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TRAFFIC IMPACT STUDY

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WATCHTOWER

WARWICK PROPERTY REDEVELOPMENT

ONE KINGS DRIVE

TOWN OF WARWICK, NEW YORK

JOB NO. 1700

OCTOBER 12, 2010

REVISED FEBRUARY 8, 2012

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SECTION I

INTRODUCTION

A. PROJECT DESCRIPTION AND LOCATION (Figure No.1)

The Watchtower Bible and Tract Society of New York, Inc., is proposing a religious administrative campus comprised of 8 buildings along with several accessory site structures on approximately 45 acres of an overall site consisting of approximately 253 acres. The campus buildings include approximately 456,000 square feet of total building area for the Administration Offices/Services Building, which includes kitchen, laundry, and support services, with a public entry lobby, and auditorium. Also proposed are four 3-to-5-story residence buildings totaling approximately 494,000 sq ft accommodating up to 588 residential units; a 427,000-square-foot maintenance and resident parking building; a vehicle maintenance building for on-site vehicles with 35,000 square feet of total building area; and a three-level visitor parking building with 92,200 square feet of total building area. The site will contain a total of approximately 870 covered parking spaces with approximately 150 surface spaces in addition to parking for up to 13 buses. Several small accessory buildings, totaling less than 8,000 square feet, will be distributed within the general development area for recreation, waste separation, visitor conveniences, and maintenance areas. It should be noted that the proposed Watchtower facility is similar to an existing Watchtower facility in Patterson, New York. This is discussed in greater detail in Section III.B. The site is located on County Route 84 (Long Meadow Road) in the Town of Warwick, New York, as shown on Figure No. 1.

A Design Year of 2015 has been utilized in completing the traffic analysis of the proposed facility.

B. SCOPE OF STUDY

This study has been prepared to evaluate the potential traffic impacts of the proposed Watchtower facilities on the roadway system in the area. As part of the study, detailed turning movement traffic counts were collected at various intersections in the area. The Existing Traffic Volumes were then projected to a future design year utilizing a background growth factor. In addition, traffic for other potential developments in the area were added to these projected traffic volumes to obtain the 2015 No-Build Traffic Volumes.

Estimates of the traffic which were expected to be generated by the proposed Watchtower facilities were computed based on information published by the Institute of Transportation Engineers (ITE) and from surveys of other existing Watchtower facilities. The Site Generated Traffic Volumes were then assigned to the roadway network based on an arrival and departure distribution which was developed based on a review of existing traffic patterns in the area. The Site Generated Traffic Volumes were combined with the design year No-Build Traffic Volumes to obtain the Build Traffic Volumes for each of the intersections.

A detailed capacity analysis was conducted at each of the intersections utilizing the procedures outlined in the 2000 Highway Capacity Manual. The Existing, No-Build and Build Traffic Volumes were all analyzed for each of the Peak Hours to identify Levels of Service and operating conditions. Where necessary, based on the results of the analysis, recommendations for improvements were made. It is important to note that this study evaluates the impacts the external site generated traffic on the roadway system. Discussion of the internal site traffic can be found in more detail in the DEIS.

SECTION II

EXISTING ROADWAY AND TRAFFIC CONDITIONS

A. DESCRIPTION OF EXISTING ROADWAY NETWORK

The following is a brief description of Long Meadow Road (County Route 84), Sterling Mine Road (County Route 72), Eagle Valley Road (East), Eagle Valley Road (West) and NYS Route 17A. A more detailed description of the existing lane geometry, traffic control as well as a summary of the existing and future Levels of Service and any recommended improvements for each of the study area intersections is presented in Section III-F. Copies of the capacity analysis (which includes lane widths, number of lanes, traffic control and signal timings, where appropriate) for each of the individual intersections studied are contained in Appendix "C" of this study.

1. Long Meadow Road (Orange County Route 84)

Long Meadow Road (Orange County Road 84) is a two lane, County road which originates at a "T" shaped, signalized intersection with Sterling Mine Road (Orange County Route 72). Long Meadow Road (C.R. 84) extends in a northerly direction for approximately 10 miles providing access to residential developments such as Sterling Pines and Woodlands at Tuxedo and the site and other commercial developments before terminating at an intersection with NYS Route 17A. Long Meadow Road (C.R. 84) has a pavement width of approximately 24' feet and shoulders varying from 4' to 8' feet. The speed limit, which is not posted along the roadway, is 55 mph.

2. Sterling Mine Road (Rockland and Orange County Route 72)

Sterling Mine Road (Orange County Route 72) originates at NYS Route 17 in Rockland County. Sterling Mine Road (C.R. 72) traverses in a generally westerly direction as a two lane road (approximately 24' feet of pavement width) with shoulders (varying from 4' to 8' feet). Sterling Mine Road (C.R. 72) continues past Eagle Valley Road (East) as a two lane road entering into Orange County (Orange County Route 72). Between Eagle Valley Road (West) and Long Meadow Road (C.R. 84), Sterling Mine Road (C.R. 72) consists of one westbound lane and two eastbound lanes. At Long Meadow Road (Orange County Route 84) there are separate turning lanes on Sterling Mine Road (C.R. 72). Sterling Mine Road (C.R. 72) continues as a two lane road entering into New Jersey. The posted speed limit in this area is 40 mph.

3. NYS Route 17A

NYS Route 17A is state highway which traverses in a generally east/west direction between NYS Route 17 in the Town of Tuxedo and NYS Route 94 in the Town of Warwick. In the vicinity of the site the roadway intersects with Long Meadow Road and Clinton Road at an unsignalized, full movement intersection. In this area the roadway generally consists of two lanes in each direction however west of the site area the roadway is reduced to one lane in each direction. The roadway has a posted speed limit of 55 mph.

4. Eagle Valley Road (East)

Eagle Valley Road (East) is a two lane road which originates at a Astop@ sign controlled "T" intersection with Sterling Mine Road (C.R. 72) and traverses in a northeasterly direction before terminating at NYS Route 17 at a signalized intersection. Eagle Valley Road has a pavement width of 20'-24' feet with no defined shoulders and has a restricted weight limit of 4 tons except for local deliveries. Eagle Valley Road (East) has a posted speed limit of 30 mph approaching Sterling Mine Road and a posted speed limit of 35 mph approaching NYS Route 17 with speed reductions at various locations.

5. Eagle Valley Road (West)

Eagle Valley Road (West) is a two lane Town road which originates at a Astop@ sign controlled intersection with Sterling Mine Road (C.R. 72) opposite Sister Servants Lane (St. Joseph Home and St. Mary Villa). Eagle Valley Road (West) traverses in a northwesterly direction providing access to other local roads before terminating at Long Meadow Road (C.R. 84). Eagle Valley Road (West) has a pavement width 22'-24' feet with no defined shoulders and has a posted speed limit of 30 mph.

B. YEAR 2010 EXISTING TRAFFIC VOLUMES (Figures No. 2, 3, 4 and 5)

Representatives of John Collins Engineers, P.C. conducted turning movement traffic counts in the area between the hours of 6:45 AM to 9:00 AM for the weekday AM hours, 4:00 PM to 6:30 PM for the weekday PM hours, 11:00 AM to 2:00 PM for the Saturday Peak hours and 9:00 AM to 12:00 Noon for the Sunday hours on various dates during the weeks of May 3rd and June 1st to identify current traffic conditions in the vicinity of the site. Automatic Traffic Recorder (ATR) machines also collected volumes, speed and classification data at locations along Long Meadow Road and Sterling Mine Road. One machine was placed along Sterling Mine Road approximately 715 ft. east of the Long Meadow Road intersection near the west end of Babcock Hill Road. Two machines were placed along Long Meadow Road, one between Eagle Valley Road and Woodlands Drive and the second approximately 400 ft. north of the proposed site access location. These data were collected continuously from April 26th to May 14th and the data collected included traffic volumes, vehicles speeds and vehicle classifications. The machine count data can be found in Appendix "B" of this report. In addition, the counted traffic volumes were compared to count data contained in other studies in the area including the traffic studies for Sterling Mine Estates, Tuxedo Reserve and the Science of the Soul Center. Together this information was used to establish the Year 2010 Existing Traffic Volumes for the Weekday Peak AM, Peak PM, Peak Saturday and Peak Sunday Hours at the following locations.

1. Long Meadow Road (CR 84) and NYS Route 17A
2. Long Meadow Road (CR 84) and Beach Road
3. Long Meadow Road (CR 84) and Woodlands Drive
4. Long Meadow Road (CR 84) and Eagle Valley Road
5. Long Meadow Road (CR 84) and Sterling Mine Road (CR 72)

6. Site Entrance and Long Meadows Road
7. Sterling Mine Road (CR 72) and Sister Servants Lane/Eagle Valley Road

Based upon a review of this information, the existing peak hours were generally identified as follows:

Weekday Peak AM Highway Hour	–	7:30 AM to 8:30 AM
Weekday Peak PM Highway Hour	–	4:45 PM to 5:45 PM
Peak Saturday Hour	–	12:30 PM to 1:30 PM
Peak Sunday Hour	–	11:00 AM to 12:00 Noon

The resulting Year 2010 Existing Traffic Volumes for each of the study locations are shown on Figures No. 2, 3, 4 and 5 for the Weekday Peak AM, Peak PM, Saturday and Sunday Peak Hours, respectively.

C. ACCIDENT DATA (Table A)

Accident reports previously obtained from the New York State Department of Motor Vehicles have been included in this study. This accident data includes accidents along Sterling Mine Road from the Rockland County Border to the NJ Border, Long Meadow Road from Sterling Mine Road to NYS Route 17A and NYS Route 17A from Benjamin Meadow Road to Sylvan Way for the period from March 2007 through February 2010. This data as well as a Table A, Table A-2, and Table A-3 which summarize the accidents can be found in Appendix "E" of this study. Table A summarizes the details of each of the individual reported accidents, Table A-2 summarizes the number of accidents for

each roadway by year and compares the accidents to statewide averages for similar roadway types, and Table A-3 summarizes the accident types for each roadway segment for the latest three year period. As can be seen from a review of these data, a total of 45 accidents were reported during the latest three year period provided. Approximately 52% of the accidents involved animal action or slippery pavement. Another 34% of were attributed to driver error, speed, or alcohol and the remaining 14 percent were due to other or unknown causes. Also, as shown on Table A-2 the accident rates for each roadway are lower than the statewide averages.

D. PUBLIC TRANSPORTATION (APPENDIX "F")

Currently there are no public transportation alternatives which operate in the immediate vicinity of the proposed development along Sterling Mine Road or Long Meadow Road. However, in the Village of Sloatsburg and Town of Tuxedo there are Metro-North/New Jersey Transit train stations which operate along the Port Jervis Line. The Sloatsburg station is approximately 5 miles from the proposed development while the Tuxedo Station is approximately 8 miles away. The Sloatsburg station contains 80 commuter parking spaces and no metered spaces while the Tuxedo station contains 245 commuter parking spaces as well as 24hour metered parking spaces. Both stations provide free parking on weekends. A round trip ticket from each of these stations to Penn Station in New York City costs approximately $23. Tickets are also available for trips to other destinations along the Port Jervis Line. Additional information on each station as well as train schedules to and from New York City are contained in Appendix F of this report.

New Jersey Transit operates two buses from the Warwick Park and Ride to the New York City Bus Terminal. The Warwick Park and Ride is approximately 18 miles from the site location and a round trip ticket for this bus costs $30.00. The Route 196 is an express bus with 13 busses to New York City during the Morning Peak and 13 busses from New York City during the PM Peak period. The Route 197 is a local bus which runs less frequently throughout the day both to and from New York City. Coach USA also operates a commuter bus route from Tuxedo and Sloatsburg to the Port Authority Bus Terminal in New York City. Tickets for this route can be bought in Tuxedo at Bently's Deli on Route 17 and in Sloatsburg at Haas Pharmacy at 62 Orange Turnpike (Route 17). The bus stops at each of these locations. Free Parking is also available at the Tuxedo stop as it is a Park and Ride Location. A round trip ticket from Sloatsburg to New York City costs $25.90 while a round trip ticket from Tuxedo Costs $27.50. The bus schedules are provided in Appendix F of this report. Table 3 contained in Appendix "B" summarizes the busses and trains including the parking availability for each route, the cost of a round trip ticket, the frequency of busses for each route and the average length of each trip.

Public Transportation usage data was also obtained for the Watchtower facility in Patterson, New York by the Project Sponsor. It is expected that the public transportation usage of the proposed Warwick facility will be similar to that of the Patterson facility since they are similar type developments. The data, which was provided by the Watchtower Transportation Department, indicates that for the Patterson Facility a maximum of 10 Watchtower residents per year are picked up from a bus or train station and there is no indication that residents at the Patterson Facility regularly use public transportation. The Watchtower Transportation Department indicated that there is no indication that commuters use public transportation for travel to the Patterson facility.

Finally, the Watchtower Transportation Department data indicates that during working hours (Mon.-Fri. 8:00 AM -12:00 PM and 1:00 PM to 5:00 PM) an average of one group every two weeks uses public transportation. In those groups there is an average of two persons. In addition, on average, once a month a visitor will use public transportation on the weekend.

SECTION III

EVALUATION OF FUTURE TRAFFIC CONDITIONS

A. YEAR 2015 NO-BUILD TRAFFIC VOLUMES (Figures No. 6 through 17)

In order to account for normal background traffic growth in the area, the Year 2010 Existing Traffic Volumes were projected to the 2015 Design Year utilizing a background growth factor of 2% per year for a total background growth of 10% (See Figures No. 6, 7, 8 and 9). The 2% per growth rate was based on NYSDOT historical data contained in the NYSDOT Traffic Volume Data Reports. This data indicates that for the last 10 year period, growth on the area roadways was less than 1% per year. The 2% per year factor was used to also account for other miscellaneous development traffic in the area which may occur. In addition to this background growth factor, traffic estimates were compiled for other developments in the area. These developments included:

- Sterling Mine Estates - 24 lot single family home subdivision which is located on the north side of County Route 72 (Sterling Mine Road) between the east and west ends of Eagle Valley Road
- Sterling Mine Active Adult - 350 unit active adult project located on the south side of Sterling Mine Road in the Town of Ramapo

- Tuxedo Reserve - A major residential project located in the Town of Tuxedo. It has access connections to NYS Route 17 and Sterling Mine Road (via Eagle Valley Road in Sloatsburgh)

This other development traffic (See Figures No. 10, 11, 12 and 13) was then combined with the 2015 Projected Traffic Volumes to obtain the Year 2015 No-Build Traffic Volumes. The resulting Year 2015 No-Build Traffic Volumes are shown on Figures No. 14, 15, 16 and 17 for each of the Peak Hours, respectively.

B. SITE GENERATED TRAFFIC VOLUMES (Table No. 1)

The live-work arrangement employed by the Project Sponsor allows residents to walk to their work locations using either the tunnels connecting the buildings or outside sidewalks. Depending on assignment, some residents may even live and work in the same building. Therefore a very limited number of external trips will be made during the weekday business hours. This is in contrast to traditional mixed-use developments where many residents live at one location, but commute to their work location via personal vehicles or public transportation.

As a result, the amount of traffic to be generated by the proposed Watchtower facilities during each of the Peak Hours were developed based on information collected by AKRF for the existing similar Watchtower Educational Center facility located in Patterson, New York. Although larger in size and population than the proposed project, the Patterson facility is similar in type of use to the proposed facility and implements the same

arrangement whereby personnel both live and work on site. The Patterson facility includes 783 dwelling units and can house a maximum population of 1,550 persons, while the proposed facility will include 588 dwelling units and a maximum population of 1000 persons. The data obtained from the traffic counts of the existing Patterson facility, which are shown in Table No. 1, were used to estimate traffic volumes that could potentially be generated by the Project Sponsor's proposed facility at maximum population. It should be noted that the Institute of Transportation Engineers (ITE) report titled "Trip Generation", 8th Edition, 2008 does not provided any specific data for a comparable land use since the majority of the trips will be internal to the site. In addition, data collected at the existing Watchtower Farms facility located in the Town of Shawangunk, New York were also referenced for determining peak hours of arrival and departure.

Also, refer to Section III-H for a discussion on the sensitivity analysis, which considers the effect of these higher peak hour trip generation rates at this facility. See also Section III-I for evaluation of Special Event Conditions.

C. ARRIVAL AND DEPARTURE DISTRIBUTIONS (Figures No. 18 and 19)

It was necessary to establish an arrival/departure distribution in order to assign the Site Generated Traffic Volumes to the roadway network. Based on a review of the Existing Traffic Volumes and expected travel patterns for this facility, the arrival and departure

distributions were established. The resulting arrival and departure distributions are shown on Figures No. 18 and 19, respectively.

D. YEAR 2015 BUILD TRAFFIC VOLUMES (Figures No. 20 through 27)

The Site Generated Traffic Volumes shown in Table No 1 were assigned to the roadway network based on the arrival and departure distributions referenced above. The resulting Site Generated Traffic Volumes are shown on Figures No. 20, 21, 22 and 23 for each of the Peak Hours, respectively. These volumes were then added to the Year 2015 No-Build Traffic Volumes to obtain the Year 2015 Build Traffic Volumes (with the proposed facility). The resulting Year 2015 Build Traffic Volumes are shown on Figures No. 24, 25, 26 and 27 for the Weekday Peak AM, Peak PM, Saturday and Sunday Peak Hours, respectively.

E. DESCRIPTION OF ANALYSIS PROCEDURES

It was necessary to perform capacity analyses to determine existing and future traffic operating conditions at the study area intersections. The following is a brief description of the analysis method utilized in this report:

- Signalized Intersection Capacity Analysis

  The capacity analysis for a signalized intersection was performed in accordance with the procedures 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.

- Unsignalized Intersection Capacity Analysis

  The unsignalized intersection capacity analysis method utilized in this report was also 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.

The capacity analysis for each intersection was conducted using HCS+ Version 5.3 developed by McTrans. Additional information concerning signalized and unsignalized Levels of Service can be found in Appendix "D" of this report.

F. TRAFFIC IMPACT ANALYSIS RESULTS (Table No. 2)

A capacity analysis was performed at the study area locations utilizing the procedures described above to evaluate current and future traffic operating conditions. Summarized below is a summary of the existing and future Levels of Service and any recommended improvements.

Table No. 2 summarizes the results of the analysis for the Year 2010 Existing, Year 2015 No-Build and Year 2015 Build Traffic Volumes. Copies of the intersection capacity analysis (which include lane widths, number of lanes, traffic control and signal timings, where appropriate) are contained in Appendix "C" of this study.

1. Sterling Mine Road (C.R. 72) and Long Meadow Road (C.R. 84)

   Long Meadow Road (County Route 84) intersects with Sterling Mine Road (County Route 72) at a "T" shaped, signalized intersection. The Sterling Mine Road (C.R. 72) eastbound approach consists of two lanes in the form of a separate left turn lane and a separate through lane and the Sterling Mine Road (C.R. 72) westbound approach consists of two lanes in the form of a separate through lane and a separate right turn lane. The Long Meadow Road (C.R. 84) southbound approach consists of two lanes in the form of a separate left turn lane and a separate right turn lane.

   Capacity analysis conducted utilizing the Year 2010 Existing Traffic Volumes indicates that the intersection is currently operating at an overall Level of Service "C" or better during the Peak Hours.

   Capacity analysis conducted utilizing the Year 2015 No-Build and Build Traffic Volumes indicates the intersection is anticipated to continue to operate at a Level of Service "C" during the AM Peak Hour while similar Levels of Service to existing conditions can be expected for PM, Saturday and Sunday Peak Hours.

2. Long Meadow Road (C.R. 84) and Eagle Valley Road

Long Meadow Road (County Route 84) and Eagle Valley Road intersect at an unsignalized, "T" shaped intersection. Each of the approaches to the intersection consists of one lane and the Eagle Valley Road approach is controlled by a stop sign.

Capacity analysis conducted utilizing the 2010 Existing Traffic Volumes indicates that the intersection currently operates at a Level of Service "B" during the AM Peak hour and at a Level of Service "A" during the PM, Saturday and Sunday Peak Hours.

The intersection was reanalyzed using the 2015 No-Build and Build Traffic Volumes. The results of these analyses indicate that the intersection will maintain similar Levels of Service under the No-Build condition, however it can be expected to operate at a Level of Service "B" during the AM, PM and Saturday Peak Hours under the Build Condition.

3. Long Meadow Road (C.R. 84) and Woodlands Drive

Long Meadow Road (County Route 84) and Woodlands Drive intersect at an unsignalized, "T" shaped intersection. Each of the approaches to the intersection consists of one lane and the Woodlands Drive approach is controlled by a stop sign. Woodlands drive consists of a 20 ft. wide entry driveway and a 20 ft. wide exit driveway with a landscaped median.

Capacity analysis conducted utilizing the 2010 Existing Traffic Volumes indicates that the intersection currently operates at a Level of Service "B" during the AM Peak hour and at a Level of Service "A" during the PM, Saturday and Sunday Peak Hours.

The intersection was reanalyzed using the 2015 No-Build Traffic Volumes. The results of these analyses indicate that the intersection will operate at a Level of Service "B" during the AM and PM Peak Hours while a Level of Service "A" will be maintained during the Saturday and Sunday Peak Hours.

Analysis conducted with the 2015 Build Traffic Volumes indicates that the intersection can be expected to operate at a Level of Service "B" during each of the Peak Hours.

4. Long Meadow Road (C.R. 84) and IBM Entrance/Beech Road

Long Meadow Road (County Route 84) and the IBM Entrance/Beech Road intersect at an unsignalized, "T" shaped intersection. The southbound Long Meadow Road approach consists of one lane while the northbound approach consists of a separate left turn lane and a separate through lane. The eastbound IBM Entrance/Beech Road approach consists of a separate left turn lane and a channelized right turn lane each of which are controlled by "stop" signs.

Capacity analysis conducted utilizing the 2010 Existing Traffic Volumes indicates that the intersection currently operates at Level of Service "A" during each of the Peak Hours. The analysis was recomputed using the 2015 No-Build and 2015 Build Traffic Volumes. These analyses indicate that similar Levels of Service can be expected under future conditions.

5. NYS Route 17A and Long Meadow Road (C.R. 84)/Clinton Road

NYS Route 17A intersects with Long Meadow Road (County Route 84) and Clinton Road at an unsignalized full movement intersection. The eastbound NYS Route 17A approach consists of two lanes formed by a share left turn/through lane and shared through/right turn lane while the westbound approach consists of a separate left turn lane, a through lane, and a shared through/right turn lane. Route 17A also has a center median approximately 30 ft. wide. The Long Meadow Road and Clinton Road approaches each consist of one lane and are controlled by "stop" signs.

Capacity analysis was conducted utilizing the 2010 Existing Traffic Volumes. There results of these analyses indicate that the intersection currently operates at a Level of Service "C" or better during the AM and PM Peak hours while a Level of Service "B" or better is currently experienced during the Saturday and Sunday Peak Hours.

The intersection was reanalyzed using the 2015 No-Build and Build Traffic Volumes which indicates that the intersection will operate at a Level of Service "D" or better during the AM Peak Hour under future conditions. It can also be expected that similar Levels of Service to existing conditions will be maintained during the PM, Saturday and Sunday Peak Hours.

6. Long Meadow Road (C.R. 84) and Site Access Driveway

The proposed site access driveway for the watchtower development is an existing driveway which is currently gated closed. This driveway was formerly used to access the International Nickel property which existed on the site prior to the property originally being acquired by Kings College and more recently by Watchtower. The access connection currently intersects Long Meadow Road (County Route 84 at an unsignalized "Y" shaped intersection. Each approach to the intersection consists of one lane. There are currently no "stop" signs on the site access approaches to the intersections. These will be installed as part of the development as well as new stop bars and new double yellow centerline striping since the existing striping is faded.

Capacity analysis was conducted for the proposed site access intersection utilizing the 2015 Build Traffic Volumes. The results of these analyses indicate that the intersection will experience a Level of Service "B" during the PM Peak Hours while it can be expected to operate at a Level of Service "A" during the AM, Saturday and Sunday Peak Hours.

A sight distance analysis was completed for this intersection based on standards provided in the American Association of State Highway and Transportation Officials (AASHTO) publication entitled "A Policy on Geometric Design of Highways and Streets", dated 2004. The sight distance looking to the left (north) from the site access is approximately 1100 ft. while the sight distance looking to the right (south) is approximately 885 ft. Based on a 85th Percentile Speed of 60 mph, as measure by ATR machine data collected along Long Meadow Road, Exhibit 9-55 on page 661 of the AASHTO indicates that a minimum stopping sight distance (SSD) of 570 ft. and an intersection sight distance (ISD) of 665 ft is required. Therefore, the required sight distances are currently met. A Highway Work Permit will be required from Orange County Department of Public Works for this and any other access related improvements. The Applicant will also contact the Orange County Department of Public Works for input on the proposed access during the Site Plan Approval and as part of the Highway Work Permit process and complete any improvements at the site access as necessary.

7. Sterling Mine Road(C.R. 72) and Eagle Valley Road (West)/Sister Servant Lane

Eagle Valley Road (West) intersects with Sterling Mine Road (County Route 72) opposite Sister Servant Lane to form a full movement unsignalized intersection. All approaches to the intersection consist of one lane in each direction.

Capacity analysis conducted utilizing the Year 2010 Existing Traffic Volumes indicates that the Eagle Valley Road (West) southbound approach (minor

movements) is currently operating at a Level of Service "E" during the Weekday Peak AM Hour and is currently operating at a Level of Service "D" during the Weekday Peak PM Hour. All other movements to the intersection are currently operating at a Level of Service "C" or better during these peak periods. A Level of Service "C" or better is also currently experienced on all approaches during the Saturday and Sunday Peak Hours.

Capacity analysis conducted utilizing both the Year 2015 No-Build and 2015 Build Traffic Volumes indicates that a Level of Service "F" for the southbound left turn movement on the Eagle Valley Road approach will occur during the AM and PM Peak Hours. All other approaches during these peak hours will operate at a Level of Service "C" or better. During the Saturday and Sunday Peak Hours it is expected that the Levels of Service experienced at this intersection will be similar to existing conditions.

It should be noted that the presence of the traffic signal at the intersection of Sterling Mine Road (C.R. 72) and Long Meadow Road (C.R. 84) does provide some gaps in the traffic stream which benefits this condition. As discussed previously traffic data was collected along Sterling Mine Road by ATR machines over several days during April and May of 2010. This data included gap data. The machine was placed approximately 715 ft. east of the Sterling Mine Road/Long Meadow Road intersection. Based on this data, contained in Appendix "B" approximately 30% of the gaps passing this intersection are greater than 7 seconds.

Note that based on the Exhibit 17-5 contained in Chapter 17 of the 2000 Highway Capacity Manual published by the Transportation Research Board the base critical gap for left turns from the minor street at an unsignalized intersection is 7.1 seconds. As an example, the gap data contained in Appendix "B" indicates that on May 13, 2010 during the AM Peak Hour (see 8:00 AM Hour in Table) there were 157 gaps of 7 seconds or more in traffic in both directions. As a result it is not expected that any mitigation will be required due to the additional traffic from the proposed Watchtower Development. It should also be noted that the increase in average vehicle delay of 8.5 to 9 seconds that will be experienced during the AM and PM Peak Hours under Build Conditions will only be experienced by the vehicles exiting (75 AM Peak Hour, 45 PM Peak Hour) from Eagle Valley Road southbound making both right and left turns onto Sterling Mine Road.

G. RESULTS AND RECOMMENDATIONS (Table No. 2)

The capacity analyses conducted at each of the intersections are summarized in Table No. 2. Based upon a review of the existing and future levels of service, the following is a summary of the recommendations relative to access improvements and traffic flow in the area.

1. The traffic signal located at the intersection of County Route 72 and County Route 84 will require the traffic signal timings to be upgraded to accommodate future traffic volumes with or without the proposed facility.

2. The access connections of the proposed development to County Route 84 will have to be reviewed with the Orange County DPW and may involve additional turning lanes and road widening in the vicinity of the access drives.

3. The intersection of County Route 84 and NYS Route 17A is currently unsignalized. This intersection will have to be reviewed for potential signalization in the future regardless of the Watchtower development because the intersection currently experiences Level of Service "E" during the AM Peak Hour, which is expected to be maintained under No-Build and Build Conditions. Since the Level of Service could be affected by other background traffic increases, this location was identified for future monitoring which should be completed approximately six months after the completion of the development.

4. Consideration could be given to providing a jitney service from the site to the Metro-North Train Station if the transit usage of the site increases in the future. The Jitney may make sense as an amenity available to the project residents, however based on expected transit usage it is not needed for any project specific mitigation.

Note that Items 3 and 4 are identified as potential improvements but are not necessary to mitigate any specific project impact.

H. SENSITIVITY ANALYSIS

A sensitivity analysis was also completed for the 2015 Build Traffic Volumes for which the data published by the Institute of Transportation Engineers (ITE) as contained in the report titled "Trip Generation", 8th Edition, 2008 was specifically referenced. This was presented for comparison only since it is expected that the trip generation rates will be consistent with those presented in the main section of the Traffic Study since these are based on actual experiences at other existing Watchtower facilities.

The applicant's proposed facility operates in a unique fashion in that individuals live and work on the site. The trip generation factors provided by ITE are not representative of this type of facility since the rates are based on individuals making trips to and from separate home and work locations. The ITE land use categories most similar to the applicant's facility are use categories 710 (Office) and 230 (Townhome); however, applying these trip generation factors directly to the applicant's facility would result in predicted traffic volumes that are significantly higher than what was actually observed at the applicant's Patterson, NY facility, which employs the same live-work arrangement, especially during the Peak AM and PM Hours. Thus, it was deemed unrealistic to assume that the full number of townhome and office trips will be external to the site. Rather, based on engineering judgment and knowledge of the Project Sponsor's Patterson facility, which employs the same live-work arrangement, it was assumed that 60 percent of the office-related trips and 40 percent of the townhome-related trips will be external to the site. Internal trips, for example, a trip from the residential portion to the office portion

of the site, will not involve any vehicles entering or exiting the site; therefore internal trips will not impact the external roadway system. Since, the applicant conducted a traffic study at the Patterson, NY facility; these results were used as background information for lowering the ITE trip generation rates, such that the sensitivity analysis would still be conservative but reasonable. Table No. 1A contained in Appendix "G" summarizes the number of external trips predicted using the modified ITE method.

In the Sensitivity Analysis, the peak hour of adjacent street traffic was used for the trip generation estimates because this represents the volume that will enter and exit the site during the peak hours of the roadway volumes. In general for residential and office land uses the peak hour of adjacent street traffic coincides with the peak hour of generator. It should be noted that a significant portion of the trips are expected to be "internal" to the site since the majority of the residents will work on site. The Site Generated and 2015 Build Traffic Volumes associated with the sensitivity analysis can be found on Figures No. 20A through 27A contained in Appendix "G" of this report.

The results of the sensitivity analysis are summarized in Table No. 2-A, contained in Appendix "G". A review of this analysis indicates that the resulting LOS at each intersection is acceptable using both the Patterson, NY trip generation rates and the modified ITE trip generation rates. The purpose of the sensitivity analysis was to show that even higher trip generation rates than those observed at the Patterson, NY facility would result in similar LOS at each intersection.

I. SPECIAL EVENTS

Three special events that are projected to increase traffic will be held at the Project Site during the year. These events will take place the same time each year: (1) on the second Saturday in March; (2) on the second Saturday in September, and (3) on the first Saturday in October. All the events commence at 10:00 AM and are three hours long. Approximately 480 vehicles are projected to arrive at the site from other locations for these special events. Based on Watchtower's past experience it is projected, that approximately 13 percent (63 vehicles) of off-site guests will arrive the night prior to the event. Another 22 percent (106 vehicles) will arrive before 9:00 AM the day of the event. The remaining 65 percent (311 vehicles) are projected to arrive during the last hour or from 9:00 AM to 10:00 AM. The proposed action will include a total of 1,020 parking spaces, so all vehicles on site during these special events will be accommodated on site. Vehicular traffic exiting the site following the events is spaced out over the afternoon and evening, since many guests for the special events remain after the conclusion of the program to socialize with residents throughout the afternoon and evening with approximately 31 percent (148 vehicles) exiting between 1:00 PM and 2:00 PM, 29% (140 vehicles) exiting between 2:00 PM and 5:00 PM, 25% (120 vehicles) exiting after 5:00 PM and 15% (72 vehicles) exiting the day after the event.

A separate analysis was conducted to analyze the impact of these special events on the study area intersections. This analysis is contained in Appendix "H". Based on the arrival and departure data for these special events as provided by the Project Sponsor it is

expected that the 9:00 AM to 10:00 AM period will be the peak period of trip generation for these special events. It should be noted that during this time the background traffic volumes on a Saturday are approximately 20% lower than during the Saturday Peak Hour which occurs between 12:30 PM and 1:30 PM. However, to provide a conservative analysis the Saturday Peak Hour background traffic volumes were assumed to coincide with the site's highest hour of trip generation during these special events. Thus, the operating conditions during the special events peak hour are expected to be better than what is depicted in the Special Events results analysis. Table 1-B contained in Appendix "G" summarizes the expected trip generation estimates of the site during the 9:00 AM to 10:00 AM Peak Hour for these special events. It should be noted that it was assumed there would be little or no exiting site traffic during this period however, for the analysis purposes it was assumed that approximately 10% of the entering traffic will also exit the site during the 9:00 AM to 10:00 AM hour. This accounts for any potential drop-offs to the site. For the Special Events condition analysis a total site trip generation of 342 vehicles (311 entering, 31 exiting) was used. Site Generated and Build Traffic Volumes for the Special Events scenario can be found on Figures No. 22B and 26B, respectively.

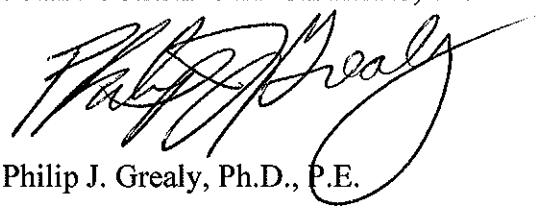
The results of the analysis are summarized on Table No. 2-B contained in Appendix "H". In general, these results indicate that similar Levels of Service to the Saturday Peak Hour Build Scenario will be experienced.

J. SUMMARY OF FINDINGS AND RECOMMENDATIONS

As summarized in this report, the traffic generated by the proposed religious facility will require improvements to the roadway system at the site access. Based on the analysis contained in this report with the completion of these improvements, similar Levels of Service and delays will be experienced under the future No-Build and future Build conditions. As previously mentioned, the Applicant will contact the Orange County Department of Public Works for input on the proposed access during the Site Plan Approval and as part of the Highway Work Permit process and complete any improvements at the site access as necessary.

Respectfully submitted,

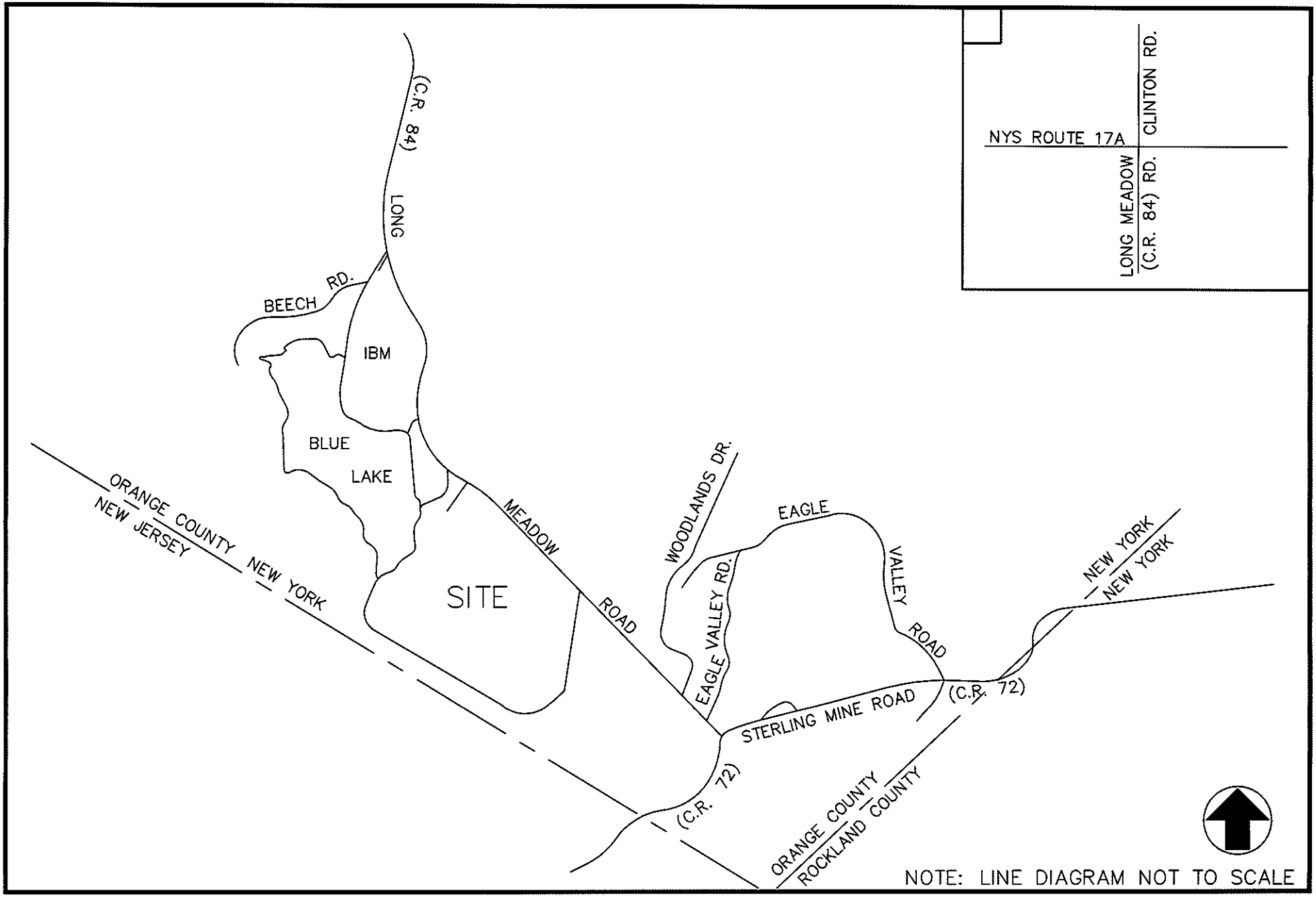
JOHN COLLINS ENGINEERS, P.C.



Philip J. Grealy, Ph.D., P.E.

APPENDIX "A"

