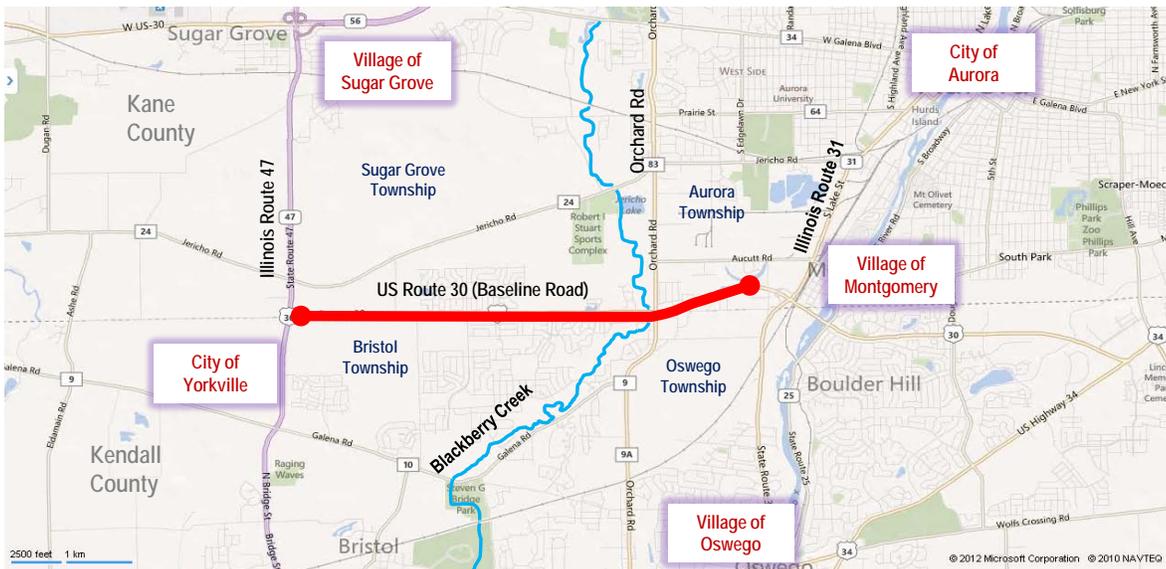


1. Purpose and Need

1.1 Introduction

The study limits extend from IL 47 in Yorkville to 1,400 feet west of the IL 31 interchange in Montgomery—a distance of roughly 5 miles. US 30 is known locally as “Baseline Road.” The project is in both Kendall and Kane counties and crosses four townships: Sugar Grove, Bristol, Aurora, and Oswego. The study corridor features a mix of land uses, including cultivated farmland, residential, and commercial development. Blackberry Creek and Kendall County Forest Preserve’s Blackberry Trail are just west of Orchard Road. A large park facility owned by the Fox Valley Park District—Stuart Sport Complex—borders the north side of US 30 west of Orchard Road.

Study Location Map



The roadway generally consists of one 12-foot lane in each direction with 10-foot-wide aggregate shoulders. There are signalized intersections with turn lanes at Gordon Road, Griffin Drive and Orchard Road, and there are seven unsignalized intersections. The posted speed limit of US 30 from IL 47 to Orchard Road is 55 miles per hour (mph). East of Orchard Road to west of the IL 31 interchange the speed limit is 50 mph. It drops to 45 mph at the east end of the project where it approaches the interchange area. Through the project corridor, US 30 is classified as a Class II Truck Route and a Strategic Regional Arterial.¹

The eastern terminus of the project is just west of the US 30 / IL 31 interchange and will match the proposed reconstruction of the US 30 and IL 31 interchange. The western terminus is just east of IL 47, and will tie into an ongoing IDOT District 3 design study of IL 47 between Kennedy Avenue in Yorkville and Cross Street in Sugar Grove. The project termini are consistent with FHWA environmental regulations under 23 CFR 771 (that is, the project has rational endpoints for a transportation improvement and a review of the environmental impacts). The proposed project is a stand-alone project in that environmental issues can be treated on a sufficiently broad scope to ensure that the project will function properly without requiring additional improvements elsewhere, and that it will not restrict consideration of alternatives for other reasonably foreseeable transportation improvements in the area.

1.2 Purpose of the Project

The purpose of the project is to improve vehicular, pedestrian, and bicycle safety along the corridor, improve roadway and intersection capacity and efficiency, and meet existing and future growth development in the area.

¹ Strategic Regional Arterials are a network of highways designed to accommodate long distance regional traffic, to complement a region’s major transit and highway facilities, and to supplement the freeway system (IDOT 2010, chapter 46 of *BDE Manual*).

1.3 Project Need

The proposed action is needed for the following reasons to improve safety, to improve capacity, and to accommodate community growth. The remainder of this section discusses these factors in detail.

1.3.1 Safety

Crash data collected for the 5-year study period 2006 through 2010 shows that 383 crashes occurred within the project corridor (Table 1). Rear-end collisions accounted for 50 percent of the total crashes, followed by turning crashes (23 percent), both indicative of high volumes of traffic, traffic congestion, and the number of intersections and driveway access points within the project corridor.

