species, as well as others). The grassland/restored prairie areas on the east side of McDonald Woods are fragmented and are much smaller. Controlling woody vegetation is also an important management strategy. The encroachment/establishment of woody vegetation (such as within portions of the Preferred Alternative corridor) can negatively affect species of grassland birds.

The Preferred Alternative corridor would impact a relatively small portion of the east/northeast corner of McDonald Woods, which is immediately adjacent to residential subdivisions and existing U.S. Route 45. It is anticipated that the majority of the bird species that use the habitat near the West Bypass corridor are most likely species that are relatively tolerant of development and disturbance, and/or adapted to “edge effect.”

Edge habitat may also be widely used by relatively urban-tolerant mammals identified near the project corridor, such as raccoon (*Procyon lotor*) and Virginia opossum (*Didelphis virginiana*). Both raccoons and opossum are opportunistic feeders and nest predators. These mammals use edge habitat and can impact birds that nest near the edge of the preserve in the existing condition. Free-ranging domestic animals, such as cats or dogs, can also impact birds that use habitat near the edge of preserve or in the vicinity of the existing residences. Residential subdivisions are located north and south of the east portion of McDonald Woods. Impacts to edge areas would reduce the size of available wildlife habitat, thus forcing relocation of remaining wildlife to interior or alternative locations, which will not be impacted by the proposed project. Forced relocation of wildlife can be expected to increase population densities and increase competition within the remaining interior or alternative habitat areas. Given the relatively small impacts to

edge habitat compared with remaining cover at McDonald Woods Forest Preserve and available at other preserves or open space in the vicinity of the project, adverse bird and/or other wildlife impacts as a result of the project are expected to be minimal.

Roads can act as a barrier to wildlife and may pose a threat because of traffic volumes, speeds, and width of roadway corridor. Roadways do not pose barriers to all forms of wildlife equally. Birds and larger mammals are relatively mobile; therefore, the direct loss of habitat as a result of the proposed project would not be as critical as it would be to other species of wildlife. Birds and mammals typically seek other areas in which to forage, breed, and rest. Small, terrestrial wildlife species would be more affected by barriers than birds and larger mammals. Most reptiles and amphibians that have been identified near the proposed project corridor are less mobile and rely on their immediate habitat. Reptiles and amphibians most likely would be affected by road crossings during breeding, nesting, and seasonal movements. Although impacts may occur, negative impacts to the overall reptile or amphibian population in the area are not anticipated as a result of the proposed project.

In general, when roads cross existing wildlife corridors, vehicle/wildlife collisions may occur. The frequency of these occurrences is expected to be higher near large contiguous habitats, especially if the habitat is crossed by a road in the existing condition or where the road would be built on new alignment. It is anticipated that the majority of the potential vehicle/wildlife collisions would be with relatively common animal species in the vicinity of wooded areas, creek crossings, and/or forest preserves near the project corridor. The number of collisions most likely to occur in the proposed condition may be affected by factors, such as driver awareness, visibility, sight distance, lighting, and weather. The proposed structures over the Millburn Creek and the Tributary to Millburn Creek have been oversized to accommodate the movement of small to medium size terrestrial wildlife along the stream/riparian corridors.

Per LCFPD, the area of the McDonald Woods Forest Preserve that would be affected by the Preferred Alternative traverses a low quality portion of the preserve. Higher quality areas, such as a State-designated natural area, are located further west in the preserve. LCFPD passed a resolution in 1994 in support of a West Bypass and LCFPD has no current project-related concerns in the area of the West Bypass (see Appendix C). As a result of the 1995 IDOT SRA study, IDOT recorded a west bypass alignment and purchased one parcel of property on Haven Lane near McDonald Woods. LCFPD has stated that they do not see a need to further discuss minimization or enhancement measures, since the LCFPD is not concerned with the affect of the West Bypass on the function and use of McDonald Woods as stated in their concurrence letter (see Section 3.13).

In a coordination meeting on November 13, 2012 (refer to Appendix C), the USFWS reiterated that during their field investigations, they also determined that the northeast area of McDonald Woods had been degraded with respect to grassland bird habitat.

3.6.3 Threatened and Endangered Species

Federal-Listed Species – Based on a letter from USFWS dated March 6, 2009 (refer to Appendix B), there are no known locations of federal listed species within the proposed project corridor; however, the possibility exists that the federal threatened eastern prairie fringed orchid

(Platanthera leucophaea) could be present in moderate to high quality wetlands within the project corridor. USFWS recommended that searches for this species be conducted if potential habitat is observed. INHS conducted botanical searches to determine the presence or absence of the eastern prairie fringed orchid per request of USFWS. Surveys were conducted on June 29, July 1, and July 8, 2009 at three potential habitat sites in the study area. One of the three sites included marginally suitable habitat (at best) for the eastern prairie fringed orchid – from the standpoint of associate plant species. This site was surveyed extensively with no eastern prairie fringed orchid found. The other two sites were not considered suitable habitat since associates were weedy and the habitat too degraded. The results of the survey are summarized in a report dated December 29, 2009. Based on the report, no eastern prairie fringed orchids or other threatened or endangered species were found during the botanical surveys. The results of the wetland and botanical survey were submitted to the Illinois Department of Natural Resources (IDNR), USFWS, and the U.S. Army Corps of Engineers (USACE) on January 8, 2010 (refer to Appendix B). The letter also states that there is “no effect” to the eastern prairie fringed orchid.

No impacts to federal-listed threatened or endangered species are anticipated as a result of the proposed improvements.

State-Listed Species – Consultation with respect to state-listed threatened and endangered species and Natural Areas was initiated with the IDNR through the Ecological Compliance Assessment Tool (EcoCAT) for the project. Consultation was terminated for this project in documentation dated March 9, 2009 and August 20, 2009, IDNR concluded that adverse effects to state-listed threatened and endangered species and Natural Areas are unlikely (Appendix B). Updated clearance with respect to natural resources review was received from IDNR on February 7, 2012 (Appendix B).

No impacts to state-listed threatened or endangered species are anticipated as a result of the proposed improvements.

3.6.4 State Designated Lands

State Designated Lands include Illinois Natural Areas, Land and Water Reserves, and Nature Preserves. Based on information provided by the IDNR and the Illinois Natural Heritage Database (dated July 11, 2011), there are no State Designated Lands within the project corridor of the Preferred Alternative.

Consultation with respect to Natural Areas was initiated with the IDNR through EcoCAT for the project. In letters terminating consultation for this project dated March 9, 2009 and August 20, 2009, IDNR concluded that adverse effects to Natural Areas are unlikely. Updated clearance with respect to natural resources review was received from IDNR on February 7, 2012 (Appendix B).

3.7 Water Resources and Aquatic Habitats

This project is located in the Des Plaines River basin (USGS Hydrologic Unit Code: 07120004). Throughout the project corridor there are numerous storm water retention ponds and basins associated with housing developments – as well as several perennial creeks and intermittent tributaries. This section describes the creeks and tributaries. Creeks that pass through the project

area are not listed as Biologically Significant Streams in the IDNR Biological Stream Rating Report, “*Integrating Multiple Taxa in a Biological Stream Rating System*” (2008). Based on a memo prepared by IDOT, dated June 28, 2010, the IDNR Natural Heritage Database (as of June 28, 2010) did not depict state-listed threatened or endangered species, natural areas, nature preserves, land and water reserves, or high quality streams as occurring within the project area. The creeks that pass through the project area are not listed as wild and scenic rivers or candidates for wild and scenic river status. In accordance with Illinois Administrative Code (35 Ill. Adm. Code §§ 302.105, 303.205, 303.206), the Illinois Pollution Control Board (IPCB) has authority to designate Outstanding Resource Waters based on exceptional ecological or recreational significance. Based on review of the IPCB website in February 2013, the IPCB has not designated any of the creeks that pass through the project corridor as Outstanding Resource Waters. INHS conducted field surveys of streams within the project corridor in September and November 2009 and July 2010. Five named creeks and their tributaries were identified near the project corridor (see Table 3-12). The named creeks are described below and their locations are depicted on Exhibit 2 in Appendix A.

Table 3-12. Summary of the Physical Parameters of Project Corridor Creeks

Stream ^a	Upstream Drainage Area (sq mi) ^b	Flow Characteristics ^c	Substrate Type	Stream Width (ft) ^d	Water Depth (ft) ^d	Presence of Woody Riparian Vegetation	Adjacent Land Use
Tributary to Hastings Creek	See Hastings Creek	lotic, intermittent	silt, rock/pebble	<2	<0.5-2	Yes (west of U.S. Route 45)	forest preserve, agriculture
Hastings Creek	6.9	lotic, perennial	rock, silt, garbage	12	<2.5	Yes (scattered)	agriculture, open space, forest preserve
Tributary (No. 3) to North Mill Creek	See North Mill Creek	lotic, intermittent	silt, rock	4	<2.5	Yes	agriculture, open space
North Mill Creek ^e	31.9	lotic, perennial	silt, rock	25-40	<2	Yes	agriculture, residential development
Millburn Creek (and tributary)	1.3	lotic, intermittent	silt, rock, debris	<2-5.5	≤1	Yes	agriculture, open space, forest preserve, residential development
Tributary to Mill Creek	See Mill Creek	lotic, intermittent	vegetation, silt	<4	<1	Yes (east of U.S. Route 45)	agriculture, open space, residential development
Dodge School Creek (and tributary)	1.1	lotic, intermittent	rock, silt	<4-7	<2	Yes	agriculture, residential and commercial development
Mill Creek	18.5	lotic, perennial	rock	25	≤2	Yes	open space, residential and commercial development

Source: Kurylo et al., 2009; Kurylo and Skultety, 2010; USGS Antioch Quadrangle Map, 1972.

^a Streams are described from north to south in relative order.

^b Drainage area is provided near downstream limit of study area (based on Hydrologic Atlas), unless otherwise noted.

^c Periodicity of flow based on USGS Quadrangle Map.

^d Approximate values estimated during INHS field visits.

^e Project drains to creek, but creek is not crossed by project. Data for North Mill Creek is provided near the crossing at Millburn Road. Data for Mill Creek is provided near the crossing at Grand Avenue and/or U.S. Route 45. Drainage areas for these crossings are from USGS StreamStats.

Hastings Creek – Hastings Creek flows west to east through the northern portion of the project corridor and crosses under U.S. Route 45 approximately 1000 feet north of Miller Road. Hastings Creek is tributary to North Mill Creek. Within the project area, Hastings Creek is not rated for biological integrity or diversity, based on the IDNR Biological Stream Rating Report (2008).

As part of the 2008 Intensive Basin Survey (IBS) Program, the Illinois Environmental Protection Agency (IEPA) sampled Hastings Creek at Miller Road for aquatic macroinvertebrates and fish. IEPA also assessed habitat quality. The macroinvertebrate community was fair and the fish community was indicative of poor conditions. Based on the habitat assessment, the sampling site had moderate siltation and was in poor condition. Data collected during the IBS is used in IEPA’s Biannual Integrated Water Quality Report.

The “Use Support” of Hastings Creek was assessed in the IEPA Illinois Integrated Water Quality Report and Section 303(d) List, 2012 (March 16, 2012, Public Review Draft). At the U.S. Route 45 crossing, Hastings Creek (i.e., Waterbody Segment IL_GWAA) is listed as impaired on the 2012 Section 303(d) List as non-supportive of aquatic life (other uses were not assessed). Potential causes of impairment include arsenic, total phosphorus, sedimentation/siltation, alteration in stream-side or littoral vegetative covers, and other flow regime alterations. Potential sources of impairment include channelization, upstream impoundments, contaminated sediments, impacts from hydrostructure flow regulation/ modification, municipal point source discharges, urban runoff/storm sewers, site clearance (land development or redevelopment), and crop production.

A Total Maximum Daily Load (TMDL) has not been prepared for Hastings Creek and Hastings Creek is not listed on “Illinois’ 2012 Two-Year Schedule for TMDL Development, 2012 – 2014.”

North Mill Creek – North Mill Creek flows south along the eastern border of the project area to its confluence with Millburn Creek south of the Millburn Road and Crawford Road intersection. Within the project area, North Mill Creek is not rated for biological integrity or diversity, based on the IDNR Biological Stream Rating Report (2008). North Mill Creek is mapped as a high quality Advanced Identification (ADID) site (see Mill Creek description below).

As part of the 2008 IBS Program, IEPA sampled North Mill Creek for aquatic macroinvertebrates and fish at two locations: at IL Route 173 and at Kelly Road. IEPA also assessed habitat quality. At both sites, the macroinvertebrate community was fair and the fish community was indicative of poor conditions. Based on the habitat assessment, the sampling site had heavy siltation at IL Route 173 and was in fair condition at both sites.

The “Use Support” of North Mill Creek (i.e., Waterbody Segment IL_GWA) was assessed in the IEPA Integrated Water Quality Report and Section 303(d) List, 2012 (March 16, 2012, Public Review Draft). North Mill Creek is listed as impaired on the 2012 Section 303(d) List as non-supportive of aquatic life (other uses were not assessed). Potential causes of impairment include

arsenic, manganese, other flow regime alterations, sedimentation/siltation, total phosphorus, and changes in stream depth and velocity patterns. Potential sources of impairment include contaminated sediments, dam or impoundment, and agriculture.

A TMDL has not been prepared for North Mill Creek and North Mill Creek is not listed on “Illinois’ 2012 Two-Year Schedule for TMDL Development, 2012 – 2014.”

Millburn Creek – Within the Central Section of the project, Millburn Creek flows east from McDonald Lake to North Mill Creek and crosses the Preferred West Bypass Alternative approximately 1,300 feet south of Haven Lane. In addition, a Tributary to Millburn Creek flows west to east and crosses the Preferred West Bypass Alternative approximately 400 feet south of Haven Lane. Within the project area, neither Millburn Creek nor the Tributary to Millburn Creek are rated for biological integrity or diversity, based on the IDNR Biological Stream Rating Report (2008). Within the project area, both Millburn Creek and the Tributary to Millburn Creek are mapped as ADID sites (see Mill Creek description below).

The “Use Support” of Millburn Creek was not assessed in the IEPA Integrated Water Quality Report and Section 303(d) List, 2012 (March 16, 2012, Public Review Draft). Millburn Creek is not listed as impaired on the 2012 Section 303(d) List.

Mill Creek – Mill Creek is a perennial stream that flows east and north near the southern portion of the project area – crossing under both U.S. Route 45 and IL Route 132/Grand Avenue. Mill Creek is not rated for biological integrity or diversity in the vicinity of the project corridor, based on the IDNR Biological Stream Rating Report (2008). However, it did receive a B rating for integrity and a D rating for diversity, downstream near its confluence with the Des Plaines River. The diversity and integrity scores fall within one of five ratings ranging from A to E, with A representing the highest biological integrity or diversity of evaluated stream segments.

Mill Creek and its tributaries are designated as ADID sites (from the 1992 study by the USACE and USEPA). ADID Site 32 consists of North Mill Creek and Millburn Creek (from MacDonald Woods Lake to North Mill Creek). Based on the 1992 ADID summary sheets, these sites are nice meandering streams which still maintain a fairly natural character along their channels. The basis for these high functional values was based on biological values (state-listed fish species and high quality stream) and water quality/hydrology values (shoreline/bank stabilization, sediment/toxicant retention, and nutrient removal/transfer).

The “Use Support” of Mill Creek was assessed in the IEPA Integrated Water Quality Report and Section 303(d) List, 2012 (March 16, 2012, Public Review Draft). Near the project area, Mill Creek (i.e., Waterbody Segment IL_GW-02) is listed as fully supporting aquatic life (other uses were not assessed). Mill Creek is not listed as impaired on the 2012 Section 303(d) List.

Dodge School Creek – Dodge School Creek flows east from the project corridor near Stearns School Road to Mill Creek. Within the project area, Dodge School Creek is not rated for biological integrity or diversity, based on the IDNR Biological Stream Rating Report (2008). Downstream of the project corridor, Dodge School Creek appears to flow through a mapped ADID wetland. However, the creek is not mapped as ADID within the project corridor.

The “Use Support” of Dodge School Creek was not assessed in the IEPA Integrated Water Quality Report and Section 303(d) List, 2012 (March 16, 2012, Public Review Draft), and it is not listed as impaired on the 2012 Section 303(d) List.

3.7.1 Construction Impacts and Measures to Minimize Harm

The placement of fill for stream crossings and additional lanes has a direct impact on water resources. Except for the proposed West Bypass, the improvements associated with the Preferred Alternative take place adjacent to and within existing transportation corridors. As such, several of the impacts to water resources would be associated with the widening or lengthening of existing stream crossing structures. Temporary construction-related impacts could result even if a waterway is not directly impacted, depending on the proximity of the activity to the waterway and drainage patterns. Potential impacts would be minimized through the implementation of Best Management Practices (BMPs).

This project would be subject to the requirements of IEPA’s National Pollutant Discharge Elimination System (NPDES) permit for construction site stormwater discharges. NPDES permit coverage is required when a construction project disturbs one acre or more of land, or is part of a larger common plan of development that ultimately disturbs one or more acres of total land.

In-stream construction may be required to extend culverts, install, and/or replace culverts. In-stream construction would follow standard practice (see IDOT *Standard Specification for Road and Bridge Construction*), including isolating the work area, as necessary. All required permits and approvals (e.g., NPDES, Section 404 Clean Water Act [CWA] and IDNR-OWR floodway construction permits) would be obtained prior to any in-stream construction. Additional details regarding construction methodology would be provided during CWA and floodway construction permitting. Flow would be maintained during construction in perennial streams by using dam and pumping, fluming, culverts, or other techniques. Cofferdams, if necessary, would be constructed of nonerodible materials; earthen embankments or dikes would not be used as cofferdams. If dewatering is required to perform “work in the dry” in perennial streams, the dewatering would be only temporary in nature. All materials used for temporary construction activities would be moved to upland areas following completion of the construction activity. Temporarily disturbed areas would be restored to preconstruction conditions, including grading, where possible, to original contours and installation of erosion control as soon as practicable in accordance with NPDES permit requirements. Erosion and sediment controls would be used to minimize downstream impacts.

Proposed crossing structures would generally match existing/nearby crossing treatments at each location. Efforts would be made to avoid and minimize impacts to water resources. When impacts are unavoidable, waterway crossings would be enclosed in a three-sided culvert, buried box culvert, or otherwise designed to accommodate anticipated high water flows; allow movement of aquatic biota; and not impede low water flows in order to minimize negative effects to the aquatic ecosystem. Impacts to unvegetated Waters of the U.S. are summarized in Table 3-13.

Table 3-13. Waters of the U.S. Impact Summary Table

Site Id	Approx. Station	Existing Crossing	Impact (ac)	Description of Impact ^a
Tributary to Hastings Creek Site 18S	U.S. 45 266+35	36-inch CMP culvert	0.01	Realignment of U.S. Route 45 to the east; add lanes widening; culvert extension; construction of embankment, bike path/sidewalk, and roadside drainage ditch
Hastings Creek Site 16S	U.S. 45 240+00	156-inch x 60-inch RCP box culvert	0.04	Realignment of U.S. Route 45 to the east with requisite add lanes widening to the east and west; culvert extension; construction of embankment and bike path/sidewalk
Tributary (No. 3) to North Mill Creek Site 13S	U.S. 45 185+75	72-inch x 48-inch concrete box culvert	0.01	Symmetric add lanes widening of U.S. Route 45; construction of embankment and bike path; culvert extension, including wingwalls
Tributary to Mill Creek Site 8S	U.S. 45 104+70	3 30-inch RCP culverts	0.03	Symmetric add lanes widening of U.S. Route 45, embankment, bike path/sidewalk, and culvert extension; intersection improvements (including left turn lane/additional storage) at Country Place
Tributary to Millburn Creek	U.S. 45 134+90	N/A	0.03	New culverts for bypass, construction of embankment, channel realignment.
Millburn Creek	U.S. 45 127+80	N/A	0.02	New three-sided culvert for bypass, construction of embankment, channel realignment.
Dodge School Creek Site 7S	U.S. 45 83+52	36-inch RCP culvert	0.02	Symmetric add lanes widening of U.S. Route 45, embankment, bike path/sidewalk, and culvert extension; intersection improvements (including right and left turn lanes/additional storage) at Sand Lake/Stearns School Road
Dodge School Creek Site 7AS	SL 3+00	48-inch x 72-inch box culvert	0.05	Symmetric add lanes widening of Stearns School Road, embankment, and culvert extension; intersection improvements (including right and left turn lanes/additional storage) at U.S. Route 45
Dodge School Creek Site 4S	U.S. 45 68+79	2 42-inch RCP culverts	0.07	Symmetric add lanes widening of U.S. Route 45, embankment, bike path/sidewalk, and culvert extension; intersection improvements at Falling Waters Lane
Total =			0.28 acre	

^a Proposed crossing structures would generally match existing/nearby crossing treatments at each location.

Prior to construction, all required permits and approvals will be obtained. The Preferred Alternative appears to meet the requirements of the USACE Regional Permit Program (RPP). The proposed project does not exceed 0.25 acre impact at any single crossing and the cumulative wetland/waters of the U.S. impact does not exceed 1.0 acre.

As indicated in Table 3-13, the proposed design at the Millburn Creek crossing, a mapped ADID creek, includes a three-sided (open bottom) culvert that would accommodate movement along this stream riparian corridor for small to medium size terrestrial wildlife. It is anticipated that impacts to federally jurisdictional waters of the U.S. (including wetlands) will be processed under Regional Permit #3 for Transportation Projects. Compensatory mitigation for the 0.28 acre unvegetated waters of U.S. impact is anticipated to be provided by purchasing credit from a wetland mitigation bank in the Des Plaines River Watershed.

On March 2, 2012, IEPA granted Section 401 Water Quality Certification, with conditions, for all Regional Permits, except for activities in certain waterways noted under Regional Permits 4 and 8. The waterways crossed by the proposed project do not impact any of these listed waterways.

3.7.2 Operational Impacts and Measures to Minimize Harm

Operational impacts associated with roadways include the accumulation of pollutants on roadway surfaces, medians, and rights-of-way as a result of roadway use, natural contributions, and deposition of air pollution. These pollutants include solids, heavy metals (lead, zinc, copper), oil and grease, and nutrients. The concentrations of these pollutants are highly variable by site and are affected by numerous factors, such as traffic characteristics, climate, maintenance activities, and adjacent land use. Operational effects to the receiving streams were predicted using a regression analysis developed by the FHWA (Driscoll et al., 1990).

Highway runoff pollution may affect water quality of receiving waters through shock or acute loadings and through chronic effects from long-term accumulation within the receiving waters. The significance of these impacts is very specific and will depend heavily on the highway receiving water characteristics. Research indicates few major impacts for highways with less than 30,000 ADT (FHWA 1996, IDOT 1999). Potential impacts generally are short-term, localized acute loadings from temporary water quality degradation, with few to no chronic effects. The estimated U.S. Route 45 2040 Build scenario ADTs south of Grass Lake Road are 29,000 to 34,000 vehicles per day (vpd). North of Grass Lake Road, the ADTs are 21,000 to 23,000 vpd.

Stormwater runoff will be collected through a system of storm sewers and conveyed to outside ditches and detention ponds. The current stormwater management system only uses drainage ditches to collect stormwater before discharging runoff to the receiving stream. Ditches extending more than 100 feet in length and vegetated will likely provide a reduction in suspended solids and heavy metals before discharge. The proposed conveyance of stormwater runoff into the detention ponds provides an opportunity for settling of large sediment particles.

Additional right-of-way is proposed and is positioned near the outlets for stormwater BMPs. These BMPs will slow water velocity and allow settling and filtering of particulates. Vegetation on the right-of way will further remove pollutants through biological processes.

The potential stream concentrations for the five named creeks that would receive stormwater runoff from the project were evaluated using the Driscoll methodology. These predictions include the anticipated pollutant reductions from the drainage swales (existing and build condition) and the proposed detention ponds (build condition). The methodology evaluates the potential for stormwater pollutants based on both the right-of-way area and the impervious (paved) area. This allows for the comparison between the existing and build conditions. These areas for the five water resources are summarized in Table 3-14.

Table 3-14. Summary of Roadway Drainage Areas

Water Resource	Hastings Creek	North Mill Creek	Millburn Creek	Dodge School Creek	Mill Creek
Existing ROW (acres)	19.59	22.27	9.93	18.09	16.94
Proposed ROW (acres)	26.97	41.60	24.36	23.72	21.53
Existing Impervious Area (acres)	5.63	8.50	2.62	8.09	5.82
Proposed Impervious Area (acres)	16.64	22.73	12.19	14.34	12.72

Concentrations of heavy metals and Total Suspended Solids (TSS) were estimated and are presented in Table 3-15. The annual average copper concentrations from existing conditions range from 0.02 mg/L to 0.07 mg/L compared to 0.02 mg/L to 0.05 mg/L in the build condition. The annual average lead concentrations range from 0.04 mg/L to 0.10 mg/L in the existing condition compared to 0.02 to 0.04 mg/L in the build condition. The annual average zinc concentrations in the existing condition range from 0.12 mg/L to 0.34 mg/L compared to 0.10 mg/L to 0.23 mg/L in the build condition.

Table 3-15. Pollutant Concentration Analysis Results (mg/L)

Condition	Pollutant	Hastings Creek	North Mill Creek	Millburn Creek	Dodge School Creek	Mill Creek
Existing Condition	TSS	106	69	142	177	60
	Copper	0.04	0.03	0.05	<u>0.07^e</u>	0.02
	Lead	0.06	0.04	0.09	0.10	0.03
	Zinc	0.20	0.13	0.28	0.34	0.12
Build Condition	TSS	45	35	61	65	28
	Copper	0.03	0.02	0.04	0.05	0.02
	Lead	0.03	0.02	0.04	0.04	0.02
	Zinc	0.16	0.12	0.21	0.23	0.10
General Water Quality Use ^a	TSS	no numeric water quality standard				
	Copper	Acute standard=0.06 mg/L				
	Lead	Acute standard=0.34 mg/L				
	Zinc	Acute standard=0.39 mg/L				
BMP Removal Efficiencies^b						
Swales ^c	TSS	60%				
	Copper	2%				
	Lead	15%				
	Zinc	16%				
Detention Pond ^d	TSS	68%				

Condition	Pollutant	Hastings Creek	North Mill Creek	Millburn Creek	Dodge School Creek	Mill Creek
	Copper	42%				
	Lead	68%				
	Zinc	42%				
^a AS=Acute Standard, should not be exceeded at any time (Illinois Administrative Code, Title 35, Part 302). ^b FHWA. 1996. Evaluation and Management of Highway Runoff Water Quality. HFWA-PD-96-032. ^c Grassed swales, 30 m (100-ft) swale. ^d Detention Pond (1/2 day detention time). ^e In the existing condition, Dodge School Creek exceeds water quality standard for copper (see bold and underlined font in table).						

Water quality standards for copper, lead, and zinc are based on water quality hardness (Illinois Administrative Code, Title 35, Part 302). The water quality standards presented in Table 3-15 are based on an average hardness value of 405 mg/L obtained from the Des Plaines River, the closest stream in the watershed with multiple hardness samples. Based on the comparison of the water quality standards to the predicted stream concentrations, the only exceedance of the water quality standards is copper in Dodge School Creek in the existing condition. The build condition does not exceed the standard due to the additional removal by the proposed detention pond. No adverse changes or effects to the streams are anticipated as a result of the proposed U.S. Route 45 project.

3.7.3 Maintenance Impacts and Measures to Minimize Harm

Deicing salt (sodium chloride) applied with blended liquids (e.g., salt brine, calcium chloride) and plowing are the main tools used during winter to control ice and snow on roadway surfaces. Deicing salt helps to maintain traffic flow and safe roadways in the winter.

Road salt moves through the environment as runoff, splash, and spray. The salt is carried by melt water runoff to the roadway drainage swales, ditches, or storm sewers to a receiving stream or other water body. Salt is also transported by splash or spray generated by moving vehicles coming in contact with brine, slush, or dried residue. Studies indicate that 60 to 80 percent of salt is carried by surface runoff into water bodies, 15 to 35 percent occurs as splash, and up to three percent occurs as spray (Frost, et al., 1981; Diment, et al., 1973; Lipka and Aulenbach, 1976; Sucoff, 1975). The amount of salt entering the environment depends on the number of snowstorms per season and salting events per storm.

Maximum and average chloride concentrations were estimated from equations developed by the U.S. Geological Survey. Mill Creek, Dodge School Creek, Millburn Creek, North Mill Creek and Hastings Creek were assessed using the combined loading from all the outfalls to that stream, the number of lane miles within the project limits for the drainage area and the average salt application per season of 23 tons per lane mile. The results are summarized in Table 3-16.

The annual daily average chloride concentrations in the existing condition range from 6 mg/L to 46 mg/L compared to 8 mg/L to 72 mg/L in the build condition. The annual daily maximum concentrations range from 30 mg/L to 98 mg/L while the build condition ranges from 34 mg/L to

142 mg/L. These values are below the general use water quality standard of 500 mg/L and therefore not anticipated to impact the receiving streams.

Table 3-16. Estimated Chloride Concentrations (mg/L)

Water Resource	Lane Miles		Annual Daily Average		Annual Daily Maximum	
	Existing	Build	Existing	Build	Existing	Build
Hastings Creek	3.7	6.9	11	19	42	56
North Mill Creek	4.7	9.8	8	12	33	40
Millburn Creek	1.4	3.9	19	51	57	110
Dodge School Creek	3.0	4.8	46	72	98	142
Mill Creek	2.3	4.6	6	8	30	34

Practices, such as deicing salt (sodium chloride) and plowing, would continue to be used as necessary to provide public safety.

3.8 Groundwater

This section evaluates the proposed project’s potential impact on groundwater quality and quantity, and the potential impacts to community and private water supplies, seeps, and karst topography.

The project study area contains groundwater resources and aquifers within the surficial glacial deposits (unconsolidated system) and within the shallow and deep bedrock systems. Within the surficial deposits, the accessible shallow aquifers can be found in the lenses of sands and gravels of the glacial till.

The glacial drift deposits in Lake County vary in thickness from about 90 feet in the southeastern part of the county to more than 300 feet along the west-central portion of the county. Within the project corridor the bedrock is mapped as being 200 to 300 feet deep. Sand and gravel deposits are present in the glacial drift. Where these deposits are sufficiently thick, they offer potential for developing moderate to large quantities of water (100 to 1000 gallons per minute) from individual wells. Shallow outwash deposits are present along the Des Plaines River in the eastern part of the county. The buried sand and gravel deposits are present at most sites in the county.

Beneath the glacial deposits, the upper bedrock formations consist principally of beds of dolomite and shale, which dip easterly at about 10 to 15 feet per mile. The rock formations in Lake County range in age from Silurian to Precambrian.

Based on available well data, most wells near the project corridor are finished within the glacial till; however, a few are finished within bedrock at a depth of approximately 250 feet. Most wells are finished between 100 and 200 feet deep within sand and gravel deposits.

Wells and Groundwater Protection Areas – Based on the Preliminary Environmental Site Assessment (PESA) for this project, 56 water wells were identified within 200 feet of the study limits - as investigated by the Illinois State Geological Survey (ISGS). ISGS identified nine public water wells serving the communities of Lindenhurst, Old Mill Creek, and unincorporated Lake County as located either within the study limits or less than 1000 feet from the study limits.

Additionally, this project crosses nine wellhead protection recharge areas for the public wells (non-community and community water supply wells). Of the nine public wells, eight were non-community water supply wells associated with commercial facilities, learning institutions, and/or forest preserve property. One community water supply well for Lindenhurst was identified; this well is located west of the proposed improvements near Independence Boulevard.

Potential for Contamination of Shallow Aquifers – According to the IEPA Source Water Assessment Program and Potential for Contamination of Shallow Aquifers in Illinois (Berg, 1984), there is a potential for shallow aquifer contamination within 20 feet of the ground surface to the east of the Preferred Alternative (associated with North Mill Creek) due to sand and gravel deposits at the surface. However, in most instances, this shallow surface layer is not suitable to provide adequate water for operation of a well. No wells within the project corridor are finished within the upper 20 feet. Only a few wells are finished less than 100 feet deep and the risk of contamination to deeper groundwater is less likely due to separation by confining layers.

The project will not create any new potential “routes” (i.e., dry wells, borrow pits) for groundwater pollution or any new potential “sources” (i.e., bulk road oil or deicing salt storage facilities) of groundwater pollution as defined in the Illinois Environmental Protection Act (415 ILCS 5/3, et seq.). Accordingly, the project is not subject to compliance with the minimum setback requirements for community water supply wells or other potable water supply wells, as set forth in 415 ILCS 5/14, et seq. Since no LCDOT or IDOT facilities exist or are planned for this project, there should be no impact on the 1000 foot setback zones around these wells as determined by the IEPA Division of Public Water Supplies.

The Preferred Alternative would result in the relocation of three residences. Based on available well data, two of the three residences have wells that will have to be properly abandoned in accordance with state regulations. Undocumented wells that may be encountered during construction and identified as functional within the proposed corridor of the Preferred Alternative would also have to be properly abandoned in accordance with state regulations.

Sole Source Aquifer – According to the list of designated Sole Source Aquifers in USEPA Region 5 at: http://www.epa.gov/safewater/sourcewater/pubs/qrg_ssamap_reg5.pdf, there are no sole source aquifers in Illinois, as defined by Section 1424(E) of the Safe Drinking Water Act; so the proposed project will not affect any such aquifers in Illinois.

Class III Special Resources Groundwater – According to the IEPA Source Water Assessment Program, there are no identified Class III Special Resources Groundwater protection areas within the project corridor, nor are there any watersheds which have been identified as being sensitive.

Karst Topography – Karst topography is characterized by numerous caves, sinkholes, fissures, and underground streams. Karst topography usually forms in regions of plentiful rainfall where

bedrock consists of carbonate-rich rock (i.e., limestone, gypsum, or dolomite) that is easily dissolved. Surface streams may be absent in areas with karst topography. The project study area does not contain karst topography. The nearest karst topography in Illinois is located along the Mississippi River in northwest and southwest Illinois.

Seeps – Within the project corridor, it is likely that there are natural water regimes that rely on groundwater either constantly or intermittently. Seeps are likely to occur at the toe of steep hillsides or along stream or river corridors. No seeps were identified in the wetland delineations completed for this project (refer to Section 3.10). The project is unlikely to have a substantive effect on the quantity or quality of groundwater reaching off-site seeps because the overall net increase in impervious area as compared to the overall surface area of the groundwater recharge area is small. The project will provide stormwater detention and BMPs that will promote infiltration and groundwater recharge, thus mitigating the potential impact of the new impervious area.

Potential Non-Point Source Pollution – Potential non-point source pollution as a result of this project is anticipated to be negligible. As part of this project, stormwater BMPs are proposed to minimize the potential impact of the proposed transportation improvements on wetlands and other water resources. Additionally, direct impacts to wetlands and waters of the U.S. have been avoided or minimized to the extent practicable. Additional information regarding the treatment of stormwater runoff and protection of surface water resources can be found in Section 3.7. Indirect and cumulative impacts are discussed in Section 3.14.

3.9 Floodplains

3.9.1 100-Year Floodplain

Based on the Flood Insurance Rate Maps (FIRM) of Lake County and Incorporated Areas (Panels 34, 42, and 44: effective date September 3, 1997); and the Letter of Map Revision (LOMR) (No. 99-05-193P revising Panel 42: effective date August 23, 1999), 100-year floodplains are located within the project area as listed in Table 3-17 and shown on Exhibit 2 in Appendix A.⁴ Potential floodplain encroachments associated with the proposed improvements are summarized in the table below:

Table 3-17. Floodplain Encroachment Summary

Floodplain	Station	Type of Encroachment	Category	Description
Tributary to Mill Creek	23+02	No work below the 100-year flood elevation	1	Culvert extension - Floodplain limit based on Zone AE base flood elevation is beyond the proposed right-of-way (ROW)
Millburn Creek	127+80	Transverse	5	New construction on new alignment / installation of a three-sided culvert. Drainage area (DA) < 1 square mile.
Tributary to	134+90	No work below	1	New construction on new alignment / installation

⁴ IDNR, Illinois State Water Survey, and Federal Emergency Management Agency are revising the floodplain limits in Lake County. Provisional maps (Panels 0032, 0034, 0042, 0044, and 0061) are available and were reviewed for this project.

Floodplain	Station	Type of Encroachment	Category	Description
Millburn Creek		the 100-year flood elevation		of multiple culverts - Floodplain limit based on FIRM is beyond the proposed ROW, DA < 1 square mile
Tributary (No. 3) to North Mill Creek	185+75	No work below the 100-year flood elevation	1	Culvert extension - Floodplain limit based on FIRM is beyond the proposed ROW, DA < 1 square mile
Hastings Creek	240+07	Transverse	3	Culvert extension
Tributary to Hastings Creek	266+35	Transverse	3	Existing CMP culvert to be removed and replaced with longer RCP culvert
Category 1: projects which will not involve any work below the 100-year flood elevation. Category 3: projects involving work below the 100-year flood elevation that will modify existing drainage structures. Category 5: projects on new alignment and projects with potentially significant increase in 100-year flood water surface elevations.				

Transverse floodplain encroachments will occur at three locations along the length of the project. No longitudinal floodplain encroachments are proposed. The floodplain impacts are not anticipated to result in any significant adverse impacts on the natural and beneficial floodplain values; they will not result in any significant change in flood risks or damage; and they do not have significant potential for interruption or termination of emergency service or emergency evacuation routes; therefore, these transverse encroachments are not significant.

All necessary permits and approvals will be obtained prior to work within the 100-year floodplain and floodway.

The potential 100-year floodplain encroachments are described below:

Tributary to Mill Creek at Station 23+02

The existing 21-inch reinforced concrete pipe (RCP) culvert at Station 23+02 is located just south of Highfield Drive. The existing culvert will be extended to accommodate the widened roadway, sidewalk, and path. The proposed work appears potentially to encroach upon the designated Zone AE floodplain as it is drawn on the FIRM. However, based on the 1 foot topographic mapping and the Zone AE base flood elevation of 763, the floodplain limit based on elevation is outside of the proposed ROW and no encroachment will occur. If necessary, a Letter of Map Amendment (LOMA) based on updated topographic information may be pursued to amend the floodplain limit to show that it is outside of the U.S. Route 45 ROW.

Millburn Creek at Station 127+80

The proposed transverse crossing of U.S. Route 45 over Millburn Creek is on the proposed bypass alignment, approximately 1100 feet south of Haven Lane. A three-side box culvert is proposed at this location. The floodplain associated with Millburn Creek is unstudied Zone A, meaning no base flood elevation has been determined. Based on the floodplain limit as drawn on the FIRM, the floodplain at the proposed crossing is approximately 135 feet wide. However, based on the 1 foot topographic mapping, this floodplain at the site is shown varying from elevation 724 to elevation 726. A complete hydrologic and hydraulic analysis must be completed to determine a base flood elevation at the proposed crossing site.

The proposed U.S. Route 45 structure over Millburn Creek will be designed not to cause adverse impacts to base flood conveyance. Hydrologic and hydraulic analyses will be completed, and an increase in flood heights and flood limits is not anticipated.

Tributary to Millburn Creek at Station 134+90

The proposed transverse crossing of U.S. Route 45 over the Tributary to Millburn Creek is on the proposed bypass alignment, approximately 400 feet south of Haven Lane. Multiple box culverts are proposed at this location. The floodplain associated with the Tributary to Millburn Creek is Zone A. Although no base flood elevation is defined on the FIRM, according to the Letter of Map Revision (LOMR) 99-05-193P, effective August 23, 1999, hydrologic and hydraulic modeling was completed and used as the basis for the map revision. The LOMR models have been obtained. Based on the floodplain limit as drawn on the Revised FIRM Panel 17097C0042, effective August 23, 1999, the floodplain limit at the proposed crossing is outside of the proposed ROW and no encroachment will occur. The drainage area at the proposed crossing is less than one square mile, so no IDNR-OWR permit will be required.

Tributary (No. 3) to North Mill Creek at Station 185+75

The existing 6 feet wide by 4 feet high reinforced concrete box culvert (RCBC) at Station 185+75 is located approximately 2400 feet north of Independence Boulevard. The existing culvert will be extended to accommodate the widened roadway and path. There is an unstudied Zone A floodplain associated with the Tributary (No. 3) to North Mill Creek located just east of the U.S. Route 45 alignment. Based on the FIRM, the floodplain limit is outside of the proposed ROW and no encroachment will occur. Because the upstream drainage area at the crossing is less than one square mile, no IDNR-OWR permit will be required.

Hastings Creek at Station 240+07

The existing 13 feet wide by 5 feet high RCBC at Station 240+07 is located approximately 1100 feet north of Miller Road. The existing culvert will be extended or replaced to accommodate the widened roadway and path. The Zone AE floodplain associated with Hastings Creek coincides with the regulatory floodway. Based on the floodplain limit as drawn on the FIRM, the floodplain at the proposed crossing is approximately 80 feet wide downstream of U.S. Route 45 and 100 feet wide upstream. The mapping shows the floodplain over the road; however, based on the 1 foot topographic mapping and published base flood elevations, the 100-year flood is contained within the existing culvert. Requests for the regulatory hydraulic model were made to the Federal Emergency Management Agency (FEMA), IDOT, and the Illinois State Water Survey. The model was not available from any source. Therefore, a new hydraulic model must be created from surveyed cross sections, and run using the published FEMA flood flows. Using accepted modeling techniques, the model will be adjusted to match the published FEMA flood elevations as closely as possible.

The proposed U.S. Route 45 culvert at Hastings Creek will be designed not to cause adverse impacts to base flood conveyance. A hydraulic analysis will be completed, and an increase in flood heights and flood limits is not anticipated. Since the work associated with the proposed

U.S. Route 45 improvements will occur in the floodplain with a regulatory floodway, an IDNR-OWR Floodway permit under the Part 3708 Rules is required.

For details of the required compensatory storage volumes, see the discussion below under Regulatory Floodway (Section 3.9.2).

Tributary to Hastings Creek at Station 266+35

The existing 36-inch corrugated metal pipe (CMP) culvert at Station 266+35 is located approximately 3900 feet south of IL Route 173. The existing culvert will be replaced by an appropriately sized RCP culvert of a length sufficient to accommodate the widened roadway and path. The floodplain associated with the Tributary to Hastings Creek is unstudied Zone A. Based on the floodplain limit as drawn on the FIRM, the floodplain at the proposed crossing is approximately 135 feet wide upstream of U.S. Route 45. However, based on the one foot topographic mapping, this floodplain varies from elevation 755 to elevation 760. A complete hydrologic and hydraulic analysis must be completed to determine a base flood elevation at the proposed crossing site.

The proposed structure carrying U.S. Route 45 over the Tributary to Hastings Creek will be designed to not cause adverse impacts to base flood conveyance. Hydrologic and hydraulic analyses will be completed, and an increase in flood heights and flood limits is not anticipated. Since the work associated with the proposed U.S. Route 45 structure will occur in the floodplain with a drainage area greater than one square mile that does not have a regulatory floodway, an IDNR-OWR “Individual Floodway” permit under the Part 3700 Rules is required. Compensatory storage for floodplain/floodway fill is not necessary per the IDNR-OWR Part 3700 Rules.

3.9.2 Regulatory Floodway

Based on the FIRM of Lake County and Incorporated Areas, Panel 34: effective date September 3, 1997, regulatory floodway associated with Hastings Creek is located within the project area (refer to Appendix A, Exhibit 2 - Environmental Resources Map).

As previously mentioned, the Zone AE floodplain associated with Hastings Creek coincides with the regulatory floodway. The proposed U.S. Route 45 improvements at Hastings Creek will be designed not to cause adverse impacts to base flood conveyance. A hydraulic analysis will be completed, and an increase in flood heights and flood limits is not anticipated. Floodway encroachment associated with this project will not result in a significant change in flood risks or damage, and does not have significant potential for interruption or termination of emergency service or emergency evacuation routes; therefore, it has been determined that this encroachment is not significant. Since the work associated with the proposed U.S. Route 45 improvements will occur in the floodplain with a regulatory floodway, an IDNR-OWR Floodway permit under the Part 3708 Rules will be obtained prior to construction in the floodway.

The proposed construction will place approximately 566 cubic yards of fill in the floodway between the normal water level and the 100-year flood elevation. Compensatory storage for fill in the floodway will be provided downstream immediately adjacent to the site, and includes approximately 600 cubic yards of excavation between the normal water level and the 100-year

flood elevation. Once the hydraulic analysis is completed, the 10-year flood elevation will be determined, and the floodway fill and compensatory storage calculations will be refined to meet the incremental storage requirements for volumes above and below the 10-year flood elevation. Incremental compensatory storage volume will meet the ratio of 1:1 as required by the IDNR-OWR Part 3708 Rules.

3.10 Wetlands

Based on current federal and state methodology, INHS conducted wetland determinations within the study area on September 1-3, 28-30, and November 2-3, 2009. Forty-five wetlands were identified, including four farmed wetlands (refer to Appendix A, Exhibit 2 - Environmental Resources Map). Farmed wetlands were identified in accordance with the Food Security Act manual methodology. In the opinion of INHS, 21 of the identified wetland sites are USACE jurisdictional and 24 are isolated. Twelve of the identified wetlands overlap with mapped ADID wetlands (based on the INHS report and the 1992 USACE/USEPA study). The FQI of the identified wetlands ranged from 0.4 to 22.7 and the native mean C-value ranged from 0.2 to 3.7. A FQI value of 20 or more or a native mean C-value of 3.0 or greater suggests that a site has evidence of native character. Based on FQI and native mean C-value, the majority of the identified wetlands were determined to have low to fair natural quality.

In general, the Preferred Alternative consists of widening U.S. Route 45 by one 12 feet lane in each direction with a 22 feet wide median. Accommodations for a 10 feet wide bike path are provided on the west side of U.S. Route 45, offset five feet from the back of curb. Accommodations for a five feet wide sidewalk are provided on the east side of U.S. Route 45, also offset five feet from the back of curb. Drainage will be conveyed by a roadside ditch along the majority of the U.S. Route 45 corridor, where practicable and as topography allows. As a result of these improvements, it is anticipated that the Preferred Alternative will impact approximately 0.38 acre of wetlands – as summarized in Table 3-18.

Table 3-18. Wetland Impact Summary Table

Site No.	Type	FQI	C-value	Quality	Function	Jurisdiction Status	Impact/Total (acre)	Description of Impact
2	wet meadow	6.4	1.7	low	wildlife habitat, flood/storm water storage	USACE	0.12/ 0.27*	Realignment of U.S. Route 45 to the east; add lanes widening; construction of embankment, sidewalk, and roadside drainage ditch
3	wet meadow	7.9	1.7	low	buffer, wildlife habitat, flood/ storm water storage	USACE	0.12/ 1.04*	Realignment of U.S. Route 45 to the east with requisite add lanes widening to the east and west; construction of embankment and bike path/sidewalk
8	wet meadow	8.5	2.1	low	wildlife habitat, flood/storm water storage	USACE	0.02/ 0.02	Symmetric add lanes widening of U.S. Route 45; construction of embankment, bike path, and new culvert/wingwalls at adjacent creek crossing

Site No.	Type	FQI	C-value	Quality	Function	Jurisdiction Status	Impact/Total (acre)	Description of Impact
45	wet meadow	8.8	2.2	low	wildlife habitat, flood/ storm water storage	USACE	0.01/ 1.09*	Symmetric add lanes widening of Stearns School Road and embankment; intersection improvements (including right and left turn lanes/additional storage) at U.S. Route 45
46	marsh	5.7	2.3	low	limited wildlife habitat, flood/ storm water storage	isolated	0.11/ 0.11	Add lanes widening U.S. Route 45 to the west; construction of embankment, bike path, and roadside drainage ditch; intersection improvements (including right and left turn lanes/additional storage) at Falling Waters Blvd.
Total impact = 0.38 acre								

Source: Kurylo et al., 2009.

* = total wetland acreage not calculated; wetland extends beyond limits of study.

Prior to construction, all necessary wetland permits and approvals will be obtained. As previously discussed in Section 3.7, the Preferred Alternative appears to meet the requirements of the USACE RPP. The proposed project does not exceed 0.25 acre impact at any single crossing and the cumulative wetland/waters of the U.S. impact does not exceed 1.0 acre. Therefore, it is anticipated that impacts to federally jurisdictional wetlands will be processed under Regional Permit #3 for Transportation Projects. Compensatory mitigation for the 0.38 acre wetland impact is anticipated to be provided by purchasing credit at a wetland mitigation bank in the Des Plaines River Watershed.

Because this project occurs on new alignment, it is being processed as a Standard Review Action in accordance with the IDOT Wetlands Action Plan and coordinated with IDNR. As a Standard Review Action with mitigation provided at an in-basin bank, the mitigation ratio is 2:1 for wetland impacts. At a 2:1 compensation ratio, 0.76 acre of mitigation is required for the 0.38 acre wetland impact. WIEs were submitted to IDNR for review. On March 2, 2012, IDNR concurred with the WIEs and with the proposal of in-basin banking for wetland mitigation. Refer to Appendix B.

Only Practicable Alternative Finding

Executive Order (EO) 11990, *Protection of Wetlands*, requires federal agencies to avoid (to the extent practicable) long- and short-term adverse impacts associated with the destruction or modification of wetlands. More specifically, EO 11990 directs federal agencies to avoid new construction in wetlands (if a practicable avoidance alternative exists). Where wetlands cannot be avoided, the proposed action must include all practicable measures to minimize harm to wetlands.

The Preferred Alternative does not impact any high quality wetlands, or ADID wetland sites. Wetland impacts have been avoided where practicable. Where avoidance is not possible, wetland impacts will be minimized by installing retaining walls, shifting the alignment, designing steeper embankments, and/or minimizing the separation between the bike path/sidewalk and road, where

practicable. It is not possible to avoid wetland impacts completely because the majority of the proposed project consists of widening existing U.S. Route 45, which has wetlands and/or unvegetated waters of the U.S. located adjacent to it (in several locations on both sides of the existing roadway). Any road widening would impact wetlands and/or unvegetated waters of the U.S. in these locations. The project corridor is also located adjacent to residential development, NRHP historic buildings/historic district, forest preserves, and prime agricultural farmland. The minimization of residential relocations or other potential socioeconomic or environmental impacts can make it difficult or impractical to shift the proposed alignment to avoid additional wetland impacts.

As discussed in Chapter 2, various alternatives were considered throughout the project development process, including a West Bypass of the historic district (Preferred Alternative), an East Bypass, and maintaining the existing U.S. Route 45 alignment for the length of the project corridor. Except for the No-Build Alternative, the Preferred Alternative (West Bypass) would result in the least amount of wetland impacts.

Based on the above considerations, it is determined that there is no practicable alternative to the proposed alternative to the proposed construction in wetlands and that the proposed action includes all practicable measures to minimize harm to wetlands that may result from such use.

3.11 Special Waste

A Preliminary Environmental Site Assessment (PESA) has been completed for this project. The PESA Review cover memo, dated July 14, 2010, states that there are Recognized Environmental Conditions (RECs) along the project route. ISGS identified 26 sites along the project route that were determined to contain RECs. These sites include gas stations and other commercial properties, public land and rights-of-way, vacant building/lots, creeks, agricultural land, and residences. Where RECs are indicated as present, ISGS noted a condition that may be indicative of releases or potential releases of hazardous substances on, at, in or to the site.

Construction of the proposed improvements will require right-of-way acquisition and temporary easements. Further studies may be required if the project will require land acquisition, temporary easements, or excavation (including subsurface utility relocation) on or adjacent to a property with RECs. Evaluations will be completed in Phase II to determine if any of the sites with RECs or right-of-way adjacent to the site with RECs will be impacted by the proposed work and/or if any right-of-way will be required at any of the REC locations. Special Waste studies are now complete for Phase I and the project is clear for Design Approval (Appendix B).

It is the responsibility of Phase II to determine if any of the sites with RECs or right-of-way adjacent to the site with RECs will be impacted with the proposed work and/or if any right-of-way will be required at any of the REC locations. Any acquisition shall be discussed with the Bureau of Land Acquisition prior to responding to the PESA to request further studies.

In some cases, the portion of the project that involves the REC can be risk managed and not require additional assessment. If the affected property containing the REC is a full take, then the property is ineligible to be risk managed. If risk managing is not possible, further environmental

study is required, specifically, a Preliminary Site Investigation (PSI), to determine the nature and extent of possible contamination.

Special waste issues that may arise in the construction phase will be managed in accordance with the IDOT “*Standard Specifications for Road and Bridge Construction and Supplemental Specifications and Recurring Special Provisions.*”

3.12 Special Lands

3.12.1 Section 6(f)

Based on coordination with IDNR and the LCFPD, the north and south portions of McDonald Woods Forest Preserve were acquired through Land and Water Conservation (LAWCON) funds (refer to Appendix A, Exhibit 2 - Environmental Resources Map). Impacts are not anticipated at these parcels as a result of this project. The portion of McDonald Woods that would be traversed by the proposed U.S. Route 45 bypass was not acquired or developed using LAWCON funds. Based on coordination with IDNR and the LCFPD, the other public lands in the vicinity of the proposed project were not acquired or developed using LAWCON funds. No use or involvement of Section 6(f) designated lands is proposed as part of the proposed improvements.

3.12.2 OSLAD and/or OLT Act Lands

Based on coordination with IDNR and/or the LCFPD, it was determined the following properties were purchased and/or developed using Open Space Lands Acquisition and Development (OSLAD) and/or Open Land Trust (OLT) (525 ILCS 33/1 *et seq.*) funds (refer to Appendix A, Exhibit 2 - Environmental Resources Map):

- The north portion of Raven Glen Forest Preserve adjacent to the west side of U.S. Route 45 (OSLAD)
- The southwest corner of Ethel’s Woods Forest Preserve adjacent to the east side of U.S. Route 45 (OLT)
- Oak Ridge Park & Wetzel Fields (Lindenhurst Park District) located west of U.S. Route 45 adjacent to the north side of Grass Lake Road (OSLAD).

No impacts to Oak Ridge Park & Wetzel Fields are proposed as part of this project. Through alignment shifts the portions of Raven Glen and Ethel’s Woods associated with the OSLAD or OLT funding will be avoided. There is no proposed use or involvement with lands that have OSLAD or OLT funds involved with their purchase or development, as a result of this project.

3.13 Section 4(f), 4(f) 106 Evaluation

Seven 4(f) lands and the NRHP historic buildings/historic district (as discussed in Section 3.3) are located proximate to the proposed improvements. Four of these areas (i.e., Raven Glen, Ethel’s Woods, McDonald Woods, and Rollins Savanna) are managed by the LCFPD. Two of the areas (i.e., Heritage Trails Park and Oak Ridge Park & Wetzel Fields) are managed by the Lindenhurst Park District. The remaining park/open space area is managed by the Grandwood Park District

(refer to Appendix A, Exhibit 2 - Environmental Resources Map). The Preferred Alternative would not result in impacts to the local parks or historic buildings/historic district, but would impact forest preserve properties as discussed below.

The Preferred Alternative includes a West Bypass of U.S. Route 45 around the Millburn Historic District. The southern portion of the West Bypass will include the acquisition of approximately 3.6 acres of right-of-way from the McDonald Woods Forest Preserve, a LCFPD holding. McDonald Woods Forest Preserve is approximately 300 acres in size and includes a loop path around a ravine and wetlands, paved and gravel trails (Millennium Trail), and other recreational activities with access off of Grass Lake Road. The Preferred Alternative would also result in an approximate 7.4 acre remnant parcel east of the proposed improvement, which LCFPD indicated they would prefer be purchased as a part of the Preferred Alternative due to disconnection from the remainder of McDonald Woods. Portions of this remnant parcel will be used for BMPs, including stormwater management. The wetlands identified in this area are not anticipated to be filled.

LCFPD has a representative on the project Community Advisory Group (CAG) and there have also been three separate meetings with LCFPD to gather their input on the project, including a meeting to discuss the three Finalist Bypass Alternatives (see Chapter 4, Agency Coordination and Public Involvement). During project coordination, the LCFPD presented IDOT and LCDOT with their Preliminary Trail Alignment U.S. Route 45 Bike and Pedestrian Trail plan (refer to Appendix A - Exhibit 5). As represented on this plan, LCFPD indicated that the Preferred Alternative (which would accommodate a 10 feet wide bike path within the west portion of the U.S. Route 45 right-of-way for the entire project limits) is compatible with their future trail plans, providing bike path connections between McDonald Woods and other LCFPD holdings to the north and south. In a letter dated March 18, 2011 and signed by LCFPD on April 4, 2011, LCFPD provided their concurrence, indicating that a "West Bypass will not adversely affect the overall recreation activities, features, and attributes of McDonald Woods" (see Appendix B). On this basis, and based on the Section 4(f) *de minimis* Impact Documentation package prepared and submitted, the FHWA approved a *de minimis* impact finding at the FHWA coordination meeting on June 8, 2011.

Outside of the bypass area, Raven Glen and Ethel's Woods Forest Preserves are immediately adjacent to portions of existing U.S. Route 45 north of Miller Road. The southwest portion of Ethel's Woods just north of Miller Road and east of existing U.S. Route 45 was purchased by LCFPD with OLT funds. In order to avoid right-of-way acquisition from this portion of Ethel's Woods, the proposed centerline of U.S. Route 45 is proposed to be shifted to the west. As a result, some right-of-way acquisition is required from the Raven Glen Forest Preserve along the west side of U.S. Route 45 from Miller Road to Hastings Creek to the north. North of this area, the proposed centerline of U.S. Route 45 will be shifted to the east to avoid additional right-of-way acquisition from Raven Glen. A temporary construction easement is anticipated to be required at the existing entrance to Raven Glen in order to re-establish the entrance as part of the proposed improvements to U.S. Route 45.

At a meeting on October 19, 2011, LCFPD concurred with the alignment shift to the west near Miller Road to avoid right-of-way acquisition from the Ethel's Woods Forest Preserve. LCFPD

concluded that the resulting proposed right-of-way acquisition from Raven Glen along the west side of U.S. Route 45 from Miller Road to Hastings Creek would not adversely affect the function and use of the Raven Glen Forest Preserve. On this basis, LCFPD concurred that they would support a Section 4(f) *de minimis* impact finding for the property acquisition from the Raven Glen Forest Preserve. Written coordination with respect to a *de minimis* impact finding for the use of property from the Raven Glen Forest Preserve will occur after the Public Hearing for this project, which is anticipated in 2013.

3.14 Indirect and Cumulative Impacts

With the proposed project, it is likely that land use conversion will occur based on improved development potential. Based on a review of local zoning maps and comprehensive plans, future land use in the vicinity of the U.S. Route 45 corridor is anticipated to be predominantly residential followed by smaller areas of commercial, industrial, agricultural, open space, and institutional land uses. Development induced by this project in Lake County, Illinois, will be subject to the requirements of the Lake County Watershed Development Ordinance (for incorporated areas) or the Unified Development Ordinance (for unincorporated areas). These ordinances require that the developer incorporate BMPs into their site design to minimize increases in runoff rates, volumes, and pollutant loads. Preservation of natural resource features (e.g., wetlands, floodplains, prairies, and woodlands) on each development site must also be considered during project design. In accordance with these ordinances, potential indirect and cumulative impacts to natural resources are anticipated to be minimal.

The Lake County Stormwater Management Commission (LCSMC) has coordinated the preparation of a watershed plan for the North Mill Creek/Dutch Gap Canal Watershed. The watershed plan was prepared to address issues such as the degraded waterbodies within the watershed and flooding, as well as to identify natural resources to be protected as development in the watershed continues. The watershed plan identifies practices, projects, and programs that can be implemented by watershed residents, farmers, businesses, and community stakeholders to achieve these goals. In addition, the watershed plan identifies desirable green infrastructure areas to maintain open space for flood damage prevention, water quality protection, recreation, and education. Following adoption by the Lake County Board, the watershed plan will be implemented, as necessary. As part of public involvement, LCDOT presented the proposed U.S. Route 45 improvements to LCSMC and watershed stakeholders on September 25, 2010 prior to a watershed tour. Implementation of the watershed plan will also reduce potential indirect and cumulative impacts to natural resources.

Future development has the potential to create additional edge effect at the perimeter of larger preserved open space and to displace isolated habitat areas (old fields or small wooded lots) that are not within protected lands, such as forest preserves and parks. The extent of habitat area affected by edge effect could continue to move inward due to the cumulative effect of other developments and projects in the area. Additional developments could further reduce the number and size of remaining open spaces and available habitat.

3.15 Permits/Certifications Required

The primary federal and state permits and approvals required for this project are listed below and briefly described in the following subsections.

- Section 404 of the CWA permit from USACE
- Confirmation that the soil erosion and sediment control plan meets technical standards from LCSMC
- Section 402 of the CWA NPDES construction permit from IEPA
- Construction in floodplains and floodways of rivers, lakes, and streams permits from IDNR-OWR
- Interagency Wetland Policy Act (IWPA) approval
- IDNR Standard Action Review Concurrence

3.15.1 Section 404 of the Clean Water Act

The Preferred Alternative would have impacts on waters of the U.S. (e.g., creeks and wetlands). The discharge of dredge or fill materials into jurisdictional waters of the U.S. (including wetlands), is subject to the requirements of Section 404 of the CWA. Projects in Lake County, Illinois, that would have minimal individual and cumulative impacts on aquatic resources may be eligible for the Chicago District USACE, Regional Permit Program. See Sections 3.7 and 3.10 for additional information. The Section 404 CWA permit is contingent upon receipt of Section 401 (CWA) water quality certification.

3.15.2 Section 401 of the Clean Water Act

In Illinois, IEPA issues Section 401 water quality certification. IEPA has granted Section 401 water quality certification for projects that qualify for the USACE Regional Permit Program. See Sections 3.7 and 3.10 for additional information.

3.15.3 Review of Soil Erosion and Sediment Control Plans

A cooperative agreement between the USACE and the Lake County Stormwater Management Commission (LCSMC) requires a detailed review of soil erosion and sediment control in conjunction with Section 404 permitting. In Lake County, review would be conducted by the LCSMC. During Section 404 permitting (if required by the USACE), a soil erosion and sediment control plan for the Preferred Alternative would be prepared and submitted to LCSMC for confirmation that the plan meets technical standards. The soil erosion and sediment control plan would require installation, maintenance, repair, and inspection of soil erosion and sediment control BMPs throughout the construction process. See Section 3.7 for additional information.

3.15.4 NPDES Construction Permit

This project is anticipated to result in the disturbance of one or more acres of total land area. Accordingly, the project is subject to the requirement for an NPDES permit for stormwater discharges from the construction sites. Permit coverage for the project would be obtained either

under the IEPA General Permit for Stormwater Discharges from Construction Site Activities (NPDES Permit Number ILR10) or under an individual NPDES permit. Requirements applicable to such a permit would be followed, including the preparation of a Storm Water Pollution Prevention Plan (SWPPP). Such a plan shall identify potential sources of pollution that may reasonably be expected to affect the quality of stormwater discharges from the construction site. The SWPPP also shall describe and ensure the implementation of practices that would be used to reduce the pollutants in discharges associated with construction site activity and to assure compliance with the terms of the permit. See Section 3.7 for additional information.

3.15.5 Floodway and Floodplain Construction Permits

IDNR-OWR issues construction permits for work within regulatory floodways and for the encroachment of regulatory floodplains serving a tributary area of 640 acres or more in an urban area and a tributary area of 6400 acres or more in a rural area. The purpose of 17 Illinois Administrative Code 3708 is to provide rules governing construction and filling in the regulatory floodway of rivers, lakes, and streams of Cook, DuPage, Kane, Lake, McHenry, and Will counties, excluding the City of Chicago. 17 Illinois Administrative Code 3700 applies to all rivers, lakes, and streams under IDNR jurisdiction, except those defined by 17 Illinois Administrative Code 3708. The Preferred Alternative would require issuance of these permits. See Section 3.9 for additional information.

3.15.6 Interagency Wetland Policy Act (IWPA)-Related Approval

Additional state agency requirements are established under the Illinois IWPA of 1989, so that there is no overall net loss of the state's existing wetland acres or their functional value. The act pertains to state activities (or activities accomplished with state funds) that impact wetlands. See Section 3.10 for additional information.

3.16 Environmental Commitments

This subsection summarizes the mitigation measures and commitments that have been identified during development of the project. More detailed descriptions of each are contained in their respective discipline discussions in this document. In general, the project will adhere to all federal, state, and local laws and regulations that pertain to the various aspects of this project. In addition, the following environmental commitments were made for this project and are to be addressed in future phases of project development and implementation.

- Millburn Creek and the Tributary to Millburn Creek within the Central Section of the project are identified ADID locations. Based on discussions with the USACE, USFWS, and the USEPA as part of the NEPA/404 project coordination, to the extent feasible impacts to these sites are to be minimized and accommodations for the movement of small to medium size terrestrial wildlife are to be provided.
- Per the January 14, 2013 memorandum from IDOT-BDE providing the Conditional No Adverse Effect finding for Cultural Resources (refer to Appendix B), preliminary and final design plans shall be submitted to the IDOT-BDE Cultural Resources Unit for

SHPO comment and review. The Phase II engineering team shall contact the IDOT-District One Environmental Studies Unit to initiate this coordination.

4.0 Agency Coordination and Public Involvement

LCDOT and IDOT provided regular opportunities for project stakeholders from the project area, local government officials, as well as state and federal agencies to participate in the U.S. Route 45 project through a structured coordination and communication program. The opportunity for participation was open with no persons excluded because of income, race, color, religion, national origin, sex, age, or handicap. This chapter summarizes the agency coordination and public involvement activities that occurred during project development, including the early coordination process, coordination activities with resource agency officials, and meetings with area officials, interested groups, and the public.

A Public Involvement Plan (PIP) was prepared which provided for a range of public involvement opportunities for this project. The PIP was used as a “blueprint” for defining methods and tools to educate project stakeholders and provide opportunities for stakeholder input as part of the project decision-making process. The PIP also established the Project Study Group that was made up of representatives from LCDOT, IDOT, FHWA and the project consultants. The Project Study Group was responsible for the ultimate project decisions made at each project development milestone based on stakeholder input as well as other factors such as transportation performance, design considerations, and environmental impacts. A copy of the PIP is available on the project website (www.route45project.com).

A summary of coordination efforts, key issues, comments, and pertinent information obtained through the agency coordination and public involvement process is provided below.

4.1 Early Coordination and Scoping

4.1.1 Cooperating Agencies

On January 21, 2009, the FHWA requested State and Federal resource agency participation in the review of the U.S. Route 45 Environmental Assessment as a cooperating agency. State and Federal resource agencies that agreed to serve as cooperating agencies for the project include IHPA, IDNR, and USACE. Refer to Appendix C for this correspondence.

A preliminary scoping meeting occurred with an introductory project presentation at the first NEPA/404 Merger meeting on February 3, 2009 as discussed below. Also refer to Appendix C for a summary of this meeting. As a result of the input received at this scoping meeting, and subsequent coordination, the logical termini for the project was expanded from the initial Millburn Bypass limits to include U.S. Route 45 from Illinois Route 132 to Illinois Route 173 to address likely future improvements to U.S. Route 45 outside of the bypass area within these established logical project termini.

4.2 State and Federal Agency Coordination

4.2.1 NEPA/404 Merger Process

Based on the initial expectation that Waters of the U.S./Wetland impacts for the entire project (U.S. Route 45; Illinois Route 132 to Illinois Route 173 and Millburn Bypass) could exceed 1.0 acres, the project was coordinated under the Statewide Implementation Agreement for concurrent National Environmental Policy Act (NEPA) and Section 404 review processes. This process is designed to involve State and Federal resource agencies early and at strategic milestones throughout the project development process. Refer to Appendix C for documentation of this coordination process. This process involved regular NEPA/404 Merger meetings, as well as supplemental meetings, to discuss the project as shown in Table 4-1 below.

Table 4-1. NEPA/404 Coordination Meetings

NEPA/404 Coordination Date	Summary of Coordination
February 3, 2009	Project Introduction; Results of Public Informational Meeting; Scoping.
September 9, 2009	Project Update; Additional Scoping.
October 16, 2009	Initial IHPA Coordination Meeting (teleconference).
February 18, 2010	Purpose and Need Concurrence; Range of Alternatives and Initial Alternatives Screening.
June 11, 2010	Alternatives Screening and Concurrence with Finalist Alternatives for Presentation at a Public Meeting.
June 29, 2010	Supplemental USACE Coordination Meeting; Concurrence to proceed to Public Meeting with the Finalist Alternatives.
July 19, 2010	Supplemental IHPA Coordination Meeting; Concurrence to proceed to Public Meeting with the Finalist Alternatives.
August 5, 2010	Supplement USFWS Coordination (email); Concurrence to proceed to Public Meeting with the Finalist Alternatives.
September 9, 2010	Results of Public Meeting concerning the Finalist Alternatives.
June 28, 2011	Concurrence on Alternatives Carried Forward and the Preferred Bypass Alternative granted by IDNR, and USEPA.
July 11, 2011	Supplement Coordination with USFWS and USACE; Preferred Bypass Alternative.
November 13, 2012	Supplemental Coordination with USFWS and USACE; project status update, discussed proposed stream crossings and concept drainage plan for the Preferred West Bypass Alternative.

Subsequent to these meetings, it was determined that Waters of U.S./Wetland impacts for the entire project will be less than 1.0 acres in the aggregate, and no more than 0.25 acres per site. On this basis, it was determined by FHWA that further project coordination via the NEPA/404 Merger process was not required.

4.3 Public Involvement

4.3.1 Community Advisory Group

One of the more formal methods used to facilitate stakeholder involvement for specifically the Millburn Bypass section of the project was the establishment of the Community Advisory Group (CAG). The CAG was formed from the non-media project stakeholders for discussion of the unique history, issues, concerns, and potential alternatives in the vicinity of the Millburn Historic District. The role of the CAG was to provide input to the Project Study Group throughout the course of the project development process.

The CAG included a mix of agency and community representatives that are familiar with the project study area and were able to provide valuable input on project needs and relative comparison of alternatives. The communities, agencies and organizations represented on the CAG are shown in Table 4-2 below.

Table 4-2. Community Advisory Group Members

Community Advisory Group Members	
Cross Creek Homeowners Association	Forest Trail Subdivision
Heritage Trail Subdivision	Historic Millburn Community Association
Lake County Forest Preserve District	Lake County Planning Department
Lake County Stormwater Management Commission	Lake Villa Township
Lindenhurst Park District	Lindenhurst Police Department
Lindenhurst Village Board	Lake Villa Chamber of Commerce
Millburn School District 24	Millburn Tree Farm
Village of Old Mill Creek	Old Mill Creek Historic Preservation Commission
Providence Ridge Subdivision	Providence Woods Homeowners Association
Tempel Farms	Area Residents

Below is a brief summary of the topics covered at each CAG meeting. Refer to Appendix C for full CAG meeting summaries.

Community Advisory Group Meeting #1 (June 16, 2009)

- Project overview and review the NEPA project development procedures
- Review the PIP and the CAG ground rules and objectives
- Review March 3, 2009 Public Meeting results on project issues and concerns survey
- **Workshop:** Develop CAG Project Problem statement as



input to Project Purpose and Need Statement

CAG Project Problem Statement: *The transportation problems to be solved by the U.S. Route 45 at Grass Lake Road/ Millburn Road project are present and future congestion, safety and accessibility for all modes of transportation, and also impacts to natural and manmade environments.*

Community Advisory Group Meeting #2 (November 3, 2009)

- Review the draft Project Purpose and Need Statement
- Discuss methodology for alternatives analysis process and methodology
- **Workshop:** CAG input on screening of the initial 18 potential bypass alternatives



Community Advisory Group Meeting #3 (April 27, 2010)

- Review the results for concept level development and evaluation of the nine preliminary bypass alternatives
- Review the evaluation results for the nine preliminary bypass alternatives
- **Workshop:** CAG input on screening of the nine preliminary bypass alternatives

Community Advisory Group Meeting #4 (August 19, 2010)

- Present the three Finalist Bypass Alternatives based on results from CAG #3 and subsequent coordination with the Project Study Group and other jurisdictional resource agencies (IHPA, ACOE, USEPA, ILEPA, IDNR, USFWS, etc)
- Present a modification to Finalist Bypass Alternative C4 due to the identified Historic Millburn Burial Site
- Preview of Public Meeting #2
- Discussion of the remaining project development procedures after Public Meeting #2



Community Advisory Group Meeting #5 (July 26, 2011)

- Presentation of the factors involved in the Project Study Group decision that Alternative A4 is the Preferred West Bypass Alternative
- Answer CAG questions concerning the Preferred West Bypass Alternative
- **Workshop:** CAG input on design issues/concerns associated with the Preferred West Bypass Alternative
- Discussion of the remaining project development procedures



4.3.2 Village of Lindenhurst

Project coordination meetings were held with the Village of Lindenhurst on April 26, 2010, September 22, 2011, and June 28, 2012. Multiple representatives from the Village of Lindenhurst were also members of the project CAG. The purpose of these coordination meetings was to introduce the U.S. Route 45 project, review the alternatives development and evaluation process, to provide an opportunity for the Village of Lindenhurst to provide input on the project outside of the CAG process, and to discuss specifics with respect to the Preferred West Bypass Alternative. Subsequent to Public Meeting #2, the Village of Lindenhurst passed a resolution in favor of an east bypass of the Millburn Historic District. An intergovernmental agreement was executed in 1995 between the Village of Lindenhurst, Lake County, the LCFPD, the Lindenhurst Sanitary District, and Westfield Homes of Illinois, Inc. that acknowledges the cooperative planning efforts and agreement to support a west bypass of U.S. Route 45. The 1997 declaration of the Forest Trail Subdivision within the Village of Lindenhurst cites the subdivisions planning in consideration of a West Bypass Alternative. Refer to Appendix C for a summary of the Village of Lindenhurst coordination meetings and excerpts from the referenced documents which are available in their entirety on the project website (see Section 4.6).

4.3.3 Village of Old Mill Creek

Project coordination occurred with the Village of Old Mill Creek May 8, 2009 (email correspondence), September 14, 2011, and July 19, 2012. Multiple representatives from the Village of Old Mill Creek were also members of the project CAG. The purpose of these coordination meetings was to introduce the U.S. Route 45 project and early project data gathering, and to discuss specifics with respect to the Preferred West Bypass Alternative.

Subsequent to the Public Meeting #1, the Village of Old Mill Creek and the owner of Tempel Farms within the Village of Old Mill Creek submitted letters in favor of a west bypass of the Millburn Historic District. Refer to Appendix C for copies of this correspondence and summaries of the coordination with the Village of Old Mill Creek.

In addition, representatives from the Historic Millburn Community Association (HMCA) and the Old Mill Creek Historic Preservation Commission were members of the project CAG, and therefore no separate project coordination occurred with these organizations.

4.3.4 Lake County Forest Preserve District

Project coordination meetings were held with the Lake County Forest Preserve District (LCFPD) on April 14, 2010; March 1, 2011, October 19, 2011, and July 9, 2012. A representative from the LCFPD was also a member of the project CAG. The purpose of this coordination meeting was to introduce the U.S. Route 45 project, review the alternatives development and evaluation process, and to provide an opportunity for LCFPD input on the project outside of the CAG process.

Of particular importance was the potential impact of alternatives being considered on the McDonald Woods, Raven Glen, and Ethel's Woods Forest Preserves. With respect to the Preferred Alternative, which includes the West Bypass, the LCFPD concurred that the impacts would not adversely affect the attributes of the McDonald Woods Forest Preserve.

In addition, as discussed in the coordination meeting on October 19, 2011, the LCFPD has indicated that they would support a Section 4(f) *de minimis* impact finding for the proposed use of land from Raven Glen Forest Preserve near Miller Road in the north section of the project. The use of land from Raven Glen along the west side of U.S. Route 45 is required to avoid the use of land from Ethel's Woods along the east side of U.S. Route 45, which was purchased with OLT funds. Refer to Appendix C for summaries of the meetings with LCFPD and the LCFPD letter of March 18, 2011 concurring with a *de minimis* impact finding for a west bypass use of McDonald Woods. Also refer to Appendix D for *de minimis* documentation.

4.3.5 Lake County Stormwater Management Commission

A separate project coordination meeting was held with the Lake County Stormwater Management Commission (LCSMC) on March 31, 2010. A representative from the LCSMC was also a member of the project CAG. The purpose of this coordination meeting was to introduce the U.S. Route 45 project, review the alternatives development and evaluation process, and to provide an opportunity for LCSMC input on the project outside of the CAG process. Refer to Appendix C for a summary of the LCSMC coordination meeting.

4.3.6 Millburn Congregational Church

Project coordination meetings were held with the Millburn Congregational Church on July 13, 2010 and September 27, 2011. The Millburn Congregational Church is located west of existing U.S. Route 45 and south of Grass Lake Road within the Millburn Historic District. The original structure of the Millburn Congregational Church is building #12 (of 18) within the historic district. A separate newer building was later added to include a day care center. The purpose of these meetings was to discuss the purpose and need for the project, the alternatives development and evaluation process, and concerns/desires of the church with respect to the Preferred West Bypass Alternative. Refer to Appendix C for summaries of the meetings held with the Millburn Congregational Church.

4.3.7 PACE Suburban Bus

Coordination occurred with PACE to determine the presence of existing PACE bus routes in the project area and the need to accommodate any future planned PACE bus routes. In a letter dated June 18, 2010 (refer to Appendix C), PACE indicated that only PACE Route 570 operates in the project area in an east-west direction along IL Route 132. No additional bus route accommodations were requested as part of the proposed improvements.

4.4 Public Meetings

4.4.1 Public Meeting #1

The first Public Meeting was held on March 3, 2009 at Millburn West School in Lindenhurst from 4:00 p.m. to 8:00 p.m. The purpose of the meeting was to solicit early input from the public regarding the project for use in engineering and environmental studies. Refer to Appendix C for a more complete summary of Public Meeting #1.

A public notice was placed in the February 13 and February 27, 2009 editions of the *Daily Herald* newspaper and the February 14 and February 28, 2009 editions of the *News Sun* newspaper. Letters of invitation were sent to public officials and agencies, representatives of local communities, utilities, other governmental agencies, and property owners within the study area. Approximately 610 letters announcing the Public Meeting were mailed for this project.

The meeting was held in an open house format beginning with a sign-in table near the entrance of the facility. A total of 184 people signed the attendance register. Each attendee was provided with a project brochure, and then directed to view the project exhibits, which were arranged in a series of six informational stations as follows:



1. Study Overview
2. Project Development Process
3. CSS Approach
4. Community Advisory Group (CAG)
5. Environmental and Community Context
6. Transportation Alternatives.

A map of these progressive stations as well as an outline of the information each station was portraying was included in the brochure that was given to each attendee as they arrived at the meeting. At the Transportation Alternatives station, meeting attendees were given the opportunity to draw their ideas of Millburn Bypass alternatives that should be considered on large aerial exhibits. This information formed the baseline for identification of the 18 initial potential bypass alternatives ultimately identified.

The following exhibits were among those placed on display at the various stations:

- Aerial Exhibit of Study Area
- Brief Project History and Summary
- Process Overview
- Study Timeline/Schedule
- CSS Overview
- Aerial Exhibit Depicting Environmental Features
- Traffic Volume Exhibits
- Origin-Destination Exhibit
- Crash Data Exhibit
- Aerial Exhibit of Potential Alternatives
- Large Scale Aerial Exhibits of Entire Area

In addition to the exhibits, various other information media were available at the station tables, which were available for inspection.

The Lake County Division of Transportation (LCDOT), Christopher B. Burke Engineering, and Patrick Engineering staff were available at each station to provide information, answer questions, and discuss individual concerns with members of the public at the meeting. A questionnaire was distributed to all attendees, which they could complete allowing them the opportunity to provide early project input on transportation issues and area context values that were important to them. Comment sheets were also available for those choosing to provide written comments at the meeting or for mailing to the LCDOT after the meeting. Lastly, forms were available for attendees to complete and submit if they desired to be a participating member of the CAG that would be used as part of the stakeholder involvement process for this project.

One-hundred fourteen questionnaires were completed as a result of the public meeting interaction, along with 45 written comments that were provided at and following the Public Meeting. 43 CAG forms were also received. A more detailed summary of Public Meeting #1 along with a summary of the questionnaire results is included in Appendix C.

4.4.2 Public Meeting #2

The second Public Meeting was held on September 2, 2010 at Millburn West School in Lindenhurst from 4:00 p.m. to 7:00 p.m. The purpose of the meeting was to provide a summary of the overall proposed improvements within the project limits from IL Route 132 to IL Route 173, to present the Millburn Bypass alternatives development and evaluation process that had occurred since Public Meeting #1, and to present the three Finalist Bypass Alternatives which were narrowed from the initial 18 potential bypass alternatives. This included an overview of the stepped alternatives development and evaluation process which included multiple meetings with the CAG to provide input in advance of the decision making milestones by the Project Study Group. Information was provided to meeting attendees regarding the study process, schedule, and results to date. Refer to Appendix C for a more complete summary of Public Meeting #2.

Public Meeting attendees were provided the opportunity to review and comment on the overall alternatives development and evaluation process as well as the identified three finalist alternatives.

Public notices were placed in the August 13 and August 27, 2010 editions of the *Daily Herald* newspaper, the August 14 and August 28, 2010 editions of the *News Sun* newspaper, and the week of August 19, 2010 *Pioneer Local* newspaper. Letters of invitation were sent to public officials and agencies, representatives of local communities, utilities, other governmental agencies, and property owners within the study area. Approximately 676 letters announcing the Public Meeting were mailed for this project.

The meeting was an open house format with a continuous PowerPoint presentation, exhibit boards for review, and large scale aerials of the study area to which meeting attendees provided comments, suggestions, issues and concerns. A total of 300 people signed the attendance register. Attendees were provided with a project brochure, and then were directed to view the project exhibits, which were arranged in a series of six information stations as follows:

1. Study Overview (PowerPoint Presentation)
2. Study Progress / Purpose and Need Overview
3. Public Involvement / CAG Proceedings
4. Alternatives Development and Evaluation Process
5. Finalist Alternatives and Evaluation
6. Public Comments

A map of these progressive stations as well as an outline of the information each station was portraying were included in the brochure that was given to each attendee as they arrived at the meeting. The following exhibits were among those placed on display at the various stations:

Station 1: Slideshow – This Station presented a short PowerPoint slideshow with narration. The slideshow provided an overview of the bypass alternatives development and evaluation process, a more detailed description of the three Finalist Bypass Alternatives, and an overview of the information available in greater detail at all of the other stations.

Station 2: Study Progress / Purpose & Need Overview – This Station included a look at the progress within the Federal NEPA process being utilized for this Phase I Study. This Station also explained the process of how the study was expanded to include the logical termini of IL 132 to IL 173 and how the study of those improvements will be woven into the already progressing study of the Millburn Bypass. The Public Involvement Plan (PIP) and a project schedule chart were available for viewing at this table.

This Station also included aerial exhibits depicting natural and man-made features, sensitive environmental resources (biological and cultural), and provided an additional opportunity for meeting attendees to provide input on the context of the study area. This Station also provided materials that described the early data collection activities that the study team performed, including aerial surveys, traffic counts, origin-destination studies, accident data, environmental features, and the study GIS network. Exhibits displayed included the following:

- Interdisciplinary Project Development Flowchart
- Current GIS Exhibit for Full EA
- Current GIS Exhibit for Bypass Area
- NEPA Process White Paper
- Purpose and Need Summary Page
- Full Purpose and Need
- Existing and 2030 Traffic Data, O/D Study, Crash Analysis Summary for Full EA Project Area

Station 3: Public Involvement/Community Advisory Group Proceedings – This Station provided information on the overall PIP and the CAG process so far and its use for this study to-date. CAG members were present to offer their insight on how the process has unfolded.

Exhibits Shown:

- Interdisciplinary Project Development Flowchart
- Current CAG Binder (includes PIP)
- A Display Board with Pictures of CAG Meetings 1, 2, and 3
- Display Board with Listed Members of the CAG

Station 4: Bypass Alternatives Development and Evaluation Process – This Station provided the story of how the Project Study Group was able to screen the alternatives from an original range of 18 bypass alternatives, first to nine preliminary bypass alternatives, and ultimately to the three finalist bypass alternatives. Input was solicited on the perceived transportation needs for the expanded area and potential solutions.

Exhibits Shown:

- Boards for the 18 Initial Bypass Alternatives
- Board for the 9 Preliminary Bypass Alternatives
- The Evaluation Matrix Showing the Relative Comparison of the 9 Preliminary Bypass Alternatives Based on 2030 Traffic
- Alternatives Screening Process Summary
- Typical Sections (one for U.S. Route 45, one for County Routes)

Station 5: Finalist Bypass Alternatives and Evaluation – This Station showed the three developed finalist bypass alternatives for the core study area carried forward to this point. Additionally, the ongoing evaluation of these alternatives was exhibited. The evaluation tools used by the project team to weigh these alternatives against each other were explained. The public was asked to provide input on each of the finalist bypass alternatives. This station also had a projector and screen set up to show the Synchro/Simtraffic runs for the three finalist bypass alternatives.

Exhibits Shown:

- Land Use Data for Full EA Project Area
- Board for the 3 Finalist Alternatives
- Evaluation Matrix Showing the Relative Comparison of the 3 Finalist Bypass Alternatives Based on 2030 Traffic

Station 6: Comments – This Station was set up as a location for attendees to write their comments (Comment Sheet/Questionnaire) and submit them in a comment box. Two-hundred one comments were submitted by the public. A more detailed summary of Public Meeting #2 along with a summary of the comments received is included in Appendix C.

LCDOT, IDOT and consultant representatives were available at each station to provide information, answer questions, and discuss individual concerns with members of the public at the meeting.

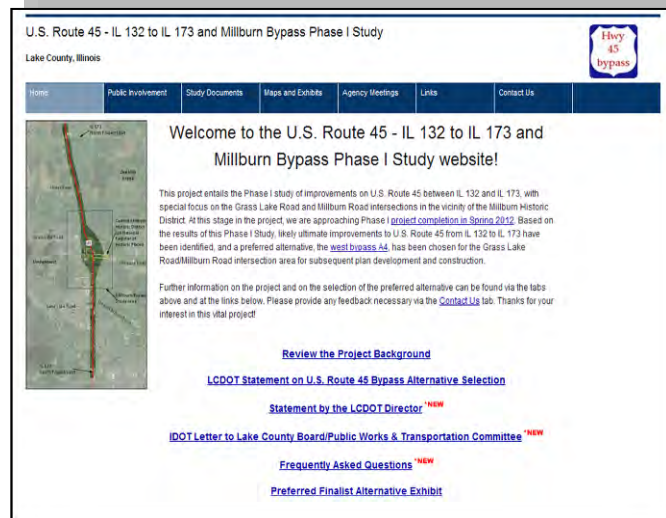
4.5 Public Hearing

A Public Hearing for the U.S. Route 45, from IL Route 132 to IL Route 173 and Millburn Bypass project is anticipated to be held in 2013.

4.6 Project Website

A project website was established and has been updated throughout the project development process with new project information as it became available. The project website can be found at: www.route45project.com.

The website consists of a homepage and various topic-specific pages. Project documentation and materials were posted to the website for public review. Project information posted on the project website includes the following:



- Location Maps
- Study Documents
- Project Schedule
- CAG Meeting Materials and Summaries
- Public Meeting Materials and Summaries
- Historical Project Related Documents
- Concept Drawings of Alternatives Considered
- Evaluation Matrices of Alternatives Considered
- Summaries of the Preferred Alternative Selection Process and Factors Involved in the Selection
- Links to Websites of Other Agencies Involved in the Project
- A Listing of Project Coordination Meeting Dates
- A Folder to Submit Comments to the Project Study Group

The project website is planned to be active throughout the remainder of the project development process, including project implementation.

