

3.5 Traffic & Transportation

Introduction

The project site is located in the Town of Ramapo, Rockland County, New York. The site location and regional transportation network are shown in Figure 3.5-1. A Traffic Impact Study, was conducted by John Collins Engineer's, P.C., dated April 15, 2009. This study specifically assesses the traffic impacts associated with the Patrick Farm development and is included in Appendix I of this DEIS.

The Traffic Impact Study evaluates existing and future traffic conditions at fifteen intersections which are proximate to the Patrick Farm property, and which were identified in the project scope adopted June 25, 2008. The following intersections were analyzed, the locations of which are shown in Figure 3.5-1:

1. Intersection of NYS Route 202 & Route 45
2. Intersection of NYS Route 202 & Thiells-Mount Ivy Road
3. Intersection of NYS Route 202 & Palisades Interstate Parkway Southbound Ramp (Exit 13)
4. Intersection of Thiells Mount Ivy Rd & Palisades Interstate Parkway Northbound Ramp
5. Intersection of Route 202 & Camp Hill Road
6. Intersection of Route 202 & NYS Route 306
7. Intersection of Route 202 & Wilder Road
8. Intersection of Route 306 & Pomona Road
9. Intersection of Route 306 & Lime Kiln Road
10. Intersection of Wilder Road & Lime Kiln Road
11. Intersection of Route 306 & Hidden Valley Drive
12. Intersection of Route 202 & Proposed Site Access
13. Intersection of Route 306 & Proposed Site Access
14. NYS Route 306 and 24 Emergency Service Worker Apartments
15. Intersection of Route 202 & Spook Rock Road/Lime Kiln Road
16. Intersection of Route 306 & Willow Tree Road
17. Intersection of Route 306 & Grandview Avenue

3.5.1 Existing Traffic Conditions

The Patrick Farm project site is located on the south/east side of NYS Route 202, immediately west of NYS Route 306. Regional transportation access is provided via the PIP and its connection to the New York State Thruway approximately 6 miles to the south. NYS Route 202 is the primary arterial corridor in the area.

In order to establish the existing traffic volumes for the study intersections in the vicinity of the Patrick Farm property, manual turning movement traffic counts were conducted by John Collins Engineers, P.C., in May and September 2008, while school was in session to determine the 2008 existing traffic volumes for the Weekday Peak AM and Weekday Peak PM hours for the study intersections. Previous counts conducted in the area by John Collins Engineers, Tim Miller Associates, and NYSDOT were also referenced in confirming the peak hours.

Based upon a review of these counts, the weekday morning peak hour period of 7:30 AM to 8:30 AM was determined to be critical with respect to traffic analysis. The critical period for the weekday evening peak hour was identified as 5:00 PM to 6:00 PM.

3.5.2 Existing Roadway Network

Patrick Farm will have direct access to U.S. Route 202 and NYS Route 306. The following is a description of the primary roads within the project vicinity: U.S. Route 202, NYS Route 306, and the Palisades Interstate Parkway (PIP).

U.S. Route 202 - U.S. Route 202 is a major east/west arterial which intersects with Wilder Road and Spook Rock Road to the west of the site at unsignalized intersections and intersects with NYS Route 306, Camp Hill Road, the PIP Southbound on/off Ramp, Thiells-Mt Ivy Road and NYS Route 45 to the east of the site at signalized intersections. In the immediate vicinity of the site, the road is one lane in each direction widened at various intersections. This section of roadway has a posted speed limit of 45 to 50 miles per hour.

NYS Route 306 - NYS Route 306 is a major north/south road which intersects with US Route 202 north of the site at a signalized intersection and intersects with Pomona Road at an unsignalized intersection with Lime Kiln Road, Willow Tree Road and Grandview Avenue at signalized intersections south of the site. In the vicinity of the site, NYS Route 306 has a posted speed limit of 45 miles per hour.

Palisades Interstate Parkway - The Palisades Interstate Parkway is a major north-south limited access highway which originates in New Jersey and travels through Rockland County and into Orange County, New York. In the vicinity of the site, it is a four lane divided, limited access highway.

Access to the PIP southbound is provided via U.S. Route 202. Access onto the PIP northbound is provided via NYS Route 45, and access from the PIP northbound is provided via Thiells - Mt. Ivy Road. The Palisades Interstate Parkway has a posted speed limit of 55 miles per hour. Exit 13 of the PIP is currently being upgraded and reconstructed.

3.5.3 Level of Service Criteria

Peak hour vehicle delays were calculated to establish the quality of operation (level of service) at intersection approach lanes under the existing conditions. Future conditions without the project and future conditions with the project were also analyzed.

In order to determine existing and future traffic operating conditions at the study area intersections, capacity analyses were performed based on procedures from the latest I.T.E. Highway Capacity Manual. The following is a brief description of the methodology:

Signalized Intersection Capacity Analysis

The capacity analysis for a signalized intersection was performed in accordance with the procedure described in the 2000 Highway Capacity Manual, published by the Transportation Research Board. The terminology used in identifying traffic flow conditions is Levels of Service. A Level of Service "A" represents the best condition and a Level of Service "F" represents the worst condition. A Level of Service "C" is generally used as a design standard while a Level of Service "D" is acceptable during peak periods. A Level of Service "E" represents an operation near capacity. In order to identify an intersection's Level of Service, the average amount of

vehicle delay is computed for each approach to the intersection as well as for the overall intersection. In addition a SYNCHRO analysis was conducted. SYNCHRO calculates intersection levels of service, approach delays, volume to capacity (V/C) ratios as well as queue lengths. SYNCHRO is also used in corridor analysis for coordination of traffic segments.

Unsignalized Intersection Capacity Analysis

The unsignalized intersection capacity analysis was performed in accordance with the procedures described in the 2000 Highway Capacity Manual. The procedure is based on total elapsed time from when a vehicle stops at the end of the queue until the vehicle departs from the stop line. The average total delay for any particular critical movement is a function of the service rate or capacity of the approach and the degree of saturation. In order to identify the level of service, the average amount of vehicle delay is computed for each critical movement to the intersection as well as for the overall intersection.

Additional information concerning signalized and unsignalized levels of service can be found in Appendix I of this DEIS.

Table 3.5-1 presents the levels of service criteria for signalized and unsignalized intersections.

TABLE 3.5-1 Level of Service Criteria			
UNSIGNALIZED INTERSECTIONS		SIGNALIZED INTERSECTIONS	
Level of Service	Average Total Delay (Seconds Per Vehicle)	Level of Service	Stopped Delay Per Vehicle (Sec)
A	≤ 10	A	≤ 10
B	>10 and ≤ 15	B	>10 and ≤ 20
C	>15 and ≤ 25	C	>20 and ≤ 35
D	>25 and ≤ 35	D*	>35 and ≤ 55
E	>35 and ≤ 50	E	>55 and ≤ 80
F	> 50	F	> 80.0

SOURCE: Highway Capacity Manual, Transportation Research Board, National Research Council, Special Report 209, Washington, D.C..
 * For urban areas, the minimum level of service for design of lane-groups (one or more movements) assuming reasonable costs and impacts.

The New York State Department of Transportation (NYSDOT) generally seeks a minimum level of service D (delay of 55 seconds or less for a signalized intersection) for all lane groups. The NYSDOT Highway Design Manual notes: "In some cases, it may be necessary to accept level of service E or F on individual lane groups due to unreasonable costs or impacts associated with improving the level of service." A lane group is a set of lanes on an approach having the same common movement(s).

For all intersections, the volume to capacity ratio is an indication of the unused capacity or the ability of the intersection to process more traffic. It is possible to have a movement with an adequate level of service (level of service A, B, C or D) and be at capacity for the movement. It is also possible to have a movement with a level of service E or F, with additional capacity available

on the movement. The NYSDOT goal for volume to capacity (V/C) ratios at signalized intersections for lane groups is generally below 0.95. The ability of an entire intersection to handle more traffic is a complex issue as traffic can be added to under capacity movements without impacting over capacity movements.

3.5.4 Existing Levels of Service

Existing traffic volumes for the roadway network are shown in Figures 3.5-3, 3.5-3A and 3.5-4, 3.5-4A. A summary of the capacity analyses for the area intersections under Existing Conditions is provided in the Level of Service Summary Table 3.5-2.

LEVEL OF SERVICE SUMMARY TABLE											
LOCATION	YEAR 2008 EXISTING		YEAR 2013 NO-BUILD		YEAR 2013 BUILD		YEAR 2013 BUILD w/ MINISCENGO		YEAR 2013 BUILD w/ MINISCENGO & TARTIKOV		
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	
1. U.S. ROUTE 202 & NYS ROUTE 45	EASTBOUND LEFT	A [4.8]	A [6.8]	A [5.8]	A [7.5]	A [6.2]	A [7.9]	A [5.8]	A [7.7]	A [5.8]	A [7.8]
	EASTBOUND THROUGH	B [10.5]	C [22.8]	B [13.7]	C [32.7]	B [14.2]	C [33.5]	B [13.1]	D [39.0]	B [13.1]	D [39.4]
	EASTBOUND RIGHT	A [4.0]	A [5.4]	A [5.2]	A [6.3]	A [5.6]	A [6.1]	A [4.9]	A [6.1]	A [4.8]	A [5.9]
	EASTBOUND APPROACH	A [7.6]	B [17.1]	A [10.0]	C [24.1]	B [10.3]	C [24.5]	A [9.5]	C [27.8]	A [9.5]	C [28.0]
	WESTBOUND LEFT	B [12.1]	C [21.6]	B [16.4]	C [33.7]	B [17.0]	C [33.7]	B [18.4]	C [33.8]	B [18.7]	C [33.8]
	WESTBOUND THROUGH / RIGHT	B [16.3]	B [13.5]	B [19.3]	B [15.6]	B [19.4]	B [15.7]	C [20.3]	B [17.8]	C [20.3]	B [17.7]
	WESTBOUND APPROACH	B [15.2]	B [15.7]	B [18.6]	C [20.6]	B [18.8]	C [20.7]	B [19.8]	C [21.6]	B [19.9]	C [21.8]
	NORTHBOUND LEFT	D [48.8]	D [54.4]	D [49.6]	E [59.5]	D [49.7]	E [60.4]	D [50.0]	E [64.7]	D [49.8]	E [65.1]
	NORTHBOUND LEFT / THROUGH	D [49.4]	E [56.3]	D [50.7]	E [62.4]	D [50.7]	E [64.2]	D [51.0]	E [68.7]	D [51.0]	E [69.7]
	NORTHBOUND RIGHT	C [33.2]	E [55.2]	C [33.3]	E [67.8]	C [33.3]	E [67.2]	C [33.1]	E [65.5]	C [33.1]	E [65.1]
	NORTHBOUND APPROACH	D [41.4]	E [55.3]	D [42.3]	E [54.9]	D [42.4]	E [65.2]	D [42.6]	E [66.1]	D [42.6]	E [66.2]
	SOUTHBOUND LEFT / THROUGH / RIGHT	D [50.5]	D [47.8]	D [52.4]	D [48.3]	D [52.5]	D [48.3]	D [52.7]	D [48.3]	D [48.3]	D [48.3]
	SOUTHBOUND APPROACH	D [50.5]	D [47.8]	D [52.4]	D [48.3]	D [52.5]	D [48.3]	D [52.7]	D [48.3]	D [52.8]	D [48.3]
	2. U.S. ROUTE 202 & THIELLS - MT. IVY RD	OVERALL INTERSECTION	B [18.9]	C [30.2]	C [21.3]	D [37.2]	C [21.4]	D [37.4]	C [21.5]	D [38.5]	C [21.5]
EASTBOUND LEFT		C [30.5]	C [22.9]	---	---	---	---	---	---	---	---
EASTBOUND THROUGH / RIGHT		A [8.9]	B [10.3]	---	---	---	---	---	---	---	---
EASTBOUND APPROACH		B [15.3]	B [14.1]	---	---	---	---	---	---	---	---
WESTBOUND LEFT		B [11.6]	B [16.7]	---	---	---	---	---	---	---	---
WESTBOUND THROUGH		F [119.8]	D [48.6]	---	---	---	---	---	---	---	---
WESTBOUND RIGHT		A [0.1]	A [0.2]	---	---	---	---	---	---	---	---
WESTBOUND APPROACH		F [102.3]	C [33.2]	---	---	---	---	---	---	---	---
NORTHBOUND LEFT / THROUGH / RIGHT		C [24.4]	C [25.2]	---	---	---	---	---	---	---	---
NORTHBOUND APPROACH		C [24.4]	C [25.2]	---	---	---	---	---	---	---	---
SOUTHBOUND LEFT / THROUGH		D [43.4]	D [53.4]	---	---	---	---	---	---	---	---

**Table 3.5-2
LEVEL OF SERVICE SUMMARY TABLE**

LOCATION	YEAR 2008 EXISTING		YEAR 2013 NO-BUILD		YEAR 2013 BUILD		YEAR 2013 BUILD w/ MINISCENGO		YEAR 2013 BUILD w/ MINISCENGO & TARTIKOV	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
SOUTHBOUND RIGHT	D [53.3]	C [26.7]	---	---	---	---	---	---	---	---
SOUTHBOUND APPROACH	D [50.5]	D [35.4]	---	---	---	---	---	---	---	---
OVERALL INTERSECTION	E [61.9]	C [27.5]	---	---	---	---	---	---	---	---
<u>W/ NYS DOT IMPROVEMENTS</u>										
EASTBOUND LEFT	---	---	B [20.0]	B [17.2]	C [20.8]	B [18.0]	C [23.1]	C [26.7]	C [24.0]	C [27.4]
EASTBOUND THROUGH	---	---	A [7.1]	A [7.8]	A [7.3]	A [7.8]	A [7.3]	A [8.1]	A [7.4]	A [8.1]
EASTBOUND APPROACH	---	---	B [10.9]	B [10.5]	B [11.1]	B [10.8]	B [11.7]	B [13.2]	B [12.0]	B [13.4]
WESTBOUND THROUGH	---	---	C [24.7]	C [21.3]	C [24.9]	C [21.4]	C [26.7]	C [23.6]	C [26.8]	C [23.6]
WESTBOUND RIGHT	---	---	A [0.1]	A [0.2]	A [0.1]	A [0.2]	A [0.1]	A [0.2]	A [0.1]	A [0.2]
WESTBOUND APPROACH	---	---	C [21.1]	B [14.6]	C [21.3]	B [14.8]	C [22.9]	B [17.0]	C [23.0]	B [17.1]
SOUTHBOUND LEFT	---	---	D [36.3]	D [35.9]	D [36.3]	D [35.8]	D [36.3]	D [38.8]	D [36.2]	D [37.8]
SOUTHBOUND RIGHT	---	---	F [86.8]	C [31.3]	F [94.4]	D [40.2]	F [124.1]	F [121.1]	F [124.5]	F [123.6]
SOUTHBOUND APPROACH	---	---	E [72.4]	C [32.8]	E [78.1]	D [38.9]	F [100.6]	F [99.7]	F [101.0]	F [101.4]
OVERALL INTERSECTION	---	---	D [40.4]	B [19.4]	D [42.7]	C [21.8]	D [52.8]	D [45.7]	D [52.9]	D [46.3]
3. U.S. ROUTE 202 & PIP SB ON/OFF RAMP										
EASTBOUND LEFT	B [13.3]	A [8.6]	C [23.9]	B [14.8]	C [32.0]	C [25.9]	---	---	---	---
EASTBOUND THROUGH / RIGHT	A [4.8]	A [7.3]	A [5.5]	A [8.9]	A [5.7]	A [9.2]	---	---	---	---
FASTBOUND APPROACH	A [7.8]	A [7.5]	B [11.8]	A [10.0]	B [15.5]	B [12.6]	---	---	---	---
WESTBOUND LEFT	B [14.8]	B [15.2]	B [10.7]	B [11.0]	B [10.9]	B [10.9]	---	---	---	---
WESTBOUND THROUGH	C [20.5]	C [20.8]	B [18.6]	B [18.0]	B [19.6]	C [23.0]	---	---	---	---
WESTBOUND RIGHT	A [0.2]	A [0.4]	A [2.6]	A [0.6]	A [2.5]	A [0.5]	---	---	---	---
WESTBOUND APPROACH	A [8.5]	B [11.2]	A [9.3]	A [9.9]	A [9.7]	B [13.1]	---	---	---	---
NORTHBOUND LEFT / THROUGH / RIGHT	C [33.6]	C [32.8]	C [33.3]	C [32.6]	C [33.3]	C [32.6]	---	---	---	---
NORTHBOUND APPROACH	C [33.6]	C [32.6]	C [33.3]	C [32.6]	C [33.3]	C [32.6]	---	---	---	---
SOUTHBOUND LEFT / THROUGH	D [53.1]	E [55.2]	E [55.0]	E [58.7]	E [55.0]	E [58.7]	---	---	---	---
SOUTHBOUND RIGHT	A [0.2]	A [0.1]	A [0.2]	A [0.1]	A [0.2]	A [0.1]	---	---	---	---

Table 3.5-2 LEVEL OF SERVICE SUMMARY TABLE												
LOCATION	YEAR 2008 EXISTING		YEAR 2013 NO-BUILD		YEAR 2013 BUILD		YEAR 2013 BUILD w/ MINISCENGO		YEAR 2013 BUILD w/ MINISCENGO & TARTIKOV			
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM		
SOUTHBOUND APPROACH	C [21.3]	C [30.6]	C [22.0]	C [33.2]	C [21.8]	C [32.1]	---	---	---	---	---	
OVERALL INTERSECTION	B [10.2]	B [12.4]	B [11.8]	B [13.0]	B [13.0]	B [15.3]	---	---	---	---	---	
EASTBOUND LEFT	---	---	---	---	---	---	D [46.1]	E [56.0]	D [47.2]	E [56.6]		
EASTBOUND THROUGH / RIGHT	---	---	---	---	---	---	A [4.3]	A [5.6]	A [4.4]	A [5.6]		
EASTBOUND APPROACH	---	---	---	---	---	---	C [20.9]	C [20.1]	C [21.2]	C [20.3]		
WESTBOUND LEFT	---	---	---	---	---	---	B [10.9]	B [10.4]	B [11.1]	B [10.7]		
WESTBOUND THROUGH/RIGHT	---	---	---	---	---	---	D [42.7]	C [33.9]	D [43.2]	C [37.3]		
WESTBOUND APPROACH	---	---	---	---	---	---	D [42.4]	C [33.7]	D [43.0]	C [37.1]		
NORTHBOUND LEFT / THROUGH / RIGHT	---	---	---	---	---	---	C [33.3]	C [32.6]	C [33.3]	C [32.6]		
NORTHBOUND APPROACH	---	---	---	---	---	---	C [33.3]	C [32.6]	C [33.3]	C [32.6]		
SOUTHBOUND LEFT / THROUGH	---	---	---	---	---	---	E [55.0]	E [58.7]	E [55.0]	E [58.7]		
SOUTHBOUND RIGHT	---	---	---	---	---	---	A [0.2]	A [0.2]	A [0.2]	A [0.2]		
SOUTHBOUND APPROACH	---	---	---	---	---	---	C [21.2]	C [28.8]	C [21.2]	C [28.4]		
OVERALL	---	---	---	---	---	---	C [33.6]	C [27.8]	C [33.9]	C [29.5]		
4. THEILLS MY IVY ROAD & PIP NB RAMP												
EASTBOUND APPROACH	E [37.9]	F [666.9]	F [137.7]	F [**]	F [160.5]	F [**]	F [307.7]	F [**]	F [310.6]	F [**]		

LEVEL OF SERVICE SUMMARY TABLE											
LOCATION	YEAR 2008 EXISTING		YEAR 2013 NO-BUILD		YEAR 2013 BUILD		YEAR 2013 BUILD w/ MINISCENGO		YEAR 2013 BUILD w/ MINISCENGO & TARTIKOV		
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	
5. U.S. ROUTE 202 & CAMP HILL ROAD	EASTBOUND LEFT / THROUGH / RIGHT	A [8.5]	A [8.0]	B [11.2]	A [8.8]	B [12.9]	A [9.0]	B [14.2]	B [14.8]	B [15.1]	
	EASTBOUND APPROACH	A [8.5]	A [8.0]	B [11.2]	A [8.8]	B [12.9]	A [9.0]	B [14.2]	B [14.8]	B [15.1]	
	WESTBOUND LEFT / THROUGH / RIGHT	B [15.1]	A [7.0]	C [21.2]	B [10.3]	C [22.6]	B [11.5]	C [30.5]	C [31.8]	C [34.8]	
	WESTBOUND APPROACH	B [15.1]	A [7.0]	C [21.2]	B [10.3]	C [22.6]	B [11.5]	C [30.5]	C [31.8]	C [34.8]	
	NORTHBOUND LEFT / THROUGH / RIGHT	C [23.1]	B [19.4]	C [26.6]	C [23.7]	C [27.8]	C [27.8]	C [29.4]	D [35.3]	D [35.3]	
	NORTHBOUND APPROACH	C [23.1]	B [19.4]	C [26.6]	C [23.7]	C [27.8]	C [27.8]	C [29.4]	D [35.3]	D [35.3]	
	SOUTHBOUND LEFT / THROUGH / RIGHT	C [31.6]	C [21.2]	D [40.6]	C [27.2]	D [42.9]	C [32.0]	D [49.3]	D [45.0]	D [45.0]	
	SOUTHBOUND APPROACH	C [31.6]	C [21.2]	D [40.6]	C [27.2]	D [42.9]	C [32.0]	D [49.3]	D [45.0]	D [45.0]	
	OVERALL INTERSECTION	B [15.6]	A [8.5]	C [20.9]	B [10.9]	C [22.0]	B [12.9]	C [27.1]	C [28.1]	C [27.5]	C [27.6]
	6. U.S. ROUTE 202 & NYS ROUTE 306	EASTBOUND LEFT	B [10.8]	B [11.2]	B [15.2]	B [12.5]	B [17.8]	B [13.5]	B [18.3]	B [14.7]	B [14.7]
EASTBOUND THROUGH / RIGHT		B [11.6]	B [15.2]	B [15.6]	B [18.2]	B [18.9]	C [20.0]	C [20.1]	C [21.5]	C [25.5]	
EASTBOUND APPROACH		B [11.6]	B [15.1]	B [15.6]	B [18.1]	B [18.9]	C [20.0]	C [20.1]	C [21.5]	C [25.5]	
WESTBOUND LEFT		A [5.0]	A [7.5]	A [8.3]	B [11.6]	B [12.2]	B [17.8]	B [15.1]	B [16.8]	D [41.0]	
WESTBOUND THROUGH / RIGHT		A [6.0]	A [5.5]	B [10.1]	A [6.9]	B [12.8]	A [8.0]	B [14.3]	B [15.8]	B [10.2]	
WESTBOUND APPROACH		A [5.8]	A [6.2]	A [9.8]	A [8.4]	B [12.7]	B [11.5]	B [14.4]	B [16.0]	C [21.5]	
NORTHBOUND LEFT / THROUGH / RIGHT		D [36.7]	D [41.6]	D [38.5]	D [42.7]	D [40.1]	D [43.3]	D [46.5]	D [41.3]	D [47.3]	
NORTHBOUND APPROACH		C [23.3]	D [41.6]	D [38.5]	D [42.7]	D [40.1]	D [43.3]	D [46.5]	D [41.3]	D [47.3]	
SOUTHBOUND LEFT / THROUGH / RIGHT		C [29.8]	C [29.1]	C [28.2]	C [31.0]	C [26.5]	C [30.1]	C [26.2]	C [25.5]	C [29.5]	
SOUTHBOUND APPROACH		C [29.8]	C [29.1]	C [28.2]	C [31.0]	C [26.5]	C [30.1]	C [26.2]	C [25.5]	C [29.5]	
OVERALL INTERSECTION	B [11.3]	B [15.9]	B [16.0]	B [19.1]	B [19.1]	C [20.8]	C [20.4]	C [22.0]	C [27.6]		

LEVEL OF SERVICE SUMMARY TABLE											
LOCATION	YEAR 2008 EXISTING		YEAR 2013 NO-BUILD		YEAR 2013 BUILD		YEAR 2013 MINISCENGO		YEAR 2013 BUILD w/ MINISCENGO & TARTIKOV		
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	
7. U.S. ROUTE 202 & WILDER ROAD MAJOR APPROACH WESTBOUND LEFT / THROUGH MINOR APPROACH NORTHBOUND LEFT / RIGHT	A [2.3]	A [1.7]	A [2.6]	A [1.9]	A [2.7]	A [2.1]	A [2.8]	A [2.2]	A [2.8]	A [2.2]	A [2.2]
	B [13.0]	B [15.0]	B [14.3]	C [16.9]	B [14.9]	C [18.3]	C [15.5]	C [21.1]	C [15.6]	C [21.3]	
8. NYS ROUTE 306 & POMONA ROAD MAJOR APPROACH SOUTHBOUND LEFT / THROUGH MINOR APPROACH WESTBOUND LEFT / RIGHT	A [1.8]	A [1.1]	A [1.8]	A [1.1]	A [1.6]	A [1.1]	A [1.6]	A [1.2]	A [1.4]	A [1.2]	
	B [13.4]	B[13.8]	C [16.5]	C [18.3]	C [17.9]	C [21.2]	C [18.9]	D [26.9]	C [21.8]	E [37.7]	
9. NYS ROUTE 306 & LIME KILN ROAD EASTBOUND LEFT / THROUGH / RIGHT EASTBOUND APPROACH WESTBOUND LEFT / THROUGH / RIGHT WESTBOUND APPROACH NORTHBOUND LEFT / THROUGH / RIGHT NORTHBOUND APPROACH SOUTHBOUND LEFT / THROUGH / RIGHT SOUTHBOUND APPROACH OVERALL INTERSECTION	C [27.9]	C [29.2]	C [28.2]	C [28.7]	C [28.2]	C [28.7]	C [28.2]	C [28.7]	C [28.2]	C [28.7]	C [28.7]
	C [27.9]	C [29.2]	C [28.2]	C [28.7]	C [28.2]	C [28.7]	C [28.2]	C [28.7]	C [28.2]	C [28.7]	C [28.7]
	C [21.6]	C [20.8]	C [21.4]	C [20.6]	C [21.4]	C [20.6]	C [21.4]	C [20.6]	C [21.4]	C [20.6]	C [20.6]
	C [21.6]	C [20.8]	C [21.4]	C [20.8]	C [21.4]	C [20.8]	C [21.4]	C [20.8]	C [21.4]	C [20.8]	C [20.8]
	A [1.8]	A [2.5]	A [2.1]	A [3.2]	A [2.1]	A [3.4]	A [2.1]	A [3.7]	A [2.2]	A [4.1]	A [4.1]
	A [1.8]	A [2.5]	A [2.1]	A [2.5]	A [2.1]	A [3.4]	A [2.1]	A [3.7]	A [2.2]	A [4.1]	A [4.1]
A [1.9]	A [2.4]	A [2.1]	A [3.1]	A [2.2]	A [3.2]	A [2.3]	A [3.4]	A [2.5]	A [4.1]	A [4.1]	
A [1.9]	A [2.4]	A [2.1]	A [3.1]	A [2.2]	A [3.2]	A [2.3]	A [3.4]	A [2.5]	A [4.1]	A [4.1]	
A [4.1]	A [5.2]	A [3.9]	A [5.4]	A [3.9]	A [5.3]	A [3.8]	A [5.3]	A [3.8]	A [5.5]		

LEVEL OF SERVICE SUMMARY TABLE											
LOCATION	YEAR 2008 EXISTING		YEAR 2013 NO-BUILD		YEAR 2013 BUILD		YEAR 2013 BUILD w/ MINISCENGO		YEAR 2013 BUILD w/ MINISCENGO & TARTIKOV		
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	
10. WILDER ROAD & LIME KILN ROAD MAJOR APPROACH NORTHBOUND LEFT / THROUGH / RIGHT SOUTHBOUND LEFT / THROUGH / RIGHT MINOR APPROACH EASTBOUND LEFT / THROUGH / RIGHT WESTBOUND LEFT / THROUGH / RIGHT	B [10.5]	B [10.7]	B [11.7]	B [10.7]	B [11.8]	B [10.9]	B [11.8]	B [10.9]	B [11.8]	B [10.9]	
	A [1.1]	A [0.6]	A [1.1]	A [0.6]	A [1.1]	A [0.6]	A [1.1]	A [0.6]	A [1.1]	A [0.6]	
	A [0.9]	A [1.7]	A [0.9]	A [1.7]	A [0.9]	A [1.6]	A [0.9]	A [1.6]	A [0.9]	A [1.6]	
	B [10.9]	B [10.6]	B [11.2]	B [10.9]	B [11.3]	B [11.0]	B [11.3]	B [11.0]	B [11.3]	B [11.0]	
11. NYS ROUTE 306 & HIDDEN VALLEY DRIVE MAJOR APPROACH NORTHBOUND LEFT / THROUGH MINOR APPROACH EASTBOUND LEFT / RIGHT	B [11.4]	B [10.5]	B [11.8]	B [10.8]	B [11.9]	B [10.9]	B [11.9]	B [10.9]	B [11.9]	B [10.9]	
	A [0.9]	A [1.1]	A [0.7]	A [1.0]	A [0.6]	A [0.9]	A [0.6]	A [0.8]	A [0.6]	A [0.7]	
	A [9.7]	A [9.7]	B [10.2]	B [10.5]	B [10.8]	B [11.0]	B [11.0]	B [11.6]	B [11.7]	B [12.3]	
12. US ROUTE 202 & PROPOSED SITE MAJOR APPROACH WESTBOUND LEFT MINOR APPROACH NORTHBOUND LEFT / RIGHT	----	----	----	----	A [8.3]	A [9.8]	A [8.4]	B [10.2]	A [8.4]	B [10.3]	
	----	----	----	----	C [23.7]	D [28.9]	D [25.7]	E [36.9]	D [26.0]	E [37.3]	
	----	----	----	----	A [7.8]	A [8.1]	A [7.9]	A [8.3]	----	----	
	----	----	----	----	B [11.9]	B [12.8]	B [12.3]	B [13.9]	----	----	
13. NYS ROUTE 306 & PROPOSED SITE MAJOR APPROACH NORTHBOUND LEFT MINOR APPROACH EASTBOUND LEFT / RIGHT	----	----	----	----	----	----	----	----	----	----	
	----	----	----	----	----	----	----	----	----	----	
	----	----	----	----	----	----	----	----	----	----	
	----	----	----	----	----	----	----	----	----	----	

Table 3.5-2 LEVEL OF SERVICE SUMMARY TABLE											
LOCATION	YEAR 2008 EXISTING		YEAR 2013 NO-BUILD		YEAR 2013 BUILD		YEAR 2013 BUILD w/ MINISCENGO		YEAR 2013 BUILD w/ MINISCENGO & TARTIKOV		
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	
NYS ROUTE 306 & PROPOSED SITE PROPOSED TARTIKOV MAJOR APPROACH NORTHBOUND LEFT SOUTHBOUND LEFT MINOR APPROACH EASTBOUND LEFT / THROUGH / RIGHT WESTBOUND LEFT / THROUGH / RIGHT	----	----	----	----	----	----	----	----	A [7.9]	A [8.3]	
	----	----	----	----	----	----	----	----	A [7.8]	A [8.2]	
	----	----	----	----	----	----	----	----	B [13.5]	C [16.1]	
	----	----	----	----	----	----	----	----	C [15.7]	C [21.1]	
14. US ROUTE 202 & PROPOSED SITE ACCESS 24 EMERGENCY SERVICE WORKER APARTMENTS											
MAJOR APPROACH NORTHBOUND LEFT / THROUGH MINOR APPROACH EASTBOUND LEFT / RIGHT	----	----	----	----	A [0.0]	A [0.1]	A [0.0]	A [0.1]	A [0.0]	A [0.1]	
	----	----	----	----	B [11.8]	B [12.4]	B [12.1]	B [13.4]	B [13.1]	B [14.8]	
15. US ROUTE 202 & SPOOK ROCK ROAD/ LIME KILN ROAD											
MAJOR APPROACH SOUTHBOUND LEFT / THROUGH MINOR APPROACH WESTBOUND LEFT / RIGHT	A [3.3]	A [2.5]	A [3.6]	A [2.7]	A [3.6]	A [2.7]	A [3.6]	A [2.8]	A [3.6]	A [2.8]	
	C [17.1]	C [15.2]	C [20.7]	C [17.7]	C [22.1]	C [19.2]	C [23.9]	C [23.4]	C [24.2]	C [23.7]	

Table 3.5-2
LEVEL OF SERVICE SUMMARY TABLE

LOCATION	YEAR 2008 EXISTING		YEAR 2013 NO-BUILD		YEAR 2013 BUILD		YEAR 2013 BUILD w/ MINISCENGO		YEAR 2013 BUILD w/ MINISCENGO & TARTIKOV	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
16. NYS ROUTE 306 & WILLOW TREE ROAD										
EASTBOUND LEFT / THROUGH / RIGHT	C [26.4]	C [24.9]	C [27.1]	C [25.0]	C [27.1]	C [25.0]	C [27.2]	C [25.4]	C [27.2]	C [25.4]
EASTBOUND APPROACH	C [26.4]	C [24.9]	C [27.1]	C [25.0]	C [27.1]	C [25.0]	C [27.2]	C [25.4]	C [27.2]	C [25.4]
WESTBOUND LEFT / THROUGH / RIGHT	C [31.6]	C [31.7]	C [32.6]	C [32.4]	C [32.6]	C [32.4]	C [32.5]	C [32.5]	C [32.5]	C [32.5]
WESTBOUND APPROACH	C [31.6]	C [31.7]	C [32.6]	C [32.4]	C [32.6]	C [32.4]	C [32.5]	C [32.5]	C [32.5]	C [32.5]
NORTHBOUND LEFT	A [5.1]	A [5.0]	A [6.0]	A [5.8]	A [6.3]	A [5.8]	A [6.6]	A [6.1]	A [7.6]	A [6.3]
NORTHBOUND THROUGH / RIGHT	A [5.3]	A [5.8]	A [6.5]	A [6.8]	A [6.6]	A [7.3]	A [6.8]	A [7.8]	A [7.0]	A [8.7]
NORTHBOUND APPROACH	A [5.3]	A [5.7]	A [6.5]	A [6.7]	A [6.6]	A [7.2]	A [6.7]	A [7.7]	A [7.0]	A [8.5]
SOUTHBOUND LEFT	A [4.9]	A [5.2]	A [5.9]	A [6.1]	A [5.9]	A [6.4]	A [6.1]	A [7.0]	A [6.3]	A [8.2]
SOUTHBOUND THROUGH / RIGHT	A [5.7]	A [5.4]	A [6.8]	A [6.5]	A [7.2]	A [6.7]	A [7.5]	A [7.2]	A [8.3]	A [7.6]
SOUTHBOUND APPROACH	A [5.6]	A [5.4]	A [6.7]	A [6.5]	A [7.1]	A [6.7]	A [7.4]	A [7.2]	A [8.1]	A [7.6]
OVERALL INTERSECTION	B [11.8]	B [12.8]	B [12.6]	B [13.1]	B [12.6]	B [12.9]	B [12.7]	B [13.1]	B [12.7]	B [13.1]
17. NYS ROUTE 306 & GRANDVIEW AVE										
EASTBOUND LEFT / THROUGH / RIGHT	C [22.7]	C [20.9]	C [26.7]	C [22.4]	C [26.7]	C [22.4]	C [27.0]	C [22.9]	C [27.0]	C [22.9]
EASTBOUND APPROACH	C [22.7]	C [20.9]	C [26.7]	C [22.4]	C [26.7]	C [22.4]	C [27.0]	C [22.9]	C [27.0]	C [22.9]
WESTBOUND LEFT / THROUGH / RIGHT	C [22.3]	B [19.2]	C [25.3]	C [20.1]	C [25.3]	C [20.1]	C [25.4]	C [20.3]	C [25.4]	C [20.3]
WESTBOUND APPROACH	C [22.3]	B [19.2]	C [25.3]	C [20.1]	C [25.3]	C [20.1]	C [25.4]	C [20.3]	C [25.4]	C [20.3]
NORTHBOUND LEFT	B [18.8]	B [15.4]	C [21.2]	B [16.5]	C [23.8]	B [16.9]	C [24.6]	B [17.3]	C [33.3]	B [18.2]
NORTHBOUND THROUGH / RIGHT	B [17.8]	B [18.8]	B [19.4]	C [20.0]	B [19.7]	C [21.4]	B [19.7]	C [22.3]	C [20.3]	C [25.1]
NORTHBOUND APPROACH	B [18.1]	B [18.4]	B [19.8]	B [19.6]	C [20.6]	C [20.9]	C [20.6]	C [21.8]	C [23.2]	C [24.5]
SOUTHBOUND LEFT	B [15.0]	B [15.1]	B [15.8]	B [16.0]	B [16.0]	B [16.6]	B [16.1]	B [17.6]	B [16.3]	B [19.8]

**Table 3.5-2
LEVEL OF SERVICE SUMMARY TABLE**

LOCATION	YEAR 2008 EXISTING		YEAR 2013 NO-BUILD		YEAR 2013 BUILD		YEAR 2013 BUILD w/ MINISCENGO		YEAR 2013 BUILD w/ MINISCENGO & TARTIKOV	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
SOUTHBOUND THROUGH / RIGHT	B [19.8]	B [18.5]	C [21.3]	C [20.4]	C [22.8]	C [21.1]	C [23.2]	C [21.9]	C [26.2]	C [23.3]
SOUTHBOUND APPROACH	B [19.3]	B [18.1]	C [20.7]	B [19.9]	C [22.2]	C [20.5]	C [22.5]	C [21.4]	C [25.4]	C [23.0]
OVERALL INTERSECTION	C [20.8]	B [19.1]	C [23.0]	C [20.5]	C [23.5]	C [21.0]	C [23.6]	C [21.6]	C [25.2]	C [23.0]

Source: John Collins Engineers, 2009.

3.5.5 No-Build Traffic Conditions

Based on historical data, the annual background growth for the area is typically 1½ percent. As per the project scope the Year 2008 Existing Traffic Volumes were increased by a background growth factor of 10 percent, thus conservatively overestimating the growth. In addition the following projects were considered specifically for their site generated traffic added to the traffic network in evaluation background growth;

- Pomona Heights Office Building
- H.A.S.C. of Rockland
- Mesifta Beth Shraga
- Bobover Yeshiva of Monsey
- Congregational Kahal Torath Charm of Rockland
- Minisceongo Park
- Tartikov
- Cumberland Farms

Due to its size and the overlap in timing with Patrick Farm, the Minisceongo Park project was evaluated separately as an alternate Build Condition. Traffic related improvements and mitigation measures anticipated to be built by the NYS DOT under P.I.N. 8093.48, additional measures are anticipated in conjunction with the Minisceongo Park project are shown on Minisceongo Park Figure CP-1, which has been included in the Traffic Study Appendix for reference. These measures have been considered as part of the No-Build scenario. Since there is no current site plan application for Tartikov, an initial phase of development (250) units for the 2013 Design Year plus the proposed Minisceongo Park project was evaluated as an additional alternate build condition.

The No-Build Traffic Volumes are shown on Figures No. 3.5-9, 3.5-9A and 3.5-10, 3.5-10A for the Weekday Peak AM and Weekday Peak PM hours, respectively. No-Build levels of service are shown in the Level of Service Summary Table 3.5-2.

3.5.6 Build Traffic Conditions

In order to estimate the anticipated amount of traffic to be generated by the Patrick Farm development during peak hours, information published by the Institute of Transportation Engineers (ITE) as contained in their publication entitled, "Trip Generation", 7th Edition, November 2003, was utilized.

Tables 3.5-3 and 3.5-4 summarize trip generation rates and the number of trips anticipated as a result of development of the Patrick Farm project. The project will generate approximately 230 vehicular trips in the weekday AM peak hour, and 288 vehicular trips in the weekday PM peak hour.

Table 3.5-3 Project Site Trip Generation Rates				
Land Uses (size) {ITE Code} ¹	Trip Rates			
	AM Peak Hour		PM Peak Hour	
	Enter	Exit	Enter	Exit
Single Family Units - 87 units {210}*	0.20	0.61	0.69	0.40
Townhouse/Apartment Units - 410 units {230}*	0.07	0.32	0.32	0.15

¹Trip Generation, Institute of Transportation Engineers, 7th edition, Washington DC, 2003.
*Trip generation rates for residential are per unit.

Table 3.5-4 Project Site Trip Generation						
Land Uses (size) {ITE Code} ¹	Trips					
	AM Peak Hour			PM Peak Hour		
	Enter	Exit	Total	Enter	Exit	Total
Single family Units - 87 units {210}	17	53	70	60	35	95
Townhouse Units - 410 units {230}	29	131	160	131	62	193
Total	46	184	230	191	97	288

¹Trip Generation, Institute of Transportation Engineers, 7th edition, Washington DC, 2003.

Based on the results of the traffic counts conducted for the traffic study, a review of the other existing traffic volumes on the area roadway, and other pertinent population data, the expected arrival/departure distributions were identified. Figures 3.5-11, 3.7-11A through 3.5-16, 3.5-16A show the anticipated arrival/departure distribution.

The trips projected for the AM and PM peak hours were distributed over the project network (see Figures 3.5-17, 3.5-17A and 3.5-18, 3.5-18A).

The project-generated traffic was added to the No-Build traffic to produce the Build traffic condition. Figures 3.5-19, 3.5-19A through Figures 3.5-28, 3.5-28A show traffic volumes for the Build condition.

In order to evaluate existing and future traffic operating conditions for the area intersections, capacity analyses were conducted utilizing the procedures described above. The capacity analysis worksheets are contained in Appendix I of the DEIS. The following is a brief description of each of the intersections analyzed, the results of the capacity analyses and any corresponding recommended improvements. Build Traffic Levels of Service are shown in the Level of Service Summary Table 3.5-2.

1. U.S. Route 202 and NYS Route 45

NYS Route 45 intersects with U.S. Route 202 at a signalized intersection.

Capacity analyses conducted utilizing the Year 2008 existing traffic volumes indicate that the intersection is currently operating at an overall Level of Service "B" during the weekday AM peak and level of service C during the PM peak hour period.

In the 2013 No-Build condition, the intersection is projected to operate at an overall Level of Service "C" during the peak AM hour and at an overall Level of Service "D" during the peak PM hour.

For the 2013 Build condition, the intersection will continue to operate at an overall Level of Service "C" during the peak AM hour and at an overall Level of Service "D" during the peak PM hour.

For the 2013 Build condition with Minisceongo Park, the intersection will continue to operate at an overall Level of Service "C" during the peak AM hour and at an overall Level of Service "D" during the peak PM hour.

For the 2013 Build condition with Minisceongo Park and Tartikov, the intersection will continue to operate at an overall Level of Service "C" during the peak AM hour and at an overall Level of Service "D" during the peak PM hour.

2. U.S. Route 202 and Thiells - Mt. Ivy Road

Thiells - Mt. Ivy Road intersects with U.S. Route 202 opposite an existing Park and Ride facility at a signalized intersection.

In the 2008 Existing condition, the intersection is operating at an overall level of service "E" during the weekday peak AM hour and at an overall Level of Service "C" during the weekday peak PM hour.

In the 2013 No-Build condition, the intersection is projected to operate at an overall level of service "D" during the peak AM hour and at an overall Level of Service "B" during the peak PM hour.

In the 2013 Build condition, the intersection will continue to operate at an overall level of service "D" during the weekday peak AM hour and will operate at an overall level of service "C" during the weekday peak PM hour.

The NYSDOT plans to improve (P.I.N. 8093.48) this intersection by eliminating the existing park and ride entrance opposite Thiells - Mt. Ivy Road and replacing it with a right turn entry only driveway to the west and a right turn exit only driveway to the east. In addition, the U.S. Route 202 westbound approach will be widened to provide an additional through lane which will tie into the westbound right turn lane at the Palisades Interstate Parkway southbound on/off ramp. As part of this project, the U.S. Route 202 eastbound right turn lane at NYS Route 45 will be extended to the west past the Thiells - Mt. Ivy Road intersection. Construction of these improvements has already begun and is planned to be completed by the end of 2006.

With improvements in place, an improved, overall Level of Service "D" will result during the weekday peak AM hour and an overall Level of Service "C" will be maintained during the weekday peak PM hour.

With improvements in place, upon construction of the Minisceongo Park and the Tartikov Project, overall level of service "D" conditions will be maintained during both the AM and PM peak hour periods.

3. U.S. Route 202 and PIP Southbound On/Off Ramp

The Palisades Interstate Parkway Southbound On/Off Ramp intersects with U.S. Route 202 opposite the Mt. Ivy Diner at a signalized intersection.

In the 2008 Existing condition, the intersection operates at an overall level of service "B" during the weekday peak AM hour and at an overall Level of Service "B" during the weekday peak PM hour.

In the 2013 No-Build condition, the intersection is projected to operate at an overall level of service "B" during the peak AM hour and at an overall level of service "B" during the peak PM hour.

In the 2013 Build condition, the intersection will continue to operate at an overall level of service "B" during the peak AM hour and will continue to operate at an overall level of service "B" during the peak PM hour.

