

TRAFFIC IMPACT STUDY

For

Daughters of Israel Proposed Continuing Care Retirement Community

Property Located at:

**1155 Pleasant Valley Way (CR 636)
Block 171 – Lot 12
Township of West Orange, Essex County, NJ**

Prepared by:



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4041-99-001TE

INTRODUCTION

It is proposed to replace the existing Daughters of Israel skilled nursing home with a continuing care retirement community. The site is located along the southbound side of Pleasant Valley Way (CR 636) between its intersection with N.J. Route 10 (Mount Pleasant Avenue) and Old Indian Road in the Township of West Orange, Essex County, New Jersey, see Figure 1 in Appendix A. The site is designated as Block 171 – Lot 12 on the Township of West Orange Tax Maps and is currently occupied by a 303-bed Skilled Nursing Facility.

The development proposal includes the reconstruction of the nursing home facility to a continuing care retirement community that will provide the following:

- 163 Independent Living Units
- 64 Assisted Living Units
- 84 Skilled Nursing Units

Access to the site is currently provided via two (2) driveways along Pleasant Valley Way. It is proposed to maintain the existing access points.

Dynamic Traffic, LLC has been retained to prepare this study to assess the traffic impact associated with the construction of The Project on the adjacent roadway network. This study documents the methodology, analyses, findings and conclusions of our study and includes:

- A detailed field inspection was conducted to obtain an inventory of existing roadway geometry, traffic control, and location and geometry of existing driveways and intersections.
- Existing traffic data was collected via manual turning movement (MTM) counts during the weekday AM and weekday PM peak periods at the following intersections:
 - N.J. Route 10 & Pleasant Valley Way
 - Pleasant Valley Way & Kessler Driveway
 - Pleasant Valley Way & North Site Driveway
 - Pleasant Valley Way & South Site Driveway
- Projections of traffic to be generated by the proposed development were prepared utilizing trip generation data as published by the Institute of Transportation Engineers. Site traffic was then assigned to the adjacent street system based upon the anticipated directional distribution.
- The proposed points of ingress and egress were inspected for adequacy of geometric design, spacing and/or alignment to streets and driveways on the opposite side of the street, relationship to other driveways adjacent to the development, and conformance with accepted design standards.
- The site plan as designed was reviewed for sufficiency in accommodating large wheel base vehicles such as delivery trucks, refuse trucks, and emergency vehicles.

EXISTING CONDITIONS

A review of the existing roadway conditions near the proposed site was conducted to provide the basis for assessing the traffic impact of the development. This included field investigations of the surrounding roadways and intersections, collection of traffic volume data, and extensive analyses.

Existing Roadway Conditions

The following are descriptions of the roadways in the study area:

N.J. Route 10 (Mount Pleasant Avenue) is an Urban Principal Arterial roadway under the jurisdiction of the New Jersey Department of Transportation (NJDOT). In the vicinity of the site the posted speed limit is 40 MPH. The roadway provides one eastbound travel lane and two westbound travel lanes to the west of its intersection with Pleasant Valley Way and two travel lanes in each direction to the east of the intersection. Curb is provided along both sides of the roadway while sidewalk is provided along portions of both sides of the roadway. N.J. Route 10 provides a curved horizontal alignment and a downhill vertical alignment from west to east. The land uses along N.J. Route 10 in the vicinity of the project are a mix of commercial and residential.

Pleasant Valley Way (CR 636) is an Urban Minor Arterial roadway under Essex County jurisdiction. In the vicinity of the site the posted speed limit is 45 MPH and the roadway provides one travel lane in each direction along the site frontage with a general north/south orientation. Curb is provided along both sides of the roadway while sidewalk is provided along the westerly (southbound) side of the roadway. Pleasant Valley Way provides a primarily straight horizontal alignment and a relatively flat vertical alignment along the site frontage. The land uses along Pleasant Valley Way in the vicinity of the project are a mix of commercial and residential.

Existing Traffic Volumes

Manual turning movement (MTM) counts were originally conducted on Tuesday, October 19, 2021 from 7:00 – 9:00 AM and from 4:30 – 6:30 PM at the following intersections:

- N.J. Route 10 & Pleasant Valley Way
- Pleasant Valley Way & Kessler Driveway
- Pleasant Valley Way & North Site Driveway
- Pleasant Valley Way & South Site Driveway

It should be noted that as outlined in our May 6, 2022 *Traffic Impact Study* (TIS) for this project, traffic impacts associated with the COVID-19 pandemic may have still been in effect at the time of the counts. Therefore, adjustment factors were conservatively calculated based on historical traffic volume data in the area and applied to the counts in order to develop a best estimate of “existing” conditions.

However, in order to provide a more accurate representation of actual current conditions, updated MTM counts were conducted on Thursday, January 19, 2023. Upon review of the count data, a comparison was made to the adjusted October 2021 data which revealed that the January 2023 traffic volumes are in fact lower than the adjusted volumes previously utilized. Therefore, in order to provide the most accurate analysis based on current traffic conditions, the updated January 2023 data was applied for all analyses contained herein.

Review of the collected traffic data reveals that the weekday morning peak street hour (PSH) of the network occurs between 8:00 – 9:00 AM and the weekday evening PSH occurs between 4:30 – 5:30 PM. Figure 2, located in Appendix A, shows the existing peak hour traffic volumes at the study intersections. All MTM counts are contained in Appendix B.

Existing Capacity Analysis

The methodology utilized in the capacity analyses is described in the *Highway Capacity Manual*, published by the Transportation Research Board. In general, the term Level of Service (LOS) is used to provide a “qualitative” evaluation of capacity based upon certain “quantitative” calculations related to empirical values, such as traffic volume and intersection control.

At signalized intersections, factors that affect the various approach capacities include width of approach, number of lanes, signal “green time”, turning percentages, truck volumes, etc. However, delays cannot be related to capacity in a simple one-to-one fashion. For example, it is possible to have delays in the Level of Service “F” range without exceeding roadway capacity. Substantial delays can exist without exceeding capacity if one or more of the following conditions exist: long signal cycle lengths; a particular traffic movement experiences a long red time; or progressive movement for a particular lane group is poor. Table I describes the level of service ranges for signalized intersections.

An unsignalized (STOP sign controlled) driveway or side street along a through route is seldom critical from an overall capacity standpoint, however, it may be of great significance to the capacity of the minor cross-route, and it may influence the quality of traffic flow on both. When analyzing an unsignalized intersection, it is assumed that both the major street through and right turn movements are unimpeded and have the right-of-way over all side street traffic and left turns from the major street. All other turning movements in the intersection cross, merge with, or are otherwise impeded by major street movements. Traffic delays at unsignalized intersections are determined by sequentially processing these impeded movements. Table II describes the level of service ranges for unsignalized (stop controlled) intersections.

Table I
Level of Service Criteria
for Signalized Intersections

Level of Service	Average Control Delay (seconds per vehicle)
A	0.0 to 10.0
B	10.1 to 20.0
C	20.1 to 35.0
D	35.1 to 55.0
E	55.1 to 80.0
F	greater than 80.0

Table II
Level of Service Criteria
for Unsignalized Intersections

Level of Service	Average Control Delay (seconds per vehicle)
a	0.0 to 10.0
b	10.1 to 15.0
c	15.1 to 25.0
d	25.1 to 35.0
e	35.1 to 50.0
f	greater than 50.0

It should be noted that the analyses within the *Highway Capacity Manual* assume a random arrival for all the movements, which may not be the case if an adjacent traffic signal is present that platoons vehicles. All capacity analyses were performed utilizing Synchro 11 software. Table III summarizes the existing Levels of Service (LOS) and delays. All capacity analysis calculation worksheets are contained in Appendix C.

Table III
Existing Levels of Service

Intersection	Direction/ Movement		AM PSH	PM PSH
N.J. Route 10 & Pleasant Valley Way	EB	LT	D (51)	D (51)
		R	A (1)	A (1)
	WB	LT	D (37)	D (36)
		R	A (3)	A (7)
	NB	L	C (21)	C (20)
		TR	D (36)	D (42)
	SB	L	C (23)	C (26)
		TR	D (36)	C (33)
Overall		D (36)	D (37)	
Pleasant Valley Way & Kessler Driveway	EB	L	C (22)	B (19)
		R	C (22)	B (16)
	NB	L	A (2)	A (4)
		TR	A (2)	B (10)
	SB	TR	A (2)	A (7)
	Overall		A (2)	B (10)
Pleasant Valley Way & North Site Driveway	EB	LR	c (18)	b (11)
	NB	L	a (10)	a (9)
Pleasant Valley Way & South Site Driveway	EB	LR	c (25)	c (21)
	NB	L	a (10)	a (9)

a (#) - Unsignalized Intersection Level of Service (seconds of delay per vehicle)

A (#) - Signalized Intersection Level of Service (seconds of delay per vehicle)

The following are discussions pertaining to each of the existing intersections analyzed. It should be noted that the existing percentage of trucks and peak hour factors were used in the existing analysis.

N.J. Route 10 and Pleasant Valley Way

Pleasant Valley Way intersects N.J. Route 10 to form a four-leg intersection controlled by a four-phase traffic signal with a variable cycle length. The eastbound and westbound approaches of N.J. Route 10 each provide a shared left turn/through lane, a dedicated through lane and a channelized right turn lane operating under yield control. The northbound and southbound approaches of Pleasant Valley Way each provide a dedicated left turn lane, a dedicated through lane and a shared through/right turn lane.

A review of the existing analysis reveals that the intersection operates at overall Level of Service “D” and the individual intersection movements operate at Levels of Service “D” or better during the analyzed peak periods. See Table III for the individual movement Levels of Service and delays.

Pleasant Valley Way and Kessler Driveway

The Kessler Driveway intersects Pleasant Valley Way to form a T-intersection controlled by a two-phase traffic signal with a 90-second cycle length. The northbound approach of Pleasant Valley Way provides a dedicated left turn lane and a dedicated through lane. The southbound approach of Pleasant Valley Way provides a shared through/right turn lane. The eastbound approach of the Kessler Driveway provides a dedicated left turn lane and a dedicated right turn lane.

A review of the existing analysis reveals that the intersection operates at overall Level of Service “B” or better and the individual intersection movements operate at Levels of Service “C” or better during the analyzed peak periods. See Table III for the individual movement Levels of Service and delays.

Pleasant Valley Way and the North Site Driveway

The north site driveway intersects Pleasant Valley Way to form an unsignalized T- intersection with the site driveway operating under stop control. The northbound approach of Pleasant Valley Way provides a dedicated left turn lane and a dedicated through lane. The southbound approach of Pleasant Valley Way provides a shared through/right turn lane. The eastbound approach of the site driveway provides a shared lane for left and right turns.

A review of the existing analysis reveals that the individual intersection movements operate at Levels of Service “C” or better during the analyzed peak periods. See Table III for the individual movement Levels of Service and delays.

Pleasant Valley Way and the South Site Driveway

The south site driveway intersects Pleasant Valley Way to form an unsignalized T- intersection with the site driveway operating under stop control. The northbound approach of Pleasant Valley Way provides a dedicated left turn lane and a dedicated through lane. The southbound approach of Pleasant Valley Way provides a shared through/right turn lane. The eastbound approach of the site driveway provides a shared lane for left and right turns.

A review of the existing analysis reveals that the individual intersection movements operate at Levels of Service “C” or better during the analyzed peak periods. See Table III for the individual movement Levels of Service and delays.

FUTURE CONDITIONS

Traffic volumes and operational analyses were developed for both the No Build and Build conditions. The No Build conditions provide a baseline for assessing the impact of site development traffic on the roadway system. The process of developing the No Build and Build traffic volumes and the subsequent analyses is outlined below.

Regardless of whether the subject site is developed or not, traffic volumes on the surrounding roadways are expected to increase as a result of developments throughout the region. A growth rate for roadways within the study area was obtained from the NJDOT Annual Background Growth Rate Table, which indicates a growth rate of 2% per year.

Future No Build traffic volumes were developed by applying the background growth rate of 2% for six (6) years to the study area roadways existing traffic volumes in order to coincide with the anticipated 6-year buildout. Figure 3, in Appendix A, shows the No Build traffic volumes.

Traffic Generation

Trip generation projections for The Project were prepared utilizing trip generation research data as published under Land Use Code (LUC) 620 – Nursing Home for the existing facility and using LUC 255 – Continuing Care Retirement Facility for the proposed facility as published in the Institute of Transportation Engineers' (ITE) publication, *Trip Generation, 11th Edition*. This publication sets forth trip generation rates based on traffic counts conducted at research sites throughout the country.

ITE defines a Continuing Care Retirement Community as follows:

“A continuing care retirement community (CCRC) is a land use that provides multiple elements of senior adult living. A CCRC enables a resident to transition in place from independent living to increased care as the medical needs of the resident change. Housing options may include various combinations of senior adult housing (both single-family and multifamily), congregate care, assisted living, and nursing home. The community may also contain special services such as medical, dining, recreational, communal transportation, and some limited, supporting retail facilities. A CCRC is usually a self-contained village.”

Based on the above definition, LUC 255 is clearly the most appropriate land use to describe the improved facility that is proposed. Table IV below provides a trip generation comparison of the existing versus proposed uses on the property for the critical weekday morning and weekday evening peak street hours (PSH).

Table IV
Existing vs. Proposed Trip Generation Comparison – Full (6-Year) Buildout

Land Use	AM PSH			PM PSH		
	In	Out	Total	In	Out	Total
LUC 620 – 303 Bed Nursing Home (Existing)	30	12	42	14	28	42
LUC 255 – 311 Units Continuing Care Retirement Community (Proposed)	31	16	47	23	36	59
Difference	+1	+4	+5	+9	+8	+17

As can be seen above, the proposed site is projected to generate 5 more trips during the morning peak hour and 17 more trips during the weekday evening peak hour. This magnitude of change in trip generation is minimal and indicates that the traffic entering and exiting the site will not materially change.

In order to further substantiate the usage of LUC 255, trip generation projections were also prepared separately for each of the individual components of the proposed facility. Specifically, LUC 253 – Congregate Care Facility was utilized for the independent living units, LUC 254 – Assisted Living was utilized for the assisted living units and LUC 620 – Nursing Home was utilized for the skilled nursing units. Table V below illustrates the trip generation with each of the components considered separately and compares it to the trip generation associated with LUC 255.

