

East Main

Town of New Market, Maryland

Revised July 7, 2023

April 13, 2023

September 19, 2022

Traffic Impact Analysis

Prepared for:

The Verdant Companies

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Professional Certification: I hereby certify that these documents were prepared or approved by me, and that I am duly licensed professional engineer under the laws of the State of Maryland, License No. 25547 Expiration Date: 09/25/2024.



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INTRODUCTION AND SUMMARY OF FINDINGS

Study Purpose

The Traffic Group, Inc. has prepared this Revised Traffic Impact Analysis based on comments provided by the Town of New Market to determine the impact the proposed East Main Development would have on the adjacent road system in the Town of New Market, Frederick County, Maryland. This development is located along the south side of Main Street east of Ninth Alley (unimproved) and is now proposed with 42 Single-Family Attached Units, 8,000 Square Feet (SF) of Retail Uses (Strip Plaza Retail), 10,000 SF of General Office, and a 4,000 SF High-Turnover Restaurant.

Two full-movement access points are proposed along East Main Street, with the western access across from Marley Street and a second access to the east. Please note there is access proposed along South Alley to the south. However, for the purposes of this Traffic Impact Analysis, all traffic from East Main is proposed to use the accesses along Main Street. East Main is expected to be built out within 3 years (2025).

Study Criteria/Methodology

The Scope of Work for this Traffic Impact Analysis was determined by the Town of New Market and can be found in Appendix A. A Comment/Response Letter was prepared and can be found in Appendix A. This Traffic Impact Analysis was prepared in accordance with Frederick County's Adequate Public Facilities Ordinance (APFO).

Scope of Services

- *Conduct a field inspection to collect physical information concerning the nearby road system, including the compilation of aerial photography.*
- *Collect intersection turning movement counts at each of the key intersections during the weekday morning and evening peak periods.*
- *Provide an allowance for regional traffic growth throughout the corridor.*
- *Obtain background development information from the Town of New Market.*
- *Prepare trip generation and trip distribution for each background development and the subject site.*

- *Undertake Intersection Capacity Analyses and Level of Service (LOS) evaluations for existing, background, and total traffic conditions using Critical Lane Volume (CLV) and Highway Capacity Manual (HCM) Methodologies.*
- *Prepare Queuing Analyses using the Maryland Department of Transportation State Highway Administration (MDOT SHA) 95th Percentile Methodology.*
- *Provide an overall assessment of traffic operations.*

Summary of Findings and Recommendations

The results of the Traffic Impact Analysis indicate that all study intersections are operating at acceptable levels of service and will continue to operate with acceptable levels of service during each of the peak periods using the CLV and HCM Methodologies except for Main Street @ Royal Oaks Drive and MD 75 @ Old New Market Road, which is projected to have delay issues under background and total traffic conditions. This doesn't mean that the intersection is failing as the major street approaches have no delay (except for the inbound turning movements). Please note that the subject site only has a minor impact on the delayed movements, therefore, no mitigation is suggested at these intersections.

Additionally, all queues can be accommodated within the existing storage areas at all intersections during the morning and evening peak hours except for a few movements which are as follows in the Town of New Market:

- SB Right Turn from Boyers Mill Road to Old National Pike – There is available land to extend the right turn lane, if deemed necessary.
- EB Left Turn from Old National Pike to Boyers Mill Road – Without a survey and using Google Maps, there may be an opportunity to restripe a longer EB Left Turn Lane and Through Lane without widening, but the lanes would be 10 feet wide. Additionally, there may be opportunities for widening as well.

Based on the data and analyses presented in this report, it is our opinion that East Main meets the requirements of the Town of New Market for approval. Please note that pro rata share contributions may be necessary to the existing escrow accounts in the area as mitigation.

The data and methodology used to undertake this study is detailed in the sections that follow.

EXISTING TRAFFIC CONDITIONS

Site Information

East Main is located along the south side of East Main Street east of Ninth Alley (unimproved) in the Town of New Market, Frederick County, Maryland. A map showing the general area can be found on Figure 1 along with the study intersections, and a Site Concept Plan can be found on Figure 1A.

Study Area

Based on the Scoping Agreement, the following intersections were identified to be included as part of this analysis:

1. Old National Pike @ Boyers Mill Road (Traffic Signal);
2. Main Street @ Royal Oaks Drive (Stop Controlled);
3. Main Street @ Old New Market Road (Stop Controlled);
4. Main Street @ South Federal Street (Stop Controlled);
5. Main Street @ Marley Street/Site Access (Stop Controlled);
6. Main Street @ Bye Alley (Stop Controlled);
7. MD 75 @ Old New Market Road (Stop Controlled);
8. MD 75 @ Old National Pike (Traffic Signal);
9. MD 75 @ I-70 WB Ramps (Traffic Signal);
10. MD 75 @ I-70 EB Ramps (Traffic Signal); and
11. Main Street @ Site Access (Stop Controlled).

Figure 2 has been prepared to detail the existing lane use and traffic control devices at each of the study intersections. Aerial photography can be found in Appendix A.

Traffic Volumes

The Traffic Group, Inc. collected intersection turning movement counts from 7–9 AM and 4–6 PM on a weekday at each of the key intersections in the study area on February 25, 2021, October 26, 2021, and May 25, 2022. Please note that the counts in February were conducted when Frederick County Students returned to the classrooms (February 16, 2021) as part of a hybrid plan and have been previously accepted. A summary of the existing peak hour traffic volumes can be found on Figure 3. Complete turning movement count worksheets are contained in Appendix A.

Figure 1. Site Location Map and Study Intersections

- Study Intersections:
1. Old National Pike/Boyers Mill Road
 2. Main Street/Royal Oak Drive
 3. Main Street/Old New Market Road
 4. Main Street/South Federal Street
 5. Main Street/Marley Street/Site Access
 6. Main Street/Bye Alley
 7. MD 75/Old New Market Road
 8. Old National Pike/MD 75
 9. MD 75/WB I-70 ramps
 10. MD 75/EB I-70 ramps

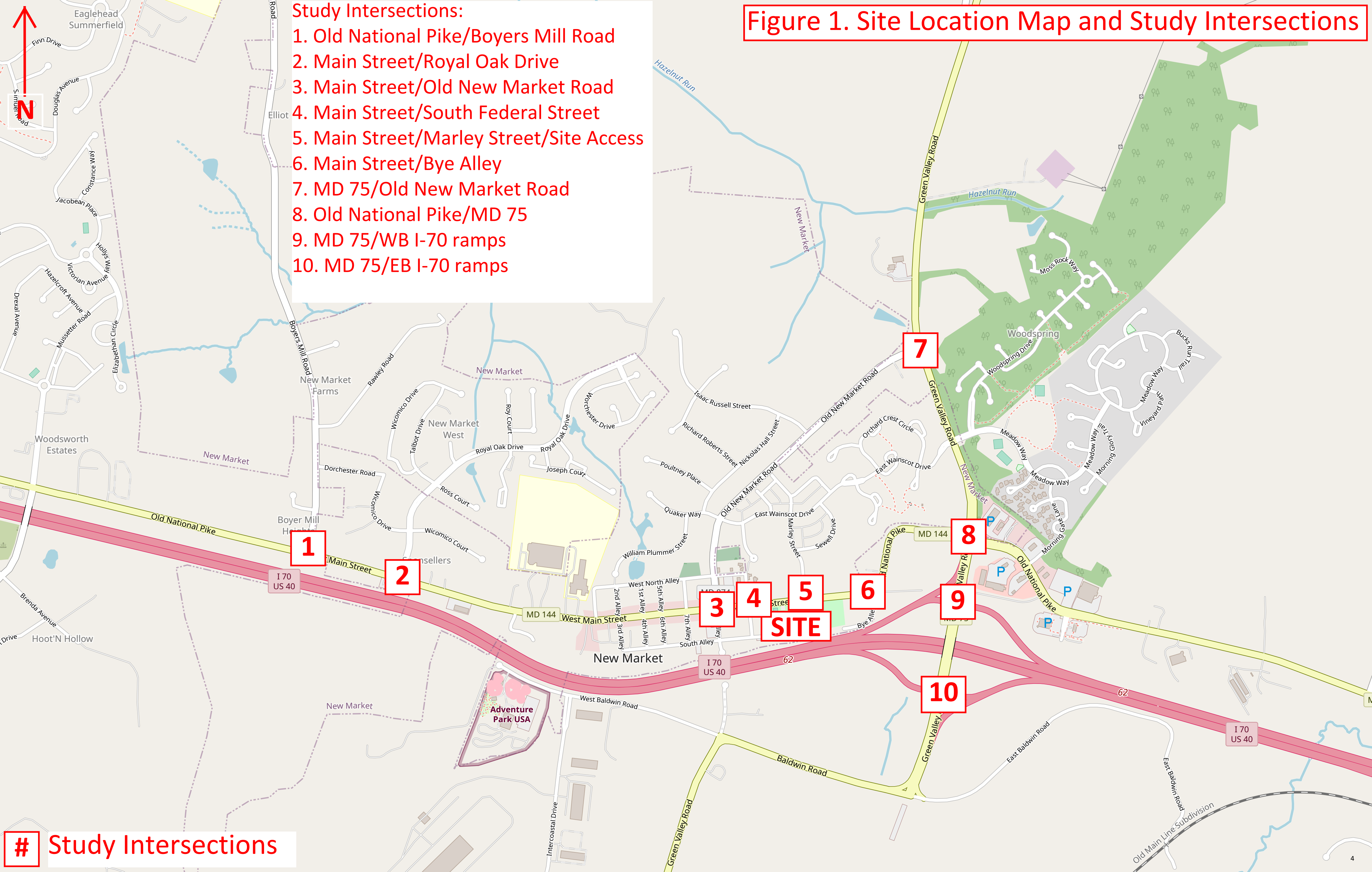
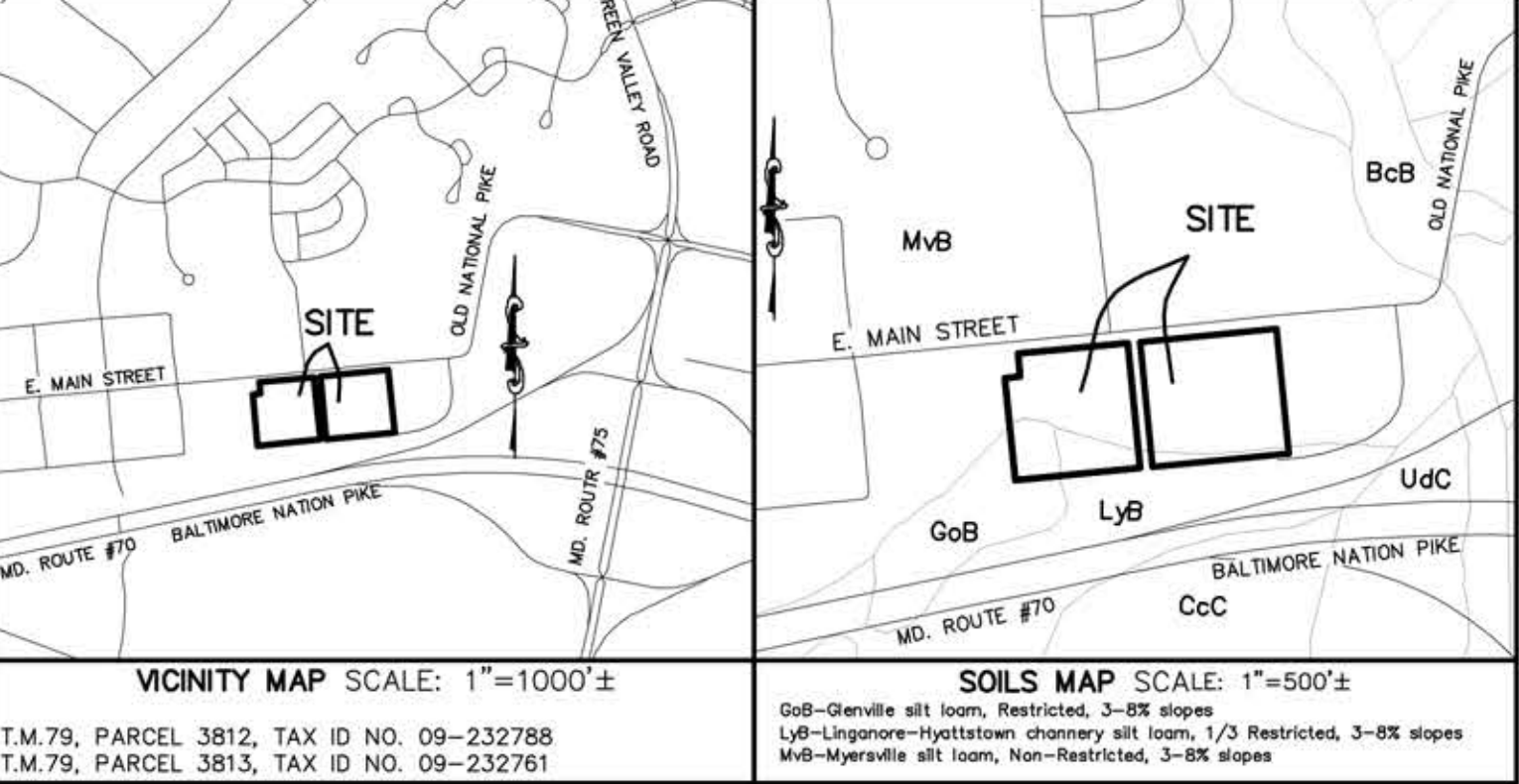


Figure 1A. Site Plan



- BASE NOTES:**
- HORIZONTAL DATUM & COORDINATES MARYLAND STATE PLANE (NAD 83/91); BASED ON FREDERICK COUNTY CONTROL MONUMENTS "MEADOW" & "CHAVEZ AZ".
 - VERTICAL DATUM: NAVD 88; BASED ON SAME MONUMENTS.
 - TOPOGRAPHY AND PLANNING PROVIDED BY HSA, MARCH 25, 2022.
 - UTILITIES SHOWN ARE FIELD RUN AS-BUILT LOCATIONS BY HARRIS, SMARIGA & ASSOCIATES, INC. AND SUPPLEMENTED BY AVAILABLE UTILITY DRAWINGS. THEIR LOCATION SHOULD BE FIELD VERIFIED PRIOR TO CONSTRUCTION.
 - SITE IS ALL OF THE LANDS OF D.R. ACQUISITIONS, LLC AS RECORDED IN LIBER 15683 AT FOLIO 352.
 - THIS PLAN PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT.
 - SITE IS ZONED "RM".
 - NO FLOODPLAIN ON SITE PER FEMA MAP #24021C0320D, DATED SEPTEMBER 19, 2007.

OPEN SPACE AREAS TABLE	
OS PARCEL	AREA (AC.)
HOA OS-1	0.02
HOA OS-2	0.03
HOA OS-3	0.55
HOA OS-4	.03
HOA OS-5	.22
HOA OS-6	.29
TOTAL	1.14

- TRC ZONING NOTES:**
- PARCEL #1, TAX ID #09-232761 & PARCEL #2, TAX ID #09-232788.
 - EXISTING ZONING: RM - RESIDENTIAL MERCHANT DISTRICT
 - PROPOSED OVERLAY ZONING: TRC - TOWN RESIDENTIAL/COMMERCIAL MIXED USE DISTRICT
 - WATER & SEWER CLASSIFICATION: W-5, S-1
 - EXISTING USE: VACANT LOT
 - PROPOSED USE: RESIDENTIAL & NON-RESIDENTIAL USES
 - LAND USE SUMMARY:**
EXISTING PARCEL #1: ±2.44 AC.
EXISTING PARCEL #2: ±2.73 AC.
OVERALL SITE: ±5.17 AC.
±EXISTING TENTH ALLEY ROW: ±0.25 AC.
PROPOSED GROSS AREA: ±5.42 AC.

PROPOSED NEW PUBLIC ROW: ±0.45 AC. (8.3%)
PROPOSED RESIDENTIAL LOTS: ±1.46 AC. (27.0%)
PROPOSED NON-RES. LOT: ±1.29 AC. (23.8%)
PROPOSED ALLEYS & ACCESS: ±1.08 AC. (19.9%)
PROPOSED OPEN SPACE: ±1.14 AC. (21.0%)

- 8. PROPOSED LOTS & BLOCKS STANDARDS, APPROVED BY THE PLANNING COMMISSION ON**
- TYPICAL LOT AREA AS SHOWN:
DUPLEX: 68' X 30' = ±2,020 SF
TOWNHOMES: 65' X 20' = ±1,300 SF
NON-RESIDENTIAL: ±136' X ±412' = ±56,115 SF

- FRONT YARD SETBACKS:**
DUPLEX: 0'
TOWNHOMES: 5'
NON-RESIDENTIAL: 0'
- REAR YARD SETBACKS:**
DUPLEX: 18'
TOWNHOMES: 18'
NON-RESIDENTIAL: 5'
- SIDE YARD SETBACKS:**
DUPLEX: 5'
TOWNHOMES: 5' (ENDS)
NON-RESIDENTIAL: 5'
- HEIGHT RESTRICTIONS:**
NO BUILDING SHALL EXCEED 35'
BUILDING HEIGHT TO BE MEASURED FROM FINISH GRADE AT BUILDING FRONT TO THE MIDPOINT OF THE EAVES TO ROOF.

PARKING:
RESIDENTIAL PARKING PADS FOR GARAGES TO PROVIDE A MINIMUM OF 18' IN LENGTH FROM ALLEY/ROAD TO GARAGE DOOR.
COMMERCIAL PARKING: 90' PARKING TO BE 9' X 18', AND PARALLEL SPACES TO BE 8' X 22'.

ARCHITECTURAL PROJECTIONS: SEE L.D.O. ARTICLE 1.4 EXCEPTIONS TO YARD REQUIREMENTS.

- 9. PARKS & OPEN SPACE:**
MINIMUM OPEN SPACE REQUIRED: 20% OF TOTAL SITE, WITH 10% OF THE REQUIRED OPEN SPACE TO BE OUTDOOR RECREATIONAL USE.
OVERALL OPEN SPACE REQUIRED: 5.42 AC. X 20% = ±1.08 AC., OVERALL OPEN SPACE PROVIDED: ±1.14 AC.
REQUIRED OUTDOOR RECREATIONAL USE OPEN SPACE: 1.08 AC. X 10% = 0.11 AC.
PROVIDED OUTDOOR RECREATIONAL USE OPEN SPACE: 0.12 AC. ON RETAIL PARCEL.

- 10. ENVIRONMENTAL RESTRAINTS:**
FEMA FLOODPLAIN: THERE IS NO 100 YEAR FEMA FLOODPLAIN MAPPED FOR THE SITE, PER FEMA MAP #24021C0320D.
WETLANDS: THERE IS A SMALL LINEAR PATCH OF WETLANDS JUST SOUTH OF THE EXISTING SOUTH ALLEY. PER THE TOWN OF NEW MARKET'S REQUEST, SOUTH ALLEY IS TO BE UPGRADED, AND IS PROPOSED AS 16' OF PAVEMENT.

- 11. STORMWATER MANAGEMENT:** IS INTENDED TO BE PROVIDED THROUGH PROPOSED ON-SITE BIO FACILITIES AND STORM-DRAIN SYSTEM CONNECTING TO EXISTING STORM DRAINAGE SYSTEMS.

- 12. SEDIMENT CONTROL AND EROSION CONTROL:** TO BE PROVIDED AT IMPROVEMENT PLAN STAGES.

- PUBLIC SIDEWALK ALONG EAST MAIN STREET IS SHOWN. DETAIL GRADING & CONSTRUCTION IMPROVEMENTS WILL BE PROVIDED WITH IMPROVEMENT PLANS. THE HOA WILL ALSO HAVE MAINTENANCE RESPONSIBILITIES FOR THE ONSITE COMMON OPEN SPACE, COMMON DRIVES, AND OFFSTREET PARKING BEYOND MAIN STREET RIGHT-OF-WAY AND SIDEWALKS OUTSIDE OF THE MAIN STREET RIGHT-OF-WAY.
- PRIVATE ALLEY EASEMENT AND AGREEMENT WILL BE RECORDED AND NOTED ON THE FINAL PLAT.
- RECORDED AGREEMENTS TO BE EXECUTED AT TIME OF FINAL PLATS.
- FINAL COMMERCIAL PARKING REQUIREMENTS WILL BE REVIEWED BY THE PLANNING COMMISSION AT THE TIME OF SITE PLAN REVIEW AND USE PERMITS FOR COMMERCIAL SITE PLANS.
- REFER TO ATTACHED NRI/PRELIMINARY FOREST STAND DELINEATION FOR ADDITIONAL WETLAND AND FOREST STAND DATA.
- PROPOSED DENSITIES:**
PROPOSED NON-RESIDENTIAL FAR: 22,000 SF / 56,115 SF = 0.39 FAR (MAXIMUM PERMITTED IS 0.40 FAR)
PROPOSED RESIDENTIAL DENSITY: 42 UNITS / 4.13 AC. = 10.17 DU/AC. NET
42 UNITS / 5.42 AC. = 7.75 DU/AC. GROSS

- 19. RESIDENTIAL PARKING REQUIREMENTS:**

UNIT TYPE	NUMBER OF UNITS	REQUIRED PARKING		PROVIDED PARKING					TOTAL ONLOT SPACES PROVIDED
		REQUIRED PARKING/UNIT	TOTAL REQUIRED PARKING	GARAGE SPACES PROVIDED	GARAGE EQUIVALENT PROVIDED (1/2 GARAGE)	TOTAL GARAGE EQUIVALENT SPACES PROVIDED (1/2)	**PARKING PAD SPACES PROVIDED (ON LOT)	TOTAL PARKING SPACES PROVIDED (ON LOT)	
DUPLEX	6	2	12	2	1	6	**2	12	18
TOWNHOUSE	36	*2.5	90	2	1	36	**2	72	108
TOTALS	42		102			42		84	126

*NOTE: THE ABOVE TOWNHOUSE CALCULATIONS ASSUME 3 BEDROOM UNITS. REQUIRED PARKING IS 2/UNIT +0.5 PER BEDROOM OVER 2 = 2.5 SPACES REQUIRED PER UNIT.

**NOTE: VARIANCE REQUESTED FOR MINIMUM SQUARE FOOTAGE PER PARKING PAD BE DECREASED FROM THE MINIMUM 180 SF TO 162 SF (9' X 18' TYPICAL) FOR ON LOT DRIVEWAY SPACES.

- 20. NON-RESIDENTIAL PARKING REQUIREMENTS:**

BUILDING NUMBER	USE	REQUIRED PARKING		ON LOT SURFACE SPACES PROVIDED	ON-STREET SPACES PROVIDED	TOTAL PARKING SPACES PROVIDED
		REQUIRED PARKING/UNIT	TOTAL REQUIRED PARKING			
1	4,000 SF RETAIL	1/200 SF	20	20	0	20
	3,000 SF OFFICE	1/300 SF	10	10	0	10
2	4,000 SF RETAIL	1/200 SF	20	20	0	20
	3,000 SF OFFICE	1/300 SF	10	10	0	10
	4,000 SF BASEMENT OFFICE	1/300 SF	13	17	0	17
3	4,000 SF RESTAURANT	1/150 SF	27	12	15	27
TOTALS	22,000 SF		100	89	15	104

**NOTE: VARIANCE REQUESTED FOR MINIMUM SQUARE FOOTAGE PER PARKING PAD BE DECREASED FROM THE MINIMUM 180 SF TO 162 SF (9' X 18' TYPICAL) FOR PERPENDICULAR (90°) PARKING SPACES, AND 176 SF (8' X 22' TYPICAL) FOR PARALLEL PARKING SPACES.

- 21. PROPOSED DWELLING UNIT MIX:**

PROPOSED DWELLING UNIT MIX				
UNIT TYPE	LOT NUMBERS	NUMBER OF UNITS	TYPICAL BUILDING ENVELOPE	TYPICAL LOT SIZE
DUPLEX	1-6	6	25' WIDE X 49' DEEP	30' WIDE X 68' DEEP
TOWNHOUSE	7-42	36	20' WIDE X 42' DEEP	20' WIDE X 65' DEEP
TOTAL	42 LOTS	42	---	---

- 22. ARCHITECTURAL STANDARDS:** WILL BE APPROVED BY THE ARCHITECTURAL REVIEW COMMISSION (ARC) PRIOR TO SITE PLAN APPROVAL BY THE PLANNING COMMISSION.

- 23. TRASH PICKUP:** WILL BE THE HOA'S (HOME OWNER ASSOCIATION) RESPONSIBILITY AND IS ANTICIPATED TO OCCUR ONCE A WEEK.

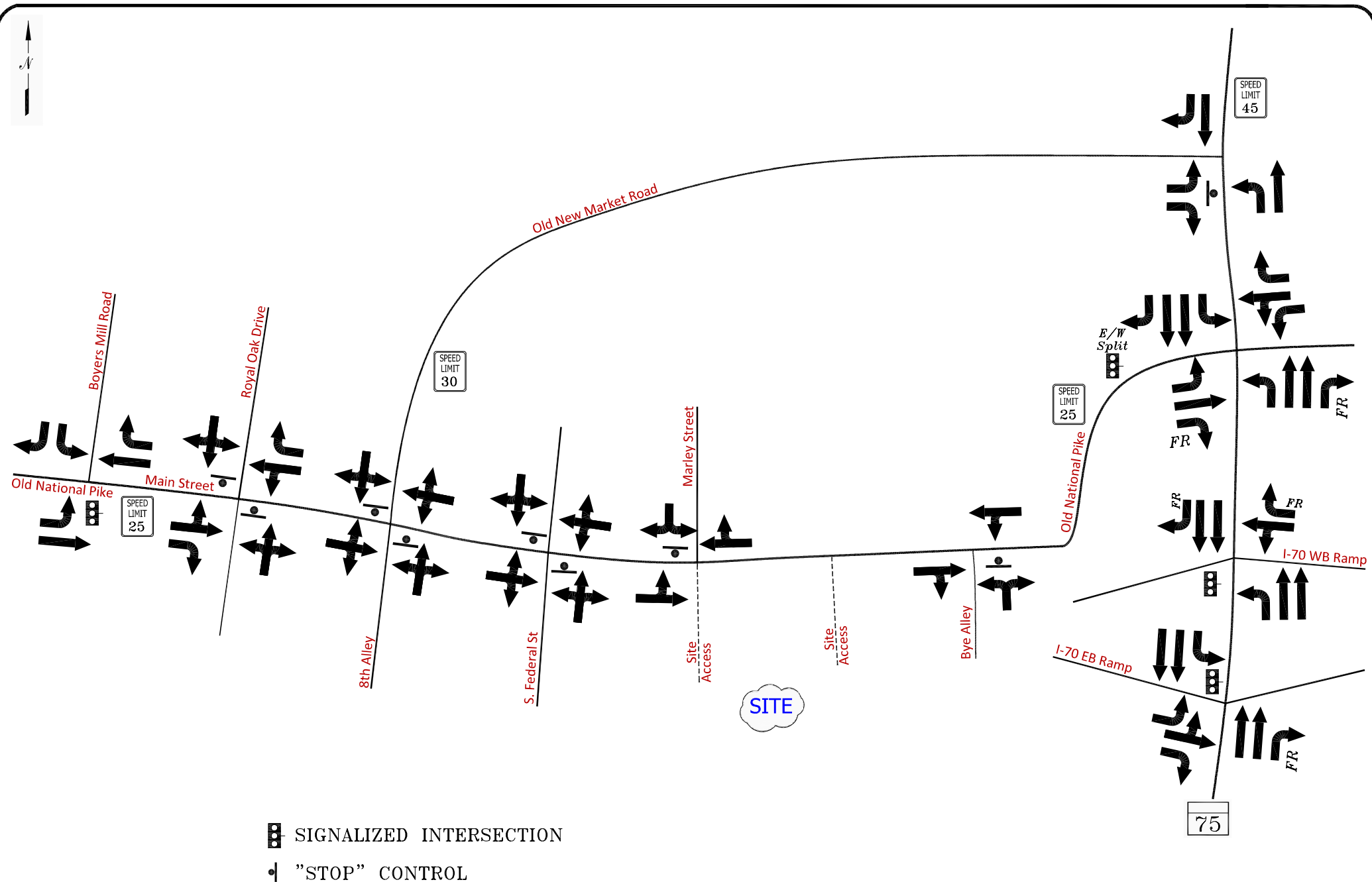
OWNER:
DR ACQUISITIONS, LLC
7945 WORMANS MILL ROAD
FREDERICK MD.21701

HARRIS
SMARIGA
PLANNERS & ENGINEERS - SURVEYORS

TRC SCHEMATIC PLAN
NEW MARKET - EAST MAIN
TOWN RESIDENTIAL / COMMERCIAL
MIXED USE DISTRICT (TRC) PLAN &
COMBINED PRELIMINARY / SITE PLAN

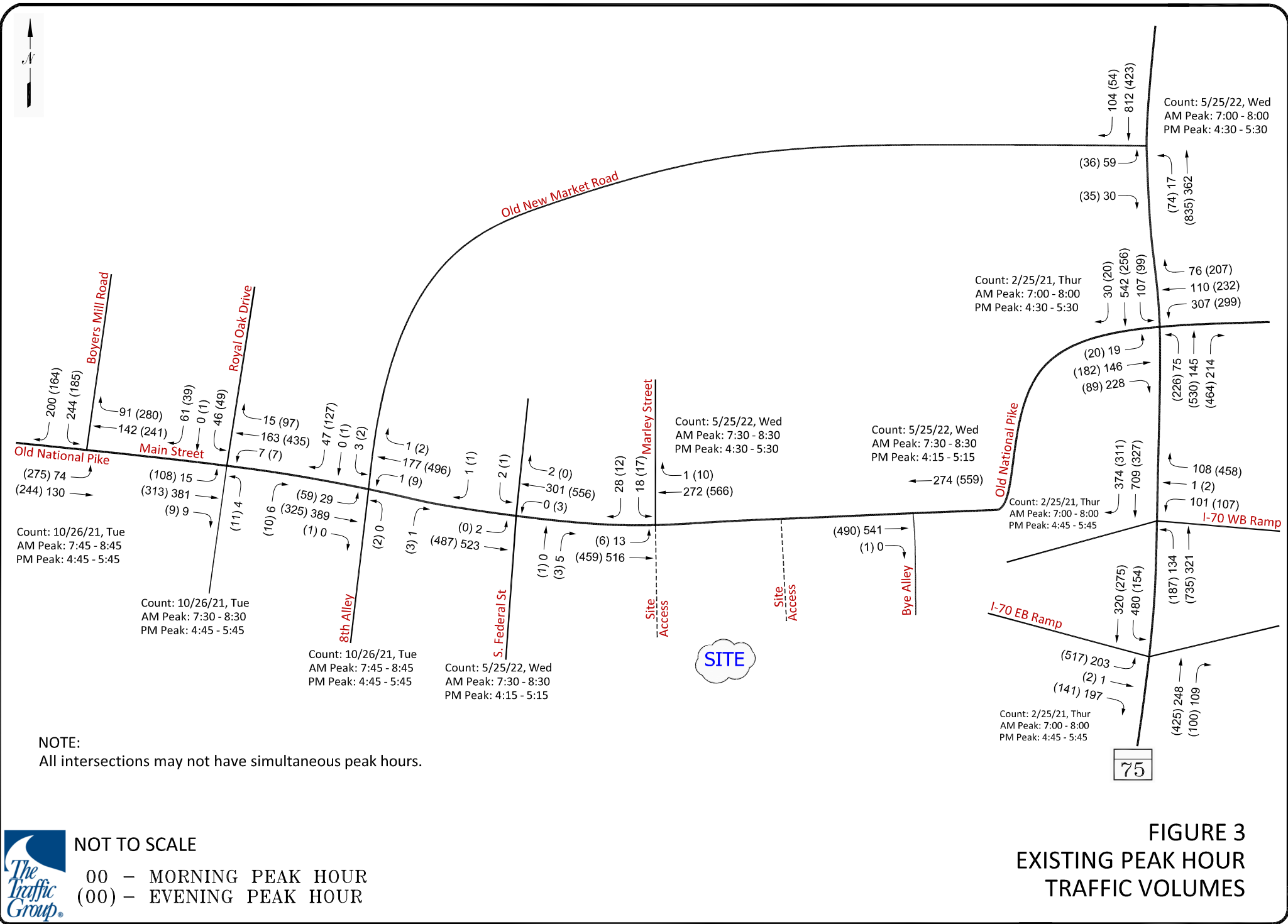
SCALE: 1"=50'
DRAWN BY: J.L.W.
CHECKED BY: CS
DATE: MARCH, 2023
SHEET: 1
OF: 5
PROJECT: 7705

LANDS OF D.R. ACQUISITIONS, LLC
L15683, F.352
PARCEL #1, TAX ID #09-232761
LOCATED ON E MAIN ST. & TENTH ALLEY
NEW MARKET ELECTION DISTRICT NO. 9
APPLICANT SITE DEVELOPER 4/27/2023 B.L.H. AM



 SIGNALIZED INTERSECTION
 "STOP" CONTROL

FIGURE 2
EXISTING LANE USE



Analysis of Existing Traffic Conditions

Intersection Capacity Analyses were undertaken at each of the study intersections based on existing traffic conditions using the MDOT SHA CLV and HCM Methodologies. The results can be found in Tables 3 and 4.

A review of Table 3 indicates that each intersection currently exhibits an acceptable LOS “A” based on CLV during the weekday morning and evening peak hours. A review of the HCM Unsignalized Intersection Methodology results in Table 4 indicates that each intersection currently exhibits an acceptable LOS during the weekday morning and evening peak hours.

Queuing Analyses for all signalized intersections were conducted based on the MDOT SHA’s 95th Percentile Methodology, and the results can be found in Table 5. As shown, most all queues can be accommodated within the existing storage areas at all intersections during the morning and evening peak hours. Below, please find the existing queues within the Town of New Market that exceed the existing storage area:

- SB Right Turn from Boyers Mill Road to Old National Pike – existing queue is 125 feet, which is 25 feet longer (one car) than the storage area of 100 feet during the AM peak hour.
- EB Left Turn from Old National Pike to Boyers Mill Road – existing queue is 225 feet, which is 75 feet longer (three cars) than the storage area of 150 feet during the PM peak hour.

Complete capacity worksheets for all analyses can be found in Appendix B.

BACKGROUND TRAFFIC CONDITIONS

Design Year

Full buildout of East Main is expected by the year 2025 (3 years). To account for regional growth a 1% per year growth factor was applied for 3 years since there are a lot of trips from background developments which is most of the growth in this region. Please note that growth was applied to all movements at all intersections for a more conservative analysis. The regional growth is shown on Figure 4, and the resulting 2025 base peak hour traffic volumes can be found on Figure 5.

Background Traffic

In addition to regional traffic growth, traffic projected to be generated by other approved developments in the vicinity of the subject site must also be taken into consideration. The Town of New Market provided three (3) approved background developments to be included in the study. Previously approved Traffic Impact Studies were utilized to determine the number of trips projected to be generated. Table 1 details the trip generation for the background developments.

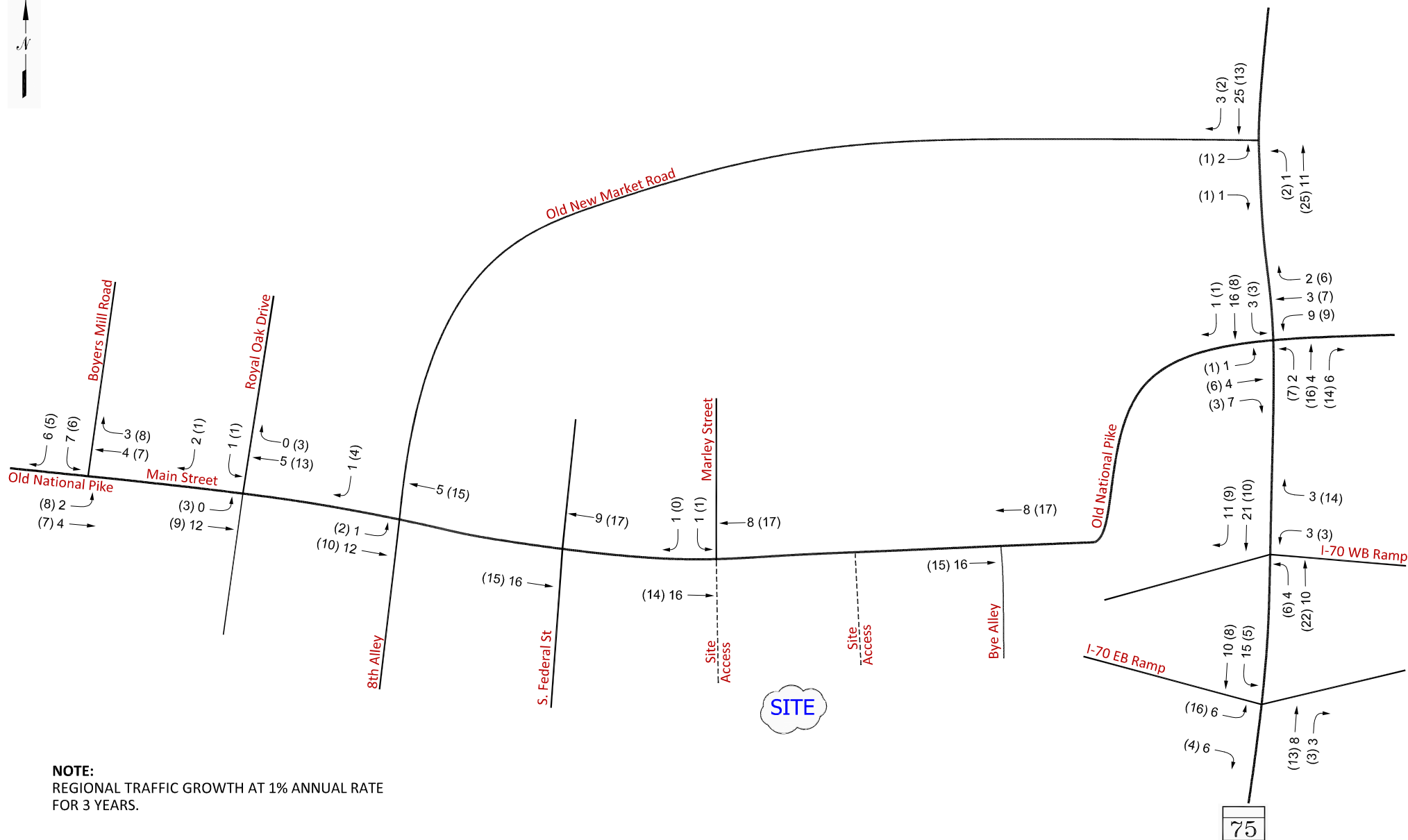
Trips from these background developments were assigned throughout the roadway network based on the previously approved Traffic Impact Studies. The trip assignment for all these developments is found on Figure 6 while the individual background development trip distribution can be found in Appendix C.

Combining the background trips from the approved developments and the 2025 base peak hour traffic volumes results in the 2025 background peak hour traffic volumes found on Figure 7.

Analysis of Background Traffic Conditions

Intersection Capacity Analyses were undertaken at each of the study intersections based on background traffic conditions using the MDOT SHA CLV and HCM Methodologies. The results can be found in Tables 3 and 4.

A review of Table 3 indicates that each intersection is projected to exhibit acceptable LOS “B” or better based on CLV during the weekday morning and evening peak hours. A review of the HCM Unsignalized Intersection Methodology results in Table 4 indicates that all intersections are projected to operate with acceptable levels of service except for Main Street @ Royal Oak Drive and MD 75 @ Old New Market Road. These intersections have movements that are projected to operate with delays.



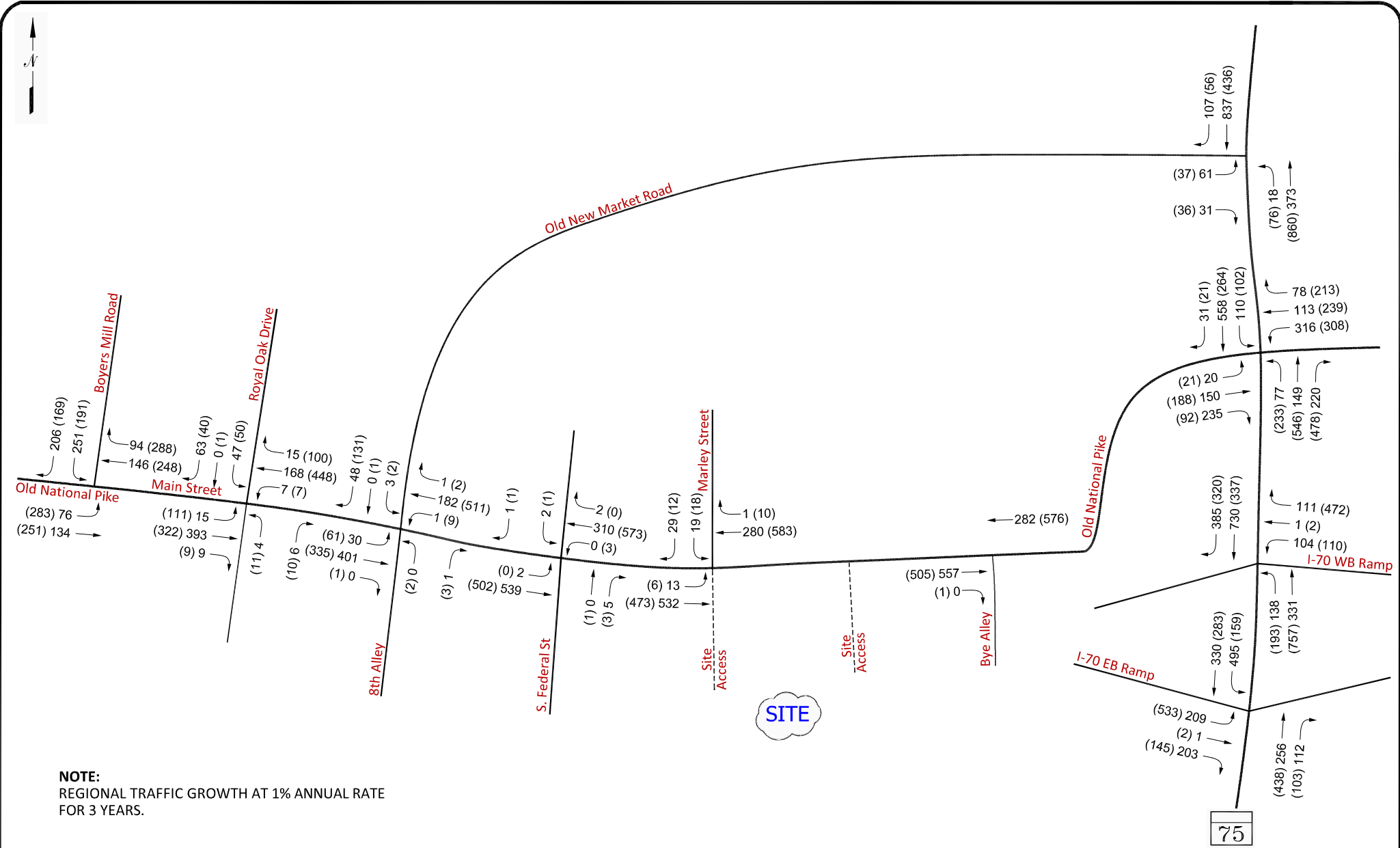
NOTE:
REGIONAL TRAFFIC GROWTH AT 1% ANNUAL RATE
FOR 3 YEARS.



NOT TO SCALE

00 - MORNING PEAK HOUR
(00) - EVENING PEAK HOUR

FIGURE 4
REGIONAL TRAFFIC GROWTH
PEAK HOUR VOLUMES



NOT TO SCALE

00 - MORNING PEAK HOUR
(00) - EVENING PEAK HOUR

FIGURE 5
2025 BASE PEAK HOUR
TRAFFIC VOLUMES

TRIP GENERATION (USE ITE BY REGION)

1. Eaglehead on the Lakes

Traffic Impact Study Approved Units	Proposed Units	MORNING PEAK HOUR			EVENING PEAK HOUR		
		IN	OUT	TOTAL	IN	OUT	TOTAL
	Alpine						
	Trips/SFD (Region 4)	0.18	0.53	0.71	0.53	0.31	0.84
100	100 Single-Family Detached Units	18	53	71	53	31	84
	Hamptons West						
	Trips/SFD (Region 1&2)	0.18	0.53	0.71	0.46	0.27	0.73
300	217 Single-Family Detached Units	39	115	154	100	59	159
	Trips/Townhouse (Region 1&2)	0.06	0.27	0.33	0.27	0.13	0.40
150	189 Townhouse Units	11	51	62	51	25	76
	Total trips for Hamtons West	50	166	216	151	84	235
	Hamptons East						
	Trips/SFD (Region 1&2)	0.18	0.53	0.71	0.46	0.27	0.73
300	300 Single-Family Detached Units	54	159	213	138	81	219
	Trips/Townhouse (Region 1&2)	0.06	0.27	0.33	0.27	0.13	0.40
135	135 Townhouse Units	8	36	44	36	18	54
	Total trips for Hamtons East	62	195	257	174	99	273
	Town Center (11 SFH, 52 TH built)						
	Trips/SFD (Region 5)	0.18	0.54	0.72	0.55	0.32	0.87
300	136 (125 units remaining)						
	Single-Family Detached Units (11 units built)	23	68	91	69	40	109
	Trips/Townhouse (Region 5)	0.05	0.27	0.32	0.26	0.13	0.39
900	631 (579 units remaining)						
	Townhouse Units (52 units built)	29	156	185	151	75	226
400	418 Apartment Units	42	167	209	161	87	248
200,000	200,000 sq.ft. Shopping Center	142	90	232	496	516	1012
	Pass-by trips (PM-32%)				-159	-165	-324
	Net Shopping Center trips	142	90	232	337	351	688
	100,000 sf commercial will remain on the north side of MD 144; 100,000 sf commercial will be replaced by South Commercial						
	Total trips for Town Center	236	481	717	718	553	1271
	Westridge						
	Trips/SFD (Region 1&2)	0.18	0.53	0.71	0.46	0.27	0.73
300	300 Single-Family Detached Units	54	159	213	138	81	219
	Trips/Townhouse (Region 1&2)	0.06	0.27	0.33	0.27	0.13	0.40
100	100 Townhouse Units	6	27	33	27	13	40
	Total trips for Westridge	60	186	246	165	94	259
	Woodridge (12 SFH bui						
	Trips/SFD (Region 1&2)	0.18	0.53	0.71	0.46	0.27	0.73
100	150 (138 units remaining)						
	Single-Family Detached Units (12 units built)	25	73	98	63	37	100
	Trips/Townhouse (Region 1&2)	0.06	0.27	0.33	0.27	0.13	0.40
50	0 Townhouse Units	0	0	0	0	0	0
	Total trips for Woodridge	25	73	98	63	37	100
	Eaglestream						
	Trips/Townhouse (Region 1&2)	0.06	0.27	0.33	0.27	0.13	0.40
50	50 Townhouse Units	3	14	17	14	7	21
	Nightingale						
	Trips/SFD (Region 3)	0.18	0.55	0.73	0.59	0.34	0.93
50	50 Single-Family Detached Units	9	28	37	30	17	47
	Aspen						
	Trips/Townhouse (Region 1&2)	0.06	0.27	0.33	0.27	0.13	0.40
100	100 Townhouse Units	6	27	33	27	13	40
	Day Care - Finn Drive						
	11,000 SF Day Care Center	Built					



Background information obtained from TIS
for Eaglehead-on-the Lakes PUD, dated
2/15/2013. Copies is included in Appendix C.

TABLE 1
TRIP GENERATION
FOR BACKGROUND DEVELOPMENTS

Linganore Town Center - South Commercial

TRIP TOTALS

MORNING PEAK HOUR			EVENING PEAK HOUR		
IN	OUT	TOTAL	IN	OUT	TOTAL

Fast Food Rest. w/Drive-Thru (ksf, ITE-934)

10,000 sq.ft.	205	197	402	170	157	327
Less Internal Trips	-8	-6	-14	-28	-55	-83
<u>Pass-by Trips (49%, 50%, 50%)</u>	<u>-97</u>	<u>-94</u>	<u>-191</u>	<u>-71</u>	<u>-51</u>	<u>-122</u>
New Trips	100	97	197	71	51	122

High Turnover (Sit-Down) Rest. (ksf, ITE-932)

19,500 sq.ft.	107	87	194	118	73	191
Less Internal Trips	-4	-3	-7	-19	-26	-45
<u>Pass-by Trips (0, 43%, 43%)</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>-43</u>	<u>-20</u>	<u>-63</u>
New Trips	103	84	187	56	27	83

Convenience Market w/Gasoline Pumps (ksf, ITE-853)

3,000 sq.ft.	61	61	122	74	74	148
Less Internal Trips	-5	-8	-13	-37	-22	-59
<u>Pass-by Trips (63%)</u>	<u>-35</u>	<u>-33</u>	<u>-68</u>	<u>-23</u>	<u>-33</u>	<u>-56</u>
New Trips	21	20	41	14	19	33

Drive-in Bank (ksf, ITE-912)

8,500 sq.ft.	47	34	81	87	87	174
Less Internal Trips	-4	-4	-8	-44	-25	-69
<u>Pass-by Trips (29%, 35%, 38%)</u>	<u>-12</u>	<u>-9</u>	<u>-21</u>	<u>-15</u>	<u>-22</u>	<u>-37</u>
New Trips	31	21	52	28	40	68

Day Care Center (ksf, ITE-565)

11,000 sq.ft.	64	57	121	57	65	122
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Total	Pass-by Trips	144	136	280	152	126	278
	New Trips	319	279	598	226	202	428



Background information obtained from TIS for
Linganore Town Center - South Commercial ,
dated 12/6/2018. Copies is included in Appendix C.

TABLE 1 CONT'D
TRIP GENERATION
FOR BACKGROUND DEVELOPMENTS

2. Marley Commons

8 Single-Family Detached Units	1	5	6	5	3	8
--------------------------------	---	---	---	---	---	---

3. 105/113 W. Main Street

(Trips obtained from 105/113 W. Main Street TIS dated 12/21/2020, prepared by Wells + Associates)

Existing/Approved Uses

1 Single-Family Detached Unit	0	1	1	1	0	1
3,712 sq. ft. Arts and Crafts Store	9	9	18	11	13	24
7,520 sq. ft. Tractor Supply Store	7	3	10	5	6	11
8 Mobile Home Units	<u>1</u>	<u>2</u>	<u>3</u>	<u>2</u>	<u>2</u>	<u>4</u>
Total Trips	17	15	32	19	21	40

Proposed Uses

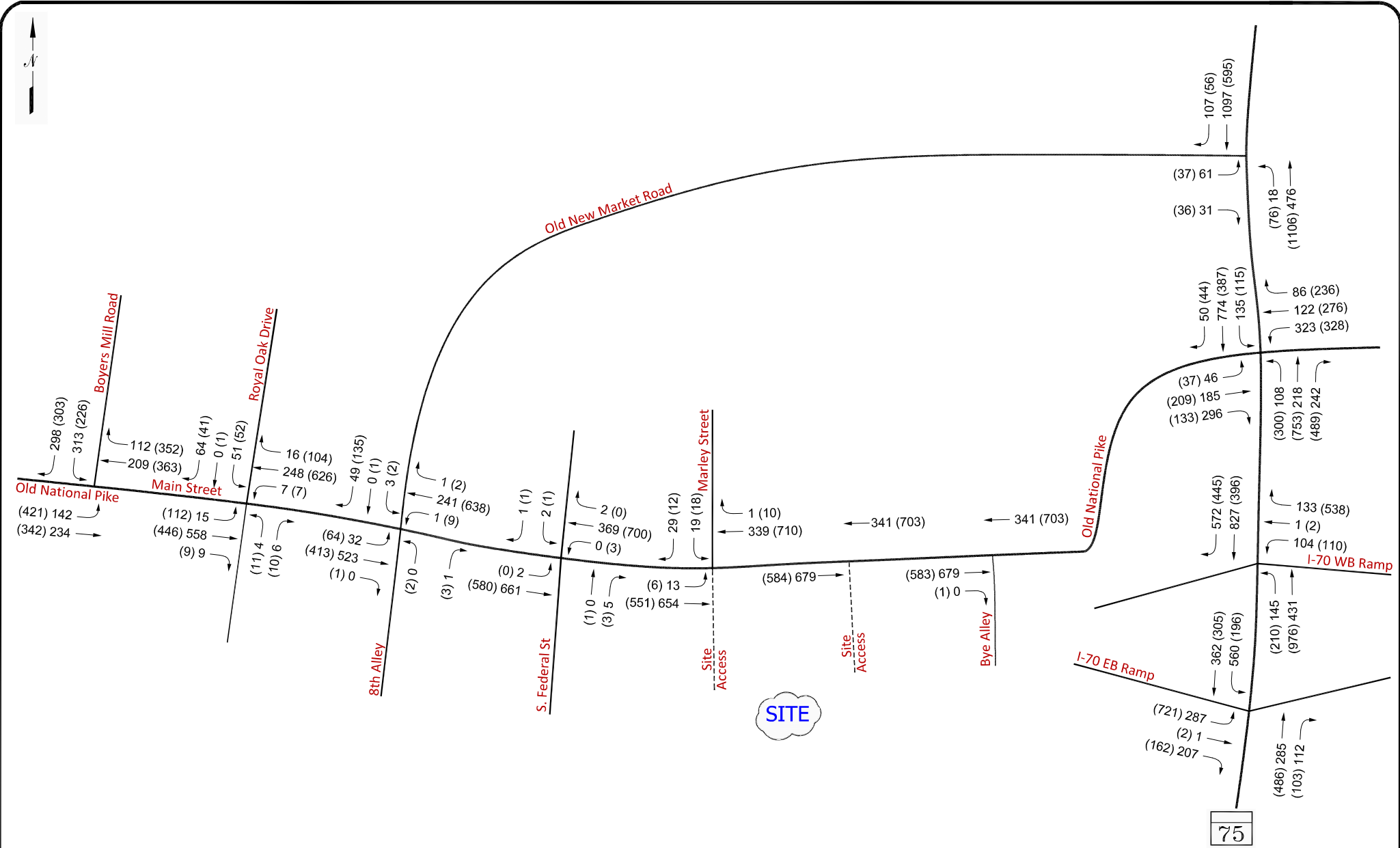
1,540 sq. ft. Small Office Building	2	1	3	1	3	4
4,105 sq. ft. Restaurant	23	18	41	25	16	41
3,270 sq. ft. Restaurant	2	2	4	21	23	44
27 Townhouse Units	<u>3</u>	<u>11</u>	<u>14</u>	<u>12</u>	<u>7</u>	<u>19</u>
Total Trips	30	32	62	59	49	108
Net Difference	13	17	30	40	28	68



TABLE 1 CONT'D
TRIP GENERATION FOR
BACKGROUND DEVELOPMENTS



00 - MORNING PEAK HOUR
(00) - EVENING PEAK HOUR



NOT TO SCALE

00 - MORNING PEAK HOUR
(00) - EVENING PEAK HOUR

FIGURE 7
2025 BACKGROUND PEAK HOUR
TRAFFIC VOLUMES

Queuing Analyses for all signalized intersections were conducted based on the MDOT SHA's 95th Percentile Methodology, and the results can be found in Table 5. As shown, most all queues can be accommodated within the existing storage areas at all intersections during the morning and evening peak hours. Below, please find the background traffic condition projected queues within the Town of New Market that exceed the existing storage area:

- SB Right Turn from Boyers Mill Road to Old National Pike – projected queue is 125 feet, which is 25 feet longer (one car) than the storage area of 100 feet during the AM peak hour. This did not change from Existing to Background Traffic Conditions.
- EB Left Turn from Old National Pike to Boyers Mill Road – projected queue is 325 feet, which is 175 feet longer (seven cars) than the storage area of 150 feet during the PM peak hour. This increased by 100 feet under Background Traffic Conditions.

Complete capacity worksheets for all analyses can be found in Appendix B.

TOTAL TRAFFIC CONDITIONS

Site Information

East Main is proposed with 42 Single-Family Attached Units, 8,000 SF of Retail Uses (Strip Plaza Retail), 10,000 SF of General Office, and a 4,000 SF High-Turnover Restaurant. Two full-movement access points are proposed along East Main Street, with the western access across from Marley Street and a second access to the east. Please note there is access proposed along South Alley to the south. However, for the purposes of this Traffic Impact Analysis, all traffic from East Main is proposed to use the accesses along Main Street.

Trip Generation/Distribution

ITE's Trip Generation Manual (11th Edition) was utilized to determine the number of trips projected to be generated by East Main. The equations and trips proposed to be generated by this development can be found in Table 2. Please note that internal trip capture was not calculated for this development to create a more conservative analysis.

Figure 8 details the new trip distribution and trip assignment based on information provided by the Town of New Market, and Figure 8A details the pass-by trip assignment. Please note that new and pass-by trips were distributed through the access points by using engineering judgment as it relates to the first opportunity to enter the development. Adding the trips projected to be generated by the subject site to the 2025 background peak hour traffic volumes, results in the 2025 total peak hour traffic volumes as shown on Figure 9.

Analysis of Total Traffic Conditions

Intersection Capacity Analyses were undertaken at each of the study intersections based on total traffic conditions using the MDOT SHA CLV and HCM Methodologies and the Future Lane Use found on Figure 10. The results can be found in Tables 3 and 4, respectively.

A review of Table 3 indicates that each intersection is projected to exhibit acceptable LOS "B" or better based on CLV during the weekday morning and evening peak hours. A review of the HCM Unsignalized Intersection Methodology results in Table 4 indicates that all intersections are projected to operate with acceptable levels of service except for Main Street @ Royal Oak Drive and MD 75 @ Old New Market Road. These intersections have movements that are projected to operate with delays. This doesn't mean that the intersection is failing as the major street approaches have no delay (except for the inbound turning movements). Please note that the subject site only has a minor impact on the delayed movements, therefore, no mitigation is suggested.

TRIP GENERATION RATES

<u>LAND USE</u>	<u>FORMULA</u>	<u>IN/OUT</u>
Single-Family Attached (ITE-215, Units)		
AM Peak Hour Trips = 0.52 x Units - 5.70		31/69
PM Peak Hour Trips = 0.60 x Units - 3.93		57/43
Strip Retail Plaza, <40 ksf (ITE-822)		
Ln(AM Peak Hour Trips) = 0.66 Ln(X) + 1.84		60/40
PM Peak Hour Trips = Ln(T) = 0.71 Ln(ksf) + 2.72		50/50
General Office Building (ksf, ITE-710)		
Ln(AM Peak Hour Trips) = 0.86 x Ln (ksf) + 1.16		88/12
Ln(PM Peak Hour Trips) = 0.83 x Ln(ksf) + 1.29		17/83
High Turnover Restaurant (ksf, ITE-932)		
AM Peak Hour Trips = 9.57 x ksf		55/45
PM Peak Hour Trips = 9.05 x ksf		61/39

TRIP GENERATION TOTALS

	Morning Peak Hour			Evening Peak Hour		
	In	Out	Total	In	Out	Total
42 Single-Family Attached Units	5	11	16	12	9	21
8,000 sq. ft. Strip Retail Plaza	15	10	25	33	33	66
Less Pass-by Trips (PM: 40%)				-13	-13	-26
Net New Trips	15	10	25	20	20	40
10,000 sq. ft. General Office Building	20	3	23	4	21	25
4,000 sq. ft. High Turnover Restaurant	21	17	38	22	14	36
Less Pass-by Trips (PM: 43%)				-9	-6	-15
Net New Trips	21	17	38	13	8	21
Overall Net New Trips	61	41	102	49	58	107

Note: Trip generation rates derived from ITE Trip Generation Manual, 11th Edition, 2021. ITE has no pass-by rate for ITE-822, so rate for ITE-821 was used.