With the construction of the proposed Minisceongo Park and Tartikov development, this segment of Route 202 will be widened and will provide additional storage for the U.S. Route 202 eastbound left turn. This widening, together with the coordination of the traffic signal to be constructed as part of the Minisceongo Park development, will improve operating conditions at this location.

4. Thiells - Mt. Ivy Road and PIP Northbound Off Ramp

The Palisades Interstate Parkway Northbound Off Ramp intersects with Thiells - Mt. Ivy Road at an unsignalized intersection.

Capacity analyses for the 2008 Existing condition indicate that the PIP Northbound Off Ramp is currently operating at a Level of Service "E" during the weekday peak AM hour and at a level of service "F" during the weekday peak PM hour.

Capacity analyses for the 2013 No-Build and 2008 Build conditions indicate that the PIP Northbound Off Ramp will operate at a level of service "F" during the weekday peak AM and PM hours.

In order to improve the operation of this intersection regardless of the proposed development, a traffic signal would be required. With signalization, this intersection will operate at an overall level of service "C" during both the weekday peak AM and PM hours for the 2013 No-Build and Build conditions.

Upon the completion of improvements, Build conditions with Minisceongo Park will result in level of service "C" during the AM peak Hour and level of Service "D" during the PM peak hour.

Upon the completion of improvements, Build conditions with Minisceongo Park and the Tartikov development will continue result in level of service "C" during the AM peak Hour and level of Service "D" during the PM peak hour.

5. U.S. Route 202 and Camp Hill Road

Camp Hill Road intersects with U. S. Route 202 at a signalized intersection. All approaches to the intersection consist of one lane.

Capacity analyses conducted for the 2008 Existing condition indicate that the intersection is currently operating at an overall Level of Service "B" or better during the weekday peak AM and weekday peak PM hours.

Capacity analyses for the 2013 No-Build conditions indicate that the intersection is operating at an overall level of service "C" during the AM peak hour and an overall level of service "B" during the PM peak hour.

Capacity analyses for the 2013 Build conditions, both with and without the proposed Minisceongo Park project indicate that the intersection is operating at an overall level of service "C" during both the AM and PM peak hour periods.

Build conditions, with both the proposed Minisceongo Park project and the Tartikov development indicate that the intersection will operate at an overall level of service "C" during both the AM peak hour and the PM peak hour periods.

6. U.S. Route 202 and NYS Route 306

U.S. Route 202 intersects with NYS Route 306 at a signalized intersection. The U.S. Route 202 eastbound and westbound approaches each consists of two lanes in the form of a separate left turn lane and a shared through/right lane. The NYS Route 306 northbound and southbound approaches each consists of one lane for left, through and right turn movements.

Capacity analyses conducted for the 2008 Existing condition indicate that the intersection is currently operating at an overall level of service "B" during the weekday AM peak and weekday PM peak hours.

Capacity analyses for the 2013 No-Build conditions indicate that the intersection is operating at an overall level of service "B" during both the AM and PM peak hour periods.

Capacity analyses for the 2013 Build conditions, both with and without the proposed Minisceongo Park project indicate that the intersection will operating at level of service "B" during the AM peak hour and an overall level of service "C" during PM peak hour period.

Capacity analyses for the 2013 Build conditions, with both the proposed Minisceongo Park project and the Tartikov development indicate that the intersection will continue to operate at an overall level of service "C" during both the AM and PM peak hour periods.

7. U.S. Route 202 and Wilder Road

Wilder Road intersects with U.S. Route 202 at an unsignalized intersection. All approaches to the intersection consist of one lane.

Capacity analyses conducted for the 2008 Existing condition indicate that the Wilder Road approach is currently operating at level of service "B" during the weekday AM peak and weekday PM peak hours.

Capacity analyses for the 2013 No-Build conditions indicate that the Wilder Road approach will operate at level of service "C" or better during both the AM and PM peak hour periods.

Capacity analyses for the 2013 Build conditions, both with and without the proposed Minisceongo Park project and the Tartikov development indicate that the Wilder Road approach will operate at level of service "C" during both the AM and PM peak hour periods.

8. NYS Route 306 and Pomona Road

Pomona Road intersects with NYS Route 306 at an unsignalized intersection. All approaches to this intersection consist of one lane.

Capacity analyses conducted for the 2008 Existing condition indicate that the Pomona Road approach is currently operating at level of service "B" during the weekday AM peak and weekday PM peak hours.

Capacity analyses for the 2013 No-Build conditions indicate that the Pomona Road approach will operate at level of service "C" or better during both the AM and PM peak hour periods.

Capacity analyses for the 2013 Build conditions, project indicate that the Pomona Road approach will continue to operate at level of service "C" during both the AM and PM peak hour periods.

Capacity analyses for the 2013 Build conditions with Minisceongo Park project indicate that the Pomona Road approach will operate at level of service "C" during the AM peak hour and at level of service "D" during the PM peak hour period.

Capacity analyses for the 2013 Build conditions with Minisceongo Park project and the Tartikov development indicate that the Pomona Road approach will operate at level of service "C" during the AM peak hour and at level of service "E" during the PM peak hour period.

9. NYS Route 306 and Lime Kiln Road

Lime Kiln Road intersects with NYS Route 306 at a signalized intersection. All approaches to this intersection consist of one lane.

Capacity analyses conducted for the 2008 Existing condition indicate that the intersection is currently operating at an overall Level of Service "A" during the weekday AM peak and weekday PM peak hours.

Capacity analyses for the 2013 No-Build conditions indicate that the intersection will operate at

an overall level of service "A" during both the AM and PM peak hour periods.

Capacity analyses for the 2013 Build conditions, both with and without the proposed Minisceongo Park project and the Tartikov development indicate that the intersection will continue to operate at an overall level of service "A" during both the AM and PM peak hour periods.

10. Wilder Road and Lime Kiln Road

Lime Kiln Road intersects with Wilder Road at an unsignalized intersection. All approaches to this intersection consist of one lane.

Capacity analyses conducted for the 2008 Existing condition indicate that all approaches to the intersection are currently operating at level of service "B" during the weekday AM peak and weekday PM peak hours.

Capacity analyses for the 2013 No-Build conditions indicate that all approaches to the intersection will operate at level of service "B" during both the AM and PM peak hour periods.

Capacity analyses for the 2013 Build conditions, both with and without the proposed Minisceongo Park project and the Tartikov development indicate that all approaches to the intersection will continue to operate at level of service "B" or better during both the AM and PM peak hour periods.

11. NYS Route 306 and Hidden Valley Drive

Hidden Valley Drive intersects with NYS Route 306 at an unsignalized intersection. All approaches to this intersection consist of one lane.

Capacity analyses conducted for the 2008 Existing condition indicate that the Hidden Valley Drive approach to the intersection is currently operating at level of service "A" during the weekday AM peak and weekday PM peak hours.

Capacity analyses for the 2013 No-Build conditions indicate that the Hidden Valley Drive approach to the intersection will operate at level of service "B" during both the AM and PM peak hour periods.

Capacity analyses for the 2013 Build conditions, both with and without the proposed Minisceongo Park project and the Tartikov development indicate that the Hidden Valley Drive approach to the intersection will continue to operate at level of service "B" or better during both the AM and PM peak hour periods.

12. U.S. Route 202 and Primary Development Area Proposed Site Access

As previously discussed, access to the Patrick Farm project is proposed via a full movement new driveway connection to U.S. Route 202. In order to accommodate turning movements to and from the Patrick Farm site, it is recommended that a separate left turn lane on U.S. Route 202 be constructed.

Capacity analyses for the 2013 Build conditions, indicate that the site driveway is projected to

operate at level of service "C" during the weekday AM peak hour and level of service "D" during the weekday PM peak hour.

Capacity analyses for the 2013 Build conditions with Minisceongo Park and the Tartikov development, indicate that the site driveway is projected to operate at level of service "D" during the weekday AM peak hour and level of service "E" during the weekday PM peak hour. Under these conditions the intersection should be monitored for Signalization.

13. NYS Route 306 and Primary Development Area Proposed Site Access

As previously discussed, a second access to the Patrick Farm project is proposed via a full movement new driveway connection to NYS Route 306. In order to accommodate turning movements to and from the Patrick Farm site, it is recommended that a separate left turn lane on NYS Route 306 be constructed.

Capacity analyses for the 2013 Build conditions, both with and without the proposed Minisceongo Park project indicate that the proposed site access will to operate at level of service "B" or better during both the AM and PM peak hour periods.

The Tartikov Development is proposed to have access onto NYS Route 306. It is recommended that the Patrick Farm and Tartikov driveways be aligned opposite one another.

Capacity analyses for the 2013 Build conditions, with both the proposed Minisceongo Park project and the Tartikov development indicate that the proposed site access will to operate at level of service "C" or better during both the AM and PM peak hour periods.

14. NYS Route 306 and Proposed Site access for 24 Emergency Service Worker Apartments

Access to the 24 emergency worker apartments is provided via a driveway connection to the NYS Route 306.

Capacity analyses for the 2013 Build conditions, both with and without the proposed Minisceongo Park project and the Tartikov development indicate that the this site access will operate at level of service "B" or better during both the AM and PM peak hour periods.

15. U.S. Route 202 and Spook Rock Road/Lime Kiln Road

Spook Rock Road and Lime Kiln Road intersect with U.S. Route 202 at an unsignalized intersection. All approaches to this intersection consist of one lane.

Capacity analyses conducted for the 2008 Existing condition indicate that the Spook Rock Road and Lime Kiln Road approaches to the intersection are currently operating at an overall level of Service "C" during the weekday AM peak and weekday PM peak hours.

Capacity analyses for the 2013 No-Build conditions indicate that the Spook Rock Road and Lime Kiln Road approaches to the intersection will operate at an overall level of service "C" during the weekday AM peak and weekday PM peak hours.

Capacity analyses for the 2013 Build conditions, both with and without the proposed Minisceongo Park project indicate that the Spook Rock Road and Lime Kiln Road approaches

to the intersection will continue to operating at an overall Level of Service "C" during the weekday AM peak and weekday PM peak hours. Build conditions with both Minisceongo Park and the Tartikov development are projected to continue to operate at level of service "C".

16. NYS Route 306 and Willow Tree Road

Willow Tree Road intersects with NYS Route 306 at a signalized intersection. The NYS Route 306 northbound and southbound approaches each consists of two lanes in the form of a separate left turn lane and a shared through/right turn lane. The Willow Tree Road eastbound and westbound approaches each consists of one lane for left/through and right turn movements.

Capacity analyses conducted for the 2008 Existing condition indicate that the intersection is currently operating at an overall Level of Service "B" during the weekday AM peak and weekday PM peak hours.

Capacity analyses for the 2013 No-Build conditions indicate that the intersection will operate at an overall level of service "B" during both the AM and PM peak hour periods.

Capacity analyses for the 2013 Build conditions, both with and without the proposed Minisceongo Park project and the Tartikov development indicate that the intersection will continue to operate at an overall level of service "B" during both the AM and PM peak hour periods.

17. NYS Route 306 and Grandview Avenue

Grandview Avenue intersects with NYS Route 306 at a signalized intersection. The NYS Route 306 northbound and southbound approaches each consists of two lanes in the form of a separate left turn lane and a shared through/right turn lane. The Grandview Avenue eastbound and westbound approaches each consists of one lane for left/through and right turn movements.

Capacity analyses conducted for the 2008 Existing condition indicate that the intersection is currently operating at an overall Level of Service "C" or better during the weekday AM peak and weekday PM peak hours.

Capacity analyses for the 2013 No-Build conditions indicate that the intersection will operate at an overall level of service "C" during both the AM and PM peak hour periods.

Capacity analyses for the 2013 Build conditions, both with and without the proposed Minisceongo Park project indicate that the intersection will continue to operate at an overall level of service "C" or better during both the AM and PM peak hour periods. Build conditions with both Minisceongo Park and the Tartikov development are projected to continue to operate at level of service "C".

3.5.7 Saturday Traffic Conditions

In order to assess Saturday traffic conditions, John Collins Engineers compared the weekday peak PM existing traffic volumes analyzed in the November 7, 2008 Traffic Impact Study with the Saturday peak hour traffic counts at four key locations. This analysis is included in the Traffic Impact Study included in Appendix I. Based upon this comparison, it was found that the Saturday traffic volumes were significantly lower than those during the weekday peak PM hour. For example, at the U.S. Route 202/NYS Route 306 intersection, the total intersection traffic volume for the weekday PM peak hour is 1170 vehicles while the Saturday peak hour traffic volume is 895 vehicles.

The proposed project will generate less traffic during the Saturday Peak Hour than during the weekday peak PM hour. Thus, the Saturday traffic conditions will be less critical than the weekday peak PM hour. Satisfactory levels of service will be experienced during the Saturday Peak Hour period.

3.5.8 Impact of Summer Day Camps

The Traffic Study is based on typical traffic conditions and includes the effect of school bus traffic, commuter traffic and the peak hour site generated traffic. The Scoping Document requested a sensitivity analysis of summer conditions, while area day camps are in session. It should be noted that the Weekday AM Peak Summer Hour (8:15AM –9:15AM) occurs after the Weekday Peak AM Highway Hour (7:30AM – 8:30AM) and the Weekday PM Peak Summer Hour (3:30PM - 4:30PM) occurs before the Weekday Peak PM Highway Hour (5:00PM – 6:00PM). However, for comparison purpose the Traffic Impact Study compared each of these peak hours.

Figure 3.5-20 contains a comparison of the Weekday Peak AM and Weekday Peak PM Highway Hour Traffic Volumes (when school was in session) and the Weekday AM and Weekday PM Peak Summer Traffic Volumes (effect of camp traffic) at the U.S. Route 202/NYS Route 306 intersection. As shown on 3.5-20, the Weekday Peak AM and Weekday Peak PM Highway Hour Traffic Volumes with school in session (typical conditions) are higher than Summer Conditions. Based upon a review of the capacity analysis, the overall Levels of Service during the summer hours would be similar to the Levels of Service under typical conditions (when school is in session).

3.5.9 Sight Distance

Stopping sight distance is the distance a vehicle would require to be able to stop on wet pavement to avoid a collision with a vehicle entering the traffic stream. Intersection sight distance provides an additional margin of safety above stopping sight distance.

The New York State Department of Transportation (NYS DOT) *Policy and Standards for the Design of Entrances to State Highways* discusses both stopping and intersections sight distance. "Driveways should be located where the stopping sight distance meets or exceeds the values in American Association of State Highway and Transportation Officials' (AASHTO) latest (2004) *A Policy on Geometric Design of Highways and Streets*." Where stopping sight distance is nonstandard mitigation need to be "considered".

The NYS DOT policies and standards note that intersection sight distance from *A Policy on Geometric Design of Highways and Streets* should also be met or exceeded where possible, although "Lower sight distances may be used if the Regional Traffic Engineer determines that they will not significantly degrade traffic safety and operations and there is no reasonable alternative."

A Policy on Geometric Design of Highways and Streets states "The provision of stopping sight distance at all locations along the highway or street, including intersection approaches is fundamental to intersection operation." As stopping sight distance may require major street traffic to stop or slow for minor road vehicles it also states "To enhance traffic operations, intersection sight distances that exceed stopping sight distances are desirable along the major road."

Intersection sight distance is defined as the sight distance that is necessary for a vehicle to safely enter the traffic stream requiring only minor speed adjustments by vehicles in the traffic stream. Stopping and Intersection Sight Distances are recommended by the American Association of State Highway and Transportation Officials (AASHTO).

Prevailing Speed

As part of this traffic analysis, prevailing speeds were identified in March 2009. The speed limit on US Route 202 is 45 miles per hour. The 85th percentile observed speed is the most frequently used measure of operating speeds associated with a location. The 85th percentile of observed vehicle operating speeds on US Route 202 is 55 miles per hour. The 85th percentile of observed vehicle operating speeds on NYS Route 306 is 50 miles per hour.

Site Access at US Route 202

As shown on the site plan the sight distance that will be provided at the main entrance driveway on US Route 202 is 665 + to the left and 665 + feet to the right. Based upon the 85th percentile speed of 55 miles per hour, and based upon the NYS DOT Policy and Standard for the Design of Entrances to State Highways, stopping sight distance is 495 feet and intersection sight distance is 610 feet looking to the left and 530 feet looking to the right.

Site Access at NYS Route 306

As shown on the site plan the sight distance that will be provided at the main entrance driveway on US Route 202 is 600 + to the left and 600 + feet to the right. Based upon the 85th percentile speed of 55 miles per hour, and based upon the NYS DOT Policy and Standard for the Design of Entrances to State Highways, stopping sight distance is 425 feet and intersection sight distance is 555 feet looking to the left and 480 feet looking to the right.

These access locations have sufficient sight distance to meet the AASHTO recommended intersection sight distances for the prevailing operating speeds on both US Route 202 and NYS Route 306.

3.5.9 Traffic from Construction Activity

The on-site earthwork has been balanced to eliminate the need for fill to be either imported or exported from the project site. The greatest volume of construction traffic is expected to occur at the beginning of the construction when rough grading is conducted, and when asphalt and building materials are transported to the site.

It is anticipated that most construction trips would travel to and from the site via US Route 202. All construction vehicles will use the proposed main access points to US Route 202 and NYS Route 306 for ingress and egress. Construction vehicles and employees will park on-site at all times. Materials and equipment will be stored on site to minimize vehicle trips.

3.5.10 Mass Transit

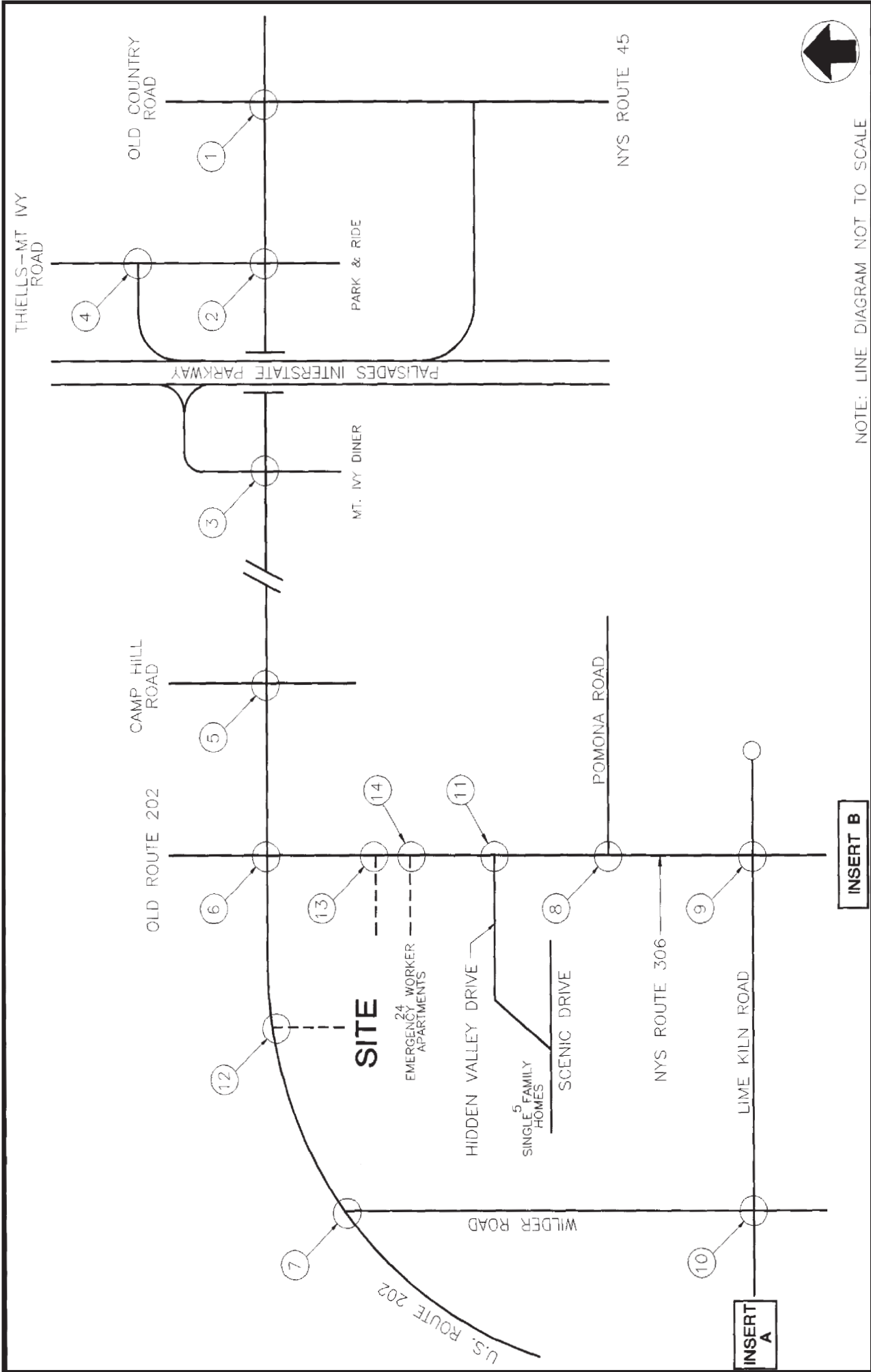
Rockland County Department of Public Transportation provides public bus transportation for the project area. Transport of Rockland (TOR) provides mass transit service through six main lines and three loop bus routes to serve the County. The closest bus route to the project site is the TOR 95 Route providing service from Haverstraw to Rockland Community College in Ramapo along Routes 202 and 306. Connections are available to TOR Route 91 and 94. The T.R.I.P.S. System, also run by Rockland County, provides para-transit service to senior citizens and persons with disabilities. A full description of the Rockland County bus service provided by Rockland County Department of Public Transportation including fares and schedules is available at www.co.rockland.ny.us/PublicTrans/index.htm.

The TOR Ferry Express Bus provides express bus service along NYS Route 202 from the Mount Ivy Park and Ride lot along NYS Route 202 to the Haverstraw/Ossining Ferry Station, in Haverstraw.

With the development of Patrick Farm, coordination with the Rockland Department of Public Transportation will be undertaken to facilitate transit opportunities for the project residents. The applicant will seek to coordinate a bus stop location within the multifamily portion of the site, a suggested location might be in the vicinity of Building 107 along Road C. Accommodation could also be made in the vicinity of lot 58 near NYS Route 306. The availability of mass transit within the project would enable residents to readily access mass transit thus reducing dependence on private vehicle trips and would make the shopping area to the north on US Route 202 more accessible without using a private auto. These efforts will be coordinated during the site plan approval process.

3.5.11 Mitigation Measures

According to the results of the *Traffic Impact Study* (Appendix I), there are certain existing traffic delays occurring during peak periods. With the completion of the improvements to NYS Route 202, completion of the improvements underway at the PIP/Thiells-Mt. Ivy Road intersections, and the installation of left turn lanes at the proposed site access, the traffic to and from Patrick Farm can be accommodated on area roadways. Traffic flow and public safety along the frontage of the site will be provided as a result of the proposed road improvements and project mitigation measures.



NOTE: LINE DIAGRAM NOT TO SCALE

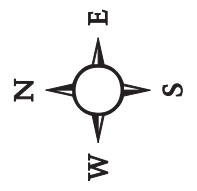
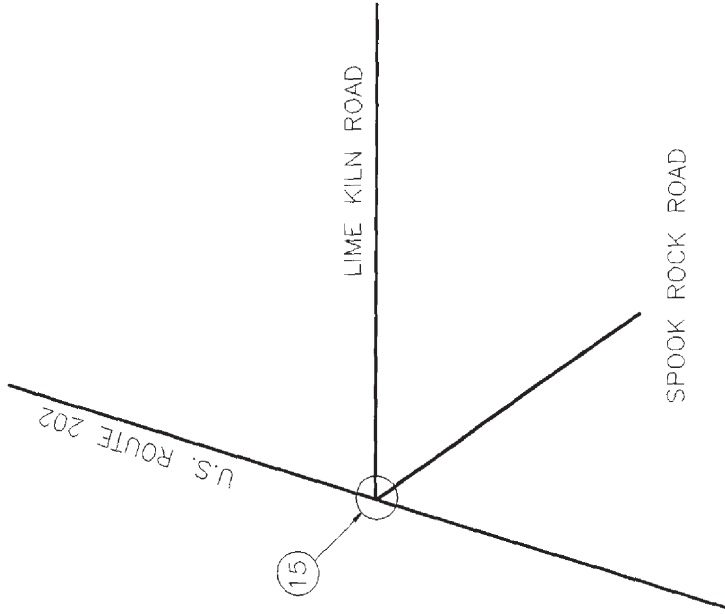


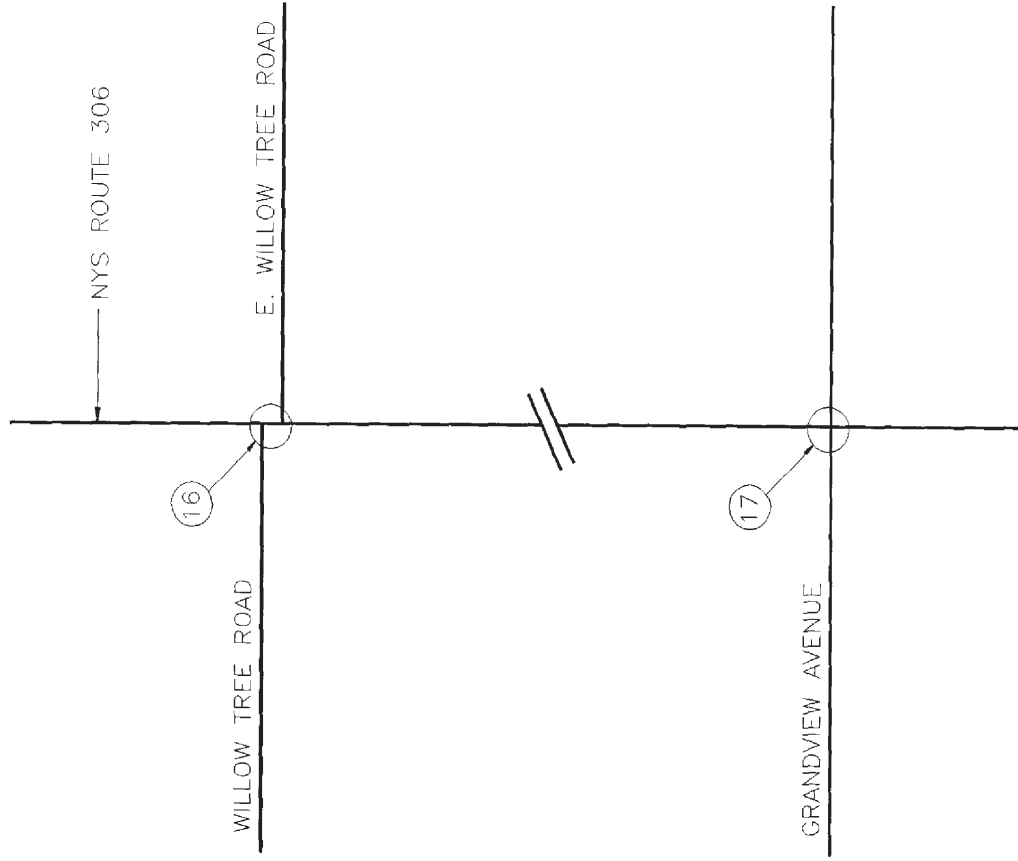
Figure 3.5-1: Site/Study Area Locations
 Patrick Farm
 Town of Ramapo, Rockland County, NY
 Source: John Collins Engineers, P.C.
 Date: April, 2009

INSERT A



NOTE: LINE DIAGRAM NOT TO SCALE

INSERT B



NOTE: LINE DIAGRAM NOT TO SCALE

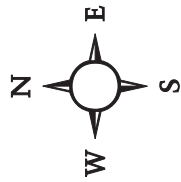
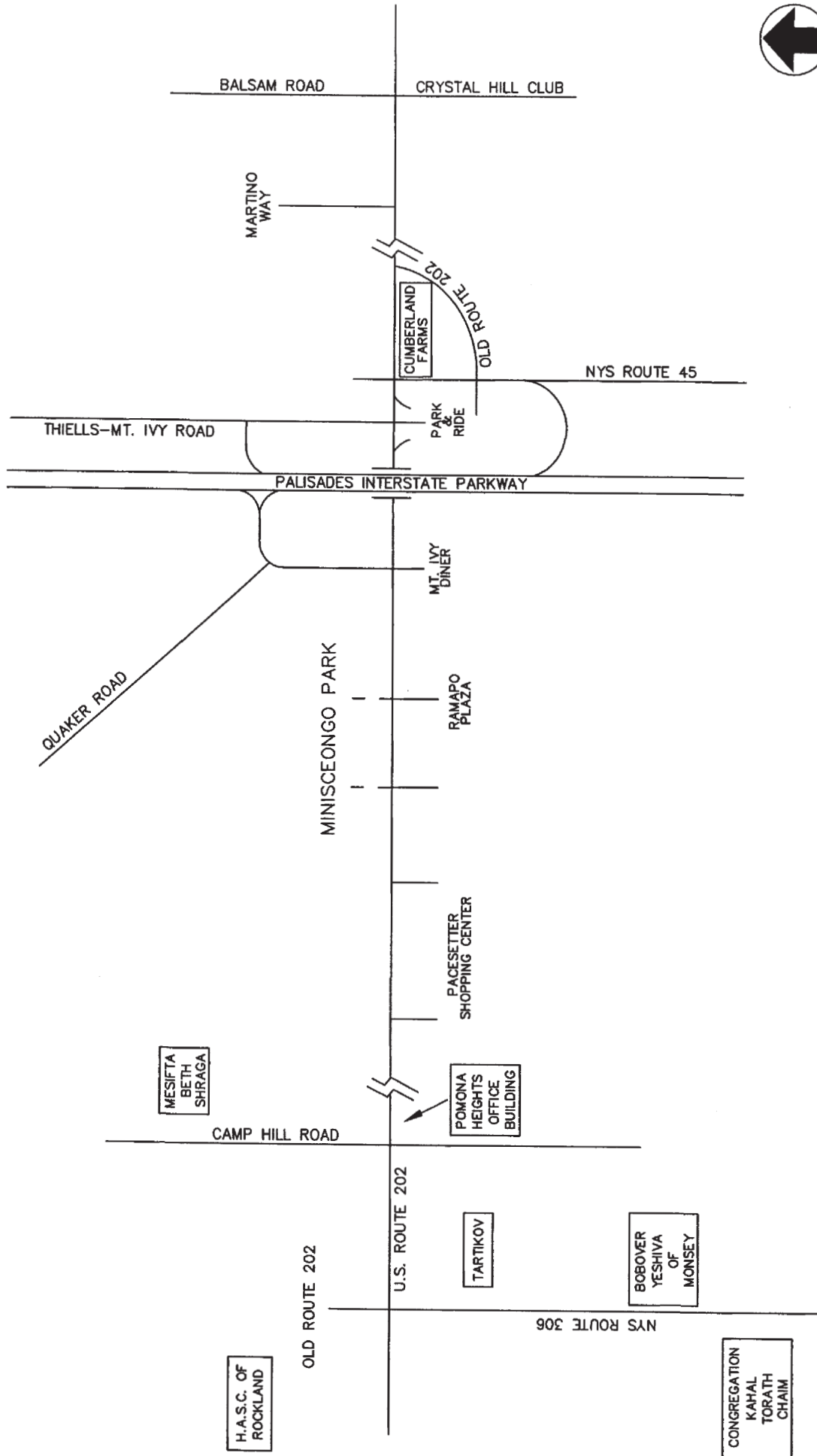


Figure 3.5-1A: Site/Study Area Locations
 Patrick Farm
 Town of Ramapo, Rockland County, NY
 Source: John Collins Engineers, P.C.
 Date: April, 2009



NOTE: LINE DIAGRAM NOT TO SCALE

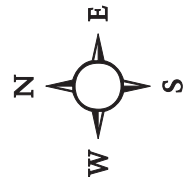
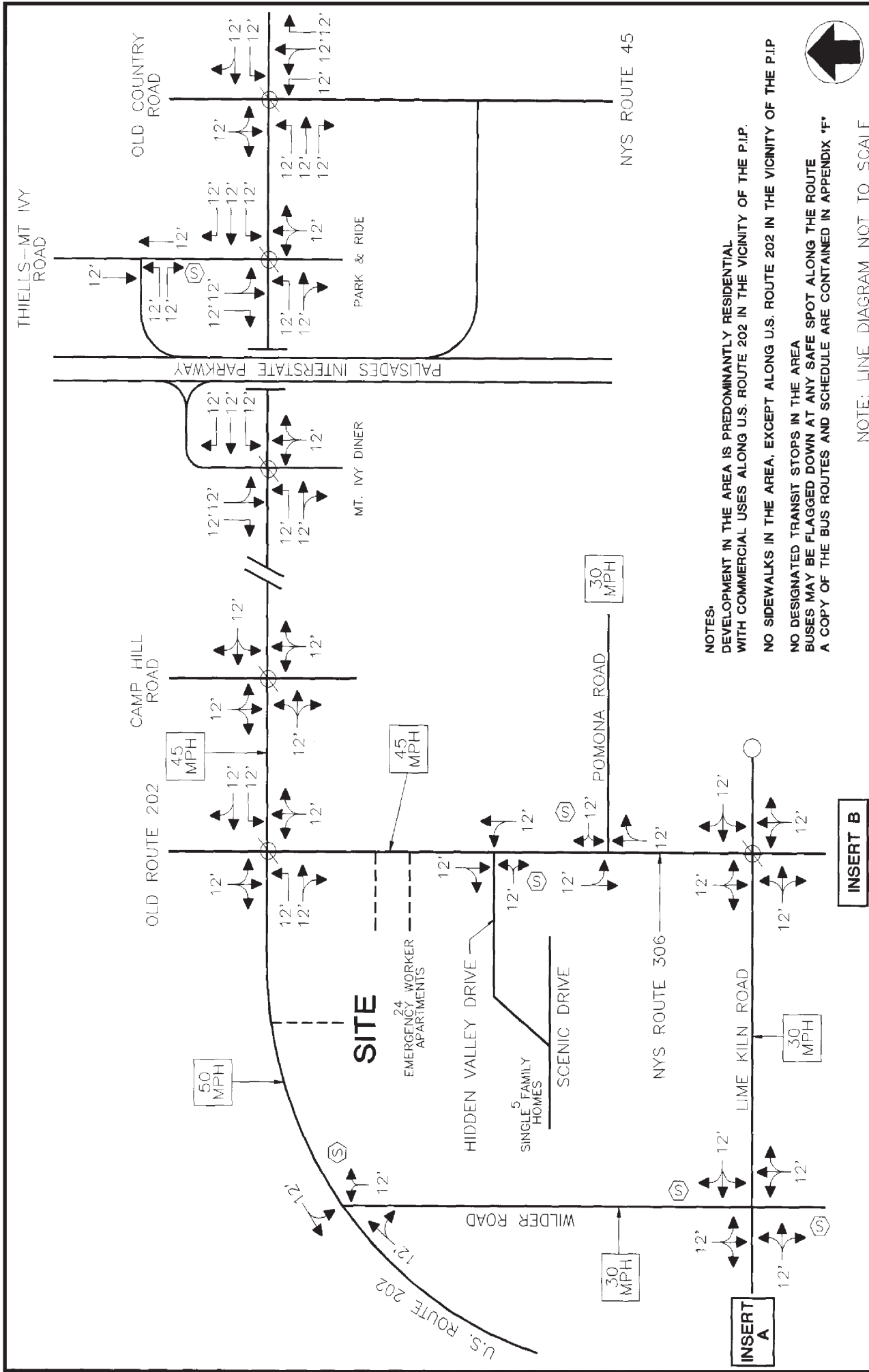


Figure 3.5-1B: Other Development Location Map
 Patrick Farm
 Town of Ramapo, Rockland County, NY
 Source: John Collins Engineers, P.C.
 Date: April, 2009



NOTES:
 DEVELOPMENT IN THE AREA IS PREDOMINANTLY RESIDENTIAL WITH COMMERCIAL USES ALONG U.S. ROUTE 202 IN THE VICINITY OF THE P.I.P.
 NO SIDEWALKS IN THE AREA, EXCEPT ALONG U.S. ROUTE 202 IN THE VICINITY OF THE P.I.P.
 NO DESIGNATED TRANSIT STOPS IN THE AREA
 BUSES MAY BE FLAGGED DOWN AT ANY SAFE SPOT ALONG THE ROUTE
 A COPY OF THE BUS ROUTES AND SCHEDULE ARE CONTAINED IN APPENDIX 'F'

NOTE: LINE DIAGRAM NOT TO SCALE

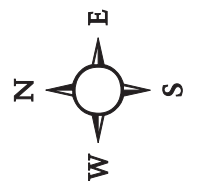
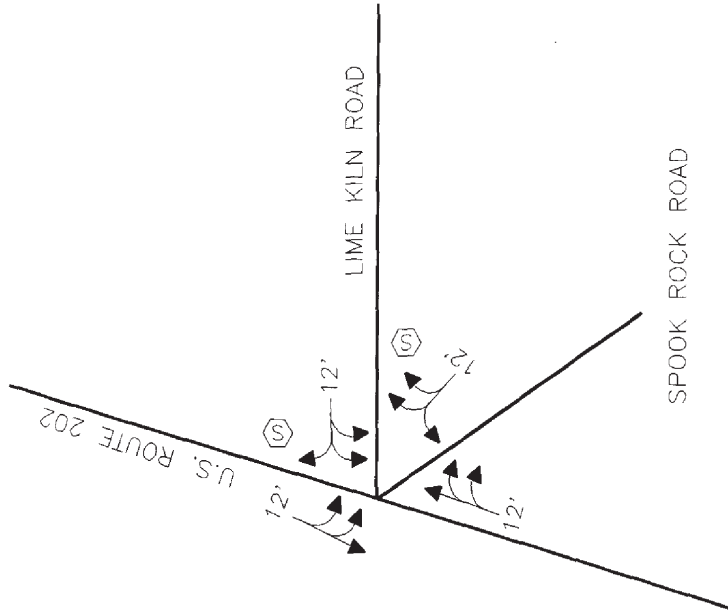
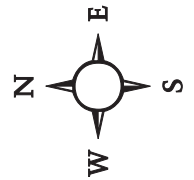


Figure 3.5-2: Existing Lane Geometry
 (Lane Geometry, Lane Widths, Traffic Control)
 Patrick Farm
 Town of Ramapo, Rockland County, NY
 Source: John Collins Engineers, P.C.
 Date: April, 2009

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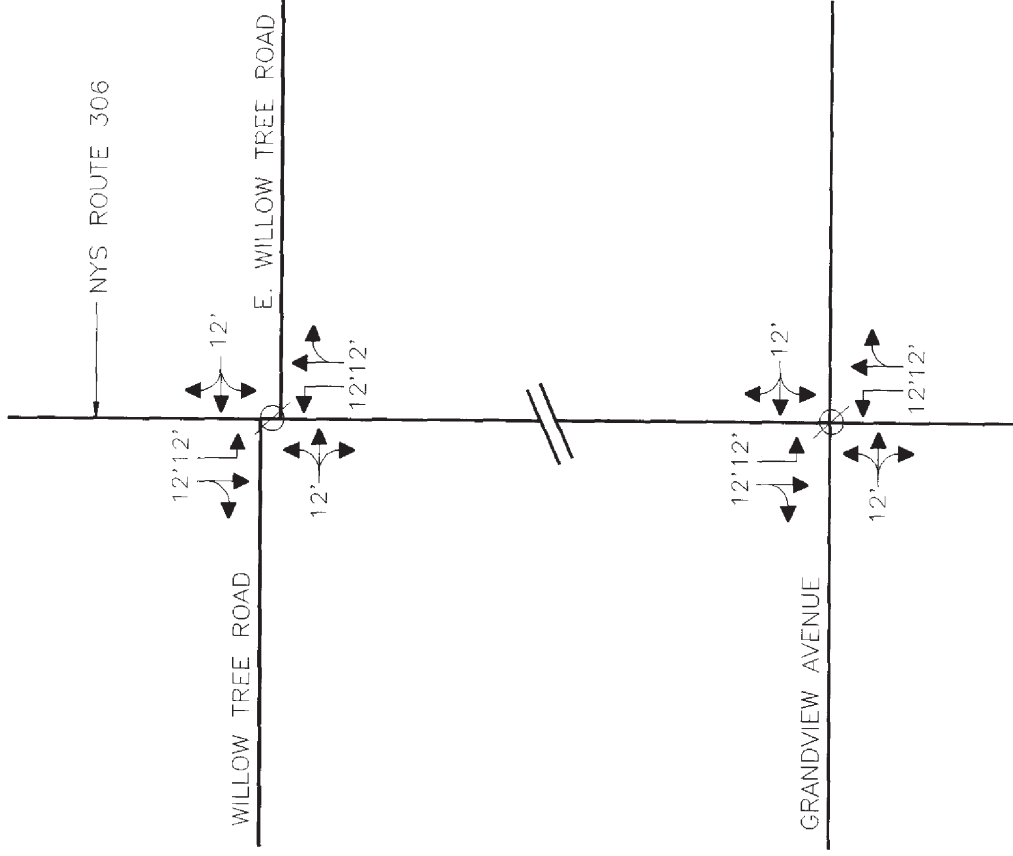


NOTE: LINE DIAGRAM NOT TO SCALE



File 07119_4/14/09
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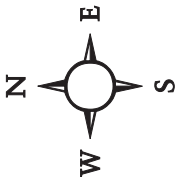
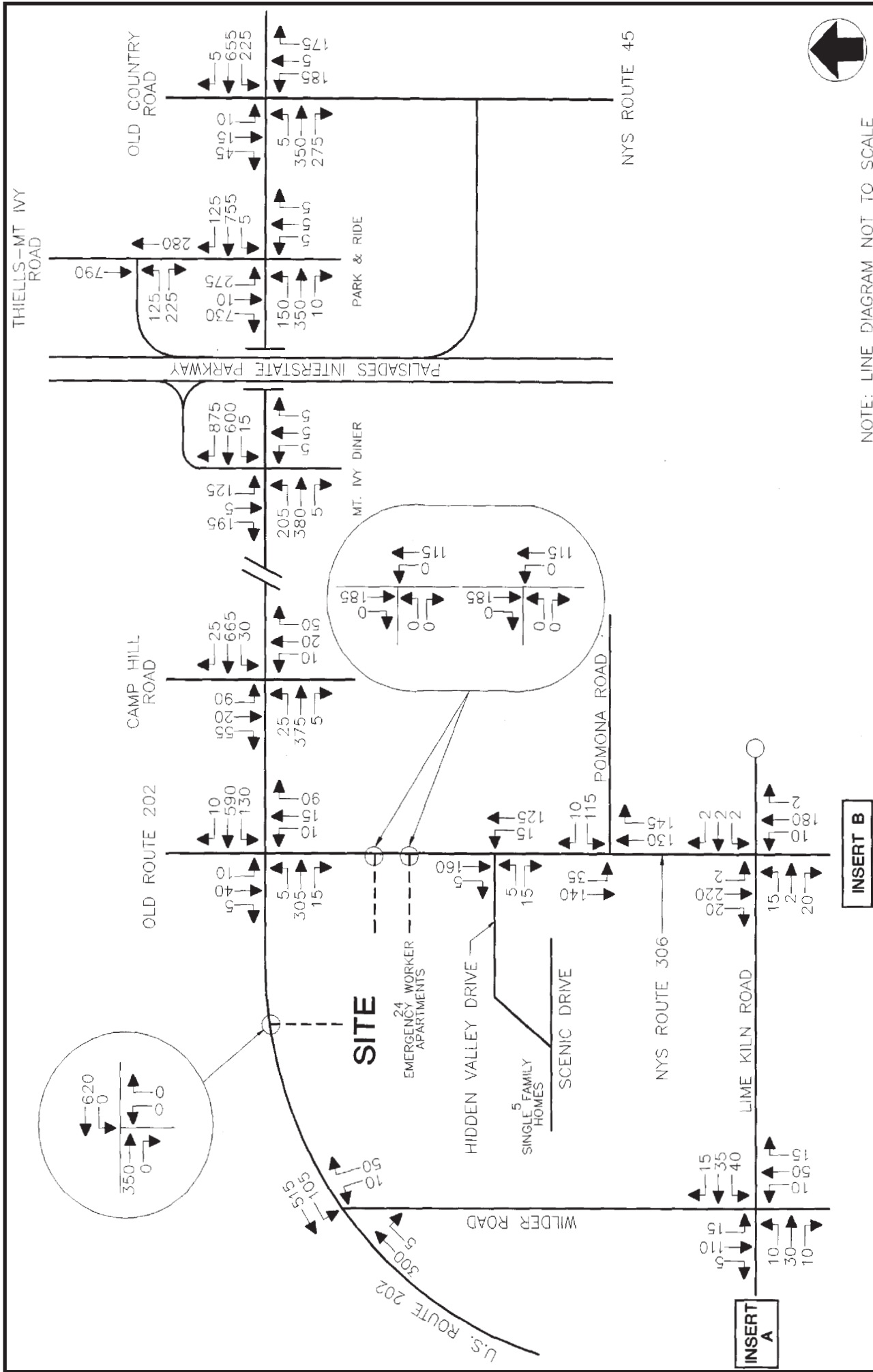
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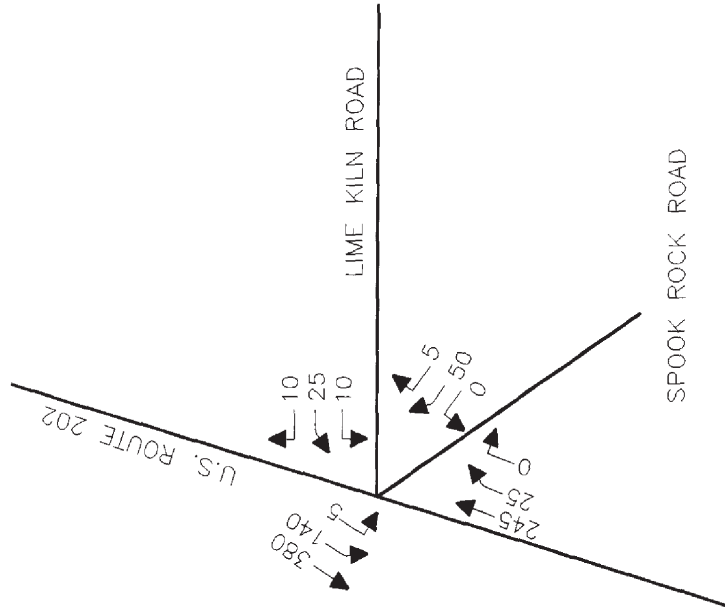
Figure 3.5-2A: Existing Lane Geometry
(Lane Geometry, Lane Widths, Traffic Control)

