

Town of Stillwater DGEIS Traffic Impact Study

Town of Stillwater
Saratoga County, New York

July 17, 2007



Prepared for:

Town of Stillwater
66 School and East Street
Stillwater, NY 12170

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Saratoga County, New York

DRAFT FOR DISCUSSION PURPOSES



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Transportation

1.0 INTRODUCTION

The Town of Stillwater is served by a network of highways consistent with the generally rural nature of the Town. Roadways include state highways, county roads, and local Town Roads to provide the overall Town of Stillwater highway network. Included in this network are US Route 4, NYS Route 9P, NYS Route 32, NYS Route 67 and NYS Route 423; collector roads such as Lake Road (County Road 76), Meeting House Road (County Road 75), Fuller Road (County Road 70) and many local streets, including Cold Spring Road, Fitch Road, Jack Halloron Road, Stratton Lane, Dick Lynch Road, and Filke Road. Although not within the Town of Stillwater boundaries, Interstate 87 (I-87), a limited access facility, and US Route 9, a major arterial, also service the Town.

The noted state highways form the roadway network around the periphery of the Town and provide routes for travel and for travel within and through the town. The county roads provide the major north/south and east/west travel routes for in town travel and connections to the State Highways.

Roads under the authority of the Town of Stillwater provide the links between residences and destinations inside and outside of Town via the county roads and state highways. According to the August 2006 NYSDOT Local Roads Listing, there were 122 town roads, half of which are under one-quarter mile in length. No town road is longer than 3.0 miles. There are 58 centerline miles, and 116 lane miles of town roads, of which 40.4 centerline miles are asphalt paved, 9.7 are chipped and sealed, and 7.9 are unpaved.

Existing development in the Town is diverse and consists of commercial, service, and light industrial uses primarily located along the Route 4 and Route 67 corridors. Areas of clustered residential use exist predominantly in the Village, and in the Town around Saratoga Lake, with more isolated residential uses throughout the Town. Stillwater continues to be a community with a significant amount of land in active agricultural use.

As the Town grows, it is important for the Town of Stillwater to plan for future growth and to be able to fairly distribute mitigation measures to the entities introducing the future growth in the Town. Understanding the existing transportation conditions in the Town is the first step in this endeavor. Future growth can then be projected and distributed to the Town's transportation infrastructure. A main component of the future growth for the Town will come from the Luther Forest Technology Campus (LFTC) project. The resulting future conditions then can be analyzed and compared to the existing conditions. This

comparison will provide the basis for proposed mitigation as required by the anticipated future growth. Finally an equitable means of assigning responsibility for the implementation of the mitigation can be formulated.

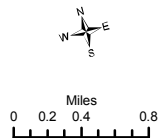
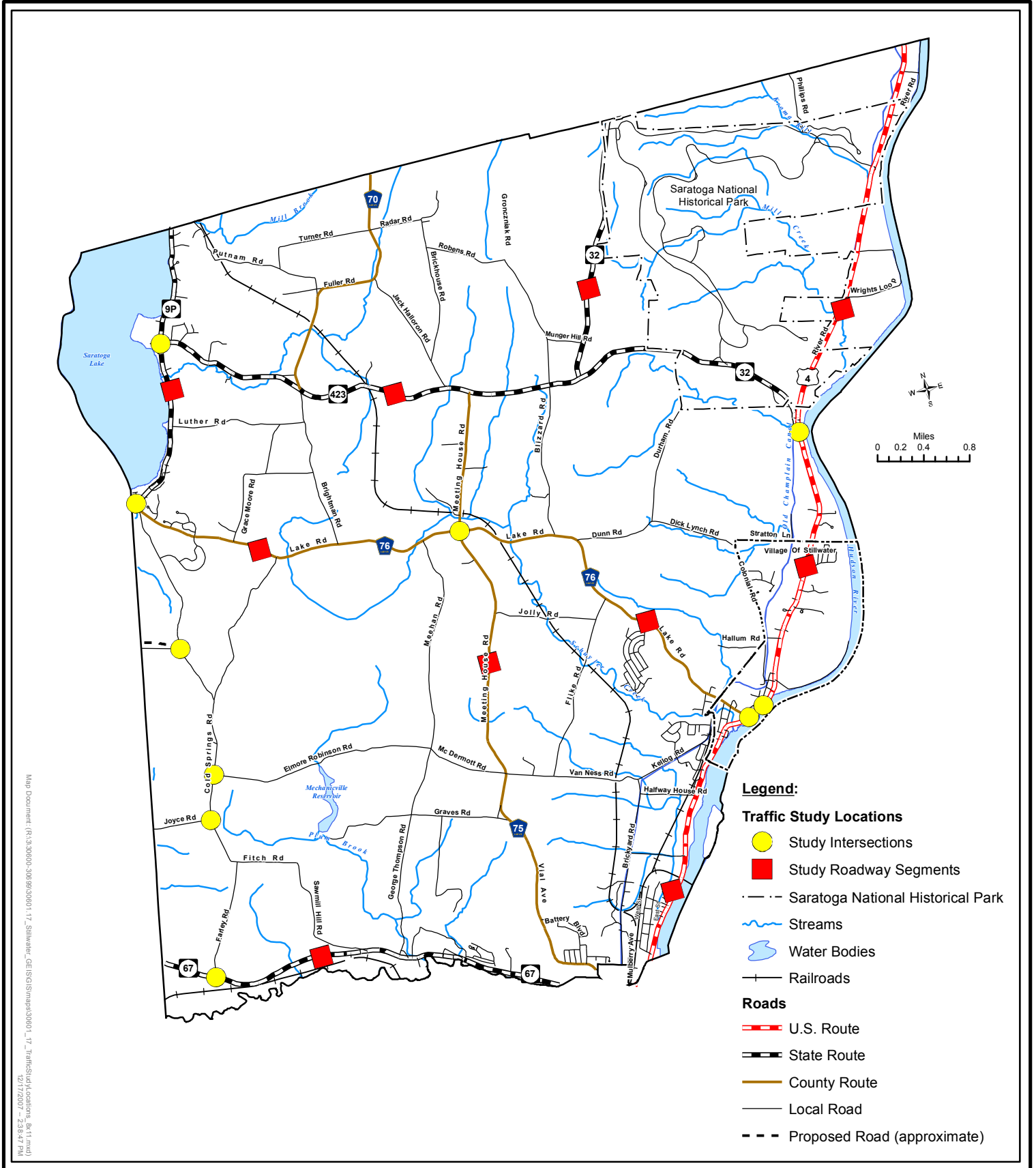
2.0 STUDY LOCATIONS

The first step in ascertaining the impact of growth on the transportation system of the Town is to understand the existing transportation conditions. Based on discussions with the Town of Stillwater Highway Superintendent, field reviews of the roadway network, and perusal of recent Traffic Impact Studies for major projects within the Town, a listing of intersections and roadways was established for study.

Table T-1 lists the intersections and roadways that will be studied. Figure F-1 provides a graphical representation of these locations. A brief description of the roadways and intersections studied is presented following Figure F-1.

Table T-1 Study Area Locations

Intersection		Roadway Segment	
1	Rte 4 @ Rte 32	1	Rte 4 North of Rte 32
2	Rte 4 @ Stillwater Bridge (CR 125)	2	Rte 4 Between Stratton Ln. and Stillwater School
3	Rte 4 @ Lake St. (CR 76)	3	Rte 4 North of Rte 67
4	Rte 67 @ Farley Rd.	4	Rte 67 Between George Thompson Rd. and Farley Rd.
5	Fitch Rd./Cold Spring Rd. @ Joyce	5	Rte 32 North of Rte 423
6	Cold Spring Rd @ Elmore Robinson Rd.	6	CR 76 Between Grace Moore Rd. and Brightman Rd.
7	Cold Spring Rd @ LFTC (Future Access)	7	CR 76 East of Filke Rd.
8	Cold Spring Rd @ CR 76	8	CR 75 Between Mc Dermott Rd. and Jolly Rd.
9	Rte 9P @ CR 76	9	Rte 9P Between CR 76 and Rte 423
10	Rte 9P @ Rte 423		
11	CR 75 @ CR 76		



Legend:

Traffic Study Locations

- Study Intersections
- Study Roadway Segments
- Saratoga National Historical Park
- Streams
- Water Bodies
- Railroads

Roads

- U.S. Route
- State Route
- County Route
- Local Road
- Proposed Road (approximate)

Map Document: (R:\30600-30690\30601_17_Stillwater_GEIS\GIS\map\30601_17_TrafficStudyLocations_R011.mxd) 12/17/2007 - 2:38:47 PM

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Town of Stillwater GEIS

Traffic Study Locations

Town of Stillwater
Saratoga County, New York

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Scale:	1:72,000
Project:	30601.17
Figure:	3.5-1

2.1 Roadways

The Town of Stillwater's roadway network consists of a mix of state highways, county roads and local town roads.

Highways and roads are classified as urban and rural, and then by their function or the character of service they are intended to provide under the system of functional classification. A highway can function as an expressway, an arterial, a collector, or a local street. As defined by the 2000 Highway Capacity Manual, an urban area is characterized by high densities of development or concentrations of population and draws people from several areas within a region. A rural area is characterized by widely scattered development and a low density of housing and employment. All roadways in the Town of Stillwater are considered as rural.

An expressway, or interstate is characterized by traffic with higher speeds, longer trip lengths, and fully controlled access. An arterial serves traffic having relatively high speeds, moderate trip lengths, and provides some access to adjacent land uses. Collectors and local streets serve traffic with lower speeds, short trip lengths, and provide full access to adjacent properties. The roadway descriptions below include the functional classification of each roadway studied. Roadways not specifically designated are classified as local streets.

US Route 4 is a rural principal arterial running north-south along the eastern edge of the Town of Stillwater, generally parallel to the Hudson River, from the City of Mechanicville to the Town of Saratoga. It is a two-lane roadway with paved shoulders varying in width from 2 to 8 feet. The posted speed limit is 40 mph south of the Village line and 30 mph within the Village to Stratton Lane. From there to the northern Village line the speed limit returns to 40 for 0.7 mile before becoming 55 mph.

Route 4 serves a dual role: first as a regional transportation route providing access from Rensselaer and Albany Counties (to the south) to points north in Saratoga County; and also as a "Main Street", running directly through the Village of Stillwater on the eastern edge of the Town.

State Route 67 is a two lane rural minor arterial in the Town of Stillwater running east-west at the southern edge of the Town of Stillwater, from the City of Mechanicville to the Town of Malta. The roadway is two 11 foot travel lanes with paved shoulders varying in width from 2 to 4 feet. The posted speed on Route 67 is 45 mph from the City of Mechanicville west to Sawmill Hill Road where it changes to 55 mph to the Malta town line. Route 67 is designated by NYSDOT as an Access

& Qualifying Highway, allowing the use of 53 foot trailer combinations. Allowable trailer combinations are restricted to 48 feet on all other State roadways.

