



Technical Memorandum 1

Existing Conditions Report

Fishkill Route 52 Alternatives Analysis

Prepared for

Poughkeepsie-Dutchess County Transportation Council

Prepared by

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CONTENTS

<u>CHAPTER</u>		<u>PAGE</u>
	EXECUTIVE SUMMARY	ES-1
1	INTRODUCTION	1
	1.1 Background	1
	1.2 Fishkill Traffic Analysis	2
	1.3 Analysis Area	3
	1.4 Potential Connection Alternatives to Route 52	3
2	EXISTING TRANSPORTATION NETWORK	4
	2.1 Roadway Network	4
	2.2 Analysis Area Intersections	5
	2.3 Existing Land Use and Development	7
	2.4 Bicycle/Pedestrian Facilities	8
3	EXISTING CONDITIONS ANALYSIS	10
	3.1 Data Collection	10
	3.2 Existing (2006) Peak Hour Traffic Volumes	10
	3.3 Origin and Destination Surveys	12
	3.4 Existing Truck Movements	13
	3.5 Capacity Analysis	13
	3.6 Travel Time and Delay Studies	17
	3.7 Traffic Simulation	18
	3.8 Crash Data Analysis	19
4	ENVIRONMENTAL CONSTRAINTS ANALYSIS	23
	4.1 Overview of Environmental Constraints Analysis	23
	4.2 Secondary Source Environmental Impact Analysis	23
	4.3 Hazardous Waste Database Review	24
5	SUMMARY OF EXISTING CONDITIONS	26
	5.1 Issues and Observations	26
	5.2 Connector Road Feasibility	27
	5.3 Next Steps	27

TABULATIONS

<u>TABLE</u>		<u>PAGE</u>
3.1	Differences between 2005 and 2006 traffic volumes	11
3.2	Level of Service Criteria for Signalized Intersections	14
3.3	Existing (2006) Levels of Service for Signalized Intersections	15
3.4	Average Travel Times in Study Area	17
3.5	Crash Data Summary	19
3.6	Crash Data Summary by Type – Non-Fixed Objects	20
3.7	Crash Data Summary by Severity	21
3.8	Comparison of Actual and Statewide Crash Rates	21
4.1	Summary of Alternative Impacts	24
5.1	Issues and Observations	26

ILLUSTRATIONS

<u>FIGURE NUMBER</u>		<u>FOLLOWS PAGE</u>
1.1	Analysis Area Map	2
1.2	Potential Connection Alternatives to Route 52	3
3.1	Existing (2006) A.M. Peak Hour Traffic Volumes	10
3.2	Existing (2006) P.M. Peak Hour Traffic Volumes	10
3.3	Differences between 2005 and 2006 A.M. Peak Hour Traffic Volumes	11
3.4	Differences between 2005 and 2006 A.M. Peak Hour Traffic Volumes	11
3.5	Route 52 Travel Patterns	12
3.6	Jackson Street Travel Patterns	13
3.7	West Merritt Boulevard Travel Patterns	13
3.8	Existing Truck Percentages	13
3.9	Existing A.M. Levels of Service	17
3.10	Existing P.M. Levels of Service	17
3.11	Paths for Travel Time Runs	17
4.1	Environmental Constraints Map	23
4.2	National and State Register Listed Site and Archeological Sensitive Areas	24
4.3	EDR Database Findings	24
4.4	Site Observations	25

EXECUTIVE SUMMARY

The Poughkeepsie-Dutchess County Transportation Council (PDCTC) is the designated Metropolitan Planning Organization (MPO) for the Fishkill, New York area. The PDCTC has undertaken the Fishkill Route 52 Alternatives Analysis at the request of the New York State Department of Transportation (NYSDOT), the Town, and the Village of Fishkill. The PDCTC selected Wilbur Smith Associates (WSA) to undertake this analysis.

This project began when Town and Village officials requested assistance to look at traffic concerns, (particularly congestion), in the vicinity of Route 52. The Fishkill Traffic Analysis focused on developing traffic engineering and safety improvements to mitigate identified congestion/safety conditions and local circulation issues. The Fishkill Traffic Analysis completed December 2006, resulted in a set of traffic improvement strategies such as signage, striping turn lanes, and changes in traffic patterns that address those issues.

The next phase is to evaluate the feasibility of extending West Merritt Boulevard to Route 52 between Jackson Street and I-84 west of the Village Center. The issues surrounding this evaluation are; 1) is such a connection feasible, 2) how and where to connect, and 3) would the road divert traffic from Route 52 in the Village Center. Other issues surrounding the feasibility of the connector road are environmental and community constraints, safety benefits, right-of-way acquisition, land impacts, and level of roadway and intersection improvements and its constructability.

The Town of Fishkill Master Plan calls for an extension of Merritt Boulevard from Brinkerhoff to Glenham to act as alternative route in and around the Village of Fishkill. In 2006 the eastern link between Route 9 and Route 52 was completed by Toll Brothers when they constructed Merritt Park at Van Wyck. The western link, West Merritt Boulevard, is a private road, which runs west from Route 9 to the Fishkill Creek, and provides access to a range of retail, hotel, medical and office buildings. The missing link between West Merritt Boulevard and Route 52 west of the Village center is the focus of this analysis.

The intended goals of this analysis are:

- Relieve congestion in the Fishkill Village Center.
- Increase accessibility of Village businesses to visitors, customers, and employees.
- Enhance safety in the area.

The specific analysis objectives are:

- Identify existing travel patterns in the analysis area.
- Inventory existing roadway and geometric deficiencies, safety, and environmental constraints.
- Identify the transportation benefits, feasibility, and impacts of a Connector Road continuing West Merritt Boulevard to Route 52 between Jackson Street and I-84.
- Identify constructability issues.
- If connection is feasible, identify preferred alignment.

CHAPTER 1 - INTRODUCTION

1.1 Background

The Poughkeepsie-Dutchess County Transportation Council (PDCTC) is the designated Metropolitan Planning Organization (MPO) for the Fishkill, New York area. The PDCTC has undertaken the Fishkill Route 52 Alternatives Analysis at the request of the New York State Department of Transportation (NYSDOT), the Town, and the Village of Fishkill. The PDCTC selected Wilbur Smith Associates (WSA) to undertake this analysis.

This project began when Village and Town officials requested assistance to look at traffic concerns in the vicinity of Route 52, in particular congestion. The next phase is to evaluate the feasibility of extending West Merritt Boulevard to Route 52 between Jackson Street and I-84 west of the Village Center. The issues surrounding this evaluation are; 1) is such a connection feasible, 2) how and where to connect, and 3) would the road divert traffic from Route 52 in the Village Center. Other issues surrounding the feasibility of the connector road are environmental and community constraints, safety benefits, right-of-way acquisition, land impacts, and level of roadway and intersection improvements and its constructability.

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- Identify constructability issues.
- If connection is feasible, identify preferred alignment.

1.2 Fishkill Traffic Analysis

The Fishkill Traffic Analysis focused in developing traffic engineering and safety improvements to mitigate identified congestion/safety conditions and local circulation issues. The analysis was conducted in coordination with the PDCTC, Advisory/Steering Committee, and the Community. Below is a list of recommendations from the analysis:

- **Route 52/Cedar Hill Road intersection** – Provide separate turn lanes on Cedar Hill Road.
- **Colonial Avenue/Shirley Avenue** – The “Do-Nothing” Alternative was favored the most by residents, and a minority supported the installation of a traffic signal at Colonial or Shirley Avenue with the other street being a right turn in-right turn out treatment.
- **Rapalje Road** – Full enhancement of Rapalje Road with sidewalks, streetscape, and a reduced pavement width, and implementation of a speed table. In addition, restrictions on left turns from Route 52 eastbound into Rapalje Road are recommended.
- **Broad Street/Cary Avenue/Elm Street** – Install pavement striping and marking on Broad Street, Smith Street, and Elm Street to improve visibility in this section. The strategy also includes all-way stop signs at Smith Street/Elm Street and Broad Street/Jackson Street intersections and a more defined intersection at these locations. Provide speed table on Broad Street. And restricting movements to right-in/right-out at the Route 52/Cary Avenue intersection.
- **Luyster Place/Cary Avenue/Weston Avenue** – Implement half closures at the Wood Place/Luyster Place and Cary Avenue/Weston Avenue intersections, and provide speed humps along Florence Avenue and Weston Avenue.
- **Route 52 between Jackson Street and I-84 (traffic signals)** – Traffic signal coordination will be undertaken in this section of Route 52.

The Fishkill Traffic Analysis was undertaken prior to the Route 52 Alternatives Analysis to address local circulation and safety issues. The outcome of the Fishkill Traffic Analysis analysis will be integrated into the Route 52 Alternatives analysis to develop an Overall Transportation Plan for the area.

1.3 Analysis Area

WSA is conducting this analysis along Routes 9 and 52 in the Village and Town of Fishkill (See **Figure 1.1**). The section of Route 52 under review begins at Blodgett Road along the west and ends at the new Merritt Boulevard connection in the east of the analysis area. The relevant section of Route 9 lies between the Route 52 intersection in the north and Merritt Boulevard in the south of the analysis area.

1.4 Potential Connection Alternatives to Route 52

In the beginning of this analysis, PDCTC developed a set of potential connection alternatives to Route 52, including the following:

- **At Jackson Street** – The Connector Road would be between Jackson Street and West Merritt Boulevard.
- **At Blodgett Road** – The Connector Road would be between Blodgett Road and West Merritt Boulevard.
- **Along Village Right of Way between Blodgett Road and I-84 Exit 12** – The Connector Road would be along the existing Village Right of Way between Blodgett Road and I-84 Exit 12.
- **Connecting Elm Street directly to Jackson Street*** – The Connector Road would be an extension of Jackson Street connecting to Elm Street.

This analysis will first review the feasibility of the Connector Road prior to studying these alternatives **Figure 1-2** is a map showing the potential connection alternatives to Route 52.

* This alternative will no longer be evaluated since the Village has expanded the sewage treatment plant facilities along Jackson Street.

CHAPTER 2 – EXISTING TRANSPORTATION NETWORK

2.1 Roadway Network

The three major roadways in the analysis area are:

Route 9 is a two-way, six-lane, north-south roadway running through the area with a posted speed limit of 50 mph. Land use is primarily commercial and there is no parking permitted. Route 9 is a principal urban arterial. Like interstates, arterial expressways are designed to carry through traffic. They are generally multi-lane facilities with grade separated interchanges and limited direct land access.



Within the analysis area, Route 9 is approximately 0.5 miles in length with 3 signalized intersections. In addition, there are numerous driveways leading to retail and commercial establishments. The estimated Average Annual Daily Traffic (AADT) on Route 9 in 2002, south of Route 52, is approximately 42,000 vehicles per day.



Route 52 is a two-way, two-lane, east-west roadway running through the Village of Fishkill. It is a principal urban arterial with a posted speed limit of 30 mph between Blodgett Road and Rapalje Road. Beyond Rapalje Road to the east, the posted speed limit is 45 mph. Land use along is primarily a mix of residential and commercial and limited parking is permitted.

Within the analysis area, Route 52 is approximately 2.7 miles in length with signalized intersections at Blodgett Road, CR 34 (Jackson Street), Route 9, Route 82 and Merritt Boulevard.

There are numerous driveways leading to residential and commercial establishments in the Village Center. The estimated AADT on Route 52 between I-84 and Route 9 in 2005 is approximately 21,000 vehicles per day.

CR 34/Jackson Street is a two-way, two-lane, north-south roadway. It is an urban collector with a posted speed limit of 25 mph. Land use is primarily a mix of residential and commercial and there is no parking permitted.





Merritt Boulevard is a two-way, one-lane roadway with a posted speed limit of 30 mph along Merritt Boulevard. Land use is primarily residential and there is no parking permitted. West Merritt Boulevard is a two-way, two-lane roadway leading mainly to commercial establishments concentrated at the southern end of the analysis area.

Route 82 is a two-way, one-lane roadway. It is an urban minor arterial with a posted speed limit of 40 mph. Land use is primarily residential and there is no parking permitted.



2.2 Analysis area Intersections

This section details the analysis area intersections on Routes 9 and 52 with geometry, parking, and land use information.

Signalized Intersections

Route 52 and Blodgett Road/Health Center Driveway



This is a four-way signalized intersection at the western limit of the analysis area. Blodgett Road and Health Center Driveway are two-way, two-lane roadways. Blodgett Road and Health Center Driveway consist of one shared lane for left, through, and right turn movements. In the eastbound direction, Route 52 has one lane for all movements; in the westbound direction, Route 52 has two lanes, one exclusive left turn lane and one shared through and right turn lane. There is no parking permitted along Route 52 or Blodgett Road/Health Center Driveway at this intersection.

Route 52 and Jackson Street/CR 34

This is a four-way signalized intersection. Jackson Street/CR 34 is a two-way, two-lane north-south roadway running through the analysis area. In the eastbound direction, Route 52 has an exclusive left turn lane and a shared through, right turn lane. In the westbound direction, it has exclusive left, through, and right turn lanes. In the north-south direction, Jackson Street/CR 34 has an exclusive left turn lane and a shared through, right turn lane. There is no parking permitted along Jackson Street/CR 34 at this intersection, but there is limited parking permitted on the eastern leg of the intersection near the north and south corners of Route 52.



Route 52 and Route 9

This is a four-way signalized intersection. Route 9 is a two-way, six-lane, north-south roadway running through the analysis area. In the east-west direction, Route 52 has an exclusive left turn lane and a shared through, right turn lane. In the north-south direction, Route 9 has five lanes including an exclusive left turn lane and a channelized right turn lane. There is no parking permitted at Route 9 or Route 52 at this intersection.

Route 52 and Route 82

This is a three-way signalized intersection at the eastern limit of the analysis area. Route 82 is a two-way, two-lane southbound roadway, with exclusive left and right turn lanes. In the eastbound direction, Route 52 has exclusive left and right turn lanes; in the westbound direction, it has a shared through and right turn lane. There is no parking available on Route 52 or Route 82 at this intersection.



Route 52 and Merritt Boulevard/Old State Road

This is a four-way signalized intersection at the eastern limit of the analysis area. Merritt Boulevard/Old State Road is a two-way, one-lane roadway running in the north-south direction. In the northbound direction, it has an exclusive right turn lane and a shared left, through lane. In the southbound direction, it has one lane for all movements. In the east-west direction, Route 52 has one lane and an exclusive left turn lane. There is no parking available on Route 52 or Merritt Boulevard/Old State Road at this intersection.

