

April 30, 2021

Mr. Michael Frisbie
Noble Energy Real Estate Holdings, LLC
141 Buckingham Street, 301
Hartford, CT 06106

**RE: Proposed Super Convenience Store with Fuel Pumps and Drive-Thru
51 Boston Post Road
East Lyme, Connecticut
Our File # 20181**

Dear Mr. Frisbie:

Pursuant to your request our office has prepared this report to document our findings related to the potential traffic impact of a proposed convenience store with gasoline service, truck fueling stations, and a drive-thru window at 51 Boston Post Road (Route 1) in the city of East Lyme, Connecticut. The property is located on the northeast side of Route 1, directly east of the I-95 on and off-ramps at interchange No. 75. The site location is presented in Figure 1 with respect to the surrounding roadway network. This report presents our findings.

Site Plan

The proposed site plan, prepared by CMG Engineering Services, depicts a 7,698 s.f. convenience store with a drive-thru window, 8 fueling islands (16 vehicle fueling positions) and three truck fueling positions. The drive through lane will circle the building starting on the southeast corner and circulating the building in a counter-clockwise direction, with the drive thru window located on the northwest side of the building. The drive through lane provides approximately 310 feet of storage, capable of accommodating a total of 15 vehicles. Parking is provided to the north, south, and east of the building. A total of 59 parking spaces including three accessible spaces are provided. There are a total of 75 spaces if you include the 16 spaces at the pumps.

The pump islands and canopy is proposed in between the building and Route 1. The islands will provide eight pumps with a total of 16 vehicle fueling positions. A second canopy and pump islands is proposed on the north side of the building with three pumps, capable of fueling three tractor trailer vehicles. Sufficient pavement is provided for service vehicles and fuel delivery trucks.

Access to the site is proposed with two full access driveways to Boston Post Road (U.S. Route 1). The main site driveway is located approximately 240 feet east of the I-95 NB on ramp. This driveway will provide ingress for passenger vehicles and egress for both passenger vehicles and tractor trailers. A second driveway is proposed along the easterly property line. This driveway will provide ingress for tractor trailer vehicles to access the truck fuel pumps. The driveway will also provide ingress and egress to the existing cemetery located behind the proposed development.

Description of Area

The site proposed for development is located on the north side of Route 1 (Boston Post Road) east of the I-95 on/off-ramps. Route 1 is a state-maintained roadway that traverses east to west and largely parallels Interstate 95. Route 1 enters East Lyme from Old Lyme and exits into Waterford. In the town of East Lyme, U.S. Route 1 has the name Boston Post Road. Across the site frontage, Route 1 provides between 36 of pavement, with one travel lane in each direction, separated by a double yellow center-line. On the approach to the I-95 Ramps, the roadway widens to provide an exclusive NB right turn lane and a painted median, that shelters a SB left turn lane for the I-95 NB On Ramp. The I-95 NB off ramp has a short exclusive left turn lane and a large radius right turn lane. The I-95 NB off ramp approaches operate under stop sign control. Route 1 is posted at 35 miles per hour. Land use in the area is primarily residential to the east of the site, and undeveloped / commercial to the west.

Current Traffic Volumes

The Connecticut DOT maintains a traffic volume count program on all state highways and some local roadways. Included within the DOT database are counts on Route 1 east of the I-95 northbound off ramp, and on I-95 northbound off ramp to Route 1. The count on Route 1, conducted during March 2018, indicates an Average Daily Traffic volume (ADT) of 11,300 vehicles with peak hour volumes of 690 vehicles during the a.m. peak hour (7:00 a.m.) and 1,158 vehicles during the p.m. peak hour (4:00 p.m.). The count on the I - 95 NB Off Ramp, was conducted during June 2020, indicates an ADT of 2,200 vehicles with peak hour volumes of 166 vehicles during the a.m. peak hour (7:00 a.m.) and 226 vehicles during the p.m. peak hour (3:00 p.m.). The ConnDOT counts are presented in Tables 1 and 2.

Manual turning movement counts were conducted by our office to determine the directional distribution of traffic at the Route 1 – I-95 NB Ramps intersection. The counts were conducted during April 2021. Copies of the counts are included in the appendix. The directional distribution found in the manual count is used in conjunction with the ConnDOT counts to determine current traffic volumes for the study area. The observed traffic volumes are shown in Figure 2. The ConnDOT counts were used and the directional distribution observed in the counts were used to determine the 2021 traffic volumes for the intersection. These volumes are presented in Figure 3. A 3% per year growth rate was added to bring the counts to a 202design year. These volumes are presented in Figure 4.

In addition to the ConnDOT counts described above, our office has reviewed the files of OSTA and the Town of East Lyme to determine if there have been any recent approvals or submissions that may have an impact on traffic volumes in the vicinity. The Town indicated that we should include the traffic for an approved 840 unit housing development located off Route 1 a short distance east of I-95. Copies of the movement diagrams for that report are included in the appendix. These volumes were added to the volumes in

Figure 4. The resultant volumes represent the 2022 Background traffic volumes, as presented in Figure 5.

Site Generated Traffic

The proposal is to construct a 7,698 s.f. convenience store with 16 vehicle fueling positions, 3 truck fueling positions, and with a drive-thru window. In order to determine the trip generation for the proposed site, the Institute of Transportation Engineers (ITE) Trip Generation Report was consulted. Trip Generation presents trip generation estimates for many land uses based on counts conducted at existing facilities throughout the country. Included within the ITE database are land uses that are applicable to the proposed development. The land use codes selected for analysis were LUC 960 – Super Convenience Market/Gas Station. Because the proposed development also includes a truck fueling facility, we have also used LUC 950 – Truck Stop, to generate traffic for that portion of the development. The report presents data based on the square footage of each use, on vfp's (vehicle fueling positions) and adjacent street traffic. We have calculated the trip generation potential for each land use and each independent variable. The total site trip generation would be the sum of the two uses.

After a discussion with DOT personnel, we have been informed that the appropriate trip generation for this use is to use the Super Convenience store land use based on the number of vehicle fueling positions. A 60% pass -by rate should be used. The results are presented in Table 3.

Due to the location of the proposed development at an interchange with Route 1 and I-95, we have used a directional distribution that reflects this. We anticipate a directional distribution with 25% oriented to and from Route 1 both east and west of the site, and 25% to and from the northbound and southbound I-95. A slightly different distribution was used for the Truck traffic, with 20% to and from Route 1 both east and west and 60% to and from the I-95 Northbound Ramps. These distributions are presented in Figure 6.

Applying the site generated traffic volumes from Table 3 to the directional distribution, and including the pass by rate, the site generated traffic volumes are shown in Figure 7. Combining the site generated traffic volumes with the 2022 background traffic volumes provides the 2022 combined traffic volumes shown in Figure 8.

Intersection Capacity

In order to determine the impact of the site generated traffic on the existing roadway network, capacity analyses were conducted for the background and combined traffic volume conditions for the morning, afternoon and Saturday peak hours. The computer program *SYNCHRO*, which is based on the methodology in the Highway Capacity Manual, was utilized for this purpose. The general method determines how much of the capacity available for each movement is being utilized. This is converted into a delay for each movement, and the delay is rated on a level of service (LOS) scale from A to F, with A being the best level of service with low delays and F being the poorest level of service with high delays. An analysis was completed for the unsignalized intersections of Route 1 with the I-95 on and off-ramps, Route 1 with site drive 1, and Route 1 with site drive 2. The capacity analysis worksheets are included in the appendix. The level of service results are summarized in Table 4.

Route 1 (Boston Post Road) at I-95 On-ramp/I-95 Off-ramp - This is an existing unsignalized intersection, with Route 1 oriented in the east/west direction. The I-95 off-ramp approaches from the south and the I-95 on-ramp departs to the north. The Route 1 eastbound approach provides a dedicated left turn lane and a single through lane. The westbound approach provides a single through lane and an exclusive right turn lane. The I-95 northbound off-ramp provides a dedicated left turn lane and an exclusive right turn lane. The off ramp operates under stop sign control. An analysis indicates that under the background traffic volumes the Route 1 approaches operate at a LOS A or B during peak hours. The northbound left turn operates at a LOS E during the morning peak hour and at a LOS F during the afternoon and Saturday Peak hours. The northbound right turn

operates at LOS B during the morning peak hour and at a LOS C during the afternoon and Saturday peak hours. With the introduction of the site generated traffic the Route 1 approaches will continue to operate at a LOS A or B during peak hours. The northbound movements will continue to operate at the same levels of service as under the background conditions.

Route 1 at Site Drive 1 - This is a proposed intersection with Route 1 oriented in the east-west direction. The proposed site drive will approach from the north. The site drive will provide two exiting lanes, an exclusive left-turn lane and right-turn lane. The Route 1 eastbound approach will be restriped to provide a dedicated left turn lane and a single through lane. The Route 1 westbound approach will provide a single lane. An analysis of indicates that the Route 1 approaches will operate at a LOS A or B during all peak hours. The site drive left-turn approach will operate at a LOS D during morning peak hour and at a LOS F during afternoon and Saturday peak hours, with average delays of 103 and 117 seconds, respectively. The site drive right-turn approach will operate at a LOS B during morning peak hour and a LOS C during afternoon and Saturday peak hours.

Route 1 at Site Drive 2 - This is a proposed intersection with Route 1 oriented in the east-west direction and the site drive will approach from the north. This drive is meant for trucks utilizing the truck fueling stations. The site drive will provide a single entering and exiting lane. The Route 1 approaches each provide a single travel lane. Analysis indicates that the Route 1 approaches will each operate at a LOS A during all peak hours. Since there is no site generated traffic using the driveway as an egress, there is no level of service for that approach. The cemetery volumes are assumed to be minimal.

Site Driveway Location and Design

As indicated above the site access is proposed by way of two full access driveways located on Route 1 (Boston Post Road). The main site driveway is located approximately 240 feet east of the Route 1 intersection with the I-95 on-ramp. The driveway will provide

a 16 foot wide lane for entering traffic and two 12 foot lanes for exiting traffic. The Route 1 eastbound approach will be restriped to provide a dedicated left turn lane.

The easterly driveway is located approximately 230 feet east of the main site driveway and 470 feet from the intersection of Route 1 and the I-95 on-ramp. This driveway is intended for entering trucks utilizing the truck fueling stations. The driveway will be a 20 foot wide driveway but will widen in the vicinity of Route 1, with large radii, to accommodate entering trucks. No site traffic will utilize the driveway as an exit driveway. However, the driveway will be shared with an existing cemetery that is located behind the proposed convenience store. Therefore, a single exiting lane is proposed for that purpose. Route 1 will be widened to provide a 20 foot wide half section to allow a by-pass capability for eastbound through vehicles to safely by-pass trucks waiting to execute a left turn into the site driveway.

Sight Distances

Observations at the location of the proposed site driveways indicate that the available intersection sight distances exceed 500 feet in each direction at each of the driveways. The 500 foot sight distance exceeds the current ConnDOT requirement for an approach speed of 45 miles per hour. The available ISD for a tractor trailer vehicle, measured at a height of eye of 7.6 feet, is in excess of 700 feet. This ISD exceeds the required distance for an approach speed of 40 miles per hour. Route 1 is posted at 35 miles per hour.

Accident Experience

The University of Connecticut gathers and compiles traffic accident data for all state highways and some major local roadways. A list of accidents occurring in the area from January 1st, 2018 through April 1st, 2021 includes the most recent 3 years of available data. In the appendix are the UConn tables relating the accidents to various conditions

including date, time, roadway and weather conditions, collision types, and other variables as well as a short description of each accident.

Accident records were obtained for Route 1 for a distance of 500 feet in each direction from the proposed site drives. The 3-year accident history indicates a total of ten (10) accidents, involving nineteen (19) vehicles.

Of the ten (10) accidents, five (5) were front-to-rear accidents, two (2) involved an angled accident, one (1) was classified as other, one (1) was classified sideswipe same direction, and one (1) involved a fixed object. Eight (8) of the accidents were property damage only, one (1) involved a possible injury, and one (1) involved a suspected injury. There were no reported fatalities.

Drive through Queueing

A standard queue analysis was conducted for the proposed drive through window to determine the required vehicle stacking distance for this site. The results of that analysis are presented in Table 5. The Saturday peak hour was chosen for analysis because it has most entering trips. The Saturday analysis was conducted based on a service rate of 85 veh/hr and assuming that 50% of the customers will utilize the drive through window. The analysis indicates the expected queue length would be 2.4 vehicles with an average waiting time of 73 seconds per vehicle. The probability that the queue would exceed fifteen (15) vehicles is approximately 1%. The afternoon and morning queue analysis result in similar queue lengths. The data is included in the appendix.

The proposed site plan provides approximately 310 feet of storage from the drive through window, around the rear of the building, before queued vehicles would extend into the main parking field. The available storage is capable of accommodating fifteen (15) vehicles at an average of 20 feet per vehicle.

State Approval

Since the development has frontage to and access from a State Highway, CT Route 1, it will be necessary to obtain an encroachment permit from the ConnDOT District II Administration Office prior to the start of any work within the DOT Right of Way. A full set of site plans and a roadway frontage plan will need to be submitted to ConnDOT for review. Since the development includes less than 100,000 s.f. of floor area and fewer than 200 parking spaces, a review by OSTA of the project as a major traffic generator will not be required.

Conclusion

Based on our analysis, it is our professional opinion that the traffic volumes associated with the proposed super convenience store with fueling stations and truck fueling stations can readily be accommodated by the existing roadway network. The proposed site driveways are properly located with respect to adjacent intersections and with respect to available sight distances and are properly designed to accommodate the anticipated driveway volumes.

We appreciate the opportunity to provide this analysis to you. We will be available to offer testimony in support of your application before local planning agencies upon your request. If you require additional information regarding this application, please do not hesitate to contact our office.

Very truly yours,

F. A. Hesketh & Associates, Inc.


Scott F. Hesketh, P.E.
Manager of Transportation Engineering

cc: Mr. James Bernardino, CMG





eLYM-030 - North & South

Route 1 - 93.13 mi East of I-95 NB Off Ramp (Exit 75)

Town.....	East Lyme	04-Mar	05-Mar	06-Mar	07-Mar
Station.....	30	Sun	Mon	Tue	Wed
Location.....	41.37025,-72.198574				
2015-Principal Arterial - Other 3...	2015-Urban				
Start Report.....	05-Mar-2018 12:00PM				
End Report.....	06-Mar-2018 12:00PM				
WATF-034 No Class Data.....	Missing ACF				
24-Hour Count.....	11313 * G4(1.00) = 11313.0				
UnRounded AADT.....	11313.0 / 1 = 11313.0				
OK 2018 Sun 04-Mar -this report-.....	11300				
OK 2012 Wed 15-Feb	10000				
OK 2009 Wed 08-Apr	10600				
OK 2006 Mon 27-Feb	10400				
	12:00am		x	40	x
	01:00am		x	24	x
	02:00am		x	18	x
	03:00am		x	20	x
	04:00am		x	95	x
	05:00am		x	297	x
	06:00am		x	451	x
	07:00am		x	690	x
	08:00am		x	690	x
	09:00am		x	570	x
	10:00am		x	548	x
	11:00am		x	584	x
	12:00pm		725	x	x
	01:00pm		668	x	x
	02:00pm		890	x	x
	03:00pm		993	x	x
	04:00pm		1158	x	x
	05:00pm		1043	x	x
	06:00pm		665	x	x
	07:00pm		427	x	x
	08:00pm		271	x	x
	09:00pm		214	x	x
	10:00pm	x	142	x	
	11:00pm	x	90	x	
Totals		0	7286	4027	0

Status: OK

Class Speed

Table 2

eLYM-160 - North

Route 95 - 87.96 mi NB Off Ramp to US 1 (Exit 75)

Collected during COVID-19 epoch

	04-Jun	05-Jun	06-Jun	07-Jun	08-Jun	09-Jun	10-Jun
	Thu	Fri	Sat	Sun	Mon	Tue	Wed
Town.....East Lyme		18	12	11	17	21	17
Station.....160		10	6	11	10	16	13
Location.....41.369722,-72.20151		14	3	6	14	19	18
A.K.A.....7295		5	5	4	10	24	17
2015-Interstate 1.....2015-Urban		13	4	4	22	31	26
Start Report.....04-Jun-2020 12:00PM		35	20	13	73	70	86
End Report.....10-Jun-2020 03:00PM		100	42	24	141	140	155
24-Hour Count.... 2600 * G4(0.91) = 2366.0		152	49	36	166	164	163
Day 1.....+ 2441 * G4(0.85) = 4440.9		150	93	51	141	160	145
Day 2.....+ 1881 * G4(1.01) = 6340.7		134	118	82	142	154	159
Day 3.....+ 1650 * G4(1.15) = 8238.2		145	123	128	171	180	164
Day 4.....+ 2563 * G4(0.91) = 10570.5	x	173	146	148	209	227	195
Day 5.....+ 2876 * G4(0.91) = 13187.7	225	190	206	155	190	253	199
UnRounded AADT.....13187.7 / 6 = 2197.9	212	158	163	160	155	217	188
OK 2020 Thu 04-Jun -this report-...2200	220	184	165	148	188	214	190
OK 2017 Tue 06-Jun1800	217	224	149	128	192	226	x
OK 2014 Mon 02-Jun1900	209	202	142	119	198	203	
REV 2011 Mon 02-May1700	195	171	115	97	187	181	
OK 2008 Mon 02-Jun2000	124	124	93	79	101	130	
	82	89	64	70	78	80	
	63	66	71	78	70	69	
	49	37	43	46	41	39	
	28	32	28	31	22	35	
	27	15	21	21	25	23	
Totals	1651	2441	1881	1650	2563	2876	1735

