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Memorandum

Ref: 42683.00
October 7, 2020
Page 1

To: Salisbury Housing Committee
C/O Housing Enterprises
51 College Street
Enfield, CT 06882

Date: October 7, 2020

Project #: 42683.00

From: Joseph Balskus, P.E., PTOE
Molly Pause, EIT

Re: Supplemental Traffic Memo
Proposed Affordable Housing
11 Holley Street
Salisbury, Connecticut

Overview

VHB conducted a traffic evaluation for a proposed affordable housing development at 11 Holley Street in Salisbury, CT. This evaluation was presented to the Planning Board on September 21, 2020, during which the Board requested additional information including existing traffic volumes on Holley Street and a parking survey of the existing parking lot. To address this request, additional traffic and parking lot data was obtained and is summarized in this supplemental traffic memo.

Within this supplemental memorandum, existing traffic conditions are quantified, and future traffic conditions are projected to provide a comparative analysis of existing and future conditions estimating how transportation would be affected with the proposed development in place. And the parking analysis is expanded to include existing parking demand.

The Study area for this supplementary memo includes the intersection of Millerton Road (Route 44) at Holley Street.

Conclusions and Recommendations

The following outlines the conclusions and recommendations resulting from the study of the proposed development and the existing transportation system as presented within this memorandum:

- The proposed project is expected to generate approximately 2 entering and 5 exiting (7 total) vehicle trips during the weekday morning peak hour, and 6 entering and 4 exiting (10 total) vehicle trips during the weekday afternoon peak hour.
- Traffic conditions at the intersection of Millerton Road (Route 44) at Holley Street maintain acceptable levels of service (LOS) of LOS B or better under all conditions.
- Traffic conditions at the intersection of Site Drive at Holley Street operate with LOS A under all existing and future conditions.
- Traffic conditions along the adjacent roadway network are not anticipated to be significantly impacted due to the proposed project.
- Adequate parking lot capacity is available at the existing site and continues under future conditions.

Existing Traffic Volumes

Due to COVID-19, traffic volumes are currently significantly lower than conditions before March 2020. After speaking with the Town during the September 21, 2020 Planning Board meeting, it was noted that the Town has seen an influx of traffic due to part-time residents using their secondary residence as a primary residence. Therefore, VHB has utilized traffic volume counts collected by at the intersection of Millerton Road (Route 44) at Holley Street on October 1, 2020.

The turning movement counts (TMCs) were recorded at the intersection of Millerton Road (Route 44) at Holley Street on October 1, 2020 between 7:00 AM to 9:00 AM and from 4:00 PM to 6:00 PM. The weekday morning peak period was found to occur between 7:30 AM and 8:30 AM and between 4:00 PM and 5:00 PM for the weekday evening peak period.

The 2020 Existing Conditions peak hour traffic volumes are summarized in Figure 1. The traffic count data is included in the Appendix.

Future Traffic Conditions

In order to conservatively evaluate the future impacts of the proposed development, traffic volumes were forecast under 2025 No-Build conditions (without the proposed housing development) and under 2025 Build Conditions (with the proposed housing development). The following describes the methodology used to develop the intersection traffic volumes over a seven-year planning horizon.

2025 No-Build Conditions

Traffic growth on area roadways is a function of land development, economic activity, and changes in demographics. For the purpose of this traffic impact statement, a conservative 1% per year growth rate was applied to the 2020 Existing Conditions volume networks to anticipate regional traffic growth in the area. The resulting 2025 No-Build condition peak hour traffic volumes are shown in Figure 2.

2025 Build Conditions

The 2025 Build Conditions scenario represents conditions with the proposed project in place. The site-generated traffic volumes were added to the 2025 No-Build traffic volumes to create the 2025 Build Conditions. The 2025 Build weekday evening peak hour traffic volumes can be seen in Figure 3.

Traffic Operations Analysis

To evaluate existing and future traffic operations at the study intersection, VHB conducted signalized intersection capacity analyses according to *Highway Capacity Manual, 6th Edition*¹ methodology using Synchro software.

Capacity analyses provide an indication of how well the roadway facilities serve the traffic demands placed on them. Volume-to-capacity (V/C), average delay per vehicle, and level of service (LOS) are key indicators produced from capacity analyses. The volume-to-capacity ratio provides an estimate of the utilization of the available roadway capacity. The average delay per vehicle provides a measure of the amount of time motorists must wait to travel through an intersection. Level of service is an indication of delay in a letter range format from A to F, with LOS A representing the best operating conditions and LOS F representing the worst operating conditions. LOS A through D are typically considered acceptable, while LOS E indicates drivers endure significant delay and LOS F suggests unacceptable delay for the average driver.

LOS designations are reported differently for signalized and unsignalized intersections. For unsignalized intersections, the analysis assumes that traffic on the mainline is not affected by traffic on the side streets. Thus, the LOS designation is for the critical movement exiting the side street, typically the left-turn out of the side street or site driveway. Table 1 defines the delay criteria for each LOS designation.

• Table 1 Level of Service Criteria

Level of Service	Signalized Intersection	Unsignalized Intersection
A	0 to 10 seconds	0 to 10 seconds
B	10 to 20 seconds	10 to 15 seconds
C	20 to 35 seconds	15 to 25 seconds
D	35 to 55 seconds	25 to 35 seconds
E	55 to 80 seconds	35 to 50 seconds
F	Greater than 80 seconds	Greater than 50 seconds

Source: Highway Capacity Manual, 6th Edition

¹ *Highway Capacity Manual, 6th Edition*, Transportation Research Board, Washington D.C., 2016

Unsignalized Intersection Analysis

Unsignalized intersection capacity analyses were conducted for the intersection of Millerton Road (Route 44) at Holley Street and the Site Drive at Holley Street for 2020 Existing Conditions, 2025 No-Build Conditions (without the proposed development), and 2025 Build Conditions (with the proposed development). The results of the analysis are summarized in Table 2. The Synchro analysis results are included in the Appendix.

The analysis reports that the unsignalized intersections experience low levels of delay with negligible queue length while maintaining LOS A and LOS B designations.

Table 2 Unsignalized Intersection Capacity Analysis Summary

Location	Peak Period	Movement	2020 Existing				2025 No-Build				2025 Build			
			Dem ^a	v/c ^b	Delay ^c	LOS ^d	Dem	v/c	Delay	LOS	Dem	v/c	Delay	LOS
Millerton Road (Route 44) at Holley Street	Weekday Morning	EB-TR	169	0.12	0.0	-	181	0.13	0.0	-	182	0.13	0.0	-
		WB-LT	143	0.01	0.4	A	153	0.01	0.3	A	154	0.01	0.4	A
		NB-LR	10	0.02	10.1	B	10	0.02	10.2	B	14	0.03	10.3	B
	Weekday Evening	EB-TR	206	0.13	0.0	-	221	0.14	0.0	-	223	0.14	0.0	-
		WB-LT	216	0.01	0.6	A	232	0.01	0.6	A	235	0.01	0.7	A
		NB-LR	27	0.07	11.2	B	29	0.07	11.5	B	32	0.08	11.6	B
Site Driveway at Holley Street	Weekday Morning	EB- LR	2	0.00	8.4	A	2	0.00	8.4	A	7	0.01	8.5	A
		NB-LT	10	0.00	0.0	-	10	0.00	0.0	-	10	0.00	0.0	-
		SB-TR	10	0.01	0.0	-	10	0.01	0.0	-	12	0.01	0.0	-
	Weekday Evening	EB- LR	6	0.01	8.6	A	6	0.01	8.6	A	10	0.01	8.7	A
		NB-LT	27	0.00	0.5	A	29	0.00	0.5	A	30	0.00	0.7	A
		SB-TR	25	0.02	0.0	-	27	0.02	0.0	-	32	0.02	0.0	-

- a demand in vehicles per hour for unsignalized intersections; demand is calculated as the total vehicular volume from the critical side street approach
- b volume-to-capacity ratio for the critical movement
- c delay of critical approach only
- d level of service of the critical movement
- EB, WB Eastbound, westbound
- NB, SB Northbound, southbound
- N/A movement not present under specified scenario
- LR shared left/right-turn movements;
- LTR shared left/through/right-turn movements
- L left-turn movement
- LT shared left/through-movement
- R right-turn movement
- T through-movement

Parking

Inventory and Existing Data Collection

VHB surveyed the existing parking lot for the proposed development located at 11 Holley Street in Salisbury from Thursday into Friday to document the number of vehicles utilizing the existing parking supply. The survey occurred on Thursday October 1st, 2020 and Friday October 2nd, 2020 from approximately 7:00 AM Thursday to 7:00 PM Friday. The following summarizes the observations that were made.

This existing lot at 11 Holley Street contains 24 parking spaces for passenger cars. Access and egress for this lot is accessible through the existing curb cut on Holley Street as well as through the parking area to the west.

Observed Existing Parking Demand

Parking demand counts were documented at the half hour of each hour time period on Thursday October 1st, 2020 and Friday October 2nd, 2020 from approximately 7:00 AM Thursday to 7:00 PM Friday. The results of the counts that were taken can be seen in Table 3. During the times that were counted, of the total 24 available spaces, the highest observed demand was 6 vehicles. An industry standard for parking lots is that they are considered full at 85% occupancy. On the maximum occupied observed time, the existing occupancy rate of 22% (parking demand of 6, 24 total parking spaces). Based on the data that was collected, it appears that the existing parking lot has sufficient parking for the proposed development and has available parking spaces that could be utilized by the Town and local businesses.

It is worth noting that during the afternoon peak hour of the site recording, vehicles were seen pulling into the lot for a short amount of time. The drivers in this situation did not leave their vehicles, this could be attributed to drivers answering a phone call/message or looking for directions. Approximately one to two vehicles were also noted as parked in the lot overnight.

Analysis of Future Parking Demand

The industry standard for parking lots is that they are considered full at 85% capacity. As noted in the initial traffic evaluation for the site, the proposed housing development is expected to utilize a maximum of 16 parking spaces during peak hours. Removing 16 parking spaces from the existing 24 to accommodate for the development leaves an excess of 8 spaces. The new calculated occupancy rate for the existing parking lot would become 75% occupancy (parking demand of 6, 8 parking spaces provided). This rate is still below the industry standard of 85% occupancy, indicating that site would continue to operate with sufficient parking on site.

Table 3 Existing Parking Demand by Day – Holley Street Lot, 11 Holley Street

Location	Parking Space Type	10/1/2020 AM Parking Demand	10/1/2020 PM Parking Demand	10/2/2020 AM Parking Demand	10/2/2020 PM Parking Demand	Average Parking Demand	Maximum Parking Demand
Holley Street Lot	Passenger Car	3	6	5	6	5	6

Conclusion

The results of this supplemental memo indicate that the proposed affordable housing development at 11 Holley Street will not have a significant impact on the roadway network adjacent to the project site. There is adequate parking capacity under existing and future conditions. VHB forecasts that the project will generate 7 total trips during the morning peak hour and 10 total trips during the afternoon peak hour. Based on Office of the State Traffic Administration (OSTA) guidelines, intersection capacity analyses are required if a project is expected to generate 100 or more new vehicles trips through an intersection. The minimal traffic volumes projected for this development are far below this threshold, a fraction of the area traffic volumes, and therefore, additional traffic analyses are not warranted.

In summary and as noted in the September memorandum, the conclusions remain the same: the project will generate minimal traffic onto the area roadways and the onsite 24 parking spaces will accommodate the parking demand.



