

EASTWOOD LOT 5

Traffic Impact Study

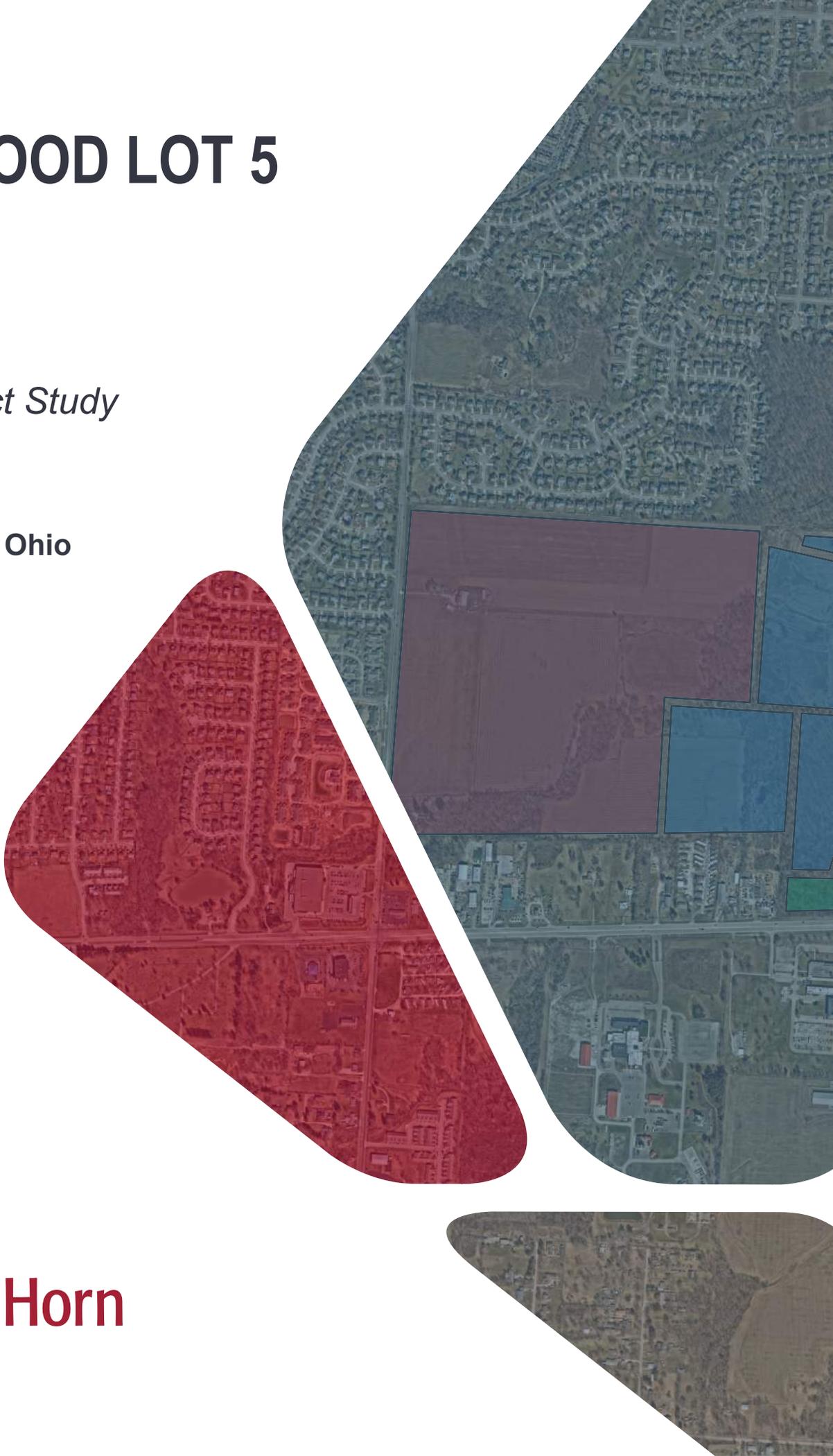
Reynoldsburg, Ohio

May, 2022

Prepared for:

Joe Ciminello

Kimley»»Horn



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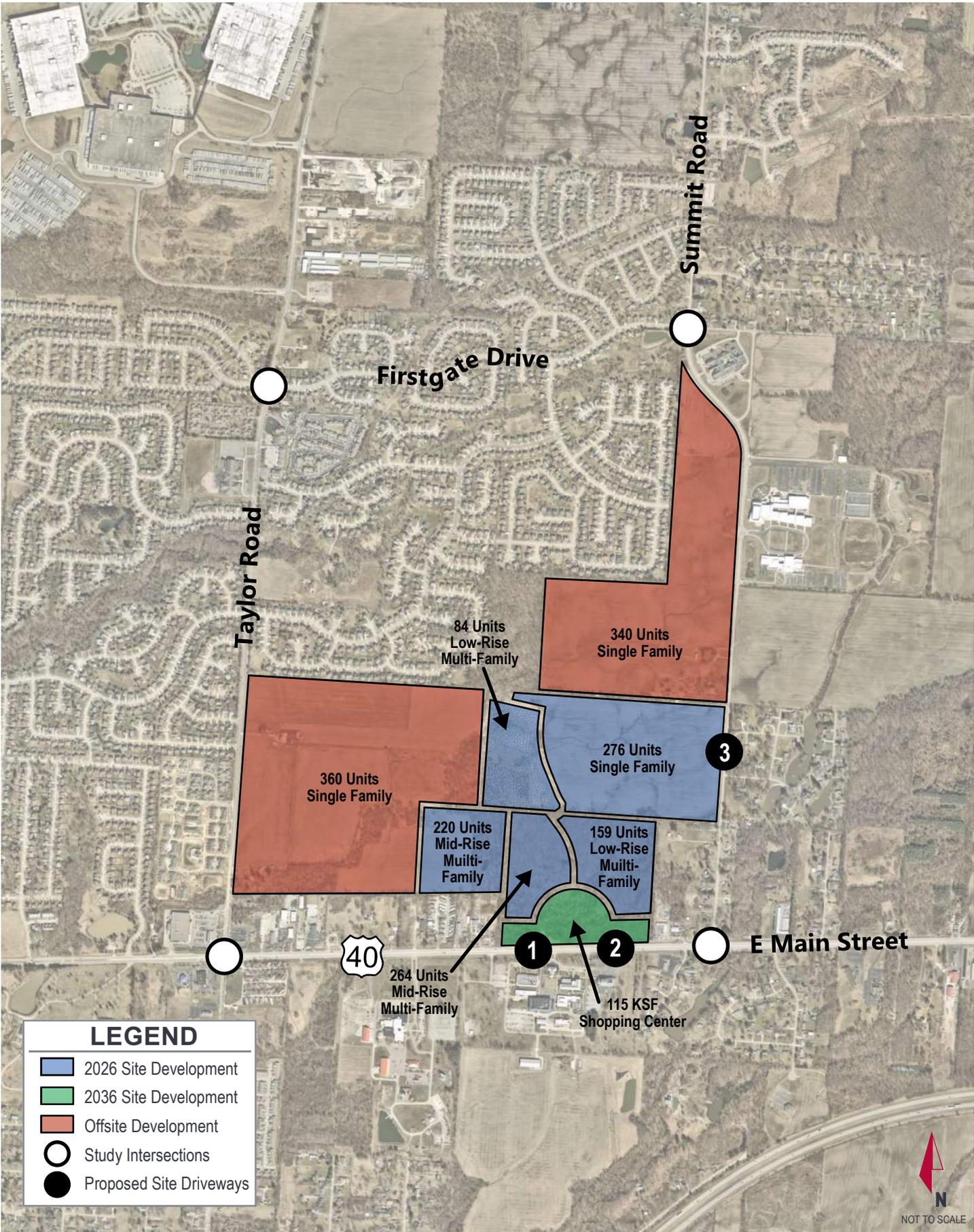
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INTRODUCTION

Kimley-Horn and Associates, Inc. (Kimley-Horn) was retained by Joe Ciminello to perform a traffic impact study for a proposed mixed-use development on the north side of US-40 (E Main Street) between Taylor Road and Summit Road, in Reynoldsburg, OH. The proposed development would replace existing agricultural land. Proposed access to the mixed-use development includes two full-access site driveways onto US-40, and one full-access site driveway onto Summit Road. An aerial view of the study location and the surrounding roadway network is presented in **Exhibit 1**.

As part of this study, the existing network was analyzed to determine the current and projected future operations at the study intersections. Trip generation characteristics for the new development were established and added to background traffic volumes to assess the site's impact on the area roadway network. This report presents and documents Kimley-Horn's data collection, summarizes the evaluation of existing and projected future traffic conditions on the surrounding roadways, and identifies recommendations to address the potential of site-generated traffic on the adjacent roadway network. The signed Traffic Memorandum of Understanding (MOU) outlining the complete scope of this traffic study can be found in the Appendix.