Table V
ITE Trip Generation Comparison – Full (6-Year) Buildout

Land Use	AM PSH			PM PSH		
	In	Out	Total	In	Out	Total
LUC 253 – 163 Units Congregate Care Facility (Independent Living)	8	5	13	14	15	29
LUC 254 – 64 Assisted Living Units	7	5	12	6	9	15
LUC 620 – 84 Units Nursing Home (Skilled Nursing)	9	3	12	4	8	12
Total	24	13	37	24	32	56
LUC 255 – 311 Units Continuing Care Retirement Community	31	16	47	23	36	59
Difference	+7	+3	+10	-1	+4	+3

As can be seen above, the trip generation projections based on LUC 255 result in 10 additional trips during the weekday morning peak hour and 3 additional trips during the weekday evening peak hour when compared to the sum of the individual land uses. Therefore, the usage of LUC 255 is deemed appropriate and conservative, and was utilized for all analyses contained herein.

It should further be noted that the number of new trips falls below the industry accepted standard of a significant increase in traffic of 100 trips. Based on *Transportation Impact Analysis for Site Development*, published by the ITE “it is suggested that a transportation impact study be conducted whenever a proposed development will generate 100 or more added (new) trips during the adjacent roadways’ peak hour or the development’s peak hour.” Additionally, NJDOT has determined that the same 100 vehicle threshold is considered a “significant increase in traffic”. Even without consideration of the existing use on the property, the proposed use is projected to generate approximately 20% of this threshold when compared to the existing use of the site. Therefore, it is not anticipated that the change in use will result in any degradation of operating conditions and the traffic impacts will be essentially imperceptible.

Once the magnitude of traffic to be generated by the site is known, it is necessary to assign that traffic to the adjacent street system. The distribution of new traffic to the surrounding roadways is based on the location of primary arterial roadways, major signalized intersections and existing traffic patterns. Located in Appendix A, Figure 4 illustrates the removal of the existing site generated traffic volumes, Figure 5 illustrates the percent distribution of site generated trips and Figure 6 illustrates the site generated traffic volumes assigned to the study area network. The site generated volumes were added to the No Build traffic volumes to generate the Build traffic volumes, shown in Figure 7.

Future Capacity Analysis

Operational conditions at the study intersections were analyzed under the No Build and Build conditions and are summarized in Table VI below.

Table VI
Future Levels of Service

Intersection	Direction/ Movement		AM PSH		PM PSH	
			No Build	Build	No Build	Build
N.J. Route 10 & Pleasant Valley Way	EB	LT	D (52)	D (52)	D (51)	D (51)
		R	A (1)	A (1)	A (1)	A (1)
	WB	LT	D (39)	D (39)	D (37)	D (37)
		R	A (4)	A (4)	A (9)	A (10)
	NB	L	C (23)	C (23)	C (21)	C (21)
		TR	D (39)	D (39)	D (48)	D (49)
	SB	L	C (26)	C (26)	C (34)	C (34)
		TR	D (43)	D (43)	C (35)	C (35)
	Overall		D (40)	D (40)	D (40)	D (41)
Pleasant Valley Way & Kessler Driveway	EB	L	C (28)	C (28)	C (22)	C (22)
		R	C (28)	C (28)	B (20)	B (20)
	NB	L	A (3)	A (3)	A (4)	A (4)
		TR	A (3)	A (3)	B (11)	B (11)
	SB	TR	A (4)	A (4)	A (7)	A (7)
	Overall		A (4)	A (4)	B (11)	B (11)
Pleasant Valley Way & North Site Driveway	EB	LR	c (21)	c (19)	b (11)	c (17)
	NB	L	b (10)	b (10)	a (9)	a (9)
Pleasant Valley Way & South Site Driveway	EB	LR	d (30)	-	c (25)	-
		L	-	d (32)	-	d (31)
		R	-	c (16)	-	c (12)
	NB	L	b (10)	b (10)	a (9)	a (9)

a (#) - Unsignalized Intersection Level of Service (seconds of delay per vehicle)

A (#) - Signalized Intersection Level of Service (seconds of delay per vehicle)

N.J. Route 10 and Pleasant Valley Way

With the addition of the site traffic, the intersection is anticipated to continue operating at overall Level of Service “D” and the individual intersection movements are anticipated to continue operating at Levels of Service “D” or better during the analyzed peak periods. See Table VI for the individual movement levels of service and delays.

It should be noted that our previously prepared TIS recommended minor signal timing adjustments in order to mitigate Level of Service “F” constraints at the northbound and southbound approaches of the intersection. However, these Level of Service issues were a function of the higher magnitude of existing traffic volumes due to the adjustments made to account for potential fluctuations with Covid-19. As detailed previously, updated traffic counts were conducted in order to establish a more accurate representation of existing traffic volumes, which found that the volumes are lower and the Covid-19 adjustments were overly conservative. As shown in Table VI above, there are no longer any Level of Service “F” constraints with consideration of the most recent traffic count data and thus it eliminates the need for any signal timing adjustments. However, if the signal timing adjustments are still desired, they could still be pursued by the Township professionals independent of this application.

Pleasant Valley Way and Kessler Driveway

With the addition of the site traffic, the intersection is anticipated to continue operating at overall Level of Service “B” or better and the individual intersection movements are anticipated to continue operating at Levels of Service “C” or better during the analyzed peak periods. See Table VI for the individual movement levels of service and delays.

Pleasant Valley Way and the North Site Driveway

With the addition of the site traffic, the individual intersection movements are anticipated to continue operating at Levels of Service “C” or better during the analyzed peak periods. See Table VI for the individual movement Levels of Service and delays.

Pleasant Valley Way and the South Site Driveway

With the addition of the site traffic, the individual intersection movements are anticipated to continue operating at Levels of Service “D” or better during the analyzed peak periods. See Table VI for the individual movement Levels of Service and delays.

Construction Traffic Analysis

In order to ensure that the roadway operating conditions will also be acceptable during the construction process, the magnitude of peak hour construction related traffic was estimated and compared to the projected peak hour trip generation of the full development buildout. Trip generation projections for the construction traffic were developed based on consultations with the Applicant and are as follows:

- It is estimated that a maximum of 4-5 material deliveries will occur during either peak hour. Therefore, it was conservatively assumed that 5 entering trips and 5 exiting trips will occur during each peak hour for deliveries.
- Subcontractors will not park directly on-site, but rather will take a shuttle from an off-site parking location. It is estimated that 8-10 shuttles will be needed. Therefore, it was conservatively assumed that 10 entering trips and 10 exiting trips will occur during each peak hour for the shuttles.
- It is estimated that 8-10 supervisory workers will park directly on-site. Therefore, it was conservatively assumed that 10 workers will enter during the morning peak hour and 10 workers will exit during the afternoon peak hour.

The following Table VII compares the construction related trips to the site generated trips for the full development buildout.

Table VII
Construction vs. Site Generated Trip Generation Comparison

Land Use	AM PSH			PM PSH		
	In	Out	Total	In	Out	Total
311 Units Continuing Care Retirement Community	31	16	47	23	36	59
Construction Traffic	25	15	40	15	25	40
Difference	-6	-1	-7	-8	-11	-19

As can be seen above, it is not expected that the magnitude of construction traffic will surpass that of the projected site generated trips. Therefore, the results and conclusions noted previously for the Future Build capacity analysis are also valid for operating conditions during the construction process, as it more than accounts for the projected construction traffic.

SITE PLAN

Site Access and Circulation

The site plan was reviewed with respect to the site access and on-site circulation design. As noted previously, access to The Project will continue to be provided via two (2) driveways along Pleasant Valley Way. Additionally, a sidewalk connection is proposed to facilitate pedestrian access to/from the site which is an improvement over the existing conditions.

The newly constructed parking areas will be serviced by parking aisles with a minimum width of 24 feet which meets the minimum Ordinance requirement of 24 feet. These aisles will allow for two-way circulation and 90-degree parking. This access configuration is consistent with accepted engineering design standards and will be sufficient to accommodate the traffic volumes anticipated for The Project.

FINDINGS & CONCLUSIONS

Findings

Based upon the detailed analyses as documented herein, the following findings are noted:

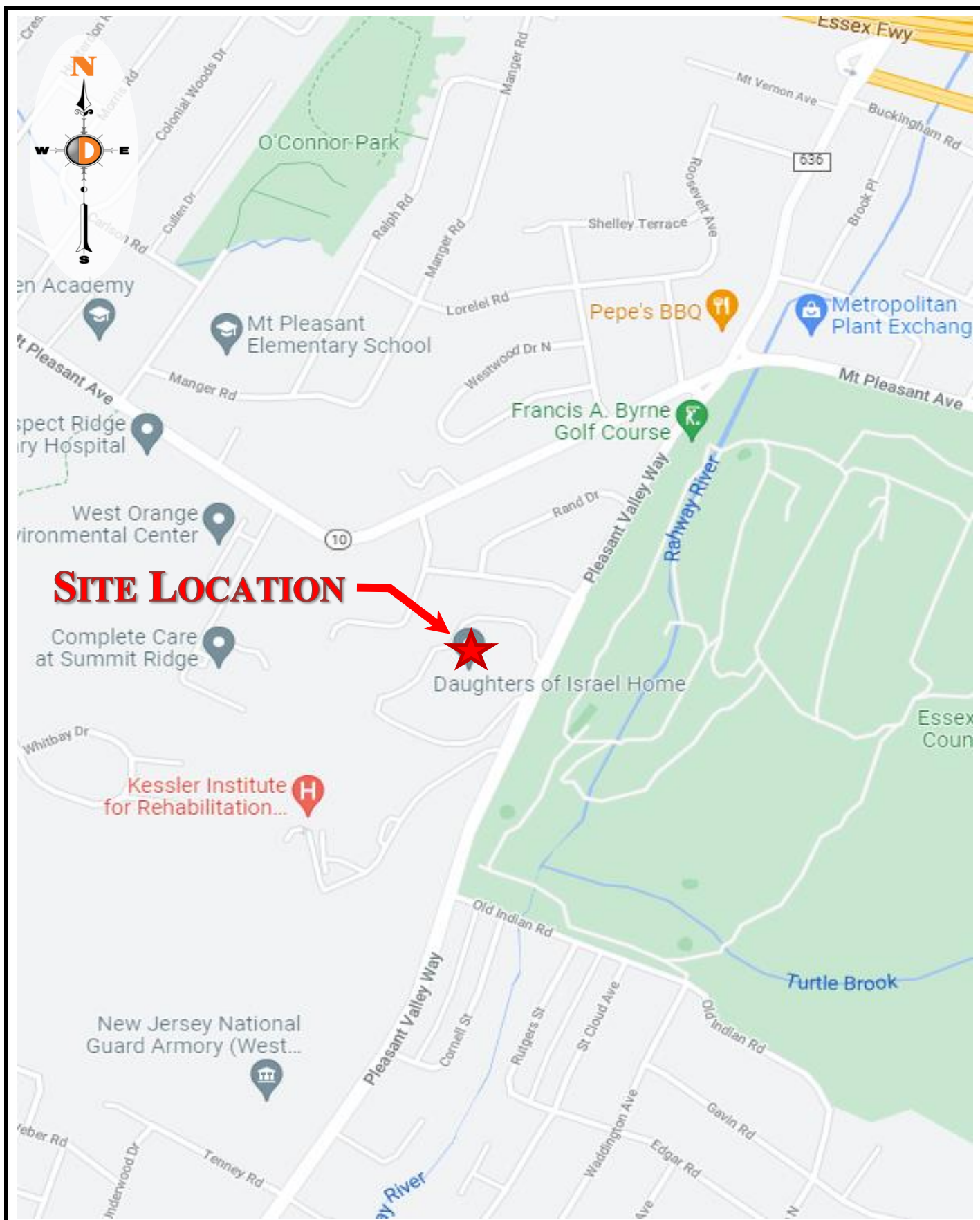
- The proposed reconstruction of the existing Daughters of Israel Nursing Home Facility to a Continuing Care Retirement Community is projected to result in the trip generation potential of the property increasing by only 5 trips during the weekday morning peak hour and 17 trips during the weekday evening peak hour.
- Vehicular access to the site will be maintained in its existing condition and pedestrian access will be improved by providing a connection between the site and the public sidewalk network.
- With the addition of the site generated traffic, the intersection of N.J. Route 10 and Pleasant Valley Way is anticipated to continue operating at overall Level of Service “D” during the analyzed peak hours.
- With the addition of the site generated traffic, the intersection of Pleasant Valley Way and the Kessler Driveway is anticipated to continue operating at overall Level of Service “B” or better during the analyzed peak hours.
- With the addition of the site generated traffic, the individual intersection movements of Pleasant Valley Way and the north site driveway are anticipated to continue operating at Level of Service “C” or better during the analyzed peak hours.
- With the addition of the site generated traffic, the individual intersection movements of Pleasant Valley Way and the south site driveway are anticipated to continue operating at Level of Service “D” or better during the analyzed peak hours.
- As proposed, The Project’s site driveways and internal circulation have been designed to provide for safe and efficient movement of automobiles and large wheel base vehicles.

Conclusions

Based upon our Traffic Impact Study as detailed in the body of this report, it is the professional opinion of Dynamic Traffic, LLC that the adjacent street system of the Township of West Orange, Essex County and NJDOT will not experience any significant degradation in operating conditions with the construction of The Project. The site driveways are located to continue to provide safe and efficient access to the adjacent roadway system. The site plan as proposed provides for good circulation throughout the site and will accommodate The Project’s needs.