APPENDIX A

EXHIBITS

- **Exhibit 1 - Project Location Map**
- **Exhibit 2 - Environmental Resources Map**
- **Exhibit 3 - 2010 Lake County Census Tracts**
- **Exhibit 4 - Existing and Future Land Use**
- **Exhibit 5 - Preliminary Trail Alignment – Route 45 Bike and Pedestrian Trail**
- **Exhibit 6 - Millburn Historic District – Village of Old Mill Creek**

APPENDIX B

ENVIRONMENTAL SURVEYS/CORRESPONDENCE

- **Wetlands and Waters of the U.S.**
- **Biological Resources**
- **Cultural Resources**
- **Special Waste**
- **Air Quality (COSIM 4.0 Prescreen)**
- **Illinois Department of Agriculture Coordination**

APPENDIX C

AGENCY and PUBLIC COORDINATION

- **Cooperating Agency Correspondence**
- **Public Meeting #1 Summary**
- **Public Meeting #2 Summary**
- **NEPA/404 Merger Meeting Summaries**
- **Community Advisory Group Meeting Summaries**
- **Village of Old Mill Creek Coordination**
- **Village of Lindenhurst Coordination**
- **Lake County Forest Preserve District Coordination**
- **Lake County Stormwater Management Coordination**
- **Lake County Planning, Building and Development**
- **Millburn Congregational Church Coordination**
- **PACE Suburban Bus Coordination**

APPENDIX D

SECTION 4(f) *de minimis* DOCUMENTATION

- **McDonald Woods Forest Preserve**
- **Raven Glen Forest Preserve**

APPENDIX A

EXHIBITS

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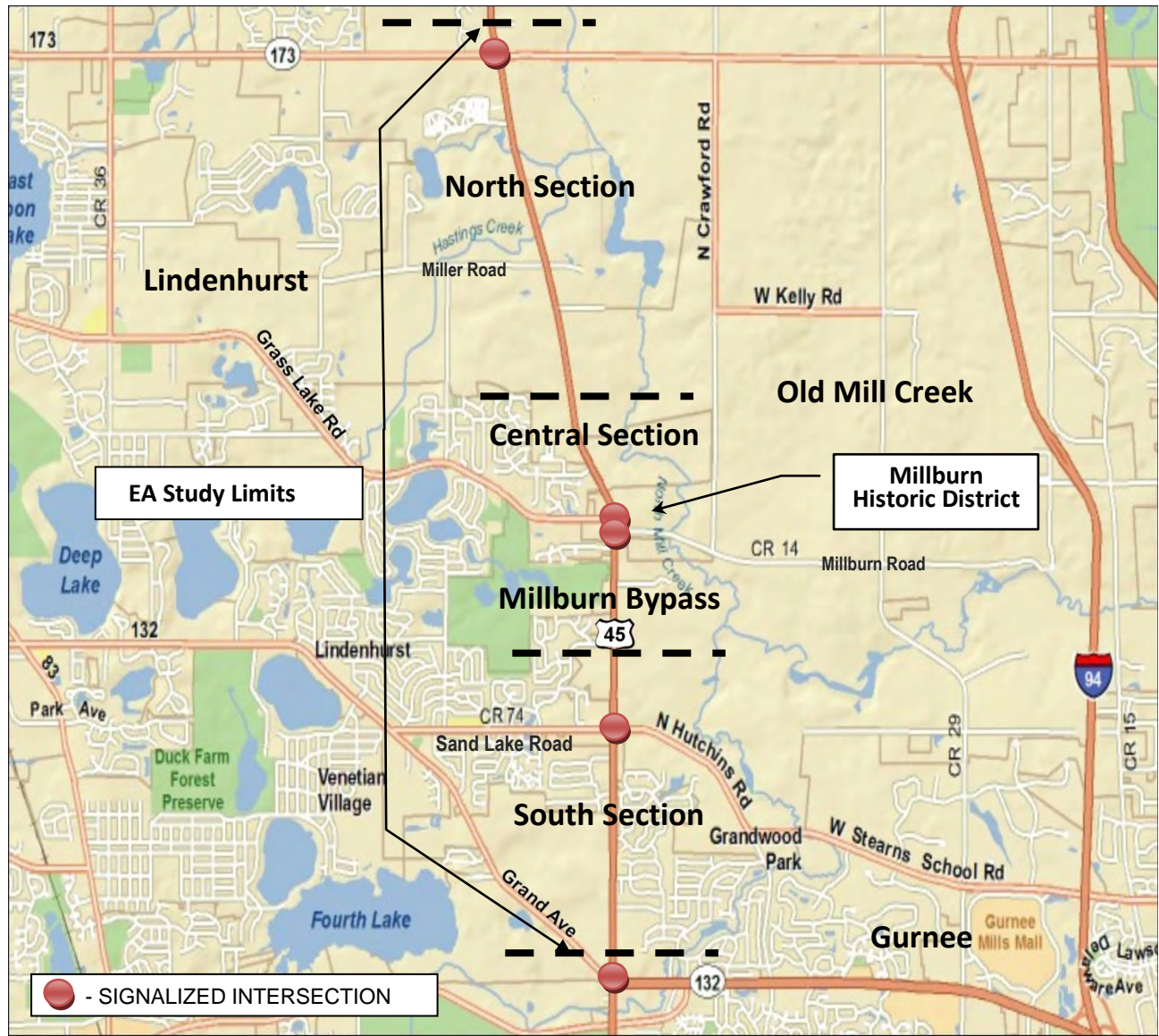
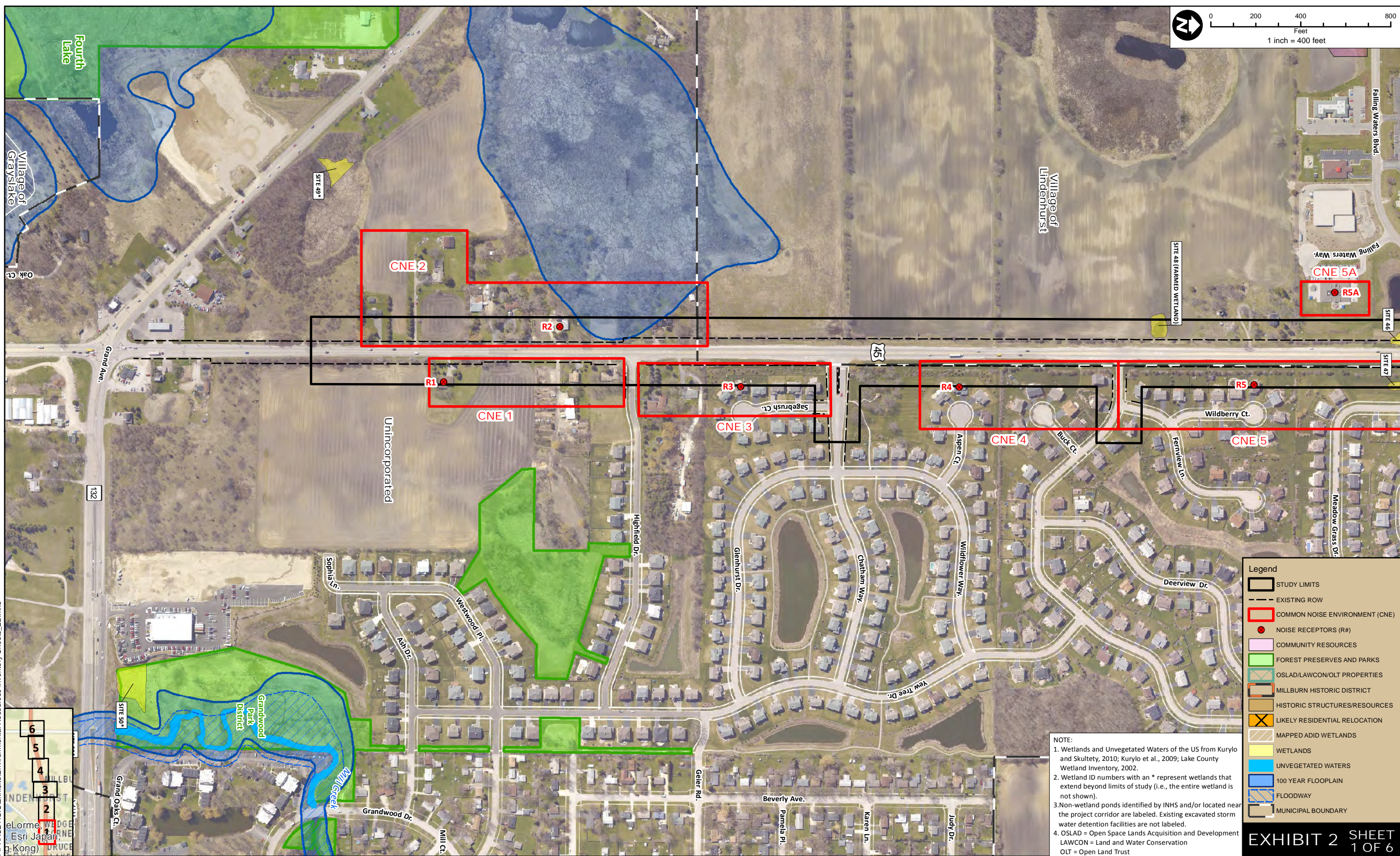
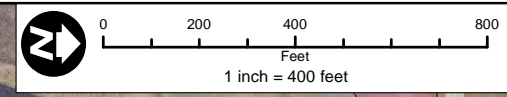


EXHIBIT 1
PROJECT LOCATION MAP
US ROUTE 45; IL ROUTE 132 TO IL ROUTE 173
AND MILLBURN BYPASS



Legend

- STUDY LIMITS
- EXISTING ROW
- COMMON NOISE ENVIRONMENT (CNE)
- NOISE RECEPTORS (R#)
- COMMUNITY RESOURCES
- FOREST PRESERVES AND PARKS
- OSLAD/LAWCON/OLT PROPERTIES
- MILLBURN HISTORIC DISTRICT
- HISTORIC STRUCTURES/RESOURCES
- LIKELY RESIDENTIAL RELOCATION
- MAPPED ADID WETLANDS
- WETLANDS
- UNVEGETATED WATERS
- 100 YEAR FLOODPLAIN
- FLOODWAY
- MUNICIPAL BOUNDARY

NOTE:

1. Wetlands and Unvegetated Waters of the US from Kurylo and Skultety, 2010; Kurylo et al., 2009; Lake County Wetland Inventory, 2002.
2. Wetland ID numbers with an * represent wetlands that extend beyond limits of study (i.e., the entire wetland is not shown).
3. Non-wetland ponds identified by INHS and/or located near the project corridor are labeled. Existing excavated storm water detention facilities are not labeled.
4. OSLAD = Open Space Lands Acquisition and Development
LAWCON = Land and Water Conservation
OLT = Open Land Trust

EXHIBIT 2 SHEET 1 OF 6

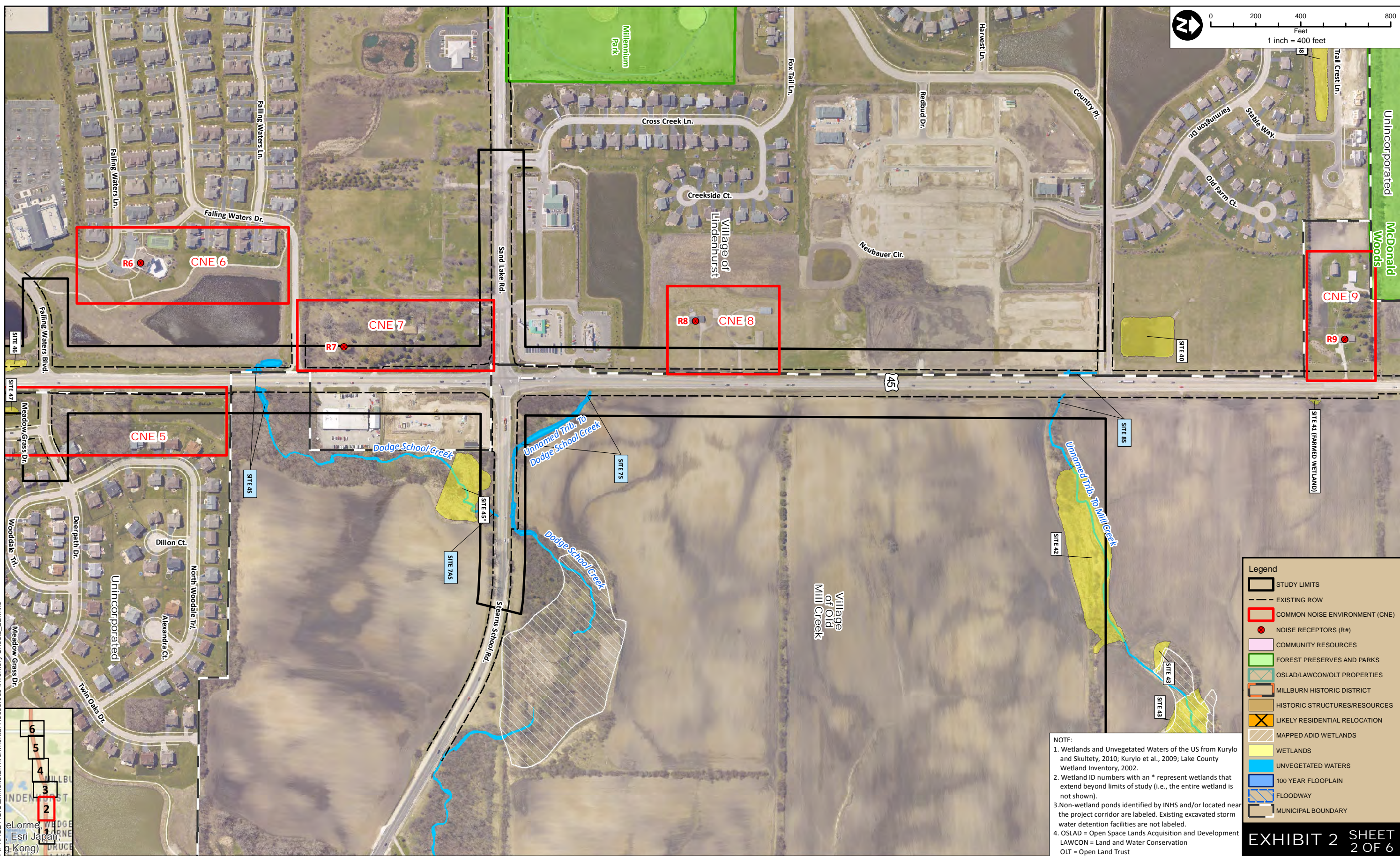
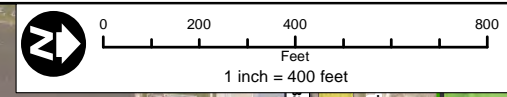
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PATRICK ENGINEERING

Illinois Department of Transportation
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 Schaumburg, IL 60196

ENVIRONMENTAL RESOURCES MAP



Legend

- STUDY LIMITS
- EXISTING ROW
- COMMON NOISE ENVIRONMENT (CNE)
- NOISE RECEPTORS (R#)
- COMMUNITY RESOURCES
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EXHIBIT 2 SHEET 2 OF 6

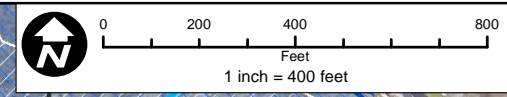
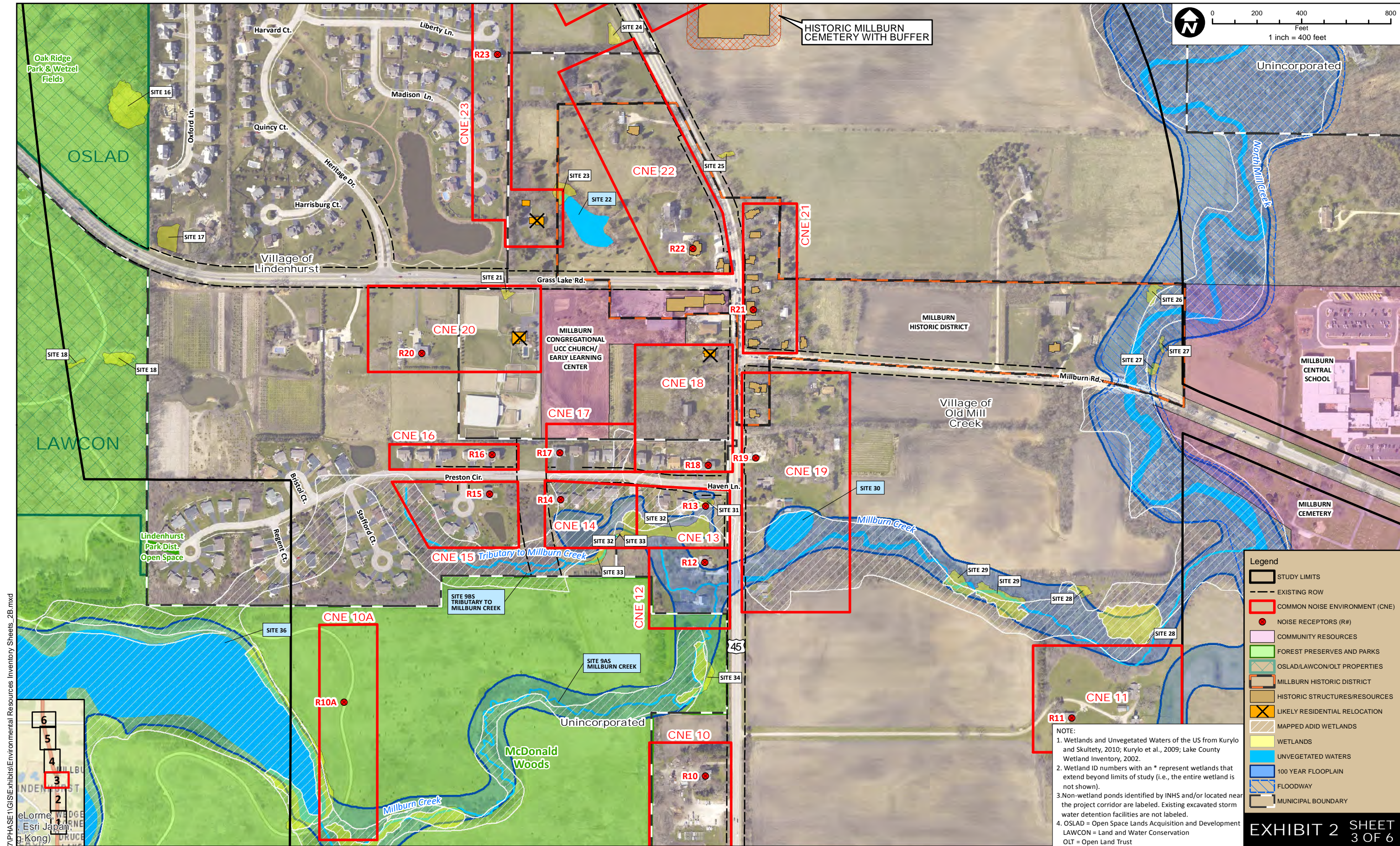
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ENVIRONMENTAL RESOURCES MAP



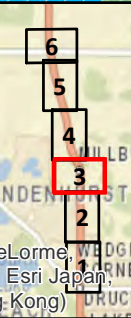
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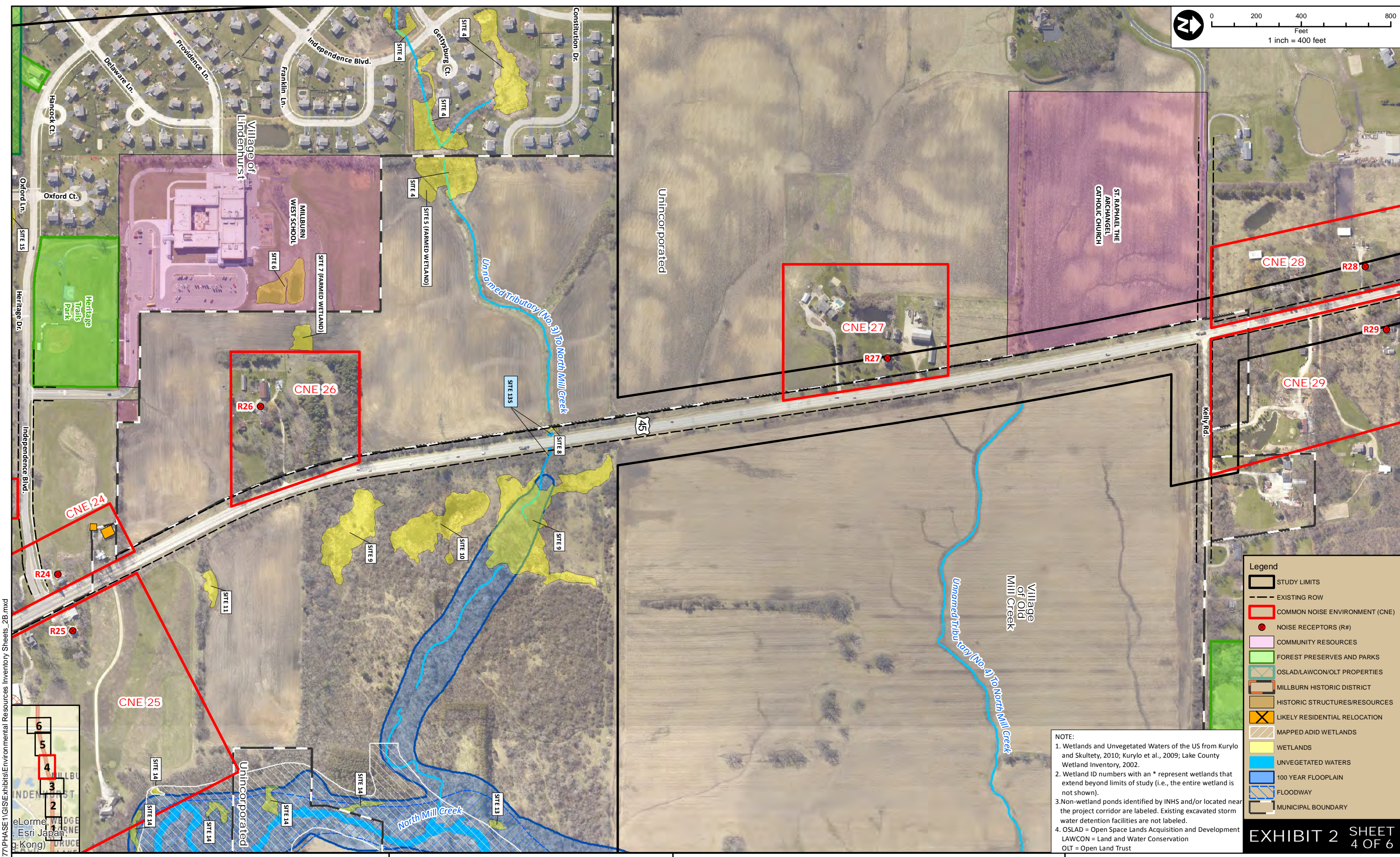
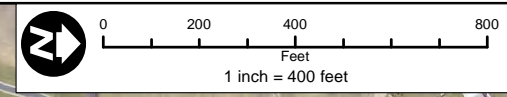
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ENVIRONMENTAL RESOURCES MAP

EXHIBIT 2 SHEET 3 OF 6



Legend

- STUDY LIMITS
- EXISTING ROW
- COMMON NOISE ENVIRONMENT (CNE)
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2. Wetland ID numbers with an * represent wetlands that extend beyond limits of study (i.e., the entire wetland is not shown).
3. Non-wetland ponds identified by INHS and/or located near the project corridor are labeled. Existing excavated storm water detention facilities are not labeled.
4. OSLAD = Open Space Lands Acquisition and Development
LAWCON = Land and Water Conservation
OLT = Open Land Trust

EXHIBIT 2 SHEET 4 OF 6

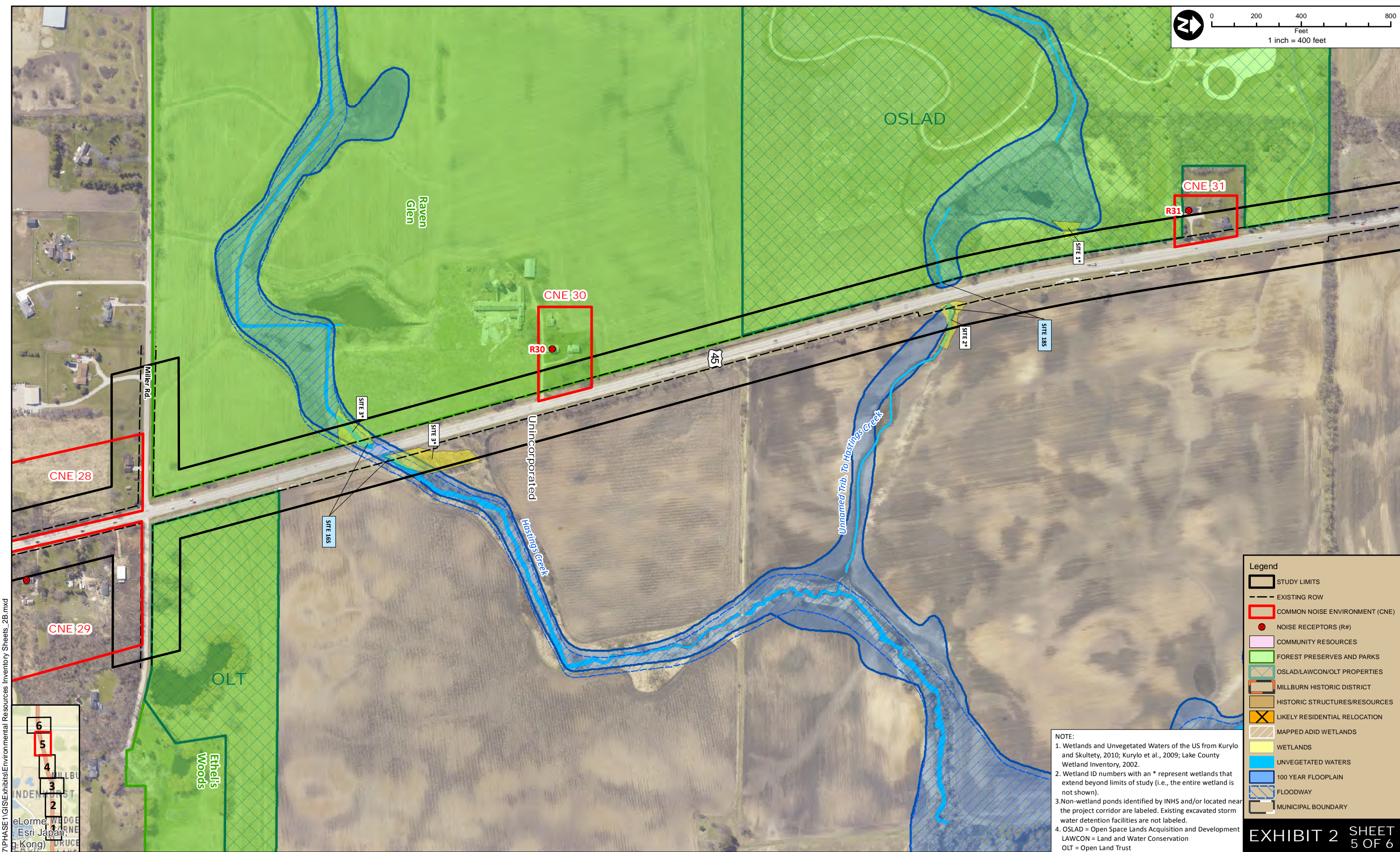
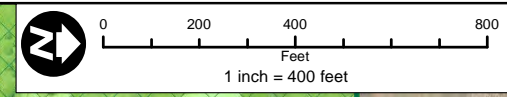
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CHRISTOPHER B. BURKE ENGINEERING LTD.
 9575 West Higgins Road, Suite 600
 Rosemont, Illinois 60018
 (847) 823-0500

PATRICK ENGINEERING

Illinois Department of Transportation
 201 West Center Court
 Schaumburg, IL 60196

ENVIRONMENTAL RESOURCES MAP



Legend

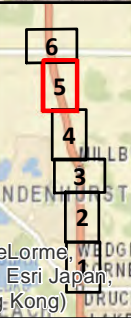
- STUDY LIMITS
- EXISTING ROW
- COMMON NOISE ENVIRONMENT (CNE)
- NOISE RECEPTORS (R#)
- COMMUNITY RESOURCES
- FOREST PRESERVES AND PARKS
- OSLAD/LAWCON/OLT PROPERTIES
- MILLBURN HISTORIC DISTRICT
- HISTORIC STRUCTURES/RESOURCES
- LIKELY RESIDENTIAL RELOCATION
- MAPPED ADID WETLANDS
- WETLANDS
- UNVEGETATED WATERS
- 100 YEAR FLOODPLAIN
- FLOODWAY
- MUNICIPAL BOUNDARY

NOTE:

1. Wetlands and Unvegetated Waters of the US from Kurylo and Skultety, 2010; Kurylo et al., 2009; Lake County Wetland Inventory, 2002.
2. Wetland ID numbers with an * represent wetlands that extend beyond limits of study (i.e., the entire wetland is not shown).
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EXHIBIT 2 SHEET 5 OF 6

Path: N:\LCDOT\080677\PHASE1\GIS\Exhibits\Environmental Resources Inventory Sheets_2B.mxd

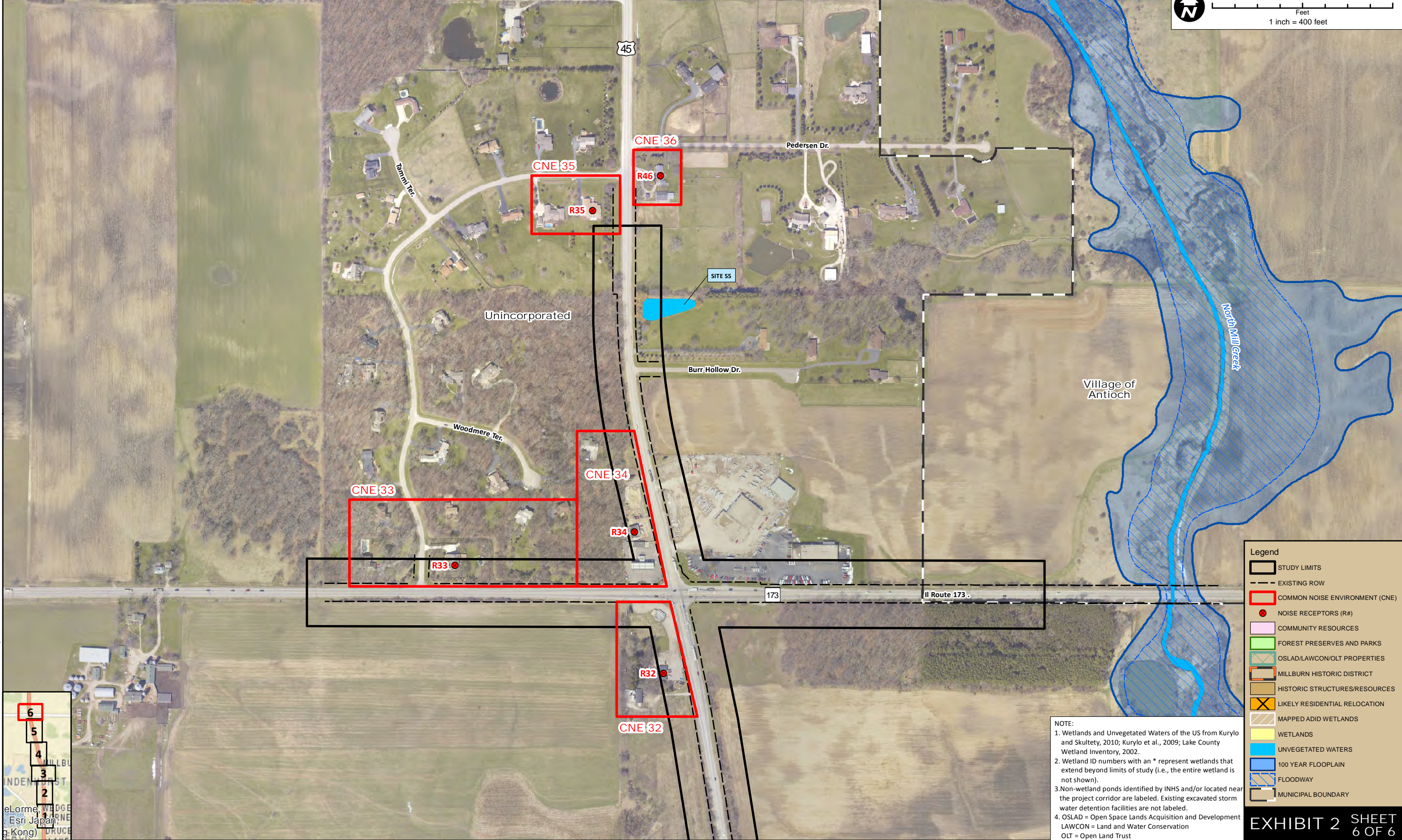


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ENVIRONMENTAL RESOURCES MAP



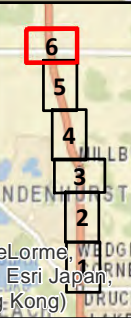
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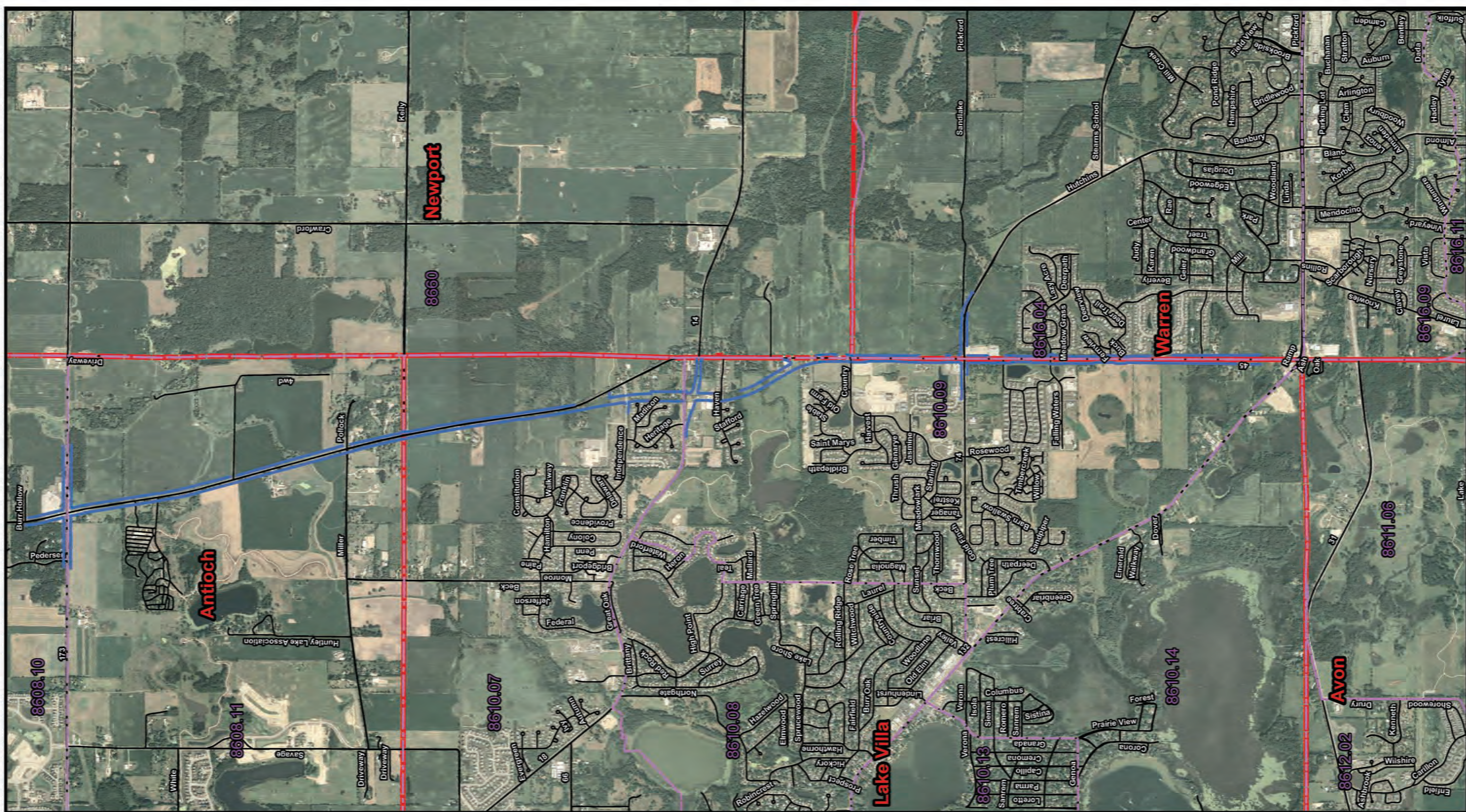
- STUDY LIMITS
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NOTE:

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Path: N:\LCDOT\080677\PHASE1\GIS\Exhibits\Environmental Resources Inventory Sheets_2B.mxd





- STUDY AREA
- CENSUS TRACTS
- TOWNSHIPS

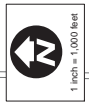
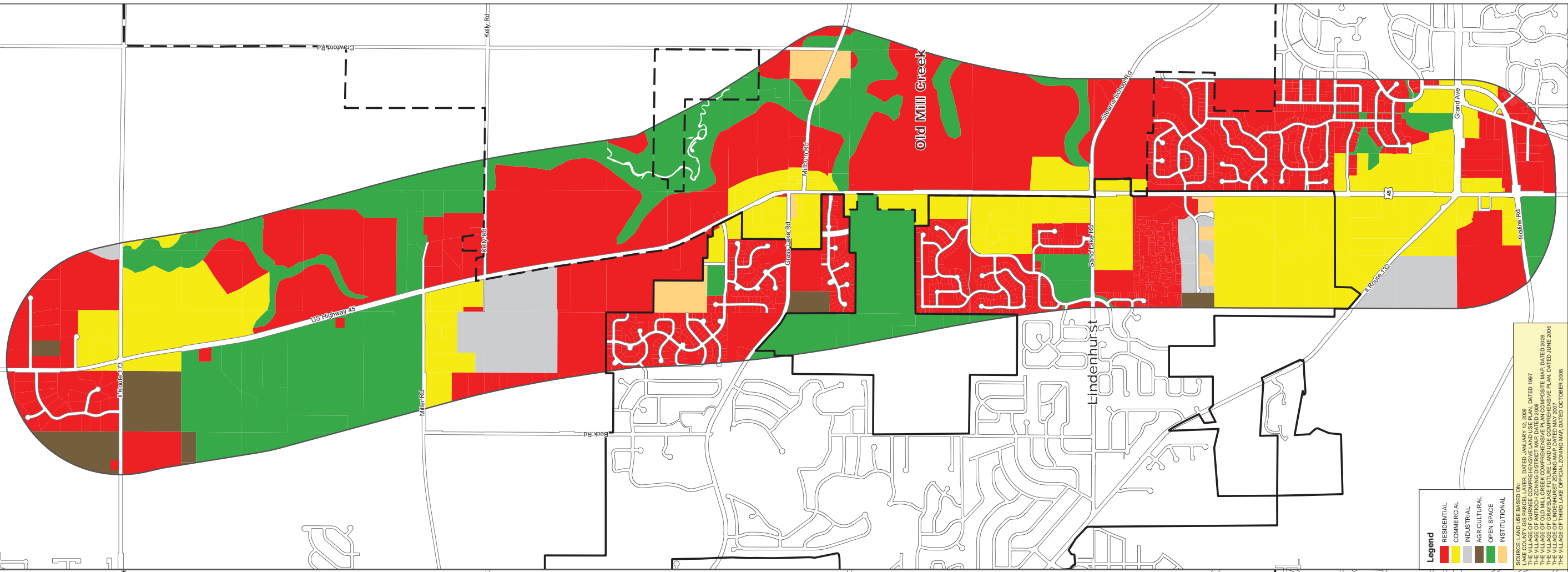
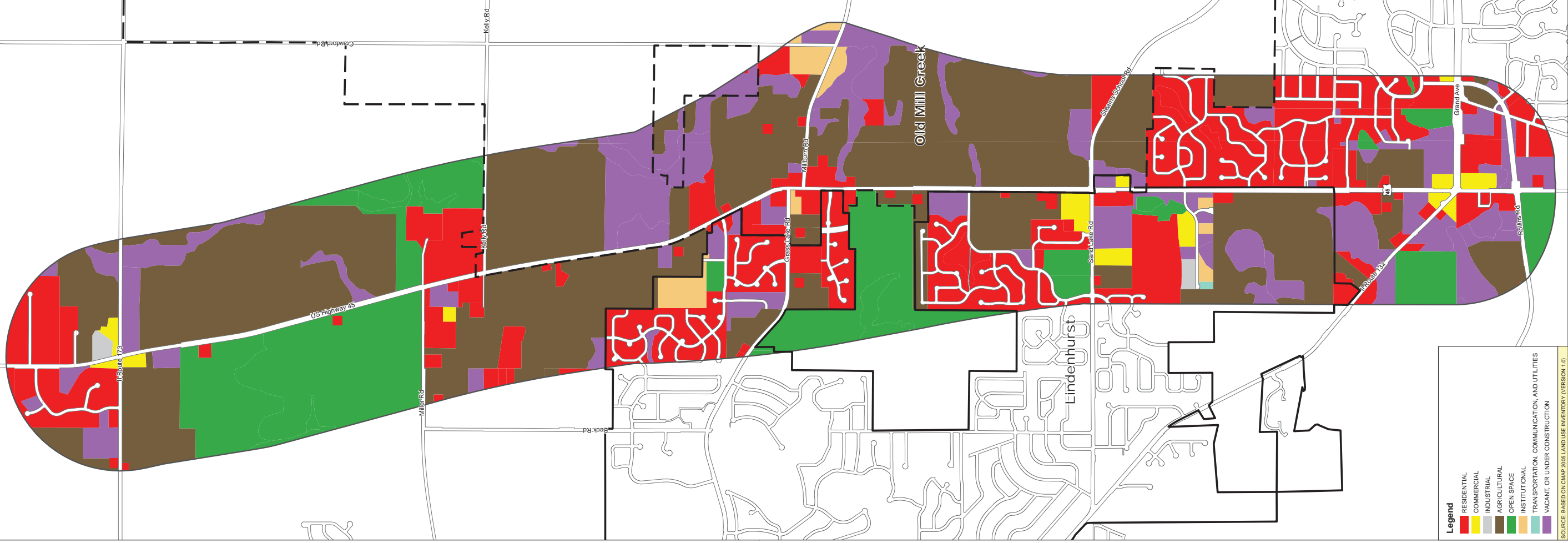
**US ROUTE 45: IL 132 to IL 173 and MILLBURN BYPASS
LAKE COUNTY, ILLINOIS**



SOURCE: U.S. DEPARTMENT OF CENSUS BUREAU, GEOGRAPHY DIVISION

EXISTING LAND USE
(FROM CMAP & OBSERVATION)

FUTURE LAND USE
(FROM COMMUNITY & COUNTY LAND USE PLANS)



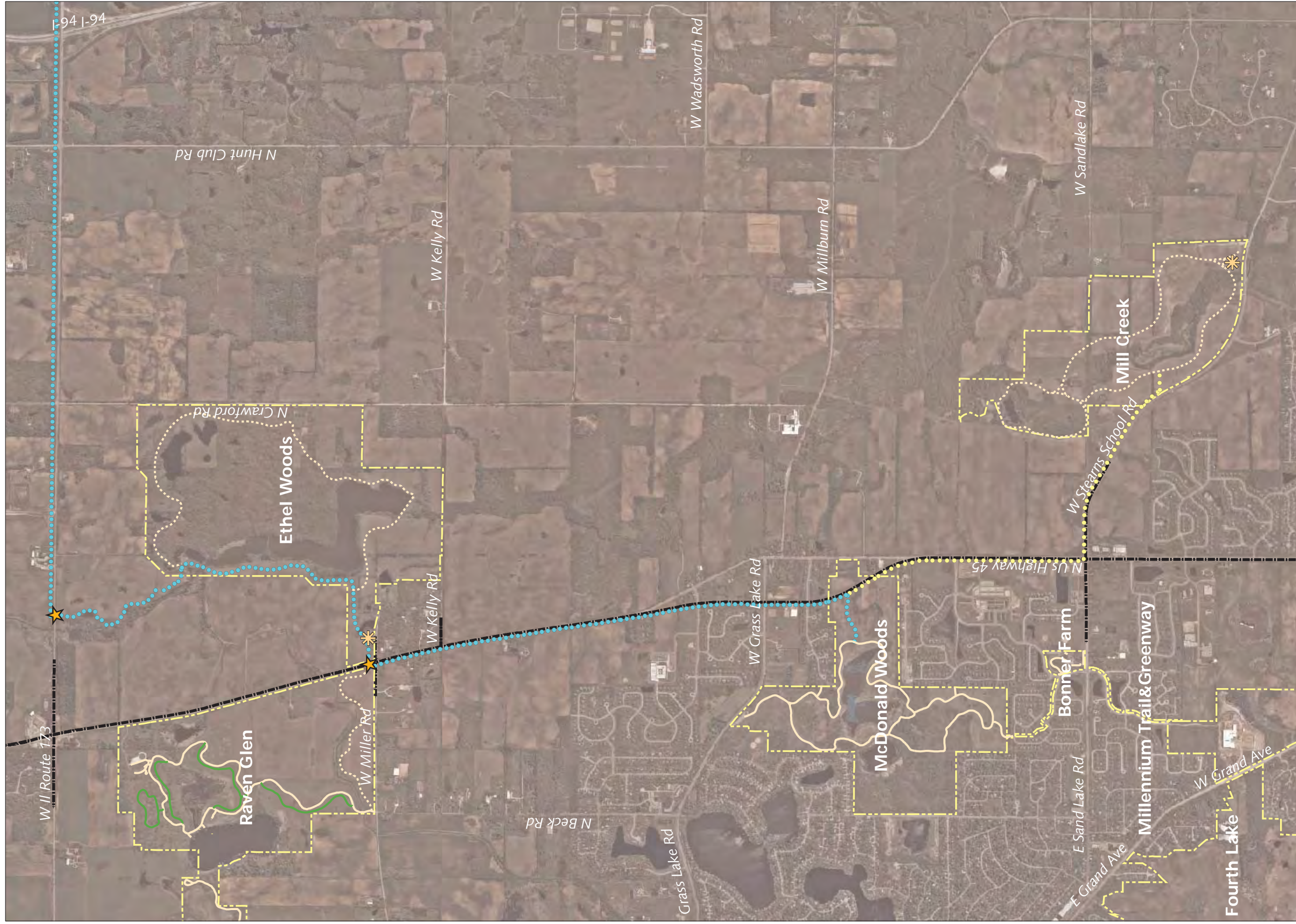
Illinois Department of Transportation
201 West Center Court
Schaumburg, IL 60196



CHRISTOPHER B. BURKE ENGINEERING LTD
3575 West Higgins Road, Suite 600
Rosemont, Illinois 60018
(847) 823-0600



US ROUTE 45 - MILLBURN BYPASS
EXISTING AND COMPREHENSIVE
LAND USE PLAN



Legend

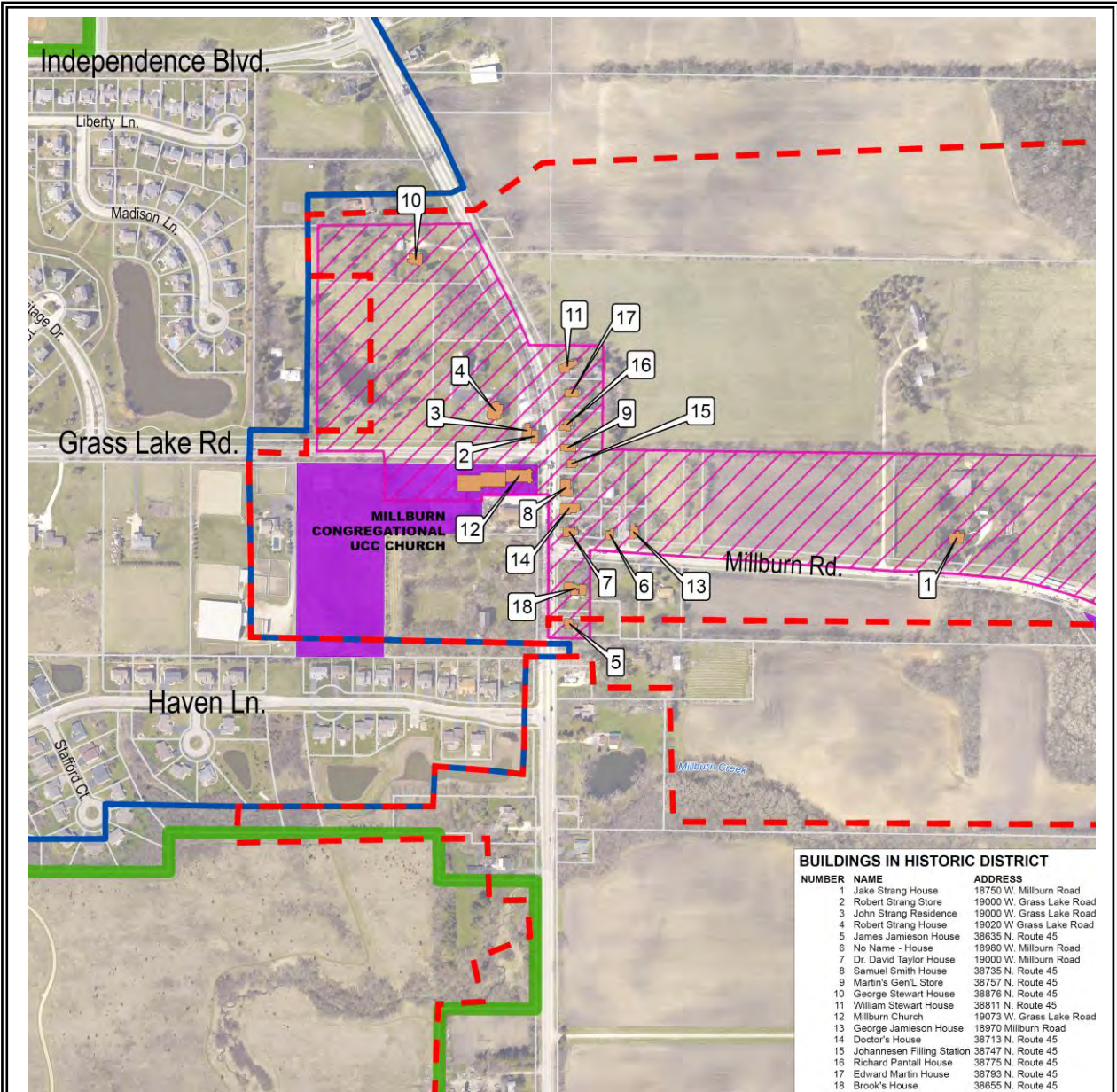
- Proposed Bike and Pedestrian Trail
- Proposed LCFPD Trail
- * Proposed Parking Lot
- Proposed Millennium Trail
- Existing LCFPD Gravel Trails
- Existing LCFPD Gravel Trails
- * Proposed Millennium Bypass
- Proposed Underpass
- Existing LCFPD Grass Trails
- Forest Preserve Boundary



Preliminary Trail Alignment

Route 45 Bike and Pedestrian Trail





BUILDINGS IN HISTORIC DISTRICT		
NUMBER	NAME	ADDRESS
1	Jake Strang House	18750 W. Millburn Road
2	Robert Strang Store	19000 W. Grass Lake Road
3	John Strang Residence	19000 W. Grass Lake Road
4	Robert Strang House	19020 W. Grass Lake Road
5	James Jamieson House	38635 N. Route 45
6	No Name - House	18980 W. Millburn Road
7	Dr. David Taylor House	19000 W. Millburn Road
8	Samuel Smith House	38735 N. Route 45
9	Martin's Gen'L. Store	38757 N. Route 45
10	George Stewart House	38876 N. Route 45
11	William Stewart House	38811 N. Route 45
12	Millburn Church	19073 W. Grass Lake Road
13	George Jamieson House	18970 Millburn Road
14	Doctor's House	38713 N. Route 45
15	Johannesen Filling Station	38747 N. Route 45
16	Richard Pantall House	38775 N. Route 45
17	Edward Martin House	38793 N. Route 45
18	Brook's House	38655 N. Route 45

-  Historic Structures
-  Millburn Historic District
-  Community Resources
-  Lindenhurst Boundary
-  Old Mill Creek Boundary

EXHIBIT 6

**MILLBURN HISTORIC DISTRICT
VILLAGE OF OLD MILL CREEK**

APPENDIX B

ENVIRONMENTAL SURVEYS/CORRESPONDENCE

- **Wetlands and Waters of the U.S.**
- **Biological Resources**
- **Cultural Resources**
- **Special Waste**
- **Air Quality (COSIM 4.0 Prescreen)**
- **Illinois Department of Agriculture Coordination**

Wetlands

Submittal Date: 04/22/2009 **Sequence No:** 15162
District: 1 **Requesting Agency:** DOH **Project No:**
Contract #: **Job No.:** P-91-666-09
Counties: Lake
Route: FAP 344 **Marked:** US 45
Street: US 45 **Section:** 05-00262-02-RP
Municipality(ies): Lindenhurst, Old Mill Creek, Unincorp.Lake **Project Length:** km miles
FromTo (At): @ Grass Lake /Millburn
Quadrangle: Antioch, Wadsworth **Township-Range-Section:** 4N-10E-S36;46N-10E-S25;46N-11W-S31;46N-11E-S30;45N-10E-S1;45N-11E-S6
Survey Target Date: **Anticipated Design Apprvl:** 07/31/2011 **Cleared for Design Apprvl:** 12/26/2012
Cleared for Letting: 12/26/2012 **Mitigation:** Yes **Mitigation Completed:**

Initial Survey and WIE

Addendum No:

Initiated	Due Date	Results Received	Wetland Present	District Notified	WIE Requested	WIE Received	Wetland Impacts	Resp to District	Coord Complete
02/06/2009	12/31/2009	12/31/2009	Yes	01/08/2010	Yes	02/28/2012	Yes	02/28/2012	No

Comments: Tasked for wet del before receiving ESR to get prelim results sooner per req; orig due date 7/31/09 now 12/31/09 w/ DA of 7/11; 12/31/09: told V results recd.; 1/8/10: wet/EPFO results sent to Malone, FWS, COE via letter; 8/3/10: recd stream delineation; 8/6/10: notified Dst.; 3/8/12 DA clear updated to 12/26/12 (SED)

Clearances: Cultural: Bio: 1/8/2010 SW

Submittal Date: 08/04/2009 **Sequence No:** 15162 A
District: 1 **Requesting Agency:** DOH **Project No:**
Contract #: **Job No.:** P-91-666-09
Counties: Lake
Route: FAP 344 **Marked:** US 45
Street: US 45 **Section:** 05-00262-02-RP
Municipality(ies): Lindenhurst, Old Mill Creek, Unincorp.Lake **Project Length:** 8.8514 km 5.5 miles
FromTo (At): Il 173 to IL 132
Quadrangle: Antioch, Wadsworth **Township-Range-Section:** 4N-10E-S36;46N-10E-S25;46N-11W-S31;46N-11E-S30;45N-10E-S1;45N-11E-S6
Survey Target Date: **Anticipated Design Apprvl:** 07/31/2011 **Cleared for Design Apprvl:** 12/26/2012
Cleared for Letting: 12/26/2012 **Mitigation:** Yes **Mitigation Completed:**

Initial Survey and WIE

Addendum No: A

Initiated	Due Date	Results Received	Wetland Present	District Notified	WIE Requested	WIE Received	Wetland Impacts	Resp to District	Coord Complete
08/20/2009	12/31/2009	12/31/2009	Yes	01/08/2010	Yes	02/28/2012	Yes	02/28/2012	No

Comments: 8/20/09: Ok w/ D-1 to have results 8/20/2010; 10/13/09: need orig del by 12/31/09 & Add. A same time or Add. A late winter per TB; 12/31/09: told V results recd.; 1/8/10: wet/EPFO results sent to Malone, FWS, COE via letter; 8/3/10: recd stream delineation; 8/6/10: notified Dst. (SED)

Clearances: Cultural: 4/25/2011 Bio: 1/8/2010 SW

Processing Standard Action

Individual Compensation Plan Required:

404 Individual Permit Required:

Mitigation Site:
 Mitigation Basin:
 Bank:
 Accumulation:

Owner:
 Name:
 Location:
 Size:
 Types:
 Quad:
 Basin:

Processing Comments:

Wetland Impacts Evaluation

Submittal Date:	<input type="text" value="02/17/2012"/>	Submitted By:	<input type="text"/>
Does the project have wetland impacts?	<input type="text" value="Yes"/>	Type:	<input type="text" value="Permanent"/>
Briefly describe the measures considered to avoid and minimize adverse impacts to the wetlands:	<input type="text" value="Shifting alignment would result in impacts to LCFPD/OSLAD funded parcel, impacts to higher quality area, 3:1 slopes."/>		
Summarize briefly why there are no practicable alternatives to the use of the wetland(s):	<input type="text" value="Impacts to WOUS are unavoidable due to culvert extensions."/>		
Wetland mitigation is being proposed:	<input type="text" value="wetland bank site"/>	<input checked="" type="checkbox"/>	Reviewed
Submittal Date:	<input type="text" value="12/26/2012"/>	Submitted By:	<input type="text"/>
Does the project have wetland impacts?	<input type="text"/>	Type:	<input type="text"/>
Briefly describe the measures considered to avoid and minimize adverse impacts to the wetlands:	<input type="text" value="Culverts were determined to be the most practical at these locations."/>		
Summarize briefly why there are no practicable alternatives to the use of the wetland(s):	<input type="text" value="The placement and angle of the culverts were located to limit the amount of impact."/>		
Wetland mitigation is being proposed:	<input type="text"/>	<input type="checkbox"/>	Reviewed

Memo Date:	<input type="text" value="12/26/2012"/>	Memo By:	<input type="text" value="V. Ruiz"/>
Memo:	<input type="text" value="Contract 60T75, Millburn Bypass, Permanent impacts to WOUS; Site 9BS, Tributary to Millburn Creek, 0.03 acre Site 9AS, Millburn Creek, 0.02 acre No USACE or IWPA mitigation required"/>		
Memo Date:	<input type="text" value="12/26/2012"/>	Memo By:	<input type="text" value="Susan Hargrove"/>
Memo:	<input type="text" value="The WOUS WIE dated this date and plan sheets are acceptable to this office. They apply to the bypass portion of the project, currently the only part funded according to Vanessa Ruiz, email dated this date. No mitigation is needed. This portion of this project is cleared for construction."/>		
Memo Date:	<input type="text" value="02/28/2012"/>	Memo By:	<input type="text" value="Susan Hargrove"/>
Memo:	<input type="text" value="Mitigation ratios for WOUS impacts were changed from 2:1 to 1.5:1.0 for purposes of the 404 permit per Vanessa Ruiz' request. Thus, total mitigationfor wetlands and WOUS is now 1.1 ac. instead of 1.22 ac. Wetland impacts total 0.38 acres, with mitigation at 2:1 ratio and mitigation acreage 0.76 acres. WOUS impacts total 0.23 acres, with mitigation acreage 0.345 acres."/>		
Memo Date:	<input type="text" value="02/22/2012"/>	Memo By:	<input type="text" value="Susan Hargrove"/>
Memo:	<input type="text" value="The WIE was received 2/21/12 and is acceptable after questions were answered. Because the project occurs on new alignment, it shall be processed as a Standard Review Action in accordance with the IDOT Wetlands Action Plan. Therefore, wetlands must be coordinated with IDNR's Mr. Patrick Malone for his concurrence before wetland clearance may be granted by this office. Impacts to 5 wetlands (Sites 2, 3, 8, 45, and 46) and 7 WOUS (4S, 7S, 7AS, 8S, 13S, 16S, and 18S) total 0.61 ac. See attached table for details. Wetland Site 46 is considered isolated by INHS. Mitigation is proposed to occur at an in-basin bank; this office concurs. Thus, the mitigation ratio shall be 2:1, resulting in mitigation acreage of 1.22 ac. When Mr. Malone's concurrence is granted, your office shall be informed and wetlands will then be cleared for construction. If there are any questions, please call me at 217/785-0150."/>		
Memo Date:	<input type="text" value="02/17/2012"/>	Memo By:	<input type="text" value="V.Ruiz"/>

Memo:

Wetland Impacts and Mitigation Required

Site No.	Type	T&E	Nature Preserve	Natural Area	Essential Habitat	Size (acres)	Acres of Impact	Ratio	Acres of Compensation
2	Wet Mead	No	No	No	No	0.27+	.120	2.0	.240
Basin	07120004	Quadrangle	Antioch		FQI	6.4			
Describe the work:		Fill							
3	Wet Mead	No	No	No	No	1.04+	.120	2.0	.240
Basin	07120004	Quadrangle	Antioch		FQI	7.9			
Describe the work:		Fill							
4S	Open Water	No	No	No	No	N/A	.070	1.5	.105
Basin	07120004	Quadrangle	Antioch		FQI	N/A			
Describe the work:		Fill							
7S	Open Water	No	No	No	No	N/A	.020	1.5	.030
Basin	07120004	Quadrangle	Antioch		FQI	N/A			
Describe the work:		Fill							
7AS	Open Water	No	No	No	No	N/A	.050	1.5	.075
Basin	07120004	Quadrangle	Antioch		FQI	N/A			
Describe the work:		Fill							
8	Wet Mead	No	No	No	No	0.02	.020	2.0	.040
Basin	07120004	Quadrangle	Antioch		FQI	8.5			
Describe the work:		Fill							
8S	Open Water	No	No	No	No	N/A	.030	1.5	.045
Basin	07120004	Quadrangle	Antioch		FQI	N/A			
Describe the work:		Fill							
13S	Open Water	No	No	No	No	N/A	.010	1.5	.015
Basin	07120004	Quadrangle	Antioch		FQI	N/A			
Describe the work:		Fill							
16S	Open Water	No	No	No	No	N/A	.040	1.5	.060
Basin	07120004	Quadrangle	Antioch		FQI	N/A			
Describe the work:									
18S	Open Water	No	No	No	No	N/A	.010	1.5	.015
Basin	07120004	Quadrangle	Antioch		FQI	N/A			
Describe the work:		Fill							
45	Wet Mead	No	No	No	No	1.09+	.010	2.0	.020
Basin	07120004	Quadrangle	Antioch		FQI	8.8			
Describe the work:		Fill							
46	Marsh	No	No	No	No	0.11	.110	2.0	.220
Basin	07120004	Quadrangle	Antioch		FQI	5.7			
Describe the work:		Fill							
Total							.610		1.105

Mitigation Site Suitability Study:

Wetland Compensation Plan:

Preparer:

Preparer:

Conceptual					Final				
Plan Received	Agency	Report Sent and District Notified	Agency Response	District Notified	Plan Received	Agency	Report Sent and District Notified	Agency Response	District Notified
	IDNR					IDNR			
	USFWS					USFWS			
	COE					COE			

Monitoring

	Monitoring Reports			
	Received	COE Notified	IDNR Notified	District Notified
Year 1				
Year 2				
Year 3				
Year 4				
Year 5				

Monitoring Agency:

Construction Begin Date:

Construction Complete Date:

Tasked Date:

Monitoring Begin Date:

Monitoring Complete Date:

Monitoring Comments:

Permit(s) Type: Corps Dist.: Permit Issued:

Special Conditions:

Permit Agreements/Commitments:

Project Phase

Project Phase Comments:



Illinois Department of Transportation

2300 South Dirksen Parkway / Springfield, Illinois / 62764

February 28, 2012

Mr. Patrick Malone
Illinois Department of Natural Resources
Division of Resource Review and Coordination
One Natural Resources Way
Springfield, Illinois 62702-1271

CONCUR

By: *[Signature]*
Division of Impact Analysis
IDOC IWIWA
3-2-12

RE: FAP 344 (U.S. 45) Milburn Bypass and Addendum A
Job No. P-91-666-09 (Seq. 15162 and 15162A)
Sec. 05-00262-02-RP
@ Grass Lake Road
Municipalities of Lindenhurst, Old Mill Creek, Milburn, Unincorporated Lake County
Lake County

Dear Mr. Malone:

The purpose of this letter is to coordinate wetland impacts for the above project. Because the project occurs on new alignment, it is being processed as a Standard Review Action in accordance with the IDOT Wetlands Action Plan, and thus coordinated with your office. Wetland delineations were transmitted to your office previously via letter dated January 8, 2010. For ease of your review, they are attached.

The Wetland Impact Evaluation form (WIE) was received this date and is acceptable after questions were answered. The WIE and WIE plan sheets are attached. Impacts to 5 wetlands (Sites 2, 3, 8, 45, and 46) and 7 Waters of the U.S. (4S, 7S, 7AS, 8S, 13S, 16S, and 18S) (WOUS) total 0.61 acres, with 0.38 acres of impacts to wetlands and 0.23 acres of impacts to WOUS. Wetland Site 46 is considered isolated by Illinois Natural History Survey. Mitigation is proposed to occur at an in-basin bank; this office concurs. Thus, the mitigation ratio shall be 2:1 for wetlands and 1.5:1.0 for WOUS, with mitigation acreage totaling 1.1 acres. Mitigation acreage for wetlands is 0.76 acres and for WOUS is 0.345 acres. Please note that the WOUS impacts are discussed for your information only since they are not addressed in the IDOT Wetlands Action Plan.

We request your concurrence on the WIE form and the proposal of in-basin banking for mitigation. Once your concurrence is received, this project shall be cleared for letting regarding wetlands. If there are questions, please call Susan Hargrove at 217/785-0150.

Sincerely,

Barbara Stevens

Barbara Stevens
Environment Section Chief

(SDH)

Cc: Diane M. O'Keefe

Attachments



Illinois Department of Natural Resources

One Natural Resources Way Springfield, Illinois 62702-1271
<http://dnr.state.il.us>

Pat Quinn, Governor
Marc Miller, Director

February 07, 2012

Sam Mead c/o William barbel
Illinois Department of Transportation
District One / Environmental Studies Unit
201 West Center Court
Schaumburg, IL 60196 1096

Re: US-45; Milburn Bypass - South End Seq # 15162A
Project Number(s): 1208575 [P-91-666-09, 1001731]
County: Lake

Dear Applicant:

This letter is in reference to the project you recently submitted for consultation. The natural resource review provided by EcoCAT identified protected resources that may be in the vicinity of the proposed action. The Department has evaluated this information and concluded that adverse effects are unlikely. Therefore, consultation under 17 Ill. Adm. Code Part 1075 is terminated.

This consultation is valid for two years unless new information becomes available that was not previously considered; the proposed action is modified; or additional species, essential habitat, or Natural Areas are identified in the vicinity. If the project has not been implemented within two years of the date of this letter, or any of the above listed conditions develop, a new consultation is necessary.

The natural resource review reflects the information existing in the Illinois Natural Heritage Database at the time of the project submittal, and should not be regarded as a final statement on the site being considered, nor should it be a substitute for detailed site surveys or field surveys required for environmental assessments. If additional protected resources are encountered during the project's implementation, you must comply with the applicable statutes and regulations. Also, note that termination does not imply IDNR's authorization or endorsement of the proposed action.

Please contact me if you have questions regarding this review.

Steve Hamer
Division of Ecosystems and Environment
217-785-5500



Illinois Department of Natural Resources

One Natural Resources Way Springfield, Illinois 62702-1271
<http://dnr.state.il.us>

Pat Quinn, Governor
Marc Miller, Director

February 07, 2012

Sam Mead c/o William barbel
Illinois Department of Transportation
District One / Environmental Studies Unit
201 West Center Court
Schaumburg, IL 60196 1096

Re: US-45; Milburn Bypass -North End Seq # 15162A
Project Number(s): 1208574 [P-91-666-09, 1001730]
County: Lake

Dear Applicant:

This letter is in reference to the project you recently submitted for consultation. The natural resource review provided by EcoCAT identified protected resources that may be in the vicinity of the proposed action. The Department has evaluated this information and concluded that adverse effects are unlikely. Therefore, consultation under 17 Ill. Adm. Code Part 1075 is terminated.

This consultation is valid for two years unless new information becomes available that was not previously considered; the proposed action is modified; or additional species, essential habitat, or Natural Areas are identified in the vicinity. If the project has not been implemented within two years of the date of this letter, or any of the above listed conditions develop, a new consultation is necessary.

The natural resource review reflects the information existing in the Illinois Natural Heritage Database at the time of the project submittal, and should not be regarded as a final statement on the site being considered, nor should it be a substitute for detailed site surveys or field surveys required for environmental assessments. If additional protected resources are encountered during the project's implementation, you must comply with the applicable statutes and regulations. Also, note that termination does not imply IDNR's authorization or endorsement of the proposed action.

Please contact me if you have questions regarding this review.

Steve Hamer
Division of Ecosystems and Environment
217-785-5500

Applicant: Illinois Department of Transportation
Contact: Sam Mead c/o William barbel
Address: District One / Environmental Studies Unit
 201 West Center Court
 Schaumburg, IL 60196

IDNR Project #: 1208575
Alternate #: P-91-666-09,
 1001731
Date: 02/07/2012

Project: US-45; Milburn Bypass - South End Seq # 15162A
Address: Lake County, Milburn

Description: Extend logical termini N to IL-72 and S to IL-132; Additional ROW, instream work. This is the South end as there is a separate submittal for the North end.

Natural Resource Review Results

Consultation for Endangered Species Protection and Natural Areas Preservation (Part 1075)

The Illinois Natural Heritage Database shows the following protected resources may be in the vicinity of the project location:

- Fourth Lake - Rollins Road Savanna INAI Site
- Mcdonald Woods Marsh INAI Site
- Fourth Lake Fen Nature Preserve
- Black-Crowned Night-Heron (*Nycticorax nycticorax*)
- Black-Crowned Night-Heron (*Nycticorax nycticorax*)
- Forster'S Tern (*Sterna forsteri*)
- Wilson'S Phalarope (*Phalaropus tricolor*)
- Yellow-Headed Blackbird (*Xanthocephalus xanthocephalus*)

An IDNR staff member will evaluate this information and contact you within 30 days to request additional information or to terminate consultation if adverse effects are unlikely.

Location

The applicant is responsible for the accuracy of the location submitted for the project.

County: Lake

Township, Range, Section:

- | | |
|--------------|--------------|
| 45N, 10E, 1 | 45N, 10E, 12 |
| 45N, 10E, 13 | 45N, 11E, 6 |
| 45N, 11E, 7 | 45N, 11E, 18 |
| 46N, 10E, 36 | 46N, 11E, 31 |



IL Department of Natural Resources Contact

Steve Hamer
217-785-5500
Division of Ecosystems & Environment

Local or State Government Jurisdiction

IL Department of Transportation
Sam Mead c/o William Barbel
IDOT - District One
201 West Center Court
Schaumburg, Illinois 60196-1096

Disclaimer

The Illinois Natural Heritage Database cannot provide a conclusive statement on the presence, absence, or condition of natural resources in Illinois. This review reflects the information existing in the Database at the time of this inquiry, and should not be regarded as a final statement on the site being considered, nor should it be a substitute for detailed site surveys or field surveys required for environmental assessments. If additional protected resources are encountered during the project's implementation, compliance with applicable statutes and regulations is required.

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Applicant: Illinois Department of Transportation *IDNR Project #:* 1208574
Contact: Sam Mead c/o William barbel *Alternate #:* P-91-666-09,
1001730

Address: District One / Environmental Studies Unit *Date:* 02/07/2012
 201 West Center Court
 Schaumburg, IL 60196

Project: US-45; Milburn Bypass -North End Seq # 15162A
Address: Lake County, Milburn

Description: To extend logical termini N to IL-72 and S to IL-132; Additional ROW, instream work. This is separate submittal from the South end.

Natural Resource Review Results

Consultation for Endangered Species Protection and Natural Areas Preservation (Part 1075)

The Illinois Natural Heritage Database shows the following protected resources may be in the vicinity of the project location:

- Mcdonald Woods Marsh INAI Site
- Redwing Slough INAI Site
- Redwing Slough/Deer Lake Land And Water Reserve
- Black Tern (*Chlidonias niger*)
- Black-Crowned Night-Heron (*Nycticorax nycticorax*)
- Common Moorhen (*Gallinula chloropus*)
- Iowa Darter (*Etheostoma exile*)
- King Rail (*Rallus elegans*)
- Least Bittern (*Ixobrychus exilis*)
- Yellow-Headed Blackbird (*Xanthocephalus xanthocephalus*)
- Yellow-Headed Blackbird (*Xanthocephalus xanthocephalus*)

An IDNR staff member will evaluate this information and contact you within 30 days to request additional information or to terminate consultation if adverse effects are unlikely.

Location

The applicant is responsible for the accuracy of the location submitted for the project.

County: Lake

Township, Range, Section:

46N, 10E, 13	46N, 10E, 24
46N, 10E, 25	46N, 10E, 36
46N, 11E, 30	46N, 11E, 31



IL Department of Natural Resources Contact

Steve Hamer
217-785-5500
Division of Ecosystems & Environment

Local or State Government Jurisdiction

IL Department of Transportation
Sam Mead c/o William Barbel
IDOT - District One
201 West Center Court
Schaumburg, Illinois 60196-1096

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Illinois Department of Natural Resources

One Natural Resources Way Springfield, Illinois 62702-1271
<http://dnr.state.il.us>

Pat Quinn, Governor
Marc Miller, Director

August 20, 2009

Susan Dees
Illinois Department of Transportation-BDE
2300 South Dirksen Parkway
Room 330
Springfield, IL 62764

Re: US 45 Milburn Bypass Add. A, P-91-666-09, 05-00262-02-RP, S end
Project Number(s): 1001731 [15162A]
County: Lake

Dear Applicant:

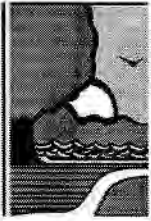
This letter is in reference to the project you recently submitted for consultation. The natural resource review provided by EcoCAT identified protected resources that may be in the vicinity of the proposed action. The Department has evaluated this information and concluded that adverse effects are unlikely. Therefore, consultation under 17 Ill. Adm. Code Part 1075 is terminated.

This consultation is valid for two years unless new information becomes available that was not previously considered; the proposed action is modified; or additional species, essential habitat, or Natural Areas are identified in the vicinity. If the project has not been implemented within two years of the date of this letter, or any of the above listed conditions develop, a new consultation is necessary.

The natural resource review reflects the information existing in the Illinois Natural Heritage Database at the time of the project submittal, and should not be regarded as a final statement on the site being considered, nor should it be a substitute for detailed site surveys or field surveys required for environmental assessments. If additional protected resources are encountered during the project's implementation, you must comply with the applicable statutes and regulations. Also, note that termination does not imply IDNR's authorization or endorsement of the proposed action.

Please contact me if you have questions regarding this review.

Steve Hamer
Division of Ecosystems and Environment
217-785-5500



Illinois Department of Natural Resources

One Natural Resources Way Springfield, Illinois 62702-1271
<http://dnr.state.il.us>

Pat Quinn, Governor
Marc Miller, Director

August 20, 2009

Susan Dees
Illinois Department of Transportation-BDE
2300 South Dirksen Parkway
Room 330
Springfield, IL 62764

Re: US 45 Milburn Bypass Add. A, P-91-666-09, 05-00262-02-RP, N end
Project Number(s): 1001730 [15162A]
County: Lake

Dear Applicant:

This letter is in reference to the project you recently submitted for consultation. The natural resource review provided by EcoCAT identified protected resources that may be in the vicinity of the proposed action. The Department has evaluated this information and concluded that adverse effects are unlikely. Therefore, consultation under 17 Ill. Adm. Code Part 1075 is terminated.

This consultation is valid for two years unless new information becomes available that was not previously considered; the proposed action is modified; or additional species, essential habitat, or Natural Areas are identified in the vicinity. If the project has not been implemented within two years of the date of this letter, or any of the above listed conditions develop, a new consultation is necessary.

The natural resource review reflects the information existing in the Illinois Natural Heritage Database at the time of the project submittal, and should not be regarded as a final statement on the site being considered, nor should it be a substitute for detailed site surveys or field surveys required for environmental assessments. If additional protected resources are encountered during the project's implementation, you must comply with the applicable statutes and regulations. Also, note that termination does not imply IDNR's authorization or endorsement of the proposed action.

Please contact me if you have questions regarding this review.

Steve Hamer
Division of Ecosystems and Environment
217-785-5500

bu

Attention: Central Office BD&E
Environment Section
Room 330

Environmental Survey Request

A. Project Information

Bio Cultural Wetlands Special Waste

Submittal Date: 04/22/2009 Sequence No: 15162
 District: 1 Requesting Agency: DOH Project No: _____
 Contract #: _____ Job No.: P-91-666-09
 Counties: Lake
 Route: FAP 344 Marked: US 45
 Street: US 45 Section: 05-00262-02-RP
 Municipality(ies): Lindenhurst, Old Mill Creek, Unincorp.L Project Length: _____ km _____ miles
 From To (At): @ Grass Lake /Millburn
 Quadrangle: Antioch, Wadsworth Township-Range-Section: 4N-10E-S36;46N-10E-S25;46N-11W-S31;46N-11E-S30;45N-10E-S1;45N-11E-S6

Anticipated Design Approval: 07/31/2011

B. Reason for Submittal (Check all that apply)

Acquisition of additional ROW or easement _____ ha/ _____ acres
 In-Stream Work Stream Name: North Millburn Creek
 Other: ADID wetlands. See add'l info

C. Project Description: Potential US 45 Bypass and add lanes project near the intersections of Grass Lake Road and Millburn Road.

Proposed Work: Highway Bridge Bike Trail Other _____

D. Tree Removal?: Yes _____ Number?: 0 _____ ha/ _____ acres
 Existing Bridge(s) Structure Number: 049-3075 On Historic Bridge List: No
 Historic District Involved? Yes _____ Historic Buildings Involved? Yes _____
 Section 4(f) Lands Involved? Yes _____ Section 6(f) Lands Involved? Don't Know
 Wetland delineation performed by: BDE End. Species Consultation performed by: _____

E. Funding: Federal State TBP MFT Local Non-MFT
 404 Permit Required Anticipated Processing: EA

F. Contact Person: John Baczek Local Contact Person: _____
 Telephone #: (847) 705-4104 ext. Telephone #: _____
 Env. Contact: Sam Mead E-Mail: _____
 Telephone #: 8477054101 Title/Company: _____

Field Sign Off (Bio & Cultural Only) Received in CO SW Received

Sequence No: 15162

BIOLOGICAL RESOURCES
 NO SURVEY OR FURTHER COORDINATION REQUIRED
 1-8-2010
Thomas C. Brook
 (SE) DATE

Memo Date: 04/22/2009 Memo By: _____
 Memo: THE INHS completed a preliminary wetland field reconnaissance for the approximate ESR study area. The results of the preliminary field reconnaissance will be updated during the growing season using methodology established by USACE following receipt of this ESR. The northeastern limit of the ESR study area was not visited due to several "No Trespassing" signs. CBBEL is in the process of obtaining contact information/access to this property. This information will be forwarded to BDE upon receipt.

V. R. SIGNED

bw

Environmental Survey Request Addendum

A. Project Information

Bio Cultural Wetlands Special Waste

Submittal Date: 08/04/2009 Sequence No: 15162 A
 District: 1 Requesting Agency: DOH Project No:
 Contract #: Job No.: P- 91-666-09
 Counties: Lake
 Route: FAP 344 Marked: US 45
 Street: US 45 Section: 05-00262-02-RP
 Municipality(ies): Lindenhurst, Old Mill Creek, Unincorp.Lake Project Length: 8.8514 km 5.5 miles
 From To (At): IL 173 to IL 132
 Quadrangle: Antioch, Wadsworth Township-Range-Section: 4N-10E-S36;46N-10E-S25;46N-11W-S31;46N-11E-S30;45N-10E-S1;45N-11E-S6

Anticipated Design Approval: 07/31/2011

B. Reason for Submittal: (Check all that apply)

Acquisition of additional ROW or easement Addendum: acres Total Project: acres
 In-Stream Work Stream Name: Millburn Creek, Ha
 Other: Wetland delineations needed. See add'l info
 Field Sign Off (Bio & Cultural Only)

C. Addendum Description: The project's logical termini were extended north to IL 173 and south to IL 132. Addendum needed to add the additional area.

D. Tree Removal?: Yes Number?: ha acres

Wetland delineation performed by: BDE End. Species Consultation performed by: BDE

E. Contact Person: John Baczek Telephone #: (847) 705-4104 ext. Env. Contact: Sam Mead Telephone #: 8477054101
Local Contact Person: Telephone #: E-Mail: Title/Company:

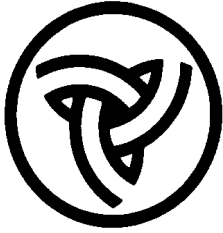
F. Update Entire Project Addendum Only

Field Sign Off (Bio & Cultural Only) Received in CO

Sequence No: 15162 A

BIOLOGICAL RESOURCES
 NO SURVEY OR FURTHER COORDINATION REQUIRED
 1-8-2010
Thomas C. Brooks
 SIGNED (SED) DATE

Memo Date: 08/04/2009 Memo By:
 Memo: Addendum A Township-Range-Section: 46N-10E-S13, 46N-10E-S24, 46N-10E-S25, 46N-11E-S18, 46N-11E-S18, 46N-11E-S19, 46N-11E-S31, 45N-10E-S1, 45N-10E-S12, 45N-10E-S13, 45N-11E-S6, 45N-11E-S6, 45N-11E-S7, 45N, 11E-S18.



Illinois Department of Transportation

Memorandum

To: John A. Fortmann Attn: Sam M. Mead
From: John D. Baranzelli By: Brad H. Koldehoff
Subject: Conditional No Adverse Effect - Cultural Resources
Date: January 14, 2013

**Lake County
FAP 344, US 45
Milburn Bypass
IDOT Sequence #15162, 15162A**

Pursuant to Section 106 of the National Historic Preservation Act of 1966, as amended, the Illinois State Historic Preservation Officer (SHPO) concurs with IDOT's determination that the above referenced project will not cause an Adverse Effect to Historic Properties provided that IDOT submits preliminary and final plans for SHPO comment and approval (see attached).

Impacts to archaeological and architectural properties within the preferred alignment (A4) have been avoided: the Milburn Historic District, the old Milburn Cemetery site (11L857), and the D. B. Taylor site (11L870). The Druce Hoffman Farmstead will likely be impacted, but it was evaluated for listing on the National Register of Historic Places and was determined ineligible by the SHPO (see attached).

This project is cleared for Design Approval provided that preliminary and final plans are submitted to the Cultural Resources Unit for SHPO comment and approval.

A handwritten signature in black ink, appearing to read "Brad Koldehoff".

Brad H. Koldehoff, RPA
Cultural Resources Unit
Bureau of Design and Environment



Illinois Department of Transportation

2300 South Dirksen Parkway / Springfield, Illinois / 62764

RECEIVED
JAN - 9 2013
005012609
Preservation Services

January 9, 2013

Lake County
FAP 344, US 45
Milburn Bypass
IDOT Sequence #15162, 15162A
ISAS/ITARP #09093, 09179

Federal - Section 106 Project

CONDITIONAL NO ADVERSE EFFECT

Ms. Anne Haaker
Deputy State Historic Preservation Officer
Illinois Historic Preservation Agency
Springfield, Illinois 62701

Dear Ms. Haaker:

In coordination with your office, impacts to archaeological and architectural properties have been avoided for the above referenced project. The attached documentation illustrates that the preferred alignment (A4) avoids impacts to the Milburn Historic District, old Milburn Cemetery site (11L857), and the D. B. Taylor site (11L870). The Druce Hoffman Farmstead was evaluated for listing on the National Register of Historic Places and was determined ineligible by your office (see attached).

In accordance with the established procedure for coordination of proposed IDOT projects, we request the concurrence of the State Historic Preservation Officer in our determination that no historic properties subject to protection under Section 106 of the National Historic Preservation Act of 1966, as amended, will be adversely affected by the proposed project, provided that IDOT submits preliminary and final plans to your office for comment and approval.

Very truly yours,

Brad H. Koldehoff, RPA
Cultural Resources Unit
Bureau of Design and Environment

CONCUR

By: Anne E. Haaker
Deputy State Historic Preservation Officer

Date: 1/14/13



Illinois Department of Transportation

2300 South Dirksen Parkway / Springfield, Illinois / 62764

April 20, 2011

Lake County
FAP 344, US 45
Milburn Bypass
Project: P-91-666-09

IDOT Seq# 15162, 15162A
ITARP#09093, 09179

NO ARCHAEOLOGICAL PROPERTIES AFFECTED

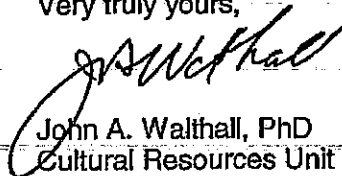
Ms. Anne Haaker
Deputy State Historic Preservation Officer
Illinois Historic Preservation Agency
Springfield, Illinois 62701

Dear Ms. Haaker:


Enclosed are two copies of Archaeological Report and Phase I documentation completed by University of Illinois personnel concerning historical and archaeological properties and sites potentially to be impacted by the 310 acre project referenced above. Fourteen archaeological sites, 11-L-863-871, L-820-822, and L-786 were recorded in the project area. All of these sites represent surface scatters of prehistoric lithic s and 19th-20th century historic debris. Only site L-870 is of historical interest since it was associated with D. B. Taylor, an early Milburn citizen. Construction plans have been altered to avoid this site as well as any potential impacts to archaeological properties within the Milburn Historic District and the Milburn Cemetery.

In accordance with the established procedure for coordination of Illinois Department of Transportation projects, we request the concurrence of the State Historic Preservation Officer in our determination that no historic properties subject to protection under Section 106 of the National Historic Preservation Act of 1966, as amended, will be affected by this proposed project.

Very truly yours,


John A. Walthall, PhD
Cultural Resources Unit

CONCUR

By: 
Deputy State Historic Preservation Officer
Date: 4/20/11



Illinois Historic
Preservation Agency

FAX (217) 782-8161

1 Old State Capitol Plaza • Springfield, Illinois 62701-1512 • www.illinois-history.gov

Lake County

Millburn and Old Mill Creek

U.S. 45 Millburn Bypass Environmental Assessment

U.S. Route 45 from IL Route 132 to IL Route 173

FHWA-HPER-IL, IDOT-P-91-666-09

IHPA Log #005012609

May 24, 2011

Matt Fuller

U.S. Department of Transportation

Federal Highway Administration

3250 Executive Park Dr.

Springfield, IL 62703

Dear Mr. Fuller:

We have received a draft National Register of Historic Places (NRHP) nomination for the Druce Hoffman Farmstead in Millburn which is within the area of project effect for the Milburn Bypass project.

The owner purported that the complex is eligible for the NRHP as a good representative example of a late 19th-early 20th century farmstead in Lake County. We originally sent the owner a letter stating that, based on this assertion that the property appeared to be a good candidate for NRHP listing. However, these claims were not factually supported in the nomination presented.

On our first site inspection we thought that at least the barn was eligible as a representative example of a mid-19th century barn. That was not supported in either the documentation prepared by the Illinois Department of Transportation nor by NRHP nomination.

It is now our opinion, in accordance with section 106 of the National Historic Preservation Act of 1966, as amended, that neither the site as a complex or any individual structure is eligible for the NRHP.

We look forward to consulting with you on other aspects of the project.

Sincerely,

Anne E. Haaker

Anne E. Haaker

Deputy State Historic

Preservation Officer

c: John Walthall, Illinois Department of Transportation



Illinois Department of Transportation

2300 South Dirksen Parkway / Springfield, Illinois / 62764

November 10, 2010

Lake County
FAP 344, US 45
Millburn Bypass
Project: P-91-666-09

***NATIONAL REGISTER EVALUATION
DRUCE-HOFFMAN RESIDENCE***

**IDOT Seq# 15162
FEDERAL 106 PROJECT**

Ms. Anne Haaker
Deputy State Historic Preservation Officer
Illinois Historic Preservation Agency
Springfield, Illinois 62701

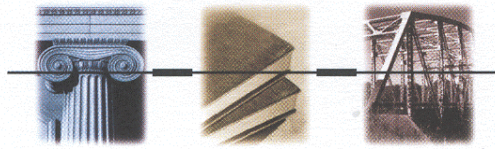
Dear Ms. Haaker:

Enclosed are two copies of an Architectural Report completed by John N. Vogel, PhD, of Heritage Research concerning the Druce-Hoffman property which will be impacted by the proposed project referenced above. As indicated in the attached report, Dr. Vogel's on-site study and historical records research indicate that this structure and associated outbuildings do not meet the criteria for listing on the National Register: "...we can presently envision no way in which this property might qualify for the Register for...Architectural Significance (Criterion C), Association with a Significant Person (Criterion B), or Historical Significance (Criterion A)."

In accordance with the established procedure for coordination of Illinois Department of Transportation projects, we request the concurrence of the State Historic Preservation Officer in our determination that the Druce-Hoffman property does not warrant protection under Section 106 of the National Historic Preservation Act of 1966, as amended.

Very truly yours,

John A. Walthall, PhD
Cultural Resources Unit



HERITAGE RESEARCH, LTD.

09 October 2010

Dr. John A. Walthall, Manager
Cultural Resource Unit
Bureau of Location & Environment
Illinois Department of Transportation
2300 South Dirksen Parkway
Springfield, IL 62764

RE: Druce-Hoffman Residence
38650 USH 45
(Unincorporated) Village of Millburn
Lake County

Dear John,

As you and I have discussed, HRL has completed its limited study of the captioned property. This letter reviews our investigations and reports our findings as they pertain to any National Register eligibility the property may have.

The community of Millburn straddles USH 45 at the Grass Lake/Millburn Road intersection in north central Lake County. As such, the west side of Millburn was historically located in the Town of Antioch, and later the Town of Lake Villa—when it was established in 1913. The east side of the community is in the Town of Newport. Despite Millburn’s location in two towns, the roadway alignment in question, and the property it may affect, is located on the Town of Antioch/Lake Villa (west) side of the highway.

The subject vicinity of Lake County was initially settled in the mid-1830s. The first land in the towns of Antioch and Newport was claimed in 1836. Despite the development of a few small communities, agriculture appears to have offered significant potential for those considering settling in the vicinity. It was reported that the Town of Antioch was well suited for raising stock, since the area was “...so remarkably well watered, and at the same time possess[ed] an unsurpassed quality of soil.” And the Town of Newport was being settled by many “...thriving and industrious farmers.”¹

Millburn was an evolving entity by the late 1830s. It claimed its first church in 1839, which was officiated at by two men known as Young and Davenport. The First Congregational Church of Millburn was established in 1841 by Reverend Flavel Bascom, who was a member of the American Home Missionary Society. A post office was opened in the community in

HISTORICAL/ENVIRONMENTAL CONSULTANTS

1848.

The first postmaster was Robert Strang, who served in that role from 1848 to 1856. Indeed, one of the early names for the evolving town was “Strang’s Neighborhood.”²

Robert Strang was born in Scotland in 1815. He arrived in the United States in 1838 and settled in Millburn. Arriving with Strang was his brother George, who had been born in 1819 in Scotland. Both Strangs were identified among the Prominent Men of Millburn listed in the *History of Lake County* (1912), as was their brother John, born in 1828. George was a land owner of prominence. He was identified as a farmer in 1877 who owned 284 acres of land valued at \$15,800. George was married in 1847 and died in 1890.³

George and Robert Strang were perhaps the most prominent land owners in Millburn. George essentially owned in 1873 the south one-half of the Northeast Quarter of Section 36 in the Town of Antioch, as well as part of the south one-half of the Northwest Quarter of Section 31 in the adjoining Town of Newport. Robert owned the north one-half of the Northeast Quarter of Section 36 in the Town of Antioch, in addition to the north one-half of the Northwest Quarter of 31 in the Town of Newport. By 1885, George had acquired part of Robert’s holdings in the north one-half of Section 36, although both appear to have parceled off lots for others to develop. The Section 36 holdings appear the same in 1907, although both men had died by that time. (George had, again, died in 1890, while Robert passed in 1904.) George’s land was still noted in 1907 as being owned by a George Strang which, perhaps, was his son George I. Strang, who subsequently died in 1927. Since at least 1926, however, the general south one-half of the Northeast Quarter of Section 36 was owned by the Hoffman, Druce or Druce-Hoffman families. It is unknown if the Hoffman’s were descendants of George I. Strang.⁴

Unlike Robert, who served as postmaster and a store owner in addition to being a farmer, no evidence was found to suggest that George did anything but farm.

By the 1990s, George Strang’s large, multiple hundred acre farm had been reduced to under 40 acres. The parcel of property fronting on USH 45 had dwindled to perhaps 4 acres by 2010 (see aerial image in Figure 1). That land claims a house in the northeast corner of the lot, followed to the west and south by an outhouse, garage, storage shed, barn (with a small adjoining structure) and a poured concrete silo. The barn is a simple, undistinguished, albeit large gabled structure that rises from a poured concrete foundation (see Figure 8). Similarly, the silo immediately to the south southwest is also of poured concrete (see Figure 9). Both structures most probably post-date 1900. The garage is thought to be modern (see Figure

6), while the age of the outhouse and storage shed is undetermined (see Figures 5 & 7, respectively).