NO-BUILD CONDITIONS

Kimley-Horn conducted a field visit to collect relevant information pertaining to existing land uses in the surrounding area, the adjacent street system, current traffic volumes and operating conditions, lane configurations and traffic controls at nearby intersections, and other key roadway characteristics. This section of the report details information on these existing conditions.

AREA LAND USES & EXISTING ROADWAY CHARACTERISTICS

The subject site is located north of US-40 (E Main Street) between Taylor Road and Summit Road, in Reynoldsburg, OH. The project would replace approximately 138 acres of agricultural land. The immediate site vicinity generally consists of rural residential, commercial, and agricultural uses. The study area for this analysis includes the following intersections:

- US-40 (E Main Street) and Taylor Road
- US-40 (E Main Street) and Summit Road
- US-40 (E Main Street) and Access Drive 1
- US-40 (E Main Street) and Access Drive 2
- Summit Road and Access Drive 3
- Summit Road and Refugee Road/ Firstgate Drive
- Taylor Road and Firstgate Drive

US-40 (E Main Street) is a 5-lane urban principal arterial generally running east-west in the site vicinity and provides two travel lanes in each direction with a two-way left turn lane in the center. At the signalized intersection with Taylor Road, an eastbound and westbound left-turn lane are provided. Regionally, US-40 runs east-west from Columbus to Reynoldsburg. This roadway has a posted speed limit of 50 miles per hour. No designated sidewalks are present on either side of the existing US-40.

Taylor Road is a 3-lane urban minor arterial generally running north-south in the site vicinity and provides one travel lane in each direction with a two-way left turn lane in the center. At the signalized intersection with US-40, dual southbound left-turn lanes and a single northbound left turn lane are provided. At the signalized intersection with Firstgate Drive, a northbound and southbound left turn lane are provided. This roadway has a posted speed limit of 35 miles per hour. Sidewalks are present on both sides of Taylor Road, throughout the site vicinity.

Summit Road is a 2-lane urban local roadway generally running north-south in the site vicinity and provides one travel lane in each direction. A two-way left turn lane is provided for some segments of Summit Road within the vicinity of the site. At the signalized intersection with Firstgate Drive, a northbound and southbound turn lane are provided. This roadway has a posted speed limit of 35 miles per hour. A designated sidewalk is present for some segments of Summit Road in the vicinity of the site. There are no sidewalks along Summit Road between US-40 and Summit Road Elementary School.

Firstgate Drive/Refugee Road is a 2-lane urban major collector generally running east-west in the site vicinity and provides one travel lane in each direction. Firstgate Drive has a posted speed limit of 25 miles per hour within the vicinity of the site. Designated sidewalks are present on both sides of the Firstgate Drive.

TRAFFIC COUNT DATA COLLECTION

Base traffic volumes and turning movement counts for the study intersections were obtained via MioVision traffic cameras. The traffic cameras were placed from on April 28th, 2021 along US-40 at Taylor Road, the Ohio Department of Agriculture campus private drive, and at Summit Road. Traffic cameras were placed at the Taylor Road and Firtgate Drive and at Summit Road and Refugee Road/ Firstgate Drive intersections on May 25th, 2021. The traffic counts were performed during the weekday morning (7:00AM-9:00AM) and evening (4:00PM-6:00PM) peak periods, coinciding with the peak hours of traffic activity on the adjacent roadways and peak conditions anticipated. A common AM and PM peak hour was determined based on the cumulative traffic counts of the study area. The AM and PM peak hours for the study intersections are 7:00-8:00 AM and 4:30-5:30 PM.

All three schools in the surrounding area (Taylor Road Elementary School, Reynoldsburg High School, and Summit Road Elementary School), were in session during the dates in which traffic cameras were placed. Existing geometry and intersection control are shown in **Exhibit 2**. The 2021 Raw Traffic Counts are provided in **Exhibit 3**. EB and WB traffic counts at the US-40 and Taylor Road intersection were significantly lower than the EB and WB counts at the US-40 and Summit Road intersection. Based on a 2021 ODOT traffic count along US-40, EB and WB thru volumes at the US-40 and Taylor Road intersection were balanced with the US-40 and Summit Road intersection. The referenced ODOT traffic count is provided in the **Appendix**, and the 2021 balanced counts are provided in **Exhibit 4**.

