

STONEFIELD

EXHIBIT A-11

TECHNICAL MEMORANDUM

FROM: Matthew J. Seckler, PE, PP PTOE

PROJECT: Proposed Multi-Family Residential Development
84-90 East Main Street
Block 801, Lot 20
Borough of Mendham, Morris County, New Jersey

SUBJECT: Growth Rate Factor Analysis

DATED: December 12, 2024

Stonefield Engineering & Design (“SED”) has prepared this technical memorandum to determine the appropriate growth rate and traffic volumes to utilize in the analysis for the Build Condition of the proposed multi-family residential development along East Main Street (County Road 510) in the Borough of Mendham, Morris County, New Jersey. This memorandum serves as a supplement to the Traffic Impact Study prepared by our office, dated October 20, 2022, and comments provided within the Boswell Engineering Traffic Review Letter dated July 26, 2024.

2024 Traffic Volume Data Collection

To account for the change in traffic volumes post the COVID-19 pandemic, manual turning movement counts were collected at the site driveways along East Main Street during the typical weekday morning, and weekday evening, time periods on Thursday, September 19, 2024, from 7:00 a.m. to 9:00 a.m. and from 4:00 p.m. to 7:00 p.m.

The study time periods were chosen as they are presentative of the peak periods of both the adjacent roadway network, the existing shopping center and the proposed residential development. Based on the review of the count data, the weekday morning peak hour occurred from 8:00 a.m. to 9:00 a.m. and the weekday evening peak hour occurred from 5:00 p.m. to 6:00 p.m. A summary of the 2024 turning movement count data is appended to this report.

2026 No-Build Condition

The 2024 traffic volume data was grown to a future horizon year of 2026, which is a conservative estimate for when the proposed multi-family residential development is expected to be fully constructed. The existing traffic volumes along East Main Street were increased by 2.75% annually for two (2) years. The 2.75% background growth rate was obtained from the NJDOT Annual Background Growth Rate Table for the Years 2023-2025. The background growth rate was applied to the 2024 traffic volumes to calculate the 2026 No-Build Traffic Volumes for the weekday morning and weekday peak hours. These volumes are summarized on appended **Figure 5**.

Note that an alternative Growth Rate was considered using the North Jersey Transportation Authority Plan 2050 Demographic Data which projects population, household, and employment growth at both a County and a municipal level. Note that Plan 2050 projects annual growth rates in the range of 0.2%-0.3% for Morris County and Mendham Township and Mendham Borough. As such the NJDOT Annual Growth Rate was utilized as the more conservative Growth Rate factor.

2026 Build Capacity Analysis

The trips generated by the proposed development were distributed according to the existing travel pattern along East Main Street and the access management plan of the site. Note that with the improvements the westerly driveway would be converted into an ingress-only driveway, as such, egress traffic volumes at the westerly site driveway were routed to the central driveway. Additionally, based on changes to the internal circulation pattern in the retail portion of the

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development, existing trips were re-routed between access points to East Main Street. The Site-Generated Traffic Volumes are illustrated on appended **Figure 7**.

A Level of Service and Volume/Capacity analysis was conducted for the 2026 Build Condition using the 2024 traffic count data for the weekday morning, and weekday evening at the site driveways. The turning movements at the westerly site driveway are calculated to operate at Level of Service A during the weekday morning and weekday evening peak hours. The turning movements at the central site driveway are calculated to operate at Level of Service C or better during the weekday morning peak hour, and Level of Service D or better during the weekday evening peak hours. The turning movements at the easterly site driveway are calculated to operate at Level of Service B or better between during all weekday morning and weekday evening peak hours. The southbound site driveway approached are calculated to have a 95th percentile queue length of one (1) vehicle during the weekday morning and weekday evening peak hours.

Traffic Volume Count Comparison

The 2024 traffic volume data collected was compared to the traffic volume data previously collected by our office. Specifically the data was compared to turning movement counts collected at the existing site driveways along East Main Street on Thursday, March 7, 2019, from 7:00 a.m. to 9:00 a.m. and 4:00 p.m. to 7:00 p.m. while local schools were in session. A summary of the 2019 count data has been appended to this memorandum. It is noted that a Starbucks opened in the existing shopping center and there have been other tenant turnover, and the closure of the Mendham Health and Racquet Club during the years between traffic count collections. **Table 1** provides a comparison of the trip generation of the existing shopping center during the weekday morning and weekday evening peak hours. **Table 2** and **3** provides a comparison of the traffic volumes collected along East Main Street at the central site driveway during the weekday morning and weekday evening peak hours.

TABLE 1 – TRIP GENERATION COMPARISON

Land Use	Weekday Morning Peak Hour			Weekday Evening Peak Hour		
	Enter	Exit	Total	Enter	Exit	Total
<i>2019 As-Counted</i> 86 E Main Street Shopping Center with the Club at Mendham	119	123	242	212	278	490
<i>2024 As-Counted</i> 86 E Main Street Shopping Center	244	183	301	324	305	629
<i>Comparison</i>	+125	+60	+185	+112	+27	+139

TABLE 2 – TRAFFIC VOLUME COMPARISON: WEEKDAY MORNING PEAK HOUR

Location	Lane Description	2019 As-Counted	2024 As-Counted	Difference
East Main Street & Central Site Driveway	EB Through	684	480	-204
	WB Through	463	365	-98

TABLE 3 – TRAFFIC VOLUME COMPARISON: WEEKDAY EVENING PEAK HOUR

Location	Lane Description	2019 As-Counted	2024 As-Counted	Difference
East Main Street & Central Site Driveway	EB Through	406	358	-48
	WB Through	764	575	-189

2019 Traffic Data Analysis

The 2019 peak hour traffic volume data was grown to a future Build-out year of 2026, which is an estimate for when the proposed multi-family residential development is expected to be fully constructed. The traffic volumes were increased by 1.00% annually for seven (7) years. The 1.00% background growth rate was obtained from the NJDOT

Annual Background Growth Rate Table for Years 2019 to 2021. The background growth rate was applied to the 2019 traffic volumes to calculate the 2026 No-Build Traffic Volumes for the weekday morning and weekday peak hours. These volumes are summarized on appended **Figure 2**. The trips generated by the proposed development were distributed according to the existing travel pattern along East Main Street and the access management plan of the site. Note that the volumes associated with the tennis club that was operational at the time the 2019 counts were conducted were removed from the roadway network. These volumes are summarized on appended **Figure 3**. The site-generated trips were added to the 2026 No-Build Traffic Volumes (2019 Counts) to calculate the 2026 Build Traffic Volumes (2019 Counts).

A capacity analysis was conducted for the 2026 Build Condition utilizing the 2019 traffic volumes during the study peak hours. The turning movements at the westerly site driveway are calculated to operate at Level of Service A during the weekday morning peak hour and Level of Service B during the weekday evening peak hour. The turning movements at the central site driveway are calculated to operate at Level of Service C or better during the weekday morning peak hour and Level of Service E or better during the weekday evening peak hour. The turning movements at the easterly site driveway are calculated to operate at Level of Service B or between during the weekday morning and Level of Service C or better during the weekday evening peak hour. The central site driveway southbound left-turn lane approach is calculated to have a 95th percentile queue length of one (1) vehicle during the weekday morning peak hour and two (2) vehicles during the weekday evening peak hour. The central site driveway southbound right-turn lane approach and the southbound easterly site driveway approach is calculated to have a 95th percentile queue length of one (1) vehicle during the weekday morning and weekday evening peak hours.

2026 Build Condition Comparison

The results of the capacity analysis for the 2026 Build Conditions utilizing the 2019 counts was compared to the results of the 2026 Build Condition utilizing the 2024 counts. During the weekday evening peak hour, the left-turning movements of the southbound central site driveway experienced the largest change in level of delay compared to the 2024 count data. It should be noted that there would be no increase in site-generated trips calculated at the central driveway during the weekday evening peak hour. Overall, the level of delay for turning movements at the site driveways was generally consistent between the traffic volume data sets during the study peak hours. The 95th percentile queue lengths decreased when growing the 2024 counts two (2) years using a 2.75% background growth rate compared to growing the 2019 counts for seven (7) years using a 1.00% background growth rate.

TABLE 4 – 2026 BUILD CONDITION LEVEL OF SERVICE COMPARISON

Location	Lane Group	Weekday Morning Peak Hour		Weekday Evening Peak Hour	
		1.00% for 7 Years	2.75% for 2 Years	1.00% for 7 Years	2.75% for 2 Years
East Main Street and Westerly Site Driveway	EB Left	A (8.5)	A (8.6)	B (10.2)	A (9.5)
East Main Street and Central Site Driveway	EB Left	A (8.6)	A (9.0)	B (10.6)	A (10.4)
	SB Left	C (23.2)	D (27.8)	E (46.0)	E (42.3)
	SB Right	B (10.5)	B (11.0)	B (15.0)	B (12.9)
East Main Street and Easterly Site Driveway	EB Left	A (8.4)	A (8.6)	A (9.9)	A (9.3)
	SB Left/Right	B (13.7)	B (13.0)	C (20.0)	C (19.2)

Conclusions

Based on a review of the comparison of the Build Conditions, the results of the analysis indicate that the site driveways for the proposed residential development will operate at an acceptable Level of Service when accounting for either data set. The increase in traffic volumes at the existing site driveway is consistent with the industry standard trip generation projections for a proposed Starbucks development. A comparison of the through movement volumes along East Main Street indicate that overall traffic volumes decreased on the roadway network between 2019 and 2024.

