Chapter 13: Traffic and Transportation

13.1. INTRODUCTION AND SUMMARY OF FINDINGS

This Chapter assesses the potential traffic and transportation impacts of the Proposed Project and the Proposed Project's potential effects on the study area's vehicular safety, circulation, and public transportation. The adopted Scoping Outline identifies 12 locations providing access to the Project Site and major roadways as the traffic analysis study area. Analysis locations include various intersections with North Broadway, north and south of the Project Site, as well as intersections along Lake Street.

This Chapter describes existing traffic conditions within the study area, conditions in the Future without the Proposed Project (the "No Build" analysis), and in the Future with the Proposed Project. The analysis year for the No Build and Proposed Project is 2022, which is when the Applicant anticipates that the Proposed Project would be operational and fully occupied. The Proposed Project is anticipated to generate a total of 175 trips for the weekday AM peak hour (58 entering trips and 117 exiting trips) and 235 for the weekday PM peak hour (138 entering trips and 97 exiting trips). It is further anticipated that those additional trips would not result in a deterioration of the Level of Service (LOS) at any study area intersection with one exception: the intersection of North Broadway with the Main Site Driveway and Park Avenue would change from a LOS A to a LOS B in the AM peak hour. Therefore, no significant adverse impacts to traffic and transportation are anticipated with the Proposed Project and no mitigation measures are anticipated to be needed with the Proposed Project. However, the Applicant has committed to providing a jitney to and from the Project Site to the White Plains Metro-North Railroad station to further encourage use of mass transit by the Proposed Project's residents and employees.

13.1.1. METHODOLOGY

Maser Consulting, P.A., prepared a Traffic Impact Study (TIS) dated June 1, 2017 to evaluate the potential traffic impacts of the Proposed Project (see **Appendix G**). To determine existing and future traffic operating conditions within the study area, capacity analyses were performed for all intersections identified in the adopted Scoping Outline.

Capacity analyses for signalized intersections were performed in accordance with the procedures described in the *2010 Highway Capacity Manual*, published by the Transportation Research Board. The terminology used in identifying traffic flow conditions is LOS. A LOS "A" represents the best condition and a LOS "F" represents the worst condition. A LOS "C" is generally used as a design standard while a LOS "D" is acceptable during peak periods. A LOS "E" represents an operation near capacity. To identify an intersection's LOS, the average amount of vehicle delay is computed for each approach to the intersection as well as for the overall intersection.

Capacity analyses for unsignalized intersections were also performed in accordance with the procedures described in the *Highway Capacity Manual*. The analysis procedure for these intersections is based on the 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. To identify the LOS, the average amount of vehicle delay is computed for each critical movement (major street left turns and minor street movements) to the intersection.

Additional information concerning signalized and unsignalized LOS can be found in Appendix C of the TIS (see **Appendix G**).

13.2. EXISTING CONDITIONS

13.2.1. ROADWAY CHARACTERISTICS IN THE STUDY AREA

The Project Site is primarily served by North Broadway (NYS Route 22) and Lake Street. North Broadway is located west of the Project Site and is a two-way arterial running north- south within the City of White Plains with two lanes each way near the Project Site. Lake Street is located to the south of the Project Site, and is a two-way roadway with bike lanes on each side, running east-west. Both Lake Street and North Broadway have a posted speed limit of 30 miles per hour (mph). Two-way neighborhood roads are located north and south of the Project Site.

13.2.2. INTERSECTION TRAFFIC VOLUMES

The adopted Scoping Outline requires that the following intersections be analyzed to determine the potential impacts of the Proposed Project. These intersections make up the Proposed Project's study area for traffic:

- North Broadway and Park Avenue/Main Site Driveway
- North Broadway and Lake Street
- Lake Street and South/North Kensico Avenue
- Lake Street and Stewart Place
- Lake Street and Warren Place
- Ross Street and Pace Driveway
- North Broadway and Cemetery Road/Orchard Street
- North Broadway and I-287 Eastbound On/Off Ramp
- North Broadway and Grant Avenue
- North Broadway and Lenox Avenue
- North Broadway and Crane Avenue/89 North Broadway
- Park Avenue and Hillside Avenue

To establish baseline traffic conditions within the study area, manual turning movement counts were conducted on December 3, 2015, February 2, 2017, and March 9, 2017. Traffic counts were performed between 7:00 AM–9:30 AM and 4:00 PM–6:30 PM. Based on the turning movement traffic counts and a review of the New York State Department Of Transportation (NYSDOT) historical traffic count data, the weekday AM peak hour was identified as being from 8:00 AM to 9:00 AM, and weekday PM peak hour was identified as being from 5:00 PM to 6:00 PM.[1] The 2017 existing traffic volumes for each study area intersection are shown in **Figures 13-1 through 13-6**.

[1] Historical traffic count data indicates that the weekend peak hour traffic volumes are 20–30 percent less than the weekday AM or PM peak hour. Because the weekend traffic generated by the Proposed Project

13.2.3. INTERSECTION OPERATIONS

Study area intersections generally operate at LOS A, B, or C in the current condition (see **Table 13-2** later in this Chapter). The one exception is the intersection of North Broadway and the I-287 Eastbound On-Ramp, which operates at LOS D in both the AM and PM peak hours.

The City of White Plains, which controls the operation and signal timing of North Broadway, currently allocates more green time to North Broadway for optimization and progression. As a result, at most study area intersections along North Broadway, the "side street" approaches operate at a lower LOS than the North Broadway approaches and the intersection as a whole.

13.2.4. PUBLIC TRANSPORTATION

There are two Bee-Line bus routes proximate to the Project Site; the Bus 6 route along North Broadway and the Bus 5 route along Lake Street. The Bee-Line Bus System is operated by the Westchester County Department of Transportation. The Bus 6 route is a full-service route operating in both directions seven days a week between Yonkers and Pleasantville with service to Hastings-on-Hudson, Dobbs Ferry, Ardsley, Greenburgh, White Plains, North White Plains, Valhalla, Hawthorne, and Chappaqua, including the Yonkers train station (Hudson Line) and White Plains TransCenter (Harlem Line). There is a stop for the Bus 6 route at the Main Site Driveway (northbound) and at Park Avenue (southbound).

The Bus 5 route is a full-service route operating in both directions seven days a week between Yonkers and White Plains with service to Ardsley and Elmsford, including the White Plains TransCenter (Harlem Line). The route also provides service to Harrison Monday through Saturday. The Bus 5 route stops closest to the Project Site are located on Lake Street in the vicinity of Stewart Place, Canfield Avenue, and North/South Kensico Avenue.

13.3. FUTURE WITHOUT THE PROPOSED PROJECT

13.3.1. TRAFFIC AND CAPACITY ANALYSIS FOR THE FUTURE WITHOUT THE PROPOSED PROJECT

The TIS Build Year is 2022, as that is representative of when the Proposed Project would be built and occupied. To account for normal background traffic growth between the current condition and 2022 without the Proposed Project, the TIS estimated a growth factor of 0.5 percent per year (as directed by the City of White Plains) for a total background growth of 2.5 percent by 2022. In addition, traffic from other planned or potential development in the study area, including 60 South Broadway (Pavilion), 55 Bank Street, Boulevard (West Post Road and Maple Avenue), Esplanade (95 South Broadway), Alliance Project (Mamaroneck Avenue and East Post Road), Roseland (1 Walter Street office replacement), 440 Hamilton Avenue, 200 Hamilton Avenue (White Plains Mall), and the Collection (Westchester Avenue), was included in the No Build traffic volumes. The resulting 2022 No Build Traffic Volumes are shown in **Figures 13-7 through 13-12**.

Capacity analyses were conducted at each study area intersection using the No Build traffic volumes. The LOS for all study area intersections was the same in the No Build condition as

would be similar to the weekday trip generation, the weekday peak hours were established as the critical hours for which the analysis should be conducted.

the current condition with one exception: the LOS in the PM peak hour at the intersection of North Broadway and the I-287 Eastbound Ramp would change from a LOS D to LOS E (see **Table 13-2** later in this Chapter) in the Future without the Proposed Project.

13.3.2. PUBLIC TRANSPORTATION

As part of the Lower Hudson Transit Link (LHTL) along the I-287 corridor, circulation and access improvements are proposed to the White Plains Metro-North Railroad station (Phase A) as well as future redevelopment of the station to accommodate ridership growth and to facilitate transfers between bus and rail. In the Future without the Proposed Project, no improvements, including physical improvements or new or expanded public transportation service, are planned in the vicinity of the Project Site.

13.4. POTENTIAL IMPACTS OF THE PROPOSED PROJECT

13.4.1. SITE GENERATED TRAFFIC

The number of peak hour trips generated by the Proposed Project was calculated using information published by the Institute of Transportation Engineers (ITE) as contained in their report *Trip Generation, 9th Edition, 2012*. As shown in **Table 13-1**, the Proposed Project would generate a total of 175 trips (58 entering trips and 117 exiting trips) during the weekday AM peak hour and a total of 235 trips (138 entering trips and 97 exiting trips) during the weekday PM peak hour. It should be noted that no credits (reduction in trips) were taken for the use of mass transit, the proposed Jitney, or for students of the Elisabeth Haub School of Law at Pace University ("Pace Law School") that currently commute to the school daily who now will reside in the academic housing building.

Table 13-1
Anticipated Site Generated Traffic

Proposed Development	Entry		Exit		Total	
	HTGR*	Volume	HTGR*	Volume	HTGR*	Volume
Multi-family (400 units)[1]						
Weekday AM highway peak hour	0.09	36	0.21	84	0.30	120
Weekday PM highway peak hour	0.23	92	0.16	64	0.39	156
Assisted-living (125 beds)[2]						
Weekday AM highway peak hour	0.12	15	0.06	8	0.18	23
Weekday PM highway peak hour	0.15	19	0.15	19	0.30	38
Academic housing[3]						
Weekday AM highway peak hour	0.10	7	0.36	25	0.46	32
Weekday PM highway peak hour	0.38	27	0.20	14	0.58	41
Total						
Weekday AM highway peak hour	**N/A**	**58**	**N/A**	**117**	**N/A**	**175**
Weekday PM highway peak hour	**N/A**	**138**	**N/A**	**97**	**N/A**	**235**

Notes:
*The above Hourly Trip Generation Rates (HTGR) are based on data published by the ITE as contained in the *Trip Generation Handbook.*
(1) ITE Land Use 223—Mid-rise Apartment Rates
(2) ITE Land Use 254—Assisted-Living Rates
(3) ITE Land Use 221—Low-Rise Apartment Rates
Source:
Traffic Impact Study (2017), Maser Consulting P. A.

Project-generated trips were assigned to the roadway network based on anticipated arrival and departure patterns for each Proposed Project use as described in **Appendix G**. The potential for Project-generated trips to "cut through" the neighborhoods to the north of the Project Site (i.e., Crane Avenue, Lenox Avenue, and

Grant Avenue) was accounted for in that trip distribution. Based on current distribution of traffic utilizing Grant Avenue, Lenox Avenue, and Crane Avenue, 5 percent of all Project-generated traffic was assigned to Grant Avenue to account for potential "cut through" traffic. This represents one third of Project-generated traffic with an anticipated destination to I-287 East. The Project-generated trips are shown in **Figures 13-13 through 13-18**. It should be noted that no credits (reduction in trips) were taken for the use of mass transit by Proposed Project residents or employees, the jitney from the Project Site to the train station, or for students of Pace Law School who currently commute but who would reside within the Proposed Project's academic housing.

Total Project-generated trips were added to the Year 2022 No Build Traffic Volumes to obtain the Year 2022 Build Traffic Volumes with the Proposed Project (see **Figures 13-19 through 13-24**).

13.4.2. TRAFFIC AND CAPACITY ANALYSIS FOR THE FUTURE WITH THE PROPOSED PROJECT

Capacity analyses were performed for each study area intersection using the traffic volumes for the Year 2022 with the Proposed Project. As shown in **Table 13-2** below, the LOS for all study area intersections, with the exception of one, remain the same with the Proposed Project as would be expected in the Future without the Proposed Project. In the weekday AM peak hour, the intersection of North Broadway and the Main Site Driveway/Park Avenue changes from LOS A in the Future without the Proposed Project to a LOS B with the Proposed Project.

Table 13-2
Level of Service Summary

Location	Year 2017 existing conditions		Year 2022 No Build conditions		Year 2022 Proposed Project conditions	
	Weekday AM	Weekday PM	Weekday AM	Weekday PM	Weekday AM	Weekday PM
North Broadway and Park Avenue/Main Site Driveway[1]	A	B	A	B	B	B
North Broadway and Lake Street[1]	C	C	C	C	C	C
Lake Street and South/North Kensico Avenue[1]	B	C	B	C	B	C
Lake Street and Stewart Place[2]						
Major movement—eastbound	A	A	A	A	A	A
Minor movement—southbound	C	C	C	C	C	C
Lake Street and Warren Street[2]						
Major movement—eastbound	A	A	A	A	A	A
Minor movement—southbound	C	C	C	C	C	C
Ross Street and Pace Law School driveway[2]						
Major movement—eastbound	A	A	A	A	A	A
Minor movement—southbound	A	A	A	A	A	A
North Broadway and Cemetery Road/Orchard Street[1]	B	B	B	B	B	B
North Broadway and I-287 Eastbound On/Off Ramp[1]	D	D	D	E	D	E
North Broadway and Grant Avenue[1]	A	A	A	A	A	A
North Broadway and Lenox Avenue[1]	A	A	A	A	A	A
North Broadway and Crane Avenue/89 North Broadway[1]	A	A	A	A	A	A
Park Avenue and Hillside Avenue[2] (all legs and all approaches)	A	A	A	A	A	A

Notes:
[1] Overall intersection LOS for signalized intersection.
[2] Critical Movements LOS for unsignalized intersection.
Source:
Traffic Impact Study (2017), Maser Consulting P. A.