The house is a one-story brick structure with a hipped roof and prominent eaves (see Figures 2, 3 & 4). It rises from a concrete foundation with two-light windows that illuminate the basement. The main entrance is set at the right (east) end of the south wall. It is approached by a modern, seven-step, wooden stairway and a small wooden porch. To the left (west) of the doorway are two openings with three, one-over-one-light windows with concrete sills. Thereafter is a chimney and a much smaller opening with two, one-over-one-light windows. The east side of the house, around the corner from the doorway, simply has three openings filled with paired, one-over-one-light windows, all with concrete sills. The window unit to the right (north) is slightly offset. The back of the house (west side) has one, one-over-one-light window to the right (south), and a small, hip roof entryway to the left (north) with a twelve-light window. The north side of the house simply contains two, paired, one-over-one-light window units, in between which is a single, smaller, one-over-one-light window. It was observed by the property owner that the house was built in 1930 and that it has been (at least partially) reconstructed after a fire.⁵

Properties are typically eligible for the National Register if they are fifty years old or older and meet the criteria for historical significance (Criterion A), association with historically significant people (Criterion B) or architectural/engineering significance (Criterion C).

Regarding Criterion C, the buildings are not representative of a particular style. The property, rather, offers a collection of very plain and simple vernacular structures with no distinctive architectural emphasis or details. Neither was any record found to suggest the buildings are a product of a prominent or significant architect. The historic integrity of the house is also in question, given the owner's statement that it was partially rebuilt after a fire. We can presently envision no circumstance under which the property would qualify for the Register under Criterion C.

George Strang was an early and long time resident of Millburn. That fact notwithstanding, no evidence was found to suggest that he had a role in the community prominent enough to qualify the property for eligibility under Criterion B. Unlike his brother, who was more involved in the community as the local post master and a shopkeeper, in addition to being a farmer, George was apparently a farmer only. While we cannot currently foresee any circumstance under which George might qualify as a significant person under Criterion B, there is another problematical circumstance associated with this matter. And that is that none of the resources on the farm are thought to be associated with George, who died in 1890.

Dr. John A. Walthall
09 October 2010
Page 4

The barn likely dates to the post 1900 period, while the house dates to 1930. Any association with George is lacking.

Finally, regarding Criterion A, historical significance, no evidence was found to substantiate such a claim. The extant property's association with George Strang, as a farmer, is nebulous at best given its current resources and their assumed dates. The farm is also a fraction of the size it was historically. Once at least 284 acres in size, the parcel in question today is no larger than 4 acres—a size that does not represent George's farming operation. And coupled with that is visual evidence that the current owner keeps bees on the property for the sake of honey production. Nothing was found to suggest that the maintenance of honey bees today represents the continuing of a nineteenth century transition initiated by George. Other than the fact that the property today was once owned and farmed by George Strang, none of the resources extant today appear to be tied to him or his farming operation. Thus do we presently believe National Register eligibility under Criterion A to be improbable.

We do understand that the property owner may elect to pursue the nomination of his property to the National Register of Historic Places. While we regard the success of such an effort as unlikely, these findings are the result of a limited property and records review. That fact notwithstanding, and in conclusion, we can presently envision no way in which this property might qualify for the Register for either Architectural Significance (Criterion C), Association with a Significant Person (Criterion B), or Historical Significance (Criterion A).

Please do not hesitate to call, John, with any questions or comments you may have in this matter.

Yours truly,

John N. Vogel, Ph.D.

enclosures/attachments

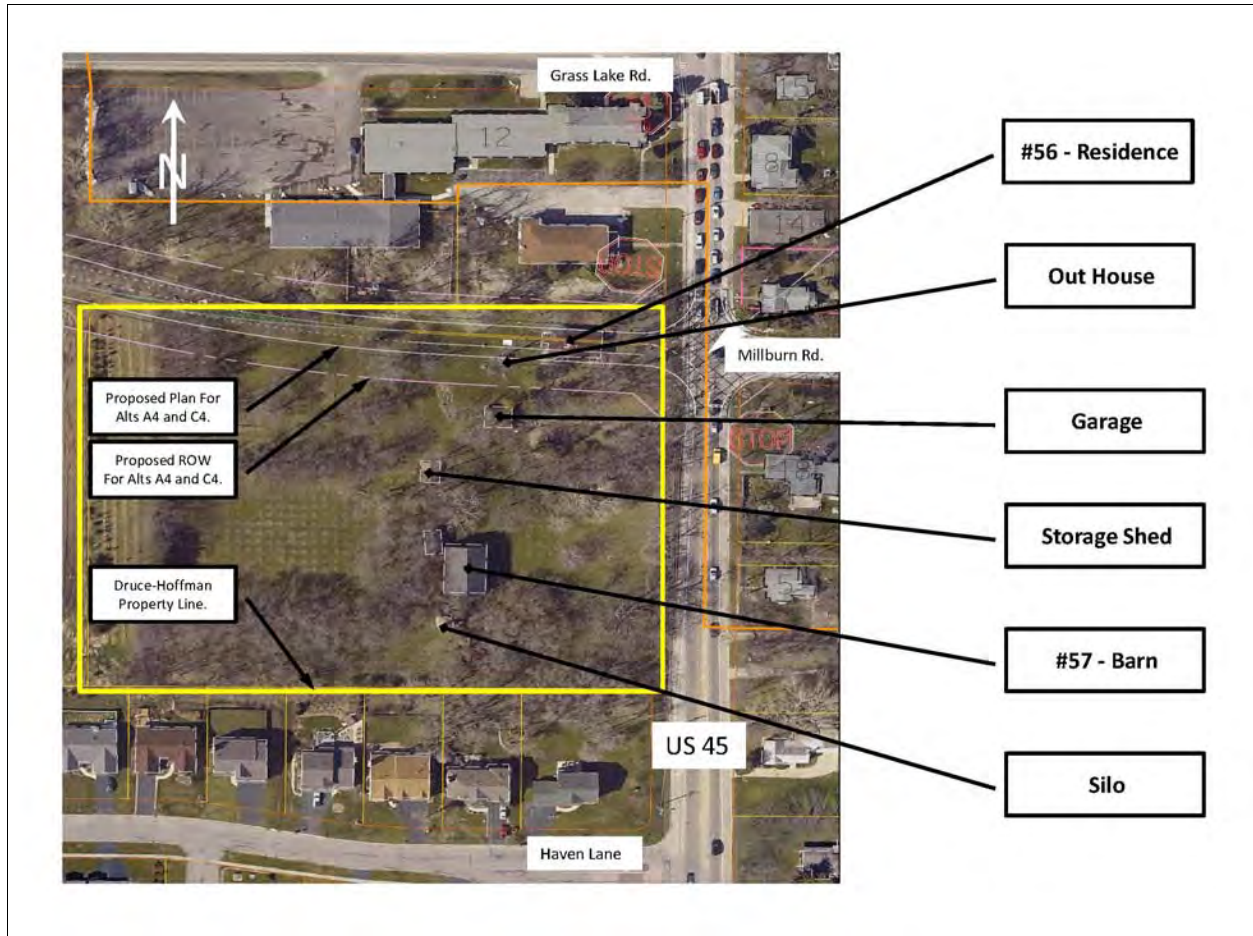


Figure 1: Illustration of the subject property from IDOT project files. It is understood that this approximately 4 acre parcel is all that remains from George Strang’s 284 acre farm. No evidence has been found to suggest that the resource remaining today are associated with, nor do they reflect any of the historic farming practices pursued by Strang.



Figure 2: House. View to northwest.



Figure 3: House. View to northeast.



Figure 4: House. View to east southeast.



Figure 5: Outhouse. View to northeast.



Figure 6: Garage. View to northwest.



Figure 7: Storage Shed. View to north.



Figure 8: Barn and adjacent Outbuilding. View to south southwest.



Figure 9: Silo (right center, behind and barely visible through the trees in the foreground). View to north northeast.

Endnotes:

1. Elijan M. Haines, *Historical and Statistical Sketches of Lake County, State of Illinois* (Waukegan: E.G. Howe, 1852), 68, 71, 92; Jane Snodgrass Johnson, *History of Lake County with Biographies* (n.p., 1939), 65.
2. Johnson, *History of Lake County*, 62; Hains, *Historical and Statistical Sketches*, 71; *The Past and Present of Lake County, Illinois* (Chicago: Wm LeBaron & Company, 1877), 245; John J. Halsey, LL.D., *A History of Lake County, Illinois* (Chicago: Roy S. Bates, 1912), 393.
3. Halsey, *History of Lake County*, 396; "Prominent Men of the Millburn Area," from *History of Lake County* (1902), viewed at www.hmca-il.org/k2men.htm on 06 October 2010; "Prominent Men of Millburn," from *History of Lake County* (1912), viewed on www.hmca-il.org/k4men.htm 06 October 2010; "Township Directory," from *The Past and Present of Lake County, Illinois* (1877), viewed at www.hmca-il.org/k3men.htm#065 on 09 October 2010; "The Descendants of Jacob Sortore, Through Seven Generations," viewed on www.sortore.com/database/p9.htm on 06 October 2010. There is no question that George's older brother, Robert, was the most prominent Strang of their generation. Robert was also a farmer however he was also a shop keeper in Millburn who built for \$10,000 a significant brick house in Millburn. While a substantial amount of additional information was found on Robert, such data was not identified for George. "Scots Around the World: Robert Strang," viewed at www.electricscotland.com/history/other/robert_strang.htm on 06 October 2010.
4. "Plat Map - 1873: Millburn Area," viewed at www.hmca-il.org/hmpl1873.htm on 06 October 2010; "Plat Map - 1885: Millburn Area," viewed at www.hmca-il.org/hmpl1885.htm on 06 October 2010; *Standard Atlas of Lake County, Illinois* (Chicago: George A. Ogle & Co., 1907), 14; "The Descendants of Jacob Sortore, Through Seven Generations;" "Plat Map - 1926: Millburn Area," viewed at www.hmca-il.org/hmpl1926.htm on 06 October 2010; "Plat Map - 1944: Millburn Area," viewed at www.hmca-il.org/hmpl1944.htm on 06 October 2010; *Land Atlas & Plat Book: Lake County, Illinois, 1976* (Rockford: Rockford Map Publishers, 1976), 40.
5. Michael J. Matkovic (Christopher B. Burke Engineering, Ltd.) to Vanessa Ruiz (IDOT), e-mail dated 20 August 2010, copy on file at Heritage Research, Ltd., Menomonee Falls, WI.



Illinois Department of Transportation

201 West Center Court
Schaumburg, IL 60196-1096

Informal Transmittal

To:	John Baczek
Bureau:	Programming
Attn:	

From:	Sam Mead
Bureau:	Programming
	Environmental Studies Unit
Subject:	US 45 from N. of IL-173 to S. of IL-132
	Special Waste

Date:	07/23/2010
-------	------------

Please check appropriate box below:

- | | | |
|--|--|---------------------------------|
| <input type="checkbox"/> Take Necessary Action | <input checked="" type="checkbox"/> For Your Information | <input type="checkbox"/> Reply |
| <input type="checkbox"/> For Your Comments | <input type="checkbox"/> See Me About the Attached | <input type="checkbox"/> Return |
| <input type="checkbox"/> Per Your Request | <input type="checkbox"/> Draft (Letter)(Memo) For | <input type="checkbox"/> Route |
| <input type="checkbox"/> For Your Approval | My signature | <input type="checkbox"/> File |

Message

Attached is a copy of the PESA for the above-mentioned project. The PESA Review cover memo, dated **July 14, 2010**, states that there are Recognized Environmental Conditions (REC's) along the project route and that further studies may be required if the project will require land acquisition or linear excavation from or adjacent to a property with RECs. Special Waste studies are now complete for Phase I and the project is clear for Design Approval.

A Special Design/Construction Consideration shall be added to the Project Report that states:

"A Preliminary Environmental Site Assessment (PESA) has been completed for this project. It is the responsibility of Phase II to determine if any of the sites with Recognized Environmental Conditions (REC's) or ROW adjacent to the site with RECs will be impacted with the proposed work and/or if any ROW will be required at any of the REC locations. Any acquisition shall be discussed with the Bureau of Land Acquisition prior to responding to the PESA to request further studies"

If you have any questions, please call me at extension 4101.

SM
Signature

Copies to	PESA File	Judy Cortese – Land Acq.	
-----------	-----------	--------------------------	--

Response

Signature

L SMM



Illinois Department of Transportation

BUREAU OF PROGRAMMING
RECEIVED

Memorandum

JUL 16 2010

To: Diane O'Keefe
From: Scott E. Stitt
Subject: PESA Review
Date: July 14, 2010

Att: Pete Harmet
By: Barbara H. Stevens

Barbara H. Stevens

DISTRICT #1

Refer to: US Route 45 (FAP 344)
Job No. P-91-666-09
From N. of IL 173 to S. of IL 132
Lake County
ISGS # 1888/A

Seq. # 15162/15162A

Attached is a copy of the Preliminary Environmental Site Assessment (PESA) conducted by the Illinois State Geological Survey (ISGS) for the subject project as described in your Special Waste Survey Request.

The attached PESA report identifies sites along the project route that were determined to contain recognized environmental conditions (RECs). See Table 1 in the PESA report for a list of sites with RECs. It is the opinion of this office, in consultation with the Chief Counsel's Office, that a preliminary site investigation (PSI) is required if any site identified in Table 1 of the PESA report involves new right-of-way or easement, railroad right-of-way other than single rail rural with no maintenance facilities, or building demolition/modification. A PSI is also required to be conducted on any site identified in Table 1 of the PESA report that involves linear excavation or subsurface utility relocation or on existing right-of-way adjacent to a site identified in Table 1 of the PESA report.

If the district determines that they can avoid all the sites that contain RECs, then a PSI is not required for the project and the project will be in compliance with Departmental Policy D&E-11. If the district determines that the project will involve a site that contains RECs, then a PSI is required and the statewide consultant should be requested to perform the PSI. Please notify this office of any actions you may decide to take concerning these sites (avoidance or further investigation). The PESA Response form can be found on PMA.

The District's Bureau of Land Acquisition (DBLA) should determine if any new right-of-way or easement will involve any site identified in Table 1 or any site located adjacent to a site listed in Table 4 of the PESA report. On those sites identified, DBLA shall coordinate the acquisition with this office, Central Bureau of Land Acquisition, and the Chief Counsel's Office to determine if an "All Appropriate Inquiries" (AAI) is required for additional liability protection under CERCLA.

Other findings and recommendations of the report should be carefully considered. If you have any questions regarding this report or the tasking of the statewide consultant, please contact Debbra Mehra at 217/785-6068 or Steven Gobelman at 217/785-4246.

Attachments

cc: Office of Chief Counsel – Rm. 313
District Bureau of Land Acquisition

Central Bureau of Land Acquisition
District Utility Coordinator

Draft COSIM 4.0 PRE-SCREEN MODELING RESULTS



01-29-13

11:53 AM

US-45; IL-132 to IL-173 - 2040 Traffic

Performed by: **SP**
Intersection Location: **Lake County**
Intersection Name: **US-45 at Sand Lake Road / Stearns School Road**
Highest Approach Volume: **1460 vph**
Closest Receptor: **37 feet**

Pass

Intersection PASSES Pre-Screen. COSIM analysis not required.
Highest approach volume for the design year on any leg of the intersection
is below Pre-Screen Cutoff ADT for the closest receptor distance.

Please include the following statement in the project report or NEPA document:

A Pre-Screen carbon monoxide analysis was completed for the proposed project. The results from this proposed roadway improvement indicate that a COSIM air quality analysis is not required, as the results for the worst-case receptor are below the 8-hour average National Ambient Air Quality Standard for CO of 9.0 ppm which is necessary to protect the public health and welfare.



Robert F. Flider, Acting Director

Bureau of Land and Water Resources

State Fairgrounds • P.O. Box 19281 • Springfield, IL 62794-9281 • 217/782-6297 • TDD 217/524-6858 • Fax 217/557-0993

May 2, 2012

Mr. John Baczek, P.E.
IDOT – District 1, Division of Highways
201 West Center Court
Schaumburg, IL 60196-1096

Re: US Route 45; IL Route 132 to IL Route 173 and Millburn Bypass
Lake County, Illinois
USDA NRCS Form AD-1006

Dear Mr. Baczek:

The Illinois Department of Agriculture (IDOA) has completed its review of the agricultural impacts associated with proposed ± 6 mile road improvement project in Lake County. The project was examined for its compliance with IDOT's Agricultural Land Preservation Policy as well as the Illinois Farmland Preservation Act (505 ILCS 75/1 et seq.).

The improvement involves symmetrically widening existing US Route 45 by adding one lane in the northbound and southbound directions. The project also includes dedicated left and right turn auxiliary lanes, accommodations for a 10 foot wide multi-use trail and a 5 foot sidewalk, all within a 135-150 foot proposed right of way. This includes a bypass of the Millburn Historic District, a National Register of Historic Places location. An additional 30.8 acres of agricultural land will be converted as a result of the upgrade.

The affected area is a mix of primarily residential, agricultural, commercial and open space uses. The area's land use has been planned by the affected communities and Lake County to be converted to predominantly residential with smaller areas of commercial, industrial, agricultural, open space and institutional land uses. Because the project is consistent with regional and local land use plans and the resulting impacts to agricultural land have been mitigated to the greatest degree possible, the IDOA has determined that the project complies with IDOT's Agricultural Land Preservation Policy and Illinois' Farmland Preservation Act.

Enclosed are two copies of the USDA NRCS form AD-1006. One copy must be included in the project's environmental assessment; the other is for your files. Should you have any questions or comments, please contact Terry Savko of my staff at 217-785-4458.

Sincerely,

A handwritten signature in cursive script that reads "Steven D. Chard".

Steven D. Chard, Acting Chief
Bureau of Land and Water Resources

SDC:TS

Enclosures-2

cc: Agency project file

FARMLAND CONVERSION IMPACT RATING

PART I (To be completed by Federal Agency)		Date Of Land Evaluation Request 1/26/12			
Name Of Project US Route 45, Lake County Illinois		Federal Agency Involved Federal Highway Administration			
Proposed Land Use Highway Right-of-way		County And State Lake County, Illinois			
PART II (To be completed by NRCS)		Date Request Received By NRCS 3/14/12			
Does the site contain prime, unique, statewide or local important farmland? <i>(If no, the FPPA does not apply -- do not complete additional parts of this form).</i>		Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Acres Irrigated N/A	Average Farm Size 372
Major Crop(s) Corn, soybeans, wheat, hay	Farmable Land In Govt. Jurisdiction Acres: 29,633,500 % 97	Amount Of Farmland As Defined in FPPA Acres: 27,695,900 % 91			
Name Of Land Evaluation System Used Illinois	Name Of Local Site Assessment System Statewide	Date Land Evaluation Returned By NRCS 3/16/12			
PART III (To be completed by Federal Agency)		Alternative Site Rating			
		Site A	Site B	Site C	Site D
A. Total Acres To Be Converted Directly		30.8			
B. Total Acres To Be Converted Indirectly					
C. Total Acres In Site		30.8	0.0	0.0	0.0
PART IV (To be completed by NRCS) Land Evaluation Information					
A. Total Acres Prime And Unique Farmland		30.4			
B. Total Acres Statewide And Local Important Farmland		0.4			
C. Percentage Of Farmland In County Or Local Govt. Unit To Be Converted		0.0			
D. Percentage Of Farmland In Govt. Jurisdiction With Same Or Higher Relative Value		50.7			
PART V (To be completed by NRCS) Land Evaluation Criterion					
Relative Value Of Farmland To Be Converted (Scale of 0 to 100 ¹⁵⁰ Points)		127	0	0	0
PART VI (To be completed by Federal Agency)		Maximum Points			
Site Assessment Criteria (These criteria are explained in 7 CFR 658.5(b))					
1. Area In Nonurban Use					
2. Perimeter In Nonurban Use					
3. Percent Of Site Being Farmed					
4. Protection Provided By State And Local Government					
5. Distance From Urban Builtup Area					
6. Distance To Urban Support Services					
7. Size Of Present Farm Unit Compared To Average					
8. Creation Of Nonfarmable Farmland					
9. Availability Of Farm Support Services					
10. On-Farm Investments					
11. Effects Of Conversion On Farm Support Services					
12. Compatibility With Existing Agricultural Use					
TOTAL SITE ASSESSMENT POINTS		160	0	0	0
PART VII (To be completed by Federal Agency)					
Relative Value Of Farmland (From Part V)		150*	100	127	0
Total Site Assessment (From Part VI above or a local site assessment)		150*	160	12	0
TOTAL POINTS (Total of above 2 lines)		300*	260	139	0
Site Selected:	Date Of Selection	Was A Local Site Assessment Used? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			

**See attached ILLINOIS Site Assessment
CORRIDOR Factors**

Reason For Selection:

** When utilizing the Illinois State Site Assessment Corridor factors, 150 points are assigned to the Land Evaluation portion, and 150 points are assigned to the Site Assessment portion of the LESA System for a maximum score of 300 points.

**U.S. Route 45 from IL 132 to IL 173
and Millburn Bypass Improvement (P-91-666-09)
Lake County, Illinois
Federal Highway Administration Funds**

PART VI-B Illinois Site Assessment <i>CORRIDOR</i> Factors	Maximum Points	Site A
1. Amount of agricultural land required	30	6
2. Location of the proposed alignment	30	3
3. Acres of off-site agricultural land required for borrow materials	15	0
4. Acres of Prime and Important farmland required for mitigation	15	0
5. Creation of severed farm parcels	10	2
6. Creation of uneconomical remnants	10	0
7. Creation of landlocked parcels	10	0
8. Creation of adverse travel	10	0
9. Relocations of rural residences and farm buildings	10	1
10. Utilization of minimum design standards	10	0
TOTAL SITE ASSESSMENT <i>CORRIDOR</i> POINTS	150	12

PART VII

Relative Value of Farmland	150	127
Total Site Assessment <i>CORRIDOR</i> Factors	150	12
TOTAL ILLINOIS LESA POINTS	300	139

* The Illinois LESA System applies the **225 point cutoff** when evaluating state and federally funded projects. Site or Corridor alternatives receiving **175 or fewer points** have a **low rating** for protection, and it is not necessary to evaluate additional alternatives. Those alternatives receiving **176 to 225 points** are in the **moderate range** for protection. In most cases, alternatives **exceeding the 225 point level should be retained for agricultural use**, and an alternate site should be utilized for the intended project. Selecting the alternative with the lowest total points will usually protect the best farmland located in the most agriculturally viable areas. LESA also serves to maintain and promote the agricultural industry in Illinois.

APPENDIX C

AGENCY and PUBLIC COORDINATION

- **Cooperating Agency Correspondence**
- **Public Meeting #1 Summary**
- **Public Meeting #2 Summary**
- **NEPA/404 Merger Meeting Summaries**
- **Community Advisory Group Meeting Summaries**
- **Village of Old Mill Creek Coordination**
- **Village of Lindenhurst Coordination**
- **Lake County Forest Preserve District Coordination**
- **Lake County Stormwater Management Coordination**
- **Lake County Planning, Building and Development**
- **Millburn Congregational Church Coordination**
- **PACE Suburban Bus Coordination**



**Illinois Historic
Preservation Agency**

1 Old State Capitol Plaza • Springfield, Illinois 62701-1512 • www.illinois-history.gov

Lake County
Millburn Historic District
Wisconsin border to Chicago's northern suburbs

PLEASE REFER TO: IHPA LOG #005012609

FHWA-HPER-IL, IDOT
U.S. 45 Millburn Bypass Environmental Assessment

January 26, 2009

Janis P. Piland
Federal Highway Administration
3250 Executive Park Dr.
Springfield, IL 62703

Dear Ms. Piland:

Thank you for your invitation to become a Cooperating Agency for the proposed relocation of U.S. Route 45 through the Millburn Historic District. We will be happy to become a Cooperating Agency in the undertaking and look forward to working with you on this project.

Sincerely,

Anne E. Haaker
Anne E. Haaker
Deputy State Historic
Preservation Officer
AEH:DJH

cc: John Walthall, Illinois Department of Transportation



REPLY TO
ATTENTION OF:

DEPARTMENT OF THE ARMY
CHICAGO DISTRICT, CORPS OF ENGINEERS
111 NORTH CANAL STREET
CHICAGO, ILLINOIS 60606-7206

JAN 29 2009

Technical Services Division
Regulatory Branch
LRC-2009-48

RECEIVED
REGULATORY
DIVISION

SUBJECT: Cooperating Agency in the Review of the Environmental Assessment for the Relocation of U.S. 45 Millburn Bypass through the Millburn Historic District and Located within Lindenhurst, Village of Old Mill Creek and Unincorporated Areas of Lake County, Illinois

Norman Stoner, P.E.
Division Administrator
Federal Highway Administration
3250 Executive Park Drive
Springfield, Illinois 62703

Dear Mr. Stoner:

This office is in receipt of your January 21, 2009 correspondence requesting the participation of the Chicago District U.S. Army Corps of Engineers as a cooperating agency in the review of the U.S. 45 Millburn Bypass Environmental Assessment. The Corps cordially accepts the invitation to participate as a cooperating agency in the review of the EA for the U.S. Millburn Bypass project and looks forward to working closely with Federal and other lead agencies state agencies in completing a comprehensive review of supporting documentation pertaining to the project.

If you have any questions, please contact Kathy Chernich of the Regulatory Branch, telephone number (312) 846-5531 or email at kathy.g.chernich@usace.army.mil.

Sincerely,

Leesa A. Beal
Chief, East Section
Regulatory Branch

Copies Furnished:

FHWA (Matt Fuller)
IDOT (Diane O'Keefe)



Illinois Department of Natural Resources

One Natural Resources Way • Springfield, Illinois 62702-1271
<http://dnr.state.il.us>

Rod R. Blagojevich, Governor

Sam Flood, Acting Director

RECEIVED
JAN 27 2009
ILLINOIS
DIVISION

January 22, 2009

Matt Fuller P.E.
FHWA IL Division Environmental Engineer
Federal Highway Administration- Illinois Division
3250 Executive Park Drive
Springfield, Illinois 62703

RE: US 45 Millburn Bypass
Environmental Assessment
Lake County , Illinois
FHWA-HPER-IL
IDNR Cooperating Agency

Dear Mr. Fuller:

Thank you for the opportunity to participate as a Cooperating Agency in the development of the Environmental Assessment for the above referenced project. It is important that the Illinois Department of Natural Resources be involved in the review process to assure resource protection and compliance with the state Endangered Species Protection Act and the Interagency Wetlands Policy Act of 1989.

Please address all correspondence and meeting agendas to Mr. Steve Hamer of the Office of Realty and Environmental Planning, Division of Ecosystems and Environment at One Natural Resources Way, Springfield, Illinois 62702-1271.

Sincerely,

Steve Hamer
Transportation Review Program Manager
Division of Ecosystems and Environment
Illinois Department of Natural Resources

cc: File

U.S. 45 – IL 132 to IL 173 and Millburn Bypass
Public Meeting #1 Summary

The first Public Informational Meeting was held for the proposed study of the U.S. Route 45 Millburn Bypass on March 3, 2009 at Millburn West School in Lindenhurst from 4:00 p.m. to 8:00 p.m. The purpose of the meeting was to solicit early input from the public regarding the project for use in engineering and environmental studies.

A public notice was placed in the February 13 and February 27, 2009 editions of the Daily Herald newspaper and the February 14 and February 28, 2009 editions of the News Sun newspaper. A typical advertisement is included in Appendix 1. Letters of invitation were sent to public officials and agencies, representatives of local communities, utilities, other governmental agencies, and property owners within the study area. A copy of the typical letters and the mailing lists are attached as Appendix 2. Approximately 610 letters announcing the Public Meeting were mailed for this project.

The meeting was held in an open house format beginning with a sign-in table near the entrance of the facility. A total of 184 people signed the attendance register. This likely represented greater than 184 individuals as many couples and parties only signed in once. Our estimate for meeting attendance is approximately 250 people. A copy of the Public Meeting attendance register is included in Appendix 3. Each attendee was provided with a project brochure, included as Appendix 4, and then directed to view the project exhibits, which were arranged in a series of six information stations. The stations were organized as follows:

1. Study overview
2. Project development process
3. CSS approach
4. Community Advisory Group (CAG)
5. Environmental and community context
6. Transportation alternatives.

A map of these progressive stations as well as an outline of the information each station was portraying was included in the brochure that was given to each attendee as they arrived at the meeting.

The following exhibits were among those placed on display at the various stations:

- Aerial exhibit of study area
- Brief project history and summary
- Process overview
- Study timeline/Schedule
- CSS overview
- Aerial exhibit depicting environmental features
- Traffic volume exhibits
- Origin-Destination exhibit

- Crash data exhibit
- Aerial exhibit of potential alternatives
- Large scale aerial exhibits of entire area

In addition to the exhibits, various other information media were available at the station tables, which were available for inspection. The exhibits are included as Appendix G5.

The Lake County Division of Transportation (LCDOT), Christopher Burke Engineering, and Patrick Engineering staff were available at each station to provide information, answer questions, and discuss individual concerns with members of the public at the meeting. A questionnaire was distributed to all attendees, which they could complete allowing them the opportunity to provide feedback on the project and on transportation issues and area context values that were important to them. Comment sheets were also available for those choosing to provide written comments at the meeting or for mailing to the LCDOT after the meeting. Lastly, forms were available for attendees to complete and submit if they desired to be involved in the upcoming Community Advisory Group that will be used as part of the stakeholder involvement process for this project.

115 questionnaires were completed as a result of the public meeting interaction, along with 46 written comments that were provided at and following the Public Meeting. 47 CAG forms were also received. Copies of the questionnaires, written comments, and CAG forms are included in Appendix 5 as well as a summary of the questionnaire results.

P:\Chicago\LakeCo\20808.040\Stakeholder Involvement\Public Meeting #1\Public Meeting Summary.doc

The Lake County Division of Transportation Has Scheduled a Public Meeting For *The U.S. 45 – Millburn Bypass Study*

The Lake County Division of Transportation (LCDOT) cordially invites all persons interested in the project to attend an Open House Public Information Meeting concerning the Phase I Study for the U.S. 45 – Millburn Bypass within the villages of Lindenhurst and Old Mill Creek in Lake County. The meeting is scheduled for the following date:

Date/Time: Tuesday, March 3, 2009 4:00 PM to 8:00 PM

Location: Millburn West Public School, 640 Freedom Way, Lindenhurst, IL 60046

The purpose of this meeting is to present the scope of the recently initiated study, the study schedule, and solicit input on the study area context, transportation problems, and potential solutions, as well as obtain general public comments.

The meeting will be conducted on an informal, open house basis, meaning interested persons can attend at any time from 4:00 PM to 8:00 PM that is convenient. Exhibits will be on display and representatives from LCDOT, IDOT, and the consultants will be present to receive input, provide information, and answer questions. Written comments regarding the project may be completed at the public meeting or mailed to the below address no later than March 12, 2009.

The meeting location is accessible to persons with a disability. Persons with a disability planning to attend this meeting should notify the individual listed below by February 27, 2009. If special accommodations are needed, the contact person should be informed at the time of notification.

For more information, contact:

Mr. Chuck Gleason, Project Manager
Lake County Division of Transportation
600 West Winchester Road
Libertyville, IL 60048
Phone: (847) 377-7447



Lake County
Division of Transportation



Project Brochure

Public Information Meeting

For

U.S. Route 45

Millburn Bypass

Phase I Study

Villages of Lindenhurst and Old Mill Creek

Lake County



Date: Tuesday, March 3, 2009

Time: 4:00-8:00 PM

**Place: Millburn West School
640 Freedom Way
Lindenhurst, IL 60046**



Welcome to this Public Information Meeting

The Lake County Division of Transportation (LCDOT) welcomes you to this Public Information Meeting concerning the initiation of Phase I engineering and environmental studies for the U.S. Route 45 – Millburn Bypass project within the Villages of Lindenhurst and Old Mill Creek in Lake County, Illinois.

This open house will last from 4:00 to 8:00 PM. You are invited to view the project exhibits displayed around the room. Staff members from LCDOT and the project engineering consultants will be hosting information stations, as indicated below, to discuss various aspects of the project and answer questions you may have.

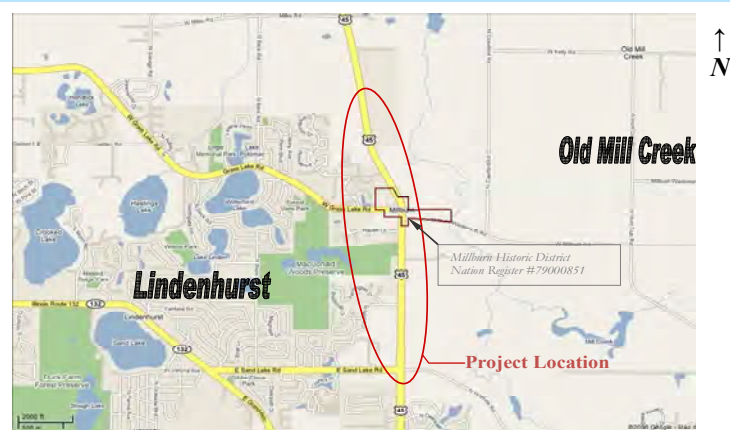
Purpose of this Public Information Meeting

The purpose of this Public Information Meeting is to provide you with information on the recently initiated study, solicit your input, and establish a Community Advisory Group to assist LCDOT in the project development process.

The project information stations at this Public Information Meeting include:

1. Study Overview and Stakeholder Involvement Plan
2. Project Development Process
3. Context Sensitive Solutions (CSS) Summary and Community Advisory Group (CAG) Formation
4. Environmental and Community Context
5. Transportation Assessment
6. Alternatives

* An exhibit showing the locations of each station is included with this brochure.



Project Background

U.S. Route 45 in this area serves as a vital north-south link from the Wisconsin border south to Chicago's northern suburbs. The section of U.S. 45 under study extends from near Sand Lake Road on the south to approximately 1/2 mile north of Grass Lake Road and traverses the Millburn Historic District.

One of the first steps of the project will be to identify various issues and concerns associated with this project. Please assist with this by filling out and submitting the **PROJECT QUESTIONNAIRE** provided with this brochure.

IDOT has previously studied a US Route 45 bypass of the Millburn Historic District as part of a Strategic Regional Arterial (SRA) study in the mid-1990s, which included recording a western bypass alignment and right-of-way protection map, and purchasing one parcel of property within this corridor. In accordance with Federal project development procedures and the National Environmental Policy Act (NEPA), this Phase I study will essentially start from a "clean slate" with respect to evaluating a full range of reasonable alternatives including the No-Build alternative, and a detailed evaluation of potential environmental impacts. The IDOT recorded west bypass alignment remains a valid alternative for full consideration as part of this Phase I study.



Context Sensitive Solutions

This project will be developed using the Context Sensitive Solutions (CSS) approach. CSS is a collaborative, interdisciplinary approach that involves all **Stakeholders** to develop a facility that fits into its surroundings and preserves cultural, scenic, aesthetic, historic and environmental resources while maintaining roadway safety and mobility. Information concerning CSS will be available at the Public Information Meeting or can be downloaded from: <http://www.dot.state.il.us/css/home.html>.



Stakeholder Involvement Plan

A Stakeholder Involvement Plan (SIP) is the foundation to successful utilization of CSS principles. The SIP is both comprehensive and flexible based on project needs, and thus subject to revision as project development warrants. Copies of the SIP will be available at the Public Information Meeting or can be requested from LCDOT as noted on the back page of this brochure.

Project **Stakeholders** can be anyone potentially affected by, concerned with, or interested in the outcome of the proposed improvements being contemplated by the Illinois Division of Transportation. Please refer to the Stakeholder Involvement plan for more information.

A **Project Study Group (PSG)** has been formed for this project, which includes the Lake County Division of Transportation, the Illinois Department of Transportation, and the Federal Highway Administration. The Project Study Group has primary responsibility for the project development process and ultimate decision making authority for this project. The Project Study Group will serve as a project oversight team that is responsible for ensuring that all applicable Federal, State and Local requirements are being met, and to ensure full implementation of the Stakeholder Involvement Plan. The Project Study Group members are noted in the Stakeholder Involvement Plan.

Stakeholder Involvement Methods

The opportunity for communication with all project Stakeholders is vital to the project's success. The Stakeholder Involvement Plan includes a variety of potential methods for Stakeholder involvement including newsletters, media briefings, Public Meeting, Public Hearing, and meetings with individuals as appropriate.

A **Community Advisory Group (CAG)** is being formed as a key component of the Stakeholder Involvement Plan. The structure of the Community Advisory Group is discussed in more detail in the Stakeholder Involvement Plan.

Community Advisory Group members must be able to fully commit to attend all Community Advisory Group meetings, and perform material reviews as requested, in order to ensure the project schedule is maintained. Only Stakeholders that can make this commitment should request to be on the Community Advisory Group. The **Community Advisory Group Membership Request Form** is available at this Public Information Meeting or can be requested from LCDOT as noted on the back page of this brochure. CAG Membership Request Forms must be returned to LCDOT by March 13, 2009.

Project Schedule

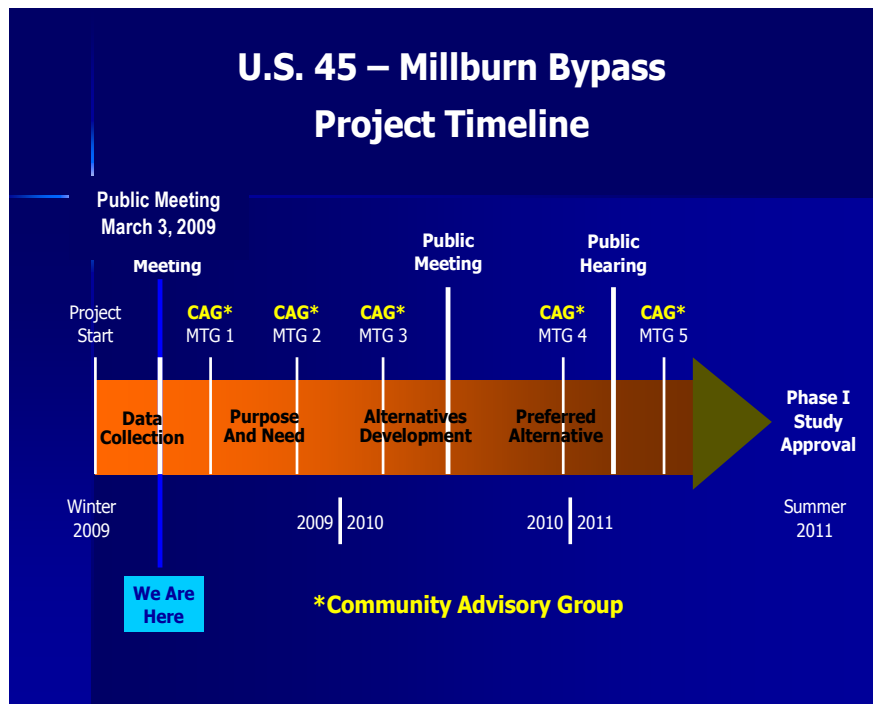
A typical highway improvement project is developed in three (3) distinct phases as follows:

- Phase I - Preliminary Engineering and Environmental Studies
- Phase II - Design Engineering and Land Acquisition
- Phase III - Construction

Phase I for this project was initiated in December 2008. The anticipated timeline for Phase I engineering is shown at the right.

Five (5) Community Advisory Group meetings are anticipated to be held during the Phase I portion of this project. Completion of Phase I is anticipated to occur during the Summer of 2011.

Phase II engineering would be initiated upon completion of Phase I.

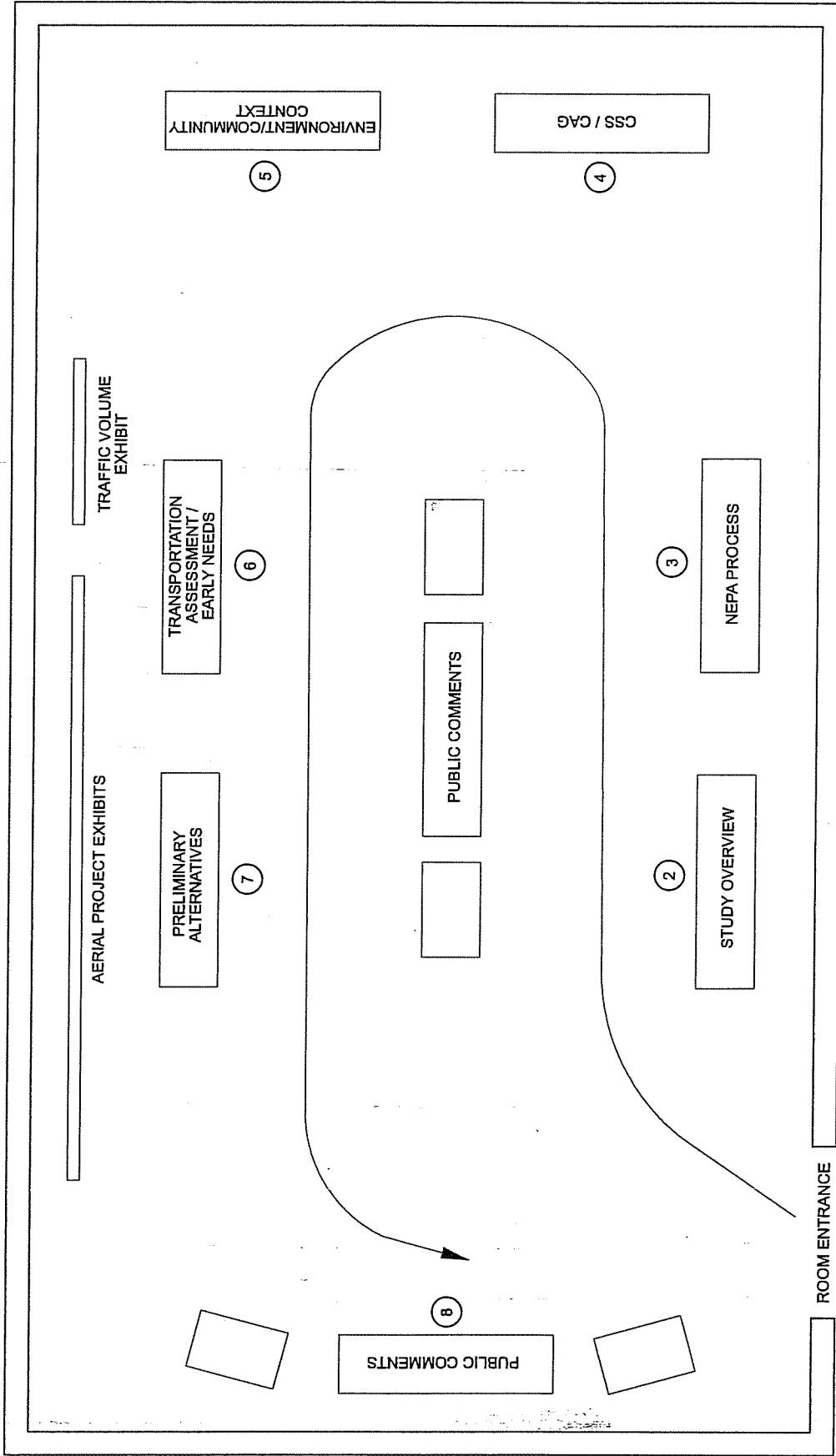


Project Questions and Comments

Your comments and input are an important part of this meeting. Written questions and comments, or requests for materials, may be submitted during this Public Information Meeting by placing them in the comment box or they may be sent to LCDOT at the address or email indicated below:

Mr. Chuck Gleason, Project Manager
Re: Millburn Bypass
Lake County Division of Transportation
600 West Winchester Road
Libertyville, Illinois 60048-1381

MILLBURN WEST SCHOOL CAFETERIA PUBLIC MEETING ROOM LAYOUT



Please make your way from exhibit to exhibit to learn more about this Study.
If you have any questions, please ask any of the County, State, or consultant representatives present.

SIGN-IN TABLE

1

U.S. Route 45 – Millburn Bypass Public Meeting

Table 1

Study Overview and Stakeholder Involvement Plan

- The scope of this project involves improving traffic operations and safety for U.S. Route 45 at the intersection of Millburn Road and Grass Lake Road, where it traverses the Millburn Historic District.
- This project includes Phase I Engineering and Environmental studies for improving U.S. Route 45 where it intersects Grass Lake Road and Millburn Road. Various alternatives will be evaluated to accommodate projected future traffic demand for the year 2030, including potential bypass alternatives.
- This study follows a previous Strategic Regional Arterial (SRA) study for U.S. Route 45 completed by IDOT in 1995, which recommended a west bypass. However, given the scope of the SRA study and the time since, the current Environmental Assessment must take a fresh look at the project Purpose and Need and evaluate a full range of alternatives, compliant with State and Federal project development procedures.
- This project will follow the federal National Environmental Policy Act (NEPA) process, as discussed further at Table 2.
- Based on the results of studies and stakeholder involvement, a preferred alternative will be chosen, and plans will be developed for this alternative.

U.S. Route 45 – Millburn Bypass Public Meeting

Table 2 Project Development Process

1. Data Collection
 - GIS (more information at Table 4)
2. Purpose & Need statement development
 - Traffic information
 - Crash data
 - Logical study limits
3. Affected Environmental and Community assets (more at Table 4)
 - Millburn Historic District
 - ADID wetlands
 - Adjacent properties
 - LCFP
4. Alternatives (more at Table 6)
 - No Build
 - Existing Alignment
 - East Bypass
 - West Bypass
 - Preferred Alternative
5. Environmental Consequences / Mitigation
6. Stakeholder Involvement (more at Table 3)
7. Engineering and Environmental Reports
8. NEPA/404 Merger Process
9. Agency Coordination

U.S. Route 45 – Millburn Bypass Public Meeting

Table 3

CSS/CAG Overview

- What is a Context Sensitive Solutions (CSS) approach?
 - CSS is an interdisciplinary approach that seeks effective, multi-modal transportation solutions by working with stakeholders to develop, build, and maintain cost-effective transportation facilities that fit into and reflect the project’s surroundings - its “context.”
- What is the Community Advisory Group (CAG)?
 - The CAG is one of the methods that will be used to facilitate stakeholder involvement. The role of the CAG will be to advise the Project Study Group (LCDOT, IDOT, FHWA, and consultants) throughout the course of the project development process.
- What is a stakeholder?
 - A stakeholder is anyone who could be affected by the project and has a stake in its outcome. This includes property owners, business owners, state and local officials, special interest groups, and motorists who utilize the facility.
- All stakeholder input will be considered during the Study preparation.
- If interested in being a part of the CAG, please submit a CAG membership request form.

U.S. Route 45 – Millburn Bypass Public Meeting

Table 4 Environmental and Community Context

- As part of this study, an Environmental Assessment (EA) will be prepared. This will include collection of environmental data from multiple agencies, evaluation of impacts to both the natural and man-made environments, and avoidance, minimization, and mitigation of these impacts in the proposed roadway design. Examples of some analyses include: traffic noise, air quality analysis, wetland impacts, a Section 4(f)/Section 106 evaluation, and development of a final EA.
- A Geographic Information System (GIS) database of the project area, being prepared specifically for this project, will be used for initial alternatives development and evaluation.
- The agencies to be coordinated with as part of this process include:

IDNR	USACE	IDNR	USFWS	IDOA	LCFP
IEPA	USEPA	IHPA	INRCS	LCSMC	
- In addition to environmental factors, the context of the improvement in its community will be considered.
- Please review the adjacent aerial map depicting many of the environmental resources present in the study area and provide us with any comments or additional information on these resources of which you may be aware.

U.S. Route 45 – Millburn Bypass Public Meeting

Table 5

Transportation Assessment

- As part of this study, new traffic counts were taken in the project study area. Counts were taken at the following intersections:
 - U.S. Route 45/Grass Lake Road
 - U.S. Route 45/Millburn Road
 - U.S. Route 45/Independence Boulevard
 - U.S. Route 45/Haven Lane
 - U.S. Route 45/Country Place
 - U.S. Route 45/Sand Lake Road
 - Grass Lake Road/Heritage Drive
- Average Daily Traffic (ADT) volumes were also counted for the roads between these intersections (see exhibit). These counts will be used to generate, via the Chicago Metropolitan Agency for Planning (CMAP), projected 2030 traffic volumes, for which the road will be designed.
- In addition, an Origin/Destination (O/D) study was conducted to determine the extent of east-west and north-south travel through this area.
- A Crash Analysis of the study area is also being completed, showing areas of high accident frequency, where countermeasures will be evaluated.

U.S. Route 45 – Millburn Bypass Public Meeting

Table 6
Alternatives

- Now it's your turn!
- We're looking for your thoughts on what the improvement should look like. Please take a marker, and sketch on one of the printouts your ideal improvement location on the map.
- For a larger view of the study area, please feel free to examine the larger aerials depicting the existing conditions. Let us know if you have any questions.

U.S. Route 45 — Millburn Bypass Community Advisory Group Membership Request Form



Name (Please Print Clearly): _____

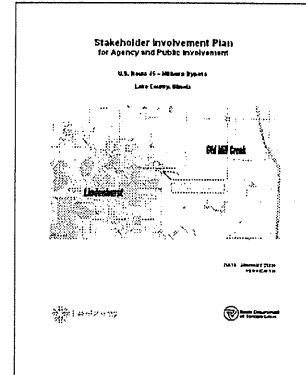
Representing: _____

Mailing Address: _____

Phone: _____

Email: _____

Signature: _____



I would like to be considered as a member of the U.S. 45 — Millburn Bypass Community Advisory Group (CAG), to assist the Lake County Division of Transportation (LCDOT) in the project development process for this project in accordance with the draft project Stakeholder Involvement Plan (SIP).

CAG Membership Commitment

I understand that I am making a commitment to attend all CAG meetings and complete all reviews requested of CAG members, and that this commitment extends until completion of the current Phase I Study which is anticipated to occur in the Summer of 2011. Currently, five (5) CAG meetings are anticipated to occur over the duration of the project. I have read the tentative ground rules in the draft project SIP, and agree to abide by those ground rules and/or the ground rules included in the SIP as agreed to at the initial CAG meeting.

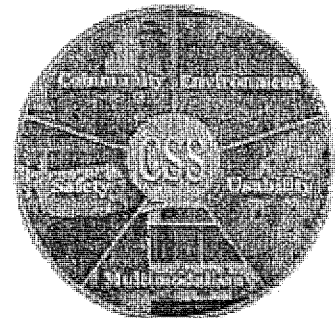
I understand that LCDOT must maintain the established project schedule and that if I cannot fulfill this commitment to the project, that LCDOT may need to replace me on the CAG in order to ensure the project schedule is maintained. I understand that depending on the number of CAG membership requests, LCDOT may limit CAG membership to one or two members from similar interests/entities to ensure good representation from the community with an effective group size.

Please note that it is intended that most CAG meetings will be held in the evening. Please take this into consideration when contemplating your own commitment to the group.

Submit to LCDOT by March 12, 2009

In order to be considered for membership on the U.S. 45 — Millburn Bypass Community Advisory Group, this form must be received by LCDOT by March 12, 2009.

This form can be faxed to LCDOT at 847/362-5290, folded and returned to LCDOT at the address on the back of this form, or scanned and emailed to LCDOT at: cgleason@lakecountyil.gov.



U.S. Route 45 — Millburn Bypass PROJECT QUESTIONNAIRE



Name (Please Print Clearly): _____

Mailing Address: _____

Phone: _____ Email: _____

1. Would you like to receive copies of the project newsletters? YES NO
2. How would you prefer to receive the newsletters? MAIL EMAIL (.pdf format)
3. How long have you lived at your current address? _____
4. If not currently living in the study area, was your previous address in the study area? _____
5. Do you work in the study area? YES NO
If yes, Name of Employer? _____

6. How frequently do you drive on U.S. 45 through the Millburn Historic District, and for what purpose?

7. Please grade the following issues with respect to their importance in developing this project:
Alternatives (A=most important, B=important, C=somewhat important, D=not important)
- | | | |
|--|---|--|
| <input type="checkbox"/> Historic District Impacts | <input type="checkbox"/> Wetland/Wildlife Impacts | <input type="checkbox"/> Project Cost |
| <input type="checkbox"/> Tourism | <input type="checkbox"/> Traffic Congestion | <input type="checkbox"/> Roadway Safety |
| <input type="checkbox"/> Business Development | <input type="checkbox"/> Access | <input type="checkbox"/> Farmland Impacts |
| <input type="checkbox"/> Traffic Noise | <input type="checkbox"/> Air Quality | <input type="checkbox"/> Stormwater Runoff |
| <input type="checkbox"/> Project Schedule | <input type="checkbox"/> Residential Property Impacts | <input type="checkbox"/> Other (describe below): |

8. Please rank the travel problems you have experienced traveling along U.S. 45 within the Millburn Historic District area: (with 1 being the worst problem; please list N/A if you haven't experienced)
- | | | |
|--|---|---|
| <input type="checkbox"/> None | <input type="checkbox"/> Traffic Congestion | <input type="checkbox"/> Traffic Crashes |
| <input type="checkbox"/> Truck Traffic | <input type="checkbox"/> Roadway Condition | <input type="checkbox"/> Inconsistent Travel Time |
| <input type="checkbox"/> Access | <input type="checkbox"/> Other (please describe): _____ | |

9. If you were designing the expansion of U.S. 45, where would you locate it?
- Where it currently is West Bypass East Bypass Other
- Why?: _____

10. Please add any additional information that you feel should be considered by the project study team:

Please return this questionnaire to the registration table this evening, or send to the Lake County Division of Transportation by March 12, 2009 at the address listed on the back, or you may scan and email it to Chuck Gleason at: cgleason@lakecountyil.gov.

U.S. 45 – IL 132 to IL 173 and Millburn Bypass
Public Meeting #1 Questionnaire Response Summary

As stated in the Public Meeting Summary, the purpose of the first Public Informational Meeting held on March 3, 2009 was to solicit early input from the public regarding the project for use in engineering and environmental studies. At the meeting, a questionnaire in regard to the project issues was distributed. This document serves as a summary of the responses received to that questionnaire.

To recap, 115 questionnaires were completed as a result of the public meeting interaction, along with 46 separate written comments that were provided at and following the Public Meeting. 47 CAG forms were also received. What follows is an outline of the responses.

The first six questions were biographical to give information on the respondents. The respondents have, on average, lived in the area for 12.0 years. 16.5% of the respondents work in the area, but 93.0% of them drive through it daily.

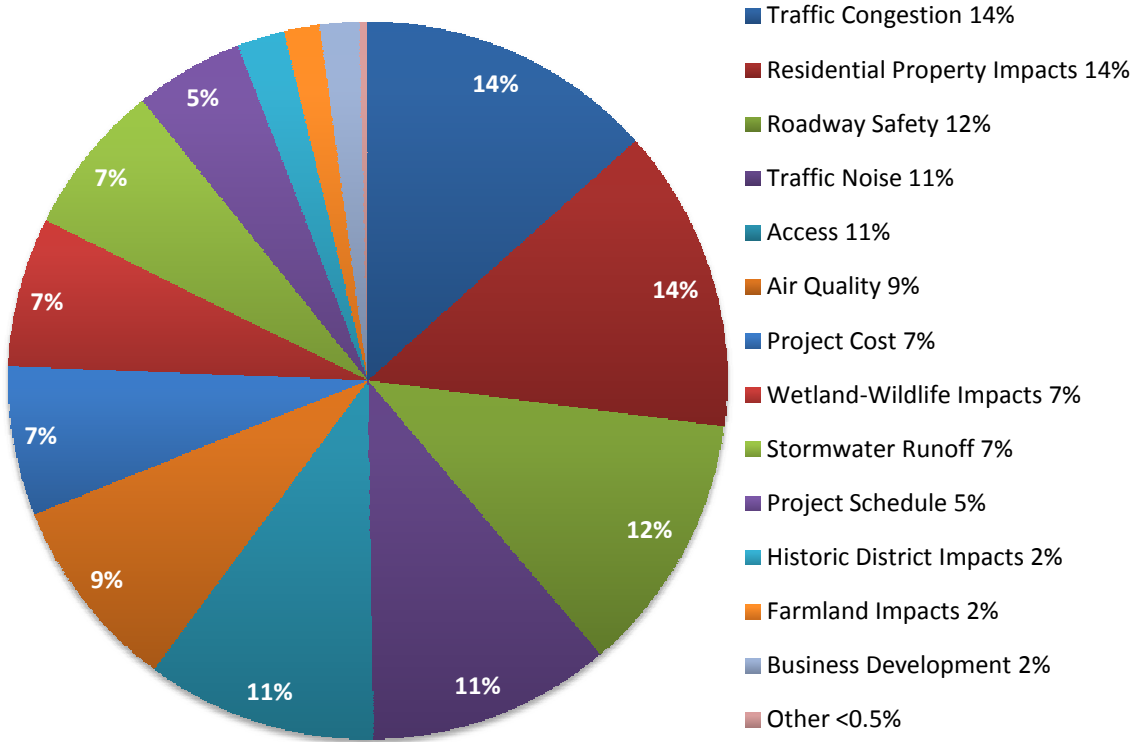
Question #7 asked respondents to identify the issues related to the project they found most important. The issues identified as most important were traffic congestion, residential property impacts, traffic noise, and roadway safety. Ranking the importance of issues by weighted average shows these responses comprise over 50% of the responses.

On the other hand, some issues rose to the top as being considered unimportant by most respondents. Over 75% of the weighted average responses for issues considered not important were comprised of four issues: tourism, historic district impacts, business development, and farmland impacts.

Question #8 asked respondents to identify which traffic problems they have experienced. The most prevalent answers encountered, comprising nearly 60% of the responses were traffic congestion, truck traffic, and inconsistent travel time.

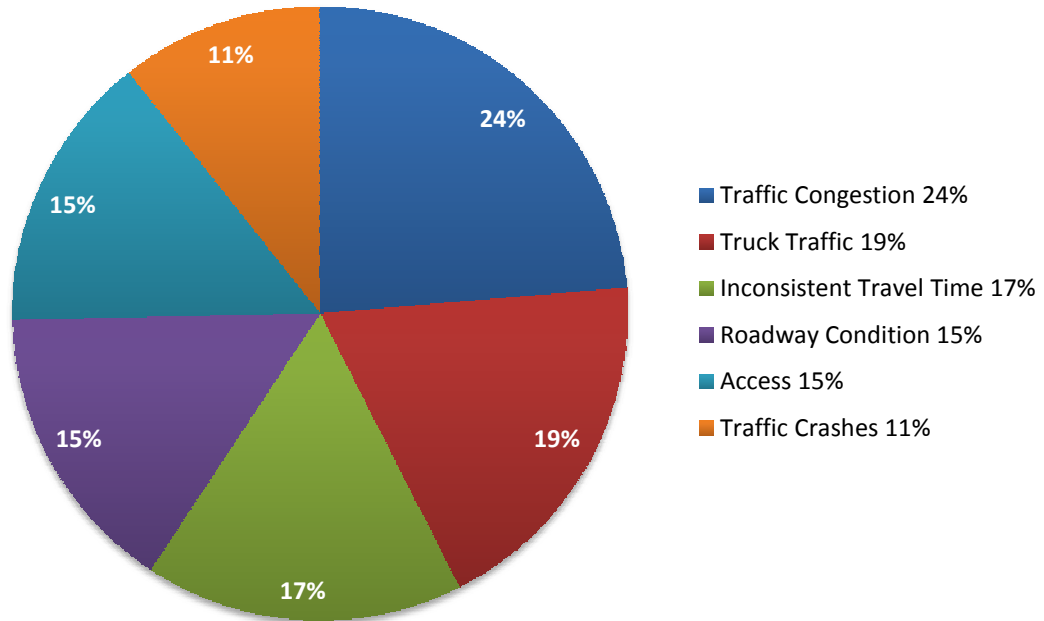
Question #9 asked respondents to state their location preference for a possible bypass within the Millburn area of U.S. Route 45. 50% of people desired the bypass to be built on the east side. 28% of the people suggested the west side. 13% of people preferred another alternative, typically realigning only Grass Lake Road with Millburn Road. 8% of people preferred widening U.S. 45 at its current location. Interestingly, when broken down by respondents' location, the above preferences for east or west correspond very closely to opposite the respondents' residence. 87% of people wanted the bypass on the opposite side of U.S. 45 than they lived.

Importance of Issues by Weighted Average



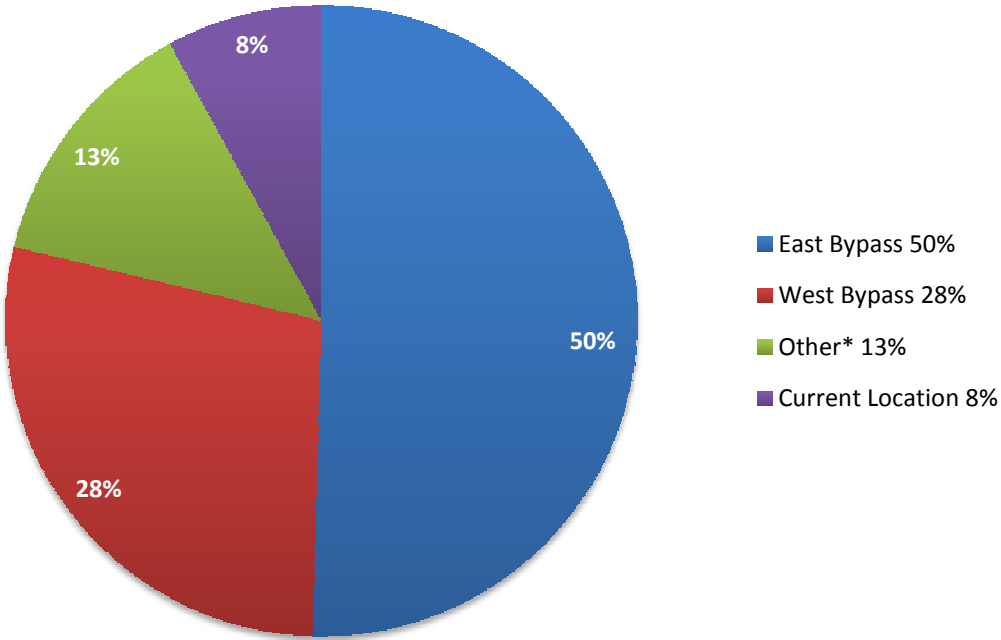
Question 7

Weighted Prevalence of Traffic Problems Experienced



Question 8

Desired Location of U.S. 45 Bypass



Question 9

* - Typically realigning only Millburn/Grass Lake Rds

U.S. 45 – IL 132 to IL 173 and Millburn Bypass
Public Meeting #2 Summary

The second Public Meeting was held for the Phase I study of the U.S. Route 45 Millburn Bypass on September 2, 2010 at Millburn West School in Lindenhurst from 4:00 p.m. to 7:00 p.m. The purpose of the meeting was to provide an update to the public on the progress of the Phase I Study, provide information to the stakeholders regarding the study progress, schedule, and to-date results, and solicit input from the public. To do so, the three ‘finalist alternatives’ for the Millburn Bypass area were presented along with the entire alternatives development process. The Public Meeting also provided an opportunity for the stakeholders to provide input on the finalist alternatives carried forward to this point and set the stage for the movement towards selection of a preferred alternative.

Public notices were placed in the August 13 and August 27, 2010 editions of the Daily Herald newspaper, the August 14 and August 28, 2010 editions of the News Sun newspaper, and the week of August 19, 2010 Pioneer Local newspaper. A typical advertisement is included in Appendix 1. Letters of invitation were sent to public officials and agencies, representatives of local communities, utilities, other governmental agencies, and property owners within the study area. A copy of the typical letters and the mailing lists are attached as Appendix 2. Approximately 676 letters announcing the Public Meeting were mailed for this project.

The meeting was an open house format with a continuous PowerPoint presentation, exhibit boards for review, and large scale aerials of the study area to which meeting attendees provided comments, suggestions, issues and concerns. A total of 300 people signed the attendance register. A copy of the Public Meeting attendance register is included in Appendix 3. Attendees were provided with a project brochure, included as Appendix 4, and then were directed to view the project exhibits, which were arranged in a series of six information stations. The stations were organized as follows:

1. Study overview (PowerPoint presentation)
2. Study Progress / Purpose and Need Overview
3. Public Involvement / CAG Proceedings
4. Alternatives Development and Evaluation Process
5. Finalist Alternatives and Evaluation
6. Public Comments

A map of these progressive stations as well as an outline of the information each station was portraying were included in the brochure that was given to each attendee as they arrived at the meeting, and this layout guide is also included with the brochure in Appendix 4.

The following exhibits were among those placed on display at the various stations:

Station 1: Slideshow – This Station presented a short PowerPoint slideshow with audio. The show provided an overview of what was presented in greater detail at all of the other stations.

Station 2: Study Progress / Purpose & Need Overview – This Station included general project update information. This included a look at the progress within the Federal NEPA process being utilized for this Phase I Study. This Station also explained the process of how the study was expanded to include the logical termini of IL 132 to IL 173 and how the study of those improvements will be woven into the already progressing study of the Millburn Bypass. The Public Involvement Plan (PIP) and a project schedule chart were available for viewing at this table.

This Station also included multiple exhibits that showed the various pieces of information that were pieced together to guide the alternatives development process for the core study area. These included aerial exhibits depicting natural and man-made features, sensitive environmental resources (biological and cultural), and solicit input on the context of the study area. This Station also provided materials that described the early data collection activities that the study team performed, including aerial surveys, traffic counts, origin-destination studies, accident data, environmental features, and the study GIS network. All this data was presented to give the public an idea of the obstacles around which alternatives had to be formulated and upon which they were evaluated. While information in the core study area was available in greater detail, the expanded study limits area was shown on an aerial to provide the viewer with a visual overview of the length of the entire study.

Exhibits Shown:

- Interdisciplinary Project Development Flowchart
- Current GIS exhibit for full EA
- Current GIS exhibit for Bypass Area
- NEPA process white paper
- Purpose and Need summary page
- Full Purpose and Need
- Existing and 2030 Traffic Data, O/D study, Crash Analysis Summary for full EA project area

Station 3: Public Involvement/Community Advisory Group Proceedings – This Station provided information on the overall Public Involvement Plan and the CAG process so far and its use for this study to-date. This also provided the opportunity to show the public how key stakeholders have been engaged in the process. CAG members were present to offer their insight on how the process has unfolded.

Exhibits Shown:

- Interdisciplinary Project Development Flowchart
- Current CAG Binder (includes Public Involvement Plan)
- 1 copy of (30 x 40) display board with pictures of CAG meetings 1, 2, and 3 – CBBEL
- Display board with listed members of the CAG

Station 4: Alternatives Development and Evaluation Process – This Station provided the story of how the Project Study Group was able to screen the alternatives from an original range of 18 alternatives, first to nine, and ultimately to the three finalists. Input was solicited on the perceived transportation needs for the expanded area and potential solutions.

Exhibits Shown:

- Boards for the 18 alternatives
- Board for the 9 alts in three alignment alternative groups
- Board of the evaluation matrix for the 9 alternatives
- Screening Summary
- Typical Sections (1 for U.S. Route 45, 1 for County routes)

Station 5: Finalist Alternatives and Evaluation – This Station showed the three developed finalist alternatives for the core study area carried forward to this point. Additionally, the ongoing evaluation of these alternatives was exhibited. The evaluation tools used by the project team to weigh these alternatives against each other were explained. The public was asked to provide input on each developed alternative remaining. This station also had a projector and screen set up to show the Synchro/SimTraffic runs for the three finalist alternatives.

Exhibits Shown:

- Land Use Data for full EA project area
- Board for the three finalist alternatives
- Evaluation matrix for the final 3 alternatives

Station 6: Comments – This Station was set up as a location for attendees to write their comments (Comment Sheet/Questionnaire) and submit them in a comment box.

The Lake County Division of Transportation (LCDOT), Christopher Burke Engineering, Patrick Engineering, Huff and Huff Inc, and IDOT representatives were available at each station to provide information, answer questions, and discuss individual concerns with members of the public at the meeting.

Comment sheets were available for those choosing to provide written comments at the meeting or for mailing to the LCDOT after the meeting. 201 comments were provided by the public. Copies of the written comments are included in Appendix 5, in addition to a full summary of the results.

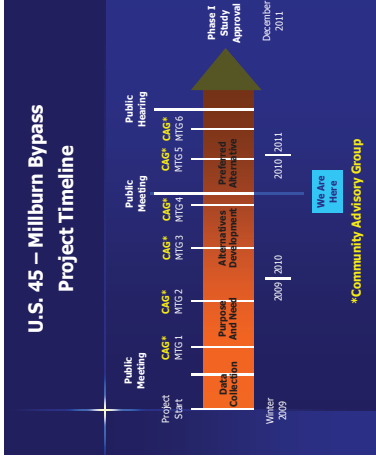
The comment forms submitted covered a variety of topics, with the most predominant themes including:

- Congestion concerns,
- Bypass routings through residential areas,
- Safety,
- Traffic Noise, and
- Land Use Planning

U.S. Route 45 – Millburn Bypass Public Meeting #2

Station 2 Study Progress/Purpose & Need Overview

- 4 Community Advisory Group (CAG) meetings
- Project Purpose & Need statement was created
- Project Problem Statement Developed by the CAG:
 - *“The transportation problems to be solved by the U.S. 45 at Grass Lake Road/Millburn Road project are present and future congestion, safety and accessibility for all modes of transportation, and also impacts to natural and manmade environments.”*
- The purpose of this project is to provide an improved transportation system to address capacity, mobility, safety, and operational deficiencies along US Route 45 within the Millburn Bypass area.
- The need for improvements is identified within the formal Purpose & Need document that establishes the purpose for and the need for the transportation project.
- Alternatives must meet the Purpose and Need to be carried forward.
- Based on input received at the first Public Meeting, 18 preliminary alternatives for the Millburn Bypass area were conceptually created. Based on input from the CAG they were narrowed to 9 and then to 3 finalist alternatives.



U.S. Route 45 – Millburn Bypass Public Meeting #2

Station 3

Public Involvement & CAG Proceedings

- Public Meeting #1 March 3, 2009
- Public Meeting #2 will be September 2, 2010
- Public Involvement Plan (PIP)
 - Lays forth the methods and timeline for meaningful coordination with project stakeholders at critical decision making points in the project development process
 - Establishes overall framework for Public Involvement during project development
 - Project Study Group (PSG provides overall project oversight and decision making authority
 - Community Advisory Group (CAG) formed for Millburn Bypass area
- Community Advisory Group
 - CAG consists of the chief elected officials and their designees who have the authority to speak on behalf of the municipalities and various other entities
 - Purpose of the CAG is to provide input on the Purpose and Need statement and the alternatives to be carried forward for evaluation at each stage of the process
 - CAG Meeting #1 June 16, 2009
 - CAG Meeting #2 November 3, 2009
 - CAG Meeting #3 April 27, 2010
 - CAG Meeting #4 August 19, 2010
 - CAG Meetings #5, 6, and possibly 7 upcoming

U.S. Route 45 – Millburn Bypass Public Meeting #2

Station 4 **Alternatives Development and Evaluation Process**

- 18 alternatives were conceptually created based on options drawn by the public at the first Public Meeting, input from CAG, and assessment by PSG.
- The 18 potential alternatives were based on a combination of three north-south alignments for US 45 and 6 east-west alignments between Grass Lake Road and Millburn Road.
- Based on input from the CAG and PSG, evaluation of the ability of each potential alternative to meet the project purpose and need, and the presence of unreasonable impacts, nine alternatives were chosen to move forward for engineering development and environmental evaluation.
- These nine alternatives were drafted and evaluated via more quantitative means than the first round of elimination, and the PSG presented information during the third CAG meeting associated with each of the nine alternative’s ability to meet objectives related to the four categories of transportation performance, environmental concerns, socioeconomic impacts, and cost.
- An evaluation matrix was developed (on display) to help draw comparisons between alternatives.
- Following the third CAG meeting, the PSG selected three finalist alternatives to be carried forward for additional evaluation based on their ability to meet project objectives.
- These finalist alternatives are the focus of tonight’s meeting.

U.S. Route 45 – Millburn Bypass Public Meeting #2

Station 5

Finalist Alternatives & Evaluation

- Three Finalist Alternatives remain.
- Alternative A1 is a west bypass of the Millburn Historic District and maintains the current Grass Lake Road and Millburn Road configuration.
- Alternative A4 is a west bypass of the Millburn Historic District and corrects the current Grass Lake Road and Millburn Road offset.
- Alternative C4.4 is an east bypass of the Millburn Historic District and corrects the current Grass Lake Road and Millburn Road offset. This alternative is a modification of original alternative C4 to avoid the identified Historic Millburn burial site in this area.
- Ask yourself, how do each of the finalist alternatives compare against the project objectives?
 - Transportation Performance
 - Safety
 - Environmental Impact
 - Socioeconomic Impact
 - Cost



U.S. Route 45 – Millburn Bypass Public Meeting #2

Station 6

Public Comments

- The Project Study Group (PSG) would like your input in regard to the 3 finalist alternatives for the Millburn area.
- Please provide feedback on the strengths and weaknesses of these alternatives.
- Your comments are extremely valuable in the process of evaluating the 3 finalist alternatives and selecting a preferred improvement plan for this project.
- Comments received by September 13, 2010 will become part of the official record for tonight's Public Meeting



CB Christopher B. Burke Engineering, Ltd.



Meeting Brochure

Public Meeting #2

Millburn Bypass Finalist Alternatives

For

U.S. Route 45 - IL 132 to IL 173 And Millburn Bypass



***Date:* Thursday, September 2, 2010**

***Time:* 4:00-7:00 PM**

***Place:* Millburn West School
640 Freedom Way
Lindenhurst, IL 60046**

Welcome to this Public Meeting

The Lake County Division of Transportation (LCDOT) welcomes you to this Public Meeting concerning the status of Phase I engineering and environmental studies for the U.S. Route 45 from IL Route 132 to IL Route 173, with special focus on the finalist alternatives for the Millburn Bypass.

This open house will last from 4:00 to 7:00 PM. You are invited to view the project exhibits displayed around the room. Staff members from LCDOT and the project engineering consultants will be hosting information stations, as indicated within, to discuss various aspects of the project and answer questions you may have.

Purpose of this Public Meeting

This Public Meeting will describe the project development process to date. This includes how the Community Advisory Group (CAG) and project team proceeded through the alternatives development, evaluation, and screening process to result in concurrence on carrying forward alternatives. The primary focus of tonight’s meeting will be the three finalist alternatives that have been carried forward for further evaluation tonight. The Project information stations at this Public Meeting include:

1. Project Overview: PowerPoint Slideshow
2. Study Progress/Purpose and Need
3. Public Involvement/Community Advisory Group (CAG) Proceedings
4. Alternatives Development and Evaluation Process
5. Finalist Alternatives and Evaluation
6. Comments

* An exhibit showing the location of each station is included with this brochure.

Project Location

U.S. Route 45 in this area serves as a vital north-south link from the Wisconsin border south to Chicago’s northern suburbs. The section of U.S. 45 under study extends from IL 132 to IL 173 and traverses the Millburn Historic District. Within this District, a bypass is being considered. Since the initial Public Meeting, the CAG has



met four times. At the first CAG meeting the Project Study Group (PSG) introduced the project and both groups went over the Public Involvement Plan (PIP) until consensus with regard to the PIP format was reached. Next, the CAG and PSG worked together to develop the project problem statement based on the transportation needs of the study area and the purpose of the study previously established.

Project Purpose & Need

The purpose of the project is to provide an improved transportation system to address capacity, mobility, safety, and operational deficiencies along US Route 45 within the Millburn Bypass area. The need for improvement is identified within the formal document that establishes the purpose for and the need for the transportation project. This document addresses project history, and compares existing conditions and future “No-Build” conditions with respect to mobility/capacity, safety, and operational deficiencies. Alternatives must meet the project Purpose & Need to be carried forward. For this project, based on traffic growth, intersection vehicle delay and crash occurrences have reached unfavorable values. Evidence of this is seen in the following statistics:

- 300% average increase in traffic volumes on U.S. 45 from 1974 to 2009.
- If no improvements are made to the Grass Lake Road and Millburn Road intersections with U.S. Route 45, traffic congestion will increase as much as 400% by the year 2030.

The following project problem statement was established to support the purpose and need:

“The transportation problems to be solved by the U.S. 45 at Grass Lake Road/Millburn Road project are present and future congestion, safety and accessibility for all modes of transportation, and also impacts to natural and manmade environments.”

The project Purpose & Need Statement is available for viewing today at Station 2 and is on the website.

Public Involvement & Community Advisory Group

Per the Public Involvement Plan, methods and timeline for meaningful coordination with project stakeholders at critical decision making points in the project development process were laid forth. As part of the process, key stakeholders were selected to join the CAG. The CAG



consists of the chief elected officials or their designees who have the authority to speak on behalf of the municipalities (Villages of Lindenhurst and Old Mill Creek) and various other entities. The purpose



of the CAG is to provide input on the development of the Purpose and Need statement and the alternatives to be carried forward for evaluation at each stage of the process. The CAG represents a broad range of interests. CAG members are present this evening that can be identified by the badges they are wearing, so please feel free to discuss the project with them as well. The PSG provides overall project oversight and decision making authority.

Alternatives Development and Evaluation Process

Initially, 18 alternatives were conceptually created based on options drawn by the public at the first Public Meeting, input from CAG, and assessment by PSG. These represented a full range of potential alternatives for the analysis of a bypass within the Millburn area. The 18 potential alternatives were based on a combination of three north-south alignments for US 45 and 6 east-west alignments between Grass Lake Road and Millburn Road. Based on input from the CAG and PSG, evaluation of the ability of each potential alternative to meet the project purpose and need, and the presence of unreasonable impacts, nine alternatives were chosen to move forward for engineering development and environmental evaluation. The north-south alignments (A, B, and C) included realigning US 45 to the west, maintaining its existing alignment, and realigning to the east, respectively. East-west alignments ranged from maintaining existing Grass Lake Road and Millburn Road to realigning one or both, north or south, to new east-west roadway links. Please refer to displays in the exhibit room which show the 18 potential alternatives. Of these 18, nine alternatives were drafted and evaluated via more quantitative means than the first round of elimination, and the PSG presented information during the third CAG meeting associated with each of the nine alternative's ability to meet objectives related to the four categories of transportation performance, environmental concerns, socioeconomic impacts, and cost. This allowed the CAG to draw comparisons between alternatives and help select those that should be carried forward. Following the third CAG meeting, the PSG selected three finalist alternatives to be carried forward for additional evaluation. These finalist alternatives are the focus of tonight's meeting.

Project Schedule/Next Steps

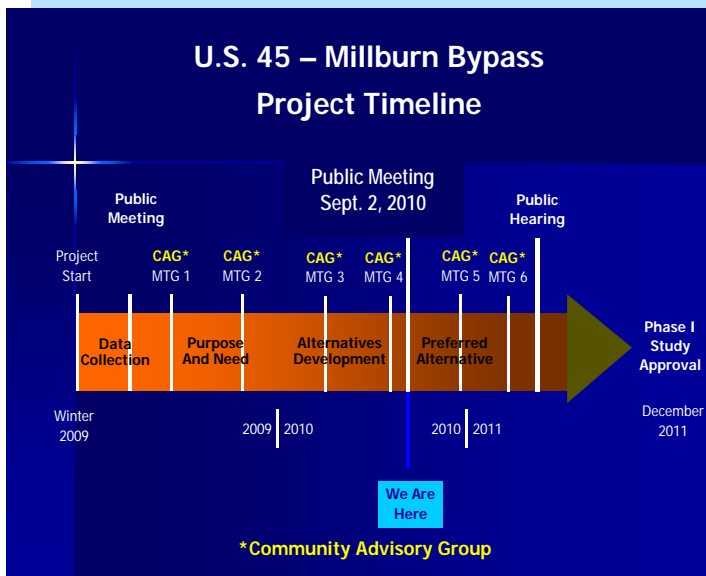
After tonight we will have progressed through two public meetings and four CAG meetings. Next, the project team will evaluate the Public Meeting comments (Please make your thoughts known!) and results and a Preferred Alternative will be selected. Once an alternative is chosen, final engineering and environmental reports will be prepared, and concurrence sought for the chosen alternative.



Finalist Alternatives and Evaluation

Based on feedback gathered at the third CAG meeting, three finalist alternatives were chosen to be carried forward. Evaluation of Alternatives A1, A4, and C4 shown above will be the focus of tonight's meeting. All three finalist alternatives provide good transportation performance for a reasonable cost and were favorable with respect to environmental and socioeconomic impacts in comparison to the other alternatives.

Tonight's meeting has been formatted in a manner conducive to open discussion and comment with regard to the three finalist alternatives, which is aimed at identifying any remaining issues, opportunities, and constraints associated with each remaining alternative. All participants tonight are encouraged to visit any and all stations, as necessary, to reach full understanding of the steps that have been taken in the process to this point and provide meaningful input.



Project Questions and Comments

Your comments and input are an important part of this meeting. Written questions and comments, or requests for materials, may be submitted during this Public Meeting by placing them in the comment box or they may be sent to LCDOT at the address indicated below:

Mr. Chuck Gleason, Project Manager
Re: Millburn Bypass
Lake County Division of Transportation
600 West Winchester Road
Libertyville, Illinois 60048-1381

For ongoing updates and additional information, please visit the project website at <http://www.route45project.com>

U.S. Route 45 - IL 132 to IL 173 & Millburn Bypass

Lake County, IL

Public Meeting #2 Millburn Bypass Finalist Alternatives

September 2, 2010



Registration/Brochure

- ✓ If you have not registered or received a copy of the brochure please do so



Purpose of Public Meetings

- ✓ Make the community aware of ongoing project details
- ✓ Seek input on issues and solutions
- ✓ Opportunity for everyone's voice to be heard
- ✓ Advise the Project Study Group (project decision-making authority)
- ✓ Develop cost-effective plans that fit into the project's surrounding community



U.S. Route 45 - IL 132 to IL 173 & Millburn Bypass Phase I Study

Purpose of This Public Meeting

- ✓ Describe the Community Advisory Group (CAG) process.
- ✓ Present the overall Millburn Bypass alternatives development and evaluation process since the first Public Meeting in March 2009
- ✓ Present the Three Finalist Alternatives for the Millburn Bypass for public review and comment
- ✓ Provide an opportunity for you to discuss the project with LCDOT, IDOT, and the consultant engineering staff



U.S. Route 45 - IL 132 to IL 173 & Millburn Bypass Phase I Study

Project Location

- ✓ Overall Limits: U.S. 45, IL 132 to IL 173
- ✓ Millburn Bypass Study Area: near Grass Lake Road and Millburn Road intersections
- Communities:
 - ✓ Millburn Historic District
 - ✓ Village of Lindenhurst
 - ✓ Village of Old Mill Creek



U.S. Route 45 - IL 132 to IL 173 & Millburn Bypass Phase I Study

Project Overview

U.S. Route 45 in this area serves as a vital north-south link from the Wisconsin border south to Chicago's northern suburbs.

- ✓ The Lake County Division of Transportation (LCDOT) in coordination with the Illinois Department of Transportation (IDOT) has initiated Phase I Engineering and Environmental Studies to evaluate likely long term improvement needs for U.S. Route 45 from IL 132 to IL 173
- ✓ Bypass alternatives were to be evaluated near the Grass Lake Road and Millburn Road intersections in the vicinity of the Millburn Historic District.
- ✓ Based on the results of this Phase I Study, proposed improvements to U.S. Route 45 from IL 132 to IL 173 will be identified, and a preferred alternative will be chosen for the Millburn Bypass area, which is the focus of this Public Meeting.



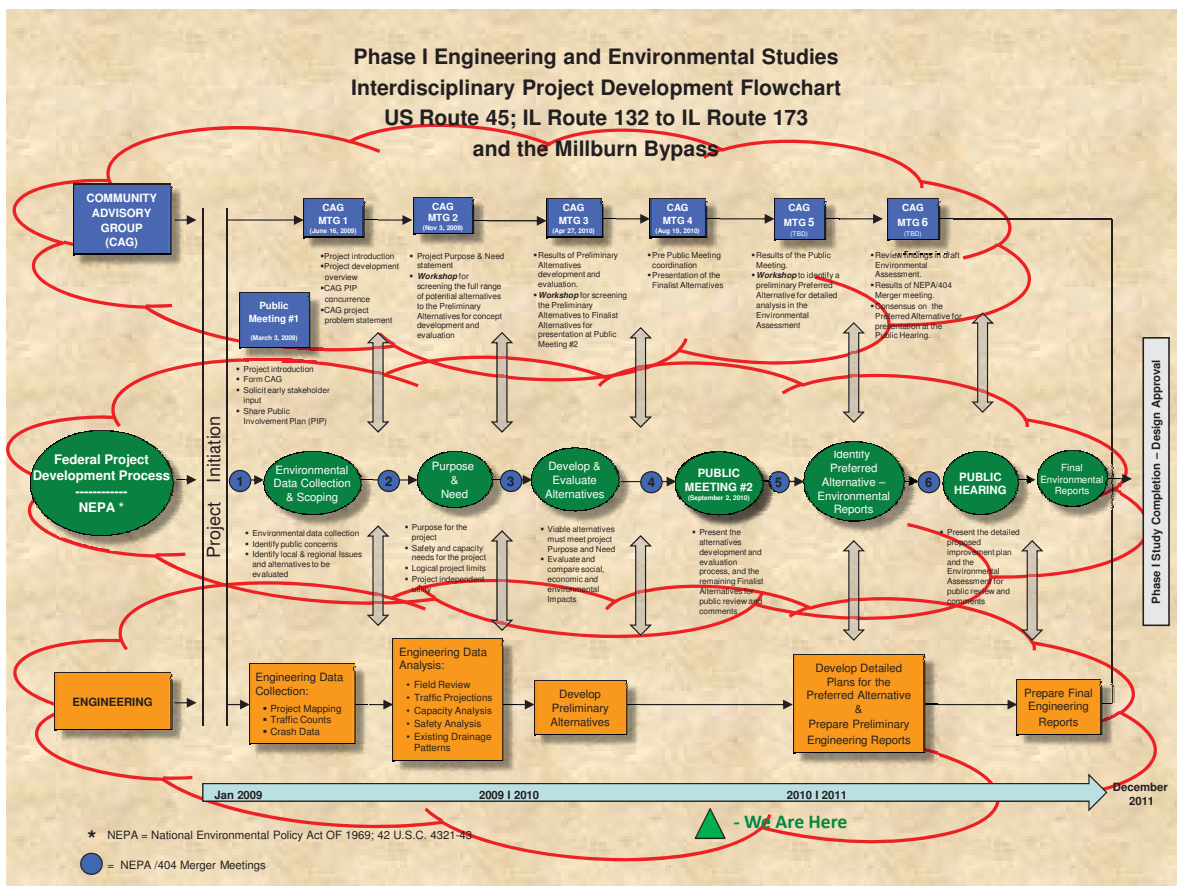
U.S. Route 45 - IL 132 to IL 173 & Millburn Bypass Phase I Study

Project Development Process Overview

- The Project Development Process is:
 - Multi-Disciplinary,
 - Follows the NEPA/Federal Process,
 - Involves comprehensive Engineering and Environmental Analysis
- The Public Meetings held for this project are one of the methods that will be used to solicit public input. The role of the attendees at this Public Meeting will be to provide comments to the Project Study Group (LCDOT, IDOT, FHWA, and consultants) with regard to the alternatives at the potential Millburn Bypass location.



U.S. Route 45 - IL 132 to IL 173 & Millburn Bypass Phase I Study



Public Involvement Plan

- ✓ The Public Involvement Plan (PIP) lays forth the methods and timeline for meaningful coordination with project stakeholders at critical decision making points in the project development process.