TABLE 1
Crashes by Collision Type: Segments and Intersections

Collision Type	Year					Total	% of Total
	2006	2007	2008	2009	2010		
Rear-end	34	47	53	28	28	190	49.6
Turning	18	28	19	11	13	89	23.2
Fixed object	6	7	5	11	5	34	8.9
Head-on	1	4	7	6	2	20	5.2
Sideswipe (same direction)	7	6	3	2	1	19	5.0
Angle	2	4	5	0	2	13	3.4
All other	1	3	7	5	2	18	9.4
Total (2006–2010)	69	99	99	63	53	383	100%

Of the 383 total crashes in the study area, 112 crashes or 29 percent, involved injuries (A, B, or C type); 62 crashes or 16 percent involved A or B type injuries (Table 2). There was one fatal crash in the study period, a pedestrian-type crash in which a pedestrian was crossing the roadway to go to a nearby business.

TABLE 2
Total Crash Types by Frequency and Injury Severity: 2006–2010

	No. of Crashes	Total Injury Crashes	Injury Crashes			Number of Injuries By Type			Fatalities
			A	B	C	A	B	C	
2006	69	19	0	7	12	0	8	17	0
2007	99	33	3	18	12	3	33	20	1
2008	99	21	4	10	7	5	16	10	0
2009	63	19	2	10	7	2	11	15	0
2010	53	20	3	5	12	8	10	22	0
Total	383	112	12	50	50	18	78	84	1

Crashes are categorized at severity levels. **Fatal** traffic crash is a crash in which at least one person dies within 30 days after the crash. **Type A**—A crash that involves any incapacitating injury, other than fatal, that prevents the injured person from walking, driving, or normally continuing the activities he/she was capable of performing before the injury occurred. Includes severe lacerations, broken/distorted limbs, and skull, chest, or abdominal injuries. **Type B**—A crash that involves any injury, other than a fatal or incapacitating injury, that is evident to observers at the scene of the crash. Includes lumps on the head, abrasions, bruises, and minor lacerations. **Type C** (reported, injury not evident)—A crash that involves any injury reported or claimed that is not listed above. Includes momentary unconsciousness, claims of injuries not evident, limping, complaints of pain, and nausea.

Of the total crashes, 65 percent occurred on a dry roadway surface, whereas 35 percent occurred on wet, ice, snow/slush, sand/mud/dirt, or unknown pavement conditions (Table 3). The findings suggest that wet pavement was not a significant cause for crashes within the study area.

TABLE 3
Total Crashes by Roadway Surface Condition

Roadway Surface	Crashes	Frequency (%)	Total Injury Crashes	Fatalities
Dry	249	65	73	1
Wet	65	17	23	0
Ice	12	3.1	1	0
Snow or slush	49	12.8	14	0
Sand, mud, dirt	1	0.3	1	0
Unknown	7	1.8	0	0
Total crashes (2006–2010)	383	100	112	1

Data in Table 4 show that 66 percent of the crashes occurred in daylight conditions; 18 percent during night hours in sections without street lights; 10 percent during night hours in sections with street lights (most of the study limit along US 30 is unlit); and 6 percent occurred during dawn or dusk. With only 18 percent of crashes occurring during darkness in the unlit sections, lighting conditions may not be a significant contributing factor to crashes.

TABLE 4
Total Crashes by Roadway Lighting Condition

Lighting Condition	Crashes	Frequency (%)	Total Injury Crashes	Fatalities
Dawn	11	2.9	1	0
Daylight	253	66.1	74	0
Dusk	11	2.9	5	0
Darkness (unlighted road)	69	18	21	1
Darkness (lighted road)	39	10.2	11	0
Total crashes (2006–2010)	383	100	112	1

IDOT reviews statewide crash numbers annually and identifies the 5 percent of locations with the most pressing safety needs. Two locations along US 30 between Lakewood Creek Drive and Blackberry Road and a segment east of Horsemen Trail were identified as 5 percent locations in 2009.

In addition to vehicular safety, there are nonmotorized safety issues. The insufficient capacity creates congestion, negatively impacts intersection operations along this segment, and leads to safety issues for motorists, pedestrians and bicyclists. The lack of shared use paths along the existing corridor limits pedestrian access to adjacent land uses, including recreational facilities and schools. The lack of pedestrian and bicycle accommodations does not offer alternative ways to travel to nearby destinations (such as schools, parks, or businesses), thereby increasing the number of vehicles entering, exiting, or traveling along the roadway. Between 2006 and 2010, there was one fatality which involved a pedestrian attempting to cross US 30 east of Horsemen Trail. There were several comments received at the September 2012 public meeting (both verbal and written), in which it noted that there have been several serious accidents along US 30 in 2012, one which involved a fatality.