Route 9 and Elm Street

This is a four-way signalized intersection. Elm Street is a two-way, two-lane, east-west roadway. In the eastbound direction, Elm Street has a shared left, through lane, and a shared through, right turn lane; in the westbound direction, it has an exclusive left turn lane and a shared through, right turn lane. In the north-south direction, Route 9 has five lanes with exclusive left and right turn lanes. There is no parking permitted on Route 9 or Elm Street near this intersection.



Route 9 and Merritt Boulevard



This is a four-way signalized intersection at the southern limit of the analysis area. Merritt Boulevard is a two-way, four-lane roadway running in the east-west direction. In the eastbound direction, it has an exclusive left turn lane; a shared left, through lane and an exclusive right turn lane. In the westbound direction, it has an exclusive left turn lane; a shared left, through lane and two exclusive right turn lanes. In the northbound direction, Route 9 has seven lanes including two exclusive left turn lanes and an exclusive right turn lane. In the southbound direction, Route 9 has six lanes including an exclusive left turn

lane. There is no parking available on Route 9 or Merritt Boulevard at this intersection.

A set of figures were developed part of the Fishkill Traffic Analysis showing existing roadway and intersection geometric conditions indicating the widths of the travel lanes and shoulders, parking, and pedestrian amenities in the analysis area.

2.3 Existing Land Use and Development

The existing land use in the analysis area is a mix of residential and commercial development with areas of community and public services. Residential development consists of single family homes along Route 52 on the east and west sides. Commercial development along the analysis area is a mix of new development and reuse of existing structures. This includes a few shopping plazas spread throughout the analysis area, with more concentrated development including Wal-Mart and Sam's Club along West Merritt Boulevard in the southern portion of the analysis area. Along Merritt Boulevard, on the eastern side of Route 9, the recently completed Merritt Park Project consists of 800 single family housing units.

Restaurants and retail establishments and community and public service establishments like libraries, churches, and schools are more prominent on the west side of Route 52 within the Village of Fishkill. The east side of Route 52 is primarily residential with the exception of shopping plazas at two locations. There is some industrial development including warehouses and distribution centers concentrated at the southern end of the analysis area.

In addition the analysis area has a railroad line running west to east through the analysis area. This railroad line commonly referred to as the “Beacon Line” is owned by Metro North Commuter Railroad. While the line is inactive any crossing of the railroad must be considered in the alternatives analysis.

2.4 Bicycle/Pedestrian Facilities

This section details the existing bicycle and pedestrian facilities in the analysis area.

Bicycle Routes

Route 9 is designated as New York State Bike Route 9 in the analysis area. There are no designated local Bicycle Routes within the analysis area. However, bicyclists use the sidewalks and shoulders along Route 9 and Route 52 to traverse the analysis area.

Pedestrian Facilities

Pedestrian facilities in the form of sidewalks and crosswalks are present along the entire analysis area. Pedestrian movements along Route 52 are primarily associated with motorists walking from their parked cars into the analysis area. Along Route 9, significant pedestrian activity was not observed in comparison to Route 52.

In the Village area, there is a mid-block pedestrian crossing along Route 52. Crosswalks are provided at intersection locations to facilitate pedestrians to cross safely.

Given the compact development, there is potential to expand the existing sidewalk network and promote bicycle usage in the analysis area. A number of short distance vehicle trips could be reduced if the pedestrian and bicycle network is improved in the future.

SUMMARY OF CHAPTER 2

Below is a summary of the existing land use and transportation network in the analysis area:

1. The daily and peak hour traffic volumes on Route 9 and Route 52 are fairly significant. Congestion is experienced in the Village area due to heavy traffic volumes in this corridor.
2. Route 9 has commercial and retail establishments in the analysis area. These land uses generate high volumes of traffic during the peak periods.
3. Route 52 has mixed development, residential west of the Village area, restaurants and small retail establishments within the Village area.
4. Bicyclists use shoulders and sidewalks to traverse Route 9 and Route 52. Route 9 is designated as New York bike route 9.

5. Pedestrian facilities are present in the form of crosswalks and sidewalks at intersection and mid-block locations. Continuity of these facilities in the analysis area requires further investigation specifically to reduce the short distance trips.

Based on the existing transportation network and the earlier defined goal to reduce congestion in this transportation network, a feasibility and benefits analysis for a Connector Road is needed.

CHAPTER 3 - EXISTING TRAFFIC CONDITIONS ANALYSIS

This chapter details the results of the existing conditions analysis, which includes data collection, origin and destination surveys, capacity analysis, traffic simulation model, and crash data.

3.1 Data Collection

The following data was obtained from existing sources:

- Available as-built signal design drawings
- Signal phasing and timing information
- Traffic volumes (through NYSDOT)
- Crash summary data

The following data was obtained through field reconnaissance:

- Intersection turning-movement counts
- Intersection geometries
- Signal phasing and timing information

3.2 Existing (2006) Peak Hour Traffic Volumes

WSA conducted manual turning movement counts at the Route 9/Merritt Boulevard, Route 9/Elm Street, Route 52/Jackson Street, and Route 52/Blodgett Road intersections along the analysis area on April 3, 2006 from 4:00 to 6:00 P.M. and April 4, 2006 from 7:00 to 9:00 A.M. peak hour periods. The data included vehicle counts as well as truck and bus movements at each of these intersections.

The New York State Department of Transportation (NYSDOT) provided turning movement counts conducted on the same days at the Route 9/Route 52, Route 52/Route 82, and Route 52/Merritt Boulevard intersections.

The turning movement traffic volumes collected by WSA were balanced along the corridor with the NYSDOT traffic counts. **Figures 3.1 and 3.2** illustrate existing A.M. and P.M. peak hour traffic volumes for the analysis area.

As part of an earlier analysis (Fishkill Traffic Analysis), WSA conducted manual turning movement counts at 4 intersections along the analysis area in June 2005 from 7:00 to 9:00 A.M. and 4:00 to 6:00 P.M. peak hour periods. NYSDOT conducted turning movement counts in September 2005 at the Route 9/Route 52 intersection.

The extension of Merritt Boulevard was completed and opened prior to the 2006 traffic counts. The new connection extends Merritt Boulevard on the east side of Route 9 to Route 52.

Table 3.1 summarizes the key differences in traffic volumes by intersection between 2005 and 2006.

Table 3.1
Differences between 2005 and 2006 volumes

Intersection	AM Peak	PM Peak
Route 52/Blodgett Road		
Total	(263)	(139)
<i>Route 52 EB approach</i>	(142)	(109)
<i>Route 52 WB approach</i>	(101)	(66)
<i>Blodgett Road NB approach</i>	(20)	44
<i>Blodgett Road SB approach</i>	0	(8)
Route 52/Jackson Street		
Overall	(146)	(49)
<i>Route 52 EB approach</i>	(62)	(22)
<i>Route 52 WB approach</i>	(7)	56
<i>Jackson Street NB approach</i>	(23)	(72)
<i>Jackson Street SB approach</i>	(54)	(11)
Route 52/Route 9		
Overall	(299)	(390)
<i>Route 52 EB approach</i>	(60)	(51)
<i>Route 52 WB approach</i>	(102)	(80)
<i>Route 9 NB approach</i>	(134)	(28)
<i>Route 9 SB approach</i>	(3)	(231)
Route 9/Merritt Boulevard		
Overall	(297)	(68)
<i>Merritt Boulevard EB approach</i>	(32)	65
<i>Merritt Boulevard WB approach</i>	(22)	22
<i>Route 9 NB approach</i>	(66)	32
<i>Route 9 SB approach</i>	(177)	(187)
Route 52/Route 82		
Overall	(88)	(512)
<i>Route 52 EB approach</i>	(87)	(277)
<i>Route 52 WB approach</i>	(36)	(124)
<i>Route 82 SB approach</i>	35	(111)

Source: Wilbur Smith Associates

Legend : xxx - Increase in Volume from 2005

(xxx) - Decrease in Volume from 2005

Figures 3.3 and 3.4 illustrate differences between the 2005 and 2006 traffic volumes by individual movements during the A.M. and P.M. peak hour periods.

As indicated in the above table, the 2006 traffic volumes were lower than the 2005 traffic volumes at many intersection locations. This is primarily due to the annual and daily variation in traffic patterns in this corridor. Based on discussions with NYSDOT staff, these variations are normal for this corridor.

Relative to the perceived shifts in traffic patterns due to the opening of the extension of Merritt Boulevard, there is very little shift seen on specific traffic movements as illustrated in Figure 3.2. These are explained below:

- **Route 9 Northbound to Route 52 Eastbound** – At the Route 9/Merritt Boulevard intersection, the Route 9 northbound right-turn movement increases in 2006 by **35** and **57** vehicles during the A.M. and P.M. peak hour periods respectively. At the Route 9/Route 52 intersection, the Route 9 northbound right-turn movement decreases in 2006 by **43** and **34** vehicles during the A.M. and P.M. peak hour periods respectively. This shift in traffic can be associated with the Merritt Boulevard extension.
- **West Merritt Boulevard to Route 52 Eastbound** – At the Route 9/Merritt Boulevard intersection, the West Merritt Boulevard eastbound through movement increases in 2006 by **10** and **34** vehicles during the A.M. and P.M. peak hour periods respectively.
- **Route 52 Westbound to Route 9 Southbound** – At the Route 9/Merritt Boulevard intersection, the Merritt Boulevard westbound left-turn movement decreases by **1** vehicle during the A.M. peak hour period and increases by **25** vehicles in 2006 during the P.M. peak hour period. At the Route 9/Route 52 intersection, the Route 52 westbound left-turn movement decreases in 2006 by **31** and **18** vehicles during the A.M. and P.M. peak hour periods respectively. This shift in traffic can be associated with the Merritt Boulevard extension.
- **Route 52 Westbound to West Merritt Boulevard** – At the Route 9/Merritt Boulevard intersection, the Merritt Boulevard westbound through movement increases by **21** vehicles during the A.M. peak hour period and decreases by **1** vehicle in 2006 during the P.M. peak hour period.

3.3 Origin and Destination Surveys

Origin and destination surveys were conducted in the analysis area during the A.M. and P.M. peak periods to record travel patterns of traffic on Route 52, Jackson Street, and Route 9. Based on the surveys, as shown in **Figure 3.5**, of the traffic on Route 52 making right turns on Cary Avenue, approximately 39 percent and 26 percent of the traffic turns right on Elm Street at the Route 9 intersection, and 28 percent and 24 percent turns right on West Merritt Boulevard at the Route 9 intersection during A.M. and P.M. peak periods, respectively. This figure also shows that of the few vehicles making a right turn at the Jackson Street/Route 52 intersection, most of them make a right turn off the Route 9/Elm Street and Route 9/Merritt Boulevard intersections.

Figure 3.6 shows that of the traffic traveling through on southbound Jackson Street at the Route 52 intersection, approximately 63 and 65 percent of the traffic makes a right turn on Elm Street at the Route 9 intersection, 23 and 21 percent of the traffic makes a right turn on West Merritt Boulevard

at the Route 9 intersection, and the remaining 40 and 44 percent of the traffic continues south on Route 9 during the A.M. and P.M. peak periods respectively.

The reverse movements from West Merritt Boulevard to Route 52 are represented in **Figure 3.7**. Of the traffic making a left turn on West Merritt Boulevard at the Route 9 intersection, approximately 4 and 15 percent of the traffic travels through northbound Jackson Street during the A.M. and P.M. peak periods respectively.

3.4 Existing Truck Movements

Route 9 and Route 52 provide connectivity to I-84 to the south and west, respectively. Route 9 and Route 52 consists of retail and commercial uses that are served regularly by trucks. This activity attracts trucks to Route 52 and therefore through the Village area. A potential benefit of a Connector Road is to provide more direct connectivity to industrial and warehouse developments, such as Montfort Brothers, or the GAP from I-84.

Figure 3.8 shows the truck percentages within the analysis area during the A.M. and P.M. peak hour periods based on the traffic counts collected in April 2006.

3.5 Capacity Analysis

A analysis of capacity is important in determining the ability of a specific roadway, intersection, or freeway to accommodate traffic under various levels of service. Level of service (LOS) is a qualitative measure describing driver satisfaction with a number of factors that influence the degree of traffic congestion. These factors include speed and travel time, traffic interruption, freedom of maneuverability, safety, driving comfort and convenience, and delay.

In general there are six levels of service describing flow conditions. The highest, LOS A, describes a condition of free flow, with low volumes and high speeds. LOS B represents a stable traffic flow with operating speeds beginning to be restricted somewhat by traffic conditions. LOS C, which is normally utilized for design purposes, describes a stable condition of traffic operation. It entails moderately restricted movements due to higher traffic volumes, but traffic conditions are not objectionable to motorists. LOS D reflects a condition of more restrictive movements for motorists and influence of congestion becomes more noticeable. LOS E is representative of the actual capacity of the roadway or intersection and involves delay to all motorists due to congestion. The lowest, LOS F, is described as force flow and is characterized by volumes greater than the theoretical roadway capacity. Complete congestion occurs, and in extreme cases, the volume passing a given point drops to zero. This is considered as an unacceptable traffic operating condition.

For this analysis, level of service was performed for signalized and un-signalized intersections. The traffic analysis software SYNCHRO 6 was used to determine the existing peak hour Level of Service (LOS) at all the intersections along the analysis area. **Table 3.2** highlights the level of service criteria for signalized intersections. The level of service criteria for signalized intersections is based on control delay per vehicle measured in seconds.

Table 3.2
Level of Service Criteria for Signalized Intersections

Level of Service	Control Delay Per Vehicle (seconds)
A	≤10
B	>10 and ≤20
C	>20 and ≤35
D	>35 and ≤55
E	>55 and ≤80
F	> 80

Source: 2000 Highway Capacity Manual, Transportation Research Board

Level of service was determined for the analysis area intersections under existing conditions during the weekday A.M. and P.M. peak hour conditions. The results of this analysis are presented in **Table 3.3** for signalized intersections.