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TECHNICAL APPENDIX

TURNING MOVEMENT COUNT DATA

Stonefield Engineering & Design, LLC

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Intersection of East Main Street (E/W)
and Easterly Site Driveway (N/S)
Mendham, Morris County, New Jersey
Thursday, March 7, 2019

File Name : Not Named 1
Site Code : 00018203
Start Date : 3/7/2019
Page No : 1

Groups Printed- Auto - HV - Bus/SB

Start Time	East Main Street Eastbound				East Main Street Westbound				Easterly Site Driveway Southbound				Int. Total
	Left	Thru	Right	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
07:00 AM	0	118	0	118	0	127	2	129	0	0	0	0	247
07:15 AM	0	146	0	146	0	134	4	138	0	0	0	0	284
07:30 AM	0	188	0	188	0	103	3	106	2	0	1	3	297
07:45 AM	0	173	0	173	0	121	6	127	1	0	1	2	302
Total	0	625	0	625	0	485	15	500	3	0	2	5	1130
08:00 AM	1	177	0	178	0	105	4	109	1	0	2	3	290
08:15 AM	0	157	0	157	0	92	1	93	3	0	0	3	253
08:30 AM	3	169	0	172	0	96	4	100	1	0	0	1	273
08:45 AM	1	155	0	156	0	107	11	118	5	0	1	6	280
Total	5	658	0	663	0	400	20	420	10	0	3	13	1096
*** BREAK ***													
04:00 PM	0	106	0	106	0	105	4	109	0	0	0	0	215
04:15 PM	0	116	0	116	0	146	9	155	2	0	5	7	278
04:30 PM	1	119	0	120	0	167	8	175	4	0	2	6	301
04:45 PM	4	121	0	125	0	238	8	246	6	0	2	8	379
Total	5	462	0	467	0	656	29	685	12	0	9	21	1173
05:00 PM	5	122	0	127	0	156	6	162	4	0	1	5	294
05:15 PM	1	131	0	132	0	215	1	216	4	0	1	5	353
05:30 PM	1	108	0	109	0	213	4	217	5	0	1	6	332
05:45 PM	1	125	0	126	0	205	5	210	3	0	0	3	339
Total	8	486	0	494	0	789	16	805	16	0	3	19	1318
06:00 PM	3	111	0	114	0	151	3	154	6	0	1	7	275
06:15 PM	0	102	0	102	0	177	2	179	0	0	2	2	283
06:30 PM	1	84	0	85	0	160	5	165	3	0	1	4	254
06:45 PM	1	73	0	74	0	156	2	158	2	0	0	2	234
Total	5	370	0	375	0	644	12	656	11	0	4	15	1046
Grand Total	23	2601	0	2624	0	2974	92	3066	52	0	21	73	5763
Aprch %	0.9	99.1	0		0	97	3		71.2	0	28.8		
Total %	0.4	45.1	0	45.5	0	51.6	1.6	53.2	0.9	0	0.4	1.3	
Auto	23	2573	0	2596	0	2933	92	3025	52	0	21	73	5694
% Auto	100	98.9	0	98.9	0	98.6	100	98.7	100	0	100	100	98.8
HV	0	9	0	9	0	10	0	10	0	0	0	0	19
% HV	0	0.3	0	0.3	0	0.3	0	0.3	0	0	0	0	0.3
Bus/SB	0	19	0	19	0	31	0	31	0	0	0	0	50
% Bus/SB	0	0.7	0	0.7	0	1	0	1	0	0	0	0	0.9

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Mendham, Morris County, New Jersey
Thursday, March 7, 2019

File Name : Not Named 1
Site Code : 00018203
Start Date : 3/7/2019
Page No : 2

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	Left	Thru	Right	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	

Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:15 AM

07:15 AM	0	146	0	146	0	134	4	138	0	0	0	0	284
07:30 AM	0	188	0	188	0	103	3	106	2	0	1	3	297
07:45 AM	0	173	0	173	0	121	6	127	1	0	1	2	302
08:00 AM	1	177	0	178	0	105	4	109	1	0	2	3	290
Total Volume	1	684	0	685	0	463	17	480	4	0	4	8	1173
% App. Total	0.1	99.9	0		0	96.5	3.5		50	0	50		
PHF	.250	.910	.000	.911	.000	.864	.708	.870	.500	.000	.500	.667	.971
Auto	1	673	0	674	0	440	17	457	4	0	4	8	1139
% Auto	100	98.4	0	98.4	0	95.0	100	95.2	100	0	100	100	97.1
HV	0	3	0	3	0	5	0	5	0	0	0	0	8
% HV	0	0.4	0	0.4	0	1.1	0	1.0	0	0	0	0	0.7
Bus/SB	0	8	0	8	0	18	0	18	0	0	0	0	26
% Bus/SB	0	1.2	0	1.2	0	3.9	0	3.8	0	0	0	0	2.2

Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:45 PM

04:45 PM	4	121	0	125	0	238	8	246	6	0	2	8	379
05:00 PM	5	122	0	127	0	156	6	162	4	0	1	5	294
05:15 PM	1	131	0	132	0	215	1	216	4	0	1	5	353
05:30 PM	1	108	0	109	0	213	4	217	5	0	1	6	332
Total Volume	11	482	0	493	0	822	19	841	19	0	5	24	1358
% App. Total	2.2	97.8	0		0	97.7	2.3		79.2	0	20.8		
PHF	.550	.920	.000	.934	.000	.863	.594	.855	.792	.000	.625	.750	.896
Auto	11	480	0	491	0	817	19	836	19	0	5	24	1351
% Auto	100	99.6	0	99.6	0	99.4	100	99.4	100	0	100	100	99.5
HV	0	2	0	2	0	0	0	0	0	0	0	0	2
% HV	0	0.4	0	0.4	0	0	0	0	0	0	0	0	0.1
Bus/SB	0	0	0	0	0	5	0	5	0	0	0	0	5
% Bus/SB	0	0	0	0	0	0.6	0	0.6	0	0	0	0	0.4

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	Left	Thru	Right	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
07:00 AM	0	118	0	118	0	127	2	129	0	0	0	0	247
07:15 AM	0	146	0	146	0	134	4	138	0	0	0	0	284
07:30 AM	0	188	0	188	0	103	3	106	2	0	1	3	297
07:45 AM	0	173	0	173	0	121	6	127	1	0	1	2	302
Total	0	625	0	625	0	485	15	500	3	0	2	5	1130
08:00 AM	1	177	0	178	0	105	4	109	1	0	2	3	290
08:15 AM	0	157	0	157	0	92	1	93	3	0	0	3	253
08:30 AM	3	169	0	172	0	96	4	100	1	0	0	1	273
08:45 AM	1	155	0	156	0	107	11	118	5	0	1	6	280
Total	5	658	0	663	0	400	20	420	10	0	3	13	1096
*** BREAK ***													
04:00 PM	13	96	0	109	0	96	9	105	10	0	23	33	247
04:15 PM	21	104	0	125	0	139	12	151	12	0	45	57	333
04:30 PM	21	94	0	115	0	157	12	169	26	0	23	49	333
04:45 PM	24	107	0	131	0	212	17	229	18	0	38	56	416
Total	79	401	0	480	0	604	50	654	66	0	129	195	1329
05:00 PM	27	107	0	134	0	156	14	170	20	0	48	68	372
05:15 PM	34	102	0	136	0	203	12	215	30	0	33	63	414
05:30 PM	26	90	0	116	0	193	20	213	19	0	33	52	381
05:45 PM	23	107	0	130	0	185	20	205	19	0	30	49	384
Total	110	406	0	516	0	737	66	803	88	0	144	232	1551
06:00 PM	20	91	0	111	0	139	13	152	23	0	36	59	322
06:15 PM	16	82	0	98	0	167	12	179	20	0	30	50	327
06:30 PM	21	67	0	88	0	151	10	161	18	0	26	44	293
06:45 PM	15	62	0	77	0	145	11	156	12	0	21	33	266
Total	72	302	0	374	0	602	46	648	73	0	113	186	1208
Grand Total	266	2392	0	2658	0	2828	197	3025	240	0	391	631	6314
Aprch %	10	90	0		0	93.5	6.5		38	0	62		
Total %	4.2	37.9	0	42.1	0	44.8	3.1	47.9	3.8	0	6.2	10	
Auto	266	2364	0	2630	0	2787	197	2984	240	0	391	631	6245
% Auto	100	98.8	0	98.9	0	98.6	100	98.6	100	0	100	100	98.9
HV	0	9	0	9	0	10	0	10	0	0	0	0	19
% HV	0	0.4	0	0.3	0	0.4	0	0.3	0	0	0	0	0.3
Bus/SB	0	19	0	19	0	31	0	31	0	0	0	0	50
% Bus/SB	0	0.8	0	0.7	0	1.1	0	1	0	0	0	0	0.8