EXISTING TRAFFIC VOLUME ADJUSTMENT

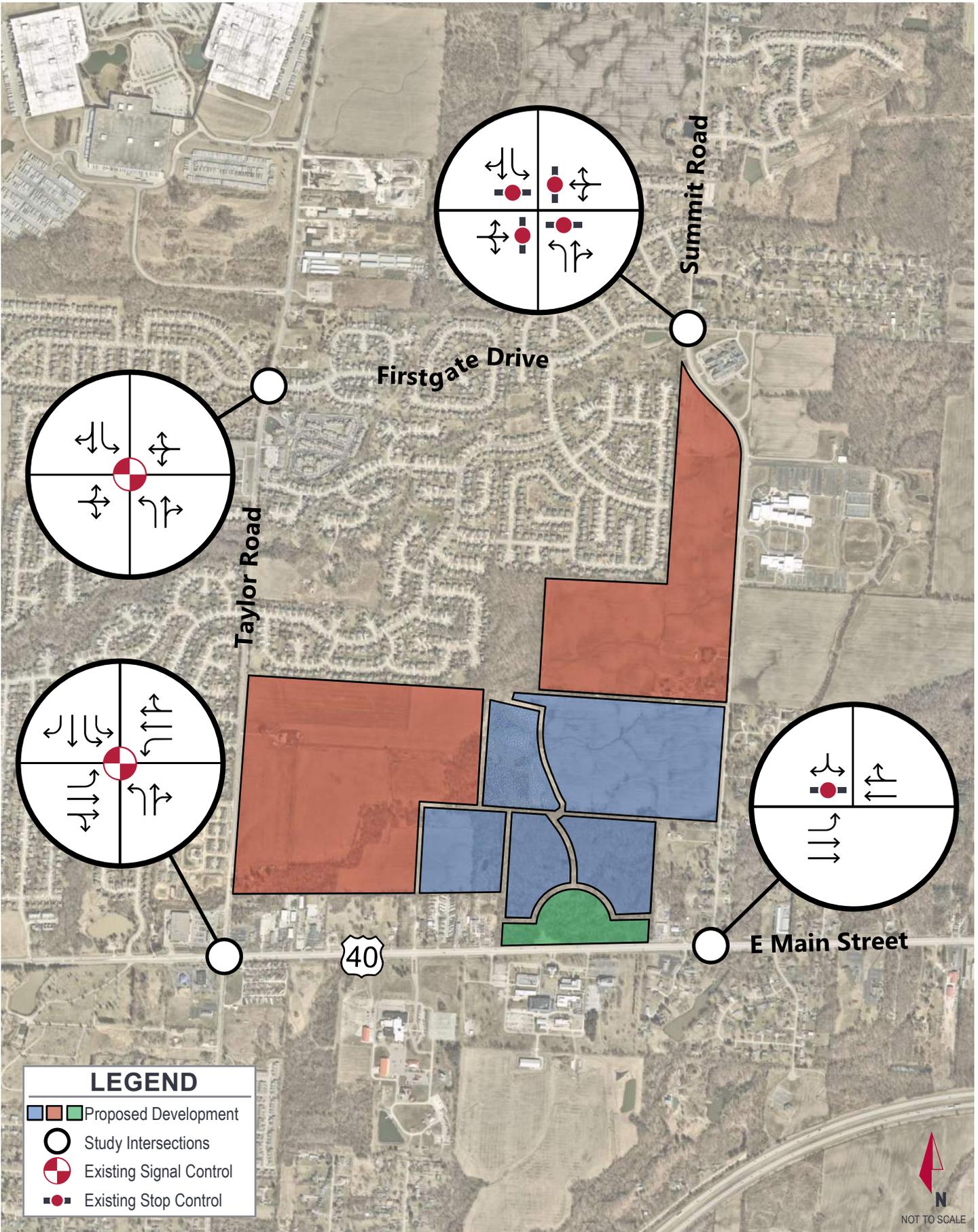
Due to circumstances associated with the COVID-19 public health crisis, traffic volumes have been atypically low since mid-March 2020 and slowly increasing toward normal volumes over the past year. To estimate typical traffic conditions, a COVID adjustment factor was obtained from ODOT traffic count data using the study location, date, and time. Traffic counts on US-40, collected in April 2021, were increased by a factor of 10 percent and traffic counts on Firstgate Drive collected in May 2021 were increased by a factor of 10 percent to reflect typical conditions absent COVID-19 impacts on traffic conditions. The 2021 Balanced counts, with the COVID adjustment factor are provided in **Exhibit 5**. COVID Adjustment factor calculations are provided in the **Appendix**.

