

MEMO

Date: April 28, 2020
Re: Traffic Assessment
Warehouse & Distribution Facility
1800 Lower Road
Linden, New Jersey 07036

This memo conveys the findings of our Preliminary Traffic Review for the proposed warehouse and distribution facility in Linden, New Jersey. The purpose of this review is to evaluate the existing transportation infrastructure and access needs of the facility and make preliminary recommendations to accommodate the site traffic. This traffic review is based on current available information, which may be subject to change.

Site Description

The site is a proposed warehouse and distribution facility located at the corner of Lower Road and Avenue C in Linden, NJ. The facility is planned to occupy an existing 326,269 square foot existing industrial building. Access to the site will be via three driveway entrances (two existing entrances and one proposed entrance on Lower Road). Parking will be available on-site. See Attachment A for the site plan.

The proposed site operations will consist of the following trips:

Autos

- 310 trips per day
- Maximum of 58 arriving in a single hour and 45 departing in a different hour

Trucks

- 14 trips per day
- Arriving/departing regularly throughout the day, maximum of 2 trips per hour

Vans

- 172 trips per day
- Maximum of 60 arriving in a single hour and 86 departing in a different hour

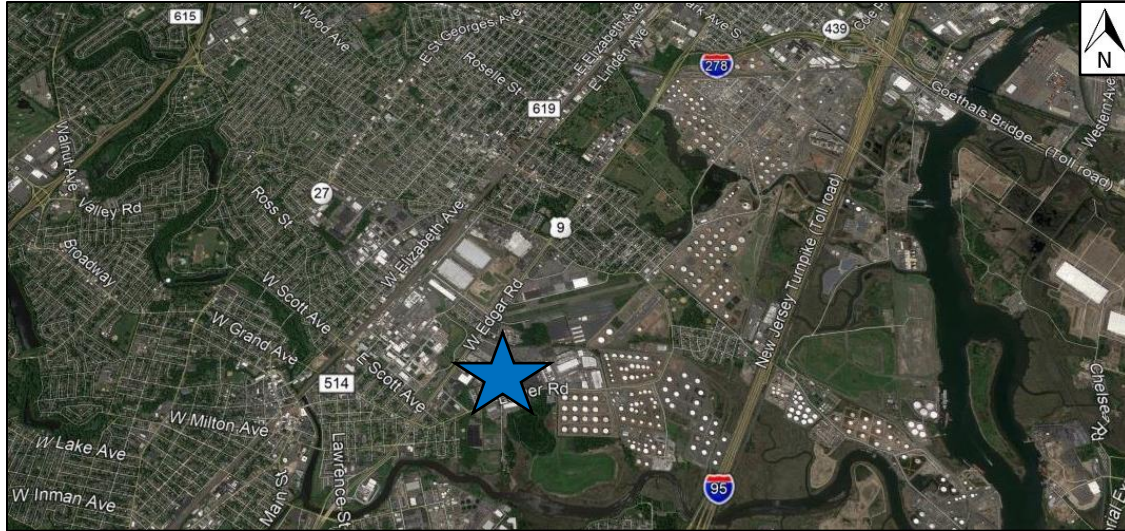
A total of 496 daily trips are expected to be generated by the site. The facility is expected to generate most of its traffic outside of the morning (7 AM – 9 AM) and evening (4 PM – 6 PM) peak periods of the network. The following table displays the peak hour of site traffic during the typical peak commuting periods.

Peak Period	Duration	Proposed Site Trips		
		Enter	Exit	Total
Morning	7:00 AM – 8:00 AM	0	1	1
Evening	4:00 PM – 5:00 PM	23	12	35