13.4.3. SITE-GENERATED TRAFFIC TO THE RESIDENTIAL NEIGHBORHOODS TO THE NORTH AND SOUTH OF THE PROJECT SITE

Traffic generated by the Proposed Project would not negatively impact the residential neighborhoods surrounding the Site. The vast majority of Project-generated traffic would use the Site's North Broadway entrance. During the AM peak hour, the Proposed Project would generate 22 trips in the neighborhood to the south of the Project Site and nine in the neighborhood to the north. During the PM peak hour, the Proposed Project would generate 30 trips (or one new trip every 2 minutes) in the neighborhood to the south of the Project Site and 12 in the neighborhood to the north. The Proposed Project would provide on-Site residences for existing Pace Law School students, which would reduce the amount of daily commuting traffic into the Project Site. No credit for this reduction in trips was taken in the TIS or the estimates of Project-generated traffic. Similarly, no credit was taken for the use of mass-transit by Proposed Project residents and employees. As such, the trip generation estimates, including those anticipated within the neighborhoods, is conservative. The low number of new trips introduced to these neighborhoods would not result in adverse impacts to existing LOS and would not be expected to have an adverse impact on existing emergency service operations.

13.4.4. ACCIDENT PATTERNS

Accident information along North Broadway and Lake Street within the study area/at the study area intersections for the 3-year period from January 1, 2013 to December 31, 2015 was obtained from the NYSDOT Records Access Office. This data is detailed in **Appendix G**. There was a total of 26 reported accidents in 2013, 26 reported accidents in 2014, and 30 reported accidents in 2015 along North Broadway and a total of 27 reported accidents in 2013, 26 reported accidents in 2014, and 26 reported accidents in 2015 along Lake Street within the study area. A review of the accident data indicates typical types of accidents, which include rear-end accidents, with apparent contributing factors such as failure to yield right-of-way, following too closely and driver inattention.

Based on the anticipated traffic generation for the Proposed Project with no major changes to the roadway network, it is expected that the Proposed Project will not have a significant impact on the accident rates on the area roadways.

13.4.5. PROPOSED ON-SITE PARKING FOR PROPOSED PROJECT

The Proposed Project would include 655 parking spaces for the Site's four primary uses.

13.4.5.1. Multi-Family Residential Housing

The Proposed Zoning would require multi-family residential buildings to provide one space per dwelling unit plus ¼-space for every bedroom. This is the same requirement that is applied to multi-family residential buildings in both the RM-0.4 and RM-0.35 zoning districts, which are mapped immediately south of the Project Site.

As applied to the Proposed Project's 400 dwelling units, the Proposed Zoning would require 548 parking spaces. The Proposed Project would include 575 parking spaces for the multi-family residential housing buildings. Of those, 560 spaces would be included in the three-story parking garage below the buildings. Ten spaces in the Ross Street lot and five spaces along the *porte cochere* would be provided for guest and convenience parking.

The amount of parking provided by the Proposed Project's multi-family residential use is consistent with requirements of both the Site's existing zoning and the requirements of the zoning district's surrounding the Project Site. The Site's current RM-1.5 zoning district requires one parking space per dwelling unit plus ⅓-space for every bedroom. As applied to the Proposed Project, this would require the provision of 597 parking spaces, or 22 spaces more than included in the Proposed Project. However, as stated above, in both the RM-0.4 and RM-0.35 zoning districts, which are mapped immediately south of the Project Site, multi-family dwellings are required to provide one parking space per dwelling unit and an additional ¼-space for every bedroom—the same as the Proposed Zoning.

13.4.5.2. Assisted-Living Facility

The Proposed Zoning would require that 0.4 parking spaces per unit be provided for the assisted-living facility. This is the same ratio as the Site's RM-1.5 current zoning. As applied to the Proposed Project, both the existing and Proposed Zoning would require 36 parking spaces for the proposed assisted-living facility. The Proposed Project would include 50 parking spaces for the assisted-living facility. This number is planned based on the experience of the facility's operator.

13.4.5.3. Chapel and Mapleton Building

Currently, the Chapel has no parking spaces proximate to the building. There is a 24-space lot south of the Mapleton building and 11 spaces along the *porte cochere* of the existing Convent that could currently be used for the Mapleton building. The Proposed Project would include 30 designated parking spaces for the Chapel and Mapleton building. These spaces would be located along the Site's driveways in close proximity to the buildings.

The Proposed Zoning would allow the Approving Agency, in this case, the White Plains' Common Council ("Common Council"), the authority to determine the appropriate minimum number of parking spaces for the Chapel and the Mapleton building. In the case of the Proposed Project, 30 parking spaces were chosen for several reasons. First, the City of White Plains Zoning Ordinance requires 10 parking spaces for every 1,000 square feet (sf) for a church. Given that the seating area of the existing Chapel is approximately 3,000 sf, 30 spaces would be appropriate for that use. Second, Mapleton building is currently used, and would continue with the Proposed Project to be used, as both office space and counseling offices for the Sisters of the Divine Compassion (the "Sisters"). The City of White Plains Zoning Ordinance requires three spaces for every 1,000 sf of professional office space. Applied to Mapleton building, this would yield 21 parking spaces. Given that Mapleton building and the Chapel would be used primarily by the Sisters and that concurrent use of the buildings by different users is unlikely, the provision of 30 parking spaces to serve both uses is believed to be appropriate.

13.4.5.4. Academic Housing

As in the existing RM-1.5 zoning, the Proposed Zoning would allow the Common Council the authority to determine the appropriate number of parking spaces required for a dormitory or academic housing use. The

Proposed Zoning would allow some, or all, of the parking required for the academic housing to be located on the parcel of the college or university being served, subject to the recordation of an easement, or other legal instrument, guaranteeing the use of those parking spaces.

Parking for the Proposed Project's academic housing would be provided within the Pace Law School's existing parking lots. Residents of the academic housing would be expected to be primarily Pace Law School students. As Pace Law School has no plans to increase enrollment, the students who would live in the Proposed Project's academic housing would be students who would otherwise commute to, and park at, Pace Law School. As such, providing parking for the academic housing use on the Pace Law School campus would not increase the current utilization of Pace Law School's parking lots. In addition, Pace Law School has a significant surplus of existing parking on-Site and could easily accommodate any net new parking demand if it should occur. Finally, the Proposed Project would be conditioned upon the recordation of an easement, or other legal instrument, that guaranteed the use of an adequate number of parking spaces on the Pace Law School campus for the academic housing.

13.4.6. PUBLIC TRANSPORTATION

The Westchester County Department of Transportation has indicated that the Bee-Line bus routes in the area have available capacity and that if ridership increases, bus service would be adjusted accordingly.

The LHTL would not include any improvements in the vicinity of the Project Site. It should be noted that a jitney would be provided between the Project Site and the White Plains Metro-North Railroad station to facilitate mass transit use.

13.5. MITIGATION MEASURES

The Proposed Project would have no significant adverse impacts on traffic or transportation (see **Appendix G**). Similar LOS and delays would be experienced in the Future without the Proposed Project as in the Future with the Proposed Project. Therefore, no mitigation measures are proposed.✶

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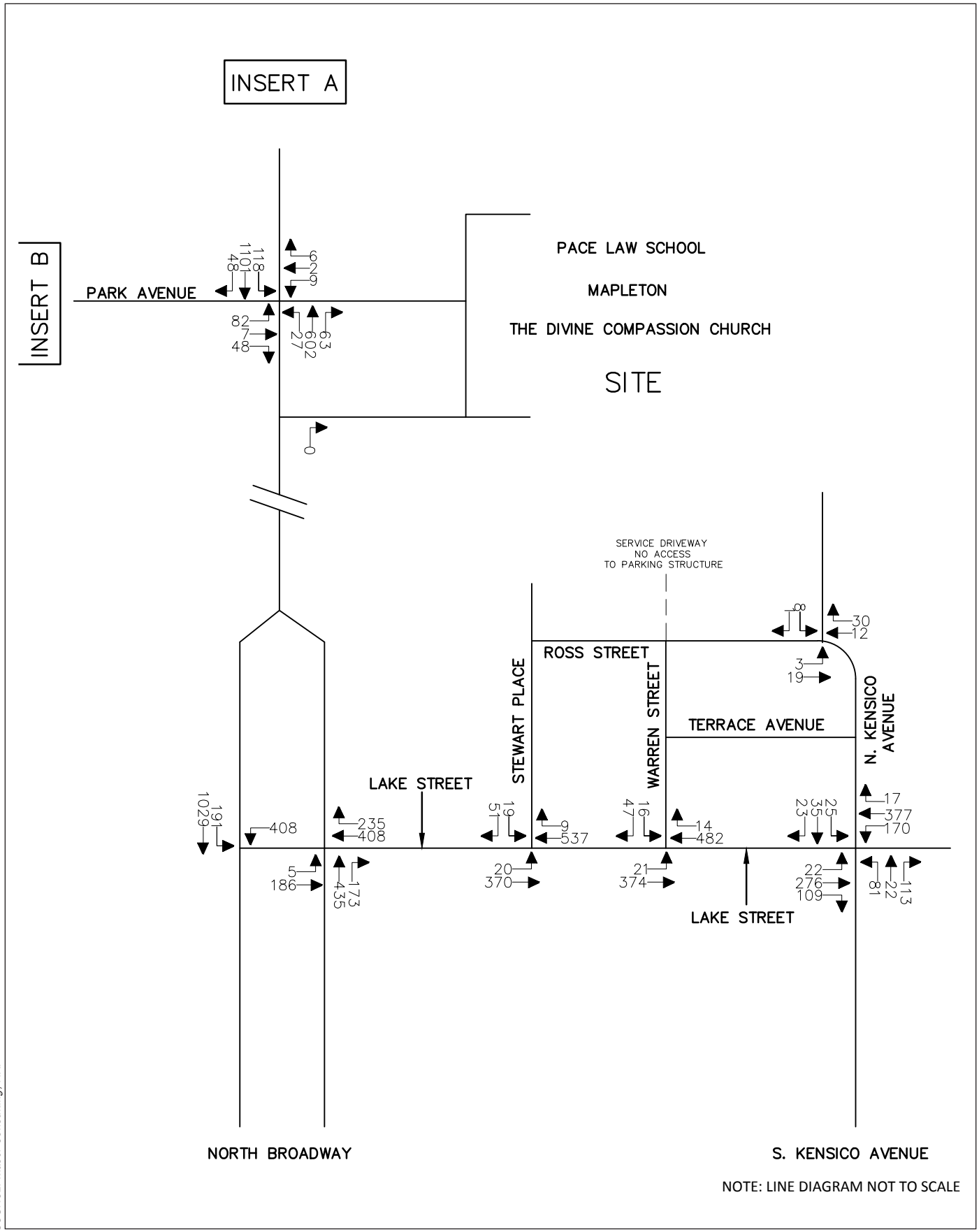
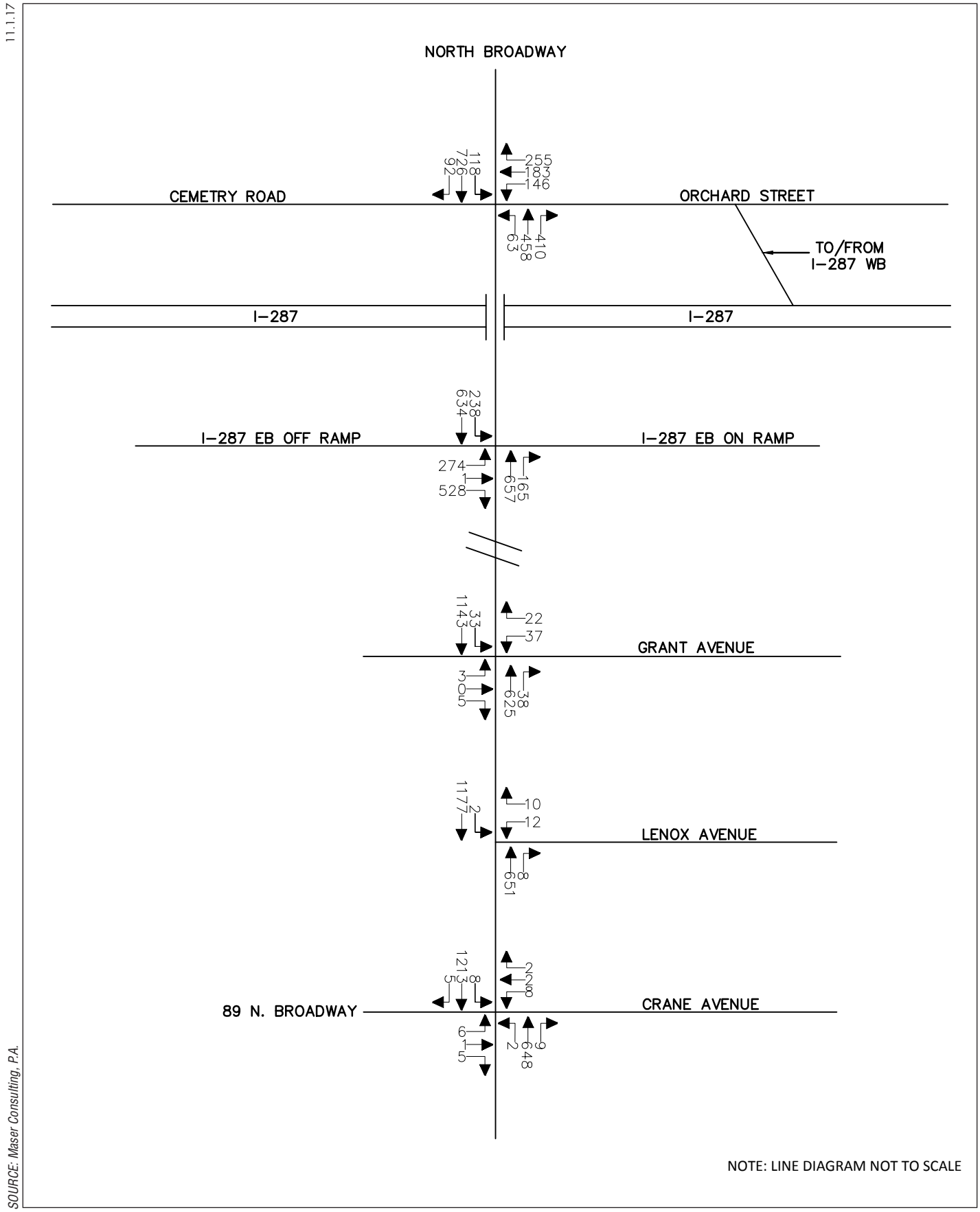


SOURCE: Maser Consulting, P.A.