State Route 9P is a north-south rural principal arterial that runs around the east side of Saratoga Lake in the Town of Stillwater. Route 9P connects to Route 9 in the Town of Malta to the south and again to Route 9 to the north in Saratoga Springs. The roadway is one 10 foot wide travel lane in each direction with 2-4 foot shoulders and with a posted speed limit is 35 mph.

State Route 423 (Battlefield Road) is an east-west rural major collector road in the northern part of the Town, connecting Route 32 to Route 9P and has one 10 foot travel lane in each direction with 3-4 foot shoulders. There is no posted speed limit and accordingly Route 423 is governed by the statewide speed limit of 55 mph.

State Route 32 is generally a north-south rural minor/principal arterial with one 10-11 foot wide travel lane in each direction with 3-4 foot paved shoulders. Route 32 overlaps U.S. Route 4 from the southerly town line to its split in the Bemis Heights area of the Town, where it overlaps Route 423 heading west until it splits again heading north into the Town of Saratoga. There is no posted speed limit after the Route 4/ Route 32 split in Bemis Heights, and accordingly Route 32 is governed by the statewide speed limit of 55 mph.

County Road 70 (Jack Halloron Road) is a north-south roadway under the jurisdiction of Saratoga County, running north from State Route 423 into the Town of Saratoga. There is one 10-11 foot travel lane in each direction with 2-3 foot wide shoulders (some paved).

County Road 75 (Viall Avenue/ Meeting House Road) is a north-south roadway under the jurisdiction of Saratoga County that connects State Route 67 to State Route 423. There is one 10-11 foot travel lane in each direction, with 2 -4 foot paved shoulders, and a posted speed limit of 45 mph from the southerly town line until the intersection with County Road 76. After County Road 76, the speed limit is not posted and is governed by the statewide speed limit of 55 mph.

County Road 76 (Lake Road) traverses east-west with one 11 foot travel lane and variable 2-4 foot paved shoulders in each direction. CR 76 connects U.S. Route 4 and Route 9P and is under the jurisdiction of Saratoga County. The posted speed limit is 35 mph in the Village of Stillwater, changing to 45 mph as it leaves the Village until the intersection with County Road 75. After County Road 75 the speed limit is not posted and is governed by the statewide speed limit of 55 mph.

Cold Springs Road, a Town road, is a 25 foot wide, gravel roadway extending north-south between Joyce Road and Lake Road. Cold Springs Road is an extension

of Fitch Road and Farley Road, with the overall travel route providing the connection between NYS Route 67 to Lake Road (CR 76). The posted speed limit is 45 mph from Joyce Road until ½ mile prior to County Road 76 where a local area speed limit is established for 35 mph. An access connection for LFTC with Cold Springs Road is part of the overall LFTC development plan.

2.2 Intersections

Route 4 @ Route 32: This three way intersection, north of the Village, terminates the Rte 4 and Rte 32 overlap with Rte 32 branching off to the west. The re-alignment of this intersection was recently completed in 2006 by NYSDOT under Contract # D259684. All traffic now enters and leaves Route 4 via a traditional “T” configuration. The Rte 32 approach is under stop sign control.

Route 4 @ Stillwater Bridge (CR 125): This is a four-way intersection, in the Village of Stillwater, with CR 125 intersecting Rte 4 from the east and a Stewart’s Shop driveway forming the westerly leg. The intersection is controlled by a flashing traffic signal with 8” indications and a stop sign on the Stillwater Bridge road approach. NYSDOT conducted a signal warrant investigation at this location in 2006 with the result that the warrants for signalization are not met by current traffic volumes and conditions.

Route 4 @ Lake Street (CR 76): This is a three-way or “T” intersection in the Village of Stillwater. Lake Street approaches Route 4 from the west and is controlled by a stop sign. Each route has a posted speed limit of 30mph within the Village limits. NYSDOT conducted a signal warrant investigation at this location in 2006 with the result that the warrants for signalization are not met by current traffic volumes and conditions.

Route 67 @ Farley Road: Farley Road approaches Rte 67 from the north at this three-way intersection. Farley Road is under stop sign control. This intersection is expected to be impacted by the LFTC development.

Fitch Road / Cold Springs Road @ Joyce Road: This is a three-way intersection with Fitch Road approaching from the south, Joyce Road from the west, and Cold Springs Road from the north. Joyce Road is under stop sign control. Fitch Road and Cold Springs Road are in direct north-south alignment and form the main roadway at this intersection. This intersection is also expected to be impacted by the LFTC development.

Cold Springs Road @ Elmore Robinson Road: Elmore Robinson road approaches Cold Springs Road from the east and is under stop sign control. This three-way intersection is also expected to be impacted by the LFTC development.

Cold Springs Road @ Future LFTC Access Road: As currently planned, the LFTC project will construct an access roadway from the LFTC campus to Cold Springs Road. This access road will be located 2000' to 2500' north of Elmore Robinson Road with the new access approaching from the west.. Current plans call for a three-way "T" intersection with the LFTC approach under stop sign control.

Cold Springs Road @ Lake Road (CR76): Cold Springs Road intersects Lake Road (CR 76) from the south at this three-way-intersection. The Cold Springs Road approach is under stop sign control. This intersection is proximate to the Route 9P and Lake Road (CR76) intersection just to the west. This intersection will figure significantly in the future, handling LFTC traffic from the north and east.

Route 9P @ Lake Road (CR 76): Lake Road (CR 76) intersects Rte 9P from the east at the southern portion of Saratoga Lake. The Lake Street approach of this three-way intersection is under stop sign control. This intersection will figure significantly in the future, as a gateway to LFTC.

Route 9P @ Route 423: Route 423 approaches Rte 9P from the east, and at the intersection splits into two legs, one for traffic heading north and the second for traffic headed south. Both Route 423 legs, each under stop sign control, are on skewed alignments to Route 9P.

Lake Road (CR 75) @ Meeting House Road (CR 76): This intersection is under four-way stop control. The intersection is a main intersection for north-south / east-west travel in the geographic center of the Town.

3.0 EXISTING CONDITIONS

To study and analyze the existing conditions on the Town of Stillwater's roadway network, information was collected from the following sources:

- New York State Department of Transportation (NYSDOT)
- Saratoga County Department of Public Works
- The Luther Forest Technology Campus Traffic Impact Study, dated November 4, 2002 prepared by Creighton Manning Engineering, LLP
- Saratoga Lake Hotel Resort & Marina Project (Brown's Beach) Traffic Impact Study, dated September, 2006, prepared by GTS Consulting.
- White Sulphur Springs Estates Traffic Impact Study, dated March 28, 2005, prepared by Creighton Manning Engineering, LLP
- The Stillwater Woods Traffic Impact Study, dated December 1, 2004, prepared by Creighton Manning Engineering, LLP

The information collected from these sources included: existing traffic volumes, functional classification of roadways, traffic signal operations, and accident histories for the selected roadways and intersections.

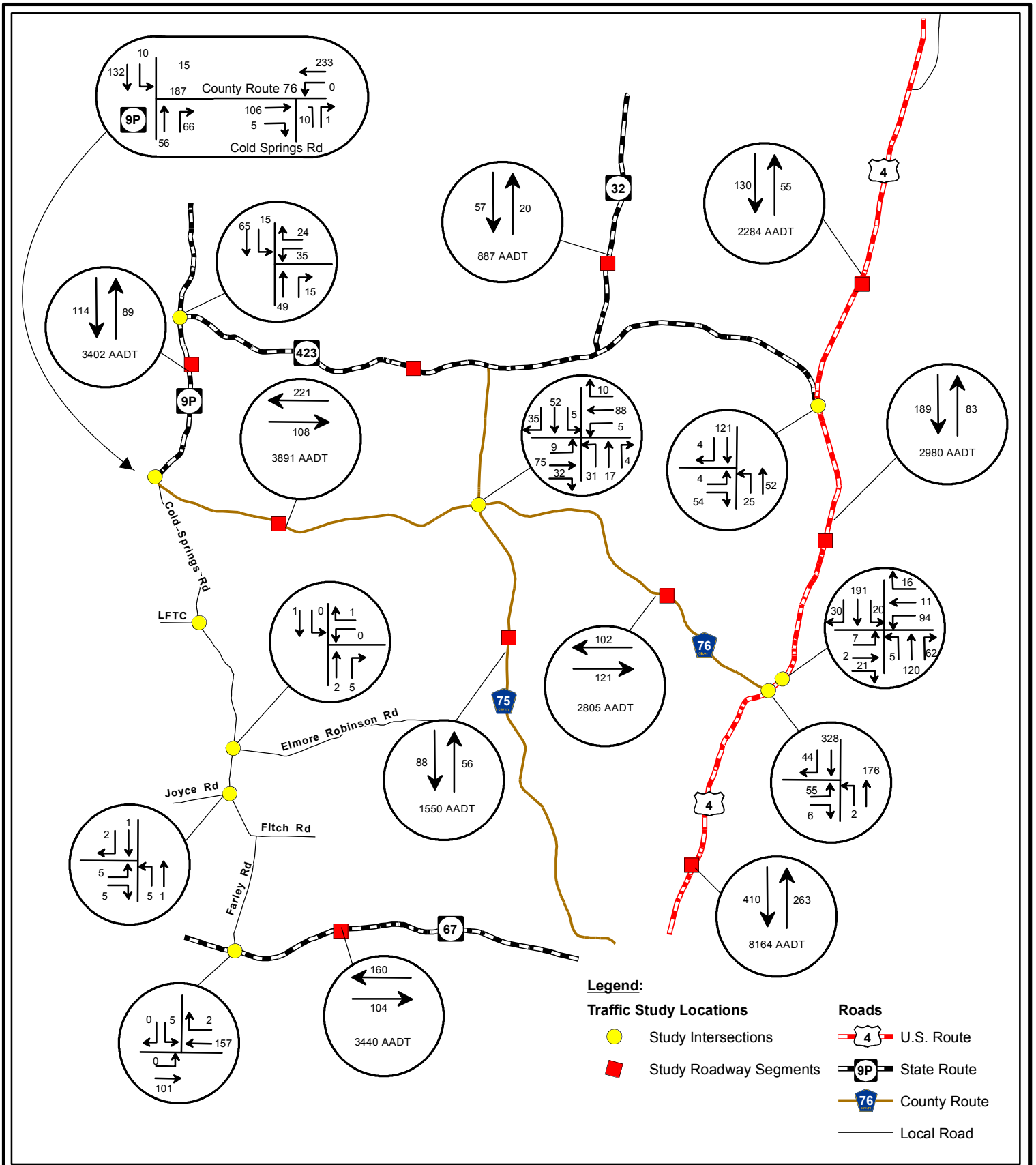
Field reviews were undertaken on selected roadways in the Town of Stillwater to identify existing features such as travel lane width, shoulder width, traffic control, speed limits, pavements markings, signing, and other pertinent roadway characteristics.

