



August 12, 2025

Township of Raritan Planning Board
16 Anderson Street
Raritan, New Jersey 08869

**Re: Traffic Assessment
Resolution No. 2025-11
Joseph Naser
Block 93, Lots 1 & 2
57-59 LaGrange Street
Township of Raritan, Somerset County, New Jersey**

Dear Board Members:

The Planning Board granted the applicant preliminary major site plan approval to construct a sixteen (16) unit townhouse complex on the above referenced lots by Resolution No. 2025-11 adopted on May 28, 2025. The approval was granted subject to conditions, two of which relate to traffic. These two conditions are:

14. *The applicant shall, after making the required plan revisions, submit same to the police department for review from a safety perspective, wherein, if the police department recommends safety changes, said changes will be vetted by the Board at the time of final site plan;*
18. *When returning for final site plan, the applicant shall submit a traffic impact statement and provide testimony about the proposed traffic impact to the surrounding roadway network;*

I have been requested to address these two conditions. In preparing this report I have;

- Reviewed the LaGrange Street Rehabilitation Plan and Ordinance No. 2023-03 adopting the development plan for the subject properties.
- Reviewed the Preliminary and Final Major Site Plan prepared by Amertech Engineering, Inc. dated August 20, 2024 last revised April 22, 2025.
- Reviewed Car Turning Exhibit Plan the Preliminary and Final Major Site Plan prepared by Amertech Engineering, Inc. dated April 21, 2025 last revised August 11, 2025.
- Estimated the volume of traffic to be generated by the proposed townhouse complex and compared this to that of the prior land uses on the subject properties.
- Conducted a field visit on Saturday May 3, 2025 to observe traffic conditions along LaGrange Street and to review the location and type of traffic control measures and existing driveways in the vicinity of the property.
- Sight distances were measured along the existing streets to/ from the proposed site driveways. The available sight distances were compared to the appropriate design criteria.

Existing Site Conditions

The subject property is located on the northerly side of LaGrange Street between Elmer Street and Reimer Street. The property is developed with a 12,600 square foot building formerly occupied by two light industrial entities, and a single building formerly occupied by the Somerville First Aid & Rescue Squad. The industrial building has three curb cuts on LaGrange Street with one driveway located opposite Elmer Street. The First Aid & Rescue Squad is accessed via a continuous curb cut on LaGrange Street located opposite Reimer Street which is on an S-curve in La Grange Street, and a single driveway located just east of Reimer Street.

Eastbound LaGrange Street is *Stop* controlled at Elmer Street, and Reimer Street is *Stop* controlled at LaGrange Street. The properties in the vicinity of the subject property are residential. There are no speed limit signs posted on the adjacent streets, but the speed limit would fall under the statutory 25 mph residential zone speed limit. Parking along LaGrange Street is permitted.



Proposed Site Conditions

It is proposed to demolish the existing structures and construct three townhome buildings. Two of the buildings will contain five townhome units and one building will contain four townhome units and two affordable units. Each unit will have a garage and driveway for off street parking with the driveways accessing La Grange Street.

The *LaGrange Street Rehabilitation Plan* states that, “any plan approved by the Planning Board depicting said redevelopment, shall be substantially consistent with the exhibits entitled “*Illustrative Plan: Multi-family Dwellings*” and “*Architectural Concept: Multi-Family Dwellings*” included as part of this *Redevelopment Plan*.” I have reviewed the Preliminary and Final Major Site Plan prepared by Amertech Engineering, Inc and find that it is consistent with the exhibit contained in the Rehabilitation Plan. The only change, from a traffic engineering perspective, is that the garage/driveway combination for the two end units has been “flipped” as a condition of the preliminary approval.

Trip Generation

Trip generation estimates for the proposed townhomes were made utilizing data as published under Land Use Code 220- *Multifamily housing (low rise) not close to rail transit*. For the former commercial buildings Land Use Code 110 -*General Light Industrial* was used. There is no data available for the *First Aid & Rescue Squad* land use. Table 1 details the comparison of the estimated trip generation.

**Table 1
Trip Generation**

	AM PEAK HOUR		PM PEAK HOUR			SAT PEAK HOUR			
	In	Out	In	In	Out	Total	In	Out	Total
Proposed Townhomes	1	5	6	5	3	8	4	3	7
Former Commercial Building	8	1	9	1	7	8	2	3	5

As noted in Table 1, the total estimated trips for the proposed townhomes are comparable to that of the former commercial use. These volumes average about one vehicle movement every 7 minutes. This is not significant from a traffic engineering perspective.