Existing Traffic Volume - Peak AM Hour



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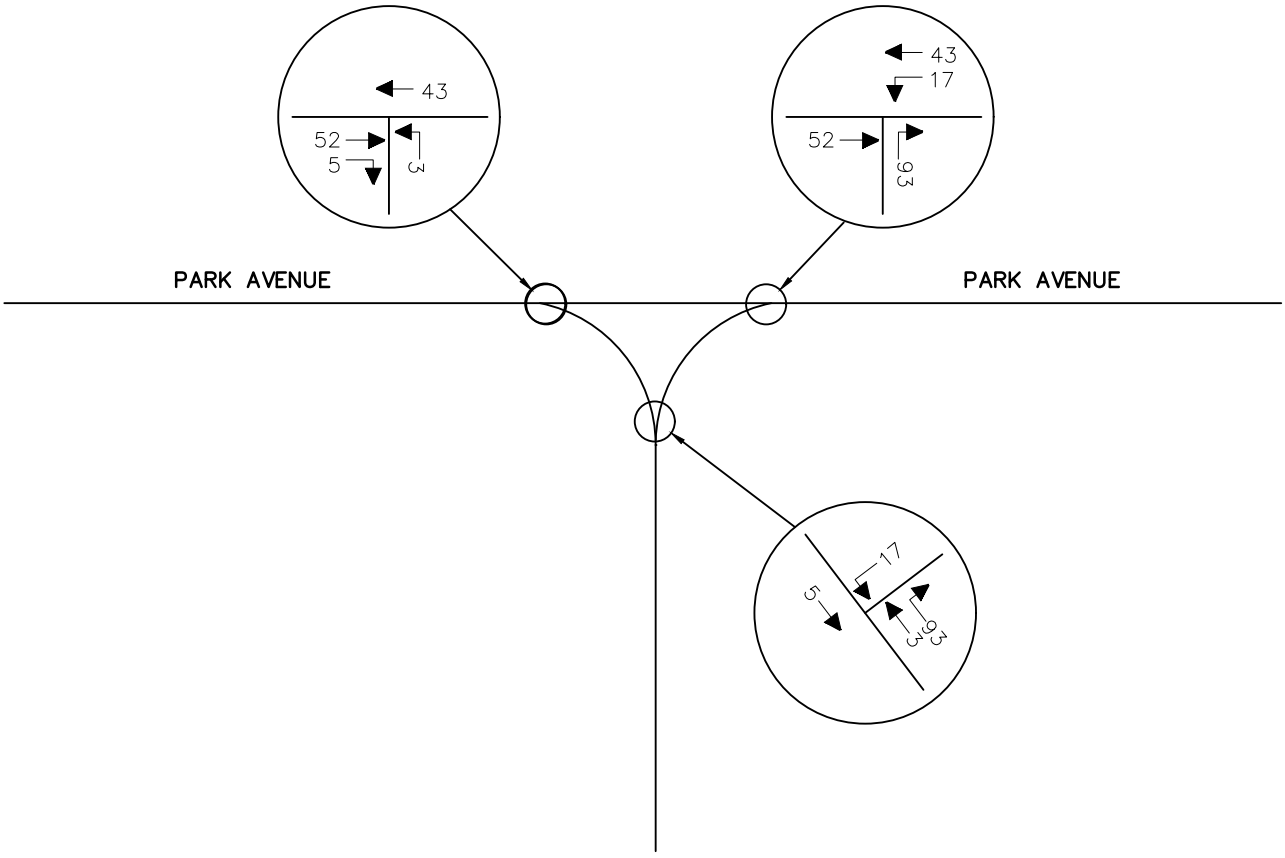

NOTE: LINE DIAGRAM NOT TO SCALE

SOURCE: Maser Consulting, P.A.

Existing Traffic Volume - Peak AM Hour

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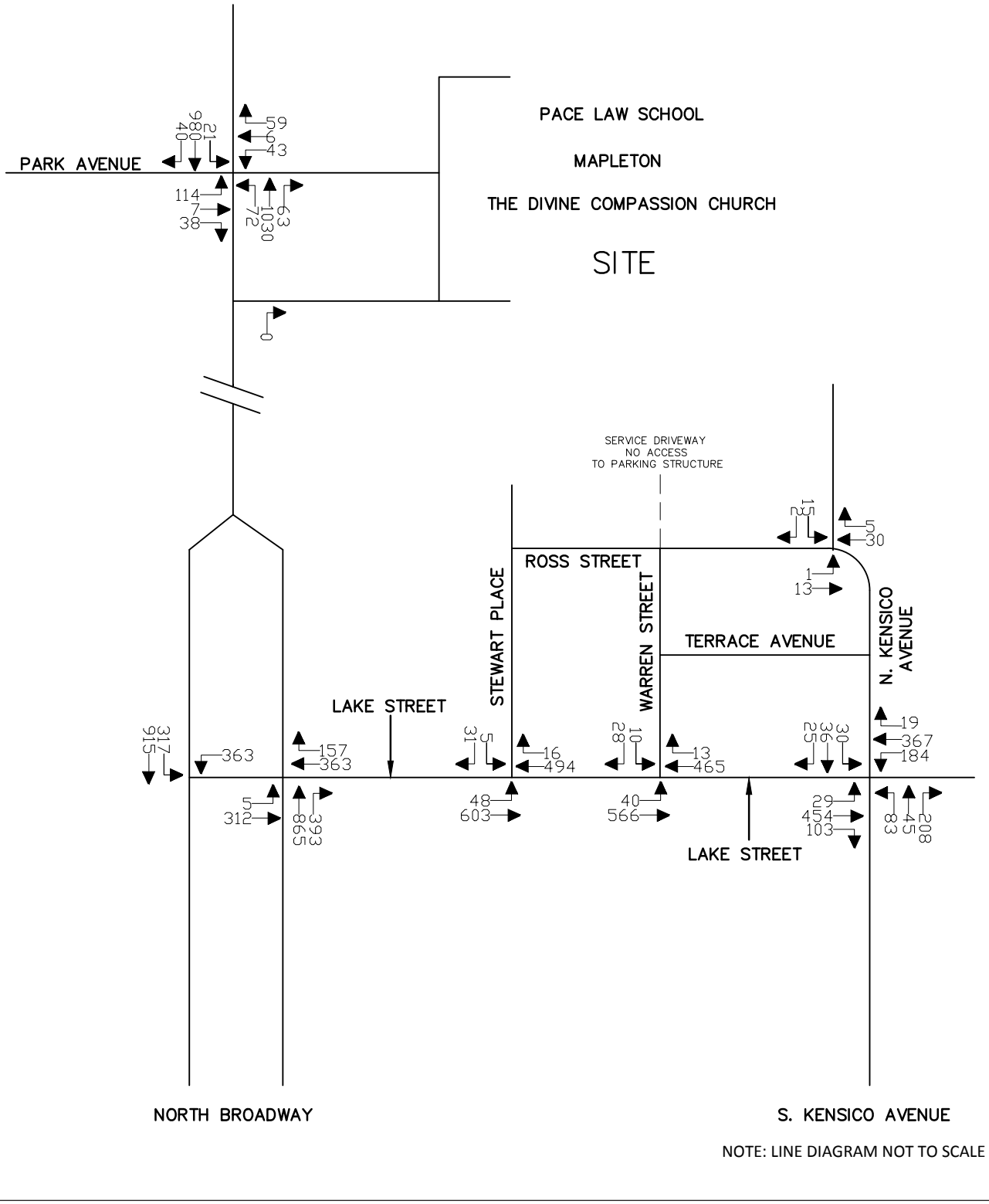

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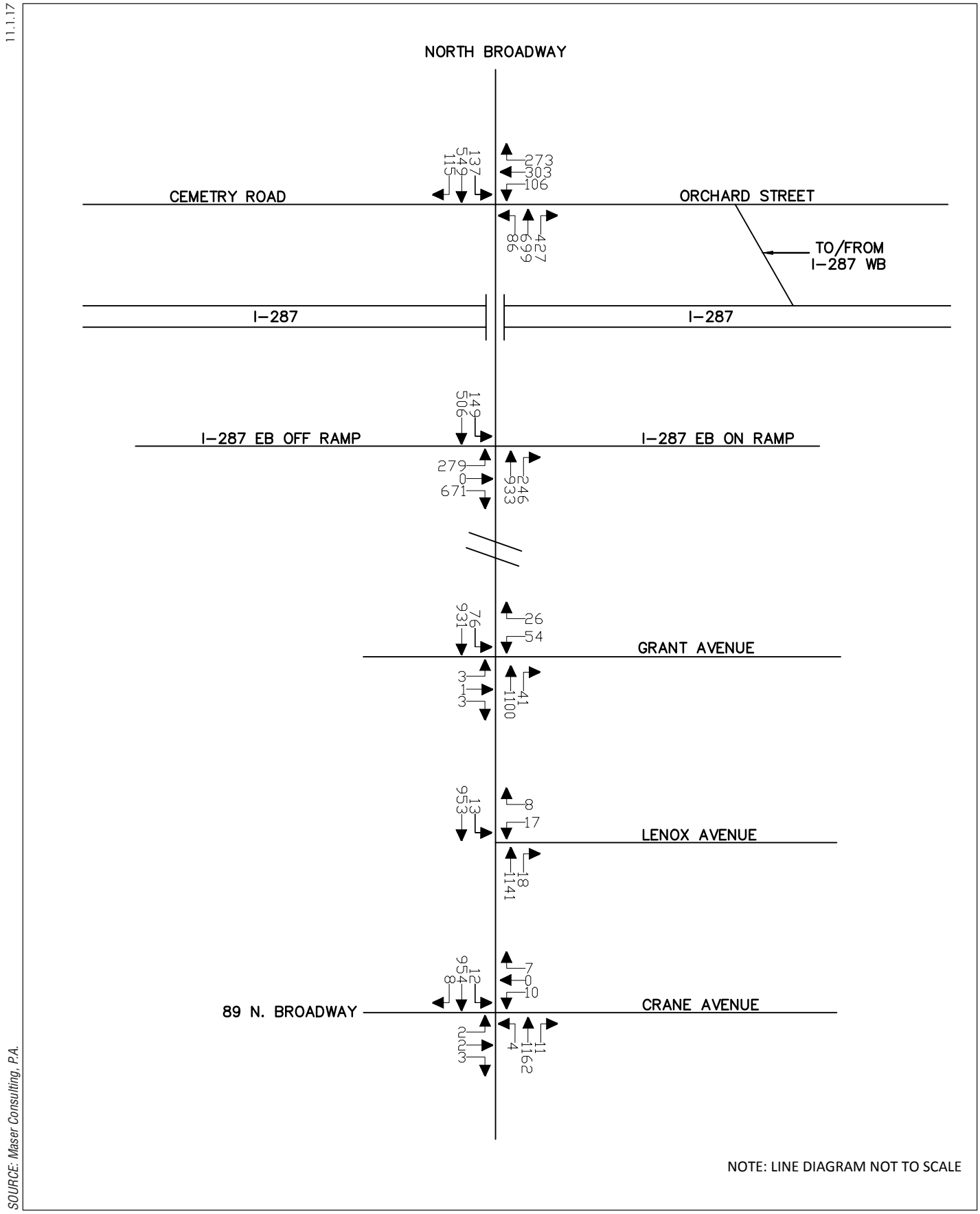

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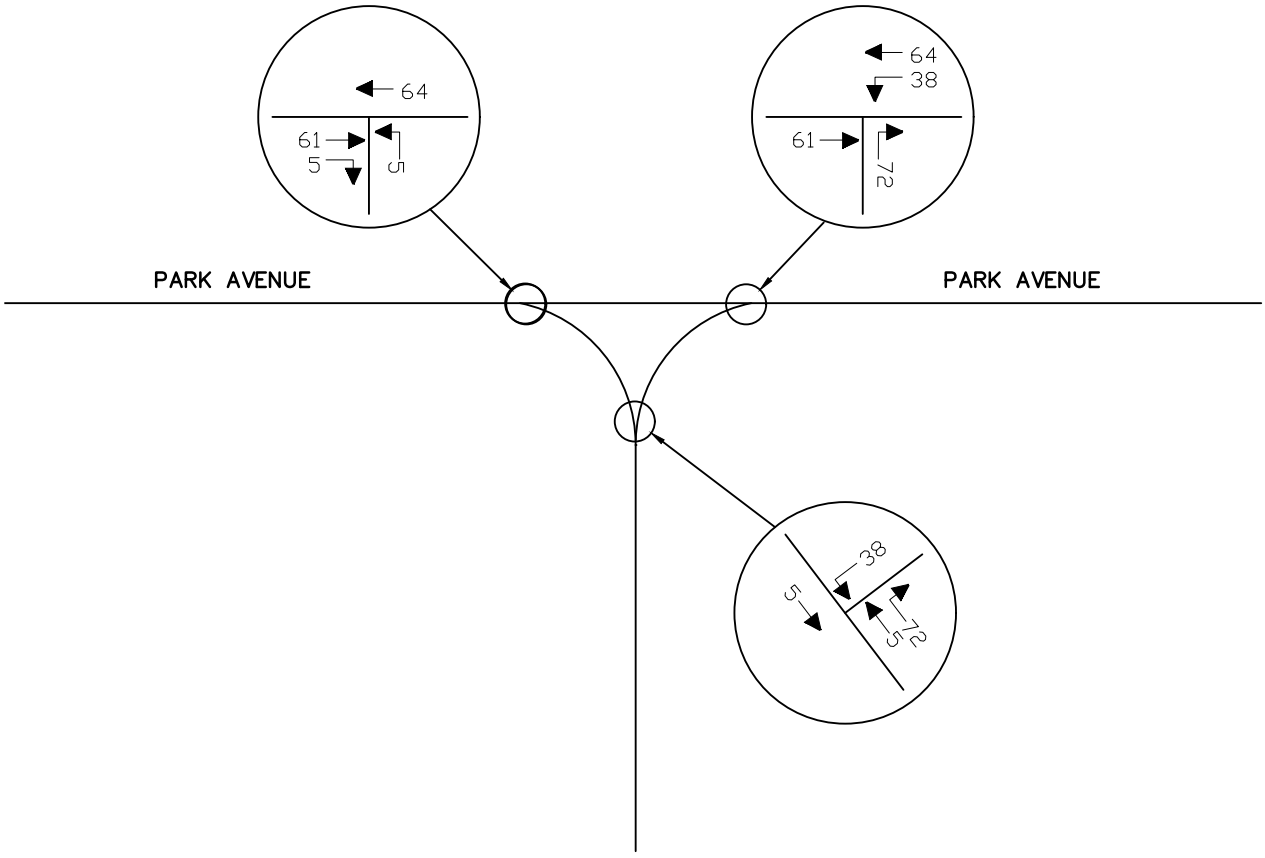