Patrick Farm
Town of Ramapo, Rockland County, NY
Source: John Collins Engineers, P.C.
Date: April, 2009

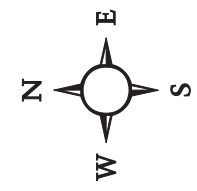


**Figure 3.5-3: Year 2008 Existing Traffic Volumes
Weekday Peak AM Highway Hour**
Patrick Farm
Town of Ramapo, Rockland County, NY
Source: John Collins Engineers, P.C.
Date: April, 2009

INSERT A

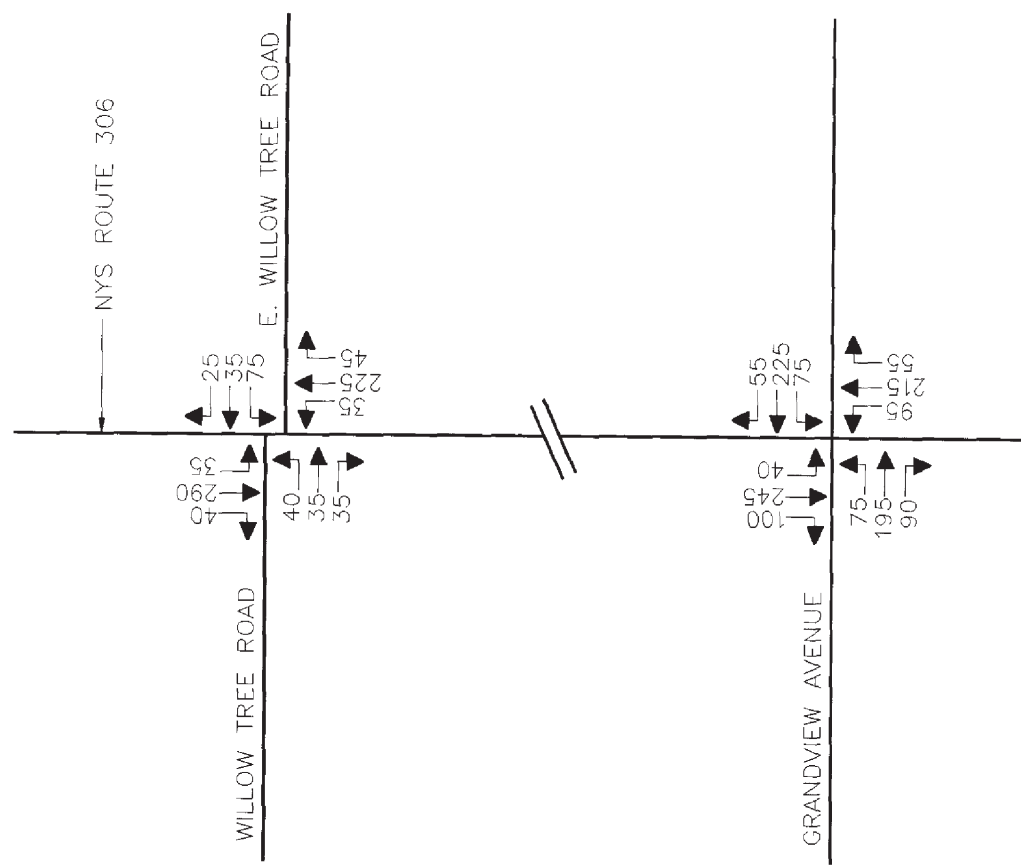


NOTE: LINE DIAGRAM NOT TO SCALE



File 07119_4/14109
JS:07119 Fig 3.5-3A

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NOTE: LINE DIAGRAM NOT TO SCALE

**Figure 3.5-3A: Year 2008 Existing Traffic Volumes
Weekday Peak AM Highway Hour**
Patrick Farm
Town of Ramapo, Rockland County, NY
Source: John Collins Engineers, P.C.
Date: April, 2009

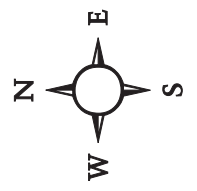
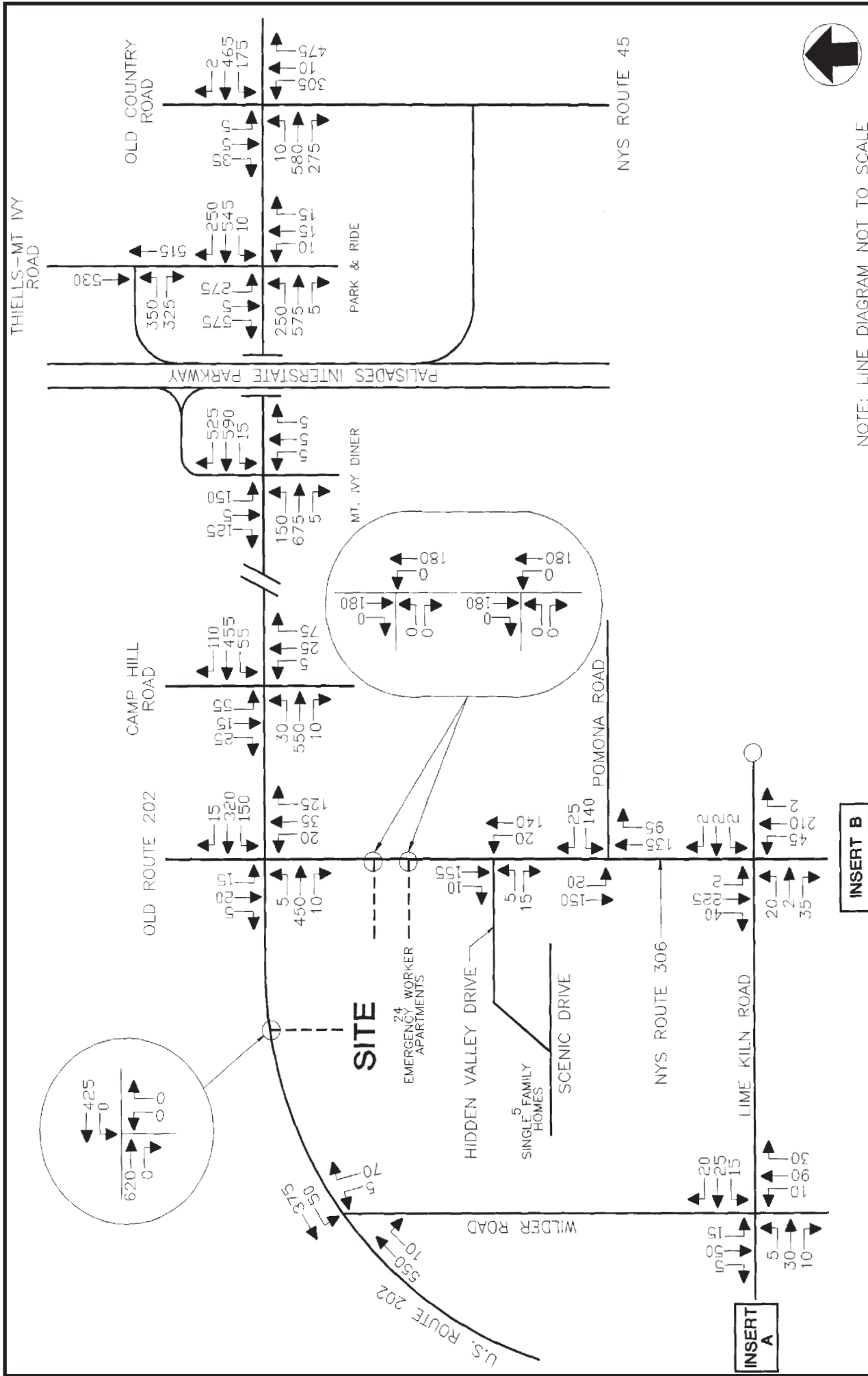
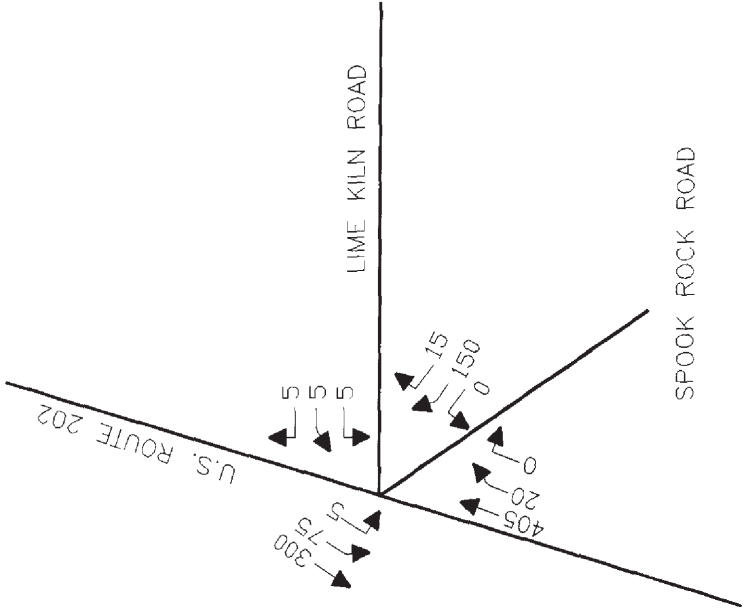
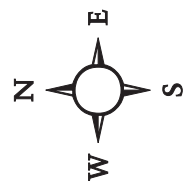


Figure 3.5-4: Year 2008 Existing Traffic Volumes
Weekday Peak PM Highway Hour
 Patrick Farm
 Town of Ramapo, Rockland County, NY
 Source: John Collins Engineers, P.C.
 Date: April, 2009

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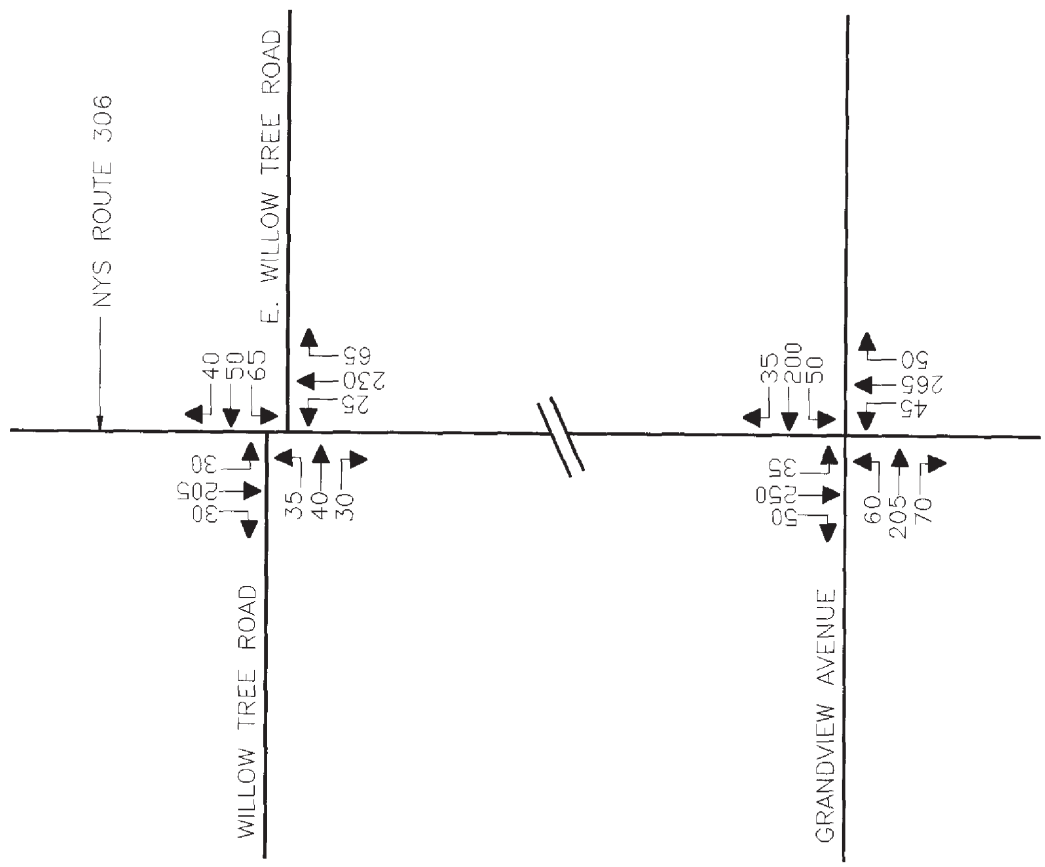


NOTE: LINE DIAGRAM NOT TO SCALE



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NOTE: LINE DIAGRAM NOT TO SCALE

**Figure 3.5-4A: Year 2008 Existing Traffic Volumes
Weekday Peak PM Highway Hour**
Patrick Farm
Town of Ramapo, Rockland County, NY
Source: John Collins Engineers, P.C.
Date: April, 2009

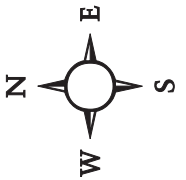
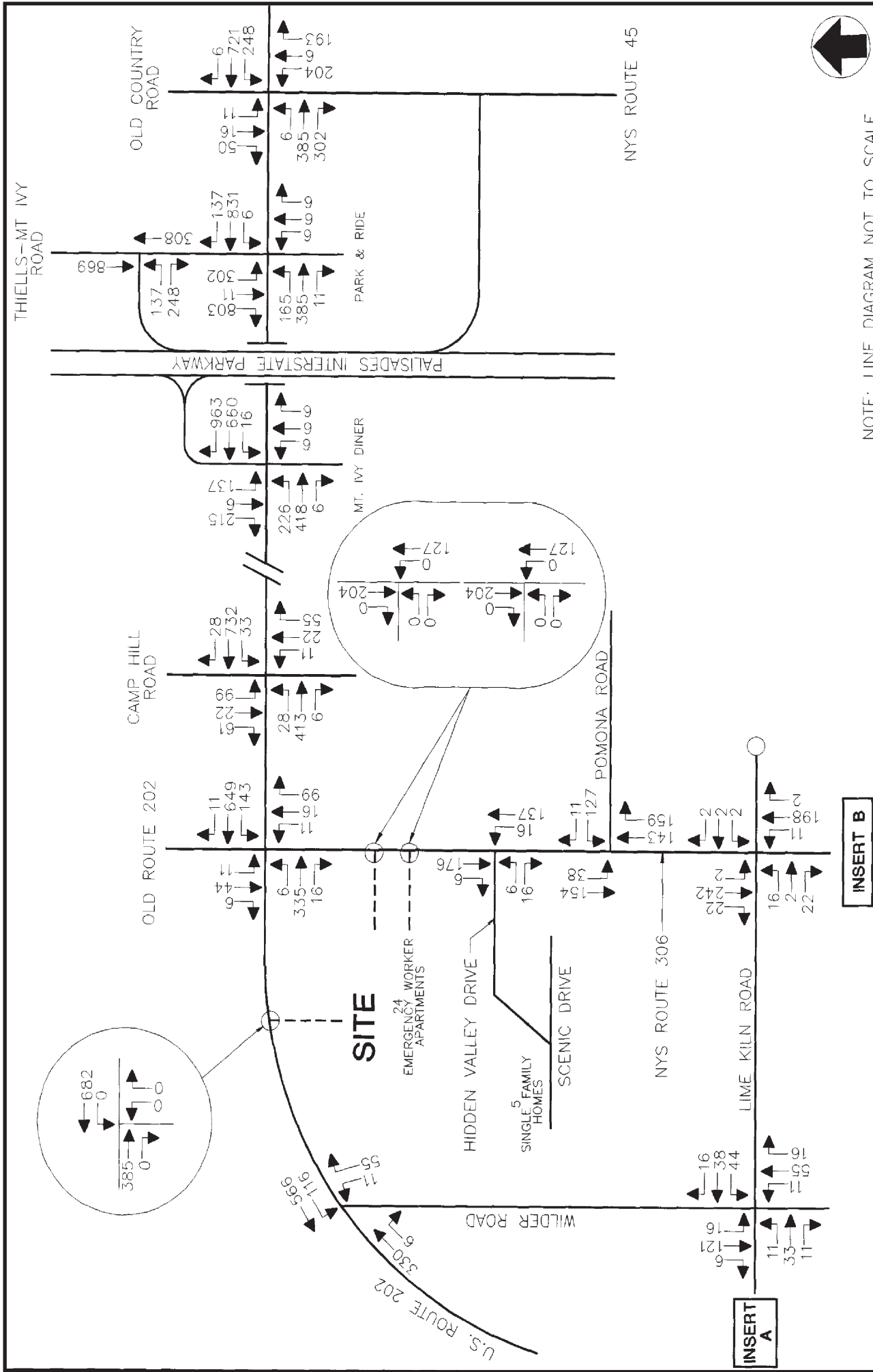
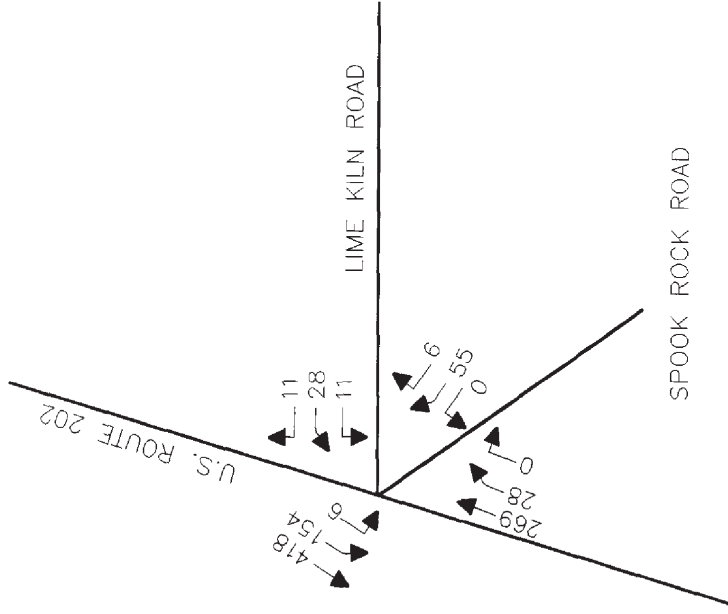
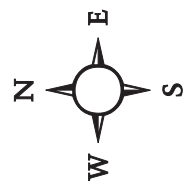


Figure 3.5-5: Year 2013 Projected Traffic Volumes
Weekday Peak AM Highway Hour
 Patrick Farm
 Town of Ramapo, Rockland County, NY
 Source: John Collins Engineers, P.C.
 Date: April, 2009

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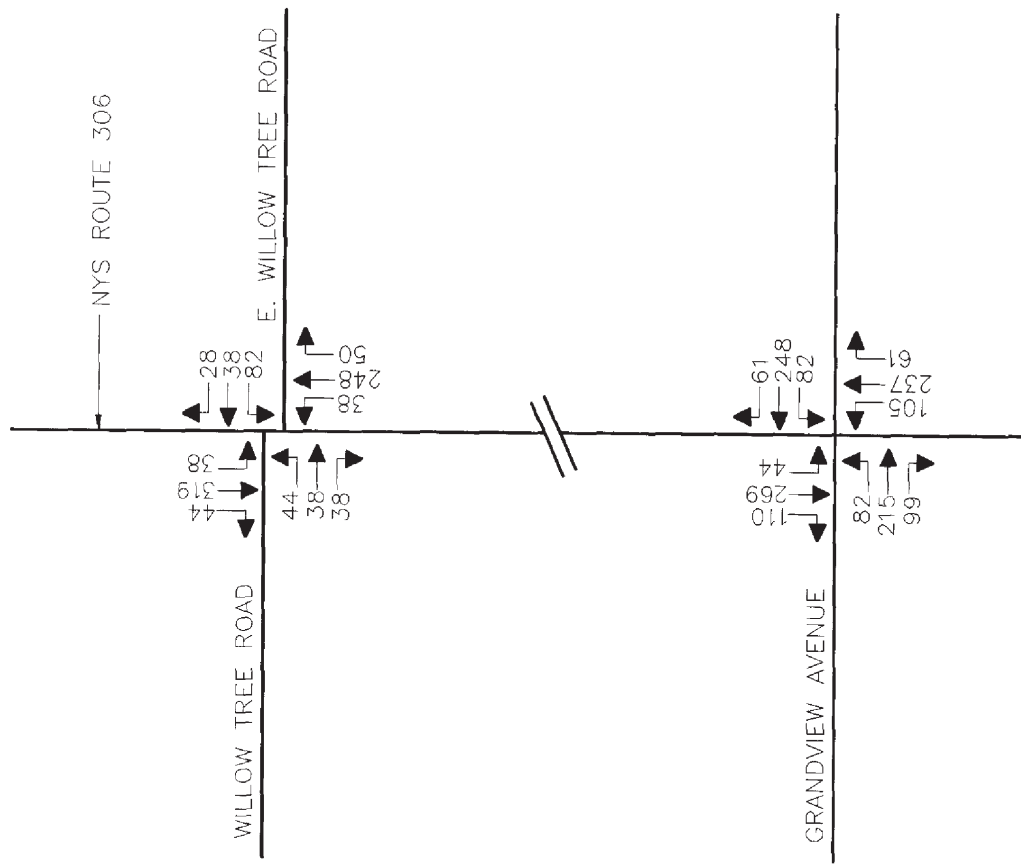


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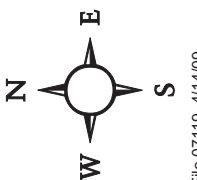
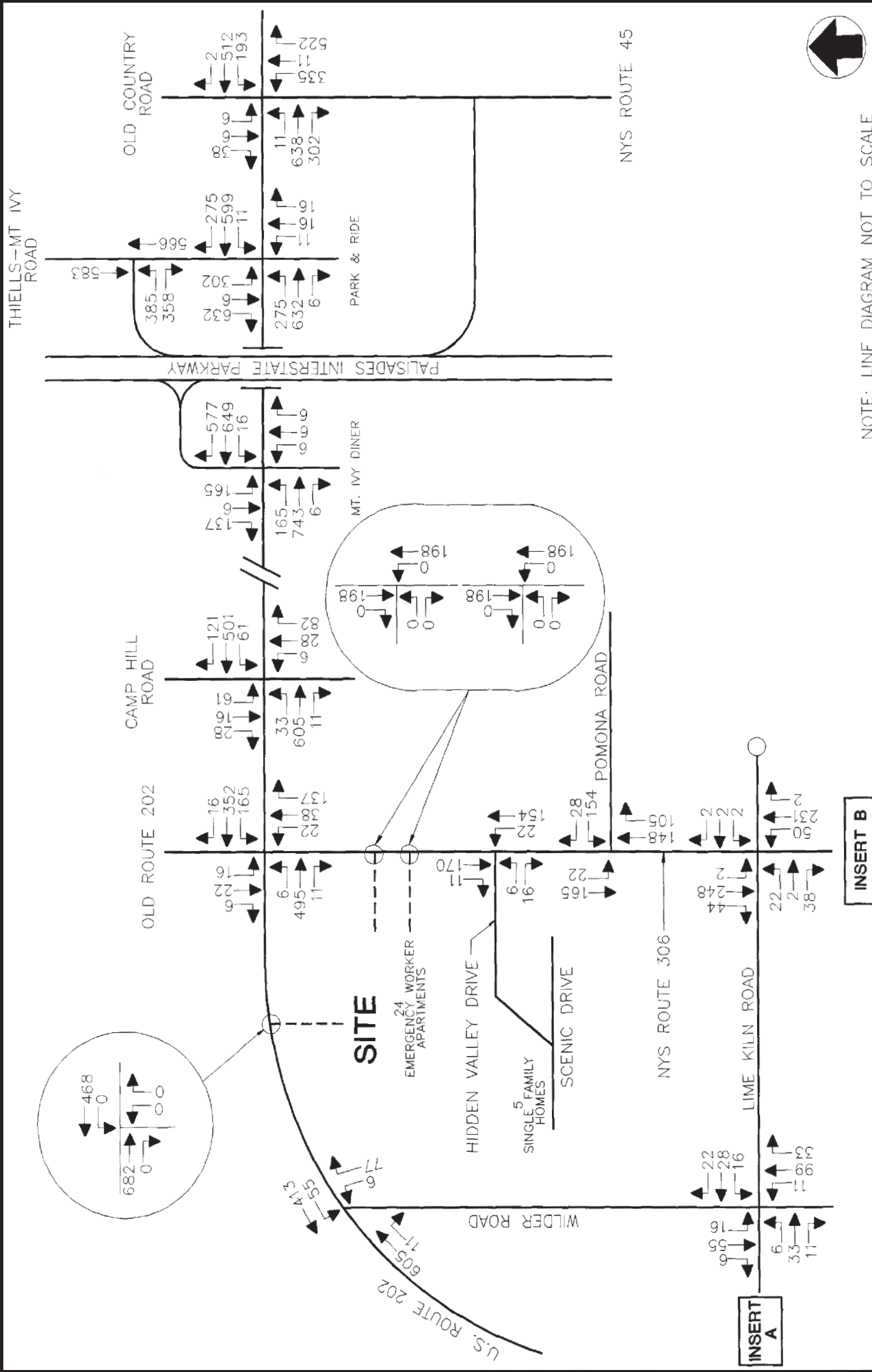
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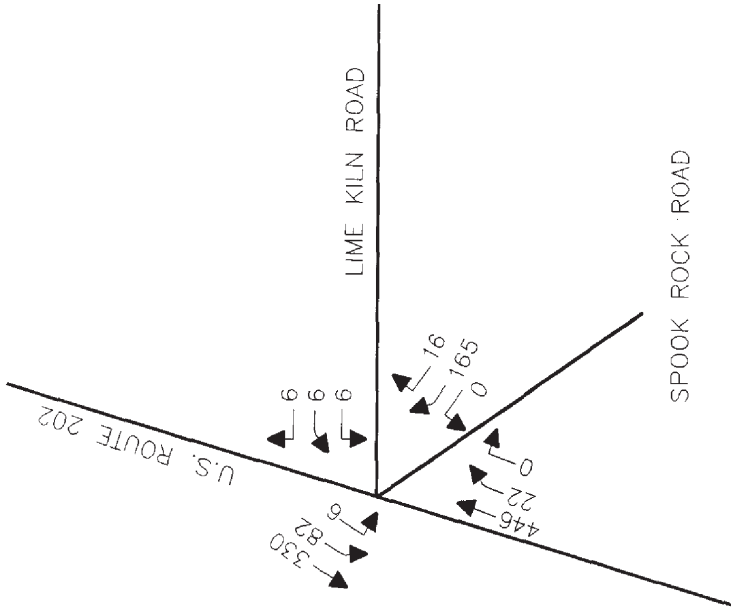
NOTE: LINE DIAGRAM NOT TO SCALE

Figure 3.5-5A: Year 2013 Projected Traffic Volumes
Weekday Peak AM Highway Hour
 Patrick Farm
 Town of Ramapo, Rockland County, NY
 Source: John Collins Engineers, P.C.
 Date: April, 2009



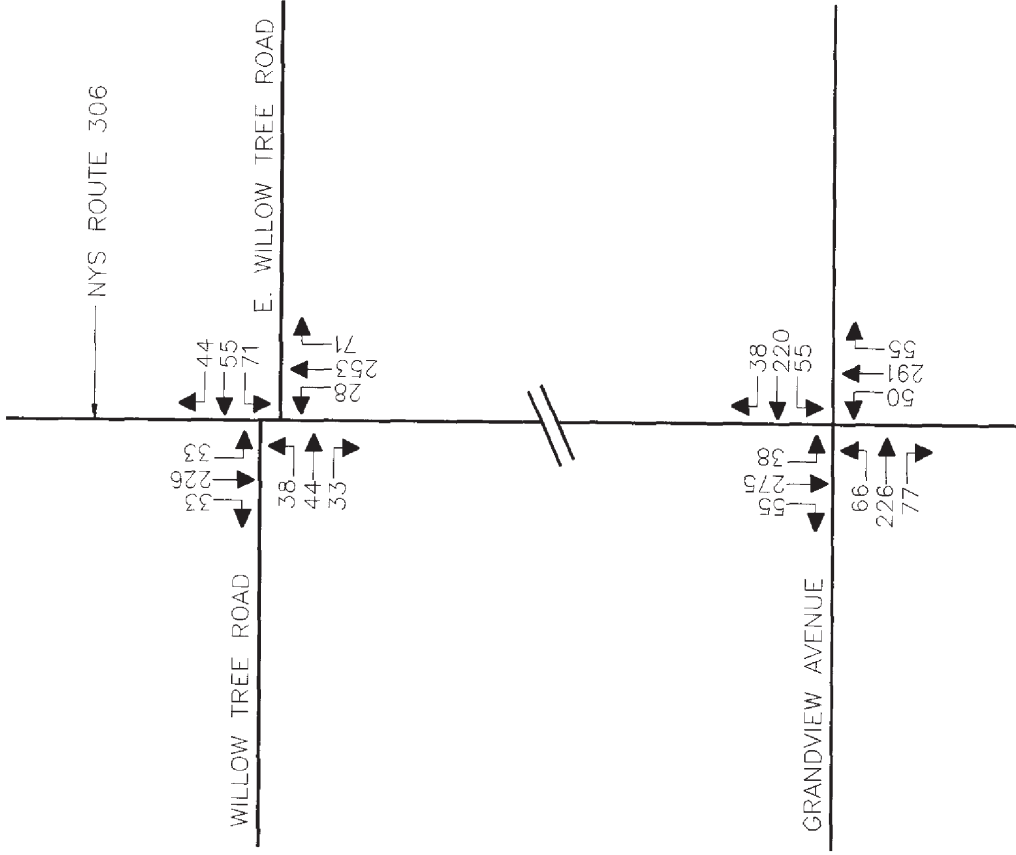
**Figure 3.5-6: Year 2013 Projected Traffic Volumes
Weekday Peak PM Highway Hour**
Patrick Farm
Town of Ramapo, Rockland County, NY
Source: John Collins Engineers, P.C.
Date: April, 2009

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NOTE: LINE DIAGRAM NOT TO SCALE

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NOTE: LINE DIAGRAM NOT TO SCALE

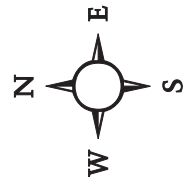
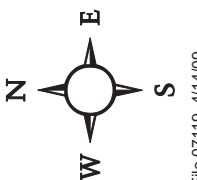
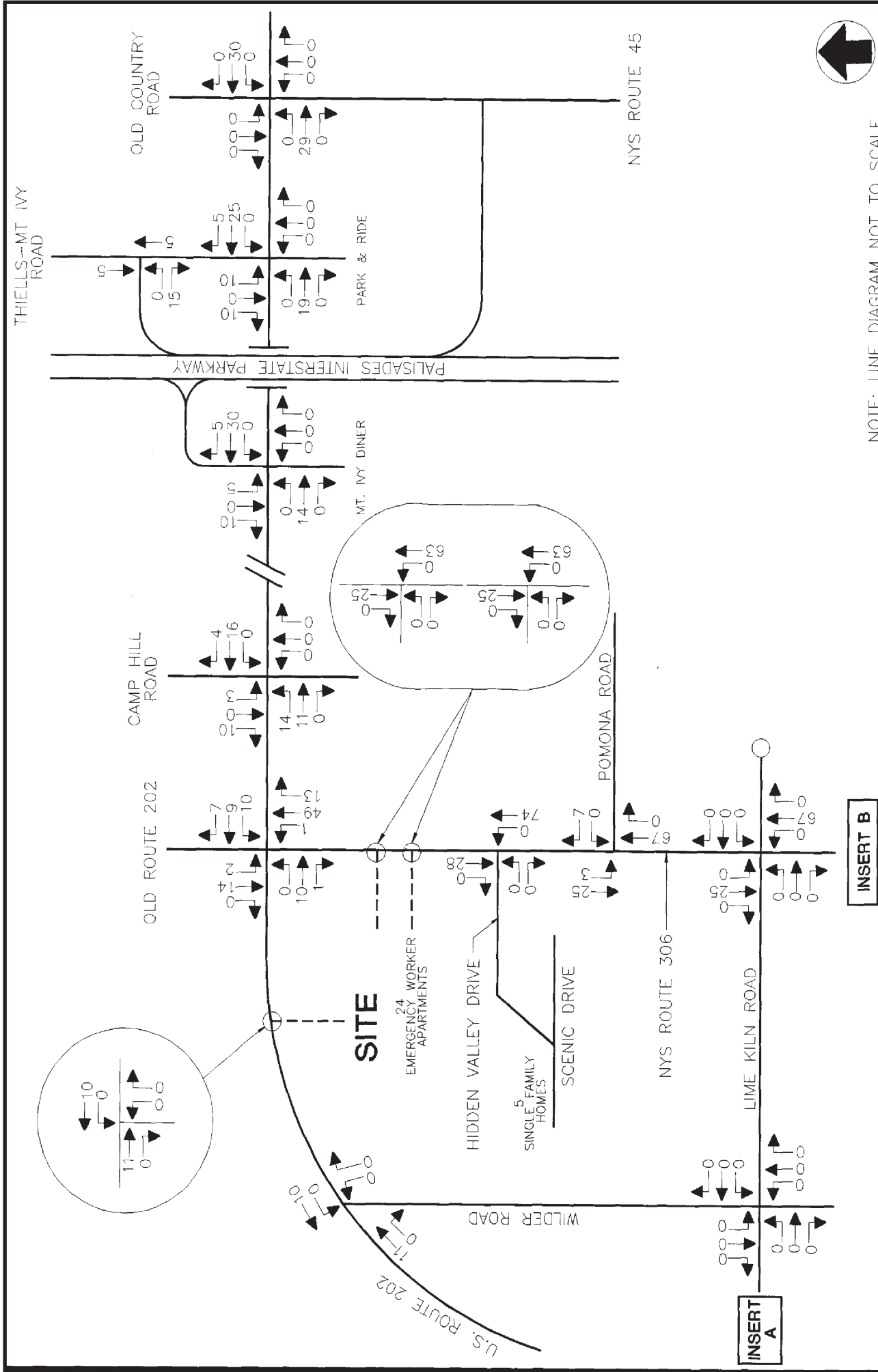
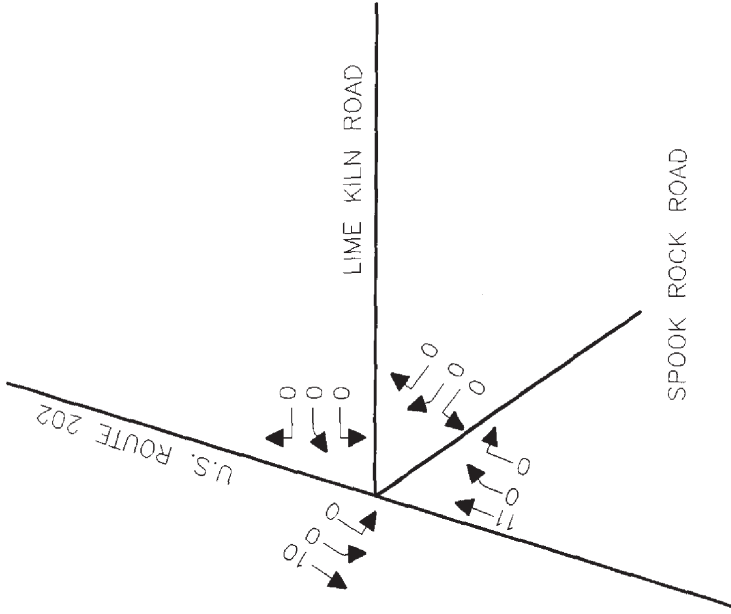


Figure 3.5-6A: Year 2013 Projected Traffic Volumes
Weekday Peak PM Highway Hour
 Patrick Farm
 Town of Ramapo, Rockland County, NY
 Source: John Collins Engineers, P.C.
 Date: April, 2009

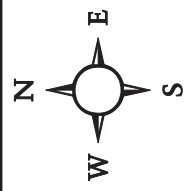


**Figure 3.5-7: Other Development Traffic Volumes
Weekday Peak AM Highway Hour**
Patrick Farm
Town of Ramapo, Rockland County, NY
Source: John Collins Engineers, P.C.
Date: April, 2009

INSERT A

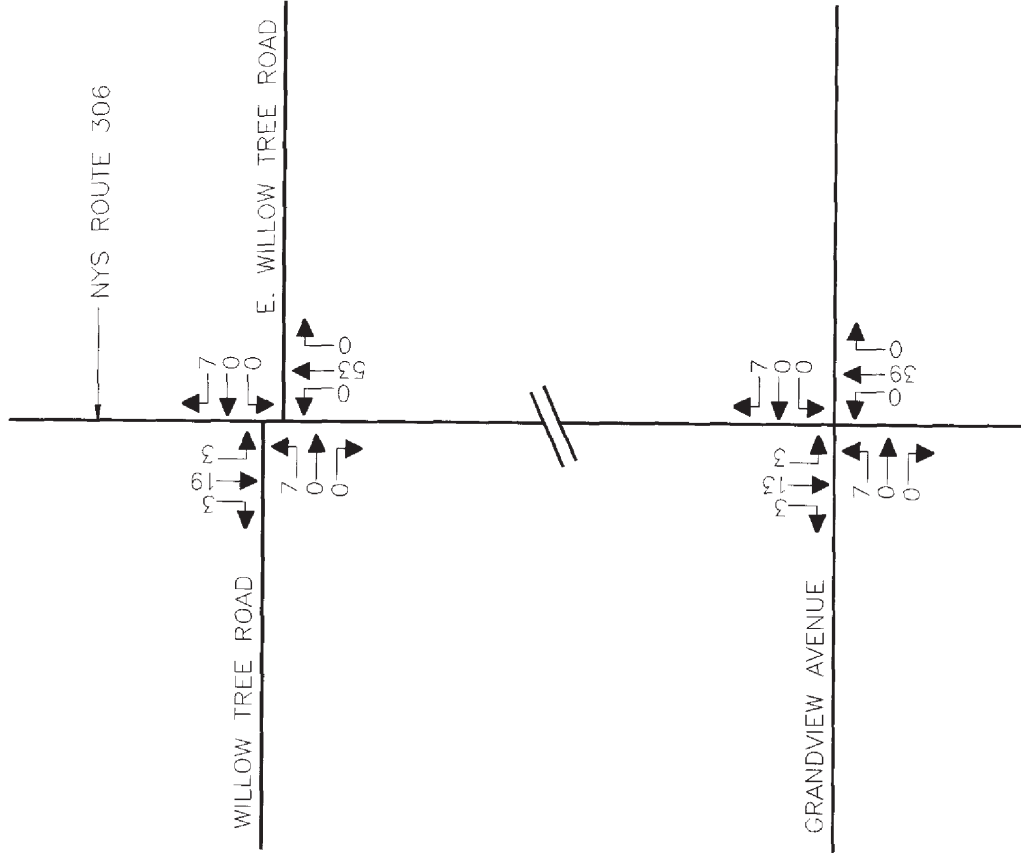


NOTE: LINE DIAGRAM NOT TO SCALE



File 07119_4/14/09
JS:07119 Fig 3.5-7A

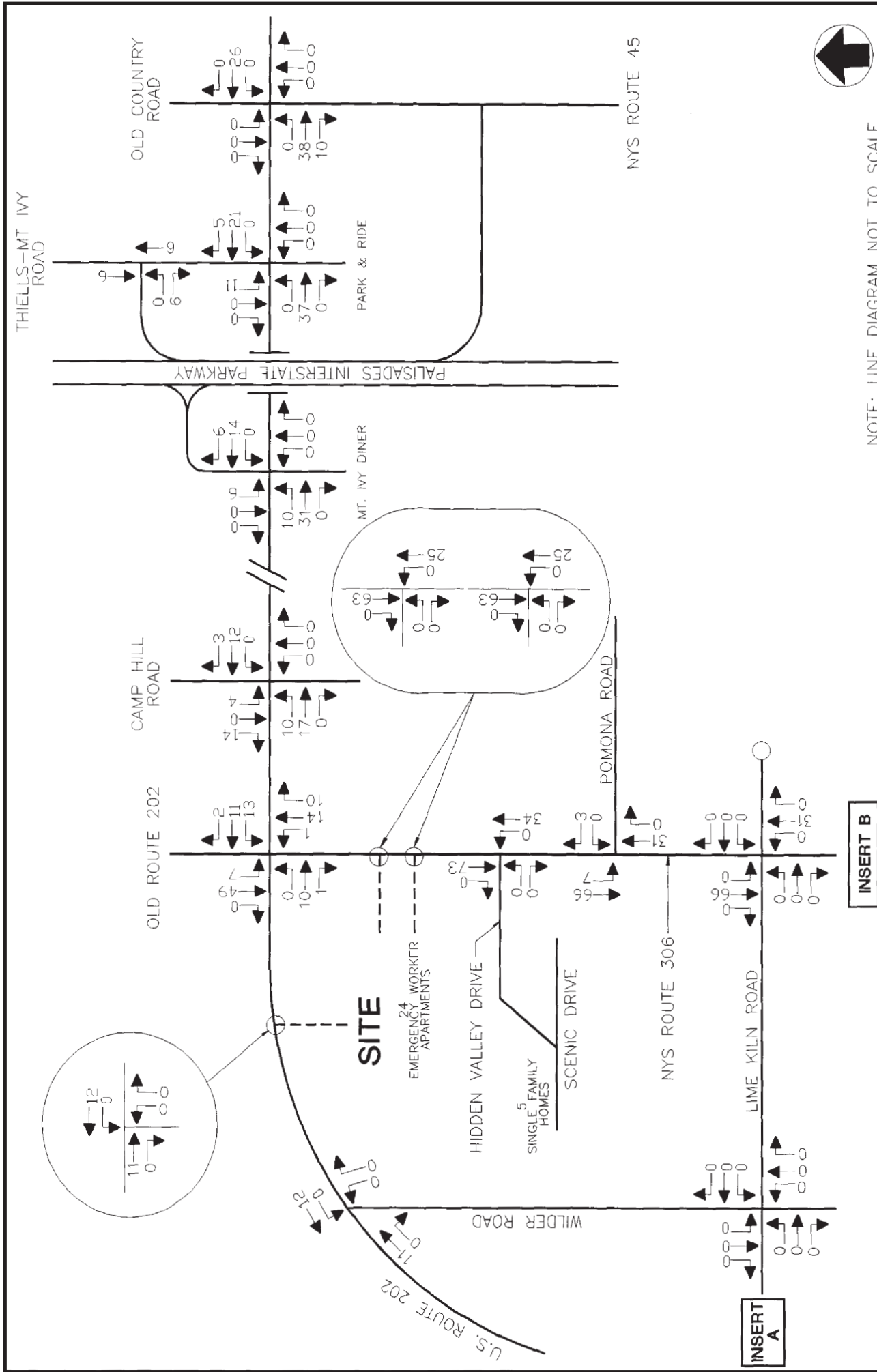
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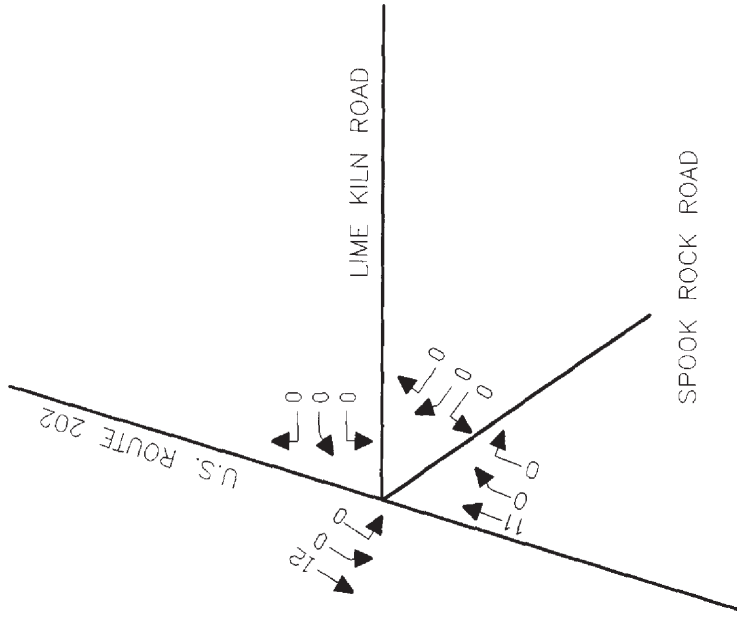
NOTE: LINE DIAGRAM NOT TO SCALE