FIGURES



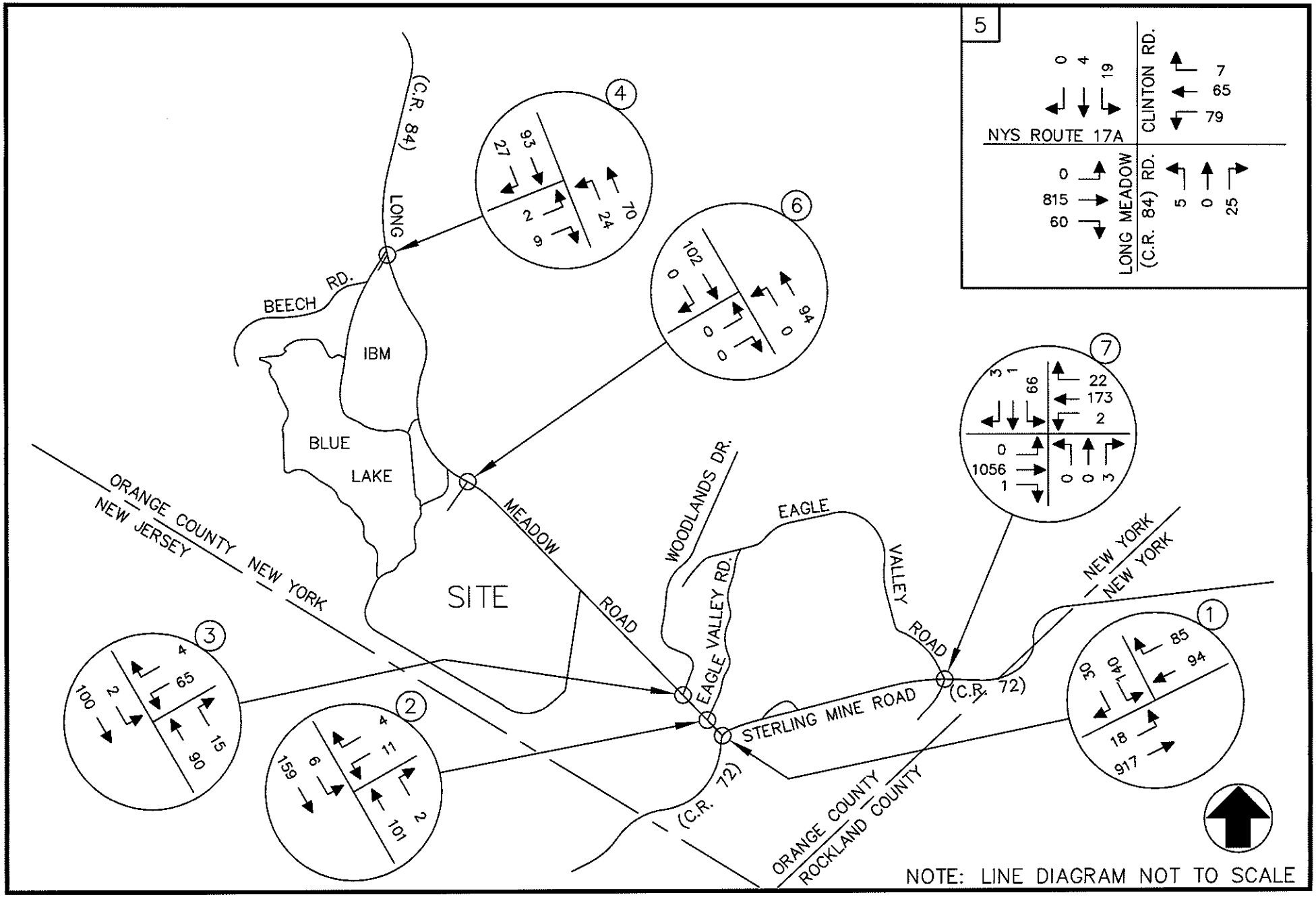
1 KINGS DRIVE WATCHTOWER

WARWICK, NEW YORK

SITE LOCATION MAP

JOHN COLLINS ENGINEERS, P.C.
HAWTHORNE , NEW YORK

PROJECT NO. 1700 DATE: SEPT. 2011 FIG. NO. 1



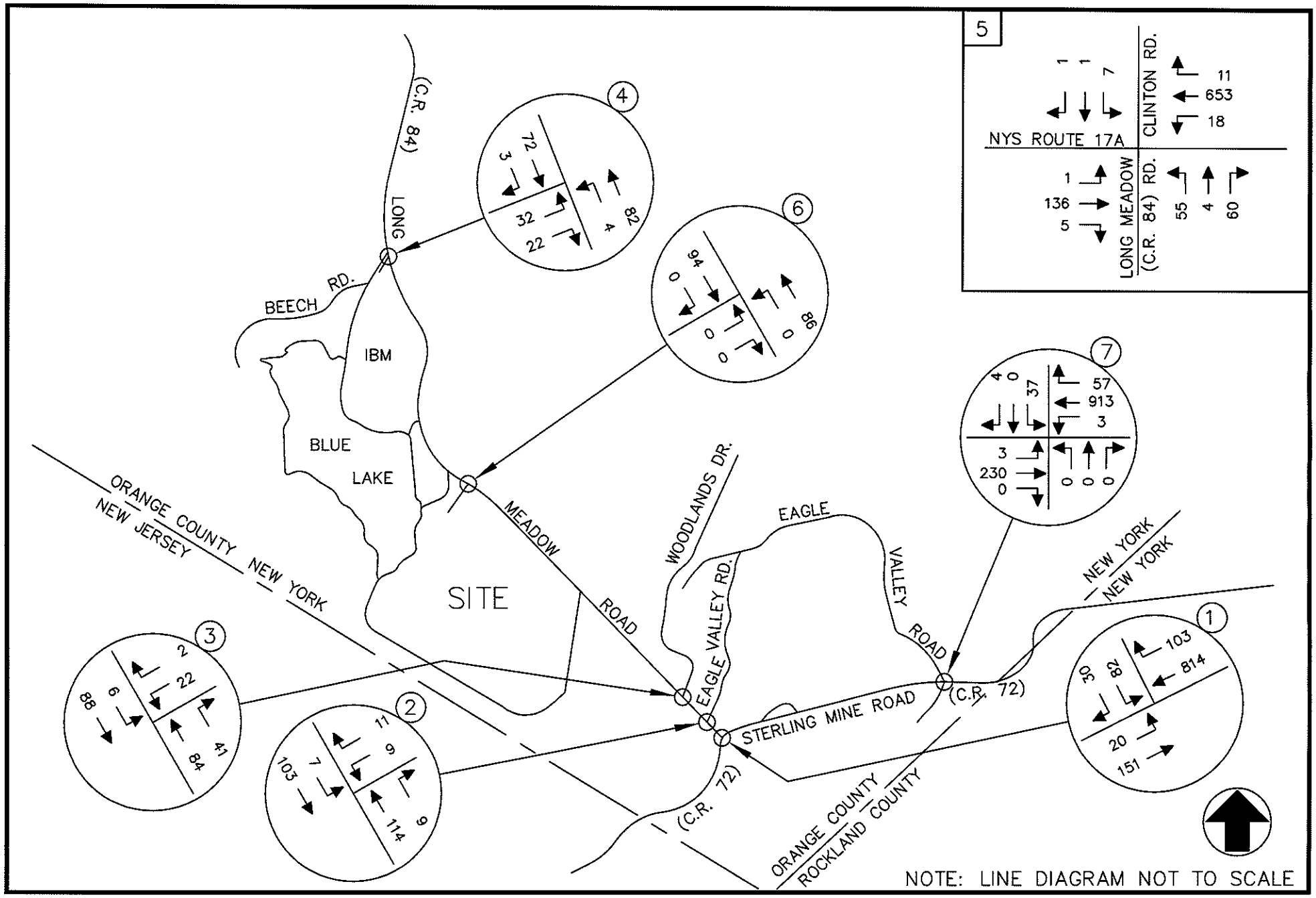
1 KINGS DRIVE WATCHTOWER

WARWICK, NEW YORK

2010 EXISTING TRAFFIC VOLUMES
WEEKDAY PEAK AM HOUR

JOHN COLLINS ENGINEERS, P.C.
HAWTHORNE , NEW YORK

PROJECT NO. 1700 DATE: SEPT. 2011 FIG. NO. 2

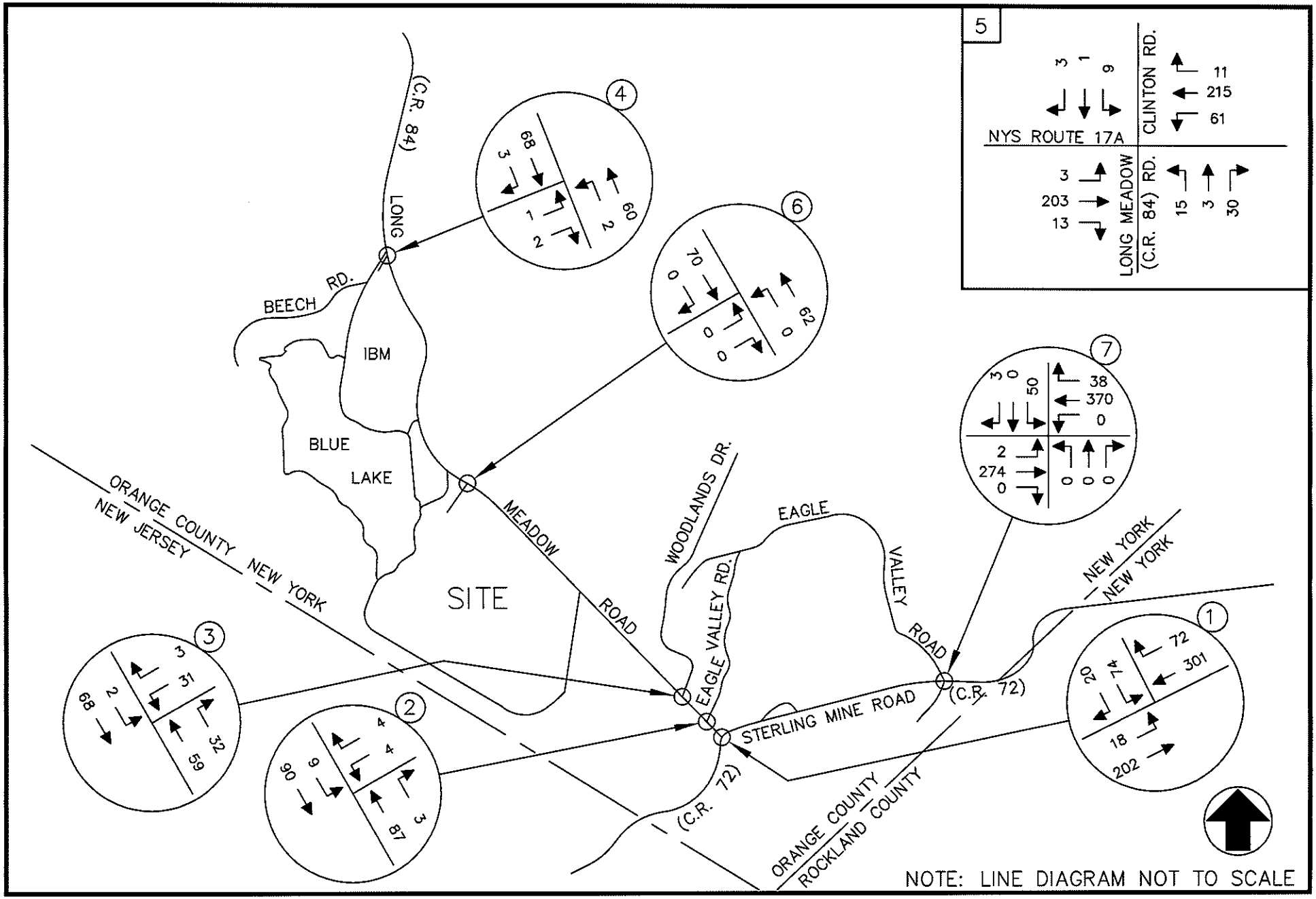


1 KINGS DRIVE WATCHTOWER
WARWICK, NEW YORK

2010 EXISTING TRAFFIC VOLUMES
WEEKDAY PEAK PM HOUR

JOHN COLLINS ENGINEERS, P.C.
HAWTHORNE , NEW YORK

PROJECT NO. 1700 DATE: SEPT. 2011 FIG. NO. 3

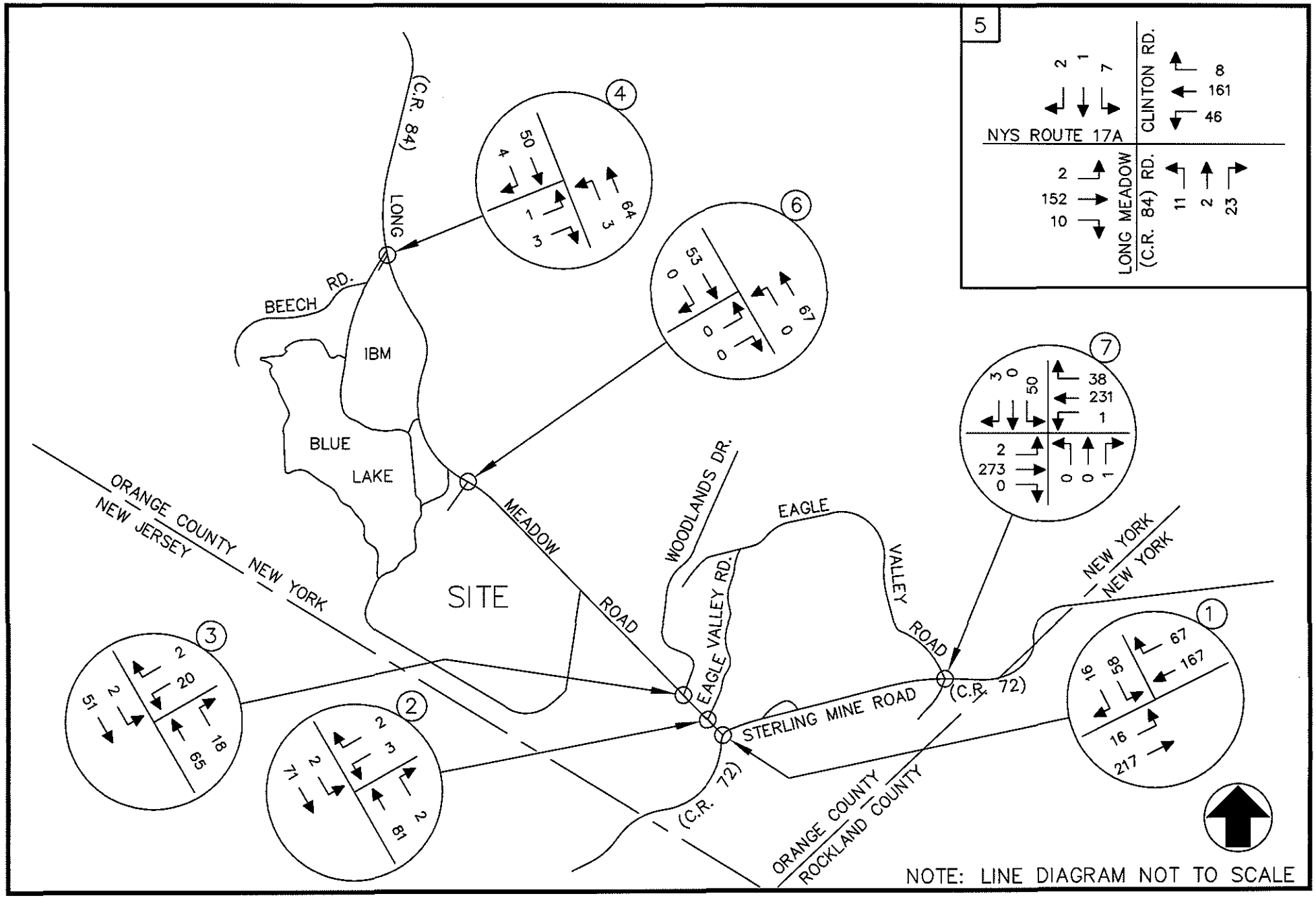


1 KINGS DRIVE WATCHTOWER
WARWICK, NEW YORK

2010 EXISTING TRAFFIC VOLUMES
WEEKEND PEAK SATURDAY HOUR

JOHN COLLINS ENGINEERS, P.C.
HAWTHORNE , NEW YORK

PROJECT NO. 1700 DATE: SEPT. 2011 FIG. NO. 4



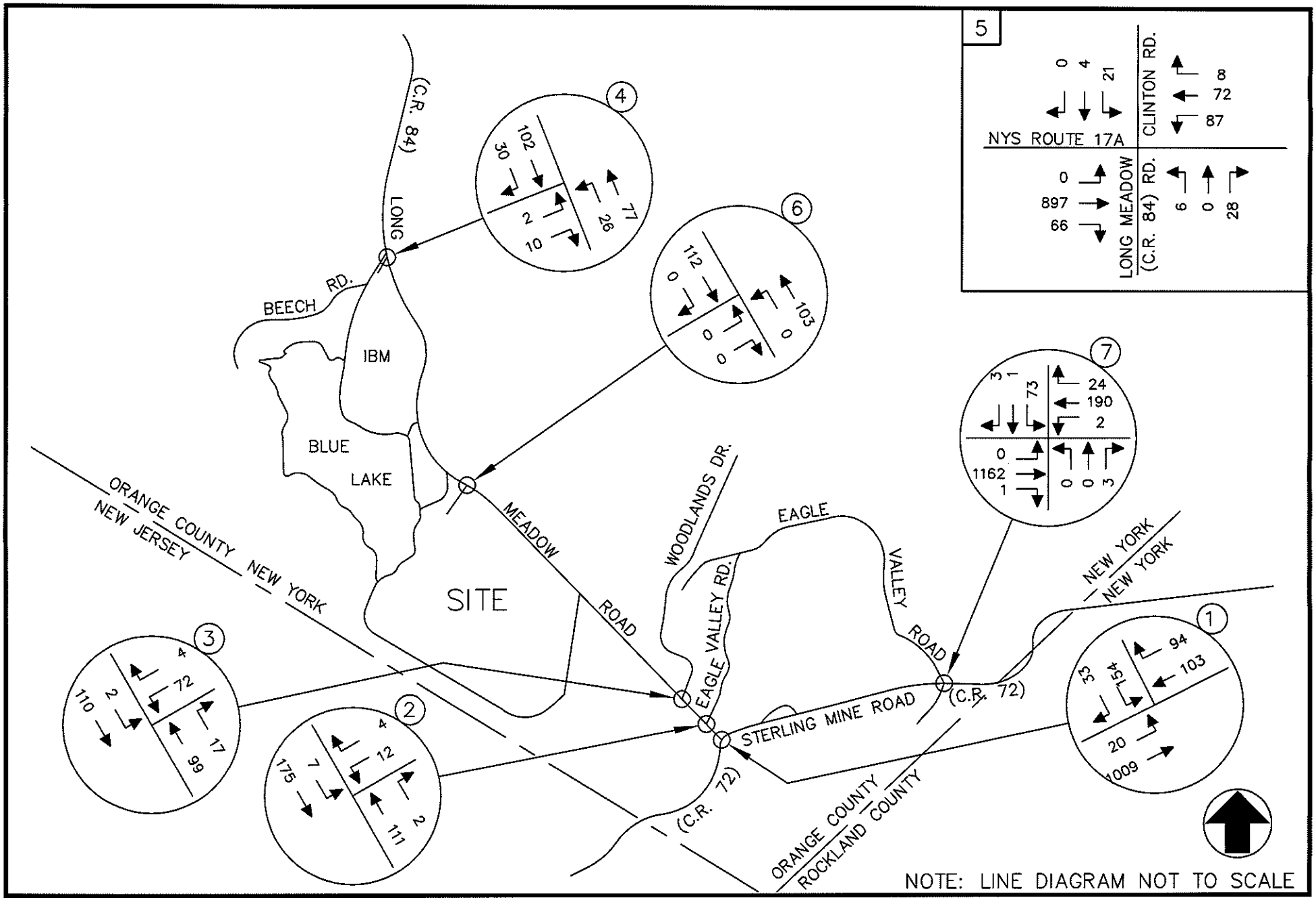
1 KINGS DRIVE WATCHTOWER

WARWICK, NEW YORK

2010 EXISTING TRAFFIC VOLUMES
WEEKEND PEAK SUNDAY HOUR

JOHN COLLINS ENGINEERS, P.C.
HAWTHORNE , NEW YORK

PROJECT NO. 1700 DATE: SEPT. 2011 FIG. NO. 5

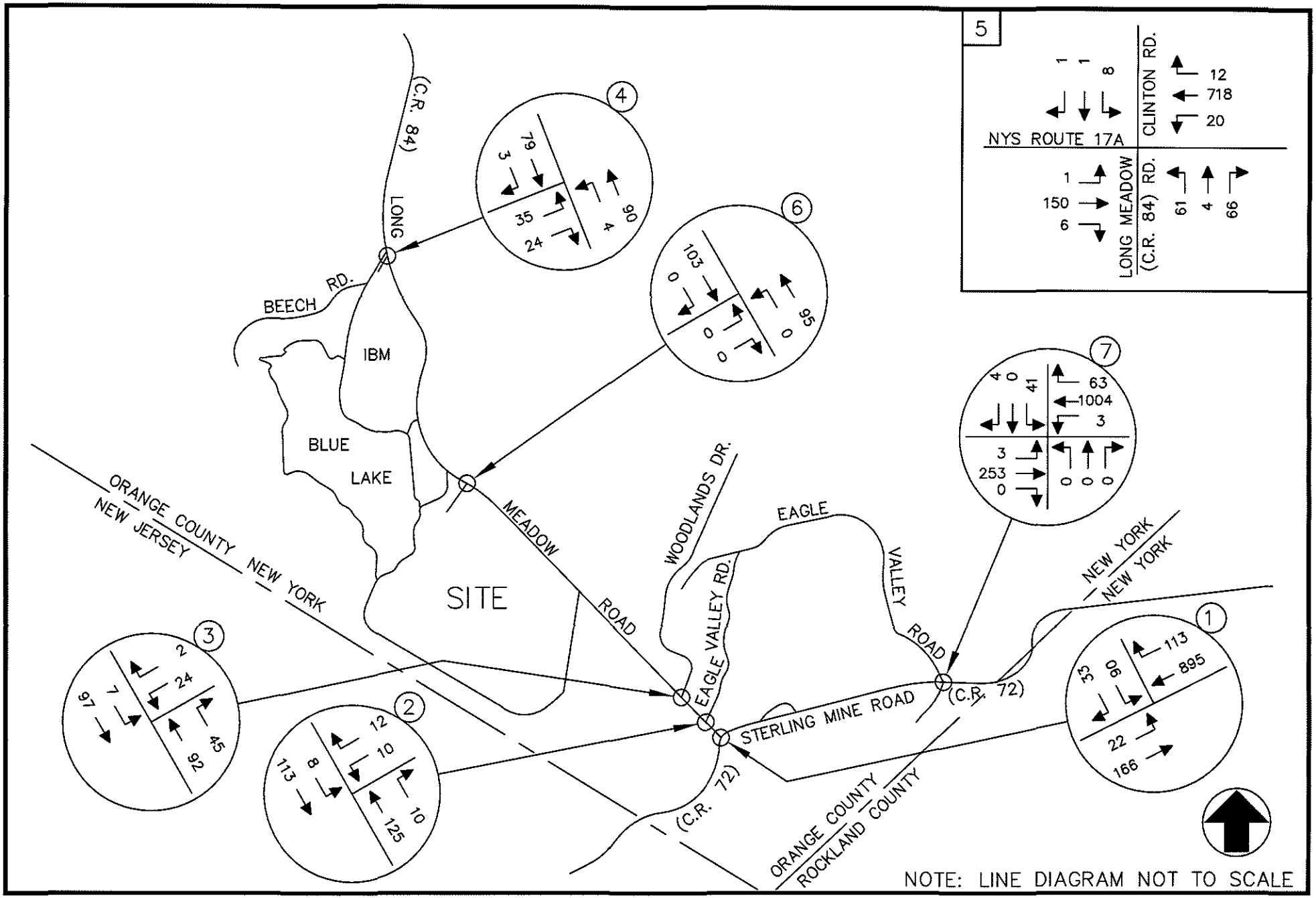


1 KINGS DRIVE WATCHTOWER
WARWICK, NEW YORK

2015 PROJECTED TRAFFIC VOLUMES
WEEKDAY PEAK AM HOUR

JOHN COLLINS ENGINEERS, P.C.
HAWTHORNE , NEW YORK

PROJECT NO. 1700 DATE: SEPT. 2011 FIG. NO. 6



1 KINGS DRIVE WATCHTOWER

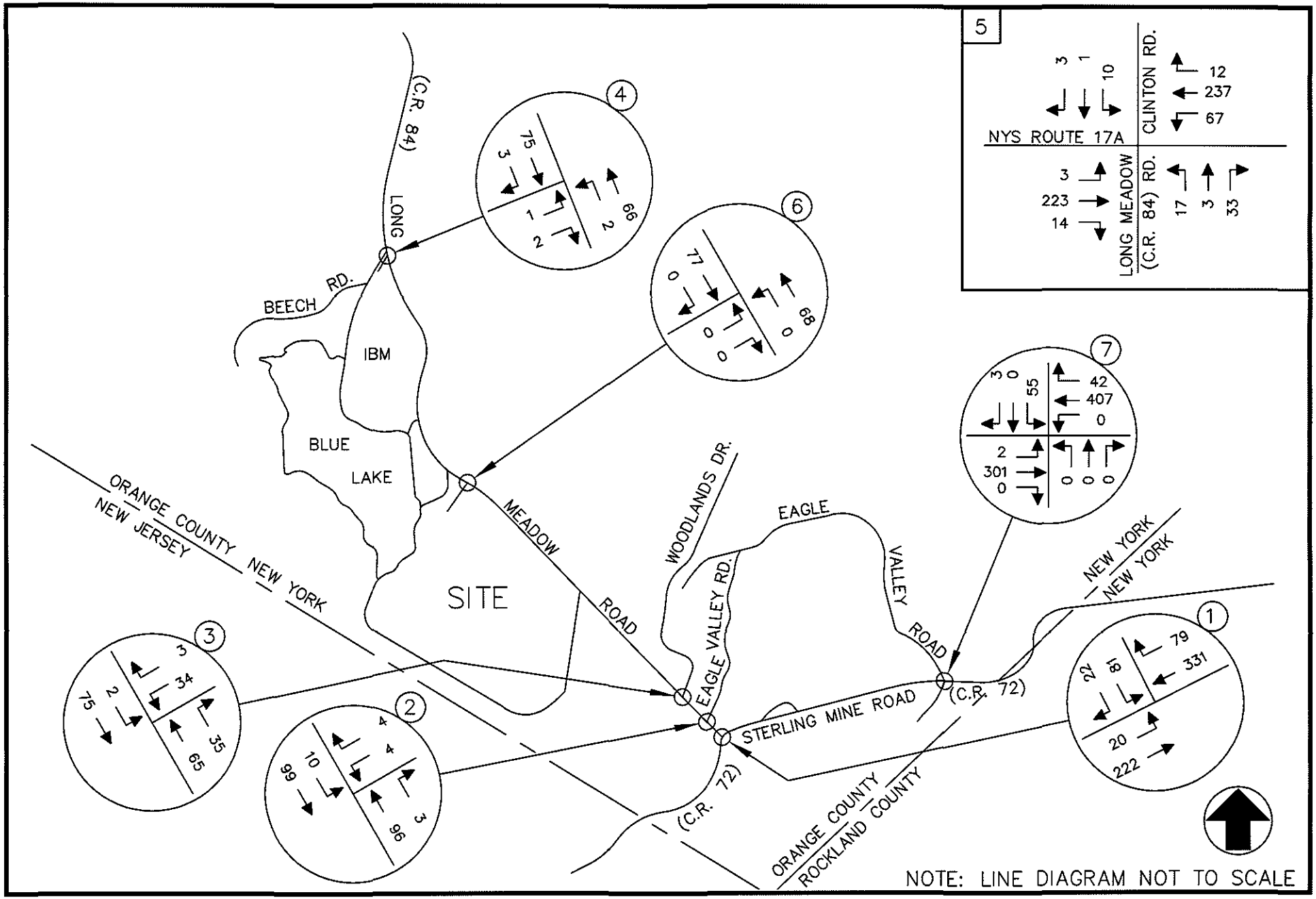
WARWICK, NEW YORK

2015 PROJECTED TRAFFIC VOLUMES

WEEKDAY PEAK PM HOUR

JOHN COLLINS ENGINEERS, P.C.
HAWTHORNE , NEW YORK

PROJECT NO. 1700 DATE: SEPT. 2011 FIG. NO. 7

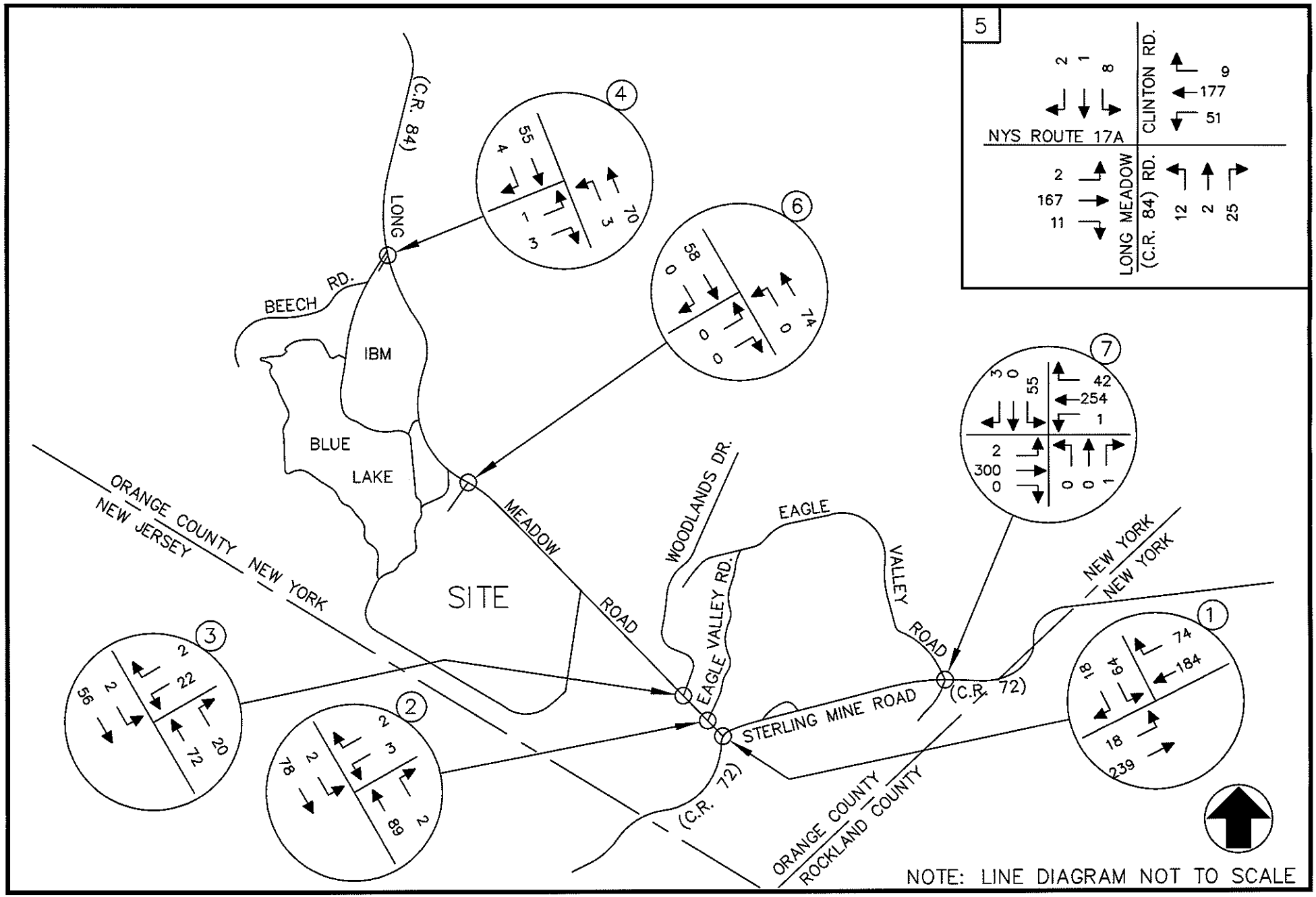


1 KINGS DRIVE WATCHTOWER
WARWICK, NEW YORK

2015 PROJECTED TRAFFIC VOLUMES
WEEKEND PEAK SATURDAY HOUR

JOHN COLLINS ENGINEERS, P.C.
HAWTHORNE , NEW YORK

PROJECT NO. 1700 DATE: SEPT. 2011 FIG. NO. 8

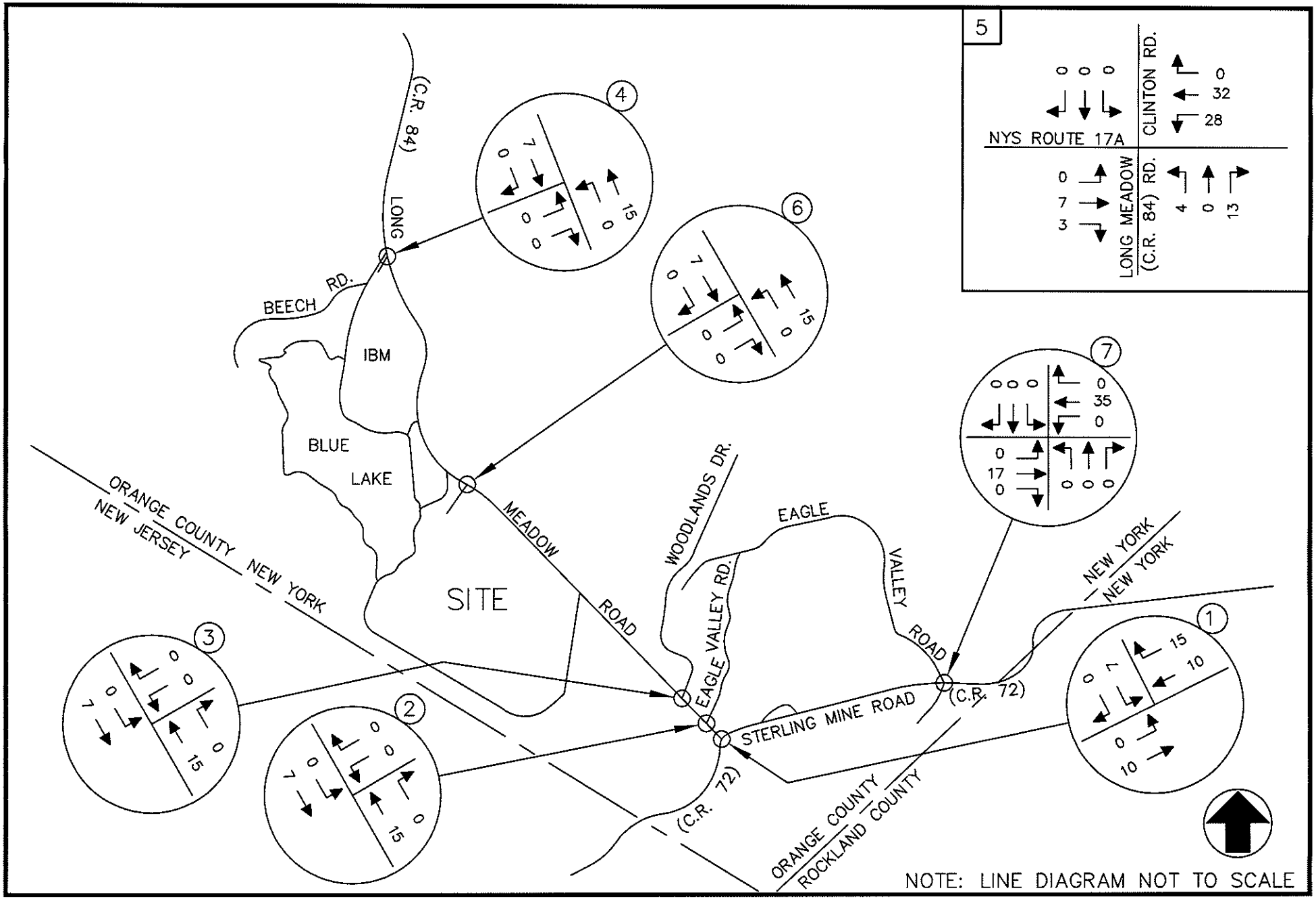


1 KINGS DRIVE WATCHTOWER
WARWICK, NEW YORK

2015 PROJECTED TRAFFIC VOLUMES
WEEKEND PEAK SUNDAY HOUR

JOHN COLLINS ENGINEERS, P.C.
HAWTHORNE , NEW YORK

PROJECT NO. 1700 DATE: SEPT. 2011 FIG. NO. 9

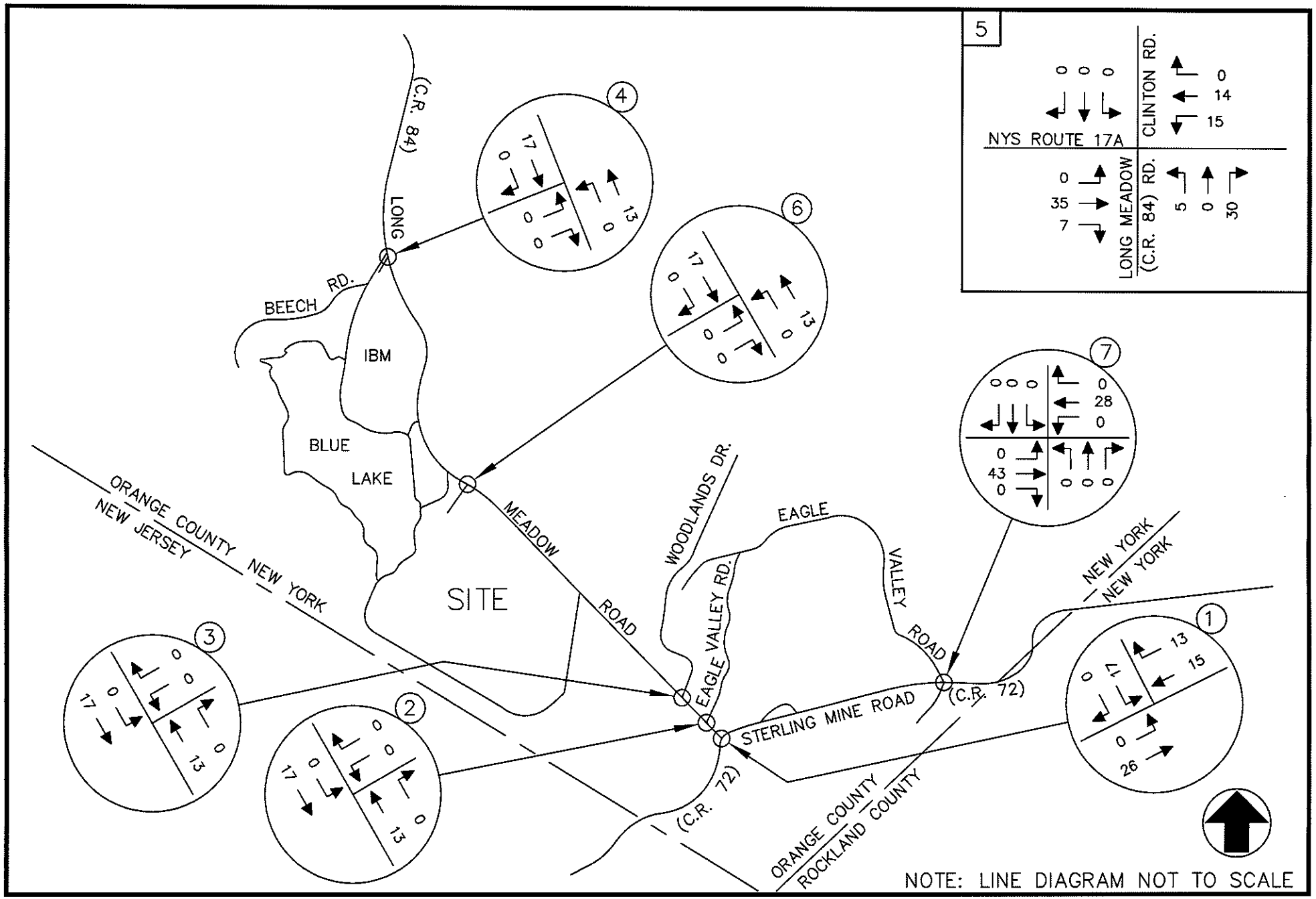


1 KINGS DRIVE WATCHTOWER
WARWICK, NEW YORK

OTHER DEVELOPMENT TRAFFIC VOLUMES
WEEKDAY PEAK AM HOUR

JOHN COLLINS ENGINEERS, P.C.
HAWTHORNE , NEW YORK

PROJECT NO. 1700 DATE: SEPT. 2011 FIG. NO. 10

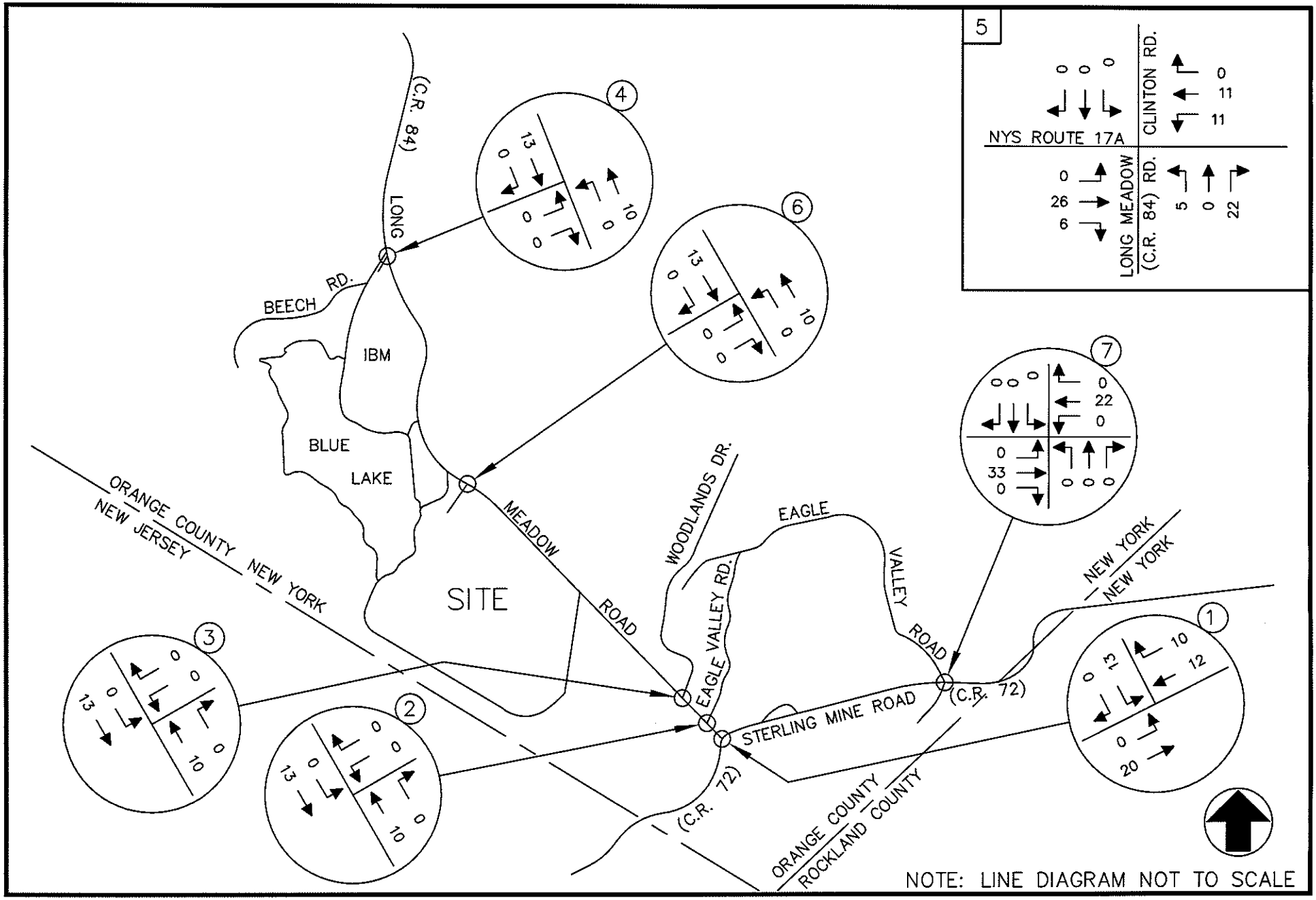


1 KINGS DRIVE WATCHTOWER
WARWICK, NEW YORK

OTHER DEVELOPMENT TRAFFIC VOLUMES
WEEKDAY PEAK PM HOUR

JOHN COLLINS ENGINEERS, P.C.
HAWTHORNE , NEW YORK

PROJECT NO. 1700 DATE: SEPT. 2011 FIG. NO. 11

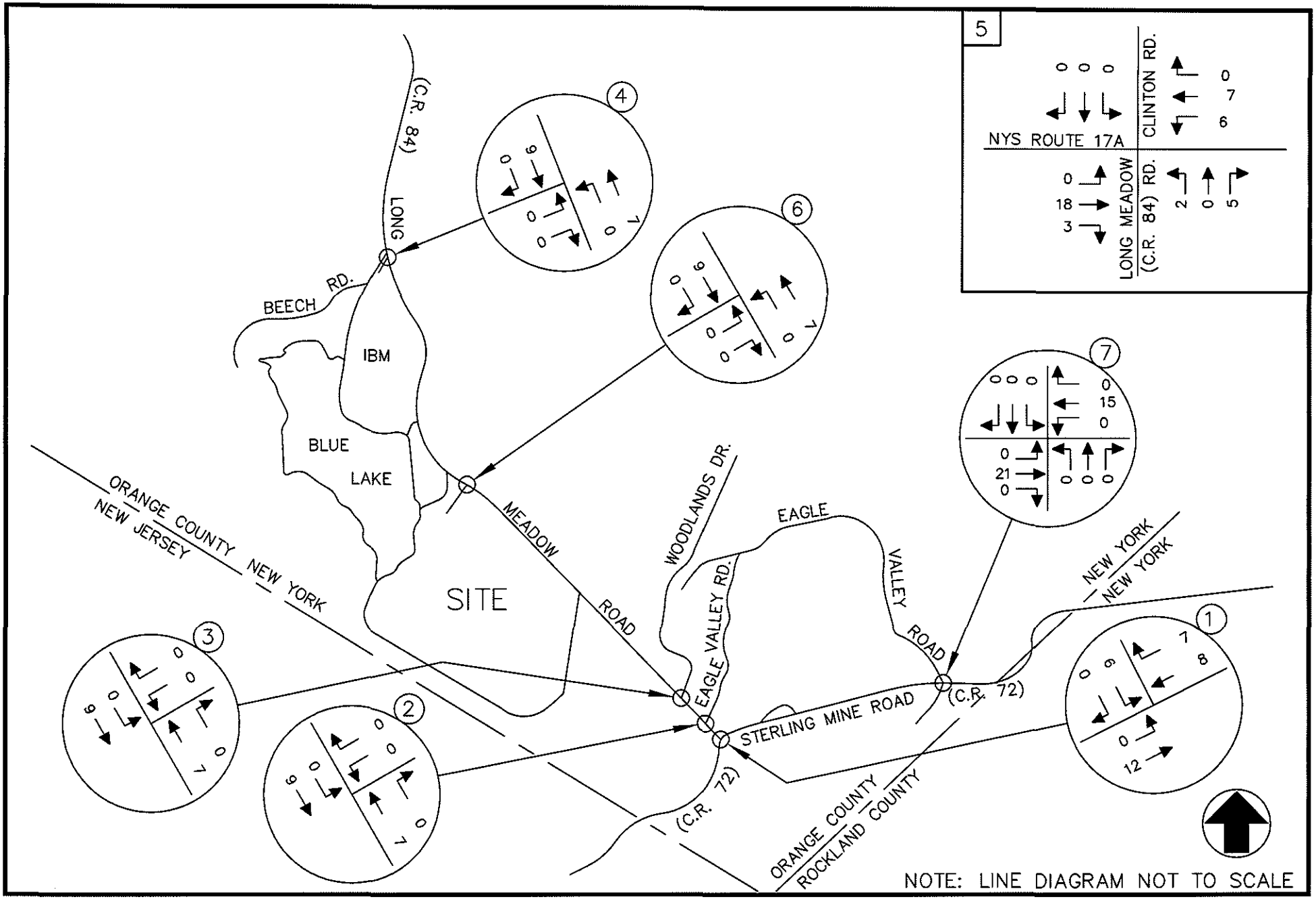


1 KINGS DRIVE WATCHTOWER
WARWICK, NEW YORK

OTHER DEVELOPMENT TRAFFIC VOLUMES
WEEKEND PEAK SATURDAY HOUR

JOHN COLLINS ENGINEERS, P.C.
HAWTHORNE , NEW YORK

PROJECT NO. 1700 DATE: SEPT. 2011 FIG. NO. 12

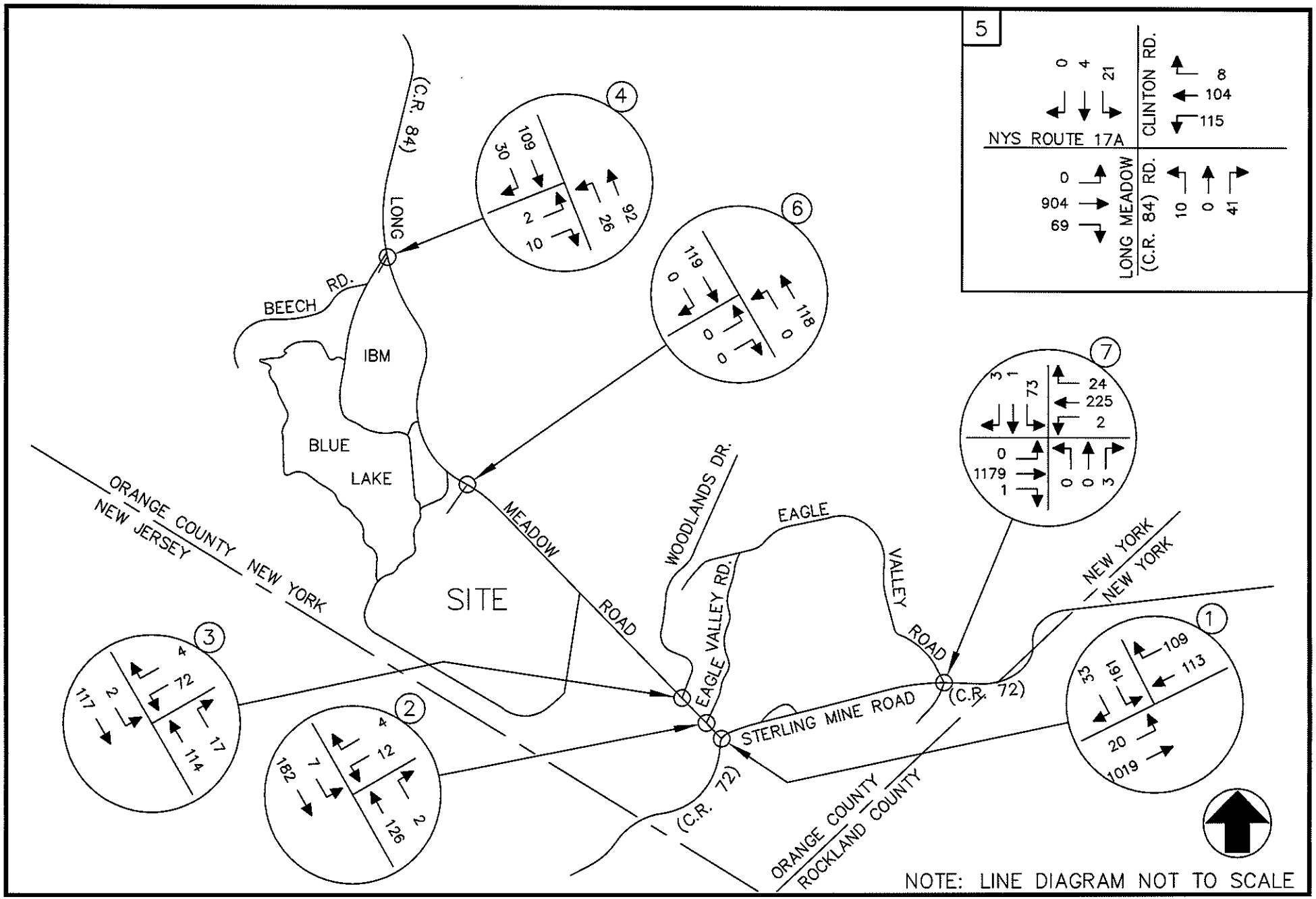


1 KINGS DRIVE WATCHTOWER
WARWICK, NEW YORK

OTHER DEVELOPMENT TRAFFIC VOLUMES
WEEKEND PEAK SUNDAY HOUR

JOHN COLLINS ENGINEERS, P.C.
HAWTHORNE , NEW YORK

PROJECT NO. 1700 DATE: SEPT. 2011 FIG. NO. 13

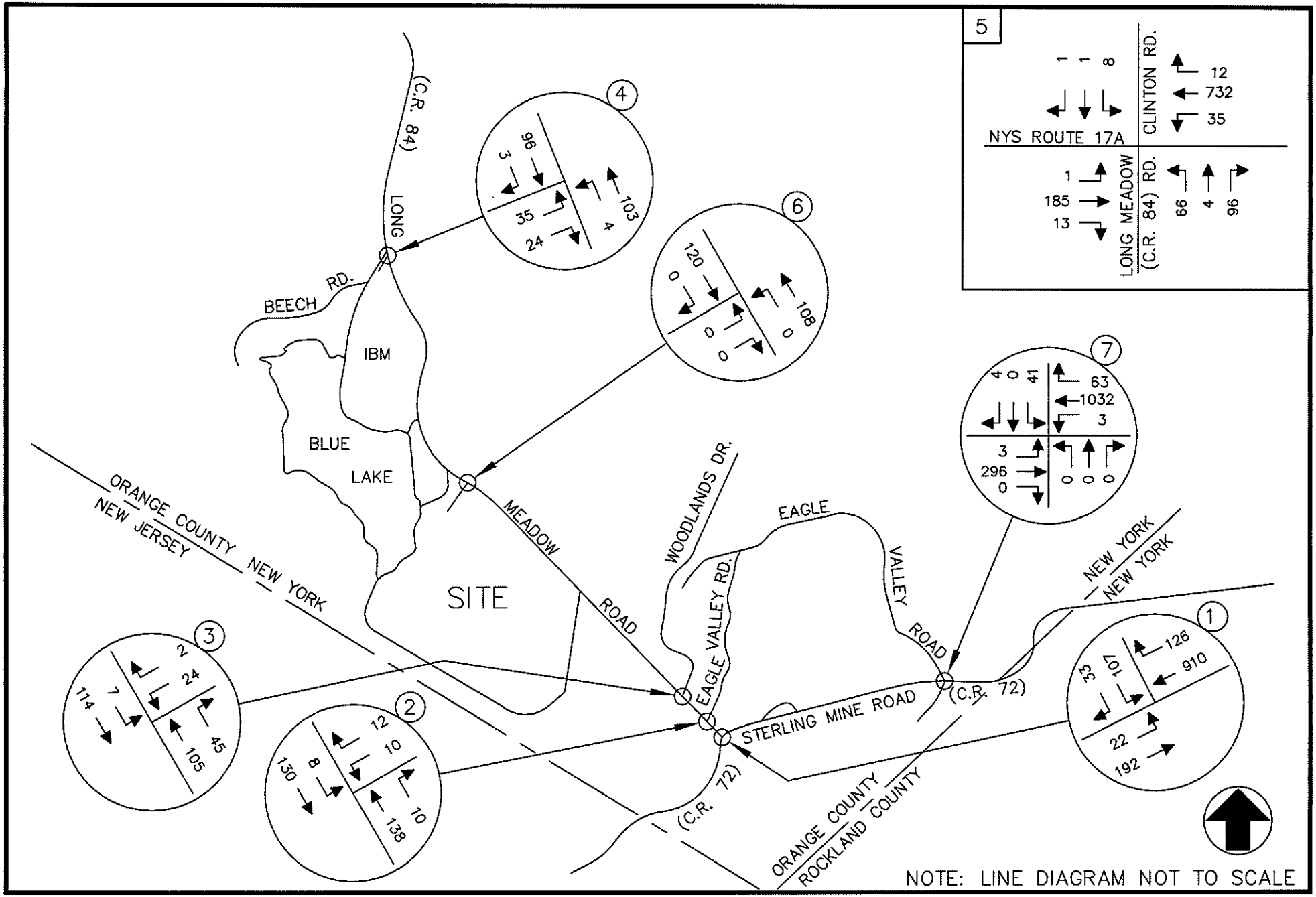


1 KINGS DRIVE WATCHTOWER
WARWICK, NEW YORK

2015 NO-BUILD TRAFFIC VOLUMES
WEEKDAY PEAK AM HOUR

JOHN COLLINS ENGINEERS, P.C.
HAWTHORNE , NEW YORK

PROJECT NO. 1700 DATE: SEPT. 2011 FIG. NO. 14

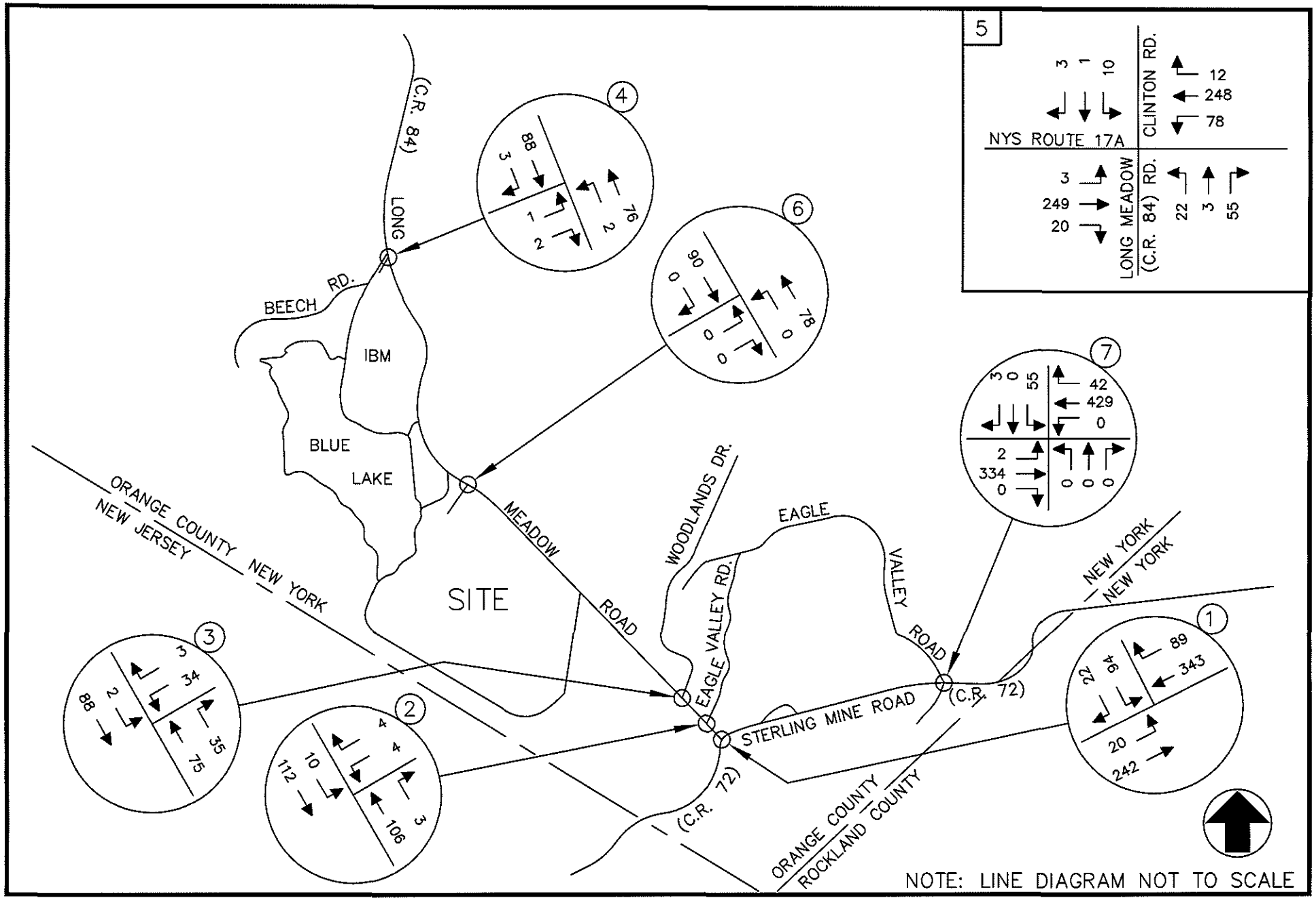


1 KINGS DRIVE WATCHTOWER
WARWICK, NEW YORK

2015 NO-BUILD TRAFFIC VOLUMES
WEEKDAY PEAK PM HOUR

JOHN COLLINS ENGINEERS, P.C.
HAWTHORNE , NEW YORK

PROJECT NO. 1700 DATE: SEPT. 2011 FIG. NO. 15

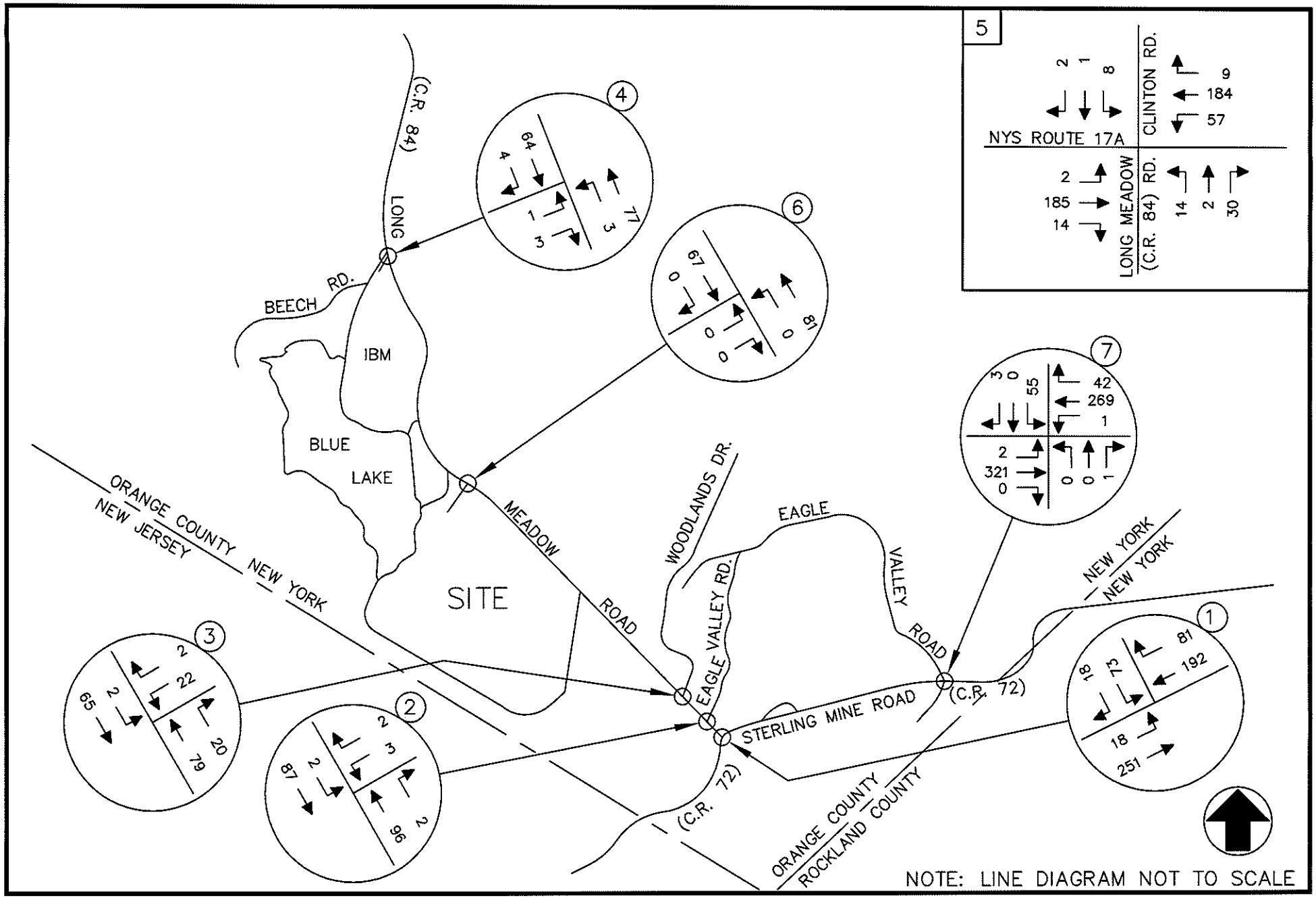


1 KINGS DRIVE WATCHTOWER
WARWICK, NEW YORK

2015 NO-BUILD TRAFFIC VOLUMES
WEEKEND PEAK SATURDAY HOUR

JOHN COLLINS ENGINEERS, P.C.
HAWTHORNE , NEW YORK

PROJECT NO. 1700 DATE: SEPT. 2011 FIG. NO. 16

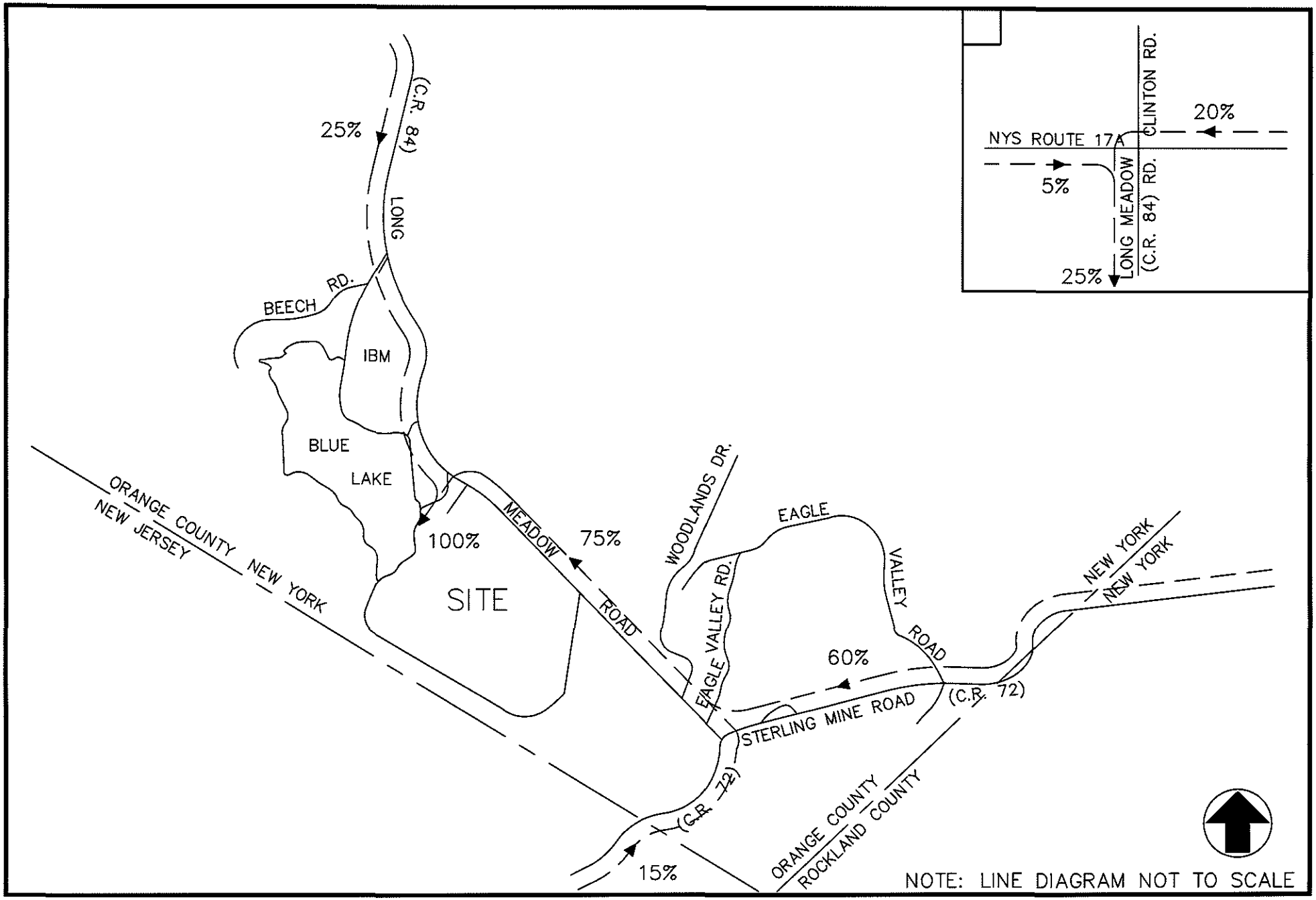


1 KINGS DRIVE WATCHTOWER
WARWICK, NEW YORK

2015 NO-BUILD TRAFFIC VOLUMES
WEEKEND PEAK SUNDAY HOUR

JOHN COLLINS ENGINEERS, P.C.
HAWTHORNE , NEW YORK

PROJECT NO. 1700 DATE: SEPT. 2011 FIG. NO. 17

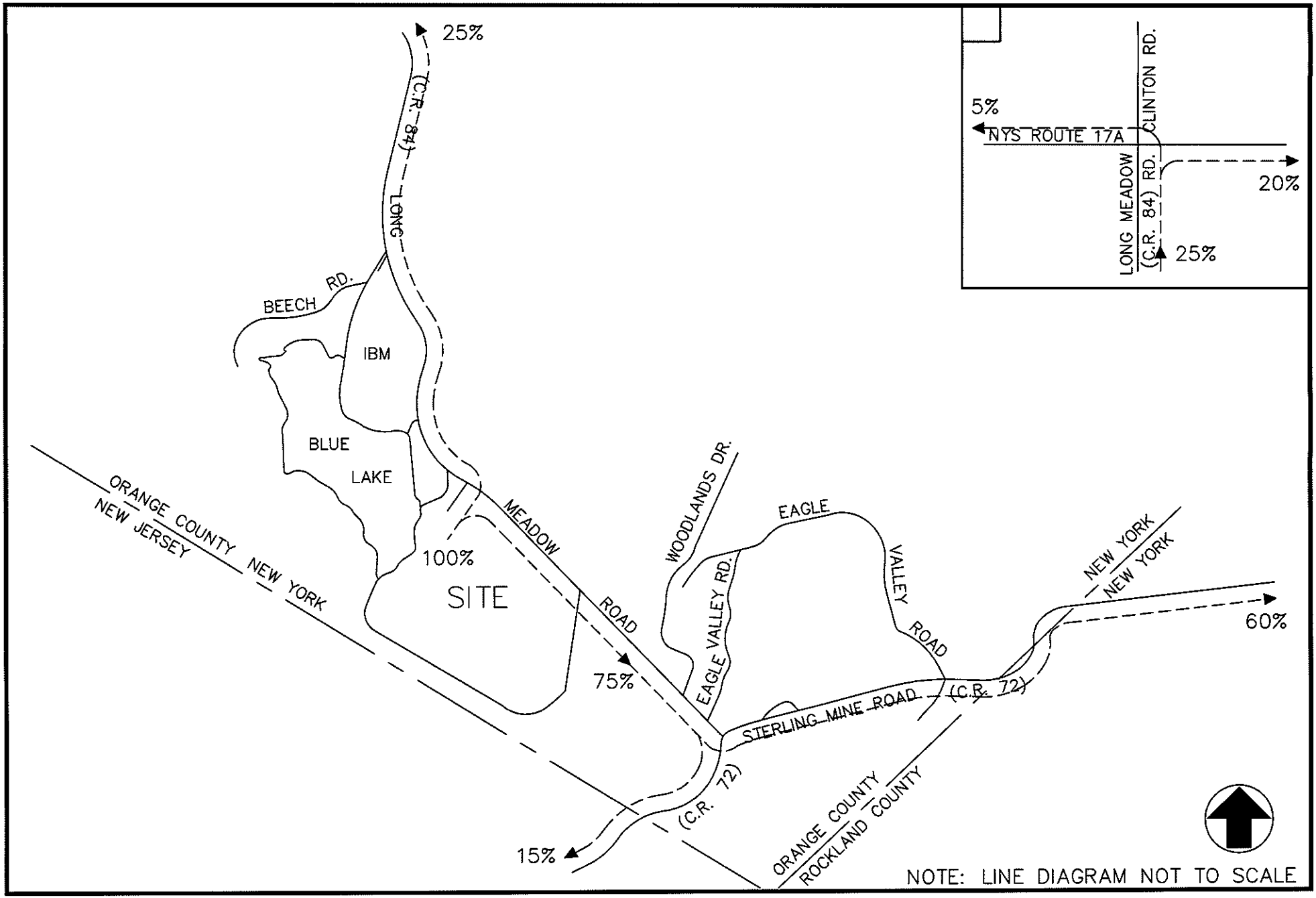


1 KINGS DRIVE WATCHTOWER
WARWICK, NEW YORK

ARRIVAL DISTRIBUTION
(ALL VALUES EXPRESSED AS A %)

JOHN COLLINS ENGINEERS, P.C.
HAWTHORNE , NEW YORK

PROJECT NO. 1700 DATE: SEPT. 2011 FIG. NO. 18



1 KINGS DRIVE WATCHTOWER
WARWICK, NEW YORK

DEPARTURE DISTRIBUTION
(ALL VALUES EXPRESSED AS A %)

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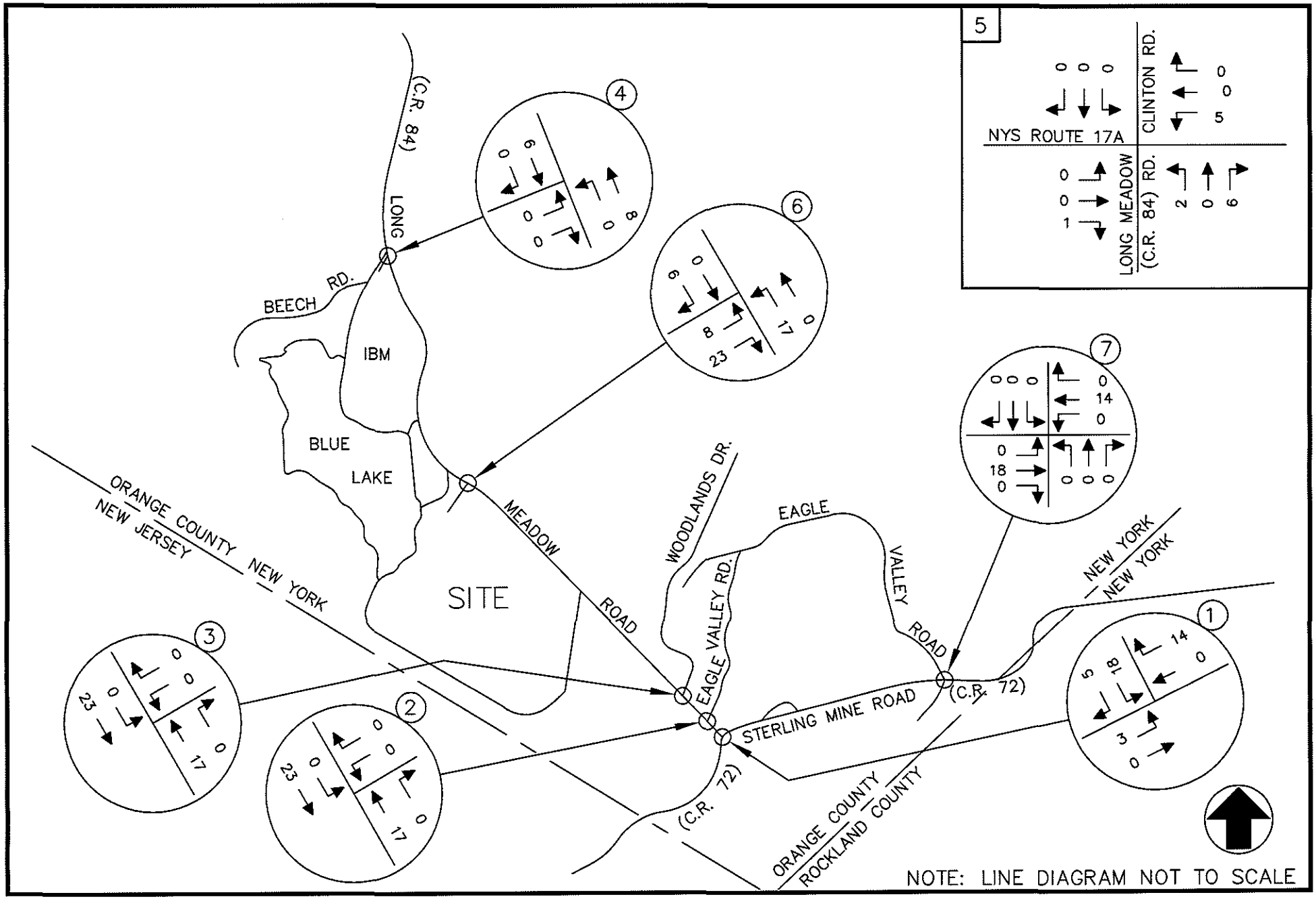
HAWTHORNE , NEW YORK

PROJECT NO. 1700 DATE: SEPT. 2011 FIG. NO. 19

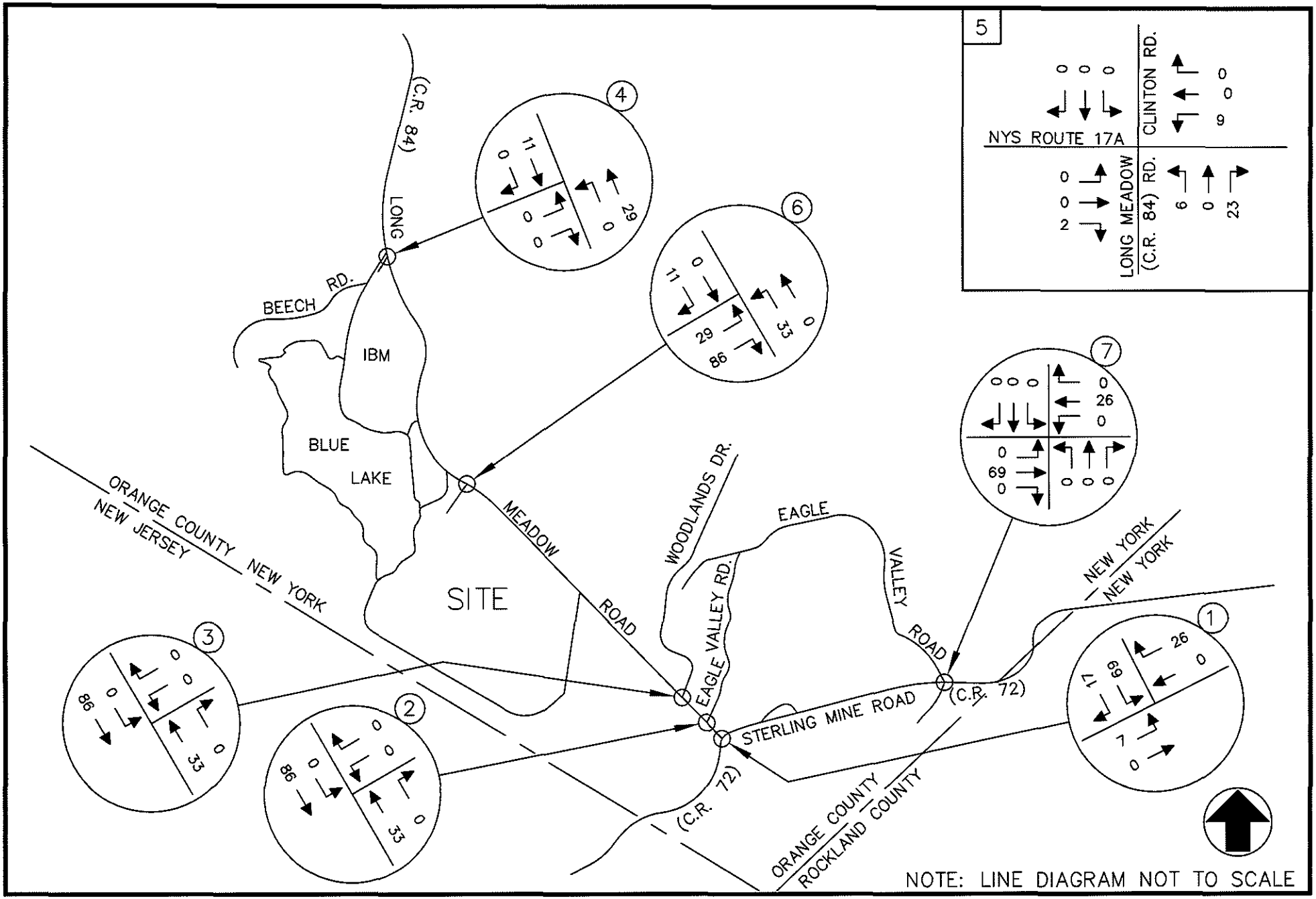


1 KINGS DRIVE WATCHTOWER
WARWICK, NEW YORK

SITE GENERATED TRAFFIC VOLUMES
WEEKDAY PEAK AM HOUR

JOHN COLLINS ENGINEERS, P.C.
HAWTHORNE , NEW YORK

PROJECT NO. 1700 DATE: SEPT. 2011 FIG. NO. 20



1 KINGS DRIVE WATCHTOWER

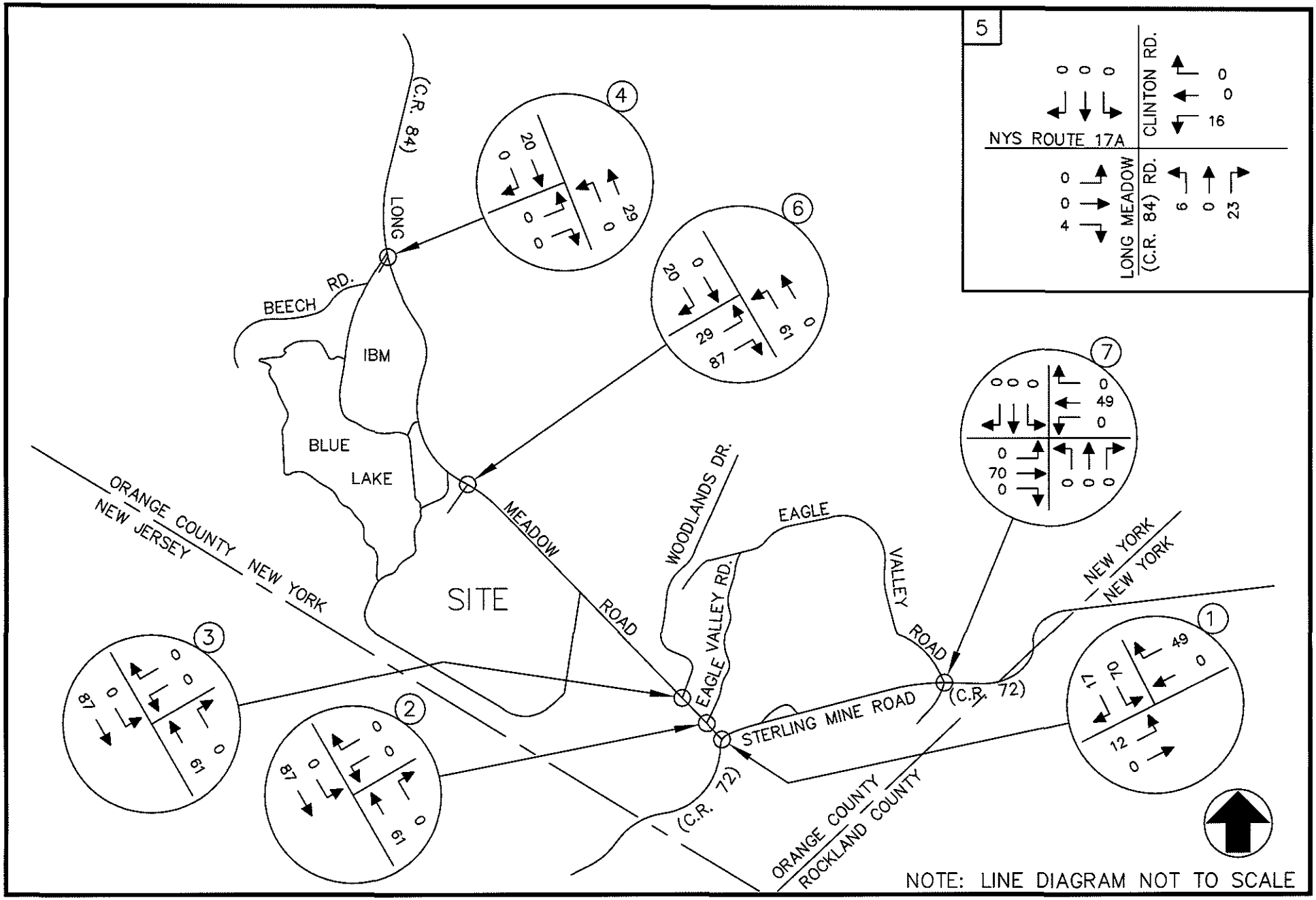
WARWICK, NEW YORK

SITE GENERATED TRAFFIC VOLUMES

WEEKDAY PEAK PM HOUR

JOHN COLLINS ENGINEERS, P.C.
HAWTHORNE , NEW YORK

PROJECT NO. 1700 DATE: SEPT. 2011 FIG. NO. 21

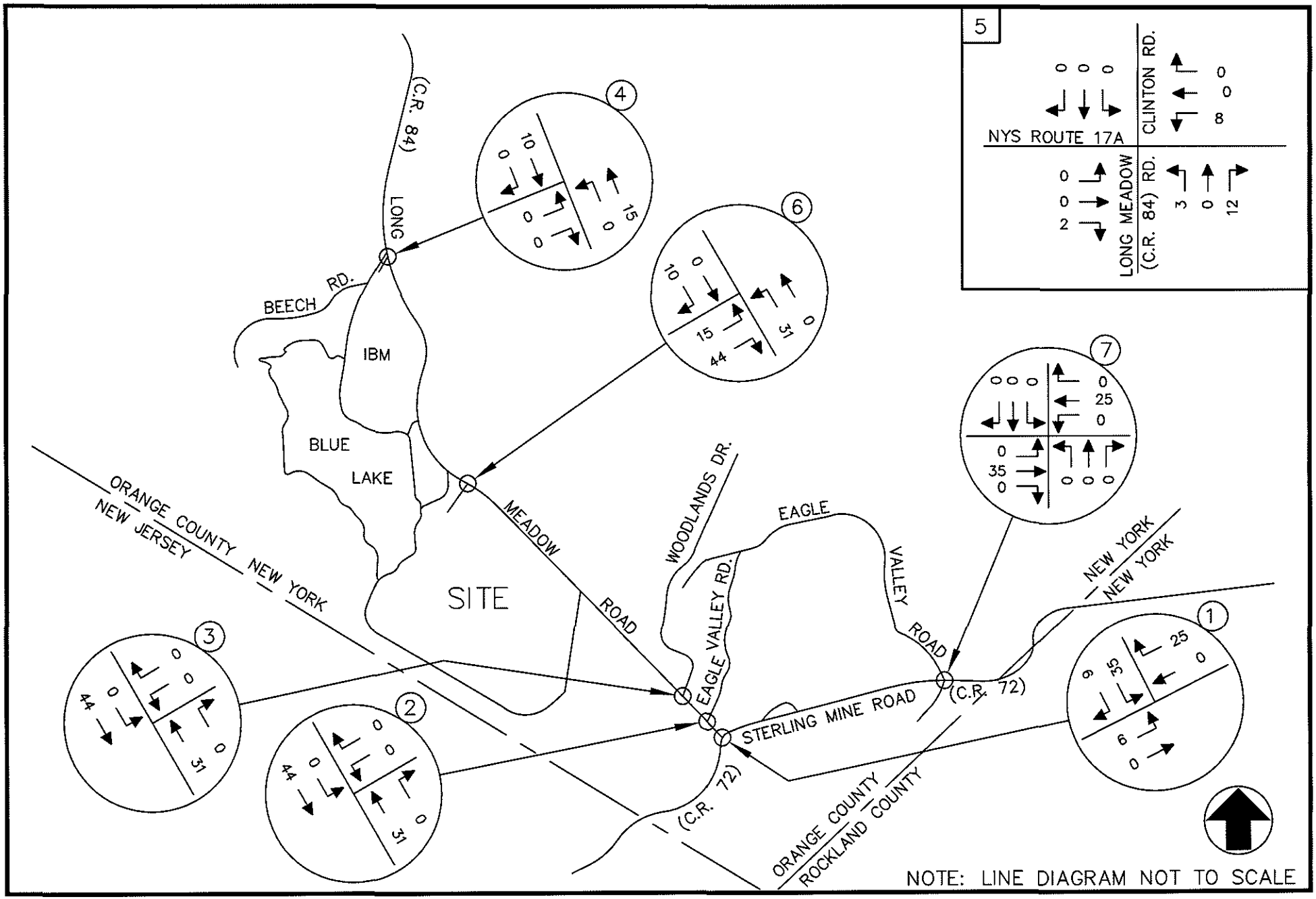


1 KINGS DRIVE WATCHTOWER
WARWICK, NEW YORK

SITE GENERATED TRAFFIC VOLUMES
WEEKEND PEAK SATURDAY HOUR

JOHN COLLINS ENGINEERS, P.C.
HAWTHORNE , NEW YORK

PROJECT NO. 1700 DATE: SEPT. 2011 FIG. NO. 22

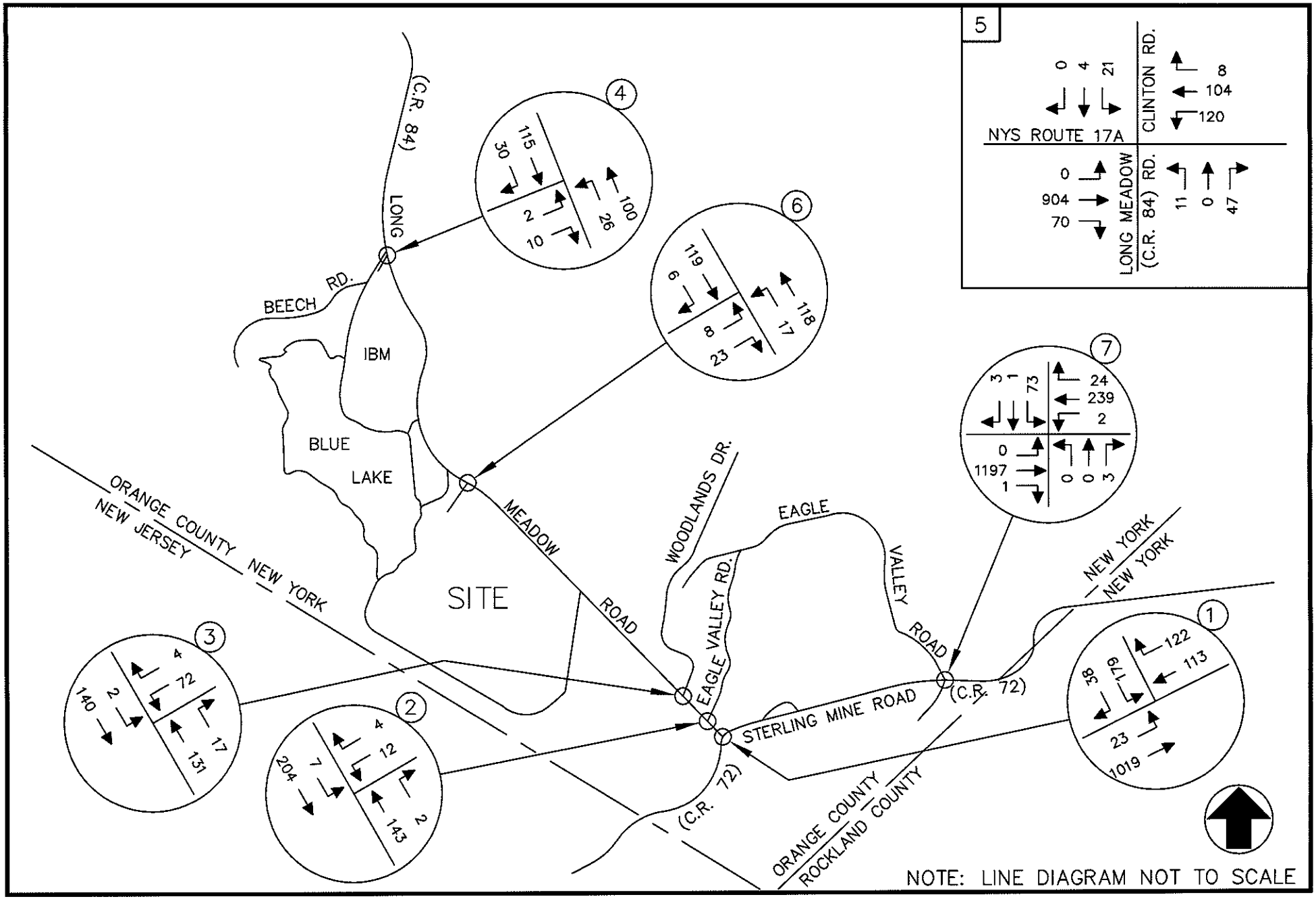


1 KINGS DRIVE WATCHTOWER
WARWICK, NEW YORK

SITE GENERATED TRAFFIC VOLUMES
WEEKEND PEAK SUNDAY HOUR

JOHN COLLINS ENGINEERS, P.C.
HAWTHORNE , NEW YORK

PROJECT NO. 1700 DATE: SEPT. 2011 FIG. NO. 23



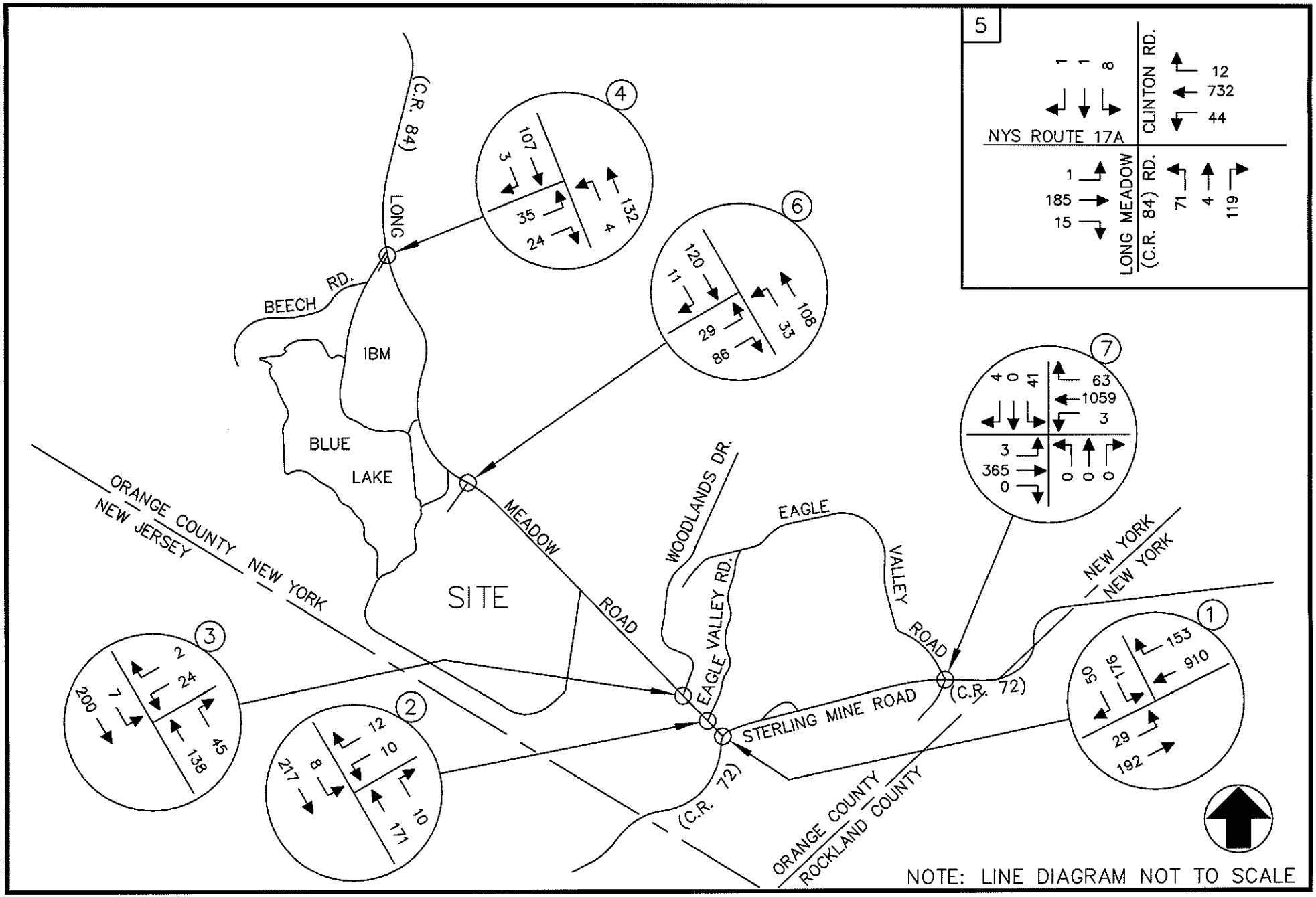
1 KINGS DRIVE WATCHTOWER

WARWICK, NEW YORK

2015 BUILD TRAFFIC VOLUMES
WEEKDAY PEAK AM HOUR

JOHN COLLINS ENGINEERS, P.C.
HAWTHORNE , NEW YORK

PROJECT NO. 1700 DATE: SEPT. 2011 FIG. NO. 24



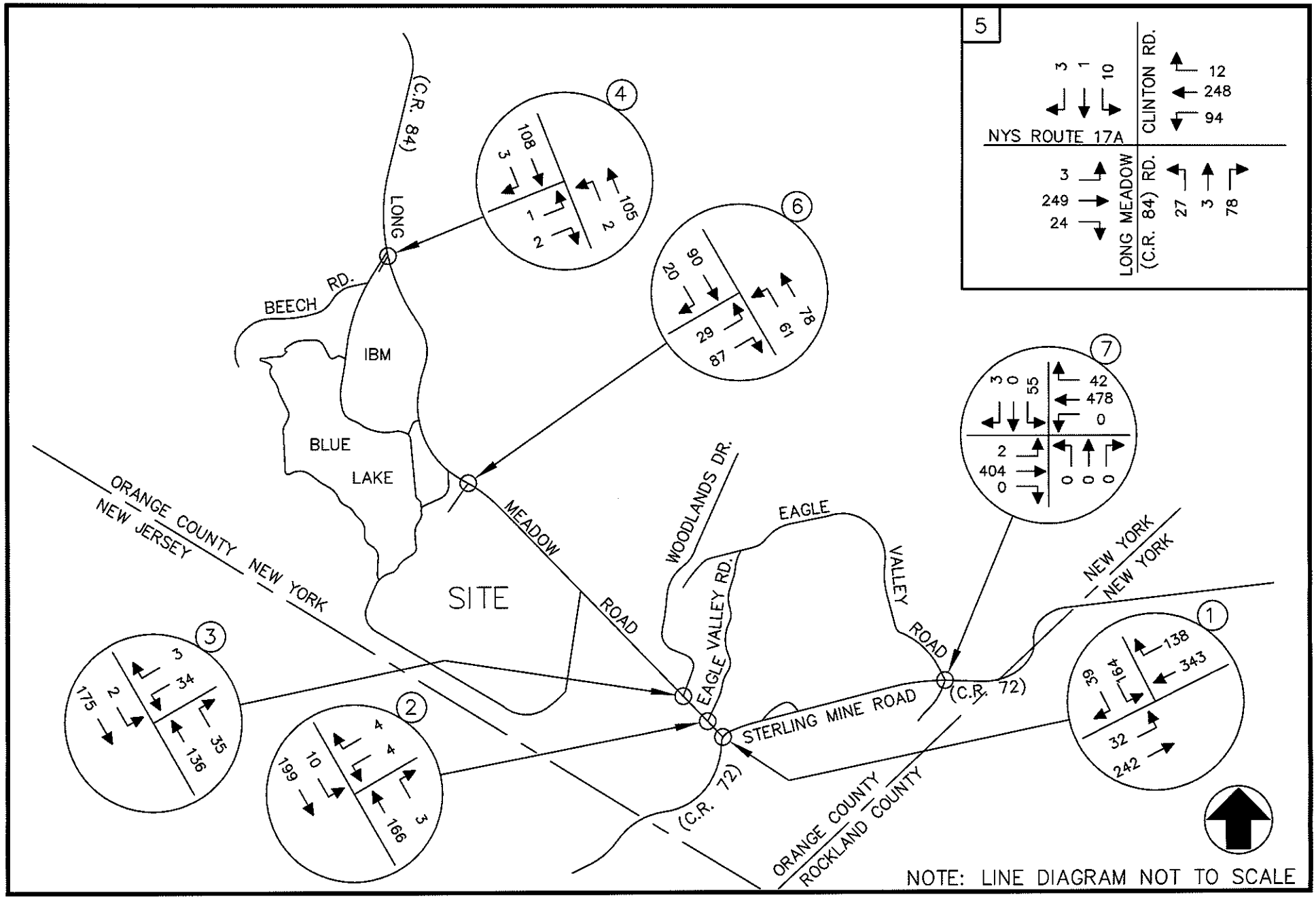
1 KINGS DRIVE WATCHTOWER

WARWICK, NEW YORK

JOHN COLLINS ENGINEERS, P.C.
HAWTHORNE , NEW YORK

2015 BUILD TRAFFIC VOLUMES
WEEKDAY PEAK PM HOUR

PROJECT NO. 1700 DATE: SEPT. 2011 FIG. NO. 25



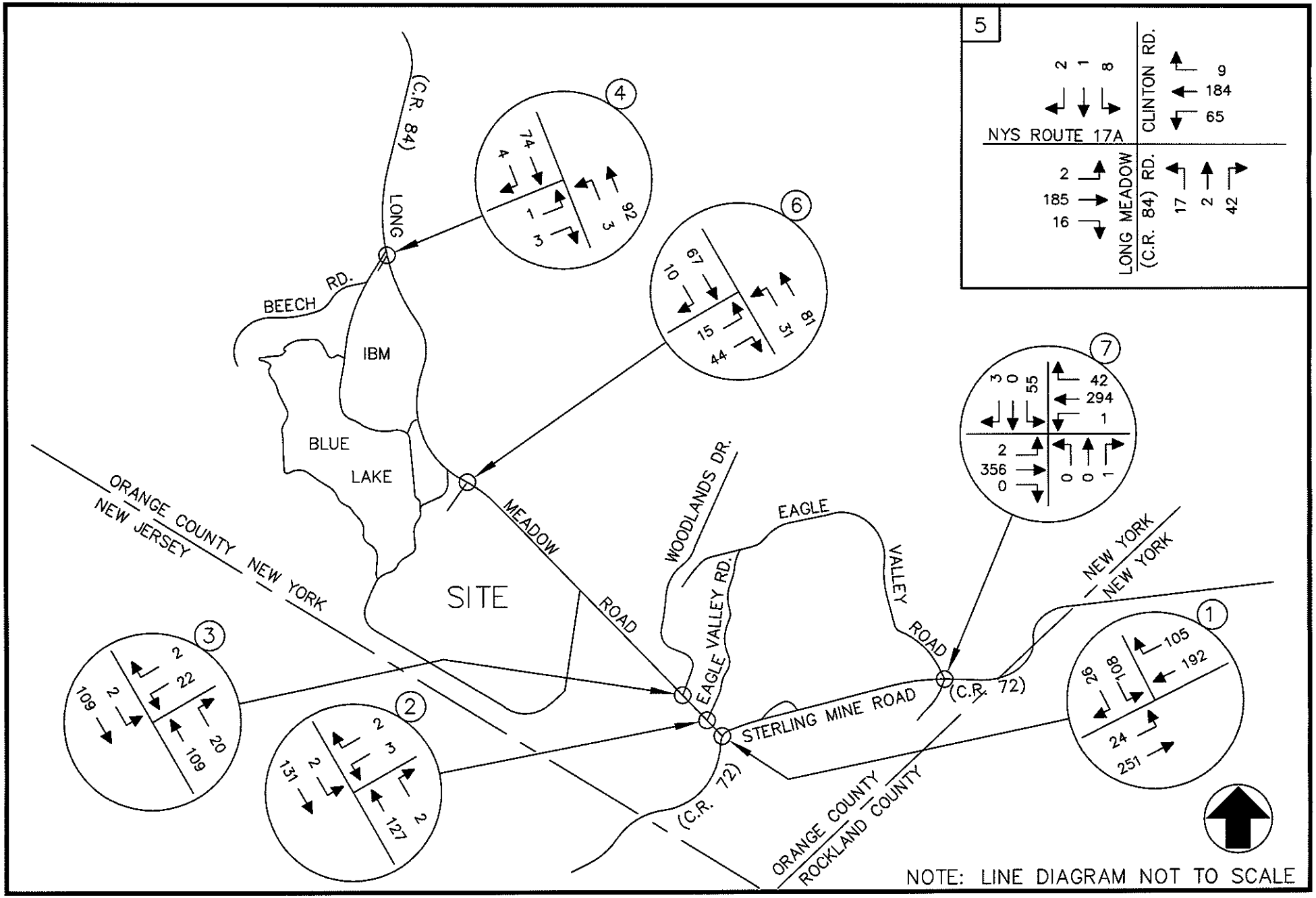
1 KINGS DRIVE WATCHTOWER

WARWICK, NEW YORK

2015 BUILD TRAFFIC VOLUMES
WEEKEND PEAK SATURDAY HOUR

JOHN COLLINS ENGINEERS, P.C.
HAWTHORNE , NEW YORK

PROJECT NO. 1700 DATE: SEPT. 2011 FIG. NO. 26



1 KINGS DRIVE WATCHTOWER

WARWICK, NEW YORK

JOHN COLLINS ENGINEERS, P.C.
HAWTHORNE , NEW YORK

2015 BUILD TRAFFIC VOLUMES
WEEKEND PEAK SUNDAY HOUR

PROJECT NO. 1700 DATE: SEPT. 2011 FIG. NO. 27

APPENDIX "B"

TABLES

TABLE NO. 1

HOURLY TRIP GENERATION RATES (HTGR) AND ANTICIPATED SITE GENERATED TRAFFIC VOLUMES

1 KINGS DRIVE WATCHTOWER WARWICK, NY	ENTRY		EXIT	
	HTGR*	VOLUME	HTGR*	VOLUME
EXISTING WATCHTOWER FACILITY PATTERSON NEW YORK (1,550 RESIDENTS)				
PEAK AM HOUR	0.015	23	0.019	30
PEAK PM HOUR	0.028	44	0.074	115
PEAK SATURDAY HOUR	0.052	81	0.075	116
PEAK SUNDAY HOUR	0.026	41	0.037	58

NOTES:
1) * THE HOURLY TRIP GENERATION RATES (HTGR) AND VOLUMES ARE BASED DATA COLLECTED BY AKRF, INC AT THE EXISTING OPERATING WATCHTOWER FACILITY IN PATTERSON, NEW YORK.

