



FINAL REPORT

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The SCRTS Study Advisory Committee

January 2016

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Thanks and Acknowledgement to the members of the Study Advisory Committee



Center for Economic Growth



National Grid



Capital District Transportation Committee



Empire State Development



GLOBALFOUNDRIES



Town of Malta



New York State Department of Transportation



Village of Round Lake



Saratoga County

Saratoga County IDA



Town of Stillwater

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Executive Summary

Introduction



Saratoga County is experiencing the largest population growth in the region, and while a large percent leave the county to work, the development of the Luther Forest Technology Campus (LFTC) and operation of GLOBALFOUNDRIES has increased employment in Saratoga County. The increased population and additional job opportunities have contributed to the changing character of central Saratoga County from the historically primarily rural/suburban bedroom

communities to more diversely developed, with the potential for continued growth. This change in character has been felt by longtime residents of the area and has placed pressure on the area’s transportation system.

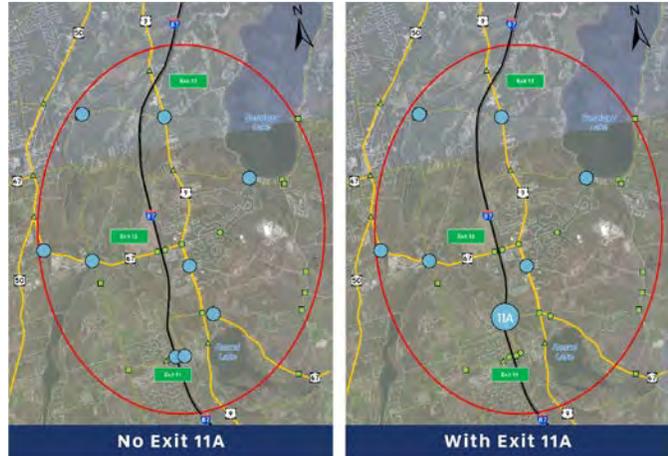
The purpose of the Saratoga County Regional Traffic Study (SRTS) is to address mobility concerns in central Saratoga County, New York, focused around the Adirondack Northway (I-87) Exits 11 and 12 associated with population growth and increased development. The question of whether Exit 11A is needed after construction of two Fabs at LFTC is answered, while examining area wide safety concerns, bicycle and pedestrian needs, transit, and passenger vehicles operations. The Study identifies several ways to *mitigate*, or reduce impacts, associated with future growth in central Saratoga County.

Conclusions

Each of the study area communities has zoning laws used to guide and frame growth within their municipal borders. The zoning and land use development codes have become increasingly important to shape development as growth occurs. The Study evaluated the regional roadway network and 38 intersections that were determined to be reflective of regional mobility. Two future conditions were evaluated: “Planned” and “Aggressive” growth scenarios over a ten year study period. The Planned scenario includes the projects that have some form of approval status, are currently under construction, and/or have been approved but not fully built out. The Aggressive scenario includes growth associated with the Planned scenario and the speculative projects identified during community interviews (for more on forecast scenarios refer Chapter 3 in the report). The evaluation of the two scenarios provide the following conclusions:

Construction of Exit 11A does not “solve” all the traffic concerns and is not needed within the timeframe and conditions studied.

- Without construction of Exit 11A, intersection mitigation is recommended at nine study area intersections. The total cost is about \$15 million.
- With construction of Exit 11A, intersection mitigation is recommended at six study area intersections. The total cost is about \$80 million.



Traffic volumes will continue to increase with additional development.

- There will be increased capacity needed for east/west travel. The mitigation includes an additional westbound through lane at the Exit 11 ramps and completion of the roadway connection opposite Stonebreak Road to NY Route 67.
- Local roads will continue to see increased traffic volumes with additional development.
- Roadway connections like Hemphill Place between US Route 9 and Dunning Street should be preserved and maintained. Construction of similar connections should be continued.

Facility upgrades are needed to serve pedestrians, bicyclists, and transit users and to maintain reasonable livability.

- Construct pedestrian and bicycle accommodations on area roadways, especially local roads with increased traffic volumes.
- Implement speed enforcement to reduce travel speeds on area roadways, especially local roads.
- Plan for “complete streets” to accommodate pedestrians, bicyclists, and transit users with construction of all site developments and roadway mitigation projects.

Travel Demand Management (TDM) is an increasingly important part of land use planning and transportation mitigation.

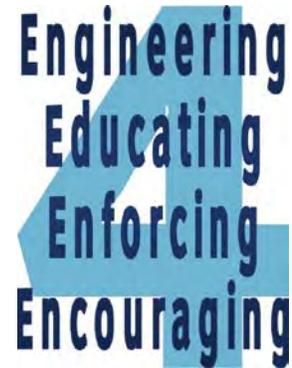
- Use zoning laws and planning documents to create smart growth.
- Reduce peak hour travel by using flexible working hours and adjusting shift work.
- Provide travel options for all users.

Assessment and Mitigation

Creating an efficient and safe transportation network involves more than just constructing roads and intersections. Therefore; the evaluations and recommended mitigation measures

include the “Four E’s” for both the built network (roads, sidewalks, etc.) and planning/policy/decision making opportunities. The “Four E’s” include:

- **Engineering** the appropriate scale roadway network and intersection modifications that meet current design standards and operational concerns.
- **Educating** the walking, bicycling, and driving public to properly use the built environment for maximum safety and health benefit and local decision makers to plan for the preferred future.
- **Enforcing** proper implementation of zoning laws and planning documents to create the preferred future and correct use of facilities for greater compliance with traffic laws to maximize safety.
- **Encouraging** greater use of multi-modal facilities, transportation options, and planning tools through programs and incentives.



Recommendations and Implementation

The goal of the recommendations is to maintain and improve regional travel by encouraging walking, bicycling, and bus trips, promoting smart planning and community building, and accommodating future vehicular traffic with reasonable operations. A Task Force should be developed to implement the findings of the Study. The Task Force should include representation from the CDTC, National Grid, Saratoga County, NYSDOT, Town of Malta, CEG, Empire State Development, Town of Stillwater, Village of Round Lake, GLOBALFOUNDRIES, and Saratoga County IDA. The responsibilities of the Task Force include:

- **Traffic Volume Monitoring** to confirm that capacity modifications are constructed at the appropriate time. The traffic monitoring plan should include a recurring count schedule, available traffic impact study data, and tracking development that drives the need for capacity modifications.
- **Travel Demand Management** implementation to provide options for how, when, where, and why people travel. Many of these strategies are little or low cost and require incentives or disincentives rather than significant capital investment.
- **Educate all transportation system users** as a fundamental element to increasing safety and compliance for all modes. Transportation education should take many forms such as using existing free online resources, hands on training at schools and organizational meetings, brochures and flyers, and outreach campaigns.

- **Fund the Study recommendations** through a mix of traditional funding opportunities, public/private partnerships (GEIS), and Highway Safety Improvement Projects (HSIP). The Task Force will need to advocate for the limited public funds that are available.



1. Introduction

A. Overview

The primary purpose of this study is to address traffic and transportation concerns in Saratoga County, NY in an area focused around the Adirondack Northway (I-87) Exits 11 and 12 in the Towns of Malta, Stillwater, Village of Round Lake, and including other areas impacted by economic growth and development associated with the Luther Forest Technology Campus (LFTC). The LFTC itself employs thousands and has the potential for significant additional growth, which has been the subject of several Generic Environmental Impact Statements (GEIS) and traffic analyses outlining expected growth and project related transportation mitigation. This study goes beyond the LFTC and takes an expanded view of transportation needs covering more regional traffic growth influences and a broader context. The study examines the latest available information and data, area wide safety concerns, bicycle and pedestrian needs, freight movement, and community input to determine deficiencies and mitigation alternatives needed over the next 10 years. Although this study does not focus solely on the LFTC, it recognizes that LFTC will be a significant driver of future transportation needs and explores the need for a potential new interchange on I-87 (Exit 11A).



This study was administered by the Center for Economic Growth (CEG) with project management and technical assistance from the Capital District Transportation Committee (CDTC). National Grid funded \$250,000 of the study through its Strategic Economic Development grant program with the remaining monies from CDTC, Saratoga County, the Town of Malta, the Town of Stillwater, GLOBALFOUNDRIES, and the Saratoga County IDA.

A Study Advisory Committee (SAC) was established to meet regularly and to guide the Study. The committee monitored the progress, reviewed Study products and provided a two-way information conduit between the project and the general public



and stakeholders. The Study Advisory Committee is comprised of:

- Center for Economic Growth (CEG)
- National Grid
- Capital District Transportation Committee (CDTC)
- Empire State Development
- GLOBALFOUNDRIES
- Town of Malta
- New York State Department of Transportation (NYSDOT)
- Village of Round Lake
- Saratoga County
- Saratoga County Industrial Development Agency (IDA)
- Town of Stillwater

The SAC articulated the following simplified Study objective to guide the progression of study work activities.

The objective of the Saratoga County Regional Traffic Study is to identify the transportation mitigation measures and implementation steps needed to accommodate growth in Saratoga County specifically centered around the Northway (I-87) Exits 11 and 12.

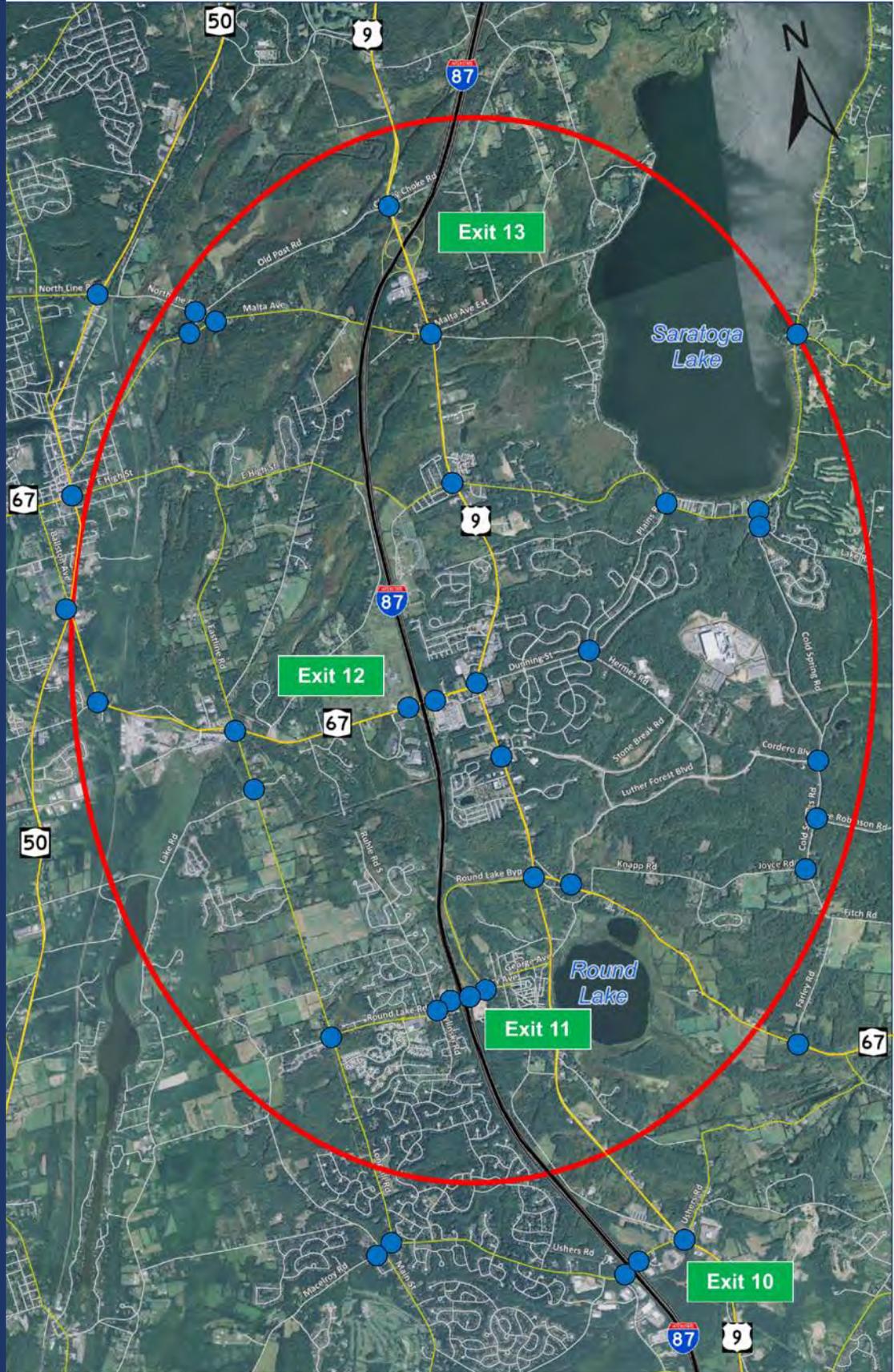
In addition to the Study Advisory Committee, the Study involved a wide range of stakeholders at a series of topic specific meetings, agency contacts, including local, county, and state government representatives, regional transportation planning and transit agencies, chambers of commerce, academic institutions, and several large employers. Further discussion of the specific public and stakeholder input is provided in Chapter 2.

B. Study Area

The SAC focused the study area within Saratoga County around I-87 Exits 11 and 12, in line with the Project Objective, by reviewing the primary travel routes in the area and the roads providing access to the Luther Forest Technology Campus. Figure 1 shows the approximate study area boundary and the intersections determined to have regional travel significance for the purposes of this study.



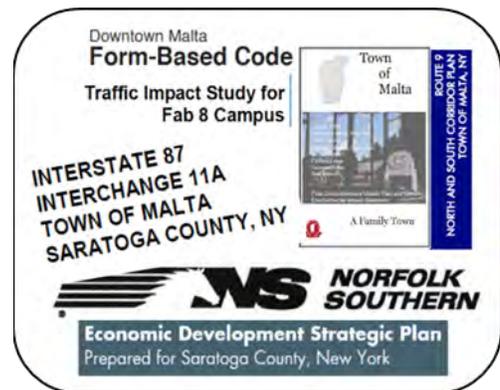
Figure 1: Study Area Intersections



C. Project Evolution and Regional Plans

As growth has been realized in the Luther Forest Technology Campus, it is important to understand and build off of previous plans and studies, including completed and ongoing traffic impact studies within the area. The policies, recommendations, and projects contained in the previous studies serve to inform the existing and planned transportation conditions in the region. Accordingly, the following studies were reviewed as they highlight important decisions and traffic changes in the study area. A summary of each of the above mentioned studies is included in Appendix A.

- New Visions
- 2002 NYSDOT Draft Conceptual Access Modification Proposal for I-87, Exit 11A
- 2003 Luther Forest Technology Campus GEIS
- 2005 Round Lake Bypass Access Study
- 2005 Town of Malta Comprehensive Master Plan
- 2006 Malta Town-Wide GEIS
- 2006 Route 9 North and South Corridor Plan
- 2006 Route 67 Corridor Study
- 2008 Stillwater GEIS & Master Plan
- 2009 Mechanicville Intermodal & Automotive Handling Facility TIS (Norfolk Southern Intermodal Traffic Study)
- 2012 Round Lake Road Corridor Plan
- 2013 Traffic Impact Study (TIS) Fab 8 Campus
- Form-Based Code for Malta
- 2014 Saratoga County Economic Development Strategic Plan



New Visions is the long-range regional transportation plan for the Capital Region including Albany, Rensselaer, Saratoga, and Schenectady counties. In September 2011, New Visions for a Quality Region 2035 Update was completed by CDTC and reaffirmed the 2030 plan which supports concentrated development in the region and follows four themes:

- **Preserve and manage** the existing investment in the region's transportation system.
- **Develop the region's potential** to grow into a uniquely attractive, vibrant, and diverse metropolitan area.
- **Link transportation and land use** planning to meet the Plan's goals for urban investment, concentrated development patterns, and smart economic growth.
- **Plan and build for all modes** including pedestrian, bicycle, public transit, cars, and trucks.



The current update (New Visions 2040) maintains the four themes while placing an emphasis on public participation, land use planning, and multi-modal transportation.

While New Visions provides planning principles and four over-arching themes for the Capital Region, the other studies provide a more focused analysis and plan for the study area. The common themes and key issues identified in these studies include:

- Capacity and safety of the Route 9/Route 67/Dunning Street intersection
- Construction of an I-87 Exit 11A with construction of two Fabs at LFTC
- Capacity and delay at the I-87 Exit 11 ramp intersections with Round Lake Road
- Individual intersection capacity modifications
- Additional roadway connections to mitigate delay
- Desire to maintain a “downtown” in Malta
- Multi-modal access and accommodations in all areas

The I-87 Exit 11A interchange was identified as a mitigation measure after construction of two Fabs in the FGEIS for LFTC dated October 16, 2003. The Malta Town-Wide GEIS identified intersection improvements at the Route 9/Route 67/Dunning Street intersection and the I-87 Exit 11 Northbound Ramp/Round Lake Road intersection with the assumption that construction of Exit 11A would alleviate traffic volumes at these intersections in the future. The LFTC FGEIS is more than a decade old and transportation conditions and business plans for LFTC have changed. The fundamental assumption that Exit 11A is needed after construction of two Fabs, which was carried through the Malta Town-Wide GEIS, requires additional investigation. The trip generating potential of LFTC was included in a number of the planning studies reviewed, as construction and operation of the first Fab continues, the trip generating potential of the site can be reviewed and updated as needed to confirm the specific recommendations in the reviewed studies. The most recent evaluation for GLOBALFOUNDRIES completed in 2013 determined that additional development, beyond two Fabs, could occur at the site without construction of Exit 11A.

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2. Existing Transportation Conditions

The study area is served through a network of local, county, and state maintained roadways. Regional north/south access to the study area is provided via I-87. Route 9 and Route 50 parallel I-87 to the east and west creating access to the study area from local origins. There are two primary east/west roadways in the study area traversing I-87: Route 67 at Exit 12 and Round Lake Road (CR 80) at Exit 11. Secondary east/west roadway connections in the study area are Old Post Road and Malta Avenue (CR 63) near Exit 13 and Ushers Road near Exit 10. Table 2.1 identifies the study area intersections by number.

Table 2.1 - Study Area Intersections

No.	Intersection	No.	Intersection
1	Rt 50/Ballston Ave/Northline Rd	20	Round Lake Rd/Ruhle Rd/Raylinsky Rd
2	Old Post Rd/Malta Ave	21	Round Lake Rd/I-87 Exit 11 Southbound
3	Old Post Rd/Northline Rd	22	Round Lake Rd/I-87 Exit 11 Northbound
4	Northline Rd/Malta Ave	23	Round Lake Bypass/Curry Ave
5	Rt 9/Cherry Choke Rd/Old Post Rd	24	Rt 9/George Ave
6	Rt 9/Malta Ave	25	Longkill Rd/McElroy Rd/Hatlee Rd/Main St
7	Rt 9/Rt 9P	26	Longkill Rd/Ushers Rd
8	Rt 67/Rt 50/E High St/Milton Ave	27	Ushers Rd/I-87 Exit 10 Southbound
9	Rt 67/Rt 50/Ballston Ave/Saratoga Rd	28	Ushers Rd/I-87 Exit 10 Northbound
10	Rt 67/Brookline Rd	29	Rt 9/Ushers Rd
11	Rt 67/Eastline Rd	30	Rt 9P/Rt 423
12	Rt 67/I-87 Exit 12 Southbound	31	Rt 9P/Plains Rd
13	Rt 67/I-87 Exit 12 Northbound	32	Rt 9P/Lake Rd
14	Rt 9/Rt 67/Dunning St	33	Lake Rd/Cold Springs Rd
15	Dunning St/Hermes Rd/Plains Rd	34	Cold Springs Rd/Cordero Blvd
16	Rt 9/Stonebreak Rd	35	Cold Springs Rd/Elmore Robinson Rd
17	Rt 9/Rt 67/Round Lake Bypass	36	Cold Springs Rd/Fitch Rd/Joyce Rd
18	Luther Forest Blvd/Rt 67	37	Rt 67/Farley Rd
19	Eastline Rd/Round Lake Rd	38	Eastline Rd/Lake Rd

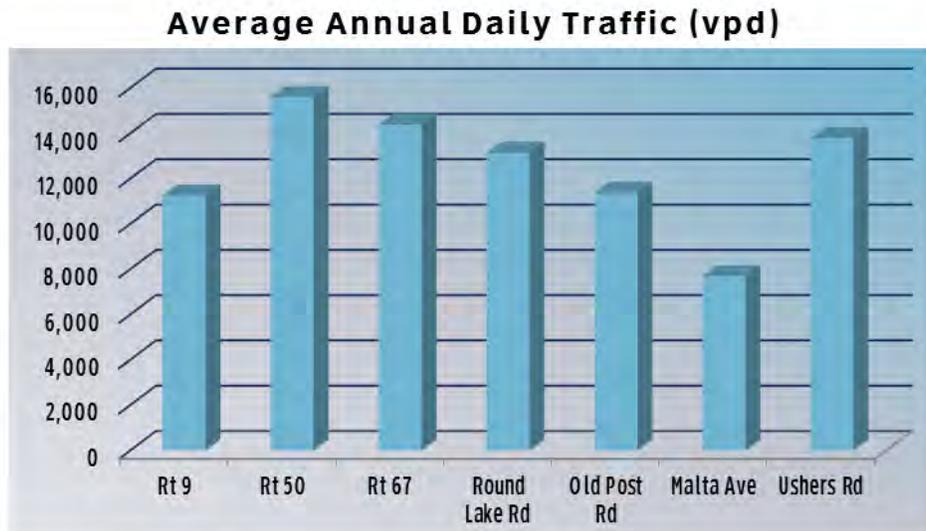
A. Study Area Traffic Volumes

Daily Traffic Volumes

Existing roadway and intersection traffic volumes were determined using data available through NYSDOT, Saratoga County, local municipalities, previously completed studies, and new traffic data where needed. The traffic volume data includes daily traffic volumes to identify peaking characteristics on study area roadways and intersection turning movement counts which are used to identify intersection operational conditions.

Traffic volumes on I-87 range from 62,000 vehicles per day (vpd) north of Exit 13 to 76,000 vpd south of Exit 10. The chart below illustrates the average annual daily traffic volumes (AADT) on

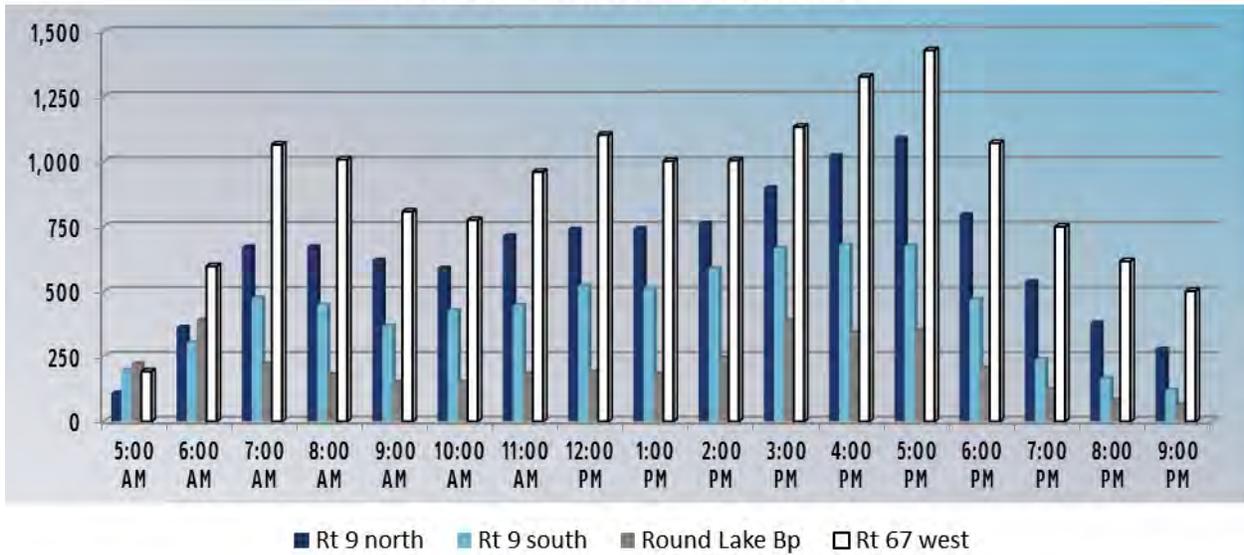
regional study area roadways between Exits 11 and 12 for north/south roadways and adjacent to I-87 for east/west roadways.



The daily traffic volume data shows that the north/south roadways in the study area (I-87, Route 9, and Route 50) together serve approximately 100,000 vpd and the east/west roadways together serve approximately 60,000 vpd. This volume is a mix of vehicles travelling to, through, from, and within the study area on a typical weekday.

Traffic volume hourly variation data is used to identify peak conditions for analysis. The following chart shows the hourly traffic volume from 5:00 a.m. to 9:00 p.m. on a typical weekday on Route 9 north of Dunning Street, Route 9 south of the Round Lake Bypass, the Round Lake Bypass, and Route 67 west of Route 9. The data shows that Routes 9 and 67 generally experience their highest volumes during the typical morning and afternoon peak periods from 7:00 to 9:00 a.m. and 4:00 to 6:00 p.m. Route 9 also experiences a peak from 12:00 to 1:00 p.m. The Round Lake Bypass serves the highest amount of traffic from 6:00 to 7:00 a.m. and 3:00 to 4:00 p.m. which is before the typical commuter peaks and therefore slightly earlier than the other roads. Data shows that the earlier peak is likely due to traffic directly associated with GLOBALFOUNDRIES. The other identified roadways serve a greater mix of general commuter and GLOBALFOUNDRIES traffic while the Round Lake Bypass has a higher percentage of traffic specifically destined for the LFTC. The data shows that the Round Lake Bypass is functioning as intended by serving traffic associated with GLOBALFOUNDRIES.

Hourly Variation (vehicles)



Traffic Distribution Patterns

Employee and contractor surveys were conducted at GLOBALFOUNDRIES to identify the regional distribution pattern for individuals travelling to and from the study area. The map illustrates the distribution pattern for employees in black and contractors in gold. One primary finding of the survey data is the number of vehicles that stay within the study area. Previous evaluations have assumed that 100% of site-generated traffic travels to and from regional points outside the study area. The survey data shows that 12% of employee traffic and 19% of contractor traffic commutes within the study area. Table 2.2 summarizes the trip distribution patterns used in previous studies and the distribution patterns identified through the survey results.

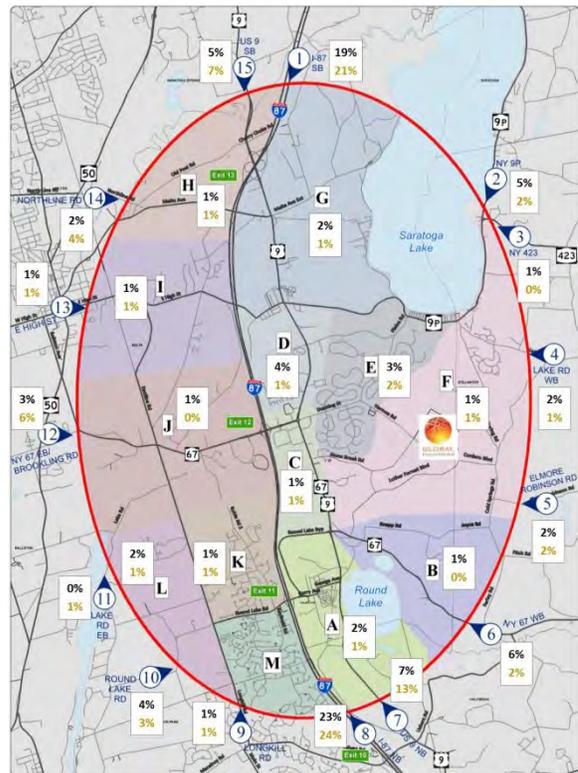


Table 2.2 - Regional Distribution Pattern

Direction	Previous GF Evaluations		2014 GF Survey	
	2003 GEIS	2013 TIS	Employee	Contractor
North	39%	39%	30%	29%
South	24%	25%	38%	31%
East	15%	14%	5%	11%
West	22%	22%	15%	10%
Internal*	0%	0%	12%	19%
Total	100%	100%	100%	100%

* Internal trips remain within the boundary of the study area.

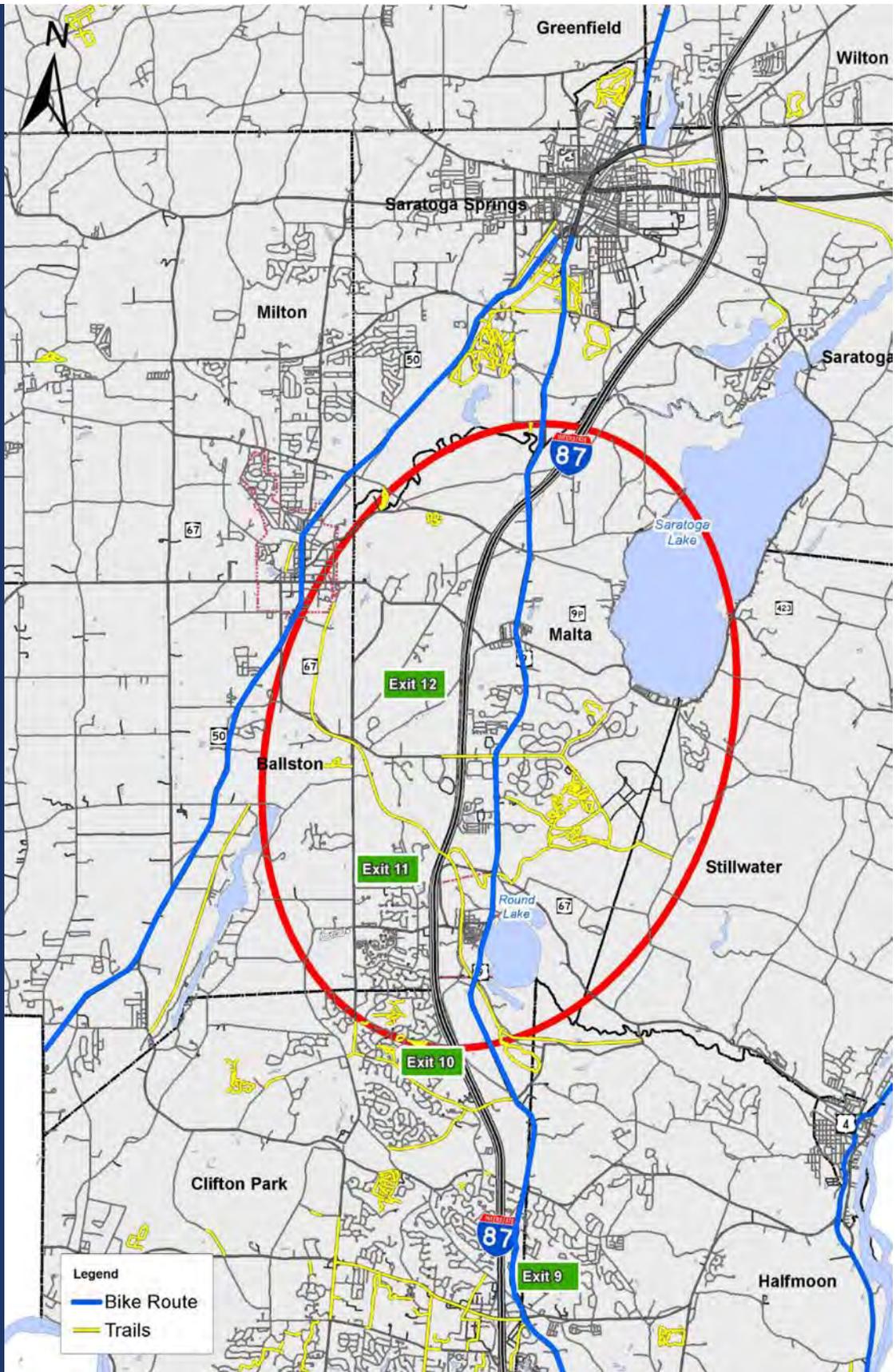
B. Pedestrian/Bicycle Accommodation and Environment

A review of the study area roadways shows that pedestrians and bicyclists are primarily accommodated on the shoulders of the roadways. Sidewalks and paths are available in some areas of Malta specifically in the Town center around the Route 67/Route 9/Dunning Street intersection and extending away from the intersection. Figure 2 shows the designated trails and bike routes as identified by the New York State GIS Clearinghouse. The image shows that there are three trail crossings of I-87 in the study area; one at Exit 10, a second along the Zim Smith Trail north of Round Lake, and the third at Exit 12. In the study area, Route 50 and Route 9 are both identified as county bike routes.

Although not shown on the figure, Route 9 has an intermittent sidewalk network extending north and south of Dunning Street. The Town has been working to implement their Downtown Pedestrian Plan since its inception in 2003. As parcels along Route 9, and other roadways included in the Downtown Pedestrian Plan, are developed sidewalks and multi-use paths are constructed to continue building the pedestrian and bicycle network.



Figure 2: Trails and State and County Bike Routes



C. Transit

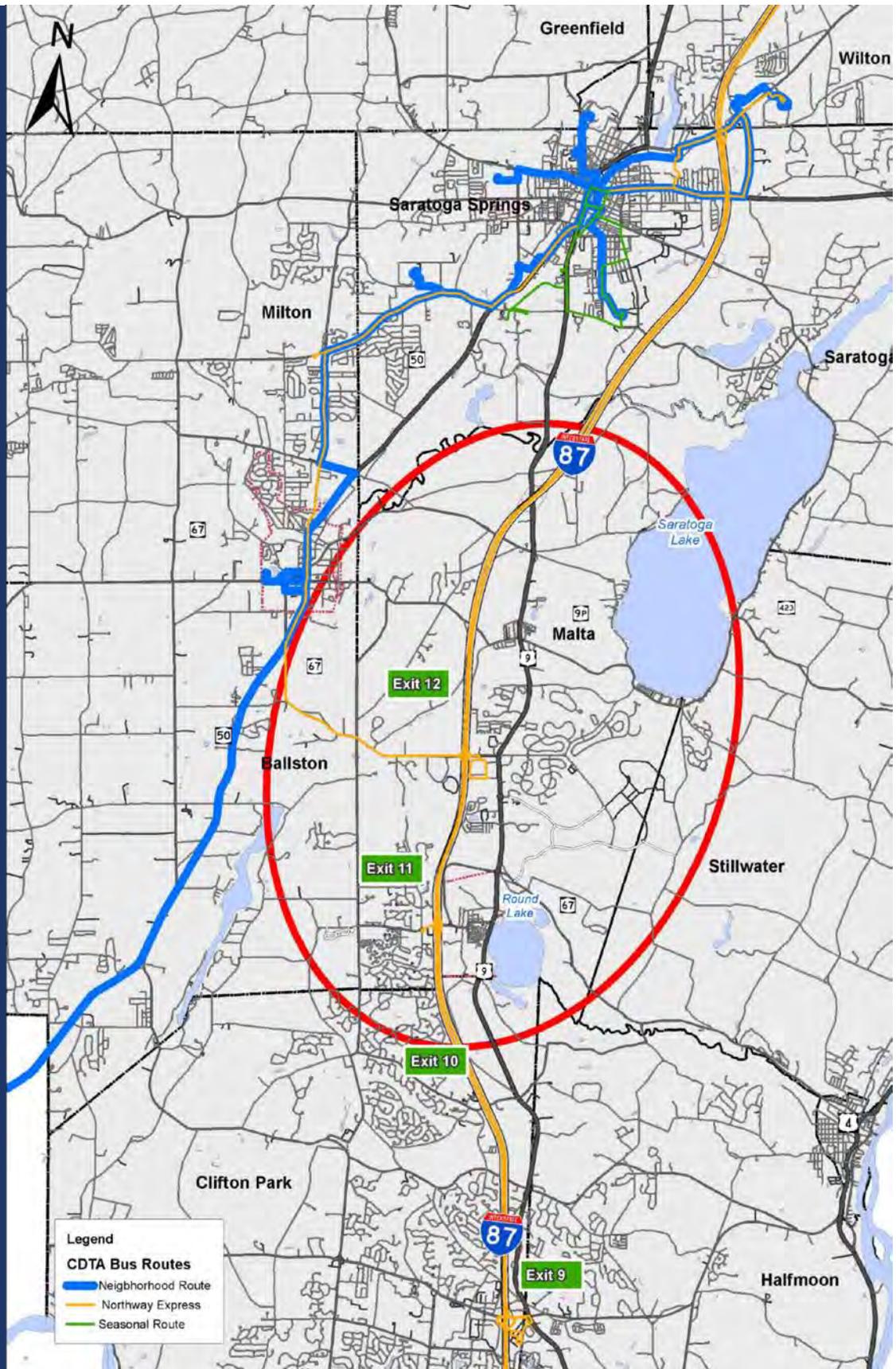
The Capital District Transportation Authority (CDTA) provides transit service in all of the Capital Region including the study area in Saratoga County. As illustrated in Figure 3, public bus service is provided in the City of Saratoga Springs and along Route 50, but only the Northway Xpress (NX) provides service within the study area as it has stops near Exit 12 and Exit 11. There are two neighborhood bus routes (472 and 473) and seasonal bus route (875) serving Saratoga Springs. Neighborhood Route 50 travels between the Cities of Schenectady and Saratoga Springs serving Wilton, Ballston Spa, and Glenville primarily on NY Route 50. Service in and around the study area may change in the relatively near future as CDTA is working on route restructuring for Saratoga County.

In addition, private shuttles like the one at Ellsworth Commons, located on Route 9 north of Dunning Street, transport residents to GLOBALFOUNDRIES.

The Ellsworth Commons shuttle has two pick-up points (as illustrated in the adjacent image) and reduces the number of passenger vehicles travelling to and from the LFTC on the local road system.



Figure 3: Transit



D. Freight

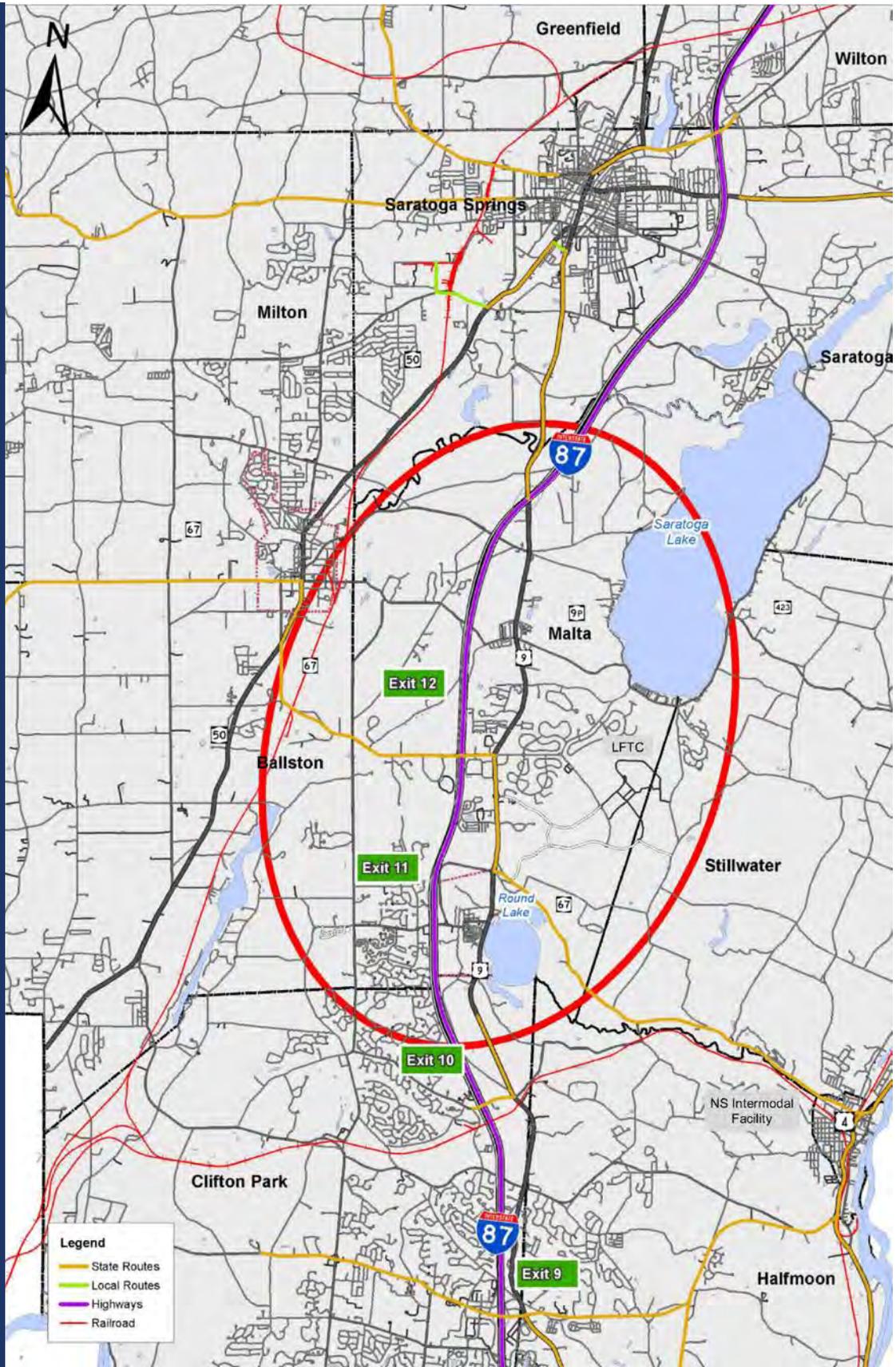
Freight traffic in the study area includes both rail and truck travel. I-87, Route 67, and portions of Route 9 are designated truck routes in the study area as shown on Figure 4. Construction of the Norfolk-Southern Mechanicville Intermodal & Automotive Handling Facility on Route 67 east of I-87 has increased heavy vehicle traffic on Route 67 between Mechanicville and I-87 Exit 11. Construction materials destined for GLOBALFOUNDRIES are also contributing to an increase in heavy vehicle traffic on study area roadways, especially between I-87 and the LFTC. Review of available data shows that heavy vehicle traffic accounts for more than 14% of daily traffic between Route 9 and Mechanicville. Heavy vehicle traffic on roadways accessing LFTC ranges from a low of 3.5% of daily traffic on Hermes Road to a high of 10.5% of daily traffic on Luther Forest Boulevard.

It is noted that the CDTC has established the Freight Advisory Committee to guide its freight planning efforts to help decision makers better understand freight movement complexities and to more effectively guide public investment in the transportation infrastructure. CDTC is currently managing The Regional Freight & Goods Movement Study which will provide analysis and recommendations to inform the freight section of the CDTC's 2040 New Visions Plan update. The study is expected to address a number of issues including the following that may affect the study area:

- Minimize conflicts caused by the proximity of incompatible land uses near major freight facilities or generators (ex: safety issues, noise pollution, conflicting movements between passenger vehicles and heavy trucks, heavy wear on roadways and residential streets, increased burden for freight delivery, etc.);
- Minimize heavy truck impacts on traffic congestion during peak commute periods;
- Minimize conflicts between freight modes, including cooperation of intra- and intermodal partners and competitors;
- Protect and enhance local delivery access for trucks, particularly in areas experiencing development;
- Identify opportunities to enhance freight activity at major generators or intermodal facilities to support further economic development.



Figure 4: Freight



E. Operations and Level of Service

Intersection levels of service and capacity analyses relate traffic volumes to the physical characteristics of an intersection. Intersection evaluations for the 38 study intersections were conducted using Synchro and SIDRA software which automates the procedures contained in the *2010 Highway Capacity Manual* (HCM). Levels of service range from A to F, with LOS A conditions considered excellent (very little delay) while LOS F represents conditions with very long delays. Table 2.3 summarizes the results of the overall levels of service for the traffic signal, roundabout, and all-way stop controlled intersections for the AM and PM peak hours under existing conditions. The detailed level of service tables are included in Appendix B. The analysis shows that the intersections operate at overall level of service D or better during the AM and PM peak hours with the exception of the Old Post Road/Northline Road all-way stop controlled intersection which operates at overall LOS E during the PM peak hour.

Figures 5 and 6 illustrate the overall or controlled approach levels of service for all study intersections. The figures also identify the intersections that have intersection approaches or movements that operate at level of service E or F even though the overall intersection may operate at overall level of service D or better.

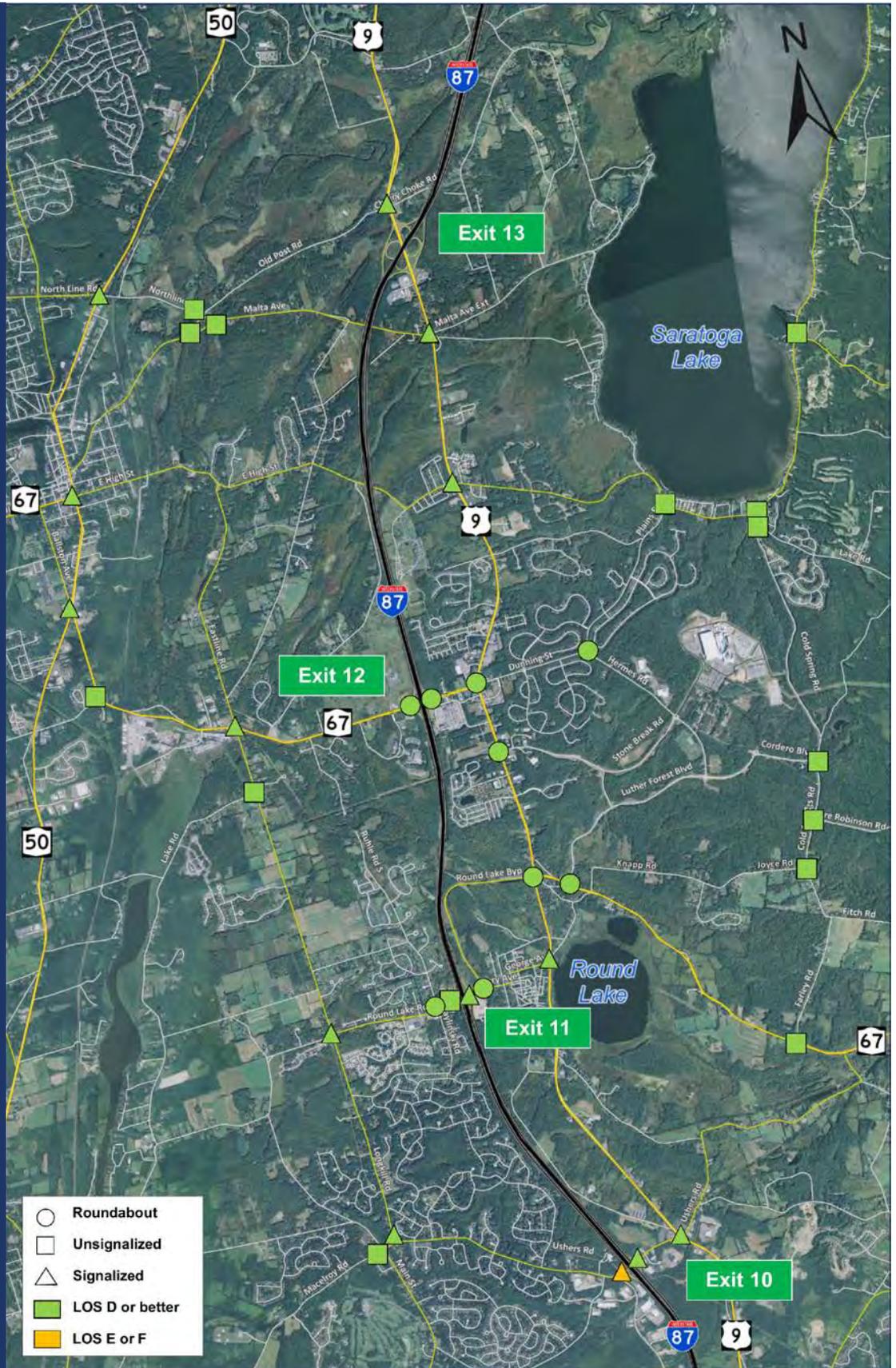


Table 2.3 - Existing Levels of Service Summary

No.	Intersection	Control	AM Peak	PM Peak
1	Rt 50/Ballston Ave/Northline Rd	S	D (35.4)	C (35.0)
2	Old Post Rd/Malta Ave	TW	A (9.2)	A (9.4)
3	Old Post Rd/Northline Ave	AW	D (25.9)	E (39.6)
4	Northline Rd/Malta Ave	TW	B (14.3)	C (20.3)
5	Rt 9/Cherry Choke Rd/Old Post Rd	S	B (18.7)	B (18.2)
6	Rt 9/Malta Ave	S	B (16.8)	C (26.7)
7	Rt 9/Rt 9P	S	B (12.4)	B (15.7)
8	Rt 67/Rt 50/E High St/Milton Ave	S	B (14.9)	B (14.8)
9	Rt 67/Rt 50/Ballston Ave/Saratoga Rd	S	C (21.2)	C (22.7)
10	Rt 67/Brookline Rd	TW	D (31.0)	C (15.8)
11	Rt 67/Eastline Rd	S	D (35.9)	D (39.8)
12	Rt 67/I-87 Exit 12 Southbound	RA	A (4.2)	A (5.2)
13	Rt 67/I-87 Exit 12 Northbound	RA	A (6.6)	A (4.5)
14	Rt 9/Rt 67/Dunning St	RA	B (19.3)	C (28.9)
15	Dunning St/Hermes Rd/Plains Rd	RA	A (6.4)	A (7.4)
16	Rt 9/Stonebreak Rd	RA	A (5.4)	A (5.8)
17	Rt 9/Rt 67/Round Lake Bypass	RA	A (9.7)	B (12.3)
18	Luther Forest Blvd/Rt 67	RA	A (7.5)	A (9.2)
19	Eastline Rd/Round Lake Rd	S	A (9.8)	B (10.4)
20	Round Lake Rd/Ruhle Rd/Raylinsky Rd	S	A (9.6)	A (8.0)
21	Round Lake Rd/I-87 Exit 11 Southbound	TW	C (18.4)	F (97.5)
22	Round Lake Rd/I-87 Exit 11 Northbound	S	B (10.9)	C (20.7)
23	Round Lake Bypass/Curry Ave	RA	A (5.2)	A (6.2)
24	Rt 9/George Ave	S	A (7.1)	A (7.3)
25	Longkill Rd/McElroy Rd/Hatlee Rd/Main St	AW	B (13.0)	C (17.2)
26	Longkill Rd/Ushers Rd	S	A (8.6)	B (11.7)
27	Ushers Rd/I-87 Exit 10 Southbound	S	B (19.9)	B (17.8)
28	Ushers Rd/I-87 Exit 10 Northbound	S	B (17.0)	C (21.6)
29	Rt 9/Ushers Rd	S	B (14.2)	C (25.3)
30	Rt 9P/Rt 423	TW	A (9.8)	B (10.4)
31	Rt 9P/Plains Rd	TW	B (11.9)	B (14.0)
32	Rt 9P/Lake Rd	TW	B (13.9)	C (24.0)
33	Lake Rd/Cold Springs Rd	TW	B (10.5)	B (14.5)
34	Cold Springs Rd/Cordero Blvd	TW	A (9.8)	B (11.5)
35	Cold Springs Rd/Elmore Robinson Rd	TW	A (9.0)	A (9.1)
36	Cold Springs Rd/Fitch Rd/Joyce Rd	AW	A (6.9)	A (7.3)
37	Rt 67/Farley Rd	TW	B (10.8)	B (10.4)
38	Eastline Rd/Lake Rd	TW	C (16.1)	C (17.5)

S, RA, AW, TW = Signalized, Roundabout, All-Way Stop, or Two-Way Stop controlled intersection
X(Y.Y) = Level of Service (Average delay in seconds per vehicle)

Figure 5: Existing AM Peak Hour Levels of Service



Figures 5 and 6 show that the following intersections have level of service E or F operations for particular movements:

- Old Post Road/Northline Road – eastbound and westbound on Northline Road during the PM peak hour
- Round Lake Road/Exit 11 Southbound Ramp – southbound ramp during the PM peak hour
- Ushers Road/Exit 10 Southbound Ramp – southbound ramp during the AM and PM peak hours
- Ushers Road/Exit 10 Northbound Ramp – northbound ramp during the PM peak hour

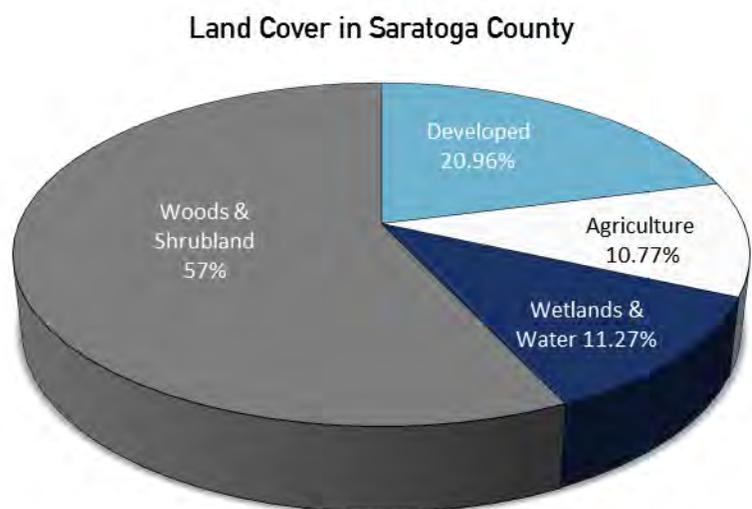
Since these locations operate below level of service D under existing conditions, mitigation measures will be evaluated in Chapter 3 of this study. It is noted that the Old Post Road/Northline Road and Round Lake Road/Exit 11 Southbound Ramp intersections have been identified in previous studies and analysis for intersection capacity modifications.

F. Existing Land Use, Zoning, and Planned Development

It is important to understand existing land use, zoning, and development trends to forecast future growth affecting the study area. The growth potential is evaluated to determine future traffic volumes and transportation deficiencies and needs in the study area.

Land Use

Saratoga County represents a mix of very low to medium density residential, agricultural, vacant, and commercial land uses. Data presented on the Saratoga PLAN website shows more than half of the land cover in Saratoga County is Woods and Shrubland and only 21% is Developed. Of the 21% of the developed land, the majority is residential. There are corridors of commercial use located proximate to Routes 9, 50, and 67 and isolated industrial land uses. The construction and operation of GLOBALFOUNDRIES has increased the number of commercial and industrial uses in Saratoga County



since the 2010 census.

Zoning

Each of the study area communities has zoning laws used to guide and frame growth within their municipal borders. The zoning and form-based codes have become increasingly important to positively shape development and strengthen the study area communities, as growth occurs.

Growth and Development

Information published by the Capital District Regional Planning Commission (CDRPC), utilizing United State census data, shows that the population in the Capital District increased by approximately 44,000 people from 2000 to 2010. Of the 44,000 increase, 19,000 (~43%) is attributed to population growth in Saratoga County. While Saratoga County is experiencing the largest population growth in the region, of the 110,000 workers in the county, almost 47% leave the county to work.

Historical building permit data was collected from CDRPC from 2004 through 2013 to identify how Saratoga County has been developing over the last decade. This period represents both pre- and post-recession periods and includes entries for the number of buildings as well as units permitted. Table 2.4 summarizes the building permit totals, annual average, and annual high for each of the study area communities. The detailed information is included in Appendix C.

Table 2.4 - Building Permits (units) 2004-2013

Community	Total	Annual Average	Annual High
Town of Ballston	652	65	124
Town of Clifton Park	877	88	213
Town of Halfmoon	2,059	206	337
Town of Malta	693	69	105
Town of Milton*	204	68	95
Town of Saratoga	171	17	37
City of Saratoga Springs	1,512	151	309
Town of Stillwater	346	35	75
Town of Wilton	1,209	121	426
Total	7,723	820	1,721

**Note – Data reported for the Town of Milton is limited to 2011 through 2013 due to lack of data*

Table 2.4 shows that over the data evaluation period, a total of 7,723 units were built at an average rate of 820 units per year.

In addition to the historical data, representatives from each of the communities surrounding the study area (identified in Table 2.4) were interviewed to identify existing development projects that have been approved or are in the approval process with the local municipality, i.e. known developments that are “on the books”. The research identified 6,432 residential units

remaining to be built and 3.75 million square feet (SF) of commercial development that has been approved or is currently undergoing the approval process. When comparing the existing planned development to growth over the last decade, this rate of anticipated growth is higher than the previous decade as identified by the CDRPC.

G. Public Involvement

With the development of the LFTC, the study area has been the focus of a number of planning and engineering studies, and public involvement upon which this study can build. The first public information meeting for the Saratoga County Regional Traffic Study was held on Wednesday, November 5, 2014, at the Malta Community Center and was well attended by residents, stakeholders, and study advisory committee members. The meeting summary is included in Appendix D. The meeting included a presentation outlining the study objective, advisory committee and its role, stakeholders, scope of work, study area, and the study process.

Following the presentation was an open forum question/comment session and then topic specific stations with one-on-one question/comment opportunities. Meeting attendees were also asked to rank livability factors (commute time length, local jobs, open spaces access, etc.) at the topic specific stations. The input from the open forum and station-oriented session resulted in the following generalized comments and concerns:

- Pedestrian and bicyclist safety at roundabouts
- Congestion concerns near I-87 Exit 11 and Exit 12
- Increases in traffic on local roads attributed to development
- Consideration of speed reduction due to high volume passenger vehicle and truck traffic
- New interchange on I-87 between Exit 11 and 12 as a possible solution to ease traffic
- High speeds, truck traffic, and narrow shoulders on Route 67 between Route 9 and Mechanicville create concern for residents to cross the road to reach their mailboxes.
- Pedestrian and bike accessibility and ADA compliance



The comments and concerns raised by the public were considered when identifying the appropriate mitigation in the study area, as discussed in later chapters and presented to the public at the second public meeting on December 8, 2015. Meeting attendees had multiple opportunities to ask questions and provide comments during an open forum question/comment session. Comments raised were consistent with those identified at the first public meeting.

In addition to the public meeting, a series of stakeholder meetings were held in small group format to discuss the study area. The stakeholders were identified by the Study Advisory Committee and included 24 groups for individual outreach including municipalities, development agencies, planning organizations, local neighborhood groups, etc. The stakeholders were asked the following 13 questions:

1. *What is your organization's mission and what is the relevance to this project?*
2. *How would you describe the current state of the transportation system in Saratoga County?*
3. *What are the greatest transportation needs for Saratoga County?*
4. *Where/when is congestion a problem?*
5. *What are your most significant transportation safety issues?*
6. *What multimodal (bus, bike, walk) improvements are most needed?*
7. *What do you see as the most pressing freight issues for the County?*
8. *Can you identify any issues related to the supply/pricing of parking?*
9. *What trends do you anticipate will have the greatest impact on the County's transportation system?*
10. *Are you aware of any development plans or land use changes that could have transportation impacts?*
11. *What, if any, demographic changes do you anticipate for the county?*
12. *Would you be willing to tolerate more travel delay in the study area in return for more jobs (economic development)? If so, how much more delay?*
13. *What transportation system improvements do you believe will have the greatest economic benefit?*

Overall themes noted by the stakeholders included:

- Residential growth is occurring at the regional level but not necessarily uniformly throughout the county and ranges from 4% to 25%.
- The transportation system is currently adequate but there are potential challenges to the system in the form of residential and commercial growth in the region.

- East/west connections in the County are particularly strained as there are not many of them and they experience high volumes of truck traffic.
- There is a general desire for more non-auto modal choices but there is little incentive for drivers to use other modes, especially since land development patterns reinforce auto use.

One of the goals of this study is to address this public input during the development of recommendations. More detailed comments are included in the Public Input Summary in Appendix D.



3. Forecasts and Null Conditions

Land use and traffic forecasts were developed to examine the sufficiency of the transportation network and the need for future mitigation. In consultation with the SAC and study area communities, the forecasts were prepared for two scenarios – “Planned” and “Aggressive”. The Planned scenario includes projects that have some form of approval status, are currently under construction, and/or have been approved but not fully built out. This scenario also includes construction of GLOBALFOUNDRIES Fab 8.2. The Aggressive scenario includes growth associated with the Planned scenario and the speculative projects identified during community interviews. This scenario also takes into account construction of another fab (similar in size to Fab 8.2) and additional development in the NYSERDA campus area.

A. Land Use Forecasts

Community representatives were interviewed to identify planned growth in their municipalities (projects on the books). In addition to the planned growth the interviews identified future speculative or potential growth beyond those projects currently with approvals or in the approval process. Review of this data identified existing plans for approximately 6,400 additional residential units and 3.7 million SF of commercial growth. The Aggressive scenario would add another 3,100 residential units and 3.6 million SF of commercial development. The detailed list of all the future land development projects and full-size map of the figure to the right are included in Appendix C and summarized in Table 3.1.

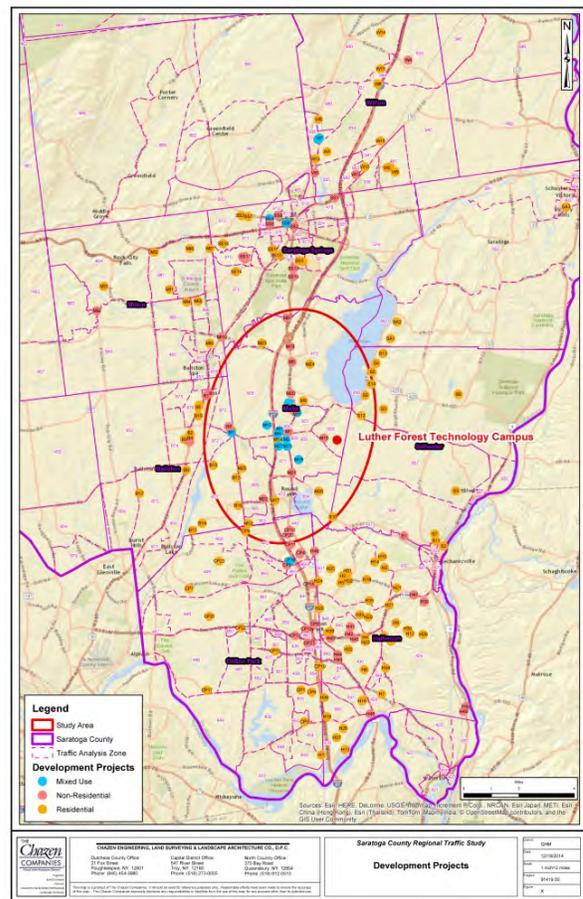


Table 3.1 - Planned and Aggressive Development

Community	Growth Scenario			
	Planned		Aggressive	
	Residential (Units)	Commercial (SF)	Residential (Units)	Commercial (SF)
Town of Ballston	523	85,000	1,037	362,000
Town of Clifton Park	337	1,400,425	337	1,464,425
Town of Halfmoon	2,069	630,026	2,856	1,484,876
Town of Malta	1,939	1,472,100	2,906	3,252,100
Town of Milton	612	6,500	642	6,500
Town of Saratoga	109	0	144	0
City of Saratoga Springs	731	309,152	731	309,152
Town of Stillwater	219	8,400	851	8,400
Town of Wilton	862	71,516	912	71,516
Total	7,431	3,983,119	10,416	6,958,969

Altogether, the land use projections show that the Aggressive Growth scenario estimates construction of approximately 10,400 residential units and 7 million SF of commercial space in the next ten years in the nine municipalities surrounding the study area. This results in a higher rate of development than has occurred over the last decade.

B. Trip Generation and Traffic Assignment

The land use forecasts were used to estimate the vehicle trips associated with the Planned and Aggressive growth scenarios for both the AM and PM peak hours. Trips were estimated using data published by the Institute of Transportation Engineers (ITE) and site specific data where applicable. Table 3.2 summarizes the trips generated during the AM and PM peak hours for the Planned and Aggressive growth scenarios, and shows that about 10,700 new trips could be generated during the PM peak hour under the Planned growth scenario and 17,500 new trips could be generated during the PM peak hour under the Aggressive growth scenario. The trip generation estimate is less during the AM peak hour with 8,000 new trips under the Planned growth scenario and 13,300 new trips with the Aggressive growth scenario.



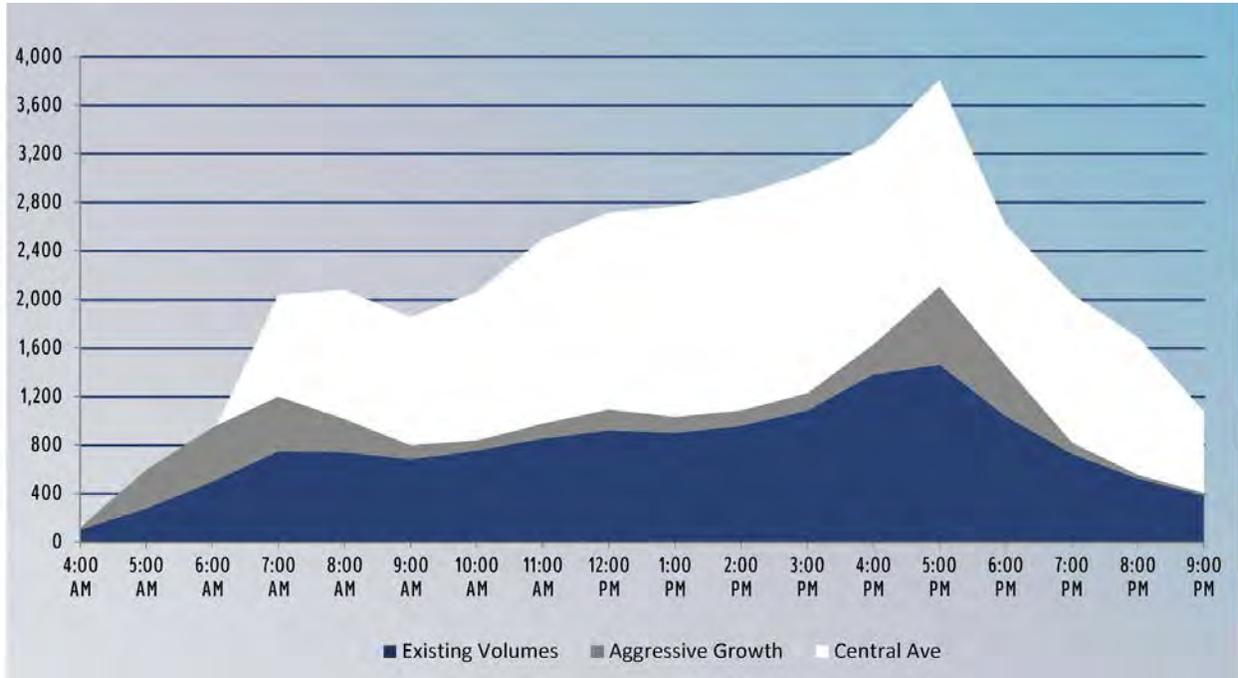
Table 3.2 - Peak Hour Trip Generation

Community	Growth Scenario			
	Planned		Aggressive	
	AM	PM	AM	PM
Town of Ballston	572	730	1,397	2,020
Town of Clifton Park	1,233	1,565	1,386	1,760
Town of Halfmoon	1,283	1,654	2,517	3,062
Town of Malta	3,205	4,356	5,848	7,780
Town of Milton	406	524	406	524
Town of Saratoga	60	86	94	127
City of Saratoga Springs	570	758	570	758
Town of Stillwater	164	232	517	682
Town of Wilton	483	779	528	835
Total	7,976	10,684	13,263	17,548

The CDTC maintains a travel demand forecasting model for the entire Capital Region. The Systematic Travel Evaluation and Planning model (STEP model) is divided into traffic analysis zones (TAZs) with links that represent roadway connections and nodes that represent intersections to simulate travel patterns in the region. Each development identified during the municipality interviews was assigned to a TAZ and then modeled to provide the future AM and PM peak hour traffic volumes for the Planned and Aggressive growth scenarios. The STEP model is capacity based and will shift traffic from roadways that are reaching or exceeding capacity to roadways that are below capacity. This is consistent with how travelers in the real world use the shortest or fastest route between origins and destinations.

The following chart illustrates the existing traffic volumes on US Route 9 (dark blue) south of Route 67 and the Aggressive growth traffic volumes on the same section of US Route 9 (grey). The Aggressive growth scenario shows a distinct spike in traffic during the PM peak hour. The white section represents the existing traffic volume on Central Avenue near Fuller Road in the Town of Colonie, Albany County; also with a distinct peak in the PM peak hour. The comparison is made because both facilities have a similar 5-lane cross-section. The chart shows that with Aggressive growth and no mitigation, the PM peak hour traffic demand on Route 9 will be approximately 2,100 vehicles. Central Avenue currently serves approximately 3,800 vehicles during the PM peak hour, so even under the Aggressive growth scenario the volume and character of US Route 9 in Malta would not approach that of Central Avenue in Colonie.

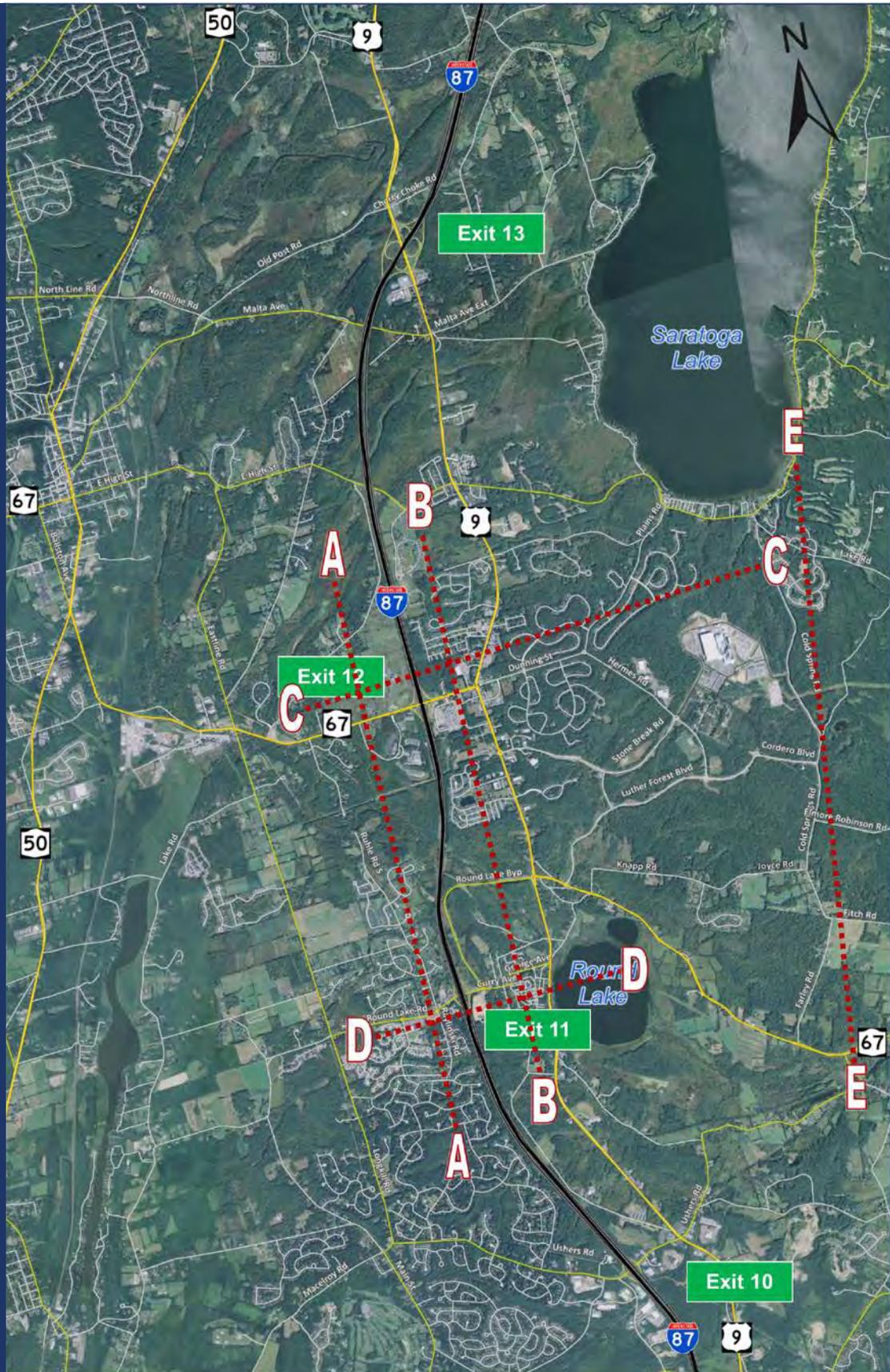
Daily Traffic Volumes on US Route 9



C. Screenline Growth Evaluation

A screenline analysis is used to identify the traffic that enters and exits a specific area on all the roads that cross a specific boundary. A screenline analysis was completed to compare the existing traffic volumes to the Aggressive growth traffic volumes during the PM peak hour which experiences the highest peak hour volumes. Figure 7 illustrates the screenline locations analyzed and the volume comparison is included in Table 3.3.

Figure 7: PM Peak Hour Screenline Growth Analysis



As shown in Figure 7, screenlines A and B evaluate the east-west traffic volumes and screenlines C and D evaluate the north-south traffic volumes.

Table 3.3 - PM Peak Hour Screenline Growth Comparison

Screenline	Traffic Volume (PM Peak Hour)			Volume Increase			
	Existing	Planned	Aggressive	Existing to Planned		Existing to Aggressive	
				Total	Annual	Total	Annual
A: West of I-87 Route 67 Round Lake Road	3,155	3,548	3,732	12%	1.1%	18%	1.7%
B: West of Route 9 Route 67 Stonebreak Road Round Lake Bypass	2,527	3,054	3,831	21%	1.9%	52%	4.2%
C: North of Exit 12 Route 9 Exit 12 ramps Plains Rd Cold Springs Rd	4,027	4,668	5,060	16%	1.5%	26%	2.3%
D: South of Exit 11 Route 9 Exit 11 ramps Route 67 Farley Rd	2,030	2,583	3,008	27%	2.4%	48%	4%
E: East of Cold Springs Rd Route 9P Lake Rd Elmore Robinson Rd Route 67	1247	1672	1802	34%	3%	45%	3.8%

The screenline analysis shows that over the ten year analysis period, the planned growth scenario results in annual average growth rates of approximately 1% to 3%. With aggressive growth over the same time period, traffic volumes could grow by approximately 1.5% to 4% per year. The largest growth is expected west of Route 9 (screenline B), south of Exit 11 (screenline D), and east of Cold Springs Road (screenline E).

D. Programmed Projects

A number of roadway projects are already programmed or have been recently constructed in the study area. These intersection modifications are associated with three projects including GLOBALFOUNDARIES Fab 8, the XAR Development, and Round Lake Road corridor modifications. Table 3.4 summarizes the programmed modifications at the eight intersections included in these studies.

Table 3.4 - Programmed Intersection Modifications

Study	Intersection (No.)	Modification
Traffic Impact Study for XAR Development (August 22, 2007)	Rt 9/Ushers Rd (#29)	Add southbound right-turn lane
Round Lake Traffic and Mobility Improvement Project PIN 1757.54 (April 2014)*	Round Lake Rd/Ruhle Rd/Raylinsky Rd (#20)	Single-lane roundabout
Traffic Impact Study for Fab 8 Campus (February 27, 2013)	Round Lake Rd/Exit 11 SB Ramp (#21)	Install traffic signal and coordinate with northbound ramp
	Rt 67/Eastline Rd (#11)	Construct northbound and southbound left-turn lanes OR provide monetary contribution to roundabout
	Rt 9/Rt 67/Round Lake Bypass (#17)	Construct eastbound left-turn lane
	Rt 9/Malta Ave (#6)	Construct eastbound right-turn lane
	Rt 9P/Lake Rd (#32)	Install traffic signal
	Rt 9/Rt 67/ Dunning St (#14)	1) Improve deflection and provide two eastbound and westbound through lanes 2) Separate northbound and westbound right-turn lanes OR provide roadway connections on all quadrants

* Construction completed in 2015

E. Future Null Conditions

Intersection evaluations were completed for all study area intersections for the future Planned and Aggressive growth scenario volumes for the AM and PM peak hours with implementation of the of the programmed intersection modifications. These analyses represent the Null conditions in the study area. Overall levels of service are reported for the traffic signal, roundabout, and all-way stop controlled intersections. The worst-case level of service for the controlled approach at intersections operating under two-way stop control is also reported. Table 3.5 summarizes the level of service results for all 38 intersections.

To determine which intersections to evaluate for mitigation, acceptable intersection operations were identified. Consistent with CDTC guidelines and in agreement with the SAC, intersections operating at overall LOS E/F should be evaluated further. In addition, intersections with approach lanes (lane groups) operating at level of service F should also be investigated for capacity modifications. Lane groups include the stop controlled approaches at two-way stop controlled

LOS	Overall	Lane Group
F	Mitigation Required	Mitigation Required
E	Mitigation Required	No Mitigation
D		
C		
B		
A		

intersections and individual lane groups approaching a traffic signal, roundabout, or all-way stop controlled intersection. Intersection operations that fall below the level of service thresholds are identified highlighted in Table 3.5.