3.1 Traffic Volumes

Existing traffic volumes obtained from NYSDOT, Saratoga County DPW, and the noted information sources (above) were supplemented with manual traffic counts and from manual turning movement counts conducted by The Chazen Companies at the following locations: US Route 4 & Lake Road (CR 76) intersection, Lake Road (CR 76) & Meeting House Road (CR75) intersection, and the intersection of US Route 4 and NYS Route 32. In addition the traffic volumes from the traffic studies noted above were reviewed for selected locations. Traffic volumes from 2005 or earlier were adjusted utilizing an appropriate growth factor to bring these volumes up to the 2007 time frame.

Figures T-2 and T-3 present the existing traffic volumes for the studied intersections and roadways. Both AM and PM peak period volumes and Average Annual Daily Traffic (AADT) volumes are provided.

The Town's roadway network experiences the highest volume of traffic during the typical commuter peak hours of 7:00 to 9:00 a.m. and 4:00 to 6:00 p.m. Individual intersections experience their actual peak hour at different intervals within the noted two-hour time periods. According to the NYSDOT 2003 Highway Sufficiency Ratings, heavy vehicles account for 7% of annual vehicle traffic on the State Highways in the Town of Stillwater. This is slightly lower than the heavy vehicle average of 8.9% to 12.6% in Region 1 for the same roadway functional classifications based on data contained in the NYSDOT Traffic Report, Section 6.4 Heavy Vehicle Percentages.



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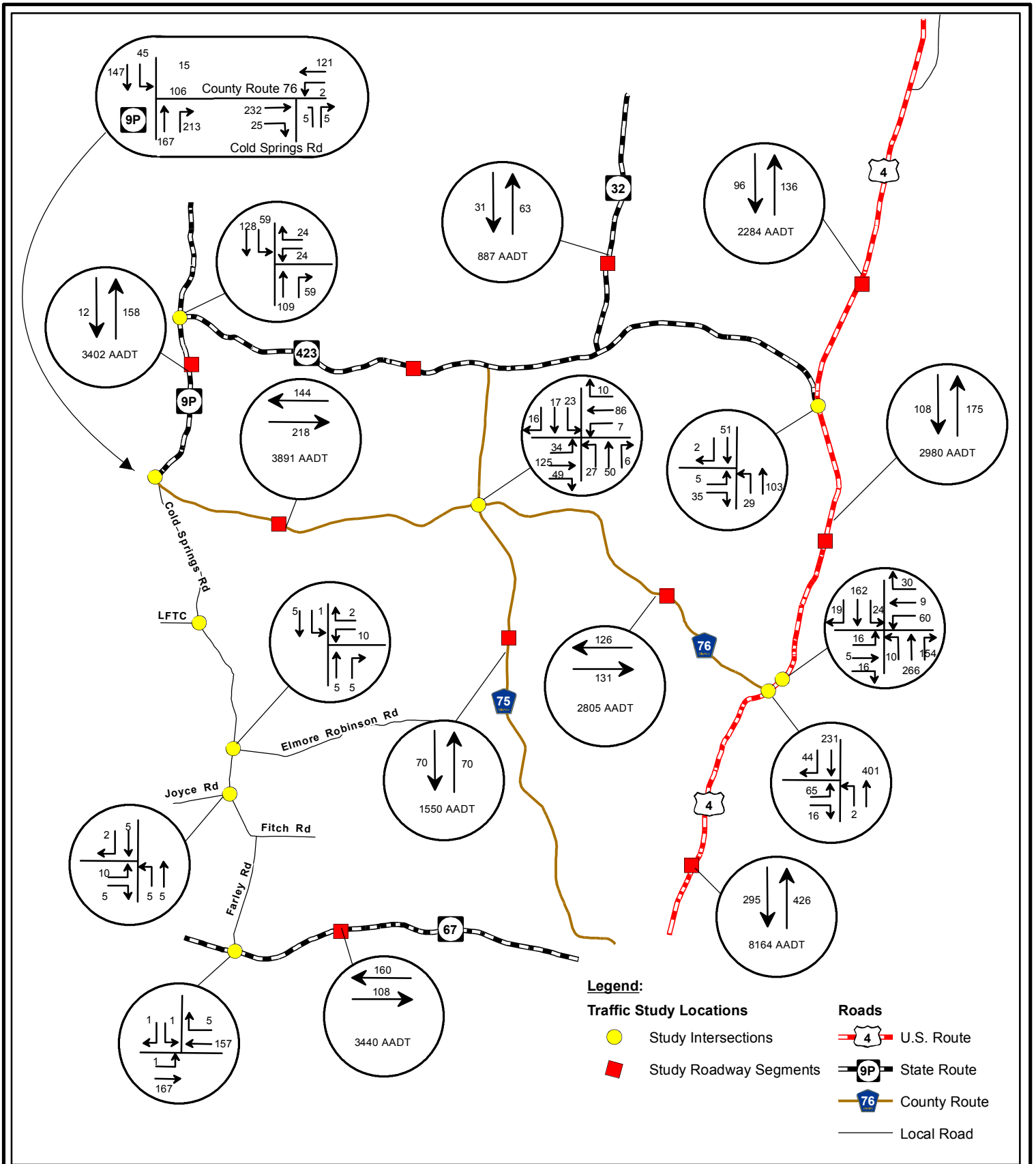
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Town of Stillwater GEIS

**Existing Traffic Volumes
 AM Peak**

Town of Stillwater
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**Existing Traffic Volumes
 PM Peak**

Town of Stillwater
 Saratoga County, New York

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Figure:	3.5-3

3.2 Public Transportation

The availability of public transportation is limited for the residents of Stillwater, consisting only of access to bus and train services at locations outside of the Town.

The Capital District Transportation Authority (CDTA) does not provide bus service in the Town of Stillwater, nor are there any Park and Ride facilities for CDTA in the Town. CDTA does provide bus service to/from the Albany-Schenectady areas from other locations in Saratoga County. CDTA Route 50 provides daily bus service to Schenectady from Ballston Spa. The CDTA Northern Express (formerly Upstate Transit) provides limited weekday service between specific pick up points in Saratoga Springs, Round Lake, and Mechanicville to a variety of locations in Albany, and to Park & Ride facilities at I-87 (Northway) Exits 11, 12, and 15.

The “*Stillwater Route 4 Corridor Plan*”, prepared by TCC for the Town and Village of Stillwater, examined local public transportation needs and noted CDTA is currently working on a regional transit development plan. Based on the plan, Route 4 in Stillwater does not contain the density of potential riders to be a high priority for new public transportation service and it is unlikely that public transportation will be available for the Route 4 corridor in the near future. Since the Route 4 corridor is the most densely populated portion of the Town, it is even more unlikely for public transportation to be extended to the other, more rural portions of the Town.

Amtrak provides intercity train service from Saratoga Springs to locations north and south via Fort Edward, Schenectady and Rensselaer.

3.3 Bikes and Pedestrian Facilities

Pedestrian facilities are limited to the Village of Stillwater. There are sidewalks throughout much of the village, beginning at the southerly line and extending on both sides of the road to about 4/10 mile south of the Stillwater School Complex. Several side streets within the Village also have sidewalks, generally on one side of the street only. A high priority recommendation of the “*Stillwater Route 4 Corridor Plan*” was to extend the sidewalks along US Route 4 to the school complex. This would provide a safer, continuous travel path for students getting to and from school, and for the population in general.

The entire length of Route 4 in the Town of Stillwater is part of designated New York State Bike Route 9. This designation indicates that this route is appropriate for experienced cyclists who are comfortable sharing the roadway with motorized vehicles and with traveling at higher speeds. This designation is not an indication for recreational use.

Off-road multi-use trails such as Stillwater's portion of the planned Champlain Canal Trail, that will run north/south on the west side of the Hudson River should someday become part of a multi-county trail system.

3.4 Accident History

Under the Freedom of Information Law (FOIL), NYSDOT was requested to provide the most recent three year accident history for the Town of Stillwater roadways. In response, NYSDOT forwarded information on vehicular accidents for the time period from January 1, 2001 until December 31, 2003.

The roadway and intersection accident history for the period studied is consistent with the generally rural nature of the Town of Stillwater. There are no roadway segments or intersections with an accident history above accepted thresholds. Mitigation to resolve an accident problem as presented by the accident history is not warranted at any location studied.

The accident history is summarized below for the State Highways, County Roads and intersections studied.

State Highways experienced a total of 150 accidents in the 2001 to 2003 period. There was included one fatality, 47 with injuries, 31 with property damage only, and 66 which were non-reportable. Non-reportable accidents are those in which there are no injuries and property damages do not exceed \$1500.

Route 4 had the highest number of accidents with 61 total accidents: 23 accidents were with other vehicles, 8 with animals, 6 with fixed objects, 22 accidents resulted in injuries, 12 resulted in property damage only, and 27 were non-reportable. Of the 61 total accidents, 22 occurred in the Village of Stillwater. There was one accident with a bicycle which was outside the village limits, and one with a pedestrian, which was in the village but was an alcohol related backing accident.

There were 26 total accidents on Route 9P; 5 with injuries, 5 with property damage only, and 16 non-reportable. The majority of the reportable accidents were with another motor vehicle (13), and 5 involved a fixed objects. There was one accident involving a bicycle.

There were 14 accidents on Route 32; 1 fatality, 2 with injuries, 4 with property damage only, and 7 were non-reportable. 1 accident was with another vehicle, 4 were with fixed objects, and 4 were with animals. The fatality was an accident with a fixed object and was alcohol related.

Route 67 experienced a total of 24 accidents; 11 with injuries, 5 with property damage only, and 8 were non-reportable. Only 2 accidents were with other vehicles, while 4 were with animals and 11 with a fixed object. There was one accident involving a pedestrian and this was not at an intersection.

Route 423 experienced 22 accidents; 6 with injuries, 4 with property damage only, and 12 were non-reportable. 5 accidents were with other vehicles, 12 were with a fixed object, and 3 were with animals.

The high percentage of vehicle/vehicle accidents on Routes 4 and 9P are consistent with the more built up areas along these two roads and the higher traffic volumes. The high percentage of vehicle/fixed object and vehicle/animal accidents on Routes 32, 67, and 423 reflect the more rural nature of these roads and the lighter traffic volumes.