Appendix A

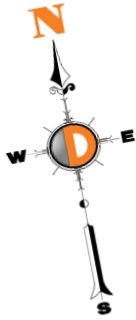
Volume Figures



Proposed Nursing Home Redevelopment
 Traffic Impact Study - Rev 2
 4041-99-001TE

Figure 1

Site Location Map



Mount Pleasant Avenue (Route 10)

(123)	142	160	(141)		
(210)	192	619	(371)		
(19)	19	92	(91)		
				84	(148)
				239	(168)
				102	(116)

North Site Driveway

(0)	2				
(1)	0				
				1	641
				(1)	(888)

South Site Driveway

(15)	6				
(8)	1				
				12	636
				(5)	(874)

Kessler Driveway

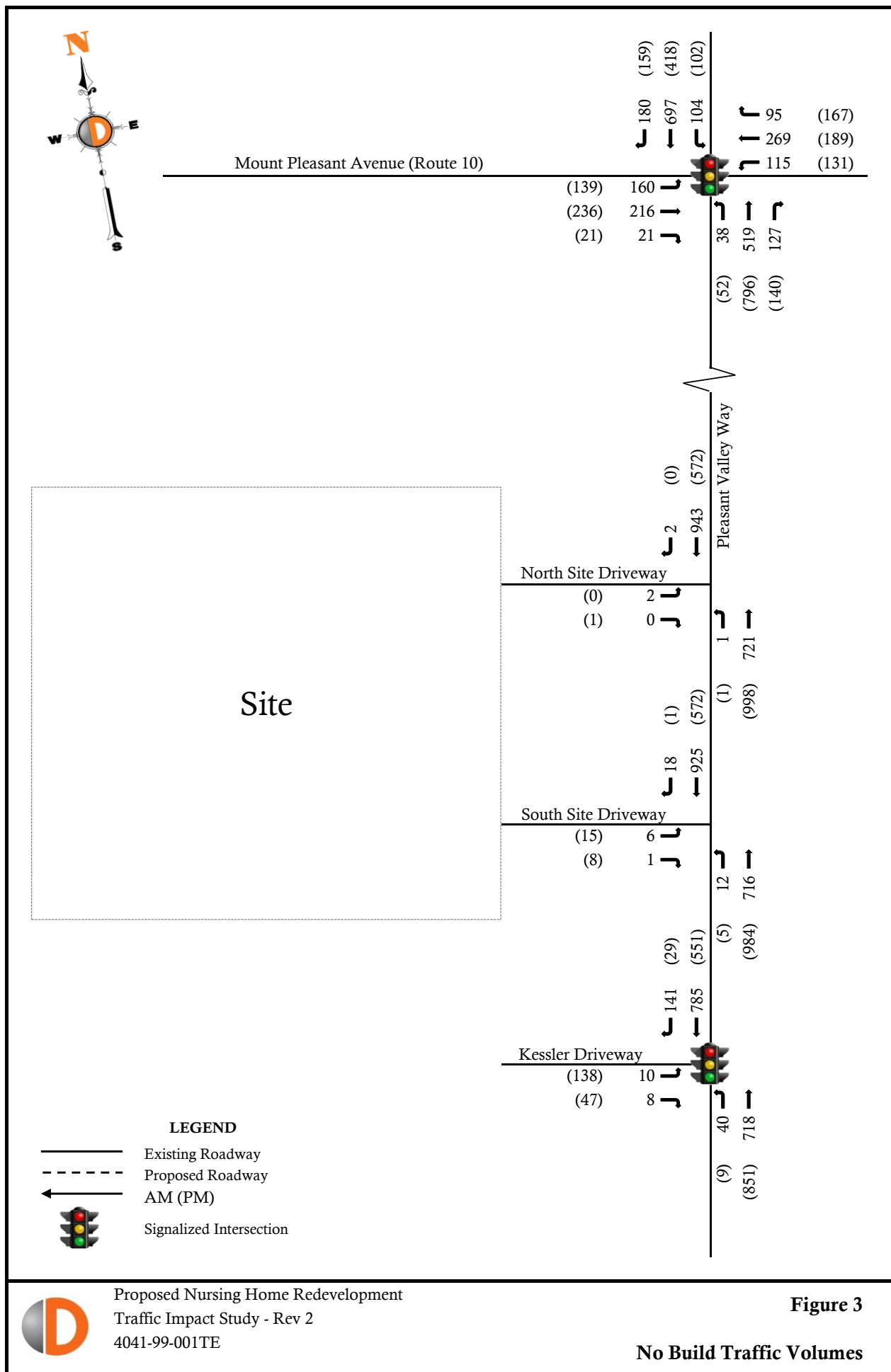
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(47)	8				
				40	638
				(9)	(741)

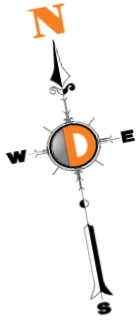
Pleasant Valley Way

LEGEND

- Existing Roadway
- Proposed Roadway
- AM (PM)
- Signalized Intersection

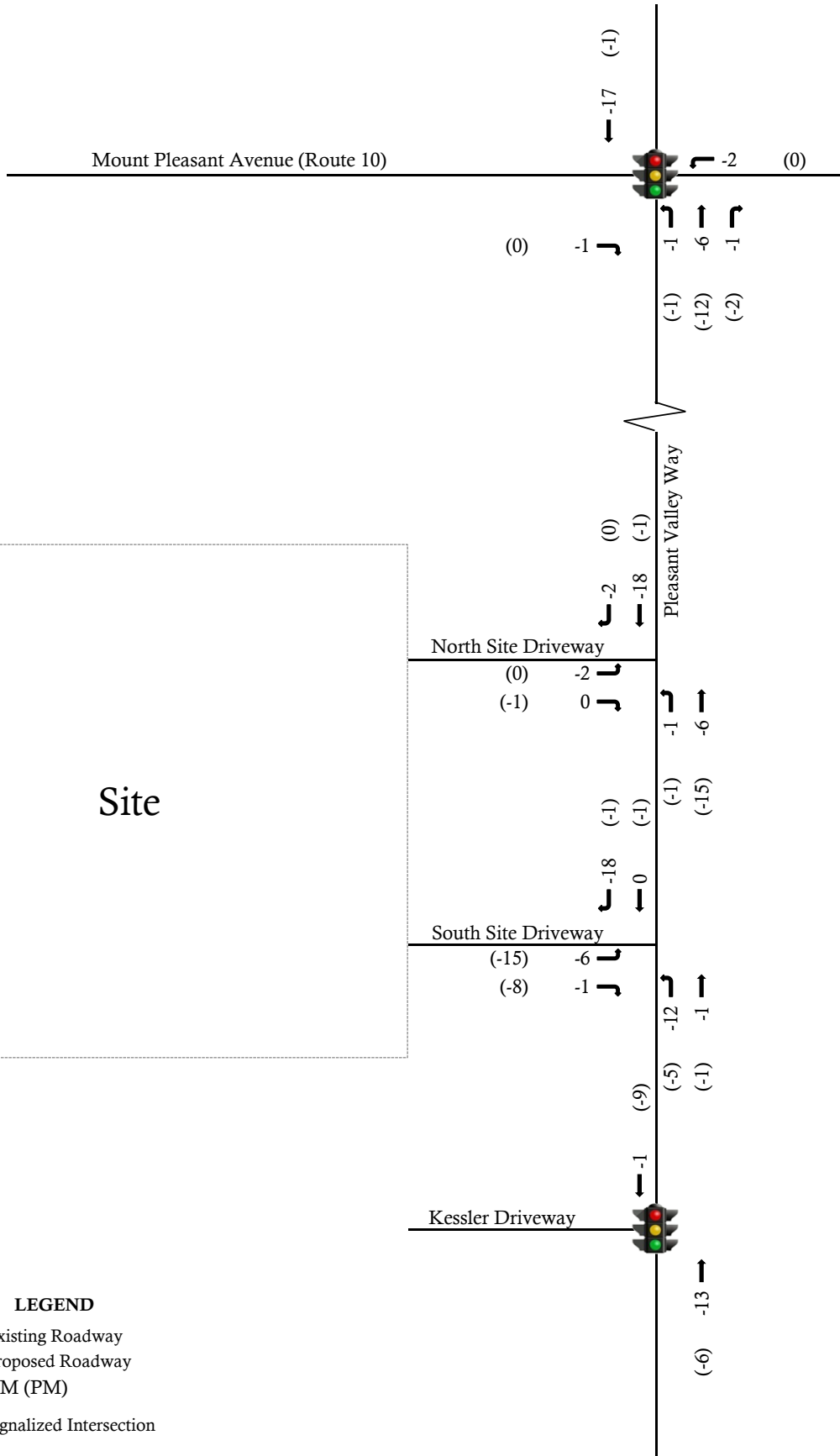


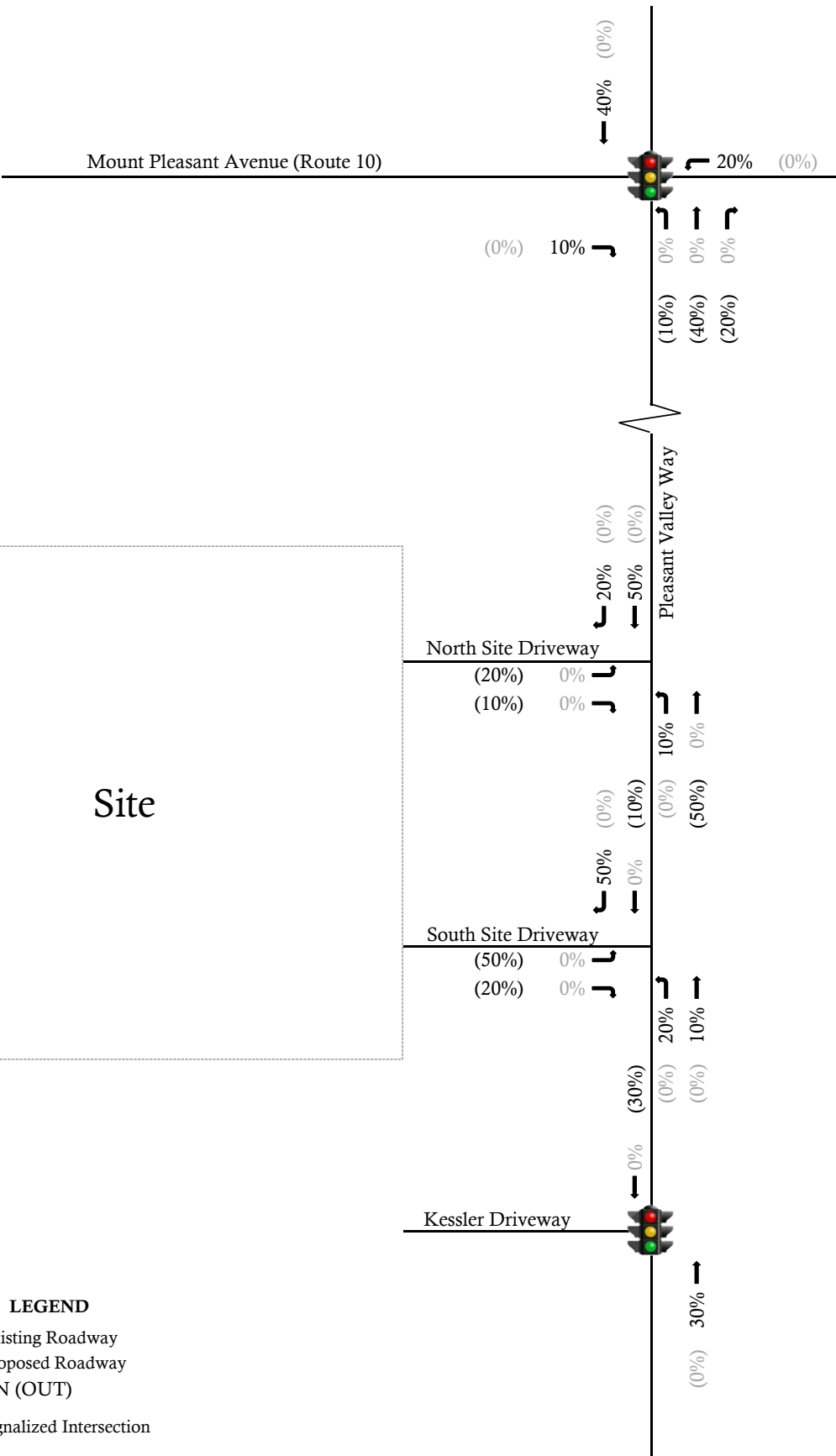
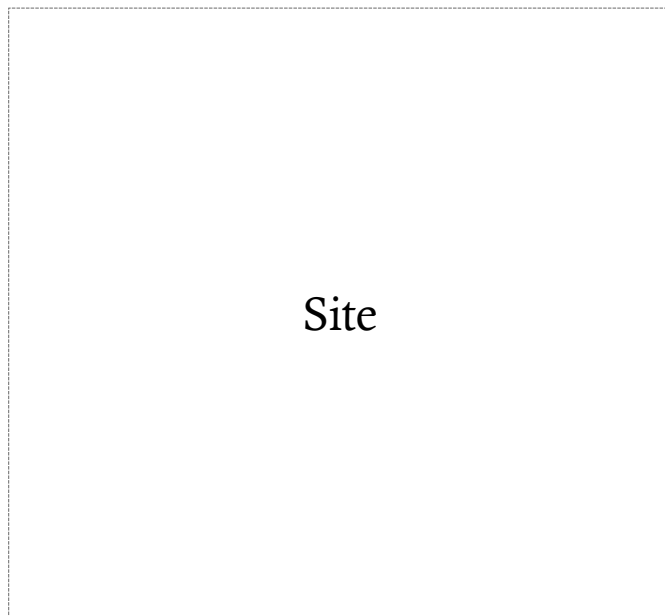