Table 3.5 - Null Conditions Peak Hour LOS

No.	Intersection	Control	2025 Growth Scenario			
			Planned		Aggressive	
			AM	PM	AM	PM
1	Rt 50/Ballston Ave/Northline Rd	S	D (40.5)	D (43.2)	D (42.0)	D (46.7)
2	Old Post Rd/Malta Ave	TW	A (9.4)	A (9.5)	A (9.4)	A (9.6)
3	Old Post Rd/Northline Rd	AW	E (39.4)	F (55.6)	E (41.1)	F (56.5)
4	Northline Rd/Malta Ave	TW	C (18.5)	D (32.6)	C (20.6)	E (37.4)
5	Rt 9/Cherry Choke Rd/Old Post Rd	S	C (20.1)	B (19.4)	C (20.2)	B (19.5)
6	Rt 9/Malta Ave	S	C (29.0)	F (84.3)	D (35.5)	F (107)
7	Rt 9/Rt 9P	S	B (14.0)	B (17.6)	B (16.1)	C (22.0)
8	Rt 67/Rt 50/E High St/Milton Ave	S	C (21.5)	B (17.5)	C (32.2)	B (18.3)
9	Rt 67/Rt 50/Ballston Ave/Saratoga Rd	S	C (25.8)	C (22.8)	C (25.8)	C (24.0)
10	Rt 67/Brookline Rd	TW	E (41.2)	B (16.7)	F (55.5)	B (13.9)
11	Rt 67/Eastline Rd	S	D (36.9)	D (40.7)	D (39.5)	D (48.3)
12	Rt 67/I-87 Exit 12 Southbound	RA	A (5.1)	A (6.1)	A (6.2)	A (6.8)
13	Rt 67/I-87 Exit 12 Northbound	RA	A (6.9)	A (5.2)	A (8.2)	A (5.6)
14	Rt 9/Rt 67/Dunning St	RA	B (16.7)	C (23.8)	C (23.0)	C (32.8)
15	Dunning St/Hermes Rd/ Plains Rd	RA	A (9.8)	B (13.8)	B (10.2)	C (29.6)
16	Rt 9/Stonebreak Rd	RA	A (9.3)	A (9.5)	A (9.5)	D (35.5)
17	Rt 9/Rt 67/Round Lake Bypass	RA	A (9.6)	C (20.1)	C (26.2)	D (53.3)
18	Luther Forest Blvd/Rt 67	RA	B (13.1)	B (10.6)	D (49.4)	B (16.3)
19	Eastline Rd/Round Lake Rd	S	B (11.9)	B (12.0)	B (14.4)	B (14.6)
20	Round Lake Rd/Ruhle Rd/Raylinsky Rd	S	B (11.9)	B (15.3)	B (15.3)	B (17.3)
21	Round Lake Rd/I-87 Exit 11 Southbound	S	B (17.7)	B (18.0)	C (22.0)	C (33.9)
22	Round Lake Rd/I-87 Exit 11 Northbound	S	B (15.2)	C (33.9)	C (22.0)	D (48.6)
23	Round Lake Bypass/Curry Ave	RA	A (7.1)	A (7.6)	B (11.7)	B (12.2)
24	Rt 9/George Ave	S	A (8.3)	A (7.2)	A (7.9)	A (7.5)
25	Longkill Rd/McElroy Rd/Hatlee Rd/Main St	AW	B (14.8)	D (25.9)	C (15.2)	D (29.3)
26	Longkill Rd/Ushers Rd	S	A (9.0)	B (13.3)	A (9.0)	B (14.4)
27	Ushers Rd/I-87 Exit 10 Southbound	S	B (17.0)	B (13.8)	B (17.1)	B (15.0)
28	Ushers Rd/I-87 Exit 10 Northbound	S	B (16.9)	B (17.0)	B (16.8)	B (15.6)
29	Rt 9/Ushers Rd	S	C (21.2)	C (32.1)	C (22.0)	C (33.1)
30	Rt 9P/Rt 423	TW	B (10.7)	B (10.6)	B (11.8)	B (11.1)
31	Rt 9P/Plains Rd	TW	B (13.4)	F (59.6)	B (14.0)	F (246)
32	Rt 9P/Lake Rd	S	A (8.8)	A (8.5)	A (9.8)	B (10.2)
33	Cold Springs Rd/Lake Rd	TW	B (11.0)	C (15.0)	B (14.3)	C (17.9)
34	Cordero Blvd/Cold Springs Rd	TW	B (10.4)	A (9.5)	B (14.6)	B (12.0)
35	Elmore Robinson Rd/Cold Springs Rd	TW	A (9.2)	A (8.7)	B (10.1)	A (9.5)
36	Cold Springs Rd/Fitch Rd/Joyce Rd	AW	A (6.9)	A (7.1)	A (7.4)	A (8.3)
37	Rt 67/Farley Rd	TW	B (13.1)	B (11.4)	B (13.9)	B (11.4)
38	Eastline Rd/Lake Rd	TW	C (20.2)	D (24.7)	D (29.0)	E (38.3)

S, RA, TW, AW = Signalized, Roundabout, Two-Way Stop, or All-Way Stop controlled intersection

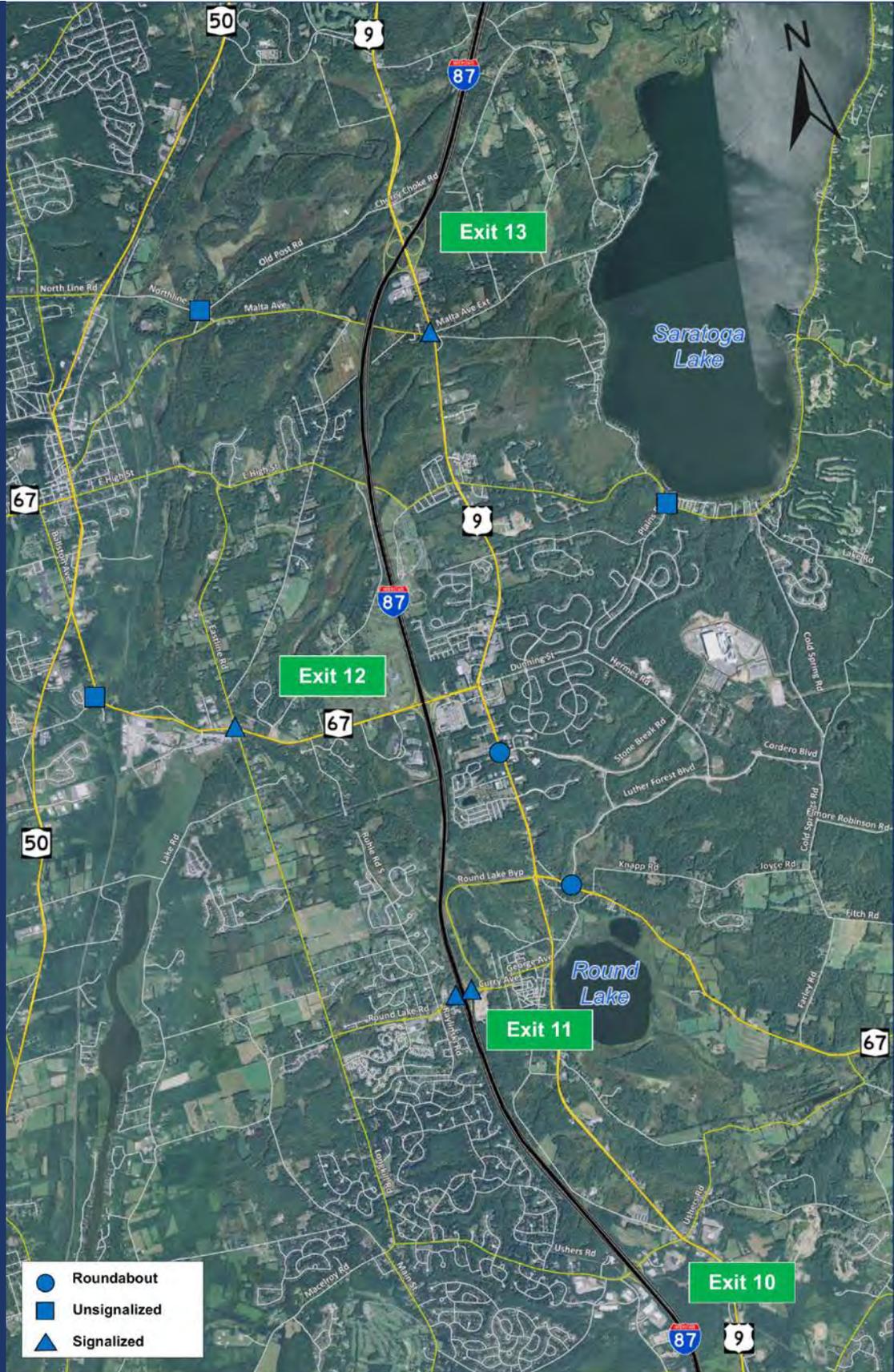
X (Y.Y) = Level of Service (Average delay in seconds per vehicle)

With the projected volumes for the 2025 Planned and Aggressive growth scenarios, most of the intersections operate at an overall LOS D or better with all lane groups operating at LOS E or better. Based upon the level of service criteria, there are three intersections to evaluate further for mitigation to accommodate the forecast volumes for the 2025 Planned growth scenario and six additional intersections for the 2025 Aggressive growth scenario. The nine intersections identified for further evaluation include:

- 3 – Old Post Rd/Northline Rd
- 6 – Rt 9/Malta Ave
- 10 – Rt 67/Brookline Rd (Aggressive only)
- 11 – Rt 67/Eastline Rd (Aggressive only)
- 16 – Rt 9/Stonebreak Rd (Aggressive only)
- 18 – Luther Forest Blvd/Rt 67 (Aggressive only)
- 21 – Round Lake Rd/I-87 Exit 11 NB ramps (Aggressive only)
- 22 – Round Lake Rd/I-87 Exit 11 SB ramps (Aggressive only)
- 31 – Rt 9P/Plains Rd

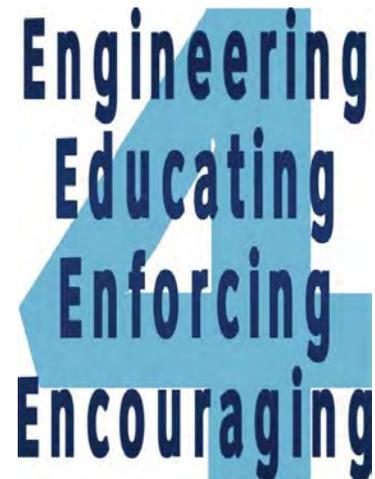
Figure 8 illustrates the intersections identified for further analyses. The additional evaluations are included in Chapter 4.

Figure 8: Intersections Identified for Additional Analysis



4. Assessment and Mitigation Measures

The objective of this study is “to identify the transportation mitigation measures and implementation steps needed to accommodate growth in Saratoga County specifically centered around the Northway (I-87) Exits 11 and 12”. This chapter summarizes the analyses and mitigation measures that can accommodate the Planned and Aggressive growth scenarios. These mitigation measures include both the built network and planning/policy/decision making opportunities. It is noted that to provide the maximum benefit, the identified mitigation measures have to include the “Four E’s”:



- **Engineering** the appropriate scale roadway network and intersection modifications that meet current design standards and operational concerns.
- **Educating** the walking, bicycling, and driving public to properly use the built environment for maximum safety and health benefit and local decision makers to plan for the preferred future
- **Enforcing** proper implementation of zoning laws and planning documents to create the preferred future and correct use of facilities for greater compliance with traffic laws to maximize safety
- **Encouraging** greater use of multi-modal facilities, transportation options, and planning tools through programs and incentives

The mitigation measures evaluated include construction of Exit 11A, additional roadway connections, intersection and roadway modifications, Travel Demand Management strategies, multi-modal facilities, education, safety considerations, and addressing freight concerns.

A. Roadway Network

Network Capacity

The study area provides a limited roadway network for regional travel and public comments have reflected concerns about the ability to travel east-west. Primary north-south routes include I-87 and Route 9. East-west routes leading to the Northway include Old Post Road and Malta Avenue (Exit 13), Route 67 (Exit 12), and Round Lake Road and the Round Lake Bypass (Exit 11). Concerns about regional travel options are not uncommon in suburban areas as development and traffic growth, over time, funnel traffic to the few roadways that provide regional mobility and access.

One way to examine the sufficiency of the roadway network is through a screenline assessment, which sums up the total traffic demand and total capacity for all routes crossing a screenline. Using the same screenlines established in Chapter 3, an assessment of the study area’s ability to move traffic regionally was completed. The screenline evaluation is based on roadway functional classification and guidelines from CDTC identifying level of service D and E capacities for different roadway types. Table 4.1 summarizes the capacity threshold in vehicles per hour for LOS D and LOS E operations for the roadway types in the study area.

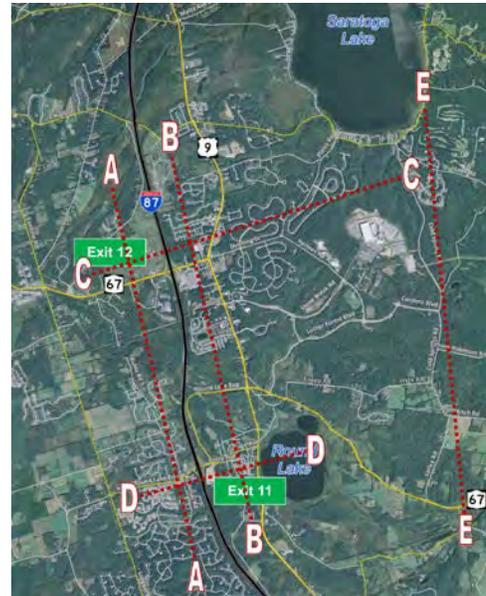


Table 4.1 - CDTC Roadway Segment Thresholds

Roadway Type	Roadway Capacity Threshold (each direction)	
	LOS D (vph)	LOS E (vph)
Local Road	625	800
Surface Arterial & Collector Roadway		
Single lane	1,000	1,300
Two-lane undivided	2,500	3,120
Two-lane divided with flush median	2,800	3,500

Table 4.2 summarizes the results of the screenline assessment, and shows that overall there will be sufficient roadway capacity and no additional through travel lanes will be needed. Because the STEP model predicts actual driver patterns, it shows that drivers will re-route to shorter, faster travel options including available local roadways with lower traffic volumes. Due to driver behavior, these roads will experience increases in traffic volume with both the Planned and Aggress growth scenarios. Residents living on these roadways will notice an increase in traffic volume that may be considered an impact to quality of life. However, these roadways have capacity to accommodate the additional traffic volumes.

The assessment does confirm that the east-west travel, particularly west of the Northway will operate near LOS D capacity under the aggressive growth scenario during the PM peak hour. This is where Route 67 and Round Lake Road each provide a single lane in each direction. It should be noted that even if a segment exceeded the LOS E threshold, further study would be needed to determine if a large scale capacity modification is actually justified. Tolerating short-term inconveniences during the peak hour can be an acceptable strategy and can foster TDM

and other modes. The 2006 Town of Malta GEIS has also recommended a three-lane roadway on Route 67 west of the Northway which would improve the overall function of this segment. The detailed segment assessment is included in Appendix E, and includes additional individual facilities beyond the screenlines.

Table 4.2 - PM Peak Hour Capacity Screenline Analysis

Screenline	Direction	Traffic Volume (PM Peak Hour)			No. of Lanes	Capacity (LOS D)	Future Aggressive Scenario v/c Ratio
		Existing	Planned	Aggressive			
A: West of Northway	EB	1,505	1,678	1,749	2	2,000	87%
	WB	1,650	1,870	1,983	2	2,000	99%
B: West of US Route 9	EB	1,262	1,584	1,826	4	4,125	44%
	WB	1,265	1,470	2,005	3	2,625	76%
C: North of Exit 12	NB	2,735	2,990	3,262	5	5,725	57%
	SB	1,292	1,678	1,798	5	5,725	31%
D: South of Exit 11	NB	900	1,335	1,449	3	4,100	35%
	SB	1,130	1,248	1,559	3	4,100	38%
E: East of Cold Springs Rd	EB	815	1,021	1,139	4	3,625	31%
	WB	432	651	663	4	3,625	18%

Interchange 11A

The potential for a new interchange on I-87 (Exit 11A), is related to the overall network sufficiency discussed above, and is a fundamental question addressed by this study. The idea for a new interchange was first identified in 2003, as a mitigation measure after construction of two Fabs prior to the construction of a third Fab (also correlated to specific traffic generation thresholds), as part of the FGEIS for the LFTC. Additional traffic evaluations have been built upon the assumption that the Exit 11A interchange would be constructed and would reduce traffic volumes at Exits 11 and 12. However, the most recent evaluation for GLOBALFOUNDRIES completed in 2013 (Traffic Impact Study for Fab 8 Campus) determined that additional development, beyond two Fabs, could occur at the site without construction of Exit 11A. Table 3.4 showed that although a new interchange isn't needed, the 2013 study for GLOBALFOUNDRIES did identify intersection mitigation at the following five study intersections:

- 6 – Rt 9/Malta Ave
- 11 – Rt 67/Eastline Rd
- 14 – Rt 9/Rt 67/Dunning St
- 17 – Rt 9/Rt 67/Round Lake Bypass
- 21 – Round Lake Rd/Exit 11 SB Ramp
- 32 – Rt 9P/Lake Rd

The approach to evaluating the need for an Exit 11A included a detailed review of existing travel characteristics, and modeling potential traffic changes for the aggressive growth scenario with versus without the interchange. With construction and operation of the first Fab at LFTC, the assumptions contained in the original traffic studies can now be verified. These major assumptions include trip generation, trip distribution, and on-site operations. When comparing the traffic studies to the existing conditions, the following is noted:

- *The trip generation experienced at LFTC is comparable to the trip generation estimated and evaluated in the traffic studies (peak hour traffic volumes are managed through setting shift work arrival and departures at different times than traditional work hours).*
- *Review of the existing trip distribution information shows that 10% of the trips expected to travel to/from the north are actually travelling to/from the south.*
- *About 10% to 20% of site trips are staying within the Town of Malta.*

The above existing conditions and findings were used to calibrate the CDTC STEP model to better reflect local travel conditions. The conceptual alignment of Exit 11A as contained in the *NYS DOT Draft Conceptual Access Modification Proposal for I-87, Exit 11A and the Round Lake Bypass Access Study*, was then used to model the potential traffic changes with an 11A. The coding also included a grade separated interchange for the 11A connector at Route 9, and closing of the existing Round Lake Bypass. The Exit 11A concept is illustrated in blue below.



The STEP model analysis showed minor traffic diversions would be expected at most study area intersections. Locations which would see reductions of 100 vph in the PM peak travel period or more are summarized in Table 4.3 below.

Table 4.3 - Interchange 11A Traffic Volume Change

No.	Intersection	Change in Total Entering Traffic with Exit 11A
14	Rt 67/Rt 9/ Dunning	-105
17	Round Lake Bypass/Rt 9 /Route 67	-567
21	Round Lake Road/Exit 11 I-87 SB Ramps	-460
22	Round Lake Road/Exit 11 I-87 NB Ramps	-711

The model showed that traffic from LFTC heading north would not use Exit 11A. Only modest reductions in traffic would be apparent at the Route 67/Route 9/Dunning Street intersection (minus 105 vph), and major traffic diversions away from existing Exit 11 would occur. Therefore, the evaluations show that construction of Exit 11A will not significantly impact regional traffic volumes to such an extent as to remove the need for mitigation at most study area intersections identified in Chapter 3. The notable exceptions are the Exit 11 northbound and southbound ramps and the Route 67/Luther Forest Boulevard intersection which will all experience major peak hour traffic volume reductions with construction of Exit 11A. Table 4.4 below shows the intersections that fall below the acceptable LOS thresholds (discussed in Section 3.E) with and without construction of Exit 11A.

Table 4.4 - Intersections Below LOS E/F Threshold

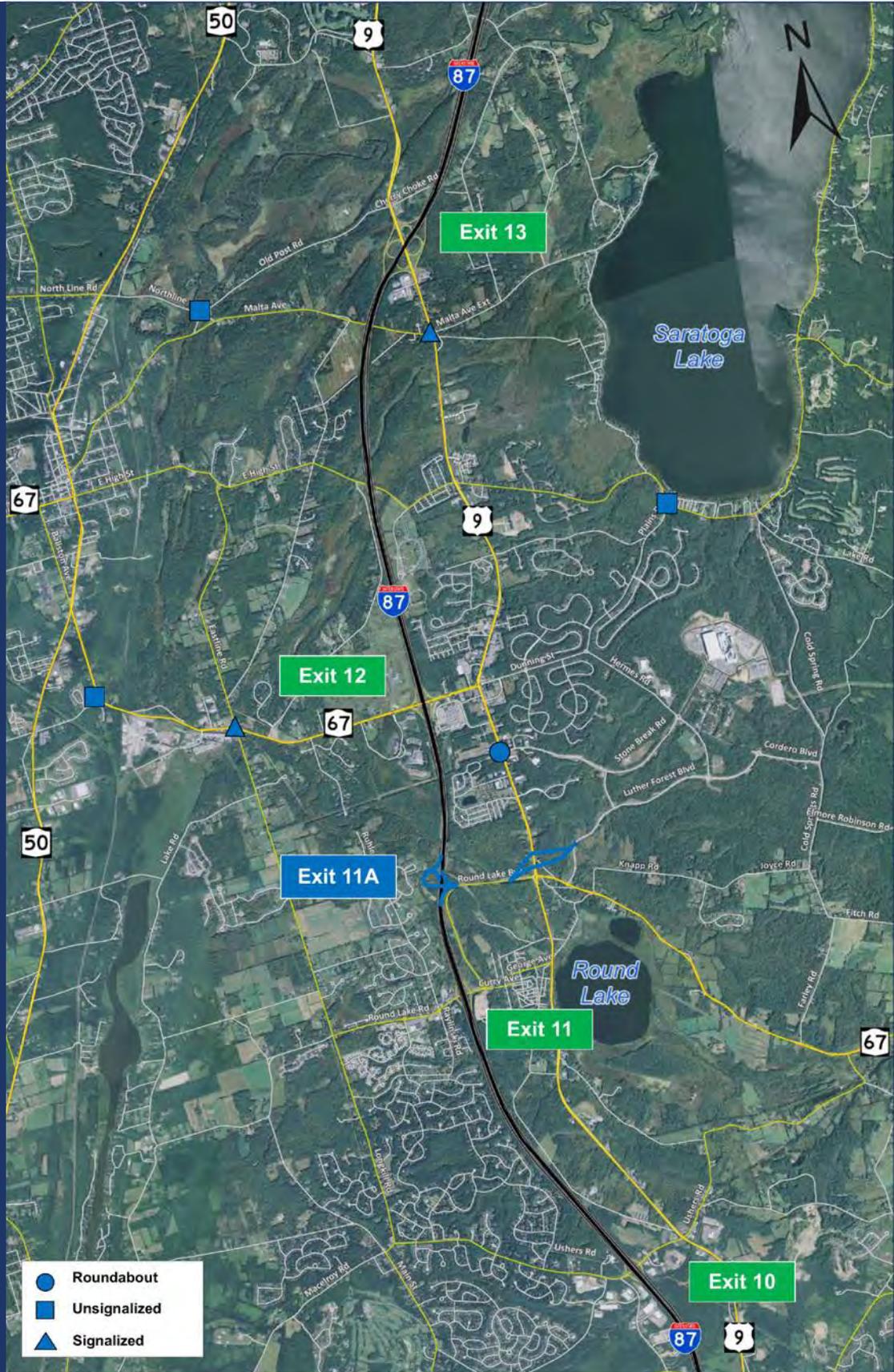
No.	Intersection	Below LOS Threshold	
		With Exit 11A	Without Exit 11A
3	Old Post Rd/Northline Rd	✓	✓
6	Rt 9/Malta Ave	✓	✓
10	Rt 67/Brookline Rd	✓	✓
11	Rt 67/Eastline Rd	✓	✓
16	Rt 9/Stonebreak Rd	✓	✓
18	Rt 67/Luther Forest Blvd		✓
21	Round Lake Rd/I-87 Exit 11 Southbound		✓
22	Round Lake Rd/I-87 Exit 11 Northbound		✓
31	Rt 9P/Plains Rd	✓	✓

Due to the high costs associated with construction of an interchange (\$50 to \$75 million for an interchange of this type) and the relatively small benefit, further evaluation and construction of I-87 Interchange Exit 11A is not recommended at this time. Further, it is highly unlikely that the NYSDOT and the FHWA would favor a new interchange when it has been established that localized improvements at three intersections would offset the need for a new interchange. The basic conclusion is that an enhanced Exit 11 and localized mitigation at the Route 67/Luther Forest Boulevard intersection will accommodate traffic at a lower cost and impact. Six of the

nine intersections identified in Table 4.4, would still need mitigation with or without construction of Exit 11A. The intersections needing intersection mitigation with and without construction of Exit 11A are illustrated below. Figure 9 illustrates the intersections requiring mitigation with construction of Exit 11A.



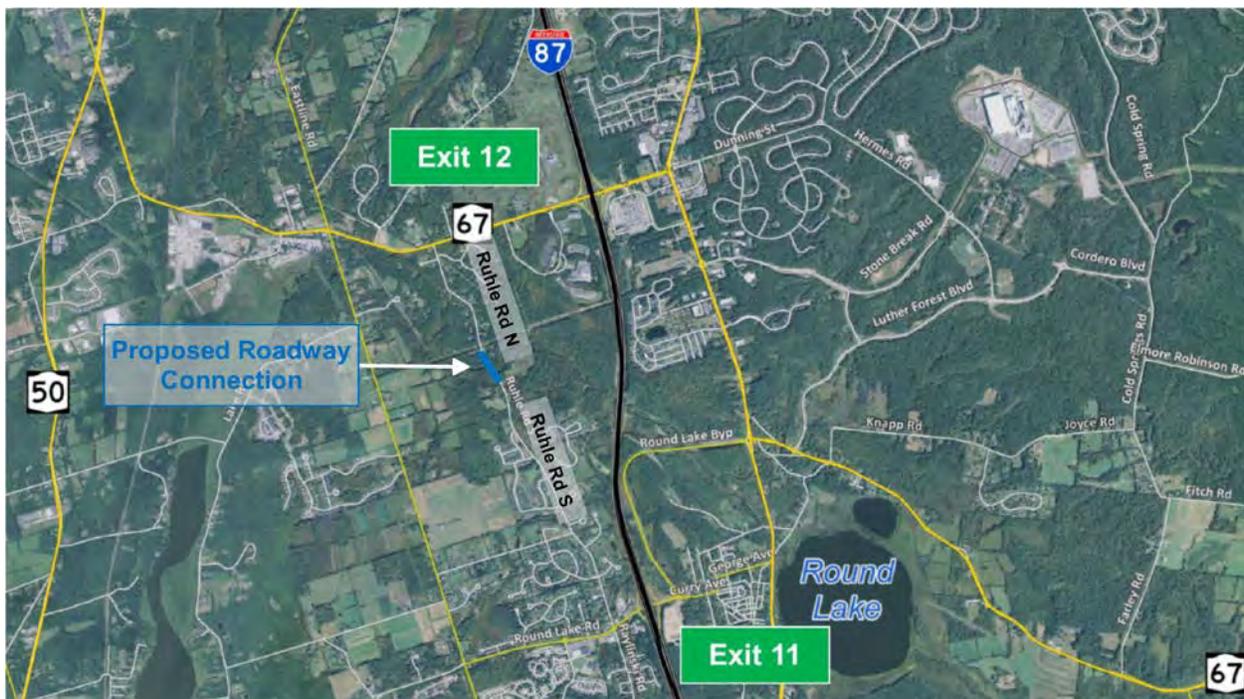
Figure 9: Intersections Identified for Additional Analysis with Exit 11A



Local Connections

The previous sections have shown that major regional roadway connections are not needed in the foreseeable future; however, local street and path connections are very important to facilitate community interaction and to preserve the function of the regional arterials for regional traffic movement. For example, the planned local street connections around the Route 9/Route 67/Dunning Street intersection are needed to insure reasonable operation of the Route 9/Route 67/Dunning Street roundabout. Similarly, the local streets and proposed street connection opposite Stonebreak Road are vital to the findings of this study. These types of connections also encourage travel by other modes by accommodating short distance walking and bicycling trips.

The Town of Malta Comprehensive Plan refers to improving access with new proposed access routes and connections to the existing roadway network. Completion of the missing connection between Ruhle Road South and Ruhle Road North (as illustrated on Figure 10) should be pursued. This would expand neighborhood connectivity on the west side of the Northway. Improving local connections in the Town of Malta ties into goals outlined in the 2005 Malta Master Plan to provide safe, efficient transportation for people within, through, and around the Town. It is noted that general public opinion at the December public meeting was against re-connecting Ruhle Road North and Ruhle Road South.



B. Travel Demand Management (TDM)

Travel Demand Management addresses intersection and roadway congestion through reduction in demand (fewer passenger vehicles) or redistribution of demand in space or time rather than just increasing capacity (bigger roads and intersections). TDM strategies range from providing multi-modal transportation options to implementing flexible work schedules to land use planning. All of these strategies reduce peak hour passenger vehicle demand. The Victoria Transport Policy Institute (VTPI) publishes the *TDM Encyclopedia* which is a comprehensive resource on innovative transportation management strategies. The *TDM Encyclopedia* defines TDM as follows:

Transportation Demand Management or TDM (also called Mobility management) refers to various strategies that change travel behavior (how, when and where people travel) in order to increase transport system efficiency and achieve specific planning objectives. TDM is increasingly used to address a variety of problems.

Table 4.5 is an overview of the available strategies from the *TDM Encyclopedia*.

Table 4.5 - TDM Strategies

Improves Transport Options	Incentives	Land Use Management	Policies and Programs
<ul style="list-style-type: none"> - Transit improvements - New Park & Ride facilities - Non-motorized improvements - Rideshare programs - Flextime - Car sharing - Vanpools - Telework - Taxi improvements - Bike/transit integration - Guaranteed ride home 	<ul style="list-style-type: none"> - Commuter financial incentives - Parking pricing - Non-motorized encouragement - Universal Access contracts 	<ul style="list-style-type: none"> - Smart growth - New urbanism - Location-efficient development - Parking management - Transit oriented development - Traffic calming 	<ul style="list-style-type: none"> - TDM Programs - Commute trip reduction - Freight transport management - TDM marketing

The table shows that there are four categories of TDM strategies, many of which are available in the Capital Region and applicable to the study area. The relevant strategies are described on the Capital Moves website (www.capitalmoves.org). For example, the website shows that CDTA partners with the vanpool provider, vRide. Monthly fare for the vanpool typically ranges from \$800 to \$1,700 per month, but with CDTA sponsorship the vanpool is subsidized up to

\$600 or 50% (whichever is lower) making the monthly cost approximately \$400 to \$1,100 per month. Vanpoolers save over \$1,000 per year compared to individuals that drive alone.

Passenger vehicle travel is relatively easy and parking is plentiful in the study area; therefore, TDM strategies that involve driver choice and convenience should be incentivized to be effective. In addition, TDM strategies should be easy to use and easy to find for the users and people new to the Capital Region.

Policy

Local communities and environmental review boards can play a role in implementing TDM strategies through local planning documents (comprehensive plans), zoning laws, and the State Environmental Quality Review Act (SEQRA) process. These documents frame the way a community is developed including locations for residential, commercial, educational, and recreational land uses and the various connections between land uses. These documents identify areas of preference for higher density development and can also define the system of vehicle, bicycle, and pedestrian connections and the types of accommodations appropriate for each connection. The plans can be written into the municipal zoning laws and policies to ensure that development in the municipality follows the community's plan. For example, the Towns of Clifton Park and Malta have implemented Form-Based Zoning Codes addressing building facades, and the scale and types of streets and blocks. Advantages to a form-based code include providing attractive streetscapes and locating and orienting buildings in a way that support walking and bicycling and reducing vehicle trips by mixing land uses and creating greater density.

Through municipal review, large employers should be required to have an Employee Transportation Coordinator (ETC) and a TDM plan. Concurrence with the plan should be illustrated on an annual basis. Flexible work schedules, off-peak shift work, and telecommuting should also be encouraged to minimize peak hour trips. Most developments undergoing municipal review will not be large enough for a site-specific ETC or TDM plan; however, flexible work schedules and telecommuting are also beneficial for small developments. For example, GLOBALFOUNDRIES adjusted shift schedules (described in greater detail on page 4-15) resulting in a reduced number of vehicles on the roadway during the commuter peak period. Smaller companies located proximate to each other can also group together to develop a



Transportation Management Association (TMA) to create the density needed to support transit service.

Town, planning, and zoning boards should take advantage of training sessions through local planning agencies to learn the best practices for travel demand and land use management. Local chambers of commerce are also good resources to better understand how to market a community to the desired development types.

Transit

Transit service reduces travel demand by removing passenger vehicles from the roadway network. It improves overall mobility while providing an essential service for those who do not have access to a car (captured riders), it offers a travel option for others (choice riders), and is an attractive travel option for millennials and people new to the Capital Region. Towns and cities across the U.S. are looking to provide higher quality transit as people are expecting and value better transit options. Transit also has the potential to reduce congestion, reduce parking demand, promote smart growth and contribute to a more balanced and sustainable transportation system.

Several studies of Saratoga County, including the *Transit Feasibility Study for Luther Forest Technology Campus Economic Development Corporation* dated March 30, 2011, have shown that the population density in Saratoga County is generally not high enough to support transit service. Key challenges are the lower suburban densities that prevail in the area, widely dispersed origins and destinations, and incomes that enable high auto ownership rates, all of which lead to travel by personal automobile. Although large employers like GLOBALFOUNDRIES present an improved opportunity for transit viability by creating a single destination, free and plentiful parking make it a challenge. The 2011 study concluded that robust public transit was not economically feasible and recommended employer incentivized vanpools as a reasonable step toward expanded transit.

Since 2011 area development and employment has been on a steady rise, including growth at LFTC, and the CDTA has continued to explore and implement expanded transit service in the area that is both viable and serves identified needs. A few of those improvements include:

- Exploring a new park and ride lot near Exit 12 due to high demand in that area. Currently there is limited parking capacity at the existing Malta Commons park and ride location (50 spaces), but there is an



estimated need for up to 500 spaces or more in the future if GLOBALFOUNDRIES is to be served. Finding a new expanded park and ride option in the area is a priority and would provide the foundation for expanded transit and local shuttles to/from activity centers in the area. A local shuttle providing front door service to/from GLOBALFOUNDRIES would provide an attractive option for employees who may be parking a long distance away in large surface parking lots. CDTA has begun initial discussion with stakeholders in the area for siting the new park and ride lot.

- CDTA is currently in the planning phase of a route restructuring that involves several bus routes in the Saratoga Springs and Ballston Spa area. Route improvements may facilitate an extension of service to GLOBALFOUNDRIES at some point, although such an extension is not part of the current plan. Public meetings were held and the restructuring plan is being revised to reflect public input. The route roll out is expected in 2016.

In addition to these existing efforts, other transit improvements were considered as part of this study, and may be advanced over time.

- The Northway Express (NX) is a premium commuter coach service with 11 daily trips to and from downtown Albany. Many of the buses “dead head” in the morning to begin their trip, meaning they travel empty northbound before starting their first trip southbound. The idea of providing service northbound in the morning was considered, particularly to serve work destinations in the Malta/GLOBALFOUNDRIES area. Although this option is not possible as part of the NX operations, it could be implemented with some service changes and operating cost increases. The NX buses originate from Albany and many GLOBALFOUNDRIES employees originate from lower Saratoga County. The current origin of the NX would not likely serve many riders, but as the buses pass through lower Saratoga County, they could attract local riders. Based upon employee data, there may be an opportunity to provide transit service to/from GLOBALFOUNDRIES and the park and ride lots at Exits 8 and 9; Wilton/Saratoga Springs, and Ballston/Milton areas, which requires further study. The proposed expanded park and ride lot near Exit 12 would provide a hub for this service.
- As a rule, bus passengers begin and end their trip as pedestrians or bicyclists, so improved bicycle/pedestrian connections should be pursued to and from bus stop locations. This is also needed on-site at major employers where bike racks, lockers and improved connections from parking lots help support “get to door” transportation.

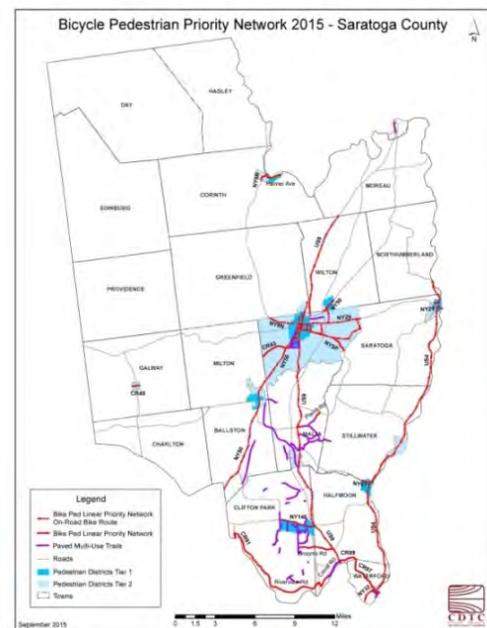
Bicycle and Pedestrian Transportation

Bicycle and pedestrian travel is an integral part of fostering healthy and active communities. To promote bicycle and pedestrian travel for purpose-based trips as well as recreation and exercise, public agencies must provide facilities for safe travel. Like purpose-based vehicle travel, bicyclists and pedestrians prefer direct connections for purpose-based trips. Pedestrians and bicyclists also have different needs primarily resulting from trip length. With these differing



needs in mind, the CDTC Bike/Pedestrian Advisory Committee (BPAC) modified the Bicycle Pedestrian Priority Network for inclusion in the *CDTC New Visions 2040 Plan*. The priority network now includes pedestrian districts (areas) and a linear bicycle network.

Historically, sidewalk networks have been difficult to complete with many hurdles to overcome. Publicly funded projects may have had difficulty acquiring right-of-way and/or funding for a project that can be considered “lower priority”. Private development projects typically have limited roadway frontage and don’t connect to what was considered a “logical termini”. More recently there has been a shift in philosophy to include property boundaries as a logical termini. This has resulted in construction of sidewalks through the site plan approval process and has created a somewhat disconnected sidewalk network that is filling in over time. The gaps in the priority networks should be identified and prioritized for completion possibly using sidewalk funds.



Local municipalities and review agencies should continue to focus on creating a fully connected sidewalk network, including to and from transit stops, through the SEQRA process one private development project at a time and implementing larger-scale public projects as funding allows. On roadways located in higher density areas, faster travel speeds, higher traffic volumes, and on roadways connecting pedestrian destinations a sidewalk or shared path is the preferred accommodation. The recommended pedestrian and bicycle connections are discussed in Appendix I.

The only east-west connection in the 1.8 mile segment between Exit 11 and Exit 12 is the Zim Smith trail which primarily serves as an east-west connection towards the southern side near Round Lake Bypass. Another bike/pedestrian connection to the north of this trail, behind State Farm offices, connecting the residential neighborhood on the west of the Northway to the commercial development near Downtown Malta would be beneficial. The need for an additional local east-west street connection is supported by public comments in the Malta Town-wide GEIS dated April 2006 and the public meeting held for this study in November 2014.

Good quality bicycle access can generally be provided through a paved shoulder (minimum 4-feet) and may not require a separate facility. These facilities should be marked with signing and striping to remind drivers of the potential for bicyclists on the roadway. Signing and striping are generally low cost options.

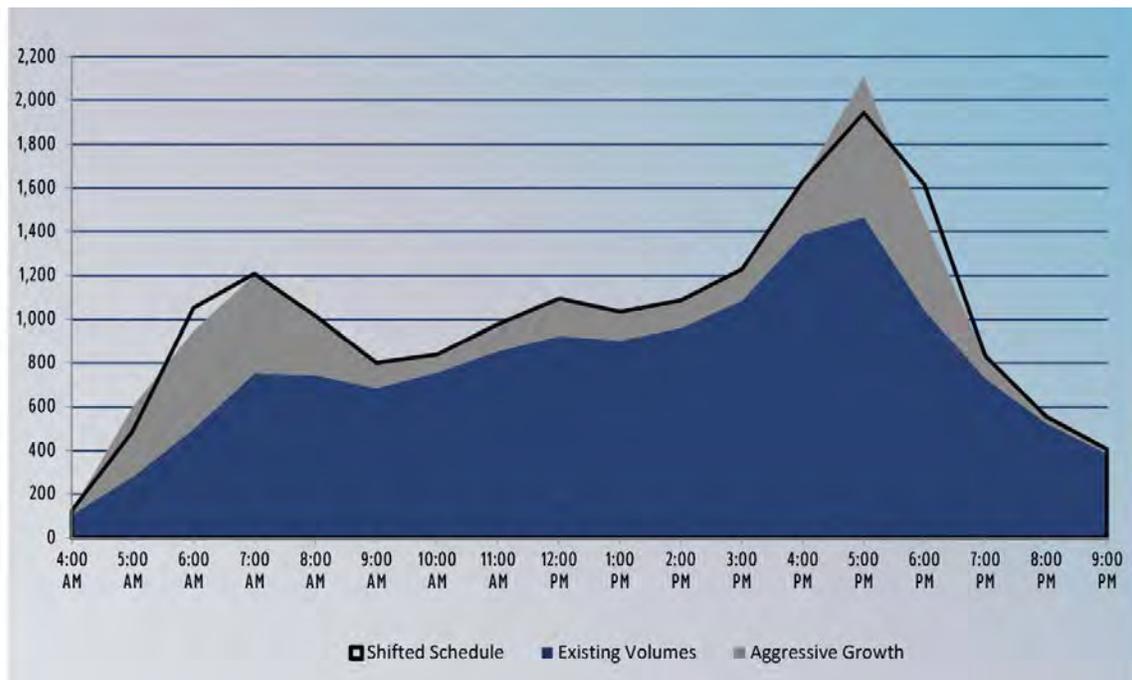
Employers can encourage bicycle and walking trips by providing locker rooms with showers and bike racks. Employers on larger campuses with multiple buildings may want to provide bicycles on-site to allow for internal trips between buildings similar to a municipal bike-share program. Municipalities and government agencies can encourage bicycle and walking trips by ensuring that transportation projects and new developments plan for and include bicycle and pedestrian elements like bike racks, sidewalks, shoulders, crosswalks, trails, appropriately designed catch basins, etc.



TDM in Practice: GLOBALFOUNDRIES

As the major employer in the study area, daily operations at GLOBALFOUNDRIES have the potential to significantly affect peak hour travel demand. For example, the existing hourly traffic volume (travel demand) on US Route 9 on the NY Route 67 overlap is shown in blue in the following chart. The future traffic volumes correlating to the Aggressive growth scenario are illustrated in grey. It is important to note that GLOBALFOUNDRIES existing traffic patterns reflect the implementation of significant TDM strategies shifting hundreds of vehicle trips outside the peak travel periods of the adjacent transportation network.

US Route 9 Hourly Traffic Volumes



The chart shows that the existing peak hour traffic volume on US Route 9 (with GLOBALFOUNDRIES using shift work to spread the peak hour) is approximately 1,500 vehicles. With aggressive growth, the peak hour traffic volume spikes to approximately 2,100 vehicles. By again adjusting the start and end times for their shift workers, GLOBALFOUNDRIES can reduce the peak hour traffic demand on US Route 9 and the adjacent roadways. The “shifted schedule” is illustrated by the black line in the above chart which shows that the peak hour traffic demand is reduced by approximately 150 vehicles to a peak hour traffic volume of 1,950 vehicles.

GLOBALFOUNDRIES has agreed to implement the shifted schedule. Implementation of this TDM strategy has been accounted for in the projection of the future peak hour traffic volumes for both the Planned and Aggressive growth scenarios analyzed in Chapter 3. Without implementation of the shifted schedule, there would likely be more intersections requiring additional evaluation and mitigation.

C. Capacity Evaluations

Intersection Capacity

As discussed in Chapter 3, future growth will increase traffic resulting in operational concerns at a number of locations. Programmed intersection modifications will mitigate concerns at eight intersections (as listed in Table 3.7); however, further intersection modifications will be needed to fully address the Planned and Aggressive growth scenarios. Table 4.6 summarizes the intersection modifications that will mitigate the Planned and Aggressive growth in the study area and Table 4.7 illustrates the levels of service associated with the intersection modifications.

It is noted that several intersections have multiple capacity modifications that will mitigate the Planned and Aggressive growth. For example, where a turn lane or traffic signal will result in acceptable levels of service, a roundabout may also address the operational concerns at a particular location. The preferred intersection design will be confirmed in the future design approval documents when funding for design and construction are secured.

Table 4.6 - Intersection Capacity Modifications

No.	Intersection	Modification
Planned Scenario		
3	Northline Rd/Old Post Rd	1) Construct a roundabout controlling a single Northline Rd/Old Post Rd/Malta Ave intersection OR 2) Install traffic signal
6	Rt 9/Malta Ave	Construct eastbound left-turn lane and southbound right-turn lane and replace the existing traffic signal
31	Rt 9P/Plains Rd	Install traffic signal
Aggressive Scenario		
10	Rt 67/Brookline Rd	Install traffic signal and construct westbound left-turn lane
11	Rt 67/Eastline Rd	Construct roundabout with 2-lanes eastbound and westbound and 1-lane northbound and southbound
16	Rt 9/Stonebreak Rd	Construct northbound right-turn lane
18	Rt 67/Luther Forest Blvd	1) Construct exclusive eastbound left-turn lane OR 2) Construct additional westbound through lane
21,22	Exit 11 Interchange SB & NB ramps	1) Construct second westbound through lane on Round Lake Rd, convert northbound right-turn lane to a shared left/right-turn lane, provide separate southbound right-turn lane OR 2) Construct roundabouts at the ramps



Table 4.7 - Mitigated Peak Hour LOS

No.	Intersection	Control	2025 Growth Scenario			
			Planned		Aggressive	
			AM	PM	AM	PM
3	Old Post Rd/Northline Rd	RA-1	C (22.1)	C (24.4)	C (24.4)	C (29.1)
		S-2	A (9.4)	B (15.5)	B (10.1)	B (18.2)
6	Rt 9/Malta Ave	S	C (23.5)	D (38.0)	C (25.1)	D (37.6)
10	Rt 67/Brookline Rd	S	NA	NA	C (31.3)	B (14.5)
11	Rt 67/Eastline Rd	RA	NA	NA	B (18.0)	C (20.7)
16	Rt 9/Stonebreak Rd	RA	NA	NA	B (16.0)	B (14.5)
18	Rt 67/Luther Forest Blvd	RA-1	NA	NA	B (18.8)	B (15.2)
		RA-2	NA	NA	B (15.4)	B (16.0)
21	Round Lake Rd/I-87 Exit 11 Southbound	S-1	NA	NA	C (29.4)	D (38.8)
		RA-2	NA	NA	A (7.6)	B (13.2)
22	Round Lake Rd/I-87 Exit 11 Northbound	S-1	NA	NA	C (29.9)	D (39.1)
		RA-2	NA	NA	B (17.1)	B (16.6)
31	Rt 9P/Plains Rd	S	A (6.5)	B (14.0)	A (7.2)	C (24.7)

S, RA = Signalized or Roundabout controlled intersection
 X (Y.Y) = Level of Service (Average delay in seconds per vehicle)
 NA = No mitigation needed with this growth scenario

Table 4.7 shows that the intersections will operate at overall LOS D or better during the Planned and Aggressive growth scenarios with implementation of the mitigation measures identified in Table 4.6. Concept level plans have been developed for each of the identified intersections and are included in Appendix F. At locations with more than one mitigation option a single concept plan was developed for the feasibility assessment, preliminary environmental impact review, and cost estimate.

Intersection Crash Review

A crash data review was completed for the three-year period from April 1, 2011 through March 31, 2014 at the nine study intersections identified for further evaluation. The purpose of the review is to identify any crash patterns or safety concerns that could be correctible by intersection modifications. The crash history will inform the preferred mitigation measures at the nine intersections in the future. Table 4.8 summarizes the crash history at the nine identified study area intersections.

Table 4.8 - Crash Data Review

No.	Intersection	Severity						Rate	
		NR	PD	Injury	Fatality	Unk	Total	Calc'd	State
3	Old Post Rd/Northline Rd	3	4	2	0	0	9	1.87	0.15
6	Rt 9/Malta Ave	8	7	5	0	0	20	0.85	0.21
10	Rt 67/Brookline Rd	5	8	9	0	0	22	1.41	0.15
11	Rt 67/Eastline Rd	8	19	6	0	1	34	1.45	0.45
16	Rt 9/Stonebreak Rd	6	11	4	0	0	21	1.27	--
18	Rt 67/Luther Forest Blvd	1	4	2	0	0	7	0.54	--
21	Round Lake Rd/I-87 Exit 11 SB	2	1	1	0	0	4	0.21	0.26
22	Round Lake Rd/I 87 Exit 11 NB	2	2	1	0	0	5	0.30	0.45
31	Rt 9P/Plains Rd	8	6	4	0	0	18	1.82	0.15

NR = Non-Reportable accident indicates no person injuries occurred and property damages totaled less than \$1,000.

PD = Property Damage only with damages greater than \$1,000

Injury = Crash involving person injury

Unk = Crash of unknown severity

Calc'd = Calculated crash rate

-- = No comparable statewide rate for roundabout controlled intersections

Review of the crash rate information shows that the calculated crash rate is higher than the statewide average at five of the nine intersections. It is noted that there is no statewide average rate for roundabout controlled intersections. The following observations are evident from the crash history evaluation:

- Old Post Rd/Northline Rd (#3) – The calculated crash rate is higher than the statewide average. Of the nine intersection crashes, three were single-vehicle crashes. Four of the remaining six intersection crashes were right-angle collisions. One of the intersection modifications identified at this location is construction of a roundabout. Right-angle collisions are correctible by construction of a roundabout.
- Route 9/Malta Ave (#6) – The calculated crash rate is higher than the statewide average. Four of the 20 intersection crashes were single-vehicle crashes. The remaining 16 crashes were a mix of rear end, left-turn, right-turn, overtaking, and “other” type collisions. Construction of turn lanes can help to reduce the potential for rear end collisions by removing turning traffic from the through vehicle movement.
- Route 67/Brookline Rd (#10) – Rear end crashes account for 14 of the 22 collisions at this intersection. Installation of a traffic signal will create an expected stop condition on the currently free-flow Route 67 approach to Brookline Road and the construction of a westbound left-turn lane on Route 67 will remove turning traffic from the through travel lane. With the expected stop condition associated with installation of a traffic signal and the removal of left-turn traffic from the through lane, the number of rear end collisions should be reduced. These improvements are consistent with previous recommendations at this location.

- Route 67/Eastline Rd (#11) – Of the 34 total crashes at the intersection two were single-vehicle collisions. The remaining crash types include 16 rear end, 8 other, 3 unknown, 3 left-turn, 2 sideswipe, 1 right-angle, and 1 head on. Roundabouts are identified by the FHWA as a proven safety countermeasure and construction of a roundabout at this intersection will result in a reduction of crash severity at this location. It is noted that construction of a roundabout at this location is consistent with previous studies.
- Route 9/Stonebreak Rd (#16) – The roundabout at this location was opened to traffic on November 1, 2011; since that time there were 19 crashes of which nine were single-vehicle collisions. Single vehicle collisions typically indicate that the drivers were travelling too fast through the roundabout. The remaining crash types are a mix of right-angle, overtaking, left-turn, and rear end collisions.
- Route 67/Luther Forest Blvd (#18) – The data shows that the seven crashes at this intersection are all single-vehicle collisions with curbing, sign posts, or guide rail. These types of collisions indicate that the drivers were travelling too fast through the roundabout.
- Round Lake Rd/I-87 Exits 11 and 12 (#21, #22) – Review of the crash data at the Round Lake Road/I-87 Exit 11 interchange showed that there was one collision with a bicyclist. The data shows that the bicyclist was crossing a roadway mid-block at the time of the crash. The provision of enhanced pedestrian features in this area as part of the Round Lake Traffic and Mobility Improvement Project PIN 1757.54 will reduce the potential for this type of collision. The other eight crashes include a mix of rear end, overtaking, right-angle, and left-turn collisions.
- Route 9P/Plains Rd (#31) – Ten of the 18 intersection collisions were single vehicle crashes that occurred during inclement weather (snow, sleet, hail, freezing rain, etc.). The remaining eight crashes include a mix of right-angle, rear end, and “other” type collisions. Installation of a traffic signal has the potential to reduce the number of crashes at the intersection.

Environmental Screening

An environmental screening for each of the capacity modifications identified in Table 4.6 was completed. The screening can be used to determine possible impacts associated with the potential intersection modifications and can help guide the documentation process needed for each of the modifications when they are implemented. Table 4.9 summarizes the possible environmental impacts associated with the potential intersection modifications. The detailed environmental screening is included in Appendix G.

Table 4.9 - Potential Environmental Impacts

No.	Intersection Mitigation Under Consideration	Federal Wetlands/ Watershed	State Wetlands & 100 ft buffer	Flood Zone	Threatened/ Endangered Species	Archeological	Right-of-Way	Quality of Life
3	Old Post Rd/Northline Rd	Yes	Yes	No	NLEB	No	Yes	No
6	Rt 9/Malta Ave	No	No	No	NLEB	No	Yes	Yes
10	Rt 67/Brookline Rd	No	No	No	NLEB	No	Yes	Yes
11	Rt 67/Eastline Rd	Yes	No	No	NLEB	Yes	Yes	No
16	Rt 9/Stonebreak Rd	No	No	No	NLEB	No	Yes	No
18	Luther Forest Blvd/Rt 67	Yes	No	No	NLEB	No	Yes	No
21	Round Lake Rd/I-87 Exit 11 SB	No	No	No	NLEB	No	No	No
22	Round Lake Rd/I-87 Exit 11 NB	No	No	No	NLEB	No	No	No
31	Rt 9P/Plains Rd	No	No	No	NLEB	No	No	Yes

NLEB – Northern Long-Eared Bat

As the potential mitigation measures are converted to projects, detailed design and environmental evaluations will be completed. When these projects are developed, the preferred intersection modification will be determined. While all projects will require detailed design and environmental analysis, publicly and privately funded projects will go through a slightly different public process; however, whether public or private, the intersection capacity modification will be required to avoid, minimize or when impacts are unavoidable may be required to mitigate environmental impacts and create safe operations. This process includes coordination with emergency responders and general public input. Overall, this preliminary assessment shows a low probability of any significant adverse impacts.

In regard to air quality, New York State collects air quality data for numerous pollutants at monitoring stations in each county through a program operated by the Bureau of Air Quality Surveillance. The Federal Environmental Protection Agency (EPA) determines which air quality pollutants should be monitored at different locations based upon the characteristics of a region. There is one monitoring station in Saratoga County located at Saratoga National Historical Park in Stillwater that monitors ozone. Based on the latest three years of available data, this station is in compliance with the New York State and National Ambient Air Quality Standards for ozone.

The NYSDOT evaluates air quality impacts through procedures set forth in The Environmental Manual (TEM). Typical “worst-case” concentrations of air quality emissions are associated with idling vehicles at an intersection; therefore, air quality impact analyses are primarily focused on signalized intersections. A review of the analysis screening criteria contained in the TEM

indicates that the nine study area intersections with proposed mitigation will operate at overall level of service D or better conditions indicating there is little potential for air quality impacts. More detailed air quality assessments will be completed as part of the design documentation process, as necessary.

Existing sources of noise at the nine study area intersections with proposed mitigation include traffic noise and noise associated with residential and commercial uses. The predominant noise sources in the study area derive from traffic on I-87, Route 9, and Route 67. The proposed modifications at the nine intersections will not result in an increase in traffic; therefore, any traffic-related noise impacts are not anticipated to be significant. Any noise impacts experienced in the study area will be short-term impacts associated with construction of intersection improvements. Construction vehicle activities such as earthwork, paving, and land clearing could increase ambient noise levels in the area immediately surrounding the construction. Construction noises are temporary and are typically limited to specific hours, intermittent, and can be minimized by implementation of mitigation strategies such as coordination of work activities, public awareness, and use of well-maintained equipment. More detailed noise assessments will be completed as part of the design documentation process, as necessary.

Cost

Planning level cost estimates were prepared for the nine intersections with capacity modifications. Table 4.10 summarizes the project costs; a more detailed cost estimate is included in Appendix H.

Table 4.10 - Capacity Modification Cost Estimates

No.	Intersection	Cost
3	Old Post Road/Northline Road (RA-1)	\$3,900,000
6	Rt 9/Malta Ave	\$850,000
10	Rt 67/Brookline Rd	\$1,200,000
11	Rt 67/Eastline Rd	\$3,300,000
16	Rt 9/Stonebreak Rd	\$820,000
18	Rt 67/Luther Forest Blvd (RA-1)	\$780,000
21,22	Round Lake Rd/I-87 Exit 11 SB and NB (RA-2)	\$3,400,000
31	Rt 9P/Plains Rd	\$390,000
Total		\$14,640,000

Table 4.10 shows that the total planning level cost estimate for construction of the nine intersection capacity modifications would be about \$15,000,000 in 2015 dollars. The construction cost includes an estimate for engineering, construction inspection, utility relocations and right-of-way acquisition. Intersection capacity modifications are intended to

address specific operational deficiencies and are relatively high cost. To the extent that capacity modifications can be avoided through implementation of TDM measures, they should.

D. Safety and Education

Several comments raised during the SAC meetings, interviews with Stakeholders, and during the public meetings were directly related to safety. Specifically pedestrian and bicyclist safety at roundabouts, general pedestrian and bicycle accessibility and Americans with Disabilities Act (ADA) compliance, and overall safety concerns related to increases in traffic volumes. This section discusses safety considerations relative to transportation to address the concerns heard from the interested participants.



Roundabouts

The SRTS study area is relatively unique in that eight of the study area intersections operate under roundabout control. There is a perception by some of the public that roundabouts are unsafe for pedestrians and bicyclists because vehicles operate under yield control rather being stopped at a traffic signal. Several studies have been completed to determine whether this perception is true or false.

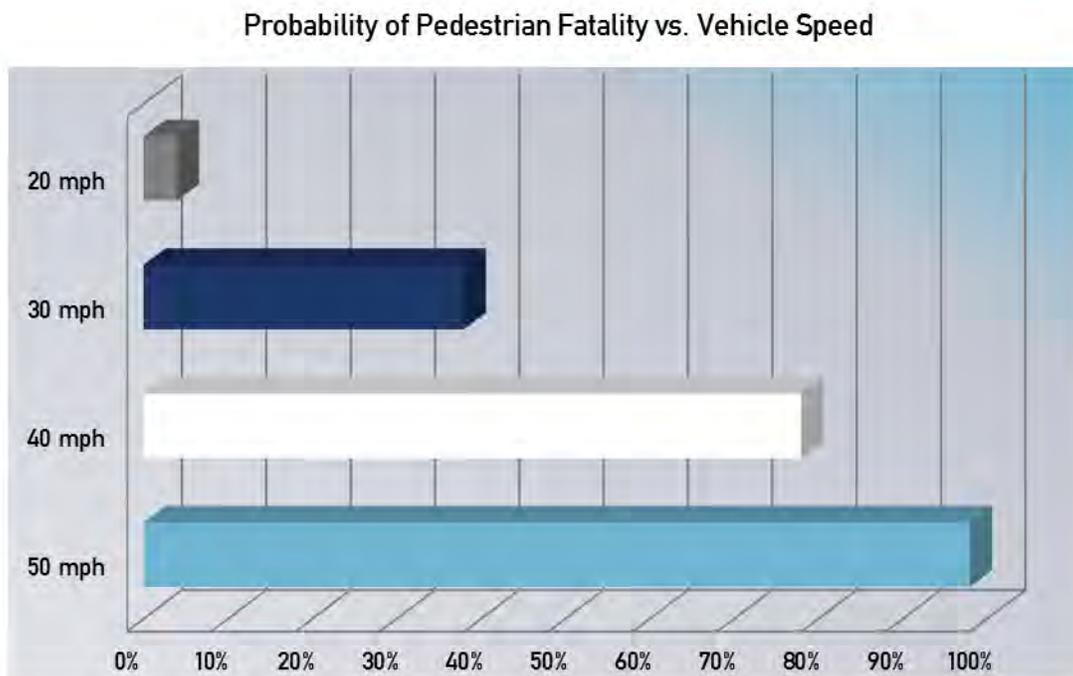
- A British study noted that there are 0.33 pedestrian crashes/million trips at roundabouts and 0.67 pedestrian crashes/million trips at traffic signals.
- A Dutch study evaluated 181 intersections that were converted to roundabout control that saw a 73% reduction in all crashes and an 89% reduction in injury crashes.
- The Insurance Institute of Highway Safety found a 75% reduction in pedestrian crashes at roundabout controlled intersections.
- A study of two roundabout controlled intersections in Washington state found that the rates of property damage crashes rose with construction of the two-lane roundabouts and that the increase in property damage collisions could be attributed to driver confusion.



- The Washington state study found that many of the benefits of single-lane roundabouts are also found at two-lane roundabouts but there is increased driver confusion with the two-lane roundabouts.
- A Minnesota study found the following:
 - pedestrians experienced an average of approximately 30 seconds of delay at a traffic signal and only 3 seconds of delay at a roundabout;
 - visually impaired pedestrians at roundabout crossings have problems similar to those at uncontrolled intersections with similar volumes.
- The Federal Highway Administration (FHWA) documents roundabouts as proven safety countermeasures.

In addition, review of available crash data shows that there have been no pedestrian or bicycle collisions at the eight roundabout controlled intersections in the study area for the latest three-year period from April 1, 2011 through March 31, 2014.

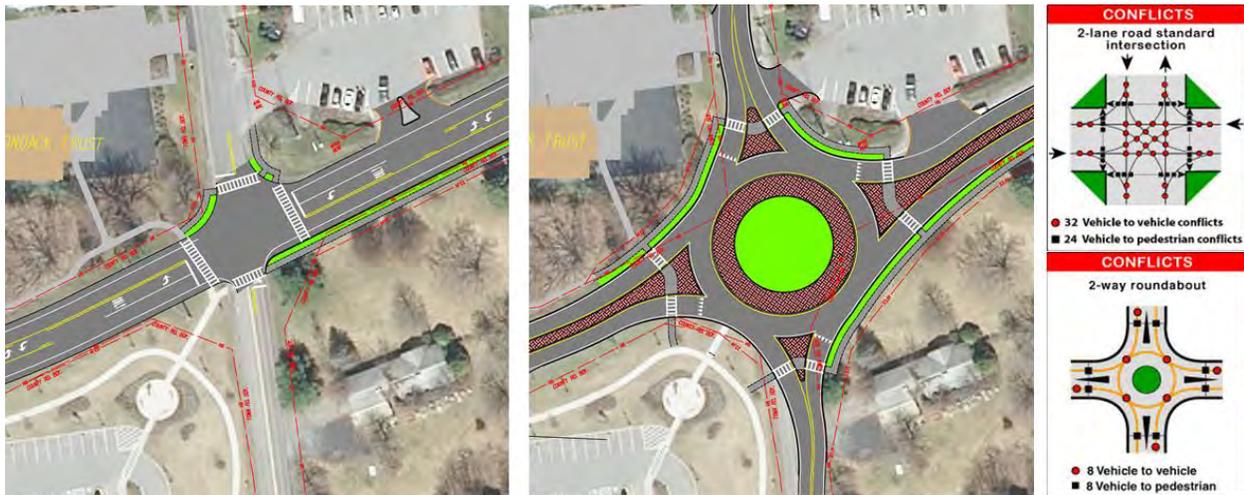
The severity of a pedestrian/vehicle collision is directly attributed to how fast the vehicle is travelling. The chart below shows the potential for a pedestrian fatality when compared to vehicle speed.



The chart shows that the potential for a pedestrian fatality decreases as travel speeds decrease. When vehicles approach a roundabout, the physical deflection of the intersection approach

requires vehicles to slow down to approximately 15 to 20-mph in order to safely navigate the roundabout. The chart shows that when a vehicle is travelling at 20-mph and collides with a pedestrian, there is a 5% chance of a pedestrian fatality. By contrast, there is no physical intersection modification causing a vehicle approaching a traffic signal to slow down to safely navigate the intersection.

A number of other factors contribute to the increased safety for roundabout controlled intersections including a reduced number of conflict and decision points, only have to worry about vehicles approaching from one direction, the location of the crossing approximately one-car length away from the circulating vehicles, and the shorter length of the exposed crossing distance. These factors are illustrated in the following images showing pedestrian crossings at typical traffic signal and roundabout controlled intersections.



There are ways to further enhance the safety benefits of roundabouts for pedestrians and bicyclists including:

- Clarifying roundabout signing and striping can minimize confusion for drivers and reduce crashes caused by confused drivers
- Installing pedestrian hybrid beacons at roundabout



approaches as recently completed on Round Lake Road

- Installing raised crosswalks to further reduce vehicle travel speeds
- Installing rectangular rapid flash beacons at pedestrian crossings
- Installing roadway crosswalk lighting to illuminate the crosswalk when a pedestrian is entering the roundabout
- Educating drivers, pedestrians, and bicyclists as to the proper way to navigate a roundabout. The FHWA Office of Safety, the NYSDOT, and other agencies including the American Association of Retired Persons (AARP) provide educational materials that teach drivers, pedestrians, and bicyclists how to navigate one-lane and two-lane roundabouts.

Pedestrians and Bicyclists

Review of the study area accident data shows that there have been three pedestrian and two bicycle injury crashes in the study area from April 1, 2011 through March 31, 2014. Table 4.11 summarizes the pedestrian and bicycle crashes during the data period.

Table 4.11 - Pedestrian/Bicycle Crash Summary

Crash Location	At intersection or Along highway?	Pedestrian/Cyclist Action
Pedestrians		
Round Lake Rd near Hearthwood Dr	Along highway	With traffic
Route 9/Kendall Way	At intersection	Crossing – no signal, marked crosswalk
Route 9 near Kendall Way	At intersection	Crossing – no signal or crosswalk
Bicyclists		
Round Lake Rd/Curry Ave near ramp	At intersection	Crossing – no signal or crosswalk
Route 67 near Raymond Rd	Along highway	With traffic

Two of the three pedestrian crashes in the study area occurred near the Route 9/Kendall Way intersection and one was on Round Lake Road near Hearthwood Drive. Of the two bicyclist crashes, one occurred on Round Lake Road and the second occurred on Route 67. Three of the five crashes occurred when the pedestrian or bicyclist was crossing the roadway and the other two when the pedestrian or bicyclist was travelling along the highway.

The National Highway Institute (NHI) is the education and training branch of the FHWA and provides educational resources for transportation-related training. One of the many university courses provided by the NHI is *Bicycle and Pedestrian Transportation* with an



entire chapter devoted to education, encouragement, and enforcement. Education campaigns must focus on all users. The FHWA *Bicycle and Pedestrian Transportation* course notes that the following must be included in a good education program:

- Teach important bicycling and walking skills to youngsters.
- Teach important bicycling and walking skills to adults.
- Include bike and pedestrian information in driver training.

There are numerous free, online resources available for municipalities, schools, clubs, and other organized groups or individuals to learn how to create and promote a safe transportation system for all users. The FHWA Office of Safety website (www.safety.fhwa.dot.gov) provides resources and links for all transportation modes and the entire transportation system. In addition to the online resources, local government agencies, coalitions, schools, and law enforcement agencies provide hands on education to promote safe travel.

An education campaign was launched by the NYSDOT in September 2014 to highlight pedestrian awareness and safety in response to a number of pedestrian fatalities in the NY Route 5 corridor in Schenectady and Albany counties and the NY Route 7 corridor in Troy. The “See! Be Seen!” campaign provides a message for both driver and pedestrian awareness. This message is advertised on CDTA buses, in brochures, on posters and in other materials being distributed at schools, senior centers, local businesses, and other locations.

The “See!” aspect of this campaign encourages drivers to:

- Always look for pedestrians, particularly when turning at a green lighting or making a right turn on red
- Take extra care around schools, playgrounds, and in neighborhoods
- Slow down and obey speed limits
- Stop for pedestrians at crosswalks and intersections
- Not block crosswalks when stopped at an intersection
- Not run red lights

The “Be Seen!” aspect of this campaign encourages pedestrians to:



- Cross at intersections and marked crosswalks
- Use pedestrian push-buttons where available and wait for the signal to cross
- Use sidewalks; if there are no sidewalks, walk facing traffic so you see vehicles and drivers see you
- Stay visible after dark and in bad weather by wearing light-colored or reflective clothing
- Watch for vehicles backing out of parking spaces and existing driveways
- Make eye contact with drivers to confirm that they see you
- Look left, look right, and then look left again before crossing the street

The educational campaign also extended to police and local courts. A pocket guide covering vehicle and traffic law related to pedestrians was developed for police personnel. In addition, a fact sheet was distributed to local courts to inform them of the campaign and help reinforce the importance of the issues that are being addressed with a focus on pedestrian safety.

Anecdotally, bicycle and pedestrian travel has increased over the last several years; however, many of the study area roadways were not constructed to accommodate these additional modes of travel. The New York State Highway Design Manual (HDM) establishes standards for typical roadway cross-sections based upon functional classification, travel speed, and traffic volume data. Table 4.12 summarizes the minimum travel lane and shoulder widths as identified in the HDM for construction of new roads for the types of roadways in the study area.

Table 4.12 - HDM Minimum Design Standards (feet)

Roadway Type	Travel Lane Width	Shoulder Width	
	ADT Over 2000	Uncurbed (Right Shoulder)	Curbed (Right shoulder)
Urban Arterial < 50 mph (Principal, Minor)	11	8	5
Urban Arterial ≥ 50 mph (Principal, Minor)	12	8	5
Rural Arterial (Principal, Minor)	12	8	NA
Urban Collector	10	8	5
Urban Local Road	10	8	5

Travel lane and shoulder width for reconstruction or resurfacing of existing roadways can be reduced to 11-foot travel lanes and 4-foot shoulders.

During the public meeting, several comments were raised concerning pedestrian and bicyclist safety on study area roadways. As an example, three roadways were evaluated to determine the desirability for roadway modification to better accommodate both pedestrians and bicyclists. Table 4.13 summarizes the existing and desired widths.

Table 4.13 - Minimum Roadway Widths for Reconstruction Projects

Roadway Name (Type)	Existing Width (feet)		Minimum Width* (feet)	
	Travel Lane	Shoulder	Travel Lane	Shoulder
Old Post Road (urban major collector)	11	1-2	10	4
NY Route 67 east of Luther Forest Blvd (rural minor arterial)	12	0-4	11	4
Saratoga Village Boulevard (urban local road)	16-17	0	10	4

* Minimum widths are determined based on the NYS HDM

The evaluation shows that the existing shoulder widths do not meet the minimum HDM guidance for the three roadways. It is noted that there is sufficient existing pavement width on Saratoga Village Boulevard to provide a 10-foot travel lane and a wide 6 to 7-foot shoulder for bicycle and pedestrian accommodations.

Consideration should be given to identifying priority pedestrian and bicycle routes and modifying the roadway cross-section to include accommodations for all users.

E. Freight Impacts

One objective of this study is to evaluate potential safety concerns associated with freight. As noted previously, I-87, Route 67, and portions of Route 9 are designated truck routes in the study area as shown on Figure 4 in Chapter 2. Construction of the Mechanicville Intermodal & Automotive Handling Facility has increased heavy vehicle traffic on Route 67 between Mechanicville and I-87 Exit 11; however, as one of the Capital Region’s few rail-to-truck intermodal facilities, the Mechanicville Intermodal facility is an important regional facility and is taking hundreds of trucks per day off of highways by carrying freight by rail. While the regional benefits of the Mechanicville Intermodal facility are noted, there are local impacts that could be mitigated. For example, during the public meeting residents living on Route 67 noted that getting their mail from boxes located on the opposite side of Route 67 from their homes has been more difficult due to the increased traffic volume and travel speeds. Data shows that there are 4,900 vehicles per day on this segment of Route 67 (of which 532 are trucks) and the 85th percentile travel speed is 60-mph. This has created a safety and livability concern for local residents. Additional information regarding freight traffic in the study area is included in Appendix I.



The existing travel lanes on Route 67 are generally 12-feet wide and the shoulder width ranges from zero to five feet. The narrow shoulder width creates a problem for pedestrians gathering their mail. There may be potential to move the existing mailboxes to eliminate the safety/access concern. Information on the US Postal Service website shows that changes to the type of delivery method can be adjusted “if service by existing methods imposes an extreme physical hardship on the customer.” The following steps are needed to request a change:

- Work with residents to get a formal request with all of their signatures.
- Work with town officials to coordinate delivery method change request.
- Talk to mail delivery person to confirm delivery route and method.
- Submit written request to the Postmaster illustrating the hardship experienced by the residents.

A change to the mail delivery would be consistent with the one of the goals of the CDTC Freight Advisory Committee to minimize conflicts associated with incompatible land uses near freight facilities or generators. In addition, consistent enforcement of speed limits would reduce travel speeds in the area. Additional information regarding mail delivery along Route 67 is included in Appendix I.

The CDTC recently completed draft report for the Freight and Goods Movement Study includes recommendations for the study area, particularly along Route 67. The Saratoga County Regional Traffic Study recommends, in addition to recommendations from the Regional Freight and Goods Movement Study, considering the following:

- Provide speed enforcement to reduce travel speeds of truck traffic
- Move the existing mailboxes
- Encourage trucks heading north to use the Round Lake Bypass to access I-87 via Exit 11 rather than travelling north on the Route 9/Route 67 overlap to access I-87 via Exit 12
- Widen shoulders where needed along Route 67

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5. Recommendations and Implementation

Recommendations for the Saratoga County Regional Traffic Study include addressing all modes of travel, policy changes, and education and encouragement opportunities. Implementation can start in the short-term but will require a long time to complete. While certain capacity improvements are driven by the Aggressive forecasts and will require monitoring and verification over time. Overall, the goal of the recommendations is to maintain and enhance regional mobility through encouraging multi-modal travel, promoting smart planning and community building, and accommodating future vehicular traffic with reasonable operations. This chapter summarizes the recommendations and implementation for the study area capacity modifications, TDM, and education.

A. Traffic Volume Monitoring

Intersection capacity modifications have been identified at three intersections under the Planned Growth scenario and at six additional intersections under the Aggressive Growth scenario. Intersection traffic volumes and operations should be monitored to confirm that capacity modifications are constructed at the appropriate time; changes in background traffic volumes and development plans can affect implementation timing. The traffic monitoring plan should include a recurring count schedule, data from traffic impact studies, and tracking development that drives the need for capacity modifications. Analysis parameters, minimum acceptable operations, and a funding source for the counts and analyses should be defined.

To determine the appropriate timeframe for design and construction, roadway traffic volume thresholds have been identified as illustrated in Table 5.1. Automatic traffic recorders should be placed on the roadways identified in the table to monitor traffic volumes for construction of intersection mitigation. The PM peak hour generally represents the worst-case condition; therefore, recorded PM peak hour traffic volumes should be compared to the volume threshold in Table 5.1. Instances where the AM peak hour represents the worst case condition are identified.

Table 5.1 - PM Peak Hour Traffic Volume Monitoring

No	Intersection & Approach	Existing Traffic Volumes	Traffic Volume Threshold
3	Old Post Rd/Northline Rd - Northline Road (west leg)	1,170	1,200
6	Rt 9/Malta Ave - Malta Ave (east leg)	195	200
10	Rt 67/Brookline Rd* - Route 67 (east leg)	1,490	1,500
11	Rt 67/Eastline Rd - Route 67 (west leg)	1,525	1,600
16	Rt 9/Stonebreak Rd - Route 9 (north leg)	1,380	2,000
18	Luther Forest Blvd/Rt 67* - Route 67 (west leg)	695	1,200
21,22	Round Lake Rd/I-87 Exit 11 - Round Lake Rd (between ramps)	1,385	1,700
31	Rt 9P/Plains Rd - Plains Rd (south leg)	430	500

* Indicates AM Peak Hour Traffic Volumes

As traffic volumes on the roadway approach the traffic volume threshold, intersection design and construction should be implemented. The table shows that there is little difference between the existing traffic volumes and the traffic volume threshold at the Old Post Road/Northline Road, Route 9/Malta Avenue and Route 67/Brookline Road intersections. While these three locations currently operate with acceptable levels of service, they are reaching capacity and relatively minor changes in traffic volume have the potential to create a noticeable difference in intersection operations.

A second alternative for growth monitoring is through the number of building permits issued in each community. The CDRPC monitors building permit history in each community in the Capital District. The building permit data can be reviewed annually to determine whether growth in the study area is on-track with the Planned or the Aggressive growth scenarios. Table 5.2 summarizes the communities to monitor and the corresponding new residential units associated with each growth scenario after 2015. Residential building permits should be reviewed annually to track growth in the study area.

It is noted that large commercial buildings can be constructed with a single building permit which doesn't capture the potential impact that a large commercial building can have on the transportation system. However, larger commercial growth is not expected to occur without corresponding residential growth. Therefore, the building permit monitoring will capture growth trends in the region.

Table 5.2 - Building Permit Monitoring

Municipality	Residential Units	
	Planned Total (Annual)	Aggressive Total (Annual)
Town of Ballston	523 (52)	1,037 (104)
Town of Clifton Park	337 (38)	337 (38)
Town of Halfmoon	2,069 (207)	2,856 (286)
Town of Malta	1,939 (194)	2,906 (291)
Town of Milton	642 (64)	642 (64)
Town of Saratoga	109 (11)	144 (14)
City of Saratoga Springs	731 (73)	731 (73)
Town of Stillwater	219 (22)	851 (85)
Town of Wilton	862 (86)	912 (91)

If the number of building permits being issued tracks more consistently with the Planned growth scenario, then implementation of capacity mitigation at those intersections identified for the Planned scenario should be progressed. Should the number of building permits being issued track more consistently with the Aggressive growth scenario, then implementation of capacity mitigation at the additional intersections should be progressed. This includes creating engineering design plans and securing funding for construction of intersection mitigation.

B. TDM

Local municipalities, government agencies, chambers of commerce, and business owners should work to encourage implementation of TDM strategies. A number of strategies are available in the region, applicable to the study area, and require additional education about availability, their benefits, and to become integrated into the regional thinking about traffic management. These include:

- Work with CDTA to locate a new and larger park and ride lot near Exit 12 from which local transit services can be expanded.
- Work with GLOBALFOUNDRIES, other larger employers, and chambers of commerce to implement, advertise, and incentivize employer-based TDM.
- Work with CDTA, CDTC, and local municipalities to develop transit improvements including bike/transit integration.
- Encourage major employers to pursue Universal Access partnerships with CDTA, particularly as an alternative to building parking.
- Encourage rideshare programs like carpools and vanpools. Also encourage car sharing and bike sharing programs.

- Encourage employers to incentivize car sharing and other modes of transportation by offering parking cash-out and other parking management strategies.
- Educate business owners about the benefits of modified work schedules including flextime, off-peak shift work, and telecommuting.
- Work with local municipalities to implement smart planning like new urbanism, smart growth, transit oriented development, car-free planning, and location-efficient development.
- Implement parking management including pay to park, parking incentives for rideshare programs, and maximum parking requirements rather than minimum parking requirements.
- Encourage non-motorized travel through education, programming, traffic calming, and construction of appropriate facilities.
- Coordinate with CDTC to implement freight transport management recommendations from the Freight and Goods Movement Study.
- Market regionally available TDM programs.

Many of these strategies are little or low cost and require education and encouragement rather than significant capital investment. For example, shifting the work schedules for GLOBALFOUNDRIES employees reduces trips at a low cost during peak hours and potentially saves millions of dollars in roadway modifications. Other strategies like transit improvements and rideshare programs will have a much lower reduction in peak hour trips, but will provide system-wide operational benefits.

Continued advocacy and implementation of good TDM measures and programs are needed, without which, employees will continue to predominately drive themselves to and from work. Towns and large employers should designate TDM managers to market and foster these programs and build from the resources already available at the regional level such as incentivizing carpools and vanpools which are a more viable option for lower density areas like Saratoga County. Commuters can sign up for carpools and vanpools by registering at the www.iPool2.org website and additional information can be found at the Capital Moves website. Employers can incentivize carpool and vanpool use by financing the service, providing pre-tax payment options, and creating preferential parking for carpool and vanpool users, among other incentives. Additional information regarding TDM is included in Appendix I.

C. Education

Education is a fundamental element to increasing safety and compliance for all travel modes. Education is also critical for municipal review boards as they are the decision makers for project

approvals and have the local authority and responsibility to implement desired changes. Transportation education should take many forms to reach all users, such as:

- Municipalities should encourage the use of existing free, online resources for schools, clubs, and other organized groups to promote a safe transportation system for all users.
- Teach bicycling and walking skills to youngsters for all types of intersections and roadways in safe, controlled environments like schools and clubs.
- Teach important travel mode skills to adults through add campaigns, employer education courses, social organizations, and flyers at major activity centers. Adults can also be reached through programs that their children attend at school.
- Include bike, pedestrian, and multiple types of intersection control navigation information in driver training like Drivers-Ed.

Saratoga County should promote safe travel for all modes by working with municipalities to create a task force focused on education. The task force should use online and local resources to develop and implement an educational campaign focused on all modes of travel on all types of intersection and roadway facilities. For example, municipalities could play short educational videos on the televisions located in Town Hall. These videos would reach most people that enter Town Hall for a relatively low cost. Additional information regarding safety education is included in Appendix I.

While education concerning the existing built environmental is vital, so is the understanding of how our planning choices affect our transportation network. For example, promoting low-density single-family housing encourages personal vehicle trips while promoting higher-density, mixed use development creates the opportunity for multi-modal travel and shared trips. Local municipalities should use the regional resources available to learn the implications of decisions made today and how they affect the transportation networks of tomorrow in order to make informed decisions when creating community plans and making development decisions.

D. Implementation

This study reveals a fundamental challenge that many areas face: planning for new economic development while ensuring that transportation facilities are capable of accommodating the increased demand associated with that development. The Towns, the State, and the private sector, while promoting responsible and beneficial economic development, all share a responsibility for evaluating and maintaining reasonable quality of life and transportation operations in the area. To ensure cooperative implementation of the recommendations in the Study, a Task Force should be developed. The Task Force should include representation from

the CDTC, Saratoga County, NYSDOT, the Towns of Malta and Stillwater, CEG, and SEDC. The Task Force should represent multiple interests, advocate for and advance fulfilling the intent of the recommendations, act as an information conduit to the public and stakeholders, and anticipate and avoid potential hurdles to project implementation. The following items should be accomplished:

- Growth monitoring
- Pursue funding opportunities/mechanisms
- Advocating for and tracking multi-modal improvements
- Encouraging education opportunities and disseminating materials
- Maintain the website

Pursuing funding opportunities and mechanisms is a major item for the Task Force. It is noted that the proposed highway modification locations are all within the Capital District urbanized area and the level of functional classification of at least one of the approach highway legs would allow for federal aid highway program eligibility under one or two of the primary core programs. The core programs include the Surface Transportation Program (STP) and National Highway System Performance Program (NHPP). These eligible functional classification assignments are generally re-evaluated every ten years in conjunction with the latest US Census information and input from State and local traffic volume reporting and the Metropolitan Planning Organization. There would be no expectation that the current designations would change given expected development patterns.

Table 5.3 - Federal Aid Highway Eligibility

No	Intersection	Highest Functional Class	Within Urbanized Area	Federal Aid Program Eligibility (Core)
3	Old Post Rd/Northline Rd	Major Collector	Yes	STP
6	Rt 9/Malta Ave	Principal Arterial	Yes	NHPP/STP
10	Rt 67/Brookline Rd	Principal Arterial	Yes	NHPP/STP
11	Rt 67/Eastline Rd	Principal Arterial	Yes	NHPP/STP
16	Rt 9/Stonebreak Rd	Principal Arterial	Yes	NHPP/STP
18	Rt 67/Luther Forest Blvd	Minor Arterial	Yes	STP
21,22	Round Lake Rd/I-87 Exit 11	Principal Arterial	Yes	NHPP/STP
31	Rt 9P/Plains Road	Major Collector	Yes	STP

Eligibility for federal funding does not automatically lead to the assignment of those funds to a project. In the Capital District four county area, of which the affected Towns are a part, the CDTC, comprised of representatives across the Capital District municipalities, has the legal mandate to determine priorities for assigning federal highway and transit funds. As noted in Chapter 1, the CDTC New Visions Plan calls for priority to maintaining existing infrastructure. This objective is consistent with the NYSDOT “Forward Four” policy with preservation of

existing facilities as the highest priority for use of limited funds. The five year CDTC Transportation Improvement Program (TIP) is structured around preservation and not system expansion. Preservation needs far exceed current and expected funding levels. As of the date of this document, CDTC has made no commitment for funding any of the improvements proposed with federal monies under its purview.