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Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:15 AM

07:15 AM	0	146	0	146	0	134	4	138	0	0	0	0	284
07:30 AM	0	188	0	188	0	103	3	106	2	0	1	3	297
07:45 AM	0	173	0	173	0	121	6	127	1	0	1	2	302
08:00 AM	1	177	0	178	0	105	4	109	1	0	2	3	290
Total Volume	1	684	0	685	0	463	17	480	4	0	4	8	1173
% App. Total	0.1	99.9	0		0	96.5	3.5		50	0	50		
PHF	.250	.910	.000	.911	.000	.864	.708	.870	.500	.000	.500	.667	.971
Auto	1	673	0	674	0	440	17	457	4	0	4	8	1139
% Auto	100	98.4	0	98.4	0	95.0	100	95.2	100	0	100	100	97.1
HV	0	3	0	3	0	5	0	5	0	0	0	0	8
% HV	0	0.4	0	0.4	0	1.1	0	1.0	0	0	0	0	0.7
Bus/SB	0	8	0	8	0	18	0	18	0	0	0	0	26
% Bus/SB	0	1.2	0	1.2	0	3.9	0	3.8	0	0	0	0	2.2

Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:45 PM

04:45 PM	24	107	0	131	0	212	17	229	18	0	38	56	416
05:00 PM	27	107	0	134	0	156	14	170	20	0	48	68	372
05:15 PM	34	102	0	136	0	203	12	215	30	0	33	63	414
05:30 PM	26	90	0	116	0	193	20	213	19	0	33	52	381
Total Volume	111	406	0	517	0	764	63	827	87	0	152	239	1583
% App. Total	21.5	78.5	0		0	92.4	7.6		36.4	0	63.6		
PHF	.816	.949	.000	.950	.000	.901	.788	.903	.725	.000	.792	.879	.951
Auto	111	404	0	515	0	759	63	822	87	0	152	239	1576
% Auto	100	99.5	0	99.6	0	99.3	100	99.4	100	0	100	100	99.6
HV	0	2	0	2	0	0	0	0	0	0	0	0	2
% HV	0	0.5	0	0.4	0	0	0	0	0	0	0	0	0.1
Bus/SB	0	0	0	0	0	5	0	5	0	0	0	0	5
% Bus/SB	0	0	0	0	0	0.7	0	0.6	0	0	0	0	0.3

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	Left	Thru	Right	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
07:00 AM	1	125	0	126	0	129	0	129	0	0	0	0	255
07:15 AM	2	159	0	161	0	129	0	129	0	0	2	2	292
07:30 AM	1	186	0	187	0	111	0	111	0	0	6	6	304
07:45 AM	2	162	0	164	0	129	2	131	0	0	1	1	296
Total	6	632	0	638	0	498	2	500	0	0	9	9	1147
08:00 AM	1	175	0	176	0	105	0	105	1	0	1	2	283
08:15 AM	2	177	0	179	0	98	2	100	0	0	1	1	280
08:30 AM	1	178	0	179	0	106	0	106	0	0	1	1	286
08:45 AM	8	160	0	168	0	120	2	122	0	0	2	2	292
Total	12	690	0	702	0	429	4	433	1	0	5	6	1141
*** BREAK ***													
04:00 PM	4	108	0	112	0	116	3	119	1	0	1	2	233
04:15 PM	1	125	0	126	0	182	2	184	0	0	0	0	310
04:30 PM	5	115	0	120	0	179	1	180	0	0	1	1	301
04:45 PM	2	130	0	132	0	257	4	261	1	0	3	4	397
Total	12	478	0	490	0	734	10	744	2	0	5	7	1241
05:00 PM	0	134	0	134	0	190	1	191	0	0	4	4	329
05:15 PM	0	136	0	136	0	237	0	237	0	0	2	2	375
05:30 PM	1	116	0	117	0	227	0	227	0	0	5	5	349
05:45 PM	1	130	0	131	0	215	0	215	0	0	1	1	347
Total	2	516	0	518	0	869	1	870	0	0	12	12	1400
06:00 PM	1	111	0	112	0	173	2	175	0	0	2	2	289
06:15 PM	2	98	0	100	0	196	1	197	0	0	5	5	302
06:30 PM	1	88	0	89	0	177	0	177	0	0	1	1	267
06:45 PM	1	77	0	78	0	165	1	166	0	0	1	1	245
Total	5	374	0	379	0	711	4	715	0	0	9	9	1103
Grand Total	37	2690	0	2727	0	3241	21	3262	3	0	40	43	6032
Aprch %	1.4	98.6	0		0	99.4	0.6		7	0	93		
Total %	0.6	44.6	0	45.2	0	53.7	0.3	54.1	0	0	0.7	0.7	
Auto	37	2662	0	2699	0	3200	21	3221	3	0	40	43	5963
% Auto	100	99	0	99	0	98.7	100	98.7	100	0	100	100	98.9
HV	0	9	0	9	0	10	0	10	0	0	0	0	19
% HV	0	0.3	0	0.3	0	0.3	0	0.3	0	0	0	0	0.3
Bus/SB	0	19	0	19	0	31	0	31	0	0	0	0	50
% Bus/SB	0	0.7	0	0.7	0	1	0	1	0	0	0	0	0.8

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Intersection of East Main Street (E/W)
and Westerly Site Driveway (N/S)
Mendham, Morris County, New Jersey
Thursday, March 7, 2019

File Name : Not Named 1
Site Code : 00018203
Start Date : 3/7/2019
Page No : 2

Start Time	East Main Street Eastbound				East Main Street Westbound				Westerly Site Driveway Southbound				Int. Total
	Left	Thru	Right	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	

Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:15 AM

07:15 AM	2	159	0	161	0	129	0	129	0	0	2	2	292
07:30 AM	1	186	0	187	0	111	0	111	0	0	6	6	304
07:45 AM	2	162	0	164	0	129	2	131	0	0	1	1	296
08:00 AM	1	175	0	176	0	105	0	105	1	0	1	2	283
Total Volume	6	682	0	688	0	474	2	476	1	0	10	11	1175
% App. Total	0.9	99.1	0		0	99.6	0.4		9.1	0	90.9		
PHF	.750	.917	.000	.920	.000	.919	.250	.908	.250	.000	.417	.458	.966
Auto	6	671	0	677	0	451	2	453	1	0	10	11	1141
% Auto	100	98.4	0	98.4	0	95.1	100	95.2	100	0	100	100	97.1
HV	0	3	0	3	0	5	0	5	0	0	0	0	8
% HV	0	0.4	0	0.4	0	1.1	0	1.1	0	0	0	0	0.7
Bus/SB	0	8	0	8	0	18	0	18	0	0	0	0	26
% Bus/SB	0	1.2	0	1.2	0	3.8	0	3.8	0	0	0	0	2.2

Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:45 PM

04:45 PM	2	130	0	132	0	257	4	261	1	0	3	4	397
05:00 PM	0	134	0	134	0	190	1	191	0	0	4	4	329
05:15 PM	0	136	0	136	0	237	0	237	0	0	2	2	375
05:30 PM	1	116	0	117	0	227	0	227	0	0	5	5	349
Total Volume	3	516	0	519	0	911	5	916	1	0	14	15	1450
% App. Total	0.6	99.4	0		0	99.5	0.5		6.7	0	93.3		
PHF	.375	.949	.000	.954	.000	.886	.313	.877	.250	.000	.700	.750	.913
Auto	3	514	0	517	0	906	5	911	1	0	14	15	1443
% Auto	100	99.6	0	99.6	0	99.5	100	99.5	100	0	100	100	99.5
HV	0	2	0	2	0	0	0	0	0	0	0	0	2
% HV	0	0.4	0	0.4	0	0	0	0	0	0	0	0	0.1
Bus/SB	0	0	0	0	0	5	0	5	0	0	0	0	5
% Bus/SB	0	0	0	0	0	0.5	0	0.5	0	0	0	0	0.3

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Intersection of East Main Street (E/W)
and Westerly Site Driveway (N/S)
Mendham, Morris County, New Jersey
Thursday, September 19, 2024

File Name : RUT-200218 West
Site Code : 00200218
Start Date : 9/19/2024
Page No : 2

Start Time	East Main Street Eastbound		East Main Street Westbound		Westerly Site Driveway Southbound			Int. Total
	Left	App. Total	Right	App. Total	Left	Right	App. Total	
Peak Hour Analysis From 08:00 AM to 08:45 AM - Peak 1 of 1								
Peak Hour for Entire Intersection Begins at 08:00 AM								
08:00 AM	0	0	0	0	0	3	3	3
08:15 AM	0	0	0	0	0	1	1	1
08:30 AM	0	0	0	0	0	0	0	0
08:45 AM	0	0	1	1	0	3	3	4
Total Volume	0	0	1	1	0	7	7	8
% App. Total	0		100		0	100		
PHF	.000	.000	.250	.250	.000	.583	.583	.500

Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1								
Peak Hour for Entire Intersection Begins at 05:00 PM								
05:00 PM	0	0	0	0	0	4	4	4
05:15 PM	1	1	0	0	0	0	0	1
05:30 PM	0	0	0	0	1	4	5	5
05:45 PM	0	0	0	0	0	2	2	2
Total Volume	1	1	0	0	1	10	11	12
% App. Total	100		0		9.1	90.9		
PHF	.250	.250	.000	.000	.250	.625	.550	.600