LEGEND

-  Existing Roadway
-  Proposed Roadway
-  AM (PM)
-  Signalized Intersection





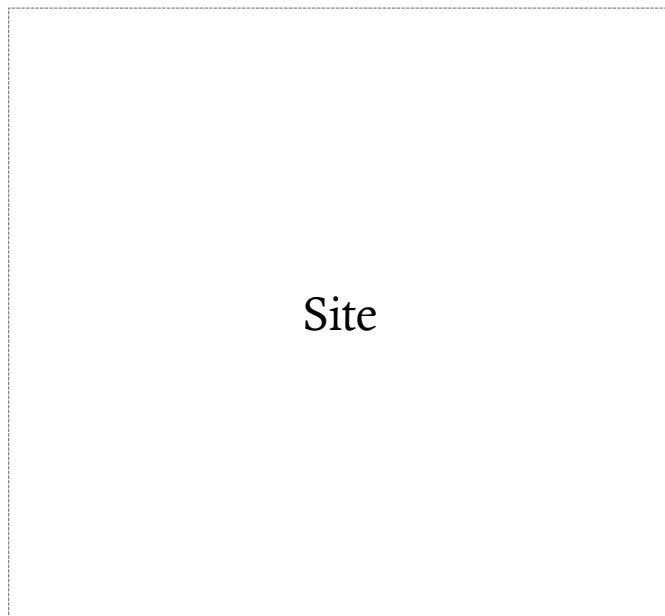
LEGEND

- Existing Roadway
- Proposed Roadway
- IIN (OUT)
- Signalized Intersection



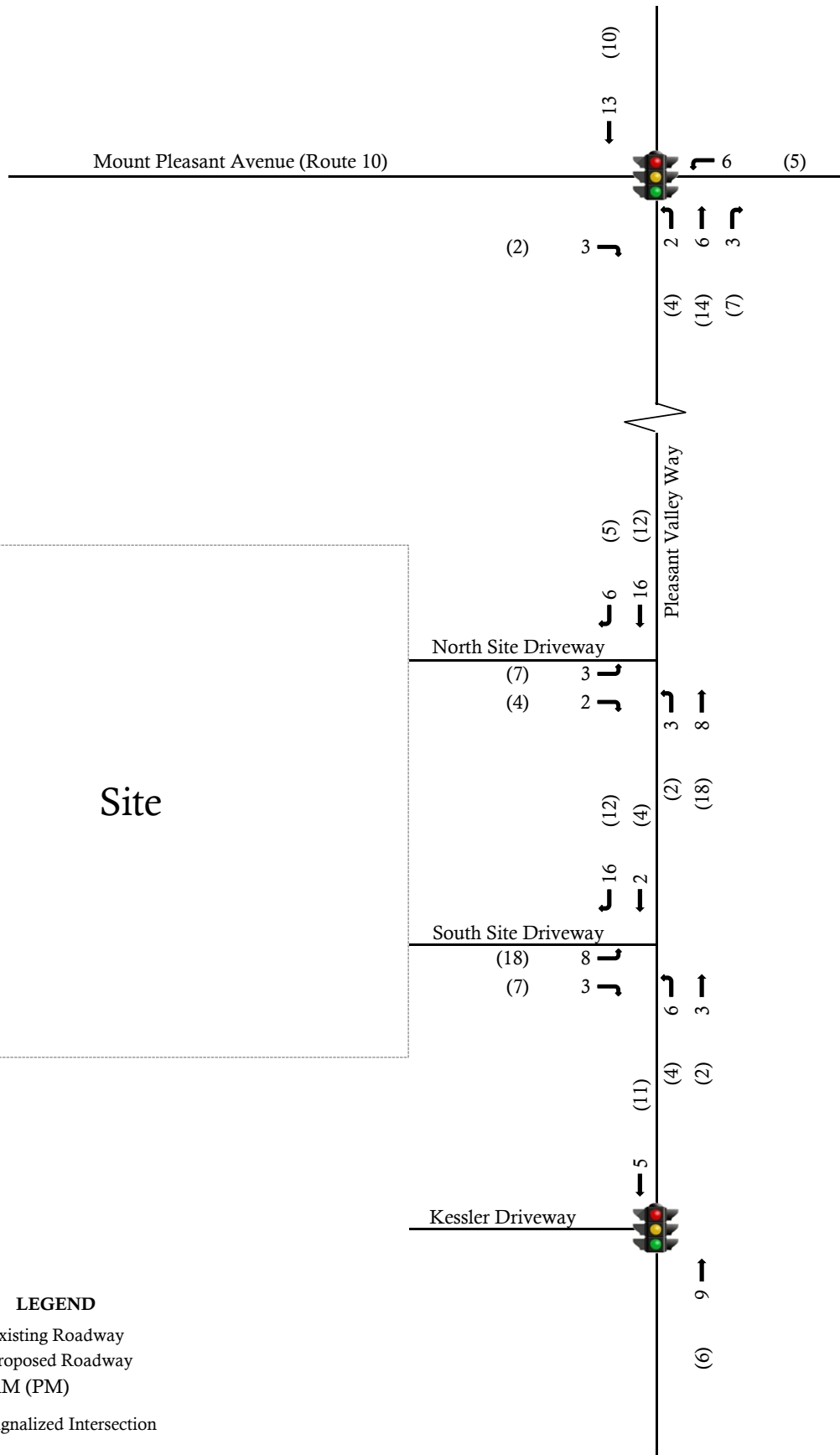
Figure 5

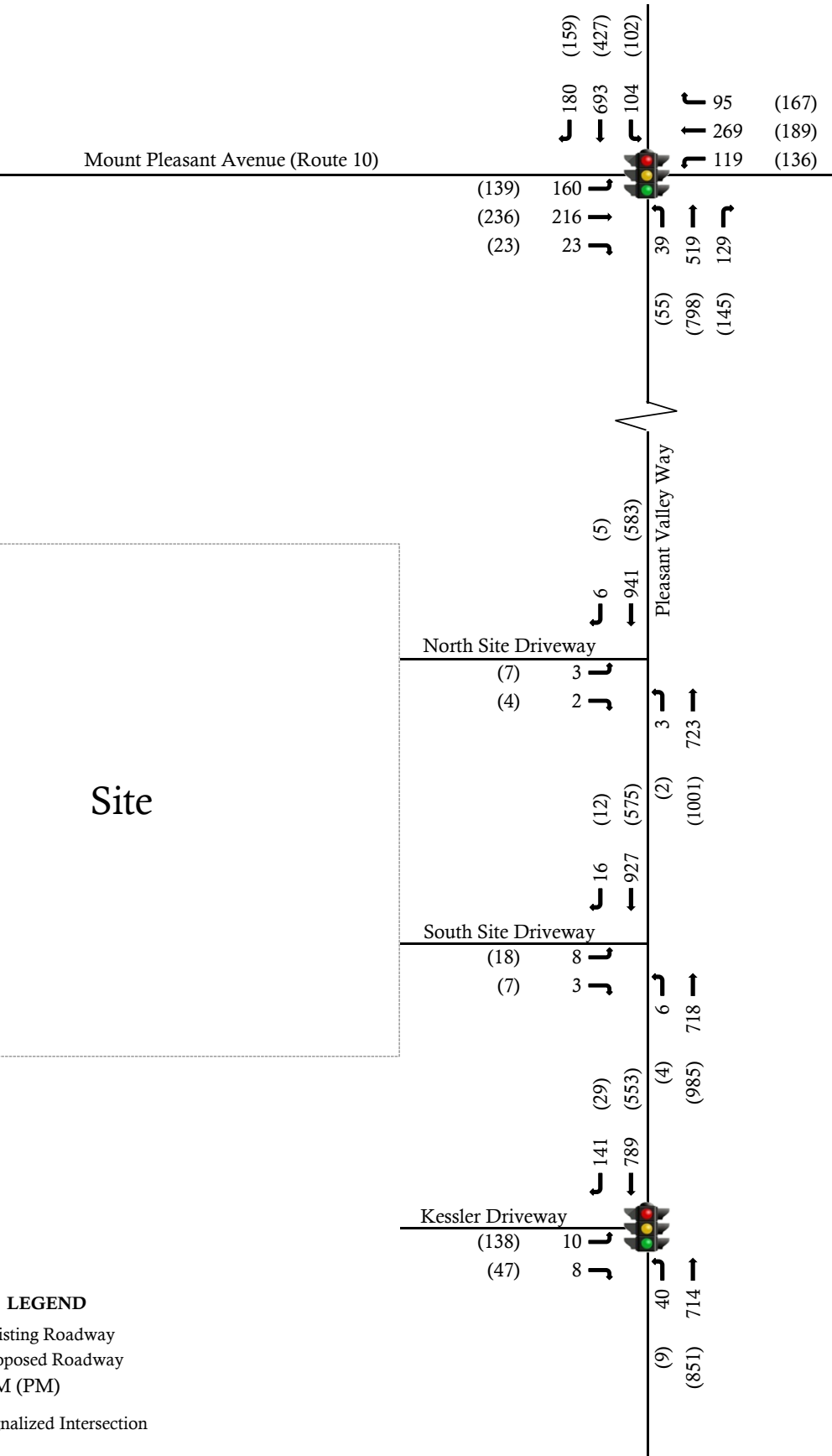
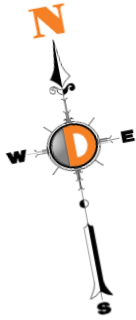
Percent Distribution



LEGEND

- Existing Roadway
- Proposed Roadway
- AM (PM)
- Signalized Intersection





LEGEND

- Existing Roadway
- Proposed Roadway
- AM (PM)
- Signalized Intersection



Figure 7

Appendix B

Traffic Counts

Dynamic Traffic, LLC

1904 Main Street, Lake Como, NJ 07719
245 Main Street - Suite #110, Chester, NJ 07930
732-681-0760

E/W: Mt Pleasant Avenue
N/S: Pleasant Valley Way
Town/County: West Orange/Essex
Job # 4041-99-001TE

File Name : Pleasant Valley Way & Mt Pleasant Ave - AMPM
Site Code : 00000000
Start Date : 1/19/2023
Page No : 1

Groups Printed- Cars - Trucks (SU) - Trucks (TT)

Pleasant Valley Way Eastbound						Pleasant Valley Way Westbound					Mt Pleasant Avenue Northbound					Mt Pleasant Avenue Southbound					Int. Total
Start Time			Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
07:00 AM	39	23	8	0	70	9	22	29	1	61	4	102	21	0	127	13	116	21	0	150	408
07:15 AM	48	20	5	0	73	18	30	50	0	98	4	137	21	0	162	21	149	26	0	196	529
07:30 AM	33	26	5	0	64	16	43	24	0	83	5	100	19	0	124	37	138	26	0	201	472
07:45 AM	31	34	6	0	71	24	63	18	0	105	9	109	36	0	154	16	144	55	0	215	545
Total	151	103	24	0	278	67	158	121	1	347	22	448	97	0	567	87	547	128	0	762	1954
08:00 AM	45	50	8	0	103	25	63	24	0	112	8	107	32	0	147	17	153	40	1	211	573
08:15 AM	28	48	8	0	84	30	60	22	0	112	6	112	24	0	142	26	194	47	0	267	605
08:30 AM	30	41	3	0	74	21	55	19	0	95	14	129	23	0	166	21	125	34	0	180	515
08:45 AM	39	53	0	0	92	26	61	19	0	106	6	113	34	0	153	28	147	39	0	214	565
Total	142	192	19	0	353	102	239	84	0	425	34	461	113	0	608	92	619	160	1	872	2258
*** BREAK ***																					
04:30 PM	37	62	2	0	101	28	42	39	0	109	3	179	35	0	217	28	96	43	0	167	594
04:45 PM	30	45	3	0	78	29	49	32	0	110	9	158	23	0	190	22	95	37	0	154	532
Total	67	107	5	0	179	57	91	71	0	219	12	337	58	0	407	50	191	80	0	321	1126
05:00 PM	33	48	5	0	86	29	43	43	0	115	19	181	34	0	234	21	82	26	0	129	564
05:15 PM	23	55	9	0	87	30	34	34	0	98	15	189	32	0	236	20	98	35	0	153	574
05:30 PM	34	46	7	0	87	27	24	33	3	87	11	155	30	0	196	34	113	39	0	186	556
05:45 PM	31	41	11	0	83	27	37	38	0	102	7	173	27	0	207	27	92	35	0	154	546
Total	121	190	32	0	343	113	138	148	3	402	52	698	123	0	873	102	385	135	0	622	2240
06:00 PM	22	40	3	0	65	22	34	33	0	89	10	142	29	0	181	16	75	27	0	118	453
06:15 PM	35	32	7	0	74	11	30	24	0	65	3	112	18	0	133	20	68	63	0	151	423
Grand Total	538	664	90	0	1292	372	690	481	4	1547	133	2198	438	0	2769	367	1885	593	1	2846	8454
Apprch %	41.6	51.4	7	0		24	44.6	31.1	0.3		4.8	79.4	15.8	0		12.9	66.2	20.8	0		
Total %	6.4	7.9	1.1	0	15.3	4.4	8.2	5.7	0	18.3	1.6	26	5.2	0	32.8	4.3	22.3	7	0	33.7	
Cars	514	636	84	0	1234	365	679	464	3	1511	124	2157	429	0	2710	356	1856	566	1	2779	8234
% Cars	95.5	95.8	93.3	0	95.5	98.1	98.4	96.5	75	97.7	93.2	98.1	97.9	0	97.9	97	98.5	95.4	100	97.6	97.4
Trucks (SU)	24	27	6	0	57	7	11	16	1	35	9	38	8	0	55	10	28	27	0	65	212
% Trucks (SU)	4.5	4.1	6.7	0	4.4	1.9	1.6	3.3	25	2.3	6.8	1.7	1.8	0	2	2.7	1.5	4.6	0	2.3	2.5
Trucks (TT)	0	1	0	0	1	0	0	1	0	1	0	3	1	0	4	1	1	0	0	2	8
% Trucks (TT)	0	0.2	0	0	0.1	0	0	0.2	0	0.1	0	0.1	0.2	0	0.1	0.3	0.1	0	0	0.1	0.1

Dynamic Traffic, LLC

1904 Main Street, Lake Como, NJ 07719
245 Main Street - Suite #110, Chester, NJ 07930
732-681-0760

E/W: Daughters of Israel Driveways
N/S: Pleasant Valley Road
Town/County: West Orange/Essex
Job #: 4041-99-001TE

File Name : Daughters of Israel Dways - AMPM
Site Code : 00000000
Start Date : 1/19/2023
Page No : 1

Groups Printed- Cars - Trucks (SU) - Trucks (TT)

	Southern Driveway Eastbound				Northern Driveway Westbound				Pleasant Valley Road Northbound					Pleasant Valley Road Southbound					
Start Time	L Out	R Out	Peds	App. Total	L Out	R Out	Peds	App. Total	L in S Dwvy	Thru	L in N Dwvy	Peds	App. Total	R in N Dwvy	Thru	R in S Dwvy	Peds	App. Total	Int. Total
07:00 AM	5	2	0	7	0	0	0	0	1	121	0	0	122	0	141	8	0	149	278
07:15 AM	0	0	0	0	1	0	0	1	2	153	1	0	156	0	170	9	0	179	336
07:30 AM	0	1	0	1	1	1	0	2	1	154	0	0	155	0	166	3	0	169	327
07:45 AM	0	0	0	0	0	0	0	0	1	148	0	0	149	0	191	2	0	193	342
Total	5	3	0	8	2	1	0	3	5	576	1	0	582	0	668	22	0	690	1283
08:00 AM	1	1	0	2	0	0	0	0	5	140	0	0	145	0	232	2	0	234	381
08:15 AM	1	0	0	1	1	0	0	1	1	165	0	0	166	1	216	6	0	223	391
08:30 AM	1	0	0	1	1	0	0	1	1	164	0	0	165	1	189	6	0	196	363
08:45 AM	3	0	0	3	0	0	0	0	5	167	0	0	172	0	184	4	0	188	363
Total	6	1	0	7	2	0	0	2	12	636	0	0	648	2	821	18	0	841	1498
*** BREAK ***																			
04:30 PM	4	4	0	8	0	1	0	1	1	189	0	1	191	0	123	1	0	124	324
04:45 PM	2	1	0	3	0	0	0	0	2	225	0	0	227	0	131	0	0	131	361
Total	6	5	0	11	0	1	0	1	3	414	0	1	418	0	254	1	0	255	685
05:00 PM	6	0	0	6	0	0	0	0	2	237	0	0	239	0	127	0	0	127	372
05:15 PM	3	3	0	6	0	0	0	0	0	223	0	0	223	0	127	0	0	127	356
05:30 PM	3	0	0	3	0	0	0	0	0	187	0	0	187	0	139	2	0	141	331
05:45 PM	3	0	0	3	0	0	0	0	1	206	0	0	207	0	132	1	0	133	343
Total	15	3	0	18	0	0	0	0	3	853	0	0	856	0	525	3	0	528	1402
06:00 PM	1	0	0	1	1	0	0	1	1	182	0	0	183	1	106	1	0	108	293
06:15 PM	1	1	0	2	0	0	0	0	1	131	0	0	132	0	90	0	0	90	224
Grand Total	34	13	0	47	5	2	0	7	25	2792	1	1	2819	3	2464	45	0	2512	5385
Apprch %	72.3	27.7	0		71.4	28.6	0		0.9	99	0	0		0.1	98.1	1.8	0		
Total %	0.6	0.2	0	0.9	0.1	0	0	0.1	0.5	51.8	0	0	52.3	0.1	45.8	0.8	0	46.6	
Cars	34	12	0	46	5	2	0	7	25	2773	1	1	2800	3	2442	44	0	2489	5342
% Cars	100	92.3	0	97.9	100	100	0	100	100	99.3	100	100	99.3	100	99.1	97.8	0	99.1	99.2
Trucks (SU)	0	1	0	1	0	0	0	0	0	15	0	0	15	0	22	1	0	23	39
% Trucks (SU)																			
Trucks (TT)	0	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	4
% Trucks (TT)	0	0	0	0	0	0	0	0	0	0.1	0	0	0.1	0	0	0	0	0	0.1