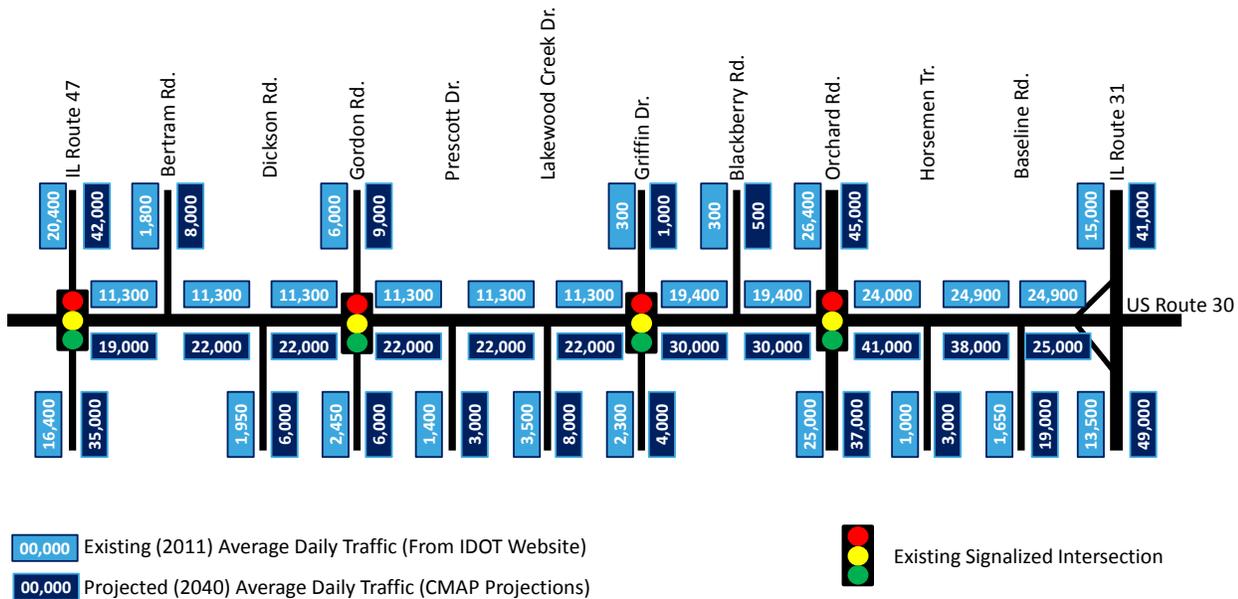
1.3.2 Roadway and Intersection Capacity and Mobility

The study corridor operates poorly under existing conditions, with moderate to high traffic congestion at the intersections and along the corridor. Congestion is primarily the result of insufficient capacity and inadequate lanes

at the intersections. In the design year (2040) under the no-build scenario, congestion is predicted to increase significantly throughout the corridor and traffic capacity and operations are predicted to deteriorate as a result.

IDOT traffic data show that the average daily traffic (ADT) ranges from about 11,000 at the west end of the corridor to 25,000 at the east end of the corridor. The CMAP projected 2040 traffic volumes show an ADT range from about 19,000 to 41,000 vehicles per day. A 2-lane roadway can accommodate 14,000 to 18,000 vehicles per day, depending on roadway conditions and number of access points. Current traffic volumes are approaching that level, and projected traffic volumes will exceed that level at some locations along the project corridor.

Average Daily Traffic Volumes



The *Highway Capacity Manual* defines the level of service (LOS) of an intersection by measuring the average vehicle delay. The measure uses letter grades, from LOS A (minimal delay) to LOS F (maximum delay). The performance of US 30 is controlled by several factors including traffic volumes, the number of lanes, the number of access points, and the presence signalized intersections. Some of the corridor is approaching the limits of acceptable capacity. Roadway segments, signalized intersections, and nonsignalized intersections are discussed below.

Under existing conditions, US 30 operates at LOS E from west of Griffin Road to the east end of the study corridor. Under 2040 no-build conditions (if no improvements are made), US 30 between Orchard Road and IL 31 will deteriorate to LOS F.

Under existing conditions, the LOS at signalized intersections range from B to F; and under no build conditions, the 2040 LOS will range from D to F. The intersection of US 30 and Gordon Road operates at LOS F in the a.m. and LOS B

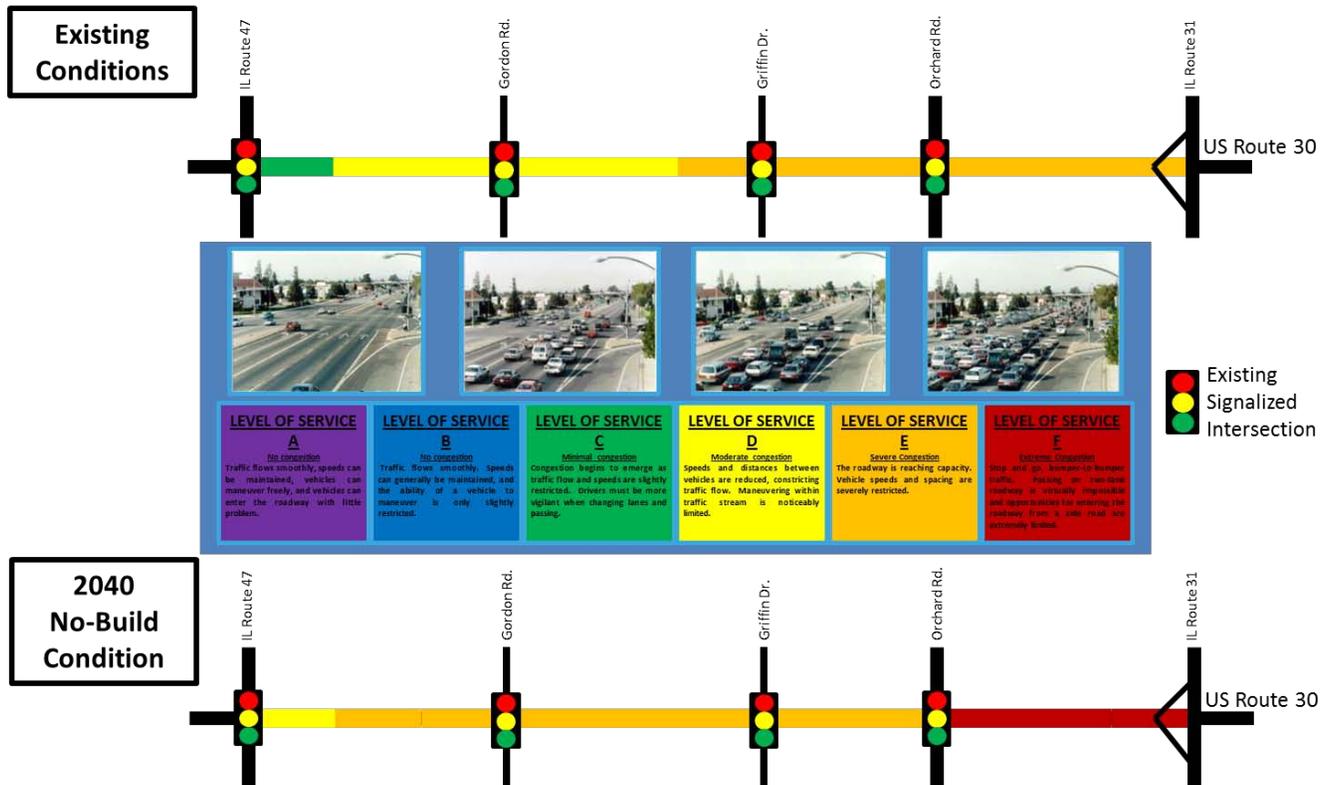
**TABLE 5
Intersection Operations and Capacity Analyses**