- PIP components:

- ✓ Establishes overall framework for Public Involvement during project development
- ✓ Project Study Group (PSG) provides overall project oversight and decision making authority
- ✓ Community Advisory Group (CAG) formed for Millburn Bypass area
- ✓ The project PIP is available for viewing at Station #3



U.S. Route 45 - IL 132 to IL 173 & Millburn Bypass Phase I Study

Community Advisory Group

- Cross Creek Homeowners Association
- Forest Trail subdivision
- Heritage Trails Homeowners Association
- Historic Millburn Community Association
- Lake County Forest Preserves
- Lake County Planning, Building and Development
- Lake County Stormwater Management Commission
- Lake Villa Township
- Lindenhurst Park District
- Lindenhurst Police Department
- Lindenhurst, Village of
- Lindenhurst/Lake Villa Chamber of Commerce
- Millburn C.C. School District
- Millburn Tree Farm
- Old Mill Creek, Village of
- Old Mill Creek Historic Preservation Commission
- Providence Ridge subdivision
- Providence Woods Homeowners Association
- Tempel Farms
- Individual property owners



U.S. Route 45 - IL 132 to IL 173 & Millburn Bypass Phase I Study

Project Purpose & Need

- ✓ Project Problem Statement Developed by the CAG:
 - *"The transportation problems to be solved by the U.S. 45 at Grass Lake Road/Millburn Road project are present and future congestion, safety and accessibility for all modes of transportation, and also impacts to natural and manmade environments."*
- ✓ Purpose: Address capacity, mobility, safety, and operational deficiencies along US 45 within the Millburn Bypass area
- ✓ Need: Identified in the formal Purpose & Need document
 - 300% average increase in traffic volumes on U.S. 45 from 1974 to 2009.
 - Traffic congestion will increase by as much as 400% by 2030 at the Grass Lake Road and Millburn Road intersections, if no improvements are made.
- ✓ Project Purpose and Need Statement is available for viewing at Station 2 and is on the project website

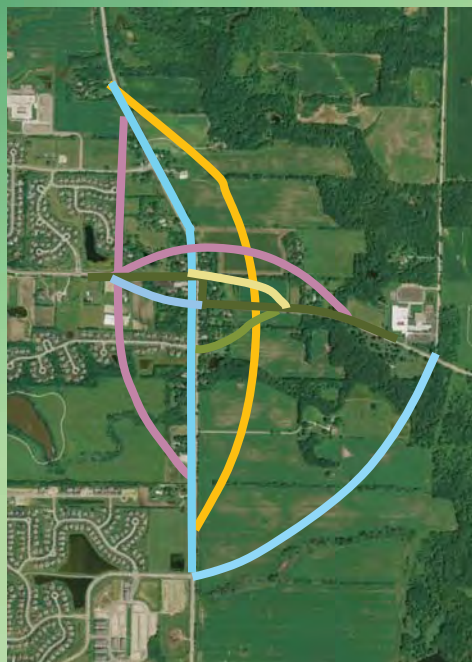


U.S. Route 45 - IL 132 to IL 173 & Millburn Bypass Phase I Study

Alternatives Development

Where We Started

- Exhibit shows options drawn at Public Meeting #1
- Input from CAG
- Refinement by PSG



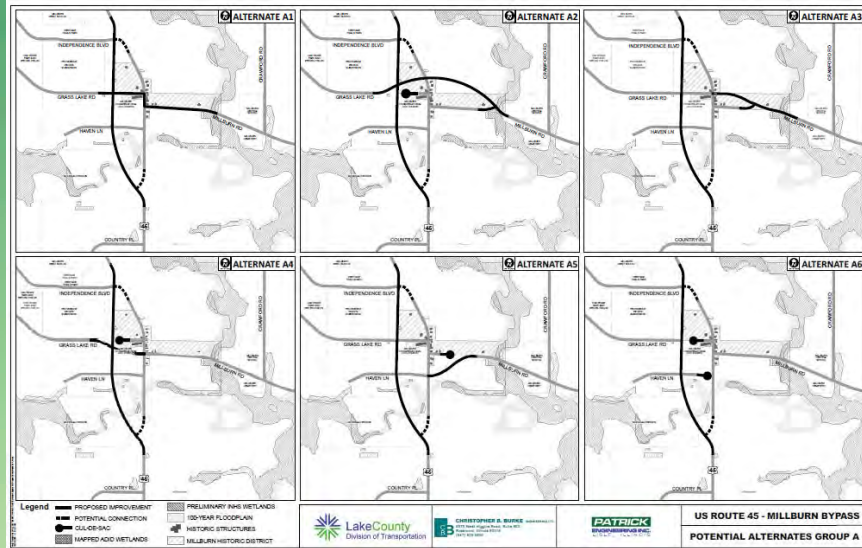
March 2009

- 18 alternatives conceptually created
- 3 north-south alignments
- 6 east-west alignments



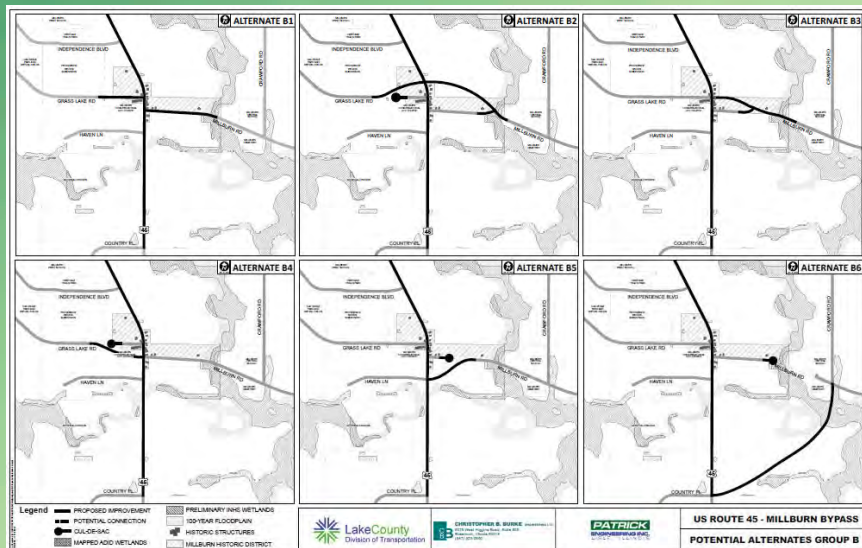
U.S. Route 45 - IL 132 to IL 173 & Millburn Bypass Phase I Study

Initial Alternatives Screening – West Bypass Options (Alignment A)



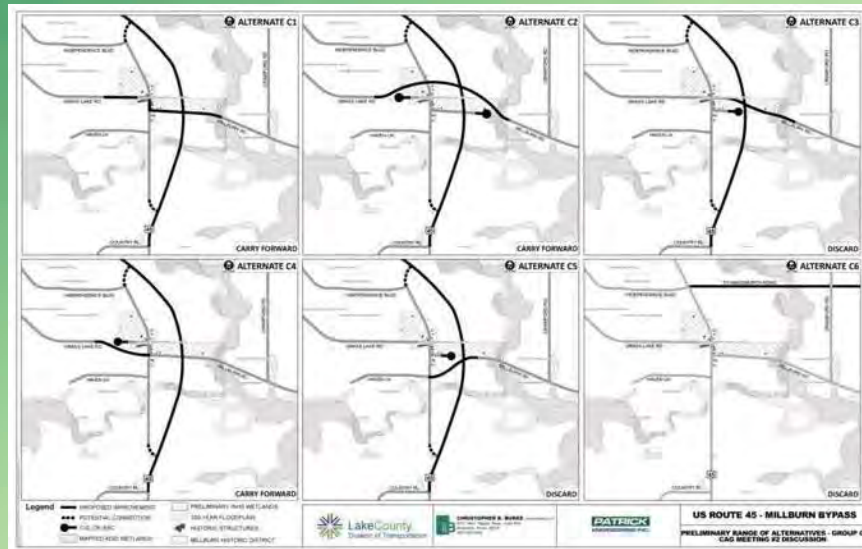
U.S. Route 45 - IL 132 to IL 173 & Millburn Bypass Phase I Study

Initial Alternatives Screening – On-Alignment Options (Alignment B)



U.S. Route 45 - IL 132 to IL 173 & Millburn Bypass Phase I Study

Initial Alternatives Screening – East Bypass Options (Alignment C)



U.S. Route 45 - IL 132 to IL 173 & Millburn Bypass Phase I Study

Alternatives Development and Analysis Process (Evaluation)

- Evaluation Matrix
- Transportation Performance
- Environmental Resources
- Socioeconomic Impacts
- Cost

U.S. Route 45, IL Route 132 to IL Route 173
Millburn Bypass Alternatives
Preliminary Impact Evaluation Matrix

Impact Criteria	Alternative	Transportation Performance					Environmental Resources					Socioeconomic Impacts					Cost				
		1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Travel Time	Alt. C1	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Travel Time	Alt. C2	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Travel Time	Alt. C3	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Travel Time	Alt. C4	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Travel Time	Alt. C5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Travel Time	Alt. C6	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5

Scale:
 1 = Best (Lowest Impact)
 2 = Low Impact
 3 = Moderate Impact
 4 = High Impact
 5 = Worst (Highest Impact)

Legend:
 1 = Best (Lowest Impact)
 2 = Low Impact
 3 = Moderate Impact
 4 = High Impact
 5 = Worst (Highest Impact)

Notes:
 1. Based on existing US Hwy 2011 environmental impact report.
 2. Based on US Hwy 2011 Environmental Assessment & Engineering Report (EIR).
 3. Additional information provided in the EIR.
 4. Public comments to the EIR should be included. (See the EIR for more information.)
 5. Public comments to the EIR should be included. (See the EIR for more information.)



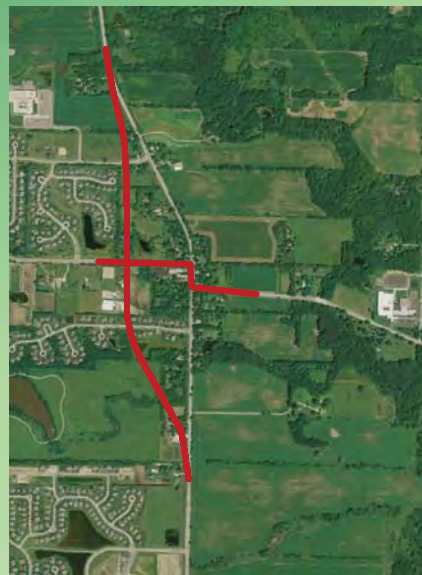
Finalist Alternatives Identified

- Based on the Alternatives Development and Evaluation Results, and input from CAG, the project study team determined the following were not worth pursuing :
 - ✓ All the B alternatives, due to their significant impact to the Historic District buildings
 - ✓ A2 and C2, due to their high cost
 - ✓ C1, since the west to east travel pattern would still pass through the problem Grass Lake and Millburn intersections
 - ✓ Agency coordination and concurrence was received on this screening
 - ✓ Thus, the finalists are A1, A4, and C4



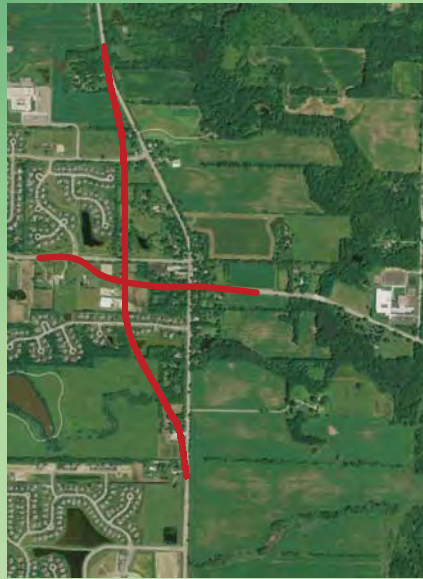
U.S. Route 45 - IL 132 to IL 173 & Millburn Bypass Phase I Study

Alternative A1



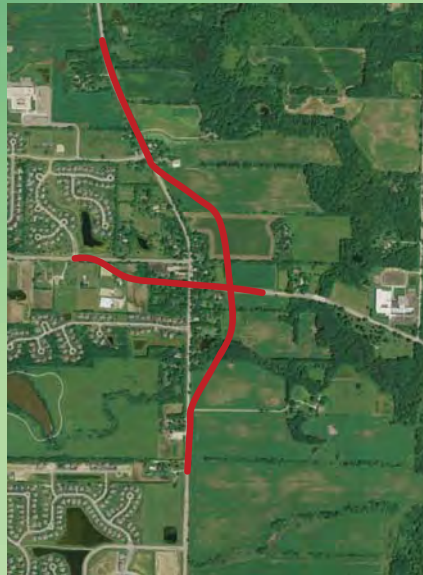
U.S. Route 45 - IL 132 to IL 173 & Millburn Bypass Phase I Study

Alternative A4



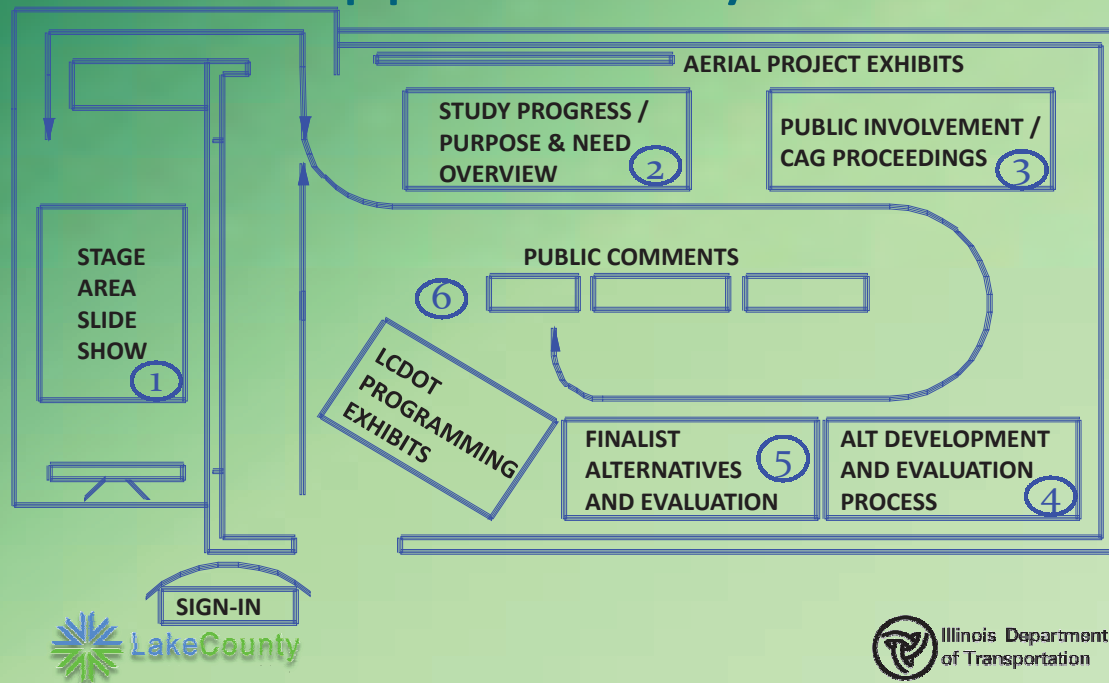
U.S. Route 45 - IL 132 to IL 173 & Millburn Bypass Phase I Study

Alternative C4



U.S. Route 45 - IL 132 to IL 173 & Millburn Bypass Phase I Study

What Happens Today?



U.S. Route 45 - IL 132 to IL 173 & Millburn Bypass Phase I Study

Your Input is Needed!

- ✓ At Station #6, the center Comments tables, please provide feedback on the strengths and weaknesses of these alternatives.
- ✓ Comments Due Date: September 16
- ✓ Your comments are extremely valuable in the process of evaluating the 3 finalist alternatives and selecting a preferred improvement plan for this project

You can also send to your comments to LCDOT at:

www.route45project.com/contactus/



U.S. Route 45 - IL 132 to IL 173 & Millburn Bypass Phase I Study

Evaluating the 3 Finalist Alternatives

- Ask yourself, how do each of the finalist alternatives compare against the project objectives...
 - Transportation Performance?
 - Safety?
 - Environmental Impact?
 - Socioeconomic Impact?
 - Cost?



U.S. Route 45 - IL 132 to IL 173 & Millburn Bypass Phase I Study

Next Steps...

- ✓ Project Team Evaluation of Public Meeting Results
- ✓ CAG Meeting #5 – Fall 2010: Public Meeting Results and Preferred Alternative
- ✓ Prepare Engineering and Environmental Reports for review by the Project Team and FHWA
- ✓ Summer 2011 Public Hearing



U.S. Route 45 - IL 132 to IL 173 & Millburn Bypass Phase I Study

www.route45project.com

Thanks for your participation!

See you at the final Public Hearing.

If you have any project questions in the interim, please contact
Chuck Gleason at LCDOT.

If those questions are in regard to the Public Involvement, please
contact Jarrod Cebulski at Patrick Engineering.

All project information presented at this meeting is also available online at:
www.Route45project.com



U.S. 45 – IL 132 to IL 173 and Millburn Bypass
Public Meeting #2 Questionnaire Response Summary

As stated in the Public Meeting Summary, the purpose of the second Public Informational Meeting held on September 2, 2010 was to provide an update to the public on the progress of the Phase I Study, provide information to the stakeholders regarding the study progress, schedule, and to-date results, and solicit input from the public. At the meeting, a questionnaire in regard to the project issues was distributed. This document serves as a summary of the responses received to that questionnaire.

To recap, 201 questionnaires were completed as a result of the public meeting interaction, and what follows is an outline of the responses.

Question one asked respondents if they agreed a Millburn Bypass was necessary, and the majority (78%) thought the bypass was a necessity. They were also asked if they are for or against a bypass. Most believed that the delays and backups resulting from the current roadway network are unacceptable and require immediate attention. Many people were concerned about safety, noise, truck traffic, and environmental impacts. Those opposed were typically opposed due to cost reasons.

Question two asked what respondents thought of the three finalist bypass alternatives as a transportation improvement. The most common responses are summarized below:

Alternative A1:

- Least expensive and uses the least amount of new land
- Concerned with proximity of the new US 45 alignment to the neighborhoods and school
- Concerned about traffic noise and buffering, heavy truck traffic near neighborhoods, safety including kids near the roadway, impact on parks and preserves, air pollution, displacement of home owners, and decrease in property values
- Concerned this alternative does not fix the problem with east-west traffic progression (through the historic district), considering the current intersection offset and stop light configuration are not corrected
- Concerned about access locations and their safety
- Concerned this alternative limits land development options in the future
- Like the easy access to the historic district and businesses

Overall, the majority of people feel this is their least favorite option.

Alternative A4:

- Many of the same general concerns as were stated under Alternative A1 with regard to the location of the bypass
- Unlike Alternative A1, many people believed that this would correct the problem with east-west traffic progression
- Some liked that travel time would be streamlined with this configuration

- Many who preferred this alternative liked that heavy commuter traffic no longer passes through the Historic District and in general felt traffic performance was better than C4.

Overall, the majority of people feel this is their 2nd choice option.

Alternative C4:

- Prefer the bypass going through farmland instead of impacting residential and school areas
- Less noise and air pollution near residential areas
- There will be more freedom with respect to future development of properties
- Will not impact the forest preserve
- Some opposed to this alternative believed the farmland could be developed more easily without the bypass cutting through it, and felt the roadway would sever the Historic District from its connections to the east

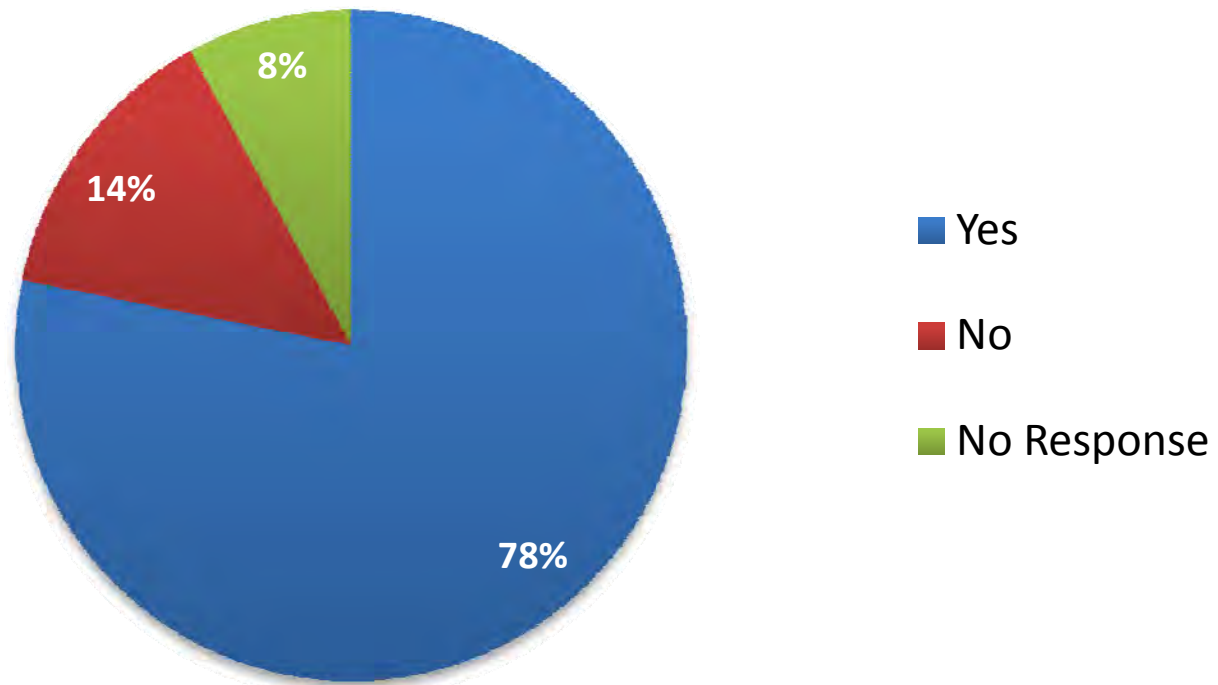
The large majority of responders live to the west of US 45 and are strongly in favor of this alternative. It is believed to be safer with more separation from residents.

Questions three and four asked if there were any other concerns that responders felt needed to be addressed with detailed development of the preferred alternative, or anything in general to be considered by the project study team. Some additional concerns are listed as follows:

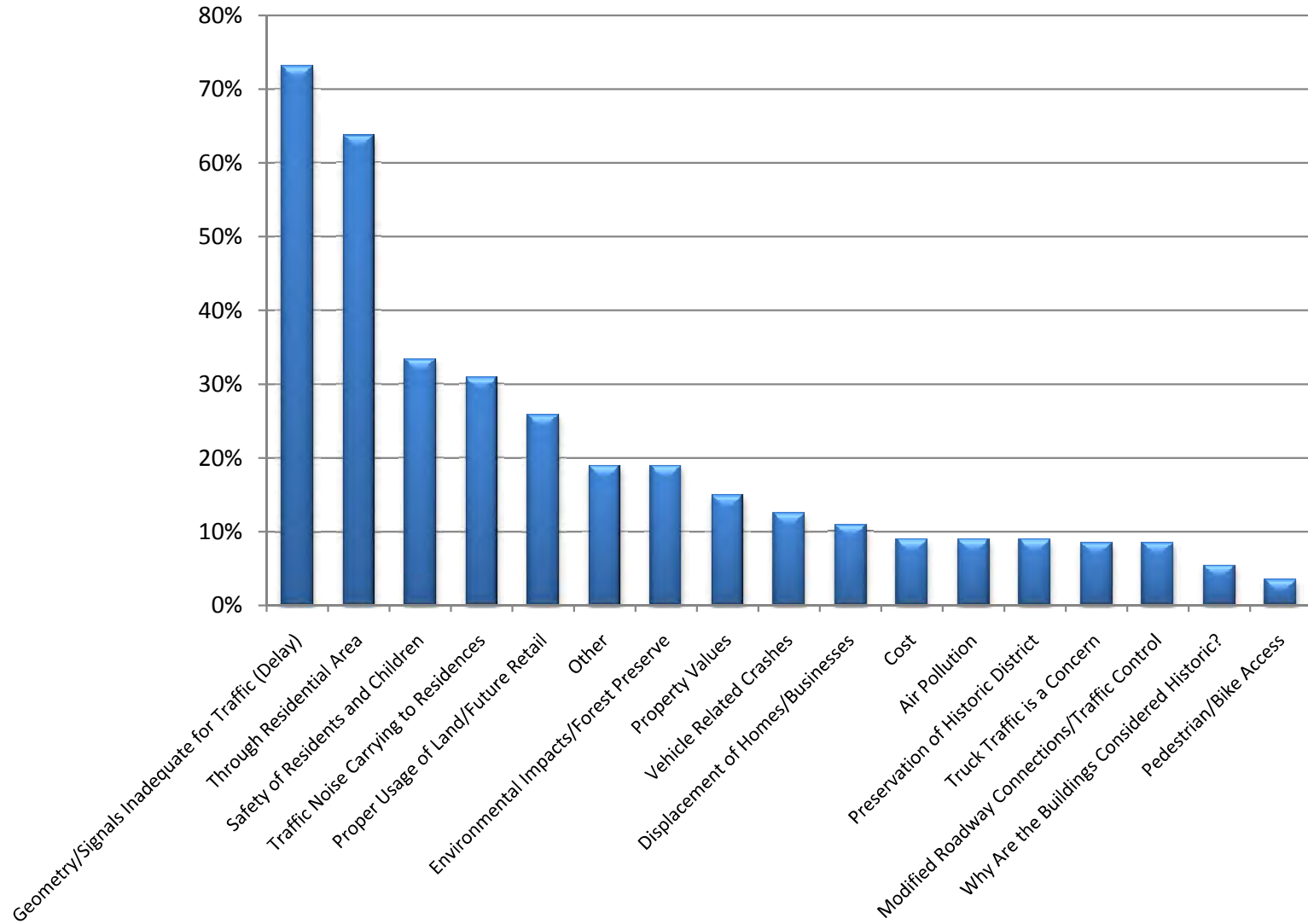
- When will the rest of US 45 be widened?
- Consider the difference in land prices between east and west
- Consideration of State purchase of homes near but not within proposed ROW
- Original plan (maybe SRA) includes 2-lane US 45 not 4-lane (deceptive)
- How soon and what impact construction will have on congestion
- Pedestrian and bike access
- C4 is better for local economy due to tax generation potential (adjacent development)
- People have known about the A alignment going through and got cheaper homes
- Traffic counts were not performed properly
- Don't let Tempel's political influence force the A alignment
- When the west bypass plan was developed it did not consider the residential that now exists
- Existing curves are causing accidents on US 45 and crash concern in general
- Four lanes are not needed
- Stage the east-west alignment first and then the north-south second
- Cost is too high
- Residents plan to have a meeting to discuss options for future development in and around the Millburn Historic District
- Modified access from local roads will cause increased travel time when accessing major roadways
- Why are buildings in Historic District being preserved as their upkeep is poor

[Click to view graphs of proportional results.](#)

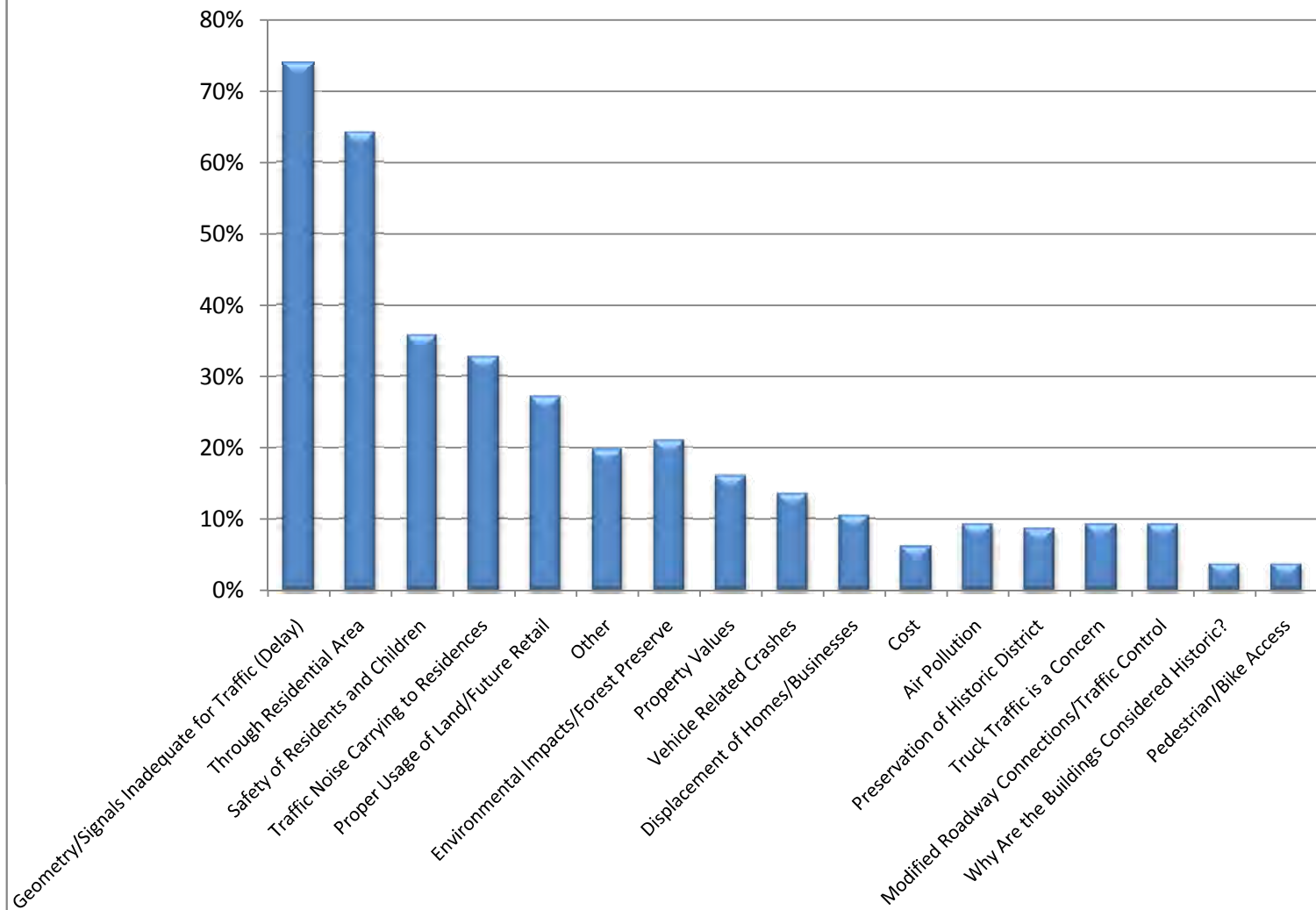
**Respondents who agree the US 45
bypass is a necessity
(201 Respondents)**



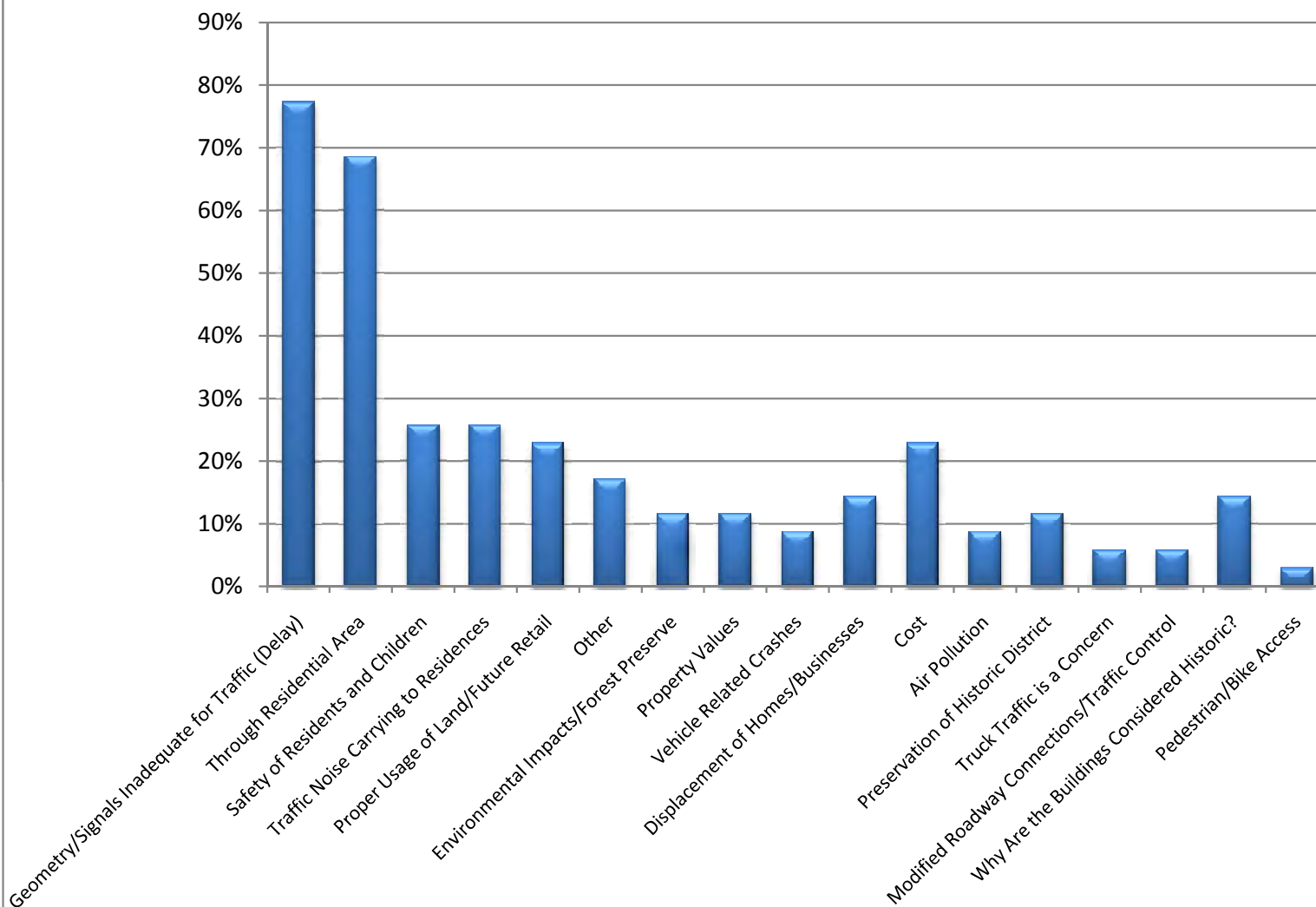
Prevalence of Concerns (201 Respondents)



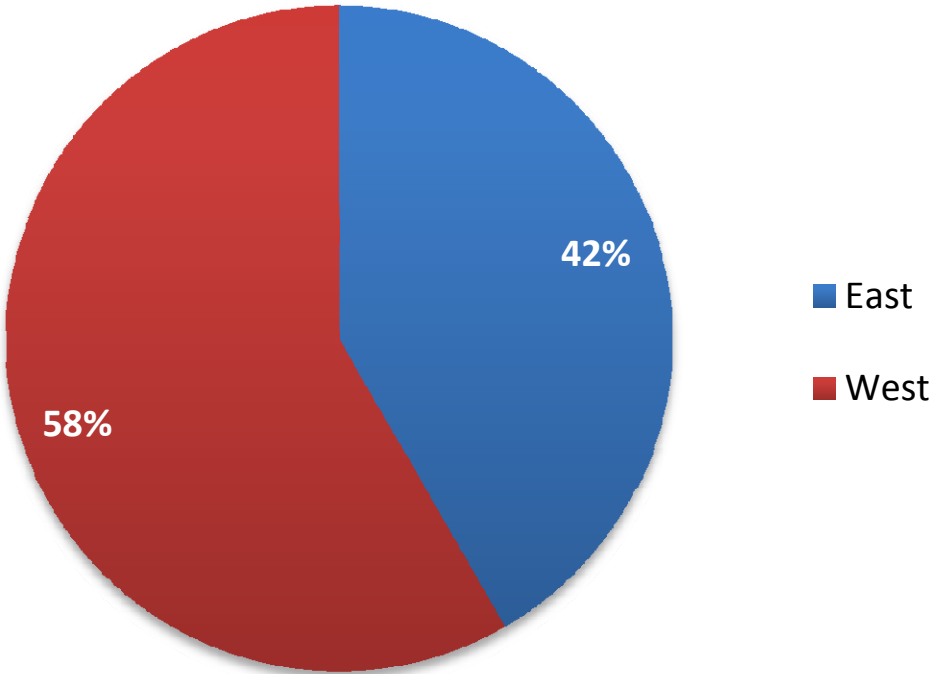
Prevalence of Concerns for those living within 1 mile of the Historical District (162 Respondents)



Prevalence of Concerns for those living outside of 1 mile of the Historical District (35 Respondents)

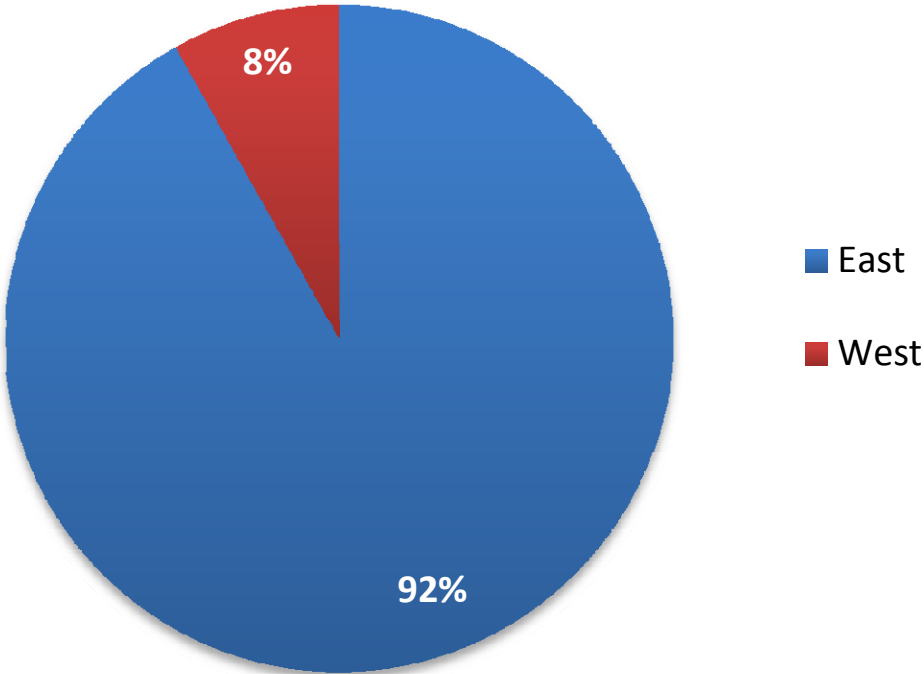


**Bypass Location preference for those
living east* of US HWY 45
(12 Respondents)**



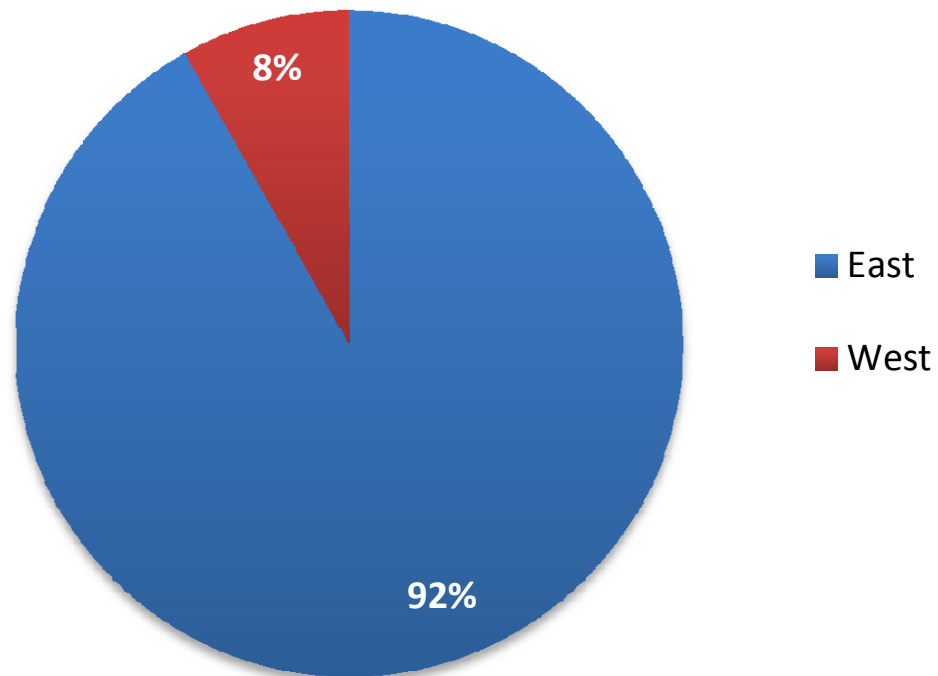
* - Limited to those living within 3 miles of the Millburn Hist. Dist.

Bypass Location preference for those living west* of US HWY 45 (172 Respondents)



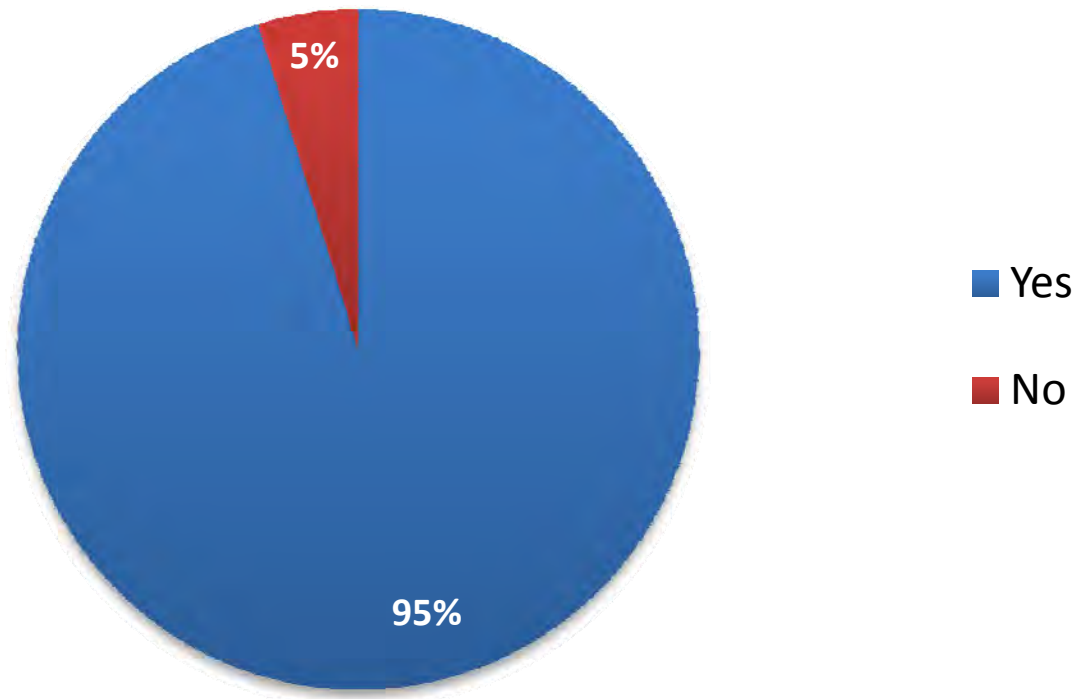
* - Limited to those living within 3 miles of the Millburn Hist. Dist.

**Bypass Location preference for those
living outside * of US HWY 45 project area
(13 Respondents)**



* - Limited to those living further than 3 miles from the Millburn Hist. Dist.

**Respondents in favor of realigning Grass Lake Rd
(189 Respondents)**



**NEPA/404 Merger Meeting
February 3, 2009
At IDOT - District Four Offices**

**IDOT - District One, Lake County
US Route 45 - Millburn Bypass
Environmental Assessment
Project Introduction**

This was the 1st presentation of this project. The purpose of this presentation was to provide an initial project introduction and request resource agency concurrence on the overall project development approach.

The Lake County Division of Transportation (LCDOT) is the lead agency for this project. LCDOT selected a consultant engineering team lead by Christopher B. Burke Engineering, Ltd. (CBBEL) to prepare Phase I Engineering and Environmental studies for this project. The project is being coordinated through the Illinois Department of Transportation (IDOT), District One office, based on the involvement with US Route 45 and the anticipated use of SAFETEA-LU federal funding. At the current time, the project is being processed as an Environmental Assessment (EA) and is being coordinated through the NEPA/404 Merger process. The 2nd NEPA/404 Merger Meeting presentation for this project is anticipated for September 2009 to present the purpose and need. Design approval is anticipated for the summer of 2011.

CBBEL began the presentation with a summary of the project history and distributed an informational packet to all meeting attendees. The proposed project includes a US Route 45 bypass in north-central Lake County, near the intersections of Grass Lake Road and Millburn Road. The project's main objective is to alleviate the north-south and east-west traffic burden through the Millburn Historic District (Historic District), a National Register location, to the extent practical and avoid or minimize impacts to the Historic District resulting from project improvements.

In 1995, a Strategic Regional Arterial (SRA) study was completed that evaluated an east and west US Route 45 bypass alternative. Consensus for a west bypass was achieved at that time by all agencies involved, including: IDOT, LCDOT, Forest Preserve District of Lake County (FPDLC), Villages of Lindenhurst and Old Mill Creek, Historic Millburn Community Association (HMCA), and others. IDOT subsequently recorded the west bypass alignment and purchased one parcel of property along the recorded alignment. Given the elapsed time, and since the SRA planning study did not include a NEPA component, the current study is taking a fresh look at the project, including purpose and need and a full range of alternatives. LCDOT is using a Context Sensitive Solutions (CSS) project development approach based on the IDOT CSS procedures. An initial Public Meeting is scheduled for March 3rd. Based on recent discussions between LCDOT and FPDLC, the FPDLC does not object to the project.

Existing US Route 45 is one lane in each direction near Grass Lake Road and Millburn Road. Traffic volumes in this area along US Route 45 have increased from approximately 4,000

vehicles per day (vpd) in the early 1970s to over 16,000 vpd in 2007. It is anticipated that the 2030 traffic projections will require consideration of additional travel lanes along US Route 45 through this area. Based on the existing narrow right-of-way along US Route 45 through the Historic District, it is anticipated that widening existing US Route 45 would directly impact buildings listed on the National Register of Historic Places within the Historic District.

CBBEL summarized the overall project development approach. A project GIS database is being developed for preliminary alternatives analysis. The GIS database is being developed from data available through the Lake County GIS database, from environmental resource agencies (e.g., IDNR, IEPA, etc.), and select field reconnaissance. The project GIS database will be compiled for an area generally bounded by IL Route 173 on the north, IL Route 132 on the south, Interstate 94 (I-94) on the east, and Deep Lake Road on the west. Wetland delineations will be performed for a smaller core study area that is approximately one-half mile east and west of US Route 45 near Grass Lake Road and Millburn Road. Due to existing residential development and various natural resources within the study area, it is anticipated that the preferred alternative(s) will be located within the core study area. There are no other north-south state routes in the vicinity of US Route 45 at Grass Lake Road/Millburn Road that if improved, would alleviate congestion near this intersection. Detailed engineering and environmental studies and reports will be prepared after identification of the preferred alternative(s). The resource agencies concurred with the GIS database approach for initial alternatives development and evaluation.

CBBEL distributed an environmental resources map of the core study area. The resource map depicts some of the data collected to date, including some notable resources near the core study area, such as mapped ADID wetlands. Based on a review of recent aerial photography, it appears as though some development has occurred within the mapped ADID wetland boundaries. Wetland field reconnaissance will be performed for the core study area by the Illinois Natural History Survey. Other notable resources/constraints near the core study area include the Historic District, floodplain/floodway, McDonald Woods Forest Preserve, an Illinois Natural Areas Inventory site, a mapped location of a State-endangered bird, and adjacent residential development.

Agency Comments:

- 1) Add Section 106 (National Historic Preservation Act) Report to the list of permits/approvals (Stevens – IDOT/BDE)
- 2) Add the Chicago Metropolitan Agency for Planning (CMAP) to the stakeholder list (in the PowerPoint) (West – USEPA) – Note that CMAP is listed as a stakeholder in the Stakeholder Involvement Plan
- 3) Contact CMAP regarding available data from their GIS database (West – USEPA)
- 4) Indirect and cumulative impacts will need to be addressed; this topic will be brought up again (West – USEPA).

**IDOT District 1, Lake County
US 45 Millburn Bypass
Environmental Assessment
Information – Project Update**

This was the second presentation of this project. The previous presentation was on February 3, 2009. The purpose of this presentation was to provide a project status update with respect to revised project termini for the Environmental Assessment, and the results of the Community Advisory Group (CAG) meeting #1 including development of the CAG project problem statement. The Lake County Division of Transportation (LCDOT) is the lead agency for this project, with all reviews being coordinated through IDOT and FHWA.

In the interest of time, the FHWA requested that the prepared Powerpoint presentation not be made, but instead a brief review of the main points of the project status update. The project consultant (Christopher B. Burke Engineering, Ltd. - CBBEL) distributed an informational packet to all meeting attendees. The informational packet included the following materials:

- Powerpoint presentation slides
- Logical Termini Determination white paper
- Community Advisory Group #1 summary
- Public Involvement Plan date June 2009 (as presented to CAG)
- Overall Project Limits exhibit

CBBEL summarized the Logical Termini Determination white paper. Based on coordination meetings between LCDOT, IDOT and FHWA subsequent to the February 2009 NEPA/404 presentation, the project limits with respect to the Environmental Assessment have been extended from IL Route 132 on the south to IL Route 173 on the north. These limits were extended to ensure environmental issues are addressed on a broad scale with respect to likely future improvements along US Route 45 within these logical termini. The likely future improvement will be identified by traffic analysis, with needed improvements developed to a conceptual level to identify the roadway footprint for environmental analysis. Detailed engineering will be limited to the original planned construction limits in the vicinity of Grass Lake Road and Millburn Road at US Route 45. The resource agencies concurred with this approach.

CBBEL referred to the Public Involvement Plan (PIP) which is modified from the previous Stakeholder Involvement Plan (SIP). While LCDOT is using CSS project development principles, LCDOT is not following IDOT CSS policy. Therefore, the SIP was renamed to PIP to avoid confusion. There were no comments on the PIP.

CBBEL referred to the Community Advisory Group (CAG) meeting #1 summary. CAG #1 was held on June 16, 2009. 22 members of the CAG were in attendance. The overall agenda for this meeting included a project introduction including discussion of the current EA limits from IL Route 132 to IL Route 173; review and CAG concurrence with the PIP, and a workshop to develop the CAG Project Problem Statement. The consensus CAG Project Problem Statement developed is as follows:

“The transportation problems to be solved by the US 45 at Grass Lake Road/Millburn Road project are present and future congestion, safety and accessibility for all modes of transportation, and also impacts to natural and manmade environments.”

There were not comments on the CAG Project Problem Statement.

CBBEL reviewed the next steps in project development. The overall project schedule is included as a Powerpoint slide with a tabular form included in the PIP. CAG #2 is planned for the 1st week in November with the primary agenda items being review of the draft project Purpose and Need statement, and initiation of alternatives development and evaluation. The Chicago Metropolitan Agency for Planning

(CMAP) has already provided 2030 No-Build traffic projections for this project and will be providing 2030 Build projections by the end of September. The Draft project Purpose and Need statement will be prepared upon receipt of these traffic projections and submitted to LCDOT, IDOT and FHWA to initiate the review process for Concurrence Point #1. The project team is targeting the February 2010 NEPA/404 Merger meeting for concurrence on Purpose and Need. A draft Purpose and Need statement will be shared with the CAG at CAG #2 to solicit their comments. The draft Purpose and Need statement will include the CAG Project Problem Statement.

Agency Comments:

- 1) Will Crawford Road to the east be considered as a potential east bypass alternative from Millburn Road to IL Route 173? (West – USEPA).

Response: Whereas local bypass alternatives are being considered in the vicinity of the Millburn Historic District due to likely impacts associated with capacity improvements, these type of constraints are not known to be present to the north or south and therefore an aggressive realignment of US Route 45 one to two miles to the east along Crawford Road is not warranted or anticipated. In addition, Crawford Avenue is within the Village of Old Mill Creek and is planned for low density residential with Crawford Road serving as a local roadway, not compatible with remarking as US Route 45.

US Route 45/Millburn Bypass
IL Route 132 to IL Route 173
Section No. 05-00262-02-RP
Lake County Division of Transportation
CBBEL Project No.: 080677

10/16/09 Teleconference
Meeting Minutes

DATE: 10/23/09

TO: All Attendees, Chuck Gleason (LCDOT), File

FROM: Mike Matkovic, PE; Christopher B. Burke Engineering, LTD. (CBBEL)

SUBJECT: IDOT, IHPA and FHWA Teleconference regarding the Millburn Historic District
10/16/09 at 10:30 am – 11:30 am

LOCATION: Teleconference

ATTENDEES: Matt Fuller (FHWA)
Mike Hine (FHWA)
Anne Haaker (IHPA)
John Walthall (IDOT – Bureau of Design and Environment)
Barbara Stevens (IDOT – Bureau of Design and Environment)
Laura Fry (IHPA)
Vanessa Ruiz (IDOT District 1 Bureau of Programming)
Marie Glynn (IDOT District 1 Bureau of Programming)
Ryan Westrom (Patrick Engineering)
Mike Matkovic (CBBEL)
Marty Worman (CBBEL)
Pete Knysz (CBBEL)
Matt Huffman (CBBEL)

The purpose of the teleconference on October 16, 2009 was to discuss the US Route 45 Phase I Study, led by Lake County Division of Transportation (LCDOT), and the evaluation of alternatives with regards to the National Register designation of the Millburn Historic District and its relation to the NEPA alternative development process. This Phase I Study is advancing through the Federal project development process due to the potential use of SAFETEA-LU funding secured for this project.

The current Phase I Study of US Route 45 is investigating the intersections of Grass Lake Road and Millburn Road with a potential bypass to the east or west since existing US Route 45 in this area traverses the Millburn Historic District. This Millburn Historic District was added to the National Register of Historic Places in 1979 and includes 18 designated structures. Millburn Road and Grass Lake Road intersect US Route 45 within the Millburn Historic District with offset intersections approximately 330 feet apart. Many of the historic structures are close proximity to those intersections. In the early to mid 1990's IDOT conducted a Strategic Regional Arterial (SRA) study for US Route 45 which resulted in a recorded alignment for a west bypass; this cuts through the eastern portion of McDonald Woods Forest Preserve (Lake County Forest Preserve District). During the IDOT SRA study there was coordination with LCDOT, Lake County Forest Preserve District (LCFPD), Historic Millburn Community Association (HMCA), the Village of Lindenhurst, and the Village of Old Mill Creek. However, the IDOT SRA study did not go



through the NEPA process or comply with Section 4f and Section 106; therefore the current Phase I Study is looking at a full range of alternatives that satisfy NEPA, Section 4(f), and Section 106 processes.

Coordination with the attendees (listed above) occurred prior to the conference call. Background materials were distributed for review in an October 6, 2009 e-mail. Subsequent to that email, in preparation for CAG meeting #2, a range of reasonable alternatives was being developed which includes four base alternates: no build, west bypass, existing US Route 45 alignment, and east bypass. With each base alternate there are numerous combinations of cul-de-sacs and re-routing Millburn Road or Grass Lake Road. Also attached in the e-mail was a resolution passed by the HMCA supporting a western bypass and opposing an eastern bypass that would bisect the historic district. The Village of Old Mill Creek recently or is currently in the process of passing a resolution supporting a western bypass, but LCDOT has yet to receive notification.

The Village of Lindenhurst is west of US Route 45. The land east of US Route 45 is in the Village of Old Mill Creek and is predominantly open space with some environmentally sensitive areas mapped along North Mill Creek (and Millburn Creek). Tempel Farms (Lipizzan horse breeders) owns a large portion of this land. The Millburn Historic District is also within the Village of Old Mill Creek

An exhibit distributed prior to the conference call showed the location of the historic district and all 18 buildings. Based on the 1979 National Register application, structure number 1 (i.e. the Jake Strang house) is the most significant building in the historic district. Structures 1, 2, 3, 4, and 9 are designated as primary structures. A potential east bypass alternate would bisect the historic district between structure 13 and structure 1. The National Register application specifically cites the relationship of the buildings and the context of this early settlement as significant. This specific issue was brought up for discussion with IHPA, BDE, and FHWA for further input with regards to what a bisection of a historic district means in the context of NEPA and National Register designation. It was asked to IHPA, BDE, and FHWA if an east bypass is precluded at this point in the project development process, in light of the resolution received and relative to NEPA, Section 4(f), and Section 106 with bisecting a historic district while not physically impacting buildings.

FHWA Response: More information is needed to eliminate an east bypass alternative from consideration. In addition there are potential Section 4(f) impacts (e.g. McDonald Woods Forest Preserve) along with other environmental resources associated with a west bypass. Both east and west bypass alternatives need to be carried forward for further evaluation in order to compare impacts.

IHPA Response: More information and investigation is needed of the historic district. With regards to potentially relocating buildings within the historic district the context of the placement of buildings needs to be assessed. Further investigation into the National Register application and contact with the HMCA is



needed. Widening US Route 45 could potentially result in significant historic district impacts due to the proximity of the structures to the existing roadway.

IDOT BDE Response: Further investigation/coordination will be required to determine if an east bypass that bisects the historic district would require a Section 4(f). Also BDE inquired if McDonald Woods Forest Preserve was established prior to the 1995 SRA study. The LCFPD was consulted about McDonald Woods Forest Preserve during the SRA study; they passed a resolution supporting a west bypass alternate at that time. BDE agrees that more information is required and the east bypass should be evaluated and compared with other alternatives considered.

On the above basis an east bypass alternative will be carried forward for further analysis. IHPA and BDE would like the December FHWA meeting minutes to be distributed to them which should discuss the CAG meeting #2 meeting and range of alternatives.

These notes represent the preparer's understanding of the items discussed and are not a verbatim account of the discussion. They are intended to generally document the discussions held; if any portion of these Minutes is found incomplete or inaccurate, please notify the preparer in writing within five business days from the receipt of the Minutes.

Matthew Huffman, EI
CBBEL



IDOT District 1, Lake County
US 45 from Illinois Route 132 to Illinois Route 173
Environmental Assessment
Concurrence - Purpose and Need

This was the 3rd presentation of this project. The previous presentation was on September 9, 2009. The purpose of this presentation was to request resource agency concurrence on the project Purpose and Need and to provide an introduction to the Millburn Bypass alternatives.

The project consultant (Christopher B. Burke Engineering, Ltd. - CBBEL) distributed an informational packet to all meeting attendees at the Matteson office; an identical packet was previously sent to Springfield for distribution and review. The informational packet included the following materials:

- PowerPoint presentation slides
- Purpose and Need – EA Chapter 1
- Full Range of Alternatives Exhibit showing general location of Potential Alternative Groups (north/south: Groups A-C; east/west Groups 1-6) resulting from early stakeholder coordination
- Preliminary Range of Alternatives Exhibits (one sheet for each north/south alternative paired with each of the 6 east/west options)
- Draft Template: Alternatives Evaluation Matrix
- Minutes from the February 3 and September 9, 2009 NEPA/404 Merger Meetings
- Community Advisory Group (CAG) #2 Meeting Summary
- Millburn Bypass Alternatives Development/Evaluation Summary Table

CBBEL reviewed the project limits. As discussed at the September 3, 2009 NEPA/404 Merger meeting, an Environmental Assessment (EA) is being prepared for this project based on the likely future improvement needs along US Route 45 from IL Route 132 to IL Route 173 that will be identified by analysis of projected year 2030 traffic. The identified needed improvements will be developed to a conceptual level to identify the roadway footprint for environmental analysis, and to ensure that environmental issues are addressed on a broad scale with respect to likely future improvements along US Route 45 within these logical project termini. Detailed engineering and a Combined Design Report (CDR) will be prepared for the core project area in the vicinity of Grass Lake Road and Millburn Road at US Route 45, which is funded for construction by the Lake County Department of Transportation (LCDOT).

CBBEL used a PowerPoint presentation to guide the overall project discussion, and proceeded with a presentation of the project Purpose and Need, also referring to the Purpose and Need statement as distributed to all meeting attendees.

The purpose of the project is to provide an improved transportation system to address capacity, mobility, safety, and operational deficiencies along US Route 45 from IL Route 132 to IL Route 173 in Lake County, Illinois. CBBEL reviewed the history of the project and the population and employment growth that has occurred, and the additional growth that is projected by the year 2030. CBBEL also reviewed the projected increase in traffic volumes by the year 2030 for the No-Build alternative. If no improvements are made to US Route 45 (No-Build alternative), traffic volumes are projected to increase from 20-100% by the year 2030, and existing travel performance deficiencies and crash occurrences will worsen. Intersection performance at the five existing signalized intersections within the limits from Illinois Route 132 to Illinois Route 173 will degrade to an unacceptable level of service of "F" under 2030 No Build conditions. A main focus area of the project is to alleviate traffic congestion at the intersections of US Route 45 with Grass Lake Road and Millburn Road within the Millburn Historic District. The location and proximity of these intersections and the narrow existing right-of-way precludes capacity improvements without impacts to the historic district and historic structures.

The draft project Purpose and Need statement was discussed with project stakeholders at the 2nd CAG meeting on November 3, 2009. The CAG concurred with the Draft Purpose and Need statement with only minor editorial comments provided.

After brief discussion, the FHWA polled the resource agencies for concurrence with the project Purpose and Need statement as follows:

- Illinois Department of Natural Resources (IDNR: Hamer) – Concur
- Illinois Historic Preservation Agency (IHPA: Haaker) – Concur
- US Army Corps of Engineers (USACE: Chernich) – Concur
- US Department of Agriculture (Savko) – Concur
- US Environmental Protection Agency (USEPA: West/Westlake) – Concur
- US Fish and Wildlife Service (USFWS: Cirton) – Concur

All resource agencies in attendance concurred with the project Purpose and Need.

The second half of the presentation focused on an introduction to the Millburn Bypass Alternatives. Eighteen initial potential alternatives were developed based on NEPA requirements, project history, and stakeholder input from the initial Public Meeting, including north-south (Group A-West Bypass; Group B-Existing Alignment; Group C-East Bypass) and east-west (1-Existing Grass Lake/Millburn Road; 2-6 Various E-W Connections) alternatives. CBBEL reviewed the conceptual line drawings of the eighteen initial alternatives, as well as the preliminary typical cross-sections of proposed improvements to US Route 45 and the county routes: Grass Lake Road and Millburn Road.

A workshop was held with the project CAG at the November 3, 2009 meeting to discuss the eighteen initial potential alternatives. As a result of input received from the CAG workshop and further discussion with Lake County Division of Transportation (LCDOT) and IDOT, nine alternatives were considered unreasonable and were not carried forward based on not meeting the project purpose and need and/or obvious severe impacts relative to other similar alternatives that would avoid such impacts. CBBEL reviewed the table that summarized the initial alternatives that were discarded and those that were carried forward for development and evaluation. On this basis, the original full range of eighteen potential alternatives has been narrowed to a reasonable range of nine initial bypass alternatives for development and evaluation.

In response to a question concerning the LCFPD opinion regarding the west bypass alternatives and resulting impacts to McDonald Woods Forest Preserve, CBBEL explained that in 1995, a Strategic Regional Arterial (SRA) feasibility study was completed by IDOT that evaluated east and west US Route 45 bypass alternatives. Consensus for a west bypass was achieved at that time by all agencies involved (including: IDOT, LCDOT, Lake County Forest Preserve District (LCFPD), Villages of Lindenhurst and Old Mill Creek, Historic Millburn Community Association (HMCA), and others). Therefore, the LCFPD is not surprised by the Group A west bypass alignments.

On the above basis, the resource agencies in attendance concurred with the screening of the eighteen initial potential alternatives and the project moving forward with the reasonable range of nine alternatives for development and evaluation.

CBBEL presented a draft evaluation matrix that will be used for evaluation of the alternatives moving forward. The evaluation matrix will be used to summarize potential environmental and socio-economic impacts associated with various alternatives for comparative purposes.

It was noted that the State is scheduling archaeological/cultural field work to occur as soon as practicable, but additional coordination is necessary. In order to keep the project moving forward, the agencies concurred that an analysis based on Geographic Information Systems (GIS)/available data remains acceptable while the State performs additional studies of the project corridor (e.g., archaeological/cultural fieldwork and analysis).

Agency Comments:

- 1) Population and employment growth is projected to increase by approximately 30% for Lake County by the year 2030, with higher increases along the US Route 45 corridor. What is driving the population growth up? (West – USEPA).

Response: Much of the land in the communities surrounding the proposed improvements is undeveloped. The Comprehensive Plans for these communities show development in the much of the undeveloped area. For example, the Comprehensive Plan for the Village of Old Mill Creek shows a Village Center with “special retail” development on the east and west sides of US Route 45 within the Historic District, as well as adjacent proposed medium and low density residential development.

- 2) Within the project area there are many engineering challenges, such as potential water resources issues, as well as adjacent forest preserve lands; however, one of the biggest issues may be the Historic District. (West – USEPA)

Response: CBBEL concurred.

- 3) USEPA commended LCDOT and the consultant team for developing and starting with a full range of alternatives. (West – USEPA)

Response: Thank you.

- 4) IHPA also commended LCDOT and the consultant team for their efforts to date. (Haaker – IHPA)

Response: Thank you.

- 5) The Millburn Historic District is one of the older districts in the state and this Historic District may increase in size; there are an additional three properties that have submitted an application for inclusion in the Millburn Historic District. IHPA requested that the photos of the structures on these three properties be forwarded to their office as soon as practicable. (Haaker – IHPA)

Response: IDOT will forward the photos of the three properties to IHPA.

- 6) In the existing condition, what is the width of the US Route 45 right-of-way, especially through the Historic District? (Haaker – IHPA)

Response: In the existing condition, the width of the US Route 45 right-of-way is approximately 80-ft, but this width narrows to as little as approximately 60-ft through the Historic District. There is no median in the existing condition. A 130-ft right-of-way is anticipated for the US Route 45 Bypass in the proposed condition. This includes an 18-22 ft wide barrier curbed median, 5-ft wide sidewalk, and a 10-ft wide bike path.

- 7) IHPA recommended that the historic cemetery reportedly located adjacent to the east side of US Route 45 be investigated as soon as feasible. IHPA stated that typically bodies were not removed from historic cemeteries when headstones were relocated. (Haaker – IHPA)

Response: Coordination regarding the historic cemetery investigation/fieldwork is underway.

NEPA/404 Merger Meeting Summary

June 11, 2010

IDOT District 1, Lake County
US 45 from Illinois Route 132 to Illinois Route 173
Environmental Assessment
Information – Project Status Update

This was the 4th presentation of this project. The previous presentation was on February 18, 2010. The purpose of this presentation was to discuss the results of the bypass alternatives development and evaluation process and the associated stakeholder coordination that has occurred since the previous NEPA/404 Merger meeting. On this basis, the Project Team is recommending that six of the nine bypass alternatives be dismissed from further consideration, with the remaining three alternatives to be further developed and presented at a Public Meeting during the Summer 2010, along with the overall bypass alternatives development and evaluation process to date.

The following information was distributed to the NEPA/404 Merger meeting attendees via e-mail approximately two weeks in advance, with additional copies provided at the meeting to all meeting attendees.

- NEPA/404 Merger meeting Agenda
- The Project Status Summary white paper that was distributed to the Community Advisory Group (CAG) members in advance of the April 27, 2010 CAG meeting (this provides a synopsis of project development activities since Fall 2009, and it also provides a detailed explanation on the development of the nine bypass alternatives and the development and use of the Evaluation Matrix)
- Meeting minutes from the CAG meeting #3 on April 27, 2010
- Project Team recommendations for further screening of alternatives from nine to three
- Previous NEPA/404 Merger meeting minutes from February 18, 2010
- Exhibits showing the nine bypass alternatives developed for comparative analysis and for discussion with the CAG
- The Evaluation Matrix which summarizes the results of the comparative analysis of the bypass alternatives

The project consultant (Christopher B. Burke Engineering, Ltd. – CBBEL) used a PowerPoint presentation to guide the overall project discussion. The project limits were re-stated. As mentioned at the previous NEPA/404 Merger meeting, an Environmental Assessment (EA) is being prepared for this project based on the likely future improvement needs along US Route 45 from IL Route 132 to IL Route 173. The intersections of US Route 45 at Grass Lake Road and Millburn Road lie within the Millburn Historic District, a National Register Historic Place. The location and proximity of these intersections and the narrow existing right-of-way precludes capacity improvements without impacts to the historic district and historic structures.

As discussed at the February 2010 NEPA/404 Merger meeting, eighteen initial potential bypass alternatives were identified based on NEPA requirements, project history, and stakeholder input from the initial Public Meeting, including north-south and east-west alternatives. Nine bypass

alternatives were dismissed due to unacceptable impacts and/or not meeting the project purpose and need. On this basis, the resource agencies in attendance concurred with the project moving forward with the reasonable range of nine bypass alternatives for development and evaluation, including Alternates A1, A2, A4, B1, B2, B4, C1, C2, and C4.

The “A” alternatives represent a US Route 45 west bypass, which uses the previously recorded IDOT alignment. The “B” alternatives represent an add lanes project on the existing US Route 45 alignment, and the “C” alternatives represent a US Route 45 east bypass. Each US Route 45 alignment is associated with 1 of 3 east-west improvement options. The “1” option maintains existing alignments of Grass Lake Road and Millburn Road. The “2” option realigns Grass Lake Road and Millburn Road to the north. The “4” option realigns Grass Lake Road to the south to meet Millburn Road. Building displacements that would result with the construction of each alternative are depicted on the conceptual drawings. All of the “B” alternatives result in the displacement of several historic structures.

CBBEL referred the meeting attendees to the Project Status Summary which provides a complete overview of the bypass alternatives development and evaluation process that has occurred for this project to date. The nine bypass alternatives were developed based on project design criteria assembled and reviewed by Lake County Division of Transportation (LCDOT) and IDOT to ensure each alternative is viable with respect to roadway design at this stage of development. As shown on the typical cross-sections distributed at the February 2010 NEPA/404 Merger meeting, a 130’ right-of-way (ROW) width is anticipated for the US Route 45 Bypass in the proposed condition, with an 80’ ROW width for Grass Lake Road and Millburn Road in the proposed condition. All nine bypass alternatives were developed with respect to proposed alignment and horizontal geometrics, and reviewed by LCDOT and IDOT for design acceptance and stakeholder coordination moving forward.

Next, discussion focused on the bypass alternatives evaluation and results. Matrix content, relative comparison of alternatives, and presentation were summarized. The matrix evaluation criteria are separated into four main categories: Transportation Performance, Environmental Resource Impacts, Socio-Economic Impacts, and Construction Cost. For the majority of the criteria, the results were quantity based, when direct measurable performance or impacts could be developed. For some of the criteria, the results were quality based, with the Project Team developing these results based on the best available information at this stage of overall project development. A color grading system was used to provide a visual representation as to which bypass alternatives perform relatively strong or relatively weak when compared to the other alternatives, within each criterion. Weighting of evaluation criteria was not used.

At this point in the evaluation process, the impact evaluation is based on the width of the ROW footprint per the typical cross-sections. Potential impacts are based on the best available information, including the results of field studies completed for this project (e.g., INHS field delineated wetlands) supplemented with available GIS information. Environmental surveys, such as cultural resources, are on-going and results will be evaluated as information becomes available.

A results summary for the four main evaluation criteria follows:

Transportation Performance: Based on Synchro/Simtraffic analysis of the core study area for each alternative and comparison of selected Measures of Effectiveness. Alternates A4 and B4 were strongest in comparison. Alternates B1 and C1 were weakest in comparison.

Environmental Resource Impacts: The B alternatives, as well as A2 and C2, were weakest in comparison predominantly due to historic district impacts, including historic buildings.

Socio-Economic Impacts: The B alternatives were clearly weakest in comparison, primarily due to resulting displacements.

Construction Cost: Alternates A2, B2, and C2 were weakest in comparison. Alternates A1, B1, B4, and C1 were strongest in comparison.

CBBEL provided a summary of the 3rd meeting of the project CAG on April 27, 2010. A PowerPoint presentation was used to update the CAG members on the project developments since the 2nd CAG meeting, which was also described in the Project Status Summary paper. A detailed explanation of how the nine bypass alternatives were developed and evaluated was given, as well as an explanation for the color coding system used with the evaluation matrix.

The CAG members were then placed in one of three breakout groups (Group 1, 2, or 3) to discuss the results of the bypass alternatives development and evaluation process, and to formulate their opinions on whether each alternative compares relatively strong or relatively weak to the other alternatives (and why), and whether the alternatives should be considered for more detailed development or dismissed (and why).

CBBEL referred the meeting attendees to the Alternatives Screening Recommendations paper that was distributed to meeting attendees and summarizes the results from the CAG meeting. Based on the CAG input received, there was general consensus that the “B” alternatives should not be considered any further due to the resulting displacements of historic structures within the Millburn Historic District. There was also general consensus for dropping the “2” options due to higher costs resulting from the greater length of roadway construction, as well as due to the property impacts/acquisition required within the Millburn Historic District boundaries both east and west of existing US Route 45. There appeared to be general consensus for four alternatives: A1, A4, C1, and C4. Group 1 supported A1, A2, C2, and C4. Group 2 supported A4 and C4. Group 3 supported Alt A1, A4, and C4.

Subsequent to the CAG #3 meeting, the Project Team (LCDOT, IDOT and the project consultants) met to discuss the overall bypass alternatives evaluation results and the recommendations moving forward. There was consensus within the Project Team that alternate C1 also be dismissed from further consideration based on the comparatively weak transportation performance. On this basis, LCDOT and IDOT/District One are recommending that alternatives A1, A4, and C4 be carried forward for further development and evaluation, and that the other six alternatives be dismissed from further consideration.

It was noted that the “A” alternatives cross through forest preserve property. The Consultant Team and LCDOT have met with the Lake County Forest Preserve District (LCFPD) to discuss this project. Overall LCFPD does not object to the “A” alternatives. LCFPD does have a

concern with the fragmentation of a northeast portion of their property (at McDonald Woods) that would be isolated following construction of the “A” alternatives. Additional coordination with LCFPD would occur if an “A” alternative is selected as the proposed action.

Discussion of the Project Team’s recommendations occurred. Concurrence with this recommendation was not received from all of the resource agencies as discussed below under Agency Comments.

Discussion then segued to project updates and next steps, including the following:

Millburn Burial Site: Based on information received from the state, there is a burial site located adjacent to US Route 45 (east of the intersection with Independence Boulevard). Alternate C4 was revised to avoid the burial site. The revised alternate is Alternate C4.4, which replaces Alternate C4. An exhibit depicting Alternate C4.4 was distributed.

Millburn Congressional Church: Based on coordination with the CAG, the Project Team was informed that the property owned by the Millburn Congressional Church was larger than originally thought. The “4” options cut across the revised church property limits. The Project Team does not anticipate this to be a Section 4(f) issue. The Millburn Congressional Church is aware of the proposed project. The Project Team will arrange a meeting to discuss potential impacts with the Millburn Congressional Church.

Status of Cultural Resource Review: The Project Team is still waiting for Cultural Resources Review to be completed. It is anticipated that the review will be completed by Fall 2010.

Public Meeting: A Public Meeting has been tentatively scheduled for the end of July 2010. Concurrence was requested on the Project Team’s recommendation to dismiss six of the nine alternatives from further consideration, with the remaining three alternatives and overall project development results to be presented at the Public Meeting.

Concept Geometry Development: Concept geometry for the remaining portions of the EA project limits will be completed and submitted to LCDOT and IDOT for review.

September 2010/February 2011 NEPA/404 Merger meetings: Seek concurrence on Concurrence Point 2: Alternatives to be Carried Forward.

Agency Comments:

- 1) Could this meeting serve as Concurrence Point 2: Alternatives to be Carried Forward? (Westlake – USEPA)

Response: The Project Team would like to use the Public Meeting to gain wider public input on the alternatives before requesting concurrence on alternatives carried forward in the Environmental Assessment. Matt Fuller (FHWA) also stated that the informational packet for this meeting was not submitted early enough to allow the full 30-day review period (Note: The informational packet was submitted within an acceptable time [2-3 weeks] to allow review for a status update – as is acceptable).

- 2) Please elaborate why the “2” options should be dropped from further consideration. (West – USEPA)

Response: At the April 27, 2010 CAG meeting, there was general support for dropping the “2” options. This was primarily due to higher cost resulting from the greater length of roadway construction, as well as due to the property impacts/acquisition required within the Millburn Historic District boundaries both east and west of US Route 45.

- 3) USFWS did not recall receiving the informational packet. Therefore, the information was not previously reviewed. USFWS cannot provide comment at this time. USFWS will provide comment before the September NEPA/404 Merger meeting. (Cirton – USFWS)
- 4) What is the quality of the triangular-shaped wetland located west of US Route 45 and south of Independence Boulevard? (West – USEPA)

Response: Based on vegetative quality (INHS determined C-value and FQI), all potentially impacted wetlands are low to fair quality.

- 5) Where is the delineation of “waters of the U.S.” (waters)? Please provide additional information with respect to waters. For example, where are the proposed waters crossings and what is the acreage of waters impact. Please add acreage of potential waters impact to the evaluation matrix (potential wetland impacts are included). Have all wetland areas been identified? Please provide a copy of the delineation report to the USACE and USFWS. USACE cannot provide comment at this time without reviewing this information. (Chernich – USACE)

Response: INHS completed a wetland delineation report - it includes all identified wetland areas based on INHS field visit. The wetland delineation report will be forwarded to the USACE and USFWS. Based on GIS data, waters are identified on the Environmental Resources Inventory Map (which was available for review as a display board at the meeting). Potential waters impacts can be added to the evaluation matrix.

- 6) It was noted that the Cultural Resources Review is not yet complete. Has a “C” alternative that is located east of the Millburn Burial Site been considered? (West – USEPA)

Response: Alternate C.4.2 located east of the Millburn Burial Site was presented. This alternative was developed and considered by the Project Team, but discarded because of the higher cost (more pavement), additional property acquisition required to construct, and more intrusive on the adjacent Tempel Farms property, leaving larger divided portions of Tempel Farms property east and west of US Route 45, which is alleviated by alternate C.4.4. Alternatives C.4.2 and C.4.4 are similar with respect to transportation performance.

- 7) Stormwater management will need to be considered, including the implementation of water quality and quantity Best Management Practices (BMPs). It is anticipated that vegetated ditches will not be sufficient on their own. (West – USEPA)

Response: Noted. Water quality and quantity BMPs will be considered in preliminary design.

**USACE Quarterly Coordination Meeting
June 29, 2010
IDOT District One**

**US Route 45; IL Route 132 to IL Route 173
Agenda Item 1 (Miscellaneous)**

The purpose of this presentation was to receive clarification from the USACE on items identified at the June NEPA/404 Merger meeting as discussed herein.

In 2008, the Lake County Division of Transportation (LCDOT) initiated a Phase I Engineering study for a US Route 45 bypass of the Millburn Historic District. The limits of their study extend from approximately Sand Lake Road to Independence Boulevard, a distance of approximately 1.5 miles. During the first few months of the Millburn Bypass Study, it was determined by FHWA that the logical project termini would need to be extended south to IL 132 and north to IL 173. The environmental survey limits were extended to cover the larger study area at that time and LCDOT agreed to prepare an EA for the larger limits.

Subsequently, IDOT has initiated a Phase I Engineering Study that will incorporate a preferred Millburn Bypass alternative into the larger project limits from IL 132 to IL 173, a distance of approximately 6.2 miles. The same consultant has been selected to perform this work. Notice to Proceed for the IDOT project is anticipated in Summer 2010.

At the June 11, 2010 NEPA/404 Merger meeting, the project team discussed the process of reducing the Millburn Bypass alternatives from nine to three. One of the items used for the analysis was an Evaluation Matrix that provided comparative results between the nine bypass alternatives. At the NEPA meeting, USACE, Kathy Chernich noticed that the Waters of the U.S. were not included in the evaluation matrix and requested this information be added. Specifically, she asked “where are the proposed waters crossings” and “what is the acreage of waters impact”. The project team could identify the crossing locations, but were unable to answer specific questions about acreage because not all waters (e.g. streams) were delineated and this information was not included in the evaluation matrix. In addition, USACE requested that the names of the crossing locations be added to the exhibits; the project team agreed to add this information to future exhibits.

Following the June 11 meeting, there were several sidebar discussions between BDE and USACE about what data was needed to identify the Waters of the U.S., but nothing was finalized. IDOT Project Manager, Marie Glynn and INHS, Allen Plocher attended the USACE Quarterly Meeting to get a final resolution on whether the Waters of the U.S. needed to be delineated; if so, to what extent; and to establish who would perform the field work.

It was decided that the waters would need to be surveyed for the three remaining Millburn Bypass alternatives (A1, A4, and C4.4) within the proposed right-of-way bands plus a distance of 100 ft either side of the proposed right-of-way. Outside the core Millburn Bypass Study area, from IL 132 to IL 173 the Waters of the U.S. would also need to be delineated due to several potential slight realignments of US 45 including near Hastings Creek to avoid LAWCON property. Outside the core study area, the Waters of the U.S. will be delineated

for a distance of 100 ft either side of existing US 45 right-of-way except adjacent to Temple Farms property since access has been denied by the property owner. The approximate limits of the Waters of the U.S. within Temple Farms should be estimated based on visual inspection from the existing US 45 right-of-way. IDOT will provide exhibits to INHS showing location of Millburn Bypass remaining alternatives in PDF format.

It was determined that INHS would perform the surveys on behalf of IDOT.

At the June 11 meeting, the Project Team recommended reducing the core Millburn Bypass alternatives from nine to three. The other six alternatives were previously dismissed from further consideration by the project's Community Advisory Group (CAG), IDOT, LCDOT, and FHWA due to operational, environmental, and historic property impacts. At the NEPA/404 Merger Meeting, USACE was tentative about agreeing that the project team advance to a Public Meeting without the waters issue being addressed. Ms. Chernich clarified that she merely wanted the waters impacts to be provided for the three remaining alternatives. Any summary table for these alternatives should identify impacts to the Waters of the U.S. In addition, exhibits should include names of creeks, streams, lakes, etc. USACE explained that they need this information to be prepared to respond to public comments or questions as they arise.

The group had a non-project specific discussion about whether INHS should be delineating the Waters of the U.S. as part of their wetland delineation field work. Since this information is eventually needed, USACE, Soren Hall offered that it would be helpful if INHS could delineate the location of the waters at the same time, instead of a two-step process as typically done. INHS noted that it would not be practical to survey the Waters of the U.S. for projects with extensive survey limits since often times the waters are avoided and this information is not needed. IDOT, Vanessa Ruiz proposed that for roadway projects that will generally be on the same alignment, it could be done for a distance of 100 ft outside the existing right-of-way without significant additional work and could possibly eliminate the two-step process. For projects which the potential impact to waters can be identified early in the process (before environmental surveys are conducted), IDOT can request this information be obtained by INHS. This approach seemed to generally be agreed upon by all.

US Route 45/Millburn Bypass
IL Route 132 to IL Route 173
Section No. 05-00262-02-RP
Lake County Division of Transportation

**7/19/2010 IHPA
Meeting Minutes**

DATE: July 21, 2010

TO: Attendees
CBBEL Project File (08-0677)

FROM: Pete Knysz – CBBEL
Mike Matkovic – CBBEL

MEETING DATE: July 19, 2010

TIME: 10:00 am

SUBJECT: IHPA Coordination Meeting

LOCATION: IHPA Office – Springfield, Illinois

ATTENDEES: Emilie Eggemeyer (IHPA)
Laura Fry (IDOT – Bureau of Design and Environment)
Matt Fuller (FHWA – IL)
Chuck Gleason – LCDOT
Marie Glynn (IDOT District 1 – Extension Staff)
Anne Haaker (IHPA)
Pete Knysz (CBBEL)
Brad Koldehoff (IDOT – Bureau of Design and Environment)
Mike Matkovic (CBBEL)
Barbara Stevens (IDOT – Bureau of Design and Environment)
Paula Trigg – LCDOT

via teleconference
Srikanth Panguluri (IDOT District 1 – Extension Staff)
Vanessa Ruiz (IDOT District 1 – Bureau of Programming)

The purpose of this meeting was two-fold, including:

- To discuss the results of the bypass alternatives development and evaluation process and the associated stakeholder coordination that has occurred since the February 2010 NEPA/404 Merger meeting;
- To obtain guidance from the Illinois Historic Preservation Agency (IHPA) on further alternatives development and evaluation with respect to potential Millburn Historic District property impacts and other potential cultural resource issues in the project area.

The Project Team (LCDOT, IDOT, and the project consultants) is recommending that six of the nine bypass alternatives be dismissed from further consideration, with the



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remaining three alternatives to be further developed and presented at a Public Meeting during late Summer 2010, along with the overall bypass alternatives development and evaluation process to date.

The project consultant (Christopher B. Burke Engineering, Ltd. – CBBEL) facilitated the overall project discussion. An Environmental Assessment (EA) is being prepared for this project based on the likely future improvement needs along US Route 45 from IL Route 132 to IL Route 173. The intersections of US Route 45 at Grass Lake Road and Millburn Road lie within the Millburn Historic District, a National Register Historic Place. The location and proximity of these intersections and the narrow, existing right-of-way precludes capacity improvements without impacts to the historic district and historic structures.

As discussed at the February 2010 NEPA/404 Merger meeting, eighteen initial potential bypass alternatives were identified based on NEPA requirements, project history, and stakeholder input from the initial Public Meeting (March 2009), including north-south and east-west alternatives. Nine bypass alternatives were dismissed due to unacceptable impacts and/or not meeting the project purpose and need. On this basis, the resource agencies in attendance at the February 2010 NEPA/404 Merger meeting concurred with the project moving forward with the reasonable range of nine bypass alternatives for development and evaluation, including Alternates A1, A2, A4, B1, B2, B4, C1, C2, and C4. The nine remaining alternatives include three west bypass options, three US Route 45 on-alignment options, and three east bypass options.

The bypass location was previously studied by IDOT as part of the US Route 45 Strategic Regional Arterial (SRA) studies. In the mid 1990s, IDOT recorded a west bypass alignment in this area, which was the consensus realignment choice based on coordination with local municipalities, the Lake County Board, the Lake County Forest Preserve District, and LCDOT.

The “A” alternatives represent a US Route 45 west bypass, which uses the previously recorded IDOT alignment. The “B” alternatives represent an add lanes project on the existing US Route 45 alignment, and the “C” alternatives represent a US Route 45 east bypass. Each US Route 45 alignment is associated with 1 of 3 east-west improvement options. The “1” option maintains existing alignments of Grass Lake Road and Millburn Road. The “2” option realigns Grass Lake Road and Millburn Road to the north. The “4” option realigns Grass Lake Road to the south to meet Millburn Road. Building displacements that would result with the construction of each alternative are depicted on the conceptual drawings. All of the “B” alternatives result in the displacement of several historic structures.



CBBEL referred the meeting attendees to the Project Status Summary which provides a complete overview of the bypass alternatives development and evaluation process that has occurred for this project to date. The nine bypass alternatives were developed based on project design criteria assembled and reviewed by LCDOT and IDOT to ensure each alternative is viable with respect to roadway design at this stage of development. All nine bypass alternatives were developed with respect to proposed alignment and horizontal geometrics, and reviewed by LCDOT and IDOT for design acceptance and stakeholder coordination moving forward.

Next, discussion focused on the bypass alternatives evaluation and results. Matrix content, relative comparison of alternatives, and presentation were summarized. The matrix evaluation criteria are separated into four main categories: Transportation Performance, Environmental Resource Impacts, Socio-Economic Impacts, and Construction Cost. For the majority of the criteria, the results were quantity based, when direct measurable performance or impacts could be developed. For some of the criteria, the results were quality based, with the Project Team developing these results based on the best available information at this stage of overall project development. A color grading system was used to provide a visual representation as to which bypass alternatives perform relatively strong or relatively weak when compared to the other alternatives, within each criterion.

CBBEL provided a summary of the 3rd Community Advisory Group (CAG) meeting (April 27, 2010). At the meeting, the CAG members were placed in one of three breakout groups (Group 1, 2, or 3) to discuss the results of the bypass alternatives development and evaluation process, and to formulate their opinions on whether each alternative compares relatively strong or relatively weak to the other alternatives (and why), and whether the alternatives should be considered for more detailed development or dismissed (and why). Based on the CAG input received, there was general consensus that the "B" alternatives should not be considered any further due to the resulting displacements of historic structures within the Millburn Historic District. There was also general consensus for dropping the "2" options due to higher costs resulting from the greater length of roadway construction, as well as due to the property impacts/acquisition required within the Millburn Historic District boundaries both east and west of existing US Route 45. There appeared to be general consensus for four alternatives: A1, A4, C1, and C4.

Subsequent to the CAG #3 meeting, the Project Team met to discuss the overall bypass alternatives evaluation results and the recommendations moving forward. There was consensus within the Project Team that alternate C1 also be dismissed from further consideration based on the comparatively weak transportation performance. Alternate C1 also draws traffic through the historic district. On this basis, LCDOT and IDOT District 1 are recommending that Alternates A1, A4, and C4 be carried forward for further development and evaluation, and that the other six alternatives be dismissed from further consideration.



Based on information received from the State, there is a burial site located adjacent to US Route 45 (east of the intersection with Independence Boulevard). Brad Koldehoff (IDOT – BDE) will forward a copy of burial site report to Vanessa Ruiz at IDOT District 1. IDOT District 1 will forward the burial site report to Chuck Gleason/Lake County for distribution to Larry Leffingwell. Four variations of Alternate C4 were developed to avoid the burial site (and adjacent 50 foot buffer). The preferred variation alternate is Alternate C4.4, based on less overall property impacts and preferred geometry as compared to the other variations. Therefore, Alternate C4.4 replaces Alternate C4.

The consultant inquired about the status of the overall Cultural Resources Review for the project. IDOT indicated that additional archaeological field surveys will be scheduled for the fall 2010. They prefer to access the property after fields have been harvested and tilled. The Project Team stressed the sensitivity with regards to property access on the east side of US Route 45. LCDOT will coordinate access. Areas adjacent to stream corridors have the greatest potential for yielding archaeological resources. Brad does not foresee any additional archeological issues, but a Phase I archaeological survey is necessary to confirm. The Project Team is to forward Brad the three remaining alternatives in pdf format. IHPA stated that, for the most part, potential archaeological issues can be addressed. An archaeological issue that could pose a problem (if discovered) would be human remains within an alternative footprint.

The Project Team noted that the “C” alternatives (east bypass) bisect open space within the Millburn Historic District. IHPA stated that this is not a major issue and questioned the eastern extent of the Historic District. IHPA stated that it is uncommon for a historic district to have such a large open space between buildings and this is no longer the standard practice. The Project Team mentioned that there is a locally designated South Millburn Historic District (not on the National Register). A photo log of potentially historic structures within the project study area was previously submitted as part of the Cultural Resources Review. IHPA stated that none of the potential displacements located outside of federally recognized Millburn Historic District appear to be eligible for listing on the National Register (this includes the Druce-Hoffman and Anderson residences). IHPA noted that there does not appear to be a basis for including the properties constructed during the 20th Century in the 19th Century Millburn Historic District. IHPA stated that they are concerned with potential direct and indirect impacts to historic sites. Impacts to historic sites along US Route 45 should be avoided and/or minimized to the extent practical – this includes changing the character of the right-of-way within the historic district, i.e., widening the roadway. The Project Team will review east-west alternatives to determine if new pavement can be reduced without compromising transportation objectives. Visual intrusion can be mitigated by such things as vegetative screening, etc. Impacts to historic sites would be a Section 4(f) issue, but depending on the extent of impact and mitigation, it could be considered a “de minimis” Section 4(f) impact.



The “4” options cut across an agricultural field owned by the Millburn Congregational Church, but do not directly impact the Church building. The Church building is part of the Millburn Historic District. The agricultural field that would be impacted by the “4” options is located outside of the Millburn Historic District and west of the Church. IHPA stated that impacts to this field are not an historic issue. The Project Team stated that the Millburn Congregational Church is aware of the proposed project. The Project Team met with the Church to discuss the project (including the three remaining alternatives) and potential impacts. The Church considers impacts to the field as an important factor, but did not object to the project. The Church also noted that they currently have capital expansion plans. The Project Team will coordinate with the Church as necessary, if a “4” option is selected as the preferred alternative. The Project Team does not anticipate this to be a Section 4(f) issue.

Concurrence with the recommendation to advance three alternatives was received from all of the resource agencies in attendance at the June 2010 NEPA/404 Merger meeting, except for the U.S. Army Corps of Engineers (USACE) and U.S. Fish and Wildlife Service (USFWS). The USACE has since concurred. USFWS did not recall receiving the informational packet prior to the meeting. Therefore, the information was not previously reviewed by USFWS and USFWS could not provide comment at the meeting. FHWA will follow-up with USFWS to check on the status of their review.

IHPA concurs with the Project Team’s recommendation to carry three alternatives forward (Alternatives A1, A4, and C4.4) and drop the other six alternatives. IHPA will prepare a letter to that effect. FHWA stated that the Project Team could proceed with the three alternatives for the upcoming Public Meeting, regardless of whether formal USFWS concurrence is received in advance. FHWA stated that the Project Team could share the findings from the Public Meeting at the September NEPA/404 Merger meeting.