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Intersection of East Main Street (E/W)
and Central Site Driveway (N/S)
Mendham, Morris County, New Jersey
Thursday, September 19, 2024

File Name : RUT-200218 Central
Site Code : 00200218
Start Date : 9/19/2024
Page No : 1

Groups Printed- Auto - HV

Start Time	East Main Street Eastbound			East Main Street Westbound			Central Site Driveway Southbound				Int. Total
	Left	Thru	App. Total	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	25	91	116	82	19	101	8	0	9	17	234
07:15 AM	22	94	116	102	13	115	19	0	23	42	273
07:30 AM	25	127	152	79	17	96	31	0	20	51	299
07:45 AM	18	114	132	65	19	84	23	0	11	34	250
Total	90	426	516	328	68	396	81	0	63	144	1056
08:00 AM	20	103	123	86	17	103	11	0	17	28	254
08:15 AM	30	123	153	84	17	101	10	0	26	36	290
08:30 AM	27	153	180	92	17	109	25	0	28	53	342
08:45 AM	36	101	137	103	26	129	17	0	32	49	315
Total	113	480	593	365	77	442	63	0	103	166	1201
*** BREAK ***											
04:00 PM	44	89	133	120	18	138	36	0	42	78	349
04:15 PM	49	95	144	102	18	120	18	0	45	63	327
04:30 PM	52	85	137	139	14	153	22	0	47	69	359
04:45 PM	23	75	98	135	19	154	22	0	36	58	310
Total	168	344	512	496	69	565	98	0	170	268	1345
05:00 PM	47	80	127	139	0	139	23	0	49	72	338
05:15 PM	55	112	167	135	24	159	40	0	26	66	392
05:30 PM	52	83	135	151	10	161	24	0	43	67	363
05:45 PM	34	83	117	150	14	164	32	0	35	67	348
Total	188	358	546	575	48	623	119	0	153	272	1441
06:00 PM	38	87	125	142	20	162	22	0	31	53	340
06:15 PM	25	77	102	103	10	113	14	0	26	40	255
06:30 PM	23	67	90	98	12	110	26	0	23	49	249
06:45 PM	30	77	107	97	21	118	22	0	30	52	277
Total	116	308	424	440	63	503	84	0	110	194	1121
*** BREAK ***											
Grand Total	675	1916	2591	2204	325	2529	445	0	599	1044	6164
Apprch %	26.1	73.9		87.1	12.9		42.6	0	57.4		
Total %	11	31.1	42	35.8	5.3	41	7.2	0	9.7	16.9	
Auto	669	1872	2541	2158	322	2480	440	0	590	1030	6051
%Auto	99.1	97.7	98.1	97.9	99.1	98.1	98.9	0	98.5	98.7	98.2
HV	6	44	50	46	3	49	5	0	9	14	113
%HV	0.9	2.3	1.9	2.1	0.9	1.9	1.1	0	1.5	1.3	1.8

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Intersection of East Main Street (E/W)
and Central Site Driveway (N/S)
Mendham, Morris County, New Jersey
Thursday, September 19, 2024

File Name : RUT-200218 Central
Site Code : 00200218
Start Date : 9/19/2024
Page No : 2

Start Time	East Main Street Eastbound			East Main Street Westbound			Central Site Driveway Southbound				Int. Total
	Left	Thru	App. Total	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 08:00 AM to 08:45 AM - Peak 1 of 1											
Peak Hour for Entire Intersection Begins at 08:00 AM											
08:00 AM	20	103	123	86	17	103	11	0	17	28	254
08:15 AM	30	123	153	84	17	101	10	0	26	36	290
08:30 AM	27	153	180	92	17	109	25	0	28	53	342
08:45 AM	36	101	137	103	26	129	17	0	32	49	315
Total Volume	113	480	593	365	77	442	63	0	103	166	1201
%App. Total	19.1	80.9		82.6	17.4		38	0	62		
PHF	.785	.784	.824	.886	.740	.857	.630	.000	.805	.783	.878

Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1											
Peak Hour for Entire Intersection Begins at 05:00 PM											
05:00 PM	47	80	127	139	27	166	23	0	49	72	365
05:15 PM	55	112	167	135	24	159	40	0	26	66	392
05:30 PM	52	83	135	151	10	161	24	0	43	67	363
05:45 PM	34	83	117	150	14	164	32	0	35	67	348
Total Volume	188	358	546	575	48	650	119	0	153	272	1468
%App. Total	34.4	65.6		92.3	7.7		43.8	0	56.2		
PHF	.855	.799	.817	.952	.500	.950	.744	.000	.781	.944	.936

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Intersection of East Main Street (E/W)
and Easterly Site Driveway (N/S)
Mendham, Morris County, New Jersey
Thursday, September 19, 2024

File Name : RUT-200218 East
Site Code : 00200218
Start Date : 9/19/2024
Page No : 1

Groups Printed- Auto - HV

Start Time	East Main Street Eastbound		East Main Street Westbound		Easterly Site Driveway Southbound			Int. Total
	Left	App. Total	Right	App. Total	Left	Right	App. Total	
07:00 AM	0	0	4	4	0	1	1	5
07:15 AM	1	1	6	6	4	0	4	11
07:30 AM	0	0	8	8	2	0	2	10
07:45 AM	3	3	12	12	0	0	0	15
Total	4	4	30	30	6	1	7	41
08:00 AM	0	0	16	16	1	2	3	19
08:15 AM	2	2	7	7	1	3	4	13
08:30 AM	1	1	12	12	1	0	1	14
08:45 AM	2	2	14	14	2	0	2	18
Total	5	5	49	49	5	5	10	64
*** BREAK ***								
04:00 PM	0	0	18	18	3	2	5	23
04:15 PM	1	1	13	13	5	1	6	20
04:30 PM	0	0	11	11	6	0	6	17
04:45 PM	0	0	19	19	2	2	4	23
Total	1	1	61	61	16	5	21	83
05:00 PM	0	0	15	15	6	5	11	26
05:15 PM	0	0	13	13	4	0	4	17
05:30 PM	1	1	13	13	3	0	3	17
05:45 PM	0	0	18	18	4	0	4	22
Total	1	1	59	59	17	5	22	82
06:00 PM	0	0	6	6	5	1	6	12
06:15 PM	0	0	7	7	2	1	3	10
06:30 PM	1	1	17	17	3	0	3	21
06:45 PM	1	1	8	8	3	1	4	13
Total	2	2	38	38	13	3	16	56
*** BREAK ***								
Grand Total	13	13	237	237	57	19	76	326
Apprch %	100		100		75	25		
Total %	4	4	72.7	72.7	17.5	5.8	23.3	
Auto	10	10	229	229	54	18	72	311
% Auto	76.9	76.9	96.6	96.6	94.7	94.7	94.7	95.4
HV	3	3	8	8	3	1	4	15
% HV	23.1	23.1	3.4	3.4	5.3	5.3	5.3	4.6

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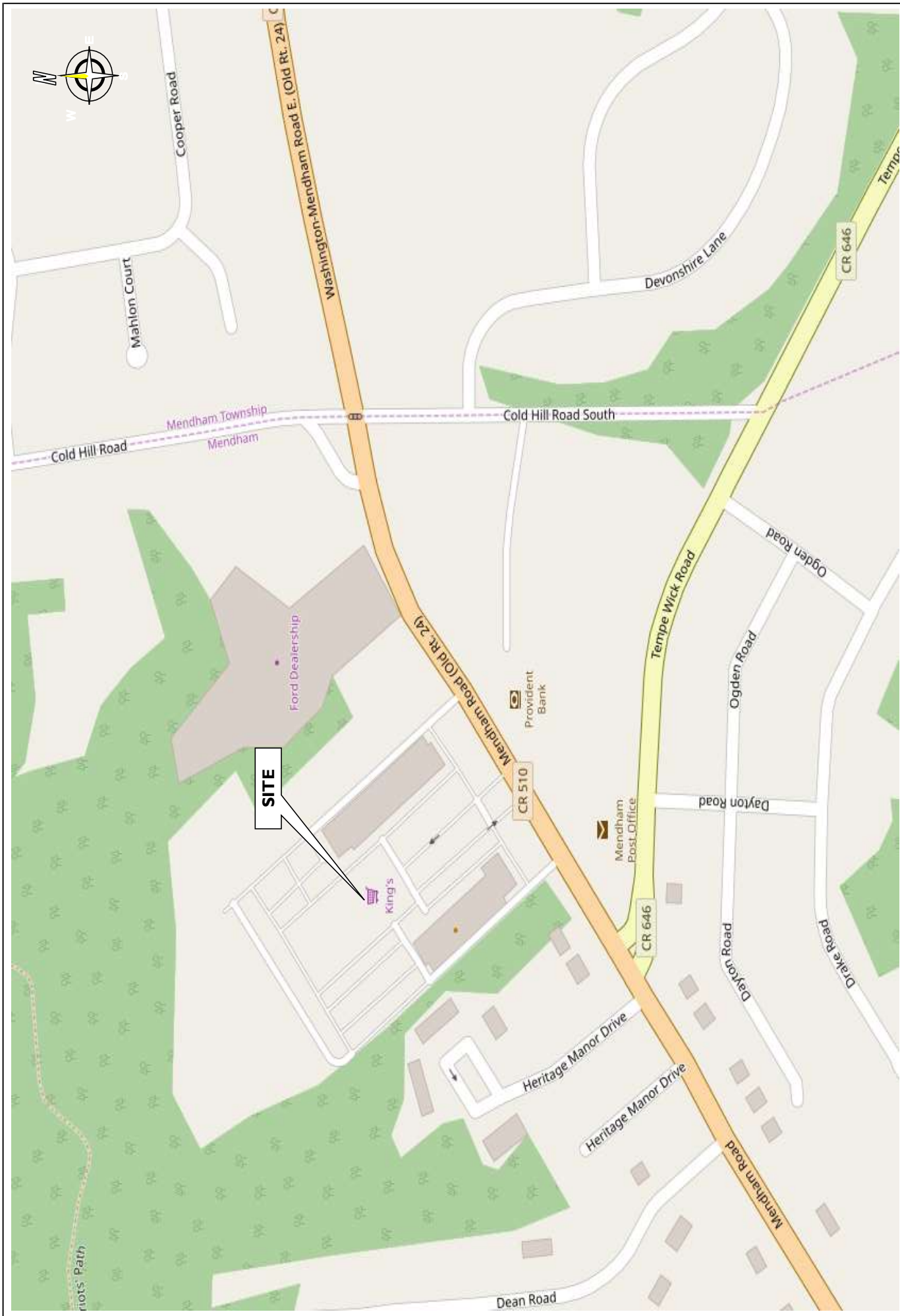
Intersection of East Main Street (E/W)
and Easterly Site Driveway (N/S)
Mendham, Morris County, New Jersey
Thursday, September 19, 2024