TABLE NO. 2

LEVEL OF SERVICE SUMMARY TABLE

			2010 EXISTING				2015 NO-BUILD				2015 BUILD			
			AM	PM	SATURDAY	SUNDAY	AM	PM	SATURDAY	SUNDAY	AM	PM	SATURDAY	SUNDAY
1	STERLING MINE ROAD (C.R. 72) & LONG MEADOW ROAD (C.R. 84)	**SIGNALIZED**												
		EB	B[18.8]	A[5.6]	A[5.8]	A[5.8]	C[32.2]	A[5.8]	A[6.0]	A[6.0]	C[32.2]	A[5.9]	A[5.9]	A[6.0]
		WB	A[2.7]	B[11.4]	A[5.1]	A[4.0]	A[2.7]	B[14.9]	A[5.2]	A[4.0]	A[2.5]	B[14.6]	A[4.6]	A[3.7]
		SB	C[30.7]	C[28.8]	C[28.6]	C[28.3]	C[31.2]	C[29.3]	C[29.1]	C[28.6]	C[32.0]	C[31.2]	C[30.8]	C[29.4]
		OVERALL	B[18.1]	B[12.2]	A[8.5]	A[8.1]	C[27.6]	B[15.0]	A[8.8]	A[8.4]	C[27.5]	B[15.8]	B[10.5]	A[9.5]
2	LONG MEADOW ROAD (C.R. 84) & EAGLE VALLEY ROAD	**UNSIGNALIZED**												
		WB	B[10.0]	A[9.6]	A[9.3]	A[9.2]	B[10.4]	A[9.9]	A[9.5]	A[9.3]	B[10.7]	B[10.5]	B[10.3]	A[9.8]
		SB LEFT	A[7.5]	A[7.5]	A[7.5]	A[7.4]	A[7.5]	A[7.6]	A[7.5]	A[7.5]	A[7.6]	A[7.7]	A[7.7]	A[7.5]
3	LONG MEADOW ROAD (C.R. 84) & WOODLANDS DRIVE	**UNSIGNALIZED**												
		WB	B[10.2]	A[9.9]	A[9.5]	A[9.3]	B[10.7]	B[10.3]	A[9.8]	A[9.6]	B[11.0]	B[11.3]	B[11.0]	B[10.1]
		SB LEFT	A[7.5]	A[7.5]	A[7.4]	A[7.4]	A[7.5]	A[7.6]	A[7.5]	A[7.5]	A[7.6]	A[7.7]	A[7.6]	A[7.5]
4	LONG MEADOW ROAD (C.R. 84) & IBM ENTRANCE / BEECH ROAD	**UNSIGNALIZED**												
		EB	A[9.0]	A[9.4]	A[8.8]	A[8.7]	A[9.2]	A[9.6]	A[9.0]	A[8.8]	A[9.2]	A[9.8]	A[9.1]	A[8.9]
		NB LEFT	A[7.6]	A[7.4]	A[7.4]	A[7.4]	A[7.6]	A[7.5]	A[7.4]	A[7.4]	A[7.6]	A[7.5]	A[7.5]	A[7.4]
5	NYS ROUTE 17A & LONG MEADOW ROAD (C.R. 84)/ CLINTON ROAD	**UNSIGNALIZED**												
		EB LEFT	A[7.4]	A[9.3]	A[7.8]	A[7.6]	A[7.5]	A[9.6]	A[7.9]	A[7.7]	A[7.5]	A[9.6]	A[7.9]	A[7.7]
		WB LEFT	B[11.0]	A[7.6]	A[7.9]	A[7.7]	B[12.2]	A[7.8]	A[8.1]	A[7.9]	B[12.3]	A[7.8]	A[8.2]	A[7.9]
		NB	C[15.4]	B[13.5]	B[11.1]	B[10.1]	C[22.4]	C[16.4]	B[12.0]	B[10.6]	C[22.8]	C[17.2]	B[12.5]	B[10.7]
		SB	C[18.6]	C[17.3]	B[12.2]	B[11.0]	D[25.4]	C[21.5]	B[13.7]	B[11.7]	D[26.4]	C[22.6]	B[14.5]	B[12.0]
6	LONG MEADOW ROAD (C.R. 84) & SITE ACCESS DRIVEWAY	**UNSIGNALIZED**												
		EB	-	-	-	-	-	-	-	-	A[9.3]	B[10.0]	A[9.9]	A[9.2]
		NB LEFT	-	-	-	-	-	-	-	-	A[7.6]	A[7.6]	A[7.6]	A[7.5]
7	STERLING MINE ROAD (C.R. 72) & SISTER SERVANTS LANE/ EAGLE VALLEY ROAD	**UNSIGNALIZED**												
		EB LEFT	A[7.7]	B[10.7]	A[8.3]	A[7.9]	A[7.8]	B[11.4]	A[8.5]	A[8.0]	A[7.9]	B[11.6]	A[8.7]	A[8.1]
		WB LEFT	B[11.2]	A[7.8]	A[7.9]	A[7.9]	B[12.0]	A[8.0]	A[8.1]	A[8.0]	B[12.1]	A[8.2]	A[8.3]	A[8.1]
		NB	C[16.4]	A[9.3]	A[9.5]	A[9.5]	C[18.2]	A[9.7]	A[9.9]	A[9.8]	C[18.5]	B[10.0]	B[10.3]	A[10.0]
		SB	E[47.2]	D[32.1]	C[15.9]	B[13.6]	F[87.1]	F[50.1]	C[22.2]	C[15.2]	F[95.6]	F[59.3]	C[22.4]	C[16.3]

NOTES:

1) THE ABOVE REPRESENTS THE LEVEL OF SERVICE AND VEHICLE DELAY IN SECONDS, C [16.2], FOR EACH KEY APPROACH AS WELL AS FOR THE OVERALL INTERSECTION FOR THE SIGNALIZED INTERSECTIONS. FOR THE UNSIGNALIZED INTERSECTIONS THE MINOR APPROACH AND LEFT TURN FROM MAJOR ROADWAY MOVEMENTS ARE SHOWN. SEE APPENDIX "D" FOR A DESCRIPTION OF THE LEVELS OF SERVICE STANDARDS.
2) INTERSECTION 7: THE RESULTS DO NOT REFLECT THE EFFECT OF GAPS IN TRAFFIC FLOW AT THIS INTERSECTION WHICH RESULT IN BETTER OPERATING CONDITIONS THAN SHOWN IN THE TABLE.

TABLE NO. 3

PUBLIC TRANSPORTATION SUMMARY

TYPE	COMMUTER PARKING	ROUND TRIP TICKET COST	FREQUENCY		AVERAGE TRIP LENGTH
NJ Transit Bus from Warwick (Route 196)	Free Park & Ride	$30.00	To NYC	Departs every 10-15 mins. From 4:55 AM to 6:58 AM	1 hr. 43 mins.
			From NYC	Departs every 15-20 Mins. From 3:00 PM to 7:10 PM	1 hr. 26 mins.
NJ Transit Bus from Warwick (Route 197)	Free Park & Ride	$30.00	To NYC	Departs at 4:38 AM and every 2 hours beginning at 8:10 AM	2 hr. 12 mins.
			From NYC	Departs every 2 hrs. from 7:30 AM to 1:30 PM and at 7:30 PM, 9:30 PM, and 11:00 PM	1 hr. 57 mins.
Coach USA Bus from Tuxedo	Free Park & Ride	$28.00	To NYC	Departs every 15 mins. During AM Peak	1 hr. 10 mins.
			From NYC	Departs every 5-15 mins. During PM Peak	0 hr. 56 mins.
Coach USA Bus from Sloatsburg	Unknown	$26.00	To NYC	Departs every 15 mins. During AM Peak	1 hr. 10 mins.
			From NYC	Departs every 5-15 mins. During PM Peak	0 hr. 56 mins.
Train from Tuxedo	245 spaces with 24-hour metered parking, and	$23.00	To NYC	Departs every 30 mins. During AM Peak	1 hr. 10 mins.
			From NYC	Departs every 30-50 mins. During PM Peak	1 hr. 5 mins.
Train from Sloatsburg	80 spaces, free on weekends	$23.00	To NYC	Departs every 30 mins. During AM Peak	1 hr. 10 mins.
			From NYC	Departs every 30-50 mins. During PM Peak	1 hr. 0 mins.

MACHINE COUNT TRAFFIC VOLUME DATA

JOHN COLLINS ENGINEERS, P.C.

11 BRADHURST AVENUE
HAWTHORNE, NY, 10532
(914) 347-7500 / FAX (914) 347-7266

Default Comments
PROJECT: 1 KINGS DRIVE WATCHTOWER
LOCATION: TUXEDO, NEW YORK
JCE JOB# 1700

Site Code: 170000000222
Station ID:
(C.R. 84) (NORTH OF EAGLE VALLEY ROAD AND SOUTH OF WOODLANDS DRIVE)
Latitude: 0' 0.000 Undefined

Start Time	26-Apr-10		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB
12:00 AM	*	*	*	*	*	*	*	*	*	*	8	15	10	11	9	13
01:00	*	*	*	*	*	*	*	*	*	*	3	5	7	9	5	7
02:00	*	*	*	*	*	*	*	*	*	*	2	5	5	4	4	4
03:00	*	*	*	*	*	*	*	*	*	*	4	3	4	1	4	2
04:00	*	*	*	*	*	*	*	*	*	*	3	12	2	6	2	9
05:00	*	*	*	*	*	*	*	*	*	*	7	14	3	6	5	10
06:00	*	*	*	*	*	*	*	*	*	*	22	36	17	10	20	23
07:00	*	*	*	*	*	*	*	*	*	*	48	38	24	25	36	32
08:00	*	*	*	*	*	*	*	*	*	*	93	60	32	35	62	48
09:00	*	*	*	*	*	*	*	*	*	*	72	81	64	65	68	73
10:00	*	*	*	*	*	*	*	*	*	*	77	76	68	74	72	75
11:00	*	*	*	*	*	*	*	*	*	*	92	82	87	77	90	80
12:00 PM	*	*	*	*	*	*	*	*	87	78	89	81	66	77	81	79
01:00	*	*	*	*	*	*	*	*	73	64	101	82	97	70	90	72
02:00	*	*	*	*	*	*	*	*	65	63	79	85	89	93	78	80
03:00	*	*	*	*	*	*	*	*	75	113	78	99	61	61	71	91
04:00	*	*	*	*	*	*	*	*	96	99	95	84	85	63	92	82
05:00	*	*	*	*	*	*	*	*	79	104	87	64	60	48	75	72
06:00	*	*	*	*	*	*	*	*	48	89	54	56	37	49	46	65
07:00	*	*	*	*	*	*	*	*	37	69	45	57	49	43	44	56
08:00	*	*	*	*	*	*	*	*	42	41	32	34	16	30	30	35
09:00	*	*	*	*	*	*	*	*	16	32	11	47	13	28	13	36
10:00	*	*	*	*	*	*	*	*	15	25	19	35	3	8	12	23
11:00	*	*	*	*	*	*	*	*	14	35	7	24	3	10	8	23
Lane	0	0	0	0	0	0	0	0	647	812	1128	1175	902	903	1017	1090
Day	0		0		0		0		1459		2303		1805		2107	
AM Peak											08:00	11:00	11:00	11:00	11:00	11:00
Vol.											93	82	87	77	90	80
PM Peak									16:00	15:00	13:00	15:00	13:00	14:00	16:00	15:00
Vol.									96	113	101	99	97	93	92	91

JOHN COLLINS ENGINEERS, P.C.

11 BRADHURST AVENUE
HAWTHORNE, NY, 10532
(914) 347-7500 / FAX (914) 347-7266

Default Comments
PROJECT: 1 KINGS DRIVE WATCHTOWER
LOCATION: TUXEDO, NEW YORK
JCE JOB# 1700

Site Code: 170000000222
Station ID:
(C.R. 84) (NORTH OF EAGLE VALLEY ROAD AND SOUTH OF WOODLANDS DRIVE)
Latitude: 0' 0.000 Undefined

Start	03-May-10		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
Time	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB
12:00 AM	5	4	10	6	3	5	5	6	9	10	3	7	11	14	7	7
01:00	0	1	3	1	0	0	2	2	2	2	3	10	2	1	2	2
02:00	1	1	4	2	0	1	0	1	2	2	1	2	2	2	1	2
03:00	1	0	6	0	3	0	3	2	1	1	1	3	1	4	2	1
04:00	6	4	7	4	6	4	11	4	3	5	12	9	0	3	6	5
05:00	17	7	24	12	34	16	23	11	24	15	6	14	4	7	19	12
06:00	57	37	57	45	58	40	61	42	54	39	25	24	15	16	47	35
07:00	116	83	144	106	138	92	153	65	164	57	50	43	23	13	113	66
08:00	111	80	112	82	119	81	151	78	124	80	73	39	46	32	105	67
09:00	72	52	80	59	80	79	94	68	70	63	67	42	63	48	75	59
10:00	57	65	73	51	66	71	66	52	70	56	72	58	48	44	65	57
11:00	76	42	86	77	76	64	62	67	81	62	77	56	66	66	75	62
12:00 PM	59	60	82	69	56	69	64	57	66	69	61	71	72	84	66	68
01:00	54	65	63	65	66	74	50	70	76	76	69	58	72	65	64	68
02:00	62	67	67	81	69	75	59	77	57	75	60	68	58	64	62	72
03:00	54	87	80	100	94	92	91	83	80	109	70	81	49	62	74	88
04:00	83	98	88	99	118	121	107	126	96	111	77	85	60	42	90	97
05:00	77	104	65	117	79	128	90	107	86	104	71	74	65	41	76	96
06:00	53	96	53	92	59	79	47	106	68	112	46	57	39	41	52	83
07:00	41	58	54	76	38	73	45	68	51	77	27	46	28	51	41	64
08:00	36	56	34	61	36	59	31	52	36	43	20	34	32	29	32	48
09:00	18	24	21	34	22	25	21	41	16	47	11	28	14	25	18	32
10:00	12	21	22	16	10	20	16	24	15	27	12	27	8	13	14	21
11:00	12	15	21	16	12	18	7	12	7	19	10	17	8	7	11	15
Lane	1080	1127	1256	1271	1242	1286	1259	1221	1258	1261	924	953	786	774	1117	1127
Day	2207		2527		2528		2480		2519		1877		1560		2244	
AM Peak	07:00	07:00	07:00	07:00	07:00	07:00	07:00	08:00	07:00	08:00	11:00	10:00	11:00	11:00	07:00	08:00
Vol.	116	83	144	106	138	92	153	78	164	80	77	58	66	66	113	67
PM Peak	16:00	17:00	16:00	17:00	16:00	17:00	16:00	16:00	16:00	18:00	16:00	16:00	12:00	12:00	16:00	16:00
Vol.	83	104	88	117	118	128	107	126	96	112	77	85	72	84	90	97

Default Comments
PROJECT: 1 KINGS DRIVE WATCHTOWER
LOCATION: TUXEDO, NEW YORK
JCE JOB# 1700

JOHN COLLINS ENGINEERS, P.C.

11 BRADHURST AVENUE
HAWTHORNE, NY, 10532
(914) 347-7500 / FAX (914) 347-7266

Site Code: 170000000222
Station ID:
(C.R. 84) (NORTH OF EAGLE VALLEY ROAD AND SOUTH OF WOODLANDS DRIVE)
Latitude: 0' 0.000 Undefined

Start Time	10-May-10		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB
12:00 AM	2	3	5	7	1	5	10	5	9	10	*	*	*	*	5	6
01:00	2	1	2	2	1	0	5	6	2	3	*	*	*	*	2	2
02:00	0	1	3	0	3	2	1	0	1	1	*	*	*	*	2	1
03:00	1	1	1	0	2	2	2	0	2	2	*	*	*	*	2	1
04:00	3	6	6	3	2	0	3	4	4	9	*	*	*	*	4	4
05:00	21	12	25	11	24	4	29	11	24	9	*	*	*	*	25	9
06:00	58	37	62	40	49	43	59	36	57	39	*	*	*	*	57	39
07:00	161	74	162	80	139	96	145	85	140	82	*	*	*	*	149	83
08:00	121	91	118	86	118	83	137	74	173	104	*	*	*	*	133	88
09:00	87	51	78	49	65	71	80	67	134	82	*	*	*	*	89	64
10:00	60	68	56	59	74	51	69	81	73	59	*	*	*	*	66	64
11:00	69	76	69	48	60	58	67	43	53	19	*	*	*	*	64	49
12:00 PM	80	48	50	75	66	57	65	71	*	*	*	*	*	*	65	63
01:00	53	75	57	55	65	74	54	61	*	*	*	*	*	*	57	66
02:00	79	82	68	76	65	75	59	74	*	*	*	*	*	*	68	77
03:00	69	84	73	81	71	78	85	93	*	*	*	*	*	*	74	84
04:00	107	108	87	114	75	79	91	113	*	*	*	*	*	*	90	104
05:00	76	128	81	100	73	72	72	143	*	*	*	*	*	*	76	111
06:00	53	94	57	82	47	98	57	122	*	*	*	*	*	*	54	99
07:00	45	76	30	56	30	67	53	79	*	*	*	*	*	*	40	70
08:00	12	42	17	46	20	43	37	51	*	*	*	*	*	*	22	46
09:00	13	21	14	34	17	32	9	45	*	*	*	*	*	*	13	33
10:00	13	19	12	20	11	22	16	19	*	*	*	*	*	*	13	20
11:00	14	11	12	12	17	19	14	11	*	*	*	*	*	*	14	13
Lane	1199	1209	1145	1136	1095	1131	1219	1294	672	419	0	0	0	0	1184	1196
Day	2408		2281		2226		2513		1091		0		0		2380	
AM Peak	07:00	08:00	07:00	08:00	07:00	07:00	07:00	07:00	08:00	08:00					07:00	08:00
Vol.	161	91	162	86	139	96	145	85	173	104					149	88
PM Peak	16:00	17:00	16:00	16:00	16:00	18:00	16:00	17:00							16:00	17:00
Vol.	107	128	87	114	75	98	91	143							90	111

Comb. Total	4615	4808	4754	4993	5069	4180	3365	6731

ADT ADT 2,249 AADT 2,249

JOHN COLLINS ENGINEERS, P.C.

11 BRADHURST AVENUE
HAWTHORNE, NY, 10532
(914) 347-7500 / FAX (914) 347-7266

Default Comments
PROJECT: 1 KINGS DRIVE WATCHTOWER
LOCATION: TUXEDO, NEW YORK
JCE JOB# 1700

Site Code: 170000000333
Station ID:
STERLING MINE ROAD (C.R. 72) (IN THE MIDDLE OF BABCOCK HILL ROAD DRIVEWAYS)
Latitude: 0' 0.000 Undefined

Start	26-Apr-10		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
Time	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB
12:00 AM	*	*	*	*	*	*	*	*	*	*	32	61	28	61	30	61
01:00	*	*	*	*	*	*	*	*	*	*	28	33	19	33	24	33
02:00	*	*	*	*	*	*	*	*	*	*	4	22	9	16	6	19
03:00	*	*	*	*	*	*	*	*	*	*	15	13	10	17	12	15
04:00	*	*	*	*	*	*	*	*	*	*	14	25	11	10	12	18
05:00	*	*	*	*	*	*	*	*	*	*	54	15	27	15	40	15
06:00	*	*	*	*	*	*	*	*	*	*	134	57	63	15	98	36
07:00	*	*	*	*	*	*	*	*	*	*	224	88	81	68	152	78
08:00	*	*	*	*	*	*	*	*	*	*	261	140	121	115	191	128
09:00	*	*	*	*	*	*	*	*	*	*	249	172	209	153	229	162
10:00	*	*	*	*	*	*	*	*	*	*	262	220	230	227	246	224
11:00	*	*	*	*	*	*	*	*	*	*	315	245	261	254	288	250
12:00 PM	*	*	*	*	*	*	*	*	223	234	263	311	248	285	245	277
01:00	*	*	*	*	*	*	*	*	204	256	317	287	292	284	271	276
02:00	*	*	*	*	*	*	*	*	228	282	250	337	273	295	250	305
03:00	*	*	*	*	*	*	*	*	191	506	275	315	252	247	239	356
04:00	*	*	*	*	*	*	*	*	248	640	314	310	297	203	286	384
05:00	*	*	*	*	*	*	*	*	187	843	259	276	197	181	214	433
06:00	*	*	*	*	*	*	*	*	166	566	232	224	187	171	195	320
07:00	*	*	*	*	*	*	*	*	151	313	168	198	143	185	154	232
08:00	*	*	*	*	*	*	*	*	87	203	117	154	87	142	97	166
09:00	*	*	*	*	*	*	*	*	68	166	74	156	59	106	67	143
10:00	*	*	*	*	*	*	*	*	52	126	74	126	35	59	54	104
11:00	*	*	*	*	*	*	*	*	62	101	41	99	26	44	43	81
Lane	0	0	0	0	0	0	0	0	1867	4236	3976	3884	3165	3186	3443	4116
Day	0		0		0		0		6103		7860		6351		7559	
AM Peak											11:00	11:00	11:00	11:00	11:00	11:00
Vol.											315	245	261	254	288	250
PM Peak									16:00	17:00	13:00	14:00	16:00	14:00	16:00	17:00
Vol.									248	843	317	337	297	295	286	433

JOHN COLLINS ENGINEERS, P.C.

11 BRADHURST AVENUE
HAWTHORNE, NY, 10532
(914) 347-7500 / FAX (914) 347-7266

Default Comments
PROJECT: 1 KINGS DRIVE WATCHTOWER
LOCATION: TUXEDO, NEW YORK
JCE JOB# 1700

Site Code: 170000000333
Station ID:
STERLING MINE ROAD (C.R. 72) (IN THE MIDDLE OF BABCOCK HILL ROAD DRIVEWAYS)
Latitude: 0' 0.000 Undefined

Start	03-May-10		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
Time	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB
12:00 AM	7	20	18	35	19	40	9	38	12	33	19	57	31	62	16	41
01:00	4	8	5	12	9	26	6	19	4	13	21	40	10	28	8	21
02:00	6	4	12	12	5	9	8	7	8	17	5	27	7	18	7	13
03:00	9	3	14	9	17	8	17	10	11	8	7	12	3	19	11	10
04:00	40	8	45	10	42	13	44	8	44	12	24	20	8	6	35	11
05:00	177	8	182	26	188	32	193	38	194	21	62	19	22	12	145	22
06:00	569	56	618	67	585	74	598	67	580	68	146	47	49	29	449	58
07:00	964	123	1034	159	1062	131	1014	129	967	110	195	85	71	37	758	111
08:00	838	155	816	153	798	180	824	139	798	150	236	94	136	75	635	135
09:00	376	105	371	137	364	150	378	121	352	136	244	116	186	109	324	125
10:00	219	133	221	136	214	138	223	121	220	142	237	160	229	127	223	137
11:00	200	131	189	139	223	164	192	157	211	160	243	191	259	206	217	164
12:00 PM	161	177	189	192	169	193	188	166	213	226	238	241	290	270	207	209
01:00	163	189	154	224	195	249	180	220	234	273	248	254	275	246	207	236
02:00	171	273	190	280	210	273	177	301	210	323	244	282	254	263	208	285
03:00	157	437	189	471	225	455	190	467	204	500	258	314	200	221	203	409
04:00	180	642	188	686	218	743	230	714	204	678	239	338	212	220	210	574
05:00	165	854	162	826	195	864	195	843	221	758	248	266	183	199	196	659
06:00	126	591	135	569	167	585	150	592	205	557	203	224	163	227	164	478
07:00	97	300	117	380	140	320	145	331	137	327	134	212	131	209	129	297
08:00	93	219	85	210	105	270	74	249	91	201	102	168	112	161	95	211
09:00	52	134	74	184	69	169	63	206	77	200	82	163	57	96	68	165
10:00	40	102	56	101	48	112	41	113	44	143	70	126	50	50	50	107
11:00	23	67	38	78	31	66	27	65	45	127	42	94	22	46	33	78
Lane	4837	4739	5102	5096	5298	5264	5166	5121	5286	5183	3547	3550	2960	2936	4598	4556
Day	9576		10198		10562		10287		10469		7097		5896		9154	
AM Peak	07:00	08:00	07:00	07:00	07:00	08:00	07:00	11:00	07:00	11:00	09:00	11:00	11:00	11:00	07:00	11:00
Vol.	964	155	1034	159	1062	180	1014	157	967	160	244	191	259	206	758	164
PM Peak	16:00	17:00	14:00	17:00	15:00	17:00	16:00	17:00	13:00	17:00	15:00	16:00	12:00	12:00	16:00	17:00
Vol.	180	854	190	826	225	864	230	843	234	758	258	338	290	270	210	659

JOHN COLLINS ENGINEERS, P.C.

11 BRADHURST AVENUE
HAWTHORNE, NY, 10532
(914) 347-7500 / FAX (914) 347-7266

Default Comments
PROJECT: 1 KINGS DRIVE WATCHTOWER
LOCATION: TUXEDO, NEW YORK
JCE JOB# 1700

Site Code: 170000000333
Station ID:
STERLING MINE ROAD (C.R. 72) (IN THE MIDDLE OF BABCOCK HILL ROAD DRIVEWAYS)
Latitude: 0' 0.000 Undefined

Start	10-May-10		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
Time	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB
12:00 AM	7	18	11	37	7	35	12	35	*	*	*	*	*	*	9	31
01:00	4	8	7	14	1	10	11	21	*	*	*	*	*	*	6	13
02:00	4	8	10	10	8	10	8	9	*	*	*	*	*	*	8	9
03:00	12	2	19	9	13	3	9	4	*	*	*	*	*	*	13	4
04:00	44	8	47	4	42	3	46	8	*	*	*	*	*	*	45	6
05:00	193	22	205	25	183	21	210	20	*	*	*	*	*	*	198	22
06:00	619	66	640	82	574	60	609	67	*	*	*	*	*	*	610	69
07:00	1038	123	1027	155	977	141	1006	152	*	*	*	*	*	*	1012	143
08:00	831	152	803	145	822	148	790	174	*	*	*	*	*	*	812	155
09:00	342	133	347	107	347	123	360	133	*	*	*	*	*	*	349	124
10:00	233	144	206	137	225	94	235	132	*	*	*	*	*	*	225	127
11:00	198	166	206	161	178	141	195	139	*	*	*	*	*	*	194	152
12:00 PM	184	163	177	188	189	165	190	196	*	*	*	*	*	*	185	178
01:00	177	226	173	186	186	214	191	231	*	*	*	*	*	*	182	214
02:00	186	288	194	284	183	296	201	295	*	*	*	*	*	*	191	291
03:00	184	439	199	484	184	477	217	469	*	*	*	*	*	*	196	467
04:00	197	750	204	689	171	616	*	*	*	*	*	*	*	*	191	685
05:00	182	860	196	877	188	680	*	*	*	*	*	*	*	*	189	806
06:00	162	596	151	559	142	599	*	*	*	*	*	*	*	*	152	585
07:00	109	291	90	279	88	322	*	*	*	*	*	*	*	*	96	297
08:00	62	189	47	222	56	217	*	*	*	*	*	*	*	*	55	209
09:00	54	130	46	140	44	174	*	*	*	*	*	*	*	*	48	148
10:00	45	111	33	102	40	115	*	*	*	*	*	*	*	*	39	109
11:00	26	58	23	74	28	68	*	*	*	*	*	*	*	*	26	67
Lane	5093	4951	5061	4970	4876	4732	4290	2085	0	0	0	0	0	0	5031	4911
Day	10044		10031		9608		6375		0		0		0		9942	
AM Peak	07:00	11:00	07:00	11:00	07:00	08:00	07:00	08:00							07:00	08:00
Vol.	1038	166	1027	161	977	148	1006	174							1012	155
PM Peak	16:00	17:00	16:00	17:00	12:00	17:00	15:00	15:00							15:00	17:00
Vol.	197	860	204	877	189	680	217	469							196	806

Comb. Total	19620	20229	20170	16662	16572	14957	12247	26655
ADT	ADT 8,998	AADT 8,998						

JOHN COLLINS ENGINEERS, P.C.

11 BRADHURST AVENUE
HAWTHORNE, NY, 10532
(914) 347-7500 / FAX (914) 347-7266

Default Comments
PROJECT: 1 KINGS DRIVE WATCHTOWER
LOCATION: TUXEDO, NEW YORK
JCE JOB# 1700

Site Code: 170000000444
Station ID:
(C.R. 84) (NORTH OF KINGS COLLEGE AND SOUTH OF IBM SOUTH GATE)
Latitude: 0' 0.000 Undefined

Start	26-Apr-10		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
Time	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB
12:00 AM	*	*	*	*	*	*	*	*	*	*	11	8	2	7	6	8
01:00	*	*	*	*	*	*	*	*	*	*	1	3	4	0	2	2
02:00	*	*	*	*	*	*	*	*	*	*	5	2	2	1	4	2
03:00	*	*	*	*	*	*	*	*	*	*	1	2	0	2	0	2
04:00	*	*	*	*	*	*	*	*	*	*	10	2	5	0	8	1
05:00	*	*	*	*	*	*	*	*	*	*	16	4	6	2	11	3
06:00	*	*	*	*	*	*	*	*	*	*	37	13	12	7	24	10
07:00	*	*	*	*	*	*	*	*	*	*	32	30	22	11	27	20
08:00	*	*	*	*	*	*	*	*	*	*	54	59	30	12	42	36
09:00	*	*	*	*	*	*	*	*	*	*	79	41	60	34	70	38
10:00	*	*	*	*	*	*	*	*	*	*	73	48	62	35	68	42
11:00	*	*	*	*	*	*	*	*	*	*	56	62	63	45	60	54
12:00 PM	*	*	*	*	*	*	*	*	55	49	51	59	54	42	53	50
01:00	*	*	*	*	*	*	*	*	47	52	72	62	53	59	57	58
02:00	*	*	*	*	*	*	*	*	42	50	69	57	72	53	61	53
03:00	*	*	*	*	*	*	*	*	76	54	66	57	48	45	63	52
04:00	*	*	*	*	*	*	*	*	60	80	57	64	37	68	51	71
05:00	*	*	*	*	*	*	*	*	70	56	32	60	38	45	47	54
06:00	*	*	*	*	*	*	*	*	42	32	33	36	25	25	33	31
07:00	*	*	*	*	*	*	*	*	41	20	33	24	24	35	33	26
08:00	*	*	*	*	*	*	*	*	17	32	16	25	13	11	15	23
09:00	*	*	*	*	*	*	*	*	8	10	8	7	10	10	9	9
10:00	*	*	*	*	*	*	*	*	13	16	9	12	3	4	8	11
11:00	*	*	*	*	*	*	*	*	14	11	11	7	4	3	10	7
Lane	0	0	0	0	0	0	0	0	485	462	832	744	649	556	762	663
Day	0		0		0		0		947		1576		1205		1425	
AM Peak											09:00	11:00	11:00	11:00	09:00	11:00
Vol.											79	62	63	45	70	54
PM Peak									15:00	16:00	13:00	16:00	14:00	16:00	15:00	16:00
Vol.									76	80	72	64	72	68	63	71

JOHN COLLINS ENGINEERS, P.C.

11 BRADHURST AVENUE
HAWTHORNE, NY, 10532
(914) 347-7500 / FAX (914) 347-7266

Default Comments
PROJECT: 1 KINGS DRIVE WATCHTOWER
LOCATION: TUXEDO, NEW YORK
JCE JOB# 1700

Site Code: 170000000444
Station ID:
(C.R. 84) (NORTH OF KINGS COLLEGE AND SOUTH OF IBM SOUTH GATE)
Latitude: 0' 0.000 Undefined

Start	03-May-10		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
Time	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB
12:00 AM	2	3	5	8	2	3	3	5	6	6	2	1	6	8	4	5
01:00	0	0	1	3	0	0	1	1	0	2	5	1	0	2	1	1
02:00	0	0	2	4	1	0	0	0	1	2	1	1	1	2	1	1
03:00	0	1	0	5	0	2	2	2	1	0	3	1	2	1	1	2
04:00	3	1	4	3	2	2	4	5	4	0	8	11	4	1	4	3
05:00	6	10	7	12	17	24	9	15	13	13	13	3	7	3	10	11
06:00	29	32	42	29	34	29	36	35	37	28	25	14	13	8	31	25
07:00	81	57	103	76	78	71	62	91	55	105	39	27	12	10	61	62
08:00	67	60	72	68	81	62	67	102	72	78	29	29	19	23	58	60
09:00	41	46	41	47	66	58	49	65	50	40	36	44	34	35	45	48
10:00	53	32	45	50	69	43	51	43	42	43	28	30	29	17	45	37
11:00	33	40	50	52	46	46	41	43	57	52	44	39	40	42	44	45
12:00 PM	32	41	46	48	56	36	45	42	42	42	37	33	51	42	44	41
01:00	52	33	43	46	43	44	52	25	53	43	38	49	40	42	46	40
02:00	45	47	51	42	45	41	47	44	46	37	41	36	30	40	44	41
03:00	55	43	64	55	63	78	58	70	58	60	44	55	34	31	54	56
04:00	62	64	65	75	73	93	73	84	73	74	57	48	25	42	61	69
05:00	60	59	83	50	85	61	75	58	68	56	33	36	17	44	60	52
06:00	48	33	45	36	36	40	69	36	62	44	22	24	17	22	43	34
07:00	24	29	39	39	35	25	27	31	38	27	18	13	24	17	29	26
08:00	20	29	17	24	24	33	24	25	28	31	11	15	15	17	20	25
09:00	12	15	9	20	9	19	11	21	14	15	11	8	7	7	10	15
10:00	11	12	6	21	7	7	9	15	14	12	8	7	5	5	9	11
11:00	9	10	13	19	9	10	9	7	9	6	13	9	6	5	10	9
Lane	745	697	853	832	881	827	824	865	843	816	566	534	438	466	735	719
Day	1442		1685		1708		1689		1659		1100		904		1454	
AM Peak	07:00	08:00	07:00	07:00	08:00	07:00	08:00	08:00	08:00	07:00	11:00	09:00	11:00	11:00	07:00	07:00
Vol.	81	60	103	76	81	71	67	102	72	105	44	44	40	42	61	62
PM Peak	16:00	16:00	17:00	16:00	17:00	16:00	17:00	16:00	16:00	16:00	16:00	15:00	12:00	17:00	16:00	16:00
Vol.	62	64	83	75	85	93	75	84	73	74	57	55	51	44	61	69

JOHN COLLINS ENGINEERS, P.C.

11 BRADHURST AVENUE
HAWTHORNE, NY, 10532
(914) 347-7500 / FAX (914) 347-7266

Default Comments
PROJECT: 1 KINGS DRIVE WATCHTOWER
LOCATION: TUXEDO, NEW YORK
JCE JOB# 1700

Site Code: 170000000444
Station ID:
(C.R. 84) (NORTH OF KINGS COLLEGE AND SOUTH OF IBM SOUTH GATE)
Latitude: 0' 0.000 Undefined

Start	10-May-10		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
Time	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB
12:00 AM	2	2	5	5	3	1	0	9	7	7	*	*	*	*	3	5
01:00	0	1	2	2	1	0	3	5	1	2	*	*	*	*	1	2
02:00	1	0	0	3	2	2	0	1	1	1	*	*	*	*	1	1
03:00	1	1	0	0	2	2	0	1	1	1	*	*	*	*	1	1
04:00	5	1	2	2	0	1	3	2	8	2	*	*	*	*	4	2
05:00	12	11	8	16	2	13	10	14	9	12	*	*	*	*	8	13
06:00	31	33	38	31	39	23	30	34	35	34	*	*	*	*	35	31
07:00	68	86	72	95	89	77	79	85	72	78	*	*	*	*	76	84
08:00	69	66	74	71	70	61	61	73	91	136	*	*	*	*	73	81
09:00	45	55	43	37	61	41	53	47	71	113	*	*	*	*	55	59
10:00	46	33	47	42	32	41	63	46	49	44	*	*	*	*	47	41
11:00	59	42	28	36	34	32	30	41	13	29	*	*	*	*	33	36
12:00 PM	35	50	43	35	33	40	38	35	*	*	*	*	*	*	37	40
01:00	44	32	35	39	52	52	36	33	*	*	*	*	*	*	42	39
02:00	54	53	54	51	47	53	45	45	*	*	*	*	*	*	50	50
03:00	56	49	57	58	52	54	64	67	*	*	*	*	*	*	57	57
04:00	69	91	76	71	47	55	78	68	*	*	*	*	*	*	68	71
05:00	84	51	58	71	43	61	84	48	*	*	*	*	*	*	67	58
06:00	54	49	38	36	45	30	87	39	*	*	*	*	*	*	56	38
07:00	30	30	22	18	28	22	46	40	*	*	*	*	*	*	32	28
08:00	15	8	18	13	15	14	27	35	*	*	*	*	*	*	19	18
09:00	4	9	10	15	12	19	17	13	*	*	*	*	*	*	11	14
10:00	11	12	9	10	10	10	7	15	*	*	*	*	*	*	9	12
11:00	7	13	7	11	16	16	9	15	*	*	*	*	*	*	10	14
Lane	802	778	746	768	735	720	870	811	358	459	0	0	0	0	795	795
Day	1580		1514		1455		1681		817		0		0		1590	
AM Peak	08:00	07:00	08:00	07:00	07:00	07:00	07:00	07:00	08:00	08:00					07:00	07:00
Vol.	69	86	74	95	89	77	79	85	91	136					76	84
PM Peak	17:00	16:00	16:00	16:00	13:00	17:00	18:00	16:00							16:00	16:00
Vol.	84	91	76	71	52	61	87	68							68	71

Comb. Total	3022	3199	3163	3370	3423	2676	2109	4469

ADT ADT 1,477 AADT 1,477

GAP DATA

JOHN COLLINS ENGINEERS

11 BRADHURST AVENUE
HAWTHORNE, NY 10532
(914) 347 - 7500

Default Comments
PROJECT: 1 KINGS DRIVE WATCHTOWER
LOCATION: TUXEDO, NEW YORK
JCE JOB# 1700

Site Code: 100000000333
Station ID:
STERLING MINE ROAD (C.R. 72) (IN THE MIDDLE OF BABCOCK HILL ROAD DRIVEWAYS)
Latitude: 0' 0.000 Undefined

COMBINED

Start	1	5	7	9	11	13	15	17	19	21	23	25	27	29
Time	4	6	8	10	12	14	16	18	20	22	24	26	28	999
5/13/10	6	0	1	1	0	1	1	2	2	0	1	0	0	32
01:00	4	1	0	1	0	0	1	1	0	0	1	0	0	23
02:00	1	0	1	0	0	0	0	0	0	0	0	0	1	14
03:00	0	0	0	0	0	0	0	0	1	0	0	0	0	12
04:00	5	1	2	1	2	0	5	1	1	1	2	0	3	30
05:00	98	18	7	15	9	7	8	7	7	3	5	3	0	43
06:00	459	42	32	22	33	20	12	3	8	7	4	6	6	22
07:00	947	55	31	26	28	27	18	6	3	3	3	0	4	7
08:00	753	54	30	16	27	23	12	14	8	5	4	2	4	12
09:00	300	34	24	19	13	20	11	12	9	7	3	6	2	33
10:00	170	27	28	16	21	12	18	6	9	8	4	5	3	40
11:00	138	24	29	14	21	16	14	8	8	10	6	7	4	35
12 PM	180	26	32	26	19	14	10	12	8	13	4	2	11	29
13:00	204	39	29	21	18	15	20	10	15	9	8	7	4	23
14:00	292	28	37	26	16	8	16	9	6	9	8	10	8	23
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	3557	349	283	204	207	163	146	91	85	75	53	48	50	378
Grand Total	72063	8166	5600	4714	4425	3612	2778	2260	1930	1625	1350	1211	1082	8955

Statistics

Number of Gaps > 7 Secs. : 36742
Percent of Gaps > 7 Secs. : 30.7%

APPENDIX "C"

CAPACITY ANALYSIS

HCS+: Signalized Intersections Release 5.3

Analyst: R.H.
Agency: JCE
Date: JUNE 2009
Period: PEAK AM HOUR
Project ID: 1700AMEX1
E/W St: STERLING MINE ROAD (C.R. 72)

Inter.: C.R. 72 & LONG MEADOW ROAD
Area Type: All other areas
Jurisd:
Year : 2010 EXISTING TRAFFIC VOLUMES
N/S St: LONG MEADOW ROAD (C.R. 84)

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	0	0	1	1	0	0	0	1	0	1
LGConfig	L	T			T	R				L		R
Volume	18	917			94	84				140		30
Lane Width	11.0	11.0			12.0	12.0				12.0		12.0
RTOR Vol						0						0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination		1	2	3	4			5	6	7	8
EB	Left	A				NB	Left				
	Thru	A					Thru				
	Right						Right				
	Peds						Peds				
WB	Left					SB	Left	A			
	Thru	A					Thru				
	Right	A					Right	A			
	Peds						Peds				
NB	Right					EB	Right				
SB	Right					WB	Right	A			
Green		60.5						19.5			
Yellow		3.0						3.0			
All Red		2.0						2.0			

Cycle Length: 90.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	807	1201	0.02	0.67	4.9	A		
T	1170	1740	0.87	0.67	19.0	B	18.8	B
Westbound								
T	1210	1800	0.09	0.67	5.2	A	2.7	A
R	1530	1530	0.06	1.00	0.0+	A		
Northbound								
Southbound								
L	371	1710	0.42	0.22	31.2	C		
							30.7	C
R	332	1530	0.10	0.22	28.4	C		

Intersection Delay = 18.1 (sec/veh) Intersection LOS = B

HCS+: Signalized Intersections Release 5.3

Analyst: R.H.
Agency: JCE
Date: JUNE 2010
Period: PEAK PM HOUR
Project ID: 1700PMEX1
E/W St: STERLING MINE ROAD (C.R. 72)

Inter.: C.R. 72 & LONG MEADOW ROAD
Area Type: All other areas
Jurisd:
Year : 2010 EXISTING TRAFFIC VOLUMES
N/S St: LONG MEADOW ROAD (C.R. 84)

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	0	0	1	1	0	0	0	1	0	1
LGConfig	L	T			T	R				L		R
Volume	20	151			814	103				82		30
Lane Width	11.0	11.0			12.0	12.0				12.0		12.0
RTOR Vol						0						0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination		1	2	3	4			5	6	7	8
EB	Left	A				NB	Left				
	Thru	A					Thru				
	Right						Right				
	Peds						Peds				
WB	Left					SB	Left	A			
	Thru	A					Thru				
	Right	A					Right	A			
	Peds						Peds				
NB	Right					EB	Right				
SB	Right					WB	Right	A			
Green		60.0						20.0			
Yellow		3.0						3.0			
All Red		2.0						2.0			

Cycle Length: 90.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	221	332	0.10	0.67	5.6	A		
T	1160	1740	0.14	0.67	5.6	A	5.6	A
Westbound								
T	1200	1800	0.75	0.67	12.8	B	11.4	B
R	1530	1530	0.07	1.00	0.0+	A		
Northbound								
Southbound								
L	380	1710	0.24	0.22	29.1	C		
							28.8	C
R	340	1530	0.10	0.22	27.9	C		

Intersection Delay = 12.2 (sec/veh) Intersection LOS = B

HCS+: Signalized Intersections Release 5.3

Analyst: R.H.
Agency: JCE
Date: JUNE 2009
Period: PEAK SATURDAY HOUR
Project ID: 1700SATEX1
E/W St: STERLING MINE ROAD (C.R. 72)

Inter.: C.R. 72 & LONG MEADOW ROAD
Area Type: All other areas
Jurisd:
Year : 2010 EXISTING TRAFFIC VOLUMES
N/S St: LONG MEADOW ROAD (C.R. 84)

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	0	0	1	1	0	0	0	1	0	1
LGConfig	L	T			T	R				L		R
Volume	18	202			301	72				74		20
Lane Width	11.0	11.0			12.0	12.0				12.0		12.0
RTOR Vol						0						0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	A				NB Left			
Thru	A				Thru			
Right					Right			
Peds					Peds			
WB Left					SB Left	A		
Thru	A				Thru			
Right	A				Right	A		
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right	A		
Green	60.0					20.0		
Yellow	3.0					3.0		
All Red	2.0					2.0		

Cycle Length: 90.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	629	944	0.03	0.67	5.1	A		
T	1160	1740	0.19	0.67	5.8	A	5.8	A
Westbound								
T	1200	1800	0.28	0.67	6.3	A	5.1	A
R	1530	1530	0.05	1.00	0.0+	A		
Northbound								
Southbound								
L	380	1710	0.22	0.22	28.9	C		
							28.6	C
R	340	1530	0.06	0.22	27.7	C		

Intersection Delay = 8.5 (sec/veh) Intersection LOS = A

HCS+: Signalized Intersections Release 5.3

Analyst: R.H.
Agency: JCE
Date: JUNE 2009
Period: PEAK SUNDAY HOUR
Project ID: 1700SUNEX1
E/W St: STERLING MINE ROAD (C.R. 72)

Inter.: C.R. 72 & LONG MEADOW ROAD
Area Type: All other areas
Jurisd:
Year : 2010 EXISTING TRAFFIC VOLUMES
N/S St: LONG MEADOW ROAD (C.R. 84)

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	0	0	1	1	0	0	0	1	0	1
LGConfig	L	T			T	R				L		R
Volume	16	217			167	67				58		16
Lane Width	11.0	11.0			12.0	12.0				12.0		12.0
RTOR Vol						0						0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	A				NB Left			
Thru	A				Thru			
Right					Right			
Peds					Peds			
WB Left					SB Left	A		
Thru	A				Thru			
Right	A				Right	A		
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right	A		
Green	60.0					20.0		
Yellow	3.0					3.0		
All Red	2.0					2.0		

Cycle Length: 90.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	743	1114	0.02	0.67	5.1	A		
T	1160	1740	0.21	0.67	5.9	A	5.8	A
Westbound								
T	1200	1800	0.16	0.67	5.6	A	4.0	A
R	1530	1530	0.05	1.00	0.0+	A		
Northbound								
Southbound								
L	380	1710	0.17	0.22	28.5	C		
							28.3	C
R	340	1530	0.05	0.22	27.6	C		

Intersection Delay = 8.1 (sec/veh) Intersection LOS = A

HCS+: Signalized Intersections Release 5.5

Analyst: R.H.
Agency: JCE
Date: 9/16/11
Period: PEAK AM HOUR
Project ID: 1700AMNB1
E/W St: STERLING MINE ROAD (C.R. 72)

Inter.: C.R. 72 & LONG MEADOW ROAD
Area Type: All other areas
Jurisd:
Year : 2015 NO-BUILD TRAFFIC VOLUMES
N/S St: LONG MEADOW ROAD (C.R. 84)

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	0	0	1	1	0	0	0	1	0	1
LGConfig	L	T			T	R				L		R
Volume	20	1019			113	109				161		33
Lane Width	11.0	11.0			12.0	12.0				12.0		12.0
RTOR Vol						0						0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	A				NB Left			
Thru	A				Thru			
Right					Right			
Peds					Peds			
WB Left					SB Left	A		
Thru	A				Thru			
Right	A				Right	A		
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right	A		
Green	60.5					19.5		
Yellow	3.0					3.0		
All Red	2.0					2.0		

Cycle Length: 90.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	791	1177	0.03	0.67	4.9	A		
T	1170	1740	0.97	0.67	32.8	C	32.2	C
Westbound								
T	1210	1800	0.10	0.67	5.2	A	2.7	A
R	1530	1530	0.08	1.00	0.0+	A		
Northbound								
Southbound								
L	371	1710	0.48	0.22	31.8	C		
							31.2	C
R	332	1530	0.11	0.22	28.4	C		

Intersection Delay = 27.6 (sec/veh) Intersection LOS = C

HCS+: Signalized Intersections Release 5.5

Analyst: R.H.
Agency: JCE
Date: 9/16/11
Period: PEAK PM HOUR
Project ID: 1700PMNB1
E/W St: STERLING MINE ROAD (C.R. 72)

Inter.: C.R. 72 & LONG MEADOW ROAD
Area Type: All other areas
Jurisd:
Year : 2015 NO-BUILD TRAFFIC VOLUMES
N/S St: LONG MEADOW ROAD (C.R. 84)

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	0	0	1	1	0	0	0	1	0	1
LGConfig	L	T			T	R				L		R
Volume	22	192			910	126				107		33
Lane Width	11.0	11.0			12.0	12.0				12.0		12.0
RTOR Vol						0						0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	A				NB Left			
Thru	A				Thru			
Right					Right			
Peds					Peds			
WB Left					SB Left	A		
Thru	A				Thru			
Right	A				Right	A		
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right	A		
Green	60.0					20.0		
Yellow	3.0					3.0		
All Red	2.0					2.0		

Cycle Length: 90.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	153	230	0.16	0.67	6.1	A		
T	1160	1740	0.18	0.67	5.8	A	5.8	A
Westbound								
T	1200	1800	0.84	0.67	17.0	B	14.9	B
R	1530	1530	0.09	1.00	0.0+	A		
Northbound								
Southbound								
L	380	1710	0.31	0.22	29.7	C		
							29.3	C
R	340	1530	0.11	0.22	28.0	C		

Intersection Delay = 15.0 (sec/veh) Intersection LOS = B

HCS+: Signalized Intersections Release 5.5

Analyst: R.H.
Agency: JCE
Date: 9/16/11
Period: PEAK SATURDAY HOUR
Project ID: 1700SATNB1
E/W St: STERLING MINE ROAD (C.R. 72)

Inter.: C.R. 72 & LONG MEADOW ROAD
Area Type: All other areas
Jurisd:
Year : 2015 NO-BUILD TRAFFIC VOLUMES
N/S St: LONG MEADOW ROAD (C.R. 84)

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	0	0	1	1	0	0	0	1	0	1
LGConfig	L	T			T	R				L		R
Volume	20	242			343	89				94		22
Lane Width	11.0	11.0			12.0	12.0				12.0		12.0
RTOR Vol						0						0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	A				NB Left			
Thru	A				Thru			
Right					Right			
Peds					Peds			
WB Left					SB Left	A		
Thru	A				Thru			
Right	A				Right	A		
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right	A		
Green	60.0					20.0		
Yellow	3.0					3.0		
All Red	2.0					2.0		

Cycle Length: 90.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	590	885	0.04	0.67	5.2	A		
T	1160	1740	0.23	0.67	6.0	A	6.0	A
Westbound								
T	1200	1800	0.32	0.67	6.5	A	5.2	A
R	1530	1530	0.06	1.00	0.0+	A		
Northbound								
Southbound								
L	380	1710	0.27	0.22	29.4	C		
							29.1	C
R	340	1530	0.07	0.22	27.7	C		

Intersection Delay = 8.8 (sec/veh) Intersection LOS = A

HCS+: Signalized Intersections Release 5.5

Analyst: R.H.
Agency: JCE
Date: 9/16/11
Period: PEAK SUNDAY HOUR
Project ID: 1700SUNNB1
E/W St: STERLING MINE ROAD (C.R. 72)

Inter.: C.R. 72 & LONG MEADOW ROAD
Area Type: All other areas
Jurisd:
Year : 2015 NO-BUILD TRAFFIC VOLUMES
N/S St: LONG MEADOW ROAD (C.R. 84)

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	0	0	1	1	0	0	0	1	0	1
LGConfig	L	T			T	R				L		R
Volume	18	251			192	81				73		18
Lane Width	11.0	11.0			12.0	12.0				12.0		12.0
RTOR Vol						0						0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	A				NB Left			
Thru	A				Thru			
Right					Right			
Peds					Peds			
WB Left					SB Left	A		
Thru	A				Thru			
Right	A				Right	A		
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right	A		
Green	60.0					20.0		
Yellow	3.0					3.0		
All Red	2.0					2.0		

Cycle Length: 90.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	725	1087	0.03	0.67	5.1	A		
T	1160	1740	0.24	0.67	6.1	A	6.0	A
Westbound								
T	1200	1800	0.18	0.67	5.7	A	4.0	A
R	1530	1530	0.06	1.00	0.0+	A		
Northbound								
Southbound								
L	380	1710	0.21	0.22	28.9	C		
							28.6	C
R	340	1530	0.06	0.22	27.7	C		

Intersection Delay = 8.4 (sec/veh) Intersection LOS = A

HCS+: Signalized Intersections Release 5.5

Analyst: R.H.
Agency: JCE
Date: 9/16/11
Period: PEAK AM HOUR
Project ID: 1700AMB1
E/W St: STERLING MINE ROAD (C.R. 72)

Inter.: C.R. 72 & LONG MEADOW ROAD
Area Type: All other areas
Jurisd:
Year : 2015 BUILD TRAFFIC VOLUMES
N/S St: LONG MEADOW ROAD (C.R. 84)

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	0	0	1	1	0	0	0	1	0	1
LGConfig	L	T			T	R				L		R
Volume	23	1019			113	122				179		38
Lane Width	11.0	11.0			12.0	12.0				12.0		12.0
RTOR Vol						0						0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	A				NB Left			
Thru	A				Thru			
Right					Right			
Peds					Peds			
WB Left					SB Left	A		
Thru	A				Thru			
Right	A				Right	A		
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right	A		
Green	60.5					19.5		
Yellow	3.0					3.0		
All Red	2.0					2.0		

Cycle Length: 90.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	791	1177	0.03	0.67	5.0	A		
T	1170	1740	0.97	0.67	32.8	C	32.2	C
Westbound								
T	1210	1800	0.10	0.67	5.2	A	2.5	A
R	1530	1530	0.09	1.00	0.0+	A		
Northbound								
Southbound								
L	371	1710	0.54	0.22	32.8	C		
							32.0	C
R	332	1530	0.13	0.22	28.6	C		

Intersection Delay = 27.5 (sec/veh) Intersection LOS = C

HCS+: Signalized Intersections Release 5.5

Analyst: R.H.
Agency: JCE
Date: 9/16/11
Period: PEAK PM HOUR
Project ID: 1700PMB1
E/W St: STERLING MINE ROAD (C.R. 72)

Inter.: C.R. 72 & LONG MEADOW ROAD
Area Type: All other areas
Jurisd:
Year : 2015 BUILD TRAFFIC VOLUMES
N/S St: LONG MEADOW ROAD (C.R. 84)

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	0	0	1	1	0	0	0	1	0	1
LGConfig	L	T			T	R				L		R
Volume	29	192			910	153				176		50
Lane Width	11.0	11.0			12.0	12.0				12.0		12.0
RTOR Vol						0						0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	A				NB Left			
Thru	A				Thru			
Right					Right			
Peds					Peds			
WB Left					SB Left	A		
Thru	A				Thru			
Right	A				Right	A		
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right	A		
Green	60.0					20.0		
Yellow	3.0					3.0		
All Red	2.0					2.0		

Cycle Length: 90.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	153	230	0.21	0.67	6.5	A		
T	1160	1740	0.18	0.67	5.8	A	5.9	A
Westbound								
T	1200	1800	0.84	0.67	17.0	B	14.6	B
R	1530	1530	0.11	1.00	0.0+	A		
Northbound								
Southbound								
L	380	1710	0.52	0.22	32.0	C		
							31.2	C
R	340	1530	0.16	0.22	28.5	C		

Intersection Delay = 15.8 (sec/veh) Intersection LOS = B

HCS+: Signalized Intersections Release 5.5

Analyst: R.H.
Agency: JCE
Date: 9/16/11
Period: PEAK SATURDAY HOUR
Project ID: 1700SATB1
E/W St: STERLING MINE ROAD (C.R. 72)

Inter.: C.R. 72 & LONG MEADOW ROAD
Area Type: All other areas
Jurisd:
Year : 2015 BUILD TRAFFIC VOLUMES
N/S St: LONG MEADOW ROAD (C.R. 84)

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	0	0	1	1	0	0	0	1	0	1
LGConfig	L	T			T	R				L		R
Volume	32	242			343	138				164		39
Lane Width	11.0	11.0			12.0	12.0				12.0		12.0
RTOR Vol						0						0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	A				NB Left			
Thru	A				Thru			
Right					Right			
Peds					Peds			
WB Left					SB Left	A		
Thru	A				Thru			
Right	A				Right	A		
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right	A		
Green	60.0					20.0		
Yellow	3.0					3.0		
All Red	2.0					2.0		

Cycle Length: 90.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	590	885	0.06	0.67	5.3	A		
T	1160	1740	0.23	0.67	6.0	A	5.9	A
Westbound								
T	1200	1800	0.32	0.67	6.5	A	4.6	A
R	1530	1530	0.10	1.00	0.0+	A		
Northbound								
Southbound								
L	380	1710	0.48	0.22	31.4	C		
							30.8	C
R	340	1530	0.13	0.22	28.2	C		

Intersection Delay = 10.5 (sec/veh) Intersection LOS = B

HCS+: Signalized Intersections Release 5.5

Analyst: R.H.
Agency: JCE
Date: 9/16/11
Period: PEAK SUNDAY HOUR
Project ID: 1700SUNB1
E/W St: STERLING MINE ROAD (C.R. 72)

Inter.: C.R. 72 & LONG MEADOW ROAD
Area Type: All other areas
Jurisd:
Year : 2015 BUILD TRAFFIC VOLUMES
N/S St: LONG MEADOW ROAD (C.R. 84)

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	0	0	1	1	0	0	0	1	0	1
LGConfig	L	T			T	R				L		R
Volume	24	251			192	105				108		26
Lane Width	11.0	11.0			12.0	12.0				12.0		12.0
RTOR Vol						0						0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	A				NB Left			
Thru	A				Thru			
Right					Right			
Peds					Peds			
WB Left					SB Left	A		
Thru	A				Thru			
Right	A				Right	A		
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right	A		
Green	60.0					20.0		
Yellow	3.0					3.0		
All Red	2.0					2.0		

Cycle Length: 90.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	725	1087	0.04	0.67	5.1	A		
T	1160	1740	0.24	0.67	6.1	A	6.0	A
Westbound								
T	1200	1800	0.18	0.67	5.7	A	3.7	A
R	1530	1530	0.08	1.00	0.0+	A		
Northbound								
Southbound								
L	380	1710	0.32	0.22	29.8	C		
							29.4	C
R	340	1530	0.09	0.22	27.9	C		

Intersection Delay = 9.5 (sec/veh) Intersection LOS = A

HCS+: Unsignalized Intersections Release 5.3

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: JUNE 2010
Analysis Time Period: PEAK AM HOUR
Intersection: C.R. 84 & EAGLE VALLEY RD
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2010 EXISTING TRAFFIC VOLUMES
Project ID: 1700AMEX2
East/West Street: LONG MEADOW ROAD (C.R. 84)
North/South Street: EAGLE VALLEY ROAD
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		101	2	6	159	
Peak-Hour Factor, PHF		0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR		112	2	6	176	
Percent Heavy Vehicles		--	--	5	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes		1	0	0	1	
Configuration		TR		LT		
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	11		4			
Peak Hour Factor, PHF	0.90		0.90			
Hourly Flow Rate, HFR	12		4			
Percent Heavy Vehicles	5		5			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No /			/
Lanes	0		0			
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		6		16				
C(m) (vph)		1457		730				
v/c		0.00		0.02				
95% queue length		0.01		0.07				
Control Delay		7.5		10.0+				
LOS		A		B				
Approach Delay				10.0+				
Approach LOS				B				

HCS+: Unsignalized Intersections Release 5.3

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: JUNE 2010
Analysis Time Period: PEAK PM HOUR
Intersection: C.R. 84 & EAGLE VALLEY RD
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2010 EXISTING TRAFFIC VOLUMES
Project ID: 1700PMEX2
East/West Street: LONG MEADOW ROAD (C.R. 84)
North/South Street: EAGLE VALLEY ROAD
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		114	9	7	103	
Peak-Hour Factor, PHF		0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR		126	10	7	114	
Percent Heavy Vehicles		--	--	5	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes		1	0	0	1	
Configuration		TR		LT		
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	9		11			
Peak Hour Factor, PHF	0.90		0.90			
Hourly Flow Rate, HFR	10		12			
Percent Heavy Vehicles	5		5			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No /			/
Lanes	0		0			
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		7		22				
C(m) (vph)		1430		812				
v/c		0.00		0.03				
95% queue length		0.01		0.08				
Control Delay		7.5		9.6				
LOS		A		A				
Approach Delay				9.6				
Approach LOS				A				

HCS+: Unsignalized Intersections Release 5.3

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: JUNE 2010
Analysis Time Period: PEAK SATURDAY HOUR
Intersection: C.R. 84 & EAGLE VALLEY RD
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2010 EXISTING TRAFFIC VOLUMES
Project ID: 1700SATEX2
East/West Street: LONG MEADOW ROAD (C.R. 84)
North/South Street: EAGLE VALLEY ROAD
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		87	3	9	90	
Peak-Hour Factor, PHF		0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR		96	3	10	100	
Percent Heavy Vehicles		--	--	5	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes		1	0	0	1	
Configuration		TR		LT		
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	4		4			
Peak Hour Factor, PHF	0.90		0.90			
Hourly Flow Rate, HFR	4		4			
Percent Heavy Vehicles	5		5			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No /			/
Lanes	0		0			
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		10		8				
C(m) (vph)		1475		844				
v/c		0.01		0.01				
95% queue length		0.02		0.03				
Control Delay		7.5		9.3				
LOS		A		A				
Approach Delay				9.3				
Approach LOS				A				

HCS+: Unsignalized Intersections Release 5.3

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: JUNE 2010
Analysis Time Period: PEAK SUNDAY HOUR
Intersection: C.R. 84 & EAGLE VALLEY RD
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2010 EXISTING TRAFFIC VOLUMES
Project ID: 1700SUNEX2
East/West Street: LONG MEADOW ROAD (C.R. 84)
North/South Street: EAGLE VALLEY ROAD
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		81	2	2	71	
Peak-Hour Factor, PHF		0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR		90	2	2	78	
Percent Heavy Vehicles		--	--	5	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes		1	0	0	1	
Configuration			TR	LT		
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	3		2			
Peak Hour Factor, PHF	0.90		0.90			
Hourly Flow Rate, HFR	3		2			
Percent Heavy Vehicles	5		5			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No /			/
Lanes	0		0			
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		2		5				
C(m) (vph)		1484		863				
v/c		0.00		0.01				
95% queue length		0.00		0.02				
Control Delay		7.4		9.2				
LOS		A		A				
Approach Delay				9.2				
Approach LOS				A				

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: 9/16/11
Analysis Time Period: PEAK AM HOUR
Intersection: C.R. 84 & EAGLE VALLEY RD
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2015 NO-BUILD TRAFFIC VOLUMES
Project ID: 1700AMNB2
East/West Street: LONG MEADOW ROAD (C.R. 84)
North/South Street: EAGLE VALLEY ROAD
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		126	2	7	182	
Peak-Hour Factor, PHF		0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR		140	2	7	202	
Percent Heavy Vehicles		--	--	5	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes		1	0	0	1	
Configuration		TR		LT		
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	12		4			
Peak Hour Factor, PHF	0.90		0.90			
Hourly Flow Rate, HFR	13		4			
Percent Heavy Vehicles	5		5			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No /			/
Lanes	0		0			
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		7		17				
C(m) (vph)		1423		679				
v/c		0.00		0.03				
95% queue length		0.01		0.08				
Control Delay		7.5		10.4				
LOS		A		B				
Approach Delay				10.4				
Approach LOS				B				

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: 9/16/11
Analysis Time Period: PEAK PM HOUR
Intersection: C.R. 84 & EAGLE VALLEY RD
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2015 NO-BUILD TRAFFIC VOLUMES
Project ID: 1700PMNB2
East/West Street: LONG MEADOW ROAD (C.R. 84)
North/South Street: EAGLE VALLEY ROAD
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		138	10	8	130	
Peak-Hour Factor, PHF		0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR		153	11	8	144	
Percent Heavy Vehicles		--	--	5	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes		1	0	0	1	
Configuration		TR		LT		
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	10		12			
Peak Hour Factor, PHF	0.90		0.90			
Hourly Flow Rate, HFR	11		13			
Percent Heavy Vehicles	5		5			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No	/		/
Lanes	0		0			
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		8		24				
C(m) (vph)		1396		766				
v/c		0.01		0.03				
95% queue length		0.02		0.10				
Control Delay		7.6		9.9				
LOS		A		A				
Approach Delay				9.9				
Approach LOS				A				

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: 9/16/11
Analysis Time Period: PEAK SATURDAY HOUR
Intersection: C.R. 84 & EAGLE VALLEY RD
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2015 NO-BUILD TRAFFIC VOLUMES
Project ID: 1700SATNB2
East/West Street: LONG MEADOW ROAD (C.R. 84)
North/South Street: EAGLE VALLEY ROAD
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		106	3	10	112	
Peak-Hour Factor, PHF		0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR		117	3	11	124	
Percent Heavy Vehicles		--	--	5	--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes		1	0	0	1	
Configuration		TR		LT		
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	4		4			
Peak Hour Factor, PHF	0.90		0.90			
Hourly Flow Rate, HFR	4		4			
Percent Heavy Vehicles	5		5			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No /			/
Lanes	0		0			
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		11		8				
C(m) (vph)		1449		806				
v/c		0.01		0.01				
95% queue length		0.02		0.03				
Control Delay		7.5		9.5				
LOS		A		A				
Approach Delay				9.5				
Approach LOS				A				

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: 9/16/11
Analysis Time Period: PEAK SUNDAY HOUR
Intersection: C.R. 84 & EAGLE VALLEY RD
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2015 NO-BUILD TRAFFIC VOLUMES
Project ID: 1700SUNNB2
East/West Street: LONG MEADOW ROAD (C.R. 84)
North/South Street: EAGLE VALLEY ROAD
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		96	2	2	87	
Peak-Hour Factor, PHF		0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR		106	2	2	96	
Percent Heavy Vehicles		--	--	5	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes		1	0	0	1	
Configuration		TR		LT		
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	3		2			
Peak Hour Factor, PHF	0.90		0.90			
Hourly Flow Rate, HFR	3		2			
Percent Heavy Vehicles	5		5			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No /			/
Lanes	0		0			
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		2		5				
C(m) (vph)		1464		833				
v/c		0.00		0.01				
95% queue length		0.00		0.02				
Control Delay		7.5		9.3				
LOS		A		A				
Approach Delay				9.3				
Approach LOS				A				

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: 9/16/11
Analysis Time Period: PEAK AM HOUR
Intersection: C.R. 84 & EAGLE VALLEY RD
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2015 BUILD TRAFFIC VOLUMES
Project ID: 1700AMB2
East/West Street: LONG MEADOW ROAD (C.R. 84)
North/South Street: EAGLE VALLEY ROAD
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		143	2	7	204	
Peak-Hour Factor, PHF		0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR		158	2	7	226	
Percent Heavy Vehicles		--	--	5	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes		1	0	0	1	
Configuration		TR		LT		
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	12		4			
Peak Hour Factor, PHF	0.90		0.90			
Hourly Flow Rate, HFR	13		4			
Percent Heavy Vehicles	5		5			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage		No	/			/
Lanes	0		0			
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		7		17				
C(m) (vph)		1401		647				
v/c		0.00		0.03				
95% queue length		0.02		0.08				
Control Delay		7.6		10.7				
LOS		A		B				
Approach Delay				10.7				
Approach LOS				B				

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: 9/16/11
Analysis Time Period: PEAK PM HOUR
Intersection: C.R. 84 & EAGLE VALLEY RD
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2015 BUILD TRAFFIC VOLUMES
Project ID: 1700PMB2
East/West Street: LONG MEADOW ROAD (C.R. 84)
North/South Street: EAGLE VALLEY ROAD
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		171	10	8	217	
Peak-Hour Factor, PHF		0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR		190	11	8	241	
Percent Heavy Vehicles		--	--	5	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes		1	0	0	1	
Configuration		TR		LT		
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	10		12			
Peak Hour Factor, PHF	0.90		0.90			
Hourly Flow Rate, HFR	11		13			
Percent Heavy Vehicles	5		5			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No /			/
Lanes	0		0			
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		8		24				
C(m) (vph)		1353		680				
v/c		0.01		0.04				
95% queue length		0.02		0.11				
Control Delay		7.7		10.5				
LOS		A		B				
Approach Delay				10.5				
Approach LOS				B				

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: 9/16/11
Analysis Time Period: PEAK SATURDAY HOUR
Intersection: C.R. 84 & EAGLE VALLEY RD
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2015 BUILD TRAFFIC VOLUMES
Project ID: 1700SATB2
East/West Street: LONG MEADOW ROAD (C.R. 84)
North/South Street: EAGLE VALLEY ROAD
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		166	3	10	199	
Peak-Hour Factor, PHF		0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR		184	3	11	221	
Percent Heavy Vehicles		--	--	5	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes		1	0	0	1	
Configuration		TR		LT		
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	4		4			
Peak Hour Factor, PHF	0.90		0.90			
Hourly Flow Rate, HFR	4		4			
Percent Heavy Vehicles	5		5			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No	/		/
Lanes	0		0			
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		11		8				
C(m) (vph)		1369		684				
v/c		0.01		0.01				
95% queue length		0.02		0.04				
Control Delay		7.7		10.3				
LOS		A		B				
Approach Delay				10.3				
Approach LOS				B				

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: 9/16/11
Analysis Time Period: PEAK SUNDAY HOUR
Intersection: C.R. 84 & EAGLE VALLEY RD
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2015 BUILD TRAFFIC VOLUMES
Project ID: 1700SUNB2
East/West Street: LONG MEADOW ROAD (C.R. 84)
North/South Street: EAGLE VALLEY ROAD
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		127	2	2	131	
Peak-Hour Factor, PHF		0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR		141	2	2	145	
Percent Heavy Vehicles		--	--	5	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes		1	0	0	1	
Configuration			TR	LT		
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	3		2			
Peak Hour Factor, PHF	0.90		0.90			
Hourly Flow Rate, HFR	3		2			
Percent Heavy Vehicles	5		5			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No	/		/
Lanes	0		0			
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		2		5				
C(m) (vph)		1421		762				
v/c		0.00		0.01				
95% queue length		0.00		0.02				
Control Delay		7.5		9.8				
LOS		A		A				
Approach Delay				9.8				
Approach LOS				A				

HCS+: Unsignalized Intersections Release 5.3

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: JUNE 2010
Analysis Time Period: PEAK AM HOUR
Intersection: C.R. 84 & WOODLANDS DRIVE
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2010 EXISTING TRAFFIC VOLUMES
Project ID: 1700AMEX3
East/West Street: LONG MEADOW ROAD (C.R. 84)
North/South Street: WOODLANDS DRIVE
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		90	15	2	100	
Peak-Hour Factor, PHF		0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR		100	16	2	111	
Percent Heavy Vehicles		--	--	5	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes		1	0	0	1	
Configuration		TR		LT		
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	65		4			
Peak Hour Factor, PHF	0.90		0.90			
Hourly Flow Rate, HFR	72		4			
Percent Heavy Vehicles	5		5			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No /			/
Lanes	0		0			
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		2		76				
C(m) (vph)		1454		766				
v/c		0.00		0.10				
95% queue length		0.00		0.33				
Control Delay		7.5		10.2				
LOS		A		B				
Approach Delay				10.2				
Approach LOS				B				

HCS+: Unsignalized Intersections Release 5.3

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: JUNE 2010
Analysis Time Period: PEAK PM HOUR
Intersection: C.R. 84 & WOODLANDS DRIVE
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2010 EXISTING TRAFFIC VOLUMES
Project ID: 1700PMEX3
East/West Street: LONG MEADOW ROAD (C.R. 84)
North/South Street: WOODLANDS DRIVE
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		84	41	6	88	
Peak-Hour Factor, PHF		0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR		93	45	6	97	
Percent Heavy Vehicles		--	--	5	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes		1	0	0	1	
Configuration			TR	LT		
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	22		2			
Peak Hour Factor, PHF	0.90		0.90			
Hourly Flow Rate, HFR	24		2			
Percent Heavy Vehicles	5		5			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No /			/
Lanes	0		0			
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		6		26				
C(m) (vph)		1427		765				
v/c		0.00		0.03				
95% queue length		0.01		0.11				
Control Delay		7.5		9.9				
LOS		A		A				
Approach Delay				9.9				
Approach LOS				A				

HCS+: Unsignalized Intersections Release 5.3

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: JUNE 2010
Analysis Time Period: PEAK SATURDAY HOUR
Intersection: C.R. 84 & WOODLANDS DRIVE
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2010 EXISTING TRAFFIC VOLUMES
Project ID: 1700SATEX3
East/West Street: LONG MEADOW ROAD (C.R. 84)
North/South Street: WOODLANDS DRIVE
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		59	32	2	68	
Peak-Hour Factor, PHF		0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR		65	35	2	75	
Percent Heavy Vehicles		--	--	5	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes		1	0	0	1	
Configuration		TR		LT		
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	31		3			
Peak Hour Factor, PHF	0.90		0.90			
Hourly Flow Rate, HFR	34		3			
Percent Heavy Vehicles	5		5			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No /			/
Lanes	0		0			
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		2		37				
C(m) (vph)		1474		832				
v/c		0.00		0.04				
95% queue length		0.00		0.14				
Control Delay		7.4		9.5				
LOS		A		A				
Approach Delay				9.5				
Approach LOS				A				

HCS+: Unsignalized Intersections Release 5.3

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: JUNE 2010
Analysis Time Period: PEAK SUNDAY HOUR
Intersection: C.R. 84 & WOODLANDS DRIVE
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2010 EXISTING TRAFFIC VOLUMES
Project ID: 1700SUNEX3
East/West Street: LONG MEADOW ROAD (C.R. 84)
North/South Street: WOODLANDS DRIVE
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		65	18	2	51	
Peak-Hour Factor, PHF		0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR		72	20	2	56	
Percent Heavy Vehicles		--	--	5	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes		1	0	0	1	
Configuration		TR		LT		
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	20		2			
Peak Hour Factor, PHF	0.90		0.90			
Hourly Flow Rate, HFR	22		2			
Percent Heavy Vehicles	5		5			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No /			/
Lanes	0		0			
Configuration	LR					

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		2		24				
C(m) (vph)		1484		852				
v/c		0.00		0.03				
95% queue length		0.00		0.09				
Control Delay		7.4		9.3				
LOS		A		A				
Approach Delay				9.3				
Approach LOS				A				

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: 9/16/11
Analysis Time Period: PEAK AM HOUR
Intersection: C.R. 84 & WOODLANDS DRIVE
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2015 NO-BUILD TRAFFIC VOLUMES
Project ID: 1700AMNB3
East/West Street: LONG MEADOW ROAD (C.R. 84)
North/South Street: WOODLANDS DRIVE
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		114	17	2	117	
Peak-Hour Factor, PHF		0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR		126	18	2	130	
Percent Heavy Vehicles		--	--	5	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes		1	0	0	1	
Configuration		TR		LT		
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	72		4			
Peak Hour Factor, PHF	0.90		0.90			
Hourly Flow Rate, HFR	80		4			
Percent Heavy Vehicles	5		5			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No /			/
Lanes	0		0			
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		2		84				
C(m) (vph)		1420		720				
v/c		0.00		0.12				
95% queue length		0.00		0.39				
Control Delay		7.5		10.7				
LOS		A		B				
Approach Delay				10.7				
Approach LOS				B				

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: 9/16/11
Analysis Time Period: PEAK PM HOUR
Intersection: C.R. 84 & WOODLANDS DRIVE
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2015 NO-BUILD TRAFFIC VOLUMES
Project ID: 1700PMNB3
East/West Street: LONG MEADOW ROAD (C.R. 84)
North/South Street: WOODLANDS DRIVE
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		105	45	7	114	
Peak-Hour Factor, PHF		0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR		116	50	7	126	
Percent Heavy Vehicles		--	--	5	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes		1	0	0	1	
Configuration			TR	LT		
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	24		2			
Peak Hour Factor, PHF	0.90		0.90			
Hourly Flow Rate, HFR	26		2			
Percent Heavy Vehicles	5		5			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No /			/
Lanes	0		0			
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		7		28				
C(m) (vph)		1394		710				
v/c		0.01		0.04				
95% queue length		0.02		0.12				
Control Delay		7.6		10.3				
LOS		A		B				
Approach Delay				10.3				
Approach LOS				B				

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: 9/16/11
Analysis Time Period: PEAK SATURDAY HOUR
Intersection: C.R. 84 & WOODLANDS DRIVE
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2015 NO-BUILD TRAFFIC VOLUMES
Project ID: 1700SATNB3
East/West Street: LONG MEADOW ROAD (C.R. 84)
North/South Street: WOODLANDS DRIVE
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		75	35	2	88	
Peak-Hour Factor, PHF		0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR		83	38	2	97	
Percent Heavy Vehicles		--	--	5	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes		1	0	0	1	
Configuration		TR		LT		
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	34		3			
Peak Hour Factor, PHF	0.90		0.90			
Hourly Flow Rate, HFR	37		3			
Percent Heavy Vehicles	5		5			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No /			/
Lanes	0		0			
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		2		40				
C(m) (vph)		1448		788				
v/c		0.00		0.05				
95% queue length		0.00		0.16				
Control Delay		7.5		9.8				
LOS		A		A				
Approach Delay				9.8				
Approach LOS				A				

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: 9/16/11
Analysis Time Period: PEAK SUNDAY HOUR
Intersection: C.R. 84 & WOODLANDS DRIVE
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2015 NO-BUILD TRAFFIC VOLUMES
Project ID: 1700SUNNB3
East/West Street: LONG MEADOW ROAD (C.R. 84)
North/South Street: WOODLANDS DRIVE
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		79	20	2	65	
Peak-Hour Factor, PHF		0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR		87	22	2	72	
Percent Heavy Vehicles		--	--	5	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes		1	0	0	1	
Configuration		TR		LT		
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	22		2			
Peak Hour Factor, PHF	0.90		0.90			
Hourly Flow Rate, HFR	24		2			
Percent Heavy Vehicles	5		5			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No /			/
Lanes	0		0			
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		2		26				
C(m) (vph)		1463		817				
v/c		0.00		0.03				
95% queue length		0.00		0.10				
Control Delay		7.5		9.6				
LOS		A		A				
Approach Delay				9.6				
Approach LOS				A				