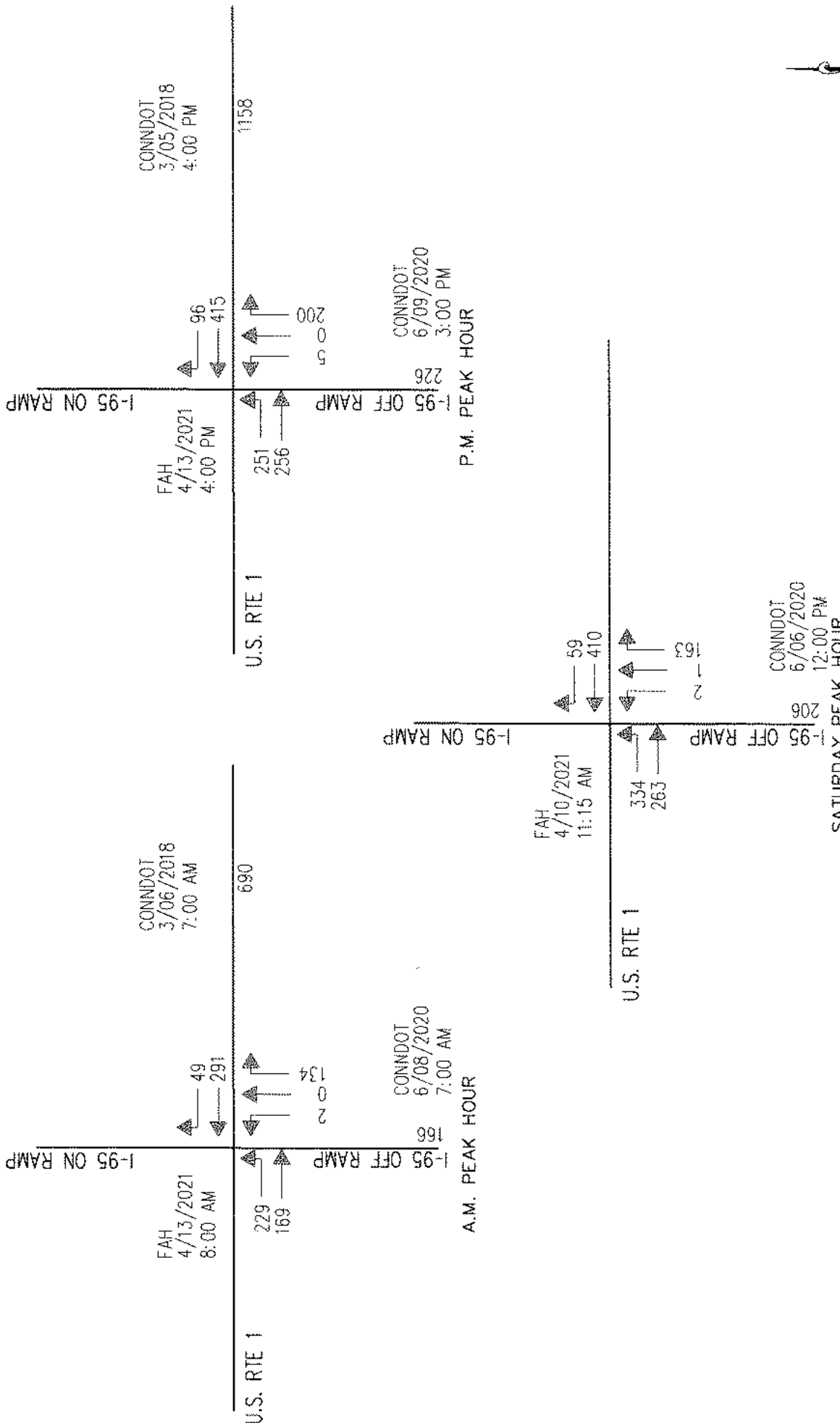


FIGURE 2
4-15-2021

OBSERVED TRAFFIC VOLUMES
A.M., P.M., AND SAT. PEAK HOUR
PROPOSED SUPER CONVENIENCE
STORE WITH FUELING STATIONS
51 BOSTON POST ROAD
EAST LYME, CONNECTICUT

F. A. Hesketh & Associates, Inc.
6 CREAMERY BROOK EAST GRANBY, CT 06026

FAH
TRAFFIC
PLANNING
ENGINEERING
DESIGN

NOT TO SCALE

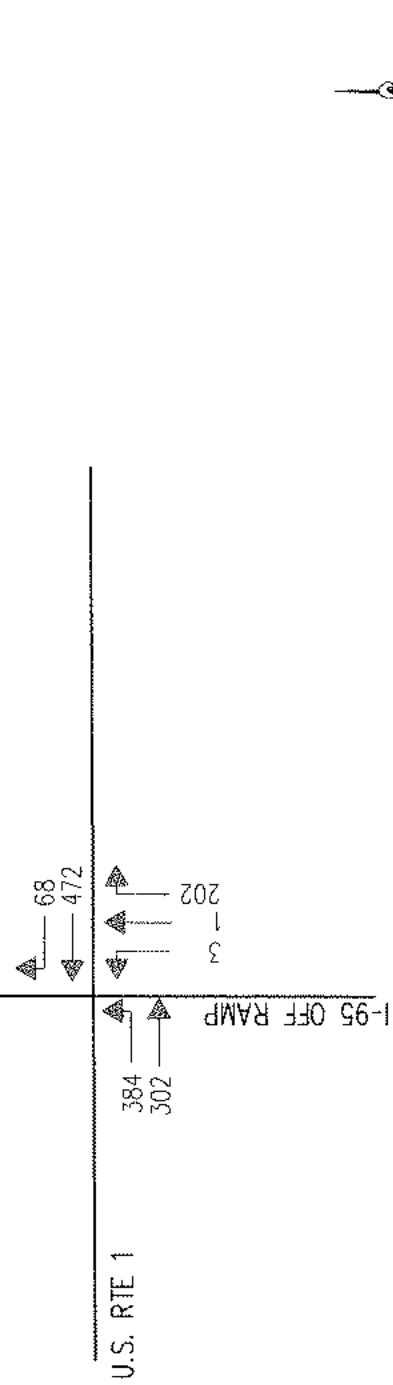
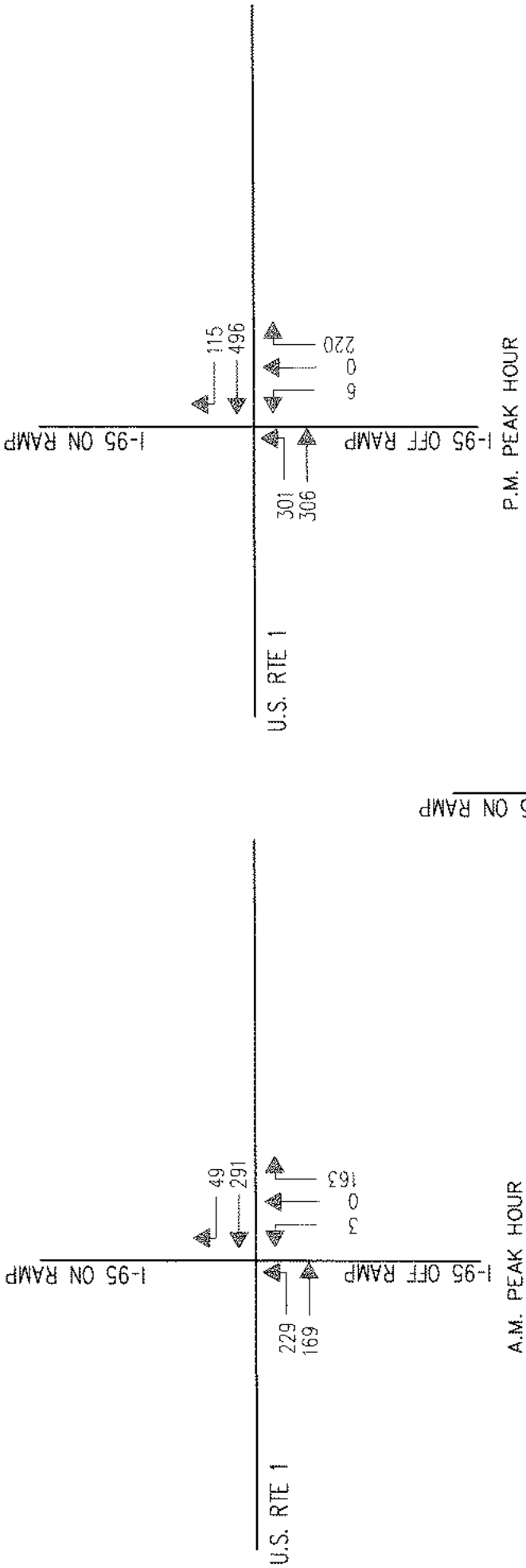


FIGURE 3

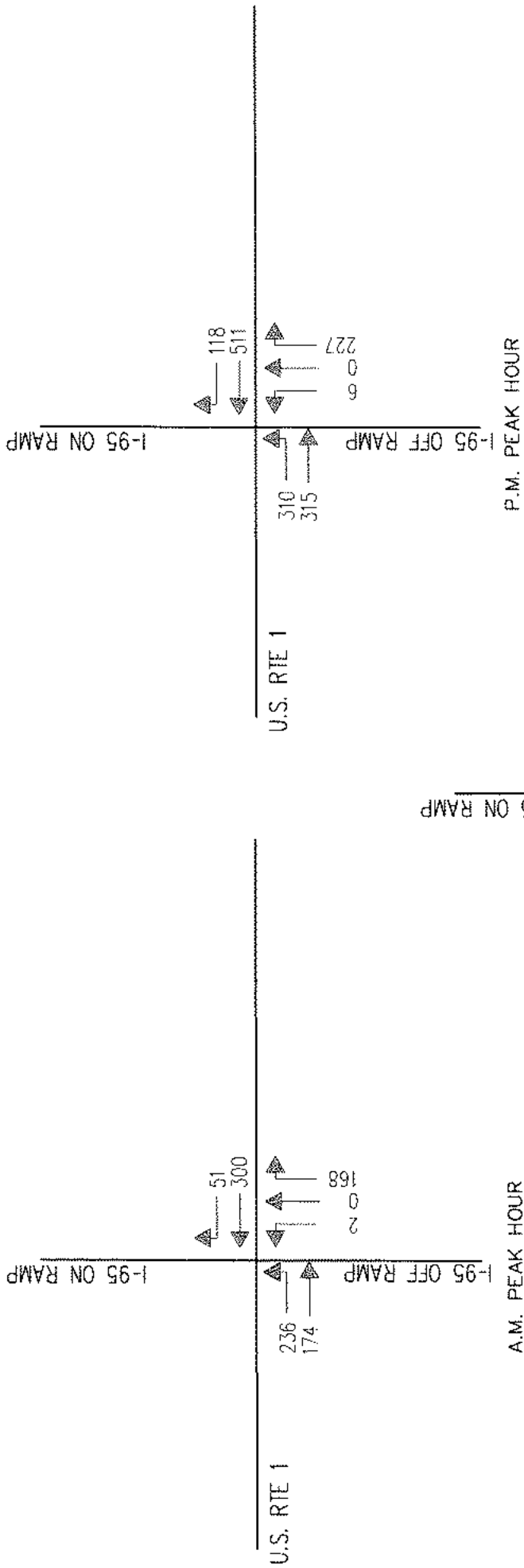
2021 TRAFFIC VOLUMES
A.M., P.M., AND SAT. PEAK HOUR
PROPOSED SUPER CONVENIENCE
STORE WITH FUELING STATIONS
51 BOSTON POST ROAD
EAST LYME, CONNECTICUT

4-15-2021

F. A. Hesketh & Associates, Inc.
6 CREMERY BROOK, EAST GRANBY, CT 06026

FAH
TRAFFIC
PLANNING
ENGINEERING
DESIGN

NOT TO SCALE



EXISTING TRAFFIC VOLUMES FROM FIGURE 3
INCREASED 3%.

FIGURE 4

2022 EXISTING TRAFFIC VOLUMES
A.M., P.M., AND SAT. PEAK HOUR
PROPOSED SUPER CONVENIENCE
STORE WITH FUELING STATIONS
51 BOSTON POST ROAD
EAST LYME, CONNECTICUT

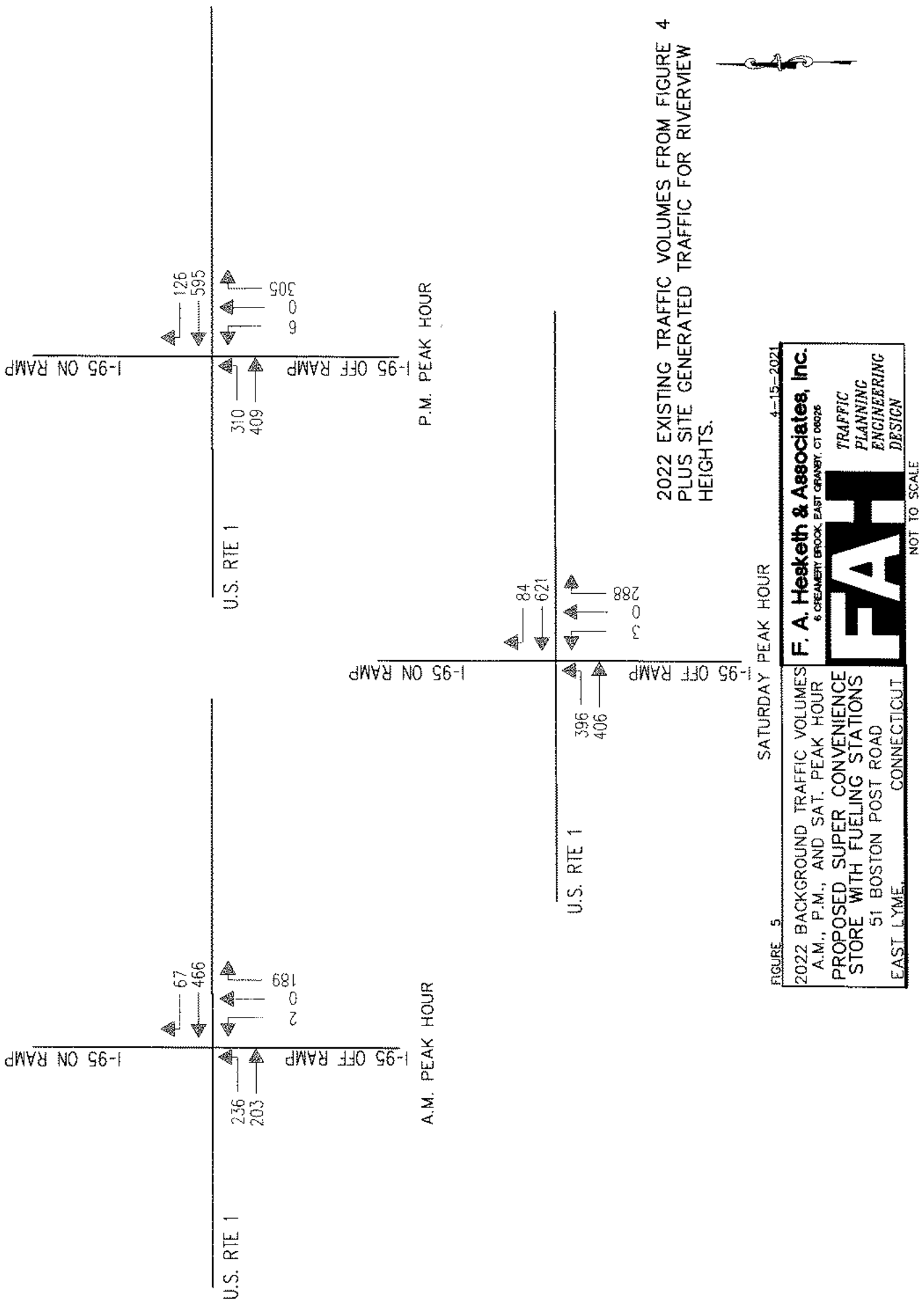
4-15-2021

F. A. Heeketh & Associates, Inc.
6 CREAMERY BROOK, EAST GRANBY, CT 06026

FAH

TRAFFIC
PLANNING
ENGINEERING
DESIGN

NOT TO SCALE



2022 EXISTING TRAFFIC VOLUMES FROM FIGURE 4 PLUS SITE GENERATED TRAFFIC FOR RIVERVIEW HEIGHTS.

FIGURE 5 4-15-2021

2022 BACKGROUND TRAFFIC VOLUMES
A.M., P.M., AND SAT. PEAK HOUR
PROPOSED SUPER CONVENIENCE
STORE WITH FUELING STATIONS
51 BOSTON POST ROAD
EAST LYME, CONNECTICUT

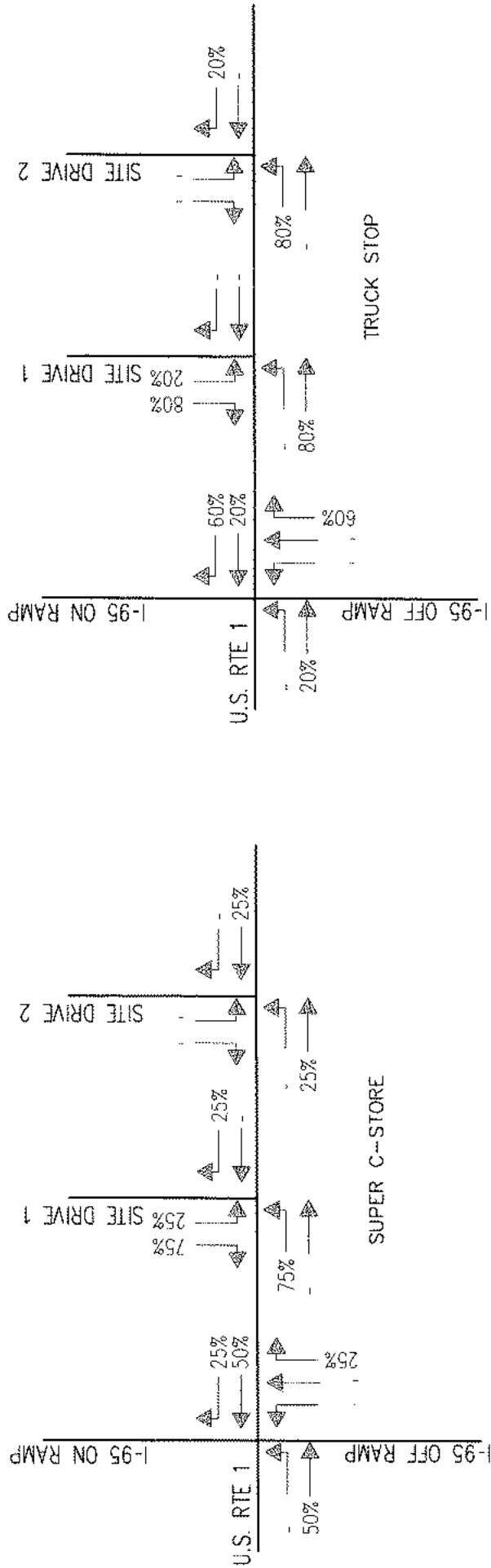
F. A. Heeketh & Associates, Inc.
6 CREAMERY BROOK, EAST GRANBY, CT 06026

FAH TRAFFIC PLANNING ENGINEERING DESIGN

NOT TO SCALE

Table 3
Trip Generation Summary
Proposed Super Convenience Market with Gasoline Pumps
East Lyme, CT

Land Use	Size	A.M. Peak Hour			P.M. Peak Hour			Saturday		Saturday Peak Hour		
		ADT	Enter	Exit	Total	Enter	Exit	Total	ADT	Enter	Exit	Total
Super Convenience Market/ Gas Station	7,698 s.f.	6449	319	320	639	277	277	554	5390	301	301	602
Vehicle Fueling Postions	16 v.f.p.	3688	170	171	341	162	162	324	4667	186	186	372
Adjacent Street Traffic	7,698 s.f.	-	396	397	793	266	267	533	-	-	-	-
Adjacent Street Traffic	16 v.f.p.	-	224	225	449	183	184	367	-	-	-	-
AM Peak Hour Adj Street Traffic	690 veh.	-	69	69	138	-	-	-	-	-	-	-
PM Peak Hour Adj Street Traffic	1158 veh.	-	-	-	-	87	87	174	-	-	-	-
Truck Stop*												
Vehicle Fueling Postions	3 v.f.p.	-	11	11	22	12	13	25	-	12	13	25
COMBINED			181	182	363	174	175	349	-	198	199	397