County Roads experienced a total of 23 accidents during the same time period: 16 accidents were with injuries, 2 with property damage only, and 5 that were “non-reported”. The types of accidents that occurred were usually with an obstruction or another vehicle. There was one incident involving a pedestrian.

County Road 70 experienced one accident, a two vehicle rear end accident resulting in injuries.

County Road 75 experienced 9 accidents; 6 with injuries, 1 with property damage only, and 2 non-reportable. 3 accidents were with other vehicles, 3 were with fixed objects, and one was a vehicle pedestrian accident.

County Road 76 had 13 accidents; 9 with injuries, 1 with property damage only, and 3 were non-reportable. All 10 reportable accidents were single vehicle accidents, and 7 occurred in snow/ice or wet pavement conditions.

Intersection accidents were not a significant portion of the total accidents for the various roadways, with the exception of US Route 4. There were 17 intersection accidents on Route 4, or 28% of the total of 61. However, only 3 intersections on Route 4 had two or more accidents. Route 4 at Route 32, with 3 accidents, was the only intersection with more than 2 accidents in the 3 year period studied; 1 was with injuries, 1 was property damage only and 1 was non-reportable. The time period studied was prior to the reconfiguration of this intersection by NYSDOT in 2006. Route 4 at Lake Street (CR 76) experienced 2 accidents; 1 with injuries and 1 non-reportable. Route 4 at Stillwater Bridge Road experienced 2 accidents, both being non-reportable.

As noted, the accident history studied did not present data indicating that mitigation to correct high accident locations was required.

3.5 Operational Analysis

The operational characteristics of a roadway system are evaluated through the use of Level of Service (LOS) analyses for the intersections and roadway segments studied. The existing operational characteristics are based on traffic volumes from several sources, including manual counts conducted by TCC, traffic volume information obtained from NYSDOT and Saratoga County, and specific project studies for other projects noted previously. Where necessary, traffic volumes were adjusted to 2006 by the application of appropriate growth factors.

The methodology employed follows standard traffic engineering procedures by using the *existing* intersection and roadway volumes as the foundation data to which projected growth is applied to arrive at the *future* volumes for the study year. The projected growth information employed accounted for general background growth and specific developments of single family residential units, such as the White Sulphur Springs Estates and the Stillwater Woods projects. In addition the traffic volumes associated with the Saratoga Lake Hotel and Marina Project (Brown's Beach) were analyzed and added as a surcharge to the *future* volumes.

Intersection levels of service are based on vehicle delay experienced and depend on the type of traffic control at an intersection, i.e. signalized or un-signalized (stop control), as well as intersection geometry, traffic volumes and intersection capacity. All intersections in the Town of Stillwater are un-signalized, stop controlled intersections. While the intersection of Rte 4 with CR 125 (Stillwater Bridge Road) has a flashing signal, it is operationally under stop control. LOS for un-signalized intersections are based on the LOS for the individual critical movements, i.e. left turns from the main road and all movements from the side roads. Un-signalized intersections operating under LOS A experience less than 10 seconds delay and exhibit very good service, while those operating under LOS F are characterized by delays of more than 50 seconds and exhibit poor service. Table T-2 summarizes the level-of-service (LOS) criteria for un-signalized intersections. Critical movements for one-way and two-way stop controlled intersections are defined as left turns from the major roadway and all movements from the minor roadway. For the case of four-way stop controlled intersections, all movements are considered critical.

Table T-2 Unsignalized Intersection Level-of-Service

LOS	Control Delay Per Vehicle (seconds)
A	Less than or equal to 10
B	Greater than 10 and less than or equal to 15
C	Greater than 15 and less than or equal to 25
D	Greater than 25 and less than or equal to 35
E	Greater than 35 and less than or equal to 50
F	Greater than 50

Roadway segment LOS for two-lane highways are based on two criteria, percent time spent following and average travel speed, depending on the class of highway. Two lane highways are either Class I or Class II. Class I highways are those on which motorist expect to travel at relatively high speeds. Most arterials are Class I highways. Class II highways are those on which motorists do not necessarily expect to travel at high speeds. Most collectors and local roads are Class II highways.

Based on the functional classifications provided in the 2003/2004 NYSDOT Highway Sufficiency Ratings, all the roadways in the Town of Stillwater are Class II highways, except for two segments. The only Class I highway segments in the Town of Stillwater are the section of Route 4 from the southern town line to the Village of Stillwater and the very eastern section of Route 67 before it enters the City of Mechanicville.

Tables T-3 and T-4 summarize the level of service measures for two-lane highways, Class I and Class II. Efficient mobility is more important on Class I highways and therefore LOS is defined by both percent time spent following and average speed. Only percent time spent following is used to define LOS on Class II highways since mobility is less critical. In addition, due to the general use of the two highway classes, a higher level of percent time spent following will be tolerated by drivers on Class II highways.

Table T - 3 Two-Lane Highways Class I Level-of-Service

LOS	Percent Time Spent Following	Average Travel Speed (MPH)
A	35 or less	Greater than 55
B	35 to 50	50 to 55
C	50 to 65	45 to 50
D	65 to 80	40 to 45
E	Greater than 80	40 or less
F	See Note	See Note

Note: LOS F applies whenever the flow rate exceeds the segment capacity

Table T - 4 Two-Lane Highways Class II Level-of-Service

LOS	Percent Time Spent Following
A	40 or less
B	40 to 55
C	55 to 70
D	70 to 85
E	Greater than 85
F	See Note

Note: LOS F applies whenever the flow rate exceeds the segment capacity

The existing conditions at each of the study intersections and roadway segments were analyzed using the HCS 2000 Highway Capacity Software by McTrans, which is based on the procedures of the Highway Capacity Manual. Un-signalized Intersections Version 4.1d and Two-Lane Highways Version 4.1d were employed. The results are presented in Tables T - 5 and T - 6 and are briefly summarized here.

As noted, LOS for un-signalized intersections is defined by the vehicle delay for the critical movements at the intersection. All the intersections studied show very acceptable LOS of either A or B for the critical movements, with the exception of two intersections. Cold Springs Road at Lake Road (CR 76) exhibits a LOS C (15.6 seconds of delay) for the northbound left and right turning movements during the PM peak period. The intersection of Route 9P and Lake Road (CR 76) exhibits a LOS C (18.6 seconds of delay) for the westbound left/right during the AM peak period; and a LOS D (25.2 seconds of delay) for same movement for the PM peak period. All the intersection critical movements LOS are acceptable.

All roadway segments analyzed also exhibit good LOS of A or B with the exception of two segments. The first segment is Route 4 north of Route 67 with LOS of E during both the AM and PM peak periods. This segment is a Class 1 roadway and the determination of LOS takes into account both % time spent following and average travel speed. The LOS E exhibited is a result of a reduced travel speed of below 40mph. Another contributing factor is the higher number of access points along Route 4 in this segment. If only the criteria of % time spent following was used, the LOS would be C. The second roadway segment exhibiting a reduced LOS is CR 76 (Lake Road) between Grace Moore Road and Brightman Road. This segment exhibits LOS C during both the AM and PM peak periods based on the % time following, the criteria for Class 2 roadways. All roadway segment LOS are acceptable with the exception of the segment of Route 4 north of Route 67.

Table T - 5 Existing Levels of Service Intersections

No.	Intersection	Movement	LOS	
			AM Peak	PM Peak
1	Routes 4 @ Rte 32	NB Left	A/7.6	A/7.4
		EB Lt/Rt	A/9.4	A/9.0
2	Route 4 @ Stillwater Bridge (CR 125)	NB LTR	A/7.7	A/7.6
		SB LTR	A/7.7	A/8.2
		EB LTR	B/10.6	B/13.8
		WB LTR	B/14.8	B/17.4
3	Routes 4 @ Lake St. (CR 76)	NB Left	A/8.3	A/7.8
		EB Lt/Rt	B/14.4	B/14.2
4	Rte 67 @ Farley Rd.	EB Left	A/7.6	A/7.6
		SB Lt/Rt	B/10.2	A/9.9
5	Fitch Rd./Cold Springs Rd. @ Joyce Rd	NB Left	A/7.2	A/7.2
		EB Lt/Rt	A/8.5	A/8.6
6	Cold Springs Rd @ Elmore Robinson Rd	SB Left	A/7.2	A/7.2
		WB Lt/Rt	A/8.3	A/8.6
7	Cold Springs Rd @ LFTC	N/A	N/A	N/A
8	Cold Springs Rd @ CR 76	WB Left	A/7.5	A/7.8
		NB Lt/Rt	B/12.0	B/10.5
9	Routes 9P @ CR 76	SB Left	A/7.6	A/8.4
		WB Lt/Rt	B/10.0	C/15.6

10	Rte 9P @ Rte 423	SB Left	A/7.4	A/7.8
		WB Left	A/9.7	B/11.7
		WB right	A/8.8	A/9.8
11	CR 75 @ CR 76	NB LTR	A/8.3	A/7.2
		SB LTR	A/8.1	A/8.6
		EB LTR	A/8.2	A/7.6
		WB LTR	A/8.3	A/9.9

Note 1: $A / 7.6 = \text{LOS} / \text{Seconds of delay}$

Note 2: Cold Springs Road @ LFTC is not an existing intersection

Table T - 6 Existing Levels of Service Roadway Segments

No.	Roadway Segment		LOS	
	Location	Class	AM Peak	PM Peak
1	Rte.4 North of Rte 32	2	A / 31.7 See Note 1	A /25.7
2	Rte 4 Between Stratton Ln. and Stillwater School	2	B /48.1	B /47.6
3	Rte 4 North of Rte 67 (See Note 2)	1	E /64.5	E /65.8
4	Rte 67 Between George Thompson Rd. and Farley Rd.	2	B /46.4	B/53.6
5	Rte 32 North of Rte 423	2	A /33.8	A /31.2
6	CR 76 Between Grace Moore Rd. and Brightman Rd.	2	C /57.8	C /59.9
7	CR 76 East of Filke Rd.	2	B /49.1	B /53.8
8	CR 75 Between Mc Dermott Rd. and Jolly Rd.	2	A /35.2	A /33.4
9	Rte 9P Between CR 76 and Rte 423	2	B /42.3	B / 54.6

Note 1: A / 31.7 = LOS / % Time Following

Note 2: Class 1 roadways LOS determined by both % Time Following and Average Travel Speed