TABLE 2
TRIP GENERATION RATES AND TOTALS
FOR SUBJECT SITE

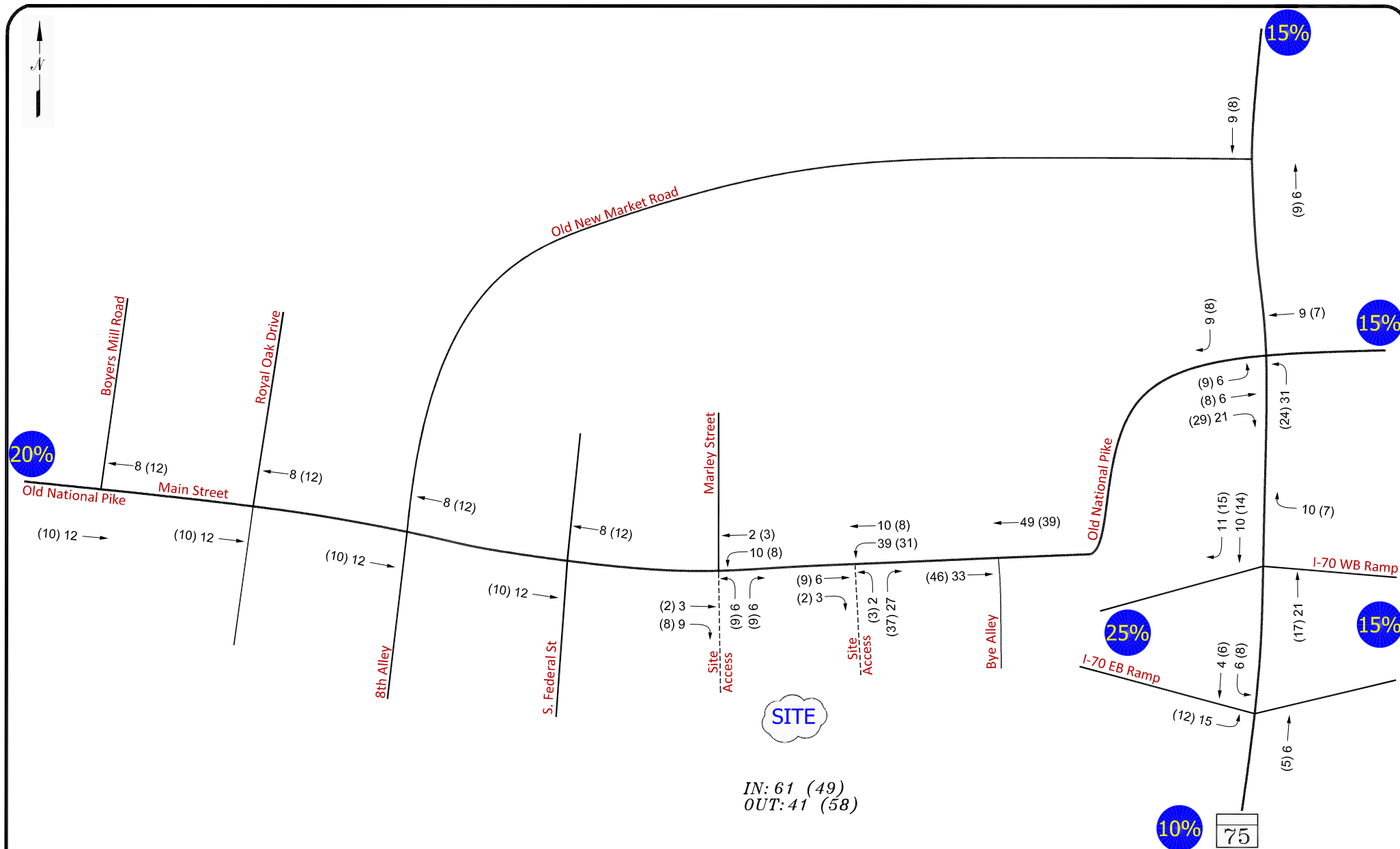
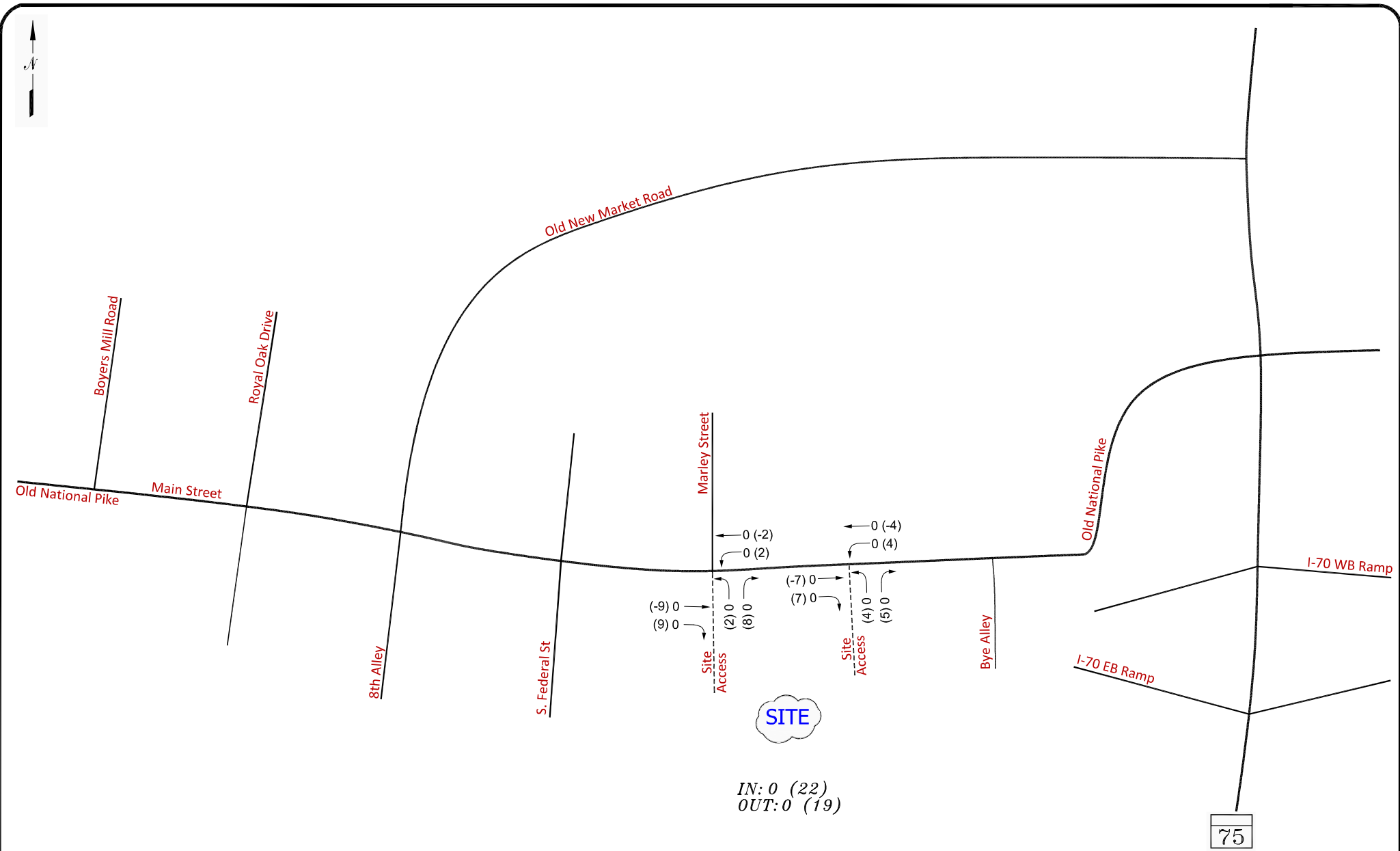


FIGURE 8
NEW TRIP ASSIGNMENT
FOR SUBJECT SITE

NOT TO SCALE

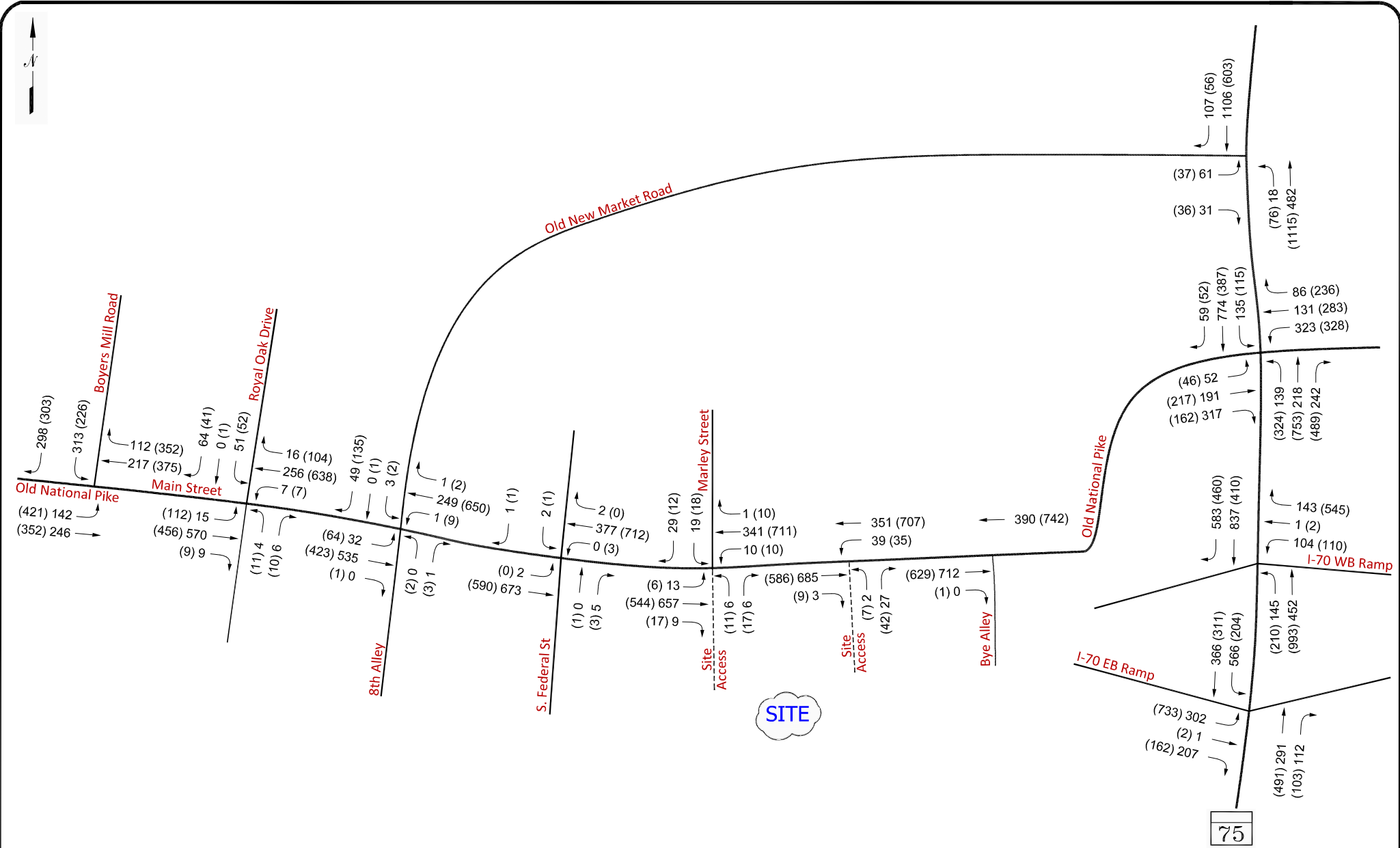
00 - MORNING PEAK HOUR
 (00) - EVENING PEAK HOUR



NOT TO SCALE

00 – MORNING PEAK HOUR
(00) – EVENING PEAK HOUR

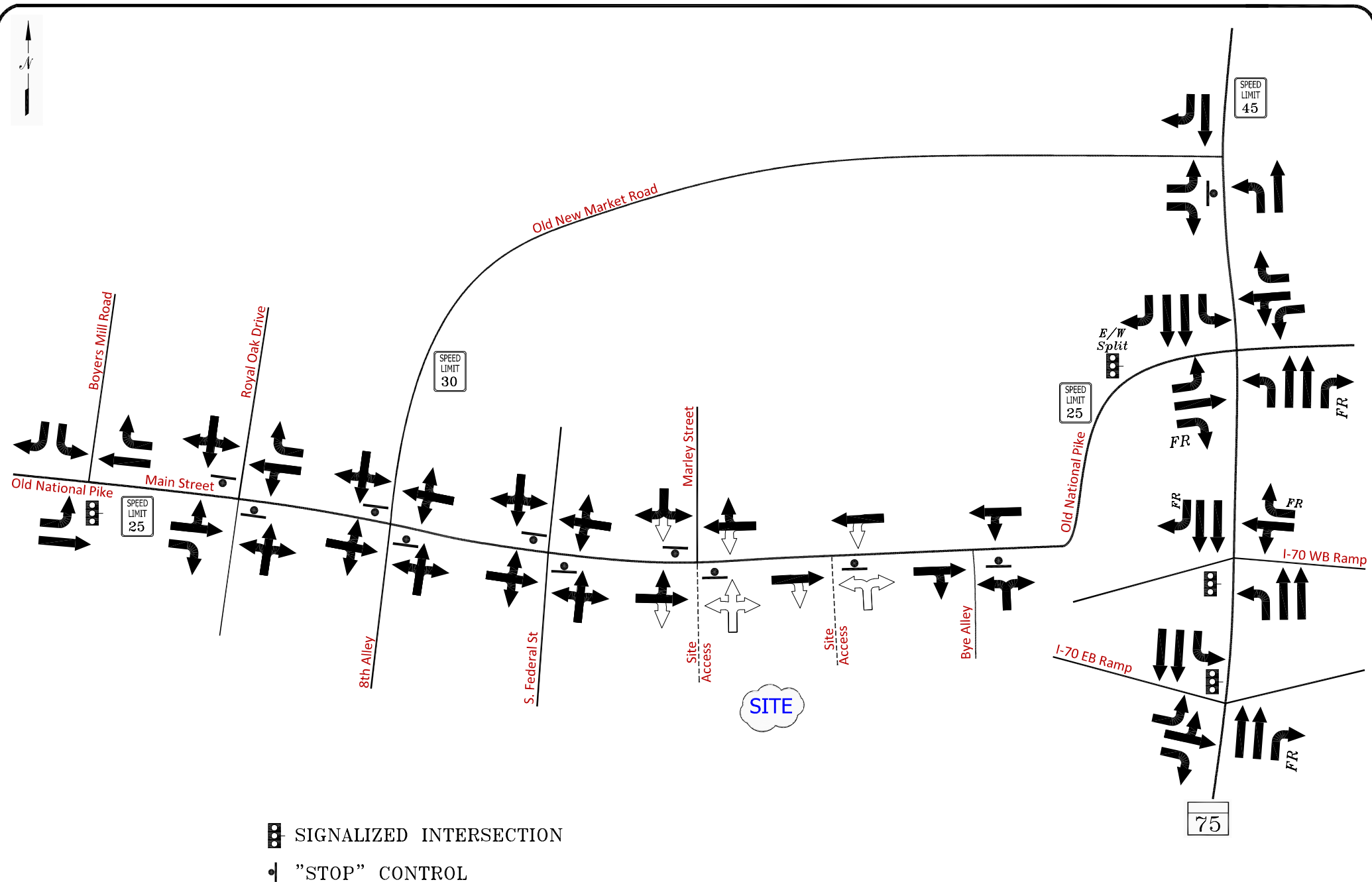
FIGURE 8A
PASS-BY TRIP ASSIGNMENT
FOR SUBJECT SITE



NOT TO SCALE

00 - MORNING PEAK HOUR
(00) - EVENING PEAK HOUR

FIGURE 9
TOTAL PEAK HOUR
TRAFFIC VOLUMES



 SIGNALIZED INTERSECTION
 "STOP" CONTROL

NOT TO SCALE

 EXISTING/PLANNED LANE USE
 RECOMMENDED LANE USE

FIGURE 10
RECOMMENDED
FUTURE LANE USE

Table 3 - Results of CLV Analysis

Signalized Intersection	2022 Existing Traffic		2025 Background Traffic		2025 Total Traffic	
	AM	PM	AM	PM	AM	PM
	LOS / CLV					
1. Old National Pike/Boyers Mill Road	A / 460	A / 701	A / 664	B / 1010	A / 672	B / 1022
8. Old National Pike/MD 75	A / 832	A / 913	B / 1053	B / 1125	B / 1097	B / 1145
9. MD 75/WB I-70 ramps	A / 626	A / 513	A / 705	A / 649	A / 710	A / 658
10. MD 75/EB I-70 ramps	A / 738	A / 699	A / 890	A / 897	A / 908	A / 915

Table 4 - Results of HCM Analysis

Intersection / Movement	2022 Existing Traffic		2025 Background Traffic		2025 Total Traffic	
	AM	PM	AM	PM	AM	PM
	LOS / Delay (sec.)					
2. Main Street/Royal Oak Drive						
EB LT	A / 7.7	A / 9.0	A / 7.9	A / 9.9	A / 8.0	A / 10.0
WB LT	A / 8.3	A / 8.0	A / 9.0	A / 8.3	A / 9.0	A / 8.4
NB approach	B / 13.5	C / 19.8	C / 18.1	D / 33.0	C / 19.3	E / 38.3
SB Approach	B / 14.5	D / 28.9	C / 22.9	F / 77.4	C / 24.2	F / 86.4
3. Main Street/Old New Market Road						
EB L	A / 7.7	A / 8.6	A / 7.9	A / 9.2	A / 8.0	A / 9.2
WB L	A / 8.3	A / 8.0	A / 8.8	A / 8.2	A / 8.9	A / 8.2
NB approach	B / 11.2	C / 17.3	B / 12.7	C / 24.0	B / 12.8	D / 26.8
SB Approach	B / 10.3	B / 13.8	B / 11.2	C / 17.0	B / 11.4	C / 17.3
4. Main Street/South Federal Street						
EB L	A / 8.0	A / 8.7	A / 8.2	A / 9.3	A / 8.2	A / 9.3
WB L	A / 8.7	A / 8.5	A / 9.2	A / 8.8	A / 9.3	A / 8.9
NB approach	B / 12.3	B / 14.8	B / 14.0	C / 17.6	B / 14.2	C / 18.0
SB Approach	C / 17.1	C / 19.5	C / 22.0	D / 26.2	C / 22.7	D / 27.0
5. Main Street/Marley Street/Site Access						
EB L	A / 7.9	A / 8.9	A / 8.1	A / 9.3	A / 8.2	A / 9.3
WB L					A / 9.4	A / 8.8
NB approach					C / 24.1	D / 25.7
SB Approach	B / 14.2	C / 20.2	C / 17.5	D / 25.8	C / 21.7	E / 35.6
6. Main Street/Bye Alley						
WB L	No traffic					
NB approach						
7. MD 75/Old New Market Road						
EB L	E / 37.2	E / 43.1	F / 105.5	F / 116.5	F / 110.5	F / 121.7
EB R	C / 16.3	B / 11.2	C / 23.1	B / 13.0	C / 23.4	B / 13.1
NB L	B / 10.3	A / 8.6	B / 12.0	A / 9.3	B / 12.0	A / 9.3
11. Main Street/Site Access						
WB L					A / 9.5	A / 9.1
NB approach					C / 15.9	C / 18.6

Queuing Analyses for all signalized intersections were conducted based on the MDOT SHA's 95th Percentile Methodology and the results can be found in Table 5. As shown, most all queues can be accommodated within the existing storage areas at all intersections during the morning and evening peak hours. Below, please find the total traffic condition projected queues within the Town of New Market that exceed the existing storage area:

- SB Right Turn from Boyers Mill Road to Old National Pike – projected queue is 125 feet, which is 25 feet longer (one car) than the storage area of 100 feet during the AM peak hour. This did not change from Existing to Total Traffic Conditions. There is available land to extend the right turn lane, if deemed necessary.
- EB Left Turn from Old National Pike to Boyers Mill Road – projected queue is 325 feet, which is 175 feet longer (seven cars) than the storage area of 150 feet during the PM peak hour. The East Main Development did not have any impact on this movement as the projected queue is the same under Background Traffic Conditions. Without a survey and using Google Maps, there may be an opportunity to restripe a longer EB Left Turn Lane and Through Lane without widening, but the lanes would be 10 feet wide. Additionally, there may be opportunities for widening as well.

Complete capacity worksheets for all analyses can be found in Appendix B.

Please note that a second scenario was prepared by removing the estimated 13 inbound and 13 outbound pass-by trips for the 8,000 SF Retail and the figures and analyses can be found in Appendix D. Comparing the MDOT SHA CLV and HCM analyses between these two scenarios show very little change in the level of service and operational analyses.

SHA Methodology

SHA Methodology	2022 Existing Traffic	2025 Background Traffic	2025 Total Traffic	Available Storage Length (ft.)
Morning Peak Hour Traffic	95% Percentile Queue Length (ft.)			
1. Old National Pike/Boyers Mill Road				
EB Old National Pike left turn:	75	125	125	150
EB Old National Pike thru:	125	175	200	>500
WB Old National Pike thru:	125	175	175	>500
WB Old National Pike right turn:	<25	<25	<25	150
SB Boyers Mill Road left turn:	200	225	225	>500
SB Boyers Mill Road right turn:	125	125	125 ^{1/}	100
8. Old National Pike/MD 75				
EB Old National Pike left turn:	50	100	100	200
EB Old National Pike thru:	225	250	275	>1000
WB Old National Pike most left lane:	175	175	175	400
WB Old National Pike left/thru shared lane:	400	325	325	680
WB Old National Pike right turn:	125	150	150	680
NB MD 75 left turn:	125	175	200	275
NB MD 75 thru:	125	175	175	700
SB MD 75 left turn:	175	200	200	425
SB MD 75 thru:	375	525	525	>1000
SB MD 75 right turn:	75	100	100	300
9. MD 75 @ I-70 WB Ramps				
WB I-70 WB off Ramps left/thru	175	175	175	>500
NB MD 75 left turn	200	225	225	225
NB MD 75 thru	250	325	325	900
SB MD 75 thru	475	550	550	700
10. MD 75 @ I-70 EB Ramps				
EB I-70 EB off Ramps left/thru	200	250	250	>800
NB MD 75 thru	200	225	225	>1000
SB MD 75 left turn	575	650	650 ^{1/}	225
SB MD 75 thru	250	275	275	900
Evening Peak Hour Traffic				
1. Old National Pike/Boyers Mill Road				
EB Old National Pike left turn:	225	325	325 ^{1/}	150
EB Old National Pike thru:	200	275	275	>500
WB Old National Pike thru:	200	300	300	>500
WB Old National Pike right turn:	100	125	125	150
SB Boyers Mill Road left turn:	175	200	200	>500
SB Boyers Mill Road right turn:	<25	<25	<25	100
8. Old National Pike/MD 75				
EB Old National Pike left turn:	50	75	100	200
EB Old National Pike thru:	250	275	300	>1000
WB Old National Pike most left lane:	275	300	300	400
WB Old National Pike left/thru shared lane:	425	325	325	680
WB Old National Pike right turn:	275	325	325	680
NB MD 75 left turn:	300	375	400 ^{1/}	275
NB MD 75 thru:	375	500	500	700
SB MD 75 left turn:	175	175	175	425
SB MD 75 thru:	200	300	300	>1000
SB MD 75 right turn:	50	100	100	300
9. MD 75 @ I-70 WB Ramps				
WB I-70 WB off Ramps left/thru	175	175	175	>500
NB MD 75 left turn	275	300	300	225
NB MD 75 thru	500	625	625	900
SB MD 75 thru	250	300	300	700
10. MD 75 @ I-70 EB Ramps				
EB I-70 EB off Ramps left/thru	400	525	525	>800
NB MD 75 thru	300	350	350	>1000
SB MD 75 left turn	225	275	275 ^{1/}	225
SB MD 75 thru	225	250	250	900



1. Negligible impact from site.

TABLE 5
RESULTS OF INTERSECTION
QUEUING ANALYSIS

TOTAL TRAFFIC CONDITIONS WITH ADDITIONAL BACKGROUND DEVELOPMENTS

Background Traffic

During the review of the TIA by The Town of New Market, it was requested to review projected traffic conditions with the additional background developments of England Woods, The Casey Property, Gordon Mill, and Calumet. The figures and tables associated with this analysis can be found in Appendix E.

- Table E-1 details the Approved Trip Generation for each of these four (4) Background Developments.
- Figure E-1 details the Approved Trip Assignment for England Woods.
- Figure E-2 details the Approved Trip Assignment for The Casey Property.
- Figure E-3 details the Approved Trip Assignment for Gordon Mill.
- Figure E-4 details the Approved Trip Assignment for Calumet.
- Figure E-5 details the 2025 Background Peak Hour Traffic Volumes.
- Figure E-6 details the 2025 Total Peak Hour Traffic Volumes (with East Main).

Analysis of Total Traffic Conditions

Intersection Capacity Analyses were undertaken at each of the study intersections based on total traffic conditions with these four (4) Developments based on the Phased Improvements (see Figure E-7) using the MDOT SHA CLV, HCM, and SHA 95th Percentile Queuing Methodologies. The results can be found in Tables E-2, E-3, and E-4.

A review of Table E-2 indicates that each intersection is projected to continue to operate at acceptable LOS “C” or better based on CLV during the weekday morning and evening peak hours. Please note that since the level of service is acceptable for the MD 75 @ I-70 Interchange Ramps, further analysis was not provided for the Diverging Diamond Interchange, which would create better levels of service.

As shown in Table E-3, the HCM Unsignalized Intersection Methodology results indicate that both minor street approaches at the intersections of Main Street @ Royal Drive and the SB Approach at Main Street @ Marley Street/Site Access is projected to operate with delay. This doesn’t mean

that the intersection is failing as the major street approaches have no delay (except for the inbound turning movements). The volumes are low for these movements and mitigation (traffic signal or all-way stop) would not be warranted.

Queuing Analyses for all signalized intersections were conducted based on the MDOT SHA's 95th Percentile Methodology and the results can be found in Table E-4. As shown, most all queues can be accommodated within the existing storage areas at all intersections during the morning and evening peak hours. Below, please find the background traffic condition projected queues within the Town of New Market that exceed the existing storage area:

- SB Right Turn from Boyers Mill Road to Old National Pike – projected queue is 175 feet, which is 75 feet longer (three cars) than the storage area of 100 feet during the AM peak hour. This did not change from Background to Total Traffic Conditions. There is available land to extend the right turn lane, if deemed necessary.
- EB Left Turn from Old National Pike to Boyers Mill Road – projected queue is 375 feet, which is 225 feet longer (nine cars) than the storage area of 150 feet during the PM peak hour. The East Main Development did not have any impact on this movement as the projected queue is the same under Background Traffic Conditions. Without a survey and using Google Maps, there may be an opportunity to restripe a longer EB Left Turn Lane and Through Lane without widening, but the lanes would be 10 feet wide. Additionally, there may be opportunities for widening as well.

Complete capacity worksheets for all analyses can be found in Appendix E.

RESULTS, RECOMMENDATIONS, AND CONCLUSIONS

Study Purpose

The Traffic Group, Inc. has prepared this Revised Traffic Impact Analysis based on comments provided by the Town of New Market to determine the impact the proposed East Main Development would have on the adjacent road system in the Town of New Market, Frederick County, Maryland. This development is located along the south side of Main Street east of Ninth Alley (unimproved) and is now proposed with 42 Single-Family Attached Units, 8,000 SF of Retail Uses (Strip Plaza Retail), 10,000 SF of General Office, and a 4,000 SF High-Turnover Restaurant.

Two full-movement access points are proposed along East Main Street, with the western access across from Marley Street and a second access to the east. Please note there is access proposed along South Alley to the south. However, for the purposes of this Traffic Impact Analysis, all traffic from East Main is proposed to use the accesses along Main Street. East Main is expected to be built out within 3 years (2025).

Study Criteria/Methodology

The Scope of Work for this Traffic Impact Analysis was determined by the Town of New Market and can be found in Appendix A. A Comment/Response Letter was prepared and can be found in Appendix A. This Traffic Impact Analysis was prepared in accordance with Frederick County's APFO.

Summary of Findings and Recommendations

The results of the Traffic Impact Analysis indicate that all study intersections are operating at acceptable levels of service and will continue to operate with acceptable levels of service during each of the peak periods using the CLV and HCM Methodologies except for Main Street @ Royal Oaks Drive and MD 75 @ Old New Market Road, which is projected to have delay issues under background and total traffic conditions. This doesn't mean that the intersection is failing as the major street approaches have no delay (except for the inbound turning movements). Please note that the subject site only has a minor impact on the delayed movements, therefore, no mitigation is suggested at these intersections.

Additionally, all queues can be accommodated within the existing storage areas at all intersections during the morning and evening peak hours except for a few movements which are as follows in the Town of New Market:

- SB Right Turn from Boyers Mill Road to Old National Pike – There is available land to extend the right turn lane, if deemed necessary.
- EB Left Turn from Old National Pike to Boyers Mill Road – Without a survey and using Google Maps, there may be an opportunity to restripe a longer EB Left Turn Lane and Through Lane without widening, but the lanes would be 10 feet wide. Additionally, there may be opportunities for widening as well.

Based on the data and analyses presented in this report, it is our opinion that East Main meets the requirements of the Town of New Market for approval. Please note that pro rata share contributions may be necessary to the existing escrow accounts in the area as mitigation.

APPENDIX A

**Correspondence,
Scoping Agreement,
Intersection Turning Movement Counts,
and Aerial Photos**





A SERVICE DISABLED
VETERAN-OWNED
SMALL BUSINESS

MBE Certified
Charles County
Howard County
Prince George's County

MFD Certified
Montgomery County

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Columbia: 803.422.9965
Rock Hill: 803.693.4216

FIELD OFFICE LOCATIONS

Arkansas
Florida
Maine
Mississippi
New York
North Carolina
Ohio
Pennsylvania
South Carolina
Texas
Utah
Virginia
West Virginia

July 7, 2023

Shawn Burnett, PE, PTOE
Vice President
The Wilson T. Ballard Company
17 Gwynns Mill Court
Owings Mills, MD 21117

RE: East Main
Town of New Market, Maryland
Our Job No.: 2021-1024

Dear Mr. Burnett:

The Traffic Group, Inc. is in receipt of your email correspondence dated June 14, 2023, containing comments in reference to the Revised Traffic Impact Analysis dated April 13, 2023, prepared for the East Main project in the Town of New Market, Maryland. Based on these comments, we have revised the Traffic Impact Analysis. The comments and responses are as follows:

Comment No. 1 – P 1 – Confirm development still anticipated to be built out in 2025.

Response No. 1 – Yes, the development is still anticipated to be built out in 2025 (3-year study).

Comment No. 2 – P 2 – Describe feasibility of necessary mitigation for delay issues calculated at Main/Royal Oaks in Town. List locations in Town where queues are expected to exceed existing storage areas and describe feasibility of required mitigation.

Response No. 2 – This has been updated in the Revised TIA.

Comment No. 3 – P 5 – Figure does not match Exhibit A in TRC submission.

Response No. 3 – This has been updated in the Revised TIA.

Comment No. 4 – P 6 (Figure 2) – Revise note for posted speed limit along Main Street as 25 mph.

Response No. 4 – This has been updated in the Revised TIA.

Comment No. 5 – P 8 – List computed queue locations in Town where peak hours are not accommodated within existing storage areas and describe feasibility of required mitigation.

Response No. 5 – This has been updated in the Revised TIA.

Comment No. 6 – P 9 – Confirm development still anticipated to be built out in 2025.

Response No. 6 – Yes, the development is still anticipated to be built out in 2025 (3-year study).

Comment No. 7 – P 10 – List computed queue locations in Town where peak hours are not accommodated within existing storage areas and describe feasibility of required mitigation. Due to the PC's recent discussions on the England Woods development, a supplemental analysis of traffic scenarios following the effort conducted for that development needs to be included.

Response No. 7 – This has been updated in the Revised TIA.

Comment No. 8 – P 18 – Include description of how site trips were distributed between the two proposed access points along Main Street.

Response No. 8 – This has been updated in the Revised TIA.

Comment No. 9 – P 19 – List computed queue locations in Town where peak hours are not accommodated within existing storage areas and describe feasibility of required mitigation. Describe feasibility of required mitigation for the elements noted as not projected to exhibit acceptable levels of service.

Response No. 9 – This has been updated in the Revised TIA.

Comment No. 10 – P 20 – Land Use 821 is for Shopping Plazas in excess of 40,000 SF, which does not compare to the proposed 8,000 SF Strip Retail Plaza. Include evaluation of ONP at MD 75, Main at Royal Oaks, and Old New Market Road at MD75 without these pass-by trips.

Response No. 10 – This has been updated in the Revised TIA.

Comment No. 11 – P 22 (Figure 8A) — Include description of how pass-by trips were distributed between the two proposed access points along Main Street.

Response No. 11 – This has been updated in the Revised TIA.

Comment No. 12 – P 28 – Describe feasibility of required mitigation for the elements noted as not projected to exhibit acceptable levels of service and include a separate determination of pro-rata contributions at the following roadway network elements (County Escrow accounts):

- Old National Pike at Boyers Mill Road (3322)
- Old National Pike at MD 75 (4108)
- MD 75 at westbound I-70 ramps (3252)
- MD 75 at eastbound I-70 ramps (3251)
- MD 75 south of Baldwin Road (3891)
- MD 75 at I-70 (4093)
- MD 75 north of Old National Pike (4094)

Response No. 12 – This will be prepared outside of the TIA.

If you have any questions, please let me know. Thank you.

Sincerely,

A handwritten signature in black ink, reading "Joseph J. Caloggero". The signature is fluid and cursive, with a long horizontal flourish extending to the right.

Joseph J. Caloggero, P.E., PTOE, PTP
Vice President

JJC:amr

(F:\2021\2021-1024_East Main\DOCS\CORRESP\ANALYST\Comment Response Ltr_Burnett.docx)

**DRAFT TIA Scoping Proposal
East Main – The Town of New Market
June 20, 2022**

1. LOCATION: South Side of Old National Pike east of Ninth Alley
2. EXISTING USE: Unimproved
3. PROPOSED USE: 43 Attached Single-Family Units and 3 Restaurant/Retail Pad Site totaling 16,500 SF
4. CIP/CTP ASSUMED IMPROVEMENTS: None
5. OTHER IMPROVEMENTS: Improvements from Background Developments
6. BACKGROUND GROWTH & DEVELOPMENT: Assume 1% growth in through traffic for Three (3) years. Pipeline development would include:
 - a. Oakdale PUD - Eaglehead on the Lakes (south of Lake Linganore)
 - b. Marley Commons
 - c. 105/113 W. Main Street
7. EXISTING TRAFFIC: Traffic counts less than two years old may be used or older counts can be factored with 3% annual growth.
8. TRIP GENERATION: ITE (11th Edition)
9. TRIP DISTRIBUTION: Base Assumption: Lake Linganore Blvd not built to Meadow Rd
 - i. 15% North on MD 75
 - ii. 20% West on Old National Pike
 - iii. 15% East on I-70
 - iv. 25% West on I-70
 - v. 10% South on MD 75
 - vi. 15% East on Old National Pike
10. ANALYSIS:
 - a. CLV () & 95% Queues:
 1. Old National Pike/Boyers Mill Road
 2. Old National Pike/MD 75
 3. MD 75/WB I-70 ramps
 4. MD 75/EB I-70 ramps

- b. HCM Un-signalized Analysis:
 - i. MD 75/Old New Market Road
 - ii. Main Street/Royal Oaks Drive
 - iii. Main Street/Old New Market Road
 - iv. Main Street/Bye Alley
 - v. Main Street/South Federal Street
 - vi. Main Street/Marley Street/Site Access
 - vii. Old National Pike @ Site Access
 - viii. South Alley/Site Access

The Town of New Market – Town Engineer

Shawn Burnett, PE, PTOE, Senior Associate
The Wilson T. Ballard Company
17 Gwynns Mill Court
Owings Mills, MD 21117
sburnett@wtbco.com
p 410.363.0150 x511 | f 410.363.7811 | c 410.978.2120

TOTALS TURNING MOVEMENT COUNT - SUMMARY

Intersection of: Old National Pike
and: Boyer Mill Road
Location: Frederick County, Maryland

Counted by: VCU
Date: October 26, 2021
Weather: Cloudy/Warm
Entered by: SN

Tuesday

Star Rating: 4



TIME	TRAFFIC FROM NORTH on: Boyer Mill Road					TRAFFIC FROM SOUTH on:					TRAFFIC FROM EAST on: Old National Pike					TRAFFIC FROM WEST on: Old National Pike					TOTAL N + S + E + W
	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	
AM																					
6:00 - 6:15	32	0	36	0	68	0	0	0	0	0	2	14	0	0	16	0	5	5	0	10	94
6:15 - 6:30	39	0	54	0	93	0	0	0	0	0	6	12	0	0	18	0	20	4	0	24	135
6:30 - 6:45	50	0	57	0	107	0	0	0	0	0	4	24	0	0	28	0	19	6	0	25	160
6:45 - 7:00	47	0	57	0	104	0	0	0	0	0	9	19	0	0	28	0	20	7	0	27	159
7:00 - 7:15	39	0	71	0	110	0	0	0	0	0	7	28	0	0	35	0	23	10	0	33	178
7:15 - 7:30	39	0	59	0	98	0	0	0	0	0	11	27	0	0	38	0	16	11	0	27	163
7:30 - 7:45	50	0	58	0	108	0	0	0	0	0	24	31	0	0	55	0	32	8	0	40	203
7:45 - 8:00	50	0	74	0	124	0	0	0	0	0	31	35	0	0	66	0	43	16	0	59	249
8:00 - 8:15	46	0	66	0	112	0	0	0	0	0	18	40	0	0	58	0	24	17	0	41	211
8:15 - 8:30	55	0	58	0	113	0	0	0	0	0	20	32	0	0	52	0	30	19	0	49	214
8:30 - 8:45	49	0	46	0	95	0	0	0	0	0	22	35	0	0	57	0	33	22	0	55	207
8:45 - 9:00	44	0	52	0	96	0	0	0	0	0	28	34	0	0	62	0	35	26	0	61	219
3 Hr Totals	540	0	688	0	1228	0	0	0	0	0	182	331	0	0	513	0	300	151	0	451	2192
1 Hr Totals																					
6:00 - 7:00	168	0	204	0	372	0	0	0	0	0	21	69	0	0	90	0	64	22	0	86	548
6:15 - 7:15	175	0	239	0	414	0	0	0	0	0	26	83	0	0	109	0	82	27	0	109	632
6:30 - 7:30	175	0	244	0	419	0	0	0	0	0	31	98	0	0	129	0	78	34	0	112	660
6:45 - 7:45	175	0	245	0	420	0	0	0	0	0	51	105	0	0	156	0	91	36	0	127	703
7:00 - 8:00	178	0	262	0	440	0	0	0	0	0	73	121	0	0	194	0	114	45	0	159	793
7:15 - 8:15	185	0	257	0	442	0	0	0	0	0	84	133	0	0	217	0	115	52	0	167	826
7:30 - 8:30	201	0	256	0	457	0	0	0	0	0	93	138	0	0	231	0	129	60	0	189	877
7:45 - 8:45	200	0	244	0	444	0	0	0	0	0	91	142	0	0	233	0	130	74	0	204	881
8:00 - 9:00	194	0	222	0	416	0	0	0	0	0	88	141	0	0	229	0	122	84	0	206	851
PEAK HOUR																					
7:45 - 8:45	200	0	244	0	444	0	0	0	0	0	91	142	0	0	233	0	130	74	0	204	881
PM																					
4:00 - 4:15	37	0	31	0	68	0	0	0	0	0	61	55	0	0	116	0	58	50	0	108	292
4:15 - 4:30	35	0	43	0	78	0	0	0	0	0	71	51	0	0	122	0	42	54	0	96	296
4:30 - 4:45	43	0	50	0	93	0	0	0	0	0	74	62	0	0	136	0	54	58	0	112	341
4:45 - 5:00	38	0	60	0	98	0	0	0	0	0	71	51	0	0	122	0	58	73	0	131	351
5:00 - 5:15	48	0	41	0	89	0	0	0	0	0	76	71	0	0	147	0	57	74	0	131	367
5:15 - 5:30	33	0	39	0	72	0	0	0	0	0	68	44	0	0	112	0	75	68	0	143	327
5:30 - 5:45	45	0	45	0	90	0	0	0	0	0	65	75	0	0	140	0	54	60	0	114	344
5:45 - 6:00	33	0	44	0	77	0	0	0	0	0	70	35	0	0	105	0	59	50	0	109	291
6:00 - 6:15	35	0	33	0	68	0	0	0	0	0	61	49	0	0	110	0	33	58	0	91	269
6:15 - 6:30	23	0	37	0	60	0	0	0	0	0	73	52	0	0	125	0	42	43	0	85	270
6:30 - 6:45	35	0	27	0	62	0	0	0	0	0	58	51	0	0	109	0	24	42	0	66	237
6:45 - 7:00	20	0	21	0	41	0	0	0	0	0	47	26	0	0	73	0	49	45	0	94	208
3 Hr Totals	425	0	471	0	896	0	0	0	0	0	795	622	0	0	1417	0	605	675	0	1280	3593
1 Hr Totals																					
4:00 - 5:00	153	0	184	0	337	0	0	0	0	0	277	219	0	0	496	0	212	235	0	447	1280
4:15 - 5:15	164	0	194	0	358	0	0	0	0	0	292	235	0	0	527	0	211	259	0	470	1355
4:30 - 5:30	162	0	190	0	352	0	0	0	0	0	289	228	0	0	517	0	244	273	0	517	1386
4:45 - 5:45	164	0	185	0	349	0	0	0	0	0	280	241	0	0	521	0	244	275	0	519	1389
5:00 - 6:00	159	0	169	0	328	0	0	0	0	0	279	225	0	0	504	0	245	252	0	497	1329
5:15 - 6:15	146	0	161	0	307	0	0	0	0	0	264	203	0	0	467	0	221	236	0	457	1231
5:30 - 6:30	136	0	159	0	295	0	0	0	0	0	269	211	0	0	480	0	188	211	0	399	1174
5:45 - 6:45	126	0	141	0	267	0	0	0	0	0	262	187	0	0	449	0	158	193	0	351	1067
6:00 - 7:00	113	0	118	0	231	0	0	0	0	0	239	178	0	0	417	0	148	188	0	336	984
PEAK HOUR																					
4:45 - 5:45	164	0	185	0	349	0	0	0	0	0	280	241	0	0	521	0	244	275	0	519	1389

Old National Pike/Boyers Mill Road

Legend

- Sara's grooming services



TOTALS TURNING MOVEMENT COUNT - SUMMARY

Intersection of: Main Street
and: Royal Oaks Drive
Location: Frederick County, Maryland

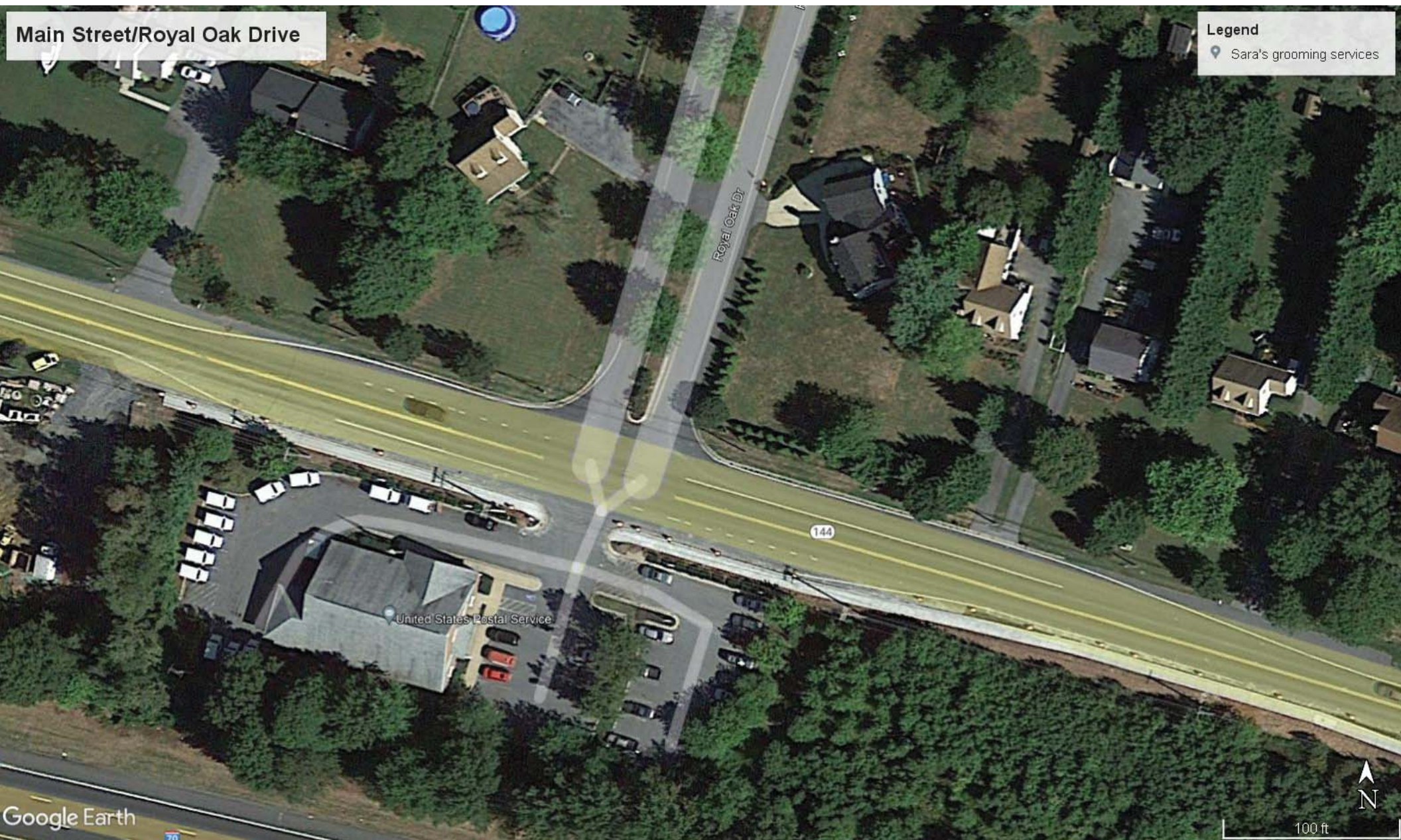
Counted by: VCU
Date: October 26, 2021
Weather: Cloudy/Warm
Entered by: SN

Tuesday

Star Rating: 4



TIME	TRAFFIC FROM NORTH Royal Oaks Drive					TRAFFIC FROM SOUTH Post Office Access					TRAFFIC FROM EAST Main Street					TRAFFIC FROM WEST Main Street					TOTAL N + S + E + W
	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	
AM																					
6:00 - 6:15	10	0	11	0	21	0	0	1	0	1	3	5	0	0	8	0	42	0	0	42	72
6:15 - 6:30	8	0	8	0	16	0	0	0	0	0	2	12	0	0	14	1	74	1	0	76	106
6:30 - 6:45	16	0	10	0	26	0	0	1	0	1	2	14	1	0	17	3	64	2	0	69	113
6:45 - 7:00	13	0	23	0	36	2	0	0	0	2	3	16	3	0	22	1	67	1	0	69	129
7:00 - 7:15	14	0	19	0	33	2	0	2	0	4	2	19	0	0	21	2	103	2	0	107	165
7:15 - 7:30	9	0	12	0	21	0	0	0	0	0	3	31	1	0	35	2	75	1	0	78	134
7:30 - 7:45	15	0	17	0	32	2	0	1	0	3	4	40	2	0	46	6	88	4	0	98	179
7:45 - 8:00	16	0	11	0	27	2	0	2	0	4	1	50	2	0	53	1	123	6	0	130	214
8:00 - 8:15	17	0	8	0	25	2	0	0	0	2	4	37	1	0	42	0	87	2	0	89	158
8:15 - 8:30	13	0	10	0	23	0	0	1	0	1	6	36	2	0	44	2	83	3	0	88	156
8:30 - 8:45	13	1	15	0	29	1	0	2	0	3	5	48	1	0	54	2	75	4	0	81	167
8:45 - 9:00	8	1	13	0	22	0	0	3	0	3	2	48	3	0	53	3	74	8	0	85	163
3 Hr Totals	152	2	157	0	311	11	0	13	0	24	37	356	16	0	409	23	955	34	0	1012	1756
1 Hr Totals																					
6:00 - 7:00	47	0	52	0	99	2	0	2	0	4	10	47	4	0	61	5	247	4	0	256	420
6:15 - 7:15	51	0	60	0	111	4	0	3	0	7	9	61	4	0	74	7	308	6	0	321	513
6:30 - 7:30	52	0	64	0	116	4	0	3	0	7	10	80	5	0	95	8	309	6	0	323	541
6:45 - 7:45	51	0	71	0	122	6	0	3	0	9	12	106	6	0	124	11	333	8	0	352	607
7:00 - 8:00	54	0	59	0	113	6	0	5	0	11	10	140	5	0	155	11	389	13	0	413	692
7:15 - 8:15	57	0	48	0	105	6	0	3	0	9	12	158	6	0	176	9	373	13	0	395	685
7:30 - 8:30	61	0	46	0	107	6	0	4	0	10	15	163	7	0	185	9	381	15	0	405	707
7:45 - 8:45	59	1	44	0	104	5	0	5	0	10	16	171	6	0	193	5	368	15	0	388	695
8:00 - 9:00	51	2	46	0	99	3	0	6	0	9	17	169	7	0	193	7	319	17	0	343	644
PEAK HOUR																					
7:30 - 8:30	61	0	46	0	107	6	0	4	0	10	15	163	7	0	185	9	381	15	0	405	707
PM																					
4:00 - 4:15	15	1	9	0	25	4	1	0	0	5	10	101	3	0	114	2	64	22	0	88	232
4:15 - 4:30	11	0	8	0	19	3	0	4	0	7	16	111	3	0	130	3	65	18	0	86	242
4:30 - 4:45	17	0	9	0	26	3	0	3	0	6	15	112	2	0	129	5	89	12	0	106	267
4:45 - 5:00	12	0	8	0	20	2	0	4	0	6	32	103	4	0	139	5	87	26	0	118	283
5:00 - 5:15	7	0	10	0	17	4	0	4	0	8	20	118	0	0	138	3	73	21	0	97	260
5:15 - 5:30	5	0	9	0	14	2	0	1	0	3	18	105	3	0	126	1	76	37	0	114	257
5:30 - 5:45	15	1	22	0	38	2	0	2	0	4	27	109	0	0	136	0	77	24	0	101	279
5:45 - 6:00	6	0	12	0	18	2	0	0	0	2	21	96	0	0	117	1	79	18	0	98	235
6:00 - 6:15	14	0	12	0	26	1	0	1	0	2	10	97	0	0	107	2	55	10	0	67	202
6:15 - 6:30	8	0	4	0	12	0	0	0	0	0	17	117	0	0	134	0	64	14	0	78	224
6:30 - 6:45	8	0	3	0	11	0	1	2	0	3	16	93	2	0	111	1	48	4	0	53	178
6:45 - 7:00	2	0	8	0	10	0	2	0	0	2	8	64	1	0	73	1	59	13	0	73	158
3 Hr Totals	120	2	114	0	236	23	4	21	0	48	210	1226	18	0	1454	24	836	219	0	1079	2817
1 Hr Totals																					
4:00 - 5:00	55	1	34	0	90	12	1	11	0	24	73	427	12	0	512	15	305	78	0	398	1024
4:15 - 5:15	47	0	35	0	82	12	0	15	0	27	83	444	9	0	536	16	314	77	0	407	1052
4:30 - 5:30	41	0	36	0	77	11	0	12	0	23	85	438	9	0	532	14	325	96	0	435	1067
4:45 - 5:45	39	1	49	0	89	10	0	11	0	21	97	435	7	0	539	9	313	108	0	430	1079
5:00 - 6:00	33	1	53	0	87	10	0	7	0	17	86	428	3	0	517	5	305	100	0	410	1031
5:15 - 6:15	40	1	55	0	96	7	0	4	0	11	76	407	3	0	486	4	287	89	0	380	973
5:30 - 6:30	43	1	50	0	94	5	0	3	0	8	75	419	0	0	494	3	275	66	0	344	940
5:45 - 6:45	36	0	31	0	67	3	1	3	0	7	64	403	2	0	469	4	246	46	0	296	839
6:00 - 7:00	32	0	27	0	59	1	3	3	0	7	51	371	3	0	425	4	226	41	0	271	762
PEAK HOUR																					
4:45 - 5:45	39	1	49	0	89	10	0	11	0	21	97	435	7	0	539	9	313	108	0	430	1079



TOTALS TURNING MOVEMENT COUNT - SUMMARY

Intersection of: Main Street
and: Old New Market Road
Location: Frederick County, Maryland

Counted by: VCU
Date: October 26, 2021
Weather: Cloudy/Warm
Entered by: SN

Tuesday

Star Rating: 4



TIME	TRAFFIC FROM NORTH Old New Market Road					TRAFFIC FROM SOUTH 8th Alley					TRAFFIC FROM EAST Main Street					TRAFFIC FROM WEST Main Street					TOTAL N + S + E + W
	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	
AM																					
6:00 - 6:15	2	1	0	0	3	0	0	0	0	0	0	9	0	0	9	0	54	1	0	55	67
6:15 - 6:30	3	0	0	0	3	0	0	0	0	0	0	9	0	0	9	0	71	4	0	75	87
6:30 - 6:45	5	0	2	0	7	0	0	0	0	0	0	12	0	0	12	0	78	2	0	80	99
6:45 - 7:00	4	0	2	0	6	0	0	0	0	0	0	20	0	0	20	0	106	6	0	112	138
7:00 - 7:15	6	0	1	0	7	0	0	0	0	0	0	19	0	0	19	0	102	3	0	105	131
7:15 - 7:30	9	0	0	0	9	0	0	0	0	0	2	33	0	0	35	1	96	3	0	100	144
7:30 - 7:45	8	0	0	0	8	1	0	0	0	1	0	36	0	0	36	1	84	10	0	95	140
7:45 - 8:00	12	0	1	0	13	1	0	0	0	1	0	53	0	0	53	0	130	3	0	133	200
8:00 - 8:15	9	0	0	0	9	0	0	0	0	0	0	37	1	0	38	0	90	13	0	103	150
8:15 - 8:30	13	0	1	0	14	0	0	0	0	0	0	44	0	0	44	0	88	4	0	92	150
8:30 - 8:45	13	0	1	0	14	0	0	0	0	0	1	43	0	0	44	0	81	9	0	90	148
8:45 - 9:00	21	0	1	0	22	0	0	0	0	0	2	32	0	0	34	0	84	6	0	90	146
3 Hr Totals	105	1	9	0	115	2	0	0	0	2	5	347	1	0	353	2	1064	64	0	1130	1600
1 Hr Totals																					
6:00 - 7:00	14	1	4	0	19	0	0	0	0	0	0	50	0	0	50	0	309	13	0	322	391
6:15 - 7:15	18	0	5	0	23	0	0	0	0	0	0	60	0	0	60	0	357	15	0	372	455
6:30 - 7:30	24	0	5	0	29	0	0	0	0	0	2	84	0	0	86	1	382	14	0	397	512
6:45 - 7:45	27	0	3	0	30	1	0	0	0	1	2	108	0	0	110	2	388	22	0	412	553
7:00 - 8:00	35	0	2	0	37	2	0	0	0	2	2	141	0	0	143	2	412	19	0	433	615
7:15 - 8:15	38	0	1	0	39	2	0	0	0	2	2	159	1	0	162	2	400	29	0	431	634
7:30 - 8:30	42	0	2	0	44	2	0	0	0	2	0	170	1	0	171	1	392	30	0	423	640
7:45 - 8:45	47	0	3	0	50	1	0	0	0	1	1	177	1	0	179	0	389	29	0	418	648
8:00 - 9:00	56	0	3	0	59	0	0	0	0	0	3	156	1	0	160	0	343	32	0	375	594
PEAK HOUR																					
7:45 - 8:45	47	0	3	0	50	1	0	0	0	1	1	177	1	0	179	0	389	29	0	418	648
PM																					
4:00 - 4:15	13	0	0	0	13	2	0	1	0	3	4	98	1	0	103	0	66	13	0	79	198
4:15 - 4:30	16	0	1	0	17	1	0	0	0	1	0	116	1	0	117	2	59	11	0	72	207
4:30 - 4:45	17	0	0	0	17	1	0	0	0	1	1	123	0	0	124	1	91	16	0	108	250
4:45 - 5:00	29	0	0	0	29	0	0	0	0	0	0	123	2	0	125	0	85	12	0	97	251
5:00 - 5:15	29	1	0	0	30	2	0	0	0	2	0	115	4	0	119	1	74	20	0	95	246
5:15 - 5:30	34	0	1	0	35	1	0	2	0	3	2	131	0	0	133	0	83	11	0	94	265
5:30 - 5:45	35	0	1	0	36	0	0	0	0	0	0	127	3	0	130	0	83	16	0	99	265
5:45 - 6:00	10	0	0	0	10	0	0	0	0	0	1	124	0	0	125	1	90	12	0	103	238
6:00 - 6:15	11	0	1	0	12	1	0	0	0	1	4	105	3	0	112	0	69	7	0	76	201
6:15 - 6:30	11	0	0	0	11	1	0	3	0	4	1	122	1	0	124	0	62	8	0	70	209
6:30 - 6:45	15	1	0	0	16	0	0	0	0	0	1	98	0	0	99	1	49	4	0	54	169
6:45 - 7:00	12	0	0	0	12	0	0	0	0	0	0	73	0	0	73	0	59	7	0	66	151
3 Hr Totals	232	2	4	0	238	9	0	6	0	15	14	1355	15	0	1384	6	870	137	0	1013	2650
1 Hr Totals																					
4:00 - 5:00	75	0	1	0	76	4	0	1	0	5	5	460	4	0	469	3	301	52	0	356	906
4:15 - 5:15	91	1	1	0	93	4	0	0	0	4	1	477	7	0	485	4	309	59	0	372	954
4:30 - 5:30	109	1	1	0	111	4	0	2	0	6	3	492	6	0	501	2	333	59	0	394	1012
4:45 - 5:45	127	1	2	0	130	3	0	2	0	5	2	496	9	0	507	1	325	59	0	385	1027
5:00 - 6:00	108	1	2	0	111	3	0	2	0	5	3	497	7	0	507	2	330	59	0	391	1014
5:15 - 6:15	90	0	3	0	93	2	0	2	0	4	7	487	6	0	500	1	325	46	0	372	969
5:30 - 6:30	67	0	2	0	69	2	0	3	0	5	6	478	7	0	491	1	304	43	0	348	913
5:45 - 6:45	47	1	1	0	49	2	0	3	0	5	7	449	4	0	460	2	270	31	0	303	817
6:00 - 7:00	49	1	1	0	51	2	0	3	0	5	6	398	4	0	408	1	239	26	0	266	730
PEAK HOUR																					
4:45 - 5:45	127	1	2	0	130	3	0	2	0	5	2	496	9	0	507	1	325	59	0	385	1027

Main Street/Old New Market Road

Legend

- Sara's grooming services



TOTALS TURNING MOVEMENT COUNT - SUMMARY

Intersection of: Main Street
and: Federal Street
Location: Frederick County, Maryland