4-15-2021

FIGURE 6

F. A. Heeketh & Associates, Inc.
 6 CREAMY BROOK, EAST GRANBY, CT 06026

FAH

TRAFFIC
 PLANNING
 ENGINEERING
 DESIGN

DIRECTIONAL DISTRIBUTION
 A.M., P.M., AND SAT. PEAK HOUR
 PROPOSED SUPER CONVENIENCE
 STORE WITH FUELING STATIONS
 51 BOSTON POST ROAD
 EAST LYME, CONNECTICUT

NOT TO SCALE

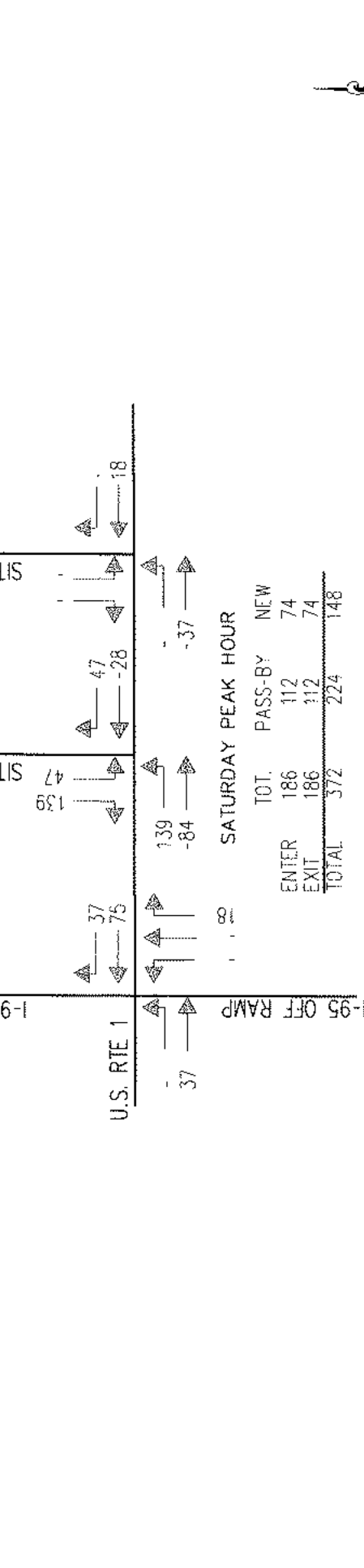
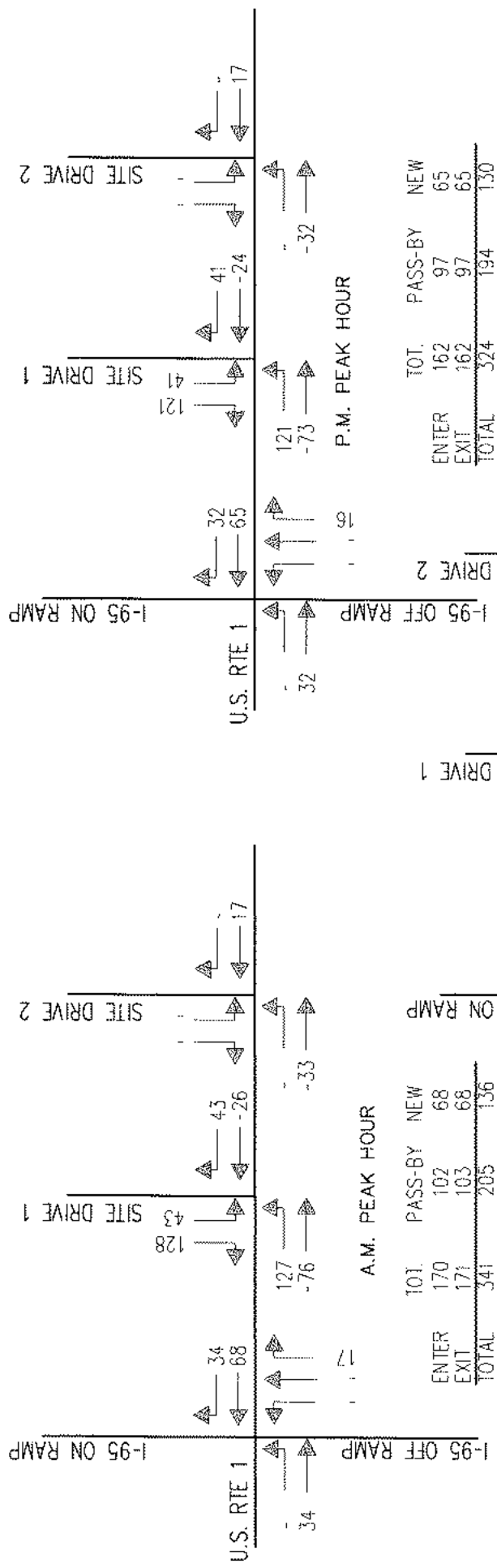


FIGURE 7 SUPER C-STORE 4-15-2021

SITE GENERATED TRAFFIC VOLUMES
A.M., P.M., AND SAT. PEAK HOUR

F. A. Heeketh & Associates, Inc.
6 CREAMERY BROOK EAST GRANBY, CT 06026

FAH TRAFFIC PLANNING ENGINEERING DESIGN

PROPOSED SUPER CONVENIENCE STORE WITH FUELING STATIONS
51 BOSTON POST ROAD
EAST LYME, CONNECTICUT

NOT TO SCALE

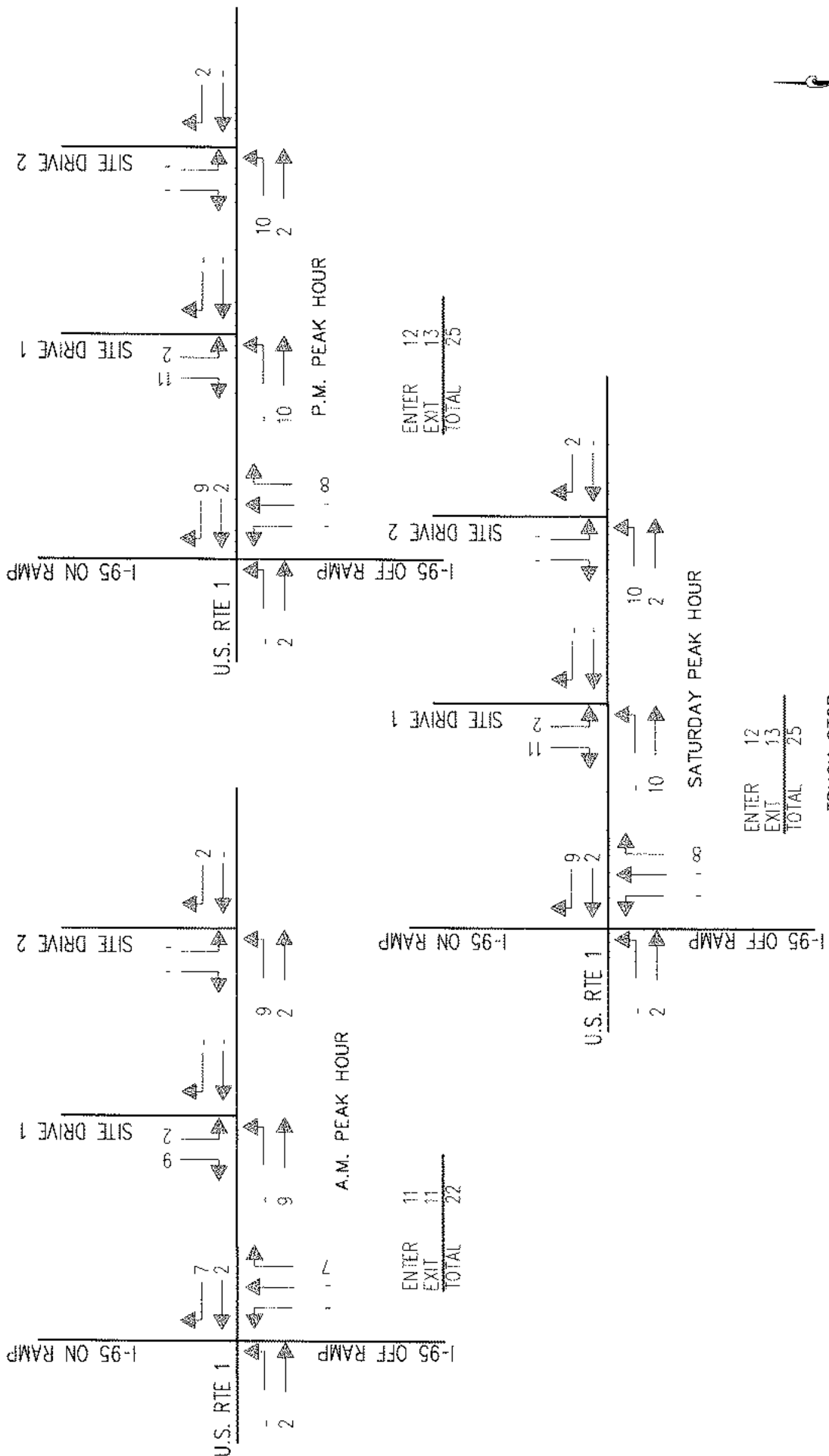


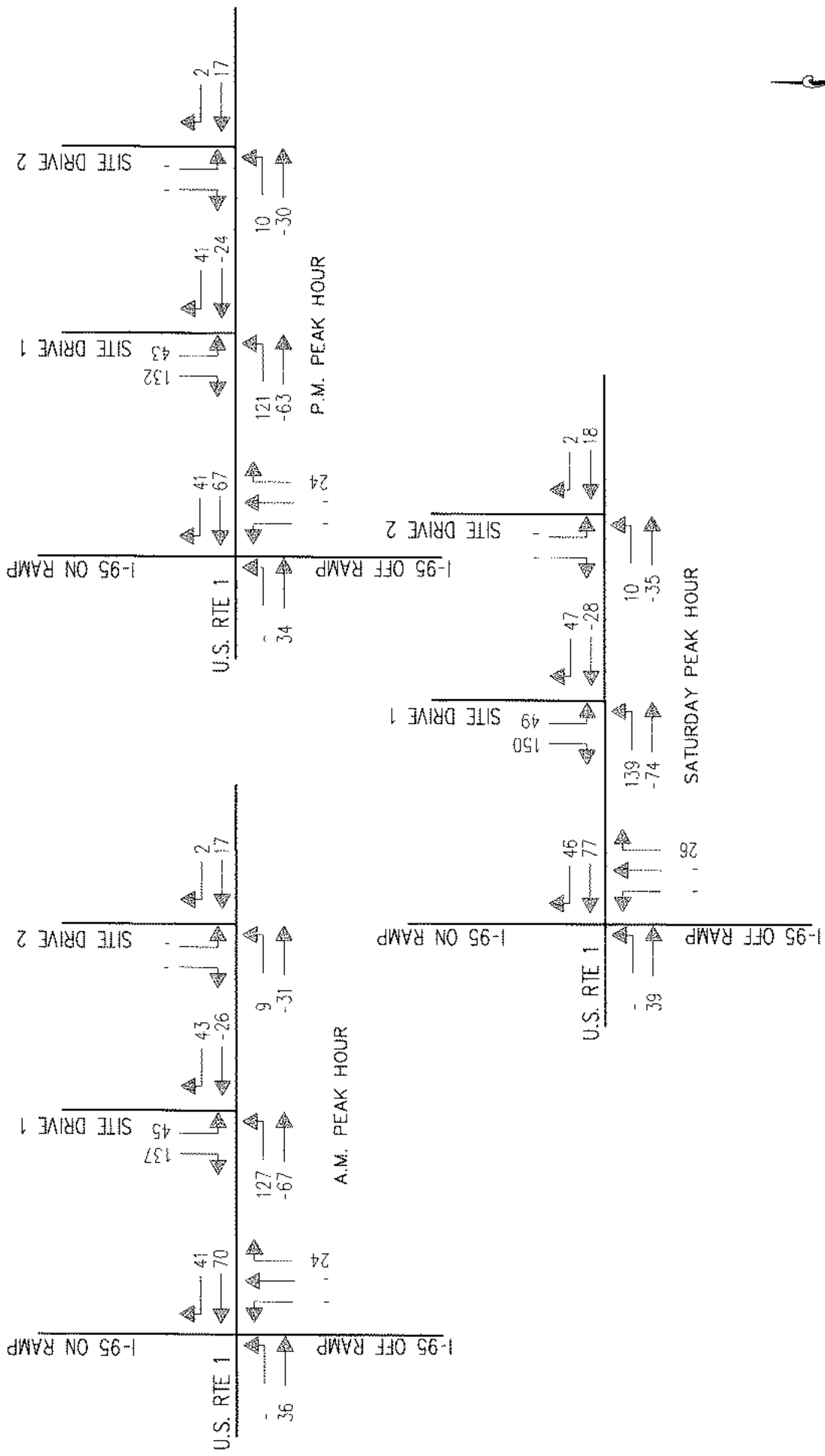
FIGURE 8 TRUCK STOP 4-15-2021

F. A. Heeketh & Associates, Inc.
 6 CREAMERY BROOK EAST GRANBY, CT 06026

FAH TRAFFIC PLANNING ENGINEERING DESIGN

SITE GENERATED TRAFFIC VOLUMES
 A.M., P.M., AND SAT. PEAK HOUR
 PROPOSED SUPER CONVENIENCE STORE WITH FUELING STATIONS
 51 BOSTON POST ROAD
 EAST LYME, CONNECTICUT

NOT TO SCALE



4-15-2021

F. A. Heskeith & Associates, Inc.
 6 CREAMERY BRICK, EAST GRANBY, CT 06028

FAH

TRAFFIC
 PLANNING
 ENGINEERING
 DESIGN

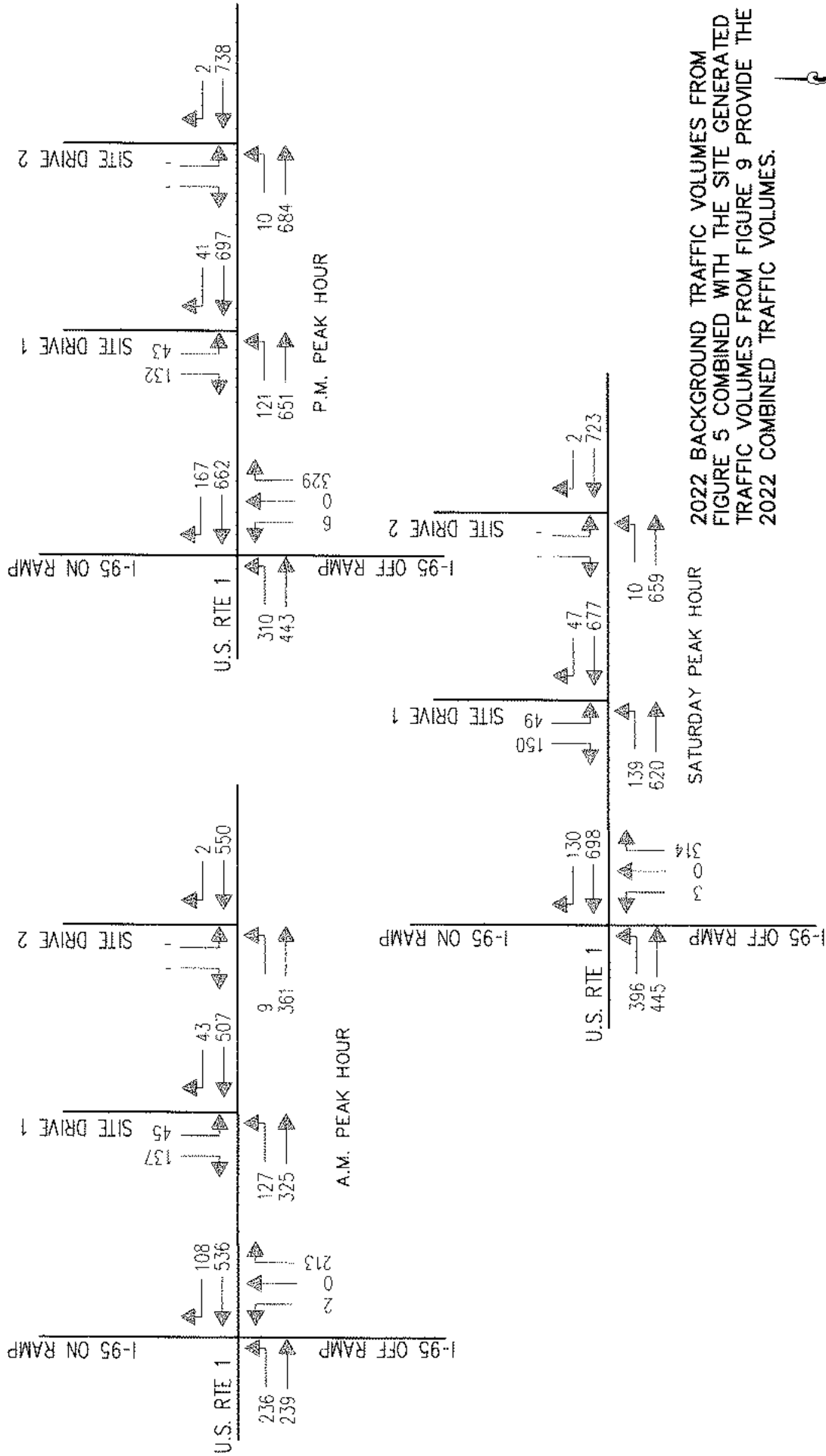
FIGURE 9

SITE GENERATED TRAFFIC VOLUMES
 A.M., P.M., AND SAT. PEAK HOUR

PROPOSED SUPER CONVENIENCE STORE WITH FUELING STATIONS

51 BOSTON POST ROAD
 EAST LYME, CONNECTICUT

NOT TO SCALE



2022 BACKGROUND TRAFFIC VOLUMES FROM
 FIGURE 5 COMBINED WITH THE SITE GENERATED
 TRAFFIC VOLUMES FROM FIGURE 9 PROVIDE THE
 2022 COMBINED TRAFFIC VOLUMES.