File Name : RUT-200218 East
Site Code : 00200218
Start Date : 9/19/2024
Page No : 2

Start Time	East Main Street Eastbound		East Main Street Westbound		Easterly Site Driveway Southbound			Int. Total
	Left	App. Total	Right	App. Total	Left	Right	App. Total	
Peak Hour Analysis From 08:00 AM to 08:45 AM - Peak 1 of 1								
Peak Hour for Entire Intersection Begins at 08:00 AM								
08:00 AM	0	0	16	16	1	2	3	19
08:15 AM	2	2	7	7	1	3	4	13
08:30 AM	1	1	12	12	1	0	1	14
08:45 AM	2	2	14	14	2	0	2	18
Total Volume	5	5	49	49	5	5	10	64
% App. Total	100		100		50	50		
PHF	.625	.625	.766	.766	.625	.417	.625	.842

Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1								
Peak Hour for Entire Intersection Begins at 05:00 PM								
05:00 PM	0	0	15	15	6	5	11	26
05:15 PM	0	0	13	13	4	0	4	17
05:30 PM	1	1	13	13	3	0	3	17
05:45 PM	0	0	18	18	4	0	4	22
Total Volume	1	1	59	59	17	5	22	82
% App. Total	100		100		77.3	22.7		
PHF	.250	.250	.819	.819	.708	.250	.500	.788

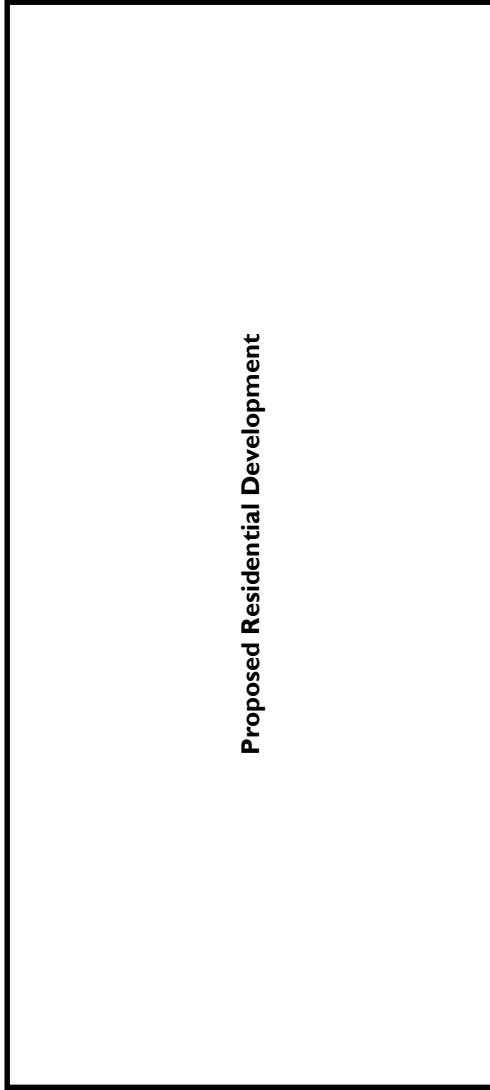
FIGURES



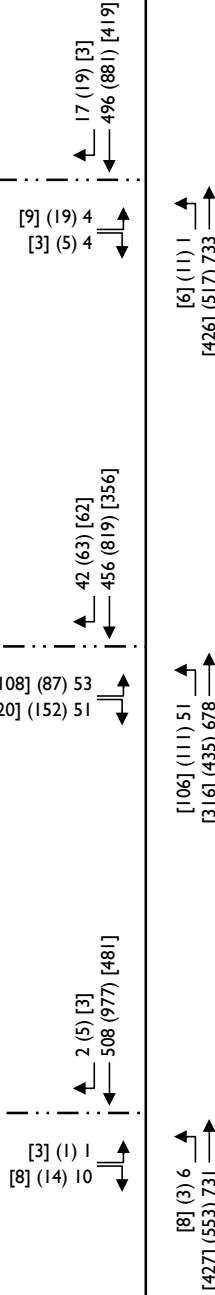
Proposed Multi-Family Residential Development
 Block 801, Lot 20
 Borough of Mendham, Morris County, New Jersey
 Traffic Impact Study

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FIGURE I
 Site Location Map



Proposed Residential Development



East Main Street

LEGEND

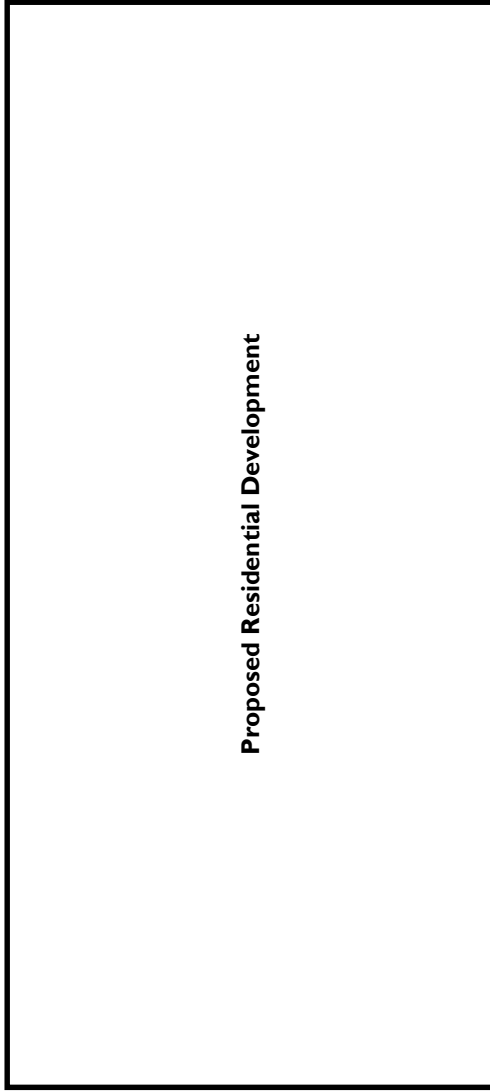
- Existing Roadway
- - - Proposed Driveway
- · - · Existing Private Driveway
- ← AM (PM) [SAT] Peak Hour Volumes
- Signalized Intersection

not to scale

Proposed Multi-Family Residential Development
Block 801, Lot 20
Borough of Mendham, Morris County, New Jersey
Traffic Impact Study

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FIGURE 2
2026 No-Build Traffic
Volumes (2019 Counts)



East Main Street

[0] (1) 1 →
[1] (2) 2 →

[1] (2) 2 →

[2] (0) 9 →

11 (0) [1]


[2] (0) 9
[1] (0) 8

2 (1) [1]
3 (0) [0]