Intersection	Intersection LOS	
	Existing (2012) a.m. / p.m. peak hour	No Build 2040 a.m. / p.m. peak hour
Bertram Road (unsignalized)	C / A	F / F
Dickson Road (unsignalized)	E / D	F / F
Gordon Road (signalized)	F / B	F / D
Prescott Drive (unsignalized)	A / B	E / C
Lakewood Creek Drive (unsignalized)	B / B	F / F
Griffin Drive (signalized)	E / C	F / E
Blackberry Road (unsignalized)	C / C	F / F
Orchard Road (signalized)	F / F	F / F
Horseman Trail/Galena Road (unsignalized)	E / C	F / F
Baseline Connector Road (unsignalized)	C / A	F / F

in the p.m. peak periods; and in the future will operate at a LOS F in the a.m. and LOS D in the p.m. peak periods. The US 30 and Griffin Drive intersection operates at LOS E in the a.m. and LOS C in the p.m. peak periods; and in the future will operate at LOS F in the a.m. and LOS E in the p.m. peak periods. The US 30 and Orchard Road intersection operates, and will continue to operate, at LOS F in both the a.m. and p.m. peak periods.

Under existing conditions, the LOS at unsignalized intersections range from A to E, and under no-build conditions in 2040, the intersections will operate at LOS F during both a.m. and p.m. peak periods (Bertram Road, Dickson Road, Lakewood Creek Drive, and Blackberry Road), with one exception. The unsignalized intersection at Prescott Drive will operate at LOS E during a.m. and LOS C during p.m. peak periods in 2040.

Level of Service



1.3.3 Community Growth

Proposed roadway improvements are needed to serve existing land uses and for remaining properties as they develop as predicted under the various land use plans. Properties along US 30 consist of a mix of uses: residential (both single and multi-family), public/institutional (including park and forest preserve lands, as well as the Village of Montgomery’s Police Department), commercial development, and agricultural.

Population forecasts by CMAP, the official land use planning agency for northeastern Illinois, project growth in housing and jobs to continue to 2040, when Montgomery’s and Yorkville’s combined population is projected to reach 82,292, a 70 percent increase over the 2010 population, and the number of jobs is projected to reach 34,324, a 43 percent increase (Table 6). The population and employment in both Kane and Kendall counties are also forecast to increase over the 30-year period. The increased population and employment will increase travel demand through the US 30 project corridor, which is a major east-west travel route.

The communities along the corridor have tools in place, such as formal comprehensive plans and zoning, to guide future land use and development. Based upon review of the various adopted documents, continued commercial and residential uses are planned throughout the corridor. Most of the lands within Kendall County are incorporated municipalities of either Yorkville or Montgomery. All four governmental bodies with jurisdiction over land use development along the corridor—Kendall and Kane Counties, the Village of Montgomery, and the City of Yorkville—identify future development along the US 30 corridor.

TABLE 6
CMAP Population and Employment Forecasts

	Population			Employment		
	2010 ^a	2040 Forecast ^b	% Change	2010 ^a	2040 Forecast ^b	% Change
Kane County	508,482	802,231	57.8	190,527	368,493	93.4
Kendall County	114,528	207,716	81.4	22,013	73,190	232.5
Village of Montgomery	25,144	43,731	73.9	6,159	16,533	168.4
City of Yorkville	22,942	38,561	68.1	5,093	17,791	249.3

Source: CMAP 2040 Forecast of Population, Households, and Employment (developed as part of the GO TO 2040 Comprehensive Regional Plan).

^a 2010 Census households and 2010 (2012 update) Census employment, summarized to Subzone, by CMAP.