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: 9/16/11
Analysis Time Period: PEAK AM HOUR
Intersection: C.R. 84 & WOODLANDS DRIVE
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2015 BUILD TRAFFIC VOLUMES
Project ID: 1700AMB3
East/West Street: LONG MEADOW ROAD (C.R. 84)
North/South Street: WOODLANDS DRIVE
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		131	17	2	140	
Peak-Hour Factor, PHF		0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR		145	18	2	155	
Percent Heavy Vehicles		--	--	5	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes		1	0	0	1	
Configuration		TR		LT		
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	72		4			
Peak Hour Factor, PHF	0.90		0.90			
Hourly Flow Rate, HFR	80		4			
Percent Heavy Vehicles	5		5			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No /			/
Lanes	0		0			
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		2		84				
C(m) (vph)		1398		681				
v/c		0.00		0.12				
95% queue length		0.00		0.42				
Control Delay		7.6		11.0				
LOS		A		B				
Approach Delay				11.0				
Approach LOS				B				

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: 9/16/11
Analysis Time Period: PEAK PM HOUR
Intersection: C.R. 84 & WOODLANDS DRIVE
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2015 BUILD TRAFFIC VOLUMES
Project ID: 1700PMB3
East/West Street: LONG MEADOW ROAD (C.R. 84)
North/South Street: WOODLANDS DRIVE
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		138	45	7	200	
Peak-Hour Factor, PHF		0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR		153	50	7	222	
Percent Heavy Vehicles		--	--	5	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes		1	0	0	1	
Configuration			TR	LT		
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	24		2			
Peak Hour Factor, PHF	0.90		0.90			
Hourly Flow Rate, HFR	26		2			
Percent Heavy Vehicles	5		5			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No /			/
Lanes	0		0			
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		7		28				
C(m) (vph)		1351		600				
v/c		0.01		0.05				
95% queue length		0.02		0.15				
Control Delay		7.7		11.3				
LOS		A		B				
Approach Delay				11.3				
Approach LOS				B				

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: JUNE 2010
Analysis Time Period: PEAK SATURDAY HOUR
Intersection: C.R. 84 & WOODLANDS DRIVE
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2015 BUILD TRAFFIC VOLUMES
Project ID: 1700SATB3
East/West Street: LONG MEADOW ROAD (C.R. 84)
North/South Street: WOODLANDS DRIVE
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		136	35	2	175	
Peak-Hour Factor, PHF		0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR		151	38	2	194	
Percent Heavy Vehicles		--	--	5	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes		1	0	0	1	
Configuration		TR		LT		
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	34		3			
Peak Hour Factor, PHF	0.90		0.90			
Hourly Flow Rate, HFR	37		3			
Percent Heavy Vehicles	5		5			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No /			/
Lanes	0		0			
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		2		40				
C(m) (vph)		1367		638				
v/c		0.00		0.06				
95% queue length		0.00		0.20				
Control Delay		7.6		11.0				
LOS		A		B				
Approach Delay				11.0				
Approach LOS				B				

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: 9/16/11
Analysis Time Period: PEAK SUNDAY HOUR
Intersection: C.R. 84 & WOODLANDS DRIVE
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2015 BUILD TRAFFIC VOLUMES
Project ID: 1700SUNB3
East/West Street: LONG MEADOW ROAD (C.R. 84)
North/South Street: WOODLANDS DRIVE
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		109	20	2	109	
Peak-Hour Factor, PHF		0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR		121	22	2	121	
Percent Heavy Vehicles		--	--	5	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes		1	0	0	1	
Configuration		TR		LT		
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	22		2			
Peak Hour Factor, PHF	0.90		0.90			
Hourly Flow Rate, HFR	24		2			
Percent Heavy Vehicles	5		5			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No /			/
Lanes	0		0			
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		2		26				
C(m) (vph)		1421		736				
v/c		0.00		0.04				
95% queue length		0.00		0.11				
Control Delay		7.5		10.1				
LOS		A		B				
Approach Delay				10.1				
Approach LOS				B				

HCS+: Unsignalized Intersections Release 5.3

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: JUNE 2010
Analysis Time Period: PEAK AM HOUR
Intersection: C.R. 84 & IBM ENTRANCE
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2010 EXISTING TRAFFIC VOLUMES
Project ID: 1700AMEX4
East/West Street: IBM ENTRANCE/BEECH ROAD
North/South Street: LONG MEADOW ROAD (C.R. 84)
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	24	70			93	27
Peak-Hour Factor, PHF	0.90	0.90			0.90	0.90
Hourly Flow Rate, HFR	26	77			103	30
Percent Heavy Vehicles	5	--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	1			1	0
Configuration		LT				TR
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				2		9
Peak Hour Factor, PHF				0.90		0.90
Hourly Flow Rate, HFR				2		10
Percent Heavy Vehicles				5		5
Percent Grade (%)		0			-4	
Flared Approach: Exists?/Storage			/			No /
Lanes				0		0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LR	
v (vph)	26						12	
C(m) (vph)	1433						903	
v/c	0.02						0.01	
95% queue length	0.06						0.04	
Control Delay	7.6						9.0	
LOS	A						A	
Approach Delay							9.0	
Approach LOS							A	

HCS+: Unsignalized Intersections Release 5.3

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: JUNE 2010
Analysis Time Period: PEAK PM HOUR
Intersection: C.R. 84 & IBM ENTRANCE
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2010 EXISTING TRAFFIC VOLUMES
Project ID: 1700PMEX4
East/West Street: IBM ENTRANCE/BEECH ROAD
North/South Street: LONG MEADOW ROAD (C.R. 84)
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	4	82			72	3
Peak-Hour Factor, PHF	0.90	0.90			0.90	0.90
Hourly Flow Rate, HFR	4	91			80	3
Percent Heavy Vehicles	5	--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	1			1	0
Configuration		LT				TR
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				32		22
Peak Hour Factor, PHF				0.90		0.90
Hourly Flow Rate, HFR				35		24
Percent Heavy Vehicles				5		5
Percent Grade (%)		0			-4	
Flared Approach: Exists?/Storage			/			No /
Lanes				0		0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LR	
v (vph)	4						59	
C(m) (vph)	1495						886	
v/c	0.00						0.07	
95% queue length	0.01						0.21	
Control Delay	7.4						9.4	
LOS	A						A	
Approach Delay							9.4	
Approach LOS							A	

HCS+: Unsignalized Intersections Release 5.3

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: JUNE 2010
Analysis Time Period: PEAK SATURDAY HOUR
Intersection: C.R. 84 & IBM ENTRANCE
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2010 EXISTING TRAFFIC VOLUMES
Project ID: 1700SATEX4
East/West Street: IBM ENTRANCE/BEECH ROAD
North/South Street: LONG MEADOW ROAD (C.R. 84)
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	2	60			68	3
Peak-Hour Factor, PHF	0.90	0.90			0.90	0.90
Hourly Flow Rate, HFR	2	66			75	3
Percent Heavy Vehicles	5	--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	1			1	0
Configuration		LT				TR
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				1		2
Peak Hour Factor, PHF				0.90		0.90
Hourly Flow Rate, HFR				1		2
Percent Heavy Vehicles				5		5
Percent Grade (%)		0			-4	
Flared Approach: Exists?/Storage			/			No /
Lanes				0		0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LR	
v (vph)	2						3	
C(m) (vph)	1502						942	
v/c	0.00						0.00	
95% queue length	0.00						0.01	
Control Delay	7.4						8.8	
LOS	A						A	
Approach Delay							8.8	
Approach LOS							A	

HCS+: Unsignalized Intersections Release 5.3

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: JUNE 2010
Analysis Time Period: PEAK SUNDAY HOUR
Intersection: C.R. 84 & IBM ENTRANCE
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2010 EXISTING TRAFFIC VOLUMES
Project ID: 1700SUNEX4
East/West Street: IBM ENTRANCE/BEECH ROAD
North/South Street: LONG MEADOW ROAD (C.R. 84)
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	3	64			50	4
Peak-Hour Factor, PHF	0.90	0.90			0.90	0.90
Hourly Flow Rate, HFR	3	71			55	4
Percent Heavy Vehicles	5	--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	1			1	0
Configuration		LT				TR
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				1		3
Peak Hour Factor, PHF				0.90		0.90
Hourly Flow Rate, HFR				1		3
Percent Heavy Vehicles				5		5
Percent Grade (%)		0			-4	
Flared Approach: Exists?/Storage			/			No /
Lanes				0		0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LR	
v (vph)	3						4	
C(m) (vph)	1526						971	
v/c	0.00						0.00	
95% queue length	0.01						0.01	
Control Delay	7.4						8.7	
LOS	A						A	
Approach Delay							8.7	
Approach LOS							A	

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: 9/16/11
Analysis Time Period: PEAK AM HOUR
Intersection: C.R. 84 & IBM ENTRANCE
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2015 NO-BUILD TRAFFIC VOLUMES
Project ID: 1700AMNB4
East/West Street: IBM ENTRANCE/BEECH ROAD
North/South Street: LONG MEADOW ROAD (C.R. 84)
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	26	92			109	30
Peak-Hour Factor, PHF	0.90	0.90			0.90	0.90
Hourly Flow Rate, HFR	28	102			121	33
Percent Heavy Vehicles	5	--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	1			1	0
Configuration		LT				TR
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				2		10
Peak Hour Factor, PHF				0.90		0.90
Hourly Flow Rate, HFR				2		11
Percent Heavy Vehicles				5		5
Percent Grade (%)		0			-4	
Flared Approach: Exists?/Storage			/			No /
Lanes				0		0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LR	
v (vph)	28						13	
C(m) (vph)	1408						879	
v/c	0.02						0.01	
95% queue length	0.06						0.05	
Control Delay	7.6						9.2	
LOS	A						A	
Approach Delay							9.2	
Approach LOS							A	

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: 9/16/11
Analysis Time Period: PEAK PM HOUR
Intersection: C.R. 84 & IBM ENTRANCE
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2015 NO-BUILD TRAFFIC VOLUMES
Project ID: 1700PMNB4
East/West Street: IBM ENTRANCE/BEECH ROAD
North/South Street: LONG MEADOW ROAD (C.R. 84)
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	4	103			96	3
Peak-Hour Factor, PHF	0.90	0.90			0.90	0.90
Hourly Flow Rate, HFR	4	114			106	3
Percent Heavy Vehicles	5	--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	1			1	0
Configuration		LT				TR
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				35		24
Peak Hour Factor, PHF				0.90		0.90
Hourly Flow Rate, HFR				38		26
Percent Heavy Vehicles				5		5
Percent Grade (%)		0			-4	
Flared Approach: Exists?/Storage			/			No /
Lanes				0		0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LR	
v (vph)	4						64	
C(m) (vph)	1463						847	
v/c	0.00						0.08	
95% queue length	0.01						0.24	
Control Delay	7.5						9.6	
LOS	A						A	
Approach Delay							9.6	
Approach LOS							A	

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: 9/16/11
Analysis Time Period: PEAK SATURDAY HOUR
Intersection: C.R. 84 & IBM ENTRANCE
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2015 NO-BUILD TRAFFIC VOLUMES
Project ID: 1700SATNB4
East/West Street: IBM ENTRANCE/BEECH ROAD
North/South Street: LONG MEADOW ROAD (C.R. 84)
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	2	76			88	3
Peak-Hour Factor, PHF	0.90	0.90			0.90	0.90
Hourly Flow Rate, HFR	2	84			97	3
Percent Heavy Vehicles	5	--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	1			1	0
Configuration		LT				TR
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				1		2
Peak Hour Factor, PHF				0.90		0.90
Hourly Flow Rate, HFR				1		2
Percent Heavy Vehicles				5		5
Percent Grade (%)		0			-4	
Flared Approach: Exists?/Storage			/			No /
Lanes				0		0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LR	
v (vph)	2						3	
C(m) (vph)	1474						912	
v/c	0.00						0.00	
95% queue length	0.00						0.01	
Control Delay	7.4						9.0	
LOS	A						A	
Approach Delay							9.0	
Approach LOS							A	

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: 9/16/11
Analysis Time Period: PEAK SUNDAY HOUR
Intersection: C.R. 84 & IBM ENTRANCE
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2015 NO-BUILD TRAFFIC VOLUMES
Project ID: 1700SUNNB4
East/West Street: IBM ENTRANCE/BEECH ROAD
North/South Street: LONG MEADOW ROAD (C.R. 84)
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	3	77			64	4
Peak-Hour Factor, PHF	0.90	0.90			0.90	0.90
Hourly Flow Rate, HFR	3	85			71	4
Percent Heavy Vehicles	5	--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	1			1	0
Configuration	LT					TR
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				1		3
Peak Hour Factor, PHF				0.90		0.90
Hourly Flow Rate, HFR				1		3
Percent Heavy Vehicles				5		5
Percent Grade (%)		0			-4	
Flared Approach: Exists?/Storage			/			No /
Lanes				0		0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LR	
v (vph)	3						4	
C(m) (vph)	1505						950	
v/c	0.00						0.00	
95% queue length	0.01						0.01	
Control Delay	7.4						8.8	
LOS	A						A	
Approach Delay							8.8	
Approach LOS							A	

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: 9/16/11
Analysis Time Period: PEAK AM HOUR
Intersection: C.R. 84 & IBM ENTRANCE
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2015 BUILD TRAFFIC VOLUMES
Project ID: 1700AMB4
East/West Street: IBM ENTRANCE/BEECH ROAD
North/South Street: LONG MEADOW ROAD (C.R. 84)
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	26	100			115	30
Peak-Hour Factor, PHF	0.90	0.90			0.90	0.90
Hourly Flow Rate, HFR	28	111			127	33
Percent Heavy Vehicles	5	--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	1			1	0
Configuration		LT				TR
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				2		10
Peak Hour Factor, PHF				0.90		0.90
Hourly Flow Rate, HFR				2		11
Percent Heavy Vehicles				5		5
Percent Grade (%)		0			-4	
Flared Approach: Exists?/Storage			/			No /
Lanes				0		0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LR	
v (vph)	28						13	
C(m) (vph)	1401						872	
v/c	0.02						0.01	
95% queue length	0.06						0.05	
Control Delay	7.6						9.2	
LOS	A						A	
Approach Delay							9.2	
Approach LOS							A	

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: 9/16/11
Analysis Time Period: PEAK PM HOUR
Intersection: C.R. 84 & IBM ENTRANCE
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2015 BUILD TRAFFIC VOLUMES
Project ID: 1700PMB4
East/West Street: IBM ENTRANCE/BEECH ROAD
North/South Street: LONG MEADOW ROAD (C.R. 84)
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	4	132			107	3
Peak-Hour Factor, PHF	0.90	0.90			0.90	0.90
Hourly Flow Rate, HFR	4	146			118	3
Percent Heavy Vehicles	5	--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	1			1	0
Configuration	LT					TR
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				35		24
Peak Hour Factor, PHF				0.90		0.90
Hourly Flow Rate, HFR				38		26
Percent Heavy Vehicles				5		5
Percent Grade (%)		0			-4	
Flared Approach: Exists?/Storage			/			No /
Lanes				0		0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LR	
v (vph)	4						64	
C(m) (vph)	1448						817	
v/c	0.00						0.08	
95% queue length	0.01						0.25	
Control Delay	7.5						9.8	
LOS	A						A	
Approach Delay							9.8	
Approach LOS							A	

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: 9/16/11
Analysis Time Period: PEAK SATURDAY HOUR
Intersection: C.R. 84 & IBM ENTRANCE
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2015 BUILD TRAFFIC VOLUMES
Project ID: 1700SATB4
East/West Street: IBM ENTRANCE/BEECH ROAD
North/South Street: LONG MEADOW ROAD (C.R. 84)
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	2	105			108	3
Peak-Hour Factor, PHF	0.90	0.90			0.90	0.90
Hourly Flow Rate, HFR	2	116			120	3
Percent Heavy Vehicles	5	--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	1			1	0
Configuration		LT				TR
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				1		2
Peak Hour Factor, PHF				0.90		0.90
Hourly Flow Rate, HFR				1		2
Percent Heavy Vehicles				5		5
Percent Grade (%)		0			-4	
Flared Approach: Exists?/Storage			/			No /
Lanes				0		0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LR	
v (vph)	2						3	
C(m) (vph)	1446						876	
v/c	0.00						0.00	
95% queue length	0.00						0.01	
Control Delay	7.5						9.1	
LOS	A						A	
Approach Delay							9.1	
Approach LOS							A	

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: 9/16/11
Analysis Time Period: PEAK SUNDAY HOUR
Intersection: C.R. 84 & IBM ENTRANCE
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2015 BUILD TRAFFIC VOLUMES
Project ID: 1700SUNB4
East/West Street: IBM ENTRANCE/BEECH ROAD
North/South Street: LONG MEADOW ROAD (C.R. 84)
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	3	92			74	4
Peak-Hour Factor, PHF	0.90	0.90			0.90	0.90
Hourly Flow Rate, HFR	3	102			82	4
Percent Heavy Vehicles	5	--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	1			1	0
Configuration		LT				TR
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				1		3
Peak Hour Factor, PHF				0.90		0.90
Hourly Flow Rate, HFR				1		3
Percent Heavy Vehicles				5		5
Percent Grade (%)		0			-4	
Flared Approach: Exists?/Storage			/			No /
Lanes				0		0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LR	
v (vph)	3						4	
C(m) (vph)	1492						933	
v/c	0.00						0.00	
95% queue length	0.01						0.01	
Control Delay	7.4						8.9	
LOS	A						A	
Approach Delay							8.9	
Approach LOS							A	

HCS+: Unsignalized Intersections Release 5.3

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: JUNE 2010
Analysis Time Period: PEAK AM HOUR
Intersection: CR 84/CLINTON RD & NYS RT 17A
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2010 EXISTING TRAFFIC VOLUMES
Project ID: 1700AMEX5
East/West Street: NYS ROUTE 17A
North/South Street: LONG MEADOW ROAD/CLINTON ROAD
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	0	815	60	79	65	7
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	0	905	66	87	72	7
Percent Heavy Vehicles	5	--	--	5	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes	0	2	0	1	2	0
Configuration		LT	TR	L	T	TR
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	5	0	25	19	4	0
Peak Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	5	0	27	21	4	0
Percent Heavy Vehicles	5	5	5	5	5	5
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage		No	/		No	/
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT	L		LTR			LTR	
v (vph)	0	87		32			25	
C(m) (vph)	1495	688		377			290	
v/c	0.00	0.13		0.08			0.09	
95% queue length	0.00	0.43		0.28			0.28	
Control Delay	7.4	11.0		15.4			18.6	
LOS	A	B		C			C	
Approach Delay				15.4			18.6	
Approach LOS				C			C	

HCS+: Unsignalized Intersections Release 5.3

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: JUNE 2010
Analysis Time Period: PEAK PM HOUR
Intersection: CR 84/CLINTON RD & NYS RT 17A
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2010 EXISTING TRAFFIC VOLUMES
Project ID: 1700PMEX5
East/West Street: NYS ROUTE 17A
North/South Street: LONG MEADOW ROAD/CLINTON ROAD
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	1	136	5	18	653	11
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	1	151	5	20	725	12
Percent Heavy Vehicles	5	--	--	5	--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	2	0	1	2	0
Configuration		LT	TR	L	T	TR
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	55	4	60	7	1	1
Peak Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	61	4	66	7	1	1
Percent Heavy Vehicles	5	5	5	5	5	5
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No /			No /
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT	L		LTR			LTR	
v (vph)	1	20		131			9	
C(m) (vph)	845	1400		555			301	
v/c	0.00	0.01		0.24			0.03	
95% queue length	0.00	0.04		0.91			0.09	
Control Delay	9.3	7.6		13.5			17.3	
LOS	A	A		B			C	
Approach Delay				13.5			17.3	
Approach LOS				B			C	

HCS+: Unsignalized Intersections Release 5.3

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: JUNE 2010
Analysis Time Period: PEAK SATURDAY HOUR
Intersection: CR 84/CLINTON RD & NYS RT 17A
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2010 EXISTING TRAFFIC VOLUMES
Project ID: 1700SATEX5
East/West Street: NYS ROUTE 17A
North/South Street: LONG MEADOW ROAD/CLINTON ROAD
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	3	203	13	61	215	11
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	3	225	14	67	238	12
Percent Heavy Vehicles	5	--	--	5	--	--
Median Type/Storage	Undivided /					
RT Channelized?						
Lanes	0	2	0	1	2	0
Configuration		LT	TR	L	T	TR
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	15	3	30	9	1	3
Peak Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	16	3	33	10	1	3
Percent Heavy Vehicles	5	5	5	5	5	5
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage		No /			No /	
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT	L		LTR			LTR	
v (vph)	3	67		52			14	
C(m) (vph)	1291	1303		643			516	
v/c	0.00	0.05		0.08			0.03	
95% queue length	0.01	0.16		0.26			0.08	
Control Delay	7.8	7.9		11.1			12.2	
LOS	A	A		B			B	
Approach Delay				11.1			12.2	
Approach LOS				B			B	

HCS+: Unsignalized Intersections Release 5.3

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: JUNE 2010
Analysis Time Period: PEAK SUNDAY HOUR
Intersection: CR 84/CLINTON RD & NYS RT 17A
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2010 EXISTING TRAFFIC VOLUMES
Project ID: 1700SUNEX5
East/West Street: NYS ROUTE 17A
North/South Street: LONG MEADOW ROAD/CLINTON ROAD
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	2	152	10	46	161	8
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	2	168	11	51	178	8
Percent Heavy Vehicles	5	--	--	5	--	--
Median Type/Storage	Undivided /					
RT Channelized?						
Lanes	0	2	0	1	2	0
Configuration		LT	TR	L	T	TR
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	11	2	23	7	1	2
Peak Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	12	2	25	7	1	2
Percent Heavy Vehicles	5	5	5	5	5	5
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage		No /			No /	
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT	L		LTR			LTR	
v (vph)	2	51		39			10	
C(m) (vph)	1364	1372		739			610	
v/c	0.00	0.04		0.05			0.02	
95% queue length	0.00	0.12		0.17			0.05	
Control Delay	7.6	7.7		10.1			11.0	
LOS	A	A		B			B	
Approach Delay				10.1			11.0	
Approach LOS				B			B	

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: 9/16/11
Analysis Time Period: PEAK AM HOUR
Intersection: CR 84/CLINTON RD & NYS RT 17A
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2015 NO-BUILD TRAFFIC VOLUMES
Project ID: 1700AMNB5
East/West Street: NYS ROUTE 17A
North/South Street: LONG MEADOW ROAD/CLINTON ROAD
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	0	904	69	115	104	8
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	0	1004	76	127	115	8
Percent Heavy Vehicles	5	--	--	5	--	--
Median Type/Storage	Undivided /					
RT Channelized?						
Lanes	0	2	0	1	2	0
Configuration	LT	TR		L	T	TR
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	10	0	41	21	4	0
Peak Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	11	0	45	23	4	0
Percent Heavy Vehicles	5	5	5	5	5	5
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage		No /			No /	
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT	L		LTR			LTR	
v (vph)	0	127		56			27	
C(m) (vph)	1440	624		263			203	
v/c	0.00	0.20		0.21			0.13	
95% queue length	0.00	0.76		0.79			0.45	
Control Delay	7.5	12.2		22.4			25.4	
LOS	A	B		C			D	
Approach Delay				22.4			25.4	
Approach LOS				C			D	

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: 9/16/11
Analysis Time Period: PEAK PM HOUR
Intersection: CR 84/CLINTON RD & NYS RT 17A
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2015 NO-BUILD TRAFFIC VOLUMES
Project ID: 1700PMNB5
East/West Street: NYS ROUTE 17A
North/South Street: LONG MEADOW ROAD/CLINTON ROAD
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	1	185	13	35	732	12
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	1	205	14	38	813	13
Percent Heavy Vehicles	5	--	--	5	--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	2	0	1	2	0
Configuration	LT	TR		L	T	TR
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	66	4	96	8	1	1
Peak Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	73	4	106	8	1	1
Percent Heavy Vehicles	5	5	5	5	5	5
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage		No	/		No	/
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT	L		LTR			LTR	
v (vph)	1	38		183			10	
C(m) (vph)	781	1326		498			228	
v/c	0.00	0.03		0.37			0.04	
95% queue length	0.00	0.09		1.67			0.14	
Control Delay	9.6	7.8		16.4			21.5	
LOS	A	A		C			C	
Approach Delay				16.4			21.5	
Approach LOS				C			C	

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: 9/16/11
Analysis Time Period: PEAK SATURDAY HOUR
Intersection: CR 84/CLINTON RD & NYS RT 17A
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2015 NO-BUILD TRAFFIC VOLUMES
Project ID: 1700SATNB5
East/West Street: NYS ROUTE 17A
North/South Street: LONG MEADOW ROAD/CLINTON ROAD
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	3	249	20	78	248	12
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	3	276	22	86	275	13
Percent Heavy Vehicles	5	--	--	5	--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	2	0	1	2	0
Configuration		LT	TR	L	T	TR
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	22	3	55	10	1	3
Peak Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	24	3	61	11	1	3
Percent Heavy Vehicles	5	5	5	5	5	5
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage		No	/		No	/
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT	L		LTR			LTR	
v (vph)	3	86		88			15	
C(m) (vph)	1249	1239		601			429	
v/c	0.00	0.07		0.15			0.03	
95% queue length	0.01	0.22		0.51			0.11	
Control Delay	7.9	8.1		12.0			13.7	
LOS	A	A		B			B	
Approach Delay				12.0			13.7	
Approach LOS				B			B	

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: 9/16/11
Analysis Time Period: PEAK SUNDAY HOUR
Intersection: CR 84/CLINTON RD & NYS RT 17A
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2015 NO-BUILD TRAFFIC VOLUMES
Project ID: 1700SUNNB5
East/West Street: NYS ROUTE 17A
North/South Street: LONG MEADOW ROAD/CLINTON ROAD
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	2	185	14	57	184	9
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	2	205	15	63	204	10
Percent Heavy Vehicles	5	--	--	5	--	--
Median Type/Storage	Undivided /					
RT Channelized?						
Lanes	0	2	0	1	2	0
Configuration		LT	TR	L	T	TR
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	14	2	30	8	1	2
Peak Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	15	2	33	8	1	2
Percent Heavy Vehicles	5	5	5	5	5	5
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage		No /			No /	
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT	L		LTR			LTR	
v (vph)	2	63		50			11	
C(m) (vph)	1332	1325		693			547	
v/c	0.00	0.05		0.07			0.02	
95% queue length	0.00	0.15		0.23			0.06	
Control Delay	7.7	7.9		10.6			11.7	
LOS	A	A		B			B	
Approach Delay				10.6			11.7	
Approach LOS				B			B	

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: 9/16/11
Analysis Time Period: PEAK AM HOUR
Intersection: CR 84/CLINTON RD & NYS RT 17A
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2015 BUILD TRAFFIC VOLUMES
Project ID: 1700AMB5
East/West Street: NYS ROUTE 17A
North/South Street: LONG MEADOW ROAD/CLINTON ROAD
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	0	904	70	120	104	8
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	0	1004	77	133	115	8
Percent Heavy Vehicles	5	--	--	5	--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	2	0	1	2	0
Configuration	LT	TR		L	T	TR
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	11	0	47	21	4	0
Peak Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	12	0	52	23	4	0
Percent Heavy Vehicles	5	5	5	5	5	5
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage		No	/		No	/
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT	L		LTR			LTR	
v (vph)	0	133		64			27	
C(m) (vph)	1440	624		266			195	
v/c	0.00	0.21		0.24			0.14	
95% queue length	0.00	0.80		0.92			0.47	
Control Delay	7.5	12.3		22.8			26.4	
LOS	A	B		C			D	
Approach Delay				22.8			26.4	
Approach LOS				C			D	

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: 9/16/11
Analysis Time Period: PEAK PM HOUR
Intersection: CR 84/CLINTON RD & NYS RT 17A
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2015 BUILD TRAFFIC VOLUMES
Project ID: 1700PMB5
East/West Street: NYS ROUTE 17A
North/South Street: LONG MEADOW ROAD/CLINTON ROAD
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	1	185	15	44	732	12
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	1	205	16	48	813	13
Percent Heavy Vehicles	5	--	--	5	--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	2	0	1	2	0
Configuration		LT	TR	L	T	TR
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	71	4	119	8	1	1
Peak Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	78	4	132	8	1	1
Percent Heavy Vehicles	5	5	5	5	5	5
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage		No	/		No	/
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT	L		LTR			LTR	
v (vph)	1	48		214			10	
C(m) (vph)	781	1324		507			214	
v/c	0.00	0.04		0.42			0.05	
95% queue length	0.00	0.11		2.07			0.15	
Control Delay	9.6	7.8		17.2			22.6	
LOS	A	A		C			C	
Approach Delay				17.2			22.6	
Approach LOS				C			C	

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: 9/16/11
Analysis Time Period: PEAK SATURDAY HOUR
Intersection: CR 84/CLINTON RD & NYS RT 17A
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2015 BUILD TRAFFIC VOLUMES
Project ID: 1700SATB5
East/West Street: NYS ROUTE 17A
North/South Street: LONG MEADOW ROAD/CLINTON ROAD
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	3	249	24	94	248	12
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	3	276	26	104	275	13
Percent Heavy Vehicles	5	--	--	5	--	--
Median Type/Storage	Undivided /					
RT Channelized?						
Lanes	0	2	0	1	2	0
Configuration		LT	TR	L	T	TR
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	27	3	78	10	1	3
Peak Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	30	3	86	11	1	3
Percent Heavy Vehicles	5	5	5	5	5	5
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage		No /			No /	
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT	L		LTR			LTR	
v (vph)	3	104		119			15	
C(m) (vph)	1249	1234		598			395	
v/c	0.00	0.08		0.20			0.04	
95% queue length	0.01	0.28		0.74			0.12	
Control Delay	7.9	8.2		12.5			14.5	
LOS	A	A		B			B	
Approach Delay				12.5			14.5	
Approach LOS				B			B	

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: 9/16/11
Analysis Time Period: PEAK SUNDAY HOUR
Intersection: CR 84/CLINTON RD & NYS RT 17A
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2015 BUILD TRAFFIC VOLUMES
Project ID: 1700SUNB5
East/West Street: NYS ROUTE 17A
North/South Street: LONG MEADOW ROAD/CLINTON ROAD
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	2	185	16	65	184	9
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	2	205	17	72	204	10
Percent Heavy Vehicles	5	--	--	5	--	--
Median Type/Storage	Undivided /					
RT Channelized?						
Lanes	0	2	0	1	2	0
Configuration	LT	TR		L	T	TR
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	17	2	42	8	1	2
Peak Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	18	2	46	8	1	2
Percent Heavy Vehicles	5	5	5	5	5	5
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage		No /			No /	
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT	L		LTR			LTR	
v (vph)	2	72		66			11	
C(m) (vph)	1332	1323		700			525	
v/c	0.00	0.05		0.09			0.02	
95% queue length	0.00	0.17		0.31			0.06	
Control Delay	7.7	7.9		10.7			12.0	
LOS	A	A		B			B	
Approach Delay				10.7			12.0	
Approach LOS				B			B	

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: 9/16/11
Analysis Time Period: PEAK AM HOUR
Intersection: C.R. 84 & SITE ACCESS
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2015 BUILD TRAFFIC VOLUMES
Project ID: 1700AMB6
East/West Street: SITE ACCESS DRIVEWAY
North/South Street: LONG MEADOW ROAD (C.R. 84)
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	17	118			119	6
Peak-Hour Factor, PHF	0.90	0.90			0.90	0.90
Hourly Flow Rate, HFR	18	131			132	6
Percent Heavy Vehicles	5	--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	1			1	0
Configuration	LT					TR
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				8		23
Peak Hour Factor, PHF				0.90		0.90
Hourly Flow Rate, HFR				8		25
Percent Heavy Vehicles				5		5
Percent Grade (%)		0			-4	
Flared Approach: Exists?/Storage			/			No /
Lanes				0		0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LR	
v (vph)	18						33	
C(m) (vph)	1427						863	
v/c	0.01						0.04	
95% queue length	0.04						0.12	
Control Delay	7.6						9.3	
LOS	A						A	
Approach Delay							9.3	
Approach LOS							A	

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: 9/16/11
Analysis Time Period: PEAK PM HOUR
Intersection: C.R. 84 & SITE ACCESS
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2015 BUILD TRAFFIC VOLUMES
Project ID: 1700PMB6
East/West Street: SITE ACCESS DRIVEWAY
North/South Street: LONG MEADOW ROAD (C.R. 84)
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	33	108			120	11
Peak-Hour Factor, PHF	0.90	0.90			0.90	0.90
Hourly Flow Rate, HFR	36	120			133	12
Percent Heavy Vehicles	5	--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	1			1	0
Configuration		LT				TR
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				29		86
Peak Hour Factor, PHF				0.90		0.90
Hourly Flow Rate, HFR				32		95
Percent Heavy Vehicles				5		5
Percent Grade (%)		0			-4	
Flared Approach: Exists?/Storage			/			No /
Lanes				0		0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LR	
v (vph)	36						127	
C(m) (vph)	1419						846	
v/c	0.03						0.15	
95% queue length	0.08						0.53	
Control Delay	7.6						10.0+	
LOS	A						B	
Approach Delay							10.0+	
Approach LOS							B	

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: 9/16/11
Analysis Time Period: PEAK SATURDAY HOUR
Intersection: C.R. 84 & SITE ACCESS
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2015 BUILD TRAFFIC VOLUMES
Project ID: 1700SATB6
East/West Street: SITE ACCESS DRIVEWAY
North/South Street: LONG MEADOW ROAD (C.R. 84)
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	61	78			90	20
Peak-Hour Factor, PHF	0.90	0.90			0.90	0.90
Hourly Flow Rate, HFR	67	86			100	22
Percent Heavy Vehicles	5	--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	1			1	0
Configuration		LT				TR
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				29		87
Peak Hour Factor, PHF				0.90		0.90
Hourly Flow Rate, HFR				32		96
Percent Heavy Vehicles				5		5
Percent Grade (%)		0			-4	
Flared Approach: Exists?/Storage			/			No /
Lanes				0		0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LR	
v (vph)	67						128	
C(m) (vph)	1447						860	
v/c	0.05						0.15	
95% queue length	0.15						0.52	
Control Delay	7.6						9.9	
LOS	A						A	
Approach Delay							9.9	
Approach LOS							A	

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: 9/16/11
Analysis Time Period: PEAK SUNDAY HOUR
Intersection: C.R. 84 & SITE ACCESS
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2015 BUILD TRAFFIC VOLUMES
Project ID: 1700SUNB6
East/West Street: SITE ACCESS DRIVEWAY
North/South Street: LONG MEADOW ROAD (C.R. 84)
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	31	81			67	10
Peak-Hour Factor, PHF	0.90	0.90			0.90	0.90
Hourly Flow Rate, HFR	34	90			74	11
Percent Heavy Vehicles	5	--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	1			1	0
Configuration	LT					TR
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				15		44
Peak Hour Factor, PHF				0.90		0.90
Hourly Flow Rate, HFR				16		48
Percent Heavy Vehicles				5		5
Percent Grade (%)		0			-4	
Flared Approach: Exists?/Storage			/			No /
Lanes				0		0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LR	
v (vph)	34						64	
C(m) (vph)	1493						917	
v/c	0.02						0.07	
95% queue length	0.07						0.22	
Control Delay	7.5						9.2	
LOS	A						A	
Approach Delay							9.2	
Approach LOS							A	

HCS+: Unsignalized Intersections Release 5.3

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: JUNE 2010
Analysis Time Period: PEAK AM HOUR
Intersection: C.R. 72 & SISTER SERVANTS LA/E
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2010 EXISTING TRAFFIC VOLUMES
Project ID: 1700AMEX7
East/West Street: STERLING MINE ROAD (C.R. 72)
North/South Street: SISTER SERVANTS LA/EAGLE VALLE
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	0	1056	1	2	173	22
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	0	1173	1	2	192	24
Percent Heavy Vehicles	5	--	--	5	--	--
Median Type/Storage	Undivided /					
RT Channelized?						
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	0	0	3	66	1	3
Peak Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	0	0	3	73	1	3
Percent Heavy Vehicles	5	5	5	5	5	5
Percent Grade (%)		-5			0	
Flared Approach: Exists?/Storage		No /			No /	
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LTR	LTR		LTR			LTR	
v (vph)	0	2		3			77	
C(m) (vph)	1336	584		319			159	
v/c	0.00	0.00		0.01			0.48	
95% queue length	0.00	0.01		0.03			2.30	
Control Delay	7.7	11.2		16.4			47.2	
LOS	A	B		C			E	
Approach Delay				16.4			47.2	
Approach LOS				C			E	

HCS+: Unsignalized Intersections Release 5.3

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: JUNE 2010
Analysis Time Period: PEAK PM HOUR
Intersection: C.R. 72 & SISTER SERVANTS LA/E
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2010 EXISTING TRAFFIC VOLUMES
Project ID: 1700PMEX7
East/West Street: STERLING MINE ROAD (C.R. 72)
North/South Street: SISTER SERVANTS LA/EAGLE VALLE
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	3	230	0	3	913	57
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	3	255	0	3	1014	63
Percent Heavy Vehicles	5	--	--	5	--	--
Median Type/Storage	Undivided /					
RT Channelized?						
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	0	0	1	37	0	4
Peak Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	0	0	1	41	0	4
Percent Heavy Vehicles	5	5	5	5	5	5
Percent Grade (%)		-5			0	
Flared Approach: Exists?/Storage		No /			No /	
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LTR	LTR		LTR			LTR	
v (vph)	3	3		1			45	
C(m) (vph)	636	1293		833			177	
v/c	0.00	0.00		0.00			0.25	
95% queue length	0.01	0.01		0.00			0.97	
Control Delay	10.7	7.8		9.3			32.1	
LOS	B	A		A			D	
Approach Delay				9.3			32.1	
Approach LOS				A			D	

HCS+: Unsignalized Intersections Release 5.3

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: JUNE 2010
Analysis Time Period: PEAK SATURDAY HOUR
Intersection: C.R. 72 & SISTER SERVANTS LA/E
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2010 EXISTING TRAFFIC VOLUMES
Project ID: 1700SATEX7
East/West Street: STERLING MINE ROAD (C.R. 72)
North/South Street: SISTER SERVANTS LA/EAGLE VALLE
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	2	274	0	0	370	38
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	2	304	0	0	411	42
Percent Heavy Vehicles	5	--	--	5	--	--
Median Type/Storage	Undivided /					
RT Channelized?						
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	0	0	1	50	0	3
Peak Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	0	0	1	55	0	3
Percent Heavy Vehicles	5	5	5	5	5	5
Percent Grade (%)		-5			0	
Flared Approach: Exists?/Storage		No /			No /	
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LTR	LTR		LTR			LTR	
v (vph)	2	0		1			58	
C(m) (vph)	1092	1240		793			387	
v/c	0.00	0.00		0.00			0.15	
95% queue length	0.01	0.00		0.00			0.52	
Control Delay	8.3	7.9		9.5			15.9	
LOS	A	A		A			C	
Approach Delay				9.5			15.9	
Approach LOS				A			C	

HCS+: Unsignalized Intersections Release 5.3

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: JUNE 2010
Analysis Time Period: PEAK SUNDAY HOUR
Intersection: C.R. 72 & SISTER SERVANTS LA/E
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2010 EXISTING TRAFFIC VOLUMES
Project ID: 1700SUNEX7
East/West Street: STERLING MINE ROAD (C.R. 72)
North/South Street: SISTER SERVANTS LA/EAGLE VALLE
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	2	273	0	1	231	38
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	2	303	0	1	256	42
Percent Heavy Vehicles	5	--	--	5	--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	0	0	1	50	0	3
Peak Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	0	0	1	55	0	3
Percent Heavy Vehicles	5	5	5	5	5	5
Percent Grade (%)		-5			0	
Flared Approach: Exists?/Storage			No /			No /
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LTR	LTR		LTR			LTR	
v (vph)	2	1		1			58	
C(m) (vph)	1246	1241		794			475	
v/c	0.00	0.00		0.00			0.12	
95% queue length	0.00	0.00		0.00			0.41	
Control Delay	7.9	7.9		9.5			13.6	
LOS	A	A		A			B	
Approach Delay				9.5			13.6	
Approach LOS				A			B	

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: 9/16/11
Analysis Time Period: PEAK AM HOUR
Intersection: C.R. 72 & SISTER SERVANTS LA/E
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2015 NO-BUILD TRAFFIC VOLUMES
Project ID: 1700AMNB7
East/West Street: STERLING MINE ROAD (C.R. 72)
North/South Street: SISTER SERVANTS LA/EAGLE VALLE
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	0	1179	1	2	225	24
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	0	1310	1	2	250	26
Percent Heavy Vehicles	5	--	--	5	--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	0	0	3	73	1	3
Peak Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	0	0	3	81	1	3
Percent Heavy Vehicles	5	5	5	5	5	5
Percent Grade (%)		-5			0	
Flared Approach: Exists?/Storage		No	/		No	/
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LTR	LTR		LTR			LTR	
v (vph)	0	2		3			85	
C(m) (vph)	1270	518		275			120	
v/c	0.00	0.00		0.01			0.71	
95% queue length	0.00	0.01		0.03			3.87	
Control Delay	7.8	12.0		18.2			87.1	
LOS	A	B		C			F	
Approach Delay				18.2			87.1	
Approach LOS				C			F	

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: 9/16/11
Analysis Time Period: PEAK PM HOUR
Intersection: C.R. 72 & SISTER SERVANTS LA/E
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2015 NO-BUILD TRAFFIC VOLUMES
Project ID: 1700PMNB7
East/West Street: STERLING MINE ROAD (C.R. 72)
North/South Street: SISTER SERVANTS LA/EAGLE VALLE
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	3	296	0	3	1032	63
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	3	328	0	3	1146	70
Percent Heavy Vehicles	5	--	--	5	--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	0	0	1	41	0	4
Peak Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	0	0	1	45	0	4
Percent Heavy Vehicles	5	5	5	5	5	5
Percent Grade (%)		-5			0	
Flared Approach: Exists?/Storage		No	/		No	/
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LTR	LTR		LTR			LTR	
v (vph)	3	3		1			49	
C(m) (vph)	563	1215		774			127	
v/c	0.01	0.00		0.00			0.39	
95% queue length	0.02	0.01		0.00			1.62	
Control Delay	11.4	8.0		9.7			50.1	
LOS	B	A		A			F	
Approach Delay				9.7			50.1	
Approach LOS				A			F	

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: 9/16/11
Analysis Time Period: PEAK SATURDAY HOUR
Intersection: C.R. 72 & SISTER SERVANTS LA/E
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2015 NO-BUILD TRAFFIC VOLUMES
Project ID: 1700SATNB7
East/West Street: STERLING MINE ROAD (C.R. 72)
North/South Street: SISTER SERVANTS LA/EAGLE VALLE
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	2	334	0	0	429	42
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	2	371	0	0	476	46
Percent Heavy Vehicles	5	--	--	5	--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	0	0	1	55	0	3
Peak Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	0	0	1	61	0	3
Percent Heavy Vehicles	5	5	5	5	5	5
Percent Grade (%)		-5			0	
Flared Approach: Exists?/Storage		No	/		No	/
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LTR	LTR		LTR			LTR	
v (vph)	2	0		1			64	
C(m) (vph)	1029	1171		741			273	
v/c	0.00	0.00		0.00			0.23	
95% queue length	0.01	0.00		0.00			0.89	
Control Delay	8.5	8.1		9.9			22.2	
LOS	A	A		A			C	
Approach Delay				9.9			22.2	
Approach LOS				A			C	

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: 9/16/11
Analysis Time Period: PEAK SUNDAY HOUR
Intersection: C.R. 72 & SISTER SERVANTS LA/E
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2015 NO-BUILD TRAFFIC VOLUMES
Project ID: 1700SUNNB7
East/West Street: STERLING MINE ROAD (C.R. 72)
North/South Street: SISTER SERVANTS LA/EAGLE VALLE
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	2	321	0	1	269	42
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	2	356	0	1	298	46
Percent Heavy Vehicles	5	--	--	5	--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	0	0	1	55	0	3
Peak Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	0	0	1	61	0	3
Percent Heavy Vehicles	5	5	5	5	5	5
Percent Grade (%)		-5			0	
Flared Approach: Exists?/Storage		No	/		No	/
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LTR	LTR		LTR			LTR	
v (vph)	2	1		1			64	
C(m) (vph)	1198	1186		752			417	
v/c	0.00	0.00		0.00			0.15	
95% queue length	0.01	0.00		0.00			0.54	
Control Delay	8.0	8.0		9.8			15.2	
LOS	A	A		A			C	
Approach Delay				9.8			15.2	
Approach LOS				A			C	

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: 9/16/11
Analysis Time Period: PEAK AM HOUR
Intersection: C.R. 72 & SISTER SERVANTS LA/E
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2015 BUILD TRAFFIC VOLUMES
Project ID: 1700AMB7
East/West Street: STERLING MINE ROAD (C.R. 72)
North/South Street: SISTER SERVANTS LA/EAGLE VALLE
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	0	1197	1	2	239	24
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	0	1330	1	2	265	26
Percent Heavy Vehicles	5	--	--	5	--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	0	0	3	72	1	3
Peak Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	0	0	3	80	1	3
Percent Heavy Vehicles	5	5	5	5	5	5
Percent Grade (%)		-5			0	
Flared Approach: Exists?/Storage		No	/		No	/
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LTR	LTR		LTR			LTR	
v (vph)	0	2		3			84	
C(m) (vph)	1254	509		270			114	
v/c	0.00	0.00		0.01			0.74	
95% queue length	0.00	0.01		0.03			4.04	
Control Delay	7.9	12.1		18.5			95.6	
LOS	A	B		C			F	
Approach Delay				18.5			95.6	
Approach LOS				C			F	

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: 9/16/11
Analysis Time Period: PEAK PM HOUR
Intersection: C.R. 72 & SISTER SERVANTS LA/E
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2015 BUILD TRAFFIC VOLUMES
Project ID: 1700PMB7
East/West Street: STERLING MINE ROAD (C.R. 72)
North/South Street: SISTER SERVANTS LA/EAGLE VALLE
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	3	365	0	3	1059	63
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	3	405	0	3	1176	70
Percent Heavy Vehicles	5	--	--	5	--	--
Median Type/Storage	Undivided /					
RT Channelized?						
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	0	0	1	41	0	4
Peak Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	0	0	1	45	0	4
Percent Heavy Vehicles	5	5	5	5	5	5
Percent Grade (%)		-5			0	
Flared Approach: Exists?/Storage		No /			No /	
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LTR	LTR		LTR			LTR	
v (vph)	3	3		1			49	
C(m) (vph)	548	1138		715			113	
v/c	0.01	0.00		0.00			0.43	
95% queue length	0.02	0.01		0.00			1.86	
Control Delay	11.6	8.2		10.0+			59.3	
LOS	B	A		B			F	
Approach Delay				10.0+			59.3	
Approach LOS				B			F	

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: 9/16/11
Analysis Time Period: PEAK SATURDAY HOUR
Intersection: C.R. 72 & SISTER SERVANTS LA/E
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2015 BUILD TRAFFIC VOLUMES
Project ID: 1700SATB7
East/West Street: STERLING MINE ROAD (C.R. 72)
North/South Street: SISTER SERVANTS LA/EAGLE VALLE
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	2	404	0	0	478	42
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	2	448	0	0	531	46
Percent Heavy Vehicles	5	--	--	5	--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	0	0	1	55	0	3
Peak Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	0	0	1	61	0	3
Percent Heavy Vehicles	5	5	5	5	5	5
Percent Grade (%)		-5			0	
Flared Approach: Exists?/Storage		No	/		No	/
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LTR	LTR		LTR			LTR	
v (vph)	2	0		1			64	
C(m) (vph)	982	1097		685			270	
v/c	0.00	0.00		0.00			0.24	
95% queue length	0.01	0.00		0.00			0.90	
Control Delay	8.7	8.3		10.3			22.4	
LOS	A	A		B			C	
Approach Delay				10.3			22.4	
Approach LOS				B			C	

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: 9/16/11
Analysis Time Period: PEAK SUNDAY HOUR
Intersection: C.R. 72 & SISTER SERVANTS LA/E
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2015 BUILD TRAFFIC VOLUMES
Project ID: 1700SUNB7
East/West Street: STERLING MINE ROAD (C.R. 72)
North/South Street: SISTER SERVANTS LA/EAGLE VALLE
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	2	356	0	1	294	42
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	2	395	0	1	326	46
Percent Heavy Vehicles	5	--	--	5	--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	0	0	1	55	0	3
Peak Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	0	0	1	61	0	3
Percent Heavy Vehicles	5	5	5	5	5	5
Percent Grade (%)		-5			0	
Flared Approach: Exists?/Storage		No	/		No	/
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LTR	LTR		LTR			LTR	
v (vph)	2	1		1			64	
C(m) (vph)	1170	1147		723			382	
v/c	0.00	0.00		0.00			0.17	
95% queue length	0.01	0.00		0.00			0.59	
Control Delay	8.1	8.1		10.0-			16.3	
LOS	A	A		A			C	
Approach Delay				10.0-			16.3	
Approach LOS				A			C	

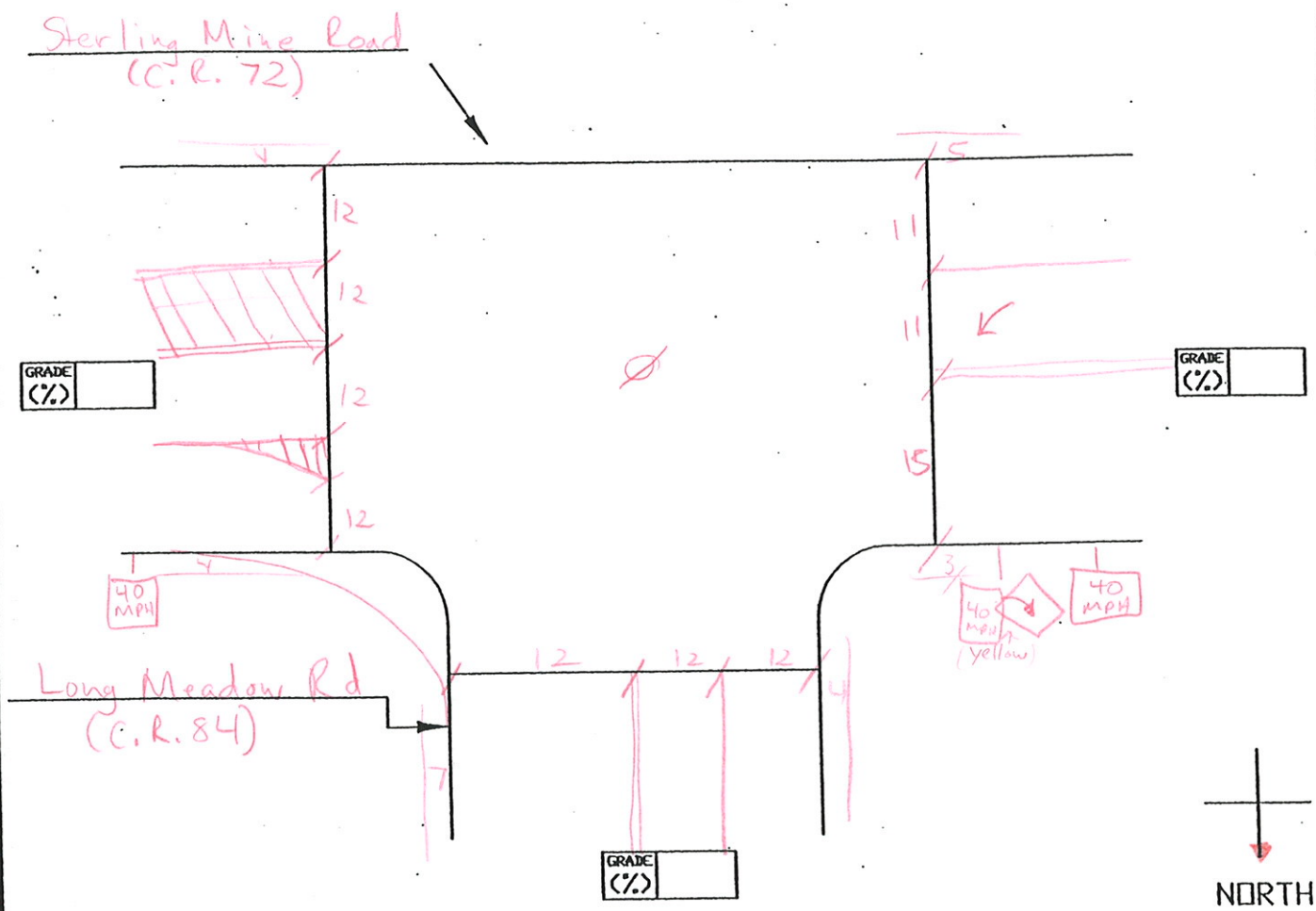
FIELD SKETCHES, PICTURES,

TRAFFIC COUNTS

FIELD DATA WORKSHEET

INTERSECTION: Sterling Mine Rd. & Long Meadow Rd. DATE & DAY: Friday 5/14/10

PROJECT NAME(#): Job#1700 LOCATION:



TIMING AND PHASING INPUT DATA

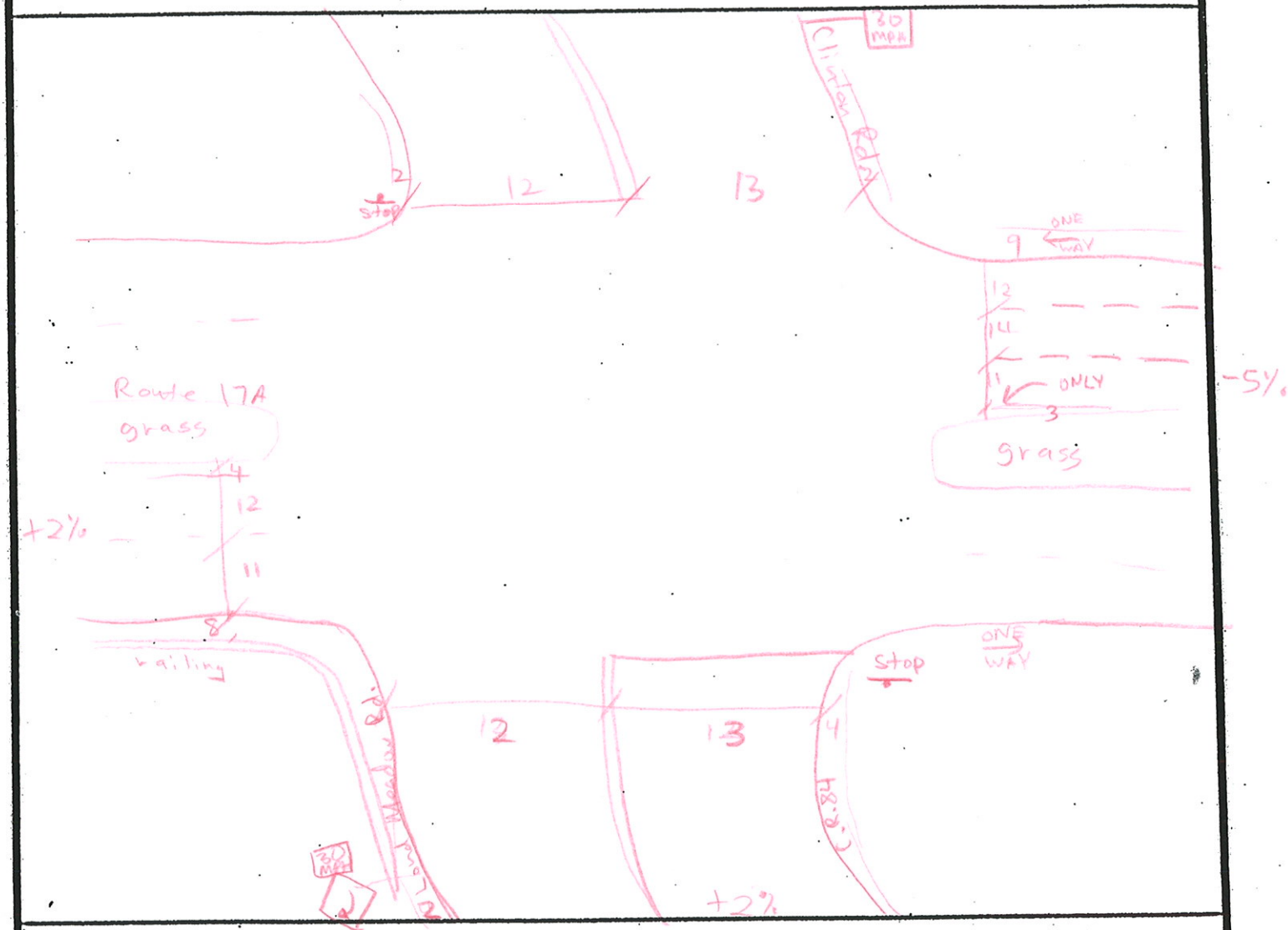
Has left turn arrow, but we did not see it run.

GREEN: 44 AMBER: ____ RED: 5	GREEN: 21 AMBER: ____ RED: 65	GREEN: ____ AMBER: ____ RED: ____	GREEN: ____ AMBER: ____ RED: ____
GREEN: ____ AMBER: ____ RED: ____	GREEN: ____ AMBER: ____ RED: ____	GREEN: ____ AMBER: ____ RED: ____	GREEN: ____ AMBER: ____ RED: ____

FIELD DATA WORKSHEET

INTERSECTION: Route 17A & Long Meadow Rd. DATE & DAY: 5/14/10 Friday

PROJECT NAME(#) Job # 1700 LOCATION:



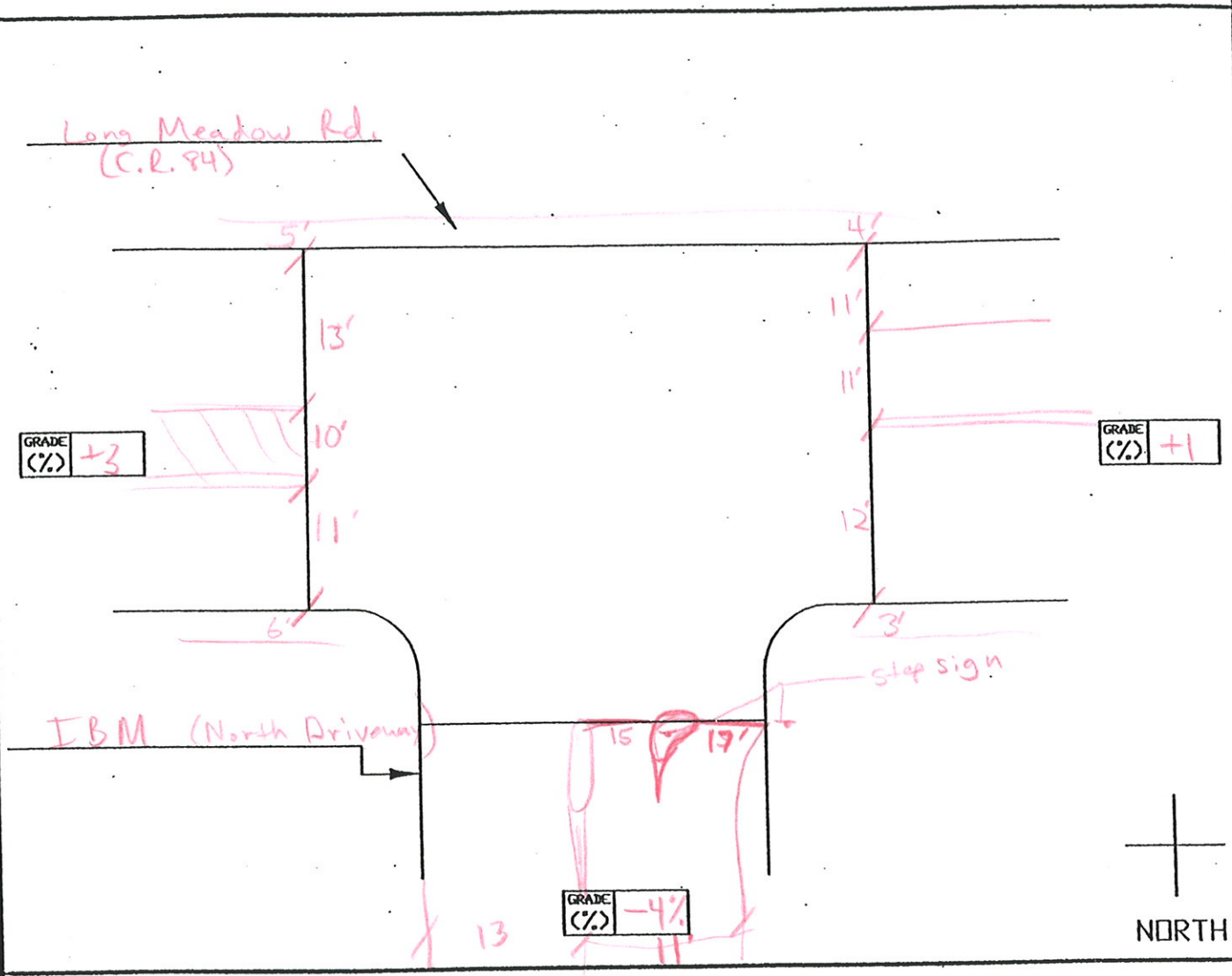
TIMING AND PHASING INPUT DATA

GREEN: ____ AMBER: ____ RED: ____	GREEN: ____ AMBER: ____ RED: ____	GREEN: ____ AMBER: ____ RED: ____	GREEN: ____ AMBER: ____ RED: ____
GREEN: ____ AMBER: ____ RED: ____	GREEN: ____ AMBER: ____ RED: ____	GREEN: ____ AMBER: ____ RED: ____	GREEN: ____ AMBER: ____ RED: ____

FIELD DATA WORKSHEET

INTERSECTION: Long Meadow Rd. & IBM DATE & DAY: 5/14/10 Friday

PROJECT NAME(#) Job #1700 LOCATION:

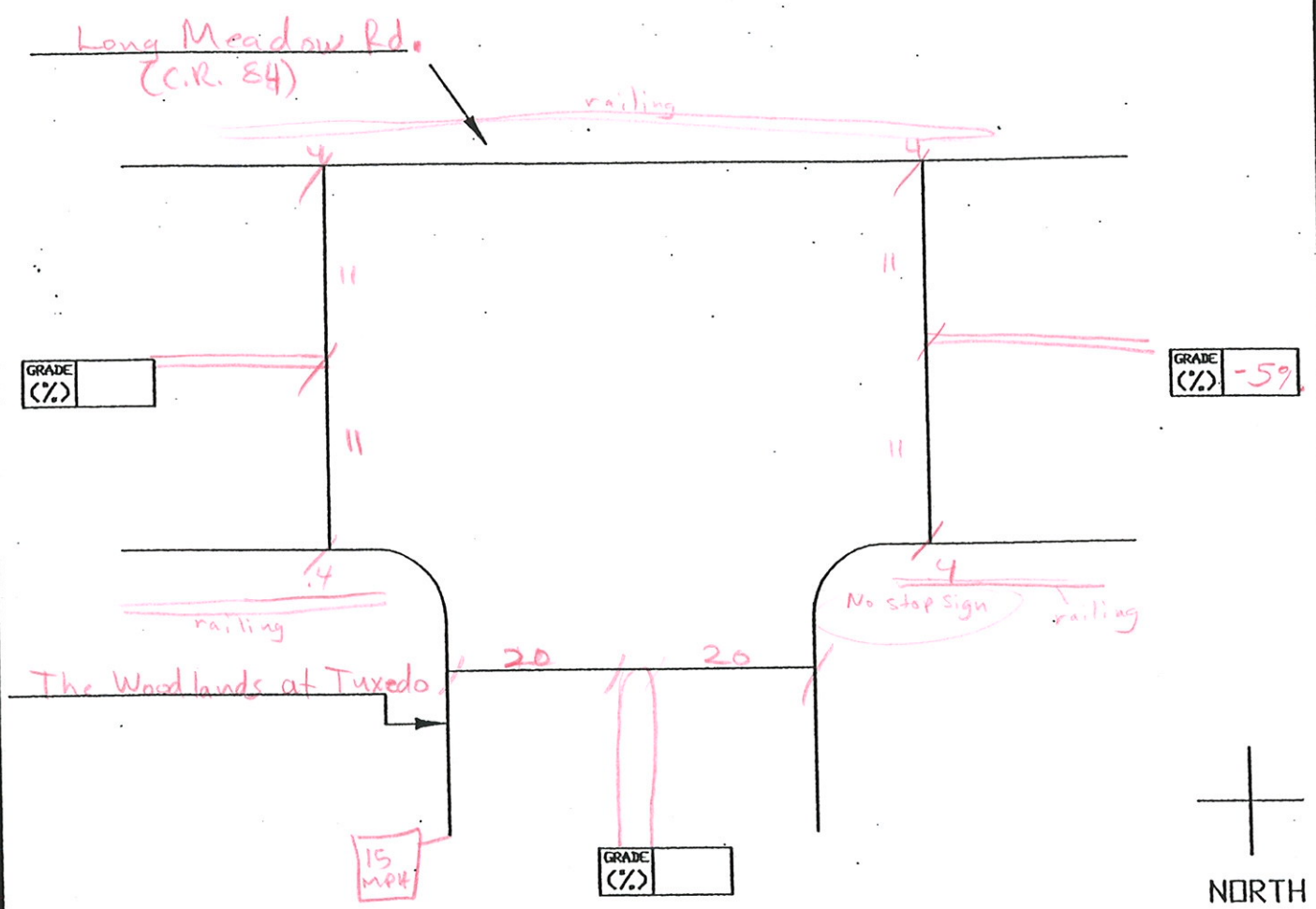


TIMING AND PHASING INPUT DATA

GREEN: ____ AMBER: ____ RED: ____	GREEN: ____ AMBER: ____ RED: ____	GREEN: ____ AMBER: ____ RED: ____	GREEN: ____ AMBER: ____ RED: ____
GREEN: ____ AMBER: ____ RED: ____	GREEN: ____ AMBER: ____ RED: ____	GREEN: ____ AMBER: ____ RED: ____	GREEN: ____ AMBER: ____ RED: ____

FIELD DATA WORKSHEET

INTERSECTION: Long Meadow Rd. & The
PROJECT NAME(#): Job# 1700
DATE & DAY: Friday 5/14/10
LOCATION: Woodlands at Tuxedo

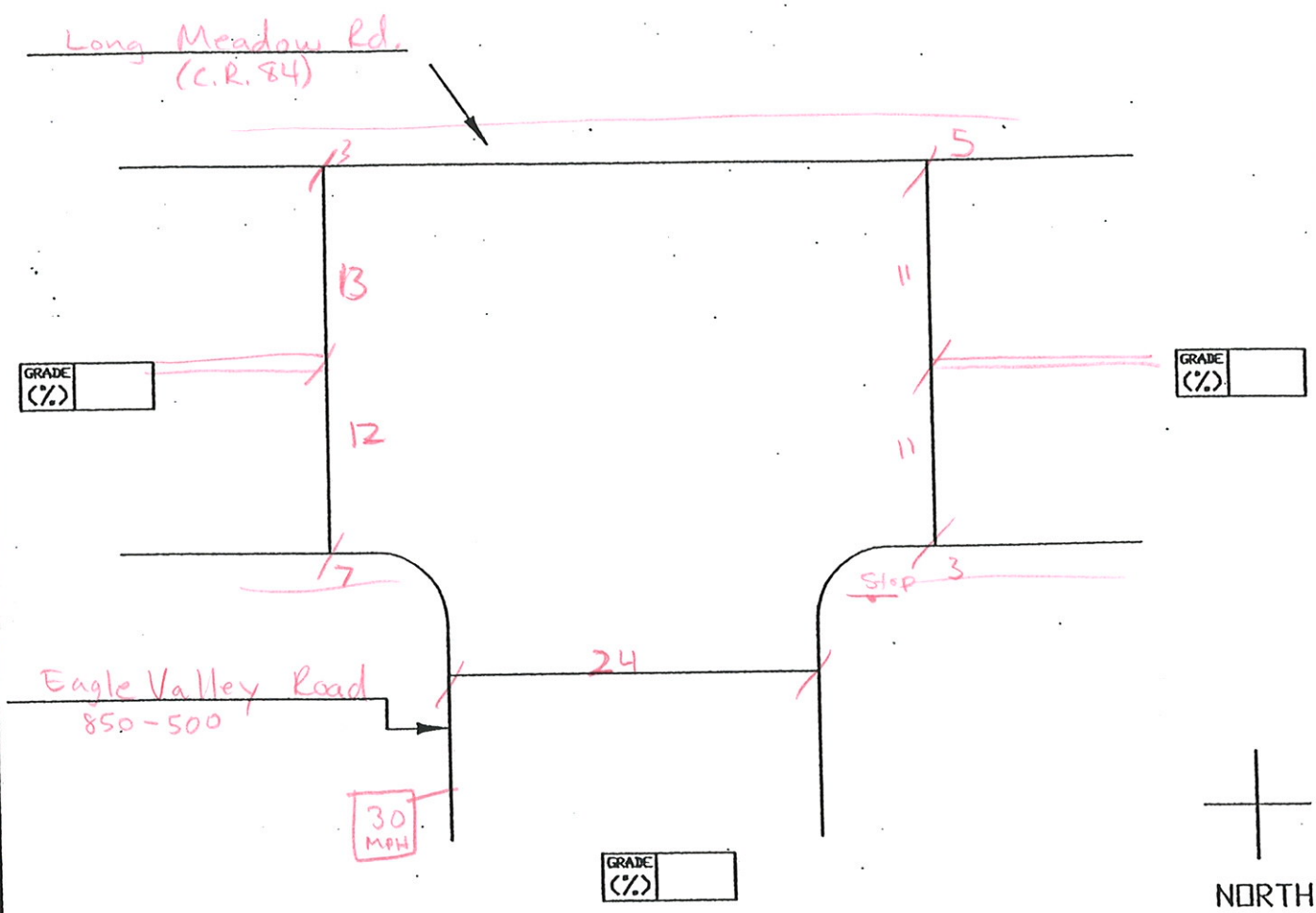


TIMING AND PHASING INPUT DATA

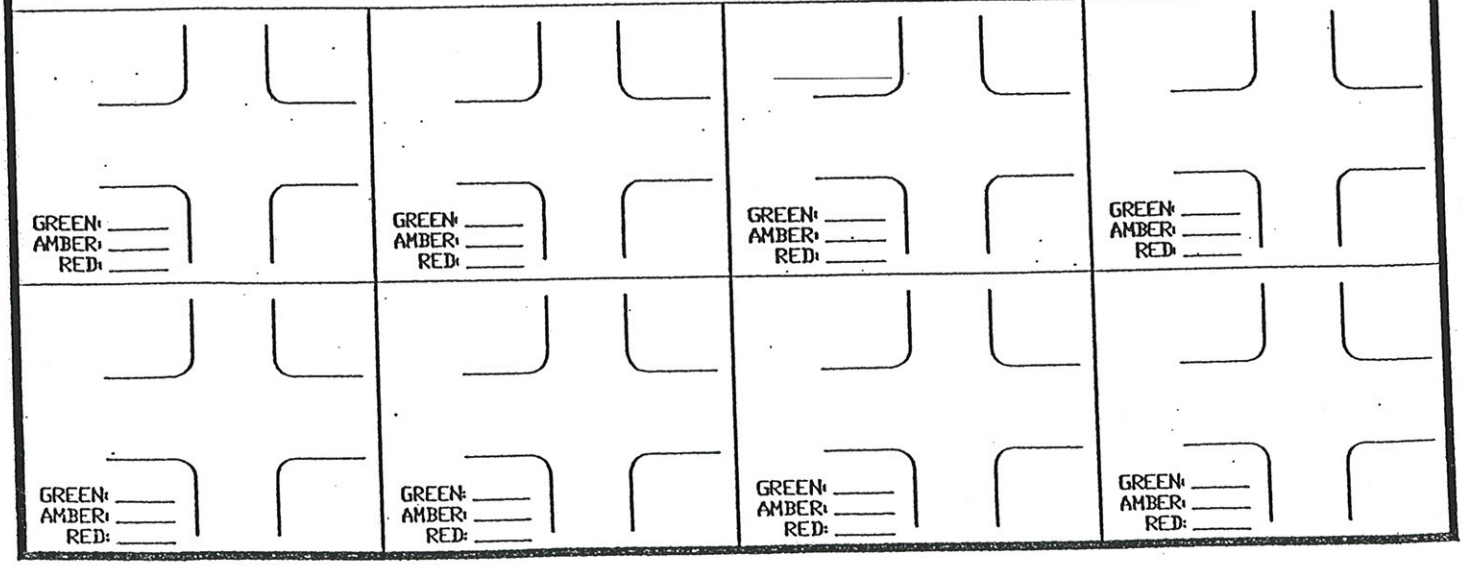
GREEN: ____ AMBER: ____ RED: ____	GREEN: ____ AMBER: ____ RED: ____	GREEN: ____ AMBER: ____ RED: ____	GREEN: ____ AMBER: ____ RED: ____
GREEN: ____ AMBER: ____ RED: ____	GREEN: ____ AMBER: ____ RED: ____	GREEN: ____ AMBER: ____ RED: ____	GREEN: ____ AMBER: ____ RED: ____

FIELD DATA WORKSHEET

INTERSECTION: Long Meadow Rd. & Eagle
PROJECT NAME(#): Job# 1700
DATE & DAY: Friday 5/14/10
LOCATION: Valley Rd



TIMING AND PHASING INPUT DATA



Long Meadow Road SB @ Eagle Valley Road

Woodlands Drive Ext @ Long Meadow Road

Eagle Valley Road @ Long Meadow Road

Long Meadow Rd. NB @ Woodlands Drive

Long Meadow Road @ Sterling Mine Road

Long Meadow Road NB @ Woodlands Drive

Sterling Mine RD. WB @ Long Meadow Road

Sterling Mine Rd EB @ Long Meadow Road

IBM Driveway at Long Meadow Road

Long Meadow Road NB @ IBM Driveway

Long Meadow Rd SB @ Woodlands Drive

Long Meadow Road SB @ IBM Driveway

Long Meadow Road @ NYS Route 17A

NYS Route 17A @ Clinton Road

Long Meadow Road @ NYS Route 17A

NYS Route 17A EB @ Long Meadow Road

Clinton Road @ NYS Route 17A

PROJECT: 1 KINGS DRIVE WATCHTOWER

PROJ. # 1700

LOCATIONS:

LOCATION 1:
LONG MEADOW RD. & STERLING MINE RD.