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Existing Traffic Volume - Peak PM Hour

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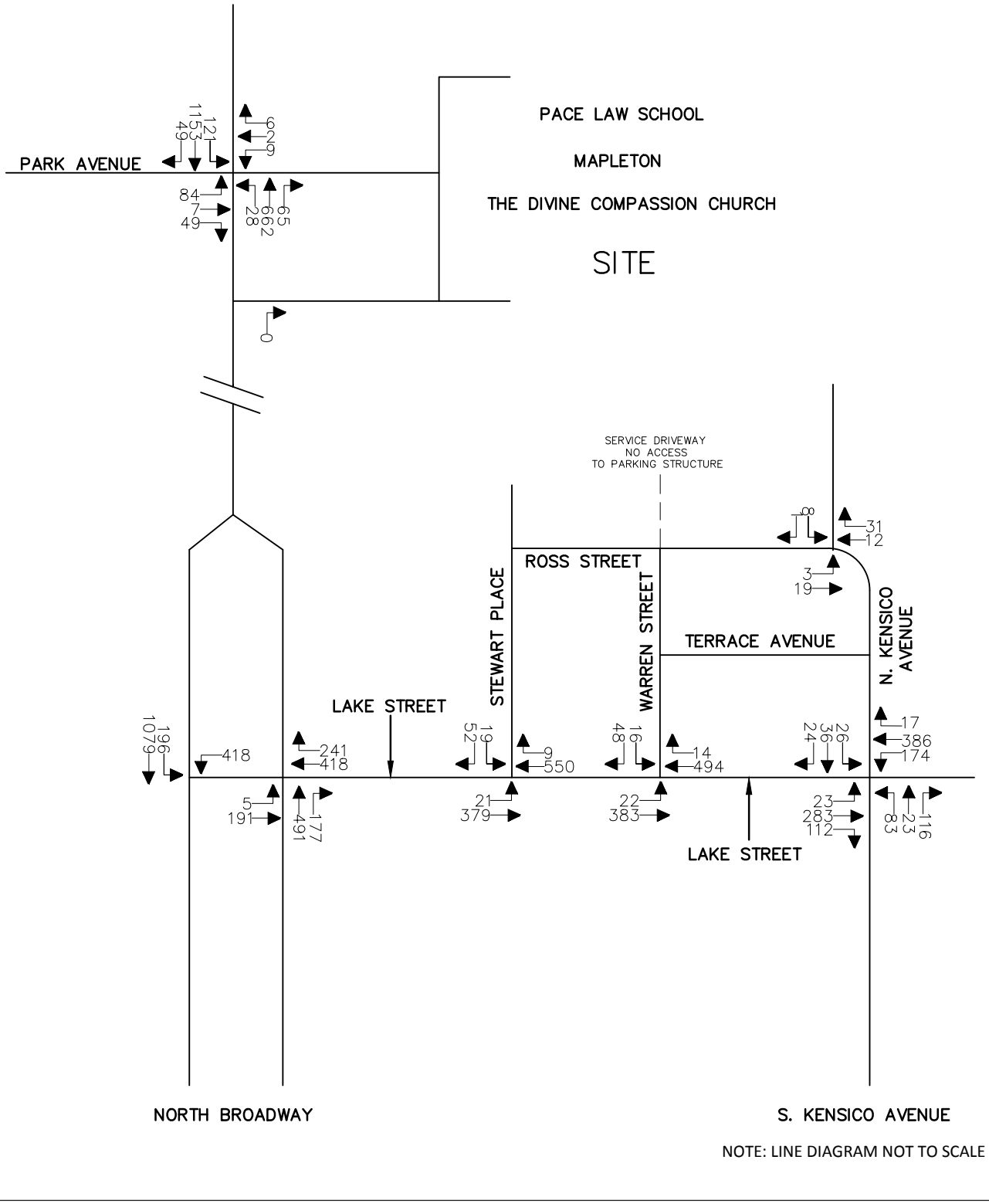

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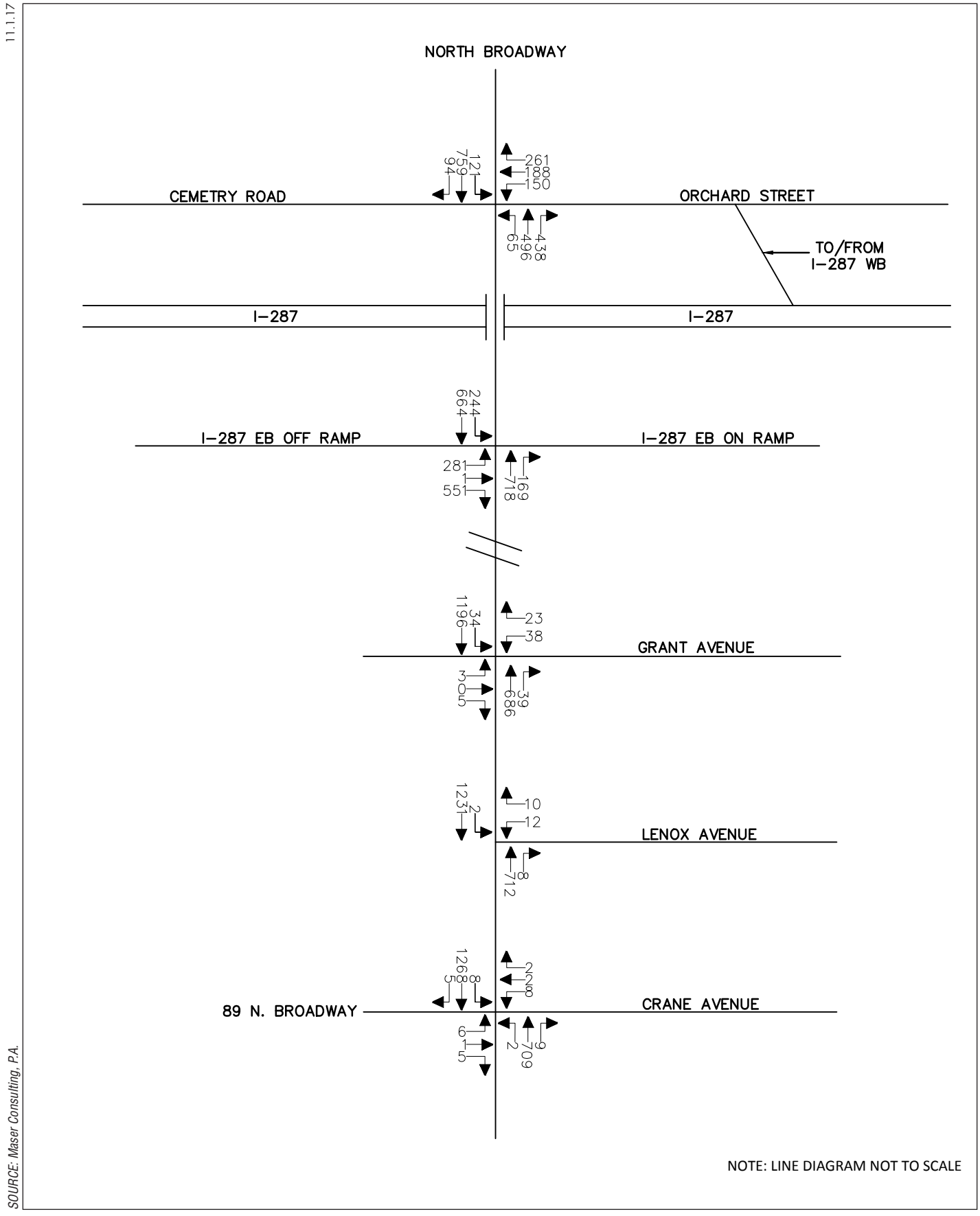
Year 2022 No-Build Traffic Volume - Peak AM Hour



Year 2022 No-Build Traffic Volume - Peak AM Hour

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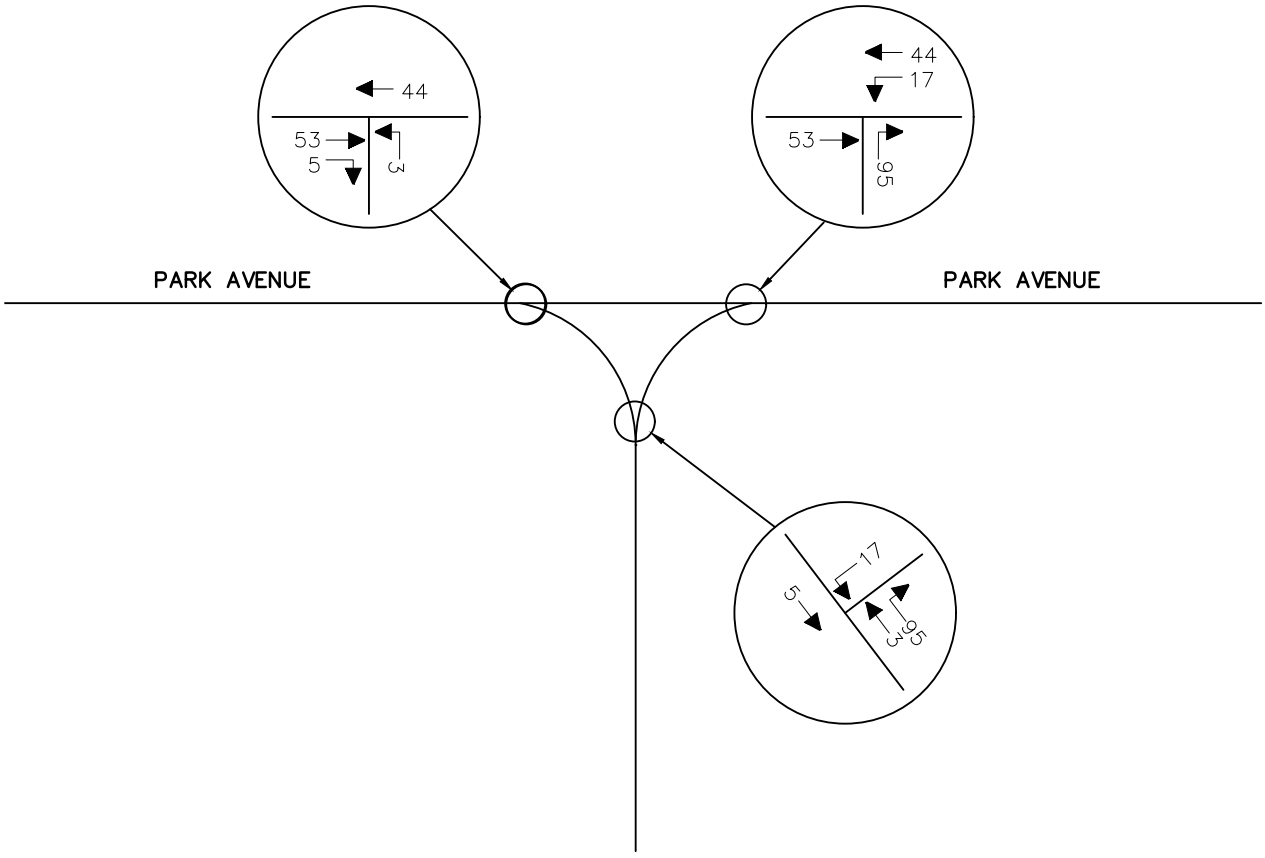

NOTE: LINE DIAGRAM NOT TO SCALE

SOURCE: Maser Consulting, P.A.