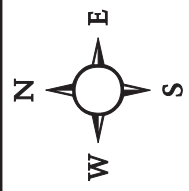
Figure 3.5-7A: Other Development Traffic Volumes
Weekday Peak AM Highway Hour
 Patrick Farm
 Town of Ramapo, Rockland County, NY
 Source: John Collins Engineers, P.C.
 Date: April, 2009



INSERT A

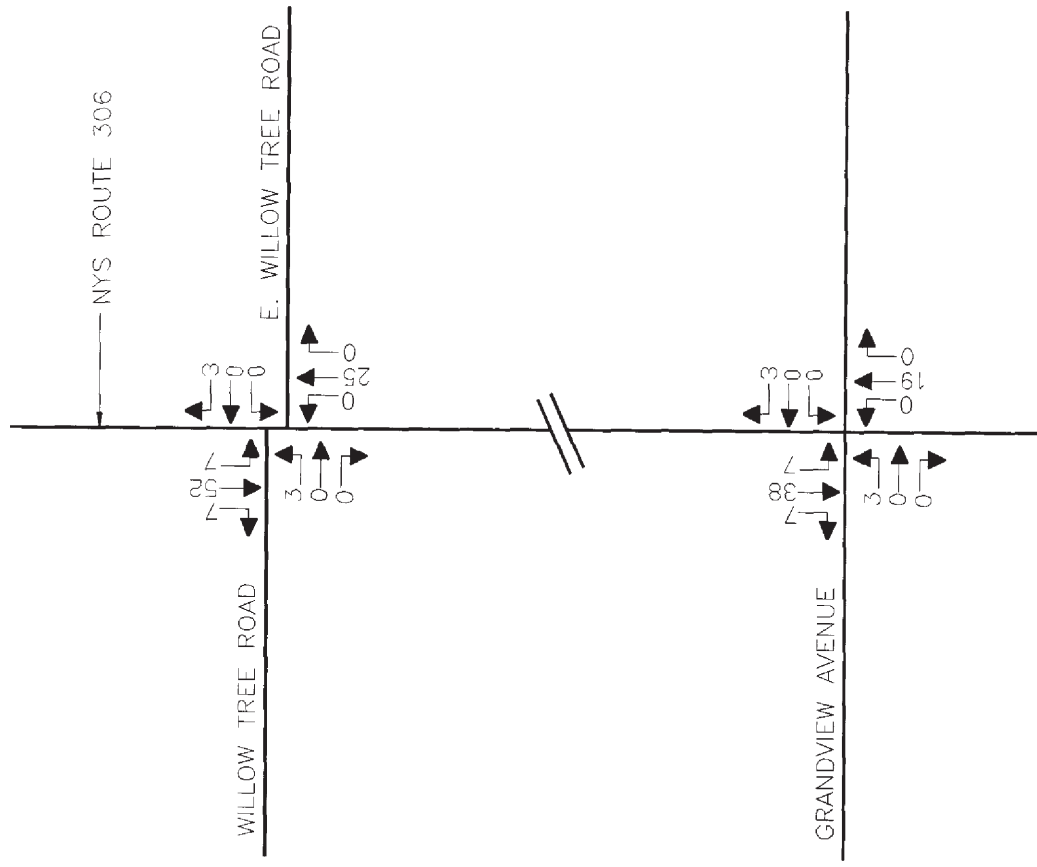


NOTE: LINE DIAGRAM NOT TO SCALE



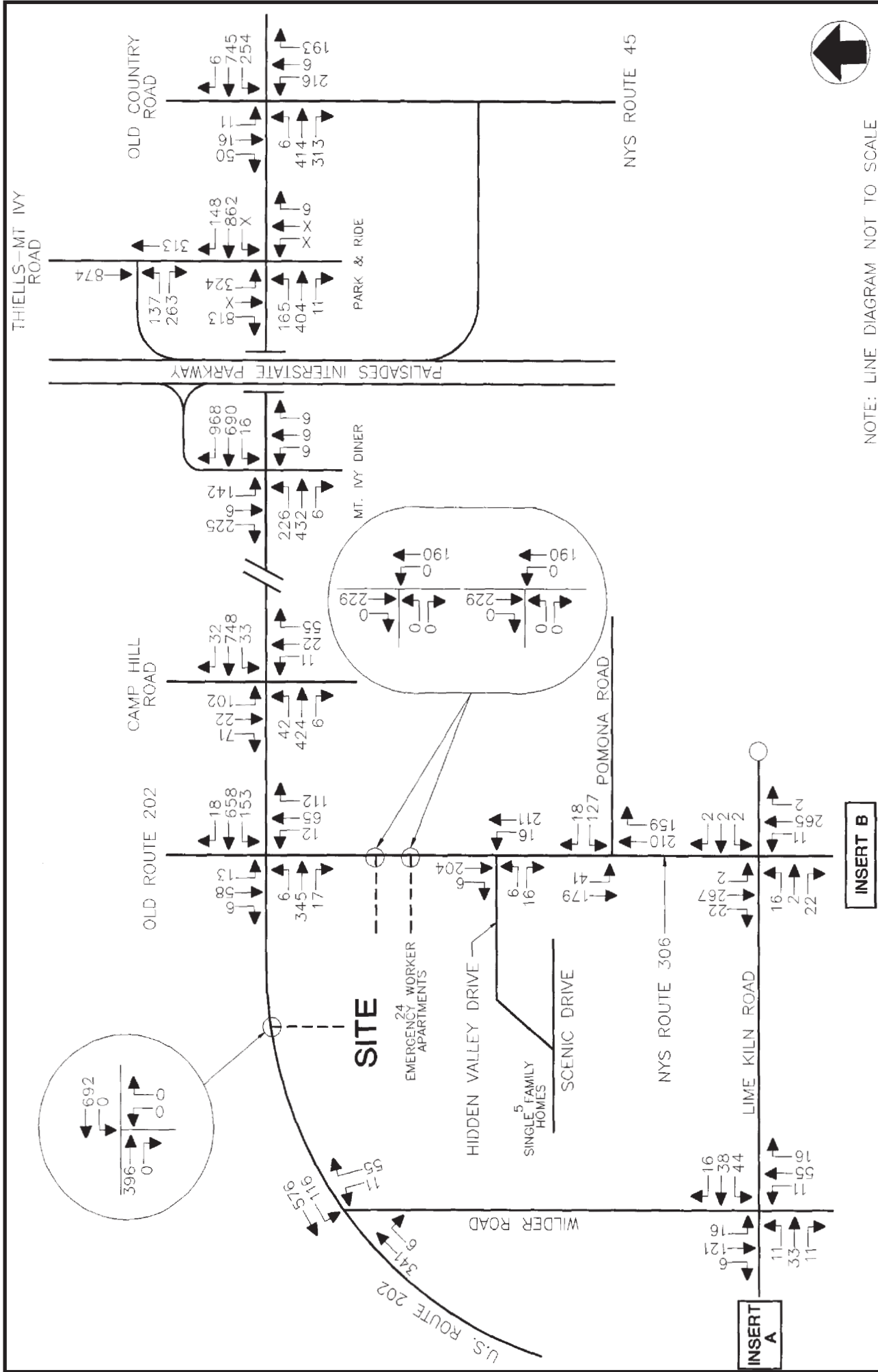
File 07119_4/14/09
JS:07119 Fig 3.5-8A

INSERT B



NOTE: LINE DIAGRAM NOT TO SCALE

Figure 3.5-8A: Other Development Traffic Volumes
Weekday Peak PM Highway Hour
 Patrick Farm
 Town of Ramapo, Rockland County, NY
 Source: John Collins Engineers, P.C.
 Date: April, 2009



NOTE: LINE DIAGRAM NOT TO SCALE

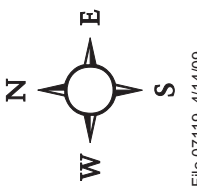
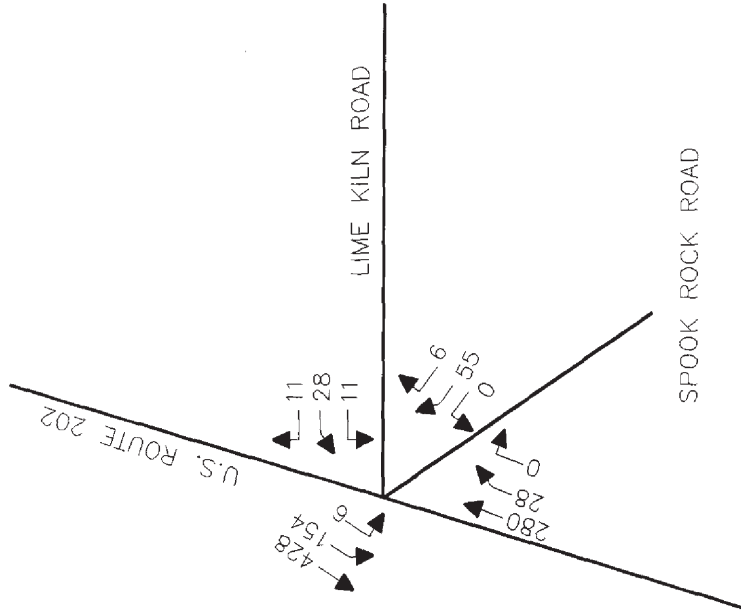
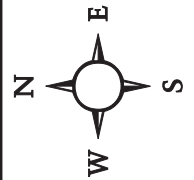


Figure 3.5-9: Year 2013 No-Build Traffic Volumes
Weekday Peak AM Highway Hour
 Patrick Farm
 Town of Ramapo, Rockland County, NY
 Source: John Collins Engineers, P.C.
 Date: April, 2009

INSERT A

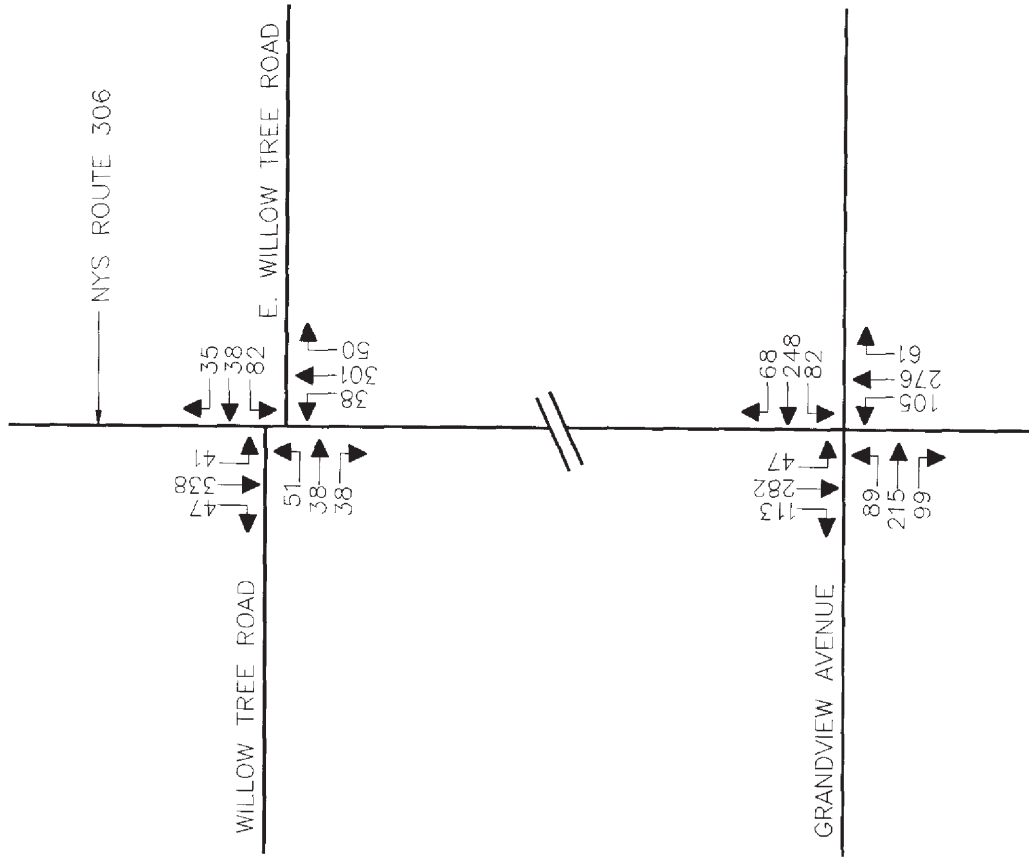


NOTE: LINE DIAGRAM NOT TO SCALE



File 07119_4/14/09
JS:07119 Fig 3.5-9A

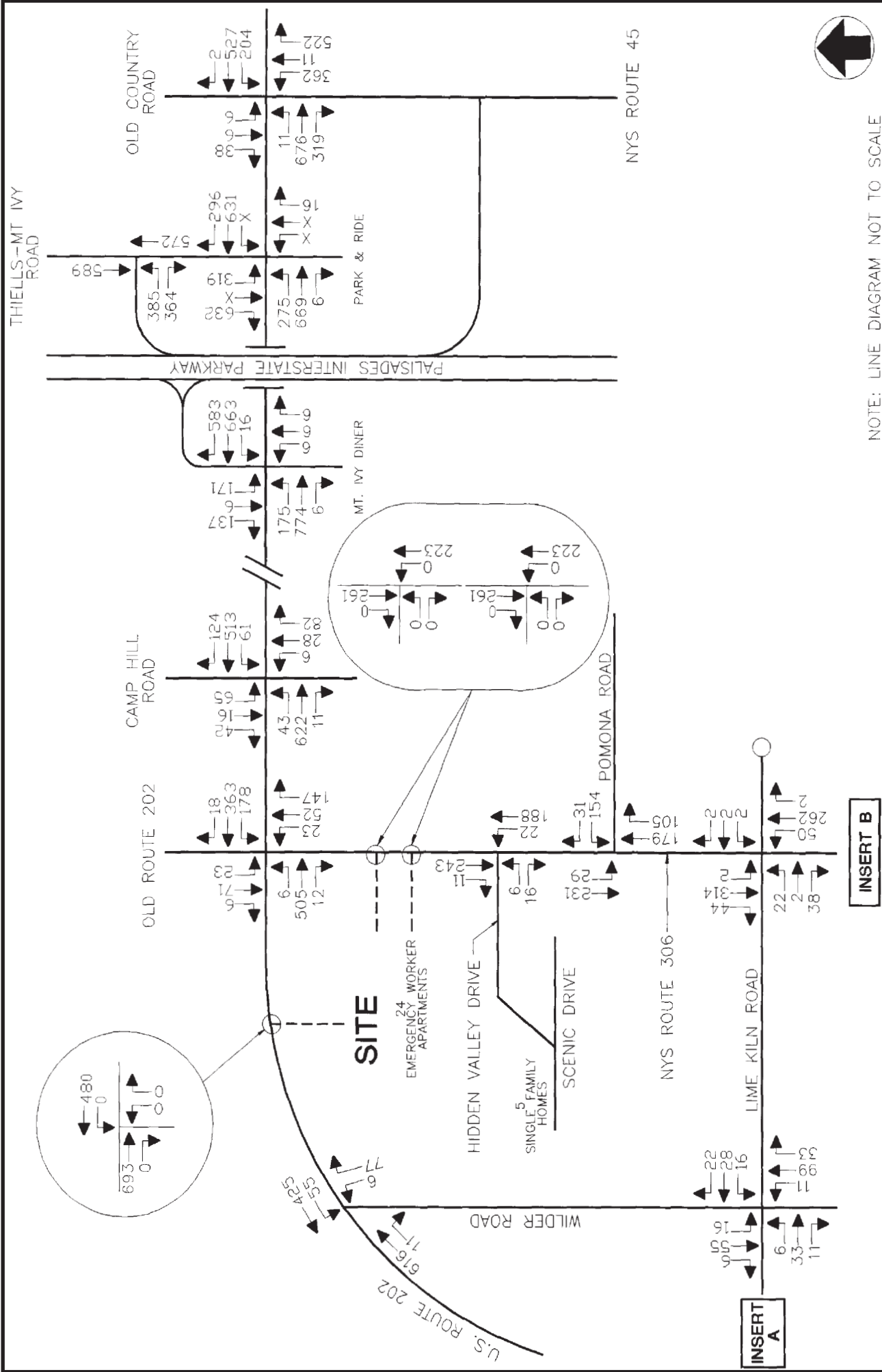
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NOTE: LINE DIAGRAM NOT TO SCALE

Figure 3.5-9A: Year 2013 No-Build Traffic Volumes
Weekday Peak AM Highway Hour
 Patrick Farm
 Town of Ramapo, Rockland County, NY
 Source: John Collins Engineers, P.C.
 Date: April, 2009

Tim Miller Associates, Inc., 10 North Street, Cold Spring, New York 10516 (845) 265-4400 Fax (845) 265-4418



NOTE: LINE DIAGRAM NOT TO SCALE

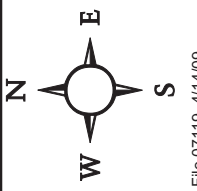
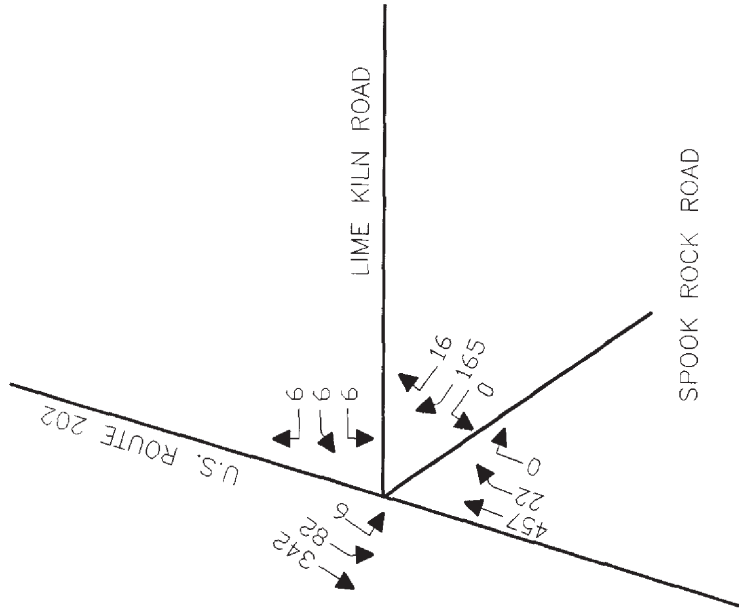


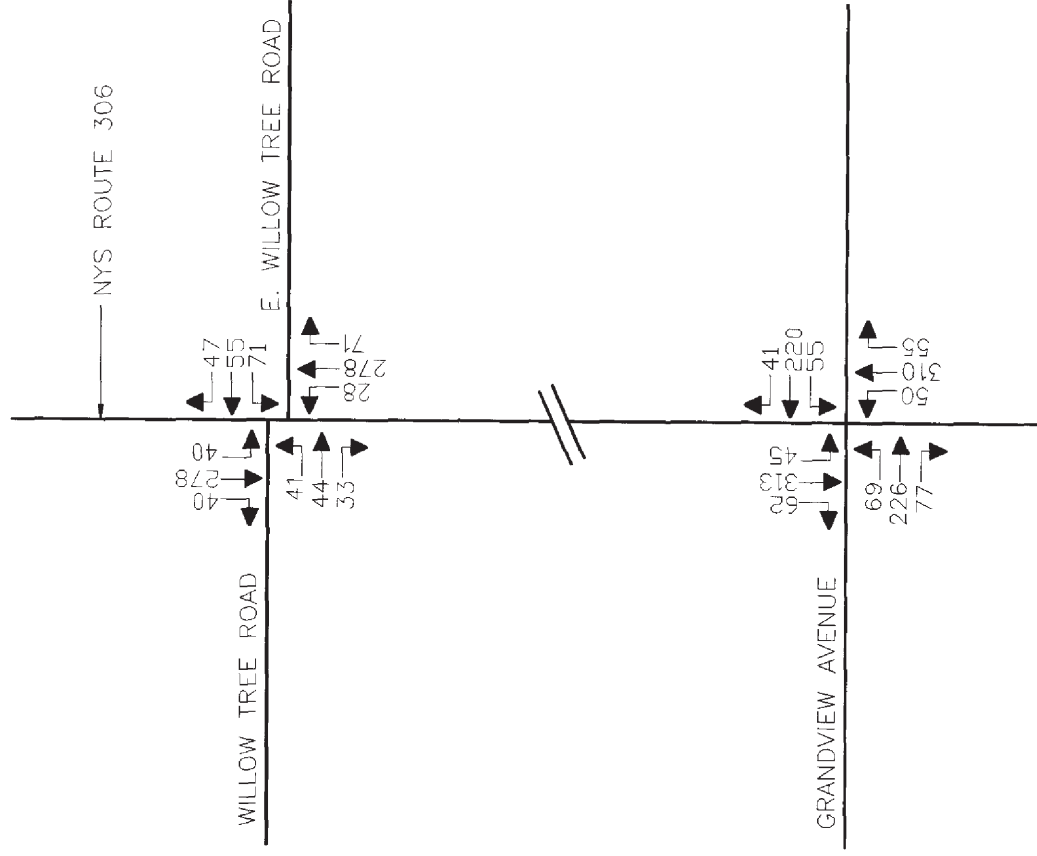
Figure 3.5-10: Year 2013 No-Build Traffic Volumes
Weekday Peak PM Highway Hour
 Patrick Farm
 Town of Ramapo, Rockland County, NY
 Source: John Collins Engineers, P.C.
 Date: April, 2009

INSERT A



NOTE: LINE DIAGRAM NOT TO SCALE

INSERT B



NOTE: LINE DIAGRAM NOT TO SCALE

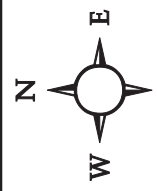
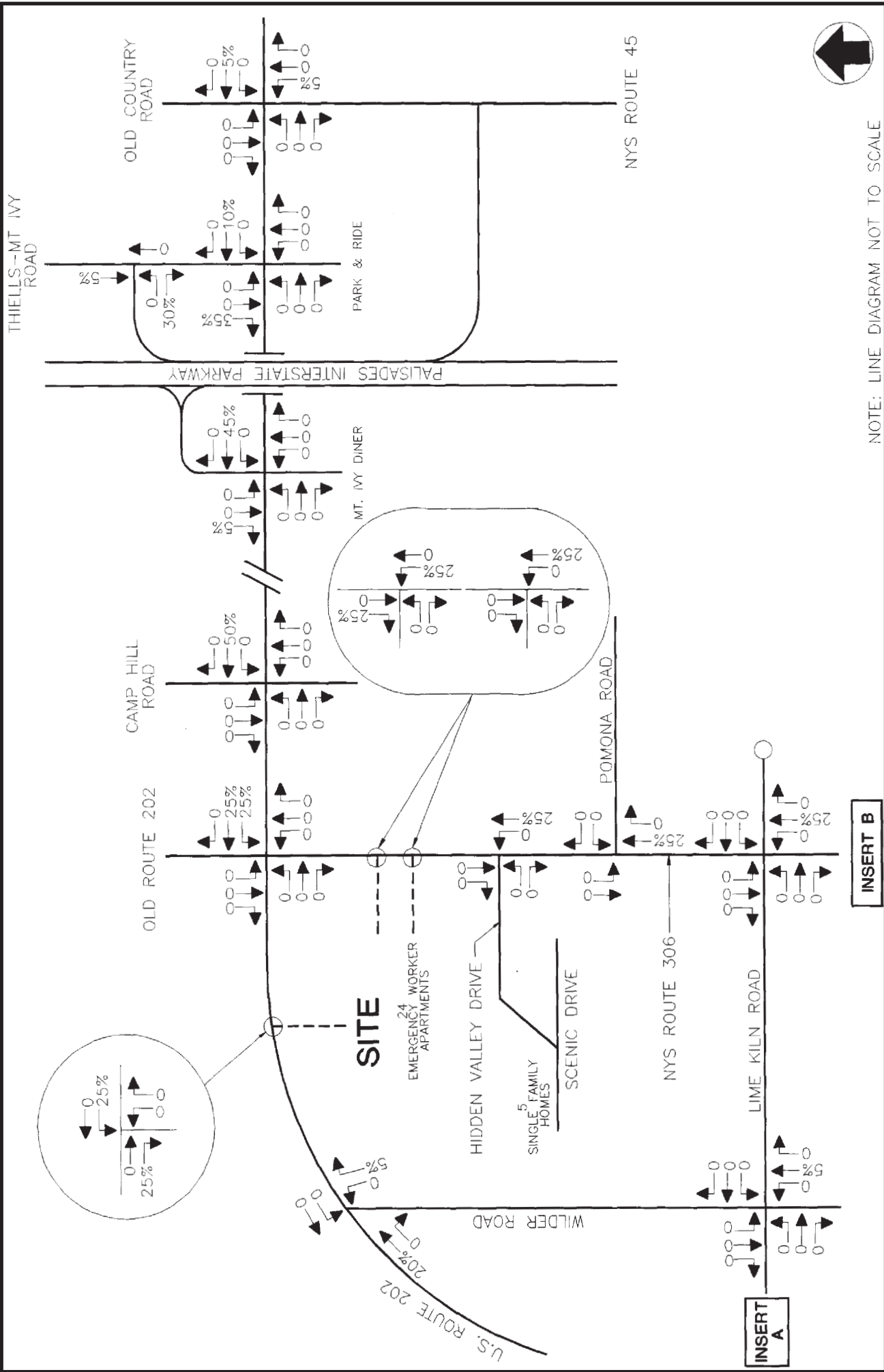


Figure 3.5-10A: Year 2013 No-Build Traffic Volumes
Weekday Peak PM Highway Hour
 Patrick Farm
 Town of Ramapo, Rockland County, NY
 Source: John Collins Engineers, P.C.
 Date: April, 2009

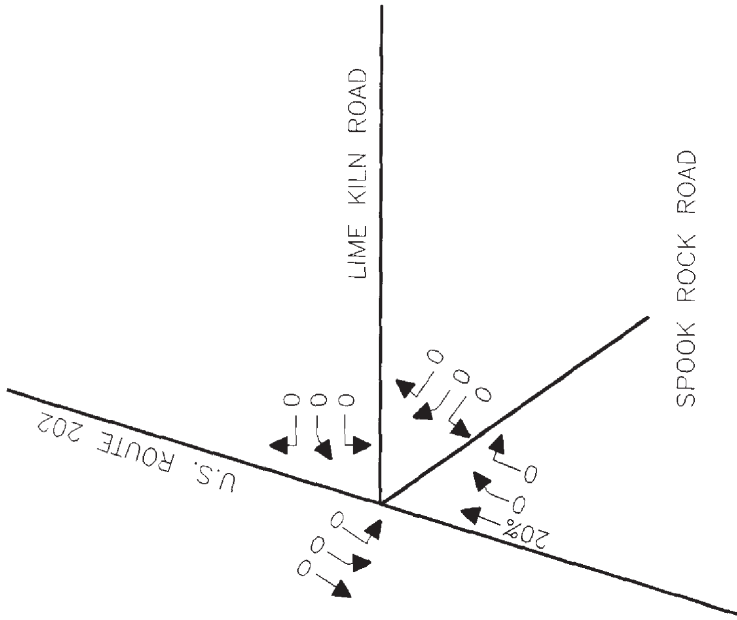


NOTE: LINE DIAGRAM NOT TO SCALE

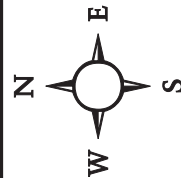


Figure 3.5-11: Arrival Distribution
 Patrick Farm
 Town of Ramapo, Rockland County, NY
 Source: John Collins Engineers, P.C.
 Date: April, 2009

INSERT A

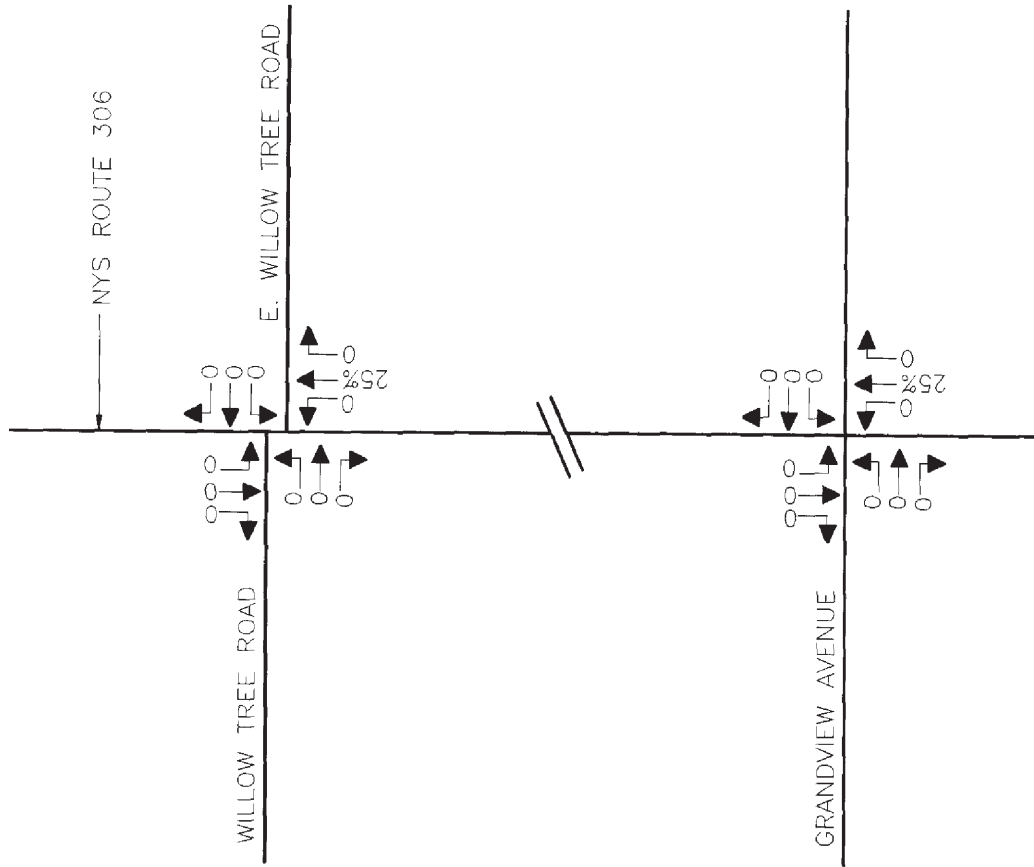


NOTE: LINE DIAGRAM NOT TO SCALE



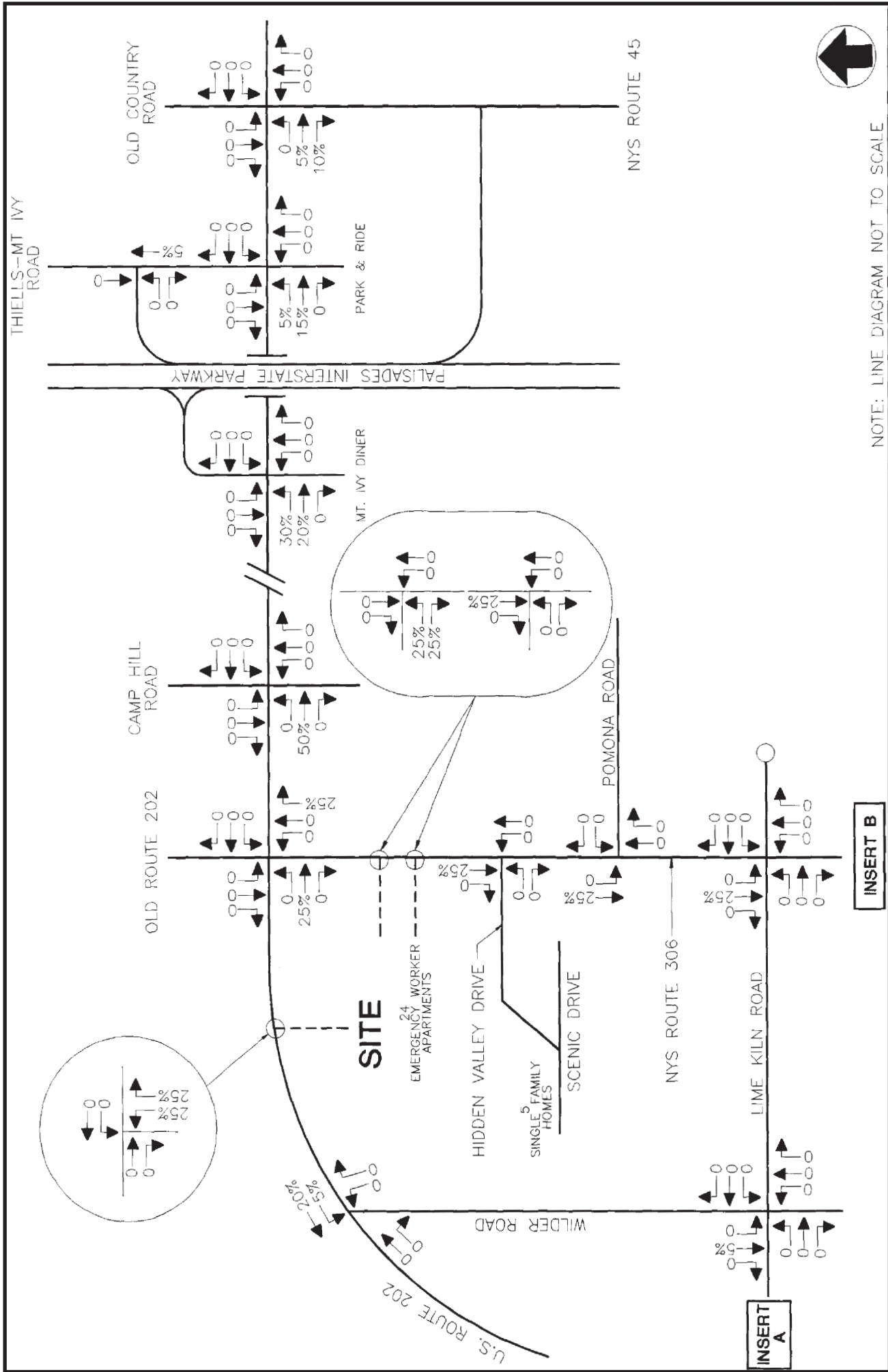
File 07119_4/14/09
JS:07119 Fig 3.5-11A

INSERT B



NOTE: LINE DIAGRAM NOT TO SCALE

Figure 3.5-11A: Arrival Distribution
 Patrick Farm
 Town of Ramapo, Rockland County, NY
 Source: John Collins Engineers, P.C.
 Date: April, 2009

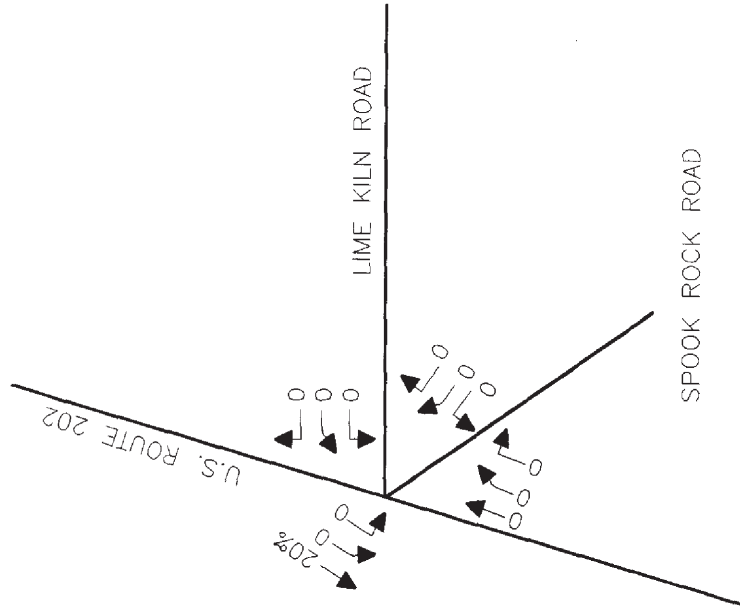


NOTE: LINE DIAGRAM NOT TO SCALE

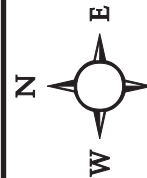


Figure 3.5-12: Departure Distribution
 Patrick Farm
 Town of Ramapo, Rockland County, NY
 Source: John Collins Engineers, P.C.
 Date: April, 2009

INSERT A

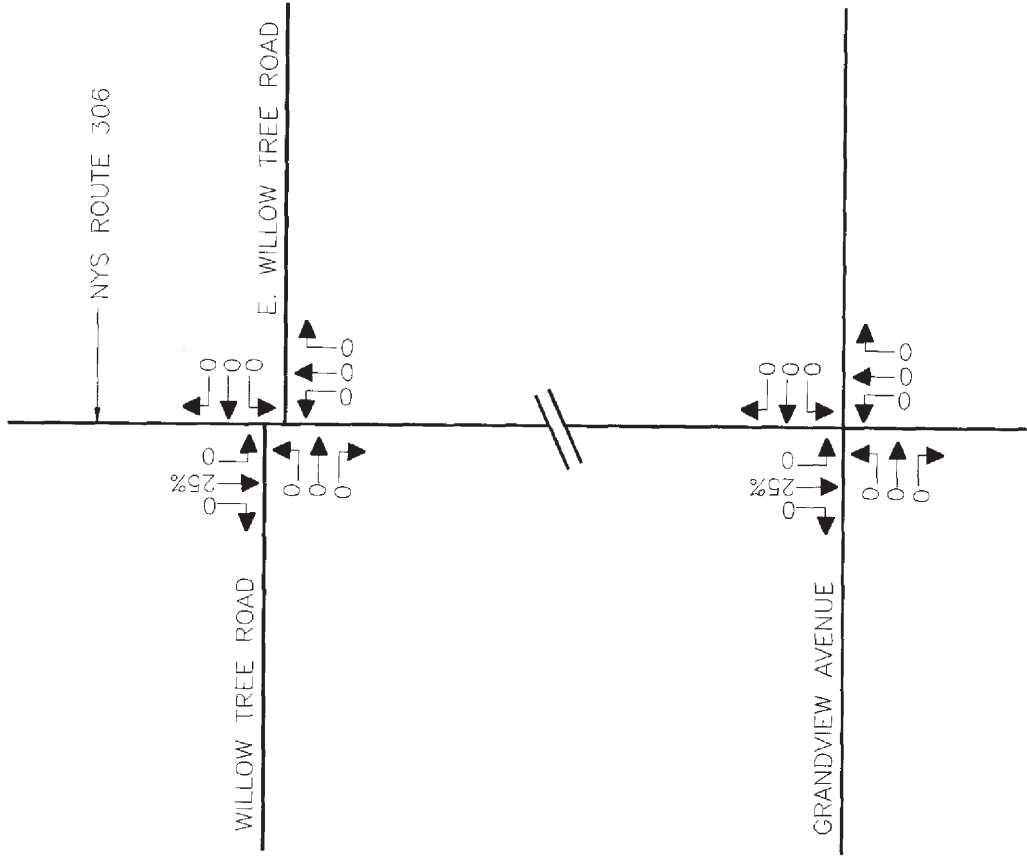


NOTE: LINE DIAGRAM NOT TO SCALE



File 07119_4/14/09
JS:07119 Fig 3.5-12A

INSERT B



NOTE: LINE DIAGRAM NOT TO SCALE

Figure 3.5-12A: Departure Distribution
 Patrick Farm
 Town of Ramapo, Rockland County, NY
 Source: John Collins Engineers, P.C.
 Date: April, 2009

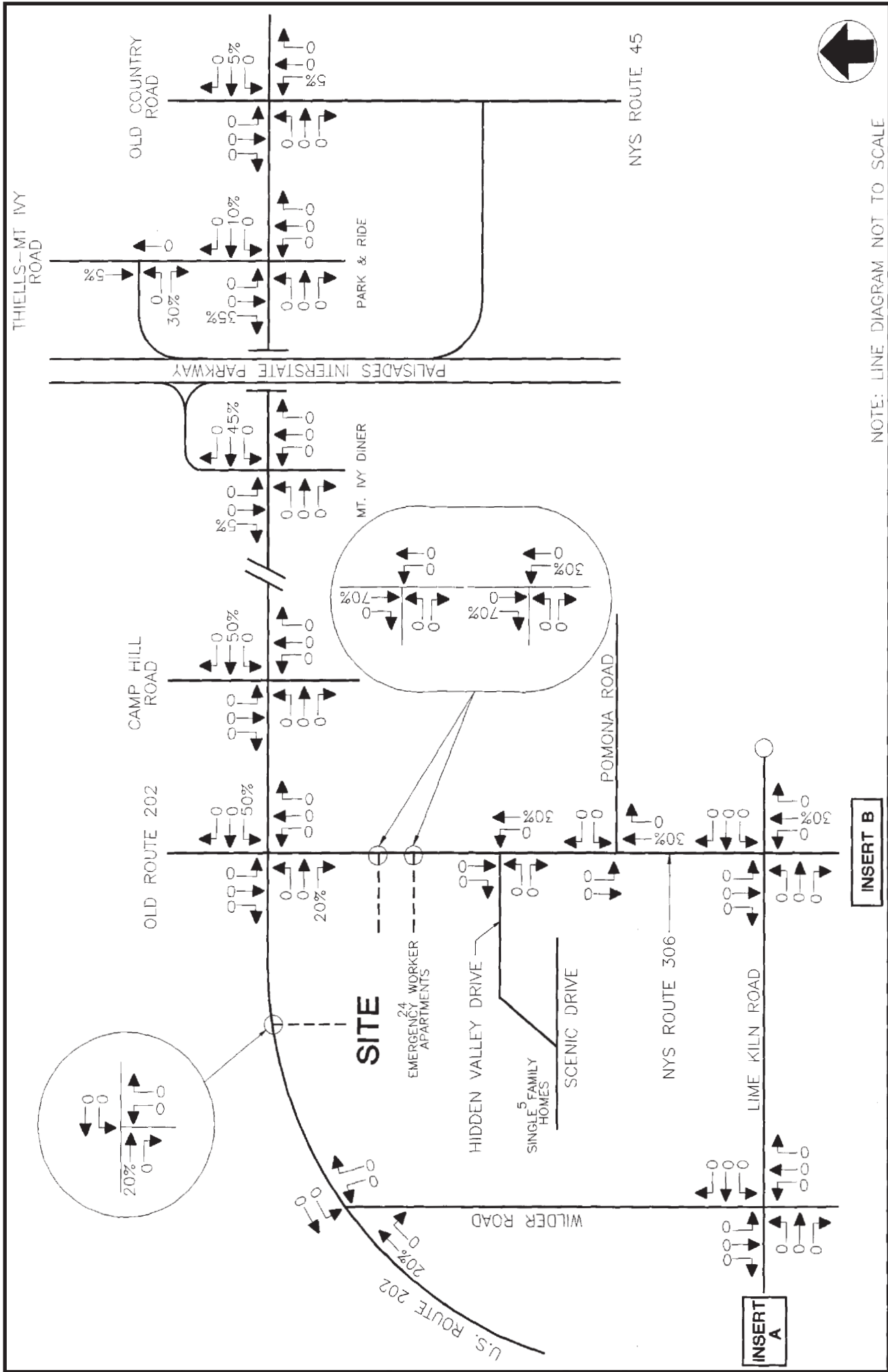
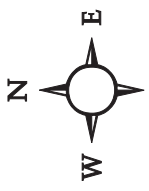
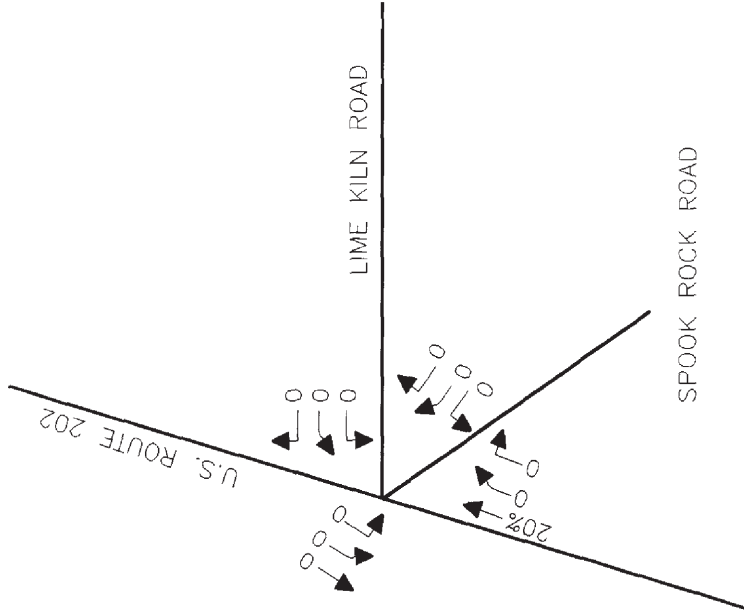