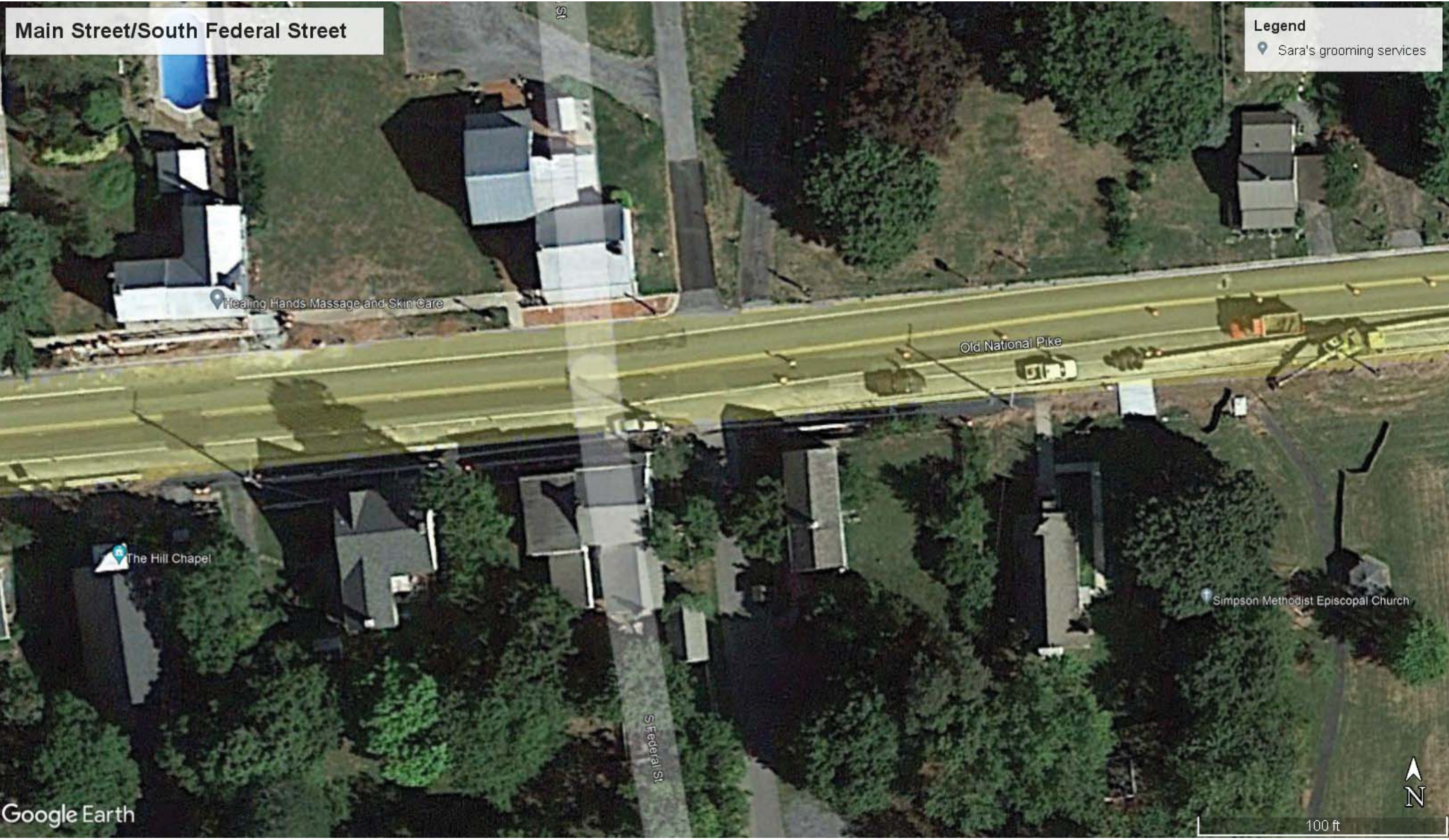
Counted by: VCU
Date: May 25, 2022
Weather: Sunny/Warm
Entered by: SN

Wednesday

Star Rating: 4



TIME	TRAFFIC FROM NORTH on: Federal Street					TRAFFIC FROM SOUTH on: Federal Street					TRAFFIC FROM EAST on: Main Street					TRAFFIC FROM WEST on: Main Street					TOTAL N + S + E + W
	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	
AM																					
7:00 - 7:15	0	0	1	0	1	0	0	0	0	0	0	31	0	0	31	0	112	0	0	112	144
7:15 - 7:30	0	0	0	0	0	0	0	0	0	0	0	56	0	0	56	0	98	0	0	98	154
7:30 - 7:45	1	0	0	0	1	1	0	0	0	1	1	79	0	0	80	0	143	1	0	144	226
7:45 - 8:00	0	0	1	0	1	0	0	0	0	0	1	89	0	0	90	0	150	0	0	150	241
8:00 - 8:15	0	0	1	0	1	4	0	0	0	4	0	59	0	0	59	0	135	0	0	135	199
8:15 - 8:30	0	0	0	0	0	0	0	0	0	0	0	74	0	0	74	0	95	1	0	96	170
8:30 - 8:45	1	0	3	0	4	0	0	0	0	0	0	65	0	0	65	0	126	1	0	127	196
8:45 - 9:00	1	0	5	0	6	0	0	0	0	0	1	76	0	0	77	0	98	0	0	98	181
2 Hr Totals	3	0	11	0	14	5	0	0	0	5	3	529	0	0	532	0	957	3	0	960	1511
1 Hr Totals																					
7:00 - 8:00	1	0	2	0	3	1	0	0	0	1	2	255	0	0	257	0	503	1	0	504	765
7:15 - 8:15	1	0	2	0	3	5	0	0	0	5	2	283	0	0	285	0	526	1	0	527	820
7:30 - 8:30	1	0	2	0	3	5	0	0	0	5	2	301	0	0	303	0	523	2	0	525	836
7:45 - 8:45	1	0	5	0	6	4	0	0	0	4	1	287	0	0	288	0	506	2	0	508	806
8:00 - 9:00	2	0	9	0	11	4	0	0	0	4	1	274	0	0	275	0	454	2	0	456	746
PEAK HOUR																					
7:30 - 8:30	1	0	2	0	3	5	0	0	0	5	2	301	0	0	303	0	523	2	0	525	836
PM																					
4:00 - 4:15	0	0	0	0	0	0	0	0	0	0	1	114	1	0	116	0	108	0	0	108	224
4:15 - 4:30	0	0	0	0	0	1	0	0	0	1	0	127	0	0	127	0	120	0	0	120	248
4:30 - 4:45	0	0	0	0	0	1	1	0	0	2	0	127	1	0	128	0	124	0	0	124	254
4:45 - 5:00	0	0	1	0	1	1	0	0	0	1	0	159	1	0	160	0	129	0	0	129	291
5:00 - 5:15	1	0	0	0	1	0	0	0	0	0	0	143	1	0	144	0	114	0	0	114	259
5:15 - 5:30	0	0	0	0	0	0	0	0	0	0	0	139	1	0	140	0	91	1	0	92	232
5:30 - 5:45	0	0	0	0	0	1	0	0	0	1	0	149	2	0	151	0	97	0	0	97	249
5:45 - 6:00	0	0	0	0	0	0	0	1	0	1	0	135	0	0	135	0	80	0	0	80	216
2 Hr Totals	1	0	1	0	2	4	1	1	0	6	1	1093	7	0	1101	0	863	1	0	864	1973
1 Hr Totals																					
4:00 - 5:00	0	0	1	0	1	3	1	0	0	4	1	527	3	0	531	0	481	0	0	481	1017
4:15 - 5:15	1	0	1	0	2	3	1	0	0	4	0	556	3	0	559	0	487	0	0	487	1052
4:30 - 5:30	1	0	1	0	2	2	1	0	0	3	0	568	4	0	572	0	458	1	0	459	1036
4:45 - 5:45	1	0	1	0	2	2	0	0	0	2	0	590	5	0	595	0	431	1	0	432	1031
5:00 - 6:00	1	0	0	0	1	1	0	1	0	2	0	566	4	0	570	0	382	1	0	383	956
PEAK HOUR																					
4:15 - 5:15	1	0	1	0	2	3	1	0	0	4	0	556	3	0	559	0	487	0	0	487	1052



TOTALS TURNING MOVEMENT COUNT - SUMMARY

Intersection of: Main Street
and: Marley Street
Location: Frederick County, Maryland

Counted by: VCU
Date: May 25, 2022
Weather: Sunny/Warm
Entered by: SN

Wednesday

Star Rating: 4



TIME	TRAFFIC FROM NORTH on: Marley Street					TRAFFIC FROM SOUTH on:					TRAFFIC FROM EAST on: Main Street					TRAFFIC FROM WEST on: Main Street					TOTAL N + S + E + W
	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	
AM																					
7:00 - 7:15	0	0	5	0	5	0	0	0	0	0	1	29	0	0	30	0	113	0	0	113	148
7:15 - 7:30	0	0	1	0	1	0	0	0	0	0	0	58	0	0	58	0	101	1	0	102	161
7:30 - 7:45	11	0	7	0	18	0	0	0	0	0	0	76	0	0	76	0	145	3	0	148	242
7:45 - 8:00	10	0	5	0	15	0	0	0	0	0	1	76	0	0	77	0	151	5	0	156	248
8:00 - 8:15	2	0	3	0	5	0	0	0	0	0	0	48	0	0	48	0	128	4	0	132	185
8:15 - 8:30	5	0	3	0	8	0	0	0	0	0	0	72	0	0	72	0	92	1	0	93	173
8:30 - 8:45	6	0	4	0	10	0	0	0	0	0	0	60	0	0	60	0	128	2	0	130	200
8:45 - 9:00	2	0	3	0	5	0	0	0	0	0	0	70	0	0	70	0	92	5	0	97	172
2 Hr Totals	36	0	31	0	67	0	0	0	0	0	2	489	0	0	491	0	950	21	0	971	1529
1 Hr Totals																					
7:00 - 8:00	21	0	18	0	39	0	0	0	0	0	2	239	0	0	241	0	510	9	0	519	799
7:15 - 8:15	23	0	16	0	39	0	0	0	0	0	1	258	0	0	259	0	525	13	0	538	836
7:30 - 8:30	28	0	18	0	46	0	0	0	0	0	1	272	0	0	273	0	516	13	0	529	848
7:45 - 8:45	23	0	15	0	38	0	0	0	0	0	1	256	0	0	257	0	499	12	0	511	806
8:00 - 9:00	15	0	13	0	28	0	0	0	0	0	0	250	0	0	250	0	440	12	0	452	730
PEAK HOUR																					
7:30 - 8:30	28	0	18	0	46	0	0	0	0	0	1	272	0	0	273	0	516	13	0	529	848
PM																					
4:00 - 4:15	3	0	1	0	4	0	0	0	0	0	1	110	0	0	111	0	105	1	0	106	221
4:15 - 4:30	2	0	3	0	5	0	0	0	0	0	2	128	0	0	130	0	112	1	0	113	248
4:30 - 4:45	4	0	3	0	7	0	0	0	0	0	2	133	0	0	135	0	127	1	0	128	270
4:45 - 5:00	2	0	4	0	6	0	0	0	0	0	4	157	0	0	161	0	136	2	0	138	305
5:00 - 5:15	3	0	4	0	7	0	0	0	0	0	1	129	0	0	130	0	103	0	0	103	240
5:15 - 5:30	3	0	6	0	9	0	0	0	0	0	3	147	0	0	150	0	93	3	0	96	255
5:30 - 5:45	1	0	0	0	1	0	0	0	0	0	1	148	0	0	149	0	100	3	0	103	253
5:45 - 6:00	0	0	7	0	7	0	0	0	0	0	5	136	0	0	141	0	77	0	0	77	225
2 Hr Totals	18	0	28	0	46	0	0	0	0	0	19	1088	0	0	1107	0	853	11	0	864	2017
1 Hr Totals																					
4:00 - 5:00	11	0	11	0	22	0	0	0	0	0	9	528	0	0	537	0	480	5	0	485	1044
4:15 - 5:15	11	0	14	0	25	0	0	0	0	0	9	547	0	0	556	0	478	4	0	482	1063
4:30 - 5:30	12	0	17	0	29	0	0	0	0	0	10	566	0	0	576	0	459	6	0	465	1070
4:45 - 5:45	9	0	14	0	23	0	0	0	0	0	9	581	0	0	590	0	432	8	0	440	1053
5:00 - 6:00	7	0	17	0	24	0	0	0	0	0	10	560	0	0	570	0	373	6	0	379	973
PEAK HOUR																					
4:30 - 5:30	12	0	17	0	29	0	0	0	0	0	10	566	0	0	576	0	459	6	0	465	1070



Main Street/Marley Street

Legend

- Sara's grooming services

James E. Stewart Lodge #49

Google Earth



100 ft

TOTALS TURNING MOVEMENT COUNT - SUMMARY

Intersection of: Main Street
and: Bye Alley
Location: Frederick County, Maryland

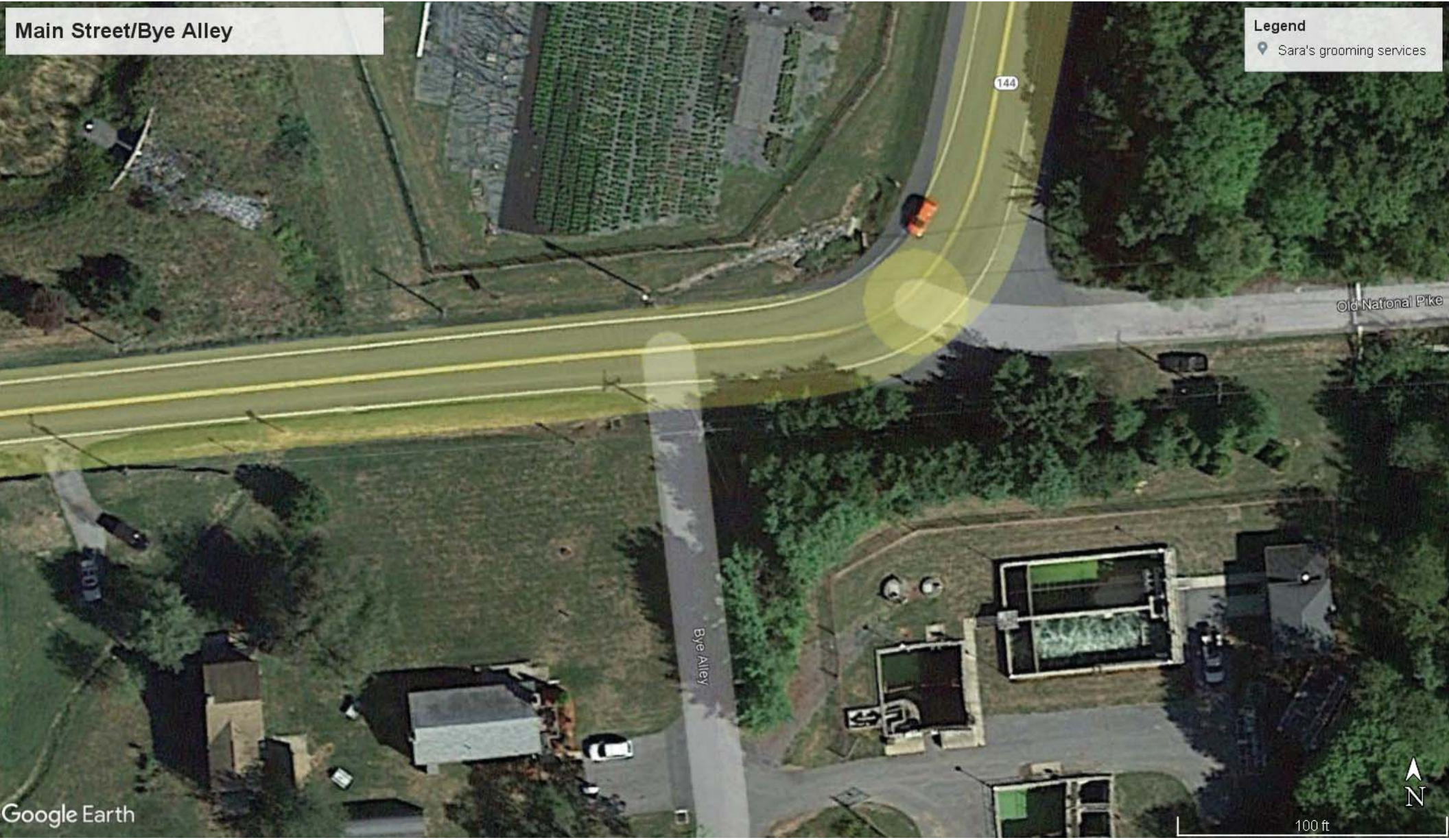
Counted by: VCU
Date: May 25, 2022
Weather: Sunny/Warm
Entered by: SN

Wednesday

Star Rating: 4



TIME	TRAFFIC FROM NORTH					TRAFFIC FROM SOUTH					TRAFFIC FROM EAST					TRAFFIC FROM WEST					TOTAL N + S + E + W
	on:					on:					on:					on:					
	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	
AM																					
7:00 - 7:15	0	0	0	0	0	0	0	0	0	0	0	33	0	0	33	0	109	0	0	109	142
7:15 - 7:30	0	0	0	0	0	0	0	1	0	1	0	54	0	0	54	0	109	0	0	109	164
7:30 - 7:45	0	0	0	0	0	0	0	0	0	0	0	72	0	0	72	0	150	0	0	150	222
7:45 - 8:00	0	0	0	0	0	0	0	0	0	0	0	80	0	0	80	0	151	0	0	151	231
8:00 - 8:15	0	0	0	0	0	0	0	0	0	0	0	53	0	0	53	0	142	0	0	142	195
8:15 - 8:30	0	0	0	0	0	0	0	0	0	0	0	69	0	0	69	0	98	0	0	98	167
8:30 - 8:45	0	0	0	0	0	0	0	0	0	0	0	59	0	0	59	0	123	0	0	123	182
8:45 - 9:00	0	0	0	0	0	0	0	0	0	0	0	73	0	0	73	0	109	0	0	109	182
2 Hr Totals	0	0	0	0	0	0	0	1	0	1	0	493	0	0	493	0	991	0	0	991	1485
1 Hr Totals																					
7:00 - 8:00	0	0	0	0	0	0	0	1	0	1	0	239	0	0	239	0	519	0	0	519	759
7:15 - 8:15	0	0	0	0	0	0	0	1	0	1	0	259	0	0	259	0	552	0	0	552	812
7:30 - 8:30	0	0	0	0	0	0	0	0	0	0	0	274	0	0	274	0	541	0	0	541	815
7:45 - 8:45	0	0	0	0	0	0	0	0	0	0	0	261	0	0	261	0	514	0	0	514	775
8:00 - 9:00	0	0	0	0	0	0	0	0	0	0	0	254	0	0	254	0	472	0	0	472	726
PEAK HOUR																					
7:30 - 8:30	0	0	0	0	0	0	0	0	0	0	0	274	0	0	274	0	541	0	0	541	815
PM																					
4:00 - 4:15	0	0	0	0	0	0	0	0	0	0	0	114	0	0	114	0	106	0	0	106	220
4:15 - 4:30	0	0	0	0	0	0	0	0	0	0	0	126	0	0	126	0	121	0	0	121	247
4:30 - 4:45	0	0	0	0	0	0	0	0	0	0	0	132	0	0	132	0	124	0	0	124	256
4:45 - 5:00	0	0	0	0	0	0	0	0	0	0	0	160	0	0	160	0	135	0	0	135	295
5:00 - 5:15	0	0	0	0	0	0	0	0	0	0	0	141	0	0	141	1	110	0	0	111	252
5:15 - 5:30	0	0	0	0	0	0	0	0	0	0	0	144	0	0	144	0	100	0	0	100	244
5:30 - 5:45	0	0	0	0	0	0	0	0	0	0	0	146	0	0	146	0	94	0	0	94	240
5:45 - 6:00	0	0	0	0	0	0	0	0	0	0	0	141	0	0	141	0	93	0	0	93	234
2 Hr Totals	0	0	0	0	0	0	0	0	0	0	0	1104	0	0	1104	1	883	0	0	884	1988
1 Hr Totals																					
4:00 - 5:00	0	0	0	0	0	0	0	0	0	0	0	532	0	0	532	0	486	0	0	486	1018
4:15 - 5:15	0	0	0	0	0	0	0	0	0	0	0	559	0	0	559	1	490	0	0	491	1050
4:30 - 5:30	0	0	0	0	0	0	0	0	0	0	0	577	0	0	577	1	469	0	0	470	1047
4:45 - 5:45	0	0	0	0	0	0	0	0	0	0	0	591	0	0	591	1	439	0	0	440	1031
5:00 - 6:00	0	0	0	0	0	0	0	0	0	0	0	572	0	0	572	1	397	0	0	398	970
PEAK HOUR																					
4:15 - 5:15	0	0	0	0	0	0	0	0	0	0	0	559	0	0	559	1	490	0	0	491	1050



Main Street/Bye Alley

Legend
Sara's grooming services

Google Earth

TOTALS TURNING MOVEMENT COUNT - SUMMARY

Intersection of: MD 75
 and: Old New Market Road
 Location: Frederick County, Maryland

Counted by: VCU
 Date: May 25, 2022
 Weather: Sunny/Warm
 Entered by: SN

Wednesday

Star Rating: 4



TIME	TRAFFIC FROM NORTH on: MD 75					TRAFFIC FROM SOUTH on: MD 75					TRAFFIC FROM EAST on:					TRAFFIC FROM WEST on: Old New Market Road					TOTAL N + S + E + W
	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	
AM																					
7:00 - 7:15	15	193	0	0	208	0	125	1	0	126	0	0	0	0	0	10	0	28	0	38	372
7:15 - 7:30	23	227	0	0	250	0	82	5	0	87	0	0	0	0	0	10	0	7	0	17	354
7:30 - 7:45	37	237	0	0	274	0	72	2	0	74	0	0	0	0	0	1	0	7	0	8	356
7:45 - 8:00	29	155	0	0	184	0	83	9	0	92	0	0	0	0	0	9	0	17	0	26	302
8:00 - 8:15	13	131	0	0	144	0	80	2	0	82	0	0	0	0	0	10	0	16	0	26	252
8:15 - 8:30	12	138	0	7	157	0	110	4	0	114	0	0	0	0	0	5	0	10	0	15	286
8:30 - 8:45	13	100	0	0	113	0	136	4	0	140	0	0	0	0	0	10	0	21	0	31	284
8:45 - 9:00	7	93	0	0	100	0	102	6	0	108	0	0	0	0	0	10	0	17	0	27	235
2 Hr Totals	149	1274	0	7	1430	0	790	33	0	823	0	0	0	0	0	65	0	123	0	188	2441
1 Hr Totals																					
7:00 - 8:00	104	812	0	0	916	0	362	17	0	379	0	0	0	0	0	30	0	59	0	89	1384
7:15 - 8:15	102	750	0	0	852	0	317	18	0	335	0	0	0	0	0	30	0	47	0	77	1264
7:30 - 8:30	91	661	0	7	759	0	345	17	0	362	0	0	0	0	0	25	0	50	0	75	1196
7:45 - 8:45	67	524	0	7	598	0	409	19	0	428	0	0	0	0	0	34	0	64	0	98	1124
8:00 - 9:00	45	462	0	7	514	0	428	16	0	444	0	0	0	0	0	35	0	64	0	99	1057
PEAK HOUR																					
7:00 - 8:00	104	812	0	0	916	0	362	17	0	379	0	0	0	0	0	30	0	59	0	89	1384
PM																					
4:00 - 4:15	6	82	0	0	88	0	189	17	0	206	0	0	0	0	0	6	0	10	0	16	310
4:15 - 4:30	9	100	0	0	109	0	179	12	0	191	0	0	0	0	0	6	0	14	0	20	320
4:30 - 4:45	14	86	0	0	100	0	245	12	0	257	0	0	0	0	0	5	0	9	0	14	371
4:45 - 5:00	11	111	0	0	122	0	181	19	0	200	0	0	0	0	0	8	0	10	0	18	340
5:00 - 5:15	14	103	0	0	117	0	214	27	0	241	0	0	0	0	0	11	0	9	0	20	378
5:15 - 5:30	15	123	0	0	138	0	195	16	0	211	0	0	0	0	0	11	0	8	0	19	368
5:30 - 5:45	10	104	0	0	114	0	176	20	0	196	0	0	0	0	0	7	0	9	0	16	326
5:45 - 6:00	9	100	0	0	109	0	156	28	0	184	0	0	0	0	0	10	0	11	0	21	314
2 Hr Totals	88	809	0	0	897	0	1535	151	0	1686	0	0	0	0	0	64	0	80	0	144	2727
1 Hr Totals																					
4:00 - 5:00	40	379	0	0	419	0	794	60	0	854	0	0	0	0	0	25	0	43	0	68	1341
4:15 - 5:15	48	400	0	0	448	0	819	70	0	889	0	0	0	0	0	30	0	42	0	72	1409
4:30 - 5:30	54	423	0	0	477	0	835	74	0	909	0	0	0	0	0	35	0	36	0	71	1457
4:45 - 5:45	50	441	0	0	491	0	766	82	0	848	0	0	0	0	0	37	0	36	0	73	1412
5:00 - 6:00	48	430	0	0	478	0	741	91	0	832	0	0	0	0	0	39	0	37	0	76	1386
PEAK HOUR																					
4:30 - 5:30	54	423	0	0	477	0	835	74	0	909	0	0	0	0	0	35	0	36	0	71	1457



Legend

 Sara's grooming services

TOTALS TURNING MOVEMENT COUNT - SUMMARY

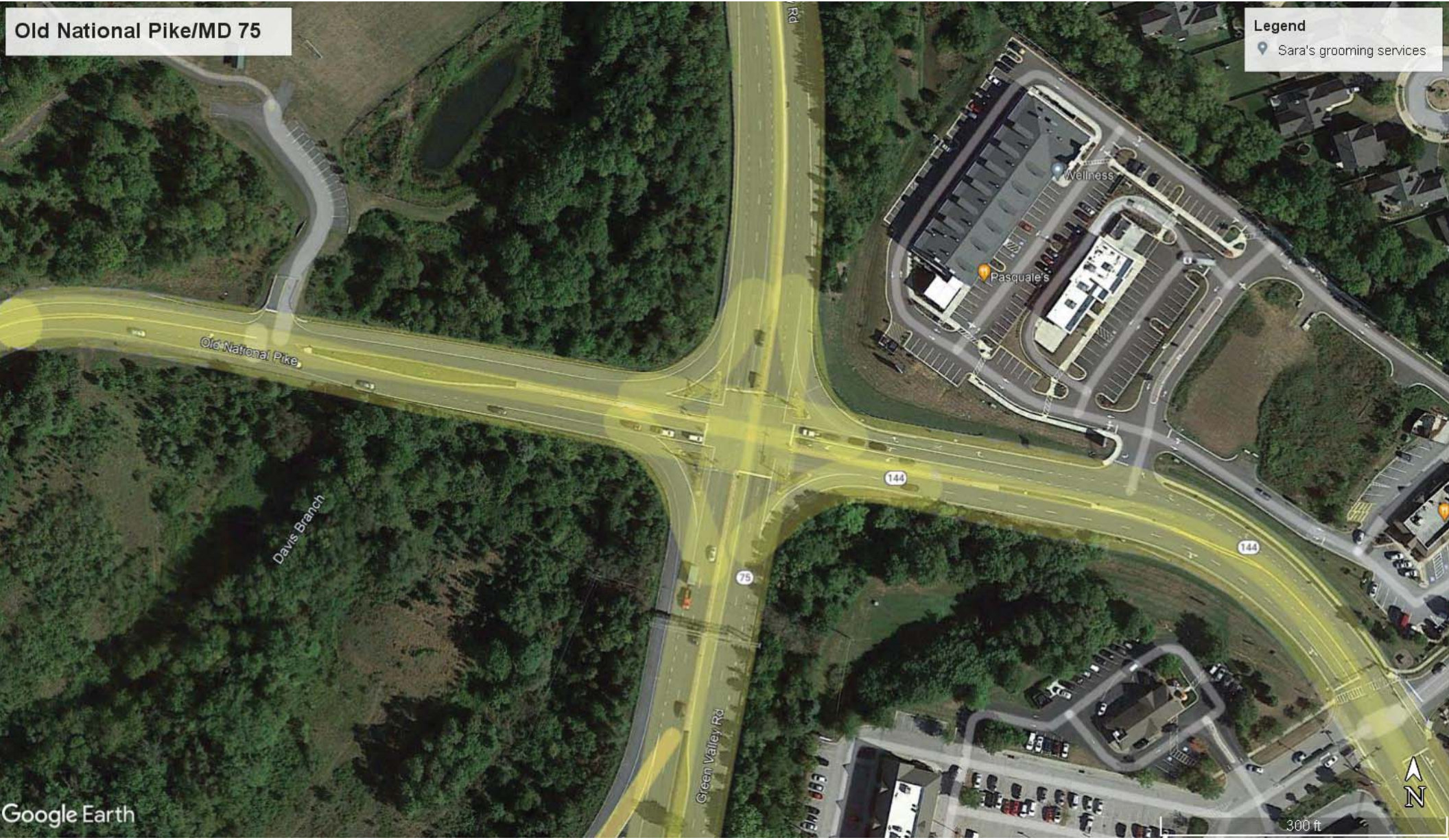
Intersection of: MD 75
and: Old National Pike
Location: Frederick County, Maryland

Counted by: VCU
Date: February 25, 2021
Weather: Sunny/Cool
Entered by: SN

Thursday
Star Rating: 4



TIME	TRAFFIC FROM NORTH on: MD 75					TRAFFIC FROM SOUTH on: MD 75					TRAFFIC FROM EAST on: Old National Pike					TRAFFIC FROM WEST on: Old National Pike					TOTAL N + S + E + W
	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	
AM																					
7:00 - 7:15	4	120	28	0	152	41	33	15	0	89	29	18	72	0	119	50	34	5	0	89	449
7:15 - 7:30	8	146	30	0	184	53	36	21	0	110	21	30	83	0	134	69	36	5	0	110	538
7:30 - 7:45	9	151	27	0	187	49	40	17	0	106	15	37	79	0	131	56	29	3	0	88	512
7:45 - 8:00	9	125	22	0	156	71	36	22	0	129	11	25	73	0	109	53	47	6	0	106	500
8:00 - 8:15	3	69	20	0	92	62	40	17	0	119	12	30	79	0	121	45	44	3	0	92	424
8:15 - 8:30	5	113	26	0	144	71	36	31	0	138	15	29	72	0	116	36	25	4	0	65	463
8:30 - 8:45	7	84	17	0	108	57	53	23	0	133	8	28	75	0	111	39	42	3	0	84	436
8:45 - 9:00	3	79	13	0	95	62	51	24	0	137	13	30	72	0	115	46	46	7	0	99	446
2 Hr Totals	48	887	183	0	1118	466	325	170	0	961	124	227	605	0	956	394	303	36	0	733	3768
1 Hr Totals																					
7:00 - 8:00	30	542	107	0	679	214	145	75	0	434	76	110	307	0	493	228	146	19	0	393	1999
7:15 - 8:15	29	491	99	0	619	235	152	77	0	464	59	122	314	0	495	223	156	17	0	396	1974
7:30 - 8:30	26	458	95	0	579	253	152	87	0	492	53	121	303	0	477	190	145	16	0	351	1899
7:45 - 8:45	24	391	85	0	500	261	165	93	0	519	46	112	299	0	457	173	158	16	0	347	1823
8:00 - 9:00	18	345	76	0	439	252	180	95	0	527	48	117	298	0	463	166	157	17	0	340	1769
PEAK HOUR																					
7:00 - 8:00	30	542	107	0	679	214	145	75	0	434	76	110	307	0	493	228	146	19	0	393	1999
PM																					
4:00 - 4:15	3	66	30	0	99	130	134	46	0	310	43	50	65	0	158	38	51	5	0	94	661
4:15 - 4:30	5	71	20	0	96	121	149	54	0	324	53	59	55	0	167	36	34	6	0	76	663
4:30 - 4:45	5	66	28	0	99	100	110	48	0	258	53	59	80	0	192	33	58	4	0	95	644
4:45 - 5:00	3	61	26	0	90	129	143	67	0	339	44	60	62	0	166	13	28	4	0	45	640
5:00 - 5:15	3	60	16	0	79	126	137	56	0	319	62	50	81	0	193	14	51	7	0	72	663
5:15 - 5:30	9	69	29	0	107	109	140	55	0	304	48	63	76	0	187	29	45	5	0	79	677
5:30 - 5:45	3	76	12	0	91	95	117	51	0	263	55	53	85	0	193	16	49	3	0	68	615
5:45 - 6:00	3	63	33	0	99	112	87	53	0	252	49	64	75	0	188	31	29	1	0	61	600
2 Hr Totals	34	532	194	0	760	922	1017	430	0	2369	407	458	579	0	1444	210	345	35	0	590	5163
1 Hr Totals																					
4:00 - 5:00	16	264	104	0	384	480	536	215	0	1231	193	228	262	0	683	120	171	19	0	310	2608
4:15 - 5:15	16	258	90	0	364	476	539	225	0	1240	212	228	278	0	718	96	171	21	0	288	2610
4:30 - 5:30	20	256	99	0	375	464	530	226	0	1220	207	232	299	0	738	89	182	20	0	291	2624
4:45 - 5:45	18	266	83	0	367	459	537	229	0	1225	209	226	304	0	739	72	173	19	0	264	2595
5:00 - 6:00	18	268	90	0	376	442	481	215	0	1138	214	230	317	0	761	90	174	16	0	280	2555
PEAK HOUR																					
4:30 - 5:30	20	256	99	0	375	464	530	226	0	1220	207	232	299	0	738	89	182	20	0	291	2624



Old National Pike/MD 75

Legend

- Sara's grooming services

Google Earth

TOTALS TURNING MOVEMENT COUNT - SUMMARY

Intersection of: MD 75
and: I-70 WB Ramps
Location: Frederick County, Maryland

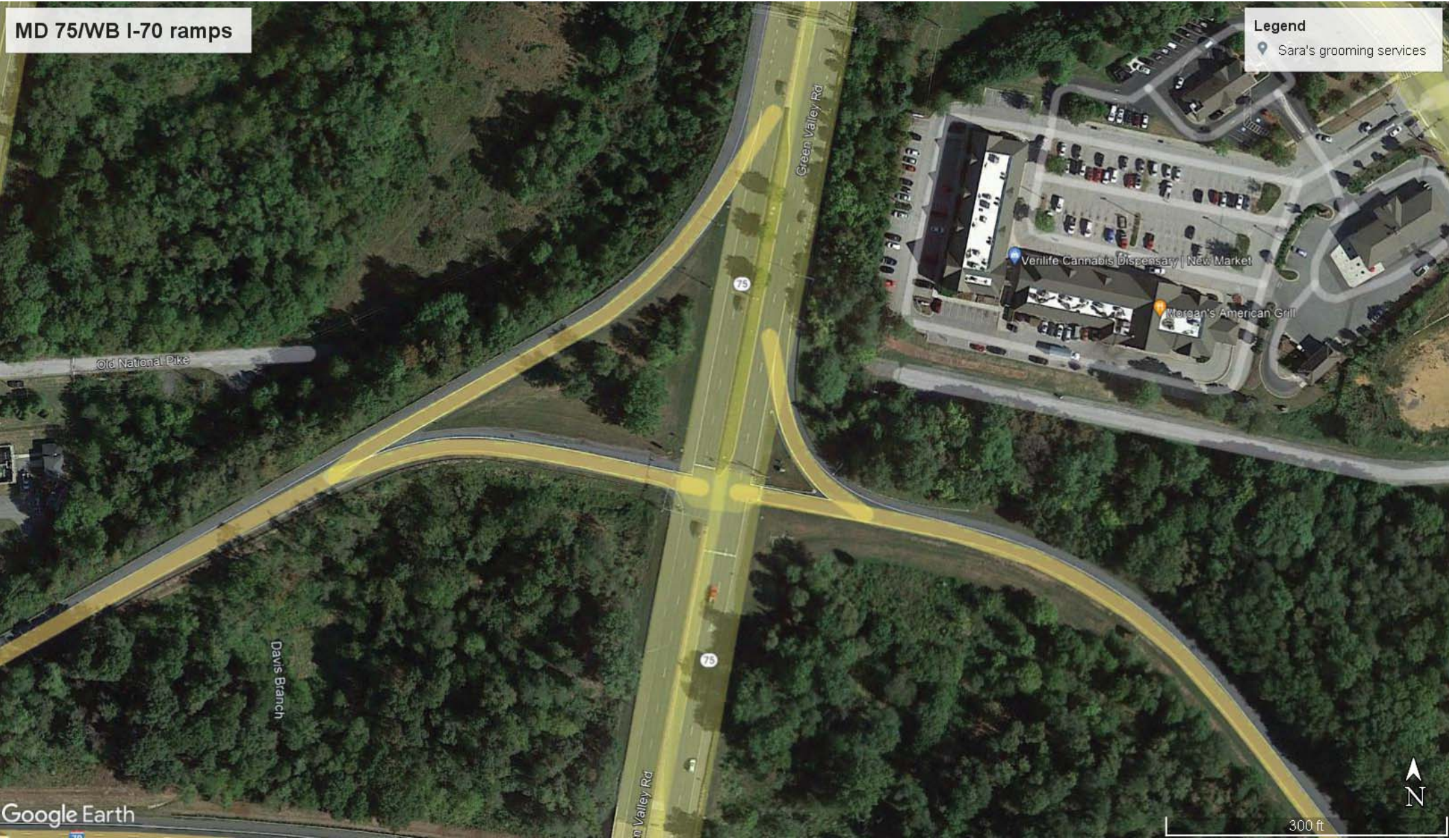
Counted by: VCU
Date: February 25, 2021
Weather: Sunny/Cool
Entered by: SN

Thursday

Star Rating: 5



TIME	TRAFFIC FROM NORTH on: MD 75					TRAFFIC FROM SOUTH on: MD 75					TRAFFIC FROM EAST on: I-70 WB Off Ramp					TRAFFIC FROM WEST on: I-70 WB On Ramp					TOTAL N + S + E + W
	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	
AM																					
7:00 - 7:15	65	169	0	0	234	0	72	25	0	97	16	0	23	0	39	0	0	0	0	0	370
7:15 - 7:30	107	197	0	0	304	0	76	29	0	105	30	0	26	0	56	0	0	0	0	0	465
7:30 - 7:45	103	181	0	0	284	0	83	38	1	122	28	1	33	0	62	0	0	0	0	0	468
7:45 - 8:00	99	162	0	0	261	0	90	41	0	131	34	0	19	0	53	0	0	0	0	0	445
8:00 - 8:15	80	116	0	0	196	0	80	35	0	115	37	0	16	0	53	0	0	0	0	0	364
8:15 - 8:30	93	145	0	0	238	0	95	42	0	137	46	0	13	0	59	0	0	0	0	0	434
8:30 - 8:45	101	105	0	0	206	0	92	43	0	135	38	0	11	0	49	0	0	0	0	0	390
8:45 - 9:00	89	102	0	0	191	0	99	28	0	127	37	0	14	0	51	0	0	0	0	0	369
2 Hr Totals	737	1177	0	0	1914	0	687	281	1	969	266	1	155	0	422	0	0	0	0	0	3305
1 Hr Totals																					
7:00 - 8:00	374	709	0	0	1083	0	321	133	1	455	108	1	101	0	210	0	0	0	0	0	1748
7:15 - 8:15	389	656	0	0	1045	0	329	143	1	473	129	1	94	0	224	0	0	0	0	0	1742
7:30 - 8:30	375	604	0	0	979	0	348	156	1	505	145	1	81	0	227	0	0	0	0	0	1711
7:45 - 8:45	373	528	0	0	901	0	357	161	0	518	155	0	59	0	214	0	0	0	0	0	1633
8:00 - 9:00	363	468	0	0	831	0	366	148	0	514	158	0	54	0	212	0	0	0	0	0	1557
PEAK HOUR																					
7:00 - 8:00	374	709	0	0	1083	0	321	133	1	455	108	1	101	0	210	0	0	0	0	0	1748
PM																					
4:00 - 4:15	86	73	0	0	159	0	171	38	1	210	141	1	29	0	171	0	0	0	0	0	540
4:15 - 4:30	96	78	0	0	174	0	168	48	0	216	133	0	15	0	148	0	0	0	0	0	538
4:30 - 4:45	88	84	0	0	172	0	141	25	0	166	109	0	30	0	139	0	0	0	0	0	477
4:45 - 5:00	67	73	0	0	140	0	185	46	0	231	119	0	34	0	153	0	0	0	0	0	524
5:00 - 5:15	84	68	0	0	152	0	182	65	0	247	133	2	24	0	159	0	0	0	0	0	558
5:15 - 5:30	74	101	0	0	175	0	204	41	0	245	103	0	28	0	131	0	0	0	0	0	551
5:30 - 5:45	86	85	0	0	171	0	164	35	0	199	103	0	21	0	124	0	0	0	0	0	494
5:45 - 6:00	85	86	0	0	171	0	167	32	0	199	95	0	23	0	118	0	0	0	0	0	488
2 Hr Totals	666	648	0	0	1314	0	1382	330	1	1713	936	3	204	0	1143	0	0	0	0	0	4170
1 Hr Totals																					
4:00 - 5:00	337	308	0	0	645	0	665	157	1	823	502	1	108	0	611	0	0	0	0	0	2079
4:15 - 5:15	335	303	0	0	638	0	676	184	0	860	494	2	103	0	599	0	0	0	0	0	2097
4:30 - 5:30	313	326	0	0	639	0	712	177	0	889	464	2	116	0	582	0	0	0	0	0	2110
4:45 - 5:45	311	327	0	0	638	0	735	187	0	922	458	2	107	0	567	0	0	0	0	0	2127
5:00 - 6:00	329	340	0	0	669	0	717	173	0	890	434	2	96	0	532	0	0	0	0	0	2091
PEAK HOUR																					
4:45 - 5:45	311	327	0	0	638	0	735	187	0	922	458	2	107	0	567	0	0	0	0	0	2127



TOTALS TURNING MOVEMENT COUNT - SUMMARY

Intersection of: MD 75
and: I-70 EB Ramps
Location: Frederick County, Maryland

Counted by: VCU
Date: February 25, 2021
Weather: Sunny/Cool
Entered by: SN

Thursday

Star Rating: 4



TIME	TRAFFIC FROM NORTH on: MD 75					TRAFFIC FROM SOUTH on: MD 75					TRAFFIC FROM EAST on: I-70 EB On Ramp					TRAFFIC FROM WEST on: I-70 EB Off Ramp					TOTAL N + S + E + W
	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	
AM																					
7:00 - 7:15	0	71	126	0	197	22	54	0	0	76	0	0	0	0	0	41	0	44	0	85	358
7:15 - 7:30	0	87	133	0	220	35	50	0	0	85	0	0	0	0	0	42	0	55	0	97	402
7:30 - 7:45	0	95	110	0	205	22	75	0	0	97	0	0	0	0	0	47	0	50	0	97	399
7:45 - 8:00	0	67	111	0	178	30	69	0	0	99	0	0	0	0	0	67	1	54	0	122	399
8:00 - 8:15	0	56	90	0	146	38	65	0	0	103	0	0	0	0	0	44	0	59	0	103	352
8:15 - 8:30	0	65	81	0	146	30	64	0	0	94	0	0	0	0	0	45	0	66	0	111	351
8:30 - 8:45	0	39	85	0	124	21	73	0	0	94	0	0	0	0	0	31	0	62	0	93	311
8:45 - 9:00	0	54	66	0	120	20	65	0	0	85	0	0	0	0	0	25	0	64	0	89	294
2 Hr Totals	0	534	802	0	1336	218	515	0	0	733	0	0	0	0	0	342	1	454	0	797	2866
1 Hr Totals																					
7:00 - 8:00	0	320	480	0	800	109	248	0	0	357	0	0	0	0	0	197	1	203	0	401	1558
7:15 - 8:15	0	305	444	0	749	125	259	0	0	384	0	0	0	0	0	200	1	218	0	419	1552
7:30 - 8:30	0	283	392	0	675	120	273	0	0	393	0	0	0	0	0	203	1	229	0	433	1501
7:45 - 8:45	0	227	367	0	594	119	271	0	0	390	0	0	0	0	0	187	1	241	0	429	1413
8:00 - 9:00	0	214	322	0	536	109	267	0	0	376	0	0	0	0	0	145	0	251	0	396	1308
PEAK HOUR																					
7:00 - 8:00	0	320	480	0	800	109	248	0	0	357	0	0	0	0	0	197	1	203	0	401	1558
PM																					
4:00 - 4:15	0	63	38	0	101	16	106	0	0	122	0	0	0	0	0	32	0	128	0	160	383
4:15 - 4:30	0	46	47	0	93	34	100	0	0	134	0	0	0	0	0	40	0	111	0	151	378
4:30 - 4:45	0	60	54	0	114	27	79	0	0	106	0	0	0	0	0	48	0	104	0	152	372
4:45 - 5:00	0	68	40	0	108	25	117	0	0	142	0	0	0	0	0	32	0	116	0	148	398
5:00 - 5:15	0	61	28	0	89	26	134	0	0	160	0	0	0	0	0	29	2	137	0	168	417
5:15 - 5:30	0	84	47	0	131	23	89	0	0	112	0	0	0	0	0	43	0	138	0	181	424
5:30 - 5:45	0	62	39	0	101	26	85	0	0	111	0	0	0	0	0	37	0	126	0	163	375
5:45 - 6:00	0	62	46	0	108	16	85	0	0	101	0	0	0	0	0	34	0	103	0	137	346
2 Hr Totals	0	506	339	0	845	193	795	0	0	988	0	0	0	0	0	295	2	963	0	1260	3093
1 Hr Totals																					
4:00 - 5:00	0	237	179	0	416	102	402	0	0	504	0	0	0	0	0	152	0	459	0	611	1531
4:15 - 5:15	0	235	169	0	404	112	430	0	0	542	0	0	0	0	0	149	2	468	0	619	1565
4:30 - 5:30	0	273	169	0	442	101	419	0	0	520	0	0	0	0	0	152	2	495	0	649	1611
4:45 - 5:45	0	275	154	0	429	100	425	0	0	525	0	0	0	0	0	141	2	517	0	660	1614
5:00 - 6:00	0	269	160	0	429	91	393	0	0	484	0	0	0	0	0	143	2	504	0	649	1562
PEAK HOUR																					
4:45 - 5:45	0	275	154	0	429	100	425	0	0	525	0	0	0	0	0	141	2	517	0	660	1614



MD 75/EB I-70 ramps

Legend

-  Sara's grooming services

Google Earth



300 ft

APPENDIX B

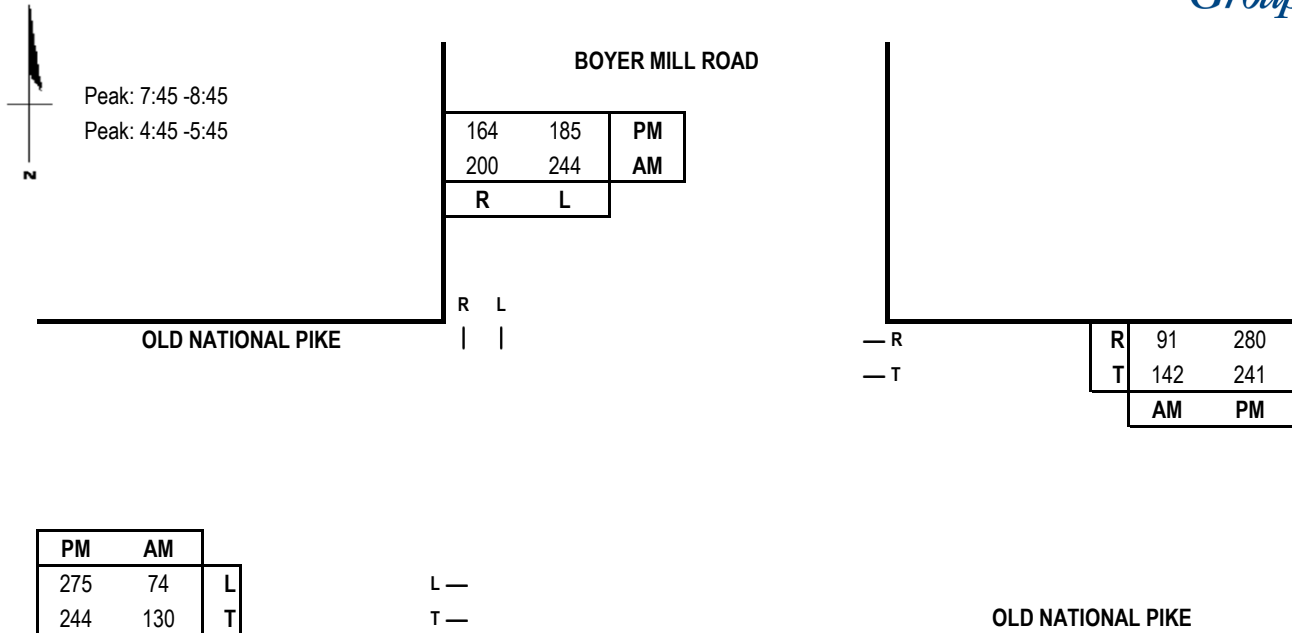
Intersection Capacity Analysis Worksheets



CRITICAL LANE VOLUME (CLV) METHODOLOGY for MSHA

E/W Road: Old National Pike
N/S Road: Boyer Mill Road
Conditions: Existing Traffic

Date of Count: 10/26/2021
Day of Count: Tuesday
Analyst: Qiang Tian



Capacity Analysis

Morning Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
SB	244	1.00	244			
EB	130	1.00	130			
WB	142	1.00	142	74	1.00	74
CLV TOTAL=						460
Level of Service (LOS)=						A

Scenario ID - EXIST1

CLV V/C =0.29

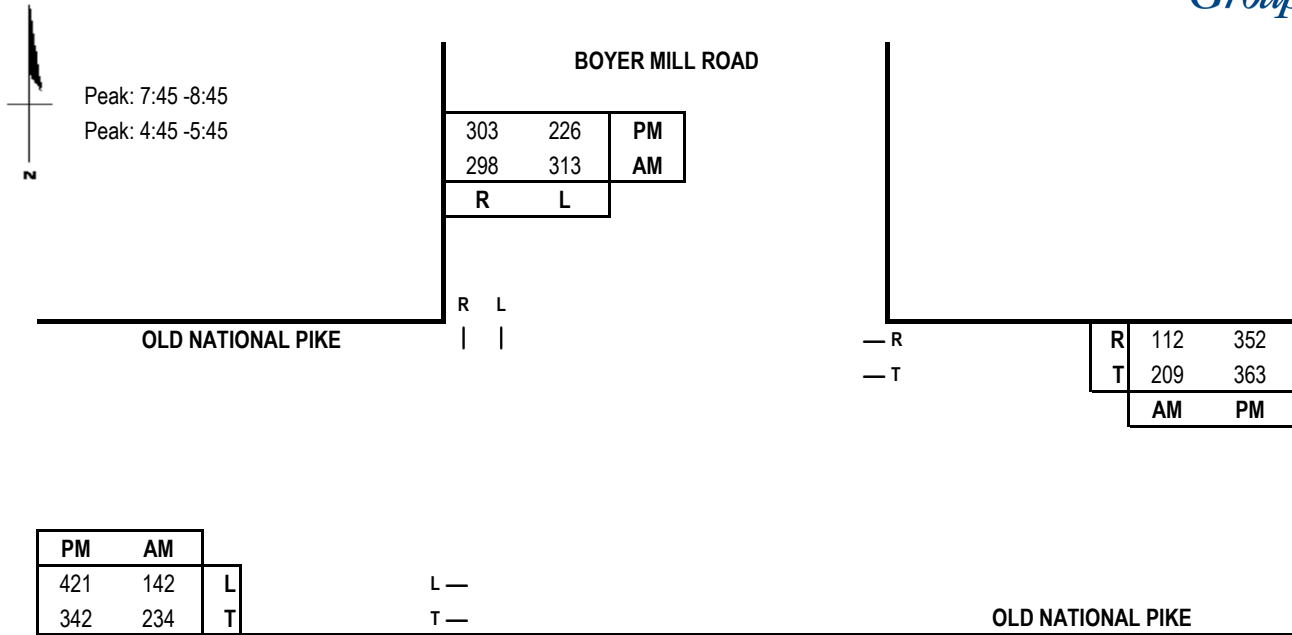
Evening Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
SB	185	1.00	185			
EB	244	1.00	244			
WB	241	1.00	241	275	1.00	275
CLV TOTAL=						701
Level of Service (LOS)=						A

CLV V/C =0.44

CRITICAL LANE VOLUME (CLV) METHODOLOGY for MSHA

E/W Road: Old National Pike
N/S Road: Boyer Mill Road
Conditions: Background Traffic

Date of Count: 10/26/2021
Day of Count: Tuesday
Analyst: Qiang Tian



Capacity Analysis

Morning Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
SB	313	1.00	313			
EB	234	1.00	234			
WB	209	1.00	209	142	1.00	142
CLV TOTAL=						664
Level of Service (LOS)=						A

CLV V/C =0.42

Evening Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
SB	226	1.00	226			
EB	342	1.00	342			
WB	363	1.00	363	421	1.00	421
CLV TOTAL=						1,010
Level of Service (LOS)=						B

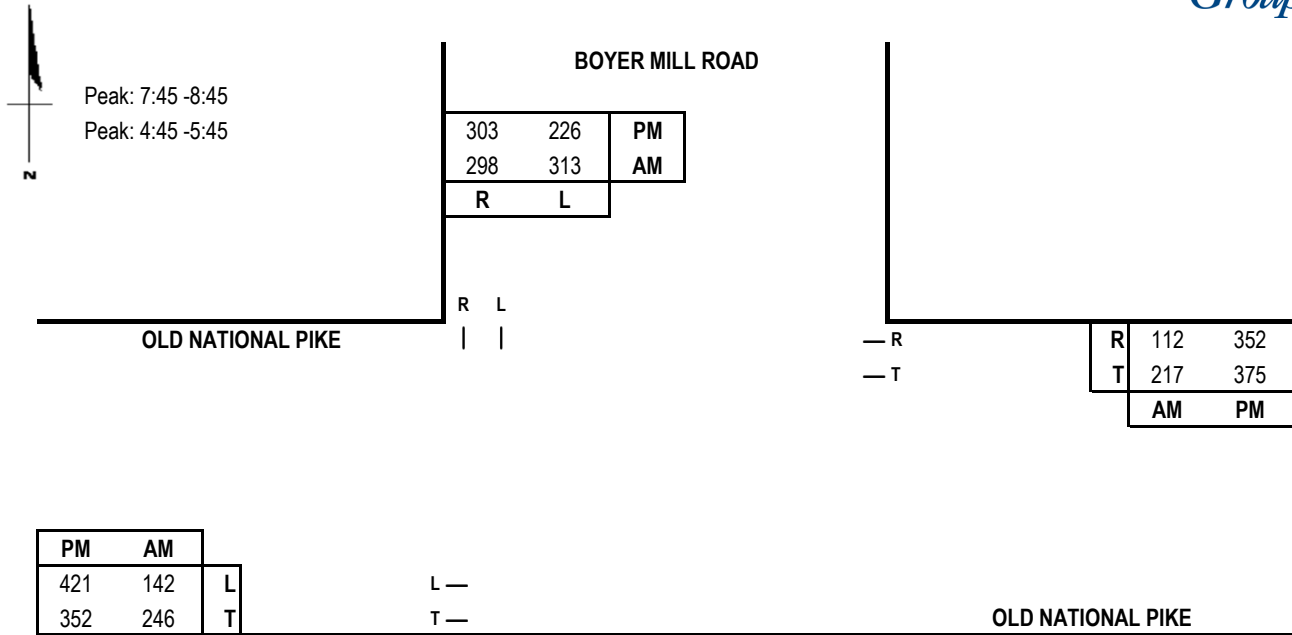
CLV V/C =0.63

Scenario ID - BACK1

CRITICAL LANE VOLUME (CLV) METHODOLOGY for MSHA

E/W Road: Old National Pike
N/S Road: Boyer Mill Road
Conditions: Total Traffic

Date of Count: 10/26/2021
Day of Count: Tuesday
Analyst: Qiang Tian



Capacity Analysis

Morning Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
SB	313	1.00	313			
EB	246	1.00	246			
WB	217	1.00	217	142	1.00	142
CLV TOTAL=						672
Level of Service (LOS)=						A

CLV V/C =0.42

Evening Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
SB	226	1.00	226			
EB	352	1.00	352			
WB	375	1.00	375	421	1.00	421
CLV TOTAL=						1,022
Level of Service (LOS)=						B

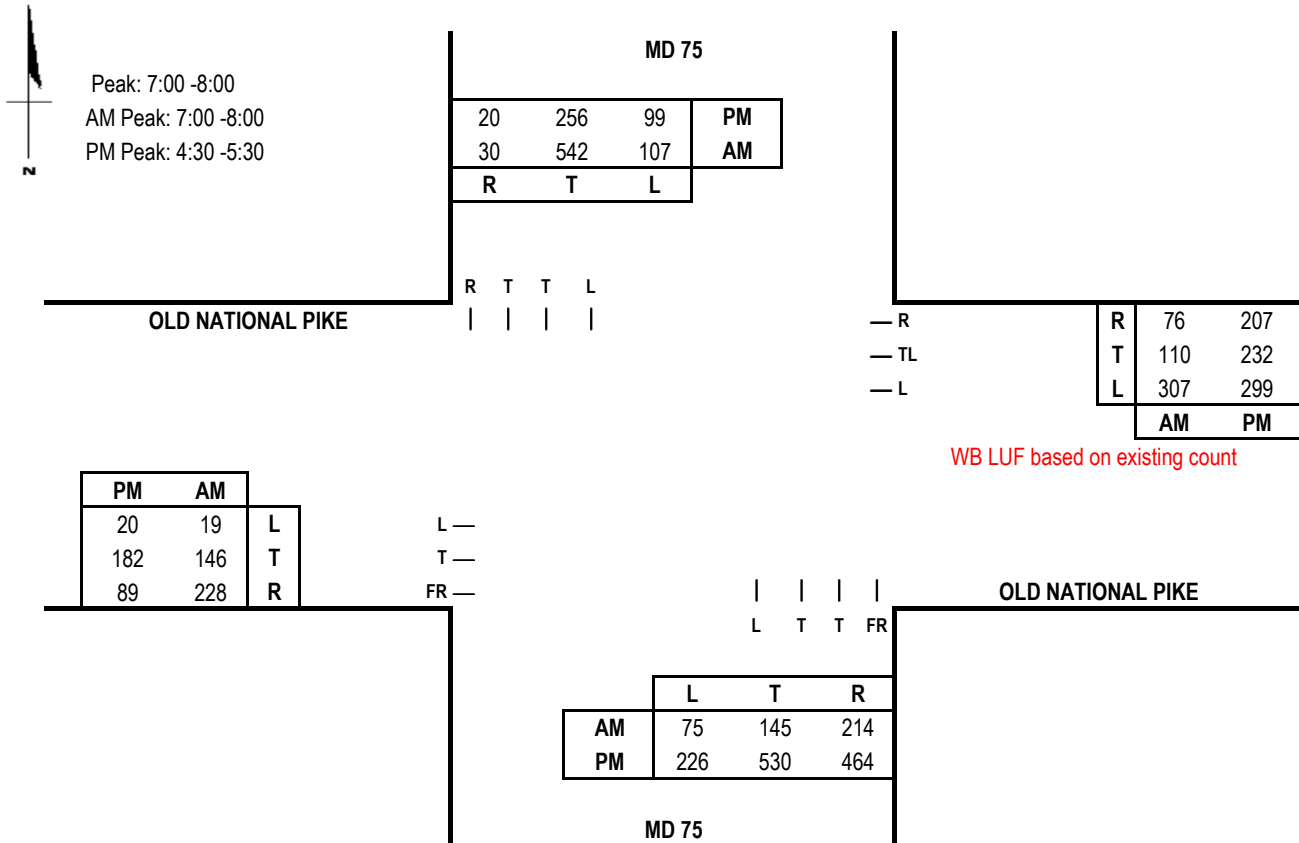
CLV V/C =0.64

Scenario ID - TOT1

CRITICAL LANE VOLUME (CLV) METHODOLOGY for Frederick County

E/W Road: Old National Pike
N/S Road: MD 75
Conditions: Existing Traffic

Date of Count: 2/25/2021
Day of Week: Thursday
Analyst: Qiang Tian



Capacity Analysis - East/West Split

Morning Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			AM
	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
EB	146	1.00	146				146
WB	417	0.75	313				313
NB	145	0.55	80	107	1.00	107	373
SB	542	0.55	298	75	1.00	75	
CLV TOTAL=							832
Level of Service (LOS)=							A

AM V/C =0.52

Evening Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			PM
	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
EB	182	1.00	182				182
WB	531	0.64	340				340
NB	530	0.55	292	99	1.00	99	391
SB	256	0.55	141	226	1.00	226	
CLV TOTAL=							913
Level of Service (LOS)=							A