FIGURE 10

4-15-2021

F. A. Hesketh & Associates, Inc.
 6 CREAMERY BROOK, EAST GRANBY, CT 06026

FAH

TRAFFIC
 PLANNING
 ENGINEERING
 DESIGN

2022 COMBINED TRAFFIC VOLUMES
 A.M., P.M., AND SAT. PEAK HOUR
 PROPOSED SUPER CONVENIENCE
 STORE WITH FUELING STATIONS
 51 BOSTON POST ROAD
 EAST LYME, CONNECTICUT

NOT TO SCALE

Table 4
Level of Service Summary
Super Convenience Store with Fuelling Stations and Truck Stop
51 Boston Post Road (Route 1) East Lyme, CT 06333

Time Period	A.M. Peak Hour			P.M. Peak Hour			Saturday Peak Hour			
	LOS	Background delay	Queue	LOS	Background delay	Queue	LOS	Background delay	Queue	
I-95 Off Ramp/I-95 On Ramp & Route 1										
EB Left	A	9.9	0.26	B	12.2	0.40	B	13.5	0.51	73
Thru	A	0.0	0.13	A	0.0	0.26	A	0.0	0.26	0
WB Thru	A	0.0	0.30	A	0.0	0.38	A	0.0	0.40	0
Right	A	0.0	0.04	A	0.0	0.08	A	0.0	0.05	0
NB Left	E	35.2	0.02	F	99.8	0.16	F	149.3	0.11	8
Thru/Right	B	10.9	0.25	C	17.6	0.54	C	16.7	0.51	72
Route 1 & Site Drive 1										
EB Thru	-	-	-	-	-	-	-	-	-	-
WB Left	A	9.3	0.14	A	0.0	0.21	B	10.2	0.16	14
SB Left	A	0.0	0.35	A	0.0	0.47	A	0.0	0.42	0
Right	D	33.4	0.28	F	103.0	0.60	F	193.0	0.60	66
	B	14.7	0.29	C	19.2	0.36	C	19.2	0.36	40
Route 1 & Site Drive 2										
EB Thru	A	0.3	0.01	A	0.4	0.01	A	0.4	0.01	1
WB Left	A	0.0	0.35	A	0.0	0.47	A	0.0	0.47	0
SB Left	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	0

TABLE 5
Queue Length Probability
for the Proposed Drive Through Window
Saturday Peak Hour

Service Rate 1

Entering Driveway Volume	170 veh/hr
% Using Drive Through	50 %
Drive Through Volume (q)	85 veh/hr
Average Service Time	30 sec.
Service Rate (Q)	120 veh/hr

P(n) = probability of having n units in the system

$$P(n) = (q/Q)^n (1-(q/Q))$$

$$= 0.7083^n \times 0.2917$$

<u>n</u>	<u>P(n)</u>	<u>Sum of P(n)</u>
0	0.2917	0.2917
1	0.2066	0.4983
2	0.1463	0.6446
3	0.1037	0.7483
4	0.0734	0.8217
5	0.0520	0.8737
6	0.0368	0.9105
7	0.0261	0.9366
8	0.0185	0.9551
9	0.0131	0.9682
10	0.0093	0.9775
11	0.0066	0.9840
12	0.0047	0.9887
13	0.0033	0.9920
14	0.0023	0.9943
15	0.0017	0.9960

Expected Queue Length =	2.4 veh.
Average Waiting Time =	73 sec.

APPENDIX

**F.A. HESKETH & ASSOCIATES
MANUAL COUNTS**

F.A. Hesketh & Associates, Inc.
3 Creamery Brook

ROUTE 1 (BOSTON POST RD)
AT I-95 OFF RAMP
EAST LYME CT, 0633

East Granby, CT 06026
Phone: (860) 653 - 8000

File Name : Am Peak
Site Code : 32423242
Start Date : 4/13/2021
Page No : 1

Groups Printed- Unshifted

Start Time	ROUTE 1 From East				I-95 OFF RAMP From South				ROUTE 1 From West				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Factor	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		
07:00 AM	5	53	0	58	22	0	0	22	0	34	31	65	145
07:15 AM	17	64	0	81	29	0	1	30	0	28	45	73	184
07:30 AM	17	75	0	92	25	0	1	26	0	35	65	100	218
07:45 AM	14	84	0	98	39	0	1	40	0	39	56	95	233
Total	53	276	0	329	115	0	3	118	0	136	197	333	780
08:00 AM	5	67	0	72	29	0	0	29	0	32	54	86	187
08:15 AM	17	71	0	88	28	0	0	28	0	56	56	112	228
08:30 AM	14	79	0	93	34	0	1	35	0	38	55	93	221
08:45 AM	13	74	0	87	43	0	1	44	0	43	64	107	238
Total	49	291	0	340	134	0	2	136	0	169	229	398	874
Grand Total	102	567	0	669	249	0	5	254	0	305	426	731	1654
Approch %	15.2	84.8	0.0		98.0	0.0	2.0		0.0	41.7	58.3		
Total %	6.2	34.3	0.0	40.4	15.1	0.0	0.3	15.4	0.0	18.4	25.8	44.2	

Start Time	ROUTE 1 From East				I-95 OFF RAMP From South				ROUTE 1 From West				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1													
Intersection	08:00 AM												
Volume	49	291	0	340	134	0	2	136	0	169	229	398	874
Percent	14.4	85.6	0.0		98.5	0.0	1.5		0.0	42.5	57.5		
08:45 Volume	13	74	0	87	43	0	1	44	0	43	64	107	238
Peak Factor													0.918
High Int.	08:30 AM				08:45 AM				08:15 AM				
Volume	14	79	0	93	43	0	1	44	0	56	56	112	
Peak Factor	0.914								0.773				0.888
Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1													
By Approach	07:45 AM				08:00 AM				08:00 AM				
Volume	50	301	0	351	134	0	2	136	0	169	229	398	
Percent	14.2	85.8	0.0		98.5	0.0	1.5		0.0	42.5	57.5		
High Int.	07:45 AM				08:45 AM				08:15 AM				
Volume	14	84	0	98	43	0	1	44	0	56	56	112	
Peak Factor	0.895								0.773				0.888

F.A. Hesketh & Associates, Inc.
3 Creamery Brook

ROUTE 1 (BOSTON POST RD)
AT I-95 OFF RAMP
EAST LYME, CT 06333

East Granby, CT 06026
Phone: (860) 653 - 8000

File Name : Pm Peak
Site Code : 25252525
Start Date : 4/13/2021
Page No : 1

Groups Printed- Unshifted

Start Time	ROUTE 1 From East				I-95 OFF RAMP From South				ROUTE 1 From West				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Factor	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		
04:00 PM	29	110	0	139	46	0	1	47	0	64	66	130	316
04:15 PM	31	98	0	129	50	0	1	51	0	68	61	129	309
04:30 PM	21	105	0	126	54	0	3	57	0	63	72	135	318
04:45 PM	15	102	0	117	50	0	0	50	0	61	52	113	280
Total	96	415	0	511	200	0	5	205	0	256	251	507	1223
05:00 PM	14	90	0	104	40	0	0	40	0	70	61	131	275
05:15 PM	14	85	0	99	51	0	0	51	0	56	53	109	259
05:30 PM	11	80	0	91	52	0	0	52	0	60	41	101	244
05:45 PM	11	60	0	71	45	0	0	45	0	35	47	82	198
Total	50	315	0	365	188	0	0	188	0	221	202	423	976
Grand Total	146	730	0	876	388	0	5	393	0	477	453	930	2199
Approch %	16.7	83.3	0.0		98.7	0.0	1.3		0.0	51.3	48.7		
Total %	6.6	33.2	0.0	39.8	17.6	0.0	0.2	17.9	0.0	21.7	20.6	42.3	

Start Time	ROUTE 1 From East				I-95 OFF RAMP From South				ROUTE 1 From West				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1													
Intersection	04:00 PM												
Volume	96	415	0	511	200	0	5	205	0	256	251	507	1223
Percent	18.8	81.2	0.0		97.6	0.0	2.4		0.0	50.5	49.5		
04:30 Volume	21	105	0	126	54	0	3	57	0	63	72	135	318
Peak Factor													0.961
High Int.	04:00 PM				04:30 PM				04:30 PM				
Volume	29	110	0	139	54	0	3	57	0	63	72	135	
Peak Factor	0.919								0.899				0.939
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1													
By Approach	04:00 PM				04:00 PM				04:15 PM				
Volume	96	415	0	511	200	0	5	205	0	262	246	508	
Percent	18.8	81.2	0.0		97.6	0.0	2.4		0.0	51.6	48.4		
High Int.	04:00 PM				04:30 PM				04:30 PM				
Volume	29	110	0	139	54	0	3	57	0	63	72	135	
Peak Factor	0.919								0.899				0.941

F.A. Hesketh & Associates, Inc.
3 Creamery Brook

ROUTE 1 (BOSTON POST RD)
AT I-95 OFF RAMP
EAST LYME, CT 06333

East Granby, CT 06026
Phone: (860) 653 - 8000

File Name : SAT Peak
Site Code : 56788765
Start Date : 4/10/2021
Page No : 1

Groups Printed- Unshifted

Start Time	ROUTE 1 From East				I-95 OFF RAMP From South				ROUTE 1 From West				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Factor	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		
11:00 AM	7	88	0	95	50	0	3	53	0	57	64	121	269
11:15 AM	16	105	0	121	55	1	0	56	0	53	83	136	313
11:30 AM	20	102	0	122	28	0	0	28	0	72	83	155	305
11:45 AM	9	88	0	97	42	0	1	43	0	66	91	157	297
Total	52	383	0	435	175	1	4	180	0	248	321	569	1184
12:00 PM	14	115	0	129	38	0	1	39	0	72	77	149	317
12:15 PM	19	84	0	103	59	0	1	60	0	72	58	130	293
12:30 PM	8	103	0	111	45	1	0	46	0	72	66	138	295
12:45 PM	12	80	0	92	46	0	0	46	0	72	49	121	259
Total	53	382	0	435	188	1	2	191	0	288	250	538	1164
Grand Total	105	765	0	870	363	2	6	371	0	536	571	1107	2348
Approch %	12.1	87.9	0.0		97.8	0.5	1.6		0.0	48.4	51.6		
Total %	4.5	32.6	0.0	37.1	15.5	0.1	0.3	15.8	0.0	22.8	24.3	47.1	

Start Time	ROUTE 1 From East				I-95 OFF RAMP From South				ROUTE 1 From West				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour From 11:00 AM to 12:45 PM - Peak 1 of 1													
Intersection	11:15 AM												
Volume	59	410	0	469	163	1	2	166	0	263	334	597	1232
Percent	12.6	87.4	0.0		98.2	0.6	1.2		0.0	44.1	55.9		
12:00 Volume	14	115	0	129	38	0	1	39	0	72	77	149	317
Peak Factor	0.972												
High Int.	12:00 PM												
Volume	14	115	0	129	55	1	0	56	0	66	91	157	
Peak Factor	0.909												
Peak Hour From 11:00 AM to 12:45 PM - Peak 1 of 1													
By Approach	11:15 AM												
Volume	59	410	0	469	188	1	2	191	0	263	334	597	
Percent	12.6	87.4	0.0		98.4	0.5	1.0		0.0	44.1	55.9		
High Int.	12:00 PM												
Volume	14	115	0	129	59	0	1	60	0	66	91	157	
Peak Factor	0.796												

CONNDOT COUNTS

Status: OK

eLYM-030 - North & South

Route 1 - 93.13 mi East of I-95 NB Off Ramp (Exit 75)

Town.....	East Lyme	04-Mar	05-Mar	06-Mar	07-Mar
Station.....	30	Sun	Mon	Tue	Wed
Location.....	41.37025,-72.198574		x	40	x
2015-Principal Arterial - Other 3...2015-Urban			x	24	x
Start Report.....	05-Mar-2018 12:00PM		x	18	x
End Report.....	06-Mar-2018 12:00PM		x	20	x
WATF-034 No Class Data.....	Missing ACF		x	95	x
Approved ACF.....			x	297	x
24-Hour Count.....	11313 * G4(1.00) = 11313.0		x	451	x
UnRounded AADT.....	11313.0 / 1 = 11313.0		x	690	x
OK 2021 Tue 06-Apr	10600		x	690	x
OK 2018 Sun 04-Mar -this report-.....	11300		x	570	x
OK 2012 Wed 15-Feb	10000		x	548	x
OK 2009 Wed 08-Apr	10600		x	584	x
OK 2006 Mon 27-Feb	10400			725	x
				668	x
				890	x
				993	x
				1158	x
				1043	x
				665	x
				427	x
				271	x
				214	x
		x	142	x	
		x	90	x	
Totals		0	7286	4027	0

Status: OK

Class

Speed

eLYM-160 - North

Route 95 - 87.96 mi NB Off Ramp to US 1 (Exit 75)

Collected during COVID-19 epoch

	04-Jun Thu	05-Jun Fri	06-Jun Sat	07-Jun Sun	08-Jun Mon	09-Jun Tue	10-Jun Wed
Town.....East Lyme	12:00am	18	12	11	17	21	17
Station.....160	01:00am	10	6	11	30	16	13
Location.....41.369722,-72.20151	02:00am	14	3	6	34	19	18
A.K.A.....7295	03:00am	5	5	4	10	24	17
2015-Interstate 1.....2015-Urban	04:00am	13	4	4	22	31	26
Start Report.....04-Jun-2020 12:00PM	05:00am	35	20	13	73	70	86
End Report.....10-Jun-2020 03:00PM	06:00am	100	42	24	141	140	155
24-Hour Count.... 2600 * G4(0.91) = 2366.0	07:00am	152	49	36	166	164	163
Day 1.....+ 2441 * G4(0.85) = 4440.9	08:00am	150	93	51	141	160	145
Day 2.....+ 1881 * G4(1.01) = 6340.7	09:00am	134	118	82	142	154	159
Day 3.....+ 1650 * G4(1.15) = 8238.2	10:00am	145	123	128	171	180	164
Day 4.....+ 2563 * G4(0.91) = 10570.5	11:00am	* 173	146	148	209	227	195
Day 5.....+ 2876 * G4(0.91) = 13187.7	12:00pm	225	190	206	190	253	199
UnRounded AADT.....13187.7 / 6 = 2197.9	01:00pm	212	158	163	155	217	188
OK 2020 Thu 04-Jun -this report-...2200	02:00pm	220	184	165	148	188	214
OK 2017 Tue 06-Jun1800	03:00pm	217	224	149	128	192	226
OK 2014 Mon 02-Jun1900	04:00pm	209	202	142	119	198	203
REV 2011 Mon 02-May1700	05:00pm	195	171	115	97	187	181
OK 2008 Mon 02-Jun2000	06:00pm	124	124	93	79	101	130
	07:00pm	82	89	64	70	78	80
	08:00pm	63	66	71	78	70	69
	09:00pm	49	37	43	46	41	39
	10:00pm	28	32	28	31	22	35
	11:00pm	27	15	21	21	25	23
Totals	1651	2441	1881	1650	2563	2876	1735

**HOUSING DEVELOPMENT
TRAFFIC MOVEMENT DIAGRAMS**

TABLE 1
PEAK HOUR SITE GENERATED TRAFFIC VOLUMES
 Riverview Heights
 East Lyme, Connecticut

	Peak Hour	840 Apartments
Weekday AM		
Enter		83
Exit		332
Total		415
Weekday PM		
Enter		312
Exit		168
Total		480

Note: Trip generation based on Curve Equation per for Land Use Code 220 (Apartment), as published in Trip Generation, 7th Edition, 2003.

Query Filter

DATA SOURCE: Trip Gen Manual, 10th Ed + Supplement

SEARCH BY LAND USE CODE: 220

LAND USE GROUP: 000-299 Residential

LAND USE: 220 - Multifamily Housing (Low-Rise)

LAND USE SUBCATEGORY: All Sites

INDEPENDENT VARIABLE (Y): Dwelling Units

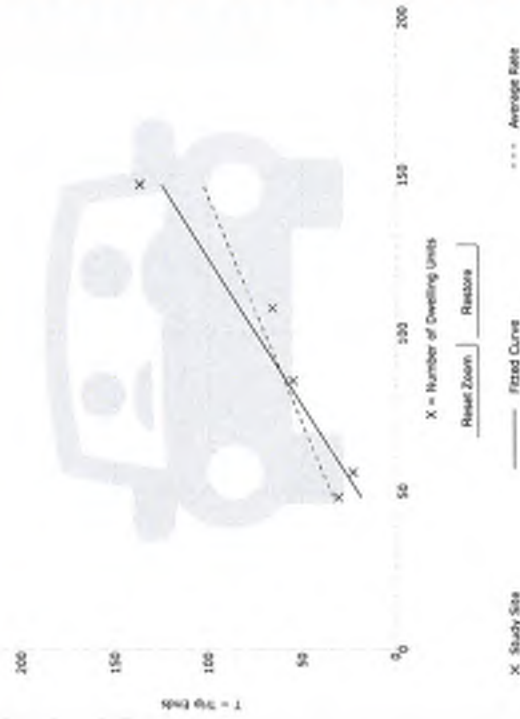
TIME PERIOD: Secondary, Peak Hour of Generation

SETTING/LOCATION: General Urban/Suburban

TRIP TYPE: Vehicle

ENTER VALUE TO CALCULATE TRIP: 842

Data Plot and Equation



Caution - Small Sample Size

DATA STATISTICS

Land Use:	Multifamily Housing (Low-Rise) (201) Club, 3rd, 2012
Address:	
Independent Variable:	Dwelling Units
Time Period:	Secondary
Peak Hour of Generation:	General Urban/Suburban
Setting/Location:	General Urban/Suburban
TRIP TYPE:	Vehicle
Number of Studies:	5
Avg. Num. of Dwelling Units:	89
Average Rate:	0.75
Range of Rates:	0.41 - 0.93
Standard Deviation:	0.25
Fitted Curve Equation:	$T = 1.00(X) - 33.24$
R ² :	0.93
Directional Distribution:	54% entering, 46% exiting
Calculated Trip Rate:	Average Rate: 588 (Total), 316 (Entry), 270 (Exit)
Fitted Curve:	814 (Total), 472 (Entry), 432 (Exit)

Use the mouse wheel to Zoom Out or Zoom In.
 Hover the mouse pointer on data points to view X and T values.