Some of the project locations exhibit a crash history pattern which may indicate a correctable situation using standard countermeasures. The previous federal surface transportation act (MAP-21), under extension authorization to October 31, 2015, included a funding program (HSIP) to address safety deficient locations. The basic requirement to access these funds is to evaluate historic crash data (usually three years) and determine if a cost effective countermeasure exists. Federal and State policy requires the analysis be data driven on severity history and pattern(s) of crashes. It is possible to combine these funds with core or other monies in the event of providing a countermeasure with a standard preservation treatment.

A Generic Environmental Impact Statement (GEIS) is a tool that can be used to facilitate public/private cost sharing for implementation of transportation improvements. The purpose of a GEIS is to associate planned development or development alternatives with potential impacts and related mitigation measures. It establishes a mechanism to assess multiple potential impacts over a large geographical area. This serves two purposes. First, it allows for future development to reduce or bypass the lengthy environmental review process, as long as the proposed project is within the thresholds established in the GEIS. This saves potential developers significant time and money. In addition, a GEIS is a means for all involved parties to contribute towards the implementation of necessary improvements. Since the establishment of the GEIS process within the State Environmental Quality Review Act (SEQR) in 1982, several communities within New York State have utilized that process to develop financial strategies to allow cost sharing for infrastructure improvements.

Additional information regarding potential traditional and non-traditional funding sources is included in Appendix I.

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6. Conclusions

The purpose of the Saratoga County Regional Traffic Study is to address mobility concerns in central Saratoga County, New York, focused around I-87 Exits 11 and 12 associated with population growth and increased development. The Study evaluated the regional roadway network and 38 intersections that were determined to influence regional mobility. Two future conditions were evaluated: “Planned” and “Aggressive” growth scenarios over a ten year study period. The Planned scenario includes the projects that have some form of approval status, are currently under construction, and/or have been approved but not fully built out. The Aggressive scenario includes growth associated with the Planned scenario and the speculative projects identified during community interviews.

The primary conclusion of the study is that construction of Exit 11A does not mitigate all traffic and mobility concerns in the study area. With continued commercial and residential development under both the Planned and Aggressive growth scenarios, traffic volumes will continue to increase. These volume increases will be noticeable on local, county, state, and federal roads. With construction of mitigation at nine intersections totaling approximately \$15 million, acceptable vehicle operations can be provided; however, the increased traffic volumes will still be noticeable and could be considered an impact to quality of life.

The goal of the recommendations is to maintain and improve regional travel by encouraging walking, bicycling, and bus trips, promoting smart planning and community building, and accommodating future vehicular traffic with reasonable operations. The Implementation Task Force will have the following roles:

- Represent multiple interests by having a diverse membership;
- Advance fulfilling the intent of the recommendations by monitoring growth, pursuing funding, and tracking mitigation implementation;
- Inform the public and stakeholders through encouraging education opportunities, disseminating information, and maintaining the project website;
- Anticipate and avoid potential hurdles to implementation.

The members of the Implementation Task Force will need to make a long-term commitment to progress the findings of the Saratoga County Regional Traffic Study to maintain and promote the opportunities and quality of life to which residents of the area are accustomed.

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Appendix A

Review of Existing Studies



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MEMORANDUM



Date: March 20, 2015
To: Michael Franchini, CDTC
From: Don Adams
Project: Saratoga Regional Traffic Study
Re: Review of Existing Studies

ENGINEERS
PLANNERS
SURVEYORS

This memo is intended to summarize the existing studies relevant to the Saratoga Regional Traffic Study (SRTS) area. The recommendations and projects in these previous studies form the basis for the planning efforts and assumptions in the current SRTS area. The following discussion highlights the major findings from each of the studies.

Report Summaries

New Visions 2035 and 2040 Plan Update

In September 2011 New Visions for a Quality Region 2035 Update was completed and reaffirmed the 2030 plan without a wholesale recreation. New Visions satisfies the federal requirements for continuing, cooperative and comprehensive long range transportation planning for the Capital Region.

To address potential growth, four alternative development scenarios were analyzed to test the impacts of growth in the region, and to document specific congestion and transit potential. An analysis of demographics and land use patterns found positive benefits of concentrated development for mobility and regional quality of life. The plan supports concentrated development in the region.

There are 31 planning and investment principles. New Visions principles generally follow four themes:

- **Preserve and manage** the existing investment in the region's transportation system.
- **Develop the region's potential** to grow into a uniquely attractive, vibrant, and diverse metropolitan area.
- **Link transportation and land use** planning to meet the Plan's goals for urban investment, concentrated development patterns, and smart economic growth.
- **Plan and build for all modes** including pedestrian, bicycle, public transit, cars, and trucks.

The plan also documents the big ticket initiatives listed which do not have identified funding but represent creative planning approaches that may be supported by concentrated high growth.

The current update (New Visions 2040) places an emphasis on public participation, land use planning, and multi-modal transportation. The ideas from the 2035 Update were refined, and the following nine New Visions Committees were formed in January, 2014:

- Quality Region Task Force – Examine local planning impacts based on regional growth scenarios, urban reinvestment to improve quality of life and livability.
- Freight Advisory Committee – Prepare a freight plan, including the rail roads, and study the land use conflicts, projects, and environmental justice related to it.

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- Regional Operational and Safety Advisory Committee – Update the congestion management plan and examine the safety needs by developing accident data, locating high accident area, and reducing accidents.
- Complete Streets Advisory Committee – Planning for all modes for all projects within the existing framework by adopting national design standards.
- Bicycle and Pedestrian Advisor Committee – Encourage progressing the Regional Greenway Plan through different funding sources and encourage trail use and local tourism
- Environment and Technology Task Force – Consideration of automated cars, POD cars, alternate fuels and other emerging technological advances and its anticipated impacts.
- Infrastructure Task Force – Consider highway design and infrastructure needs for non-State owned roads and maintenance costs in the long term.
- Regional Transportation Coordinating Committee – Developing methods to coordinate the public and private sources of human services transportation and identifying needs and solutions for Transit Human Services Transportation plan.
- Transit Task Force – Work the CDTA to develop Transit Development Plan to expand the transit services, travel demand management and transit oriented communities.

2002 NYSDOT Draft Conceptual Access Modification Proposal for I-87, Exit 11A

The Conceptual Access Modification Proposal was prepared to obtain a feasibility determination from the Federal Highway Administration for a new interchange on I-87 between exit 11 and exit 12. The report summarizes the existing and future traffic volumes and analyzes several different interchange alternatives, including ramp spacing requirements, proposed signing and level of service analysis to ensure feasibility. The results of this study indicate that the construction of Exit 11A appears feasible from a traffic operations standpoint. In their letter dated February 5, 2003 the Federal Highway Administration (FHWA) stated “Based on our review of the provided document, our initial reaction is that the Exit 11A concept appears to have no obvious flaws.”

2003 Luther Forest Technology Campus (LFTC) GEIS

The Generic Environmental Impact Statement (GEIS) was completed to evaluate the potential impacts of the Luther Forest Technology Campus (LFTC). LFTC, located in the Towns of Malta and Stillwater in Saratoga County is being developed as a world-class nanotechnology campus and manufacturing center with a mix of industrial, commercial and residential uses, including up to four silicon ‘wafer’ manufacturing facilities, up to 2 million square feet of ancillary uses, a hotel/conference center, and up to 50 residential units. The site was estimated to create 10,000 new jobs at full build-out over a 15 to 25 year period. Some new jobs will be filled by the existing population residing in approximately 30 to 40 mile radius around the project site. Others will be filled by new professionals moving to the region as well as recent local graduates choosing to live in the Saratoga-Albany-Glens Falls region.

The GEIS evaluates potential impacts and identifies appropriate mitigation measures. The notable proposed transportation improvements included:

- Construction of a new interchange, 11A, on I-87 (\$70 million)
- Upgrading 19 local intersections (\$5 million)
- Building a road between Cold Springs Road and Route 9 to mitigate local traffic on Cold Springs Road (\$22 million)

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- Construction of a bypass road around the Village of Round Lake to I-87 Exit 11 (\$25 million)

The Final GEIS notes that CDTA transit service to the LFTC area is feasible as development density increases, which would decrease vehicular trips generated by the project. CDTA agreed to coordinate with the developer to provide service to the site.

2005 Round Lake Bypass Access Study

The Round Lake Bypass Access Transportation Feasibility Study documented the independent utility of constructing a new section of highway to connect I-87 Exit 11 and US Route 9 around the Village of Round Lake. The study analyzed possible alternative routes that would replace the incompatible use of Curry Road/George Street (NY Route 911U) as an arterial road through the center of the developed Village; thereby preserving the Historical and Aesthetic Context of the Village and improving the quality of life within the Village. The study analyzed ETC (2007), ETC+10 (2017), and ETC+20 (2027) conditions with construction of two Fabs at LFTC. Development of additional Fabs at LFTC was not analyzed because, as defined in the LFTC GEIS, a new interchange would be needed for construction of more than two Fabs.

2005 Town of Malta Comprehensive Master Plan

The approval of the LFTC as well as NYSERDA's proposed Saratoga Technology and Energy Park led to the update of the Master Plan for the Town of Malta. The plan divided the Town into 13 neighborhoods based on common use such as residential, commercial, downtown, agricultural or rural areas.

In accordance to the State Environmental Quality Review Act (SEQRA) for the adoption of the Comprehensive Master Plan, it also served as a GEIS. In order to address the potential growth of the Town, a total build-out of the Town's remaining developable area by neighborhood under existing zoning and associated probable growth impacts was conducted. These results were used for future land use recommendations and all other future development strategies detailed under the Action Plan. In order to accomplish the vision, goals, and objectives, specific implementation measures were listed under the action plan in different categories as follows:

- Zoning and Land Use
- Transportation
- Recreation and Community Resources
- Historic and Cultural Resources

Subsequent planning studies provided refinements and have been amended to the plan.

2006 Malta Town-Wide GEIS and updates

Pursuant to SEQRA, the Town of Malta prepared a GEIS for the purpose of evaluating the cumulative impacts of future development on community resources including land use, infrastructure and the environment and to identify appropriate mitigation to ensure orderly and equitable growth. A full build-out analysis was conducted for a 10-year period in concurrence with the completion of Phase 1 of LFTC in the Town's Comprehensive Plan and Zoning update. This led to land use and density modifications

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which became the basis for the geographic distribution of future growth over the 10-year planning period.

The GEIS evaluated potential impacts and identified appropriate mitigation measures. The notable transportation improvements included:

- Construction of collector and access roads to provide alternative travel routes in order to reduce traffic on Routes 9 and 67 and bypass the Dunning Street intersection
- The operational analysis revealed that 17 intersections would result in poor levels of service by the end of the planning period
- Town implementation of a transportation mitigation fee of \$1,025 per PM peak hour vehicular trip generated by new development in the Town to fund improvements

2006 Route 9 North and South Corridor Plan

The Route 9 North and South Corridor plays an important role in defining the character of Malta as it experiences increased development. The study area for the corridor plan extended north from Cramer Road to Northway Exit 13, and south from Knabner Road to the Village of Round Lake. These corridors serve as important gateways to Malta. The goal of this Plan was to provide development guidelines that help Malta achieve a balance between preserving landscapes and views, ensuring aesthetically attractive development, and maintaining the functionality of Route 9 as a transportation corridor as the area develops. The following guidelines reflected the design and planning goals for the area:

- Encourage nodes of mixed-use development, promote workforce and senior housing, and preserve the natural landscape;
- Create design standards that require attractive gateways to new developments and enhance the appearance of existing developments; and
- Improve traffic safety, enhance access management, and improve non-vehicular circulation.

Transportation recommendations from the plan included:

- Improve traffic safety
- Apply access management techniques
- Require right-of-way dedications
- Improve non-vehicular circulation
- Encourage mass transit opportunities such as bus/shuttle service and carpooling
- Construct a number of new vehicle and pedestrian/bicycle connections

2006 Route 67 Corridor Study

The purpose of the study was to provide short-term solutions to improve the transportation infrastructure like intersection improvements, roadway configurations and potential parallel access road configurations. The study area included Route 67, on the west of I-87, from V-Corners (where Route 67 intersects and overlaps with Route 50) to the I-87 Exit 12 interchange. Brookline Road, between Routes 50 and 67 is also part of the study area. The study included a number of recommendations including:

- Construct a pair of roundabouts at the NY Route 50/NY Route 67 intersection.
- Construct a parallel road north of Route 67 from Brookline Road to Route 50.
- Construct a roundabout at the Route 67/Brookline Road intersection.

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- Construct a roundabout at the Eastline Road/Route 67 intersection.
- Widen shoulders along the entire corridor to 5-feet to accommodate bicycles.
- Encourage shared vehicle access at existing parcels and future development projects to minimize curb cuts to Routes 50 and 67.

2008 Stillwater GEIS & Master Plan

The purpose of the Final Generic Environmental Impact Statement (FGEIS) was to evaluate the potential impacts of growth on certain resources and facilities located in the Town of Stillwater, Saratoga County, New York. The document examines the impacts of land development projected to occur from 2007-2017 on the Town's infrastructure including highways (traffic), water supply and distribution systems, wastewater collection and treatment system, as well as the Town's open spaces, farmland, and recreational facilities. The study assumed 600 residential units, 50,000 square feet (SF) of commercial/office/retail space, and 100,000 SF industrial space from 2007 through 2017.

From a transportation perspective, the GEIS projected the Route 9P/Lake Road (CR76) intersection to operate at a LOS F under the build condition requiring mitigation. Traffic largely associated with the construction of the LFTC and the Saratoga Lake Hotel impact the intersection. The installation of a traffic signal at this intersection was projected after completion of Phase 3 of the LFTC build-out. As a result of the analysis in this DGEIS, this mitigation will be required prior to that time. The Master Plan recommended that the Town (and the LFTC project sponsor) should review the timing of this mitigation and assign implementation accordingly.

2009 Mechanicville Intermodal & Automotive Handling Facility TIS (Norfolk Southern Intermodal Traffic Study)

This study was prepared to document the traffic impacts created by the proposed Intermodal and Automotive Handling Facility, located in Mechanicville, with access via a driveway connection to Route 67. The anticipated completion date of the proposed development was 2012. The immediate adjacent roadway segment and roadway segments utilized to access the two major highways (I-87 and Route 4), which comprised seven roadway segments and six intersections were evaluated as part of this study.

The analysis concluded that all study area roadways for the 2012 total build-out were anticipated to operate at an acceptable level of service with the addition of project traffic generated by the proposed development. The Route 9/67 and Dunning Street intersection was the only intersection that was not anticipated to operate at an acceptable level of service. However, no project traffic was anticipated to access this roundabout in the future condition once the construction of the Round Lake Bypass was complete.

2012 Round Lake Road Corridor Plan

The Malta Round Lake Road corridor study area is located between the Town's municipal boundary along East Line Road and the Round Lake Bypass roundabout. The 1.25 mile roadway segment is owned and maintained by Saratoga County. The study advisory committee evaluated two design alternatives in order to identify possible improvements to the Round Lake Road corridor:

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- Expanded Roadway Alternative: This alternative included the development of a two-way left-turn lane on Round Lake Road from Chango Drive through to Exit 11 southbound, creating a three-lane section for a segment of the corridor. This alternative also included select intersection improvements.
- Roundabout Alternative: This alternative included roundabouts at Chango Drive and Ruhle/Raylinsky Road with a narrow raised median between the two roundabouts. East of Ruhle/Raylinsky Road the roadway cross-section would widen to include a two-way left-turn lane to the southbound ramps and a three-lane section under I-87.

The study committee concluded that both alternatives were feasible, but the roundabout alternative was preferred. Design was funded and is planned for construction in 2015.

2013 TIS Fab 8 Campus

The intent of the study was to support evaluation and decision making regarding the feasibility of the next phase of development at the GLOBALFOUNDARIES Fab 8 site. The study assessed the traffic impacts related to the full build-out of the Fab 8 Campus with potential development and occupancy of Fab 8.2. The full occupancy of the approved Fab 8.1 and Technology Development Campus, including the Administrative buildings 1 and 2 support services, as well as the development and full production ramp up of Fab 8.2, was expected to generate up to an additional 1,264 vehicle trips during the AM peak hour of adjacent street traffic and 1,226 vehicle trips during the PM peak hour of adjacent street traffic under conservative assumptions.

The analysis, based on existing and 2022 forecasted traffic volumes and the existing geometry at the study area intersections, concluded that the potential next phase of development can be accommodated without significant impact of service levels and does not warrant the construction of Exit 11A at this time. The following mitigation was recommended based on the analysis:

- Construction of an eastbound right-turn lane at the US Route 9/Malta Avenue/Malta Avenue Extension intersection.
- Construction of northbound and southbound left-turn lanes on East Line Road at NY Route 67, or an alternative mitigation plan for contribution towards long-term mitigation at this intersection to include the construction of a roundabout consistent with the Malta Town-wide GEIS.
- Modification to the US Route 9/NY Route 67/Dunning Street roundabout to allow east/west through movements to use the eastbound and westbound left-turn only lanes and provide northbound and westbound right-turn lanes or an alternative mitigation plan to support additional roadway connections as outlined in Malta's Highway Access Planning Guide (2003) and Form Based Code (2013).
- Modification to the US Route 9/NY Route 67/Round Lake Bypass roundabout to provide an eastbound left-turn lane.
- Installation of a traffic signal at the Interstate 87 Exit 11 southbound ramp with Round Lake Road.
- Traffic signal coordination at the Interstate 87 southbound ramp with the existing traffic signal at the northbound ramp at Exit 11.

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Form-Based Code for Malta (2013)

The Town of Malta's 2011 Downtown Plan recommended that the Town develop a Form-Based Code and complete streets plan for Downtown Malta. Traditional zoning is based on density use, floor area ratio, setbacks, and maximum building heights. A form-based code is a land development regulation that fosters predictable built results by using physical form as the organizing principle for the code. It addresses the relationship between the buildings and its form with the public space around it. Form-based codes were developed to address the growth in the region and avoid issues of urban sprawl. It provides regulatory means to the local governments to develop compact and walkable urbanism.

The Town of Malta adopted the code in February, 2013 which amended the 2005 Comprehensive Plan. The purpose of the Downtown Malta Form-Based codes is:

- To enhance quality construction of new development
- Reduce bulk and mass of buildings along Route 9
- Promote mixed use and more walkable and multi-modal connections

The form-based code districts are located mainly along Route 9 between Cramer Road and Knabner Road in Downtown Malta extending to Hemphill Place in the east and the I-87 Exit 12 ramps in the west.

2014 Saratoga County Economic Development Strategic Plan

The Economic Development Strategic Plan was adopted in March 2014. The Plan called for the creation of a local development corporation or public authority that unites all the economic partners under a single entity and function as the county's official economic development entity. The plan focused on economic vitality by strengthening business and industry, tourism, and agriculture. The strategic plan focuses on the following goals:

- Identify and support strategic investment in high-impact projects.
- Promote conditions for continued business investment and growth in the county and the region.
- Create a system for identifying prospects and providing best-in-class project management for priority projects.
- Assemble a network of services to support business creation and business expansion.

The plan endorsed connecting the county's sports & recreation attractions and building a regional manufacturing technology education center in partnership with GLOBALFOUNDRIES. It suggested expanding target industries such as advanced manufacturing, research and development, clean technologies, financial business process outsourcing, and specialized distribution.

Summary of Studies

As growth has been realized in the Luther Forest Technology Campus, it is important to understand and build off of previous plans and studies, including completed and ongoing traffic impact studies within the area. The policies, recommendations, and projects contained in the previous studies serve to inform the existing and planned transportation conditions in the region.

New Visions is the long-range planning document for the Capital Region including Albany, Rensselaer, Saratoga, and Schenectady counties. In September 2011 New Visions for a Quality Region 2035 Update

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was completed and reaffirmed the 2030 plan which supports concentrated development in the region and follows four themes:

- Preserve and manage the existing investment in the region's transportation system.
- Develop the region's potential to grow into a uniquely attractive, vibrant, and diverse metropolitan area.
- Link transportation and land use planning to meet the Plan's goals for urban investment, concentrated development patterns, and smart economic growth.
- Plan and build for all modes including pedestrian, bicycle, public transit, cars, and trucks.

The current update (New Visions 2040) maintains the four themes while placing an emphasis on public participation, land use planning, and multi-modal transportation.

While New Visions provides planning principles and four over-arching themes for the Capital Region, the other studies provide a more focused analysis and plan for the study area. The common themes and key issues identified in these studies include:

- Capacity and safety of the Route 9/Route 67/Dunning Street intersection
- Construction of an I-87 Exit 11A with construction of two Fabs at LFTC
- Capacity and delay at the I-87 Exit 11 ramp intersections with Round Lake Road
- Individual intersection capacity modifications
- Additional roadway connections to mitigate delay
- Desire to maintain a "downtown" in Malta
- Multi-modal access and accommodations in all areas

The I-87 Exit 11A interchange was identified as a mitigation measure after construction of two Fabs in the FGEIS for LFTC dated October 16, 2003. The Malta Town-Wide GEIS identified intersection improvements at the US Route 9/NY Route 67/Dunning Street intersection and the I-87 Exit 11 Northbound Ramp/Round Lake Road intersection with the assumption that construction of Exit 11A would alleviate traffic volumes at these intersections in the future. The LFTC FGEIS is more than a decade old and transportation conditions and business plans for LFTC have changed. The fundamental assumption that Exit 11A is needed after construction of two Fabs, which was carried through the Malta Town-Wide GEIS, requires additional investigation. The trip generating potential of LFTC was included in a number of the planning studies reviewed, as construction and operation of the first Fab continues, the trip generating potential of the site can be reviewed and updated as needed to confirm the specific recommendations in the reviewed studies.

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Appendix B

Detailed Levels of Service Tables



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Table 1: Level of Service Summary for the AM Peak Hour

Intersection			Control	AM Peak Hour						
				Existing	2025 Design Year				CME Additional Improvements	
					Current Geometry (Timing Imp only)		W/ Planned Geometric Improvements			
					Planned	Aggressive	Planned	Aggressive	Planned	Aggressive
1. Northline Rd/Rt 50			S							
Northline Rd EB	LTR		C (30.3)	D (37.7)	D (40.6)					
Northline Rd WB	L		C (20.3)	C (24.3)	C (25.7)					
	TR		B (11.5)	B (13.0)	B (13.3)					
Route 50 NB	L		D (45.7)	D (52.1)	D (53.7)	--	--	--	--	
	TR		D (48.4)	D (51.3)	D (52.3)					
Route 50 SB	L		D (47.7)	D (52.7)	D (54.0)					
	TR		D (47.9)	D (50.3)	D (51.7)					
Overall				D (35.4)	D (40.5)	D (42.0)	--	--	--	--
2. Old Post Rd/Malta Ave			TW							
Malta Ave EB	LT		A (7.6)	A (7.7)	A (7.7)					
Old Post Rd SB	LR		A (9.2)	A (9.4)	A (9.4)	--	--	--	--	
3. Old Post Rd/Northline Rd			AW							
Northline Rd EB	LTR		D (32.9)	F (51.6)	F (54.1)					
Northline Rd WB	LTR		A (9.5)	A (9.9)	A (10.0)	--	--	--	--	
Old Post Rd NB	LTR		A (9.7)	A (9.9)	A (9.8)					
Old Post Rd SB	LTR		A (9.9)	B (10.5)	B (10.4)					
Overall				D (25.9)	E (39.4)	E (41.1)	--	--	--	--
Northline Rd EB	LTR							A (8.0)	A (8.8)	
Northline Rd WB	LTR		--	--	--	--	--	A (2.9)	A (2.9)	
Old Post Rd NB	LTR							B (17.7)	B (18.8)	
Old Post Rd SB	LTR							C (22.8)	C (24.3)	
Overall				--	--	--	--	A (9.4)	B (10.1)	
Northline Rd EB	LTR							C (27.6)	C (30.5)	
Northline Rd WB	LTR		--	--	--	--	--	B (16.5)	B (17.8)	
Old Post Rd NB	LTR							C (20.6)	C (23.2)	
Old Post Rd SB	LTR							A (6.4)	A (6.6)	
Overall				--	--	--	--	C (22.1)	C (24.4)	
4. Northline Rd/Malta Ave			TW							
Malta Ave EB	LT		A (7.8)	A (7.9)	A (8.0)					
Northline Rd SB	LR		B (14.3)	C (18.5)	C (20.6)	--	--	--	--	
5. Old Post Rd/Cherry Choke Rd/Rt 9			S							
Old Post Rd EB	LTR		C (31.6)	C (34.0)	C (34.2)					
Cherry Choke Rd WB	LTR		C (23.9)	C (25.1)	C (25.2)					
Route 9 NB	L		D (40.4)	D (41.2)	D (41.2)	--	--	--	--	
	T,TR		A (9.6)	B (10.4)	B (10.6)					
Route 9 SB	L		B (13.4)	B (14.2)	B (14.3)					
	T,TR		B (18.6)	C (21.2)	C (21.5)					
Overall				B (18.7)	C (20.1)	C (20.2)	--	--	--	--
6. Malta Ave/Rt 9			S							
Malta Ave EB	LTR		B (19.1)	D (49.8)	F (69.0)	--	--	--	--	
	{LT}		--	--	--	D (37.2)	D (52.8)	--	--	
	{L}		--	--	--	--	--	C (27.9)	C (30.6)	
	{TR}		--	--	--	--	--	C (30.8)	C (31.6)	
	{R}		--	--	--	C (26.0)	C (29.6)	--	--	
Malta Ave WB	LTR		B (13.6)	B (18.4)	B (19.9)	C (24.5)	C (28.6)	C (20.2)	C (20.9)	
Route 9 NB	L		C (32.6)	E (65.6)	E (71.9)	D (39.5)	D (45.0)	D (36.7)	D (38.7)	
	T,TR		B (12.6)	B (19.6)	B (19.2)	B (15.6)	B (15.0)	B (13.9)	B (14.7)	
Route 9 SB	L		C (33.7)	E (55.8)	E (57.3)	D (48.2)	D (50.3)	D (45.1)	D (46.9)	
	T,TR		B (16.0)	C (34.2)	C (38.5)	C (27.6)	C (30.3)	--	--	
	{T,T}		--	--	--	--	--	C (21.4)	C (24.0)	
	{R}		--	--	--	--	--	C (20.6)	C (22.4)	
Overall				B (16.8)	D (37.9)	D (45.4)	C (26.6)	C (30.6)	C (23.5)	C (25.1)
7. E High St/Rt 9/Rt 9P			S							
E High St EB	LTR		B (15.0)	B (18.4)	C (22.4)					
Route 9P WB	LTR		B (17.1)	C (22.1)	C (24.7)					
Route 9 NB	L		A (9.0)	B (11.6)	B (11.6)					
	T,TR		B (11.1)	B (15.0)	B (14.5)	--	--	--	--	
Route 9 SB	L		A (8.4)	B (11.0)	B (10.8)					
	T,TR		B (11.4)	B (15.5)	B (16.8)					
Overall				B (12.4)	B (16.5)	B (17.9)	--	--	--	--

Table 1: Level of Service Summary for the AM Peak Hour (Continued)

Intersection			Control	AM Peak Hour						
				Existing	2025 Design Year					
					Current Geometry (Timing Imp. only)		W/ Planned Geometric Improvements		CME Additional Improvements	
					Planned	Aggressive	Planned	Aggressive	Planned	Aggressive
8. E High St/Rt 50/Rt 67/Rt 67/50			S							
Route 67 EB	LTR	B (19.4)	C (22.6)	C (30.8)						
E High St WB	LTR	B (19.3)	C (23.0)	C (34.9)						
Route 50/67 NB	L	A (9.6)	B (15.2)	C (20.8)						
	TR	B (12.1)	B (17.2)	C (23.0)	--	--	--	--		
Route 50 SB	L	A (7.4)	B (11.7)	B (15.9)						
	TR	B (14.6)	C (25.9)	D (42.0)						
Overall				B (14.9)	C (21.5)	C (32.2)	--	--	--	--
9. Ballston Ave/Rt 50/Rt 67/Rt 67/50			S							
Ballston Ave EB	LTR	C (21.5)	C (26.3)	C (27.9)						
Route 67 WB	LTR	C (24.7)	C (34.2)	C (34.5)						
Route 50 NB	L	B (17.6)	B (19.0)	B (18.4)	--	--	--	--		
	TR	C (24.0)	C (27.6)	C (27.8)						
Route 50/67 SB	L	B (15.1)	B (18.0)	B (18.3)						
	TR	C (20.7)	C (22.8)	C (21.9)						
Overall				C (21.2)	C (25.8)	C (25.8)	--	--	--	--
10. Rt 67/Brookline Rd			TW							
Route 67 WB	LT	A (9.3)	A (9.6)	A (9.7)	--	--	--	--		
Brookline Rd NB	LR	D (31.0)	E (41.2)	F (55.5)						
Route 67 EB	TR								C (21.4)	
Route 67 WB	L	--	--	--	--	--	--	--	C (13.7)	
	T								A (7.4)	
Brookline Rd NB	LR								C (34.8)	
Overall				--	--	--	--	--	--	B (19.2)
11. Eastline Rd/Rt 67			S							
Route 67 EB	L	B (12.6)	B (14.8)	B (16.0)	B (12.4)	B (13.2)				
	TR	D (46.3)	F (66.0)	F (66.0)	D (51.9)	D (51.7)				
Route 67 WB	L	C (24.3)	C (27.8)	C (27.9)	D (43.6)	D (44.0)				
	TR	B (19.9)	C (23.7)	C (26.4)	B (16.9)	B (18.5)				
Eastline Rd NB	LTR	C (35.0)	D (38.8)	D (46.7)	--	--	--	--		
	[L]	--	--	--	C (32.7)	C (33.0)				
	[TR]	--	--	--	C (29.6)	C (32.8)				
Eastline Rd SB	LTR	D (42.9)	E (55.5)	F (91.4)	--	--				
	[L]	--	--	--	D (48.3)	F (81.5)				
	[TR]	--	--	--	C (27.2)	C (27.2)				
Overall				D (35.9)	D (46.5)	D (52.6)	D (36.9)	D (39.5)	--	--
Route 67 EB	LT,TR									B (12.4)
Route 67 WB	LT,TR	--	--	--	--	--	--	--	--	A (7.8)
Eastline Rd NB	LTR									D (48.2)
Eastline Rd SB	LTR									B (19.2)
Overall				--	--	--	--	--	--	B (18.0)
12. Rt 67/I-87 Exit 12 SB Ramps			RA							
Route 67 EB	T,TR	A (3.1)	A (4.0)	A (5.4)						
Route 67 WB	LT,T	A (6.3)	A (6.7)	A (7.4)	--	--	--	--	--	
Exit 12 I-87 Off Ramp SB	L,LTR	A (2.9)	A (4.0)	A (5.5)						
Overall				A (4.3)	A (5.1)	A (6.2)	--	--	--	--
13. Rt 67/Exit 12 I-87 NB Ramps			RA							
Route 67 EB	LT,T	A (4.3)	A (4.9)	A (5.5)						
Route 67 WB	T,TR	B (11.4)	B (12.2)	B (15.0)	--	--	--	--	--	
Exit 12 I-87 Off Ramp NB	L,LTR	A (2.9)	A (3.2)	A (3.5)						
Overall				A (6.8)	A (6.9)	A (8.2)	--	--	--	--
14. Rt 67/Rt 9/67/Rt 9/Dunning St			RA							
Route 67 EB	L[T],TR	B (16.6)	E (57.0)	E (77.1)	C (32.4)	E (58.3)				
Dunning St WB	L[T],TR	B (13.8)	C (22.2)	D (38.0)	B (15.6)	C (21.2)				
Route 9/67 NB	LT,TR	A (7.2)	B (11.1)	B (14.7)	B (12.0)	B (15.0)	--	--		
Route 9 SB	LT,TR	B (14.4)	C (30.2)	D (45.0)	C (24.8)	C (34.0)				
Overall				B (13.9)	C (33.0)	D (47.2)	C (22.8)	C (34.8)	--	--
15. Dunning St/Hermes Rd/Plains Rd			RA							
Dunning St EB	TR	A (6.7)	B (12.9)	B (14.0)						
Plains Rd WB	LT	A (6.3)	A (8.0)	A (8.0)	--	--	--	--		
Hermes Rd NB	LR	A (4.3)	A (4.6)	A (4.6)						
Overall				A (6.4)	A (9.8)	B (10.2)	--	--	--	--

Table 1: Level of Service Summary for the AM Peak Hour (Continued)

Intersection	Control	AM Peak Hour							
		Existing	2025 Design Year						
			Current Geometry (Timing Imp. only)		W/ Planned Geometric Improvements		CME Additional Improvements		
			Planned	Aggressive	Planned	Aggressive	Planned	Aggressive	
16. Stonebreak Rd/Rt 9/67		RA	--	A (7.7)	B (14.9)				B (15.2)
Stonebreak Rd EB	L,TR		A (4.8)	A (7.4)	B (12.4)				B (13.7)
Stonebreak Rd WB	L,TR		A (6.8)	B (13.1)	F (102)	--	--	--	C (21.7)
Route 9/67 NB	LT,[T]R [R]		A (5.0)	A (7.0)	B (10.7)				B (11.1)
Route 9/67 SB	LT,TR		A (5.7)	A (9.3)	D (48.6)	--	--	--	B (16.0)
Overall									
17. Round Lake Byp/Rt 9/Rt 67/Rt 9/67		RA	B (11.5)	D (51.9)	F (259)	--	--		
Round Lake Bypass EB	LTR [L,TR]		--	--	--	B (11.3)	B (17.3)		
Route 67 WB	L,TR		A (6.7)	A (9.8)	B (19.3)	A (9.8)	C (24.8)	--	--
Route 9 NB	LT,TR		A (5.9)	B (13.1)	B (19.5)	B (10.7)	E (56.3)		
Route 9/67 SB	LT,TR		A (4.9)	A (6.9)	A (7.6)	A (6.9)	A (7.7)		
Overall			A (7.4)	C (22.1)	F (102)	A (9.6)	C (26.2)	--	--
18. Rt 67/Luther Forest Blvd		RA	A (5.5)	A (9.3)	B (14.3)				A (5.9)
Route 67 EB	[L], LT		A (9.4)	C (22.8)	F (137)	--	--	--	D (48.1)
Route 67 WB	TR		A (4.5)	A (6.9)	A (8.6)				A (9.5)
Luther Forest Blvd SB	LR		A (6.7)	B (13.1)	D (49.4)	--	--	--	B (18.8)
Overall									
Route 67 EB	LT	RA	--	--	--	--	--	--	B (14.3)
Route 67 WB	[T],TR								C (20.2)
Luther Forest Blvd SB	LR								B (10.2)
Overall			--	--	--	--	--	--	B (15.4)
19. Round Lake Rd/Eastline Rd		S	A (7.9)	A (9.5)	B (11.8)				
Round Lake Rd EB	LTR		A (9.7)	B (11.9)	B (14.9)				
Round Lake Rd WB	LTR		A (9.7)	B (10.9)	B (11.5)	--	--	--	--
Eastline Rd NB	LTR		B (11.1)	B (13.9)	B (16.3)				
Eastline Rd SB	LTR		A (9.8)	B (11.9)	B (14.4)	--	--	--	--
Overall									
20. Round Lake Rd/Ruhle Rd/Raylinsky Rd		S	A (5.7)	A (7.1)	A (8.9)				
Round Lake Rd EB	LTR		A (4.9)	A (6.1)	A (7.7)				
Round Lake Rd WB	LTR		C (24.6)	C (24.6)	C (24.4)	--	--	--	--
Raylinsky Rd NB	LTR		C (28.3)	C (28.2)	C (29.0)				
Ruhle Rd SB	LTR		A (9.6)	B (11.0)	B (12.4)	--	--	--	--
Overall									
Round Lake Rd EB	LTR	RA	--	--	--	B (16.2)	C (21.2)		
Round Lake Rd WB	LTR					A (6.7)	A (7.4)		
Raylinsky Rd NB	LTR					B (15.8)	C (24.7)	--	
Ruhle Rd SB	LTR					A (9.0)	B (10.0)		
Overall			--	--	--	B (11.9)	B (15.3)	--	--
21. Round Lake Rd/Exit 11 I-87 SB Ramps		TW	A (8.5)	A (8.8)	A (9.4)				
Round Lake Rd WB	L		C (18.4)	C (24.6)	E (38.5)	--	--	--	--
Exit 11 I-87 Off Ramp SB	L TR		B (11.3)	B (12.6)	B (13.9)				
Round Lake Rd EB	T	S				B (19.0)	C (28.3)		D (42.0)
Round Lake Rd WB	R					B (16.9)	C (21.7)		C (28.3)
Round Lake Rd WB	L		--	--	--	A (6.2)	B (16.2)		D (49.6)
Round Lake Rd WB	T					A (6.1)	B (10.1)	--	--
Exit 11 I-87 Off Ramp SB	[T,T] L [R]					--	--		B (12.3)
						C (31.6)	C (22.4)		B (18.8)
						C (31.7)	C (22.9)		B (19.5)
[Overall]			--	--	--	B (17.7)	C (21.3)	--	C (29.4)
Round Lake Rd EB	T,R	RA	--	--	--			A (7.1)	A (8.3)
Round Lake Rd WB	LT,T					--	--	A (3.4)	A (3.7)
Exit 11 I-87 Off Ramp SB	LTR							A (9.8)	B (11.2)
Overall			--	--	--	--	--	A (6.7)	A (7.6)

Table 1: Level of Service Summary for the AM Peak Hour (Continued)

Intersection	Control	AM Peak Hour							
		Existing	2025 Design Year						
			Current Geometry (Timing Imp. only)		W/ Planned Geometric Improvements		CME Additional Improvements		
			Planned	Aggressive	Planned	Aggressive	Planned	Aggressive	
22. Round Lake Rd/Exit 11 I-87 NB Ramps		S							
Round Lake Rd EB	L	A (7.1)	B (11.5)	C (21.1)	A (6.8)	A (9.9)		B (13.0)	
	T	A (4.0)	A (7.5)	B (17.5)	A (8.9)	B (13.9)		B (12.6)	
Round Lake Rd WB	T	B (12.5)	B (19.3)	C (32.0)	B (16.5)	C (22.6)		--	
	T,[T]R	--	--	--	--	--	--	C (21.6)	
	R	B (10.1)	B (14.5)	C (22.6)	B (12.3)	B (15.0)	--	--	
I-87 Off Ramp NB	L	B (18.7)	B (18.1)	C (20.3)	C (32.6)	C (23.4)		B (19.5)	
	TR	C (20.0)	C (23.2)	D (51.9)	B (19.2)	C (30.5)		--	
	[L]TR	--	--	--	--	--		D (52.4)	
Overall			B (10.9)	B (15.8)	C (32.0)	B (15.2)	C (22.0)	--	C (29.9)
Round Lake Rd EB	LT							A (5.3)	A (6.1)
Round Lake Rd WB	L,LR	--	--	--	--	--		A (6.5)	A (7.0)
I-87 Off Ramp NB	L,LTR							B (11.9)	C (31.0)
Overall			--	--	--	--	--	A (8.2)	B (17.1)
23. Curry Rd/Round Lake Bypass		RA							
Curry Rd EB	LT	A (5.1)	A (7.3)	B (13.0)					
Curry Rd WB	TR	A (6.0)	A (7.9)	B (13.0)	--	--	--	--	--
Round Lake Byp SB	LR	A (5.0)	A (5.6)	A (6.2)					
Overall			A (5.2)	A (7.1)	B (11.7)	--	--	--	--
24. George Ave/Rt 9		S							
George Ave EB	LR	B (19.1)	C (21.7)	C (22.9)					
Route 9 NB	L	A (5.3)	A (5.9)	A (5.7)	--	--	--	--	
	T,T	A (3.5)	A (4.0)	A (4.2)					
Route 9 SB	T,TR	A (7.5)	A (8.9)	A (8.6)					
Overall			A (7.1)	A (8.3)	A (7.9)	--	--	--	--
25. Mac Elroy Rd/Hatlee Rd/Main St/Longkill Rd		AW							
Mac Elroy Rd EB	LTR	B (13.1)	C (15.8)	C (16.4)					
Longkill Rd WB	LTR	A (9.6)	B (10.7)	B (11.2)	--	--	--	--	
Main St NB	LTR	A (10.0)	B (10.3)	B (10.5)					
Hatlee Rd SB	LTR	B (14.8)	C (16.7)	C (17.2)					
Overall			B (13.0)	B (14.8)	C (15.2)	--	--	--	--
26. Longkill Rd/Ushers Rd		S							
Longkill Rd EB	LTR	B (12.0)	B (11.5)	B (11.5)					
Longkill Rd WB	LTR	B (15.2)	B (13.8)	B (13.8)	--	--	--	--	
Ushers Rd NB	LTR	A (9.4)	A (7.9)	A (8.0)					
Stewarts Dwy SB	LTR	A (9.8)	A (7.3)	A (7.4)					
Overall			B (10.8)	A (9.0)	A (9.0)	--	--	--	--
27. Ushers Rd/Exit 10 I-87 SB Ramps		S							
Ushers Rd EB	T	A (7.2)	A (9.9)	B (10.2)					
Ushers Rd WB	LT,T	B (10.2)	B (11.4)	B (11.5)	--	--	--	--	
Exit 10 I-87 Off Ramp SB	LTR	E (70.5)	D (52.4)	D (52.6)					
Overall			B (19.3)	B (17.0)	B (17.1)	--	--	--	--
28. Ushers Rd/Exit 10 I-87 NB Ramps		S							
Ushers Rd EB	LT	B (10.5)	B (11.8)	B (11.9)					
Ushers Rd WB	T,T	A (6.3)	A (8.7)	A (8.9)	--	--	--	--	
Exit 10 I-87 Off Ramp NB	L,L	D (51.3)	D (35.1)	C (34.7)					
	R	D (49.4)	C (34.8)	C (34.5)					
Overall			B (17.0)	B (16.9)	B (16.8)	--	--	--	--
29. Ushers Rd/Rt 9		S							
Ushers Rd EB	LT	C (25.8)	C (29.6)	C (34.4)	C (27.5)	C (30.6)			
	R	B (15.1)	B (12.5)	B (13.0)	B (11.9)	B (12.2)			
Ushers Rd WB	LTR	C (28.2)	C (21.3)	C (21.9)	C (20.3)	C (20.6)			
Route 9 NB	L	A (4.7)	B (15.0)	B (15.2)	B (14.5)	B (14.7)			
	T,TR	A (7.0)	B (18.0)	B (19.1)	B (18.3)	B (19.6)	--	--	
Route 9 SB	L	B (10.7)	C (22.3)	C (21.9)	C (22.4)	C (22.1)			
	T,TR	B (13.3)	C (29.5)	C (29.6)	--	--			
	[T,T]	--	--	--	C (28.0)	C (28.0)			
	[R]	--	--	--	C (23.6)	C (23.4)			
Overall			B (14.2)	C (22.3)	C (23.2)	C (21.2)	C (22.0)	--	--
30. Rt 423/Rt 9P		TW							
Route 423 WB	LR	A (9.8)	B (10.7)	B (11.8)	--	--	--	--	
Route 9P SB	LT	A (7.8)	A (7.9)	A (7.9)					

Table 1: Level of Service Summary for the AM Peak Hour (Continued)

Intersection	Control	AM Peak Hour							
		Existing	2025 Design Year						
			Current Geometry (Timing Imp. only)		W/ Planned Geometric Improvements		CME Additional Improvements		
			Planned	Aggressive	Planned	Aggressive	Planned	Aggressive	
31. Rt 9P/Plains Rd		TW	A (7.9) B (11.9)	A (8.4) B (13.4)	A (8.7) B (14.0)	--	--	--	--
Route 9P WB	LT								
Plains Rd NB	LR								
Route 9P EB	TR							A (2.6)	A (2.5)
Route 9P WB	LT							A (5.2)	A (5.9)
Plains Rd NB	LR							C (21.3)	C (25.3)
Overall			--	--	--	--	--	A (6.5)	A (7.2)
32. Rt 9P/Lake Rd		TW	A (7.4) B (13.9)	A (7.5) C (20.3)	A (7.7) E (43.9)	--	--	--	--
Route 9P WB	LT								
Lake Rd NB	LR								
Route 9P EB	T					A (8.8)	A (7.6)		
Route 9P WB	LT					B (11.9)	B (11.9)	--	--
Lake Rd NB	LR					A (6.0)	A (8.6)		
Overall			--	--	--	A (8.8)	A (9.8)	--	--
33. Cold Springs Rd & Lake Rd		TW	B (10.5) A (7.5)	B (11.0) A (7.5)	B (14.3) A (7.5)	--	--	--	--
Cold Springs Rd EB	LR								
Lake Rd NB	LT								
34. Cordero Blvd/Cold Springs Rd		TW	A (9.8) A (7.4)	B (10.4) A (7.4)	B (14.6) A (8.1)	--	--	--	--
Cordero Blvd EB	LR								
Cold Springs Rd NB	LT								
35. Elmore Robinson Rd/Cold Springs Rd		TW	A (9.0) --	A (9.2) A (7.3)	B (10.1) A (7.5)	--	--	--	--
Elmore Robinson Rd WB	LR								
Cold Springs Rd SB	LT								
36. Joyce Rd/Cold Springs Rd/Fitch Rd		AW	A (6.8) A (7.1) A (6.6)	A (6.8) A (7.1) A (6.6)	A (7.0) A (7.5) A (6.7)	--	--	--	--
Joyce Rd EB	LR								
Fitch Rd NB	LT								
Cold Springs Rd SB	TR								
Overall			A (6.9)	A (6.9)	A (7.4)	--	--	--	--
37. Rt 67/Farley Rd		TW	A (7.7) B (10.8)	A (8.1) B (13.1)	A (8.4) B (13.9)	--	--	--	--
Route 67 EB	LT								
Farley Rd SB	LR								
38. Eastline Rd/Lake Rd		TW	A (8.0) C (16.1)	A (8.1) C (20.2)	A (8.2) D (29.0)	A (8.1) C (20.2)	A (8.2) D (29.0)	--	--
Eastline Rd NB	LT								
Lake Rd EB	LR								

Key: TW, AW, S, RA = Two-way stop, All-way stop, Signal, or Roundabout controlled intersection
 NB, SB, EB, WB = Northbound, Southbound, Eastbound, Westbound intersection approaches
 L, T, R = Left-turn, through, and/or right-turn movements,
 -- = Not applicable
 L[T]R = LR represents the existing geometry, LTR represents the future geometry
 X (Y.Y) = Level of Service (Average delay in seconds per vehicle)

Table 2: Level of Service Summary for the PM Peak Hour

Intersection			Control	PM Peak Hour						
				Existing	2025 Design Year				CME Additional Improvements	
					Current Geometry (Timing Imp. only)		W/ Planned Geometry Improvements		Planned	Aggressive
					Planned	Aggressive	Planned	Aggressive		
1. Northline Rd/Rt 50			S	C (29.0)	D (41.4)	D (49.0)				
Northline Rd EB	LTR	C (20.7)		C (27.7)	C (30.7)					
Northline Rd WB	L	C (23.7)		C (29.0)	C (31.3)					
	TR	D (47.9)		D (54.4)	E (57.3)	--	--	--	--	
Route 50 NB	L	D (44.5)		D (54.5)	E (57.9)					
	TR	D (49.1)		E (58.2)	E (60.8)					
Route 50 SB	L	D (45.2)		D (54.6)	E (57.5)					
	TR	Overall		C (35.0)	D (43.2)	D (46.7)	--	--	--	--
2. Old Post Rd/Malta Ave			TW	A (7.6)	A (7.7)	A (7.7)	--	--	--	--
Malta Ave EB	LT	A (9.4)		A (9.5)	A (9.6)					
Old Post Rd SB	LR									
3. Old Post Rd/Northline Rd			AW	E (48.5)	F (66.7)	F (67.0)				
Northline Rd EB	LTR	E (44.9)		F (66.4)	F (66.7)					
Northline Rd WB	LTR	B (13.1)		B (14.2)	B (14.3)	--	--	--	--	
Old Post Rd NB	LTR	D (26.2)		D (33.4)	E (35.6)					
Old Post Rd SB	LTR	Overall		E (39.6)	F (55.6)	F (56.5)	--	--	--	--
Northline Rd EB	LTR	S	--	--	--	--	--	B (15.2)	C (21.1)	
Northline Rd WB	LTR		--	--	--	--	--	A (4.9)	A (5.5)	
Old Post Rd NB	LTR		--	--	--	--	--	C (25.7)	C (25.2)	
Old Post Rd SB	LTR		Overall	--	--	--	--	--	C (28.2)	C (30.9)
				--	--	--	--	--	B (15.5)	B (18.2)
Northline Rd EB	LTR	RA	--	--	--	--	--	B (12.8)	B (13.0)	
Northline Rd WB	LTR		--	--	--	--	--	C (29.2)	C (34.0)	
Old Post Rd NB	LTR		--	--	--	--	--	B (12.0)	B (12.1)	
Old Post Rd SB	LTR		Overall	--	--	--	--	--	D (40.3)	D (53.5)
				--	--	--	--	--	C (24.4)	C (29.1)
4. Northline Rd/Malta Ave			TW	A (8.7)	A (9.1)	A (9.2)	--	--	--	--
Malta Ave EB	LT	C (20.3)		D (32.6)	E (37.4)					
Northline Rd SB	LR									
5. Old Post Rd/Cherry Choke Rd/Rt 9			S	C (31.7)	C (32.1)	C (32.3)				
Old Post Rd EB	LTR	C (29.8)		C (29.6)	C (29.9)					
Cherry Choke Rd WB	LTR	C (32.0)		C (32.8)	C (32.6)					
Route 9 NB	L	A (6.3)		A (7.0)	A (7.0)	--	--	--	--	
	T,TR	B (16.0)		B (17.3)	B (17.6)					
Route 9 SB	L	C (22.1)		C (24.4)	C (25.0)					
	T,TR	Overall		B (18.2)	B (19.4)	B (19.5)	--	--	--	--
6. Malta Ave/Rt 9			S	C (32.0)	E (58.0)	E (76.0)	--	--	--	--
Malta Ave EB	LTR	--		--	--	F (201)	F (234)	--	--	
	[LT]	--		--	--	--	--	E (72.9)	E (61.8)	
	{L}	--		--	--	--	--	D (41.2)	C (34.9)	
	{TR}	--		--	--	--	--	--	--	
	[R]	--		--	--	C (34.4)	C (29.7)	--	--	
Malta Ave WB	LTR	C (22.2)		C (21.1)	C (21.7)	E (69.4)	E (75.5)	C (32.3)	C (28.5)	
Route 9 NB	L	D (51.2)		F (402)	F (331)	F (118)	F (88.6)	E (65.3)	E (60.6)	
	T,TR	B (16.4)		C (26.1)	C (27.5)	B (16.5)	C (21.0)	B (16.6)	C (20.3)	
Route 9 SB	L	D (45.3)		D (54.4)	D (55.0)	E (57.1)	E (57.9)	E (56.6)	E (55.4)	
	T,TR	C (24.9)		D (41.4)	D (45.2)	D (40.3)	E (67.4)	--	--	
	{T,T}	--		--	--	--	--	C (31.9)	C (33.4)	
	{R}	--		--	--	--	--	D (41.3)	D (51.8)	
		Overall	C (25.8)	F (91.6)	F (80.3)	E (60.8)	E (69.4)	D (38.0)	D (37.6)	
7. E High St/Rt 9/Rt 9P			S	C (20.8)	C (25.6)	C (26.9)				
E High St EB	LTR	C (25.1)		D (36.2)	D (50.7)					
Route 9P WB	LTR	A (9.6)		B (13.2)	B (14.4)					
Route 9 NB	L	B (15.1)		C (22.5)	C (26.1)	--	--	--	--	
	T,TR	B (10.2)		B (16.4)	C (20.9)					
Route 9 SB	L	B (12.7)		B (16.6)	B (18.7)					
	T,TR	Overall		B (15.7)	C (22.3)	C (27.6)	--	--	--	--

Table 2: Level of Service Summary for the PM Peak Hour (Continued)

Intersection	Control	PM Peak Hour							
		Existing	2025 Design Year						
			Current Geometry (Timing Imp. only)		W/ Planned Geometric Improvements		CME Additional Improvements		
			Planned	Aggressive	Planned	Aggressive	Planned	Aggressive	
8. E High St/Rt 50/Rt 67/Rt 67/50		S							
Route 67 EB	LTR	B (19.2)	B (19.4)	B (19.4)					
E High St WB	LTR	B (16.8)	B (16.7)	B (16.7)					
Route 50/67 NB	L	A (9.3)	B (12.1)	B (13.0)					
	TR	B (13.8)	B (18.0)	B (19.3)	--	--	--	--	
Route 50 SB	L	A (8.7)	B (11.9)	B (12.8)					
	TR	B (14.3)	B (18.1)	B (19.3)					
Overall			B (14.8)	B (17.5)	B (18.3)	--	--	--	--
9. Ballston Ave/Rt 50/Rt 67/Rt 67/50		S							
Ballston Ave EB	LTR	B (19.5)	C (21.1)	C (20.3)					
Route 67 WB	LTR	C (25.3)	C (29.5)	C (31.1)					
Route 50 NB	L	B (14.9)	B (15.7)	B (16.7)	--	--	--	--	
	TR	C (23.1)	C (25.0)	C (26.1)					
Route 50/67 SB	L	B (14.8)	B (16.4)	B (17.1)					
	TR	B (16.7)	B (17.8)	B (19.2)					
Overall			C (20.5)	C (22.8)	C (24.0)	--	--	--	--
10. Rt 67/Brookline Rd		TW							
Route 67 WB	LT	A (9.9)	B (10.2)	B (10.2)	--	--	--	--	
Brookline Rd NB	LR	C (15.8)	C (16.7)	B (13.9)					
Route 67 EB	TR							B (14.7)	
Route 67 WB	L	--	--	--	--	--	--	A (8.6)	
	T							A (3.9)	
Brookline Rd NB	LR							C (26.4)	
Overall			--	--	--	--	--	B (10.3)	
11. Eastline Rd/Rt 67		S							
Route 67 EB	L	B (17.8)	C (23.1)	C (23.9)	B (17.1)	B (15.9)			
	TR	D (49.4)	F (87.4)	F (110)	D (52.4)	D (50.0)			
Route 67 WB	L	D (37.9)	D (52.3)	D (54.5)	D (53.0)	E (65.3)			
	TR	C (30.4)	D (43.7)	D (45.8)	C (24.8)	C (22.5)			
Eastline Rd NB	LTR	D (45.4)	F (88.7)	F (181)	--	--			
	[L]	--	--	--	D (42.3)	F (83.6)	--	--	
	[TR]	--	--	--	D (47.0)	F (83.6)			
Eastline Rd SB	LTR	C (31.3)	D (33.7)	D (39.7)	--	--			
	[L]	--	--	--	D (48.4)	F (108)			
	[TR]	--	--	--	C (33.4)	D (40.1)			
Overall			D (39.8)	E (65.4)	F (88.7)	D (40.7)	D (48.3)	--	--
Route 67 EB	LT,TR								B (13.1)
Route 67 WB	LT,TR	--	--	--	--	--	--	--	B (12.6)
Eastline Rd NB	LTR								D (51.4)
Eastline Rd SB	LTR								C (25.5)
Overall			--	--	--	--	--	--	C (20.7)
12. Rt 67/I-87 Exit 12 SB Ramps		RA							
Route 67 EB	T,TR	A (5.8)	A (7.4)	A (8.5)					
Route 67 WB	LT,T	A (5.4)	A (6.0)	A (6.4)	--	--	--	--	
Exit 12 I-87 Off Ramp SB	L,LTR	A (2.7)	A (3.3)	A (3.7)					
Overall			A (5.2)	A (6.1)	A (6.8)	--	--	--	--
13. Rt 67/Exit 12 I-87 NB Ramps		RA							
Route 67 EB	LT,T	A (4.8)	A (5.2)	A (5.5)					
Route 67 WB	T,TR	A (5.9)	A (6.7)	A (7.4)	--	--	--	--	
Exit 12 I-87 Off Ramp NB	L,LTR	A (2.8)	A (2.9)	A (2.7)					
Overall			A (4.5)	A (5.2)	A (5.6)	--	--	--	--
14. Rt 67/Rt 9/67/Rt 9/Dunning St		RA							
Route 67 EB	L[T],TR	C (21.4)	D (38.1)	D (54.7)	F (92.4)	D (36.6)			
Dunning St WB	L[T],TR	D (46.6)	E (60.6)	F (110)	D (46.2)	E (62.1)			
Route 9/67 NB	LT,TR	D (37.9)	E (56.8)	E (77.6)	E (70.1)	E (69.3)	--	--	
Route 9 SB	LT,TR	B (14.6)	B (17.7)	C (22.6)	D (38.4)	B (16.8)			
Overall			C (28.9)	D (40.8)	E (59.9)	E (63.7)	D (43.6)	--	--
15. Dunning St/Hermes Rd/Plains Rd		RA							
Dunning St EB	TR	A (4.7)	A (5.9)	A (5.9)					
Plains Rd WB	LT	A (8.1)	B (10.4)	B (10.6)	--	--	--	--	
Hermes Rd NB	LR	B (10.1)	C (23.0)	D (52.5)					
Overall			A (7.4)	B (13.8)	C (29.6)	--	--	--	--

Table 2: Level of Service Summary for the PM Peak Hour (Continued)

Intersection	Control	PM Peak Hour								
		Existing	2025 Design Year						CME Additional Improvements	
			Current Geometry (Timing Imp. only)		W/ Planned Geometric Improvements		CME Additional Improvements		Planned	Aggressive
			Planned	Aggressive	Planned	Aggressive	Planned	Aggressive		
16. Stonebreak Rd/Rt 9/67		RA	--	A (7.0)	F (91.8)				B (14.3)	
Stonebreak Rd EB	L,TR		A (7.4)	B (13.2)	D (35.6)				C (28.6)	
Stonebreak Rd WB	L,TR		A (5.2)	A (8.6)	B (11.4)	--	--	--	A (7.9)	
Route 9/67 NB	LT,[T]R [R]		A (5.5)	A (9.0)	B (19.4)				B (13.8)	
Route 9/67 SB	LT,TR									
Overall			A (5.8)	A (9.5)	D (35.5)	--	--	--	B (14.5)	
17. Round Lake Byp/Rt 9/Rt 67/Rt 9/67		RA	B (17.7)	F (103)	F (414)	--	--			
Round Lake Bypass EB	LTR		--	--	--	B (14.1)	D (36.6)			
Route 67 WB	L,TR		B (13.8)	C (31.3)	D (46.9)	C (32.5)	E (77.4)	--	--	
Route 9 NB	LT,TR		A (6.7)	B (15.1)	B (12.2)	B (14.7)	C (26.8)			
Route 9/67 SB	LT,TR		B (11.8)	B (15.7)	E (66.7)	B (15.7)	E (57.0)			
Overall			B (12.3)	C (34.1)	F (106)	C (20.1)	D (53.3)	--	--	
18. Rt 67/Luther Forest Blvd		RA	A (4.7)	A (7.3)	A (7.4)				A (4.6)	
Route 67 EB	[L], LT		A (5.4)	A (8.4)	B (10.0)	--	--	--	B (10.9)	
Route 67 WB	TR		B (14.0)	B (15.9)	C (29.1)				C (28.5)	
Luther Forest Blvd SB		LR								
Overall			A (9.2)	B (10.6)	B (16.3)	--	--	--	B (15.2)	
Route 67 EB		LT	--	--	--	--	--	--	A (7.4)	
Route 67 WB		[T], TR							A (6.2)	
Luther Forest Blvd SB		LR							C (30.5)	
Overall			--	--	--	--	--	--	B (16.0)	
19. Round Lake Rd/Eastline Rd		S	A (8.3)	A (9.7)	B (11.9)					
Round Lake Rd EB	LTR		A (9.3)	B (10.7)	B (14.2)					
Round Lake Rd WB	LTR		B (12.9)	B (14.7)	B (15.2)	--	--	--	--	
Eastline Rd NB	LTR		B (13.5)	B (15.8)	B (18.2)					
Eastline Rd SB	LTR									
Overall			B (10.4)	B (12.0)	B (14.6)	--	--	--	--	
20. Round Lake Rd/Ruhle Rd/Raylinsky Rd		S	A (4.0)	A (4.6)	A (5.7)					
Round Lake Rd EB	LTR		A (5.7)	A (9.9)	C (20.8)					
Round Lake Rd WB	LTR		C (25.3)	C (29.1)	D (35.5)	--	--	--	--	
Raylinsky Rd NB	LTR	C (28.1)	C (31.0)	D (40.9)						
Raylinsky Rd SB	LTR									
Overall			A (8.0)	B (11.3)	B (18.8)	--	--	--	--	
Round Lake Rd EB		LTR				B (16.9)	B (18.2)			
Round Lake Rd WB		LTR	--	--	--	B (14.8)	B (17.2)	--	--	
Raylinsky Rd NB		LTR				A (9.9)	B (10.8)			
Ruhle Rd SB		LTR				B (16.3)	B (19.2)			
Overall			--	--	--	B (15.3)	B (17.3)	--	--	
21. Round Lake Rd/Exit 11 I-87 SB Ramps		TW	A (10.0)	B (10.3)	B (12.0)					
Round Lake Rd WB	L		F (97.5)	F (500+)	F (500+)	--	--	--	--	
Exit 11 I-87 Off Ramp SB	L		C (19.9)	D (27.9)	E (37.5)					
Round Lake Rd EB		T				C (23.2)	C (24.0)		D (54.8)	
Round Lake Rd WB		R				B (16.1)	B (16.3)		C (25.3)	
Round Lake Rd WB		L				B (19.9)	F (96.9)		D (53.2)	
Round Lake Rd WB		T	--	--	--	A (10.0)	B (11.2)	--	--	
Exit 11 I-87 Off Ramp SB		[T,T]				--	--		C (34.7)	
Exit 11 I-87 Off Ramp SB		L				C (27.2)	C (27.4)		C (27.7)	
Exit 11 I-87 Off Ramp SB		[R]				C (27.2)	C (27.9)		B (11.2)	
Overall			--	--	--	B (18.0)	C (33.9)	--	D (38.8)	
Round Lake Rd EB		T,R						B (10.3)	B (14.2)	
Round Lake Rd WB		LT,T	--	--	--	--	--	A (5.2)	A (5.8)	
Exit 11 I-87 Off Ramp SB		LTR						B (19.5)	C (33.6)	
Overall			--	--	--	--	--	A (9.2)	B (13.2)	

Table 2: Level of Service Summary for the PM Peak Hour (Continued)

Intersection	Control	PM Peak Hour							
		2015 Existing	2025 Design Year						
			Current Geometry (Timing Imp. only)		W/ Planned Geometric Improvements		CME Additional Improvements		
			Planned	Aggressive	Planned	Aggressive	Planned	Aggressive	
22. Round Lake Rd/Exit 11 I-87 NB Ramps		S							
Round Lake Rd EB	L	B (15.2)	C (22.6)	E (63.6)	D (53.9)	F (106)			D (37.0)
	T	A (6.6)	A (8.6)	B (10.1)	B (11.3)	B (12.7)			B (13.0)
Round Lake Rd WB	T	C (22.2)	C (30.2)	F (78.6)	C (31.8)	E (57.5)			--
	R	B (13.5)	B (15.3)	C (22.6)	B (14.2)	B (16.3)		--	--
	T,[T]R	--	--	--	--	--		--	D (47.6)
I-87 Off Ramp NB	L	C (30.4)	D (35.9)	E (56.5)	D (53.7)	E (60.3)			D (52.4)
	TR	C (23.7)	C (28.5)	D (38.2)	B (16.2)	B (16.6)			--
	[L]TR	--	--	--	--	--			C (29.5)
Overall			C (20.7)	C (26.0)	D (52.8)	C (33.9)	D (48.6)	--	D (39.1)
Round Lake Rd EB	LT							A (5.6)	A (6.0)
Round Lake Rd WB	T,TR	--	--	--	--	--		B (13.2)	C (26.3)
I-87 Off Ramp NB	L,LTR							B (10.5)	B (13.0)
Overall			--	--	--	--	--	A (10.0)	B (16.6)
23. Curry Rd/Round Lake Bypass		RA							
Curry Rd EB	LT	A (4.1)	A (5.4)	A (6.1)					
Curry Rd WB	TR	A (5.6)	A (7.0)	A (7.5)	--	--		--	--
Round Lake Byp SB	LR	A (8.0)	B (10.0)	B (17.9)					
Overall			A (6.3)	A (7.6)	B (12.2)	--	--	--	--
24. George Ave/Rt 9		S							
George Ave EB	LR	C (22.8)	C (29.1)	C (32.3)					
Route 9 NB	L	A (5.2)	A (5.1)	A (5.4)	--	--		--	--
	T,T	A (3.1)	A (3.3)	A (3.1)				--	--
Route 9 SB	T,TR	A (8.7)	A (8.6)	A (8.8)					
Overall			A (7.3)	A (7.2)	A (7.5)	--	--	--	--
25. Mac Elroy Rd/Hatlee Rd/Main St/Longkill Rd		AW							
Mac Elroy Rd EB	LTR	B (10.7)	B (12.6)	B (12.9)					
Longkill Rd WB	LTR	C (22.9)	E (38.9)	E (45.6)	--	--		--	--
Main St NB	LTR	B (12.8)	C (17.8)	C (18.3)					
Hatlee Rd SB	LTR	B (12.4)	B (14.1)	B (14.4)					
Overall			C (17.2)	D (25.9)	D (29.3)	--	--	--	--
26. Longkill Rd/Ushers Rd		S							
Longkill Rd EB	LTR	A (9.6)	A (9.6)	A (9.5)					
Longkill Rd WB	LTR	B (13.8)	B (14.7)	B (15.4)	--	--		--	--
Ushers Rd NB	LTR	B (11.2)	B (13.7)	B (15.1)					
Stewarts Dwy SB	LTR	A (9.8)	B (11.1)	B (12.2)					
Overall			B (11.7)	B (13.3)	B (14.4)	--	--	--	--
27. Ushers Rd/Exit 10 I-87 SB Ramps		S							
Ushers Rd EB	T	A (5.4)	A (5.7)	A (7.0)					
Ushers Rd WB	LT,T	B (11.2)	A (9.2)	A (9.8)	--	--		--	--
Exit 10 I-87 Off Ramp SB	LTR	E (71.6)	D (52.8)	D (53.2)					
Overall			B (17.8)	B (13.8)	B (15.0)	--	--	--	--
28. Ushers Rd/Exit 10 I-87 NB Ramps		S							
Ushers Rd EB	LT	A (6.7)	A (5.9)	A (6.8)					
Ushers Rd WB	T,T	A (4.7)	A (5.0)	A (6.0)					
	R	A (0.3)	A (0.3)	A (0.4)	--	--		--	--
Exit 10 I-87 Off Ramp NB	L,L	E (63.9)	D (46.5)	D (41.9)					
	R	E (55.3)	D (41.3)	D (39.1)					
Overall			C (21.6)	B (16.7)	B (15.6)	--	--	--	--
29. Ushers Rd/Rt 9		S							
Ushers Rd EB	LT	D (48.6)	E (64.0)	F (94.2)	D (52.5)	E (66.3)			
	R	B (13.6)	B (18.2)	C (21.3)	B (15.5)	B (14.8)			
Ushers Rd WB	LTR	C (31.9)	D (35.2)	D (39.1)	C (31.9)	C (26.9)			
Route 9 NB	L	C (20.8)	D (48.3)	F (80.5)	D (37.1)	D (52.2)			
	T,TR	B (11.3)	C (25.3)	C (28.4)	C (24.2)	B (19.0)		--	--
Route 9 SB	L	C (20.8)	C (24.6)	C (24.7)	C (25.7)	C (20.4)			
	T,TR	C (26.6)	D (35.9)	D (41.3)	--	--			
	[T,T]	--	--	--	C (34.3)	C (31.6)			
	[R]	--	--	--	C (25.6)	C (20.4)			
Overall			C (23.9)	D (36.6)	D (47.7)	C (32.1)	C (33.1)	--	--
30. Rt 423/Rt 9P		TW							
Route 423 WB	LR	B (10.4)	B (10.6)	B (11.1)	--	--		--	--
Route 9P SB	LT	A (7.6)	A (9.6)	A (7.7)					

Table 2: Level of Service Summary for the PM Peak Hour (Continued)

Intersection	Control	PM Peak Hour								
		Existing	2025 Design Year						CME Additional Improvements	
			Current Geometry (Timing Imp. only)		W/ Planned Geometric Improvements		Planned	Aggressive	Planned	Aggressive
			Planned	Aggressive	Planned	Aggressive				
31. Rt 9P/Plains Rd	TW	A (8.0) B (14.0)	A (8.3) F (59.6)	A (8.4) F (246)	--	--	--	--		
Route 9P WB LT Plains Rd NB LR	S	--	--	--	--	--	A (9.1) B (14.2) B (16.9)	B (13.5) C (32.7) C (25.6)		
Route 9P EB TR Route 9P WB LT Plains Rd NB LR	Overall	--	--	--	--	--	B (14.0)	C (24.7)		
32. Rt 9P/Lake Rd	TW	A (8.3) C (24.0)	A (8.6) C (21.0)	A (8.8) D (27.1)	--	--	--	--		
Route 9P WB LT Lake Rd NB LR	S	--	--	--	A (9.1) A (6.6) A (8.1)	B (11.1) A (6.5) A (9.6)	--	--		
Route 9P EB TR Route 9P WB LT Lake Rd NB LR	Overall	--	--	--	A (8.5)	B (10.2)	--	--		
33. Cold Springs Rd & Lake Rd	TW	B (14.5) A (7.8)	C (15.0) A (8.1)	C (17.9) A (8.2)	--	--	--	--		
Cold Springs Rd EB LR Lake Rd NB LT										
34. Cordero Blvd/Cold Springs Rd	TW	B (11.5) A (8.8)	A (9.5) A (7.3)	B (12.0) A (7.3)	--	--	--	--		
Cordero Blvd EB LR Cold Springs Rd NB LT										
35. Elmore Robinson Rd/Cold Springs Rd	TW	A (9.1) --	A (8.7) A (7.3)	A (9.5) A (7.4)	--	--	--	--		
Elmore Robinson Rd WB LR Cold Springs Rd SB LT										
36. Joyce Rd/Cold Springs Rd/Fitch Rd	AW	A (7.4) A (7.2) A (7.3)	A (7.2) A (7.1) A (6.9)	A (7.7) A (7.4) A (8.5)	--	--	--	--		
Joyce Rd EB LR Fitch Rd NB LT Cold Springs Rd SB TR	Overall	A (7.3)	A (7.1)	A (8.3)	--	--	--	--		
37. Rt 67/Farley Rd	TW	A (7.8) B (10.4)	A (8.0) B (11.4)	A (8.1) B (11.4)	--	--	--	--		
Route 67 EB LT Farley Rd SB LR										
38. Eastline Rd/Lake Rd	TW	A (8.3) C (17.5)	A (8.5) D (24.7)	A (8.9) E (38.3)	A (8.5) C (24.7)	A (8.9) E (38.3)	--	--		
Eastline Rd NB LT Lake Rd EB LR										

Key: TW, AW, S, RA = Two-way stop, All-way stop, Signal, or Roundabout controlled intersection
 NB, SB, EB, WB = Northbound, Southbound, Eastbound, Westbound intersection approaches
 L, T, R = Left-turn, through, and/or right-turn movements,
 -- = Not applicable
 L[T]R = LR represents the existing geometry, LTR represents the future geometry
 X (Y.Y) = Level of Service (Average delay in seconds per vehicle)

Appendix C

SCRTS - Development Project Summary



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MEMORANDUM

To: Don Adams, P.E., PTOE
From: Chris Round, AICP, Greg Merriam, AICP
cc: Mark Sargent, P.E., Mark Nadolny
Date: December 19, 2014
Re: SCRTS – Development Project Summary
Job #: 91419.00

Introduction

The Saratoga County Regional Traffic Study (the Study) is an evaluation of traffic and other transportation concerns within the Towns of Malta and Stillwater, Village of Round Lake, and adjacent areas impacted by the development associated with the growth of the Luther Forest Technology Campus. Within this area, the primary north-south corridors include NYS Interstate 87 (the Northway) and NYS Route 9. The Northway links the Capital District with the North Country and is the most highly travelled north-south corridor. Exits 11, 12, and 13 along the Northway form the basis for the Study Area.

Communities located within and proximate to this area were contacted to identify development projects that are in varying stages of the local approval process. Communities contacted include the Towns of Ballston, Halfmoon, Clifton Park, Malta, Milton, Saratoga, Stillwater, and Wilton, and the City of Saratoga Springs.

Two planning scenarios were developed to allocate increased traffic resulting from the inventoried development projects. The “Planned” scenario presents those project that are anticipated to be completed within a ten year period (2015-2025). Projects included in this scenario are largely those that have some form of approval (i.e. site plan or subdivision) including those that may have remaining development potential under existing approvals. The “Aggressive” scenario includes those projects that may come to fruition beyond the 10 year planning window and do not currently have any local approvals.

Historic development data from the Capital District Regional Planning Commission (CDRPC) was reviewed to provide a point of reference for comparison. The CDRPC records building permit history data for communities within the Counties of Albany, Rensselaer, Saratoga and Schenectady.

Development Projects Review

For each of the communities affecting the Study Area, interviews were held with municipal staff including planners, engineers and building inspectors regarding ongoing development projects. These interviews focused on projects that were approved in recent years and may not have been fully built out, as well as those projects that have been recently approved or are in the process of becoming approved. Discussions further focused on speculative projects that may occur over the next ten to twenty years.

Information collected from the interviews as well as from the Town of Malta Townwide GEIS (TWGEIS) was organized by location, Traffic Analysis Zone (TAZ), project type, amount of development, and stage of approval process (see Attachment – Development Project Spreadsheet).

According to this research, a total of 9,565 unbuilt residential units and 7.33 million SF of non-residential space are in various stages of planning throughout the Study Area. A summary of each community’s development projects is provided in the table below.

SCRTS - Development Projects Summary				
Community	Residential (Units)		Non-Residential (SF)	
	Total	Unbuilt	Total	Unbuilt
Town of Ballston	1,037	956	362,000	362,000
Town of Clifton Park	531	528	1,493,225	1,245,975
Town of Halfmoon	2,856	2,100	2,057,876	2,057,876
Town of Malta	2,956	2,946	3,252,100	3,274,600
Town of Milton	642	523	3,000	3,000
Town of Saratoga	144	144	0	0
City of Saratoga Springs	731	731	309,152	309,152
Town of Stillwater	851	742	8,400	8,400
Town of Wilton	912	895	71,516	71,516
TOTAL	10,660	9,565	7,557,269	7,332,519

Each of the projects identified from the interviews have been mapped and coded based on their location (see Attachment – Development Project Map). Projects have been organized by project type: residential, non-residential, and mixed-use (to indicate multiple forms of development in a single location). The Development Project Map also illustrates municipal boundaries, and TAZ’s within the context of the Study Area.

Description of Planning Scenario Assumptions

As indicated, two planning scenarios have been identified. The first “Planned” scenario considers those projects that are anticipated to be constructed within the 10 year period between 2015 and 2025. This includes projects that have some form of approval status, are currently under construction, and have been approved but not fully built out. This scenario also makes the assumption that GlobalFoundries Fab 8.2 is constructed. The “Aggressive” scenario considers those projects that are anticipated to be constructed beyond the year 2025. Due to the purely speculative nature of this discussion, this information is more limited.

Based on these assumptions, the table below presents the findings for each of the planning scenarios over their respective periods.

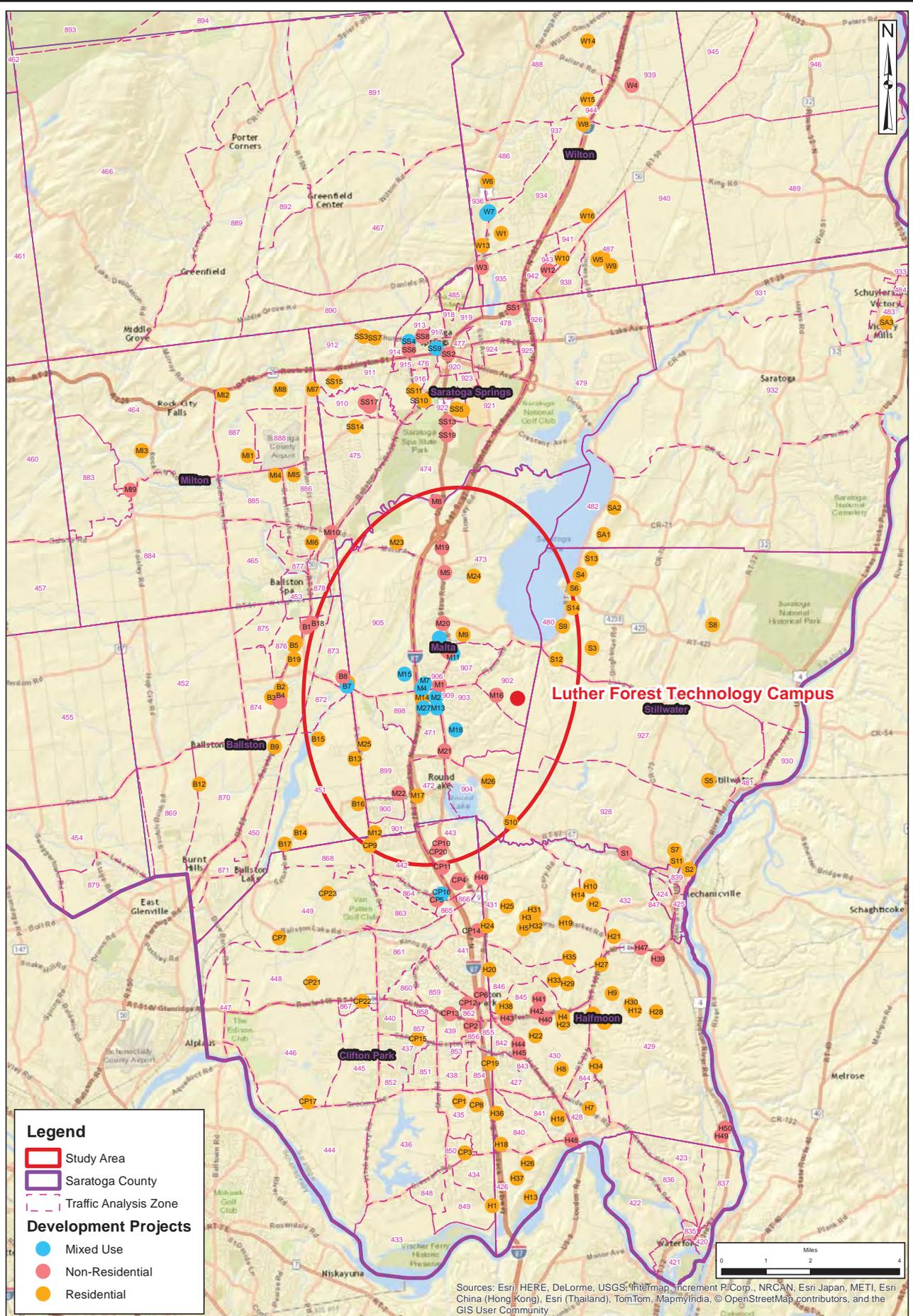
SCRTS - Development Projects Summary				
Scenario	Residential (Units)		Non-Residential (SF)	
	Total	Unbuilt	Total	Unbuilt
Planned (2015-2025)	7,431	6,432	3,979,619	3,754,869
Aggressive (Beyond 2025)	3,229	3,133	3,577,650	3,577,650
TOTAL	10,660	9,565	7,557,269	7,332,519

Building Permit History Review

Historical building permit data was collected from CDRPC from 2004 through 2013 as this period represents pre and post-recession periods and includes entries for the number of buildings as well as units permitted (see Attachment – Building Permit History). The presentation of the total number of units allows for multi-family units (i.e. apartments, townhomes, etc.) to be accounted for within the analysis. The summary table below presents totals, annual average, and annual high for each of the communities. Over the period, a total of 7,723 units were permitted.