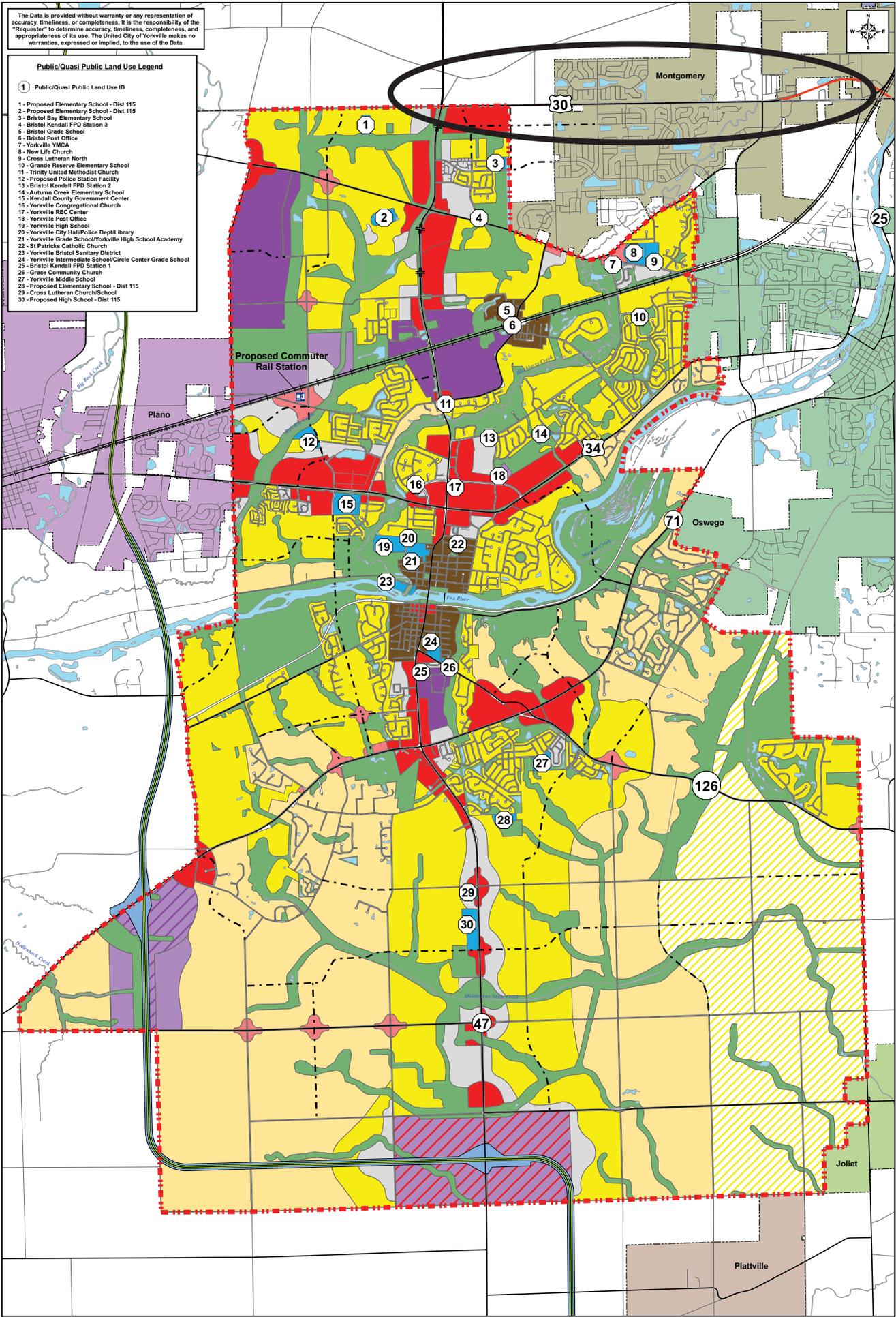
^b Per CMAP, aggregation of forecast data to the municipal and township level was created through a GIS-based exercise, where whole subzones were assigned to municipalities and townships based on the proximity of each subzone's central point (centroid) to current municipality/township boundaries. Therefore, these summaries do not exactly account for population residing within existing municipal boundaries; they are approximate. Refer to the PDF maps available on the CMAP website for depictions of "assigned" municipal and township boundaries used to generate these summaries. These subzone aggregations were created for tabulation purposes only, and are not intended to suggest or predict the future extent of any community.

The Kendall County Land Resource Management Plan, adopted 2011, identifies business use occurring on properties within its jurisdiction that are farmed. *Kane County's 2040 Land Use Plan*, adopted May 2012, designates "institutional/private open space" for undeveloped properties (currently in agricultural use) on the north side of US 30 between the residential development and IL 47.

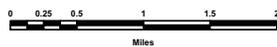
The *City of Yorkville's Comprehensive Plan*, adopted October 2008, shows future commercial development for the part of US 30 within its corporate planning boundary (the south side of the roadway, just east IL 47). This land currently is in agricultural use. Finally, *the Village of Montgomery's 2011 Comprehensive Land Use Development Plan* shows a mix of uses throughout the US 30 corridor, including open space, park, residential, industrial uses and commercial uses. The land in agricultural use (on the west end of the corridor) is shown as future retail development, on both the north and south sides of US 30. The agricultural areas at the west end of the project would be replaced with retail/commercial areas. These types of land use changes have the potential to change the travel characteristics along the project corridor.