Graph Look Up

Technical Support

Add Users

Comments

Add-on to do more

Try OTISS Pro



OIL MILL ROAD

SUMMIT AVENUE

I-95 NORTH ON RAMP
EXIT 75

I-95 NORTH OFF RAMP
EXIT 75

ROUTE 1 WB

ROUTE 1
U-TURN

ROUTE 1 EB

I-95 SOUTH ON RAMP

ROUTE 1

RIVER ROAD

CALKINS ROAD

HILL ROAD

PROPOSED SITE

20% ← →

45% ← →

55% ← →

55% ← →

55% ← →

55% ← →

55% ← →

55% ← →

55% ← →

55% ← →

55% ← →

55% ← →

55% ← →

55% ← →

55% ← →

55% ← →

55% ← →

55% ← →

55% ← →

55% ← →

55% ← →

25% →

45% →

55% →

55% →

55% →

55% →

55% →

55% →

55% →

55% →

55% →

55% →

55% →

55% →

55% →

55% →

55% →

55% →

55% →

55% →

55% →

100%

100%

100%

100%

100%

100%

100%

100%

100%

100%

100%

100%

100%

100%

100%

100%

100%

100%

100%

100%

100%

PROJECT NO. 2017-00043
DATE: 08/15/17

LANDMARK DEVELOPMENT GROUP, LLC
SITE GENERATED PEAK HOUR TRAFFIC
PRESENT DISTRIBUTION
EAST LYME, CONNECTICUT

FUSS & O'NEILL INC. Consulting Engineers
145 HARTFORD ROAD, HARTFORD, CONNECTICUT 06104
860.641.2409
www.FandO.com

SCALE:	HORIZ. HTS.
	VERT.
DATE:	HORIZ.
	VERT.
GRAPHIC SCALE	



OIL MILL ROAD

SUMMIT AVENUE

RIVER ROAD

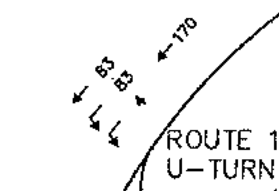
CALKINS ROAD

HILL ROAD

PROPOSED SITE

I-95 NORTH ON RAMP EXIT 75

I-95 NORTH OFF RAMP EXIT 75

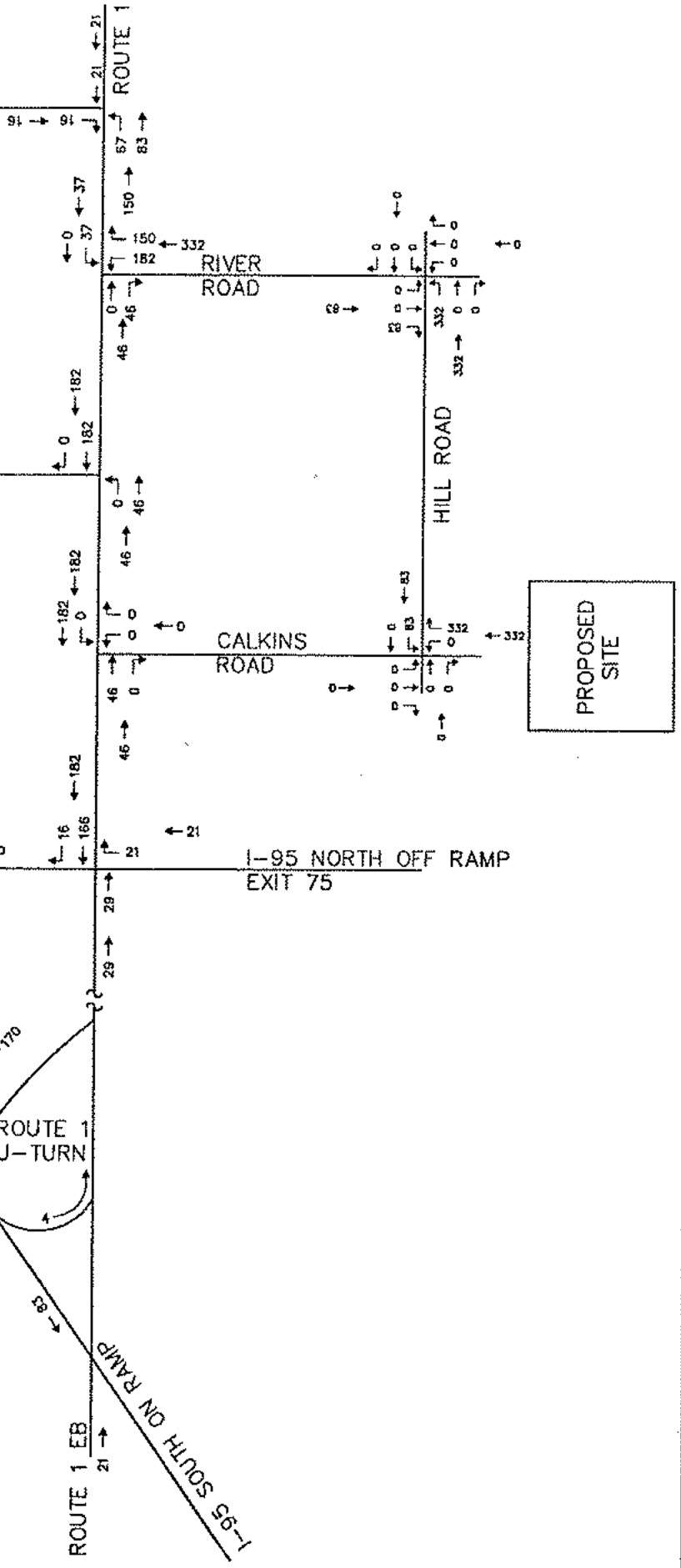


ROUTE 1 WB

ROUTE 1 U-TURN

ROUTE 1 EB

I-95 SOUTH ON RAMP



PROJ. NO. 2007 002A17
DATE: OCTOBER 2005

FIG 7

LANDMARK DEVELOPMENT GROUP, LLC
AM SITE GENERATED TRAFFIC VOLUMES
RIVERVIEW HEIGHTS

CONNECTICUT

EAST LYME

FUSS & O'NEILL, INC. Consulting Engineers
146 HARTFORD ROAD, MANCHESTER, CONNECTICUT 06040
860.422.7618



www.fandoi.com

SCALE:	HORIZ. NTS.	VERT.
DATUM:	HORIZ.	VERT.
GRAPHIC SCALE		

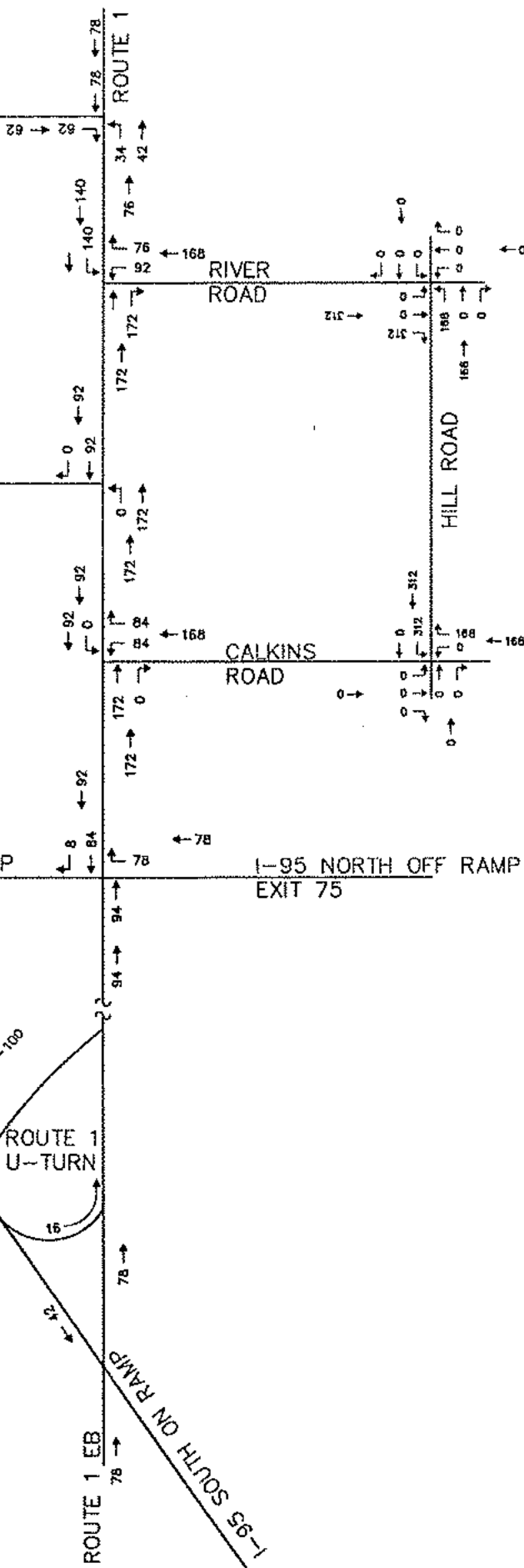
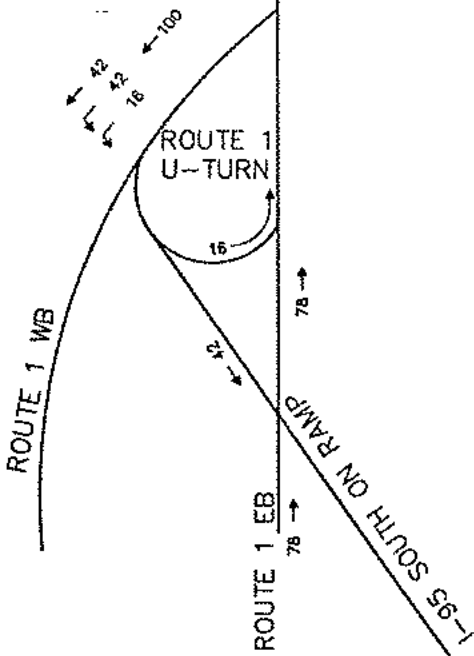


OIL MILL ROAD

SUMMIT AVENUE

I-95 NORTH ON RAMP EXIT 75

I-95 NORTH OFF RAMP EXIT 75



PROJ. NO. 2002 SBLA13
DATE: OCTOBER 2005

FIG 8

LANDMARK DEVELOPMENT GROUP, LLC
PM SITE GENERATED TRAFFIC VOLUMES
RIVERVIEW HEIGHTS

CONNECTICUT

EAST LYME

FUSS & O'NEILL INC. Consulting Engineers
148 HARTFORD ROAD, MANDERSIER, CONNECTICUT 06040
860.648.2489



www.FandO.com

SCALE:	HORIZ. HTS.
	VERT.
DATUM:	HORIZ.
	VERT.

GRAPHIC SCALE



OIL MILL ROAD

SUMMIT AVENUE

RIVER ROAD

CALKINS ROAD

HILL ROAD

PROPOSED SITE

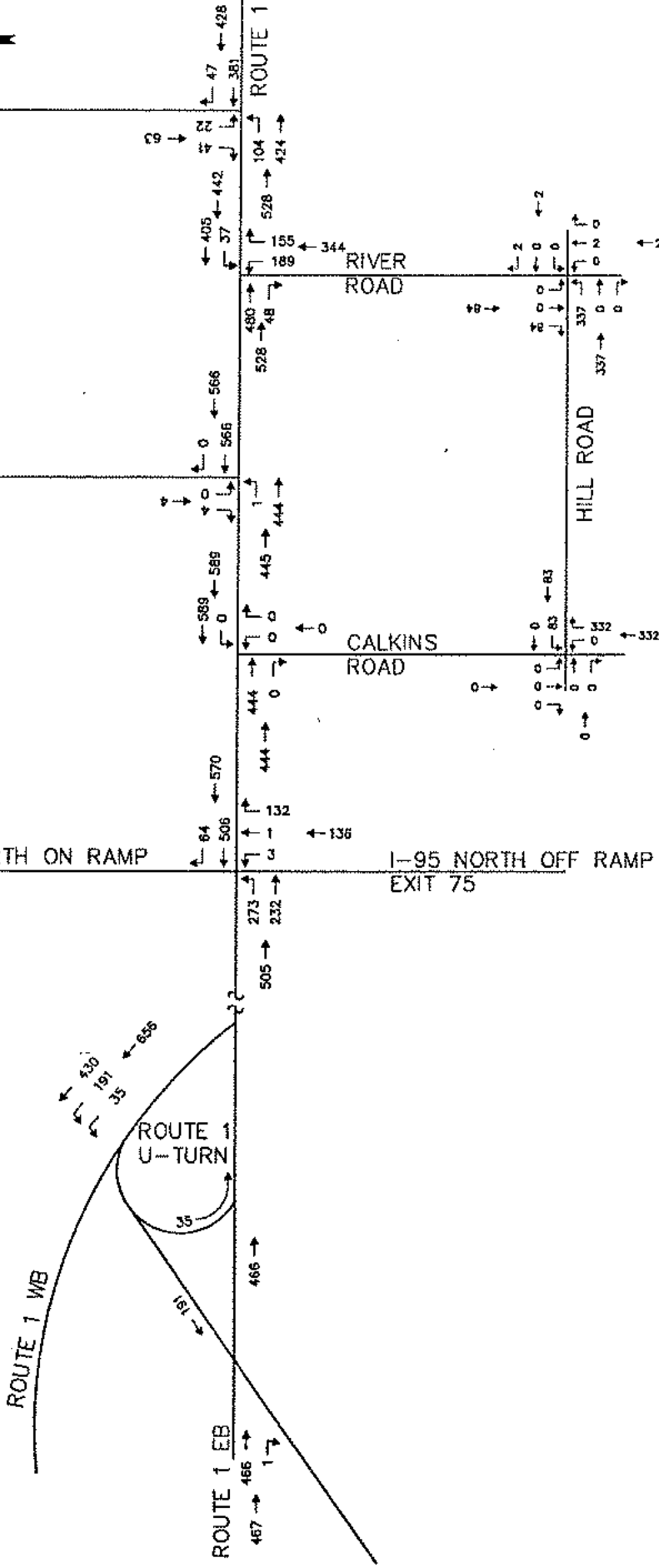
I-95 NORTH ON RAMP
EXIT 75

I-95 NORTH OFF RAMP
EXIT 75

ROUTE 1 WB

ROUTE 1 U-TURN

ROUTE 1 EB



PROJ. NO. 2002-880A19
DATE: OCTOBER 2005

FIG 9

LANDMARK DEVELOPMENT GROUP, LLC
COMBINED 2008 AM TRAFFIC VOLUMES
RIVERVIEW HEIGHTS

CONNECTICUT

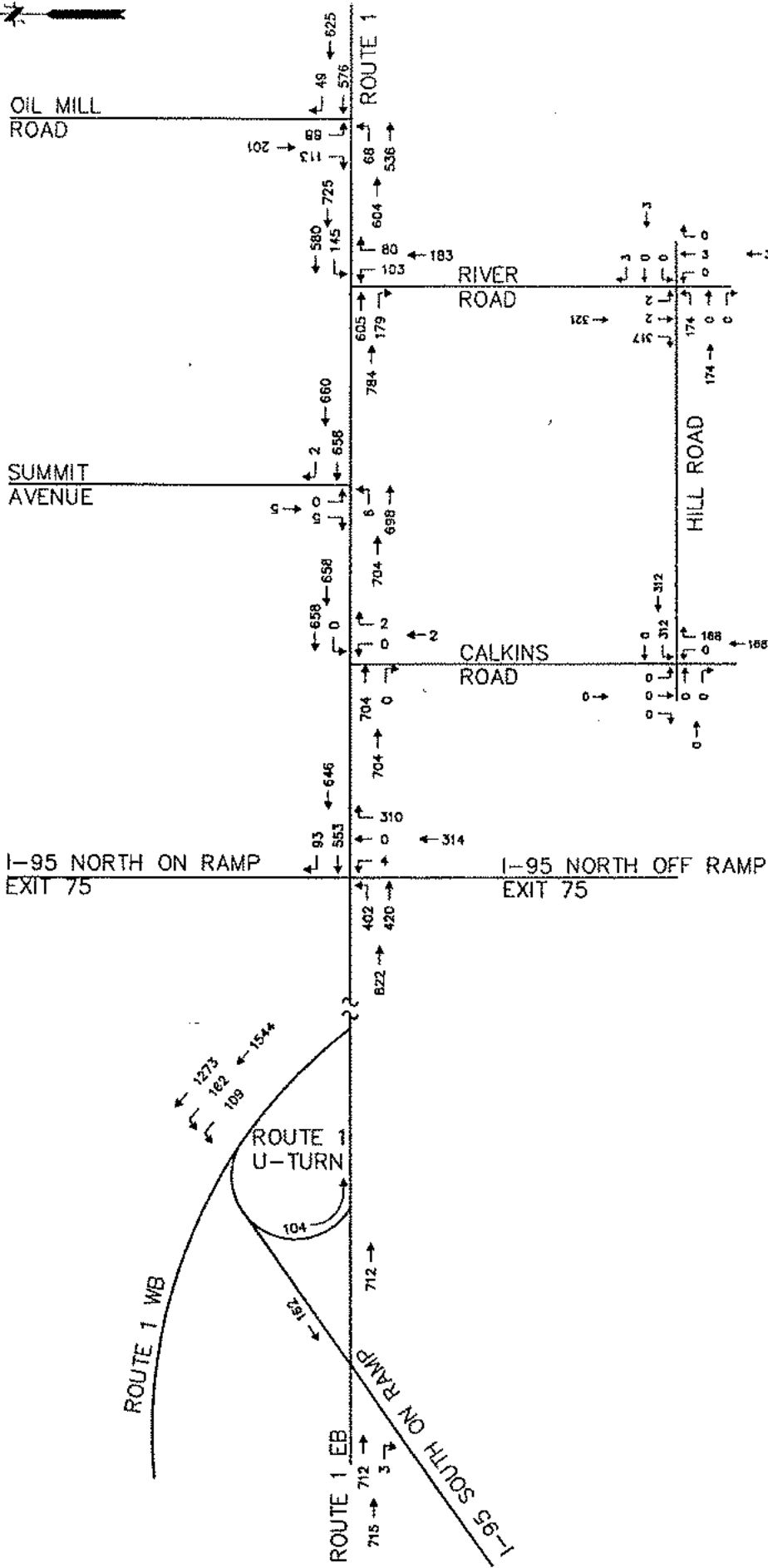
EAST LYME

FUSS & ONEILL, INC. Consulting Engineers
148 HARTFORD ROAD, MANCHESTER, CONNECTICUT 06040
860.246.2469

www.FandO.com



SCALE:	HORIZ. INTS.
	VERT.
DATUM:	HORIZ.
	VERT.
GRAPHIC SCALE	
0 5 10	



PROJ. NO.: 2002.081413
DATE: OCTOBER, 2005

FIG 10

LANDMARK DEVELOPMENT GROUP, LLC
COMBINED 2008 PM TRAFFIC VOLUMES
RIVERVIEW HEIGHTS

CONTRACT NO. IT

EAST TYP. F.

FUSS & O'NEILL INC. Consulting Engineers
140 HARTFORD ROAD, MANCHESTER, CONNECTICUT 06040
860.646.2469



www.FandO.com

SCALE:	HORIZ. NTS.
	VERT.
DATUM:	HORIZ.
	VERT.

ITE TRIP GENERATION WORKSHEETS



Graph Look Up

ITETripGen Web-based App

Graph Look Up

Technical Support

App Users

Comments

Query Filter

DATA SOURCE
 Trip Gen Manual, 10th Ed - Supplement

SEARCH BY LAND USE CODE

LAND USE GROUP
 (900-999) Services

LAND USE 1
 960 - Super Convenience Market/Gas Station

LAND USE SUBCATEGORY
 All Sizes

INDEPENDENT VARIABLE (X)
 1000 Sq. Ft. GFA

TIME PERIOD
 Weekly

SETTING/LOCATION
 General Urban/Suburban

TRIP TYPE
 Vehicle

ENTER IN VALUE TO CALCULATE TRIPS

Data Plot and Equation

DATA STATISTICS

Land Use: Super Convenience Market/Gas Station (960) Class
 for 0000.00000

Independent Variable:
 1000 Sq. Ft. GFA

Time Period:
 Weekly

Setting/Location:
 General Urban/Suburban

Trips Type:
 Vehicle

Number of Studies:
 1

Avg. 1000 Sq. Ft. GFA:
 4

Average Rate:
 817.50

Range of Rates:
 419.50 - 1725.50

Standard Deviation:
 234.67

Fitted Curve Equation:
 Avg. Rate

R^2 :

Directional Distribution:
 50% entering, 50% exiting

Calculated Trip Ends:
 Average Rate (664) (Trips) 3224 (Daily), 3225 (Daily)

Use the mouse wheel to Zoom Out or Zoom In.
 Hover the mouse pointer on data points to view X and Y values.