Additional Section 4(f) Discussion

It was noted that the “A” alternatives cross through forest preserve property (McDonald Woods) located west of US Route 45. The Consultant Team and LCDOT have met with the Lake County Forest Preserve District (LCFPD) to discuss this project and LCFPD concerns have been noted. Overall, LCFPD does not object to the “A” alternatives (west bypass). Additional coordination with LCFPD would occur if an “A” alternative is selected as the proposed action.

North of the core study area and south of IL Route 173, LCFPD has two forest preserves, Raven Glen and Ethel’s Woods. Impacts (primarily edge takes) at these forest preserves are anticipated due to the existing, narrow right-of-way. Efforts will be made to avoid forest preserve land that was purchased and/or developed using OSLAD/LAWCON funds. A Section 4(f) evaluation will be prepared for each forest preserve impact. FHWA recommended pursuing concurrence from LCFPD regarding a “de minimis” impact finding.



Action Items

1. Brad Koldehoff (IDOT – BDE) to forward a copy of burial site report to Vanessa Ruiz at IDOT District 1. District 1 will forward the burial site report to Lake County for distribution to Larry Leffingwell.
2. The Project Team to forward Brad the three remaining alternatives (A1, A4, and C4.4) in pdf format.
3. Archeological surveys to be tasked for Fall 2010. This includes three alternatives within core area and along US 45 from IL 132 to IL 173 (outside of the core area).
4. IHPA to provide a letter stating that the agency concurs with the Project Team carrying three alternatives forward for further development, evaluation, and presentation at the upcoming Public Meeting – the other six alternatives can be dismissed from further consideration. IHPA will also state that the three parcels (Druce-Hoffman, Anderson, and Schubert) that sought inclusion in the National Register are not eligible.
5. FHWA to follow-up with USFWS to check on the status of their review and any comments regarding concurrence with dismissing six of the nine bypass alternatives from further consideration, with the remaining three alternatives to be further developed and presented at a Public Meeting.

The meeting concluded at approximately 11:00 am.

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Email Correspondence

From: Glynn, Marie E [mailto:Marie.Glynn@illinois.gov]
Sent: Thursday, August 05, 2010 1:11 PM
To: mmatkovic@cbbel.com
Subject: US 45 Millburn Bypass - USFWS Follow-Up

USFWS has not had an opportunity to review all the reference material provided. However, they are okay with moving forward with the finalist alternatives to a Public Meeting.

Marie Glynn

From: Glynn, Marie E
Sent: Friday, July 02, 2010 12:00 PM
To: Ruiz, Vanessa V
Subject: US 45 Millburn Bypass Status and Request for USFWS Follow-Up

Vanessa,

I wanted to provide you a quick status update on the US45 Millburn Bypass project. We've received concurrence from all of the agencies (FHWA, IDOT, D1 and BDE, Lake County, USEPA, and USACE) except for USFWS to proceed forward to the Public Meeting with three remaining alternatives. I've attached the three remaining alternatives for your reference.

As you may recall, USFWS did not have a chance to review the materials in advance of the June 11 NEPA/404 Merger Meeting and requested a few extra weeks of time to review. Would you please check with Shawn to determine if he has since had a chance to review the materials; has any follow-up comments; or is now comfortable with reducing the remaining alternatives from 9 to 3. The other 6 alternatives were dismissed following close coordination with CAG Members, Lake County, and IDOT for a range of geometric, operational, and environmental/socio-economic impacts related to the layout of the core historic district.

For your reference, I've also attached a copy of the Draft Minutes from the meeting with USACE this week which notes that they are comfortable with reducing from nine to three alternatives.

Would you please follow-up with Shawn to find out if he is ok with us moving forward with three alternatives at a Public Meeting scheduled for early August (postponed from the original date in July due in order to get his and USACE concurrence). Please let him know that the project team is available to come to his office in Barrington at anytime to discuss the project and answer any questions he may have. As a reminder, we have full T&E clearance for the entire study area.

Have a good 4th of July Weekend. If you have any questions, stop by or give me a call.

Marie Glynn
(847) 705-4106

**IDOT District 1, Lake County
US 45 from Illinois Route 132 to Illinois Route 173
Environmental Assessment
Information – Project Status Update**

This was the 5th presentation of this project. The previous presentation was on June 11, 2010. The goal of this presentation was to (1) summarize the coordination meeting with the Illinois Historic Preservation Agency (IHPA) on July 19, 2010; (2) provide a project status update based on the results of the Community Advisory Group (CAG) meeting #4 on August 19, 2010 and the Public Meeting #2 on September 2, 2010; and (3) provide a status update with respect to the “waters” delineation and on-going archaeological surveys for the entire project corridor by IDOT. Resource agency concurrence to proceed with the three finalist alternatives to a public meeting was obtained prior to Public Meeting #2.

All materials used to arrive at the three finalist bypass alternatives were previously distributed for the June 11, 2010 NEPA/404 Merger meeting. At the September NEPA/404 Merger meeting presentation, the following information was distributed to the attendees:

- NEPA/404 Merger meeting Agenda
- Meeting minutes from the IHPA coordination meeting on July 19, 2010
- Meeting minutes from CAG meeting #4 on August 19, 2010
- DRAFT Summary from Public Meeting #2 on September 2, 2010 (including questionnaire and summary of comments)
- Exhibits showing the three finalist bypass alternatives (Alternates A-1, A-4, and C-4) as presented at Public Meeting #2
- Updated Environmental Resources Exhibit, including the Illinois Natural History Survey (INHS) “waters” delineation and labeled stream names
- Updated Finalist Impact Evaluation Matrix, which summarizes the results of the comparative analysis of the 3 remaining bypass alternatives

The project consultant (Christopher B. Burke Engineering, Ltd. – CBBEL) guided the overall discussion, which began with a summary of the IHPA coordination meeting that took place on July 19, 2010 in Springfield, Illinois. Meeting minutes were provided to NEPA/404 Merger meeting attendees. At that meeting, IHPA concurred with carrying the three finalist alternatives (Alternates A-1, A-4, and C-4.4) forward for further development, evaluation, and presentation at the September Public Meeting. Note that Alternate C-4.4 (hereinafter known as Alternate C-4) was designed to avoid the Millburn burial site. The project consultant noted that the burial site was not shown on the exhibits at the Public Meeting (refer to the exhibit(s) presented at the June NEPA/404 Merger meeting for the location of the burial site). Alternate C-4 (east bypass alternative) bisects open space within the National Register Historic District. At the IHPA coordination meeting, IHPA stated that this is not a concern to them even if this alternative were to emerge as the preferred alternative.

As part of the Cultural Resources Review for this project, the Druce-Hoffman property is being evaluated. This property is located immediately west of the existing Millburn Road and US Route 45 intersection. A residence on this property is located within the footprint of the “4” options (i.e., Alternate A-4 and C-4) and would be displaced by either option. The residence is located southeast (and outside) of the existing National Register Historic District. Based on the meeting with IHPA on July 19, 2010, IHPA did not feel that this residence was an eligible historic building; however, the property is currently under review as a potentially historic homestead. In addition, Mr. Druce-Hoffman (a member of the CAG) has contracted with an independent consultant and is proceeding with the nomination of his property in the National Register of Historic Places. Cultural Resources Review, including archaeological resources for the entire project corridor, is on-going.

Next, the project consultant summarized CAG meeting #4 and the Public Meeting that took place on August 19, 2010 and September 2, 2010, respectively. The purpose of the CAG meeting was to brief the CAG members on the project status, the three finalist alternatives, and the upcoming Public Meeting - where the three finalist alternatives

would be presented. Meeting minutes were provided to NEPA/404 Merger meeting attendees. The discussion then segued to the Public Meeting. Over 300 people attended the Public Meeting, which lasted over three hours. At the time of the NEPA/404 Merger meeting, over 120 comments had been received by the Project Team. However, the public comment period was still open. Draft summaries of the Public Meeting and comments received to date were provided to NEPA/404 Merger meeting attendees. The Project Team intends to meet with the Lake County Division of Transportation (LCDOT) and IDOT in the near future to review the comments and to identify the Millburn Bypass alternative(s) to be carried forward in the Environmental Assessment (EA) (i.e., No Build, Build Alternative(s), and a Preliminary Preferred Alternative).

The project consultant stressed the importance of receiving the results of the Cultural Resources Review, as it pertains to “Alternatives to be Carried Forward”. The Project Team is targeting the February NEPA/404 Merger meeting to present “Alternatives to be Carried Forward”. Chapter 3 of the EA is currently being written and will be submitted to FHWA for review in advance of the meeting.

The goal of the Project Team is to request concurrence of a “Preferred Alternative” at the June 2011 NEPA/404 Merger meeting, hold a Public Hearing during the Summer of 2011, and receive Design Approval at the end of 2011.

Agency Comments:

- 1) Do all three finalist alternatives provide sufficient travel performance? (Westlake – USEPA)

Response: Yes, all three finalist alternatives provide sufficient travel performance. However, when compared to each other, Alternate A-4 is superior (followed by Alternate C-4). Alternate A-4 would bring the bypass the closest to the majority of the existing residences (i.e., motorist origins/destinations) in the vicinity of the project and corrects the current Grass Lake Road and Millburn Road offset.

- 2) Is the east bypass within the corporate boundaries of Old Mill Creek? (Savko – Department of Agriculture)

Response: All three finalist alternatives are located (at least partially) within the corporate boundaries of Old Mill Creek.

- 3) Why was Alternate C-1 dropped from further consideration and has the owner of the Millburn Tree Farm been involved in the community outreach for the project? (West – USEPA)

Response: Alternate C-1 was dismissed due to poor travel performance when compared to the other alternatives and its associated cost. The main travel performance issue with C-1 is that the heavier local traffic from the west along Grass Lake Road would still need to traverse through the Historic District to access the East Bypass associated with this alternate. The alternative screening process, including Alternate C-1, was covered at Public Meeting #2.

Yes, the owner of the Millburn Tree Farm is a member of the CAG.

- 4) If the Druce-Hoffman property is determined to be historic, would this finding dismiss Alternates A-4 and C-4? (West – USEPA)

Response: It is unclear at this time how a “finding of historic significance” would affect the project. The Project Team will know more after receiving the results of the Cultural Resources Review.

Based on coordination with IHPA completed to date, it doesn't appear as if avoidance of the Druce-Hoffman property will be the primary objective. The Project Team understands that the residence on the property is a 20th century structure that has had many additions/modifications since initial construction. The brick outhouse on the property appears to be the oldest structure on site.

- 5) Why are there two options for Haven Lane (i.e., cul-de-sac versus maintaining Haven Lane as a through street) under the A Alternatives? (West – USEPA)

Response: From a transportation performance perspective, there is not much of a difference...a stop sign is

proposed with both options. The cul-de-sac option was originally platted with the subdivision.

- 6) It appears that a creek crossing is proposed at McDonald Woods Forest Preserve? What type of crossing is proposed – bridge or culvert? Will the crossing accommodate wildlife movement/corridors? (West – USEPA)

Response: Most likely the crossing will consist of a culvert(s) or a conspan. The size and type of structure will depend on the results of the drainage study, which has not been completed yet. The crossing will accommodate wildlife movement, as necessary. Additional coordination with the Lake County Forest Preserve District (LCFPD) will be completed for the A Alternatives, if carried forward. There is also the possibility of a ped/bike underpass at relocated US Route 45 and Millburn Creek.

The Project Team also noted that INHS completed a waters delineation of the streams that are located within the footprint of the remaining three finalist alternatives. Potential stream impacts have been quantified and added to the Finalist Impact Evaluation Matrix.

- 7) Has the Project Team discussed a preferred alternative with LCFPD? (Cirton – USFWS)

Response: This project has been coordinated with the LCFPD. The LCFPD has known about a potential west Millburn Bypass since the mid-1990s. The Strategic Regional Arterial (SRA) study from the mid-1990s recommended a west bypass; an east bypass was considered as part of the SRA study. The LCFPD may prefer an east bypass, but they have also considered the potential of a west bypass in future plans. There are some benefits that could be realized by LCFPD associated with a potential west bypass, such as ped/bike accommodations at the relocated US Route 45. Potential ped/bike facilities could be consistent with future LCFPD regional trail plans and promote connectivity between preserves.

Based on the potential impact and coordination with the LCFPD, the Project Team anticipates requesting a Section 4(f) de minimis finding for this project.

- 8) Are there any Section 4(f) impacts associated with an east bypass? (Zyznieuski – IDOT/BDE)

Response: There are no Section 4(f) impacts anticipated within the limits of the east bypass only. However, the project limits extend north to IL Route 173. North of the bypass portion of the project corridor and south of IL Route 173, two forest preserves (Raven Glen and Ethel's Woods) are located immediately adjacent to US Route 45. Due to the proximity of the forest preserves to existing US Route 45, any widening of US Route 45 would result in a forest preserve impact in this location. The Project Team understands that OSLAD/OLT funds have been used in the acquisition and/or development at portions of these preserves – specifically at the north half of Raven Glen (west of US Route 45) and the portion of Ethel's Woods adjacent to the east side of US Route 45. It is anticipated that through geometric roadway design alternatives, impacts to the OSLAD/OLT lands can be avoided, but acquisition of LCFPD property to the north is unavoidable due to the narrow existing right-of-way along US Route 45 in this area. This project has been coordinated with the LCFPD.

- 9) Do the projected traffic volumes for this project take into account the proposed IL Route 53 north extension? It is worth consideration. (West – USEPA)

Response: The projected 2030 traffic volumes were prepared by the Chicago Metropolitan Agency for Planning (CMAP). The Project Team understands that CMAP did take the proposed IL Route 53 north extension into account for the traffic projections. Regardless, 2040 traffic projections will be available in the near future and will be used for this project. The project team will confirm with CMAP whether the IL Route 53 extension will be included in the 2040 projections.

IDOT District 1, Lake County
US 45 from Illinois Route 132 to Illinois Route 173 including Millburn Bypass
Environmental Assessment
Concurrence – Alternatives to Carry Forward
Concurrence – Preferred Alternative

This was the 6th presentation of this project. The previous presentation was on September 9, 2010. The goal of this presentation was to request Concurrence Point 2 (Bypass Alternatives Carried Forward) and Concurrence Point 3 (Preferred Bypass Alternative).

An advance materials packet was distributed to the Resource Agencies for review in advance of this meeting, with an additional copy provided to all attendees of this meeting. The advance materials packet included the following information:

Advance Materials Packet

- NEPA/404 Merger meeting Agenda
- NEPA/404 Merger Meeting Summary - June 11, 2010
- NEPA/404 Merger Meeting Summary - September 9, 2010
- Meeting minutes from IHPA coordination meeting on July 19, 2010
- FHWA meeting minutes - March 16, 2011
- Public Meeting #2 Questionnaire Response Summary (September 2, 2010)
- Lake County Forest Preserve District McDonald Woods *de minimis* concurrence letter (April 4, 2011)
- IHPA Druce-Hoffman NRHP eligibility determination letter (May 24, 2011)
- Millburn Bypass - Finalist Bypass Alternatives Comparison Positive/Negative white paper
- Traffic Measures of Effectiveness (MOE) spreadsheet
- Finalist Bypass Alternatives color exhibits (A1, A4, and C4)
- Finalist Bypass Alternatives Impact Evaluation Matrix

The following additional materials were provided to all meeting attendees:

- Power point presentation slides
- Section 4(f) *De Minimis* Impact Documentation package (McDonald Woods)
- Lake County Forest Preserve District Preliminary Trail Alignment - Route 45 Bike and Pedestrian Trail Exhibit (March 1, 2011)

Concurrence Point 2 (Bypass Alternatives Carried Forward) Presentation:

The project consultant (Christopher B. Burke Engineering, Ltd. - CBBEL) made a formal presentation guided by PowerPoint seeking concurrence on the Bypass Alternatives Carried Forward. A summary of the projects 4th NEPA/404 meeting presentation on June 11, 2010 and 5th NEPA/404 meeting presentation on September 9, 2010 was made. As part of these meetings and follow-up coordination, the Resource Agencies had concurred with the three Finalist Bypass Alternatives, although Concurrence Point 3 was not requested at that time due to ongoing cultural resources review, which is now completed. On this basis, Concurrence Point 2 (Bypass Alternatives Carried Forward) was requested.

Agency Questions/Comments:

- 1) Norm West of US EPA asked about the status of the Druce-Hoffman property with respect to eligibility for the National Register of Historic Places (NRHP)?

Response: The project team indicated that in a letter dated May 24, 2011, IHPA concluded that neither the site nor any individual structure on the property is eligible for National Register of Historic Places. Subsequent to IHPA's determination IDOT issued Cultural Clearance for the project.

Agency Poll on Concurrence Point 2 (Bypass Alternatives Carried Forward):

The FHWA polled the resource agencies for concurrence with the project Bypass Alternatives Carried Forward as follow:

- Illinois Department of Natural Resources (IDNR: Hamer) - Concur
- US Army Corps of Engineers (USACE: Chernich and Hall) - Concur
- US Environmental Protection Agency (USEPA: West and Westlake) - Concur
- US Fish and Wildlife Service (USFWS: Cirton) - Not Present
- Illinois Historic Preservation Agency (IHPA: Haaker) - Not Present

All Resource Agencies in attendance concurred with the project Bypass Alternatives Carried Forward. Agencies not present will be contacted by FHWA for their formal vote.

Concurrence Point 3 (Preferred Bypass Alternative) Presentation:

The project consultant (Christopher B. Burke Engineering, Ltd. - CBBEL) made a formal presentation guided by PowerPoint seeking concurrence on the Preferred Bypass Alternative. The presentation was broken up into two portions, (1) project activities since the 4th NEPA/404 presentation in September 2010 and (2) other factors in determining the Preferred Bypass Alternative.

Since September, there has been ongoing coordination between the Illinois Historic Preservation Agency (IHPA) and the FHWA concerning the eligibility of the Druce-Hoffman property for inclusion on the NRHP. In a letter dated May 24, 2011, the IHPA concluded that the Druce-Hoffman property as a complex or any individual structure is not eligible for the NRHP based on lack of factual evidence provided by the owner and/or the separate documentation developed by IDOT. The Druce-Hoffman property is impacted by Bypass Alternatives A4 and C4, which both re-align Grass Lake Road to meet Millburn Road. Based on the determination by IHPA Alternatives A4 and C4 remain viable bypass alternatives for consideration.

LCFPD has a representative on the project Community Advisory Group (CAG) and there has also been two separate meetings with LCFPD to gather their input on the project, including a separate meeting to discuss the three Finalist Bypass Alternatives. Bypass Alternatives A1 and A4 include a west bypass of US Route 45 around the Millburn Historic District. The southern portion of the west bypass would require 3.13 acres of right-of-way to be acquired from the McDonald Woods Forest Preserve, a Lake County Forest Preserve District holding. McDonald Woods Forest Preserve is a total of 298 acres which contains a loop path around a ravine and wetlands, paved and gravel trails (Millennium Trail) and other recreational activities with access off of Grass Lake Road. A West Bypass alternative would also result in a 7.13 acre remnant parcel east of the proposed improvement which LCFPD indicated they may prefer also be purchased as a part of a West Bypass alternative due to disconnection with the remainder of McDonald Woods. Portions of this remnant site appear to be usable for compensatory storage and/or stormwater detention. The wetlands in this area would not be filled. Further coordination with LCFPD will occur if a West Bypass Alternative advances to determine the appropriate use of this remnant site. As part of the most recent coordination with LCFPD they provided their Preliminary Trail Alignment Route 45 Bike and Pedestrian Trail plan. As represented on this exhibit, LCFPD indicated that a West Bypass, which will accommodate a multi-use trail within the west portion of the right-of-way for the entire project limits, is compatible with their future trail plans, providing bikepath connections between McDonald Woods and other LCFPD holdings to the north and south. In a letter dated March 18, 2011 and signed by LCFPD on April 4, 2011, LCFPD concurred that a "West Bypass will not adversely affect the overall recreation activities, features, and attributes of McDonald Woods." On this basis, and based on the Section 4(f) *De Minimis* Impact Documentation package prepared and submitted, the FHWA issued a *de minimis* impact finding at the FHWA coordination meeting on June 8th.

An update of the environmental resource clearances was provided. Biological and Cultural Resource Clearances have been received for the entire US Route 45 project limits, including the Bypass study area as follows:

- Biological resource clearance - January 8, 2010
- Archeological resource clearance - April 25, 2011
- Cultural resource clearance - May 24, 2011

The next portion of the presentation included highlights of the primary factors considered in a joint

determination by LCDOT and IDOT that Alternative A4 (West Bypass with realigned Grass Lake Road) is the preferred bypass alternative. These factors included public involvement, transportation performance, Strategic Regional Arterial (SRA) roadway design considerations, and environmental considerations. The project team indicated that additional factors are presented in the Finalist Bypass Alternatives Comparison Positive/Negative white paper which was provided to meeting attendees.

The second Public Meeting for the project was held on September 2, 2010. A total of four Community Advisory Group (CAG) meetings were held, with the last one covering the finalist alternatives. With input from the CAG the initial range of 18 bypass alternatives was narrowed down to the three Finalist Bypass Alternatives, which includes two West Bypass alternatives (A1 and A4) and one east bypass alternative (C4). The Village of Lindenhurst favors the east bypass alternative (C4) and the Village of Old Mill Creek favors the west bypass alternatives (A1 and A4). A project questionnaire was provided to Public Meeting attendees with 201 questionnaires received. Highlights of the questionnaire responses includes the following:

- The number one expressed concern was transportation performance.
- A majority of the attendees agree that a bypass is needed.
- A majority of the attendees favor the Grass Lake Road re-alignment.
- A majority of the attendees reside to the west of US Route 45 and favored an east bypass.

Regarding transportation performance, Alternative A4 is the best transportation performing alternative. The west bypass (Alternatives A1 and A4) is most compatible with the area travel demand identified in the purpose and need, to/from the northwest and southeast. The Measures of Effectiveness (MOE) spreadsheet was referenced in the advance materials packet; Alternative A4 has the lower overall network travel times, travel delay, and main intersection performance compared to the other finalist alternatives.

Although each of the three Finalist Bypass Alternatives meets the IDOT SRA roadway design criteria, the west bypass has more desirable geometry than the east alternative. The east bypass (C4) alignment was modified to avoid the identified Historic Millburn Burial Site with continuously rotating reverse curves, with full superelevation, which is less desirable than the west bypass alignments. The proximity of the main east bypass intersection (East Bypass and Millburn Road) to existing US Route 45 is shorter than desirable which will require less than desirable geometry to provide eastbound and westbound left turn lanes at these intersections. Based on the 2040 traffic projections for the three Finalist Bypass Alternatives as provided by the Chicago Metropolitan Agency for Planning (CMAP), Alternative C4 would result in 22 percent and 44 percent higher traffic volumes along Millburn Road to the east than Alternatives A4 and A1 respectively.

Regarding environmental considerations, Alternative A1 displaces two residential properties and alternatives A4 and C4 displace three residential properties. Alternative A4 has no wetland impacts, compared with Alternative A1 and C4 with 0.02 and 0.04 acres of wetland impacts respectively. Each of the three Finalist Bypass Alternatives avoids ADID wetlands and/or waters impacts. The delineated waters will be bridged with a three sided culvert or simple span bridge. Alternative A1 and A4 have two crossings and C4 has one crossing, but has a wider riparian corridor. Alternative C4 bisects the Millburn Historic District and disconnects the most significant historical structure (Strang House) from the rest of the 17 historic structures within the historic district. Alternatives A1 and A4 avoid any property acquisition from the Millburn Historic District. Alternative C4 impacts 11.49 acres of prime farm land where Alternative A1 and A4 impact 1.92 acres. Wildlife considerations compared against the west and east bypass alternatives; the west bypass and McDonald Woods is adjacent to existing development whereas the east bypass would be in close proximity to the North Mill Creek Wooded Riparian Corridor, which is largely existing open space. A highway traffic noise study has been initiated and will be finalized when a preferred alternative is selected.

Based on the above described further project development activities, and the other factors as described, the LCDOT and IDOT have jointly identified West Bypass Alternative A4 as the Preferred Bypass Alternative. At the June 8th FHWA coordination meeting, FHWA concurred with presenting Alternative A4 as the preferred bypass alternative at a NEPA/404 merger meeting.

Agency Comments:

- 1) Kathy Chernich of USACE asked if the LCFPD would also relinquish the remnant parcel of McDonald Woods Forest Preserve for west bypass alternatives. Would the use of that parcel could possibly be for compensatory storage? Would the wetland complex contained within this remnant parcel be compromised?

Response: From coordination meetings with the Forest Preserve District they indicated they would have no use for this property and it would likely be purchased as a part of this project which is reflected in the LCFPD *de minimis* impact finding. A portion of this site does contain a wetland complex that is not anticipated to be impacted in any way if this property is purchased by LCDOT. Any compensatory storage or stormwater detention provided on this site would be located within the open space within the remnant parcel.

- 2) Norm West of USEPA asked if the *de minimis* finding was appropriate if there is an impact to the McDonald Woods Forest Preserve?

Response: The project team indicated that the *de minimis* impact finding is part of the Section 4(f) coordination for the project. A *de minimis* impact finding does not mean no impact, but a minor and insignificant impact. LCFPD, as the agency of jurisdiction, has found that the use of the property associated with a West Bypass would not affect the overall recreation activities, features, and attributes of the property. LCFPD further indicated that a west bypass is compatible with bike path connections to other LCFPD holdings to the north and south. The FHWA agreed with this finding and issued the *de minimis* finding for the impact to their property. During open discussion on the *de minimis* finding it was mentioned that all of the 27 comments in the *de minimis* finding package referenced some concern of impacts to the Forest Preserve District. It was clarified that the 27 comments are the only comments from the 201 comments received from the second Public Meeting for the project that mentioned anything about the McDonald Woods Forest Preserve, positive or negative.

- 3) Soren Hall of USACE asked if the area west of Alternative C4 alignment could be used for BMPs?

Response: Yes it could.

- 4) Soren Hall of USACE asked if the Preliminary Trail alignment, as shown on the LCFPD District exhibit, could still be possible if there was not a west bypass there.

Response: Yes, but LCFPD would need to purchase land on their own for the path, which would be a considerable disadvantage.

- 5) Soren Hall of USACE indicated that USACE is not comfortable with the West Bypass since the public comments push for the east bypass.

Response: The project team indicated that the public comments are not the only factor in determining the west bypass as the preferred alternative. The areas to the west of US Route 45 are developed with residential subdivisions (Lindenhurst), whereas east of US Route 45 there is predominantly prime farmland and few residences (Old Mill Creek). Therefore there is an over representation of people favoring the east bypass as there are not nearly an equal amount of people living east of US Route 45.

- 6) Soren Hall of USACE indicated that there is some concern over the crossing of the ADID streams. As mentioned during the presentation, the ADID streams are approximately 4 feet wide and three sided culverts are proposed to span these streams without impacts. It is felt that a three sided box culvert may be too narrow and a span should be considered.

Response: The project team indicated that this will be evaluated in more detailed. The intent is to not impact the ADID streams and thus a larger three sided culvert, or short span bridge would be

considered.

- 7) Norm West of USEPA indicated that a three sided box culvert may not be conducive to wildlife crossings. Wildlife does not like to use culverts and this would apply to either an east or west bypass alternative.

Response: The project team indicated that coordination with LCFPD will occur to best handle the wild-life concerns in the area. A clear span or con-span bridge will be considered as a possible mitigation strategy for wild-life movements in the area.

- 8) Kathy Chernich of USACE indicated that if the ADID wetland in the remnant parcel is relinquished by LCFPD and used for compensatory storage or stormwater detention that would be a major impact.

Response: The project team indicated that the wetland in the remnant parcel would not be impacted. The only portion of this parcel that would be considered for compensatory storage or stormwater detention use is the non-wetland area in the north portion of this parcel.

Agency Poll on Preferred Alternative (Concurrence Point #3):

The FHWA polled the resource agencies for concurrence with the project Alternatives Carried Forward as follow:

- Illinois Department of Natural Resources (IDNR: Hamer) - Concur
- US Army Corps of Engineers (USACE: Chernich and Hall) - Does not Concur
- US Environmental Protection Agency (USEPA: West and Westlake) - Concur
- US Fish and Wildlife Service (USFWS: Cirton) - Not Present
- Illinois Historic Preservation Agency (IHPA: Haaker) - Not Present

USACE further explained that their concern with Alternative A4 as the preferred alternative is based on this alternative crossing two ADID streams, bringing the roadway closer to residential properties (noise), and reductions in transportation delay is not significant as compared to the other alternatives. USACE indicated they wanted to discuss with USFWS. USACE would also like more information on the proximity of the west bypass with the Heritage Trails subdivision. The project team indicated that the west bypass is approximately 70 feet away from the east property line of the Heritage Trails Subdivision to the face of curb of the proposed west bypass. There is a 30 foot buffer between the east Heritage Trail property line and the proposed roadway right of way, which is a 135 feet in width. The ultimate project would likely purchase the 30 foot strip of property for possible landscape berm or noise mitigation (if warranted under new FHWA criteria).

Agencies not present will be contacted by FHWA and subsequent presentations may be made at individual meetings. USACE indicated that USFWS is at their office two times a week and a possible meeting could be set up with both agencies to further discuss the project. LCDOT expressed concern and frustration that not all of the Resource Agencies have a representative at the NEPA/404 merger meetings as is expected, thus requiring follow-up coordination which adversely affects the Federal project development process. This has occurred multiple times during the course of the study, resulting in project delays.

The meeting concluded at approximately 10:30 a.m.

US Route 45/Millburn Bypass
IL Route 132 to IL Route 173
Section No. 05-00262-02-RP
Lake County Division of Transportation

**7/11/2011 USFWS
Meeting Minutes**

DATE: August 17, 2011

TO: Attendees
CBBEL Project File (08-0677)

FROM: Pete Knysz – CBBEL

MEETING DATE: July 11, 2011
TIME: 11:00 AM

SUBJECT: Coordination Meeting

LOCATION: Illinois Department of Transportation
District One
201 West Center Court
Schaumburg, IL 60196

ATTENDEES: Shawn Cirton – USFWS
Matt Fuller – FHWA (by phone)
Chuck Gleason – LCDOT
Marie Glynn – IDOT Extension Staff
Soren Hall – USACE (by phone)
Austin Hoekstra – FHWA (by phone)
Pete Knysz – CBBEL
Mike Matkovic – CBBEL
Carla Mykytiuk – IDOT Extension Staff
Vanessa Ruiz – IDOT, District One
Paula Trigg – LCDOT

On July 11, 2011, representatives from the Illinois Department of Transportation (IDOT), the Lake County Division of Transportation (LCDOT), and Christopher B. Burke Engineering, Ltd. (CBBEL) met with the U.S. Fish and Wildlife Service (USFWS) for a US Route 45/Millburn Bypass coordination meeting. The Federal Highway Administration (FHWA) and U.S. Army Corps of Engineers (USACE) participated via teleconference. This meeting was scheduled because USFWS was unable to attend the June 28, 2011 NEPA/404 Merger meeting. The purpose of this meeting was to present the Preferred Bypass Alternative to USFWS and discuss previously expressed concerns of USFWS.

An advance materials packet was distributed to USFWS and USACE for review prior to this meeting. The advance materials packet included the following information:

- NEPA/404 Merger meeting agenda and PowerPoint presentation
- NEPA/404 Merger meeting summary - June 11, 2010



CHRISTOPHER B. BURKE ENGINEERING, LTD.

9575 W Higgins Road, Suite 600 Rosemont, Illinois 60018-4920 Tel (847) 823-0500 Fax (847) 823-0520

- NEPA/404 Merger meeting summary - September 9, 2010
- Meeting minutes from IHPA coordination meeting on July 19, 2010
- FHWA meeting minutes - March 16, 2011
- Public Meeting #2 Questionnaire Response Summary (September 2, 2010)
- Lake County Forest Preserve District McDonald Woods *de minimis* concurrence letter (April 4, 2011)
- IHPA Druce-Hoffman NRHP eligibility determination letter (May 24, 2011)
- Millburn Bypass - Finalist Bypass Alternatives Comparison Positive/Negative white paper
- Traffic Measures of Effectiveness (MOE) spreadsheet
- Finalist Bypass Alternatives color exhibits (A1, A4, and C4)
- Aerial of Alternative A4 concept near Heritage Trails subdivision
- Finalist Bypass Alternatives Impact Evaluation Matrix
- Excerpts from the 1995 IDOT Strategic Regional Arterial (SRA) feasibility study
- Letters from Tim Smith (President of Old Mill Creek) and Larry Leffingwell (Tempel Farms)
- Final Alternatives Comparison (Pros/Cons)

Mike Matkovic (CBBEL) started the meeting by summarizing the project history (including the 1995 SRA study) and the coordination efforts that lead to the Project Study Group's (PSG – LCDOT and IDOT, in coordination with FHWA) selection of West Bypass Alternative A4 as the Preferred Bypass Alternative. This project has been presented at six NEPA/404 Merger meetings, four Community Advisory Group (CAG) meetings, two public meetings, and various independent agency meetings (a fifth CAG meeting was held on July 26, 2011). With input from the CAG, the initial range of 18 bypass alternatives was narrowed down to the three Finalist Bypass Alternatives, which include two West Bypass alternatives (A1 and A4) and one East Bypass alternative (C4). The Village of Lindenhurst favors the East Bypass alternative (C4) and the Village of Old Mill Creek favors the West Bypass alternatives (A1 and A4).

Regarding transportation performance, Alternative A4 is the best transportation performing alternative. The West Bypass (Alternatives A1 and A4) is most compatible with the area travel demand identified in the purpose and need, to/from the northwest and southeast. Alternative A4 has the lower overall network travel times, travel delay, and the best main intersection performance compared to the other finalist alternatives.

Although each of the three Finalist Bypass Alternatives meets the IDOT SRA roadway design criteria, the West Bypass has more desirable geometry than the east alternative. The East Bypass (C4) alignment was modified to avoid the identified Historic Millburn Burial Site with continuously rotating reverse curves, with full superelevation, which is less desirable than the West Bypass alignments. The proximity of the main East Bypass intersection (East Bypass and Millburn Road) to existing US Route 45 is shorter than desirable, which will require less than desirable



geometry to provide overlapping eastbound and westbound left turn lanes at these intersections.

The Cultural/Historic resources review has been on-going since the second Public Meeting (September 2, 2010) and was recently completed in May 2011. The results of this review showed that the realignment of Grass Lake Road does not traverse any sensitive historic properties, which meant that Alternatives A4 and C4 remained viable alternatives for consideration. Alternative C4 is the only alternative requiring acquisition of Millburn Historic District property (not including buildings) and would separate the building of highest importance to the Historic District (Strang House) from the remainder of the historic district buildings, which is less desirable.

Archaeological, Biological, and Cultural Resource Clearances have been received for the entire US Route 45 project limits, including the Bypass study area.

The Lake County Forest Preserve District (LCFPD) has a representative on the project CAG and there have also been two separate meetings with LCFPD to gather their input on the project, including a separate meeting to discuss the three Finalist Bypass Alternatives. Bypass Alternatives A1 and A4 include a West Bypass of US Route 45 around the Millburn Historic District. The southern portion of the West Bypass would require approximately 3.1 acres of right-of-way to be acquired from the McDonald Woods Forest Preserve, a LCFPD holding. McDonald Woods Forest Preserve is a total of 298 acres. A West Bypass alternative would result in a 7.1 acre remnant site east of the proposed improvement. LCFPD indicated that they may prefer for this remnant site to be purchased as a part of a West Bypass alternative due to disconnection with the remainder of McDonald Woods. Portions of this remnant site could potentially be used for stormwater management. The wetlands identified in this area are not anticipated to be filled as part of this project. If a West Bypass Alternative advances, further coordination with LCFPD will occur to determine the appropriate use of this remnant site.

LCFPD provided the project team with their Preliminary Trail Alignment Route 45 Bike and Pedestrian Trail plan. As represented on this exhibit, a West Bypass (which will accommodate a multi-use trail within the west portion of the right-of-way for the entire project limits) is compatible with their future trail plans, providing connections between McDonald Woods and other LCFPD holdings to the north and south. In a letter dated March 18, 2011 and signed by LCFPD on April 4, 2011, LCFPD provided their *de minimis* impact concurrence, indicating that a "West Bypass will not adversely affect the overall recreation activities, features, and attributes of McDonald Woods." On this basis, and based on the Section 4(f) *De Minimis* Impact Documentation package prepared and submitted, FHWA granted a *de minimis* impact finding at the FHWA coordination meeting on June 8, 2011.



Shawn Cirton (USFWS) stated that he had concerns regarding the potential impacts to McDonald Woods – most notably regarding grassland birds. Shawn said that he was informed that LCFPD staff also had concerns. Shawn said that he received a list of birds that have been observed at McDonald Woods from LCFPD, which included grassland birds. According to Shawn, grassland birds are among our nation's fastest declining species. Based on the list, Shawn pointed out four species of concern:

- bobolink
- eastern meadowlark
- field sparrow
- savannah sparrow

Post Meeting Note: At the request of LCDOT, Tom Hahn (Executive Director of the LCFPD) checked with LCFPD staff. Per Tom, there must have been a miscommunication between USFWS and LCFPD staff. Tom indicated that the area of the McDonald Woods Preserve that would be affected by the West Bypass traverses a very low quality portion of the Preserve. Tom reiterated that the LCFPD has no concerns with the West Bypass and they had known about the Bypass for a long time. The LCFPD had provided Shawn with a copy of a bird list for the entire McDonald Woods Preserve, but the LCFPD has no concerns in the area of the West Bypass. Tom further stated that he does not see a need to further discuss minimization or enhancement measures since the LCFPD is not concerned with the affect of the West Bypass on the function and use of McDonald Woods as stated in their de minimis concurrence letter.

Pete Knysz (CBBEL) distributed aerial and ground-level photographs showing the land cover in and near the West Bypass corridor at McDonald Woods. The West Bypass alignment crosses through a wooded riparian corridor, the edge of a fragmented grassland, and a successional field (with scattered woody vegetation). Pete noted that the "grassland" areas near the West Bypass corridor are relatively small in size (under ±28 acres) and include actively used multi-use paths and mowed trails. The preserve is surrounded by development, including roads and residences. Much of the West Bypass corridor at McDonald Woods does not currently meet the definition of a true "grassland" due to the presence of woody and other non-grassland plant species.

The bird list provided to USFWS pertains to the entire preserve, which is 298 acres in size. Pete noted that the majority of the birds on the 2009 LCFPD bird list are woodland or wetland species. Pete stated that the bird species which use the habitat near the West Bypass corridor are most likely species found in successional areas, generally tolerant of development/human disturbance, and/or adapted to "edge effect." The USFWS bird species of concern may have been observed elsewhere at McDonald Woods. Shawn said that a bird survey would help. Pete stated that managing large tracts of grassland habitat (preferably 250 acres or larger) is the best strategy to benefit the greatest number of grassland bird species (accommodating area-sensitive species, as well as others). Examples include Midewin National Tallgrass Prairie and Nachusa Grasslands; the grassland/successional fields at McDonald Woods are fragmented and are much smaller. Controlling woody



vegetation is also an important management strategy. The encroachment/establishment of woody vegetation can negatively affect grassland birds.

Shawn noted that USFWS may also have concerns regarding potential impacts of traffic noise on migratory birds at McDonald Woods. A highway traffic noise study will be completed for this project.

Mike Matkovic stated that the project team can work with the LCFPD to minimize potential project impact to birds, including consideration of habitat enhancement.

Mike noted that an Individual Section 404 Clean Water Act permit may not be necessary for this project (i.e., the project appears to qualify for the Regional Permit Program). In response to a question by Matt Fuller (FHWA), Shawn noted that the USFWS provides comment regarding birds under the Migratory Bird Treaty Act. The USFWS will comment on the Environmental Assessment (EA) that is being prepared for the project.

Soren Hall (USACE) stated that the USACE will take the USFWS concerns into consideration as well as the public comments received for this project. The project team acknowledged that a greater number of individuals living west of US Route 45 attended the Public Meeting and commented on their preference for an East Bypass. The project team also noted that while not captured in the Public Meeting comments, the Village of Old Mill Creek, major land owners to the east, and the Historic Millburn Community Association (HMCA) have stated their preference for a West Bypass, which is also part of the project documentation.



AGENDA ITEM # 7
US Route 45
IL Route 132 to IL Route 173 including Millburn Bypass
P-91-388-10
Illinois Department of Transportation
November 13, 2012

This was the 1st presentation of this project at a Quarterly Meeting. The purpose of this presentation was to provide a brief overview of the project status, specifically the central section, i.e., the Millburn Bypass.

The Phase I Study is nearing completion. The Public Hearing for the Phase I Study from IL 132 to IL 173 including the Millburn Bypass is tentatively scheduled for February 2013, following FHWA and District final review of the Environmental Assessment. Funding is available for final design and construction for a U.S. 45 west bypass of the Millburn Historic District from approximately Country Place to Independence Blvd. The Millburn Bypass will require a Regional Permit for the 0.05 acre impact to the Waters of the U.S. (WOUS) discussed herein. IDOT will be the lead agency for Phase II and III.

No funding has been identified by either IDOT or Lake County for the final design/construction of the south and north sections of the project from IL 173 to Country Place and Independence Blvd to IL 132.

Existing Conditions

West of US 45, there are two locations that the re-aligned US 45 west bypass would cross the Waters of the U.S. (WOUS). The two WOUS, named Millburn Creek and Tributary to Millburn Creek, join west of existing US 45. The combined flow passes under existing US 45 through a 9' x 5' Reinforced Concrete Box Culvert (RCBC); there are no known drainage or flooding issues at this location.

The south crossing, Millburn Creek, is considered perennial. In Aug 2012 under normal conditions, Millburn Creek was measured at less than 1-ft deep and 4-ft wide. The northern crossing, Tributary to Millburn Creek and its associated back channel, consists of a small creek measured under normal conditions as 1-ft deep and less than 3-ft wide and a back channel measured as less than 1-ft deep and 2- ft wide. The Tributary to Millburn Creek is NOT considered perennial. In Sept 2012, all crossings were dry as shown in the handout provided at the meeting. Both Millburn Creek and the Tributary to Millburn Creek were mapped as ADID sites, but are not considered wetlands. As reference, the wetlands upstream and downstream of these crossings have FQIs less than 20 and C-Values less than 3.5.

Millburn Creek (south crossing)

A three sided structure (open bottom) is proposed at Millburn Creek. The structure would have a 42-ft span and 8 ft opening from the stream bed permitting passage of small to medium sized animals. Approximately 210-ft of Millburn Creek would be re-aligned or re-channelized resulting in 0.02 additional acres of WOUS impact. The 42-ft span would provide adequate width to reinstate a meandering stream underneath the structure. Roadway drainage from the south will be conveyed over the top of Millburn Creek via a storm sewer and released at the main detention basin within property already being acquired from the LCFPD.

The three sided structure alternative provides several advantages over a clear span, bridge alternative. First, it allows water to be conveyed across creek, eliminating a detention basin south of Millburn Creek that would require acquisition of 0.67 acres of private property. Second, it simplifies construction of the crossing by

eliminating a temporary modular steel bridge that would need to be dropped into place from the south bank in order to avoid impacts to the WOUS and LCFPD.

Tributary to Millburn Creek and Back Channel (north crossings)

Box culverts are proposed for the Tributary to Millburn Creek and associated back channel. The main conveyance would be through two adjacent closed box culverts (10-ft x 6-ft cell for low flows; 4-ft x 6-ft cell for high/flood flows). The box culverts would be embedded 2-ft with a 4-ft opening from the stream bed elevation to the top of the culvert for passage of small to medium sized animals. Conveyance of the back channel located 35-ft to the north would be through a 4-ft x 6-ft closed box culvert that would be embedded 2-ft. Approximately 360-ft of the Tributary to Millburn Creek and the associated back channel would be re-aligned resulting in 0.015 additional acres of WOUS impacts at each crossing (total 0.03 acres).

A 48" storm sewer is also proposed to be jacked underneath the tributary and back channel, conveying water from the north to the main detention basin to be constructed on the remnant property being acquired from the LCFPD.

Summary

Both crossings meet IDOT and Lake County drainage requirements and maximize the use of property already being acquired for the Millburn Bypass from the LCFPD for detention and water quality BMPs. The proposed waterway crossings exceed the hydraulic requirements at both locations as well as provide buffer areas for passage of terrestrial wildlife. The WOUS impacts (streams and wetlands) for the entire project from IL132 to IL173 would be 0.66 acres. If there was no impact to the WOUS at these two locations, the total impact would be reduced by 0.05 acres to 0.61 acres. It is anticipated that a regional permit will be necessary for the 0.05 acres of impact within the Millburn Bypass area.

Agency Questions and Comments:

- USACE: Is the Millburn Bypass are the only portion of the project they (Lake County) wants to move forward on?
- IDOT Response: Yes, there is funding in place for the Millburn Bypass, but not the other sections to the south or north.
- USACE: Has Millburn Creek been delineated?
- IDOT Response: Yes
- USFWS: What was Millburn Creek found to be high habitat value for?
- IDOT Response: For T & E although none were found during field surveys.
- USFWS: The ADID sites were mapped in the early 90's and there has been a lot of changes/development in this area since that time. Stated that he recently performed a field visit and found the grassland bird habitat had been completely degraded. Only one ground nesting, grassland bird was seen during the field check.
- USACE: For the Tributary to Millburn Creek, will the 48" sewer also divert tributary waters away from the creek?
- IDOT Response: Yes, some of the runoff from the subdivision will be diverted into the culvert and away from the creek. All of this water ends up in the main detention basin which is ultimately outlet downstream into Millburn Creek (west of existing US 45).
- USACE: For the Tributary to Millburn Creek, is the grading all coming down into the culvert (northern box culverts)? The contour lines appear to be grading all in one direction.

IDOT Response: There is a saddle in between the two culverts that is being eliminated.

USACE: Recalled that impacts for west and east bypass alternatives were comparably low. Previously he preferred the east bypass due to the proximity of the residences to west bypass alignment. However, from a resource perspective, there is relatively no difference between the west and east bypass alternatives.

IDOT Response: Through the Millburn Bypass, the original east bypass alternative was re-aligned to avoid a burial ground located north of Millburn Road. The re-design resulted in a less desirable US 45 alignment and intersection geometry at US 45/Millburn Rd. In addition, the east bypass alternative severs the historic district as well as runs parallel to the north-south riparian corridor.

USACE: Do you have a breakdown of WOUS impacts between the proposed culverts and the bridge alternatives for the Millburn Bypass?

IDOT Response: Yes, the culvert option impacts 0.05 acres of WOUS. The bridge option does not impact the WOUS if a temporary portable structure is constructed at Millburn Creek to transport construction equipment materials. The bridge option also requires an additional 0.67 acres of property impacts to construct the detention basin south of Millburn Creek.

USACE: Noted that the originally proposed long span bridges would not be typically proposed by IDOT under these circumstances.

USACE: Were property owners aware of the ROW reservation for the bypass?

IDOT Response: Original property owners in Heritage and Forest Trail Subdivisions were made aware of the US 45 west bypass alignment. State right-of-way was delineated on the developer's plans that were viewed by residences prior to purchase. However, it is unknown if subsequent owners were notified by real estate agents/selling property owners about protected right-of-way. Fire hydrants and utilities were also placed in the proposed right-of-way.

USFWS: Noted that he saw signs of utilities through this right-of-way when he was in the field.

USACE: Do you have a cost breakdown between the bridge and culvert options?

IDOT Response: The difference in structure cost between culvert and bridge options is approximately \$3 Million. This does not include additional costs associated with the temporary bridge at Millburn Creek or the additional right-of-way for the detention basin.

USACE – Soren Hall (SH)

USFWS – Sean Cirton (SC)

IDOT – John Baczek (JB), Rick Wojcik (RW), Vanessa Ruiz (VR), Steve Rauch (SR), Marie Glynn (MG)

U.S. 45 – IL 132 to IL 173 and Millburn Bypass
Community Advisory Group #1 Summary

The first meeting of the US Route 45 Millburn Bypass Community Advisory Group (CAG) was held on June 16, 2009 at the State Bank of the Lakes in Lindenhurst from 6:30 p.m. to 8:30 p.m. The purpose of the meeting was to introduce members of the CAG to the Lake County Division of Transportation (LCDOT), Illinois Department of Transportation (IDOT), and consultant members of the project study team. In addition, the meeting included a project overview, a discussion on the overall Phase I (preliminary engineering and environmental studies) project development proceedings, the overall project public involvement plan and CAG proceedings, and a workshop to develop a CAG Project Problem Statement. All attendees are listed on the last page of this document.

The meeting agenda was as follows:

- I. Welcome / Introductions
- II. Project Overview / National Environmental Policy Act (NEPA) Process
- III. Public Involvement Plan (PIP) / CAG Process Overview
 - a. Goals and Objectives
 - b. Ground Rules of Participation
- IV. Summary of Public Meeting and Questionnaire Responses
- V. Project Problem Statement (CAG Workshop)
- VI. Next Steps / Overall Project Schedule

The following exhibits were among those placed on display around the meeting room:

- Overall GIS exhibit of study area
- GIS exhibits showing the cultural and environmental resources in the area
- Average Daily Traffic exhibits
- Peak Hour Traffic exhibits
- Origin-Destination Traffic exhibit
- Study timeline/Schedule

In addition to these exhibits, the following information was provided within the project binders that were distributed to each member of the CAG:

- CAG Member Name Badge
- CAG #1 Meeting Agenda
- Copy of PowerPoint Presentation
- Copy of the Public Improvement Plan (PIP)
- Summary of the first Public Information Meeting that was held on March 3, 2009
- Summary of Questionnaire Results from the Public Information Meeting
- NEPA Fact Sheet
- Phase I Project Schedule Exhibit
- Blank Pad of Paper and Pen

A PowerPoint presentation guided the overall meeting. Chuck Gleason of LCDOT began by giving a welcome and facilitating introductions of everyone present. Mike Matkovic of

Christopher B Burke Engineering, Ltd. (CBBEL) continued and gave a project overview and a description of the NEPA and Federal Project Development process as it relates to this study. This included a discussion of the updated overall project limits being addressed as part of the Environmental Assessment (EA) for US Route 45 from IL Route 132 to IL Route 173 as required by the Federal Highway Administration (FHWA) as discussed in the PIP. It was noted that the main objective of the CAG is to provide input to LCDOT and IDOT with respect to bypass alternatives being considered within the Millburn Historic District Area.

Jarrold Cebulski of Patrick Engineering Inc (Patrick) continued the presentation by walking through the principles of a Context Sensitive Solutions (CSS) project development approach that is being utilized for this project to ensure meaningful stakeholder input and key project development milestone points. Jarrod also reviewed the contents of the PIP including the specific goals and objectives of the CAG, and the ground rules of participation in the CAG. After discussion, there was general concurrence from the CAG in the overall PIP as well as the specific goals/objectives and ground rules.

Ryan Westrom of Patrick then provided a short summary of some of the feedback received at the initial Public Meeting held on March 3, 2009. Those results indicated that the most important issues were traffic congestion, residential property impacts, and roadway safety. The traffic problems people had experienced most included traffic congestion, truck traffic, and inconsistent travel time. This segued into the CAG workshop activity, led again by Mike Matkovic of CBBEL.

As part of the workshop, the CAG was divided into three groups (yellow, green, and red). Within these groups, members were asked to discuss the transportation problems present at the US Route 45 at Millburn Road/Grass Lake Road intersection(s) and craft a brief statement of the transportation problems to be solved by this project. The Project Problem Statements formulated were as follows:

Group #1 (yellow)

Issues:

- Congestion
 - Rapid Development
 - Addressing Growth
- Truck Traffic
 - Avoid scales → Enforcement
 - Result of increased tolls on Tollway
 - Efficient progression
 - Garbage dump destination to north
- More semi trucks and not construction related
- Offset side streets
- Access
 - Along Route 45
 - To and through Historic District
- Road condition okay
- Accommodating traffic growth
- Traffic Safety
- Noise
- Air Quality

Statement: *The transportation problem to be solved by the U.S. 45 at Grass Lake Road/Millburn Road project is to ease present and future congestion, improve safety and accessibility through the historic district area, and also minimize overall environmental impacts.*

Group #2 (green)

Issues:

- Congestion
- Safety (geometrics)
- Multimodal (bikes/sidewalks)
- Historic impact
- Mobility (move people)
- Tollway access (where the tolls are)
- Economic development

Statement: The transportation problem solution will address congestion, improve safety for all modes (bike/ped/horse), improve mobility in all directions, and allow for consistent travel times. Additionally, it will minimize impacts to the natural and manmade environments including the historic district and open space, while promoting economic vitality.

Group #3 (red)

Issues:

- Congestion
- Truck Traffic
- Offset side streets
- Eastbound traffic in the AM
- Westbound traffic in the PM
- Weekend traffic
- Livability of intersection
- Historic preservation
- Noise, pollution, vibrations, etc.
- Afford growth
 - Congestion at other intersections
- Through traffic (N-S)
- Compatibility with adjacent projects (improvements)
- Protecting land (preservation)
- Safety
- Pedestrian access
- Bicycle lanes

Statement: Solving the transportation problem involves creating the opportunity to accommodate future traffic flow while incorporating the integrity of the historic district and minimizing the environmental impacts.

The entire group then gathered back together and reported out their individual groups' thoughts, after which the CAG collaborated on formation of a consensus statement. The statement they arrived at was:

The transportation problems to be solved by the U.S. Route 45 at Grass Lake Road/ Millburn Road project are present and future congestion, safety and accessibility for all modes of transportation, and also impacts to natural and manmade environments.

After the workshop, the CAG meeting concluded with an overview of the upcoming project development activities and schedule. The next meeting of the US Route 45 Millburn Bypass CAG is scheduled for the Fall of 2009 at which the focus of discussion will be the project Purpose and Need (which will contain the CAG Project Problem Statement) and initiation of the project alternatives development process.

CAG #1 attendees were:

PSG Members	Organization
Chuck Gleason	LCDOT
Paula Trigg	LCDOT
Marie Glynn	IDOT
Mike Matkovic	CBBEL
Matt Huffman	CBBEL
Marty Worman	CBBEL
Sean LaDieu	Huff & Huff
Jarrold Cebulski	Patrick
Steve Lynch	Patrick
Ryan Westrom	Patrick

CAG Members	Representing
Andrew Kimmel	Lake County Forest Preserves
Bob Holbach	Millburn Tree Farm
Craig Richardson	Heritage Trails Homeowners Association
Daniel Venturi	Lake Villa Township & Lindenhurst/Lake Villa Chamber of Commerce
Dawn Revenaugh	Millburn Glass Studios
Dominic Marturano	Village of Lindenhurst
Gerald F. Swanson	Self
Glenn Westman	Lake County SMC
Kevin Klahs	Lindenhurst Police Department
Kevin McKeever	Providence Ridge subdivision
Larry Leffingwell	Tempel Farms
Linda Berger	Forest Trail subdivision
Michael Mark	Self
Michael Scholler	Providence Woods Homeowners Association
Milt Anderson	Self
Pete Szpak	Heritage Trails Homeowners Association
Philip Rovang	Lake County Planning, Building and Development
Scott Martin	Old Mill Creek Historic Preservation Commission
Scott Pfeiffer	Cross Creek Homeowners Association
Thomas Druce-Hoffman	Self
Tom Lippert	Lindenhurst Park District
Wolfgang Berthold	Old Mill Creek



U.S. Route 45 – IL 132 to IL 173 and Millburn Bypass

Community Advisory Group Meeting #1
June 16, 2009



Welcome and Introductions


- Lake County Division of Transportation staff:
 - Chuck Gleason
 - Paula Trigg
- Illinois Department of Transportation staff:
 - John Baczek
 - Marie Glynn
- Consultant Engineering staff:
 - Mike Matkovic – Christopher B. Burke Engineering, Ltd.
 - Marty Worman – Christopher B. Burke Engineering, Ltd.
 - Jarrod Cebulski – Patrick Engineering Inc.
 - Ryan Westrom – Patrick Engineering Inc.
- CAG members



CAG participants

- Groups Represented
 - Cross Creek Homeowners Association
 - Forest Trail subdivision
 - Heritage Trails Homeowners Association
 - Historic Millburn Community Association
 - Lake County Forest Preserves
 - Lake County Planning, Building and Development
 - Lake County Stormwater Management Commission
 - Lake Villa Township
 - Lindenhurst Park District
 - Lindenhurst Police Department
 - Lindenhurst, Village of
 - Lindenhurst/Lake Villa Chamber of Commerce
 - Millburn C.C. School District
 - Millburn Tree Farm
 - Old Mill Creek, Village of
 - Old Mill Creek Historic Preservation Commission
 - Providence Ridge subdivision
 - Providence Woods Homeowners Association
 - Tempel Farms

• Please review the list of CAG members within your binder to familiarize yourself with your fellow participants.

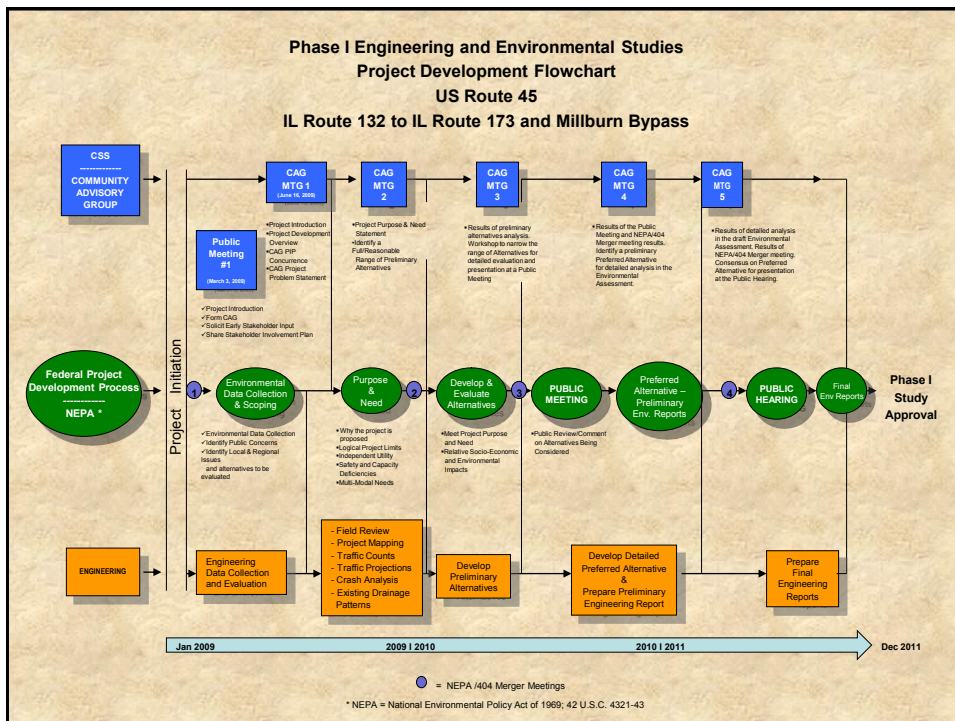


Agenda and Housekeeping

- Meeting Agenda Overview
 - Project Overview & NEPA Process
 - CSS/Public Involvement/CAG Procedures
 - Summary of Public Meeting Results
 - Tonight's Workshop: CAG Project Problem Statement
 - Next Steps: CAG #2 - Alternatives
- CAG procedures
 - Meeting Day
 - Meeting Time
 - Meeting Notification/Preparation/Duration
 - CAG Project Binders

Project Overview / NEPA Process

- Discussion of NEPA project limits vs. Millburn Bypass
- Project History of Millburn Bypass
 - 1995 IDOT Strategic Regional Arterial (SRA) study
 - Recorded west bypass alignment
 - SAFETEA-LU and Federal funding eligibility
 - NEPA compliance / 'Fresh Look'
- National Environmental Policy Act (NEPA)
 - 1969 Law
 - Compliance required for Federal funding eligibility
 - Full range of reasonable alternatives, including "no build" must be considered
 - Comprehensive environmental review (avoid, minimize, mitigate)
 - Public involvement
 - Formal documentation/disclosure
- Public Involvement – Context Sensitive Solutions (CSS)
- Overall Project Development Schedule





Public Involvement – CSS

- What CSS is:
 - CSS is an **interdisciplinary** project development approach that seeks effective, **multi-modal** transportation **solutions** by working with **stakeholders** to develop **cost-effective** transportation facilities that fit into and reflect the project's surroundings - its "**context**."
 - CSS is building Stakeholder Consensus
 - Consensus = Majority agree, while the dissenting remainder agrees its input has been considered and the process was fair



Public Involvement – CSS

- What CSS is not:
 - While we strive for consensus, this may not mean 100% agreement
 - While we seek input on issues, there are no decisions by voting
 - No guarantee that everyone will agree, but everyone's voice will be heard



Public Involvement Plan

- Prior to the meeting, a copy of the Public Involvement Plan (PIP) was mailed to you
- PIP components
 - Establishes overall framework for Public Involvement during project development
 - Project Study Group (PSG) provides overall project oversight and decision making authority
 - Community Advisory Group (CAG) formed for Millburn Bypass area



CAG process overview

- The CAG is one of the methods that will be used to facilitate stakeholder involvement. The role of the CAG will be to advise the Project Study Group (LCDOT, IDOT, FHWA, and consultants) throughout the course of the project development process in regard to the alternatives at the potential Millburn Bypass location.



CAG Participation Ground Rules

- All meetings will be conducted based on a set of ground rules that form the basis for the respectful interaction of all parties involved in this process.
- These ground rules, as listed in draft format in the Public Involvement Plan (PIP), must be agreed upon by the CAG membership.



Participation Ground Rule Highlights

- Input on the project from all stakeholders is duly considered in order to yield the best solutions to problems identified by the process.
- Input from all participants in the process is valued and considered.
- The list of stakeholders is subject to revision at any time as events warrant.
- All participants must keep an open mind and participate openly, honestly, and respectfully.
- All participants in the process must treat each other with respect and dignity.



Participation Ground Rules Highlights (continued)

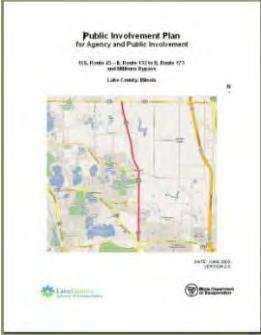
- All participants should work collaboratively and cooperatively to seek a consensus solution.
- Project progress is important and must occur at a reasonable pace, per the established project schedule. Members should commit to CAG attendance as prior meetings will not be revisited subsequently.
- Members of the media and public are welcome at all meetings, but must remain in the role of observers, not participants in the process.
- Final project decisions will be made by the PSG (LCDOT, IDOT, and FHWA).



Participation Ground Rules (continued)

○ Conflict Resolution

The PSG is committed to building stakeholder consensus for project decisions. However, if an impasse has been reached after making good-faith efforts to address unresolved concerns, the PSG, as the ultimate decision-making authority for the project, may proceed to the next stage of project development.

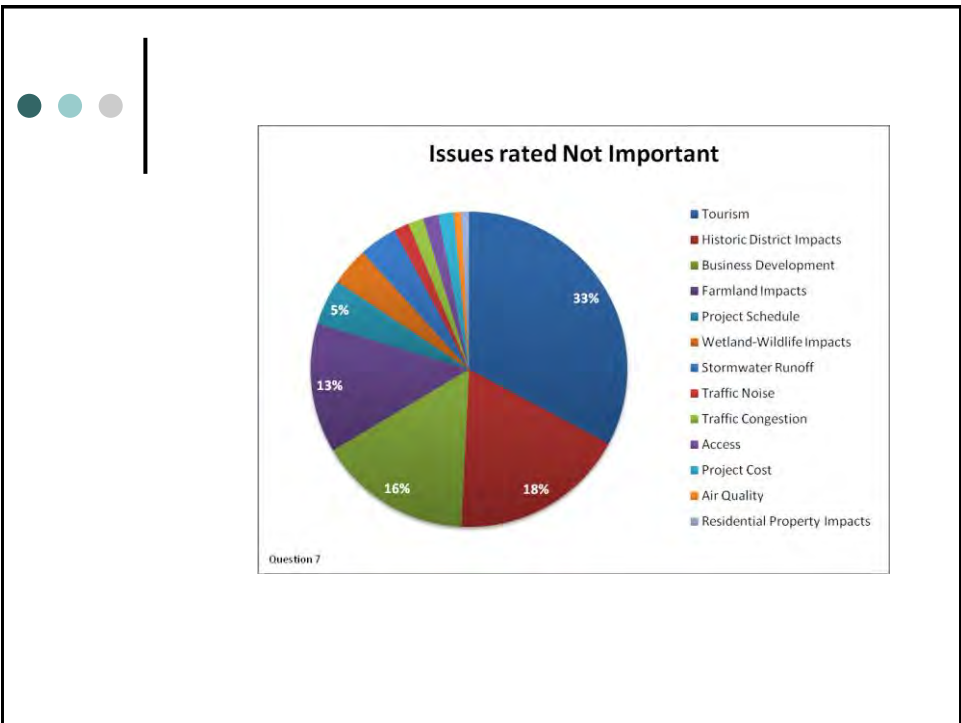
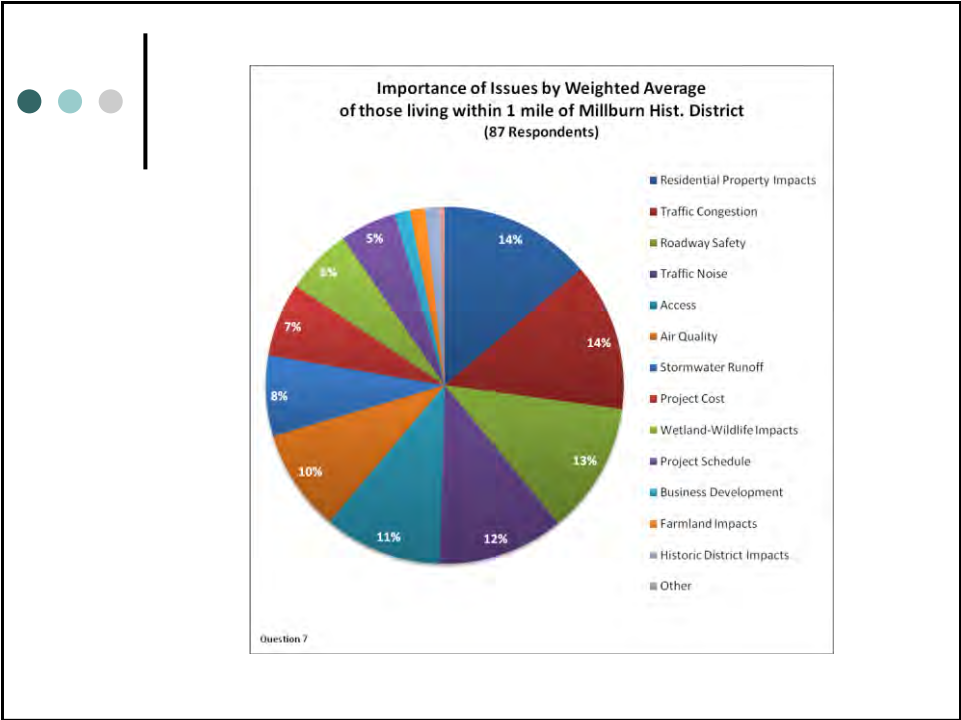


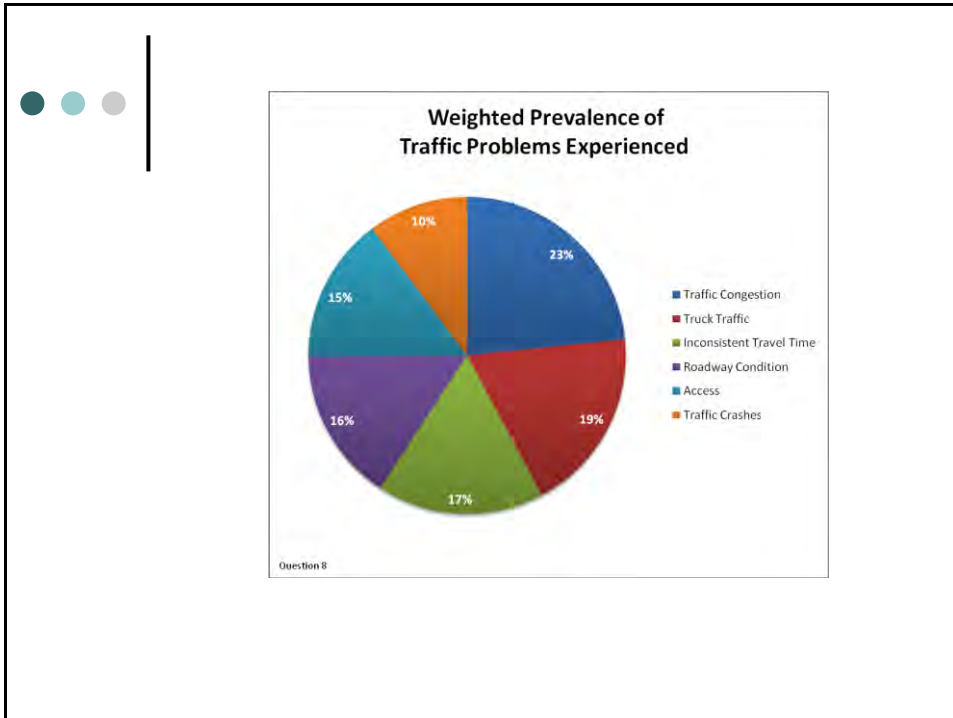
The image shows the cover of a document titled "Public Involvement Plan for Agency and Public Involvement". The cover features a map of Lake County, Illinois, with a red line indicating a proposed route. The text on the cover includes "U.S. Route 55 - B. Route 150 to U.S. Route 157 and Illinois Expressway" and "Lake County, Illinois". Logos for Lake County and the Department of Transportation are visible at the bottom.

- CAG discussion and consensus on PIP

Summary of Questionnaire Results

- Please refer to the Public Meeting summary for a documentation of the first Public Meeting
- Included in your binder are graphs depicting the results of the questionnaire questions and a summary
- Conclusions





Project Problem Statement

- What is this?
 - This statement records the reasons why a project is necessary. What is the problem this transportation project is intended to solve?
- Project Problem Statement development activity



Next Steps / Schedule

- Ongoing project development activities
 - Traffic analysis / projections
 - Crash analysis
 - Environmental surveys
- The next CAG meeting is anticipated in October 2009.
- Topics at that meeting will include review of draft purpose and need statement, and identifying a full range of build alternatives to be developed and evaluated.



Thanks for your participation!

See you next time.

If you have any project questions in the interim, please contact Chuck Gleason at LCDOT.

If those questions are in regard to the CAG, please contact Jarrod Cebulski at Patrick Engineering.

www.Route45project.com

U.S. 45 – IL 132 to IL 173 and Millburn Bypass
Community Advisory Group #2 Meeting Summary

On November 3, 2009, the second meeting of the US Route 45 Millburn Bypass Community Advisory Group (CAG) was held at the State Bank of the Lakes in Lindenhurst from 6:30 p.m. to 8:30 p.m. A summary of the evening's proceedings follows.

The goal of this CAG meeting was to (1) update the members on the project status and schedule, (2) obtain CAG comments on the project Purpose & Need, (3) begin discussion on the alternatives development and evaluation process, and then (4) hold a break out session on a full/reasonable range of alternatives moving forward. Facilitators included members of the Lake County Division of Transportation (LCDOT), Illinois Department of Transportation (IDOT), and consultant members of the project study team. All attendees are listed on the last page of this document.

The meeting agenda was as follows:

- I. Welcome / Introductions
- II. Project Update / NEPA Process and Schedule Review
- III. Purpose and Need Discussion
- IV. Alternatives Analysis Process and Methodology
- V. Range of Alternatives (Breakout Exercise)
- VI. Next Steps / Schedule

Exhibits on display at this meeting included:

- Overall GIS exhibit of study area showing updated environmental resources
- An existing and proposed land-use map
- 2009 and 2030 Traffic Volume exhibit
- Current Study Schedule

In addition to these exhibits, the following information was provided for inclusion within the CAG member project binders:

- CAG #2 Meeting Agenda
- Copy of the CAG #2 PowerPoint Presentation
- Summary of the CAG #1 Meeting held on June 16, 2009
- Draft Purpose & Need document
- Current Schedule
- Sample Evaluation Matrix Template
- Alternatives Combinations exhibits

A PowerPoint presentation guided the overall meeting. Chuck Gleason of LCDOT began by welcoming the CAG members and facilitating reintroductions of everyone present. Chuck also inquired if the CAG members had any comments on the minutes from CAG #1 that were previously distributed. There were no comments on the CAG #1 Meeting Minutes.

Mike Matkovic of Christopher B. Burke Engineering, Ltd. (CBBEL) continued the presentation by giving a project update and a review of the schedule and NEPA process. He noted that the project is on schedule for completion by the end of 2011, as planned. This segued into a discussion of the project Purpose and

Need document. The draft version had been distributed prior to the meeting, and an explanation of what it is, why it's required, and what it is used for was given. Mike explained that the Purpose and Need statement is a formal initial project deliverable under the National Environmental Policy Act (NEPA) that presents technical analysis to establish the transportation need for the project, as well as represents public input in this regard in the form of the CAG Project Problem Statement, developed at CAG #1. The purpose and need statement forms the basis for identifying a full and reasonable range of alternatives for the project in compliance with NEPA, as all reasonable alternatives must meet the transportation purpose and need for the project. Mike further explained that in accordance with NEPA the "no-build" (or do nothing) alternative must be carried forward for relative comparison.

The Purpose and Need document is currently being concurrently being reviewed by IDOT and FHWA; the goal is to obtain concurrence on the project Purpose and Need statement at the February NEPA 404 merger meeting. Attendees were asked to provide comments on the draft version of the Purpose and Need document. Comments included:

- Mr. Boller noted that on Page 2, where describing Mill Creek, the word 'Old' should be omitted as Old Mill Creek is the village and the creek is just Mill Creek.
- Mr. Smith asked that a discussion of the implications of the Tollway toll plaza locations on cut-through traffic be added.
- Mr. Pfeiffer asked to compare the growth rate of Lake County, and specifically this area, to the northeast Illinois region's growth as a whole.

Jarrold Cebulski of Patrick Engineering Inc. (Patrick) then continued the presentation by walking through the principles of alternatives development and evaluation and the process and methodology that is being utilized for this project. Jarrod showed an example of how an alternative could be developed and evaluated. A sample evaluation matrix template was presented. An evaluation matrix can be used to summarize potential environmental and socio-economic impacts associated with various alternatives for comparative purposes. Jarrod also shared the results of project consultation with IDOT, the Federal Highway Administration (FHWA), and the Illinois Historic Preservation Agency (IHPA) in regards to the potential effect an impact on the Millburn Historic District could have on an alternative's evaluation. The agencies directed that although there is concern with the potential effects, at this point in the project development process, alternatives for each north-south scenario (west bypass, east bypass, and retain current alignment) need to be analyzed and relatively compared with respect to transportation performance and socioeconomic and environmental effects in compliance with the National Environmental Policy Act (NEPA) that guides the federal project development process. On this basis, Jarrod reviewed the seventeen (17) combinations of north-south (Group A-West Bypass; Group B-Existing Alignment; Group C-East Bypass) and east-west (1-Existing Grass Lake/Millburn; 2-6 Various E-W Connections) alternatives (refer to attached) that were identified at the Public Meeting in March 2009 and that the Project Teams feels is a good starting point for developing a full and reasonable range of alternatives as required with NEPA.

This segued into the CAG workshop activity. Mike Matkovic outlined that each breakout group would be providing input to the Project Team on the alternatives presented, as well as indicating whether any alternatives were lacking. This input will be used by the Project Team to finalize the NEPA range of alternatives. As part of the workshop, there were three separate CAG groups (yellow, green, and red). CAG members were assigned to the same breakout groups as at the first CAG meeting. Each group provided input on the 17 combinations of north-south and east-west alternatives, specifically relating to key benefits, concerns, and/or if further consideration was warranted based on the project purpose and

need, potential impacts, etc. The entire group then gathered back together and reported out their individual groups' thoughts. Mr. Boller spoke for the yellow group, Mr. Richardson for the green, and Mr. Marturano for the red. With reference to the attached notes pages from each breakout group, the following summarizes the groups' reports:

Mr. Boller (Yellow Group)

This group felt that amongst the A bypass alternatives, combinations A1 and A4 would best address the transportation improvement needs since they seemed to better serve the general traffic flow experienced in the area. The group felt that the A bypass location, as compared to B and C, due to its closer proximity to most of the developed area would provide quicker access for most drivers. It was noted that the east-west alternate A2 was not desirable due to a remnant portion of the original Millburn Cemetery remaining in this area. This information was new to the Project Team, and will be investigated.

The group felt that the B alternatives were generally not preferred as a widening of US Route 45 on existing alignment would be even closer to the existing homes in the Historic District, which is already a concern.

The group felt that of the C bypass alternatives, combinations C1 and C4 would be preferred. Alternative C was considered more favorable when weighing impacts to residential properties. However, it was noted that the length of improvement for C would be longer than A. Similarly, the question of whether A or C would be more expensive was discussed, but it was noted that this is something that would be evaluated during the analysis process.

Mr. Richardson (Green Group)

Mr. Richardson expressed concern that the group was not given enough time to evaluate the alternatives presented. There was generally discussion that this exercise is the beginning of the alternatives development and evaluation process and that early input is being requested by the CAG for use in identifying the full range of alternatives that will be developed in greater detail and relatively compared with respect to transportation performance and socio-economic and environmental impacts. It was further noted that if CAG members had additional input to provide to the Project Team on the combination of alternatives presented today, that they can provide this input to Chuck Gleason at LCDOT within the two weeks following the meeting, or by November 17, 2009.

In terms of the group's input on the alternatives presented, it was noted that the B alternatives were undesirable due to historic district impacts. The group had concerns with the A alternatives based on residential impacts, although A1 and A2 were relatively the most favorable. The group had concerns with the C alternatives based on residential and historic building impacts (C3 and C4), agricultural land impacts (C1-C5), and not serving transportation needs (C5). However, it was noted that C2 seemed favorable with respect to serving traffic needs.

Another potential east-west connection was discussed and proposed by the group. They suggested that consideration for a connection between US 45 and Wadsworth

Road also be made by the County. There was discussion about whether this would address the project purpose and need with respect to needed improvements along US Route 45 given the predominant travel patterns noted in the Purpose and Need statement.

Mr. Marturano (Red Group)

This group felt that inclusion of alternatives that met the transportation needs outlined in the Purpose & Need document rose to the top.

The group felt that with respect to the A alternatives, A2 and A4 seemed to maintain the east-west traffic flow as well as providing the needed north-south bypass but was concerned about the cost of these alternatives. A1 was deemed less desirable due to the fact that significant traffic would remain within the Historic District. A3 would likely impact an historic building, while A5 would introduce substantial traffic to a residential street. A6 was seen as not providing the crucial east-west link.

With respect to the B and C alternatives, the group felt that east-west combinations 2 and 4 would be the most desirable with respect to avoiding homes and addressing traffic needs.

After the workshop, the CAG meeting concluded with an overview of the upcoming project development activities and schedule. The next meeting of the US Route 45 Millburn Bypass CAG is scheduled for the spring of 2010 at which the focus of discussion will be on the relative comparison of the alternatives developed for further narrowing to alternatives presented at a Public Meeting.

Throughout the course of CAG #2, the following additional information emerged about the project area that will be coordinated with IDOT, FHWA and IHPA:

- Scott Martin provided information (Map and Narrative Description) on the locally designated Southern Millburn Historic District, located south of the Millburn Historic District boundaries per the National Register Location, which is locally known as the Central Millburn Historic District.
- Several CAG members informed the Project Team of a possible remnant of the original Millburn Cemetery that exists along the east side of US 45, north of the Millburn Historic District boundaries. It was indicated that some grave sites may have been left in place when the move occurred although all of the headstones were moved.
- There was discussion of a new church being constructed adjacent to US 45 in this same area north of the Millburn Historic District. This will be investigated.
- There was discussion that the Old Mill Creek Historic Preservation Commission (HPC) is planning to develop a downtown area in the vicinity of the existing Millburn Historic District. Old Mill Creek HPC has not publically released any information about their plan. The CAG discussed that they would like Old Mill Creek HPC to release their plan.

The 2nd meeting of the US Route 45 Millburn Bypass CAG was adjourned at approximately 8:30 p.m. LCDOT asked that all comments pertaining to CAG meeting #2 be submitted by November 17, 2009.

Post CAG #2 Meeting Comments:

- In follow up to the CAG #2 meeting comment regarding the relocation of a church adjacent to US Route 45, the church referenced is St. Raphael the Archangel Catholic Church currently located at 2101 E. IL Route 173, Antioch Illinois. The Catholic Bishop of Chicago has title to vacant property along US Route 45 north of IL 173 in Antioch, which is outside of the Environmental Assessment project limits.
- Comments were received from CAG member Milt Anderson of 19176 W. Grass Lake Road stating his intention along with Mrs. George Druce-Hoffman of 38650 US Route 45 and Mr. Richard Schubert of 38924 US Route 45, of requesting inclusion to the Millburn Historic District. They plan on applying for Federal Register of Historic Places designation and will begin the process beginning January 1, 2010. Mr. Anderson intends on going through the Millburn Historic Preservation Commission of Old Mill Creek to make a formal request for inclusion to the Millburn Historic District (i.e. Central Millburn Historic District).
- Comments were received from Mr. Philip Rovang, Lake County Director of Planning, Building and Development, dated November 11, 2009. Mr. Rovang suggested that the goals of the project should include: no destruction of historical buildings, minimal disruption of the land in the Historic District, protection of the existing natural environment and cemetery, and minimize the need for vehicle turning movements. He expressed concerns with the B alternatives due to impacts of the historic district and the C alternatives due to bisection of the historic district. He further expressed concerns with the east-west alternatives: alternative 1 due to the turning movements required and impact to the historic district, alternatives 2, 3, and 6 due to impacts on the historic district structures (2 and 3) and not solving the transportation problem (6). Mr. Rovang recommended further evaluation of alternatives 4 and 5. He also requested that the purpose and need statement reflect the effects of the increased traffic and congestion causing discontinuity within the Millburn Community and creating harmful effects on commercial business.

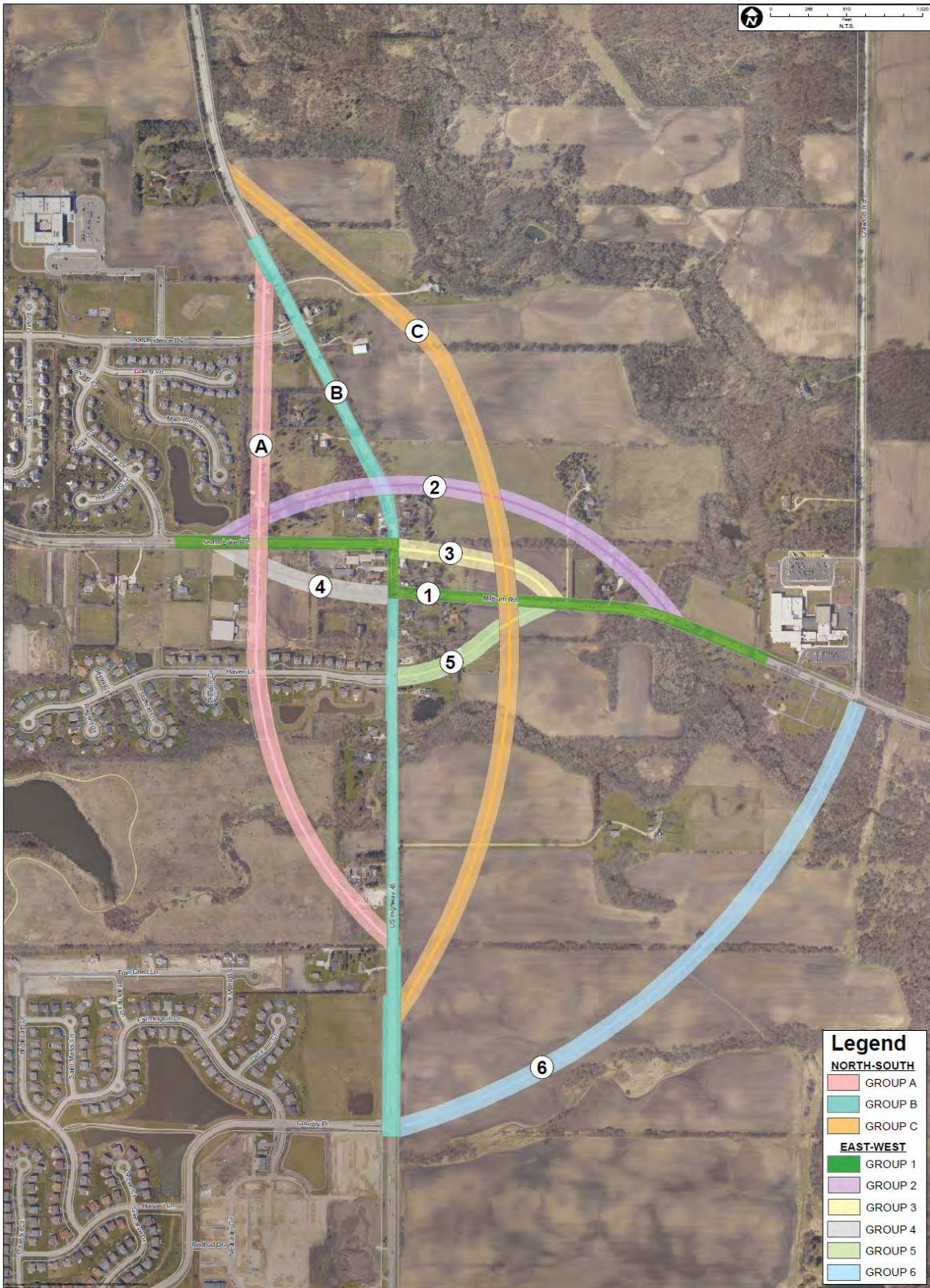
CAG #2 attendees were:

PSG Members	Organization
Chuck Gleason	LCDOT
Paula Trigg	LCDOT
Marie Glynn	IDOT
Srikanth Panguluri	IDOT
Mike Matkovic	CBBEL
Matt Huffman	CBBEL
Pete Knysz	CBBEL
Marty Worman	CBBEL
Sean LaDieu	Huff & Huff
Jarrod Cebulski	Patrick
Eric Cook	Patrick
Ryan Westrom	Patrick

CAG Members	Representing
Andrew Kimmel	Lake County Forest Preserves
Bob Holbach	Millburn Tree Farm
Craig Richardson	Heritage Trails Homeowners Association
Dawn Revenaugh	Millburn Glass Studios
Dominic Marturano	Village of Lindenhurst
Ellen Mauer	Millburn Community Consolidated School District 24
Gerald F. Swanson	Self
Glenn Westman	Lake County SMC
Jennifer Andrew	Historic Millburn Community Association
Kevin Klahs	Lindenhurst Police Department
Kevin McKeever	Providence Ridge subdivision
Larry Leffingwell	Tempel Farms
Linda Berger	Forest Trail subdivision
Michael Mark	Self
Michael Scholler	Providence Woods Homeowners Association
Milt Anderson	Self
Pete Szpak	Heritage Trails Homeowners Association
Scott Martin	Old Mill Creek Historic Preservation Commission
Scott Pfeiffer	Cross Creek Homeowners Association
Thomas Druce-Hoffman	Self
Tim Smith	Old Mill Creek
Tom Lippert	Lindenhurst Park District

CAG members not in attendance were:

Philip Rovang	Lake County Planning, Building and Development
Daniel Venturi	Lake Villa Township & Lindenhurst/Lake Villa Chamber of Commerce



Breakout Session – Group YELLOW

Group	Combination	Rank*	Key Benefits	Key Concerns	Other Comments	
A	A1	+ All	• Better Access • Schools planned around "A" • No disconnection of NMCA All	Offset intersection congestion Forest Preserve ; Cuts New Millburn School ; Cuts	Proximity to School Forest Trail Sub	
	A2	-	• Natural Beauty of Linden/OMC	Millburn Meadows PUD Max Disruption to New Housing • Eliminate b/c of CEMETERY	*- Though Historic Cemetery can Indep + 45 on 1861 Map	
	A3	-		• Though Museum • Impact HD		
	A4	+	"Do-Able"			
	A5	-			• will it solve E/W Problem • Change classification of Haven • Eliminate	
	A6	-			Eliminate	
				- E/W Demand solved	- Millburn / Gross Lake intersection	Watsworth at Hunt Club Alt. - connects with Independence Extend Kelly Rd. to Millburn
B	B1	+		• PROXIMITY TO HOUSES IN HD	All-Utility DISRUPTION	
	B2	-		CEMETERY		
	B3	-		CEM		
	B4	+				
	B5	-				
	B6	-			MAKES NO TRANS SENSE b/c E/W ELIMINATE	
C	C1	+	• LEAST AMT. OF IMPACT OF RESEDENTIAL • HELP OMC special retail	ALL SLIGHTLY LONGER } ALL CEMETERY		
	C2	-	• MINIMAL DEMOLITION • QUICK BUILD OUT			
	C3	-	• DECREASE PROPERTY VALUE		HISTORIC DISTRICT	
	C4	+				
	C5	-		HAVEN LANE ISSUES		

* Ranking Guidelines: (X = Do Not Consider Further. Would Not Address Purpose and Need, or Would Have Obvious Significant Impacts; 1 = Best Potential to Address Transportation Purpose and Need, Without Obvious Significant Impacts).

Breakout Session – Group GREEN

Group	Combination	Rank*	Key Benefits	Key Concerns	Other Comments
A	A1		LEAST IMPACT		
	A2		LESS IMPACTS COULD BE ALIGNED W/ LESS IMPACTS		
	A3				
	A4			RESIDENTIAL & HISTORIC IMPACTS	
	A5	LOW		NOT DESIREABLE	
	A6	LOW		NOT DESIREABLE	
B	B1			HISTORIC IMPACTS	
	B2				
	B3				
	B4				
	B5				
	B6				
C	C1				
	C2		SERVES TRAFFIC WELL.		
	C3			HISTORIC BUILDING IMPACT	
	C4			RESIDENTIAL & HISTORIC IMPACTS	
	C5			NOT SERVING TRANSPORTATION NEEDS	

* Ranking Guidelines: (X = Do Not Consider Further. Would Not Address Purpose and Need, or Would Have Obvious Significant Impacts; 1 = Best Potential to Address Transportation Purpose and Need, Without Obvious Significant Impacts).