Driveway Location

The field visit noted that the other residential properties in the neighborhood have driveways on LaGrange Street. With the proposed redevelopment, driveways are also proposed along LaGrange Street. Thus driveway access on LaGrange Street is reasonable. However, to evaluate the safety aspects of the driveway locations, the available sight distances for motorists traveling on the existing streets towards proposed site driveways were measured. These distances were compared to the appropriate design criteria.

Stopping Sight Distance (SSD) is the distance required for a motorist to perceive a conflict, react, and come to a stop, and is based on speed. Since no posted speed was observed, the speed limit would fall under the statutory 25 mph for a residential zone speed limit. Based on industry standards, a design speed of 30 mph was selected.

**Table 2
Stopping Sight Distance**

West Unit Driveway	Speed Limit	AASHTO Stopping Sight Distance	Design Speed	AASHTO Stopping Sight Distance	Available Sight Distance
Eastbound on LaGrange Street	25 mph	165 feet	30 mph	200 feet	400 feet plus
Westbound on LaGrange Street	25 mph	165 feet	30 mph	200 feet	300 feet
Northbound on Reimer Street	25 mph	165 feet	30 mph	200 feet	Not applicable. Reimer Street Under Stop control
East Unit Driveway	Speed Limit	AASHTO Stopping Sight Distance	Design Speed	AASHTO Stopping Sight Distance	Available Sight Distance
Eastbound on LaGrange Street	25 mph	165 feet	30 mph	200 feet	370 feet
Westbound on LaGrange Street	25 mph	165 feet	30 mph	200 feet	Not applicable Under Stop control
Northbound on Elmer Street	25 mph	165 feet	30 mph	200 feet	400 feet + to E. Somerset Street

Traffic westbound on LaGrange Street is under *Stop* control at Elmer Street. A stopped motorist can see a vehicle on the east unit driveway which has a sight distance of about 90 feet and thus can readily see if a vehicle is backing out of the easterly driveway. This is about the same distance for a vehicle on the driveway next to the east unit (Lot 3).

Reimer Street is also under *Stop* control at LaGrange Street. A stopped motorist can readily see if a vehicle is backing out of the east unit driveway which has a sight distance of about 65 feet from the stop line. However, a motorist can see a vehicle at the east unit driveway before reaching the stop line (about 100 feet).

Thus, from a safety perspective, the available stopping sight distances exceed both the minimum distance required for the statutory 25 mph speed limit and for a 30 mph design speed.

Findings and Conclusion

Findings

1. The Preliminary and Final Major Site Plan prepared by Amertech Engineering, Inc is consistent with the exhibit contained in the *LaGrange Street Rehabilitation Plan*. The only difference, from a traffic engineering perspective, is that the garage/driveway for the two end units has been “flipped” as a condition of the preliminary approval.
2. The estimated traffic generated by the proposed townhomes is comparable to that of the former commercial use. The estimated volumes average about one vehicle movement every seven minutes. This is not significant from a traffic engineering perspective.
3. The available *Stopping Sight Distance* to the either of the end units exceeds both the minimum distance required for the statutory 25 mph speed limit and for a 30 mph design speed.

Conclusion

Based on our evaluation of traffic as detailed in the body of this report, it is my professional opinion that the adjacent street system can accommodate the estimated site traffic without a major degradation in the overall operating conditions and that adequate sight distances are available.

Respectfully Submitted,

MISKOVICH CONSULTING ENGINEERS, LLC.



Frank A. Miskovich, P.E., C.M.E.
New Jersey Professional Engineers License No. 23731

JOSEPH NASSER

*Block 93, LOTS 1 & 2
57-59 LaGrange Street
TOWNSHIP OF RARITAN
SOMERSET COUNTY, NJ*

APPENDIX

INSTITUTE OF TRANSPORTATION ENGINEER'S : TRIP GENERATION MANUAL, 11TH EDITION

ITE LAND USE: CODE 220- Multifamily Housing (Low Rise) Not close to Rail Transit

Time Period	PROPOSED SIZE:	Dwelling		R ²	Split		Calculated Trips Using Average		
	16	Units	Average		In	Out	Total Trips	In	Out
	Average	Studies	Size						
	Rate								
Weekday Daily	6.74	22	229	0.86	50%	50%	108	54	54
AM Peak Street Hour	0.40	49	249	0.79	24%	76%	6	1	5
PM Peak Street Hour	0.51	59	241	0.84	63%	37%	8	5	3
AM Peak Hour of Generator	0.47	40	234	0.76	24%	76%	8	2	6
PM Peak Hour of Generator	0.57	38	231	0.80	62%	38%	9	6	3
Saturday Daily	4.55	1	282	n.a	50%	50%	73	37	37
Saturday Peak Hour of Generator	0.41	1	282	n.a	n.a.	n.a.	7	not given	not given
Sunday Daily	3.86	1	282	n.a	50%	50%	62	31	31
Sunday Peak Hour of Generator	0.36	1	282	n.a	n.a.	n.a.	6	not given	not given

Low-rise multifamily housing includes apartments, townhouses, and condominiums located within the same building with at least three other dwelling units and that have two or three floors (levels). Various configurations fit this description, including walkup apartment, mansion apartment, and stacked townhouse.