P000000010010000

By 12/18/2014



Graph Look Up

ITETripGen Web-based App

Graph Look Up

Technical Support

Auto Users

Comments

Query Filter

DATA SOURCE

SEARCH BY LAND USE CODE

LAND USE GROUP

LAND USE

LAND USE SUBCATEGORY

INDEPENDENT VARIABLE (V)

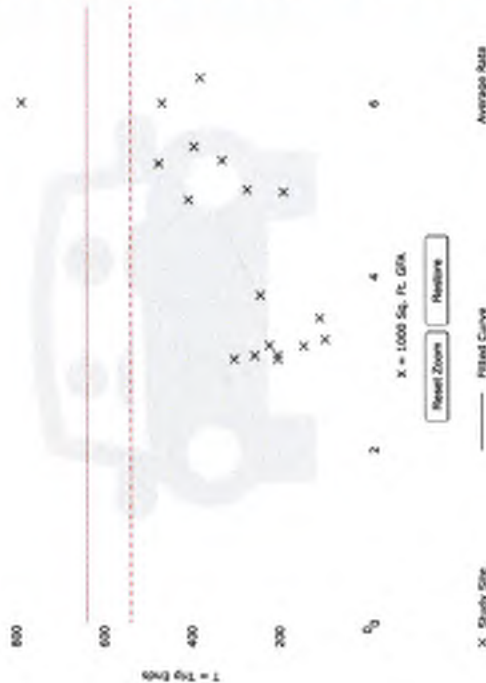
TIME PERIOD

SETTING/LOCATION

TRIP TYPE

ENTER A VALUE TO CALCULATE TRIPS

Data Plot and Equation



Use the mouse wheel to Zoom Out or Zoom In.
 Hover the mouse pointer on data points to view X and Y values.

DATA REFERENCES

Land Use:

Super Convenience Market/Gas Station (900) Class
 32,000,000%

Independent Variable:

1000 Sq. Ft. GFA

Time Period:

Weekday

AM Peak Hour of Generator

General Urban/Suburban

Setting/Location:

General Urban/Suburban

Trip Type:

Vehicle

Number of Studies:

18

Avg. 1000 Sq. Ft. GFA:

4

Average Rate:

75.01

Range of Rates:

28.34 - 131.90

Standard Deviation:

28.94

Fitted Curve Equation:

$T = 99.9500 \cdot 1.0036$

 R^2 :

0.93

Download Distribution:

50% entering, 50% exiting

Calculated Trip Ends:

Average Rate: 53 (Total), 269 (Entry), 270 (Exit)

Fitted Curve: 628 (Total), 314 (Entry), 314 (Exit)

Graph Look Up

ITSTripGen Web-based App

Graph Look Up

Technical Support

Add Users

Comments

Query Filter

DATA SOURCE:

The Gen Manual, 10th Ed + Supplement

SEARCH BY LAND USE CODE:

960

LAND USE GROUP:

(900-999) Services

LAND USE:

960 - Super Convenience Market/Gas Station

LAND USE SUBCATEGORY:

All Sites

INDEPENDENT VARIABLE (V):

1000 Sq. Ft. GFA

TIME PERIOD:

Weekday, PM Peak Hour of Generator

SETTLEMENT:

General Urban/Suburban

TRIP TYPE:

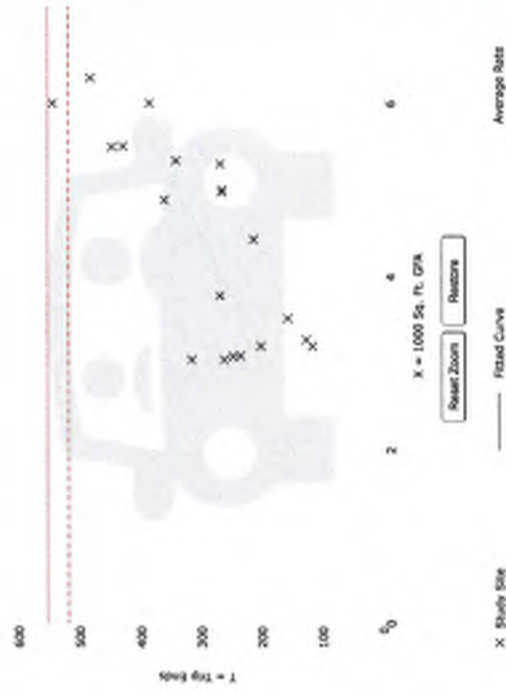
Vehicle

ENTER A VALUE TO CALCULATE TRIP:

7.7

Calculate

Data Plot and Equation



DATA REFERENCES

Land Use:
Super Convenience Market/Gas Station (960) Class
SC-960-0000

Independent Variable:
1000 Sq. Ft. GFA

Time Period:
Weekday, PM Peak Hour of Generator

Settings/Location:
General Urban/Suburban

Trip Type:
Vehicle

Number of Studies:
29

Avg. 1000 Sq. Ft. GFA:
4

Average Rate:
67.53

Range of Rates:
58.88 - 54.61

Standard Deviation:
11.12

Fitted Curve Equation:
 $T = 77.8600 \cdot R - 48.12$

R^2
0.81

Directional Distribution:
50% entering, 50% exiting

Calculated Trip Ends:
Average Rate: 529 (Total), 200 (Entry), 200 (Exit)

Fitted Curve: 554 (Total), 277 (Entry), 277 (Exit)

Use the mouse wheel to Zoom Out or Zoom In.
Hover the mouse pointer on data points to view X and Y values.

Apply to all more

Try ITSGS Plus



Graph Look Up

ITETripGen Web-based App

[Graph Look Up](#)
[Technical Support](#)
[App Users](#)
[Comments](#)

Query: Filter

DATA SOURCE: Trip Gen Manual, 10th Ed + Supplement

SEARCH BY LAND USE CODE: 990

LAND USE GROUP: (900-999) Services

LAND USE: 990 - Super Convenience Market/Use Station

LAND USE SUBCATEGORY: All Sites

INDEPENDENT VARIABLE (X): 1000 Sq. Ft. GFA

TIME PERIOD: Saturday

SETTING/LOCATION: General Urban/Suburban

TRIP TYPE: Vehicle

ENTER Y VALUE TO CALCULATE TRIPS: 7.7

Data Plot and Equation

Y = 2000 X

DATA STATISTICS

Land Use: Super Convenience Market/Use Station (990) Click for more details

Independent Variable: 1000 Sq. Ft. GFA

Time Period: Saturday

Setting/Location: General Urban/Suburban

Trips Type: Vehicle

Number of Studies: 1

Avg. 1000 Sq. Ft. GFA: 5

Average Rate: 700.00

Range of Rates: 700.00 - 700.00

Standard Deviation: ---

Fitted Curve Equation: Not Given

R²: ---

Directional Distribution: 50% entering, 50% exiting

Calculated Trip Ends: Average Rate 2000 (Y=2000, X=1000 (July), 2000 (Sat))

Use the mouse wheel to Zoom Out or Zoom In.
 Hover the mouse pointer on data points to view X and Y values.

[Address Book](#)
[My 20155 Plus](#)



Graph Look Up

ITETripGen Web-based App

Graph Look Up

Fuel Fuel Station

Add Loads

Comments

Query Filter

DATA SOURCE

Trip Gen Manual, 10th Ed + Supplement

SEARCH BY LAND USE CODE

960

LAND USE GROUP

(900-999) Services

LAND USE

960 - Super Convenience Market/Gas Station

LAND USE SUBCATEGORY

All Sites

INDEPENDENT VARIABLE (V)

1000 Sq. Ft. GFA

TIME PERIOD

Saturday, Peak Hour of Generator

SETTINGS LOCATION

General Urban/Suburban

TRIP TYPE

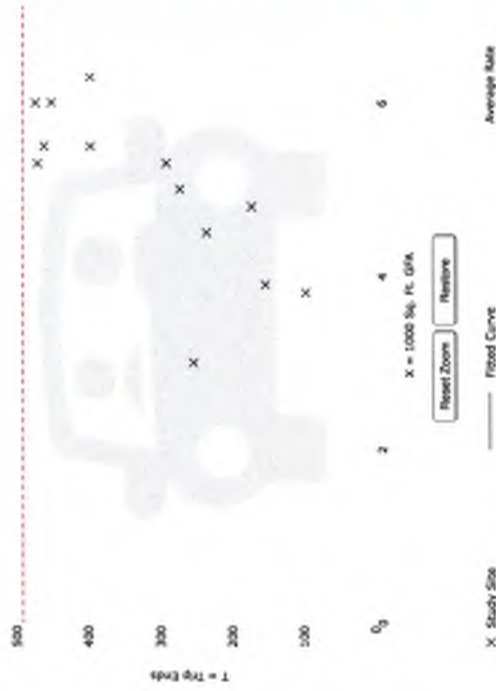
Vehicle

ENTER IN VALUE TO CALCULATE TRIPS

7.7

Calculate

Data Plot and Equation



Use this mouse wheel to Zoom Out or Zoom In.
 Hover the mouse pointer on data points to view X and T values.

DATA STATISTICS

Land Use: Super Convenience Market/Gas Station (960) DIS
 10.com.0010
Independent Variable: 1000 Sq. Ft. GFA
Time Period: Saturday
Peak Hour of Generator: General Urban/Suburban
Settings Location: General Urban/Suburban
Trip Type: vehicle
Number of Studies: 13
 5
Average Rate: 63.85
Range of Rates: 25.72 - 88.87
Standard Deviation: 19.29
Fitted Curve Equation: $T = 104.7(3) + 204.23$
 $R^2:$ 0.99
Directional Distribution: 50% entering, 50% exiting
Calculated Trip End: Average Rate: 497 (1000), 248 (500), Flood Curve: 632 (700), 301 (800), 301 (800)



Graph Look Up

ITE TripGen Web-based App

[Graph Look Up](#)
[Technical Support](#)
[Add Users](#)
[Contact Us](#)
Query

DATA SOURCE

SEARCH BY LAND USE CODE

LAND USE GROUP

LAND USE

LAND USE SUBCATEGORY

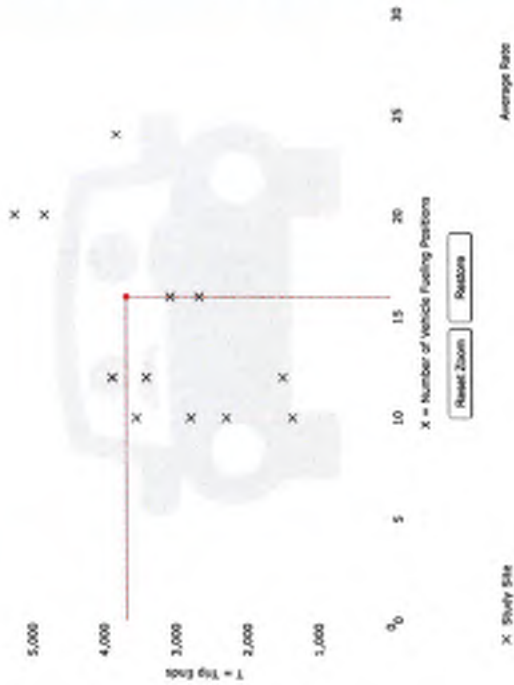
INDEPENDENT VARIABLE (X)

TIME PERIOD

BITTING/LOCATION

TRIP TYPE

Data Plot and Equation



DATA STATISTICS

Land Use: Super Convenience Market/Gas Station (960) CLOS
 (0, 000, 000.00)

Independent Variable: Vehicle Fueling Positions

Time Period: Weekly

Settings/Level: General Urban/Suburban

Trips Type: Vehicle

Number of Studies: 13

Avg. Num. of Vehicle Fueling Positions: 14

Average Rate: 209.52

Range of Rates: 129.67 - 309.62

Standard Deviation: 71.75

Fitted Curve Equation: Not Given

R²: ...

Directional Distribution: 50% entering, 50% exiting

Calculated Trip Ends: Average Rate * 2000 (/Year) = 444 (Trips), 1944 (Trips)

Use the mouse wheel to Zoom Out or Zoom In.
 Hover the mouse pointer on data points to view X and Y values.

[Graph Look Up](#)[Technical Support](#)[About Us](#)[Comments](#)

Graph Look Up

Query Filter

DATA SOURCE:

SEARCH BY LAND USE CODE:

LAND USE GROUP:

LAND USE:

LAND USE SUBCATEGORY:

INDEPENDENT VARIABLE (Y):

TIME PERIOD:

SETTING/LOCATION:

TRIP TYPE:

ENTER IN VALUE TO CALCULATE TRIPS:

Data Plot and Equation

DATA STATISTICS

Land Use: Super Convenience Market/Gas Station (960) Click [to view details](#)

Independent Variable: Vehicle Fueling Positions

Time Period: Weekday, AM Peak Hour of Generator

Setting/Location: General Urban/Suburban

Trip Type: vehicle

Number of Studies: 18

Avg. Num. of Vehicle Fueling Positions: 14

Average Rate: 21.36

Range of Rates: 9.00 - 45.31

Standard Deviation: 11.15

Fitted Curve Equation: Not Given

R^2 : -

σ : -

Directional Distribution: 60% entering, 40% exiting

Calculated Trip Ends: Average Rate: 241 (70%), 172 (50%), 131 (34%)

Use the mouse wheel to Zoom Out or Zoom In.
Hover the mouse pointer on data points to view X and Y values.

 Graph Look Up

ITETripGen Web-based App

Graph Look Up

Technical Support

App Users

Comments

Query Filter

DATA SOURCE:
 Trip Gen Manual, 10th Ed + Supplement

SEARCH BY LAND USE CODE:

LAND USE CATEGORY:
 (960-999) Services

LAND USE:
 960 - Super Convenience Market/Gas Station

LAND USE SUBCATEGORY:
 All Sites

INDEPENDENT VARIABLE (X):
 Vehicle Fueling Positions

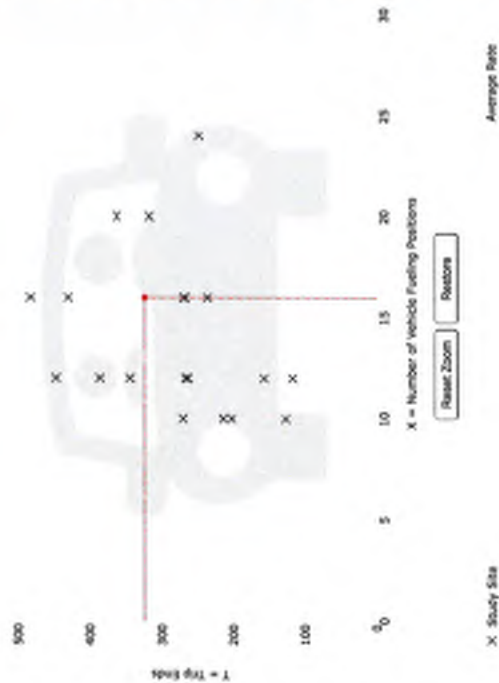
TIME PERIOD:
 Weekday, PM Peak Hour of Generator

SETTING/LOCATION:
 General Urban/Suburban

TRIP TYPE:
 Vehicle

ENTER Y VALUE TO CALCULATE TRIP:

Data Plot and Equation



X: Study Site

Average Rate

DATA STATISTICS

Land Use:
 Super Convenience Market/Gas Station (960) 253

Source/Details:

Independent Variable:
 Vehicle Fueling Positions

Time Period:
 Weekday, PM Peak Hour of Generator

Setting/Location:
 General Urban/Suburban

Trips Type:
 Vehicle

Number of Studies:
 19

Avg. Num. of Vehicle Fueling Positions:
 7.4

Average Rate:
 20.25

Range of Rates:
 8.83 - 27.62

Standard Deviation:
 7.73

Fit: Curve Equation:
 Not Given

R^2
 .666

Directional Distribution:
 50% entering, 50% exiting

Calculated Trip Ends:
 Average Rate: 20.4 (70%), 14.2 (Entry), 14.2 (Exit)

Use the mouse wheel to Zoom Out or Zoom In.
 Move the mouse pointer on data points to view X and Y values.

JANUARY 2017

Page 01055 P.10



Graph Look Up

ITETripGen Web-based App

[Graph Look Up](#)[Technical Support](#)[Add Users](#)[Comments](#)

Query Filter

DATA SOURCE:

SEARCH BY LAND USE CODE:

LAND USE GROUP:

LAND USE:

LAND USE SUBCATEGORY:

INDEPENDENT VARIABLE (Y):

TIME PERIOD:

SETTING/LOCATION:

TRIP TYPE:

ENTER IN VALUE TO CALCULATE TRIPS:

Data Plot and Equation

Cautions - Small Sample Size

DATA STATISTICS

Land Use: Super Convenience Market/Gas Station (900) Click
 Scenarios: 0(0)

Independent Variable: Vehicle Fueling Positions

Time Period: Saturday

Setting/Location: General Urban/Suburban

Trip Type: Vehicle

Number of Studies: 1

Avrg. Num. of Vehicle Fueling Positions: 12

Average Rate: 261.87

Range of Rates: 241.87 - 281.87

Standard Deviation: ---

Fitted Curve Equation: Not Given

R²: ---

Directional Distribution: 50% vehicle, 50% walking

Calculated Trip Ends: Average Rate: 4887 (Thurs), 2333 (Fri), 2234 (Sat)

Plot Controls:

Equation: Average Rate

Use the mouse wheel to Zoom Out or Zoom In. Hover the mouse pointer on data points to view X and Y values.

Saturday, 07/30/2016

Page 11 of 50 P.10



Graph Look Up

ITETripGen Web-based App

Graph Look Up

Technical Support

FAQs/Links

Comments

Query Filter

DATA SOURCE:

Trip Gen Manual, 10th Ed + Supplement

SEARCH BY LAND USE CODE:

960

LAND USE GROUP:

(900-999) Services

LAND USE:

960 - Super Convenience Market/Gas Station

LAND USE SUBCATEGORY:

All Sites

INDEPENDENT VARIABLE (X):

Vehicle Fueling Positions

TIME PERIOD:

Saturday, Peak Hour of Generator

SETTING/LOCATION:

General Urban/Suburban

TRIP TYPE:

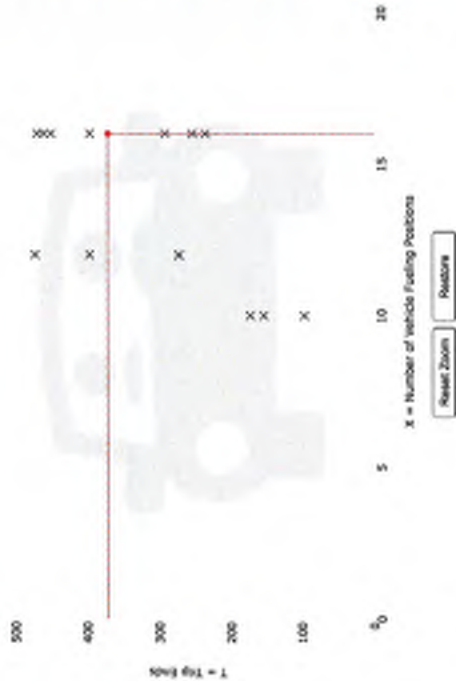
Vehicle

ENTER IN VALUE TO CALCULATE TERMS:

16

Calculate

Data Plot and Equation



X Study Site

Average Rate

X = Number of Vehicle Fueling Positions

Reset Zoom

Positions

Use the mouse wheel to Zoom Out or Zoom In.
Hover the mouse pointer on data points to view X and Y values.