4.0 FUTURE CONDITIONS AND PROJECTED IMPACTS

4.1 Future Traffic Projections

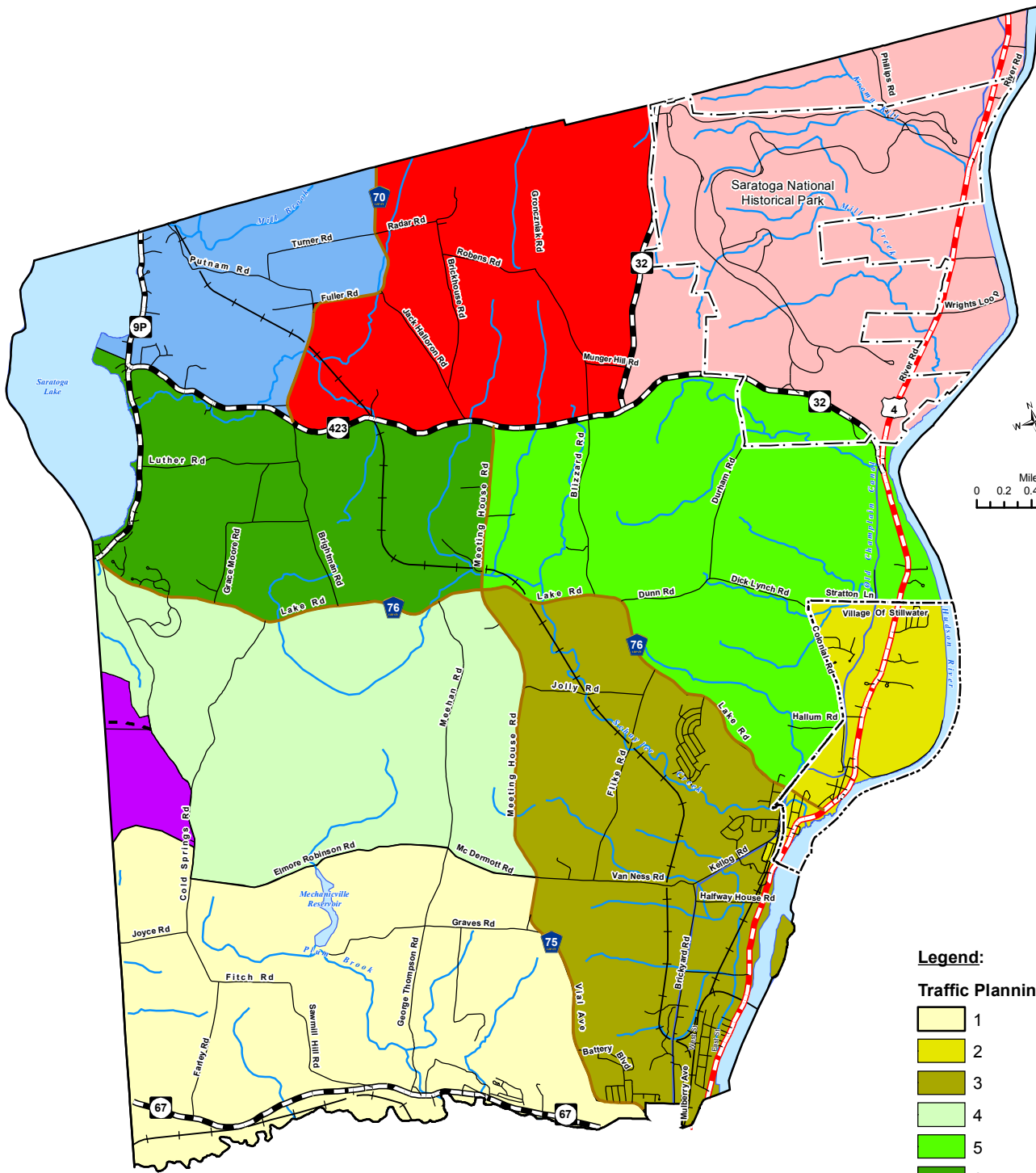
Traffic projected for the year 2017 will be analyzed and then compared to the existing conditions to facilitate the understanding of the impact of growth in the Town. Future traffic volumes will increase due to growth within the Town and growth outside of Stillwater resulting in traffic traveling into or through the Town. The Luther Forest Technology Campus will be a significant contributor to both sources of future traffic.

4.2 Growth Projections

Town of Stillwater

The growth projections for the build year (2017) were developed from the buildout analysis/growth projections developed as the basis for the Generic Environmental Impact Statement. Working with the Town's technical advisory team the Town anticipates 60 to 70 homes/year could be constructed in any given year and 500-600 residential units could be constructed over the next 10 years (2017). Additionally it is anticipated that an additional 50,000 square feet of retail/commercial space and that up to 100,000 square feet of industrial space will be constructed during the study period.

For the purpose of conducting the traffic analysis the Town was divided into smaller planning areas (traffic planning areas). The advisory committee distributed the projected growth to the traffic planning areas based on a number of factors including location of approved projects, the availability of infrastructure and developable land. Figure F - 4 shows the traffic planning areas developed and the projected growth within each area.



Map Document: R:\30600-30690\30601_17_Silverline_GIS\GIS\map\30601_17_TrafficPlanningAreas_Rx11.mxd
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Town of Stillwater GEIS

Traffic Planning Areas

Town of Stillwater
 Saratoga County, New York

Drawn:	CLC
Date:	12/17/2007
Scale:	1:72,000
Project:	30601.17
Figure:	3.5-4

Outside the Town of Stillwater

In addition to future traffic generated by new homes and businesses in the Town of Stillwater, traffic from general growth outside the Town will also add to the traffic volumes on the Town's highway system. Future traffic from outside the Town will come from the south, east, and north, and will have destinations in Town or pass through Town to outside destinations.

A 0.5% per year increase in traffic on the Town's roadways will be assigned to take into account traffic passing through the Town from locations outside the Town due to general growth.

Luther Forest Technology Campus

A substantial number of trips is expected to be generated by LFTC during the peak periods of the local roadway system, and assigned to LFTC's future access driveway on Cold Springs Road. Volumes from the LFTC DGEIS/TIS were utilized for this location. For this study, it is estimated that 25% of traffic attributed to the Cold Springs entrance will originate in the Town of Stillwater. The remaining 75% of this traffic will originate outside the Town to the south, east and north. This traffic will use the local highway network to get to LFTC via Cold Springs Road.

4.3 Trip Generation

Trip generation provides the volume of traffic expected to travel to and from a specific site or location. As noted above new trips will be generated from several sources; new homes and businesses, background growth outside the Town of Stillwater, and traffic generated by LFTC. Also as noted, the traffic generated from LFTC can be assigned as originating from within the Town and from outside the Town. To determine the trips generated from each source, several methods were employed.

Town of Stillwater

For new homes and businesses projected as part of the buildout in the Town, trip generation is based on historical generation figures for the particular land use. The Institute of Transportation Engineers (ITE) provides traffic and transportation professionals with a source document as a guide to trip generation rates for all land uses and building types. This document, Trip Generation Manual¹, 7th Edition, is updated periodically and details rates developed for the average weekday, and

¹*Trip Generation Manual, 6th Edition*, Institute of Transportation Engineers, 1997.

Saturday and Sunday, during the peak hours of the generator and during the peak hours of the adjacent roadway traffic.

The Institute of Transportation Engineers defines a trip or trip end as “a single or one-direction vehicle movement with either the origin or destination (exiting or entering) inside a study site. For trip generation purposes, the total trip ends for a land use over a given period of time are the total of all trips entering and all trips exiting a site during a designated time period.”²

Since these generated trips represent vehicles entering or exiting a site or a study area, they are appropriate in determining the total traffic to be accommodated.

Based on the projected growth for each Planning Area (as identified in Figure F-4) generated trips were estimated using ITE figures for the appropriate land uses. Table T - 7 represent the trips generated by the anticipated overall growth within the Town of Stillwater by 2017 for each Traffic Planning Area.

² *Trip Generation, 6th Edition, User’s Guide*, Institute of Transportation Engineers, 1997.

Table T - 7 Trip Generation From Projected Town Growth

Traffic Planning Area	New Homes	AM Peak Trips	PM Peak Trips
1	65	49	66
2 (Village)	N/A	N/A	N/A
3	240	180	242
4	70	53	71
5	35	26	35
6	80	60	81
7	25	19	25
8	25	19	25
9	60	45	61
10 (LFTC)	N/A	N/A	N/A
Total New Homes	600	451	606
Traffic Planning Area	New Industrial		
1	81,000 SF	92	98
3	41,000 SF	46	49
Total - Industry	122,000 SF	138	147
Total Trips		589	753

Table 7 above provides projected growth for the planning areas studied in terms of new homes and businesses. The figures include approved and/or proposed

residential projects such as White Sulphur Springs Estates and Stillwater Woods. The figures do not include the Saratoga Lake Hotel Resort & Marina project, which will analyzed and the generated trips considered separately.

Outside the Town of Stillwater

For the background growth outside the Town a 0.5% per year increase was applied to the existing traffic volumes on the local highway network. Since a ten year study period is being examined an overall 5% increase in traffic will result. For the purpose of the study, this traffic will enter/leave the Town via either Route 4, Route 9P or Route 67.

Luther Forest Technology Campus

The Traffic generation estimates from the LFTC Traffic Impact Study (TIS), prepared in 2002 by Creighton Manning Engineering, P.C. were utilized for this analysis. The LFTC project is expected to consist of “*four nanotechnology facilities and up to 2 million SF of ancillary development. The nanotechnology facilities are anticipated to be the anchor land use of LFTC, and the ancillary development is expected to encompass mostly research and development, office, manufacturing and other support land uses. ...employees of the facility (i.e. nanotechnology manufacturing facilities) generally work 12 hour shifts beginning at 6:00 AM and 6:00 PM.*” These are times when the traffic on the local roadway system is relatively low or not at peak. Accordingly, the LFTC TIS identified and analyzed “the two peak hours of operation for the ancillary development which coincide with the AM and PM peak hours of the adjacent street traffic.”

The LFTC TIS assigned 28% of the ancillary trips generated by LFTC to Cold Springs Road and therefore to the Town of Stillwater’s roadway network. The balance of LFTC generated traffic will access the LFTC campus from areas outside of Stillwater. The LFTC access driveway proposed for Cold Springs Road (2000 to 2500’ north of Elmore Robinson Road). The LFTC TIS (2002) analyzed traffic based on four phases of build-out: Phase 1 in 2005, Phase 2 in 2011, Phase 3 in 2018, and Phase 4 in 2025. Each phase corresponding to the development of one nanotechnology facility and 500,000 SF of ancillary development. Based on the time elapsed to date the Town of Stillwater DGEIS study year of 2017 can be equated to the LFTC Phase 2 completion (LFTC TIS year of 2011) in regards to trip generation and traffic volumes. Table T - 8 provides the trips generated by LFTC at the Cold Springs Road access for the AM and PM peak periods, as provided in the LFTC TIS.