LOCATION 2:
LONG MEADOW RD. & EAGLE VALLEY RD.

LOCATION 3:
RTE 17A & LONG MEADOW RD./CLINTON RD.

LOCATION 4:
LONG MEADOW RD. & IBM DRIVEWAY

LOCATION 5:
LONG MEADOW RD. & WOODLANDS RD.

LOCATION 6:

AM COUNTS DONE:

DATE: May 4, 2010

DAY: TUESDAY

PM COUNTS DONE:

DATE: May 5, 2010

DAY: WEDNESDAY

LOCATION:	LONG MEADOW RD. & STERLING MINE RD.	PROJECT:	1 KINGS DRIVE WATCHTOWER		
DATE OF COUNT:	05/04/10	DAY: TUESDAY	JCE JOB #: 1700	START TIME : 06:45	**AM**

ENTER 15-MINUTE COUNT VOLUMES BY MOVEMENT

		EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND					
AM PEAK HOUR		1	2	3	4	5	6	7	8	9	10	11	12	total		
06:45 AM	07:00 AM	3	158			15	15				13		2	206	A	
07:00 AM	07:15 AM	1	155			9	10				10		3	188	A	
07:15 AM	07:30 AM	6	187			20	15				28		4	260	X	
07:30 AM	07:45 AM	6	224			22	27				38		7	324	X	978
07:45 AM	08:00 AM	1	187			19	26				32		9	274	X	1046
08:00 AM	08:15 AM	5	188			15	17				27		3	255	X	1113
08:15 AM	08:30 AM	2	159			20	17				35		6	239	A	1092
08:30 AM	08:45 AM	3	190			19	18				30		4	264	A	1032
08:45 AM	09:00 AM	7	137			19	16				12		6	197	A	955
09:00 AM	09:15 AM													0	A	700
09:15 AM	09:30 AM													0	A	461
09:30 AM	09:45 AM													0	A	197
09:45 AM	10:00 AM													0	A	0
10:00 AM	10:15 AM													0	A	0
10:15 AM	10:30 AM													0	A	0
10:30 AM	10:45 AM													0	A	0

CALCULATED PEAK 15-MINUTE VOLUMES

06:45 AM	07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00 AM	07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	07:30 AM	6	187	0	0	20	15	0	0	0	28	0	4	260
07:30 AM	07:45 AM	6	224	0	0	22	27	0	0	0	38	0	7	324
07:45 AM	08:00 AM	1	187	0	0	19	26	0	0	0	32	0	9	274
08:00 AM	08:15 AM	5	188	0	0	15	17	0	0	0	27	0	3	255
08:15 AM	08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00 AM	09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15 AM	09:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30 AM	09:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45 AM	10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 AM	10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 AM	10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM	10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0

CALCULATED PEAK HOUR VOLUMES

AM PEAK HOUR		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**total**	**PHF**
07:15 AM	08:15 AM	18	786	0	0	76	85	0	0	0	125	0	23	1113	0.858796
PHF BY MOVEMENT		0.75	0.88	#DIV/0!	#DIV/0!	0.86	0.79	#DIV/0!	#DIV/0!	#DIV/0!	0.82	#DIV/0!	0.64		
PHF BY APPROACH			0.87			0.82			#DIV/0!			0.82			

23	0	125	^	6	85
12	11	10	<	5	76
<	v	>	v	4	0
18	1	^	<	^	>
786	2	>	7	8	9
0	3	v	0	0	0

LOCATION: LONG MEADOW RD. & STERLING MINE RD. PROJECT: 1 KINGS DRIVE WATCHTOWER

DATE OF COUNT: 05/05/10 DAY: WEDNESDAY JCE JOB #: 1700 START TIME : 16:00 **PM**

ENTER 15-MINUTE COUNT VOLUMES BY MOVEMENT

		EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND					
PM PEAK HOUR		1	2	3	4	5	6	7	8	9	10	11	12	total		
04:00 PM	04:15 PM	4	31			89	15				23		8	170	A	
04:15 PM	04:30 PM	5	30			140	28				22		11	236	A	
04:30 PM	04:45 PM	2	33			166	30				21		8	260	A	
04:45 PM	05:00 PM	2	34			199	24				16		8	283	X	949
05:00 PM	05:15 PM	3	30			194	24				14		6	271	X	1050
05:15 PM	05:30 PM	5	41			206	25				14		10	301	X	1115
05:30 PM	05:45 PM	7	46			215	25				13		5	311	X	1166
05:45 PM	06:00 PM	6	25			182	29				17		5	264	A	1147
06:00 PM	06:15 PM	3	28			148	15				11		5	210	A	1086
06:15 PM	06:30 PM	1	46			144	20				12		8	231	A	1016
06:30 PM	06:45 PM													0	A	705
06:45 PM	07:00 PM													0	A	441
07:00 PM	07:15 PM													0	A	231
07:15 PM	07:30 PM													0	A	0
07:30 PM	07:45 PM													0	A	0
07:45 PM	08:00 PM													0	A	0

CALCULATED PEAK 15-MINUTE VOLUMES

04:00 PM	04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	05:00 PM	2	34	0	0	199	24	0	0	0	16	0	8	283
05:00 PM	05:15 PM	3	30	0	0	194	24	0	0	0	14	0	6	271
05:15 PM	05:30 PM	5	41	0	0	206	25	0	0	0	14	0	10	301
05:30 PM	05:45 PM	7	46	0	0	215	25	0	0	0	13	0	5	311
05:45 PM	06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00 PM	06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 PM	06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 PM	06:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 PM	07:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00 PM	07:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 PM	07:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 PM	07:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 PM	08:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0

29	0	57	^	6	98	05:30 PM	05:45 PM	7	46	0	0	215	25	0	0	0	13	0	5	311
12	11	10	<	5	814	05:45 PM	06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
<	v	>	v	4	0	06:00 PM	06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
17	1	^	<	^	>	06:15 PM	06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
151	2	>	7	8	9	06:30 PM	06:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
0	3	v	0	0	0	06:45 PM	07:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0

CALCULATED PEAK HOUR VOLUMES

PM PEAK HOUR		1	2	3	4	5	6	7	8	9	10	11	12	total	PHF
04:45 PM	05:45 PM	17	151	0	0	814	98	0	0	0	57	0	29	1166	0.937299
PHF BY MOVEMENT		0.61	0.82	#DIV/0!	#DIV/0!	0.95	0.98	#DIV/0!	#DIV/0!	#DIV/0!	0.89	#DIV/0!	0.73		
PHF BY APPROACH			0.79			0.95			#DIV/0!			0.90			

LOCATION: LONG MEADOW RD. & EAGLE VALLEY RD. PROJECT: 1 KINGS DRIVE WATCHTOWER

DATE OF COUNT: 05/04/10 DAY: TUESDAY JCE JOB #: 1700 START TIME : 06:45 **AM**

ENTER 15-MINUTE COUNT VOLUMES BY MOVEMENT

	EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND					
AM PEAK HOUR	1	2	3	4	5	6	7	8	9	10	11	12	total		
06:45 AM 07:00 AM				1		2		16	0	1	14		34	A	
07:00 AM 07:15 AM				1		1		11	0	0	15		28	A	
07:15 AM 07:30 AM				2		1		29	0	2	32		66	X	
07:30 AM 07:45 AM				6		1		30	0	2	45		84	X	212
07:45 AM 08:00 AM				2		0		32	1	1	45		81	X	259
08:00 AM 08:15 AM				1		2		22	1	1	32		59	X	290
08:15 AM 08:30 AM				3		0		15	1	0	37		56	A	280
08:30 AM 08:45 AM				3		2		21	3	1	30		60	A	256
08:45 AM 09:00 AM				4		1		21	0	0	13		39	A	214
09:00 AM 09:15 AM													0	A	155
09:15 AM 09:30 AM													0	A	99
09:30 AM 09:45 AM													0	A	39
09:45 AM 10:00 AM													0	A	0
10:00 AM 10:15 AM													0	A	0
10:15 AM 10:30 AM													0	A	0
10:30 AM 10:45 AM													0	A	0

CALCULATED PEAK 15-MINUTE VOLUMES

06:45 AM 07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00 AM 07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM 07:30 AM	0	0	0	2	0	1	0	29	0	2	32	0	66
07:30 AM 07:45 AM	0	0	0	6	0	1	0	30	0	2	45	0	84
07:45 AM 08:00 AM	0	0	0	2	0	0	0	32	1	1	45	0	81
08:00 AM 08:15 AM	0	0	0	1	0	2	0	22	1	1	32	0	59
08:15 AM 08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM 08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM 09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00 AM 09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15 AM 09:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30 AM 09:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45 AM 10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 AM 10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 AM 10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM 10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0

0	154	6	^	6	4
12	11	10	<	5	0
<	v	>	v	4	11
0	1	^	<	^	>
0	2	>	7	8	9
0	3	v	0	113	2

CALCULATED PEAK HOUR VOLUMES

AM PEAK HOUR	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**total**	**PHF**
07:15 AM 08:15 AM	0	0	0	11	0	4	0	113	2	6	154	0	290	0.863095
PHF BY MOVEMENT	#DIV/0!	#DIV/0!	#DIV/0!	0.46	#DIV/0!	0.50	#DIV/0!	0.88	0.50	0.75	0.86	#DIV/0!		
PHF BY APPROACH	#DIV/0!			0.54			0.87			0.85				

LOCATION: LONG MEADOW RD. & EAGLE VALLEY RD. PROJECT: 1 KINGS DRIVE WATCHTOWER

DATE OF COUNT: 05/05/10 DAY: WEDNESDAY JCE JOB #: 1700 START TIME : 16:00 **PM**

ENTER 15-MINUTE COUNT VOLUMES BY MOVEMENT

		EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND					
PM PEAK HOUR		1	2	3	4	5	6	7	8	9	10	11	12	total		
04:00 PM	04:15 PM				1		1		27	1	2	38		70	X	
04:15 PM	04:30 PM				3		1		24	5	1	22		56	X	
04:30 PM	04:45 PM				2		7		32	3	2	26		72	X	
04:45 PM	05:00 PM				3		2		30	0	2	25		62	X	260
05:00 PM	05:15 PM				2		1		22	3	2	17		47	A	237
05:15 PM	05:30 PM				3		1		31	1	1	22		59	A	240
05:30 PM	05:45 PM				2		1		35	2	1	14		55	A	223
05:45 PM	06:00 PM				1		8		35	1	3	24		72	A	233
06:00 PM	06:15 PM				3		2		20	0	2	16		43	A	229
06:15 PM	06:30 PM				1		3		20	3	1	24		52	A	222
06:30 PM	06:45 PM													0	A	167
06:45 PM	07:00 PM													0	A	95
07:00 PM	07:15 PM													0	A	52
07:15 PM	07:30 PM													0	A	0
07:30 PM	07:45 PM													0	A	0
07:45 PM	08:00 PM													0	A	0

CALCULATED PEAK 15-MINUTE VOLUMES

04:00 PM	04:15 PM	0	0	0	1	0	1	0	27	1	2	38	0	70
04:15 PM	04:30 PM	0	0	0	3	0	1	0	24	5	1	22	0	56
04:30 PM	04:45 PM	0	0	0	2	0	7	0	32	3	2	26	0	72
04:45 PM	05:00 PM	0	0	0	3	0	2	0	30	0	2	25	0	62
05:00 PM	05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00 PM	06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 PM	06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 PM	06:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 PM	07:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00 PM	07:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 PM	07:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 PM	07:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 PM	08:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0

0	111	7	^	6	11
12	11	10	<	5	0
<	v	>	v	4	9
0	1	^	<	^	>
0	2	>	7	8	9
0	3	v	0	113	9

CALCULATED PEAK HOUR VOLUMES

PM PEAK HOUR		1	2	3	4	5	6	7	8	9	10	11	12	total	PHF
04:00 PM	05:00 PM	0	0	0	9	0	11	0	113	9	7	111	0	260	0.902778
PHF BY MOVEMENT		#DIV/0!	#DIV/0!	#DIV/0!	0.75	#DIV/0!	0.39	#DIV/0!	0.88	0.45	0.88	0.73	#DIV/0!		
PHF BY APPROACH		#DIV/0!			0.56			0.87			0.74				

LOCATION: RTE 17A & LONG MEADOW RD./CLINTON RD. PROJECT: 1 KINGS DRIVE WATCHTOWER

DATE OF COUNT: 05/05/10 DAY: WEDNESDAY JCE JOB #: 1700 START TIME : 06:45 **AM**

ENTER 15-MINUTE COUNT VOLUMES BY MOVEMENT

		EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND					
AM PEAK HOUR		1	2	3	4	5	6	7	8	9	10	11	12	total		
06:45 AM	07:00 AM	0	98	6	7	15	0	1	0	5	2	0	0	134	A	
07:00 AM	07:15 AM	0	160	10	8	9	1	1	0	9	5	1	0	204	X	
07:15 AM	07:30 AM	0	202	17	13	11	1	2	0	6	3	2	0	257	X	
07:30 AM	07:45 AM	0	160	12	20	20	2	0	0	8	5	0	0	227	X	822
07:45 AM	08:00 AM	0	193	13	17	19	1	2	0	2	4	1	0	252	X	940
08:00 AM	08:15 AM	0	123	9	13	17	0	1	0	7	1	0	1	172	A	908
08:15 AM	08:30 AM	0	167	16	12	20	1	3	1	4	2	1	0	227	A	878
08:30 AM	08:45 AM	0	147	6	10	19	2	0	1	8	3	1	1	198	A	849
08:45 AM	09:00 AM	0	98	7	14	26	1	3	1	11	3	1	0	165	A	762
09:00 AM	09:15 AM													0	A	590
09:15 AM	09:30 AM													0	A	363
09:30 AM	09:45 AM													0	A	165
09:45 AM	10:00 AM													0	A	0
10:00 AM	10:15 AM													0	A	0
10:15 AM	10:30 AM													0	A	0
10:30 AM	10:45 AM													0	A	0

CALCULATED PEAK 15-MINUTE VOLUMES

06:45 AM	07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00 AM	07:15 AM	0	160	10	8	9	1	1	0	9	5	1	0	204
07:15 AM	07:30 AM	0	202	17	13	11	1	2	0	6	3	2	0	257
07:30 AM	07:45 AM	0	160	12	20	20	2	0	0	8	5	0	0	227
07:45 AM	08:00 AM	0	193	13	17	19	1	2	0	2	4	1	0	252
08:00 AM	08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00 AM	09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15 AM	09:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30 AM	09:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45 AM	10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 AM	10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 AM	10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM	10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0

CALCULATED PEAK HOUR VOLUMES

AM PEAK HOUR		1	2	3	4	5	6	7	8	9	10	11	12	total	PHF
07:00 AM	08:00 AM	0	715	52	58	59	5	5	0	25	17	4	0	940	0.914397
PHF BY MOVEMENT		#DIV/0!	0.88	0.76	0.73	0.74	0.63	0.63	#DIV/0!	0.69	0.85	0.50	#DIV/0!		
PHF BY APPROACH			0.88			0.73			0.75			0.88			

0	4	17	^	6	5
12	11	10	<	5	59
<	v	>	v	4	58
0	1	^	<	^	>
715	2	>	7	8	9
52	3	v	5	0	25

LOCATION: RTE 17A & LONG MEADOW RD./CLINTON RD. PROJECT: 1 KINGS DRIVE WATCHTOWER

DATE OF COUNT: 05/04/10 DAY: TUESDAY JCE JOB #: 1700 START TIME : 16:00 **PM**

ENTER 15-MINUTE COUNT VOLUMES BY MOVEMENT

		EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND					
PM PEAK HOUR		1	2	3	4	5	6	7	8	9	10	11	12	total		
04:00 PM	04:15 PM	1	36	7	4	69	5	9	1	17	3	3	0	155	A	
04:15 PM	04:30 PM	0	22	2	3	118	3	13	0	23	2	0	0	186	A	
04:30 PM	04:45 PM	0	31	1	7	131	1	12	0	32	1	0	0	216	A	
04:45 PM	05:00 PM	0	20	2	3	110	2	10	0	6	2	0	0	155	A	712
05:00 PM	05:15 PM	0	24	3	1	149	6	12	1	12	2	0	1	211	X	768
05:15 PM	05:30 PM	0	26	0	7	134	2	11	2	20	0	0	0	202	X	784
05:30 PM	05:45 PM	0	22	2	7	160	0	11	0	16	3	0	0	221	X	789
05:45 PM	06:00 PM	0	22	0	3	143	3	7	1	12	2	1	0	194	X	828
06:00 PM	06:15 PM	0	16	0	4	148	3	10	0	11	0	0	0	192	A	809
06:15 PM	06:30 PM	1	12	0	4	122	0	9	0	8	0	0	0	156	A	763
06:30 PM	06:45 PM													0	A	542
06:45 PM	07:00 PM													0	A	348
07:00 PM	07:15 PM													0	A	156
07:15 PM	07:30 PM													0	A	0
07:30 PM	07:45 PM													0	A	0
07:45 PM	08:00 PM													0	A	0

CALCULATED PEAK 15-MINUTE VOLUMES

04:00 PM	04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	05:15 PM	0	24	3	1	149	6	12	1	12	2	0	1	211
05:15 PM	05:30 PM	0	26	0	7	134	2	11	2	20	0	0	0	202
05:30 PM	05:45 PM	0	22	2	7	160	0	11	0	16	3	0	0	221
05:45 PM	06:00 PM	0	22	0	3	143	3	7	1	12	2	1	0	194
06:00 PM	06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 PM	06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 PM	06:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 PM	07:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00 PM	07:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 PM	07:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 PM	07:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 PM	08:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0

1	1	7	^	6	11
12	11	10	<	5	586
<	v	>	v	4	18
0	1	^	<	^	>
94	2	>	7	8	9
5	3	v	41	4	60

CALCULATED PEAK HOUR VOLUMES

PM PEAK HOUR		1	2	3	4	5	6	7	8	9	10	11	12	total	PHF
05:00 PM	06:00 PM	0	94	5	18	586	11	41	4	60	7	1	1	828	0.936652
PHF BY MOVEMENT		#DIV/0!	0.90	0.42	0.64	0.92	0.46	0.85	0.50	0.75	0.58	0.25	0.25		
PHF BY APPROACH			0.92			0.92			0.80			0.75			

LOCATION: LONG MEADOW RD. & IBM DRIVEWAY PROJECT: 1 KINGS DRIVE WATCHTOWER

DATE OF COUNT: 05/06/10 DAY: THURSDAY JCE JOB #: 1700 START TIME : 06:45 **AM**

ENTER 15-MINUTE COUNT VOLUMES BY MOVEMENT

	EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND					
AM PEAK HOUR	1	2	3	4	5	6	7	8	9	10	11	12	total		
06:45 AM 07:00 AM	0		0				4	4			8	9	25	A	
07:00 AM 07:15 AM	2		1				2	6			10	7	28	A	
07:15 AM 07:30 AM	0		0				3	6			20	7	36	A	
07:30 AM 07:45 AM	2		3				7	11			27	4	54	A	143
07:45 AM 08:00 AM	0		1				4	6			14	6	31	A	149
08:00 AM 08:15 AM	2		8				6	13			19	7	55	X	176
08:15 AM 08:30 AM	0		0				5	4			12	6	27	X	167
08:30 AM 08:45 AM	0		1				6	14			32	7	60	X	173
08:45 AM 09:00 AM	0		0				7	10			24	7	48	X	190
09:00 AM 09:15 AM													0	A	135
09:15 AM 09:30 AM													0	A	108
09:30 AM 09:45 AM													0	A	48
09:45 AM 10:00 AM													0	A	0
10:00 AM 10:15 AM													0	A	0
10:15 AM 10:30 AM													0	A	0
10:30 AM 10:45 AM													0	A	0

CALCULATED PEAK 15-MINUTE VOLUMES

06:45 AM 07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00 AM 07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM 07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM 07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM 08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM 08:15 AM	2	0	8	0	0	0	6	13	0	0	19	7	55
08:15 AM 08:30 AM	0	0	0	0	0	0	5	4	0	0	12	6	27
08:30 AM 08:45 AM	0	0	1	0	0	0	6	14	0	0	32	7	60
08:45 AM 09:00 AM	0	0	0	0	0	0	7	10	0	0	24	7	48
09:00 AM 09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15 AM 09:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30 AM 09:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45 AM 10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 AM 10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 AM 10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM 10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0

CALCULATED PEAK HOUR VOLUMES

AM PEAK HOUR	1	2	3	4	5	6	7	8	9	10	11	12	total	PHF
08:00 AM 09:00 AM	2	0	9	0	0	0	24	41	0	0	87	27	190	0.791667
PHF BY MOVEMENT	0.25	#DIV/0!	0.28	#DIV/0!	#DIV/0!	#DIV/0!	0.86	0.73	#DIV/0!	#DIV/0!	0.68	0.96		
PHF BY APPROACH	0.28			#DIV/0!			0.81			0.73				

27	87	0	^	6	0
12	11	10	<	5	0
<	v	>	v	4	0
2	1	^	<	^	>
0	2	>	7	8	9
9	3	v	24	41	0

LOCATION: LONG MEADOW RD. & IBM DRIVEWAY PROJECT: 1 KINGS DRIVE WATCHTOWER

DATE OF COUNT: 05/06/10 DAY: THURSDAY JCE JOB #: 1700 START TIME : 16:15 **PM**

ENTER 15-MINUTE COUNT VOLUMES BY MOVEMENT

		EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND					
PM PEAK HOUR		1	2	3	4	5	6	7	8	9	10	11	12	total		
04:15 PM	04:30 PM	6		5				1	18			10	1	41	X	
04:30 PM	04:45 PM	12		5				2	14			16	0	49	X	
04:45 PM	05:00 PM	11		10				1	14			11	2	49	X	
05:00 PM	05:15 PM	3		2				0	21			9	0	35	X	174
05:15 PM	05:30 PM	2		4				1	14			17	0	38	A	171
05:30 PM	05:45 PM	2		2				1	20			8	0	33	A	155
05:45 PM	06:00 PM	3		3				0	18			11	0	35	A	141
06:00 PM	06:15 PM	1		3				0	17			8	0	29	A	135
06:15 PM	06:30 PM	1		2				1	29			9	6	48	A	145
06:30 PM	06:45 PM													0	A	112
06:45 PM	07:00 PM													0	A	77
07:00 PM	07:15 PM													0	A	48
07:15 PM	07:30 PM													0	A	0
07:30 PM	07:45 PM													0	A	0
07:45 PM	08:00 PM													0	A	0
08:00 PM	08:15 PM													0	A	0

CALCULATED PEAK 15-MINUTE VOLUMES

04:15 PM	04:30 PM	6	0	5	0	0	0	1	18	0	0	10	1	41
04:30 PM	04:45 PM	12	0	5	0	0	0	2	14	0	0	16	0	49
04:45 PM	05:00 PM	11	0	10	0	0	0	1	14	0	0	11	2	49
05:00 PM	05:15 PM	3	0	2	0	0	0	0	21	0	0	9	0	35
05:15 PM	05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00 PM	06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 PM	06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 PM	06:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 PM	07:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00 PM	07:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 PM	07:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 PM	07:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 PM	08:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 PM	08:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0

3	46	0	^	6	0
12	11	10	<	5	0
<	v	>	v	4	0
32	1	^	<	^	>
0	2	>	7	8	9
22	3	v	4	67	0

CALCULATED PEAK HOUR VOLUMES

PM PEAK HOUR		1	2	3	4	5	6	7	8	9	10	11	12	total	PHF
04:15 PM	05:15 PM	32	0	22	0	0	0	4	67	0	0	46	3	174	0.887755
PHF BY MOVEMENT		0.67	#DIV/0!	0.55	#DIV/0!	#DIV/0!	#DIV/0!	0.50	0.80	#DIV/0!	#DIV/0!	0.72	0.38		
PHF BY APPROACH		0.64			#DIV/0!			0.85			0.77				

LOCATION: LONG MEADOW RD. & WOODLANDS RD. PROJECT: 1 KINGS DRIVE WATCHTOWER

DATE OF COUNT: 05/06/10 DAY: THURSDAY JCE JOB #: 1700 START TIME : 06:45 **AM**

ENTER 15-MINUTE COUNT VOLUMES BY MOVEMENT

	EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND					
AM PEAK HOUR	1	2	3	4	5	6	7	8	9	10	11	12	total		
06:45 AM 07:00 AM				5		0		7	1	0	8		21	A	
07:00 AM 07:15 AM				11		2		9	3	0	10		35	A	
07:15 AM 07:30 AM				19		2		13	0	1	21		56	X	
07:30 AM 07:45 AM				18		0		20	0	1	31		70	X	182
07:45 AM 08:00 AM				18		2		12	5	0	19		56	X	217
08:00 AM 08:15 AM				11		0		19	4	0	31		65	X	247
08:15 AM 08:30 AM				20		1		14	2	0	17		54	A	245
08:30 AM 08:45 AM				9		0		13	0	0	28		50	A	225
08:45 AM 09:00 AM				10		2		20	7	0	17		56	A	225
09:00 AM 09:15 AM													0	A	160
09:15 AM 09:30 AM													0	A	106
09:30 AM 09:45 AM													0	A	56
09:45 AM 10:00 AM													0	A	0
10:00 AM 10:15 AM													0	A	0
10:15 AM 10:30 AM													0	A	0
10:30 AM 10:45 AM													0	A	0

CALCULATED PEAK 15-MINUTE VOLUMES

06:45 AM 07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00 AM 07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM 07:30 AM	0	0	0	19	0	2	0	13	0	1	21	0	56
07:30 AM 07:45 AM	0	0	0	18	0	0	0	20	0	1	31	0	70
07:45 AM 08:00 AM	0	0	0	18	0	2	0	12	5	0	19	0	56
08:00 AM 08:15 AM	0	0	0	11	0	0	0	19	4	0	31	0	65
08:15 AM 08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM 08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM 09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00 AM 09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15 AM 09:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30 AM 09:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45 AM 10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 AM 10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 AM 10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM 10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0

CALCULATED PEAK HOUR VOLUMES

AM PEAK HOUR	1	2	3	4	5	6	7	8	9	10	11	12	total	PHF
07:15 AM 08:15 AM	0	0	0	66	0	4	0	64	9	2	102	0	247	0.882143
PHF BY MOVEMENT	#DIV/0!	#DIV/0!	#DIV/0!	0.87	#DIV/0!	0.50	#DIV/0!	0.80	0.45	0.50	0.82	#DIV/0!		
PHF BY APPROACH	#DIV/0!			0.83			0.79			0.81				

0	102	2	^	6	4
12	11	10	<	5	0
<	v	>	v	4	66
0	1	^	<	^	>
0	2	>	7	8	9
0	3	v	0	64	9

LOCATION: LONG MEADOW RD. & WOODLANDS RD. PROJECT: 1 KINGS DRIVE WATCHTOWER

DATE OF COUNT: 05/10/10 DAY: MONDAY JCE JOB #: 1700 START TIME : 16:00 **PM**

ENTER 15-MINUTE COUNT VOLUMES BY MOVEMENT

		EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND					
PM PEAK HOUR		1	2	3	4	5	6	7	8	9	10	11	12	total		
04:00 PM	04:15 PM				6		0		18	7	0	11		42	A	
04:15 PM	04:30 PM				4		0		14	9	0	26		53	X	
04:30 PM	04:45 PM				5		0		10	9	2	25		51	X	
04:45 PM	05:00 PM				9		1		20	10	2	14		56	X	202
05:00 PM	05:15 PM				4		1		21	13	2	23		64	X	224
05:15 PM	05:30 PM				8		0		19	7	0	14		48	A	219
05:30 PM	05:45 PM				3		2		17	17	1	7		47	A	215
05:45 PM	06:00 PM				13		1		20	12	0	10		56	A	215
06:00 PM	06:15 PM				3		0		25	12	1	12		53	A	204
06:15 PM	06:30 PM				1		0		10	10	0	13		34	A	190
06:30 PM	06:45 PM													0	A	143
06:45 PM	07:00 PM													0	A	87
07:00 PM	07:15 PM													0	A	34
07:15 PM	07:30 PM													0	A	0
07:30 PM	07:45 PM													0	A	0
07:45 PM	08:00 PM													0	A	0

CALCULATED PEAK 15-MINUTE VOLUMES

04:00 PM	04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	04:30 PM	0	0	0	4	0	0	0	14	9	0	26	0	53
04:30 PM	04:45 PM	0	0	0	5	0	0	0	10	9	2	25	0	51
04:45 PM	05:00 PM	0	0	0	9	0	1	0	20	10	2	14	0	56
05:00 PM	05:15 PM	0	0	0	4	0	1	0	21	13	2	23	0	64
05:15 PM	05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00 PM	06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 PM	06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 PM	06:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 PM	07:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00 PM	07:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 PM	07:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 PM	07:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 PM	08:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0

CALCULATED PEAK HOUR VOLUMES

PM PEAK HOUR		1	2	3	4	5	6	7	8	9	10	11	12	total	PHF
04:15 PM	05:15 PM	0	0	0	22	0	2	0	65	41	6	88	0	224	0.875
PHF BY MOVEMENT		#DIV/0!	#DIV/0!	#DIV/0!	0.61	#DIV/0!	0.50	#DIV/0!	0.77	0.79	0.75	0.85	#DIV/0!		
PHF BY APPROACH		#DIV/0!			0.60			0.78			0.87				

0	88	6	^	6	2
12	11	10	<	5	0
<	v	>	v	4	22
0	1	^	<	^	>
0	2	>	7	8	9
0	3	v	0	65	41

PROJECT: 1 KINGS DRIVE - WATCHTOWER

PROJ. # 1700

LOCATIONS:

LOCATION 1:

LONG MEADOW RD. & EAGLE VALLEY RD.

LOCATION 2:

LONG MEADOW RD. & IBM ENTRANCE

LOCATION 3:

RTE 17A & LONG MEADOW RD./CLINTON RD.

LOCATION 4:

LOCATION 5:

LOCATION 6:

PM COUNTS DONE:

DATE:

DAY:

SATURDAY COUNTS DONE:

DATE: June 5, 2010

DAY: SATURDAY

SUNDAY COUNTS DONE:

DATE:

DAY: SUNDAY

LOCATION:	LONG MEADOW RD. & EAGLE VALLEY RD.	PROJECT:	1 KINGS DRIVE - WATCHTOWER		
DATE OF COUNT:	06/05/10	DAY: SATURDAY	JCE JOB #: 1700	START TIME : 11:00	**SAT**

ENTER 15-MINUTE COUNT VOLUMES BY MOVEMENT

		EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND					
SAT PEAK HOUR		1	2	3	4	5	6	7	8	9	10	11	12	total		
11:00 AM	11:15 AM				0		1		15	0	0	12		28	A	
11:15 AM	11:30 AM				4		3		21	0	0	14		42	A	
11:30 AM	11:45 AM				1		2		11	0	2	18		34	A	
11:45 AM	12:00 PM				0		1		6	2	0	21		30	A	134
12:00 PM	12:15 PM				1		0		12	0	3	26		42	X	148
12:15 PM	12:30 PM				0		1		11	0	1	15		28	X	134
12:30 PM	12:45 PM				1		1		16	2	4	18		42	X	142
12:45 PM	01:00 PM				2		2		19	1	1	17		42	X	154
01:00 PM	01:15 PM													0	A	112
01:15 PM	01:30 PM													0	A	84
01:30 PM	01:45 PM													0	A	42
01:45 PM	02:00 PM													0	A	0
02:00 PM	02:15 PM													0	A	0
02:15 PM	02:30 PM													0	A	0
02:30 PM	02:45 PM													0	A	0
02:45 PM	03:00 PM													0	A	0

CALCULATED PEAK 15-MINUTE VOLUMES

11:00 AM	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	12:15 PM	0	0	0	1	0	0	0	12	0	3	26	0	42
12:15 PM	12:30 PM	0	0	0	0	0	1	0	11	0	1	15	0	28
12:30 PM	12:45 PM	0	0	0	1	0	1	0	16	2	4	18	0	42
12:45 PM	01:00 PM	0	0	0	2	0	2	0	19	1	1	17	0	42
01:00 PM	01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15 PM	01:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30 PM	01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45 PM	02:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00 PM	02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
02:15 PM	02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30 PM	02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45 PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0

CALCULATED PEAK HOUR VOLUMES

SAT PEAK HOUR		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**total**	**PHF**
12:00 PM	01:00 PM	0	0	0	4	0	4	0	58	3	9	76	0	154	0.916667
PHF BY MOVEMENT		#DIV/0!	#DIV/0!	#DIV/0!	0.50	#DIV/0!	0.50	#DIV/0!	0.76	0.38	0.56	0.73	#DIV/0!		
PHF BY APPROACH		#DIV/0!			0.50			0.76			0.73				

0	76	9	^	6	4
12	11	10	<	5	0
<	v	>	v	4	4
0	1	^	<	^	>
0	2	>	7	8	9
0	3	v	0	58	3

LOCATION: LONG MEADOW RD. & IBM ENTRANCE PROJECT: 1 KINGS DRIVE - WATCHTOWER

DATE OF COUNT: 06/05/10 DAY: SATURDAY JCE JOB #: 1700 START TIME : 13:00

SAT

ENTER 15-MINUTE COUNT VOLUMES BY MOVEMENT

		EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND					
SAT PEAK HOUR		1	2	3	4	5	6	7	8	9	10	11	12	total		
01:00 PM	01:15 PM	0		1				0	3			12	0	16	X	
01:15 PM	01:30 PM	0		0				1	14			5	1	21	X	
01:30 PM	01:45 PM	0		0				1	10			15	0	26	X	
01:45 PM	02:00 PM	1		1				0	10			14	2	28	X	91
02:00 PM	02:15 PM													0	A	75
02:15 PM	02:30 PM													0	A	54
02:30 PM	02:45 PM													0	A	28
02:45 PM	03:00 PM													0	A	0
03:00 PM	03:15 PM													0	A	0
03:15 PM	03:30 PM													0	A	0
03:30 PM	03:45 PM													0	A	0
03:45 PM	04:00 PM													0	A	0
04:00 PM	04:15 PM													0	A	0
04:15 PM	04:30 PM													0	A	0
04:30 PM	04:45 PM													0	A	0
04:45 PM	05:00 PM													0	A	0

CALCULATED PEAK 15-MINUTE VOLUMES

01:00 PM	01:15 PM	0	0	1	0	0	0	0	3	0	0	12	0	16
01:15 PM	01:30 PM	0	0	0	0	0	0	1	14	0	0	5	1	21
01:30 PM	01:45 PM	0	0	0	0	0	0	1	10	0	0	15	0	26
01:45 PM	02:00 PM	1	0	1	0	0	0	0	10	0	0	14	2	28
02:00 PM	02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
02:15 PM	02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30 PM	02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45 PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 PM	03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 PM	04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0

CALCULATED PEAK HOUR VOLUMES

SAT PEAK HOUR		1	2	3	4	5	6	7	8	9	10	11	12	total	PHF
01:00 PM	02:00 PM	1	0	2	0	0	0	2	37	0	0	46	3	91	0.8125
PHF BY MOVEMENT		0.25	#DIV/0!	0.50	#DIV/0!	#DIV/0!	#DIV/0!	0.50	0.66	#DIV/0!	#DIV/0!	0.77	0.38		
PHF BY APPROACH		0.38			#DIV/0!			0.65			0.77				

3	46	0	^	6	0
12	11	10	<	5	0
<	v	>	v	4	0
1	1	^	<	^	>
0	2	>	7	8	9
2	3	v	2	37	0

LOCATION: RTE 17A & LONG MEADOW RD./CLINTON RD. PROJECT: 1 KINGS DRIVE - WATCHTOWER

DATE OF COUNT: 06/05/10 DAY: SATURDAY JCE JOB #: 1700 START TIME : 11:00

SAT

ENTER 15-MINUTE COUNT VOLUMES BY MOVEMENT

		EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND					
SAT PEAK HOUR		1	2	3	4	5	6	7	8	9	10	11	12	total		
11:00 AM	11:15 AM	0	41	0	5	19	1	3	0	2	1	0	2	74	A	
11:15 AM	11:30 AM	0	40	1	3	30	1	3	0	4	2	0	0	84	A	
11:30 AM	11:45 AM	0	36	1	4	46	3	4	0	5	1	1	1	102	A	
11:45 AM	12:00 PM	1	62	1	10	43	0	2	1	6	2	0	0	128	A	388
12:00 PM	12:15 PM	1	43	2	3	43	1	3	0	2	2	0	1	101	A	415
12:15 PM	12:30 PM	0	47	3	2	44	2	5	0	8	0	0	1	112	X	443
12:30 PM	12:45 PM	1	49	2	5	59	3	2	1	8	1	0	0	131	X	472
12:45 PM	01:00 PM	0	43	6	5	48	2	3	1	7	1	0	0	116	X	460
01:00 PM	01:15 PM	2	46	2	6	61	4	2	0	7	2	0	0	132	X	491
01:15 PM	01:30 PM	0	38	3	2	55	1	3	0	3	1	0	0	106	A	485
01:30 PM	01:45 PM	0	37	7	6	46	1	1	0	6	5	1	0	110	A	464
01:45 PM	02:00 PM	0	39	4	8	44	1	6	1	4	2	1	0	110	A	458
02:00 PM	02:15 PM													0	A	326
02:15 PM	02:30 PM													0	A	220
02:30 PM	02:45 PM													0	A	110
02:45 PM	03:00 PM													0	A	0

CALCULATED PEAK 15-MINUTE VOLUMES

11:00 AM	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	12:30 PM	0	47	3	2	44	2	5	0	8	0	0	1	112
12:30 PM	12:45 PM	1	49	2	5	59	3	2	1	8	1	0	0	131
12:45 PM	01:00 PM	0	43	6	5	48	2	3	1	7	1	0	0	116
01:00 PM	01:15 PM	2	46	2	6	61	4	2	0	7	2	0	0	132
01:15 PM	01:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30 PM	01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45 PM	02:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00 PM	02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
02:15 PM	02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30 PM	02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45 PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0

1	0	4	^	6	11
12	11	10	<	5	212
<	v	>	v	4	18
3	1	^	<	^	>
185	2	>	7	8	9
13	3	v	12	2	30

CALCULATED PEAK HOUR VOLUMES

SAT PEAK HOUR		1	2	3	4	5	6	7	8	9	10	11	12	total	PHF
12:15 PM	01:15 PM	3	185	13	18	212	11	12	2	30	4	0	1	491	0.929924
PHF BY MOVEMENT		0.38	0.94	0.54	0.75	0.87	0.69	0.60	0.50	0.94	0.50	#DIV/0!	0.25		
PHF BY APPROACH			0.97			0.85			0.85			0.63			

APPENDIX "D"

LEVELS OF SERVICE STANDARDS

LEVEL OF SERVICE FOR SIGNALIZED INTERSECTIONS

Level of Service (LOS) for signalized intersections is defined in terms of control delay, which is a measure of driver discomfort, frustration, fuel consumption, and increased travel time. The delay experienced by a motorist is made up of a number of factors that relate to control, geometrics, traffic, and incidents. Specifically, LOS criteria for traffic signals are stated in terms of the average control delay per vehicle, typically for a 15-minute analysis period. The criteria are given in Exhibit 16-2 from the 2000 Highway Capacity Manual published by the Transportation Research Board.

EXHIBIT 16-2

LEVEL OF SERVICE FOR SIGNALIZED INTERSECTIONS

LEVEL OF SERVICE (LOS)	CONTROL DELAY PER VEHICLE (S/VEH)
A	≤10
B	>10-20
C	>20-35
D	>35-55
E	>55-80
F	>80

LEVEL OF SERVICE A describes operations with low control delay, up to 10 seconds per vehicle (s/veh). This LOS occurs when progression is extremely favorable and most vehicles arrive during the green phase. Many vehicles do not stop at all. Short cycle lengths may tend to contribute to low delay values.

LEVEL OF SERVICE B describes operations with control delay greater than 10 and up to 20 seconds per vehicle (s/veh). This level generally occurs with good progression, short cycle lengths, or both. More vehicles stop than with Level of Service "A", causing higher levels of delay.

LEVEL OF SERVICE C describes operations with control delay greater than 20 and up to 35 seconds per vehicle (s/veh). These higher delays may result from only fair progression, longer cycle lengths, or both. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant at this level, though many still pass through the intersection without stopping.

LEVEL OF SERVICE D describes operations with control delay greater than 35 and up to 55 seconds per vehicle (s/veh). At Level of Service D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, and high v/c ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.

LEVEL OF SERVICE E describes operations with control delay greater than 55 and up to 80 seconds per vehicle (s/veh). This is considered to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths, and high v/c ratios. Individual cycle failures are frequent.

LEVEL OF SERVICE F describes operations with control delay in excess of 80 seconds per vehicle (s/veh). This level is considered unacceptable to most drivers, often occurs with oversaturation, that is, when arrival flow rates exceed the capacity of the groups. It may also occur at high v/c ratios with many individual cycle failures. Poor progression and long cycle lengths may also contribute significantly to high delay levels.

LEVEL OF SERVICE CRITERIA FOR UNSIGNALIZED INTERSECTIONS

The Level of Service (LOS) for unsignalized intersections is determined by the computed or measured control delay and is defined for each minor movement. Control delay is defined as the total elapsed time a vehicle stops at the end of the queue to the time the vehicle departs from the stop line. This total elapsed time includes the time required for the vehicle to travel from the last-in-queue position to the first-in-queue position, including deceleration of vehicles from free-flow speed to speed of vehicles in queue. Average control delay for any particular minor movement is a function of the capacity of the approach and the degree of saturation. The Level of Service Criteria are given in Exhibit 17-2 from the 2000 Highway Capacity Manual published by the Transportation Research Board.

EXHIBIT 17-2

LEVEL OF SERVICE FOR CRITERIA
FOR UNSIGNALIZED INTERSECTIONS

LEVEL OF SERVICE (LOS)	AVERAGE CONTROL DELAY (S/VEH)
A	0-10
B	>10-15
C	>15-25
D	>25-35
E	>35-50
F	>50

The Level of Service Criteria for unsignalized intersections are somewhat different from the criteria for signalized intersections.

APPENDIX "E"

ACCIDENT DATA

TABLE NO. A

ACCIDENT REPORT

NODE/LINK	LOCATION	DATE	TIME	TRAFFIC CONTROL	ACCIDENT CLASS *	# OF VEHICLES - INJURIES	LIGHT CONDITION	ROAD CONDITION	WEATHER	MANNER OF COLLISION	APPARENT CONTRIBUTING FACTORS
STERLING MINE ROAD (C.R. 72)											
605 Meters South of Long Meadow Road		11/24/07	7:06 PM	NONE	PDO	1-0	DARK-ROAD UNLIGHTED	DRY	CLEAR	OTHER	ANIMAL'S ACTION
At Intersection with Shepherd Pond Road		12/02/07	5:06 PM	NO PASSING ZONE	N/A	1-0	DAYLIGHT	SNOW/ICE	SNOW	OTHER	PAVEMENT SLIPPERY
24 Meters South of Walkway		02/29/08	4:06 PM	NONE	PDO	1-0	DAYLIGHT	DRY	CLOUDY	OTHER	UNKNOWN
91 Meters West of Iris Lane		08/22/08	5:06PM	NO PASSING ZONE	PD & I	2-2	DAYLIGHT	DRY	CLEAR	SIDESWIPE	FAILURE TO KEEP RIGHT
152 Meters South of Route 84		12/02/08	8:06 AM	NO PASSING ZONE	PD & I	1-1	DAYLIGHT	SNOW/ICE	CLOUDY	OTHER	PAVEMENT SLIPPERY
61 Meters East of Eagle Valley Road		01/05/09	6:06 AM	NONE	I	1-1	DARK-ROAD UNLIGHTED	WET	CLOUDY	OTHER	PAVEMENT SLIPPERY
322 Meters South of Long Meadow Road		04/20/09	12:06 PM	NONE	PDO	2-0	DAYLIGHT	WET	RAIN	REAR END	DRIVER INATTENTION, ALCOHOL INVOLVEMENT, PASSENGER INVOLVEMENT
N/A		04/22/09	4:06 PM	TRAFFIC SIGNAL	N/A	1-0	DAYLIGHT	DRY	CLEAR	OTHER	OUTSIDE CAR DISTRACTION
N/A		04/25/09	3:06 PM	NONE	PDO	2-0	DAYLIGHT	DRY	CLEAR	REAR END	DRIVER INATTENTION
N/A		06/13/09	3:06 PM	NONE	N/A	2-0	DAYLIGHT	WET	RAIN	SIDESWIPE	PAVEMENT SLIPPERY
At Intersection with Iris Lane		06/19/09	11:06 AM	NONE	PDO	2-0	DAYLIGHT	DRY	CLEAR	LEFT TURN	FAILURE TO YIELD RIGHT OF WAY
		09/17/09	7:06 AM	STOPPED SCHOOL BUS W/RED LIGHT FLSH	PDO	2-0	DAYLIGHT	DRY	CLEAR	REAR END	VIEW OBSTRUCTED/LIMITED, REACTION TO OTHER UNINVOLVED VEHICLE
At Intersection with Eagle Valley Road		07/02/09	7:06 AM	STOP SIGN	PDO	2-0	DAYLIGHT	WET	CLOUDY	LEFT TURN	FAILURE TO YIELD RIGHT OF WAY
At Intersection with Route 84		11/14/09	8:06 AM	TRAFFIC SIGNAL	PD & I	2-1	DAYLIGHT	WET	RAIN	REAR END	PAVEMENT SLIPPERY, DRIVER INATTENTION
30 Meters South of Long Meadow Road		02/13/10	6:06 PM	NONE	PDO	2-0	DARK-ROAD UNLIGHTED	DRY	CLEAR	REAR END	ANIMAL'S ACTION, FOLLOWING TOO CLOSELY
61 Meters South of Route 84		02/25/10	12:06 PM	NONE	N/A	1-0	DAYLIGHT	SNOW/ICE	SNOW	OTHER	PAVEMENT SLIPPERY
LONG MEADOW RD.											
At Intersection with Sterling Mine Road		09/13/08	11:06 PM	UNKNOWN	PDO	1-0	DARK-ROAD UNLIGHTED	WET	CLOUDY	OTHER	PAVEMENT SLIPPERY
		11/26/08	12:06 AM	NONE	PDO	1-0	DARK-ROAD UNLIGHTED	SNOW/ICE	FOG/SMOG/ SMOKE	OTHER	UNSAFE SPEED, ANIMAL'S ACTION
		01/31/10	9:06 AM	TRAFFIC SIGNAL	PDO	1-0	DAYLIGHT	DRY	CLEAR	OTHER	DRIVER INEXPERIENCE, UNSAFE SPEED

* PDO = PROPERTY DAMAGE ONLY I = INJURY F= FATALITY

Job #1700

TABLE NO. A (CONTINUED)

ACCIDENT REPORT

NODE/LINK	LOCATION	DATE	TIME	TRAFFIC CONTROL	ACCIDENT CLASS *	# OF VEHICLES - INJURIES	LIGHT CONDITION	ROAD CONDITION	WEATHER	MANNER OF COLLISION	APPARENT CONTRIBUTING FACTORS
LONG MEADOW ROAD (C.R. 84)											
8 Meters North of Woodlands Drive		03/08/07	1:06 AM	NONE	PD & I	1-1	DARK-ROAD UNLIGHTED	DRY	CLEAR	OTHER	ANIMAL'S ACTION, ALCOHOL INVOLVEMENT
At Intersection with Warwick Brook Road		05/21/07	7:06 PM	NONE	PDO	1-0	DAYLIGHT	DRY	CLEAR	OTHER	ANIMAL'S ACTION
N/A		12/02/07	4:06 PM	NONE	PDO	1-0	DUSK	SNOW/ICE	SLEET/HAIL/ FREEZING RAIN	OTHER	PAVEMENT SLIPPERY, UNSAFE SPEED
N/A		07/20/08	8:06 AM	NONE	PDO	1-0	DAYLIGHT	DRY	CLOUDY	OTHER	DRUGS (ILLEGAL), ALCOHOL INVOLVEMENT
At Intersection with Route 17A		09/17/08	6:06 AM	UNKNOWN	PDO	1-0	UNKNOWN	UNKNOWN	UNKNOWN	OTHER	UNKNOWN
30 Meters South of Route 17A		09/28/08	4:06 PM	NONE	PDO	1-0	DAYLIGHT	WET	RAIN	OTHER	ANIMAL'S ACTION, PAVEMENT SLIPPERY
161 Meters North of Ironwood Drive		09/29/08	6:06 AM	NONE	PDO	1-0	DAYLIGHT	DRY	CLEAR	OTHER	ANIMAL'S ACTION
N/A		10/12/08	3:06 PM	NONE	FATAL	2-0-2	DAYLIGHT	DRY	CLEAR	RIGHT ANGLE	TURNING IMPROPER, UNSAFE SPEED
N/A		02/15/09	11:06 AM	NONE	PDO	1-0	DAYLIGHT	DRY	CLEAR	OTHER	ALCOHOL INVOLVEMENT
N/A		02/20/09	9:06 PM	NONE	N/A	1-0	DARK-ROAD LIGHTED	DRY	CLEAR	OTHER	ANIMAL'S ACTION
ROUTE 17A											
15 Meters South of Clinton Road											
17A 8301 1231		8/24/2007	1:06 PM	NONE	PDO	2-1	DAYLIGHT	DRY	CLOUDY	OVERTAKING	ANIMAL'S ACTION
17A 8301 1231		8/24/2007	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
At Intersection with Sylvan Way											
17A 8301 1231		09/22/07	10:06 AM	NONE	PDO	2-0	DAYLIGHT	DRY	CLEAR	REAR END	DRIVER INATTENTION, UNSAFE LANE CHANGE, PASSENGER DISTRACTION
N/A											
17A 8301 1231		08/15/08	4:06 AM	NONE	N/A	1-0	DARK-ROAD UNLIGHTED	DRY	CLEAR	OTHER	ANIMAL'S ACTION
15 Meters South of Long Meadow Road											
17A 8301 1231		12/26/08	1:06 AM	NONE	N/A	1-0	DARK-ROAD UNLIGHTED	DRY	CLEAR	OTHER	ANIMAL'S ACTION, DRIVER INATTENTION
434 Meters East of Roosevelt Avenue		06/11/09	3:06 PM	NONE	PD & I	2-2	DAYLIGHT	WET	RAIN	RIGHT ANGLE	FAILURE TO YIELD RIGHT OF WAY

*PDO = PROPERTY DAMAGE ONLY I = INJURY F = FATALITY

TABLE NO. A (CONTINUED)

ACCIDENT REPORT

NODE/LINK	LOCATION	DATE	TIME	TRAFFIC CONTROL	ACCIDENT CLASS *	# OF VEHICLES - INJURIES	LIGHT CONDITION	ROAD CONDITION	WEATHER	MANNER OF COLLISION	APPARENT CONTRIBUTING FACTORS
LONG MEADOW ROAD (C.R. 84)											
44 Meters South of Unnamed Street		07/05/09	11:06 AM	NONE	PD & I	2-2	DAYLIGHT	WET	RAIN	RIGHT ANGLE	ANIMAL'S ACTION
61 Meters South of Sterling Mine Road		08/09/09	9:06 AM	NO PASSING ZONE	PDO	1-0	DAYLIGHT	WET	CLOUDY	OTHER	STEERING FAILURE
91 Meters South of Route 17A		09/30/09	N/A	UNKNOWN	PDO	1-0	DARK-ROAD UNLIGHTED	DRY	CLEAR	OTHER	UNKNOWN
360 Meters East of Unnamed Street		10/29/09	5:06 PM	NONE	N/A	1-0	DUSK	DRY	CLEAR	OTHER	ANIMAL'S ACTION
142 Meters West of Unnamed Street		11/07/09	4:06 PM	NONE	N/A	1-0	DARK-ROAD UNLIGHTED	DRY	CLEAR	OTHER	ANIMAL'S ACTION
259 Meters East of Unnamed Street		11/15/09	6:06 PM	NONE	PDO	1-0	DARK-ROAD UNLIGHTED	DRY	CLOUDY	OTHER	ANIMAL'S ACTION
N/A		12/05/09	4:06 PM	NONE	PDO	1-0	DAYLIGHT	SNOW/ICE	SNOW	OTHER	PAVEMENT SLIPPERY
N/A		12/13/09	5:06 PM	NONE	PDO	1-0	DARK-ROAD LIGHTED	SNOW/ICE	SLEET/HAIL /FREEZING RAIN	OTHER	PAVEMENT SLIPPERY
172 Meters South of Sterling Mine Road		01/04/10	3:06 AM	NONE	PDO	1-0	DARK-ROAD UNLIGHTED	DRY	CLEAR	OTHER	ANIMAL'S ACTION
N/A		01/20/10	12:06 AM	NONE	PD & I	1-1	DARK-ROAD UNLIGHTED	SNOW/ICE	CLEAR	OTHER	PAVEMENT SLIPPERY

*PDO = PROPERTY DAMAGE ONLY I = INJURY F = FATALITY

TABLE A-2

Roadway	Year	Total Accidents	Segment Length (Miles)	AADT (VPD)	Average Rate (ACC/MVM)	State Wide Average (ACC/MVM)
Sterling Mine Road	2007	2	1.65	8,998	0.37	2.14
	2008	3			0.55	2.14
	2009	9			1.66	2.14
	2010	2			0.37	2.14
Long Meadow Road	2007	3	7.85	2,249	0.47	2.14
	2008	7			1.09	2.14
	2009	10			1.55	2.14
	2010	3			0.47	2.14
NYS Route 17A	2007	3	0.84	8,152	1.20	1.74
	2008	2			0.80	1.74
	2009	1			0.40	1.74
	2010	0			0.00	1.74

Note:

1) State Wide Averages for Accident Rates were obtained from information provided by NYSDOT. The average rate for Free Access Controlled, Rural Functional Class, Undivided 2 Lane Roadways was used for Sterling Mine Road and Long Meadow Road. The average rate for Partial Control of Access, Rural Functional Class, Divided 4 Lane Roadways was used for NYS Route 17A.

TABLE A-3

Roadway	Accident Type[1]	Year				Total
		2007	2008	2009	2010	
Long Meadow Road (C.R. 84)	F		1			**1**
	N/A			3		**3**
	PD & I	1		1	1	**3**
	PDO	2	6	6	2	**16**
Subtotal		***3***	***7***	***10***	***3***	***23***
Route 17A	N/A	1	2			**3**
	PD & I			1		**1**
	PDO	2				**2**
Subtotal		***3***	***2***	***1***	***0***	***6***
Sterling Mine Road (C.R. 72)	I			1		**1**
	N/A	1		2	1	**4**
	PD & I		2	1		**3**
	PDO	1	1	5	1	**8**
Subtotal		***2***	***3***	***9***	***2***	***16***
Total		**8**	**12**	**20**	**5**	**45**

Notes:
(1) Accident Types:
F = Fatality
N/A = Not Available
PD = Property Damage
PDO = Property Damage Only
I = Injury

Accident Location Information System (ALIS)

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County Interim Accident Summary

5467 Sterling mine Rd from Rockland County Border to NJ Border

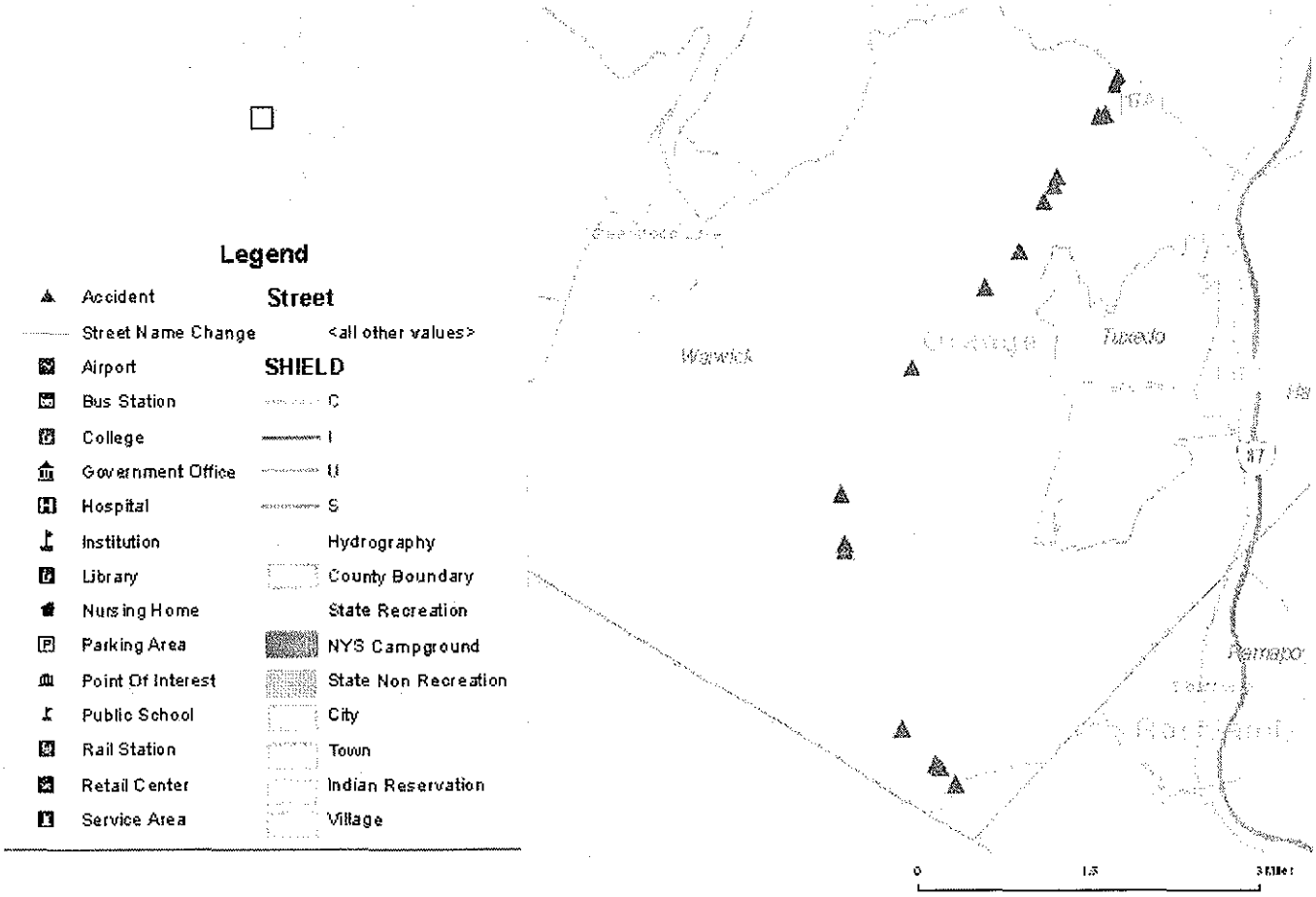
Data in this report covers the period Mar 01, 2007 - Feb 28, 2010

Complete Accident data from NYSDMV is only available thru 2/28/2010

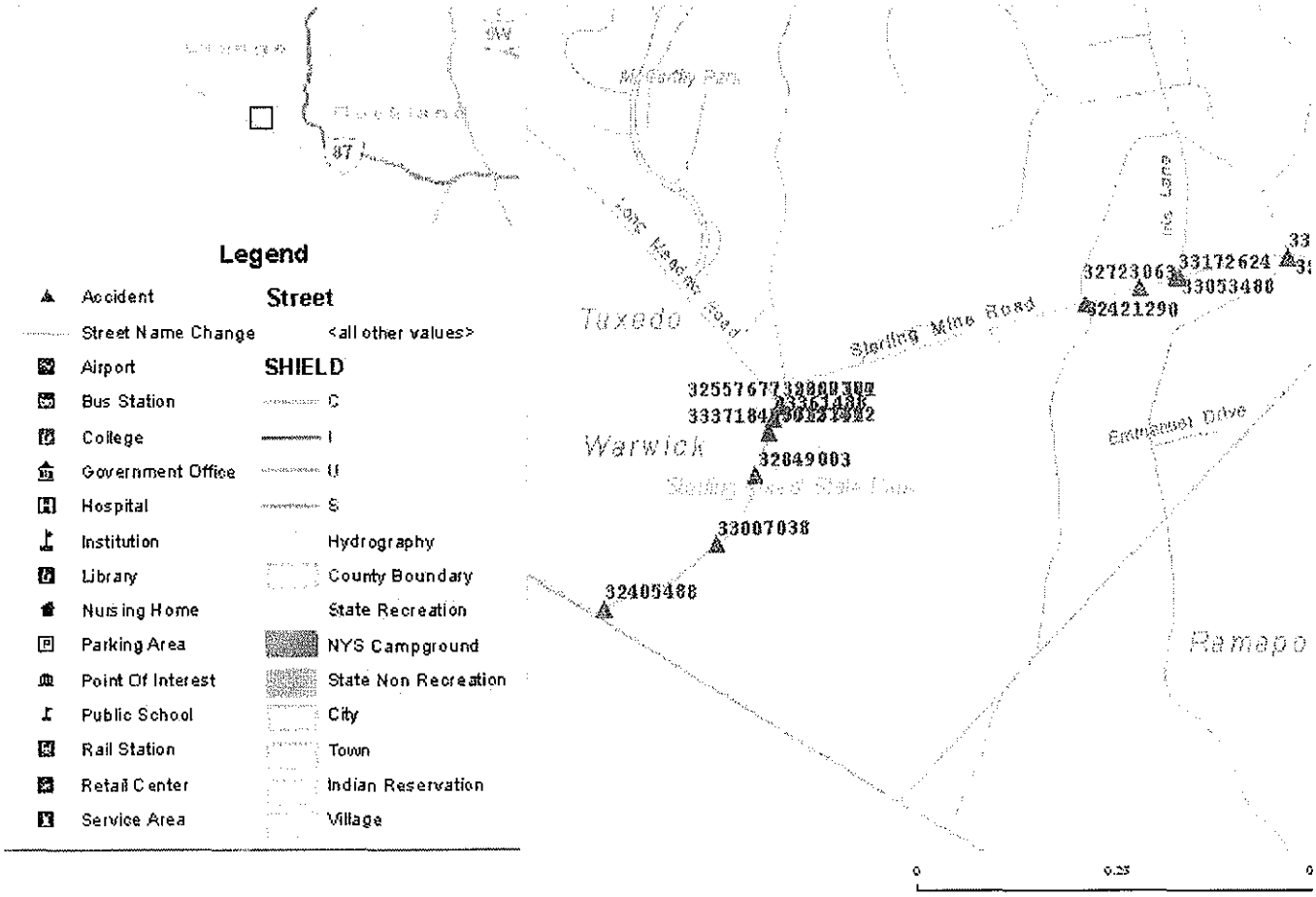
Number Of Accidents

COUNTY	TOTAL	AT INT.	FTL	INJ	PDO	N/R	WET ROAD	FIXED OBJ	PED & BIKE	TRUCK	LIGHT CONDITION DWN/DSK	DAY	NIGHT
ORANGE	19	7	0	4	11	4	6	8	0	1	0	14	5
Total	19	7	0	4	11	4	6	8	0	1	0	14	5

5467 Long Meadow Rd from Sterling Mine Rd to NYS 17A



5467 Sterling mine Rd from Rockland County Border to NJ B



Accident Location Information System (ALIS)

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Accident Verbal Description Report

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5467 Sterling mine Rd from Rockland County Border to NJ Border

Data in this report covers the period Mar 01, 2007 - Feb 28, 2010

Complete Accident data from NYSDMV is only available thru 2/28/2010

County: Orange Muni: Tuxedo(T) Ref. Marker: Street: COUNTY HWY 72
605 Meters South of LONG MEADOW RD

11/24/2007 Sat 19:06 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2007-32405488**
Accident Class: PROPERTY DAMAGE Police Agency: Num of Veh: 1
Type Of Accident: COLLISION WITH DEER Traffic Control: NONE
Manner of Collision: OTHER Weather: CLEAR
Road Surface Condition: DRY Road Char.: STRAIGHT/ GRADE Light Condition: DARK-ROAD UNLIGHTED
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration: NJ
Num of Occupants: 4 Driver's Age: 19 Sex: F Citation Issued: N
Direction of Travel: WEST Public Property Damage: N School Bus Involved: N
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: NOT APPLICABLE, ANIMAL'S ACTION

County: Orange Muni: Tuxedo(T) Ref. Marker: Street: [Route] 72
AT INTERSECTION WITH SHEPHERD POND RD

12/2/2007 Sun 17:06 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2007-32421290**
Accident Class: NON-REPORTABLE Police Agency: Num of Veh: 1
Type Of Accident: COLLISION WITH GUIDE RAIL Traffic Control: NO PASSING ZONE
Manner of Collision: OTHER Weather: SNOW
Road Surface Condition: SNOW/ICE Road Char.: STRAIGHT/ GRADE Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration: NJ
Num of Occupants: 1 Driver's Age: 46 Sex: M Citation Issued: N
Direction of Travel: WEST Public Property Damage: N School Bus Involved: N
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: PAVEMENT SLIPPERY, NOT APPLICABLE

County: Orange Muni: Tuxedo(T) Ref. Marker: Street: STERLING MINE RD
24 Meters South of WALKWAY

2/29/2008 Fri 16:06 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2008-32557677**
Accident Class: PROPERTY DAMAGE Police Agency: Num of Veh: 1
Type Of Accident: COLLISION WITH TREE Traffic Control: NONE
Manner of Collision: OTHER Weather: CLOUDY
Road Surface Condition: DRY Road Char.: CURVE AND LEVEL Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 TRUCK Registered Weight: State of Registration: NJ
Num of Occupants: 1 Driver's Age: 38 Sex: M Citation Issued: N
Direction of Travel: NORTH-WEST Public Property Damage: N School Bus Involved: N
Pre-Accd Action: AVOIDING OBJECT IN ROADWAY
Apparent Factors: UNKNOWN, UNKNOWN

Accident Location Information System (ALIS)

Accident Verbal Description Report

5467 Sterling mine Rd from Rockland County Border to NJ Border

Data in this report covers the period Mar 01, 2007 - Feb 28, 2010

Complete Accident data from NYSDMV is only available thru 2/28/2010

County: Orange Muni: Tuxedo(T) Ref. Marker: Street: STERLING MINE RD
91 Meters West of IRIS LN

8/22/2008 Fri 17:06 PM Persons Killed: 0 Persons Injured: 2 Extent of Injuries: AC **Case: 2008-32723063**
Accident Class: PROPERTY DAMAGE AND INJURY Police Agency: Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: NO PASSING ZONE
Manner of Collision: SIDESWIPE Weather: CLEAR
Road Surface Condition: DRY Road Char.: STRAIGHT AT HILLCREST Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration: NJ
Num of Occupants: 1 Driver's Age: 48 Sex: M Citation Issued: N
Direction of Travel: NORTH Public Property Damage: N School Bus Involved: N
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: FAILURE TO KEEP RIGHT, NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: 3300 State of Registration: NY
Num of Occupants: 1 Driver's Age: 18 Sex: F Citation Issued: N
Direction of Travel: EAST Public Property Damage: N School Bus Involved: N
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: FAILURE TO KEEP RIGHT, NOT APPLICABLE

County: Orange Muni: Tuxedo(T) Ref. Marker: Street: LONG MEADOW RD
AT INTERSECTION WITH Sterling Mine Rd

9/13/2008 Sat 23:06 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2008-32869777**
Accident Class: PROPERTY DAMAGE Police Agency: Num of Veh: 1
Type Of Accident: COLL. W/EARTH ELE./ROCK CUT/DITCH Traffic Control: UNKNOWN
Manner of Collision: OTHER Weather: CLOUDY
Road Surface Condition: WET Road Char.: CURVE AND LEVEL Light Condition: DARK-ROAD UNLIGHTED
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration: NJ
Num of Occupants: 2 Driver's Age: 17 Sex: F Citation Issued: N
Direction of Travel: SOUTH-WEST Public Property Damage: N School Bus Involved: N
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: PAVEMENT SLIPPERY, UNKNOWN

County: Orange Muni: Tuxedo(T) Ref. Marker: Street: LONG MEADOW RD
AT INTERSECTION WITH STERLING MINE RD

11/26/2008 Wed 00:06 AM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2008-32890301**
Accident Class: PROPERTY DAMAGE Police Agency: Num of Veh: 1
Type Of Accident: COLL. W/EARTH ELE./ROCK CUT/DITCH Traffic Control: NONE
Manner of Collision: OTHER Weather: FOG/SMOG/SMOKE
Road Surface Condition: SNOW/ICE Road Char.: STRAIGHT AND LEVEL Light Condition: DARK-ROAD UNLIGHTED
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Accident Location Information System (ALIS)

Accident Verbal Description Report

5467 Sterling mine Rd from Rockland County Border to NJ Border

Data in this report covers the period Mar 01, 2007 - Feb 28, 2010

Complete Accident data from NYSDMV is only available thru 2/28/2010

County: Orange Muni: Tuxedo(T) Ref. Marker: Street: LONG MEADOW RD
***** CONTINUED

Veh :1 CAR/VAN/PICKUP Registered Weight: 2654 State of Registration: NY
Num of Occupants: 2 Driver's Age: 20 Sex: F Citation Issued: N
Direction of Travel: SOUTH Public Property Damage: N School Bus Involved: N
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: UNSAFE SPEED, ANIMAL'S ACTION

County: Orange Muni: Tuxedo(T) Ref. Marker: Street: [Route] 72
152 Meters South of [Route] 84

12/2/2008 Tue 08:06 AM Persons Killed: 0 Persons Injured: 1 Extent of Injuries: C **Case: 2008-32849003**
Accident Class: PROPERTY DAMAGE AND INJURY Police Agency: Num of Veh: 1
Type Of Accident: COLLISION WITH TREE Traffic Control: NO PASSING ZONE
Manner of Collision: OTHER Weather: CLOUDY
Road Surface Condition: SNOW/ICE Road Char.: CURVE AND LEVEL Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration: NJ
Num of Occupants: 1 Driver's Age: 39 Sex: M Citation Issued: N
Direction of Travel: WEST Public Property Damage: N School Bus Involved: N
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: PAVEMENT SLIPPERY, NOT APPLICABLE

County: Orange Muni: Tuxedo(T) Ref. Marker: Street: STERLING MINE RD
61 Meters East of EAGLE VALLEY RD

1/5/2009 Mon 06:06 AM Persons Killed: 0 Persons Injured: 1 Extent of Injuries: C **Case: 2009-32913938**
Accident Class: INJURY Police Agency: Num of Veh: 1
Type Of Accident: COLL. W/EARTH ELE./ROCK CUT/DITCH Traffic Control: NONE
Manner of Collision: OTHER Weather: CLOUDY
Road Surface Condition: WET Road Char.: STRAIGHT/ GRADE Light Condition: DARK-ROAD UNLIGHTED
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 OTHER Registered Weight: State of Registration: NJ
Num of Occupants: 1 Driver's Age: 35 Sex: M Citation Issued: N
Direction of Travel: SOUTH-EAST Public Property Damage: N School Bus Involved: N
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: OTHER (VEHICLE), PAVEMENT SLIPPERY

County: Orange Muni: Tuxedo(T) Ref. Marker: Street: STERLING MINE RD
322 Meters South of LONG MEADOW RD

4/20/2009 Mon 12:06 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2009-33007038**
Accident Class: PROPERTY DAMAGE Police Agency: Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: NONE
Manner of Collision: REAR END Weather: RAIN
Road Surface Condition: WET Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Accident Location Information System (ALIS)

Accident Verbal Description Report

5467 Sterling mine Rd from Rockland County Border to NJ Border

Data in this report covers the period Mar 01, 2007 - Feb 28, 2010

Complete Accident data from NYSDMV is only available thru 2/28/2010

County: Orange Muni: Tuxedo(T) Ref. Marker: Street: STERLING MINE RD
***** CONTINUED

Veh :2 CAR/VAN/PICKUP Registered Weight: State of Registration: NJ
Num of Occupants: 2 Driver's Age: 19 Sex: M Citation Issued: N
Direction of Travel: WEST Public Property Damage: N School Bus Involved: N
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: DRIVER INATTENTION, NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration: NJ
Num of Occupants: 2 Driver's Age: 47 Sex: F Citation Issued: Y
Direction of Travel: WEST Public Property Damage: N School Bus Involved: N
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: ALCOHOL INVOLVEMENT, PASSENGER DISTRACTION

County: Orange Muni: Tuxedo(T) Ref. Marker: Street: [Route] 72
4/22/2009 Wed 16:06 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2009-33012741**
Accident Class: NON-REPORTABLE Police Agency: Num of Veh: 1
Type Of Accident: COLLISION WITH TREE Traffic Control: TRAFFIC SIGNAL
Manner of Collision: OTHER Weather: CLEAR
Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration: NJ
Num of Occupants: 2 Driver's Age: 71 Sex: M Citation Issued: N
Direction of Travel: WEST Public Property Damage: N School Bus Involved: N
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: OUTSIDE CAR DISTRACTION, NOT APPLICABLE

County: Orange Muni: Tuxedo(T) Ref. Marker: Street: STERLING MINE RD
4/25/2009 Sat 15:06 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2009-32996129**
Accident Class: PROPERTY DAMAGE Police Agency: Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: NONE
Manner of Collision: REAR END Weather: CLEAR
Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration: NJ
Num of Occupants: 1 Driver's Age: 30 Sex: M Citation Issued: N
Direction of Travel: WEST Public Property Damage: N School Bus Involved: N
Pre-Accd Action: MAKING LEFT TURN
Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: State of Registration: NJ
Num of Occupants: 3 Driver's Age: 45 Sex: M Citation Issued: N
Direction of Travel: WEST Public Property Damage: N School Bus Involved: N
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: NOT APPLICABLE, DRIVER INATTENTION

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Accident Verbal Description Report

5467 Sterling mine Rd from Rockland County Border to NJ Border

Data in this report covers the period Mar 01, 2007 - Feb 28, 2010

Complete Accident data from NYSDMV is only available thru 2/28/2010

County: Orange Muni: Tuxedo(T) Ref. Marker: Street: [Route] 72

6/13/2009 Sat 15:06 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2009-33068029**
Accident Class: NON-REPORTABLE Police Agency: Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: NONE
Manner of Collision: SIDESWIPE Weather: RAIN
Road Surface Condition: WET Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration: NY
Num of Occupants: 2 Driver's Age: 71 Sex: M Citation Issued: N
Direction of Travel: EAST Public Property Damage: N School Bus Involved: N
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: OTHER (VEHICLE), NOT APPLICABLE