Table 3.3
Existing (2006) Level of Service for Signalized Intersections

Intersection	AM Peak	PM Peak
Route 52/Blodgett Road		
Overall	A (5.7)	A (9.8)
<i>Route 52 EB approach</i>	A (5.1)	A (8.6)
<i>Route 52 WB approach</i>	A (4.6)	A (8.2)
<i>Blodgett Road NB approach</i>	B (13.6)	B (19.9)
<i>Blodgett Road SB approach</i>	B (11.5)	B (15.2)
Route 52/Jackson Street		
Overall	C (26.0)	C (27.6)
<i>Route 52 EB approach</i>	B (18.6)	B (15.5)
<i>Route 52 WB approach</i>	C (25.8)	C (25.8)
<i>Jackson Street NB approach</i>	D (38.5)	D (45.3)
<i>Jackson Street SB approach</i>	C (32.8)	D (40.8)
Route 52/Route 9		
Overall	D (40.4)	E (56.4)
<i>Route 52 EB approach</i>	D (52.8)	F (121.9)
<i>Route 52 WB approach</i>	E (75.6)	E (71.9)
<i>Route 9 NB approach</i>	B (16.9)	B (16.3)
<i>Route 9 SB approach</i>	D (38.0)	E (76.4)
Route 9/Elm Street		
Overall	B (16.7)	B (14.5)
<i>Elm Street EB approach</i>	D (41.0)	D (38.9)
<i>Elm Street WB approach</i>	D (36.1)	D (40.6)
<i>Route 9 NB approach</i>	A (8.2)	A (7.4)
<i>Route 9 SB approach</i>	B (17.1)	B (16.4)

Source: Wilbur Smith Associates

Table 3.3 - Continued
Existing (2006) Level of Service for Signalized Intersections

Intersection	AM Peak	PM Peak
Route 9/Merritt Boulevard		
Overall	B (18.0)	C (27.7)
<i>Merritt Boulevard EB approach</i>	D (39.8)	E (59.9)
<i>Merritt Boulevard WB approach</i>	D (42.9)	D (48.0)
<i>Route 9 NB approach</i>	B (18.2)	C (22.7)
<i>Route 9 SB approach</i>	A (9.8)	B (12.4)
Route 52/Merritt Boulevard		
Overall	B (14.2)	B (14.9)
<i>Route 52 EB approach</i>	B (16.6)	B (13.6)
<i>Route 52 WB approach</i>	A (8.6)	B (14.4)
<i>Merritt Boulevard NB approach</i>	B (18.4)	C (20.8)
<i>Old State Road SB approach</i>	C (20.4)	C (21.2)
Route 52/Route 82		
Overall	A (6.4)	B (10.8)
<i>Route 52 EB approach</i>	A (3.6)	A (8.9)
<i>Route 52 WB approach</i>	A(9.3)	B (16.5)
<i>Route 82 SB approach</i>	A (8.8)	A (9.3)

Source: Wilbur Smith Associates

Below is a list of findings from the level of service analysis results with an overall level of service at LOS D or worse or any approaches at LOS E or worse:

- **Route 52/Route 9** - This intersection operates at an overall LOS D and LOS E during the A.M. and P.M. peak hour periods respectively. During the A.M. and P.M. peak hour periods, the Route 52 eastbound and westbound approaches to the intersection operate at LOS D, E, or F with significant delays. This is mainly due to inadequate capacity on Route 52 to accommodate these volumes. During the P.M. peak hour period, the Route 9 southbound approach experiences LOS E due to a heavy left turn movement from Route 9 southbound to Route 52 eastbound.
- **Route 9/Merritt Boulevard** - This intersection operates at an overall LOS B and LOS C during the A.M. and P.M. peak hour periods respectively. During the P.M. peak hour period, the Merritt Boulevard eastbound approach to the intersection operates at LOS E due to exiting traffic from the offices and the shopping areas on Merritt Boulevard.

Figures 3.9 and 3.10 represent the results of the level of service analysis by approach and overall intersection during the A.M. and P.M. peak hour periods respectively.

3.6 Travel Time and Delay Studies

The primary purpose of the travel time and delay studies is to measure the existing travel times and delays (wait times) in the analysis area. These measurements will be used to compare the estimated travel times for the planned Route 52 alternatives. In addition, the travel time measurements will be used to calibrate the SYNCHRO model for the Route 52-Route 9 corridor.

In-vehicle travel time and delay runs were conducted on Thursday, September 7, 2006 along the following paths:

- **Path A:** Route 52/I-84 Ramps to Route 9/West Merritt Boulevard via Route 9/Route 52 intersection
- **Path B:** Route 52/I-84 Ramps to Route 9/West Merritt Boulevard via Broad Street, Smith Street, and Elm Street

These paths are illustrated in **Figure 3.11**. Three runs were taken in each direction along the above paths during the weekday A.M. and weekday P.M. peak hour periods. A stop-watch was used to record the travel time and delay measurements. The results of the travel time and delay runs are summarized in **Table 3.4**.

Table 3.4
Average Travel Times in the Analysis area

Paths	A.M. (in sec.)		P.M. (in sec.)		Travel Times (in sec.) at free-flow speed*
	EB	WB	EB	WB	
A	310	351	449	383	170
B	268	313	329	382	187

Note: * - Travel times estimated based on travel distance and posted speed limits.

Source: Wilbur Smith Associates

As indicated in Table 3.4, travel times were shorter in the path through Broad Street, Smith Street, and Elm Street compared to the path through the Village area and the Route 9/Route 52 intersection. In addition, the P.M. travel times were longer than the A.M. travel times in both directions. Specifically in the eastbound direction, travel times were longer by a minute or more in the P.M. than the A.M. peak hour period.

Comparing travel times measured in Paths A and B during A.M. and P.M. peak periods to an estimated travel time under free flow condition, it can be noted that in some instances, during peak periods it takes almost twice as much time to traverse the corridor than under the free-flow condition.

3.7 Traffic Simulation

An existing conditions traffic micro-simulation model was developed for the analysis area using SYNCHRO/SimTraffic software, which includes Route 9, Route 52, and Route 82. This traffic simulation model will be used to compare the base conditions with potential alternatives of the Connector Road. The model was developed for the P.M. peak hour period to represent a higher volume condition.

The following is a list of common performance measures used for comparing the alternatives:

- **Average Travel Time** - Defined as the amount of time a vehicle takes to traverse a roadway segment inclusive of all delays (waits) experienced by the vehicle. Average travel time is measured in seconds per vehicle.
- **Average Delay** - Defined as the amount of delay or “wait” time experienced by a vehicle while traversing a roadway segment. This delay is the amount of time a vehicle is stopped on the roadway segment. Average delay is measured in seconds per vehicle.
- **Average Speed** - Defined as the ratio of distance over time calculated on the entire roadway segment. Average speed is measured in miles per hour. As delay increases along a roadway segment, travel time increases, and speed reduces.
- **Vehicle Miles Traveled (VMT)** - Defined as the total number of miles traveled in an automobile or another vehicle in a specified area. VMT is measured in miles.
- **Vehicle Hours Traveled (VHT)** - Defined as the total number of hours traveled in an automobile or another vehicle in a specified area during a specific time period. VMT is measured in hours. The ratio of VMT and VHT also gives the average speed.

The travel time runs detailed in Section 3.7 were used to calibrate the existing conditions traffic micro-simulation model. The calibration process allows the traffic simulation model to replicate actual conditions. It is extremely difficult to mimic experiences from the public on a typical day. The micro-simulation model is a mechanism to predict traffic conditions in the future and compare different alternatives.

3.8 Crash Data Analysis

Crash data was obtained from the Dutchess County Traffic Safety Board (DCTSB) for the most recent three-year period available. Reports were received and evaluated for the period of January 2002 through June 2004. Crash data summary sheets were prepared for the analysis area and are shown in **Table 3.5**.

Table 3.5
Crash Data Summary

Roadway	Location	Summary of Crash Data (2002-2004)			
		Non-Fixed Object	Fixed Object	Unknown	Total
Route 52	At Blodgett	5	0	0	5
	At Jackson Street	6	0	1	7
	At US 9	See Route 9 Table			
	At Route 82	0	0	0	0
	Total	11	0	1	12
Route 9	At Merritt Boulevard	3	1	1	5
	At Elm Street	37	3	1	41
	At Route 52	62	3	6	71
	Total	102	7	8	117
Grand Total		113	7	9	129

Source: Wilbur Smith Associates

The analysis revealed that of a total of 129 crashes, 113 crashes involved non-fixed objects like other automobiles, pedestrians, or animals.

Table 3.6 shows a breakdown of the non-fixed object crashes based on types.

The most frequently occurring crash types of the 113 collisions reviewed are as follows:

1. Rear end collisions – 46.0 %
2. Angle collisions – 36.3 %
3. Sideswipe collisions – 9.7 %

Table 3.6
Crash Data Summary by Type – Non-Fixed Objects

Roadway	Location/Segment	Type of Crash (2002-2004)						Total
		Head-On	Rear End	Angled	Sideswipe	Other	Unknown	
Route 52	At Blodgett	0	4	1	0	0	0	5
	At Jackson Street	0	3	1	1	0	1	6
	At 9	See Route 9 Table						
	At 82	0	0	0	0	0	0	0
	Total	0	7	2	1	0	1	11
Route 9	At Merritt Blvd.	0	1	2	0	0	0	3
	At Elm Street	0	12	21	3	0	1	37
	At 52	1	32	16	7	0	6	62
	Total	1	45	39	10	0	7	102
Grand Total		1	52	41	11	0	8	113

Source: Wilbur Smith Associates

Table 3.7 shows the breakdown of crashes by severity.

Table 3.7
Crash Data Summary by Severity

Roadway	Location/Segment	Crashes by Severity (2002-2004)			
		Injury	Property Damage Only	Fatality	Total
Route 52	At Blodgett	1	4	0	5
	At Jackson Street	2	5	0	7
	At 9	See Route 9 Table			
	At 82	0	0	0	0
	Total	3	9	0	12
Route 9	At Merritt Blvd.	0	5	0	5
	At Elm Street	15	26	0	41
	At 52	15	56	0	71
	Total	30	87	0	117
Grand Total		33	96	0	129

Source: Wilbur Smith Associates

Table 3.8 shows a comparison of actual crash rates with the statewide threshold rates.

Table 3.8
Comparison of Actual and Statewide Crash Rates

Roadway	Location/Segment	Crash Rates		
		Total Accidents	Actual Rate	Statewide Rate
Route 52	At Blodgett	5	0.25	0.60
	At Jackson Street	7	0.30	0.46
	At Route 9	See Route 9 Table		
	At 82	0	0.0	0.29
Route 9	At Merritt Boulevard	5	0.11	0.46
	At Elm Street	41	0.99	0.46
	At Route 52	71	1.49	0.46

Source: Wilbur Smith Associates and NYSDOT Statewide Average Crash Rates.

Note: (1) Crash Rates in Acc/Million Vehicle Miles (MVM)

(2) Route 9, Route 52, and Jackson Street assumed to be Urban Functional Class.

(3) Route 9 has 7 or more lanes in the analysis area

(4) Route 52 and Jackson Street have two lanes in the analysis area except at select intersection locations.

Intersections Crashes

The following describes the intersection locations where the Actual Crash Rate exceeds the Statewide Average Crash Rate:

- **Route 9/Elm Street** - A total of 41 crashes occurred at this intersection during the three year analysis period, 37 (37 of 41, 90.2 %) of which were with non-fixed objects and three (3 of 41, 7.3 %) of which were fixed object crashes. Rear end (12 of 37, 32.4 %) and angled (21 of 37, 56.8 %) were the predominant type of crashes that occurred at this intersection. Three (3 of 37, 8.1 %) sideswipe crashes were also reported at this intersection. Fifteen (15 of 41, 36.6 %) of these crashes resulted in an injury of one or more persons and 26 (26 of 41, 63.4%) crashes resulted in damage to property.
- **Route 9/Route 52** - A total of 71 crashes occurred at this intersection during the three year analysis period, 62 (62 of 71, 87.3 %) of which were with non-fixed objects and three (3 of 71, 4.2 %) of which were fixed object crashes. Rear end (32 of 62, 51.6 %), angled (16 of 62, 25.8 %), and sideswipe (7 of 62, 11.3 %) were the predominant type of crashes that occurred at this intersection. One (1 of 62, 1.6 %) head-on collision was also reported at this intersection. Fifteen (15 of 71, 21.1 %) of these crashes resulted in an injury of one or more persons and 56 (56 of 71, 78.9 %) crashes resulted in damage to property.

SUMMARY OF CHAPTER 3

Below is a summary of the existing traffic conditions analyses undertaken in Chapter 3:

1. The opening of the Merritt Boulevard extension to the east of Route 9 appears to have altered some travel patterns in the analysis area. The amount of traffic volume shifting towards the Merritt Boulevard is smaller than anticipated with the opening of this extension.
2. Congestion is experienced during peak travel periods at the Route 9/Route 52 and Route 9/Merritt Boulevard intersections. The existing conditions traffic analysis confirms the peak period congestion.
3. Travel patterns demonstrate that motorists use local streets to avoid congested intersections.
4. Travel times during peak periods of congestions are significantly higher and are often almost twice the time it would take under free-flow or un-congested conditions.
5. Crashes at traffic signals are typically rear ends, sideswipes, or angled and are associated with driver impatience seeing congestion and back-up at the intersection. A number of these crashes can be attributed to the congested roadway network.
6. The congestion and safety issues support a feasibility and benefits evaluation of a Connector Road.

CHAPTER 4 – ENVIRONMENTAL CONSTRAINTS ANALYSIS

This chapter details the results of the existing conditions environmental analysis, which includes data collection, secondary source information, hazardous waste database review, and a review of environmental constraints related to the potential alternatives.

4.1 Overview of Environmental Constraints Analysis

An existing conditions environmental constraints analysis has been undertaken for the Route 52 Alternatives using primarily secondary source environmental resource data. This analysis is summarized in this memorandum and on a series of analysis area maps. Specifically, the following resources have been identified for the four alternatives being evaluated:

- NWI (federal) wetlands
- State-regulated DEC wetlands
- 100 year floodzone
- 500 year floodzone
- United States Environmental Protection Agency (USEPA) and New York State Department of Environmental Conservation (NYSDEC) environmental/hazardous waste databases
- National and State Register Historic Sites
- Archeological Sensitive Areas

In addition to these secondary data sources, a windshield survey to identify any other readily visible hazardous waste concerns was undertaken.

4.2 Secondary Source Environmental Impact Analysis

Figure 4.1, Environmental Constraints, shows wetlands, floodzone, and Fishkill Creek crossing impacts based on acreages of the four alternatives as provided in GIS by PDCTC. As indicated in **Table 4.1**, the Village right-of-way alternative connecting Haight with West Merritt Boulevard requires the greatest land in terms of total acreage with approximately 9.8 acres. Not surprisingly given the total land requirements of this alternative, it also has the greatest acreage impacts in terms of NWI wetlands (+/- 1.8 acres), and 100 year floodzone (+/- 7.9 acres) impacts. No mapped DEC wetlands were identified as impacting the alternatives.

Table 4.1
Summary of Alternative Impacts

Alternative	Total Acres (+/-)	NWI Wetland Acres(+/-)	100 Year Floodzone Acres(+/-)	500 Year Floodzone Acres(+/-)	Fishkill Creek Linear Ft
Jackson St.	4.08	0.21	3.96	0.11	148.6
Blodgett Rd.	3.69	1.35	3.51	0.13	120.7
Village ROW	9.8	1.78	7.93	1.65	122.6
Elm/Jackson	1.47	0	1.47	0	0

Source: PDCTC GIS database.