Dynamic Traffic, LLC

1904 Main Street, Lake Como, NJ 07719
245 Main Street - Suite 110, Chester, NJ 07930
732-681-0760

E/W: Route 10
N/S: Pleasant Valley Way
Town/County: West Orange/Essex
Job #: 4041-99-001TE

File Name : Rt 10 & Pleasant Valley Way - AMPM
Site Code : 00000000
Start Date : 10/19/2021
Page No : 1

Groups Printed- Cars - Trucks (SU) - Trucks (TT)

	Route 10 (Mt Pleasant Avenue) Eastbound						Route 10 (Mt Pleasant Avenue) Westbound						Pleasant Valley Way (CR 636) Northbound						Pleasant Valley Way (CR 636) Southbound						
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total				
07:00 AM	40	14	7	0	61	16	15	45	0	76	3	113	16	0	132	11	108	38	0	157	426				
07:15 AM	59	22	5	3	89	14	22	40	0	76	8	130	12	0	150	24	146	29	1	200	515				
07:30 AM	42	32	8	4	86	24	37	13	0	74	14	118	27	0	159	25	168	49	0	242	561				
07:45 AM	31	44	17	0	92	35	55	26	0	116	6	100	28	0	134	23	170	68	0	261	603				
Total	172	112	37	7	328	89	129	124	0	342	31	461	83	0	575	83	592	184	1	860	2105				
08:00 AM	52	55	19	1	127	35	44	26	0	105	12	93	29	0	134	21	194	56	0	271	637				
08:15 AM	27	39	22	0	88	37	40	30	0	107	17	141	37	0	195	36	177	48	1	262	652				
08:30 AM	48	39	18	1	106	38	63	30	0	131	25	116	11	0	152	18	198	43	0	259	648				
08:45 AM	47	49	20	1	117	34	56	14	0	104	16	127	36	0	179	30	164	39	1	234	634				
Total	174	182	79	3	438	144	203	100	0	447	70	477	113	0	660	105	733	186	2	1026	2571				
*** BREAK ***																									
04:30 PM	35	43	4	0	82	13	27	38	0	78	15	187	31	0	233	26	104	35	0	165	558				
04:45 PM	37	58	2	0	97	33	62	21	0	116	9	193	37	0	239	23	130	29	0	182	634				
Total	72	101	6	0	179	46	89	59	0	194	24	380	68	0	472	49	234	64	0	347	1192				
05:00 PM	38	54	3	1	96	19	94	53	0	166	5	208	41	0	254	32	78	24	0	134	650				
05:15 PM	54	63	3	2	122	38	66	46	1	151	9	207	34	0	250	25	107	44	0	176	699				
05:30 PM	27	48	9	0	84	29	46	43	0	118	15	228	44	0	287	32	106	42	0	180	669				
05:45 PM	39	55	9	0	103	26	42	52	0	120	3	179	38	0	220	25	131	43	0	199	642				
Total	158	220	24	3	405	112	248	194	1	555	32	822	157	0	1011	114	422	153	0	689	2660				
06:00 PM	35	49	11	0	95	49	46	40	0	135	17	176	42	0	235	36	121	36	0	193	658				
06:15 PM	46	54	8	0	108	26	41	38	0	105	10	154	33	0	197	43	90	36	0	169	579				
Grand Total	657	718	165	13	1553	466	756	555	1	1778	184	2470	496	0	3150	430	2192	659	3	3284	9765				
Apprch %	42.3	46.2	10.6	0.8		26.2	42.5	31.2	0.1		5.8	78.4	15.7	0		13.1	66.7	20.1	0.1						
Total %	6.7	7.4	1.7	0.1	15.9	4.8	7.7	5.7	0	18.2	1.9	25.3	5.1	0	32.3	4.4	22.4	6.7	0	33.6					
Cars	641	700	160	13	1514	457	738	535	1	1731	177	2435	491	0	3103	417	2166	634	3	3220	9568				
% Cars	97.6	97.5	97	100	97.5	98.1	97.6	96.4	100	97.4	96.2	98.6	99	0	98.5	97	98.8	96.2	100	98.1	98				
Trucks (SU)	16	18	5	0	39	9	17	20	0	46	7	34	5	0	46	13	26	23	0	62	193				
% Trucks (SU)	2.4	2.5	3	0	2.5	1.9	2.2	3.6	0	2.6	3.8	1.4	1	0	1.5	3	1.2	3.5	0	1.9	2				
Trucks (TT)	0	0	0	0	0	0	1	0	0	1	0	1	0	0	1	0	0	2	0	2	4				
% Trucks (TT)	0	0	0	0	0	0	0.1	0	0	0.1	0	0	0	0	0	0	0	0.3	0	0.1	0				

1904 Main Street, Lake Como, NJ 07719
245 Main Street - Suite 110, Chester, NJ 07930
732-681-0760

E/W: Daughters of Israel Dways
N/S: Pleasant Valley Rd
Town/County: West Orange/Essex
Job #: 4041-99-001TE

File Name : Daughters of Israel Dways - AMPM
Site Code : 00000000
Start Date : 10/19/2021
Page No : 1

Groups Printed- Cars - Trucks (SU) - Trucks (TT)

	Southern Driveway Eastbound					Northern Driveway Westbound					Southern Driveway Northbound					Northern Driveway Southbound					
Start Time	Left Out	Thru	Right Out	Peds	App. Total	Left In	Thru	Right In	Peds	App. Total	Left In	Thru	Right In	Peds	App. Total	Left Out	Thru	Right Out	Peds	App. Total	Int. Total
07:00 AM	5	0	2	0	7	0	0	0	0	0	0	0	10	0	10	0	0	0	0	0	17
07:15 AM	1	0	0	5	6	0	0	0	1	1	1	0	8	0	9	0	0	0	0	0	16
07:30 AM	0	0	0	1	1	0	0	0	0	0	1	0	4	0	5	0	0	0	0	0	6
07:45 AM	3	0	0	0	3	0	0	0	0	0	3	0	5	0	8	0	0	0	0	0	11
Total	9	0	2	6	17	0	0	0	1	1	5	0	27	0	32	0	0	0	0	0	50
08:00 AM	1	0	1	0	2	1	0	0	1	2	4	0	1	0	5	0	0	0	0	0	9
08:15 AM	1	0	0	1	2	0	0	0	0	0	0	0	5	0	5	0	0	0	0	0	7
08:30 AM	0	0	0	0	0	0	0	0	0	0	3	0	5	0	8	0	0	0	0	0	8
08:45 AM	1	0	0	0	1	0	0	0	0	0	1	0	3	0	4	0	0	0	0	0	5
Total	3	0	1	1	5	1	0	0	1	2	8	0	14	0	22	0	0	0	0	0	29
*** BREAK ***																					
04:30 PM	5	0	1	2	8	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1	10
04:45 PM	3	0	5	1	9	1	0	1	0	2	1	0	2	0	3	1	0	1	0	2	16
Total	8	0	6	3	17	1	0	2	0	3	1	0	2	0	3	1	0	2	0	3	26
05:00 PM	6	0	4	3	13	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	14
05:15 PM	2	0	2	2	6	0	0	0	0	0	0	0	4	0	4	0	0	0	0	0	10
05:30 PM	1	0	1	0	2	0	0	0	1	1	3	0	2	0	5	0	0	0	0	0	8
05:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
Total	9	0	7	5	21	0	0	0	1	1	4	0	7	0	11	0	0	0	0	0	33
06:00 PM	0	0	1	0	1	0	0	0	2	2	0	0	3	0	3	0	0	0	0	0	6
06:15 PM	3	0	1	0	4	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	5
Grand Total	32	0	18	15	65	2	0	2	5	9	19	0	53	0	72	1	0	2	0	3	149
Apprch %	49.2	0	27.7	23.1		22.2	0	22.2	55.6		26.4	0	73.6	0		33.3	0	66.7	0		
Total %	21.5	0	12.1	10.1	43.6	1.3	0	1.3	3.4	6	12.8	0	35.6	0	48.3	0.7	0	1.3	0	2	
Cars	32	0	18	15	65	2	0	1	5	8	19	0	51	0	70	1	0	1	0	2	145
% Cars	100	0	100	100	100	100	0	50	100	88.9	100	0	96.2	0	97.2	100	0	50	0	66.7	97.3
Trucks (SU)	0	0	0	0	0	0	0	1	0	1	0	0	2	0	2	0	0	1	0	1	4
% Trucks (SU)	0	0	0	0	0	0	0	50	0	11.1	0	0	3.8	0	2.8	0	0	50	0	33.3	2.7
Trucks (TT)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Trucks (TT)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Appendix C

Capacity Analysis

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	142	192	19	102	239	84	34	461	113	92	619	160
Future Volume (vph)	142	192	19	102	239	84	34	461	113	92	619	160
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	11	11	16	10	10	16	10	10	10	10	11	11
Grade (%)		-8%			0%			-2%			-1%	
Storage Length (ft)	0		150	0		75	60		0	110		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	25			25			50			20		
Lane Util. Factor	0.95	0.95	1.00	0.95	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850			0.850		0.970			0.969	
Flt Protected		0.979			0.985		0.950			0.950		
Satd. Flow (prot)	0	3680	1895	0	3586	1945	1725	3515	0	1799	3711	0
Flt Permitted		0.979			0.985		0.210			0.288		
Satd. Flow (perm)	0	3680	1895	0	3586	1945	381	3515	0	545	3711	0
Right Turn on Red			Yes			Yes			No			No
Satd. Flow (RTOR)			131			131						
Link Speed (mph)		40			40			45			40	
Link Distance (ft)		378			977			1545			744	
Travel Time (s)		6.4			16.7			23.4			12.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	5%	8%	11%	3%	2%	4%	9%	4%	3%	4%	1%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	359	20	0	367	90	37	618	0	99	838	0
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	6	6		2	2		3	8		7	4	
Permitted Phases			6			2	8			4		
Detector Phase	6	6	6	2	2	2	3	8		7	4	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	10.0		7.0	10.0	
Minimum Split (s)	14.0	14.0	14.0	14.0	14.0	14.0	10.0	18.0		10.0	18.0	
Total Split (s)	34.0	34.0	34.0	37.0	37.0	37.0	10.0	44.0		10.0	44.0	
Total Split (%)	27.2%	27.2%	27.2%	29.6%	29.6%	29.6%	8.0%	35.2%		8.0%	35.2%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	3.0	4.0		3.0	4.0	
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	0.0	4.0		0.0	4.0	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		7.0	7.0		7.0	7.0	3.0	8.0		3.0	8.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	Min	Min	Min	Max	Max	Max	None	Max		None	Max	
Act Effct Green (s)		17.7	17.7		30.0	30.0	48.0	36.0		49.3	40.1	
Actuated g/C Ratio		0.15	0.15		0.26	0.26	0.41	0.31		0.43	0.35	
v/c Ratio		0.64	0.05		0.40	0.15	0.15	0.57		0.32	0.65	
Control Delay		51.4	0.2		37.4	2.5	21.2	36.2		23.0	36.3	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		51.4	0.2		37.4	2.5	21.2	36.2		23.0	36.3	
LOS		D	A		D	A	C	D		C	D	
Approach Delay		48.7			30.5			35.4			34.9	
Approach LOS		D			C			D			C	

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		133	0		118	0	15	201		43	291	
Queue Length 95th (ft)		183	0		174	16	39	278		83	388	
Internal Link Dist (ft)		298			897			1465			664	
Turn Bay Length (ft)			150			75	60			110		
Base Capacity (vph)		858	542		929	601	239	1093		307	1286	
Starvation Cap Reductn		0	0		0	0	0	0		0	0	
Spillback Cap Reductn		0	0		0	0	0	0		0	0	
Storage Cap Reductn		0	0		0	0	0	0		0	0	
Reduced v/c Ratio		0.42	0.04		0.40	0.15	0.15	0.57		0.32	0.65	

Intersection Summary

Area Type: Other

Cycle Length: 125

Actuated Cycle Length: 115.8

Natural Cycle: 60

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.65

Intersection Signal Delay: 36.3

Intersection LOS: D

Intersection Capacity Utilization 64.8%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 10: Pleasant Valley Way & Route 10

 Ø2	 Ø6	 Ø3	 Ø4
37 s	34 s	10 s	44 s
		 Ø7	 Ø8
		10 s	44 s

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	10	8	40	638	681	141
Future Volume (vph)	10	8	40	638	681	141
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100
Lane Width (ft)	12	12	11	12	12	12
Grade (%)	-9%			1%	2%	
Storage Length (ft)	0	150	190			0
Storage Lanes	1	1	1			0
Taper Length (ft)	25		60			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.977	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	2085	1865	1919	2069	2014	0
Flt Permitted	0.950		0.260			
Satd. Flow (perm)	2085	1865	525	2069	2014	0
Right Turn on Red		No				Yes
Satd. Flow (RTOR)					37	
Link Speed (mph)	25			45	45	
Link Distance (ft)	458			449	352	
Travel Time (s)	12.5			6.8	5.3	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	0%	0%	1%	1%	0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	11	9	45	725	934	0
Turn Type	Prot	Perm	Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases		4	2			
Detector Phase	4	4	2	2	6	
Switch Phase						
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	12.0	12.0	12.0	12.0	12.0	
Total Split (s)	15.0	15.0	75.0	75.0	75.0	
Total Split (%)	16.7%	16.7%	83.3%	83.3%	83.3%	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	Min	Min	Min	
Act Effct Green (s)	7.6	7.6	40.6	40.6	40.6	
Actuated g/C Ratio	0.18	0.18	0.95	0.95	0.95	
v/c Ratio	0.03	0.03	0.09	0.37	0.49	
Control Delay	22.2	22.4	1.6	1.6	2.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	22.2	22.4	1.6	1.6	2.3	
LOS	C	C	A	A	A	
Approach Delay	22.3			1.6	2.3	
Approach LOS	C			A	A	