The Data is provided without warranty or any representation of accuracy, timeliness, or completeness. It is the responsibility of the "Requester" to determine accuracy, timeliness, completeness, and appropriateness of its use. The United City of Yorkville makes no warranties, expressed or implied, to the use of the Data.

- Public/Quasi Public Land Use Legend**
- 1 - Public/Quasi Public Land Use ID
 - 1 - Proposed Elementary School - Dist 115
 - 2 - Proposed Elementary School - Dist 115
 - 3 - Bristol Bay Elementary School
 - 4 - Bristol Kendall FPD Station 3
 - 5 - Bristol Grade School
 - 6 - Bristol Post Office
 - 7 - Yorkville YMCA
 - 8 - New Life Church
 - 9 - Cross Lutheran North
 - 10 - Grande Reserve Elementary School
 - 11 - Trinity United Methodist Church
 - 12 - Proposed Police Station Facility
 - 13 - Bristol Kendall FPD Station 2
 - 14 - Autumn Creek Elementary School
 - 15 - Kendall County Government Center
 - 16 - Yorkville Congregational Church
 - 17 - Yorkville SEC Center
 - 18 - Yorkville Post Office
 - 19 - Yorkville High School
 - 20 - Yorkville City Hall/Police Dept/Library
 - 21 - Yorkville Grade School/Yorkville High School Academy
 - 22 - St. Patrick's Catholic Church
 - 23 - Yorkville Bristol Sanitary District
 - 24 - Yorkville Intermediate School/Circle Center Grade School
 - 25 - Bristol Kendall FPD Station 1
 - 26 - Grace Community Church
 - 27 - Yorkville Middle School
 - 28 - Proposed Elementary School - Dist 115
 - 29 - Cross Lutheran Church/School
 - 30 - Proposed High School - Dist 115



**United City of Yorkville
2008 Land Use Plan**
October 28, 2008



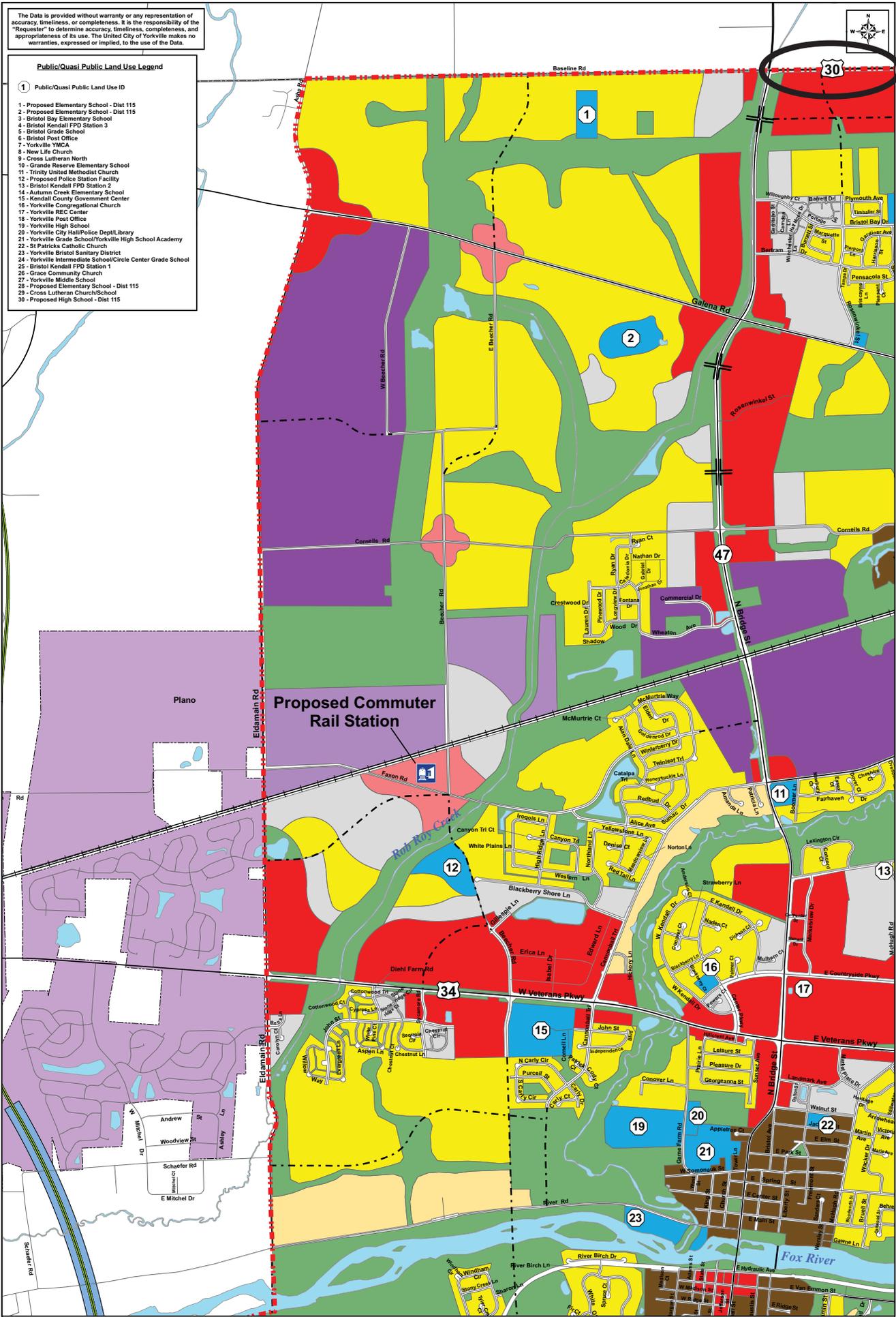
Yorkville Planning Area	Locally Proposed Roads	Prairie Parkway B5 Alignment	Prairie Parkway ROW	2008 Land Use Plan	Legend	Suburban Neighborhood	Traditional Neighborhood	Office/Research	Parks/Open Space
Rural Neighborhood	Estate Neighborhood	Commercial	Neighborhood Retail	Public/Quasi Public	Industrial	Mixed Use	Industrial/Office Research	Commercial/Office Research	Public/Quasi Public