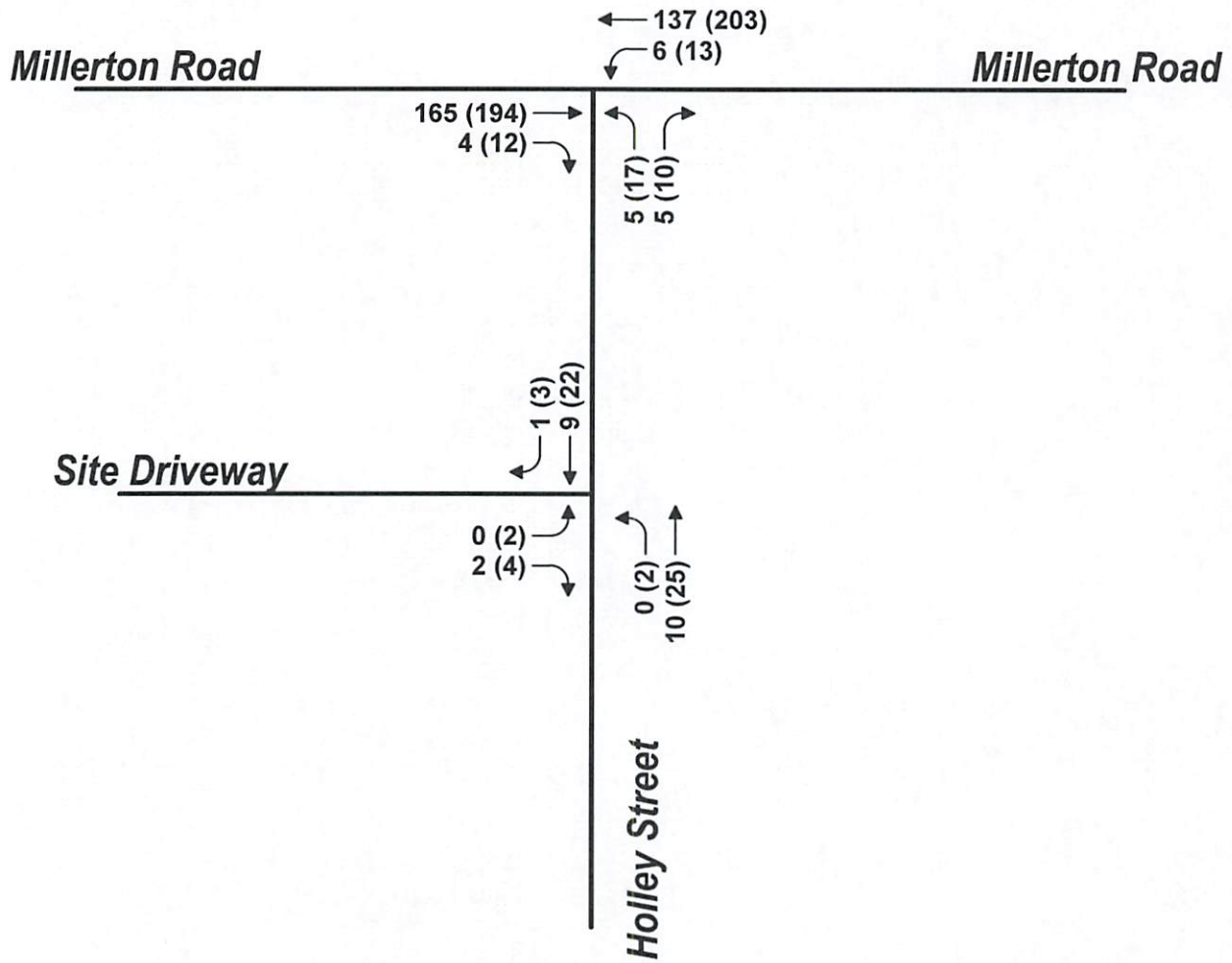
0 100 200 Feet



Site and Study Intersection Location

Figure 1

Proposed Apartment Building
11 Holley Street, Salisbury, CT



Weekday Morning Peak Hour
(Weekday Afternoon Peak Hour)

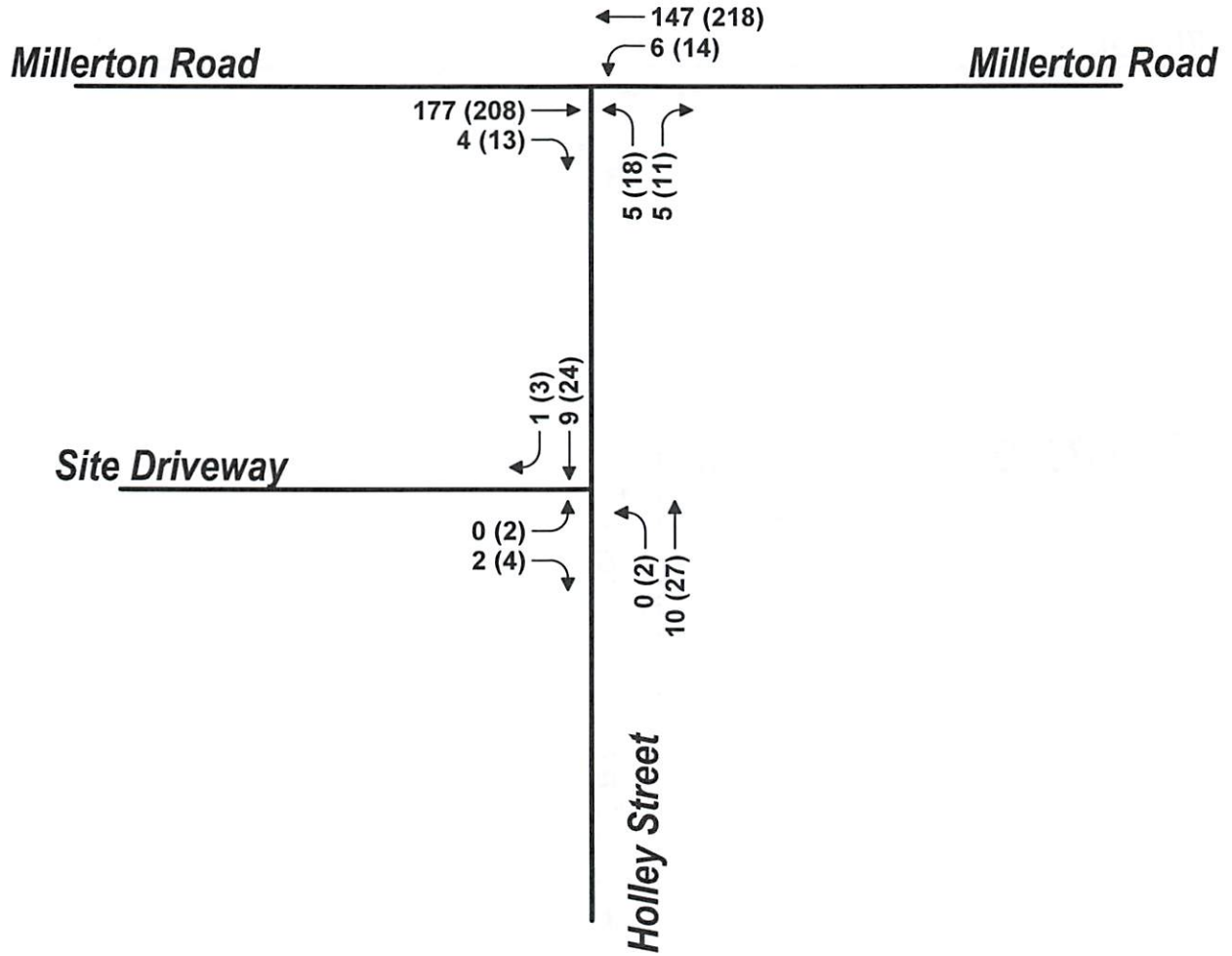


Not to Scale



2020 Existing Conditions
Peak Hour Traffic Volumes
Proposed Apartment Building
11 Holley Street, Salisbury, CT

Figure 2



Weekday Morning Peak Hour
(Weekday Afternoon Peak Hour)

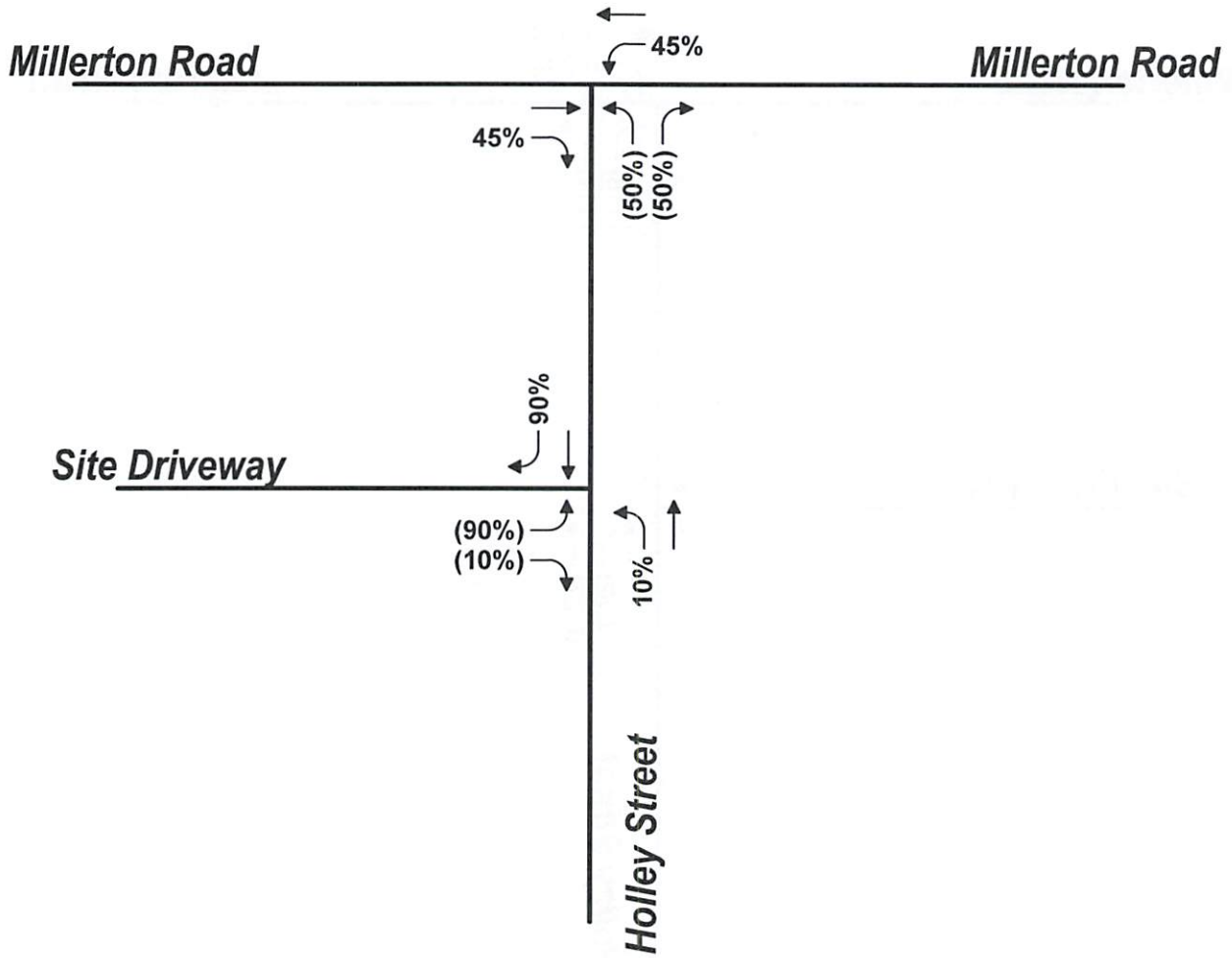


Not to Scale



2025 No-Build Conditions
Peak Hour Traffic Volumes
Proposed Apartment Building
11 Holley Street, Salisbury, CT

Figure 3



Entering Site Traffic
(Exiting Site Traffic)