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Queue Length 50th (ft)	2	1	0	0	0	
Queue Length 95th (ft)	18	16	11	128	193	
Internal Link Dist (ft)	378			369	272	
Turn Bay Length (ft)		150	190			
Base Capacity (vph)	533	477	525	2069	2014	
Starvation Cap Reductn	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	
Reduced v/c Ratio	0.02	0.02	0.09	0.35	0.46	

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 42.7

Natural Cycle: 45

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.49

Intersection Signal Delay: 2.2

Intersection LOS: A

Intersection Capacity Utilization 54.3%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 20: Pleasant Valley Way & Kessler Driveway

 Ø2	 Ø4
75 s	15 s
 Ø6	
75 s	

Intersection

Int Delay, s/veh 0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	0	1	641	839	2
Future Vol, veh/h	2	0	1	641	839	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	60	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-9	-	-	-2	1	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	1	1	2
Mvmt Flow	2	0	1	668	874	2

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	1545	875	876
Stage 1	875	-	-
Stage 2	670	-	-
Critical Hdwy	4.62	5.32	4.12
Critical Hdwy Stg 1	3.62	-	-
Critical Hdwy Stg 2	3.62	-	-
Follow-up Hdwy	3.518	3.318	2.218
Pot Cap-1 Maneuver	273	434	771
Stage 1	632	-	-
Stage 2	711	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	273	434	771
Mov Cap-2 Maneuver	273	-	-
Stage 1	631	-	-
Stage 2	711	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18.3	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	771	-	273	-	-
HCM Lane V/C Ratio	0.001	-	0.008	-	-
HCM Control Delay (s)	9.7	-	18.3	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection

Int Delay, s/veh 0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	6	1	12	636	821	18
Future Vol, veh/h	6	1	12	636	821	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	105	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-4	-	-	-2	2	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	1	1	2
Mvmt Flow	6	1	13	663	855	19

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1554	865	874	0	-	0
Stage 1	865	-	-	-	-	-
Stage 2	689	-	-	-	-	-
Critical Hdwy	5.62	5.82	4.12	-	-	-
Critical Hdwy Stg 1	4.62	-	-	-	-	-
Critical Hdwy Stg 2	4.62	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	176	389	772	-	-	-
Stage 1	500	-	-	-	-	-
Stage 2	581	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	173	389	772	-	-	-
Mov Cap-2 Maneuver	173	-	-	-	-	-
Stage 1	492	-	-	-	-	-
Stage 2	581	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	24.9	0.2	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	772	-	188	-	-
HCM Lane V/C Ratio	0.016	-	0.039	-	-
HCM Control Delay (s)	9.7	-	24.9	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	123	210	19	116	168	148	46	707	124	91	371	141
Future Volume (vph)	123	210	19	116	168	148	46	707	124	91	371	141
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	11	11	16	10	10	16	10	10	10	10	11	11
Grade (%)		-8%			0%			-2%			-1%	
Storage Length (ft)	0		150	0		75	60		0	110		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	25			25			50			20		
Lane Util. Factor	0.95	0.95	1.00	0.95	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850			0.850		0.978			0.959	
Flt Protected		0.982			0.980		0.950			0.950		
Satd. Flow (prot)	0	3820	2104	0	3599	2003	1844	3642	0	1853	3671	0
Flt Permitted		0.982			0.980		0.388			0.149		
Satd. Flow (perm)	0	3820	2104	0	3599	2003	753	3642	0	291	3671	0
Right Turn on Red			Yes			Yes			No			No
Satd. Flow (RTOR)			131			151						
Link Speed (mph)		40			40			45			40	
Link Distance (ft)		378			977			1545			744	
Travel Time (s)		6.4			16.7			23.4			12.7	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	5%	2%	0%	2%	1%	1%	2%	1%	1%	1%	1%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	350	20	0	299	156	48	875	0	96	539	0
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	6	6		2	2		3	8		7	4	
Permitted Phases			6			2	8			4		
Detector Phase	6	6	6	2	2	2	3	8		7	4	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	10.0		7.0	10.0	
Minimum Split (s)	14.0	14.0	14.0	14.0	14.0	14.0	10.0	18.0		10.0	18.0	
Total Split (s)	34.0	34.0	34.0	37.0	37.0	37.0	10.0	44.0		10.0	44.0	
Total Split (%)	27.2%	27.2%	27.2%	29.6%	29.6%	29.6%	8.0%	35.2%		8.0%	35.2%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	3.0	4.0		3.0	4.0	
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	0.0	4.0		0.0	4.0	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		7.0	7.0		7.0	7.0	3.0	8.0		3.0	8.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	Min	Min	Min	Max	Max	Max	None	Max		None	Max	
Act Effct Green (s)		17.0	17.0		30.0	30.0	48.1	36.0		48.7	38.1	
Actuated g/C Ratio		0.15	0.15		0.26	0.26	0.42	0.31		0.42	0.33	
v/c Ratio		0.62	0.05		0.32	0.25	0.13	0.77		0.44	0.44	
Control Delay		51.0	0.2		35.9	7.1	20.2	41.5		26.2	32.7	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		51.0	0.2		35.9	7.1	20.2	41.5		26.2	32.7	
LOS		D	A		D	A	C	D		C	C	
Approach Delay		48.3			26.0			40.4			31.7	
Approach LOS		D			C			D			C	

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		129	0		94	3	20	306		41	168	
Queue Length 95th (ft)		178	0		142	55	46	408		80	235	
Internal Link Dist (ft)		298			897			1465			664	
Turn Bay Length (ft)			150			75	60			110		
Base Capacity (vph)		896	594		939	634	380	1140		218	1215	
Starvation Cap Reductn		0	0		0	0	0	0		0	0	
Spillback Cap Reductn		0	0		0	0	0	0		0	0	
Storage Cap Reductn		0	0		0	0	0	0		0	0	
Reduced v/c Ratio		0.39	0.03		0.32	0.25	0.13	0.77		0.44	0.44	

Intersection Summary

Area Type: Other

Cycle Length: 125

Actuated Cycle Length: 115.1

Natural Cycle: 60

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.77

Intersection Signal Delay: 36.6

Intersection LOS: D

Intersection Capacity Utilization 64.5%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 10: Pleasant Valley Way & Route 10

 Ø2	 Ø6	 Ø3	 Ø4
37 s	34 s	10 s	44 s
		 Ø7	 Ø8
		10 s	44 s

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	138	47	9	741	487	29
Future Volume (vph)	138	47	9	741	487	29
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100
Lane Width (ft)	12	12	11	12	12	12
Grade (%)	-9%			1%	2%	
Storage Length (ft)	0	150	190			0
Storage Lanes	1	1	1			0
Taper Length (ft)	25		60			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.992	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	2085	1865	1919	2069	2043	0
Flt Permitted	0.950		0.388			
Satd. Flow (perm)	2085	1865	784	2069	2043	0
Right Turn on Red		No				Yes
Satd. Flow (RTOR)					11	
Link Speed (mph)	25			45	45	
Link Distance (ft)	458			449	352	
Travel Time (s)	12.5			6.8	5.3	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	0%	0%	0%	1%	1%	0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	152	52	10	814	567	0
Turn Type	Prot	Perm	Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases		4	2			
Detector Phase	4	4	2	2	6	
Switch Phase						
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	12.0	12.0	12.0	12.0	12.0	
Total Split (s)	15.0	15.0	75.0	75.0	75.0	
Total Split (%)	16.7%	16.7%	83.3%	83.3%	83.3%	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	Min	Min	Min	
Act Effct Green (s)	8.7	8.7	25.7	25.7	25.7	
Actuated g/C Ratio	0.20	0.20	0.58	0.58	0.58	
v/c Ratio	0.37	0.14	0.02	0.68	0.48	
Control Delay	18.7	16.3	4.4	10.3	7.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	18.7	16.3	4.4	10.3	7.2	
LOS	B	B	A	B	A	
Approach Delay	18.1			10.3	7.2	
Approach LOS	B			B	A	



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Queue Length 50th (ft)	29	9	1	117	67	
Queue Length 95th (ft)	81	36	5	224	127	
Internal Link Dist (ft)	378			369	272	
Turn Bay Length (ft)		150	190			
Base Capacity (vph)	471	421	784	2069	2043	
Starvation Cap Reductn	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	
Reduced v/c Ratio	0.32	0.12	0.01	0.39	0.28	

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 44.5

Natural Cycle: 40

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.68

Intersection Signal Delay: 10.2

Intersection LOS: B

Intersection Capacity Utilization 50.5%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 20: Pleasant Valley Way & Kessler Driveway

 Ø2	 Ø4
75 s	15 s
 Ø6	
75 s	

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	1	1	888	508	0
Future Vol, veh/h	0	1	1	888	508	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	60	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-9	-	-	-2	1	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	1	1	2
Mvmt Flow	0	1	1	935	535	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1472	535	535	0	-	0
Stage 1	535	-	-	-	-	-
Stage 2	937	-	-	-	-	-
Critical Hdwy	4.62	5.32	4.12	-	-	-
Critical Hdwy Stg 1	3.62	-	-	-	-	-
Critical Hdwy Stg 2	3.62	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	292	623	1033	-	-	-
Stage 1	767	-	-	-	-	-
Stage 2	609	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	292	623	1033	-	-	-
Mov Cap-2 Maneuver	292	-	-	-	-	-
Stage 1	766	-	-	-	-	-
Stage 2	609	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	10.8	0		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1033	-	623	-	-	
HCM Lane V/C Ratio	0.001	-	0.002	-	-	
HCM Control Delay (s)	8.5	-	10.8	-	-	
HCM Lane LOS	A	-	B	-	-	
HCM 95th %tile Q(veh)	0	-	0	-	-	

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	15	8	5	874	508	1
Future Vol, veh/h	15	8	5	874	508	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	105	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-4	-	-	-2	2	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	1	1	2
Mvmt Flow	16	8	5	920	535	1
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1466	536	536	0	-	0
Stage 1	536	-	-	-	-	-
Stage 2	930	-	-	-	-	-
Critical Hdwy	5.62	5.82	4.12	-	-	-
Critical Hdwy Stg 1	4.62	-	-	-	-	-
Critical Hdwy Stg 2	4.62	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	195	578	1032	-	-	-
Stage 1	661	-	-	-	-	-
Stage 2	472	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	194	578	1032	-	-	-
Mov Cap-2 Maneuver	194	-	-	-	-	-
Stage 1	658	-	-	-	-	-
Stage 2	472	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	20.8	0		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1032	-	252	-	-	
HCM Lane V/C Ratio	0.005	-	0.096	-	-	
HCM Control Delay (s)	8.5	-	20.8	-	-	
HCM Lane LOS	A	-	C	-	-	
HCM 95th %tile Q(veh)	0	-	0.3	-	-	

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	160	216	21	115	269	95	38	519	127	104	697	180
Future Volume (vph)	160	216	21	115	269	95	38	519	127	104	697	180
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	11	11	16	10	10	16	10	10	10	10	11	11
Grade (%)		-8%			0%			-2%			-1%	
Storage Length (ft)	0		150	0		75	60		0	110		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	25			25			50			20		
Lane Util. Factor	0.95	0.95	1.00	0.95	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850			0.850		0.970			0.969	
Flt Protected		0.979			0.985		0.950			0.950		
Satd. Flow (prot)	0	3680	1895	0	3586	1945	1725	3515	0	1799	3711	0
Flt Permitted		0.979			0.985		0.131			0.243		
Satd. Flow (perm)	0	3680	1895	0	3586	1945	238	3515	0	460	3711	0
Right Turn on Red			Yes			Yes			No			No
Satd. Flow (RTOR)			131			131						
Link Speed (mph)		40			40			45			40	
Link Distance (ft)		378			977			1545			744	
Travel Time (s)		6.4			16.7			23.4			12.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	5%	8%	11%	3%	2%	4%	9%	4%	3%	4%	1%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	404	23	0	413	102	41	695	0	112	943	0
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	6	6		2	2		3	8		7	4	
Permitted Phases			6			2	8			4		
Detector Phase	6	6	6	2	2	2	3	8		7	4	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	10.0		7.0	10.0	
Minimum Split (s)	14.0	14.0	14.0	14.0	14.0	14.0	10.0	18.0		10.0	18.0	
Total Split (s)	34.0	34.0	34.0	37.0	37.0	37.0	10.0	44.0		10.0	44.0	
Total Split (%)	27.2%	27.2%	27.2%	29.6%	29.6%	29.6%	8.0%	35.2%		8.0%	35.2%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	3.0	4.0		3.0	4.0	
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	0.0	4.0		0.0	4.0	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		7.0	7.0		7.0	7.0	3.0	8.0		3.0	8.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	Min	Min	Min	Max	Max	Max	None	Max		None	Max	
Act Effct Green (s)		19.2	19.2		30.0	30.0	48.0	36.0		48.7	38.1	
Actuated g/C Ratio		0.16	0.16		0.26	0.26	0.41	0.31		0.42	0.32	
v/c Ratio		0.67	0.05		0.45	0.17	0.22	0.64		0.41	0.78	
Control Delay		51.8	0.2		39.1	3.5	23.3	38.9		26.0	42.5	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		51.8	0.2		39.1	3.5	23.3	38.9		26.0	42.5	
LOS		D	A		D	A	C	D		C	D	
Approach Delay		49.0			32.1			38.0			40.7	
Approach LOS		D			C			D			D	

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		152	0		138	0	18	237		50	346	
Queue Length 95th (ft)		205	0		200	26	43	325		94	#464	
Internal Link Dist (ft)		298			897			1465			664	
Turn Bay Length (ft)			150			75	60			110		
Base Capacity (vph)		847	537		917	595	186	1079		270	1205	
Starvation Cap Reductn		0	0		0	0	0	0		0	0	
Spillback Cap Reductn		0	0		0	0	0	0		0	0	
Storage Cap Reductn		0	0		0	0	0	0		0	0	
Reduced v/c Ratio		0.48	0.04		0.45	0.17	0.22	0.64		0.41	0.78	