INSTITUTE OF TRANSPORTATION ENGINEER'S : TRIP GENERATION MANUAL, 10TH EDITION

ITE LAND USE: CODE 110- General Light Industrial

Time Period	Size:	1,000 s.f.		R ²	Split		Calculated Trips Using Average		
	12.6	Studies	Average		In	Out	Total Trips	In	Out
	Average		Size						
	Rate								
Weekday Daily	4.96	40	49,000	0.54	50%	50%	62	31	31
AM Peak Street Hour	0.70	45	73,000	0.52	88%	12%	9	8	1
PM Peak Street Hour	0.63	44	67,000	0.52	13%	87%	8	1	7
AM Peak Hour of Generator	0.92	43	59,000	0.57	87%	13%	12	10	2
PM Peak Hour of Generator	0.83	44	64,000	0.61	18%	82%	10	2	8
Saturday Daily	1.99	2	78,000	n.a.	50%	50%	25	13	13
Saturday Peak Hour of Generator	0.41	1	98,000	n.a.	47%	53%	5	2	3
Sunday Daily	5.00	1	58,000	n.a.	50%	50%	63	32	32
Sunday Peak Hour of Generator	0.69	1	58,000	n.a.	53%	47%	9	5	4

Metric					US Customary				
Design speed (km/h)	Brake reaction distance (m)	Braking distance on level (m)	Stopping sight distance		Design speed (mph)	Brake reaction distance (ft)	Braking distance on level (ft)	Stopping sight distance	
			Calculated (m)	Design (m)				Calculated (ft)	Design (ft)
20	13.9	4.6	18.5	20	15	55.1	21.6	76.7	80
30	20.9	10.3	31.2	35	20	73.5	38.4	111.9	115
40	27.8	18.4	46.2	50	25	91.9	60.0	151.9	155
50	34.8	28.7	63.5	65	30	110.3	86.4	196.7	200
60	41.7	41.3	83.0	85	35	128.6	117.6	246.2	250
70	48.7	56.2	104.9	105	40	147.0	153.6	300.6	305
80	55.6	73.4	129.0	130	45	165.4	194.4	359.8	360
90	62.6	92.9	155.5	160	50	183.8	240.0	423.8	425
100	69.5	114.7	184.2	185	55	202.1	290.3	492.4	495
110	76.5	138.8	215.3	220	60	220.5	345.5	566.0	570
120	83.4	165.2	248.6	250	65	238.9	405.5	644.4	645
130	90.4	193.8	284.2	285	70	257.3	470.3	727.6	730
					75	275.6	539.9	815.5	820
					80	294.0	614.3	908.3	910

Note: Brake reaction distance predicated on a time of 2.5 s; deceleration rate of 3.4 m/s² [11.2 ft/s²] used to determine calculated sight distance.

Exhibit 3-1. Stopping Sight Distance



Miskovich Consulting Engineers, LLC.

16 Carson Avenue, Metuchen, N. J. 08840 908-616-1031

Francis A. Miskovich, P.E., C.M.E.

President

PROFESSIONAL SUMMARY

Mr. Miskovich has approximately 55 years of progressive engineering experience in the planning and design of various traffic, transportation, and highway engineering projects. These include preparation of traffic impact assessments; parking surveys and studies; transportation master plans; vehicular and pedestrian circulation studies; traffic calming evaluations and plan preparation; traffic signal design; highway design; and preparation of private development site plans.

ENGINEERING EXPERIENCE

Prior to starting Miskovich Consulting Engineers, LLC, Mr. Miskovich was with the multi-disciplined engineering firm of Birdsall Engineering/Birdsall Services Group where he served as Vice President directly responsible for the management and supervision of the Transportation Services Group. Primary services included all aspects of traffic and highway engineering. In this capacity, he has primary responsibility for traffic impact assessments, parking surveys and studies, traffic and transportation master plans, traffic circulation studies; highway alignment studies; traffic signal system designs; transportation feasibility studies and concept plans; develops contract documents for traffic, intersection, and highway improvements; conducts municipal engineering reviews and studies; presentations before local and County planning and zoning boards, and traffic consultant to several municipalities.

Prior to joining Birdsall Engineering Inc. Mr. Miskovich had 20 years of experience with the firm of Abbington Associates, Inc., a multi-disciplined engineering firm with an emphasis in transportation and site civil design. As a Partner, he managed the Traffic and Highway Engineering Department providing these services to a number of municipalities, Counties, and private developers.