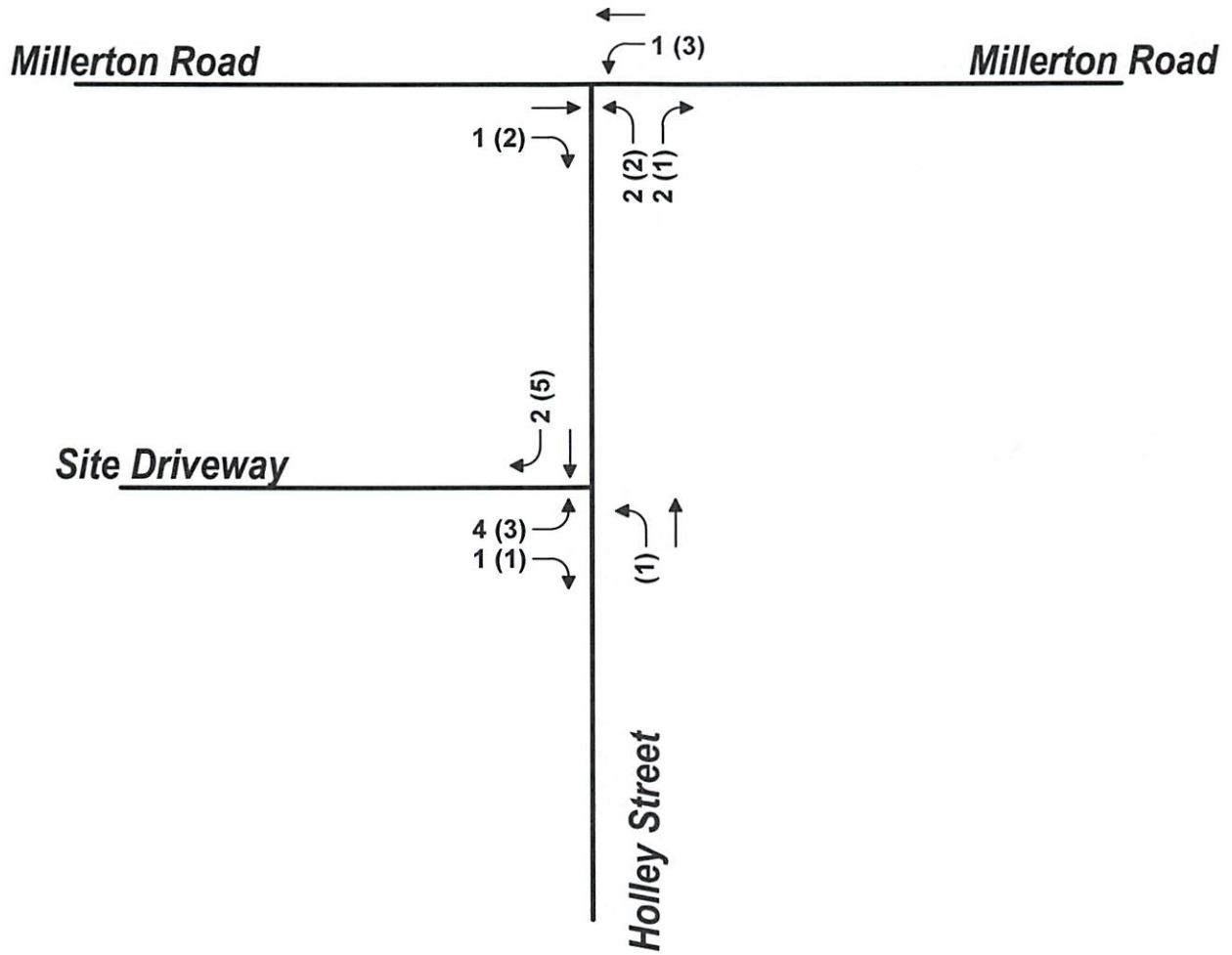
Not to Scale



Site-Generated Trip Distribution

Figure 4

Proposed Apartment Building
11 Holley Street, Salisbury, CT



Weekday Morning Peak Hour
(Weekday Afternoon Peak Hour)

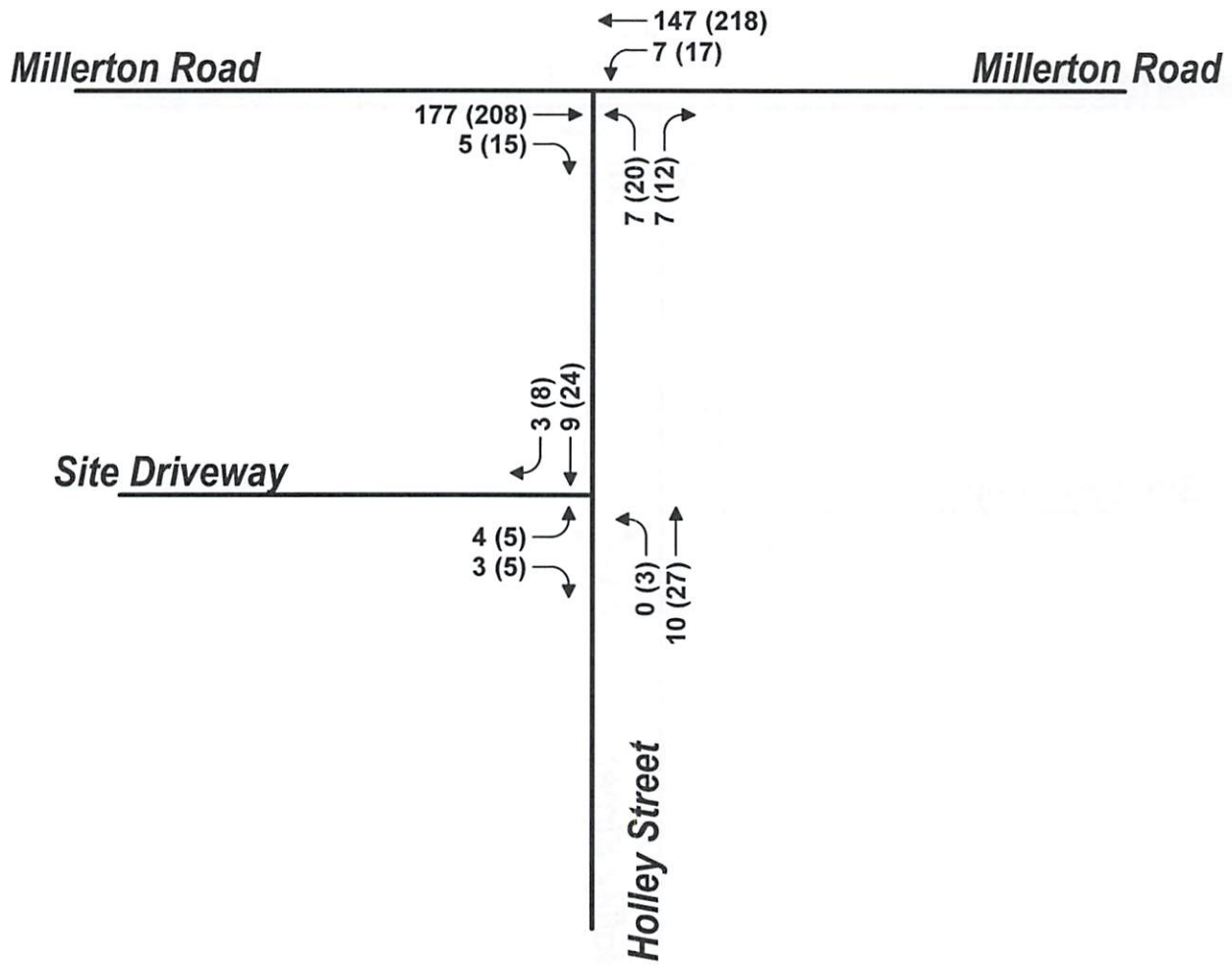


Not to Scale



Site-Generated Trips
Peak Hour Traffic Volumes
Proposed Apartment Building
11 Holley Street, Salisbury, CT

Figure 5



Weekday Morning Peak Hour
(Weekday Afternoon Peak Hour)



Not to Scale



2025 Build Conditions
Peak Hour Traffic Volumes
Proposed Apartment Building
11 Holley Street, Salisbury, CT

Figure 6

Appendix

Preliminary Site Plan

Traffic Evaluation Submitted Sept. 16, 2020

ITE Trip Generation

Parking Generation

Traffic Count Data

Parking Lot Peak Images

Capacity Analysis

Preliminary Site Plan

HOLLEY PLACE

29 MAIN STREET
SALISBURY, CT
Project #: 6342

Revisions 07.15.2020-PK&Q ZONE

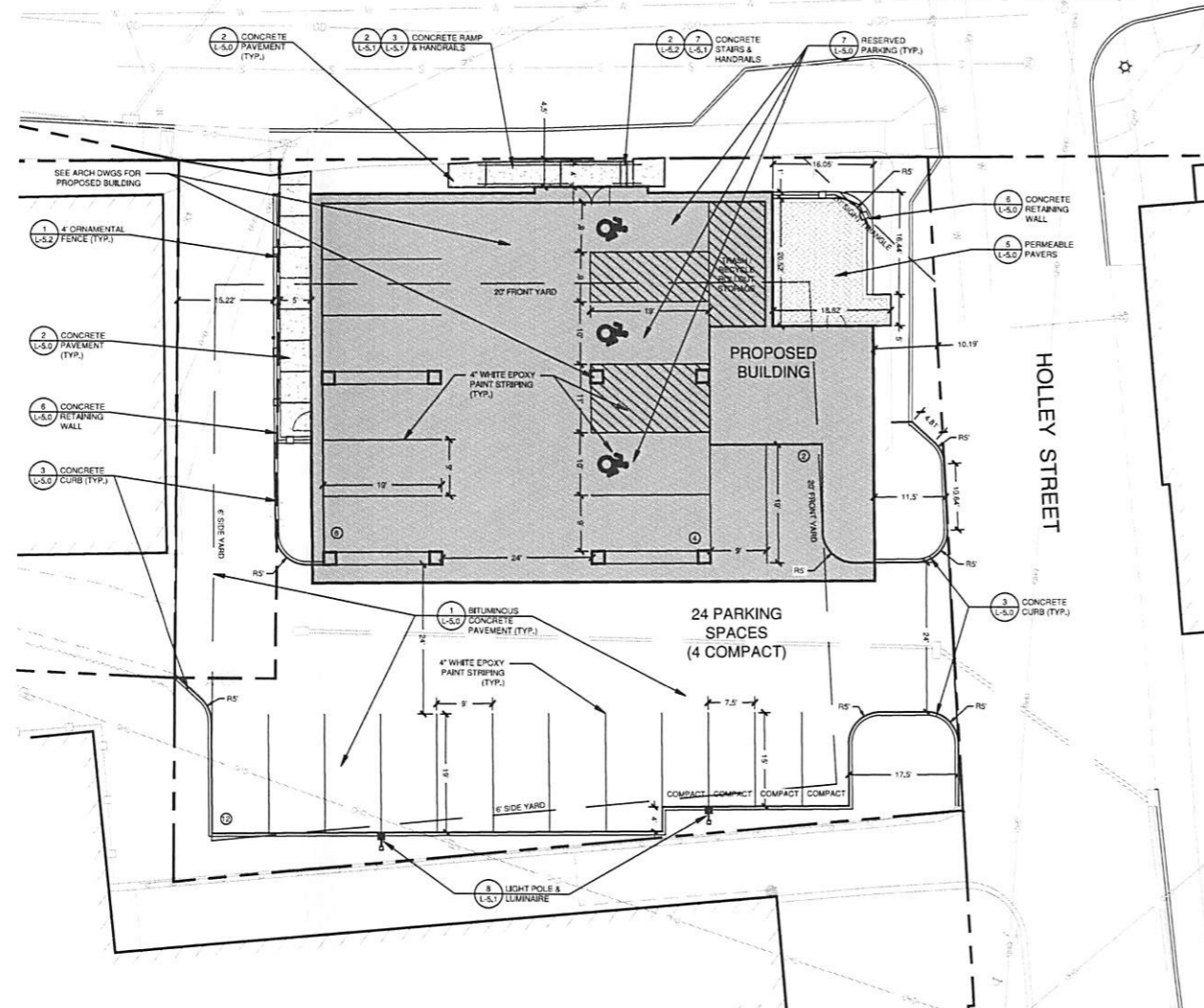
Issue Dates:

APPLICATION FOR SPECIAL PERMIT
06.17.2020

Layout Plan

L-2.0

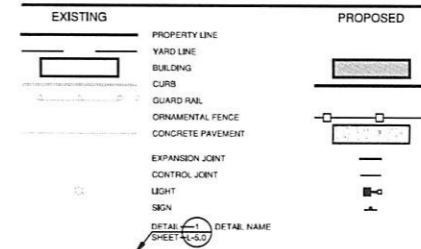
MILLERTON ROAD (ROUTE 44)