[0] (0) 2
[0] (0) 3

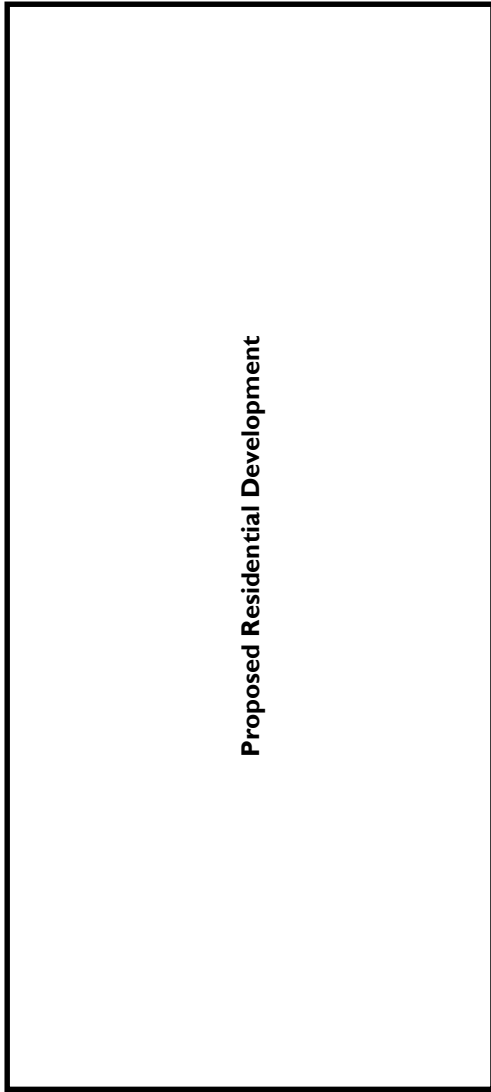
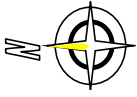
1 (2) [1]
2 (1) [1]

LEGEND

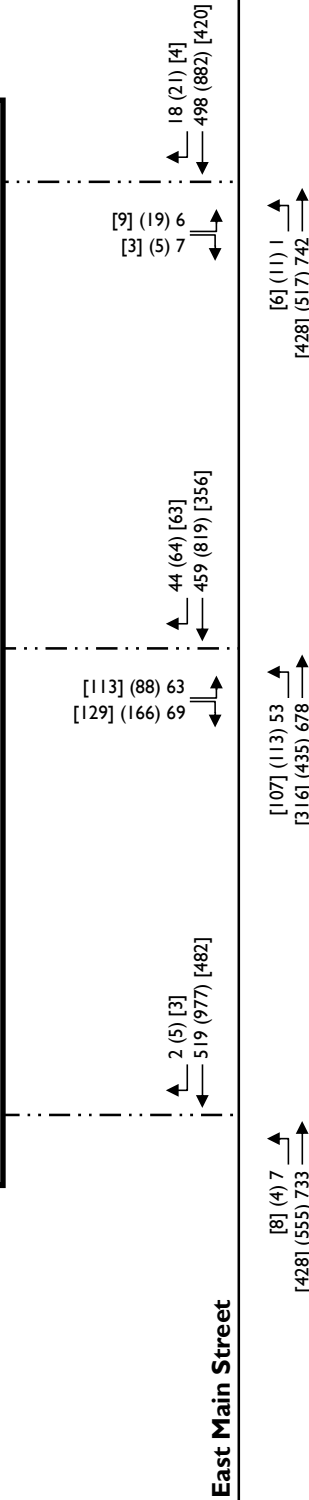
- Existing Roadway
- - - Proposed Driveway
- · - · Existing Private Driveway
- ← AM (PM) [SAT] Peak Hour Volumes
-  Signalized Intersection

not to scale

STONEFIELD	Proposed Multi-Family Residential Development Block 801, Lot 20 Borough of Mendham, Morris County, New Jersey Traffic Impact Study	FIGURE 3 Net Increase in Site- Generated Traffic Volumes (2019 Counts)
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Proposed Residential Development



LEGEND

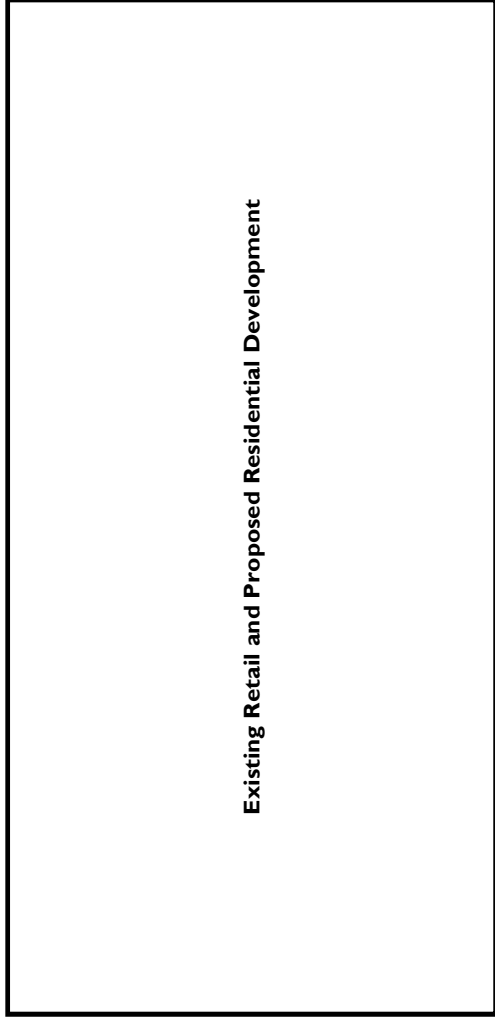
- Existing Roadway
- - - Proposed Driveway
- · - Existing Private Driveway
- ← Existing Private Driveway AM (PM) [SAT] Peak Hour Volumes
- 🚦 Signalized Intersection

not to scale

Proposed Multi-Family Residential Development
Block 801, Lot 20
Borough of Mendham, Morris County, New Jersey
Traffic Impact Study

FIGURE 4
2026 Build Traffic Volumes
(2019 Counts)

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Existing Retail and Proposed Residential Development

East Main Street






(4) 1  
 (5) 2 

(5) 9  
 (4) 8 

(5) 2 (4)  
 (3) 3 (1) 

(3) 2  
 (1) 3 
 (5) 1 (5)  
 (2) 2 (4)  

LEGEND

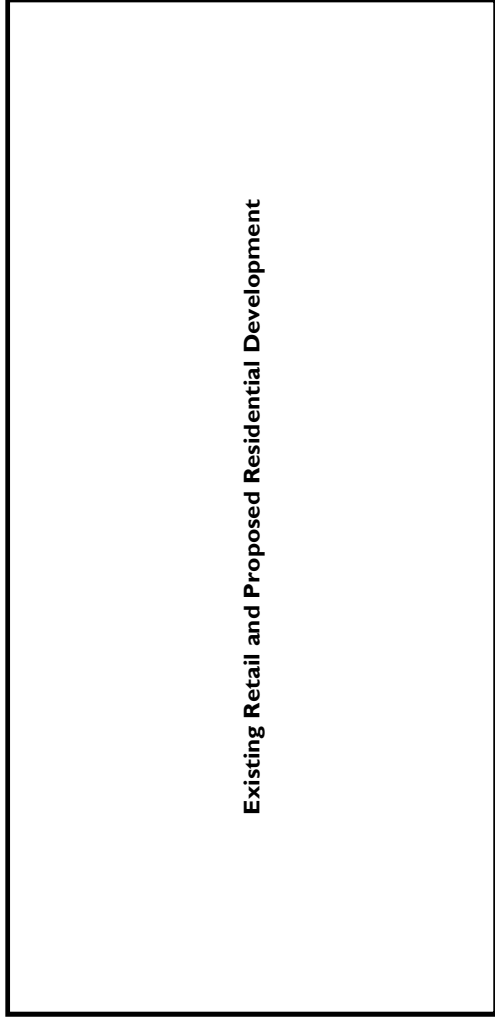
-  Existing Roadway
-  Proposed Driveway
-  Existing Private Driveway
-  AM (PM) [SAT] Peak Hour Volumes
-  Signalized Intersection

not to scale

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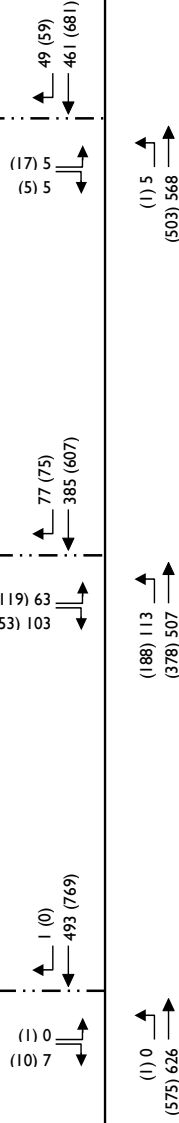
Proposed Multi-Family Residential Development
Block 80 I, Lot 20
 Borough of Mendham, Morris County, New Jersey
 Traffic Impact Study

FIGURE 6
Site-Generated Traffic
Volumes (2024 Counts)