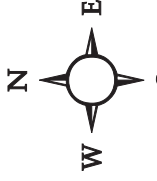
Figure 3.5-13: Arrival Distribution (24 Emergency Worker Apartments)
 Patrick Farm
 Town of Ramapo, Rockland County, NY
 Source: John Collins Engineers, P.C.
 Date: April, 2009



INSERT A

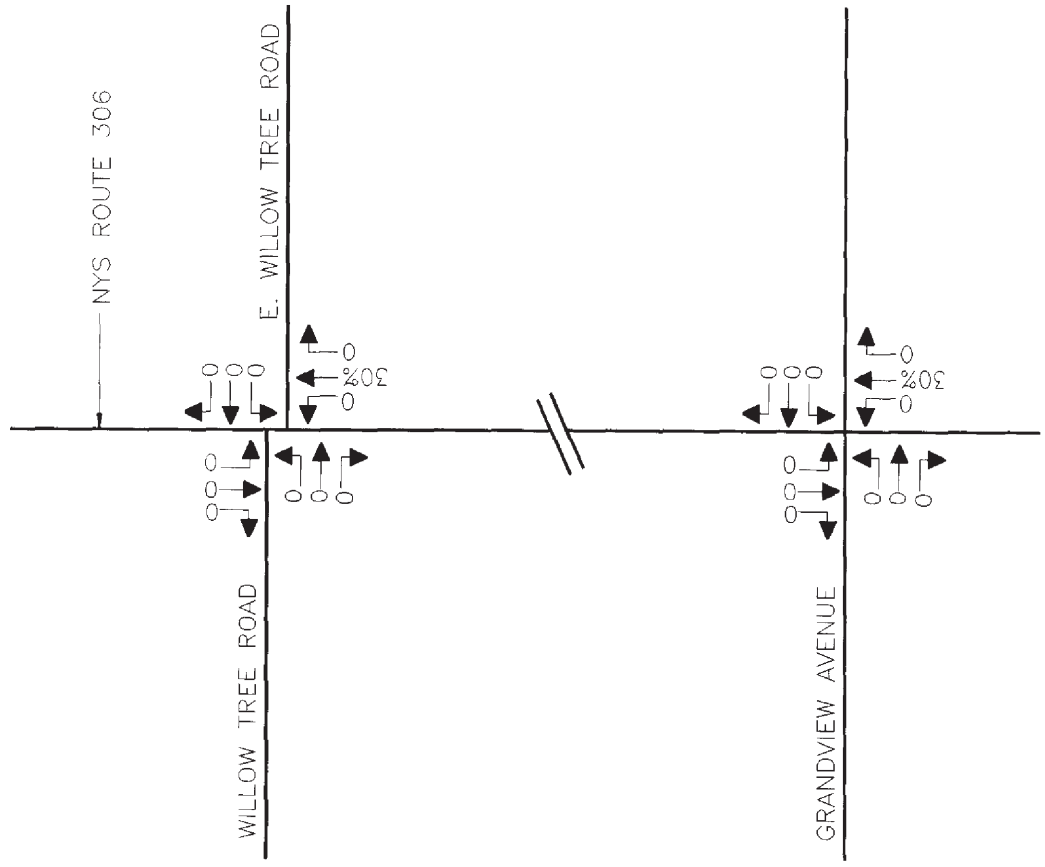


NOTE: LINE DIAGRAM NOT TO SCALE



File 07119, 4/14/09
JS:07119 Fig 3.5-13A

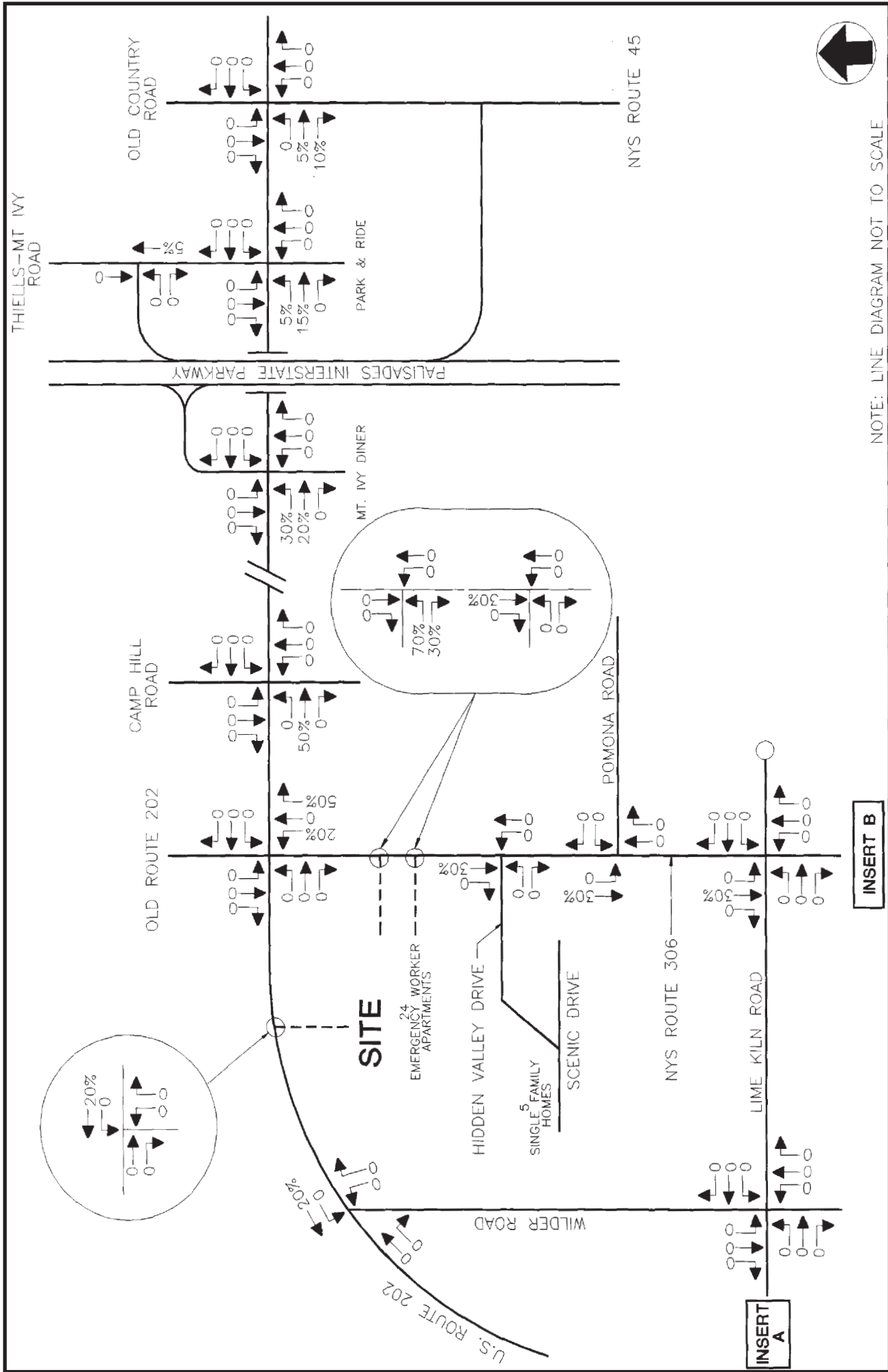
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NOTE: LINE DIAGRAM NOT TO SCALE

Figure 3.5-13A: Arrival Distribution (24 Emergency Worker Apartments)

Patrick Farm
Town of Ramapo, Rockland County, NY
Source: John Collins Engineers, P.C.
Date: April, 2009

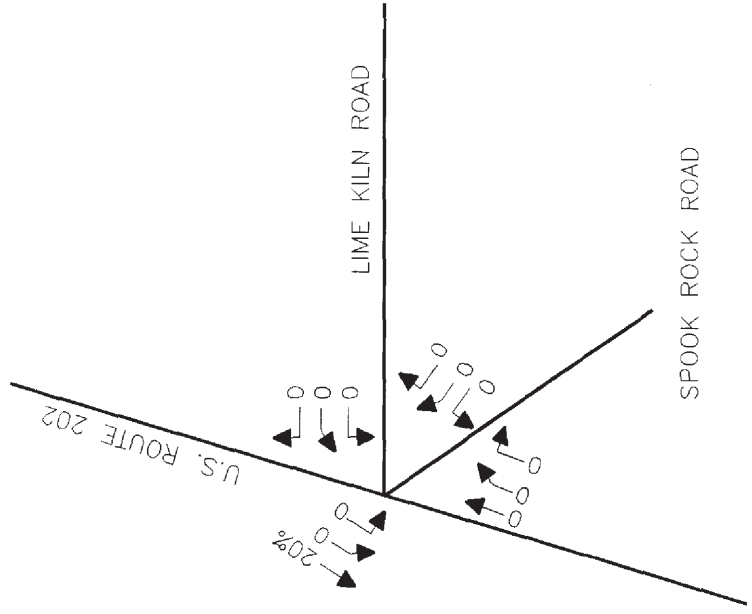


NOTE: LINE DIAGRAM NOT TO SCALE



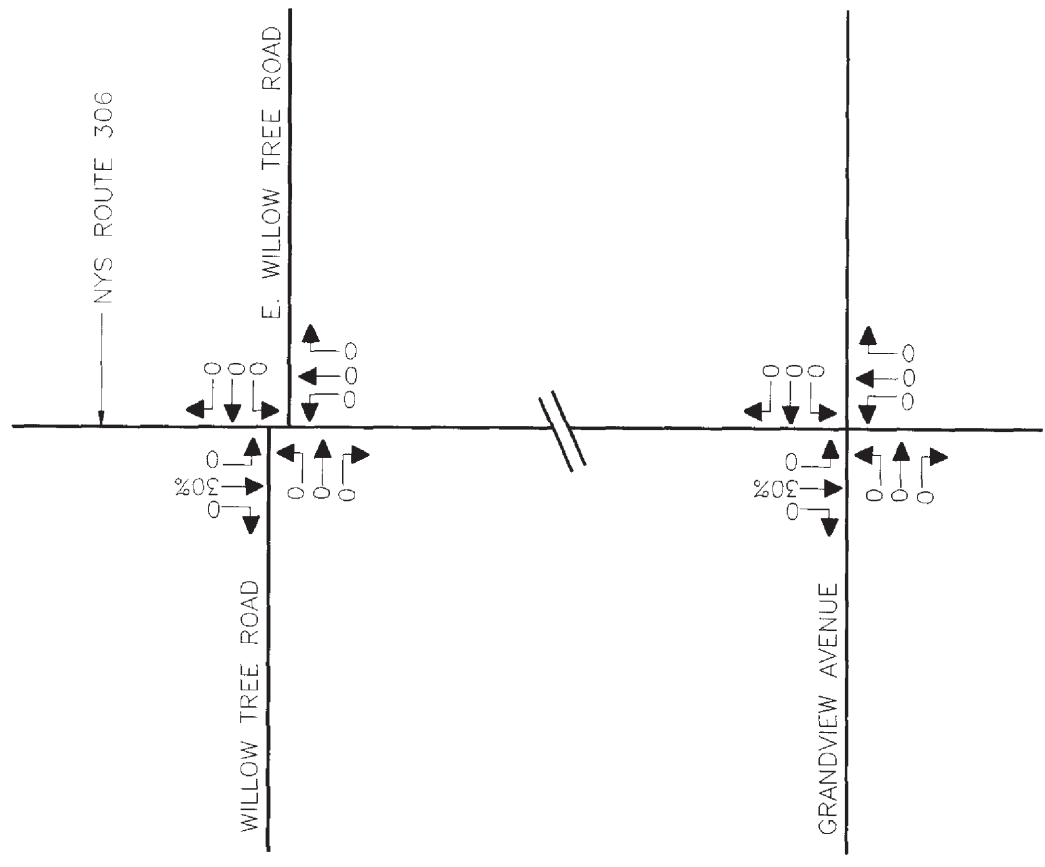
Figure 3.5-14: Departure Distribution (24 Emergency Worker Apartments)
 Patrick Farm
 Town of Ramapo, Rockland County, NY
 Source: John Collins Engineers, P.C.
 Date: April, 2009

INSERT A



NOTE: LINE DIAGRAM NOT TO SCALE

INSERT B



NOTE: LINE DIAGRAM NOT TO SCALE

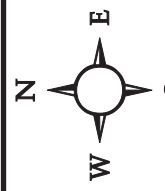
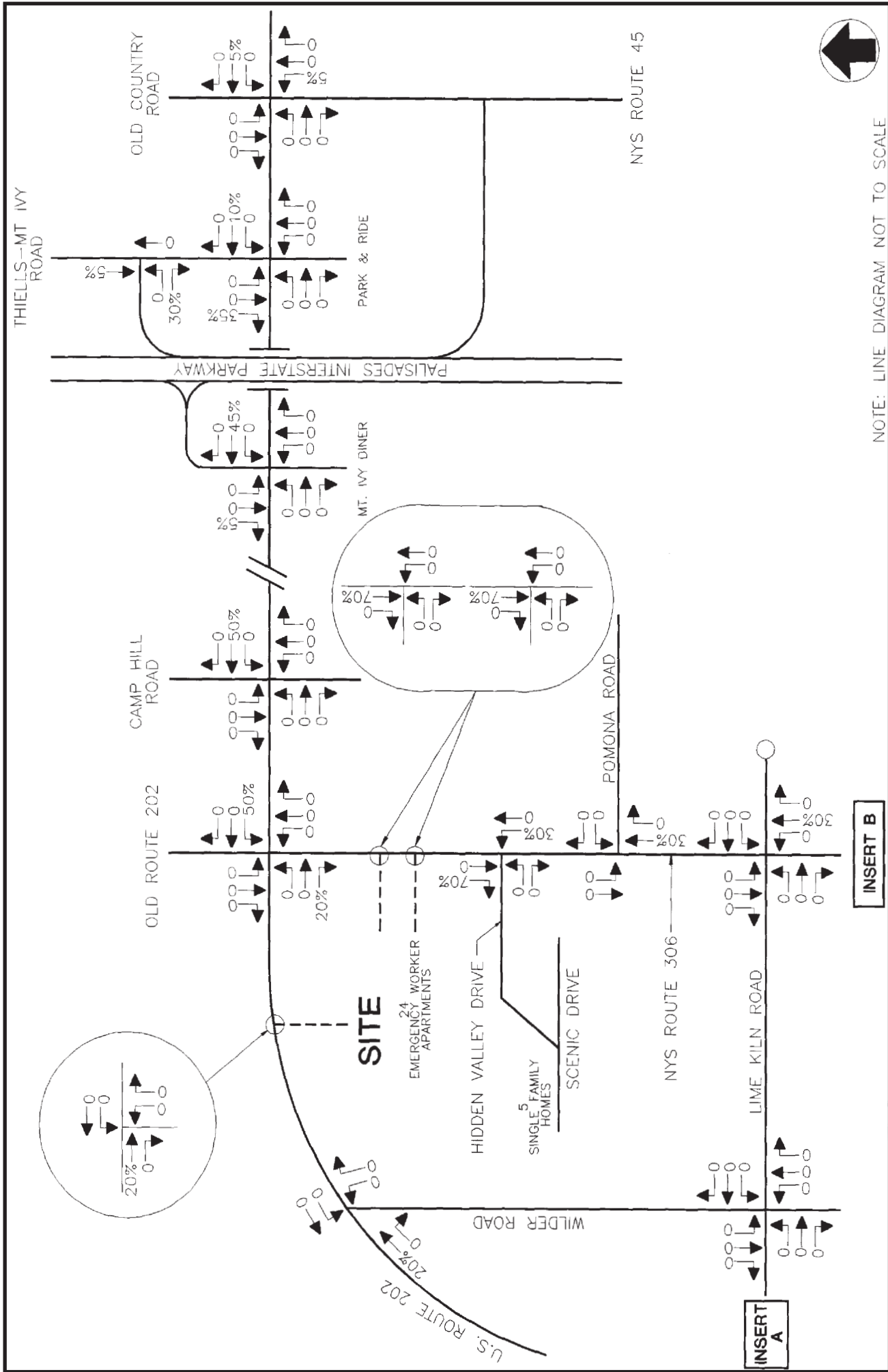
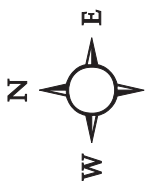


Figure 3.5-14A: Departure Distribution (24 Emergency Worker Apartments)
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 Town of Ramapo, Rockland County, NY
 Source: John Collins Engineers, P.C.
 Date: April, 2009

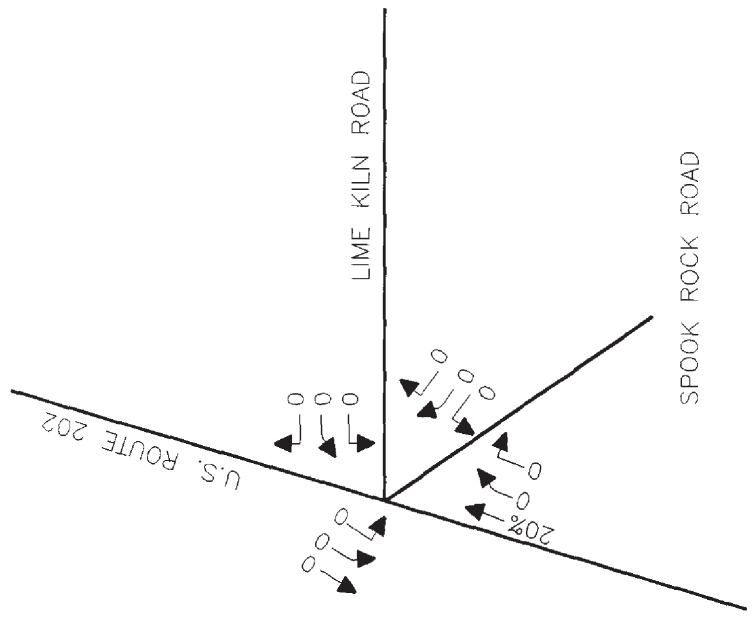


NOTE: LINE DIAGRAM NOT TO SCALE

Figure 3.5-15: Arrival Distribution (5 Single Family Homes To Scenic Drive)
 Patrick Farm
 Town of Ramapo, Rockland County, NY
 Source: John Collins Engineers, P.C.
 Date: April, 2009

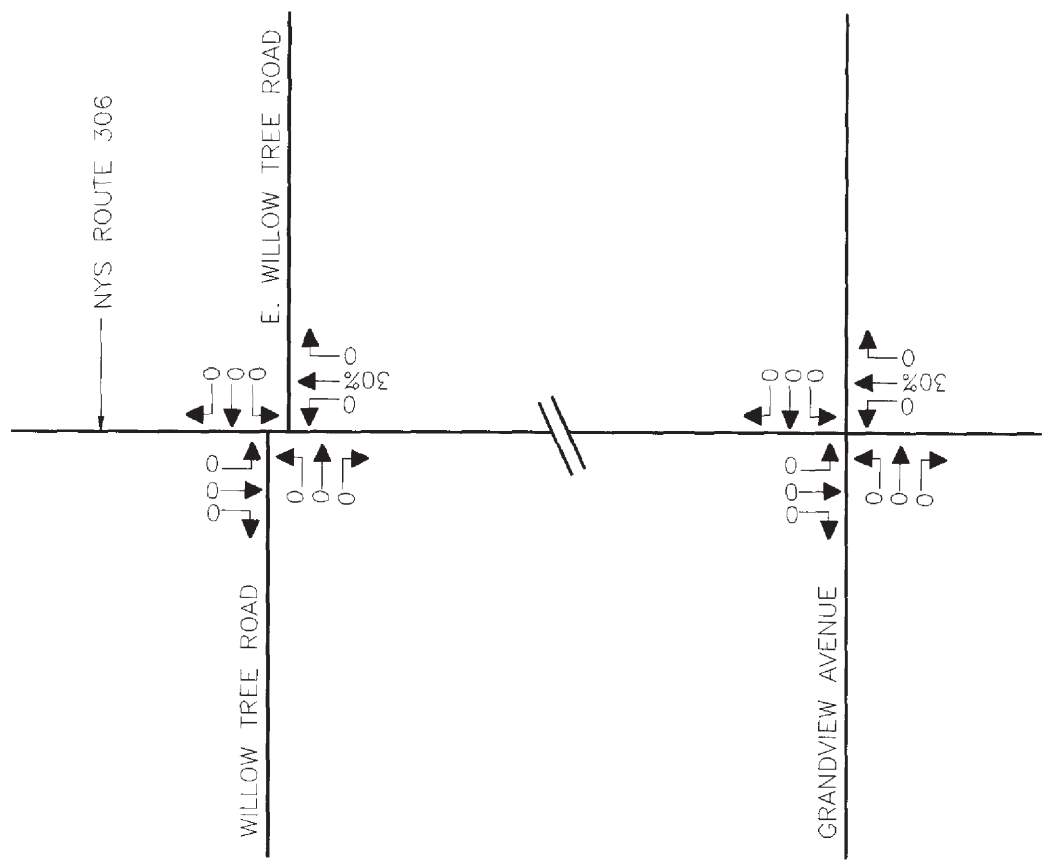


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NOTE: LINE DIAGRAM NOT TO SCALE

INSERT B



NOTE: LINE DIAGRAM NOT TO SCALE

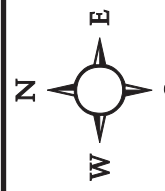
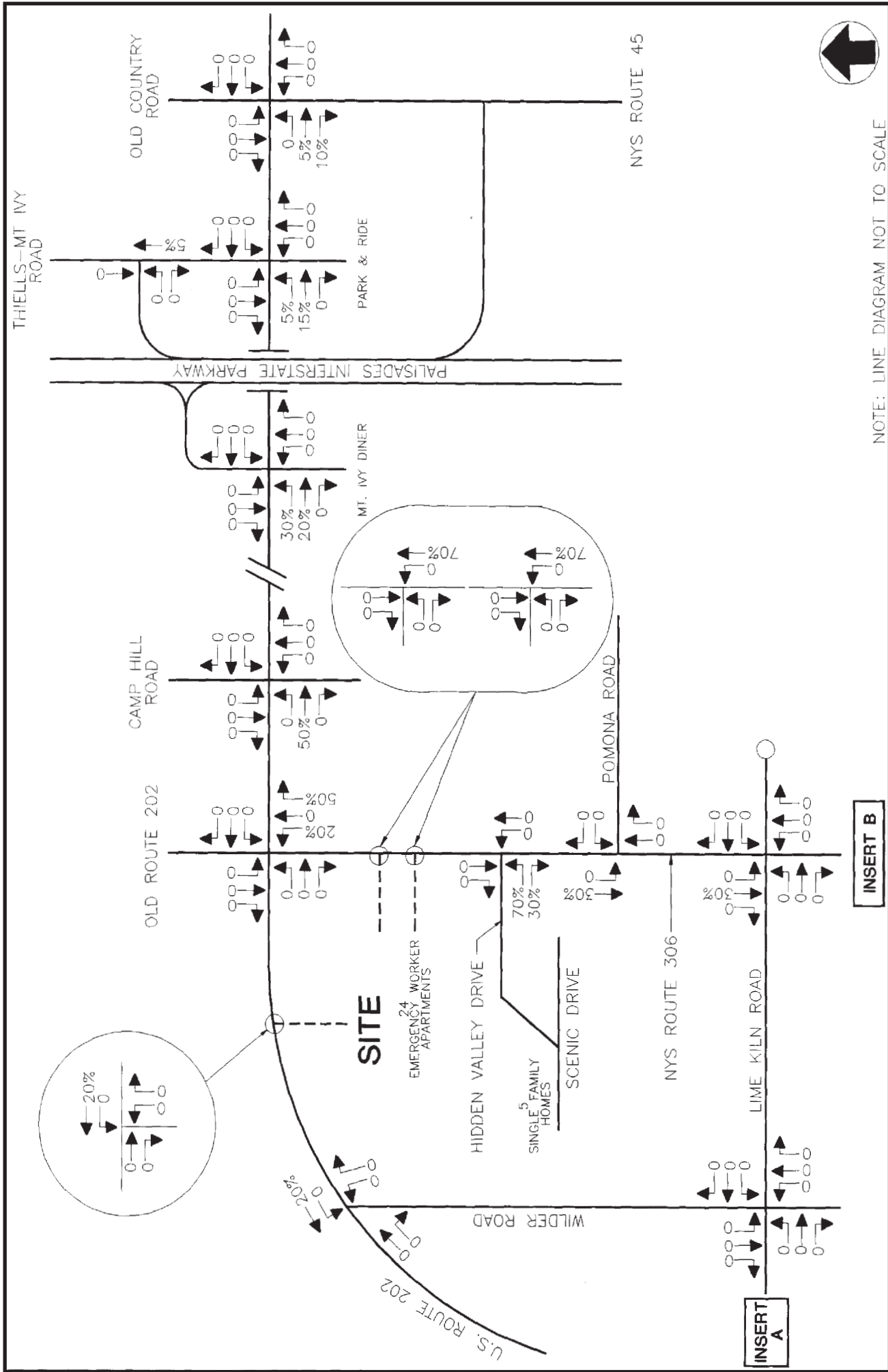


Figure 3.5-15A: Arrival Distribution (5 Single Family Homes To Scenic Drive)
 Patrick Farm
 Town of Ramapo, Rockland County, NY
 Source: John Collins Engineers, P.C.
 Date: April, 2009



NOTE: LINE DIAGRAM NOT TO SCALE

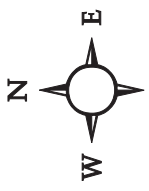
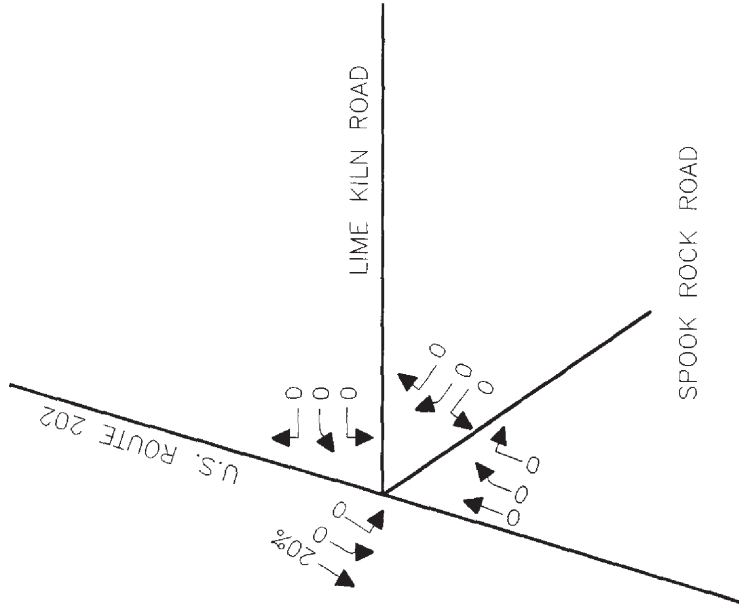
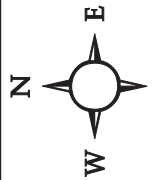


Figure 3.5-16: Departure Distribution (5 Single Family Homes To Scenic Drive)
 Patrick Farm
 Town of Ramapo, Rockland County, NY
 Source: John Collins Engineers, P.C.
 Date: April, 2009

INSERT A

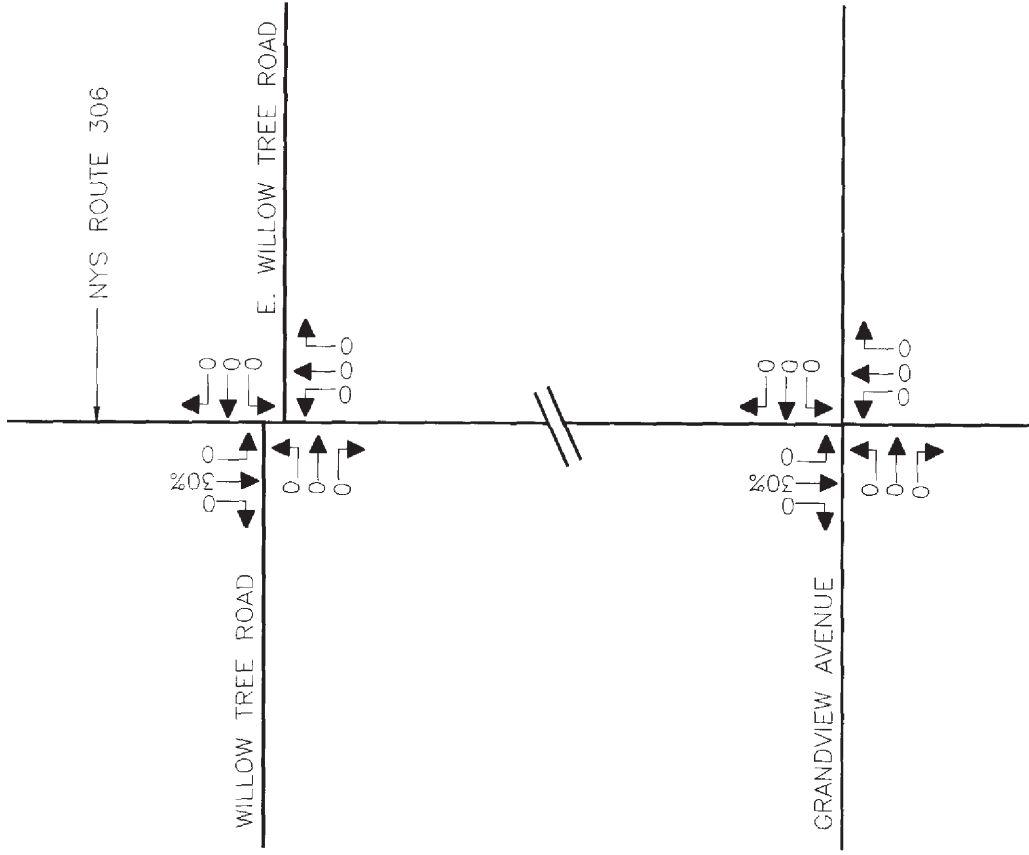


NOTE: LINE DIAGRAM NOT TO SCALE



File 07119_4/14/09
JS:07119 Fig 3.5-16A

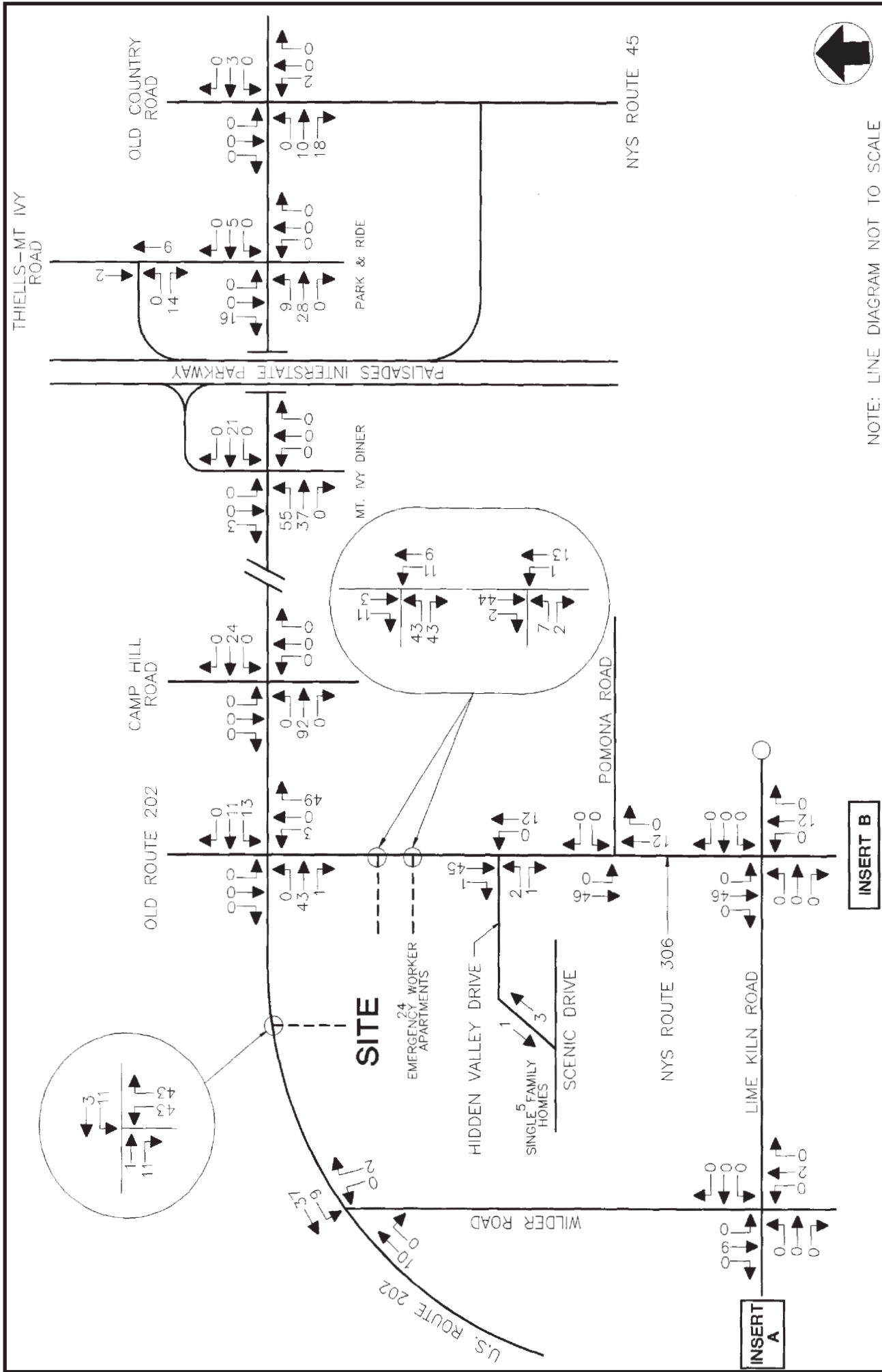
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NOTE: LINE DIAGRAM NOT TO SCALE

Figure 3.5-16A: Departure Distribution (5 Single Family Homes To Scenic Drive)

Patrick Farm
Town of Ramapo, Rockland County, NY
Source: John Collins Engineers, P.C.
Date: April, 2009



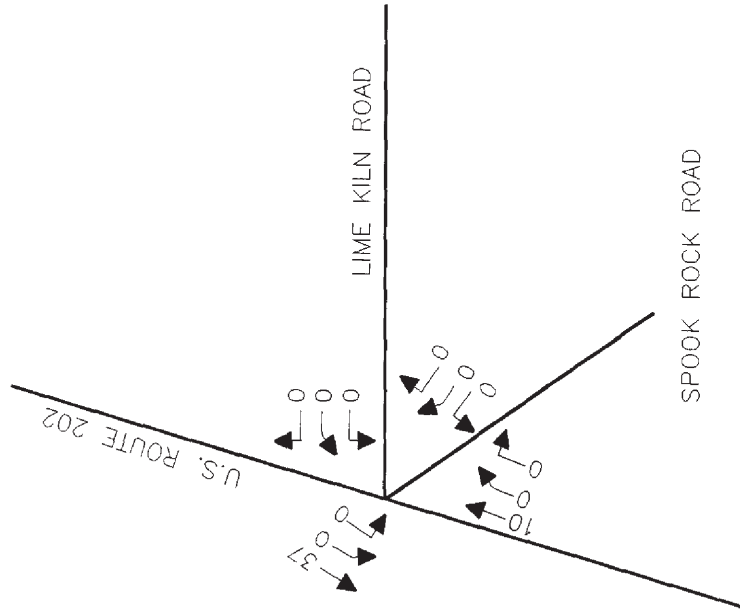
NOTE: LINE DIAGRAM NOT TO SCALE



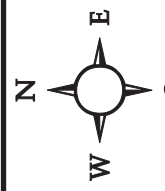
Figure 3.5-17: Site Generated Traffic Volumes Weekday Peak AM Highway Hour
 Patrick Farm
 Town of Ramapo, Rockland County, NY
 Source: John Collins Engineers, P.C.
 Date: April, 2009



INSERT A

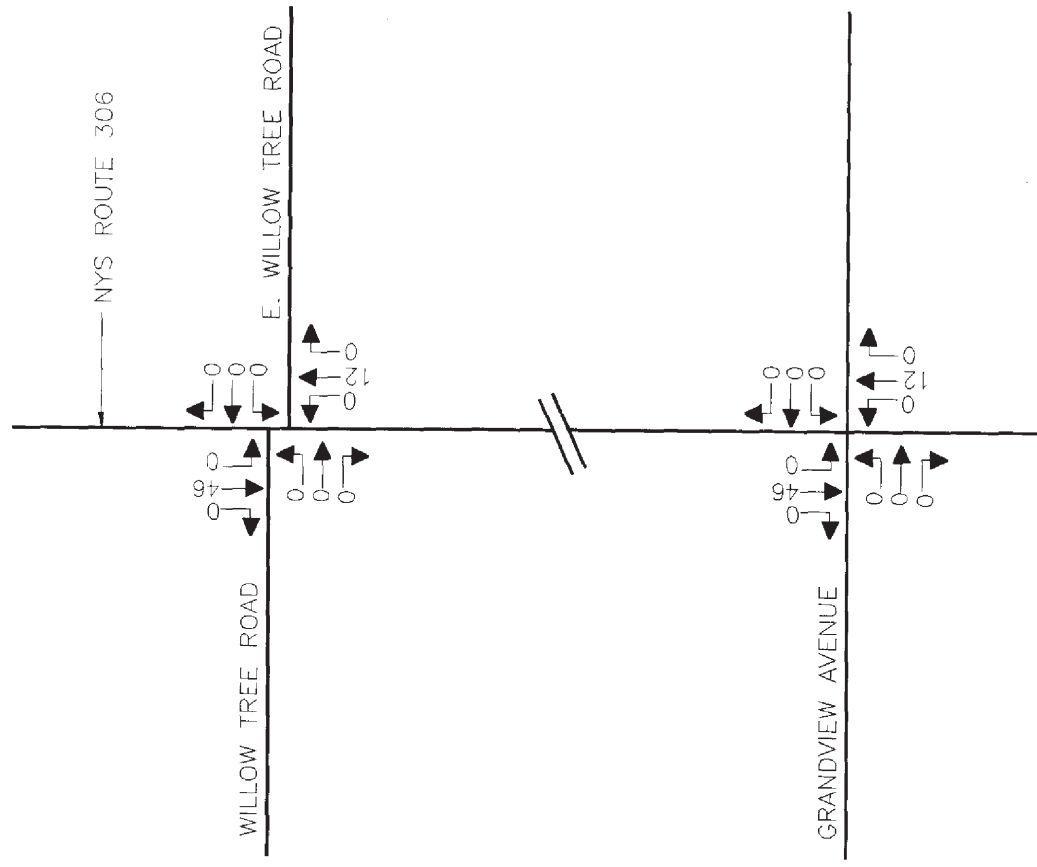


NOTE: LINE DIAGRAM NOT TO SCALE



File 07119_4/14/09
JS:07119 Fig 3.5-17A

INSERT B



NOTE: LINE DIAGRAM NOT TO SCALE



Figure 3.5-17A: Site Generated Traffic Volumes Weekday Peak AM Highway Hour
 Patrick Farm
 Town of Ramapo, Rockland County, NY
 Source: John Collins Engineers, P.C.
 Date: April, 2009

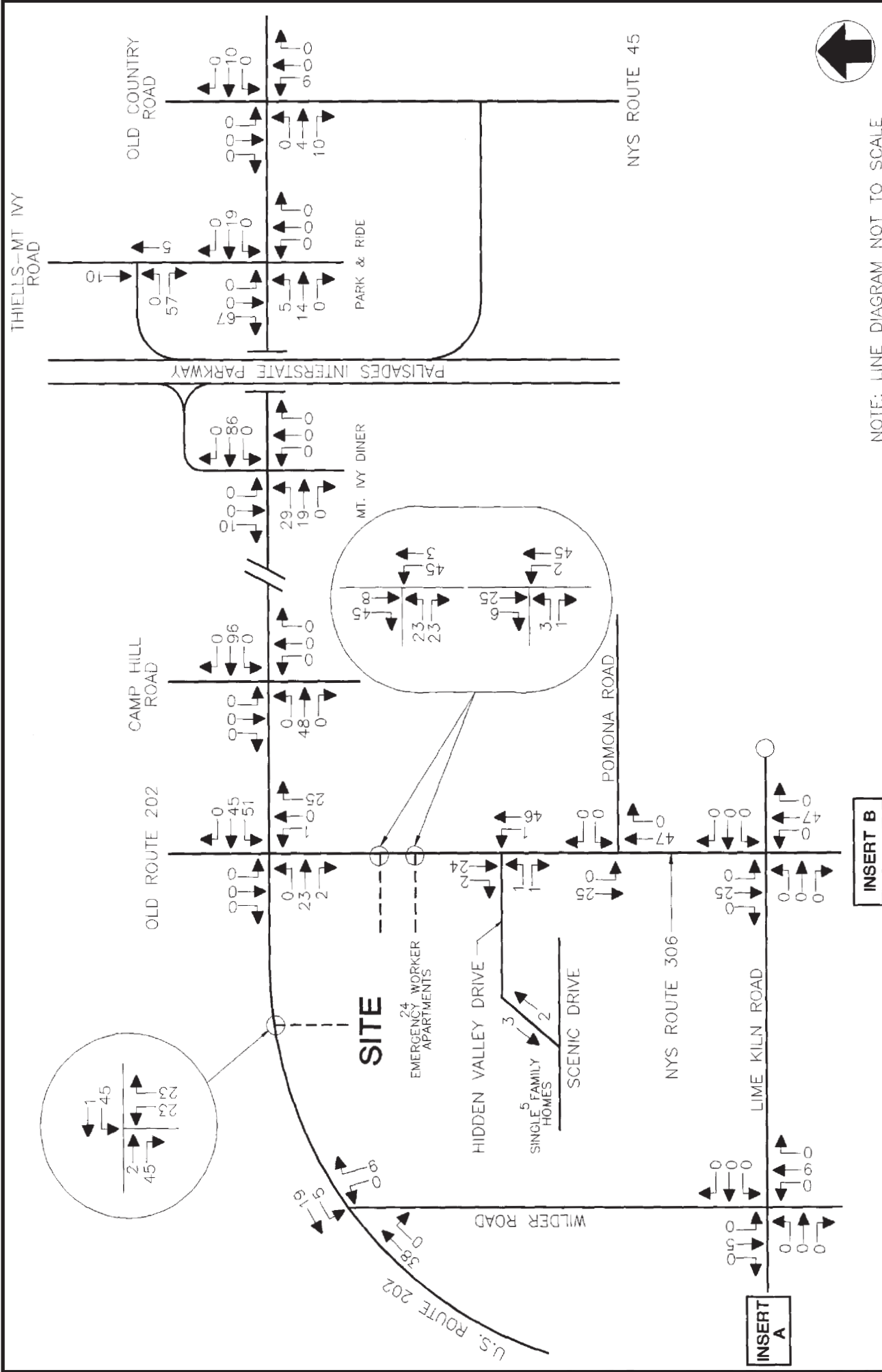
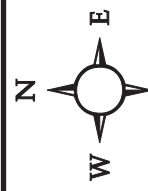
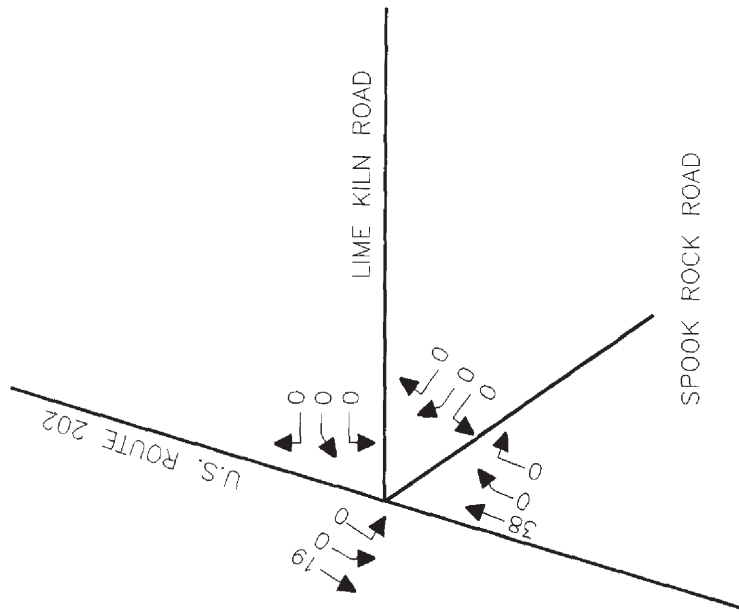