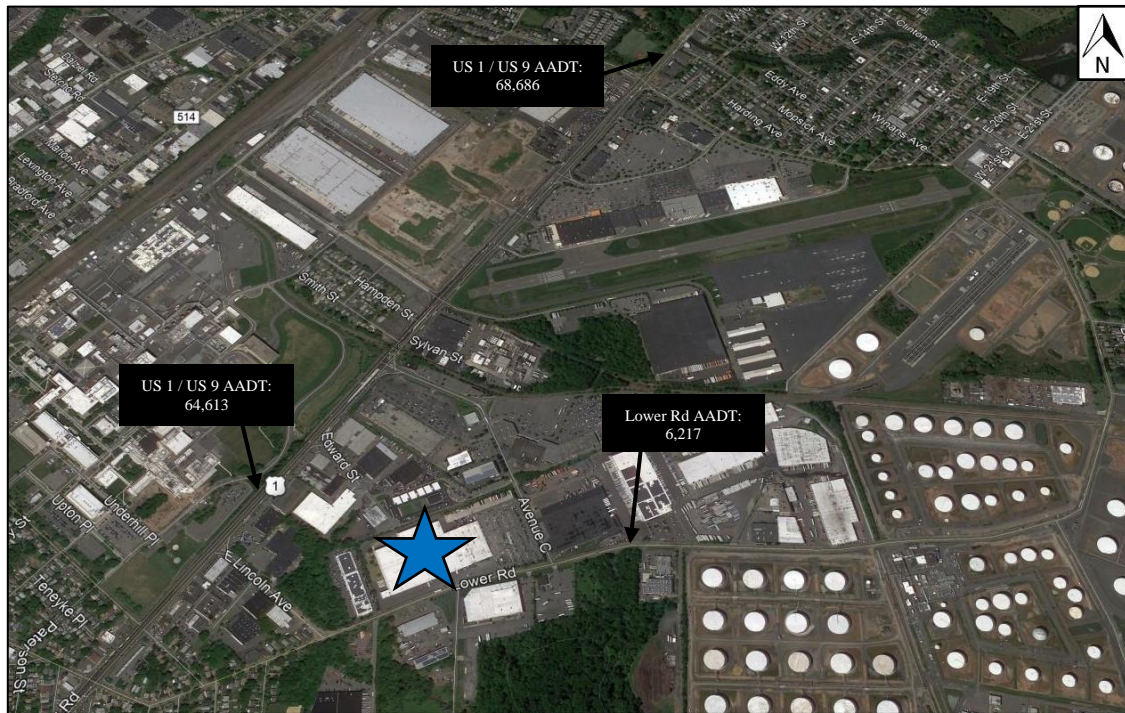
Transportation Network

The transportation network in the vicinity of the site features a combination of collectors, arterials and freeway facilities. Lower Road borders the site to the south, Avenue C borders the site to the east, and East Lincoln Avenue borders the site to the west. Avenue C and East Lincoln Avenue both intersect with Lower Road and provide access to US Route 1/US Route 9 (W Edgar Road). US Route 1/US Route 9 provides additional access to I-95 (New Jersey Turnpike). A project vicinity map and study area map are provided below to further illustrate the transportation network for the subject site.

Project Vicinity Map



Study Area Map



The corresponding Annual Average Daily Traffic (AADT), which is the average number of vehicles two-way passing at a given location, is also included on the study area map. The table below further summarizes the characteristics of the primary roadways that will be used to access the subject site.

Road	Cross Section	Speed Limit	Sidewalk	AADT ¹
Barnett Street*	2 Lane Undivided	25 MPH	Yes	N/A
E Lincoln Avenue	2 Lane Undivided	25 MPH	No	N/A
Lower Road	2 Lane Undivided	40 MPH	No	6,217
Avenue C	2 Lane Undivided	25 MPH	Yes	N/A
US Route 1/9 (W Edgar Rd) N of E Lincoln Ave	6+ Lane Divided	45 MPH	Yes	64,613
US Route 1/9 (W Edgar Rd) N of S Stile St	6+ Lane Divided	45 MPH	Yes	68,686

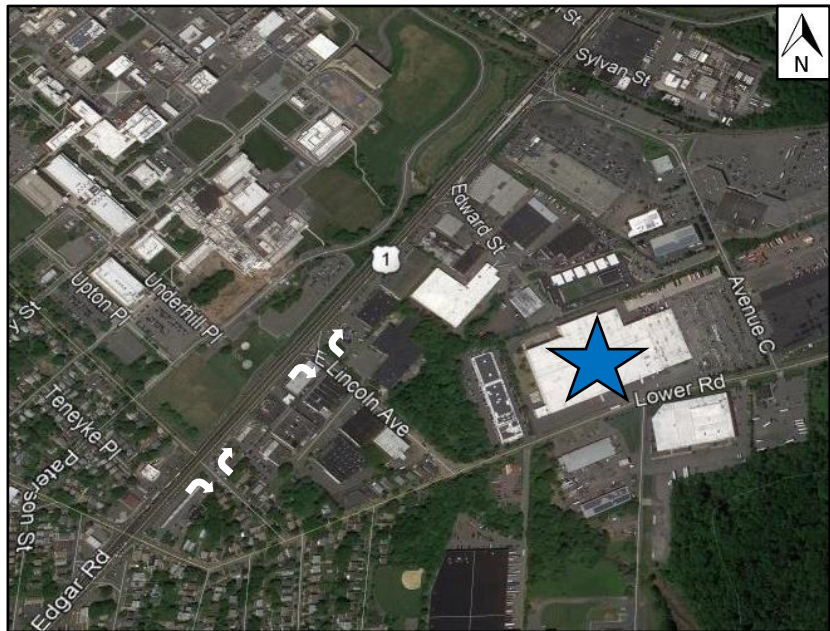
¹Average Annual Daily Traffic in vehicles per day; source: New Jersey Department of Transportation