DATA SUMMARY

Land Use:

Super Convenience Market/Gas Station (REC) 238
07,000,0000

Independent Variable:

Vehicle Fueling Positions

Time Period:

Saturday

Peak Hour of Generator:

General Urban/Suburban

Setting/Location:

General Urban/Suburban

Trip Type:

Vehicle

Number of Studies:

13

Avg. Num. of Vehicle Fueling Positions:

14

Average Rate:

23.28

Range of Rates:

8.80 - 28.50

Standard Deviation:

8.20

Fitted Curve Equation:

Not Given

R²:

1.00

Desired Distribution:

50% entering, 50% exiting

Calculated Trip Ends:

Average Rate: 272 (70%), 186 (Entry), 186 (Exit)



Graph Look Up

ITETripGen Web-based App

Graph Look Up

Technical Support

Auto Users

Comments

Query Filter

DATA SOURCE

Trip Gen Manual, 10th Ed + Supplement

SEARCH BY LAND USE CODE

960

LAND USE GROUP

(900-999) Services

LAND USE

960 - Super Convenience Market/Gas Station

LAND USE SUBCATEGORY

All Other

INDEPENDENT VARIABLE (X)

1000 Sq. Ft. GFA

TIME PERIOD

Weekday, Peak Hour of Adjacent Street Traffic

SETTING/LOCATION

General Urban/Suburban

TRIP TYPE

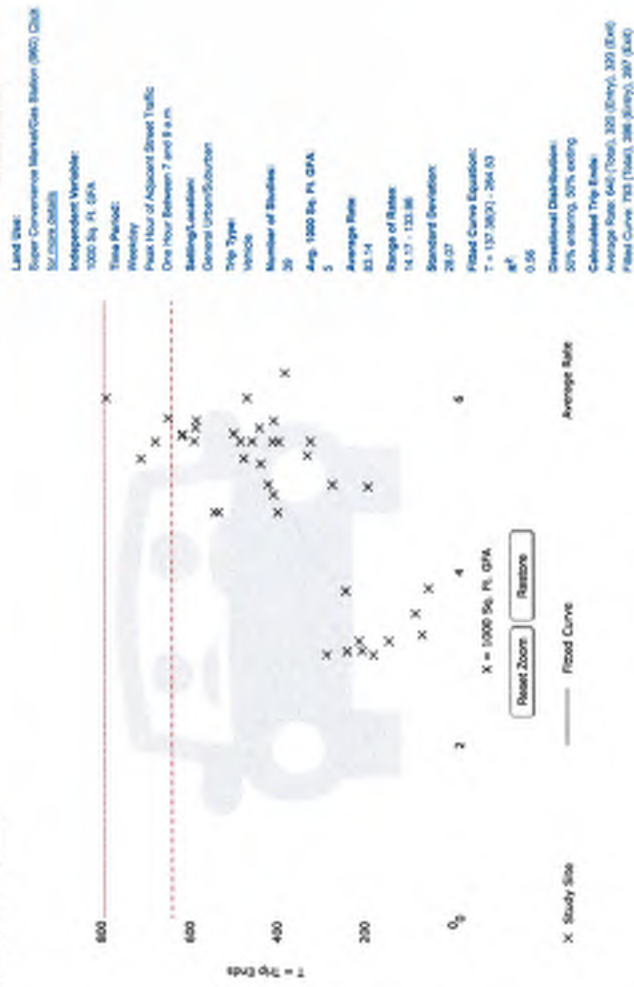
Vehicle

ENTER X VALUE TO CALCULATE TRIPS

7.7

CALCULATE

Data Plot and Equation



Use the mouse wheel to Zoom Out or Zoom In.
 Hover the mouse pointer on data points to show X and Y values.

About to do more

By ITISS, Ph.D.



Graph Look Up

ITETripGen Web-based App

Graph Look Up

Technical Support

Add Links

Comments

Query Filter

DATA SOURCE:
Trip Gen Manual, 10th Ed - Supplement

SEARCH BY LAND USE CODE:
960

LAND USE GROUP:
(900-999) Services

LAND USE:
960 - Super Convenience Market/Gas Station

LAND USE SUBCATEGORY:
All Sites

INDEPENDENT VARIABLE (V):
1000 Sq. Ft. GFA

TIME PERIOD:
Weekday, Peak Hour of Adjacent Street Traffic

SETTING/LOCATION:
General Urban/Suburban

TRIP TYPE:
Vehicle

ENTER IN VALUE TO CALCULATE TRIPS:
7.7 Calculate

Data Plot and Equation

X = Study Site

Reset Zoom Restore

DATA STATISTICS

Level Use:
Super Convenience Market/Gas Station (960) Click for more details

Independent Variable:
1000 Sq. Ft. GFA

Time Period:
Weekday
Peak Hour of Adjacent Street Traffic
One Hour Between 4 and 5 p.m.

Setting/Location:
General Urban/Suburban

Trip Type:
Vehicle

Number of Studies:
4

Avg. 1000 Sq. Ft. GFA:
5

Average Rate:
95.28

Range of Rates:
28.83 - 114.27

Standard Deviation:
21.07

Fitted Curve Equation:
Not Given

R²:

Conditional Distribution:
50% entering, 50% exiting
Calculated Trip Ends:
Average Rate: 533 (Total), 258 (Entry), 287 (Exit)

Use this mouse wheel to Zoom Out or Zoom In.
Hover the mouse pointer on data points to view X and Y values.

Submitted by: 03/03/2014

By: 03/03/2014

ITE TripGen Web-based App

Graph Look Up

Technical Support

Add Levels

Comments

Query Filter

DATA SOURCE:

Trip Gen Manual, 10th Ed + Supplement

SEARCH BY LAND USE CODE:

960

LAND USE GROUP:

[900-999] Services

LAND USE:

960 - Super Convenience Market/Gas Station

LAND USE SUBCATEGORY:

All Sites

INDEPENDENT VARIABLE (X):

Vehicle Fueling Positions

TIME PERIOD:

Weekday, Peak Hour of Adjacent Street Traffic

SETTING/LOCATION:

General Urban/Suburban

TRIP TYPE:

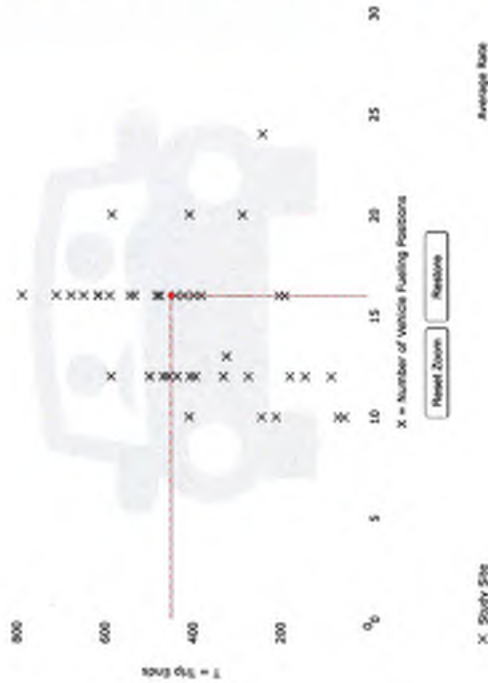
Vehicle

ENTER IN VALUE TO CALCULATE TRIPS:

16

Calculate

Data Plot and Equation



Average Rate

X = Number of Vehicle Fueling Positions

X Study Site

New Zoom

Reset

Use the mouse wheel to Zoom In or Zoom Out.
Hover the mouse pointer on data points to see X and Y values.

DATA STATISTICS

Land Use: Super Convenience Market/Gas Station (960) (0x)

Search Results

Independent Variable: Vehicle Fueling Positions

Time Period: Weekday, Peak Hour of Adjacent Street Traffic One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban

Trip Type: Vehicle

Number of Studies: 30

Avg. Num. of Vehicle Fueling Positions: 16

Average Rate: 28.38

Range of Rates: 1.00 - 83.31

Standard Deviation: 11.88

Fitted Curve Equation: Not Given

Directional Distribution: 50% entering, 50% exiting

Calculated Trip Rate: Average Rate: 48 (Data), 324 (Empty), 325 (Data)


Graph Look Up

ITETripGen Web-based App

Graph Look Up

Technical Support

Non Users

Comments

Query Filter

DATA SOURCE:
 Trip Gen Manual, 10th Ed + Supplement

SEARCH BY LAND USE CODE:

LAND USE GROUP:
 (000-999) Services

LAND USE:
 660 - Super Convenience Market/Gas Station

LAND USE SUBCATEGORY:
 All Sites

INDEPENDENT VARIABLE (Y):
 Vehicle Fueling Positions

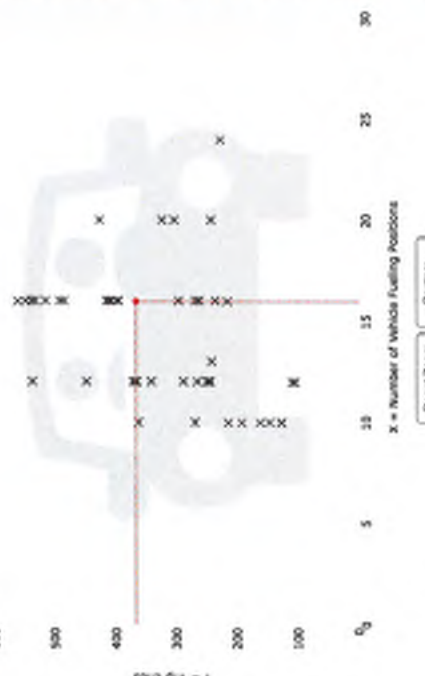
TIME PERIOD:
 Weekday, Peak Hour of Adjacent Street Traffic

SETTING/LOCATION:
 General Urban/Suburban

TRIP TYPE:
 Vehicle

ENTER A VALUE TO CALCULATE TRIP:

Data Plot and Equation



X = Number of Vehicle Fueling Positions

Average Rate

DATA STATISTICS

Land Use:
 Super Convenience Market/Gas Station (660) 238
 30,000 (total)

Independent Variable:
 Vehicle Fueling Positions

Time Period:
 Weekday
 Peak Hour of Adjacent Street Traffic
 One Hour between 4 and 5 p.m.

Setting/Location:
 General Urban/Suburban

Trip Type:
 Vehicle

Number of Studies:
 48

Arg. Num. of Vehicle Fueling Positions:
 14

Average Rate:
 22.96

Range of Rates:
 0.75 - 44.83

Standard Deviation:
 8.34

Fitted Curve Equation:
 Not Given

R^2 :
 --

Directional Distribution:
 50% entering, 50% exiting

Calculated Trip End:
 Average Rate: 307 (7040), 193 (5140), 184 (5140)

Use the mouse wheel to Zoom Out or Zoom In.
 Hover the mouse pointer on data points to view X and Y values.

© 2010-2011

Try ITETripGen


Graph Look Up

ITE TripGen Web-based App

Graph Look Up

Technical Support

Add Users

Comments

Back to Main Page

Try Other P...

Data Plot and Equation

Query Filter

DATA SOURCE:

Trip Gen Manual, 10th Ed + Supplement

SEARCH BY LAND USE CODE:

LAND USE GROUP:

(900-999) Services

LAND USE:

960 - Super Convenience Market/Gas Station

LAND USE SUBCATEGORY:

All Sites

INDEPENDENT VARIABLE (X):

AM Peak Hour Traffic on Adj. St.

TIME PERIOD:

Weekday, Peak Hour of Adjacent Street Traffic

SETTING/LOCATION:

General Urban/Suburban

TRIP TYPE:

Vehicle

ENTER IN VALUE TO CALCULATE TRIPS:

Land Use:
 Super Convenience Market/Gas Station (960) 238
 (97,000,0000)

Independent Variable:

AM Peak Hour Traffic on Adj. St.

Time Period:

 Weekday
 Peak hour of Adjacent Street Traffic
 One Hour between 7 and 9 a.m.

Setting/Location:

General Urban/Suburban

Trip Type:

Vehicle

Number of Studies:

9

 Avg. AM Peak Hour Traffic on Adj. St.:
 2208

Average Rate:

0.20

Range of Rates:

0.08 - 0.45

Standard Deviation:

0.28

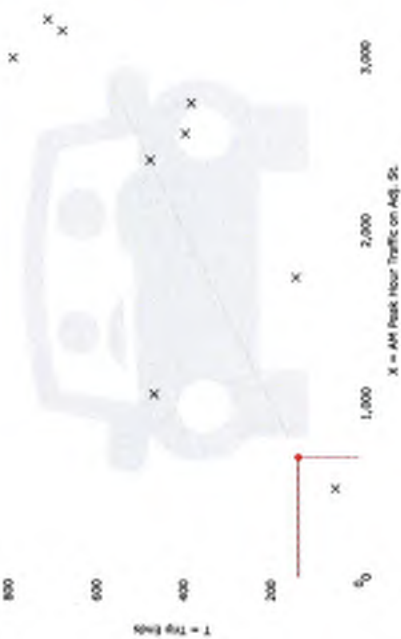
Fitted Curve Equation:
 $T = 3.22001 \cdot X^{1.14}$
R²:

0.81

Directional Distribution:

50% entering, 50% exiting

Calculated Trip End:

 Average Rate: 0.21 (Trips), 88 (Trips), 89 (Exit)
 Fitted Curve: 137 (Trips), 88 (Trips), 89 (Exit)


Average Rate

 Use the mouse wheel to Zoom Out or Zoom In.
 Hover the mouse pointer on data points to view X and T values.



Graph Look Up

ITETripGen Web-based App

[Graph Look Up](#)
[Technical Support](#)
[Add Users](#)
[Comments](#)
Query [Filter](#)

DATA SOURCE:

SEARCH BY LAND USE CODE:

LAND USE GROUP:

LAND USE:

LAND USE SUBCATEGORY:

INDEPENDENT VARIABLE (X):

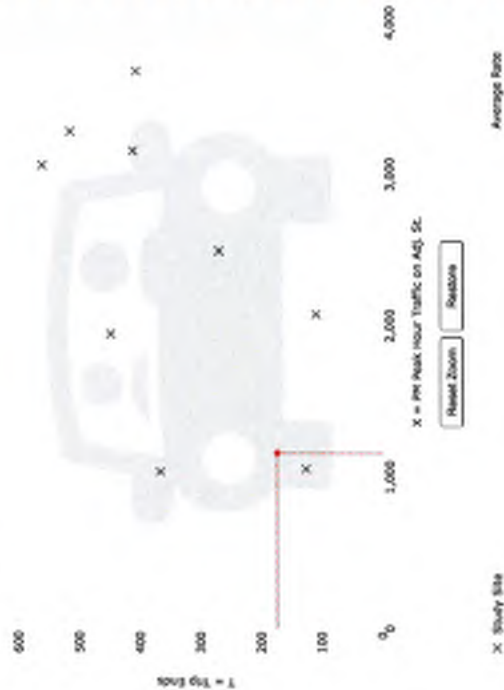
TIME PERIOD:

SETTING/LOCATION:

TRIP TYPE:

ENTER IN VALUE TO CALCULATE TRIPS:

Data Plot and Equation



Use the mouse wheel to Zoom Out or Zoom In.
Hover the mouse pointer on data points to view X and Y values.

DATA SUMMARY

Land Use: Super Convenience Market/Gas Station (860) (248)
 (52,700,2828)

Independent Variable: PM Peak Hour Traffic on Adj. St.

Time Period: Weekday, Peak Hour of Adjacent Street Traffic
 One hour between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

Trips Type: Vehicle

Number of Studies: 8

Avg. PM Peak Hour Traffic on Adj. St.: 2,418

Average Rate: 8.15

Range of Rates: 0.00 - 0.25

Standard Deviation: 0.07

Fitted Curve Equation: Not Given

R²: --

Directional Distribution: 50% entering, 50% exiting

Calculated Trip Ends: Average Rate (14 (1144), 87 (344), 87 (344)

[Graph Look Up](#)[Regional Support](#)[All Users](#)[Comments](#)

Graph Look Up

Query [Print](#)

DATA SOURCE:
 Trip Gen Manual, 10th Ed + Supplement

SEARCH BY LAND USE CODE:

LAND USE GROUP:
 (R00-899) Services

LAND USE:
 850 - Truck Stop

LAND USE SUBCATEGORY:
 All Sites

INDEPENDENT VARIABLE (Y):
 Vehicle Fueling Positions

TIME PERIOD:
 Weekday, Peak Hour of Adjacent Street Traffic

SETTING/LOCATION:
 General Urban/Suburban

TRIP TYPE:
 Vehicle

ENTER IN VALUE TO CALCULATE TRIP:

Data Plot and Equation

Case - Small Sample Size

Y Study Site

Legend:
 X = Number of Vehicle Fueling Positions

**Use the mouse wheel to Zoom Out or Zoom In.
 Hover the mouse pointer on data points to view X and Y values.**

QUALIFIERS

Land Use:
 Truck Stop (R00) Click for more details

Independent Variable:
 Vehicle Fueling Positions

Time Period:
 Weekday, Peak Hour of Adjacent Street Traffic
 One hour between 7 and 9 a.m.

Setting/Location:
 General Urban/Suburban

Trips Type:
 Vehicle

Number of Studies:
 1

Avg. Num. of Vehicle Fueling Positions:
 22

Average Rate:
 7.18

Range of Rates:
 7.18 - 7.18

Standard Deviation:

Fitted Curve Equation:
 Not Given

R²:

Distributional Characteristics:
 51% entering, 49% exiting

Calculated Trip Ends:
 Average Rate: 22 (Trips), 11 (Emp), 11 (Est)



Graph Look Up

ITETripGen Web-based App

Graph Look Up

Technical Support

About Us

Comments

Query Filter

DATA SOURCE:
Trip Gen Manual, 10th Ed + Supplement

SEARCH BY LAND USE CODE:
660

LAND USE GROUP:
(800-899) Services

LAND USE:
600 - Truck Stop

LAND USE SUBCATEGORY:
All Sites

INDEPENDENT VARIABLE (Y):
Vehicle Fueling Positions

TIME PERIOD:
Weekly, Peak Hour of Adjacent Street Traffic

SETTING/LOCATION:
General Urban/Suburban

TRIP TYPE:
Vehicle

ENTER Y VALUE TO CALCULATE TRIPS:
3

Data Plot and Equation

CAUTION - Small Sample Size

Average Rate

DATA SUMMARY

Land Use: Truck Stop (800) OMS.MV.COST.DISTRI

Independent Variable: Vehicle Fueling Positions

Time Period: Weekly

Peak Hour of Adjacent Street Traffic: One Hour Between 4 and 9 p.m.