Year 2022 No-Build Traffic Volume - Peak AM Hour

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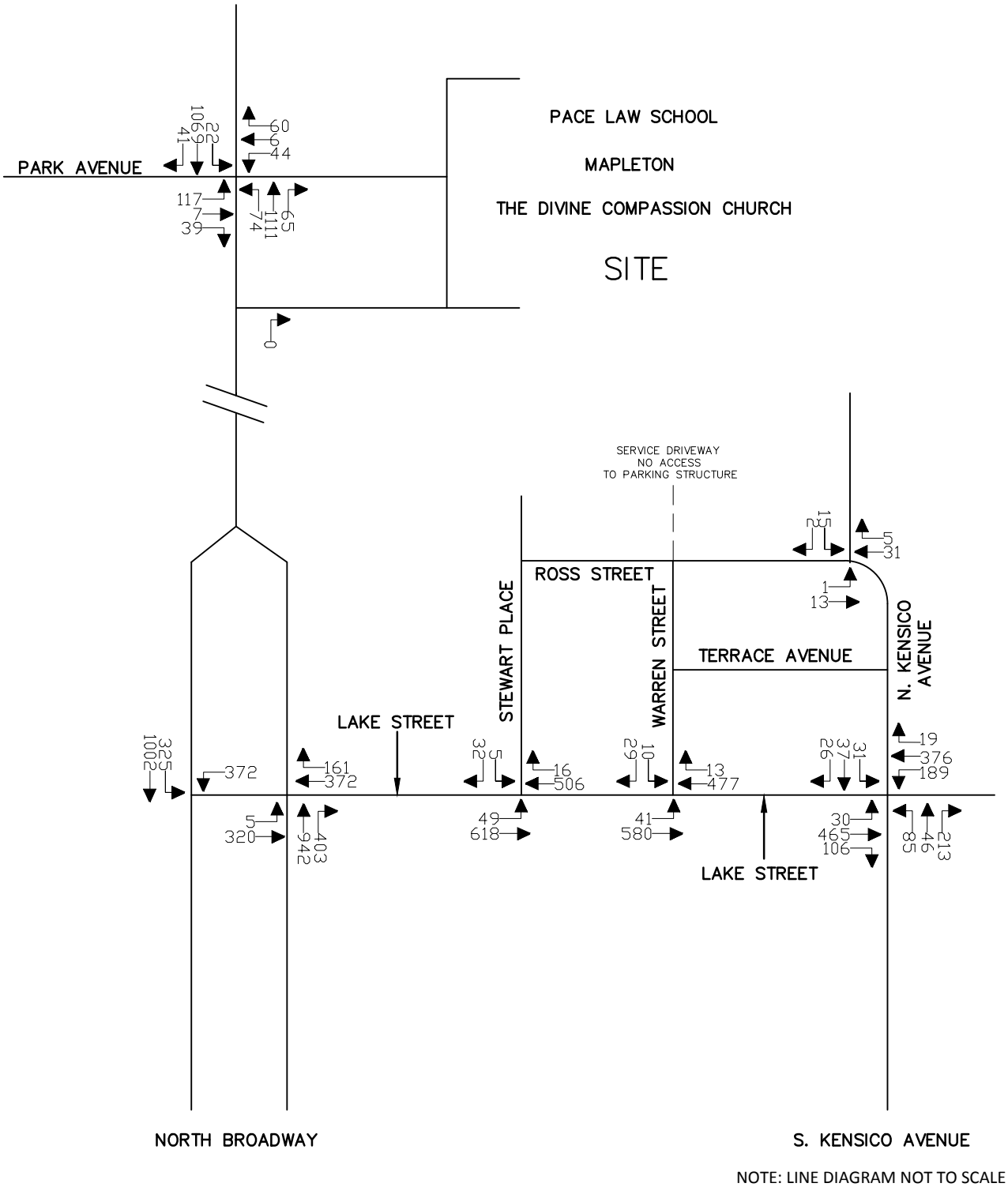

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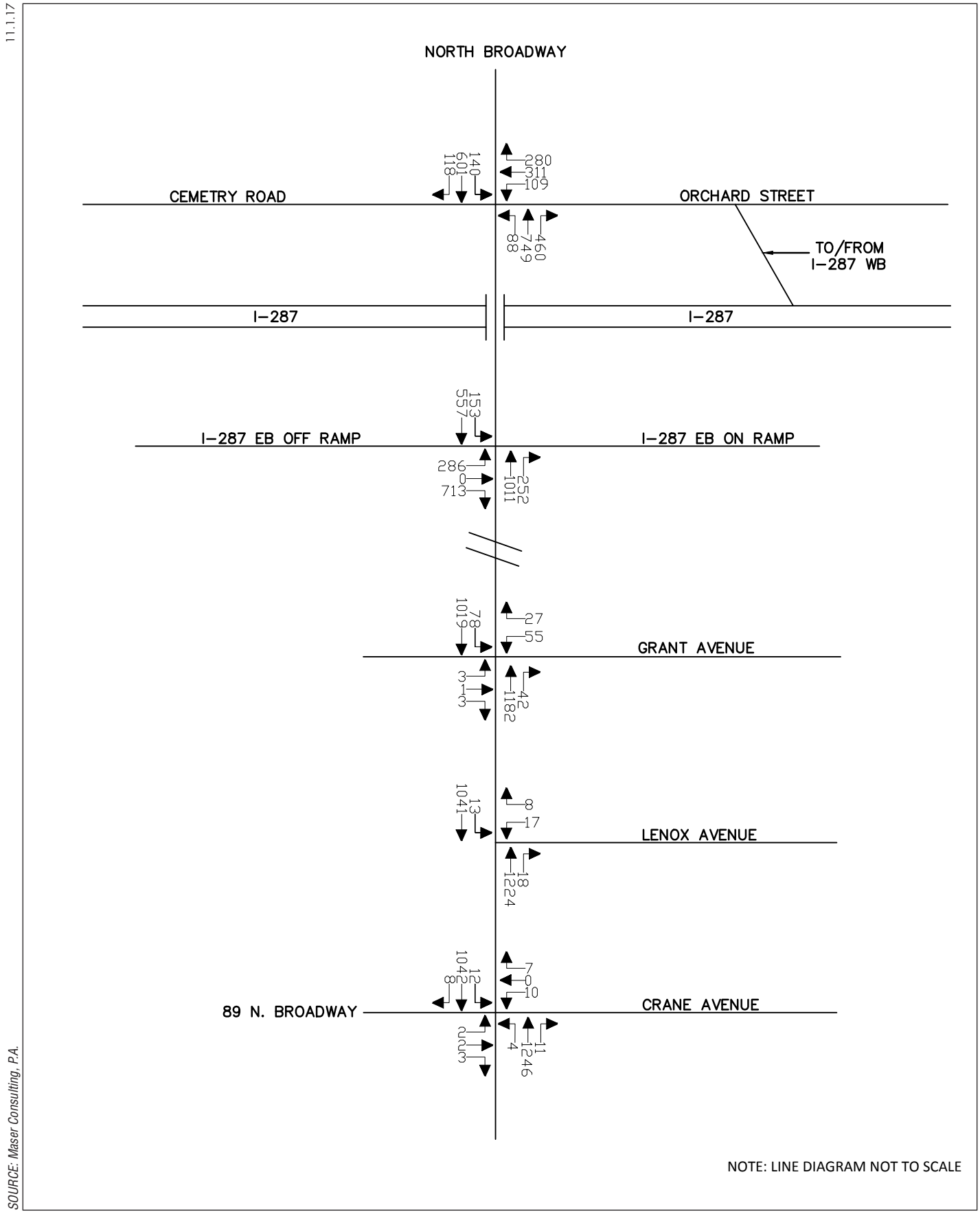
Year 2022 No-Build Traffic Volume - Peak PM Hour



Year 2022 No-Build Traffic Volume - Peak PM Hour

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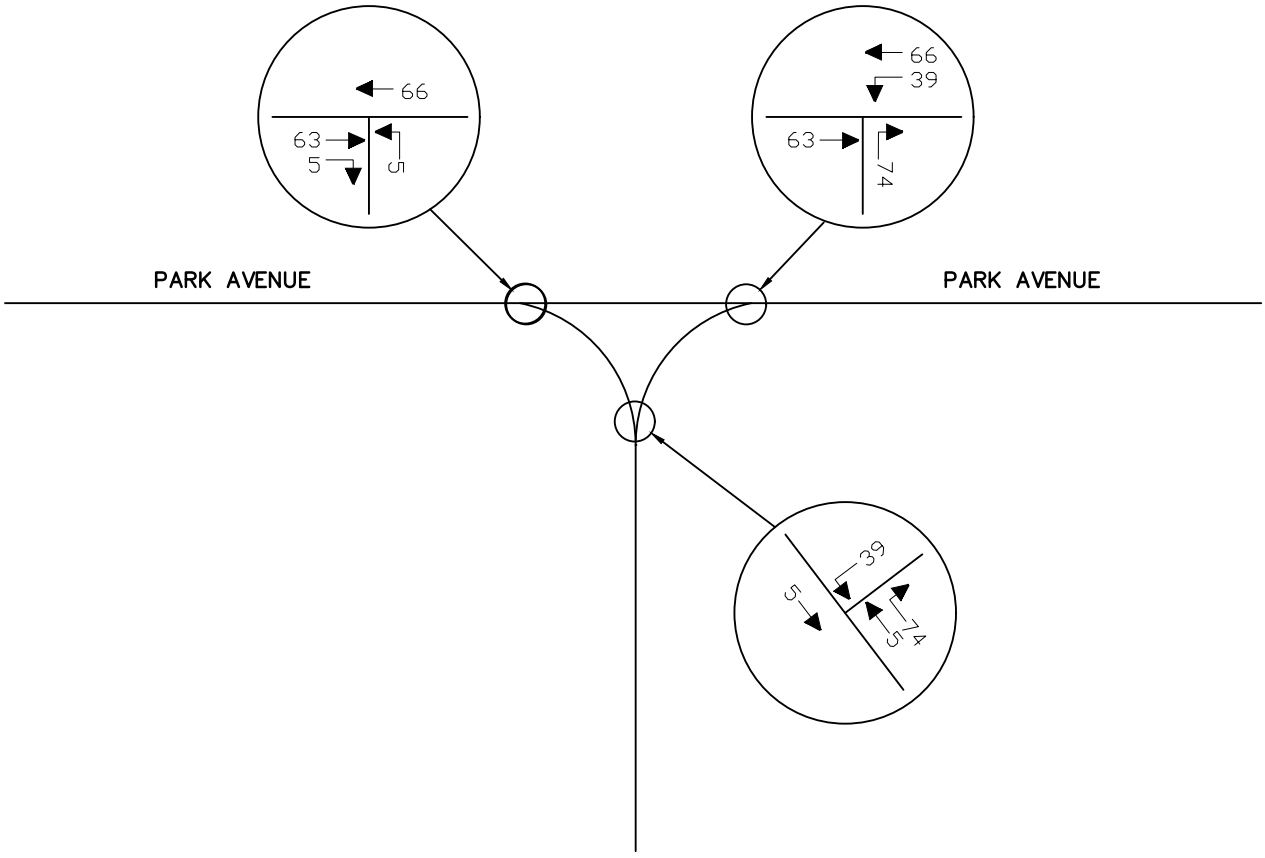

NOTE: LINE DIAGRAM NOT TO SCALE

SOURCE: Maser Consulting, P.A.

Year 2022 No-Build Traffic Volume - Peak PM Hour

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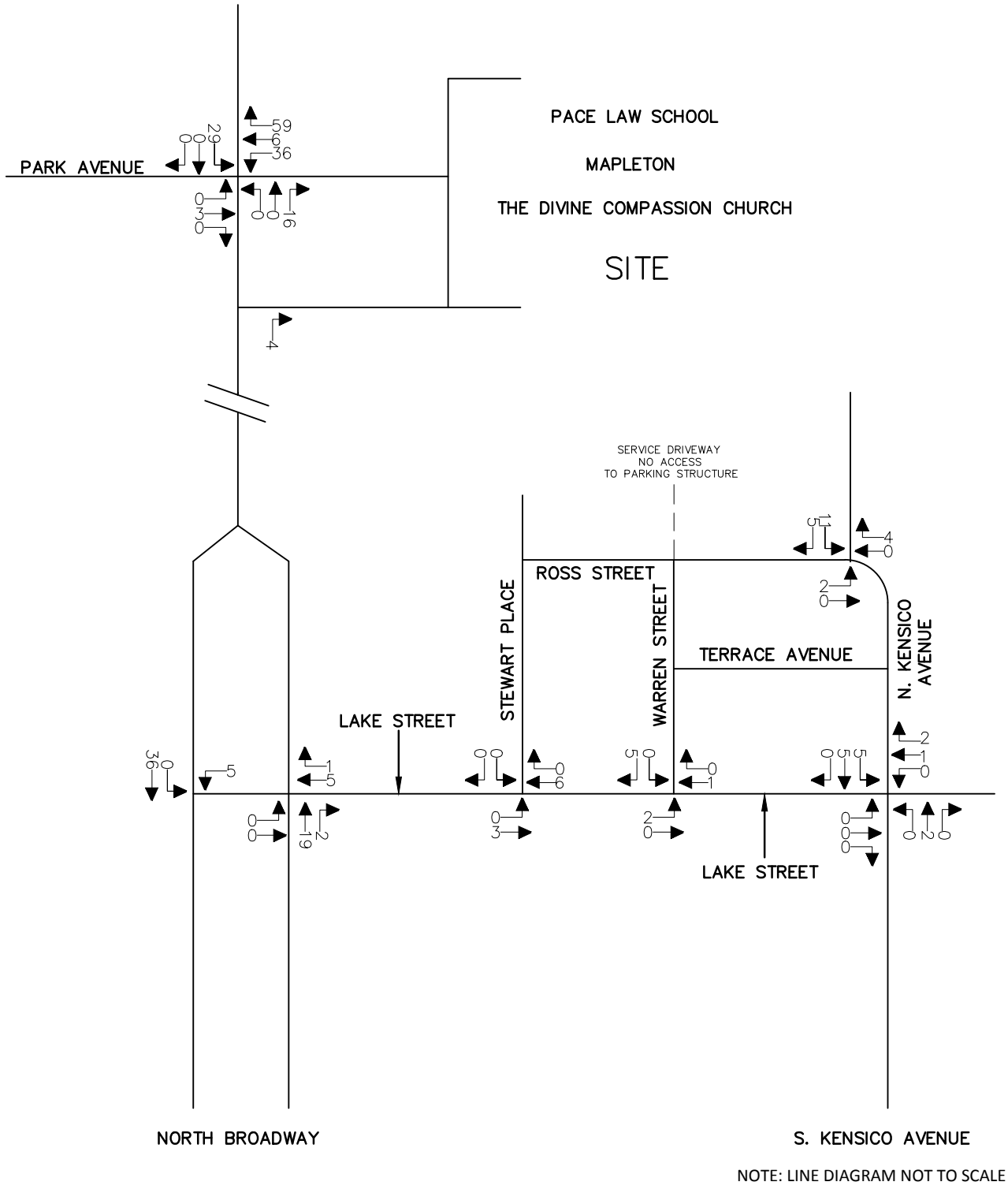
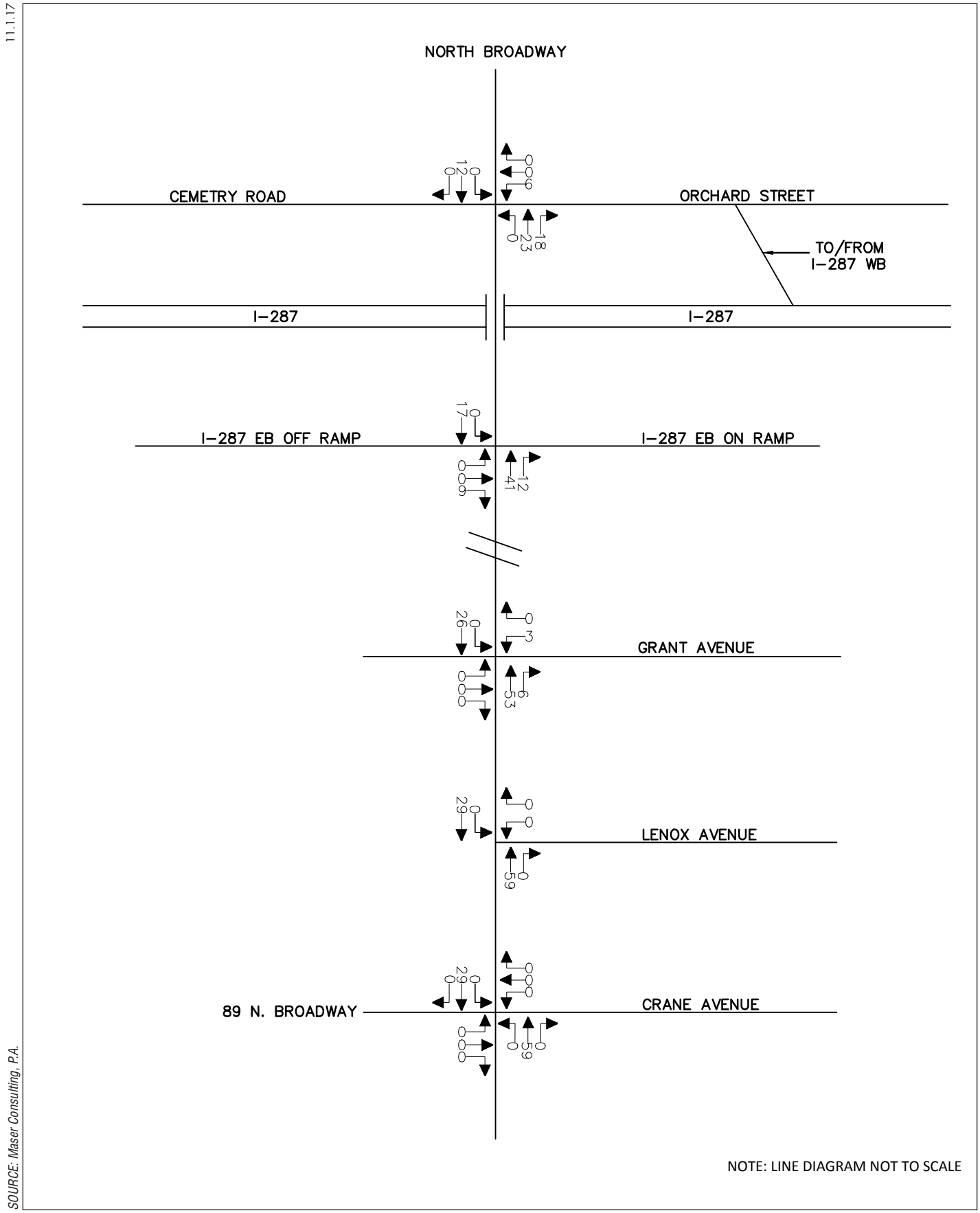