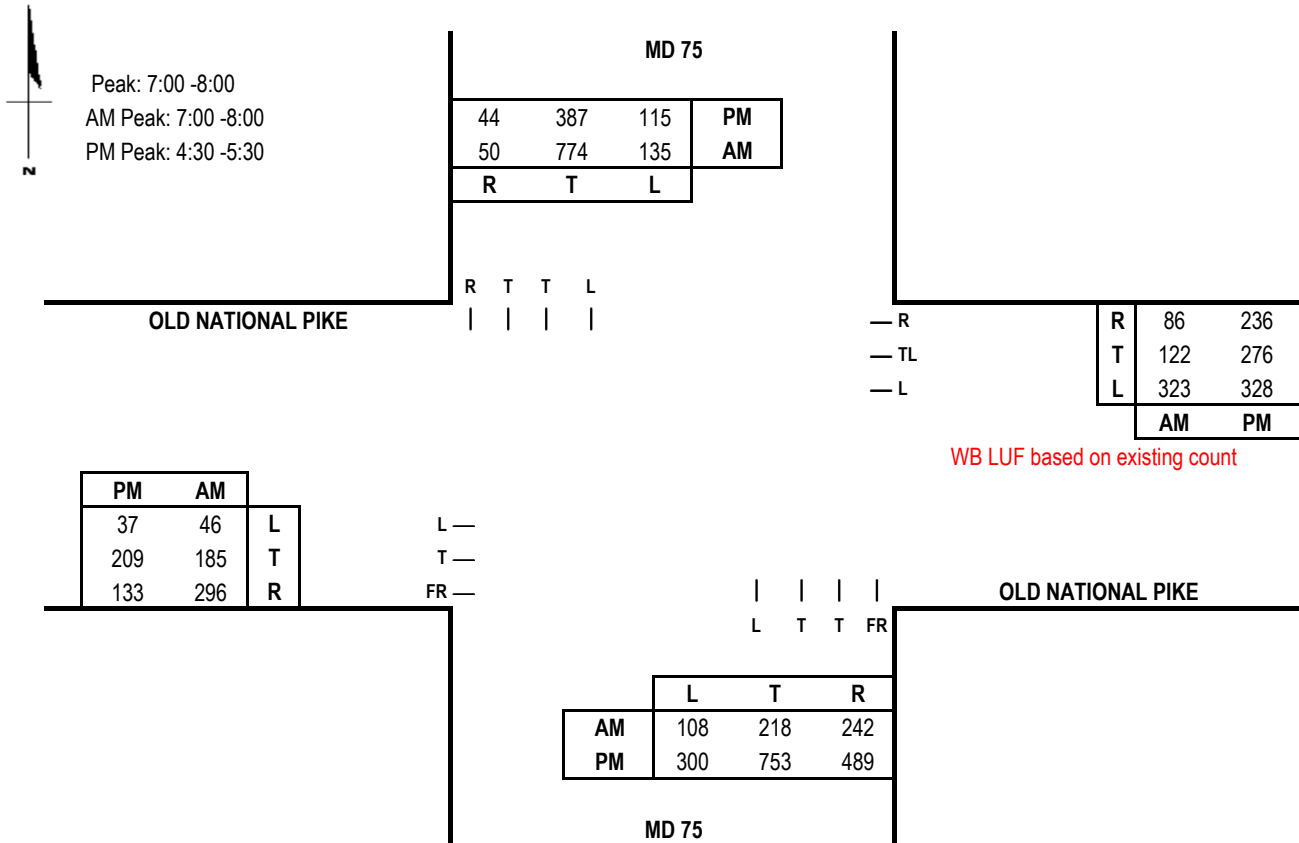
PM V/C =0.57

Scenario ID - EXIST8

CRITICAL LANE VOLUME (CLV) METHODOLOGY for Frederick County

E/W Road: Old National Pike
N/S Road: MD 75
Conditions: Background Traffic

Date of Count: 2/25/2021
Day of Week: Thursday
Analyst: Qiang Tian



Capacity Analysis - East/West Split

Morning Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			AM
	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
EB	185	1.00	185				185
WB	445	0.75	334				334
NB	218	0.55	120	135	1.00	135	534
SB	774	0.55	426	108	1.00	108	
CLV TOTAL=							1,053
Level of Service (LOS)=							B

AM V/C = 0.66

Evening Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			PM
	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
EB	209	1.00	209				209
WB	604	0.64	387				387
NB	753	0.55	414	115	1.00	115	529
SB	387	0.55	213	300	1.00	300	
CLV TOTAL=							1,125
Level of Service (LOS)=							B

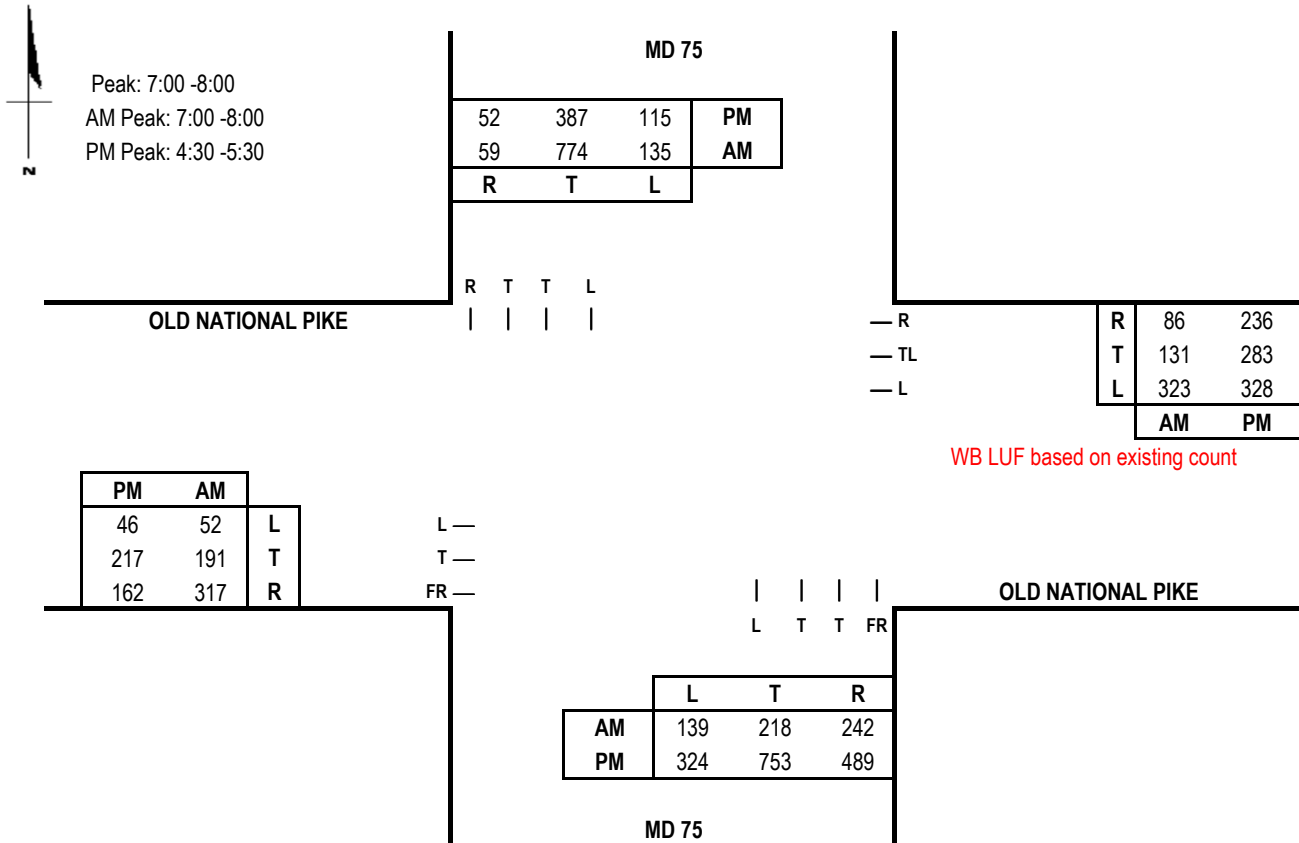
PM V/C = 0.7

Scenario ID - BACK8

CRITICAL LANE VOLUME (CLV) METHODOLOGY for Frederick County

E/W Road: Old National Pike
N/S Road: MD 75
Conditions: Total Traffic

Date of Count: 2/25/2021
Day of Week: Thursday
Analyst: Qiang Tian



Capacity Analysis - East/West Split

Morning Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			AM
	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
EB	191	1.00	191				191
WB	454	0.75	341				341
NB	218	0.55	120	135	1.00	135	565
SB	774	0.55	426	139	1.00	139	
CLV TOTAL=							1,097
Level of Service (LOS)=							B

AM V/C =0.69

Evening Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			PM
	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
EB	217	1.00	217				217
WB	611	0.64	391				391
NB	753	0.55	414	115	1.00	115	537
SB	387	0.55	213	324	1.00	324	
CLV TOTAL=							1,145
Level of Service (LOS)=							B

Level of Service (LOS)=

PM V/C =0.72

Scenario ID - TOT8

CRITICAL LANE VOLUME (CLV) METHODOLOGY for MSHA

E/W Road: I-70 WB Off Ramp/I-70 Wb On Ramp

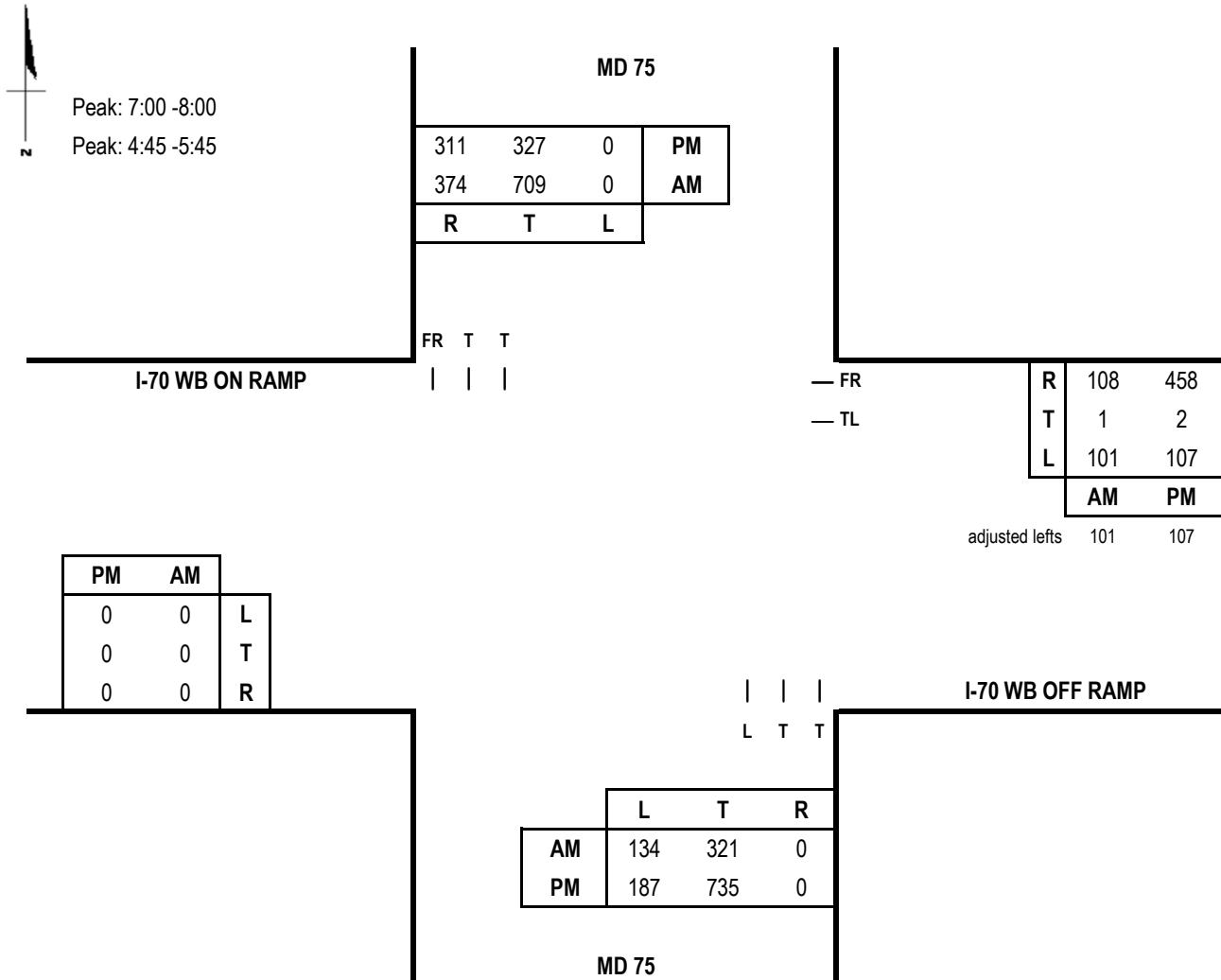
Date of Count: 2/25/2021

N/S Road: MD 75

Day of Count: Thursday

Conditions: Existing Traffic

Analyst: Qiang Tian



Capacity Analysis

Morning Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			AM CLV
	VOL	x LUF	= Total	VOL	x LUF	= Total	
NB	321	0.55	177	0	0.00	0	524
SB	709	0.55	390	134	1.00	134	
EB	0	0.00	0	101	1.00	101	102
WB	102	1.00	102	0	0.00	0	
CLV TOTAL=							626
Level of Service (LOS)=							A

Evening Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			PM CLV
	VOL	x LUF	= Total	VOL	x LUF	= Total	
NB	735	0.55	404	0	0.00	0	404
SB	327	0.55	180	187	1.00	187	
EB	0	0.00	0	107	1.00	107	109
WB	109	1.00	109	0	0.00	0	
CLV TOTAL=							513
Level of Service (LOS)=							A

Scenario ID - EXIST9

AM V/C =0.39

PM V/C =0.32

CRITICAL LANE VOLUME (CLV) METHODOLOGY for MSHA

E/W Road: I-70 WB Off Ramp/I-70 Wb On Ramp

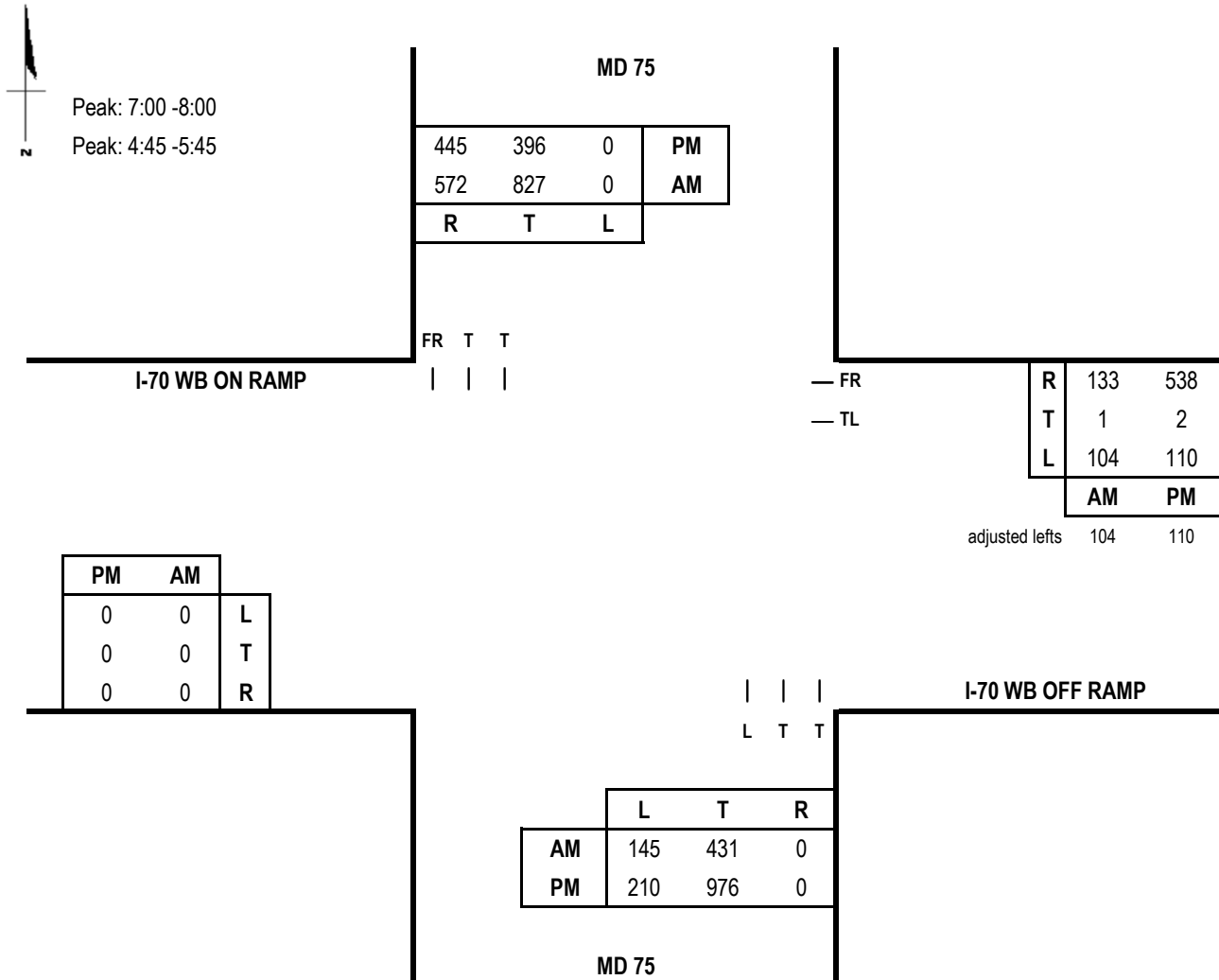
Date of Count: 2/25/2021

N/S Road: MD 75

Day of Count: Thursday

Conditions: Background Traffic

Analyst: Qiang Tian



Capacity Analysis

Morning Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			AM CLV
	VOL	x LUF	= Total	VOL	x LUF	= Total	
NB	431	0.55	237	0	0.00	0	600
SB	827	0.55	455	145	1.00	145	
EB	0	0.00	0	104	1.00	104	105
WB	105	1.00	105	0	0.00	0	
CLV TOTAL=							705
Level of Service (LOS)=							A

AM V/C =0.44

Evening Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			PM CLV
	VOL	x LUF	= Total	VOL	x LUF	= Total	
NB	976	0.55	537	0	0.00	0	537
SB	396	0.55	218	210	1.00	210	
EB	0	0.00	0	110	1.00	110	112
WB	112	1.00	112	0	0.00	0	
CLV TOTAL=							649
Level of Service (LOS)=							A

PM V/C =0.41

Scenario ID - BACK9

CRITICAL LANE VOLUME (CLV) METHODOLOGY for MSHA

E/W Road: I-70 WB Off Ramp/I-70 Wb On Ramp

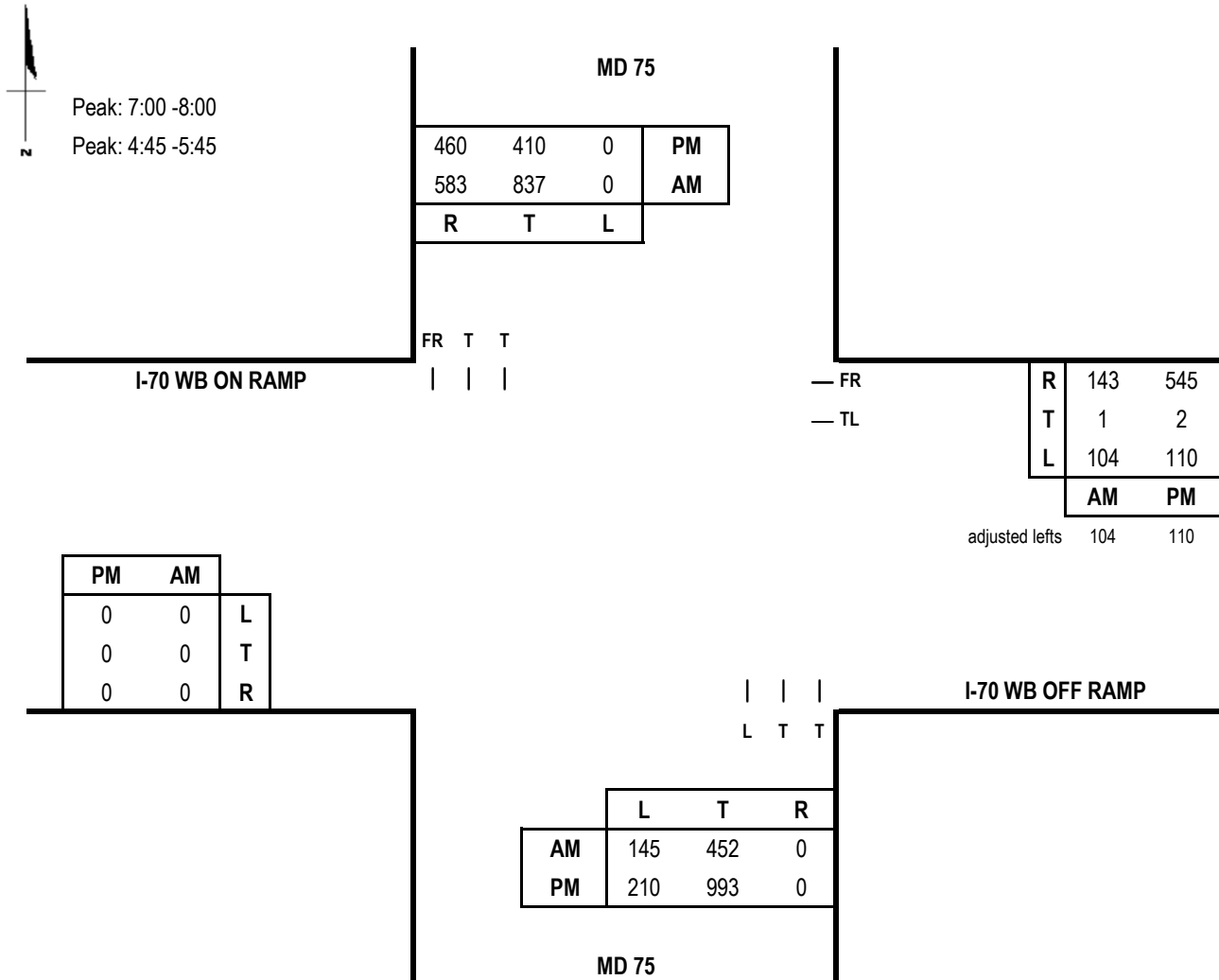
Date of Count: 2/25/2021

N/S Road: MD 75

Day of Count: Thursday

Conditions: Total Traffic

Analyst: Qiang Tian



Capacity Analysis

Morning Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			AM CLV
	VOL	x LUF	= Total	VOL	x LUF	= Total	
NB	452	0.55	249	0	0.00	0	605
SB	837	0.55	460	145	1.00	145	
EB	0	0.00	0	104	1.00	104	105
WB	105	1.00	105	0	0.00	0	
CLV TOTAL=							710
Level of Service (LOS)=							A

Evening Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			PM CLV
	VOL	x LUF	= Total	VOL	x LUF	= Total	
NB	993	0.55	546	0	0.00	0	546
SB	410	0.55	226	210	1.00	210	
EB	0	0.00	0	110	1.00	110	112
WB	112	1.00	112	0	0.00	0	
CLV TOTAL=							658
Level of Service (LOS)=							A

Scenario ID - TOT9

AM V/C =0.44

PM V/C =0.41

CRITICAL LANE VOLUME (CLV) METHODOLOGY for Frederick County

E/W Road: I-70 EB On Ramp/I-70 Eb Off Ramp

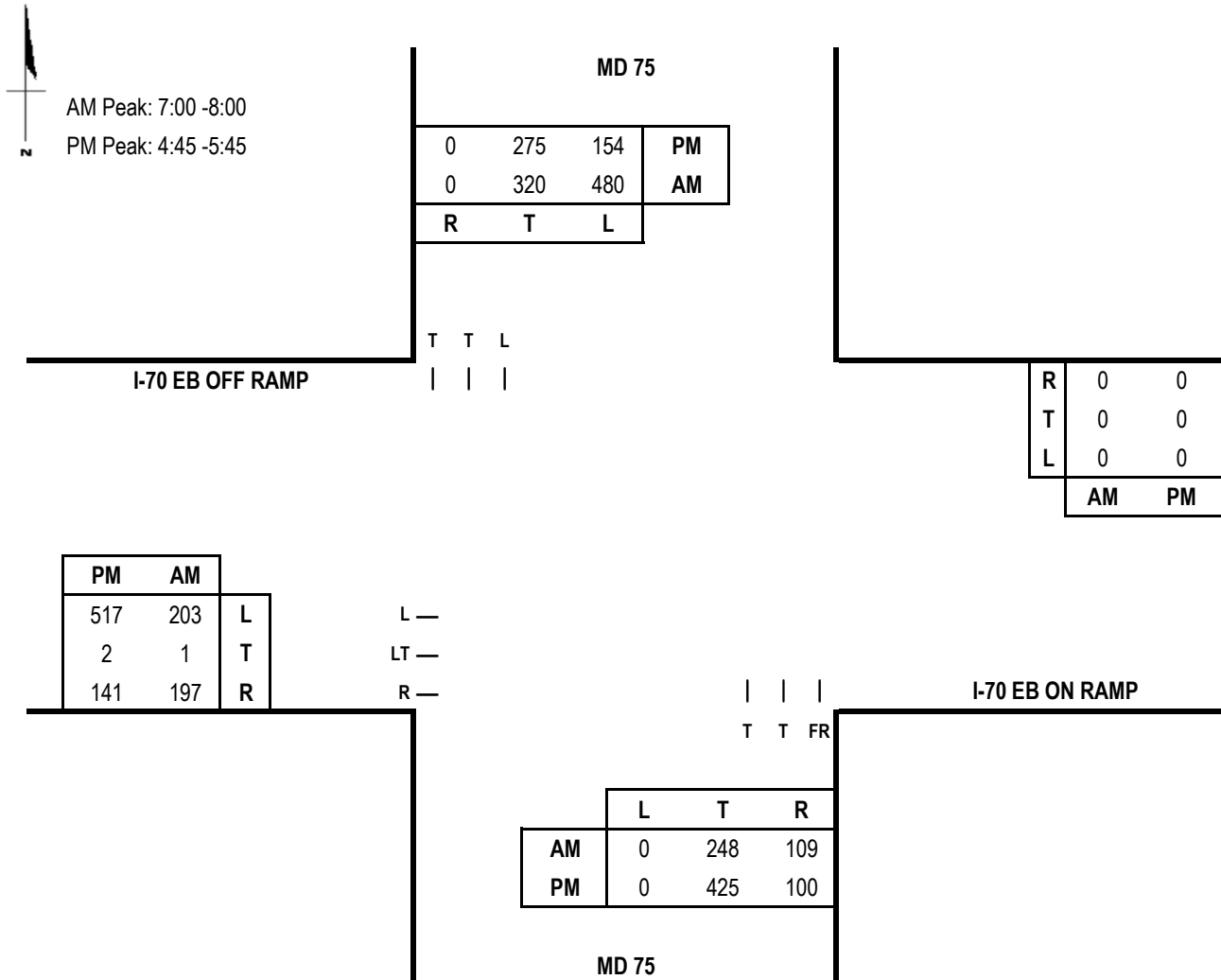
Date of Count: 2/25/21

N/S Road: MD 75

Day of Count: Thursday

Conditions: Existing Traffic

Analyst: Qiang Tian



Capacity Analysis

Morning Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			AM
	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
NB	248	0.55	136	480	1.00	480	616
SB	320	0.55	176	0	0.00	0	
EB	204	0.60	122	0	0.00	0	122
WB	0	0.00	0	203	0.60	122	
CLV TOTAL=							738
Level of Service (LOS)=							A

Evening Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			PM
	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
NB	425	0.55	234	154	1.00	154	388
SB	275	0.55	151	0	0.00	0	
EB	519	0.60	311	0	0.00	0	311
WB	0	0.00	0	517	0.60	310	
CLV TOTAL=							699
Level of Service (LOS)=							A

Scenario ID - EXIST10

AM V/C =0.46

PM V/C =0.44

CRITICAL LANE VOLUME (CLV) METHODOLOGY for Frederick County

E/W Road: I-70 EB On Ramp/I-70 Eb Off Ramp

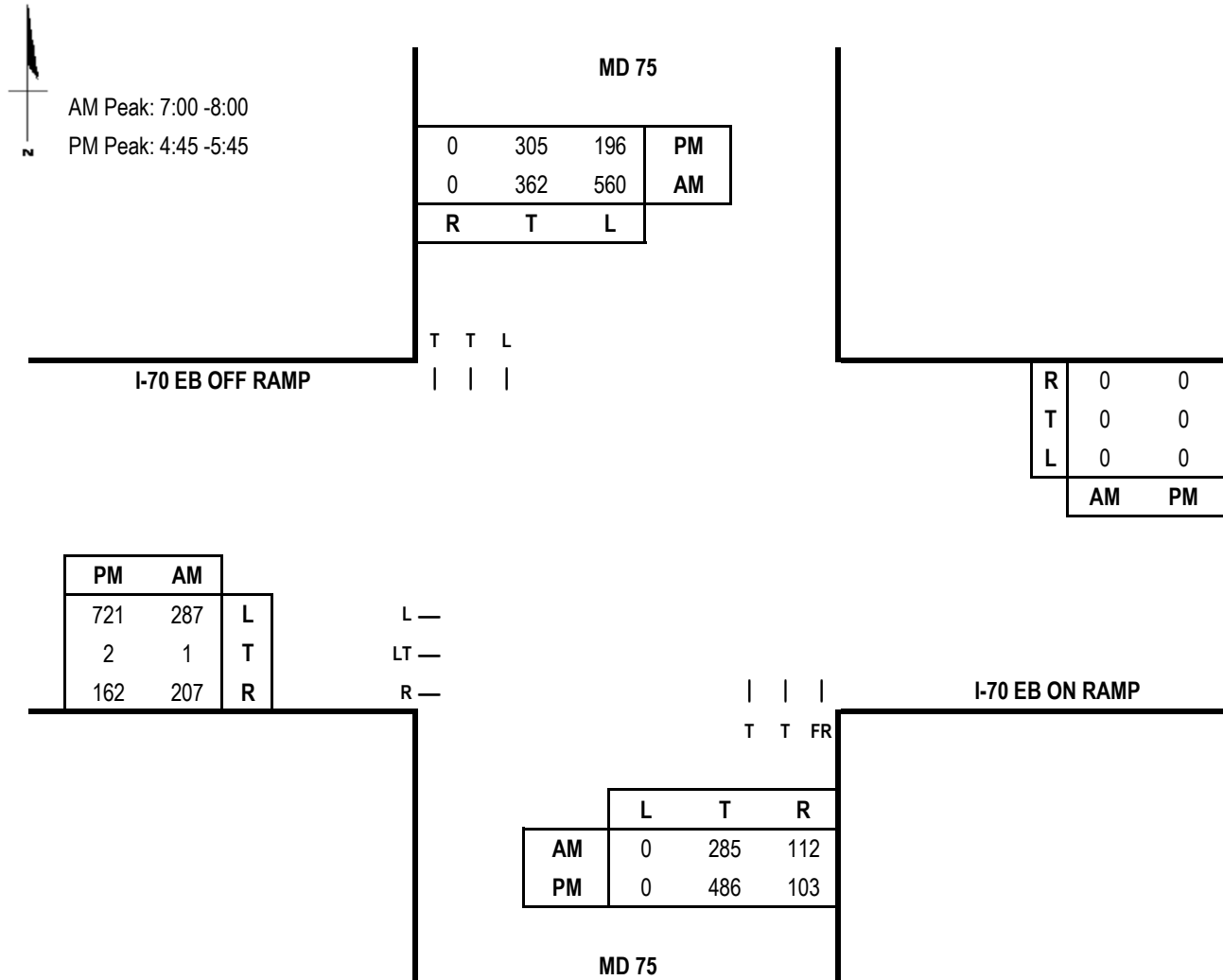
Date of Count: 2/25/21

N/S Road: MD 75

Day of Count: Thursday

Conditions: Background Traffic

Analyst: Qiang Tian



Capacity Analysis

Morning Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			AM
	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
NB	285	0.55	157	560	1.00	560	717
SB	362	0.55	199	0	0.00	0	
EB	288	0.60	173	0	0.00	0	173
WB	0	0.00	0	287	0.60	172	
CLV TOTAL=							890
Level of Service (LOS)=							A

AM V/C =0.56

Evening Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			PM
	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
NB	486	0.55	267	196	1.00	196	463
SB	305	0.55	168	0	0.00	0	
EB	723	0.60	434	0	0.00	0	434
WB	0	0.00	0	721	0.60	433	
CLV TOTAL=							897
Level of Service (LOS)=							A

PM V/C =0.56

Scenario ID - BACK10

CRITICAL LANE VOLUME (CLV) METHODOLOGY for Frederick County

E/W Road: I-70 EB On Ramp/I-70 Eb Off Ramp

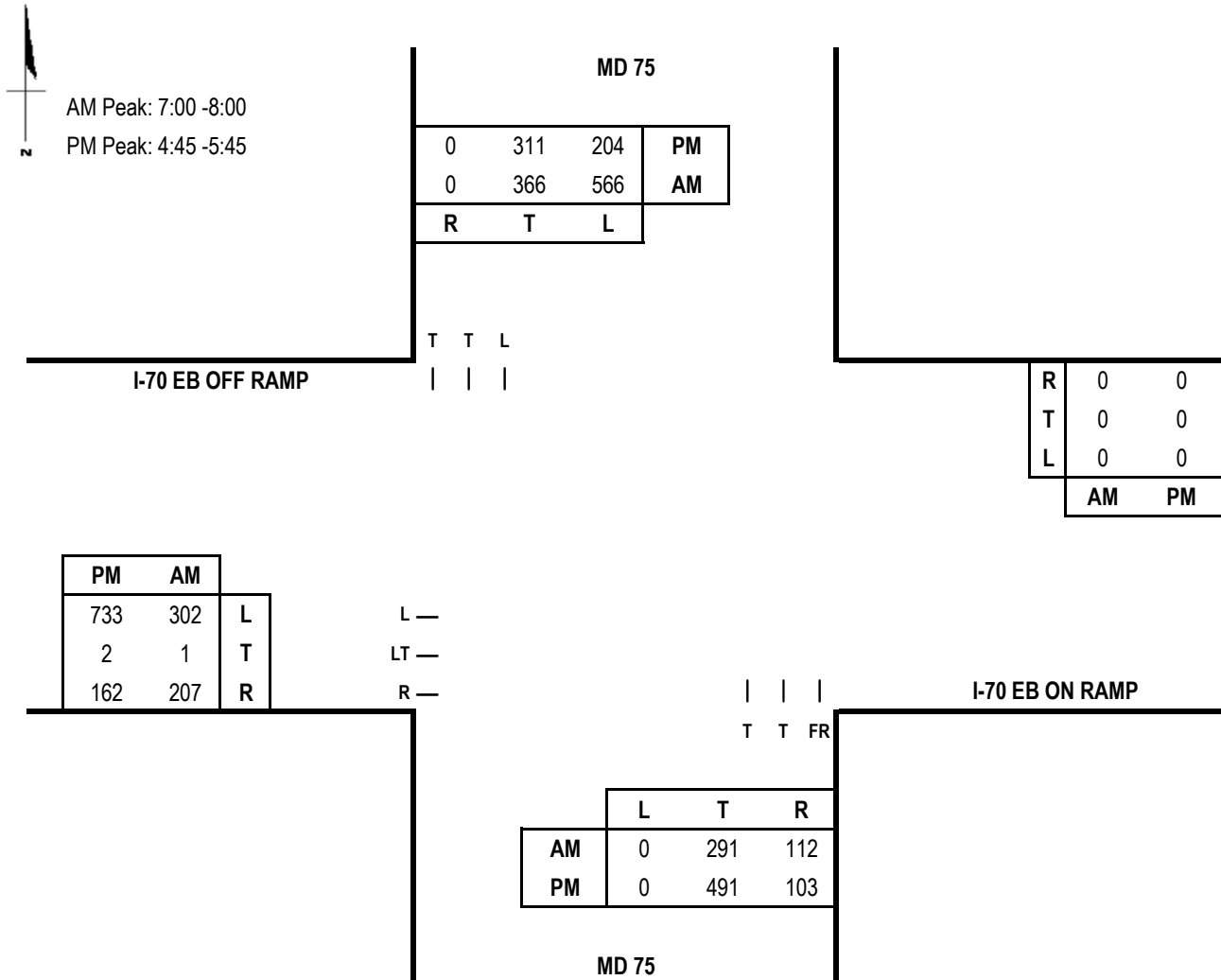
Date of Count: 2/25/21

N/S Road: MD 75

Day of Count: Thursday

Conditions: Total Traffic

Analyst: Qiang Tian



Capacity Analysis

Morning Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			AM
	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
NB	291	0.55	160	566	1.00	566	726
SB	366	0.55	201	0	0.00	0	
EB	303	0.60	182	0	0.00	0	182
WB	0	0.00	0	302	0.60	181	
CLV TOTAL=							908
Level of Service (LOS)=							A

Evening Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			PM
	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
NB	491	0.55	270	204	1.00	204	474
SB	311	0.55	171	0	0.00	0	
EB	735	0.60	441	0	0.00	0	441
WB	0	0.00	0	733	0.60	440	
CLV TOTAL=							915
Level of Service (LOS)=							A

Scenario ID - TOT10

AM V/C =0.57

PM V/C =0.57

HCS Two-Way Stop-Control Report

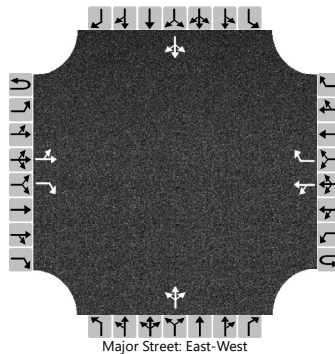
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	7/11/2022
Analysis Year	2022
Time Analyzed	Existing AM
Intersection Orientation	East-West
Project Description	East Main

Site Information

Intersection	Main Street/Royal Oak Drive
Jurisdiction	Town of New Market
East/West Street	Main Street
North/South Street	Royal Oak Drive
Peak Hour Factor	0.83
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	1	0	0	1	1		0	1	0		0	1	0
Configuration		LT		R		LT		R			LTR				LTR	
Volume (veh/h)		15	381	9		7	163	15		4	0	6		46	0	61
Percent Heavy Vehicles (%)		2				2				2	2	2		2	2	2
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized	No				No											
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.12				4.12				7.12	6.52	6.22		7.12	6.52	6.22
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.22				2.22				3.52	4.02	3.32		3.52	4.02	3.32

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		18				8					12				129	
Capacity, c (veh/h)		1356				1092					435				506	
v/c Ratio		0.01				0.01					0.03				0.25	
95% Queue Length, Q ₉₅ (veh)		0.0				0.0					0.1				1.0	
Control Delay (s/veh)		7.7	0.1			8.3	0.1				13.5				14.5	
Level of Service (LOS)		A	A			A	A				B				B	
Approach Delay (s/veh)	0.4				0.4				13.5				14.5			
Approach LOS	A				A				B				B			

HCS Two-Way Stop-Control Report

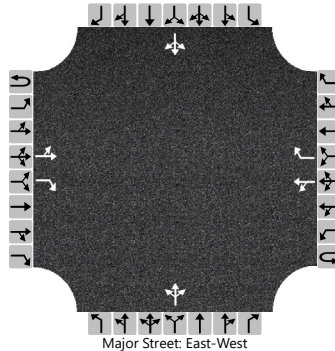
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	7/11/2022
Analysis Year	2022
Time Analyzed	Existing PM
Intersection Orientation	East-West
Project Description	East Main

Site Information

Intersection	Main Street/Royal Oak Drive
Jurisdiction	Town of New Market
East/West Street	Main Street
North/South Street	Royal Oak Drive
Peak Hour Factor	0.95
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	1	0	0	1	1		0	1	0		0	1	0
Configuration		LT		R		LT		R			LTR				LTR	
Volume (veh/h)		108	313	9		7	435	97		11	0	10		49	1	39
Percent Heavy Vehicles (%)		2				2				2	2	2		2	2	2
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized	No				No											
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.12				4.12				7.12	6.52	6.22		7.12	6.52	6.22
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.22				2.22				3.52	4.02	3.32		3.52	4.02	3.32

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		114				7					22				94	
Capacity, c (veh/h)		1011				1220					265				242	
v/c Ratio		0.11				0.01					0.08				0.39	
95% Queue Length, Q ₉₅ (veh)		0.4				0.0					0.3				1.7	
Control Delay (s/veh)		9.0	0.7			8.0	0.1				19.8				28.9	
Level of Service (LOS)		A	A			A	A				C				D	
Approach Delay (s/veh)	2.7				0.1				19.8				28.9			
Approach LOS	A				A				C				D			

HCS Two-Way Stop-Control Report

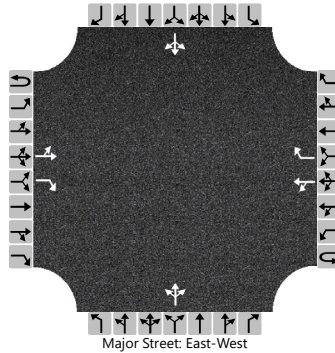
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	7/11/2022
Analysis Year	2025
Time Analyzed	Background AM
Intersection Orientation	East-West
Project Description	East Main

Site Information

Intersection	Main Street/Royal Oak Drive
Jurisdiction	Town of New Market
East/West Street	Main Street
North/South Street	Royal Oak Drive
Peak Hour Factor	0.83
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	1	0	0	1	1		0	1	0		0	1	0
Configuration		LT		R		LT		R			LTR				LTR	
Volume (veh/h)		15	558	9		7	248	16		4	0	6		51	0	64
Percent Heavy Vehicles (%)		2				2				2	2	2		2	2	2
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized	No				No											
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.12				4.12				7.12	6.52	6.22		7.12	6.52	6.22
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.22				2.22				3.52	4.02	3.32		3.52	4.02	3.32

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		18				8					12				139	
Capacity, c (veh/h)		1242				910					286				337	
v/c Ratio		0.01				0.01					0.04				0.41	
95% Queue Length, Q ₉₅ (veh)		0.0				0.0					0.1				1.9	
Control Delay (s/veh)		7.9	0.1			9.0	0.1				18.1				22.9	
Level of Service (LOS)		A	A			A	A				C				C	
Approach Delay (s/veh)	0.3				0.3				18.1				22.9			
Approach LOS	A				A				C				C			

HCS Two-Way Stop-Control Report

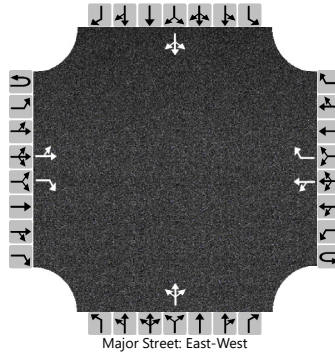
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	7/11/2022
Analysis Year	2025
Time Analyzed	Background PM
Intersection Orientation	East-West
Project Description	East Main

Site Information

Intersection	Main Street/Royal Oak Drive
Jurisdiction	Town of New Market
East/West Street	Main Street
North/South Street	Royal Oak Drive
Peak Hour Factor	0.95
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	1	0	0	1	1		0	1	0		0	1	0
Configuration		LT		R		LT		R			LTR				LTR	
Volume (veh/h)		112	446	9		7	626	104		11	0	10		52	1	41
Percent Heavy Vehicles (%)		2				2				2	2	2		2	2	2
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized	No				No											
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.12				4.12				7.12	6.52	6.22		7.12	6.52	6.22
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.22				2.22				3.52	4.02	3.32		3.52	4.02	3.32

Delay, Queue Length, and Level of Service

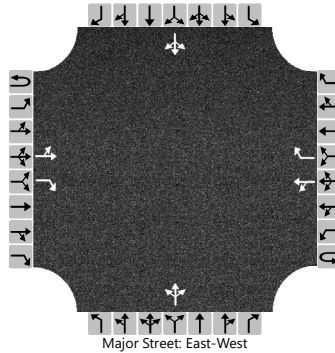
Flow Rate, v (veh/h)		118				7					22				99	
Capacity, c (veh/h)		846				1083					150				139	
v/c Ratio		0.14				0.01					0.15				0.71	
95% Queue Length, Q ₉₅ (veh)		0.5				0.0					0.5				4.1	
Control Delay (s/veh)		9.9	1.1			8.3	0.1				33.0				77.4	
Level of Service (LOS)		A	A			A	A				D				F	
Approach Delay (s/veh)	2.8				0.1				33.0				77.4			
Approach LOS	A				A				D				F			

HCS Two-Way Stop-Control Report

General Information

Analyst	QT	Intersection	Main Street/Royal Oak Drive
Agency/Co.	TTG, Inc.	Jurisdiction	Town of New Market
Date Performed	7/11/2022	East/West Street	Main Street
Analysis Year	2025	North/South Street	Royal Oak Drive
Time Analyzed	Total AM	Peak Hour Factor	0.83
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	East Main		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	1	0	0	1	1		0	1	0		0	1	0
Configuration		LT		R		LT		R			LTR				LTR	
Volume (veh/h)		15	570	9		7	256	16		4	0	6		51	0	64
Percent Heavy Vehicles (%)		2				2				2	2	2		2	2	2
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized	No				No											
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.12				4.12				7.12	6.52	6.22		7.12	6.52	6.22
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.22				2.22				3.52	4.02	3.32		3.52	4.02	3.32

Delay, Queue Length, and Level of Service

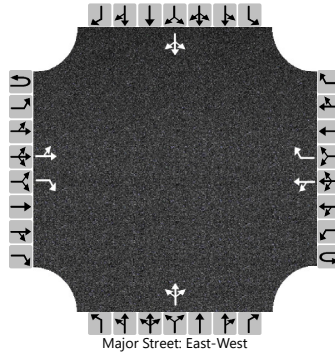
Flow Rate, v (veh/h)		18				8					12					139
Capacity, c (veh/h)		1232				899					264					323
v/c Ratio		0.01				0.01					0.05					0.43
95% Queue Length, Q ₉₅ (veh)		0.0				0.0					0.1					2.1
Control Delay (s/veh)		8.0	0.1			9.0	0.1				19.3					24.2
Level of Service (LOS)		A	A			A	A				C					C
Approach Delay (s/veh)	0.3				0.3				19.3				24.2			
Approach LOS	A				A				C				C			

HCS Two-Way Stop-Control Report

General Information

Analyst	QT	Intersection	Main Street/Royal Oak Drive
Agency/Co.	TTG, Inc.	Jurisdiction	Town of New Market
Date Performed	7/11/2022	East/West Street	Main Street
Analysis Year	2025	North/South Street	Royal Oak Drive
Time Analyzed	Total PM	Peak Hour Factor	0.95
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	East Main		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	1	0	0	1	1		0	1	0		0	1	0
Configuration		LT		R		LT		R			LTR				LTR	
Volume (veh/h)		112	456	9		7	638	104		11	0	10		52	1	41
Percent Heavy Vehicles (%)		2				2				2	2	2		2	2	2
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized	No				No											
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.12				4.12				7.12	6.52	6.22		7.12	6.52	6.22
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.22				2.22				3.52	4.02	3.32		3.52	4.02	3.32

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		118				7					22				99	
Capacity, c (veh/h)		836				1074					130				133	
v/c Ratio		0.14				0.01					0.17				0.75	
95% Queue Length, Q ₉₅ (veh)		0.5				0.0					0.6				4.3	
Control Delay (s/veh)		10.0	1.1			8.4	0.1				38.3				86.4	
Level of Service (LOS)		B	A			A	A				E				F	
Approach Delay (s/veh)	2.8				0.1				38.3				86.4			
Approach LOS	A				A				E				F			

HCS Two-Way Stop-Control Report

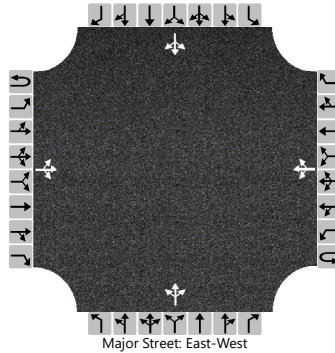
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	7/11/2022
Analysis Year	2022
Time Analyzed	Existing AM
Intersection Orientation	East-West
Project Description	East Main

Site Information

Intersection	Main Street/Old New Market Road
Jurisdiction	Town of New Market
East/West Street	Main Street
North/South Street	Old New Market Road
Peak Hour Factor	0.81
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		29	389	0		1	177	1		0	0	1		3	0	47
Percent Heavy Vehicles (%)		2				2				2	2	2		2	2	2
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.12				4.12				7.12	6.52	6.22		7.12	6.52	6.22
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.22				2.22				3.52	4.02	3.32		3.52	4.02	3.32

Delay, Queue Length, and Level of Service

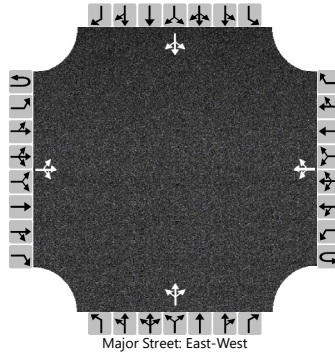
Flow Rate, v (veh/h)		36				1					1				62	
Capacity, c (veh/h)		1350				1082					586				744	
v/c Ratio		0.03				0.00					0.00				0.08	
95% Queue Length, Q ₉₅ (veh)		0.1				0.0					0.0				0.3	
Control Delay (s/veh)		7.7	0.3	0.3		8.3	0.0	0.0			11.2				10.3	
Level of Service (LOS)		A	A	A		A	A	A			B				B	
Approach Delay (s/veh)	0.8				0.1				11.2				10.3			
Approach LOS	A				A				B				B			

HCS Two-Way Stop-Control Report

General Information

Analyst	QT	Intersection	Main Street/Old New Market Road
Agency/Co.	TTG, Inc.	Jurisdiction	Town of New Market
Date Performed	7/11/2022	East/West Street	Main Street
Analysis Year	2022	North/South Street	Old New Market Road
Time Analyzed	Existing PM	Peak Hour Factor	0.97
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	East Main		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		59	325	1		9	496	2		2	0	3		2	1	127
Percent Heavy Vehicles (%)		2				2				2	2	2		2	2	2
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.12				4.12				7.12	6.52	6.22		7.12	6.52	6.22
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.22				2.22				3.52	4.02	3.32		3.52	4.02	3.32

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		61				9					5					134
Capacity, c (veh/h)		1052				1223					297					541
v/c Ratio		0.06				0.01					0.02					0.25
95% Queue Length, Q ₉₅ (veh)		0.2				0.0					0.1					1.0
Control Delay (s/veh)		8.6	0.6	0.6		8.0	0.1	0.1			17.3					13.8
Level of Service (LOS)		A	A	A		A	A	A			C					B
Approach Delay (s/veh)	1.8				0.2				17.3				13.8			
Approach LOS	A				A				C				B			

HCS Two-Way Stop-Control Report

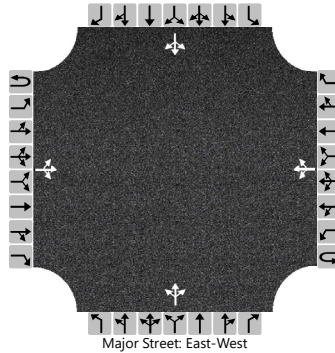
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	7/11/2022
Analysis Year	2025
Time Analyzed	Background AM
Intersection Orientation	East-West
Project Description	East Main

Site Information

Intersection	Main Street/Old New Market Road
Jurisdiction	Town of New Market
East/West Street	Main Street
North/South Street	Old New Market Road
Peak Hour Factor	0.81
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		32	523	0		1	241	1		0	0	1		3	0	49
Percent Heavy Vehicles (%)		2				2				2	2	2		2	2	2
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.12				4.12				7.12	6.52	6.22		7.12	6.52	6.22
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.22				2.22				3.52	4.02	3.32		3.52	4.02	3.32

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		40				1					1				64	
Capacity, c (veh/h)		1262				940					472				642	
v/c Ratio		0.03				0.00					0.00				0.10	
95% Queue Length, Q ₉₅ (veh)		0.1				0.0					0.0				0.3	
Control Delay (s/veh)		7.9	0.4	0.4		8.8	0.0	0.0			12.7				11.2	
Level of Service (LOS)		A	A	A		A	A	A			B				B	
Approach Delay (s/veh)	0.8				0.1				12.7				11.2			
Approach LOS	A				A				B				B			

HCS Two-Way Stop-Control Report

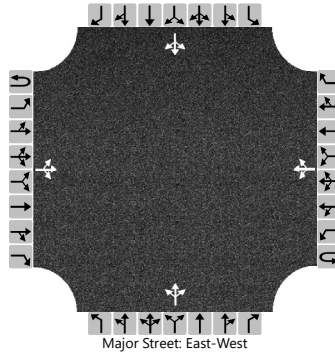
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	7/11/2022
Analysis Year	2025
Time Analyzed	Background PM
Intersection Orientation	East-West
Project Description	East Main

Site Information

Intersection	Main Street/Old New Market Road
Jurisdiction	Town of New Market
East/West Street	Main Street
North/South Street	Old New Market Road
Peak Hour Factor	0.97
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		64	413	1		9	638	2		2	0	3		2	1	135
Percent Heavy Vehicles (%)		2				2				2	2	2		2	2	2
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.12				4.12				7.12	6.52	6.22		7.12	6.52	6.22
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.22				2.22				3.52	4.02	3.32		3.52	4.02	3.32

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		66				9					5				142	
Capacity, c (veh/h)		928				1133					194				442	
v/c Ratio		0.07				0.01					0.03				0.32	
95% Queue Length, Q ₉₅ (veh)		0.2				0.0					0.1				1.4	
Control Delay (s/veh)		9.2	0.9	0.9		8.2	0.1	0.1			24.0				17.0	
Level of Service (LOS)		A	A	A		A	A	A			C				C	
Approach Delay (s/veh)	2.0				0.2				24.0				17.0			
Approach LOS	A				A				C				C			

HCS Two-Way Stop-Control Report

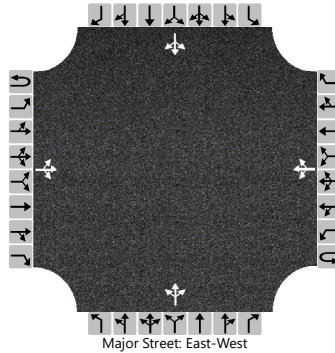
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	7/11/2022
Analysis Year	2025
Time Analyzed	Total AM
Intersection Orientation	East-West
Project Description	East Main

Site Information

Intersection	Main Street/Old New Market Road
Jurisdiction	Town of New Market
East/West Street	Main Street
North/South Street	Old New Market Road
Peak Hour Factor	0.81
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		32	535	0		1	249	1		0	0	1		3	0	49
Percent Heavy Vehicles (%)		2				2				2	2	2		2	2	2
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.12				4.12				7.12	6.52	6.22		7.12	6.52	6.22
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.22				2.22				3.52	4.02	3.32		3.52	4.02	3.32

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		40				1					1					64
Capacity, c (veh/h)		1252				928					463					631
v/c Ratio		0.03				0.00					0.00					0.10
95% Queue Length, Q ₉₅ (veh)		0.1				0.0					0.0					0.3
Control Delay (s/veh)		8.0	0.4	0.4		8.9	0.0	0.0			12.8					11.4
Level of Service (LOS)		A	A	A		A	A	A			B					B
Approach Delay (s/veh)	0.8				0.0				12.8				11.4			
Approach LOS	A				A				B				B			

HCS Two-Way Stop-Control Report

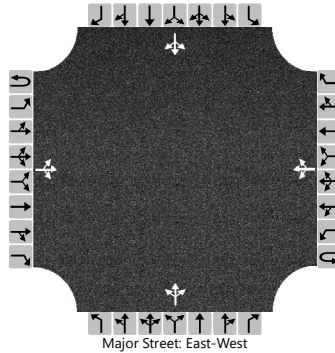
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	7/11/2022
Analysis Year	2025
Time Analyzed	Total PM
Intersection Orientation	East-West
Project Description	East Main

Site Information

Intersection	Main Street/Old New Market Road
Jurisdiction	Town of New Market
East/West Street	Main Street
North/South Street	Old New Market Road
Peak Hour Factor	0.97
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		64	423	1		9	650	2		2	0	3		2	1	135
Percent Heavy Vehicles (%)		2				2				2	2	2		2	2	2
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.12				4.12				7.12	6.52	6.22		7.12	6.52	6.22
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.22				2.22				3.52	4.02	3.32		3.52	4.02	3.32

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		66				9					5					142
Capacity, c (veh/h)		919				1123					170					434
v/c Ratio		0.07				0.01					0.03					0.33
95% Queue Length, Q ₉₅ (veh)		0.2				0.0					0.1					1.4
Control Delay (s/veh)		9.2	0.9	0.9		8.2	0.1	0.1			26.8					17.3
Level of Service (LOS)		A	A	A		A	A	A			D					C
Approach Delay (s/veh)	2.0				0.2				26.8				17.3			
Approach LOS	A				A				D				C			

HCS Two-Way Stop-Control Report

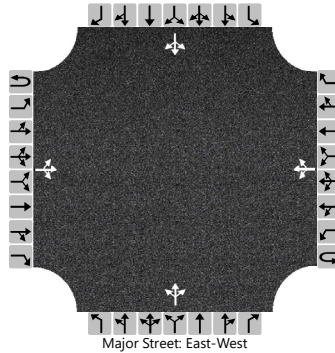
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	7/11/2022
Analysis Year	2022
Time Analyzed	Existing AM
Intersection Orientation	East-West
Project Description	East Main

Site Information

Intersection	Main Street/Federal Street
Jurisdiction	Town of New Market
East/West Street	Main Street
North/South Street	Federal Street
Peak Hour Factor	0.87
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		2	523	0		0	301	2		0	0	5		2	0	1
Percent Heavy Vehicles (%)		2				2				2	2	2		2	2	2
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.12				4.12				7.12	6.52	6.22		7.12	6.52	6.22
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.22				2.22				3.52	4.02	3.32		3.52	4.02	3.32

Delay, Queue Length, and Level of Service

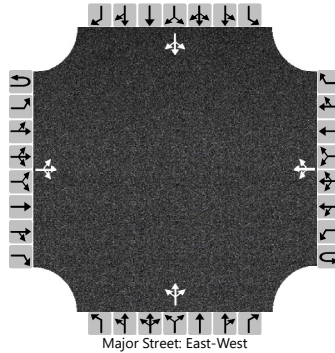
Flow Rate, v (veh/h)		2				0					6				3	
Capacity, c (veh/h)		1211				976					500				302	
v/c Ratio		0.00				0.00					0.01				0.01	
95% Queue Length, Q ₉₅ (veh)		0.0				0.0					0.0				0.0	
Control Delay (s/veh)		8.0	0.0	0.0		8.7	0.0	0.0			12.3				17.1	
Level of Service (LOS)		A	A	A		A	A	A			B				C	
Approach Delay (s/veh)	0.1				0.0				12.3				17.1			
Approach LOS	A				A				B				C			

HCS Two-Way Stop-Control Report

General Information

Analyst	QT	Intersection	Main Street/Federal Street
Agency/Co.	TTG, Inc.	Jurisdiction	Town of New Market
Date Performed	7/11/2022	East/West Street	Main Street
Analysis Year	2022	North/South Street	Federal Street
Time Analyzed	Existing PM	Peak Hour Factor	0.90
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	East Main		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		0	487	0		3	556	0		0	1	3		1	0	1
Percent Heavy Vehicles (%)		2				2				2	2	2		2	2	2
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.12				4.12				7.12	6.52	6.22		7.12	6.52	6.22
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.22				2.22				3.52	4.02	3.32		3.52	4.02	3.32

Delay, Queue Length, and Level of Service

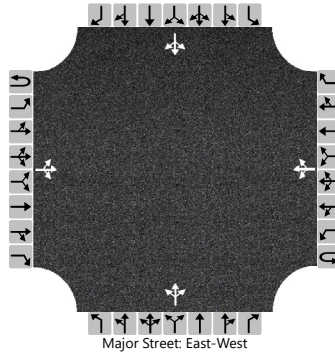
Flow Rate, v (veh/h)		0				3					4				2	
Capacity, c (veh/h)		962				1027					373				250	
v/c Ratio		0.00				0.00					0.01				0.01	
95% Queue Length, Q ₉₅ (veh)		0.0				0.0					0.0				0.0	
Control Delay (s/veh)		8.7	0.0	0.0		8.5	0.0	0.0			14.8				19.5	
Level of Service (LOS)		A	A	A		A	A	A			B				C	
Approach Delay (s/veh)	0.0				0.1				14.8				19.5			
Approach LOS	A				A				B				C			

HCS Two-Way Stop-Control Report

General Information

Analyst	QT	Intersection	Main Street/Federal Street
Agency/Co.	TTG, Inc.	Jurisdiction	Town of New Market
Date Performed	7/11/2022	East/West Street	Main Street
Analysis Year	2025	North/South Street	Federal Street
Time Analyzed	Background AM	Peak Hour Factor	0.87
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	East Main		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		2	661	0		0	369	2		0	0	5		2	0	1
Percent Heavy Vehicles (%)		2				2				2	2	2		2	2	2
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.12				4.12				7.12	6.52	6.22		7.12	6.52	6.22
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.22				2.22				3.52	4.02	3.32		3.52	4.02	3.32