Building Permits (Units) 2004-2013			
Community	Total	Annual Average	Annual High
Town of Ballston	652	65	124
Town of Clifton Park	877	88	213
Town of Halfmoon	2,059	206	337
Town of Malta	693	69	105
Town of Milton*	204	68	95
Town of Saratoga	171	17	37
City of Saratoga Springs	1,512	151	309
Town of Stillwater	346	35	75
Town of Wilton	1,209	121	426
Total	7,723	820	1,721

**Note – Data reported for the Town of Milton is limited to 2011 – 2013 due to the lack of data*



Sources: Esri, HERE, DeLorme, USGS, Imagery, Mapbox, OpenStreetMap contributors, and the GIS User Community



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Saratoga County Regional Traffic Study

Development Projects

Drawn:	GHM
Date:	12/19/2014
Scale:	1 inch=2 miles
Project:	91419.00
Figure:	X

Saratoga County Regional Traffic Study - Development Projects in the Pipeline (10 years)

Town	Map ID	Project Name	Location	TAZ	Land Use Type	Residential (Units)		Non-Residential (SF)		Status	Scenario
						Total	Unbuilt	Total	Unbuilt		
Ballston	B2	Ballston Meadows	Rt. 50 and Sherman Way	874	Single Family	58	58	-	-	Concept	Aggressive
Ballston	B7	Eastline Commons PUDD (Area B/C)	Rt. 67 and Eastline Road	873	Apartments	80	80	-	-	Concept	Aggressive
Ballston	B7	Eastline Commons PUDD (Area B/C)	Rt. 67 and Eastline Road	873	Office	-	-	80,000	80,000	Concept	Aggressive
Ballston	B13	Kelly Farm	Eastline Road	451	Single Family	133	133	-	-	Concept	Aggressive
Ballston	B16	Timber Creek Phase 3	Round Lake Road	451	Single Family	32	32	-	-	Concept	Aggressive
Ballston	B16	Timber Creek Phase 3	Round Lake Road	451	Office	-	-	60,000	60,000	Concept	Aggressive
Ballston	B16	Timber Creek Phase 4 (Abele Woods)	Round Lake Road	451	Single Family	211	211	-	-	Concept	Aggressive
Ballston	B18	Walmart (Commercial PUD)	Rt. 50	874	Retail	-	-	137,000	137,000	Concept	Aggressive
Clifton Park	CP12	Seton Health at Schuyler Ridge	1 Abele Boulevard	862	Medical	-	-	64,000	64,000	Concept	Aggressive
Clifton Park	CP16	Ushers Woods PUD	259.-2-69.11 Ushers Rd	442	Office	-	-	28,800	28,800	Denied	Aggressive
Clifton Park	CP16	Ushers Woods PUD	259.-2-69.11 Ushers Rd	442	Detached Senior	194	194	-	-	Denied	Aggressive
Halfmoon	H3	Angle Road Subdivision	Cary Road near Farm to Market	431	Single Family	27	27	-	-	Referred to Engineer 7/2014	Aggressive
Halfmoon	H9	Creekview	Upper Newtown Road	429	Single Family	61	61	-	-	Referred to Engineer 2/2014	Aggressive
Halfmoon	H13	Halfmoon Village & Yacht Club	Beach Road (near Canal Road)	426	Condo/Apt	244	244	-	-	Not approved; Site Plan	Aggressive
Halfmoon	H16	Kensington - Phase II	Stone Quarry/Rt 9	841	Apartments	70	70	-	-	Not approved; tabled 12/2013	Aggressive
Halfmoon	H19	Mott Orchard	Farm to Market Road	431	Single Family	112	112	-	-	Referred to Engineer 2/2014	Aggressive
Halfmoon	H21	Paar Estates	Farm to Market Road	432	Twin Homes	148	148	-	-	Referred to Engineer 10/2014	Aggressive
Halfmoon	H24	Regency Park	Route 9	431	Single Family	51	51	-	-	Not approved; tabled 7/2014	Aggressive
Halfmoon	H24	Regency Park	Route 9	431	Apartments	42	42	-	-	Not approved; tabled 7/2014	Aggressive
Halfmoon	H37	Shea Subdivision	Dunsback	426	Single Family	32	32	-	-	Not approved; project stalled	Aggressive
Halfmoon	H39	Clemente Commercial PDD	Rt. 146	429	Light Industrial	-	-	750,000	750,000	Approved, no building permit	Aggressive
Halfmoon	H40	Halfmoon Health Care and Assisted Living	Rt. 146	430	Assisted Living	-	-	104,850	104,850	Approved, no building permit	Aggressive
Halfmoon	H40	Halfmoon Health Care and Assisted Living	Rt. 146	430	Medical Office	-	-	573,000	573,000	Not enacted	Aggressive
Malta	M15	Saratoga Medical Park (Phase 4)		905	Medical Office/Retail	-	-	25,000	25,000		Aggressive
Malta	M15	Saratoga Medical Park (Phase 4)		905	Senior Townhouse	30	30	-	-		Aggressive
Malta	M15	Saratoga Medical Park (Phase 5)		905	Hospital (200 beds)	-	-	440,000	440,000		Aggressive
Malta	M16	STEP (Stage 3)		902	Light Industrial/Office	-	-	200,000	200,000	included in 8.2	Aggressive
Malta	M16	STEP (Stage 4) - Should we include?		902	Light Industrial/Office	-	-	450,000	450,000	included in 8.2	Aggressive
Malta	M10	Luthers Forest Technology Campus		902	Single Family	50	30	-	-	Remaining Development in PDD	Aggressive
Malta	M19	Exit 13		473	60/40% Retail to Office	-	-	30,000	30,000	Malta TWGEIS (Low Growth)	Aggressive
Malta	M20	Route 9 (North of Downtown)		473	40/60% Retail to Office	-	-	30,000	30,000	Malta TWGEIS (Low Growth)	Aggressive
Malta	M21	Route 9 (South of Downtown)		903	40/60% Retail to Office	-	-	30,000	30,000	Malta TWGEIS (Low Growth)	Aggressive
Malta	M22	Round Lake		899	70/30% Retail to Office	-	-	15,000	15,000	Malta TWGEIS (Low Growth)	Aggressive
Malta	M23	Akins Hill Road		473	Single Family	16	16	-	-	Malta TWGEIS (Low Growth)	Aggressive
Malta	M24	Silver Beach Road		473	Single Family	16	16	-	-	Malta TWGEIS (Low Growth)	Aggressive
Malta	M25	Eastline Road (North of Miller)		899	Single Family	25	25	-	-	Malta TWGEIS (Low Growth)	Aggressive
Malta	M26	Rt 67 (East of Round Lake)		904	Single Family	25	25	-	-	Malta TWGEIS (Low Growth)	Aggressive
Malta	M27	Downtown		471	Apartments	855	855	-	-	Malta TWGEIS (Low Growth)	Aggressive
Malta	M27	Downtown		471	50/50% Retail to Office	-	-	560,000	560,000	Malta TWGEIS (Low Growth)	Aggressive
Stillwater	S4	Jib Drive PDD Subdivision	Jib Drive, off of Route 9P	480	Single Family	35	35	-	-	Sunsetted	Aggressive
Stillwater	S6	Saratoga Pointe PDD Subdivision	Route 9P	480	Single Family	125	123	-	-	Approved PDD	Aggressive
Stillwater	S7	Turning Point PDD	Southern East side of Route 75	928	SF/Townhouse	80	6	-	-	Approved PDD	Aggressive
Stillwater	S9	White Sulpher Springs	Luther Road/9P	480	Single Family	29	29	-	-	Proposed	Aggressive
Stillwater	S10	Kings Isle Apartments	Southeast Side of Route 67	928	Apartments	319	319	-	-	Proposed	Aggressive
Stillwater	S11	Brickyard Road Apartments	Brickyard Road behind Mulberry Ave	928	Apartments	44	44	-	-	Proposed	Aggressive
Wilton	W16	Putnam (Belmonte)	Putnam Lane (Jones Road off Rt 50)	934	Single Family	50	50	-	-	Conceptual-in the works 10-15 years	Aggressive
Saratoga	SA2	Cedar Bluff Road	Cedar Bluff Road	482	Single Family	35	35	-	-	Sketch Plan Review	Aggressive
Ballston	B1	Advanced Auto/Dollar General	Rt. 50 (South of proposed Walmart)	874	Retail	-	-	10,000	10,000	Proposed	Planned
Ballston	B3	Ballston Mourningkill	Mourningkill Drive	874	Single Family	45	35	-	-	Approved; started	Planned
Ballston	B4	Beacon Hill Condominiums	Rt. 50 (South of Brookline Rd.)	874	Condominiums	54	18	-	-	Approved; started	Planned
Ballston	B5	Cornerstone Condominiums	Rt. 50 (South of Rt. 67)	876	Condominium	54	54	-	-	Approved; not started	Planned
Ballston	B6	Eastline Commons PUDD (Area A)	Rt. 67 and Eastline Road	873	Condominium	21	21	-	-	Concept, nearing approval	Planned

Saratoga County Regional Traffic Study - Development Projects in the Pipeline (10 years)

Town	Map ID	Project Name	Location	TAZ	Land Use Type	Residential (Units)		Non-Residential (SF)		Status	Scenario
						Total	Unbuilt	Total	Unbuilt		
Ballston	B8	Eastline Commons PUDD (Area D)	Rt. 67 and Eastline Road	873	Office or Industrial	-	-	50,000	50,000	PDD Approval	Planned
Ballston	B9	Eric Katz Apartments	Rt. 50 (south of Outlet Rd.)	450	Apartments	32	32	-	-	Approved; not started	Planned
Ballston	B10	Iaia Condominiums	Rt. 50 (South of Rt. 67)	876	Condominium	24	24	-	-	Approved; not started	Planned
Ballston	B11	Industrial Park	Mcree Hill Road	874	Industrial	-	-	25,000	25,000	Remaining lot	Planned
Ballston	B12	Joseph Lazare	Goode St. (South of Charlton Rd.)	870	Single Family	21	11	-	-	Approved; started	Planned
Ballston	B14	Sharon Lane	Schauber Road	451	Single Family	9	9	-	-	Approved; started	Planned
Ballston	B15	Stonebridge PUD	Lake Road	451	Single Family	56	56	-	-	Approved; started	Planned
Ballston	B15	Stonebridge PUD	Lake Road	451	Townhouse	43	43	-	-	Approved; started	Planned
Ballston	B16	Timber Creek Phase 2	Round Lake Road	451	Single Family	99	99	-	-	Approved	Planned
Ballston	B17	Volpe	Schauber Road	451	Single Family	17	16	-	-	Approved; started	Planned
Ballston	B19	Ballston Condominiums (Springwood)	Rt. 50 (South of Rt. 67)	874	Condominium	48	24	-	-	Approved; started	Planned
Clifton Park	CP1	Brooks - Grooms Road	504 Grooms Road	435	Single Family	104	104	-	-	Conditioned Final Approval	Planned
Clifton Park	CP2	Clifton Park Center - Mixed Use	309 Clifton Park Center Road	856	Retail	-	-	28,000	28,000	Approved	Planned
Clifton Park	CP3	Crescent Woods	1567 Crescent Road	850	Single Family	61	61	-	-	Concept Approved	Planned
Clifton Park	CP4	DCG - Tech Valley Flex Park	SBL#259.-2-74.1 - Wood Road	443	Warehouse/Industrial/Flex	-	-	163,000	40,750	Approved, 75% complete	Planned
Clifton Park	CP5	Fairchild Square Development	55 Van Patten Dr./1 Fairchild Sq.	864	Industrial/Flex	-	-	250,000	125,000	Approved; started	Planned
Clifton Park	CP6	Hanoush Jewelers (near Tractor Supply)	Route 9	441	Retail	-	-	15,000	15,000	Approved; started	Planned
Clifton Park	CP7	Khan, Lands of	Waite Road	449	Single Family	9	9	-	-	Concept Approved	Planned
Clifton Park	CP8	Lapp Road, #246	246 Lapp Road	435	2 duplex & 2 single family	7	7	-	-	Concept Approved	Planned
Clifton Park	CP9	Park View Estates	Longkill Road	868	Single Family	4	1	-	-	Approved; started	Planned
Clifton Park	CP10	Quick Response	2077 Route 9	443	Construction/Warehouse	-	-	9,000	9,000	Approved; not started	Planned
Clifton Park	CP11	Rekucki Warehouse	SBL# 259.-2-81 - NYS Rt. 9	443	Warehouse	-	-	27,800	27,800	Approved, not started	Planned
Clifton Park	CP13	St. Peters Health Medical Campus	1 Tallow Wood Drive	859	Medical	-	-	9,000	9,000	Approved started	Planned
Clifton Park	CP14	Synergy Technology Park	265.-1-15.3 Rt.9 & Kinns Rd.	441	Office	-	-	80,000	80,000	Approved; not started	Planned
Clifton Park	CP14	Synergy Technology Park	265.-1-15.3 Rt.9 & Kinns Rd.	441	Manufacturing	-	-	161,000	161,000	Approved; not started	Planned
Clifton Park	CP14	Synergy Technology Park	265.-1-15.3 Rt.9 & Kinns Rd.	441	Warehouse	-	-	161,000	161,000	Approved; not started	Planned
Clifton Park	CP15	Trojanski Builders (Diamond Pointe)	Clifton Park Center Road	857	Single Family	10	10	-	-	Approved	Planned
Clifton Park	CP17	Windhover Farms	Grooms Road	446	Single Family	25	25	-	-	Concept Approved	Planned
Clifton Park	CP18	Wood Road Light Industrial Development	SBL# 259.-2-74.2 - Wood Road	443	Light Industrial	-	-	71,000	71,000	Completed-shovel ready	Planned
Clifton Park	CP18	Wood Road Light Industrial Development	SBL#259.-2-74.2 - Wood Road	443	Warehouse	-	-	71,000	71,000	Completed, shovel ready	Planned
Clifton Park	CP19	Woodin Major	226 Woodin Road	854	Single Family	6	6	-	-	Concept Approved	Planned
Clifton Park	CP20	XAR Development	250.-2-19 (213 acres) Wood Rd.	443	Light Industrial	-	-	331,500	331,500	Approved, not started	Planned
Clifton Park	CP20	XAR Development	250.-2-19 Wood Road	443	Warehouse	-	-	23,125	23,125	Approved, not started	Planned
Clifton Park	CP22	Honey Hollow Farms	SBL #270-2-28	867	Single Family	38	38	-	-	Approved, not started	Planned
Clifton Park	CP23	Rolling Meadows	SBLs# 258.-2-3.11 & 258.-3.12 & 258.-2-3.21	449	Single Family	35	35	-	-	Approved, not started	Planned
Clifton Park	CP21	Waite Meadows	SBL#270.-1-19.1	448	Single Family	38	38	-	-	Approved, not started	Planned
Halfmoon	H1	Mike Abele/Caranfa	Boyack Road	426	Single Family	6	1	-	-	Approved; started	Planned
Halfmoon	H2	Adams Pointe PDD	McBride/Johnson Road	431	Single Family	20	20	-	-	Approved; started	Planned
Halfmoon	H4	Anna's Place PDD	Werner Road	430	Single Family	27	1	-	-	Approved; started	Planned
Halfmoon	H5	Arlington Heights	Farm to Market Road	431	Single Family	48	13	-	-	Approved; started	Planned
Halfmoon	H5	Arlington Heights Phase II	Farm to Market Road	431	Single Family	26	21	-	-	Approved; started	Planned
Halfmoon	H6	Betts Farm	Betts Lane and Hayner Road	429	Single Family	120	120	-	-	Referred to Engineer 10/2014	Planned
Halfmoon	H6	Betts Farm	Betts Lane and Hayner Road	429	Two Family	102	102	-	-	Referred to Engineer 10/2014	Planned
Halfmoon	H7	Brookfield Place	Harris/Guideboard Road	428	Single Family	81	3	-	-	Approved; started	Planned
Halfmoon	H8	Cardin Acres	Plant Road	430	Single Family	36	36	-	-	Approved; started	Planned
Halfmoon	H10	Fairway Meadows Phase II	Johnson Road	432	Single Family	64	64	-	-	Approved; started	Planned
Halfmoon	H11	Falcon Trace PDD	Rt. 236	429	General Office	-	-	10,000	10,000	Approved, no building permit	Planned
Halfmoon	H12	Glen Meadows	Upper Newtown Road	429	Single Family	129	126	-	-	Approved; started	Planned
Halfmoon	H14	Howland Park PDD	Johnson Road	431	Single Family	96	96	-	-	Approved; not started	Planned
Halfmoon	H15	Inglewood	Cemetery Road	845	Townhouse	27	24	-	-	Approved; started	Planned

Saratoga County Regional Traffic Study - Development Projects in the Pipeline (10 years)

Town	Map ID	Project Name	Location	TAZ	Land Use Type	Residential (Units)		Non-Residential (SF)		Status	Scenario
						Total	Unbuilt	Total	Unbuilt		
Halfmoon	H17	Kensington I/Hudson Ridge (Mooring of Halfmoon)	Stone Quarry/Rt 9	841	Apartments	200	20	-	-	Approved; started	Planned
Halfmoon	H18	Linden Village	Dunsbach Road (near Crescent Vischer)	840	Single Family	48	48	-	-	Not approved: Major Subd.	Planned
Halfmoon	H20	Oakbrook Commons	Route 9	846	Apartments	152	8	-	-	Approved; started	Planned
Halfmoon	H22	Plant Road	Plant Road	430	Townhouse	150	150	-	-	Approved; started	Planned
Halfmoon	H23	Pointe West (Fellows Road PDD)	Fellows Road	430	Townhouse	118	39	-	-	Approved; started	Planned
Halfmoon	H25	Rolling Hills Estates PDD Phase III	Cary/Tabor Road	431	Warehouse	-	-	465,000	465,000	Approved; not started	Planned
Halfmoon	H26	Sandy Rock	Dunsbach/Beach Road	426	Single Family	19	19	-	-	Approved; started	Planned
Halfmoon	H27	Sheldon Hills	Route 146	429	Townhome/Condo	83	2	-	-	Approved; started	Planned
Halfmoon	H28	Stephenson Ridge	Upper Newtown Road	429	Single Family	156	156	-	-	Referred to Engineer 4/2012	Planned
Halfmoon	H29	Stone Crest Preserve	Werner Road/Vosburgh	846	Single Family	90	23	-	-	Approved; started	Planned
Halfmoon	H30	Swatling Falls	Upper Newtown Road	429	Single Family	95	60	-	-	Approved; started	Planned
Halfmoon	H31	The Meadows of Halfmoon	Farm to Market Road	431	Single Family	53	53	-	-	Approved; not started	Planned
Halfmoon	H32	Victors Farm	Farm to Market Road	431	Single Family	13	13	-	-	Approved; started	Planned
Halfmoon	H33	Werner Road Subdivision	Werner Road	846	Single Family	8	3	-	-	Approved; started	Planned
Halfmoon	H34	Westbrook	Harris Road	429	Single Family	16	15	-	-	Approved; started	Planned
Halfmoon	H35	Windsor Woods	Vosburgh Road	431	Single Family	28	19	-	-	Approved; started	Planned
Halfmoon	H36	Princeton Heights	Princeton Ave (near Machaster Dr, Dunsbach)	840	Single Family	51	51	-	-	Not approved; near final approval	Planned
Halfmoon	H38	Woodloch Subdivision	Cemetary Road	845	Single Family	7	7	-	-	Referred to Engineer 3/2014	Planned
Halfmoon	H41	Bobrow Distributing Corp	8 Enterprise Ave	845	Warehouse	-	-	5,100	5,100	Approval Renewal 11/10/14	Planned
Halfmoon	H42	421 Halfmoon Flex Park	421 Rt. 146	845	Manufacturing/Warehouse	-	-	60,000	60,000	Waiting on PDD Amendment	Planned
Halfmoon	H43	Point 146	Rt 146 Old Plant Road	430	Bank	-	-	2,400	2,400	Waiting on Site Plan Approval	Planned
Halfmoon	H44	1615 Retail/Commercial	1615 Rt. 9	430	Retail/Commercial	-	-	5,600	5,600	Waiting on Site Plan Approval	Planned
Halfmoon	H45	Northway Surgical & Pain Management	1596 Rt. 9	842	Medical Office/Surgical	-	-	10,000	10,000	Waiting on Site Plan Approval	Planned
Halfmoon	H46	VRS Sales	Ushers Road	431	Auto Service	-	-	2,700	2,700	Approved, no building permit	Planned
Halfmoon	H47	Santoro's Warehouse	Farm to Market Road	432	Warehouse	-	-	13,978	13,978	Plans signed/stamped	Planned
Halfmoon	H48	Lussier Auto Body	1385 Crescent Vischer Ferry	841	Auto Body	-	-	5,600	5,600	Approved, no building permit	Planned
Halfmoon	H49	Kivort Steel	Hudson River Road	429	Commercial	-	-	7,648	7,648	Building permit under review	Planned
Halfmoon	H50	Self Storage Facility	4223 Hudson River Road	429	Storage	-	-	42,000	42,000	Approved, no building permit	Planned
Malta	M1	Berkshire Bank, SUP & PP		907	Bank	-	-	50,400	50,400	Planned Project - Pending	Planned
Malta	M2	Blacksmith Sq., SP		908	Apartments	170	170	-	-	Planned Project - Approved	Planned
Malta	M2	Blacksmith Sq., SP		908	Commercial	-	-	32,150	32,150	Planned Project - Approved	Planned
Malta	M3	Cramer Road No, SD		473	Townhomes	76	76	-	-	Planned Project - Approved	Planned
Malta	M4	DCG Malta Commons		473	Apartments	220	220	-	-	Planned Project - Conceptual	Planned
Malta	M4	DCG Malta Commons		473	Mixed Use (Retail/Service)	-	-	134,500	134,500	Planned Project - Conceptual	Planned
Malta	M5	Hearn Road Medical, SP		473	Medical	-	-	85,000	85,000	Planned Project - Approved	Planned
Malta	M6	Home of The Good Shepard, SPAs		473	Assisted Living Facility	-	-	5,700	5,700	Planned Project - Approved	Planned
Malta	M7	Kelch Drive		473	Apartments	344	344	-	-	Planned Project - Conceptual	Planned
Malta	M7	Kelch Drive		473	Retail/Office	-	-	170,000	170,000	Planned Project - Conceptual	Planned
Malta	M8	Kumar/Comfort Inn, SP		473	Hotel	-	-	33,750	33,750	Planned Project - Approved	Planned
Malta	M9	Lakeview Landings, SD		473	Single Family	160	160	-	-	Included in 8.2	Planned
Malta	M11	Malta Crossings, SD		907	Apartments/Townhomes/SF	79	79	-	-	Included in 8.2	Planned
Malta	M11	Malta Crossings, SD		907	Retail/Office	-	-	217,600	217,600	Included in 8.2	Planned
Malta	M12	Maple Forest SD		901	Single Family	16	16	-	-	Planned Project - Approved	Planned
Malta	M13	Park Place, PP		471	Apartments	511	521	-	-	Included in 8.2	Planned
Malta	M13	Park Place, PP		471	Single Family	45	45	-	-	Included in 8.2	Planned
Malta	M13	Park Place, PP		471	Retail/Office	-	-	80,000	80,000	Included in 8.2	Planned
Malta	M14	Saratoga Blvd Apartments, PP		908	Apartments	214	214	-	-	Planned Project - Conceptual Approval	Planned
Malta	M15	Saratoga Medical Park (Phase 2)		905	Medical Office/Retail	-	-	30,000	30,000	Included in 8.2	Planned
Malta	M15	Saratoga Medical Park (Phase 2)		905	Ambulatory Care	-	-	30,000	30,000	Included in 8.2	Planned
Malta	M15	Saratoga Medical Park (Phase 2)		905	Nursing Home (160 beds)	-	-	-	-	Included in 8.2	Planned
Malta	M15	Saratoga Medical Park (Phase 3)		905	Medical Office/Retail	-	-	30,000	30,000	Included in 8.2	Planned

Saratoga County Regional Traffic Study - Development Projects in the Pipeline (10 years)

Town	Map ID	Project Name	Location	TAZ	Land Use Type	Residential (Units)		Non-Residential (SF)		Status	Scenario
						Total	Unbuilt	Total	Unbuilt		
Malta	M15	Saratoga Medical Park (Phase 3)		905	Assisted Living Facility	-	-	120,000	120,000	Included in 8.2	Planned
Malta	M16	STEP (Stage 2)		902	Warehouse	-	-	65,000	65,000	Included in 8.2	Planned
Malta	M16	STEP (Stage 2)		902	Light Industrial/Office	-	-	188,000	188,000	Included in 8.2	Planned
Malta	M16	STEP (Stage 3)		902	Light Industrial/Office	-	-	200,000	200,000	Included in 8.2	Planned
Malta	M17	Victorian Landings (Village of Round Lake)		472	Townhomes	80	80	-	-	Included in 8.2	Planned
Malta	M18	Woodfield Estates, SD		903	Single Family	24	24	-	-	Planned Project - Approved	Planned
Malta	M18	Woodfield Estates, SD		903	Non-residential	-	-	-	22,500	Planned Project - Approved	Planned
Stillwater	S1	DA collins - Warehouse	Route 67, across from Norfolk/Southern	928	Warehouse	-	-	8400	8400	Approved	Planned
Stillwater	S2	Esplande	Intersection of Route 67/Route 4	839	Apartments	44	44	-	-	Approved	Planned
Stillwater	S3	Gracemoore Road Subdivision	Gracemoore Road	480	Single Family	9	7	-	-	Approved	Planned
Stillwater	S5	Revolutionary Heights	Gurba Drive	927	SF/Townhouse	100	97	-	-	Approved	Planned
Stillwater	S8	Grozniak	Grozniak (near rt 423)	480	Single Family	12	10	-	-	Approved	Planned
Stillwater	S12	Saratoga Glen	579 Lake Road	480	Single Family	-	3	-	-	Approved	Planned
Stillwater	S13	Battle Ridge	131 Putnam Road	480	Single Family	7	2	-	-	Approved	Planned
Stillwater	S14	Stillwater Woods	Southside of Route 423	480	Single Family	47	23	-	-	Approved	Planned
Saratoga Springs	SS1	Plaza 15 Storage	153-1-1.1 30 Gick Road	478	Storage	-	-	26,200	26,200	Approved Site Plan (03/13/14)	Planned
Saratoga Springs	SS2	Rip Van Dam Hotel	165.67-1-70 353 Broadway	477	Hotel (rooms)	176	176	-	-	Pending Site Plan (03/13/14)	Planned
Saratoga Springs	SS3	Buff Road Subdivision	164.-2-12 Buff Rd and Route 9N	912	Single Family	15	15	-	-	Approved Subdivision (03/13/14)	Planned
Saratoga Springs	SS4	2 West Ave Mixed Use	165.10-1-21 2 West Ave	917	Commercial	-	-	5,500	5,500	Under Construction	Planned
Saratoga Springs	SS4	2 West Ave Mixed Use	165.10-1-21 2 West Ave	917	Apartments	63	63	-	-	Under Construction	Planned
Saratoga Springs	SS5	Chloe's Way	178.52-4-10 East Broadway	922	Single Family	31	31	-	-	Approved Subdivision (03/13/14)	Planned
Saratoga Springs	SS6	Security Supply Addition	165.14-1-41 50 West Ave	917	Commercial	-	-	26,200	26,200	Approved Site Plan (03/13/14)	Planned
Saratoga Springs	SS7	Home of The Good Shepard, SPAs	165.-2-2.211 394-402 Church St	912	Assisted Living/Senior	146	146	-	-	Approved Site Plan (03/13/14)	Planned
Saratoga Springs	SS8	Saratoga Hospital ICU	165.41-1-1-12.1 211 Church St	917	Hospital	-	-	33,900	33,900	Pending Site Plan (03/13/14)	Planned
Saratoga Springs	SS9	Ellsworth Mixed Use Development	165.58-3-3 120 Division St	477	Apartments	41	41	-	-	Pending SP, Subdivision (03/13/14)	Planned
Saratoga Springs	SS9	Ellsworth Mixed Use Development	165.58-3-3 120 Division St	477	Retail	-	-	4,000	4,000	Pending SP, Subdivision (03/13/14)	Planned
Saratoga Springs	SS10	316-318 Ballston Ave	178.41-2-18 215 Grand Avenue	476	Apartments	12	12	-	-	Approved Site Plan (03/13/14)	Planned
Saratoga Springs	SS11	246 West Ave	178.33-1-21 246 West Ave	476	Single Family	16	16	-	-	Approved Site Plan (03/13/14)	Planned
Saratoga Springs	SS12	Mckenzie's Way Part 1, 2	178.-2-6 East Broadway	922	Single Family	14	14	-	-	Under Construction (03/13/14)	Planned
Saratoga Springs	SS13	Saratoga Honda Expansion	178.-2-20 3402 Route 9	474	Auto Sales	-	-	29,000	29,000	Approved Site Plan (03/13/14)	Planned
Saratoga Springs	SS14	Beaver Pond Subdivision	177.-1-19 Geyser Road	475	Single Family	84	84	-	-	Under Construction (03/13/14)	Planned
Saratoga Springs	SS15	Meadow Vista Subdivision	177.-1-2 Grand Avenue	911	Single Family	21	21	-	-	Under Construction (03/13/14)	Planned
Saratoga Springs	SS16	Logistics One Flex Warehouse Expansion	177.-1-45 Cady Hill Blvd	910	Warehouse	-	-	145,000	145,000	Approved Site Plan (03/13/14)	Planned
Saratoga Springs	SS17	Unlimited Potential	178.-1-50 36 Cady Hill Blvd	910	Warehouse	-	-	9,352	9,352	Approved Site Plan (03/13/14)	Planned
Saratoga Springs	SS18	Munter/Grande Industrial Park Site Plan	178.-1-50 Cady Hill Boulevard	910	Industrial	-	-	30,000	30,000	Under Construction (03/13/14)	Planned
Saratoga Springs	SS19	Turf Hotels	178.2-16 3368 South Broadway	474	Hotel (rooms)	112	112	-	-	Under Construction (03/13/14)	Planned
Milton	M11	Stone Church Subdivision	Stone Church Road North of Geyser Rd	887	Single Family	100	100	-	-	Approved; started	Planned
Milton	M12	Chuck Hollow	Middle Line Road and Washington St.	887	Single Family	10	10	-	-	Approved; started	Planned
Milton	M13	Creekside	Rock City Road	464	Single Family	90	45	-	-	Approved; started	Planned
Milton	M14	Kaydeross Village	West of Greenfield Ave on Geyser Road	885	Townhomes	50	50	-	-	Approved; started	Planned
Milton	M14	Kaydeross Village	West of Greenfield Ave on Geyser Road	885	Apartments	350	250	-	-	Approved; started	Planned
Milton	M15	Boghossian Brothers	East of Greenfield Ave on Geyser Road	886	Single Family	-	20	-	-	Approved; started	Planned
Milton	M16	NY Development Group	Rowland/Rt 50	465	Single Family	32	32	-	-	Approved; started	Planned
Milton	M17	Grand/Rowland	Grand Ave/Rowland Rd	887	Single Family	10	10	-	-	Approved; started	Planned
Milton	M18	Rowland Hollow West	Grand Ave/Hoffman Rd	887	Single Family	-	6	-	-	Approved; started	Planned
Milton	M19	Dollar General	162 West Milton Ave	884	Retail	-	-	2000	2000	Conceptual	Planned
Milton	M10	Cumberland Farms	Northline/Route 50	465	Convenience	-	-	1000	1000	Conceptual	Planned
Wilton	W1	Mill at Smith Bridge	Smith Bridge Rd./Davidson Drive	934	Single Family	63	50	-	-	Approved; started	Planned
Wilton	W2	Park Place at Wilton	665 Route 9	936	Multi-family	114	114	-	-	Approved; started	Planned
Wilton	W2	Park Place at Wilton	665 Route 9	936	Retail/Service	-	-	16,357	16,357	Approved; started	Planned

Saratoga County Regional Traffic Study - Development Projects in the Pipeline (10 years)

Town	Map ID	Project Name	Location	TAZ	Land Use Type	Residential (Units)		Non-Residential (SF)		Status	Scenario
						Total	Unbuilt	Total	Unbuilt		
Wilton	W3	Saratoga Health & Wellness	Rt. 9	935	Health facility	-	-	14,000	14,000	Approved; started	Planned
Wilton	W4	KLN, LLC	12 Commerce Park Drive	939	Warehouse	-	-	14,000	14,000	Approved	Planned
Wilton	W5	Pine Brook Landing	Rose Terrace & Louden Road	487	Single Family	21	17	-	-	Approved; started	Planned
Wilton	W6	708 Rt 9	708 Rt 9	486	Multi-family	46	46	-	-	Approved; started	Planned
Wilton	W7	Everglades	666 Rt. 9	936	Multi-family	50	50	-	-	Pre-application	Planned
Wilton	W7	Everglades	666 Rt. 9	936	Retail/Service	-	-	8,620	8,620	Pre-application	Planned
Wilton	W8	Canyon Run Extension	Gailor Road	934	Single Family	36	36	-	-	Pre-application	Planned
Wilton	W9	Maple Grove Subd.	Louden Road	487	Single Family	52	52	-	-	Pre-application	Planned
Wilton	W10	Wilton Senior Community	Perry Rd. & Route 50	941	Senior Apts/Assist Liv	202	202	-	-	Pre-application	Planned
Wilton	W11	Louden Road Conservation Sub	Louden Road	487	Single Family	18	18	-	-	Conceptual	Planned
Wilton	W12	Aldi's	Lowes Drive	942	Grocery	-	-	18,539	18,539	Pre-application	Planned
Wilton	W13	Wilton Ridge Senior Apts.	Rt. 9 & Smith Bridge Road	936	Senior Apts.	226	226	-	-	Pre-application	Planned
Wilton	W14	Trice Conservation Subdivision	Wilton-Gansevoort & North Rds.	488	Single Family	15	15	-	-	Pre-application	Planned
Wilton	W15	Morris Subdivision	Traver Road	944	Single Family	19	19	-	-	Conceptual	Planned
Saratoga	SA1	Brown Road - Saratoga Development	Brown Road	482	Single Family	11	11	-	-	Approved, under construction	Planned
Saratoga	SA3	Victory Mill	42 Gates Ave	483	Apartments/Lofts	98	98	-	-	Approved, not under construction	Planned
TOTAL						10,660	9,565	7,557,269	7,332,519		

Appendix D

Public and Stakeholder Input



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Saratoga County Regional Traffic Study Public Information Meeting November 5, 2014 Summary

The first public information meeting for the Saratoga County Regional Traffic Study was held on Wednesday, November 5, 2014, at the Malta Community Center. The meeting was well attended by residents, stakeholders, and study advisory committee members. The meeting began with an introduction by Michael Tucker from the Center for Economic Growth (CEG) followed by a presentation by Don Adams of Creighton Manning. The presentation outlined the study objective, advisory committee and its role, stakeholders, scope of work, study area, and the study process and is included as Attachment A.

Meeting attendees had multiple opportunities to ask questions and provide comments including an open forum question/comment session and a more focused, station-oriented input session covering three different topics. The topics included: 1) General traffic and transportation, 2) Multi-Modal Accommodations and Interests, and 3) Community, Economic, and Environmental Elements.

The input from the open forum question/comment session and station-oriented session resulted in the following overall comments and concerns:



- Pedestrian and bicyclist safety at roundabouts
- Congestion concerns near I-87 Exit 11 and Exit 12
- Increases in traffic on local roads attributed to development
- Consideration of speed reduction due to high vehicular and truck traffic
- New interchange on I-87 between Exit 11 and 12 as a possible solution to ease traffic
- High speeds, truck traffic, and narrow shoulders on Route 67 between Route 9 and Mechanicville create an unsafe environment for residents to cross the road to reach their mailboxes.
- Pedestrian and bike accessibility and ADA compliance
- Congestion concerns at Route 9/Route 67/Dunning Street and I-87 Exit 11 NB Ramps/Round Lake Road intersections
- Heavy construction traffic and difficult turns at the intersection of Route 9P/Lake Road/Cold Springs Road

Specific input from the open forum and the station-oriented session are included in Attachment B. The meeting concluded with closing remarks from Michael Franchini from the Capital District Transportation Committee (CDTC) and an invitation for meeting attendees to stay involved in the study through the study website (www.SaratogaRTS.com) and contact with the Study Advisory Committee members.

Attachment A Presentation

Saratoga County Regional Traffic Study
Saratoga County, New York



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Saratoga County Regional Traffic Study

*Public Information Meeting
November 5, 2014*

SARATOGA
REGIONAL TRAFFIC STUDY

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1791

SARATOGA

Study Advisory Committee (SAC)

- Center for Economic Growth
- National Grid
- CDTC
- Empire State Development
- Global Foundries
- Town of Malta
- NYSDOT
- Village of Round Lake
- Saratoga County
- Saratoga County IDA
- Town of Stillwater



Meeting Agenda

- Introductions
- Purpose of the Study
- Study advisory committee role
- Study Overview
 - Study Area
 - Process
 - Schedule and next steps
- Questions
- Input Stations
- Recap

Local grasp, global reach
GlobalFoundries drives growth and leads region's tech sectors
By Deborah Moore
Updated 3:25 pm Monday, September 8, 2014

1 of 5 ◀ PREV NEXT ▶



Technicians work on a new \$200 million lithography tool purchased by IBM from ASML, Friday, Feb. 14, 2014, at NanoFab X in Albany N.Y. The tool utilizes extreme ultraviolet light to print micro circuitry designs on processors. Extreme ultraviolet lithography (EUVL) is an emerging technology believed to be capable of producing computer chips which are 100 times faster than anything currently in production. Memory chips produced with EUVL could see a potential 1,000 times increase in storage capability. (Walt Wadsworth/Times Union) ORG XMIT: MBR2014021414405545 Buy this photo



Study Objective

The objective of the Saratoga County Regional Traffic Study (RTS) is to identify the transportation mitigation measures and implementation steps needed to accommodate growth in Saratoga County specifically centered around the Northway (I-87) Exits 11 and 12.



Study Advisory Committee Role

- Provide input and guidance during the study
- Monitor progress/review study products
- Provide a two way information conduit between the project and the public/stakeholders



Stakeholders

- Capital District Regional Planning Commission (CDRPC)
- CDTA
- Capital Region Economic Development Council (CREDC)
- City of Mechanicville
- City of Saratoga Springs
- Federal Highway Administration (FHWA)
- Luther Forest Technology Campus Economic Development Corporation
- Malta Community Relations Board (Global Foundries/Malta Foundation)
- Mechanicville Intermodal and Automotive Handling Facility
- New York State Department of Environmental Conservation (NYSDEC)
- New York State Electric and Gas
- New York State Energy Research and Development Authority (NYSERDA)
- Saratoga Convention and Tourism Bureau
- Saratoga County Prosperity Partnership
- Saratoga Economic Development Corporation (SEDC)
- Saratoga Framework for Success
- Saratoga PLAN (Zim Smith Trail)
- The Chamber of Southern Saratoga County
- The Saratoga County Chamber
- Town of Ballston
- Town of Clifton Park
- Town of Halfmoon
- Town of Milton
- Village of Ballston Spa
- Village of Stillwater



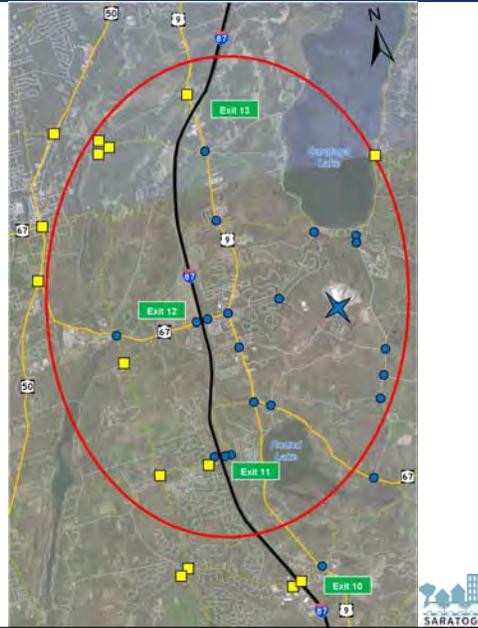
Scope of Work

- ✓ Project kickoff – September 2014
- ✓ Obtain input from stakeholders, confirm findings from previous studies – Fall 2014
- ✓ Data collection – Fall 2014
- Traffic analysis and modeling – Winter 2015
- Identify and evaluate transportation mitigation measures – Spring 2015
- Draft report – Summer 2015
- Present findings to the public – Fall 2015
- Final report – December 2015

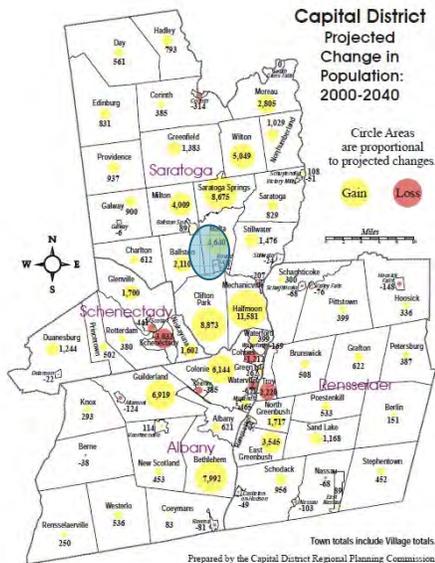


Study Area

- Critical locations
 - Intersections of primary routes
 - Area wide or regional significance
- Total of 37 intersections



Study Process: Growth Forecasting



- County-wide influence
 - Zoning and growth in Saratoga County
 - LFTC
- Proposed Scenarios
 - A = Planned Growth
 - B = Aggressive Growth
 - C = to be determined
- General background



Study Process: Traffic Engineering

- Traffic volume modeling
 - CDTC regional model
 - Localized corridors and intersections
- Analysis
 - Intersection capacity and level of service
 - Roadway capacity
 - Other performance measures
- Identify acceptable operations and trade-offs.



Study Process: Mitigation

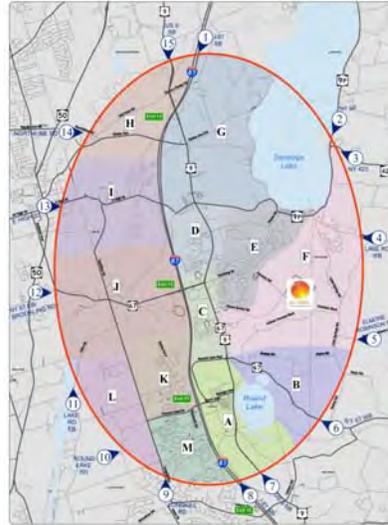
- Intersection or roadway modifications
- Multi-modal options
 - Wide shoulders
 - Linked sidewalks
 - Bus shelters
- Selective development options
 - Transit oriented
 - Localized density incentives
 - Zoning modifications



Completed/In Process Tasks

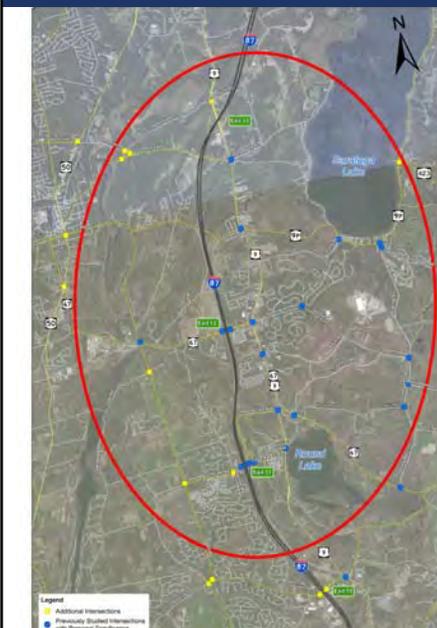
SaratogaRTS.com

- Project Kickoff
- Data Collection
- Obtaining input from Stakeholders
- Confirming findings from previous studies
- Building the traffic simulation model



Questions?

SaratogaRTS.com



- Input Stations:
[Tonight](#)
- Comment forms:
[Take home or tonight](#)
- Website:
www.SaratogaRTS.com



Public Input Stations

1. General Traffic and Transportation

- What are your top three intersections with congestion concerns?
- Are you concerned about safety in the study area? If so, what and where?

2. Multi-Modal Accommodations and Interests

- What multimodal (bus, bike, walk) improvements are most needed? Are there any accessibility concerns?
- What are the safety concerns for pedestrians and bicyclists?



Public Input Stations

3. Community, Economic, and Environmental Elements

- What do you see as the most pressing commercial or residential development issues for the County?
- Any other concerns related to community, environmental elements, and quality of life?
- What are the three most important factors for livability?



Recap

- General Traffic and Transportation
- Multi-Modal Accommodations and Interests
- Community, Economic, and Environmental Elements



Attachment B
Input Station Comments

Saratoga County Regional Traffic Study
Saratoga County, New York

General Comments

- People coming in from Saratoga are not going all the way to Stonebreak Road
- Congestion at Exit 11 is getting worst because of trucks at LFTC and the intermodal using the Round Lake Bypass
- Studies are online, but some appendices are missing
- LFTC Community Response Board: growth projections should be regional with many new developments coming up in the county
- Malta Avenue is the second most used roadway since it crosses the Northway, with truck traffic around the clock
- Commuters from Old Post Road are getting backed up due to trucks turning
- Bicycle/pedestrian accommodations are not good in this area [Malta] for handicapped users
- The roundabouts are not built for larger vehicles
- Route 67 from Route 9 to Mechanicville is a problem with high speeds and heavy truck traffic
- Speed limit change on Round Lake Road should be pursued
- How does this study get incorporated with the Round Lake Road work?
- Opportunity to connect Route 67 to the Exit 10 area
- Traffic signal at Exit 11 SB to be considered
- Expensive recommendations from 2 local studies: Why was the regional study not done first?
- There is an Exit 11A concept from LFTC 2004 study. What happened to it? Solution to get trucks off of the streets is Exit 11A
- Provide a list of people associated with the Study Advisory Committee agencies
- The speed limit on Round Lake Road between Ruhle Road and Chango Drive is currently 40 mph and should be reduced to 30 mph. This will be especially needed with the new roundabouts.
- Traffic related to GlobalFoundries construction creates congestion on Lake Road between Route 9P and Cold Springs Road, and turns are difficult at those intersections.
- Need for east/west route west of I-87
- I-787 should be extended north beyond Glens Falls, and then loop around south west of Route 50
- Provide reporting of comments received through the website



General Traffic and Transportation

Question 1: What are your top three intersections with congestion concerns?

Intersection	Count
Route 9/Route 67/Dunning Street	6
Route 67/Eastline Road	3
Route 9/Old Pose Road/Cherry Choke Road	2
Round Lake Bypass/Round Lake Road	2
Route 50/Route 67	0
I-87 Exit 11 NB Ramps/Round Lake Road	6
Route 9P/Lake Road (Coldspring)	4
Eastline Road/Round Lake	1
Brookline Rd/Route 50 & 67	1
Route 67 from Route 9 to Mechanicville (intermodal)	4
Exit 10 Truck Traffic Between Route 9 & Industrial Parks	2
Ushers Road/Van Patten	1
East/West traffic From I-87 to Schenectady	2
Route 67/Curtis Industrial Park	1
Development pressure between Eastline/Lake/Outlet	1

Question 2: Are you concerned about safety in the study area? If so, what and where?

- Speed and truck traffic on Route 67
- Heavy construction traffic and difficult turns at the intersection of Route 9P/Lake Road/Cold Springs Road
- Pedestrian and bicyclist safety at roundabouts
- Traffic on local roads due to the development (Knapp Road, Fitch Road, Joyce Road, Cold Springs Road, Raylinsky Road, Ruhle Road, Miller Road)
- Intersection of Cherry Choke Road/Old Post Road /Route 9 and left turn from Old Post Road
- Pedestrian concerns on Round Lake Road across the roundabouts
- New interchange on I-87 between Exit 11 and Exit 12
- Truck traffic at Malta Avenue/Route 9
- Congestion on westbound side to get on Exit 11 SB ramp



Multi-Modal Accommodations and Interests

What multimodal (bus, bike, walk) improvements are most needed? Are there any accessibility concerns?

- Trails do not connect
- No connection to GlobalFoundries parks
- Speed reduction (down to 30mph) on Round Lake Road close to Chango Drive, and Raylinsky Road, Ruhle Road & Miller Road
- Need pedestrian activated light at Chango Drive pedestrian crossing
- On Route 67, the mail boxes on the northeast side of the road requires resident owners to cross high speed road
- Route 67 has no shoulder for bicyclists or pedestrians
- Need of more sidewalks on Round Lake Road
- Need accessible (Americans with Disabilities Act) compliance
- Bus Route: Need connections between Malta-Ballston-Round Lake and Mechanicville-Stillwater-Round Lake



What are the safety concerns for pedestrians and bicyclists?

- Pedestrian safety at the roundabouts
- Need roundabout at Brookline Road/Route 67 and Brookline Road/Route 50
- Pedestrian safety concern at Eastline Road/Round Lake Road
- Pedestrian signs at roundabouts for vehicles to yield to pedestrians
- No sidewalks or bike lanes on Eastline Road & Round Lake Road and around the roundabouts. There is heavy bike traffic on both these roads.
- No shoulders on Route 67 and 9 for bikes
- Visibility to get on Route 67 between Knapp Road and Mechanicville
- On Route 67, the mail boxes on the northeast side of the road requires resident owners to cross high speed road

Community, Economic, and Environmental Elements

What do you see as the most pressing commercial or residential development issues for the County?

- Malta Ave is a truck route

Any other concerns related to community, environment, and quality of life?

- More park and ride locations at Exits 9, 10, 11, and 12
- Provision of shuttle for Global employees
- Economic growth comes with cost
- Benefits outweigh the impacts, balance is needed
- Mitigation does not eliminate the impact
- Need to add east/west corridors. Current east-west connections are at capacity
- Prefer crossing at a roundabout than the signal at Kendall Way/Route 9 as drivers are unaware of the pedestrians and their right-of-way
- Benefit of economic growth for long term residents in terms of taxes, water, and sewer is zero; there are only more problems with it
- Route 67 truck route issues
- Truck speeds at Round Lake
- No positive impacts from GlobalFoundries

What are the three most important factors for livability?

Intersection	Count
Safety	11
Complete pedestrian network	8
Slow travel speeds	5
Bike trails	3
Lower residential taxes	2
Increased local transit options	2
Local jobs	1
Short vehicle delays	1
Community beautification	1
ADA compliance/Accessibility	1
Multimodal alternatives to access schools, healthcare, jobs, etc.	1
Run off from Route 67 to Lake Road	1
Horse access	1
Connections to town parks	
Accessibility to local land uses	



Saratoga County Regional Traffic Study Public Information Meeting December 8, 2015 Summary

The second public information meeting for the Saratoga County Regional Traffic Study was held on Tuesday, December 8, 2015, at the Malta Community Center. The meeting was well attended by approximately 60 residents, stakeholders, and study advisory committee members. The meeting included a presentation by Don Adams, Mark Sargent, and Alanna Moran of Creighton Manning. The presentation outlined the study objective, concerns identified at the first public information meeting, study recommendations, and the next steps in the study process, and is included as Attachment A.

Meeting attendees had multiple opportunities to ask questions and provide comments during an open forum question/comment session. The input from this session resulted in the following overall comments and concerns:

- Speed enforcement through dynamic speed display signs is not adequate to enforce the posted speed limit on Route 67 east of Route 9
- The Route 50 corridor was not included in the study area. Why not?
- Increased traffic volumes and improved traffic flow on Route 67 result in fewer vehicle gaps which makes it harder for residents to enter and exit driveways and commercial sites such as the Curtis Industrial Park.
- There is potential cut-through traffic on neighborhood streets if roads such as Ruhle Road North and Ruhle Road South are connected.
- High speed and heavy truck traffic on Malta Avenue between Route 50 and Route 9.
- Lack of available funding among individual towns for a GEIS. All municipalities should work together to have a coordinated asset and land use management system. Maybe a regional GEIS through Saratoga County?
- Can the rapid flash beacons (RFBs) be installed at the Malta roundabouts as they are on the Round Lake Road corridor?
- Some support for Exit 11A to provide a direct route between I-87 and the Luther Forest Technology Campus to plan for growth of LFTC beyond the Aggressive Growth scenario.
- Continued need for another east-west connection between the Towns of Ballston and Malta.
- Availability and use of other modes of transportation (i.e. bus, pedestrian, bicycle)
- Difficulty selling property on Route 67 due to the high traffic volume therefore property values are decreasing.
- Mailbox access on high volume roads (specifically Route 67) continues to be a concern.



The meeting concluded with an invitation for meeting attendees to stay involved in the study through the study website (www.SaratogaRTS.com) and contact with the Study Advisory Committee members.

Attachment A Presentation

Saratoga County Regional Traffic Study
Saratoga County, New York



CEG
nationalgrid
CDTC
Empire State Development
FEDERAL FOUNDRIES
Saratoga County
Saratoga
Saratoga
Saratoga
Saratoga
Saratoga

Saratoga County Regional Traffic Study

Public Information Meeting
December 8, 2015



SARATOGA
REGIONAL TRAFFIC STUDY

Meeting Agenda

SaratogaRTS.com

- Study objective and overview
- Concerns identified at the first public meeting
- Study recommendations
- Next steps



SARATOGA
REGIONAL TRAFFIC STUDY

Study Objective

....identify the transportation mitigation measures and implementation steps needed to accommodate growth in Saratoga County specifically centered around Northway Exits 11 and 12.



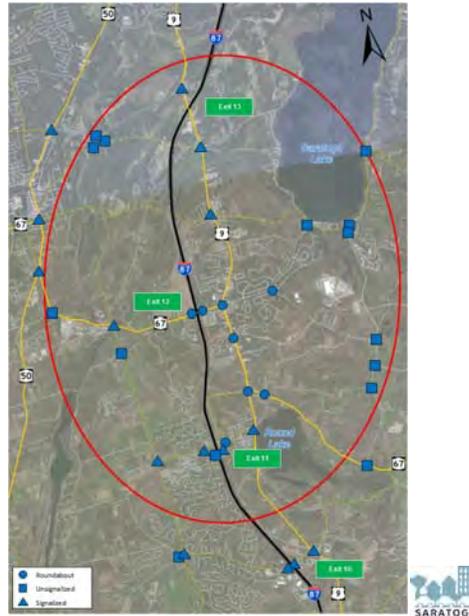
Overview

- ✓ Project kickoff – September 2014
- ✓ Public Meeting #1 – November 2014
- ✓ Obtain input from stakeholders, confirm findings from previous studies – Fall 2014
- ✓ Data collection – Fall 2014
- ✓ Traffic analysis and modeling – Winter 2015
- ✓ Identify and evaluate transportation mitigation measures – Spring/Summer 2015
- ✓ Draft report – Summer/Fall 2015
- Present findings to the public – Fall 2015
- Final report – December 2015/January 2016



Existing Conditions

- Collected data and projected traffic volumes to common base year for all 38 intersections.
- Built localized traffic models. Only 5 poorly operating intersections.



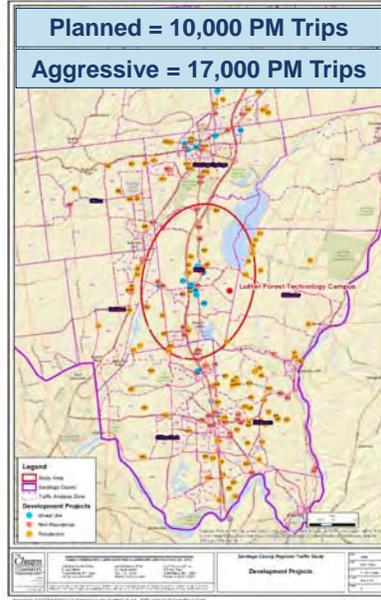
Public Concerns

- Bike and pedestrian safety at roundabouts
- Congestion near I-87 Exit 11 and Exit 12
- Increase in traffic on local roads
- Consideration of speed reduction due to high vehicular and truck traffic
- Exit 11A: a possible solution
- Mailbox location on Route 67
- Concerns at Route 9P/Lake Road/Cold Springs Road



Study Evaluations

- Traffic volume modeling
- Forecasting
 - Planned Growth
 - Aggressive Growth
- Analysis
 - Intersection capacity and level of service
 - Roadway capacity
- Identify acceptable operations and trade-offs.

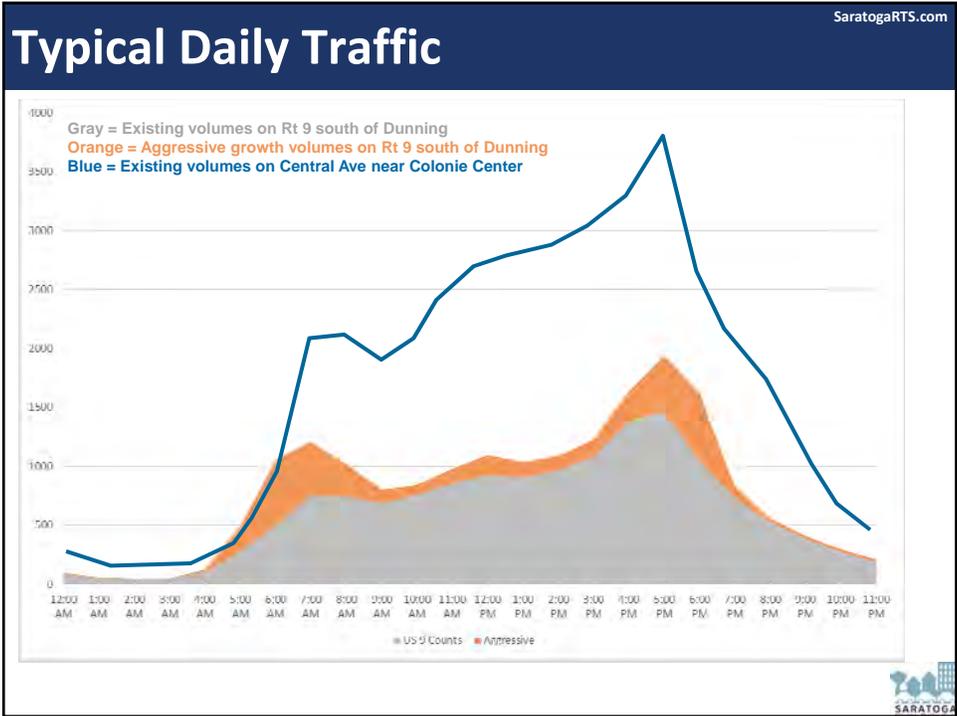


Study Evaluations

- Traffic volume modeling
- Forecasting
 - Planned Growth
 - Aggressive Growth
- Analysis
 - Intersection capacity and level of service
 - Roadway capacity
- Identify acceptable operations and trade-offs.

LOS	Overall	Lane Group
F	Mitigation Required	Mitigation Required
E	Mitigation Required	No Mitigation
D		
C		
B		
A		





The 4 E's

SaratogaRTS.com

Engineering
Educating
Enforcing
Encouraging

SARATOGA

Assessment and Mitigation

- Roadway network sufficiency
 - Regional interchange 11A
 - Local roadway capacity
 - Intersection capacity evaluations
- Travel demand management
 - Land use & management policies (municipal and employer level)
 - Transit, bicycle, and pedestrian
- Safety and education
- Freight impacts



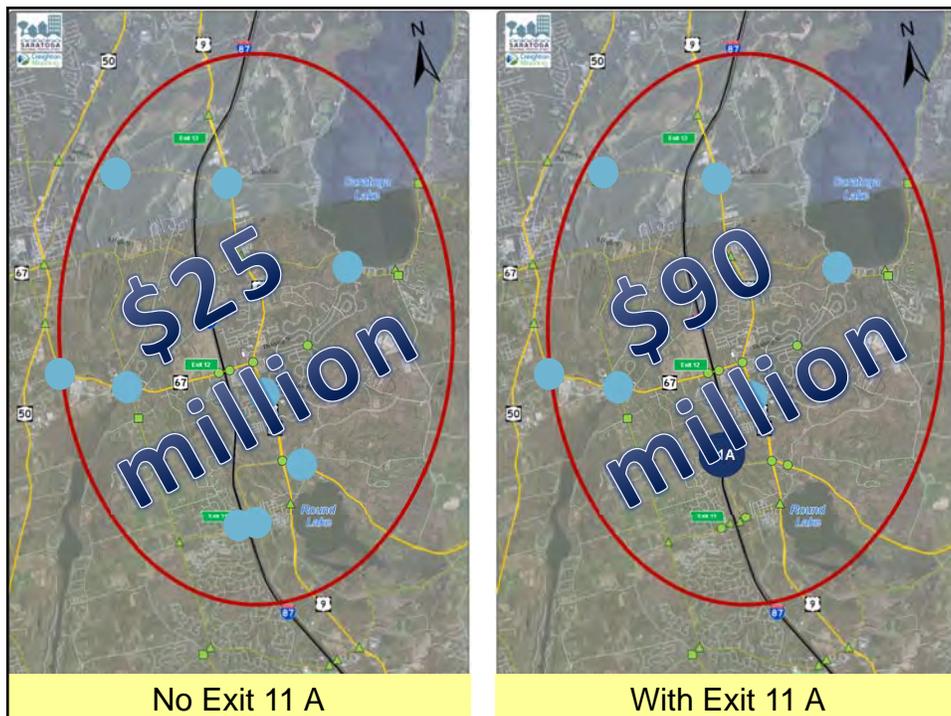
Assessment and Mitigation

- Roadway network sufficiency
 - Regional interchange 11A
 - Local roadway capacity
 - Intersection capacity evaluations



Studies Projections vs. Actual Volumes

- Traffic Distribution – more trips to the south than previously anticipated
- High percentage of local traffic – trips that do not need I-87
- Vehicle operations mitigated with isolated intersection capacity modifications
- Roundabout construction rather than traffic signal installation at some locations (Exit 12) provides greater intersection capacity
- Implementation of Traffic Demand Management



Existing Roadway at Exit 11 (looking west)



Additional Lane at Exit 11 (looking west)



Local Road Connections

- Preserve and enhance existing local connections
- Construct new local roadway connections



Intersection Capacity Modification



Assessment and Mitigation

- Roadway network sufficiency
 - Regional interchange 11A
 - Local roadway capacity
 - Intersection capacity evaluations
- Travel demand management
 - Land use & management policies (municipal and employer level)
 - Transit, bicycle, and pedestrian



Travel Demand Management

Transportation or Travel Demand Management (also called Mobility management) refers to various strategies that change travel behavior (how, when, and where people travel) in order to increase transportation system efficiency and achieve specific planning objectives. TDM is increasingly used to address a variety of problems.



Travel Demand Management

- Land Use & Management Policies
 - Municipal
 - » Land use policies
 - » Parking management
 - Employer
 - » Work schedules
 - » Incentives
- Encourage non-personal vehicle travel
 - Transit viability
 - Pedestrian and bicycle connections and accommodations

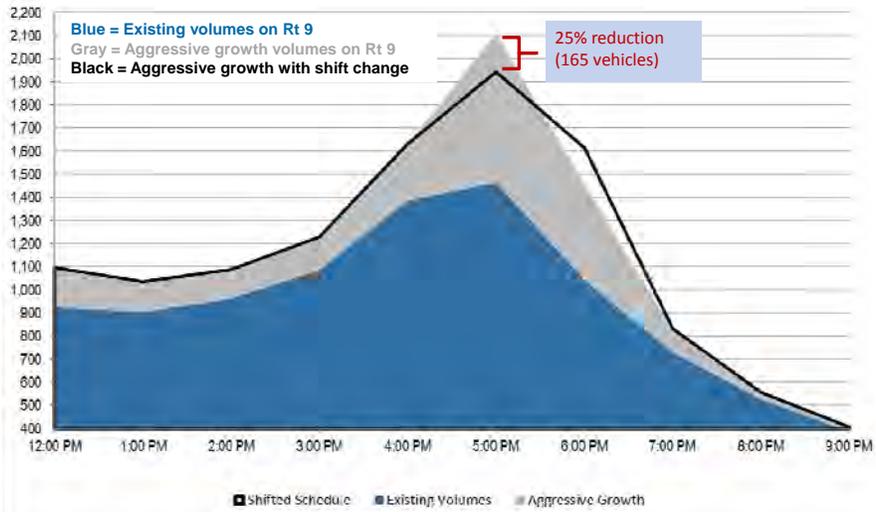


TDM – Employer Strategies

- Advertise and incentivize TDM strategies
 - Closer parking for carpoolers
 - Gym membership for transit users
 - Cafeteria voucher for bicyclists
- Modify work schedules
 - Flextime
 - Off-peak shift work
 - Telecommuting
- Car-sharing, vanpools, and carpools



Adjust Shift Change



TDM – Transit, Bicycle, & Pedestrian

- Expand Park & Ride facilities
- Improve bike/transit integration
- Use local shuttles
- Pursue key linkages for pedestrians and bicyclists
- Use complete streets guiding principles



Assessment and Mitigation

- Roadway network sufficiency
 - Regional interchange 11A
 - Local roadway capacity
 - Intersection capacity evaluations
- Travel demand management
 - Land use & management policies (municipal and employer level)
 - Transit, bicycle, and pedestrian
- **Safety and education**



Safety and Education

- Training and online resources on town websites, newspapers, social media, etc.
- Educational campaigns to facilitate proper understanding and use of the transportation system for all users



Chango Elementary Education Outreach

SaratogaRTS.com



Assessment and Mitigation

SaratogaRTS.com

- Roadway network sufficiency
 - Regional interchange 11A
 - Local roadway capacity
 - Intersection capacity evaluations
- Travel demand management
 - Land use & management policies (municipal and employer level)
 - Transit, bicycle, and pedestrian
- Safety and education
- Freight impacts



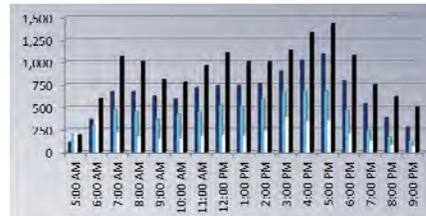
Freight Impacts

- Provide speed enforcement to reduce travel speeds of truck traffic
- Coordinate with the postal service to evaluate relocation of mailboxes on NY Route 67
- Direct trucks destined to the north to use I-87 via Exit 11 instead of major arterials
- Widen shoulders along NY Route 67
- Implement recommendations from *Regional Freight and Goods Movement Study*



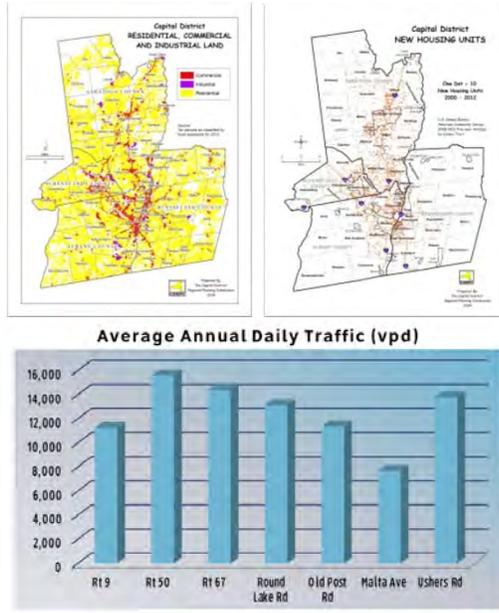
Implementation

- Develop Implementation task force for:
 - Growth monitoring
 - Pursuing funding opportunities
 - Advocating for and tracking multi-modal improvements
 - Encouraging education opportunities and disseminating materials



Implementation – Monitor

- Growth monitoring through building permits and traffic volumes
 - CDRPC building permit data
 - Automatic traffic recorder data
 - Track data and compare to threshold tables in the study



Implementation – Pursue

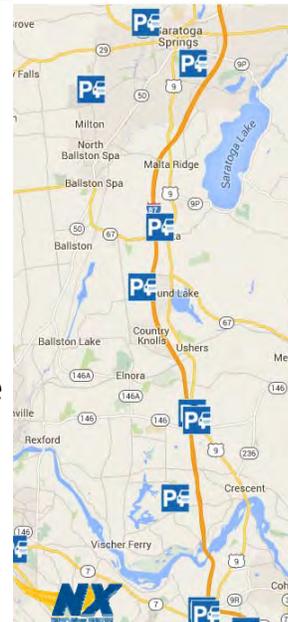
- Pursue funding opportunities
 - Traditional funding opportunities
 - Advocate for unfunded project for 3-lane section on NY Route 67
 - Highway Safety Improvement Projects (HSIP)
 - GEIS – public/ private partnership



Implementation – Multi-modal

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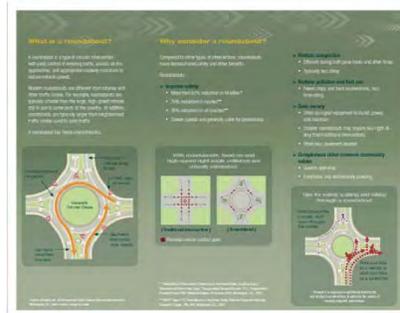
- Transit, Pedestrians, Bicyclists
 - Work with CDTA to locate a park and ride lot near exit 12 to spur further transit growth
 - Prioritize filling in gaps in the pedestrian network in the study area
 - Prioritize filling in gaps in the bicycle network in the study area
 - Follow the United States Post Office procedure to accommodate mailboxes on NY Route 67



Implementation – Educate

SaratogaRTS.com

- Encourage education of all transportation users
 - Make education a priority
 - Provide safety materials
 - Implement safety education in schools
 - Educate municipal boards
 - Compile online resources



Next Steps

- ✓ Project kickoff – September 2014
- ✓ Public Meeting #1 – November 2014
- ✓ Obtain input from stakeholders, confirm findings from previous studies – Fall 2014
- ✓ Data collection – Fall 2014
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Questions







Saratoga County Regional Traffic Study Stakeholder Interviews November 5, 2014 Summary

The Saratoga County Regional Traffic Study project team held interviews with key stakeholders on Thursday, December 4, 2014, at the Malta Town Hall. Invitations were sent to a total of ___ stakeholders that included local municipalities, county and regional agencies, economic development interests, private business interests, and neighborhood coalitions. The interview invitation included a link to an online survey to be completed prior to the interview (see questions below).

Interview participants (see Attachment A for a complete list) were guided through the survey questionnaire to provide an opportunity to discuss and expand upon any written answers supplied. The interviews were conversational in nature and supplemented the written responses. Interviews were held both with individual stakeholders and with small groups of stakeholders who share similar areas of expertise.

Common Overall Themes:

- Residential growth is occurring at the regional level but not necessarily uniformly throughout the county.
- The transportation system is currently adequate but there are potential challenges to the system in the form of residential and commercial growth in the region.
- East/west connections in the County are particularly strained as there are not many of them and they experience high volumes of truck traffic.
- There is a general desire for more non-auto modal choices but there is little incentive for drivers to use other modes, especially since land development patterns reinforce auto use.

Response to Questions:

1. What is your organization's mission and what is the relevance to this project?

Interviews were held with a diverse range of stakeholders that included private business interests as well as local municipalities. Though the central mission of these organizations varies widely, common themes emerged suggesting that many of these diverse players have similar interests. Namely, that Saratoga County is a fast growing county, though that growth is not uniform. The county is home to older established communities as well as extremely fast growing areas. While traffic congestion is not a significant problem today, there is consensus that as the County grows, congestion could become more problematic without intervention. The primary concerns are the regional growth and how that growth impacts the quality of life and traveling conditions.

Growth in the County could also impact road safety as the number of growing conflict could lead to an increase in crash rates. Many of those interviewed expressed some concern about road safety with regard to the increased volumes of truck and auto traffic.

2. How would you describe the current state of the transportation system in Saratoga County?

Interviewees expressed general consensus that current state of the transportation system in Saratoga County is adequate with a few caveats or exceptions:

- East/west routes are a concern. There are not enough east/west connections. Those that exist can get congested and/or impact local residents, as once low-volume roads are now experiencing greater volumes, some of which are heavy vehicles and trucks.
- Continuation of current growth trends could threaten the adequacy of the system.
- The current system promotes auto-dependency.

3. What are the greatest transportation needs for Saratoga County?

Interviewees reiterated the need for more or better east/west connections, and provided input on a wide range of transportation needs including:

- Goods delivery issues for the entire county including the east/west routes.
- The need for wayfinding for drivers, cyclists, and pedestrians.
- There is relative shortage of CDL drivers.
- There is a need for a coordinated land use and transportation planning that can capitalize on reverse-commute activity to balance traffic loads.
- Safety is an important issue.

4. Where/when is congestion a problem?

Congested roads and intersections seem to be well understood by stakeholders. Interviewees consistently raised similar congested locations and times:

- Route 67, west of 87
- Route 9
- Route 146
- Route 50
- All east/west connections
- Rush hours are primarily when congestion occurs.
- Route 9 and 87 will continue to be congested, regardless of mitigation.
- As the western parts of Saratoga County build out (e.g., Galway, Milton, etc.), Route 29 and Route 67 will become more congested.
- Commuters will use Farm to Market Road at Route 9 as an alternative route to avoid congestion.

5. What are your most significant safety issues?

Safety concerns emerged in two primary areas - infrastructure and behavior:

- Old country roads have become more heavily traveled routes and often that traffic travels at high speeds.
- Walkability is a concern in light of the auto dependence of the area and increased traffic.
- Distracted driving is a serious issue.
- The aging of the population presents safety concerns as seniors continue to drive beyond their

abilities.

- Aggressive driving.
- Vehicle-pedestrian conflicts.
- Stacking at the traffic lights.
- Growth in truck traffic with the intermodal facility. There should be more public education regarding yielding to pedestrians.
- The study should look at crash statistics. There has likely been an increase in rates.

6. What multimodal (bus, bike, and walk) improvements are most needed?

With regard to bus, bicycle and pedestrian improvements, there was consensus that there should be improvements in each of these areas but that due to the existing land use patterns, availability of parking, and other factors, it is unlikely that there will be any significant mode shift in the near to mid-term.

- There is a density component that must be met for transit: Need 7 dwelling units per acre for viable bus transit.
- The river towns are hoping for additional transit routes.
- Start commuter buses going into the Tech campus.
- There is a generally negative association with bus transit – people do not want to use it.
- Use vans between various destinations. It has to be “origin to destination” use rather than a standard route.
- Get companies to subsidize shuttles. Think outside of the box in terms of public transportation.
- Bike/trail network connections are highly important. Small connections could help to build a usable network. The lack of connectivity is one reason that trails are primarily recreational.
- Specific corridors and routes that would benefit from cycling improvements:
 - Connect the Zim Smith north to Saratoga
 - Brownell Road to the 63/9P loop around Saratoga Lake and to Stillwater
 - Ruhle Road to the Zim Smith
 - Eastline Road
- Just like we have a lot of through-traffic, we also get through-cyclists. Make sure cyclists are considered with all roadway improvements.
- 4-foot dedicated shoulders would be a start to accommodating all users.
- It is the responsibility of each community to promote more pedestrian travel movements and a healthier lifestyle.
- Need to educate cyclists and drivers.
- Protect the walkable features of the downtowns while maintaining access to the region.
- There are options for smaller projects such as smart signals that could help to accommodate pedestrians and bicyclists. Many of the signals will require full upgrade in order to accomplish this.

7. What do you see as the most pressing freight issues for the county?

Much of the conversation related to freight focused on the impacts of increased truck traffic in the county and the interaction between truck and increased residential traffic. It was also noted that the County’s opportunities for increased rail and barge freight could potentially attract more businesses to the area.

- Increased numbers of trucks and personal autos are using the same roads. Truck traffic generally uses Upper Newtown Road. More inquiries on the vacant and semi-vacant sites on the Route 4 corridor.
- Specific locations were identified for freight issues:
 - Malta Ave is not a designated truck route but it is used by trucks because of the 55 mph speed limit. The road is not designed for this level of traffic.
 - Route 67 is heavily traveled by trucks serving the Intermodal terminal.
- Road noise travels.
- People in Stillwater are hearing noise from the intermodal terminal all the time.
- The Luther Forest Tech Campus does not contribute significantly to regional truck traffic.
- Truck traffic through downtown is a nuisance.
- The length of freight trains becomes a problem because they block the at-grade crossings for long periods.
- The safety of shipments as they travel through the freight network is key.

8. Can you identify any issues related to the supply/pricing of parking?

While many of the interviewees recognized the importance of parking, few identified pressing issues relate to parking. There was consensus that free parking is important to businesses in the County. Generally, interviewees felt that parking in the county is adequate.

- The Clifton Park Downtown Study may recommend a reduction in parking in that area.
- The Park & Ride lots are busy. More small Park & Ride facilities could work.
- Saratoga Springs has limited parking in the city center. When it opens, the parking garage there will be the City's first paid public parking.
- Saratoga Springs does not require projects to provide parking in the downtown area.
- The Exit 9 town center plan with the proposed density creates a parking problem. A grid like system with form-based code could limit the surface parking available right in front of the building.

9. What trends do you anticipate will have the greatest impact on the County's transportation system?

While various municipalities differ in the amount of development and growth they are experiencing, the regional growth fueled by the development at the Luther Forest Tech Campus (LFTC) and residential development in several areas of the county affect all users of the transportation system.

- Population growth in southern Saratoga County (Halfmoon, Clifton Park, etc.).
- More manufacturing companies means more trucks on the roads and greater delay on the roads.
- The 2000 employees traveling to the LFTC are expected to drive their own cars. Ipool is encouraged, promoted, but it's not incentive based.
- If LFTC develops as stated, the county will need to have the infrastructure to handle the growth associated with wealth development and residential growth.
- Global Foundries does not have the population to make transit work yet.
- Global Foundries is shuttling people from the TechSmart parking lot. Shared parking spaces are

working well on the STEP campus.

- The transplant populations may be more accepting of transit and modes other than private autos.
- Grappling with commuters going north and south.
- The municipal boards are currently trying to be more responsive to residents.

10. Are you aware of any development plans or land use changes that could have transportation impacts?

All interviewees agreed to share any development plans relevant to the study. Several participants also discussed tracts that are likely to develop in a reasonable timeframe.

- Route 9 between Exits 9 and 10 has a lot of space for warehousing and distribution.
- The commercial corridor on Route 146 from Mechanicville to Route 9 will be developed.
- There is a potential rezoning on the east side of Ushers Road to allow residential and to focus the commercial growth elsewhere.
- Liebech Lane = 600,000sf.
- Crestmore at Halfmoon on Route 146.
- Route 146, west of Clifton Park.

11. What, if any demographic changes do you anticipate for the county?

There were several significant demographic changes that were consistently raised as measureable trends:

- There is an influx of residents from out of state/country.
- Aging of the population (especially in Clifton Park, not as much in Halfmoon).
- People want to age in place to transition from large, single-family homes to apartments with less space to maintain.
- Lots of shuttles needed to serve the older users.
- The region has become more successful at being able to keep their college graduates in the area. There are some downtown settings that will attract people.
- The rural areas will start to develop more (e.g., Charlton, Milton, etc.) which will further strain the Route 29 and Route 67 corridors.
- Young couples are the target for some of the builders in the area.
- Downsizing is the general trend.
- Extended stay hotels are trending right now. High demand for those uses right now. These people aren't residents but are part of the transportation problem because they contribute to congestion.
- There are a lot more complaints from senior drivers about lighting. Bad night vision.
- Seniors are definitely downsizing.

12. Would you be willing to tolerate more travel delay in the study area in return for more jobs (economic development)? If so, how much more delay?

There was general consensus around the idea that traffic congestion currently is not too bad. Some additional delay will be tolerated so long as it is not significant and especially if it is accompanied by

high-quality jobs. There was also discussion of methods for preventing or mitigating additional delay.

- An additional 5, 10, or 15 minutes on the commute is tolerable, but longer delays will be a problem for people.
- Delays in getting products shipped are a bigger issue.
- The County does not need more retail space. Economic development that involves high paying jobs is desired.
- Smaller, targeted projects are a way to address some of the growth concerns.
- Try to get development fees from developers. However, it should be collected at time of subdivision approval to have the greatest impact.
- We should have a GEIS for whole towns.
- A little congestion shows you're a vibrant community; congestion is not a bad thing.
- Having a regional Capital Improvement Plan would be a good way to address regional needs. A tangible and/or cumulative benefit assessment could help offset impacts.

13. What transportation system improvements do you believe will have the greatest economic benefit?

Interviewees provided a wide range of improvement strategies to promote economic benefit. One common theme that ran throughout was the need to address the growth strategies on a regional level rather than as disparate municipalities.

- We need to do something with the BIG goods: Rail and barges would provide something special and unique for businesses in the area. If goods and people arrive on time then this area of upstate NY is special.
- What are the options besides widening 87 and 9?
- If you want to bring development in you have to provide water and sewer.
- How do we grow the higher paying jobs? What kind of investment will bring them in? - Global Foundries has their own access into the park. Maybe we should continue to focus in the park since the infrastructure is there.
- A Regional Capital Improvement Plan that addresses a regional level is needed. County board should keep tally of what is impacting the county roads.
- CIP at a "sub" level to determine the more regional (but not regional) impacts and needs. Not fair to the last guy coming in that the answer is "no" since it's a contribution from all, not just one.
- Technology is going to play a role. Ramp metering and other transportation technologies should be utilized.
- TDM and access management. New capacity is not the answer. Local government responsibility.