Existing Retail and Proposed Residential Development

East Main Street



LEGEND

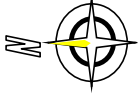
- Existing Roadway
- - - Proposed Driveway
- . . . Existing Private Driveway
- ← AM (PM) [SAT] Peak Hour Volumes
- Signalized Intersection

not to scale

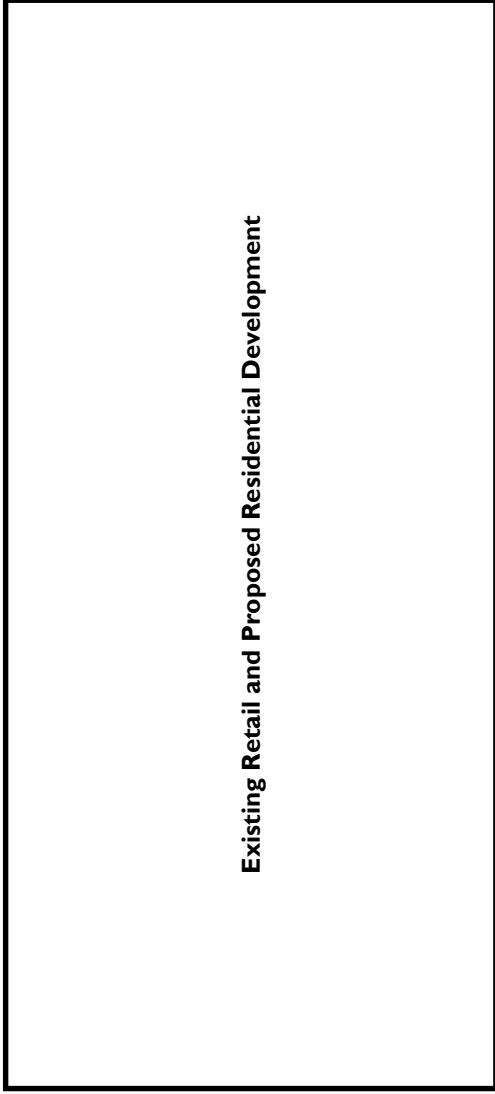
Proposed Multi-Family Residential Development
Block 80 I, Lot 20
 Borough of Mendham, Morris County, New Jersey
 Traffic Impact Study

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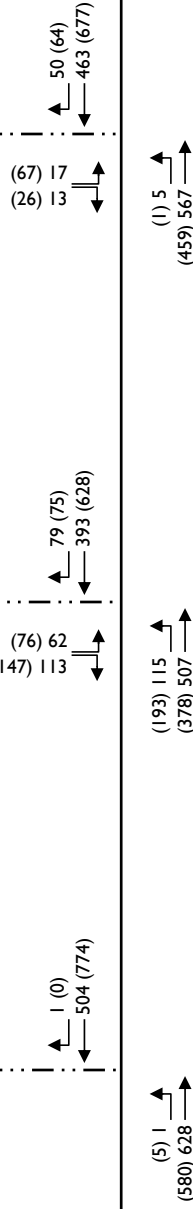
FIGURE 5
2026 No-Build Traffic
Volumes (2024 Counts)



Existing Retail and Proposed Residential Development



East Main Street



LEGEND

- Existing Roadway
- - - Proposed Driveway
- · - Existing Private Driveway
- ← AM (PM) [SAT] Peak Hour
- 🚦 Signalized Intersection

not to scale

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Proposed Multi-Family Residential Development
Block 801, Lot 20
 Borough of Mendham, Morris County, New Jersey
 Traffic Impact Study

FIGURE 7
2026 Build Traffic Volumes
 (2024 Counts)

HIGHWAY CAPACITY ANALYSIS DETAIL SHEETS

HCM 7th TWSC
 1: East Main Street & Westerly Site Driveway

2026 Build Condition (Based on 2019 Counts)
 Weekday Morning Peak Hour

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		4	1		1	
Traffic Vol, veh/h	7	733	519	2	0	0
Future Vol, veh/h	7	733	519	2	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	0	2	5	0	0	0
Mvmt Flow	7	756	535	2	0	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	537	0	-	0	1306 536
Stage 1	-	-	-	-	536 -
Stage 2	-	-	-	-	770 -
Critical Hdwy	4.1	-	-	-	5.1 -
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	2.2	-	-	-	3.5 3.3
Pot Cap-1 Maneuver	1041	-	-	-	285 1381
Stage 1	-	-	-	-	591 -
Stage 2	-	-	-	-	460 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1041	-	-	-	282 1381
Mov Cap-2 Maneuver	-	-	-	-	282 -
Stage 1	-	-	-	-	584 -
Stage 2	-	-	-	-	460 -

Approach	EB	WB	SB
HCM Control Delay, s/v	0.08	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	17	-	-	-	-
HCM Lane V/C Ratio	0.007	-	-	-	-
HCM Control Delay (s/veh)	8.5	0	-	-	0
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

HCM 7th TWSC
2: East Main Street & Central Site Driveway

2026 Build Condition (Based on 2019 Counts)
Weekday Morning Peak Hour

Intersection						
Int Delay, s/veh	1.9					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	↷
Traffic Vol, veh/h	53	678	459	44	63	69
Future Vol, veh/h	53	678	459	44	63	69
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	0	2	5	0	0	0
Mvmt Flow	55	699	473	45	65	71

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	519	0	-	0	1304 496
Stage 1	-	-	-	-	496 -
Stage 2	-	-	-	-	808 -
Critical Hdwy	4.1	-	-	-	5.1 4.5
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	2.2	-	-	-	3.5 3.3
Pot Cap-1 Maneuver	1058	-	-	-	286 730
Stage 1	-	-	-	-	616 -
Stage 2	-	-	-	-	442 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1058	-	-	-	262 730
Mov Cap-2 Maneuver	-	-	-	-	262 -
Stage 1	-	-	-	-	564 -
Stage 2	-	-	-	-	442 -

Approach	EB	WB	SB
HCM Control Delay, s/v	0.62	0	16.55
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	131	-	-	-	262	730
HCM Lane V/C Ratio	0.052	-	-	-	0.248	0.097
HCM Control Delay (s/veh)	8.6	0	-	-	23.2	10.5
HCM Lane LOS	A	A	-	-	C	B
HCM 95th %tile Q(veh)	0.2	-	-	-	1	0.3

HCM 7th TWSC
 3: East Main Street & Easterly Site Driveway

2026 Build Condition (Based on 2019 Counts)
 Weekday Morning Peak Hour

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		4	3		3	
Traffic Vol, veh/h	1	742	498	18	6	7
Future Vol, veh/h	1	742	498	18	6	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	0	2	5	0	0	0
Mvmt Flow	1	765	513	19	6	7

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	532	0	-	0	1290 523
Stage 1	-	-	-	-	523 -
Stage 2	-	-	-	-	767 -
Critical Hdwy	4.1	-	-	-	5.1 4.5
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	2.2	-	-	-	3.5 3.3
Pot Cap-1 Maneuver	1046	-	-	-	290 714
Stage 1	-	-	-	-	599 -
Stage 2	-	-	-	-	462 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1046	-	-	-	290 714
Mov Cap-2 Maneuver	-	-	-	-	290 -
Stage 1	-	-	-	-	598 -
Stage 2	-	-	-	-	462 -

Approach	EB	WB	SB
HCM Control Delay, s/v	0.01	0	13.72
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	2	-	-	-	426
HCM Lane V/C Ratio	0.001	-	-	-	0.031
HCM Control Delay (s/veh)	8.4	0	-	-	13.7
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

HCM 7th TWSC
 1: East Main Street & Westerly Site Driveway

2026 Build Condition (Based on 2019 Counts)
 Weekday Evening Peak Hour

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		4	3		3	
Traffic Vol, veh/h	4	555	977	5	0	0
Future Vol, veh/h	4	555	977	5	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	0	2	5	0	0	0
Mvmt Flow	4	572	1007	5	0	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	1012	0	-	0	1590 1010
Stage 1	-	-	-	-	1010 -
Stage 2	-	-	-	-	580 -
Critical Hdwy	4.1	-	-	-	5.1 4.5
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	2.2	-	-	-	3.5 3.3
Pot Cap-1 Maneuver	693	-	-	-	212 473
Stage 1	-	-	-	-	355 -
Stage 2	-	-	-	-	564 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	693	-	-	-	211 473
Mov Cap-2 Maneuver	-	-	-	-	211 -
Stage 1	-	-	-	-	352 -
Stage 2	-	-	-	-	564 -

Approach	EB	WB	SB
HCM Control Delay, s/v	0.07	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	13	-	-	-	-
HCM Lane V/C Ratio	0.006	-	-	-	-
HCM Control Delay (s/veh)	10.2	0	-	-	0
HCM Lane LOS	B	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

HCM 7th TWSC
2: East Main Street & Central Site Driveway

2026 Build Condition (Based on 2019 Counts)
Weekday Evening Peak Hour

Intersection						
Int Delay, s/veh	4.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↖	↗		↖	↗
Traffic Vol, veh/h	113	435	819	64	88	166
Future Vol, veh/h	113	435	819	64	88	166
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	0	2	5	0	0	0
Mvmt Flow	116	448	844	66	91	171

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	910	0	-	0	1559 877
Stage 1	-	-	-	-	877 -
Stage 2	-	-	-	-	681 -
Critical Hdwy	4.1	-	-	-	5.1 4.5
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	2.2	-	-	-	3.5 3.3
Pot Cap-1 Maneuver	757	-	-	-	220 530
Stage 1	-	-	-	-	410 -
Stage 2	-	-	-	-	506 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	757	-	-	-	175 530
Mov Cap-2 Maneuver	-	-	-	-	175 -
Stage 1	-	-	-	-	326 -
Stage 2	-	-	-	-	506 -