Figure 3.5-18: Site Generated Traffic Volumes Weekday Peak PM Highway Hour
 Patrick Farm
 Town of Ramapo, Rockland County, NY
 Source: John Collins Engineers, P.C.
 Date: April, 2009

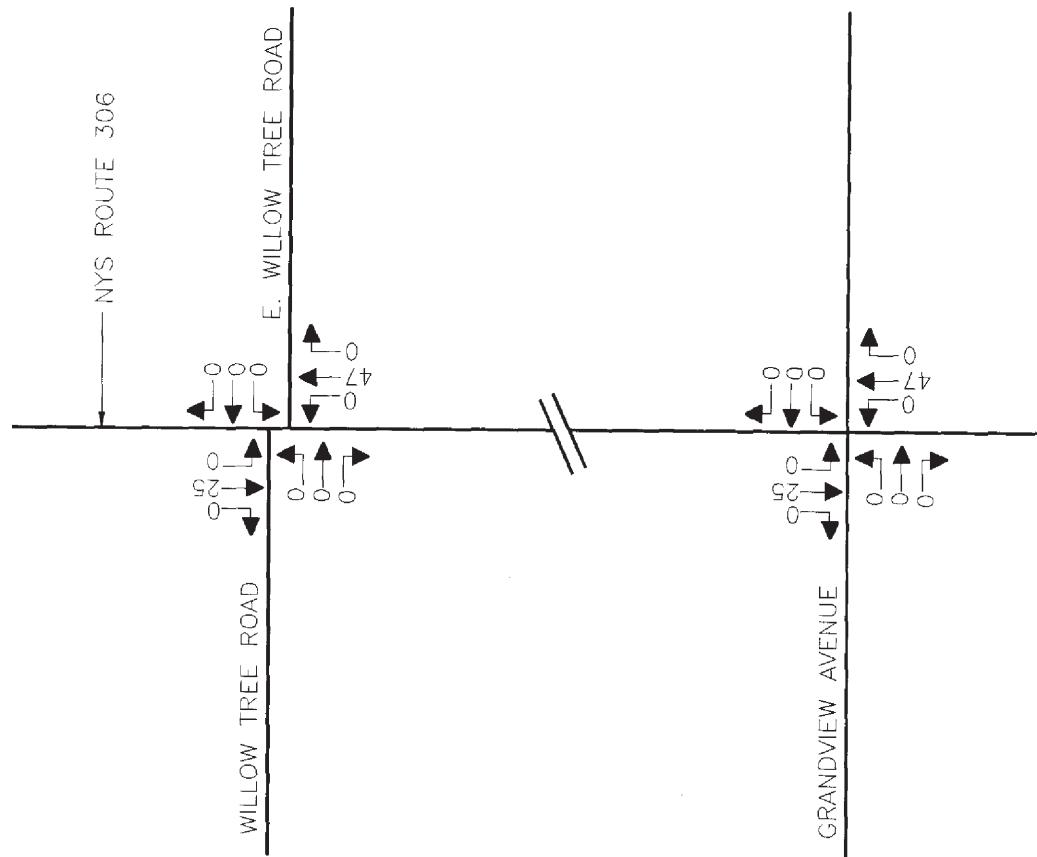


INSERT A



NOTE: LINE DIAGRAM NOT TO SCALE

INSERT B



NOTE: LINE DIAGRAM NOT TO SCALE

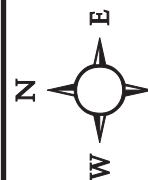


Figure 3.5-18A: Site Generated Traffic Volumes Weekday Peak PM Highway Hour
 Patrick Farm
 Town of Ramapo, Rockland County, NY
 Source: John Collins Engineers, P.C.
 Date: April, 2009

THIELLS-MT IVY ROAD

OLD COUNTRY ROAD

148
867
X

322

137
277
174
432
11

6
748
254

900

6
424
331

6
218

6
6
8
9

NYS ROUTE 45

PALISADES INTERSTATE PARKWAY

PARK & RIDE

CAMP HILL ROAD

968
711
16
142

28
281
469
6

32
772
33

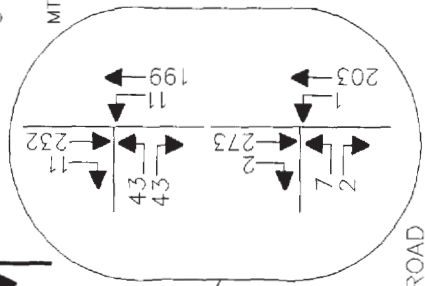
22
42
516
6

18
669
166

102

42
22
7

MT. IVY DINER



POMONA ROAD

OLD ROUTE 202

18
669
166

102

42
516
6

18
669
166

42
22
7

18
669
166

SITE

EMERGENCY WORKER APARTMENTS

HIDDEN VALLEY DRIVE

SINGLE FAMILY HOMES

SCENIC DRIVE

NYS ROUTE 306

LIME KILN ROAD

OLD ROUTE 202

695
11
2
2

397
11
2
2

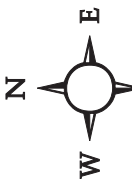
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38
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38
44

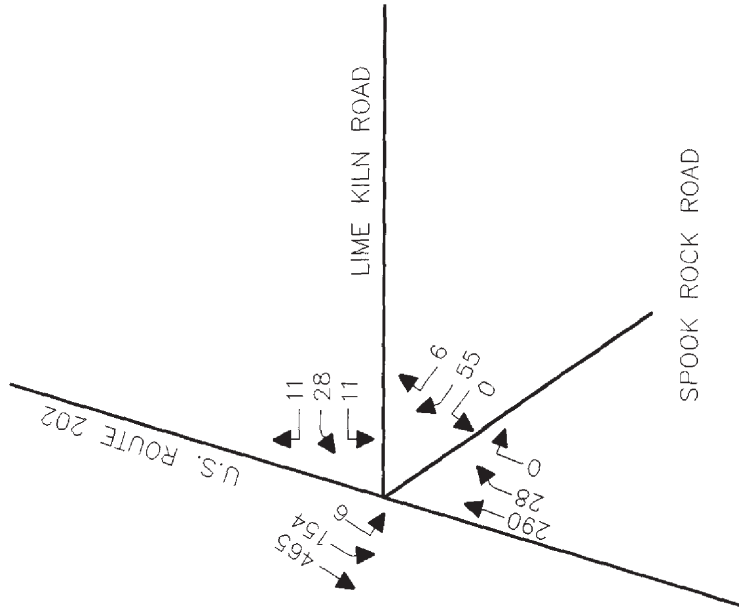
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NOTE: LINE DIAGRAM NOT TO SCALE

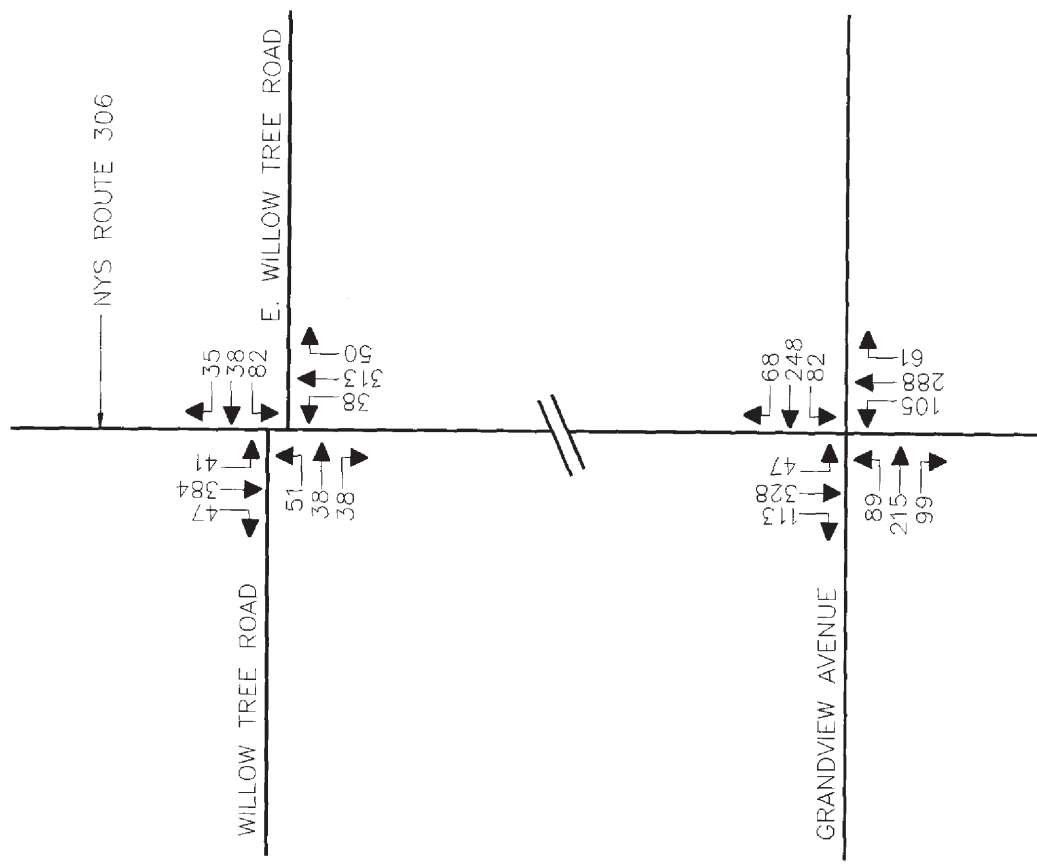
Figure 3.5-19: Year 2013 Build Traffic Volumes
Weekday Peak AM Highway Hour
 Patrick Farm
 Town of Ramapo, Rockland County, NY
 Source: John Collins Engineers, P.C.
 Date: April, 2009

INSERT A



NOTE: LINE DIAGRAM NOT TO SCALE

INSERT B



NOTE: LINE DIAGRAM NOT TO SCALE

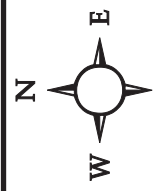


Figure 3.5-19A: Year 2013 Build Traffic Volumes
Weekday Peak AM Highway Hour
 Patrick Farm
 Town of Ramapo, Rockland County, NY
 Source: John Collins Engineers, P.C.
 Date: April, 2009

THIELLS-MT IVY ROAD

OLD COUNTRY ROAD

PALISADES INTERSTATE PARKWAY

CAMP HILL ROAD

OLD ROUTE 202

OLD ROUTE 202

WILDER ROAD

U.S. ROUTE 202

NYS ROUTE 45

MT. IVY DINER

EMERGENCY WORKER APARTMENTS

HIDDEN VALLEY DRIVE

SINGLE FAMILY HOMES

SCENIC DRIVE

NYS ROUTE 306

LIME KILN ROAD

INSERT A

INSERT B



NOTE: LINE DIAGRAM NOT TO SCALE

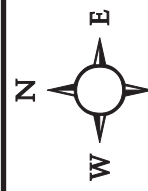
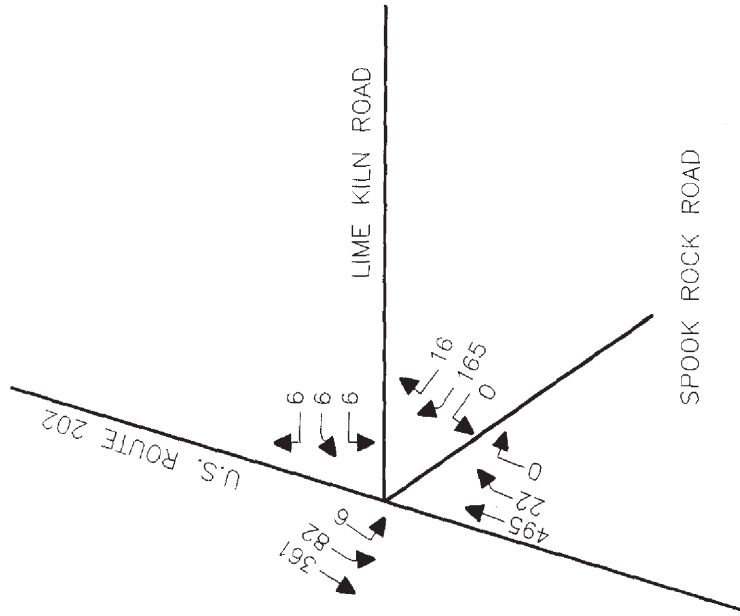


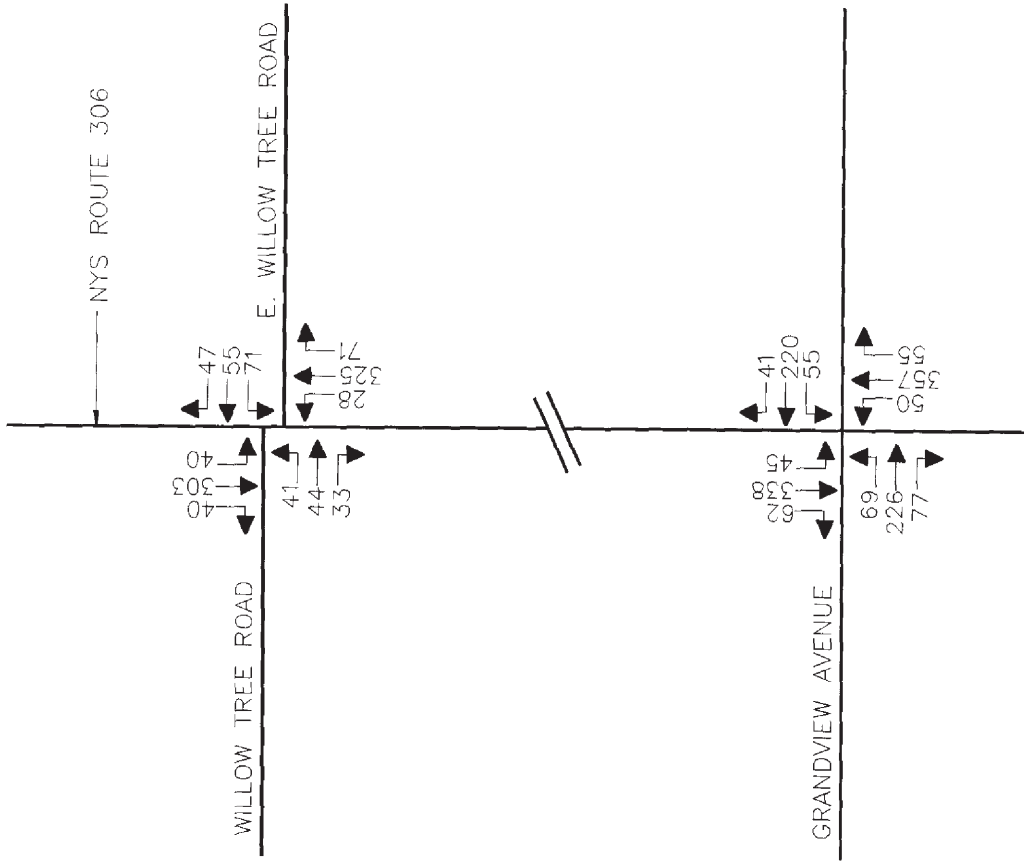
Figure 3.5-20: Year 2013 Build Traffic Volumes
Weekday Peak PM Highway Hour
Patrick Farm
Town of Ramapo, Rockland County, NY
Source: John Collins Engineers, P.C.
Date: April, 2009

INSERT A



NOTE: LINE DIAGRAM NOT TO SCALE

INSERT B



NOTE: LINE DIAGRAM NOT TO SCALE

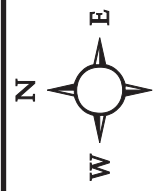
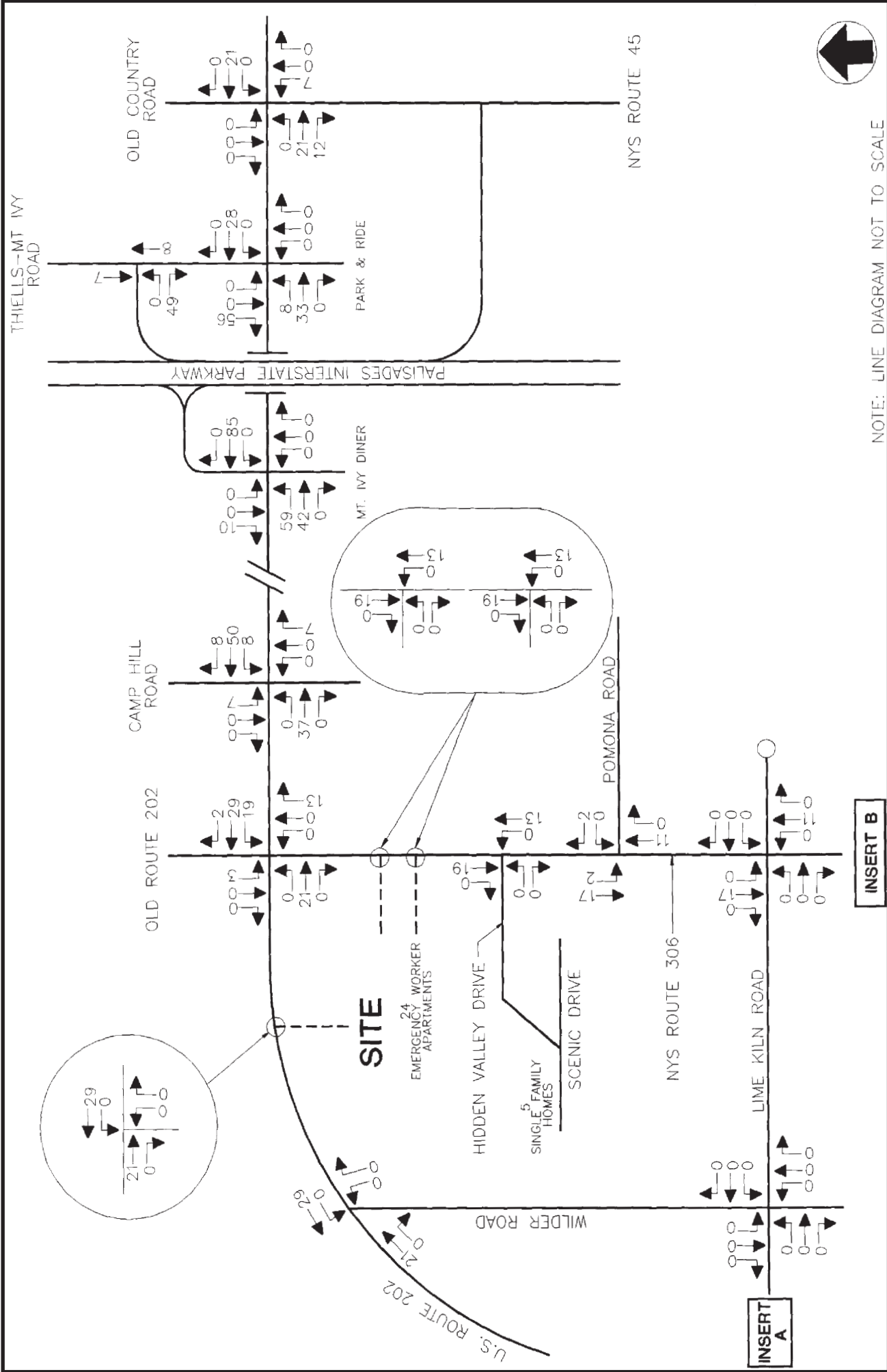
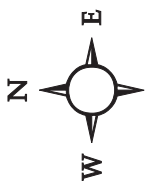


Figure 3.5-20A: Year 2013 Build Traffic Volumes
Weekday Peak PM Highway Hour
 Patrick Farm
 Town of Ramapo, Rockland County, NY
 Source: John Collins Engineers, P.C.
 Date: April, 2009

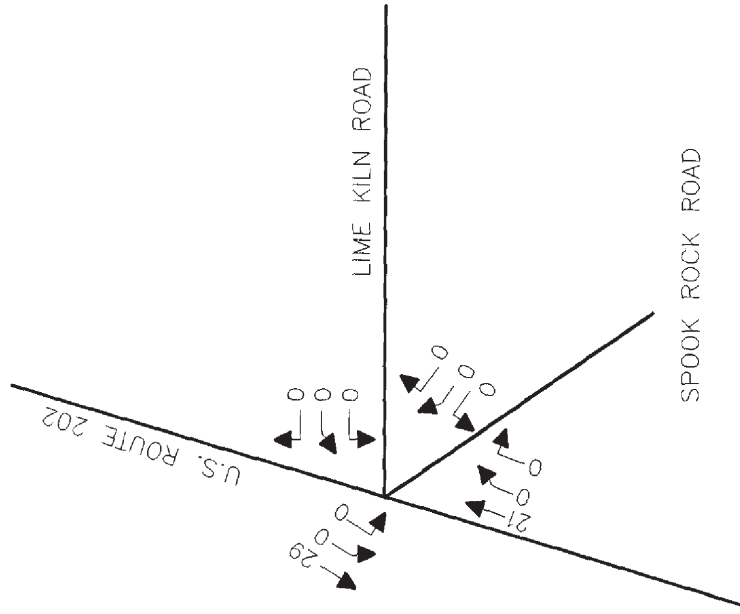


NOTE: LINE DIAGRAM NOT TO SCALE

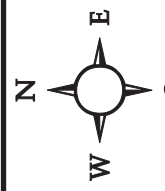
Figure 3.5-21: Minisceongo Park Traffic Volumes
Weekday Peak AM Highway Hour
 Patrick Farm
 Town of Ramapo, Rockland County, NY
 Source: John Collins Engineers, P.C.
 Date: April, 2009



INSERT A

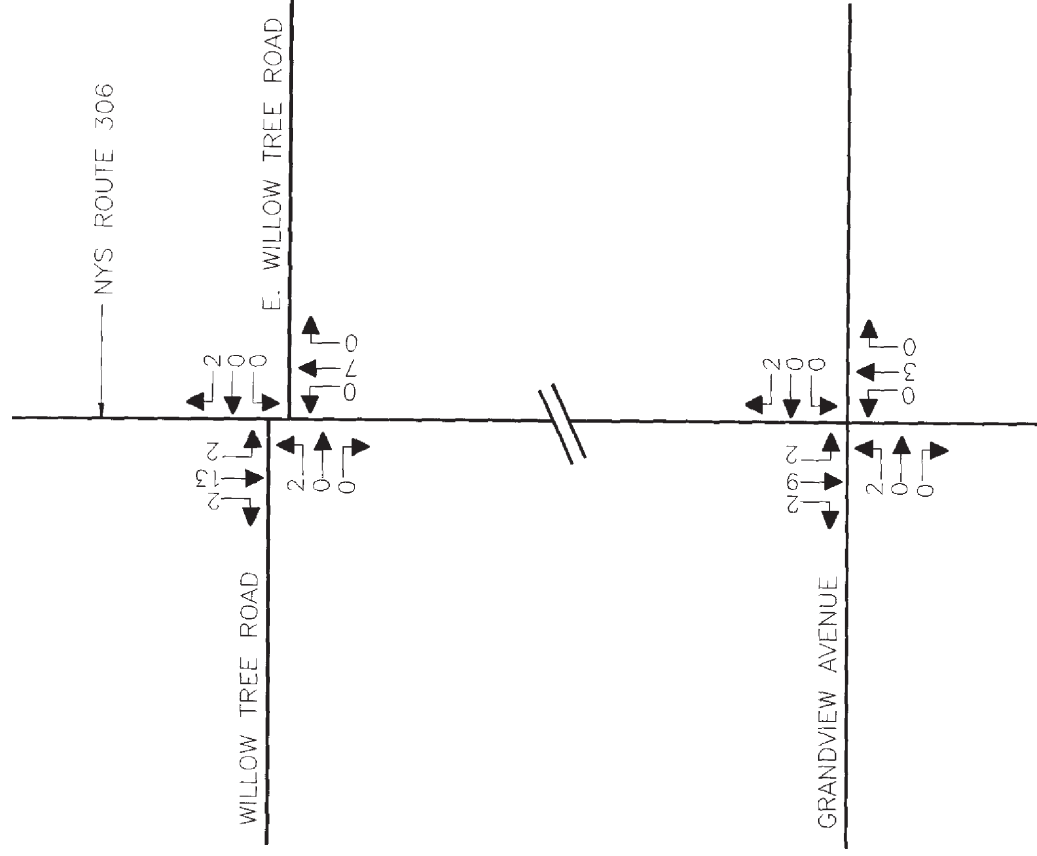


NOTE: LINE DIAGRAM NOT TO SCALE



File 07119_4/14/09
JS:07119 Fig 3.5-21A

INSERT B



NOTE: LINE DIAGRAM NOT TO SCALE

Figure 3.5-21A: Minisceongo Park Traffic Volumes
Weekday Peak AM Highway Hour
 Patrick Farm
 Town of Ramapo, Rockland County, NY
 Source: John Collins Engineers, P.C.
 Date: April, 2009

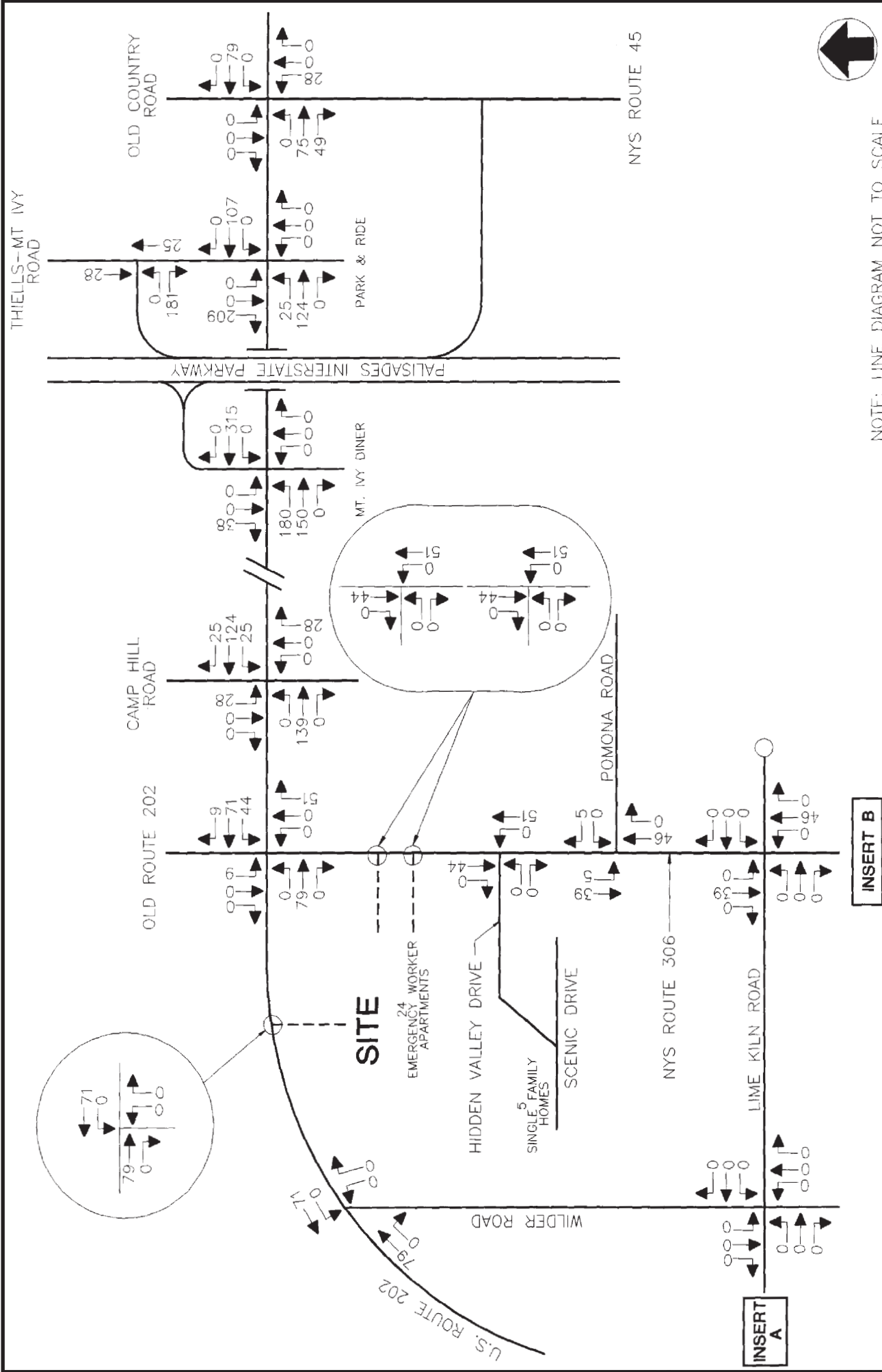
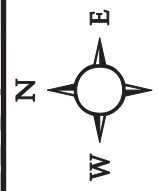
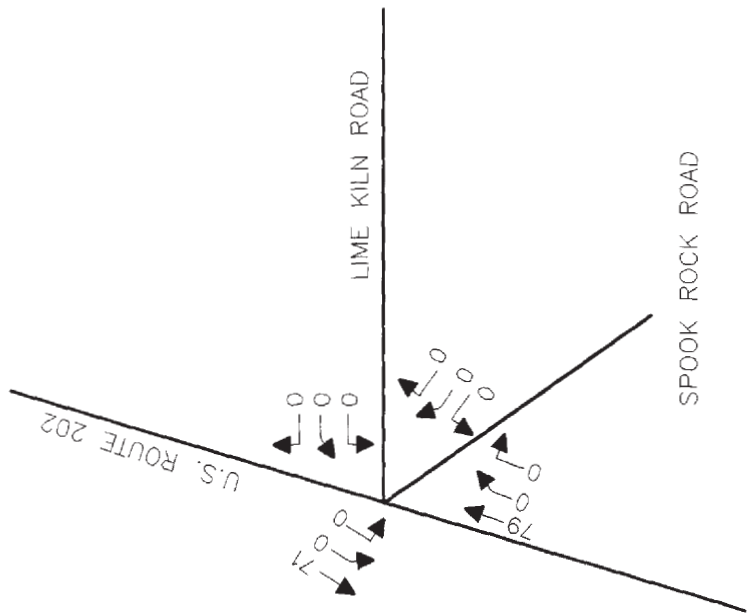


Figure 3.5-22: Minisceongo Park Traffic Volumes
 Weekday Peak PM Highway Hour
 Patrick Farm
 Town of Ramapo, Rockland County, NY
 Source: John Collins Engineers, P.C.
 Date: April, 2009

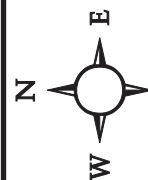
NOTE: LINE DIAGRAM NOT TO SCALE



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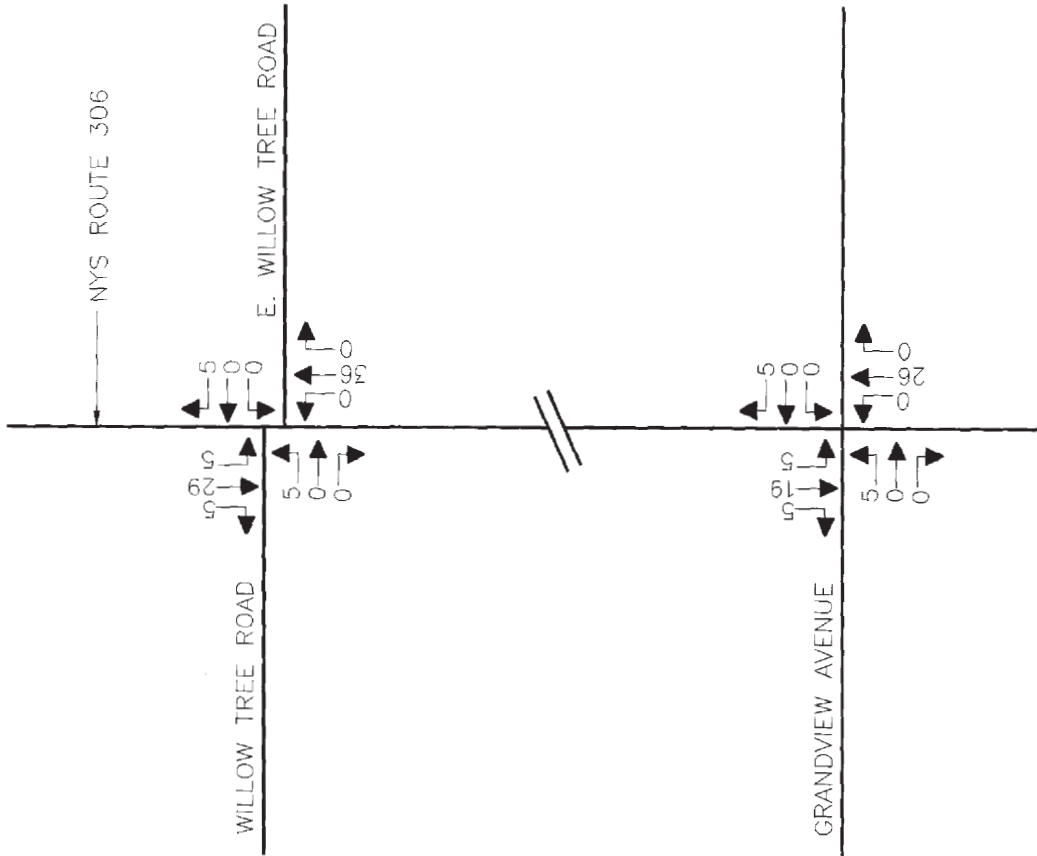


NOTE: LINE DIAGRAM NOT TO SCALE



File 07119_4/14/09
JS:07119 Fig 3.5-22A

INSERT B



NOTE: LINE DIAGRAM NOT TO SCALE

Figure 3.5-22A: Minisceongo Park Traffic Volumes
Weekday PM Peak Highway Hour
 Patrick Farm
 Town of Ramapo, Rockland County, NY
 Source: John Collins Engineers, P.C.
 Date: April, 2009

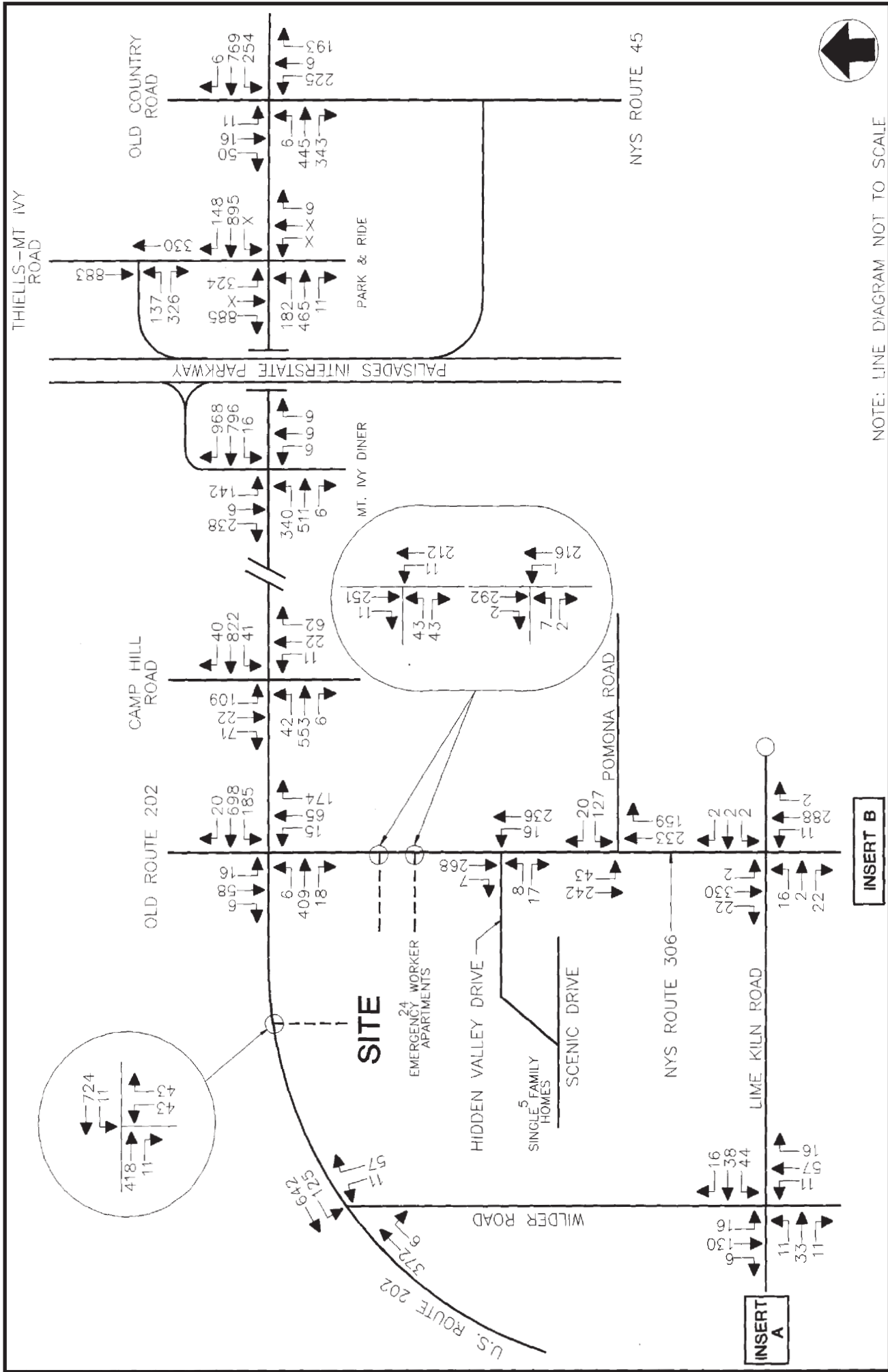
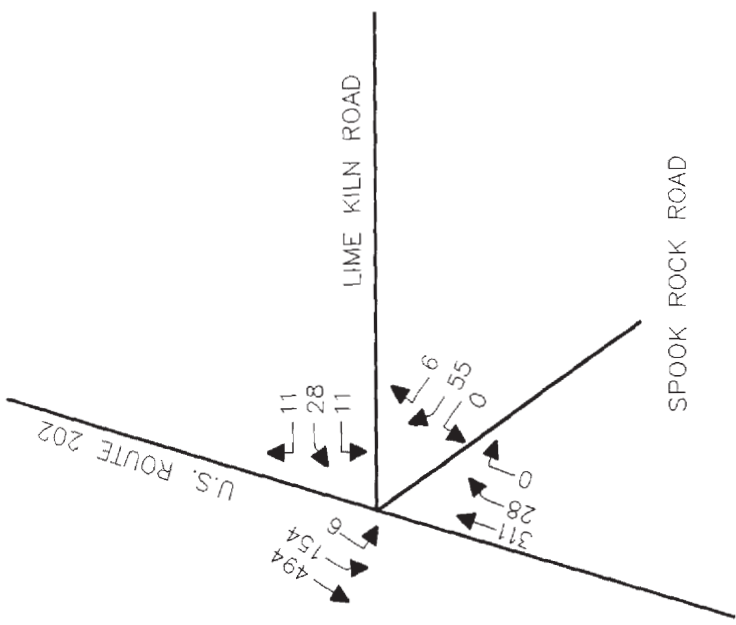


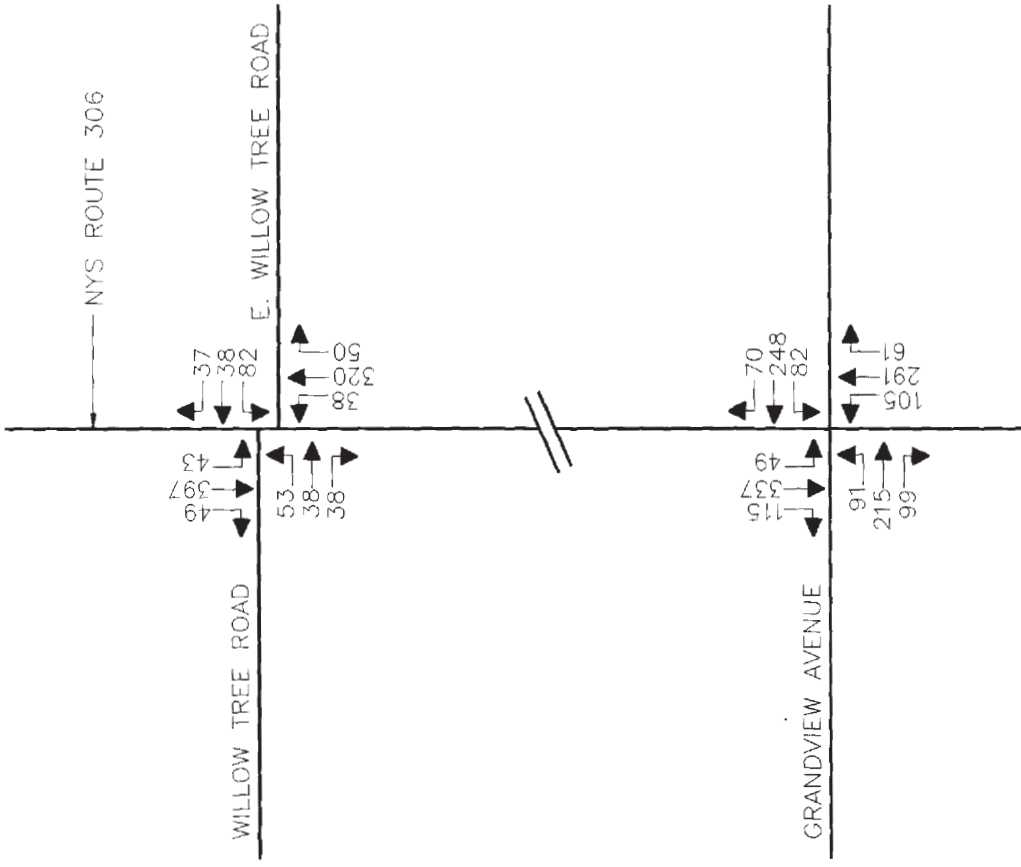
Figure 3.5-23: Year 2013 Build Traffic Volumes Weekday Peak AM Highway Hour (W/ Minisceongo Park)
 Patrick Farm
 Town of Ramapo, Rockland County, NY
 Source: John Collins Engineers, P.C.
 Date: April, 2009

INSERT A



NOTE: LINE DIAGRAM NOT TO SCALE

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NOTE: LINE DIAGRAM NOT TO SCALE

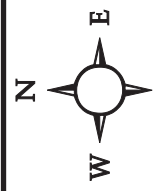


Figure 3.5-23A: Year 2013 Build Traffic Volumes Weekday AM Peak Highway Hour (W/ Minisceongo Park)
 Patrick Farm
 Town of Ramapo, Rockland County, NY
 Source: John Collins Engineers, P.C.
 Date: April, 2009