Table T-8 LFTC Trip Generation Cold Springs Access Road

LFTC Generated Trips 2017 – LFTC Phase 2 Complete						
	Entering			Exiting		
	Rights	Lefts	Total	Rights	Lefts	Total
AM Peak	200	80	280	16	40	56
PM Peak	52	20	72	200	80	280

4.4 Trip Distribution and Assignment

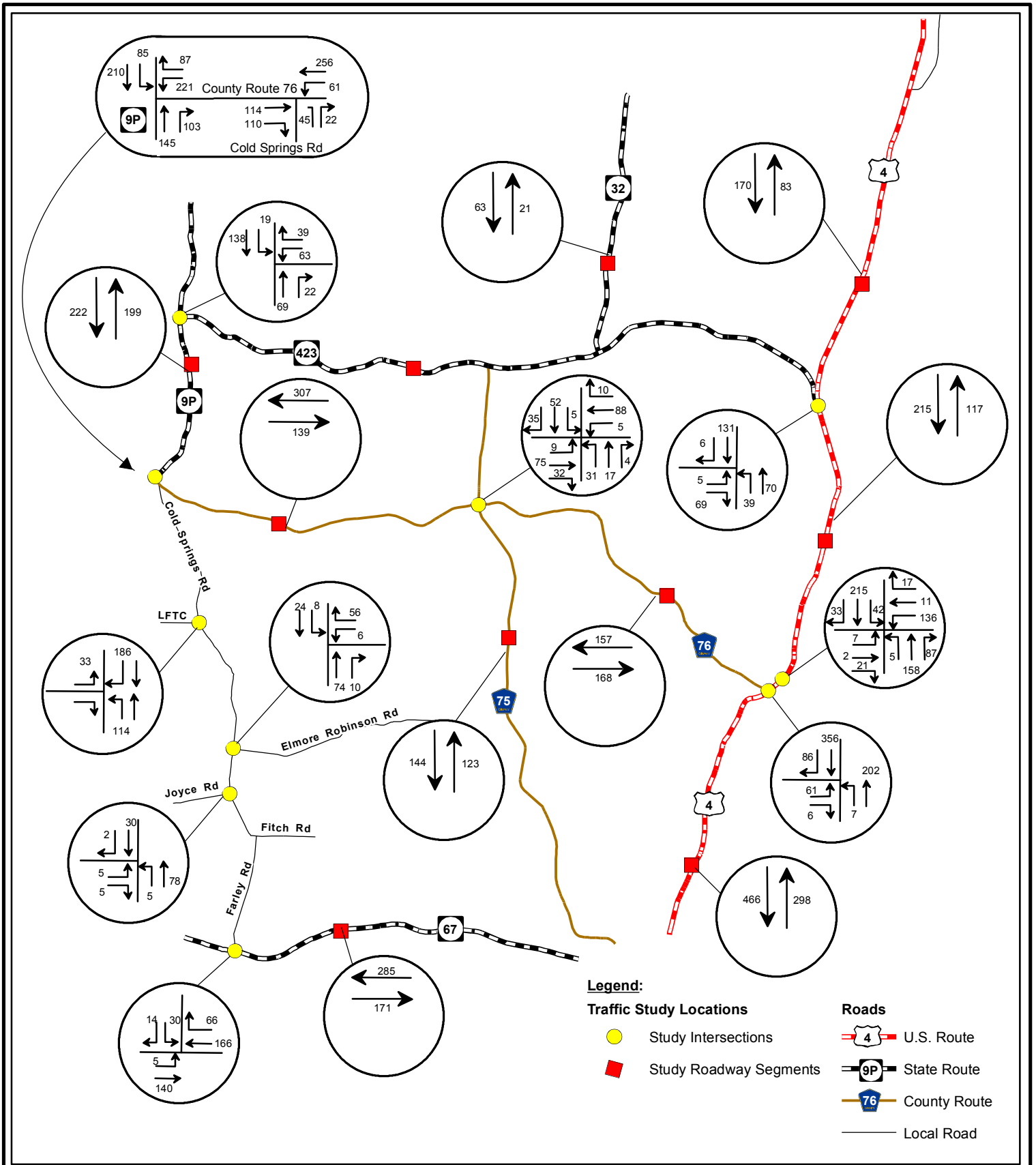
Generated trips are assigned to the roadway network and distributed to specific roadways based on the origin and destination of the trips and the expected travel route. New trips are traditionally assigned to a roadway network based on existing travel patterns unless some specific circumstance dictates revised travel patterns. For this study, a method of trip distribution was employed that combined the effects of projected Town growth, normal background growth outside the Town, and the Luther Forest Technology Campus project. This trip distribution methodology is further defined as follows.

1. First the trips generated due to background growth outside the town were distributed based on existing travel patterns as per the traditional method. See Appendix A - Figures TA - 1 and TA - 2 for these trips. It is noted that Figures TA-I and TA-2 also include the trips generated by the Saratoga Lake Hotel Resort & marina project.
2. Next the trips generated by LFTC at Cold Springs Road were distributed and assigned in two steps, based on 25% of these LFTC generated trips being assigned as originating in the Town of Stillwater and 75% assigned as originating outside the Town.
3. The LFTC Cold Springs Road trips originating outside of the Town were distributed to the three main access routes; US 4, NYS 9P, and NYS 67, based on existing travel patterns. Then these trips were further distributed and assigned to Town roadways based on the most likely routes to arrive at LFTC via Cold Springs Road from these three routes. See Appendix A - Figures TA - 3 and TA - 4 for these trips.
4. The LFTC Cold Springs Road trips originating within the Town were first distributed to the Traffic Planning Areas base on the projected increase in homes in each area. These trips were then assigned to the Town’s roadway

system based on the most likely route to LFTC via Cold Springs Road. See Appendix A - Figures TA - 5 and TA - 6 for these volumes.

5. The trips in Step 4 above are only a portion of the total trips generated by the anticipated growth in homes and businesses in the Town. The remaining new trips, i.e. the total anticipated generated trips minus the LFTC generated trips, were then assigned to/from each area based on existing travel patterns. See Appendix A - Figures 7 and 8 for these volumes.

The end result of this process provided the overall distribution and assignment of all new trips generated to 2017 from the sources previously discussed. These volumes were then combined with the existing traffic volumes to arrive at the future traffic volumes for 2017. See Figures F - 5 and F - 6 for the total of all new trips generated traffic volume and Figures 7 and 8 for the build year (2017).



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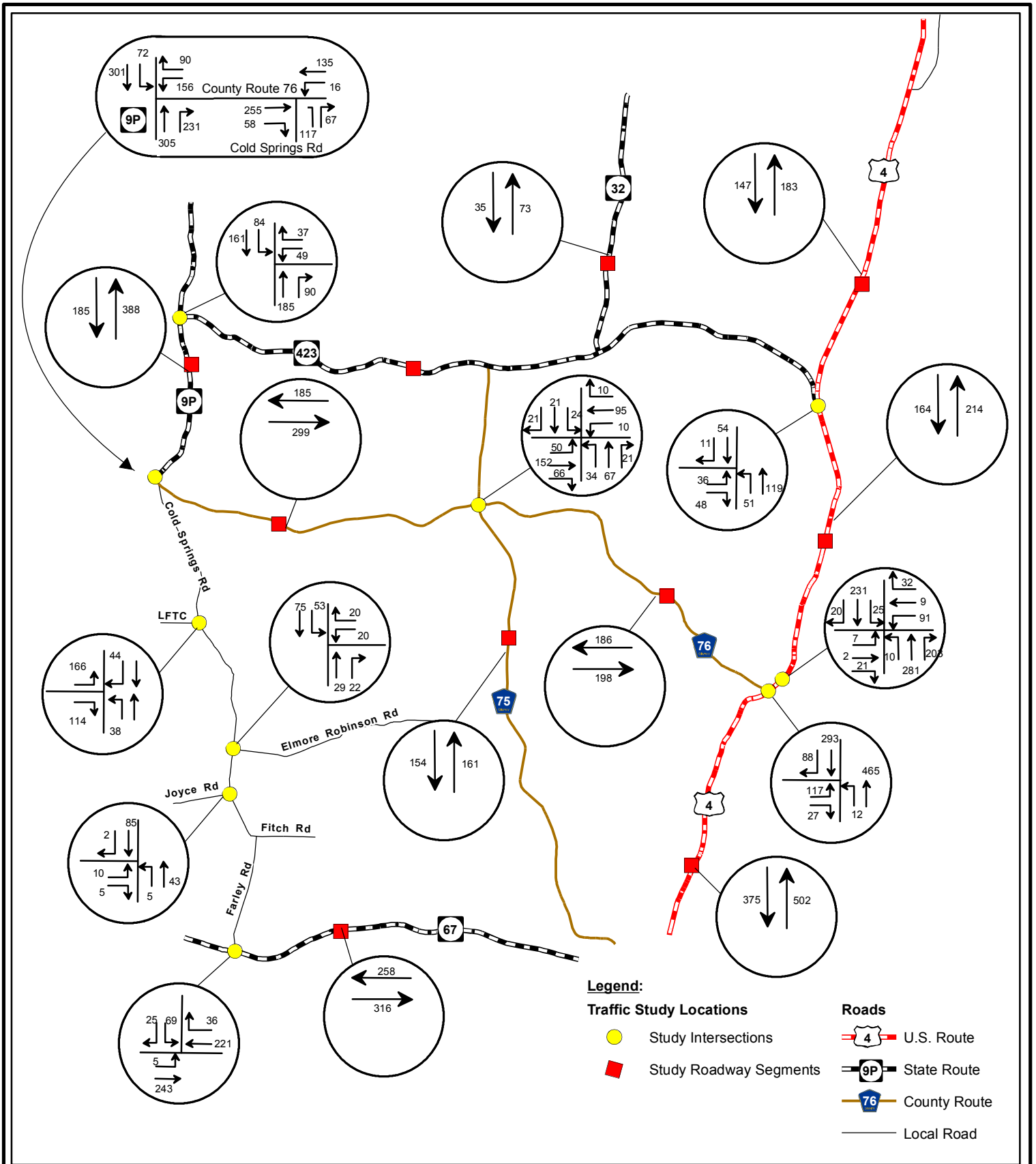
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Town of Stillwater Draft GEIS

Predicted Traffic Volumes in 2017 AM Peak

Town of Stillwater
Saratoga County, New York

Drawn:	CLC
Date:	06/19/2007
Scale:	1:72,000
Project:	30601.17
Figure:	



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Town of Stillwater Draft GEIS

Predicted Traffic Volumes in 2017 PM Peak

Town of Stillwater
Saratoga County, New York

Drawn:	CLC
Date:	06/19/2007
Scale:	1:72,000
Project:	30601.17
Figure:	

4.5 Projected Traffic Volumes

The 2017 projected traffic volumes, or 2017 Build volumes, are arrived at by combining the 2007 existing volumes with the total of all new trips generated to 2017.