Approach	EB	WB	SB
HCM Control Delay, s/v	2.19	0	25.75
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	371	-	-	-	175	530
HCM Lane V/C Ratio	0.154	-	-	-	0.52	0.323
HCM Control Delay (s/veh)	10.6	0	-	-	46	15
HCM Lane LOS	B	A	-	-	E	B
HCM 95th %tile Q(veh)	0.5	-	-	-	2.6	1.4

HCM 7th TWSC
 3: East Main Street & Easterly Site Driveway

2026 Build Condition (Based on 2019 Counts)
 Weekday Evening Peak Hour

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	11	517	882	21	19	5
Future Vol, veh/h	11	517	882	21	19	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	0	2	5	0	0	0
Mvmt Flow	11	533	909	22	20	5

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	931	0	-	0	1476 920
Stage 1	-	-	-	-	920 -
Stage 2	-	-	-	-	556 -
Critical Hdwy	4.1	-	-	-	5.1 4.5
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	2.2	-	-	-	3.5 3.3
Pot Cap-1 Maneuver	743	-	-	-	239 511
Stage 1	-	-	-	-	391 -
Stage 2	-	-	-	-	578 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	743	-	-	-	234 511
Mov Cap-2 Maneuver	-	-	-	-	234 -
Stage 1	-	-	-	-	383 -
Stage 2	-	-	-	-	578 -

Approach	EB	WB	SB
HCM Control Delay, s/v	0.21	0	20.04
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	38	-	-	-	264
HCM Lane V/C Ratio	0.015	-	-	-	0.094
HCM Control Delay (s/veh)	9.9	0	-	-	20
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.3

HCM 7th TWSC
 1: East Main Street & Westerly Site Driveway

2026 Build Condition (Based on 2024 Counts)
 Weekday Morning Peak Hour

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	1	628	504	1	0	0
Future Vol, veh/h	1	628	504	1	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	0	2	5	0	0	0
Mvmt Flow	1	714	573	1	0	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	574	0	-	0	1289 573
Stage 1	-	-	-	-	573 -
Stage 2	-	-	-	-	716 -
Critical Hdwy	4.1	-	-	-	5.1 -
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	2.2	-	-	-	3.5 3.3
Pot Cap-1 Maneuver	1009	-	-	-	291 1403
Stage 1	-	-	-	-	568 -
Stage 2	-	-	-	-	488 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1009	-	-	-	290 1403
Mov Cap-2 Maneuver	-	-	-	-	290 -
Stage 1	-	-	-	-	567 -
Stage 2	-	-	-	-	488 -

Approach	EB	WB	SB
HCM Control Delay, s/v	0.01	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	3	-	-	-	-
HCM Lane V/C Ratio	0.001	-	-	-	-
HCM Control Delay (s/veh)	8.6	0	-	-	0
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

HCM 7th TWSC
2: East Main Street & Central Site Driveway

2026 Build Condition (Based on 2024 Counts)
Weekday Morning Peak Hour

Intersection						
Int Delay, s/veh	3.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↔		↔	↔
Traffic Vol, veh/h	115	507	393	79	62	113
Future Vol, veh/h	115	507	393	79	62	113
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	0	2	5	0	0	0
Mvmt Flow	131	576	447	90	70	128

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	536	0	-	0	1329 491
Stage 1	-	-	-	-	491 -
Stage 2	-	-	-	-	838 -
Critical Hdwy	4.1	-	-	-	5.1 4.5
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	2.2	-	-	-	3.5 3.3
Pot Cap-1 Maneuver	1042	-	-	-	279 733
Stage 1	-	-	-	-	619 -
Stage 2	-	-	-	-	428 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1042	-	-	-	227 733
Mov Cap-2 Maneuver	-	-	-	-	227 -
Stage 1	-	-	-	-	505 -
Stage 2	-	-	-	-	428 -

Approach	EB	WB	SB
HCM Control Delay, s/v	1.65	0	16.91
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	333	-	-	-	227	733
HCM Lane V/C Ratio	0.125	-	-	-	0.31	0.175
HCM Control Delay (s/veh)	9	0	-	-	27.8	11
HCM Lane LOS	A	A	-	-	D	B
HCM 95th %tile Q(veh)	0.4	-	-	-	1.3	0.6

HCM 7th TWSC
 3: East Main Street & Easterly Site Driveway

2026 Build Condition (Based on 2024 Counts)
 Weekday Morning Peak Hour

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	5	567	463	50	17	13
Future Vol, veh/h	5	567	463	50	17	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	0	2	5	0	0	0
Mvmt Flow	6	644	526	57	19	15

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	583	0	-	0	1210
Stage 1	-	-	-	-	555
Stage 2	-	-	-	-	656
Critical Hdwy	4.1	-	-	-	5.1
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	2.2	-	-	-	3.5
Pot Cap-1 Maneuver	1001	-	-	-	315
Stage 1	-	-	-	-	579
Stage 2	-	-	-	-	520
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1001	-	-	-	312
Mov Cap-2 Maneuver	-	-	-	-	391
Stage 1	-	-	-	-	574
Stage 2	-	-	-	-	520

Approach	EB	WB	SB
HCM Control Delay, s/v	0.08	0	13.03
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	16	-	-	-	482
HCM Lane V/C Ratio	0.006	-	-	-	0.071
HCM Control Delay (s/veh)	8.6	0	-	-	13
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.2

HCM 7th TWSC
 1: East Main Street & Westerly Site Driveway

2026 Build Condition (Based on 2024 Counts)
 Weekday Evening Peak Hour

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	5	580	774	0	0	0
Future Vol, veh/h	5	580	774	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	2	2	0	0	0
Mvmt Flow	5	617	823	0	0	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	823	0	-	0	1451 823
Stage 1	-	-	-	-	823 -
Stage 2	-	-	-	-	628 -
Critical Hdwy	4.1	-	-	-	5.1 4.5
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	2.2	-	-	-	3.5 3.3
Pot Cap-1 Maneuver	815	-	-	-	246 555
Stage 1	-	-	-	-	435 -
Stage 2	-	-	-	-	536 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	815	-	-	-	243 555
Mov Cap-2 Maneuver	-	-	-	-	243 -
Stage 1	-	-	-	-	430 -
Stage 2	-	-	-	-	536 -

Approach	EB	WB	SB
HCM Control Delay, s/v	0.08	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	15	-	-	-	-
HCM Lane V/C Ratio	0.007	-	-	-	-
HCM Control Delay (s/veh)	9.4	0	-	-	0
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

HCM 7th TWSC
 2: East Main Street & Central Site Driveway

2026 Build Condition (Based on 2024 Counts)
 Weekday Evening Peak Hour

Intersection						
Int Delay, s/veh	4.8					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↙	↑	↘		↙	↗
Traffic Vol, veh/h	193	378	628	75	76	147
Future Vol, veh/h	193	378	628	75	76	147
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	2	2	0	0	0
Mvmt Flow	205	402	668	80	81	156

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	748	0	-	0	1521 708
Stage 1	-	-	-	-	708 -
Stage 2	-	-	-	-	813 -
Critical Hdwy	4.1	-	-	-	5.1 4.5
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	2.2	-	-	-	3.5 3.3
Pot Cap-1 Maneuver	870	-	-	-	228 612
Stage 1	-	-	-	-	492 -
Stage 2	-	-	-	-	440 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	870	-	-	-	175 612
Mov Cap-2 Maneuver	-	-	-	-	175 -
Stage 1	-	-	-	-	376 -
Stage 2	-	-	-	-	440 -

Approach	EB	WB	SB
HCM Control Delay, s/v	3.52	0	22.91
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	870	-	-	-	175	612
HCM Lane V/C Ratio	0.236	-	-	-	0.463	0.256
HCM Control Delay (s/veh)	10.4	-	-	-	42.3	12.9
HCM Lane LOS	B	-	-	-	E	B
HCM 95th %tile Q(veh)	0.9	-	-	-	2.2	1

HCM 7th TWSC
 3: East Main Street & Easterly Site Driveway

2026 Build Condition (Based on 2024 Counts)
 Weekday Evening Peak Hour

Intersection						
Int Delay, s/veh	1.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	1	459	681	64	67	26
Future Vol, veh/h	1	459	681	64	67	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	2	2	0	0	0
Mvmt Flow	1	488	724	68	71	28

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	793	0	-	0	1249 759
Stage 1	-	-	-	-	759 -
Stage 2	-	-	-	-	490 -
Critical Hdwy	4.1	-	-	-	5.1 4.5
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	2.2	-	-	-	3.5 3.3
Pot Cap-1 Maneuver	837	-	-	-	303 587
Stage 1	-	-	-	-	466 -
Stage 2	-	-	-	-	620 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	837	-	-	-	302 587
Mov Cap-2 Maneuver	-	-	-	-	302 -
Stage 1	-	-	-	-	465 -
Stage 2	-	-	-	-	620 -

Approach	EB	WB	SB
HCM Control Delay, s/v	0.02	0	19.31
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	4	-	-	-	350
HCM Lane V/C Ratio	0.001	-	-	-	0.283
HCM Control Delay (s/veh)	9.3	0	-	-	19.3
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	1.1