7:25pm

Breakout Session – Group RED

Group	Combination	Rank*	Key Benefits	Key Concerns	Other Comments
A	A1	X		DOES NOT ADDRESS E-W TRAFFIC	
	A2	1			COST EVALUATIONS UNMET
	A3	X			
	A4	1			COST EVALUATIONS UNMET
	A5	X			
	A6	X		DOES NOT ADDRESS E-W TRAFFIC CUTS APPROX TO HIST. DIST.	
B	B1	X		DOES NOT ADDRESS E-W TRAFFIC	
	B2	1	AVOIDS HISTORIC DIST.		
	B3				
	B4	1		REMOVES "216-245"	FUND MAINTAINS HISTORIC DIST.
	B5				
	B6			SAFETY FOR SCHOOL	CONCERN W/ 09
C	C1	X		DOES NOT ADDRESS E-W TRAFFIC	
	C2	1	AVOIDS HOMES		
	C3	X		CUTS HISTORIC DIST.	
	C4	1	AVOIDS HISTORIC DIST.		
	C5	X		DOES NOT ADDRESS E-W TRAFFIC	

* Ranking Guidelines: (X = Do Not Consider Further. Would Not Address Purpose and Need, or Would Have Obvious Significant Impacts; 1 = Best Potential to Address Transportation Purpose and Need, Without Obvious Significant Impacts).




U.S. Route 45 – IL 132 to IL 173 and Millburn Bypass

Community Advisory Group Meeting #2
November 3, 2009



Welcome and Introductions

- Lake County Division of Transportation staff:
 - Chuck Gleason
 - Paula Trigg
- Illinois Department of Transportation staff:
 - John Baczek
 - Srikanth Panguluri
- Consultant Engineering staff:
 - Mike Matkovic – Christopher B. Burke Engineering, Ltd.
 - Marty Worman – Christopher B. Burke Engineering, Ltd.
 - Jarrod Cebulski – Patrick Engineering Inc.
 - Ryan Westrom – Patrick Engineering Inc.
- CAG members




CAG participants

Groups Represented

- Cross Creek Homeowners Association
- Forest Trail subdivision
- Heritage Trails Homeowners Association
- Historic Millburn Community Association
- Lake County Forest Preserves
- Lake County Planning, Building and Development
- Lake County Stormwater Management Commission
- Lake Villa Township
- Lindenhurst Park District
- Lindenhurst Police Department
- Lindenhurst, Village of
- Lindenhurst/Lake Villa Chamber of Commerce
- Millburn C.C. School District
- Millburn Tree Farm
- Old Mill Creek, Village of
- Old Mill Creek Historic Preservation Commission
- Providence Ridge subdivision
- Providence Woods Homeowners Association
- Tempel Farms

• Please review the updated list of CAG members within your binder to re-familiarize yourself with your fellow participants.

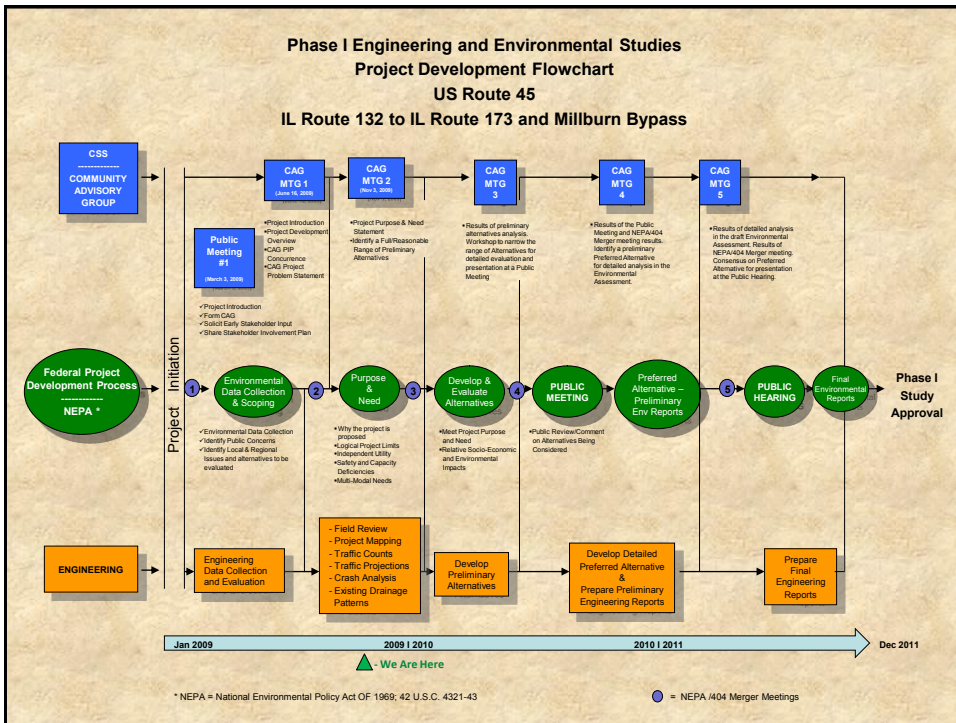



Meeting Agenda

- Introduction / Housekeeping / CAG Binders
- June 16, 2009 Meeting Minutes
- Project Update, NEPA Process, and Schedule Review
- Project Purpose & Need
- Alternatives Analysis Process and Methodology
- Tonight's Breakout Session: NEPA Range of Alternatives
- Next Steps: Alternatives Development, CAG #3

Project Update / NEPA Process and Schedule Review


- NEPA project limits review
- Items Accomplished Since CAG #1
 - Traffic projections & analysis
 - Crash analysis
 - Environmental surveys (ongoing)
 - NEPA/404 presentation (September)
 - Roadway Typical Sections
 - NEPA Range of Alternatives / Agency Consultation
 - Draft Purpose & Need Statement
- Overall Project Development Schedule
 - NEPA Process
 - Public Involvement / CAG Process





Draft Project Purpose & Need

- Draft Purpose & Need Statement
 - Formal NEPA document that establishes the purpose for and the need for the transportation project
 - Sets the stage for identification of a full and reasonable range of alternatives, and alternatives evaluation relative to transportation performance
 - Alternatives must meet the project Purpose and Need to be carried forward
 - The “No-Build” alternative must be carried forward and evaluated in the Environmental Assessment
 - Addresses project history, and compares existing conditions and future “No-Build” conditions with respect to mobility/capacity, safety, and operational deficiencies
 - Stakeholder Input



Draft Project Purpose & Need

- Draft Purpose & Need Statement Highlights:
 - 300% average increase in traffic volumes on US 45 from 1974 to 2009.
 - 150% average increase in traffic volumes projected for US 45 by the year 2030....even if no improvements are made (No-Build).
 - Over 300% average increase in vehicle delay during evening peak travel period by the year 2030 for signalized intersections north of IL132....if no improvements are made.
 - 73% of all crashes 2005-2007 at 5 signalized intersections. 1 fatality (at IL 132) and 7 severe crashes. Likely increase in crash occurrences and severity based on traffic growth....if no improvements are made.
 - General northwest to southeast travel patterns would be aided by US 45 improvements...reduces re-direct onto other roadways.
 - Good correlation with CAG Project Problem Statement:
“The transportation problems to be solved by the US 45 at Grass Lake Road/Millburn Road project are present and future congestion, safety and accessibility for all modes of transportation, and also impacts to natural and manmade environments.”
- Comments?



Alternatives Analysis Process and Methodology

- Analysis of the Alternatives will be via an Evaluation Process that meets federal requirements.
- Evaluation is the process of determining desirability of different courses of action in a comprehensive and useful form.
- By identifying the relative costs and benefits among alternatives being considered, evaluation leads to the identification of preferred outcomes.



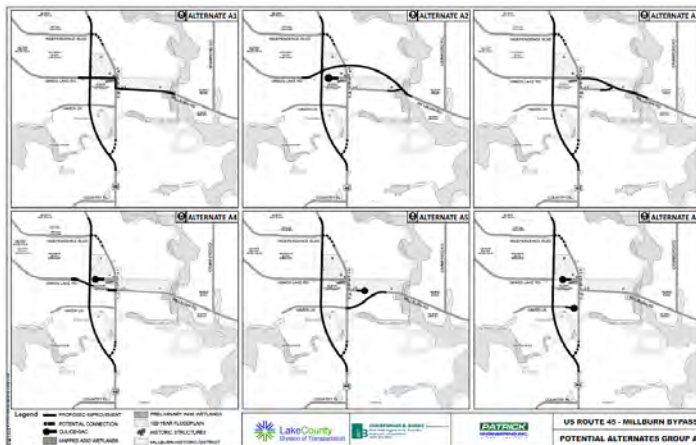
Alternatives Development

- Input received at Public Information Meeting – March 2009
- NEPA requires a full range of reasonable alternatives be considered...We are starting that process today with your input.
- Initial concept alternatives based on Public Meeting input and project history
 - 3 potential north-south (U.S. 45) links and up to 6 potential east-west (Grass Lake/Millburn) links (17 total initial combinations) were identified as follows:

Alternatives Overview

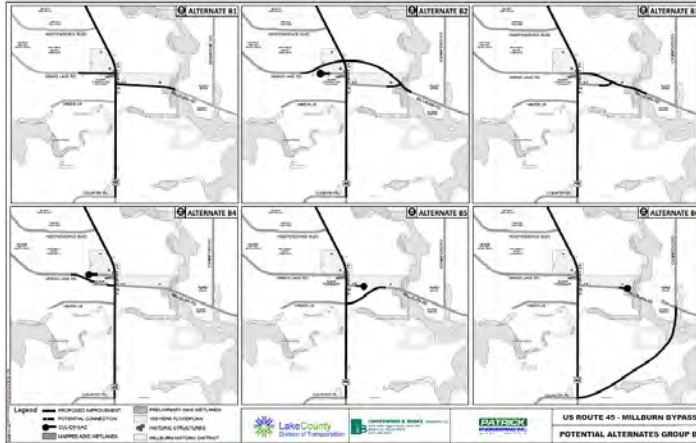


Alternatives Overview

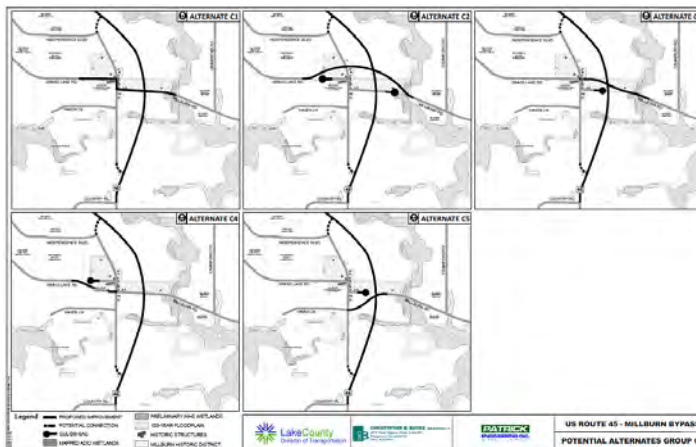




Alternatives Overview



Alternatives Overview



Analysis Process (Evaluation)

- Evaluation Criteria
 - Meets Transportation Purpose & Need
 - Congestion Relief
 - Safety
 - Environmental impacts
 - Historic District impacts
 - Forest Preserve impacts
 - Wetlands
 - Other
 - Socio-Economic Impacts
 - Displacements
 - Economic impacts
 - Land Use compatibility
 - Cost
- Preliminary Evaluation Matrix

The table is titled "Alternatives Evaluation Matrix" and contains a grid for evaluating various alternatives against numerous criteria. The criteria are grouped into sections: Meets Purpose & Need, Environmental Resources, Socio-Economic Impacts, and Cost. A legend at the bottom right indicates that the grid cells are color-coded: white for "Not Applicable", yellow for "Substantial Adverse Effect", red for "Substantial Adverse Effect", green for "Substantial Benefit", and blue for "Substantial Benefit".

Methodology

- Example alternative development and evaluation
 - Alternative B-1 (existing-existing alignment)
 - Proposed geometry/Typical Section
 - Evaluation considerations (matrix)



Breakout Exercise

- CAG input on the range of reasonable alternatives to be considered
- Each breakout group to discuss the 17 initial concept alternatives (30 minutes)
 - Narrow alternatives for further development and evaluation
 - Are all reasonable alternatives represented?
 - Are there any alternatives that should be eliminated due to unreasonableness?
 - Are there any reasonable alternatives missing?
- Report out on Group recommendations for alternatives development and evaluation (15 minutes)



Next Steps / Schedule

- Ongoing project development activities
 - Further traffic analysis
 - Environmental surveys
 - Alternatives evaluation
- The next CAG meeting is anticipated in Spring 2010.
- Topics at that meeting will include presentation of alternatives development and comparison, and narrowing of preferred alternative(s) for the Public Meeting.



Thanks for your participation!

See you next time.

If you have any project questions in the interim, please contact Chuck Gleason at LCDOT.

If those questions are in regard to the CAG, please contact Jarrod Cebulski at Patrick Engineering.

www.Route45project.com

U.S. 45 – IL 132 to IL 173 and Millburn Bypass
Community Advisory Group #3 Meeting Summary

The third meeting of the US Route 45 Millburn Bypass Community Advisory Group (CAG) was held at the State Bank of the Lakes in Lindenhurst from 6:30 p.m. to 8:30 p.m. on April 27, 2010. What follows is a summary of the evening's proceedings.

The goal of this third CAG meeting was to (1) update the members on the project status and schedule, and (2) procure CAG comments on the nine developed alternatives. Again present to facilitate were members of the Lake County Division of Transportation (LCDOT), Illinois Department of Transportation (IDOT), and consultant members of the project study team. All attendees are listed on the last page of this document.

The meeting agenda was as follows:

- I. Welcome and Meeting Agenda Overview
- II. Project Status Update
 - a. CAG #2 Meeting Results
 - b. LCDOT and IDOT Initial Bypass Alternatives Screening
 - c. NEPA/404 Merger Meeting with Resource Agencies
 - i. Purpose and Need Concurrence
 - ii. Initial Bypass Alternatives Screening Concurrence
 - d. Preliminary Bypass Alternatives Development and Evaluation
 - i. CMAP Project Traffic Projections
 - ii. Transportation Performance
 - iii. GIS Database and IDOT Environmental Surveys
 - iv. Social/Environmental Impacts based on Typical Section Right-of-Way Footprint
 - v. Relative Comparison for Distinction
 - vi. Bypass Alternatives Evaluation Matrix
- III. Breakout Exercise – Review of Preliminary Bypass Alternatives
- IV. Next Steps
 - a. Further LCDOT and IDOT Bypass Alternatives Screening
 - b. June NEPA/404 Merger Meeting with Resource Agencies
 - c. Summer Public Meeting

The following information was provided for inclusion within the project binders each CAG member possesses:

- CAG #3 Meeting Agenda
- Copy of the CAG #3 PowerPoint Presentation
- Summary of the second CAG Meeting held on November 3, 2009
- Project Status update
- Conceptual Developed Alternatives exhibits
- Evaluation Matrix
- Updated project Environmental Resources exhibit
- Existing/Proposed Land Use exhibit

A PowerPoint presentation guided the overall meeting. Chuck Gleason of LCDOT began by giving a welcome and facilitating reintroductions of everyone present. Mike Matkovic of Christopher B. Burke Engineering, Ltd. (CBBEL) continued the presentation by providing an overview of the current project status and a review of the schedule and NEPA process, which show the project is on schedule. He conveyed the project milestones that have occurred since the last CAG meeting, and described the process by which the original range of alternatives including eighteen options was narrowed to the remaining nine. He noted that this process began with the feedback received at the last CAG meeting, and then based on input from the PSG the remaining nine were selected to be carried forward. The alternatives dropped were A3, A5, A6, B3, B5, B6, C3, C5, and C6. Based on the CAG feedback it was generally determined that east-west options 3 and 5 were less preferable. And since the east-west movements were facilitated by other more acceptable east-west linkages, these options were dropped. In the cases of A6, which did not provide an east-west linkage, B6, which extended Crawford Road, and C6, which extended Wadsworth Road, it was determined that the project's Purpose & Need was not met. Therefore, these options were also dropped.

The remaining nine alternatives were developed further in order to begin evaluation of them to facilitate a decision on selection of a preferred alternative. Mike noted that this evaluation was based broadly on the entire ROW corridor width's impact. Mr. Druce-Hoffman noted that the church at the corner of Grass Lake Road and US 45 actually also owns the lot behind them and it should be considered an impact. Mike Matkovic requested that the CAG members be aware of this and to consider this information during the breakout exercise. Mr. Boller noted the southern 'historic' district was left off. Mike Matkovic indicated that this area is not considered an historic district by the State of Illinois or as part of the National Register. However, a photo log of the entire area has been submitted to IDOT and IHPA for review to determine if any additional buildings in the area are eligible historic structures. A response from IDOT and IHPA on this has not yet been received.

Ryan Westrom of Patrick Engineering Inc. (Patrick) continued the description of the developed alternatives by noting that each exhibit for the remaining nine (A1, A2, A4, B1, B2, B4, C1, C2, and C4) depicts the proposed buildout condition for the alternative overlaid on the aerial for the area. At this point, Ryan transitioned to describe the process by which the developed alternatives will be evaluated. One of the tools that was developed to aid this process was an evaluation matrix, which lists criteria upon which each alternative can be developed and weighed against each other. These criteria measure the benefits, costs, and impacts of each alternative and allow a relative comparison.

Three major items in regard to the evaluation matrix were observed. First, the criteria used: These criteria were grouped into four main categories: Transportation Performance, Environmental Resources, Socioeconomic Impacts, and Cost. Secondly, the means of measurements used: Both scales and applicable quantifications were used. Items for which no quantifiable measure is applicable used a scale in order to measure relative positive impacts ranging from 1, meaning a high positive impact, to 5, meaning a high negative impact. Where quantifiable, the applicable unit of measurement was used, and the scale was not used. Third, the color coding indicating a relative comparison between alternatives: Whether the criterion used a scale or number, the alternatives were weighed against each other. The best in each category was colored dark green, indicating it was relatively strong in comparison. The worst in each category was colored red, indicating it was relatively weak in comparison. Those values measuring between the extremes were colored proportionally (light green, yellow, orange) in between those spectrum ends.

The evaluation matrix is to be used as a tool to guide decision making in regards to alternative selection. While it is a handy tool, it is not the final answer. It can, however, provide overarching information and give broad takeaways. For instance, in regards to the nine developed alternatives, a few observations were able to be made. B1 can quickly be seen as having the lowest construction cost, but with the greatest impact to historic buildings. East-west alignment 2 is easily seen to be the most expensive. One other observation made was that the criteria categories are not weighted. This is due to the fact that any individual may consider them of differing varying importance, and thus they are presented without summation or weights. Mr. Boller noted that the costs are not accurate because the land acquisition costs are not included and he feels that land acquisition costs would be much less with the east bypass alternatives which is largely farm land. Mike Matkovic indicated that land acquisition costs can vary considerably based on a number of factors and can only be accurately estimated through property appraisals. The Project Team felt that at this stage of the project development process, it was best to compare the alternatives based on the more tangible construction cost estimates and to use the acreage of land acquisition required as a criteria for comparative analysis of the alternatives. As the number of alternatives are further narrowed and developed in more detail, land acquisition costs will be considered to the extent practical. Mr. McKeever asked about the available funding for this project. Paula Trigg indicated that approximately \$2 million in federal funding was secured for this project by Congresswoman Melissa Bean as part of the last federal highway bill (i.e. SAFETEA LU). In addition, the Lake County Division of Transportation (LCDOT) has identified \$20 million for this project through its one-quarter percent sales tax for transportation and public safety program. Mr. McKeever also asked which alternative was most favorable to commercial development due to the need for the local schools to see increased tax income. Mike Matkovic explained that the land use planning is not within the purview of LCDOT or IDOT, and therefore various potential land use development scenarios were not explored with the alternatives. The responsibility for land use planning lies with local agencies and is contingent upon their individual likes and dislikes. However, an assessment of the compatibility of each alternative to the known composite land use plans for the study area was made and is reflected on the evaluation matrix.

One aspect of the evaluation was detailed further. As part of the software, Synchro and SimTraffic, that helps calculate the delay each transportation network would result in, visualizations of the traffic in each condition can be created. Short video clips showing the following four scenarios were shown:

- Existing conditions
- 2030 No-Build conditions
- 2030 Alternative B1 conditions
- 2030 Alternative A4 conditions

Alternatives B1 and A4 were the best and worst relatively of the proposed improvements in terms of transportation performance. These videos were able to convey an idea of what variance in traffic delay could result within the different future scenarios. Mr. Anderson asked what the transportation delay values on the matrix meant. Mike Matkovic explained that each alternative was evaluated based on transportation performance within the core study area in the aggregate for the evening peak hour of travel, which is generally the heaviest travel period of the day. This means that the total travel time (or delay) for all vehicles traveling within or through the core study area during the evening peak hour of travel was added up for each alternative for comparison of overall travel performance. This was deemed as the most effective means of comparatively evaluating the overall transportation performance of each alternative within the core study area since the various alternatives have different numbers of likely signalized or stop controlled intersections.

Mike Matkovic then continued the presentation by walking through what each breakout group would be providing input on. The breakout session at this meeting was for the purpose of providing feedback on the nine preliminary developed alternatives. As part of the workshop, the CAG was divided into three groups (1, 2, and 3). Each group filled in a chart outlining their preliminary input on the 9 alternatives. The entire group then gathered back together and reported out their individual groups' thoughts. Mr. Kimmel spoke for group 1, Mr. Boller for group 2, and Mr. Venturi for group 3.

With reference to the attached notes pages from each breakout group, the following summarizes the groups' reports:

Mr. Kimmel (Group 1)

The group felt that the B alternatives were generally not preferred as a widening of US Route 45 on the existing alignment would have such serious impacts as to not be worth exploring further. Thus, they recommended dropping these three from further consideration.

Amongst the remaining alternatives, this group felt that within the A bypass alternatives, combinations A1 and A2 would address the transportation needs while preserving the historic district and were worth further consideration. A4 impacted three homes, and thus, they were less sure about it. The group felt that the A bypass location, as compared to B and C, was advantageous due to the fact that many residents were expecting this to be the proposed alignment, and that the west bypass best serves the County since it best matches area travel patterns.

The group felt that of the C bypass alternatives, combinations C2 and C4 would be preferred. Alternative C was considered more favorable when weighing impacts to residential properties. However, it was noted that the length of improvement for C would be longer than A resulting in a higher cost. The group was less sure of C1 due to the remaining offset east-west routes.

Mr. Boller (Group 2)

This group also felt that the B alternatives provided too great of an impact, and thus, should be dropped from consideration.

They also did not prefer east-west alignments 1 and 2. They felt leaving the east-west configuration the same as in 1 would not solve the transportation issue facing the intersections. And they felt 2 was too expensive.

That left the group's preference for either alternative A4 or C4. There was some difference as to which of these alternatives was preferred, however both were deemed worthy of carrying forward.

A few residents living in the neighborhoods west of the proposed A alignment were concerned about the proximity of the road to residences and if an adequate buffer could be provided. A suggestion was made to include an alternative that would cul de sac Old US 45 on the south rather than having it intersect the new US 45 alignment.

Overall, the C4 alternative seemed to be most favorable to the group from a land development standpoint and its ability to minimize overall impacts.

Mr. Venturi (Group 3)

This group felt that Alternative B4 would solve the east-west movement issue. They understood that the widening proposed was not desirable, but wanted to see the transportation performance modeled for the north-south route with three lanes versus five. The group was comfortable, however, with eliminating B1 and B2 as they felt the east-west movement would not be as well addressed in these scenarios. In regard to the viability of alternative B4, Mike Matkovic explained that this improvement with less capacity on US 45 would not meet the project Purpose and Need, which established the likelihood of additional travel lanes being needed by 2030. There was general concurrence that if US 45 needed to be five lanes, alternative B4 was also not desirable.

The group also did not prefer east-west alignment 2. They felt this option was too expensive, and was better addressed by alignment 4. Thus, they suggested dropping A2 and C2.

The group also felt like alternative A1 was worth maintaining. While the east-west movement matched existing conditions, they felt that since much of the traffic would now use the western realignment, and not traverse these intersections, this option was more appealing. They noted that the evaluation matrix showed that this option performed adequately from a transportation perspective and was also relatively less expensive.

That left alternatives A4 and C4, which the group also felt were worth proceeding forward with. They felt east-west alignment 4 addressed the east-west movement of traffic well. They were, however, split on whether A or C were preferred.

After the workshop, a few further questions were raised. Ms. Revenaugh asked about different geometric alternatives for the Independence Boulevard intersection with alignment C. Mike Matkovic explained that the geometric alternative as shown is conceptual based on the objective to minimize property and building impacts to the extent possible. As the alternatives screening process moves forward and more detailed engineering plans are developed, various intersection designs such as Independence Boulevard at US 45 will be evaluated in greater detail relative to transportation performance and impacts. Mr. Smith asked whether historic buildings can be taken down. Mike Matkovic explained that it is possible and that historic buildings can and have been moved with other projects, however, avoidance is typically the first objective with relocation a last resort. It was added that the Millburn Historic District is unique in that the proximity and connection of the historic buildings is a primary contributing factor to the National Register Location designation. Although the project team has not yet received the Cultural Resource review from IDOT, it is anticipated that IDOT and IHPA will prefer an alternative that avoids these impacts if the transportation purpose and need can be met with another alternative. Mr. Boller asked whether noise barrier costs were included. Mike Matkovic explained that for the alternatives that would place a new roadway in close proximity to a sensitive noise receptor, such as a dense residential community, noise walls and the cost thereof were included in the construction cost for those alternatives.

The CAG meeting concluded with an overview of the upcoming project development activities and schedule. This summer, a Public Meeting providing information on the project's to-date status will be held. The next meeting of the US Route 45 Millburn Bypass CAG is anticipated just prior to the Public Meeting and will likely be relatively brief, with no breakout session planned. This meeting will bring the CAG up to speed on project developments, including further alternative screening decisions that have been made by the Project Team. But the next formal meeting, at which the focus of discussion will be on working towards a selected alternative, will be in the fall.

Group | CAG #3
4-27-10

Group	Combination	Rank*	Key Benefits	Key Concerns	Other Comments
A	A1	✓	- Preserves Historic Dist. - West of Byers Cross Lake on - Preserves Hist. Bldg. - West of Byers Cross Lake - Good Transportation Performance	Displacement (Res) Impacts Historic District Less Compatible Roadside Appropriately explaining Cost Impacts to Church/School Property Impacts to Historic District/Low compatibility	Good travel Pat previously considered Doesn't affect church property
	A2	✓			
	A4				
	B1	X	Advance No Forest Pres Impacts	High # Historic Impacts Displacement (Res & Com) Rehabilitation for Res. Residence	
B	B2	X			
	B4	X			
	C1		No. Res Displacements	Adverse Impact to Commercial (Planned) Disturbance of Farming & Open Space No. Res moved Cost Bisects Milliken for Old Mill (H) Residential Displacement (C4)	
C	C2	✓			
	C4	✓	Competitively Good Transportation Beauty	Church & School Impacts (C4) Impacts to Historic Dist. Less Compatible w/historic setting (C4)	

✓ Ranking Guidelines: (X) = Candidate for dropping from further consideration based on relatively weak transportation performance and/or relatively severe impacts; ✓ = Candidate to carry forward for further development based on relatively strong transportation performance and/or with relatively less severe impacts.

Group 2

Group	Combination	Rank*	Key Benefits	Key Concerns	Other Comments
A	A1	X	Maintaining Good (Trams) with diversity and human transportation	PM Poor (Trams), Noise, Forest Preserve Procter Foundation, Landfill, Remediation Tree Impacts	B, NR, Remains, small impacts, + all other 2's
	A2	X			
	A4	✓		New Church, Pine Impacts New Religion, Residential Doubles Forest Preserve	Cultural-use of 1/4 hrs in south, This 7 will kill Redtail BFFC
B	B1	X			
	B2	X			
	B4	X			
C	C1	X			
	C2	X			
	C4	✓	Maintaining Forest, Trees, Forest, Local Wood Species Greater Tree Diversity and not create fossils + water contamination Also New Religion for Bee but do by 1/4th Day	Does that meet Purpose + Need (CEM Habitat) Tree 1/4 A 1/4th Day of Forested Impact than A1 or A4 (Planted trees) How will create and maintain soil? Include Burden in Cost	(A4) Living Trees are about 1/4th (A4) Forest Tracts

- ✓ Ranking Guidelines: (X = Candidate for dropping from further consideration based on relatively weak transportation performance and/or relatively severe impacts; ; ✓ = Candidate to carry forward for further development based on relatively strong transportation performance and/or with relatively less severe impacts.

Group 3

Group	Combination	Rank*	Key Benefits	Key Concerns	Other Comments
A	A1	✓ ✓	Least New Impacts	East/West Movement, Spills Suspension, 2 Home Disruption, Forest Pressure	
	A2	X		Costs / Impacts	
	A4	✓	Aluminum Recovered / Saves East-West	Spring Forest Trail Disrupts Homes (2)	
B	B1	X		East/West Movement	
	B2	X			
	B4	✓	Solves East-West Issue	Movement of Homes	Remove to 2-Lane
C	C1	X		East/West Movement	
	C2	X		Costs / Impacts	
	C4	✓	Only Home Disruption / Min. Environmental Impacts / Cost Effective / Safety		

✓ Ranking Guidelines: (X = Candidate for dropping from further consideration based on relatively weak transportation performance and/or relatively severe impacts. ; ✓ = Candidate to carry forward for further development based on relatively strong transportation performance and/or with relatively less severe impacts.

CAG #3 attendees were:

PSG Members	Organization
Chuck Gleason	LCDOT
Paula Trigg	LCDOT
Marie Glynn	IDOT
Srikanth Panguluri	IDOT
Mike Matkovic	CBBEL
Matt Huffman	CBBEL
Pete Knysz	CBBEL
Marty Worman	CBBEL
Ryan Westrom	Patrick
Eric Boelter	Patrick
Eric Cook	Patrick
Chris DeRosia	Patrick

CAG Members	Representing
Andrew Kimmel	Lake County Forest Preserves
Bob Holbach	Millburn Tree Farm
Craig Richardson	Heritage Trails Homeowners Association
Daniel Venturi	Lake Villa Township & Lindenhurst/Lake Villa Chamber of Commerce
Dawn Revenaugh	Millburn Glass Studios
Dominic Marturano	Village of Lindenhurst
Ellen Mauer	Millburn Community Consolidated School District 24
Gerald F. Swanson	Self
Glenn Westman	Lake County SMC
Jennifer Andrew	Historic Millburn Community Association
Kevin Klahs	Lindenhurst Police Department
Kevin McKeever	Providence Ridge subdivision
Larry Leffingwell	Tempel Farms
Linda Berger	Forest Trail subdivision
Michael Mark	Self
Milt Anderson	Self
Pete Szpak	Heritage Trails Homeowners Association
Philip Rovang	Lake County Planning, Building and Development
Ray Boller	Self
Scott Pfeiffer	Cross Creek Homeowners Association
Thomas Druce-Hoffman	Self
Tim Smith	Old Mill Creek
Jim Stout (representing Tom Lippert)	Lindenhurst Park District

CAG members not in attendance were:

Michael Scholler	Providence Woods Homeowners Association
Scott Martin	Old Mill Creek Historic Preservation Commission



U.S. Route 45 IL 132 to IL 173 and Millburn Bypass

Community Advisory Group Meeting #3
April 27, 2010



Welcome and Introductions

- Lake County Division of Transportation staff:
 - Chuck Gleason
 - Paula Trigg
- Illinois Department of Transportation staff:
 - John Baczek
 - Marie Glynn
- Consultant Engineering staff:

<p><u>Christopher B. Burke Engineering</u></p> <ul style="list-style-type: none"> •Mike Matkovic •Marty Worman •Pete Knysz •Matt Huffman 	<p><u>Patrick Engineering</u></p> <ul style="list-style-type: none"> •Ryan Westrom •Eric Boelter •Eric Cook •Chris DeRosia
--	--
- CAG members

CAG participants

Groups Represented

- Cross Creek Homeowners Association
- Forest Trail subdivision
- Heritage Trails Homeowners Association
- Historic Millburn Community Association
- Lake County Forest Preserves
- Lake County Planning, Building and Development
- Lake County Stormwater Management Commission
- Lake Villa Township
- Lindenhurst Park District
- Lindenhurst Police Department
- Lindenhurst, Village of
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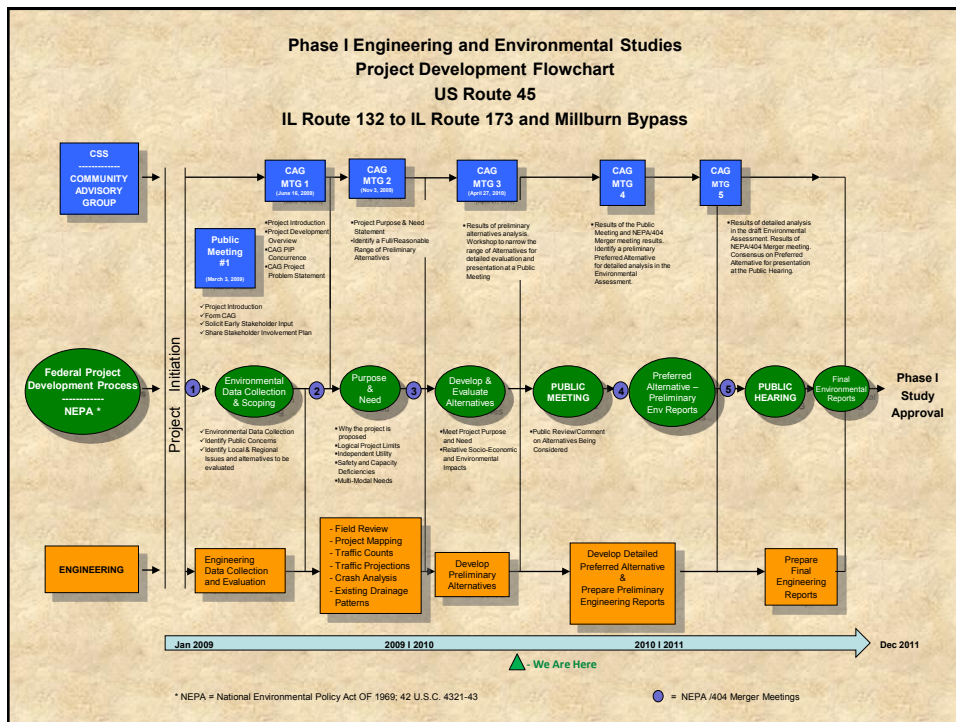
- Please review the updated list of CAG members within your binder to re-familiarize yourself with your fellow participants.

Meeting Agenda

- Introduction / Housekeeping / CAG Binders
- November 3, 2009 Meeting Minutes
- Project Update, NEPA Process, Schedule **Review, and Tonight's Objectives**
- Evaluation Process Overview
- Relative Comparison of Alternatives
- **Tonight's Breakout Session: Input on Remaining Alternatives**
- Next Steps:
 - Further Alternatives Narrowing
 - Public Meeting

Project Update / NEPA Process and Schedule Review

- Items Accomplished Since CAG #2
 - Environmental surveys (ongoing)
 - Initial Alternatives Screening with CAG #2 results
 - NEPA/404 presentation (February)
 - Purpose & Need Concurrence
 - Initial Alternatives Screening Concurrence
 - Alternatives Development and Analysis
- Overall Project Development Schedule
 - NEPA Process
 - Public Involvement / CAG Process



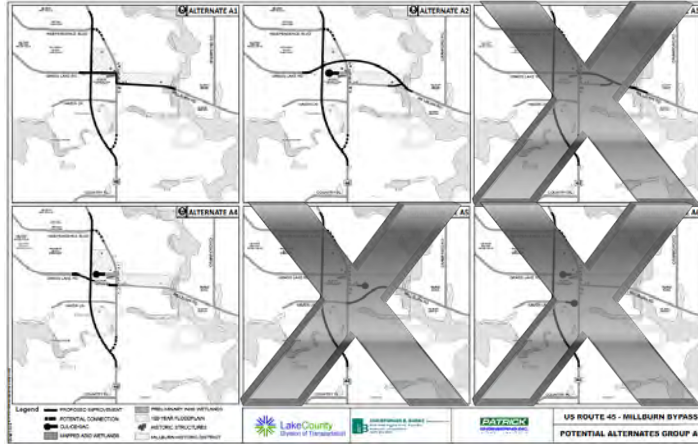
Alternatives Overview



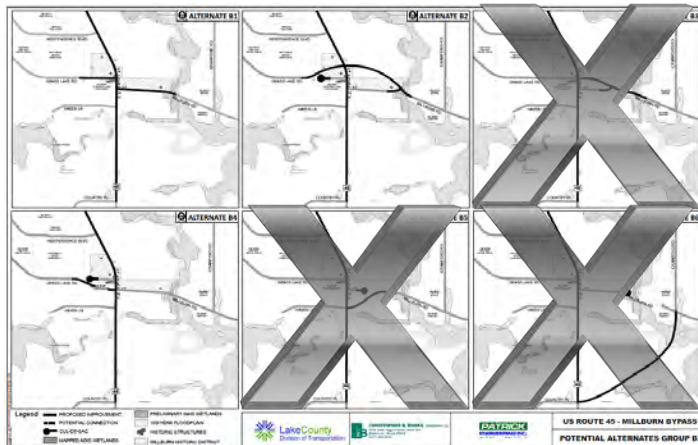
Alternatives Narrowing

- ❑ CAG #2 results
 - Alignment 3 and 5 were not preferred
- ❑ An extension of Crawford Rd. south or Wadsworth Rd. west to US 45 are considered outside the scope of the traffic problem to be solved by this bypass
- ❑ Consultation with the FHWA, IDOT, and LCDOT concluded these 9 alternatives provided a reasonable range of alternatives for further analysis and evaluation

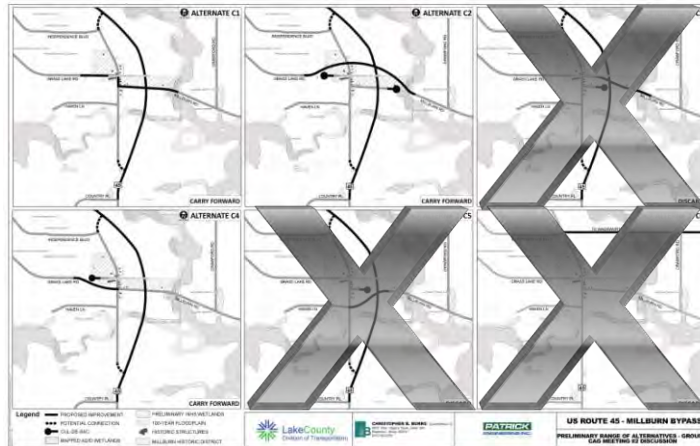
Alternatives Screening – West Bypass Options



Alternatives Screening – On Alignment Options



Alternatives Screening – East Bypass Options



Alternatives Analysis Process

- Analysis of the Alternatives is via an Evaluation Process that meets federal requirements.
- By identifying the relative costs, benefits, and impacts among alternatives being considered, evaluation leads to the identification of preferred outcomes.

Analysis Process (Evaluation)

- Evaluation Criteria
 - Transportation Performance
 - Congestion Relief
 - Safety
 - Environmental impacts
 - Historic District impacts
 - Forest Preserve impacts
 - Wetlands
 - Other
 - Socio-Economic Impacts
 - Displacements
 - Economic impacts
 - Land Use compatibility
 - Cost
- Evaluation Matrix

U.S. Route 45, I. Route 142 to U. Route 174
 Different Route Alternatives
 Preliminary Impact Evaluation Matrix

Legend:

Green	Low Impact
Yellow	Medium Impact
Red	High Impact

Notes:

1. This matrix is for informational purposes only. It is not intended to be used as a decision-making tool.

2. The matrix is based on the information provided in the project description and the preliminary impact assessment.

3. The matrix is subject to change as more information is available.

4. The matrix is not intended to be used as a decision-making tool.

5. The matrix is based on the information provided in the project description and the preliminary impact assessment.

6. The matrix is subject to change as more information is available.

7. The matrix is not intended to be used as a decision-making tool.

8. The matrix is based on the information provided in the project description and the preliminary impact assessment.

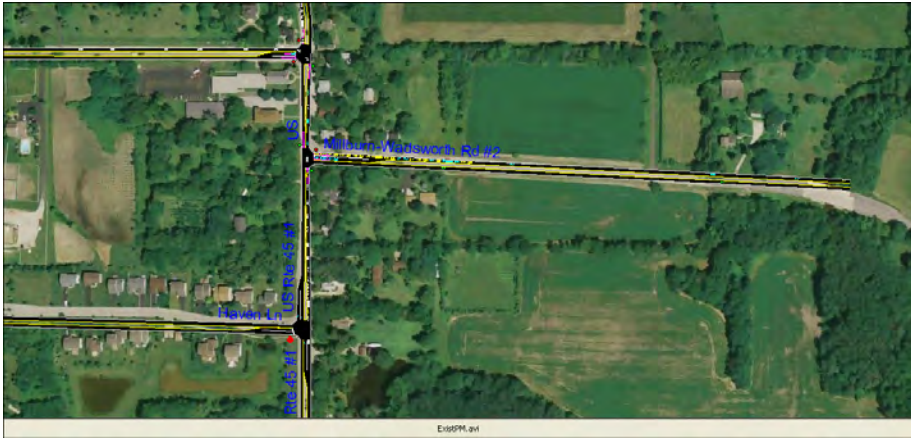
9. The matrix is subject to change as more information is available.

10. The matrix is not intended to be used as a decision-making tool.

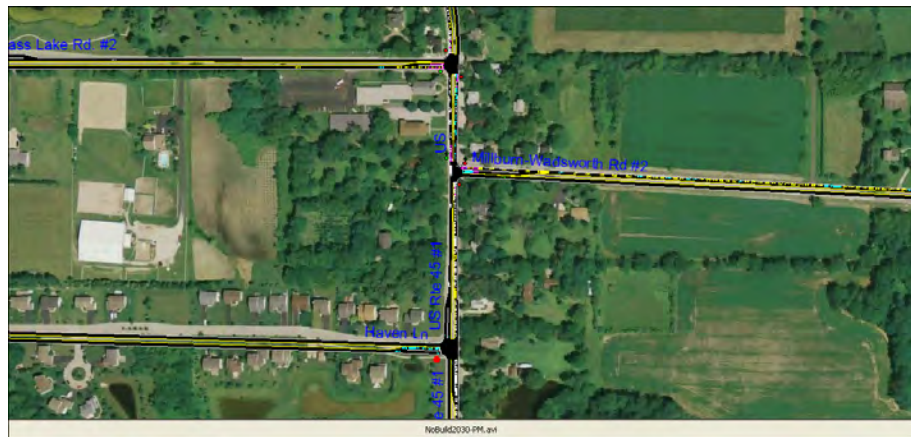
Transportation Performance Visualizations

- Transportation performance within the core study area for each alternative is a key part of the overall alternatives evaluation process.
- **The computer traffic analysis tool "Synchro/Simtraffic" was used to analyze the transportation performance for each alternative, with the analysis results included in the evaluation matrix for relative comparison.**
- Visualization files can also be generated from Synchro/Simtraffic. The following four examples are for existing conditions, 2030 No-Build, alternative B1 (worst performing), and alternative A4 (best performing).
- **If interested, more information on this visualization tool can be shared after this evening's meeting.**

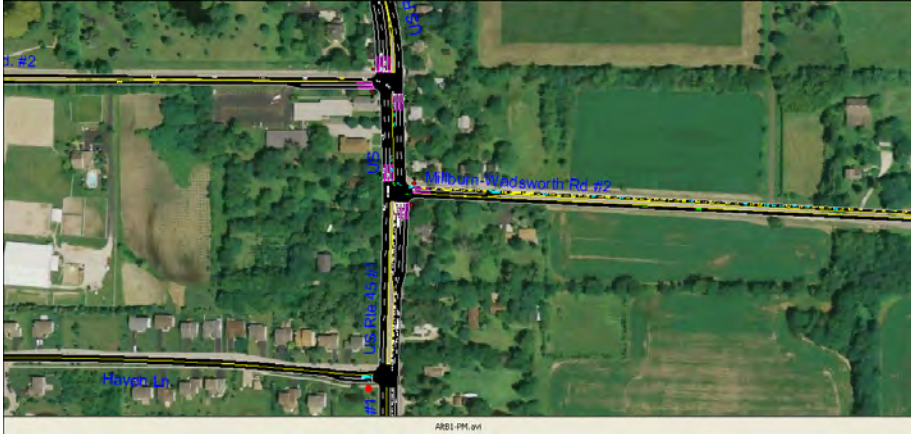
Existing Conditions Traffic Visualization



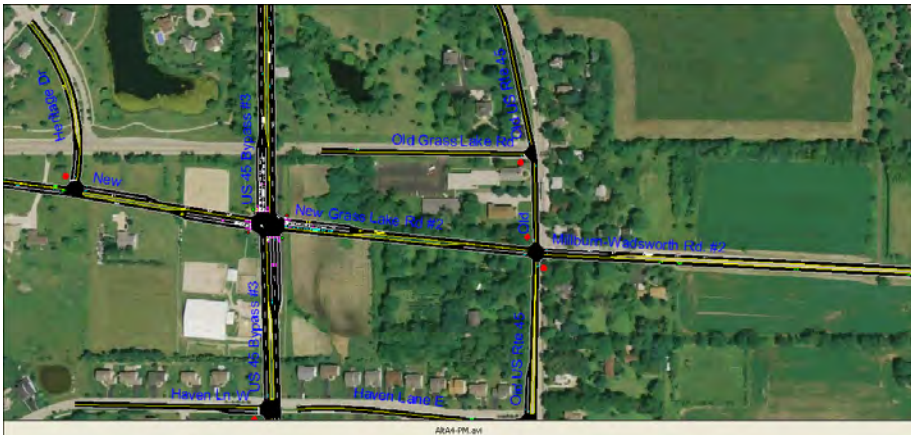
No-Build 2030 Traffic Visualization



Alt. B1 2030 Traffic Visualization



Alt. A4 2030 Traffic Visualization



Methodology

- Evaluation General Findings
 - *The matrix can guide findings.*
 - Alternative B-1 (existing-existing alignment)
 - Cheapest but with Greatest Impacts
 - 9 Historic Building and Residential Impacts
 - Highest Delay
 - East-West Alignment 2 (northernmost connection) is most expensive
 - Alternative B-2 costs \$18.3 million versus B-4 at \$12.5 million

Breakout Exercise

- CAG input on the developed alternatives
- Each breakout group to discuss the 9 concept alternatives (30 minutes)
 - Narrow alternatives for further development, evaluation, and presentation to public
 - Are there any alternatives that should be eliminated due to unreasonableness?
- Report out on Group recommendations for further alternatives development and evaluation feedback (15 minutes)

Next Steps / Schedule

- Ongoing project development activities:
 - Further traffic analysis
 - Environmental surveys
 - Alternatives evaluation
 - Further Alternative Screening
- NEPA/404 Merger Meeting (June)
- A Public Meeting will be held this summer presenting the alternatives to be considered.
- Topics at that meeting will include presentation of alternatives development and comparisons.
- The next CAG meeting is anticipated in Fall 2010.



Thanks for your
participation!

See you next time.

If you have any project questions in the interim,
please contact Chuck Gleason at LCDOT.

If those questions are in regard to the CAG, please
contact Jarrod Cebulski at Patrick Engineering.

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U.S. 45 – IL 132 to IL 173 and Millburn Bypass
Community Advisory Group #4 Meeting Summary

The fourth meeting of the US Route 45 Millburn Bypass Community Advisory Group (CAG) was held at the State Bank of the Lakes in Lindenhurst from 6:30 p.m. to 7:30 p.m. on August 19, 2010. What follows is a summary of the evening's proceedings.

The goal of this fourth CAG meeting was to (1) update the members on the project progress since the last CAG meeting, and (2) present a preview of the Public Meeting #2. Again present to facilitate were members of the Lake County Division of Transportation (LCDOT), Illinois Department of Transportation (IDOT), and consultant members of the project study team. All attendees are listed on the last page of this document.

The meeting agenda was as follows:

- I. Welcome and Meeting Agenda Overview
- II. Project Status Update
 - a. CAG #3 Meeting Minutes
 - b. Project Team Recommendation – Finalist Alternatives
 - c. Federal Highway Administration meeting – May 12th
 - d. NEPA/404 Merger Meeting – June 11th
 - e. Illinois Historic Preservation Agency meeting – July 19th
 - f. Public Meeting #2 – September 2nd
- III. Public Meeting #2 Content Overview and Preview
 - a. Study Progress/Purpose and Need Overview
 - b. Alternatives Development and Evaluation Process
 - c. Finalist Alternatives and Evaluation
 - d. Community Advisory Group Proceedings
- IV. Next Steps
 - a. Project Team Evaluation of Public Meeting Results
 - b. CAG Meeting #5 – Fall '10: Public Meeting Results and Preferred Alternative
 - c. Prepare Engineering and Environmental Reports for review by the Project Team and FHWA
 - d. February NEPA/404 Merger Meeting – Preferred Alternative Concurrence
 - e. Summer 2011 Public Hearing

The following information was provided for inclusion within the project binders each CAG member possesses:

- CAG #4 Meeting Agenda
- Copy of the CAG #4 PowerPoint Presentation
- Summary of the third CAG Meeting held on April 27, 2010
- Conceptual Finalist Alternatives Exhibits
- Updated Evaluation Matrix
- Public Meeting #2 Station Overview

A PowerPoint presentation guided the overall meeting. Chuck Gleason of LCDOT began by giving a welcome and facilitating reintroductions of everyone present. Mike Matkovic of Christopher B. Burke Engineering, Ltd. (CBBEL) then continued the presentation by providing an update on the current project

status. He conveyed the events that have occurred since the last CAG meeting, and described the process by which concurrence on the three finalist alternatives was gained. He noted that this process began with the feedback received at the last CAG meeting, and then continued with further study by the PSG to identify the preliminary finalist alternatives, and then involved coordination with the following agencies:

- Federal Highway Administration Meeting – May 12th
- NEPA/404 Merger Meeting – June 11th
- Illinois State Archeological Survey
- Illinois Historic Preservation Agency – July 19th

On this basis, alternatives A1, A4, and C4 emerged as the finalist alternatives. Based on information provided by the Illinois State Archeological Survey, it was determined that a potential archeological site was within the proposed Alternative C4 alignment. As a result, Alignment C4 was modified to avoid this location. This was possible within the standard design criteria laid forth for the project.

A meeting was also held with the Millburn Congregational Church to discuss the direct impacts to their property of the finalist alternatives. At that meeting, it was observed that the east-west 4 alignment could potentially be tweaked to minimize the impacts to certain areas of the church property, including a children's playground. If the chosen alternative is one of these, adjustments such as this will be explored.

Concurrence on the finalist three alternatives was gained from the FHWA and at the NEPA/404 Merger Meeting, and therefore, the project team will proceed towards Public Meeting #2 to present these alternatives.

Jarrold Cebulski of Patrick Engineering Inc. (Patrick) then continued the meeting with a description of the upcoming Public Meeting. He noted that the following Stations will be available for public viewing:

1. A Slideshow
2. Study Progress/Purpose & Need Overview
3. Public Involvement/Community Advisory Group Proceedings
4. Alternatives Development and Evaluation Process
5. Finalist Alternatives and Evaluation
6. Comments

He gave a short description of what each station would entail, which was provided to each CAG member. Jarrold also displayed an exhibit that showed the Public Meeting room layout and showed the expected progression through the meeting.

In regard to Station 3, the Public Involvement/Community Advisory Group Proceedings station, Jarrold noted that CAG members could be integral in explaining to the public how the CAG has worked. He asked that CAG members consider volunteering to staff this booth. An email will be sent out to facilitate this.

Mike Matkovic then concluded the meeting by outlining the anticipated next steps and schedule. After the Public Meeting, the project team will evaluate the meeting results, and discern if there is consensus on a final alternative. Another CAG meeting is anticipated this fall to go over the Public Meeting results and hopefully select a preferred alternative. At that point, the project team will prepare the final

geometry and engineering & environmental reports. Preferred alternative concurrence will be sought at the NEPA/404 Merger Meetings, beginning in February. Ultimately, a final Public Hearing will be held in the summer of 2011

At this point, the floor was opened for comments. A few items were raised. Mr. Rovang asked whether a proposed typical section for the roadways had been settled on. Mr. Matkovic noted that the initial proposed section had previously been presented at CAG Meeting #2, and will be shown at the Public Meeting. Currently, the U.S. 45 proposed typical section consists of two through lanes in each direction with a center 22' landscaped median, with a bikepath on one side of the roadway and a sidewalk on the other, within an approximate 130' ROW width, which matches the width preserved for potential Alignment A along Haven Lane. Mr. Pfeiffer asked whether the proposed radius for Alignment C4, now that it was modified, meets design criteria standards. Mr. Matkovic indicated that it does, and noted that the design speed is 50 mph, while posted speed is anticipated to be 45 mph. Mr. Leffingwell asked whether landscaping will be considered for all finalist alternatives. Mr. Matkovic noted that landscaping will be considered for all alternatives both in the median and roadside to the extent practical and feasible. The meeting adjourned with the opportunity for members to peruse the exhibits that will be presented at Public Meeting #2.

CAG #4 attendees were:

PSG Members	Organization
Chuck Gleason	LCDOT
Paula Trigg	LCDOT
Marie Glynn	IDOT
Mike Matkovic	CBBEL
Matt Huffman	CBBEL
Pete Knysz	CBBEL
Jarrold Cebulski	Patrick
Ryan Westrom	Patrick
Chris DeRosia	Patrick
Christina Bernardo	Patrick

CAG Members	Representing
Bob Holbach	Millburn Tree Farm
Craig Richardson	Heritage Trails Homeowners Association
Dawn Revenaugh	Millburn Glass Studios
Dominic Marturano	Village of Lindenhurst
Ellen Mauer	Millburn Community Consolidated School District 24
Gerald F. Swanson	Self
Glenn Westman	Lake County SMC
Jennifer Andrew	Historic Millburn Community Association
Kevin Klahs	Lindenhurst Police Department
Larry Leffingwell	Tempel Farms
Linda Berger	Forest Trail subdivision
Michael Mark	Self
Michael Scholler	Providence Woods Homeowners Association

Milt Anderson	Self
Pete Szpak	Heritage Trails Homeowners Association
Philip Rovang	Lake County Planning, Building and Development
Ray Boller	Self
Scott Pfeiffer	Cross Creek Homeowners Association
Thomas Druce-Hoffman	Self
Tim Smith	Old Mill Creek
Jim Stout (representing Tom Lippert)	Lindenhurst Park District
A representative for Andrew Kimmel	Lake County Forest Preserves
A representative for Kevin McKeever	Providence Ridge subdivision

CAG members not in attendance were:

Daniel Venturi	Lake Villa Township & Lindenhurst/Lake Villa Chamber of Commerce
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U.S. Route 45 IL 132 to IL 173 and Millburn Bypass

Community Advisory Group Meeting #4
August 19, 2010



Welcome and Introductions

- Lake County Division of Transportation staff:
 - Paula Trigg, Director of Planning and Programming
 - Chuck Gleason, Project Manager
- Illinois Department of Transportation staff:
 - Marie Glynn, Project Manager
 - Srikanth Panguluri, Asst. Project Manager
- Consultant Engineering staff:

Christopher B. Burke Engineering

- Mike Matkovic
- Marty Worman
- Pete Knysz
- Matt Huffman

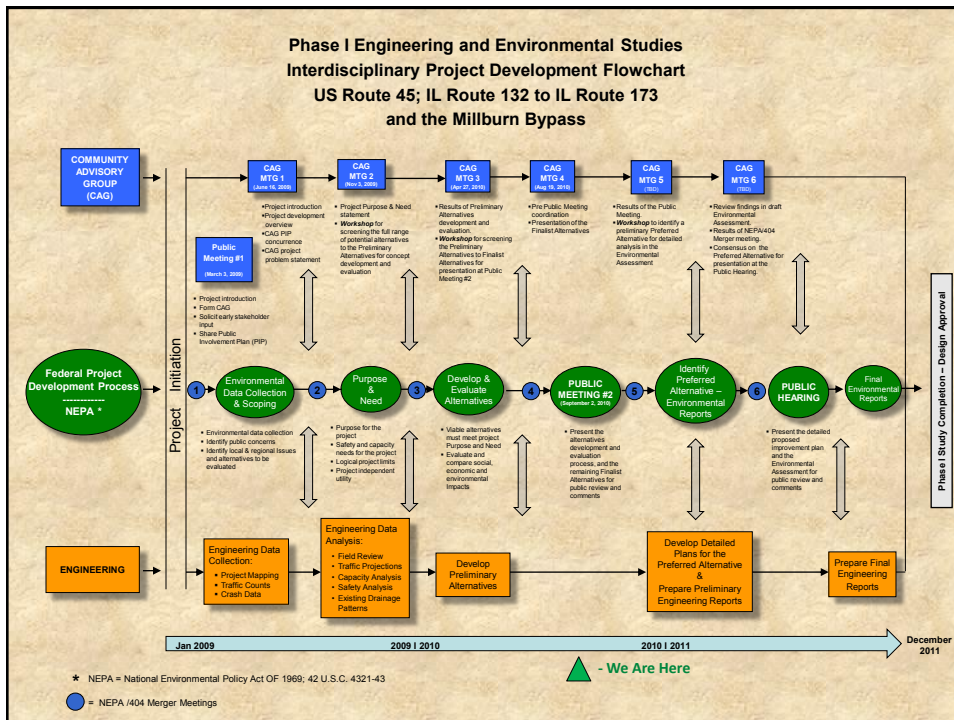
Patrick Engineering

- Jarrod Cebulski
- Ryan Westrom
- Chris DeRosia
- Christina Bernardo

- CAG members

Meeting Agenda

- Introduction / Housekeeping / CAG Binders
 - April 27, 2010 Meeting Minutes
- Project Status Update
 - General Project Status
 - CAG #3 Results
 - Project Team Recommendation
 - Agency Coordination
 - Millburn Burial Site
- Public Meeting #2 Content Overview
- Next Steps:
 - Project Team Evaluation of Public Meeting Results
 - CAG Meeting #5 – October: Public Meeting Results and Preferred Alternative
 - Prepare Engineering and Environmental Reports for review by the Project Team and FHWA
 - February NEPA/404 Merger Meeting – Preferred Alternative Concurrence
 - Summer 2011 Public Hearing



Project Status Update

Summary of CAG #3 on April 27, 2010

- Information provided to CAG members in advance for review :
 - Project Status Summary paper
 - Color copies of the nine alternatives
 - Color copy of the evaluation matrix
 - Updated project Environmental Resources Exhibit and the Existing/Proposed Land Use Exhibit.
- Reviewed the alternatives development process and the results of the evaluation process as reflected on the evaluation matrix
- Three breakout groups to discuss the alternatives and provide input on the relative performance of alternatives and recommendations moving forward.



Project Status Update

Summary of CAG #3 on April 27, 2010:

- Report out from each breakout group, with follow up discussion.
- Based on the CAG input, there was consensus to dismiss alternatives A2, B1, B2, B4, C1 and C2.

Alternative Considered	CAG Group Recommendation			CAG Group Comments
	1	2	3	
A1	+	-	+	CAG Group 1 felt that the A1 was advantageous since best resident travel patterns. CAG Group 2 felt that A1 was undesirable due to potential noise and forest preserve impacts. CAG Group 3 felt A1 would work well since most traffic would use the west leg.
A2	+	-	-	Same comment from CAG Group 1 per above relative to transportation, but with concerns for Historic District impacts and cost. CAG Groups 2 and 3 felt that the E-W '2' options in general were too expensive with better transportation options available.
A4	U	+	+	CAG Group 1 was undecided with respect to A4 due to the residential displacements involved. CAG Groups 2 and 3 felt that A4 was a preferred transportation alternative and should be considered further.
B1	-	-	-	All CAG groups felt that B1 should be dropped from further consideration due to the substantial resulting impacts to the Milliken Historic District, including displacement of 9 historic buildings.
B2	-	-	-	All CAG groups felt that B2 should be dropped from further consideration due to the substantial resulting impacts to the Milliken Historic District, including displacement of 9 historic buildings.
B4	-	-	U	CAG Groups 1 and 2 felt that B3 should be dropped from further consideration. CAG group 3 initially felt this alternative should be carried forward without additional travel lanes however, it was explained that maintaining one travel lane in each direction on US 45 would not meet the project purpose and need.
C1	U	-	-	CAG Group 1 felt that C1 had lower residential impacts, but would cost more and was uncertain with respect to a recommendation. CAG Groups 2 and 3 felt that C1 does not address the east-west movement and was poor with respect to transportation performance.
C2	+	-	-	CAG Groups 2 and 3 felt that the E-W '2' options in general were too expensive with better transportation options available. CAG Group 1 felt that C2 was viable but with concerns with the highest cost and property impacts to the Historic District.
C4	+	+	+	All CAG Groups felt that C4 was comparatively strong with respect to impacts and transportation performance and should be considered further.

“+” = Preferred with respect to further consideration
 “-” = Undesirable with respect to further consideration.
 “U” = Uncertain with respect to further consideration

Project Status Update

Project Team recommendations for further alternatives screening:

- The Project Team met to review the results of the completed evaluation of alternatives, and the input received at CAG #3.
- On this basis, the project team proposed to dismiss alternatives A3, B1, B2, B4, C1, and C2 from further consideration based on impacts associated with these alternatives, and based on the remaining alternatives meeting the transportation purpose and need for the project.

**US Route 45 - Millburn Bypass
Post CAG #3 Alternatives Screening Recommendations**

Subsequent to CAG #2 and various coordination meetings including the Project Team (LCDOT, IDOT, Consultants, THWA), and the February 2010 NEPA/EA/EAIS target meeting, the new alternatives listed below were conceptually developed based on the design criteria developed by LCDOT and IDOT for the involved State and County agencies. Each alternative was comprehensively evaluated with respect to transportation performance, environmental impacts, socio-economic impacts, and costs for discussion at CAG #3.

Based on the review of the comparative analysis, and based on input received at CAG #3, the following is a summary of the Project Team's recommendation with respect to alternatives to be dropped or carried forward for further development and evaluation, and for presentation at a Public Meeting in the Summer 2010.

Alternative Considered	CAG Group Recommendation			CAG Group Comments	Carry Forward
	1	2	3		
A1	+	-	+	Alternative A1 was evaluated as a desirable alternative. It was found to be a desirable alternative due to its low cost, low impacts, and high performance. It was recommended to be carried forward for further development and evaluation.	Y
A2	+	-	-	Alternative A2 was evaluated as a desirable alternative. It was found to be a desirable alternative due to its low cost, low impacts, and high performance. It was recommended to be carried forward for further development and evaluation.	N
A4	U	+	+	Alternative A4 was evaluated as a desirable alternative. It was found to be a desirable alternative due to its low cost, low impacts, and high performance. It was recommended to be carried forward for further development and evaluation.	Y
B1	-	-	-	Alternative B1 was evaluated as a desirable alternative. It was found to be a desirable alternative due to its low cost, low impacts, and high performance. It was recommended to be carried forward for further development and evaluation.	N
B2	-	-	-	Alternative B2 was evaluated as a desirable alternative. It was found to be a desirable alternative due to its low cost, low impacts, and high performance. It was recommended to be carried forward for further development and evaluation.	N
B4	-	-	U	Alternative B4 was evaluated as a desirable alternative. It was found to be a desirable alternative due to its low cost, low impacts, and high performance. It was recommended to be carried forward for further development and evaluation.	N
C1	U	-	-	Alternative C1 was evaluated as a desirable alternative. It was found to be a desirable alternative due to its low cost, low impacts, and high performance. It was recommended to be carried forward for further development and evaluation.	N
C2	+	-	-	Alternative C2 was evaluated as a desirable alternative. It was found to be a desirable alternative due to its low cost, low impacts, and high performance. It was recommended to be carried forward for further development and evaluation.	N
C4	+	+	+	Alternative C4 was evaluated as a desirable alternative. It was found to be a desirable alternative due to its low cost, low impacts, and high performance. It was recommended to be carried forward for further development and evaluation.	Y

Legend: "+" = Alternative with respect to further consideration; "-" = Alternative with respect to further consideration; "U" = Alternative with respect to further consideration; "N" = Alternative with respect to further consideration; "Y" = Alternative with respect to further consideration.

Project Status Update: Project Team Recommendations

- Based on the Alternatives Development and Evaluation Results, and input from CAG, the project study team determined the following:
 - All the B alternatives were not desirable due to their significant impact to the Historic District buildings
 - A2 and C2 were not desirable due to their high cost and impacts to Millburn Historic District property.
 - C1 was not desirable as the west to east travel pattern would still pass through the problem Grass Lake and Millburn intersections
 - Thus, the finalists are A1, A4, and C4 to be presented at Public Meeting #2

Project Status Update: Agency Coordination After CAG #3

- Illinois State Archeological Survey – Millburn Burial Site
- Federal Highway Administration Meeting – May 12th
- NEPA/404 Merger Meeting – June 11th
- Illinois Historic Preservation Agency – July 19th

Project Development Updates

- Millburn Burial Site – **Alternative C4 "avoidance"** modification
- Millburn Congregational Church – potential property impacts with alternatives A4 and C4.4



Project Development Updates

- Millburn Burial Site – **Alternative C4 "avoidance"** modification
- Millburn Congregational Church – potential property impacts with alternatives A4 and C4.4



Project Development Updates

- Millburn Burial Site – **Alternative C4 "avoidance"** modification
- Millburn Congregational Church – potential property impacts with alternatives A4 and C4.4



Public Meeting #2 Content Overview and Preview

September 2, 2010

- Study Progress/Purpose and Need Overview
- Alternatives Development and Evaluation Process
- Finalist Alternatives and Evaluation
- Community Advisory Group Proceedings
- As well, a Slideshow will be presented & there will be an opportunity for Comments.

- Are there any volunteers to provide the public insight on the CAG proceedings?

Next Steps / Schedule

- Project Team Evaluation of Public Meeting Results
- CAG Meeting #5 – **Fall '10: Public Meeting** Results and Preferred Alternative
- Develop Concept Geometry Full EA Limits
- Prepare Engineering and Environmental Reports for review by the Project Team and FHWA
- February and June 2011 NEPA/404 Merger Meetings – Preferred Alternative Concurrence
- Summer 2011 Public Hearing



Thanks for your participation!

See you at the Public Meeting.

If you have any questions in the interim, please contact Chuck Gleason at LCDOT.

*Please note, all project proceedings have been updated and provided on the project website at:
www.Route45project.com*

US 45 – IL 132 to IL 173 and Millburn Bypass
Community Advisory Group #5 Meeting Summary

The fifth meeting of the US Route 45 Millburn Bypass Community Advisory Group (CAG) was held at the State Bank of the Lakes in Lindenhurst from 6:30 p.m. to 9:00 p.m. on July 26, 2011. What follows is a summary of the evening's proceedings.

The goal of this fifth CAG meeting was to (1) announce the Preferred Bypass Alternative that has been selected by Lake County Division of Transportation (LCDOT) and Illinois Department of Transportation (IDOT) and review the factors considered in that decision, (2) update the members on the project progress since the last CAG meeting and Public Meeting #2, and the next steps in the project development process, and (3) hold a workshop giving the opportunity for CAG members to provide design input on the preferred bypass alternative. Again present to facilitate were members of LCDOT, IDOT, and consultant members of the project study team. All attendees are listed on the last page of this document.

The meeting agenda was as follows:

- I. Introduction and Preferred Bypass Alternative Selection
- II. CAG #4 Meeting Summary
- III. Factors in Selection of the Preferred Bypass Alternative
 - a. Process Review
 - b. Public Comments to Date
 - c. Cultural Clearance for Historic Resources
 - d. De minimis impact finding for West Bypass use of McDonald Woods
 - e. Environmental Considerations
 - f. Transportation Performance
 - g. SRA Roadway (US 45) Design Considerations
- IV. Remaining Analysis of the Preferred Bypass Alternative
- V. Design Input Workshop
 - a. Design Elements of the Preferred Bypass Alternative
- VI. Next Steps
 - a. Project Team to develop detailed geometry
 - b. Prepare Engineering and Environmental Reports
 - c. CAG Meeting #6: Present Proposed Improvement Plan and Public Hearing preview
 - d. Public Hearing – Fall 2011

The following information was provided for inclusion within the project binders each CAG member possesses:

- CAG #5 Meeting Agenda
- Copy of the CAG #5 PowerPoint Presentation
- Summary of the 4th CAG Meeting held on August 19, 2010
- Summary of Public Meeting #2 held on Sept. 2, 2010
- Preferred Bypass Alternative Exhibit

A PowerPoint presentation guided the overall meeting. Chuck Gleason of LCDOT began by welcoming the CAG members and facilitating reintroductions of everyone present. He then shared a statement outlining the Project Study Group's (PSG – LCDOT and IDOT, in coordination with FHWA) selection of

West Bypass Alternative A4 as the Preferred Bypass Alternative. While all finalist alternatives were viable alternatives, the PSG has determined that Alternative A4 is most responsive to overall stakeholder input, best enhances mobility for all users, and best accommodates existing and future travel patterns along US Route 45 as well as Grass Lake and Millburn Roads.

Mike Matkovic of Christopher B. Burke Engineering, Ltd. (CBBEL) then continued the presentation by providing an update on the current project status. He conveyed the events that have occurred since the last CAG meeting and provided an overview of the evening's agenda. The events since CAG meeting #4 include the second public meeting held on September 2, 2010 and continuing evaluation of cultural and environmental resources for the three finalist alternatives. Mike notified the CAG that the meeting summary for CAG meeting #4 was emailed to the CAG in advance and included in the binder materials being distributed and asked if there were any comments on the summary. No comments on the prior meeting's summary were received.

Mike then presented the factors considered by the PSG in the selection of the preferred bypass alternative, which are listed in the PowerPoint presentation. It was explained that there were a number of factors that impacted the decision and that the issues and benefits were weighed in their entirety.

Comments from all project stakeholders were evaluated to determine the various issues and opportunities to consider in selecting a preferred bypass alternative. As reflected in the Public Meeting #2 summary, it is understandable that questionnaire respondents living to the west would indicate a preference for an east bypass and vice versa. The PSG was careful to consider all opinions and input while selecting an improvement that was most advantageous for all project stakeholders. A consistent stakeholder comment was that traffic backups were an issue of primary concern on this project. One of the benefits of the preferred bypass alternative is that it has the best overall transportation performance as compared to the other two finalist alternatives. It was noted that several of the performance measures utilized to draw comparisons among the finalist alternatives were similar, but that Alternative A4 is the best overall transportation alternative.

The Cultural and Historic resources review has been ongoing since the Public Meeting and was recently completed in May 2011. The results of this review showed that the realignment of Grass Lake Road does not traverse any sensitive historic properties, which meant that Alternatives A4 and C4 remained viable alternatives for consideration. C4 is the only alternative requiring acquisition of Millburn Historic District property (not including buildings) and would separate the building of highest importance to the Historic District (Strang House) from the remainder of the historic district buildings, which is less desirable.

The West Bypass was found to not adversely affect the overall recreation activities of McDonald Woods, is compatible with the LCFPD Preliminary Trail Alignment Plan, traverses only low quality areas, and does not affect facility access. On this basis, LCFPD and FHWA concurred with a *de minimis* impact finding for a West Bypass use of McDonald Woods.

All three alternatives have received biological, archaeological, and cultural resource clearances. Alternative A1 displaces one less residence (2) than the other two alternatives (3). Alternative A4 is anticipated to have no wetland impacts compared to the other two alternatives which are anticipated to have minor wetland impacts. Alternatives A1 and A4 impact approximately 2 acres of prime farmland while C4 impacts approximately 11.5 acres.

As noted, transportation performance was a primary concern for project stakeholders and Alternative A4 showed the best overall performance including the best performing main intersection during the p.m. peak travel period (US 45 Bypass and Grass Lake/Millburn Road [LOS C versus D]). Additionally, the West Bypass is most compatible with the predominant northwest/southeast area travel patterns as established in the project purpose and need statement. Specifically, Alternative A4 results in less total travel delay than the other alternatives. Additionally, total travel time within the project network would be lower in A4 than C4. With US Route 45 being classified as a Strategic Regional Arterial (SRA) roadway, design considerations for US 45 were a factor including less desirable intersection spacing and horizontal curvature associated with Alternative C4, which are not issues with Alternatives A1 or A4.

After this presentation, the CAG was provided an opportunity to ask questions concerning the selection of Alternative A4 as the preferred bypass alternative. A summary of the questions and answers is provided below:

- Some CAG members expressed their concerns that they felt the public input was not considered as part of the preferred alternative selection. The project team and LCDOT noted that public input has been considered throughout the project development process amongst many factors, and was a key factor in the screening of the eighteen initial bypass alternatives to the three finalist alternatives, two of which were west bypass alternatives and one of which was an east bypass alternative.
- Some CAG members expressed frustration that they did not wish to have the West Bypass (A) alternatives move forward and felt the PSG had solely decided to move these two alternatives forward. Mike noted that while it was advisable based on FHWA input to keep at least one east bypass, west bypass, and existing alignment alternative as part of the initial screening from 18 to 9 preliminary alternatives (three of each were kept), there was no such directive in the selection of finalists at CAG #3, as reflected in the CAG #3 meeting summary.
- A statement was made with regard to the possibility that political connections of properties to the east may have led to private meetings to influence the decision. LCDOT and the consultant team noted that no such meetings took place. A CAG member affiliated with Tempel Farms denied any private meetings as well.
- A few residents from neighborhoods adjacent the West Bypass ROW, including the Forest Trail representative, stated that they were informed of the potential for a highway to be built near their property. Some residents were sent a letter when the ROW was reserved approximately 20 years prior and others were notified when they moved to the neighborhoods.
- A statement was made with regard to why the LCFPD would allow this highway to be built through their property, and the representative from LCFPD responded with a statement that no sensitive habitats or trails would be impacted by the highway.
- Some CAG members felt that the evaluation matrix was the ultimate indicator of the decision, and questioned the methodology used on the matrix. Mike explained that while the three finalist alternatives are viable alternatives, there are distinctions and the matrix was used to draw comparisons and provide some differentiation between the finalist alternatives. Mike noted that the color comparison has been updated, as compared to the finalist alternatives matrix shown at the Public Meeting, based on the analysis of updated year 2040 traffic projections from CMAP.
- CAG members felt that the majority 'vote' should have determined the selection of the preferred alternative. Paula Trigg from LCDOT read information from the first CAG meeting outlining that the PSG would make the ultimate decision of a preferred alternative with input

from the CAG, and that voting would not be the method to determine the preferred alternative. It was noted that most of the population lives to the west, and thus, it was not unexpected that they would desire the bypass going east. Additionally, no formal vote was ever held, nor promised.

- Some CAG members noted that they supported the decision to provide a west bypass.

Next, Jarrod Cebulski of Patrick Engineering (Patrick) outlined the remaining analysis of the preferred alternative and as part of this Tim Kelly of Huff and Huff provided information to the CAG members related to the traffic noise study that is currently being initiated. Jarrod then explained the design input workshop that was structured in a manner to draw feedback from CAG members with regard to particular design elements that could be included in the development of the preferred alternative. Three breakout groups were identified; northern, central, and southern. CAG members were placed into each group based on the region of the project area their interest/stake most lies with. Jarrod concluded by listing some general topics of discussion including: landscaping/streetscaping, pedestrian and bicycle accommodations, roadway details, and lighting.

Everyone split into their respective breakout group and began generating ideas with regard to potential design elements that could be incorporated in the development of the preferred alternative. After approximately 25 minutes everyone came back together to report out the results of their breakout session to the whole group.

Northern Breakout Group – Heritage Trails

The northern breakout group focused on design details in and around the Heritage Trails Subdivision and developed the following:

- Concerned about Anderson property access
- Open to potential adjustment to subdivision access (i.e. extend Heritage Drive to Haven Lane)
- Generally want to see berms incorporated particularly along the west side of the Bypass
- Care as to not overdo lighting
- Improvements to drainage facilities
- Could use the remnant parcel and vacate Old Grass Lake Road to create an enhancement area
- Concerned about safety at the new US 45 and Haven Lane intersection
- Okay with path connection to Heritage Trails trail, but prefer new path closer to new US 45
- Concerned about the incorporation of additional detention areas
- Concerned about the amount of lights and how far the illumination will carry
- Consideration for a less imposing vertical profile was desired

Central Breakout Group – Millburn Historic District

The central breakout group focused on design details in and around the Millburn Historic District and developed the following:

- Design improvements to be modest and to reflect the character of the community as opposed to so called “over-the-top” improvements

- Green features
- Street parking
- Sidewalks preferably away from the road
- Roadway separation
- More natural rather than scripted locating of plantings/street trees.
- Connections from the new US 45 on both the north and south ends was desired
- Include directional signage for Historic District
- Bike Lanes were not desired
- Bioswales and natural planting were desired and curb and gutter is not a must
- Historic character lighting at a pedestrian scale
- Fix the existing retaining wall that is in bad shape and potentially replace with sloped plantings
- No banners, planters, asphalt stamping, or pavers are desired; although metal signs are
- Desire to be involved through entire design process
- Grass Lake Road cul-de-sac should be eliminated to provide more green space
- Keep some of the original Historic signage

Southern Breakout Group – Forest Trail (Haven Lane)

The southern breakout group focused on design details in and around the Forest Trail (Haven Lane) area and developed the following:

- Generally, comments were related to the aesthetics certain design elements would provide, and particularly gateway type improvements including entrance signage
- Consider Haven Lane cul-de-sac at old US 45 instead of new US 45 so access is not so circuitous
- Consistent design of entryways to subdivision
- Include BMP/green measures
- Consider visibility with respect to Haven Lane access and include visual cue to subdivision
- Should be parallel trail along US 45 north of Grass Lake Road and pedestrian safety for crossing Haven Lane should be considered in design
- Care to improve upon current issues with drainage on the east side of Haven Lane
- Minimize lighting to maximum extent possible without compromising safety and consider beacon lighting
- Provide a connection rather than cul-de-sac
- Landscaped Berms
- Minimize lighting to a reasonable extent
- If sound walls are considered cost-effective consider appearance (i.e. aesthetically pleasing)
- Provide opportunity for agencies of all levels and community organizations to provide input with regard to landscape elements

Jarrold then concluded the meeting by outlining the anticipated next steps and schedule. After the project team has developed the detailed geometry and engineering reports are undertaken, a Public Hearing preview will be presented at CAG #6, and finally the Public Hearing will be held to gain final input on the preferred alternative.

CAG #5 attendees were:

PSG Members	Organization
Chuck Gleason	LCDOT
Paula Trigg	LCDOT
Marie Glynn	IDOT
Carla Mykytiuk	IDOT
John Baczek	IDOT
Mike Matkovic	CBBEL
Matt Huffman	CBBEL
Pete Knysz	CBBEL
Jarrold Cebulski	Patrick
Ryan Westrom	Patrick
Chris DeRosia	Patrick
Tim Kelly	Huff & Huff
Kevin Clark	The Lakota Group

CAG Members	Representing
Andrew Kimmel	Lake County Forest Preserves
Bob Holbach	Millburn Tree Farm
Craig Richardson	Heritage Trails Homeowners Association
Daniel Venturi	Lake Villa Township & Lindenhurst/Lake Villa Chamber of Commerce
Dawn Revenaugh	Millburn Glass Studios
Dominic Marturano	Village of Lindenhurst
Gerald F. Swanson	Self
Glenn Westman	Lake County SMC
Jennifer Andrew	Historic Millburn Community Association
Kevin Klahs	Lindenhurst Police Department
Linda Berger	Forest Trail subdivision
Michael Mark	Self
Michael Scholler	Providence Woods Homeowners Association
Milt Anderson	Self
Philip Rovang	self
Ray Boller	Self
Thomas Druce-Hoffman	Self
Tim Smith	Old Mill Creek

CAG members not in attendance were:

Dusty Powell	Lake County Planning, Building and Development
Jason Lind	Millburn Community Consolidated School District 24
Kevin McKeever	Providence Ridge subdivision
Larry Leffingwell	Tempel Farms
Pete Szpak	Heritage Trails Homeowners Association
Scott Pfeiffer	Cross Creek Homeowners Association
Tom Lippert	Lindenhurst Park District



U.S. Route 45 IL 132 to IL 173 and Millburn Bypass

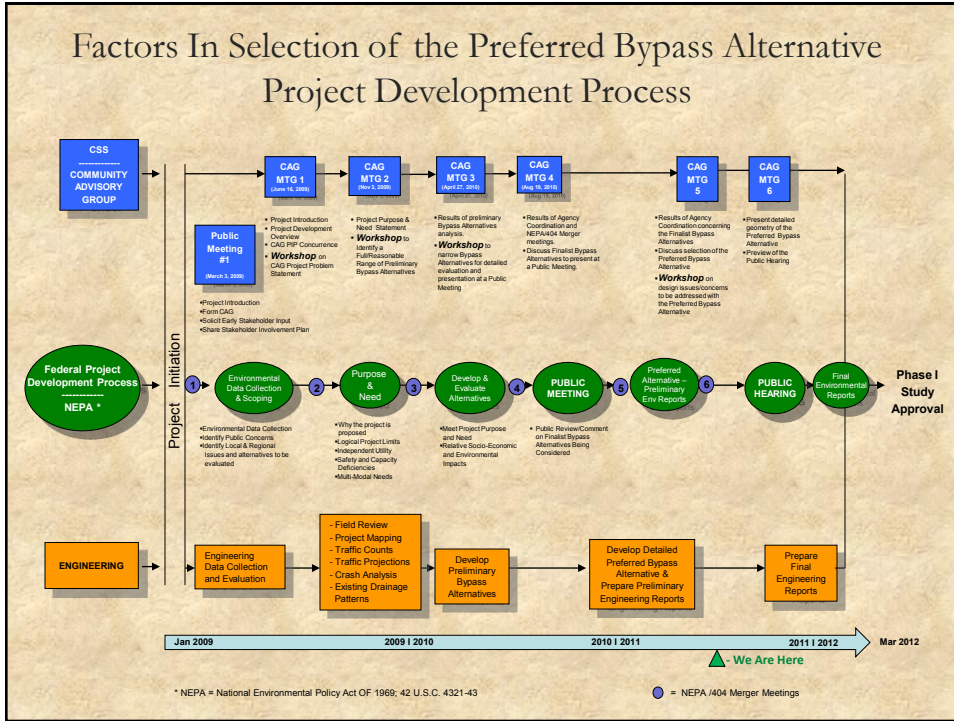
Community Advisory Group Meeting #5

July 26, 2011



Meeting Agenda

- CAG #4 Meeting Minutes
- Factors in Selection of the Preferred Bypass Alternative
- Remaining Analysis of the Preferred Bypass Alternative
- Design Input Workshop
- Next Steps



Factors In Selection of the Preferred Bypass Alternative Community Advisory Group

<p>CAG Meeting #1 (June 16, 2009)</p> <ul style="list-style-type: none"> Project overview NEPA process Public involvement plan Public Meeting summary Workshop: Project problem statement 	<p>CAG Meeting #2 (November 3, 2009)</p> <ul style="list-style-type: none"> Purpose and Need statement Bypass alternatives analysis Workshop: Screening 18 initial Bypass Alternatives to 9 Reasonable Bypass Alternatives
<p>CAG Meeting #3 (April 27, 2010)</p> <ul style="list-style-type: none"> Review the 9 concept Bypass Alternatives Evaluate the 9 Bypass Alternatives with respect to transportation performance, environmental impacts, and cost Workshop: Screening of the 9 Bypass Alternatives based on development and evaluation results 	<p>CAG Meeting #4 (August 19, 2010)</p> <ul style="list-style-type: none"> Present the 3 Finalist Bypass Alternatives based on input from CAG Meeting #3 and Agency Coordination Preview of Public Meeting #2 Discussion of remaining project development procedures

Factors in Selection of the Preferred Bypass Alternative

Public Comments to Date:

Public Meeting #1 Questionnaire

- Traffic congestion, roadway safety, and access ranked 1, 3 and 5 respectively as the most important project issues/concerns

Public Meeting #2 Questionnaire

- The #1 expressed concern was transportation performance
- Majority agree that a bypass is needed
- Majority favored Grass Lake Road re-alignment

Factors in Selection of the Preferred Bypass Alternative

Cultural Clearance for Historic Resources:

- Additional detailed review of the Finalist Bypass Alternatives required by IHPA, IDOT, and FHWA
- Finding: The realignment of Grass Lake Road does not traverse any properties deemed historic
- Therefore: Alternatives A4 and C4 are viable Bypass Alternatives

Factors in Selection of the Preferred Bypass Alternative

McDonald Woods:

- A West Bypass is compatible with LCFPD Preliminary Trail Alignment Plan
- A West Bypass traverses low quality areas within McDonald Woods and does not affect facility access
- LCFPD concurs that a West Bypass will not adversely affect the overall recreation activities, features, and attributes of McDonald Woods
- FHWA grants a *de minimis* impact finding for a West Bypass use of McDonalds Woods



Factors in Selection of the Preferred Bypass Alternative

Environmental Considerations:

- Environmental Clearances received for all three Finalist Bypass Alternatives:
 - ✓ Biological - 1/8/10
 - ✓ Archaeological - 4/25/11
 - ✓ Cultural - 5/24/11
- A1 displaces 2 residences. Both A4 & C4 displace 3 residences
- A4 includes no impacts to wetlands and A1 and C4 have minimal wetland impacts
- Prime Farmland Impacts
 - C4 = 11.49 acres; A1 & A4 = 1.92 acres
- Historic District Property Acquisition (no buildings)
 - C4 = 1.25 acres
 - C4 bisects Historic District and disconnects Strang House (#1 Primary Importance Structure) from remainder of the Historic District
 - A1 & A4 avoid any property acquisition from Historic District



Factors in Selection of the Preferred Bypass Alternative

Transportation Performance:

- #1 expressed concern at the Public Meetings
- A4 has the best transportation performance of the Finalist Alternatives with the lowest overall travel times and travel delay
- A1 and A4 are the most compatible with area travel patterns, although A1 requires east-west travel through the Historic District
- A4 has best performing main intersection (US 45 Bypass and Grass Lake/Millburn Road) during PM peak period
- C4 requires heavier traffic from the west to travel past the Historic District to access bypass US 45. **Cut-off traffic on "old 45" could require 2nd signal**
- Based on CMAP 2040 traffic projections, C4 results in traffic volume increases on Millburn Road of 22% and 42% as compared to A4 and A1 respectively

Category	Alternative	A1	A4	C4
Overall Performance	Travel Time	Green	Green	Red
	Travel Delay	Green	Green	Red
	Travel Time (Peak)	Green	Green	Red
	Travel Delay (Peak)	Green	Green	Red
Key Intersections	US 45 Bypass / Millburn Rd	Green	Green	Red
	US 45 / Millburn Rd	Green	Green	Red
	US 45 / Grass Lake Rd	Green	Green	Red
	US 45 / Old 45	Green	Green	Red
	US 45 / Millburn Rd (Old)	Green	Green	Red
	US 45 / Millburn Rd (New)	Green	Green	Red
	US 45 / Millburn Rd (Bypass)	Green	Green	Red
	US 45 / Millburn Rd (Bypass)	Green	Green	Red
	US 45 / Millburn Rd (Bypass)	Green	Green	Red
	US 45 / Millburn Rd (Bypass)	Green	Green	Red
US 45 / Millburn Rd (Bypass)	Green	Green	Red	

Factors in Selection of the Preferred Bypass Alternative

US Route 45 / Strategic Regional Arterial (SRA) Design Considerations:

- C4 design requires less desirable alignment to avoid historic Millburn Burial Site.
- C4 main intersection (US 45 / Millburn Road) proximity to Old 45 is a design concern



Factors in Selection of the Preferred Bypass Alternative

- In Summary, based on:
 - ✓ Public Comments
 - ✓ Cultural Clearance for Historic Resources
 - ✓ *De minimis* impact finding for West Bypass use of McDonald Woods
 - ✓ Environmental Considerations
 - ✓ Transportation Performance
 - ✓ SRA Roadway (US 45) Design Considerations
- LCDOT and IDOT have jointly identified A4 as the Preferred Bypass Alternative since it best enhances mobility for all users and best accommodates future travel patterns along US Route 45, Grass Lake Road and Millburn Road
- FHWA concurred with advancing A4 as the Preferred Bypass Alternative for development of the Environmental Assessment (EA) and presentation at a Public Hearing later this year

Factors in Selection of the Preferred Bypass Alternative

Questions?

Remaining Analysis of the Preferred Bypass Alternative

- Detailed Final Geometry
 - Roadway and Intersection Design Details
 - Pedestrian/Bicycle Accommodations
 - Determine Right-of-Way needs (no acquisition yet)
- Drainage Study
 - Detention Requirements
- Engineering Report
- Environmental Assessment
 - Noise
 - Air Quality
 - Water Quality

U.S. Route 45 - IL 132 to IL 173 & Millburn Bypass Phase I Study

Traffic Noise Analysis

Requirements:

- Identify representative noise receptors
- Perform traffic noise impact analysis using the Federal Highway Administration (FHWA) approved Traffic Noise Model (TNM)
- Determine receptors with traffic noise impacts; those that approach, meet, or exceed the Noise Abatement Criterion (NAC) of 67 Decibels (dB(A)) for residential receptor locations
- Perform traffic noise abatement evaluation for all receptors determined to have traffic noise impacts

U.S. Route 45 - IL 132 to IL 173 & Millburn Bypass Phase I Study

Traffic Noise Analysis

- For a noise abatement option to be implemented, all of the following need to occur:
 - Traffic noise impact needs to be identified
 - Abatement option provides at least an 8-dB(A) traffic noise reduction
 - Abatement option must meet the cost-effectiveness criterion per IDOT policy
 - Benefited receptors must demonstrate a desire for noise abatement option
- Highway Traffic Noise Assessment Manual:
<http://www.dot.il.gov/environment/HTNAMManual.pdf>

U.S. Route 45 - IL 132 to IL 173 & Millburn Bypass Phase I Study

Alternative A4 Design Input Workshop

- The workshop will give participants the opportunity to discuss remaining design elements for the Preferred Alternative A4.