Veh :2 OTHER Registered Weight: State of Registration:
Num of Occupants: 1 Driver's Age: Sex: U Citation Issued: N
Direction of Travel: WEST Public Property Damage: N School Bus Involved: N
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: UNKNOWN, PAVEMENT SLIPPERY

County: Orange Muni: Tuxedo(T) Ref. Marker: Street: STERLING MINE RD
AT INTERSECTION WITH IRIS LN

6/19/2009 Fri 11:06 AM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2009-33053488**
Accident Class: PROPERTY DAMAGE Police Agency: Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: NONE
Manner of Collision: LEFT TURN (AGAINST OTHER CAR) Weather: CLEAR
Road Surface Condition: DRY Road Char.: STRAIGHT AT HILLCREST Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration: NJ
Num of Occupants: 1 Driver's Age: 53 Sex: M Citation Issued: N
Direction of Travel: WEST Public Property Damage: N School Bus Involved: N
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: State of Registration: NY
Num of Occupants: 1 Driver's Age: 17 Sex: M Citation Issued: N
Direction of Travel: SOUTH-EAST Public Property Damage: N School Bus Involved: N
Pre-Accd Action: MAKING LEFT TURN
Apparent Factors: FAILURE TO YIELD RIGHT OF WAY, NOT APPLICABLE

County: Orange Muni: Tuxedo(T) Ref. Marker: Street: [Route] 72
AT INTERSECTION WITH EAGLE VALLEY RD

7/2/2009 Thu 07:06 AM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2009-33076449**
Accident Class: PROPERTY DAMAGE Police Agency: Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: STOP SIGN
Manner of Collision: LEFT TURN (AGAINST OTHER CAR) Weather: CLOUDY
Road Surface Condition: WET Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Accident Location Information System (ALIS)

Accident Verbal Description Report

5467 Sterling mine Rd from Rockland County Border to NJ Border

Data in this report covers the period Mar 01, 2007 - Feb 28, 2010

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County: Orange Muni: Tuxedo(T) Ref. Marker: Street: [Route] 72
***** CONTINUED

Veh :1 CAR/VAN/PICKUP Registered Weight: 2500 State of Registration: NY
Num of Occupants: 1 Driver's Age: 19 Sex: M Citation Issued: N
Direction of Travel: SOUTH Public Property Damage: N School Bus Involved: N
Pre-Accd Action: MAKING LEFT TURN
Apparent Factors: FAILURE TO YIELD RIGHT OF WAY, NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: State of Registration: NJ
Num of Occupants: 1 Driver's Age: 53 Sex: F Citation Issued: N
Direction of Travel: WEST Public Property Damage: N School Bus Involved: N
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: NOT APPLICABLE, OTHER (VEHICLE)

County: Orange Muni: Tuxedo(T) Ref. Marker: Street: [Route] 72
AT INTERSECTION WITH IRIS LN

9/17/2009 Thu 07:06 AM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2009-33172624**
Accident Class: PROPERTY DAMAGE Police Agency: Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: STOPPED SCHOOL BUS W/RED LIGHT FLSH
Manner of Collision: REAR END Weather: CLEAR
Road Surface Condition: DRY Road Char.: STRAIGHT AT HILLCREST Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration: NJ
Num of Occupants: 1 Driver's Age: 62 Sex: M Citation Issued: N
Direction of Travel: EAST Public Property Damage: N School Bus Involved: N
Pre-Accd Action: SLOWED OR STOPPING
Apparent Factors: VIEW OBSTRUCTED/LIMITED, REACTION TO OTHER UNINVOLVED VEHICL

Veh :2 CAR/VAN/PICKUP Registered Weight: State of Registration: NJ
Num of Occupants: 1 Driver's Age: 45 Sex: M Citation Issued: N
Direction of Travel: EAST Public Property Damage: N School Bus Involved: N
Pre-Accd Action: SLOWED OR STOPPING
Apparent Factors: VIEW OBSTRUCTED/LIMITED, REACTION TO OTHER UNINVOLVED VEHICL

County: Orange Muni: Tuxedo(T) Ref. Marker: Street: [Route] 72
AT INTERSECTION WITH [Route] 84

11/14/2009 Sat 08:06 AM Persons Killed: 0 Persons Injured: 1 Extent of Injuries: A **Case: 2009-33217184**
Accident Class: PROPERTY DAMAGE AND INJURY Police Agency: Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: TRAFFIC SIGNAL
Manner of Collision: REAR END Weather: RAIN
Road Surface Condition: WET Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration: NJ
Num of Occupants: 1 Driver's Age: 67 Sex: F Citation Issued: N
Direction of Travel: EAST Public Property Damage: N School Bus Involved: N
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: PAVEMENT SLIPPERY, DRIVER INATTENTION

Accident Location Information System (ALIS)

Accident Verbal Description Report

5467 Sterling mine Rd from Rockland County Border to NJ Border

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County: Orange Muni: Tuxedo(T) Ref. Marker: Street: [Route] 72
***** CONTINUED

Veh :2 CAR/VAN/PICKUP Registered Weight: 3310 State of Registration: NY
Num of Occupants: 1 Driver's Age: 57 Sex: F Citation Issued: N
Direction of Travel: EAST Public Property Damage: N School Bus Involved: N
Pre-Accd Action: STOPPED IN TRAFFIC
Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

County: Orange Muni: Tuxedo(T) Ref. Marker: Street: [Route] 84
AT INTERSECTION WITH [Route] 72

1/31/2010 Sun 09:06 AM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2010-33331802**
Accident Class: PROPERTY DAMAGE Police Agency: Num of Veh: 1
Type Of Accident: OVERTURNED Traffic Control: TRAFFIC SIGNAL
Manner of Collision: OTHER Weather: CLEAR
Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: 2694 State of Registration: NY
Num of Occupants: 3 Driver's Age: 19 Sex: M Citation Issued: Y
Direction of Travel: SOUTH Public Property Damage: N School Bus Involved: N
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: DRIVER INEXPERIENCE, UNSAFE SPEED

County: Orange Muni: Tuxedo(T) Ref. Marker: Street: [Route] 72
30 Meters South of LONG MEADOW RD

2/13/2010 Sat 18:06 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2010-33361488**
Accident Class: PROPERTY DAMAGE Police Agency: Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: NONE
Manner of Collision: REAR END Weather: CLEAR
Road Surface Condition: DRY Road Char.: CURVE AND LEVEL Light Condition: DARK-ROAD UNLIGHTED
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration: NJ
Num of Occupants: 1 Driver's Age: 26 Sex: F Citation Issued: N
Direction of Travel: EAST Public Property Damage: N School Bus Involved: N
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: UNKNOWN, NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: State of Registration: NJ
Num of Occupants: 2 Driver's Age: 21 Sex: M Citation Issued: N
Direction of Travel: EAST Public Property Damage: N School Bus Involved: N
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: ANIMAL'S ACTION, FOLLOWING TOO CLOSELY

County: Orange Muni: Tuxedo(T) Ref. Marker: Street: [Route] 72
61 Meters South of [Route] 84

2/25/2010 Thu 12:06 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2010-33371847**
Accident Class: NON-REPORTABLE Police Agency: Num of Veh: 1
Type Of Accident: COLL. W/EARTH ELE./ROCK CUT/DITCH Traffic Control: NONE
Manner of Collision: OTHER Weather: SNOW
Road Surface Condition: SNOW/ICE Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Accident Location Information System (ALIS)

Accident Verbal Description Report

5467 Sterling mine Rd from Rockland County Border to NJ Border

Data in this report covers the period Mar 01, 2007 - Feb 28, 2010

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County: Orange Muni: Tuxedo(T) Ref. Marker: Street: [Route] 72
***** CONTINUED

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration: NJ

Num of Occupants: 1 Driver's Age: 23 Sex: M Citation Issued: N

Direction of Travel: WEST Public Property Damage: N School Bus Involved: N

Pre-Accd Action: GOING STRAIGHT AHEAD

Apparent Factors: PAVEMENT SLIPPERY, NOT APPLICABLE

Accident Location Information System (ALIS)

Date: 06/30/10
11:28

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County Interim Accident Summary

5467 Long Meadow Rd from Sterling Mine Rd to NYS 17A

Data in this report covers the period Mar 01, 2007 - Feb 28, 2010

Complete Accident data from NYSDMV is only available thru 2/28/2010

Number Of Accidents

COUNTY	TOTAL	AT INT.	FTL	INJ	PDO	N/R	WET ROAD	FIXED OBJ	PED & BIKE	TRUCK	LIGHT CONDITION DWN/DSK	DAY	NIGHT
ORANGE	30	6	1	4	20	5	5	10	0	1	2	15	12
Total	30	6	1	4	20	5	5	10	0	1	2	15	12

Accident Location Information System (ALIS)

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Accident Verbal Description Report

5467 Long Meadow Rd from Sterling Mine Rd to NYS 17A

Data in this report covers the period Mar 01, 2007 - Feb 28, 2010

Complete Accident data from NYSDMV is only available thru 2/28/2010

County: Orange Muni: Tuxedo(T) Ref. Marker: Street: Long Meadow Rd
8 Meters North of Woodlands Dr

3/8/2007 Thu 01:06 AM Persons Killed: 0 Persons Injured: 1 Extent of Injuries: C **Case: 2007-32141410**
Accident Class: PROPERTY DAMAGE AND INJURY Police Agency: Num of Veh: 1
Type Of Accident: COLL. W/EARTH ELE./ROCK CUT/DITCH Traffic Control: NONE
Manner of Collision: OTHER Weather: CLEAR
Road Surface Condition: DRY Road Char.: CURVE AND LEVEL Light Condition: DARK-ROAD UNLIGHTED
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration: NJ
Num of Occupants: 2 Driver's Age: 20 Sex: M Citation Issued: Y
Direction of Travel: WEST Public Property Damage: N School Bus Involved: N
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: ANIMAL'S ACTION, ALCOHOL INVOLVEMENT

County: Orange Muni: Tuxedo(T) Ref. Marker: Street: Long Meadow Rd
AT INTERSECTION WITH Warwick Brook Rd

5/21/2007 Mon 19:06 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2007-32199845**
Accident Class: PROPERTY DAMAGE Police Agency: Num of Veh: 1
Type Of Accident: COLLISION WITH DEER Traffic Control: NONE
Manner of Collision: OTHER Weather: CLEAR
Road Surface Condition: DRY Road Char.: STRAIGHT/ GRADE Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: 6500 State of Registration: NY
Num of Occupants: 1 Driver's Age: 64 Sex: M Citation Issued: N
Direction of Travel: NORTH Public Property Damage: N School Bus Involved: N
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: ANIMAL'S ACTION, NOT APPLICABLE

County: Orange Muni: Tuxedo(T) Ref. Marker: 17A83011231 Street: Route 17A
15 Meters South of Clinton Rd

8/24/2007 Fri 13:06 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2007-32302695**
Accident Class: PROPERTY DAMAGE Police Agency: Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: NONE
Manner of Collision: OVERTAKING Weather: CLOUDY
Road Surface Condition: DRY Road Char.: STRAIGHT AT HILLCREST Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: 3845 State of Registration: NY
Num of Occupants: 2 Driver's Age: 35 Sex: F Citation Issued: N
Direction of Travel: WEST Public Property Damage: N School Bus Involved: N
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: ANIMAL'S ACTION, NOT APPLICABLE

Accident Location Information System (ALIS)

Accident Verbal Description Report

5467 Long Meadow Rd from Sterling Mine Rd to NYS 17A

Data in this report covers the period Mar 01, 2007 - Feb 28, 2010

Complete Accident data from NYSDMV is only available thru 2/28/2010

County: Orange Muni: Tuxedo(T) Ref. Marker: 17A83011231 Street: Route 17A
***** CONTINUED

Veh :2 CAR/VAN/PICKUP Registered Weight: 2624 State of Registration: NY
Num of Occupants: 1 Driver's Age: 45 Sex: F Citation Issued: N
Direction of Travel: WEST Public Property Damage: N School Bus Involved: N
Pre-Accd Action: MAKING LEFT TURN
Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

County: Orange Muni: Tuxedo(T) Ref. Marker: 17A83011231 Street: Route 17A
15 Meters South of Clinton Rd

8/24/2007 Fri Persons Killed: Persons Injured: Extent of Injuries: **Case: 2007-SP0265127**
Accident Class: Police Agency: Num of Veh:
Type Of Accident: Traffic Control:
Manner of Collision: Weather:
Road Surface Condition: Road Char.: Light Condition:
Loc. of Ped/Bicycle: Action of Ped/Bicycle:

Veh : Registered Weight: State of Registration:
Num of Occupants: Driver's Age: Sex: Citation Issued:
Direction of Travel: Public Property Damage: School Bus Involved:
Pre-Accd Action:

County: Orange Muni: Tuxedo(T) Ref. Marker: 17A83011231 Street: ROUTE 17A
AT INTERSECTION WITH SYLVAN WAY

9/22/2007 Sat 10:06 AM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2007-32359165**
Accident Class: PROPERTY DAMAGE Police Agency: Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: NONE
Manner of Collision: REAR END Weather: CLEAR
Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: 3106 State of Registration: NY
Num of Occupants: 2 Driver's Age: 22 Sex: F Citation Issued: N
Direction of Travel: WEST Public Property Damage: N School Bus Involved: N
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: DRIVER INATTENTION, NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: 3212 State of Registration: NY
Num of Occupants: 2 Driver's Age: 20 Sex: F Citation Issued: N
Direction of Travel: WEST Public Property Damage: N School Bus Involved: N
Pre-Accd Action: SLOWED OR STOPPING
Apparent Factors: UNSAFE LANE CHANGE, PASSENGER DISTRACTION

County: Orange Muni: Tuxedo(T) Ref. Marker: Street: LONG MEADOW RD

12/2/2007 Sun 16:06 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2007-32420745**
Accident Class: PROPERTY DAMAGE Police Agency: Num of Veh: 1
Type Of Accident: COLL. W/EARTH ELE./ROCK CUT/DITCH Traffic Control: NONE
Manner of Collision: OTHER Weather: SLEET/HAIL/FREEZING RAIN
Road Surface Condition: SNOW/ICE Road Char.: CURVE AND LEVEL Light Condition: DUSK
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Accident Location Information System (ALIS)

Accident Verbal Description Report

5467 Long Meadow Rd from Sterling Mine Rd to NYS 17A

Data in this report covers the period Mar 01, 2007 - Feb 28, 2010

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County: Orange Muni: Tuxedo(T) Ref. Marker: Street: LONG MEADOW RD
***** CONTINUED

Veh :1 CAR/VAN/PICKUP Registered Weight: 4048 State of Registration: NY
Num of Occupants: 1 Driver's Age: 37 Sex: M Citation Issued: N
Direction of Travel: NORTH Public Property Damage: N School Bus Involved: N
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: PAVEMENT SLIPPERY, UNSAFE SPEED

County: Orange Muni: Tuxedo(T) Ref. Marker: Street: STERLING MINE RD
24 Meters South of WALKWAY

2/29/2008 Fri 16:06 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2008-32557677**
Accident Class: PROPERTY DAMAGE Police Agency: Num of Veh: 1
Type Of Accident: COLLISION WITH TREE Traffic Control: NONE
Manner of Collision: OTHER Weather: CLOUDY
Road Surface Condition: DRY Road Char.: CURVE AND LEVEL Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 TRUCK Registered Weight: State of Registration: NJ
Num of Occupants: 1 Driver's Age: 38 Sex: M Citation Issued: N
Direction of Travel: NORTH-WEST Public Property Damage: N School Bus Involved: N
Pre-Accd Action: AVOIDING OBJECT IN ROADWAY
Apparent Factors: UNKNOWN, UNKNOWN

County: Orange Muni: Tuxedo(T) Ref. Marker: Street: COUNTY HWY 84

7/20/2008 Sun 08:06 AM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2008-32675856**
Accident Class: PROPERTY DAMAGE Police Agency: Num of Veh: 1
Type Of Accident: COLLISION WITH OTHER FIXED OBJECT Traffic Control: NONE
Manner of Collision: OTHER Weather: CLOUDY
Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: 2615 State of Registration: NY
Num of Occupants: 1 Driver's Age: 26 Sex: F Citation Issued: Y
Direction of Travel: NORTH Public Property Damage: N School Bus Involved: N
Pre-Accd Action: MAKING RIGHT TURN
Apparent Factors: DRUGS (ILLEGAL), ALCOHOL INVOLVEMENT

County: Orange Muni: Tuxedo(T) Ref. Marker: 17A83011231 Street: [Route] 17A

8/15/2008 Fri 04:06 AM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2008-32696021**
Accident Class: NON-REPORTABLE Police Agency: Num of Veh: 1
Type Of Accident: COLLISION WITH DEER Traffic Control: NONE
Manner of Collision: OTHER Weather: CLEAR
Road Surface Condition: DRY Road Char.: STRAIGHT/ GRADE Light Condition: DARK-ROAD UNLIGHTED
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration: NY
Num of Occupants: 1 Driver's Age: 65 Sex: M Citation Issued: N
Direction of Travel: EAST Public Property Damage: N School Bus Involved: N
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: ANIMAL'S ACTION, NOT APPLICABLE

Accident Location Information System (ALIS)

Accident Verbal Description Report

5467 Long Meadow Rd from Sterling Mine Rd to NYS 17A

Data in this report covers the period Mar 01, 2007 - Feb 28, 2010

Complete Accident data from NYSDMV is only available thru 2/28/2010

County: Orange Muni: Tuxedo(T) Ref. Marker: Street: LONG MEADOW RD
AT INTERSECTION WITH Sterling Mine Rd

9/13/2008 Sat 23:06 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2008-32869777**
Accident Class: PROPERTY DAMAGE Police Agency: Num of Veh: 1
Type Of Accident: COLL. W/EARTH ELE./ROCK CUT/DITCH Traffic Control: UNKNOWN
Manner of Collision: OTHER Weather: CLOUDY
Road Surface Condition: WET Road Char.: CURVE AND LEVEL Light Condition: DARK-ROAD UNLIGHTED
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration: NJ
Num of Occupants: 2 Driver's Age: 17 Sex: F Citation Issued: N
Direction of Travel: SOUTH-WEST Public Property Damage: N School Bus Involved: N
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: PAVEMENT SLIPPERY, UNKNOWN

County: Orange Muni: Tuxedo(T) Ref. Marker: Street: LONG MEADOW RD
AT INTERSECTION WITH Route 17A

9/17/2008 Wed 06:06 AM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2008-32773322**
Accident Class: PROPERTY DAMAGE Police Agency: Num of Veh: 1
Type Of Accident: COLLISION WITH DEER Traffic Control: UNKNOWN
Manner of Collision: OTHER Weather: UNKNOWN
Road Surface Condition: UNKNOWN Road Char.: UNKNOWN Light Condition: UNKNOWN
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: 2500 State of Registration: NY
Num of Occupants: 1 Driver's Age: 57 Sex: M Citation Issued: N
Direction of Travel: SOUTH Public Property Damage: N School Bus Involved: N
Pre-Accd Action: UNKNOWN
Apparent Factors: UNKNOWN, UNKNOWN

County: Orange Muni: Tuxedo(T) Ref. Marker: Street: COUNTY HWY 84
30 Meters South of Route 17A

9/28/2008 Sun 16:06 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2008-32745042**
Accident Class: PROPERTY DAMAGE Police Agency: Num of Veh: 1
Type Of Accident: COLLISION WITH DEER Traffic Control: NONE
Manner of Collision: OTHER Weather: RAIN
Road Surface Condition: WET Road Char.: CURVE AND LEVEL Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: 5192 State of Registration: NY
Num of Occupants: 1 Driver's Age: 35 Sex: M Citation Issued: N
Direction of Travel: NORTH Public Property Damage: N School Bus Involved: N
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: ANIMAL'S ACTION, PAVEMENT SLIPPERY

Accident Location Information System (ALIS)

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Accident Verbal Description Report

5467 Long Meadow Rd from Sterling Mine Rd to NYS 17A

Data in this report covers the period Mar 01, 2007 - Feb 28, 2010

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County: Orange Muni: Tuxedo(T) Ref. Marker: Street: LONG MEADOW RD
161 Meters North of Ironwood Dr
9/29/2008 Mon 06:06 AM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2008-32744830**
Accident Class: PROPERTY DAMAGE Police Agency: Num of Veh: 1
Type Of Accident: COLLISION WITH DEER Traffic Control: NONE
Manner of Collision: OTHER Weather: CLEAR
Road Surface Condition: DRY Road Char.: STRAIGHT/ GRADE Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: 2042 State of Registration: NY
Num of Occupants: 1 Driver's Age: 35 Sex: M Citation Issued: N
Direction of Travel: SOUTH Public Property Damage: N School Bus Involved: N
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: ANIMAL'S ACTION, NOT APPLICABLE

County: Orange Muni: Tuxedo(T) Ref. Marker: Street: LONG MEADOW RD
10/12/2008 Sun 15:06 PM Persons Killed: 2 Persons Injured: 0 Extent of Injuries: KK **Case: 2008-32870543**
Accident Class: FATAL Police Agency: Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: NONE
Manner of Collision: RIGHT ANGLE Weather: CLEAR
Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :2 MOTORCYCLE Registered Weight: State of Registration: NJ
Num of Occupants: 1 Driver's Age: 23 Sex: M Citation Issued: N
Direction of Travel: EAST Public Property Damage: N School Bus Involved: N
Pre-Accd Action: MAKING U TURN
Apparent Factors: UNKNOWN, TURNING IMPROPER

Veh :1 MOTORCYCLE Registered Weight: State of Registration: NJ
Num of Occupants: 1 Driver's Age: 24 Sex: M Citation Issued: N
Direction of Travel: SOUTH Public Property Damage: N School Bus Involved: N
Pre-Accd Action: OVERTAKING
Apparent Factors: UNSAFE SPEED, UNKNOWN

County: Orange Muni: Tuxedo(T) Ref. Marker: Street: LONG MEADOW RD
AT INTERSECTION WITH STERLING MINE RD
11/26/2008 Wed 00:06 AM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2008-32890301**
Accident Class: PROPERTY DAMAGE Police Agency: Num of Veh: 1
Type Of Accident: COLL. W/EARTH ELE./ROCK CUT/DITCH Traffic Control: NONE
Manner of Collision: OTHER Weather: FOG/SMOG/SMOKE
Road Surface Condition: SNOW/ICE Road Char.: STRAIGHT AND LEVEL Light Condition: DARK-ROAD UNLIGHTED
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Accident Location Information System (ALIS)

Accident Verbal Description Report

5467 Long Meadow Rd from Sterling Mine Rd to NYS 17A

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County: Orange Muni: Tuxedo(T) Ref. Marker: Street: LONG MEADOW RD
***** CONTINUED

Veh :1 CAR/VAN/PICKUP Registered Weight: 2654 State of Registration: NY
Num of Occupants: 2 Driver's Age: 20 Sex: F Citation Issued: N
Direction of Travel: SOUTH Public Property Damage: N School Bus Involved: N
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: UNSAFE SPEED, ANIMAL'S ACTION

County: Orange Muni: Tuxedo(T) Ref. Marker: 17A83011231 Street: ROUTE 17A
15 Meters South of Long Meadow Rd

12/26/2008 Fri 01:06 AM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2008-32861593**
Accident Class: NON-REPORTABLE Police Agency: Num of Veh: 1
Type Of Accident: COLLISION WITH DEER Traffic Control: NONE
Manner of Collision: OTHER Weather: CLEAR
Road Surface Condition: DRY Road Char.: STRAIGHT AT HILLCREST Light Condition: DARK-ROAD UNLIGHTED
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration: NY
Num of Occupants: 1 Driver's Age: 20 Sex: M Citation Issued: N
Direction of Travel: WEST Public Property Damage: N School Bus Involved: N
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: ANIMAL'S ACTION, NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: 3000 State of Registration: NY
Num of Occupants: 1 Driver's Age: 22 Sex: M Citation Issued: N
Direction of Travel: NORTH Public Property Damage: N School Bus Involved: N
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: DRIVER INATTENTION, UNKNOWN

County: Orange Muni: Tuxedo(T) Ref. Marker: Street: [Route] 84

2/15/2009 Sun 11:06 AM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2009-32914255**
Accident Class: PROPERTY DAMAGE Police Agency: Num of Veh: 1
Type Of Accident: COLLISION WITH TREE Traffic Control: NONE
Manner of Collision: OTHER Weather: CLEAR
Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: 3920 State of Registration: NY
Num of Occupants: 1 Driver's Age: 26 Sex: M Citation Issued: Y
Direction of Travel: NORTH Public Property Damage: N School Bus Involved: N
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: NOT APPLICABLE, ALCOHOL INVOLVEMENT

County: Orange Muni: Warwick(T) Ref. Marker: Street: COUNTY HWY 84

2/20/2009 Fri 21:06 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2009-32928256**
Accident Class: NON-REPORTABLE Police Agency: Num of Veh: 1
Type Of Accident: COLLISION WITH DEER Traffic Control: NONE
Manner of Collision: OTHER Weather: CLEAR
Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DARK-ROAD LIGHTED
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Accident Location Information System (ALIS)

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Accident Verbal Description Report

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5467 Long Meadow Rd from Sterling Mine Rd to NYS 17A

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County: Orange Muni: Warwick(T) Ref. Marker: Street: COUNTY HWY 84
***** CONTINUED

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration: NY
Num of Occupants: 1 Driver's Age: 38 Sex: F Citation Issued: N
Direction of Travel: NORTH-WEST Public Property Damage: N School Bus Involved: N
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: ANIMAL'S ACTION, NOT APPLICABLE

County: Orange Muni: Tuxedo(T) Ref. Marker: Street: [Route] 17A
434 Meters East of Roosevelt Ave

6/11/2009 Thu 15:06 PM Persons Killed: 0 Persons Injured: 2 Extent of Injuries: CC **Case: 2009-33057842**
Accident Class: PROPERTY DAMAGE AND INJURY Police Agency: Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: NONE
Manner of Collision: RIGHT ANGLE Weather: RAIN
Road Surface Condition: WET Road Char.: STRAIGHT/ GRADE Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 BUS Registered Weight: State of Registration: NY
Num of Occupants: 2 Driver's Age: 67 Sex: F Citation Issued: N
Direction of Travel: SOUTH Public Property Damage: N School Bus Involved: Y
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: NOT APPLICABLE, FAILURE TO YIELD RIGHT OF WAY

Veh :2 CAR/VAN/PICKUP Registered Weight: 3030 State of Registration: NY
Num of Occupants: 1 Driver's Age: 38 Sex: M Citation Issued: N
Direction of Travel: EAST Public Property Damage: N School Bus Involved: N
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

County: Orange Muni: Tuxedo(T) Ref. Marker: Street: [Route] 84
44 Meters South of Unnamed Street

7/5/2009 Sun 11:06 AM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2009-33076335**
Accident Class: PROPERTY DAMAGE Police Agency: Num of Veh: 1
Type Of Accident: COLLISION WITH DEER Traffic Control: NONE
Manner of Collision: OTHER Weather: CLEAR
Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: 3532 State of Registration: NY
Num of Occupants: 1 Driver's Age: 45 Sex: M Citation Issued: N
Direction of Travel: NORTH Public Property Damage: N School Bus Involved: N
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: ANIMAL'S ACTION, NOT APPLICABLE

County: Orange Muni: Warwick(T) Ref. Marker: Street: LONG MEADOW RD
61 Meters South of STERLING MINE RD

8/9/2009 Sun 09:06 AM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2009-33182204**
Accident Class: PROPERTY DAMAGE Police Agency: Num of Veh: 1
Type Of Accident: RAN OFF ROAD ONLY Traffic Control: NO PASSING ZONE
Manner of Collision: OTHER Weather: CLOUDY
Road Surface Condition: WET Road Char.: CURVE AND LEVEL Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Accident Location Information System (ALIS)

Accident Verbal Description Report

5467 Long Meadow Rd from Sterling Mine Rd to NYS 17A

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County: Orange Muni: Warwick(T) Ref. Marker: Street: LONG MEADOW RD
***** CONTINUED

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration: PA
Num of Occupants: 2 Driver's Age: 50 Sex: M Citation Issued: N
Direction of Travel: SOUTH Public Property Damage: N School Bus Involved: N
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: STEERING FAILURE, NOT APPLICABLE

County: Orange Muni: Tuxedo(T) Ref. Marker: Street: LONG MEADOW RD
91 Meters South of STATE HWY 17A

9/30/2009 Wed Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2009-33220908**
Accident Class: PROPERTY DAMAGE Police Agency: Num of Veh: 1
Type Of Accident: COLLISION WITH ANIMAL Traffic Control: UNKNOWN
Manner of Collision: OTHER Weather: CLEAR
Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DARK-ROAD UNLIGHTED
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 MOTORCYCLE Registered Weight: 732 State of Registration: NY
Num of Occupants: 1 Driver's Age: 39 Sex: M Citation Issued: N
Direction of Travel: NORTH Public Property Damage: N School Bus Involved: N
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: UNKNOWN, UNKNOWN

County: Orange Muni: Tuxedo(T) Ref. Marker: Street: [Route] 84
360 Meters East of Unnamed Street

10/29/2009 Thu 17:06 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2009-33217178**
Accident Class: NON-REPORTABLE Police Agency: Num of Veh: 1
Type Of Accident: COLLISION WITH ANIMAL Traffic Control: NONE
Manner of Collision: OTHER Weather: CLEAR
Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DUSK
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration: NJ
Num of Occupants: 1 Driver's Age: 76 Sex: M Citation Issued: N
Direction of Travel: NORTH Public Property Damage: N School Bus Involved: N
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: ANIMAL'S ACTION, NOT APPLICABLE

County: Orange Muni: Tuxedo(T) Ref. Marker: Street: [Route] 84
142 Meters West of Unnamed Street

11/7/2009 Sat 16:06 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2009-33217188**
Accident Class: NON-REPORTABLE Police Agency: Num of Veh: 1
Type Of Accident: COLLISION WITH ANIMAL Traffic Control: NONE
Manner of Collision: OTHER Weather: CLEAR
Road Surface Condition: DRY Road Char.: CURVE AND LEVEL Light Condition: DARK-ROAD UNLIGHTED
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Accident Location Information System (ALIS)

Accident Verbal Description Report

5467 Long Meadow Rd from Sterling Mine Rd to NYS 17A

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County: Orange Muni: Tuxedo(T) Ref. Marker: Street: [Route] 84
***** CONTINUED

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration: NY
Num of Occupants: 1 Driver's Age: 64 Sex: F Citation Issued: N
Direction of Travel: SOUTH Public Property Damage: N School Bus Involved: N
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: ANIMAL'S ACTION, NOT APPLICABLE

County: Orange Muni: Tuxedo(T) Ref. Marker: Street: [Route] 72
AT INTERSECTION WITH [Route] 84

11/14/2009 Sat 08:06 AM Persons Killed: 0 Persons Injured: 1 Extent of Injuries: A **Case: 2009-33217184**
Accident Class: PROPERTY DAMAGE AND INJURY Police Agency: Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: TRAFFIC SIGNAL
Manner of Collision: REAR END Weather: RAIN
Road Surface Condition: WET Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration: NJ
Num of Occupants: 1 Driver's Age: 67 Sex: F Citation Issued: N
Direction of Travel: EAST Public Property Damage: N School Bus Involved: N
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: PAVEMENT SLIPPERY, DRIVER INATTENTION

Veh :2 CAR/VAN/PICKUP Registered Weight: 3310 State of Registration: NY
Num of Occupants: 1 Driver's Age: 57 Sex: F Citation Issued: N
Direction of Travel: EAST Public Property Damage: N School Bus Involved: N
Pre-Accd Action: STOPPED IN TRAFFIC
Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

County: Orange Muni: Tuxedo(T) Ref. Marker: Street: [Route] 84
259 Meters East of Unnamed Street

11/15/2009 Sun 18:06 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2009-33217186**
Accident Class: PROPERTY DAMAGE Police Agency: Num of Veh: 1
Type Of Accident: COLLISION WITH DEER Traffic Control: NONE
Manner of Collision: OTHER Weather: CLOUDY
Road Surface Condition: DRY Road Char.: STRAIGHT/ GRADE Light Condition: DARK-ROAD UNLIGHTED
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: 3466 State of Registration: NY
Num of Occupants: 1 Driver's Age: 24 Sex: M Citation Issued: N
Direction of Travel: SOUTH Public Property Damage: N School Bus Involved: N
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: ANIMAL'S ACTION, NOT APPLICABLE

County: Orange Muni: Warwick(T) Ref. Marker: Street: [Route] 84

12/5/2009 Sat 16:06 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2009-33243979**
Accident Class: PROPERTY DAMAGE Police Agency: Num of Veh: 1
Type Of Accident: COLLISION WITH TREE Traffic Control: NONE
Manner of Collision: OTHER Weather: SNOW
Road Surface Condition: SNOW/ICE Road Char.: CURVE AND GRADE Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Accident Location Information System (ALIS)

Date: 06/30/10
11:25
Page: 1(

Accident Verbal Description Report

5467 Long Meadow Rd from Sterling Mine Rd to NYS 17A

Data in this report covers the period Mar 01, 2007 - Feb 28, 2010

Complete Accident data from NYSDMV is only available thru 2/28/2010

County: Orange Muni: Warwick(T) Ref. Marker: Street: [Route] 84
***** CONTINUED
Veh :1 CAR/VAN/PICKUP Registered Weight: 3752 State of Registration: NY
Num of Occupants: 1 Driver's Age: 23 Sex: M Citation Issued: N
Direction of Travel: SOUTH Public Property Damage: N School Bus Involved: N
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: PAVEMENT SLIPPERY, NOT APPLICABLE

County: Orange Muni: Warwick(T) Ref. Marker: Street: COUNTY HWY 84
12/13/2009 Sun 17:06 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2009-33259681**
Accident Class: PROPERTY DAMAGE Police Agency: Num of Veh: 1
Type Of Accident: COLL. W/LIGHT SUPPORT/UTILITY POLE Traffic Control: NONE
Manner of Collision: OTHER Weather: SLEET/HAIL/FREEZING RAIN
Road Surface Condition: SNOW/ICE Road Char.: STRAIGHT/ GRADE Light Condition: DARK-ROAD LIGHTED
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration: PA
Num of Occupants: 1 Driver's Age: 50 Sex: M Citation Issued: N
Direction of Travel: SOUTH Public Property Damage: N School Bus Involved: N
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: PAVEMENT SLIPPERY, NOT APPLICABLE

County: Orange Muni: Warwick(T) Ref. Marker: Street: LONG MEADOW RD
172 Meters South of Sterling Mine Rd
1/4/2010 Mon 03:06 AM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2010-33302168**
Accident Class: PROPERTY DAMAGE Police Agency: Num of Veh: 1
Type Of Accident: COLLISION WITH DEER Traffic Control: NONE
Manner of Collision: OTHER Weather: CLEAR
Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DARK-ROAD UNLIGHTED
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: 3489 State of Registration: NY
Num of Occupants: 1 Driver's Age: 58 Sex: M Citation Issued: N
Direction of Travel: SOUTH Public Property Damage: N School Bus Involved: N
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: ANIMAL'S ACTION, NOT APPLICABLE

County: Orange Muni: Tuxedo(T) Ref. Marker: Street: LONG MEADOW RD
1/20/2010 Wed 00:06 AM Persons Killed: 0 Persons Injured: 1 Extent of Injuries: C **Case: 2010-33331805**
Accident Class: PROPERTY DAMAGE AND INJURY Police Agency: Num of Veh: 1
Type Of Accident: COLL. W/EARTH ELE./ROCK CUT/DITCH Traffic Control: NONE
Manner of Collision: OTHER Weather: CLEAR
Road Surface Condition: SNOW/ICE Road Char.: CURVE AND LEVEL Light Condition: DARK-ROAD UNLIGHTED
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: 3250 State of Registration: NY
Num of Occupants: 2 Driver's Age: 60 Sex: F Citation Issued: N
Direction of Travel: NORTH Public Property Damage: N School Bus Involved: N
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: NOT APPLICABLE, PAVEMENT SLIPPERY

Accident Location Information System (ALIS)

Accident Verbal Description Report

5467 Long Meadow Rd from Sterling Mine Rd to NYS 17A

Data in this report covers the period Mar 01, 2007 - Feb 28, 2010

Complete Accident data from NYSDMV is only available thru 2/28/2010

County: Orange Muni: Tuxedo(T) Ref. Marker: Street: [Route] 84
AT INTERSECTION WITH [Route] 72

1/31/2010 Sun 09:06 AM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2010-33331802**
Accident Class: PROPERTY DAMAGE Police Agency: Num of Veh: 1
Type Of Accident: OVERTURNED Traffic Control: TRAFFIC SIGNAL
Manner of Collision: OTHER Weather: CLEAR
Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: 2694 State of Registration: NY
Num of Occupants: 3 *Driver's Age: 19* *Sex: M* *Citation Issued: Y*
Direction of Travel: SOUTH *Public Property Damage: N* *School Bus Involved: N*
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: DRIVER INEXPERIENCE, UNSAFE SPEED

APPENDIX "F"

PUBLIC TRANSPORTATION INFORMATION

Metropolitan Transportation Authority

Search

Metro-North Railroad

SLOATSBURG

Location
Municipal Plaza & Mills Street
Sloatsburg, NY 10974
(34.5 miles to Grand Central Terminal)

Train Service
PORT JERVIS LINE SCHEDULES

DepartureVision™

Connecting Service
No Connecting Service is available at this station.

Station Parking
Operator: Village of Sloatsburg Commuter Capacity 80
Tel.#: (845) 753- 2727
Free Weekend/Holiday Policy: Free weekends only
Daily Metered Information
Meter Type: No meters
Comments: None
Parking Station Area Map
Please Note: Parking information is subject to change, customers should contact the parking operator for the most accurate information.

Taxis
Sammy's Cab: (845) 357-1249. Call ahead for taxi.P.S. Must leave a message and they will get back to you.

Accessibility*
NO WHEELCHAIR ACCESS
FEATURES FOR VISUALLY IMPAIRED: Tactile signage is present
NEAREST STATION WITH FULL ACCESS FOR PERSONS WITH MOBILITY, VISUAL AND HEARING IMPAIRMENTS: Nanuet and Ramsey (NJT)

*FULL ACCESS stations comply with all requirements of the Americans with Disabilities Act and have accessibility features for persons with mobility, visual and hearing impairments. Accessibility at other stations is limited to the features listed.

Ticket Machines
There is one ticket machine at this station. Ticket machine accepts cash, credit cards and debit cards.

Ticket Office Hours
There is no staffed ticket office at this station.

Get Driving Directions MAP
George Washington Bridge to Palisades Interstate Parkway. Palisades Interstate Parkway to Thruway (I-87). I-87 Exit 15A Route 17 (Orange Tpke) north. Make a right onto Millss St. The station is on the right, between Mills St & Municipal Plaza. Near the firehouse.

Station List

Train Schedules

Origin Station : Sloatsburg
Destination Station : New York Penn Station
Date of Travel : 06/28/2010

Origin Departure	Transfer Departure	Destination Arrival	Total Travel Time
05:10 AM - MNBNP	06:09 AM - NJCL Secaucus Junction	06:23 AM	73 minutes
05:51 AM - MNBNP	06:49 AM - NEC Secaucus Junction	07:03 AM	72 minutes
06:23 AM - MNBNP	07:09 AM - NEC Secaucus Junction	07:22 AM	59 minutes
06:55 AM - MNBNP	07:42 AM - NJCL Secaucus Junction	07:55 AM	60 minutes
07:25 AM - MNBNP	08:21 AM - NEC Secaucus Junction	08:33 AM	68 minutes
08:12 AM - MNBNP	08:57 AM - NJCL Secaucus Junction	09:12 AM	60 minutes
09:04 AM - MNBNP	09:51 AM - NJCL Secaucus Junction	10:05 AM	61 minutes
10:37 AM - MNBNP	11:29 AM - BNTNM Secaucus Junction	11:42 AM	65 minutes
12:48 PM - MNBNP	02:04 PM - NEC Secaucus Junction	02:17 PM	89 minutes
02:47 PM - MNBNP	03:35 PM - BNTNM Secaucus Junction	03:48 PM	61 minutes
04:11 PM - MNBNP	05:02 PM - BNTNM Secaucus Junction	05:16 PM	65 minutes
10:47 PM - MNBNP	11:48 PM - NJCL Secaucus Junction	12:06 AM	79 minutes

Please note every effort will be made to maintain connections if presented, however, they cannot be guaranteed. Transfers listed in the trip planner represent the quickest travel time based on scheduled arrival and departure times and may differ from those in printed timetables.

Some trips can be completed by transferring at either Secaucus or Hoboken. For most trips, the higher Secaucus fare is presented because there are significantly greater transfer and travel options available.

For fares for direct trips, visit **Rail Fare Finder**.

One-way and round-trip tickets may be purchased on board your train. However, if the ticket office is open or a Ticket Vending Machine (TVM) is available, there will be a $5.00 surcharge per person including children (except senior/disabled tickets).

For more information on fare options **click here**.

Adult One Way	$11.50
Child/Senior/Disabled One Way	$5.50
Weekly	$95.00
Ten Trip	$110.50
Monthly	$309.00
Student Monthly	$232.00

Train Schedules

Origin Station : New York Penn Station
Destination Station : Sloatsburg
Date of Travel : 06/28/2010

Origin Departure	Transfer Departure	Destination Arrival	Total Travel Time
08:13 AM - NEC	08:31 AM - MNBNP Secaucus Junction	09:14 AM	61 minutes
09:37 AM - NEC	09:57 AM - MNBNP Secaucus Junction	10:53 AM	76 minutes
01:05 PM - NEC	01:22 PM - MNBNP Secaucus Junction	02:05 PM	60 minutes
03:48 PM - BNTNM	04:18 PM - MNBNP Secaucus Junction	04:55 PM	67 minutes
04:36 PM - NEC	04:57 PM - MNBNP Secaucus Junction	05:35 PM	59 minutes
05:03 PM - NJCL	05:23 PM - MNBNP Secaucus Junction	06:01 PM	58 minutes
05:32 PM - NJCL	05:50 PM - MNBNP Secaucus Junction	06:34 PM	62 minutes
06:18 PM - BNTNM	06:37 PM - MNBNP Secaucus Junction	07:16 PM	58 minutes
06:52 PM - NJCL	07:12 PM - MNBNP Secaucus Junction	07:52 PM	60 minutes
07:42 PM - NEC	08:07 PM - MNBNP Secaucus Junction	08:44 PM	62 minutes
09:51 PM - MNE	10:08 PM - MNBNP Secaucus Junction	11:12 PM	81 minutes
12:34 AM - MNE	12:50 AM - MNBNP Secaucus Junction	01:52 AM	78 minutes

Please note every effort will be made to maintain connections if presented, however, they cannot be guaranteed. Transfers listed in the trip planner represent the quickest travel time based on scheduled arrival and departure times and may differ from those in printed timetables.

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Adult One Way	$11.50
Child/Senior/Disabled One Way	$5.50
Weekly	$95.00
Ten Trip	$110.50
Monthly	$309.00
Student Monthly	$232.00

Metropolitan Transportation Authority

Search

Metro-North Railroad

TUXEDO

Location
240 Route 17
Tuxedo, NY 10987
(37.0 miles to Grand Central Terminal)

Train Service
PORT JERVIS LINE SCHEDULES

DepartureVision™

Connecting Service
No Connecting Service is available at this station.

Station Parking
Operator: Town of Tuxedo Commuter Capacity 245
Tel.#: (845) 351- 2265
Free Weekend/Holiday Policy: Free weekends only
Daily Metered Information
Meter Type: 24-hr.
Comments: None
Parking Station Area Map
Please Note: Parking information is subject to change, customers should contact the parking operator for the most accurate information.

Taxis
Sammy's Taxi: (845) 357-1249. Call ahead for taxi.

Accessibility*
NO WHEELCHAIR ACCESS
FEATURES FOR VISUALLY IMPAIRED: Tactile signage is present
NEAREST STATION WITH FULL ACCESS FOR PERSONS WITH MOBILITY, VISUAL AND HEARING IMPAIRMENTS: Harriman or Nanuet

*FULL ACCESS stations comply with all requirements of the Americans with Disabilities Act and have accessibility features for persons with mobility, visual and hearing impairments. Accessibility at other stations is limited to the features listed.

Ticket Machines
Two ticket machines at this station. Ticket machines accept cash, credit cards and debit cards.

Ticket Office Hours
There is no staffed ticket office at this station.

Get Driving Directions MAP
Northbound:
Take Thruway north to Route 17. On Route 17, exit at Tuxedo. Station is located near intersection of Library Road and East Village Road (located near Tuxedo police station).
Southbound:
I-87 to NY-17W via exit 16 Harriman/Rt-17. Take NY 32 exit towards NY-17 south, continue on Rt. 17 south for about 10 mines. Station is on the left.

Station List

Train Schedules

Origin Station : Tuxedo
Destination Station : New York Penn Station
Date of Travel : 06/28/2010

Origin Departure	Transfer Departure	Destination Arrival	Total Travel Time
05:05 AM - MNBNP	06:09 AM - NJCL Secaucus Junction	06:23 AM	78 minutes
05:46 AM - MNBNP	06:49 AM - NEC Secaucus Junction	07:03 AM	77 minutes
06:18 AM - MNBNP	07:09 AM - NEC Secaucus Junction	07:22 AM	64 minutes
06:50 AM - MNBNP	07:42 AM - NJCL Secaucus Junction	07:55 AM	65 minutes
07:20 AM - MNBNP	08:21 AM - NEC Secaucus Junction	08:33 AM	73 minutes
08:07 AM - MNBNP	08:57 AM - NJCL Secaucus Junction	09:12 AM	65 minutes
08:59 AM - MNBNP	09:51 AM - NJCL Secaucus Junction	10:05 AM	66 minutes
10:32 AM - MNBNP	11:29 AM - BNTNM Secaucus Junction	11:42 AM	70 minutes
12:43 PM - MNBNP	02:04 PM - NEC Secaucus Junction	02:17 PM	94 minutes
02:42 PM - MNBNP	03:35 PM - BNTNM Secaucus Junction	03:48 PM	66 minutes
04:06 PM - MNBNP	05:02 PM - BNTNM Secaucus Junction	05:16 PM	70 minutes
10:42 PM - MNBNP	11:48 PM - NJCL Secaucus Junction	12:06 AM	84 minutes

Please note every effort will be made to maintain connections if presented, however, they cannot be guaranteed. Transfers listed in the trip planner represent the quickest travel time based on scheduled arrival and departure times and may differ from those in printed timetables.

Some trips can be completed by transferring at either Secaucus or Hoboken. For most trips, the higher Secaucus fare is presented because there are significantly greater transfer and travel options available.

For fares for direct trips, visit **Rail Fare Finder**.

One-way and round-trip tickets may be purchased on board your train. However, if the ticket office is open or a Ticket Vending Machine (TVM) is available, there will be a $5.00 surcharge per person including children (except senior/disabled tickets).

For more information on fare options **click here**.

Adult One Way	$11.50
Child/Senior/Disabled One Way	$5.50
Weekly	$95.00
Ten Trip	$110.50
Monthly	$309.00
Student Monthly	$232.00

Train Schedules

Origin Station : New York Penn Station
Destination Station : Tuxedo
Date of Travel : 06/28/2010

Origin Departure	Transfer Departure	Destination Arrival	Total Travel Time
08:13 AM - NEC	08:31 AM - MNBNP Secaucus Junction	09:19 AM	66 minutes
09:37 AM - NEC	09:57 AM - MNBNP Secaucus Junction	10:58 AM	81 minutes
01:05 PM - NEC	01:22 PM - MNBNP Secaucus Junction	02:10 PM	65 minutes
03:48 PM - BNTNM	04:18 PM - MNBNP Secaucus Junction	05:00 PM	72 minutes
04:36 PM - NEC	04:57 PM - MNBNP Secaucus Junction	05:40 PM	64 minutes
05:03 PM - NJCL	05:23 PM - MNBNP Secaucus Junction	06:06 PM	63 minutes
05:32 PM - NJCL	05:50 PM - MNBNP Secaucus Junction	06:39 PM	67 minutes
06:18 PM - BNTNM	06:37 PM - MNBNP Secaucus Junction	07:21 PM	63 minutes
06:52 PM - NJCL	07:12 PM - MNBNP Secaucus Junction	07:57 PM	65 minutes
07:42 PM - NEC	08:07 PM - MNBNP Secaucus Junction	08:49 PM	67 minutes
09:51 PM - MNE	10:08 PM - MNBNP Secaucus Junction	11:17 PM	86 minutes
12:34 AM - MNE	12:50 AM - MNBNP Secaucus Junction	01:57 AM	83 minutes

Please note every effort will be made to maintain connections if presented, however, they cannot be guaranteed. Transfers listed in the trip planner represent the quickest travel time based on scheduled arrival and departure times and may differ from those in printed timetables.

Some trips can be completed by transferring at either Secaucus or Hoboken. For most trips, the higher Secaucus fare is presented because there are significantly greater transfer and travel options available.

For fares for direct trips, visit **Rail Fare Finder**.

One-way and round-trip tickets may be purchased on board your train. However, if the ticket office is open or a Ticket Vending Machine (TVM) is available, there will be a $5.00 surcharge per person including children (except senior/disabled tickets).

For more information on fare options **click here**.

Adult One Way	$11.50
Child/Senior/Disabled One Way	$5.50
Weekly	$95.00
Ten Trip	$110.50
Monthly	$309.00
Student Monthly	$232.00

TABLE 1: NEW YORK TO ORANGE COUNTY & ROCKLAND COUNTY SERVICE

New York • Suffern • Harriman • Middletown

	Run Number	521	501	729	731	373	401	733	389	773	385	801	735	153	723	405	581	737	387	583	161	803	509	739	725	503	505	155	515	507	813	301	775	303	527	541	383	595	741	549	309	513	805	517	743	531
	Route Number	17c	17M	x87N	x32N	xPA84	x17MD	x32N	L17MD	x32N		xPA84	x32N	L17MD	x30N	x17MD	x94	x32N	L17MD	x94	17c	xPA84	17c	x32N	x87n	17c	17c	x87m		17c	xPA84	x87m	x32N	x87m	17M	17c	x87m		x32N	17c	x87m	17M	xPA84	17G	x32N	17G
Code	Day of Week	M-F	M-F	M-F	DAILY	M-F	DAILY	DAILY	DAILY	DAILY	SSH	DAILY	DAILY	DAILY	M-F	DAILY	M-F	DAILY	DAILY	M-F	M-F	DAILY	M-F	DAILY	M-F	M-F	M-F	DAILY	SAT	M-F	M-F	M-F	M-F	M-F	M-F	M-F	SSH	SSH	Daily	M-F	M-F	M-F	M-F	M-F	M-F	M-F
	New York, NY																																													
1	*41st St. & 8th Ave., NYC ♥ (PABT)*	600a	640a	655a	715a	750a	830a	830a	910a	930a	930a	1000a	1000a	1045a	1115a	1130a	1210p	1245p	115p	200p	225p	230p	238p	245p	245p	246p	305p	310p	310p	325p	330p	341p	345p	400p	409p	415p	415p	415p	415p	420p	430p	440p	435p	445p	458p	500p
2	Paramus, NJ *(Rt. 17 & Century Rd.)*																																						440p							
3	Ridgewood ♥ *(Rt. 17N, Park & Ride Shelter)*	625a	D		747a	822a	902a	902a	942a	1005a	1005a	1032a	1032a	1117a		1155a	1242p	115p	147p	232p		300p									400p							447p	P 445p					P523p	
4	Suffern, NY *(Terminal – 94 Orange Ave.)*					840a			1000a					1135a			100p		205p	253p								P 355p										508p							
5	Sloatsburg, NY *(Route 17)*		717a		Express	847a		Express	1007a			Thruway Express	Thruway Express	1142a		Thruway Express	107p	Thruway Express	212p	257p		Thruway Express	Monroe PR Express	Thruway Express		Thruway Express	Thruway Express	401p		Thruway Express		Thruway Express		Thruway Express	459p			517p	Thruway Express		Thruway Express	530p	Thruway Express	Thruway Express	Thruway Express	Thruway Express
6	Tuxedo, NY *(Rt. 17 – Bus Shelter)*		732a			852a	*D		1012a					1147a			112p		217p	302p								406p								503p			522p				535p				
7	Tuxedo, NY *(Rt. 17 & 17A, Park & Ride)*		734a			854a	*D		1014a					1149a			114p		219p	304p								408p								504p			524p				537p				
8	Southfields, NY *(Rt. 17 & Old Orange Tpk.)*		736a			856a	*D		1016a					1151a			116p		221p	306p								410p								507p			527p				540p				
9	Rt. 17 Ent. Metro North Station		743a			903a			1023a					1158a			123p		228p	313p								417p								513p			534p				549p				
10	Harriman, NY *(Rt. 17 & 17M, Park & Ride)*		744a			904a			1024a					1159a			124p		229p	314p								418p								514p			535p				550p				
11	Central Valley, NY *(Park & Ride, Jct. Rt. 6&17)*				817a			D					D					D				330p			D		350p	408p			427p		448p	502p		517p				531p		547p	600p	
12	Woodbury Common, NY *(Bus Shelter)*				822a			935a		1030a	1030a	D	1105a		1215p	1230p		150p							350p	350p																			
13	Woodbury Common, NY *(Highway Stop)*																																												HS	
14	Monroe, NY ♥ *(Terminal – Mill Pond Pkwy.)*		753a			913a			1033a					1208p			133p		238p	323p								421p							523p			545p				555p				
15	Monroe, NY *(Rt. 17 Park & Ride)*		756a			916a	930a		1036a					1212p			136p		241p	326p	337p		346p			358p	415p		425p	434p		452p		509p	526p	525p		548p		530p	539p	558p		555p		610p
16	Museum Village, NY					918a																																							
17	Chester, NY *(Rt. 17M, Cumberland Farms)*					927a			1047a					1222p					252p									432p																	
18	Chester, NY *(Rt. 17M Park & Ride)*	722a				D930a			D1050a					D1225p			146p		D	336p	347p					408p		D				502p		519p		535p		555p		540p			604p		620p
19	Whispering Hills, NY	717a																																									610p		
20	Goshen, NY *(Main St. Bus Stop)*					937a			1058a					1233p					303p		358p							443p				513p					535p							D627p
21	Goshen, NY *(Mathew St. Park & Ride)*					938a			1059a					1234p					304p		400p							444p				514p					539p		550p			619p		630p
22	Mid-Hudson Hospital, NY *(Route 17M)*					951a	D943a																																					
23	New Hampton, NY *(Junction of Rt. 17M & 84 – Route 84 Citgo)*					D956a	948a					1125a		D1244p															*D454p*			445p	525p		D532p			548p				D604p				
24	Galleria Mall, NY *(Note G)*																																												
25	Orange Plaza, NY *(Route 211)*																																												
26	Middletown, NY ♥ *(14 Railroad Ave.)*					1003a	955a		1125a		1105a	1132a		1252p		100p			322p		417p	355p						502p			455p	532p		539p			556p				610p				
27	Orange Plaza, NY *(Route 211)*													100p					*358p*																									Continues to Monticello
28	Galleria Mall, NY *(Note G)*													112p					*405p*		Continues to Monticello																								
29	Central Valley, NY *(Rt. 32 & Smith Clove Rd.)*				829a			942a					1112a		1222p			157p						357p									455p						525p				608p		
30	Highland Mills, NY *(Rt. 32 – Upper Crust Deli)*				832a			945a					1115a		1225p			200p						400p									458p						528p				611p		
31	Mountainville, NY *(Rt. 32 & Angola Rd.)*				839a			952a					1122a		1232p			207p						407p									505p						535p				618p		
32	Vails Gate, NY *(Jct. Rt. 32, 300 & 94)*				846a			959a					1129a		1239p			214p						414p									512p						550p				625p		
33	Newburgh, NY *(Bwy & Lake St. – Citgo)*				854a			1007a					1137a		1247p			222p						422p									520p						557p				633p		
34	Newburgh *(Terminal – Park & Ride, Rt. 17K & NYS Thruway)*			815a	859a			1012a					1142a		1252p			227p						427p	415p								525p						600p				638p		
35	Port Jervis, NY *(Rt. 6 Park & Ride, First Assembly)*											•1149a										• 419p									519p									615p			
36	Port Jervis, NY *(JC Gas, 12 Route 6)*											1150a										420p																						
37																																													
38																																													
39																																													

NOTE: Service does not serve PABT

	G	H	I
40th & 8th	7:30am	7:50am	8:10am
40th & 6th	7:33am	7:53am	8:13am
58th & 5th	7:38am	7:58am	8:18am
34th & 5th	7:44am	8:04am	8:24am
23rd & 5th	7:50am	8:10am	8:30am

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- **SSH** = Saturdays, Sundays and holidays
- ✪ = Sunday only
- ♥ = Agency station to which collect or prepaid express may be consigned. No C.O.D. express or checked baggage.
- **D** = Discharge only
- ✱ = Weekends only
- **P** = Pick up only
- **S** = Stops on signal on Rt 17M
- **HS** = Highway stop only
- **PS** = Pick up at Ridgewood Park & Ride only if seats are available
- • = Bus does NOT stop at First Assembly of God on weekends

Times shown in *ITALICS* indicate service via connecting trip.

Shaded areas represent Park & Rides.

THE FARE POLICY AND TICKET REFUNDS

Except in the case of job loss, cash refunds will no longer be allowed on commutation tickets. In the event of illness, business travel or vacation, unused tickets may be returned for credit toward the purchase of additional commuter tickets by using the commutation credit voucher. A letter stating the reason for returning tickets with the actual tickets must be mailed within fifteen (15) days after the last date of possible use to ShortLine, 4 Leisure Lane, Mahwah, NJ 07430, to Attention: REFUND DEPT. A personal voucher will be issued and mailed. Only one credit voucher may be redeemed at one time against the purchase of another commuter book of tickets.

COMMUTER TICKET POLICY

10 Trips	Good for 20 days	No Credit, No Refund
40 Trips	Good for 40 days	Up to 10 tickets may be returned refund (if turned in 15 days after
50 Trips	Good for 90 days	May Be Shared, No Credit, No Ref
One Way	Good for 30 days	Refundable up to 90 days after la possible use
Round Trip	Good for 120 days	Refundable up to 90 days after la possible use

A 10% Service Charge will be deducted on all refunds.

town • Newburgh • Monroe

43	531	753	163	523	159	525	711	547	745	411	533	807	529	545	407	715	809	377	305	537	747	535	539	543	311	811	397	749	307	157	587	413	413	751	551	589	771	591	815	125	381	391	593
2N	17G		x87m	17G	17M	17c	x87N	17M	x32N	x87m	17c	xPA84	17M	17c	17G	x87N	xPA84	178	x17MD	17M	x32N	17M	17M	17c	x87m	17M	L17MD	x32N	L17MD	178	17M	x17MD	x17MD	x32N	17M	17M	x32N	xPA84	xPA84	x17MD	L17MD	17M	17c
-F	M-F	M-F	M-F	M-F	SSH	M-F	M-F	M-F	M-F	DAILY	M-F	M-F	M-F	M-F	M-F	M-F	SSH	M-F	M-F	SSH	DAILY	M-F	M-F	M-F	M-F	M-F	SSH	M-F	M-F	DAILY	M-F	M-F	S&S	DAILY	M-F	DAILY	DAILY	Sun-F	M-F	DAILY	DAILY	S&S	M-F
8p	500p	505p	510p	510p	515p	520p	525p	525p	530p	530p	530p	535p	535p	540p	550p	600p	600p	600p	600p	615p	615p	622p	630p	635p	635p	700p	715p	715p	730p	755p	815p	830p	830p	845p	945p	1015p	1045p	1100p	1100p	1100p	1230a	140a	140a
3p			535p	546p	548p			D558p	P558p	P558p								P632p	P632p		645p	D643p		703p			730p			820p	844p	857p	857p	D912p	1016p	1046p	1116p	1125p			101a	211a	211a
								618p															722p						842p	902p				1033p	1102p	1132p				117a	227a	227a
ay	Thruway Express	Thruway Nonstop Express	Thruway Express	559p	608p	Thruway Express	Thruway Nonstop Express	625p	Thruway Express	Thruway Express	Thruway Express	Thruway Express	625p		Thruway Express	Thruway Nonstop Express			643p	708p	Thruway Express	714p	730p	Express	Express	753p	807p	Thruway Express	822p		909p		915p	Thruway Express	1039p	1109p	1139p	Thruway Express			123a	233a	233a
ss				604p	613p			630p					628p							653p	712p		717p	735p			757p	809p		824p		913p		919p		1043p	1113p	1143p				127a	237a	237a
				606p	615p			632p					D634p							655p	714p		D719p	738p			D801p	D810p		D826p		915p		921p		1045p	D1115p	D1145p				D129a	D239a	D239a
				609p	618p			633p					641p							657p	716p		721p	740p			807p	813p		828p		917p		923p		1047p	1117p	1147p				131a	241a	241a
				616p	625p			641p					642p							659p	722p		727p	747p				819p		834p		922p		930p		1052p	1122p	1152p				136a	246a	246a
0p				617p	626p	622p		642p	632p				643p		652p			702p	702p	701p	723p	717p	728p	748p	737p		813p	820p	817p	835p	905p	923p		931p	947p	1053p	1123p	1153p	1155 p			137a	247a	247a
HS																					722p							822p							1055p								
				626p	635p			651p					652p		737p	754p				710p	732p		737p	754p	737p		817p	828p		844p	915p	931p	940p	940p		1101p	1130p			1210a		145a	255a	255a
	610p				637p	630p					640p	D645p		653p	659p		709p	709p		735p		740p	757p	750p		820p	831p		846p	915p		940p	942p		1101p	1133p		1210a	*1210a	147a	258a	258a
																											832p												*Sat. only	151a		
																											838p													157a		
	620p			638p		640p				s648p	650p			703p	D708p					745p				800p			D841p		D853p		D940p	D948p	D954p			1143p			D		D157a	D	D307a
				644p										708p																													
	D627p									s659p									720p						751p	848p		903p			959p	1005p								207a		
	630p					650p				s700p	700p				723p				723p						752p	849p		904p			1000p	1006p						D		208a	D	
			S							s = SSH																																	
	D650p									708p									D729p						D800p	D857p		D912p				1016p							D		D215a	D	
	657p									715p							740p	740p	736p						805p	902p		917p	937p		1024p	1026p						1220a	1225a	221a	325a	
	Continues to Monticello																												Continues to Monticello														
8p								639p													729p							829p					954p			1202a							
1p								642p													732p							832p					957p			1205a							
8p								649p													739p							839p					1004p			1212a							
5p								656p													746p							846p					1011p			1219a							
3p								704p													754p							854p					1018p			1227a							
8p		630p					650p	709p								720p					759p							859p					1022p			1231a							
												710p					804p																					1250a					

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We Care For Your Health

SENIOR CITIZEN FARES

Senior Citizens at least 62 years old with I.D. may receive 10% off of the regular one way excursion fare between all points of ShortLine or Chenango Valley Bus Lines. There is no further discount on the purchase of a round trip. Senior Citizen discounts may not be applied to any promotional or other discounted fares.

The New Jersey Senior Citizen Program is valid ONLY between Orange, Rockland or Bergen Counties and New York City.

Senior Citizens, 62 years of age and over, and customers with disabilities, may ride at all times of the day with a valid New Jersey Senior Citizen Coupon in Bergen County, NJ and Orange and Rockland County, NY. Senior Citizens need to remit one coupon for a one-way ticket and two coupons for a round trip ticket.

Senior Citizens may travel at half fare locally within Orange, Sullivan and Rockland Counties. I.D. and a Medicare card is required.

Coach USA Airport Connections

Available on ALL schedules

JFK • LaGuardia • Newark

Ask about our special fares

No reservations are required. Buses leave every 20 minutes from the ground level AirTrans Center in the North Wing, 42nd St. entrance. From the ShortLine gates on the 3rd floor of the North Wing there is a convenient elevator or escalators down to the AirTrans Center.

PORT JERVIS PARK & RIDE

First Assembly of God, Rt. 6

BUS PICKS UP HERE MONDAY – FRIDAY ONLY

For more information call

800-631-8405

NEW YORK TERMINALS

Port Authority Bus Term., 41st & 8th Ave., 212-736-4700

ShortLine Ticket Plaza located on the second floor of the North Wing. ShortLine coaches depart from the 3rd floor Level, Gates 307–314.

TERMINALS & TICKET AGENTS

CENTRAL VALLEY, NY: Danny's Market & Deli, 4 Smith Clove, 845-928-9614
MIDDLETOWN, NY: Shortline Terminal, 14 Railroad Avenue, 845-343-3903
MONROE, NY: Monroe Taxi, 70 Millpond Parkway, 845-782-8141
NEWBURGH, NY: ShortLine Transp. Center, Rt. 17K at Thruway Entrance, 845-561-0734
PORT JERVIS, NY: JC Gas, 12 Rt. 6, 800-631-8405
RIDGEWOOD, NJ: Ridgewood Park & Ride, 201-444-7005
Southbound – Shortline Term., 575 Rt. 17 South
Northbound – Bus Shelter/Pedestrian Overpass, Rt. 17 N
SLOATSBURG, NY: Tuxedo Park Pharmacy, 59 Orange Turnpike, 845-753-9671
SUFFERN, NY: Multiservices Shop & Travel, 94 Orange Avenue, 845-369-7003
TUXEDO, NY: Tickets: Bentlys Deli, Bus stops at shelter across from Railroad Station

NOTES AND REFERENCE MARKS

- No service is rendered to or from New York City and places designated R.
- Holiday Service – Holiday schedule will be operated on New Year's Day, Martin Luther King Jr. Day, President's Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving, and Christmas.
- At the discretion of the carrier additional stops may be made for pick up in New Jersey during morning rush hour. This company is not responsible for errors in the timetable or inconvenience or damage resulting from delayed buses. Schedules are subject to change.

PARK AND RIDE LOCATIONS

FREE PARKING
Harriman • Tuxedo • Newburgh • Middletown
Monroe • Central Valley • Goshen • Chester

New Hampton – Route 84 Citgo
Port Jervis – First Assembly of God (M–F only)

BAGGAGE

Two pieces of luggage will be accepted for transportation in the luggage compartment and one piece may be carried on the bus free of charge. ShortLine/Coach USA reserves the right to limit and charge customers for additional pieces of luggage in peak periods. At this time at ticket will be issued and required on all additional baggage and a fee of $5.00 per piece on a space available basis will be in effect.

Baggage is transported at the customer's risk; the company is not responsible for lost or damaged luggage, or its contents.

TABLE 2: ORANGE COUNTY & ROCKLAND COUNTY TO NEW YORK SERVICE

	Run Number	514	726	500	160	300	772	316	504	312	550	502	800	508	510	728	512	302	542	802	516 554	518	730	310	520	732	528	524	548	544	530	304	526	714	378	804	506	536	406	710	734	306	156	534	712	736	314
	Route Number	x87m		17M	17c	x87m	x32N	17M	17c	x87m	x32N	17c	xPA84	17G	17c	x32N	17M	x87m	17c	xPA84	17M	17c	x32N	x87m	17M	x32N	17c	17G	17c	17M	17c	L17MD	17M	x87N	x87m	xPA84	x87n	17M	17G	x87N	x32N	x17MD	x17MD	17c	x87N	x32N	L17MD
Code	Day of Week	M-F	M-F	M-F	M-F	M-F	M-F	SSH	M-F	M-F	M-F	M-F	M-F	M-F	M-F	M-F	M-F	M-F	M-F	M-F	Daily	M-F	M-F	M-F	M-F	M-F	M-F	M-F	M-F	SSH	M-F	SSH	M-F	M-F	M-F	M-F	M-F	M-F	M-F	M-S	M-F	Daily	Daily	M-F	M-S	M-F
36	Port Jervis, NY *(JC Gas, 12 Route 6)*																																													
35	Port Jervis, NY *(Rt. 6 Park & Ride, First Assembly)*												446a							517a																613a											
34	Newburgh *(Terminal – Park & Ride, Rt. 17K)*		420a				440a									505a							545a			605a								610a					630a	640a				650a	700a	
33	Newburgh, NY *(Bwy & Lake St. – Citgo)*						444a									514a							554a			610a														647a				707a	
32	Vails Gate, NY *(Jct. Rt. 32, 300 & 94)*						450a									520a							600a			616a														654a				715a	
31	Mountainville, NY *(Rt. 32 & Angola Rd.)*						456a									526a							606a			622a														701a				722a	
30	Highland Mills, NY *(Rt. 32 – Upper Crust Deli)*						501a									531a							611a			626a														708a				729a	
29	Central Valley, NY *(Rt. 32 & Smith Clove Rd.)*						504a									534a							614a			629a														713a				732a	
28	Galleria Mall, NY *(Note G)*																																													
27	Orange Plaza, NY *(Route 211)*																																													
26	Middletown, NY *(14 Railroad Ave.)*					424a		432a		445a								520a						543a								557a			628a							620a	645a				648a
25	Orange Plaza, NY *(Route 211)*																																													
24	Galleria Mall, NY *(Note G)*																																													
23	New Hampton, NY																																													
22	*(Junction of Rt. 17M & 84 – Route 84 Citgo)*					431a		439a		451a								527a						550a								603a										627a	652a				655a
	Mid-Hudson Hospital, NY *(Route 17M)*					S																										S															
21	Goshen, NY *(Main St. Bus Stop)*					440a												536a										559a															636a					704a
20	Goshen, NY *(Park & Ride / Matthews St.)*					443a		446a		456a				515a	530a			539a				550a						604a			622a	613a							631a			639a	700a				705a
19	Whispering Hills, NY													523a														612a									643a									
18	Chester, NY *(Rt. 17M Park & Ride)*	420a			435a	451a			453a			508a		528a	536a				550a		*545a	559a				612a		620a	622a	629a	620a					654a		640a						720a			
17	Chester, NY *(Rt. 17M, Cumberland Farms)*																														623a												646a				
16	Museum Village, NY																				*Sat. & Sun.																										
15	Monroe, NY *(Park & Ride, Route 17)*	430a			445a	458a		502a	503a	515a		518a	526a	538a	546a			553a	600a		*555a	609a		611a		622a	627a	630a	632a	639a					701a		650a					729a			
14	Monroe, NY *(Term. - Mill Pond Pkwy.)*			450a				505a								545a					600a				618a						636a	630a					642a			658a					726a
12	Woodbury Common, NY *(Bus Shelter)*																																													
11	Central Valley, NY *(Park & Ride, Jct. Rt. 6&17)*	436a	438a		453a		511a		512a		520a				555a	540a			608a			618a	623a			640a	630a		640a	654a				658a	715a		705a		718a			738a			
10	Harriman, NY *(Rt. 17 & 17M Park & Ride)*			457a				512a								552a			608a		608a	618a	623a		627a		640a				643a	639a					651a			705a					736a
9	Route 17 Ent. Metro North Station			500a												553a					609a				628a						644a	640a					652a			706a					737a
8	Southfields, NY *(Rt. 17 & Old Orange Tpk.)*			502a				517a								557a					615a				632a						648a	644a					656a			712a					741a
7	Tuxedo, NY *(Rt. 17 & 17A, Park & Ride)*			504a				519a								559a					616a				634a						651a	647a					659a			713a					743a
6	Tuxedo, NY *(Rt. 17 Bus Shelter)*			507a		Park Ride Express		522a	Park Ride Express			Park Ride Express	Park Ride Express	Park Ride Express	Park Ride Express	Thruway Express	602a	Park Ride Express			618a	Park Ride Express	Park Ride Express	Park Ride Express	637a	Park Ride Express	Park Ride Express	Park Ride Express	Park Ride Express		Park Ride Express	653a	649a	Park Ride Express		Local NJ Stops	701a	Park Ride Express	Park Ride Express	Park Ride Express	717a		Park Ride Express	Nonstop Express	Park Ride Express	746a
5	Sloatsburg, NY *(Route 17)*			511a				526a								607a					623a				642a						658a	654a					706a			722a					750a
4	Suffern, NY *(Terminal – 94 Orange Ave.)*							530a																						700a															
3	Ridgewood *(Rt. 17N, Park & Ride Shelter)*	PS		532a	PS			547a	PS	PS	PS				PS	PS	PS	PS		PS	PS	PS	PS	PS	PS	PS		PS			717a	PS	PS	PS		PS									758a
2	New York, NY (PABT)																																													
1	*41st St. & 8th Ave., NYC*	540a	550a	600a	555a	605a	611a	618a	621a	626a	620a	631a	638a	641a	649a	641a	655a	704a	708a	718a	726a	722a	723a	725a	736a	745a	740a	736a	737a	739a	744a	747a	746a	See Note G	806a	815a	830a	801a	814a	See Note H	829a	824a	815a	855a	See Note I	853a	831a

Run 726 (continued from above)

New York PABT	550a
30th & 9th	555a
26th & 9th	557a
26th & 7th	559a
26th & 5th	601a
Broadway & 3rd	605a
Broadway & Spring Street	607a
Broadway & Leonard	609a
Broadway & Chambers	612a
Broadway & Liberty	614a
Broadway & Wall Street	615a

NOTE: Service does not serve PABT

	G	H	I
40th & 8th	7:30am	7:50am	8:10am
40th & 6th	7:33am	7:53am	8:13am
58th & 5th	7:38am	7:58am	8:18am
34th & 5th	7:44am	8:04am	8:24am
23rd & 5th	7:50am	8:10am	8:30am

Run 542 (cont. from above)

New York PABT	708a
30th & 9th	713a
26th & 9th	715a
26th & 7th	717a
26th & 5th	719a
Broadway & 3rd	723a
Broadway & Spring Street	725a
Broadway & Leonard	727a
Broadway & Chambers	730a
Broadway & Liberty	732a
Broadway & Wall Street	733a

NEW BUS SERVICE FROM NYC (PABT)

to Long Island points – Hempstead, Mineola, Patchogue, and more!

Leaves 5:50 am and 7:15 am

Times shown in *ITALICS* indicate service via connecting trip. Shaded areas represent Park & Rides.