United City of Yorkville GIS

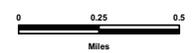
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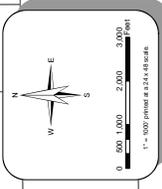
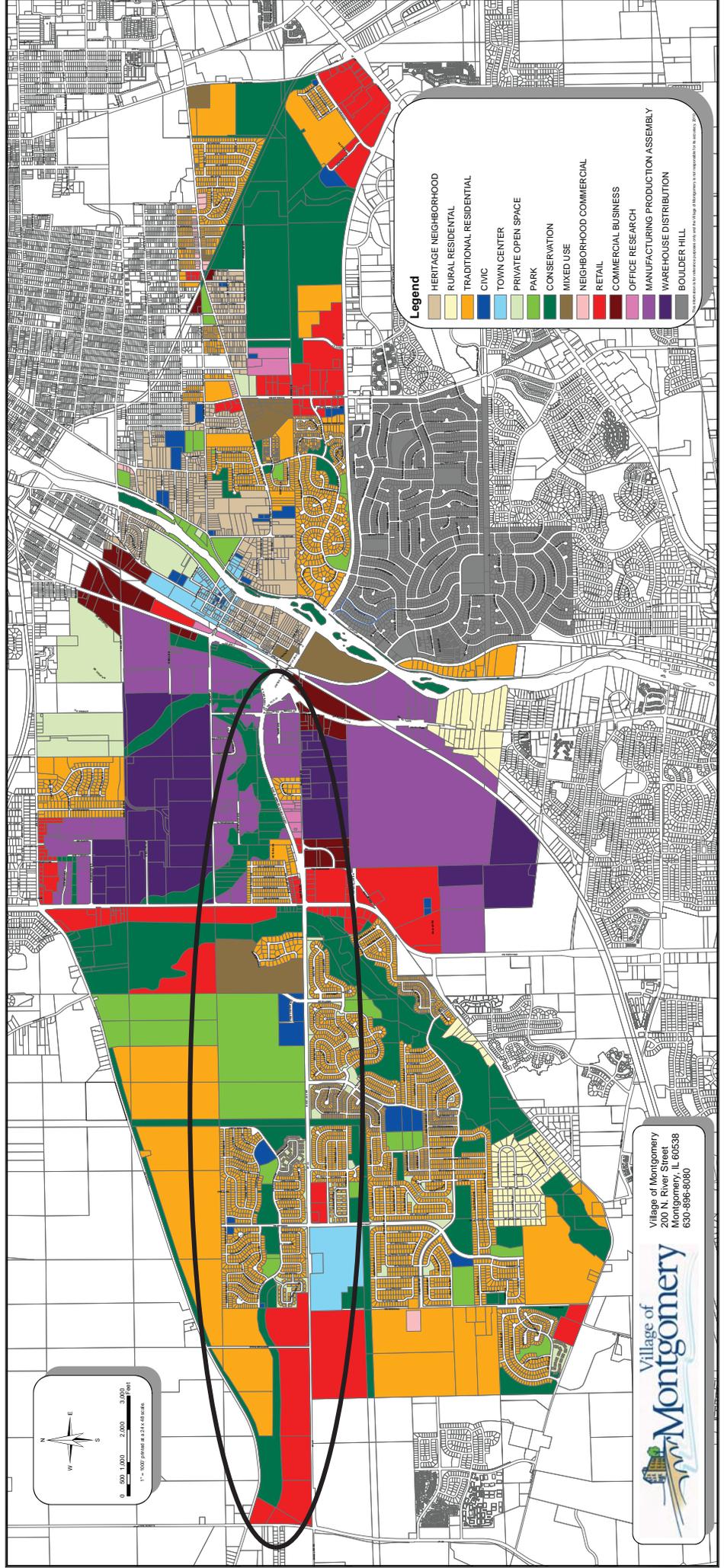


**United City of Yorkville
2008 Land Use Plan - NW 1/4**
October 28, 2008



Legend	
	Yorkville Planning Area
	Locally Proposed Roads
	Prarie Parkway BS Alignment
	Prarie Parkway ROW
	Suburban Neighborhood
	Industrial
	Parks/Open Space
	Commercial
	Public/Quasi Public
	Commercial/Office Research
	Industrial/Office Research
	Rural Neighborhood
	Neighborhood Retail
	Office/Research
	Mixed Use
	Estate Neighborhood
	Traditional Neighborhood