Group	<i>Southern- Forest Trail (Haven Lane) Area</i>	<i>Central- Millburn Historic District Area</i>	<i>Northern- Heritage Trails Subdivision Area</i>
Issue Areas	<ul style="list-style-type: none"> • Haven Lane connection or cul-de-sac • Potential enhancement areas and strategies • Old US 45 connection at south end to new US 45 	<ul style="list-style-type: none"> • Old US 45 connections at north and south ends to new US 45 • Historic District roadway character • Pedestrian/bicycle accommodations within Historic District 	<ul style="list-style-type: none"> • Driveway locations • Potential enhancement areas and strategies • Adjusted Grass Lake Road/ Heritage Drive intersection • Old US 45 connection at north end to new US 45

U.S. Route 45 - IL 132 to IL 173 & Millburn Bypass Phase I Study

Alternative A4 Design Input Workshop

- Input on Potential Design Elements:
 - Potential Enhancement Areas
 - Landscaping/Streetscape Options¹
 - Pedestrian/Bicycle Accommodations & Connections¹
 - Roadway Details (Access, Cul-de-sac, Turnarounds, U-turns)
 - Roadway Lighting¹

Notes:

¹ *Local cost participation and maintenance may be required*

- 25 Minute Workshop Exercise (3 Breakout Groups)
- 10 Minute Report-out Session

U.S. Route 45 - IL 132 to IL 173 & Millburn Bypass Phase I Study

Alternative A4 Design Input Workshop

Break for Workshop

U.S. Route 45 - IL 132 to IL 173 & Millburn Bypass Phase I Study

Next Steps / Schedule

- Project Team to Develop Detailed Geometry
- Prepare Engineering Report and Environmental Assessment
- CAG Meeting #6 – Geometry Presented and Public Hearing Preview
- Public Hearing – Fall 2011

U.S. Route 45 - IL 132 to IL 173 & Millburn Bypass Phase I Study



Thanks for your participation!

See you at the next CAG meeting.

If you have any questions in the interim, please contact Chuck Gleason at LCDOT.

Please note, all project proceedings have been updated and provided on the project website at:

www.Route45project.com

Matt Huffman

From: Gleason, Chuck L. [CGleason@lakecountyil.gov]
Sent: Friday, May 08, 2009 1:08 PM
To: 'mhuffman@cbbel.com'
Subject: FW: Old Mill Creek Comp. Plan

Here you go Matt.

From: Al Maiden [mailto:amaiden@rccai.com]
Sent: Friday, May 08, 2009 12:14 PM
To: Gleason, Chuck L.
Cc: jennifer.andrew@me.com
Subject: Old Mill Creek Comp. Plan

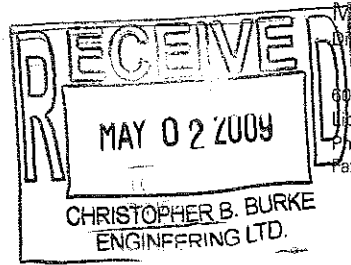
Chuck, sorry I haven't gotten back to you for a status report. The part of the Village's Comprehensive Plan that included the area of the Route 45 By-pass was prepared by a different planning consultant for the Village, in the 1990's, before our office became the Village's planning consultant in 2002. As such, I do not have an electronic copy of the Village's Comprehensive Plan from the 1990's. The Village Clerk, Jennifer Andrew has indicated that she has an extra paper copy of the Comprehensive Plan Book & that she can provide it to me at the Village Board meeting on Monday (May 11, 09) & then I will get it to you. That paper copy of the Village's Comprehensive Plan, does include some recent amendments, where our office assisted the Village, but the primary areas addressed by the amendments are north of Route 173, an area around the Route 173 & Route 45 intersection (S.E. Quadrant) & some areas near Stearns School Road & east of Route 45. I do have some of these more recent amendments in an electronic format, but I believe they are also part of the paper copy of the Comprehensive Plan book.

You should also be aware that as part of the recent reviews of the options for sewer service to the Millburn area, I did point out to the Village Engineer, Village Board & Village Plan Commission that the existing zoning in the area did not provide for single family uses (only retail and multiple family uses) and that could make the numerous existing single family homes in the area nonconforming in regard to the existing zoning & that this might be a consideration in planning future sewer capacity needs. After review by the Village Plan Commission and Village Board it was determined that this was a mistake in the text of the Zoning Ord. & that the Village's Comprehensive Plan did anticipate a mix of single family homes within the special retail area and uses in Millburn. After the appropriate Public Hearing, the Village did adopt a text amendment that allows single family homes in addition to the special retail & multiple family uses allowed in the the Millburn area.

If you need a copy of the Village's Zoning Ord. (Development Code) I'll have to check with Jennifer (it's a pretty large document & I don't think they have the complete document in electric format, but I'm not sure). I do have an electronic copy of the Village's Zoning Map, that our office prepared for the Village & I may be able to send you a PDF copy. I can ask at Monday night's Village Board meeting.

Please let me know if there is any additional information that you may need from the Village for your Route 45 By-pass study & I can review this with the Village Board on Monday night. I know the Village wants me to cooperate with you & LDOT on this study, but you do have to note that with the size of the current Village it does have some limited resource materials.

Look forward to hearing from you. Sincerely Al Maiden



Martin G. Buehler, P.E.
Director of Transportation/County Engineer
600 West Winchester Road
Libertyville, Illinois 60048-1381
Phone (847) 377-7400
Fax (847) 362-5290

**Millburn Bypass Study
Section No. 05-00262-02-RP
Lake County**

April 28, 2009

Mr. Tim Smith
P.O. Box 399
Wadsworth, IL 60083-0399

Dear Mr. Smith:

Thank you for your letter of March 3, 2009 concerning the U.S. Route 45 – Millburn Bypass study (copy attached) as submitted at the Public Meeting on March 3rd. We offer the following reply to the issues mentioned in your comments.

It is recognized by the Lake County Division of Transportation (LCDOT), as well as the Illinois Department of Transportation (IDOT), that there has been considerable effort with respect to past engineering studies concerning a realignment of U.S. Route 45 near Grass Lake Road and Millburn Road, where it traverses the Millburn Historic District, a National Register Place. Both agencies have worked together over the years to explore funding alternatives for construction of these improvements. Partial funding was secured through the SAFETEA-LU Federal Highway Bill, which earmarked \$2 million for this project. While LCDOT has identified county funding for this project through its ¼ % sales tax for transportation and public safety program, IDOT may also participate toward construction of this project and would likely use federal funds to do so. Because of the federal funding already secured for this project, and being prudent with respect to leaving the option open to use additional federal funding, the required engineering and environmental studies must be completed compliance with all applicable federal project development procedures. The previous IDOT Strategic Regional Arterial (SRA) feasibility study completed in the mid 1990's was adequate to preserve a viable west bypass alternative through strategic land use planning, however, the SRA study did not include a companion environmental study compliant with federal procedures.

The applicable federal project development procedures are set forth by the Federal Highway Administration (FHWA) in compliance with the National Environmental Policy Act (NEPA) of 1969. These procedures require an assessment of the social, economic, and environmental impacts of a contemplated transportation project, including comparative analysis of a full range of reasonable alternatives. The past SRA study remains a viable planning study for continuing consideration through the project development process for the current project, however, additional alternatives must be considered and compared with respect to transportation performance and environment impacts. The federal project development process also requires a broad public involvement program, of which the Community Advisory Group (CAG) is one component.

The concerns you have raised with respect to potential impacts of an eastern bypass alternative on land use plans and other obstacles will and must be fully considered, and documented, as part of the current federal project development process. The federal project development procedures are aimed at ensuring a balanced transportation decision-making process that takes into account the potential impacts on the human and natural environment, and the public's need for safe and efficient transportation.

We thank you again for your input, and we look forward to working with you on this important project. If you have any further questions, please contact me at 847-377-7447.

Very truly yours,



Chuck Gleason
Phase I Project Manager

cc: Marie Glynn, IDOT Bureau of Programming
Paula Trigg, LCDOT Director of Planning and Programming
Mike Matkovic, Christopher B. Burke Engineering, Ltd.

Marty Buhler
Lake County Division of Transportation

March 3 2009

Dear Marty

The Village of Old Mill Creek is addament that the bypass should go to the west as has been shown on plans since the early 1990s . We have invested countless hours planning this and annexing properties with this in mind to help our village, and to help Lake County .. We hired Lohan land planning to come up with the concept and we do not understand why this would be changed, especially since it has been planned and accepted this way . There are many obstacles to moving it to the east and we believe it is a mistake to even bring it up

The village has given you in writing our concept of how the old Route 45 should be treated once the new bypass is put in to the west ,and ,we would like to meet with your staff to discuss this

There are many things which we would like to work with the County on

and we do appreciate the counties willingness to step up and fix the problems of he intersection

Respectfully


Tim Smith
Village President
Old Mill Creek

___ Asst. CE _____
___ Administration _____
___ Construction _____
___ Design _____
___ Maintenance _____
___ Planning _____
___ Traffic _____
___ Other _____
___ File _____





Division of Transportation

Martin G. Buehler, P.E.
Director of Transportation/County Engineer

600 West Winchester Road
Libertyville, Illinois 60048-1381
Phone (847) 377-7400
Fax (847) 362-5290

**Millburn Bypass Study
Section No. 05-00262-02-RP
Lake County**

April 28, 2009

Mr. Larry Leffingwell
Tempel Farms
17000 Wadsworth Road
Wadsworth, IL 60083

Dear Mr. Leffingwell:

Thank you for the comments you provided concerning the U.S. Route 45 – Millburn Bypass Study (copy attached) in follow-up to the Public Meeting on March 3rd. We offer the following reply to the issues mentioned in your comments.

It is recognized by the Lake County Division of Transportation (LCDOT), as well as the Illinois Department of Transportation (IDOT), that there has been considerable effort with respect to past engineering studies concerning a realignment of U.S. Route 45 near Grass Lake Road and Millburn Road, where it traverses the Millburn Historic District, a National Register Place. Both agencies have worked together over the years to explore funding alternatives for construction of these improvements. Partial funding was secured through the SAFETEA-LU Federal Highway Bill, which earmarked \$2 million for this project. While LCDOT has identified county funding for this project through its ¼ % sales tax for transportation and public safety program, IDOT may also participate toward construction of this project and would likely use federal funds to do so. Because of the federal funding already secured for this project, and being prudent with respect to leaving the option open to use additional federal funding, the required engineering and environmental studies must be completed compliance with all applicable federal project development procedures. The previous IDOT Strategic Regional Arterial (SRA) feasibility study completed in the mid 1990's was adequate to preserve a viable west bypass alternative through strategic land use planning, however, the SRA study did not include a companion environmental study compliant with federal procedures.

The applicable federal project development procedures are set forth by the Federal Highway Administration (FHWA) in compliance with the National Environmental Policy Act (NEPA) of 1969. These procedures require an assessment of the social, economic, and environmental impacts of a contemplated transportation project, including comparative analysis of a full range of reasonable alternatives. The past SRA study remains a viable planning study for continuing consideration through the project development process for the current project, however, additional alternatives must be considered and compared with respect to transportation performance and environment impacts. The federal project development process also requires a broad public involvement program, of which the Community Advisory Group (CAG) is one component.

The concerns you have raised with respect to potential impacts on known sensitive environmental resources, land use plans, public utilities, long range transportation performance, cost, and the effect on the Millburn Historic District will and must be fully considered, and documented, as part of the current federal project development process. The federal project development procedures are aimed at ensuring a balanced transportation decision making process that takes into account the potential impacts on the human and natural environment, and the public's need for safe and efficient transportation.

We thank you again for your input, and we look forward to working with you on this important project. If you have any further questions, please contact me at 847-377-7447.

Very truly yours,



Chuck Gleason
Phase I Project Manager

cc: Marie Glynn, IDOT Bureau of Programming
Paula Trigg, LCDOT Director of Planning and Programming
Mike Matkovic, Christopher B. Burke Engineering, Ltd.

RESPONSE OF TEMPEL FARMS TO REQUEST FOR PUBLIC COMMENT

MILLBURN BYPASS PHASE I STUDY

March 12, 2009

The owners of the properties commonly and collectively known as the "Tempel Farms", which properties are situated in the Village of Old Mill Creek (the "Village"), submit to the Lake County Division of Transportation the following concerns and comments relative to the possible construction of an eastern alignment of the proposed Route 45 Millburn Bypass (the "Eastern Alignment"). The Eastern Alignment was depicted on several of the public hearing exhibits that were on display at the public hearing held on March 3 at the Millburn West School.

We are opposed to the construction of the Eastern Alignment for a number of reasons. We believe its construction would significantly adversely affect the value, use and enjoyment of our properties and that it would be detrimental to the welfare of the general public. Specifically, we are concerned about the following:

- The Eastern Alignment will isolate lands we own from the balance of the Village of Old Mill Creek.
- The Eastern Alignment will separate commercially zoned land we own from other lands in the Village that have a reasonable prospect of being developed with commercial uses.
- The Eastern Alignment makes no traffic logic and ignores the conclusions that were reached almost 15 years ago when the Illinois Department of Transportation completed its SRA Report for the roadway network extending from Route 120 to the Illinois-Wisconsin border.
- The Eastern Alignment will adversely affect the cost and feasibility of extending sanitary sewer and potable water improvements to other portions of the Tempel Farms property.
- Construction of the Millburn Bypass with an eastern alignment will diminish the opportunity to preserve large areas of open space and effectively penalize landowners who for years have furthered the County's policies relative to land preservation, landowners who have not developed their lands or contributed to the growth in traffic congestion in the area.
- The Eastern Alignment will conflict with comprehensive planning concepts that have been adopted by the Village of Old Mill Creek. Among other things, it will isolate a portion of the Village from the balance of the Village, it will interfere with the preservation of the Village's Greenway Corridor and, if the Village decides to establish a Village retail area in this location, it will isolate that area from the remainder of the Village. Thus, the Eastern Alignment will adversely affect the fiscal well-being of the Village and its potential for future economic growth.

- The Eastern Alignment will adversely affect the cost and feasibility of extending utility services to Historic Millburn, which is an important part of the Village. The need to extend sanitary sewer to this area has been an issue for years. Thus, the public health and welfare will be adversely affected by the construction of the Eastern Alignment.
- The Eastern Alignment will adversely affect the use, enjoyment and value of Historic Millburn.
- Construction of the Eastern Alignment will give rise to greater environmental challenges than the construction of the originally planned western alignment. Among other things, the construction of the Eastern Alignment will require a significant encroachment into, and destruction of, a large ADID wetland that exists on the Tempel Farms property.
- The construction of a western alignment of the Millburn Bypass has been “on the books” for years with a recorded center line that has put all on notice as to the anticipated construction of this improvement in a specific location. The 130-foot “right-of-way” that is reflected by the recorded center line is adequate not only for the proposed roadway construction but for significant buffers to existing abutting development. In addition, some of the right-of-way needed to construct a western alignment of the Millburn Bypass has already been acquired by the State.

Submitted by:

TEMPEL FARMS

By: _____
Laurens W. Leffingwell

cc: **Harold W. Francke, DLA Piper LLP (US)**
Dennis Carl, V-3 Companies of Illinois, Ltd.



MEETING MINUTES

Meeting Date: September 14, 2011
Date Issued: October 4, 2011
Location: Lake County Division of Transportation
Project: U.S. 45 – IL 132 to IL 173 and Millburn Bypass
Purpose: Old Mill Creek Coordination Meeting

<u>Attendees</u>	<u>Representing</u>	<u>Phone</u>
Jennifer Andrew	Village of Old Mill Creek	847-828-3737
Roger Baske	Village of Old Mill Creek	847-912-2667
Tim Smith	Village of Old Mill Creek	847-840-5309
Al Maiden	Rolf C. Campbell & Assoc.	847-302-6800
Chuck Gleason	LCDOT	847-377-7447
Paula Trigg	LCDOT	847-377-7400
Matt Huffman	Christopher B. Burke Engineering (CBBEL)	847-823-0500
Martin Worman	Christopher B. Burke Engineering (CBBEL)	847-823-0500
Kevin Clark	The Lakota Group (Lakota)	312-467-5445
Ryan Westrom	Patrick Engineering Inc. (Patrick)	312-201-7955

The following notes reflect our understanding of the discussions and decisions made at this meeting. If you have any questions, additions or comments, please contact us at the above address. We will consider the minutes to be accurate unless written notice is received within 10 working days of the date issued.

The purpose of this meeting was to provide an update on project status to the Village of Old Mill Creek following the selection of preferred alternative A4, and as well to obtain their feedback on the remaining improvement details going forward. The meeting began at 3:00 p.m.

1. After introductions, LCDOT began by giving a confirmation of the recent selection of preferred alternative A4. The A4 route will become the west bypass around the intersections at Grass Lake Road and Millburn Road with a realignment of Grass Lake Road to meet with Millburn Road at existing U.S. Route 45 near the Millburn Historic District area. This improvement is part of an Environmental Assessment of U.S. 45 from IL 132 north to IL 173, however the portion funded for Phase II engineering and construction is only the realignment portion. Old Mill Creek indicated they knew about this selection via their CAG representation, and support the preferred alternative.
2. Project limits for this improvement were noted, where the realignment returns to existing U.S. 45 near Country Place on the south and just north of Independence Boulevard on the north. The improvement on Grass Lake Road extends west of Heritage Drive on the west and to the intersection with the former Millburn Road and U.S. 45 on the east.
3. An overview of the U.S. Route 45 realignment characteristics was given by Patrick. It was noted that the typical section shows two lanes in each direction with turning lanes at the intersections. A center median is planned, with a bike path running adjacent on the west and a sidewalk on the east. The median would be grass unless a local municipality chose to provide enhancements. It was observed that these elements would be cost participation items for the local agency (20%). Included would be the sidewalk, median enhancements, and potentially the multi-use path. LCDOT indicated that the Lake County Forest

Preserve District is considering obtaining maintenance and also funding of the local cost share of the multi-use path along the realignment. It was also observed that most of the realignment route remains in Old Mill Creek, however some of it is within Lindenhurst. Agreement on the proposed enhancements along the route between the local agencies needs to be reached.

4. An overview of the rerouted Grass Lake Road/Millburn Road characteristics was then given by CBBEL. It was noted that the typical section shows two lanes westbound through the main intersection with one lane eastbound and auxiliary lanes at the intersections. A flush painted median is planned, with a multi-use path running adjacent on the north. A crosswalk on the north leg of the proposed intersection at 'old' U.S. 45 is planned. It was noted that this intersection will be proposed as stop-controlled on the north and south approaches, with east-west traffic flowing free.
5. Old Mill Creek observed that an unsignalized intersection with existing U.S. 45 and Grass Lake Road was not preferable, and expressed concern that cars exiting those legs of the intersection would not find a gap. However, CBBEL noted that, based on projections of the proposed traffic conditions at the time of construction, a traffic signal is anticipated not being warranted at this location. Old Mill Creek inquired as to the proposed speed limit on the new Grass Lake/Millburn Road, and the project team noted they would provide it.
6. Discussion of the 'old' U.S. 45 then ensued. Patrick stated that the anticipated scope of work as part of the realignment project includes signal removal at both the former Grass Lake Road and Millburn Road intersections with U.S. 45 as well as pavement marking removal and replacement.
7. The potential connections between 'old' U.S. 45 and the realigned U.S. 45 were discussed. As shown on the final alternative plan, a full tee intersection connection is proposed on the southern end, but the northern end concludes at a cul de sac. Old Mill Creek noted that they are highly desirous of a connection at this northern end. Old Mill Creek indicated that maintaining this connection will increase access to and from the Historic District. LCDOT noted that the reason this connection was not shown were threefold. First, IDOT may not be desirous of a new intersection at this location due to access management reasons. Second, there would not be a signal warranted, and thus there are potential safety concerns in crossing U.S. 45. Thirdly, they felt this would increase cut through traffic within the Historic District, traffic which could be traveling too fast, and did not think that situation would be optimal. Old Mill Creek stated, however, that they felt that via traffic calming measures the number and speed of vehicles could be limited. As well they felt the benefits of a connection at this location outweighed the safety concerns. The project team agreed to follow up with IDOT and check on their thoughts as to whether an access would be allowed at this location, and as well, their thoughts on a marked mid-block pedestrian crossing if a signal is not warranted. This intersection would also be under the jurisdiction of the Village of Lindenhurst and their input on this potential connection will also be sought.
8. The future jurisdiction of 'old' U.S. 45 was then discussed. Old Mill Creek noted that they were interested in taking ownership of this roadway. Discussion as to how this would occur was had, and Old Mill Creek was informed that the transfer would occur from IDOT to the Village, as IDOT is the current owner. Details of this negotiation will be part of the discussion in formulating the jurisdictional transfer agreement.
9. Additionally, the status of 'old' Grass Lake Road was discussed, east of the proposed west realignment. The project team noted that many options for its remainder were available, ranging from a cul de sac just east of the realigned U.S. 45 to its removal. It was noted that other parties may be interested in the land if the roadway were abandoned. Old Mill Creek noted, however, that they felt this portion of Grass Lake Road could be part of their Village redevelopment plans, and thought there could be options within this area. They expressed interest in receiving this roadway as a jurisdictional transfer as well. LCDOT noted that this is a County route, and the transfer would be from the County in this case. Old Mill Creek asked whether Grass Lake Road could tie back into U.S. 45, and the project team noted that this could not be possible in its current location due to the proximity to the new intersection on realigned U.S. 45 with the relocated Grass Lake Road. Further discussion as to this potential transfer will be had after Old Mill Creek coordinates with their residents in the area.

10. Then, potential Historic District improvements that could be made in the 'old' U.S. 45 area were showcased. As part of the project team's work, designs for this area were prepared. While this may not be part of the construction on this project, the improvements could happen in synchrony with the move of traffic to the realignment route. Lakota presented the concepts they prepared, showing the concept proposed roadway for 'old' U.S. 45 and streetscaping, including sidewalks, lighting, and other furnishings and treatments. They prepared four typical sections along 'old' U.S. 45, a plan view of the area, and two before-after renderings showing the potential concept.

The concept for a potential new roadway cross-section addressed the likelihood that the roadway would become a local street with narrower lanes and overall width throughout. The main goals were to maximize pedestrian connections to residential neighborhoods and create a streetscape concept that fits the Village's historic character. The northern and southernmost sections depict two 12-foot lanes, as well as four-foot paved asphalt shoulders on each side. Bioswales and natural plantings are envisioned as a stormwater management strategy, combined with groupings of trees to blend in and enhance the existing rural landscape. The core of the historic district envisions curb and gutter with five-foot sidewalks on both sides; parallel parking on the east; new historic district signage; traditional pedestrian lighting; short split rail fences to mimic the surrounding horse farms; natural stone retaining walls in key locations; new crosswalks; and seating pockets.

It was discussed that these concepts and ideas are a starting point for the Village to begin envisioning how their historic district can be improved and "branded" with the new realignment.

11. The issue of noise created by a widened U.S. 45 was discussed. LCDOT stated that the noise assessment has not yet been finalized. Old Mill Creek requested that consideration for the use of asphalt pavement in lieu of concrete be made in the interest of reducing noise.
12. It was noted that next steps in the project will include the preparation of the project Environmental Assessment report, and then a Public Hearing.
13. The project team noted that minutes from the meeting would be distributed, and that the action items followed-up upon. Action items noted were:
 - a. LCDOT to provide Old Mill Creek with the proposed speed limit for the new Grass Lake Road
 - b. The project team to inquire with IDOT as to their thoughts on providing an east access at Independence Boulevard to connect to 'old' U.S. 45 and/or a pedestrian crossing at this location
 - c. Old Mill Creek to provide any plans for development adjacent to the project site for consideration in design of the final project geometric details
 - d. Old Mill Creek to formally initiate their request for jurisdictional transfer of 'old' U.S. 45 from IDOT and Grass Lake Road from LCDOT.
 - e. Old Mill Creek to provide a copy of their recent zoning changes for noting in the Environmental Assessment report being prepared.

The meeting adjourned at approximately 4:30 p.m.

Submitted by:



Ryan Westrom
Patrick Engineering Inc.

U.S. Route 45

IL Route 132 to IL Route 173 and Millburn Bypass

Section No. 05-00262-02-RP

P-91-666-09

Illinois Department of Transportation
Lake County Division of Transportation

Old Mill Creek Coordination
Meeting Summary

MEETING DATE: July 19, 2012

MEETING TIME: 1:00 p.m.

SUBJECT: Project Status Update and Pre-Public Hearing Coordination

LOCATION: LCDOT
600 West Winchester Road, Libertyville

ATTENDEES: Tim Smith – Old Mill Creek
Milton Anderson – Old Mill Creek
Mike Fogarty – Old Mill Creek
Roger Baske – Old Mill Creek
Jennifer Andrew – Old Mill Creek
Al Maiden – Old Mill Creek (RCCA/Manhard Consulting)
Yamin Yamin – Old Mill Creek (James Anderson Co.)
Paula Trigg – LCDOT
John Baczek – IDOT
Brian Carlson – IDOT
Terry Heffron – IDOT
Marie Glynn – IDOT
Ryan Westrom – Patrick Engineering Inc.
Mike Matkovic – Christopher B. Burke Engineering Ltd.

The purpose of this meeting was to provide an overall project status update to the Village of Old Mill Creek with respect to ongoing engineering and environmental studies for the U.S. Route 45 project from IL 132 to IL 173 and the Millburn Bypass and to discuss Public Hearing preparations.

Documents Distributed at Meeting

- Meeting Agenda. A copy of the agenda and the meeting sign-in sheet is attached.
- Preliminary proposed roadway plans, profiles, and cross sections for the full limits (IL 132 to IL 173). The Village requested three additional review sets, which will be mailed separately.
- Noise Report
- Local Cost Participation Items
- IDOT Guidance on Local Cost Participation (Exhibit A)

The following provides a summary of the discussion and any resulting action items.



U.S. Route 45

IL Route 132 to IL Route 173 and Millburn Bypass

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Agency Coordination (IDOT and LCDOT)

It was discussed that IDOT will lead the remaining portion of Phase I (engineering and environmental studies), Phase II (contract plan preparation and land acquisition), and Phase III (construction of the Millburn Bypass). For the sections north and south of the bypass, there is no funding for Phase II or III.

LCDOT staff will remain involved with the project through completion of the Phase I study. It was pointed out that while LCDOT has been the lead agency for this project since 2009, IDOT has been actively involved throughout the project development process, along with FHWA, as members of the Project Study Group.

West Bypass Selection

The Village asked if the decision on the West Bypass is final. It was confirmed that the Project Study Group (IDOT and LCDOT in coordination with FHWA) has selected the west bypass Alternative A4 as the preferred alternative. This was discussed with the Community Advisory Group (CAG) at the meeting in July 2011. The proposed improvement plans for the preferred west bypass alternative will be presented at the upcoming Public Hearing.

Environmental Assessment

The Environmental Assessment (EA) being prepared for the project has been reviewed on multiple occasions by IDOT and FHWA, and is nearing approval. The Public Hearing will be scheduled following FHWA approval of the EA. The EA addresses the planned improvements associated with the Millburn Bypass, but also likely future improvements north and south of the bypass in between IL 132 and IL 173, establishing the environmental footprint (i.e., right-of-way footprint) for these areas. This was required by FHWA based on logical termini requirements per federal project development procedures.

Roadway Plans (Millburn Bypass Area)

The typical roadway cross section from IL 132 to IL 173 includes two travel lanes in each direction separated by a 22 foot wide barrier-curb median. Accommodations for a 10 foot wide multi-use path along the west side of U.S. Route 45 and 5 feet wide sidewalk along the east side of U.S. Route 45 are included in the plans for the entire limits from IL 132 to IL 173, as well as along major side streets such as Grass Lake Road and Sand Lake Road.

The preliminary roadway plan and profile sheets have been developed in detail for the Millburn Bypass from approximately Country Place to Independence Boulevard and at a more conceptual level north and south of the west bypass.

The plans include retaining the Independence Boulevard pavement in between the bypass and existing U.S. Route 45 and providing a four-leg intersection at this location, which will allow southbound left turns from the bypass at Independence Boulevard. Independence Boulevard will have stop signs at the new bypass intersection. Similarly, it



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was explained that the intersection of existing U.S. Route 45 and realigned Grass Lake Road/Millburn Road will not have a traffic signal, but will have stop signs on the north and south legs of this intersection.

It was discussed that proposed drainage plans and a Location Drainage Study (LDS) report are being prepared for the Millburn Bypass project. Both are currently under review by IDOT. When IDOT completes their review, a coordination meeting will be requested with the Village of Old Mill Creek to review the proposed drainage plans for the bypass. It is anticipated that this meeting will occur in advance of the Public Hearing. The proposed plans also include designated areas for storm water detention and implementation of water quality Best Management Practices (BMPs) for the full EA limits including the bypass area.

Roadway Plans (North and South of the Bypass Area)

The preliminary roadway plan and profile sheets have been developed at a conceptual level north and south of the west bypass.

Minor alignment shifts have been incorporated in the likely improvement plans north and south of the bypass to minimize impacts to developed properties south of Sand Lake Road, and additional forest preserve properties (Raven Glen and Ethel Woods) north of Miller Road.

IDOT has a separate ongoing Phase I study that will look at detailed roadway plans north and south of the bypass that is ongoing. Additional coordination with the Village of Old Mill Creek will occur as part of the separate IDOT Phase I study as those detailed plans north and south of the bypass area advance.

The proposed drainage plans for U.S. Route 45 north and south of the bypass are being prepared as part of the separate IDOT Phase I study, for which coordination with the Village of Old Mill Creek will also occur at a future date, sometime after the Public Hearing for the current study.

Noise Analysis Results

The results of the traffic noise analysis for the full EA limits including the Millburn Bypass were discussed. Two copies were provided to the Village of Old Mill Creek. The analysis was based on the proposed roadway improvements assumed to be in place with projected year 2040 traffic levels. Specifically for the bypass area, there are properties that will see a reduction in traffic noise such as properties adjacent to existing U.S. Route 45, and properties that will see an increase in traffic noise such as the closest residences within the Forest Trail and Heritage Trails subdivisions. The change in traffic noise levels predicted for year 2040 conditions within the bypass area ranges from -12 to +14 dB(A). Outside of the bypass area, the change in traffic noise levels ranges from 0 to 5 dB(A).

In areas where traffic noise will increase and approach or exceed the Noise Abatement Criteria level (NAC) of 67 decibels or dB(A), the benefits of noise abatement walls in accordance with IDOT and FHWA requirements were evaluated. There are locations where a noise abatement wall meets the dB(A) requirements but will not work due to



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openings for access roads such as along Haven Lane to the west. In other locations, such as along Haven Lane to the east and along the Heritage Trails subdivision, there are not enough residences that would benefit from a noise abatement wall (minimum 5 dB(A) reduction in traffic noise levels) to meet the IDOT and FHWA allowable cost per benefitted receptor criteria. On this basis, noise abatement walls will not be constructed along the bypass or other locations along U.S. Route 45 within the full EA limits.

The offset distances of approximately 90 feet to 150 feet from the proposed bypass (west curb line) to the closest residences within the Heritage Trails subdivision, was a primary factor in these results. While the nearest residences will experience an increase in traffic noise levels, there are, as noted, not enough residences that would benefit from a noise abatement wall such that the cost per benefitted receptor criteria would be met.

The traffic noise analysis was prepared in accordance with the IDOT Highway Traffic Noise Abatement Manual (HTNAM) that is available on the IDOT website (<http://www.dot.il.gov/environment/HTNAMManual.pdf>). As noted in the HTNAM, it was discussed that a change of 3 dB(A) is a barely perceivable change in noise, while an increase of 10 dB(A) is perceived as being twice as loud.

The Village was referred to Table 1-3 (Common Sound Levels) within the HTNAM (copy attached) which provides a point of reference to common sound levels. The highest traffic noise levels anticipated for year 2040 conditions within the IL 132 to IL 173 corridor, including along the bypass, are 68 to 69 dB(A). As shown in Table 1-3, this is comparable to normal speech at a distance of three feet, and considerably less, for instance, than a gas lawnmower at 100 feet.

It was indicated that the cost of noise walls is based on a \$25 per square foot cost and that 3rd party cost participation to achieve the cost per benefitted receptor criteria is not allowed as part of the project per IDOT and FHWA policy.

Village Comments Regarding Noise Analysis

The Village inquired about providing an area within the U.S. Route 45 right-of-way for the Village to potentially construct noise abatement walls as part of potential future developments. IDOT indicated that the preference would be to plan future developments to be compatible with predicted traffic noise levels which was the topic of the June 28th letter mailed to the Village (additional copy was provided to the Village). This would include appropriate offsets from the highway right-of-way.

If noise abatement is desired by the Village as part of future developments, whether in the form of berms or noise abatement walls, IDOT's preference would be to provide it off of the highway right-of-way on private property. The Village could also approach IDOT in the future for a permit to construct noise abatement walls within the U.S. Route 45 right-of-way at 100% Village cost and maintenance responsibility. In general, and contingent upon the specific location and associated topography, noise abatement walls could be considered near the right-of-way line, although additional easements may be required for Village maintenance, and other potential issues such as drainage and utility impacts would need to be resolved.



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Visual Buffering

Opportunities for visual buffering along the project were discussed. This would include planting of trees/shrubs focused in certain areas in accordance with IDOT's tree replacement policy to provide a visual buffer. This would not provide noise abatement, but would block line of sight from residences to the roadway. Along the Heritage Trails subdivision, there is already a considerable amount of vegetation (trees/shrubs) in the area in between the proposed bypass and the subdivision. Along the Forest Trail subdivision, there is very limited opportunity to include plantings within the right-of-way previously purchased for this project by the State of Illinois. However, 20 feet wide landscape easements adjacent to the highway right-of-way were included in the subdivisions plats. Additional plantings will be considered in these areas to provide some further visual buffering.

Jurisdictional Transfer (State Highway)

Discussion occurred regarding the potential jurisdictional transfer (JT) of existing IDOT-owned U.S. Route 45 to the Village of Old Mill Creek within the limits of the bypass. IDOT explained to the Village the process to JT a roadway to a community. In general terms, the present worth value of the roadway and right-of-way will be calculated and offered to the Village as a one-time payment in exchange for the jurisdictional transfer, which would be expected to occur after completion of construction and the new bypass roadway is open to traffic. The jurisdictional transfer would mean that the roadway would become a Village street with the U.S. Route 45 designation moved to the bypass, and that the Village would have complete operational (stop signs, speed limits, trucks, etc.) and maintenance jurisdiction and responsibility for the roadway in perpetuity, with the condition that the roadway remain in public use.

If pursued, the JT requirements would be spelled out in forthcoming correspondence from IDOT after the present worth calculations are completed. IDOT would also provide typical future roadway maintenance costs that the Village could expect.

Based on information available, it is unclear if the Village of Lindenhurst boundary extends across existing U.S. Route 45 at the Independence Boulevard intersection. The Village of Old Mill Creek will review their record annexation agreement in this regard and inform IDOT and LCDOT accordingly. IDOT maintenance staff needs to access the highway system from their own roadways. If a remnant parcel exists, IDOT may not be in a position to do the JT. If necessary, a de-annexation from Lindenhurst in order to transfer complete jurisdiction of U.S. Route 45 to the Village of Old Mill Creek may be necessary to facilitate the JT.

Jurisdictional Transfer (County Highway)

Discussion then turned to the LCDOT-owned existing Grass Lake Road, which the Village has also expressed interest in a jurisdictional transfer. LCDOT noted that they would be open to such a transfer, however would not provide a payment as does IDOT. Discussion in regards to whether this roadway portion could be abandoned ensued, with dialogue to continue. Discussion of potential future additional access points to the west



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bypass and/or the realigned Grass Lake Road near the new intersection between these roads also occurred. It was noted that any such future desired accesses could be applied for via a permit with IDOT or LCDOT, respectively. The Village will need to coordinate with the current landowners to achieve these developments.

Local Cost Participation

Potential Village cost participation and maintenance responsibility items were discussed. IDOT and LCDOT policy requires local agency cost participation and/or maintenance responsibility for items such as bike paths/sidewalks, roadway lighting, median landscape features, and utility relocations (if already within the highway right-of-way via permit).

Regarding bike paths/sidewalks, both IDOT and LCDOT policies indicate that the bike paths and sidewalks can be included with construction of the bypass project as long as the adjacent jurisdictional agency agrees to contribute 20% of the construction cost and agrees to maintenance responsibility. If not included with this project and the Village desired to construct them at a future date, the Village would be responsible for 100% of the cost and maintenance.

The Lake County Forest Preserve District (LCFPD) has expressed an interest in covering the local agency cost participation (20%) for the bike path along the west side of U.S. Route 45 and along the south side of Grass Lake Road west of U.S. Route 45, as part of the land acquisition process for this project. However, the LCFPD will only be able to maintain the bike path within the limits of the McDonald Woods Forest Preserve. The Village of Lindenhurst and/or the Village of Old Mill Creek will have to agree to maintain sections of the bike path outside the McDonald Woods boundaries in order for the bike path to be included with construction of the bypass.

The Village of Old Mill Creek was provided preliminary information on the approximate level of Village cost participation to provide sidewalk along the east side of U.S. Route 45 and south side of the realigned Grass Lake Road (east of the bypass), and bike path along the north side of realigned Grass Lake Road (east of the bypass) within the Village limits. The Village expressed interest in participating and agreeing to maintain these sections of sidewalk and bike path. **Post Meeting Note: IDOT confirmed that the Village can use their allocation of MFT funds to cover their 20% match for bicycle/pedestrian accommodations.**

The cost information will be updated prior to completion of the Phase I study and will be included in a Letter of Intent between the Village and IDOT. The Village indicated that they support landscaping within the median areas, but that they may not be able to maintain. It was discussed that the Village of Lindenhurst has expressed interest in median landscaping and potentially maintaining the median areas.

Continuous roadway lighting was briefly discussed, which would be a 100% village cost responsibility if desired. The Village does not like continuous roadway lighting, and does not plan to submit a request for lighting.



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Public Hearing

A brief overview of the upcoming Public Hearing was provided. The Public Hearing will feature the proposed improvement plan details for the proposed west Millburn Bypass. Information will also be presented regarding the likely future improvements to U.S. Route 45 north and south of the bypass area.

The Public Hearing is anticipated to be an open house type Public Hearing, which provides attendees the opportunity to come and view exhibits, ask questions, and submit comments at any time that suits their schedule.

The date has not been determined, but is anticipated to occur in late August or September, contingent upon completion of ongoing reviews by IDOT and FHWA. As soon as a date is selected the Village will be notified. The Public Hearing is anticipated to be held from 4 p.m. to 7 p.m. The location is anticipated to be Millburn School West.

A preliminary aerial fly-through visualization of the proposed Millburn Bypass improvements was shown. This visualization is anticipated to be available on the project website and shown at the Public Hearing to provide a better understanding of the proximity of the proposed bypass improvements and adjacent properties.

Other

The County inquired about an Old Mill Creek Zoning Exhibit for an east bypass alternative that is posted on the move45east.org website. The Village indicated that this exhibit was prepared as part of a previous "what if" exercise before the Project Study Group selected the preferred west bypass alternative, and that the Village supports the preferred west bypass alternative. The Village will provide a letter to IDOT and LCDOT stating this to ensure there is no misunderstanding in this regard.

The meeting concluded at approximately 3:15 p.m.

Meeting summary prepared by:

Mike Matkovic

Christopher B. Burke Engineering, Ltd.



U.S. Route 45

IL Route 132 to IL Route 173 and Millburn Bypass

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Illinois Department of Transportation
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Old Mill Creek Coordination
Meeting Summary

U.S. Route 45; IL Route 132 to IL Route 173 and Millburn Bypass

Village of Old Mill Creek Coordination Meeting
at LCDOT Libertyville Office
July 19, 2012 – 1:00 p.m.

MEETING AGENDA

- 1) Overall Project Status Update
 - a) Environmental Assessment (EA) development (IL 132 to IL 173 and Millburn Bypass)
 - b) Preliminary Roadway Plan and Profile development
 - i) Planned improvements for Millburn Bypass
 - ii) Likely Future Improvements north and south of the Bypass to establish environmental footprint for EA
 - *Detailed studies north and south of the Bypass are part of separate IDOT Phase I project*
 - iii) Distribute Bypass and Like Future Improvements plans
 - c) Drainage Plan development (Bypass only)
 - d) Engineering Design Report (DR) development (Bypass only)
- 2) Traffic Noise Analysis
 - a) Noise Abatement Walls do not meet IDOT and FHWA Criteria
 - b) Planning For Undeveloped Lands
- 3) Overview of the Proposed Improvement Plans
 - a) Planned Bypass Improvements
 - i) Independence Blvd. intersection
 - ii) Visualization of planned Bypass improvements with Projected 2040 Traffic Volumes
 - b) Likely Future Improvements north and south of Bypass for EA
- 4) Jurisdictional Transfer of existing US Route 45 (from IDOT) and Grass Lake Road (from LCDOT) to Old Mill Creek
- 5) Potential Village Cost/Maintenance Participation Items
 - (1) Sidewalk and Bike Path
 - (2) Roadway Lighting
 - (3) Median Landscaping and Maintenance
 - (4) Letter of Intent
- 6) Public Hearing Overview
 - a) Format and Content
 - b) Location and Timeframe



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Old Mill Creek Coordination
Meeting Summary

U.S. ROUTE 45; IL 132 TO IL 173 AND MILLBURN BYPASS

VILLAGE OF OLD MILL CREEK COORDINATION MEETING

July 19, 2012

1:00 p.m. at LCDOT Office in Libertyville

SIGN-IN SHEET

	Name	Representing	Email
1	Ryan Westrom	Patrick Engineering	rwestrom@patrickco.com
2	MIKE MATKOVIC	CBBEL	MMATKOVIC@CBBEL.COM
3	Time Smith	Old Mill Creek	Time at Tempel Smith Co. LLC
4	Yamin Yamin	James Anderson Co. Old Mill Creek	YAYAMIN@JACOENGINEERS.COM
5	Milton Anderson	OMC Trustee	miltsee@aol.com
6	Mike Fogarty	Tempel Smith Trust	Fogarty326@aol.com
7	ROGER BASKE	OLD MILL CREEK TRUSTEE & PLANNING DIR.	vbecki@att.net
8	JOHN BACZEK	IL DOT	john.baczek@illinois.gov
9	AL Maiden	RCCA / Manhard Old Mill Creek	amaiden@rccai.com
10	Jennifer Andrew	Old Mill Creek	jennifer.andrew@me.com
11	Brian Carlson	IDOT - Prog Dev.	brian.carlson@illinois.gov
12	Terry Heffron	IDOT - Pgm Dev.	terrence.heffron@illinois.gov
13	Marie Glynn	IDOT Extension Staff/ CIBM Hill	marie.glynn@illinois.gov
14	PAULA TRIGGS	LCDOT	p.trigg@lakecounty.il.gov
15			
16			
17			
18			



U.S. Route 45

IL Route 132 to IL Route 173 and Millburn Bypass

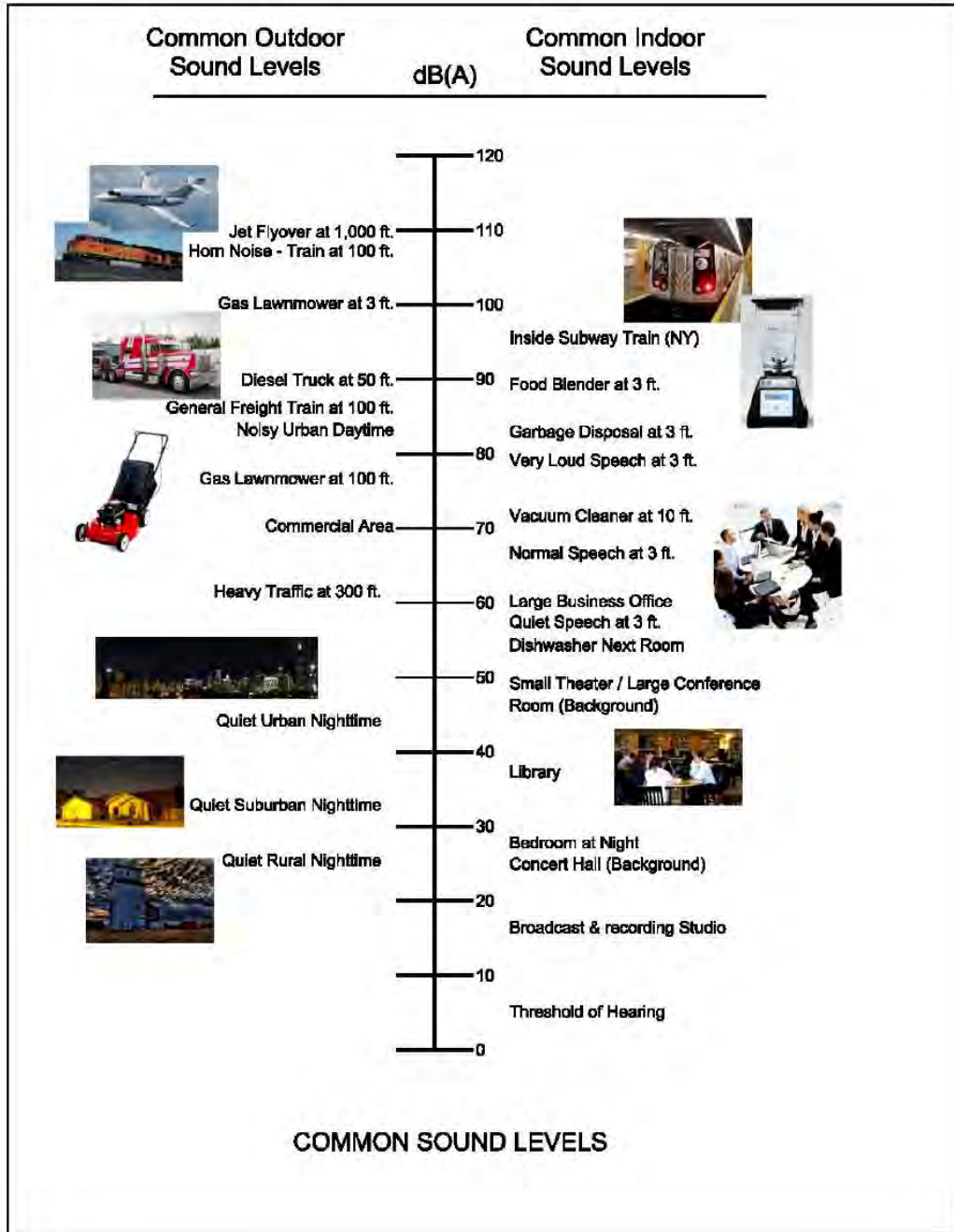
Section No. 05-00262-02-RP

P-91-666-09

Illinois Department of Transportation
Lake County Division of Transportation

Old Mill Creek Coordination
Meeting Summary

**TABLE 1-3
COMMON SOUND LEVELS**





**Traffic Noise Information for Undeveloped Lands
U.S. Route 45, IL Route 132 to IL Route 173, and Millburn Bypass
Lake County, IL**

Division of Transportation

Paula J. Trigg, P.E.
Acting Director of Transportation/
Acting County Engineer

600 West Winchester Road
Libertyville, Illinois 60048-1381
Phone 847 377 7400
Fax 847 984 5888

June 28, 2012

The Hon. Tim Smith
Mayor, Village of Old Mill Creek
40870 N. Hunt Club Road
Old Mill Creek, IL 60083

Dear Mayor Smith:

As part of the ongoing Phase I Engineering and Environmental Study (Phase I Study) for U.S. Route 45, from IL Route 132 to IL Route 173, and the Millburn Bypass, we would like to take this opportunity to coordinate traffic noise information for undeveloped lands. Specifically, the projected future traffic noise levels were evaluated for lands either currently under your jurisdiction or land that may come under your jurisdiction near the proposed Millburn Bypass improvements and likely future improvements along U.S. Route 45 south to IL Route 132 and north to IL Route 173.

For developed lands, a traffic noise study has been completed for this project and the results will be summarized in the Environmental Assessment prepared for this Phase I Study. Enclosed for your information is an exhibit showing the predicted design year (2040) build traffic noise levels for the undeveloped lands identified along the project corridor.

We hope this information will be useful to you in planning and permitting future development in your area. We recommend that you carefully consider the future predicted noise levels to avoid potential issues of public concern over incompatible noise levels.

To help with your future planning and discernment regarding permitting decisions, we encourage you to obtain the Federal Highway Administration (FHWA) publication titled *Entering the Quiet Zone: Noise Compatible Land Use Planning*. This publication can be obtained from the FHWA website:

http://www.fhwa.dot.gov/environment/noise/noise_compatible_planning/federal_approach/land_use/quietzon.pdf

For additional information regarding traffic noise, regulations and policy, noise analyses or noise abatement, we encourage you to visit the Illinois Department of Transportation's web site at:

<http://www.dot.il.gov/desenv/noise.html>

Very truly yours,

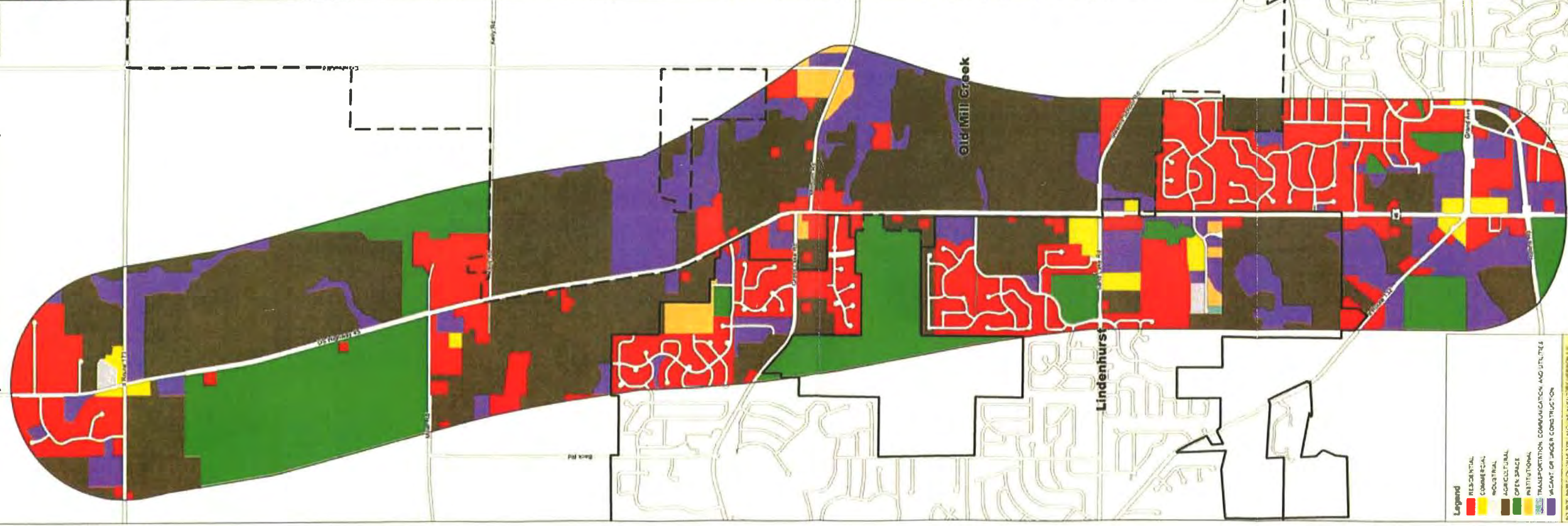
Chuck Gleason
Acting Director
Planning and Programming

Enclosure

cc: Marie Glynn, Illinois Department of Transportation

www.lakecountyil.gov

**EXISTING LAND USE
(FROM CMAP & OBSERVATION)**



- Legend**
- RESIDENTIAL
 - COMMERCIAL
 - INDUSTRIAL
 - AGRICULTURAL
 - OPEN SPACE
 - TRANSPORTATION, COMMUNICATION, AND UTILITIES
 - VACANT OR UNDER CONSTRUCTION



LakeCounty
Division of Transportation

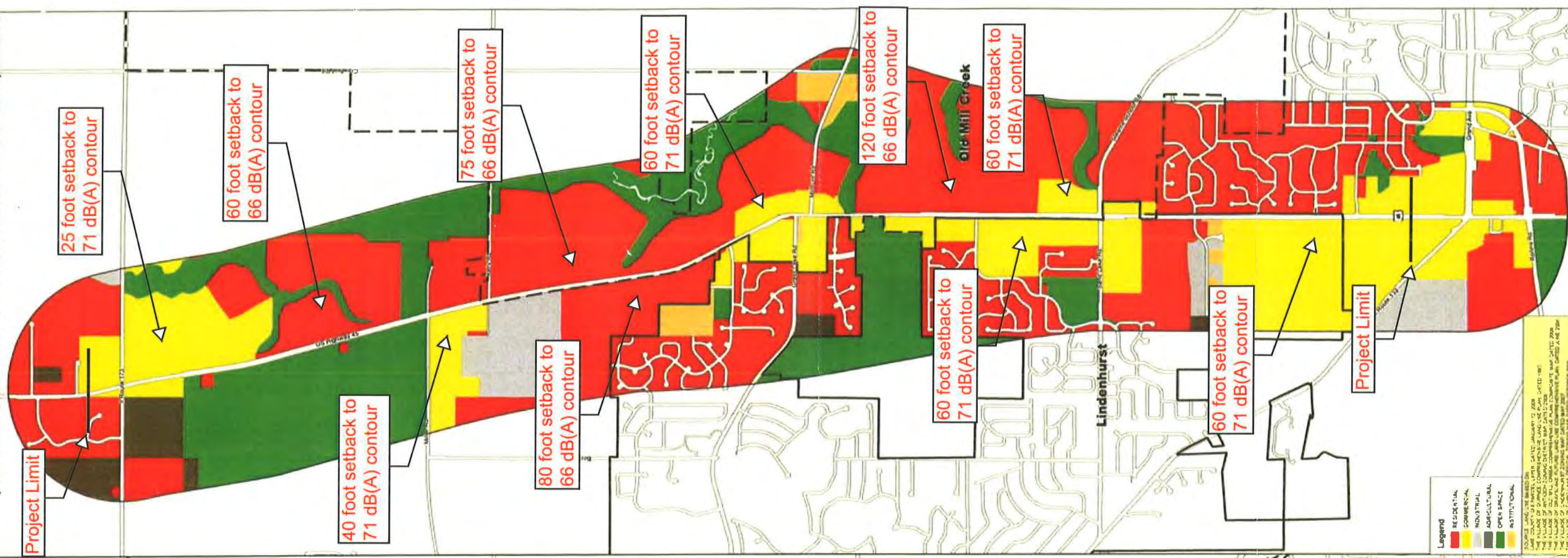


CHRISTOPHER B. BURKE ENGINEERING LTD.
9575 West Higgins Road, Suite 600
Rosemont, Illinois 60018
(847) 842-0000



**FUTURE TRAFFIC NOISE LEVEL
INFORMATION FOR UNDEVELOPED LANDS**

**FUTURE LAND USE
(FROM COMMUNITY & COUNTY LAND USE PLANS)**



- Legend**
- RESIDENTIAL
 - COMMERCIAL
 - INDUSTRIAL
 - AGRICULTURAL
 - OPEN SPACE
 - INSTITUTIONAL

NOISE LEVELS ARE BASED ON THE FOLLOWING ASSUMPTIONS:
1. THE FUTURE TRAFFIC VOLUME IS BASED ON THE 2030 CMAP.
2. THE FUTURE TRAFFIC SPEED IS BASED ON THE 2030 CMAP.
3. THE FUTURE TRAFFIC COMPOSITION IS BASED ON THE 2030 CMAP.
4. THE FUTURE TRAFFIC NOISE LEVEL IS BASED ON THE 2030 CMAP.
5. THE FUTURE TRAFFIC NOISE LEVEL IS BASED ON THE 2030 CMAP.
6. THE FUTURE TRAFFIC NOISE LEVEL IS BASED ON THE 2030 CMAP.

25 foot setback to 71 dB(A) contour

60 foot setback to 66 dB(A) contour

40 foot setback to 71 dB(A) contour

75 foot setback to 66 dB(A) contour

80 foot setback to 66 dB(A) contour

60 foot setback to 71 dB(A) contour

120 foot setback to 66 dB(A) contour

60 foot setback to 71 dB(A) contour

60 foot setback to 71 dB(A) contour

60 foot setback to 71 dB(A) contour

Project Limit

Village of Old Mill Creek
40870 Hunt Club Road
Old Mill Creek, Illinois 60048
847-838-0275

August 28, 2012

Ms. Paula Trigg, P.E.
Acting Director of Transportation/Acting County Engineer
Lake County Division of Transportation
600 W. Winchester Road
Libertyville, IL 60048

**RE: Clarification of the Purpose of the Village of Old Mill Creek "Potential Development PODS" Exhibit
--October/ November 2010 and the Route 45 Bypass Alternate C4 from the LCDOT Phase I Study**

Dear Ms. Trigg:

Pursuant to our meeting on July 19, 2012, regarding the updated status of the Route 45 Bypass Studies, your Departments (LCDOT) past Phase I Studies, and the transition to additional study by IDOT; and pursuant to your request at that meeting for the Village of Old Mill Creek to clarify the purpose of the exhibit that was prepared for the Village in 2010 entitled "Potential Development PODS" I offer the following:

First, I think that I should explain that I am the Chairman of the Plan Commission of the Village of Old Mill Creek as well as serving as a Trustee on the Old Mill Creek Village Board.

Second, as Chairman of the Village Plan Commission I would like to note that we often have exhibits prepared for study purposes. The purpose of the subject exhibit was one of those types of exhibits, for study purposes, as a "what if" scenario in the event that Alternate C4 was selected as the preferred alternative through your Phase I Route 45 Bypass Study.

The exhibit was in no way meant to be misrepresented as any type of endorsement of Alternate C4, and after this exhibit was thoroughly examined, it was determined that Alternate C4 was not a preferred alternative that the Village of Old Mill Creek would support.

If I can provide any additional information, or if you have any questions, please contact me at your convenience.

Sincerely,



Roger Baske

Plan Commission Chairperson and Village Board Trustee

cc: John Baczek, IDOT
Jennifer Andrew, Assist Clerk, Village of Old Mill Creek,
Tim Smith, Mayor, Village of Old Mill Creek
E. M. "Al" Maiden, AICP; Rolf C. Campbell & Associates/Manhard Consulting LTD
Mike Fogarty, Tempel Smith Trust

US Route 45/Millburn Bypass
IL Route 132 to IL Route 173
Section No. 05-00262-02-RP
Lake County Division of Transportation

**4/12/2010 Lindenhurst
Meeting Minutes**

DATE: April 26, 2010

TO: Attendees

FROM: Matt Huffman – CBBEL

MEETING DATE: April 12, 2010
TIME: 11:00 am

SUBJECT: Initial Coordination Meeting

LOCATION: Lindenhurst Village Hall

ATTENDEES: Mayor Susan Lahr – Lindenhurst Mayor
Matt Formica – Lindenhurst Village Administrator
Wes Welsh – Lindenhurst Public Works Director
Paula Trigg - LCDOT
Chuck Gleason – LCDOT
Jarrod Cebulski – Patrick Engineering, Inc.
Mike Matkovic – CBBEL
Matt Huffman – CBBEL

An initial project coordination meeting with the Village of Lindenhurst was held on April 12, 2010. The purpose of the meeting was to:

- introduce the US Route 45/Millburn Bypass project
- summarize the project and alternative development process's
- review the environmental analysis performed (GIS based) and preliminary results
- review the evaluation matrix content, relative comparison of alternatives, grading, and presentation
- discuss next steps
- provide an opportunity for Lindenhurst to comment on the project

The Lake County Division of Transportation (LCDOT) is the lead agency for the project, which includes improvements to US Route 45 in the vicinity of the intersections of Grass Lake Road and Millburn Road with US Route 45. An Environmental Assessment will be prepared from IL Route 132 north to IL Route 173 (i.e., logical termini). A Combined Design Report (i.e., detailed engineering) will be prepared to address area around the Grass Lake Road and Millburn Road intersections with US Route 45. This includes evaluating east bypass, west bypass, and on-alignment alternatives for US Route 45. This bypass location was previously studied by the Illinois Department of Transportation (IDOT) as part of the US Route 45 Strategic Regional Arterial (SRA) studies. In the mid 1990s, IDOT recorded a west bypass alignment in this area, which was the consensus realignment choice based on



CHRISTOPHER B. BURKE ENGINEERING, LTD.

9575 W Higgins Road, Suite 600 Rosemont, Illinois 60018-4920 Tel (847) 823-0500 Fax (847) 823-0520

coordination with local municipalities, the Lake County Board, the Lake County Forest Preserve District, and LCDOT.

The project kicked off in December 2008, followed by a public information meeting in February 2009, and formation of the Community Advisory Group (CAG). Based on information received from the CAG, a range of eighteen initial alternatives was developed, nine of which were later discarded based on LCDOT, IDOT, and CAG input. Some of the reasons of dismissing were impacts to historically significant structures in the Millburn Historic District and not meeting the purpose and need statement of the project.

The logical termini and purpose and need statement for the project have been approved by the Federal Highway Administration (FHWA), IDOT, and other resource agencies (as part of the National Environmental Policy Act [NEPA]/404 merger process). FHWA and the other resource agencies also agreed with the elimination of nine alternatives - leaving nine alternatives to be carried forward for further analysis. The nine remaining alternatives include three west bypass options, three US Route 45 on-alignment options, and three east bypass options.

Preliminary conceptual plan view drawings depicting the nine remaining alternatives were presented to LCFPD. Typical cross sections were also presented for US 45, Millburn Road, and Grass Lake Road. All alternative alignments have been preliminarily reviewed and are acceptable to LCDOT and IDOT. The alternative alignments used IDOT design criteria and tried to minimize impacts as much as possible. The "A" alternatives (west bypass) use the previously recorded IDOT alignment. ROW was preserved for the recorded west bypass alignment in certain locations during the last 15 years as Lindenhurst developed.

A draft impact evaluation matrix for the nine remaining alternatives was also presented to LCFPD. Matrix content, relative comparison of alternatives, grading, and presentation were discussed. The impact criteria listed on the matrix is based on NEPA/IDOT policy – consistent with topics that will be evaluated in the EA. Potential impacts were calculated using available GIS information and field collected data (as available). The impact matrix quantifies impacts within the proposed project right-of-way, which is typically a 130 foot corridor; all resources within this right-of-way "footprint" were considered impacted. Avoidance of resources due to bridging (e.g., floodway) was not included at this point in the alternative evaluation process. The impact matrix will be presented at the next CAG meeting. CAG members will receive a packet of information prior to the upcoming CAG meeting. It is anticipated that this packet of information will include conceptual plan view drawings of the nine alternatives and the impact matrix.

CBBEL stated that the segments of US 45 outside the core study area (Millburn Bypass area) will be assessed and a general ROW footprint will be developed for



determination of impacts for the Environmental Assessment. North of the core study area LCFPD has two forest preserves, Raven Glen and Ethel's Woods. Through this section the west right of way will be held to minimize impacts to LCFPD property.

CBBEL explained that the Illinois Natural History Survey (INHS) completed wetland and biological surveys for this project. Cultural surveys are ongoing. IDOT – Bureau of Design and Environment (BDE) cleared this project with respect to biological resources; the Illinois Department of Natural Resources (IDNR) also terminated consultation with respect to state listed threatened and endangered species. At the request of the U.S. Fish and Wildlife Service (USFWS), INHS conducted searches for the Eastern Prairie Fringed Orchid (*Platanthera leucophaea*). INHS followed USFWS guidelines for evaluating Eastern Prairie Fringed Orchid habitat in northeastern Illinois with searches conducted on three non-consecutive days during the period between June 28 and July 11. No Eastern Prairie Fringed Orchids were identified during the field searches. CBBEL stated that INHS completed the wetland delineation for the study area and has been coordinated with Lake County Stormwater Management Commission (LCSMC). The INHS field identified wetlands are different from those that are mapped; there is more mapped wetland within the study area than identified by INHS.

Lindenhurst indicated that there would be utility impacts for some of the alternatives. CBBEL will coordinate with Lindenhurst to acquire utility atlases. There was discussion about various mitigation strategies for the "A" alternatives along with access of Haven Lane. The current design shows the east leg of Haven Lane with a cul-de-sac and also an option for a full access intersection. Lindenhurst provided no major objections or concerns to any of the alternatives that are being carried forward to CAG #3. CBBEL indicated that there could be agreements set up for median beautification along state routes.

CBBEL summarized the next steps for the project. These include finalizing the preliminary impact analysis of the nine remaining alternatives for the upcoming CAG meeting on April 27, 2010. It is anticipated that additional alternatives will be dropped following a review of the impact analysis and consideration of LCDOT, IDOT and CAG input. A public meeting to present the alternatives being carried forward is anticipated in Summer 2010. Tentatively, the project team anticipates a September 2010 NEPA/404 merger meeting to present the alternatives being carried forward for detailed review and to obtain concurrence. Based on the current schedule, CBBEL anticipates Phase I completion in December 2011.

Action Items

- CBBEL to send Lindenhurst a full set of plans for their records
- Lindenhurst to send LCDOT utility atlases

The meeting concluded at approximately 12:00 pm.





MEETING MINUTES

<u>Meeting Date:</u>	September 22, 2011
<u>Date Issued:</u>	October 6, 2011
<u>Location:</u>	Lindenhurst Village Hall
<u>Project:</u>	U.S. 45 – IL 132 to IL 173 and Millburn Bypass
<u>Purpose:</u>	Lindenhurst Coordination Meeting

<u>Attendees</u>	<u>Representing</u>	<u>Phone</u>
Susan Lahr	Mayor - Lindenhurst	847-356-8252
Matt Formica	Village Administrator - Lindenhurst	847-356-8252
Wes Welsh	Village Engineer/Public Works Director - Lindenhurst	847-356-8252
Tom Lippert	Executive Director - Lindenhurst Park District	847-356-6011
Chuck Gleason	LCDOT	847-377-7447
Paula Trigg	LCDOT	847-377-7400
Mike Matkovic	Christopher B. Burke Engineering (CBBEL)	847-823-0500
Matt Huffman	Christopher B. Burke Engineering (CBBEL)	847-823-0500

The meeting began at 1:00 pm. The purpose of this meeting was to provide an update on project status to the Village of Lindenhurst following the selection of the preferred bypass alternative A4 by the Project Study Group (Lake County Division of Transportation (LCDOT), Illinois Department of Transportation (IDOT), and Federal Highway Administration (FHWA)). Feedback was also being sought from the Village of Lindenhurst regarding design details for the preferred bypass Alternative A4.

A meeting agenda was distributed and several exhibits were displayed including an overall exhibit of the preferred bypass Alternative A4, an environmental resource exhibit, the U.S. 45 proposed typical cross section, and larger scale exhibits of the preferred bypass Alternative A4 near the Haven Lane Subdivision, Heritage Trail Subdivision, and Millburn Historic District. The Village of Lindenhurst began the discussion with questions regarding the selection process of the preferred bypass Alternative A4. CBBEL provided an overview of factors considered by the Project Study Group.

- **Transportation Performance:** Based on the analysis of the three finalist alternatives for projected year 2040 traffic during the evening peak travel period, bypass Alternative A4 provides the best overall transportation performance within the Millburn Bypass area roadway network. The network includes the U.S. 45 bypass, Grass Lake Road, Millburn Road, old U.S. 45, Independence Blvd., Heritage Drive, and Haven Lane intersections. The results of the network analysis show that bypass Alternative A4 would result in 99 hours of total travel time (cumulative for all vehicles traveling through the network during the peak hour) as compared to 116 hours for bypass Alternative C4, a 17 hour or 15 percent difference in total travel time through the network. The total travel delay (travel time above free flow travel) would be 32 hours for bypass Alternative A4 as compared to 39 hours for bypass Alternative C4, an 18 percent difference. The main intersection for each finalist alternative was also analyzed for the year 2040 evening peak period. The intersection of U.S. 45 at Grass Lake Road with bypass Alternative A4 was the best performing at level of service (LOS) C with 31.7 seconds of average delay per vehicle. The main intersection of U.S. 45 at Millburn Road with bypass Alternative C4, would be LOS D with 37.6 seconds of average delay per vehicle, a 15 percent difference. These differences also correlate to differences in user costs, emissions, and energy consumption.

- Compatibility with regional travel patterns: As part of early development of the project Purpose and Need statement, which is available on the project website, the project team conducted origin/destination traffic studies, and consulted with the Chicago Metropolitan Agency for Planning (CMAP) to perform a "select link" analysis to evaluate travel patterns in the study area. The results of this analysis showed the predominant travel patterns in the study area are oriented in a northwest/southeast direction. The western bypass supports this more effectively than an eastern bypass where traffic will be pulled through or past the historic district, which is one of the likely reasons for the performance differences. Correspondingly, CMAP's traffic projections show higher anticipated traffic on Millburn Road for bypass Alternative C4 (17,000) than bypass Alternative A4 (14,000).
- SRA Design Criteria: The roadway alignment of bypass Alternative C4 is less desirable than bypass Alternative A4 due to the minimum radius reverse curves. This alignment was developed to avoid the known archeological sensitive site, and surveyed wetlands to the north, which resulted in a less desirable design as compared to bypass Alternative A4. This is an even greater issue since U.S. Route 45 is designated a Strategic Regional Arterial (SRA) roadway by IDOT and FHWA. Another design issue is the proximity of the main intersection to the old U.S. Route 45 and Grass Lake Road, which poses turn lane storage and taper deficiencies.
- Lake County Forest Preserve: The Lake County Forest Preserve District (LCFPD) supported the western bypass as being most compatible with their regional trail objectives. Coordination occurred with LCFPD during the IDOT 1995 SRA study which identified a western bypass which was concurred to by LCFPD at that time. Planning efforts have occurred since then and the current preferred bypass Alternative A4 coincides best with the LCFPD Preliminary Trail Alignment as shown in their March 1, 2011 exhibit connecting Mill Creek holdings, Millennium Trail, McDonald Woods, Ethel's Woods, and Raven Glen. LCFPD concurred with a *de minimis* finding regarding the impact to their property, which was approved by FHWA. The *de minimis* finding indicates that there are no adverse effects to McDonald Woods as a result of the proposed improvement.
- Impact on the Millburn Historic District: Alternative C4 bisects the Millburn Historic District, a National Register Historic Place, and disconnects the most historically significant structure, the Strang House, from the remainder of the historic district. Bypass Alternative A4 avoids any impact to the Millburn Historic District.

LCDOT indicated that all evaluation criteria were considered as a whole. Some of the evaluation criteria are based on established Federal laws such as Section 404 of Clean Water Act protecting wetlands, and Section 106 of the National Historic Preservation Act protecting historic resources. Therefore the avoidance of wetlands and impacts to the Millburn Historic District are important considerations.

The Village of Lindenhurst asked specific questions about the noise analysis, safety, differences in transportation performance between bypass Alternative A4 and C4, landscaping, speed limits, the Federal project development process, and involvement of the Lake County Board. CBBEL and LCDOT provided the following responses:

- Noise analysis: As standard practice for transportation projects, noise analysis and modeling is typically conducted when a preferred alternative is selected due to the design details and information required to perform the modeling. The FHWA Traffic Noise Model (TNM) is required to be used to evaluate the existing condition and for the preferred alternative. The noise modeling for this project is not yet finalized. An initial part of the modeling process is to take field noise readings to validate the model. The field noise readings have no bearing on the results of the noise analysis, but are simply to establish that the model is accurate based on real life conditions, and for this project, that was so. Once the model is validated by this method, the model can then be used to predict noise levels for existing conditions and proposed improvement. The noise analysis process was also explained. If noise abatement is warranted and feasible, it must still meet the IDOT cost per benefitted resident criteria to be implemented with the project.

- Safety: Safety concerns were expressed by the Village regarding the Haven Lane intersection and the ability of vehicles to safely ingress and egress from Haven Lane to U.S. Route 45. It was explained that it is expected there will be adequate gaps for vehicles to make an eastbound left turn due to the proximity of the traffic signal at the Grass Lake Road and U.S. 45 intersection. Pedestrian access would not be provided across U.S. Route 45 at Haven Lane. As a part of this project, an area of flat ground behind the curb line will be provided to accommodate a sidewalk on the east side of U.S. Route 45 up to Grass Lake Road which will be connected to the proposed multiuse path along the west side of U.S. Route 45 at the new signalized intersection of Grass Lake Road and U.S. Route 45. The project team is looking into whether a southbound right turn lane into the Forest Trails Subdivision can fit within the existing bypass right-of-way. A northbound left turn lane will be provided to Haven Lane. The east leg of Haven Lane is recommended to become a cul de sac per the Homeowners Associations Declarations. A southbound left turn lane is not feasible due to the northbound dual left turn lanes at the Grass Lake Road intersection to the north, which disallows a southbound left turn lane without considerable additional pavement widening.
- There was discussion about the possible connection of Haven Lane to Grass Lake Road to form a 4-way intersection with Heritage Drive. There is currently a ROW stub off of Haven Lane that appeared it would line up with a future road to Grass Lake Road. The Village indicated that this is a 50 foot ROW and was intended for a future short road that led to a cul-de-sac. A future road could be built at a later date by the Village of Lindenhurst, but is not being considered for this project.
- Landscaping: The proposed improvement has a barrier median in the roadway which will be grassed at a minimum. For any barrier medians that are within the Village's municipal boundary there is the opportunity for additional landscaping if the Village agrees to maintenance. This would need to be discussed with IDOT. LCDOT does anticipate there to be potential for landscaping in buffer areas near Haven Lane. There is another buffer area adjacent to the Heritage Trails subdivision.
- Speed Limits: The Village of Lindenhurst expressed some concern over the speed limits on U.S. Route 45 and Grass Lake Road. The speed limit on U.S. Route 45 is proposed to be 45 mph. The proposed speed limit on Grass Lake Road was not provided at the time of the meeting but will be looked into by LCDOT. LCDOT indicated that they perform speed studies to establish the proposed speed limits on their County Highways, so the speed limits could change based on these studies at a future date after the project is constructed.
- Federal Project Development Process: LCDOT is funding the engineering and construction of this project based on results of 2006 Lake County Transportation Summit. U.S. Route 45 is a State Route, and the County has some Federal funds allocated for the construction of this project. Based on Federal funding and following IDOT procedures, this project is proceeding through the Federal project development process. FHWA is the agency that oversees the Federal project development process for the project and ensures that all Federal laws and processes are followed. IDOT and LCDOT act on behalf of FHWA to carry out the day to day project management of the project. Throughout the project development process the project is presented to FHWA and other Federal resource agencies for their comments and concurrence.
- Lake County Board involvement: The transportation decisions are made by the Lake County Division of Transportation with concurrence from IDOT and FHWA depending on the roads involved and source of funding. The Lake County Board will vote on release of the funding for Phase II Engineering and Phase III (construction), as they did for Phase I.

The Village of Lindenhurst Park District provided comments on the compatibility of bypass Alternative A4 with the Village's Pedestrian and Bicycle Plan. The Village of Lindenhurst Park District and the LCFPD have been working in cooperation to provide pedestrian connectivity north and south through the Village of Lindenhurst and LCFPD holdings. The improvement of U.S. Route 45 from IL 132 to IL 173, including the Millburn Bypass area, will include a graded area for a bike path along the west side of the roadway. As a part of the IDOT Complete Streets law, pedestrian and bicycle facilities must be planned for in any project. The policy states that IDOT will contribute 80 percent of the cost and the local governing body must contribute 20 percent along state routes. LCDOT has similar cost participation for County routes and also a

pedestrian/bicycle accommodation policy. LCDOT indicated that the LCFPD expressed possible interest in providing the cost participation for the multi-use path along the west side of U.S. Route 45. The concern of the Park District is that the LCFPD will contribute the 20 percent of the cost share for the bike path adjacent to the proposed bypass and will abandon potential funding and participation for the proposed underpass of Grass Lake Road connecting McDonald Woods to the Park District property. It was agreed that LCDOT, Lindenhurst Park District, and LCFPD will work on setting up a coordination meeting to discuss the pedestrian and bicycle accommodations for this project.

The meeting proceeded following the distributed agenda beginning with discussion of the bypass project limits from Country Place on the south to just north to Independence Boulevard and the typical cross section of the bypass. It was discussed that space will be provided for a multi-use path on the west side of the bypass and a sidewalk on the east side. Grass Lake Road will have space for a multi-use path on the north side from Heritage Drive to old U.S. Route 45. The Village of Lindenhurst will need to cost share and provide maintenance for portions of the pedestrian facilities within their municipal boundary contingent upon the extent of potential LCFPD participation. If the Village wanted roadway lighting to be incorporated it would be 100 percent Village cost. The north segment of Old U.S. 45 is intended to become a cul de sac and not tie into the bypass at Independence Boulevard, which would remain a safer three leg intersection design.

Through coordination meetings with the Village of Old Mill Creek they have indicated that they would like jurisdiction of old U.S. Route 45 and a portion of old Grass Lake Road. The jurisdictional transfer of old U.S. Route 45 would occur with IDOT and old Grass Lake Road with LCDOT. The signals would be removed at both the existing locations.

The Village provided utility atlases and Planning Commission meeting minutes from 1996 and 1997 regarding the Haven Lane subdivision. The Village indicated that Wes Welsh should be contacted for any additional information the project team needed.

The next steps in the project development process will be completion of the noise analysis and review by IDOT and LCDOT, development of the preliminary engineering plans for the bypass, concept level engineering plans for the segments north and south of the bypass area to IL 132 and IL 173, and preparation of the Draft Environmental Assessment. CAG#6 is anticipated for Fall 2011 with a Public Hearing anticipated in early 2012. The Village and LCDOT also discussed LCDOT attendance at small group meetings that would be setup by the Village to discuss the project and address questions, which the County was agreeable to.

The meeting adjourned at approximately 4:00 p.m.

Submitted by:



Matthew Huffman, P.E.
Christopher B. Burke Engineering, Ltd.

LMEC



Village of Lindenhurst

2301 E. Sand Lake Road
Lindenhurst, Illinois 60046-8934

BUREAU OF PROGRAMMING
RECEIVED
OCT 28 2010
DISTRICT #1

10/27/2010

Ms. Marie Glynn
IDOT Project Manager
201 W. Center Ct.
Schaumburg, IL 60196

Re: Resolution Urging the Federal Highway Administration, Illinois Department of Transportation and Lake County Division of Transportation to Utilize the U.S. Route 45 Eastern Bypass Alternative

Dear Ms. Glynn:

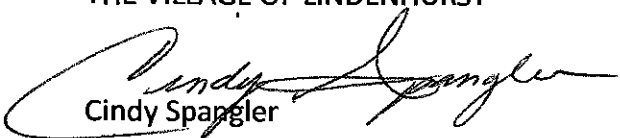
Your name was provided by Chuck Gleason of the Lake County Division of Transportation. He identified you as the person to best assist the Village of Lindenhurst with disseminating the referenced Resolution. The Resolution was adopted by the Village Board at the Regular Meeting on Monday, October 25, 2010.

Please assist the Village by routing the Resolution to the appropriate individuals associated with the Lake County Division of Transportation, the Illinois Department of Transportation and the Federal Highway Administration. If it is more appropriate for us to issue the Resolution directly, please provide me with the contact information. My email address is cspangler@lindenhurstil.org.

Thank you for your assistance in this matter.

Sincerely,

THE VILLAGE OF LINDENHURST


Cindy Spangler
Deputy Clerk

enclosure

RESOLUTION NO. 10-10-1821-R

**VILLAGE OF LINDENHURST
LAKE COUNTY, ILLINOIS**

**Published in Pamphlet Form by Authority of the
President and Board of Trustees
of the
Village of Lindenhurst, Lake County, Illinois
Date of Publication: October 25, 2010**

RESOLUTION NO. 10-10-1821-R

A RESOLUTION URGING THE FEDERAL HIGHWAY ADMINISTRATION, ILLINOIS DEPARTMENT OF TRANSPORTATION AND LAKE COUNTY DIVISION OF TRANSPORTATION TO UTILIZE THE U.S. ROUTE 45 EASTERN BYPASS ALTERNATIVE

WHEREAS, U.S. Route 45 serves as a vital North-South link from the Wisconsin border south to Chicago's Northern Suburbs; and

WHEREAS, existing U.S. Route 45 in this area carries as much as 16,900 vehicles per day on a two lane roadway, and traffic volume is anticipated to increase in the future from expected development growth North of the Village; and

WHEREAS, the Lake County Division of Transportation (LCDOT) in coordination with the Illinois Department of Transportation (IDOT) has initiated Phase I Engineering and Environmental Studies (Phase I Study) to evaluate long term improvement needs for U.S. Route 45 from IL 132 to IL 173, with special focus on the Grass Lake Road and Millburn Road intersections; and

WHEREAS, in the 1990's, IDOT studied a Route 45 bypass of the Millburn Historic District as part of a Strategic Regional Arterial (SRA) study, which included a western bypass alignment; and

WHEREAS, in 1993 as part of IDOT's SRA study, the Village of Lindenhurst adopted Resolution 93-7-850-R which stated the Village's strong belief that an alignment east of Millburn would be the most beneficial long term solution for the Village of Lindenhurst and the historic community of Millburn; and

WHEREAS, in accordance with Federal Project Development procedures and the National Environmental Policy Act, the Phase I Engineering and Environmental Study has taken a "clean slate" approach with respect to a fresh look at the purpose and need for this project; and

WHEREAS, the Phase I study will evaluate all reasonable alternatives for the Millburn area including western and eastern bypass alignments, and improvements to existing Route 45; and

WHEREAS, recent public comment and petition indicated roughly 91% of all respondents were in favor of an eastern bypass alignment; and

WHEREAS, the Village of Lindenhurst continues to be concerned with the negative impacts a western alignment would have on existing homes and commercial property due to significant truck traffic diverting from I94; and

WHEREAS, high quality natural areas of the McDonald Woods Forest Preserve would be negatively impacted by a western alignment and the overall environment of the property will be adversely affected by the placement of a major highway on its borders; and

WHEREAS, land impacted by an eastern alignment is primarily undeveloped vacant land or agriculture use,

NOW, THEREFORE, BE IT RESOLVED by the Mayor and Board of Trustees of the Village of Lindenhurst, Illinois as follows:

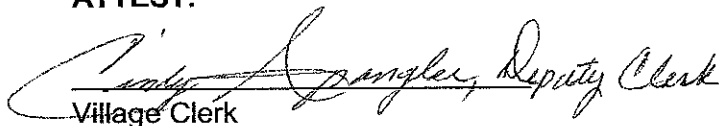
1: Based upon potential environmental impacts, negative impact on the community due to noise and safety concerns resulting from significant truck traffic, and a more cost-effective viable solution moving Rte 45 to the East of its existing location, the Village of Lindenhurst strongly urges the Federal Highway Administration, Illinois Department of Transportation and Lake County Division of Transportation, collectively known as the Project Study Group, to utilize the alignment labeled Alternate C4 (Eastern Bypass Alignment) as generally depicted on Exhibit A attached to this Resolution.

PASSED AND APPROVED by the President and members of the Board of Trustees of the Village of Lindenhurst, Illinois this 25th day of October, 2010.



VILLAGE PRESIDENT

ATTEST:



Village Clerk

TRUSTEES:	Aye	Nay
Bill Anderson	X	—
Patty Chybowski	X	—
Patrick Dunham	X	—
Dominic Marturano	X	—
Renee Metzelaar	X	—
Timothy Wayne	Absent	—

US Route 45

IL Route 132 to IL Route 173 and Millburn Bypass

Section No. 05-00262-02-RP

P-91-666-09

Lake County Division of Transportation

**Lindenhurst Coordination
Meeting Summary**

MEETING DATE: June 28, 2012

MEETING TIME: 10:00 a.m.

SUBJECT: Project Status Update and Pre-Public Hearing Coordination

LOCATION: Lindenhurst Village Hall
2301 Sand Lake Road

ATTENDEES: Matt Formica – Lindenhurst Village Administrator
Wes Welsh – Lindenhurst Public Works Director
Chuck Gleason – LCDOT
Marie Glynn – IDOT
Ryan Westrom – Patrick Engineering Inc.
Mike Matkovic – Christopher B. Burke Engineering, Ltd.

The purpose of this meeting was to provide an overall project status update to the Village of Lindenhurst with respect to ongoing engineering and environmental studies for the US Route 45 project from IL 132 to IL 173 and the Millburn Bypass and to discuss Public Hearing preparations. A meeting agenda was distributed. A copy of the agenda and the meeting sign-in sheet is provided at the end of this meeting summary. The following summarizes the main points of discussion at this meeting and any resulting action items.

It was discussed that IDOT will have more of a leadership role with the project as part of completing the ongoing Phase I engineering and environmental studies (Phase I studies), and that IDOT will be the lead agency for subsequent Phase II engineering (contract plan preparation and land acquisition) and construction of the Millburn Bypass. This results from the Lake County Board transferring funding for the Millburn Bypass project secured by the County to IDOT for implementation. LCDOT staff will remain involved with the project through completion of the Phase I study. It was pointed out that while LCDOT has been the lead agency for this project since 2009, IDOT has been actively involved throughout the project development process, along with FHWA, as members of the Project Study Group.

The Environmental Assessment (EA) being prepared for the project has been reviewed on multiple occasions by IDOT and FHWA, and is nearing approval. The Public Hearing cannot be scheduled until FHWA has approved the EA, which is the basis for the Public Hearing. As previously discussed, the EA addresses the planned improvements associated with the Millburn Bypass, but also likely future improvements north and south of the bypass in between IL 132 and IL 173, establishing the environmental footprint (i.e. right-of-way footprint) for these areas. This was required by FHWA based on logical termini requirements per federal project development procedures.



US Route 45

IL Route 132 to IL Route 173 and Millburn Bypass

Section No. 05-00262-02-RP

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Lake County Division of Transportation

Lindenhurst Coordination

Meeting Summary

The preliminary roadway plan and profile sheets have been developed in detail for the Millburn Bypass, which is essentially from Country Place on the south to north of Independence Boulevard, and to a more conceptual level north and south of the bypass. The typical roadway cross section is identical for the entire EA limits from IL 132 to IL 173 and includes two travel lanes in each direction separated by a 22 foot wide barrier-curb median. Accommodations for a 10 feet wide multi-use path along the west side of U.S. Route 45 and 5 feet wide sidewalk along the east side of U.S. Route 45 are included in the plans for the entire limits from IL 132 to IL 173, as well as along major side streets such as Grass Lake Road and Sand Lake Road. Minor alignment shifts have been incorporated in the likely improvement plans north and south of the bypass to minimize impacts to developed properties south of Sand Lake Road, and additional forest preserve properties (Raven Glen and Ethel Woods) north of Miller Road. It was further discussed that IDOT has a separate ongoing Phase I study that will look at detailed roadway plans north and south of the bypass. Additional coordination with the Village of Lindenhurst will occur as part of the separate IDOT Phase I study as those detailed plans advance. An overview of the plan and profile sheets provided for the full EA limits was provided, which, as noted, includes the planned improvements for the Millburn Bypass, and likely future improvements north to IL 173 and south to IL 132. Along the portions of the proposed bypass within the McDonald Woods boundaries, two low clearance bridges are proposed to avoid high quality Waters of the U.S. sites, and to provide unobstructed movement for small to medium size terrestrial wildlife in response to concerns expressed by environmental agencies during project coordination. These bridges are pending review and approval by IDOT. The proposed plans also include designated areas for storm water detention and implementation of water quality Best Management Practices (BMPs) for the full EA limits including the bypass area. Two sets of the plan and profile sheets for the full EA limits were provided to the Village of Lindenhurst for their review.

It was discussed that proposed drainage plans and a Location Drainage Study (LDS) report are being prepared for the Millburn Bypass project. Both are currently under review by IDOT. When IDOT completes their review, a coordination meeting will be requested with the Village of Lindenhurst to review the proposed drainage plan for the bypass. It is anticipated that this meeting will occur toward the end of July. The proposed drainage plans for US Route 45 north and south of the bypass are being prepared as part of the separate IDOT Phase I study, for which coordination with the Village of Lindenhurst will occur at a future date, sometime after the Public Hearing for the current study.

The results of the traffic noise analysis for the full EA limits, including the Millburn Bypass were then discussed. The Traffic Noise Report has been reviewed and approved by IDOT and FHWA, and a copy was provided to the Village of Lindenhurst. The traffic noise analysis was prepared based on projected year 2040 traffic levels. Specifically for the bypass area, there are properties that will see a reduction in traffic noise, and properties that will see an increase in traffic noise as a result of the bypass. In areas where traffic noise will increase and approach or exceed the Noise Abatement Criteria



US Route 45

IL Route 132 to IL Route 173 and Millburn Bypass

Section No. 05-00262-02-RP

P-91-666-09

Lake County Division of Transportation

Lindenhurst Coordination

Meeting Summary

level (NAC) of 67 dB(A), the benefits of noise abatement walls in accordance with IDOT and FHWA requirements were evaluated. There are instances where a noise abatement wall will not work due to openings for access roads such as along Haven Lane to the west. In other locations, such as along Haven Lane to the east and along the Heritage Trails subdivision, there are not enough residences that would benefit (5 dB(A) reduction in traffic noise levels) from a noise abatement wall to allow the walls to meet the IDOT and FHWA allowable cost per benefitted receptor criteria. On this basis, noise abatement walls will not be constructed along the bypass or at any other locations along U.S. Route 45 within the full EA limits. The Village inquired if the County or the Village could participate in the cost of the noise abatement walls such that the cost per benefitted receptor criteria is met. It was indicated that 3rd party cost participation to achieve the cost per benefitted receptor criteria is not allowed per IDOT and FHWA policy. It was noted that the costs, as well as the specific number of benefitted receptors, were outlined within the noise analysis report distributed to the Village.

A copy of Table 1-3 (Common Sound Levels) from IDOT's Highway Traffic Noise Abatement Manual (HTNAM) was provided to the Village and reviewed. Based on the noise analysis, the highest noise levels anticipated for the residences closest to the bypass within the Forest Trail and Heritage Trails subdivisions based on year 2040 traffic projections are approximately 68 dB(A) and 66 dB(A) respectively. As a point of reference, as shown in Table 1-3, this is comparable to normal speech at a distance of three feet, and less than common noise levels within a commercial area. The offset distance of approximately 90 feet to 150 feet, from the proposed bypass (west curb line) to the closest residences within the Heritage Trails subdivision, was a factor in these results. While the nearest residences will experience an increase in traffic noise levels, there are not enough residences that would benefit from a noise abatement wall such that the cost per benefitted receptor criteria would be met.