Intersection Summary

Area Type: Other

Cycle Length: 125

Actuated Cycle Length: 117.3

Natural Cycle: 70

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.78

Intersection Signal Delay: 39.7

Intersection LOS: D

Intersection Capacity Utilization 69.5%

ICU Level of Service C

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 10: Pleasant Valley Way & Route 10

 Ø2	 Ø6	 Ø3	 Ø4
37 s	34 s	10 s	44 s
		 Ø7	 Ø8
		10 s	44 s

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	10	8	40	718	785	141
Future Volume (vph)	10	8	40	718	785	141
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100
Lane Width (ft)	12	12	11	12	12	12
Grade (%)	-9%			1%	2%	
Storage Length (ft)	0	150	190			0
Storage Lanes	1	1	1			0
Taper Length (ft)	25		60			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.979	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	2085	1865	1919	2069	2018	0
Flt Permitted	0.950		0.203			
Satd. Flow (perm)	2085	1865	410	2069	2018	0
Right Turn on Red		No				Yes
Satd. Flow (RTOR)					32	
Link Speed (mph)	25			45	45	
Link Distance (ft)	458			449	352	
Travel Time (s)	12.5			6.8	5.3	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	0%	0%	1%	1%	0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	11	9	45	816	1052	0
Turn Type	Prot	Perm	Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases		4	2			
Detector Phase	4	4	2	2	6	
Switch Phase						
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	12.0	12.0	12.0	12.0	12.0	
Total Split (s)	15.0	15.0	75.0	75.0	75.0	
Total Split (%)	16.7%	16.7%	83.3%	83.3%	83.3%	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	Min	Min	Min	
Act Effct Green (s)	8.0	8.0	44.8	44.8	44.8	
Actuated g/C Ratio	0.16	0.16	0.91	0.91	0.91	
v/c Ratio	0.03	0.03	0.12	0.44	0.58	
Control Delay	28.0	28.1	2.6	2.7	3.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	28.0	28.1	2.6	2.7	3.9	
LOS	C	C	A	A	A	
Approach Delay	28.1			2.7	3.9	
Approach LOS	C			A	A	



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Queue Length 50th (ft)	2	2	0	0	0	
Queue Length 95th (ft)	19	18	11	151	244	
Internal Link Dist (ft)	378			369	272	
Turn Bay Length (ft)		150	190			
Base Capacity (vph)	480	429	401	2026	1977	
Starvation Cap Reductn	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	
Reduced v/c Ratio	0.02	0.02	0.11	0.40	0.53	

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 49.5

Natural Cycle: 55

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.58

Intersection Signal Delay: 3.6

Intersection LOS: A

Intersection Capacity Utilization 59.3%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 20: Pleasant Valley Way & Kessler Driveway

 Ø2	 Ø4
75 s	15 s
 Ø6	
75 s	

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	0	1	721	943	2
Future Vol, veh/h	2	0	1	721	943	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	60	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-9	-	-	-2	1	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	1	1	2
Mvmt Flow	2	0	1	751	982	2
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1736	983	984	0	-	0
Stage 1	983	-	-	-	-	-
Stage 2	753	-	-	-	-	-
Critical Hdwy	4.62	5.32	4.12	-	-	-
Critical Hdwy Stg 1	3.62	-	-	-	-	-
Critical Hdwy Stg 2	3.62	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	229	386	702	-	-	-
Stage 1	593	-	-	-	-	-
Stage 2	678	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	229	386	702	-	-	-
Mov Cap-2 Maneuver	229	-	-	-	-	-
Stage 1	592	-	-	-	-	-
Stage 2	678	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	20.9	0		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	702	-	229	-	-	
HCM Lane V/C Ratio	0.001	-	0.009	-	-	
HCM Control Delay (s)	10.1	-	20.9	-	-	
HCM Lane LOS	B	-	C	-	-	
HCM 95th %tile Q(veh)	0	-	0	-	-	

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	6	1	12	716	925	18
Future Vol, veh/h	6	1	12	716	925	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	105	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-4	-	-	-2	2	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	1	1	2
Mvmt Flow	6	1	13	746	964	19
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1746	974	983	0	-	0
Stage 1	974	-	-	-	-	-
Stage 2	772	-	-	-	-	-
Critical Hdwy	5.62	5.82	4.12	-	-	-
Critical Hdwy Stg 1	4.62	-	-	-	-	-
Critical Hdwy Stg 2	4.62	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	140	340	703	-	-	-
Stage 1	455	-	-	-	-	-
Stage 2	541	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	137	340	703	-	-	-
Mov Cap-2 Maneuver	137	-	-	-	-	-
Stage 1	447	-	-	-	-	-
Stage 2	541	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	30.2	0.2		0		
HCM LOS	D					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	703	-	150	-	-	
HCM Lane V/C Ratio	0.018	-	0.049	-	-	
HCM Control Delay (s)	10.2	-	30.2	-	-	
HCM Lane LOS	B	-	D	-	-	
HCM 95th %tile Q(veh)	0.1	-	0.2	-	-	

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	139	236	21	131	189	167	52	796	140	102	418	159
Future Volume (vph)	139	236	21	131	189	167	52	796	140	102	418	159
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	11	11	16	10	10	16	10	10	10	10	11	11
Grade (%)		-8%			0%			-2%			-1%	
Storage Length (ft)	0		150	0		75	60		0	110		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	25			25			50			20		
Lane Util. Factor	0.95	0.95	1.00	0.95	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850			0.850		0.978			0.959	
Flt Protected		0.982			0.980		0.950			0.950		
Satd. Flow (prot)	0	3820	2104	0	3599	2003	1844	3642	0	1853	3671	0
Flt Permitted		0.982			0.980		0.335			0.105		
Satd. Flow (perm)	0	3820	2104	0	3599	2003	650	3642	0	205	3671	0
Right Turn on Red			Yes			Yes			No			No
Satd. Flow (RTOR)			131			151						
Link Speed (mph)		40			40			45			40	
Link Distance (ft)		378			977			1545			744	
Travel Time (s)		6.4			16.7			23.4			12.7	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	5%	2%	0%	2%	1%	1%	2%	1%	1%	1%	1%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	394	22	0	337	176	55	985	0	107	607	0
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	6	6		2	2		3	8		7	4	
Permitted Phases			6			2	8			4		
Detector Phase	6	6	6	2	2	2	3	8		7	4	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	10.0		7.0	10.0	
Minimum Split (s)	14.0	14.0	14.0	14.0	14.0	14.0	10.0	18.0		10.0	18.0	
Total Split (s)	34.0	34.0	34.0	37.0	37.0	37.0	10.0	44.0		10.0	44.0	
Total Split (%)	27.2%	27.2%	27.2%	29.6%	29.6%	29.6%	8.0%	35.2%		8.0%	35.2%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	3.0	4.0		3.0	4.0	
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	0.0	4.0		0.0	4.0	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		7.0	7.0		7.0	7.0	3.0	8.0		3.0	8.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	Min	Min	Min	Max	Max	Max	None	Max		None	Max	
Act Effct Green (s)		18.4	18.4		30.0	30.0	48.0	36.0		48.7	38.1	
Actuated g/C Ratio		0.16	0.16		0.26	0.26	0.41	0.31		0.42	0.33	
v/c Ratio		0.65	0.05		0.36	0.28	0.16	0.87		0.58	0.51	
Control Delay		51.4	0.2		37.3	9.4	21.2	48.4		34.0	34.5	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		51.4	0.2		37.3	9.4	21.2	48.4		34.0	34.5	
LOS		D	A		D	A	C	D		C	C	
Approach Delay		48.7			27.7			47.0			34.5	
Approach LOS		D			C			D			C	

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		147	0		108	14	23	366		47	197	
Queue Length 95th (ft)		200	0		162	73	52	#518		#93	272	
Internal Link Dist (ft)		298			897			1465			664	
Turn Bay Length (ft)			150			75	60			110		
Base Capacity (vph)		886	588		927	628	339	1126		184	1201	
Starvation Cap Reductn		0	0		0	0	0	0		0	0	
Spillback Cap Reductn		0	0		0	0	0	0		0	0	
Storage Cap Reductn		0	0		0	0	0	0		0	0	
Reduced v/c Ratio		0.44	0.04		0.36	0.28	0.16	0.87		0.58	0.51	

Intersection Summary

Area Type: Other

Cycle Length: 125

Actuated Cycle Length: 116.5

Natural Cycle: 65

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.87

Intersection Signal Delay: 40.2

Intersection LOS: D

Intersection Capacity Utilization 69.2%

ICU Level of Service C

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 10: Pleasant Valley Way & Route 10

 Ø2	 Ø6	 Ø3	 Ø4
37 s	34 s	10 s	44 s
		 Ø7	 Ø8
		10 s	44 s

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	138	47	9	851	551	29
Future Volume (vph)	138	47	9	851	551	29
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100
Lane Width (ft)	12	12	11	12	12	12
Grade (%)	-9%			1%	2%	
Storage Length (ft)	0	150	190			0
Storage Lanes	1	1	1			0
Taper Length (ft)	25		60			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.993	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	2085	1865	1919	2069	2045	0
Flt Permitted	0.950		0.349			
Satd. Flow (perm)	2085	1865	705	2069	2045	0
Right Turn on Red		No				Yes
Satd. Flow (RTOR)					10	
Link Speed (mph)	25			45	45	
Link Distance (ft)	458			449	352	
Travel Time (s)	12.5			6.8	5.3	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	0%	0%	0%	1%	1%	0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	152	52	10	935	637	0
Turn Type	Prot	Perm	Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases		4	2			
Detector Phase	4	4	2	2	6	
Switch Phase						
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	12.0	12.0	12.0	12.0	12.0	
Total Split (s)	15.0	15.0	75.0	75.0	75.0	
Total Split (%)	16.7%	16.7%	83.3%	83.3%	83.3%	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	Min	Min	Min	
Act Effct Green (s)	8.9	8.9	30.6	30.6	30.6	
Actuated g/C Ratio	0.18	0.18	0.62	0.62	0.62	
v/c Ratio	0.41	0.16	0.02	0.73	0.50	
Control Delay	22.4	19.5	3.9	11.0	6.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	22.4	19.5	3.9	11.0	6.9	
LOS	C	B	A	B	A	
Approach Delay	21.7			10.9	6.9	
Approach LOS	C			B	A	



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Queue Length 50th (ft)	34	11	1	154	82	
Queue Length 95th (ft)	96	42	5	276	144	
Internal Link Dist (ft)	378			369	272	
Turn Bay Length (ft)		150	190			
Base Capacity (vph)	424	379	705	2069	2045	
Starvation Cap Reductn	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	
Reduced v/c Ratio	0.36	0.14	0.01	0.45	0.31	

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 49.6

Natural Cycle: 45

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.73

Intersection Signal Delay: 10.7

Intersection LOS: B

Intersection Capacity Utilization 55.8%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 20: Pleasant Valley Way & Kessler Driveway

 Ø2	 Ø4
75 s	15 s
 Ø6	
75 s	

Intersection

Int Delay, s/veh 0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	1	1	998	572	0
Future Vol, veh/h	0	1	1	998	572	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	60	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-9	-	-	-2	1	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	1	1	2
Mvmt Flow	0	1	1	1051	602	0

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1655	602	602	0	-	0
Stage 1	602	-	-	-	-	-
Stage 2	1053	-	-	-	-	-
Critical Hdwy	4.62	5.32	4.12	-	-	-
Critical Hdwy Stg 1	3.62	-	-	-	-	-
Critical Hdwy Stg 2	3.62	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	247	581	975	-	-	-
Stage 1	739	-	-	-	-	-
Stage 2	568	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	247	581	975	-	-	-
Mov Cap-2 Maneuver	247	-	-	-	-	-
Stage 1	738	-	-	-	-	-
Stage 2	568	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.2	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	975	-	581	-	-
HCM Lane V/C Ratio	0.001	-	0.002	-	-
HCM Control Delay (s)	8.7	-	11.2	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	15	8	5	984	572	1
Future Vol, veh/h	15	8	5	984	572	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	105	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-4	-	-	-2	2	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	1	1	2
Mvmt Flow	16	8	5	1036	602	1
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1649	603	603	0	-	0
Stage 1	603	-	-	-	-	-
Stage 2	1046	-	-	-	-	-
Critical Hdwy	5.62	5.82	4.12	-	-	-
Critical Hdwy Stg 1	4.62	-	-	-	-	-
Critical Hdwy Stg 2	4.62	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	157	534	975	-	-	-
Stage 1	625	-	-	-	-	-
Stage 2	427	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	156	534	975	-	-	-
Mov Cap-2 Maneuver	156	-	-	-	-	-
Stage 1	622	-	-	-	-	-
Stage 2	427	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	24.7	0		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	975	-	207	-	-	
HCM Lane V/C Ratio	0.005	-	0.117	-	-	
HCM Control Delay (s)	8.7	-	24.7	-	-	
HCM Lane LOS	A	-	C	-	-	
HCM 95th %tile Q(veh)	0	-	0.4	-	-	

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	160	216	23	119	269	95	39	519	129	104	693	180
Future Volume (vph)	160	216	23	119	269	95	39	519	129	104	693	180
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	11	11	16	10	10	16	10	10	10	10	11	11
Grade (%)		-8%			0%			-2%			-1%	
Storage Length (ft)	0		150	0		75	60		0	110		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	25			25			50			20		
Lane Util. Factor	0.95	0.95	1.00	0.95	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850			0.850		0.970			0.969	
Flt Protected		0.979			0.985		0.950			0.950		
Satd. Flow (prot)	0	3680	1895	0	3585	1945	1725	3515	0	1799	3711	0
Flt Permitted		0.979			0.985		0.133			0.242		
Satd. Flow (perm)	0	3680	1895	0	3585	1945	242	3515	0	458	3711	0
Right Turn on Red			Yes			Yes			No			No
Satd. Flow (RTOR)			131			131						
Link Speed (mph)		40			40			45			40	
Link Distance (ft)		378			977			1545			744	
Travel Time (s)		6.4			16.7			23.4			12.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	5%	8%	11%	3%	2%	4%	9%	4%	3%	4%	1%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	404	25	0	417	102	42	697	0	112	939	0
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	6	6		2	2		3	8		7	4	
Permitted Phases			6			2	8			4		
Detector Phase	6	6	6	2	2	2	3	8		7	4	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	10.0		7.0	10.0	
Minimum Split (s)	14.0	14.0	14.0	14.0	14.0	14.0	10.0	18.0		10.0	18.0	
Total Split (s)	34.0	34.0	34.0	37.0	37.0	37.0	10.0	44.0		10.0	44.0	
Total Split (%)	27.2%	27.2%	27.2%	29.6%	29.6%	29.6%	8.0%	35.2%		8.0%	35.2%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	3.0	4.0		3.0	4.0	
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	0.0	4.0		0.0	4.0	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		7.0	7.0		7.0	7.0	3.0	8.0		3.0	8.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	Min	Min	Min	Max	Max	Max	None	Max		None	Max	
Act Effct Green (s)		19.2	19.2		30.0	30.0	48.0	36.0		48.7	38.1	
Actuated g/C Ratio		0.16	0.16		0.26	0.26	0.41	0.31		0.42	0.32	
v/c Ratio		0.67	0.06		0.45	0.17	0.22	0.65		0.41	0.78	
Control Delay		51.8	0.3		39.2	3.5	23.4	38.9		26.0	42.3	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		51.8	0.3		39.2	3.5	23.4	38.9		26.0	42.3	
LOS		D	A		D	A	C	D		C	D	
Approach Delay		48.8			32.2			38.0			40.6	
Approach LOS		D			C			D			D	