Setting/Location: General Urban/Suburban

Trip Type: Vehicle

Number of Studies: 1

Avg. Num. of Vehicle Fueling Positions: 22

Average Rate: 8.41

Range of Rates: 8.41 - 8.41

Standard Deviation: ---

Fitted Curve Equation: Not Given

R²: ---

Directional Distribution: 49% entering, 51% exiting

Calculated Trip Ends: Average Rate: 20 (Trips), 12 (Energy), 13 (Fuel)

Use the mouse wheel to Zoom Out or Zoom In.
Hover the mouse pointer on data points to view X and Y values.


















Access to print

Try Online Pro

SYNCHRO ANALYSIS



















HCM Unsignalized Intersection Capacity Analysis
3: I-95 Off Ramp & Route 1 & I-95 On Ramp

2022 Background Traffic Volumes
AM

											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SBL	SBR	NEL2	NEL	NER
Lane Configurations											
Traffic Volume (veh/h)	236	203	0	0	466	67	0	0	2	0	189
Future Volume (Veh/h)	236	203	0	0	466	67	0	0	2	0	189
Sign Control		Free			Free		Stop			Stop	
Grade		0%			0%		0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	257	221	0	0	507	73	0	0	2	0	205
Pedestrians											
Lane Width (ft)											
Walking Speed (ft/s)											
Percent Blockage											
Right turn flare (veh)											
Median type		None			None						
Median storage (veh)											
Upstream signal (ft)											
pX, platoon unblocked											
vC, conflicting volume	580			221			1447	1242	1242	1315	221
vC1, stage 1 conf vol											
vC2, stage 2 conf vol											
vCu, unblocked vol	580			221			1447	1242	1242	1315	221
tC, single (s)	4.1			4.1			7.1	6.5	7.1	6.5	6.2
tC, 2 stage (s)											
tF (s)	2.2			2.2			3.5	4.0	3.5	4.0	3.3
p0 queue free %	74			100			100	100	98	100	75
cM capacity (veh/h)	994			1348			66	129	121	117	819
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NE 1	NE 2					
Volume Total	257	221	507	73	2	205					
Volume Left	257	0	0	0	2	0					
Volume Right	0	0	0	73	0	205					
cSH	994	1700	1700	1700	121	819					
Volume to Capacity	0.26	0.13	0.30	0.04	0.02	0.25					
Queue Length 95th (ft)	26	0	0	0	1	25					
Control Delay (s)	9.9	0.0	0.0	0.0	35.2	10.9					
Lane LOS	A				E	B					
Approach Delay (s)	5.3		0.0		11.1						
Approach LOS					B						
Intersection Summary											
Average Delay			3.8								
Intersection Capacity Utilization			50.9%		ICU Level of Service				A		
Analysis Period (min)			15								












HCM Unsignalized Intersection Capacity Analysis
3: I-95 Off Ramp & Route 1 & I-95 On Ramp

2022 Combined Traffic Volumes
AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SBL	SBR	NEL2	NEL	NER	
Lane Configurations												
Traffic Volume (veh/h)	236	232	0	0	536	108	0	0	2	0	213	
Future Volume (Veh/h)	236	232	0	0	536	108	0	0	2	0	213	
Sign Control		Free			Free		Stop			Stop		
Grade		0%			0%		0%			0%		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Hourly flow rate (vph)	257	252	0	0	583	117	0	0	2	0	232	
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type	None					None						
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	700			252			1581	1349	1349	1466	252	
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	700			252			1581	1349	1349	1466	252	
tC, single (s)	4.1			4.1			7.1	6.5	7.1	6.5	6.2	
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.5	4.0	3.3	
p0 queue free %	71			100			100	100	98	100	71	
cM capacity (veh/h)	897			1313			48	107	99	91	787	
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NE 1	NE 2						
Volume Total	257	252	583	117	2	232						
Volume Left	257	0	0	0	2	0						
Volume Right	0	0	0	117	0	232						
cSH	897	1700	1700	1700	99	787						
Volume to Capacity	0.29	0.15	0.34	0.07	0.02	0.29						
Queue Length 95th (ft)	30	0	0	0	2	31						
Control Delay (s)	10.6	0.0	0.0	0.0	41.9	11.5						
Lane LOS	B				E	B						
Approach Delay (s)	5.4		0.0		11.7							
Approach LOS					B							
Intersection Summary												
Average Delay			3.8									
Intersection Capacity Utilization			54.6%	ICU Level of Service	A							
Analysis Period (min)	15											

HCM Unsignalized Intersection Capacity Analysis
6: Route 1 & Site Drive 1

2022 Combined Traffic Volumes
AM

						
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	127	325	507	43	45	137
Future Volume (Veh/h)	127	325	507	43	45	137
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	138	353	551	47	49	149
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	598			1204	574	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	598			1204	574	
tC, single (s)	4.1			6.4	6.2	
tC, 2 stage (s)						
tF (s)	2.2			3.5	3.3	
p0 queue free %	86			72	71	
cM capacity (veh/h)	979			175	518	
Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2	
Volume Total	138	353	598	49	149	
Volume Left	138	0	0	49	0	
Volume Right	0	0	47	0	149	
cSH	979	1700	1700	175	518	
Volume to Capacity	0.14	0.21	0.35	0.28	0.29	
Queue Length 95th (ft)	12	0	0	27	30	
Control Delay (s)	9.3	0.0	0.0	33.4	14.7	
Lane LOS	A			D	B	
Approach Delay (s)	2.6		0.0	19.4		
Approach LOS				C		
Intersection Summary						
Average Delay			4.0			
Intersection Capacity Utilization			49.7%	ICU Level of Service	A	
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
8: Route 1 & Site Drive 2



















2022 Combined Traffic Volumes
AM



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Volume (veh/h)	9	381	550	2	0	0
Future Volume (Veh/h)	9	381	550	2	0	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	10	392	598	2	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type						
		None	None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	600				1011	599
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	600				1011	599
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				100	100
cM capacity (veh/h)	977				263	502
Direction, Lane #						
	EB 1	WB 1	SB 1			
Volume Total	402	600	0			
Volume Left	10	0	0			
Volume Right	0	2	0			
cSH	977	1700	1700			
Volume to Capacity	0.01	0.35	0.00			
Queue Length 95th (ft)	1	0	0			
Control Delay (s)	0.3	0.0	0.0			
Lane LOS	A		A			
Approach Delay (s)	0.3	0.0	0.0			
Approach LOS			A			
Intersection Summary						
Average Delay			0.1			
Intersection Capacity Utilization		32.4%		ICU Level of Service		A
Analysis Period (min)			15			



















HCM Unsignalized Intersection Capacity Analysis
3: I-95 Off Ramp/I-95 On Ramp & Route 1

2022 Background Traffic Volumes
PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	310	409	0	0	595	126	6	0	305	0	0	0
Future Volume (Veh/h)	310	409	0	0	595	126	6	0	305	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	337	445	0	0	647	137	7	0	332	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	784			445			1766	1903	445	2098	1766	647
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	784			445			1766	1903	445	2098	1766	647
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	60			100			84	100	46	100	100	100
cM capacity (veh/h)	834			1115			45	41	613	12	50	471
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2						
Volume Total	337	445	647	137	7	332						
Volume Left	337	0	0	0	7	0						
Volume Right	0	0	0	137	0	332						
cSH	834	1700	1700	1700	45	613						
Volume to Capacity	0.40	0.26	0.38	0.08	0.16	0.54						
Queue Length 95th (ft)	49	0	0	0	13	81						
Control Delay (s)	12.2	0.0	0.0	0.0	99.8	17.6						
Lane LOS	B				F	C						
Approach Delay (s)	5.3		0.0		19.3							
Approach LOS					C							
Intersection Summary												
Average Delay			5.6									
Intersection Capacity Utilization			77.4%		ICU Level of Service				D			
Analysis Period (min)			15									












HCM Unsignalized Intersection Capacity Analysis
3: I-95 Off Ramp & Route 1 & I-95 On Ramp

2022 Combined Traffic Volumes
PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SBL	SBR	NEL2	NEL	NER	
Lane Configurations												
Traffic Volume (veh/h)	310	443	0	0	662	167	0	0	6	0	329	
Future Volume (Veh/h)	310	443	0	0	662	167	0	0	6	0	329	
Sign Control		Free			Free		Stop			Stop		
Grade		0%			0%		0%			0%		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Hourly flow rate (vph)	337	482	0	0	720	182	0	0	7	0	358	
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	902			482			2234	1876	1876	2058	482	
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	902			482			2234	1876	1876	2058	482	
tC, single (s)	4.1			4.1			7.1	6.5	7.1	6.5	6.2	
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.5	4.0	3.3	
p0 queue free %	55			100			100	100	80	100	39	
cM capacity (veh/h)	754			1081			8	40	36	30	584	
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NE 1	NE 2						
Volume Total	337	482	720	182	7	358						
Volume Left	337	0	0	0	7	0						
Volume Right	0	0	0	182	0	358						
cSH	754	1700	1700	1700	36	584						
Volume to Capacity	0.45	0.28	0.42	0.11	0.20	0.61						
Queue Length 95th (ft)	58	0	0	0	16	103						
Control Delay (s)	13.6	0.0	0.0	0.0	129.8	20.4						
Lane LOS	B				F	C						
Approach Delay (s)	5.6		0.0		22.5							
Approach LOS					C							
Intersection Summary												
Average Delay			6.1									
Intersection Capacity Utilization			65.3%		ICU Level of Service				C			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis
6: Route 1 & Site Drive 1

2022 Combined Traffic Volumes
PM

						
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	121	651	697	41	43	132
Future Volume (Veh/h)	121	651	697	41	43	132
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	132	708	758	45	47	143
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None		None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	803			1752	780	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	803			1752	780	
tC, single (s)	4.1			6.4	6.2	
tC, 2 stage (s)						
tF (s)	2.2			3.5	3.3	
p0 queue free %	84			40	64	
cM capacity (veh/h)	821			79	395	
Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2	
Volume Total	132	708	803	47	143	
Volume Left	132	0	0	47	0	
Volume Right	0	0	45	0	143	
cSH	821	1700	1700	79	395	
Volume to Capacity	0.16	0.42	0.47	0.60	0.36	
Queue Length 95th (ft)	14	0	0	66	40	
Control Delay (s)	10.2	0.0	0.0	103.0	19.2	
Lane LOS	B			F	C	
Approach Delay (s)	1.6	0.0		39.9		
Approach LOS				E		
Intersection Summary						
Average Delay			4.9			
Intersection Capacity Utilization			59.2%	ICU Level of Service	B	
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
8: Route 1 & Site Drive 2



















2022 Combined Traffic Volumes
PM



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Volume (veh/h)	10	684	738	2	0	0
Future Volume (Veh/h)	10	684	738	2	0	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	11	743	802	2	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type						
		None	None			
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	804				1568	803
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	804				1568	803
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				100	100
cM capacity (veh/h)	820				120	383
Direction, Lane #						
	EB 1	WB 1	SB 1			
Volume Total	754	804	0			
Volume Left	11	0	0			
Volume Right	0	2	0			
cSH	820	1700	1700			
Volume to Capacity	0.01	0.47	0.00			
Queue Length 95th (ft)	1	0	0			
Control Delay (s)	0.4	0.0	0.0			
Lane LOS	A		A			
Approach Delay (s)	0.4	0.0	0.0			
Approach LOS			A			
Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utilization		47.3%		ICU Level of Service		A
Analysis Period (min)		15				


















HCM Unsignalized Intersection Capacity Analysis
3: I-95 Off Ramp/I-95 On Ramp & Route 1

2022 Background Traffic Volumes
SAT

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	396	406	0	0	621	84	3	0	288	0	0	0
Future Volume (Veh/h)	396	406	0	0	621	84	3	0	288	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	430	441	0	0	675	91	3	0	313	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	766			441			1976	2067	441	2289	1976	675
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	766			441			1976	2067	441	2289	1976	675
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	49			100			89	100	49	100	100	100
cM capacity (veh/h)	847			1119			28	27	616	8	31	454
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2						
Volume Total	430	441	675	91	3	313						
Volume Left	430	0	0	0	3	0						
Volume Right	0	0	0	91	0	313						
cSH	847	1700	1700	1700	28	616						
Volume to Capacity	0.51	0.26	0.40	0.05	0.11	0.51						
Queue Length 95th (ft)	73	0	0	0	8	72						
Control Delay (s)	13.5	0.0	0.0	0.0	149.3	16.7						
Lane LOS	B				F	C						
Approach Delay (s)	6.7		0.0		18.0							
Approach LOS					C							
Intersection Summary												
Average Delay			5.9									
Intersection Capacity Utilization			82.5%		ICU Level of Service				E			
Analysis Period (min)			15									












HCM Unsignalized Intersection Capacity Analysis
3: I-95 Off Ramp & Route 1 & I-95 On Ramp

2022 Combined Traffic Volumes
SAT

											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SBL	SBR	NEL2	NEL	NER
Lane Configurations											
Traffic Volume (veh/h)	396	445	0	0	698	130	0	0	3	0	314
Future Volume (Veh/h)	396	445	0	0	698	130	0	0	3	0	314
Sign Control		Free			Free		Stop			Stop	
Grade		0%			0%		0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	430	484	0	0	759	141	0	0	3	0	341
Pedestrians											
Lane Width (ft)											
Walking Speed (ft/s)											
Percent Blockage											
Right turn flare (veh)											
Median type		None			None						
Median storage (veh)											
Upstream signal (ft)											
pX, platoon unblocked											
vC, conflicting volume	900			484			2444	2103	2103	2244	484
vC1, stage 1 conf vol											
vC2, stage 2 conf vol											
vCu, unblocked vol	900			484			2444	2103	2103	2244	484
tC, single (s)	4.1			4.1			7.1	6.5	7.1	6.5	6.2
tC, 2 stage (s)											
tF (s)	2.2			2.2			3.5	4.0	3.5	4.0	3.3
p0 queue free %	43			100			100	100	85	100	41
cM capacity (veh/h)	755			1079			5	22	21	18	583
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NE 1	NE 2					
Volume Total	430	484	759	141	3	341					
Volume Left	430	0	0	0	3	0					
Volume Right	0	0	0	141	0	341					
cSH	755	1700	1700	1700	21	583					
Volume to Capacity	0.57	0.28	0.45	0.08	0.15	0.59					
Queue Length 95th (ft)	91	0	0	0	11	94					
Control Delay (s)	15.9	0.0	0.0	0.0	207.1	19.5					
Lane LOS	C				F	C					
Approach Delay (s)	7.5		0.0		21.2						
Approach LOS					C						
Intersection Summary											
Average Delay			6.5								
Intersection Capacity Utilization			72.0%		ICU Level of Service				C		
Analysis Period (min)			15								

HCM Unsignalized Intersection Capacity Analysis
6: Route 1 & Site Drive 1

2022 Combined Traffic Volumes
SAT

						
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	139	620	677	47	49	150
Future Volume (Veh/h)	139	620	677	47	49	150
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	151	674	736	51	53	163
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	787			1738	762	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	787			1738	762	
tC, single (s)	4.1			6.4	6.2	
tC, 2 stage (s)						
tF (s)	2.2			3.5	3.3	
p0 queue free %	82			33	60	
cM capacity (veh/h)	832			79	405	
Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2	
Volume Total	151	674	787	53	163	
Volume Left	151	0	0	53	0	
Volume Right	0	0	51	0	163	
cSH	832	1700	1700	79	405	
Volume to Capacity	0.18	0.40	0.46	0.67	0.40	
Queue Length 95th (ft)	16	0	0	78	48	
Control Delay (s)	10.3	0.0	0.0	116.5	19.7	
Lane LOS	B			F	C	
Approach Delay (s)	1.9		0.0	43.5		
Approach LOS				E		
Intersection Summary						
Average Delay			6.0			
Intersection Capacity Utilization			59.5%	ICU Level of Service	B	
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
8: Route 1 & Site Drive 2

2022 Combined Traffic Volumes
SAT



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Volume (veh/h)	10	659	723	2	0	0
Future Volume (Veh/h)	10	659	723	2	0	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	11	716	786	2	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	788				1525	787
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	788				1525	787
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				100	100
cM capacity (veh/h)	831				128	392
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	727	788	0			
Volume Left	11	0	0			
Volume Right	0	2	0			
cSH	831	1700	1700			
Volume to Capacity	0.01	0.46	0.00			
Queue Length 95th (ft)	1	0	0			
Control Delay (s)	0.4	0.0	0.0			
Lane LOS	A		A			
Approach Delay (s)	0.4	0.0	0.0			
Approach LOS			A			
Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utilization		46.0%		ICU Level of Service		A
Analysis Period (min)			15			

UCONN CRASH HISTORY

https://ctrash.uconn.edu/QueryTool2.action?cid=117098

CrashID	DOT Case #	Town	Date	Time of Crash	Crash Severity	# of Veh.	Milemarker	Roadway	Intersecting Roadway	Dist.	Unit	Dir.	Manner of Crash	Weather	Lighting	Road Surface
401487	2547024	East Lyme	6/8/2017	18:13:00	PDO	2	93.06	Boston Post Rd	CON FR NB-EXIT FR I-95 NB(293)				Front to rear	Clear	Daylight	Dry
439350	2583450	East Lyme	9/27/2017	16:57:00	PDO	2	93.11	BOSTON POST RD	NB-EXIT FR I-95 NB(293)	1500	Feet	W	Front to rear	Clear	Daylight	Dry
481588	2622331	East Lyme	1/5/2018	17:32:00	PDO	2	93.07	Summit Ave		400	Feet	W	Angle	Clear	Dark-Lighted	Dry
579665	3002330	East Lyme	11/17/2018	6:51:00	POSS INJURY	1	93.99	1-S	95-N				Not Applicable	Clear	Daylight	Snow
627144	3035565	East Lyme	4/16/2019	14:21:00	PDO	2	93.07	1-S	I-95 EXIT 75 N/B ON RAMP	20	Feet	W	Front to rear	Clear	Daylight	Dry
646519	3073340	East Lyme	5/22/2019	16:10:00	SUSP INJURY	2	93.06	1-N	Landmark: INTERSTATE 95	180	Feet	E	Angle	Clear	Daylight	Dry
664596	3090992	East Lyme	5/21/2019	8:04:00	PDO	2	93.24	1-N	Landmark: RIVER ROAD	1	Tenths of Mile	W	Other	Clear	Daylight	Dry
668466	5090100	East Lyme	7/25/2019	17:41:00	PDO	2	93.06	1-S	I-95				Front to rear	Clear	Daylight	Dry
672213	3097337	East Lyme	8/4/2019	16:48:00	PDO	2	93.06	1-S	19S				Front to rear	Clear	Daylight	Dry
687502	3084076	East Lyme	6/27/2019	8:42:00	PDO	2	93.23	1-N	CALKINS RD	3	Tenths of Mile	W	SSSD	Clear	Daylight	Dry