Attachment A Stakeholders

Saratoga County Regional Traffic Study
Saratoga County, New York

Saratoga County Regional Traffic Study Stakeholder List

- Capital District Regional Planning Commission (CDRPC)
- Capital District Transportation Authority (CDTA)
- Capital Region Economic Development Council (CREDC)
- City of Mechanicville
- Federal Highway Administration (FHWA)
- Luther Forest Technology Campus Economic Development Corporation (LFTC EDC)
- Malta Community Relations Board (Global Foundries/Malta Foundation)
- Mechanicville Intermodal and Automotive Handling Facility
- National Grid
- New York State Department of Environmental Conservation (NYSDEC)
- New York State Electric and Gas (NYSEG)
- New York State Energy Research and Development Authority (NYSERDA)
- Saratoga Convention and Tourism Bureau
- Saratoga County Prosperity Partnership
- Saratoga Economic Development Corporation (SEDC)
- Saratoga Framework for Success
- Saratoga PLAN
- The Chamber of Southern Saratoga County
- The Saratoga County Chamber
- Town of Ballston
- Town of Clifton Park
- Town of Halfmoon
- Town of Milton
- Village of Stillwater



Saratoga County Regional Traffic Study DRAFT Report/PM#2 Comments

Project: Saratoga County Regional Traffic Study	
Date: December 29, 2015	Reviewer:

Action Code	A Comply	B Evaluate	C Delete Comment	D No Action Required
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Comment #	Source	Comment	Review Action	Response
1	Resident (CT)	Build Exit 11A	D	Analysis shows it's not needed.
2	Resident (KS)	<ul style="list-style-type: none"> - No benefits resulting from growth of LFTC - extra lanes, wider shoulders, more roundabouts are not desirable - enforce existing speed or lower speeds in residential areas 	<ul style="list-style-type: none"> - D - D - D 	<ul style="list-style-type: none"> - - Speed enforcement is a recommendation in the report
3	Resident (DM)	<ul style="list-style-type: none"> - Need better public transportation system - interested to hear more about Complete Streets meetings in Saratoga Springs 	<ul style="list-style-type: none"> - D - D 	<ul style="list-style-type: none"> - There are recommendations for transit improvements in the study -
4	Resident (KS)	<ul style="list-style-type: none"> - Growth here has "zero" benefit - Negative traffic - Solutions put forth are still negative impact - Stop the growth or slow it down - Hasn't helped with taxes 	<ul style="list-style-type: none"> - D - D - D - D - D 	<ul style="list-style-type: none"> - - - - -

Action	A	B	C	D
Code	Comply	Evaluate	Delete Comment	No Action Required

Comment #	Source	Comment	Review Action	Response
5	Resident (CM)	<ul style="list-style-type: none"> - Regional Freight Study calls for redesign of 3 roundabouts to make them safer for trucks - TIS for intermodal study showed LOS D/F for Rt 9/Dunning roundabout. No mitigation recommended. - Need to create appropriate truck routes so trucks aren't in downtown Malta - Redesign the Rt 9/Rt 67/Round Lake Bypass to include a Rt 67 flyover and build a direct northbound entrance to the Northway at the 90-degree turn on the Round Lake Bypass - Preserve option to construct Exit 11A - Designate Luther Forest Blvd as the main entrance to LFTC - Rt 9P is substandard in width and condition and not appropriate for the amount of traffic on it. - Towns need to support our quality of life. 	<ul style="list-style-type: none"> - D 	<ul style="list-style-type: none"> - The study actually recommends evaluating the design. However, these were designed by NYSDOT to accommodate trucks and appear to accommodate the appropriate design vehicle - - The study includes recommendations for truck routing - The study shows that this isn't needed - - Recent completion of the Luther Forest Boulevard Extension (on campus) makes Luther Forest Boulevard a direct route from the south to GLOBALFOUNDRIES access points. - The capacity evaluation shows that Rt 9P can accommodate the existing and future traffic - Will discuss further with SAC
6	C.T. Male Associates (Town of Ballston)	Page 2-10: Table 2.3 "Existing Levels of Service Summary" does not provide information on all of the intersections mentioned in Table 2.1 "Study Area Intersections." For example, intersections #10 (Route 67/Brookline Road) and #38 (Eastline Road/Lake Road) are missing from Table 2.3.	D	The text prior to Table 2.3 explains that Table 2.3 only includes overall LOS which doesn't include two-way or one-way stop controlled intersections.
7	C.T. Male Associates (Town of Ballston)	Page 3-7 and 3-8: The chart at the bottom of page 3-7 implies that projects with a level of service of E or F require mitigation. There are several intersections shown on Table 3.5 in which the level of service drops to E or F and no mitigation is discussed in the report. One of these intersections (which is within the Town of Ballston) is #38 (Eastline Road/Lake Road) in which the LOS drops to E during the PM aggressive peak hour scenario. This is particularly concerning to the Town of Ballston since there are few east-west roadways through the Town, due to the presence of Ballston Lake. Lake Road is used as a major "cut through" between Route 50 and Route 67/I-87/Route 9 by taking Eastline Road to Lake Road to Outlet Road. It is recommended that the report discuss this intersection, as well as other intersections that drop to LOS E, and are not discussed further. If the study is not going to recommend improvements at these intersections, technical reasons for this intersection being left out of the study's improvement section shall be provided.	D	These intersections are two-way stop controlled at LOS E.

Action	A	B	C	D
Code	Comply	Evaluate	Delete Comment	No Action Required

Comment #	Source	Comment	Review Action	Response
8	C.T. Male Associates (Town of Ballston)	Page 3-8: Do the results of Table 3.5 take into account the approved (but not constructed) Walmart project within the Town of Ballston (at Route 50/67) and the associated improvements to Route 50/67 that were required by the Town Planning Board as a condition of approval? This comment would apply particularly to intersections #8 and #9.	D	Yes.
9	C.T. Male Associates (Town of Ballston)	Section 4 recommends improvements to Intersection #10 (Route 67/Brookline Road) that include construction of a left turn lane eastbound and a traffic signal. The Town agrees that mitigation is needed at this intersection. The question on this intersection is related to the level of service (LOS) noted in Table 3.5. The LOS is at E and F during the AM peaks (planned vs. aggressive). It is understood that the LOS provided in the tables is the overall LOS for all approaches on the intersection, but this intersection is known to have significant backups westbound during the PM peak hour. Table 3.5 infers that the intersection operates well during the PM peak hour (LOS B under both scenarios), which is not consistent with known conditions.	D	Delay refers to the controlled approach and during the PM peak hour there are very few vehicles turning from Brookline Rd onto Rt 67. During the AM peak hour when there are more vehicles turning from Brookline Rd then the delay increases.
10	C.T. Male Associates (Town of Ballston)	As noted in comment #4, the report tables provide information on the overall LOS for the intersections. Would it be possible to provide, in the report appendices, LOS values for each approach? The would allow the Town Planning Board to use the results of the study to compare it with projects coming before the Planning Board that may add trips to the studied intersections. In many cases, the Planning Board may focus on specific legs or approaches to an intersections versus the overall operation of the intersection.	A	
11	C.T. Male Associates (Town of Ballston)	Page 5-1: <i>"Intersection modifications identified to accommodate the Planned scenario will likely be needed in the short-term. The Aggressive growth intersection modifications will be needed in the longer term... Those intersections identified for intersection capacity modifications in the Aggressive Growth scenario should be monitored annually starting in the spring of 2021 when school is in session."</i> Who will be responsible for monitoring the Aggressive Growth scenario intersections?	D	The task force led by CDTC and the Towns

Action	A	B	C	D
Code	Comply	Evaluate	Delete Comment	No Action Required

Comment #	Source	Comment	Review Action	Response
12	C.T. Male Associates (Town of Ballston)	<p>Table 5.1: The bottom of Page 5-1 reads "<i>To determine the appropriate timeframe for design and construction, roadway traffic volume thresholds have been identified as illustrated below in Table 5.1. Automatic traffic recorders should be placed on the roadways identified in the table to monitor traffic volumes for construction of intersection mitigation... As traffic volumes on the roadway approach the traffic volume threshold, intersection design and construction should be implemented</i>" Table 5.1 provides for the existing, planned and aggressive traffic volumes, then compares it with the traffic volume threshold at which design and construction of the improvements should be performed. For the two intersections within the Town of Ballston, intersections #10 and #11 (Route 67/Brookline Road and Route 67/Eastline Road), the traffic volume thresholds are very close to the existing traffic volumes. For intersection #10, the existing traffic is 1,490 and the threshold is 1,500. Based upon Table 5.1 both intersections would need to be upgraded very soon, likely in a year or two based upon average annual traffic growth. This is not consistent with the rest of the study that indicates that these two intersections will need to be upgraded under aggressive growth scenarios and that monitoring of the intersections won't be needed until 2021.</p>	B	The traffic volume and growth thresholds are being reviewed, however, the reality is that some of these locations are currently close to the point of requiring mitigation.

Action	A	B	C	D
Code	Comply	Evaluate	Delete Comment	No Action Required

Comment #	Source	Comment	Review Action	Response
13	C.T. Male Associates (Town of Ballston)	Section D should better explain the changes of getting funding to perform capacity upgrades at the intersections. It is understood that capacity improvements are not considered priority when compared with improvements that are needed due to deteriorating infrastructure. At the meeting on December 8th, it was implied that it was "unlikely" that federal or state funds could be allocated for these improvements. For the intersections within the Town of Ballston, it was noted in the 2006 "Route 67 Corridor Study" that both Route 67 at Eastline Road and Brookline Road would need to be upgraded. In the 10 years since that study was published, growth has continued in the area and no upgrades have been proposed. The Town of Ballston has seen many largerscale developments, but none have been large enough to (on their own) require these two intersections to be upgraded. In addition, Route 67 is a major east/west corridor, such that traffic from other towns in the area impacts the intersections within the Town of Ballston.	A	The implementation process is being progressed to a higher level of detail and text will be updated to include.
14	C.T. Male Associates (Town of Ballston)	Page 5-7: The Town of Ballston is aware that a Generic Environmental Impact Statement is a tool that a town can use to facilitate private/public cost sharing for implementation of transportation improvements. At the December 8th meeting, the possibility of a Regional GEIS was discussed. It is recommended that this option be discussed within the report. As noted in comment #8, a significant portion of the traffic on Route 67 in the Town of Ballston is attributed to trips not generated by specific projects within the Town of Ballston. A regional solution to the traffic problems on Route 67 may be a better answer than trying to resolve it at the local level.	A	The implementation process is being progressed to a higher level of detail and text will be updated to include.
15	CDTA	Page 2-6, add Exit 11	A	
16	CDTA	Page 2-6, Route 50 is a neighborhood route not a trunk route	A	Coordination with CDTA has been completed and report will be revised to reflect.
17	CDTA	Page 2-6, Route 875 is a seasonal route not a neighborhood route	A	Coordination with CDTA has been completed and report will be revised to reflect.
18	CDTA	Page 2-7, update map to reflect corrected route classifications	A	Coordination with CDTA has been completed and report will be revised to reflect.
19	CDTA	Page 4-10, under "improves transport options" add vanpools and new park & ride facilities	A	
20	CDTA	Page 4-10, under "incentives" add universal access contracts	A	

Action	A	B	C	D
Code	Comply	Evaluate	Delete Comment	No Action Required

Comment #	Source	Comment	Review Action	Response
21	CDTA	Page 4-10, vanpool is subsidized to whichever is LOWER not higher	A	
22	CDTA	Page 4-12, consider removing reference to route 409 since the service was operated before GLOBALFOUNDRIES was in existence. It was also operated at very low levels of service due to funding constraints making it difficult to compete as a travel mode. It's not a good barometer for the viability of transit to the campus.	B	
23	CDTA	Page 4-13, Saratoga route restructuring paragraph; public meetings have been held, the plan is being revised to reflect input, still on schedule for 2016 rollout.	A	
24	CDTA	Page 4-14, sidewalk network should provide connections to/from transit stops	A	Additional text was added to report
25	CDTA	Page 5-3, consider "encourage major employers to pursue Universal Access partnerships with CDTA, particularly as an alternative to building parking"	A	Additional text was added to report
26	GLOBAL	The title - Saratoga County Regional Traffic Study does not reflect, in my view, the study area and it may create the false impression to the cover reader (which may not be our audience or concern) that the study area was all of Saratoga County which of course it was not. Might we consider "Central Saratoga County" or another title to the report that more accurately defines the study area?	B	This has been the name of the study since the RFP phase. There has been additional text added to the report and the executive summary to clarify study area.
27	GLOBAL	Please correct on Page 1-1 the spelling of GLOBALFOUNDRIES - it is NOT Global Foundries	A	
28	GLOBAL	Figures 5 & 6 do not identify a number of roundabouts within LFTC nor does it reflect the recent improvements and traffic mitigation measures on Round Lake Road which includes roundabouts - my sense that the residents of that particular neighborhood may be the only members of the public even interested in this study and if they are in attendance, they will attack the reliability of the report and credibility of our conclusions by pointing those omissions out - publicly.	A	The report figures have been updated to show the existing roadway network within LFTC.

Action	A	B	C	D
Code	Comply	Evaluate	Delete Comment	No Action Required

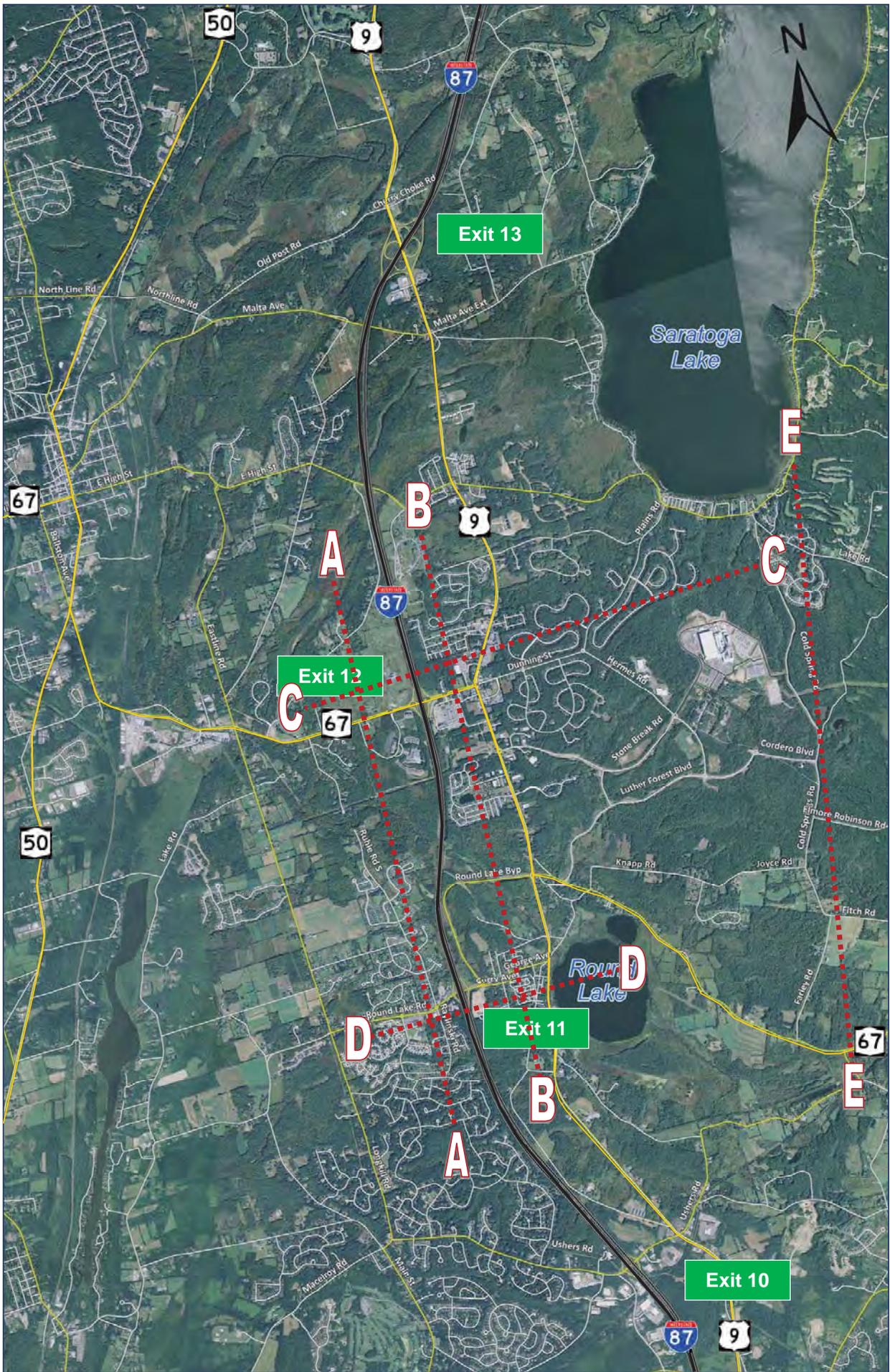
Comment #	Source	Comment	Review Action	Response
29	GLOBAL	I also notice that no data (planning or building permits) were collected from the City of Mechanicville - did they not cooperate with the data collection process or did we not ask? It seems that with the inter-modal a big part of our observations/conclusions and expressed concern by members of the public at meeting #1, that data would be helpful, no?	B	We will confirm the situation with the City of Mechanicville and document. The intermodal facility projections/growth were evaluated and included in this study, and appear to be consistent with what was previously approved.
30	Malta	Did you evaluate a north spur to the Northway – an “on-ramp only?” This could be located as a single lane northbound spur off the RL bypass. Right now, trucks headed for Montreal have to go down through Exit 11 or go up route 9 through our “downtown.” It seems to me that a leg of the RL by-pass could be used and a short spurt to get on the Northway north would be cost effective, certainly less than cost for a full blown Exit 11A.	B	We looked at this option using methodologies similar to how we approached the Exit 11A screening. Based on the screening it is our opinion that an “on-ramp only” option is not justified or cost effective for the following reasons: <ul style="list-style-type: none"> - The current highway system with a few minor improvements can accommodate the traffic. - The construction costs and the environmental costs would still be substantial - The FHWA strongly discourages partial interchanges as documented in the FHWA Interstate System Access Information Guide, August 2010. - Working with large truck traffic generators to divert northbound trucks to Exit 11 is much less costly, without this direction only a few trucks are using the current designated truck route. The Saratoga Traffic Study Team is scheduling meetings with three of the bigger traffic generators (users of the intermodal facility) to recommend use of designated truck routes and discouraging the use of Exit 12. Past experience with this approach has been successful. A white paper was completed describing the approach and justification with the large truck generators.

Appendix E

Roadway Capacity Evaluation



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Screen line A – E/W West of Northway near Exit 12

Location	Existing	Aggressive	% Change
Route 67	1715	1954	+18%
Round Lake Road	1440	1778	
Total	3155	3732	

Screen line B – E/W West of Route 9

Location	Existing	Aggressive	% Change
Route 67	1835	1930	+52%
Stonebreak Road	0	521	
Round Lake Bypass	692	1380	
Total	2527	3831	

Screen line C – N/S North of Route 67/Dunning

Location	Existing	Aggressive	% Change
Route 9	1785	2499	+26%
Northway Exit 12 ramps	1265	1285	
Plains Rd	615	1051	
Cold Springs Rd	362	225	
Total	4027	5060	

Screen line D – N/S South of Exit 11

Location	Existing	Aggressive	% Change
Route 9 at George Ave	1065	1606	+50%
Northway Exit 11 ramps	965	1402	
Route 67	530	760	
Farley Rd	80	202	
Total	2640	3970	

Screen line A – E/W West of Northway near Exit 12

PM Peak

Location		Existing	Planned	Aggressive	Capacity
Route 67	EB	880	945	982	2500
#12	WB	835	920	972	2500
	Total	1715	1865	1954	5000
Round Lake Road	EB	625	733	767	1000
#21	WB	815	950	1011	1000
	Total	1440	1683	1778	2000
Grand Total		3155	3548	3732	7000
total			112%	118%	188%
Annual			1.011808736	1.016937417	1.064917

Screen line B – E/W West of Route 9

Location		Existing	Planned	Aggressive	Capacity
Route 67	EB	1025	1081	1059	5000
#14	WB	810	773	871	2500
	Total	1835	1854	1930	7500
Stonebreak	EB	0	63	216	625
#16	WB	0	168	305	625
	Total	0	231	521	1250
Round Lake Bypass	EB	237	440	551	1000
#17	WB	455	529	829	1000
	Total	692	969	1380	2000
Grand Total		2527	3054	3831	10750
total			121%	152%	281%
Annual			1.019122474	1.042487103	1.108689

Screen line C – N/S North of Route 67/Dunning

Location		Existing	Planned	Aggressive	Capacity
Route 9	NB	1085	1307	1405	5000
#14	SB	700	973	1094	5000
	Total	1785	2280	2499	10000
Northway exit 12 ramps	NB	925	894	875	1600
#12, 13	SB	340	385	410	1600
	Total	1265	1279	1285	3200
Plains Rd	NB	405	666	800	1000
#15	SB	210	277	251	1000
	Total	615	943	1051	2000
Cold Springs Rd #33	NB	320	123	182	625
	SB	42	43	43	625
	Total	362	166	225	1250
Grand Total		4027	4668	5060	16450
total			116%	126%	325%
Annual			1.014880532	1.023097183	1.125127

Screen line D – N/S South of Exit 11

Location		Existing	Planned	Aggressive	Capacity
Route 9 at George Ave	NB	425	717	743	5600
#24	SB	640	694	863	5600
	Total	1065	1411	1606	11200
Northway exit 11 ramps	NB	475	618	706	1600
#21,22	SB	490	554	696	1600
	Total	965	1172	1402	3200
Grand Total		2030	2583	3008	14400
total			127%	148%	479%
Annual			1.024384119	1.040107384	1.169522

Screen line E – E/W East of Cold Springs

Location		Existing	Planned	Aggressive	Capacity (LOS D)
Route 9P	EB	250	239	316	1000
#32	WB	70	102	112	1000
	Total	320	341	428	2000
Lake Rd	EB	260	353	401	1000
#33	WB	117	208	195	1000
	Total	377	561	596	2000
Elmore Robinson Rd	EB	5	18	52	625
#35	WB	5	12	18	625
	Total	10	30	70	1250
Route 67	EB	300	411	370	1000
#37	WB	240	329	338	1000
	Total	540	740	708	2000
Grand Total		1247	1672	1802	7250
total			134%	145%	402%
Annual			1.029762285	1.037501739	1.149366

Note: Round Lake Bypass is categorized as local road but for capacity was calculated as single lane collector roadway.

No.	Intersection	Approach	Travel Direction	Increase in AM	Increase in PM	Functional Classification of Roadways	Approach Total per Direction AM	Approach Total per Direction PM	Roadway Threshold for LOS D capacity	Above LOS D Threshold	Roadway Threshold for LOS E capacity	Above LOS E Threshold
1	Rt 50/Balston Ave/Northline Rd	EB	WB		102	Minor Arterial		782	1000	N	1300	N
		WB	EB		133	Minor Arterial		818	1000	N	1300	N
2	Old Post Rd/Northline Rd	EB	WB		132	Minor Arterial		872	1000	N	1300	N
		WB	EB		104	Minor Arterial		529	1000	N	1300	N
4	Northline Rd/ Malta Ave	SB	NB		104	Minor Arterial		529	1000	N	1300	N
		WB	EB		137	Major Collector		707	1000	N	1300	N
		WB	WB	134		Major Collector	464		1000	N	1300	N
5	Rt 9/Cherry Choke Rd/Old Post Rd	SB	NB	175	105	Principal Arterial Other	980	1160	2800	N	3500	N
		SB	SB	133		Principal Arterial Other	983		2800	N	3500	N
6	Rt 9/Malta Ave/Ext	NB	NB	119	231	Principal Arterial Other	554	1081	2800	N	3500	N
		SB	SB	263	181	Principal Arterial Other	783	736	2800	N	3500	N
		SB	NB	103	327	Principal Arterial Other	668	1247	2800	N	3500	N
		SB	SB	289	108	Principal Arterial Other	794	923	2800	N	3500	N
		EB	EB	270	221	Major Collector	610	596	1000	N	1300	N
		WB	WB	184	251	Major Collector	409	821	1000	N	1300	N
		WB	EB	336	258	Major Collector	371	353	1000	N	1300	N
		WB	WB	208	457	Major Collector	208	457	1000	N	1300	N
7	Rt 9/9P	NB	NB	142	245	Principal Arterial Other	442	1115	2800	N	3500	N
		SB	SB	275	184	Principal Arterial Other	850	674	2800	N	3500	N
		SB	NB	118	231	Principal Arterial Other	528	1091	2800	N	3500	N
		SB	SB	261	181	Principal Arterial Other	786	771	2800	N	3500	N
		EB	EB	178		Local Road	293		625	N	799	N
		WB	WB		128	Local Road		418	625	N	800	N
		WB	EB	155		Major Collector	240		1000	N	1300	N
		WB	WB		119	Major Collector		119	1000	N	1300	N
8	Rt 67/Rt 50/ E. High St/Milton Ave	SB	NB	108	106	Principal Arterial Other	488	631	1000	N	1300	N
		SB	SB	128		Principal Arterial Other	638		1000	N	1300	N
		EB	EB	124		Principal Arterial Other	334		1000	N	1300	N
		WB	WB		113	Principal Arterial Other		368	1000	N	1300	N
		WB	EB	199	109	Major Collector	324	309	1000	N	1300	N
		WB	WB	124	146	Major Collector	339	301	1000	N	1300	N
9	Rt 67/Rt 50/Balston Ave/Saratoga Rd	NB	NB	113		Principal Arterial Other	433		1000	N	1300	N
		EB	EB		169	Major Collector		169	1000	N	1300	N
10	Rt 67/Brookline Road	WB	WB	128		Principal Arterial Other		923	1000	N	1300	N
11	Rt 67/East Line	NB	NB	102		Local Road		442	625	N	800	N
		SB	SB	148		Local Road		518	625	N	800	N
		SB	NB	122		Local Road		312	625	N	800	N
		SB	SB	110		Local Road		250	625	N	800	N
		EB	EB		105	Principal Arterial Other		860	1000	N	1300	N
		WB	WB	152		Principal Arterial Other	772		1000	N	1301	N
		WB	WB	152	107	Principal Arterial Other	792	1017	1000	Y	1300	N
12	Exit 12 SB	SB	SB	213		Ramp	823		1000			
		EB	EB	108	102	Principal Arterial Other	983	982	2500	N	3120	N
		WB	WB	173	137	Principal Arterial Other	1063	972	2500	N	3120	N
		WB	EB	333	183	Principal Arterial Other	993	998	2500	N	3120	N
		WB	WB	156	233	Principal Arterial Other	1131	1288	2500	N	3120	N
13	Exit 12 NB	NB	NB	338		Ramp	868		2500	N	3120	N
		SB	NB	104	235	Ramp	359	880	2500	N	3120	N
		EB	EB	333	184	Principal Arterial Other	993	999	2500	N	3120	N
		WB	WB	156	234	Principal Arterial Other	1131	1289	2500	N	3120	N
		WB	EB	566	203	Principal Arterial Other	1356	1233	2500	N	3120	N
		WB	WB	155	538	Principal Arterial Other	985	1528	2500	N	3120	N
14	Rt 9/Rt 67/Dunning St (Malta)	NB	NB	305		Principal Arterial Other	620		2500	N	3120	N
		SB	SB	371	204	Principal Arterial Other	1121	884	2500	N	3120	N
		SB	NB	412	320	Principal Arterial Other	747	1405	2500	N	3120	N
		SB	SB	355	394	Principal Arterial Other	1000	1094	2500	N	3120	N
		EB	EB	303		Principal Arterial Other	923		2500	N	3120	N
		WB	WB	124		Principal Arterial Other	904		2500	N	3120	N
15	Dunning St/Hermes Rd/Plains Rd	NB	NB		381	Local Road		701	625	Y	800	N
		SB	SB	311		Local Road	636		625	Y	800	N
		EB	EB	106		Major Collector	451		1000	N	1300	N
		WB	WB		112	Major Collector		567	1000	N	1300	N
		WB	EB		395	Major Collector		800	1000	N	1300	N
		WB	WB	247		Major Collector	662		1000	N	1300	N
16	Route 9/Stonebreak Rd	NB	NB	666	465	Principal Arterial Other	1146	1100	2800	N	3500	N
		SB	SB	215	586	Principal Arterial Other	625	1191	2800	N	3500	N
		SB	NB	344		Principal Arterial Other	754		2800	N	3500	N
		SB	SB	379		Principal Arterial Other	1084		2800	N	3500	N
		EB	EB	512	651	Local Road	512	651	625	Y	800	N
		WB	WB	571	749	Local Road	571	749	625	Y	800	N
		WB	EB	550	142	Local Road	990	222	625	Y	800	Y
		WB	WB	123	236	Local Road	198	236	625	N	800	N
17	Rt 9/Rt 67/Round Lake Bypass	NB	NB	336	307	Principal Arterial Other	616	717	2500	N	3120	N
		SB	SB	199	228	Principal Arterial Other	445	840	2500	N	3120	N
		SB	NB	623	401	Principal Arterial Other	963	1056	2500	N	3120	N
		SB	SB	173	534	Principal Arterial Other	533	1139	2500	N	3120	N
		EB	EB	564	314	Local Road	905	551	625	N	800	N
		WB	WB	130	374	Local Road	265	829	625	Y	800	Y
		WB	EB	406	325	Minor Arterial	886	670	1000	N	1300	N
		WB	WB	285	173	Minor Arterial	505	988	1000	N	1300	N
18	Luther Forest Blvd/Rt 67	SB	NB	482	246	Local Road	907	321	625	Y	800	Y
		SB	SB	193	121	Local Road	218	661	625	Y	800	N
		EB	EB	407	323	Minor Arterial	887	668	1000	N	1300	N
		WB	WB	286	172	Minor Arterial	501	987	1000	N	1300	N
		WB	EB		132	Minor Arterial		422	1000	N	1300	N
		WB	WB	223	106	Minor Arterial	458	401	1000	N	1300	N

No.	Intersection	Approach	Travel Direction	Increase in AM	Increase in PM	Functional Classification of Roadways	Approach Total	Approach Total	Roadway Threshold for LOS D capacity	Above LOS D Threshold	Roadway Threshold for LOS E capacity	Above LOS E Threshold
							per Direction AM	per Direction PM				
19	Eastline Rd/Round Lake Rd	SB	NB		170	Minor Collector		480	1000	N	1300	N
			SB	156	107	Minor Collector	416	347	1000	N	1300	N
		WB	EB	117		Minor Collector	262		1000	N	1300	N
			EB	147		Major Collector	472		1000	N	1300	N
20	Round Lake Rd/Ruhle Rd/Raylinsky	NB	SB	120	115	Major Collector	480	580	1000	N	1300	N
			EB	137		Major Collector	737	197	1000	N	800	N
		WB	WB	124		Major Collector	580		1000	N	1300	N
			EB	246	136	Major Collector	1076	761	1000	Y	1300	N
21	Exit 11 SB	WB	WB	161	206	Major Collector	616	1021	1000	Y	1300	N
			SB	133	206	Major Collector	616	1021	1000	Y	1300	N
		NB	SB	206		Ramp		696	1000	N	1300	N
			SB	146		Ramp		391	1000	N	1300	N
22	Exit 11 NB	EB	EB	246	142	Major Collector	1076	767	1000	N	1300	N
			WB	162	196	Major Collector	617	1011	1000	Y	1300	N
		WB	EB	218	173	Major Collector	613	648	1000	N	1300	N
			WB	168	287	Major Collector	483	1197	1000	Y	1300	N
23	Round Lake Bypass/Curry Ave	NB	SB	418	231	Ramp	773	706	1000	N	1300	N
			SB	190		Ramp		500	1000	N	1300	N
		WB	EB	217	173	Major Collector	612	648	1000	N	1300	N
			WB	168	287	Major Collector	483	1197	1000	Y	1300	N
24	Route 9/George Ave	WB	EB	617	323	Major Collector	1062	638	1000	Y	1300	N
			SB	133	396	Major Collector	388	981	1000	N	1300	N
		SB	NB	564	310	Local Road	904	545	625	Y	800	Y
			SB	130	374	Local Road	266	829	625	Y	800	Y
25	Rt 9/Ushers Rd	EB	EB	617	321	Major Collector	1062	636	1000	Y	1300	N
			WB	133	391	Major Collector	383	981	1000	N	1300	N
		NB	SB	331	318	Principal Arterial Other	601	743	2800	N	3500	N
			SB	227	223	Principal Arterial Other	567	863	2800	N	3500	N
26	Longkill Rd/Ushers Rd	SB	NB	336	305	Principal Arterial Other	616	715	2800	N	3500	N
			SB	198	218	Principal Arterial Other	498	858	2800	N	3500	N
		WB	SB	152		Major Collector	462	1000	1000	N	1300	N
			WB	100		Minor Arterial		505	1000	N	1300	N
27	Ushers Rd/Exit 10 SB	NB	SB	146		Ramp	831		1000	N	1300	N
			EB	153	126	Minor Arterial	853	666	1250	N	1625	N
		WB	WB	113		Minor Arterial	403		1250	N	1625	N
			NB	184		Ramp	426		1000	N	1300	N
28	Ushers Rd/Exit 10 NB	WB	EB	205	110	Minor Arterial	645	615	1250	N	1625	N
			WB	126		Minor Arterial		781	1250	N	1625	N
		NB	SB	409	283	Principal Arterial Other	794	1053	2800	N	3500	N
			SB	178	370	Principal Arterial Other	828	1155	2800	N	3500	N
29	Rt 9/Ushers Rd	SB	NB	572	307	Principal Arterial Other	842	767	2800	N	3500	N
			SB	181	501	Principal Arterial Other	623	1141	2800	N	3500	N
		EB	EB	204	109	Minor Arterial	539	534	1000	N	1300	N
			WB	130		Minor Arterial		650	1000	N	1300	N
30	Rt 9P/Rt 423	WB	EB	104		Local Road		299	625	N	800	N
			NB	SB	152		Major Collector	277		1000	N	1300
		WB	SB	104		Major Collector		289	1000	N	1300	N
			WB	138	142	Major Collector	193	182	1000	N	1300	N
31	Rt 9P/Plains Rd	NB	SB	258		Major Collector	508		1000	N	1300	N
			EB	137		Major Collector	241		1000	N	1300	N
		WB	EB		119	Major Collector		429	1000	N	1300	N
			WB	EB	170		Major Collector		625	1000	N	1300
32	Rt 9P/Lake Rd	NB	SB	137		Major Collector	532		1000	N	1300	N
			EB	EB	142		Local Road		432	625	N	800
		WB	EB	170		Major Collector		605	1000	N	1300	N
			WB	137		Major Collector	557		1000	N	1300	N
33	Lake Rd/Cold Springs Rd	WB	WB	152		Major Collector	332		1000	N	1300	N
			NB	SB	139		Major Collector	399		1000	N	1300
		SB	SB		141	Local Road		401	625	N	800	N
			SB		142	Local Road		412	625	N	800	N
34	Cold Spings Rd/ Cordero Blvd	EB	WB	143		Major Collector	163		1000	N	1300	N
			NB	SB	114		Local Road	169		1000	N	1300
		SB	SB		174	Local Road		259	625	N	800	N
			SB		108	Local Road		178	625	N	800	N
35	Cold Springs Rd/Elmore Robinson Rd	EB	SB	142		Local Road	202		625	N	800	N
			EB	EB		332	Local Road		392	625	N	800
		WB	WB	255		Local Road	300		625	N	800	N
			NB	SB	115	127	Local Road	150	182	625	N	800
36	Fairly Rd/Joyce Rd/Fitch Rd	SB	SB		174	Local Road		224	625	N	800	N
			SB		122	Local Road		182	625	N	800	N
		EB	SB		122	Local Road		182	625	N	800	N
			WB	WB	211		Minor Arterial	381		1000	N	1300
37	Rt 67/Farley	WB	WB	211		Minor Arterial	406		1000	N	1300	N

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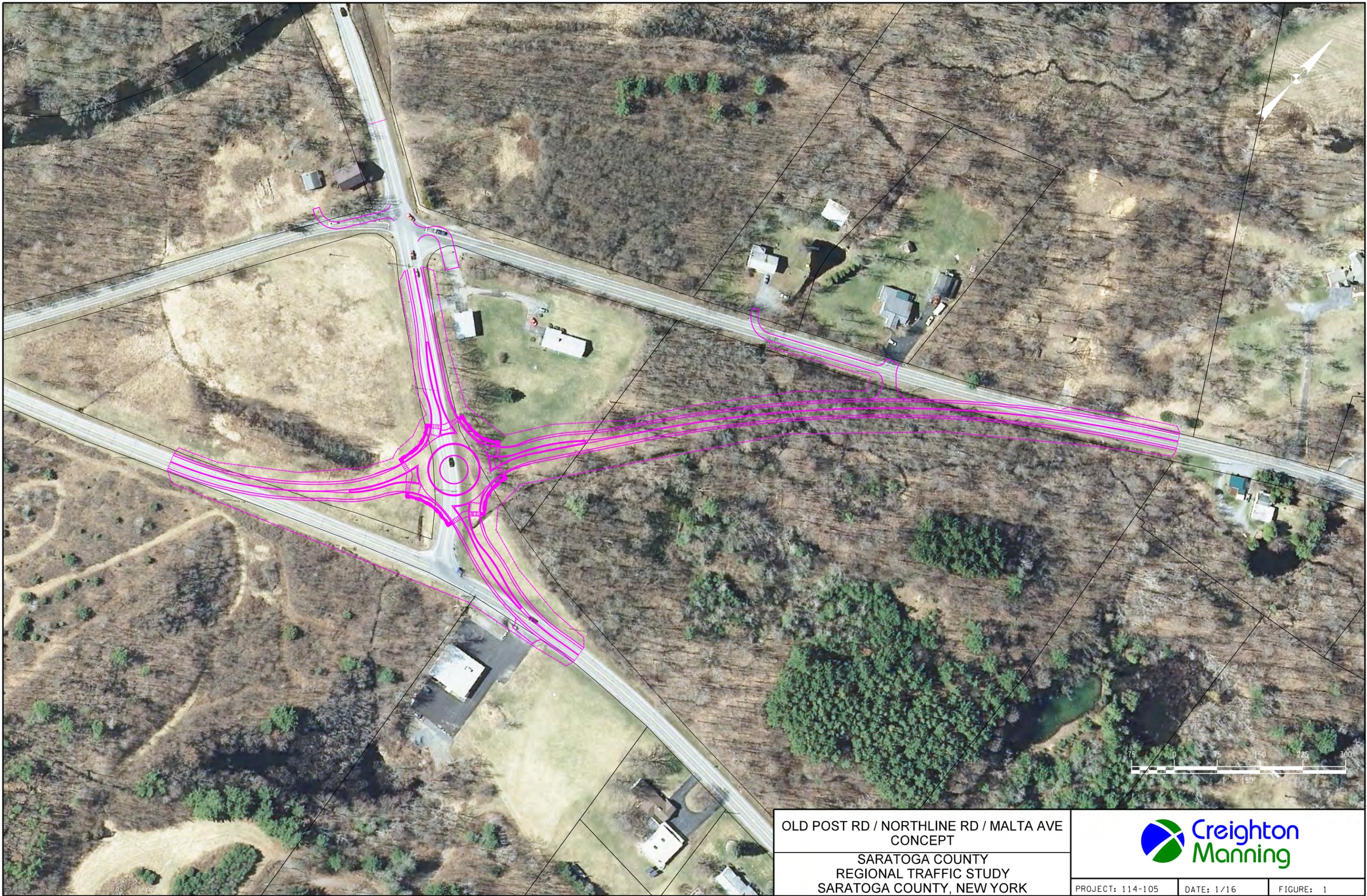
Appendix F

Concept Plans



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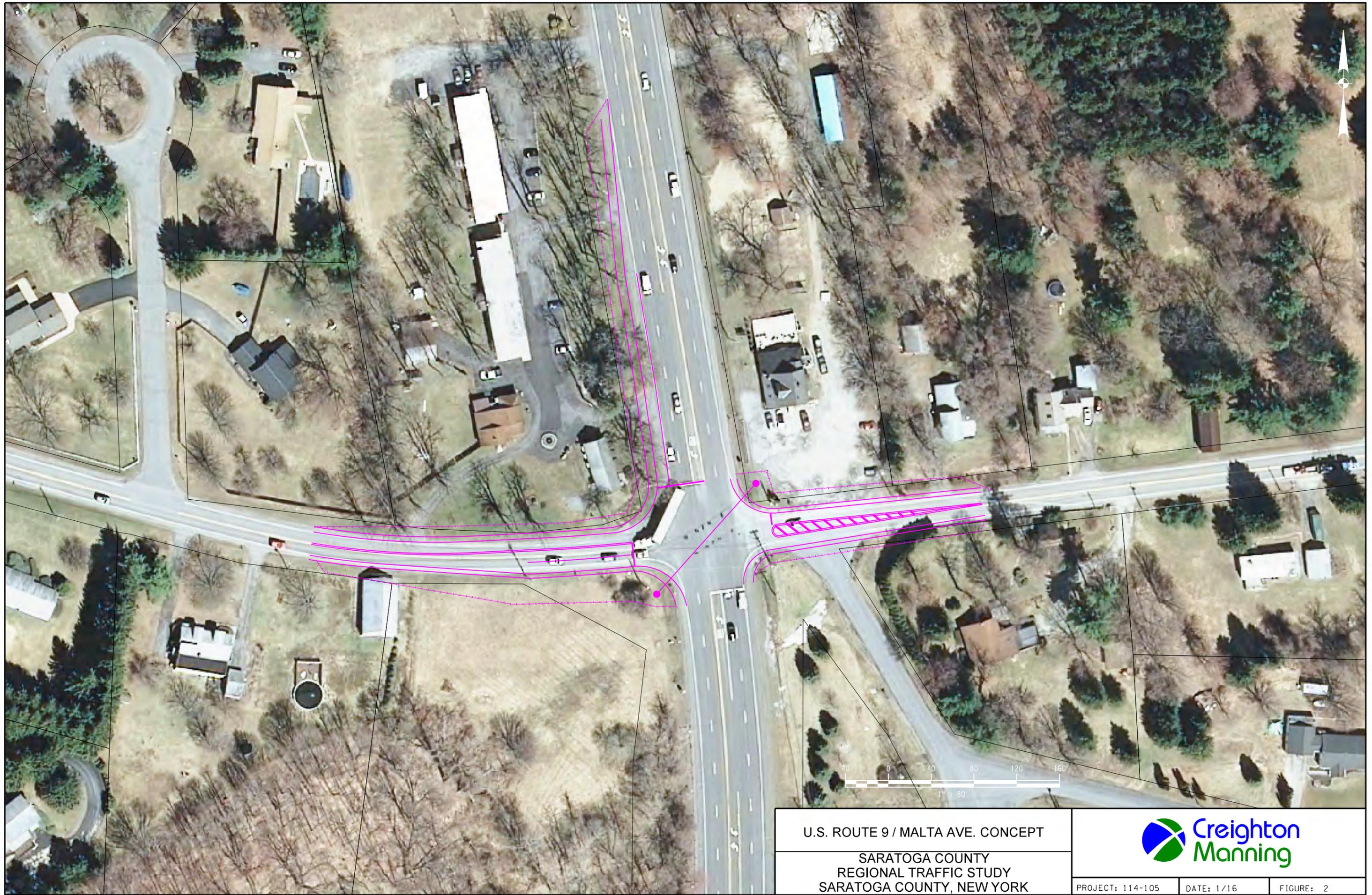
OLD POST RD / NORTHLINE RD / MALTA AVE
CONCEPT

SARATOGA COUNTY
REGIONAL TRAFFIC STUDY
SARATOGA COUNTY, NEW YORK



PROJECT: 114-105	DATE: 1/16	FIGURE: 1
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U.S. ROUTE 9 / MALTA AVE. CONCEPT

SARATOGA COUNTY
REGIONAL TRAFFIC STUDY
SARATOGA COUNTY, NEW YORK



PROJECT: 114-105

DATE: 1/16

FIGURE: 2

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ROUTE 67 / BROOKLINE ROAD CONCEPT

SARATOGA COUNTY
REGIONAL TRAFFIC STUDY
SARATOGA COUNTY, NEW YORK



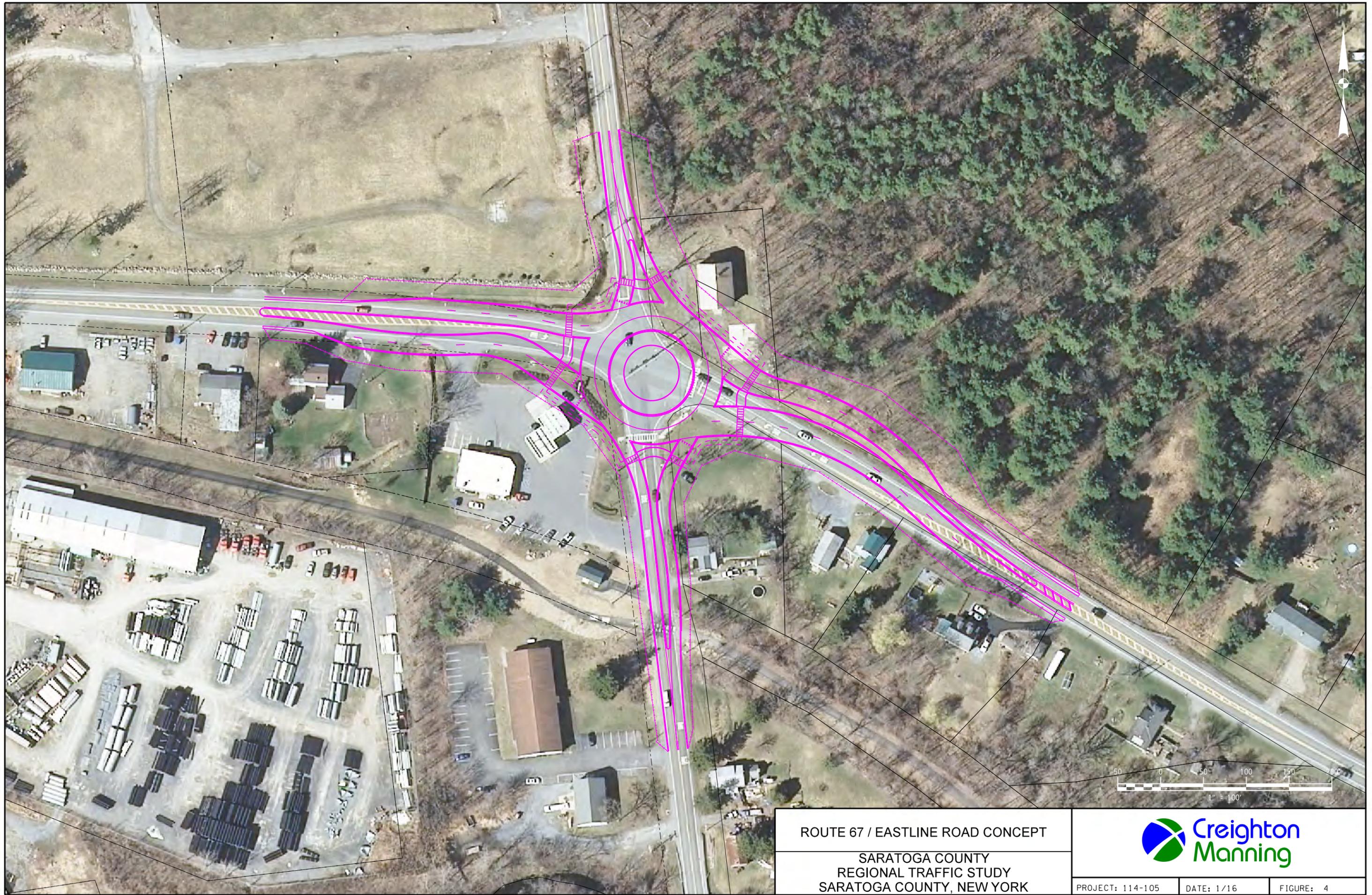
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FIGURE: 3

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ROUTE 67 / EASTLINE ROAD CONCEPT
SARATOGA COUNTY
REGIONAL TRAFFIC STUDY
SARATOGA COUNTY, NEW YORK

		
PROJECT: 114-105	DATE: 1/16	FIGURE: 4

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ROUTE 9 / STONEBREAK ROAD CONCEPT

SARATOGA COUNTY
REGIONAL TRAFFIC STUDY
SARATOGA COUNTY, NEW YORK



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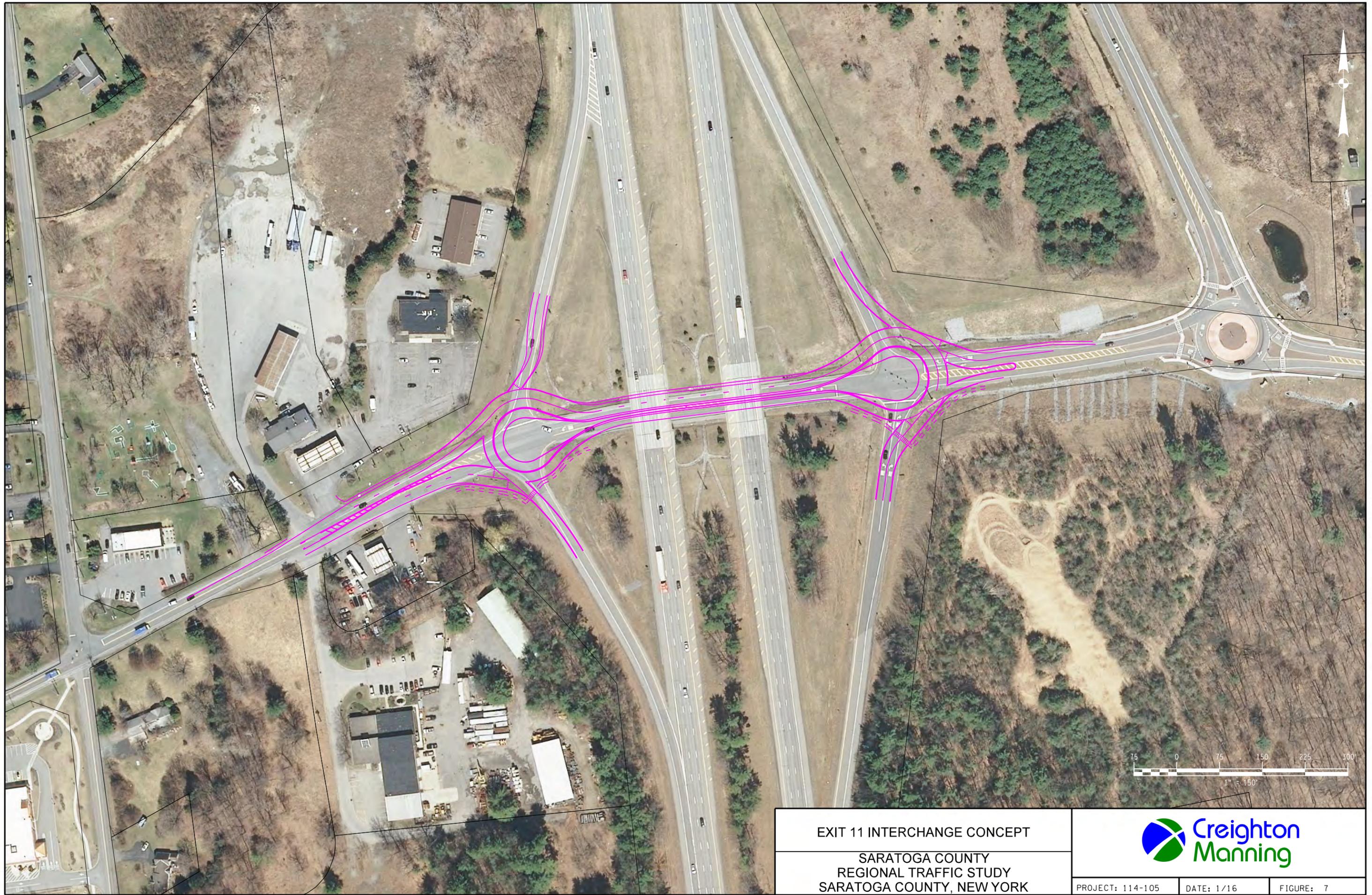
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ROUTE 67 / LUTHER FOREST BLVD. CONCEPT
 SARATOGA COUNTY
 REGIONAL TRAFFIC STUDY
 SARATOGA COUNTY, NEW YORK



PROJECT: 114-105 DATE: 1/16 FIGURE: 6

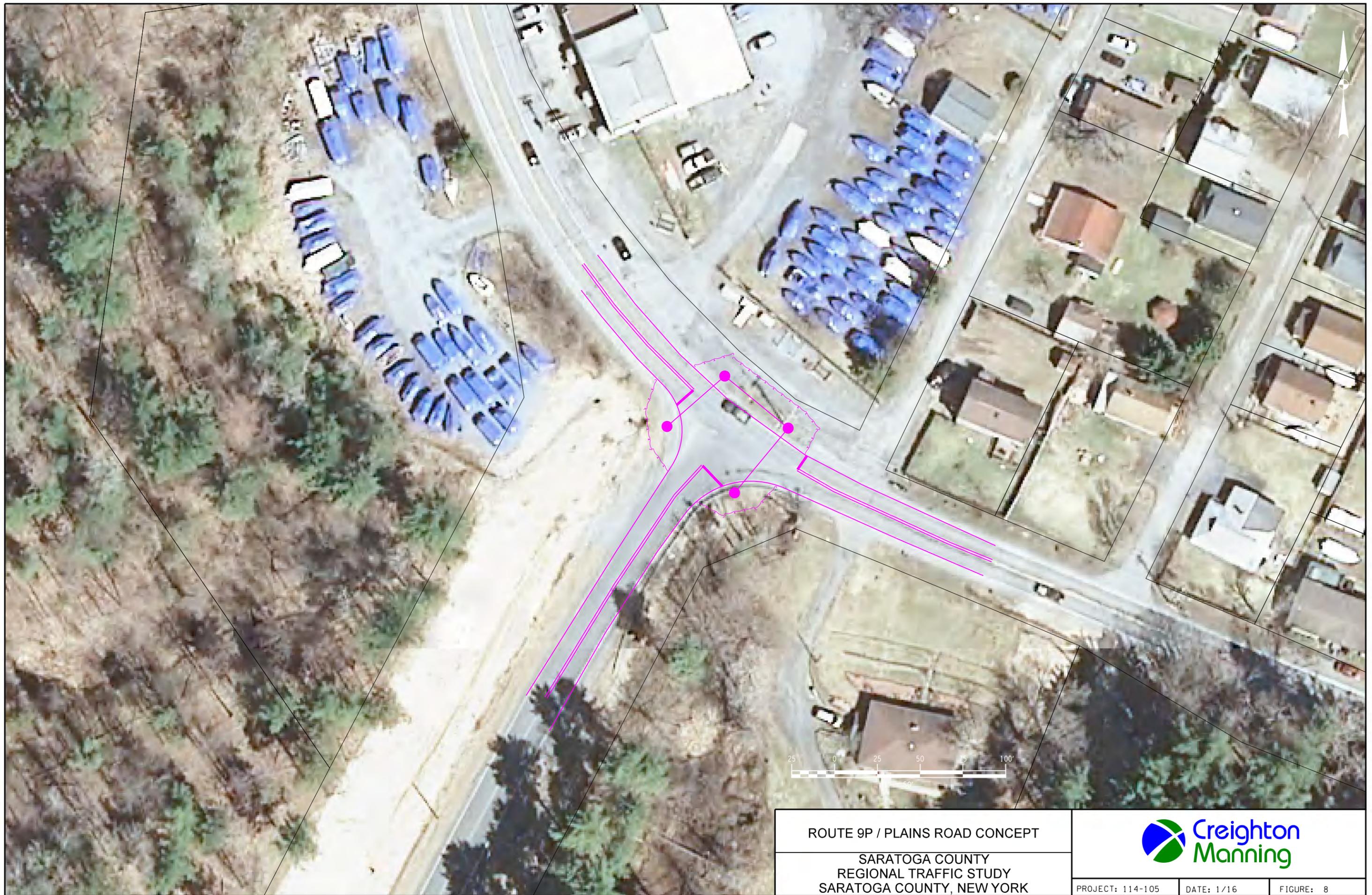
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EXIT 11 INTERCHANGE CONCEPT
SARATOGA COUNTY
REGIONAL TRAFFIC STUDY
SARATOGA COUNTY, NEW YORK

		
PROJECT: 114-105	DATE: 1/16	FIGURE: 7

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ROUTE 9P / PLAINS ROAD CONCEPT

SARATOGA COUNTY
REGIONAL TRAFFIC STUDY
SARATOGA COUNTY, NEW YORK



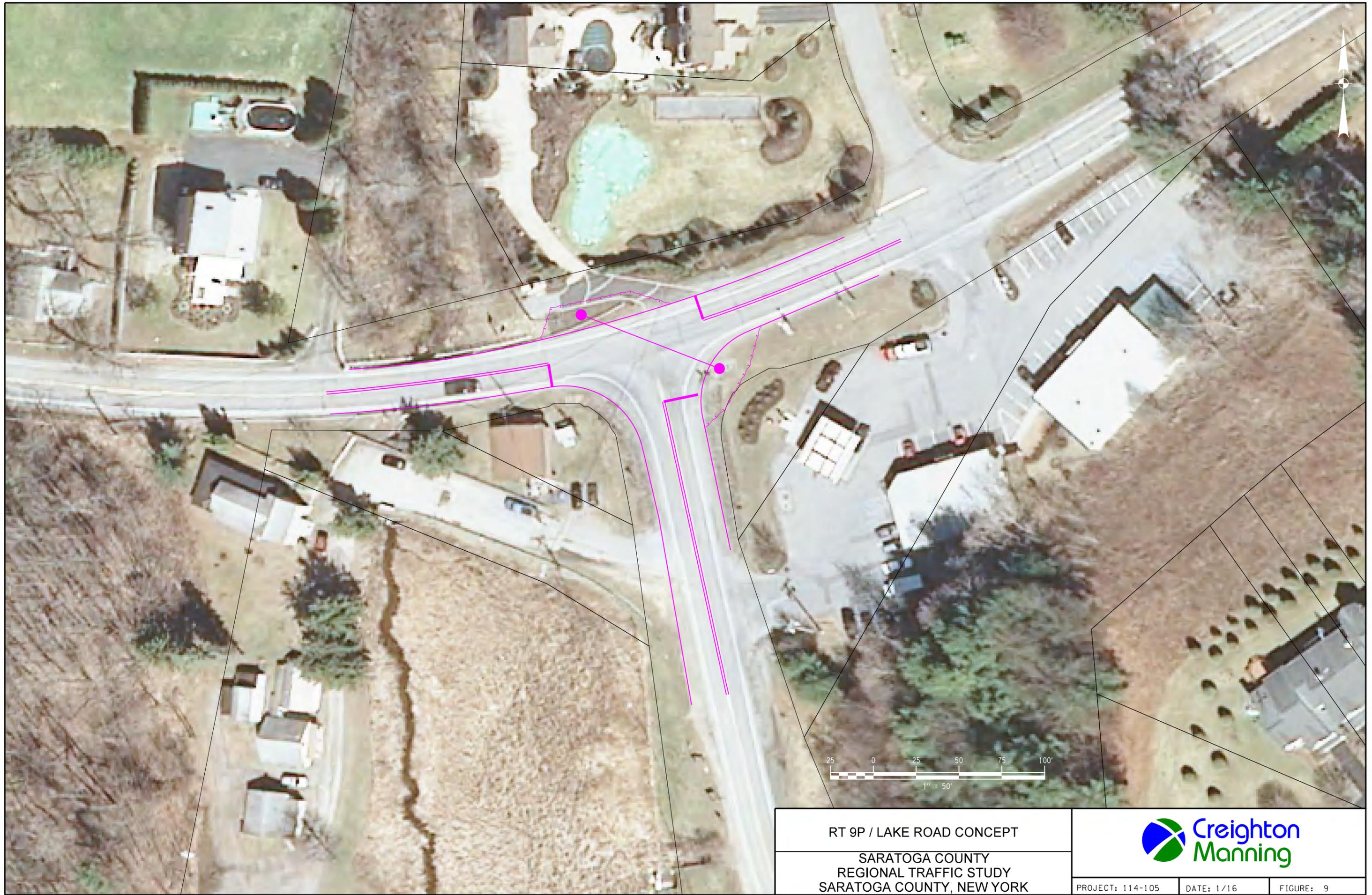
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FIGURE: 8

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RT 9P / LAKE ROAD CONCEPT

SARATOGA COUNTY
REGIONAL TRAFFIC STUDY
SARATOGA COUNTY, NEW YORK



PROJECT: 114-105

DATE: 1/16

FIGURE: 9

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Appendix G

Environmental Screenings



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Saratoga County Regional Traffic Study

Natural Resource Constraints Analysis

Towns of Ballston, Malta, and Stillwater
Saratoga County, New York



Prepared for:

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October 30, 2015

Saratoga County Regional Traffic Study

Natural Resource Constraints Analysis

Towns of Ballston, Malta, and Stillwater
Saratoga County, New York

October 1, 2015



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ATTACHMENTS

- Attachment A – IPaC Trust Resource Reports for All Study Locations
- Attachment B – New York Natural Heritage Program Correspondence

1. INTRODUCTION

As part of the Saratoga County Regional Traffic Study, The Chazen Companies have prepared this report on the natural resources and physical site characteristics for eight potential road intersection improvement projects. This review includes topography, steep slopes, hydric soils, streams and wetlands under federal and state jurisdiction, FEMA-mapped floodplains, and threatened and endangered species. The Study Area consists of the following eight intersections (“Study Locations”) where proposed traffic mitigation projects have been identified:

- New York Route 67 and Luther Forest Boulevard
- New York Route 67 and Eastline Road (County Route 82)
- New York Route 67 and Brookline Road (County Route 60)
- New York Route 9 and Stone Break Road
- New York Route 9P and Plains Road (County Route 108)
- Interstate 87, Exit 11, at Round Lake Road (County Route 80)
- U.S. Route 9 and Malta Avenue (County Route 63)
- Old Post Road, Northline Road (County Route 45), and Malta Avenue

Section 2 of this report presents a brief summary of the data collection efforts. Section 3 provides a discussion of the findings of the physical and natural resource evaluations for each Study Area. Finally, Section 4 describes the pertinent natural resource regulations and potential permitting issues for each of the Study Areas.

2. DATA COLLECTION

The analysis of each of the above Study Locations is based on information collected from a variety of sources, as described below.

2.1. Mapped Data for Geographic Information Systems

The analysis of each of the Study Locations began with a desktop review of mapped information in digital form available from public sources. This includes data provided by governmental agencies for use with Geographic Information System (GIS) software. The GIS data was used to produce a set of maps depicting the following features within the vicinity of each Study Location:

- Soil map units classified as either all hydric or partially hydric, mapped by the Natural Resources Conservation Service (NRCS)
- Steep slopes (i.e., those >15%), based on digital elevation models of the US Geological Survey (USGS)
- Wetlands under the jurisdiction of the New York State Department of Environmental Conservation (NYSDEC)
- Streams protected under NYSDEC regulations
- Wetlands mapped by the National Wetlands Inventory (NWI) of the U.S. Fish and Wildlife Service (USFWS)
- 100-year and 500-year flood zones mapped by the Federal Emergency Management Agency (FEMA)

2.2. Biological Resource Occurrence Information

In order to determine whether threatened or endangered species have the potential to be affected by projects at these Study Locations, information was obtained from the USFWS via its online Information for Conservation and Planning (IPaC) system. Users of this system provide information on the location of a project site, and receive a list of federally listed threatened and endangered species, as well as a list of protected migratory birds, that may occur in that vicinity.

Also, the New York Natural Heritage Program (NYNHP) of NYSDEC maintains data on the occurrence of state- and federally-listed threatened and endangered species, rare species, and significant ecological communities. In order to obtain site-specific information from NYNHP, an informational request letter was emailed to NYNHP for each Study Location. Copies of the correspondence are provided as Attachment B.

2.3. On-Site Review

After examination of the results from the desktop analysis, a Chazen environmental scientist visited each Study Location to verify the existence of streams, wetlands, and habitats suitable for the threatened and endangered species identified by USFWS and NYNHP. Those visits took place on August 12th and 13th, 2015. Maps have been produced that overlay information sketched in the field on GIS data layers. Photos taken during those visits are on file, but are not presented here.

3. NATURAL RESOURCE ANALYSIS OF STUDY LOCATIONS

This section presents a summary of findings for each of the eight Study Locations. This includes a description of the location, topography and hydric soils, aquatic resources, and threatened and endangered species, both as shown on mapping resources, and based on the on-site field visit. Figures illustrating each of these resources and maps summarizing the locations of wetlands, streams and drainage ditches, along with potential endangered species habitat, are provided at the end of the report.

3.1. New York Route 67 and Luther Forest Boulevard

This Study Location is in the Town of Malta, at the southern edge of the Luther Forest Technology Campus. Figure 1 is a site location map based on the 1:24,000-scale USGS topographic map of the area. A roundabout was established at this location when Luther Forest Boulevard was constructed. Potential improvements to this intersection include additional traffic lanes on eastbound Route 67 and northbound Luther Forest Boulevard.

Topography and Hydric Soils: Figure 2 is a map of steep slopes and hydric soils in the vicinity of this Study Location. The nearest patch of hydric soil lies approximately 600 feet to the east of the intersection. Some steep slopes are indicated near the intersection, particularly on the north and east sides of the roundabout. The on-site review showed that these slopes are on the sides of low knolls that were created during construction of the intersection, possibly for the purpose of screening views or mitigation of road noise. A small area of steep slopes is impacted by planned improvements on the south side of Route 67 west of the planned roundabout.

Aquatic Resources: Figure 3 is a map of the GIS data on wetlands, streams, and flood zones as mapped by the NWI, NYSDEC and FEMA; mapped resources are not shown as being present in the Study Location limits. The on-site review indicates the existence of a wetland adjacent to the north side of Route 67 at

the western end of the Study Location outside of the proposed disturbance limits for this improvement project. This wetland has an open tree canopy of ashes (*Fraxinus* sp.), American elm (*Ulmus americana*), swamp white oak (*Quercus bicolor*), and cottonwood (*Populus deltoides*), below which are shrubs such as European buckthorn (*Rhamnus cathartica*) and willows (*Salix* sp.). Herbaceous hydrophytic plants in the wetland that could be seen from the roadside include common reed (*Phragmites australis*), purple loosestrife (*Lythrum salicaria*), and spotted Joe-Pye weed (*Eutrochium maculatum*). The approximate location of this wetland is indicated on Figure 4.

This wetland is not part of a NYSDEC-mapped wetland, nor is it sufficiently close to the nearest NYSDEC wetland to be linked to it. Therefore, activities impacting this wetland would not require a NYSDEC permit under 6 NYCRR Part 663. Although the wetland is not mapped by the NWI, it is likely to be under Federal jurisdiction, and any activities affecting it would require a permit administered by the US Army Corps of Engineers (Corps). Based on preliminary plans, it appears that the potential improvements to this intersection would not affect this wetland, and no permit would be required.

A short roadside ditch, dominated by the invasive hydrophyte common reed (*Phragmites communis*) exists on the south side of Route 67, and drains into the southeastern corner of the wetland via a culvert under the road. The approximate location of this drainage ditch is also illustrated on Figure 4. The proposed project disturbance limits appear to impact this drainage ditch. Based on current regulations, it is possible that the Corps would identify this drainage ditch as constructed out of uplands, and therefore a non-regulated drainage ditch feature. If so, no permit would be needed for impacts to this drainage ditch. If not, then permits from the Corps would be required for impacts to the ditch. See additional discussion in Section 4 of this Report.

Threatened and Endangered Species: The IPaC Trust Resource Report for the Route 67 and Luther Forest Boulevard area (Attachment A) indicates the potential occurrence of two species on the Federal endangered species. One is the endangered Karner blue butterfly (*Lycaeides melissa samuelis*) and the other is the threatened northern long-eared bat (*Myotis septentrionalis*).

Karner blue butterflies are dependent on the wild lupine (*Lupinus perennis*) as the sole food source for their larvae. They will not breed and persist on sites that are lacking wild lupines. The lupines form patches large enough to support colonies of Karner blue butterflies only in open, sunny areas with sandy, somewhat disturbed soil, often with bare patches. Lupines do not persist long or in large quantities under tree and shrub cover. The vegetation immediately adjacent to the roadways in this Study Location is mainly mowed lawn with some planted trees and shrubs. Maintained lawns that experience frequent mowing are not hospitable to the growth of lupines because mowing destroys the major part of the plants and their flowers, keeping them from fruiting and re-seeding themselves. No evidence of lupines was seen in this Study Location. Therefore, this area is unsuitable for Karner blue butterflies.

On a site such as this, which does not have caves or mines that would serve as wintertime hibernacula for the northern long-eared bat, the concern would be only whether their foraging or breeding habitat is present. Of greatest concern would be whether there are any trees present that would provide daytime roosting sites for females and their young from mid-May to mid-August. Favored roosting sites are dead or living trees larger than 3 inches dbh that have shaggy or exfoliating bark, cavities, or crevices in which the bats can find shelter from predators and the elements. Some trees having these characteristics exist adjacent to the project area, but the potential roadway expansion indicated on Figures 2 through 4 would affect only a few trees of 3 inches dbh or greater. Because of the low likelihood of affecting

northern long-eared bats, the work would be able to proceed under the USFWS 4(d) rule. Work under the 4(d) rule is discussed further in Section 4 of this report.

The IPaC Trust Resource Report also lists 14 migratory birds and the bald eagle, which are also protected by law. Any activity that results in a “take” of such birds is prohibited unless authorized by USFWS. Most of the birds in question are not likely to forage or nest in the immediate vicinity of these roadways. Ground-nesting birds, in particular, are not likely to be nesting in any of the roadside areas to be affected. To avoid impacting tree-nesting birds, trees should be cut outside of the breeding season, which would be approximately between late September and early March.

The report on this site from the New York Natural Heritage Program (see Attachment B) does not indicate that they have any records of occurrences of Karner blue butterfly or northern long-eared bats in this vicinity. However, their records include the occurrence of the bald eagle (*Haliaeetus leucocephalus*) within 0.25 mile of the site. That record is during the breeding season, but the report does not indicate whether eagles are nesting within the vicinity. It will be necessary to contact the Wildlife Manager at the regional NYSDEC office for additional information and advice on avoiding any impacts on the eagles.

3.2. New York Route 67 and Eastline Road

This Study Location is currently a 4-way intersection controlled by a traffic light. Eastline Road is the boundary between the Town of Ballston, on the west, and Town of Malta, on the east. Figure 5 is a location map for this site. The potential improvements to this intersection include construction of a two-lane traffic roundabout and expansion of westbound and eastbound lanes of Route 67, on both sides of the intersection, to two lanes.

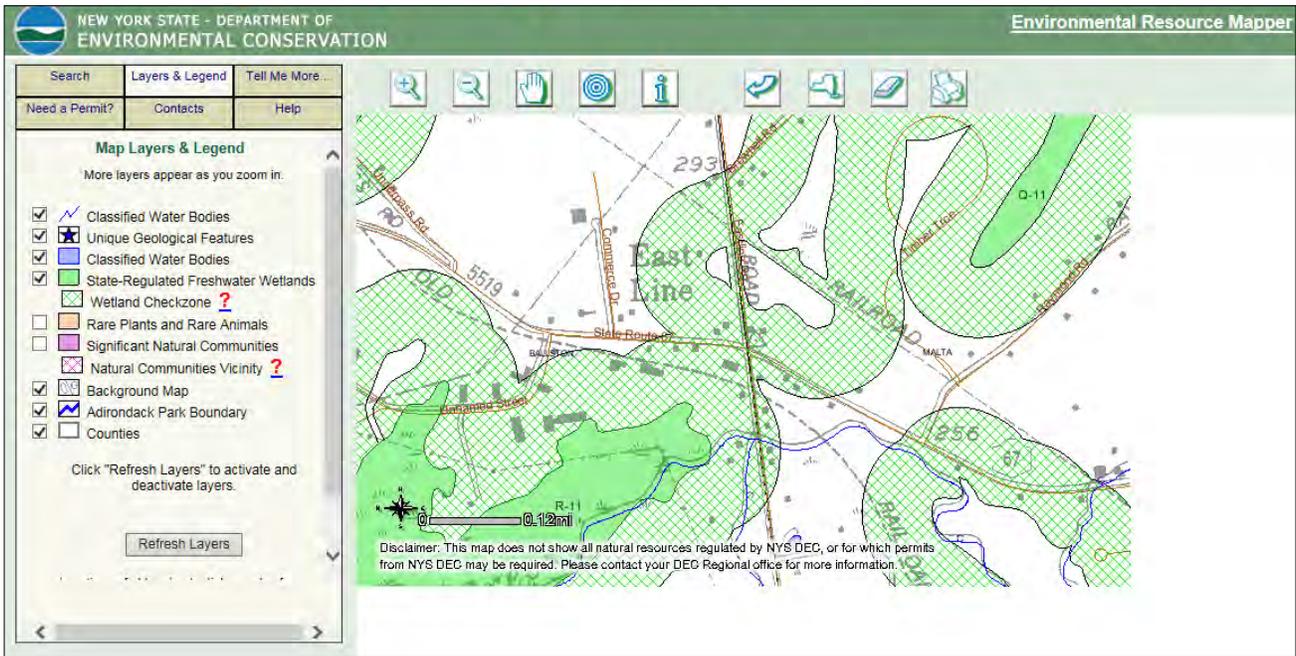
Topography and Hydric Soils: Figure 6 shows the steep slopes and hydric soils of this area. For the most part, the topography of this Study Location is rather flat. The only steep slopes are on the edges of ditches along the roadsides and along an old railroad grade (now a recreational trail) that crosses Eastline Road in the southern part of the Study Location. Hydric soils are mapped only in one place, approximately 400 feet northeast of the center of the intersection and outside the area of planned improvements.

Aquatic Resources: The map of wetlands, streams, and flood zones in this area (Figure 7) indicates the existence of NYSDEC Wetland Q-11 to the northeast of the planned intersection, outside the limits of planned improvements but coincident with the mapped area of hydric soil. The NYSDEC Environmental Resource Mapper illustrates this wetland extending to both the east and west sides of Eastline Road. The NYSDEC Environmental Resource Mapper (see Screenshot below) shows this wetland as an open area surrounded by a 500-foot regulatory check zone. This indicates that this area was a 1999 addition to the NYSDEC wetland mapping (and to the original limits of NYSDEC Wetland Q-11). The 1999 NYSDEC Saratoga County Wetland Map Amendments were never officially adopted. Thus, the Environmental Resource Mapper illustrates these additional amended wetland areas as open spots with a 500-foot check zone (green checkered pattern). In comparison, the NYSDEC GIS Database (see Figure 7) illustrates these areas as containing state mapped wetlands. The legal status of these wetlands is unclear. The 500-foot NYSDEC wetland regulatory check zone is an area where the NYSDEC can extend jurisdiction from existing wetlands to new wetlands identified in the field. This check zone includes most of the planned improvement area.

NYSDEC Wetland R-11 is mapped approximately 550 feet southwest of the intersection, also outside the areas of planned improvements. The NYSDEC Wetland R-11 is mapped within an area that is clearly shown in the aerial photographs as now under an industrial use.

The NWI has mapped only a very small patch of wetland approximately 130 feet north of the west end and outside of the area of planned improvements.

Screenshot of NYSDEC Environmental Resource Mapper – Route 67 and Eastline Road



The in-field review of this Study Location (Figure 8) found wetland vegetation immediately adjacent to the roadways in several places. At the northwest corner of the intersection there is a broad roadside ditch with shallow emergent marsh vegetation dominated by green bulrush (*Scirpus atrovirens*), spike-rush (*Eleocharis* sp.), sallow sedge (*Carex lurida*), common reed, and purple loosestrife. To the north of that, on the west side of Eastline Road, is another similar wetland patch that also includes some swamp white oak and ash trees. Based on original work by Richard Futyma, Ph.D., we understand that these wetland areas were constructed as compensatory mitigation for the Eastline Commons project. As such, these wetlands are regulated by the Corps under Section 404 of the Clean Water Act. They may also be protected by a deed restriction or conservation easement which would make them more difficult to impact than wetlands otherwise not encumbered. The planned project improvements extend into these wetlands on the north side of Route 67 just west of the Roundabout. These wetlands are also within the NYSDEC 500-foot wetland check zone, so may be regulated by the NYSDEC, along with a 100-foot adjacent area.

On the east side of Eastline Road at the northern project limits (and opposite of the patch described above) is a wooded wetland with ash, American elm, red maple (*Acer rubrum*), swamp white oak, and shrubs such as European buckthorn and winterberry (*Ilex verticillata*), plus herbaceous plants, including tussock sedge (*Carex stricta*), sensitive fern (*Onoclea sensibilis*), and purple loosestrife. This wetland would likely be regulated by the Corps of Engineers under Section 404 of the Clean Water Act. The

planned limits of disturbance cross this wetland area. This wetland also appears to be an extension of the additional area that had been mapped as part of NYSDEC Wetland Q-11. While the status of the NYSDEC mapping amendment is unclear, this wetland could be regulated by the NYSDEC and the Corps of Engineers; the NYSDEC would also regulate a 100 foot adjacent area. The planned project improvements may impact a small portion of this wetland requiring direct wetland impact permits from the Corps and NYSDEC, and a 100-foot adjacent area permit. There is also a wetland area along the northern edge of Route 67, east of the intersection, which has emergent marsh vegetation dominated by common reed, along with a few scattered trees, mainly white pine (*Pinus strobus*) and red maple. Drainage from this wetland flows southward, through a culvert under Route 67, probably connecting to Ballston Creek. Assuming a connection to Ballston Creek, this wetland is regulated by the Corps; if there is no connection it may not be regulated. While not currently mapped by the NYSDEC, the wetland is found within 500 feet of NYSDEC Wetland Q-11. The NYSDEC may choose to assume jurisdiction over this wetland. The largest wetland impacts from the planned project occur at this location; permits would likely be required from the Corps; the NYSDEC may also regulate this wetland and its 100 foot adjacent area.

Ballston Creek lies approximately 650 feet south of the center of the intersection. FEMA has mapped 100-year and 500-year flood zones, both of which come within 70 feet of the southern end of the Study Location.

Threatened and Endangered Species: The IPaC Trust Resources report for the Route 67 and Eastline Road area is presented in Attachment A. Under threatened and endangered species, it lists only one: the northern long-eared bat. There are only a few trees in this area that are large enough to be used by the northern long-eared bat as summertime roost sites. The trees that might be impacted by the potential intersection improvements are along the north side of Route 67 and east of the intersection, and along the east side of Eastline Road, south of the intersection. It is likely that the work can be accomplished under the terms of the USFWS 4(d) rule. See the discussion in Section 4.

The IPaC report also provides the same list of protected birds as for the Route 67 and Luther Forest Boulevard area. Mitigation measures for any potential impact to these birds are discussed in Section 4.

The New York Natural Heritage Program has no records of occurrence of rare, threatened, or endangered species in this vicinity (see Attachment B).

3.3. New York Route 67 and Brookline Road

This is a three-way intersection in the Town of Ballston, at the point where the eastern end of Brookline Road meets Route 67 (see Figure 9 for the location map). Currently, there is only a stop sign on Brookline Road and traffic on Route 67 does not stop. The potential improvements at this intersection involve installation of traffic signals.

Topography and Hydric Soils: A map of steep slopes and hydric soils is provided in Figure 10. Steep slopes adjacent to the Study Location occur mainly on the south side of Brookline Road and the southwest side of Route 67, southeast of the intersection. Those slopes extend down to the Mourning Kill, which flows from west to east through the mapped area. A large patch of hydric soil is mapped in the valley of the Mourning Kill, south of Brookline Road. Another patch of hydric soil is mapped approximately 350 feet to the northeast of the intersection. There are no steep slopes or hydric soils within the planned development limits.

Aquatic Resources: The map of wetlands, streams, and flood zones indicates only one NWI wetland, which corresponds to the area of hydric soil south of Brookline Road (see Figure 11). There are no NYSDEC wetlands mapped in this vicinity. However, NYSDEC has mapped the Mourning Kill and designates it as a Class C stream with a water quality standard of C.