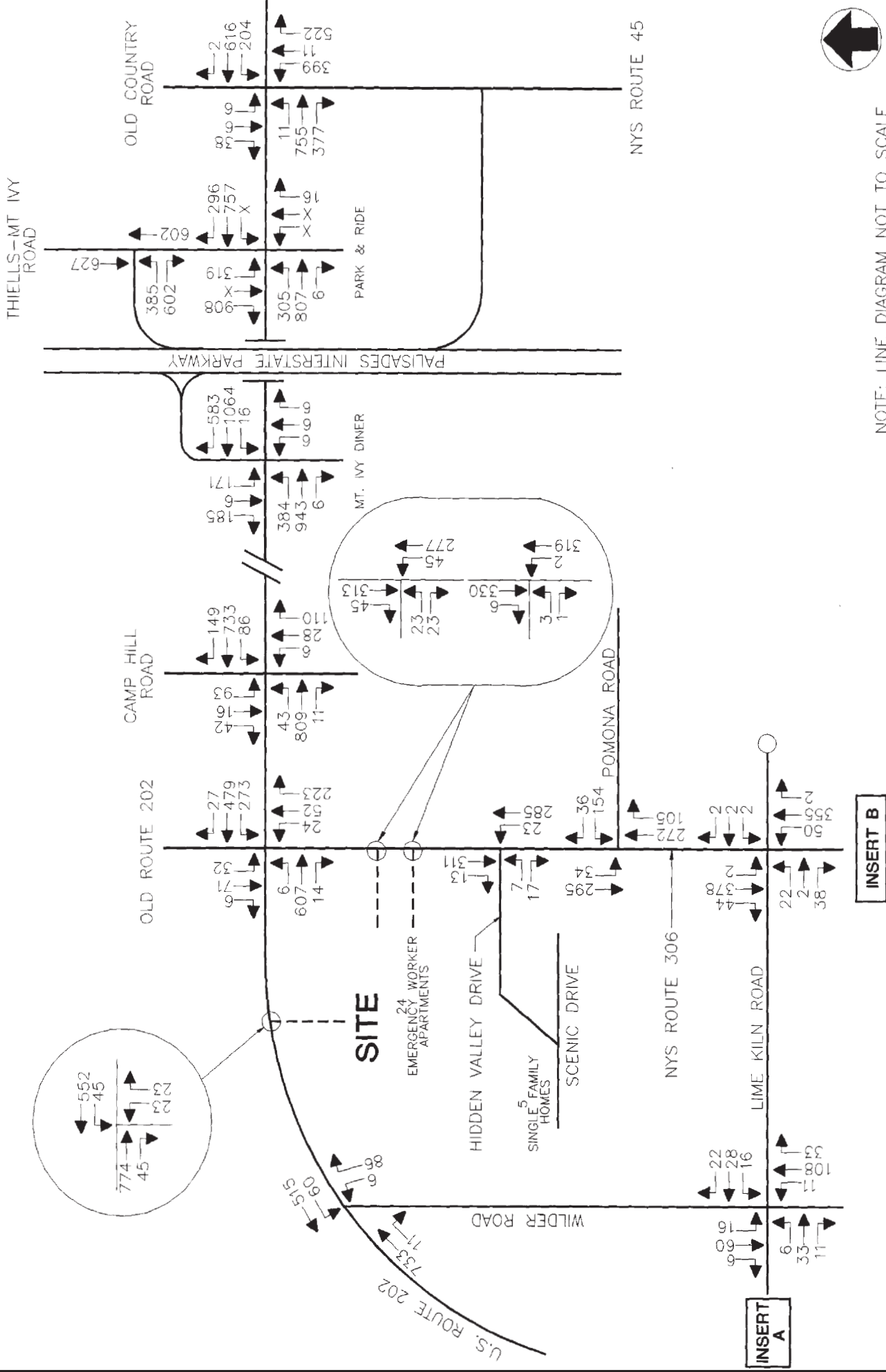
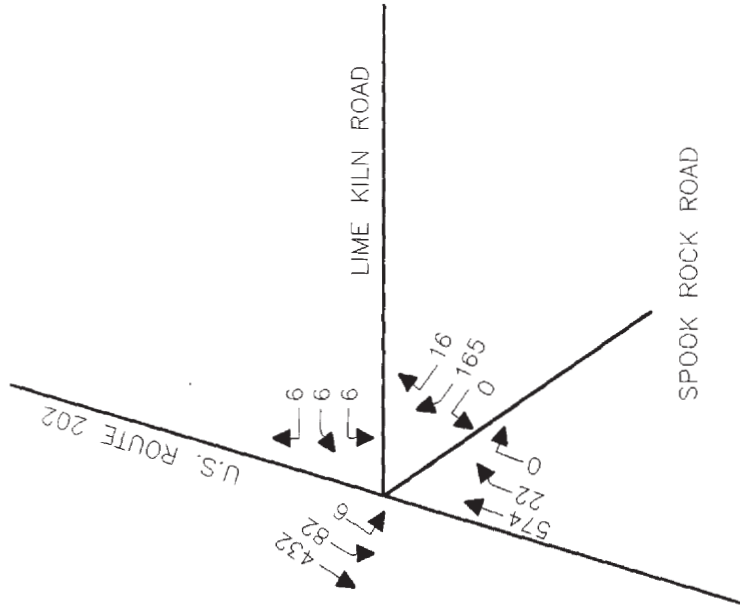
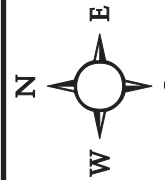


Figure 3.5-24: Year 2013 Build Traffic Volumes Weekday Peak PM Highway Hour (W/ Minisceongo Park)
 Patrick Farm
 Town of Ramapo, Rockland County, NY
 Source: John Collins Engineers, P.C.
 Date: April, 2009

INSERT A

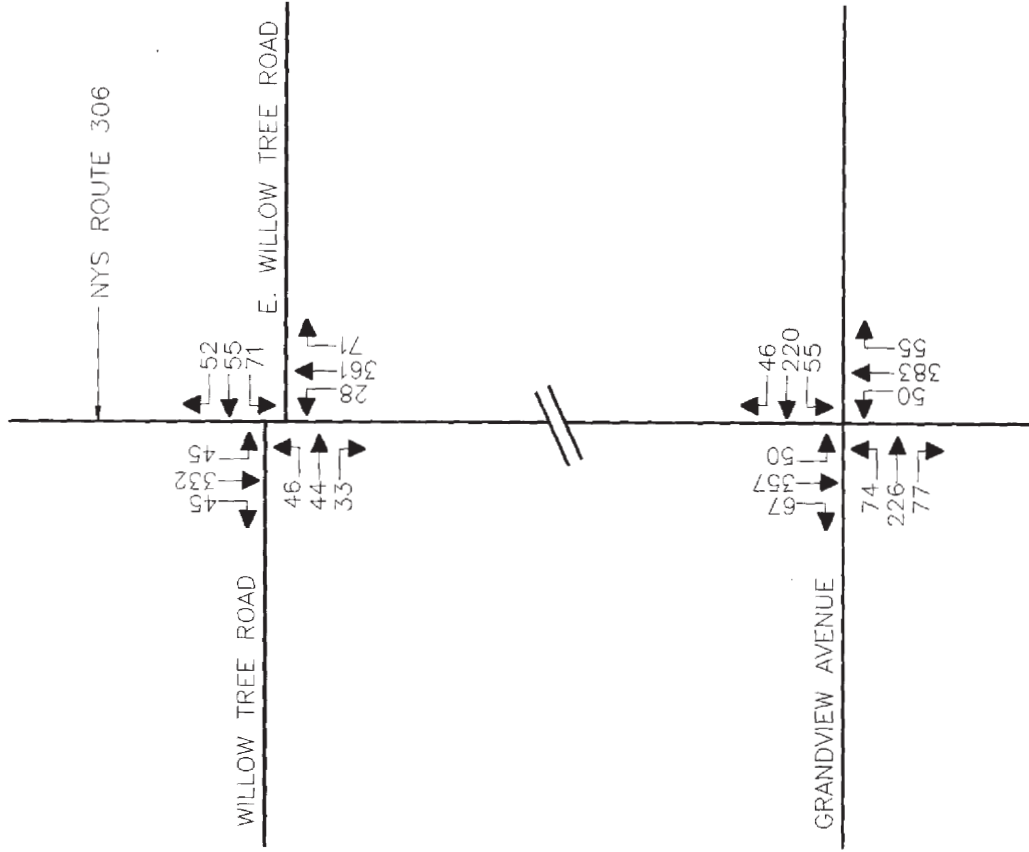


NOTE: LINE DIAGRAM NOT TO SCALE



File 07119_4/14/09
JS:07119 Fig 3.5-24A

INSERT B



NOTE: LINE DIAGRAM NOT TO SCALE

Figure 3.5-24A: Year 2013 Build Traffic Volumes Weekday PM Peak Highway Hour (W/ Minisceongo Park)
 Patrick Farm
 Town of Ramapo, Rockland County, NY
 Source: John Collins Engineers, P.C.
 Date: April, 2009

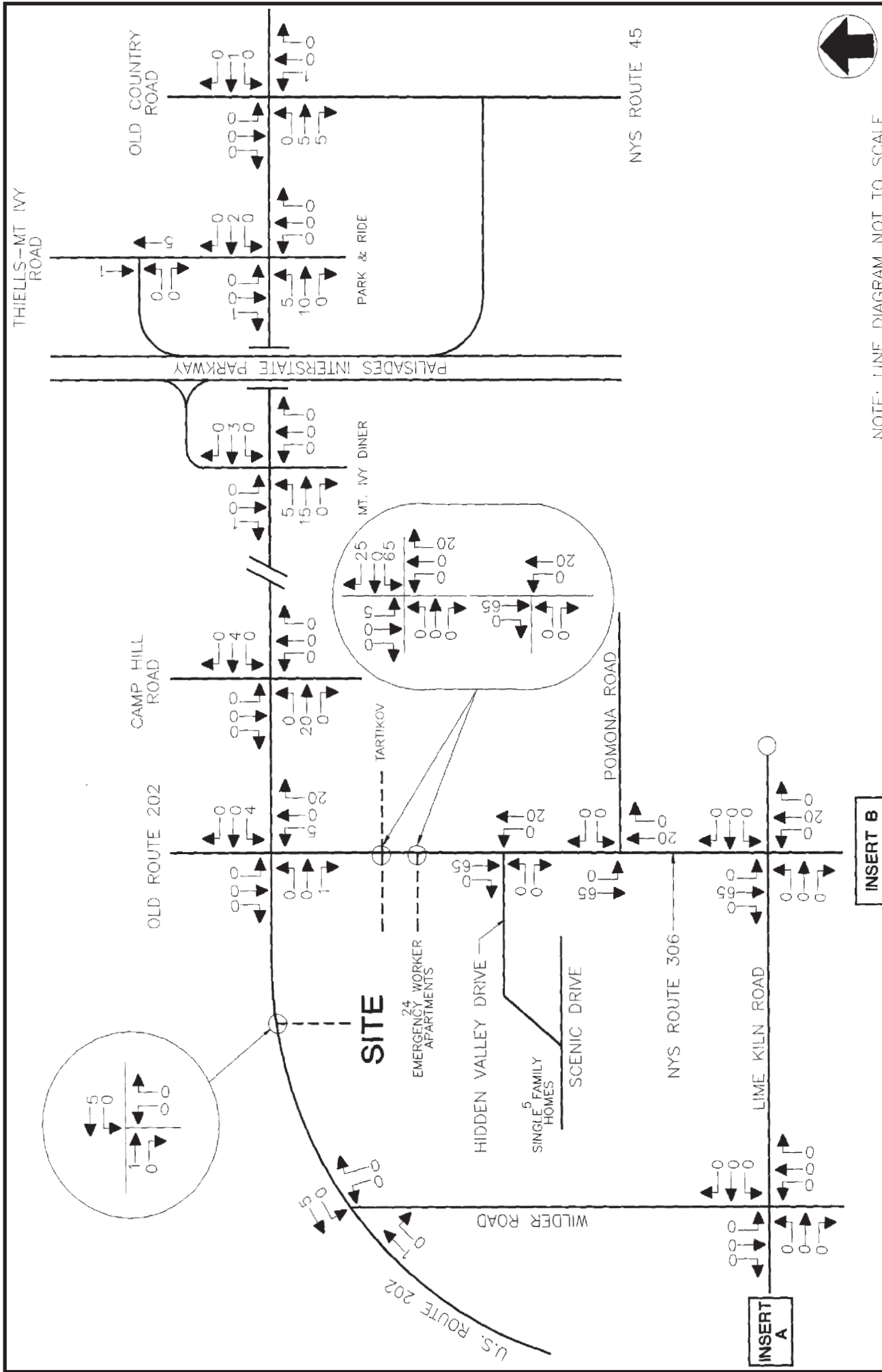
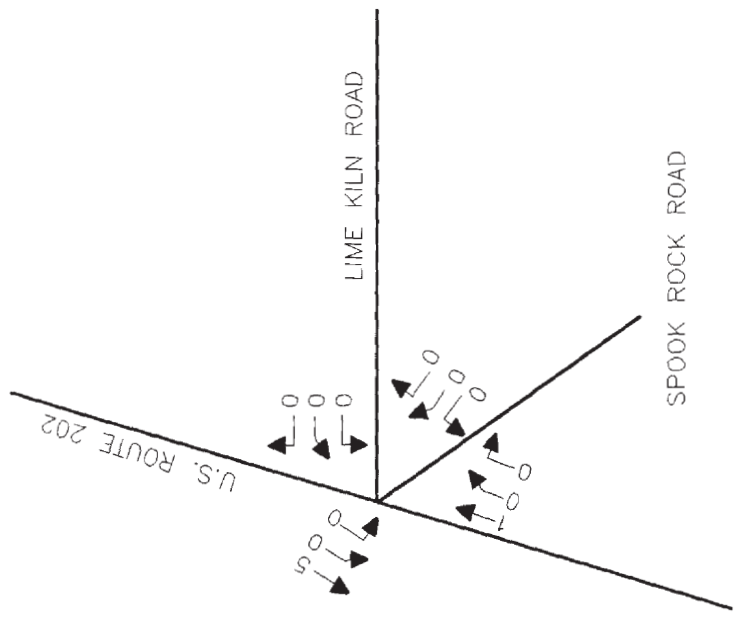


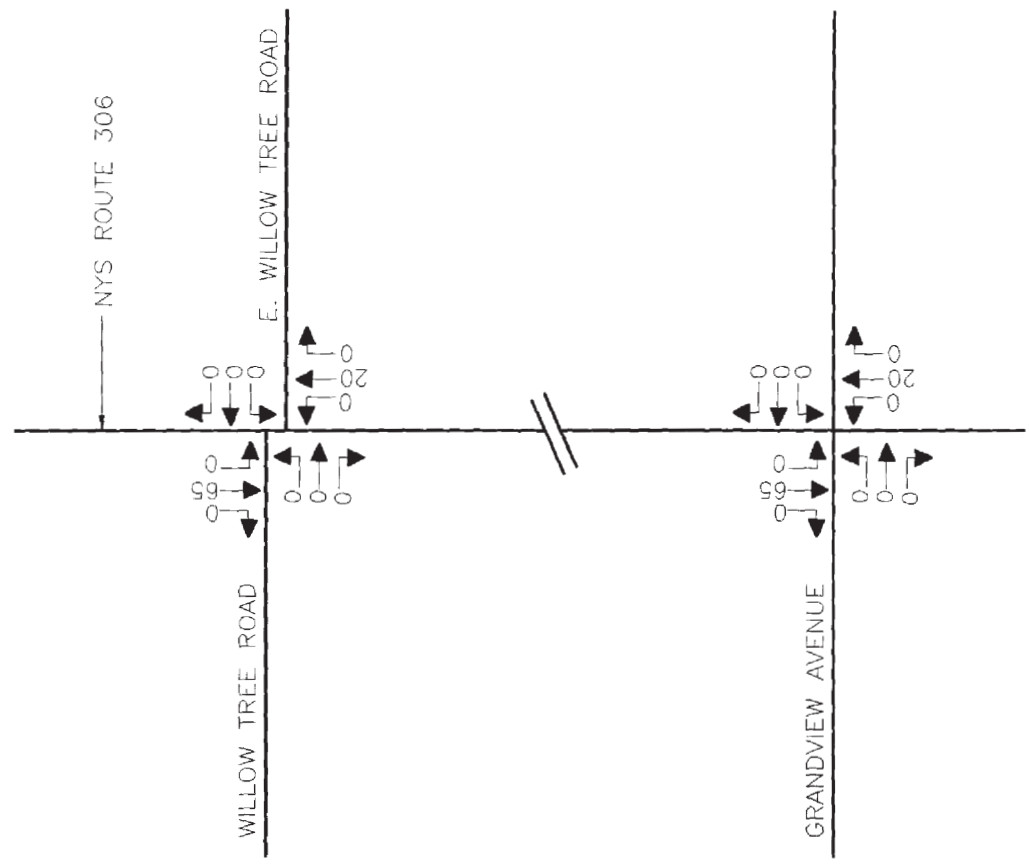
Figure 3.5-25: Tartikov Traffic Volumes Weekday Peak AM Highway Hour (250 Units)
 Patrick Farm
 Town of Ramapo, Rockland County, NY
 Source: John Collins Engineers, P.C.
 Date: April, 2009

INSERT A

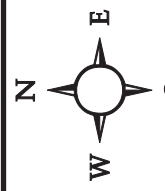


NOTE: LINE DIAGRAM NOT TO SCALE

INSERT B



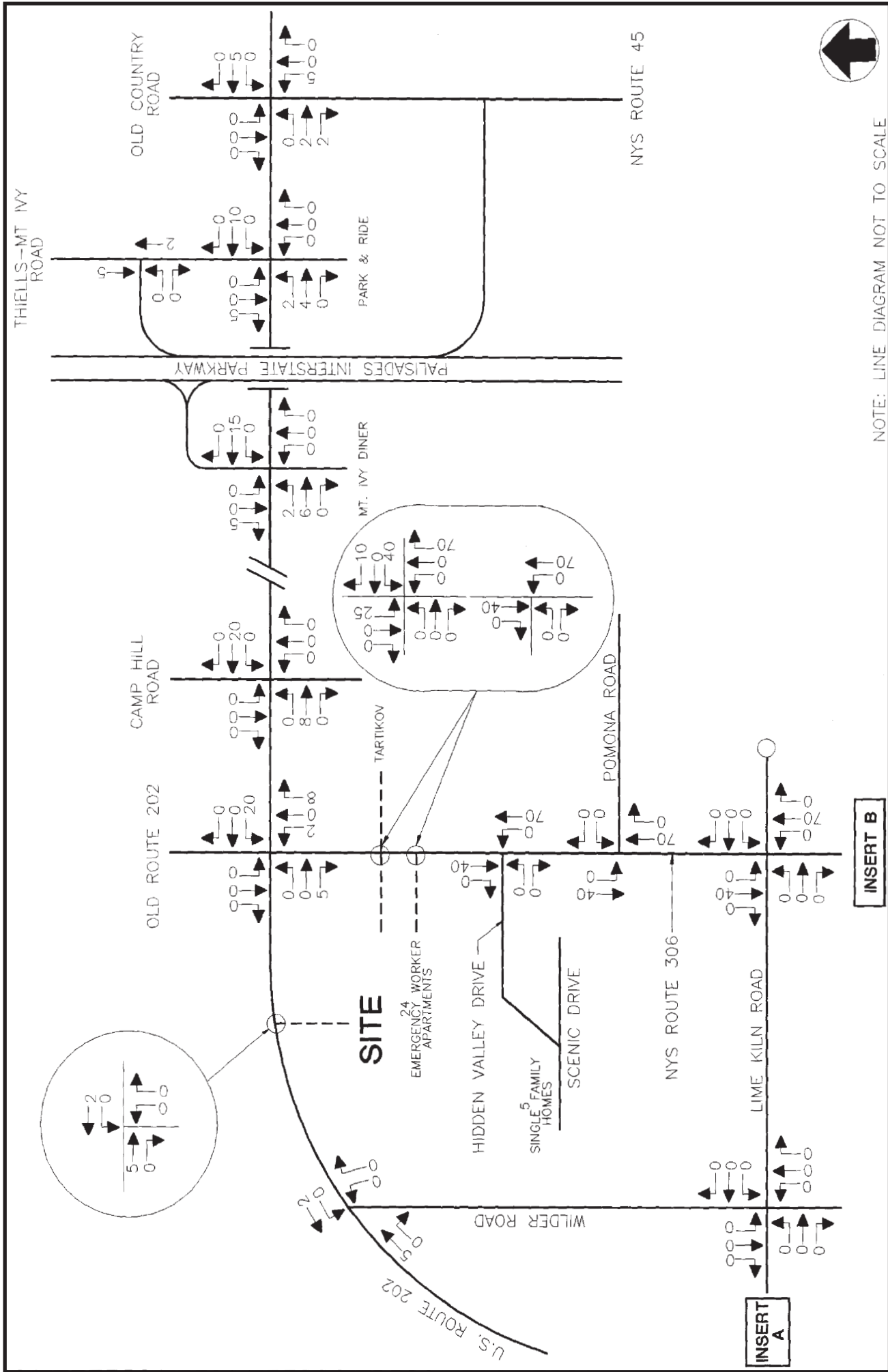
NOTE: LINE DIAGRAM NOT TO SCALE



File 07119_4/14/09
 JS:07119 Fig 3.5-25A

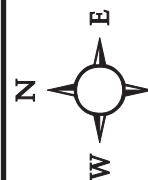
Figure 3.5-25A: Tartikov Traffic Volumes Weekday AM Peak Highway Hour (250 Units)

Patrick Farm
 Town of Ramapo, Rockland County, NY
 Source: John Collins Engineers, P.C.
 Date: April, 2009

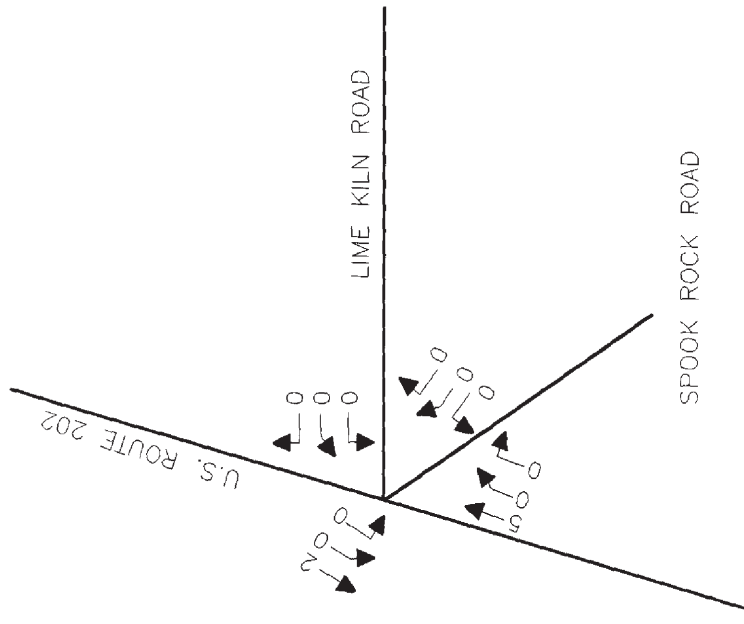


NOTE: LINE DIAGRAM NOT TO SCALE

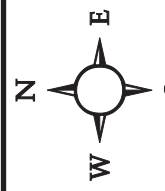
Figure 3.5-26: Tartikov Traffic Volumes Weekday Peak PM Highway Hour (250 Units)
 Patrick Farm
 Town of Ramapo, Rockland County, NY
 Source: John Collins Engineers, P.C.
 Date: April, 2009



INSERT A

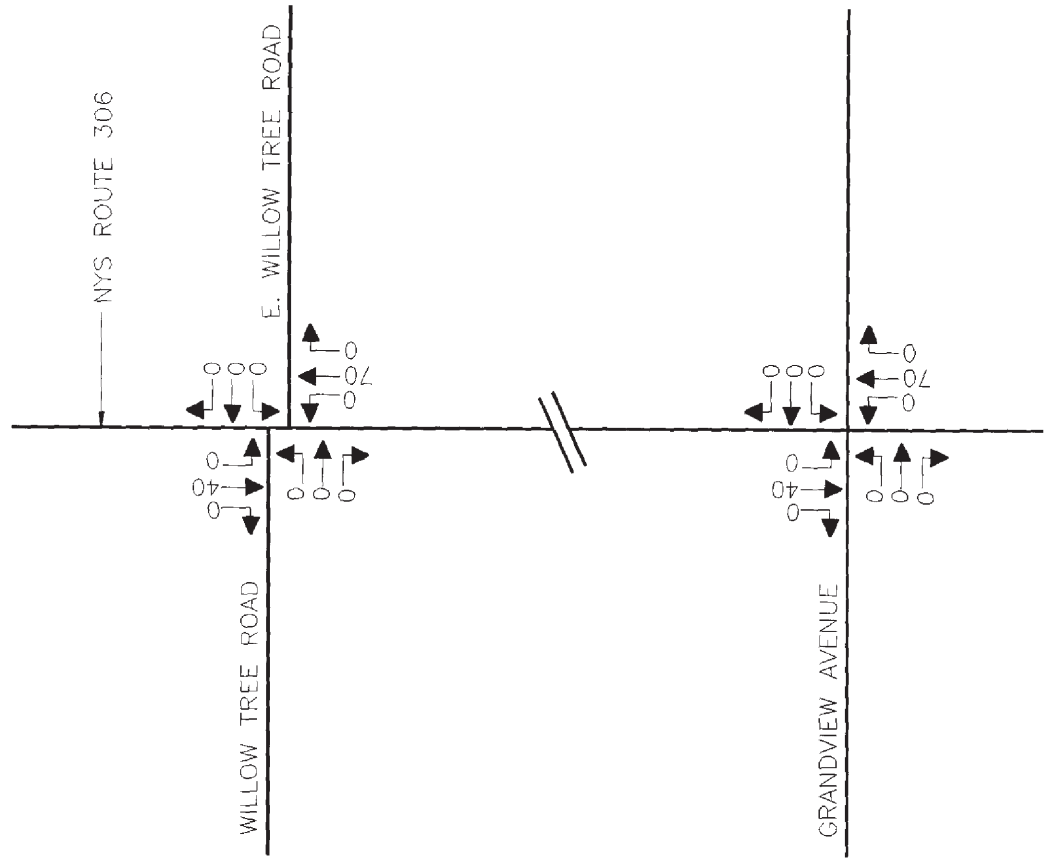


NOTE: LINE DIAGRAM NOT TO SCALE



File 07119_4/14/09
JS:07119 Fig 3.5-26A

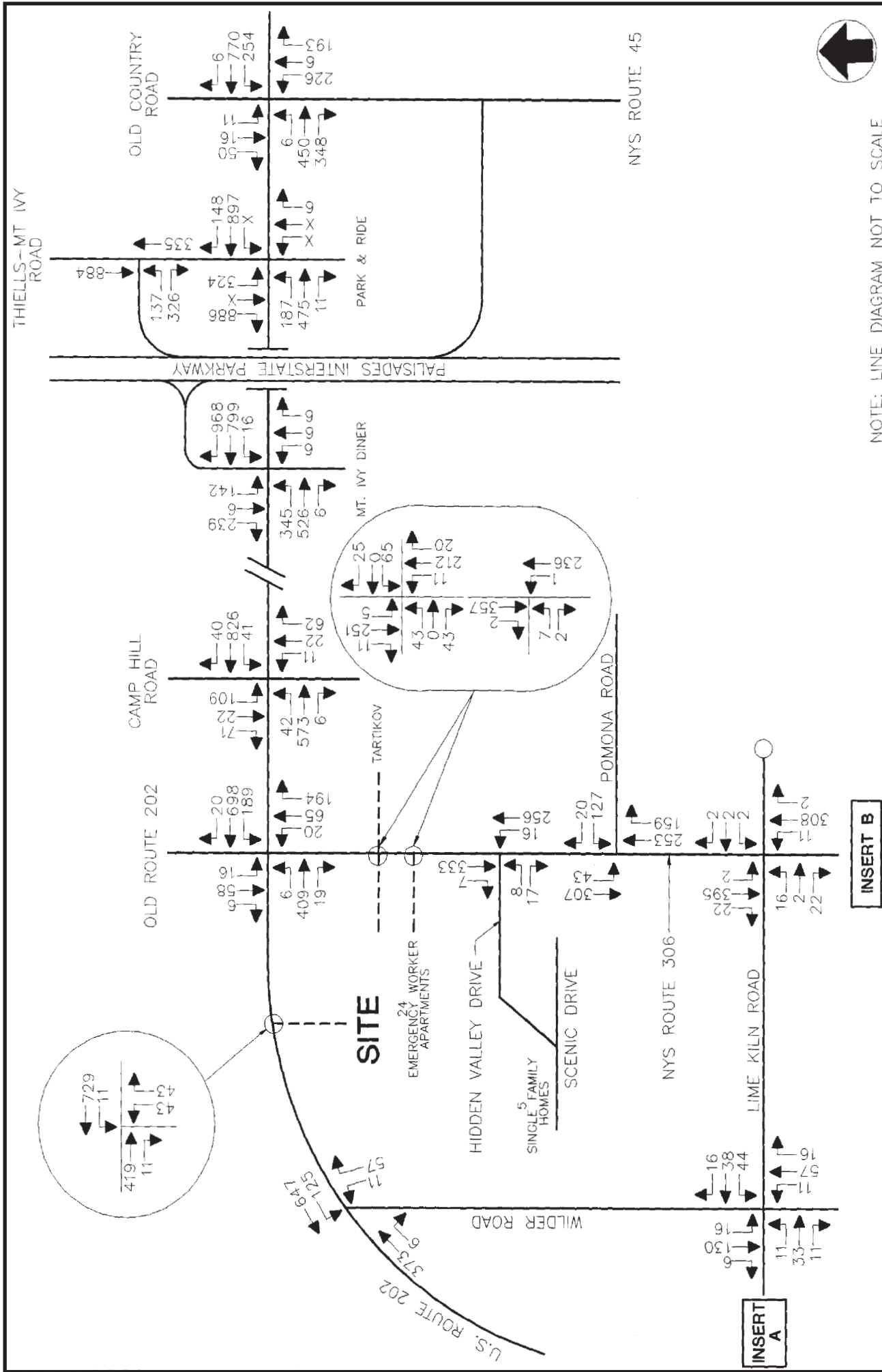
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NOTE: LINE DIAGRAM NOT TO SCALE

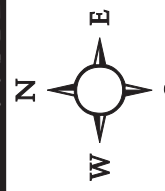
Figure 3.5-26A: Tartikov Traffic Volumes Weekday PM Peak Highway Hour (250 Units)

Patrick Farm
Town of Ramapo, Rockland County, NY
Source: John Collins Engineers, P.C.
Date: April, 2009

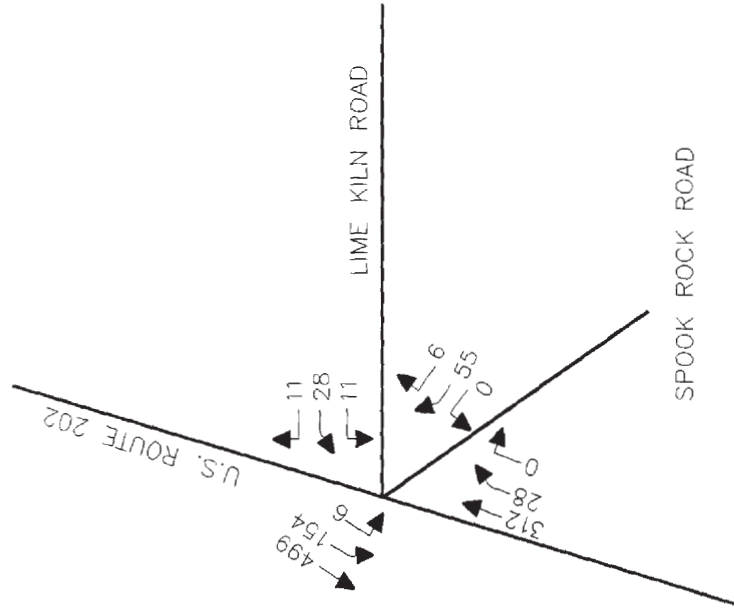


NOTE: LINE DIAGRAM NOT TO SCALE

Figure 3.5-27: Year 2013 Build Traffic Volumes Weekday Peak AM Highway Hour (W/ Minisceongo Park & Tartikov)
 Patrick Farm
 Town of Ramapo, Rockland County, NY
 Source: John Collins Engineers, P.C.
 Date: April, 2009

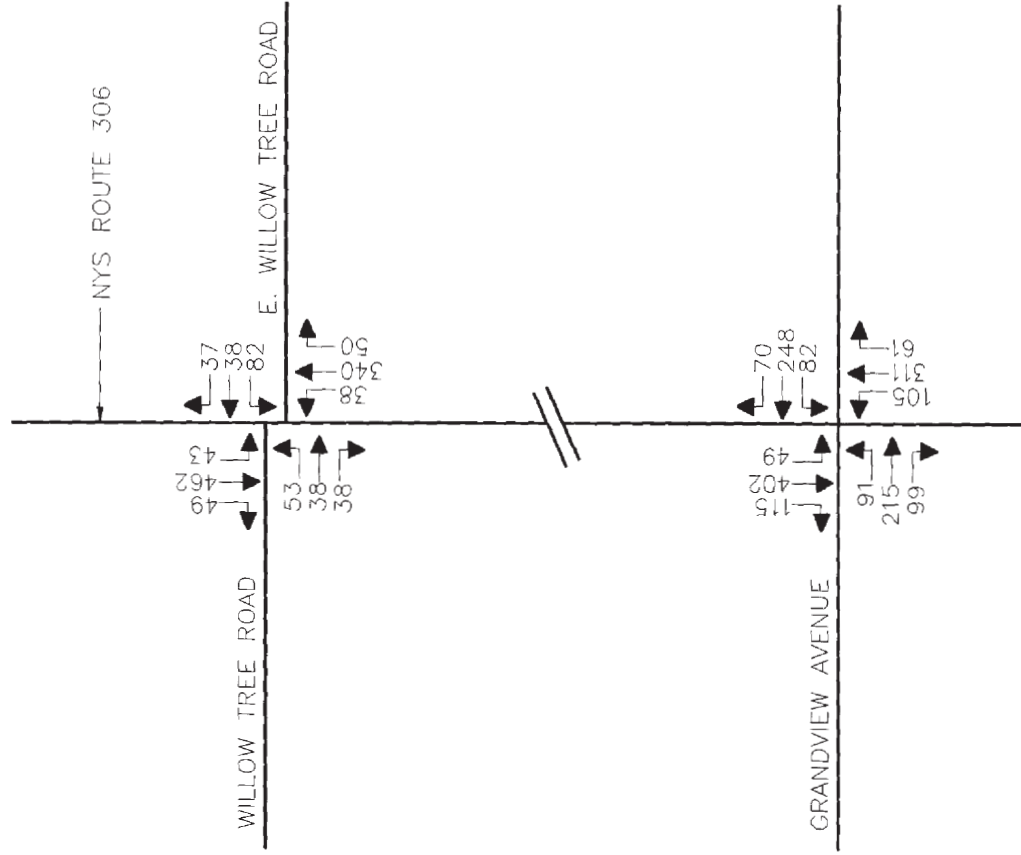


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NOTE: LINE DIAGRAM NOT TO SCALE

INSERT B



NOTE: LINE DIAGRAM NOT TO SCALE

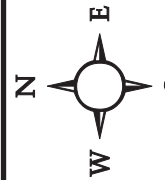


Figure 3.5-27A: Year 2013 Build Traffic Volumes Weekday AM
Peak Highway Hour (W/ Minisceongo Park & Tartikov)

Patrick Farm
Town of Ramapo, Rockland County, NY
Source: John Collins Engineers, P.C.
Date: April, 2009

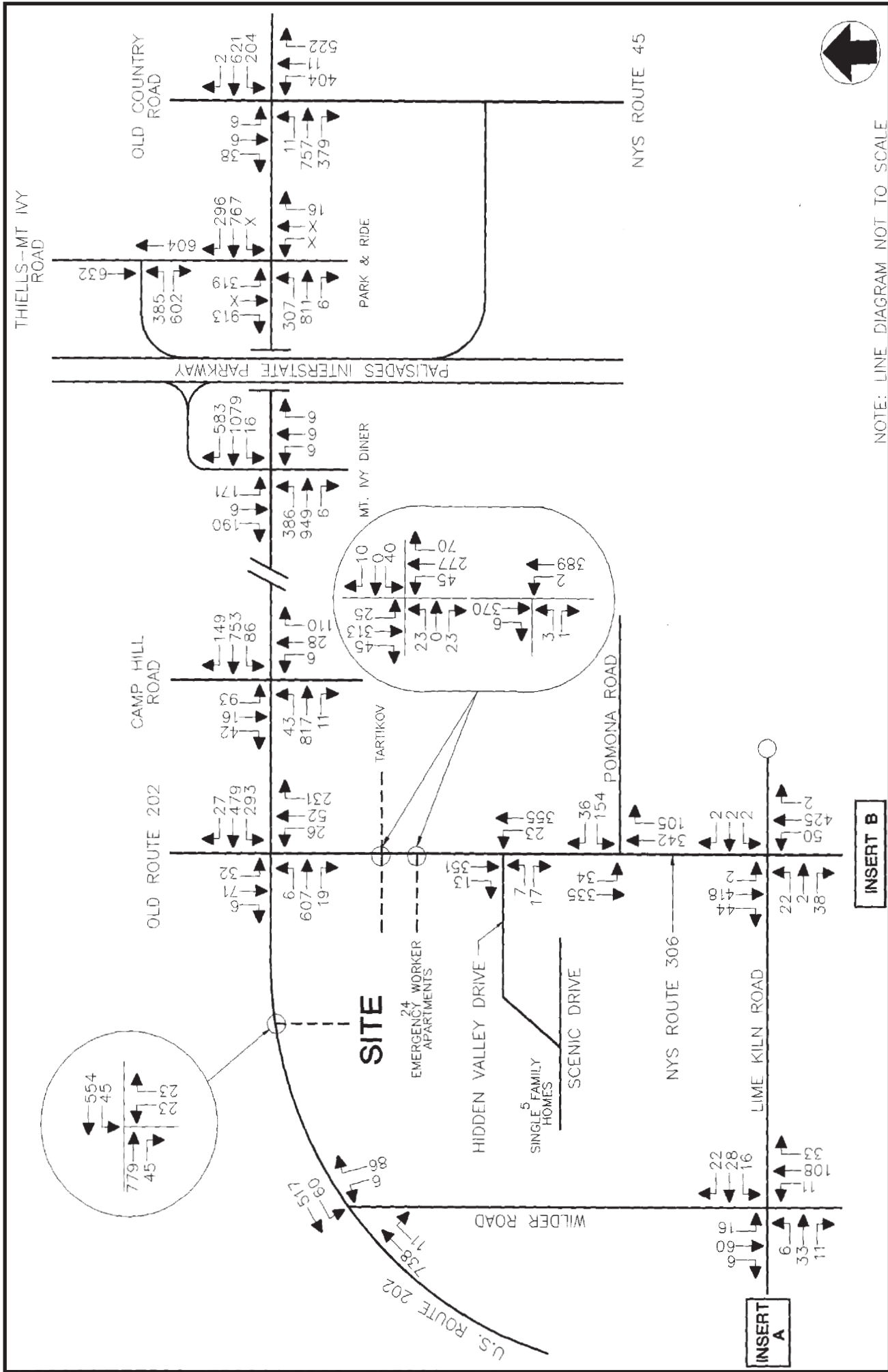


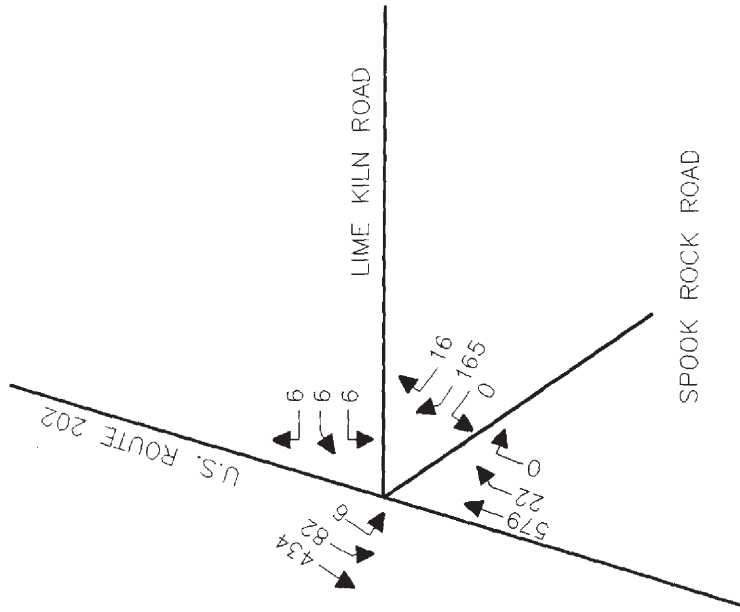
Figure 3.5-28: Year 2013 Build Traffic Volumes Weekday Peak PM Highway Hour (W/ Minisceongo Park & Tartikov)

Patrick Farm
Town of Ramapo, Rockland County, NY
Source: John Collins Engineers, P.C.
Date: April, 2009

Tim Miller Associates, Inc., 10 North Street, Cold Spring, New York 10516 (845) 265-4400 Fax (845) 265-4418

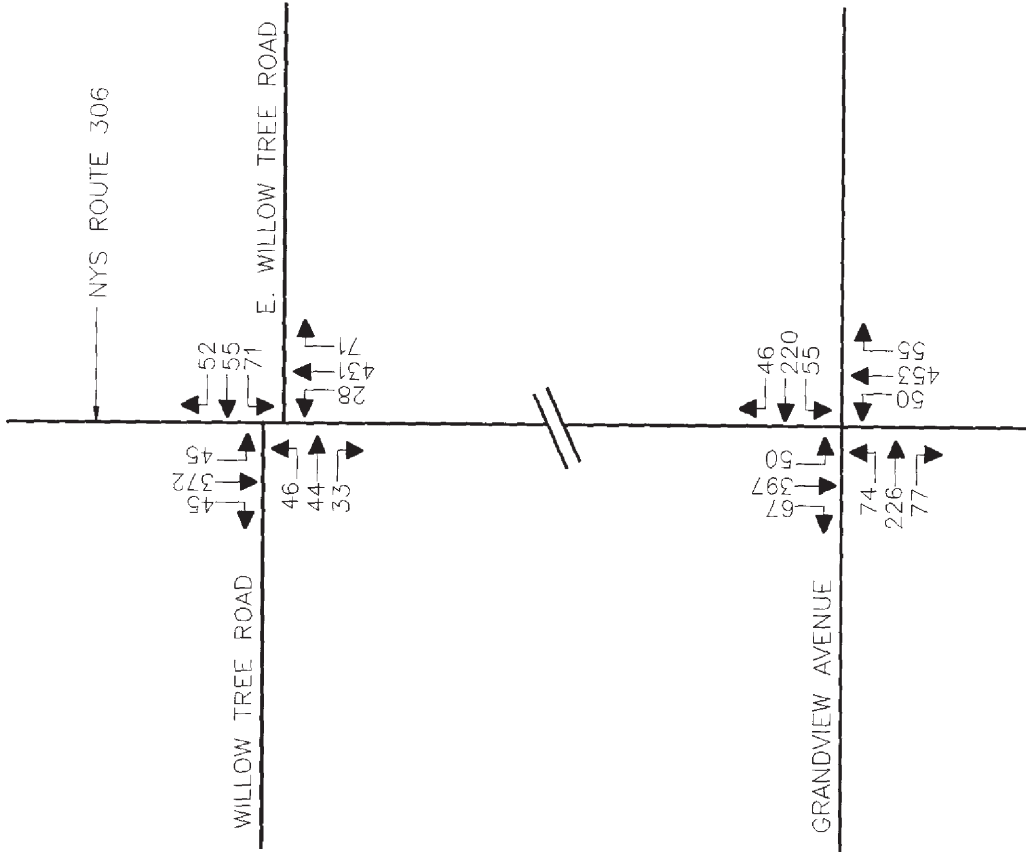
File 07119_4/14/09
JS:07119 Fig 3.5-28

INSERT A



NOTE: LINE DIAGRAM NOT TO SCALE

INSERT B



NOTE: LINE DIAGRAM NOT TO SCALE

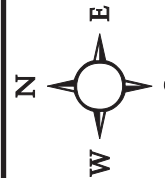
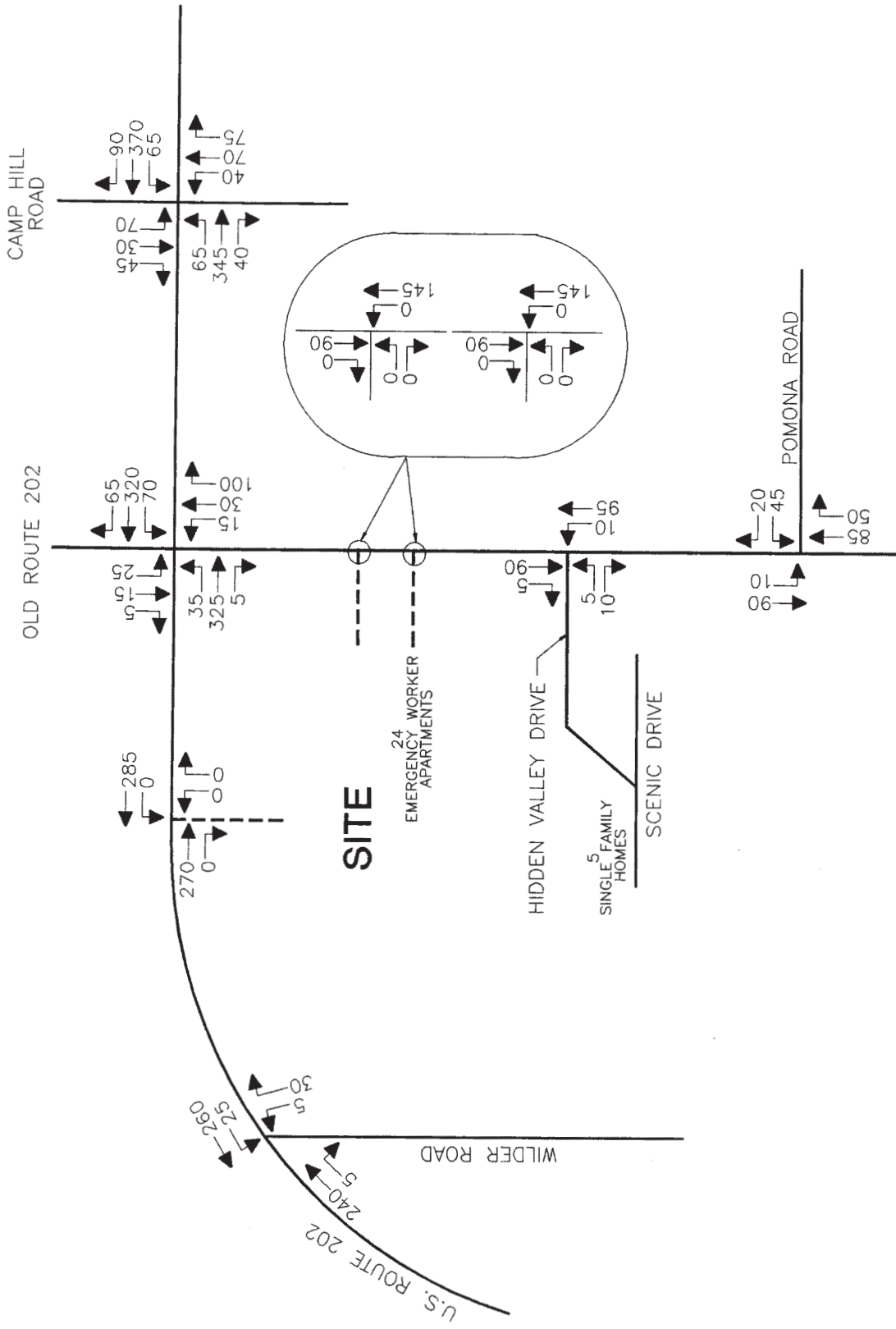