LAYOUT NOTES

1. THE CONTRACTOR SHALL COMPLY WITH ALL STATE, LOCAL AND FEDERAL REGULATIONS.
2. MATERIALS AND CONSTRUCTION PROCEDURES SHALL COMPLY WITH CT DOT FORM 815-817 AND THE TOWN OF SALISBURY SPECIFICATIONS.
3. CONTRACTOR TO SECURE ALL NECESSARY TRADE PERMITS.
4. NEW PAVEMENT TO MEET LINE & GRADE OF EXISTING PAVEMENTS.
5. CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE DUE TO CONSTRUCTION ACTIVITIES.
6. LOAM AND SEED ALL DISTURBED AREAS NOT COVERED BY OTHER IMPROVEMENTS.
7. ALL LINES AND DIMENSIONS ARE PARALLEL OR PERPENDICULAR TO THE LINES FROM WHICH THEY ARE MEASURED.
8. ALL LOCATIONS WHERE EXISTING CURBING, BITUMINOUS CONCRETE ROADWAY OR CONCRETE ROADWAY OR CONCRETE SIDEWALK ABUT NEW CONSTRUCTION, THE EDGE OF THE EXISTING CURB OR PAVEMENT SHALL BE SAW CUT TO PROVIDE A CLEAN, SMOOTH EDGE. TACK COAT EXPOSED EDGES OF EXISTING CONCRETE PRIOR TO PLACEMENT OF NEW BITUMINOUS CONCRETE PAVEMENT.
9. FIELD ADJUSTMENTS MUST BE APPROVED BY THE OWNER'S REPRESENTATIVE AND APPROPRIATE MUNICIPAL OFFICIALS PRIOR TO CONSTRUCTION.
10. CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE VERTICAL AND HORIZONTAL POSITION OF EXISTING UTILITIES PRIOR TO CONSTRUCTION.
11. CONTRACTOR SHALL CONTROL DUST CAUSED BY HIS OPERATIONS BY APPLYING WATER OR DUST FALLATIVE, OTHER THAN CALCIUM CHLORIDE.
12. CONTRACTOR SHALL CONTROL NOISE TO AS GREAT AN EXTENT AS POSSIBLE. ALL POWER EQUIPMENT USED DURING CONSTRUCTION SHALL BE EQUIPPED WITH MUFFLERS.
13. MANUFACTURED ITEMS SHALL BE INSTALLED, CONNECTED AND CLEANED ACCORDING TO THE MANUFACTURER'S DIRECTIONS.
14. PRIOR TO PROJECT CLOSE-OUT, CONTRACTOR SHALL REMOVE ALL DEBRIS AND EXCESS MATERIALS FROM SITE. ALSO, ANY DAMAGE TO FIELD OR FACTORY APPLIED FINISHES SHALL BE REPAIRED.
15. EXPANSION AND SCORE JOINTS FOR NEW CONCRETE WALKS SHALL BLEND TO MATCH EXISTING PATTERNS. CONTRACTOR TO ARRANGE TIMELY ON-SITE CONFERENCES WITH LANDSCAPE ARCHITECT TO APPROVE LAYOUT OF JOINT PATTERNS.
16. PROVIDE EXPANSION JOINTS FOR NEW CONCRETE PAVING AT ALL CURBS, BUILDING WALLS, SITE WALLS, STAIRS, EXISTING CONCRETE PAVING AND ALL OTHER FIXED MATERIALS. MAXIMUM DISTANCE BETWEEN EXPANSION JOINTS SHALL NOT EXCEED 25 FEET.

LEGEND



ZONING INFORMATION

ZONE PK&Q (POCKETKNIFE SQUARE OVERLAY DISTRICT) U-20	REQUIRED	EXISTING	PROPOSED	CONFORMANCE
USE		PARKING	MULTI-FAMILY DWELLING	BY SPECIAL PERMIT
MAXIMUM DENSITY	16 UNITS/ACRE (1)	0	13	YES
MAX. BUILDING HEIGHT	32'	0'	32'	YES
MIN. LOT AREA	20,000 SF	13,590 SF	13,290 SF	EXISTING CONDITION
MIN. STREET FRONTAGE	25'	103.91'	103.91'	YES
FRONT YARD	20'	N/A	4.50' (2)	YES
MAX. BUILDING COVERAGE	75%	0%	39.8% (3)	YES
SIDE YARD	6'	N/A	10.19'	YES
REAR YARD	10'	N/A	N/A	YES
PARKING SPACES	13 (1 PER UNIT)	±24	24	YES
MAX. COMPACT PARKING SPACES	20%	0	17% (4 SPACES)	YES

(1) 60% OF UNITS ARE AFFORDABLE AND MINIMUM SIZE IS GREATER THAN 350 SQUARE FEET.
(2) MATCHES EXISTING FRONT YARD SETBACK OF BUILDINGS ON ABUTTING PROPERTIES
(3) BUILDING COVERAGE: 5292 SF / 13,290 SF = 39.8%
(4) MAX. COMPACT PARKING SPACES: 24 SPACES / 139 SPACES = 17%



Traffic Evaluation Submitted Sept. 16, 2020



Memorandum

To: Salisbury Housing Committee
C/O Housing Enterprises
51 College Street
Enfield, CT 06882

Date: September 15, 2020

Project #: 42683.00

From: Joseph Balskus, P.E., PTOE
Molly Pause, EIT

Re: Traffic Evaluation
Proposed Affordable Housing
11 Holley Street
Salisbury, Connecticut

Overview

VHB has conducted a traffic evaluation for a proposed affordable housing development at 11 Holley Street in Salisbury, CT. As part of this evaluation, VHB has investigated existing conditions on the roadways adjacent to the site, the proposed driveway access, and the anticipated traffic volumes generated by the project. This traffic evaluation is intended to support an application to the Town of Salisbury submitted by the Salisbury Housing Committee.

Project Description

The proposed project consists of the development of an existing parking lot located at 11 Holley Street into an apartment building with a total of 13 units. This development proposes 8 one-bedroom, 2 two-bedroom, and 3 three-bedroom units available. Approximately 24 parking spaces are to be provided on site, with 12 of the 24 spaces proposed to be located in a parking garage constructed under the proposed apartment building. Based on the current site plan, access to the complex will be provided by one entrance only driveway on Route 44 and one full access driveway on Holley Street.

The preliminary site plan is included in the Appendix.

Existing Traffic Conditions

A site visit was conducted for the proposed project location in August 2020. During this visit, VHB measured the existing roadway, shoulders, and sight lines and observed factors affecting access and egress to the site such as roadway speeds. VHB's observations and the existing roadway conditions in the vicinity of the site are summarized below.

Millerton Road (Route 44) is a two-lane roadway (one lane in each direction) under state jurisdiction and is classified as a principal arterial roadway. The posted speed limit on Millerton Road (Route 44) is 30 miles per hour in the vicinity of the site and increases to 40 miles per hour just west of Holley Street. CTDOT in collaboration with AECOM completed a Road Safety Audit (RSA) on Route 44 to the east of Holley Street in Spring 2016. From this RSA, pedestrian connectivity improvements have been made to the corridor connecting the district of Lakeville to the Downtown area.

Sidewalks have been made available on both sides of Route 44 and crosswalks with Rapid Rectangular Flashing Beacons (RRFBs) have been installed across this roadway. On-street parking is allowed on the southern side of Route 44 adjacent to the proposed project site but prohibited and posted on the northern side of the roadway. Millerton Road maintains a roadway width of approximately 26 feet near the project site with 11-foot travel lanes and two-foot shoulders on each side of the roadway. Street illumination in the project area was deemed adequate as there exists a streetlamp at the intersection of Route 44 at Holley Street and two additional streetlamps to the west of the project site.

Holley Street is a two-lane roadway (one lane in each direction) with a northwest-southeast orientation that runs between Millerton Road (Route 44) and Ethan Allen Street, approximately 320 feet in length. Holley Street is classified as a local road under local jurisdiction. Holley Street maintains a road width of 34 feet adjacent to the site and tapering down to 23 feet to the south. No parking signs are posted on the western side of the roadway.

Project Area Intersection

Millerton Road (Route 44) is intersected by *Holley Street* from the south and a private driveway from the north to form a four-leg unsignalized intersection. The northbound Holley Street approach provides a single multi-purpose lane. While no signage is provided, the northbound approach is assumed stop controlled. The eastbound and westbound Route 44 approaches provide one multi-purpose lane and operate freely. Sidewalks are provided on the south side of Route 44 west of Holley Street and on the north side of Route 44 to the east of Holley Street. A crosswalk is provided across the eastern leg of Route 44. Pedestrian push buttons and RRFBs are provided at this location.

Crash Analysis

To identify potential vehicle crash trends and/or roadway deficiencies near the project site, VHB conducted a review of the UConn Crash Database to document the number of geolocated vehicular collisions that have taken place over the most recent three years (2017-2019).

The review revealed zero reported crashes at the Millerton Road & Holley Street intersection or along the site frontage. It should be noted that the results of the Crash Database review were dependent on the accuracy of crash reporting and geolocating.

Trip Generation

The Institute of Transportation Engineers (ITE) *Trip Generation Manual, 10th Edition* was used to estimate vehicle trips to be generated by the proposed development. ITE land use code (LUC) 220 "Multifamily Housing (Low-Rise)" was used to estimate vehicle trips for all peak hours.

Table 1 presents the resulting total new trips for the weekday daily, morning peak hour, and afternoon peak hour for the proposed apartment complex. It is anticipated to generate 2 entering trips and 5 exiting trips (7 total) during the

morning peak hour, and 6 entering trips and 4 exiting trips (10 total) during the afternoon peak hour. The ITE Trip Generation data are included in the Appendix.

▪ **Table 1 Trip Generation**

Time Period	Trip Generation
<i>Daily (vpd)</i>	<i>57</i>
<i>Morning Peak Hour (vph)</i>	
Enter	2
<u>Exit</u>	<u>5</u>
Total	7
<i>Evening Peak Hour (vph)</i>	
Enter	6
<u>Exit</u>	<u>4</u>
Total	10

Source: Institute of Transportation Engineers, Trip Generation, 10th Edition, LUC 220 Multifamily Housing (Low-Rise), 13 units
vpd= vehicles per day, vph = vehicles per hour

Trip Distribution

The trip distribution of site-generated traffic to/from the proposed development would be expected to reflect the vehicle patterns of existing volumes within the study area. With easy access to downtown Salisbury to the east of the project site, New York state to the west of the project site, and the Town of Sharon to the south, it is expected that the trip distribution would be evenly split to/from each direction.

Parking

The proposed site plan shows 24 parking spaces on site supporting the 13 units of housing which exceeds the minimum zoning requirements. A review the Institute of Transportation Engineers (ITE) Parking Generation Manual, 5th edition for Multi-Family Low Rise residential use with no access to transit indicates a maximum of 16 parking spaces will be utilized for the proposed development during peak parking demand for residents and visitors. This is based upon parking surveys for over 119 other developments.

The proposed parking will primarily be accessed to and from Holley Street via the existing curb cut and provides standard parking stalls and parking aisle in conformance with standards.

Intersection Sight Distance

A field visit was conducted to measure the available sight distance from Holley Street onto Millerton Road (Route 44), and observe other potential conditions that may affect the safety and operation of the proposed full access driveway. The available sight distance was then compared with the sight distance requirements outlined in the CTDOT Highway Design Manual to ensure that adequate sight distance is provided to allow a vehicle exiting the site driveway and turning onto Millerton Road to safely enter the traffic stream.

Based on field measurements, adequate sight distance was found to be available from the driveway on Holley Street to see to the end of the road in each direction. To evaluate the adequacy of the sight distance from Holley Street onto Millerton Road, the minimum suggested sight distance was calculated based on a conservative design speed of 40 miles per hour on Millerton Road (Route 44) (10 miles per hour above the posted speed limit).

The sight distance at the intersection of Route 44 at Holley Street is inadequate due to a few factors. On-Street parking is allowed on the south side of Route 44 to the west of Holley Street, which obstructs sightlines to the left for vehicles exiting Holley Street. The horizontal curvature of the existing roadway obstructs sightlines to the right, as the Holley Street entrance is at the focal point of the roadway curvature. However, as noted above, the sight distance requirement was calculated based on a conservative design speed of 10 miles per hour above the speed limit. The available sight distance at this intersection would meet the minimum requirements if the posted speed limit was used as the design speed. Furthermore, the crash research indicates that no crashes have been reported at this intersection in the last three years. Therefore, the crash data does not indicate that the sight distance presents a safety concern.

The results of the sight distance investigation are summarized in Table 2.

Table 2 Intersection Sight Distances

Location	Available Sight Distance			Meets Standard	
	Left	Right	Minimum	Left	Right
Holley Street at Millerton Road (Route 44)	440'	400'	445'	No	No
Proposed Site Drive at Holley Street	*	*	*	Yes	Yes

Source: Vanasse Hangen Brustlin, Inc.

* Sight distance for motorists exiting the site driveway on Holley Street is available to the end of the street in both directions

Conclusion

The results of this review indicate that the proposed affordable housing development at 11 Holley Street will not have a significant impact on the roadway network adjacent to the project site. There are adequate sight lines for traffic exiting Holley Street and ample parking. VHB forecasts that the project will generate 7 total trips during the morning peak hour and 10 total trips during the afternoon peak hour. Based on Office of the State Traffic Administration (OSTA) guidelines, intersection capacity analyses are required if a project is expected to generate 100 or more new vehicles trips through an intersection. The minimal traffic volumes projected for this development are far below this threshold, a fraction of the area traffic volumes, and therefore, additional traffic analyses are not warranted.