The on-site review indicated the existence of riparian wetland along the length of the Mourning Kill, including the portion close to Route 67 (see Figure 12). In addition, a potential wooded wetland area was found on the west side of Route 67, north of the intersection. This is a wooded wetland with American elm, ash, and purple loosestrife. It appears that the wetland drains into a ditch that runs southward, under Brookline Road, then probably along Tiffault Road and into the Mourning Kill. The likely drainage ditch along Tiffault Road is not shown on Figure 12 because its presence could not be confirmed visually from the roadway. A second drainage extends from north to south under Route 67 southeast of the planned project limits and into the riparian wetland noted above. The project limits include a drainage ditch, but the location of the light poles do not appear to impact any regulated aquatic resources.

FEMA has mapped 100-year and 500-year flood zones along the Mourning Kill. The 100-year flood zone is mapped as overlapping part of Brookline Road outside of the Study Location. That may be an artifact due to the enlargement of the FEMA mapping to a scale at which it is no longer accurate.

Threatened and Endangered Species: The IPaC Trust Resource Report for this site (in Attachment A) lists only one threatened or endangered species: the northern long-eared bat. This Study Location does have some trees of a size suitable for use by the bats as summertime roosting sites, mainly along the part of Route 67 southeast of the intersection. It does not appear that the proposed improvements at this intersection would involve the cutting of any trees unless there is an expansion of the shoulders on both sides or a realignment of the roadway.

The IPaC report also provides the same list of 15 protected bird species as for the sites discussed above. Mitigation measures for any potential impact to these birds are discussed in Section 4.

The New York Natural Heritage Program has no records of occurrence of rare, threatened, or endangered species in this vicinity (see Attachment B).

3.4. New York Route 9 and Stonebreak Road

This is an intersection in the Town of Malta on the section of US Route 9 that is concurrent with NY State Route 67. This intersection consists of a roundabout where the western end of Stonebreak Road (County Route 76) meets Route 9. On the western side of this intersection is a stub of the future Phaeton Lane. Figure 13 is a map of the location of this site. The potential improvement at this intersection is the addition of a separate lane on northbound Route 9 for traffic turning onto Stonebreak Road. That lane would also become a second lane on eastbound Stonebreak Road. That lane would merge into the existing single lane on Stonebreak Road approximately 500 feet east of the intersection.

Topography and Hydric Soils: Figure 14 is a map of the steep slopes and hydric soils at this location. The steep slopes are short and confined to the edges of stormwater basins in the area south of Stonebreak Road. No areas of hydric soil are mapped in the vicinity of this intersection.

Aquatic Resources: There are no mapped wetlands, streams, or flood zones in the area adjacent to or close to the intersection (see Figure 15). No wetland indicators were observed in this area. The

stormwater basin south of Stonebreak Road and west of Route 9 would be considered an upland drainage feature and not regulated. The undeveloped lands bordering the intersection on its northeast and southwest sides are upland woods composed of trees such as white pine, sugar maple (*Acer saccharum*), black locust (*Robinia pseudoacacia*), cottonwood, quaking aspen (*Populus tremuloides*), and black oak (*Quercus velutina*).

Threatened and Endangered Species: The IPaC Trust Resources Report for the Route 9 and Stonebreak Road area (Attachment A) lists the northern long-eared bat and Karner blue butterfly as federally listed species that may occur there. There are only a few trees larger than 3 inches dbh, which could serve as summertime roost trees for northern long-eared bats, standing within the area that would be impacted by the proposed additions to the intersection. Next to Stonebreak Road there are two trees within the area where work would take place. One of those trees is a 13-inch dbh white pine and the other is a sugar maple with two trunks, one 9 inches dbh and the other, 12 inches dbh. There are also three black oaks standing in front of the 84 Lumber building, which range from 11 to 15 inches dbh, and which have a low probability of being impacted by the addition of a lane on Route 9. It is noted that the areas north of Stonebreak Road east of Route 9 and area west of Route 9 south of Stonebreak Road are also wooded, but located outside of the current study area.

As discussed above, concerning the nearby intersection of Route 67 and Luther Forest Boulevard, Karner blue butterflies are dependent on the wild lupine, the sole food source for their larvae. The area that would be impacted by the improvements at this intersection is largely maintained as lawn with some planted trees and shrubs, which is not conducive to the survival of lupines. In addition, no evidence of existence of wild lupines was observed in this area. Therefore, the proposed project is not likely to affect Karner blue butterflies.

The IPaC report also provides the same list of 15 protected bird species as for the sites discussed above. Mitigation measures for any potential impact to these birds are discussed in Section 4.

The New York Natural Heritage Program has no records of occurrence of rare, threatened, or endangered species in this vicinity (see Attachment B).

3.5. New York Route 9P and Plains Road

This is another three-way intersection, located at the north end of Plains Road (County Route 108), in the Town of Malta. The location map for this site is Figure 17. There is a stop sign on Plains Road, but traffic on Route 9P is not required to stop. The potential improvement at this intersection is the installation of traffic signals.

Topography and Hydric Soils: Steep slopes and hydric soils at this Study Location are mapped on Figure 18. Along Route 9P the steep slopes are on the sides of roadside drainage ditches. Both sides of Plains Road contains slopes greater than 15%, beginning about 10 to 20 feet from the edge of pavement.

No hydric soils are mapped in the immediate vicinity of this intersection.

Aquatic Resources: The map of wetlands, streams, and flood zones in the vicinity of Route 9P and Plains Road is presented in Figure 19. No state-regulated wetlands are mapped in this vicinity. Strictly speaking, the area of NWI “wetlands” on this map is not wetland, but rather it is a lacustrine habitat, i.e., the waters of Saratoga Lake, located approximately 500 feet north of the Study Location. The FEMA-

mapped 100-year flood zone on the south edge of the lake lies more than 260 feet north of the intersection.

The on-site review of this area revealed the existence of two small wetland patches (see Figure 20). One is a patch of shallow emergent marsh wetland with common reed, purple loosestrife, sensitive fern (*Onoclea sensibilis*), spotted touch-me-not, sallow sedge, and silky dogwood, which lies on the south side of Route 9P, just east of the eastern end of the Study Location. This wetland drains into a roadside ditch and flows westward to the southeastern corner of the intersection with Plains Road. At that point, the drainage enters a culvert that carries it under Route 9P, and apparently into the stormwater sewer system of the neighborhood of cottages on the south side of Saratoga Lake.

There is also a small patch of wetland running parallel to the east side of Plains Road, which also flows into the culvert at the southeastern corner of the intersection. This patch, which lies approximately 25 to 30 feet from the edge of Plains Road, has wetland plants such as sensitive fern, silky dogwood, European buckthorn, and ash trees.

It does not appear that the proposed traffic poles or trenching for lines will impact these wetlands.

Threatened and Endangered Species: According to the IPaC Trust Resource Report for this Study Location (Attachment A), the northern long-eared bat is the only federally listed species that may occur there. There are some trees large enough to be summertime bat roost trees, mainly on either side of Plains Road and on the south side of Route 9P, west of the intersection. However, only those along Route 9P appear vulnerable to disturbance, and only if the road were to be widened. Based on the planned improvements at this Study Location, it does not appear that there will be impacts to any large trees.

The IPaC report also provides the same list of 15 protected bird species as for the sites discussed above. Mitigation measures for any potential impact to these birds are discussed in Section 4.

The New York Natural Heritage Program has no records of occurrence of rare, threatened, or endangered species in this vicinity (see Attachment B).

3.6. Exit 11 of Interstate 87 at Round Lake Road

This Study Location is in the Town of Malta, at Exit 11 of I-87, the Adirondack Northway (see Figure 21). There are essentially two intersections here: (1) on the west side of the Northway, where the southbound off-ramp and southbound on-ramp meet Round Lake Road, and (2), on the east side of the Northway, where the northbound on-ramp and off-ramp meet Round Lake Road. The potential improvements include (1) an extension eastward of the right-turn lane on westbound Round Lake Road, for turning onto I-87 northbound; (2) a westward extension of the left-turn lane on eastbound Round Lake Road, for turning onto I-87 northbound; (3) a doubling of the lanes at the end of the southbound off-ramp from I-87; (4) adding a second lane westbound on Round Lake Road, between the southbound off-ramp and the first driveway on the north side.

Topography and Hydric Soils: The map of steep slopes and hydric soils is presented in Figure 21. There are no areas of hydric soil mapped in the vicinity of the Study Location. Slopes greater than 25% border most of the Study Location roadways, including the southbound and northbound on-ramps, the northbound off-ramp, and Round Lake Road east of the southbound off-ramp. The reason for the steep

slopes is the exit's location, which is essentially at the top of a hill, and the need to avoid a steep gradient on Round Lake Road, which resulted in some deep road-cuts.

The Round Lake Road Improvement Project began in June of 2015, was in progress at the time of the on-site inspection of the Study Location. There is the potential that some of the potential improvements shown on the maps presented here will be made as part of the ongoing project.

Aquatic Resources: As indicated on Figure 23, there are no wetlands mapped by NYSDEC or the NWI in the Study Location, nor any streams or flood zones. The on-site review confirmed the absence of wetlands. Some of the roadside ditches, particularly along the northbound off-ramp and on-ramp and along Round Lake Road to the east of those, have some wetland plants such as common reed, purple loosestrife, and spotted touch-me-not, but no natural wetlands were observed. It is our opinion that the roadside drainage ditches were constructed from uplands and would not be considered regulated wetlands or waters by the Corps of Engineers.

Threatened and Endangered Species: The IPaC Trust Resource Report for Exit 11 (in Attachment A) lists only the northern long-eared bat as potentially occurring in this vicinity. However, no trees large enough to be used by the bats as summertime roost sites exist within the limits of planned work.

The IPaC report also provides the same list of 15 protected bird species as for the sites discussed above. Mitigation measures for any potential impact to these birds are discussed in Section 4.

The New York Natural Heritage Program has no records of occurrence of rare, threatened, or endangered species in this vicinity (see Attachment B).

3.7. U.S. Route 9 and Malta Avenue

This Study Location is a signalized intersection in the Town of Malta (see Figure 25 for a location map). There is one lane in each direction on Malta Avenue (County Route 63) and two lanes in each direction on Route 9. The potential improvements to this intersection include widening of Malta Avenue on both sides and providing a separate lane for eastbound cars turning left onto Route 9. Also, Route 9 would be widened to provide a separate lane for southbound traffic turning right onto westbound Malta Avenue.

Topography and Hydric Soils: Figure 26 is a map of steep slopes and hydric soils in the vicinity of Route 9 and Malta Avenue. There are no hydric soils in the immediate vicinity of the intersection. For the most part, steep slopes are confined to the sides of roadside ditches. Steeper slopes that extend for more than a few feet are found in the northwest corner of the intersection, next to a small rectangular building, which is a motel.

Aquatic Resources: The map of wetlands, streams, and flood zones, Figure 27, indicates that no such features have been identified near this intersection. The on-site inspection did not find any wetlands or even roadside ditches dominated by wetland plants.

Threatened and Endangered Species: The USFWS IPaC Trust Resource Report (Attachment A) indicates the potential presence of two federally listed species at this Study Location: the endangered Karner blue butterfly and the threatened northern long-eared bat. There are some trees large enough to provide summer roosting habitat for the bats within the potential work areas, particularly on the west side of Route 9, north of the intersection, and along Malta Avenue east of Route 9 (see Figure 28).

All of the parts of this Study Location that have a cover of herbaceous vegetation are mowed roadsides or lawns and would not be suitable habitat for the growth of wild lupines. Since wild lupines are the sole food source for larvae of the Karner blue butterfly, it is highly unlikely that the butterfly would occur in this area.

The IPaC report also provides the same list of 15 protected bird species as for the sites discussed above. Mitigation measures for any potential impact to these birds are discussed in Section 4.

The New York Natural Heritage Program has no records of occurrence of rare, threatened, or endangered species in this vicinity (see Attachment B).

3.8. Old Post Road, Northline Road, and Malta Avenue

The site location map for this Study Location is Figure 29. It is the most complex of the Study Locations, for it consists of two intersections on Northline Road (County Route 45). The northern of the two intersections, with Old Post Road, is a four-way stop intersection. Approximately 550 feet to the southeast, Northline Road ends at Malta Avenue (County Route 63). There is a stop sign on Northline Road, but none on Malta Avenue. The potential modification would bring these three roads together in a single intersection with a roundabout. This would involve re-routing a 1,100-foot-long section of Old Post Road and a 600-foot-long section of Malta Avenue.

Topography and Hydric Soils: Figure 30 indicates that most of the steep slopes are on the sides of roadside ditches and in places where the roadway has been built up above surrounding land (i.e., at the Northline Road and Malta Avenue intersection), or where a road cut lowered the road below adjacent land (i.e., on Northline Road northwest of Old Post Road).

Hydric soils have been mapped at several places surrounding the Study Location, but it is only to the northeast of the potential new intersection that an area of hydric soil may be impacted by the re-routed Old Post Road.

Aquatic Resources: There are NYSDEC- and NWI-mapped wetlands that correspond to the mapped areas of hydric soils (see Figure 31). NYSDEC Wetland S-29, a Class 3 wetland, is the one in the northeast part of the Study Location. Next closest is NYSDEC Wetland S-28, which is just south of Malta Avenue. There are wetlands mapped to the northwest of the intersection of Northline Road and Old Post Road, along Kayaderosseras Creek. The 100-year flood zone along the creek is also the closest FEMA-mapped flood zone.

During the field visit, wetlands in these locations were confirmed. However, the extent of NYSDEC Wetland S-29 along Old Post Road was found to be more extensive than illustrated in the NWI and NYSDEC mapping (see Figure 32). On the basis of in-field observation and review of aerial photographs¹, it appears that the wetland extends southwestward to near the intersection of Northline Road and Malta Avenue. This is a wooded wetland with a tree canopy of green ash (*Fraxinus pennsylvanica*), red maple, and American elm. A stream passing through this wetland runs northeast to southwest, through a culvert under Old Post Road and then continues to flow north through a pond to Kayaderosseras Creek. This same wetland receives water from wetland S-28, which first flows northward through a culvert under Malta Avenue, into a ditch, then northeastward through a culvert under Northline Road into the western end of NYSDEC Wetland S-29. NYSDEC Wetlands S-28 and S-29 are regulated by the

¹ Aerial photographs viewed at the NYS Orthos Online internet site, <http://www.orthos.dhSES.ny.gov/>.

NYSDEC along with a 100-foot adjacent area. These wetlands are also regulated by the Corps of Engineers under Section 404 of the Clean Water Act.

In addition, a wetland was found in the triangle of land bounded by the three roads, on the west side of the Study Location. This wetland receives some drainage from an unmapped wetland south of Malta Avenue. Its eastern end, closest to the potential roundabout area, appears to be ponded for at least part of the year and contains some buttonbush. Ultimately, this wetland drains northwestward, under Old Post Road, to wetlands along Kayaderosseras Creek. This wetland is likely regulated by the Corps of Engineers only.

The planned project improvements would impact the Corps and NYSDEC Wetland S-29 and its 100-foot adjacent area; the Corps and NYSDEC regulated S-28, and the Corps regulated wetter portion of the wetland bounded by the three roadways.

Threatened and Endangered Species: The northern long-eared bat is the only federally listed species indicated in the IPaC Trust Resource Report (Attachment A) as potentially occurring on this site. Trees that have the potential to be used by roosting bats during the summer exist along the roadways at several places, such as along Old Post Road and Northline Road (see Figure 32). The section of Old Post Road that would potentially be relocated to connect to a roundabout would pass through a wooded area, much of it wetland, in which there are many trees that could be used as roost sites by the bats.

The IPaC report also provides the same list of 15 protected bird species as for the sites discussed above. Mitigation measures for any potential impact to these birds are discussed in Section 4.

The New York Natural Heritage Program has no records of occurrence of rare, threatened, or endangered species in this vicinity (see Attachment B).

4. REGULATIONS AND PERMITTING ISSUES

A summary of the environmental features that are present and may be impacted at each of the eight intersections is presented in Table 1. For steep slopes, federal and state wetlands, the table columns include whether the resource is mapped, present (confirmed through on-site visual inspection) and impacted. None of the sites had FEMA Flood Zones within the planned project limits. Following the Table is a discussion of how each class of environmental features may affect the eight Study Locations, whether permits from regulatory agencies may be required for impacts to those features.

4.1. Steep Slopes

Slopes greater than 15% are listed for a site in Table 1 if slopes of that magnitude are mapped in the vicinity of the planned project improvements; if they were observed, and if they would be impacted or avoided. The main importance of the existence of steep slope is the extra cost for excavation or filling that might be involved required in a project. There is no particular need for a permit to impact steep slopes unless some other resource, such as a wetland is also affected.

- At Route 67 and Luther Forest Boulevard, there is an approximately 50 foot length of steep slopes on the south side of Route 67 west of the roundabout that would be within the planned improvement limits.
- At Route 67 and Eastline Road, there is a very small length of steep slopes on the north side of Route 67 west of the planned roundabout that would be within the planned improvement limits.
- At Route 67 and Brookline Road there are no steep slopes within the planned improvement limits.
- At US Route 9 and Stonebreak Road, there are some steep slopes on the edges of stormwater retention basins, a small area of which may be affected by the work.
- At Route 9P and Plains Road, there are some steep slopes in the southeast corner of Route 9P and Route 108 that can be avoided by the proposed traffic pole.
- At I-87 at Exit 11, there are steep slopes along the length of proposed traffic improvements.
- At Malta Avenue and Route 8, there are steep slopes on the east side of Route within the planned improvements.
- At Old Post Road and Northline Road, there are steep slopes at the current intersection of Route 63 and Northline Road.

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Table 1 - Environmental Constraints Present at Study Locations

Potential Environmental Constraints														
Study Location	Planned Improvement	Steep Slopes			Federal Wetlands/Waters			State Wetlands & 100 Foot Adjacent Area			Flood Zone	Threatened/Endangered Species*		
		Mapped	Present	Impacted	Mapped	Present	Impacted	Mapped	Present	Impacted		NLEB	KBB	Bald Eagle
NY Rt. 67 and Luther Forest Blvd.	3-legged roundabout; expansion south of Route 67 & east side Luther Forest Blvd	Yes	Yes	Small Area	No	Yes	Drainage Ditch	No	No	No	No	Yes	No Habitat	Yes
NY Rt. 67 and Eastline Road	4-legged roundabout; expand width of all roadways	Yes	Yes	Small Area	Yes	Yes	Yes	Yes in GIS	Maybe	Maybe	No	Yes	No	No
NY Rt. 67 and Brookline Road	4 traffic light poles; signal lines in pavement; no changes in lane alignment	Yes	Not in disturbance limits	No	Yes	Yes	Plan to Avoid	No	No	No	No	Yes	No	No
U.S. Rt. 9 and Stonebreak Road	4-legged roundabout; additional lane on Rt. 9 northbound and Stonebreak Rd. eastbound.	Yes	Yes	Small Area	No	No	No	No	No	No	No	Yes	No Habitat	No
NY Rt. 9P and Plains Road	4 traffic pole lights; signal lines in pavement; no lane realignment.	Yes	Not in disturbance limits	No	Yes	Yes	Plan to Avoid	No	No	No	No	Yes	No	No
I-87, Exit 11, at Round Lake Road	Realign I-87 SB off-ramp; northern portion of Route 80	Yes	Yes	Small Area	No	No	None	No	No	No	No	Yes	No	No
U.S. Rt. 9 and Malta Avenue	Widen east side Route 9 north of intersection; alignment change Route 63	Yes	Yes	Yes NW; SW	No	No	No	No	No	No	No	Yes	No Habitat	No
Old Post Road, Northline Road, and Malta Avenue	4-legged roundabout; new alignment Old Post Rd.	Yes	Yes	Small Area	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No	No

*KBB = Karner blue butterfly; NLEB = northern long-eared bat.

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4.2. Federal Wetlands

Wetlands that are potentially regulated by the Federal government are present within or close to all of the Study Locations except for I-87 at Round Lake Road and US Route 9 at Malta Avenue. The following Study Locations were identified as definitively having wetland impacts within the planned improvement limits:

- At Route 67 and Eastline Road, north of the planned roundabout, on the east and west side of Eastline Road, the planned disturbance limits cross an area of wetlands; the west side is a constructed wetland mitigation. Federal wetlands are also within planned disturbance limits on the north side of Route 67 east of the planned roundabout. Permits would be needed from the Corps of Engineers; the wetland in the northwest side may be more difficult to permit.
- At Old Post Road, Northline Road and Malta Avenue, there is the potential for wetland impacts greater than 0.5 acre associated with roadway realignments.

At one site it was unclear whether there would be federal wetland impacts; this would be dependent upon a Corps jurisdictional determination:

- At Route 67 and Luther Forest Boulevard there is a drainage ditch on the south side of Route 67 at the western limit of the planned improvement limits that will be impacted. If the drainage ditch is a non-regulated feature, no permits will be needed from the Corps.

The other two Study Locations involving traffic pole installations appear as though they could be designed to avoid impacts to waters/wetlands of the United States. However, modification of the project could result in impacts.

Before a project is undertaken at any of these intersections, formal delineation of wetland boundaries should take place and a jurisdictional determination obtained from the US Army Corps of Engineers. For a wetland to be under Federal jurisdiction, it must have a "significant nexus" or direct connection to a navigable waterway, such as the Hudson River. That connection can be via any number of tributaries of that navigable water. However roadside drainage ditches, constructed from uplands should not be regulated by the Corps of Engineers, assuming that they do not convey waters from one wetland to another. Except as noted above, each of the aquatic resources identified during the in-field examinations appear to have connections to perennial waters that ultimately connect to the Hudson River. Those connections would have to be verified in order to know the regulatory status of each wetland.

In general, road projects that impact aquatic resources, including wetlands under Federal jurisdiction can be permitted under a system of general permits known as the Nationwide Permits, which are administered by the US Army Corps of Engineers (Corps). Nationwide Permit 14 authorizes linear transportation projects that cause that loss of no more than 0.5 acre of wetlands or other waters of the United States. If the proposed impacts are greater than 0.1 acre, then the applicant must submit a Pre-Construction Notification (PCN) to the Corps. The PCN must contain a proposal for compensatory mitigation, such as creation of new wetlands on some nearby site. The ability to proceed with a project under authorization of the Nationwide Permits is also dependent on the ability of the applicant to meet a number of other conditions, such as demonstrating that the project will not imperil threatened or endangered species or impact a site with historical or archeological resources.

The project at Old Post Road, Northline Road, and Malta Avenue has the potential to require the deposition of fill in more than 0.5 acre of federal wetland. This is mainly due to the proposed re-routing of Malta Avenue southward, through a large wooded wetland. If the project's impacts cannot be reduced to below 0.5 acre, then it will be necessary to apply for an Individual Permit from the Corps. The process for receiving an individual permit is more complicated, involving public notices and review by other Federal agencies.

One of the conditions for obtaining authorization for a wetland disturbance, under either a Nationwide Permit or an Individual Permit, is to obtain Water Quality Certification under Section 401 of the Federal Clean Water Act. In New York State, NYSDEC administers the Clean Water Act and issues Section 401 Water Quality Certification. Projects authorized under Nationwide Permit 14 are eligible for a blanket Water Quality Certification, provided that they comply with a set of general conditions.

The projects would also need to demonstrate compliance with the National Historic Preservation Act and the federal Endangered Species Act.

4.3. New York State Wetlands and Streams

Only two of the Study Locations have wetlands under NYSDEC jurisdiction that may be affected by the potential projects.

- At the Route 67 and Eastline Road Study Location, the entire project area is within a NYSDEC 500-foot wetland check zone; coordination with the NYSDEC should be undertaken to determine their wetland regulatory involvement. NYSDEC Wetland Q-11, (Class 1) is located near the north end of the Study Location. It appears that the wetland observed immediately adjacent to the east and west sides of Eastline Road in the northern limit of the planned project improvements could be part of the mapped NYSDEC wetland Q-11, and the 100-foot adjacent area would extend from that wetland limit. As explained above, in Section 3.2.2, this section of wetland Q-11 does not appear on the NYSDEC Environmental Resource Mapper, but a 500-foot check zone does appear around this wetland, and the wetland mapping is present in NYSDEC GIS Data. This situation results from the 1999 Saratoga County NYSDEC Wetland Mapping Amendments not being formally adopted by the NYSDEC. Coordination with NYSDEC should be undertaken for this Study Location to ensure a common understanding of state wetland regulation in this area.
- At the Study Location of Old Post Road, Northline Road, and Malta Avenue, the large wetland through which Old Post Road would be re-routed is mapped as state wetland S-29, a Class 3 wetland (see Figure 30). Wetland S-28, a Class 3 wetland is also present in the vicinity of the Study Location and may extend through the Project Location.

The NYSDEC issues permits for disturbance of wetlands in accordance with regulations at 6 NYCRR Part 663. In addition to regulating activities taking place within the wetlands, NYSDEC also regulates activities within the 100-foot-wide "adjacent area" immediately outside of the wetland. Proposed activities within the wetlands and the adjacent areas are evaluated according to their compatibility with the wetland and the functions and benefits it provides. Road construction is classified as an activity that is incompatible with the existence of the wetland and its functions and benefits. Therefore, a permit is required for road construction that impacts a wetland. The standards for permit issuance vary according to the class of the wetland, with Class 1 wetlands having the most stringent standards. In general, NYSDEC issues a permit if it is determined that the economic or social need satisfied by the proposed activity outweighs the loss of or detriment to the wetland.

Since both NYSDEC and the Corps have jurisdiction over some wetlands, and NYSDEC issues Section 401 Water Quality Certification for all projects involving Federal wetland permits, wetland permit applications are submitted to both using a joint application form. That form is submitted to both agencies, as well as to any other agency that may have some jurisdiction over the project, such as the NY State Department of State and the Office of General Services.

Route 67 and Brookline Road is the only Study Location that includes a NYSDEC classified stream. This stream does not have a water quality standard high enough for it to be a protected stream under NYSDEC regulations. Therefore, none of these projects would need a permit for disturbance of the stream bed or banks.

4.4. Threatened and Endangered Species

Certain species of plants and animals, which have been determined to be threatened or endangered, are protected under New York State and Federal laws. Demonstrating that a proposed project will not harm such species is among the general conditions for obtaining a federal wetland permit and 401 Water Quality Certification. As discussed above, the USFWS has identified the northern long-eared bat as a threatened species that may be found in the vicinity of all eight of the Study Locations. Two of the sites – Route 67 at Luther Forest Boulevard and US Route 9 at Malta Avenue – also have the potential for the occurrence of the endangered Karner blue butterfly. Those two sites are places where frequent mowing of the roadsides and adjacent properties make it very difficult for the wild lupine, which is the sole food plant for larvae of the Karner blue butterfly, to grow and produce patches large enough to support a population of the butterfly. In addition, the NY Natural Heritage Program files have no records of Karner blue butterflies occurring near these two sites or at any of the other six Study Locations. Therefore, we conclude that none of these conceptual projects have the potential to impact the Karner blue butterfly.

In contrast, all eight of the Study Locations have some trees measuring at least 3 inches in diameter at breast height, which can serve as summertime roosting habitat for the northern long-eared bat. In many of the sites, these trees are located within the limits of the planned project improvements.

As part of the recent addition of this bat to the Federal list of threatened species, the USFWS created a species-specific rule under Section 4(d) of the Endangered Species Act. This rule allows the incidental “take” of northern long-eared bats in the course of certain activities, provided that certain conservation measures are followed. One of the activities covered under this rule is the expansion of a transportation corridor or ROW by up to 100 feet from the edge of the existing corridor or ROW. The conservation measures that must be implemented in order to conduct such an activity are the following:

- No activities will take place within 0.25 mile of a known, occupied hibernaculum.
- Cutting or destroying of known, occupied maternity roost trees does not take place during the pup season (June 1 – July 31).
- No clearcutting of trees occurs within 0.25 mile of known, occupied maternity roost trees during the pup season (June 1 – July 31).

To be compliant with this rule, coordination with the local USFWS Ecological Services field office and state conservation department should take place to determine specific locations of known hibernacula and known maternity roosts. At present, there are no known hibernacula of the northern long-eared bat within 0.25 mile of any of the Study Locations.

Most of the conceptual improvements to these intersections involve corridor expansions of less than 100 feet, and could be carried out under the Section 4(d) rule. The only exception is at the intersection of Old Post Road, Northline Road, and Malta Avenue, where the realignment of Old Post Road would involve more than 100 feet of displacement from the existing ROW. In such an instance, the activity can only take place after Section 7 consultation with the USFWS to determine that no take will occur, or through issuance of an incidental take permit. Alternatively, cutting of trees only during the hibernation season, between November 1 and March 31, would insure that no take of the bats will occur.

4.5. Migratory Birds

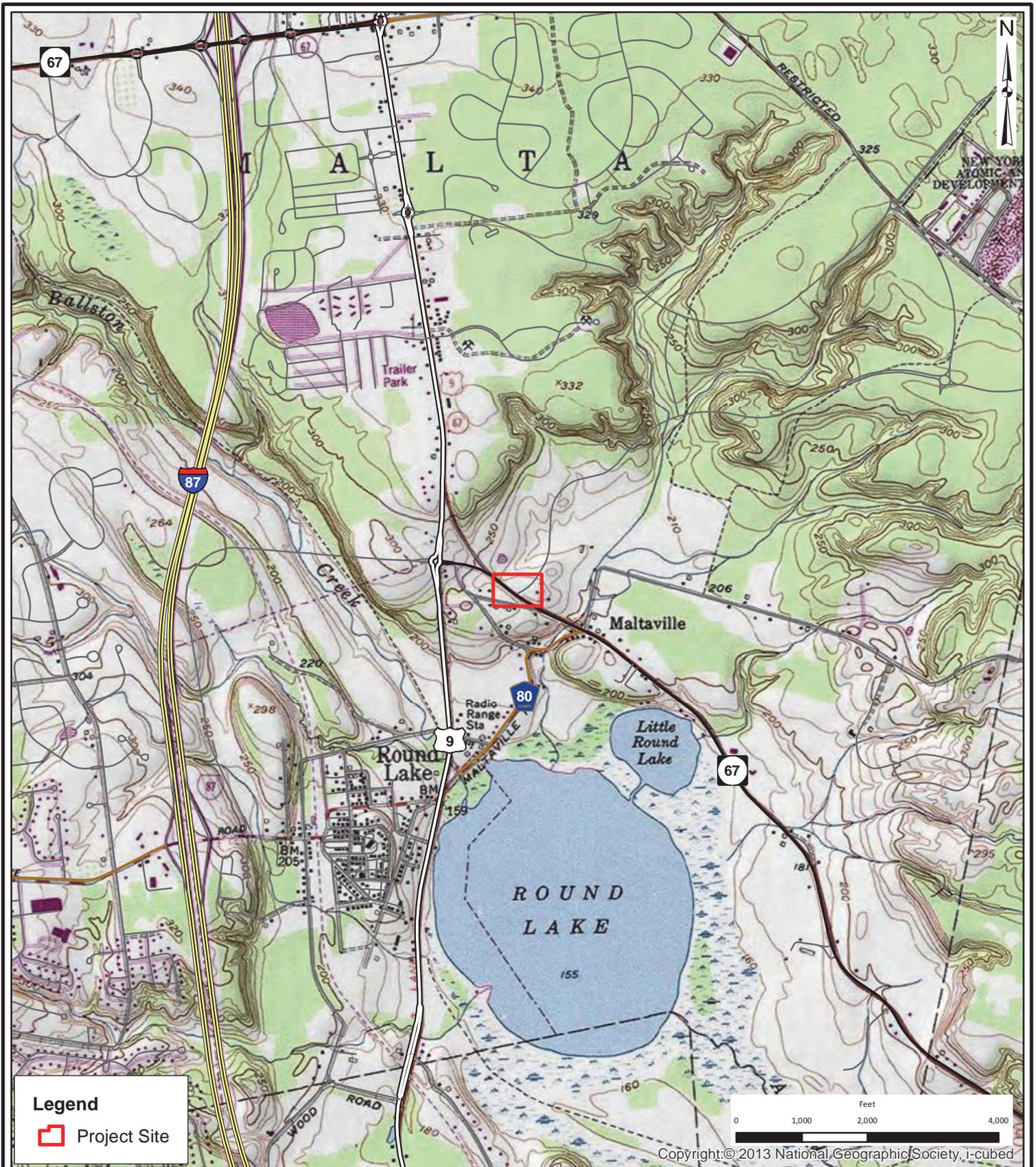
The USFWS trust resource reports for all eight of the Study Locations list the same 14 migratory birds and the bald eagle as protected species occurring in the area. These are birds that are known from Saratoga County in general and may not necessarily be found near any one of these intersections. There are many more species of birds found in Saratoga County that are protected by the Migratory Bird Treaty Act (MBTA). The species listed in the trust resource reports are “Birds of Conservation Concern,” which, without additional conservation actions, are likely to become candidates for listing as threatened or endangered.

One of the general conditions of the Nationwide Permits for disturbance of wetlands under Federal jurisdiction requires the permittee to obtain a “take” permit if necessary to comply with the regulations under the MBTA. Permittees are advised to contact the USFWS to determine whether a take permit is required for the activities proposed. It has been the practice of the USFWS to concentrate its enforcement of the MBTA on industries that chronically kill birds, and most activities authorized under the Nationwide Permits do not fit that description. Consequently, the Corps has generally not required applicants to demonstrate their compliance with the MBTA. However, the USFWS has recently begun the rulemaking process to address potential approaches to regulate the incidental take of migratory birds. Those approaches may include general incidental take permits for hazards associated with certain industries or activities, or individual permits for incidental take resulting from particular projects.

There is the potential that new rules under the MBTA will require those seeking authorization under the Nationwide Permits to demonstrate that migratory birds will not be harmed by their projects. The most easily implemented mitigation measure to insure no impact to most migratory birds would be to restrict vegetation clearing to the period when the birds are not present, which would generally be from early fall to late winter.

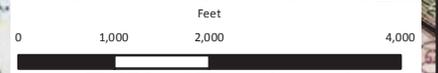
As indicated by the NYNHP report, breeding bald eagles have been observed in the vicinity of the intersection of NY Route 67 and Luther Forest Boulevard. Bald eagles are protected by the Federal government under the Bald and Golden Eagle Protection Act. During the process of planning for any work at this intersection, it will be necessary to coordinate with NYSDEC and USFWS to insure that bald eagles are not impacted by the work.

R:\9\91400-91499\91419.00 - Saratoga County Regional Traffic Study - Exit 11A\ENV\91419.00 Natural Resource report 2015-08-19.docx



Legend

Project Site



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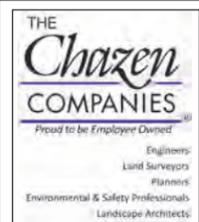
Saratoga County Regional Traffic Study

USGS Location Map
Route 67 and Luther Forest Blvd.

Town of Malta - Saratoga County, New York

Drawn:	RLB
Date:	09/10/2015
Scale:	1:24,000
Project:	91419.00
Figure:	1

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- | | | |
|----------------------------|---------------------------|-------------------|
| Observed Features | Ditch | NWI Wetlands |
| Wetland Edge (approximate) | Potential Bat Roost Trees | 100-yr Flood Zone |
| Culvert | NYSDEC Wetlands | NYSDEC Streams |

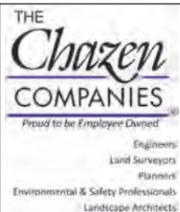
Saratoga County Regional Traffic Study

**Field Observations
Old Post Road, Northline Road and Malta Avenue**

Town of Malta - Saratoga County, New York

Drawn:	RLB
Date:	09/10/2015
Scale:	1 inch = 200 feet
Project:	91419.00
Figure:	32

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-  Surface Water
-  NYSDEC Wetlands
-  NWI Wetlands
-  100-yr Flood Zone
-  500-yr Flood Zone
-  NYSDEC Streams

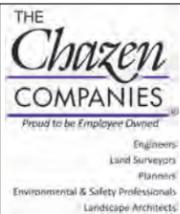
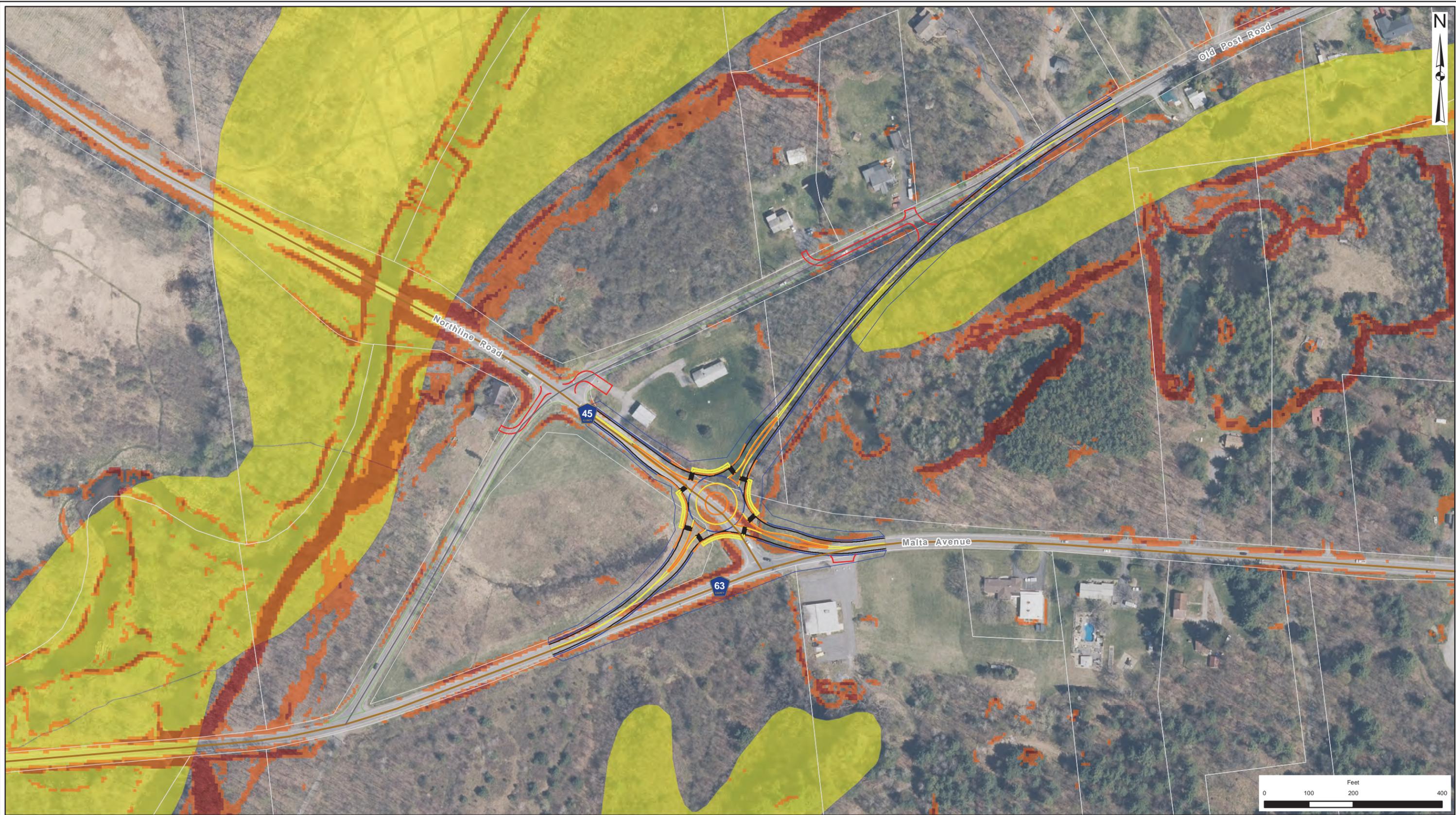
Saratoga County Regional Traffic Study

**Wetlands, Streams and Flood Zones
Old Post Road, Northline Road and Malta Avenue**

Town of Malta - Saratoga County, New York

Drawn:	RLB
Date:	09/10/2015
Scale:	1 inch = 200 feet
Project:	91419.00
Figure:	31

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Slopes

-  < 15 %
-  15 - 25 %
-  > 25 %

Hydric Soils

-  Partially hydric
-  All hydric

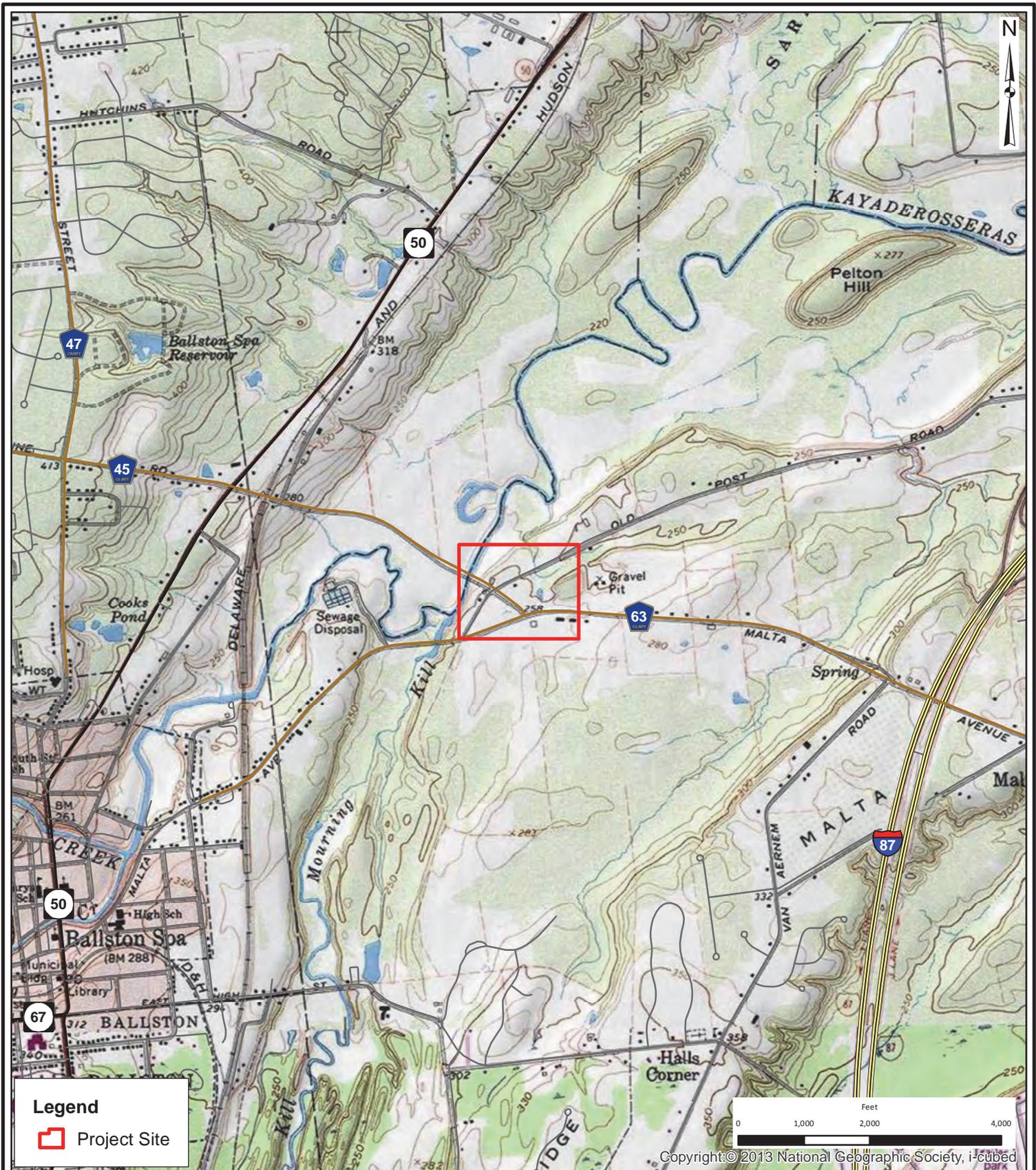
Saratoga County Regional Traffic Study

**Steep Slopes and Hydric Soils
Old Post Road, Northline Road and Malta Avenue**

Town of Malta - Saratoga County, New York

Drawn:	RLB
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Scale:	1 inch = 200 feet
Project:	91419.00
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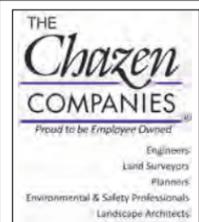
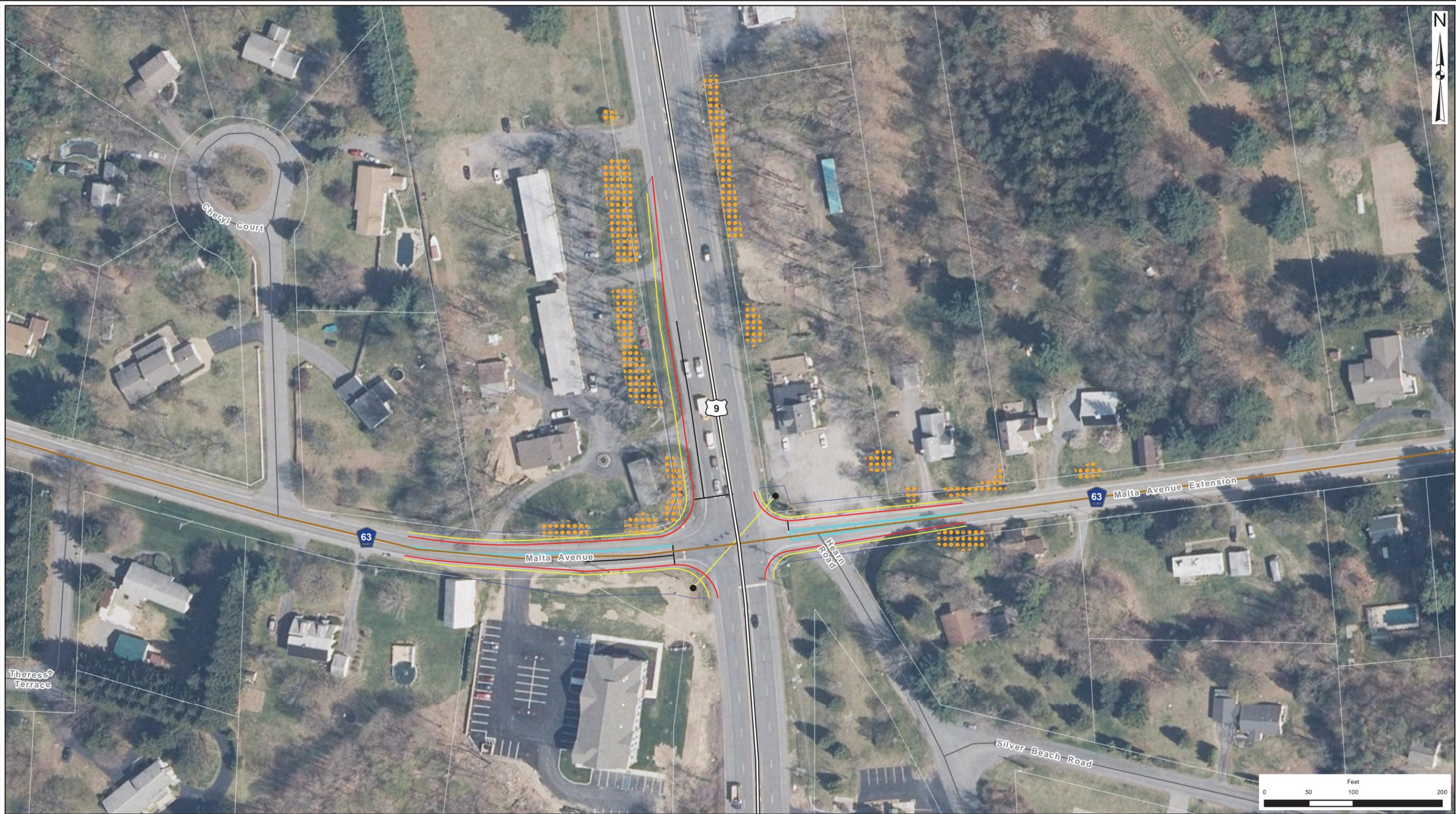
Saratoga County Regional Traffic Study

USGS Location Map
Old Post Road, Northline Road and Malta Avenue

Town of Malta - Saratoga County, New York

Drawn:	RLB
Date:	09/10/2015
Scale:	1:24,000
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Figure:	29

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 Potential Bat Roost Trees

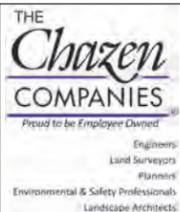
Saratoga County Regional Traffic Study

**Field Observations
U.S. Route 9 and Malta Avenue**

Town of Malta - Saratoga County, New York

Drawn:	RLB
Date:	09/10/2015
Scale:	1 inch = 100 feet
Project:	91419.00
Figure:	28

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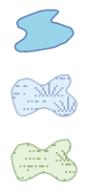
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Surface Water
NYSDEC Wetlands
NWI Wetlands



100-yr Flood Zone
500-yr Flood Zone
NYSDEC Streams

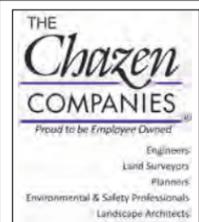
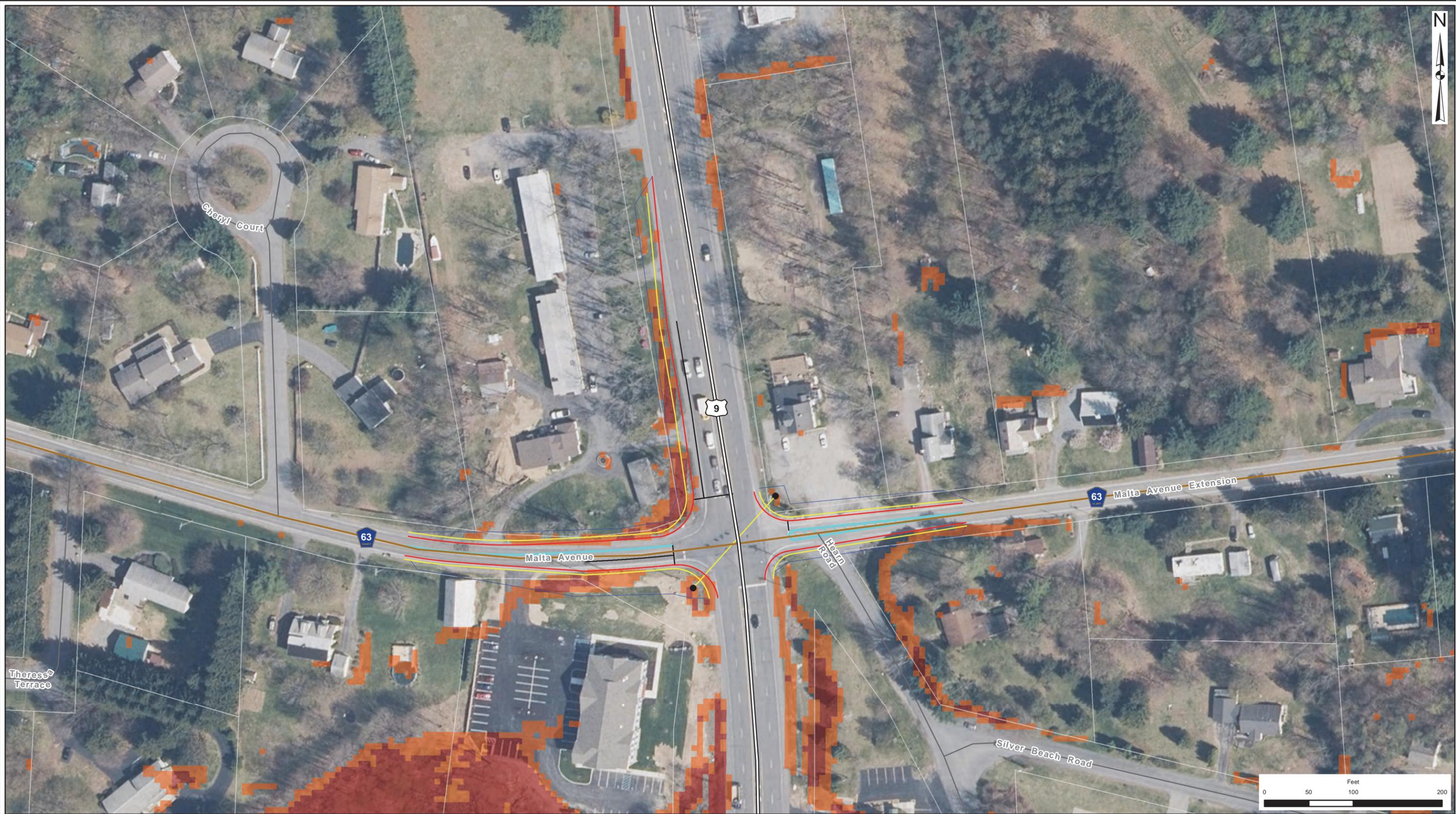
Saratoga County Regional Traffic Study

**Wetlands, Streams and Flood Zones
U.S. Route 9 and Malta Avenue**

Town of Malta - Saratoga County, New York

Drawn:	RLB
Date:	09/10/2015
Scale:	1 inch = 100 feet
Project:	91419.00
Figure:	27

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Slopes	Hydric Soils
< 15 %	Partially hydric
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> 25 %	

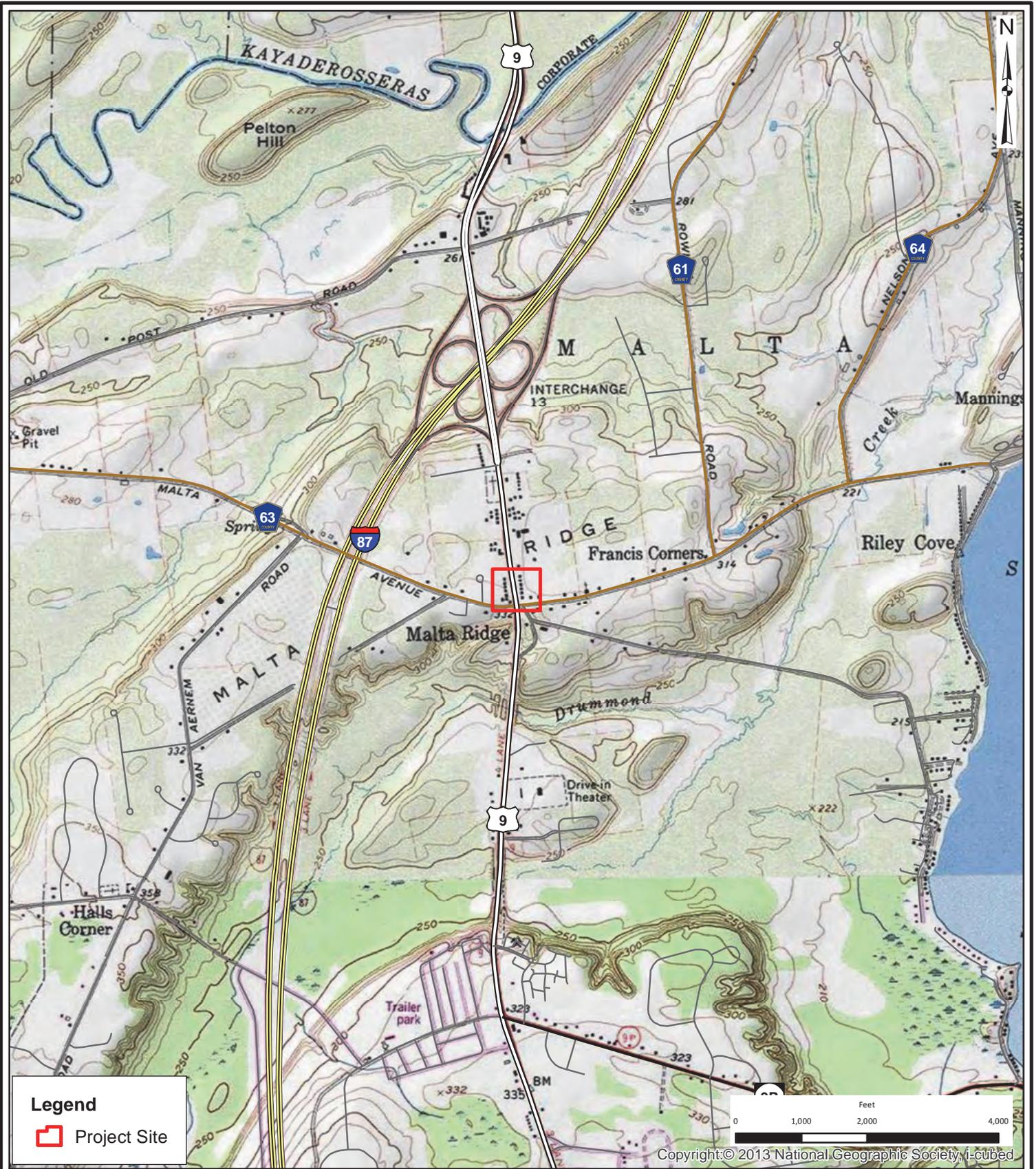
Saratoga County Regional Traffic Study

**Steep Slopes and Hydric Soils
U.S. Route 9 and Malta Avenue**

Town of Malta - Saratoga County, New York

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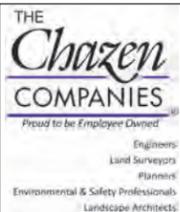
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USGS Location Map
U.S. Route 9 and Malta Avenue

Town of Malta - Saratoga County, New York

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Scale:	1:24,000
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 Potential Bat Roost Trees

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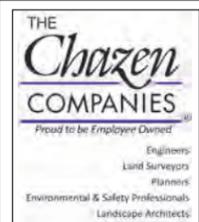
Saratoga County Regional Traffic Study

**Field Observations
Exit 11, I-87 and Round Lake Road**

Town of Malta - Saratoga County, New York

Drawn:	RLB
Date:	09/10/2015
Scale:	1 inch = 120 feet
Project:	91419.00
Figure:	24

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-  NYSDEC Wetlands
-  NWI Wetlands
-  Surface Water
-  100-yr Flood Zone
-  500-yr Flood Zone
-  NYSDEC Stream

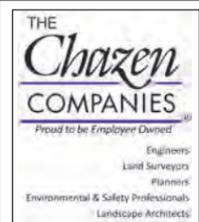
Saratoga County Regional Traffic Study

**Wetlands, Streams and Flood Zones
Exit 11, I-87 and Round Lake Road**

Town of Malta - Saratoga County, New York

Drawn:	RLB
Date:	09/10/2015
Scale:	1 inch = 120 feet
Project:	91419.00
Figure:	23

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Slopes	Hydric Soils
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15 - 25 %	All hydric
> 25 %	

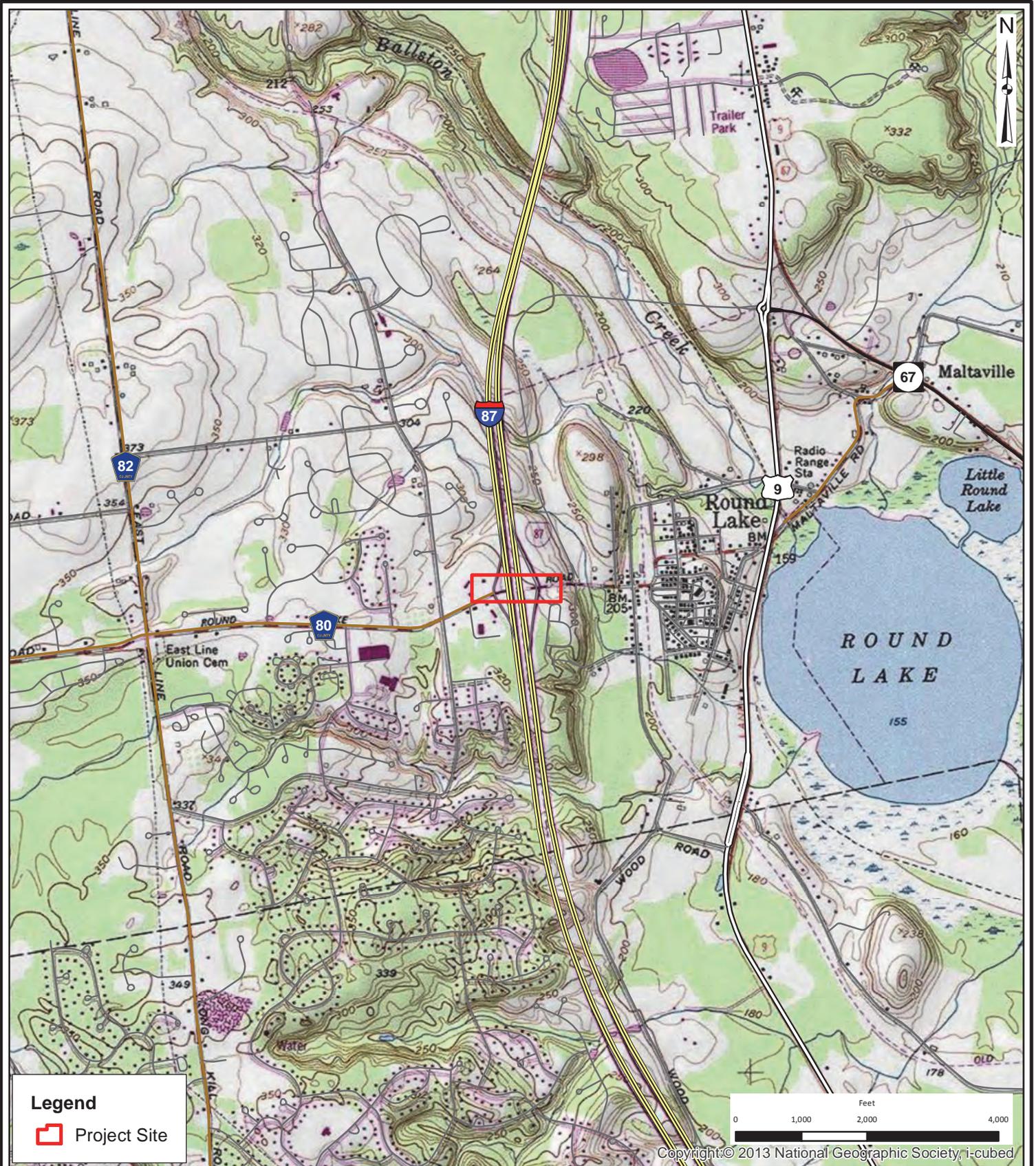
Saratoga County Regional Traffic Study

**Steep Slope and Hydric Soils
Exit 11, I-87 and Round Lake Road**

Town of Malta - Saratoga County, New York

Drawn:	RLB
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Scale:	1 inch = 120 feet
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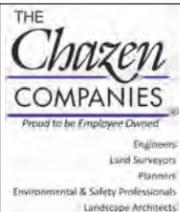
Saratoga County Regional Traffic Study

USGS Location Map
Exit 11, I-87 and Round Lake Road

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Observed Features

- Wetland Edge (approximate)
- Culvert
- Ditch
- Potential Bat Roost Trees
- Surface Water
- NWI Wetlands
- 100-yr Flood Zone

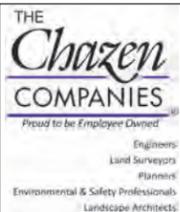
Saratoga County Regional Traffic Study

**Field Observations
Route 9P and Plains Road**

Town of Malta - Saratoga County, New York

Drawn:	RLB
Date:	09/10/2015
Scale:	1 inch = 100 feet
Project:	91419.00
Figure:	20

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-  Surface Water
-  NYSDEC Wetlands
-  NWI Wetlands
-  100-yr Flood Zone
-  500-yr Flood Zone
-  NYSDEC Stream

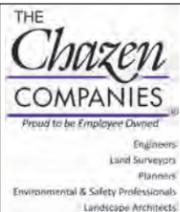
Saratoga County Regional Traffic Study

**Wetlands, Streams and Flood Zones
Route 9P and Plains Road**

Town of Malta - Saratoga County, New York

Drawn:	RLB
Date:	09/10/2015
Scale:	1 inch = 100 feet
Project:	91419.00
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Slopes

-  < 15 %
-  15 - 25 %
-  > 25 %

Hydric Soils

-  Partially hydric
-  All hydric

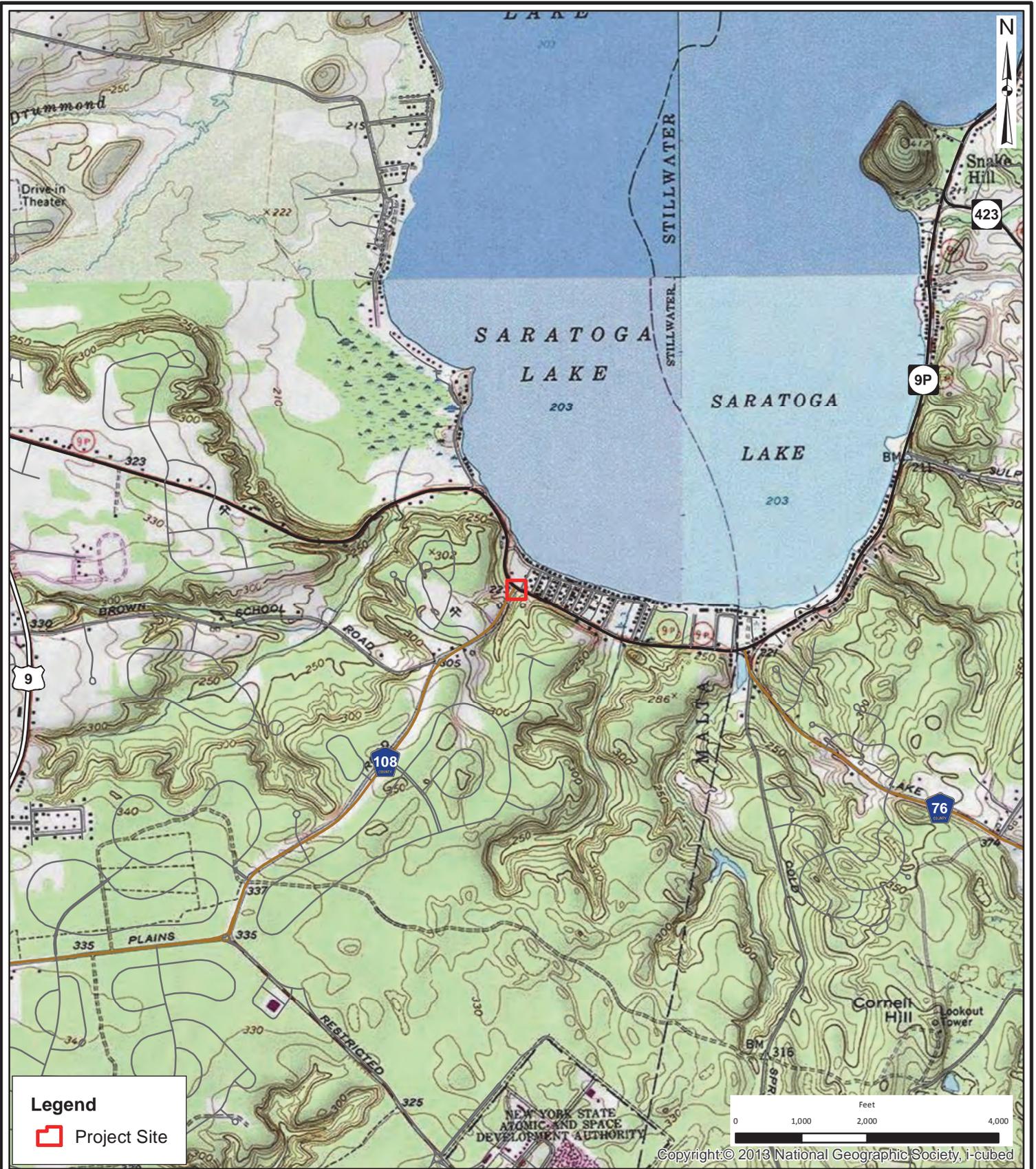
Saratoga County Regional Traffic Study

**Steep Slopes and Hydric Soils
Route 9P and Plains Road**

Town of Malta - Saratoga County, New York

Drawn:	RLB
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Scale:	1 inch = 100 feet
Project:	91419.00
Figure:	18

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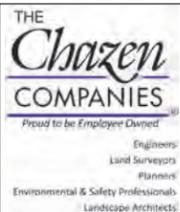
Saratoga County Regional Traffic Study

**USGS Location Map
Route 9P and Plains Road**

Town of Malta - Saratoga County, New York

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-  Potential Bat Roost Trees
-  Stormwater Basin
-  Wooded

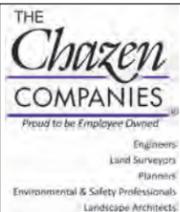
Saratoga County Regional Traffic Study

**Field Observations
Route 9 and Stonebreak Road**

Town of Malta - Saratoga County, New York

Drawn:	RLB
Date:	10/30/2015
Scale:	1 inch = 100 feet
Project:	91419.00
Figure:	16

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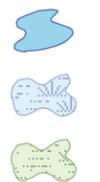
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Surface Water
NYSDEC Wetlands
NWI Wetlands



100-yr Flood Zone
500-yr Flood Zone
NYSDEC Stream

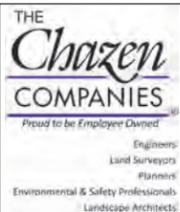
Saratoga County Regional Traffic Study

**Wetlands, Streams and Flood Zones
Route 9 and Stonebreak Road**

Town of Malta - Saratoga County, New York

Drawn:	RLB
Date:	09/24/2015
Scale:	1 inch = 100 feet
Project:	91419.00
Figure:	15

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Slopes

-  < 15 %
-  15 - 25 %
-  > 25 %

Hydric Soils

-  Partially hydric
-  All hydric

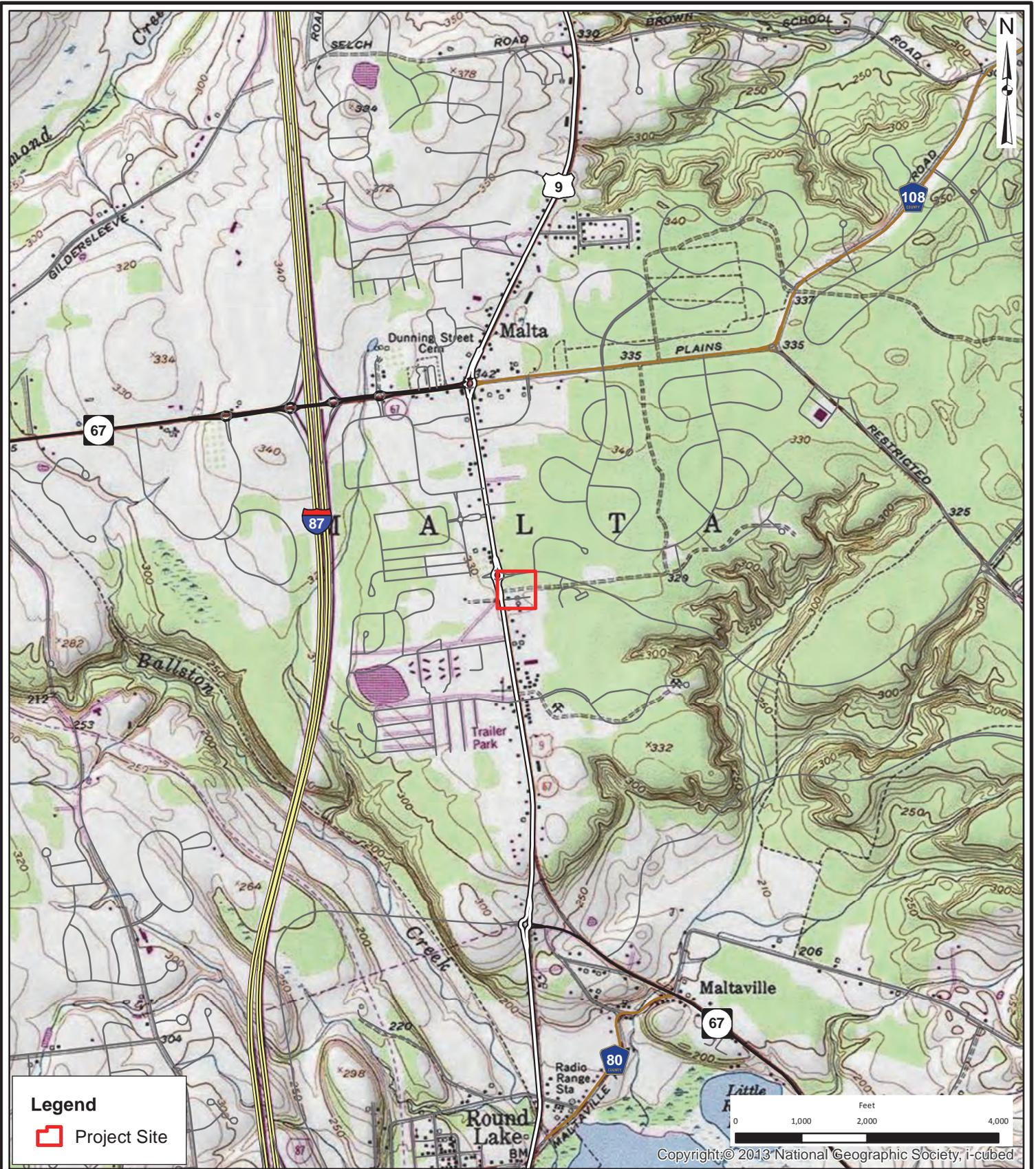
Saratoga County Regional Traffic Study

**Steep Slopes and Hydric Soils
Route 9 and Stonebreak Road**

Town of Malta - Saratoga County, New York

Drawn:	RLB
Date:	09/24/2015
Scale:	1 inch = 100 feet
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Figure:	14

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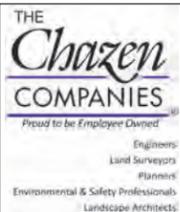
Saratoga County Regional Traffic Study

USGS Location Map
Route 9 and Stonebreak Road

Town of Malta - Saratoga County, New York

Drawn:	RLB
Date:	09/24/2015
Scale:	1:24,000
Project:	91419.00
Figure:	13

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Observed Features

- Wetland Edge (approximate)
- Culvert
- Ditch

- Potential Bat Roost Trees
- NWI Wetlands
- 100-yr Flood Zone

- 500-yr Flood Zone
- NYSDEC Stream

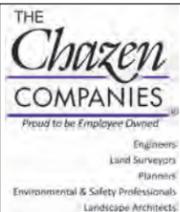
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**Field Observations
Route 67 and Brookline Road**

Town of Ballston - Saratoga County, New York

Drawn:	RLB
Date:	09/10/2015
Scale:	1 inch = 100 feet
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Figure:	12

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NYSDEC Wetlands



NWI Wetlands



Surface Water



100-yr Flood Zone



500-yr Flood Zone



NYSDEC Stream

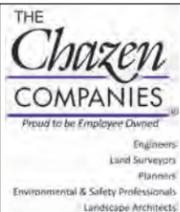
Saratoga County Regional Traffic Study

**Wetlands, Streams and Flood Zones
Route 67 and Brookline Road**

Town of Ballston - Saratoga County, New York

Drawn:	RLB
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Scale:	1 inch = 100 feet
Project:	91419.00
Figure:	11

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Slopes

-  <math>< 15\%</math>
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Hydric Soils

-  Partially hydric
-  All hydric

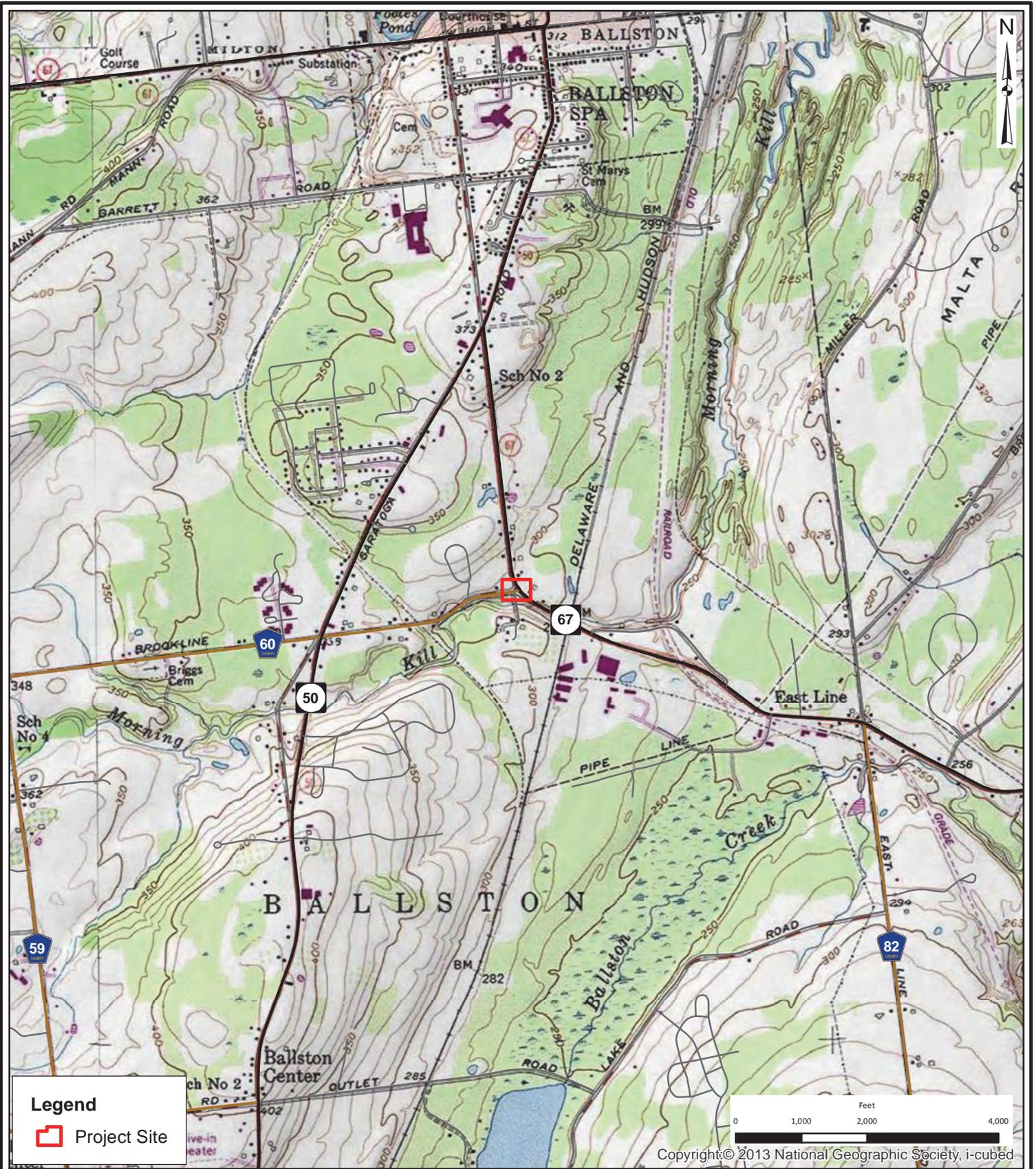
Saratoga County Regional Traffic Study

**Steep Slopes and Hydric Soils
Route 67 and Brookline Road**

Town of Ballston - Saratoga County, New York

Drawn:	RLB
Date:	09/10/2015
Scale:	1 inch = 100 feet
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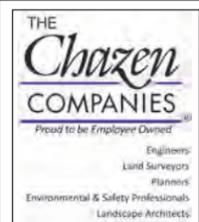
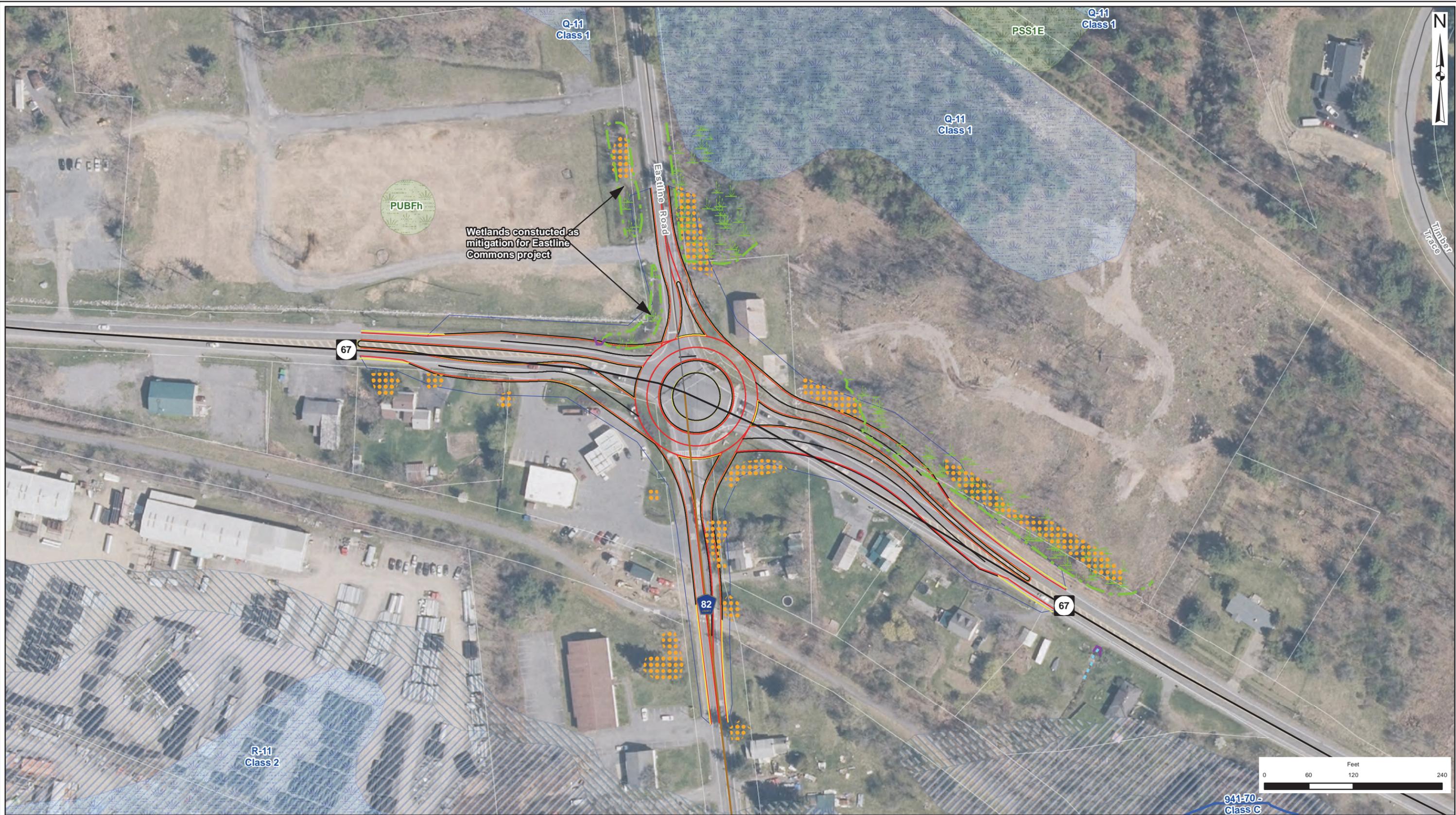
Saratoga County Regional Traffic Study