In addition to the surface water resources analyzed above, a search was undertaken on the NYS Office of Parks, Recreation and Historic Preservation on-line database (as updated in March of 2005) to identify potential impacts to any nationally or state-listed historic sites, as well as to identify any known archeologically sensitive areas. **Figure 4.2** shows the results of this database search. All of the alternatives are located within an archeologically sensitive area, which would therefore require archeological investigations as part of any environmental review of a future road.

4.3 Hazardous Waste Database Review

The USEPA and NYSDEC maintain various databases of environmental information. Facilities listed on these databases are frequently cross-referenced by their latitude and longitude coordinates. Therefore, searches of these databases can be conducted to identify environmental issues within close proximity of a target area. In this case, the target areas are the Route 52 alternatives, and searches were conducted for facilities within 0.5 miles or less depending upon the migratory potential of the contamination. A copy of the databases search report conducted by Environmental Data Resources, Inc. (EDR), dated November 8, 2005, is provided in Appendix B. **Table 4.2** provides a summary of facilities identified on or near the alternatives. Additionally, **Figure 4.3** shows these locations in relationship to the alternatives. Please note that the locations on Figure 4.3 are based on information obtained during the site visit or by the addresses provided in the EDR search. The databases identified as having information in the area of the alternatives are:

- USEPA Resource Conservation and Recovery Act (RCRA) Hazardous Waste Generators list
- NYSDEC Spills Information database
- NYSDEC Petroleum Bulk Storage (PBS) database and Chemical Bulk Storage (CBS) database
- USEPA Facility Index System/Facility Identification Initiative Program Summary Report (FINDS) database

The database searches indicated that the Montfort Brothers/Miron Lumber facility, located on Chips Lane and Elm Street was identified on the Spill, LUST, FINDs, and PBS databases. The Village right-of-way alternative appears to extend through the southern portion of this facility. Two spills have been reported for this facility. Both spills have received “closed” status by the NYSDEC, one in 1987 and the other in 1991. Prior to 1995, the NYSDEC had not established soil cleanup guidance values (TAGM #4046).

Site reconnaissance, consisting of drive-by and site walk inspections of the areas of concern was performed on November 18, 2005. All accessible exterior areas of the Route 52 alternatives were observed during this site inspection. **Table 4.3** summarizes the observations made, and **Figure 4.4** shows the approximate locations of these observations. Additionally, photographs documenting site conditions at the time of inspection are included in Appendix A.

During the site visit, an area of convenience dumping was noted in and around the Blodgett Road alternative. This debris consisted mainly of paper, tires, appliances, shingles, toilets, and 5 and 30-gallon containers. The potential exists that minor releases may have occurred in relation to the containers found in this area. Additionally, a former building foundation was noted slightly north of this area. It is unclear if the former building used fuel oil as a heating source and if any tanks existed/remain on the property or if oil spills occurred during their removal. If any fuel oil tanks are still present on the property or spilled oil, the potential exists that contamination may have migrated into the analysis area.

SUMMARY OF CHAPTER 4

1. The environmental analysis has been undertaken using secondary source environmental information and indicates that no potential impacts to NYSDEC wetlands were identified along any of the alternative routes.
2. Based on a search of the NYS Office of Parks, Recreation and Historic Preservation on-line database, it was determined that all of the alternatives are located within an archeologically sensitive area.
3. Two facilities, located near the direct connection between Elm Street and Jackson Street are listed on several databases for storage and spills of hazardous wastes. These findings are important to select a Connector Road concept which has a low environmental impact.
4. Before any alternatives are eliminated from an environmental standpoint, a field visit to better understand wetland and floodzone issues, as well as other constructability concerns, such as the railroad and Fishkill Creek crossings is required.

CHAPTER 5 – SUMMARY OF EXISTING CONDITIONS

This chapter summarizes the existing conditions in Chapters 3 and 4 and supports the issues provided at the beginning of the analysis.

5.1 Issues and Observations

Table 5.1 outlines key issues identified at the beginning of the analysis and observations from the existing conditions analysis.

Table 5.1
Issues and Observations

Issues	Observations
Congestion/Delays	<ul style="list-style-type: none"> • Route 9/Route 52 intersection • Route 9/Merritt Boulevard
Travel Patterns	<ul style="list-style-type: none"> • Route 52 to Merritt Boulevard • Route 52 to Elm Street
Trucking Patterns	<ul style="list-style-type: none"> • Trucks travel through Village area (Montfort Brothers)
Travel Time Studies	<ul style="list-style-type: none"> • Travel times are shorter when avoiding the Village area and the Route 9/Route 52 intersection
Safety Issues	<ul style="list-style-type: none"> • Crashes at traffic signals is attributed to high volumes at Route 9/Route 52 and Route 9/Elm Street intersections
Environmental	<ul style="list-style-type: none"> • Archeologically sensitive area • Two hazardous waste sites near Elm Street and Jackson Street connection

Source: Wilbur Smith Associates

Currently, there is a significant amount of traffic on Route 52 oriented toward Merritt Boulevard and points south that uses local streets to avoid the Route 9/Route 52 intersection. As traffic growth increases, the corridor will experience more congestion and potentially an increase in crashes. A Connector Road between Route 9 and Route 52 could reduce congestion and potential for crashes in the Village Center and the Route 9/Route 52 intersection as well as provide an alternate route for traffic oriented toward Merritt Boulevard and points south.

The environmental analysis identified that all of the potential alternatives are located within an archeologically sensitive area. Two facilities, located near the direct connection between Elm Street and Jackson Street are listed on several databases for storage and spills of hazardous wastes.

5.2 Connector Road Feasibility

The results of the data collection and analysis of the existing conditions as summarized in Table 5.1 demonstrate a need to relieve congestion and safety through the Village area. A Connector Road to allow through traffic to bypass the Village area may solve those concerns. There is evidence of motorists using local streets to bypass the Village area.

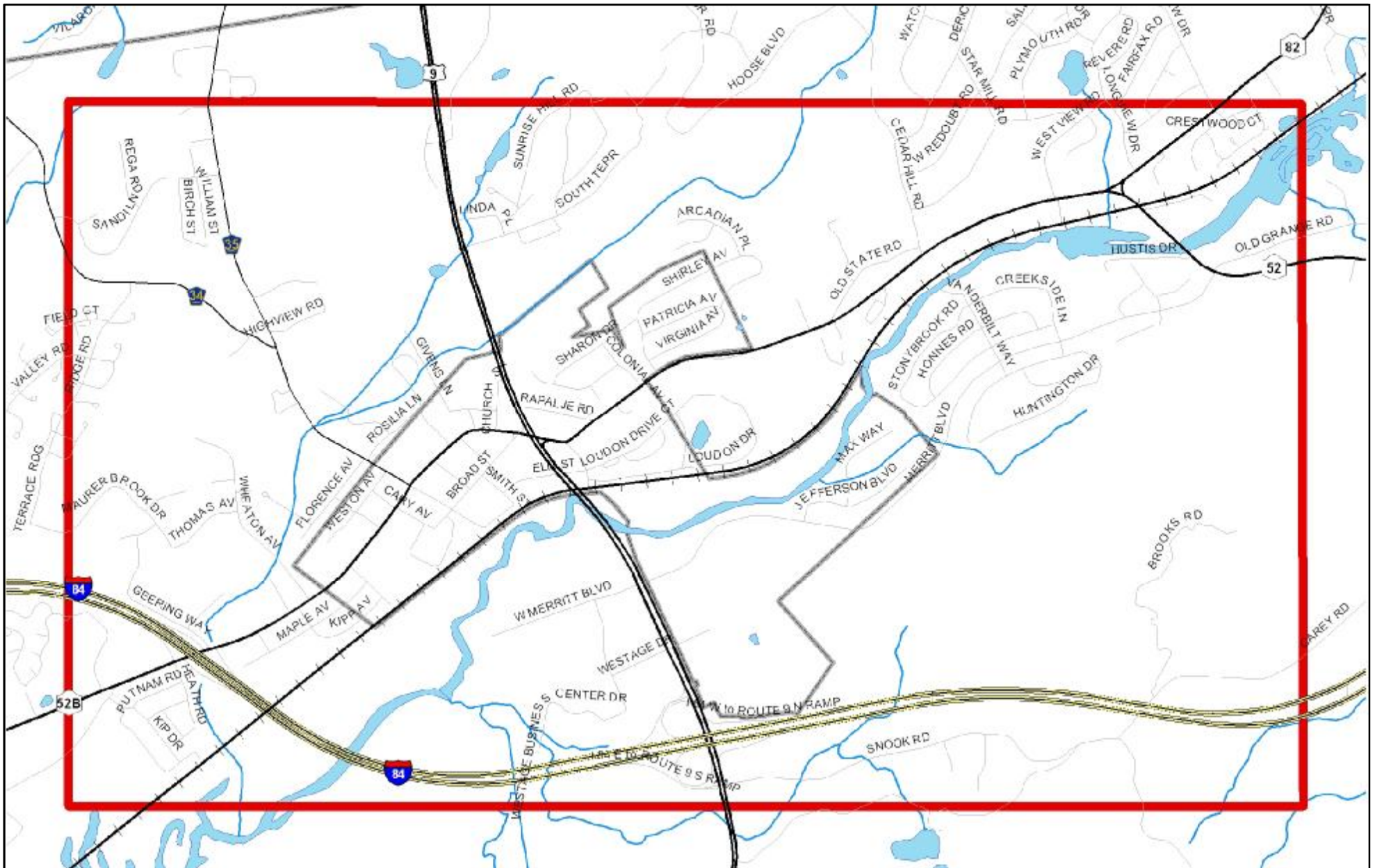
The opening of the Merritt Boulevard extension to the east did not demonstrate enough benefits relative to traffic diversions in the analysis. The same conclusion cannot be applied to the West Merritt Boulevard extension based on the type of land use and transportation system on the west side of Route 9.

The Connector Road should improve truck access to commercial and industrial uses in the area. Specifically connectivity to I-84 west and south of the analysis area will be further enhanced by the Connector Road. The environmental analysis did not point out any fatal flaws in the potential alignments of the Connector Road.

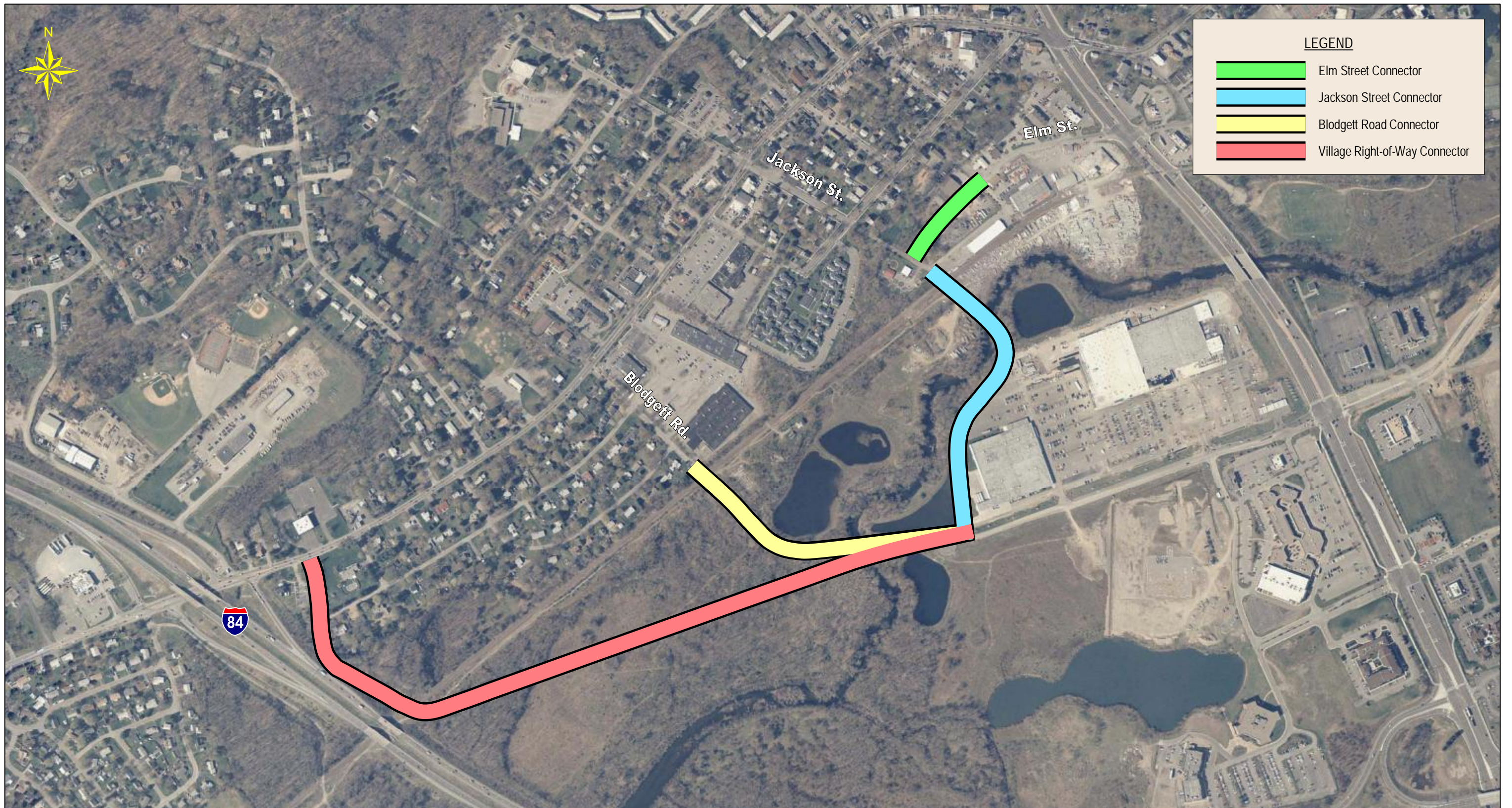
An important criterion to determine the feasibility of the Connector Road will be its constructability and reaching consensus on a location. Field visits are needed to better understand constructability concerns relative to the railroad and Fishkill Creek crossings.