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		152	0		139	0	18	238		50	344	
Queue Length 95th (ft)		205	0		202	26	44	326		94	#461	
Internal Link Dist (ft)		298			897			1465			664	
Turn Bay Length (ft)			150			75	60			110		
Base Capacity (vph)		847	537		917	595	187	1079		270	1205	
Starvation Cap Reductn		0	0		0	0	0	0		0	0	
Spillback Cap Reductn		0	0		0	0	0	0		0	0	
Storage Cap Reductn		0	0		0	0	0	0		0	0	
Reduced v/c Ratio		0.48	0.05		0.45	0.17	0.22	0.65		0.41	0.78	

Intersection Summary

Area Type: Other

Cycle Length: 125

Actuated Cycle Length: 117.3

Natural Cycle: 70

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.78

Intersection Signal Delay: 39.6

Intersection LOS: D

Intersection Capacity Utilization 69.5%

ICU Level of Service C

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 10: Pleasant Valley Way & Route 10

 Ø2	 Ø6	 Ø3	 Ø4
37 s	34 s	10 s	44 s
		 Ø7	 Ø8
		10 s	44 s

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	10	8	40	714	789	141
Future Volume (vph)	10	8	40	714	789	141
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100
Lane Width (ft)	12	12	11	12	12	12
Grade (%)	-9%			1%	2%	
Storage Length (ft)	0	150	190			0
Storage Lanes	1	1	1			0
Taper Length (ft)	25		60			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.980	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	2085	1865	1919	2069	2020	0
Flt Permitted	0.950		0.201			
Satd. Flow (perm)	2085	1865	406	2069	2020	0
Right Turn on Red		No				Yes
Satd. Flow (RTOR)					32	
Link Speed (mph)	25			45	45	
Link Distance (ft)	458			449	352	
Travel Time (s)	12.5			6.8	5.3	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	0%	0%	1%	1%	0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	11	9	45	811	1057	0
Turn Type	Prot	Perm	Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases		4	2			
Detector Phase	4	4	2	2	6	
Switch Phase						
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	12.0	12.0	12.0	12.0	12.0	
Total Split (s)	15.0	15.0	75.0	75.0	75.0	
Total Split (%)	16.7%	16.7%	83.3%	83.3%	83.3%	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	Min	Min	Min	
Act Effct Green (s)	8.0	8.0	45.0	45.0	45.0	
Actuated g/C Ratio	0.16	0.16	0.91	0.91	0.91	
v/c Ratio	0.03	0.03	0.12	0.43	0.58	
Control Delay	28.1	28.2	2.6	2.7	3.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	28.1	28.2	2.6	2.7	3.9	
LOS	C	C	A	A	A	
Approach Delay	28.2			2.7	3.9	
Approach LOS	C			A	A	



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Queue Length 50th (ft)	2	2	0	0	0	
Queue Length 95th (ft)	19	17	11	149	246	
Internal Link Dist (ft)	378			369	272	
Turn Bay Length (ft)		150	190			
Base Capacity (vph)	479	429	397	2025	1977	
Starvation Cap Reductn	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	
Reduced v/c Ratio	0.02	0.02	0.11	0.40	0.53	

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 49.7

Natural Cycle: 55

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.58

Intersection Signal Delay: 3.6

Intersection LOS: A

Intersection Capacity Utilization 59.5%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 20: Pleasant Valley Way & Kessler Driveway

 Ø2	 Ø4
75 s	15 s
 Ø6	
75 s	

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	2	3	723	941	6
Future Vol, veh/h	3	2	3	723	941	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	60	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-9	-	-	-2	1	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	1	1	2
Mvmt Flow	3	2	3	753	980	6
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1742	983	986	0	-	0
Stage 1	983	-	-	-	-	-
Stage 2	759	-	-	-	-	-
Critical Hdwy	4.62	5.32	4.12	-	-	-
Critical Hdwy Stg 1	3.62	-	-	-	-	-
Critical Hdwy Stg 2	3.62	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	228	386	701	-	-	-
Stage 1	593	-	-	-	-	-
Stage 2	676	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	227	386	701	-	-	-
Mov Cap-2 Maneuver	227	-	-	-	-	-
Stage 1	591	-	-	-	-	-
Stage 2	676	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	18.5	0		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	701	-	272	-	-	
HCM Lane V/C Ratio	0.004	-	0.019	-	-	
HCM Control Delay (s)	10.2	-	18.5	-	-	
HCM Lane LOS	B	-	C	-	-	
HCM 95th %tile Q(veh)	0	-	0.1	-	-	

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	8	3	6	718	927	16
Future Vol, veh/h	8	3	6	718	927	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	105	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-4	-	-	-2	2	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	1	1	2
Mvmt Flow	8	3	6	748	966	17
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1735	975	983	0	-	0
Stage 1	975	-	-	-	-	-
Stage 2	760	-	-	-	-	-
Critical Hdwy	5.62	5.82	4.12	-	-	-
Critical Hdwy Stg 1	4.62	-	-	-	-	-
Critical Hdwy Stg 2	4.62	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	142	340	703	-	-	-
Stage 1	454	-	-	-	-	-
Stage 2	547	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	141	340	703	-	-	-
Mov Cap-2 Maneuver	141	-	-	-	-	-
Stage 1	450	-	-	-	-	-
Stage 2	547	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	27.6	0.1		0		
HCM LOS	D					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	703	-	141	340	-	-
HCM Lane V/C Ratio	0.009	-	0.059	0.009	-	-
HCM Control Delay (s)	10.2	-	32.1	15.7	-	-
HCM Lane LOS	B	-	D	C	-	-
HCM 95th %tile Q(veh)	0	-	0.2	0	-	-

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	139	236	23	136	189	167	55	798	145	102	427	159
Future Volume (vph)	139	236	23	136	189	167	55	798	145	102	427	159
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Lane Width (ft)	11	11	16	10	10	16	10	10	10	10	11	11
Grade (%)		-8%			0%			-2%			-1%	
Storage Length (ft)	0		150	0		75	60		0	110		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	25			25			50			20		
Lane Util. Factor	0.95	0.95	1.00	0.95	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850			0.850		0.977			0.959	
Flt Protected		0.982			0.980		0.950			0.950		
Satd. Flow (prot)	0	3820	2104	0	3598	2003	1844	3638	0	1853	3671	0
Flt Permitted		0.982			0.980		0.329			0.105		
Satd. Flow (perm)	0	3820	2104	0	3598	2003	639	3638	0	205	3671	0
Right Turn on Red			Yes			Yes			No			No
Satd. Flow (RTOR)			131			148						
Link Speed (mph)		40			40			45			40	
Link Distance (ft)		378			977			1545			744	
Travel Time (s)		6.4			16.7			23.4			12.7	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	5%	2%	0%	2%	1%	1%	2%	1%	1%	1%	1%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	394	24	0	342	176	58	993	0	107	616	0
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	6	6		2	2		3	8		7	4	
Permitted Phases			6			2	8			4		
Detector Phase	6	6	6	2	2	2	3	8		7	4	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	10.0		7.0	10.0	
Minimum Split (s)	14.0	14.0	14.0	14.0	14.0	14.0	10.0	18.0		10.0	18.0	
Total Split (s)	34.0	34.0	34.0	37.0	37.0	37.0	10.0	44.0		10.0	44.0	
Total Split (%)	27.2%	27.2%	27.2%	29.6%	29.6%	29.6%	8.0%	35.2%		8.0%	35.2%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	3.0	4.0		3.0	4.0	
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	0.0	4.0		0.0	4.0	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		7.0	7.0		7.0	7.0	3.0	8.0		3.0	8.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	Min	Min	Min	Max	Max	Max	None	Max		None	Max	
Act Effct Green (s)		18.4	18.4		30.0	30.0	48.0	36.0		48.7	38.1	
Actuated g/C Ratio		0.16	0.16		0.26	0.26	0.41	0.31		0.42	0.33	
v/c Ratio		0.65	0.05		0.37	0.28	0.17	0.88		0.58	0.51	
Control Delay		51.4	0.2		37.4	9.8	21.4	49.1		34.0	34.7	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		51.4	0.2		37.4	9.8	21.4	49.1		34.0	34.7	
LOS		D	A		D	A	C	D		C	C	
Approach Delay		48.4			28.0			47.6			34.6	
Approach LOS		D			C			D			C	

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		147	0		111	16	25	370		47	200	
Queue Length 95th (ft)		200	0		163	75	54	#526		#93	277	
Internal Link Dist (ft)		298			897			1465			664	
Turn Bay Length (ft)			150			75	60			110		
Base Capacity (vph)		886	588		927	626	335	1125		184	1201	
Starvation Cap Reductn		0	0		0	0	0	0		0	0	
Spillback Cap Reductn		0	0		0	0	0	0		0	0	
Storage Cap Reductn		0	0		0	0	0	0		0	0	
Reduced v/c Ratio		0.44	0.04		0.37	0.28	0.17	0.88		0.58	0.51	

Intersection Summary

Area Type: Other

Cycle Length: 125

Actuated Cycle Length: 116.5

Natural Cycle: 65

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.88

Intersection Signal Delay: 40.5

Intersection LOS: D

Intersection Capacity Utilization 69.5%

ICU Level of Service C

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 10: Pleasant Valley Way & Route 10

 Ø2	 Ø6	 Ø3	 Ø4
37 s	34 s	10 s	44 s
		 Ø7	 Ø8
		10 s	44 s

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	138	47	9	851	553	29
Future Volume (vph)	138	47	9	851	553	29
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100
Lane Width (ft)	12	12	11	12	12	12
Grade (%)	-9%			1%	2%	
Storage Length (ft)	0	150	190			0
Storage Lanes	1	1	1			0
Taper Length (ft)	25		60			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.993	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	2085	1865	1919	2069	2045	0
Flt Permitted	0.950		0.347			
Satd. Flow (perm)	2085	1865	701	2069	2045	0
Right Turn on Red		No				Yes
Satd. Flow (RTOR)					9	
Link Speed (mph)	25			45	45	
Link Distance (ft)	458			449	352	
Travel Time (s)	12.5			6.8	5.3	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	0%	0%	0%	1%	1%	0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	152	52	10	935	640	0
Turn Type	Prot	Perm	Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases		4	2			
Detector Phase	4	4	2	2	6	
Switch Phase						
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	12.0	12.0	12.0	12.0	12.0	
Total Split (s)	15.0	15.0	75.0	75.0	75.0	
Total Split (%)	16.7%	16.7%	83.3%	83.3%	83.3%	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	Min	Min	Min	
Act Effect Green (s)	8.9	8.9	30.6	30.6	30.6	
Actuated g/C Ratio	0.18	0.18	0.62	0.62	0.62	
v/c Ratio	0.41	0.16	0.02	0.73	0.51	
Control Delay	22.4	19.5	3.9	11.0	6.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	22.4	19.5	3.9	11.0	6.9	
LOS	C	B	A	B	A	
Approach Delay	21.7			10.9	6.9	
Approach LOS	C			B	A	



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Queue Length 50th (ft)	34	11	1	154	83	
Queue Length 95th (ft)	96	42	5	276	145	
Internal Link Dist (ft)	378			369	272	
Turn Bay Length (ft)		150	190			
Base Capacity (vph)	424	379	701	2069	2045	
Starvation Cap Reductn	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	
Reduced v/c Ratio	0.36	0.14	0.01	0.45	0.31	

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 49.6

Natural Cycle: 45

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.73

Intersection Signal Delay: 10.7

Intersection LOS: B

Intersection Capacity Utilization 55.8%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 20: Pleasant Valley Way & Kessler Driveway

 Ø2	 Ø4
75 s	15 s
 Ø6	
75 s	

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	7	4	2	1001	583	5
Future Vol, veh/h	7	4	2	1001	583	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	60	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-9	-	-	-2	1	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	1	1	2
Mvmt Flow	7	4	2	1054	614	5
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1675	617	619	0	-	0
Stage 1	617	-	-	-	-	-
Stage 2	1058	-	-	-	-	-
Critical Hdwy	4.62	5.32	4.12	-	-	-
Critical Hdwy Stg 1	3.62	-	-	-	-	-
Critical Hdwy Stg 2	3.62	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	242	572	961	-	-	-
Stage 1	733	-	-	-	-	-
Stage 2	567	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	242	572	961	-	-	-
Mov Cap-2 Maneuver	242	-	-	-	-	-
Stage 1	732	-	-	-	-	-
Stage 2	567	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	17.2	0		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	961	-	306	-	-	
HCM Lane V/C Ratio	0.002	-	0.038	-	-	
HCM Control Delay (s)	8.8	-	17.2	-	-	
HCM Lane LOS	A	-	C	-	-	
HCM 95th %tile Q(veh)	0	-	0.1	-	-	

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	18	7	4	985	575	12
Future Vol, veh/h	18	7	4	985	575	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	105	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-4	-	-	-2	2	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	1	1	2
Mvmt Flow	19	7	4	1037	605	13
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1657	612	618	0	-	0
Stage 1	612	-	-	-	-	-
Stage 2	1045	-	-	-	-	-
Critical Hdwy	5.62	5.82	4.12	-	-	-
Critical Hdwy Stg 1	4.62	-	-	-	-	-
Critical Hdwy Stg 2	4.62	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	156	528	962	-	-	-
Stage 1	620	-	-	-	-	-
Stage 2	427	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	155	528	962	-	-	-
Mov Cap-2 Maneuver	155	-	-	-	-	-
Stage 1	618	-	-	-	-	-
Stage 2	427	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	25.9	0		0		
HCM LOS	D					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	962	-	155	528	-	-
HCM Lane V/C Ratio	0.004	-	0.122	0.014	-	-
HCM Control Delay (s)	8.8	-	31.4	11.9	-	-
HCM Lane LOS	A	-	D	B	-	-
HCM 95th %tile Q(veh)	0	-	0.4	0	-	-