SOURCE: Maser Consulting, P.A.

Project-Generated Traffic Volume - Peak AM Hour



Project-Generated Traffic Volume - Peak AM Hour

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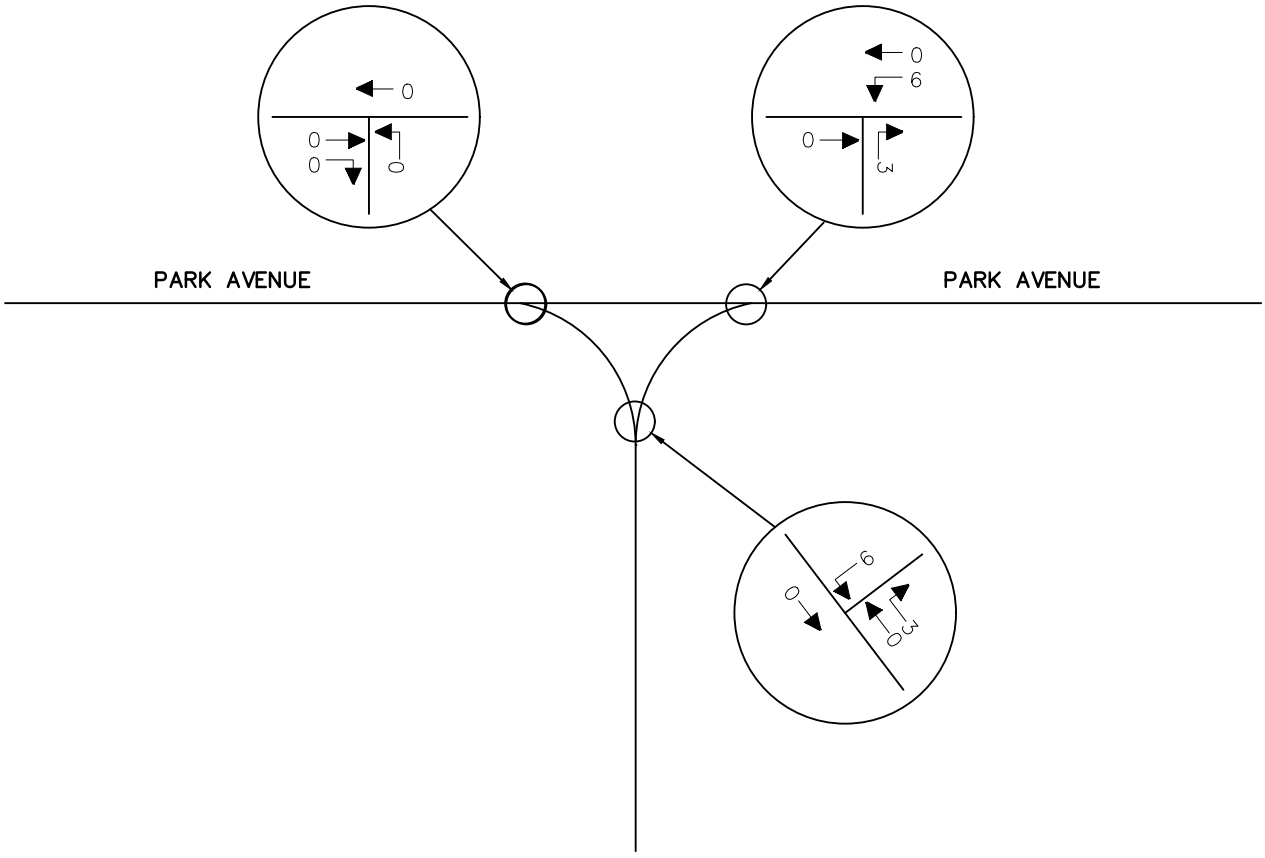

NOTE: LINE DIAGRAM NOT TO SCALE

SOURCE: Maser Consulting, P.A.

Project-Generated Traffic Volume - Peak AM Hour

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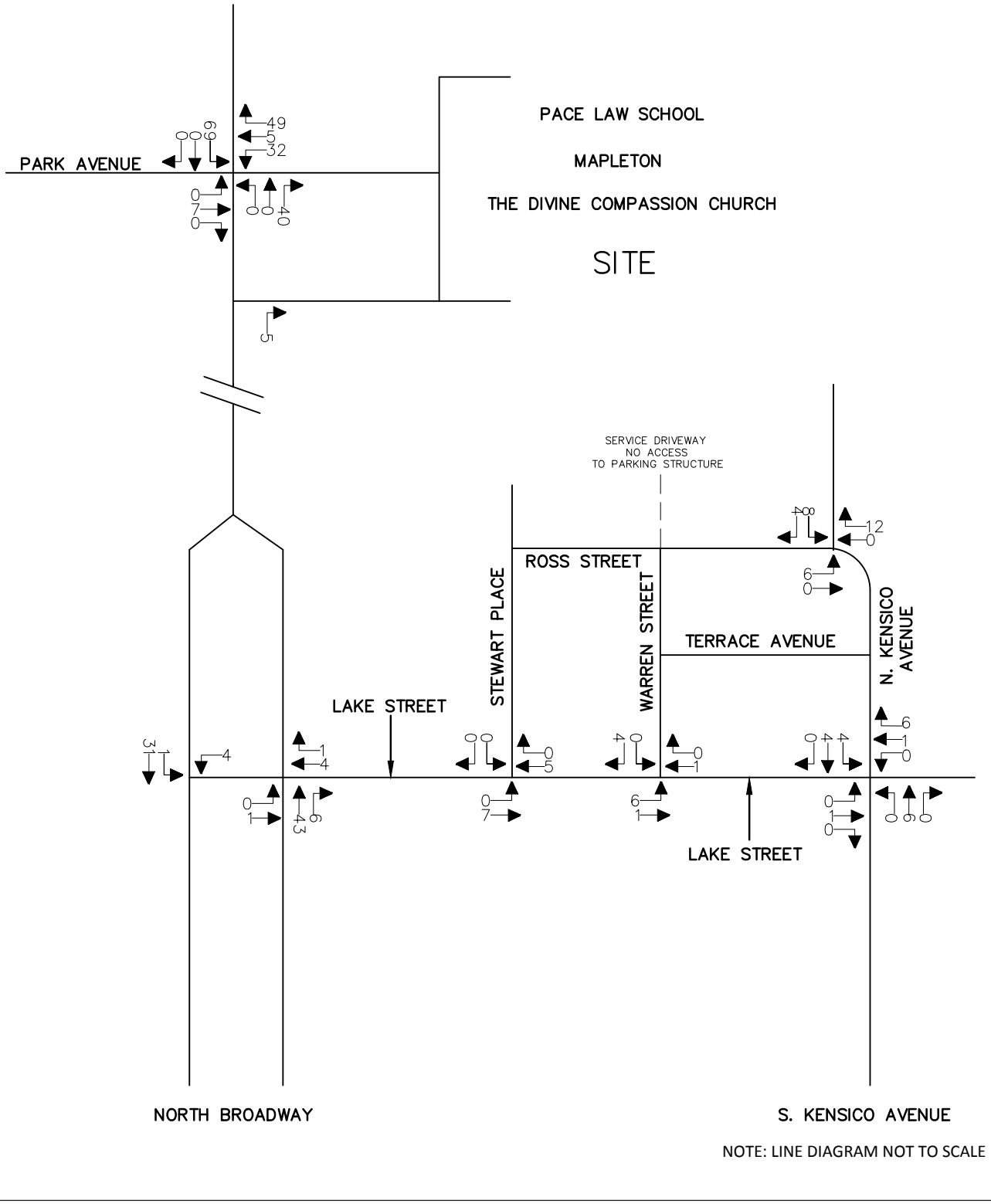
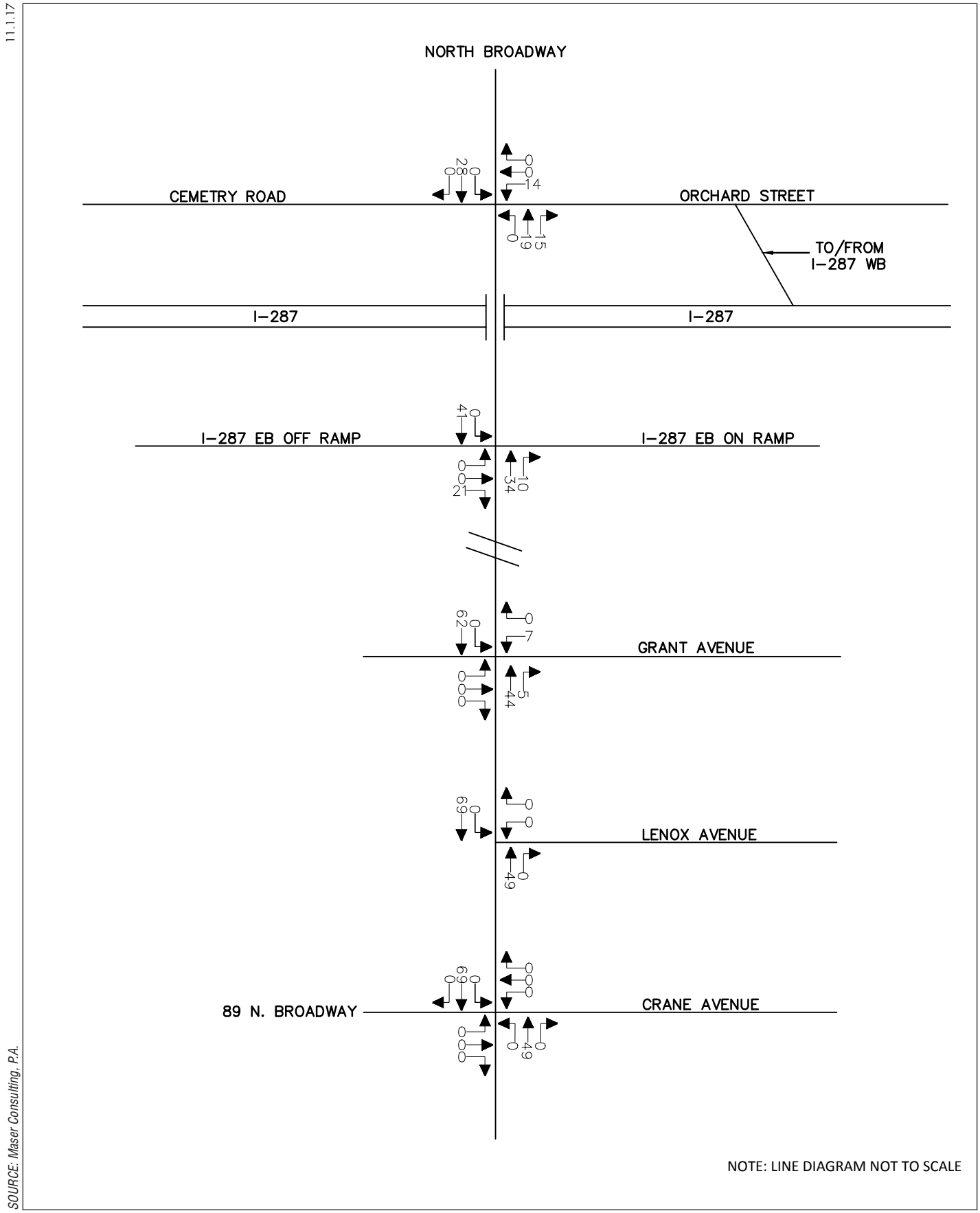