Delay, Queue Length, and Level of Service

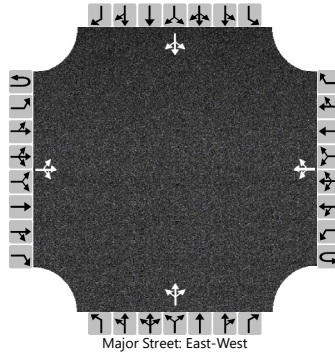
Flow Rate, v (veh/h)		2				0					6				3	
Capacity, c (veh/h)		1133				852					406				215	
v/c Ratio		0.00				0.00					0.01				0.02	
95% Queue Length, Q ₉₅ (veh)		0.0				0.0					0.0				0.0	
Control Delay (s/veh)		8.2	0.0	0.0		9.2	0.0	0.0			14.0				22.0	
Level of Service (LOS)		A	A	A		A	A	A			B				C	
Approach Delay (s/veh)	0.1				0.0				14.0				22.0			
Approach LOS	A				A				B				C			

HCS Two-Way Stop-Control Report

General Information

Analyst	QT	Intersection	Main Street/Federal Street
Agency/Co.	TTG, Inc.	Jurisdiction	Town of New Market
Date Performed	7/11/2022	East/West Street	Main Street
Analysis Year	2025	North/South Street	Federal Street
Time Analyzed	Background PM	Peak Hour Factor	0.90
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	East Main		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		0	580	0		3	700	0		0	1	3		1	0	1
Percent Heavy Vehicles (%)		2				2				2	2	2		2	2	2
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.12				4.12				7.12	6.52	6.22		7.12	6.52	6.22
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.22				2.22				3.52	4.02	3.32		3.52	4.02	3.32

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		0				3					4				2	
Capacity, c (veh/h)		839				941					290				172	
v/c Ratio		0.00				0.00					0.02				0.01	
95% Queue Length, Q ₉₅ (veh)		0.0				0.0					0.0				0.0	
Control Delay (s/veh)		9.3	0.0	0.0		8.8	0.1	0.1			17.6				26.2	
Level of Service (LOS)		A	A	A		A	A	A			C				D	
Approach Delay (s/veh)	0.0				0.1				17.6				26.2			
Approach LOS	A				A				C				D			

HCS Two-Way Stop-Control Report

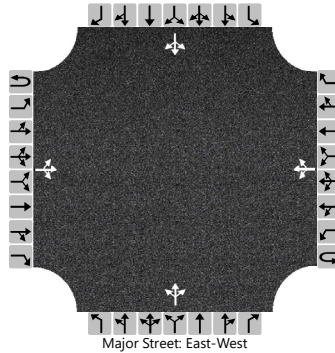
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	7/11/2022
Analysis Year	2025
Time Analyzed	Total AM
Intersection Orientation	East-West
Project Description	East Main

Site Information

Intersection	Main Street/Federal Street
Jurisdiction	Town of New Market
East/West Street	Main Street
North/South Street	Federal Street
Peak Hour Factor	0.87
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		2	673	0		0	377	2		0	0	5		2	0	1
Percent Heavy Vehicles (%)		2				2				2	2	2		2	2	2
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.12				4.12				7.12	6.52	6.22		7.12	6.52	6.22
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.22				2.22				3.52	4.02	3.32		3.52	4.02	3.32

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		2				0					6				3	
Capacity, c (veh/h)		1124				842					399				207	
v/c Ratio		0.00				0.00					0.01				0.02	
95% Queue Length, Q ₉₅ (veh)		0.0				0.0					0.0				0.1	
Control Delay (s/veh)		8.2	0.0	0.0		9.3	0.0	0.0			14.2				22.7	
Level of Service (LOS)		A	A	A		A	A	A			B				C	
Approach Delay (s/veh)	0.1				0.0				14.2				22.7			
Approach LOS	A				A				B				C			

HCS Two-Way Stop-Control Report

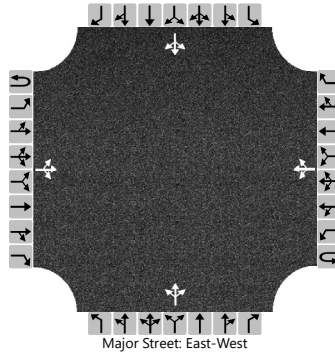
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	7/11/2022
Analysis Year	2025
Time Analyzed	Total PM
Intersection Orientation	East-West
Project Description	East Main

Site Information

Intersection	Main Street/Federal Street
Jurisdiction	Town of New Market
East/West Street	Main Street
North/South Street	Federal Street
Peak Hour Factor	0.90
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		0	590	0		3	712	0		0	1	3		1	0	1
Percent Heavy Vehicles (%)		2				2				2	2	2		2	2	2
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.12				4.12				7.12	6.52	6.22		7.12	6.52	6.22
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.22				2.22				3.52	4.02	3.32		3.52	4.02	3.32

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		0				3					4				2	
Capacity, c (veh/h)		829				932					282				166	
v/c Ratio		0.00				0.00					0.02				0.01	
95% Queue Length, Q ₉₅ (veh)		0.0				0.0					0.0				0.0	
Control Delay (s/veh)		9.3	0.0	0.0		8.9	0.1	0.1			18.0				27.0	
Level of Service (LOS)		A	A	A		A	A	A			C				D	
Approach Delay (s/veh)	0.0				0.1				18.0				27.0			
Approach LOS	A				A				C				D			

HCS Two-Way Stop-Control Report

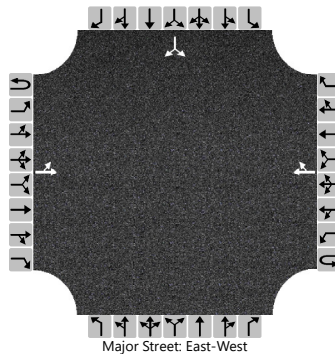
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	7/11/2022
Analysis Year	2022
Time Analyzed	Existing AM
Intersection Orientation	East-West
Project Description	East Main

Site Information

Intersection	Main Street/Marley Street/Site Access
Jurisdiction	Town of New Market
East/West Street	Main Street
North/South Street	Marley Street/Site Access
Peak Hour Factor	0.85
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	1	0
Configuration		LT						TR							LR	
Volume (veh/h)		13	516				272	1						18		28
Percent Heavy Vehicles (%)		2												2		2
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.12												6.42		6.22
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.22												3.52		3.32

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		15													54	
Capacity, c (veh/h)		1239													446	
v/c Ratio		0.01													0.12	
95% Queue Length, Q ₉₅ (veh)		0.0													0.4	
Control Delay (s/veh)		7.9	0.1												14.2	
Level of Service (LOS)		A	A												B	
Approach Delay (s/veh)	0.3												14.2			
Approach LOS	A												B			

HCS Two-Way Stop-Control Report

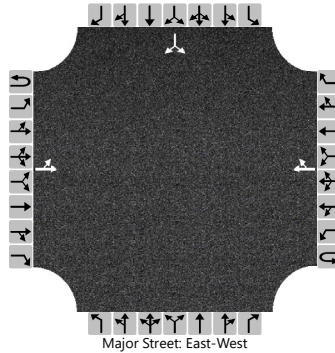
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	7/11/2022
Analysis Year	2025
Time Analyzed	Existing PM
Intersection Orientation	East-West
Project Description	East Main

Site Information

Intersection	Main Street/Marley Street/Site Access
Jurisdiction	Town of New Market
East/West Street	Main Street
North/South Street	Marley Street/Site Access
Peak Hour Factor	0.88
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	1	0
Configuration		LT						TR							LR	
Volume (veh/h)		6	459				566	10						17		12
Percent Heavy Vehicles (%)		2												2		2
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.12												6.42		6.22
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.22												3.52		3.32

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		7													33	
Capacity, c (veh/h)		932													269	
v/c Ratio		0.01													0.12	
95% Queue Length, Q ₉₅ (veh)		0.0													0.4	
Control Delay (s/veh)		8.9	0.1												20.2	
Level of Service (LOS)		A	A												C	
Approach Delay (s/veh)	0.2												20.2			
Approach LOS	A												C			

HCS Two-Way Stop-Control Report

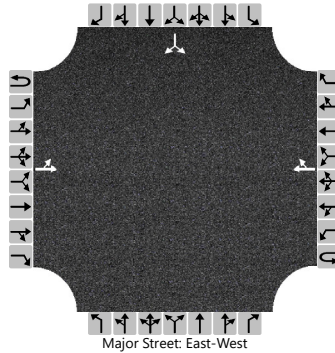
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	7/11/2022
Analysis Year	2025
Time Analyzed	Background AM
Intersection Orientation	East-West
Project Description	East Main

Site Information

Intersection	Main Street/Marley Street/Site Access
Jurisdiction	Town of New Market
East/West Street	Main Street
North/South Street	Marley Street/Site Access
Peak Hour Factor	0.85
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	1	0
Configuration		LT						TR							LR	
Volume (veh/h)		13	654				339	1						19		29
Percent Heavy Vehicles (%)		2												2		2
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.12												6.42		6.22
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.22												3.52		3.32

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		15													56	
Capacity, c (veh/h)		1159													344	
v/c Ratio		0.01													0.16	
95% Queue Length, Q ₉₅ (veh)		0.0													0.6	
Control Delay (s/veh)		8.1	0.2												17.5	
Level of Service (LOS)		A	A												C	
Approach Delay (s/veh)	0.3												17.5			
Approach LOS	A												C			

HCS Two-Way Stop-Control Report

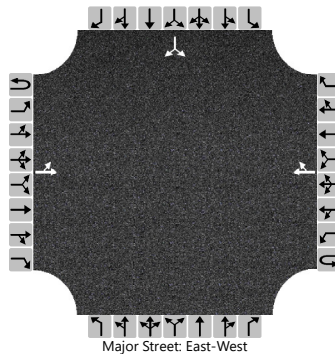
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	7/11/2022
Analysis Year	2025
Time Analyzed	Background PM
Intersection Orientation	East-West
Project Description	East Main

Site Information

Intersection	Main Street/Marley Street/Site Access
Jurisdiction	Town of New Market
East/West Street	Main Street
North/South Street	Marley Street/Site Access
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	1	0
Configuration		LT						TR							LR	
Volume (veh/h)		6	551				710	10						18		12
Percent Heavy Vehicles (%)		2												2		2
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.12												6.42		6.22
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.22												3.52		3.32

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		7													33	
Capacity, c (veh/h)		835													205	
v/c Ratio		0.01													0.16	
95% Queue Length, Q ₉₅ (veh)		0.0													0.6	
Control Delay (s/veh)		9.3	0.1												25.8	
Level of Service (LOS)		A	A												D	
Approach Delay (s/veh)	0.2												25.8			
Approach LOS	A												D			

HCS Two-Way Stop-Control Report

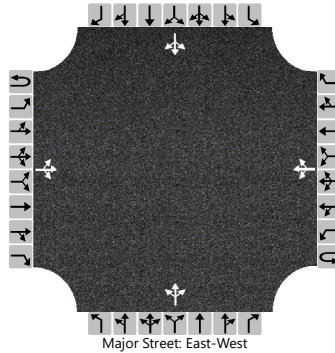
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	7/11/2022
Analysis Year	2025
Time Analyzed	Total AM
Intersection Orientation	East-West
Project Description	East Main

Site Information

Intersection	Main Street/Marley Street/Site Access
Jurisdiction	Town of New Market
East/West Street	Main Street
North/South Street	Marley Street/Site Access
Peak Hour Factor	0.85
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		13	657	9		10	341	1		6	0	6		19	0	29
Percent Heavy Vehicles (%)		2				2				2	2	2		2	2	2
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.12				4.12				7.12	6.52	6.22		7.12	6.52	6.22
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.22				2.22				3.52	4.02	3.32		3.52	4.02	3.32

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		15				12					14					56
Capacity, c (veh/h)		1156				835					202					271
v/c Ratio		0.01				0.01					0.07					0.21
95% Queue Length, Q ₉₅ (veh)		0.0				0.0					0.2					0.8
Control Delay (s/veh)		8.2	0.2	0.2		9.4	0.2	0.2			24.1					21.7
Level of Service (LOS)		A	A	A		A	A	A			C					C
Approach Delay (s/veh)	0.3				0.4				24.1				21.7			
Approach LOS	A				A				C				C			

HCS Two-Way Stop-Control Report

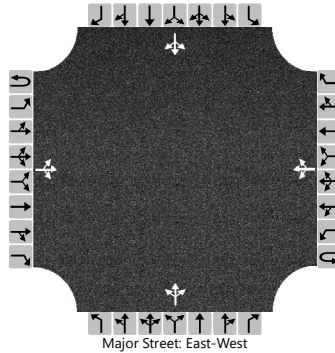
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	7/11/2022
Analysis Year	2025
Time Analyzed	Total PM
Intersection Orientation	East-West
Project Description	East Main

Site Information

Intersection	Main Street/Marley Street/Site Access
Jurisdiction	Town of New Market
East/West Street	Main Street
North/South Street	Marley Street/Site Access
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		6	544	17		10	711	10		11	0	17		18	0	12
Percent Heavy Vehicles (%)		2				2				2	2	2		2	2	2
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.12				4.12				7.12	6.52	6.22		7.12	6.52	6.22
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.22				2.22				3.52	4.02	3.32		3.52	4.02	3.32

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		7				11					30				33	
Capacity, c (veh/h)		835				969					205				150	
v/c Ratio		0.01				0.01					0.15				0.22	
95% Queue Length, Q ₉₅ (veh)		0.0				0.0					0.5				0.8	
Control Delay (s/veh)		9.3	0.1	0.1		8.8	0.2	0.2			25.7				35.6	
Level of Service (LOS)		A	A	A		A	A	A			D				E	
Approach Delay (s/veh)	0.2				0.3				25.7				35.6			
Approach LOS	A				A				D				E			

HCS Two-Way Stop-Control Report

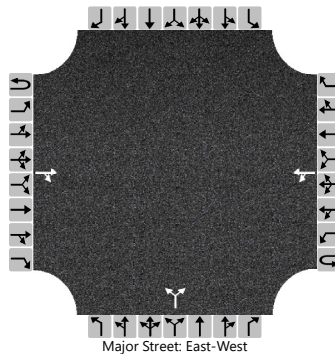
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	7/11/2022
Analysis Year	2022
Time Analyzed	Existing AM
Intersection Orientation	East-West
Project Description	East Main

Site Information

Intersection	Main Street/Bye Alley
Jurisdiction	Town of New Market
East/West Street	Main Street
North/South Street	Marley Street/Bye Alley
Peak Hour Factor	0.88
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			541	0		0	274			0		0				
Percent Heavy Vehicles (%)						2				2		2				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.12				6.42		6.22				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.22				3.52		3.32				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						0					0					
Capacity, c (veh/h)						965					0					
v/c Ratio						0.00										
95% Queue Length, Q ₉₅ (veh)						0.0										
Control Delay (s/veh)						8.7	0.0									
Level of Service (LOS)						A	A									
Approach Delay (s/veh)					0.0											
Approach LOS					A											

HCS Two-Way Stop-Control Report

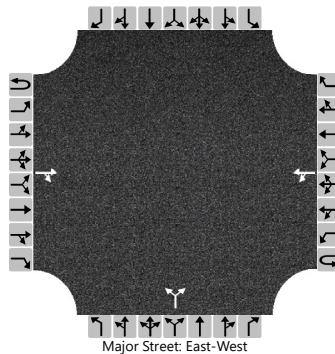
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	7/11/2022
Analysis Year	2022
Time Analyzed	Existing PM
Intersection Orientation	East-West
Project Description	East Main

Site Information

Intersection	Main Street/Bye Alley
Jurisdiction	Town of New Market
East/West Street	Main Street
North/South Street	Marley Street/Bye Alley
Peak Hour Factor	0.89
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			490	1		0	559			0		0				
Percent Heavy Vehicles (%)						2				2		2				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1					7.1		6.2			
Critical Headway (sec)						4.12					6.42		6.22			
Base Follow-Up Headway (sec)						2.2					3.5		3.3			
Follow-Up Headway (sec)						2.22					3.52		3.32			

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						0					0					
Capacity, c (veh/h)						1018					0					
v/c Ratio						0.00										
95% Queue Length, Q ₉₅ (veh)						0.0										
Control Delay (s/veh)						8.5	0.0									
Level of Service (LOS)						A	A									
Approach Delay (s/veh)					0.0											
Approach LOS					A											

HCS Two-Way Stop-Control Report

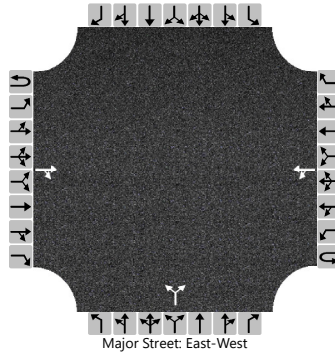
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	7/11/2022
Analysis Year	2025
Time Analyzed	Background AM
Intersection Orientation	East-West
Project Description	East Main

Site Information

Intersection	Main Street/Bye Alley
Jurisdiction	Town of New Market
East/West Street	Main Street
North/South Street	Marley Street/Bye Alley
Peak Hour Factor	0.88
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			679	0		0	341			0		0				
Percent Heavy Vehicles (%)						2				2		2				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1					7.1		6.2			
Critical Headway (sec)						4.12					6.42		6.22			
Base Follow-Up Headway (sec)						2.2					3.5		3.3			
Follow-Up Headway (sec)						2.22					3.52		3.32			

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						0					0					
Capacity, c (veh/h)						843					0					
v/c Ratio						0.00										
95% Queue Length, Q ₉₅ (veh)						0.0										
Control Delay (s/veh)						9.3	0.0									
Level of Service (LOS)						A	A									
Approach Delay (s/veh)					0.0											
Approach LOS					A											

HCS Two-Way Stop-Control Report

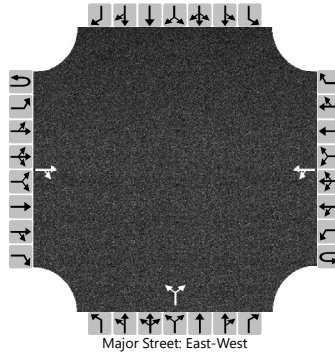
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	7/11/2022
Analysis Year	2025
Time Analyzed	Background PM
Intersection Orientation	East-West
Project Description	East Main

Site Information

Intersection	Main Street/Bye Alley
Jurisdiction	Town of New Market
East/West Street	Main Street
North/South Street	Marley Street/Bye Alley
Peak Hour Factor	0.89
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			583	1		0	703			0		0				
Percent Heavy Vehicles (%)						2				2		2				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1					7.1		6.2			
Critical Headway (sec)						4.12					6.42		6.22			
Base Follow-Up Headway (sec)						2.2					3.5		3.3			
Follow-Up Headway (sec)						2.22					3.52		3.32			

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						0					0					
Capacity, c (veh/h)						931					0					
v/c Ratio						0.00										
95% Queue Length, Q ₉₅ (veh)						0.0										
Control Delay (s/veh)						8.9	0.0									
Level of Service (LOS)						A	A									
Approach Delay (s/veh)					0.0											
Approach LOS					A											

HCS Two-Way Stop-Control Report

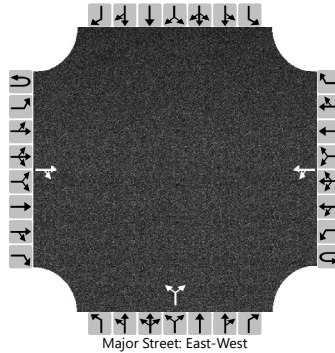
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	7/11/2022
Analysis Year	2025
Time Analyzed	Total AM
Intersection Orientation	East-West
Project Description	East Main

Site Information

Intersection	Main Street/Bye Alley
Jurisdiction	Town of New Market
East/West Street	Main Street
North/South Street	Marley Street/Bye Alley
Peak Hour Factor	0.88
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			712	0		0	390			0		0				
Percent Heavy Vehicles (%)						2				2		2				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1					7.1		6.2			
Critical Headway (sec)						4.12					6.42		6.22			
Base Follow-Up Headway (sec)						2.2					3.5		3.3			
Follow-Up Headway (sec)						2.22					3.52		3.32			

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						0					0					
Capacity, c (veh/h)						817					0					
v/c Ratio						0.00										
95% Queue Length, Q ₉₅ (veh)						0.0										
Control Delay (s/veh)						9.4	0.0									
Level of Service (LOS)						A	A									
Approach Delay (s/veh)					0.0											
Approach LOS					A											

HCS Two-Way Stop-Control Report

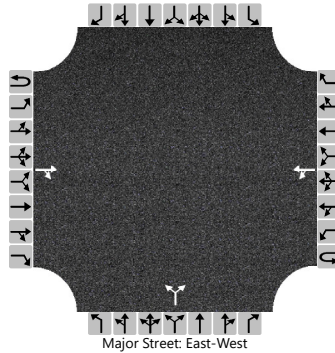
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	7/11/2022
Analysis Year	2025
Time Analyzed	Total PM
Intersection Orientation	East-West
Project Description	East Main

Site Information

Intersection	Main Street/Bye Alley
Jurisdiction	Town of New Market
East/West Street	Main Street
North/South Street	Marley Street/Bye Alley
Peak Hour Factor	0.89
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			629	1		0	742			0		0				
Percent Heavy Vehicles (%)						2				2		2				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.12				6.42		6.22				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.22				3.52		3.32				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						0					0					
Capacity, c (veh/h)						891					0					
v/c Ratio						0.00										
95% Queue Length, Q ₉₅ (veh)						0.0										
Control Delay (s/veh)						9.0	0.0									
Level of Service (LOS)						A	A									
Approach Delay (s/veh)					0.0											
Approach LOS					A											

HCS Two-Way Stop-Control Report

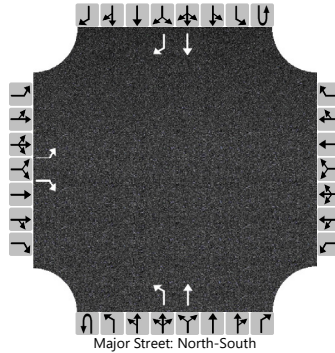
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	7/11/2022
Analysis Year	2022
Time Analyzed	Existing AM
Intersection Orientation	North-South
Project Description	East Main

Site Information

Intersection	MD 75/Old New Market Road
Jurisdiction	Town of New Market
East/West Street	Old New Market Road
North/South Street	MD 75
Peak Hour Factor	0.93
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		1	0	1		0	0	0	0	1	1	0	0	0	1	1
Configuration		L		R						L	T				T	R
Volume (veh/h)		59		30						17	362				812	104
Percent Heavy Vehicles (%)		2		2						2						
Proportion Time Blocked																
Percent Grade (%)	0															
Right Turn Channelized	No												No			
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.42		6.22						4.12						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.52		3.32						2.22						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		63		32						18						
Capacity, c (veh/h)		174		349						701						
v/c Ratio		0.37		0.09						0.03						
95% Queue Length, Q ₉₅ (veh)		1.6		0.3						0.1						
Control Delay (s/veh)		37.2		16.3						10.3						
Level of Service (LOS)		E		C						B						
Approach Delay (s/veh)	30.2								0.5							
Approach LOS	D								A							

HCS Two-Way Stop-Control Report

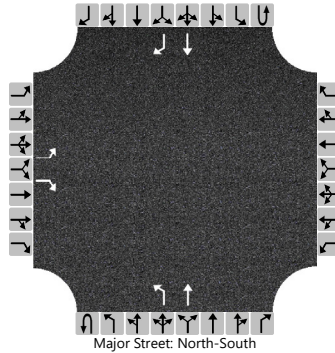
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	7/11/2022
Analysis Year	2022
Time Analyzed	Existing PM
Intersection Orientation	North-South
Project Description	East Main

Site Information

Intersection	MD 75/Old New Market Road
Jurisdiction	Town of New Market
East/West Street	Old New Market Road
North/South Street	MD 75
Peak Hour Factor	0.96
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		1	0	1		0	0	0	0	1	1	0	0	0	1	1
Configuration		L		R						L	T				T	R
Volume (veh/h)		36		35						74	835				423	54
Percent Heavy Vehicles (%)		2		2						2						
Proportion Time Blocked																
Percent Grade (%)	0															
Right Turn Channelized	No												No			
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.42		6.22						4.12						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.52		3.32						2.22						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		38		36						77						
Capacity, c (veh/h)		131		617						1067						
v/c Ratio		0.29		0.06						0.07						
95% Queue Length, Q ₉₅ (veh)		1.1		0.2						0.2						
Control Delay (s/veh)		43.1		11.2						8.6						
Level of Service (LOS)		E		B						A						
Approach Delay (s/veh)	27.4								0.7							
Approach LOS	D								A							

HCS Two-Way Stop-Control Report

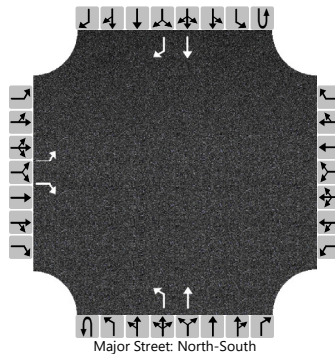
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	7/11/2022
Analysis Year	2025
Time Analyzed	Background AM
Intersection Orientation	North-South
Project Description	East Main

Site Information

Intersection	MD 75/Old New Market Road
Jurisdiction	Town of New Market
East/West Street	Old New Market Road
North/South Street	MD 75
Peak Hour Factor	0.93
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		1	0	1		0	0	0	0	1	1	0	0	0	1	1
Configuration		L		R						L	T				T	R
Volume (veh/h)		61		31						18	476				1097	107
Percent Heavy Vehicles (%)		2		2						2						
Proportion Time Blocked																
Percent Grade (%)	0															
Right Turn Channelized	No												No			
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.42		6.22						4.12						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.52		3.32						2.22						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		66		33						19						
Capacity, c (veh/h)		93		232						535						
v/c Ratio		0.70		0.14						0.04						
95% Queue Length, Q ₉₅ (veh)		3.5		0.5						0.1						
Control Delay (s/veh)		105.5		23.1						12.0						
Level of Service (LOS)		F		C						B						
Approach Delay (s/veh)	77.8								0.4							
Approach LOS	F								A							

HCS Two-Way Stop-Control Report

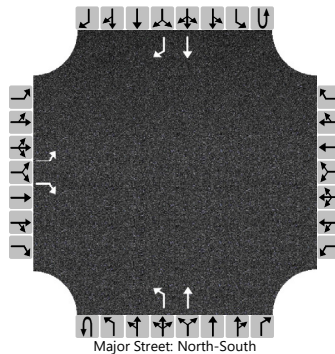
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	7/11/2022
Analysis Year	2025
Time Analyzed	Background PM
Intersection Orientation	North-South
Project Description	East Main

Site Information

Intersection	MD 75/Old New Market Road
Jurisdiction	Town of New Market
East/West Street	Old New Market Road
North/South Street	MD 75
Peak Hour Factor	0.96
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		1	0	1		0	0	0	0	1	1	0	0	0	1	1
Configuration		L		R						L	T				T	R
Volume (veh/h)		37		36						76	1106				595	56
Percent Heavy Vehicles (%)		2		2						2						
Proportion Time Blocked																
Percent Grade (%)	0															
Right Turn Channelized	No												No			
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.42		6.22						4.12						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.52		3.32						2.22						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		39		38						79						
Capacity, c (veh/h)		66		488						914						
v/c Ratio		0.58		0.08						0.09						
95% Queue Length, Q ₉₅ (veh)		2.4		0.2						0.3						
Control Delay (s/veh)		116.5		13.0						9.3						
Level of Service (LOS)		F		B						A						
Approach Delay (s/veh)	65.4								0.6							
Approach LOS	F								A							

HCS Two-Way Stop-Control Report

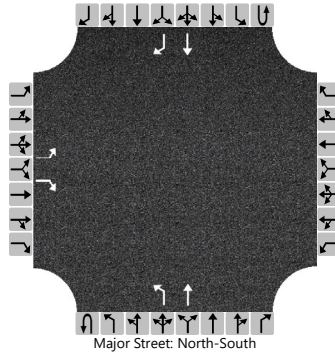
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	7/11/2022
Analysis Year	2025
Time Analyzed	Total AM
Intersection Orientation	North-South
Project Description	East Main

Site Information

Intersection	MD 75/Old New Market Road
Jurisdiction	Town of New Market
East/West Street	Old New Market Road
North/South Street	MD 75
Peak Hour Factor	0.93
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		1	0	1		0	0	0	0	1	1	0	0	0	1	1
Configuration		L		R						L	T				T	R
Volume (veh/h)		61		31						18	482				1106	107
Percent Heavy Vehicles (%)		2		2						2						
Proportion Time Blocked																
Percent Grade (%)	0															
Right Turn Channelized	No												No			
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.42		6.22						4.12						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.52		3.32						2.22						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		66		33						19						
Capacity, c (veh/h)		91		229						531						
v/c Ratio		0.72		0.15						0.04						
95% Queue Length, Q ₉₅ (veh)		3.6		0.5						0.1						
Control Delay (s/veh)		110.5		23.4						12.0						
Level of Service (LOS)		F		C						B						
Approach Delay (s/veh)	81.2								0.4							
Approach LOS	F								A							

HCS Two-Way Stop-Control Report

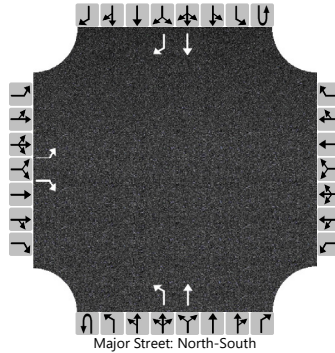
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	7/11/2022
Analysis Year	2022
Time Analyzed	Total PM
Intersection Orientation	North-South
Project Description	East Main

Site Information

Intersection	MD 75/Old New Market Road
Jurisdiction	Town of New Market
East/West Street	Old New Market Road
North/South Street	MD 75
Peak Hour Factor	0.96
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		1	0	1		0	0	0	0	1	1	0	0	0	1	1
Configuration		L		R						L	T				T	R
Volume (veh/h)		37		36						76	1115				603	56
Percent Heavy Vehicles (%)		2		2						2						
Proportion Time Blocked																
Percent Grade (%)	0															
Right Turn Channelized	No												No			
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.42		6.22						4.12						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.52		3.32						2.22						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		39		38						79						
Capacity, c (veh/h)		65		483						907						
v/c Ratio		0.60		0.08						0.09						
95% Queue Length, Q ₉₅ (veh)		2.5		0.3						0.3						
Control Delay (s/veh)		121.7		13.1						9.3						
Level of Service (LOS)		F		B						A						
Approach Delay (s/veh)	68.2								0.6							
Approach LOS	F								A							

HCS Two-Way Stop-Control Report

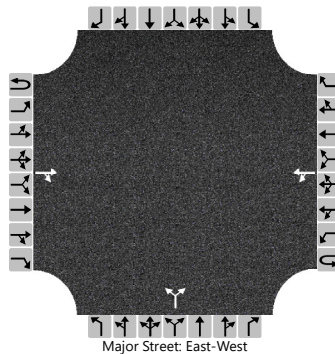
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	7/11/2022
Analysis Year	2025
Time Analyzed	Total AM
Intersection Orientation	East-West
Project Description	East Main

Site Information

Intersection	Main Street/Site Access
Jurisdiction	Town of New Market
East/West Street	Main Street
North/South Street	Site Access
Peak Hour Factor	0.88
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			685	3		39	351			2		27				
Percent Heavy Vehicles (%)						2				2		2				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.12				6.42		6.22				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.22				3.52		3.32				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						44					33					
Capacity, c (veh/h)						836					363					
v/c Ratio						0.05					0.09					
95% Queue Length, Q ₉₅ (veh)						0.2					0.3					
Control Delay (s/veh)						9.5	0.7				15.9					
Level of Service (LOS)						A	A				C					
Approach Delay (s/veh)					1.5				15.9							
Approach LOS					A				C							

HCS Two-Way Stop-Control Report

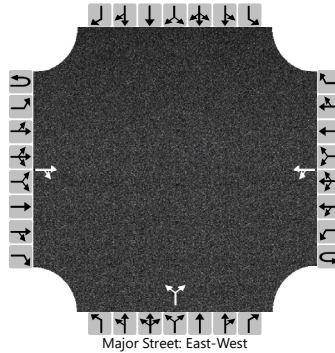
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	7/11/2022
Analysis Year	2025
Time Analyzed	Total PM
Intersection Orientation	East-West
Project Description	East Main

Site Information

Intersection	Main Street/Site Access
Jurisdiction	Town of New Market
East/West Street	Main Street
North/South Street	Site Access
Peak Hour Factor	0.88
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			586	9		35	707			7		42				
Percent Heavy Vehicles (%)						2				2		2				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.12				6.42		6.22				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.22				3.52		3.32				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						40					56					
Capacity, c (veh/h)						915					320					
v/c Ratio						0.04					0.17					
95% Queue Length, Q ₉₅ (veh)						0.1					0.6					
Control Delay (s/veh)						9.1	0.7				18.6					
Level of Service (LOS)						A	A				C					
Approach Delay (s/veh)					1.1				18.6							
Approach LOS					A				C							

1. Old National Pike/Boyers Mill Road

Maryland State Highway Administration Queuing Analysis Formula

Queue Length (feet) =

If Average No. of Vehicle (Specific Movement) per Cycle <= 20: Poisson Distribution Maximum No. of Vehicles per Cycle x 25 Feet per Vehicle

If Average No. of Vehicle (Specific Movement) per Cycle > 20: $\frac{\text{Turning Volume (veh per hour)} \times \text{Lane Use Factor} \times \text{Cycle Length (Seconds)}}{3600 \text{ (Seconds per hour)}}$ x 25 Feet per Vehicle x 1.4 Surge Factor

		Available Storage (feet)	Queue Length (feet)	Veh / Hour	Lane Use Factor	Cycle Length (seconds)	Average No. of Vehicle per Cycle	Is Average No. of Vehicle (Specific Movement) per Cycle <= 20?	Poisson Distribution Maximum No. of Vehicle per Cycle
Existing Traffic									
AM Peak Hour									
	EB Old National Pike left turn:	150	75	74	1	60	1.2	Yes	3
	EB Old National Pike thru:	>500	125	130	1	60	2.2	Yes	5
	WB Old National Pike thru:	>500	125	142	1	60	2.4	Yes	5
	WB Old National Pike right turn:	150	0	0	1	60	0.0	Yes	0
	SB Boyers Mill Road left turn:	>500	200	244	1	60	4.1	Yes	8
	SB Boyers Mill Road right turn:	100	125	126	1	60	2.1	Yes	5
PM Peak Hour									
	EB Old National Pike left turn:	150	225	275	1	70	5.3	Yes	9
	EB Old National Pike thru:	>500	200	244	1	70	4.7	Yes	8
	WB Old National Pike thru:	>500	200	241	1	70	4.7	Yes	8
	WB Old National Pike right turn:	150	100	95	1	70	1.8	Yes	4
	SB Boyers Mill Road left turn:	>500	175	185	1	70	3.6	Yes	7
	SB Boyers Mill Road right turn:	100	0	0	1	70	0.0	Yes	0
Background Traffic									
AM Peak Hour									
	EB Old National Pike left turn:	150	125	142	1	60	2.4	Yes	5
	EB Old National Pike thru:	>500	175	234	1	60	3.9	Yes	7
	WB Old National Pike thru:	>500	175	209	1	60	3.5	Yes	7
	WB Old National Pike right turn:	150	0	0	1	60	0.0	Yes	0
	SB Boyers Mill Road left turn:	>500	225	313	1	60	5.2	Yes	9
	SB Boyers Mill Road right turn:	100	125	156	1	60	2.6	Yes	5
PM Peak Hour									
	EB Old National Pike left turn:	150	325	421	1	70	8.2	Yes	13
	EB Old National Pike thru:	>500	275	342	1	70	6.7	Yes	11
	WB Old National Pike thru:	>500	300	363	1	70	7.1	Yes	12
	WB Old National Pike right turn:	150	125	126	1	70	2.5	Yes	5
	SB Boyers Mill Road left turn:	>500	200	226	1	70	4.4	Yes	8
	SB Boyers Mill Road right turn:	100	0	0	1	70	0.0	Yes	0
Total Traffic									
AM Peak Hour									
	EB Old National Pike left turn:	150	125	142	1	60	2.4	Yes	5
	EB Old National Pike thru:	>500	200	246	1	60	4.1	Yes	8
	WB Old National Pike thru:	>500	175	217	1	60	3.6	Yes	7
	WB Old National Pike right turn:	150	0	0	1	60	0.0	Yes	0
	SB Boyers Mill Road left turn:	>500	225	313	1	60	5.2	Yes	9
	SB Boyers Mill Road right turn:	100	125	156	1	60	2.6	Yes	5
PM Peak Hour									
	EB Old National Pike left turn:	150	325	421	1	70	8.2	Yes	13
	EB Old National Pike thru:	>500	275	352	1	70	6.8	Yes	11
	WB Old National Pike thru:	>500	300	375	1	70	7.3	Yes	12
	WB Old National Pike right turn:	150	125	126	1	70	2.5	Yes	5
	SB Boyers Mill Road left turn:	>500	200	226	1	70	4.4	Yes	8
	SB Boyers Mill Road right turn:	100	0	0	1	70	0.0	Yes	0



8. Old National Pike/MD 75

Maryland State Highway Administration Queuing Analysis Formula

Queue Length (feet) =

If Average No. of Vehicle (Specific Movement) per Cycle <= 20: Poisson Distribution Maximum No. of Vehicles per Cycle x 25 Feet per Vehicle

If Average No. of Vehicle (Specific Movement) per Cycle > 20: $\frac{\text{Turning Volume (veh per hour)} \times \text{Lane Use Factor} \times \text{Cycle Length (Seconds)}}{3600 \text{ (Seconds per hour)}}$ x 25 Feet per Vehicle x 1.4 Surge Factor

	Available Storage (feet)	Queue Length (feet)	Veh / Hour	Lane Use Factor	Cycle Length (seconds)	Average No. of Vehicle per Cycle	Is Average No. of Vehicle (Specific Movement) per Cycle <= 20?	Poisson Distribution Maximum No. of Vehicle per Cycle
Existing Traffic (WB left/thru lane use factors based on existing traffic count)								
AM Peak Hour								
EB (Old National Pike) left turn	200	50	19	1	120	0.6	Yes	2
EB (Old National Pike) thru	1000+	225	146	1	120	4.9	Yes	9
WB (Old National Pike) most left lane	400	175	417	0.25	120	3.5	Yes	7
WB (Old National Pike) left/thru shared lane	680	400	417	0.75	120	10.4	Yes	16
WB (Old National Pike) right turn	680	125	76	1	120	2.5	Yes	5
NB (MD 75) left turn	275	125	75	1	120	2.5	Yes	5
NB (Old National Pike) thru	700	125	145	0.55	120	2.7	Yes	5
SB (MD 75) left turn	425	175	107	1	120	3.6	Yes	7
SB (MD 75) thru	1000+	375	542	0.55	120	9.9	Yes	15
SB (MD 75) right turn	300	75	30	1	120	1.0	Yes	3
PM Peak Hour								
EB (Old National Pike) left turn	200	50	20	1	120	0.7	Yes	2
EB (Old National Pike) thru	1000+	250	182	1	120	6.1	Yes	10
WB (Old National Pike) most left lane	400	275	531	0.36	120	6.4	Yes	11
WB (Old National Pike) left/thru shared lane	680	425	531	0.64	120	11.3	Yes	17
WB (Old National Pike) right turn	680	275	207	1	120	6.9	Yes	11
NB (MD 75) left turn	275	300	226	1	120	7.5	Yes	12
NB (Old National Pike) thru	700	375	530	0.55	120	9.7	Yes	15
SB (MD 75) left turn	425	175	99	1	120	3.3	Yes	7
SB (MD 75) thru	1000+	200	256	0.55	120	4.7	Yes	8
SB (MD 75) right turn	300	50	20	1	120	0.7	Yes	2
Background Traffic								
AM Peak Hour								
EB (Old National Pike) left turn	200	100	46	1	120	1.5	Yes	4
EB (Old National Pike) thru	1000+	250	185	1	120	6.2	Yes	10
WB (Old National Pike) most left lane	400	175	445	0.25	120	3.7	Yes	7
WB (Old National Pike) left/thru shared lane	680	325	445	0.75	120	8.3	Yes	13
WB (Old National Pike) right turn	680	150	86	1	120	2.9	Yes	6
NB (MD 75) left turn	275	175	108	1	120	3.6	Yes	7
NB (Old National Pike) thru	700	175	218	0.55	120	4.0	Yes	7
SB (MD 75) left turn	425	200	135	1	120	4.5	Yes	8
SB (MD 75) thru	1000+	525	774	0.55	120	14.2	Yes	21
SB (MD 75) right turn	300	100	50	1	120	1.7	Yes	4



MD SHA QUEUING ANALYSIS
8. OLD NATIONAL PIKE/MD 75

8. Old National Pike/MD 75

Maryland State Highway Administration Queuing Analysis Formula

Queue Length (feet) =

If Average No. of Vehicle (Specific Movement) per Cycle <= 20: Poisson Distribution Maximum No. of Vehicles per Cycle x 25 Feet per Vehicle

If Average No. of Vehicle (Specific Movement) per Cycle > 20: $\frac{\text{Turning Volume (veh per hour)} \times \text{Lane Use Factor} \times \text{Cycle Length (Seconds)}}{3600 \text{ (Seconds per hour)}}$ x 25 Feet per Vehicle x 1.4 Surge Factor

	Available Storage (feet)	Queue Length (feet)	Veh / Hour	Lane Use Factor	Cycle Length (seconds)	Average No. of Vehicle per Cycle	Is Average No. of Vehicle (Specific Movement) per Cycle <= 20?	Poisson Distribution Maximum No. of Vehicle per Cycle
Background Traffic								
PM Peak Hour								
EB (Old National Pike) left turn	200	75	37	1	120	1.2	Yes	3
EB (Old National Pike) thru	1000+	275	209	1	120	7.0	Yes	11
WB (Old National Pike) most left lane	400	300	604	0.36	120	7.2	Yes	12
WB (Old National Pike) left/thru shared lane	680	325	604	0.64	120	8.3	Yes	13
WB (Old National Pike) right turn	680	325	236	1	120	7.9	Yes	13
NB (MD 75) left turn	275	375	300	1	120	10.0	Yes	15
NB (Old National Pike) thru	700	500	753	0.55	120	13.8	Yes	20
SB (MD 75) left turn	425	175	115	1	120	3.8	Yes	7
SB (MD 75) thru	1000+	300	387	0.55	120	7.1	Yes	12
SB (MD 75) right turn	300	100	44	1	120	1.5	Yes	4
Total Traffic								
AM Peak Hour								
EB (Old National Pike) left turn	200	100	52	1	120	1.7	Yes	4
EB (Old National Pike) thru	1000+	275	191	1	120	6.4	Yes	11
WB (Old National Pike) most left lane	400	175	454	0.25	120	3.8	Yes	7
WB (Old National Pike) left/thru shared lane	680	325	454	0.75	120	8.3	Yes	13
WB (Old National Pike) right turn	680	150	86	1	120	2.9	Yes	6
NB (MD 75) left turn	275	200	139	1	120	4.6	Yes	8
NB (Old National Pike) thru	700	175	218	0.55	120	4.0	Yes	7
SB (MD 75) left turn	425	200	135	1	120	4.5	Yes	8
SB (MD 75) thru	1000+	525	774	0.55	120	14.2	Yes	21
SB (MD 75) right turn	300	100	59	1	120	2.0	Yes	4
PM Peak Hour								
EB (Old National Pike) left turn	200	100	46	1	120	1.5	Yes	4
EB (Old National Pike) thru	1000+	300	217	1	120	7.2	Yes	12
WB (Old National Pike) most left lane	400	300	611	0.36	120	7.3	Yes	12
WB (Old National Pike) left/thru shared lane	680	325	611	0.64	120	8.3	Yes	13
WB (Old National Pike) right turn	680	325	236	1	120	7.9	Yes	13
NB (MD 75) left turn	275	400	324	1	120	10.8	Yes	16
NB (Old National Pike) thru	700	500	753	0.55	120	13.8	Yes	20
SB (MD 75) left turn	425	175	115	1	120	3.8	Yes	7
SB (MD 75) thru	1000+	300	387	0.55	120	7.1	Yes	12
SB (MD 75) right turn	300	100	52	1	120	1.7	Yes	4



MD SHA QUEUING ANALYSIS
8. OLD NATIONAL PIKE/MD 75

9. MD 75 @ I-70 WB Ramps

Maryland State Highway Administration Queuing Analysis Formula

Queue Length (feet) =

If Average No. of Vehicle (Specific Movement) per Cycle <= 20: Poisson Distribution Maximum No. of Vehicles per Cycle x 25 Feet per Vehicle

If Average No. of Vehicle (Specific Movement) per Cycle > 20: $\frac{\text{Turning Volume (veh per hour)} \times \text{Lane Use Factor} \times \text{Cycle Length (Seconds)}}{3600 \text{ (Seconds per hour)}}$ x 25 Feet per Vehicle x 1.4 Surge Factor

Existing Traffic		Available Storage (feet)	Queue Length (feet)	Veh / Hour	Lane Use Factor	Cycle Length (seconds)	Average No. of Vehicle per Cycle	Is Average No. of Vehicle (Specific Movement) per Cycle <= 20?	Poisson Distribution Maximum No. of Vehicles per Cycle
AM Peak Hour									
	WB (I-70 WB off Ramps) left/thru	>500	175	102	1	120	3.4	Yes	7
	NB (MD 75) left turn	225	200	134	1	120	4.5	Yes	8
	NB (MD 75) thru	900	250	321	0.55	120	5.9	Yes	10
	SB (MD 75) thru	700	475	709	0.55	120	13.0	Yes	19
PM Peak Hour									
	WB (I-70 WB off Ramps) left/thru	>500	175	109	1	120	3.6	Yes	7
	NB (MD 75) left turn	225	275	187	1	120	6.2	Yes	11
	NB (MD 75) thru	900	500	735	0.55	120	13.5	Yes	20
	SB (MD 75) thru	700	250	327	0.55	120	6.0	Yes	10
2025 Background Traffic									
AM Peak Hour									
	WB (I-70 WB off Ramps) left/thru	>500	175	105	1	120	3.5	Yes	7
	NB (MD 75) left turn	225	225	145	1	120	4.8	Yes	9
	NB (MD 75) thru	900	325	431	0.55	120	7.9	Yes	13
	SB (MD 75) thru	700	550	827	0.55	120	15.2	Yes	22
PM Peak Hour									
	WB (I-70 WB off Ramps) left/thru	>500	175	112	1	120	3.7	Yes	7
	NB (MD 75) left turn	225	300	210	1	120	7.0	Yes	12
	NB (MD 75) thru	900	625	976	0.55	120	17.9	Yes	25
	SB (MD 75) thru	700	300	396	0.55	120	7.3	Yes	12
2025 Total Traffic									
AM Peak Hour									
	WB (I-70 WB off Ramps) left/thru	>500	175	105	1	120	3.5	Yes	7
	NB (MD 75) left turn	225	225	145	1	120	4.8	Yes	9
	NB (MD 75) thru	900	325	452	0.55	120	8.3	Yes	13
	SB (MD 75) thru	700	550	837	0.55	120	15.3	Yes	22
PM Peak Hour									
	WB (I-70 WB off Ramps) left/thru	>500	175	112	1	120	3.7	Yes	7
	NB (MD 75) left turn	225	300	210	1	120	7.0	Yes	12
	NB (MD 75) thru	900	625	993	0.55	120	18.2	Yes	25
	SB (MD 75) thru	700	300	410	0.55	120	7.5	Yes	12



MD SHA QUEUING ANALYSIS
9. MD 75 @ I-70 WB RAMPS

10. MD 75 @ I-70 EB Ramps

Maryland State Highway Administration Queuing Analysis Formula

Queue Length (feet) =

If Average No. of Vehicle (Specific Movement) per Cycle <= 20: Poisson Distribution Maximum No. of Vehicles per Cycle x 25 Feet per Vehicle

If Average No. of Vehicle (Specific Movement) per Cycle > 20: $\frac{\text{Turning Volume (veh per hour)} \times \text{Lane Use Factor} \times \text{Cycle Length (Seconds)}}{3600 \text{ (Seconds per hour)}}$ x 25 Feet per Vehicle x 1.4 Surge Factor

Existing Traffic		Available Storage (feet)	Queue Length (feet)	Veh / Hour	Lane Use Factor	Cycle Length (seconds)	Average No. of Vehicle per Cycle	Is Average No. of Vehicle (Specific Movement) per Cycle <= 20?	Poisson Distribution Maximum No. of Vehicles per Cycle
AM Peak Hour									
	EB (I-70 EB off Ramps) left/thru	>800	200	204	0.6	120	4.1	Yes	8
	NB (MD 75) thru	>1000	200	248	0.55	120	4.5	Yes	8
	SB (MD 75) left turn	225	575	480	1	120	16.0	Yes	23
	SB (MD 75) thru	900	250	320	0.55	120	5.9	Yes	10
PM Peak Hour									
	EB (I-70 EB off Ramps) left/thru	>800	400	519	0.6	120	10.4	Yes	16
	NB (MD 75) thru	>1000	300	425	0.55	120	7.8	Yes	12
	SB (MD 75) left turn	225	225	154	1	120	5.1	Yes	9
	SB (MD 75) thru	900	225	275	0.55	120	5.0	Yes	9
2028 Background Traffic									
AM Peak Hour									
	EB (I-70 EB off Ramps) left/thru	>800	250	288	0.6	120	5.8	Yes	10
	NB (MD 75) thru	>1000	225	285	0.55	120	5.2	Yes	9
	SB (MD 75) left turn	225	650	560	1	120	18.7	Yes	26
	SB (MD 75) thru	900	275	362	0.55	120	6.6	Yes	11
PM Peak Hour									
	EB (I-70 EB off Ramps) left/thru	>800	525	723	0.6	120	14.5	Yes	21
	NB (MD 75) thru	>1000	350	486	0.55	120	8.9	Yes	14
	SB (MD 75) left turn	225	275	196	1	120	6.5	Yes	11
	SB (MD 75) thru	900	250	305	0.55	120	5.6	Yes	10
2028 Total Traffic									
AM Peak Hour									
	EB (I-70 EB off Ramps) left/thru	>800	250	303	0.6	120	6.1	Yes	10
	NB (MD 75) thru	>1000	225	291	0.55	120	5.3	Yes	9
	SB (MD 75) left turn	225	650	566	1	120	18.9	Yes	26
	SB (MD 75) thru	900	275	366	0.55	120	6.7	Yes	11
PM Peak Hour									
	EB (I-70 EB off Ramps) left/thru	>800	525	735	0.6	120	14.7	Yes	21
	NB (MD 75) thru	>1000	350	491	0.55	120	9.0	Yes	14
	SB (MD 75) left turn	225	275	204	1	120	6.8	Yes	11
	SB (MD 75) thru	900	250	311	0.55	120	5.7	Yes	10



MD SHA QUEUING ANALYSIS
10. MD 75 @ I-70 EB RAMPS

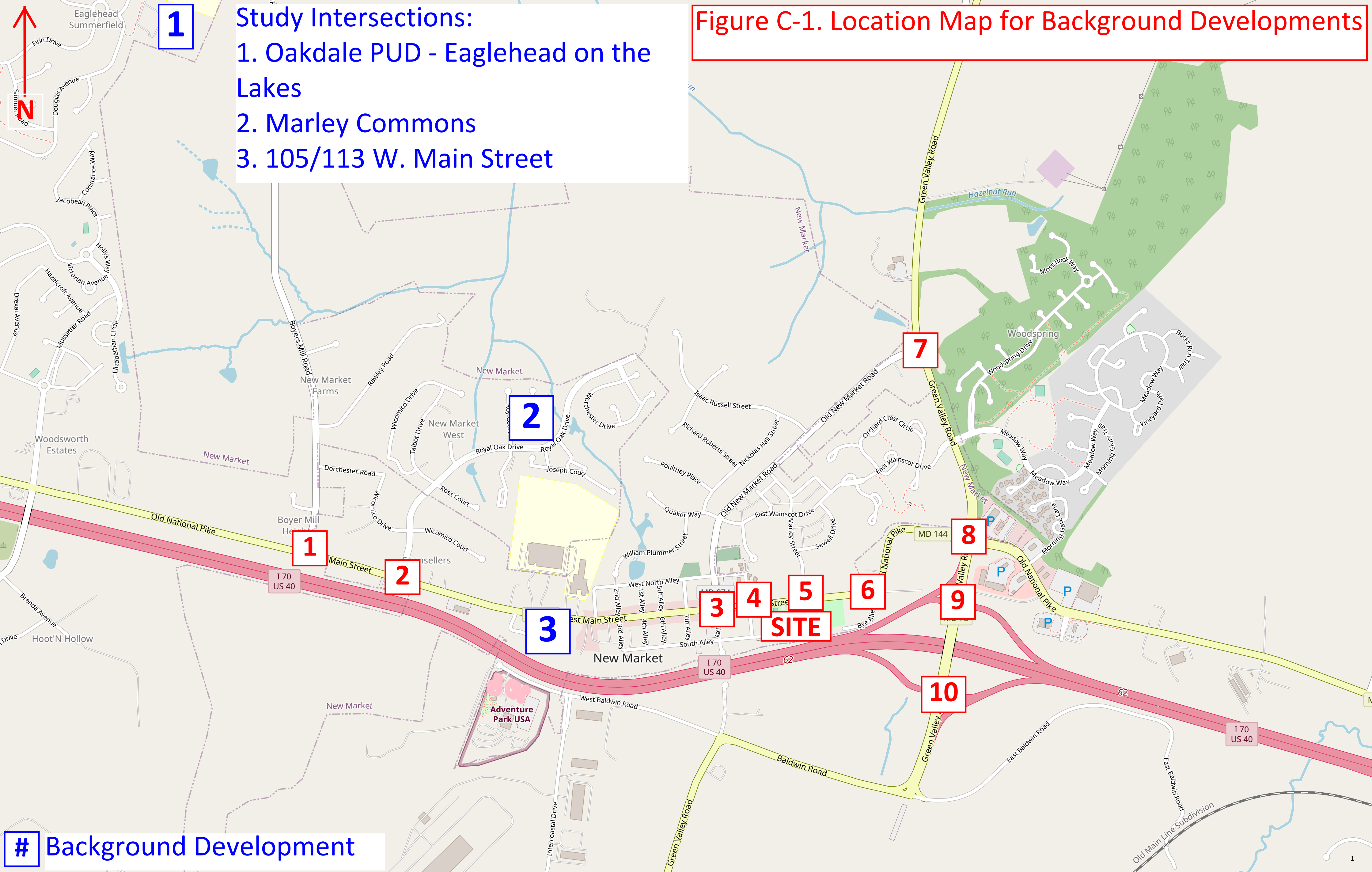
APPENDIX C

Trip Assignment for Approved Developments



Figure C-1. Location Map for Background Developments

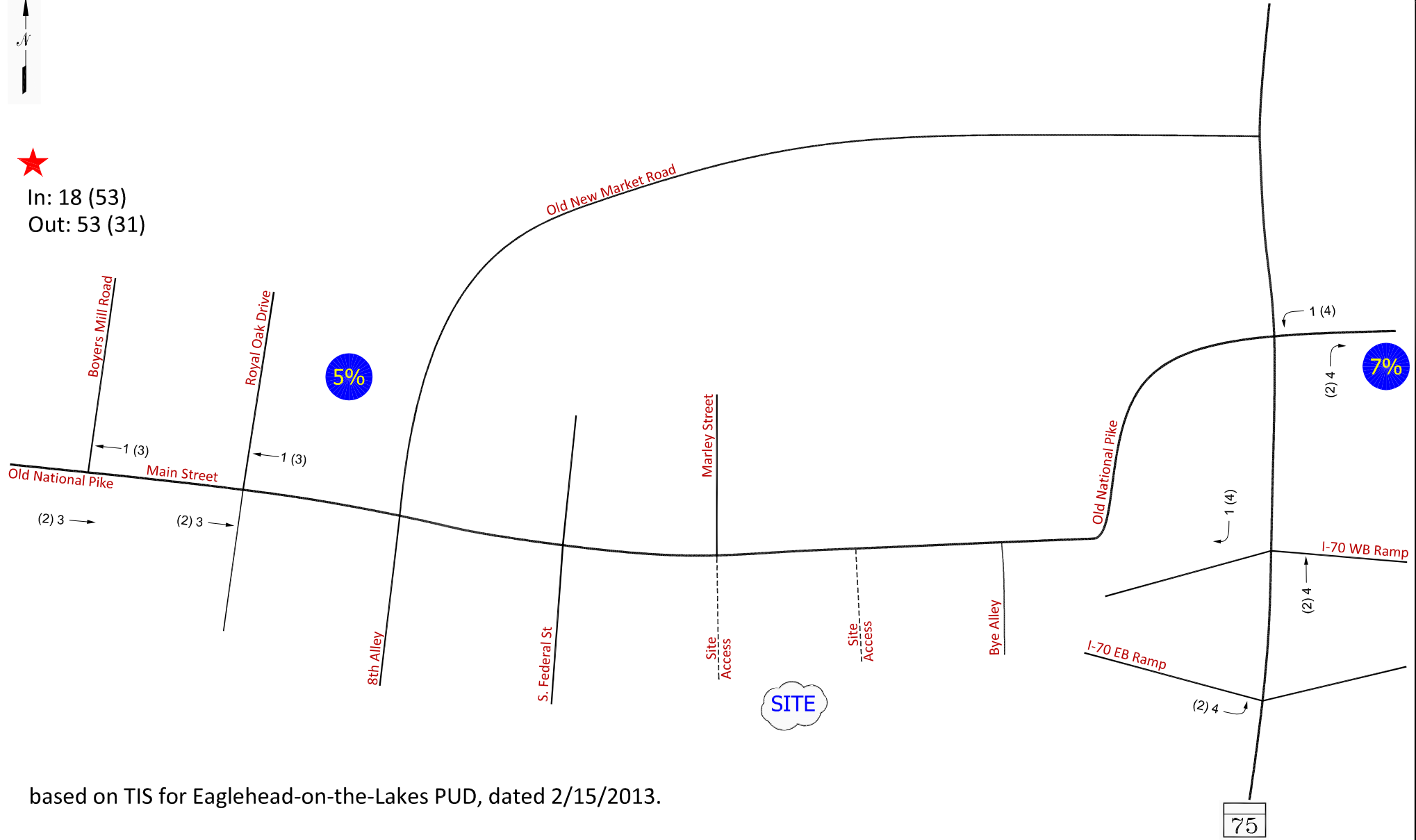
- Study Intersections:**
- 1. Oakdale PUD - Eaglehead on the Lakes
 - 2. Marley Commons
 - 3. 105/113 W. Main Street



Background Development



In: 18 (53)
Out: 53 (31)



based on TIS for Eaglehead-on-the-Lakes PUD, dated 2/15/2013.