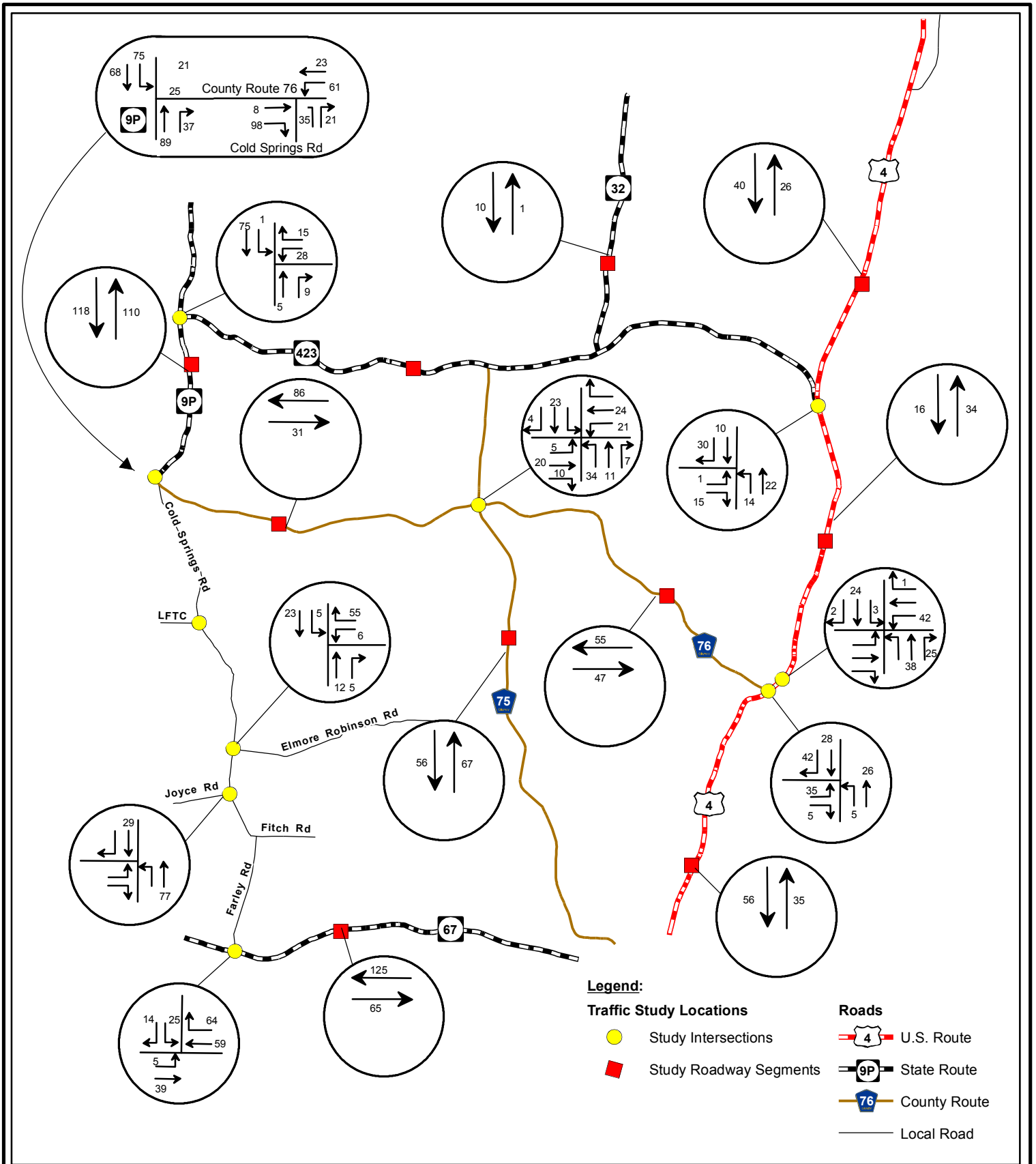
Tables T – 9, T – 10 present 2007 existing and 2017 traffic volumes for the intersections and roadways studied. This information is also presented in Figures 7 and 8. The increases in traffic are more significant for Cold Springs Road and the several intersections on Cold Springs Road studied due to traffic generated by LFTC, and for Route 9P and the intersection of Route 9P & Lake Road due to the traffic generated by the Saratoga Lake Hotel Resort project.

Table T - 9 Projected Traffic Volumes Intersections – AM and PM Peak

#	Intersection	2007 Volume		Generated Volume		2017 (build) Volume	
		AM	PM	AM	PM	AM	PM
1	Routes 4 @ Rte 32	261	225	59	94	320	319
2	Route 4 2 CR 125 (Stillwater Bridge)	579	771	155	170	734	941
3	Routes 4 @ Lake St. (CR 76)	611	759	107	243	718	1002
4	Rte 67 @ Farley Rd.	265	332	156	266	421	598
5	Fitch Rd./Cold Spring Rd. @ Joyce Rd	19	29	76	123	95	152
6	Cold Spring Rd @ Elmore Robinson Rd	9	29	169	190	178	219
7	Cold Spring Rd @ LFTC	N/A	N/A				
8	Cold Spring Rd @ CR 76	355	387	253	261	608	648
9	Routes 9P @ CR 76	466	572	385	583	851	1155
10	Rte 9P @ Rte 423	203	403	147	203	350	606
11	CR 75 @ CR 76	363	450	159	121	522	571

Table T - 10 Projected Traffic Volumes Roadway Segments – AM and PM Peak

	Roadway Segment	2007 Volume		Generated Volume		2017 (Build) Volume	
		AM	PM	AM	PM	AM	PM
1	Rte.4 North of Rte 32	185	232	68	98	253	330
2	Rte 4 Between Stratton Ln. and Stillwater School	272	283	50	95	332	378
3	Rte 4 North of Rte 67	673	721	91	156	764	877
4	Rte 67 Between George Thompson Rd. and Farley R	264	268	192	306	456	574
5	Rte 32 North of Rte 423	77	94	17	14	94	108
6	CR 76 Between Grace Moore Rd. and Brightman Rd.	329	362	117	122	446	484
7	CR 76 East of Filke Rd.	223	257	102	127	325	384
8	CR 75 Between Mc Dermott Rd. and Jolly Rd.	144	140	123	175	267	315
9	Rte 9P Between CR 76 and Rte 423	203	170	220	403	423	573



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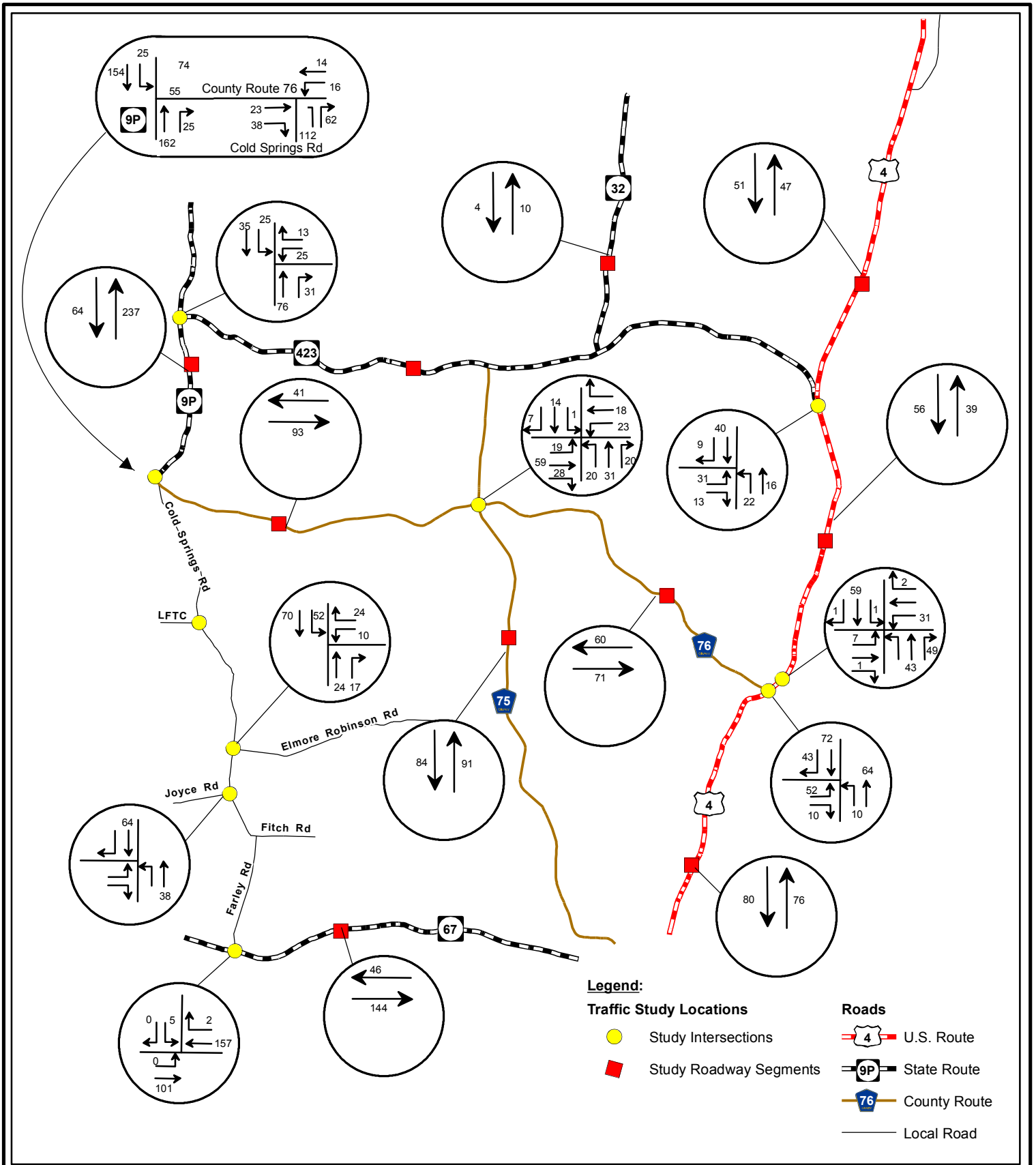
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Town of Stillwater Draft GEIS

**Total Generated Volumes
 AM Peak**

Town of Stillwater
 Saratoga County, New York

Drawn:	CLC
Date:	06/25/2007
Scale:	1:72,000
Project:	30601.17
Figure:	5



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Town of Stillwater Draft GEIS

Total Generated Volumes PM Peak

Town of Stillwater
Saratoga County, New York

Drawn:	CLC
Date:	06/25/2007
Scale:	1:72,096
Project:	30601.17
Figure:	6

5.0 FUTURE TRAFFIC CONDITIONS

Planned Roadway Improvements

Currently there are no NYSDOT or Saratoga County roadway projects underway in the Town of Stillwater. However two projects have been programmed by NYSDOT in conjunction with the Luther Forest Technology Campus project. NYSDOT PIN 175753 will involve the reconstruction of Farley Road, Fitch Road, and Cold Springs Road from Route 67 to 1/8th mile south of Lake Road (CR76); and NYSDOT PIN (not yet assigned) Elmore Robinson Road from George Thompson Road (CR 75) to Cold Springs Road. This project is currently in the design stage and will provide a paved roadway section with surface drainage.