In summary, the project will generate minimal traffic onto the area roadways, the onsite 24 parking spaces will accommodate the parking demand, sight distances are adequate and access from Holley Street is appropriate.

ITE Trip Generation

Multifamily Housing (Low-Rise) (220)

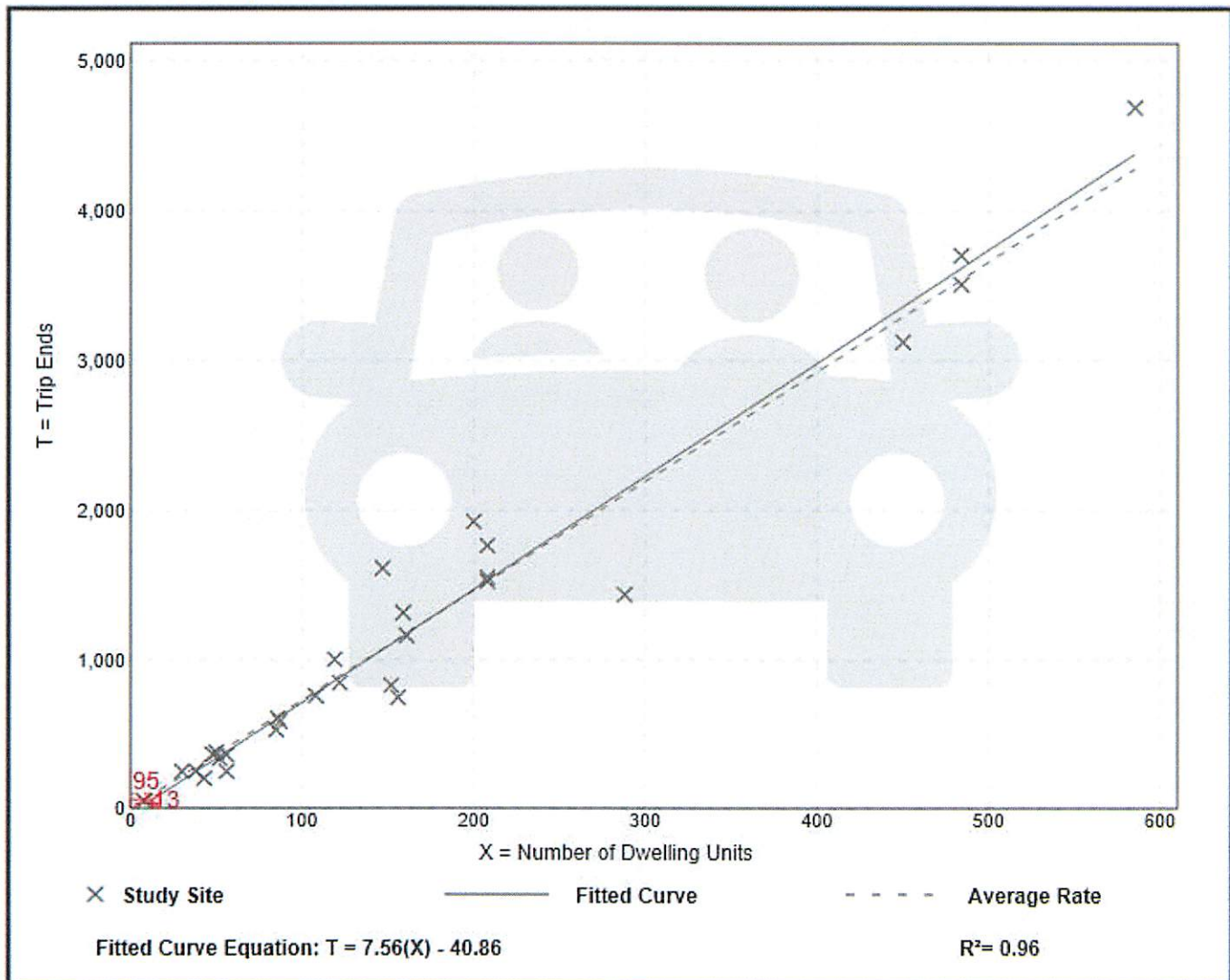
Vehicle Trip Ends vs: Dwelling Units
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 29
Avg. Num. of Dwelling Units: 168
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
7.32	4.45 - 10.97	1.31

Data Plot and Equation



Multifamily Housing (Low-Rise) (220)

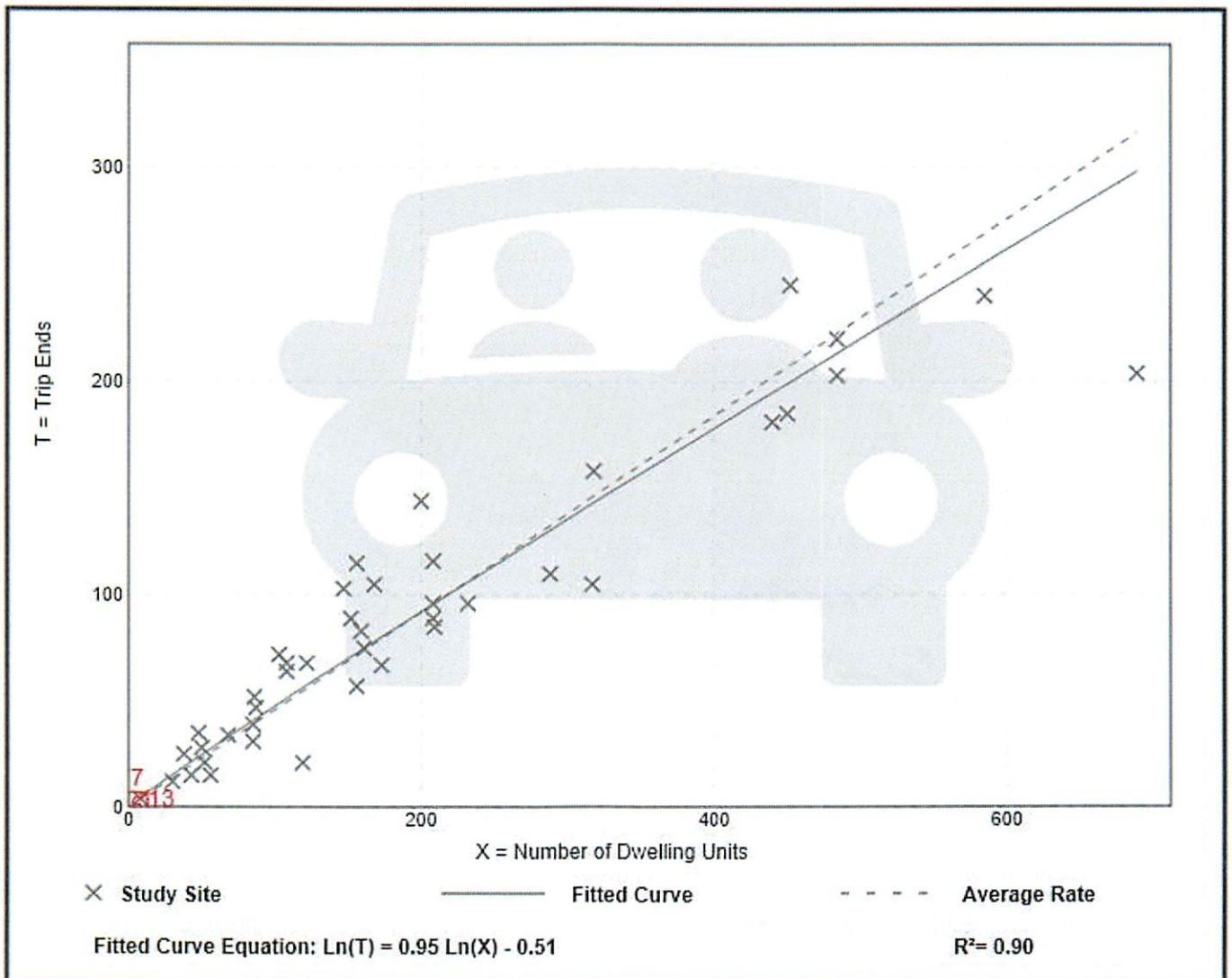
Vehicle Trip Ends vs: Dwelling Units
 On a: Weekday,
 Peak Hour of Adjacent Street Traffic,
 One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban
 Number of Studies: 42
 Avg. Num. of Dwelling Units: 199
 Directional Distribution: 23% entering, 77% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.46	0.18 - 0.74	0.12

Data Plot and Equation



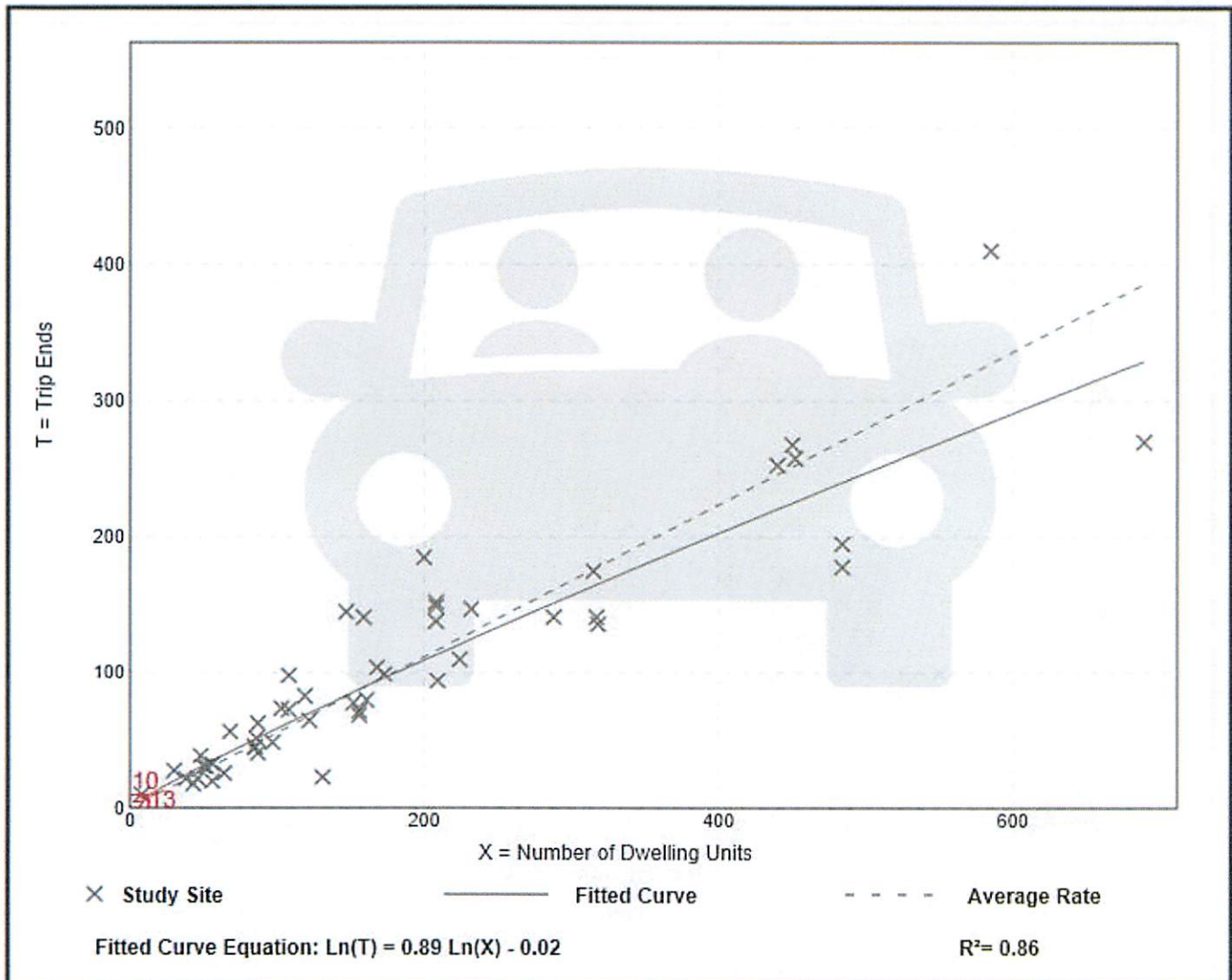
Multifamily Housing (Low-Rise) (220)