SCHEDULE LEGEND:

- ◗ = Except Saturday, Sunday and holidays
- **SSH** = Saturdays, Sundays and holidays
- ✪ = Sunday only
- ♥ = Agency station to which collect or prepaid express may be consigned. No C.O.D. express or checked baggage.
- **D** = Discharge only
- ✱ = Weekends only
- **P** = Pick up only
- **S** = Stops on signal on Rt 17M
- **HS** = Highway stop only
- **PS** = Pick up at Ridgewood Park & Ride only if seats are available
- • = Bus does NOT stop at First Assembly of God on weekends

TO PURCHASE

Note: These tickets are
Ticket Office is open fr

You will need to enter t

You will then enter th

Allendale, NJ .....
Chester, NY .....
Goshen, NY .....
Harriman,NY .....
Hohokus, NJ .....
Mahwah, NJ .....

rriman • Suffern • New York

36	314	386 580	806	308	540	738	400	380	318	820	700	152 382	740	538	376	702	708	384	404	584	776	742	420	798	808	750 **778 **716	586	164	746	458	546 **706	748	388 168	752	812	590	770	724	360	522
2N	L17MD	L17MD	xPA84	L17MD	17M	x32N	x17MD	L17MD	17c	xPA84	x87N	L17MD	x32N	17c	xL7MD	x87	x32N	L17MD	17c	x17MD	x32N	x32N	x17MD	17c	xPA84	x87N	x17M	x17MD	x32N	L17MD	17c	x32N	L17MD	x87	xPA84	17M	x32N		L17MD	17c
-S	M-F	SSH	M-F	M-Sat	M-F	Daily	Daily	Daily	M-F	SSH	Daily	Daily	Daily	M-F	SSH	M-F	Daily	Daily	Daily	M-F	Daily	Daily	Daily	Daily	Daily	Daily	Daily	Daily	Daily	Daily	Daily	Daily	Daily	M-F	Daily	SUN	Daily	M-F	SUN	M-Sat
			722a							950a															315p									730p						
																									• 316p									• 731p						
0a						830a					1000a		1130a				130p					300p							445p			622p		750p				850p			
7a						837a							1137a				137p					307p							452p			629p						857p			
5a						845a							1145a				145p					315p							500p			637p						905p			
2a						852a							1152a				151p					322p							507p			644p						912p			
9a						859a							1159a				154p					329p							514p			651p						919p			
2a						902a							1202p				158p					332p							517p			654p						922p			
																												500p				618p								
																																622p								
	648a	✪ 656a	751a	730a			850a	855a	1015a	1015a		1115a			1200p			120p	150p				230p		345p			520p		515p		652p		755p				950p	
	655a	✪ 702a	759a	738a				904a		1023a		1124a						129p					237p		353p			530p				659p		803p				957p	
				S				S															242p		358p														
	704a	✪ 710a		753a				917a				1137a						142p										540p				708p						1006p		
	705a	✪ 713a		756a				920a				1140a						145p										541p				709p						1007p		
		722a		806a				927a				1147a								213p						411p														
								930a				1150a						155p										551p				719p						1017p		
		732a		813a				937a	1040a	1038a		1157a		1230p	1230p			202p		221p			300p		420p	421p	556p		◗605p			724p		818p	823p			1022p	1220a
	726a	735a			815a			943a				1203p						208p		223p						424p	559p					727p			826p			1025p	
						906a				D			1206p	1245p	1245p	130p	202p				325p	336p		410p		445p			521p	545p	615p	658p		816p	*826p		926p	926p		
8a				822a									1213p								330p											705p			*Sat. & Sun only					1226a
	736a	742a			825a			951a				1211p						216p		233p						433p	608p					737p			835p	935p		1035p	
	737a	743a			826a			953a				1213p						218p		234p						434p	609p					738p			837p	936p		1036p	
	741a	747a			830a			958a				1218p						223p		241p						441p	616p					743p			842p	943p		1043p	
	743a	749a			832a			959a				1219p						224p		243p						443p	618p					745p			844p	945p		1045p	
tide	746a	752a		Park Ride Express	835a		Express	1003a	Express	Express	Nonstop Express	1223p	Thruway Express				Thruway Express	228p		246p		Thruway Express		Thruway Express	Park Ride Express	446p	618p	Thruway Express		Thruway Express	Thruway Express	748p	Express	Express	847p	948p		1048p	
ess	750a	756a			844a			1007a				1227p						232p		251p						451p	626p					753p			852p	954p		1053p	
		800a						D1011a										238p		300p						500p	633p					800p			900p	1001p			
	758a	817a			903a	930a	938a	1030a	1105a		1038a	1254p	D1240p					257p	238p	321p	408p	D408p				521p	D655p	549p			729p	818p			917p	1018p		1118p	100a
3a	831a	855a	936a	936a	943a	1007a	1015a	1106a	1140a	1143a	1120a	130p	115p	145p	145p	245p	300p	333p	315p	355p	445p	445p	405p	600p	545p	615p	602p	730p	640p	646p	730p	803p	856p	911p	930p	950p	1050p	1036p	1148p	130a

** Run 716 runs as additional Buses from Woodbury Common to NYC Mon–Fri.
** Runs 778 and 706 run as additional Buses from Woodbury Common to NYC Sat. & Sun.

CHASE TICKETS FROM THE NEW JERSEY TRANSIT MACHINES IN THE PORT AUTHORITY

tickets are for travel on the 11:30 pm,12:30 am and 1:40 am schedules to points in New Jersey and Orange County only. Coach USA/Shortline is open from 6:00 am to 11:00 pm daily.

l to enter the company code – **958**

n enter the zone code of your destination as follows:

l..... 6	Middletown, NY..... 21	Southfields, NY..... 15
..... 20	Monroe, NY..... 18	Suffern, NY..... 9
..... 19	Paramus, NJ..... 2	Tuxedo, NY..... 13
..... 17	Ramsey, NJ..... 7	Waldwick, NJ..... 5
..... 4	Ridgewood, NJ..... 3	
..... 8	Sloatsburg, NY..... 12	

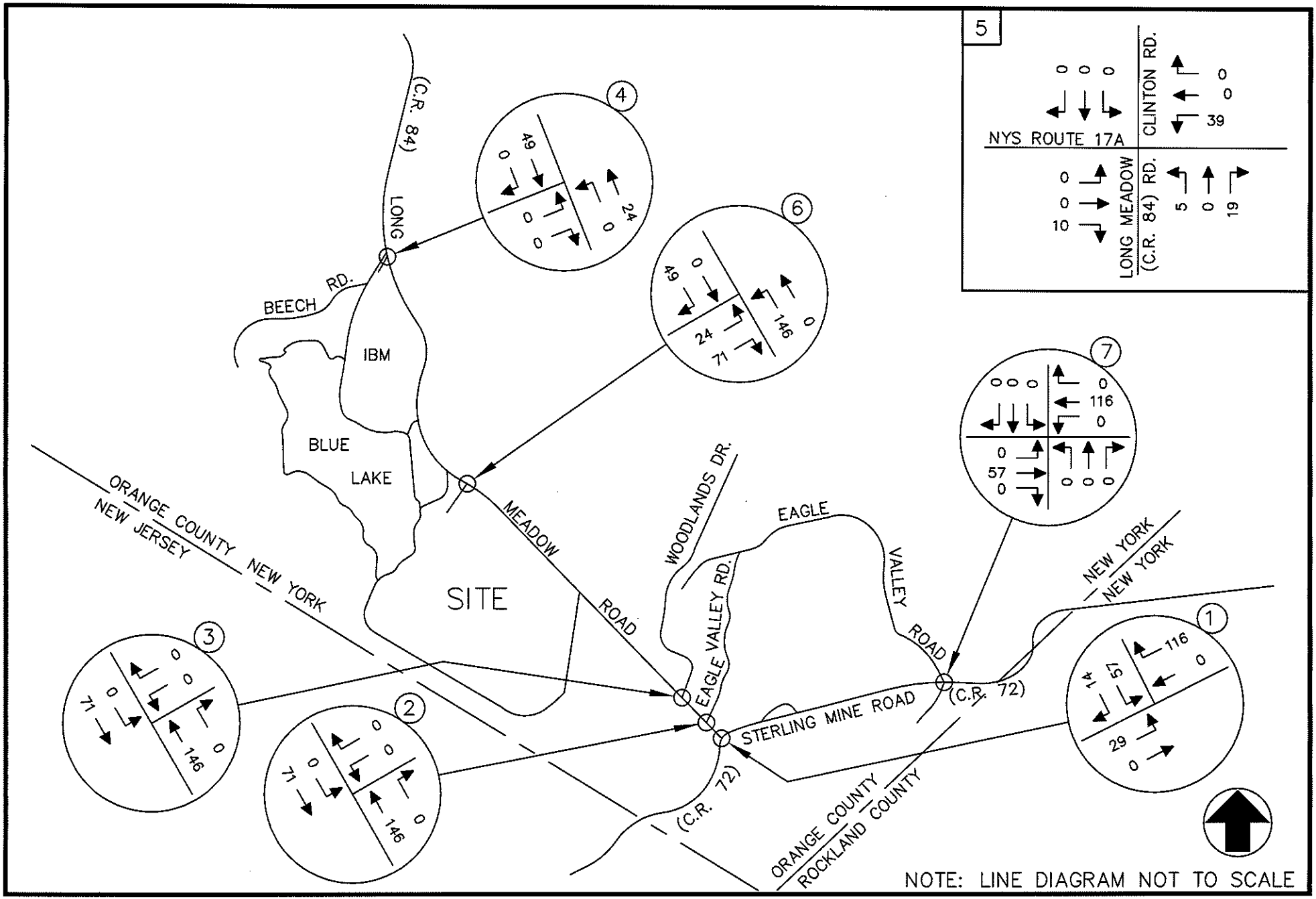
COMMUTER TICKET POLICY

10 Trips	Good for 20 days	No Credit, No Refund
40 Trips	Good for 40 days	Up to 10 tickets may be returned for credit or refund (if turned in 15 days after last date valid)
50 Trips	Good for 90 days	May Be Shared, No Credit, No Refund
One Way	Good for 30 days	Refundable up to 90 days after last date of possible use
Round Trip	Good for 120 days	Refundable up to 90 days after last date of possible use

A 10% Service Charge will be deducted on all refunds.

APPENDIX "G"

SENSITIVITY ANALYSIS

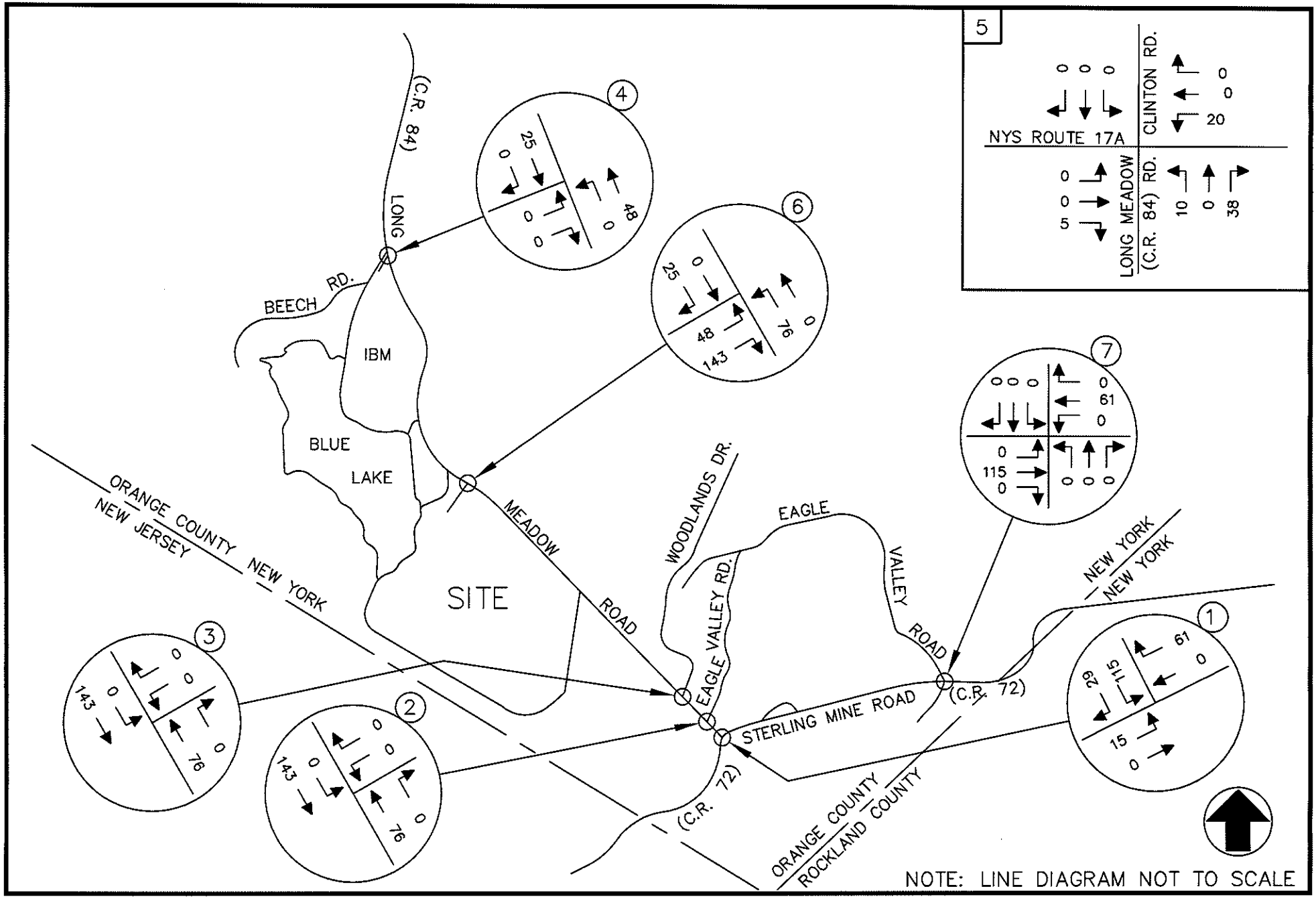


1 KINGS DRIVE WATCHTOWER
WARWICK, NEW YORK

JOHN COLLINS ENGINEERS, P.C.
HAWTHORNE , NEW YORK

SITE GENERATED TRAFFIC VOLUMES
WEEKDAY PEAK AM HOUR
(SENSITIVITY ANALYSIS)

PROJECT NO. 1700 DATE: JUNE 2010 FIG. NO. 20A

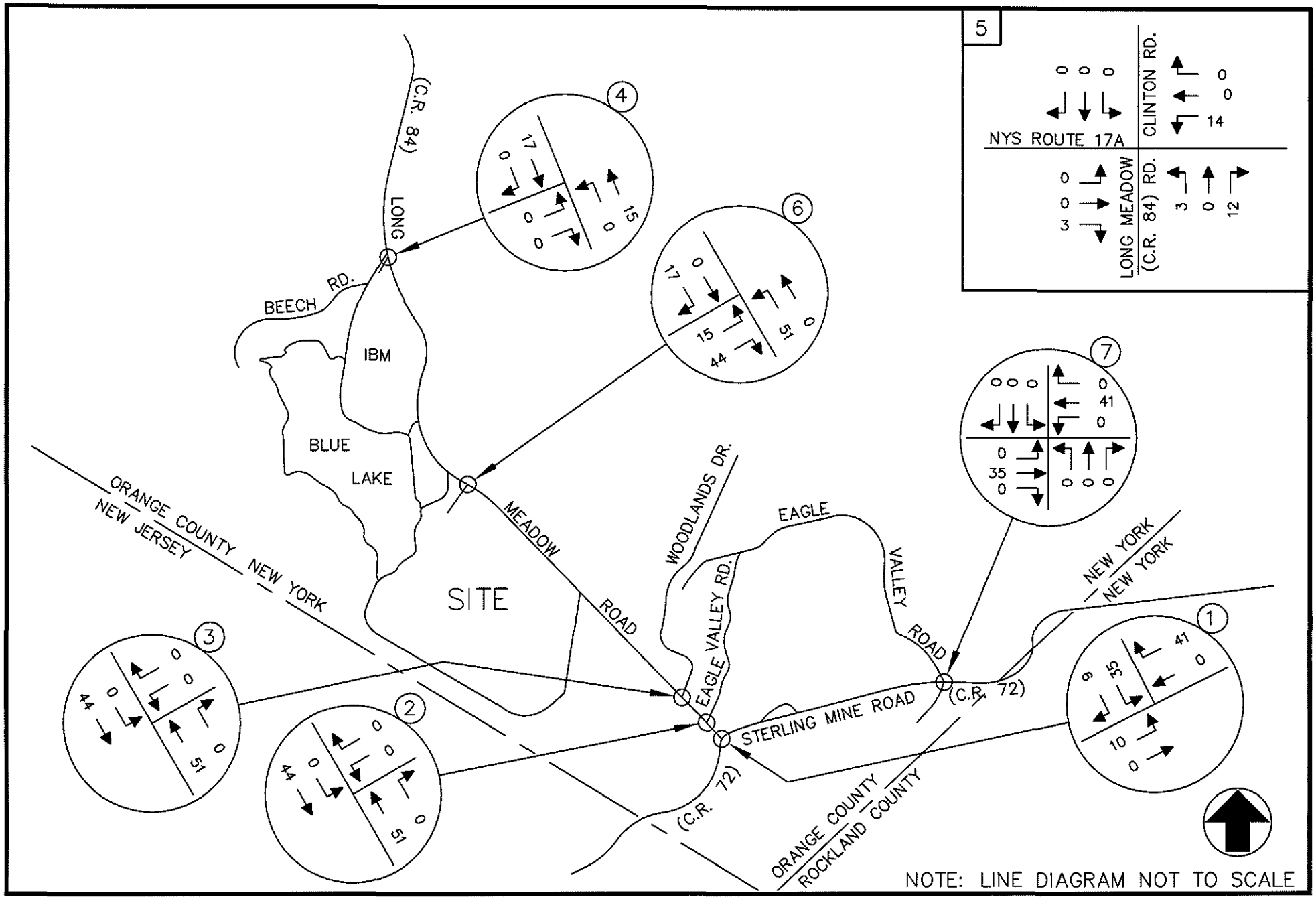


1 KINGS DRIVE WATCHTOWER
WARWICK, NEW YORK

JOHN COLLINS ENGINEERS, P.C.
HAWTHORNE , NEW YORK

SITE GENERATED TRAFFIC VOLUMES
WEEKDAY PEAK PM HOUR
(SENSITIVITY ANALYSIS)

PROJECT NO. 1700 DATE: JUNE 2010 FIG. NO. 21A

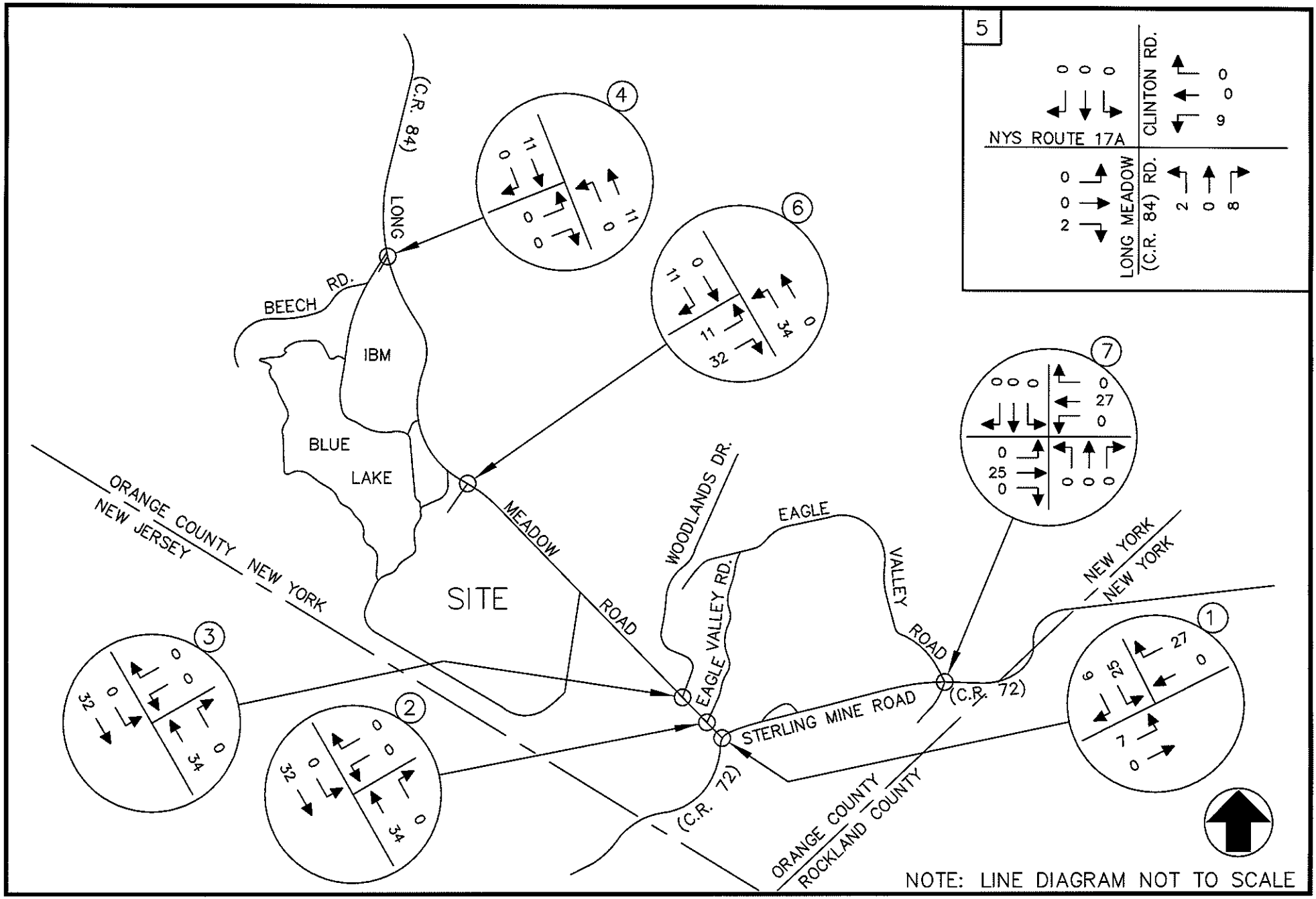


1 KINGS DRIVE WATCHTOWER
WARWICK, NEW YORK

JOHN COLLINS ENGINEERS, P.C.
HAWTHORNE , NEW YORK

SITE GENERATED TRAFFIC VOLUMES
WEEKEND PEAK SATURDAY HOUR
(SENSITIVITY ANALYSIS)

PROJECT NO. 1700 DATE: JUNE 2010 FIG. NO. 22A

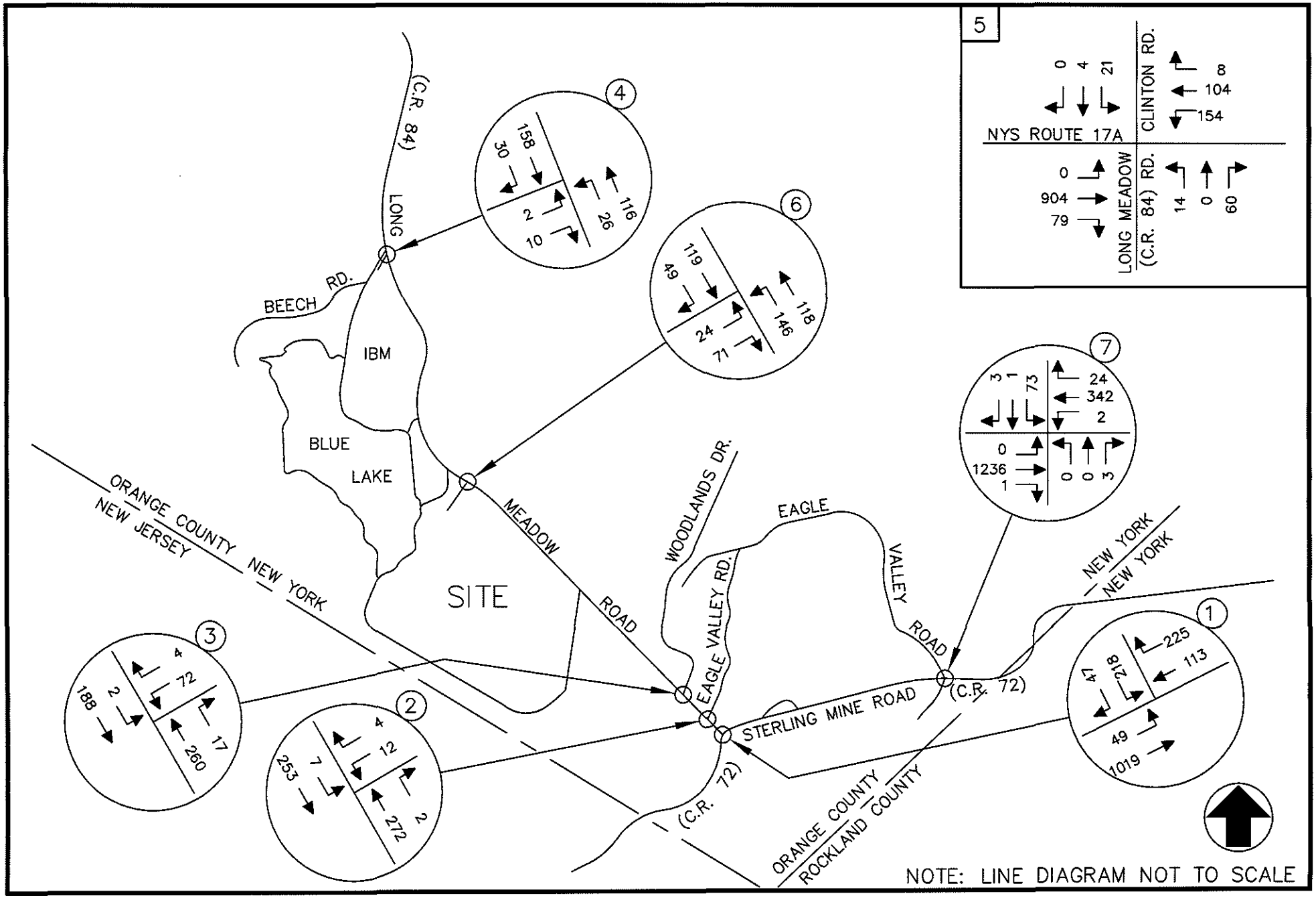


1 KINGS DRIVE WATCHTOWER
WARWICK, NEW YORK

JOHN COLLINS ENGINEERS, P.C.
HAWTHORNE , NEW YORK

SITE GENERATED TRAFFIC VOLUMES
WEEKEND PEAK SUNDAY HOUR
(SENSITIVITY ANALYSIS)

PROJECT NO. 1700 DATE: JUNE 2010 FIG. NO. 23A



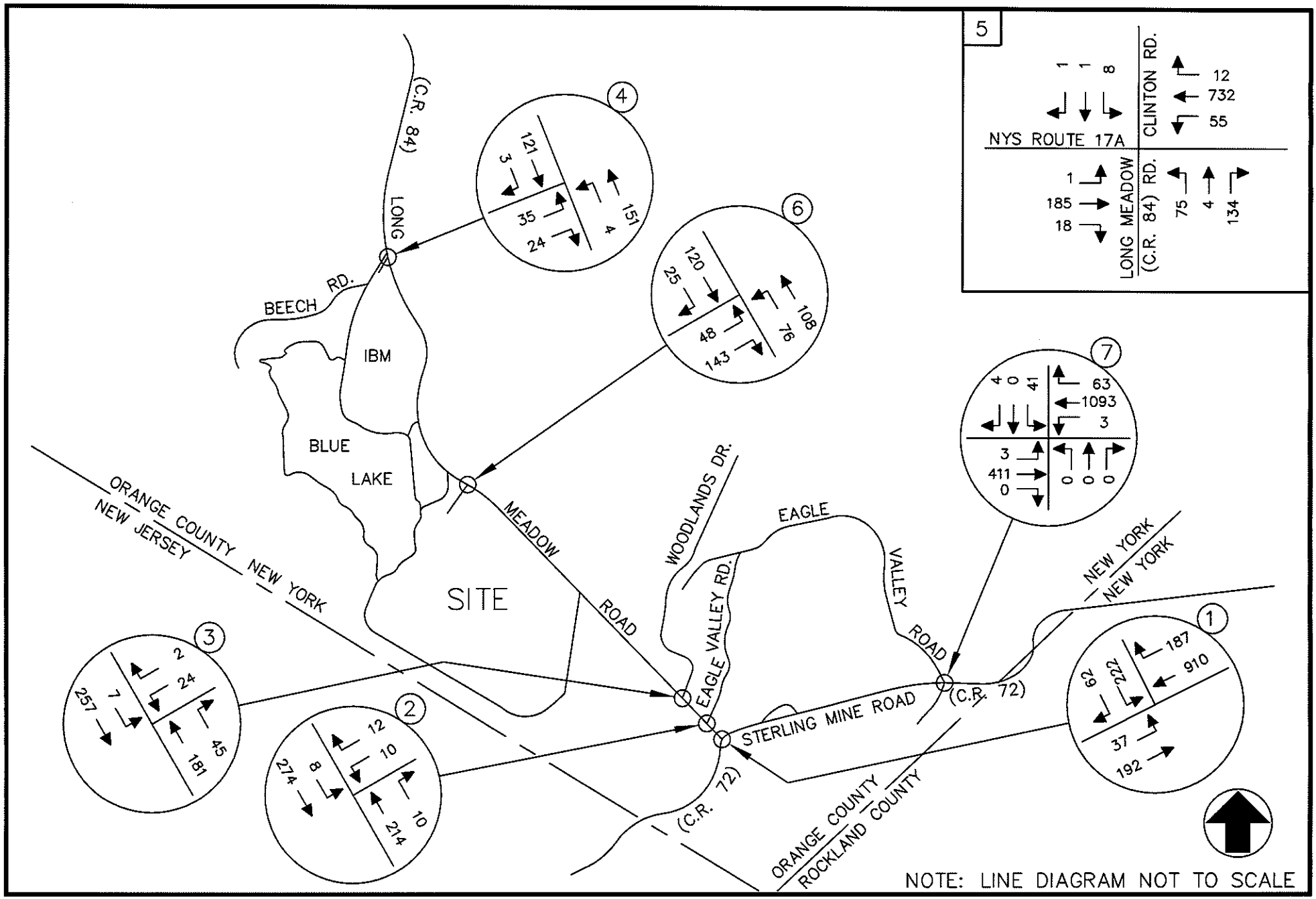
1 KINGS DRIVE WATCHTOWER

WARWICK, NEW YORK

JOHN COLLINS ENGINEERS, P.C.
HAWTHORNE , NEW YORK

2015 BUILD TRAFFIC VOLUMES
WEEKDAY PEAK AM HOUR
(SENSITIVITY ANALYSIS)

PROJECT NO. 1700 DATE: JUNE 2010 FIG. NO. 24A

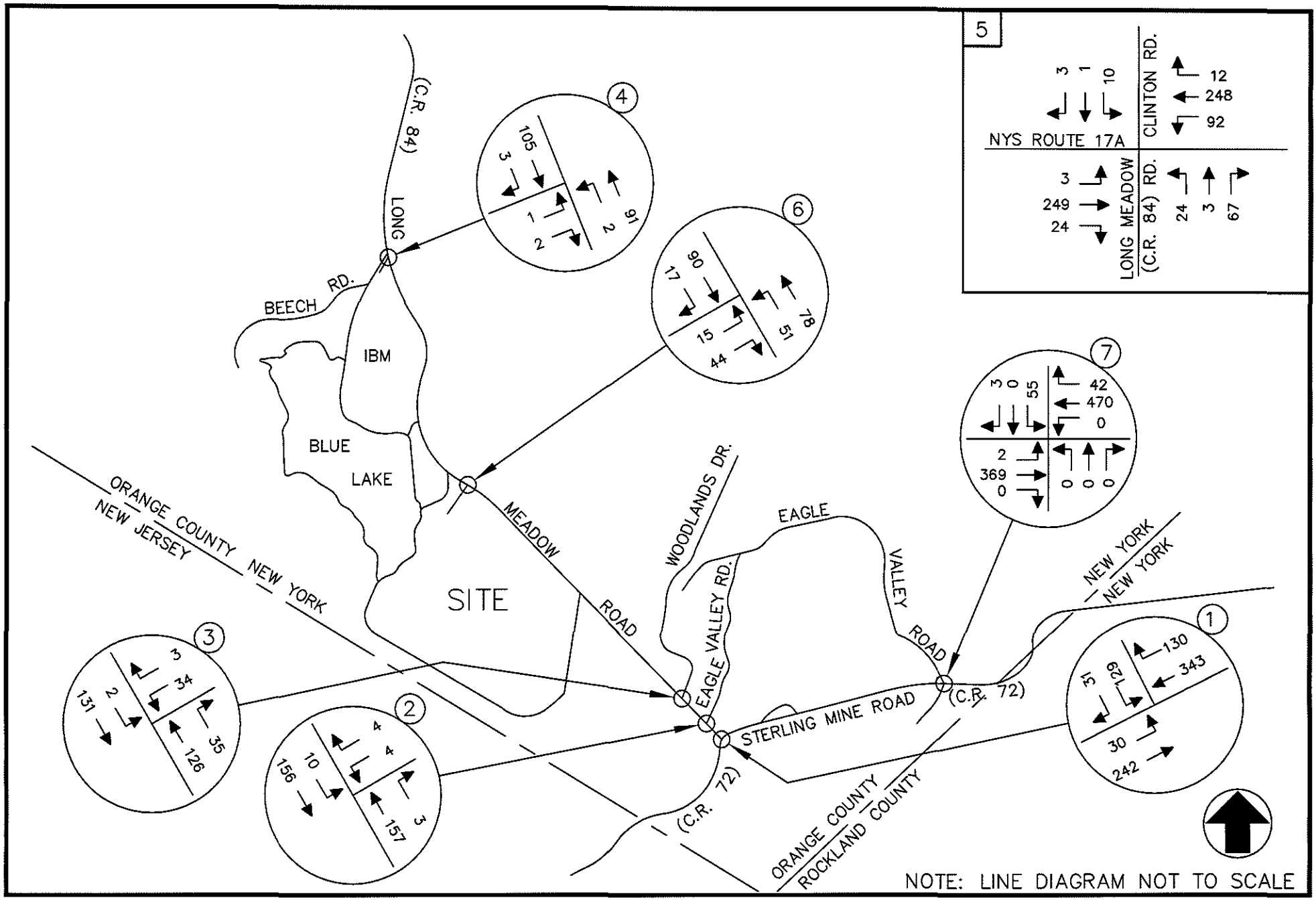


1 KINGS DRIVE WATCHTOWER
WARWICK, NEW YORK

JOHN COLLINS ENGINEERS, P.C.
HAWTHORNE , NEW YORK

2015 BUILD TRAFFIC VOLUMES
WEEKDAY PEAK PM HOUR
(SENSITIVITY ANALYSIS)

PROJECT NO. 1700 DATE: JUNE 2010 FIG. NO. 25A

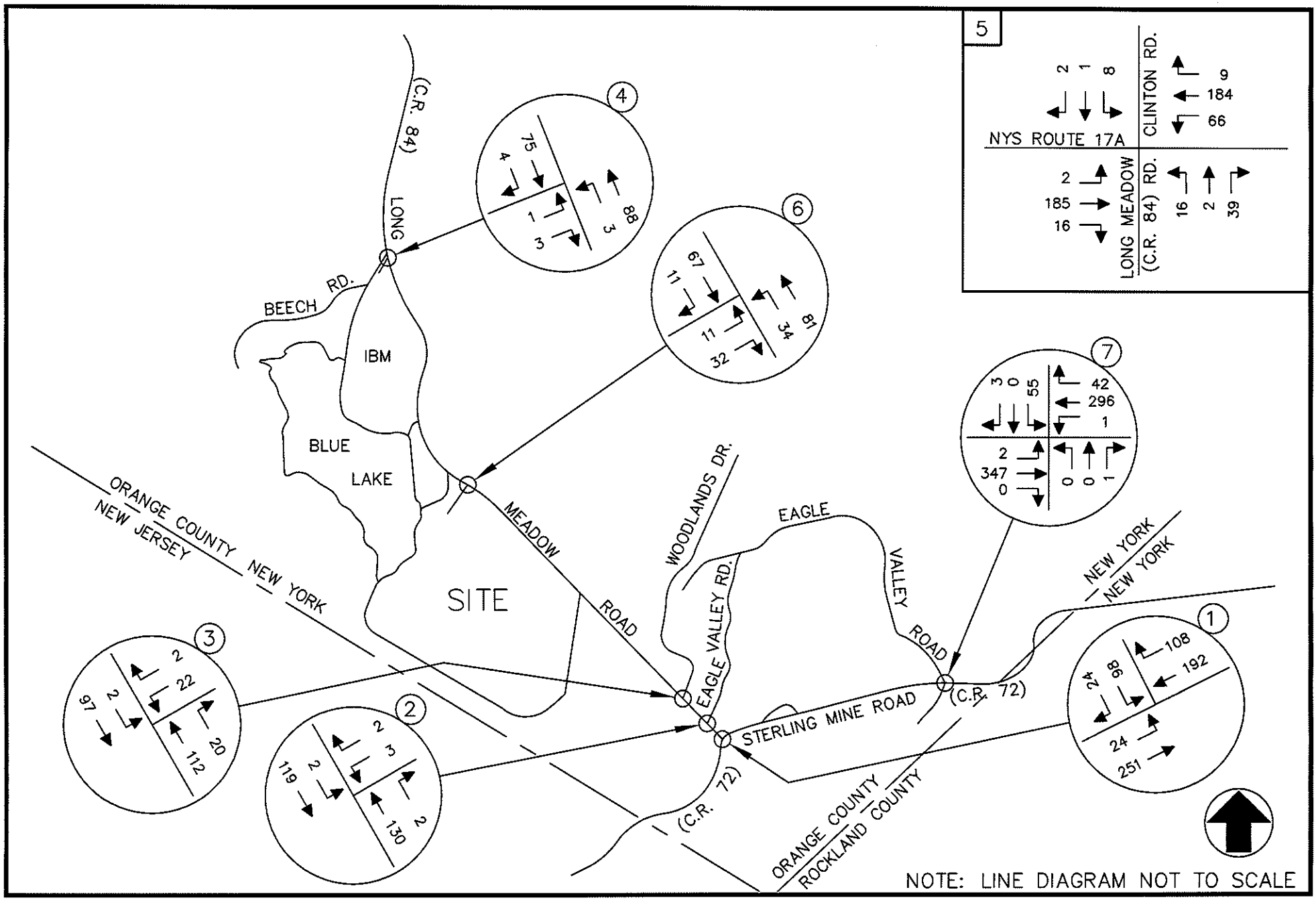


1 KINGS DRIVE WATCHTOWER
WARWICK, NEW YORK

JOHN COLLINS ENGINEERS, P.C.
HAWTHORNE , NEW YORK

2015 BUILD TRAFFIC VOLUMES
WEEKEND PEAK SATURDAY HOUR
(SENSITIVITY ANALYSIS)

PROJECT NO. 1700 DATE: JUNE 2010 FIG. NO. 26A



1 KINGS DRIVE WATCHTOWER
WARWICK, NEW YORK

JOHN COLLINS ENGINEERS, P.C.
HAWTHORNE , NEW YORK

2015 BUILD TRAFFIC VOLUMES
WEEKEND PEAK SUNDAY HOUR
(SENSITIVITY ANALYSIS)

PROJECT NO. 1700 DATE: JUNE 2010 FIG. NO. 27A

TABLE NO. 1-A

HOURLY TRIP GENERATION RATES (HTGR) AND ANTICIPATED SITE GENERATED TRAFFIC VOLUMES

1 KINGS DRIVE WATCHTOWER WARWICK, NY	ENTRY			EXIT		
	HTGR*	VOLUME	EXTERNAL TRIPS	HTGR*	VOLUME	EXTERNAL TRIPS
OFFICE (210,000 S.F.)						
PEAK AM HOUR	1.42	299	179	0.20	41	25
PEAK PM HOUR	0.25	53	32	1.24	261	157
PEAK SATURDAY HOUR	0.17	36	22	0.15	31	19
PEAK SUNDAY HOUR	0.06	13	8	0.04	8	5
RESIDENTIAL DWELLINGS (588 DWELLING UNITS)						
PEAK AM HOUR	0.06	36	14	0.30	177	71
PEAK PM HOUR	0.29	172	69	0.14	85	34
PEAK SATURDAY HOUR	0.20	115	46	0.17	98	39
PEAK SUNDAY HOUR	0.16	93	37	0.16	93	37
TOTALS						
PEAK AM HOUR	-	-	194	-	-	95
PEAK PM HOUR	-	-	101	-	-	191
PEAK SATURDAY HOUR	-	-	68	-	-	58
PEAK SUNDAY HOUR	-	-	45	-	-	42

NOTES:

1) * THE HOURLY TRIP GENERATION RATES (HTGR) ARE BASED ON DATA PUBLISHED BY THE INSTITUTE OF TRANSPORTATION ENGINEERS (ITE) AS CONTAINED IN THE TRIP GENERATION HANDBOOK, 8TH EDITION, 2008. ITE LAND USE CODE - 710 - OFFICE & 230 - TOWNHOME.

2) THE EXTERNAL TRIPS SHOWN ARE BASED ON 60% OF THE OFFICE AND 40% OF THE RESIDENTIAL TRIPS.

TABLE NO. 2-A

LEVEL OF SERVICE SUMMARY TABLE - SENSITIVITY ANALYSIS

			2010 EXISTING				2015 NO-BUILD				2015 BUILD (SENSITIVITY ANALYSIS)			
			AM	PM	SATURDAY	SUNDAY	AM	PM	SATURDAY	SUNDAY	AM	PM	SATURDAY	SUNDAY
1	STERLING MINE ROAD (C.R. 72) & LONG MEADOW ROAD (C.R. 84)	**SIGNALIZED**												
		EB	B[18.8]	A[5.6]	A[5.8]	A[5.8]	C[32.2]	A[5.8]	A[6.0]	A[6.0]	C[31.5]	A[6.0]	A[5.9]	A[6.0]
		WB	A[2.7]	B[11.4]	A[5.1]	A[4.0]	A[2.7]	B[14.9]	A[5.2]	A[4.0]	A[1.8]	B[14.1]	A[4.7]	A[3.7]
		SB	C[30.7]	C[28.8]	C[28.6]	C[28.3]	C[31.2]	C[29.3]	C[29.1]	C[28.6]	C[34.9]	C[34.2]	C[29.9]	C[29.2]
		OVERALL	B[18.1]	B[12.2]	A[8.5]	A[8.1]	C[27.6]	B[15.0]	A[8.8]	A[8.4]	C[26.0]	B[16.5]	A[9.5]	A[9.1]
2	LONG MEADOW ROAD (C.R. 84) & EAGLE VALLEY ROAD	**UNSIGNALIZED**												
		WB	B[10.0]	A[9.6]	A[9.3]	A[9.2]	B[10.4]	A[9.9]	A[9.5]	A[9.3]	B[12.4]	B[11.1]	B[10.1]	A[9.7]
		SB LEFT	A[7.5]	A[7.5]	A[7.5]	A[7.4]	A[7.5]	A[7.6]	A[7.5]	A[7.5]	A[7.9]	A[7.8]	A[7.6]	A[7.5]
3	LONG MEADOW ROAD (C.R. 84) & WOODLANDS DRIVE	**UNSIGNALIZED**												
		WB	B[10.2]	A[9.9]	A[9.5]	A[9.3]	B[10.7]	B[10.3]	A[9.8]	A[9.6]	B[13.2]	B[12.3]	B[10.5]	A[10.0]
		SB LEFT	A[7.5]	A[7.5]	A[7.4]	A[7.4]	A[7.5]	A[7.6]	A[7.5]	A[7.5]	A[7.9]	A[7.8]	A[7.6]	A[7.5]
4	LONG MEADOW ROAD (C.R. 84) & IBM ENTRANCE / BEECH ROAD	**UNSIGNALIZED**												
		EB	A[9.0]	A[9.4]	A[8.8]	A[8.7]	A[9.2]	A[9.6]	A[9.0]	A[8.8]	A[9.5]	A[10.0]	A[9.1]	A[8.9]
		NB LEFT	A[7.6]	A[7.4]	A[7.4]	A[7.4]	A[7.6]	A[7.5]	A[7.4]	A[7.4]	A[7.7]	A[7.5]	A[7.5]	A[7.4]
5	NYS ROUTE 17A & LONG MEADOW ROAD (C.R. 84)/ CLINTON ROAD	**UNSIGNALIZED**												
		EB LEFT	A[7.4]	A[9.3]	A[7.8]	A[7.6]	A[7.5]	A[9.6]	A[7.9]	A[7.7]	A[7.5]	A[9.6]	A[7.9]	A[7.7]
		WB LEFT	B[11.0]	A[7.6]	A[7.9]	A[7.7]	B[12.2]	A[7.8]	A[8.1]	A[7.9]	B[13.0]	A[7.9]	A[8.2]	A[7.9]
		NB	C[15.4]	B[13.5]	B[11.1]	B[10.1]	C[22.4]	C[16.4]	B[12.0]	B[10.6]	D[28.3]	C[18.6]	B[12.3]	B[10.7]
		SB	C[18.6]	C[17.3]	B[12.2]	B[11.0]	D[25.4]	C[21.5]	B[13.7]	B[11.7]	D[32.0]	C[23.8]	B[14.3]	B[12.0]
6	LONG MEADOW ROAD (C.R. 84) & SITE ACCESS DRIVEWAY	**UNSIGNALIZED**												
		EB	-	-	-	-	-	-	-	-	B[10.8]	B[11.1]	A[9.5]	A[9.2]
		NB LEFT	-	-	-	-	-	-	-	-	A[8.0]	A[7.7]	A[7.6]	A[7.5]
7	STERLING MINE ROAD (C.R. 72) & SISTER SERVANTS LANE/ EAGLE VALLEY ROAD	**UNSIGNALIZED**												
		EB LEFT	A[7.7]	B[10.7]	A[8.3]	A[7.9]	A[7.8]	B[11.4]	A[8.5]	A[8.0]	A[8.2]	B[11.8]	A[8.6]	A[8.1]
		WB LEFT	B[11.2]	A[7.8]	A[7.9]	A[7.9]	B[12.0]	A[8.0]	A[8.1]	A[8.0]	B[12.4]	A[8.3]	A[8.2]	A[8.1]
		NB	C[16.4]	A[9.3]	A[9.5]	A[9.5]	C[18.2]	A[9.7]	A[9.9]	A[9.8]	C[19.2]	B[10.3]	B[10.1]	A[9.9]
		SB	E[47.2]	D[32.1]	C[15.9]	B[13.6]	F[87.1]	F[50.1]	C[22.2]	C[15.2]	F[116.1]	F[57.8]	D[25.4]	C[18.3]

NOTES:

1) THE ABOVE REPRESENTS THE LEVEL OF SERVICE AND VEHICLE DELAY IN SECONDS, C [16.2], FOR EACH KEY APPROACH AS WELL AS FOR THE OVERALL INTERSECTION FOR THE SIGNALIZED INTERSECTIONS. FOR THE UNSIGNALIZED INTERSECTIONS THE MINOR APPROACH AND LEFT TURN FROM MAJOR ROADWAY MOVEMENTS ARE SHOWN. SEE APPENDIX "D" FOR A DESCRIPTION OF THE LEVELS OF SERVICE STANDARDS.
2) INTERSECTION 7: THE RESULTS DO NOT REFLECT THE EFFECT OF GAPS IN TRAFFIC FLOW AT THIS INTERSECTION WHICH RESULT IN BETTER OPERATING CONDITIONS THAN SHOWN IN THE TABLE.

HCS+: Signalized Intersections Release 5.5

Analyst: R.H.
Agency: JCE
Date: 9/19/11
Period: PEAK AM HOUR
Project ID: 1700AMB1 (SENSITIVITY ANALYSIS)
E/W St: STERLING MINE ROAD (C.R. 72)

Inter.: C.R. 72 & LONG MEADOW ROAD
Area Type: All other areas
Jurisd:
Year : 2015 BUILD TRAFFIC VOLUMES
N/S St: LONG MEADOW ROAD (C.R. 84)

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	0	0	1	1	0	0	0	1	0	1
LGConfig	L	T			T	R				L		R
Volume	49	1019			113	225				218		47
Lane Width	11.0	11.0			12.0	12.0				12.0		12.0
RTOR Vol						0						0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	A				NB Left			
Thru	A				Thru			
Right					Right			
Peds					Peds			
WB Left					SB Left	A		
Thru	A				Thru			
Right	A				Right	A		
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right	A		
Green	60.5					19.5		
Yellow	3.0					3.0		
All Red	2.0					2.0		

Cycle Length: 90.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	791	1177	0.07	0.67	5.1	A		
T	1170	1740	0.97	0.67	32.8	C	31.5	C
Westbound								
T	1210	1800	0.10	0.67	5.2	A	1.8	A
R	1530	1530	0.16	1.00	0.1	A		
Northbound								
Southbound								
L	371	1710	0.65	0.22	36.2	D		
							34.9	C
R	332	1530	0.16	0.22	28.8	C		

Intersection Delay = 26.0 (sec/veh) Intersection LOS = C

HCS+: Signalized Intersections Release 5.5

Analyst: R.H.
Agency: JCE
Date: 9/19/11
Period: PEAK PM HOUR
Project ID: 1700PMB1
E/W St: STERLING MINE ROAD (C.R. 72)

Inter.: C.R. 72 & LONG MEADOW ROAD
Area Type: All other areas
Jurisd:
Year : 2015 BUILD TRAFFIC VOLUMES
N/S St: LONG MEADOW ROAD (C.R. 84)

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	0	0	1	1	0	0	0	1	0	1
LGConfig	L	T			T	R				L		R
Volume	37	192			910	187				222		62
Lane Width	11.0	11.0			12.0	12.0				12.0		12.0
RTOR Vol						0						0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	A				NB Left			
Thru	A				Thru			
Right					Right			
Peds					Peds			
WB Left					SB Left	A		
Thru	A				Thru			
Right	A				Right	A		
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right	A		
Green	60.0					20.0		
Yellow	3.0					3.0		
All Red	2.0					2.0		

Cycle Length: 90.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	153	230	0.27	0.67	7.0	A		
T	1160	1740	0.18	0.67	5.8	A	6.0	A
Westbound								
T	1200	1800	0.84	0.67	17.0	B	14.1	B
R	1530	1530	0.14	1.00	0.0+	A		
Northbound								
Southbound								
L	380	1710	0.65	0.22	35.7	D		
							34.2	C
R	340	1530	0.20	0.22	28.8	C		

Intersection Delay = 16.5 (sec/veh) Intersection LOS = B

HCS+: Signalized Intersections Release 5.5

Analyst: R.H.
Agency: JCE
Date: 9/19/11
Period: PEAK SATURDAY HOUR
Project ID: 1700SATB1
E/W St: STERLING MINE ROAD (C.R. 72)

Inter.: C.R. 72 & LONG MEADOW ROAD
Area Type: All other areas
Jurisd:
Year : 2015 BUILD TRAFFIC VOLUMES
N/S St: LONG MEADOW ROAD (C.R. 84)

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	0	0	1	1	0	0	0	1	0	1
LGConfig	L	T			T	R				L		R
Volume	30	242			343	130				129		31
Lane Width	11.0	11.0			12.0	12.0				12.0		12.0
RTOR Vol						0						0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	A				NB Left			
Thru	A				Thru			
Right					Right			
Peds					Peds			
WB Left					SB Left	A		
Thru	A				Thru			
Right	A				Right	A		
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right	A		
Green	60.0					20.0		
Yellow	3.0					3.0		
All Red	2.0					2.0		

Cycle Length: 90.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	590	885	0.06	0.67	5.2	A		
T	1160	1740	0.23	0.67	6.0	A	5.9	A
Westbound								
T	1200	1800	0.32	0.67	6.5	A	4.7	A
R	1530	1530	0.09	1.00	0.0+	A		
Northbound								
Southbound								
L	380	1710	0.38	0.22	30.3	C		
							29.9	C
R	340	1530	0.10	0.22	28.0	C		

Intersection Delay = 9.5 (sec/veh) Intersection LOS = A

HCS+: Signalized Intersections Release 5.5

Analyst: R.H.
Agency: JCE
Date: 9/19/11
Period: PEAK SUNDAY HOUR
Project ID: 1700SUNB1
E/W St: STERLING MINE ROAD (C.R. 72)

Inter.: C.R. 72 & LONG MEADOW ROAD
Area Type: All other areas
Jurisd:
Year : 2015 BUILD TRAFFIC VOLUMES
N/S St: LONG MEADOW ROAD (C.R. 84)

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	0	0	1	1	0	0	0	1	0	1
LGConfig	L	T			T	R				L		R
Volume	24	251			192	108				98		24
Lane Width	11.0	11.0			12.0	12.0				12.0		12.0
RTOR Vol						0						0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	A				NB Left			
Thru	A				Thru			
Right					Right			
Peds					Peds			
WB Left					SB Left	A		
Thru	A				Thru			
Right	A				Right	A		
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right	A		
Green	60.0					20.0		
Yellow	3.0					3.0		
All Red	2.0					2.0		

Cycle Length: 90.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	725	1087	0.04	0.67	5.1	A		
T	1160	1740	0.24	0.67	6.1	A	6.0	A
Westbound								
T	1200	1800	0.18	0.67	5.7	A	3.7	A
R	1530	1530	0.08	1.00	0.0+	A		
Northbound								
Southbound								
L	380	1710	0.29	0.22	29.5	C		
							29.2	C
R	340	1530	0.08	0.22	27.8	C		

Intersection Delay = 9.1 (sec/veh) Intersection LOS = A

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: 9/19/11
Analysis Time Period: PEAK AM HOUR
Intersection: C.R. 84 & EAGLE VALLEY RD
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2015 BUILD TRAFFIC VOLUMES
Project ID: 1700AMB2 (SENSITIVITY ANALYSIS)
East/West Street: LONG MEADOW ROAD (C.R. 84)
North/South Street: EAGLE VALLEY ROAD
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		272	2	7	253	
Peak-Hour Factor, PHF		0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR		302	2	7	281	
Percent Heavy Vehicles		--	--	5	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes		1	0	0	1	
Configuration		TR		LT		
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	12		4			
Peak Hour Factor, PHF	0.90		0.90			
Hourly Flow Rate, HFR	13		4			
Percent Heavy Vehicles	5		5			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No /			/
Lanes	0		0			
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		7		17				
C(m) (vph)		1240		501				
v/c		0.01		0.03				
95% queue length		0.02		0.11				
Control Delay		7.9		12.4				
LOS		A		B				
Approach Delay				12.4				
Approach LOS				B				

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: 9/19/11
Analysis Time Period: PEAK PM HOUR
Intersection: C.R. 84 & EAGLE VALLEY RD
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2015 BUILD TRAFFIC VOLUMES
Project ID: 1700PMB2
East/West Street: LONG MEADOW ROAD (C.R. 84)
North/South Street: EAGLE VALLEY ROAD
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		214	10	8	274	
Peak-Hour Factor, PHF		0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR		237	11	8	304	
Percent Heavy Vehicles		--	--	5	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes		1	0	0	1	
Configuration		TR		LT		
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	10		12			
Peak Hour Factor, PHF	0.90		0.90			
Hourly Flow Rate, HFR	11		13			
Percent Heavy Vehicles	5		5			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No /			/
Lanes	0		0			
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		8		24				
C(m) (vph)		1300		610				
v/c		0.01		0.04				
95% queue length		0.02		0.12				
Control Delay		7.8		11.1				
LOS		A		B				
Approach Delay				11.1				
Approach LOS				B				

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: 9/19/11
Analysis Time Period: PEAK SATURDAY HOUR
Intersection: C.R. 84 & EAGLE VALLEY RD
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2015 BUILD TRAFFIC VOLUMES
Project ID: 1700SATB2 (SENSITIVITY ANALYSIS)
East/West Street: LONG MEADOW ROAD (C.R. 84)
North/South Street: EAGLE VALLEY ROAD
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		157	3	10	156	
Peak-Hour Factor, PHF		0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR		174	3	11	173	
Percent Heavy Vehicles		--	--	5	--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes		1	0	0	1	
Configuration		TR		LT		
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	4		4			
Peak Hour Factor, PHF	0.90		0.90			
Hourly Flow Rate, HFR	4		4			
Percent Heavy Vehicles	5		5			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No /			/
Lanes	0		0			
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		11		8				
C(m) (vph)		1381		720				
v/c		0.01		0.01				
95% queue length		0.02		0.03				
Control Delay		7.6		10.1				
LOS		A		B				
Approach Delay				10.1				
Approach LOS				B				

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: 9/19/11
Analysis Time Period: PEAK SUNDAY HOUR
Intersection: C.R. 84 & EAGLE VALLEY RD
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2015 BUILD TRAFFIC VOLUMES
Project ID: 1700SUNB2 (SENSITIVITY ANALYSIS)
East/West Street: LONG MEADOW ROAD (C.R. 84)
North/South Street: EAGLE VALLEY ROAD
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		130	2	2	119	
Peak-Hour Factor, PHF		0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR		144	2	2	132	
Percent Heavy Vehicles		--	--	5	--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes		1	0	0	1	
Configuration		TR		LT		
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	3		2			
Peak Hour Factor, PHF	0.90		0.90			
Hourly Flow Rate, HFR	3		2			
Percent Heavy Vehicles	5		5			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No /			/
Lanes	0		0			
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		2		5				
C(m) (vph)		1418		768				
v/c		0.00		0.01				
95% queue length		0.00		0.02				
Control Delay		7.5		9.7				
LOS		A		A				
Approach Delay				9.7				
Approach LOS				A				

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: 9/19/11
Analysis Time Period: PEAK AM HOUR
Intersection: C.R. 84 & WOODLANDS DRIVE
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2015 BUILD TRAFFIC VOLUMES
Project ID: 1700AMB3 (SENSITIVITY ANALYSIS)
East/West Street: LONG MEADOW ROAD (C.R. 84)
North/South Street: WOODLANDS DRIVE
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		260	17	2	188	
Peak-Hour Factor, PHF		0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR		288	18	2	208	
Percent Heavy Vehicles		--	--	5	--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes		1 0		0	1	
Configuration		TR		LT		
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	72		4			
Peak Hour Factor, PHF	0.90		0.90			
Hourly Flow Rate, HFR	80		4			
Percent Heavy Vehicles	5		5			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No /			/
Lanes	0		0			
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		2		84				
C(m) (vph)		1238		525				
v/c		0.00		0.16				
95% queue length		0.00		0.57				
Control Delay		7.9		13.2				
LOS		A		B				
Approach Delay				13.2				
Approach LOS				B				

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: 9/19/11
Analysis Time Period: PEAK PM HOUR
Intersection: C.R. 84 & WOODLANDS DRIVE
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2015 BUILD TRAFFIC VOLUMES
Project ID: 1700PMB3 (SENSITIVITY ANALYSIS)
East/West Street: LONG MEADOW ROAD (C.R. 84)
North/South Street: WOODLANDS DRIVE
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		181	45	7	257	
Peak-Hour Factor, PHF		0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR		201	50	7	285	
Percent Heavy Vehicles		--	--	5	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes		1	0	0	1	
Configuration			TR	LT		
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	24		2			
Peak Hour Factor, PHF	0.90		0.90			
Hourly Flow Rate, HFR	26		2			
Percent Heavy Vehicles	5		5			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No /			/
Lanes	0		0			
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		7		28				
C(m) (vph)		1297		519				
v/c		0.01		0.05				
95% queue length		0.02		0.17				
Control Delay		7.8		12.3				
LOS		A		B				
Approach Delay				12.3				
Approach LOS				B				

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: 9/19/11
Analysis Time Period: PEAK SATURDAY HOUR
Intersection: C.R. 84 & WOODLANDS DRIVE
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2015 BUILD TRAFFIC VOLUMES
Project ID: 1700SATB3 (SENSITIVITY ANALYSIS)
East/West Street: LONG MEADOW ROAD (C.R. 84)
North/South Street: WOODLANDS DRIVE
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		126	35	2	131	
Peak-Hour Factor, PHF		0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR		140	38	2	145	
Percent Heavy Vehicles		--	--	5	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes		1	0	0	1	
Configuration		TR		LT		
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	34		3			
Peak Hour Factor, PHF	0.90		0.90			
Hourly Flow Rate, HFR	37		3			
Percent Heavy Vehicles	5		5			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No /			/
Lanes	0		0			
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		2		40				
C(m) (vph)		1380		689				
v/c		0.00		0.06				
95% queue length		0.00		0.18				
Control Delay		7.6		10.5				
LOS		A		B				
Approach Delay				10.5				
Approach LOS				B				

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: 9/19/11
Analysis Time Period: PEAK SUNDAY HOUR
Intersection: C.R. 84 & WOODLANDS DRIVE
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2015 BUILD TRAFFIC VOLUMES
Project ID: 1700SUNB3 (SENSITIVITY ANALYSIS)
East/West Street: LONG MEADOW ROAD (C.R. 84)
North/South Street: WOODLANDS DRIVE
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		112	20	2	97	
Peak-Hour Factor, PHF		0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR		124	22	2	107	
Percent Heavy Vehicles		--	--	5	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes		1	0	0	1	
Configuration		TR		LT		
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	22		2			
Peak Hour Factor, PHF	0.90		0.90			
Hourly Flow Rate, HFR	24		2			
Percent Heavy Vehicles	5		5			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No /			/
Lanes	0		0			
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		2		26				
C(m) (vph)		1418		746				
v/c		0.00		0.03				
95% queue length		0.00		0.11				
Control Delay		7.5		10.0-				
LOS		A		A				
Approach Delay				10.0-				
Approach LOS				A				

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: 9/19/11
Analysis Time Period: PEAK AM HOUR
Intersection: C.R. 84 & IBM ENTRANCE
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2015 BUILD TRAFFIC VOLUMES
Project ID: 1700AMB4 (SENSITIVITY ANALYSIS)
East/West Street: IBM ENTRANCE/BEECH ROAD
North/South Street: LONG MEADOW ROAD (C.R. 84)
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	26	116			158	30
Peak-Hour Factor, PHF	0.90	0.90			0.90	0.90
Hourly Flow Rate, HFR	28	128			175	33
Percent Heavy Vehicles	5	--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	1			1	0
Configuration	LT					TR
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				2		10
Peak Hour Factor, PHF				0.90		0.90
Hourly Flow Rate, HFR				2		11
Percent Heavy Vehicles				5		5
Percent Grade (%)		0			-4	
Flared Approach: Exists?/Storage			/			No /
Lanes				0		0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LR	
v (vph)	28						13	
C(m) (vph)	1345						821	
v/c	0.02						0.02	
95% queue length	0.06						0.05	
Control Delay	7.7						9.5	
LOS	A						A	
Approach Delay							9.5	
Approach LOS							A	

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: 9/19/11
Analysis Time Period: PEAK PM HOUR
Intersection: C.R. 84 & IBM ENTRANCE
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2015 BUILD TRAFFIC VOLUMES
Project ID: 1700PMB4 (SENSITIVITY ANALYSIS)
East/West Street: IBM ENTRANCE/BEECH ROAD
North/South Street: LONG MEADOW ROAD (C.R. 84)
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	4	151			121	3
Peak-Hour Factor, PHF	0.90	0.90			0.90	0.90
Hourly Flow Rate, HFR	4	167			134	3
Percent Heavy Vehicles	5	--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	1			1	0
Configuration	LT					TR
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				35		24
Peak Hour Factor, PHF				0.90		0.90
Hourly Flow Rate, HFR				38		26
Percent Heavy Vehicles				5		5
Percent Grade (%)		0			-4	
Flared Approach: Exists?/Storage			/			No /
Lanes				0		0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LR	
v (vph)	4						64	
C(m) (vph)	1429						791	
v/c	0.00						0.08	
95% queue length	0.01						0.26	
Control Delay	7.5						10.0-	
LOS	A						A	
Approach Delay							10.0-	
Approach LOS							A	

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: 9/19/11
Analysis Time Period: PEAK SATURDAY HOUR
Intersection: C.R. 84 & IBM ENTRANCE
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2015 BUILD TRAFFIC VOLUMES
Project ID: 1700SATB4 (SENSITIVITY ANALYSIS)
East/West Street: IBM ENTRANCE/BEECH ROAD
North/South Street: LONG MEADOW ROAD (C.R. 84)
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	2	91			105	3
Peak-Hour Factor, PHF	0.90	0.90			0.90	0.90
Hourly Flow Rate, HFR	2	101			116	3
Percent Heavy Vehicles	5	--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	1			1	0
Configuration	LT					TR
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				1		2
Peak Hour Factor, PHF				0.90		0.90
Hourly Flow Rate, HFR				1		2
Percent Heavy Vehicles				5		5
Percent Grade (%)		0			-4	
Flared Approach: Exists?/Storage			/			No /
Lanes				0		0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LR	
v (vph)	2						3	
C(m) (vph)	1451						885	
v/c	0.00						0.00	
95% queue length	0.00						0.01	
Control Delay	7.5						9.1	
LOS	A						A	
Approach Delay							9.1	
Approach LOS							A	

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: 9/19/11
Analysis Time Period: PEAK SUNDAY HOUR
Intersection: C.R. 84 & IBM ENTRANCE
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2015 BUILD TRAFFIC VOLUMES
Project ID: 1700SUNB4 (SENSITIVITY ANALYSIS)
East/West Street: IBM ENTRANCE/BEECH ROAD
North/South Street: LONG MEADOW ROAD (C.R. 84)
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	3	88			75	4
Peak-Hour Factor, PHF	0.90	0.90			0.90	0.90
Hourly Flow Rate, HFR	3	97			83	4
Percent Heavy Vehicles	5	--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	1			1	0
Configuration		LT				TR
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				1		3
Peak Hour Factor, PHF				0.90		0.90
Hourly Flow Rate, HFR				1		3
Percent Heavy Vehicles				5		5
Percent Grade (%)		0			-4	
Flared Approach: Exists?/Storage			/			No /
Lanes				0		0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LR	
v (vph)	3						4	
C(m) (vph)	1490						933	
v/c	0.00						0.00	
95% queue length	0.01						0.01	
Control Delay	7.4						8.9	
LOS	A						A	
Approach Delay							8.9	
Approach LOS							A	

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: 9/19/11
Analysis Time Period: PEAK AM HOUR
Intersection: CR 84/CLINTON RD & NYS RT 17A
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2015 BUILD TRAFFIC VOLUMES
Project ID: 1700AMB5 (SENSITIVITY ANALYSIS)
East/West Street: NYS ROUTE 17A
North/South Street: LONG MEADOW ROAD/CLINTON ROAD
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	0	904	79	154	104	8
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	0	1004	87	171	115	8
Percent Heavy Vehicles	5	--	--	5	--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	2	0	1	2	0
Configuration		LT	TR	L	T	TR
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	14	0	60	21	4	0
Peak Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	15	0	66	23	4	0
Percent Heavy Vehicles	5	5	5	5	5	5
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No /			No /
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT	L		LTR			LTR	
v (vph)	0	171		81			27	
C(m) (vph)	1440	618		234			160	
v/c	0.00	0.28		0.35			0.17	
95% queue length	0.00	1.13		1.47			0.59	
Control Delay	7.5	13.0		28.3			32.0	
LOS	A	B		D			D	
Approach Delay				28.3			32.0	
Approach LOS				D			D	

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: 9/19/11
Analysis Time Period: PEAK PM HOUR
Intersection: CR 84/CLINTON RD & NYS RT 17A
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2015 BUILD TRAFFIC VOLUMES
Project ID: 1700PMB5 (SENSITIVITY ANALYSIS)
East/West Street: NYS ROUTE 17A
North/South Street: LONG MEADOW ROAD/CLINTON ROAD
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	1	185	18	55	732	12
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	1	205	20	61	813	13
Percent Heavy Vehicles	5	--	--	5	--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	2	0	1	2	0
Configuration		LT	TR	L	T	TR
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	75	4	134	8	1	1
Peak Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	83	4	148	8	1	1
Percent Heavy Vehicles	5	5	5	5	5	5
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage		No	/		No	/
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT	L		LTR			LTR	
v (vph)	1	61		235			10	
C(m) (vph)	781	1319		497			201	
v/c	0.00	0.05		0.47			0.05	
95% queue length	0.00	0.15		2.50			0.16	
Control Delay	9.6	7.9		18.6			23.8	
LOS	A	A		C			C	
Approach Delay				18.6			23.8	
Approach LOS				C			C	

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: 9/19/11
Analysis Time Period: PEAK SATURDAY HOUR
Intersection: CR 84/CLINTON RD & NYS RT 17A
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2015 BUILD TRAFFIC VOLUMES
Project ID: 1700SATB5 (SENSITIVITY ANALYSIS)
East/West Street: NYS ROUTE 17A
North/South Street: LONG MEADOW ROAD/CLINTON ROAD
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	3	249	24	92	248	12
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	3	276	26	102	275	13
Percent Heavy Vehicles	5	--	--	5	--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	2	0	1	2	0
Configuration		LT	TR	L	T	TR
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	24	3	67	10	1	3
Peak Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	26	3	74	11	1	3
Percent Heavy Vehicles	5	5	5	5	5	5
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No /			No /
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT	L		LTR			LTR	
v (vph)	3	102		103			15	
C(m) (vph)	1249	1234		597			402	
v/c	0.00	0.08		0.17			0.04	
95% queue length	0.01	0.27		0.62			0.12	
Control Delay	7.9	8.2		12.3			14.3	
LOS	A	A		B			B	
Approach Delay				12.3			14.3	
Approach LOS				B			B	

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: 9/19/11
Analysis Time Period: PEAK SUNDAY HOUR
Intersection: CR 84/CLINTON RD & NYS RT 17A
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2015 BUILD TRAFFIC VOLUMES
Project ID: 1700SUNB5 (SENSITIVITY ANALYSIS)
East/West Street: NYS ROUTE 17A
North/South Street: LONG MEADOW ROAD/CLINTON ROAD
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	2	185	16	66	184	9
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	2	205	17	73	204	10
Percent Heavy Vehicles	5	--	--	5	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes	0	2	0	1	2	0
Configuration		LT	TR	L	T	TR
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	16	2	39	8	1	2
Peak Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	17	2	43	8	1	2
Percent Heavy Vehicles	5	5	5	5	5	5
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No /			No /
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT	L		LTR			LTR	
v (vph)	2	73		62			11	
C(m) (vph)	1332	1323		697			524	
v/c	0.00	0.06		0.09			0.02	
95% queue length	0.00	0.18		0.29			0.06	
Control Delay	7.7	7.9		10.7			12.0	
LOS	A	A		B			B	
Approach Delay				10.7			12.0	
Approach LOS				B			B	

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: 9/19/11
Analysis Time Period: PEAK AM HOUR
Intersection: C.R. 84 & SITE ACCESS
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2015 BUILD TRAFFIC VOLUMES
Project ID: 1700AMB6 (SENSITIVITY ANALYSIS)
East/West Street: SITE ACCESS DRIVEWAY
North/South Street: LONG MEADOW ROAD (C.R. 84)
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	146	118			119	49
Peak-Hour Factor, PHF	0.90	0.90			0.90	0.90
Hourly Flow Rate, HFR	162	131			132	54
Percent Heavy Vehicles	5	--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	1			1	0
Configuration	LT					TR
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				24		71
Peak Hour Factor, PHF				0.90		0.90
Hourly Flow Rate, HFR				26		78
Percent Heavy Vehicles				5		5
Percent Grade (%)		0			-4	
Flared Approach: Exists?/Storage			/			No /
Lanes				0		0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LR	
v (vph)	162						104	
C(m) (vph)	1371						720	
v/c	0.12						0.14	
95% queue length	0.40						0.50	
Control Delay	8.0						10.8	
LOS	A						B	
Approach Delay							10.8	
Approach LOS							B	

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: 9/19/11
Analysis Time Period: PEAK PM HOUR
Intersection: C.R. 84 & SITE ACCESS
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2015 BUILD TRAFFIC VOLUMES
Project ID: 1700PMB6 (SENSITIVITY ANALYSIS)
East/West Street: SITE ACCESS DRIVEWAY
North/South Street: LONG MEADOW ROAD (C.R. 84)
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	76	108			120	25
Peak-Hour Factor, PHF	0.90	0.90			0.90	0.90
Hourly Flow Rate, HFR	84	120			133	27
Percent Heavy Vehicles	5	--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	1			1	0
Configuration	LT				TR	
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				48		143
Peak Hour Factor, PHF				0.90		0.90
Hourly Flow Rate, HFR				53		158
Percent Heavy Vehicles				5		5
Percent Grade (%)		0			-4	
Flared Approach: Exists?/Storage			/			No /
Lanes				0		0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LR	
v (vph)	84						211	
C(m) (vph)	1401						802	
v/c	0.06						0.26	
95% queue length	0.19						1.06	
Control Delay	7.7						11.1	
LOS	A						B	
Approach Delay							11.1	
Approach LOS							B	

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: 9/19/11
Analysis Time Period: PEAK SATURDAY HOUR
Intersection: C.R. 84 & SITE ACCESS
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2015 BUILD TRAFFIC VOLUMES
Project ID: 1700SATB6 (SENSITIVITY ANALYSIS)
East/West Street: SITE ACCESS DRIVEWAY
North/South Street: LONG MEADOW ROAD (C.R. 84)
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	51	78			90	17
Peak-Hour Factor, PHF	0.90	0.90			0.90	0.90
Hourly Flow Rate, HFR	56	86			100	18
Percent Heavy Vehicles	5	--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	1			1	0
Configuration	LT					TR
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				15		44
Peak Hour Factor, PHF				0.90		0.90
Hourly Flow Rate, HFR				16		48
Percent Heavy Vehicles				5		5
Percent Grade (%)		0			-4	
Flared Approach: Exists?/Storage			/			No /
Lanes				0		0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LR	
v (vph)	56						64	
C(m) (vph)	1452						870	
v/c	0.04						0.07	
95% queue length	0.12						0.24	
Control Delay	7.6						9.5	
LOS	A						A	
Approach Delay							9.5	
Approach LOS							A	

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: 9/19/11
Analysis Time Period: PEAK SUNDAY HOUR
Intersection: C.R. 84 & SITE ACCESS
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2015 BUILD TRAFFIC VOLUMES
Project ID: 1700SUNB6 (SENSITIVITY ANALYSIS)
East/West Street: SITE ACCESS DRIVEWAY
North/South Street: LONG MEADOW ROAD (C.R. 84)
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	34	81			67	11
Peak-Hour Factor, PHF	0.90	0.90			0.90	0.90
Hourly Flow Rate, HFR	37	90			74	12
Percent Heavy Vehicles	5	--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	1			1	0
Configuration	LT					TR
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				11		32
Peak Hour Factor, PHF				0.90		0.90
Hourly Flow Rate, HFR				12		35
Percent Heavy Vehicles				5		5
Percent Grade (%)		0			-4	
Flared Approach: Exists?/Storage			/			No /
Lanes				0		0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LR	
v (vph)	37						47	
C(m) (vph)	1492						913	
v/c	0.02						0.05	
95% queue length	0.08						0.16	
Control Delay	7.5						9.2	
LOS	A						A	
Approach Delay							9.2	
Approach LOS							A	