He also has a municipal background with 20 years' experience with the Middlesex County, serving approximately 12 years as the Middlesex County Traffic Engineer. In this capacity he was responsible for managing intersection, traffic signal, and roadway design projects, providing traffic review of all subdivisions and site plan applications to the County, and coordinating activities and providing liaison to the various municipalities in the County and the County Transportation Coordinating committee. Mr. Miskovich has also been Traffic Consultant to a number of municipalities, Planning Boards, and Zoning Boards of Adjustment throughout the State of New Jersey.

PROFESSIONAL HISTORY

Miskovich Consulting Engineers, LLC , President	2013 - Present
Birdsall Engineering , Vice President- Transportation Engineering	2008 - 2013
Abbingdon –Ney Associates , Manager-Traffic and Highway Engineering	1988 - 1992
Middlesex County , County Traffic Engineer	1976 - 1988
Middlesex County , Supervising Engineer and County Traffic Engineer	1969 - 1976

PROFESSIONAL EXPERIENCE

- Traffic Calming
- Traffic Signal Design
- Highway Design
- Intersection Design
- Transportation Circulation Plans
- Alternatives Analysis
- Coordinate activities with other disciplines and sub-consultants
- Conduct Traffic and Parking Studies
- Conduct Accident Analyses
- Conduct Municipal Planning Board and Zoning Board of Adjustment Reviews
- Provide Expert Traffic Engineering Testimony
- NJDOT Highway Access Permits, Studies, and Applications

EDUCATION

New Jersey Institute of Technology	Masters of Science in Civil Engineering	1977
Newark College of Engineering	Bachelors of Science in Civil Engineering	1969

PROFESSIONAL REGISTRATIONS

Professional Engineer	New Jersey	Lic. # 24GE02373100
Certified Municipal Engineer	New Jersey	Lic. # 0123

PROFESSIONAL AFFILIATIONS

Institute of Transportation Engineers
Transportation Planners Council
Urban Traffic Engineers
NJ Society of Municipal Engineers

MUNICIPAL APPOINTMENTS (FORMER)

Township of Jackson, Ocean County, NJ -Traffic Consultant: Retained as traffic consultant to the Zoning Board of Adjustment for 2016.

Borough of Fair Lawn, Bergen County, NJ -Traffic Consultant: Retained as traffic consultant to the Zoning Board of Adjustment for 2016.

Township of East Brunswick, Middlesex County, NJ – Traffic Consultant: Retained to provide traffic engineering services for the redevelopment commission.

Borough of North Plainfield, Somerset County, NJ -Traffic Consultant: Provided traffic engineering services to the Planning Board of Adjustment on an on-call service basis.

Township of Marlboro, Monmouth County, NJ -Traffic Consultant: Retained by French & Parrello Associates to complete their 2015 contractual obligation of providing traffic engineering consultant services to the Township on an on-call service basis.

City of Hackensack, Bergen County, NJ -Traffic Consultant: Provided traffic engineering services to the Zoning Board of Adjustment.

Township of Brick, Ocean County, NJ -Traffic Consultant: Traffic engineering consultant services provided to the Township of Brick on an on-call service basis.

Township of Washington, Gloucester County, NJ Traffic Consultant: Former traffic engineering consultant for the Township, Planning Board, and Zoning Board of Adjustment.

Township of Mansfield, Burlington County, NJ -Traffic Consultant: Former traffic engineering consultant for the Township of Planning Board.

Township of Edison, Middlesex County, NJ -Traffic Consultant: Have provided traffic engineering services to the Township Planning Board on an on-call service basis.

Township of Kearny, Hudson County, NJ -Traffic Consultant: Provided traffic engineering services to the Township Zoning Board of Adjustment for review of an application.

Borough of Freehold, Monmouth County, NJ -Traffic Consultant: Traffic engineering consultant services provided to the Borough of Freehold, Planning Board, and Zoning Board of Adjustment.

Various Municipalities throughout New Jersey: Birdsall Services Group is the Engineer of record for a number of municipalities through the State of New Jersey. As part of the engineering services, provide traffic engineering support as needed.

AGENCY APPOINTMENTS (FORMER)

Harrison Redevelopment Agency, Hudson County, NJ –Traffic Consultant: Provided traffic engineering services for the waterfront redevelopment of Harrison which included Red Bulls Stadium.

New Brunswick Development Corporation (DEVCO), Middlesex County, NJ –Traffic Consultant: Provided traffic engineering services for various projects in the City of New Brunswick and Rutgers University for the New Brunswick Redevelopment Authority.