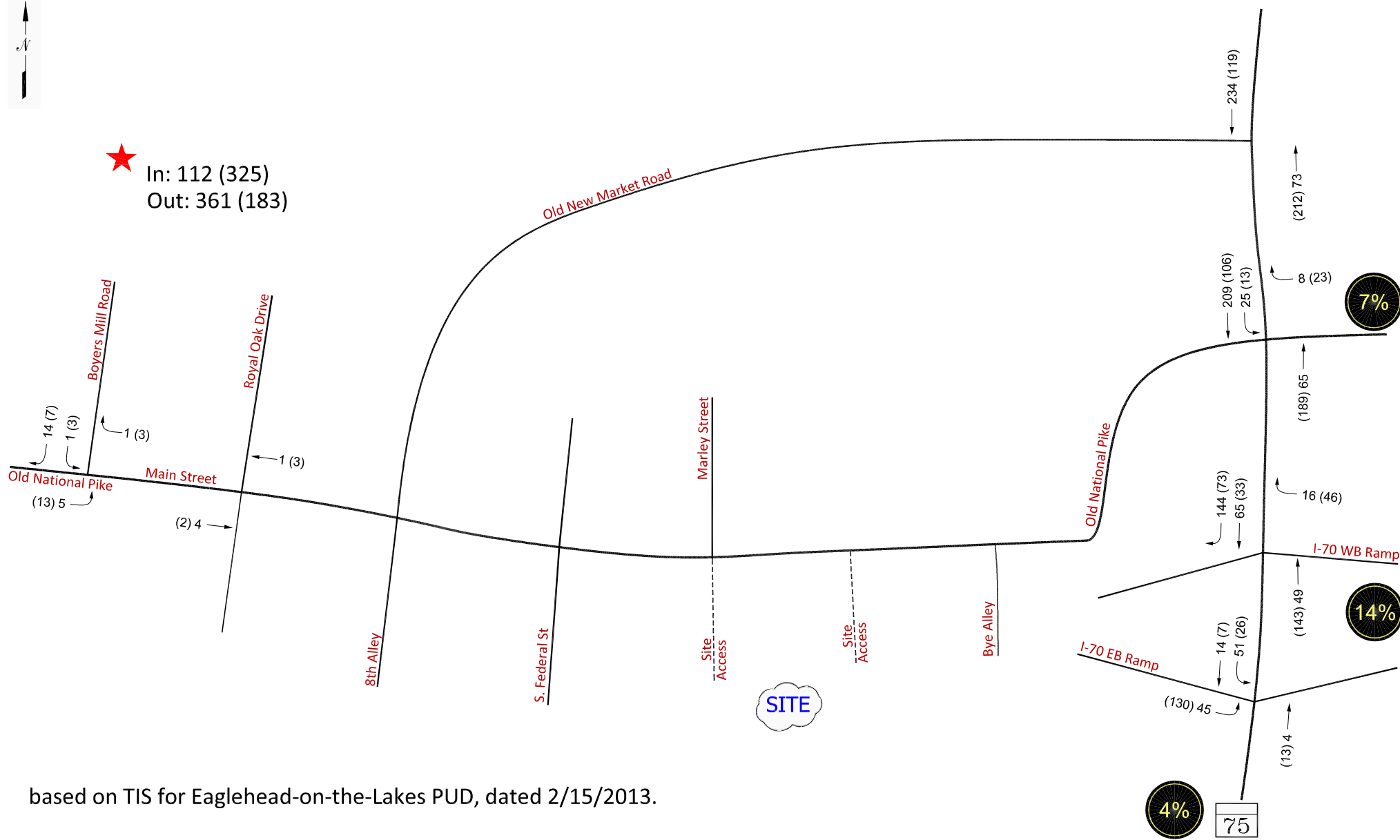
NOT TO SCALE

00 - MORNING PEAK HOUR
(00) - EVENING PEAK HOUR

FIGURE C-2A
NEW TRIP ASSIGNMENT
FOR APPROVED DEVELOPMENTS #1 -
ALPINE



In: 112 (325)
Out: 361 (183)



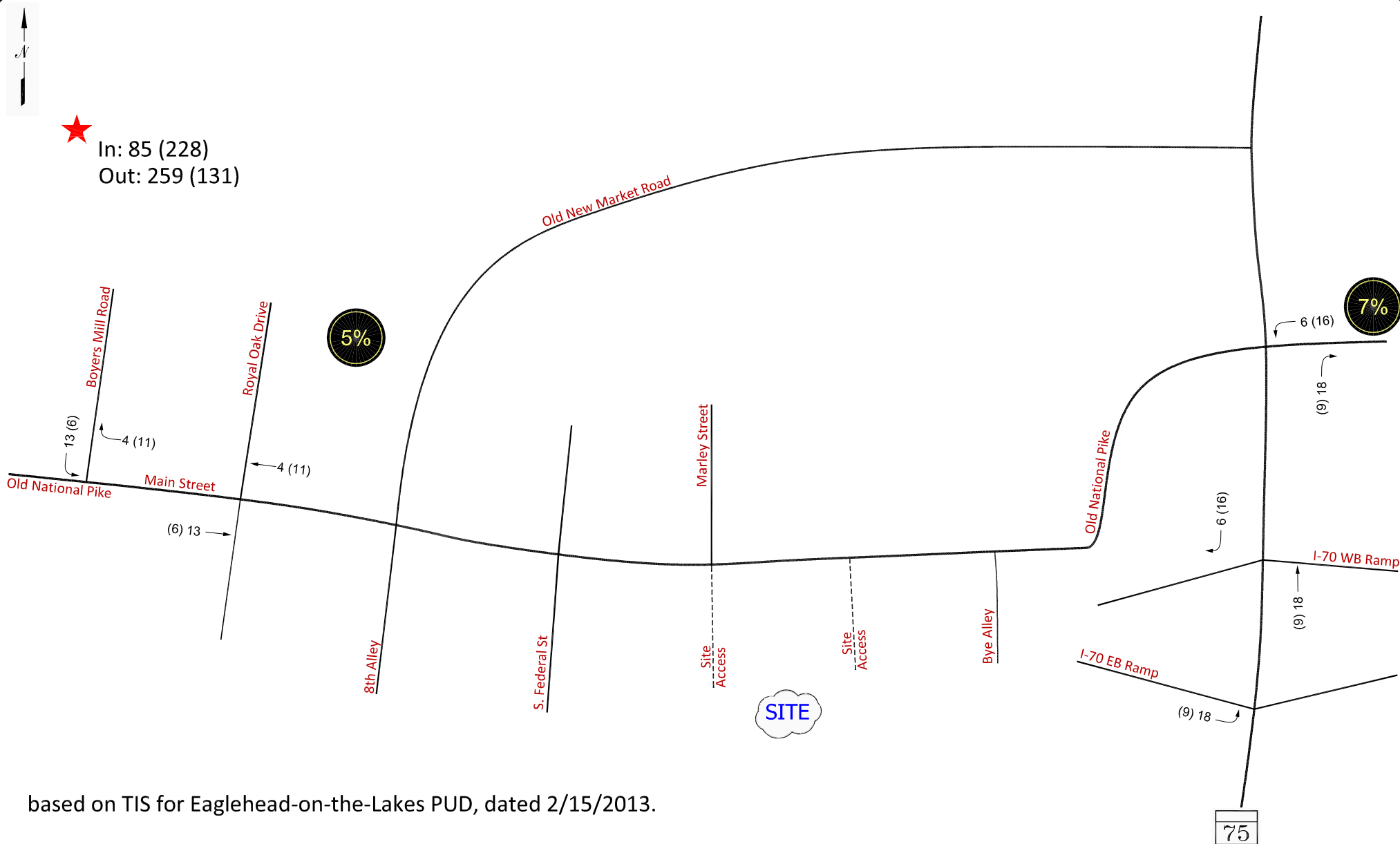
based on TIS for Eaglehead-on-the-Lakes PUD, dated 2/15/2013.



NOT TO SCALE

00 - MORNING PEAK HOUR
(00) - EVENING PEAK HOUR

FIGURE C-2B
NEW TRIP ASSIGNMENT
FOR APPROVED DEVELOPMENTS
#1 - HAMPTONS WEST & HAMPTONS EAST



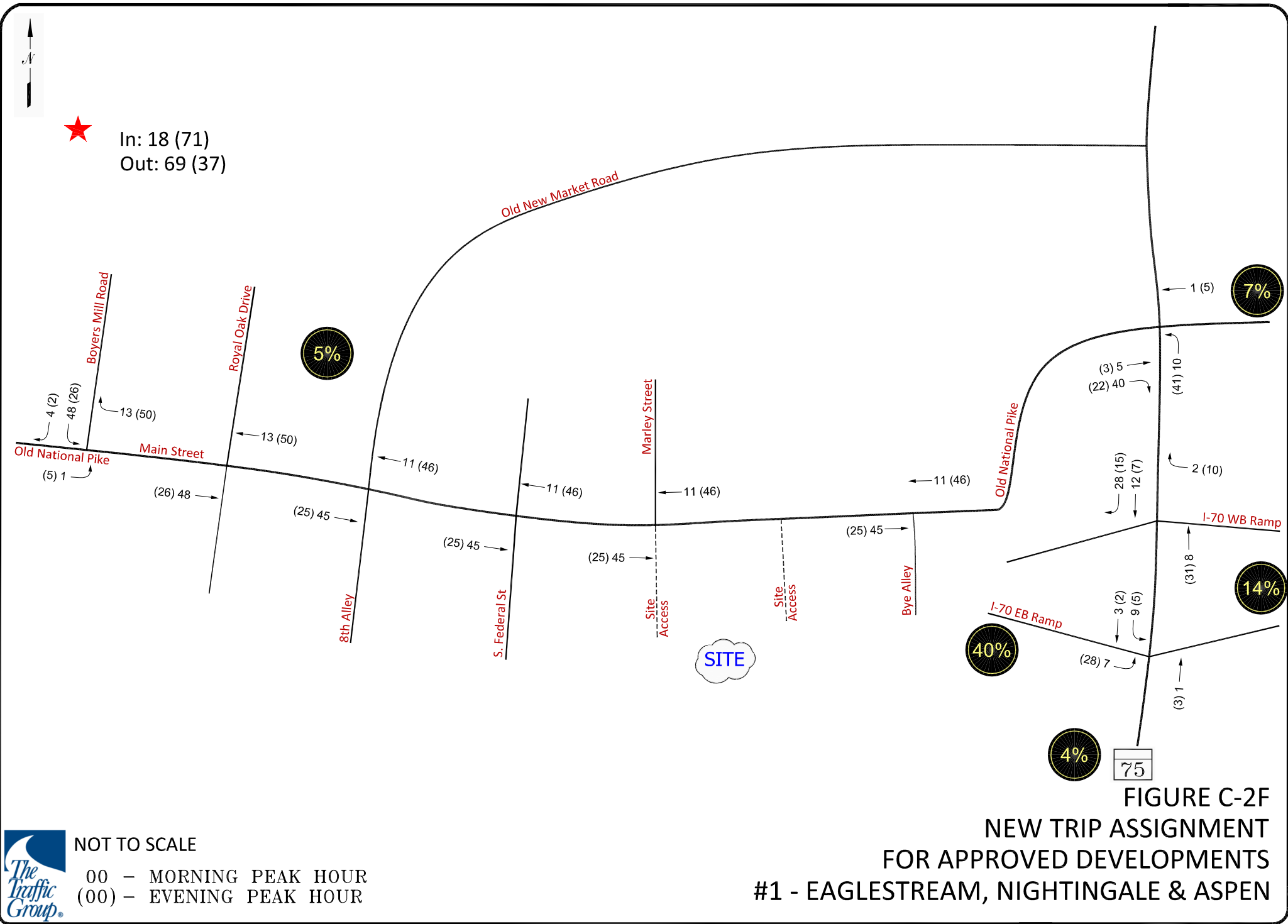
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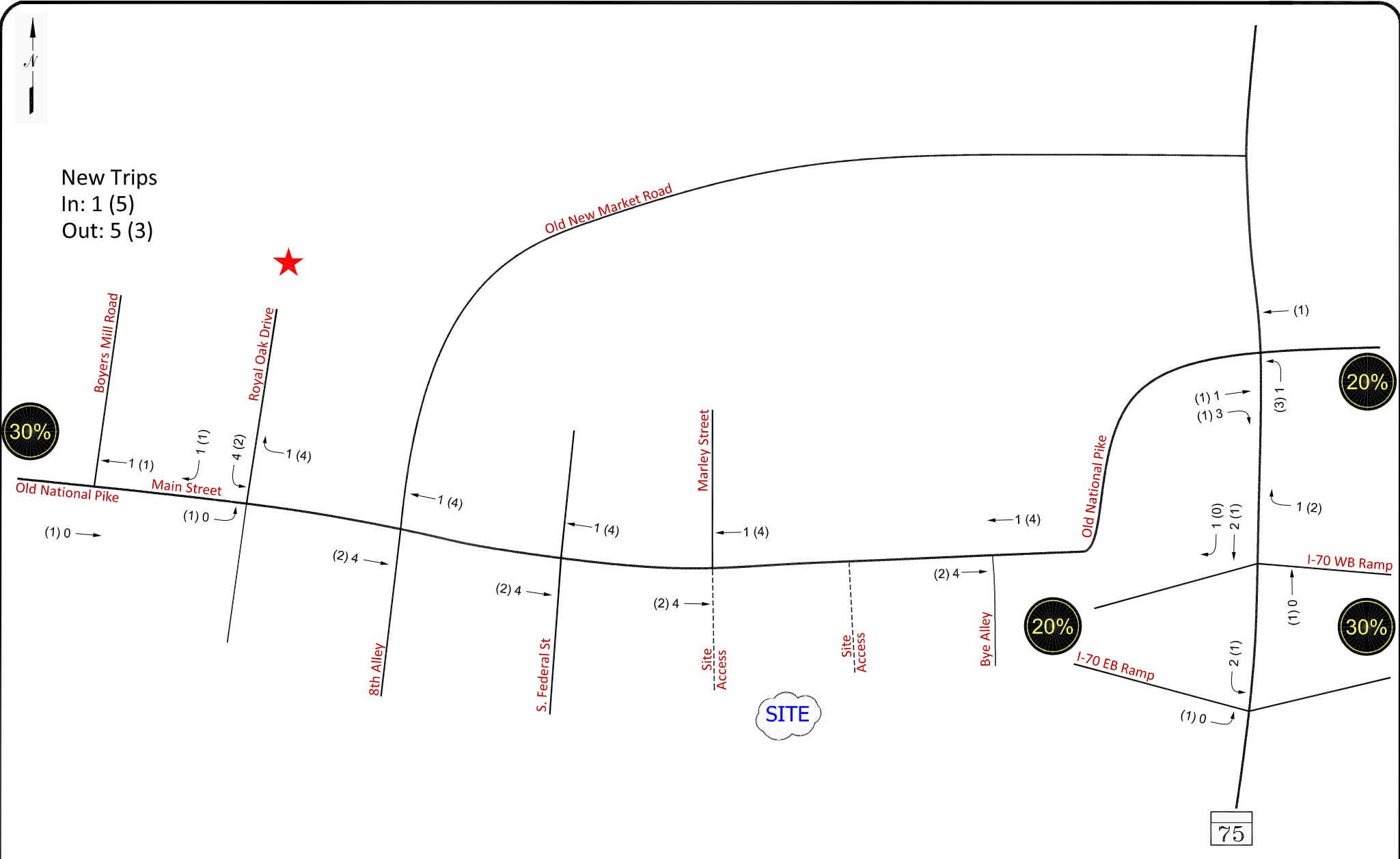


NOT TO SCALE

00 - MORNING PEAK HOUR
(00) - EVENING PEAK HOUR

FIGURE C-2E
NEW TRIP ASSIGNMENT
FOR APPROVED DEVELOPMENTS
#1 - WESTRIDGE & WOODRIDGE





NOT TO SCALE

00 - MORNING PEAK HOUR
(00) - EVENING PEAK HOUR

FIGURE C-3
TRIP ASSIGNMENT
FOR #2

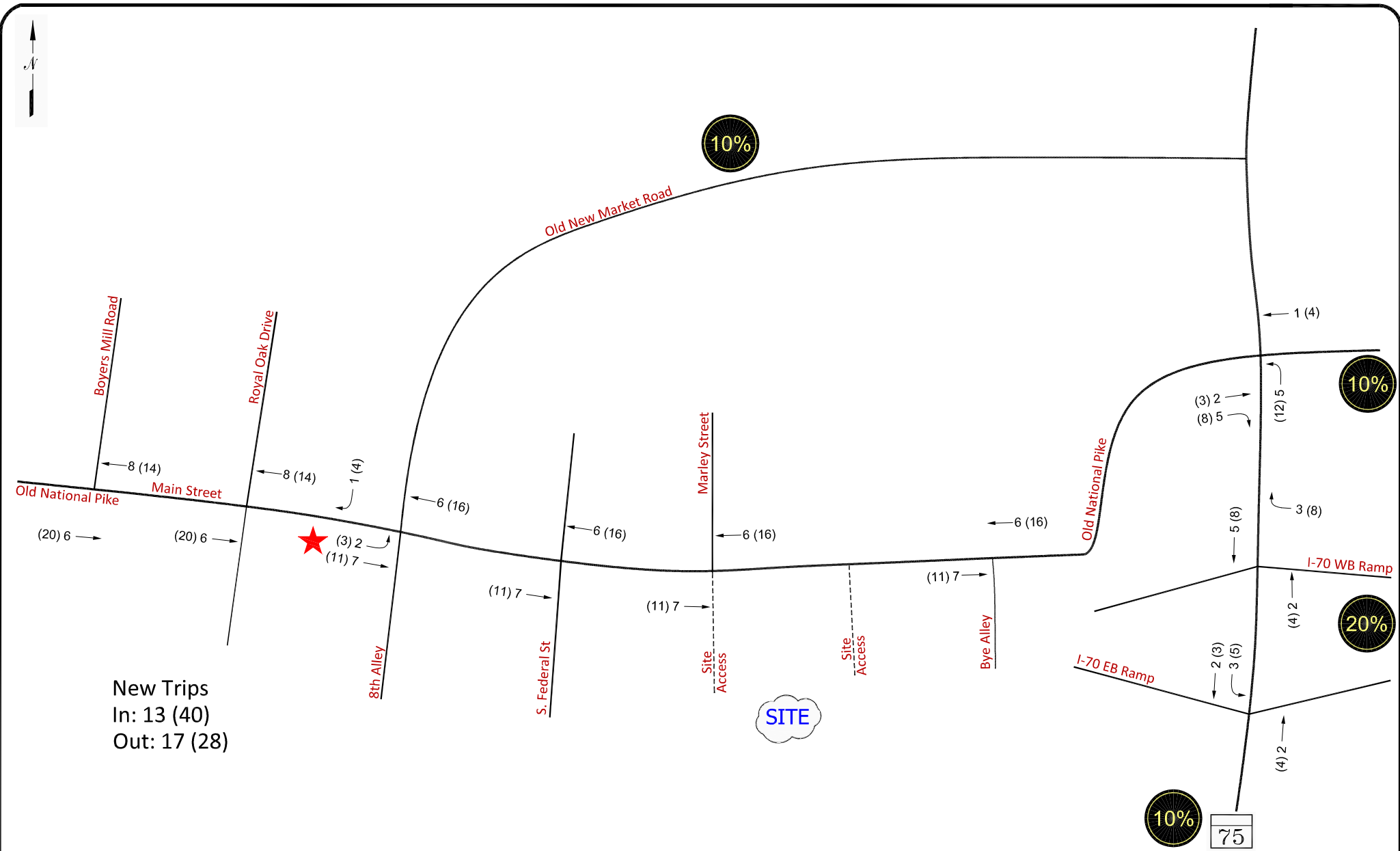


FIGURE C-4
TRIP ASSIGNMENT
FOR #3



APPENDIX D

Analysis

Without Strip Retail Pass-by Trips



TRIP GENERATION RATES

<u>LAND USE</u>	<u>FORMULA</u>	<u>IN/OUT</u>
Single-Family Attached (ITE-215, Units)		
AM Peak Hour Trips = 0.52 x Units - 5.70		31/69
PM Peak Hour Trips = 0.60 x Units - 3.93		57/43
Strip Retail Plaza, <40 ksf (ITE-822)		
Ln(AM Peak Hour Trips) = 0.66 Ln(X) + 1.84		60/40
PM Peak Hour Trips = Ln(T) = 0.71 Ln(ksf) + 2.72		50/50
General Office Building (ksf, ITE-710)		
Ln(AM Peak Hour Trips) = 0.86 x Ln (ksf) + 1.16		88/12
Ln(PM Peak Hour Trips) = 0.83 x Ln(ksf) + 1.29		17/83
High Turnover Restaurant (ksf, ITE-932)		
AM Peak Hour Trips = 9.57 x ksf		55/45
PM Peak Hour Trips = 9.05 x ksf		61/39

TRIP GENERATION TOTALS

	Morning Peak Hour			Evening Peak Hour		
	In	Out	Total	In	Out	Total
42 Single-Family Attached Units	5	11	16	12	9	21
8,000 sq. ft. Strip Retail Plaza	15	10	25	33	33	66
10,000 sq. ft. General Office Building	20	3	23	4	21	25
4,000 sq. ft. High Turnover Restaurant	21	17	38	22	14	36
Less Pass-by Trips (PM: 43%)				-9	-6	-15
Net New Trips	21	17	38	13	8	21
Overall Net New Trips	61	41	102	62	71	133

Note: Trip generation rates derived from ITE Trip Generation Manual, 11th Edition, 2021.



TABLE D-2
TRIP GENERATION RATES AND TOTALS
FOR SUBJECT SITE

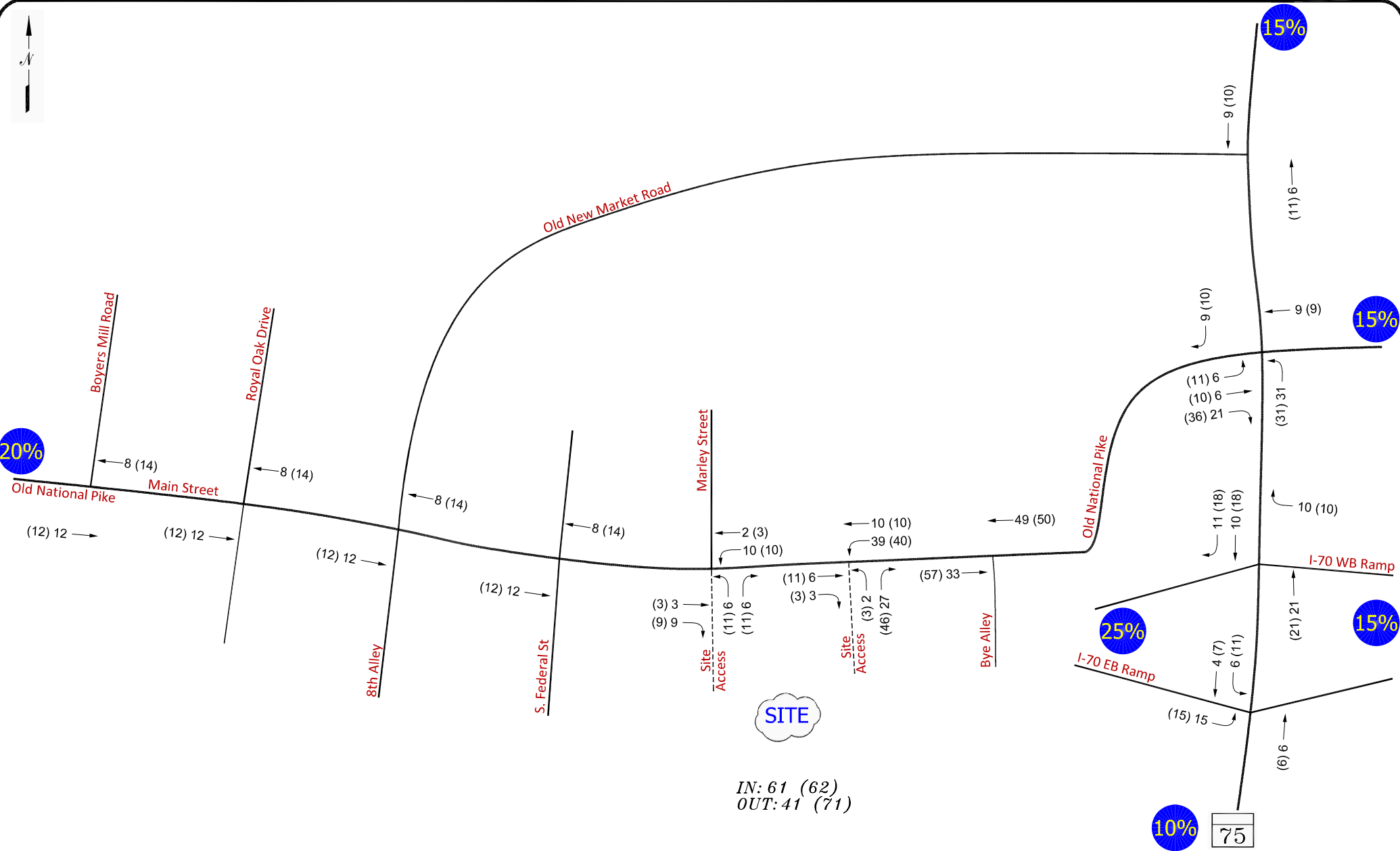
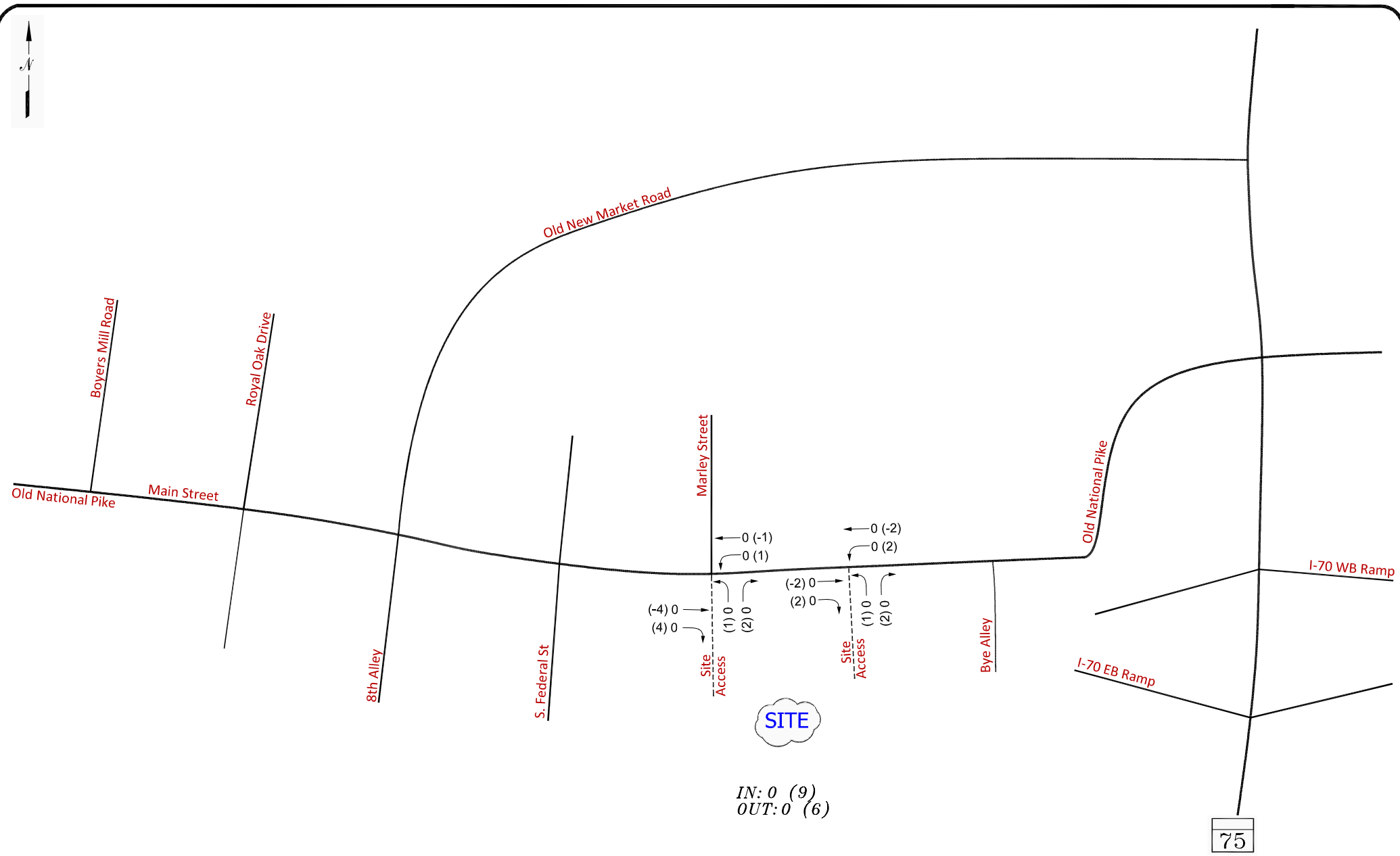


FIGURE D-8
NEW TRIP ASSIGNMENT
FOR SUBJECT SITE

NOT TO SCALE

The Traffic Group

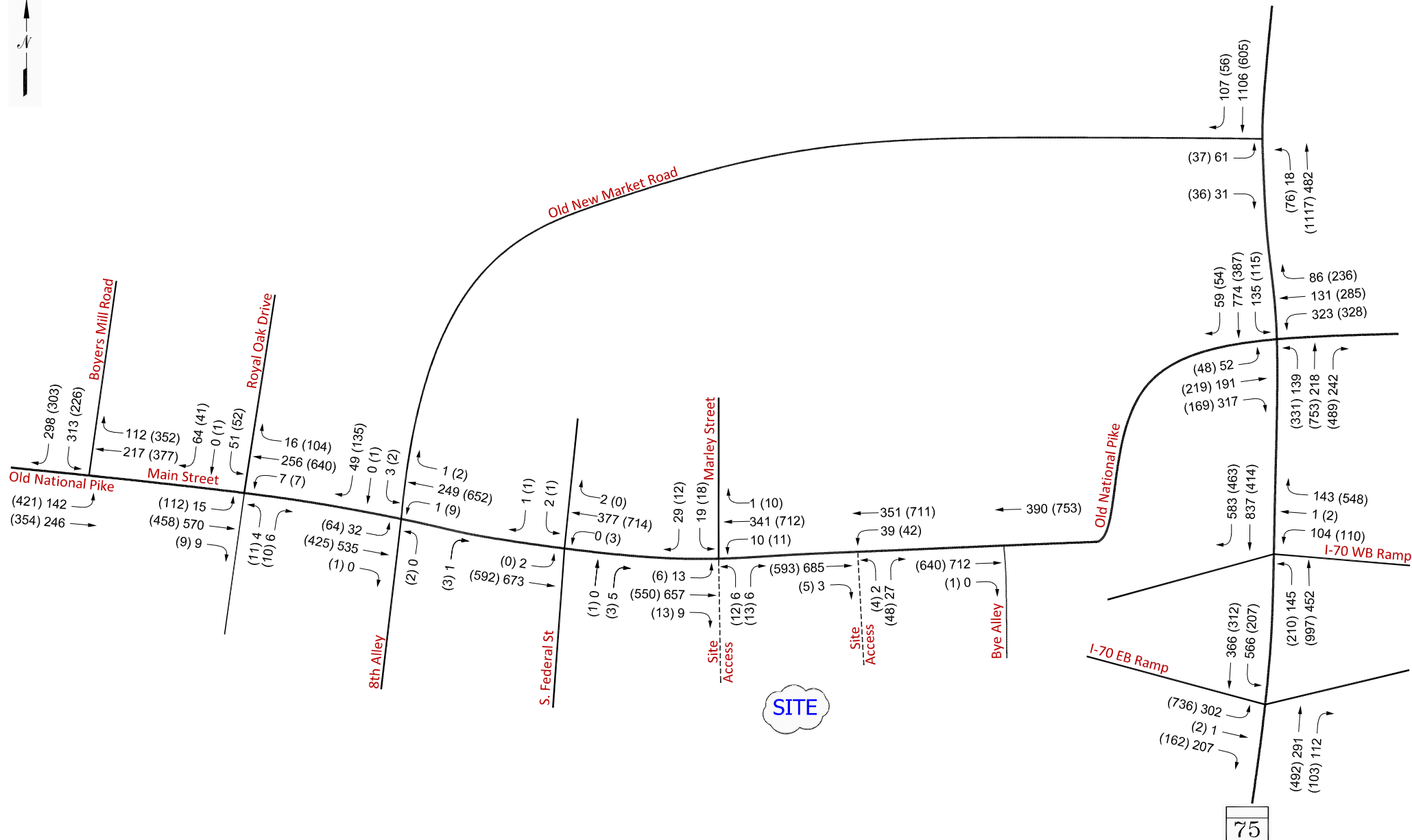
00 - MORNING PEAK HOUR
(00) - EVENING PEAK HOUR



NOT TO SCALE

00 – MORNING PEAK HOUR
 (00) – EVENING PEAK HOUR

**FIGURE D-8A
 PASS-BY TRIP ASSIGNMENT
 FOR SUBJECT SITE**



SITE

75



NOT TO SCALE

00 - MORNING PEAK HOUR
(00) - EVENING PEAK HOUR

FIGURE D-9
TOTAL PEAK HOUR
TRAFFIC VOLUMES

Table D-3 - Results of CLV Analysis

Signalized Intersection	2022 Existing Traffic		2025 Background Traffic		2025 Total Traffic w/o Stip Retail Pass-by Trips	
	AM	PM	AM	PM	AM	PM
	LOS / CLV					
8. Old National Pike/MD 75	A / 832	A / 913	B / 1053	B / 1125	B / 1097	C / 1155

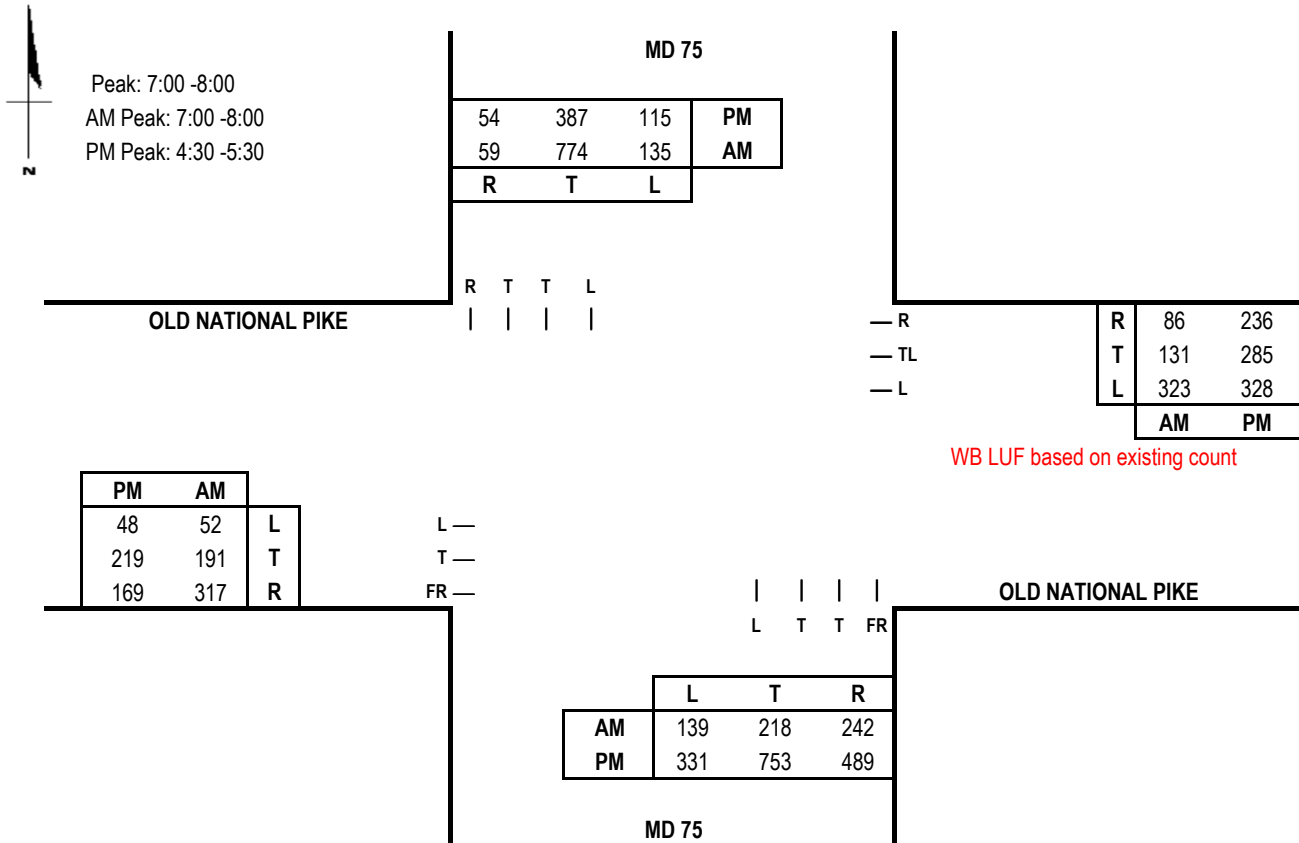
Table D-4 - Results of HCM Analysis

Intersection / Movement	2022 Existing Traffic		2025 Background Traffic		2025 Total Traffic	
	AM	PM	AM	PM	AM	PM
	LOS / Delay (sec.)					
2. Main Street/Royal Oak Drive						
EB LT	A / 7.7	A / 9.0	A / 7.9	A / 9.9	A / 8.0	A / 10.0
WB LT	A / 8.3	A / 8.0	A / 9.0	A / 8.3	A / 9.0	A / 8.4
NB approach	B / 13.5	C / 19.8	C / 18.1	D / 33.0	C / 19.3	E / 38.6
SB Approach	B / 14.5	D / 28.9	C / 22.9	F / 77.4	C / 24.2	F / 87.7
7. MD 75/Old New Market Road						
EB L	E / 37.2	E / 43.1	F / 105.5	F / 116.5	F / 110.5	F / 123.0
EB R	C / 16.3	B / 11.2	C / 23.1	B / 13.0	C / 23.4	B / 13.1
NB L	B / 10.3	A / 8.6	B / 12.0	A / 9.3	B / 12.0	A / 9.4

CRITICAL LANE VOLUME (CLV) METHODOLOGY for Frederick County

E/W Road: Old National Pike
N/S Road: MD 75
Conditions: Total Traffic

Date of Count: 2/25/2021
Day of Week: Thursday
Analyst: Qiang Tian



Capacity Analysis - East/West Split

Morning Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			AM
	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
EB	191	1.00	191				191
WB	454	0.75	341				341
NB	218	0.55	120	135	1.00	135	565
SB	774	0.55	426	139	1.00	139	
CLV TOTAL=							1,097
Level of Service (LOS)=							B

AM V/C =0.69

Evening Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			PM
	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
EB	219	1.00	219				219
WB	613	0.64	392				392
NB	753	0.55	414	115	1.00	115	544
SB	387	0.55	213	331	1.00	331	
CLV TOTAL=							1,155
Level of Service (LOS)=							C

PM V/C =0.72

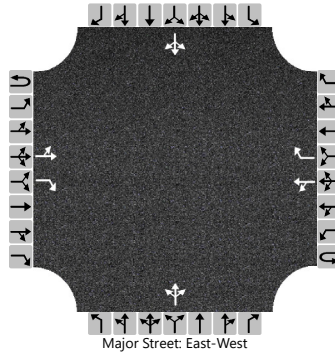
Scenario ID - TOT18

HCS Two-Way Stop-Control Report

General Information

Analyst	QT	Intersection	Main Street/Royal Oak Drive
Agency/Co.	TTG, Inc.	Jurisdiction	Town of New Market
Date Performed	7/11/2022	East/West Street	Main Street
Analysis Year	2025	North/South Street	Royal Oak Drive
Time Analyzed	Total PM wo Retail PB	Peak Hour Factor	0.95
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	East Main		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	1	0	0	1	1		0	1	0		0	1	0
Configuration		LT		R		LT		R			LTR				LTR	
Volume (veh/h)		112	458	9		7	640	104		11	0	10		52	1	41
Percent Heavy Vehicles (%)		2				2				2	2	2		2	2	2
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized	No				No											
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.12				4.12				7.12	6.52	6.22		7.12	6.52	6.22
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.22				2.22				3.52	4.02	3.32		3.52	4.02	3.32

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		118				7					22					99
Capacity, c (veh/h)		835				1072					129					132
v/c Ratio		0.14				0.01					0.17					0.75
95% Queue Length, Q ₉₅ (veh)		0.5				0.0					0.6					4.4
Control Delay (s/veh)		10.0	1.1			8.4	0.1				38.6					87.7
Level of Service (LOS)		B	A			A	A				E					F
Approach Delay (s/veh)	2.8				0.1				38.6				87.7			
Approach LOS	A				A				E				F			

HCS Two-Way Stop-Control Report

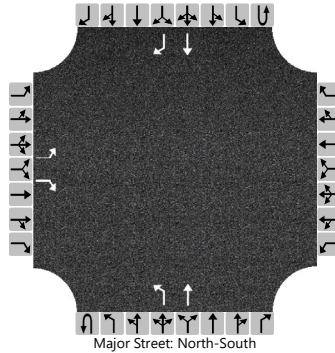
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	7/11/2022
Analysis Year	2022
Time Analyzed	Total PM wo Retail PB
Intersection Orientation	North-South
Project Description	East Main

Site Information

Intersection	MD 75/Old New Market Road
Jurisdiction	Town of New Market
East/West Street	Old New Market Road
North/South Street	MD 75
Peak Hour Factor	0.96
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		1	0	1		0	0	0	0	1	1	0	0	0	1	1
Configuration		L		R						L	T				T	R
Volume (veh/h)		37		36						76	1117				605	56
Percent Heavy Vehicles (%)		2		2						2						
Proportion Time Blocked																
Percent Grade (%)	0															
Right Turn Channelized	No												No			
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.42		6.22						4.12						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.52		3.32						2.22						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		39		38						79						
Capacity, c (veh/h)		64		481						906						
v/c Ratio		0.60		0.08						0.09						
95% Queue Length, Q ₉₅ (veh)		2.5		0.3						0.3						
Control Delay (s/veh)		123.0		13.1						9.4						
Level of Service (LOS)		F		B						A						
Approach Delay (s/veh)	68.8								0.6							
Approach LOS	F								A							

APPENDIX E

Analysis

With Additional Background Developments



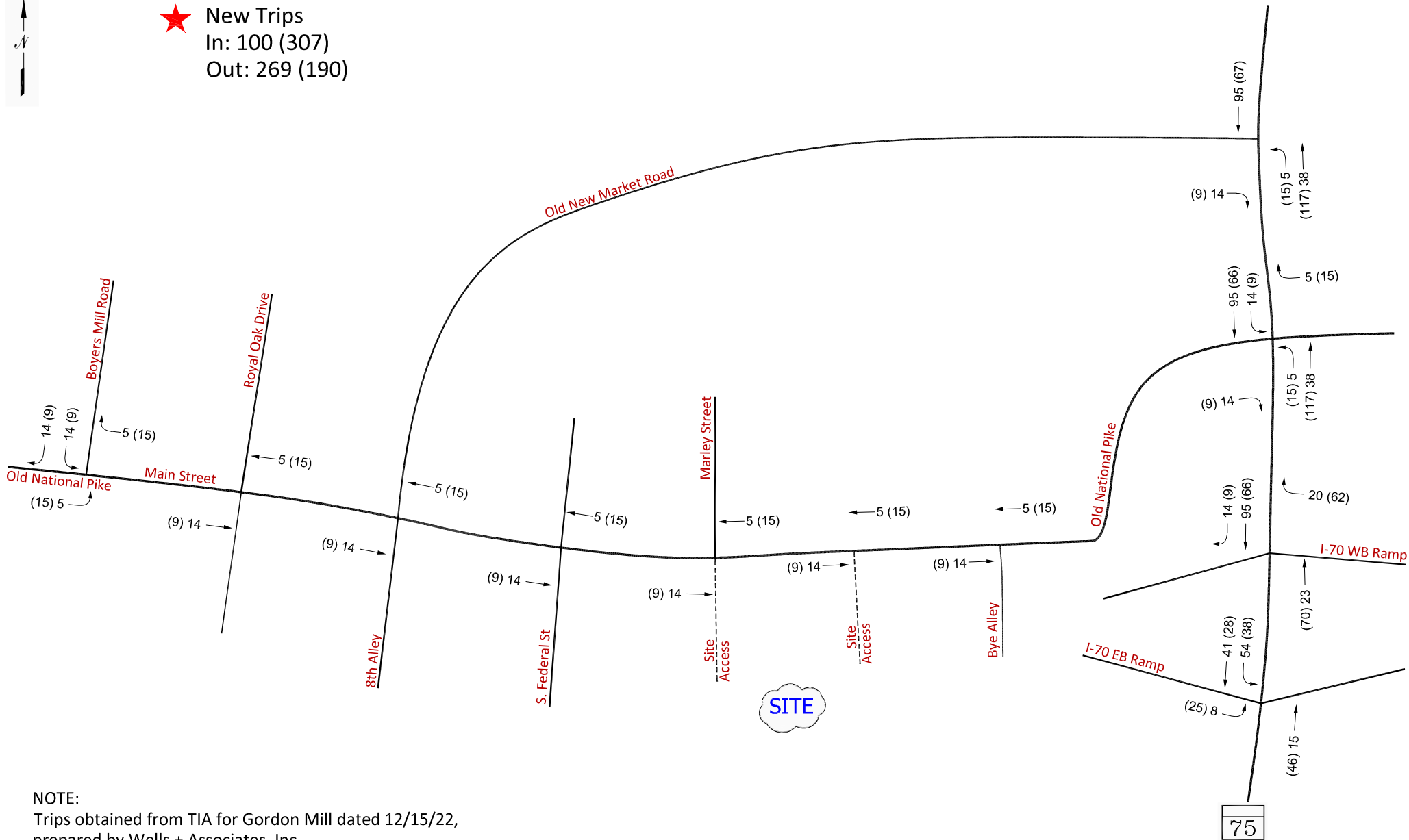
TRIP GENERATION TOTALS

		Morning Peak Hour			Evening Peak Hour		
		In	Out	Total	In	Out	Total
England Woods (Trips obtained from TIA for England Woods dated 2/11/22, prepared by TTG, Inc.)							
50	Senior Adult Housing - Detached Units	8	16	24	17	11	28
500	Senior Adult Housing - Attached Units	<u>35</u>	<u>65</u>	<u>100</u>	<u>67</u>	<u>55</u>	<u>122</u>
Total Trips		43	81	124	84	66	150
Casey Property (Trips obtained from TIA for Casey Property dated 7/17/13, prepared by Wells + Associates, Inc.)							
680	Single-Family Detached Units	122	364	486	372	218	590
337	Condominium/Townhouse Units	23	113	136	109	54	163
10,000	sq. ft. Shopping Center	24	14	38	61	67	128
	Less 25% Pass-by Trips	<u>-6</u>	<u>-4</u>	<u>-10</u>	<u>-15</u>	<u>-17</u>	<u>-32</u>
		18	11	28	46	50	96
Total Trips		163	488	650	527	322	849
Gordon Mill (Trips obtained from TIA for Gordon Mill dated 12/15/22, prepared by Wells + Associates, Inc.)							
435	Single-Family Detached Units	74	210	284	249	147	396
175	Single-Family Attached Units	<u>26</u>	<u>59</u>	<u>85</u>	<u>58</u>	<u>43</u>	<u>101</u>
Total Trips		100	269	369	307	190	497
Calumet (Trips obtained from TIA for Calumet dated 4/22/15, prepared by Wells + Associates, Inc.)							
455	Single-Family Detached Units	82	246	328	259	152	411
470	Single-Family Attached Units	<u>30</u>	<u>148</u>	<u>178</u>	<u>143</u>	<u>71</u>	<u>214</u>
Total Trips		112	394	506	402	223	625



TABLE E-1
TRIP GENERATION
FOR ADDITIONAL BACKGROUND DEVELOPMENTS

★ New Trips
In: 100 (307)
Out: 269 (190)

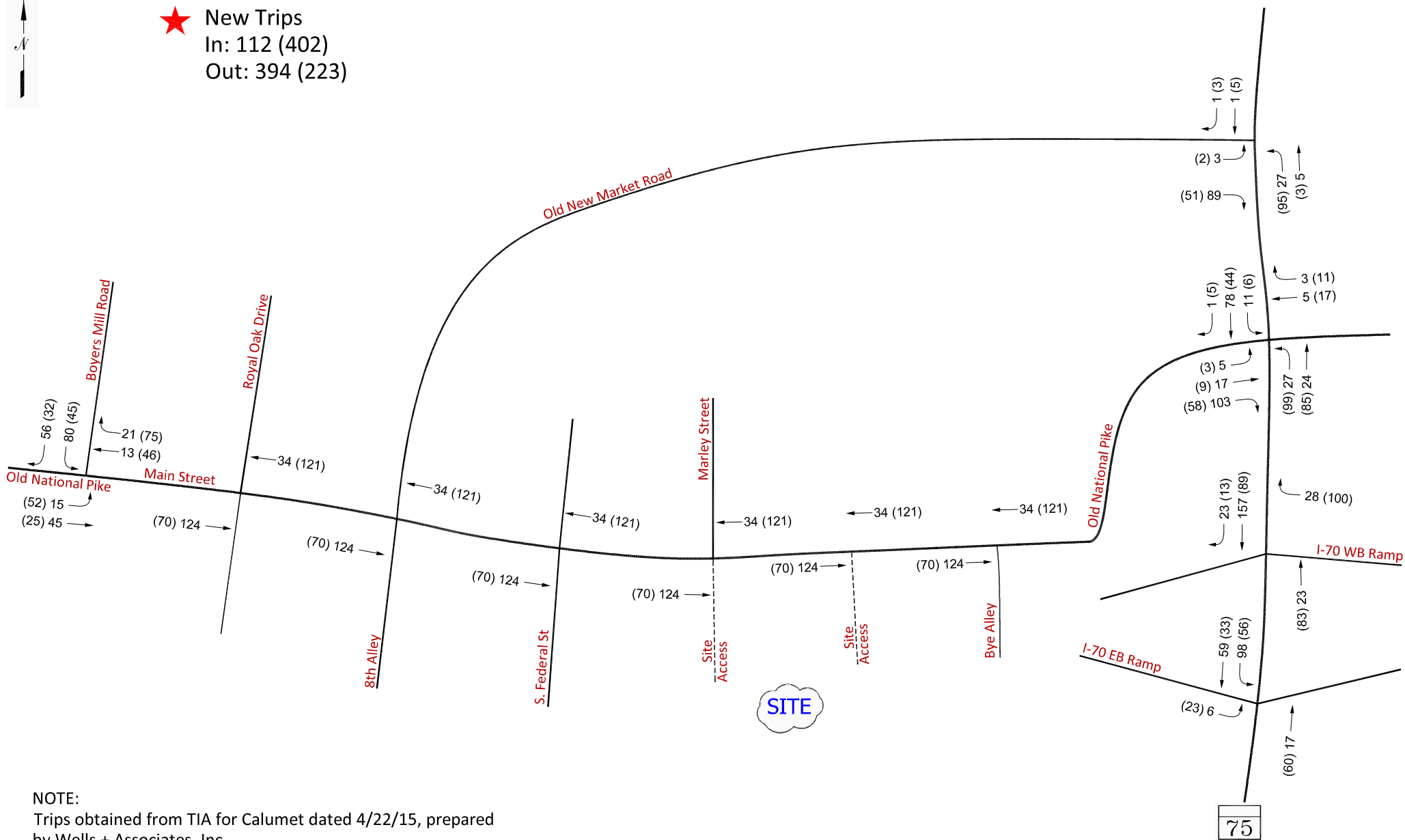


NOT TO SCALE

00 - MORNING PEAK HOUR
(00) - EVENING PEAK HOUR

FIGURE E-3
TRIP ASSIGNMENT
FOR GORDON MILL

★ New Trips
In: 112 (402)
Out: 394 (223)



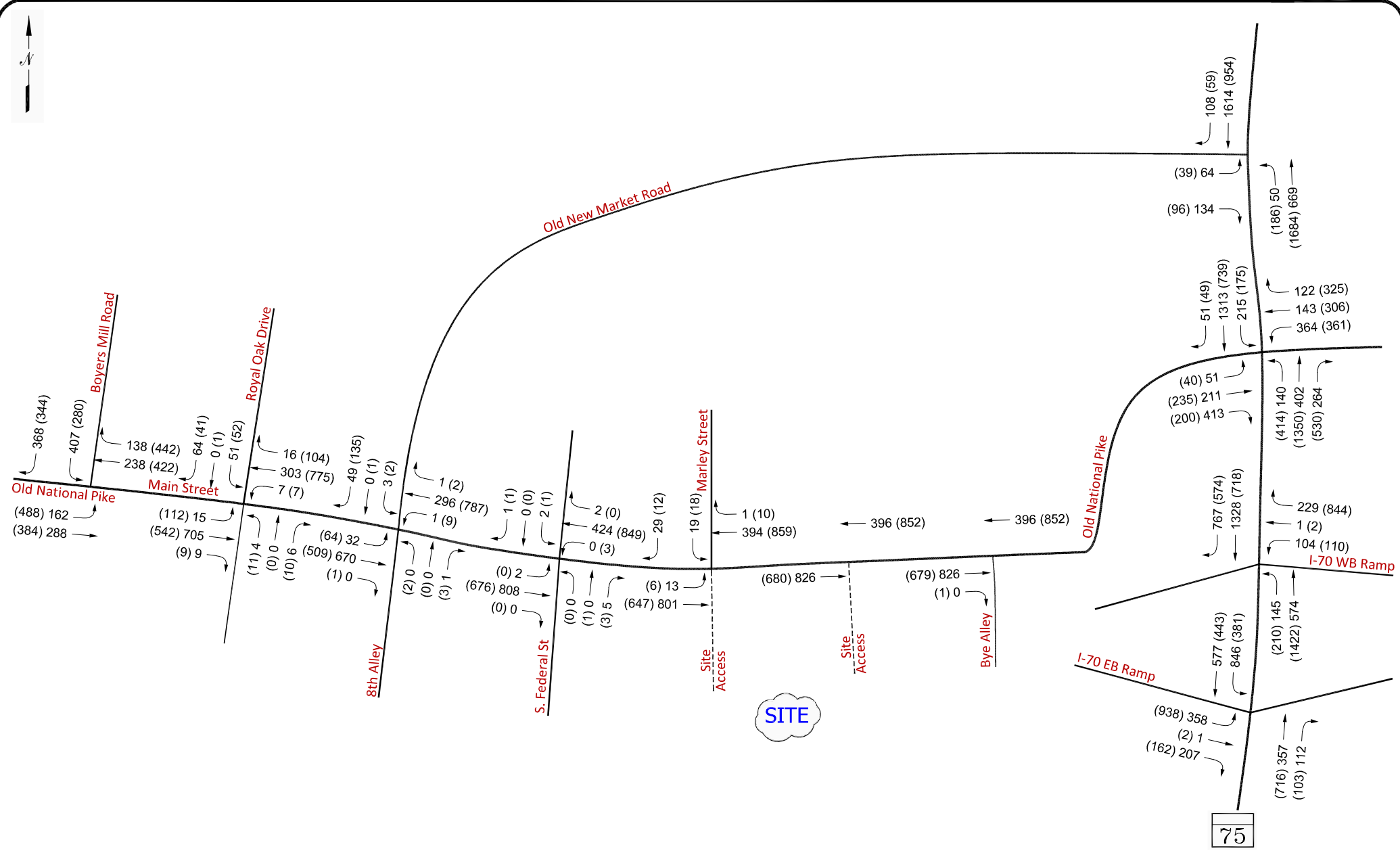
NOTE:
Trips obtained from TIA for Calumet dated 4/22/15, prepared by Wells + Associates, Inc.