Village of Montgomery 2011 Comprehensive Land Use Development Plan



Village of Montgomery
200 N. River Street
Montgomery, IL 60538
630-686-6080



Future Land Use Plan Kendall County, Illinois



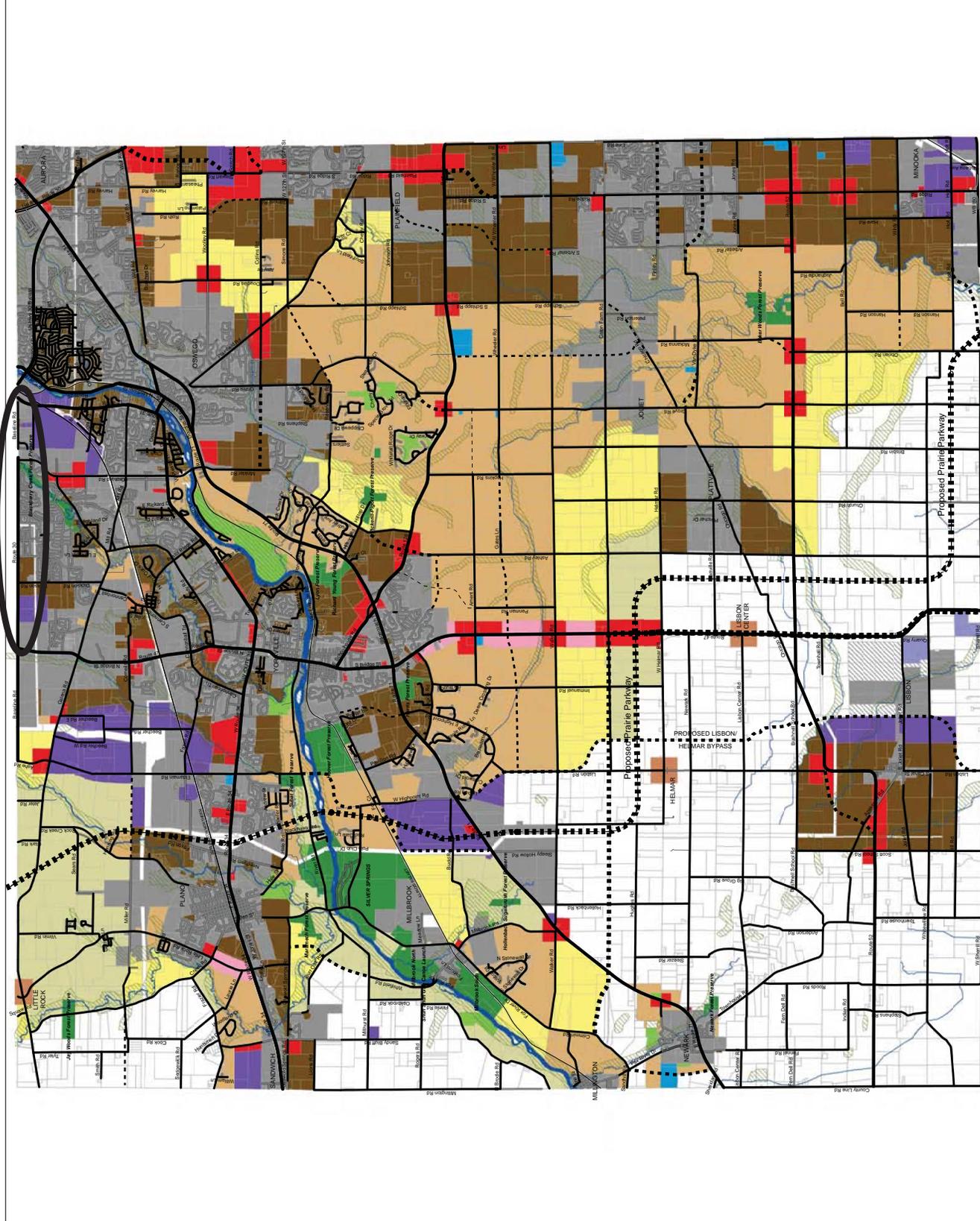
LEGEND

- Urbanized Areas (Incorporated)
- Suburban Residential (Max Density = 1.00 DU/Acre)
- Rural Residential (Max Density = 0.65 DU/Acre)*
- Rural Estate Residential (Max Density = 0.45 DU/Acre)
- Countryside Residential (Max Density = 0.33 DU/Acre)
- Commercial
- Mixed Use Business
- Transportation Corridors
- Mining
- Potential Mining District
- Public/Institutional
- Hamlets
- Agricultural
- Open Space
- Forest Preserves/State Park
- Natural Resource Areas
- Utility

*Note: Additional Density Bonuses up to 0.05 DU/Acre may be applicable; refer to zoning summaries for explanation of density bonuses.

Code	Description
U-1	Urban Center
U-2	Urban Center
U-3	Urban Center
U-4	Urban Center
U-5	Urban Center
U-6	Urban Center
U-7	Urban Center
U-8	Urban Center
U-9	Urban Center
U-10	Urban Center
U-11	Urban Center
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U-46	Urban Center
U-47	Urban Center
U-48	Urban Center
U-49	Urban Center
U-50	Urban Center

ORIGINAL ADOPTION - MARCH 1994 LAST REVISED - APRIL 2011



2040 LAND USE