Vehicle Trip Ends vs: Dwelling Units
 On a: Weekday,
 Peak Hour of Adjacent Street Traffic,
 One Hour Between 4 and 6 p.m.
 Setting/Location: General Urban/Suburban
 Number of Studies: 50
 Avg. Num. of Dwelling Units: 187
 Directional Distribution: 63% entering, 37% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.56	0.18 - 1.25	0.16

Data Plot and Equation



Parking Generation

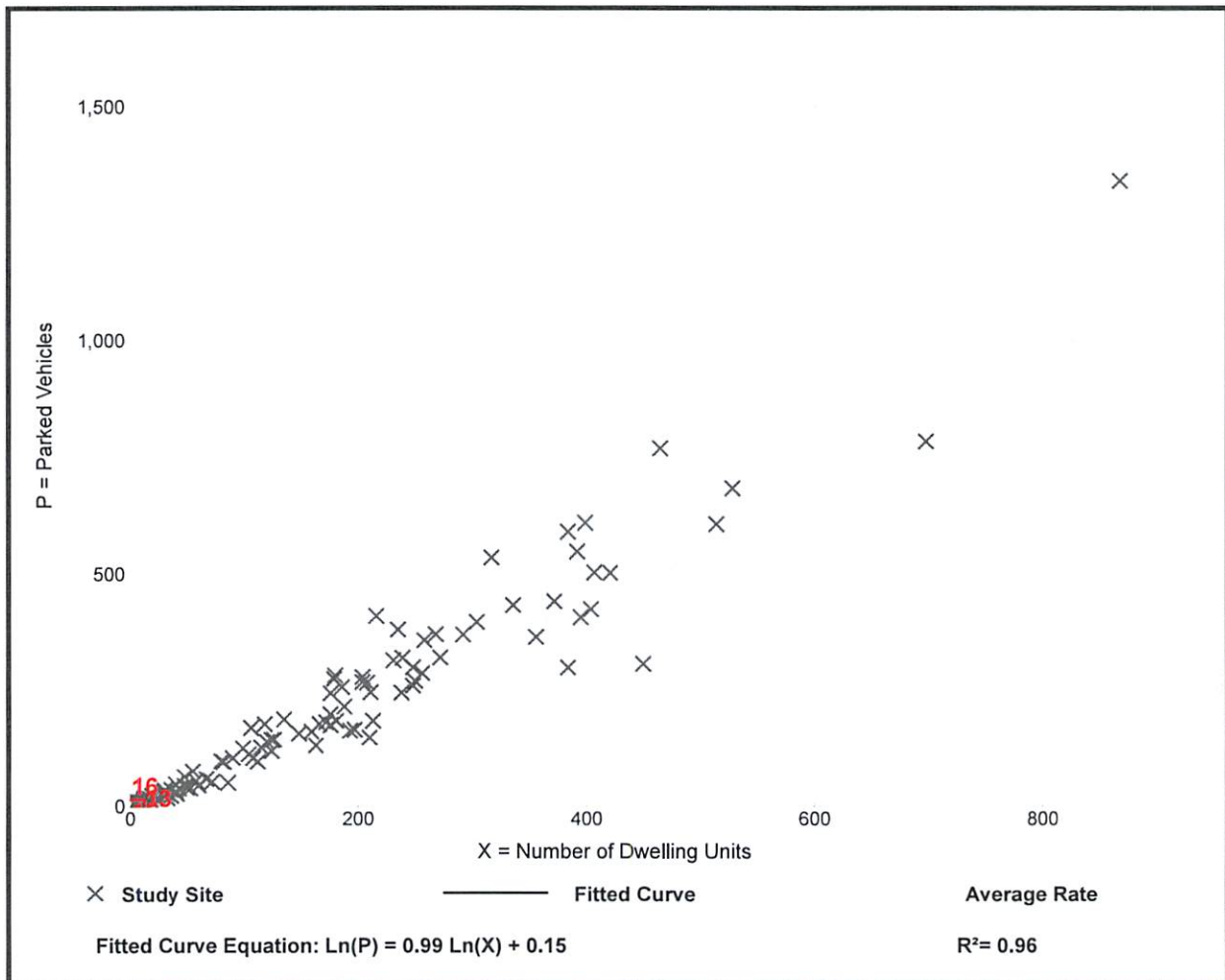
Multifamily Housing (Low-Rise) (220)

Peak Period Parking Demand vs: Dwelling Units
On a: Weekday (Monday - Friday)
Setting/Location: General Urban/Suburban (no nearby rail transit)
Peak Period of Parking Demand: 11:00 p.m. - 6:00 a.m.
 Number of Studies: 119
 Avg. Num. of Dwelling Units: 156

Peak Period Parking Demand per Dwelling Unit

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
1.21	0.58 - 2.50	1.03 / 1.52	1.16 - 1.26	0.27 (22%)

Data Plot and Equation



Parking Generation Manual, 5th Edition • Institute of Transportation Engineers

Traffic Count Data

Connecticut Counts LLC

Kensington, Connecticut 06037
(860) 828-1693

Route 44 at Holley Street
Salisbury, Connecticut

File Name : 21039
Site Code : 21039
Start Date : 10/1/2020
Page No : 1

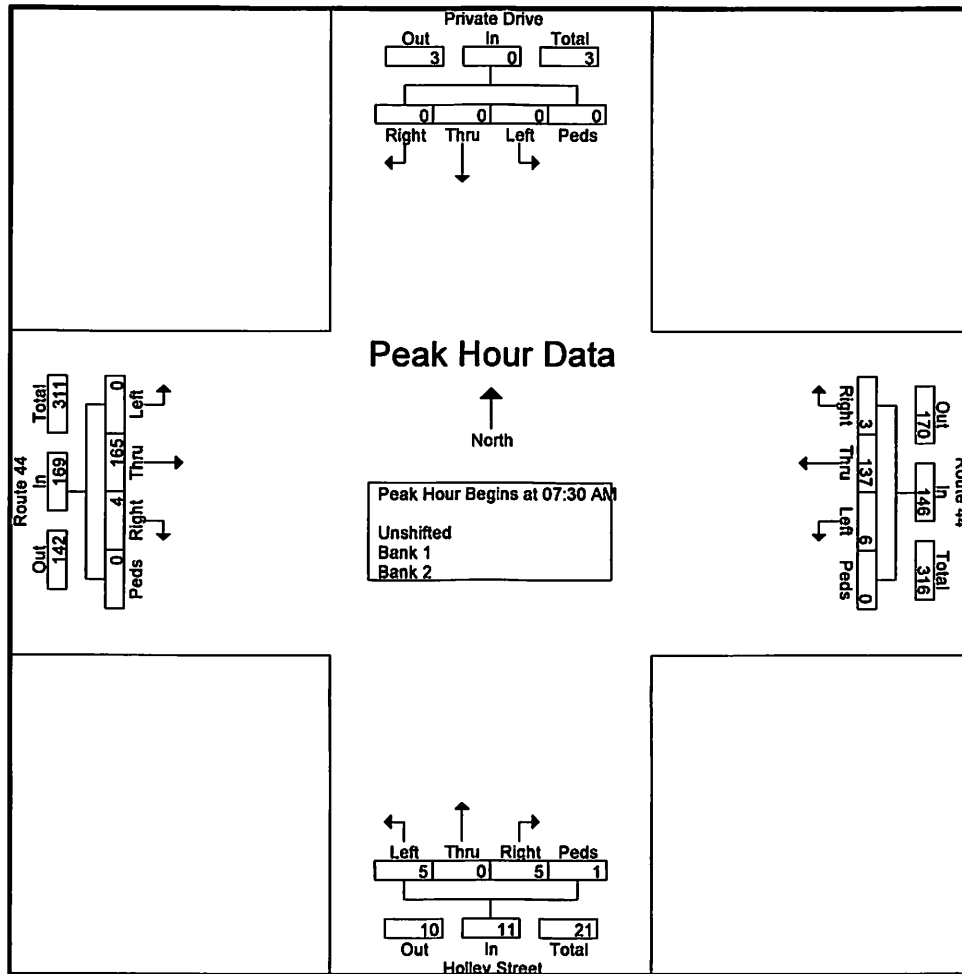
Groups Printed- Unshifted - Bank 1 - Bank 2

Start Time	Private Drive From North					Route 44 From East					Holley Street From South					Route 44 From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	0	0	0	0	0	0	22	2	0	24	0	0	0	0	0	0	19	0	0	19	43
07:15 AM	0	0	0	0	0	0	22	0	0	22	0	0	0	0	0	1	31	0	0	32	54
07:30 AM	0	0	0	0	0	0	39	1	0	40	2	0	0	0	2	2	35	0	0	37	79
07:45 AM	0	0	0	0	0	3	38	1	0	42	1	0	3	0	4	0	46	0	0	46	92
Total	0	0	0	0	0	3	121	4	0	128	3	0	3	0	6	3	131	0	0	134	268
08:00 AM	0	0	0	0	0	0	31	1	0	32	1	0	2	0	3	0	36	0	0	36	71
08:15 AM	0	0	0	0	0	0	29	3	0	32	1	0	0	1	2	2	48	0	0	50	84
08:30 AM	0	0	0	0	0	0	27	0	0	27	2	0	0	0	2	2	39	0	0	41	70
08:45 AM	0	0	0	0	0	0	40	1	1	42	2	0	6	0	8	1	39	0	0	40	90
Total	0	0	0	0	0	0	127	5	1	133	6	0	8	1	15	5	162	0	0	167	315
Grand Total	0	0	0	0	0	3	248	9	1	261	9	0	11	1	21	8	293	0	0	301	583
Apprch %	0	0	0	0	0	1.1	95	3.4	0.4	44.8	42.9	0	52.4	4.8	3.6	2.7	97.3	0	0	51.6	
Total %	0	0	0	0	0	0.5	42.5	1.5	0.2	44.8	1.5	0	1.9	0.2	3.6	1.4	50.3	0	0	51.6	
Unshifted	0	0	0	0	0	3	239	9	1	252	8	0	11	1	20	7	284	0	0	291	563
% Unshifted																					
Bank 1	0	0	0	0	0	0	9	0	0	9	1	0	0	0	1	1	8	0	0	9	19
% Bank 1	0	0	0	0	0	0	3.6	0	0	3.4	11.1	0	0	0	4.8	12.5	2.7	0	0	3	3.3
Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
% Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0	0	0.3	0.2

Connecticut Counts LLC
 Kensington, Connecticut 06037
 (860) 828-1693

File Name : 21039
 Site Code : 21039
 Start Date : 10/1/2020
 Page No : 2

Start Time	Private Drive From North					Route 44 From East					Holley Street From South					Route 44 From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	0	0	0	0	0	0	39	1	0	40	2	0	0	0	2	2	35	0	0	37	79
07:45 AM	0	0	0	0	0	3	38	1	0	42	1	0	3	0	4	0	46	0	0	46	92
08:00 AM	0	0	0	0	0	0	31	1	0	32	1	0	2	0	3	0	36	0	0	36	71
08:15 AM	0	0	0	0	0	0	29	3	0	32	1	0	0	1	2	2	48	0	0	50	84
Total Volume	0	0	0	0	0	3	137	6	0	146	5	0	5	1	11	4	165	0	0	169	326
% App. Total	0	0	0	0	0	2.1	93.8	4.1	0		45.5	0	45.5	9.1		2.4	97.6	0	0		
PHF	.000	.000	.000	.000	.000	.250	.878	.500	.000	.869	.625	.000	.417	.250	.688	.500	.859	.000	.000	.845	.886