NOT TO SCALE

00 - MORNING PEAK HOUR
(00) - EVENING PEAK HOUR

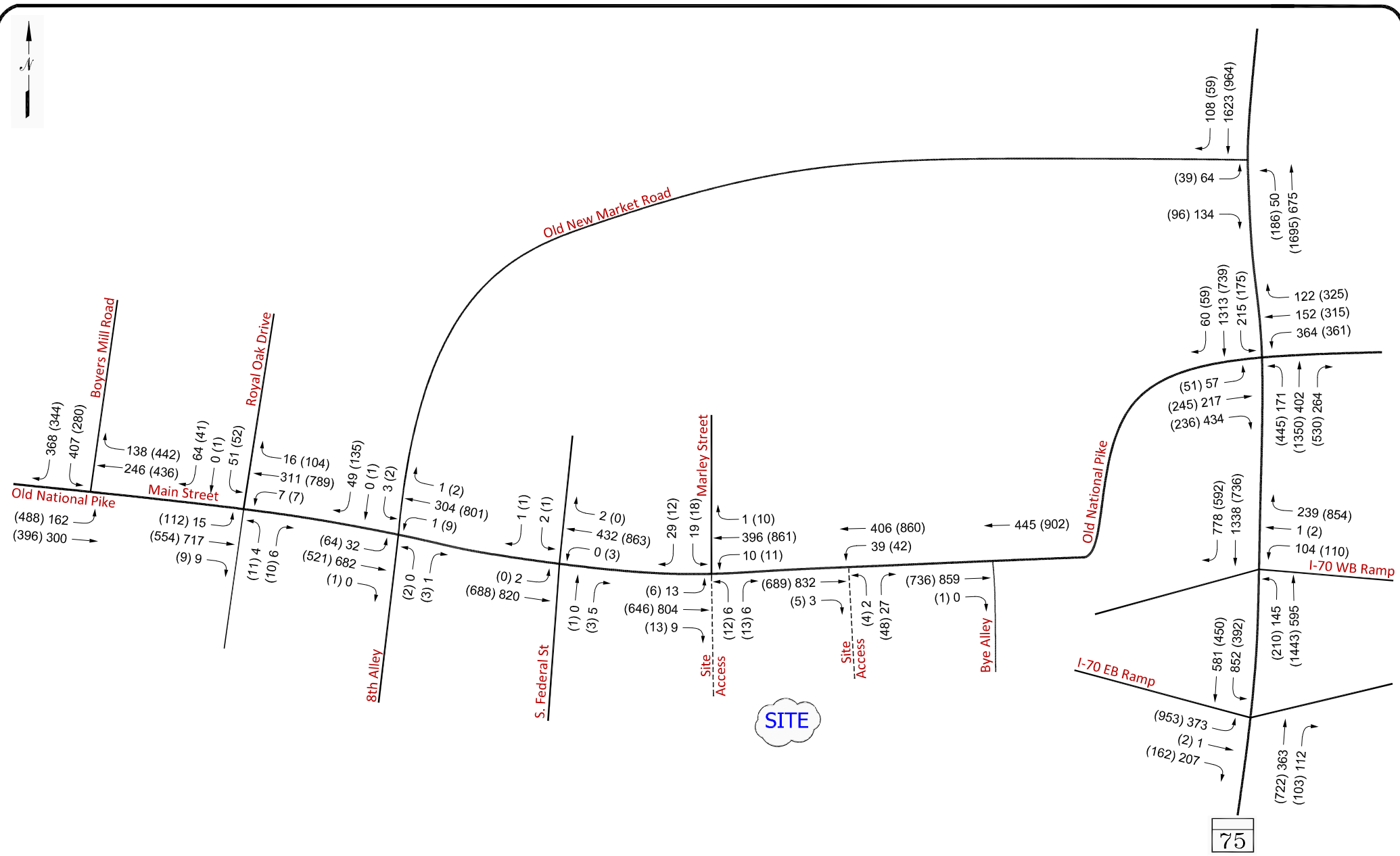
FIGURE E-4
TRIP ASSIGNMENT
FOR CALUMET



NOT TO SCALE

00 - MORNING PEAK HOUR
 (00) - EVENING PEAK HOUR

FIGURE E-5
2025 BACKGROUND PEAK HOUR
TRAFFIC VOLUMES
(WITH ENGLAND WOODS, CASEY PROPERTY, GORDON MILL, AND CALUMET)



NOT TO SCALE

00 - MORNING PEAK HOUR
 (00) - EVENING PEAK HOUR

FIGURE E-6
TOTAL PEAK HOUR
TRAFFIC VOLUMES
 (WITH ENGLAND WOODS, CASEY PROPERTY, GORDON MILL, AND CALUMET)

Table E-2 - Results of CLV Analysis

Signalized Intersection	2025 Background Traffic		2025 Total Traffic	
	AM	PM	AM	PM
	LOS / CLV			
1. Old National Pike/Boyers Mill Road	A / 807	C / 1190	A / 815	C / 1204
7. MD 75/Old New Market Road (New Market Bypass)	B / 1002	A / 965	B / 1007	A / 971
8. Old National Pike/MD 75	B / 1054	C / 1243	B / 1088	C / 1255
9. MD 75/WB I-70 ramps	A / 980	A / 894	A / 986	A / 906
10. MD 75/EB I-70 ramps	C / 1257	D / 1339	C / 1276	D / 1362

Table E-3 - Results of HCM Analysis

Intersection / Movement	2025 Background Traffic		2025 Total Traffic	
	AM	PM	AM	PM
	LOS / Delay (sec.)			
2. Main Street/Royal Oak Drive				
EB LT	A / 8.1	B / 10.8	A / 8.1	B / 10.9
WB LT	A / 9.7	A / 8.6	A / 9.7	A / 8.7
NB approach	C / 24.8	F / 60.6	D / 25.6	F / 64.3
SB Approach	E / 38.2	F / 209.4	E / 40.7	F / 231.4
3. Main Street/Old New Market Road				
EB L	A / 8.1	A / 9.8	A / 8.2	A / 9.9
WB L	A / 9.5	A / 8.5	A / 9.5	A / 8.5
NB approach	B / 14.7	E / 39.3	B / 14.9	E / 41.3
SB Approach	B / 12.4	C / 21.7	B / 12.6	C / 22.3
4. Main Street/South Federal Street				
EB L	A / 8.4	A / 10.0	A / 8.4	A / 10.0
WB L	A / 9.9	A / 9.2	A / 9.9	A / 9.3
NB approach	C / 16.3	C / 21.8	C / 16.5	C / 22.3
SB Approach	D / 29.3	E / 36.9	D / 30.2	E / 38.3
5. Main Street/Marley Street/Site Access				
EB L	A / 8.3	A / 10.0	A / 8.3	A / 10.0
WB L			B / 10.1	A / 9.1
NB approach			D / 33.2	E / 43.5
SB Approach	C / 22.3	E / 36.9	D / 30.6	F / 58.2
6. Main Street/Bye Alley				
WB L	No Traffic			
NB approach				
11. Main Street/Site Access				
WB L			B / 10.3	A / 9.6
NB approach			C / 19.2	C / 20.5

SHA Methodology		2025 Background Traffic	2025 Total Traffic	Available Storage Length (ft.)
Morning Peak Hour Traffic		95% Percentile Queue Length (ft.)		
1. Old National Pike/Boyers Mill Road				
EB Old National Pike left turn:		150	150	150
EB Old National Pike thru:		225	225	>500
WB Old National Pike thru:		175	200	>500
WB Old National Pike right turn:		<25	<25	150
SB Boyers Mill Road left turn:		275	275	>500
SB Boyers Mill Road right turn:		175 ^{1/}	175 ^{1/}	100
7. MD 75/New Market Bypass				
EB (New Market Bypass) left turn		125	125	>1000
NB (MD 75) left turn		100	100	new
NB (MD 75) thru		450	450	>1500
SB (MD 75) thru		1036	1041	>1500
SB (MD 75) right turn		175	175	new
8. Old National Pike/MD 75				
EB Old National Pike left turn:		100	100	200
EB Old National Pike thru:		175	175	>1000
WB Old National Pike most left lane:		350	350	400
WB Old National Pike left/thru shared lane:		325	325	680
WB Old National Pike right turn:		200	200	680
NB MD 75 left turn:		200	250	275
NB MD 75 thru:		300	300	700
SB MD 75 left turn:		300	300	425
SB MD 75 thru:		625	625	>1000
SB MD 75 right turn:		100	125	300
9. MD 75 @ I-70 WB Ramps				
WB I-70 WB off Ramps left/thru		175	175	>500
NB MD 75 left turn		225	225	225
NB MD 75 thru		400	425	900
SB MD 75 thru		871 ^{1/}	859 ^{1/}	700
10. MD 75 @ I-70 EB Ramps				
EB I-70 EB off Ramps left/thru		300	300	>800
NB MD 75 thru		275	275	>1000
SB MD 75 left turn		987 ^{1/}	994 ^{1/}	225
SB MD 75 thru		400	400	900



1. Negligible impact from site.

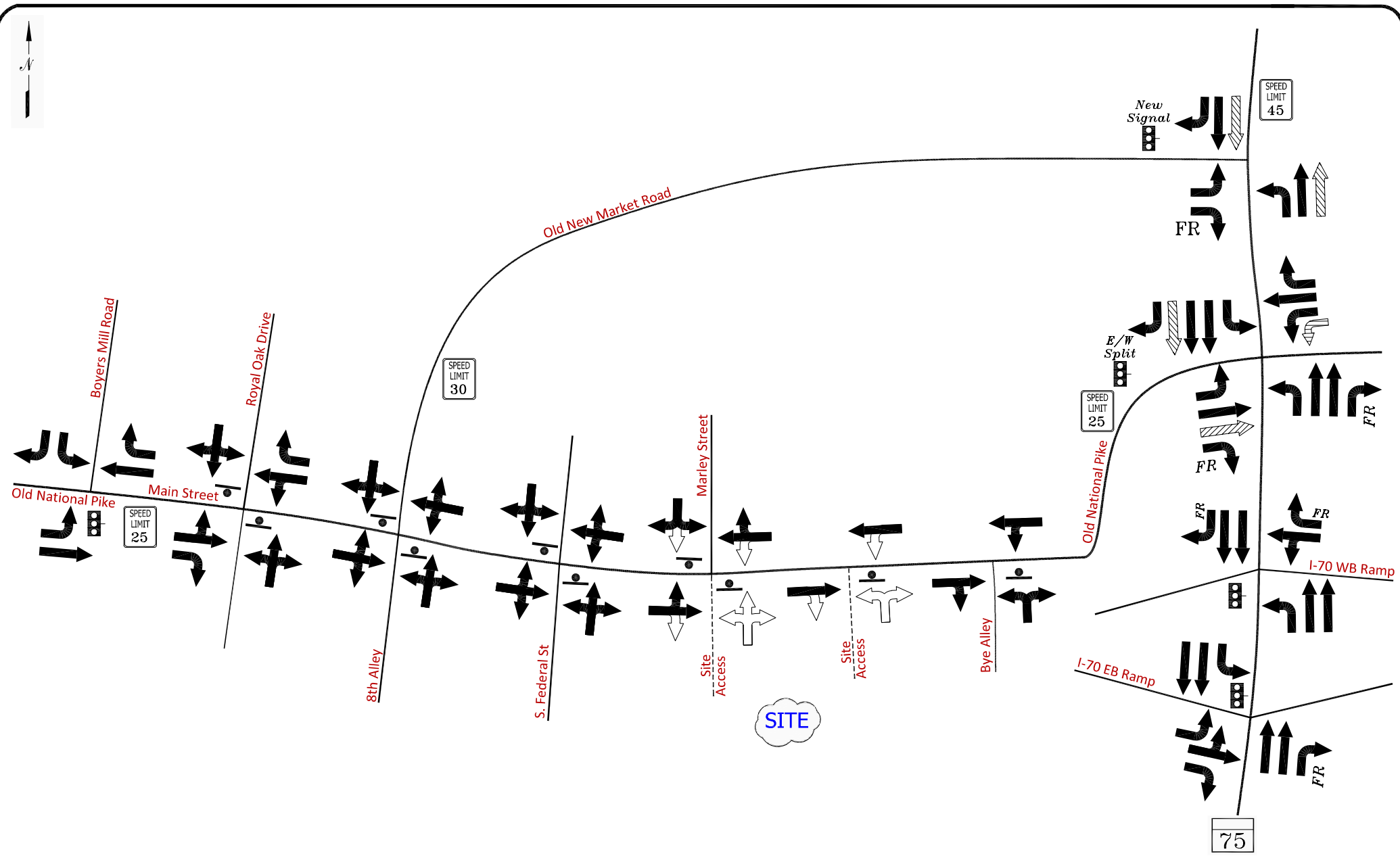
TABLE E-4
RESULTS OF INTERSECTION
QUEUING ANALYSIS

SHA Methodology		2025 Background Traffic	2025 Total Traffic	Available Storage Length (ft.)
Evening Peak Hour Traffic		95% Percentile Queue Length (ft.)		
1. Old National Pike/Boyers Mill Road				
EB Old National Pike left turn:		375 ^{1/}	375 ^{1/}	150
EB Old National Pike thru:		300	300	>500
WB Old National Pike thru:		325	325	>500
WB Old National Pike right turn:		150	150	150
SB Boyers Mill Road left turn:		225	225	>500
SB Boyers Mill Road right turn:		<25	<25	100
7. MD 75/New Market Bypass				
EB (New Market Bypass) left turn		75	75	>1000
NB (MD 75) left turn		275	275	new
NB (MD 75) thru		1081	1088	>1500
SB (MD 75) thru		625	625	>1500
SB (MD 75) right turn		100	100	new
8. Old National Pike/MD 75				
EB Old National Pike left turn:		75	100	200
EB Old National Pike thru:		200	200	>1000
WB Old National Pike most left lane:		300	300	400
WB Old National Pike left/thru shared lane:		325	325	680
WB Old National Pike right turn:		400	400	680
NB MD 75 left turn:		500 ^{1/}	525 ^{1/}	275
NB MD 75 thru:		866 ^{1/}	866 ^{1/}	700
SB MD 75 left turn:		250	125	425
SB MD 75 thru:		375	375	>1000
SB MD 75 right turn:		100	100	300
9. MD 75 @ I-70 WB Ramps				
WB I-70 WB off Ramps left/thru		175	175	>500
NB MD 75 left turn		300 ^{1/}	300 ^{1/}	225
NB MD 75 thru		912 ^{1/}	926 ^{1/}	900
SB MD 75 thru		475	500	700
10. MD 75 @ I-70 EB Ramps				
EB I-70 EB off Ramps left/thru		650	675	>800
NB MD 75 thru		475	475	>1000
SB MD 75 left turn		475 ^{1/}	475 ^{1/}	225
SB MD 75 thru		325	325	900



1. Negligible impact from site.

TABLE E-4 CONT'D
RESULTS OF INTERSECTION
QUEUING ANALYSIS



All intersections are signalized.



NOT TO SCALE

- EXISTING/PLANNED LANE USE
- RECOMMENDED LANE USE BY OTHERS
- RECOMMENDED LANE USE BY SITE

EXHIBIT E-7
FUTURE LANE USE
(WITH ENGLAND WOODS, CASEY
PROPERTY, GORDON MILL, AND CALUMET)

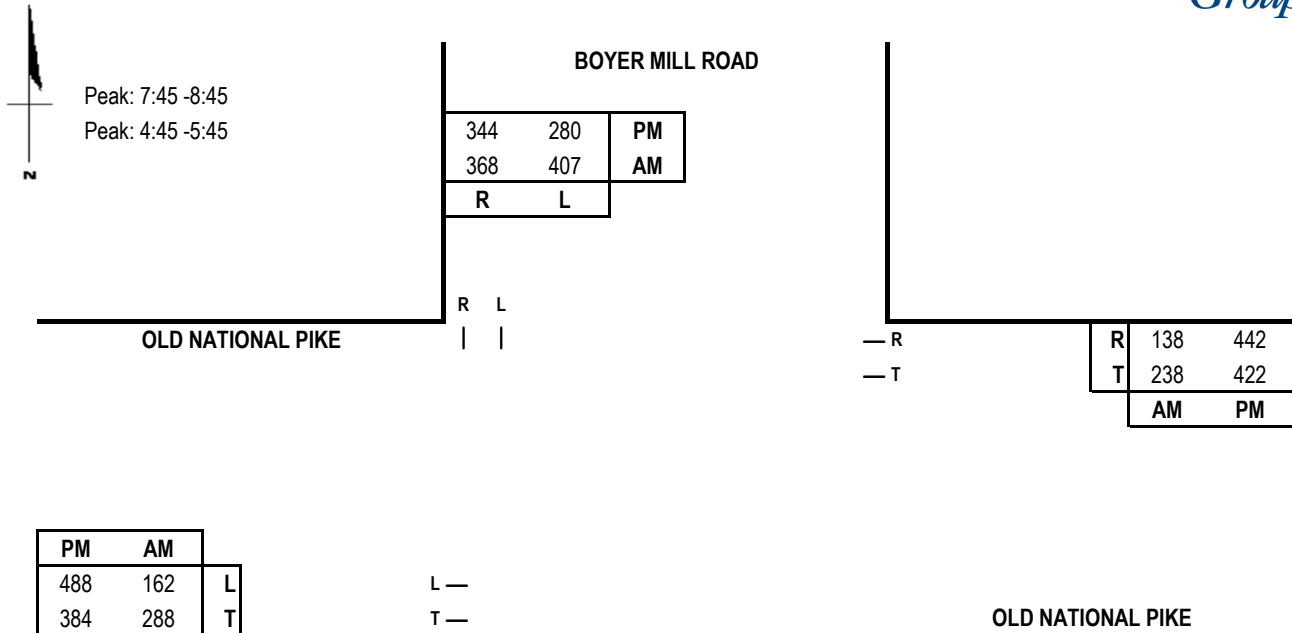
**Analysis Worksheets
And Supporting Documents**



CRITICAL LANE VOLUME (CLV) METHODOLOGY for MSHA

E/W Road: Old National Pike
N/S Road: Boyer Mill Road
Conditions: Background Traffic

Date of Count: 10/26/2021
Day of Count: Tuesday
Analyst: Qiang Tian



Capacity Analysis

Morning Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
SB	407	1.00	407			
EB	288	1.00	288			
WB	238	1.00	238	162	1.00	162
CLV TOTAL=						807
Level of Service (LOS)=						A

Scenario ID - BACK21

CLV V/C =0.5

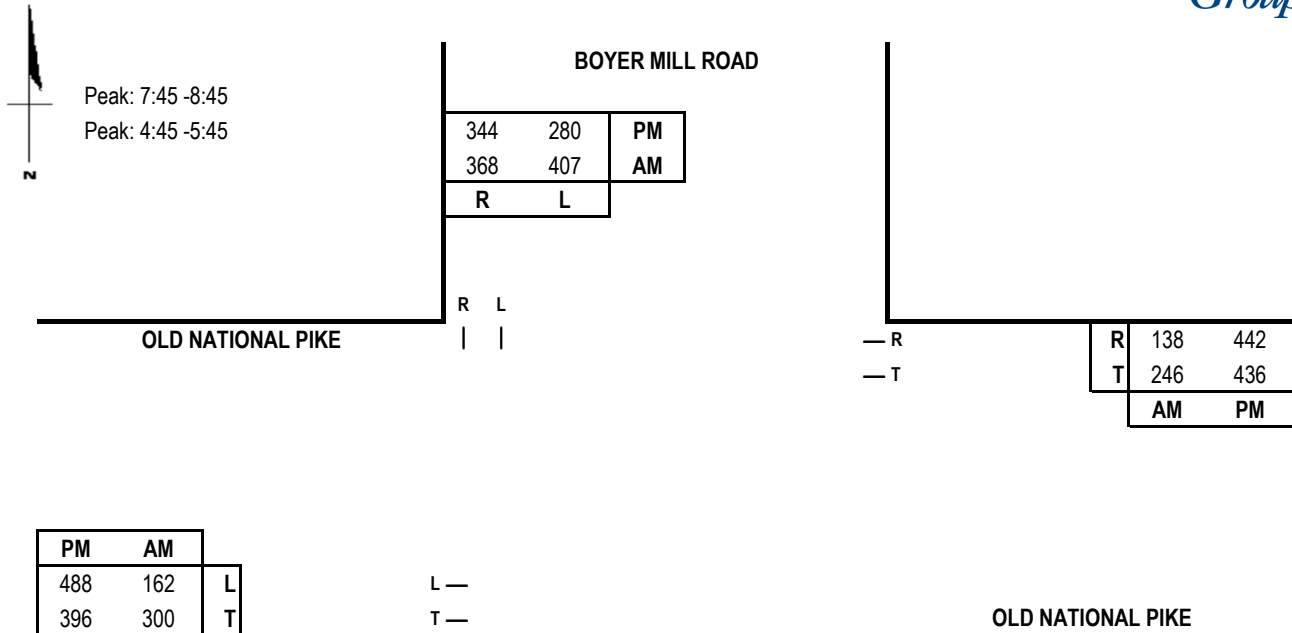
Evening Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
SB	280	1.00	280			
EB	384	1.00	384			
WB	422	1.00	422	488	1.00	488
CLV TOTAL=						1,190
Level of Service (LOS)=						C

CLV V/C =0.74

CRITICAL LANE VOLUME (CLV) METHODOLOGY for MSHA

E/W Road: Old National Pike
N/S Road: Boyer Mill Road
Conditions: Total Traffic

Date of Count: 10/26/2021
Day of Count: Tuesday
Analyst: Qiang Tian



Capacity Analysis

Morning Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
SB	407	1.00	407			
EB	300	1.00	300			
WB	246	1.00	246	162	1.00	162
CLV TOTAL=						815
Level of Service (LOS)=						A

Scenario ID - TOT21

CLV V/C =0.51

Evening Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
SB	280	1.00	280			
EB	396	1.00	396			
WB	436	1.00	436	488	1.00	488
CLV TOTAL=						1,204
Level of Service (LOS)=						C

CLV V/C =0.75

CRITICAL LANE VOLUME (CLV) METHODOLOGY for MSHA

E/W Road Name: Mussetter Rd Ext. / New Market Bypass
N/S Road Name: MD 75
Conditions: Background Traffic

Date of Count: 5/25/2022
Day of Count: Wednesday
Analyst: Qiang Tian



AM Peak: 07:30-8:30
 PM Peak: 04:00-5:00

MD 75

59	954	PM
108	1614	AM
R	T	

R T T
 | | |

MUSSETTER RD EXT. / NEW MARKET
 BYPASS

PM	AM	
39	64	L
96	134	R

L —
 FR —

| | |
 L T T

	L	T
AM	50	669
PM	186	1684

MD 75

Capacity Analysis

Morning Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
EB	64	1.00	64			
NB	669	0.55	368			
SB	1614	0.55	888	50	1.00	50
CLV TOTAL=						1,002
Level of Service (LOS)=						B

CLV V/C = 0.63

Evening Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
EB	39	1.00	39			
NB	1684	0.55	926			
SB	954	0.55	525	186	1.00	186
CLV TOTAL=						965
Level of Service (LOS)=						A

CLV V/C = 0.6

Scenario ID - BACK27

CRITICAL LANE VOLUME (CLV) METHODOLOGY for MSHA

E/W Road Name: Mussetter Rd Ext. / New Market Bypass
N/S Road Name: MD 75
Conditions: Total Traffic

Date of Count: 5/25/2022
Day of Count: Wednesday
Analyst: Qiang Tian



AM Peak: 07:30-8:30
 PM Peak: 04:00-5:00

MD 75

59	964	PM
108	1623	AM
R	T	

R T T
 | | |

MUSSETTER RD EXT. / NEW MARKET
 BYPASS

PM	AM	
39	64	L
96	134	R

L —
 FR —

| | |
 L T T

	L	T
AM	50	675
PM	186	1695

MD 75

Capacity Analysis

Morning Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
EB	64	1.00	64			
NB	675	0.55	371			
SB	1623	0.55	893	50	1.00	50
CLV TOTAL=						1,007
Level of Service (LOS)=						B

CLV V/C = 0.63

Evening Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
EB	39	1.00	39			
NB	1695	0.55	932			
SB	964	0.55	530	186	1.00	186
CLV TOTAL=						971
Level of Service (LOS)=						A

CLV V/C = 0.61

Scenario ID - TOT27

CRITICAL LANE VOLUME (CLV) METHODOLOGY for Frederick County

E/W Road: Old National Pike

Date of Count: 2/25/2021

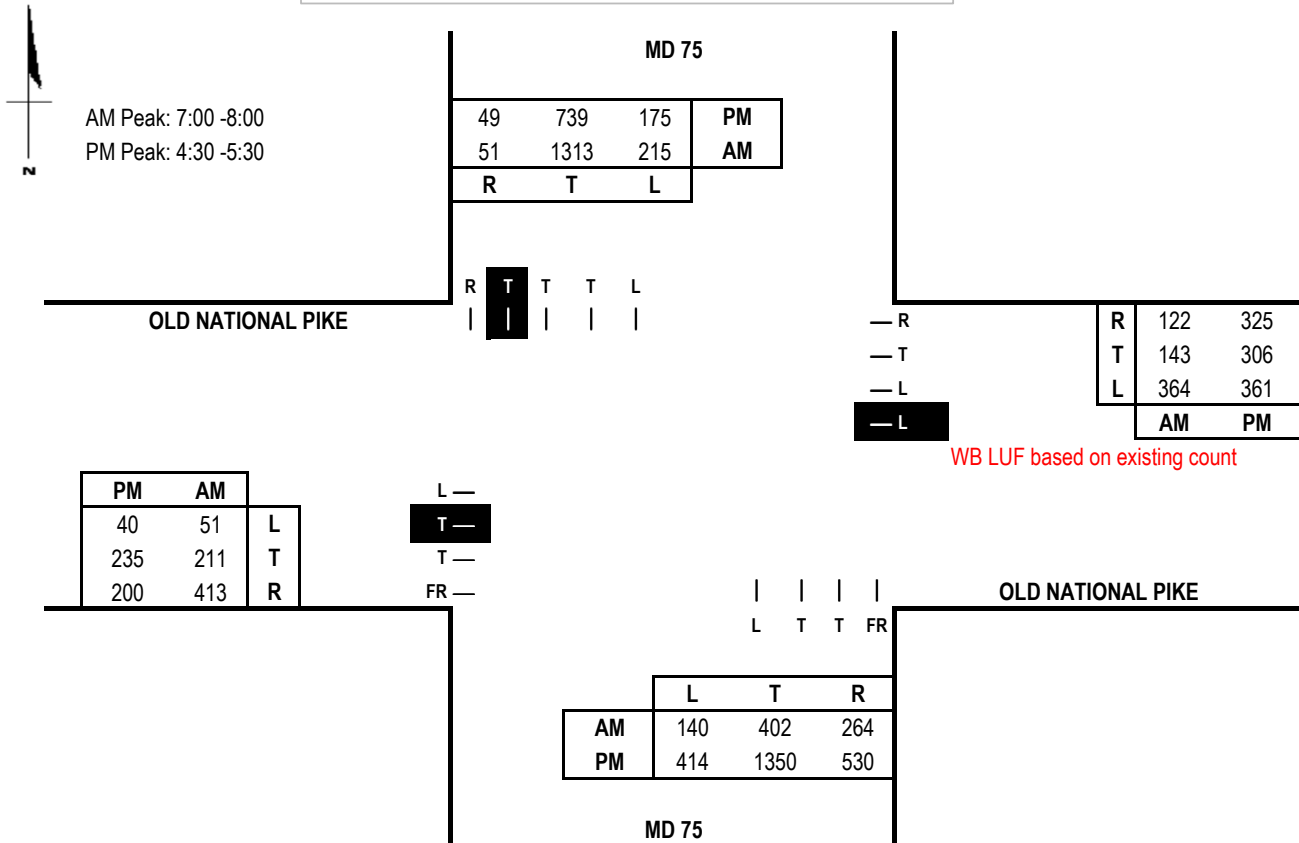
N/S Road: MD 75

Day of Week: Thursday

Conditions: Background Traffic

Analyst: Qiang Tian

w. Casey Property Phases 1, 2, & 3 Improvement



Capacity Analysis - East/West Split

Morning Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			AM CLV
	VOL	x LUF	= Total	VOL	x LUF	= Total	
EB	211	0.55	116				116
WB	364	0.75	273				273
NB	402	0.55	221	215	1.00	215	665
SB	1313	0.40	525	140	1.00	140	
CLV TOTAL=							1,054
Level of Service (LOS)=							B

AM V/C = 0.66

Evening Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			PM CLV
	VOL	x LUF	= Total	VOL	x LUF	= Total	
EB	235	0.55	129				129
WB	306	0.64	196				196
NB	1350	0.55	743	175	1.00	175	918
SB	739	0.40	296	414	1.00	414	
CLV TOTAL=							1,243
Level of Service (LOS)=							C

PM V/C = 0.78

Scenario ID - BACK28

CRITICAL LANE VOLUME (CLV) METHODOLOGY for Frederick County

E/W Road: Old National Pike

Date of Count: 2/25/2021

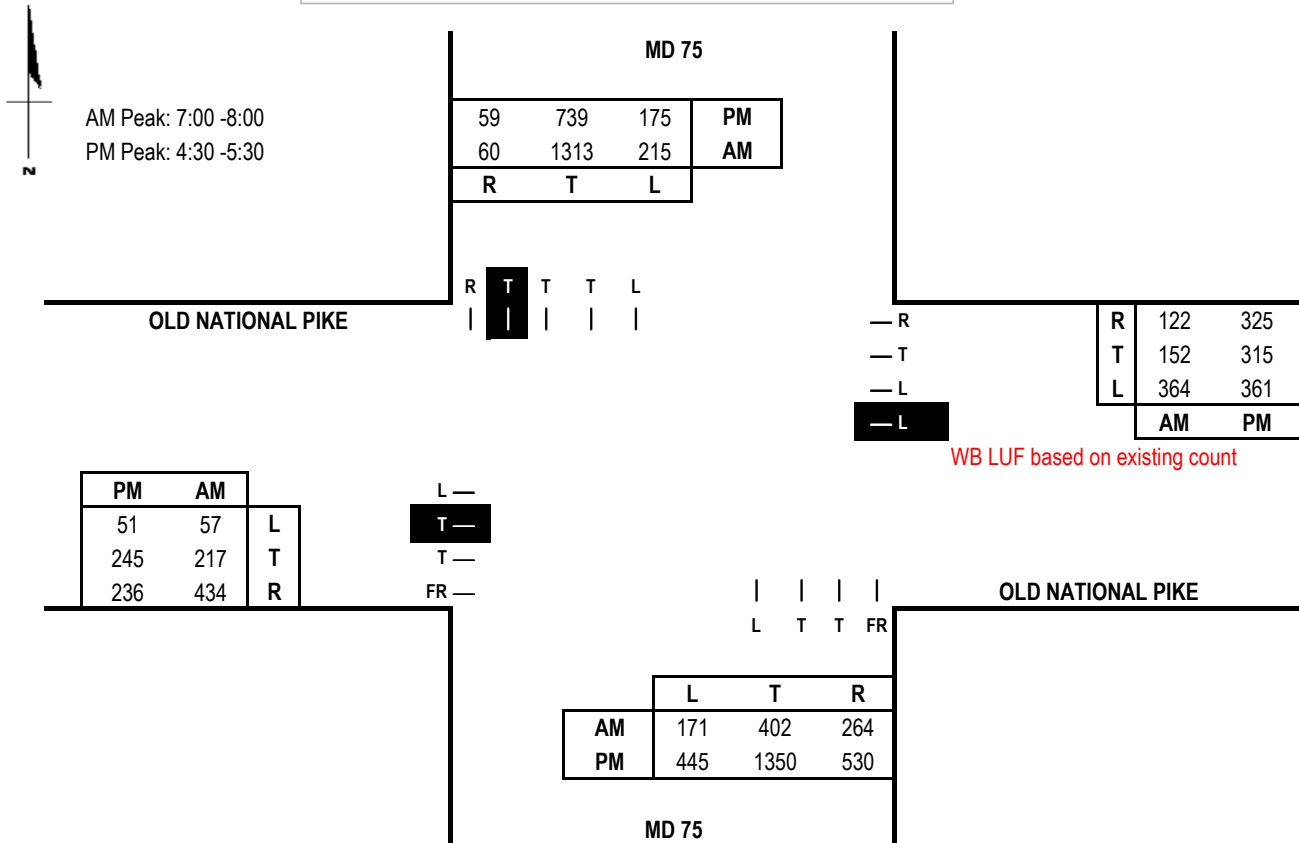
N/S Road: MD 75

Day of Week: Thursday

Conditions: Total Traffic

Analyst: Qiang Tian

w. Casey Property Phases 1, 2, & 3 Improvement



Capacity Analysis - East/West Split

Morning Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			AM CLV
	VOL	x LUF	= Total	VOL	x LUF	= Total	
EB	217	0.55	119				119
WB	364	0.75	273				273
NB	402	0.55	221	215	1.00	215	696
SB	1313	0.40	525	171	1.00	171	
CLV TOTAL=							1,088
Level of Service (LOS)=							B

Scenario ID - TOT28

AM V/C = 0.68

Evening Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			PM CLV
	VOL	x LUF	= Total	VOL	x LUF	= Total	
EB	245	0.55	135				135
WB	315	0.64	202				202
NB	1350	0.55	743	175	1.00	175	918
SB	739	0.40	296	445	1.00	445	
CLV TOTAL=							1,255
Level of Service (LOS)=							C

PM V/C = 0.78

CRITICAL LANE VOLUME (CLV) METHODOLOGY for MSHA

E/W Road: I-70 WB Off Ramp/I-70 Wb On Ramp

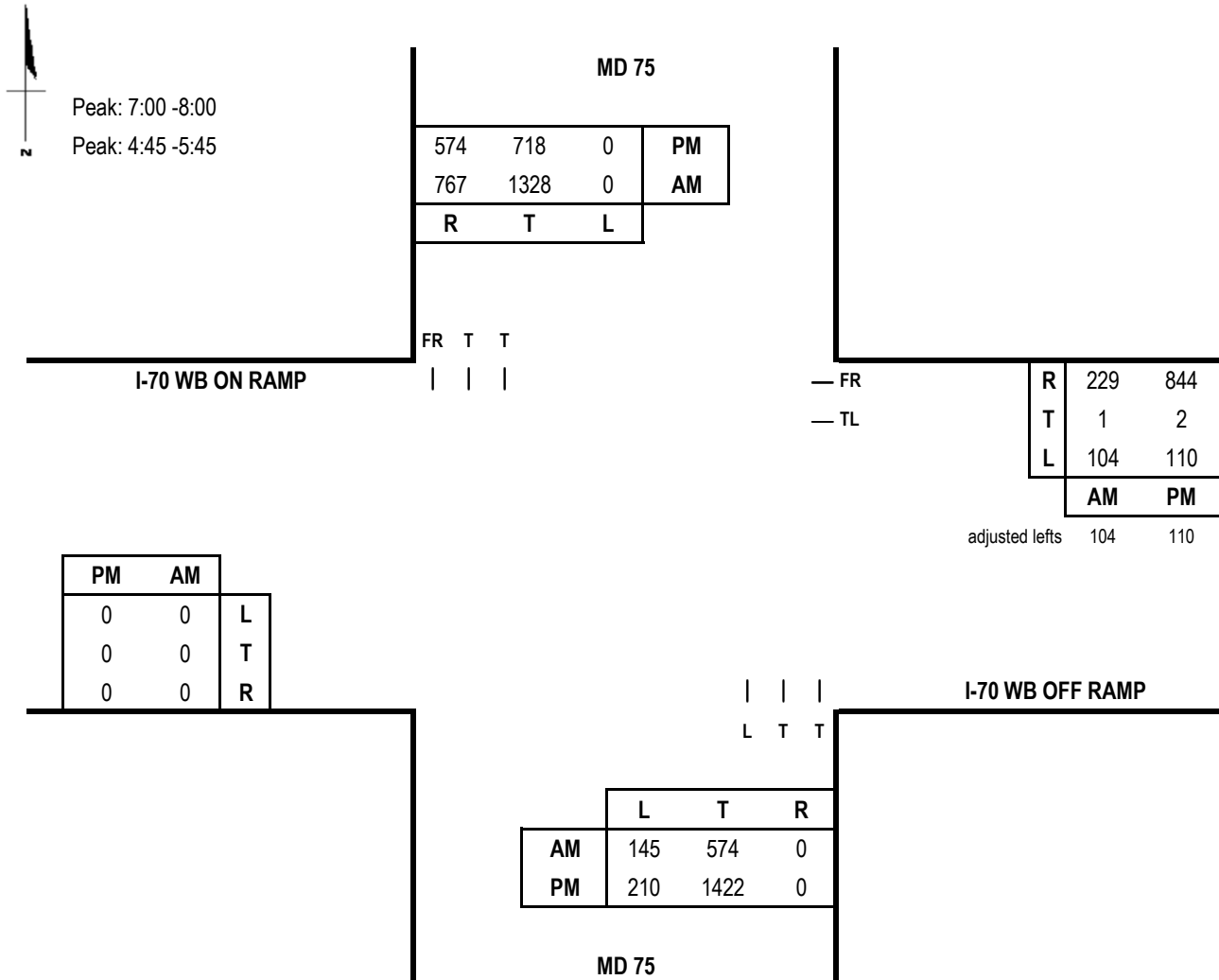
Date of Count: 2/25/2021

N/S Road: MD 75

Day of Count: Thursday

Conditions: Background Traffic

Analyst: Qiang Tian



Capacity Analysis

Morning Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			AM CLV
	VOL	x LUF	= Total	VOL	x LUF	= Total	
NB	574	0.55	316	0	0.00	0	875
SB	1328	0.55	730	145	1.00	145	
EB	0	0.00	0	104	1.00	104	105
WB	105	1.00	105	0	0.00	0	
CLV TOTAL=							980
Level of Service (LOS)=							A

AM V/C =0.61

Evening Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			PM CLV
	VOL	x LUF	= Total	VOL	x LUF	= Total	
NB	1422	0.55	782	0	0.00	0	782
SB	718	0.55	395	210	1.00	210	
EB	0	0.00	0	110	1.00	110	112
WB	112	1.00	112	0	0.00	0	
CLV TOTAL=							894
Level of Service (LOS)=							A

PM V/C =0.56

Scenario ID - BACK29

CRITICAL LANE VOLUME (CLV) METHODOLOGY for MSHA

E/W Road: I-70 WB Off Ramp/I-70 Wb On Ramp

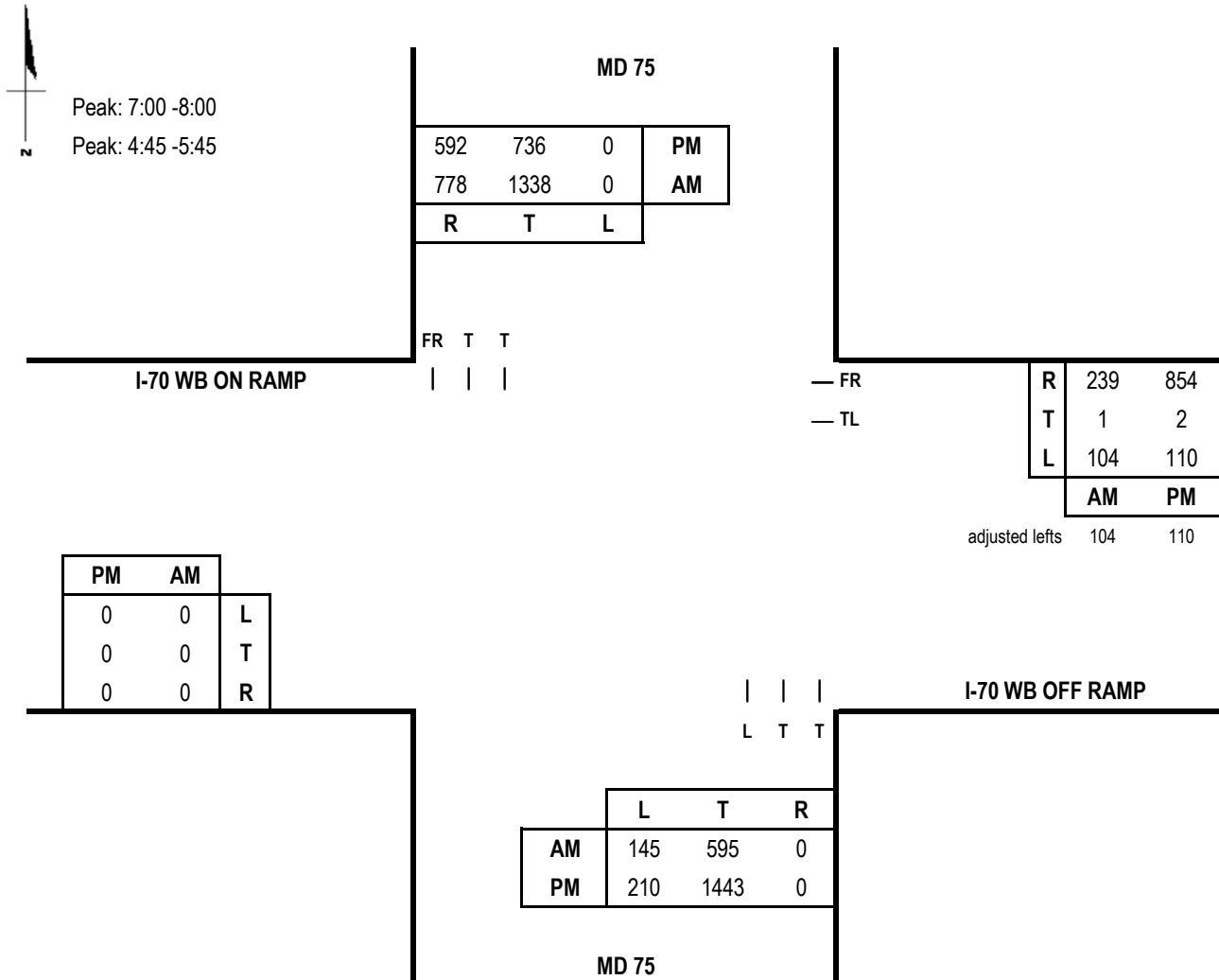
Date of Count: 2/25/2021

N/S Road: MD 75

Day of Count: Thursday

Conditions: Total Traffic

Analyst: Qiang Tian



Capacity Analysis

Morning Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			AM CLV
	VOL	x LUF	= Total	VOL	x LUF	= Total	
NB	595	0.55	327	0	0.00	0	881
SB	1338	0.55	736	145	1.00	145	
EB	0	0.00	0	104	1.00	104	105
WB	105	1.00	105	0	0.00	0	
CLV TOTAL=							986
Level of Service (LOS)=							A

Evening Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			PM CLV
	VOL	x LUF	= Total	VOL	x LUF	= Total	
NB	1443	0.55	794	0	0.00	0	794
SB	736	0.55	405	210	1.00	210	
EB	0	0.00	0	110	1.00	110	112
WB	112	1.00	112	0	0.00	0	
CLV TOTAL=							906
Level of Service (LOS)=							A

Scenario ID - TOT29

AM V/C =0.62

PM V/C =0.57

CRITICAL LANE VOLUME (CLV) METHODOLOGY for Frederick County

E/W Road: I-70 EB On Ramp/I-70 Eb Off Ramp

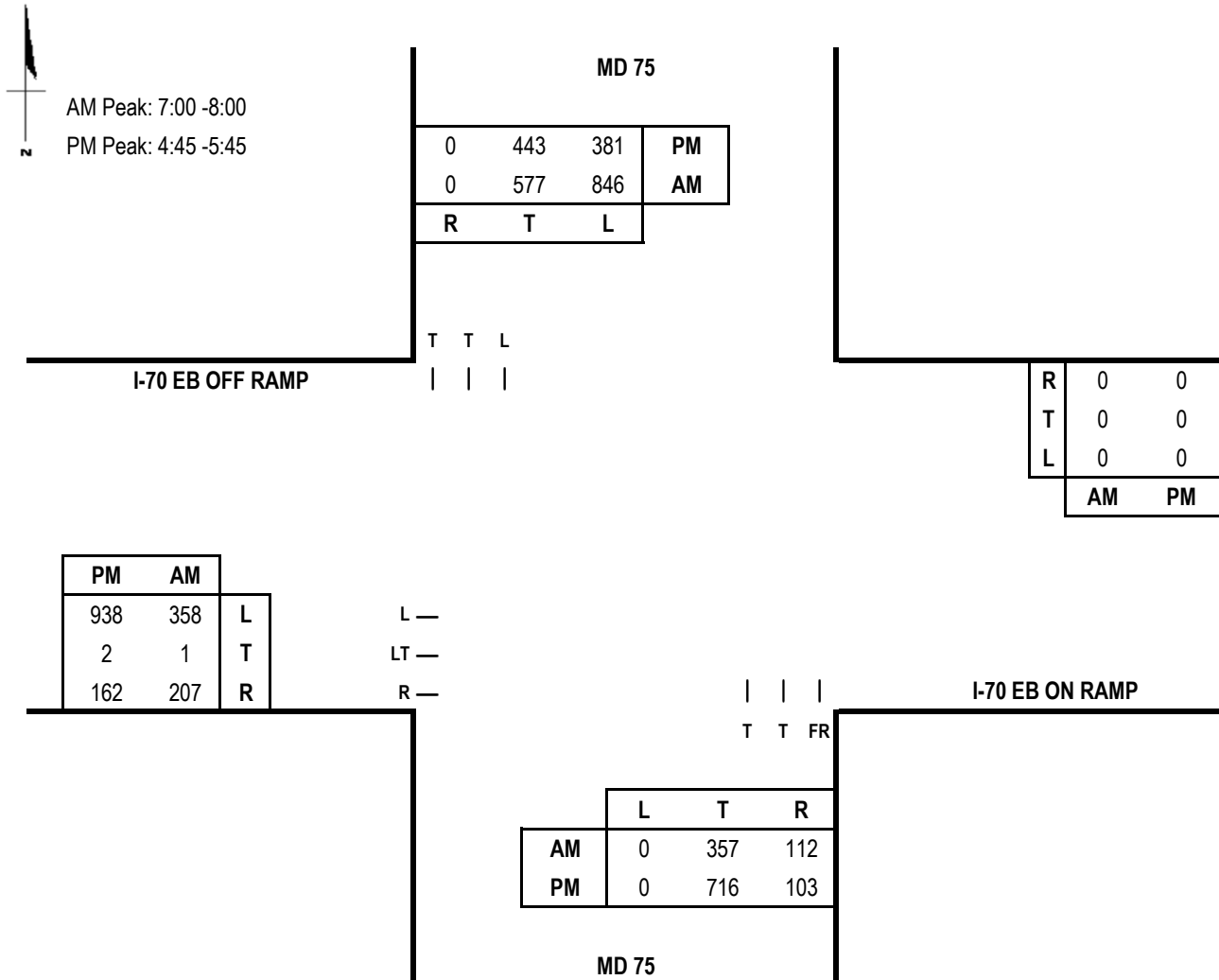
Date of Count: 2/25/21

N/S Road: MD 75

Day of Count: Thursday

Conditions: Background Traffic

Analyst: Qiang Tian



Capacity Analysis

Morning Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			AM
	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
NB	357	0.55	196	846	1.00	846	1042
SB	577	0.55	317	0	0.00	0	
EB	359	0.60	215	0	0.00	0	215
WB	0	0.00	0	358	0.60	215	
CLV TOTAL=							1,257
Level of Service (LOS)=							C

Evening Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			PM
	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
NB	716	0.55	394	381	1.00	381	775
SB	443	0.55	244	0	0.00	0	
EB	940	0.60	564	0	0.00	0	564
WB	0	0.00	0	938	0.60	563	
CLV TOTAL=							1,339
Level of Service (LOS)=							D

Scenario ID - BACK210

AM V/C =0.79

PM V/C =0.84

CRITICAL LANE VOLUME (CLV) METHODOLOGY for Frederick County

E/W Road: I-70 EB On Ramp/I-70 Eb Off Ramp

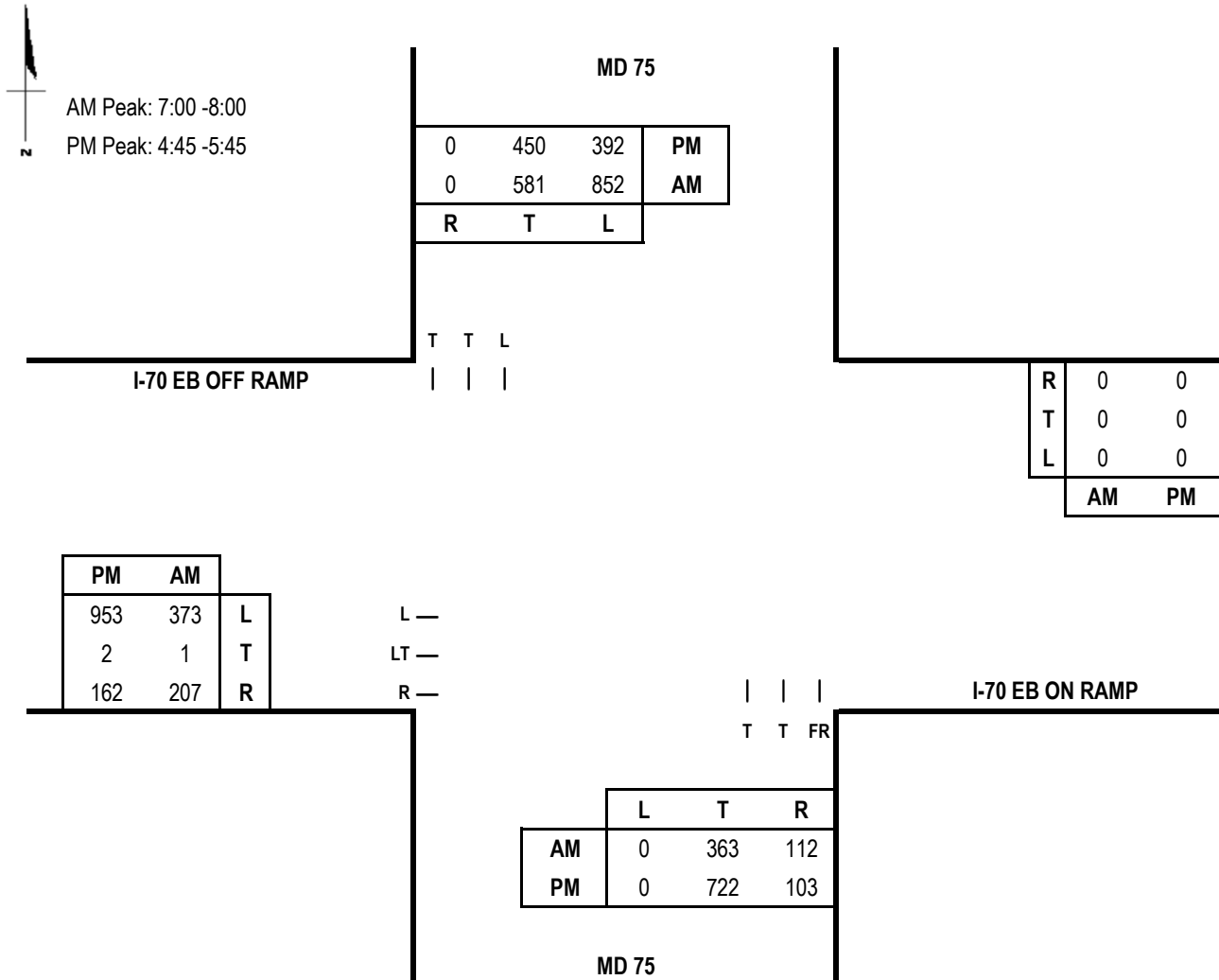
Date of Count: 2/25/21

N/S Road: MD 75

Day of Count: Thursday

Conditions: Total Traffic

Analyst: Qiang Tian



Capacity Analysis

Morning Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			AM CLV
	VOL	x LUF	= Total	VOL	x LUF	= Total	
NB	363	0.55	200	852	1.00	852	1052
SB	581	0.55	320	0	0.00	0	
EB	374	0.60	224	0	0.00	0	224
WB	0	0.00	0	373	0.60	224	
CLV TOTAL=							1,276
Level of Service (LOS)=							C

Evening Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			PM CLV
	VOL	x LUF	= Total	VOL	x LUF	= Total	
NB	722	0.55	397	392	1.00	392	789
SB	450	0.55	248	0	0.00	0	
EB	955	0.60	573	0	0.00	0	573
WB	0	0.00	0	953	0.60	572	
CLV TOTAL=							1,362
Level of Service (LOS)=							D

Scenario ID - TOT210

AM V/C =0.8

PM V/C =0.85

HCS Two-Way Stop-Control Report

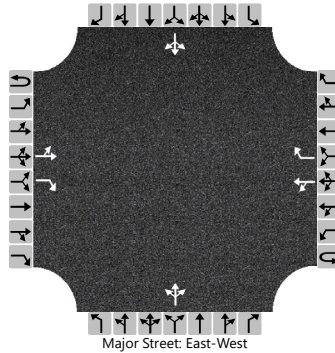
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	7/11/2022
Analysis Year	2025
Time Analyzed	Background AM
Intersection Orientation	East-West
Project Description	East Main

Site Information

Intersection	Main Street/Royal Oak Drive
Jurisdiction	Town of New Market
East/West Street	Main Street
North/South Street	Royal Oak Drive
Peak Hour Factor	0.83
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	1	0	0	1	1		0	1	0		0	1	0
Configuration		LT		R		LT		R			LTR				LTR	
Volume (veh/h)		15	705	9		7	303	16		4	0	6		51	0	64
Percent Heavy Vehicles (%)		2				2				2	2	2		2	2	2
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized	No				No											
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.12				4.12				7.12	6.52	6.22		7.12	6.52	6.22
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.22				2.22				3.52	4.02	3.32		3.52	4.02	3.32

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		18				8					12				139	
Capacity, c (veh/h)		1174				781					193				242	
v/c Ratio		0.02				0.01					0.06				0.57	
95% Queue Length, Q ₉₅ (veh)		0.0				0.0					0.2				3.2	
Control Delay (s/veh)		8.1	0.2			9.7	0.1				24.8				38.2	
Level of Service (LOS)		A	A			A	A				C				E	
Approach Delay (s/veh)	0.3				0.3				24.8				38.2			
Approach LOS	A				A				C				E			

HCS Two-Way Stop-Control Report

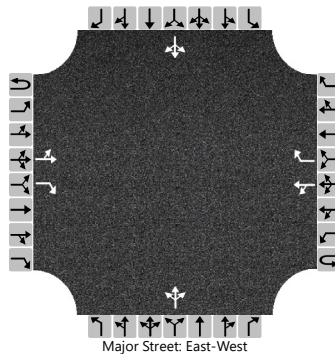
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	7/11/2022
Analysis Year	2025
Time Analyzed	Background PM
Intersection Orientation	East-West
Project Description	East Main

Site Information

Intersection	Main Street/Royal Oak Drive
Jurisdiction	Town of New Market
East/West Street	Main Street
North/South Street	Royal Oak Drive
Peak Hour Factor	0.95
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	1	0	0	1	1		0	1	0		0	1	0
Configuration		LT		R		LT		R			LTR				LTR	
Volume (veh/h)		112	542	9		7	775	104		11	0	10		52	1	41
Percent Heavy Vehicles (%)		2				2				2	2	2		2	2	2
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized	No				No											
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.12				4.12				7.12	6.52	6.22		7.12	6.52	6.22
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.22				2.22				3.52	4.02	3.32		3.52	4.02	3.32

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		118				7					22				99	
Capacity, c (veh/h)		739				994					86				90	
v/c Ratio		0.16				0.01					0.26				1.10	
95% Queue Length, Q ₉₅ (veh)		0.6				0.0					0.9				6.7	
Control Delay (s/veh)		10.8	1.5			8.6	0.1				60.6				209.4	
Level of Service (LOS)		B	A			A	A				F				F	
Approach Delay (s/veh)	3.0				0.1				60.6				209.4			
Approach LOS	A				A				F				F			

HCS Two-Way Stop-Control Report

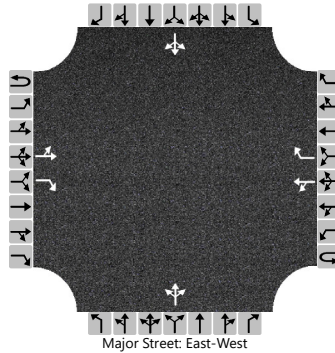
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	7/11/2022
Analysis Year	2025
Time Analyzed	Total AM
Intersection Orientation	East-West
Project Description	East Main

Site Information

Intersection	Main Street/Royal Oak Drive
Jurisdiction	Town of New Market
East/West Street	Main Street
North/South Street	Royal Oak Drive
Peak Hour Factor	0.83
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	1	0	0	1	1		0	1	0		0	1	0
Configuration		LT		R		LT		R			LTR				LTR	
Volume (veh/h)		15	717	9		7	311	16		4	0	6		51	0	64
Percent Heavy Vehicles (%)		2				2				2	2	2		2	2	2
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized	No				No											
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.12				4.12				7.12	6.52	6.22		7.12	6.52	6.22
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.22				2.22				3.52	4.02	3.32		3.52	4.02	3.32

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		18				8					12				139	
Capacity, c (veh/h)		1165				772					187				234	
v/c Ratio		0.02				0.01					0.06				0.59	
95% Queue Length, Q ₉₅ (veh)		0.0				0.0					0.2				3.4	
Control Delay (s/veh)		8.1	0.2			9.7	0.1				25.6				40.7	
Level of Service (LOS)		A	A			A	A				D				E	
Approach Delay (s/veh)	0.3				0.3				25.6				40.7			
Approach LOS	A				A				D				E			

HCS Two-Way Stop-Control Report

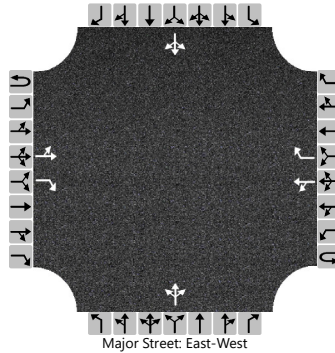
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	7/11/2022
Analysis Year	2025
Time Analyzed	Total PM
Intersection Orientation	East-West
Project Description	East Main

Site Information

Intersection	Main Street/Royal Oak Drive
Jurisdiction	Town of New Market
East/West Street	Main Street
North/South Street	Royal Oak Drive
Peak Hour Factor	0.95
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	1	0	0	1	1		0	1	0		0	1	0
Configuration		LT		R		LT		R			LTR				LTR	
Volume (veh/h)		112	554	9		7	789	104		11	0	10		52	1	41
Percent Heavy Vehicles (%)		2				2				2	2	2		2	2	2
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized	No				No											
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.12				4.12				7.12	6.52	6.22		7.12	6.52	6.22
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.22				2.22				3.52	4.02	3.32		3.52	4.02	3.32

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		118				7					22				99	
Capacity, c (veh/h)		729				983					82				86	
v/c Ratio		0.16				0.01					0.27				1.15	
95% Queue Length, Q ₉₅ (veh)		0.6				0.0					1.0				6.9	
Control Delay (s/veh)		10.9	1.5			8.7	0.1				64.3				231.4	
Level of Service (LOS)		B	A			A	A				F				F	
Approach Delay (s/veh)	3.0				0.1				64.3				231.4			
Approach LOS	A				A				F				F			

HCS Two-Way Stop-Control Report

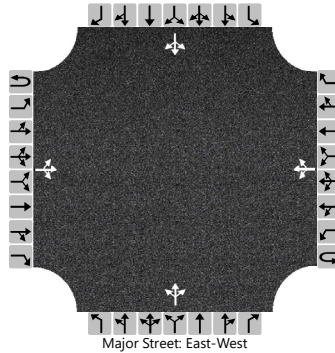
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	7/11/2022
Analysis Year	2025
Time Analyzed	Background AM
Intersection Orientation	East-West
Project Description	East Main

Site Information

Intersection	Main Street/Old New Market Road
Jurisdiction	Town of New Market
East/West Street	Main Street
North/South Street	Old New Market Road
Peak Hour Factor	0.81
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		32	670	0		1	296	1		0	0	1		3	0	49
Percent Heavy Vehicles (%)		2				2				2	2	2		2	2	2
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.12				4.12				7.12	6.52	6.22		7.12	6.52	6.22
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.22				2.22				3.52	4.02	3.32		3.52	4.02	3.32

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		40				1					1				64	
Capacity, c (veh/h)		1192				804					371				550	
v/c Ratio		0.03				0.00					0.00				0.12	
95% Queue Length, Q ₉₅ (veh)		0.1				0.0					0.0				0.4	
Control Delay (s/veh)		8.1	0.5	0.5		9.5	0.0	0.0			14.7				12.4	
Level of Service (LOS)		A	A	A		A	A	A			B				B	
Approach Delay (s/veh)	0.8				0.1				14.7				12.4			
Approach LOS	A				A				B				B			

HCS Two-Way Stop-Control Report

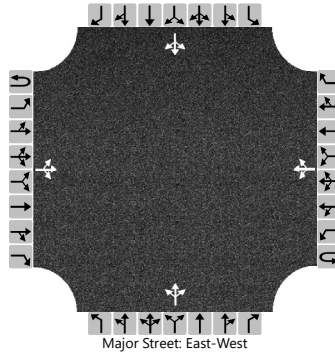
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	7/11/2022
Analysis Year	2025
Time Analyzed	Background PM
Intersection Orientation	East-West
Project Description	East Main

Site Information

Intersection	Main Street/Old New Market Road
Jurisdiction	Town of New Market
East/West Street	Main Street
North/South Street	Old New Market Road
Peak Hour Factor	0.97
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		64	509	1		9	787	2		2	0	3		2	1	135
Percent Heavy Vehicles (%)		2				2				2	2	2		2	2	2
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.12				4.12				7.12	6.52	6.22		7.12	6.52	6.22
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.22				2.22				3.52	4.02	3.32		3.52	4.02	3.32

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		66				9					5				142	
Capacity, c (veh/h)		813				1041					110				355	
v/c Ratio		0.08				0.01					0.05				0.40	
95% Queue Length, Q ₉₅ (veh)		0.3				0.0					0.1				1.9	
Control Delay (s/veh)		9.8	1.1	1.1		8.5	0.1	0.1			39.3				21.7	
Level of Service (LOS)		A	A	A		A	A	A			E				C	
Approach Delay (s/veh)	2.1				0.2				39.3				21.7			
Approach LOS	A				A				E				C			

HCS Two-Way Stop-Control Report

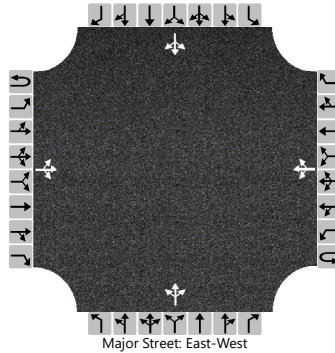
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	7/11/2022
Analysis Year	2025
Time Analyzed	Total AM
Intersection Orientation	East-West
Project Description	East Main

Site Information

Intersection	Main Street/Old New Market Road
Jurisdiction	Town of New Market
East/West Street	Main Street
North/South Street	Old New Market Road
Peak Hour Factor	0.81
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		32	682	0		1	304	1		0	0	1		3	0	49
Percent Heavy Vehicles (%)		2				2				2	2	2		2	2	2
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.12				4.12				7.12	6.52	6.22		7.12	6.52	6.22
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.22				2.22				3.52	4.02	3.32		3.52	4.02	3.32

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		40				1					1				64	
Capacity, c (veh/h)		1182				794					364				540	
v/c Ratio		0.03				0.00					0.00				0.12	
95% Queue Length, Q ₉₅ (veh)		0.1				0.0					0.0				0.4	
Control Delay (s/veh)		8.2	0.5	0.5		9.5	0.0	0.0			14.9				12.6	
Level of Service (LOS)		A	A	A		A	A	A			B				B	
Approach Delay (s/veh)	0.9				0.0				14.9				12.6			
Approach LOS	A				A				B				B			

HCS Two-Way Stop-Control Report

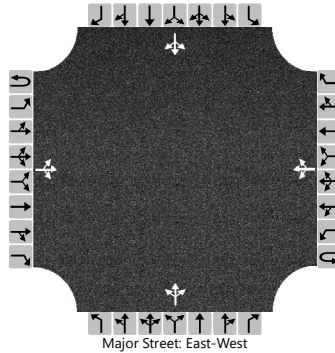
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	7/11/2022
Analysis Year	2025
Time Analyzed	Total PM
Intersection Orientation	East-West
Project Description	East Main

Site Information

Intersection	Main Street/Old New Market Road
Jurisdiction	Town of New Market
East/West Street	Main Street
North/South Street	Old New Market Road
Peak Hour Factor	0.97
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		64	521	1		9	801	2		2	0	3		2	1	135
Percent Heavy Vehicles (%)		2				2				2	2	2		2	2	2
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.12				4.12				7.12	6.52	6.22		7.12	6.52	6.22
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.22				2.22				3.52	4.02	3.32		3.52	4.02	3.32

Delay, Queue Length, and Level of Service

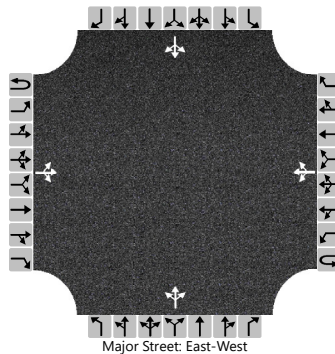
Flow Rate, v (veh/h)		66				9					5					142
Capacity, c (veh/h)		803				1030					104					348
v/c Ratio		0.08				0.01					0.05					0.41
95% Queue Length, Q ₉₅ (veh)		0.3				0.0					0.2					1.9
Control Delay (s/veh)		9.9	1.2	1.2		8.5	0.1	0.1			41.3					22.3
Level of Service (LOS)		A	A	A		A	A	A			E					C
Approach Delay (s/veh)	2.1				0.2				41.3				22.3			
Approach LOS	A				A				E				C			

HCS Two-Way Stop-Control Report

General Information

Analyst	QT	Intersection	Main Street/Federal Street
Agency/Co.	TTG, Inc.	Jurisdiction	Town of New Market
Date Performed	7/11/2022	East/West Street	Main Street
Analysis Year	2025	North/South Street	Federal Street
Time Analyzed	Background AM	Peak Hour Factor	0.87
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	East Main		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		2	808	0		0	424	2		0	0	5		2	0	1
Percent Heavy Vehicles (%)		2				2				2	2	2		2	2	2
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.12				4.12				7.12	6.52	6.22		7.12	6.52	6.22
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.22				2.22				3.52	4.02	3.32		3.52	4.02	3.32