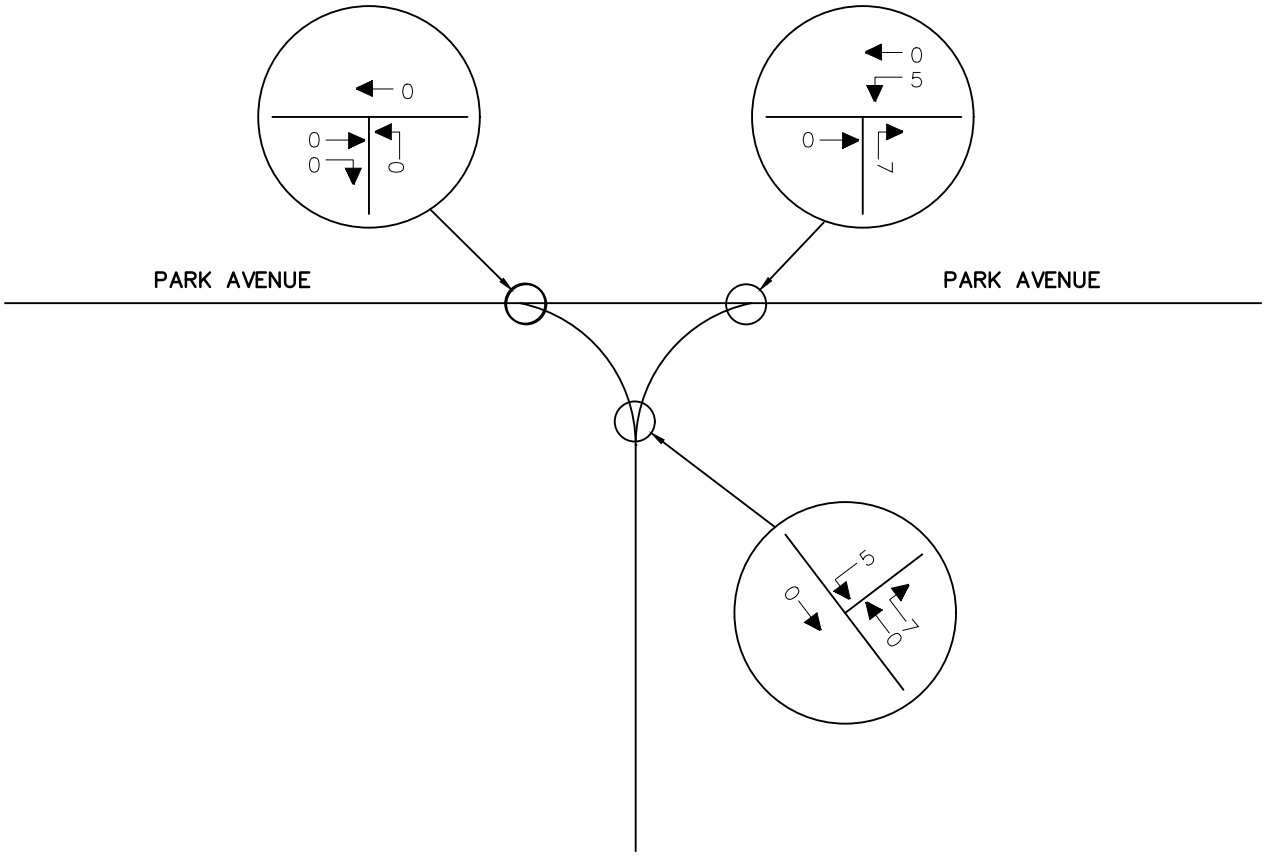
SOURCE: Maser Consulting, P.A.

Project-Generated Traffic Volume - Peak PM Hour



Project-Generated Traffic Volume - Peak PM Hour

11.1.17

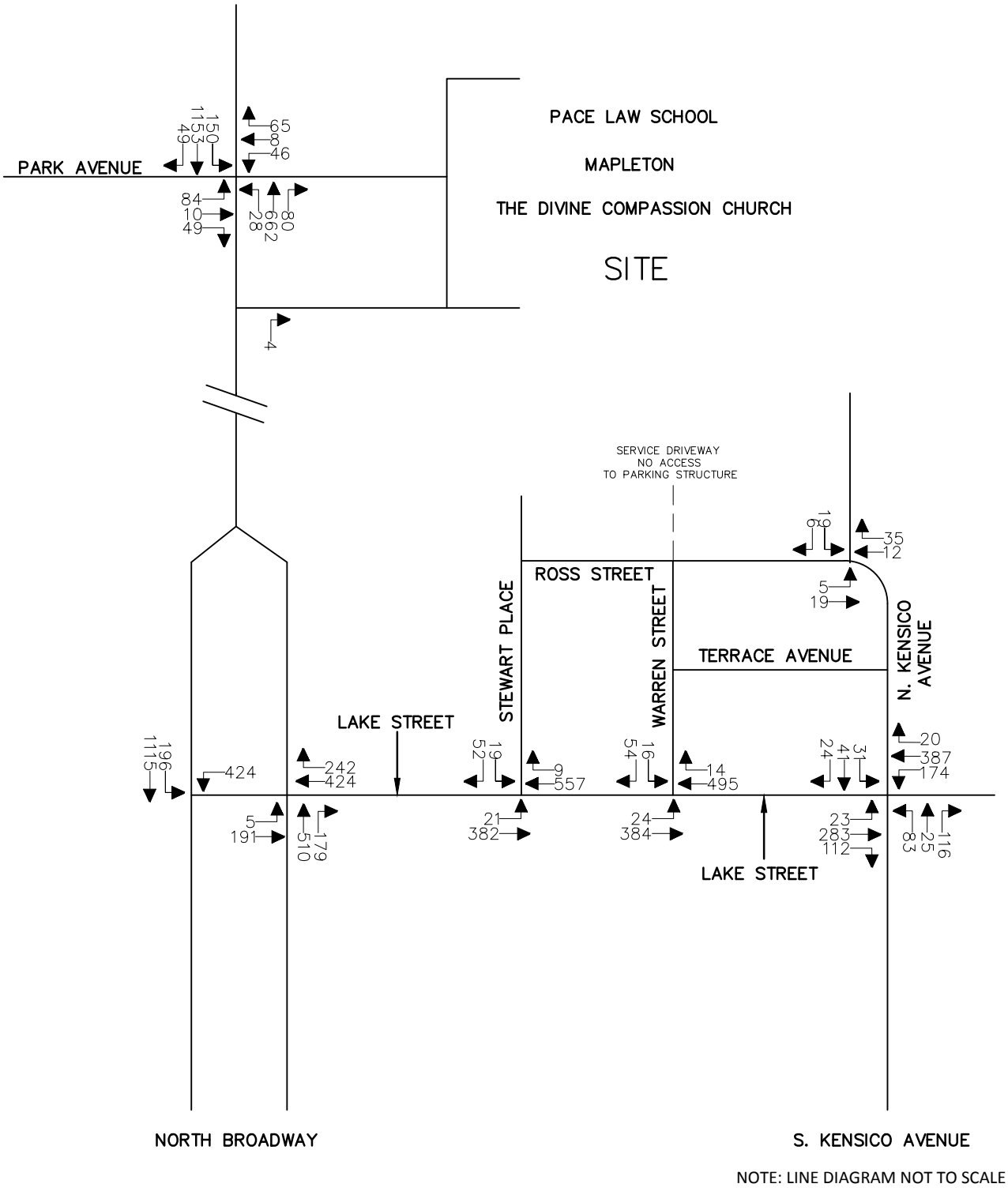


NOTE: LINE DIAGRAM NOT TO SCALE

SOURCE: Maser Consulting, P.A.

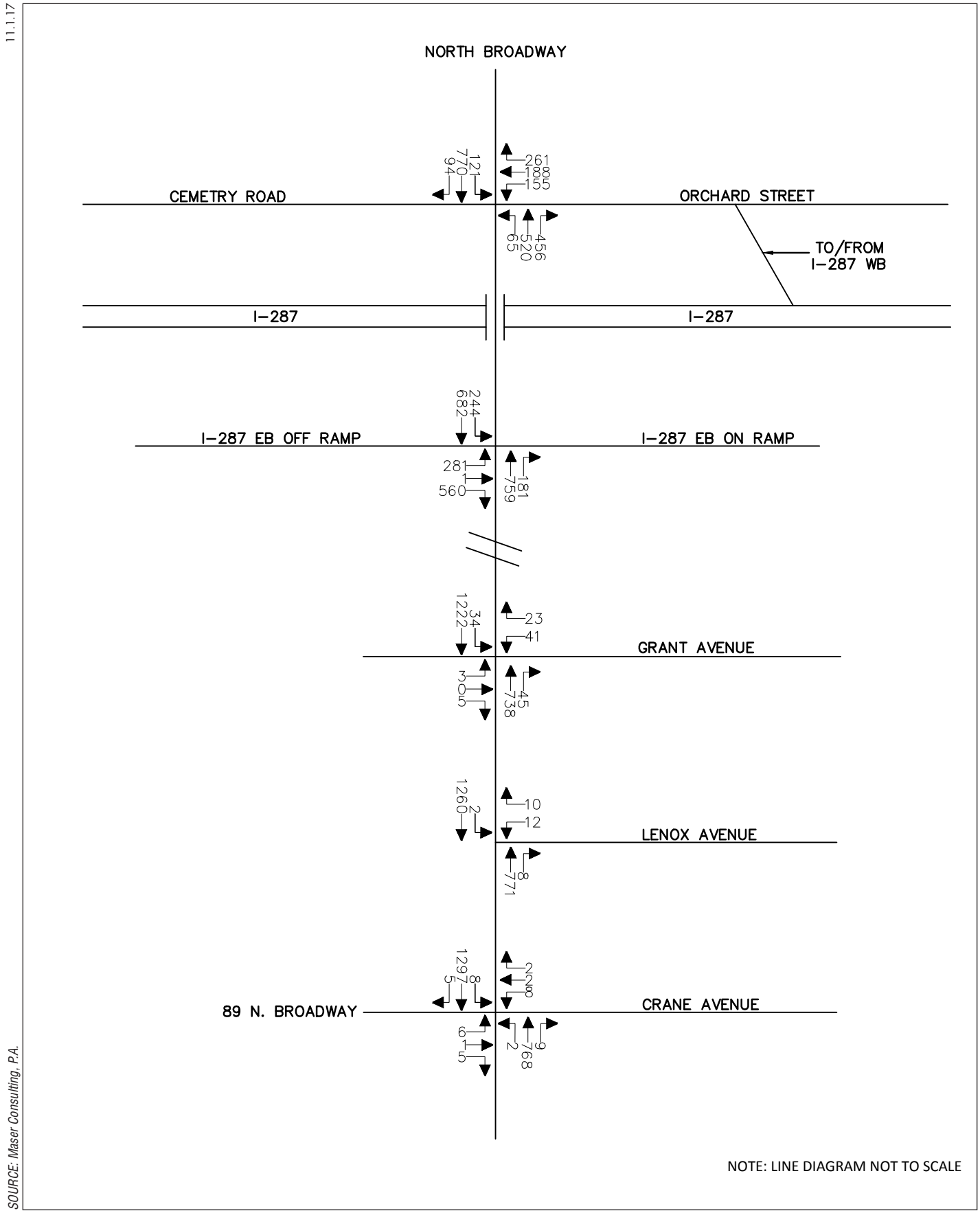
Project-Generated Traffic Volume - Peak PM Hour