5.3 Next Steps

- Meeting with Advisory and Steering Committee members
- Develop future year no-build traffic projections in coordination with Dutchess County Planning and Development Staff
- Present existing conditions to the public and gather input
- Develop a list of alternatives for evaluation



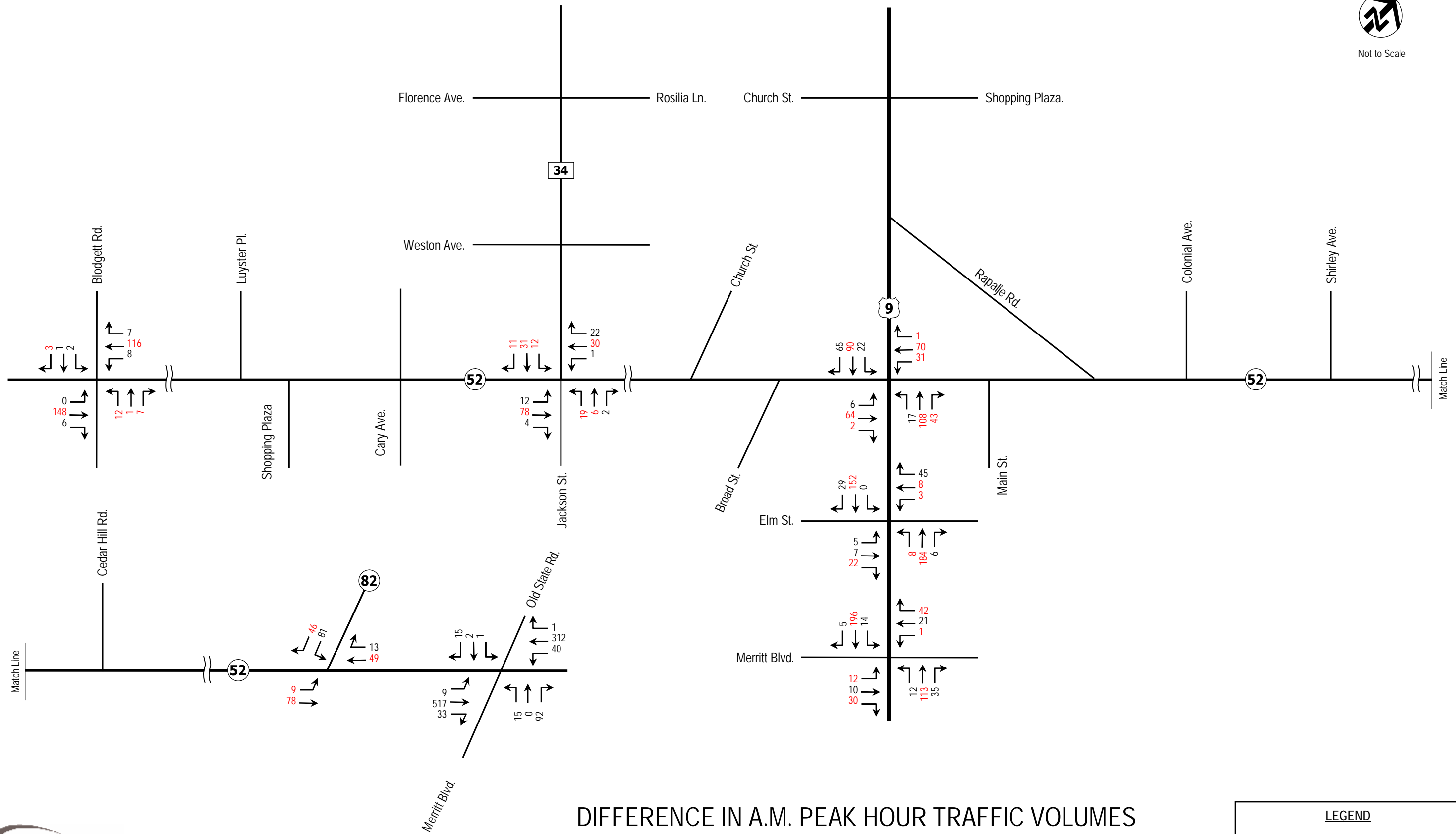
ANALYSIS AREA MAP
 FISHKILL ROUTE 52 ALTERNATES ANALYSIS
 Fishkill, New York