Delay, Queue Length, and Level of Service

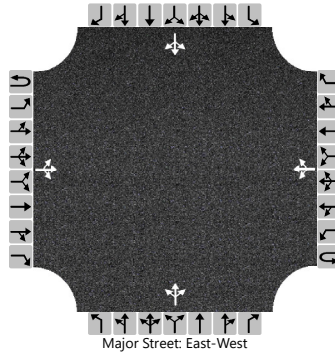
Flow Rate, v (veh/h)		2				0					6				3	
Capacity, c (veh/h)		1074				736					325				152	
v/c Ratio		0.00				0.00					0.02				0.02	
95% Queue Length, Q ₉₅ (veh)		0.0				0.0					0.1				0.1	
Control Delay (s/veh)		8.4	0.0	0.0		9.9	0.0	0.0			16.3				29.3	
Level of Service (LOS)		A	A	A		A	A	A			C				D	
Approach Delay (s/veh)	0.1				0.0				16.3				29.3			
Approach LOS	A				A				C				D			

HCS Two-Way Stop-Control Report

General Information

Analyst	QT	Intersection	Main Street/Federal Street
Agency/Co.	TTG, Inc.	Jurisdiction	Town of New Market
Date Performed	7/11/2022	East/West Street	Main Street
Analysis Year	2025	North/South Street	Federal Street
Time Analyzed	Background PM	Peak Hour Factor	0.90
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	East Main		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		0	676	0		3	849	0		0	1	3		1	0	1
Percent Heavy Vehicles (%)		2				2				2	2	2		2	2	2
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.12				4.12				7.12	6.52	6.22		7.12	6.52	6.22
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.22				2.22				3.52	4.02	3.32		3.52	4.02	3.32

Delay, Queue Length, and Level of Service

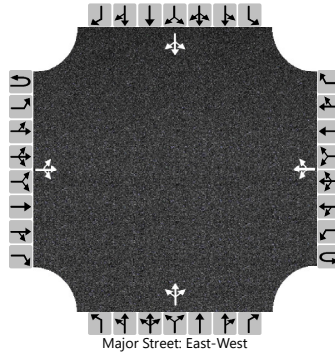
Flow Rate, v (veh/h)		0				3					4				2	
Capacity, c (veh/h)		727				858					219				115	
v/c Ratio		0.00				0.00					0.02				0.02	
95% Queue Length, Q ₉₅ (veh)		0.0				0.0					0.1				0.1	
Control Delay (s/veh)		10.0	0.0	0.0		9.2	0.1	0.1			21.8				36.9	
Level of Service (LOS)		A	A	A		A	A	A			C				E	
Approach Delay (s/veh)	0.0				0.1				21.8				36.9			
Approach LOS	A				A				C				E			

HCS Two-Way Stop-Control Report

General Information

Analyst	QT	Intersection	Main Street/Federal Street
Agency/Co.	TTG, Inc.	Jurisdiction	Town of New Market
Date Performed	7/11/2022	East/West Street	Main Street
Analysis Year	2025	North/South Street	Federal Street
Time Analyzed	Total AM	Peak Hour Factor	0.87
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	East Main		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		2	820	0		0	432	2		0	0	5		2	0	1
Percent Heavy Vehicles (%)		2				2				2	2	2		2	2	2
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.12				4.12				7.12	6.52	6.22		7.12	6.52	6.22
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.22				2.22				3.52	4.02	3.32		3.52	4.02	3.32

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		2				0					6				3	
Capacity, c (veh/h)		1065				728					319				146	
v/c Ratio		0.00				0.00					0.02				0.02	
95% Queue Length, Q ₉₅ (veh)		0.0				0.0					0.1				0.1	
Control Delay (s/veh)		8.4	0.0	0.0		9.9	0.0	0.0			16.5				30.2	
Level of Service (LOS)		A	A	A		A	A	A			C				D	
Approach Delay (s/veh)	0.1				0.0				16.5				30.2			
Approach LOS	A				A				C				D			

HCS Two-Way Stop-Control Report

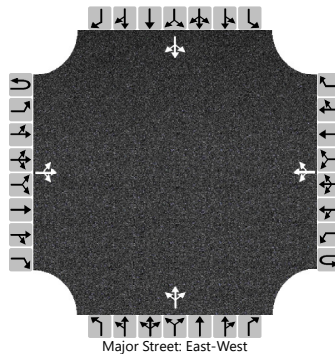
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	7/11/2022
Analysis Year	2025
Time Analyzed	Total PM
Intersection Orientation	East-West
Project Description	East Main

Site Information

Intersection	Main Street/Federal Street
Jurisdiction	Town of New Market
East/West Street	Main Street
North/South Street	Federal Street
Peak Hour Factor	0.90
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		0	688	0		3	863	0		0	1	3		1	0	1
Percent Heavy Vehicles (%)		2				2				2	2	2		2	2	2
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.12				4.12				7.12	6.52	6.22		7.12	6.52	6.22
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.22				2.22				3.52	4.02	3.32		3.52	4.02	3.32

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		0				3					4				2	
Capacity, c (veh/h)		717				849					212				110	
v/c Ratio		0.00				0.00					0.02				0.02	
95% Queue Length, Q ₉₅ (veh)		0.0				0.0					0.1				0.1	
Control Delay (s/veh)		10.0	0.0	0.0		9.3	0.1	0.1			22.3				38.3	
Level of Service (LOS)		B	A	A		A	A	A			C				E	
Approach Delay (s/veh)	0.0				0.1				22.3				38.3			
Approach LOS	A				A				C				E			

HCS Two-Way Stop-Control Report

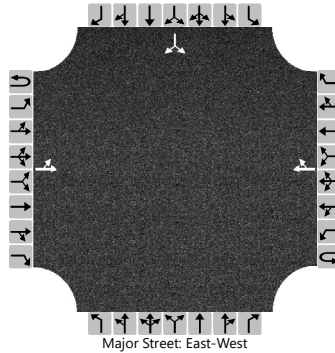
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	7/11/2022
Analysis Year	2025
Time Analyzed	Background AM
Intersection Orientation	East-West
Project Description	East Main

Site Information

Intersection	Main Street/Marley Street/Site Access
Jurisdiction	Town of New Market
East/West Street	Main Street
North/South Street	Marley Street/Site Access
Peak Hour Factor	0.85
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	1	0
Configuration		LT						TR							LR	
Volume (veh/h)		13	801				394	1						19		29
Percent Heavy Vehicles (%)		2												2		2
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.12												6.42		6.22
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.22												3.52		3.32

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		15													56	
Capacity, c (veh/h)		1097													264	
v/c Ratio		0.01													0.21	
95% Queue Length, Q ₉₅ (veh)		0.0													0.8	
Control Delay (s/veh)		8.3	0.2												22.3	
Level of Service (LOS)		A	A												C	
Approach Delay (s/veh)	0.4												22.3			
Approach LOS	A												C			

HCS Two-Way Stop-Control Report

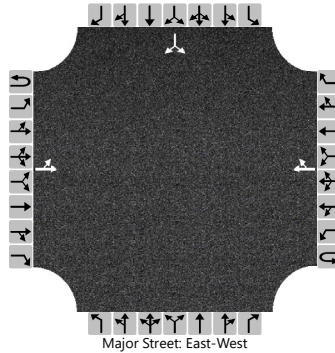
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	7/11/2022
Analysis Year	2025
Time Analyzed	Background PM
Intersection Orientation	East-West
Project Description	East Main

Site Information

Intersection	Main Street/Marley Street/Site Access
Jurisdiction	Town of New Market
East/West Street	Main Street
North/South Street	Marley Street/Site Access
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	1	0
Configuration		LT						TR							LR	
Volume (veh/h)		6	647				859	10						18		12
Percent Heavy Vehicles (%)		2												2		2
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.12												6.42		6.22
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.22												3.52		3.32

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		7													33	
Capacity, c (veh/h)		726													145	
v/c Ratio		0.01													0.22	
95% Queue Length, Q ₉₅ (veh)		0.0													0.8	
Control Delay (s/veh)		10.0	0.1												36.9	
Level of Service (LOS)		B	A												E	
Approach Delay (s/veh)	0.2												36.9			
Approach LOS	A												E			

HCS Two-Way Stop-Control Report

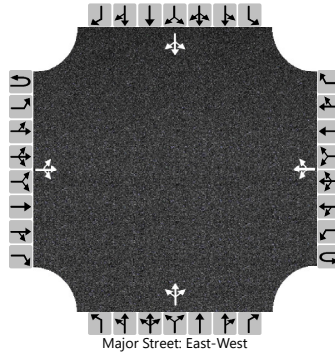
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	7/11/2022
Analysis Year	2025
Time Analyzed	Total AM
Intersection Orientation	East-West
Project Description	East Main

Site Information

Intersection	Main Street/Marley Street/Site Access
Jurisdiction	Town of New Market
East/West Street	Main Street
North/South Street	Marley Street/Site Access
Peak Hour Factor	0.85
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		13	804	9		10	396	1		6	0	6		19	0	29
Percent Heavy Vehicles (%)		2				2				2	2	2		2	2	2
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.12				4.12				7.12	6.52	6.22		7.12	6.52	6.22
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.22				2.22				3.52	4.02	3.32		3.52	4.02	3.32

Delay, Queue Length, and Level of Service

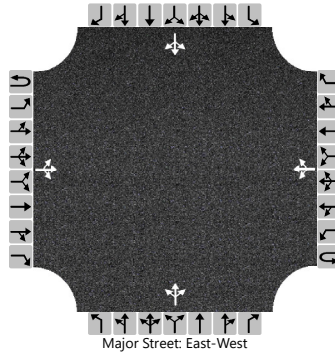
Flow Rate, v (veh/h)		15				12					14				56	
Capacity, c (veh/h)		1094				719					142				196	
v/c Ratio		0.01				0.02					0.10				0.29	
95% Queue Length, Q ₉₅ (veh)		0.0				0.0					0.3				1.1	
Control Delay (s/veh)		8.3	0.2	0.2		10.1	0.2	0.2			33.2				30.6	
Level of Service (LOS)		A	A	A		B	A	A			D				D	
Approach Delay (s/veh)	0.4				0.5				33.2				30.6			
Approach LOS	A				A				D				D			

HCS Two-Way Stop-Control Report

General Information

Analyst	QT	Intersection	Main Street/Marley Street/Site Access
Agency/Co.	TTG, Inc.	Jurisdiction	Town of New Market
Date Performed	7/11/2022	East/West Street	Main Street
Analysis Year	2025	North/South Street	Marley Street/Site Access
Time Analyzed	Total PM	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	East Main		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		6	646	13		11	861	10		12	0	13		18	0	12
Percent Heavy Vehicles (%)		2				2				2	2	2		2	2	2
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.12				4.12				7.12	6.52	6.22		7.12	6.52	6.22
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.22				2.22				3.52	4.02	3.32		3.52	4.02	3.32

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		7				12					27				33	
Capacity, c (veh/h)		725				884					120				99	
v/c Ratio		0.01				0.01					0.23				0.33	
95% Queue Length, Q ₉₅ (veh)		0.0				0.0					0.8				1.3	
Control Delay (s/veh)		10.0	0.1	0.1		9.1	0.3	0.3			43.5				58.2	
Level of Service (LOS)		B	A	A		A	A	A			E				F	
Approach Delay (s/veh)	0.2				0.4				43.5				58.2			
Approach LOS	A				A				E				F			

HCS Two-Way Stop-Control Report

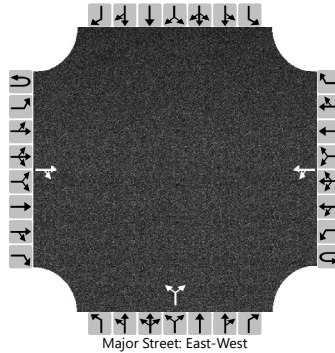
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	7/11/2022
Analysis Year	2025
Time Analyzed	Background AM
Intersection Orientation	East-West
Project Description	East Main

Site Information

Intersection	Main Street/Bye Alley
Jurisdiction	Town of New Market
East/West Street	Main Street
North/South Street	Marley Street/Bye Alley
Peak Hour Factor	0.88
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			826	0		0	396			0		0				
Percent Heavy Vehicles (%)						2				2		2				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.12				6.42		6.22				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.22				3.52		3.32				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						0					0					
Capacity, c (veh/h)						730					0					
v/c Ratio						0.00										
95% Queue Length, Q ₉₅ (veh)						0.0										
Control Delay (s/veh)						9.9	0.0									
Level of Service (LOS)						A	A									
Approach Delay (s/veh)					0.0											
Approach LOS					A											

HCS Two-Way Stop-Control Report

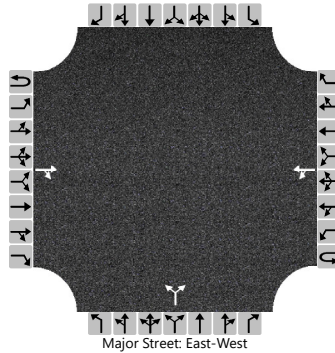
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	7/11/2022
Analysis Year	2025
Time Analyzed	Background PM
Intersection Orientation	East-West
Project Description	East Main

Site Information

Intersection	Main Street/Bye Alley
Jurisdiction	Town of New Market
East/West Street	Main Street
North/South Street	Marley Street/Bye Alley
Peak Hour Factor	0.89
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			679	1		0	852			0		0				
Percent Heavy Vehicles (%)						2				2		2				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.12				6.42		6.22				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.22				3.52		3.32				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						0					0					
Capacity, c (veh/h)						849					0					
v/c Ratio						0.00										
95% Queue Length, Q ₉₅ (veh)						0.0										
Control Delay (s/veh)						9.2	0.0									
Level of Service (LOS)						A	A									
Approach Delay (s/veh)					0.0											
Approach LOS					A											

HCS Two-Way Stop-Control Report

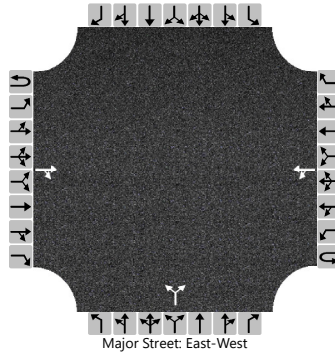
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	7/11/2022
Analysis Year	2025
Time Analyzed	Total AM
Intersection Orientation	East-West
Project Description	East Main

Site Information

Intersection	Main Street/Bye Alley
Jurisdiction	Town of New Market
East/West Street	Main Street
North/South Street	Marley Street/Bye Alley
Peak Hour Factor	0.88
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			859	0		0	445			0		0				
Percent Heavy Vehicles (%)						2				2		2				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1					7.1		6.2			
Critical Headway (sec)						4.12					6.42		6.22			
Base Follow-Up Headway (sec)						2.2					3.5		3.3			
Follow-Up Headway (sec)						2.22					3.52		3.32			

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						0					0					
Capacity, c (veh/h)						707					0					
v/c Ratio						0.00										
95% Queue Length, Q ₉₅ (veh)						0.0										
Control Delay (s/veh)						10.1	0.0									
Level of Service (LOS)						B	A									
Approach Delay (s/veh)					0.0											
Approach LOS					A											

HCS Two-Way Stop-Control Report

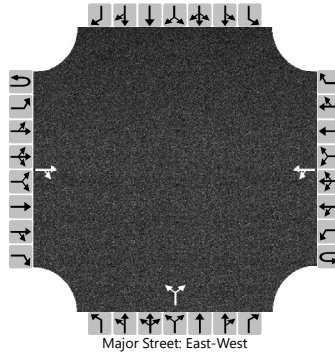
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	7/11/2022
Analysis Year	2025
Time Analyzed	Total PM
Intersection Orientation	East-West
Project Description	East Main

Site Information

Intersection	Main Street/Bye Alley
Jurisdiction	Town of New Market
East/West Street	Main Street
North/South Street	Marley Street/Bye Alley
Peak Hour Factor	0.89
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			736	1		0	902			0		0				
Percent Heavy Vehicles (%)						2				2		2				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1					7.1		6.2			
Critical Headway (sec)						4.12					6.42		6.22			
Base Follow-Up Headway (sec)						2.2					3.5		3.3			
Follow-Up Headway (sec)						2.22					3.52		3.32			

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						0					0					
Capacity, c (veh/h)						803					0					
v/c Ratio						0.00										
95% Queue Length, Q ₉₅ (veh)						0.0										
Control Delay (s/veh)						9.5	0.0									
Level of Service (LOS)						A	A									
Approach Delay (s/veh)					0.0											
Approach LOS					A											

HCS Two-Way Stop-Control Report

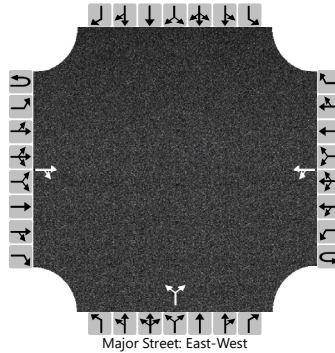
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	7/11/2022
Analysis Year	2025
Time Analyzed	Total AM
Intersection Orientation	East-West
Project Description	East Main

Site Information

Intersection	Main Street/Site Access
Jurisdiction	Town of New Market
East/West Street	Main Street
North/South Street	Site Access
Peak Hour Factor	0.88
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			832	3		39	406			2		27				
Percent Heavy Vehicles (%)						2				2		2				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.12				6.42		6.22				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.22				3.52		3.32				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						44					33					
Capacity, c (veh/h)						724					286					
v/c Ratio						0.06					0.12					
95% Queue Length, Q ₉₅ (veh)						0.2					0.4					
Control Delay (s/veh)						10.3	0.8				19.2					
Level of Service (LOS)						B	A				C					
Approach Delay (s/veh)					1.7				19.2							
Approach LOS					A				C							

HCS Two-Way Stop-Control Report

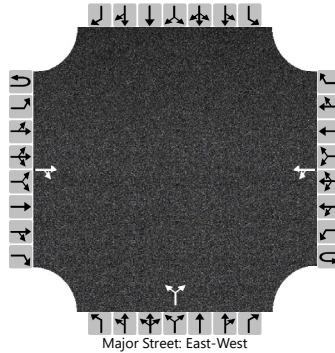
General Information

Analyst	QT
Agency/Co.	TTG, Inc.
Date Performed	7/11/2022
Analysis Year	2025
Time Analyzed	Total PM
Intersection Orientation	East-West
Project Description	East Main

Site Information

Intersection	Main Street/Site Access
Jurisdiction	Town of New Market
East/West Street	Main Street
North/South Street	Site Access
Peak Hour Factor	0.88
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			689	5		42	860			4		48				
Percent Heavy Vehicles (%)						2				2		2				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.12				6.42		6.22				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.22				3.52		3.32				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						48					59					
Capacity, c (veh/h)						831					290					
v/c Ratio						0.06					0.20					
95% Queue Length, Q ₉₅ (veh)						0.2					0.7					
Control Delay (s/veh)						9.6	1.2				20.5					
Level of Service (LOS)						A	A				C					
Approach Delay (s/veh)					1.6				20.5							
Approach LOS					A				C							

1. Old National Pike/Boyers Mill Road

Maryland State Highway Administration Queuing Analysis Formula

Queue Length (feet) =

If Average No. of Vehicle (Specific Movement) per Cycle <= 20: Poisson Distribution Maximum No. of Vehicles per Cycle x 25 Feet per Vehicle

If Average No. of Vehicle (Specific Movement) per Cycle > 20: $\frac{\text{Turning Volume (veh per hour)} \times \text{Lane Use Factor} \times \text{Cycle Length (Seconds)}}{3600 \text{ (Seconds per hour)}}$ x 25 Feet per Vehicle x 1.4 Surge Factor

		Available Storage (feet)	Queue Length (feet)	Veh / Hour	Lane Use Factor	Cycle Length (seconds)	Average No. of Vehicle per Cycle	Is Average No. of Vehicle (Specific Movement) per Cycle <= 20?	Poisson Distribution Maximum No. of Vehicle per Cycle
Background Traffic									
AM Peak Hour									
	EB Old National Pike left turn:	150	150	162	1	60	2.7	Yes	6
	EB Old National Pike thru:	>500	225	288	1	60	4.8	Yes	9
	WB Old National Pike thru:	>500	175	238	1	60	4.0	Yes	7
	WB Old National Pike right turn:	150	0	0	1	60	0.0	Yes	0
	SB Boyers Mill Road left turn:	>500	275	407	1	60	6.8	Yes	11
	SB Boyers Mill Road right turn:	100	175	206	1	60	3.4	Yes	7
PM Peak Hour									
	EB Old National Pike left turn:	150	375	488	1	70	9.5	Yes	15
	EB Old National Pike thru:	>500	300	384	1	70	7.5	Yes	12
	WB Old National Pike thru:	>500	325	422	1	70	8.2	Yes	13
	WB Old National Pike right turn:	150	150	162	1	70	3.2	Yes	6
	SB Boyers Mill Road left turn:	>500	225	280	1	70	5.4	Yes	9
	SB Boyers Mill Road right turn:	100	0	0	1	70	0.0	Yes	0
Total Traffic									
AM Peak Hour									
	EB Old National Pike left turn:	150	150	162	1	60	2.7	Yes	6
	EB Old National Pike thru:	>500	225	300	1	60	5.0	Yes	9
	WB Old National Pike thru:	>500	200	246	1	60	4.1	Yes	8
	WB Old National Pike right turn:	150	0	0	1	60	0.0	Yes	0
	SB Boyers Mill Road left turn:	>500	275	407	1	60	6.8	Yes	11
	SB Boyers Mill Road right turn:	100	175	206	1	60	3.4	Yes	7
PM Peak Hour									
	EB Old National Pike left turn:	150	375	488	1	70	9.5	Yes	15
	EB Old National Pike thru:	>500	300	396	1	70	7.7	Yes	12
	WB Old National Pike thru:	>500	325	436	1	70	8.5	Yes	13
	WB Old National Pike right turn:	150	150	162	1	70	3.2	Yes	6
	SB Boyers Mill Road left turn:	>500	225	280	1	70	5.4	Yes	9
	SB Boyers Mill Road right turn:	100	0	0	1	70	0.0	Yes	0



MD SHA QUEUING ANALYSIS
1. OLD NATIONAL PIKE/BOYERS MILL ROAD

7. MD 75/New Market Bypass

Maryland State Highway Administration Queuing Analysis Formula

Queue Length (feet) =

If Average No. of Vehicle (Specific Movement) per Cycle <= 20: Poisson Distribution Maximum No. of Vehicles per Cycle x 25 Feet per Vehicle

If Average No. of Vehicle (Specific Movement) per Cycle > 20: $\frac{\text{Turning Volume (veh per hour)} \times \text{Lane Use Factor} \times \text{Cycle Length (Seconds)}}{3600 \text{ (Seconds per hour)}}$ x 25 Feet per Vehicle x 1.4 Surge Factor

		Available Storage (feet)	Queue Length (feet)	Veh / Hour	Lane Use Factor	Cycle Length (seconds)	Average No. of Vehicle per Cycle	Is Average No. of Vehicle (Specific Movement) per Cycle <= 20?	Poisson Distribution Maximum No. of Vehicle per Cycle
Background Traffic									
AM Peak Hour									
	EB (New Market Bypass) left turn	1000+	125	64	1	120	2.1	Yes	5
	NB (MD 75) left turn	new	100	50	1	120	1.7	Yes	4
	NB (MD 75) thru	1500+	450	669	0.55	120	12.3	Yes	18
	SB (MD 75) thru	1500+	1036	1614	0.55	120	29.6	No	41
	SB (MD 75) right turn	new	175	108	1	120	3.6	Yes	7
PM Peak Hour									
	EB (New Market Bypass) left turn	1000+	75	39	1	120	1.3	Yes	3
	NB (MD 75) left turn	new	275	186	1	120	6.2	Yes	11
	NB (MD 75) thru	1500+	1081	1684	0.55	120	30.9	No	43
	SB (MD 75) thru	1500+	625	954	0.55	120	17.5	Yes	25
	SB (MD 75) right turn	new	100	59	1	120	2.0	Yes	4
Total Traffic									
AM Peak Hour									
	EB (New Market Bypass) left turn	1000+	125	64	1	120	2.1	Yes	5
	NB (MD 75) left turn	new	100	50	1	120	1.7	Yes	4
	NB (MD 75) thru	1500+	450	675	0.55	120	12.4	Yes	18
	SB (MD 75) thru	1500+	1041	1623	0.55	120	29.8	No	42
	SB (MD 75) right turn	new	175	108	1	120	3.6	Yes	7
PM Peak Hour									
	EB (New Market Bypass) left turn	1000+	75	39	1	120	1.3	Yes	3
	NB (MD 75) left turn	new	275	186	1	120	6.2	Yes	11
	NB (MD 75) thru	1500+	1088	1695	0.55	120	31.1	No	44
	SB (MD 75) thru	1500+	625	964	0.55	120	17.7	Yes	25
	SB (MD 75) right turn	new	100	59	1	120	2.0	Yes	4



WB left turn LUF based on existing count

MD SHA QUEUING ANALYSIS
7. MD 75/NEW MARKET BYPASS

8. Old National Pike/MD 75

Maryland State Highway Administration Queuing Analysis Formula

Queue Length (feet) =

If Average No. of Vehicle (Specific Movement) per Cycle <= 20: Poisson Distribution Maximum No. of Vehicles per Cycle x 25 Feet per Vehicle

If Average No. of Vehicle (Specific Movement) per Cycle > 20: $\frac{\text{Turning Volume (veh per hour)} \times \text{Lane Use Factor} \times \text{Cycle Length (Seconds)}}{3600 \text{ (Seconds per hour)}}$ x 25 Feet per Vehicle x 1.4 Surge Factor

	Available Storage (feet)	Queue Length (feet)	Veh / Hour	Lane Use Factor	Cycle Length (seconds)	Average No. of Vehicle per Cycle	Is Average No. of Vehicle (Specific Movement) per Cycle <= 20?	Poisson Distribution Maximum No. of Vehicle per Cycle
Background Traffic								
AM Peak Hour								
EB (Old National Pike) left turn	200	100	51	1	120	1.7	Yes	4
EB (Old National Pike) thru	1000+	175	211	0.55	120	3.9	Yes	7
WB (Old National Pike) left lane	400	350	364	0.75	120	9.1	Yes	14
WB (Old National Pike) thru lane	680	325	143	1	120	8.3	Yes	13
WB (Old National Pike) right turn	680	200	122	1	120	4.1	Yes	8
NB (MD 75) left turn	275	200	140	1	120	4.7	Yes	8
NB (MD 75) thru	700	300	402	0.55	120	7.4	Yes	12
SB (MD 75) left turn	425	300	215	1	120	7.2	Yes	12
SB (MD 75) thru	1000+	625	1313	0.4	120	17.5	Yes	25
SB (MD 75) right turn	300	100	51	1	120	1.7	Yes	4
PM Peak Hour								
EB (Old National Pike) left turn	200	75	40	1	120	1.3	Yes	3
EB (Old National Pike) thru	1000+	200	235	0.55	120	4.3	Yes	8
WB (Old National Pike) left lane	400	300	361	0.64	120	7.7	Yes	12
WB (Old National Pike) thru lane	680	325	306	1	120	8.3	Yes	13
WB (Old National Pike) right turn	680	400	325	1	120	10.8	Yes	16
NB (MD 75) left turn	275	500	414	1	120	13.8	Yes	20
NB (MD 75) thru	700	866	1350	0.55	120	24.8	No	35
SB (MD 75) left turn	425	250	175	1	120	5.8	Yes	10
SB (MD 75) thru	1000+	375	739	0.4	120	9.9	Yes	15
SB (MD 75) right turn	300	100	49	1	120	1.6	Yes	4



WB left turn LUF based on existing count

MD SHA QUEUING ANALYSIS
8. OLD NATIONAL PIKE/MD 75

8. Old National Pike/MD 75

Maryland State Highway Administration Queuing Analysis Formula

Queue Length (feet) =

If Average No. of Vehicle (Specific Movement) per Cycle <= 20: Poisson Distribution Maximum No. of Vehicles per Cycle x 25 Feet per Vehicle

If Average No. of Vehicle (Specific Movement) per Cycle > 20: $\frac{\text{Turning Volume (veh per hour)} \times \text{Lane Use Factor} \times \text{Cycle Length (Seconds)}}{3600 \text{ (Seconds per hour)}}$ x 25 Feet per Vehicle x 1.4 Surge Factor

	Available Storage (feet)	Queue Length (feet)	Veh / Hour	Lane Use Factor	Cycle Length (seconds)	Average No. of Vehicle per Cycle	Is Average No. of Vehicle (Specific Movement) per Cycle <= 20?	Poisson Distribution Maximum No. of Vehicle per Cycle
Total Traffic								
AM Peak Hour								
EB (Old National Pike) left turn	200	100	57	1	120	1.9	Yes	4
EB (Old National Pike) thru	1000+	175	217	0.55	120	4.0	Yes	7
WB (Old National Pike) left lane	400	350	364	0.75	120	9.1	Yes	14
WB (Old National Pike) thru lane	680	325	152	1	120	8.3	Yes	13
WB (Old National Pike) right turn	680	200	122	1	120	4.1	Yes	8
NB (MD 75) left turn	275	250	171	1	120	5.7	Yes	10
NB (MD 75) thru	700	300	402	0.55	120	7.4	Yes	12
SB (MD 75) left turn	425	300	215	1	120	7.2	Yes	12
SB (MD 75) thru	1000+	625	1313	0.4	120	17.5	Yes	25
SB (MD 75) right turn	300	125	60	1	120	2.0	Yes	5
PM Peak Hour								
EB (Old National Pike) left turn	200	100	51	1	120	1.7	Yes	4
EB (Old National Pike) thru	1000+	200	245	0.55	120	4.5	Yes	8
WB (Old National Pike) left lane	400	300	361	0.64	120	7.7	Yes	12
WB (Old National Pike) thru lane	680	325	315	1	120	8.3	Yes	13
WB (Old National Pike) right turn	680	400	325	1	120	10.8	Yes	16
NB (MD 75) left turn	275	525	445	1	120	14.8	Yes	21
NB (MD 75) thru	700	866	1350	0.55	120	24.8	No	35
SB (MD 75) left turn	425	125	75	1	120	2.5	Yes	5
SB (MD 75) thru	1000+	375	739	0.4	120	9.9	Yes	15
SB (MD 75) right turn	300	100	59	1	120	2.0	Yes	4



WB left turn LUF based on existing count

MD SHA QUEUING ANALYSIS
8. OLD NATIONAL PIKE/MD 75

9. MD 75 @ I-70 WB Ramps

Maryland State Highway Administration Queuing Analysis Formula

Queue Length (feet) =

If Average No. of Vehicle (Specific Movement) per Cycle <= 20: Poisson Distribution Maximum No. of Vehicles per Cycle x 25 Feet per Vehicle

If Average No. of Vehicle (Specific Movement) per Cycle > 20: $\frac{\text{Turning Volume (veh per hour)} \times \text{Lane Use Factor} \times \text{Cycle Length (Seconds)}}{3600 \text{ (Seconds per hour)}}$ x 25 Feet per Vehicle x 1.4 Surge Factor

		Available Storage (feet)	Queue Length (feet)	Veh / Hour	Lane Use Factor	Cycle Length (seconds)	Average No. of Vehicle per Cycle	Is Average No. of Vehicle (Specific Movement) per Cycle <= 20?	Poisson Distribution Maximum No. of Vehicles per Cycle
2025 Background Traffic									
AM Peak Hour									
	WB (I-70 WB off Ramps) left/thru	>500	175	105	1	120	3.5	Yes	7
	NB (MD 75) left turn	225	225	145	1	120	4.8	Yes	9
	NB (MD 75) thru	900	400	574	0.55	120	10.5	Yes	16
	SB (MD 75) thru	700	871	1368	0.55	120	24.9	No	35
PM Peak Hour									
	WB (I-70 WB off Ramps) left/thru	>500	175	112	1	120	3.7	Yes	7
	NB (MD 75) left turn	225	300	210	1	120	7.0	Yes	12
	NB (MD 75) thru	900	912	1422	0.55	120	26.1	No	36
	SB (MD 75) thru	700	475	718	0.55	120	13.2	Yes	19
2025 Total Traffic									
AM Peak Hour									
	WB (I-70 WB off Ramps) left/thru	>500	175	105	1	120	3.5	Yes	7
	NB (MD 75) left turn	225	225	145	1	120	4.8	Yes	9
	NB (MD 75) thru	900	425	595	0.55	120	10.9	Yes	17
	SB (MD 75) thru	700	859	1338	0.55	120	24.5	No	34
PM Peak Hour									
	WB (I-70 WB off Ramps) left/thru	>500	175	112	1	120	3.7	Yes	7
	NB (MD 75) left turn	225	300	210	1	120	7.0	Yes	12
	NB (MD 75) thru	900	926	1443	0.55	120	26.5	No	37
	SB (MD 75) thru	700	500	736	0.55	120	13.5	Yes	20



MD SHA QUEUING ANALYSIS
9. MD 75 @ I-70 WB RAMPS

10. MD 75 @ I-70 EB Ramps

Maryland State Highway Administration Queuing Analysis Formula

Queue Length (feet) =

If Average No. of Vehicle (Specific Movement) per Cycle <= 20: Poisson Distribution Maximum No. of Vehicles per Cycle x 25 Feet per Vehicle

If Average No. of Vehicle (Specific Movement) per Cycle > 20: $\frac{\text{Turning Volume (veh per hour)} \times \text{Lane Use Factor} \times \text{Cycle Length (Seconds)}}{3600 \text{ (Seconds per hour)}}$ x 25 Feet per Vehicle x 1.4 Surge Factor

		Available Storage (feet)	Queue Length (feet)	Veh / Hour	Lane Use Factor	Cycle Length (seconds)	Average No. of Vehicle per Cycle	Is Average No. of Vehicle (Specific Movement) per Cycle <= 20?	Poisson Distribution Maximum No. of Vehicles per Cycle
2028 Background Traffic									
AM Peak Hour									
	EB (I-70 EB off Ramps) left/thru	>800	300	359	0.6	120	7.2	Yes	12
	NB (MD 75) thru	>1000	275	357	0.55	120	6.5	Yes	11
	SB (MD 75) left turn	225	987	846	1	120	28.2	No	39
	SB (MD 75) thru	900	400	577	0.55	120	10.6	Yes	16
PM Peak Hour									
	EB (I-70 EB off Ramps) left/thru	>800	650	940	0.6	120	18.8	Yes	26
	NB (MD 75) thru	>1000	475	716	0.55	120	13.1	Yes	19
	SB (MD 75) left turn	225	475	381	1	120	12.7	Yes	19
	SB (MD 75) thru	900	325	443	0.55	120	8.1	Yes	13
2028 Total Traffic									
AM Peak Hour									
	EB (I-70 EB off Ramps) left/thru	>800	300	374	0.6	120	7.5	Yes	12
	NB (MD 75) thru	>1000	275	363	0.55	120	6.7	Yes	11
	SB (MD 75) left turn	225	994	852	1	120	28.4	No	40
	SB (MD 75) thru	900	400	581	0.55	120	10.7	Yes	16
PM Peak Hour									
	EB (I-70 EB off Ramps) left/thru	>800	675	955	0.6	120	19.1	Yes	27
	NB (MD 75) thru	>1000	475	722	0.55	120	13.2	Yes	19
	SB (MD 75) left turn	225	475	392	1	120	13.1	Yes	19
	SB (MD 75) thru	900	325	450	0.55	120	8.3	Yes	13



MD SHA QUEUING ANALYSIS
10. MD 75 @ I-70 EB RAMPS

England Woods

Town of New Market, Maryland

Revised February 11, 2022

November 5, 2021

Traffic Impact Analysis

Prepared for:

The Verdant Companies

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TOTAL TRAFFIC CONDITIONS

Site Information

England Woods is proposed with 50 Detached and 500 Attached Senior Adult Housing Units. Two full-movement access points are proposed along Old National Pike, and a connection is also proposed to the west to The Meadow at New Market Development via Welspring Way. However, for purposes of this Traffic Impact Analysis, all traffic from England Woods is proposed to use the access along Old National Pike.

Trip Generation/Distribution

ITE's Trip Generation Manual (10th Edition) was utilized to determine the number of trips projected to be generated by England Woods. The rates and equations used can be found in Table 2. Figure 8 details the trip distribution and trip assignment based on information provided by Frederick County. Adding the trips projected to be generated by the subject site to the 2028 background peak hour traffic volumes, results in the 2028 total peak hour traffic volumes as shown on Figure 9.

Table 2. Trip Generation Rates and Totals for Subject Site

TRIP GENERATION RATES

<u>LAND USE</u>	<u>FORMULA</u>	<u>IN/OUT</u>
Senior Adult Housing - Detached (ITE-251, Units)		
	$\text{Ln}(\text{Morning Trips}) = 0.76 \times \text{Ln}(\text{Units}) + 0.21$	33/67
	$\text{Ln}(\text{Evening Trips}) = 0.78 \times \text{Ln}(\text{Units}) + 0.28$	61/39
Senior Adult Housing - Attached (ITE-252, Units)		
	$\text{Morning Trips} = 0.20 \times \text{Units} - 0.13$	35/65
	$\text{Evening Trips} = 0.24 \times \text{Units} + 2.26$	55/45

TRIP GENERATION TOTALS

	Morning Peak Hour			Evening Peak Hour		
	In	Out	Total	In	Out	Total
England Woods						
50 Senior Adult Housing - Detached Units	8	16	24	17	11	28
500 Senior Adult Housing - Attached Units	<u>35</u>	<u>65</u>	<u>100</u>	<u>67</u>	<u>55</u>	<u>122</u>
Total Trips	43	81	124	84	66	150

Note: Trip generation rates derived from ITE Trip Generation Manual, 10th Edition, 2017.

Figure 8. Trip Assignment for Subject Site

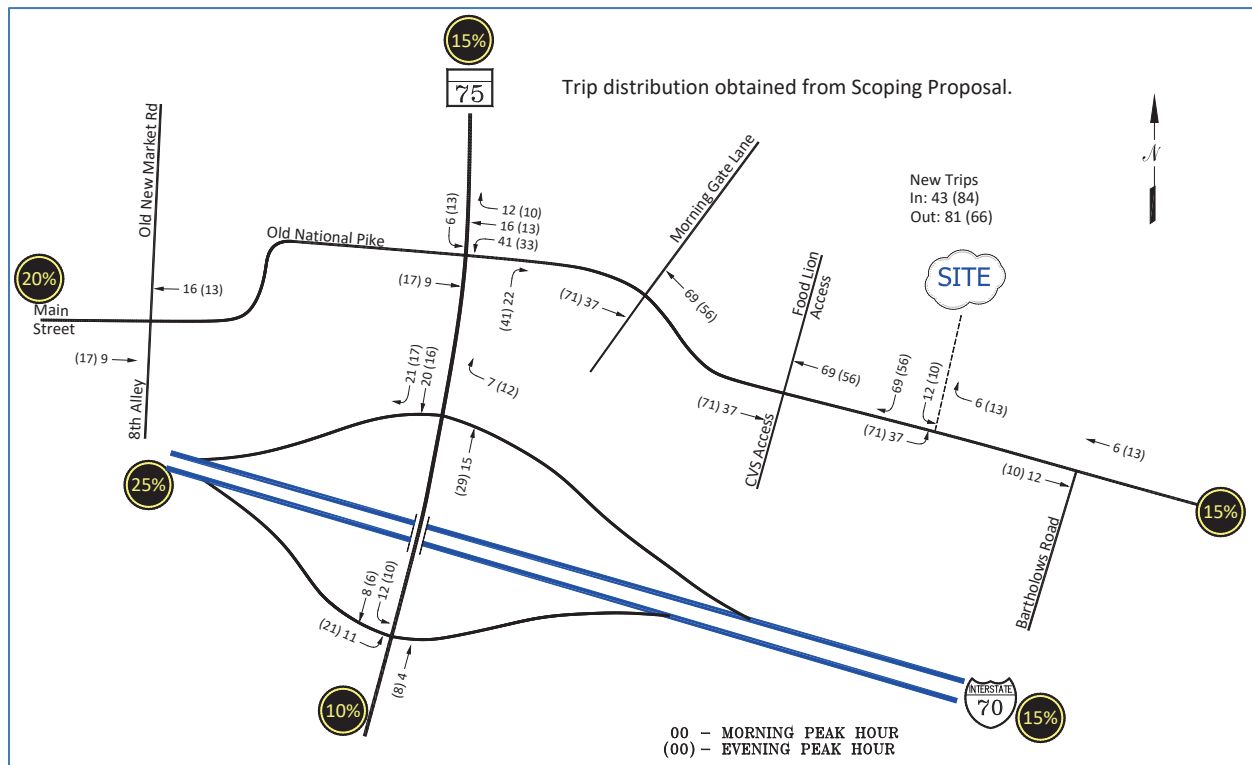


Figure 9. 2028 Total Peak Hour Traffic Volumes

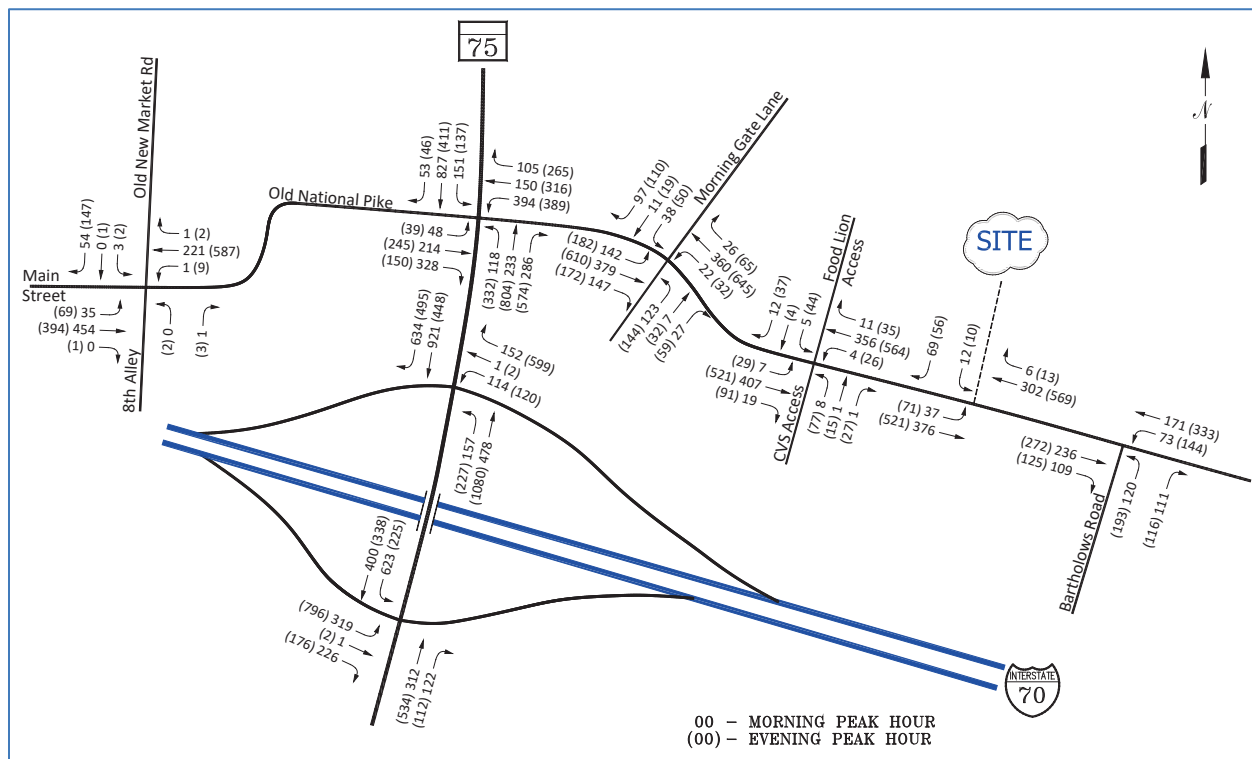
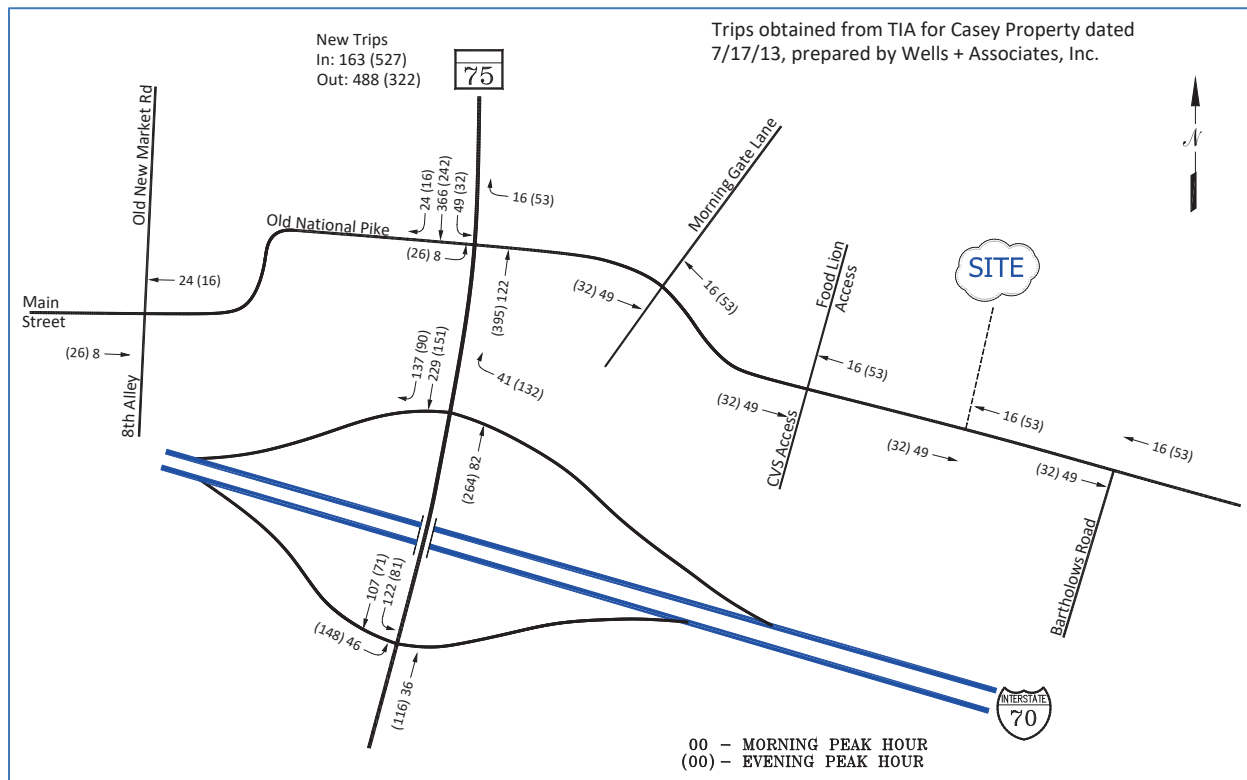


Table 6. Trip Generation for Casey Property

	MORNING PEAK HOUR			EVENING PEAK HOUR		
	IN	OUT	TOTAL	IN	OUT	TOTAL
Casey Property						
680 Single-Family Detached Units	122	364	486	372	218	590
337 Condominium/Townhouse Units	23	113	136	109	54	163
10,000 sq. ft. Shopping Center	24	14	38	61	67	128
Less 25% Pass-by Trips	<u>-6</u>	<u>-4</u>	<u>-10</u>	<u>-15</u>	<u>-17</u>	<u>-32</u>
	18	11	28	46	50	96
Total Trips	163	488	650	527	322	849

Note: Trips obtained from TIA for Casey Property dated 7/17/13, prepared by Wells + Associates, Inc.

Figure 10. Trip Assignment for Casey Property





WELLS + ASSOCIATES

GORDON MILL

TRAFFIC IMPACT ANALYSIS

Updated December 15, 2022



Table 4
Gordon Mill
Trip Generation Summary⁽¹⁾

Scenario	Land Use			AM Peak Hour			PM Peak Hour			Average Daily Trips Weekday
	Code	Amount	Units	In	Out	Total	In	Out	Total	
Proposed Development										
Gordon Mill (Formerly Blentlinger PUD)										
Residential - Single Family Detached	210	435	DU	74	210	284	249	147	396	3906
Residential - Single Family Attached	215	175	DU	26	59	85	58	43	101	1283
Subtotal		610	DU	100	269	369	307	190	497	5189

Note(s): (1) Trip generation based on the Institute of Transportation Engineers' Trip Generation, 11th Edition rates/equations as appropriate.

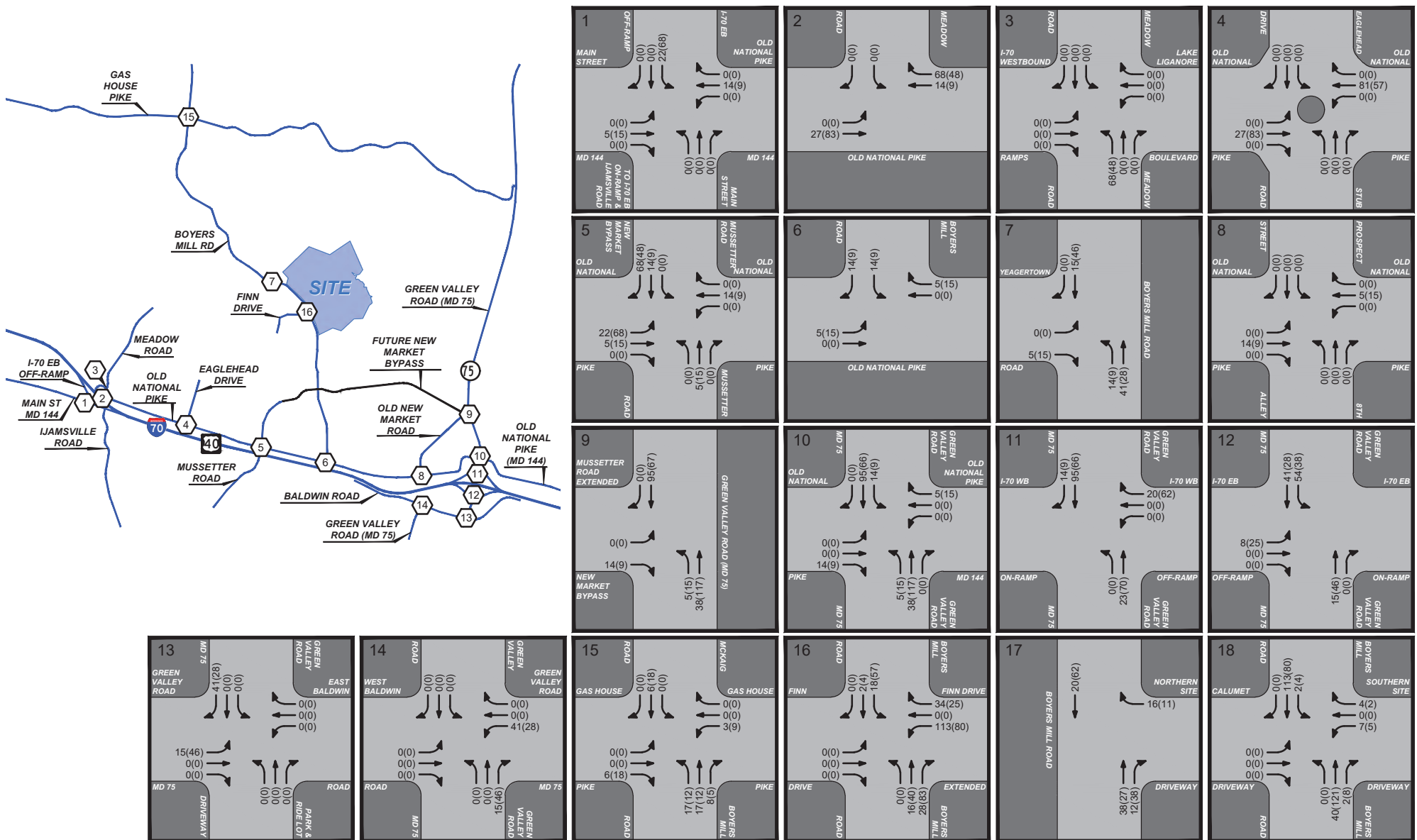


Figure 10C
Gordon Mill Site Traffic Assignments
(w/ New Market Bypass & Casey Bypass)

Gordon Mill (Formerly Blentlinger PUD)

Frederick County, Maryland

Table 4

Smith Cline Property (Hazelnut Run)

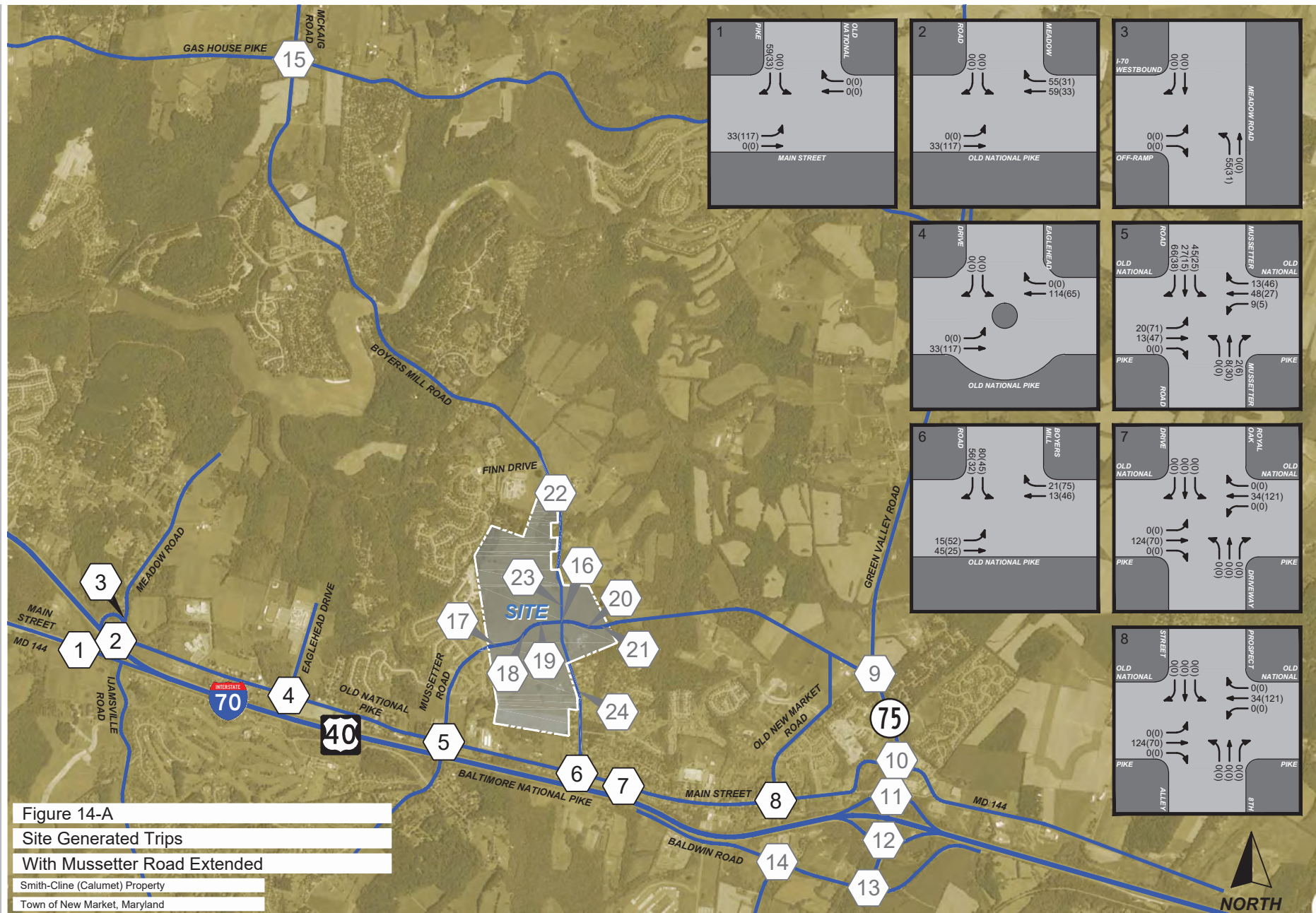
Site Trip Generation

Development/Use	ITE Land Use Code	Amount	Units	AM Peak Hour			PM Peak Hour			Average Daily Traffic
				In	Out	Total	In	Out	Total	
Single Family Detached	210	455	DU's	82	246	328	259	152	411	4,191
Condominium/Townhouse	230	470	DU's	30	148	178	143	71	214	2,472
Total Trips				112	394	506	402	223	625	6,663

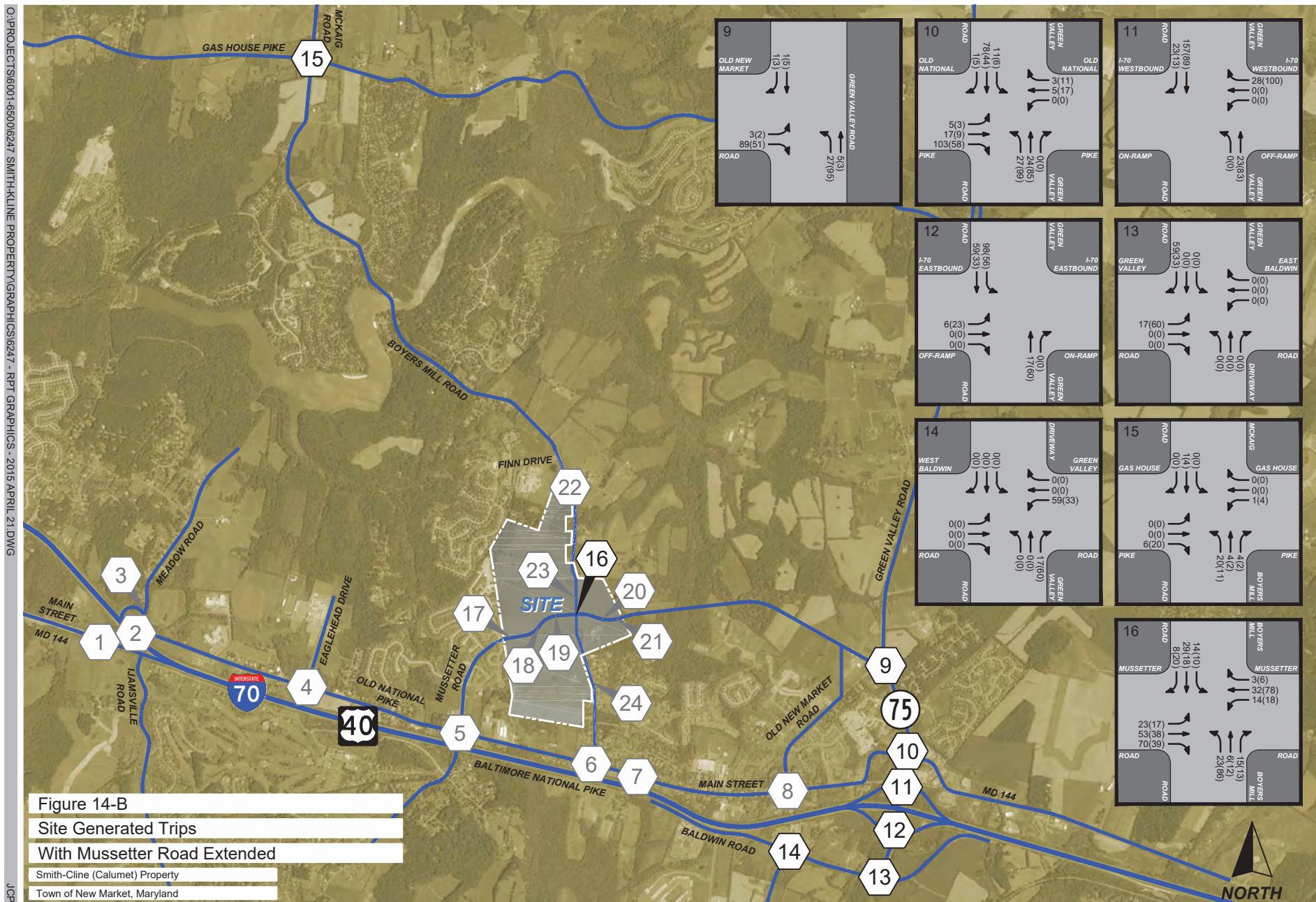
Note: Trip calculations based on ITE Trip Generation, 9th Edition

O:\PROJECTS\6001-6500\6247 SMITHKLINE PROPERTY\GRAPHICS\6247 - RPT GRAPHICS - 2015 APRIL 21.DWG

JCP



O:\PROJECTS\6001-6500\6247 SMITHCLINE PROPERTY\GRAPHICS\6247 - RPT GRAPHICS - 2015 APRIL 21.DWG



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