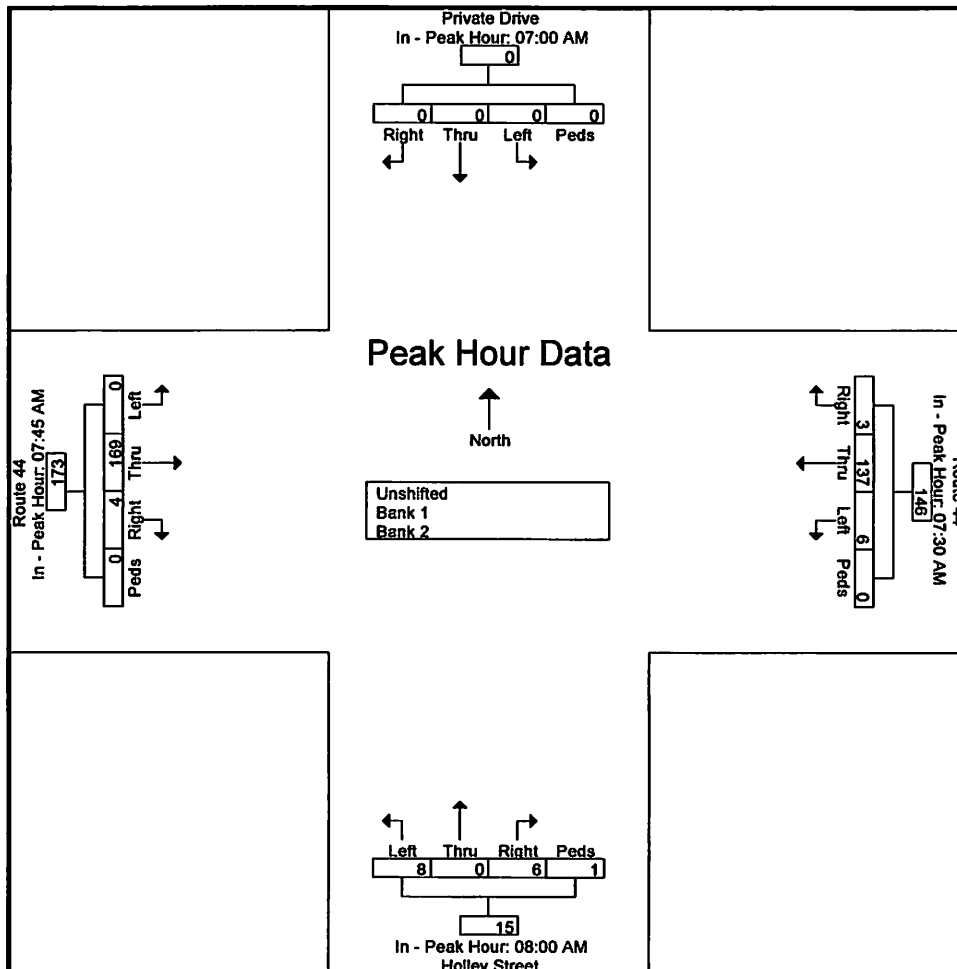
Connecticut Counts LLC
 Kensington, Connecticut 06037
 (860) 828-1693

File Name : 21039
 Site Code : 21039
 Start Date : 10/1/2020
 Page No : 3

Start Time	Private Drive From North					Route 44 From East					Holley Street From South					Route 44 From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:00 AM					07:30 AM					08:00 AM					07:45 AM				
+0 mins.	0	0	0	0	0	0	39	1	0	40	1	0	2	0	3	0	46	0	0	46
+15 mins.	0	0	0	0	0	3	38	1	0	42	1	0	0	1	2	0	36	0	0	36
+30 mins.	0	0	0	0	0	0	31	1	0	32	2	0	0	0	2	2	48	0	0	50
+45 mins.	0	0	0	0	0	0	29	3	0	32	2	0	6	0	8	2	39	0	0	41
Total Volume	0	0	0	0	0	3	137	6	0	146	6	0	8	1	15	4	169	0	0	173
% App. Total	0	0	0	0	0	2.1	93.8	4.1	0		40	0	53.3	6.7		2.3	97.7	0	0	
PHF	.000	.000	.000	.000	.000	.250	.878	.500	.000	.869	.750	.000	.333	.250	.469	.500	.880	.000	.000	.865



Connecticut Counts LLC

Kensington, Connecticut 06037
(860) 828-1693

Route 44 at Holley Street
Salisbury, Connecticut

File Name : 21040
Site Code : 21040
Start Date : 10/1/2020
Page No : 1

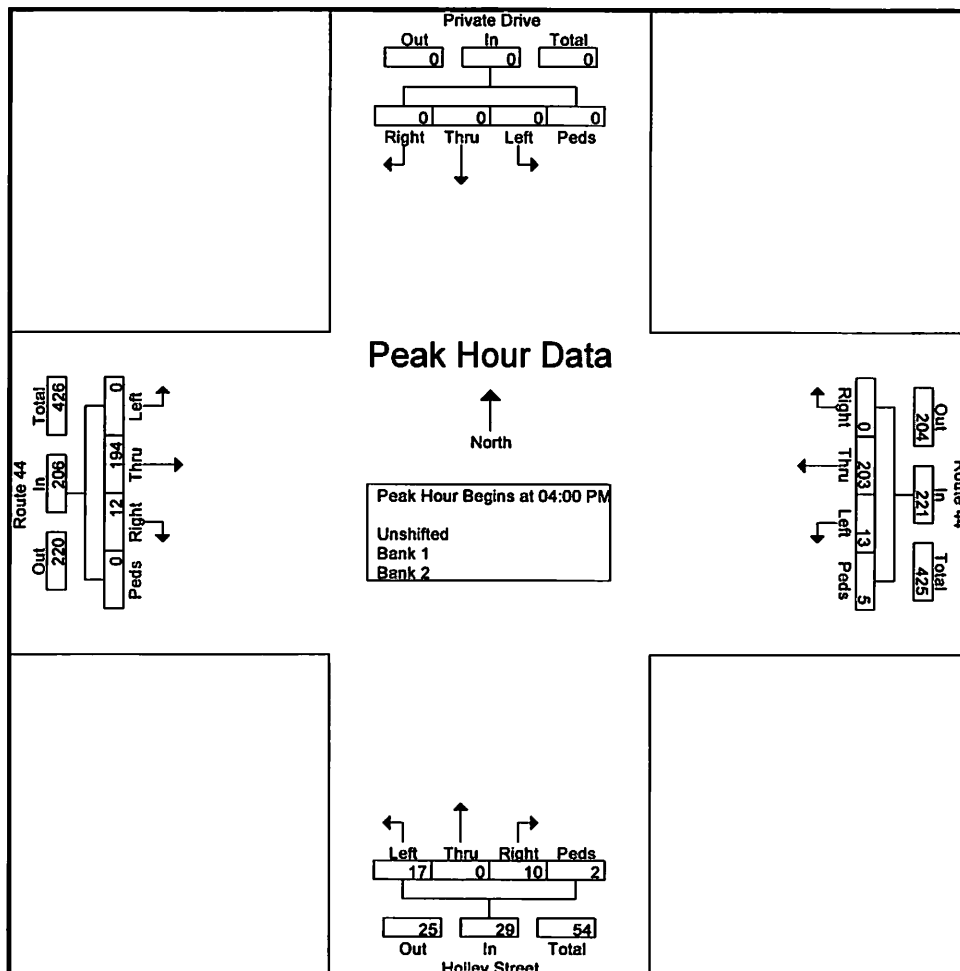
Groups Printed- Unshifted - Bank 1 - Bank 2

Start Time	Private Drive From North					Route 44 From East					Holley Street From South					Route 44 From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	0	0	0	0	0	0	42	2	0	44	5	0	6	0	11	4	52	0	0	56	111
04:15 PM	0	0	0	0	0	0	57	6	0	63	1	0	4	0	5	3	47	0	0	50	118
04:30 PM	0	0	0	0	0	0	55	4	0	59	2	0	2	0	4	4	52	0	0	56	119
04:45 PM	0	0	0	0	0	0	49	1	5	55	2	0	5	2	9	1	43	0	0	44	108
Total	0	0	0	0	0	0	203	13	5	221	10	0	17	2	29	12	194	0	0	206	456
05:00 PM	0	0	0	0	0	0	38	1	1	40	2	0	6	0	8	1	60	0	0	61	109
05:15 PM	0	0	0	0	0	0	41	0	2	43	2	0	2	2	6	3	49	0	0	52	101
05:30 PM	0	0	0	0	0	0	36	2	0	38	2	0	4	0	6	0	52	0	0	52	96
05:45 PM	0	0	0	0	0	0	32	0	1	33	1	0	3	0	4	2	36	0	0	38	75
Total	0	0	0	0	0	0	147	3	4	154	7	0	15	2	24	6	197	0	0	203	381
Grand Total	0	0	0	0	0	0	350	16	9	375	17	0	32	4	53	18	391	0	0	409	837
Apprch %	0	0	0	0	0	0	93.3	4.3	2.4		32.1	0	60.4	7.5		4.4	95.6	0	0		
Total %	0	0	0	0	0	0	41.8	1.9	1.1	44.8	2	0	3.8	0.5	6.3	2.2	46.7	0	0	48.9	
Unshifted % Unshifted	0	0	0	0	0	0	348	16	9	373	17	0	32	4	53	18	388	0	0	406	832
Bank 1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	5
% Bank 1	0	0	0	0	0	0	0.6	0	0	0.5	0	0	0	0	0	0	0.8	0	0	0.7	0.6
Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Connecticut Counts LLC
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 (860) 828-1693

File Name : 21040
 Site Code : 21040
 Start Date : 10/1/2020
 Page No : 2

Start Time	Private Drive From North					Route 44 From East					Holley Street From South					Route 44 From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	0	0	0	0	0	0	42	2	0	44	5	0	6	0	11	4	52	0	0	56	111
04:15 PM	0	0	0	0	0	0	57	6	0	63	1	0	4	0	5	3	47	0	0	50	118
04:30 PM	0	0	0	0	0	0	55	4	0	59	2	0	2	0	4	4	52	0	0	56	119
04:45 PM	0	0	0	0	0	0	49	1	5	55	2	0	5	2	9	1	43	0	0	44	108
Total Volume	0	0	0	0	0	0	203	13	5	221	10	0	17	2	29	12	194	0	0	206	456
% App. Total	0	0	0	0	0	0	91.9	5.9	2.3		34.5	0	58.6	6.9		5.8	94.2	0	0		
PHF	.000	.000	.000	.000	.000	.000	.890	.542	.250	.877	.500	.000	.708	.250	.659	.750	.933	.000	.000	.920	.958



Connecticut Counts LLC

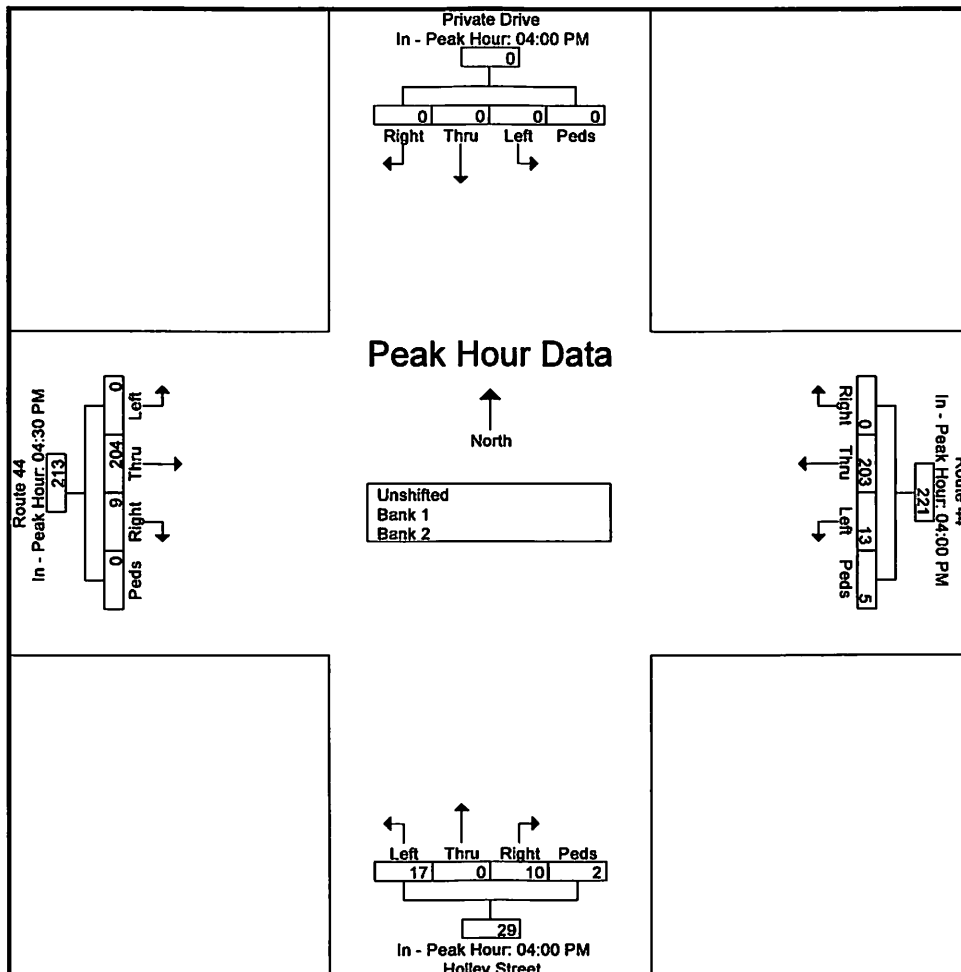
Kensington, Connecticut 06037
(860) 828-1693