Opportunities for visual buffering along the Forest Trail and Heritage Trails subdivisions were discussed. This would include planting of trees/shrubs focused in these areas in accordance with IDOT's tree replacement policy. Along the Forest Trail subdivision, there is very limited opportunity to include plantings within the right-of-way previously purchased for this project by the State of Illinois. Additional temporary construction easements in all four quadrants at the Haven Lane crossing would be desirable to provide a more robust visual buffering. It was discussed that acquisition of these temporary easements would need to be discussed with the Forest Trail Homeowners Association. For now, these easements will be shown on the plans and discussions with the Forest Trail Homeowners Association would be pursued. Along the Heritage Trails subdivision, there is already a considerable amount of vegetation (trees/shrubs) in the area in between the proposed bypass and the subdivision. This area will also be looked at for additional plantings to further increase the visual buffer. Both locations provide opportunities for the Village to consider specialty landscape features such as Village gateways, etc. Depending on what the Village desires, Village cost participation and agreement to maintain these features may be required. The Village indicated a potential interest in both locations.



US Route 45

IL Route 132 to IL Route 173 and Millburn Bypass

Section No. 05-00262-02-RP

P-91-666-09

Lake County Division of Transportation

Lindenhurst Coordination

Meeting Summary

The Village was provided a letter with information on anticipated future traffic noise levels based on year 2040 traffic within currently undeveloped lands adjacent to U.S. Route 45 from IL 132 to IL 173. This information was provided to the Village for their consideration of these future traffic noise levels and planning if developments are considered in these areas.

A preliminary aerial flythrough visualization of the proposed Millburn Bypass improvements was shown. This visualization is anticipated to be available on the project website and shown at the Public Hearing to provide a better understanding of the locational relationship between the proposed bypass improvements and adjacent properties. It was discussed that a visualization of the 2040 No-Build condition (2040 traffic on the existing roadway facilities) might be helpful for viewers to further understand the reason the bypass project is required. The project team will look at options in this regard.

Potential Village cost participation and maintenance responsibility items associated with the proposed bypass improvements were discussed. IDOT and LCDOT policy requires local agency cost participation and/or maintenance responsibility for items such as bike paths/sidewalks, roadway lighting, median landscape features, and utility relocations (if already within the highway right-of-way via permit). Lake County is currently coordinating with the Lake County Forest Preserve District (LCFPD) regarding the LCFPD covering the local agency cost participation (20%) and maintenance responsibility for the portions of the bike path along the west side of U.S. Route 45 and along the south side of Grass Lake Road west of U.S. Route 45. The Village was provided preliminary information on the approximate level of Village cost participation to provide sidewalk along the east side of U.S. Route 45 from Haven Lane to realigned Grass Lake Road, and along the north side of Grass Lake Road from the bypass to Heritage Drive. This information will be updated prior to completion of the Phase I study to be included in a Letter of Intent between the Village and IDOT at that time. The Village also expressed potential interest in adding landscape features within the available median areas along the bypass, acknowledging potential cost participation requirements and maintenance requirements. It was discussed that this will need to also be discussed with the Village of Old Mill Creek since areas of the median are within Old Mill Creek boundaries. LCDOT and IDOT intend to meet with Old Mill Creek in the near future and will follow-up with Lindenhurst afterwards accordingly. Continuous roadway lighting was briefly discussed, which would be a 100% village cost responsibility if desired. The Village does not anticipate requesting continuous roadway lighting along the bypass. The Village did express an interest in lighting at side street intersections such as Haven Lane and Independence Boulevard. IDOT indicated that per policy existing unwarranted beacon lighting within the highway right-of-way would be removed at Village cost. These locations are currently under review by IDOT. The results of this review will be provided to the Village. All cost participation and/or maintenance responsibility items identified by the conclusion of the Phase I study will be included in a Letter of Intent between the Village and IDOT.



US Route 45

IL Route 132 to IL Route 173 and Millburn Bypass

Section No. 05-00262-02-RP

P-91-666-09

Lake County Division of Transportation

Lindenhurst Coordination

Meeting Summary

A brief overview of the upcoming Public Hearing was provided. The Public Hearing is anticipated to be an open house type Public Hearing, which provides attendees the opportunity to come and view exhibits, ask questions, and submit comments at any time that suits their schedule. The Public Hearing is anticipated to be held from 4 p.m. to 7 p.m.. The location is anticipated to be Millburn School West. The date is anticipated to be during the first half of August, contingent upon completion of ongoing reviews by IDOT and FHWA. As soon as a date is selected the Village will be notified. The Public Hearing will feature the proposed improvement plan details for the proposed west Millburn Bypass. Information will also be presented regarding the likely future improvements to U.S. Route 45 north and south of the bypass area. It is not anticipated that detailed information will be presented on the bypass alternatives considered throughout the prior project development process. The focus will be on the selected bypass alternative as presented in the EA.

It was discussed that similar to the small group meeting held with residents from the Forest Trail subdivision, a small group meeting is anticipated to be held with residents from the Heritage Trails subdivision in the foreseeable future. This meeting would provide an opportunity for Q and A with the project team. It is desirable that a Village trustee attend this meeting, as occurred with the Forest Trail meeting.

The meeting concluded at approximately 12:00 p.m.

Meeting summary prepared by:

Mike Matkovic

Christopher B. Burke Engineering, Ltd.



U.S. Route 45; IL Route 132 to IL Route 173 and Millburn Bypass

Village of Lindenhurst Coordination Meeting
2301 East Sand Lake Road
June 28, 2012 – 10:00 a.m.

MEETING AGENDA

1) Overall Project Status Update

- a) Environmental Assessment (EA) development (IL 132 to IL 173 and Millburn Bypass)
- b) Preliminary Roadway Plan and Profile development
 - i) Planned improvements for Millburn Bypass
 - ii) Likely Future Improvements north and south of the Bypass to establish environmental footprint for EA
 - *Detailed studies north and south of the Bypass are part of separate IDOT Phase I project*
 - iii) Distribute Bypass and Like Future Improvements plans
- c) Drainage Plan development (Bypass only)
- d) Engineering Design Report (DR) development (Bypass only)

2) Traffic Noise Analysis

- a) Noise Abatement Walls do not meet IDOT and FHWA Criteria
- b) Options for Visual Buffering
 - i) Heritage Trails Subdivision
 - ii) Forest Trail Subdivision
- c) Planning For Undeveloped Lands

3) Overview of the Proposed Improvement Plans

- a) Planned Bypass Improvements
 - i) Design Near Forest Trail and Heritage Trails
 - ii) Grass Lake Road Intersection
 - iii) Visualization of planned Bypass improvements with Projected 2040 Traffic Volumes
- b) Likely Future Improvements north and south of Bypass for EA
- c) Potential Village Cost/Maintenance Participation Items
 - (1) Sidewalk and Bike Path
 - (2) Roadway Lighting
 - (3) Median Landscaping and Maintenance
 - (4) Letter of Intent

4) Public Hearing Overview

- a) Format and Content
- b) Location and Timeframe





**Traffic Noise Information for Undeveloped Lands
U.S. Route 45, IL Route 132 to IL Route 173, and Millburn Bypass
Lake County, IL**

Division of Transportation

Paula J. Trigg, P.E.
Acting Director of Transportation/
Acting County Engineer

600 West Winchester Road
Libertyville, Illinois 60048-1381
Phone 847 377 7400
Fax 847 984 5888

June 28, 2012

The Hon. Susan Lahr
Mayor, Village of Lindenhurst
2301 E. Sand Lake Road
Lindenhurst, IL 60046

Dear Mayor Lahr:

As part of the ongoing Phase I Engineering and Environmental Study (Phase I Study) for U.S. Route 45, from IL Route 132 to IL Route 173, and the Millburn Bypass, we would like to take this opportunity to coordinate traffic noise information for undeveloped lands. Specifically, the projected future traffic noise levels were evaluated for lands either currently under your jurisdiction or land that may come under your jurisdiction near the proposed Millburn Bypass improvements and likely future improvements along U.S. Route 45 south to IL Route 132 and north to IL Route 173.

For developed lands, a traffic noise study has been completed for this project and the results will be summarized in the Environmental Assessment prepared for this Phase I Study. Enclosed for your information is an exhibit showing the predicted design year (2040) build traffic noise levels for the undeveloped lands identified along the project corridor.

We hope this information will be useful to you in planning and permitting future development in your area. We recommend that you carefully consider the future predicted noise levels to avoid potential issues of public concern over incompatible noise levels.

To help with your future planning and discernment regarding permitting decisions, we encourage you to obtain the Federal Highway Administration (FHWA) publication titled *Entering the Quiet Zone: Noise Compatible Land Use Planning*. This publication can be obtained from the FHWA website:

[http://www.fhwa.dot.gov/environment/noise/noise compatible planning/federal approach/land use/quietzon.pdf](http://www.fhwa.dot.gov/environment/noise/noise%20compatible%20planning/federal%20approach/land%20use/quietzon.pdf)

For additional information regarding traffic noise, regulations and policy, noise analyses or noise abatement, we encourage you to visit the Illinois Department of Transportation's web site at:

<http://www.dot.il.gov/desenv/noise.html>

Very truly yours,

Chuck Gleason
Acting Director
Planning and Programming

Enclosure

cc: Marie Glynn, Illinois Department of Transportation

www.lakecountyil.gov

EXISTING LAND USE
(FROM CMAP & OBSERVATION)



Legend
 RESIDENTIAL
 COMMERCIAL
 INDUSTRIAL
 AGRICULTURAL
 OPEN SPACE
 INSTITUTIONAL
 TRANSPORTATION, COMMUNICATION, AND UTILITIES
 MISC. OR UNCLASSIFIED



Lake County
Division of Transportation

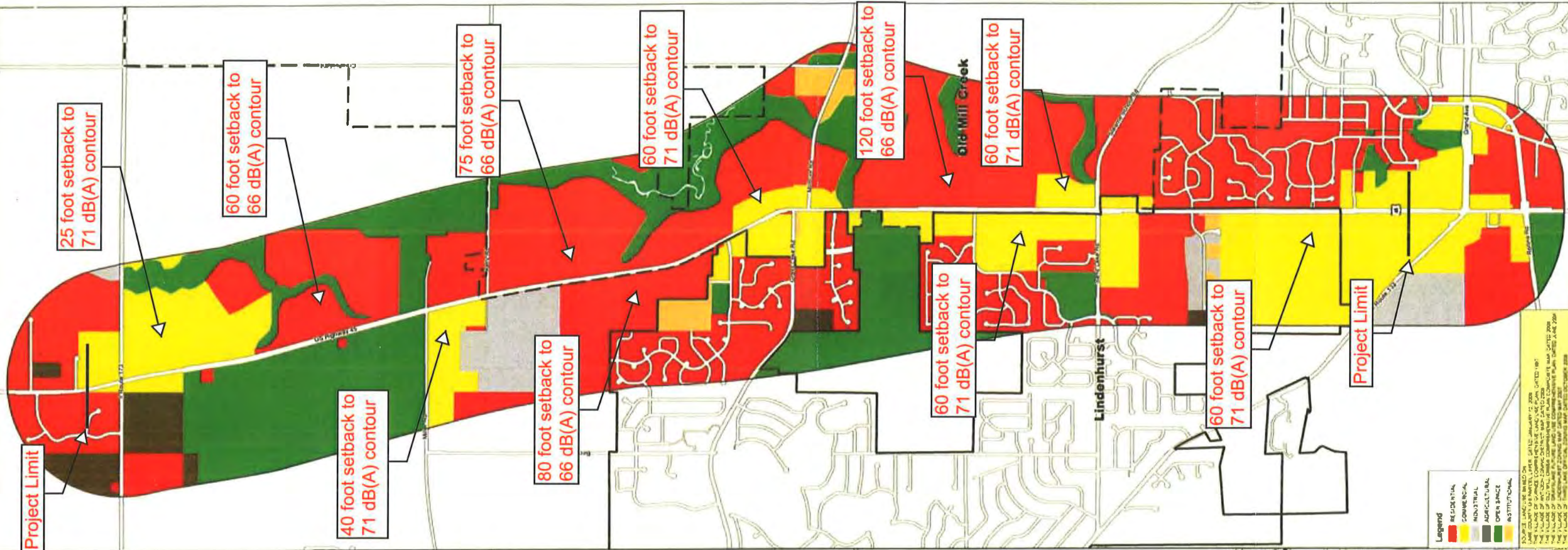


CHRISTOPHER & BURKE ENGINEERING, INC.
 9973 West Highway Road, Suite 600
 Government Center 6018
 (847) 832-6500



FUTURE TRAFFIC NOISE LEVEL
 INFORMATION FOR UNDEVELOPED LANDS

FUTURE LAND USE
(FROM COMMUNITY & COUNTY LAND USE PLANS)



Legend
 RESIDENTIAL
 COMMERCIAL
 INDUSTRIAL
 AGRICULTURAL
 OPEN SPACE
 INSTITUTIONAL

25 foot setback to 71 dB(A) contour
 60 foot setback to 66 dB(A) contour
 40 foot setback to 71 dB(A) contour
 80 foot setback to 66 dB(A) contour
 75 foot setback to 66 dB(A) contour
 60 foot setback to 71 dB(A) contour
 120 foot setback to 66 dB(A) contour
 60 foot setback to 71 dB(A) contour
 60 foot setback to 71 dB(A) contour
 60 foot setback to 71 dB(A) contour
 Project Limit

NOISE LEVELS WERE BASED ON
 SOURCE LEVELS OF 70 DB(A) FOR ALL SOURCES. SOURCE LEVELS WERE DETERMINED BY
 VISUAL INSPECTION OF THE PROJECT AREA AND THE LAND USE PLANS. THE
 NOISE LEVELS WERE DETERMINED USING THE FOLLOWING ASSUMPTIONS:
 1. ALL SOURCES WERE ASSUMED TO BE POINT SOURCES.
 2. ALL SOURCES WERE ASSUMED TO BE UNIDIRECTIONAL.
 3. ALL SOURCES WERE ASSUMED TO BE UNCORRELATED.
 4. ALL SOURCES WERE ASSUMED TO BE UNCORRELATED.
 5. ALL SOURCES WERE ASSUMED TO BE UNCORRELATED.
 6. ALL SOURCES WERE ASSUMED TO BE UNCORRELATED.
 7. ALL SOURCES WERE ASSUMED TO BE UNCORRELATED.
 8. ALL SOURCES WERE ASSUMED TO BE UNCORRELATED.
 9. ALL SOURCES WERE ASSUMED TO BE UNCORRELATED.
 10. ALL SOURCES WERE ASSUMED TO BE UNCORRELATED.

US Route 45/Millburn Bypass
IL Route 132 to IL Route 173
Section No. 05-00262-02-RP
Lake County Division of Transportation

**4/12/2010 LCFPD
Meeting Minutes**

DATE: April 14, 2010

TO: Attendees
Ryan Westrom – Patrick Engineering, Inc.
CBBEL Project File (08-0677)

FROM: Matt Huffman – CBBEL

MEETING DATE: April 12, 2010
TIME: 9:00 am

SUBJECT: Initial Coordination Meeting

LOCATION: Lake County Forest Preserve – Almond Road Office
Grayslake, Illinois

ATTENDEES: Andy Kimmel - LCFPD
Mike Fenelon - LCFPD
Chuck Gleason – LCDOT
Jarrod Cebulski – Patrick Engineering, Inc.
Mike Matkovic – CBBEL
Matt Huffman – CBBEL

An initial project coordination meeting with the Lake County Forest Preserve District (LCFPD) was held on April 12, 2010. The purpose of the meeting was to:

- introduce the US Route 45/Millburn Bypass project
- summarize the project and alternative development process's
- review the environmental analysis performed (GIS based) and preliminary results
- review the evaluation matrix content, relative comparison of alternatives, grading, and presentation
- discuss next steps
- provide an opportunity for LCFPD to comment on the project

The Lake County Division of Transportation (LCDOT) is the lead agency for the project, which includes improvements to US Route 45 in the vicinity of the intersections of Grass Lake Road and Millburn Road with US Route 45. An Environmental Assessment will be prepared from IL Route 132 north to IL Route 173 (i.e., logical termini). A Combined Design Report (i.e., detailed engineering) will be prepared to address area around the Grass Lake Road and Millburn Road intersections with US Route 45. This includes evaluating east bypass, west bypass, and on-alignment alternatives for US Route 45. This bypass location was previously studied by the Illinois Department of Transportation (IDOT) as part of the US Route 45 Strategic Regional Arterial (SRA) studies. In the mid 1990s, IDOT recorded a west



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bypass alignment in this area, which was the consensus realignment choice based on coordination with local municipalities, the Lake County Board, the Lake County Forest Preserve District, and LCDOT.

The project kicked off in December 2008, followed by a public information meeting in February 2009, and formation of the Community Advisory Group (CAG). Based on information received from the CAG, a range of eighteen initial alternatives was developed, nine of which were later discarded based on LCDOT, IDOT, and CAG input. Andy Kimmel, a Lake County Forest Preserve employee, is a member of the CAG. Some of the reasons of dismissing alternatives were such things as not meeting the purpose and need of the project and impacts to historically significant buildings designed by IHPA.

The logical termini and purpose and need statement for the project have been approved by the Federal Highway Administration (FHWA), IDOT, and other resource agencies (as part of the National Environmental Policy Act [NEPA]/404 merger process). FHWA and the other resource agencies also agreed with the elimination of nine alternatives - leaving nine alternatives to be carried forward for further analysis. The nine remaining alternatives include three west bypass options, three US Route 45 on-alignment options, and three east bypass options.

Preliminary conceptual plan view drawings depicting the nine remaining alternatives were presented to LCFPD. Typical cross sections were also presented for US 45, Millburn Road, and Grass Lake Road. All alternative alignments have been preliminarily reviewed and are acceptable to LCDOT and IDOT. The alternative alignments used IDOT design criteria and tried to minimize impacts as much as possible. The "A" alternatives (west bypass) use the previously recorded IDOT alignment, which impacts the north east corner of McDonald Woods Forest Preserve with approximately 3.13 acres of impact. The alignment bisects a portion of McDonald Woods and creates a 7.61 acre remnant parcel. LCFPD indicated that this parcel will likely have to be acquired if an "A" alternative is selected as the preferred alternative. Moving the "A" alignment to limit impacts to McDonalds Woods would result in numerous residential impacts along with being inconsistent with the Lindenhurst Comprehensive Plan. ROW was preserved for the recorded west bypass alignment in certain locations during the last 15 years as Lindenhurst developed. CBBEL indicated that the 4f process will begin in the near future.

A draft impact evaluation matrix for the nine remaining alternatives was also presented to LCFPD. Matrix content, relative comparison of alternatives, grading, and presentation were discussed. The impact criteria listed on the matrix is based on NEPA/IDOT policy – consistent with topics that will be evaluated in the EA. Potential impacts were calculated using available GIS information and field collected data (as available). The impact matrix quantifies impacts within the proposed project right-of-way, which is typically a 130 foot corridor; all resources within this right-of-way



“footprint” were considered impacted. Avoidance of resources due to bridging (e.g., floodway) was not included at this point in the alternative evaluation process. The impact matrix will be presented at the next CAG meeting. CAG members will receive a packet of information prior to the upcoming CAG meeting. It is anticipated that this packet of information will include conceptual plan view drawings of the nine alternatives and the impact matrix.

CBBEL stated that the segments of US 45 outside the core study area (Millburn Bypass area) will be assessed and a general ROW footprint will be developed for determination of impacts for the Environmental Assessment. North of the core study area LCFPD has two forest preserves, Raven Glen and Ethel’s Woods. Through this section the west right of way will be held to minimize impacts to LCFPD property.

CBBEL explained that the Illinois Natural History Survey (INHS) completed wetland and biological surveys for this project. Cultural surveys are ongoing. IDOT – Bureau of Design and Environment (BDE) cleared this project with respect to biological resources; the Illinois Department of Natural Resources (IDNR) also terminated consultation with respect to state listed threatened and endangered species. At the request of the U.S. Fish and Wildlife Service (USFWS), INHS conducted searches for the Eastern Prairie Fringed Orchid (*Platanthera leucophaea*). INHS followed USFWS guidelines for evaluating Eastern Prairie Fringed Orchid habitat in northeastern Illinois with searches conducted on three non-consecutive days during the period between June 28 and July 11. No Eastern Prairie Fringed Orchids were identified during the field searches. CBBEL stated that INHS completed the wetland delineation for the study area and has been coordinated with Lake County Stormwater Management Commission (LCSMC). The INHS field identified wetlands are different from those that are mapped; there is more mapped wetland within the study area than identified by INHS.

LCFPD indicated that they are in the planning process of potential bike path options to connect McDonald Woods, Hastings Lake, Raven Glen, and Ethel’s Woods Forest Preserves. LCFPD will coordinate with the project team as the planning process develops. LCDOT indicated that pedestrian and bicycle accommodations will be incorporated in the project. Lindenhurst is currently working on pedestrian access from McDonald Woods to Oak Ridge Park and Wetzel Fields. LCFPD has coordinated with Lindenhurst, Old Mill Creek, and Tempel Farms.

CBBEL summarized the next steps for the project. These include finalizing the preliminary impact analysis of the nine remaining alternatives for the upcoming CAG meeting on April 27, 2010. It is anticipated that additional alternatives will be dropped following a review of the impact analysis and consideration of LCDOT, IDOT and CAG input. A public meeting to present the alternatives being carried forward is anticipated in Summer 2010. Tentatively, the project team anticipates a September 2010 NEPA/404 merger meeting to present the alternatives being carried forward for



detailed review and to obtain concurrence. Based on the current schedule, CBBEL anticipates Phase I completion in December 2011.

Action Items

- CBBEL to send LCFPD a full set of plans for their records

The meeting concluded at approximately 10:00 am.



US Route 45/Millburn Bypass
IL Route 132 to IL Route 173
Section No. 05-00262-02-RP
Lake County Division of Transportation

**2/21/2011 LCFPD
Meeting Minutes**

DATE: March 1, 2011

TO: Attendees
Marie Glynn – IDOT
Jarrod Cebulski – Patrick Engineering, Inc.
CBBEL Project File (08-0677)

FROM: Pete Knysz – CBBEL

MEETING DATE: February 21, 2011
TIME: 1:00 PM

SUBJECT: Coordination Meeting

LOCATION: Lake County Forest Preserve District Office
2000 N. Milwaukee Avenue
Libertyville, Illinois

ATTENDEES: Mike Fenelon – LCFPD
Tom Hahn – LCFPD
Andy Kimmel – LCFPD
Chuck Gleason – LCDOT
Paula Trigg – LCDOT
Pete Knysz – CBBEL
Mike Matkovic – CBBEL

On February 21, 2011, representatives from the Lake County Division of Transportation (LCDOT) and Christopher B. Burke Engineering, Ltd. (CBBEL) met with the Lake County Forest Preserve District (LCFPD) for a second US Route 45/Millburn Bypass coordination meeting. The purpose of the meeting was to:

- present the preliminary preferred bypass alternative
- discuss potential pedestrian/bicycle accommodations and connections
- discuss potential right-of-way (ROW) implications
- discuss *de minimis* impact determination versus Section 4(f) evaluation and coordination
- provide an opportunity for LCFPD to comment on the project
- discuss next steps

An Environmental Assessment (EA) is being prepared for proposed improvements to US Route 45 from IL Route 132 north to IL Route 173 (i.e., logical termini). LCDOT is the lead agency for the bypass portion of the project, which includes improvements in the vicinity of the intersections of Grass Lake Road and Millburn Road. The Illinois



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Department of Transportation (IDOT) is the lead agency north and south of the bypass. CBEL has been selected as the Phase I consultant for both the bypass and the IDOT portion of the project. IDOT does not have money programmed for Phase II north or south of the bypass. LCDOT anticipates construction of the bypass to begin in 2014.

LCDOT began the meeting by stating that they have selected Alternate A-1 as the preliminary preferred bypass alternative. A full-size preliminary conceptual plan view drawing of Alternate A-1 was provided to LCFPD for review and discussion. Alternate A-1 is the west bypass alternative without re-alignment of Millburn Road and Grass Lake Road. CBEL explained that a preliminary review of Alternate A-1 was completed with respect to geometry, travel performance, etc., and was acceptable to LCDOT and IDOT. This bypass location was previously studied by IDOT as part of the US Route 45 Strategic Regional Arterial (SRA) studies. In the mid-1990s, IDOT recorded a west bypass alignment in this area, which was the consensus realignment choice based on coordination with local municipalities, the Lake County Board, the LCFPD, and LCDOT.

The selection of this preliminary preferred bypass alternative was guided by consultation with the Illinois Historic Preservation Agency (IHPA). Near the end of January 2011, IHPA provided IDOT with a letter stating that the Druce-Hoffman property located near the southwest corner of the existing US Route 45 and Grass Lake Road intersection should be considered an eligible historic property for purposes of Section 106 of the National Historic Preservation Act. The IHPA determination provided in the January 2011 letter was contrary to previous discussions between IDOT, LCDOT, and IHPA. The IHPA letter references a previous eligibility determination for the Druce-Hoffman property. In early February 2011, LCDOT requested copies of documents pertaining to the previous determination. As part of the NEPA process, IDOT and LCDOT are required to consider avoidance, minimization, and mitigation for potential impacts to historic properties. If avoidance is not possible, then a Section 4(f) evaluation and Section 106 Assessment would be required. At the current time, LCDOT intends to avoid the Druce-Hoffman property. The other two finalist alternatives, A-4 and C-4, both include realigning Grass Lake Road which would displace the Druce-Hoffman residence.

Alternate A-1 would impact approximately 3.1 acres at the northeast corner of McDonald Woods Forest Preserve. The impact would create a 7.6 acre remnant parcel on the east side of the proposed US Route 45 bypass. The project team suggested alternative uses for the remnant parcel, such as a stormwater management facility, parking, etc. LCFPD will consider options, but stated that using the remnant parcel for McDonald Woods parking was not desirable due to maintenance and safety concerns – the existing park entrance off of Grass Lake Road is sufficient. LCFPD indicated that this remnant parcel may need to be acquired by LCDOT as part of this project.



A US Route 45 typical cross section was presented to LCFPD. The typical cross section shows a 10 foot wide bike path on the west side of US Route 45, a sidewalk on the east, and a 22 foot wide median provided within an approximate 130 foot right-of-way (ROW), which may vary due to topography and final design requirements. The median treatment is yet to be determined (future discussion topic with the Community Advisory Group). In accordance with State and County requirements, the ROW width would accommodate pedestrian/bike facilities regardless of whether or not these facilities are supported at this time.

The discussion then focused on different pedestrian/bike facility options. LCFPD is interested in connecting several Lake County forest preserves through an integrated trail system, including connecting McDonald Woods with Raven Glen and Ethel's Woods to the north (also with other preserves located north of IL Route 173), extending the trail system east, and connecting with the newly acquired Mill Creek Forest Preserve to the southeast (adjacent to the north side of Stearns School Road). US Route 45 underpass/overpass options were discussed at two locations: (1) at the east end of McDonald Woods and (2) between Raven Glen and Ethel's Woods. Of the two options, LCFPD said that the underpass/overpass option between Raven Glen and Ethel's Woods was more desirable at this time – an additional option would be to provide an at-grade trail crossing with a stop light at Miller Road. LCDOT stated that the underpass north of McDonald Woods at Grass Lake Road is beyond the limits of this project and will not be funded by LCDOT as part of this project. The project team stated that there is limited space for pedestrian/bike accommodations within the existing ROW along Grass Lake Road and Millburn Road through the Millburn Historic District – a sidewalk (possibly 7 feet wide behind curb) is most likely the maximum that can be provided for pedestrian/bike accommodations along this portion of the corridor. LCFPD will provide additional input regarding potential trail alternatives/connections and their master plan.

Based on coordination with LCFPD (and IDNR), CBBEL understands that Open Space Lands Acquisition and Development (OSLAD) and Open Land Trust (OLT) funds were used for portions of Raven Glen and Ethel's Woods that are immediately adjacent to the project corridor. The project team intends to avoid permanent acquisition of the OSLAD and OLT funded parcels. CBBEL will confirm the funding sources and restrictions on these lands. The project team anticipates that ROW acquisition will be required at Raven's Glen to accommodate the widening of US Route 45 and avoid permanent ROW acquisition from the OLT lands at Ethel's Woods.

The project team explained that a Section 4(f) *de minimis* impact determination would be requested for this project. The SAFETEA-LU amendment to the Section 4(f) requirements allow a *de minimis* impact determination to be made when a project will not adversely affect the features, attributes, or activities that qualify the property for



protection under Section 4(f). A separate determination will be made for proposed impacts at McDonald Woods, Raven Glen, and/or Ethel's Woods, as necessary (with one public notice to be accomplished in conjunction with the project Public Hearing notice). LCFPD will consider and assess potential impacts/implications and get back to the project team regarding concurrence with a *de minimis* finding.

Next Steps

LCDOT stressed that concurrence of the preliminary preferred bypass alternative was still needed from IDOT, Federal Highway Administration (FHWA), and the NEPA/404 Merger meeting regulatory/resource agencies. LCDOT will request concurrence from IDOT and FHWA in early March 2011 and from the NEPA/404 Merger meeting agencies in June 2011. LCDOT recently discussed the preliminary preferred bypass alternative with the Villages of Old Mill Creek and Lindenhurst, and anticipates discussions with the Community Advisory Group (CAG) to take place on March 22, 2011 (tentative date). LCDOT would like to present the preliminary preferred bypass alternative to the CAG before it is made public.

An additional CAG meeting is anticipated in Fall 2011 before the Public Hearing, which is also anticipated this fall.

Action Items

- LCFPD to provide the project team with trail alternatives from McDonald Woods
- LCFPD to provide a copy of the Raven Glen Master Plan (pdf received February 21, 2011)
- LCFPD to consider *de minimis* finding for potential impacts to Section 4(f) lands
- CBBEL to confirm funding sources and associated restrictions associated with OLT funds

The meeting concluded at approximately 2:30 PM.



From: Trigg, Paula J. [mailto:PTrigg@lakecountyil.gov]
Sent: Tuesday, July 19, 2011 5:00 PM
To: 'mmatkovic@cbbel.com'; Pete Knysz (pknysz@cbbel.com)
Cc: Gleason, Chuck L.; 'Marie Glynn'
Subject: Millburn Bypass

Mike

During our meeting with USFWS at IDOT on July 11th, I was very surprised by the comments that Shawn Cirton made regarding Lake County Forest Preserve District *staff* being concerned about the impact of the west bypass on the grassland birds in the McDonald Woods Forest Preserve.

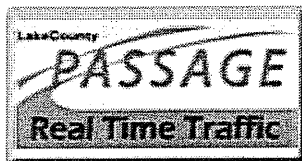
I knew that the Forest Preserve staff had discussed the project at length before they provided the *de minimis* letter. Therefore I contacted Tom Hahn the Executive Director of the District and asked him if there were any outstanding concerns regarding the impact of the West Bypass and shared with him the comments made by Shawn.

Tom checked with staff and he called me back to say that there must have been a miscommunication between USFWS and LCFPD staff. Tom indicated that the area of the McDonald Woods Preserve that would be affected by the West Bypass would traverse a **very low quality** portion of the Preserve and there were no T&E species in this area. He indicated that there were other areas of McDonald Woods that had T&E species but they were not in the area of impact. **He reiterated that the District had no concerns with the West Bypass** and they had known about the Bypass for a long time. The District did provide Shawn with a copy of a bird list for the entire McDonald Woods Preserve.

If you have any questions let me know. I think this information would be good for Matt to have.

Thanks
Paula

Paula J. Trigg
Director of Planning and Programming
Lake County Division of Transportation
T (847)377-7400
F (847)984-5944
pstrigg@lakecountyil.gov



Meeting Summary

PROJECT: US Route 45; IL Route 132 to IL Route 173
and the Millburn Bypass
Lake County
Section No. 05-00262-02-RP
P-91-666-09
CBBEL 08-0677

DATE: October 21, 2011

PREPARED BY: Mike Matkovic – CBBEL

MEETING DATE: October 19, 2011
TIME: 1:00 PM

SUBJECT: Project Coordination Meeting

LOCATION: Lake County Division of Transportation
600 W. Winchester Road
Libertyville, Illinois

ATTENDEES: Refer to attached sign-in sheet

On October 19, 2011, representatives from the Lake County Division of Transportation (LCDOT) and Christopher B. Burke Engineering, Ltd. (CBBEL) met with representatives from the Lake County Forest Preserve District (LCFPD) for a third coordination meeting concerning the proposed improvements to US Route 45 from IL Route 132 to IL Route 173, and the Millburn Bypass in Lake County. The purpose of the meeting was to:

- Discuss more detailed design of the preferred west bypass Alternative A4 that will traverse McDonald Woods Forest Preserve
- Discuss potential pedestrian/bicycle accommodations and connections for the entire project limits
- Discuss potential right-of-way acquisition needs and a Section 4(f) *de minimis* impact determination for the Raven Glen Forest Preserve
- Discuss next steps in project development

CBBEL reviewed the overall project development approach for the proposed improvements to US Route 45. LCDOT is the lead agency for the Millburn Bypass project for which the Project Study Team (LCDOT and IDOT in coordination with FHWA) has selected the west bypass Alternative A4 as the preferred bypass alternative. The limits of the proposed improvements associated with the Millburn Bypass are from Country Place on the south to north of Independence Boulevard; where the Millburn Bypass will tie back into existing US Route 45. As part of the

Meeting Summary

Environmental Assessment (EA) being prepared for the Millburn Bypass project, the FHWA has required that concept proposed improvements based on year 2040 traffic projections be developed for a larger section of US Route 45 from IL Route 132 to IL Route 173 based on logical project termini. This will establish the likely environmental footprint for future improvements to US Route 45 within these limits for which environmental impacts will be evaluated the EA. The LCDOT Millburn Bypass project will include detailed engineering and a Combined Design Report (CDR) for the bypass area only.

IDOT is the lead agency north and south of the bypass. A separate CDR will be prepared for areas north and south of the Millburn Bypass project as part of a separate ongoing IDOT Phase I Study for which CBBEL is also the consultant. LCDOT has funding for construction of the Millburn Bypass. However, construction of US Route 45 north and south of the bypass area is not included in IDOT's current FY 2012-2017 Program.

CBBEL reviewed the typical proposed cross section for US Route 45 for the full project limits from IL Route 132 to IL Route 173. The typical cross section includes two 12 feet wide lanes in each direction separated by a 22 foot wide median. A 10 feet wide multi-use trail will be accommodated along the west side of US Route 45 and a 5 feet wide sidewalk will be accommodated along the east side of US Route 45 for the full project limits. The median treatment is anticipated to be grassed where possible, with enhanced landscaping treatments if a local agency agrees to accept maintenance responsibility. Similarly, actual implementation of the multi-use trail and/or sidewalk is contingent upon a local agency agreeing to cost participation (20% match) and maintenance responsibility, which is consistent with both LCDOT and IDOT policies. LCFPD indicated that they would not be able to maintain a landscaped median for US Route 45. Further discussions will be necessary to determine if LCFPD can participate in the cost of portions of the multi-use trail and/or sidewalk.

CBBEL reviewed the preliminary proposed improvement plans traversing the northeast portion of McDonald Woods for the preferred bypass alternative. In order to provide storm water detention for the project as well as additional areas where water quality Best Management Practices (BMPs) can be implemented, additional areas of right-of-way acquisition have been identified on the concept improvement plans for the full project limits from IL Route 132 to IL Route 173. One of these areas is within the remnant parcel on the east side of the proposed bypass within McDonald Woods. The area needed would comprise approximately 50% of the remnant parcel. LCFPD indicated that this remnant area would have no recreational value to the McDonald Woods Forest Preserve and that they would prefer that LCDOT purchase the entire remnant parcel. LCDOT concurred that the proposed plans will indicate acquisition of the entire remnant parcel.

CBBEL reviewed the concept improvement plans for the areas north and south of the Millburn Bypass project. There was considerable discussion with respect to

Meeting Summary

appropriate long term path connections between the US Route 45 corridor and other planned LCFPD facilities. The following desired plan modifications resulted from these discussions:

- A 10 feet wide multi-use path will be shown along the north side of Stearns School Road within the project limits.
- The LCFPD envisions providing a connection between the existing path within McDonald Woods and the proposed path along the west side of the Millburn Bypass. LCFPD requested that this connection be represented on the proposed plans as a future connection by LCFPD.
- A 10 feet wide multi use path should be shown along the south side of Grass Lake Road west of the proposed bypass within the project limits. The path should remain as shown on the north side of Grass Lake Road east of the proposed bypass to “Old 45”.
- The LCFPD envisions providing a connection between the proposed path going under US Route 45 just north of Miller Road within the Raven Glen Forest Preserve and the proposed path along the west side of US Route 45 in this area. LCFPD requested that this connection be represented on the proposed plans as a future connection by LCFPD.
- A 10 feet wide multi-use path should be shown along the north side of IL Route 173 within the project limits, which is consistent with plans to the east and nearest to residential areas to the west.

CBBEL reviewed the concept improvement plans in the vicinity of the Raven Glen and Ethel's Woods Forest Preserves, which are adjacent to portions of existing US Route 45 north of Miller Road. The southwest portion of Ethel's Woods just north of Miller Road and east of existing US Route 45 was purchased by LCFPD with Open Land Trust (OLT) funds. In order to avoid right-of-way acquisition from this portion of Ethel's Woods, the proposed centerline of US Route 45 is proposed to be shifted to the west in this area. As a result, some right-of-way acquisition is required from the Raven Glen Forest Preserve along the west side of US Route 45 from Miller Road to Hastings Creek to the north. North of this area, the proposed centerline of US Route 45 will be shifted to the east to avoid additional right-of-way acquisition from Raven Glen. A temporary construction easement is anticipated to be required at the existing entrance to Raven Glen in order to re-establish the entrance as part of the proposed improvements to US Route 45.

LCFPD concurred with the alignment shift to the west near Miller Road to avoid right-of-way acquisition from the Ethel's Woods Forest Preserve. LCFPD concurred that the resulting proposed right-of-way acquisition from Raven Glen along the west side of US Route 45 from Miller Road to Hastings Creek would not adversely affect the function and use of the Raven Glen Forest Preserve. On this basis, LCFPD concurred that they would support a Section 4(f) *de minimis* impact finding for the property acquisition from the Raven Glen Forest Preserve. It was discussed that written coordination with

Meeting Summary

respect to a *de minimis* impact finding for the use of property from the Raven Glen Forest Preserve will occur after the Public Hearing for this project.

The remaining overall project schedule was discussed. The draft EA is currently being prepared with initial submittal to LCDOT and IDOT for concurrent review anticipated by the end of October. It is anticipated that the overall review of the EA by LCDOT, IDOT and FHWA, and the associated edits will require approximately three months. After FHWA signs the EA, then the Public Hearing will be held which provides an opportunity for public comments on the proposed improvement plans and the EA. At this time, it is anticipated the Public Hearing will be held in the February 2012 timeframe. After the Public Hearing is held, the Public Hearing summary and resulting EA errata is prepared and coordinated with LCDOT, IDOT and FHWA. Assuming no significant impacts are identified, then the Finding of No Significant Impact (FONSI) is prepared and signed by FHWA which allows Phase I Design Approval. At this time, Phase I Design Approval is anticipated in late Spring 2012. After Phase I Design Approval, LCDOT will proceed with Phase II Engineering and Land Acquisition for the Millburn Bypass.

In addition to action items as noted above, the following additional action items were identified:

- CBBEL will provide an exhibit to LCFPD showing the proposed 10 feet wide multi-use trail along the west side of the Millburn Bypass, and the proposed future connection by LCFPD within McDonald Woods.
- CBBEL will provide the available contour mapping along US Route 45 north of Miller Road for LCFPD use in evaluating potential path locations within the Raven Glen Forest Preserve.
- CBBEL will check the school district boundaries near Independence Drive and existing US Route 45, and possible changes to school district busing policies.

The meeting concluded at approximately 2:45 PM.

Meeting Summary

US Route 45; IL Route 132 to IL Route 173
and Millburn Bypass

SIGN-IN SHEET

MEETING PURPOSE: Lake County Forest Preserve District Coordination
 MEETING DATE: October 19, 2011
 MEETING TIME: 1:00 pm
 LOCATION: Lake County Division of Transportation
 Project #: P-91-666-09

ATTENDEES:

	NAME	REPRESENTING	EMAIL ADDRESS
1.	Pete Knysz	CBBEL	pknysz@cbbel.com
2.	MIKE MATKOVIC	CBBEL	M.MATKOVIC@CBBEL.COM
3.	MIKE FENELON	LCFPD	m.fenelon@lcfpd.org
4.	TOM HAHN	LCFPD	THAHN@LCFPD.ORG
5.	CHUCK GUNSON	LC DOT	CG.GUNSON@LAKECOUNTYIL.GOV
6.	PAULA TRIGG	LC DOT	p.trigg@lakecounty.il.gov
7.			
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12.			
13.			
14.			



Martin G. Buehler, P.E.
Director of Transportation/County Engineer

600 West Winchester Road
Libertyville, Illinois 60048-1381
Phone (847) 377-7400
Fax (847) 984-5888

US Route 45
IL Route 132 to IL Route 173 and Millburn Bypass
Section No. 05-00262-02-RP
Lake County

March 18, 2011

Mr. Thomas E. Hahn
Executive Director
Lake County Forest Preserve District
2000 N. Milwaukee Ave.
Libertyville, IL 60048

Dear Mr. Hahn:

The Lake County Division of Transportation (LCDOT) is performing Phase I engineering and environmental studies for the realignment of US Route 45 near the Millburn Historic District. The purpose and need for this project is to alleviate daily traffic congestion along this section of US Route 45 which has reached unfavorable levels, with traffic volumes having increased more than 300% from 1974 to 2009. These conditions will continue to worsen based on the continuing growth in traffic volumes that is projected for this area, and the inability to improve existing US Route 45 through the Millburn Historic District, a National Register Location. These transportation issues and potential solutions have been discussed at two separate Public Meetings, four separate Community Advisory Group (CAG) meetings, and multiple meetings with the Illinois Department of Transportation (IDOT), the Federal Highway Administration (FHWA), and other environmental resource agencies. The result to date is that eighteen (18) initial potential solutions (ie.; alternatives) have been narrowed to three finalist alternatives.

The purpose of this letter is to request concurrence from the Lake County Forest Preserve District (LCFPD) with respect to potential construction activities with McDonald Woods as part of the subject project. As discussed at our meeting on February 21, 2011, two of the three finalist alternatives being considered include a west bypass of US Route 45, both of which would require approximately 3.13 acres of direct property acquisition from McDonald Woods for the roadway realignment, and potentially another 7.13 acres of property acquisition in the northeast corner of McDonald Woods for compensatory storage and/or stormwater detention.

The three finalist alternatives were presented at the Public Meeting for this project on September 2, 2010 which afforded people an opportunity to comment on the potential effects of the three finalist alternatives on McDonald Woods. Of the 300 people that signed in at the Public Meeting, 20 people submitted comments concerning the effect of this project on McDonald Woods. These comments are

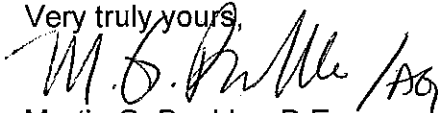
characterized as mostly related to preference for an east bypass or west bypass, and not specifically related to resulting adverse effects on the use or function of McDonald Woods.

As discussed at our meeting on February 21st, the west bypass alternatives are compatible with the results of the prior Millburn Bypass feasibility study by IDOT, and are compatible with a regional bike path system connecting McDonald Woods to Raven Glen and Ethel's Woods to the north via a bike path proposed along the west side of US Route 45. In addition, we have developed a concept plan for a bike path underpass just north of Miller Road as requested. This concept plan is attached for your review and comment. The LCDOT has taken the lead on applying for CMAQ funding for this underpass.

Based on our prior coordination, and contingent upon a west bypass emerging as a Preliminary Preferred Alternative, we intend to seek a "de minimis" impact finding from the Federal Highway Administration based on this project not adversely affecting the features, attributes, or activities that qualify this property for protection under Section 4(f) of the U.S. Department of Transportation Act of 1966. In this regard, we are requesting written concurrence from the LCFPD that a west bypass will not adversely affect the overall recreational activities, features and attributes of McDonald Woods, and as such LCFPD would concur with a "de minimis impact" finding by the FHWA with respect to the subject project and these Section 4(f) resources.

Upon completion of Phase I, Phase II engineering will be initiated and will include development of plats, legal descriptions, and appraisals and acquisition of the required easements. If you have any questions or need additional information, please contact me or Chuck Gleason, Phase I Project Manager, at (847) 377-7447.

Very truly yours,



Martin G. Buehler, P.E.
Director of Transportation/
County Engineer

Attachments

Cc: John Baczek; IDOT Project and Environmental Studies Section Chief

LCFPD De minimis Concurrence

Concur Do Not Concur

Signature: Thomas E. Hahn

Title: EXECUTIVE DIRECTOR

Date: APRIL 4, 2011

U.S. Route 45

IL Route 132 to IL Route 173, and Millburn Bypass

Section No. 05-00262-02-RP

P-91-666-09

Meeting Summary

MEETING DATE: July 09, 2012

TIME: 1:30 p.m.

SUBJECT: Project Update

LOCATION: Lake County Forest Preserve District Office
1899 West Winchester Road
Libertyville, Illinois

ATTENDEES: Mike Fenelon – LCFPD
Tom Hahn – LCFPD
Andy Kimmel – LCFPD
Randy Seebach - LCFPD
Chuck Gleason – LCDOT
Mike Matkovic – CBBEL

On July 9, 2012, representatives from the Lake County Division of Transportation (LCDOT) and Christopher B. Burke Engineering, Ltd. (CBBEL) met with the Lake County Forest Preserve District (LCFPD) concerning the proposed improvements to U.S. Route 45 from IL 132 to IL 173 and the Millburn Bypass. The purpose of the meeting was to:

- Discuss design considerations along the Bypass adjacent to McDonald Woods
- Discuss potential LCFPD cost participation items for the Bypass
- Discuss the next steps and upcoming meetings for completion of Phase I engineering and environmental studies

CBBEL indicated that detailed plans have been developed for the funded Bypass improvements, and that concept level plans have been developed north and south of the Bypass area (IL 132 to IL 173) to establish the likely environmental footprint (right-of-way requirements) to be evaluated in the Environmental Assessment (EA) based on logical termini requirements. Both the detailed Bypass improvements and the likely future improvements north and south of the Bypass as discussed in the EA will be presented at the upcoming Public Hearing for comment. Copies of the concept improvement plans along Raven Glen and Ethel's Woods to the north were previously provided to LCFPD.

The proposed Bypass plans include two low clearance bridges over the Tributary to North Mill Creek and an Unnamed Intermittent Stream/Back Channel within the limits of McDonald Woods. The low clearance bridges will have approximately three feet of clearance from stream bank elevation to low beam. The purpose of the bridges is to avoid impacts to these streams which are delineated Waters of the US (WOUS) and



CHRISTOPHER B. BURKE ENGINEERING, LTD.
9575 W Higgins Road, Suite 600, Rosemont, Illinois

U.S. Route 45

IL Route 132 to IL Route 173, and Millburn Bypass

Section No. 05-00262-02-RP

P-91-666-09

Meeting Summary

identified ADID riparian corridors. Through project coordination with environmental resource agencies (USFWS and USACOE), it was requested to avoid impacts at these sites and to provide for terrestrial wildlife movement along these corridors. IDOT is currently reviewing these proposed low clearance bridges given the unique low clearance configuration to avoid environmental impacts. IDOT approval is pending. LCFPD did not have concerns with the proposed low clearance bridges.

Based on further plan development, and in particular the proposed drainage plan, in order to stay within the previously proposed right-of-way along the west side of the proposed Bypass through McDonald Woods, approximately 700 feet of block retaining wall, averaging five to six feet in height would be required. An option was discussed that would eliminate the block retaining wall in favor of 3:1 grading. This option would require additional temporary construction easements since 3:1 grading would require portions of the ditch line to be outside of the current proposed right-of-way line. LCFPD indicated that they would prefer the 3:1 grading option since the retaining wall would include an additional 54" high rail adjacent to the proposed bike path along the west side of the Bypass, and since the 3:1 grading option would be more compatible with a potential future connection to the bike path within McDonald Woods. The LCFPD understands that this will require additional temporary construction easements for grading, and potentially additional permanent easement if IDOT desires to have access to maintain the new drainage ditch in the future.

Exhibits were provided to LCFPD showing the sections of bike path and sidewalk that will be accommodated along the proposed Bypass, but that requires local agency cost participation and maintenance responsibility per IDOT and LCDOT policy in order to be implemented. Based on previous discussions, the LCFPD had expressed interest in participating in the implementation of the proposed bike path along the Bypass and realignment Grass Lake Road west of the Bypass. In this case, IDOT and LCDOT would pick up 80% of the cost and LCFPD would be responsible for 20% of the cost. A table was provided showing a preliminary estimated construction cost based on 2011 unit cost information, which results in an approximate LCFPD cost participation amount of \$45,900 for the bike path. LCFPD indicated that they are anticipating that IDOT will cover their cost for the proposed bike path for this project as part of the land acquisition process, which is how it was handled with recent IDOT improvements along IL Route 21. Regarding maintenance responsibility for the bike path, LCFPD is willing to maintain the bike path along the McDonald Woods frontage but would look to others to maintain the bike path outside of these limits. They are hopeful this can be worked out as long as the cost is covered.

Potential landscaping of the Bypass median area, and maintenance thereof, was discussed. LCFPD is not interested in participating in or maintaining any landscaped median areas along the Bypass.



U.S. Route 45

IL Route 132 to IL Route 173, and Millburn Bypass

Section No. 05-00262-02-RP

P-91-666-09

Meeting Summary

An overall project status was provided. It was indicated that the EA is currently under review by IDOT and FHWA. As soon as the EA is approved, a date for the Public Hearing will be selected, which is anticipated late Summer. The Public Hearing is anticipated to be an Open House Public Hearing from 4 p.m. to 7 p.m. that provides people the opportunity to come at any time during the three hour period.

A 6th Community Advisory Group (CAG) meeting is anticipated to be held a week to 10 days in advance of the Public Hearing to provide an overall project update including the results of the EA, and a preview of materials to be presented at the Public Hearing, as well as further discussion of further design considerations.

The LCFPD was advised that the *de minimis* impact finding for Raven Glen and Ethel's Woods as discussed at previous meetings, will be completed after the Public Hearing. Per IDOT and FHWA requirements, the newspaper display ads announcing the Public Hearing, as well as the Public Hearing presentation will indicate that a *de minimis* impact finding is being considered at both locations, and that public comments are requested. After the Public Hearing, the LCFPD will receive a letter from IDOT requesting their concurrence in the *de minimis* impact finding. With LCFPD concurrence, FHWA will consider granting the *de minimis* impact finding. The LCFPD had no questions regarding this process.

The meeting concluded at approximately 2:45 PM.

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CHRISTOPHER B. BURKE ENGINEERING, LTD.
9575 W Higgins Road, Suite 600, Rosemont, Illinois

US Route 45/Millburn Bypass
IL Route 132 to IL Route 173
Section No. 05-00262-02-RP
Lake County Division of Transportation

**3/26/2010 LCSMC
Meeting Minutes**

DATE: March 31, 2010

TO: Attendees
Chuck Gleason – LCDOT
Mike Matkovic – CBBEL
Ryan Westrom – Patrick Engineering Inc.
CBBEL Project File (08-0677)

FROM: Matt Huffman – CBBEL
Pete Knysz – CBBEL

MEETING DATE: March 26, 2010
TIME: 9:00 am

SUBJECT: Initial Project Coordination Meeting

LOCATION: Lake County Stormwater Management Commission
Libertyville, Illinois

ATTENDEES: Bob Gardiner – LCSMC
Glenn Westman – LCSMC
Pete Knysz – CBBEL
Matt Huffman – CBBEL

An initial project coordination meeting with the Lake County Stormwater Management Commission (LCSMC) was held on March 26, 2010. The purpose of the meeting was to:

- introduce the US Route 45/Millburn Bypass project
- summarize the alternative development process
- review the environmental analysis performed (GIS based) and preliminary results
- review the evaluation matrix content, relative comparison of alternatives, grading, and presentation
- discuss next steps
- provide an opportunity for LCSMC to comment on the project

The Lake County Division of Transportation (LCDOT) is the lead agency for the project, which includes improvements to US Route 45. The project limits (i.e., logical termini) extend from IL Route 132 north to IL Route 173. The project also includes evaluating east bypass, west bypass, and on-alignment alternatives for US Route 45 where it intersects with Grass Lake Road and Millburn Road. Existing US Route 45 in this area traverses the Millburn Historic District. This bypass location was previously studied by the Illinois Department of Transportation (IDOT) as part of the US Route 45 Strategic Regional Arterial (SRA) studies. In the mid 1990s, IDOT recorded a west



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bypass alignment in this area, which was the consensus realignment choice based on coordination with local municipalities, the Lake County Board, the Lake County Forest Preserve District, and LCDOT.

An Environmental Assessment (EA) is being prepared for this project. The project kicked off in December 2008, followed by a public information meeting in February 2009, and formation of the Community Advisory Group (CAG). Based on information received from the CAG, a range of eighteen initial alternatives was developed, nine of which were later discarded based on LCDOT, IDOT, and CAG input.

The logical termini and purpose and need statement for the project have been approved by the Federal Highway Administration (FHWA), IDOT, and other resource agencies (as part of the National Environmental Policy Act [NEPA]/404 merger process). FHWA and the other resource agencies also agreed with the elimination of nine alternatives - leaving nine alternatives to be carried forward for further analysis. The nine remaining alternatives include three west bypass options, three US Route 45 on-alignment options, and three east bypass options.

Preliminary conceptual plan view drawings depicting the nine remaining alternatives were presented to LCSMC and briefly discussed, particularly as the project relates to potential wetland, floodplain, and floodway impacts. All alternatives assumed basic IDOT geometric standards and attempted to minimize environmental impacts. It is anticipated that Glenn Westman (LCSMC) would review the project as it pertains to wetlands and Bob Gardiner (LCSMC) would review the project as it pertains to floodplains and stormwater.

A draft impact evaluation matrix for the nine remaining alternatives was also presented to LCSMC. Matrix content, relative comparison of alternatives, grading, and presentation were discussed. The impact criteria listed on the matrix is based on NEPA/IDOT policy – consistent with topics that will be evaluated in the EA. Potential impacts were calculated using available GIS information and field collected data (as available). The impact matrix quantifies impacts within the proposed project right-of-way, which is typically a 150 foot corridor; all resources within this right-of-way “footprint” were considered impacted. Avoidance of resources due to bridging (e.g., floodway) was not included at this point in the alternative evaluation process. The impact matrix will be presented at the next CAG meeting. CAG members will receive a packet of information prior to the upcoming CAG meeting. It is anticipated that this packet of information will include conceptual plan view drawings of the nine alternatives and the impact matrix.

Christopher B. Burke Engineering, Ltd. (CBBEL) explained that the Illinois Natural History Survey (INHS) completed wetland and biological surveys for this project. Cultural surveys are ongoing. IDOT – Bureau of Design and Environment (BDE) cleared this project with respect to biological resources; the Illinois Department of



Natural Resources (IDNR) also terminated consultation with respect to state listed threatened and endangered species. At the request of the U.S. Fish and Wildlife Service (USFWS), INHS conducted searches for the Eastern Prairie Fringed Orchid (*Platanthera leucophaea*). INHS followed USFWS guidelines for evaluating Eastern Prairie Fringed Orchid habitat in northeastern Illinois with searches conducted on three non-consecutive days during the period between June 28 and July 11. No Eastern Prairie Fringed Orchids were identified during the field searches.

CBBEL stated that INHS completed the wetland delineation for the study area. The wetland delineation report prepared by INHS was submitted to LCSMC prior to the meeting. LCSMC acknowledged receipt of the report.

CBBEL stated that the INHS field identified wetlands are different from those that are mapped; there is more mapped wetland within the study area than identified by INHS. LCSMC said that field identified wetlands often vary from those that are mapped on the Lake County Wetland Inventory (including mapped ADID polygons). CBBEL stated that based on the preliminary alternative footprints, four wetlands may be directly impacted. Preliminary potential wetland impacts total less than 0.1 acre. CBBEL stated that based on the INHS delineation report, three of the potentially impacted wetlands are low quality and one is fair quality (based on floristic inventories). The direct wetland impacts do not include impacts to mapped ADID wetland polygons. CBBEL explained that only wetland areas identified by INHS are shown on the exhibits within the study area – resulting in less mapped ADID wetland within the study area. Portions of mapped ADID polygons were removed from field verified upland/non-wetland areas on the exhibits. LCSMC will review the wetland delineation report and notify CBBEL of any concerns – particularly with respect to the farmed wetland determination.

LCSMC recommended that a wetland jurisdictional determination be completed – at a minimum for the wetlands that are within or immediately adjacent to the alternative footprints (i.e., for wetlands that could potentially be impacted by the project). The request could be processed through the U.S. Army Corps of Engineers or through LCSMC. CBBEL explained that the formal request for a jurisdictional determination is anticipated during Phase II (final design and permitting) – after a preferred alternative is selected. LCSMC recommended an informal field meeting in late May/early June to review potentially impacted wetlands. During the informal field meeting, LCSMC would provide a cursory opinion regarding jurisdictional status, wetland boundary, and quality (e.g., is the wetland a High Quality Aquatic Resource – such as a vernal pool). LCSMC concurred with the wetland methodology approach discussed at the meeting.

LCSMC recommended that existing drain tiles be considered in design/engineering for the project (in accordance with the Lake County Watershed Development Ordinance). LCSMC provided CBBEL with a GIS exhibit showing the approximate location of known drain tiles for the bypass study area. LCSMC recommended that if a drain tile



will be impacted by the project then it should be reconnected and an observation structure should be installed at the right-of-way.

LCSMC recommended that Best Management Practices (BMPs) be considered in project development. For example, consider incorporating porous pavement into the project design to assist with mitigating noise impacts, limiting salt spray, and increasing infiltration of stormwater run-off. There are AASHTO standards that can be reviewed with respect to this topic. LCSMC can be contacted for additional BMP information and/or consulted as needed regarding other topics. LCSMC is interested in meeting again following selection of a preferred alternative.

CBBEL summarized the next steps for the project. These include finalizing the preliminary impact analysis of the nine remaining alternatives for the upcoming CAG meeting on April 27, 2010. It is anticipated that additional alternatives will be dropped following a review of the impact analysis and consideration of LCDOT, IDOT and CAG input. A public meeting to present the alternatives being carried forward is anticipated in Summer 2010. Tentatively, the project team anticipates a September 2010 NEPA/404 merger meeting to present the alternatives being carried forward for detailed review and to obtain concurrence. Based on the current schedule, CBBEL anticipates Phase I completion in December 2011.

Action Items

- LCSMC to review the INHS wetland delineation report – particularly as it pertains to the farmed wetland determination, and comment on sufficiency.
- CBBEL to coordinate informal field visit with LCSMC to view potentially impacted wetlands. Field visit is to be scheduled for late May/early June.
- LCSMC to review their files and provide floodway and/or Base Flood Elevation (BFE) applicable to the project (e.g., Millburn Creek), if available. When no BFE exists, it will have to be determined by the project team.

The meeting concluded at approximately 10:00 am.





**Traffic Noise Information for Undeveloped Lands
U.S. Route 45, IL Route 132 to IL Route 173, and Millburn Bypass
Lake County, IL**

June 28, 2012

Mr. Eric Waggoner, Director
Planning, Building & Development
500 W. Winchester Road, Unit 101
Libertyville, IL 60048

Dear Mr. Waggoner:

As part of the ongoing Phase I Engineering and Environmental Study (Phase I Study) for U.S. Route 45, from IL Route 132 to IL Route 173, and the Millburn Bypass, we would like to take this opportunity to coordinate traffic noise information for undeveloped lands. Specifically, the projected future traffic noise levels were evaluated for lands either currently under your jurisdiction or land that may come under your jurisdiction near the proposed Millburn Bypass improvements and likely future improvements along U.S. Route 45 south to IL Route 132 and north to IL Route 173.

For developed lands, a traffic noise study has been completed for this project and the results will be summarized in the Environmental Assessment prepared for this Phase I Study. Enclosed for your information is an exhibit showing the predicted design year (2040) build traffic noise levels for the undeveloped lands identified along the project corridor.

We hope this information will be useful to you in planning and permitting future development in your area. We recommend that you carefully consider the future predicted noise levels to avoid potential issues of public concern over incompatible noise levels.

To help with your future planning and discernment regarding permitting decisions, we encourage you to obtain the Federal Highway Administration (FHWA) publication titled *Entering the Quiet Zone: Noise Compatible Land Use Planning*. This publication can be obtained from the FHWA website:

[http://www.fhwa.dot.gov/environment/noise/noise compatible planning/federal approach/land use/quietzon.pdf](http://www.fhwa.dot.gov/environment/noise/noise%20compatible%20planning/federal%20approach/land%20use/quietzon.pdf)

For additional information regarding traffic noise, regulations and policy, noise analyses or noise abatement, we encourage you to visit the Illinois Department of Transportation's web site at:

<http://www.dot.il.gov/desenv/noise.html>

Very truly yours,

Chuck Gleason
Acting Director
Planning and Programming

Enclosure

cc: Marie Glynn, Illinois Department of Transportation

www.lakecountyil.gov

Division of Transportation

Paula J. Trigg, P.E.
Acting Director of Transportation/
Acting County Engineer

600 West Winchester Road
Libertyville, Illinois 60048-1381
Phone 847 377 7400
Fax 847 984 5888

**EXISTING LAND USE
(FROM CMAP & OBSERVATION)**



Legend
 RESIDENTIAL
 COMMERCIAL
 INDUSTRIAL
 AGRICULTURAL
 OPEN SPACE
 INSTITUTIONAL
 TRANSPORTATION, COMMUNICATION AND UTILITIES
 IN-GAINT OR UNDER CONSTRUCTION



Lake County
 Division of Transportation

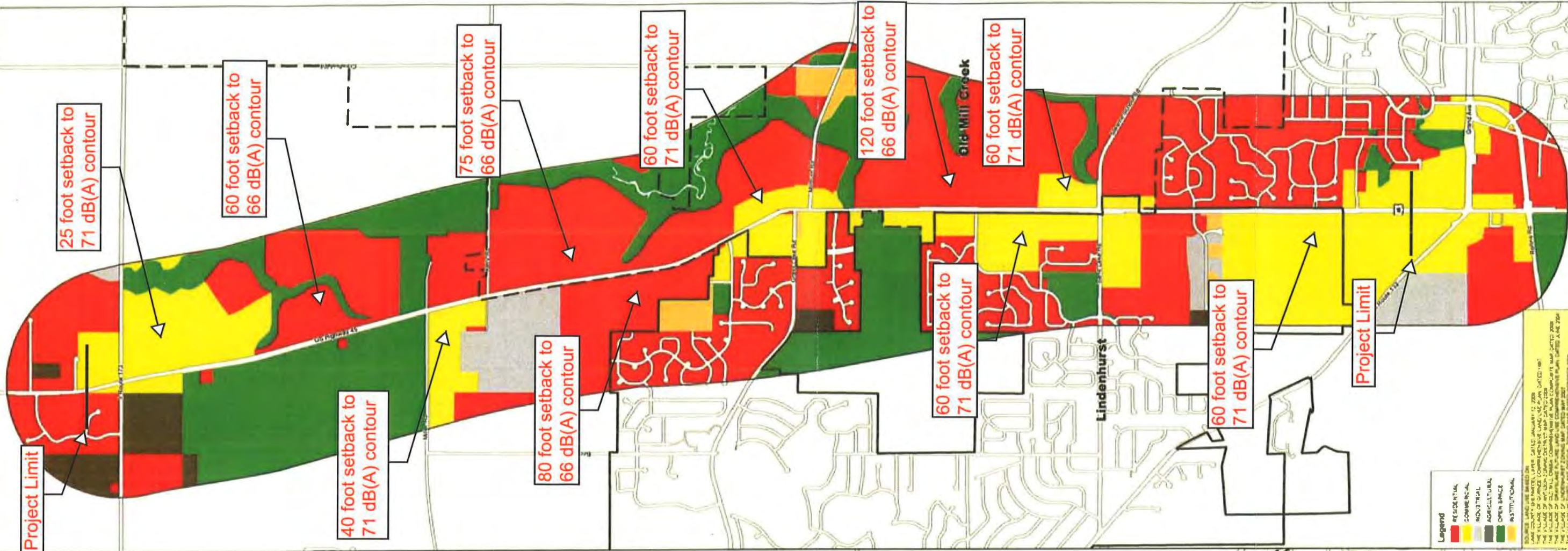


CHRISTOPHER & BURKE ENGINEERING LTD
 9575 West Higgins Road, Suite 600
 Rosemont, Illinois 60018
 (847) 823-0500



**FUTURE TRAFFIC NOISE LEVEL
 INFORMATION FOR UNDEVELOPED LANDS**

**FUTURE LAND USE
(FROM COMMUNITY & COUNTY LAND USE PLANS)**



Legend
 RESIDENTIAL
 COMMERCIAL
 INDUSTRIAL
 AGRICULTURAL
 OPEN SPACE
 INSTITUTIONAL

SOURCE: LAND USE BASED ON: 1. CITY OF LINDENHURST, INDIANA, 2008
 2. COUNTY OF LAKE COUNTY, INDIANA, 2008
 3. THE PLANS OF THE PROJECT, COMMUNITY AND COUNTY LAND USE PLANS, 2008
 4. THE PLANS OF THE PROJECT, COMMUNITY AND COUNTY LAND USE PLANS, 2008
 5. THE PLANS OF THE PROJECT, COMMUNITY AND COUNTY LAND USE PLANS, 2008
 6. THE PLANS OF THE PROJECT, COMMUNITY AND COUNTY LAND USE PLANS, 2008

25 foot setback to 71 dB(A) contour

60 foot setback to 66 dB(A) contour

40 foot setback to 71 dB(A) contour

75 foot setback to 66 dB(A) contour

80 foot setback to 66 dB(A) contour

60 foot setback to 71 dB(A) contour

120 foot setback to 66 dB(A) contour

60 foot setback to 71 dB(A) contour

60 foot setback to 71 dB(A) contour

60 foot setback to 71 dB(A) contour

Project Limit

Project Limit

Lindenhurst

Old Mill Creek



MEETING MINUTES

Meeting Date: July 13, 2010
Date Issued: July 15, 2010
Location: Lake County Division of Transportation
Project: U.S. 45 – IL 132 to IL 173 and Millburn Bypass
Purpose: Millburn Congregational Church Coordination Meeting

<u>Attendees</u>	<u>Representing</u>	<u>Phone</u>
Rev. Jed Watson	Millburn UCC	847-356-5237
Joel Williams	Millburn UCC	630-222-9073
Chuck Gleason	LCDOT	847-377-7447
Pete Knysz	Christopher Burke Engineering	847-823-0500
Jarrod Cebulski	Patrick Engineering Inc. (Patrick)	630-795-7468
Ryan Westrom	Patrick Engineering Inc.	312-201-7955

The following notes reflect our understanding of the discussions and decisions made at this meeting. If you have any questions, additions or comments, please contact us at the above address. We will consider the minutes to be accurate unless written notice is received within 10 working days of the date issued.

The purpose of this meeting was to provide an update on project status to the Millburn Congregational Church (a key stakeholder adjacent to the U.S. 45 project within the Millburn area) and to obtain their feedback on the remaining improvement alternatives to be carried forward. The meeting began at 5:00 p.m.

1. LCDOT began by giving an overview of the project. The project is studying the improvement of U.S. 45 from IL 132 north to IL 173, with a special focus on the intersections at Grass Lake Road and Millburn Road in the Millburn Historic District area.
2. An overview of the project Purpose & Need statement was given by Patrick. The Purpose & Need statement describes the reasons a project is necessary, and outlines the magnitude of need. Alternatives developed must meet the project Purpose & Need to be carried forward. Highlights of the U.S. 45 Purpose & Need include:
 - a. 300% average increase in traffic volumes on U.S. 45 from 1974 to 2009.
 - b. 150% average increase in traffic volumes projected for U.S. 45 by the year 2030, even if no improvements are made (No-Build Alternative).
 - c. Over 300% average increase in vehicle delay during evening peak travel period by the year 2030 for signalized intersections north of IL132, if no improvements are made.
 - d. 73% of all crashes during 2005-2007 occur at 5 signalized intersections. 1 fatality (at IL 132) and 7 severe injury crashes. Likely increase in crash potential and severity based on traffic growth, if no improvements are made.
 - e. General northwest to southeast travel patterns would be aided by U.S. 45 improvements, which could also reduce re-directs onto other roadways.
3. The Community Advisory Group (CAG) formed for the project was also discussed. The CAG consists of a broad range of stakeholders - those who could be affected by the project and have a stake in its outcome (e.g., property owners, business owners, state and local officials, etc.). The CAG was created to provide

specific feedback on the Millburn area and potential bypass alternatives as part of this transportation project. The CAG is one of the methods that will be used to facilitate stakeholder involvement. The role of the CAG is to advise the Project Study Group (LCDOT, IDOT, FHWA, and consultants) throughout the course of the project development process in regard to the alternatives at the potential Millburn Bypass location.

4. At this point, the development of alternatives for the Millburn area was discussed. Initially, a full range of 18 potential alternatives was developed. These alternatives were based on input received at the first Public Meeting. Based on the project Purpose & Need statement, and the input received by the CAG, the project team (LCDOT, IDOT, and consultants) determined that nine alternatives should be eliminated from further consideration because these alternatives did not meet the project Purpose & Need or better transportation alternatives were available which would result in similar or less impact. The project team identified the remaining nine alternatives for concept development and comparative evaluation.

The "A" alternatives represent a U.S. 45 west bypass, which uses the previously recorded IDOT alignment. The "B" alternatives represent staying on the existing U.S. 45 alignment, and the "C" alternatives represent a U.S. 45 east bypass. Each U.S. 45 alignment is associated with 1 of 3 east-west improvement options. The "1" option maintains existing alignments of Grass Lake Road and Millburn Road. The "2" option realigns Grass Lake Road and Millburn Road to the north. The "4" option realigns Grass Lake Road to the south to meet Millburn Road. Building displacements that would result with the construction of each alternative are depicted on the conceptual drawings. All of the "B" alternatives result in the displacement of several historic structures due to the proposed add-lanes projected to be needed along U.S. 45.

Patrick walked through the concepts developed and gave an overview of the evaluation process. An evaluation matrix showing the relative strengths and weaknesses of each alternative was developed. Currently, from analysis of these nine alternatives, and based on feedback from the CAG, three alternatives are proposed to be carried forward. These are A-1, A-4, and C-4, and it is anticipated that these three alternatives will be presented at an upcoming Public Meeting.

5. The Millburn Congregational Church was asked to provide their input on the project and these three remaining alternatives, as well as outlining any redevelopment plans they have. The Church noted that the land holdings shown on the exhibits are correct. They do own the field to their west (a separate PIN) and allow it to be farmed at no charge. They consider impact to this property an important factor.
6. The Church also noted that they currently have capital expansion plans, which include a new sanctuary. A preliminary site layout has been developed, and they fully intend to proceed with these expansion plans in the near future.
7. The Church acknowledged that they were aware of plans for a west bypass (i.e., Alternative A-1). The Church noted that if A-4 or C-4 became the selected alternative they had a few concerns:
 - a. Their children's playground is immediately south of their existing building and would be adjacent to the realigned Grass Lake Road. This would be a safety concern. If this alignment were selected, they would seek to have a secure fence built to protect this area. The Church prefers that this alignment be located as far south as possible.
 - b. Alternatives A-4 and C-4 would bisect the western Church parcel. The Church is concerned with the value of the southern remnant piece of land. Its current zoning is residential, and they feel a zoning change would be necessary for that piece of land to hold value at that point. It was noted that it could be a valuable piece of land if A-1 were chosen, as the remnant land would be located at a major intersection.
 - c. The redevelopment plans of the Church could be hindered by this bisection of the west parcel. The Church was unsure whether room would remain north of the '4' alignment for layout of their site. It was noted that due to the potential for abandonment of the existing Grass Lake Road, it was possible this land (80' existing ROW width) could be ceded to the

church. The Church will explore whether this will leave them enough room for their future plans.

- d. The potential exists for a new entrance to the Church property from a realigned Grass Lake Road; however, it was noted that access could be difficult with the storage and tapers required at the U.S. 45-Grass Lake Road intersection.
8. The Church stated that their preference would be for the U.S. 45 expansion to impact their property as little as possible. They are okay with a western 'A' alignment. Their greater concern is with the '4' east-west alignment, which would bisect their property. Therefore, their preference would be for A-1.
9. The project team stated that the Church would be notified of the next CAG meeting, and made a recommendation that the Church encourage its members to attend the upcoming Public Meeting. Public comments will be taken at the Public Meeting.

The meeting adjourned at approximately 6:00 p.m.

Submitted by:



Ryan Westrom
Patrick Engineering Inc.



MEETING MINUTES

Meeting Date: September 27, 2011
Date Issued: October 4, 2011
Location: Millburn Congregational Church
Project: US 45 – IL 132 to IL 173 and Millburn Bypass
Purpose: Millburn Congregational Church Coordination Meeting

Attendees

Rev. Jed Watson
Terry Knight
Todd Schmeling
Bob O'Donnell
Chuck Gleason
Paula Trigg
Matt Huffman
Martin Worman
Ryan Westrom

Representing

Millburn UCC
Millburn UCC
Millburn UCC
O'Donnell Law Firm
LCDOT
LCDOT
Christopher B. Burke Engineering (CBBEL)
Christopher B. Burke Engineering (CBBEL)
Patrick Engineering Inc. (Patrick)

Email

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knightcpa@gmail.com
schmeling.todd@yahoo.com
rodonnell@law-firm.com
cgleason@lakecountyl.gov
ptrigg@lakecountyl.gov
mhuffman@cbbel.com
mworman@cbbel.com
rwestrom@patrickco.com

The following notes reflect our understanding of the discussions and decisions made at this meeting. If you have any questions, additions or comments, please contact us at the above address. We will consider the minutes to be accurate unless written notice is received within 10 working days of the date issued.

The purpose of this meeting was to provide an update on project status to the Millburn Congregational Church (MCC - a key stakeholder adjacent to the US 45 project within the Millburn area) and to provide additional information on the selected alternative and its impact on the Church. An overall exhibit of the preferred alternative was shown, along with a close-up of the MCC property. Smaller exhibits were distributed to all meeting attendees.

The meeting began at 2:30 p.m.

1. Patrick began by giving an update on the project's status. LCDOT recently announced the selection of Preferred Alternative A4, a U.S. Route 45 western bypass around the intersections at Grass Lake Road and Millburn Road with a realignment of Grass Lake Road to meet with Millburn Road at the existing U.S. Route 45 intersection near the Millburn Historic District area.
2. Project limits for this improvement are U.S. Route 45 near Country Place on the south and just north of Independence Boulevard on the north. The improvement on Grass Lake Road extends west of Heritage Drive on the west and to the intersection with Millburn Road at the existing U.S. Route 45 intersection on the east.
3. An overview of the proposed improvements was given by Patrick. Discussed were the typical section, the new proposed main intersection, and the location of the proposed path and sidewalk. It was observed that some of these elements would require cost participation from the local agencies, such as the sidewalk, median enhancements, and the multi-use path. It was indicated by LCDOT that the Lake County Forest Preserve District is considering maintaining and funding the local cost share of the multi-use path along

the realignment. It was also observed that most of the realignment route remains in Old Mill Creek, however some of it is within Lindenhurst.

4. Patrick then discussed what would happen to old US 45 and Grass Lake Road as part of the project. As part of this specific project, signal removal at the old intersections and pavement marking revisions would be completed. The new intersection at Millburn Road/Grass Lake Road with old U.S. Route 45 will be stop controlled on the old U.S. Route 45 legs only.
5. The project team then noted that in a prior meeting with the Village of Old Mill Creek it was determined that Old Mill Creek is interested in taking jurisdiction of old U.S. Route 45 and the remaining portion of Grass Lake Road east of the proposed realignment. The jurisdictional transfer process was discussed, and it was noted that this would occur with IDOT for old US 45 and with LCDOT for old Grass Lake Road. It was also noted that this would occur after construction completion; however the coordination process for the jurisdictional transfer begins in Phase I and would typically be completed before construction.
6. Related to the discussion of old Grass Lake Road's future, it was observed that previous discussion with the Church in regard to a potential of abandonment of this roadway ROW and transfer to the Church as part of the land acquisition process had occurred. Based on Old Mill Creek's interest in this roadway, this may not be possible. It was noted that the Church would need to know this as they're proceeding in their negotiations. Therefore, the project team encouraged the Church to work with their Village in determining what their plans for the roadway were. LCDOT is not certain what Old Mill Creek envisions for this remaining road.
7. It was further noted that old Grass Lake Road could, as part of the Village or via a private holder, be modified in various forms from its current state. Whether these would be advantageous to the Church is something they will be looking into.
8. Then, the specific impacts to the Millburn Congregational Church property were noted. The project team indicated that the Church has approximately 7.101 acres of total holding on the site distributed over two parcels. The area of impact is estimated at 1.646 acres, which would bisect the western parcel.
9. The project team inquired with the Church as to the status of their redevelopment plans. The Church's lawyer stated that, yes, while there are plans, they are being reassessed given the impacts seen as part of this project. They observed that there is a need for expansion, but that they are assessing their options. Part of their interest in this meeting was to gain a better understanding in regard to the project's impacts in order to make this assessment.
10. The Church inquired as to the potential for site access from the proposed roadways to the remaining Church holdings. The project team noted that potentially a right-in right-out entrance off both US 45 and Grass Lake Road could access the remaining parcel southeast of the proposed intersection. As well, a new access to the Church from Grass Lake Road could potentially be provided. Whether the Grass Lake Road access(s) could be a full access would be something the County would determine based on the Church's plans for the property.
11. The Church inquired as to the profile grade of the new Grass Lake Road. CBEL noted that east to west it would typically follow the site topography and the land would generally be higher to the north of the road and lower to the south. As well, this will mean that the road is lower than the existing Millburn Church.
12. At this point, the meeting attendees all went outside to review the site. The project team brought paint and used it to mark general locations where the anticipated proposed ROW would be. This was meant to be informational only, giving the Church a general idea where the proposed road would be, and is not exact. Based on this site reconnaissance, all attendees were able to envision, based on comparison of the exhibits of the proposed alternative to the site, the proposed roadways' locations.
13. The Church's lawyer inquired as to the timeline for beginning the land acquisition process. CBEL stated that based on the remaining Phase I items, and then the Phase II start-up items, followed by initial plat and legal research and preparations, this process would likely officially begin in late summer 2011.

14. The project team noted that next steps in the project will include the preparation of the project draft Environmental Assessment, and then a Public Hearing seeking comments on the draft Environmental Assessment.
15. LCDOT concluded the meeting by noting that their goal in meeting with the Church is to work with them as they deal with the impact of the project and to make it the best for them that LCDOT can.

The meeting adjourned at approximately 3:30 p.m.

Submitted by:



Ryan Westrom
Patrick Engineering Inc.

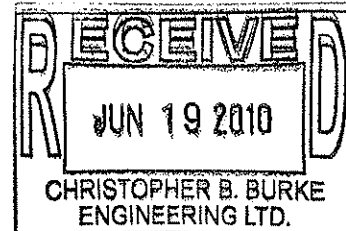


A Fresh Approach To Public Transportation

Thomas J. Ross
Executive Director

June 18, 2010

Mr. Michael J. Matkovic, P.E.
Phase 1 Department Head, V.P.
Christopher B. Burke Engineering, LTD
9575 W. Higgins Road Suite 600
Rosemont, Illinois 60018



Re: US 45 from north of Il 132 to north of Il 173

Dear Mr. Matkovic:

MUST BE NW IF WESTBOUND

In reference to the above project Pace Route 570 operates through the intersection of US45/Grand Avenue. Operating days are Monday through Saturday. Span of service is 5:30 a.m. to 9:30 p.m. Monday through Friday and 7:30 a.m. to 8:45 p.m. on Saturday. Current bus stop locations westbound stop SW corner of US 45/Grand Avenue intersection; Eastbound stop SE corner of US45/Grand Avenue intersection. Peak number of Buses through intersection 2 per hour. No need for shelter pad or bus turnout at this time.

Should you need further assistance, feel free to contact me at (847) 228-4287.

Sincerely,

Taqhi Mohammed,
Transportation Engineer

By: *Thomas J. Radak*
Thomas J. Radak, AICP
Senior Project Manager

APPENDIX D

SECTION 4(f) *de minimis* DOCUMENTATION

- **McDonald Woods Forest Preserve**
- **Raven Glen Forest Preserve**

Section 4(f) *de minimis* Impact Documentation

US Route 45; IL Route 132 to IL Route 173 and Millburn Bypass FAP 0344 / P-91-666-09

McDonald Woods Forest Preserve Lake County Forest Preserve District Lake County, Illinois

1. Project Description

- a. **Project Number:** P-91-666-09 (Lake County Division of Transportation (LCDOT) lead, coordinated through IDOT)
- b. **Project Name:** US Route 45; IL Route 132 to IL Route 173, and Millburn Bypass.
- c. **Location:** Lake County
- d. **Project Type:** Add-Lanes and Bypass of Millburn Historic District, a National Register Place.
- e. **Project Length:** 5.50 miles
- f. **NEPA Class of Action:** Environmental Assessment
- g. **Purpose and Need of the Project:** To provide an improved transportation system to address capacity, mobility, safety and operational deficiencies along US Route 45 within the project limits for current travel conditions and travel conditions projected for the year 2040 regional planning horizon.
- h. **Project Status:** Phase I Engineering and Environmental Studies are nearing completion with a Public Hearing anticipated by the end of 2011.

2. Section 4(f) Resource

- a. **Name of Resource:** McDonald Woods
- b. **Type of Resource:** Forest Preserve
- c. **Official with Jurisdiction (OWJ):** Thomas E. Hahn, Executive Director, Lake County Forest Preserve District (LCFPD)
- d. **Description of role/significance in the community:** Open space and outdoor recreational activities.

3. Description of Intended Section 4(f) Resource Use

- a. 3.13 acres of direct property acquisition from McDonald Woods is required for roadway realignment associated with a West Bypass of the Millburn Historic District.
- b. 7.13 acres of additional acquisition in the northeast corner of McDonald Woods for compensatory storage and/or storm water detention, and based on disconnection of this relatively small remaining remnant piece to the overall McDonald Woods holdings west of the bypass roadway.

Section 4(f) *de minimis* Impact Documentation

US Route 45; IL Route 132 to IL Route 173 and Millburn Bypass FAP 0344 / P-91-666-09

McDonald Woods Forest Preserve Lake County Forest Preserve District Lake County, Illinois

- c. There will be no negative impact to the McDonald Woods Forest Preserve based on this acquisition. McDonald Woods consists of 298 acres of open space that accommodates a 3.8-mile loop around woods and wetlands, a 0.3-mile wood-chip trail designed for hiking and cross-country skiing, a cooling ravine, portions of the 35-mile Millennium Trail and other community hiking and biking paths. These features will remain intact as they are located to the west of the proposed West Bypass alignment. In addition, the West Bypass alignment provides an optimum opportunity for the LCFPD to connect McDonald Woods to other LCFPD facilities via the bike path proposed within the west right-of-way of the West Bypass.

4. Description of Efforts to Avoid, Minimize, and Mitigate/Enhance the Resource

- a. East Bypass alternatives that would avoid McDonald Woods were considered throughout the alternatives development and evaluation process, and as part of coordination with project stakeholders including LCFPD. All East Bypass alternatives would require some property acquisition from the Millburn Historic District. In addition, while an East Bypass would meet the project purpose and need, it is less desirable based on transportation performance.
- b. A bike path is proposed within the west right-of-way for the West Bypass. This is a preferred opportunity for LCFPD to provide a connection to other planned bike paths in the project area, and for connections to other LCFPD holdings to the north and south.

5. Evidence of Opportunity for Public Review and Comment:

- a. Multiple opportunities have been provided for public review and comment concerning potential property acquisition from McDonald Woods associated with this project. These opportunities consisted of four (4) Community Advisory Group (CAG) meetings through which project stakeholders (including LCFPD) participated in the alternatives development and evaluation process, which considered eighteen (18) initial alternatives. Through this process, the initial alternatives were narrowed to three (3) finalist alternatives which included two (2) West Bypass and one (1) East Bypass alternatives. The finalist alternatives were presented at a Public Meeting in September 2010 with each alternative graphically displayed and a comparative socio-economic and environmental impacts matrix was presented for public review/comment, which included impacts

Section 4(f) *de minimis* Impact Documentation

US Route 45; IL Route 132 to IL Route 173 and Millburn Bypass FAP 0344 / P-91-666-09

McDonald Woods Forest Preserve Lake County Forest Preserve District Lake County, Illinois

to McDonald Woods associated with the finalist alternatives. The Public Meeting was advertised via display ads in print media, as well as via direct invitation letters sent to interested and/or affected agencies, property owners, and residents within the project area.

6. Evidence of Coordination with Official(s) with Jurisdiction

- a. Summaries of meetings with LCFPD on April 12, 2010 and February 21, 2011(Refer to Appendix C)
- b. Copy of letter from LCDOT to LCFPD dated March 18, 2011(Refer to Appendix C).
- c. Return *de minimis* concurrence letter from LCFPD to LCDOT signed April 4, 2011 (Refer to Appendix C).

7. Supporting Documentation

- a. Project location map (Refer to Exhibit 1).
- b. Project environmental resources exhibit (Refer to Exhibit 2).
- c. Finalist bypass alternatives (A1, A4, C4) concept plans (Refer to Chapter 2).
- d. Finalist bypass alternatives (A1, A4, C4) comparative impacts matrix (Refer to Chapter 2).
- e. Newspaper display ad for Public Meeting on September 2, 2010 (Refer to Appendix C).
- f. Summary of LCFPD coordination meetings on April 12, 2010 and February 21, 2011 (Refer to Appendix C).
- g. Letter from LCDOT to LCFPD dated March 18, 2011 with attachments and includes LCFPD *de minimis* concurrence signature dated April 4, 2011 (Refer to Appendix C).

Section 4(f) *de minimis* Impact Documentation

US Route 45; IL Route 132 to IL Route 173 and Millburn Bypass FAP 0344 / P-91-666-09

Raven Glen Forest Preserve Lake County Forest Preserve District Lake County, Illinois

1. Project Description

- a. **Project Number:** P-91-666-09 (Lake County Division of Transportation (LCDOT) lead, coordinated through IDOT)
- b. **Project Name:** US Route 45; IL Route 132 to IL Route 173, and Millburn Bypass.
- c. **Location:** Lake County
- d. **Project Type:** Add-Lanes and Bypass of Millburn Historic District, a National Register Place.
- e. **Project Length:** 5.50 miles
- f. **NEPA Class of Action:** Environmental Assessment
- g. **Purpose and Need of the Project:** To provide an improved transportation system to address capacity, mobility, safety and operational deficiencies along US Route 45 within the project limits for current travel conditions and travel conditions projected for the year 2040 regional planning horizon.
- h. **Project Status:** Phase I Engineering and Environmental Studies are nearing completion with a Public Hearing anticipated in early 2012.

2. Section 4(f) Resource

- a. **Name of Resource:** Raven Glen
- b. **Type of Resource:** Forest Preserve
- c. **Official with Jurisdiction (OWJ):** Thomas E. Hahn, Executive Director, Lake County Forest Preserve District (LCFPD)
- d. **Description of role/significance in the community:** Open space and outdoor recreational activities.

3. Description of Intended Section 4(f) Resource Use

- a. 0.315 acres of direct property acquisition from Raven Glen Forest Preserve is required for improvements to US Route 45 north of Miller Road.
- b. 0.174 acres of temporary construction easements for construction of a bikepath underpass north of Miller Road to accommodate a bikepath planned by LCFPD in this area, and for improvements to the Raven Glen Forest Preserve entrance on US Route 45.
- c. There will be no negative impact to the Raven Glen Forest Preserve based on this acquisition. The Raven Glen Forest Preserve consists of 536 acres of open space

Section 4(f) *de minimis* Impact Documentation

US Route 45; IL Route 132 to IL Route 173 and Millburn Bypass FAP 0344 / P-91-666-09

Raven Glen Forest Preserve Lake County Forest Preserve District Lake County, Illinois

that includes two trail systems divided by the 33 acre Timber Lake. The trails offer hiking, bicycling and cross-country skiing, with a separate grass trail for horseback riding. In addition to these trails, the Raven Glen Forest Preserve also includes picnic tables, fishing piers with benches, and an overlook. These features will remain intact as they are not located near the area where the proposed property acquisition will occur.

4. Description of Efforts to Avoid, Minimize, and Mitigate/Enhance the Resource

- a. A US Route 45 alternative that avoids the Raven Glen Forest Preserve was considered as part of the overall project alternatives development and evaluation process, and as part of coordination with LCFPD. A shift in the US Route 45 centerline to the east to avoid the Raven Glen Forest Preserve property would result in similar impacts to the Ethel's Woods Forest Preserve which is adjacent to the east side of US Route 45 north of Miller Road. This portion of the Ethel's Woods Forest Preserve was acquired by the LCFPD with federal Open Land Trust (OLT) funding, which would require coordination with the Illinois Department of Natural Resources (IDNR) and Section 6(f) compliance. Symmetrical widening of US Route 45 on existing alignment was also considered. This would require property acquisition from both forest preserves. On this basis, the LCFPD concurred with the proposed westward shift to the US Route 45 centerline to avoid acquisition from the Ethel's Woods Forest Preserve.
- b. The proposed improvement of US Route 45 in this area will accommodate a bike path underpass just north of Miller Road to provide a grade separated crossing for bike paths within the Raven Glen and Ethel's Woods Forest Preserves as planned by the LCFPD.

5. Evidence of Opportunity for Public Review and Comment:

- a. Multiple coordination meetings have occurred with the LCFPD concerning this project. At the LCFPD coordination meeting on October 19, 2011 (Refer to Appendix C) the LCFPD concurred that the proposed use of property from Raven Glen would not adversely affect the overall use and function of the Raven Glen Forest Preserve and therefore indicated support for a *de minimis* impact finding.
- b. A Public Hearing is planned for early 2012, which will provide an opportunity for public review and comment concerning the proposed use of property from the Raven Glen Forest Preserve.

Section 4(f) *de minimis* Impact Documentation

**US Route 45; IL Route 132 to IL Route 173
and Millburn Bypass
FAP 0344 / P-91-666-09**

**Raven Glen Forest Preserve
Lake County Forest Preserve District
Lake County, Illinois**

6. Evidence of Coordination with Official(s) with Jurisdiction

- a. Summaries of meetings with LCFPD (Refer to Appendix C)

7. Supporting Documentation

- a. Project location map (Refer to Exhibit 1)
- b. Project environmental resources exhibit (Refer to Exhibit 2)
- c. Proposed roadway improvement plans (Refer to Exhibit 4)