POTENTIAL ROUTE 52 CONNECTIONS
 FISHKILL ROUTE 52 ALTERNATES ANALYSIS
 Fishkill, New York



Not to Scale



DIFFERENCE IN A.M. PEAK HOUR TRAFFIC VOLUMES
 FISHKILL ROUTE 52 ALTERNATES ANALYSIS
 Fishkill, NY

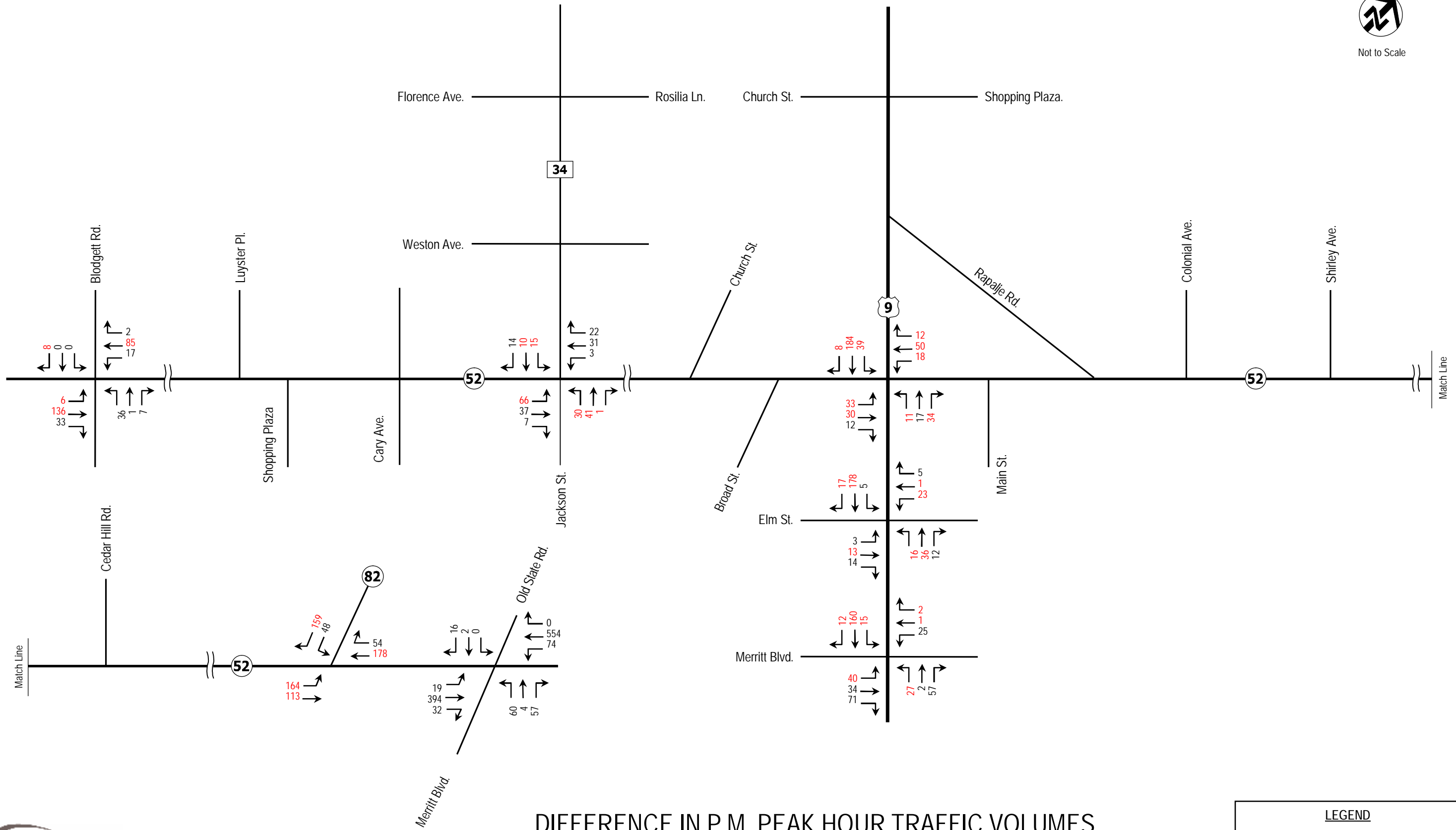
LEGEND

Number : Increase in Volume from 2005
 Number : Reduction in Volume from 2005





Not to Scale



DIFFERENCE IN P.M. PEAK HOUR TRAFFIC VOLUMES
 FISHKILL ROUTE 52 ALTERNATES ANALYSIS
 Fishkill, NY

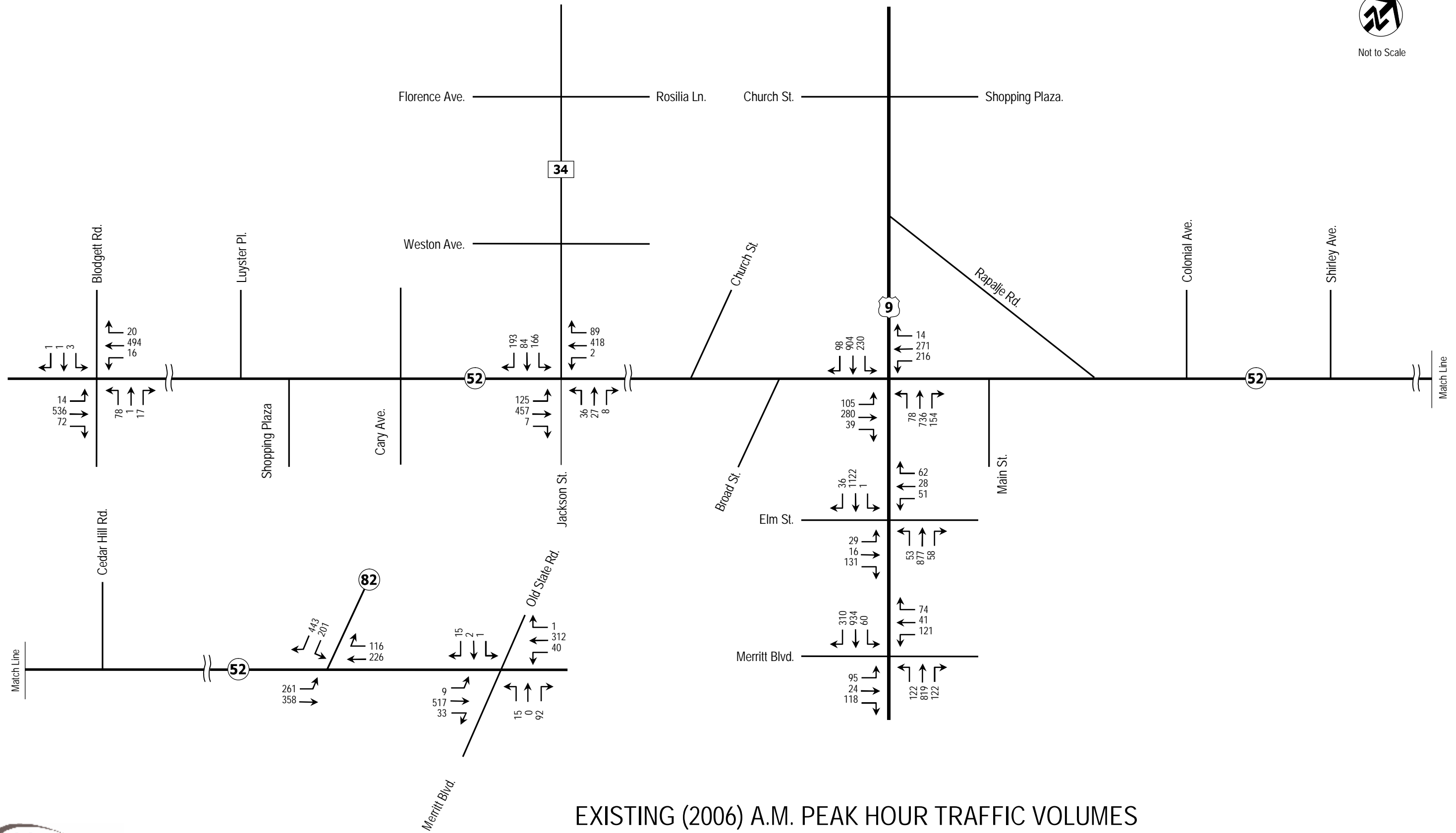
LEGEND

Number : Increase in Volume from 2005
 Number : Reduction in Volume from 2005





Not to Scale

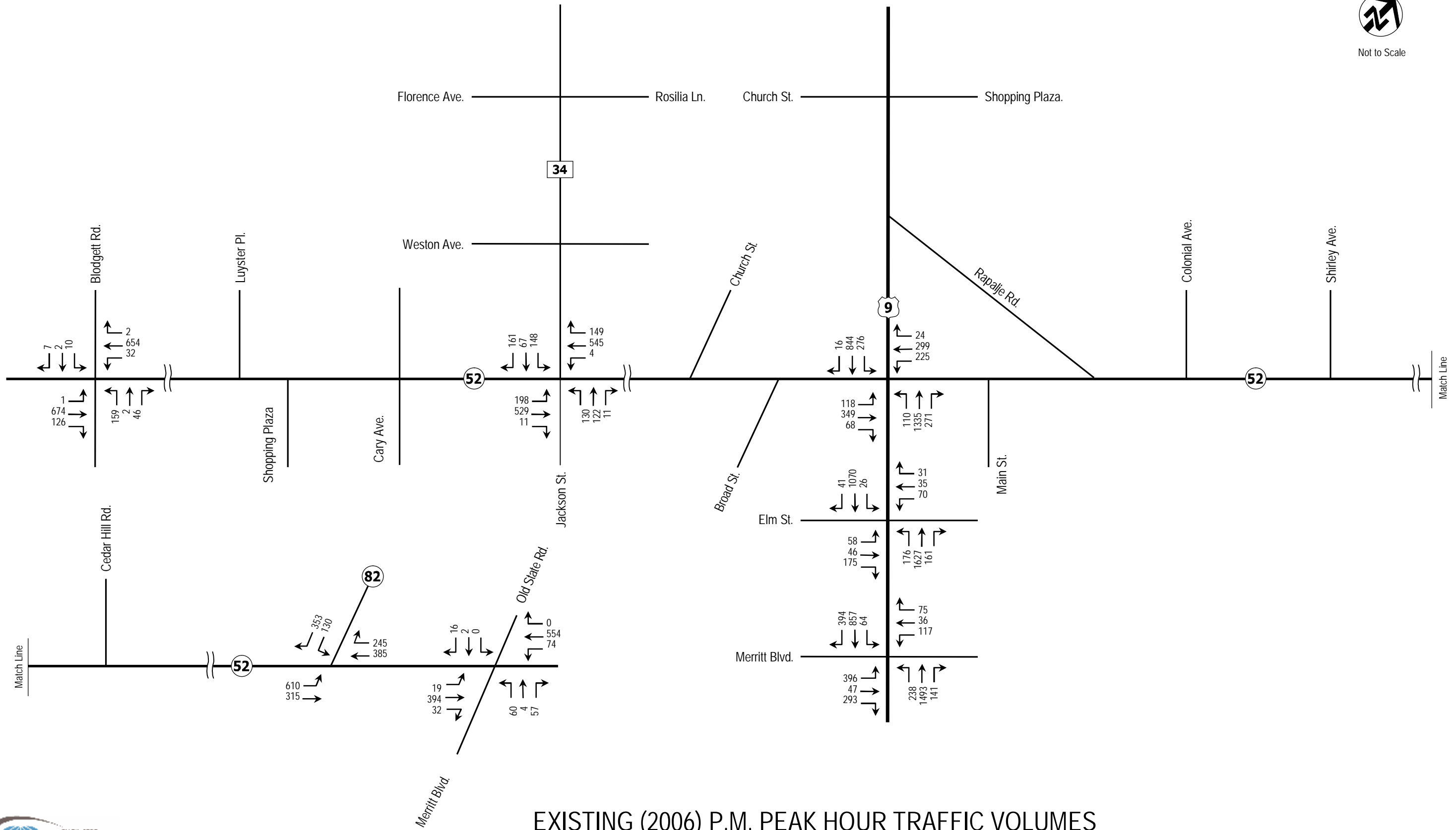


EXISTING (2006) A.M. PEAK HOUR TRAFFIC VOLUMES
 FISHKILL ROUTE 52 ALTERNATES ANALYSIS
 Fishkill, NY



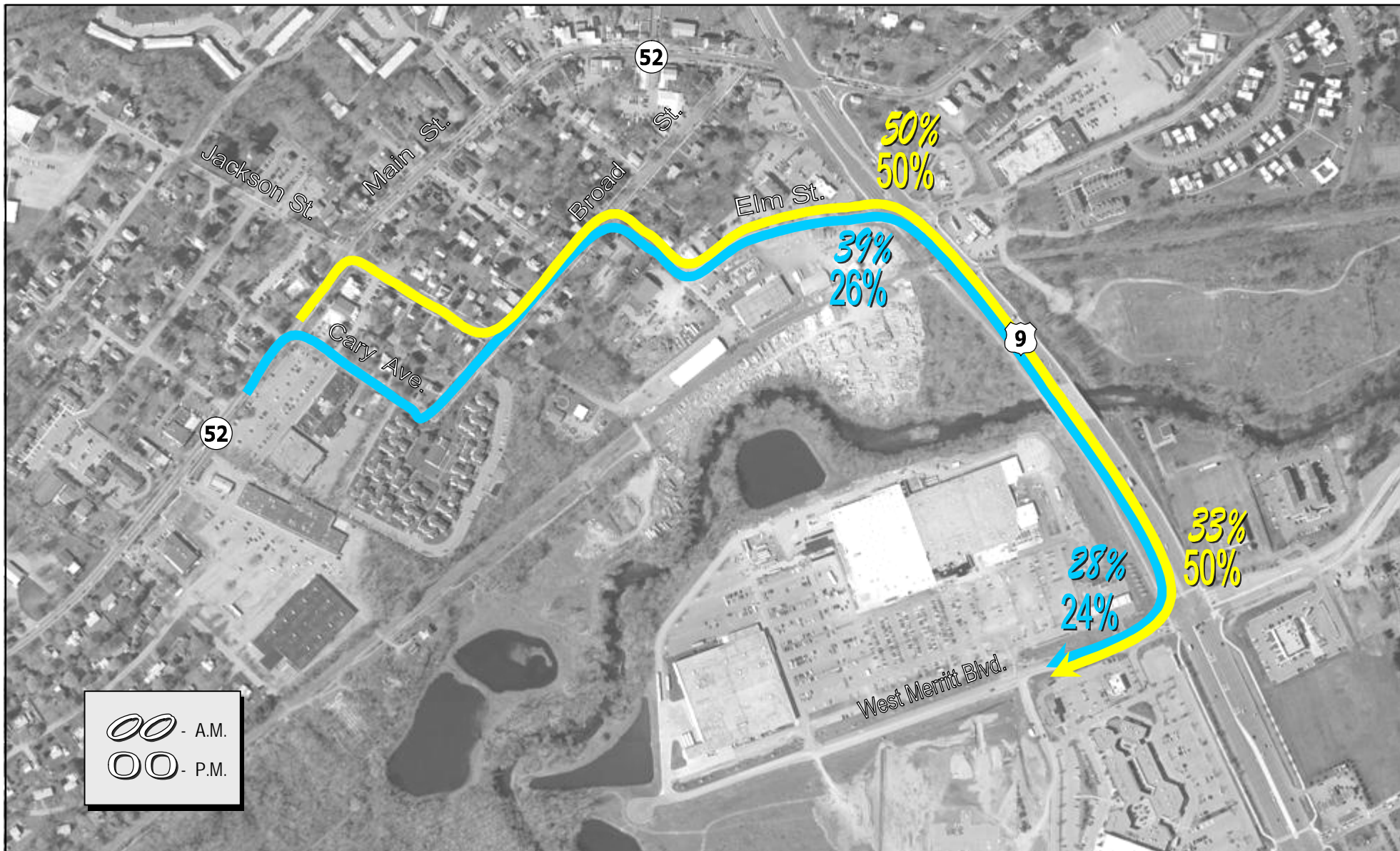


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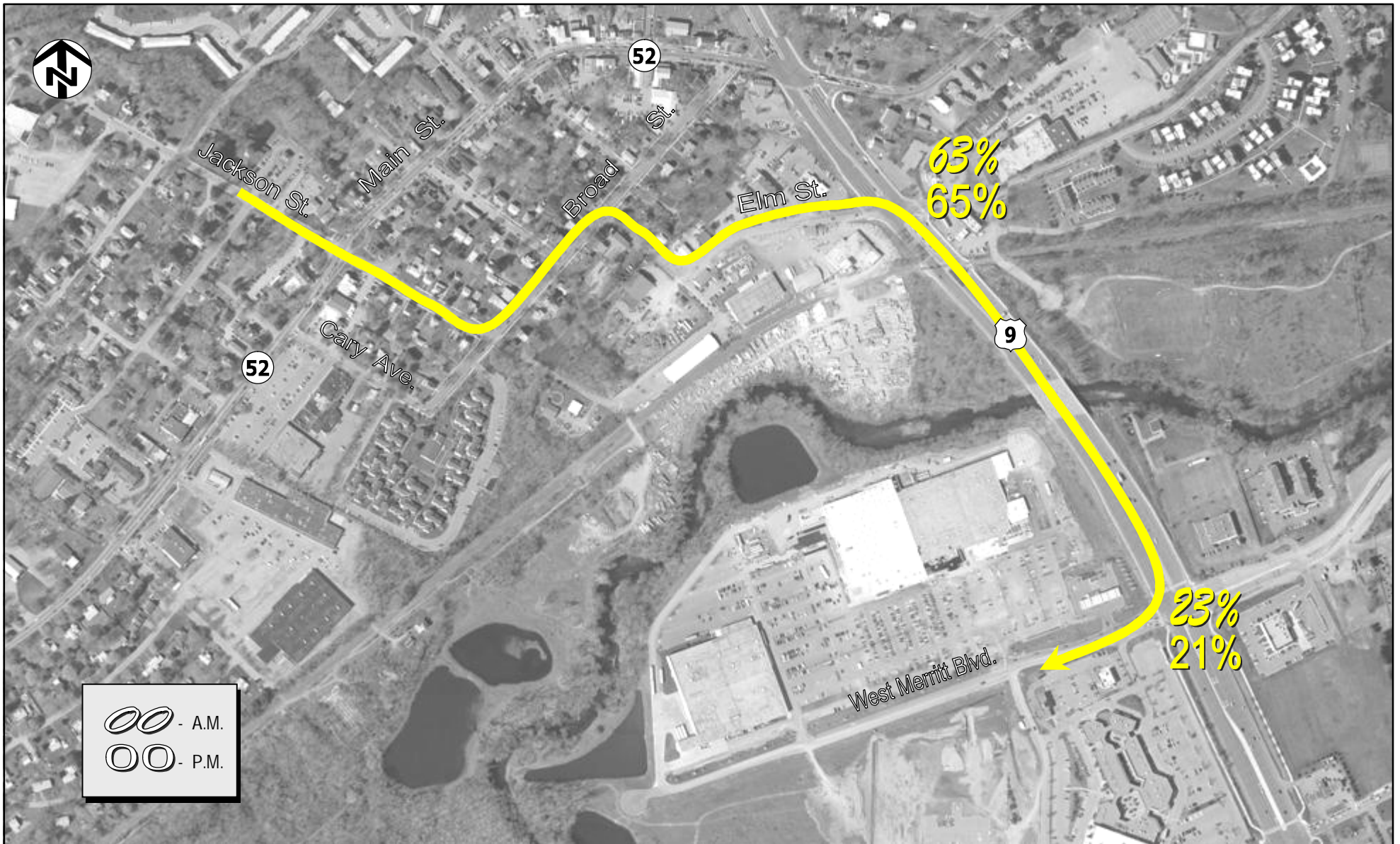