**USGS Location Map
 Route 67 and Brookline Road**

Town of Ballston - Saratoga County, New York

Drawn:	RLB
Date:	09/10/2015
Scale:	1:24,000
Project:	91419.00
Figure:	9

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- | | | |
|----------------------------|---------------------------|-------------------|
| Observed Features | Potential Bat Roost Trees | 100-yr Flood Zone |
| Wetland Edge (approximate) | NYSDEC Wetlands | 500-yr Flood Zone |
| Culvert | NWI Wetlands | NYSDEC Stream |
| Ditch | | |

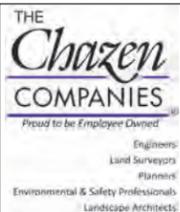
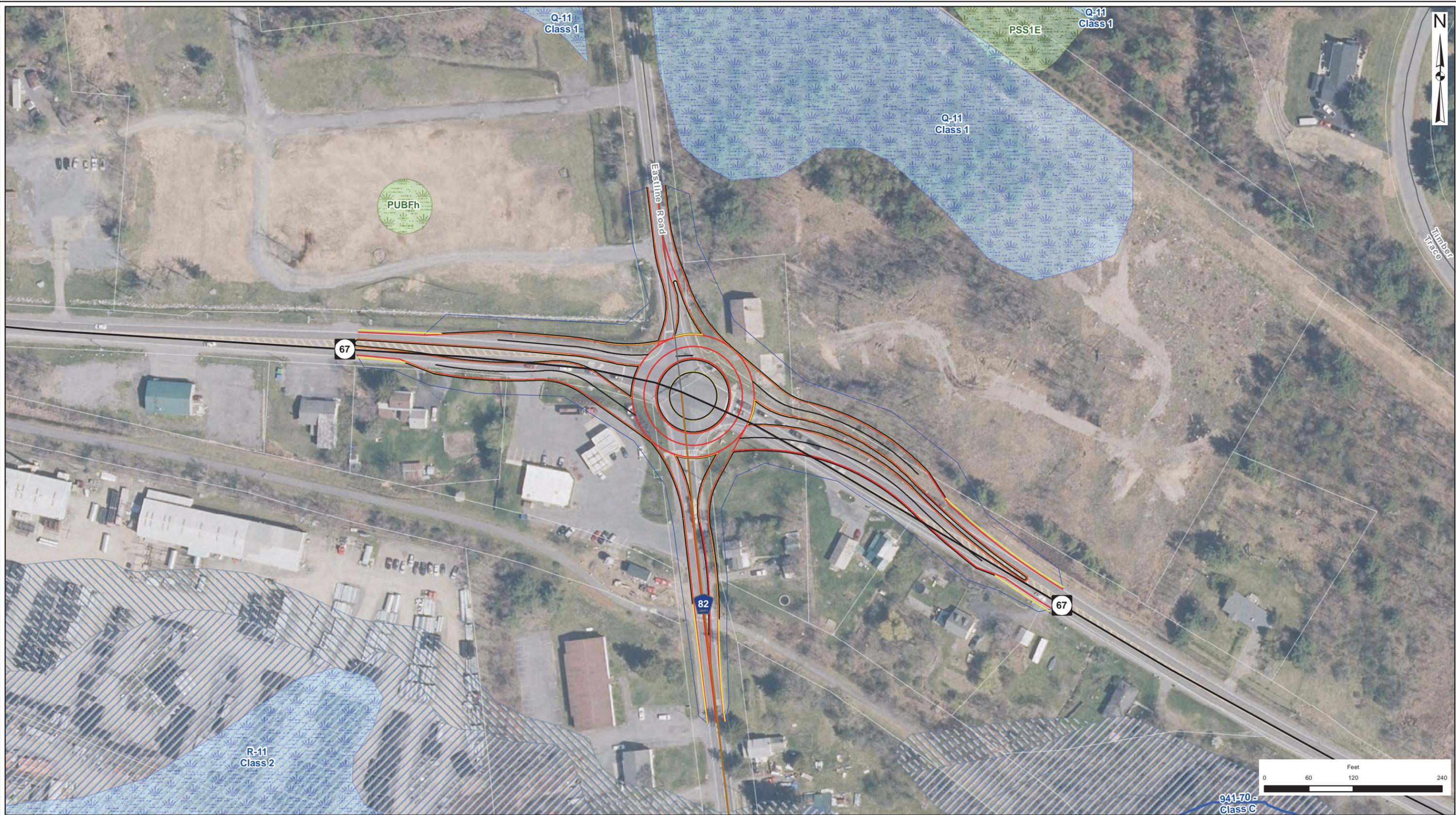
Saratoga County Regional Traffic Study

**Field Observations
Route 67 and Eastline Road**

Towns of Ballston & Malta - Saratoga County, New York

Drawn:	RLB
Date:	09/10/2015
Scale:	1 inch = 120 feet
Project:	91419.00
Figure:	8

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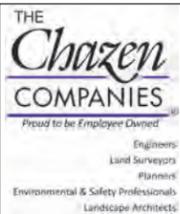
Saratoga County Regional Traffic Study

**Wetlands, Streams and Flood Zones
Route 67 and Eastline Road**

Towns of Ballston & Malta - Saratoga County, New York

Drawn:	RLB
Date:	09/10/2015
Scale:	1 inch = 120 feet
Project:	91419.00
Figure:	7

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Slopes

-  < 15 %
-  15 - 25 %
-  > 25 %

Hydric Soils

-  Partially hydric
-  All hydric

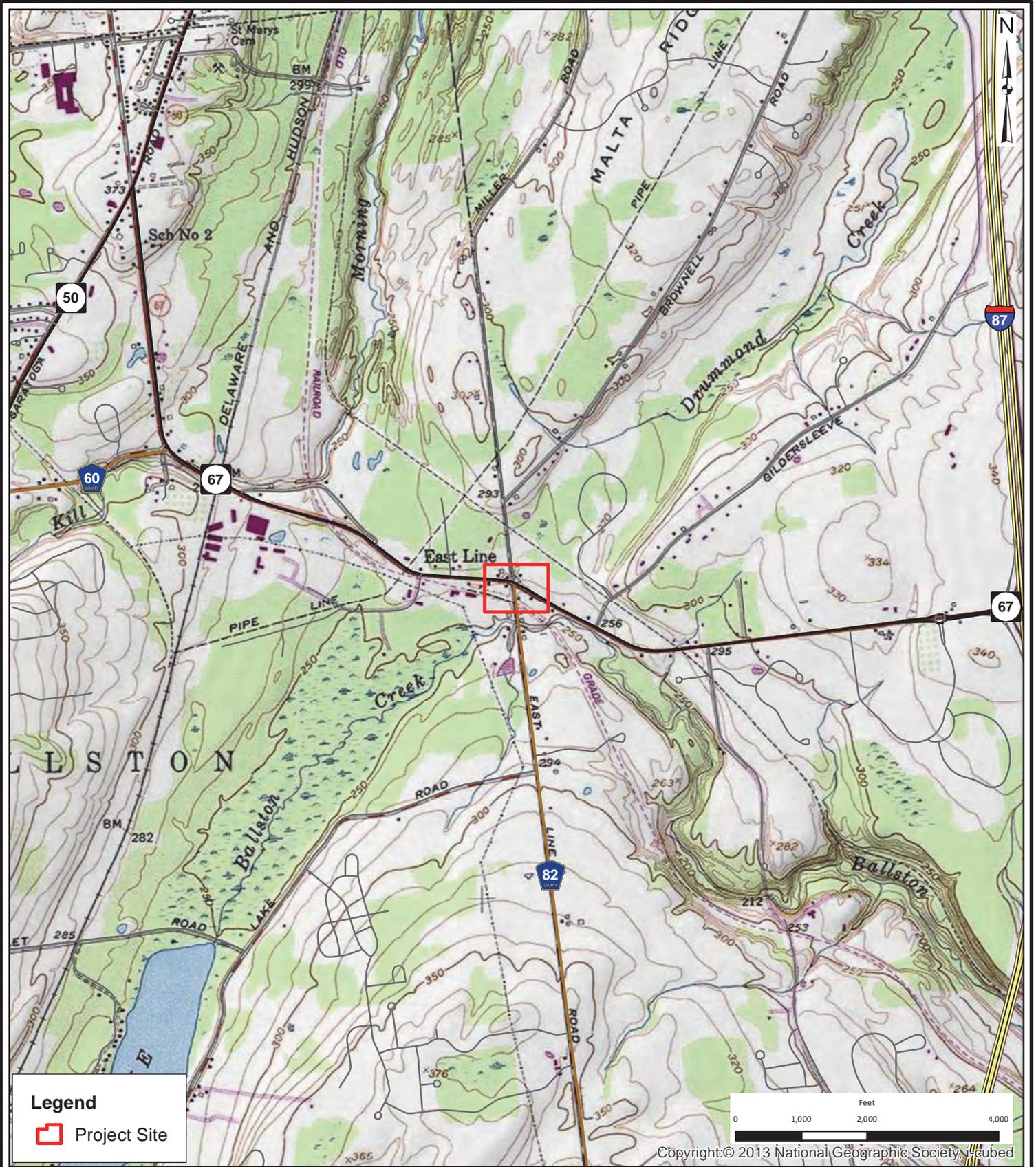
Saratoga County Regional Traffic Study

**Steep Slopes and Hydric Soils
Route 67 and Eastline Road**

Towns of Ballston & Malta - Saratoga County, New York

Drawn:	RLB
Date:	09/10/2015
Scale:	1 inch = 120 feet
Project:	91419.00
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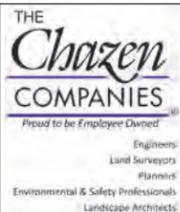
Saratoga County Regional Traffic Study

**USGS Location Map
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Towns of Ballston & Malta - Saratoga County, New York

Drawn:	RLB
Date:	09/10/2015
Scale:	1:24,000
Project:	91419.00
Figure:	5

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Observed Features

-  Wetland Edge (approximate)
-  Culvert
-  Ditch

-  Potential Bat Roost Trees
-  NWI Wetlands
-  100-yr Flood Zone
-  NYSDEC Stream

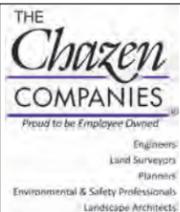
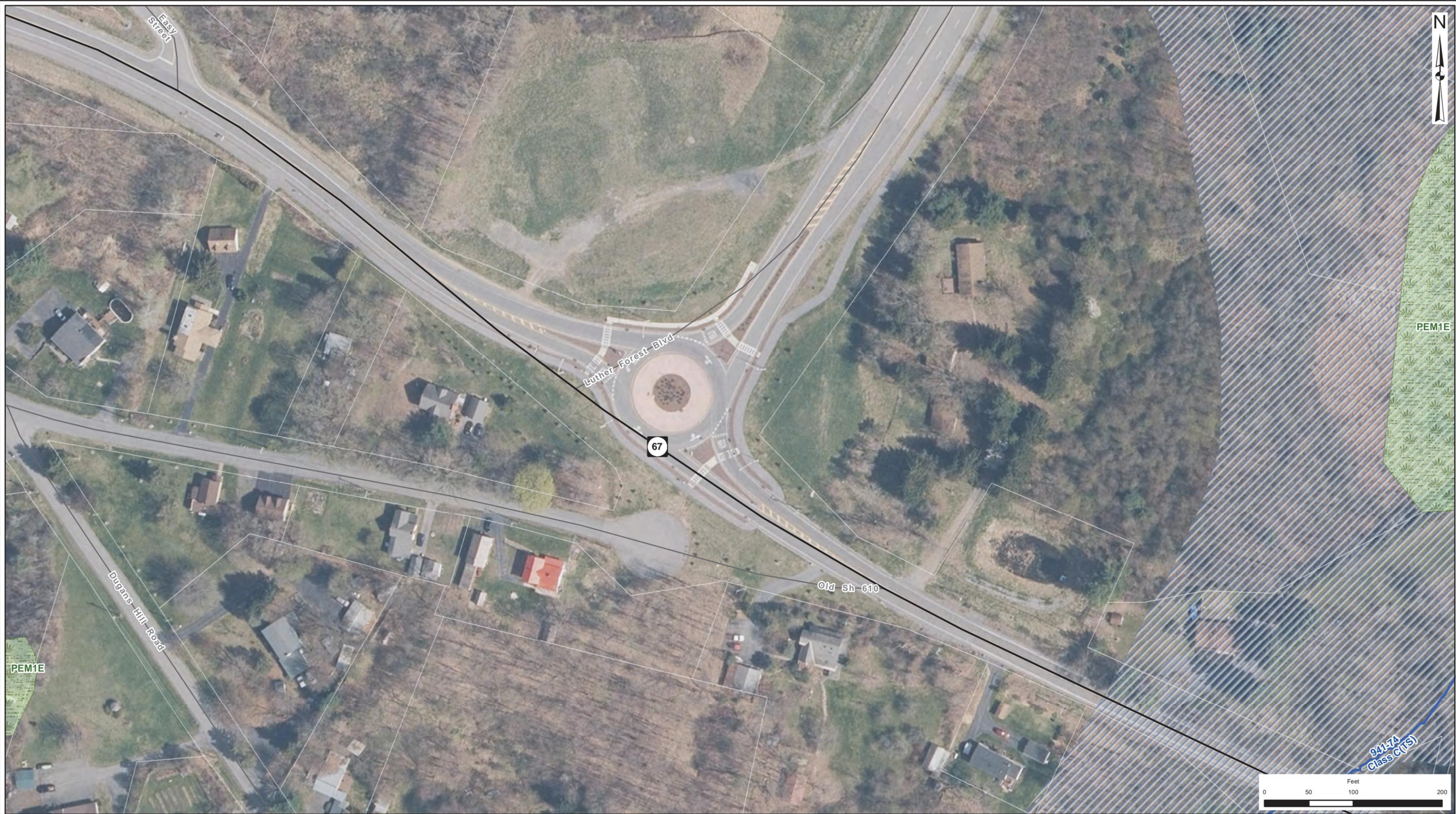
Saratoga County Regional Traffic Study

**Field Observations
Route 67 and Luther Forest Blvd.**

Town of Malta - Saratoga County, New York

Drawn:	RLB
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Figure:	4

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-  100-yr Flood Zone
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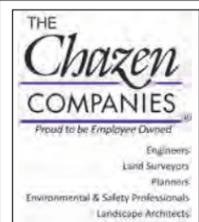
Saratoga County Regional Traffic Study

**Wetlands, Streams and Flood Zones
Route 67 and Luther Forest Blvd.**

Town of Malta - Saratoga County, New York

Drawn:	RLB
Date:	09/10/2015
Scale:	1 inch = 100 feet
Project:	91419.00
Figure:	3

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Saratoga County Regional Traffic Study

**Steep Slopes and Hydric Soils
Route 67 and Luther Forest Blvd.**

Town of Malta - Saratoga County, New York

Drawn:	RLB
Date:	09/10/2015
Scale:	1 inch = 100 feet
Project:	91419.00
Figure:	2

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ATTACHMENT A

IPaC Trust Resource Reports

Old Post Road, Northline Road, and Malta Avenue Intersection Improvement Study

IPaC Trust Resource Report

Generated August 18, 2015 09:56 AM MDT



US Fish & Wildlife Service

IPaC Trust Resource Report



Project Description

NAME

Old Post Road, Northline Road, and
Malta Avenue Intersection
Improvement Study

PROJECT CODE

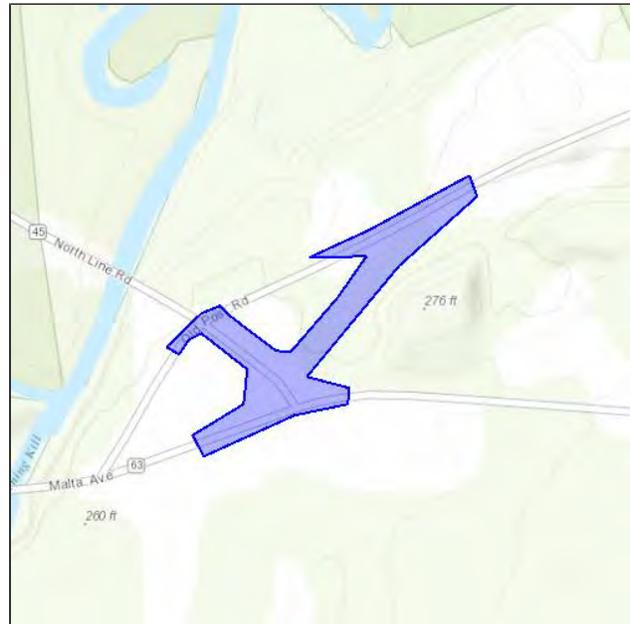
EEOVQ-Z3EXF-EEFFV-SECAB-5RBBD4

LOCATION

Saratoga County, New York

DESCRIPTION

The intersection of Old Post Road, Northline Road, and Malta Avenue in the Town of Malta is under study for potential changes, such as creation of a roundabout, which would improve traffic flow and safety.



U.S. Fish & Wildlife Contact Information

Species in this report are managed by:

New York Ecological Services Field Office

3817 Luker Road

Cortland, NY 13045-9349

(607) 753-9334

Endangered Species

Proposed, candidate, threatened, and endangered species that are managed by the [Endangered Species Program](#) and should be considered as part of an effect analysis for this project.

This unofficial species list is for informational purposes only and does not fulfill the requirements under [Section 7](#) of the Endangered Species Act, which states that Federal agencies are required to "request of the Secretary of Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action." This requirement applies to projects which are conducted, permitted or licensed by any Federal agency.

A letter from the local office and a species list which fulfills this requirement can be obtained by returning to this project on the IPaC website and requesting an Official Species List from the regulatory documents section.

Mammals

Northern Long-eared Bat *Myotis septentrionalis*

Threatened

CRITICAL HABITAT

No critical habitat has been designated for this species.

<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?sPCODE=A0JE>

Critical Habitats

Potential effects to critical habitat(s) within the project area must be analyzed along with the endangered species themselves.

There is no critical habitat within this project area

Migratory Birds

Birds are protected by the [Migratory Bird Treaty Act](#) and the Bald and Golden Eagle Protection Act.

Any activity which results in the take of migratory birds or eagles is prohibited unless authorized by the U.S. Fish and Wildlife Service (1). There are no provisions for allowing the take of migratory birds that are unintentionally killed or injured.

You are responsible for complying with the appropriate regulations for the protection of birds as part of this project. This involves analyzing potential impacts and implementing appropriate conservation measures for all project activities.

<p>American Bittern <i>Botaurus lentiginosus</i> Season: Breeding https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0F3</p>	Bird of conservation concern
<p>Bald Eagle <i>Haliaeetus leucocephalus</i> Year-round https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B008</p>	Bird of conservation concern
<p>Black-billed Cuckoo <i>Coccyzus erythrophthalmus</i> Season: Breeding https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0HI</p>	Bird of conservation concern
<p>Black-crowned Night-heron <i>Nycticorax nycticorax</i> Season: Breeding https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0EU</p>	Bird of conservation concern
<p>Blue-winged Warbler <i>Vermivora pinus</i> Season: Breeding</p>	Bird of conservation concern
<p>Canada Warbler <i>Wilsonia canadensis</i> Season: Breeding</p>	Bird of conservation concern
<p>Golden-winged Warbler <i>Vermivora chrysoptera</i> Season: Breeding https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0G4</p>	Bird of conservation concern
<p>Olive-sided Flycatcher <i>Contopus cooperi</i> Season: Breeding https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0AN</p>	Bird of conservation concern
<p>Peregrine Falcon <i>Falco peregrinus</i> Season: Breeding https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0FU</p>	Bird of conservation concern
<p>Pied-billed Grebe <i>Podilymbus podiceps</i> Season: Breeding</p>	Bird of conservation concern
<p>Prairie Warbler <i>Dendroica discolor</i> Season: Breeding</p>	Bird of conservation concern
<p>Red-headed Woodpecker <i>Melanerpes erythrocephalus</i> Season: Breeding</p>	Bird of conservation concern

Short-eared Owl *Asio flammeus*

Bird of conservation concern

Season: Wintering

<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?sPCODE=B0HD>

Upland Sandpiper *Bartramia longicauda*

Bird of conservation concern

Season: Breeding

<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?sPCODE=B0HC>

Wood Thrush *Hylocichla mustelina*

Bird of conservation concern

Season: Breeding

Refuges

Any activity proposed on [National Wildlife Refuge](#) lands must undergo a 'Compatibility Determination' conducted by the Refuge. If your project overlaps or otherwise impacts a Refuge, please contact that Refuge to discuss the authorization process.

There are no refuges within this project area

Wetlands

Impacts to [NWI wetlands](#) and other aquatic habitats from your project may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal Statutes.

Project proponents should discuss the relationship of these requirements to their project with the Regulatory Program of the appropriate [U.S. Army Corps of Engineers District](#).

DATA LIMITATIONS

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

DATA EXCLUSIONS

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

DATA PRECAUTIONS

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

Wetland data is unavailable at this time.

US Route 9 and Malta Avenue Traffic Improvement Study

IPaC Trust Resource Report

Generated August 18, 2015 09:39 AM MDT



US Fish & Wildlife Service

IPaC Trust Resource Report



Project Description

NAME

US Route 9 and Malta Avenue Traffic Improvement Study

PROJECT CODE

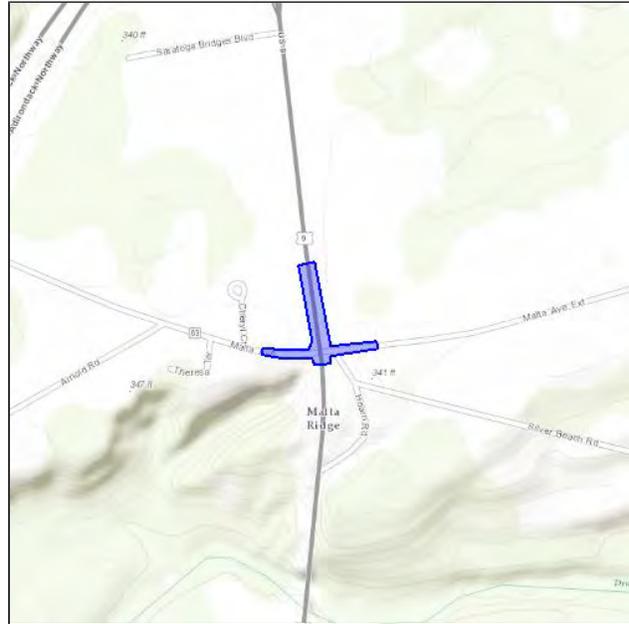
6ZNZH-PNQ2N-BFJEG-DCNEZ-MVYISI

LOCATION

Saratoga County, New York

DESCRIPTION

The intersection of US Route 9 and Malta Avenue in the Town of Malta is under study for potential changes, such as new turning lanes, which would improve traffic flow and safety.



U.S. Fish & Wildlife Contact Information

Species in this report are managed by:

New York Ecological Services Field Office

3817 Luker Road

Cortland, NY 13045-9349

(607) 753-9334

Endangered Species

Proposed, candidate, threatened, and endangered species that are managed by the [Endangered Species Program](#) and should be considered as part of an effect analysis for this project.

This unofficial species list is for informational purposes only and does not fulfill the requirements under [Section 7](#) of the Endangered Species Act, which states that Federal agencies are required to "request of the Secretary of Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action." This requirement applies to projects which are conducted, permitted or licensed by any Federal agency.

A letter from the local office and a species list which fulfills this requirement can be obtained by returning to this project on the IPaC website and requesting an Official Species List from the regulatory documents section.

Insects

Karner Blue Butterfly *Lycaeides melissa samuelis*

Endangered

CRITICAL HABITAT

No critical habitat has been designated for this species.

<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=I00E>

Mammals

Northern Long-eared Bat *Myotis septentrionalis*

Threatened

CRITICAL HABITAT

No critical habitat has been designated for this species.

<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=A0JE>

Critical Habitats

Potential effects to critical habitat(s) within the project area must be analyzed along with the endangered species themselves.

There is no critical habitat within this project area

Migratory Birds

Birds are protected by the [Migratory Bird Treaty Act](#) and the Bald and Golden Eagle Protection Act.

Any activity which results in the take of migratory birds or eagles is prohibited unless authorized by the U.S. Fish and Wildlife Service (1). There are no provisions for allowing the take of migratory birds that are unintentionally killed or injured.

You are responsible for complying with the appropriate regulations for the protection of birds as part of this project. This involves analyzing potential impacts and implementing appropriate conservation measures for all project activities.

<p>American Bittern <i>Botaurus lentiginosus</i> Season: Breeding https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0F3</p>	Bird of conservation concern
<p>Bald Eagle <i>Haliaeetus leucocephalus</i> Year-round https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B008</p>	Bird of conservation concern
<p>Black-billed Cuckoo <i>Coccyzus erythrophthalmus</i> Season: Breeding https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0HI</p>	Bird of conservation concern
<p>Black-crowned Night-heron <i>Nycticorax nycticorax</i> Season: Breeding https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0EU</p>	Bird of conservation concern
<p>Blue-winged Warbler <i>Vermivora pinus</i> Season: Breeding</p>	Bird of conservation concern
<p>Canada Warbler <i>Wilsonia canadensis</i> Season: Breeding</p>	Bird of conservation concern
<p>Golden-winged Warbler <i>Vermivora chrysoptera</i> Season: Breeding https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0G4</p>	Bird of conservation concern
<p>Olive-sided Flycatcher <i>Contopus cooperi</i> Season: Breeding https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0AN</p>	Bird of conservation concern
<p>Peregrine Falcon <i>Falco peregrinus</i> Season: Breeding https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0FU</p>	Bird of conservation concern
<p>Pied-billed Grebe <i>Podilymbus podiceps</i> Season: Breeding</p>	Bird of conservation concern
<p>Prairie Warbler <i>Dendroica discolor</i> Season: Breeding</p>	Bird of conservation concern
<p>Red-headed Woodpecker <i>Melanerpes erythrocephalus</i> Season: Breeding</p>	Bird of conservation concern

Short-eared Owl *Asio flammeus*

Bird of conservation concern

Season: Wintering

<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?sPCODE=B0HD>

Upland Sandpiper *Bartramia longicauda*

Bird of conservation concern

Season: Breeding

<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?sPCODE=B0HC>

Wood Thrush *Hylocichla mustelina*

Bird of conservation concern

Season: Breeding

Refuges

Any activity proposed on [National Wildlife Refuge](#) lands must undergo a 'Compatibility Determination' conducted by the Refuge. If your project overlaps or otherwise impacts a Refuge, please contact that Refuge to discuss the authorization process.

Refuge data is unavailable at this time.

Wetlands

Impacts to [NWI wetlands](#) and other aquatic habitats from your project may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal Statutes.

Project proponents should discuss the relationship of these requirements to their project with the Regulatory Program of the appropriate [U.S. Army Corps of Engineers District](#).

DATA LIMITATIONS

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

DATA EXCLUSIONS

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

DATA PRECAUTIONS

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Wetland data is unavailable at this time.

Adirondack Northway Exit 11 Improvement Project

IPaC Trust Resource Report

Generated August 18, 2015 09:25 AM MDT



US Fish & Wildlife Service

IPaC Trust Resource Report



Project Description

NAME

Adirondack Northway Exit 11
Improvement Project

PROJECT CODE

CNVJC-GVVWV-HLBNH-TKA66-EFKI2U

LOCATION

Saratoga County, New York

DESCRIPTION

Exit 11 of the Adirondack Northway (Interstate 87) is under study for changes to be made, such as new turning lanes, to improve traffic flow on Round Lake Road.



U.S. Fish & Wildlife Contact Information

Species in this report are managed by:

New York Ecological Services Field Office

3817 Luker Road

Cortland, NY 13045-9349

(607) 753-9334

Endangered Species

Proposed, candidate, threatened, and endangered species that are managed by the [Endangered Species Program](#) and should be considered as part of an effect analysis for this project.

This unofficial species list is for informational purposes only and does not fulfill the requirements under [Section 7](#) of the Endangered Species Act, which states that Federal agencies are required to "request of the Secretary of Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action." This requirement applies to projects which are conducted, permitted or licensed by any Federal agency.

A letter from the local office and a species list which fulfills this requirement can be obtained by returning to this project on the IPaC website and requesting an Official Species List from the regulatory documents section.

Mammals

Northern Long-eared Bat *Myotis septentrionalis*

Threatened

CRITICAL HABITAT

No critical habitat has been designated for this species.

<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?sPCODE=A0JE>

Critical Habitats

Potential effects to critical habitat(s) within the project area must be analyzed along with the endangered species themselves.

There is no critical habitat within this project area

Migratory Birds

Birds are protected by the [Migratory Bird Treaty Act](#) and the Bald and Golden Eagle Protection Act.

Any activity which results in the take of migratory birds or eagles is prohibited unless authorized by the U.S. Fish and Wildlife Service (1). There are no provisions for allowing the take of migratory birds that are unintentionally killed or injured.

You are responsible for complying with the appropriate regulations for the protection of birds as part of this project. This involves analyzing potential impacts and implementing appropriate conservation measures for all project activities.

<p>American Bittern <i>Botaurus lentiginosus</i> Season: Breeding https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0F3</p>	Bird of conservation concern
<p>Bald Eagle <i>Haliaeetus leucocephalus</i> Year-round https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B008</p>	Bird of conservation concern
<p>Black-billed Cuckoo <i>Coccyzus erythrophthalmus</i> Season: Breeding https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0HI</p>	Bird of conservation concern
<p>Black-crowned Night-heron <i>Nycticorax nycticorax</i> Season: Breeding https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0EU</p>	Bird of conservation concern
<p>Blue-winged Warbler <i>Vermivora pinus</i> Season: Breeding</p>	Bird of conservation concern
<p>Canada Warbler <i>Wilsonia canadensis</i> Season: Breeding</p>	Bird of conservation concern
<p>Golden-winged Warbler <i>Vermivora chrysoptera</i> Season: Breeding https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0G4</p>	Bird of conservation concern
<p>Olive-sided Flycatcher <i>Contopus cooperi</i> Season: Breeding https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0AN</p>	Bird of conservation concern
<p>Peregrine Falcon <i>Falco peregrinus</i> Season: Breeding https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0FU</p>	Bird of conservation concern
<p>Pied-billed Grebe <i>Podilymbus podiceps</i> Season: Breeding</p>	Bird of conservation concern
<p>Prairie Warbler <i>Dendroica discolor</i> Season: Breeding</p>	Bird of conservation concern
<p>Red-headed Woodpecker <i>Melanerpes erythrocephalus</i> Season: Breeding</p>	Bird of conservation concern

Short-eared Owl *Asio flammeus*

Bird of conservation concern

Season: Wintering

<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?sPCODE=B0HD>

Upland Sandpiper *Bartramia longicauda*

Bird of conservation concern

Season: Breeding

<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?sPCODE=B0HC>

Wood Thrush *Hylocichla mustelina*

Bird of conservation concern

Season: Breeding

Refuges

Any activity proposed on [National Wildlife Refuge](#) lands must undergo a 'Compatibility Determination' conducted by the Refuge. If your project overlaps or otherwise impacts a Refuge, please contact that Refuge to discuss the authorization process.

There are no refuges within this project area

Wetlands

Impacts to [NWI wetlands](#) and other aquatic habitats from your project may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal Statutes.

Project proponents should discuss the relationship of these requirements to their project with the Regulatory Program of the appropriate [U.S. Army Corps of Engineers District](#).

DATA LIMITATIONS

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The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

DATA EXCLUSIONS

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

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Wetland data is unavailable at this time.

New York Route 9P and Plains Road Intersection Improvement Study

IPaC Trust Resource Report

Generated August 18, 2015 11:04 AM MDT



US Fish & Wildlife Service

IPaC Trust Resource Report



Project Description

NAME

New York Route 9P and Plains Road
Intersection Improvement Study

PROJECT CODE

7N40X-V2S6F-EGXA3-5UVQA-IIHFDE

LOCATION

Saratoga County, New York

DESCRIPTION

The intersection of NY Route 9P and Plains Road (County Route 108) in the Town of Malta is under study for potential changes, such as signalization, which would improve traffic flow and safety.



U.S. Fish & Wildlife Contact Information

Species in this report are managed by:

New York Ecological Services Field Office

3817 Luker Road

Cortland, NY 13045-9349

(607) 753-9334

Endangered Species

Proposed, candidate, threatened, and endangered species that are managed by the [Endangered Species Program](#) and should be considered as part of an effect analysis for this project.

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A letter from the local office and a species list which fulfills this requirement can be obtained by returning to this project on the IPaC website and requesting an Official Species List from the regulatory documents section.

Mammals

Northern Long-eared Bat *Myotis septentrionalis*

Threatened

CRITICAL HABITAT

No critical habitat has been designated for this species.

<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?scode=A0JE>

Critical Habitats

Potential effects to critical habitat(s) within the project area must be analyzed along with the endangered species themselves.

There is no critical habitat within this project area

Migratory Birds

Birds are protected by the [Migratory Bird Treaty Act](#) and the Bald and Golden Eagle Protection Act.

Any activity which results in the take of migratory birds or eagles is prohibited unless authorized by the U.S. Fish and Wildlife Service (1). There are no provisions for allowing the take of migratory birds that are unintentionally killed or injured.

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<p>American Bittern <i>Botaurus lentiginosus</i> Season: Breeding https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0F3</p>	Bird of conservation concern
<p>Bald Eagle <i>Haliaeetus leucocephalus</i> Year-round https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B008</p>	Bird of conservation concern
<p>Black-billed Cuckoo <i>Coccyzus erythrophthalmus</i> Season: Breeding https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0HI</p>	Bird of conservation concern
<p>Black-crowned Night-heron <i>Nycticorax nycticorax</i> Season: Breeding https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0EU</p>	Bird of conservation concern
<p>Blue-winged Warbler <i>Vermivora pinus</i> Season: Breeding</p>	Bird of conservation concern
<p>Canada Warbler <i>Wilsonia canadensis</i> Season: Breeding</p>	Bird of conservation concern
<p>Golden-winged Warbler <i>Vermivora chrysoptera</i> Season: Breeding https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0G4</p>	Bird of conservation concern
<p>Olive-sided Flycatcher <i>Contopus cooperi</i> Season: Breeding https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0AN</p>	Bird of conservation concern
<p>Peregrine Falcon <i>Falco peregrinus</i> Season: Breeding https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0FU</p>	Bird of conservation concern
<p>Pied-billed Grebe <i>Podilymbus podiceps</i> Season: Breeding</p>	Bird of conservation concern
<p>Prairie Warbler <i>Dendroica discolor</i> Season: Breeding</p>	Bird of conservation concern
<p>Red-headed Woodpecker <i>Melanerpes erythrocephalus</i> Season: Breeding</p>	Bird of conservation concern

Short-eared Owl *Asio flammeus*

Bird of conservation concern

Season: Wintering

<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?sPCODE=B0HD>

Upland Sandpiper *Bartramia longicauda*

Bird of conservation concern

Season: Breeding

<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?sPCODE=B0HC>

Wood Thrush *Hylocichla mustelina*

Bird of conservation concern

Season: Breeding

Refuges

Any activity proposed on [National Wildlife Refuge](#) lands must undergo a 'Compatibility Determination' conducted by the Refuge. If your project overlaps or otherwise impacts a Refuge, please contact that Refuge to discuss the authorization process.

There are no refuges within this project area

Wetlands

Impacts to [NWI wetlands](#) and other aquatic habitats from your project may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal Statutes.

Project proponents should discuss the relationship of these requirements to their project with the Regulatory Program of the appropriate [U.S. Army Corps of Engineers District](#).

DATA LIMITATIONS

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DATA EXCLUSIONS

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There are no wetlands identified in this project area

US Route 9 and Stonebreak Road Intersection Improvement Project

IPaC Trust Resource Report

Generated October 01, 2015 10:07 AM MDT

This report is for informational purposes only and should not be used for planning or analyzing project-level impacts. For projects that require FWS review, please return to this project on the IPaC website and request an official species list from the Regulatory Documents page.



US Fish & Wildlife Service

IPaC Trust Resource Report



Project Description

NAME

US Route 9 and Stonebreak Road
Intersection Improvement Project

PROJECT CODE

LWM2B-DYQTV-DKHCF-MOLIT-YC44DI

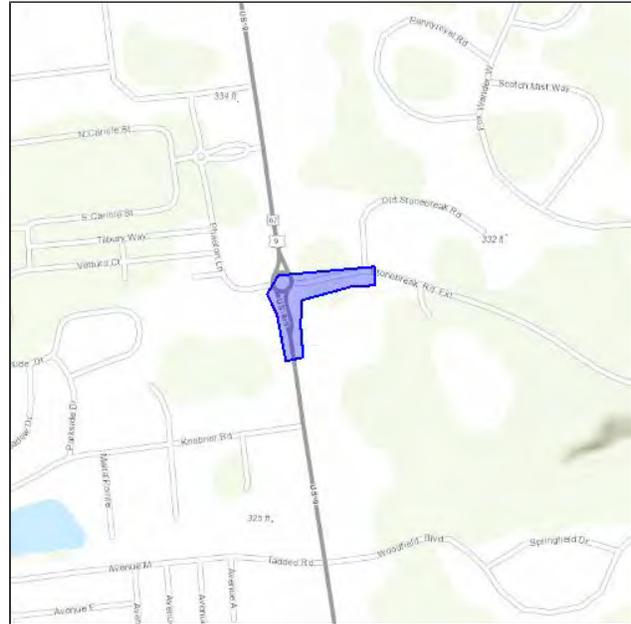
LOCATION

Saratoga County, New York

DESCRIPTION

An existing road intersection that features a roundabout is proposed to be improved by addition of a separate lane on northbound Route 9 for traffic turning into Stonebreak Road. That additional lane will merge into an

existing lane on eastbound Stonebreak Road within 500 feet of the intersection. All proposed work will be east of Route 9 and south of Stonebreak Road.



U.S. Fish & Wildlife Contact Information

Species in this report are managed by:

New York Ecological Services Field Office

3817 Luker Road

Cortland, NY 13045-9349

(607) 753-9334

Endangered Species

Proposed, candidate, threatened, and endangered species that are managed by the [Endangered Species Program](#) and should be considered as part of an effect analysis for this project.

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A letter from the local office and a species list which fulfills this requirement can be obtained by returning to this project on the IPaC website and requesting an official species list on the Regulatory Documents page.

Insects

Karner Blue Butterfly *Lycaeides melissa samuelis*

Endangered

CRITICAL HABITAT

No critical habitat has been designated for this species.

<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=I00E>

Mammals

Northern Long-eared Bat *Myotis septentrionalis*

Threatened

CRITICAL HABITAT

No critical habitat has been designated for this species.

<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=A0JE>

Critical Habitats

Potential effects to critical habitat(s) within the project area must be analyzed along with the endangered species themselves.

There is no critical habitat within this project area

Migratory Birds

Birds are protected by the [Migratory Bird Treaty Act](#) and the Bald and Golden Eagle Protection Act.

Any activity which results in the take of migratory birds or eagles is prohibited unless authorized by the U.S. Fish and Wildlife Service (1). There are no provisions for allowing the take of migratory birds that are unintentionally killed or injured.

You are responsible for complying with the appropriate regulations for the protection of birds as part of this project. This involves analyzing potential impacts and implementing appropriate conservation measures for all project activities.

<p>American Bittern <i>Botaurus lentiginosus</i> Season: Breeding https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0F3</p>	Bird of conservation concern
<p>Bald Eagle <i>Haliaeetus leucocephalus</i> Year-round https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B008</p>	Bird of conservation concern
<p>Black-billed Cuckoo <i>Coccyzus erythrophthalmus</i> Season: Breeding https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0HI</p>	Bird of conservation concern
<p>Black-crowned Night-heron <i>Nycticorax nycticorax</i> Season: Breeding https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0EU</p>	Bird of conservation concern
<p>Blue-winged Warbler <i>Vermivora pinus</i> Season: Breeding</p>	Bird of conservation concern
<p>Canada Warbler <i>Wilsonia canadensis</i> Season: Breeding</p>	Bird of conservation concern
<p>Golden-winged Warbler <i>Vermivora chrysoptera</i> Season: Breeding https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0G4</p>	Bird of conservation concern
<p>Olive-sided Flycatcher <i>Contopus cooperi</i> Season: Breeding https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0AN</p>	Bird of conservation concern
<p>Peregrine Falcon <i>Falco peregrinus</i> Season: Breeding https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0FU</p>	Bird of conservation concern
<p>Pied-billed Grebe <i>Podilymbus podiceps</i> Season: Breeding</p>	Bird of conservation concern
<p>Prairie Warbler <i>Dendroica discolor</i> Season: Breeding</p>	Bird of conservation concern
<p>Red-headed Woodpecker <i>Melanerpes erythrocephalus</i> Season: Breeding</p>	Bird of conservation concern

Short-eared Owl *Asio flammeus*

Bird of conservation concern

Season: Wintering

<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?sPCODE=B0HD>

Upland Sandpiper *Bartramia longicauda*

Bird of conservation concern

Season: Breeding

<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?sPCODE=B0HC>

Wood Thrush *Hylocichla mustelina*

Bird of conservation concern

Season: Breeding

Refuges

Any activity proposed on [National Wildlife Refuge](#) lands must undergo a 'Compatibility Determination' conducted by the Refuge. If your project overlaps or otherwise impacts a Refuge, please contact that Refuge to discuss the authorization process.

Refuge data is unavailable at this time.

Wetlands

Impacts to [NWI wetlands](#) and other aquatic habitats from your project may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal Statutes.

Project proponents should discuss the relationship of these requirements to their project with the Regulatory Program of the appropriate [U.S. Army Corps of Engineers District](#).

DATA LIMITATIONS

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

DATA EXCLUSIONS

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

DATA PRECAUTIONS

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

There are no wetlands identified in this project area

New York Route 67 and Brookline Road Intersection Improvement Study

IPaC Trust Resource Report

Generated August 18, 2015 11:18 AM MDT



US Fish & Wildlife Service

IPaC Trust Resource Report



Project Description

NAME

New York Route 67 and Brookline
Road Intersection Improvement Study

PROJECT CODE

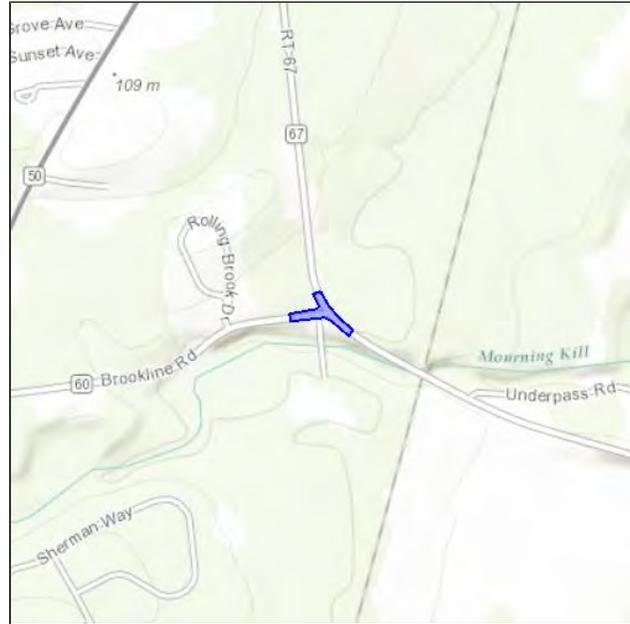
6L3MI-CHGEJ-CHHNZ-3GPPM-PBT3PY

LOCATION

Saratoga County, New York

DESCRIPTION

The intersection of NY Route 67 and Brookline Road (County Route 60) in the Town of Ballston is under study for potential changes, such as signalization, which would improve traffic flow and safety.



U.S. Fish & Wildlife Contact Information

Species in this report are managed by:

New York Ecological Services Field Office

3817 Luker Road

Cortland, NY 13045-9349

(607) 753-9334

Endangered Species

Proposed, candidate, threatened, and endangered species that are managed by the [Endangered Species Program](#) and should be considered as part of an effect analysis for this project.

This unofficial species list is for informational purposes only and does not fulfill the requirements under [Section 7](#) of the Endangered Species Act, which states that Federal agencies are required to "request of the Secretary of Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action." This requirement applies to projects which are conducted, permitted or licensed by any Federal agency.

A letter from the local office and a species list which fulfills this requirement can be obtained by returning to this project on the IPaC website and requesting an Official Species List from the regulatory documents section.

Mammals

Northern Long-eared Bat *Myotis septentrionalis*

Threatened

CRITICAL HABITAT

No critical habitat has been designated for this species.

<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?sPCODE=A0JE>

Critical Habitats

Potential effects to critical habitat(s) within the project area must be analyzed along with the endangered species themselves.

There is no critical habitat within this project area

Migratory Birds

Birds are protected by the [Migratory Bird Treaty Act](#) and the Bald and Golden Eagle Protection Act.

Any activity which results in the take of migratory birds or eagles is prohibited unless authorized by the U.S. Fish and Wildlife Service (1). There are no provisions for allowing the take of migratory birds that are unintentionally killed or injured.

You are responsible for complying with the appropriate regulations for the protection of birds as part of this project. This involves analyzing potential impacts and implementing appropriate conservation measures for all project activities.

<p>American Bittern <i>Botaurus lentiginosus</i> Season: Breeding https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0F3</p>	Bird of conservation concern
<p>Bald Eagle <i>Haliaeetus leucocephalus</i> Year-round https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B008</p>	Bird of conservation concern
<p>Black-billed Cuckoo <i>Coccyzus erythrophthalmus</i> Season: Breeding https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0HI</p>	Bird of conservation concern
<p>Black-crowned Night-heron <i>Nycticorax nycticorax</i> Season: Breeding https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0EU</p>	Bird of conservation concern
<p>Blue-winged Warbler <i>Vermivora pinus</i> Season: Breeding</p>	Bird of conservation concern
<p>Canada Warbler <i>Wilsonia canadensis</i> Season: Breeding</p>	Bird of conservation concern
<p>Golden-winged Warbler <i>Vermivora chrysoptera</i> Season: Breeding https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0G4</p>	Bird of conservation concern
<p>Olive-sided Flycatcher <i>Contopus cooperi</i> Season: Breeding https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0AN</p>	Bird of conservation concern
<p>Peregrine Falcon <i>Falco peregrinus</i> Season: Breeding https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0FU</p>	Bird of conservation concern
<p>Pied-billed Grebe <i>Podilymbus podiceps</i> Season: Breeding</p>	Bird of conservation concern
<p>Prairie Warbler <i>Dendroica discolor</i> Season: Breeding</p>	Bird of conservation concern
<p>Red-headed Woodpecker <i>Melanerpes erythrocephalus</i> Season: Breeding</p>	Bird of conservation concern

Short-eared Owl *Asio flammeus*

Season: Wintering

<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0HD>

Bird of conservation concern

Upland Sandpiper *Bartramia longicauda*

Season: Breeding

<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0HC>

Bird of conservation concern

Wood Thrush *Hylocichla mustelina*

Season: Breeding

Bird of conservation concern

Refuges

Any activity proposed on [National Wildlife Refuge](#) lands must undergo a 'Compatibility Determination' conducted by the Refuge. If your project overlaps or otherwise impacts a Refuge, please contact that Refuge to discuss the authorization process.

There are no refuges within this project area

Wetlands

Impacts to [NWI wetlands](#) and other aquatic habitats from your project may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal Statutes.

Project proponents should discuss the relationship of these requirements to their project with the Regulatory Program of the appropriate [U.S. Army Corps of Engineers District](#).

DATA LIMITATIONS

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

DATA EXCLUSIONS

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

DATA PRECAUTIONS

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

There are no wetlands identified in this project area

New York Route 67 and Eastline Road Intersection Improvement Study

IPaC Trust Resource Report

Generated August 18, 2015 11:36 AM MDT



US Fish & Wildlife Service

IPaC Trust Resource Report



Project Description

NAME

New York Route 67 and Eastline Road
Intersection Improvement Study

PROJECT CODE

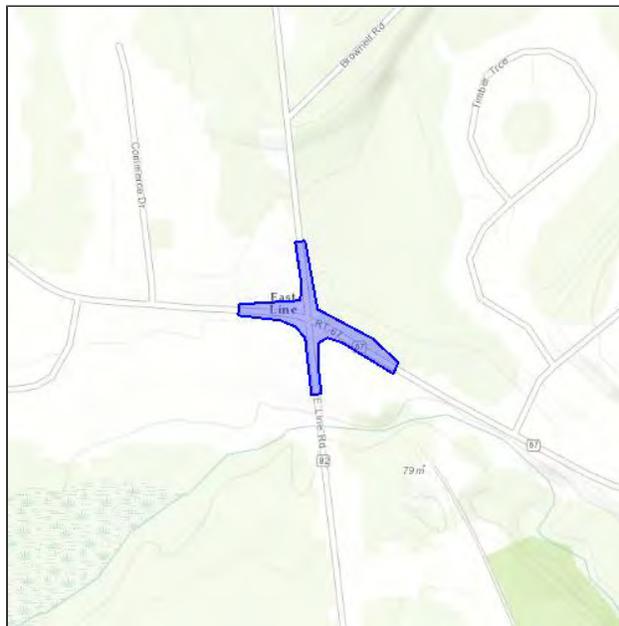
H3ZAG-2TOXR-ED7GE-YOJTZ-MP3BSE

LOCATION

Saratoga County, New York

DESCRIPTION

The intersection of NY Route 67 and Eastline Road (County Route 82) in the Towns of Malta and Ballston is under study for potential changes, such as construction of a roundabout, which would improve traffic flow and safety.



U.S. Fish & Wildlife Contact Information

Species in this report are managed by:

New York Ecological Services Field Office

3817 Luker Road

Cortland, NY 13045-9349

(607) 753-9334

Endangered Species

Proposed, candidate, threatened, and endangered species that are managed by the [Endangered Species Program](#) and should be considered as part of an effect analysis for this project.

This unofficial species list is for informational purposes only and does not fulfill the requirements under [Section 7](#) of the Endangered Species Act, which states that Federal agencies are required to "request of the Secretary of Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action." This requirement applies to projects which are conducted, permitted or licensed by any Federal agency.

A letter from the local office and a species list which fulfills this requirement can be obtained by returning to this project on the IPaC website and requesting an Official Species List from the regulatory documents section.

Mammals

Northern Long-eared Bat *Myotis septentrionalis*

Threatened

CRITICAL HABITAT

No critical habitat has been designated for this species.

<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?sPCODE=A0JE>

Critical Habitats

Potential effects to critical habitat(s) within the project area must be analyzed along with the endangered species themselves.

There is no critical habitat within this project area

Migratory Birds

Birds are protected by the [Migratory Bird Treaty Act](#) and the Bald and Golden Eagle Protection Act.

Any activity which results in the take of migratory birds or eagles is prohibited unless authorized by the U.S. Fish and Wildlife Service (1). There are no provisions for allowing the take of migratory birds that are unintentionally killed or injured.

You are responsible for complying with the appropriate regulations for the protection of birds as part of this project. This involves analyzing potential impacts and implementing appropriate conservation measures for all project activities.

<p>American Bittern <i>Botaurus lentiginosus</i> Season: Breeding https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0F3</p>	Bird of conservation concern
<p>Bald Eagle <i>Haliaeetus leucocephalus</i> Year-round https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B008</p>	Bird of conservation concern
<p>Black-billed Cuckoo <i>Coccyzus erythrophthalmus</i> Season: Breeding https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0HI</p>	Bird of conservation concern
<p>Black-crowned Night-heron <i>Nycticorax nycticorax</i> Season: Breeding https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0EU</p>	Bird of conservation concern
<p>Blue-winged Warbler <i>Vermivora pinus</i> Season: Breeding</p>	Bird of conservation concern
<p>Canada Warbler <i>Wilsonia canadensis</i> Season: Breeding</p>	Bird of conservation concern
<p>Golden-winged Warbler <i>Vermivora chrysoptera</i> Season: Breeding https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0G4</p>	Bird of conservation concern
<p>Olive-sided Flycatcher <i>Contopus cooperi</i> Season: Breeding https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0AN</p>	Bird of conservation concern
<p>Peregrine Falcon <i>Falco peregrinus</i> Season: Breeding https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0FU</p>	Bird of conservation concern
<p>Pied-billed Grebe <i>Podilymbus podiceps</i> Season: Breeding</p>	Bird of conservation concern
<p>Prairie Warbler <i>Dendroica discolor</i> Season: Breeding</p>	Bird of conservation concern
<p>Red-headed Woodpecker <i>Melanerpes erythrocephalus</i> Season: Breeding</p>	Bird of conservation concern

Short-eared Owl *Asio flammeus*

Bird of conservation concern

Season: Wintering

<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?sPCODE=B0HD>

Upland Sandpiper *Bartramia longicauda*

Bird of conservation concern

Season: Breeding

<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?sPCODE=B0HC>

Wood Thrush *Hylocichla mustelina*

Bird of conservation concern

Season: Breeding

Refuges

Any activity proposed on [National Wildlife Refuge](#) lands must undergo a 'Compatibility Determination' conducted by the Refuge. If your project overlaps or otherwise impacts a Refuge, please contact that Refuge to discuss the authorization process.

Refuge data is unavailable at this time.

Wetlands

Impacts to [NWI wetlands](#) and other aquatic habitats from your project may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal Statutes.

Project proponents should discuss the relationship of these requirements to their project with the Regulatory Program of the appropriate [U.S. Army Corps of Engineers District](#).

DATA LIMITATIONS

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

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DATA EXCLUSIONS

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There are no wetlands identified in this project area

New York Route 67 and Luther Forest Boulevard Intersection Improvement Study

IPaC Trust Resource Report

Generated August 18, 2015 10:05 AM MDT



US Fish & Wildlife Service

IPaC Trust Resource Report



Project Description

NAME

New York Route 67 and Luther Forest Boulevard Intersection Improvement Study

PROJECT CODE

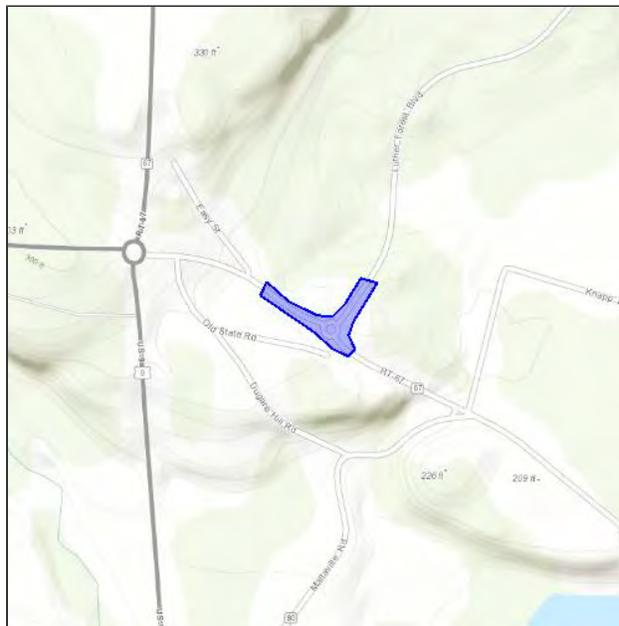
VMBJG-Y7ZAJ-D2TJR-KVJNH-BJ7P7M

LOCATION

Saratoga County, New York

DESCRIPTION

The intersection of NY Route 67 and Luther Forest Boulevard in the Town of Malta is under study for potential changes, such as additional lanes at the existing roundabout, which would improve traffic flow and safety.



U.S. Fish & Wildlife Contact Information

Species in this report are managed by:

New York Ecological Services Field Office

3817 Luker Road

Cortland, NY 13045-9349

(607) 753-9334

Endangered Species

Proposed, candidate, threatened, and endangered species that are managed by the [Endangered Species Program](#) and should be considered as part of an effect analysis for this project.

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Insects

Karner Blue Butterfly *Lycaeides melissa samuelis*

Endangered

CRITICAL HABITAT

No critical habitat has been designated for this species.

<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=I00E>

Mammals

Northern Long-eared Bat *Myotis septentrionalis*

Threatened

CRITICAL HABITAT

No critical habitat has been designated for this species.

<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=A0JE>

Critical Habitats

Potential effects to critical habitat(s) within the project area must be analyzed along with the endangered species themselves.

There is no critical habitat within this project area

Migratory Birds

Birds are protected by the [Migratory Bird Treaty Act](#) and the Bald and Golden Eagle Protection Act.

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You are responsible for complying with the appropriate regulations for the protection of birds as part of this project. This involves analyzing potential impacts and implementing appropriate conservation measures for all project activities.

<p>American Bittern <i>Botaurus lentiginosus</i> Season: Breeding https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0F3</p>	Bird of conservation concern
<p>Bald Eagle <i>Haliaeetus leucocephalus</i> Year-round https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B008</p>	Bird of conservation concern
<p>Black-billed Cuckoo <i>Coccyzus erythrophthalmus</i> Season: Breeding https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0HI</p>	Bird of conservation concern
<p>Black-crowned Night-heron <i>Nycticorax nycticorax</i> Season: Breeding https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0EU</p>	Bird of conservation concern
<p>Blue-winged Warbler <i>Vermivora pinus</i> Season: Breeding</p>	Bird of conservation concern
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<p>Golden-winged Warbler <i>Vermivora chrysoptera</i> Season: Breeding https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0G4</p>	Bird of conservation concern
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<p>Prairie Warbler <i>Dendroica discolor</i> Season: Breeding</p>	Bird of conservation concern
<p>Red-headed Woodpecker <i>Melanerpes erythrocephalus</i> Season: Breeding</p>	Bird of conservation concern

Short-eared Owl *Asio flammeus*

Bird of conservation concern

Season: Wintering

<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?sPCODE=B0HD>

Upland Sandpiper *Bartramia longicauda*

Bird of conservation concern

Season: Breeding

<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?sPCODE=B0HC>

Wood Thrush *Hylocichla mustelina*

Bird of conservation concern

Season: Breeding

Refuges

Any activity proposed on [National Wildlife Refuge](#) lands must undergo a 'Compatibility Determination' conducted by the Refuge. If your project overlaps or otherwise impacts a Refuge, please contact that Refuge to discuss the authorization process.

There are no refuges within this project area

Wetlands

Impacts to [NWI wetlands](#) and other aquatic habitats from your project may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal Statutes.

Project proponents should discuss the relationship of these requirements to their project with the Regulatory Program of the appropriate [U.S. Army Corps of Engineers District](#).

DATA LIMITATIONS

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Wetland data is unavailable at this time.

ATTACHMENT B

New York Natural Program Correspondence

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Division of Fish, Wildlife and Marine Resources
New York Natural Heritage Program
625 Broadway, 5th Floor, Albany, New York 12233-4757
Phone: (518) 402-8935 • Fax: (518) 402-8925
Website: www.dec.ny.gov



September 16, 2015

Richard Futyma
The Chazen Companies
375 Bay Road, Suite 201
Queensbury, NY 12804

Re: Saratoga County Regional Traffic Study - Intersection of Old Post Road and Northline Road
Town/City: Malta. County: Saratoga.

Dear Richard Futyma:

In response to your recent request, we have reviewed the New York Natural Heritage Program database with respect to the above project.

We have no records of rare or state-listed animals or plants, or significant natural communities at your site or in its immediate vicinity.

The absence of data does not necessarily mean that rare or state-listed species, significant natural communities, or other significant habitats do not exist on or adjacent to the proposed site. Rather, our files currently do not contain information that indicates their presence. For most sites, comprehensive field surveys have not been conducted. We cannot provide a definitive statement on the presence or absence of all rare or state-listed species or significant natural communities. Depending on the nature of the project and the conditions at the project site, further information from on-site surveys or other resources may be required to fully assess impacts on biological resources.

This response applies only to known occurrences of rare or state-listed animals and plants, significant natural communities, and other significant habitats maintained in the Natural Heritage database. Your project may require additional review or permits; for information regarding other permits that may be required under state law for regulated areas or activities (e.g., regulated wetlands), please contact the appropriate NYS DEC Regional Office, Division of Environmental Permits, as listed at www.dec.ny.gov/about/39381.html.

Sincerely,

A handwritten signature in cursive script that reads "Andrea Chaloux".

Andrea Chaloux
Environmental Review Specialist
New York Natural Heritage Program

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Division of Fish, Wildlife and Marine Resources
New York Natural Heritage Program
625 Broadway, 5th Floor, Albany, New York 12233-4757
Phone: (518) 402-8935 • Fax: (518) 402-8925
Website: www.dec.ny.gov



September 16, 2015

Richard Futyma
The Chazen Companies
375 Bay Road, Suite 201
Queensbury, NY 12804

Re: Saratoga County Regional Traffic Study - Intersection of Malta Avenue and Route 9
Town/City: Malta. County: Saratoga.

Dear Richard Futyma:

In response to your recent request, we have reviewed the New York Natural Heritage Program database with respect to the above project.

We have no records of rare or state-listed animals or plants, or significant natural communities at your site or in its immediate vicinity.

The absence of data does not necessarily mean that rare or state-listed species, significant natural communities, or other significant habitats do not exist on or adjacent to the proposed site. Rather, our files currently do not contain information that indicates their presence. For most sites, comprehensive field surveys have not been conducted. We cannot provide a definitive statement on the presence or absence of all rare or state-listed species or significant natural communities. Depending on the nature of the project and the conditions at the project site, further information from on-site surveys or other resources may be required to fully assess impacts on biological resources.

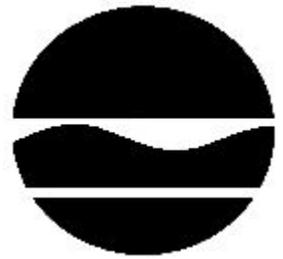
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Sincerely,

A handwritten signature in cursive script that reads "Andrea Chaloux".

Andrea Chaloux
Environmental Review Specialist
New York Natural Heritage Program

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Division of Fish, Wildlife and Marine Resources
New York Natural Heritage Program
625 Broadway, 5th Floor, Albany, New York 12233-4757
Phone: (518) 402-8935 • Fax: (518) 402-8925
Website: www.dec.ny.gov



September 16, 2015

Richard Futyma
The Chazen Companies
375 Bay Road, Suite 201
Queensbury, NY 12804

Re: Saratoga County Regional Traffic Study - Exit 11 Intersection
Town/City: Malta. County: Saratoga.

Dear Richard Futyma:

In response to your recent request, we have reviewed the New York Natural Heritage Program database with respect to the above project.

We have no records of rare or state-listed animals or plants, or significant natural communities at your site or in its immediate vicinity.

The absence of data does not necessarily mean that rare or state-listed species, significant natural communities, or other significant habitats do not exist on or adjacent to the proposed site. Rather, our files currently do not contain information that indicates their presence. For most sites, comprehensive field surveys have not been conducted. We cannot provide a definitive statement on the presence or absence of all rare or state-listed species or significant natural communities. Depending on the nature of the project and the conditions at the project site, further information from on-site surveys or other resources may be required to fully assess impacts on biological resources.

This response applies only to known occurrences of rare or state-listed animals and plants, significant natural communities, and other significant habitats maintained in the Natural Heritage database. Your project may require additional review or permits; for information regarding other permits that may be required under state law for regulated areas or activities (e.g., regulated wetlands), please contact the appropriate NYS DEC Regional Office, Division of Environmental Permits, as listed at www.dec.ny.gov/about/39381.html.

Sincerely,

A handwritten signature in cursive script that reads "Andrea Chaloux".

Andrea Chaloux
Environmental Review Specialist
New York Natural Heritage Program

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Division of Fish, Wildlife and Marine Resources
New York Natural Heritage Program
625 Broadway, 5th Floor, Albany, New York 12233-4757
Phone: (518) 402-8935 • Fax: (518) 402-8925
Website: www.dec.ny.gov



September 16, 2015

Richard Futyma
The Chazen Companies
375 Bay Road, Suite 201
Queensbury, NY 12804

Re: Saratoga County Regional Traffic Study - Intersection of Route 9P and Plains Road
Town/City: Malta. County: Saratoga.

Dear Richard Futyma:

In response to your recent request, we have reviewed the New York Natural Heritage Program database with respect to the above project.

We have no records of rare or state-listed animals or plants, or significant natural communities at your site or in its immediate vicinity.

The absence of data does not necessarily mean that rare or state-listed species, significant natural communities, or other significant habitats do not exist on or adjacent to the proposed site. Rather, our files currently do not contain information that indicates their presence. For most sites, comprehensive field surveys have not been conducted. We cannot provide a definitive statement on the presence or absence of all rare or state-listed species or significant natural communities. Depending on the nature of the project and the conditions at the project site, further information from on-site surveys or other resources may be required to fully assess impacts on biological resources.

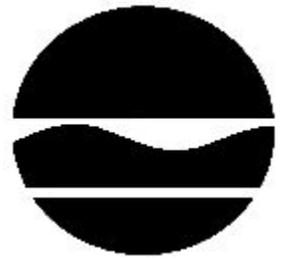
This response applies only to known occurrences of rare or state-listed animals and plants, significant natural communities, and other significant habitats maintained in the Natural Heritage database. Your project may require additional review or permits; for information regarding other permits that may be required under state law for regulated areas or activities (e.g., regulated wetlands), please contact the appropriate NYS DEC Regional Office, Division of Environmental Permits, as listed at www.dec.ny.gov/about/39381.html.

Sincerely,

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Andrea Chaloux
Environmental Review Specialist
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Website: www.dec.ny.gov



October 19, 2015

Richard Futyma
The Chazen Companies
375 Bay Road, Suite 201
Queensbury, NY 12804

Re: Saratoga County Regional Traffic Study - potential road improvements near the intersection of US
Route 9 and Stonebreak Road (TCC Job #91419.00)
Town/City: Malta. County: Saratoga.

Dear Richard Futyma:

In response to your recent request, we have reviewed the New York Natural Heritage Program database with respect to the above project.

We have no records of rare or state-listed animals or plants, or significant natural communities at your site or in its immediate vicinity.

The absence of data does not necessarily mean that rare or state-listed species, significant natural communities, or other significant habitats do not exist on or adjacent to the proposed site. Rather, our files currently do not contain information that indicates their presence. For most sites, comprehensive field surveys have not been conducted. We cannot provide a definitive statement on the presence or absence of all rare or state-listed species or significant natural communities. Depending on the nature of the project and the conditions at the project site, further information from on-site surveys or other resources may be required to fully assess impacts on biological resources.

This response applies only to known occurrences of rare or state-listed animals and plants, significant natural communities, and other significant habitats maintained in the Natural Heritage database. Your project may require additional review or permits; for information regarding other permits that may be required under state law for regulated areas or activities (e.g., regulated wetlands), please contact the appropriate NYS DEC Regional Office, Division of Environmental Permits, as listed at www.dec.ny.gov/about/39381.html.

Sincerely,

A handwritten signature in cursive script that reads "Andrea Chaloux".

Andrea Chaloux
Environmental Review Specialist
New York Natural Heritage Program

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Website: www.dec.ny.gov



September 16, 2015

Richard Futyma
The Chazen Companies
375 Bay Road, Suite 201
Queensbury, NY 12804

Re: Saratoga County Regional Traffic Study - Intersection of Route 67 and Brookline Road
Town/City: Ballston. County: Saratoga.

Dear Richard Futyma:

In response to your recent request, we have reviewed the New York Natural Heritage Program database with respect to the above project.

We have no records of rare or state-listed animals or plants, or significant natural communities at your site or in its immediate vicinity.

The absence of data does not necessarily mean that rare or state-listed species, significant natural communities, or other significant habitats do not exist on or adjacent to the proposed site. Rather, our files currently do not contain information that indicates their presence. For most sites, comprehensive field surveys have not been conducted. We cannot provide a definitive statement on the presence or absence of all rare or state-listed species or significant natural communities. Depending on the nature of the project and the conditions at the project site, further information from on-site surveys or other resources may be required to fully assess impacts on biological resources.

This response applies only to known occurrences of rare or state-listed animals and plants, significant natural communities, and other significant habitats maintained in the Natural Heritage database. Your project may require additional review or permits; for information regarding other permits that may be required under state law for regulated areas or activities (e.g., regulated wetlands), please contact the appropriate NYS DEC Regional Office, Division of Environmental Permits, as listed at www.dec.ny.gov/about/39381.html.

Sincerely,

A handwritten signature in black ink that reads "Andrea Chaloux". The signature is written in a cursive, flowing style.

Andrea Chaloux
Environmental Review Specialist
New York Natural Heritage Program

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
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Website: www.dec.ny.gov



September 16, 2015

Richard Futyma
The Chazen Companies
375 Bay Road, Suite 201
Queensbury, NY 12804

Re: Saratoga County Regional Traffic Study - Intersection of Route 67 and Eastline Road
Town/City: Ballston, Malta. County: Saratoga.

Dear Richard Futyma:

In response to your recent request, we have reviewed the New York Natural Heritage Program database with respect to the above project.

We have no records of rare or state-listed animals or plants, or significant natural communities at your site or in its immediate vicinity.

The absence of data does not necessarily mean that rare or state-listed species, significant natural communities, or other significant habitats do not exist on or adjacent to the proposed site. Rather, our files currently do not contain information that indicates their presence. For most sites, comprehensive field surveys have not been conducted. We cannot provide a definitive statement on the presence or absence of all rare or state-listed species or significant natural communities. Depending on the nature of the project and the conditions at the project site, further information from on-site surveys or other resources may be required to fully assess impacts on biological resources.

This response applies only to known occurrences of rare or state-listed animals and plants, significant natural communities, and other significant habitats maintained in the Natural Heritage database. Your project may require additional review or permits; for information regarding other permits that may be required under state law for regulated areas or activities (e.g., regulated wetlands), please contact the appropriate NYS DEC Regional Office, Division of Environmental Permits, as listed at www.dec.ny.gov/about/39381.html.

Sincerely,

A handwritten signature in cursive script that reads "Andrea Chaloux".

Andrea Chaloux
Environmental Review Specialist
New York Natural Heritage Program

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Website: www.dec.ny.gov



September 16, 2015

Richard Futyma
The Chazen Companies
375 Bay Road, Suite 201
Queensbury, NY 12804

Re: Saratoga County Regional Traffic Study - Intersection of Route 67 and Luther Forest Boulevard
Town/City: Malta. County: Saratoga.

Dear Richard Futyma:

In response to your recent request, we have reviewed the New York Natural Heritage Program database with respect to the above project.

Enclosed is a report of rare or state-listed animals and plants, and significant natural communities that our database indicates occur, or may occur, on your site or in the immediate vicinity of your site.

For most sites, comprehensive field surveys have not been conducted; the enclosed report only includes records from our database. We cannot provide a definitive statement as to the presence or absence of all rare or state-listed species or significant natural communities. Depending on the nature of the project and the conditions at the project site, further information from on-site surveys or other sources may be required to fully assess impacts on biological resources.

Our database is continually growing as records are added and updated. If this proposed project is still under development one year from now, we recommend that you contact us again so that we may update this response with the most current information.

The presence of the plants and animals identified in the enclosed report may result in this project requiring additional review or permit conditions. For further guidance, and for information regarding other permits that may be required under state law for regulated areas or activities (e.g., regulated wetlands), please contact the appropriate NYS DEC Regional Office, Division of Environmental Permits, as listed at www.dec.ny.gov/about/39381.html.

Sincerely,

Andrea Chaloux
Environmental Review Specialist
New York Natural Heritage Program



**The following state-listed animals have been documented
in the vicinity of your project site.**

The following list includes animals that are listed by NYS as Endangered, Threatened, or Special Concern; and/or that are federally listed or are candidates for federal listing.

For information about potential impacts of your project on these populations, how to avoid, minimize, or mitigate any impacts, and any permit considerations, contact the Wildlife Manager or the Fisheries Manager at the NYSDEC Regional Office for the region where the project is located. A listing of Regional Offices is at <http://www.dec.ny.gov/about/558.html>.

The following species have been documented within 0.25 mi of the project site. Individual animals may travel 1 mi from documented locations.

<i>COMMON NAME</i>	<i>SCIENTIFIC NAME</i>	<i>NY STATE LISTING</i>	<i>FEDERAL LISTING</i>
Birds			
Bald Eagle <i>Breeding</i>	<i>Haliaeetus leucocephalus</i>	Threatened	13496

This report only includes records from the NY Natural Heritage database. For most sites, comprehensive field surveys have not been conducted, and we cannot provide a definitive statement as to the presence or absence of all rare or state-listed species. Depending on the nature of the project and the conditions at the project site, further information from on-site surveys or other sources may be required to fully assess impacts on biological resources.

If any rare plants or animals are documented during site visits, we request that information on the observations be provided to the New York Natural Heritage Program so that we may update our database.

Information about many of the listed animals in New York, including habitat, biology, identification, conservation, and management, are available online in Natural Heritage's Conservation Guides at www.guides.nynhp.org, and from NYSDEC at www.dec.ny.gov/animals/7494.html.