File Name : 21040
Site Code : 21040
Start Date : 10/1/2020
Page No : 3

Start Time	Private Drive From North					Route 44 From East					Holley Street From South					Route 44 From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM					04:00 PM					04:00 PM					04:30 PM				
+0 mins.	0	0	0	0	0	0	42	2	0	44	5	0	6	0	11	4	52	0	0	56
+15 mins.	0	0	0	0	0	0	57	6	0	63	1	0	4	0	5	1	43	0	0	44
+30 mins.	0	0	0	0	0	0	55	4	0	59	2	0	2	0	4	1	60	0	0	61
+45 mins.	0	0	0	0	0	0	49	1	5	55	2	0	5	2	9	3	49	0	0	52
Total Volume	0	0	0	0	0	0	203	13	5	221	10	0	17	2	29	9	204	0	0	213
% App. Total	0	0	0	0	0	0	91.9	5.9	2.3		34.5	0	58.6	6.9		4.2	95.8	0	0	
PHF	.000	.000	.000	.000	.000	.000	.890	.542	.250	.877	.500	.000	.708	.250	.659	.563	.850	.000	.000	.873



Parking Lot Peak Images



2020-10-01 8:30:41 A



SCU51P_202010011600_009

2020-10-01 4:30:12 P



U51P_202010020800_025

2020-10-02 8:30:16 AM

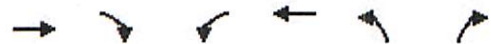


2020-10-02 4:30:26 P

Capacity Analysis

HCM Unsignalized Intersection Capacity Analysis
 3: Holley St & Rt 44

2020 Existing Conditions
 Weekday Morning Peak Hour



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↩			↩	↩	
Traffic Volume (veh/h)	165	4	6	137	5	5
Future Volume (Veh/h)	165	4	6	137	5	5
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.85	0.85	0.87	0.87	0.69	0.69
Hourly flow rate (vph)	194	5	7	157	7	7
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			199		368	196
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			199		368	196
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		99	99
cM capacity (veh/h)			1373		629	845
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	199	164	14			
Volume Left	0	7	7			
Volume Right	5	0	7			
cSH	1700	1373	721			
Volume to Capacity	0.12	0.01	0.02			
Queue Length 95th (ft)	0	0	1			
Control Delay (s)	0.0	0.4	10.1			
Lane LOS		A	B			
Approach Delay (s)	0.0	0.4	10.1			
Approach LOS			B			
Intersection Summary						
Average Delay			0.5			
Intersection Capacity Utilization			22.1%	ICU Level of Service		A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
5: Holley St & Site Driveway

2020 Existing Conditions
Weekday Morning Peak Hour



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y			↑	↓	
Traffic Volume (veh/h)	0	2	0	10	9	1
Future Volume (Veh/h)	0	2	0	10	9	1
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	2	0	11	10	1
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	22	10	11			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	22	10	11			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	995	1071	1608			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	2	11	11			
Volume Left	0	0	0			
Volume Right	2	0	1			
cSH	1071	1608	1700			
Volume to Capacity	0.00	0.00	0.01			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	8.4	0.0	0.0			
Lane LOS	A					
Approach Delay (s)	8.4	0.0	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			0.7			
Intersection Capacity Utilization			13.3%	ICU Level of Service	A	
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
 3: Holley St & Rt 44










2020 Existing Conditions
 Weekday Evening Peak Hour



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↶			↷	↶	↷
Traffic Volume (veh/h)	194	12	13	203	17	10
Future Volume (Veh/h)	194	12	13	203	17	10
Sign Control	Free		Free		Stop	
Grade	0%		0%		0%	
Peak Hour Factor	0.92	0.92	0.88	0.88	0.66	0.66
Hourly flow rate (vph)	211	13	15	231	26	15
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			224		478	218
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			224		478	218
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		95	98
cM capacity (veh/h)			1345		540	822
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	224	246	41			
Volume Left	0	15	26			
Volume Right	13	0	15			
cSH	1700	1345	617			
Volume to Capacity	0.13	0.01	0.07			
Queue Length 95th (ft)	0	1	5			
Control Delay (s)	0.0	0.6	11.2			
Lane LOS		A	B			
Approach Delay (s)	0.0	0.6	11.2			
Approach LOS			B			
Intersection Summary						
Average Delay			1.2			
Intersection Capacity Utilization			31.3%	ICU Level of Service	A	
Analysis Period (min)			15			

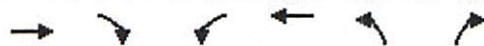
HCM Unsignalized Intersection Capacity Analysis
5: Holley St & Site Driveway

2020 Existing Conditions
Weekday Evening Peak Hour

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	2	4	2	25	22	3
Future Volume (Veh/h)	2	4	2	25	22	3
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	2	4	2	27	24	3
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	56	26	27			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	56	26	27			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	950	1050	1587			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	6	29	27			
Volume Left	2	2	0			
Volume Right	4	0	3			
cSH	1015	1587	1700			
Volume to Capacity	0.01	0.00	0.02			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	8.6	0.5	0.0			
Lane LOS	A	A				
Approach Delay (s)	8.6	0.5	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			1.1			
Intersection Capacity Utilization			13.3%	ICU Level of Service		A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
3: Holley St & Rt 44

2025 No-Build Condition
Weekday Morning Peak Hour



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↑	
Traffic Volume (veh/h)	177	4	6	147	5	5
Future Volume (Veh/h)	177	4	6	147	5	5
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.85	0.85	0.87	0.87	0.69	0.69
Hourly flow rate (vph)	208	5	7	169	7	7
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			213		394	210
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			213		394	210
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		99	99
cM capacity (veh/h)			1357		608	830
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	213	176	14			
Volume Left	0	7	7			
Volume Right	5	0	7			
cSH	1700	1357	702			
Volume to Capacity	0.13	0.01	0.02			
Queue Length 95th (ft)	0	0	2			
Control Delay (s)	0.0	0.3	10.2			
Lane LOS		A	B			
Approach Delay (s)	0.0	0.3	10.2			
Approach LOS			B			
Intersection Summary						
Average Delay			0.5			
Intersection Capacity Utilization			22.6%	ICU Level of Service	A	
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
 5: Holley St & Site Driveway

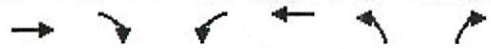
2025 No-Build Condition
 Weekday Morning Peak Hour



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↙			↑	↓	↘
Traffic Volume (veh/h)	0	2	0	10	9	1
Future Volume (Veh/h)	0	2	0	10	9	1
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	2	0	11	10	1
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	22	10	11			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	22	10	11			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	995	1071	1608			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	2	11	11			
Volume Left	0	0	0			
Volume Right	2	0	1			
cSH	1071	1608	1700			
Volume to Capacity	0.00	0.00	0.01			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	8.4	0.0	0.0			
Lane LOS	A					
Approach Delay (s)	8.4	0.0	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			0.7			
Intersection Capacity Utilization			13.3%	ICU Level of Service	A	
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
 3: Holley St & Rt 44

2025 No-Build Condition
 Weekday Evening Peak Hour



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↑	
Traffic Volume (veh/h)	208	13	14	218	18	11
Future Volume (Veh/h)	208	13	14	218	18	11
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.88	0.88	0.66	0.66
Hourly flow rate (vph)	226	14	16	248	27	17
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			240		513	233
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			240		513	233
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		95	98
cM capacity (veh/h)			1327		515	806
Direction, Lane #						
	EB 1	WB 1	NB 1			
Volume Total	240	264	44			
Volume Left	0	16	27			
Volume Right	14	0	17			
cSH	1700	1327	598			
Volume to Capacity	0.14	0.01	0.07			
Queue Length 95th (ft)	0	1	6			
Control Delay (s)	0.0	0.6	11.5			
Lane LOS		A	B			
Approach Delay (s)	0.0	0.6	11.5			
Approach LOS			B			
Intersection Summary						
Average Delay			1.2			
Intersection Capacity Utilization			33.0%	ICU Level of Service		A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
5: Holley St & Site Driveway

2025 No-Build Condition
Weekday Evening Peak Hour



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	2	4	2	27	24	3
Future Volume (Veh/h)	2	4	2	27	24	3
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	2	4	2	29	26	3
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	60	28	29			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	60	28	29			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	945	1048	1584			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	6	31	29			
Volume Left	2	2	0			
Volume Right	4	0	3			
cSH	1011	1584	1700			
Volume to Capacity	0.01	0.00	0.02			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	8.6	0.5	0.0			
Lane LOS	A	A				
Approach Delay (s)	8.6	0.5	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			1.0			
Intersection Capacity Utilization			13.3%	ICU Level of Service	A	
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
3: Holley St & Rt 44

2025 Build Condition
Weekday Morning Peak Hour



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔			↔	↔	
Traffic Volume (veh/h)	177	5	7	147	7	7
Future Volume (Veh/h)	177	5	7	147	7	7
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.85	0.85	0.87	0.87	0.69	0.69
Hourly flow rate (vph)	208	6	8	169	10	10
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			214		396	211
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			214		396	211
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		98	99
cM capacity (veh/h)			1356		605	829
Direction, Lane #						
	EB 1	WB 1	NB 1			
Volume Total	214	177	20			
Volume Left	0	8	10			
Volume Right	6	0	10			
cSH	1700	1356	700			
Volume to Capacity	0.13	0.01	0.03			
Queue Length 95th (ft)	0	0	2			
Control Delay (s)	0.0	0.4	10.3			
Lane LOS		A	B			
Approach Delay (s)	0.0	0.4	10.3			
Approach LOS			B			
Intersection Summary						
Average Delay			0.7			
Intersection Capacity Utilization			23.4%	ICU Level of Service		A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
5: Holley St & Site Driveway

2025 Build Condition
Weekday Morning Peak Hour



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y			↑	↓	
Traffic Volume (veh/h)	4	3	0	10	9	3
Future Volume (Veh/h)	4	3	0	10	9	3
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	4	3	0	11	10	3
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type						
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	22	12	13			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	22	12	13			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	994	1069	1606			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	7	11	13			
Volume Left	4	0	0			
Volume Right	3	0	3			
cSH	1025	1606	1700			
Volume to Capacity	0.01	0.00	0.01			
Queue Length 95th (ft)	1	0	0			
Control Delay (s)	8.5	0.0	0.0			
Lane LOS	A					
Approach Delay (s)	8.5	0.0	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			1.9			
Intersection Capacity Utilization			13.3%	ICU Level of Service		A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
3: Holley St & Rt 44

2025 Build Condition
Weekday Evening Peak Hour



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↑	
Traffic Volume (veh/h)	208	15	17	218	20	12
Future Volume (Veh/h)	208	15	17	218	20	12
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.88	0.88	0.66	0.66
Hourly flow rate (vph)	226	16	19	248	30	18
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			242		520	234
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			242		520	234
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		94	98
cM capacity (veh/h)			1324		509	805
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	242	267	48			
Volume Left	0	19	30			
Volume Right	16	0	18			
cSH	1700	1324	590			
Volume to Capacity	0.14	0.01	0.08			
Queue Length 95th (ft)	0	1	7			
Control Delay (s)	0.0	0.7	11.6			
Lane LOS		A	B			
Approach Delay (s)	0.0	0.7	11.6			
Approach LOS			B			
Intersection Summary						
Average Delay			1.3			
Intersection Capacity Utilization			35.5%	ICU Level of Service	A	
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
5: Holley St & Site Driveway

2025 Build Condition
Weekday Evening Peak Hour



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	WT			↑	↓	
Traffic Volume (veh/h)	5	5	3	27	24	8
Future Volume (Veh/h)	5	5	3	27	24	8
Sign Control	Stop			Free		Free
Grade	0%			0%		0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	5	3	29	26	9
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type						
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	66	30	35			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	66	30	35			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	100	100			
cM capacity (veh/h)	938	1044	1576			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	10	32	35			
Volume Left	5	3	0			
Volume Right	5	0	9			
cSH	988	1576	1700			
Volume to Capacity	0.01	0.00	0.02			
Queue Length 95th (ft)	1	0	0			
Control Delay (s)	8.7	0.7	0.0			
Lane LOS	A	A				
Approach Delay (s)	8.7	0.7	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			1.4			
Intersection Capacity Utilization			13.9%	ICU Level of Service	A	
Analysis Period (min)			15			