EXISTING (2006) P.M. PEAK HOUR TRAFFIC VOLUMES
 FISHKILL ROUTE 52 ALTERNATES ANALYSIS
 Fishkill, NY

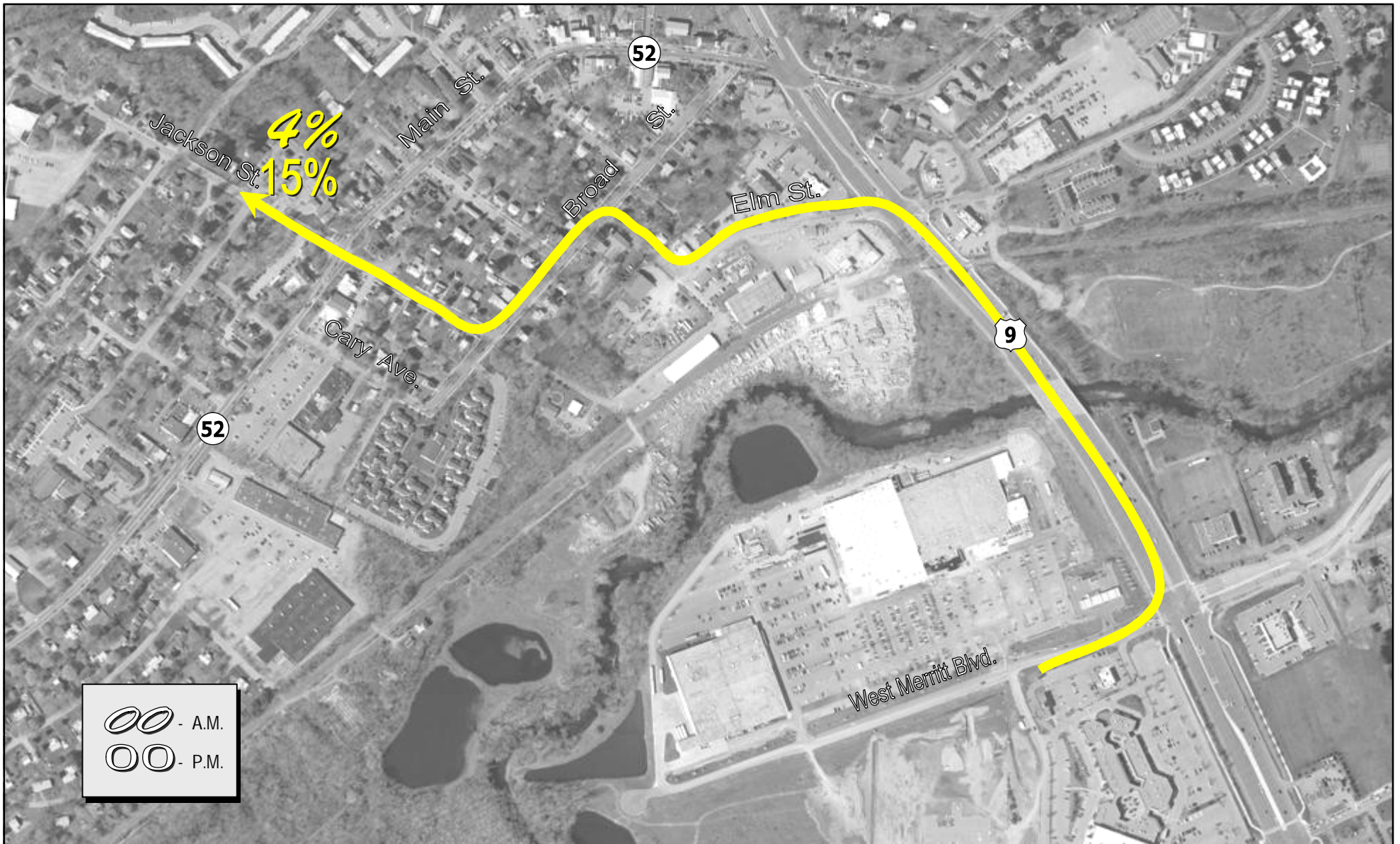




ROUTE 52 TRAVEL PATTERNS
 FISHKILL ROUTE 52 ALTERNATES ANALYSIS
 Fishkill, New York



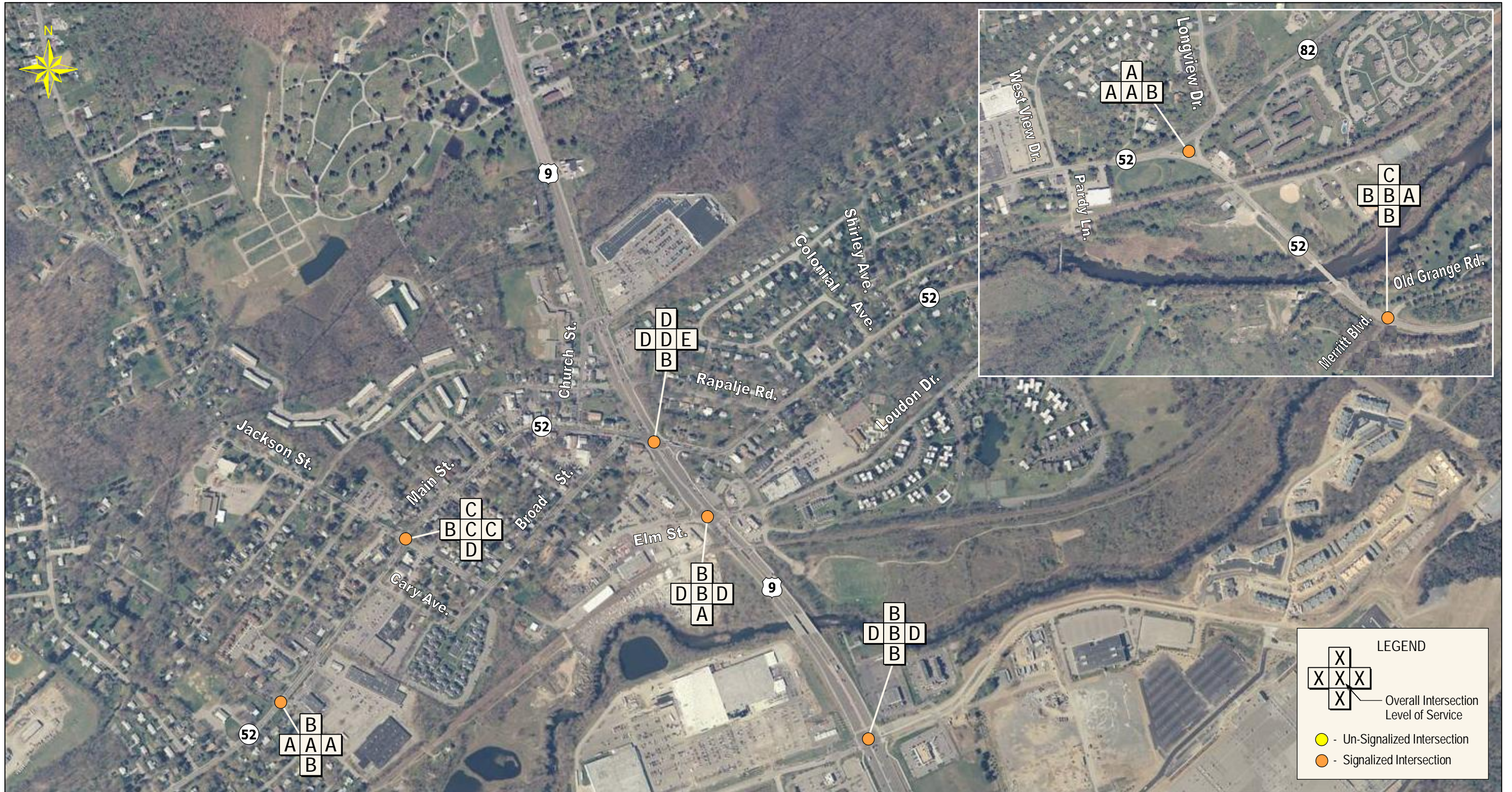
JACKSON STREET TRAVEL PATTERNS
 FISHKILL ROUTE 52 ALTERNATES ANALYSIS
 Fishkill, New York



WEST MERRITT BOULEVARD TRAVEL PATTERNS
 FISHKILL ROUTE 52 ALTERNATES ANALYSIS
 Fishkill, New York



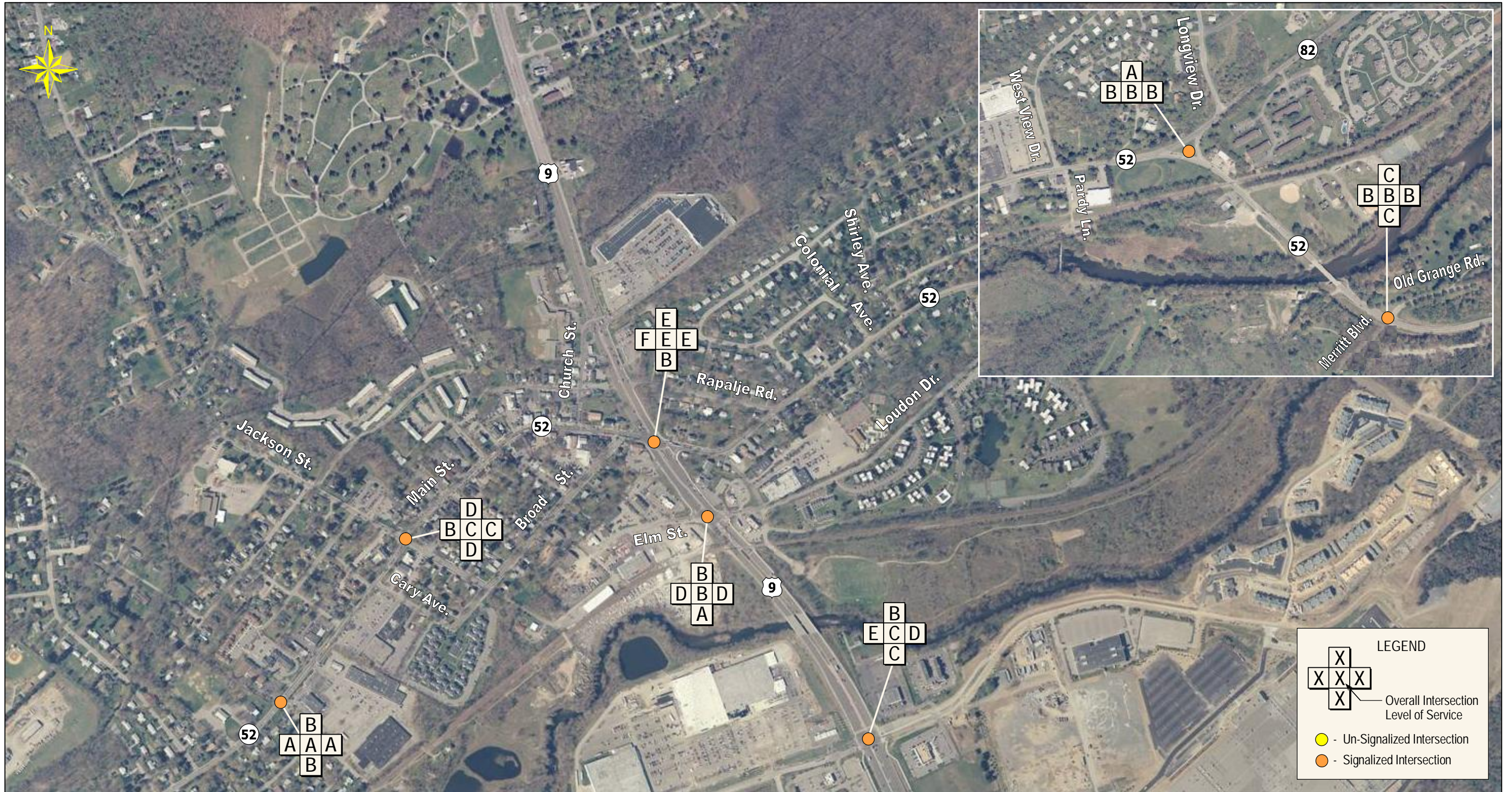
TRUCK PERCENTAGES IN THE STUDY AREA
 FISHKILL ROUTE 52 ALTERNATES ANALYSIS
 Fishkill, New York



Note: Overall LOS for un-signalized intersections is not computable.



FIGURE 3.9



Note: Overall LOS for un-signalized intersections is not computable.



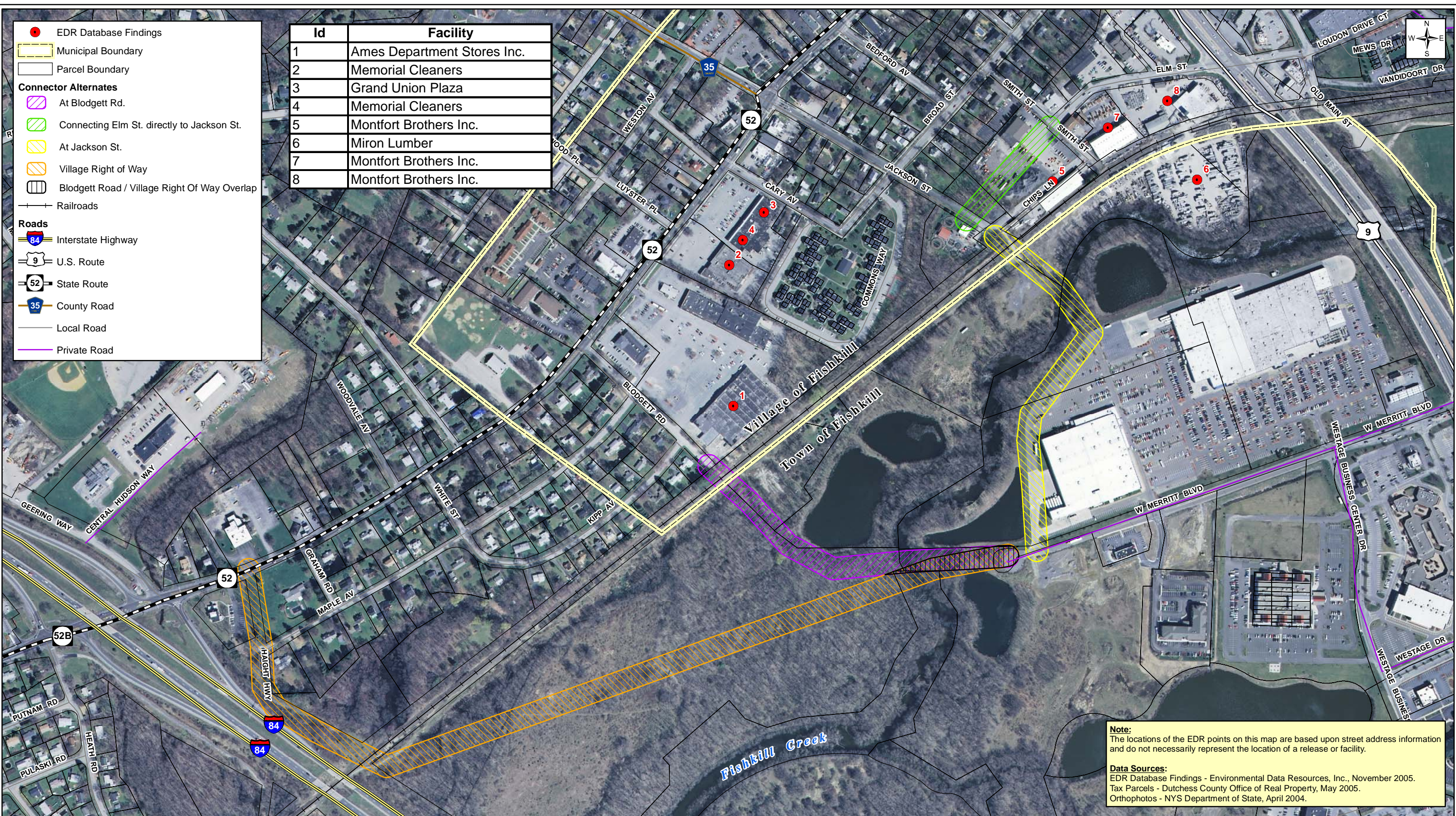
FIGURE 3.10



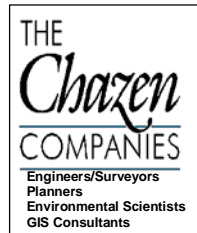
PATHS FOR TRAVEL TIME RUNS
FISHKILL ROUTE 52 ALTERNATES ANALYSIS
 Fishkill, New York

● EDR Database Findings
 Municipal Boundary
 Parcel Boundary
Connector Alternates
 At Blodgett Rd.
 Connecting Elm St. directly to Jackson St.
 At Jackson St.
 Village Right of Way
 Blodgett Road / Village Right Of Way Overlap
 Railroads
Roads
 Interstate Highway
 U.S. Route
 State Route
 County Road
 Local Road
 Private Road

Id	Facility
1	Ames Department Stores Inc.
2	Memorial Cleaners
3	Grand Union Plaza
4	Memorial Cleaners
5	Montfort Brothers Inc.
6	Miron Lumber
7	Montfort Brothers Inc.
8	Montfort Brothers Inc.



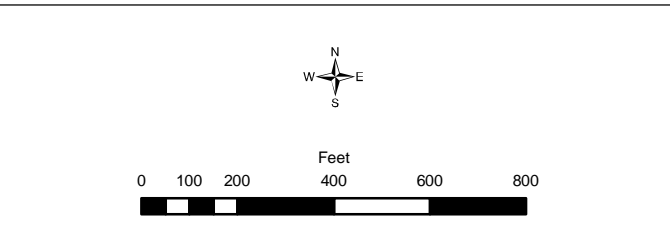
Note:
 The locations of the EDR points on this map are based upon street address information and do not necessarily represent the location of a release or facility.
Data Sources:
 EDR Database Findings - Environmental Data Resources, Inc., November 2005.
 Tax Parcels - Dutchess County Office of Real Property, May 2005.
 Orthophotos - NYS Department of State, April 2004.



CHAZEN ENGINEERING & LAND SURVEYING CO., P.C.