It is anticipated that a project to address the intersection of Route 9P and Lake Road will be initiated in a time frame as defined by the progress of completion of LFTC development. The LFTC TIS indicates that a traffic signal will be warranted after the completion of LFTC Phase 3.

Corridor Studies

The Stillwater U.S. Route 4 Corridor Plan assessed existing conditions along the Route 4 corridor and provided recommendation for future action, including transportation improvements. The Plan recommended the extension of the sidewalk in the village north to the school complex, and various traffic calming and pedestrian initiatives to promote safety and more efficient traffic flow in the Village.

The Stillwater Comprehensive Plan, adopted by the Town on July 6, 2006, provides a policy guide for the Town. It identified specific goals, objectives, and strategies to preserve aspects of the community worthy of protection and to promote change where change is desired. Recommendations offered include the following related to transportation: Identification of key locations for traffic calming improvements and pedestrian improvements; Examination of re-establishment of mass transit and use of "Park and Ride"; and Coordination with local/state/federal transportation officials to plan for the traffic impact as a result of the LFTC.

6.0 OPERATIONAL ANALYSES – FUTURE CONDITIONS

As noted previously, the operational characteristics of a roadway system are evaluated through the use of Level of Service (LOS) analyses for the intersections and roadway segments studied. Intersection and roadway segment analyses of the Town's future conditions were performed based on the projected 2017 Build traffic volumes.

Tables T -11 and T -12 present the AM and PM Peak LOS for the intersections and roadway segments studied for existing and 2017 traffic volumes.

Based on the operational analysis, only one location, the intersection of Route 9P and Lake Road requires mitigation due to increases in traffic volumes. During the PM peak period the LOS for the westbound (Lake Road) approach degrades to a failing LOS F. This is principally attributable to the combined increases from LFTC and the Saratoga Lake Hotel project. During the AM peak period the same approach drops from LOS B to LOS C.

For all other locations, the Levels of Service for the Build Year 2017 traffic conditions do not indicate the need for mitigation. Although some of the analyzed locations will experience large increases in traffic compared to existing volumes, these increases are not of the scale that results in degradation of a LOS requiring mitigation. Most of the intersections and roadway segments will retain the same good to excellent LOS that is exhibited for the Existing conditions.

Several study area locations are discussed below to illustrate the very limited drop in LOS from Existing to 2017 conditions that is characteristic of the results of the operational analysis. As noted under Section 3.5; LOS for un-signalized intersections is based on seconds of vehicle delay, and LOS for roadway segments is based on the percentage of time following another vehicle.

At the intersection of Route 4 and Stillwater Bridge (CR 125), the westbound approach LOS drops from a B/14.8 to a C/20.3 in the AM Peak, and from a B/17.4 to a D/25.5 in the PM Peak. It is noted that the 25.5 seconds of vehicle delay in the 2017 PM Peak is only 0.6 seconds above LOS C.

During the PM peak period the Route 423 left turn movement onto Route 9P drops from LOS A/7.6 to C/15.6.

The roadway segment of Route 67 between George Thompson road and Farley Road LOS drops from a B to a C for both the AM and PM Peaks. These drops are based on

an increase in “percent time following” of 12% and 10% for the AM and PM Peaks respectively.

Table T - 11 Year 2017 Levels of Service Intersection

#	Intersection	Movement	Level of Service			
			Existing		2017	
			AM Peak	PM Peak	AM Peak	PM Peak
1	Routes 4 @ Rte 32	NB Left	A/7.6	A/7.4	A/7.7	A/7.5
		EB Lt/Rt	A/9.4	A/9.0	A/9.7	B/10.1
2	Route 4 @ Stillwater Bridge (CR 125)	NB LTR	A/7.7	A/7.6	A/7.8	A/7.8
		SB LTR	A/7.7	A/8.2	A/7.9	A/8.7
		EB LTR	B/10.6	B/13.8	B/11.3	C/15.8
		WB LTR	B/14.8	B/17.4	C/20.3	D/25.5
3	Routes 4 @ Lake St. (CR 76)	NB Left	A/8.3	A/7.8	A/8.6	A/8.1
		EB Lt/Rt	B/14.4	B/14.2	C/16.7	C/15.8
4	Route 67 @ Farley Rd.	EB Left	A/7.6	A/7.6	A/7.8	A/7.9
		SB Lt/Rt	B/10.2	A/9.9	B/10.9	B/13.2
5	Fitch Rd./Cold Springs Rd @ Joyce Rd.	NB Left	A/7.2	A/7.2	A/7.3	A/7.4
		EB Lt/Rt	A/8.5	A/8.6	A/8.9	A/9.2
6	Cold Springs Rd @ Elmore Robinson Rd.	SB Left	A/7.2	A/7.2	A/7.4	A/7.4
		WB Lt/Rt	A/8.3	A/8.4	A/9.0	A/9.6
7	Cold Springs Rd. @ LFTC	N/A	N/A			
8	Cold Springs Rd. @ CR 76	WB Left	A/7.5	A/8.0	A/7.9	A/8.0
		NB Lt/Rt	B/12.0	B/10.5	B/13.2	B/14.7
9	Routes 9P @ CR 76	SB Left	A/7.6	A/8.4	A/8.1	A/9.2
		WB Lt/Rt	B/10.0	C/15.6	C/20.7	F/59.8
10	Routes 9P @ Rte 423	SB Left	A/7.4	A/8.6	A/7.5	A/8.3
		WB Left	A/9.7	A/7.6	A/9.8	C/15.6
		WB right	A/8.8	A/9.9	A/9.0	B/10.0
11	CR 75 @ CR 76	NB LTR	A/8.3	A/7.2	A/9.5	A/9.3
		SB LTR	A/8.1	A/8.6	A/8.8	A/8.9
		EB LTR	A/8.2	A/7.6	A/9.1	B/10.9
		WB LTR	A/8.3	A/9.9	A/9.5	A/8.9

Note: A / 7.6 = LOS / Seconds of delay

Table T - 12 Year 2017 Levels of Service Roadway Segments

No.	Roadway Segment		LOS			
			Existing		2017	
	Location	Class	AM Peak	PM Peak	AM Peak	PM Peak
1	Rte.4 North of Rte 32	2	A /31.7	A /25.7	A/36.8	B/41.1
2	Rte 4 Between Stratton Ln. and Stillwater School	2	B /48.1	B /47.6	B/52.4	B/53.6
3	Rte 4 North of Rte 67 (See Note 2)	1	E /64.5	E /65.8	E/67.2	E.71.0
4	Rte 67 Between George Thompson Rd. and Farley R	2	B /46.4	B/53.6	C/58.0	C/62.9
5	Rte 32 North of Rte 423	2	A /33.8	A /31.2	A/34.4	A/32.3
6	CR 76 Between Grace Moore Rd. and Brightman Rd.	2	C /57.8	C /59.9	C/60.8	C/62.9
7	CR 76 East of Filke Rd	2	B /49.1	B /53.8	C/57.4	C/61.0
8	CR 75 Between Mc Dermott Rd. and Jolly Rd.	2	A /35.2	A /33.4	B/45.7	B/50.0
9	Rte 9P Between CR 76 and Rte 423	2	B /42.3	B / 54.6	C/57.9	C/58.7

Note 1: A / 31.7 = LOS / % Time Following

Note 2: Class 1 roadways LOS determined by both % Time Following and Average Travel Speed

7.0 MITIGATION

Traffic mitigation is traditionally based on improvements recommended at specific locations, such as traffic signals, or additional travel lanes to address capacity or operational issues. These recommendations are based on LOS analyses comparing existing versus future conditions and the changes in traffic operations resulting from increased traffic. Traffic volumes may increase as a result of normal (background) growth, induced growth, or may be attributed to a specific land development. As outlined in this report, traffic volumes are expected to increase in the Town of Stillwater from several sources.

Based on the LOS analyses for the 2017 projected (build) conditions; traditional mitigation is not required at any of the intersections/roadway segments studied with minor exception. The Route 9P/Lake Road (CR 76) intersection does show a degradation in level of service from LOS C to LOS F for the PM Peak period at the Build Year 2017. This can be directly attributed to the LFTC and Saratoga Lake Hotel Resort & Marina generated traffic. Otherwise, the overall increase in traffic on the Town's roadway network does not degrade intersection or roadway segment LOS to levels that require specific mitigation.

There are planned roadway improvements associated with LFTC as noted previously in Section 5.0. Reconstruction of Farley Road, Fitch Road and Cold Springs Road from Route 67 to 1/8th mile south of Lake Road (CR 76), as well as Elmore Robinson Road from George Thompson Road (CR75) to Cold Springs Road, will include an asphalt pavement section with surface drainage. Work is anticipated to be completed at the end of 2008.

The Traffic Impact Study completed for the LFTC identified called for the installation of a traffic signal at the intersection of NYS Route 9P and County Route 76 (Lake Road) after completion of Phase 3 of the LFTC buildout. Based on the analysis presented herein, the LOS of the NYS Rte 9P/CR 76 intersection will occur well in advance of the construction of Phase 3. We recommend that the Town/Project sponsors should review the timing of this mitigation and assign/coordinate implementation accordingly.

While the demand for traditional mitigation measures is limited; growth within the Town will trigger an overall increase in the maintenance of its existing and new roadways. This mitigation is more difficult to define in terms of cost than conventional mitigation.

It is recommended that roadway and intersection conditions, as well as the actual implementation of LFTC and Saratoga Lake Hotel Resort & Marina, be monitored for the next several years to verify the basic tenets of this study. These would

include the projected growth within the town, distribution of this projected growth, new town roadways resulting from actual growth, traffic volumes and travel paths to LFTC, and trips generation by Saratoga Lake Hotel Resort & Marina.