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Appendix H

Cost Estimates



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Calculated By: _____
 Calculated Date: _____
 Checked By: _____
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Saratoga Regional Traffic Study, Northline Road/Old Post Road/Malta Ave Concept

January 21, 2016

Description of Major Improvements:

Realign/combine intersections and construct single-lane Roundabout

Approximate ROW required:

	110000	SF	2.5253	Acres
ITEM DESCRIPTION	UNITS	PRICE	QUANTITY	TOTAL
UNCLASSIFIED EXCAVATION AND DISPOSAL	CY	\$14.00	17000	\$238,000
EMBANKMENT IN PLACE	CY	\$20.00	10000	\$200,000
FULL DEPTH PAVEMENT AND SUBBASE	SF	\$8.00	85000	\$680,000
SPLITTER ISLAND TREATMENT	SF	\$8.00	5370	\$42,960
RAB TRUCK APRON	SF	\$13.00	4200	\$54,600
GRANITE CURBING	LF	\$35.00	2675	\$93,625
SIDEWALKS	SF	\$6.00	1950	\$11,700
CLEARING AND GRUBBING	LS	\$70,000.00	1	\$70,000
LANDSCAPING (INCLUDING TOPSOIL AND SEED)	LS	\$100,000.00	1	\$100,000
SIGNING AND STRIPING	LS	\$45,000.00	1	\$45,000
DRAINAGE STRUCTURES	EACH	\$5,000.00	11	\$55,000
DRAINAGE PIPE	LF	\$60.00	800	\$48,000
DRIVEWAYS	SF	\$5.00	10500	\$52,500
ROUNABOUT LIGHTING	LS	\$75,000.00	1	\$75,000
UTILITY RELOCATIONS	LS	\$10,000.00	3	\$30,000
STORMWATER MANAGEMENT (\$50,000 /acre)	AC	\$50,000.00	2.5	\$125,000
WETLAND MITIGATION (\$75,000/acre) (2:1 replacement)	AC	\$75,000.00	2.0	\$150,000
EROSION CONTROL	LS	\$30,000.00	1	\$30,000
WORK ZONE TRAFFIC CONTROL	LS	5%	1	\$105,100
SURVEY AND STAKEOUT	LS	2%	1	\$42,100
MOBILIZATION	LS	4%	1	\$84,100
CONTINGENCY	LS	20%	1	\$420,300

CONSTRUCTION SUBTOTAL: \$ 2,753,000

DESIGN ENGINEERING (10%) \$ 275,300
 CONSTRUCTION INSPECTION (20%) \$ 550,600
 ANTICIPATED ROW COST \$ 303,030

PROJECT TOTAL: \$ 3,882,000

SAY \$ 3,900,000



Calculated By: _____
 Calculated Date: _____
 Checked By: _____
 Checked Date: _____

Saratoga Regional Traffic Study, US 9 and Malta Ave. Concept
January 21, 2016

Description of Major Improvements:

Box-out Widening; Overlay; Concrete Gutter; Drainage Improvements;
 Utility Relocations; Striping; Traffic Signal Upgrades
 Approximate ROW required:

	4200	SF	0.0964	Acres
ITEM DESCRIPTION	UNITS	PRICE	QUANTITY	TOTAL
UNCLASSIFIED EXCAVATION AND DISPOSAL	CY	\$14.00	1222	\$17,111
EMBANKMENT IN PLACE	CY	\$20.00	200	\$4,000
MILL & FILL	SF	\$2.00	13050	\$26,100
FULL DEPTH PAVEMENT AND SUBBASE	SF	\$7.00	16500	\$115,500
CONCRETE GUTTER	LF	\$30.00	700	\$21,000
CLEARING AND GRUBBING	LS	\$5,000.00	1	\$5,000
LANDSCAPING (INCLUDING TOPSOIL AND SEED)	LS	\$10,000.00	1	\$10,000
SIGNING AND STRIPING	LS	\$8,500.00	1	\$8,500
TRAFFIC SIGNALS (FULL REPLACEMENT)	LS	\$175,000.00	1	\$175,000
DRAINAGE STRUCTURES	EACH	\$5,000.00	2	\$10,000
DRAINAGE PIPE	LF	\$60.00	400	\$24,000
UTILITY RELOCATIONS	LS	\$10,000.00	1	\$10,000
STORMWATER MANAGEMENT (\$50,000 /acre)	AC	\$50,000.00	1	\$50,000
EROSION CONTROL	LS	\$5,000.00	1	\$5,000
WORK ZONE TRAFFIC CONTROL	LS	5%	1	\$24,100
SURVEY AND STAKEOUT	LS	2%	1	\$9,700
MOBILIZATION	LS	4%	1	\$19,300
CONTINGENCY	LS	20%	1	\$96,300

CONSTRUCTION SUBTOTAL: \$ 631,000

DESIGN ENGINEERING (10%) \$ 63,100
 CONSTRUCTION INSPECTION (20%) \$ 126,200
 ANTICIPATED ROW COST \$ 28,926

PROJECT TOTAL: \$ 850,000

SAY \$ 850,000



Calculated By: _____
 Calculated Date: _____
 Checked By: _____
 Checked Date: _____

Saratoga Regional Traffic Study, NY 67 and Brookline Road Concept
January 21, 2016

Description of Major Improvements:

Construct WB Left Turn Lane on Route 67
 New Signal Installation

Approximate ROW required:

	12000	SF	0.2755	Acres
ITEM DESCRIPTION	UNITS	PRICE	QUANTITY	TOTAL
UNCLASSIFIED EXCAVATION AND DISPOSAL	CY	\$14.00	2800	\$39,200
EMBANKMENT IN PLACE	CY	\$20.00	1000	\$20,000
FULL DEPTH PAVEMENT AND SUBBASE	SF	\$7.00	18000	\$126,000
CLEARING AND GRUBBING	LS	\$15,000.00	1	\$15,000
LANDSCAPING (INCLUDING TOPSOIL AND SEED)	LS	\$15,000.00	1	\$15,000
RETAINING WALL	SF	\$65.00	800	\$52,000
BOX BEAM GUIDE RAIL	LF	\$32.00	1000	\$32,000
SIGNING AND STRIPING	LS	\$12,500.00	1	\$12,500
TRAFFIC SIGNAL INSTALLATION	LS	\$205,000.00	1	\$205,000
DRAINAGE PIPE	LF	\$60.00	500	\$30,000
UTILITY RELOCATION	EA	\$10,000.00	6	\$60,000
STORMWATER MANAGEMENT (\$50,000 /acre)	AC	\$50,000.00	1	\$50,000
EROSION CONTROL	LS	\$12,000.00	1	\$12,000
WORK ZONE TRAFFIC CONTROL	LS	8%	1	\$53,500
SURVEY AND STAKEOUT	LS	2%	1	\$13,400
MOBILIZATION	LS	4%	1	\$26,800
CONTINGENCY	LS	20%	1	\$133,800

CONSTRUCTION SUBTOTAL: \$ 897,000

DESIGN ENGINEERING (10%) \$ 89,700

CONSTRUCTION INSPECTION (20%) \$ 179,400

ANTICIPATED ROW COST \$ 33,058

PROJECT TOTAL: \$ 1,200,000

SAY \$ 1,200,000



Calculated By: _____
 Calculated Date: _____
 Checked By: _____
 Checked Date: _____

Saratoga Regional Traffic Study, Route 67/Eastline Road Concept
January 21, 2016

Description of Major Improvements:

Realign intersection and construct two-lane Roundabout

Approximate ROW required:

63870 SF 1.4663 Acres

ITEM DESCRIPTION	UNITS	PRICE	QUANTITY	TOTAL
UNCLASSIFIED EXCAVATION AND DISPOSAL	CY	\$14.00	7100	\$99,400
EMBANKMENT IN PLACE	CY	\$20.00	500	\$10,000
FULL DEPTH PAVEMENT AND SUBBASE	SF	\$8.00	74000	\$592,000
SPLITTER ISLAND TREATMENT	SF	\$8.00	14500	\$116,000
RAB TRUCK APRON	SF	\$13.00	4100	\$53,300
GRANITE CURBING	LF	\$35.00	5460	\$191,100
CLEARING AND GRUBBING	LS	\$15,000.00	1	\$15,000
LANDSCAPING (INCLUDING TOPSOIL AND SEED)	LS	\$60,000.00	1	\$60,000
SIGNING AND STRIPING	LS	\$35,000.00	1	\$35,000
DRAINAGE STRUCTURES	EACH	\$5,000.00	17	\$85,000
DRAINAGE PIPE	LF	\$60.00	1500	\$90,000
ROUNDAABOUT LIGHTING	LS	\$75,000.00	1	\$75,000
UTILITY RELOCATIONS	LS	\$10,000.00	7	\$70,000
STORMWATER MANAGEMENT (\$50,000 /acre)	AC	\$50,000.00	2	\$100,000
EROSION CONTROL	LS	\$25,000.00	1	\$25,000
WORK ZONE TRAFFIC CONTROL	LS	8%	1	\$129,400
SURVEY AND STAKEOUT	LS	2%	1	\$32,400
MOBILIZATION	LS	4%	1	\$64,700
CONTINGENCY	LS	20%	1	\$323,400

CONSTRUCTION SUBTOTAL: \$ 2,167,000

DESIGN ENGINEERING (10%) \$ 216,700
 CONSTRUCTION INSPECTION (20%) \$ 433,400
 ANTICIPATED ROW COST \$ 439,876

PROJECT TOTAL: \$ 3,257,000

SAY \$ 3,300,000



Calculated By: _____
 Calculated Date: _____
 Checked By: _____
 Checked Date: _____

Saratoga Regional Traffic Study, Route 9/Stonebreak Road Concept
January 21, 2016

Description of Major Improvements:

Construct NB Right Turn Lane on Route 9 at existing Roundabout

Approximate ROW required:

	16020	SF	0.3678	Acres
ITEM DESCRIPTION	UNITS	PRICE	QUANTITY	TOTAL
UNCLASSIFIED EXCAVATION AND DISPOSAL	CY	\$14.00	1600	\$22,400
EMBANKMENT IN PLACE	CY	\$20.00	200	\$4,000
FULL DEPTH PAVEMENT AND SUBBASE	SF	\$7.00	16000	\$112,000
ASPHALT PATH	SF	\$4.00	5900	\$23,600
GRANITE CURBING	LF	\$35.00	1130	\$39,550
SPLITTER ISLAND TREATMENT	SF	\$8.00	2500	\$20,000
CLEARING AND GRUBBING	LS	\$2,500.00	1	\$2,500
LANDSCAPING (INCLUDING TOPSOIL AND SEED)	LS	\$7,500.00	1	\$7,500
SIGNING AND STRIPING	LS	\$5,000.00	1	\$5,000
DRAINAGE STRUCTURES	EACH	\$5,000.00	5	\$25,000
DRAINAGE PIPE	LF	\$60.00	700	\$42,000
LIGHT POLES	LS	\$7,500.00	2	\$15,000
LIGHTPOLE RELOCATIONS	LS	\$5,000.00	2	\$10,000
UTILITY RELOCATIONS	LS	\$10,000.00	4	\$40,000
STORMWATER MANAGEMENT (\$50,000 /acre)	AC	\$50,000.00	0.75	\$37,500
EROSION CONTROL	LS	\$5,000.00	1	\$5,000
WORK ZONE TRAFFIC CONTROL	LS	5%	1	\$20,600
SURVEY AND STAKEOUT	LS	2%	1	\$8,300
MOBILIZATION	LS	4%	1	\$16,500
CONTINGENCY	LS	20%	1	\$82,300

CONSTRUCTION SUBTOTAL: \$ 539,000

DESIGN ENGINEERING (10%) \$ 53,900
 CONSTRUCTION INSPECTION (20%) \$ 107,800
 ANTICIPATED ROW COST \$ 110,331

PROJECT TOTAL: \$ 812,000

SAY \$ 820,000



Calculated By: _____
 Calculated Date: _____
 Checked By: _____
 Checked Date: _____

Saratoga Regional Traffic Study, Route 67/Luther Forest Blvd. Concept
January 21, 2016

Description of Major Improvements:

Construct additional WB Left Turn Lane at existing Roundabout

Approximate ROW required:

	12000	SF	0.2755	Acres
ITEM DESCRIPTION	UNITS	PRICE	QUANTITY	TOTAL
UNCLASSIFIED EXCAVATION AND DISPOSAL	CY	\$14.00	2050	\$28,700
EMBANKMENT IN PLACE	CY	\$20.00	250	\$5,000
FULL DEPTH PAVEMENT AND SUBBASE	SF	\$7.00	20000	\$140,000
ASPHALT PATH	SF	\$4.00	8000	\$32,000
GRANITE CURBING	LF	\$35.00	1160	\$40,600
SPLITTER ISLAND TREATMENT	SF	\$8.00	1140	\$9,120
CLEARING AND GRUBBING	LS	\$7,500.00	1	\$7,500
LANDSCAPING (INCLUDING TOPSOIL AND SEED)	LS	\$12,500.00	1	\$12,500
SIGNING AND STRIPING	LS	\$7,500.00	1	\$7,500
DRAINAGE STRUCTURES	EACH	\$5,000.00	10	\$50,000
DRAINAGE PIPE	LF	\$60.00	200	\$12,000
LIGHTPOLE RELOCATIONS	LS	\$5,000.00	3	\$15,000
STORMWATER MANAGEMENT (\$50,000 /acre)	AC	\$50,000.00	1	\$40,000
EROSION CONTROL	LS	\$7,500.00	1	\$7,500
WORK ZONE TRAFFIC CONTROL	LS	5%	1	\$20,400
SURVEY AND STAKEOUT	LS	2%	1	\$8,200
MOBILIZATION	LS	4%	1	\$16,300
CONTINGENCY	LS	20%	1	\$81,500

CONSTRUCTION SUBTOTAL: \$ 534,000

DESIGN ENGINEERING (10%) \$ 53,400
 CONSTRUCTION INSPECTION (20%) \$ 106,800
 ANTICIPATED ROW COST \$ 82,645

PROJECT TOTAL: \$ 777,000

SAY \$ 780,000



Calculated By: _____
 Calculated Date: _____
 Checked By: _____
 Checked Date: _____

Saratoga Regional Traffic Study, Exit 11 Roundabout Concept
January 21, 2016

Description of Major Improvements:

- Construct additional WB Travel Lane under I-87
- Construct roundabouts on Round Lake Road at the northbound and southbound ramp of I-87
- Construct raised median between roundabouts

Approximate ROW required:

	0	SF	0.0000	Acres
ITEM DESCRIPTION	UNITS	PRICE	QUANTITY	TOTAL
UNCLASSIFIED EXCAVATION AND DISPOSAL	CY	\$14.00	13000	\$182,000
EMBANKMENT IN PLACE	CY	\$20.00	2600	\$52,000
FULL DEPTH PAVEMENT AND SUBBASE	SF	\$7.00	96200	\$673,400
SPLITTER ISLAND TREATMENT	SF	\$8.00	30500	\$244,000
RAB TRUCK APRON	SF	\$13.00	8100	\$105,300
CONCRETE BARRIER HALF SECTION	LF	\$100.00	135	\$13,500
GRANITE CURBING	LF	\$35.00	3100	\$108,500
LANDSCAPING (INCLUDING TOPSOIL AND SEED)	LS	\$40,000.00	1	\$40,000
SIDEWALKS	SF	\$6.00	2700	\$16,200
DRAINAGE STRUCTURES	EACH	\$5,000.00	12	\$60,000
DRAINAGE PIPE	LF	\$60.00	825	\$49,500
ROUNDAABOUT LIGHTING	LS	\$125,000.00	1	\$125,000
SIGNING AND STRIPING	LS	\$30,000.00	1	\$30,000
BOX BEAM GUIDE RAIL	LF	\$32.00	345	\$11,040
STORMWATER MANAGEMENT (\$50,000 /acre)	AC	\$50,000.00	3.0	\$150,000
EROSION CONTROL	LS	\$25,000.00	1	\$25,000
SIGNAL REMOVAL	LS	\$15,000.00	1	\$15,000
UTILITY RELOCATION	LS	\$10,000.00	3	\$30,000
WORK ZONE TRAFFIC CONTROL	LS	8%	1	\$154,500
SURVEY AND STAKEOUT	LS	2%	1	\$38,700
MOBILIZATION	LS	4%	1	\$77,300
CONTINGENCY	LS	20%	1	\$386,100

CONSTRUCTION SUBTOTAL: \$ 2,588,000

DESIGN ENGINEERING (10%) \$ 258,800
 CONSTRUCTION INSPECTION (20%) \$ 517,600
 ANTICIPATED ROW COST \$ -

PROJECT TOTAL: \$ 3,365,000

SAY \$ 3,400,000



Calculated By: _____
 Calculated Date: _____
 Checked By: _____
 Checked Date: _____

Saratoga Regional Traffic Study, Route 9P and Plains Road Concept
January 21, 2016

Description of Major Improvements:

New Signal Installation

Approximate ROW required:

	0	SF	0.0000	Acres
ITEM DESCRIPTION	UNITS	PRICE	QUANTITY	TOTAL
TRAFFIC SIGNAL INSTALLATION	EA	\$205,000.00	1	\$205,000
UTILITY RELOCATION	EA	\$10,000.00	2	\$20,000
WORK ZONE TRAFFIC CONTROL	LS	5%	1	\$11,300
SURVEY AND STAKEOUT	LS	2%	1	\$4,500
MOBILIZATION	LS	4%	1	\$9,000
CONTINGENCY	LS	20%	1	\$45,000

CONSTRUCTION SUBTOTAL:	\$ 295,000
DESIGN ENGINEERING (10%)	\$ 29,500
CONSTRUCTION INSPECTION (20%)	\$ 59,000
PROJECT TOTAL:	\$ 384,000
SAY	\$ 390,000

Appendix I

Implementation



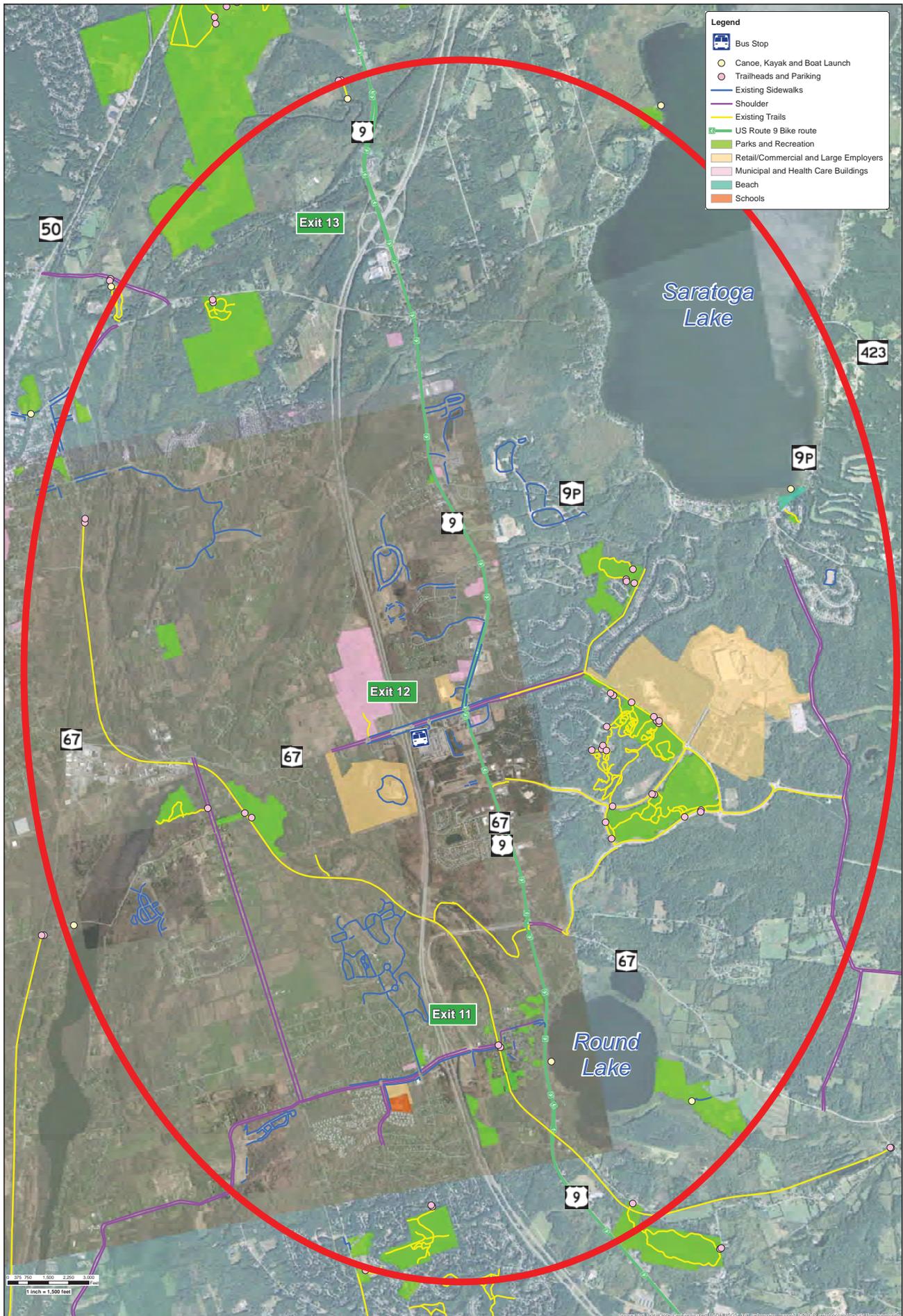
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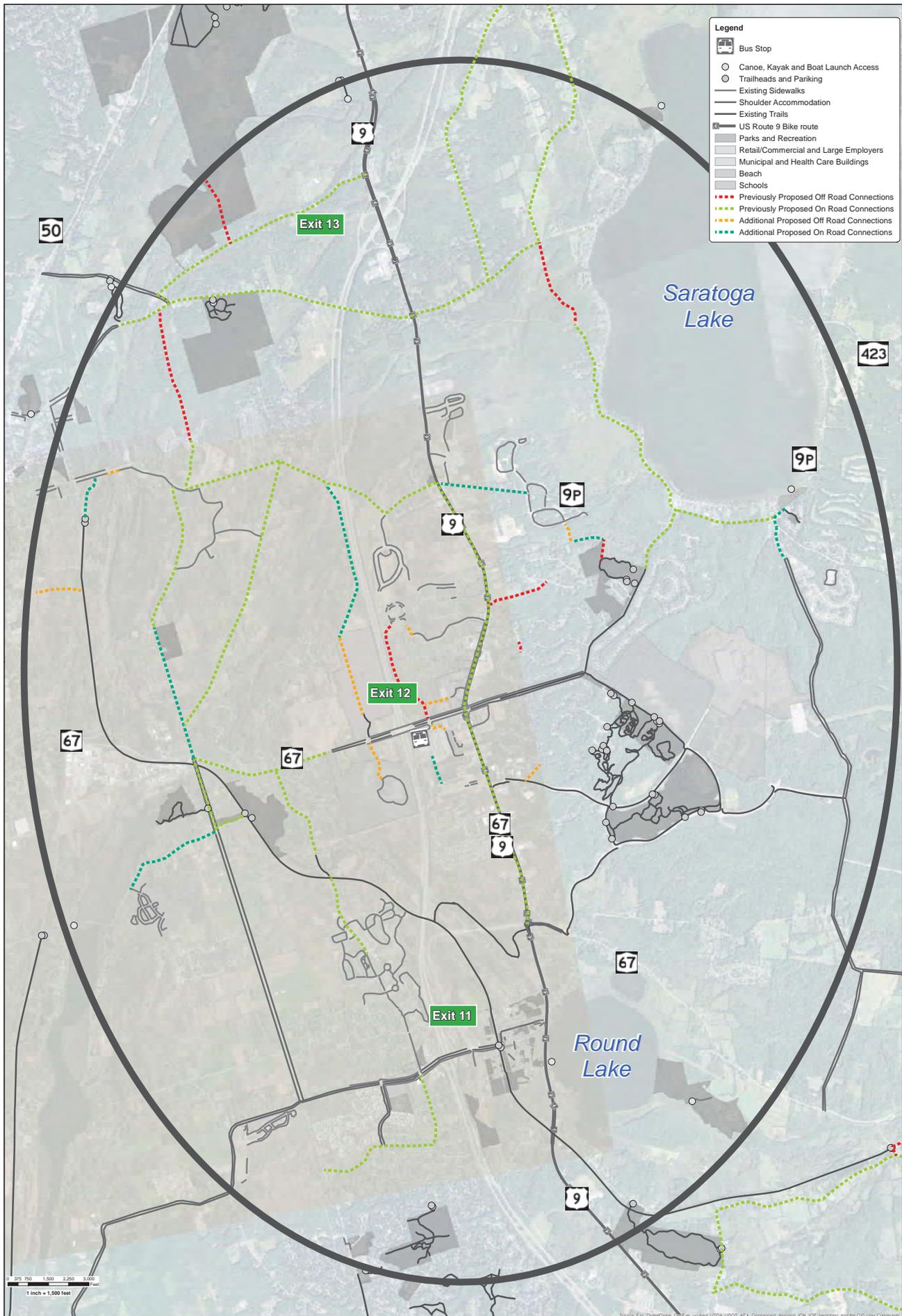
White Paper
Pedestrian and Bicycle Summary
Saratoga County Regional Traffic Study
January, 2016

Pedestrian and bicycle transportation is an integral part of the overall transportation network and also impacts quality of life. One of the recommendations in the Saratoga County Regional Traffic Study is for local municipalities and review agencies to continue to focus on creating a fully connected sidewalk and bicycle network. This white paper identifies the existing pedestrian and bicycle network in the study area and identifies gaps in the system and additional recommended connections.

A review of the study area roadways shows that pedestrians and bicyclists are primarily accommodated on the shoulders of the roadways. Sidewalks and paths are available in some areas of downtown Malta and in some newer residential and commercial developments in the Town. In addition, US Route 9 is a designated bike route through the entire study area. Attached Figure 1 shows the existing pedestrian and bicycle network for the study area. The existing network includes on-road and off-road connections like existing sidewalks, roadway shoulders at least four feet wide, existing trails, trailheads, and parking. The existing network was identified using information from the Town of Malta's *Proposed Shared Use Trail Guidelines*, the *Malta Town-wide Draft Supplemental GEIS Update 2015*, the *NYSDOT Pavement Data Report*, the *NYSDOT County Roads Listing*, and field review.

The proposed connections were developed using information from the Town of Malta's *Proposed Shared Use Trail Guidelines* and the *Malta Town-wide Draft Supplemental GEIS Update 2015*. In addition, activity centers like schools, large employers, government buildings, commercial centers, and medical centers were mapped to identify desired destinations. The desirable travel corridors, where people are more likely to walk or bike, were identified and illustrated on Figure 2 which includes previously proposed connections and some proposed additional on-road and off-road network connections.





**White Paper
Freight Routing
Saratoga County Regional Traffic Study
January, 2016**

Questions were raised during the public process regarding the noticeable increase in heavy vehicle travel in the study area over the last several years. Specific comments noted the heavier than anticipated flow of heavy vehicles in the area of Exit 12 in Malta. In response to these questions, research was completed to try and determine the primary flow of heavy vehicle traffic in the study area and if there is information being provided by local facilities to encourage the use of the Round Lake Bypass as the preferred route of travel in lieu of traveling through the downtown area of Malta and Exit 12. The following summarizes the research and obtained information:

In 2012 the Intermodal site in the Town of Halfmoon and City of Mechanicville on NY Route 67 was re-opened, after 30 years of vacancy, which has created a new focus for heavy vehicle traffic in the study area. Traffic volume data available from the New York State Department of Transportation (NYSDOT) on NY Route 67 in 2011 indicates average daily trips of approximately 4,200 vehicles with heavy vehicle trips accounting for approximately 14% of the traffic. Field observations at the US Route 9/NY Route 67/Round Lake Bypass intersection showed that some trucks do travel to and from the downtown Malta area, but generally trucks travelling to and from the Intermodal facility use the Round Lake Bypass.

The three major facilities of GLOBALFOUNDRIES, the ACE Hardware Distribution Center in Wilton (Exit 16) and the Target Distribution Center in Wilton (Exit 16) were contacted to obtain available information on delivery travel to and from these facilities. To date, specific information has been obtained from GLOBALFOUNDRIES and ACE Hardware and is summarized below:

- Suppliers are provided directions by GLOBALFOUNDRIES that indicate the use of Exit 11 and the Round Lake Bypass to enter the site via Luther Forest Boulevard. The directions specifically state to avoid the use of US Route 9 to access the site. This information is provided to all new suppliers. In general, equipment for GLOBALFOUNDRIES is typically provided via air to JFK in New York City and then trucked up to the facility or is directly delivered from domestic suppliers (Fed Ex, UPS, etc.); therefore, the Intermodal site is not typically used by GLOBALFOUNDRIES. In 2015, there were approximately 7,500 deliveries to the GLOBALFOUNDRIES site via box trucks or larger vehicles and approximately 1,900 deliveries to the site via vans or courier passenger vehicles.
- ACE Hardware related trucks are at the Intermodal site on a daily basis. The ACE Traffic team instructs all their drivers to travel to and from the Intermodal site using the Round Lake Bypass and Exit 11. The Traffic team communicates to their drivers via GPS units if route reminders and updates are needed.

Detailed delivery information from the Target Distribution Center has not been obtained. A google search for the Target Distribution Center resulted in a link to an information page on Foursquare, which has a link to directions to the facility. If a starting point on NY Route 67 in Mechanicville is input, three directional options are output with the preferred route shown traveling on NY Route 67 west, north on the US Route 9/NY Route 67 overlap, and continuing west on NY Route 67 to travel north on I-87 via Exit 12. The two other routes travel from NY Route 67 west to NY Route 9P north to travel north on I-87 via Exit 14 and traveling from NY Route 67 east to NY Route 32 north to Edie Road and connect directly with

Ballard Road to access the site. No route utilizing the Round Lake Bypass is presented to drivers. Manually modifying the route to use the Round Lake Bypass and Exit 11 results in a route that is within 1 minute (24 minutes) of the travel time presented for the preferred route (23 minutes) shown and is 6 and 11 minutes shorter than the two alternative routes presented (30 and 35 minutes).

To confirm the small time differential anticipated between a travel route using Exit 12 and a travel route using Exit 11, travel time runs were completed in the field to compare actual travel times. Runs were completed on Thursday, January 7, 2016 between 8:00 and 9:30 a.m. The following routes were traveled:

- NY Route 67 at Luther Forest Boulevard west to US Route 9 north, to NY Route 67 west, to I-87 via Exit 12 to Exit 13 off-ramp.
- NY Route 67 at Luther Forest Boulevard west to Round Lake Bypass south, to Round Lake Road west, to I-87 via Exit 11 to Exit 13 off-ramp.
- Exit 13 on-ramp to I-87 south, to Exit 12 to NY Route 67 east, to US Route 9 south, to NY Route 67 east to Luther Forest Boulevard.
- Exit 13 on-ramp to I-87 south, to Exit 11 to Round Lake Road east, to Round Lake Bypass north, to NY Route 67 east to Luther Forest Boulevard.

The table below summarizes the results of the travel time runs.

Travel Direction		Start Time	Total Time
North			
<i>Via Exit 12</i>	Run 1	8:48 a.m.	7:02
	Run 2	9:27 a.m.	6:57
<i>Via Exit 11</i>	Run 1	8:25 a.m.	7:58
	Run 2	9:08 a.m.	7:54
South			
<i>Via Exit 12</i>	Run 1	8:38 a.m.	7:32
	Run 2	9:17 a.m.	7:36
<i>Via Exit 11</i>	Run 1	8:11 a.m.	8:50
	Run 2	8:57 a.m.	8:37

Also during the field visit, it was noted that at the roundabout at the Round Lake Bypass, US Route 9 and NY Route 67, the directional guide signs in the roundabout indicate to drivers that traffic bound for I-87 north use US Route 9 north and travel up through Malta, rather than use the Round Lake Bypass. An image of the guide sign alignment at this location is shown on the following page.



It is suggested that further investigation with the mapping companies be pursued to help to prioritize the use of the Round Lake Bypass as a travel route when traveling to and from destinations to the north. It is also suggested that further discussions occur with the Intermodal facility managers and well as other large retailers to help manage and distribute the flow of heavy vehicle traffic in and out of the study area.

White Paper
NY Route 67 Mailbox Relocation
Saratoga County Regional Traffic Study
January, 2016

In response to public concern regarding the increased truck traffic and mailbox access on NY Route 67 between US Route 9 and Mechanicville, Creighton Manning evaluated the mailbox locations and access along NY Route 67. At the first public information meeting in November 2014 concern was expressed that residents on the south side of the road required to cross NY Route 67 to access their mailboxes (most of the mailboxes are on the north side of NY Route 67) is a safety concern due to travel speeds and truck traffic.

The following comments were received at the public meeting relative to mailboxes on Route 67:

- Mailboxes are located on opposite side of the road of homes
- Limited shoulder to wait when crossing
- High speed trucks
- Safety concerns to get mail on daily basis

Based on the concerns and complaints raised by the residents the following tasks were initiated and/or completed:

- Identify the mailboxes that if relocated would provide a safer situation for the resident and the mail carrier.
- Confirmed municipal support for mailbox relocation at SAC #5 meeting
- Reach out to the mail delivery person to find identify the route

Below is a summary of the findings from the evaluation of current mailbox locations:

- There are currently 5 mailboxes located on the south side of Route 67 (majority are on the north side).
- Relocating 31 mailboxes from the north side to the south side of NY Route 67 would eliminate the need for residents to cross NY Route 67 to access their mailbox. The approximate cost to install a new mailbox is \$200.
- Only three locations out of 31 will require some brush/tree trimming to improve the sight distance for cars driving eastbound to see the stopped mail delivery vehicle and/or pedestrian accessing the mailbox. The approximate total cost for tree and vegetation trimming is \$2,500.
- The results of the field survey indicate that the 5 mailboxes on the south side of the road being served by a mail carrier are similar to the delivery conditions observed on the rest of the mail route.
- The Mailing Standards of the United States Postal Service Domestic Mail Manual states:

2.3.4 Mailbox Location

Curbside mailboxes meeting the applicable standards in 3.0 must be placed where they protect the mail and can be conveniently served by carriers without leaving their vehicles. These boxes must be on the right side of the road in the direction of travel when required by traffic conditions or when driving to the left to reach the boxes would violate traffic laws by the carrier. [D042.11.4]

Source: <http://pe.usps.com/text/dmm300/508.htm#1047017>

This indicates that if the mailboxes located on the north were moved to the south of the NY Route 67, they will be in compliance to the USPS regulations and the mail carrier should be able to deliver mail consistent with the five mailboxes currently located on the south of NY Route 67.

- There are currently three different mail carrier routes serving the segment of NY Route 67 from US Route 9 to Mechanicville. These routes also serve the mailboxes on the north and south side of the roadway on their way back to Mechanicville travelling eastbound on NY Route 67.
- Similar conditions exist in both the eastbound and westbound directions on NY Route 67 (high speeds, increasing traffic and truck volumes, some areas of limited sight distance/stopping sight distance) so reducing the potential pedestrian vehicle conflicts should be considered.

As part of implementation of the recommendations in the Saratoga County Regional Traffic Study, the proposed Task Force should progress the mailbox relocation effort. The next step in the process is meeting with the postmaster to present the findings and clarify next steps.

White Paper
Funding Improvements Alternatives
Saratoga County Regional Traffic Study
January, 2016

The *Saratoga County Regional Traffic Study* (SRTS) outlines several traditional public funding mechanisms which may be used to implement transportation improvements within the SRTS area, and identifies a regional GEIS as a possible tool to obtain private mitigation funds on a fair share basis to facilitate improvements. This paper expands on the issues and next steps that will need to be addressed by the task force being formed to further explore both traditional and non-traditional funding mechanisms and advance the transportation improvements in the study area. It also summarizes three additional potential funding mechanisms that MAY be considered.

The SRTS determined that nine study area intersections require improvements to maintain adequate traffic operations after development of an aggressive land use development scenario. The nine intersections are either controlled by the New York State Department of Transportation (NYSDOT) or Saratoga County and are located in the Towns of Malta and Ballston. The intersections are summarized below:

- Northline Road (CR 45)/Old Post Road – Town of Malta;
- US Route 9/Malta Avenue (CR 63) – Town of Malta;
- NY Route 67/Eastline Road (CR 82) – Towns of Malta and Ballston;
- NY Route 9P/Plains Road (CR 108) – Town of Malta;
- NY Route 67/Brookline Road (CR 60) – Town of Ballston;
- US Route 9/Stonebreak Road – Town of Malta;
- NY Route 67/Luther Forest Boulevard – Town of Malta;
- I-87 Exit 11 NB Ramp/Curry Road (NY Route 911U) – Town of Malta; and
- I-87 Exit 11 SB Ramp/Round Lake Road (CR 80)/Curry Road (NY Route 911U) – Town of Malta.

The potential funding mechanisms discussed in this paper include:

- A. traditional public funding sources,
- B. establishment of a multi-municipal Generic Environmental Impact Statement (GEIS),
- C. the creation of a Transportation Development District (TDD),
- D. the implementation of Tax Increment Financing (TIF), or
- E. implementation of a Payment in Lieu of Taxes (PILOT) program.

Based upon the research of the funding mechanisms and their use throughout New York State, including the Capital District, a GEIS appears to be the approach carrying the highest chance of success (for non-traditional funding sources) in terms of implementation and supporting funding the improvements to the intersections listed above. Nevertheless, a regional transportation GEIS would involve multiple jurisdictions and implementation challenges. Set forth below is a summary of each of the funding alternatives studied.

A. Traditional Public Funding Sources

The proposed highway modification locations are all within the Capital District urbanized area and the level of functional classification of at least one of the approach highway legs would allow for federal aid highway program eligibility under one or two of the primary core programs. The core programs include the Surface Transportation Program (STP) and National Highway System Performance Program (NHPP). These eligible functional classification assignments are generally re-evaluated every ten years in

conjunction with the latest US Census information and input from State and local traffic volume reporting and the Metropolitan Planning Organization. There would be no expectation that the current designations would change given expected development patterns.

Eligibility for federal funding does not automatically lead to the assignment of those funds to a project. In the Capital District four county area, of which the affected Towns are a part, the CDTC, comprised of representatives across the Capital District municipalities, has the legal mandate to determine priorities for assigning federal highway and transit funds. The CDTC New Visions Plan calls for priority to maintaining existing infrastructure. This objective is consistent with the NYSDOT "Forward Four" policy with preservation of existing facilities as the highest priority for use of limited funds (approximately 80%). The five year CDTC Transportation Improvement Program (TIP) is structured around preservation and not system expansion. Preservation needs far exceed current and expected funding levels. As of the date of this document, CDTC has made no commitment for funding any of the improvements proposed with federal monies under its purview.

Some of the project locations exhibit a crash history pattern which may indicate a correctable situation using standard countermeasures. The previous federal surface transportation act (MAP-21), under extension authorization to October 31, 2015, included a funding program (HSIP) to address safety deficient locations. The basic requirement to access these funds is to evaluate historic crash data (usually three years) and determine if a cost effective countermeasure exists. Federal and State policy requires the analysis be data driven on severity history and pattern(s) of crashes. It is possible to combine these funds with core or other monies in the event of providing a countermeasure with a standard preservation treatment.

MAP-21 in essence, redirected the federal funding focus to the expanded National Highway System. Projects off the NHS are competing for far fewer available monies. Under the new five year federal surface transportation act ("FAST"), this focus to the NHPP continues. There is no reason, as of now, to believe this situation will change anytime soon; nor, can one assume the strict direction and focus of funding toward preservation, not expansion, would cease in the near term. It should also be noted that Congress again, under the FAST, has opted not to create special member items.

New York, under direction from Governor Cuomo has created regional economic development councils (EDCs) to set strategies and program and project proposals for the geographic area each council presides over. Proposals for grants, loans, and other State economic development monies outside the federal highway and transit programs generally have to be evaluated and prioritized by the affected Council in accordance with that Region's multi-year plan. One of the major strategies of the Capital Region Plan is to create a 21st Century sustainable infrastructure able to attract and allow expansion of business. This plan and its strategies, in turn, are supported by a Consolidated Funding Application (CFA) process. The improvements proposed essentially have to be strongly linked to job creation or retention. Most (sub) programs have cash match requirements and three to one, or higher, (private) leverage for benefits. Each calendar year, new projects are solicited and evaluated by the EDCs. The proposed improvements could be submitted under the CFA solicitation either separately or combined; but, as stated would have to be strongly linked to job creation or retention.

Most Federal and State programs require cash matches for individual projects, usually 10-20 percent of the total cost. The match can be provided by State transportation monies, local funds, or private contributions (usually through a SEQRA GEIS assessment). Absent a GEIS assessment, the State has no set policy on providing its contributions, except that projects with scopes outside Forward Four preservation scopes generally will not fare well for State participation under current and expected

budget restrictions. It is clear that an infusion of private monies, of some significance, will probably be expected for some, or possibly all, of the proposed improvements.

This is consistent with the programmed projects “already on the books” which are the responsibility of private developers as part of the traffic impacts associated with specific developments. The additional capacity mitigation identified in this study are also directly related to land development, and the towns should take the lead on securing private mitigation funding through traffic impact studies and other SEQR documentation.

Of special note are improvements for pedestrians and bicyclists. Those improvements slated for non-vehicular users are specifically made eligible for federal funding under Title 23 USC. The State has been required to assign a minimum portion of its funding towards these type improvements. Special project solicitations have been made on a regular basis and are continued under the new surface transportation act. As always, the affected municipalities should identify and prioritize its pedestrian/bicyclists facility needs and, indeed, incorporate them into individual property development requirements, either as actual construction or reservation of right of way.

B. Multi-Municipal Transportation GEIS

A GEIS is a process concluding in a decision (findings) document required by the State Environmental Quality Review Act (SEQRA) (6NYCRR Part 617.10) for certain actions that significantly affect the quality of the human environment. In this case a series of actions (projects), in the aggregate, may have a significant impact on the environment within a specific geographic area (i.e. the “study area”). To guide decision making, a GEIS will describe the positive and negative environmental effects of a proposed action. A GEIS can cover a range of community needs such as water, sewer, and fire protection recreational, and schools, however in this case it is contemplated as a transportation specific GEIS, similar to the Town of Colonie, *Boght Road Transportation GEIS*.

Who will be lead agent and how will it be administered?

If the multi-municipal GEIS concept is adopted, it is envisioned that the Capital District Transportation Committee (CDTC) would potentially administer the mitigation program. They would determine the fair share contribution from both public agencies and private developments. While the CDTC acts as the administrator, determining the GEIS Lead Agent could be established through an inter-municipal agreement. An agreement may stipulate that a particular town acts as Lead Agent or representatives from each municipality form together to act as the lead agent. Table 1 summarizes some of the advantages and challenges associated with the establishment of a Multi-Municipal GEIS.

Table 1 – Multi-Municipal GEIS

Advantages	Challenges
Establishment of fair share contributions	Agreement among multiple governments
Used successfully in the capital district	Improvement benefit equity across a defined area
Supplement permit fees	Identify GEIS geographic boundaries
May obviate need for multiple SEQRA processes	May require special legislation to implement successfully

Forming a GEIS would standardize the way future developments are held accountable for their impacts in a way that is widely used throughout the Capital District. Mitigation fees would likely be calculated based on a similar approach to the *Boght Area GEIS* and *Airport Area GEIS*, based on percent of capacity used

The mitigation fees also act as a supplement to building permit fees which have been defined as regulatory fees. Established in the court case *Coconato v. Town of Esopus (1989)*, regulatory fees are those “reasonably necessary to cover the costs of issuance, inspection, and enforcement.” This case restricts a municipality’s ability to simply raise its permit fees to help cover the cost of future mitigation.

Lastly, establishing a GEIS may also obviate the need for multiple SEQRA processes for future developments. This will shorten the project timelines and require less town resources during the lifecycle.

What is the legal precedent for a Regional GEIS?

Although there are numerous examples of municipalities completing GEISs, there is no legal precedent as a multi-municipal GEIS has never been formed in the State of New York. Forming such a mechanism may require special legislation at the county level, or possibly the State legislature and a high degree of cooperation among “member” public entities.

A fundamental component of a GEIS is that it provides a so far unchallenged legal mechanism to establish the nexus between the impacts of a project to the human environment and the fee(s) that will be paid to mitigate them. This nexus is a result of the court case *Contractors & Builders Association v. City of Dunedin (1976, Florida)*¹. The case established the “rational nexus” test that was used in the New York court case *Weingarten v. Town of Lewisboro (1989)* to establish New York case law. The test requires that a valid mitigation fee originate from “a) a development creating a need for the creation or expansion of certain capital facilities; b) the amount of the fee not exceeding the cost the municipality in the event that the community provided the facility; and c) the fee being designated to address the concerns that promoted its imposition.” This process has been successfully used, most notably by the Town of Colonie.

Who should participate in a multi-municipal GEIS?

The SCRTS has identified a study area that includes parts of the following towns/village areas:

- Town of Ballston
- Town of Clifton Park
- Town of Halfmoon
- Town of Malta
- Town of Milton
- Village of Round Lake
- Town of Stillwater
- Town of Wilton

Despite including eight towns and a village, the SRTS has identified nine intersection improvements that fall within only the Towns of Malta and Ballston. Unless there is an extraordinary level of buy-in on the concept of a multi-municipal GEIS, it is unlikely that the municipalities listed above would support contributing toward the nine intersection improvements. For this reason, a smaller two-municipal GEIS could be considered only for the Towns of Ballston and Malta, or the study area could be expanded to include transportation improvements in participating towns. Narrowing the involved municipalities will help, but additional questions and challenges still need to be addressed. See Attachment A which identifies considerations for pursuing a large or small GEIS.

What would be the specific boundary of the GEIS?

Working collaboratively, the Towns of Ballston and Malta would need to establish a geographic boundary for a new GEIS. In part, this process involves introducing the community to the broader GEIS concept and establishing a line of communication between the general public and the administrators of the GEIS.

Establishing the boundary also means that the Town of Malta will need to address their existing GEIS and whether to modify or invalidate it. If the existing GEIS is maintained, Malta would need to address the overlap with the proposed boundary of the multi-municipal GEIS. It would be unreasonable to “double-dip” on mitigation fees. If the existing Malta GEIS is replaced, the Town also needs to determine where the mitigation fees held by the Town would be spent.

What are the economics of the GEIS?

Fundamentally, a GEIS does not recover 100 percent of the cost of an improvement. It assigns the cost of highway improvements to those who create the need for the improvement, and it recovers only the percent of the cost that is equal to the capacity of the improvement that is used by new development inside the GEIS area. The balance of the cost requires public funding.

The percent public vs. private will vary depending on the characteristics of the study area and specific developments and is expected to range from 50/50 to 70/30 private/public. Decisions on final GEIS study area boundary and further modeling by the CDTC would identify the final percentages.

The cost of all intersection improvements in the SRTS area for the aggressive growth scenario is \$15M. Using a 60/40 private/public split for illustration purposes, means that approximately \$9M could be collected if all developments are built. Public funds on the order of \$6M would still need to be obtained to complete the projects.

In addition, the task force will need to determine if there is enough justification for expending the time and money to perform a study that would lead to a multi-municipal GEIS. Expecting that the traffic analysis in the SRTS would form the basis for the GEIS, some additional study will still be needed to focus it on development within the GEIS area.

Another consideration is the disproportionate number of intersections that are in the Town of Malta. Relying again on a great level of cooperation, the Town of Ballston would have to accept that the mitigation fees generated from within Ballston would be used largely in the Town of Malta. If Ballston and Malta are the only towns contributing mitigation fees, the multi-jurisdictional GEIS is essentially being formed to fund the NY Route 67/Brookline Road and part of the NY Route 67/Eastline Road intersections. These intersections could be potentially be funded using a simpler agreement that would not require the advanced study required by a multi-municipal GEIS.

C. Transportation Development or Improvement District

A TDD, also known as Transportation Improvement District (TID) is a geographical jurisdiction created by a group of shareholders for the purpose of raising funds to construct and maintain transportation infrastructure. Funds are raised by imposing a tax on goods, services, and/or property throughout its area. The infrastructure may include, but is not limited to roadway, bridge, rail, mass transit, and aviation. The process of creating a TDD typically begins when one of the following groups files a petition with the County Court in which the TDD will be created:

- Registered Voters
- Property Owners
- Local Transportation Authority
- Multi-Jurisdiction Transportation Authority

Once established, a TDD elects a board of directors (BOD) depending upon the group that founded it. The exemption to this process involves a multi-jurisdictional transportation authority. Prior to filling a petition, each of the jurisdictions must first pass a resolution calling for the creation of the TDD. In the first three groups, a BOD is elected from within the ranks of the founding group. Contrary to this, when a multi-jurisdictional transportation authority forms a TDD, the BOD is comprised of the presiding officers of each of the local authorities.

A TDD raises funds by either imposing a sales tax on goods and services provided within its area typically ranging from one percent or less or a special property tax. For example, a TDD in the state of Missouri can impose a property tax rate not to exceed 10 cents per 100 dollars of assessed value⁴. In addition to raising funds; a TDD can operate similar to any municipality. They can purchase/sell property in their right-of-way, bid and pay for projects, sell bonds, establish contractor requirements, and contract with other federal/state/local agencies as needed. Often actions such as these first require voter approval in order to be implemented. Similar to other funding mechanisms, a TDD has its advantages and challenges that are summarized in Table 2 below.

Table 2 – Transportation Development District

Advantages	Challenges
Broad Authority/flexibility to achieve funding requirements	Increases taxes
Not limited to just roadway projects	Relies on sustained property value or retail business growth
Eliminates some bureaucracy to accelerate projects	Formation and administration can be cumbersome
Allows areas to set region specific standards	Requires voter and legislative approval
Promotes collaboration between local governments	Public may not be fully involved

The main advantage to creating a TDD is the flexibility it brings. The BOD is free to prioritize projects based upon the wants and needs of the public. This eliminates bureaucracy and encourages collaboration between governments to speed up project timelines. It also allows areas to establish region specific standards. The downside to a TDD is it relies on revenue generated from a new property and/or sales tax that will likely be met with fierce opposition. An area with a stagnant economy will struggle to generate revenue to meet project costs. A TDD may be difficult to administer partially because it often requires the consent of the public who will inevitably have competing opinions. In other cases where a transportation authority governs the TDD, the public may not be adequately involved. To date, New York does have legislation (Section 190 and Article 12 of the NYS Town Law) that establishes the framework a TDD must follow, but has seen limited use of TDD's. According to the NYSDOT, a TDD was used in Hauppauge (Town of Islip, Suffolk County) to construct a new exit ramp for the Northern State Parkway. A TDD was also established in Westchester and Ulster Counties where the public bonds issued ranged from \$2 million to \$9.4 million⁵.

Use of a TDD in other areas have been met with stiff resistance in the State legislature as is the case with the City of Yonkers. Since the 2007/2008 legislative cycle the City has attempted to pass a bill five times to form a TDD. Each time it has failed to reach the NYS Assembly or Senate for a vote. Also worth mentioning is the potential impact New York's Property Tax Cap would have on a proposed TDD. Depending upon the circumstances, a resolution requiring a 60 percent vote of local government boards may or may not be required to override the tax cap to implement a TDD property tax.

D. Tax Increment Financing

A TIF provides municipalities a means to promote development in underdeveloped or economically depressed areas. A TIF District is an area where a town, village, or school district develops a plan for infrastructure improvements and freezes the local property tax rate. The municipality then issues public bonds to pay for the projects with the expectation that they will revitalize the area leading to private development. As private development increases, the assessed value of the property grows leading to increased revenue. The increase in revenue (the tax increment) is then used to repay the original bonds issued at the beginning project.

TIF's have been used in New York State since 1984; however, they are rarely used due to legal issues and a lack of revenue generation. Established by New York State law (General Municipal Law Section 970-b Legislative findings and declaration), a TIF District can be formed as a tool to combat "blight" in an area where redevelopment "cannot be accomplished by private enterprise alone⁶." Contrary to other states, New York law states that a district can issue TIF Bonds in contrast to general obligation bonds. The primary difference is that a TIF Bond is not secured by the "faith and credit" of the city or state and does not count against the municipality's debt limit. New York also specifies that redevelopment within a district can be industrial, commercial, and residential without any size (acreage) or time limits. A TIF was established in the Town of Greenburgh in Westchester County, New York; however, usage of the TIF proved unsuccessful after the Town was sued concerning the price it paid for a piece of property within the TIF District. TIF projects can range from small scale public works improvements to large scale joint ventures with private developers to construct large retail/commercial centers. In the specific case of funding the nine intersection improvements, establishing a TIF would require extraordinary interpretation of the municipal law as a TIF can only be used to combat blight.

TIF Districts have been widely used outside of New York State. Illinois has established over 100 districts in the Chicago area alone. They have proven to be very successful in raising hundreds of millions of dollars in increased revenue; however, they are not without their downfalls. Table 3 summarizes the advantages and challenges of creating TIF Districts.

Table 3 – Tax Increment Financing

Advantages	Challenges
Does not increase taxes	TIF's fall short of expected revenue
Incentive to redevelop depressed areas	Individual developer tax abatements may limit tax increment
Increases economic opportunities and property values	Benefit/Cost spillover to surrounding areas
Does not impact municipality debt limit	Fragmentation of the tax base

Unlike other funding mechanisms, a TIF does not increase taxes upon the district while creating an incentive to improve designated development areas. This can help garner support from the community for this type of funding. The greatest drawback for using a TIF program is revenues generated often fall short of expectation. Without the supplement of other funds, the TIF District fails. Contributing to a potential revenue shortage are the tax abatements commonly used to attract developers. From a public standpoint, a TIF provides a benefit and cost spillover to surrounding areas. A generic example of benefit spillover would occur if a Town in the Capital District built an interchange. Initially, Town residents would shoulder the financial burden, yet residents from the Capital District would benefit as a whole from a large scale transportation improvement. Similarly, cost spillover would occur if the Town fails to repay the TIF Bonds forcing the Town to seek additional County/State funding. Lastly, when a TIF District thrives, the area keeps any tax increment surplus. In this instance, there is not a redistribution of wealth to less prosperous areas.

E. Payment in Lieu of Taxes

A PILOT program provides a tax incentive for developers to invest in underutilized or impoverished areas. Contrary to a TDD or TIF, a PILOT program does not raise revenue with the intention of building or maintaining transportation infrastructure. Rather the program provides a tax abatement in a variety of forms to attract potential development. In order to qualify, a project must meet a set of requirements established by each municipality including job creation and tax revenue generation. A project may need to pass a “but-for” test. This test asks if a project would or would not be built “but for” the PILOT incentive. Areas that are impoverished with less than optimal investment opportunities often meet this “but for” condition. Similar to a TIF, a PILOT is meant to encourage development in underutilized or impoverished areas so it would take a liberal interpretation to qualify this approach in Malta and Ballston. Nevertheless, some New York towns have had success with PILOTs.

Once a project is selected, a PILOT can be implemented in a variety of ways. The first example is where a municipality begins the program by freezing the assessed value on a parcel of land. A developer will then pay a predetermined amount of property tax and/or annual fees until the project is complete. At completion the parcel will be taxed based on 100% of its post-construction assessed value. This method is currently being used by the Village of Suffern in Rockland County, New York. In an effort to revitalize a section of Orange Avenue, the village has formed a PILOT Program with Orange Avenue Associates, LLC (OAA) where the existing property tax will be frozen for 35 years. Each year OAA will pay a set amount of property tax and an annual fee. In this case both the tax and annual fee will increase every five years. At the end of the PILOT, the developer will have paid 3.4 million dollars to the village which is a 1.2 million dollar increase over current tax revenue projected over the next 35 years. The benefit to the developer is that the pre-construction assessed value of the Orange Avenue parcel is frozen. By not taxing the project based on its post-construction assessed value, OAA will save 1.5 million dollars in property taxes over the next 35 years⁷. In essence, Suffern receives more tax revenue than if the property had remained undeveloped while the developer pays less property tax over the 35 years than if the property were taxed at its full post-construction assessed value.

A second example to demonstrate how a PILOT can be used is in the Town of Bethlehem by their Industrial Developmental Agency. Their program offers both a standard and enhanced tax abatement where the abatement is based upon the increase in assessed property value once a project has been completed. For a standard abatement an applicant must meet a standard level of economic impact including job creation, business development, and tax generation. At year one of a standard abatement, the taxable value is reduced by 50% and declines each year until year eleven when the full assessed value is taxable. To meet the enhanced tax abatement a developer has to meet a much stricter set of requirements such as creating extraordinary new job creation, reusing/redeveloping abandoned or underutilized real estate, and others. If met, the enhanced abatement starts at 100% and declines until it ends in year 12⁸.

F. Summary

In summary, this paper is intended to support the implementation and funding discussion in the SRTS report, and present next steps for a possible regional transportation GEIS, for consideration by the task force, along with an assessment of three additional funding alternatives that could be used to pay for the nine intersection improvements identified in the SRTS. Each alternative has and can be used within New York State. However, requirements for implementation of a TIF program nearly preclude its use in the Towns of Malta and Ballston, and it appears that a PILOT program would require liberal interpretation to qualify. A TDD would be applicable, but will likely be met by a high degree of resistance as it imposes an additional tax. Based upon the research and local experience a GEIS

represents the best alternative, as they are widely used throughout the area, provide a legal nexus between affected properties and proposed actions, and are generally accepted by most municipalities. The challenges of implementing the State's first multi-municipal GEIS as a tool to obtain private mitigation funds would need to be addressed.

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Attachment A
Considerations for Pursuing a Large or Small
Multi-municipal Regional General Environmental Impact Statement (GEIS)
for the Saratoga Regional Traffic Study (SRTS) area

No.	Aspect of a GEIS	Advantage		Notes	Next Steps
		Large GEIS	Small GEIS		
1	Legal authority	TBD	TBD	There is no clear advantage for a Large or Small multi-municipal GEIS, although a large GEIS will involve more participants and for that reason has a greater potential for legal challenge. Although GEISs have been used successfully in the Capital Region, there is no record that a multi-municipal GEIS has been prepared in NY for the purpose of establishing mitigation Fees.	Obtain legal opinion
2	SEQRA Action	TBD	TBD	The SEQRA Action needs to be confirmed, which is expected to be something like...."to build certain transportation improvements", and to study the impact of those improvements. Growth projections that drive the need for improvements are for planning purposes only, and as actual developments come online, they would be subject to their own SEQRA process.	Obtain legal opinion
3	Identifying and agreeing on the mitigation plan		X	The challenge of developing consensus for the GIES mitigation Plan should not be underestimated. The Transportation Update to the Boght Road area GEIS took approximately four years for the stakeholders to agree on the mitigation plan, and that GEIS was contained entirely within one community. Achieving consensus for a small multi-municipal GEIS involving Malta and Ballston should be achievable. Gaining consensus for all mitigation in a large multi-municipal regional GEIS involving the five communities of Ballston, Clifton Park, Halfmoon, Malta, and Stillwater, and other involved agencies and the public will be a greater challenge.	Involve potential participants in early planning to gage willingness to participate, and for eventual Go / No-go decision
4	Potential to fund and implement more transportation improvements	X		One of the greatest advantages to a large multi-municipal GEIS involving the five communities of Ballston, Clifton Park, Halfmoon, Malta, and Stillwater, is that it has the potential to support funding for more transportation improvements, with the cost spread fairly across more users. A broader look at non-vehicular transportation (bike/ped) needs might be required. A smaller two-municipal GEIS with Ballston and Malta would partially fund the nine intersection improvements identified in the SRTS. The potential to fund more improvements needs to be weighed against the other factors in this table in terms of overall costs and benefits.	Consider benefit / cost
5	Consistent revenue stream	X		A larger GEIS area would potentially see a more consistent revenue stream leading to more timely improvements. This assumes that the final mitigation fees are reasonable and have the effect of fostering economic development because the process is efficient and the fees are fair.	Cross check fee structure at interim phases to see that it does not become a deterrent to development.
6	Who administers?	X		The advantage of a large multi-municipal GEIS is that it would need to be administered by a larger public entity such as the Saratoga County IDA. Saratoga IDA would have the ability to bond larger projects and pay off the bonds through the more consistent revenue stream. A small two municipal GEIS involving Malta and Ballston has less need for a regional entity to administer and could be administered by Malta under a MOU with Ballston supporting localized improvements.	Confirm willingness of Saratoga IDA to administer large GEIS
7	Establish a county wide process to prioritize transportation investments	X		A large multi-municipal regional GEIS has a greater potential to prioritize transportation investment that supports regional economic development and sustainability. The project selection process also needs to insure equity across participants.	Work through project selection process
8	Cost to develop a GEIS mitigation plan		X	Scoping, technical studies and public involvement for a large multi-municipal GEIS could cost on the order of \$1 million dollars, or more. Assuming that the technical studies completed for the Saratoga Regional Transportation Study could be used as the basis for a smaller two municipal GEIS (Ballston and Malta), the estimated cost could be reduced substantially.	Task Force discuss funding for GEIS
9	Simplicity		X	Although not necessarily simple, forming a small two-municipal GEIS with Malta and Ballston will be easier than a large multi-municipal GEIS involving five communities. Inter-municipal agreements will be needed between participants.	Pursue municipal agreements
10	Cost to Administer (staff resources) / Ease of Administration and calculation of mitigation fees		X	A Small GEIS may be administered with existing staff. A large GEIS may require more staff resources. Once the GEIS is in place the ease of administration and calculate fees should be about equal. Only the volume of work will increase with a larger multi-municipal GEIS.	Identify administration staff and process
11	Resolve the overlap of existing and proposed GEIS		X	The towns of Clifton Park, Halfmoon, and Malta have existing GEISs imposing mitigation fees. The overlap of these individual GEIS's with the new multi-municipal regional GEIS will need to be resolved so that there is no "double dipping" of mitigation fees. Individual GEIS's may be retained with improvements accounted for separately, or abandoned and rolled into the regional GEIS. Account balances for any abandoned GEIS would need to be applied appropriately, or reimbursed.	Decide to abandon or maintain existing GEISs

Travel Demand Management

Saratoga County Regional Traffic Study (2015)



Transportation is always changing...

SaratogaRTS.com

What is travel demand management and why we are doing this? Because transportation is always changing. How we travel around has changed dramatically in the past century.



Automobile oriented development

The introduction of automobiles allowed people and businesses to spread out. We can travel further and faster than ever. The problem is, automobiles seem to have become the sole means of transportation.



Intent

- What is TDM?
- TDM goals
- TDM Benefits
- TDM does work!
- Categories of TDM strategies
- How TDM strategies can be used?



What is TDM? – Definition

Transportation Demand Management or *TDM* (also called *Mobility management*) refers to various strategies that change travel behavior (how, when, and where people travel) in order to increase transport system efficiency and achieve specific planning objectives. TDM is increasingly used to address a variety of problems.

- The Victoria Transport Policy Institute



What is TDM? – Definition

**TDM is the use of
policies, programs, services and products
to influence
whether, why, when, where, and how
people travel.**



Travel Demand Management Shall

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- Reduce the total volume of traffic
- Promote shifts towards more sustainable modes of transport

With the objectives to

- Reduce traffic congestion
- Reduce adverse effects on the environment or public health
- Generate additional revenue to improve public transport and non-motorized travel

TDM emphasizes the movement of people and goods, not just motor vehicles, and gives priority to public transit and non-motorized modes.



Travel Demand Management

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Paradigm Shift

From
PREDICT and **PROVIDE**
To
PREDICT and **PREVENT**

TDM

It aims at reducing the demand at first place, rather than extending facilities to meet for ever growing demand.

CONGESTION REDUCING MEASURES

Supply Side

- Efficient use of existing facilities.
- Increasing the supply



Demand Side

- Managing the existing demand
- Controlling the growth of demand
- Cutting down the existing demand

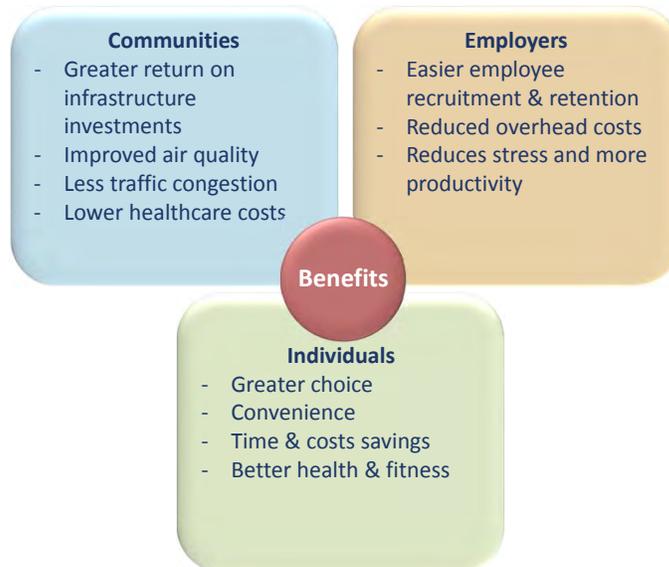


TDM Goals

- Regional mobility/ accessibility
- Congestion reduction
- Safety for all modes
- Environmental benefits- air quality
- Economic development
- Land use/transportation
- Quality of life/livability



Benefits of TDM



TDM Does Work

Arlington, VA. Compact residential and commercial development along the Metro rail line has allowed the county to grow rapidly without major expansion of the highway network or parking facilities, while maintaining low tax rates.

Bellevue, WA. Due to the Commute Trip Reduction program, the drive alone commute rate in downtown Bellevue fell by 30% between 1990 to 2000.

Saint John, N.B. A TDM strategy for the downtown core is expected to reduce growth related parking demand, eliminating the need for up to 425 new parking spaces and saving \$5 to \$10 million in parking construction costs.



Categories of TDM Strategies

Improve Transport Options

- Transit improvements
- Non-motorized improvements
- Rideshare programs- vanpools
- Flextime
- Car sharing
- Telework
- Taxi improvements
- Pedestrian/bike improvements
- Guaranteed ride home

Incentives

- Commuter financial incentives
- Parking pricing
- Parking cash-out
- Non-motorized encouragement

Land Use Management

- Smart growth
- Complete streets
- Location-efficient land uses
- Parking management
- Transit oriented development
- Traffic calming

Policies & Programs

- TDM programs
- Commute trip reduction
- Freight transport management
- TDM marketing and education



Improve Transport Options

TDM Measure	Mechanism	Travel changes
Transit improvements	Improved transport choice	Shifts mode, increases transit use
Ridesharing (carpool, vanpool)	Improved transport choice	Increase vehicle occupancy, reduces vehicle trips
Flexible work hours	Improved transport choice	Shifts travel time (when trips occur)
Carsharing	Improved transport choice	Reduces vehicle ownership and trips
Teleworking	Improved transport choice	Reduces overall vehicle travel
Taxi improvements	Improved transport choice	Shifts mode, reduces vehicle ownership and trips
Pedestrian/bicycle improvements	Improved transport choice, roadway design	Shifts mode, increases walking and cycling



Other Transport Options

- [ACCESS](#): senior transportation for Albany County residents, taxi rides for TANF-eligible citizens of Albany, Rensselaer, Saratoga, and Schenectady Counties.
- [Travel Training](#): help customers to better use transit service.
- [Star Program](#): a para-transit service for those with disability or impairment.
- [iPool2](#): a ride-matching website that matches ride-share partners.
- [LINK Tickets](#): allows commuters on partnering long-distance carriers to transfer to CDTA buses free of charge.
- [Vanpool, Carpool, Carshare, Guaranteed Ride Home](#): Other services provided via Capital Moves



Improve Transport Options

SaratogaRTS.com

Did you know...

Since the **BusPlus Red Line** (NY Route 5) was rolled out in 2011, the ridership has increased by 25 percent. The total travel time between the two Downtowns (Albany and Schenectady) has been reduced by 20 percent. With improved bus service, dedicated lanes, priority signals, and other improvements, transit as an alternate mode has improved in this corridor.



Improve Transport Options

SaratogaRTS.com

Did you know...

At an apartment development in Malta with the provision of an employer shuttle, the total single occupancy vehicle trips were reduced by about 5 percent during the peak hours. This benefit is also associated with a reduction in auto-ownership.



Improve Transport Options

SaratogaRTS.com

Did you know...

In 2008, Mildred Elley and Austin's School of Spa Technology moved to a location right behind a bus stop on Central Avenue. As a result, enrollment has increased about 50 percent and the ridership at that bus stop has subsequently increased.



Incentives to Use Alternate Modes

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- Commuter financial incentives
 - Parking pricing: motorists pay directly for using parking facility
 - Parking cash-out: employer pays the employee for not using a parking space
 - Subsidized parking for off-site parking
 - Travel allowances instead of parking subsidies
 - Benefits of transit and rideshare like vanpools and carsharing



Incentives to Use Alternate Modes

- Parking pricing
 - Charge motorists for using parking facilities.
 - Manage and price the most convenient parking spaces to favor priority users.
 - Set parking prices to equal or exceed transit fares.
 - Avoid excessive parking supply.
- Parking cash-out
 - Pay motorists for NOT using parking facilities.
 - Reduce parking demand by encouraging carpooling.
 - Direct cash subsidy as an incentive.



Incentives to Use Alternate Modes

- Vanpools & carpools
 - Preferred parking for carpools and vanpools
 - Subsidized vanpool from CDTA (www.capitalmoves.org)
 - Employer-run or employee-requested
 - Reduction in parking demand
 - Reduction in peak hour traffic



Incentives to Use Alternate Modes

- Non-motorized encouragement
 - Neighborhood design affects walking activity.
 - Site design of commercial locations
 - Partnerships with other organizations to encourage walking and bicycling.
 - Design provisions for walking and bicycling a requirement.
 - Bicycle parking spaces.
 - Complete streets, traffic calming, streetscaping.



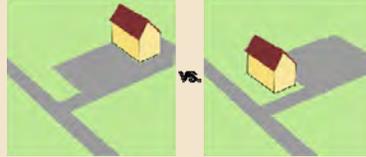
Land Use Management

- Smart growth
- Complete streets
- Location-efficient land uses
- Parking management
- Transit oriented development
- Traffic calming



Smart Growth Versus Sprawl

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Smart Growth

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- More **compact**, infill development.
- **Mixed** land use.
- Increased **connectivity**.
- Improved **walkability**.
- **Urban villages**.
- Improved **public realm**.
- Better parking **management**.
- Increased transportation **diversity**.
- More **traffic calming** and speed control.



Smart growth in Rockville, Maryland
(PHOTO: EPA Smart Growth)



Location Efficient Development

- Locate affordable housing in accessible areas, with good walking conditions and transit service.
- Mixed use areas, so residents can walk to neighborhood services: schools, shops, parks, etc.
- Reduce parking requirements. Unbundle parking.
- Provide carsharing services.
- Recognize transportation cost reductions when evaluating household borrowing ability.
- Market for this type of housing to encourage alternate modes of transport.



Parking Management – Old

- Motorists should nearly always be able to **easily find, convenient, free** parking at every destination
- Parking planning consists of generous minimum parking requirements
- Costs born indirectly through taxes and building rents



Parking Management - New

- Parking facilities should be used efficiently
 - parking lots may often fill as long as alternative options are available nearby
 - motorists may often have a choice between paid parking nearby or free parking a few blocks away
- Requires good walking conditions between parking facilities and the destinations they serve
- Parking planning includes shared parking, parking pricing, user information, and walkability improvements.



Land Use Management

Some examples how these strategies can be used:

- Pedestrian & transit oriented site planning
- Approval of projects contingent on investment in non-motorized facilities
- Encourage development of mixed uses



Policies and Programs

- TDM programs
- Commute trip reduction
- Freight transport management



Local TDM Programs

- CDTA and ShopRite Supermarkets partnership where ShopRite offers their employees free access to the entire CDTA system.
- SCCC and CDTA partnership provides a universal access transportation program to students using their student ID cards
- Vanpools to Watervliet Arsenal and Stratton Air National Guard Base are subsidized by CDTA to incentivize more vanpools where bus transit is not as feasible.



Pedestrian Friendly Policies

- Mix of land uses: e.g. Malta's form-based code
- Pedestrian-oriented building entries and street edges: e.g. Saratoga Springs' Transect Zoning
- Complete Streets: Albany's Complete Street ordinance passed in 2013



Downtown Saratoga Springs, NY in the 1970s (top) had started to slide towards suburban style auto-centric development. Residents and business people realized the folly of this trend and required a complete and solid street front for buildings that today is a major contributor to the main street's vibrancy.



Other Policies

- **Incentive zoning** is a broad regulatory framework for encouraging and stimulating development that provides a desired public benefit as established in adopted planning goals.
- **Overlay districts** are a regulatory tool that creates a special zoning district, placed over an existing base zone(s), which identifies special provisions in addition to those in the underlying base zone.



Other Policies

- **Bicycle parking ordinances** (a sample ordinance <http://www.changelabsolutions.org/publications/bike-parking>)
- **Streetscaping** recognizes that streets are places where people engage in various activities, including but not limited to motor vehicle travel. It includes design standards like maximum block lengths, connectivity requirements, among others.



Policy – Sources

- For a variety of pedestrian friendly codes and examples <http://www.changelabsolutions.org/childhood-obesity/pedestrian-friendly-code>
- TDM measures and sample policies http://www.pedbikeinfo.org/planning/sample_policies.cfm
- LEED for Neighborhood Development (LEED-ND) is a rating system that promotes bicycling and walking by prioritizing development density and network connectivity. <http://www.usgbc.org/neighborhoods>
- The National Complete Streets Coalition provides model language for Complete Streets policies. <http://www.smartgrowthamerica.org/complete-streets>



Policies and Programs

- TDM marketing and education
 - Programs to promote walking and bicycling
 - Encourage transit ridership
 - Workshops to provide information about the alternative modes available in the area
 - Information on different transport options should be easily accessible



Education Programs

- Encourage education of all transportation users
 - Make education a priority
 - Provide safety materials
 - Implement safety education in schools
 - Educate municipal boards
 - Compile online resources



Resources

- Victoria Transport Policy Institute (all about TDM):
<http://www.vtpi.org/tdm/tdm12.htm>
- About TDM: <http://mobilitylab.org/about-us/what-is-tdm/>
- TDM presentation - Canada:
https://www.fcm.ca/Documents/tools/GMF/Improving_Travel_Options_with_Transportation_Demand_Management_EN.pdf
- Incorporation of TDM into Development Review Process:
<http://ddot.dc.gov/sites/default/files/dc/sites/ddot/publication/attachments/tdm-final-report.pdf>
- Integration of TDM at Local Planning Level:
<http://www.ops.fhwa.dot.gov/publications/fhwahop12035/chap8.htm>



Resources

- Application of TDM to Policy Issues:
<http://www.ops.fhwa.dot.gov/publications/fhwahop12035/chap3.htm>
- Pedestrian and Bicycle Information Center, Sample Policies:
http://www.pedbikeinfo.org/planning/sample_policies.cfm
- Parking Management: <http://www.vtpi.org/tdm/tdm28.htm>
- Pedestrian Friendly code directory:
<http://www.changelabsolutions.org/childhood-obesity/pedestrian-friendly-code>
- Massachusetts Smart Growth Toolkit:
http://www.mass.gov/envir/smart_growth_toolkit/pages/state-policy.html
- Seattle Best Practices in TDM:
<http://www.seattle.gov/transportation/docs/ump/07%20SEATTLE%20Best%20Practices%20in%20Transportation%20Demand%20Management.pdf>







Education

Saratoga County
Regional Traffic Study



Goals of Presentation SaratogaRTS.com

- Impart basic safety education for all users
- Compile existing safety education material resources

See!

Drivers:

- STOP for pedestrians at crosswalks and intersections - it's the law.
- Do not block crosswalks when stopping at intersections.
- Slow down and obey posted speed limits.
- Take extra care around schools, playgrounds and neighborhoods.
- Always look out for pedestrians, especially before hitting a green light or making a "right turn on red."
- Never run red lights.
- Be careful when passing stopped vehicles. They might be stopping for pedestrians.
- Pay Attention! Do not text and drive!
- Share the road. It's your responsibility to look for others.

Pedestrian Safety: It's no Accident.

Be Seen!

Pedestrians:

- Cross at intersections and marked crosswalks.
- Use pedestrian protection and WAIT for signal to cross.
- Before crossing, look left, right, then left again, and over your shoulder for turning vehicles.
- Use sidewalks. If there are none, walk facing traffic so you see vehicles, and drivers see you.
- Pay attention! Don't text while crossing!
- Make eye contact with drivers so they see you.
- Stay visible after dark and in bad weather with light-colored or reflective clothing.
- Don't step suddenly in front of buses and trucks. They take longer to stop than a car.
- Watch out for trucks and buses backing out of parking spaces and driveways.

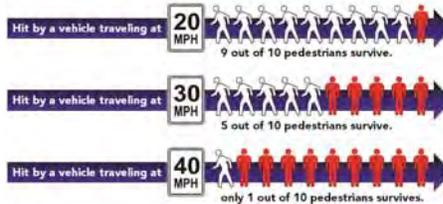
Pedestrian Safety: It's no Accident.



Presentation Outline

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- Why safety education?
- Basic safety education
 - Pedestrians
 - Bicyclists
 - Drivers
 - Roundabouts
- Existing educational resources



Why safety education?



One of the 4 E's

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Engineering, education, enforcement, and encouragement are all necessary components of a SAFE transportation system.

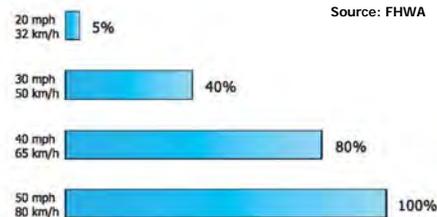
**Engineering
Educating
Enforcing
Encouraging**



All travel includes pedestrians

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Whether walking, biking, taking the bus, or driving to or from a destination, all trips start and end as a pedestrian.



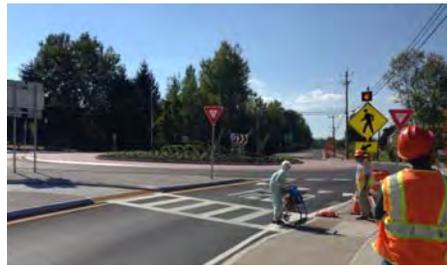
The potential for pedestrian deaths increases significantly with vehicle travel speed.

Speeding matters!



New traffic control devices

Traffic control evolves with changes in technology and society, yet there are no requirements for education concerning new traffic control devices. The lack of knowledge can create confusion, especially for very young and aging drivers.



Goal of safety education

Education for all system users will reduce injuries and fatalities!



Basic safety education.



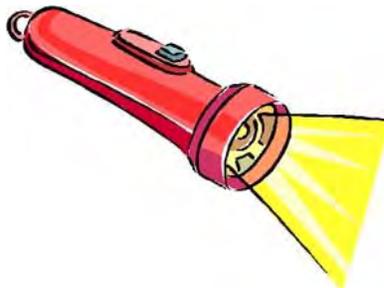
PEDESTRIANS



Pedestrian Safety Tips

SaratogaRTS.com

- Be Safe and Be Seen → Make yourself visible to drivers
 - Wear bright/light colored clothing and reflective materials.
 - Carry a flashlight when walking at night.
 - Cross the street in a well-lit area at night.
 - Stand clear of buses, hedges, parked cars, or other obstacles before crossing so drivers can see you.



Source: pedbikeinfo.org



Pedestrian Safety Tips

- Be Smart and Alert → Avoid dangerous behaviors
 - Always walk on the sidewalk. If there is no sidewalk, walk facing traffic.
 - Stay sober; walking while impaired increases your chance of being struck.
 - Don't assume vehicles will stop. Make eye contact with drivers, don't just look at the vehicle.
 - Don't rely solely on pedestrian signals. Look before you cross the road.
 - Be alert to engine noise or backup lights on cars in parking lots and near on-street parking spaces.

Source: pedbikeinfo.org



Pedestrian Safety Tips

- Be Careful at Crossings → Look before you step
 - Cross streets at marked crosswalks or intersections, if possible.
 - Obey traffic signals such as WALK/DON'T WALK signs.
 - Look left, right, and left again before crossing.
 - Watch for turning vehicles. Make sure the driver sees you and will stop for you.
 - Look across ALL lanes you must cross and visually clear each lane before proceeding. Even if one motorist stops, do not presume drivers in other lanes can see you and will stop for you.
 - Don't wear headphones or talk on a cell phone while crossing.

Source: pedbikeinfo.org



Basic safety education.



BICYCLISTS



Bicyclist Safety Tips

SaratogaRTS.com

- Always ride with traffic and follow the rules of the road
 - You are better off riding with the flow of traffic, not against it. Crash data tells us that getting hit from behind is extremely unlikely.
- Don't ride on the sidewalk
 - Although you might think it's a safer option, motorists are simply not looking for bicyclists on the sidewalk, especially those riding against the direction of traffic.
 - At every driveway and intersection, you are at greater risk of being hit by a motorist than if you were riding on the road with traffic.



Source: pedbikeinfo.org



Bicyclist Safety Tips

- Be predictable and visible
 - If riding in the dark, use headlights, taillights, and reflectors and wear reflective materials and brightly colored clothing.
 - Do not wear headphones or talk on a cell phone while bicycling.
- Watch for stuff on the road or trail that might make you fall or swerve
 - Rocks, trash, storm grates, wet leaves, potholes, gravel, railroad tracks, and even wet pavement markings can all send you flying.
- Watch for Turning Traffic
 - Most car/bike collisions happen at intersections and driveways when motorists or bicyclists are turning.

Source: pedbikeinfo.org



**Basic
safety
education.**

DRIVERS



Driver Safety Tips

- Keep your cell phone off
 - Cell phone use can be the equivalent of driving drunk
- Don't text
 - Texting causes an average loss of focus for 4.6 seconds (about a football field)
- Turn on your headlights
 - It increases your visibility to help other drivers see you



Source: dmv.org



Driver Safety Tips

- Obey the speed limit
 - Increased speed increases the potential for injuries and fatalities
- Minimize distractions
 - When distracted you are less likely to notice impending danger and lose the ability to control the vehicle
- Practice defensive driving
 - Always be aware of the traffic around you
- Choose a safe car
 - With the latest safety features like anti-lock brakes and air bags

Source: dmv.org



Basic safety education.



ROUNDABOUTS



Navigation – Rules

SaratogaRTS.com

- Traffic in the roundabout has the right-of-way
- Travel in a counter-clockwise direction (right)
- Follow the lane designation signs
- Do not stop in the crosswalk, keep it clear for pedestrians
- Bicyclists can ride within the roundabout and will ride in the travel lanes.
- Trucks can use the center turning apron

Source: dot.ny.gov



Navigation – Emergency Vehicles

- Do not enter the roundabout when emergency vehicles are approaching on another leg.
- Allow vehicles in the roundabout to clear in front of the emergency vehicle.
- If an emergency vehicle approaches, pull to the right before entering the roundabout.
- If in the roundabout, continue to your exit and pull to the right after exiting the roundabout.



Source: dot.ny.gov



Navigation – Approach and Enter

- When approaching the roundabout follow the lane designation signs
- Slow down and yield to pedestrians
- Look to the left traffic in the roundabout has the right-of-way
- Enter the roundabout when there is an adequate gap in the circulating traffic flow



Source: dot.ny.gov



Navigation – Exit

- Once in the roundabout, you now have the right-of-way
- Drive in a counter-clockwise direction (toward the right)
- As you approach your exit, turn on your right-turn signal
- As you exit the roundabout yield to pedestrians



Source: dot.ny.gov



Available resources.



Pedestrian Resources

- Pedestrian and Bicycle Information Center
pedbikeinfo.org
- NYSDOT Pedestrian Information
dot.ny.gov/divisions/operating/opdm/local-programs-bureau/pedestrian
- NYSAMPO “Know Your Pedestrian and Bicycle Laws”
Fact Sheet
nysmpos.org/wordpress/wp-content/uploads/2014/11/NYSAMPO_SafetyBikePed_Web_150401.pdf
- Capital Coexist “Capital Region Walking Guide”
capitalcoexist.org/wp-content/uploads/2014/01/PedGuideWithCover.pdf



Bicyclist Resources

- Pedestrian and Bicycle Information Center
pedbikeinfo.org
- NYSDOT Bicycling in New York
dot.ny.gov/bicycle
- NYSAMPO “Know Your Pedestrian and Bicycle Laws”
Fact Sheet
nysmpos.org/wordpress/wp-content/uploads/2014/11/NYSAMPO_SafetyBikePed_Web_150401.pdf
- National Highway Traffic Safety Administration
nhtsa.gov/Bicycles
- Capital Coexist
capitalcoexist.org



Driver Resources

- Pedestrian and Bicycle Information Center
pedbikeinfo.org/community/tips_driver.cfm
- NYSDOT Bicycling in New York
dot.ny.gov/bicycle
- NYSAMPO “Know Your Pedestrian and Bicycle Laws”
Fact Sheet
nysmpos.org/wordpress/wp-content/uploads/2014/11/NYSAMPO_SafetyBikePed_Web_150401.pdf
- National Highway Traffic Safety Administration
nhtsa.gov/Bicycles
- Capital Coexist
capitalcoexist.org



Roundabout Resources

- NYSDOT Roundabouts
dot.ny.gov/main/roundabouts
- Insurance Institute for Highway Safety Highway Loss
Data Institute
iihs/topics/t/roundabouts/topicoverview
- AARP “Modern Roundabouts” A Livability Fact Sheet
aarp.org/content/dam/aarp/livable-communities/documents-2014/Livability%20Fact%20Sheets/Modern-Roundabouts-Fact-Sheet.pdf
- FHWA Safety
safety.fhwa.dot.gov/intersection/innovative/roundabouts/
- Washington State DOT Roundabout videos
wsdot.wa.gov/safety/roundabouts/



Implementation & Outreach Resources

- “See! Be Seen!” Tip card
capitalmoves.org/wp-content/uploads/2013/09/BeSeen_TipCard.pdf
- FHWA Safer Journey Education and Outreach
safety.fhwa.dot.gov/ped_bike/education/
- FHWA Roundabout Outreach and Education Toolbox
safety.fhwa.dot.gov/intersection/innovative/roundabouts/roundabouttoolbox/
- AAA Foundation for Traffic Safety videos
aaafoundation.org/videos
- NHTSA Highway Safety Grant Programs Resources Guide
nhtsa.gov/About+NHTSA/Highway+Safety+Grant+Programs/Resources+Guide



Contact

Capital District Transportation Committee
One Park Place
Albany, New York 12205
518-458-2161
www.cdtcmpo.org



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