11.1.17



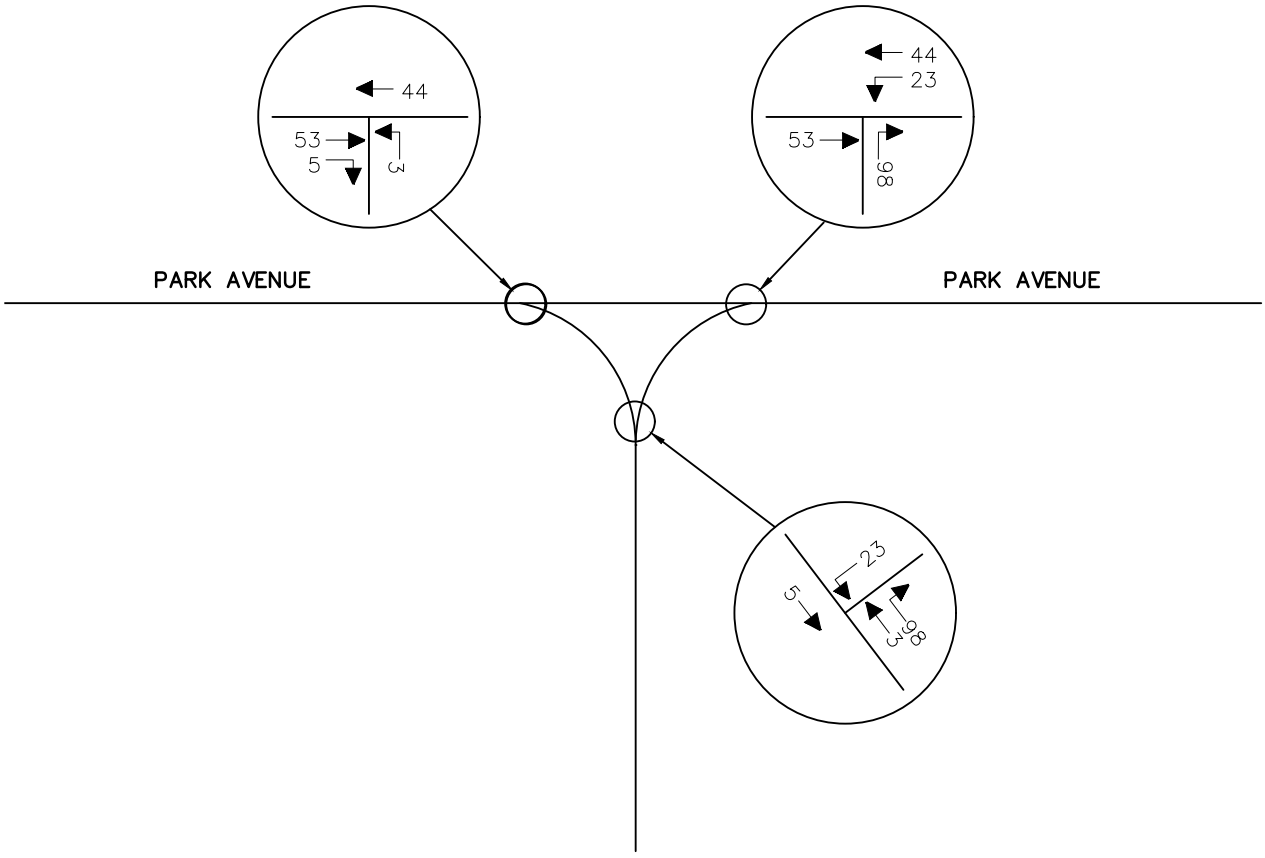
SOURCE: Maser Consulting, P.A.

Year 2022 Build with
Proposed Project Traffic Volume - Peak AM Hour



Year 2022 Build with
Proposed Project Traffic Volume - Peak AM Hour

11.1.17

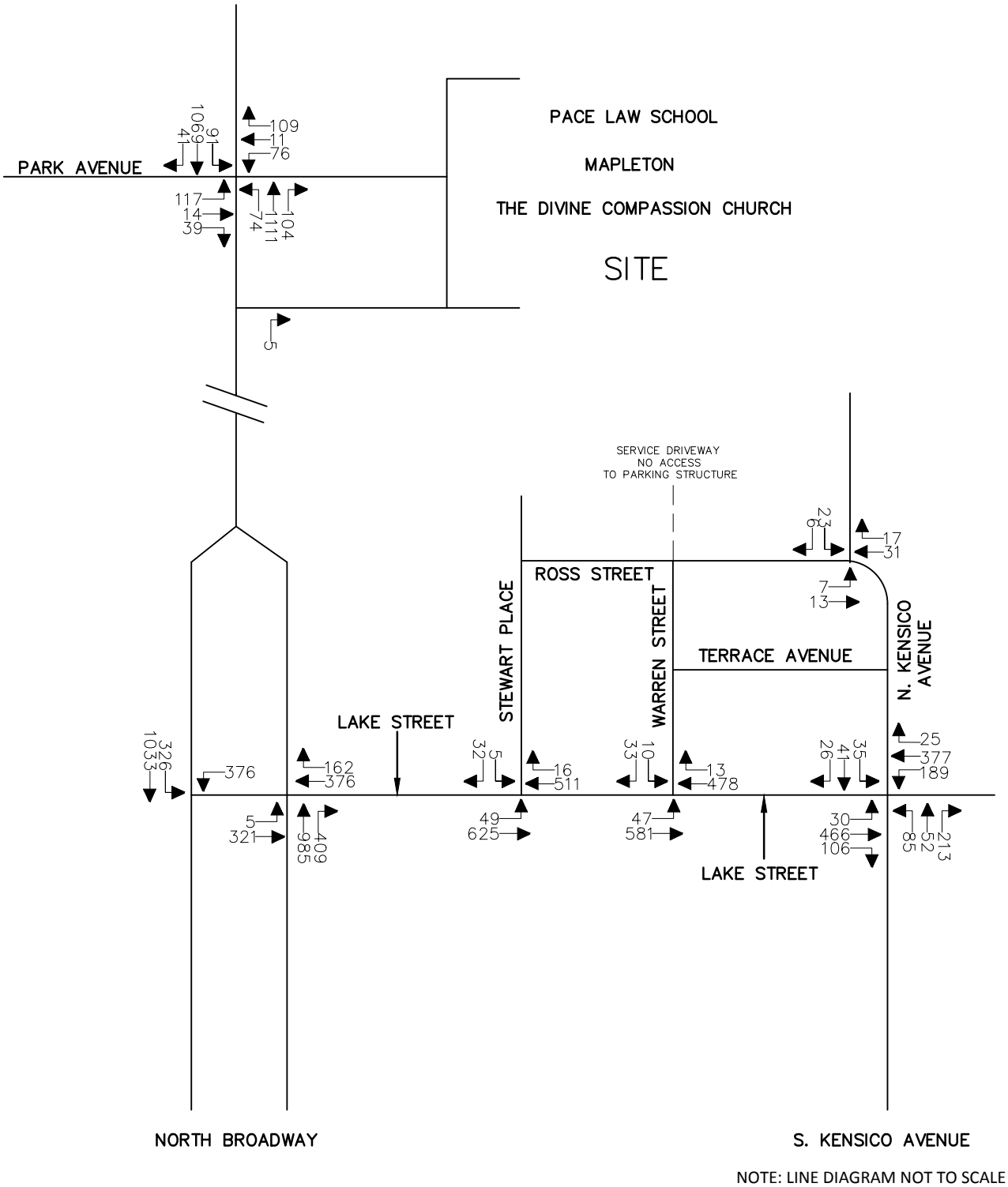


NOTE: LINE DIAGRAM NOT TO SCALE

SOURCE: Maser Consulting, P.A.

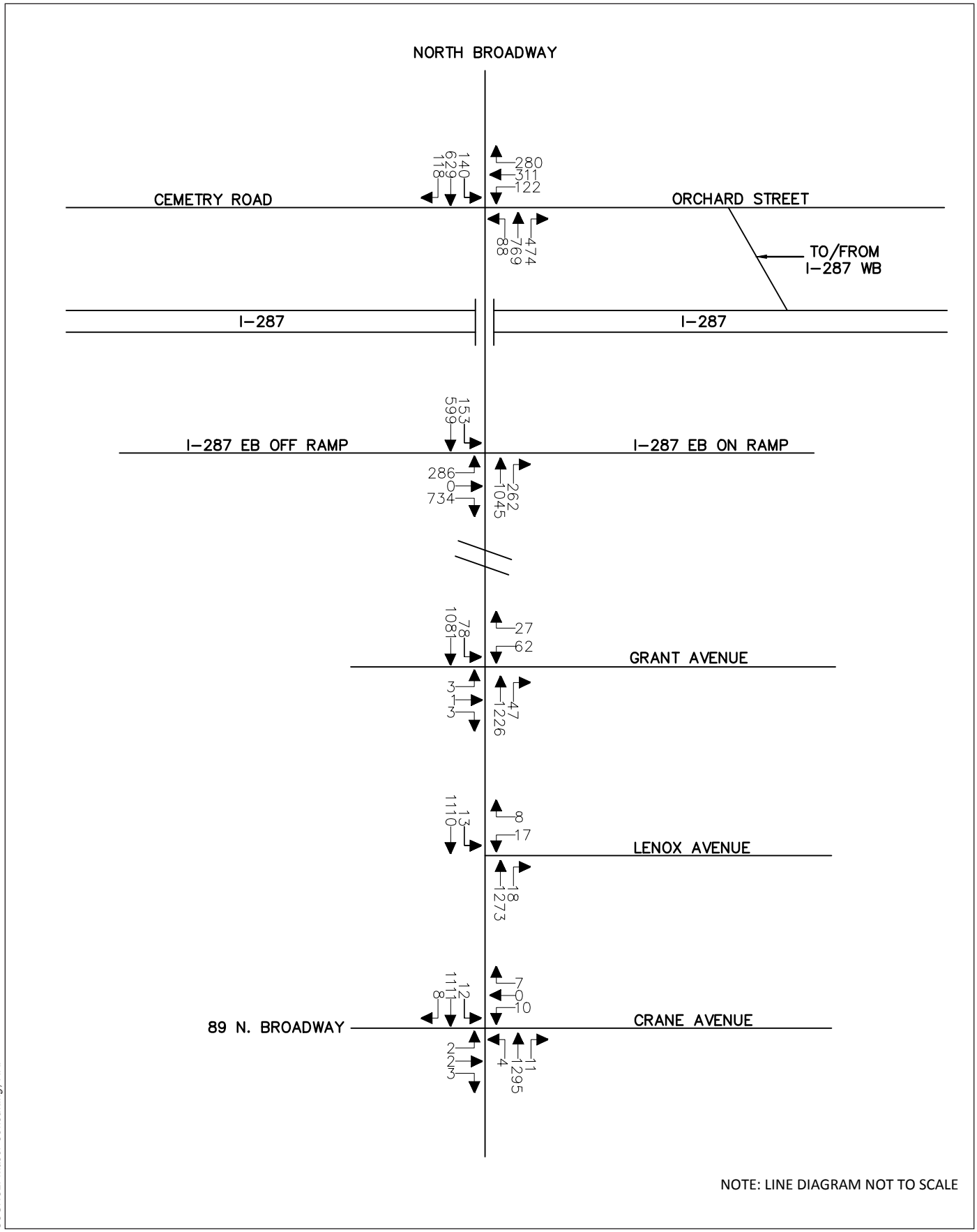
Year 2022 Build with
Proposed Project Traffic Volume - Peak AM Hour

11.1.17



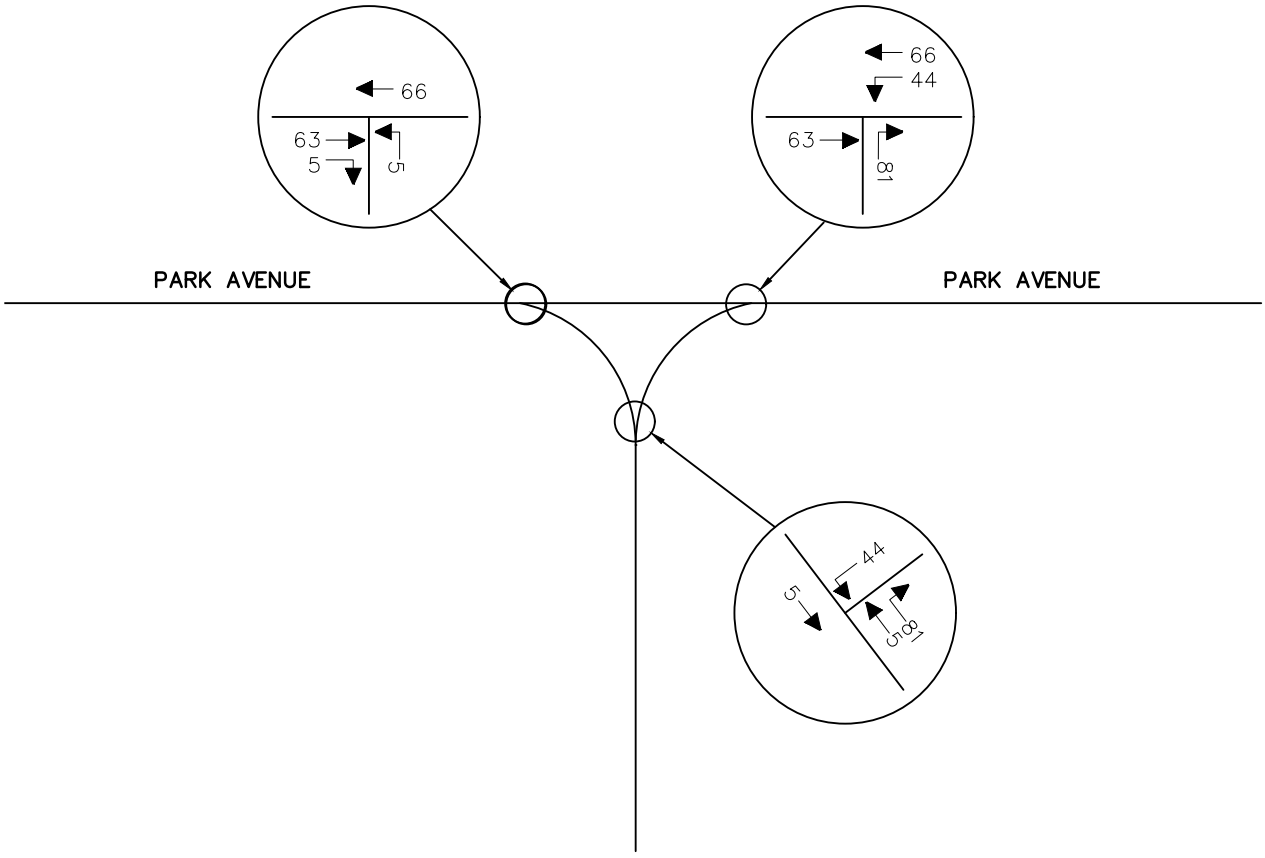
SOURCE: Maser Consulting, P.A.

Year 2022 Build with
Proposed Project Traffic Volume - Peak PM Hour



Year 2022 Build with
Proposed Project Traffic Volume - Peak PM Hour

11.1.17



NOTE: LINE DIAGRAM NOT TO SCALE

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Year 2022 Build with
Proposed Project Traffic Volume - Peak PM Hour