*Lower Road becomes Barnett Street west of E Lincoln Avenue

Site Access

As previously stated, access to the site will be via three driveway entrances (two existing entrances on Lower Road and one proposed entrance on Lower Road). The existing entrances on Lower Road provide full movement access. The proposed entrance on Lower Road will also provide full movement access for truck traffic. An existing driveway along Avenue C is shown as closed on the provided site plan. A permit must be obtained from the City Engineer to construct or remove curb or gutter within any public right-of-way in the city.

It should also be noted that both E Lincoln Avenue and E Scott Avenue function as right-in/right-out only intersection with US Route 1/US Route 9. Therefore, vehicles leaving the site that plan to travel southbound on US Route 1/US Route 9 should be routed to one of the signalized intersections as illustrated in the figure to the right.



Truck Restrictions

Per the City of Linden ordinance, truck parking is prohibited at all times on Lower Road. In addition, there is a posted weight restriction of 4 tons on Barnett Street west of E Lincoln Avenue.

Parking

A total of 206 passenger car spaces, 450 Van spaces, and 8 docks are available. Parking will be separated by use. Based on the parking requirement table provided with the site plan (Attachment A), there is adequate parking available for all vehicles.

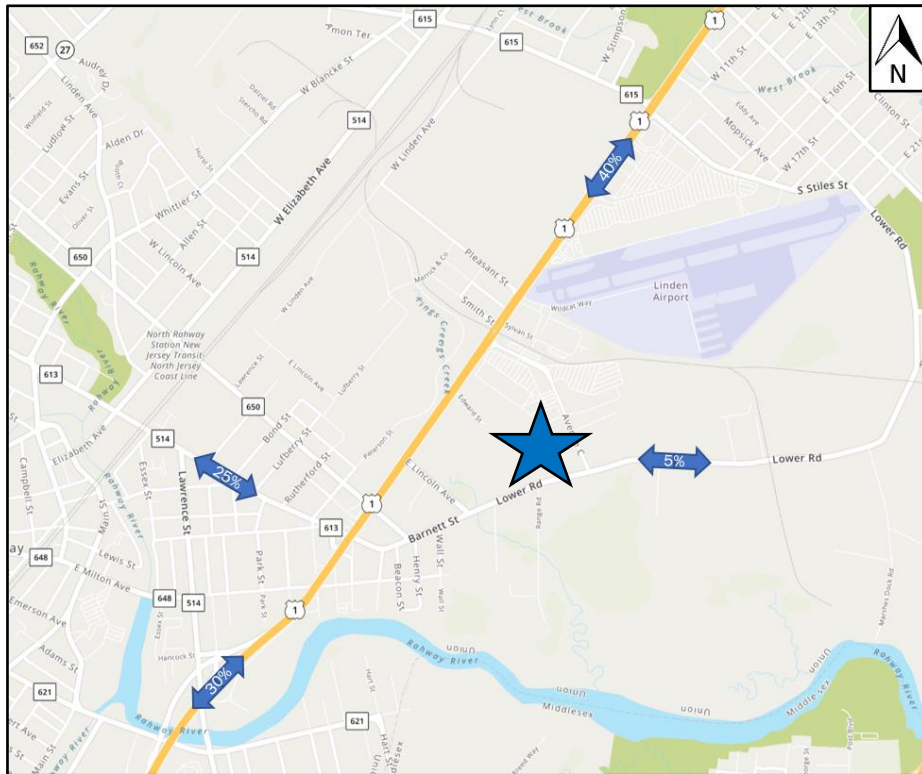


Trip Distribution

Examination of a 10 to 15-mile radius from the proposed delivery site indicates there are many potential delivery destinations and housing opportunities to the north, south and west of the site in Elizabeth, Woodbridge and other townships in the surrounding area. A proposed trip distribution is detailed and shown below:

- 40% to/from the north via US 9
- 30% to/from the south via US 9
- 25% to/from the west via E Grand Avenue
- 5% to/from the east via Lower Road

Site Traffic Distribution



Preliminary Traffic Review

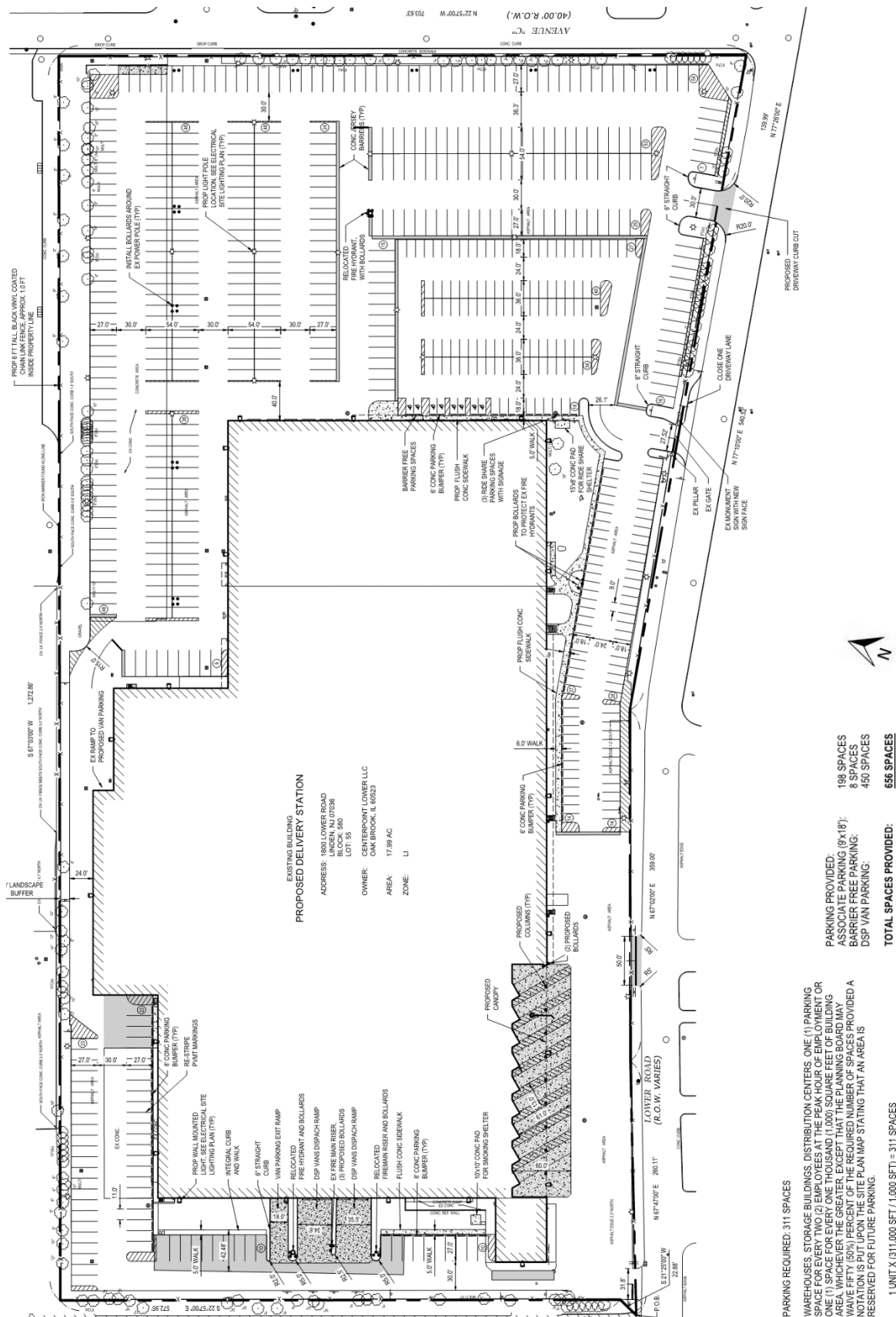
As part of our work, we have reviewed aerial imagery, researched traffic count data and assessed the current site plan to evaluate the traffic operations of the proposed facility. Based on our preliminary traffic review, we have identified the following:

1. Per the City of Linden ordinance, the subject property is zoned Light Industrial (LI), which allows industrial and warehouse/ distribution uses.
2. The surrounding street network experiences moderate delays throughout the day at various locations. The intersections of US Route 1/9 / Avenue C and US Route 1/9 / E Grand Avenue experience moderate congestion during both the AM and PM peak hours. Current AADTs on the area roadways indicate that space capacity is available to accommodate facility traffic.
3. Most traffic generated by the facility will occur throughout the day, between 6:30 AM and 10:30 PM. The heaviest site traffic occurs between 9:00 AM – 10:00 AM with a total of 154 trips entering and exiting the site. The next highest peak hours will occur between 7:00 PM – 8:00 PM with a total of 149 trips entering and exiting the site. A preliminary analysis of the site driveways indicates that even during peak times, passenger cars and trucks will not incur significant delays entering or exiting the site.
4. Autos and trucks can access the site using three driveways, two existing and one proposed, all along Lower Road. Additional access to the site along Avenue C is shown as removed on the provided site plan. The eastern entrance on Lower Road leads to Auto parking, while the western entrance on Lower Road and the proposed entrance will provide Truck and Van access.
5. Both E Lincoln Avenue and E Scott Avenue function as right-in/right-out only intersection with US Route 1/US Route 9. Therefore, vehicles leaving the site that plan to travel southbound on US Route 1/US Route 9 should be routed to one of the signalized intersections at Avenue C or E Grand Avenue.

Recommendations

No offsite improvements or access changes are anticipated to mitigate site traffic.

Attachment A: Site Plan



Attachment B: Proposed Traffic Schedule

DJZ6 in Linden, NJ - 1W1F												
Autos				Trucks			Vans			Total		
Time	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
00:00	0	0	0	0	0	0	0	0	0	0	0	0
01:00	34	0	34	1	0	1	0	0	0	35	0	35
02:00	0	0	0	0	1	1	0	0	0	0	1	1
03:00	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	0	0	1	1	2	0	0	0	1	1	2
05:00	11	0	11	0	0	0	0	0	0	11	0	11
06:00	0	0	0	1	0	1	0	0	0	1	0	1
07:00	0	0	0	0	1	1	0	0	0	0	1	1
07:30	0	0	0	0	0	0	0	0	0	0	0	0
08:00	0	0	0	0	0	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0	0	0	0	0	0
09:00	39	0	39	1	0	1	0	0	0	40	0	40
10:00	27	0	27	0	1	1	0	86	86	27	87	114
11:00	2	0	2	0	0	0	0	0	0	2	0	2
12:00	0	34	34	0	0	0	0	0	0	0	34	34
13:00	19	0	19	0	0	0	0	0	0	19	0	19
14:00	0	11	11	0	0	0	0	0	0	0	11	11
15:00	0	0	0	0	0	0	0	0	0	0	0	0
16:00	23	0	23	0	0	0	0	0	0	23	0	23
16:30	0	12	12	0	0	0	0	0	0	0	12	12
17:00	0	11	11	0	0	0	0	0	0	0	11	11
17:30	0	0	0	0	0	0	0	0	0	0	0	0
18:00	0	8	8	1	0	1	0	0	0	1	8	9
19:00	0	18	18	0	1	1	47	0	47	47	19	66
20:00	0	43	43	1	0	1	39	0	39	40	43	83
21:00	0	5	5	0	1	1	0	0	0	0	6	6
22:00	0	13	13	1	0	1	0	0	0	1	13	14
23:00	0	0	0	0	1	1	0	0	0	0	1	1
Total	155	155	310	7	7	14	86	86	172	248	248	496

1st Shift:	2:00 AM	12:30 PM	45	Assoc.
2nd Shift:	6:00 AM	2:30 PM	14	Assoc.
3rd Shift:	1:30 PM	10:00 PM	14	Assoc.
PFSD Shift:	2:00 PM	6:00 PM	10	Assoc.
RTS Shift:	12:00 PM	10:30 PM	2	Assoc.
Drivers:	9:20 AM	8:50 PM	86	Drivers