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: 9/19/11
Analysis Time Period: PEAK AM HOUR
Intersection: C.R. 72 & SISTER SERVANTS LA/E
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2015 BUILD TRAFFIC VOLUMES
Project ID: 1700AMB7 (SENSITIVITY ANALYSIS)
East/West Street: STERLING MINE ROAD (C.R. 72)
North/South Street: SISTER SERVANTS LA/EAGLE VALLE
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	0	1236	1	2	342	24
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	0	1373	1	2	380	26
Percent Heavy Vehicles	5	--	--	5	--	--
Median Type/Storage	Undivided /					
RT Channelized?						
Lanes	0	1	0	0	1	0
Configuration	LTR			LTR		
Upstream Signal?	No			No		

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	0	0	3	73	1	3
Peak Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	0	0	3	81	1	3
Percent Heavy Vehicles	5	5	5	5	5	5
Percent Grade (%)		-5			0	
Flared Approach: Exists?/Storage		No /			No /	
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LTR	LTR		LTR			LTR	
v (vph)	0	2		3			85	
C(m) (vph)	1137	490		257			105	
v/c	0.00	0.00		0.01			0.81	
95% queue length	0.00	0.01		0.04			4.53	
Control Delay	8.2	12.4		19.2			116.1	
LOS	A	B		C			F	
Approach Delay				19.2			116.1	
Approach LOS				C			F	

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: 9/19/11
Analysis Time Period: PEAK PM HOUR
Intersection: C.R. 72 & SISTER SERVANTS LA/E
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2015 BUILD TRAFFIC VOLUMES
Project ID: 1700PMB7 (SENSITIVITY ANALYSIS)
East/West Street: STERLING MINE ROAD (C.R. 72)
North/South Street: SISTER SERVANTS LA/EAGLE VALLE
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	3	411	0	3	1093	63
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	3	456	0	3	1214	70
Percent Heavy Vehicles	5	--	--	5	--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	0	0	1	41	0	4
Peak Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	0	0	1	45	0	4
Percent Heavy Vehicles	5	5	5	5	5	5
Percent Grade (%)		-5			0	
Flared Approach: Exists?/Storage		No	/		No	/
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LTR	LTR		LTR			LTR	
v (vph)	3	3		1			49	
C(m) (vph)	530	1089		679			115	
v/c	0.01	0.00		0.00			0.43	
95% queue length	0.02	0.01		0.00			1.82	
Control Delay	11.8	8.3		10.3			57.8	
LOS	B	A		B			F	
Approach Delay				10.3			57.8	
Approach LOS				B			F	

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: 9/19/11
Analysis Time Period: PEAK SATURDAY HOUR
Intersection: C.R. 72 & SISTER SERVANTS LA/E
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2015 BUILD TRAFFIC VOLUMES
Project ID: 1700SATB7 (SENSITIVITY ANALYSIS)
East/West Street: STERLING MINE ROAD (C.R. 72)
North/South Street: SISTER SERVANTS LA/EAGLE VALLE
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	2	369	0	0	470	42
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	2	410	0	0	522	46
Percent Heavy Vehicles	5	--	--	5	--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	0	0	1	55	0	3
Peak Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	0	0	1	61	0	3
Percent Heavy Vehicles	5	5	5	5	5	5
Percent Grade (%)		-5			0	
Flared Approach: Exists?/Storage		No	/		No	/
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LTR	LTR		LTR			LTR	
v (vph)	2	0		1			64	
C(m) (vph)	989	1133		712			240	
v/c	0.00	0.00		0.00			0.27	
95% queue length	0.01	0.00		0.00			1.04	
Control Delay	8.6	8.2		10.1			25.4	
LOS	A	A		B			D	
Approach Delay				10.1			25.4	
Approach LOS				B			D	

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: 9/19/11
Analysis Time Period: PEAK SUNDAY HOUR
Intersection: C.R. 72 & SISTER SERVANTS LA/E
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2015 BUILD TRAFFIC VOLUMES
Project ID: 1700SUNB7 (SENSITIVITY ANALYSIS)
East/West Street: STERLING MINE ROAD (C.R. 72)
North/South Street: SISTER SERVANTS LA/EAGLE VALLE
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	2	347	0	1	296	42
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	2	385	0	1	328	46
Percent Heavy Vehicles	5	--	--	5	--	--
Median Type/Storage	Undivided /					
RT Channelized?						
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	
Upstream Signal?		No			No	

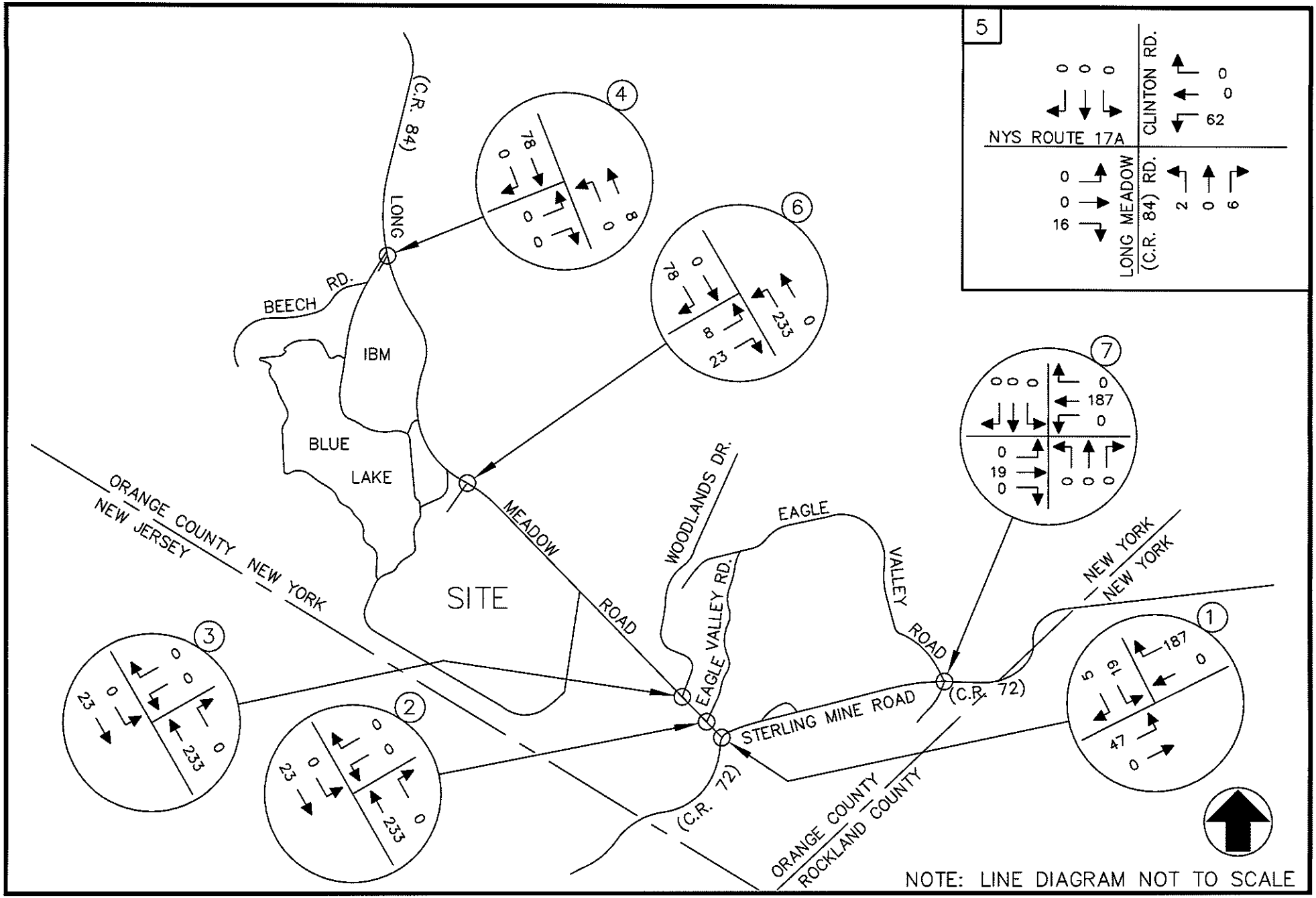
Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	0	0	1	55	0	3
Peak Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	0	0	1	61	0	3
Percent Heavy Vehicles	5	5	5	5	5	5
Percent Grade (%)		-5			0	
Flared Approach: Exists?/Storage		No /			No /	
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LTR	LTR		LTR			LTR	
v (vph)	2	1		1			64	
C(m) (vph)	1168	1157		730			335	
v/c	0.00	0.00		0.00			0.19	
95% queue length	0.01	0.00		0.00			0.69	
Control Delay	8.1	8.1		9.9			18.3	
LOS	A	A		A			C	
Approach Delay				9.9			18.3	
Approach LOS				A			C	

APPENDIX "H"

SPECIAL EVENTS ANALYSIS

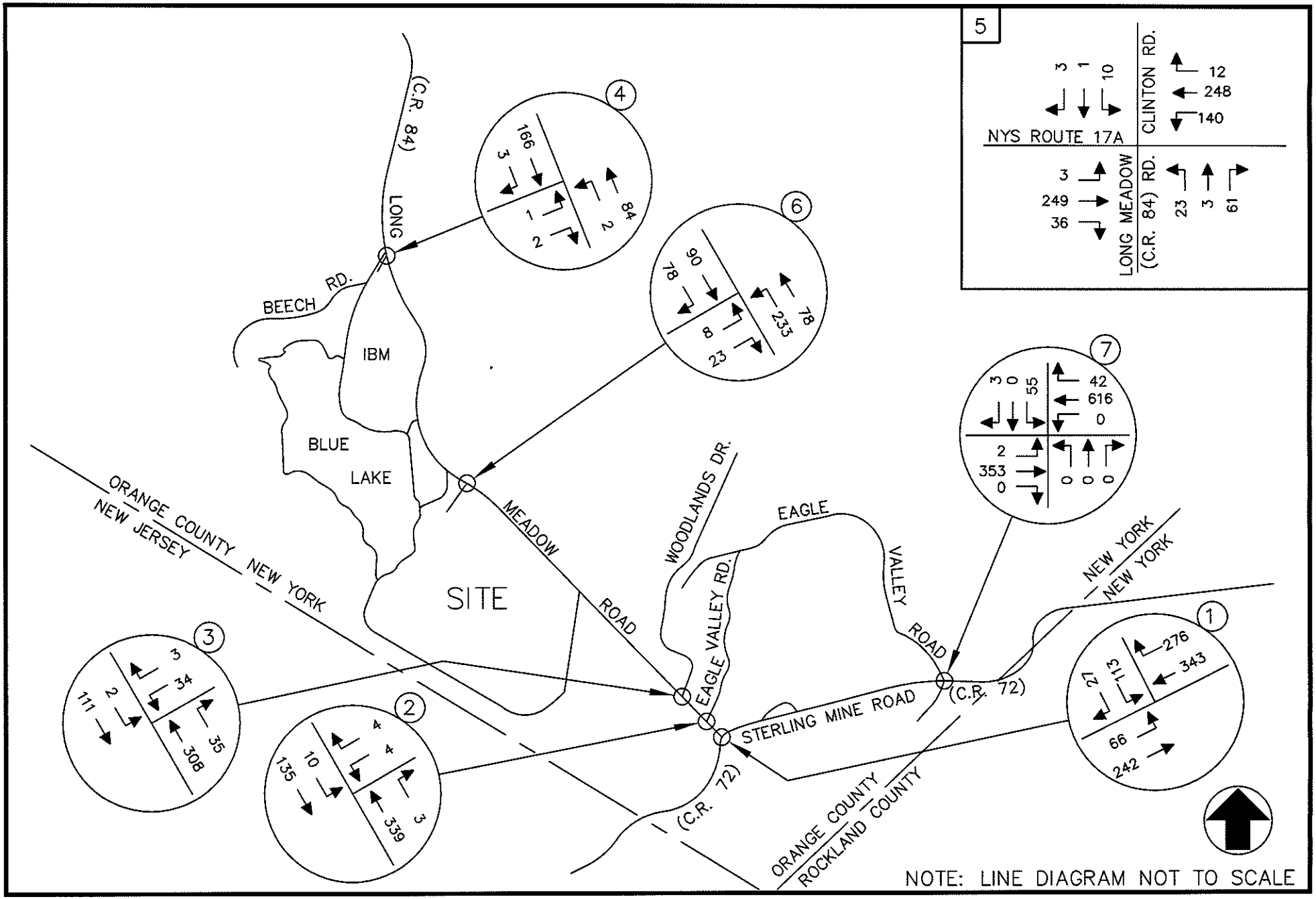


1 KINGS DRIVE WATCHTOWER
WARWICK, NEW YORK

JOHN COLLINS ENGINEERS, P.C.
HAWTHORNE , NEW YORK

SITE GENERATED TRAFFIC VOLUMES
WEEKEND PEAK SATURDAY HOUR
(SPECIAL EVENTS)

PROJECT NO. 1700 DATE: SEPT. 2011 FIG. NO. 22B



1 KINGS DRIVE WATCHTOWER

WARWICK, NEW YORK

JOHN COLLINS ENGINEERS, P.C.
HAWTHORNE , NEW YORK

2015 BUILD TRAFFIC VOLUMES
WEEKEND PEAK SATURDAY HOUR
(SPECIAL EVENTS)

PROJECT NO. 1700 DATE: SEPT. 2011 FIG. NO. 26B

TABLE NO. 2-B

LEVEL OF SERVICE SUMMARY TABLE - SPECIAL EVENTS

			2010 EXISTING	2015 NO-BUILD	2015 BUILD (SPECIAL EVENTS ANALYSIS)
			SATURDAY	SATURDAY	SATURDAY
1	STERLING MINE ROAD (C.R. 72) & LONG MEADOW ROAD (C.R. 84)	**SIGNALIZED**			
		EB	A[5.8]	A[6.0]	A[5.9]
		WB	A[5.1]	A[5.2]	A[4.7]
		SB	C[28.6]	C[29.1]	C[29.5]
		OVERALL	A[8.5]	A[8.8]	A[7.7]
2	LONG MEADOW ROAD (C.R. 84) & EAGLE VALLEY ROAD	**UNSIGNALIZED**			
		WB	A[9.3]	A[9.5]	B[11.5]
		SB LEFT	A[7.5]	A[7.5]	A[78.1
3	LONG MEADOW ROAD (C.R. 84) & WOODLANDS DRIVE	**UNSIGNALIZED**			
		WB	A[9.5]	A[9.8]	B[12.2]
		SB LEFT	A[7.4]	A[7.5]	A[8.1]
4	LONG MEADOW ROAD (C.R. 84) & IBM ENTRANCE / BEECH ROAD	**UNSIGNALIZED**			
		EB	A[8.8]	A[9.0]	A[9.4]
		NB LEFT	A[7.4]	A[7.4]	A[7.6]
5	NYS ROUTE 17A & LONG MEADOW ROAD (C.R. 84)/ CLINTON ROAD	**UNSIGNALIZED**			
		EB LEFT	A[7.8]	A[7.9]	A[7.9]
		WB LEFT	A[7.9]	A[8.1]	A[8.4]
		NB	B[11.1]	B[12.0]	B[13.5]
		SB	B[12.2]	B[13.7]	B[16.1]
6	LONG MEADOW ROAD (C.R. 84) & SITE ACCESS DRIVEWAY	**UNSIGNALIZED**			
		EB	-	-	B[10.7]
		NB LEFT	-	-	A[8.2]
7	STERLING MINE ROAD (C.R. 72) & SISTER SERVANTS LANE/ EAGLE VALLEY ROAD	**UNSIGNALIZED**			
		EB LEFT	A[8.3]	A[8.5]	A[9.2]
		WB LEFT	A[7.9]	A[8.1]	A[8.1]
		NB	A[9.5]	A[9.9]	A[10.0]
		SB	C[15.9]	C[22.2]	C[25.8]

NOTES:

1) THE ABOVE REPRESENTS THE LEVEL OF SERVICE AND VEHICLE DELAY IN SECONDS, C [16.2], FOR EACH KEY APPROACH AS WELL AS FOR THE OVERALL INTERSECTION FOR THE SIGNALIZED INTERSECTIONS. FOR THE UNSIGNALIZED INTERSECTIONS THE MINOR APPROACH AND LEFT TURN FROM MAJOR ROADWAY MOVEMENTS ARE SHOWN. SEE APPENDIX "D" FOR A DESCRIPTION OF THE LEVELS OF SERVICE STANDARDS.
2) INTERSECTION 7: THE RESULTS DO NOT REFLECT THE EFFECT OF GAPS IN TRAFFIC FLOW AT THIS INTERSECTION WHICH RESULT IN BETTER OPERATING CONDITIONS THAN SHOWN IN THE TABLE.

HCS+: Signalized Intersections Release 5.5

Analyst: R.H.
Agency: JCE
Date: 9/19/11
Period: PEAK SATURDAY HOUR
Project ID: 1700SATB1 - SPECIAL EVENTS
E/W St: STERLING MINE ROAD (C.R. 72)

Inter.: C.R. 72 & LONG MEADOW ROAD
Area Type: All other areas
Jurisd:
Year : 2015 BUILD TRAFFIC VOLUMES
N/S St: LONG MEADOW ROAD (C.R. 84)

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	0	0	1	1	0	0	0	1	0	1
LGConfig	L	T			T	R				L		R
Volume	66	242			343	276				113		27
Lane Width	11.0	11.0			12.0	12.0				12.0		12.0
RTOR Vol						0						0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	A				NB Left			
Thru	A				Thru			
Right					Right			
Peds					Peds			
WB Left					SB Left	A		
Thru	A				Thru			
Right	A				Right	A		
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right	A		
Green	60.0					20.0		
Yellow	3.0					3.0		
All Red	2.0					2.0		

Cycle Length: 90.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	590	885	0.12	0.67	5.5	A		
T	1160	1740	0.23	0.67	6.0	A	5.9	A
Westbound								
T	1200	1800	0.32	0.67	6.5	A	3.6	A
R	1530	1530	0.20	1.00	0.1	A		
Northbound								
Southbound								
L	380	1710	0.33	0.22	29.9	C		
							29.5	C
R	340	1530	0.09	0.22	27.9	C		

Intersection Delay = 7.7 (sec/veh) Intersection LOS = A

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: 9/19/11
Analysis Time Period: PEAK SATURDAY HOUR
Intersection: C.R. 84 & EAGLE VALLEY RD
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2015 BUILD TRAFFIC VOLUMES
Project ID: 1700SATB2 - SPECIAL EVENTS
East/West Street: LONG MEADOW ROAD (C.R. 84)
North/South Street: EAGLE VALLEY ROAD
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		339	3	10	135	
Peak-Hour Factor, PHF		0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR		376	3	11	150	
Percent Heavy Vehicles		--	--	5	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes		1	0	0	1	
Configuration		TR		LT		
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	4		4			
Peak Hour Factor, PHF	0.90		0.90			
Hourly Flow Rate, HFR	4		4			
Percent Heavy Vehicles	5		5			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No	/		/
Lanes	0		0			
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		11		8				
C(m) (vph)		1163		561				
v/c		0.01		0.01				
95% queue length		0.03		0.04				
Control Delay		8.1		11.5				
LOS		A		B				
Approach Delay				11.5				
Approach LOS				B				

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: JUNE 2010
Analysis Time Period: PEAK SATURDAY HOUR
Intersection: C.R. 84 & WOODLANDS DRIVE
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2015 BUILD TRAFFIC VOLUMES
Project ID: 1700SATB3 - SPECIAL EVENTS
East/West Street: LONG MEADOW ROAD (C.R. 84)
North/South Street: WOODLANDS DRIVE
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		308	35	2	111	
Peak-Hour Factor, PHF		0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR		342	38	2	123	
Percent Heavy Vehicles		--	--	5	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes		1	0	0	1	
Configuration		TR		LT		
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	34		3			
Peak Hour Factor, PHF	0.90		0.90			
Hourly Flow Rate, HFR	37		3			
Percent Heavy Vehicles	5		5			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No /			/
Lanes	0		0			
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		2		40				
C(m) (vph)		1162		542				
v/c		0.00		0.07				
95% queue length		0.01		0.24				
Control Delay		8.1		12.2				
LOS		A		B				
Approach Delay				12.2				
Approach LOS				B				

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: 9/16/11
Analysis Time Period: PEAK SATURDAY HOUR
Intersection: C.R. 84 & IBM ENTRANCE
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2015 BUILD TRAFFIC VOLUMES
Project ID: 1700SATB4 - SPECIAL EVENTS
East/West Street: IBM ENTRANCE/BEECH ROAD
North/South Street: LONG MEADOW ROAD (C.R. 84)
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	2	84			166	3
Peak-Hour Factor, PHF	0.90	0.90			0.90	0.90
Hourly Flow Rate, HFR	2	93			184	3
Percent Heavy Vehicles	5	--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	1			1	0
Configuration		LT				TR
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				1		2
Peak Hour Factor, PHF				0.90		0.90
Hourly Flow Rate, HFR				1		2
Percent Heavy Vehicles				5		5
Percent Grade (%)		0			-4	
Flared Approach: Exists?/Storage			/			No /
Lanes				0		0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LR	
v (vph)	2						3	
C(m) (vph)	1369						822	
v/c	0.00						0.00	
95% queue length	0.00						0.01	
Control Delay	7.6						9.4	
LOS	A						A	
Approach Delay							9.4	
Approach LOS							A	

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: 9/16/11
Analysis Time Period: PEAK SATURDAY HOUR
Intersection: CR 84/CLINTON RD & NYS RT 17A
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2015 BUILD TRAFFIC VOLUMES
Project ID: 1700SATB5 - SPECIAL EVENTS
East/West Street: NYS ROUTE 17A
North/South Street: LONG MEADOW ROAD/CLINTON ROAD
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	3	249	36	140	248	12
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	3	276	40	155	275	13
Percent Heavy Vehicles	5	--	--	5	--	--
Median Type/Storage	Undivided /					
RT Channelized?						
Lanes	0	2	0	1	2	0
Configuration		LT	TR	L	T	TR
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	23	3	61	10	1	3
Peak Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	25	3	67	11	1	3
Percent Heavy Vehicles	5	5	5	5	5	5
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage		No /			No /	
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT	L		LTR			LTR	
v (vph)	3	155		95			15	
C(m) (vph)	1249	1220		517			340	
v/c	0.00	0.13		0.18			0.04	
95% queue length	0.01	0.44		0.67			0.14	
Control Delay	7.9	8.4		13.5			16.1	
LOS	A	A		B			C	
Approach Delay				13.5			16.1	
Approach LOS				B			C	

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: 9/16/11
Analysis Time Period: PEAK SATURDAY HOUR
Intersection: C.R. 84 & SITE ACCESS
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2015 BUILD TRAFFIC VOLUMES
Project ID: 1700SATB6 - SPECIAL EVENTS
East/West Street: SITE ACCESS DRIVEWAY
North/South Street: LONG MEADOW ROAD (C.R. 84)
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	233	78			90	78
Peak-Hour Factor, PHF	0.90	0.90			0.90	0.90
Hourly Flow Rate, HFR	258	86			100	86
Percent Heavy Vehicles	5	--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	1			1	0
Configuration	LT					TR
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				8		23
Peak Hour Factor, PHF				0.90		0.90
Hourly Flow Rate, HFR				8		25
Percent Heavy Vehicles				5		5
Percent Grade (%)		0			-4	
Flared Approach: Exists?/Storage			/			No /
Lanes				0		0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LR	
v (vph)	258						33	
C(m) (vph)	1371						665	
v/c	0.19						0.05	
95% queue length	0.69						0.16	
Control Delay	8.2						10.7	
LOS	A						B	
Approach Delay							10.7	
Approach LOS							B	

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: R.H.
Agency/Co.: JCE
Date Performed: 9/16/11
Analysis Time Period: PEAK SATURDAY HOUR
Intersection: C.R. 72 & SISTER SERVANTS LA/E
Jurisdiction:
Units: U. S. Customary
Analysis Year: 2015 BUILD TRAFFIC VOLUMES
Project ID: 1700SATB7 - SPECIAL EVENTS
East/West Street: STERLING MINE ROAD (C.R. 72)
North/South Street: SISTER SERVANTS LA/EAGLE VALLE
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	2	353	0	0	616	42
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	2	392	0	0	684	46
Percent Heavy Vehicles	5	--	--	5	--	--
Median Type/Storage	Undivided /					
RT Channelized?						
Lanes	0	1	0	0	1	0
Configuration	LTR			LTR		
Upstream Signal?	No			No		

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	0	0	1	55	0	3
Peak Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	0	0	1	61	0	3
Percent Heavy Vehicles	5	5	5	5	5	5
Percent Grade (%)		-5			0	
Flared Approach: Exists?/Storage		No /			No /	
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LTR	LTR		LTR			LTR	
v (vph)	2	0		1			64	
C(m) (vph)	860	1150		725			236	
v/c	0.00	0.00		0.00			0.27	
95% queue length	0.01	0.00		0.00			1.06	
Control Delay	9.2	8.1		10.0-			25.8	
LOS	A	A		A			D	
Approach Delay				10.0-			25.8	
Approach LOS				A			D	

F-2

CHAPTER 7

Multi-Use Development

7.1 Background

A basic premise behind the data presented in *Trip Generation* is that they were collected at single-use, free-standing sites. However, the development of mixed-use or multi-use sites is increasingly popular. While the trip generation rates for individual uses on such sites may be the same or similar to what they are for free-standing sites, there is potential for interaction among those uses within the multi-use site, particularly where the trip can be made by walking. As a result, the total generation of vehicle trips entering and exiting the multi-use site may be reduced from simply a sum of the individual, discrete trips generated by each land use.

A common example of this internal trip-making occurs at a multi-use development containing offices and a shopping/service area. Some of the trips made by office workers to shops, to restaurants, or to banks may occur on site. These types of trips are defined as internal to (i.e., "captured" within) the multi-use site.

7.2 What Is a Multi-Use Development?

For purposes of this handbook, a ***multi-use development is typically a single real-estate project that consists of two or more ITE land use classifications between which trips can be made without using the off-site road system.*** Because of the nature of these land uses, the trip-making characteristics are interrelated, and some trips are made among the on-site uses. This capture of trips internal to the site has the net effect of reducing vehicle trip generation between the overall development site and the external street system (compared to the total number of trips generated by comparable, stand-alone sites).

Multi-use developments are commonly found ***ranging in size from 100,000 square feet to 2 million square feet.*** The data presented in this chapter correspond to multi-use developments in this size range. The recommended procedures for estimating trip generation at multi-use developments are likely applicable at even larger sites, but the analyst is encouraged to collect additional data.

A key characteristic of a multi-use development is that trips among the various land uses can be made on site and these ***internal trips are*** not ***made on the major street system.*** In some multi-use developments, these internal trips can be made either by walking or by vehicle entirely on internal pathways or internal roadways without using streets external to the site.

An ***internal capture rate*** can generally be defined as a percentage reduction that can be applied to the trip generation estimates for individual land uses to account for trips internal to the site. It is important to note that these reductions are applied externally to the site (i.e., at entrances, at adjacent intersections, and on adjacent roadways). The trip reduction for internally captured trips is separate from the reduction for ***pass-by trips.*** These are two distinct phenomena, and both could be applicable for a proposed development. The internal trips, if present, should be subtracted out ***before*** pass-by trip reductions are applied (refer to chapter 5 for a complete discussion of pass-by trip estimation).

Multi-Use Development

- typically planned as a single real-estate project,
- typically between 100,000 and 2 million square feet in size,
- contains two or more land uses,
- some trips are between on-site land uses, and
- trips between land uses do not travel on major street system.

Not

- a central business district,
- a suburban activity center, or
- an existing ITE land use classification with potential for a mix of land uses, such as
  - a shopping center,
  - an office park with retail,
  - an office building with retail, or
  - a hotel with limited retail and restaurant space.

7.3 What Is *Not* a Multi-Use Development?

In literal terms, a multi-use development could mean any combination of different land use types within a defined, congruous area. But that definition would encompass a wide range of potential applications, many of which are not intended to be the focus of this chapter.

A traditional **downtown or central business district (CBD)** is not considered a multi-use development for purposes of this handbook. Downtown areas typically have a mixture of diverse employment, retail, residential, commercial, recreation, and hotel uses. Extensive pedestrian interaction occurs because of the scale of the downtown area, the ease of access, and the proximity of the various uses. Automobile occupancy, particularly during peak commuting hours, is usually higher in the CBD than in the outlying areas. Some downtowns have excellent transit service. For these reasons, trip generation characteristics in a downtown environment are different from those found in outlying or suburban areas. The focus of the data presented throughout *Trip Generation* is on sites in suburban settings with limited or no transit service and with free parking. ***Accordingly, trip generation characteristics in this chapter, and specifically in the case of capture rates at multi-use developments, are directly applicable only to sites outside the traditional downtown.*** The potential effects of transit service and on site parking fees are discussed in appendix B.

A **shopping center** could also be considered a multi-use development. However, because data have been collected directly for them, shopping centers are considered in *Trip Generation* as a single land use. The associated trip generation rates and equations given in *Trip Generation* reflect the "multi-use" nature of the development because of the way shopping center data have been collected. ***Accordingly, internal capture rates are not applicable and should not be used to forecast trips for shopping centers if using Land Use Code 820 statistics and data.*** However, if the shopping center is planned to have out-parcel development of a significantly different land use classification or a very large percentage of overall GLA, the site could be considered a multi-use development for the purpose of estimating site trip generation.

Likewise, a subdivision or planned unit development containing general office buildings and support services such as banks, restaurants, and service stations arranged in a park- or campus-like atmosphere should be considered as an **office park** (Land Use Code 750), not as a multi-use development. Similarly, office buildings with support retail or restaurant facilities contained inside the building should be treated as **general office buildings** (Land Use Code 710) because the trip generation rates and equations already reflect such support uses. A hotel with an on-site restaurant and small retail falls within Land Use Code 310 and should not be treated as a multi-use development.

7.4 Methodology for Estimating Trip Generation at Multi-Use Sites

Internally captured trips can be a significant component in the travel patterns at multi-use developments. However, more studies are needed to thoroughly quantify this phenomenon. Section 7.5 presents a recommended procedure for estimating internal capture rates (and a worksheet for organizing and documenting the analysis assumptions used in the estimation of the internal capture rates) for multi-use development sites.

The internal trip-making characteristics of multi-use development sites are directly related to the mix of on-site land uses (which are typically a combination of residential, office, shopping/retail, restaurant, entertainment, and hotel/motel). When combined within a single mixed-use development, these land uses tend to interact, and thus to attract a portion of each other's trip generation.

The recommended methodology for estimating internal capture rates and trip generation at multi-use sites is based on two fundamental assumptions. First, the proportions of trips between interacting land use types (which will be satisfied internally by pairs of land uses) are assumed to be relatively stable. Second, if sufficient data were available, these internal capture percentages could be predicted with adequate confidence. The need for additional data collection at multi-use developments is described in section 7.7.

As should be expected, the observed internal capture rates for multi-use developments vary by time of day, by the site's mix of land uses, and by the size of the development.

Several premises frame the recommended methodology. An example to illustrate their application is presented in the highlighted text to the side. Key to the success of this methodology in replicating internal capture patterns at multi-use sites is its iterative, balancing steps that constrain internal trip-making levels to what are realistic given the mix of land uses.

Illustration of Methodology Overview

Assume a multi-use development with a mix of office, retail, and residential uses. Assume that the office building generates 500 exiting trips during the evening peak hour (based on factors presented in *Trip Generation*).

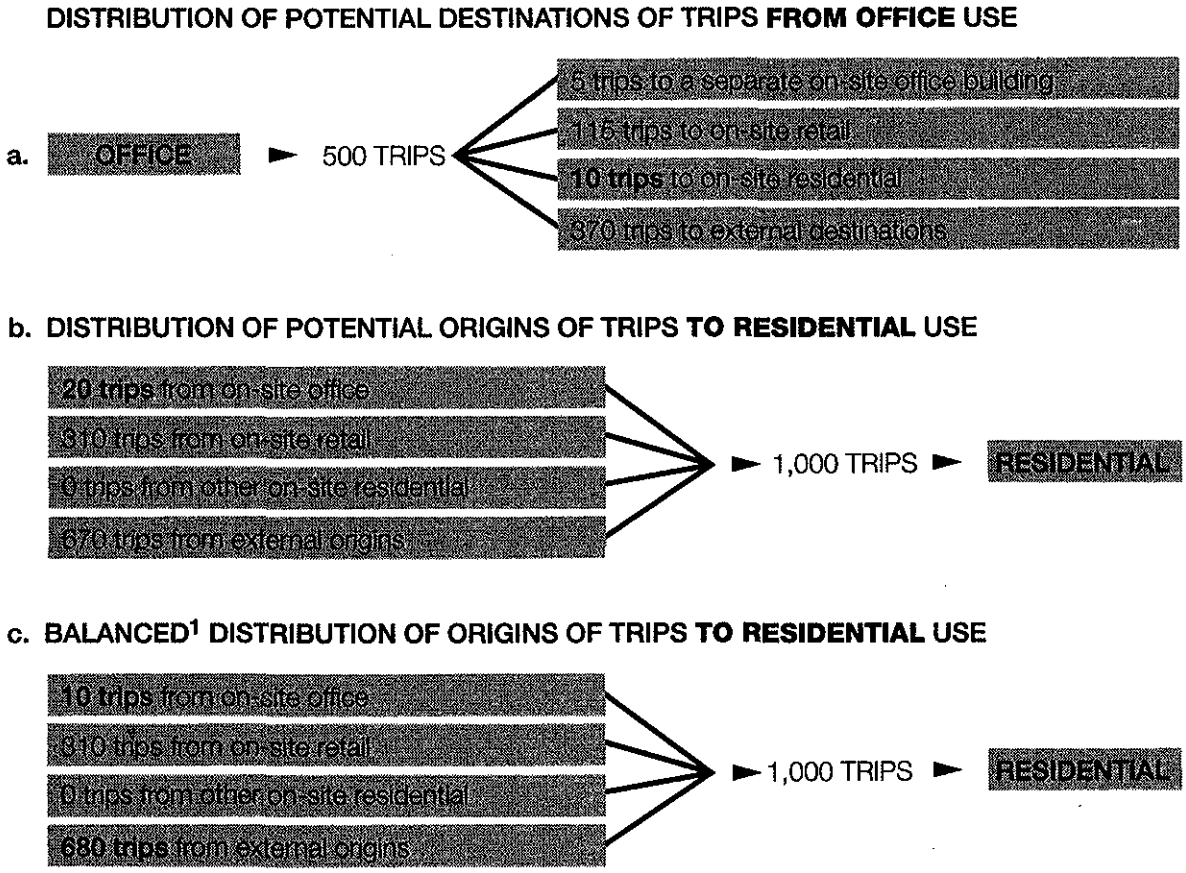
Based on surveys at other multi-use developments (for illustration purposes), it is estimated that the 500 peak hour trips could go to the following destinations: 5 trips to another office building within the development, 115 trips to a retail site within the development, 10 trips to residential units on-site, and 370 to external sites (as illustrated in figure 7.1a).

What if there are no on-site residential units? **The number of trips from the office to an internal residential destination changes to zero and the number of trips to external destinations becomes 380 (i.e., the total trips from the office building remains constant at 500).**

What if there are a large number of on-site residences? **Assume the residential uses generate 1,000 entering trips during the evening peak hour. As illustrated in figure 7.1b, the trips are assumed to originate as follows: 20 trips from an on-site office building, 310 trips from on-site retail, no trips from another on-site residential component, and 670 trips from external origins.**

With the larger number of residences, as many as 20 trips could come from on-site office buildings. But the actual on-site office buildings generate only 10 trips to the on-site residential land use. So, 10 trips would be expected from on-site office to on-site residential in figure 7.1c. The key assumption is that the *"balanced" number of internal trips will match the controlling (i.e., lower) value.*

Figure 7.1 Illustration of Internal Trip Balancing for a Multi-Use Development



[1] Only the office-to-residential values have been "balanced." Each other pair of land uses would likewise need to be balanced.

Premise 1: The distribution of trip purposes among motorists entering or exiting a development site is relatively stable. The distribution of destination land uses is likewise assumed to be relatively stable. For example, the destinations of trips from an office building are distributed among the many potential destinations (e.g., retail, residential, other office) in roughly the same pattern whether the office is stand-alone or in a multi-use development.

Premise 2: The converse of Premise 1 is also true, that the distribution of origins for trips to a particular land use is relatively stable.

Premise 3: The number of trips *from* a land use within a multi-use development *to* another land use within the same multi-use development (i.e., an internal trip) is a function of the size of the "receiving" land use and the number of trips it attracts as well as the size of the "originating" land use and the number of trips it sends. ***The number of trips between a particular pair of internal land uses is limited to the smaller of these two values.***

7.5 Procedure for Estimating Multi-Use Trip Generation

The recommended procedure for trip estimation, although complex, simplifies the actual trip-making dynamics within a multi-use development. For example, the procedure does not take into account a number of key variables that are likely to affect the internal capture rate, such as proximity of on-site land uses (and pedestrian connections between them) and location of the multi-use site within the urban/suburban area (and the proximity of competing or complementary land uses). **The analyst is encouraged to exercise caution in applying the data presented herein because of the limited sample size and scope. Additional data should be collected where possible (refer to section 7.7 for guidance). The analyst is also encouraged to make logical assumptions in his/her use of this procedure. In summary, use good professional judgment.**

WORDS OF ADVICE

- **Collect additional data if possible**
- **Exercise caution**
- **Be logical**
- **Use good professional judgment**

The step-by-step procedure, as described below, can be used for any number of land uses within the multi-use site. Sample forms are provided for three and four land uses, however, the analyst can modify the sample worksheet to correspond to the desired number of land uses. The layout of the worksheet will become more complex as additional land uses are included.

Blank worksheets for estimating multi-use development trip generation are provided at the end of this chapter. The following step-by-step procedures illustrate how the worksheet should be completed.

Step 1. Document Characteristics of Multi-Use Development

Enter the following information onto the worksheet:

- name of development;
- description of each land use in the development and its ITE land use code; and
- size of each land use, corresponding to the most appropriate independent variable used in *Trip Generation* (e.g., gross leasable area, gross floor area, dwelling units).

If the site has two or more buildings containing the same land use, combine the sizes of the multiple buildings if they are situated within reasonable and convenient walking distance of each other. If the buildings are not close to each other, treat them as separate land uses on the worksheet (for example, as Office A and Office B).

If the site has multiple residential components (single-family, apartment, etc.), compute the trip generation for each residential type separately (later in step 3), but record as only a single land use on the worksheet.

Step 2. Select Time Period for Analysis

Enter the time period for which the analysis is being conducted onto the worksheet (for help in selecting the appropriate time period for analysis, refer to chapter 2 of this handbook).

Internal capture rates vary by time of day. A separate worksheet should be completed for each distinct time period. It should be noted that typical internal capture rates are presented later in this chapter for the weekday midday, the weekday evening peak, and weekday daily.

Internal capture rates may also vary by day of the week. The typical internal capture rates used in a later step are based on data collected on a Tuesday, Wednesday, or Thursday (unless specifically noted otherwise). Analyses for a Friday or Saturday may need modified rates.

Step 3. Compute Baseline Trip Generation for Individual Land Uses

Compute the number of trips generated for the desired time period for each land use based on the given independent variable.

◆ Refer to notes in step 1 if there are multiple buildings of the same land use within the site.

◆ Compute number of trips generated by direction (enter/exit).

◆ Use the *Trip Generation* rate, *Trip Generation* equation or local data for each land use. Refer to chapter 3 for guidance on how to select the appropriate rate or equation for each land use. Do not adjust for pass-by or diverted linked trips at this time.

Record trip generation values in worksheet. For each land use, record the baseline trip generation in the column under the "TOTAL" heading.

SAMPLE PROBLEM

Step 1. For our example problem, we are analyzing a multi-use site comprised of a 200,000-square-foot shopping center; a 120,000-square-foot office building; and 200 low-rise apartments. On the worksheet in figure 7.2, the three land use types and their corresponding ITE land use codes and sizes are recorded.

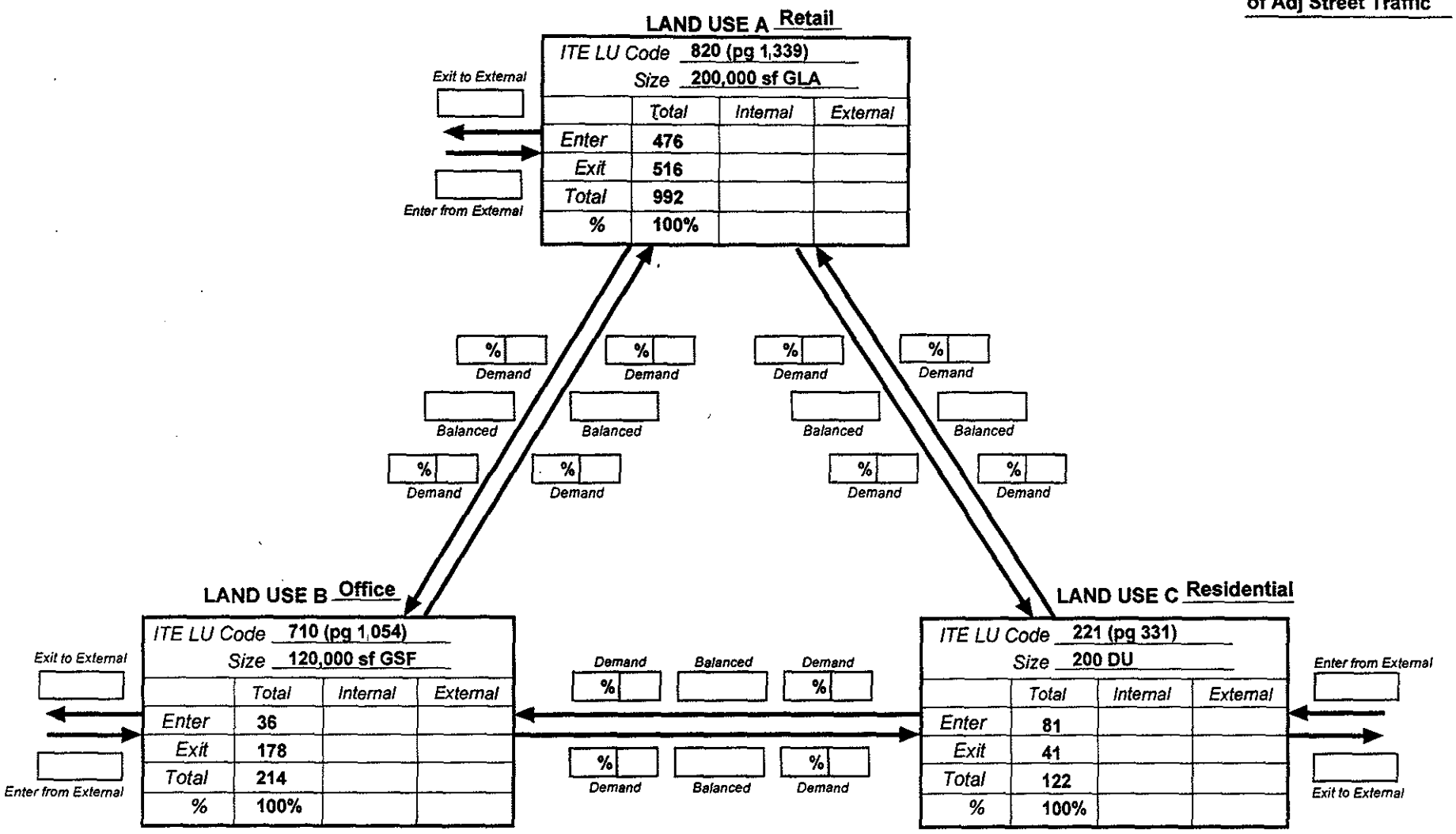
Step 2. We will assume the analysis time period is the evening peak hour of adjacent street traffic (as indicated in the worksheet in figure 7.2).

Step 3. For Land Use Code 820, use the equation from page 1,339 of *Trip Generation*, Sixth Edition, to compute trips; for Land Use Code 710, use the equation from page 1,054; for Land Use Code 221, use the equation from page 331. The results are listed in the worksheet in figure 7.2.

Analyst _____
Date _____

Figure 7.2 Steps 1-3 for Multi-Use Trip Generation Calculation Sample Problem

Name of Dvlpt _____
Time Period PM Peak Hour of Adj Street Traffic



Net External Trips for Multi-Use Development

	LAND USE A	LAND USE B	LAND USE C	TOTAL
Enter				
Exit				
Total				
Single-Use Trip Gen. Est.				

Source: Kaku Associates, Inc.

INTERNAL CAPTURE

Step 4. Estimate Anticipated Internal Capture Rate Between Each Pair of Land Uses

Tables 7.1 and 7.2 present unconstrained internal capture rates that have been estimated on the basis of a series of studies conducted in Florida. These are the only data available to ITE prior to publication that are detailed enough for credible use. Readers are encouraged to collect and submit additional data to ITE using procedures described in section 7.7. As the best available applicable data, it is recommended that these internal capture rates be used unless local data are collected.

SAMPLE PROBLEM (continued)
Step 4. The sample worksheet in figure 7.3 shows the recorded "internal capture" rates for each pair of land uses.

Estimate the interaction between each pair of land uses for the selected time period.

◆ Use tables 7.1 and 7.2 (or local data) as the basis for the estimate. (Note: there are no data provided for the weekday morning peak period or for the Saturday midday peak period.)

◆ Table 7.1 presents estimated unconstrained internal capture rates for trip origins within a multi-use development. For example, during the weekday midday peak period, of all the vehicle-trips **exiting** an on-site office use, 2 percent of the trips could be destined for another on-site office use and 20 percent destined for on-site retail use.

◆ Table 7.2 presents estimated unconstrained internal capture rates for trip destinations within a multi-use development. For example, during the weekday midday peak period, of all the vehicle-trips entering an on-site retail use, 4 percent of the trips could originate at an on-site office use and 5 percent at an on-site residential use.

Record the estimated capture rates on the worksheet (in the boxes marked "demand").

◆ For each land use pairing, record four values; for example, for the pairing of retail and office uses, the following four values should be recorded:

- percent of trips from on-site office destined to an internal retail destination
- percent of trips to on-site retail originating from an internal office use
- percent of trips from on-site retail destined to an internal office destination
- percent of trips to on-site office originating from an internal retail use

◆ Each value represents the unconstrained demand (or maximum potential trip interaction between the two land uses), by direction.

Because of the limited data base on trip characteristics at multi-use sites, the analyst is cautioned to review the particular characteristics of the multi-use development under analysis before using the factors presented in tables 7.1 and 7.2. Specifically, the analyst must ***assess whether each set of internal trip capture rates makes sense considering the particular individual land uses within the multi-use development.***

If local data on internal capture rates by land use pair can be obtained, the local data should be given preference.

The data in table 7.1 are limited to trip interaction among the three land uses for which sufficient data were available. ***If an on-site land use does not match a land use category in table 7.1, either (1) collect local data to establish an internal capture rate, according to procedures described in section 7.7 of this chapter, or (2) assume no internal capture.*** (Note: although this assumption of no internal capture may be unrealistic, in the absence of any data it is better to overestimate off-site vehicle-trips.)

Table 7.1 Unconstrained Internal Capture Rates for Trip Origins within a Multi-Use Development

		WEEKDAY		
		MIDDAY PEAK HOUR	P.M. PEAK HOUR OF ADJACENT STREET TRAFFIC	DAILY
from OFFICE	to Office	2%	1%	2%
	to Retail	20%	23%	22%
	to Residential	0%	2%	2%
from RETAIL	to Office	3%	3%	3%
	to Retail	29%	20%	30%
	to Residential	7%	12%	11%
from RESIDENTIAL	to Office	N/A	N/A	N/A
	to Retail	34%	53%	38%
	to Residential	N/A	N/A	N/A

Caution: The estimated typical internal capture rates presented in this table rely directly on data collected at a limited number of multi-use sites in Florida. While ITE recognizes the limitations of these data, they represent the only known credible data on multi-use internal capture rates and are provided as illustrative of typical rates. ***If local data on internal capture rates by paired land uses can be obtained, the local data may be given preference.***

N/A — Not Available; logic indicates there is some interaction between these two land uses; however, the limited data sample on which this table is based did not record any interaction.

Table 7.2 Unconstrained Internal Capture Rates for Trip Destinations Within a Multi-Use Development

		WEEKDAY		
		MIDDAY PEAK HOUR	P.M. PEAK HOUR OF ADJACENT STREET TRAFFIC	DAILY
to OFFICE	from Office	6%	6%	2%
	from Retail	38%	31%	15%
	from Residential	0%	0%	N/A
to RETAIL	from Office	4%	2%	4%
	from Retail	31%	20%	28%
	from Residential	5%	9%	9%
to RESIDENTIAL	from Office	0%	2%	3%
	from Retail	37%	31%	33%
	from Residential	N/A	N/A	N/A

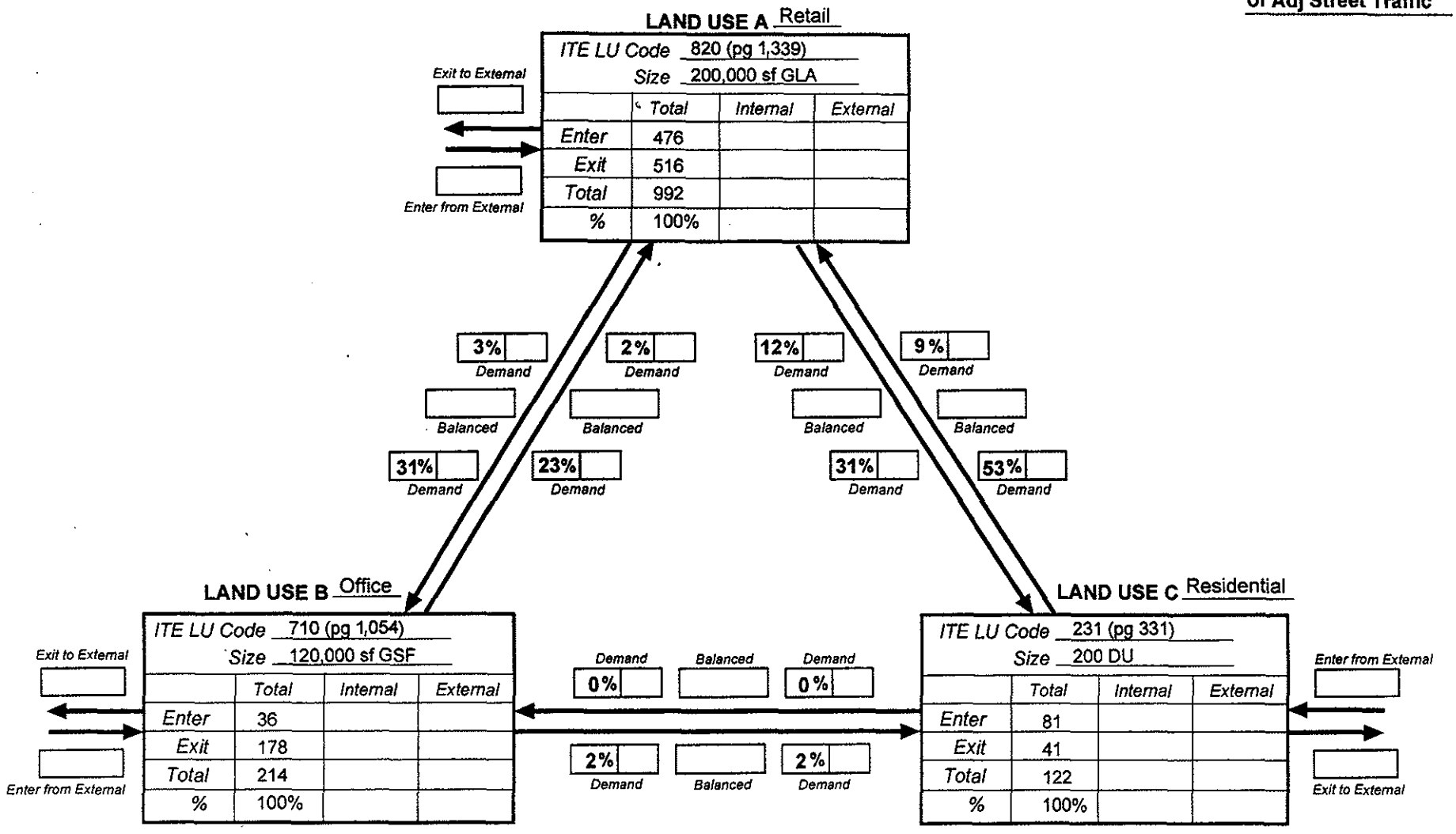
Caution: The estimated typical internal capture rates presented in this table rely directly on data collected at a limited number of multi-use sites in Florida. While ITE recognizes the limitations of these data, they represent the only known credible data on multi-use internal capture rates and are provided as illustrative of typical rates. ***If local data on internal capture rates by paired land uses can be obtained, the local data may be given preference.***

N/A — Not Available; logic indicates there is some interaction between these two land uses; however, the limited data sample on which this table is based did not record any interaction.

Analyst _____
Date _____

Figure 7.3 Step 4 for Multi-Use Trip Generation Calculation Sample Problem

Name of Dvlpt _____
Time Period PM Peak Hour of Adj Street Traffic



Net External Trips for Multi-Use Development

	LAND USE A	LAND USE B	LAND USE C	TOTAL
Enter				
Exit				
Total				
Single-Use Trip Gen. Est.				

Source: Kaku Associates, Inc.

INTERNAL CAPTURE

Step 5. Estimate "Unconstrained Demand" Volume by Direction

Multiply the internal capture percentages by the appropriate directional trip generation value in the worksheet.

◆ For each pair of land uses, compute a directional value from the percentages that were entered. (Note: these values will be balanced later in step 6.)

Record the "unconstrained demand" volumes by direction on the worksheet in the boxes marked "demand" next to the percentages.

Step 6. Estimate "Balanced Demand" Volume by Direction

Compare the two values in each direction for each land use pairing and **select the lower (i.e., controlling) value.**

Record the value as the "balanced demand" (the lower of the directional internal volumes) between each pair of land uses

◆ record the lower value for each land use for each direction

◆ record in the worksheet boxes marked "balanced."

Step 7. Estimate Total Internal Trips to/from Multi-Use Development Land Uses

For each land use, first sum the internal trips *to* each other land use. Then for each land use, sum the internal trips *from* each other land use. Record these total internal trip values in the worksheet in the summary table for each land use.

Compute and record the internal percentages for each land use in the summary table for each land use. **Review values and verify that they are reasonable.**

SAMPLE PROBLEM
(continued)

Step 5. The "unconstrained demand" volumes are computed by multiplying the directional trip generation value by the "unconstrained demand" percentage, as shown in the sample worksheet in figure 7.4. For example,

- trips from retail to office: 516 *outbound trips* x 3% = 15 trips
- trips to office from retail: 36 inbound trips x 31% = 11 trips
- trips from office to retail: 176 outbound trips x 23% = 41 trips
- trips to retail from office 476 inbound trips x 2% = 10 trips

Step 6. Select the controlling value (i.e., the lower value) for each pair of land uses for each direction. For example, in the figure 7.4 worksheet,

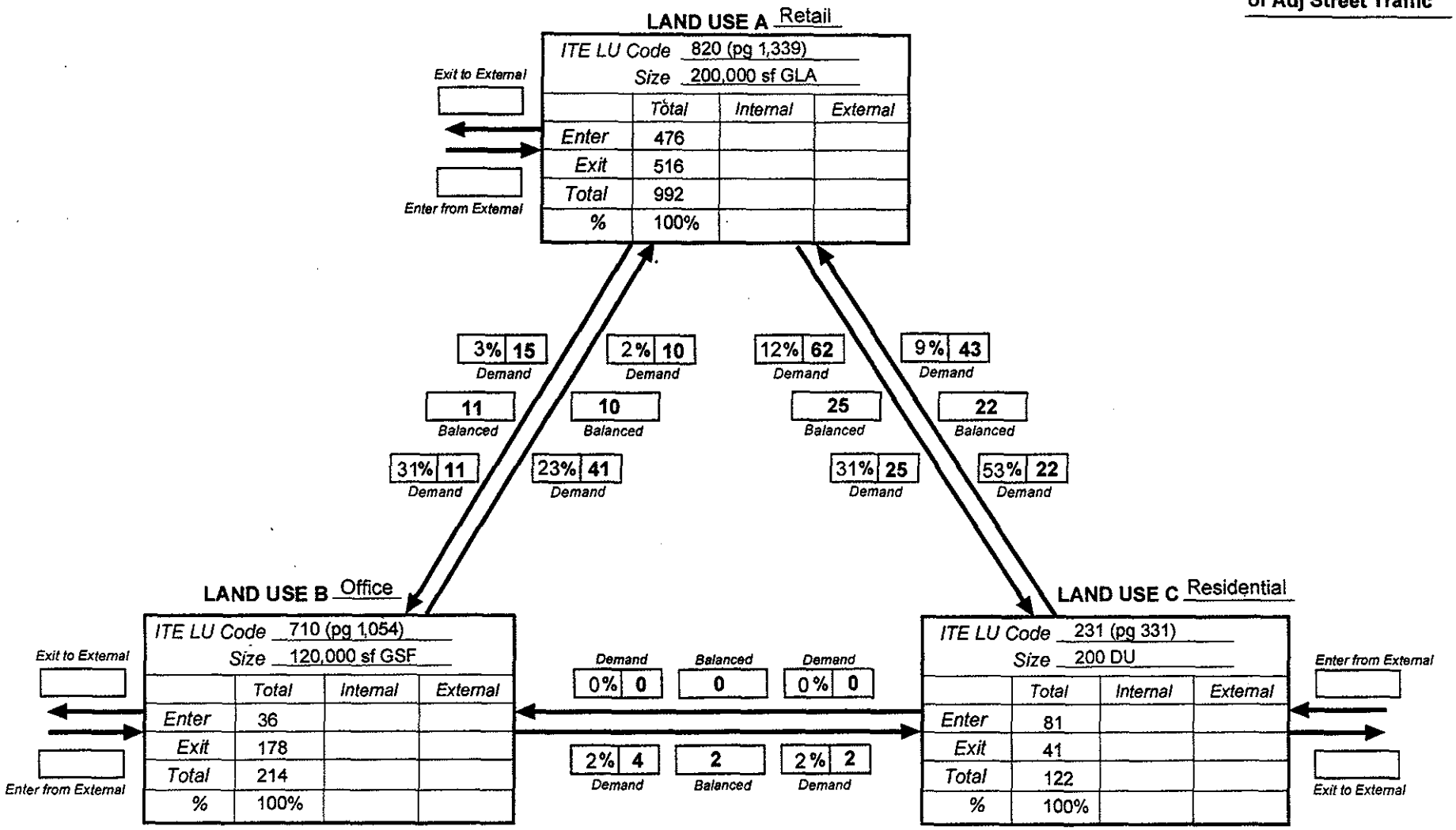
- for trips from retail to office, the retail could generate 15 internal trips but the office could only receive 11 internal trips; the controlling value is 11 internal trips.
- for trips from office to retail, the office could generate 41 internal trips but the retail could only receive 10 internal trips; the controlling value is 10 internal trips.

Step 7. The sample worksheet in figure 7.5 illustrates step 7. For the retail land use, 10 internal trips are estimated from the on-site office and 22 internal trips from the on-site residential. Therefore, the total internal trips entering the retail land use is 32. The internal trips exiting retail sum to 36 (11 to the on-site office and 25 to the on-site residential). In total, seven percent of the retail trips (68 of 992) are internal to the multi-use site. This procedure is followed for each land use.

Analyst _____
Date _____

Figure 7.4 Steps 5 & 6 for Multi-Use Trip Generation Calculation Sample Problem

Name of Dvlpt _____
Time Period PM Peak Hour of Adj Street Traffic



Net External Trips for Multi-Use Development

	LAND USE A	LAND USE B	LAND USE C	TOTAL
Enter				
Exit				
Total				
Single-Use Trip Gen. Est.				

Source: Kaku Associates, Inc.

INTERNAL CAPTURE

Step 8. Estimate the Total External Trips for Each Land Use

Calculate the number of external trips (by direction) by subtracting the estimated internal trips from the total trips for each individual land use. Record values in tables for each land use and in the boxes marked "exit to external" and "enter from external."

SAMPLE PROBLEM (continued)

Step 8. The sample worksheet in figure 7.5 lists the external trip volumes for each land use. For the retail use, there are estimated to be 444 trips entering from outside the site (computed by subtracting 32 internal trips from 476 total trips) and 480 trips exiting to outside the site (516 minus 36).

Step 9. Calculate Internal Capture Rate and Total External Trip Generation for Multi-Use Site

Record the final external trip estimates for each land use onto the worksheet and in the table of "net external trips."

Compute the *net external trip generation* for the entire site by summing the external volumes for each of the site land uses.

Record the original estimates for total trip generation for each land use onto the worksheet in the row denoted "original trip generation estimate." Compute the overall *internal capture rate* by dividing the net external trip generation estimate by the original total trip generation estimate, and subtracting the quotient from 100 percent.

Step 9. The sample worksheet in figure 7.5 lists the net external volumes for each of the three land uses in the summary table. The entering volume estimate of 523 peak hour trips is the sum of the external trips entering retail (444 trips), entering office (25 trips), and entering residential (54 trips). The net external volume for the multi-use site is 1,188 (523 plus 665) and represents an 11 percent reduction.

7.6 Cautions Regarding Recommended Procedure

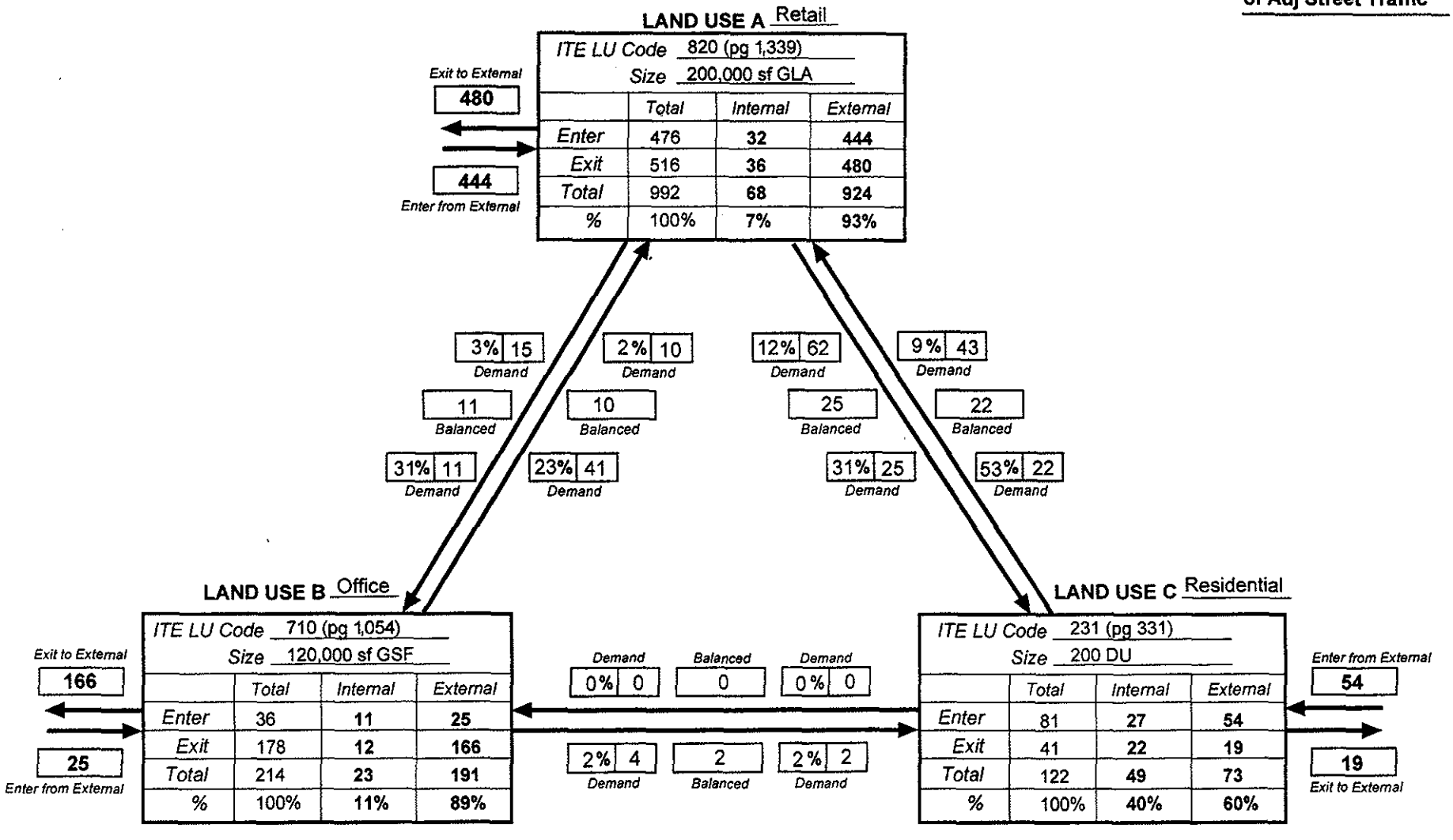
The data presented in section 7.5 quantify the influence of several key factors on internal capture rates. Numerous other factors have a direct influence on travel at multi-use sites, factors for which the current data do not account. Additional data and analysis are desirable to better quantify the relationships between these factors and multi-use development trip generation and internal capture rates. A summary description of the pertinent information contained in several existing documents is included in appendix C of this handbook.

Limited Sample Size—The estimated typical internal capture rates presented in section 7.5 in tables 7.1 and 7.2 rely directly on data collected at a limited number of multi-use sites in Florida. While ITE recognizes the limitations of these data, they represent the only known credible data on multi-use internal capture rates and are provided as illustrative of typical rates. ***If local data on internal capture rates by land use pair can be obtained, the local data should be used (and the data submitted to ITE for use in future publications).***

Analyst _____
Date _____

Figure 7.5 Steps 7-9 for Multi-Use Trip Generation Calculation Sample Problem

Name of Dvlpt _____
Time Period **PM Peak Hour of Adj Street Traffic**



Net External Trips for Multi-Use Development

	LAND USE A	LAND USE B	LAND USE C	TOTAL
Enter	444	25	54	523
Exit	480	166	19	665
Total	924	191	73	1188
Single-Use Trip Gen. Est.	992	214	122	1328

Source: Kaku Associates, Inc.

INTERNAL CAPTURE 11%

ADDITIONAL LAND USE MIXES

The analyst should exercise caution when considering the effects of additional land use mixes. For example, one of the newer types of multi-use developments is the large entertainment center complex with cinemas, restaurants, nightclubs, and retail space. Customer interviews in Florida and California have suggested that as many as 40 percent of the cinema users also eat at the on-site restaurants. In another survey, only 20 percent of the visitors to the complex report visiting only one land use at the site. However, reliance on interview data alone will tend to overstate the actual amount of internal capture. Actual counts should be taken to supplement these data.

Pass-By Trips—The application of pass-by trip reductions presented in chapter 5 should be likewise applicable to multi-use sites. However, none of the internal trips can be of a pass-by nature because they do not travel on the adjacent (external) street system. ***Pass-by trip percentages are applicable only to trips that enter or exit the adjacent street system.*** Use the pass-by trip estimation procedure in chapter 5 of this handbook.

Competing Markets—Proximity to competing markets is expected to influence internal capture rates. ***The greater the distance to external competing uses, the greater the likelihood of capturing trips internally within a multi-use development site.*** Developments in a suburban community may have higher capture rates than those for urban developments since urban areas provide a higher number of alternative opportunities than many suburban developments. For example, residents in an urban mixed-use development have more choices of shopping opportunities and thus may travel outside the development site for their shopping needs, even though there are retail uses in their development site. Suburban residents, on the other hand, may not have as many alternative opportunities and therefore may be more likely to confine their trips to the mixed-use site for their shopping or other needs. However, at this time there are no site-trip generation data available on which to base adjustment factors of this type.

Proximity and Density of On-Site Land Uses—The proximity and density of the residential, retail, office, and hotel uses will affect internal trip-making. ***Generally, the greater the density and the closer the proximity of the complementary uses on site, the greater the level of internalization of trips.*** The proximity should be measured in terms of both distance and impedance to the traveler. For example, the presence of foot paths or bicycle paths, protected crosswalks or overpasses, and pedestrian refuge areas greatly enhance the accessibility of paired on-site land uses. At this time, however, no site-trip generation data are available on which to base adjustment factors of this type.

Key Premise

Internal capture should increase with an increase in proximity, density, and number of complementary land uses within a multi-use development.

Other Site-Specific Issues—Many other issues potentially affect trip making at multi-use sites. For example, can those who work on site afford to live on site? How long will it take for the office uses to attract work trips from on-site residences? Is there an internal circulation system that enhances or discourages internal trips?

Shared Parking—Shared parking and multi-use trip generation estimation methodologies, though similar, are not interchangeable. Shared parking factors cannot be applied to estimate trip generation at multi-use developments.

Shared parking factors *cannot* be applied to estimate trip generation at multi-use developments.

7.7 Data Collection at Multi-Use Developments

The Institute wishes to increase the data base on multi-use developments in order to provide internal capture data for a broader range of land uses. ITE would appreciate additional data from analyses of such developments.

A data collection program for a multi-use development site should include verification that the site to be surveyed is appropriate for inclusion in the ITE data base. It should also include a compilation of information describing the site characteristics and field data collection. The field data collection at the site should have at least two components: in-person interviews on site and a cordon traffic count. The conduct of internal traffic counts should be considered at sites where internal streets exist and can be isolated and where internal streets carry most of the internal trips (both pedestrian and vehicular).

A data collection program that has all three components will provide the clearest understanding of internal and external trip-making at the multi-use site. If only an on-site interview is conducted, factoring of the survey results to calibrate to actual trip volumes will not be possible. In general, experience has shown that data collection efforts consisting solely of interviews tend to overstate the actual proportion of internal trips at a multi-use site.

At the minimum, data collection should consist of on-site in-person interviews coupled with a complete cordon count.

Site Selection

The site should be fully developed, operational, and mature. New or partially developed sites may not generate trips (both external and internal) at the rate expected of a mature site. (Note: the degree of occupancy is one of the site characteristics to be collected, as described below.)

The driveways serving the multi-use site should not serve any adjacent property. If driveways are shared with another site, it is not possible to count the traffic destined for the multi-use site using traditional traffic counting methods. In addition, the selected multi-use site should have a minimal presence of through trips (i.e., external trips that pass through the site without stopping).

Site Characteristics

Compile the necessary information to describe the multi-use development and each of its individual land uses. At the minimum, obtain information on the independent variables reported under each of the individual land uses in *Trip Generation*. For example, this would include, as appropriate, gross square footage (total and occupied), employees, hotel rooms (total and occupied), dwelling units (total and occupied), restaurant seats, presence of drive-through windows, and so forth. A map or sketch should also be prepared showing buildings, internal streets, access to the external street system, and the locations of counts and interviews.

If possible, the data collection program should also obtain a description and assessment of the proximity/accessibility of complementary uses within the site and a description and assessment of the proximity of competing markets outside the site.

Traffic Counts (Cordon)

Driveway volumes at all entrances/exits at the multi-use site should be counted for as long a period as possible. If only 48 hours of data can be obtained, volumes should be counted during the mid-week (Tuesday through Thursday) to avoid daily variations that may occur on Friday and Monday. If the selected period for design of site access could be the weekend, traffic counts and surveys should likewise be conducted during the weekend.

Ideally, seven consecutive days of data are recommended if budgets allow and if the site driveways are configured to enable complete and accurate counts. With seven days of data, daily variations can be computed and a weekday average and weekend average can be calculated. Driveway counts should be conducted during the same periods as interviews.

Traffic Counts (Internal)

For some multi-use developments, it will be possible to validate the survey results for overall internal trip-making with a comprehensive count of internal pedestrians and vehicles. In such cases, pedestrians and vehicles traveling among on-site land uses should be counted during the interview time periods.

Interviews

Concurrent with gathering driveway volumes, interviews of workers, shoppers, visitors, and residents of the site should be conducted. In general, the objective of the intercept survey is to obtain information on trip purposes at the multi-use site, the origins and destinations of trips entering and exiting the site, and the mode of each trip.

Interviews of persons are typically conducted on site as they leave the site (or leave a single land use within the site). Each interview obtains information on the trips to and from the site. A sample list of interview questions is provided in figures 7.6 and 7.7. The questions are written for on-site administration of the survey. If the survey will be conducted at the cordon driveway, the analyst will need to revise the questions to account for potential multiple on-site stops.

The actual field survey form should also include a space for the interviewer to record the date, the name of the development, the interviewer's location within the site, the time of the interviews (half-hour intervals should be sufficient), and the interviewer's name.

A minimum of 100 interviews per time period should be conducted at the multi-use development. For larger developments (i.e., with at least 300,000 square feet of office or retail space), a minimum of 200 interviews per time period should be completed.

Submittal of Multi-Use Development Data to ITE

A summary of the survey and traffic count results should be submitted to ITE for use in updating the multi-use development data base and trip estimation methodology in subsequent updates to the *Trip Generation Handbook*. The report should include a **description of the site and its setting**, a summary of the **data collection program**, the measured internal capture rates between on-site land uses, and a comparison of the **actual external trip generation of the site** to the sum of the trip generation estimates for individual uses within the site. It is strongly suggested that all trip generation studies for multi-use developments follow the procedures presented in this chapter.

Tables 7.3 and 7.4 present a suggested tabulation of multi-use internal capture data. Values should represent factored numbers summed from all of the interview stations. Table 7.3 summarizes the distribution of trip origins and destinations for ***trips heading to land uses within the multi-use development.***

If the survey instrument and format shown in figure 7.6 is used, the "from" end of the trip is compiled from answers to question C; the "to" end of the trip is compiled from responses to question B. The analyst should also compile information on trips "from" the land use described in question B to an on-site land use identified in question A.

If the survey instrument and format shown in figure 7.7 is used, the "from" end of the trip is compiled from answers to question C; the "to" end of the trip is compiled from responses to question A that indicate an on-site destination.

Table 7.4 summarizes the distribution of trip origins and destinations ***for trips heading from land uses within the multi-use development.***

If the survey instrument and format shown in figure 7.6 is used, the "from" end of the trip is compiled from answers to question B; the "to" end of the trip is compiled from responses to question A.

If the survey instrument and format shown in figure 7.7 is used, the "from" end of the trip is compiled from answers to question A; the "to" end of the trip is compiled from responses to question B.

The pass-by data (question D) should be summarized as a single value across all trip purposes.

Send the multi-use development study results to:

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