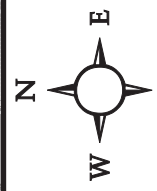
Figure 3.5-28A: Year 2013 Build Traffic Volumes Weekday PM Peak Highway Hour (W/ Minisceongo Park & Tartikov)

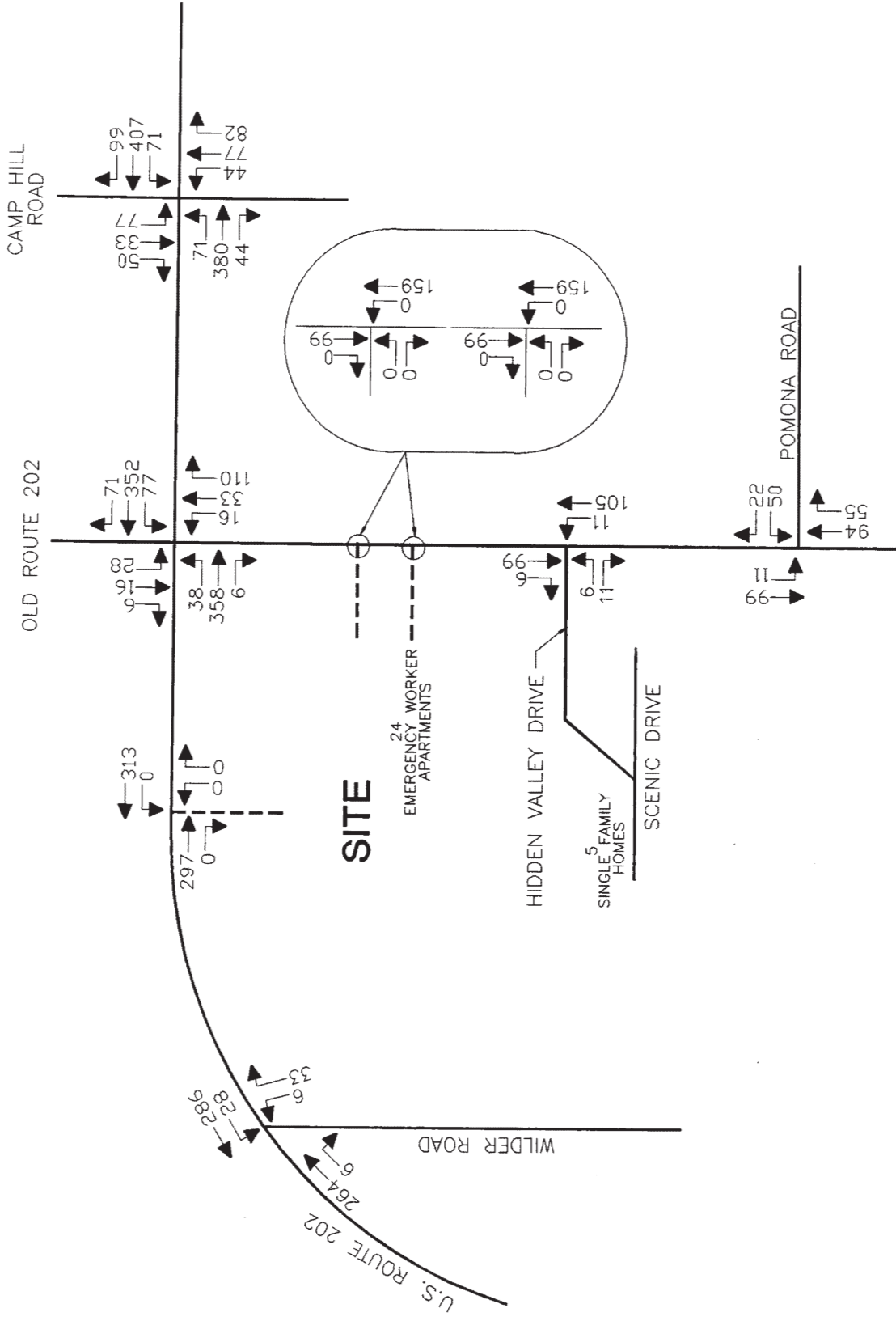
Patrick Farm
Town of Ramapo, Rockland County, NY
Source: John Collins Engineers, P.C.
Date: April, 2009



NOTE: LINE DIAGRAM NOT TO SCALE

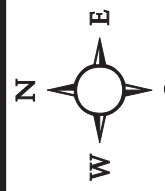
Figure 3.5-29: Year 2008 Existing Traffic Volumes Saturday Peak Hour
 Patrick Farm
 Town of Ramapo, Rockland County, NY
 Source: John Collins Engineers, P.C.
 Date: April, 2009





NOTE: LINE DIAGRAM NOT TO SCALE

Figure 3.5-30: Year 2013 Projected Traffic Volumes Saturday Peak Hour
 Patrick Farm
 Town of Ramapo, Rockland County, NY
 Source: John Collins Engineers, P.C.
 Date: April, 2009



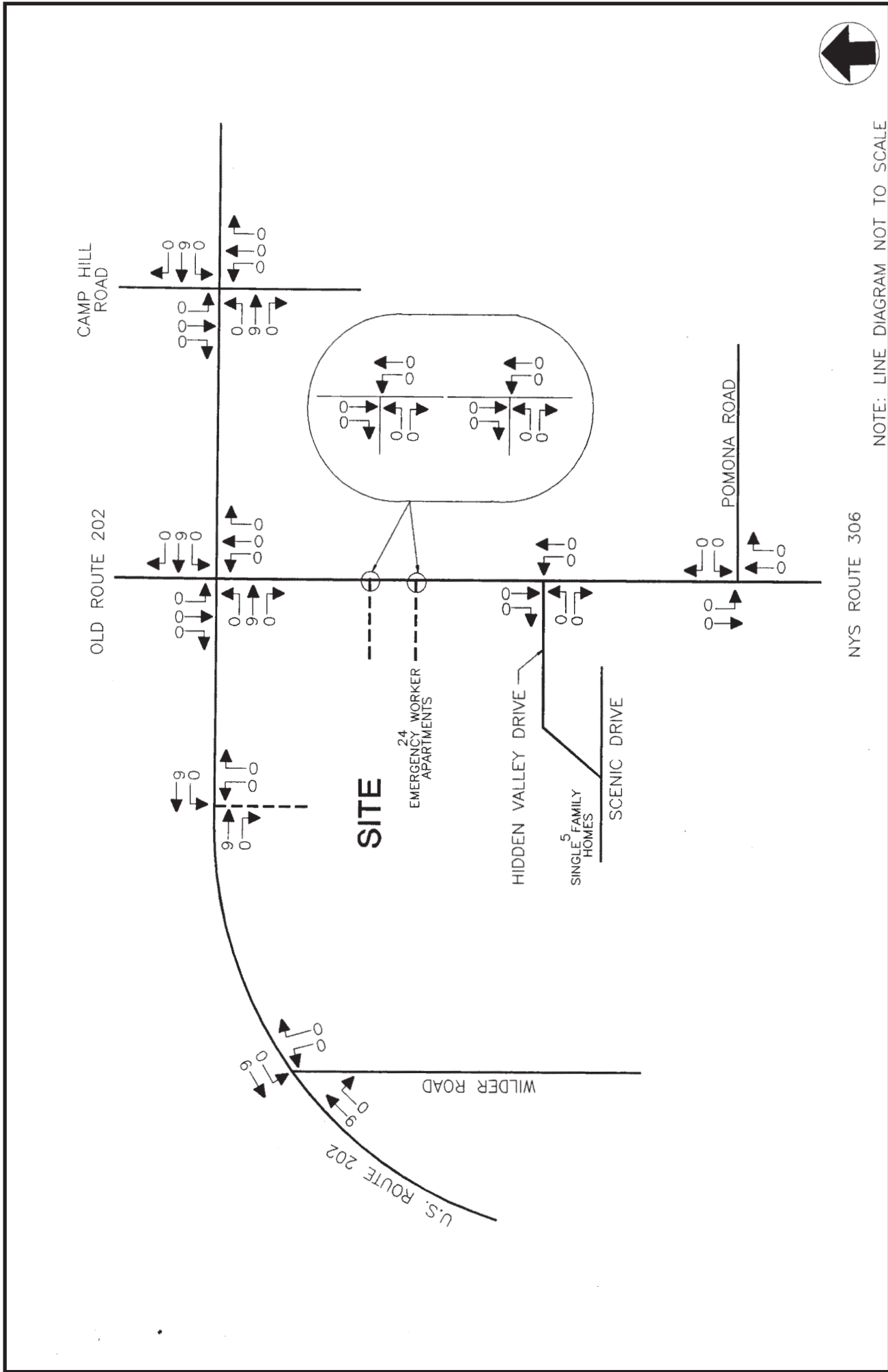
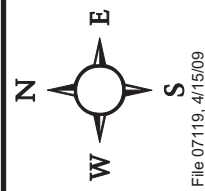
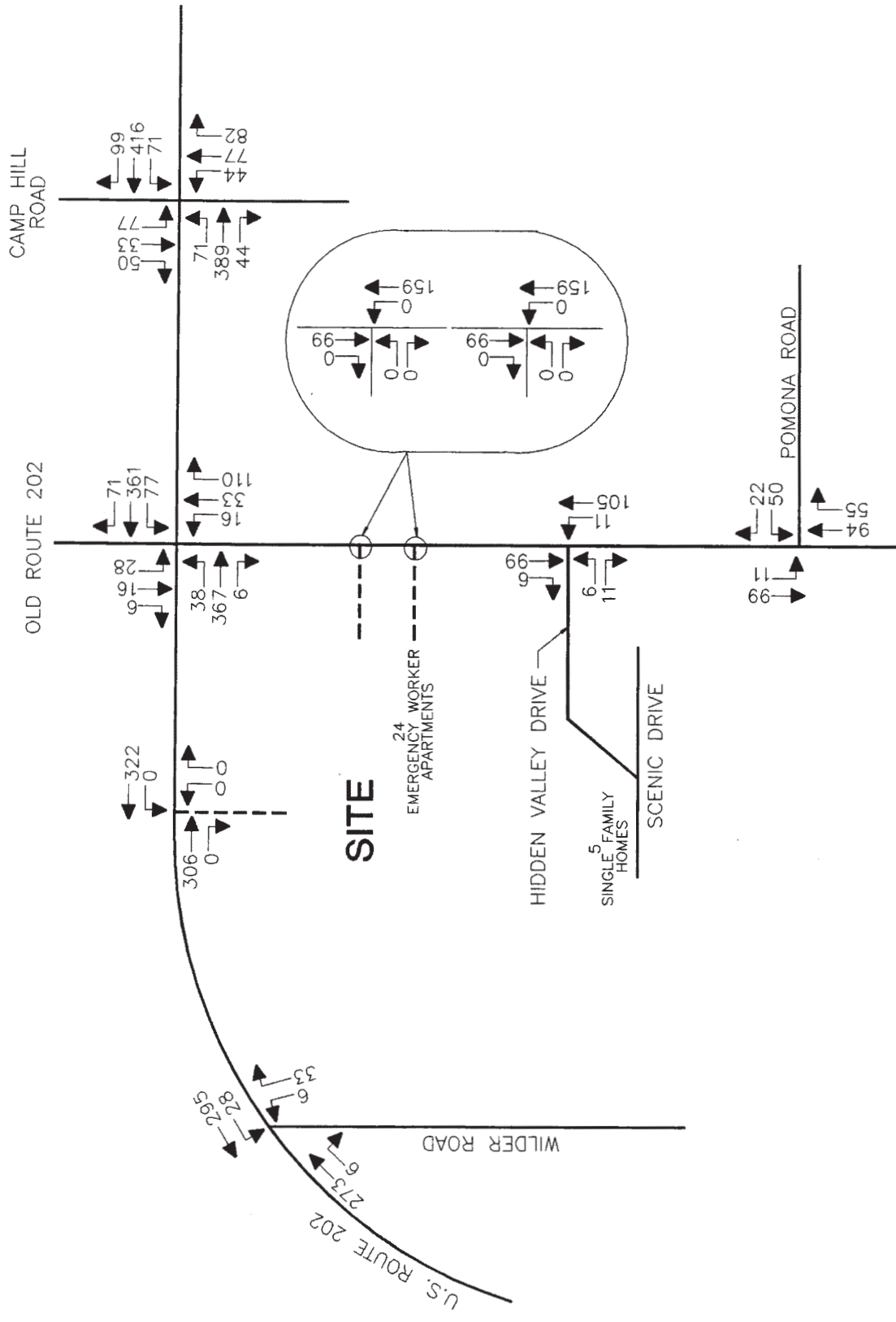


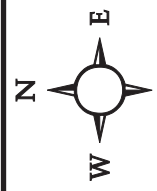
Figure 3.5-31: Other Development Traffic Volumes Saturday Peak Hour
 Patrick Farm
 Town of Ramapo, Rockland County, NY
 Source: John Collins Engineers, P.C.
 Date: April, 2009

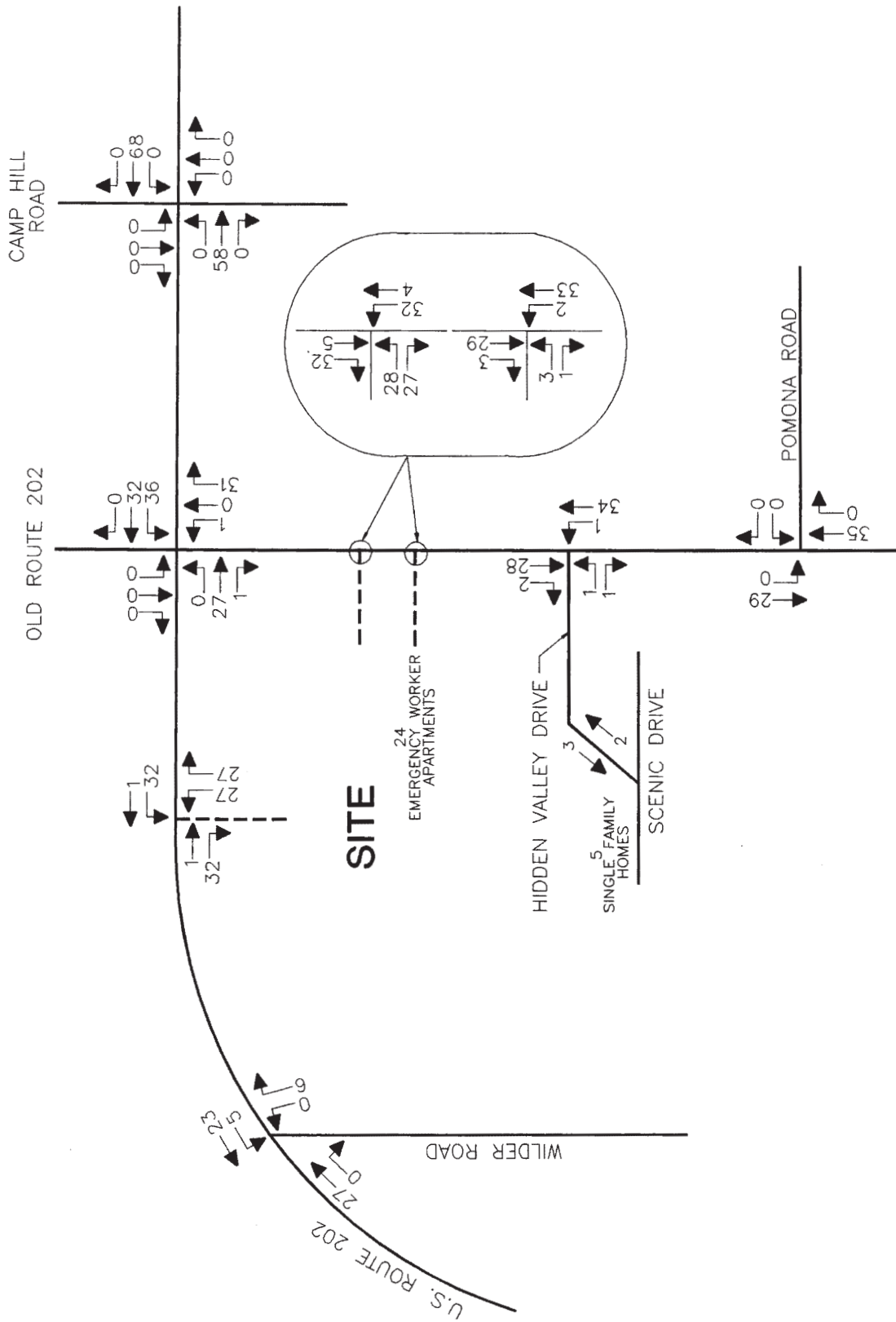




NOTE: LINE DIAGRAM NOT TO SCALE

Figure 3.5-32: Year 2013 No-Build Traffic Volumes Saturday Peak Hour
 Patrick Farm
 Town of Ramapo, Rockland County, NY
 Source: John Collins Engineers, P.C.
 Date: April, 2009





NOTE: LINE DIAGRAM NOT TO SCALE

NYS ROUTE 306

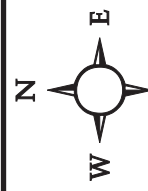
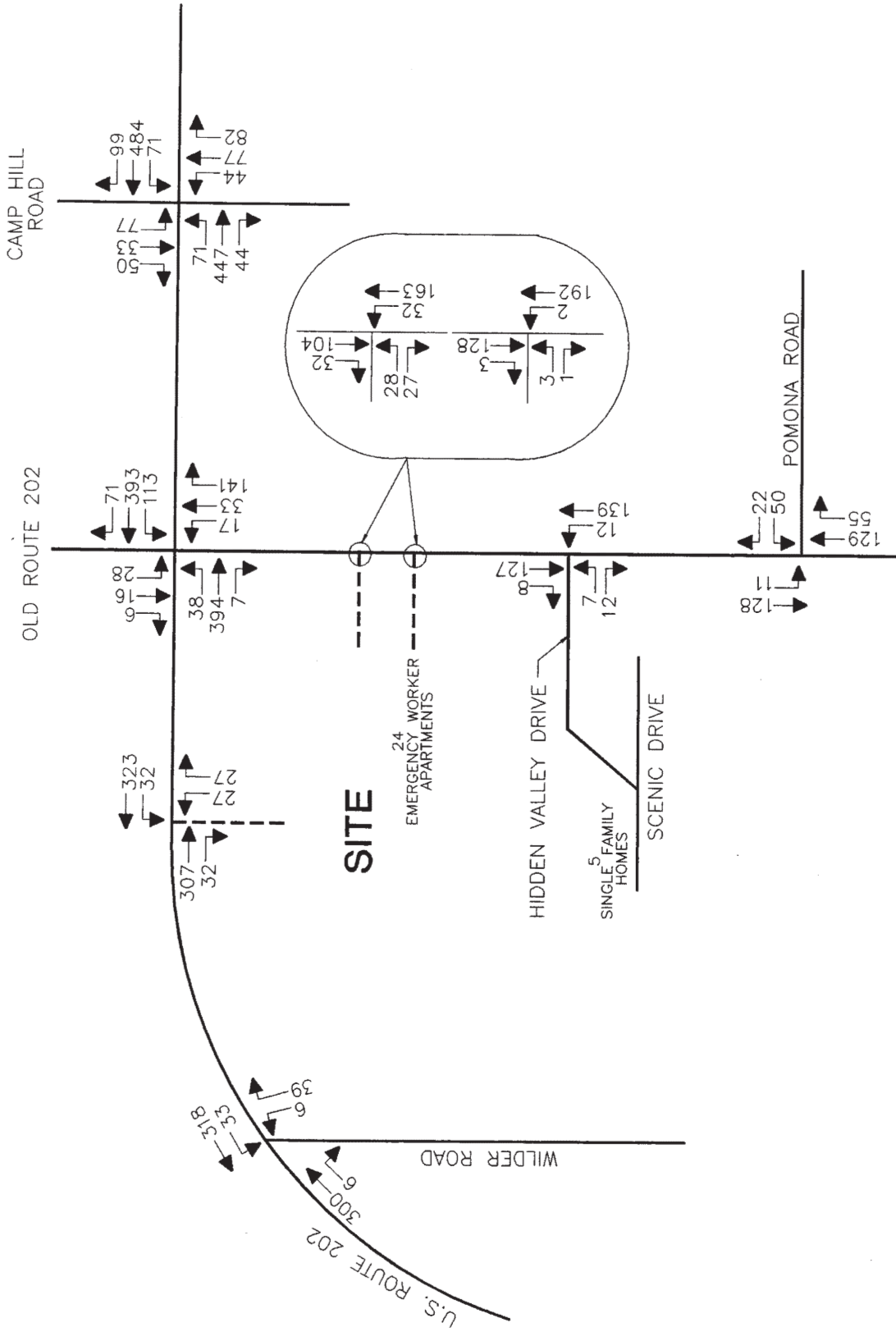


Figure 3.5-33: Site Generated Traffic Volumes Saturday Peak Hour
 Patrick Farm
 Town of Ramapo, Rockland County, NY
 Source: John Collins Engineers, P.C.
 Date: April, 2009



NOTE: LINE DIAGRAM NOT TO SCALE

NYS ROUTE 306

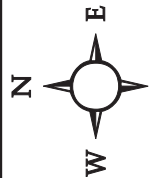
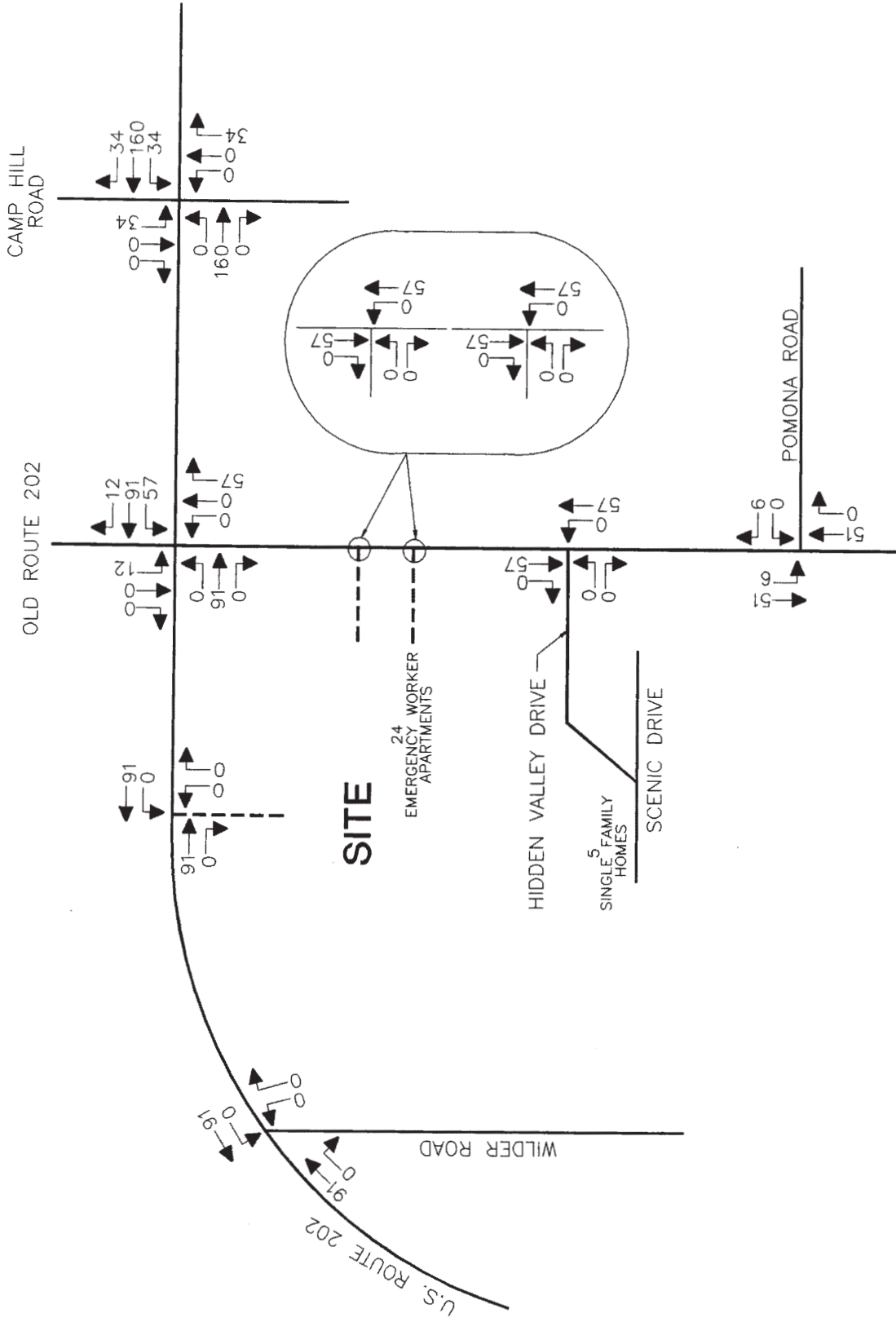


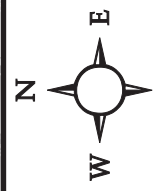
Figure 3.5-34: Year 2013 Build Traffic Volumes Saturday Peak Hour
 Patrick Farm
 Town of Ramapo, Rockland County, NY
 Source: John Collins Engineers, P.C.
 Date: April, 2009

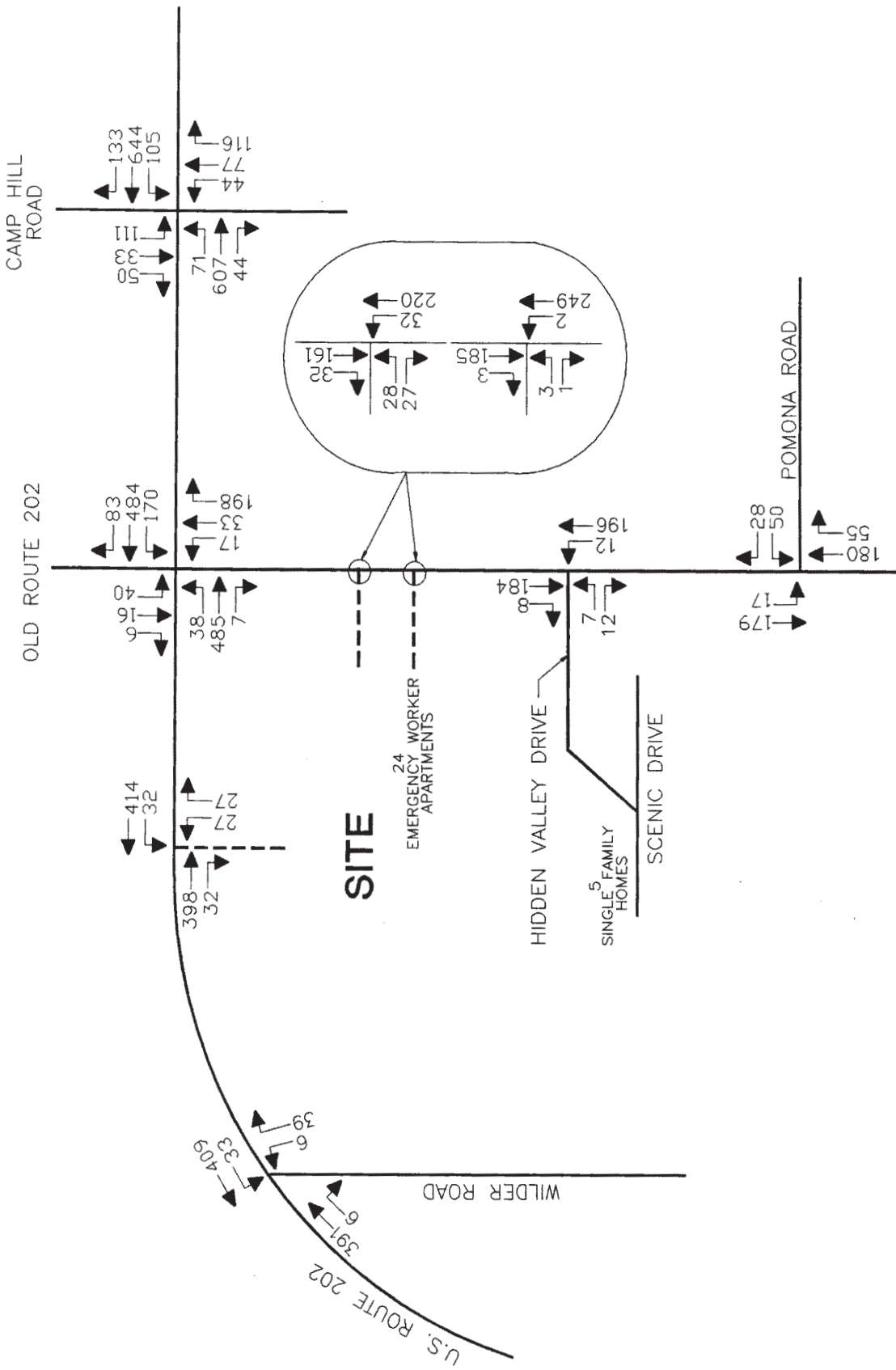


NOTE: LINE DIAGRAM NOT TO SCALE

NYS ROUTE 306

Figure 3.5-35: Minisceongo Park Traffic Volumes Saturday Peak Hour
 Patrick Farm
 Town of Ramapo, Rockland County, NY
 Source: John Collins Engineers, P.C.
 Date: April, 2009





NOTE: LINE DIAGRAM NOT TO SCALE

NYS ROUTE 306

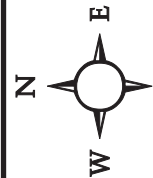
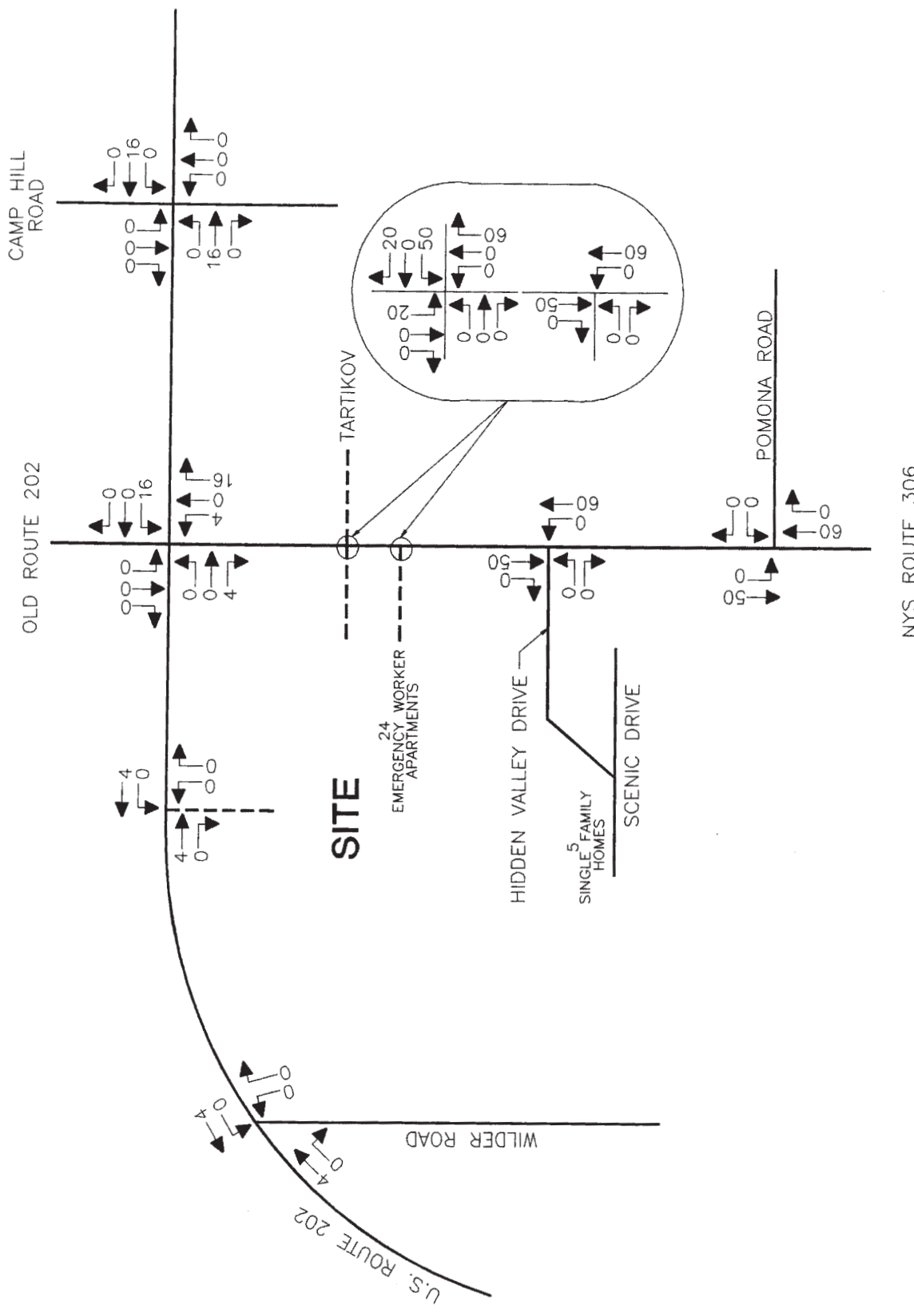


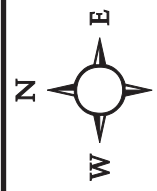
Figure 3.5-36: Year 2013 Build Traffic Volumes Saturday Peak Hour (W/ Minisceongo Park)

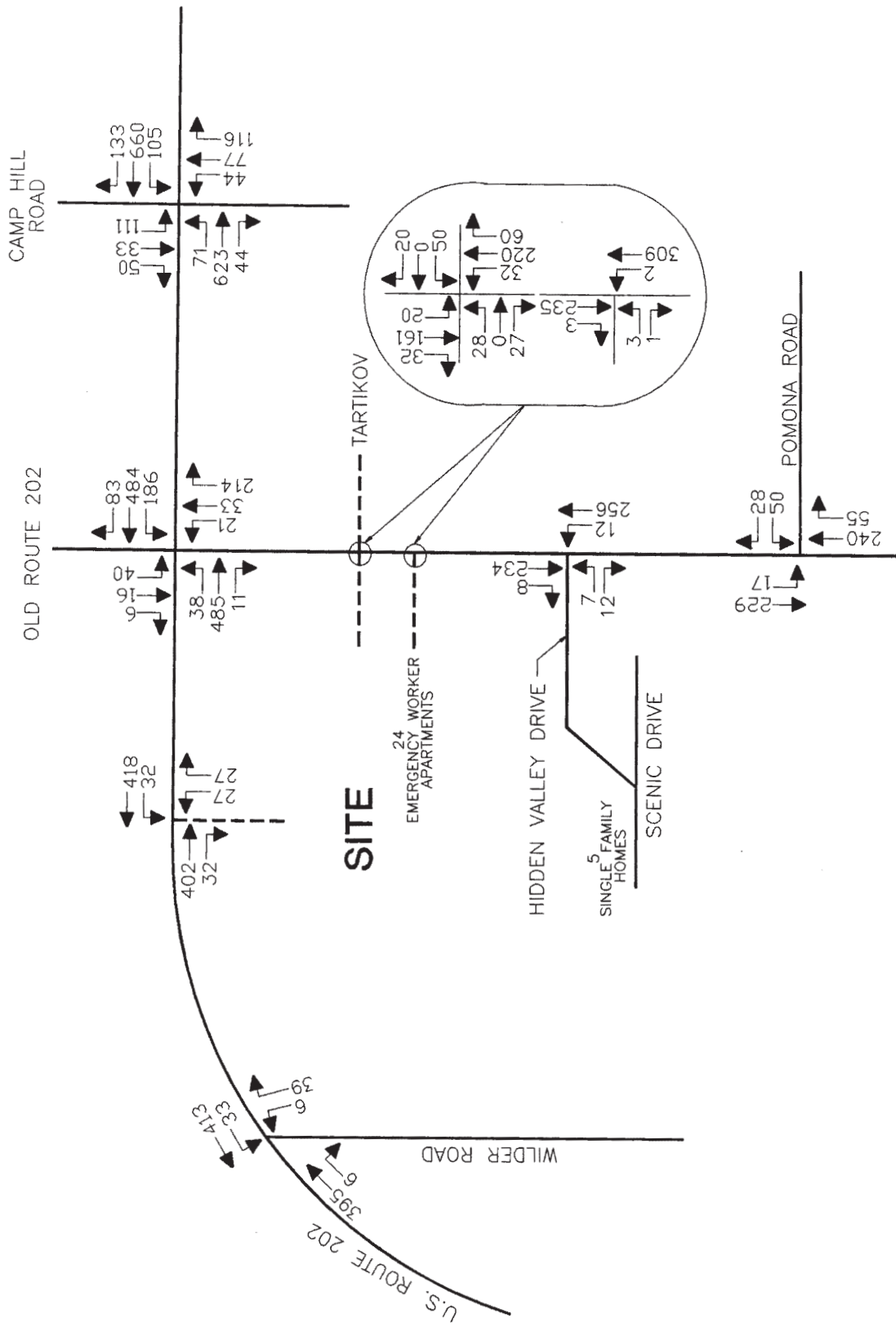
Patrick Farm
 Town of Ramapo, Rockland County, NY
 Source: John Collins Engineers, P.C.
 Date: April, 2009



NOTE: LINE DIAGRAM NOT TO SCALE

Figure 3.5-37: Tartikov Traffic Volumes Saturday Peak Hour (250 Units)
 Patrick Farm
 Town of Ramapo, Rockland County, NY
 Source: John Collins Engineers, P.C.
 Date: April, 2009

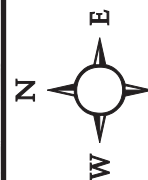




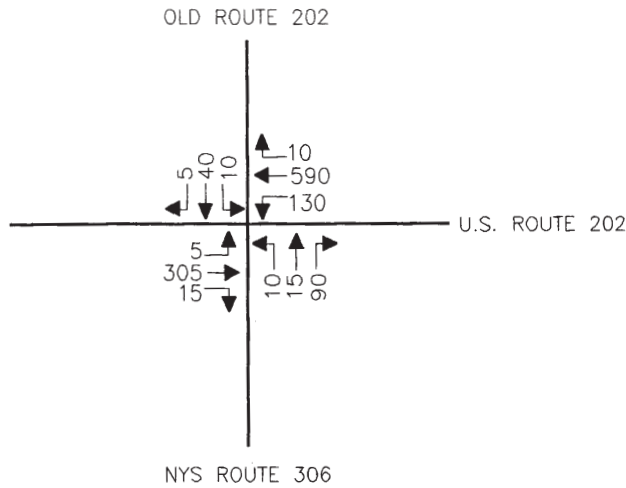
NOTE: LINE DIAGRAM NOT TO SCALE

NYS ROUTE 306

Figure 3.5-38: Year 2013 Build Traffic Volumes Saturday Peak Hour (W/ Minisceongo Park & Tartikov)
 Patrick Farm
 Town of Ramapo, Rockland County, NY
 Source: John Collins Engineers, P.C.
 Date: April, 2009



TOTAL INTERSECTION VOLUME = 1225

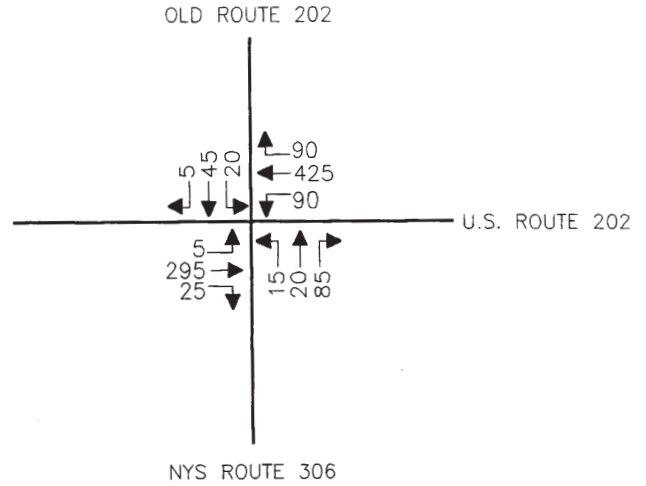


2008 EXISTING TRAFFIC VOLUMES
WEEKDAY PEAK AM HIGHWAY HOUR
(7:30 AM - 8:30 AM)



SUMMER CONDITIONS*

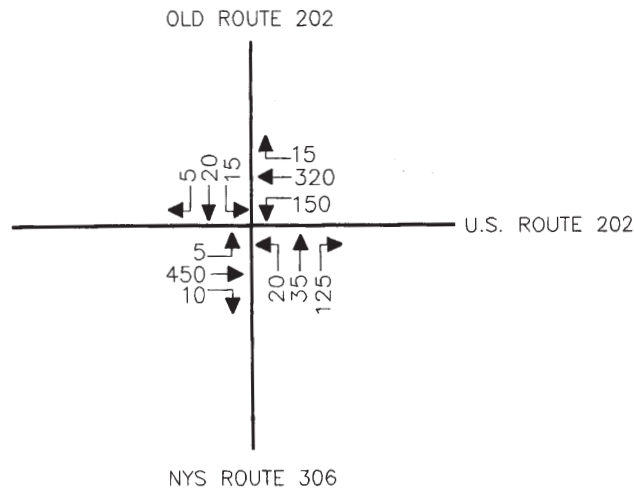
TOTAL INTERSECTION VOLUME = 1120



2008 EXISTING TRAFFIC VOLUMES
WEEKDAY PEAK AM HOUR
(8:15 AM - 9:15 AM)
* COUNT CONDUCTED 7/18/2008



TOTAL INTERSECTION VOLUME = 1170

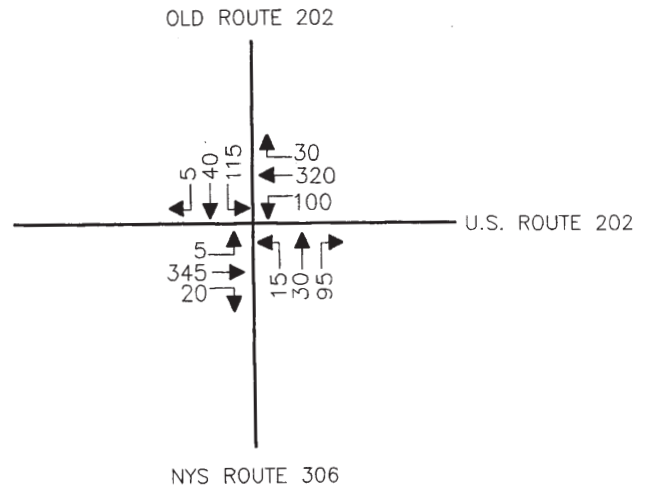


2008 EXISTING TRAFFIC VOLUMES
WEEKDAY PEAK PM HIGHWAY HOUR
(5:00 PM - 6:00 PM)

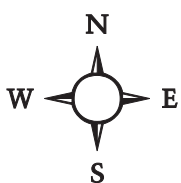


SUMMER CONDITIONS*

TOTAL INTERSECTION VOLUME = 1120



2008 EXISTING TRAFFIC VOLUMES
WEEKDAY PEAK PM HOUR
(3:30 PM - 4:30 PM)
* COUNT CONDUCTED 7/17/2008



**Figure 3.5-39: Year 2013 Build Traffic Volumes Saturday Peak Hour
(W/ Minisceongo Park & Tartikov)**

Patrick Farm

Town of Ramapo, Rockland County, NY

Source: John Collins Engineers, P.C.

Date: April, 2009