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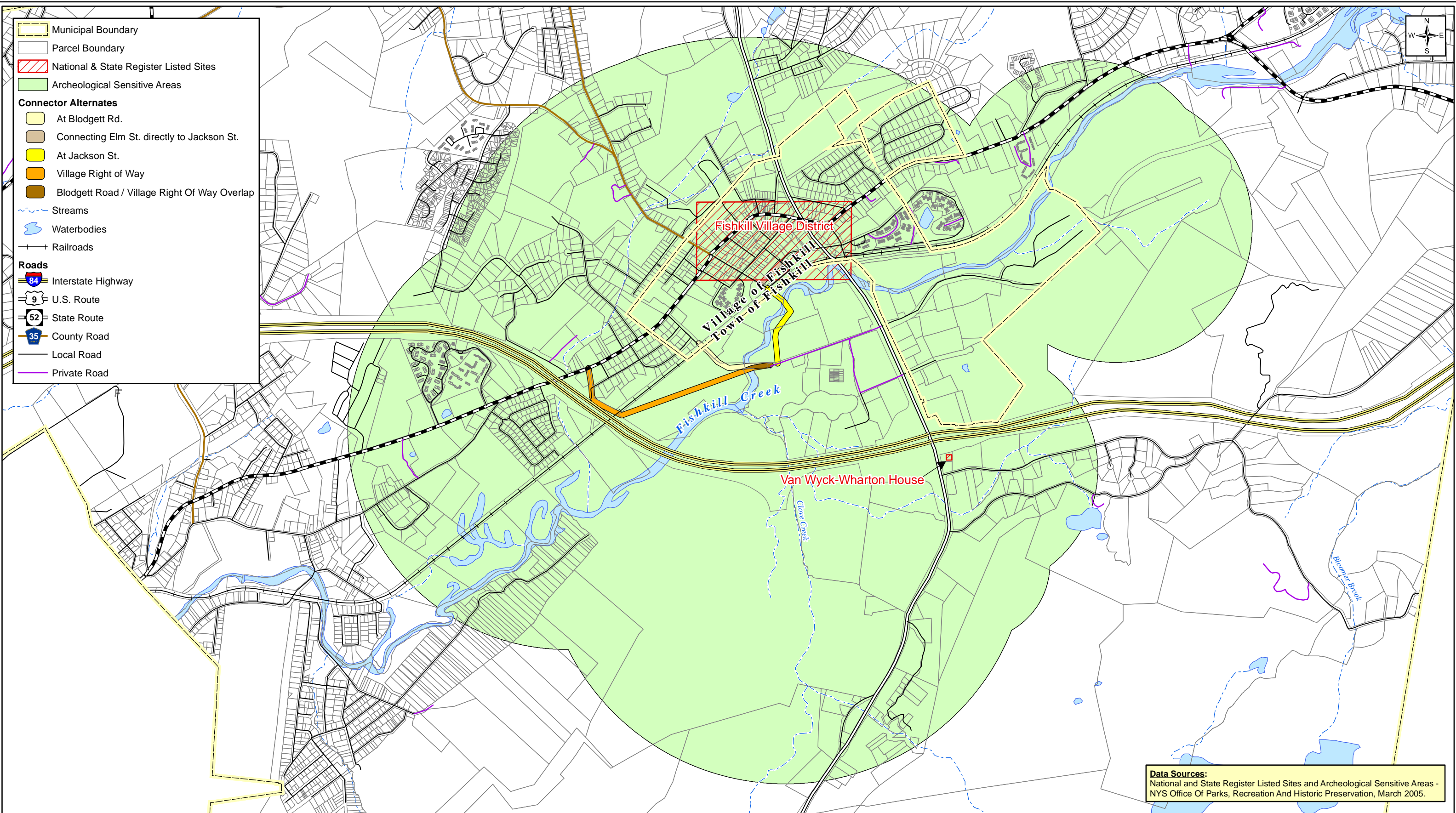


Route 52 Alternatives Analysis

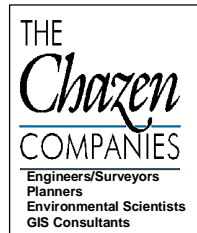
Figure 4.3
EDR Database Findings

Town & Village of Fishkill
Dutchess County, New York

Drawn:	CLC
Date:	01/11/2006
Scale:	1:4,800
Project:	10538.00
Figure:	3



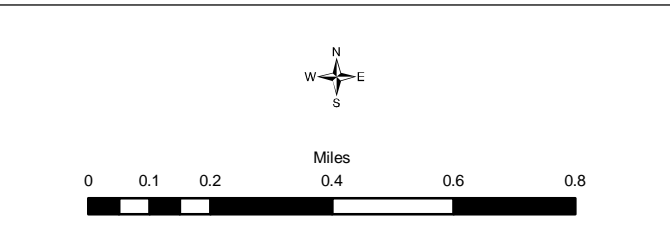
Data Sources:
 National and State Register Listed Sites and Archeological Sensitive Areas -
 NYS Office Of Parks, Recreation And Historic Preservation, March 2005.



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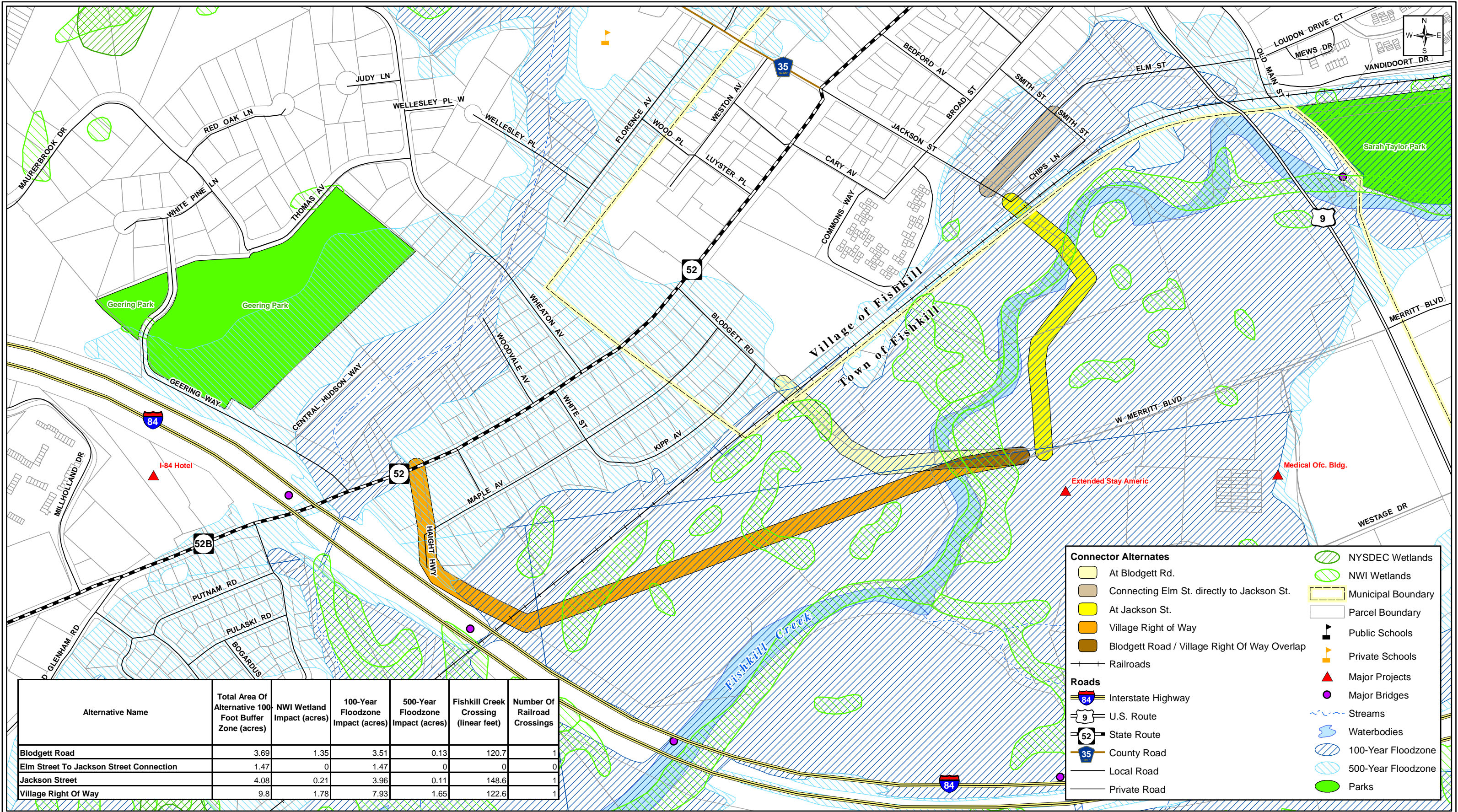
Dutchess County Office: 21 Fox Street Poughkeepsie, New York 12601 Phone: (845) 454-3980	Orange County Office: 356 Meadow Avenue Newburgh, New York 12550 Phone: (845) 567-1133	Capital District Office: 547 River Street Troy, New York 12180 Phone: (518) 237-0055	North Country Office: 100 Glen Street Glens Falls, New York 12801 Phone: (518) 812-0513
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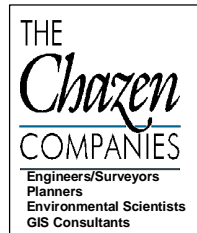
Route 52 Alternatives Analysis
Figure 4.2
National And State Register Listed Sites
And Archeological Sensitive Areas
 Town & Village of Fishkill
 Dutchess County, New York

Drawn:	CLC
Date:	01/11/2006
Scale:	1:20,000
Project:	10538.00
Figure:	2



Alternative Name	Total Area Of Alternative 100 Foot Buffer Zone (acres)	NWI Wetland Impact (acres)	100-Year Floodzone Impact (acres)	500-Year Floodzone Impact (acres)	Fishkill Creek Crossing (linear feet)	Number Of Railroad Crossings
Blodgett Road	3.69	1.35	3.51	0.13	120.7	1
Elm Street To Jackson Street Connection	1.47	0	1.47	0	0	0
Jackson Street	4.08	0.21	3.96	0.11	148.6	1
Village Right Of Way	9.8	1.78	7.93	1.65	122.6	1

- Connector Alternates**
- At Blodgett Rd.
 - Connecting Elm St. directly to Jackson St.
 - At Jackson St.
 - Village Right of Way
 - Blodgett Road / Village Right Of Way Overlap
- Roads**
- Interstate Highway
 - U.S. Route
 - State Route
 - County Road
 - Local Road
 - Private Road
- Other Features**
- NYSDEC Wetlands
 - NWI Wetlands
 - Municipal Boundary
 - Parcel Boundary
 - Public Schools
 - Private Schools
 - Major Projects
 - Major Bridges
 - Streams
 - Waterbodies
 - 100-Year Floodzone
 - 500-Year Floodzone
 - Parks



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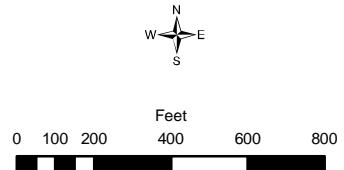
Dutchess County Office:
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Phone: (845) 454-3980

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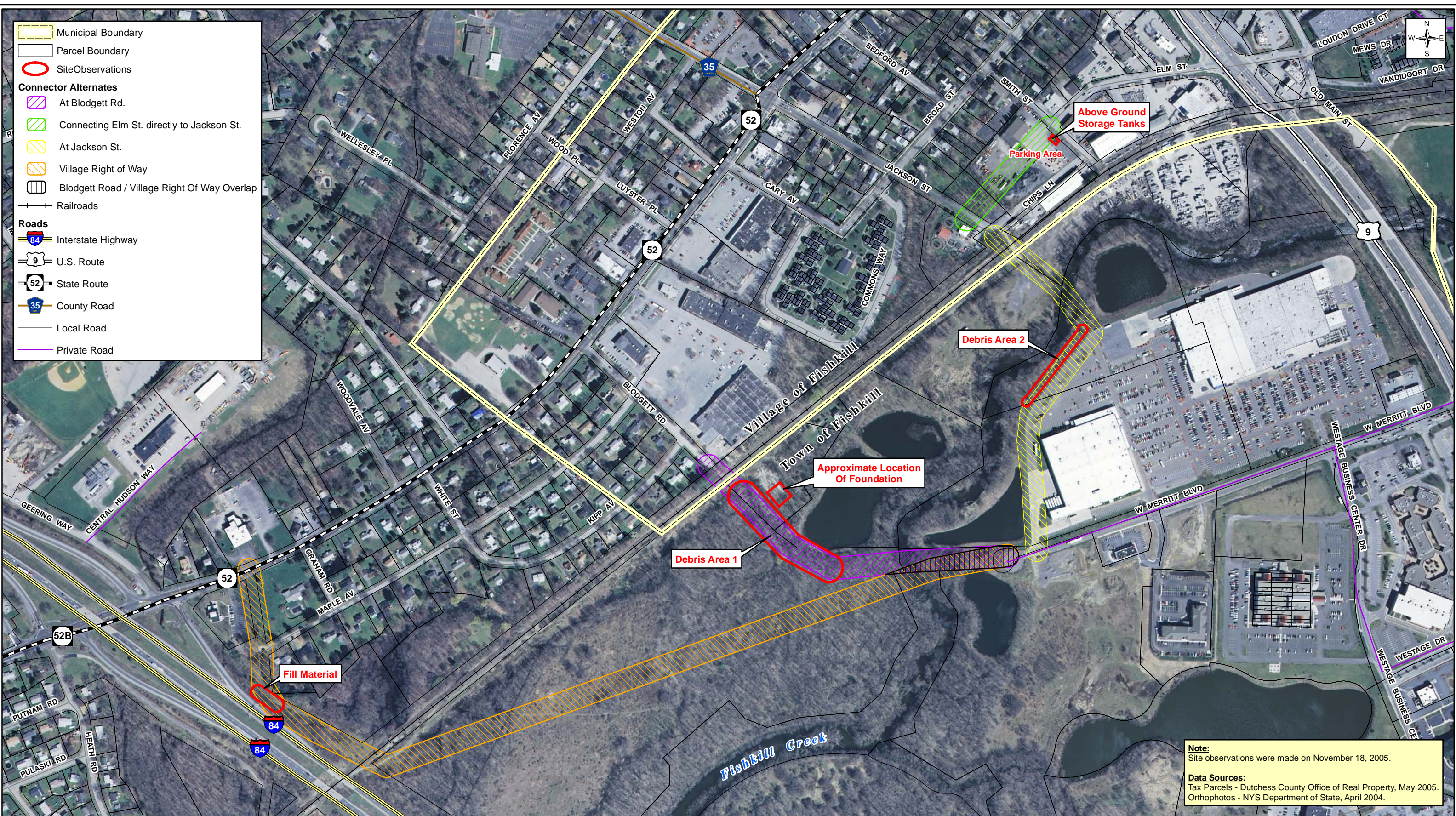


Route 52 Alternatives Analysis

Figure 4.1
Environmental Constraints Map

Town & Village of Fishkill
Dutchess County, New York

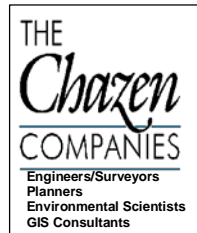
Drawn:	CLC
Date:	01/11/2006
Scale:	1:6,000
Project:	10538.00
Figure:	1



- Municipal Boundary
- Parcel Boundary
- Site Observations
- Connector Alternates**
- At Blodgett Rd.
- Connecting Elm St. directly to Jackson St.
- At Jackson St.
- Village Right of Way
- Blodgett Road / Village Right Of Way Overlap
- Railroads
- Roads**
- Interstate Highway
- U.S. Route
- State Route
- County Road
- Local Road
- Private Road

Note:
Site observations were made on November 18, 2005.

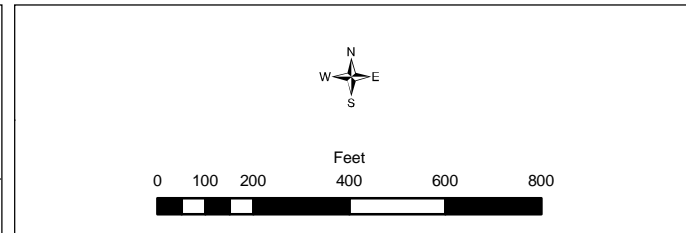
Data Sources:
Tax Parcels - Dutchess County Office of Real Property, May 2005.
Orthophotos - NYS Department of State, April 2004.



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Route 52 Alternatives Analysis

**Figure 4.4
Site Observations**

Town & Village of Fishkill
Dutchess County, New York

Drawn:	CLC
Date:	01/11/2006
Scale:	1:4,800
Project:	10538.00
Figure:	4