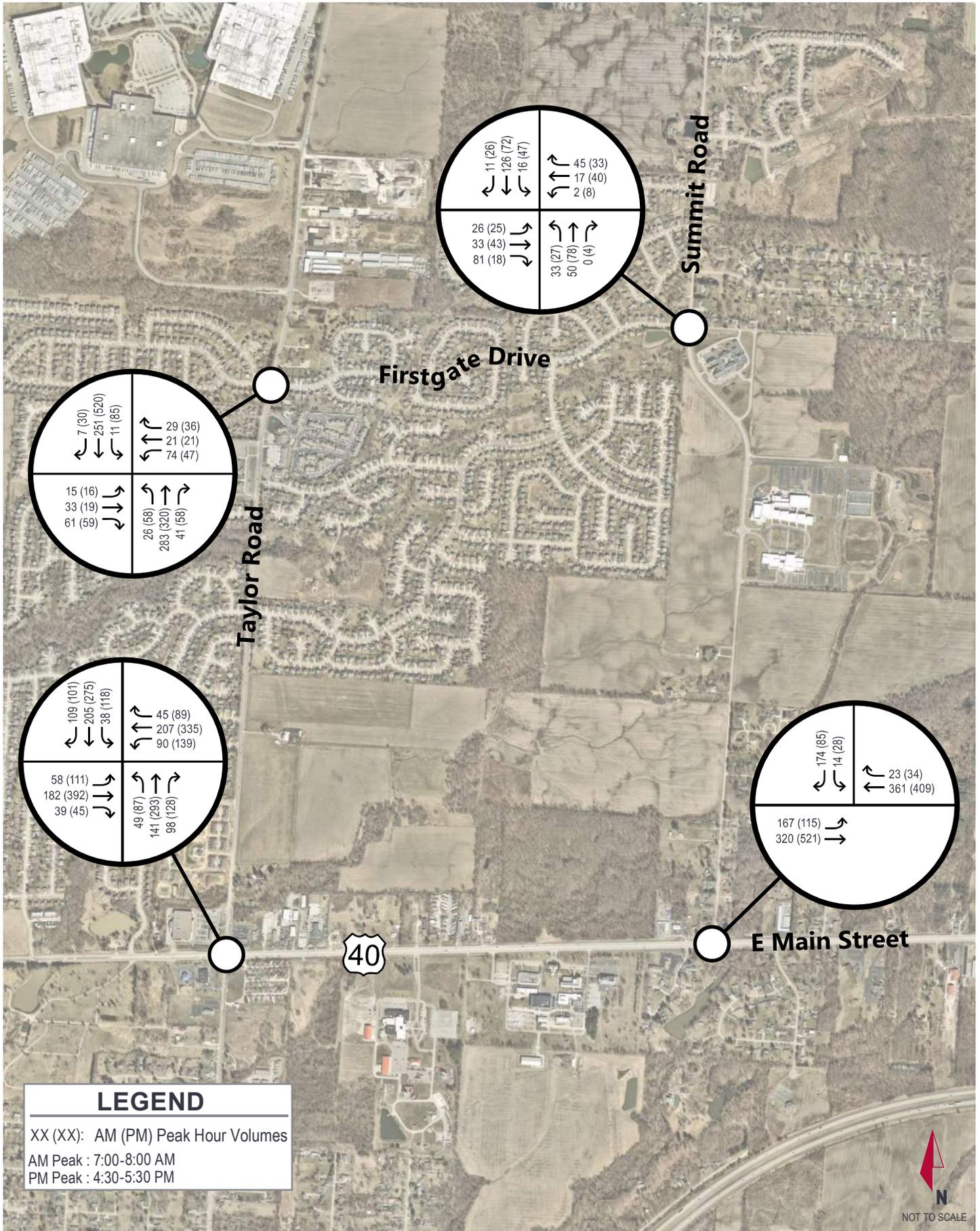
EXPECTED GROWTH TRAFFIC ASSIGNMENT

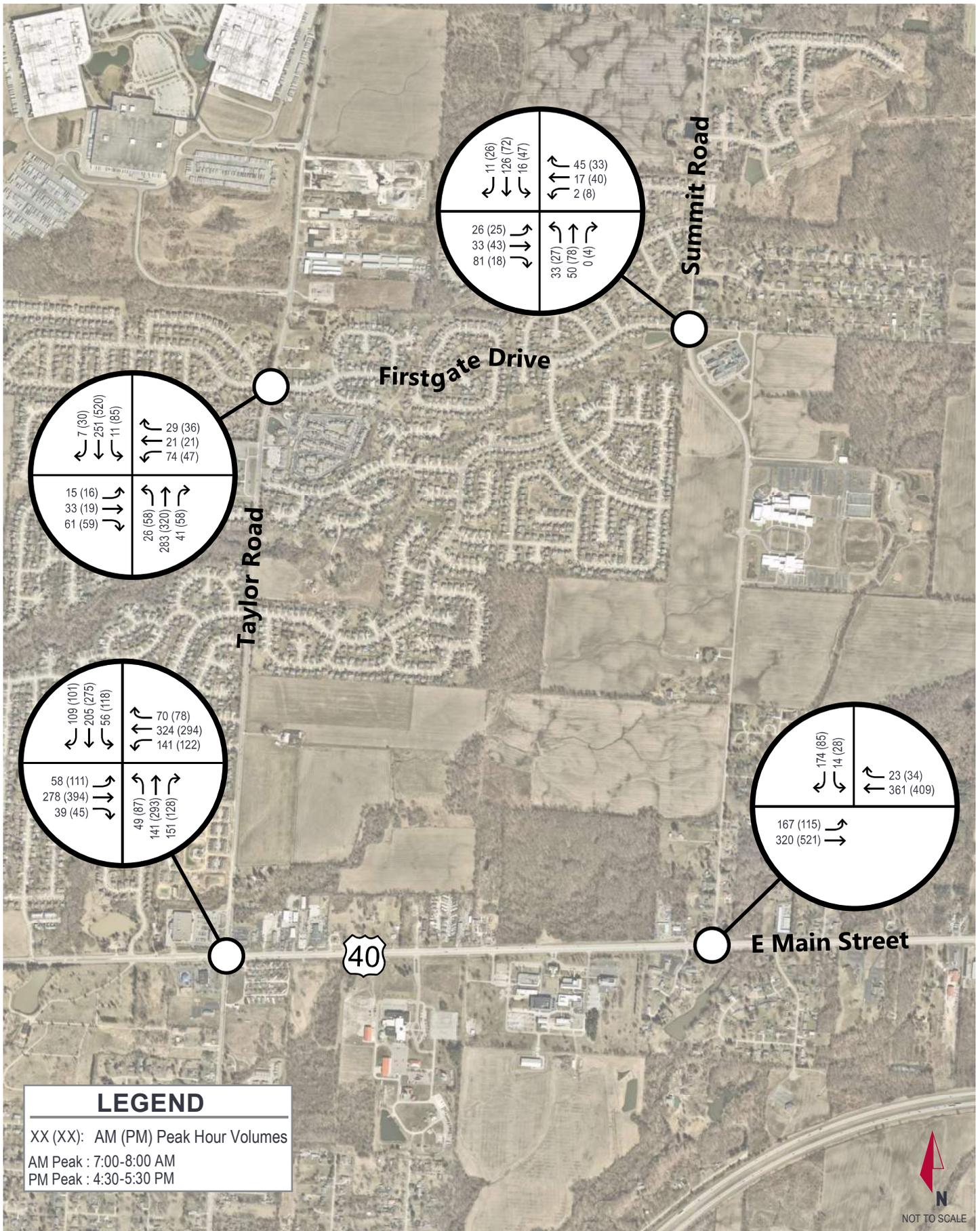
As development of the central Ohio region increases over the next 15 years, the expected vehicular volume is anticipated to increase in kind. Growth rates for each of the roadways within the study area were derived based on the Mid-Ohio Regional Planning Commission regional travel demand model and are summarized in **Table 1**. Email communications with MORPC regarding traffic growth are included in the appendix. These growth rates were used to develop the turning movement volumes for the Opening Year (2026) No-Build and Horizon Year (2036) No-Build models. The calculated 2026 and 2036 No-Build vehicular volumes for the study are illustrated in **Exhibit 6** and **Exhibit 7**.

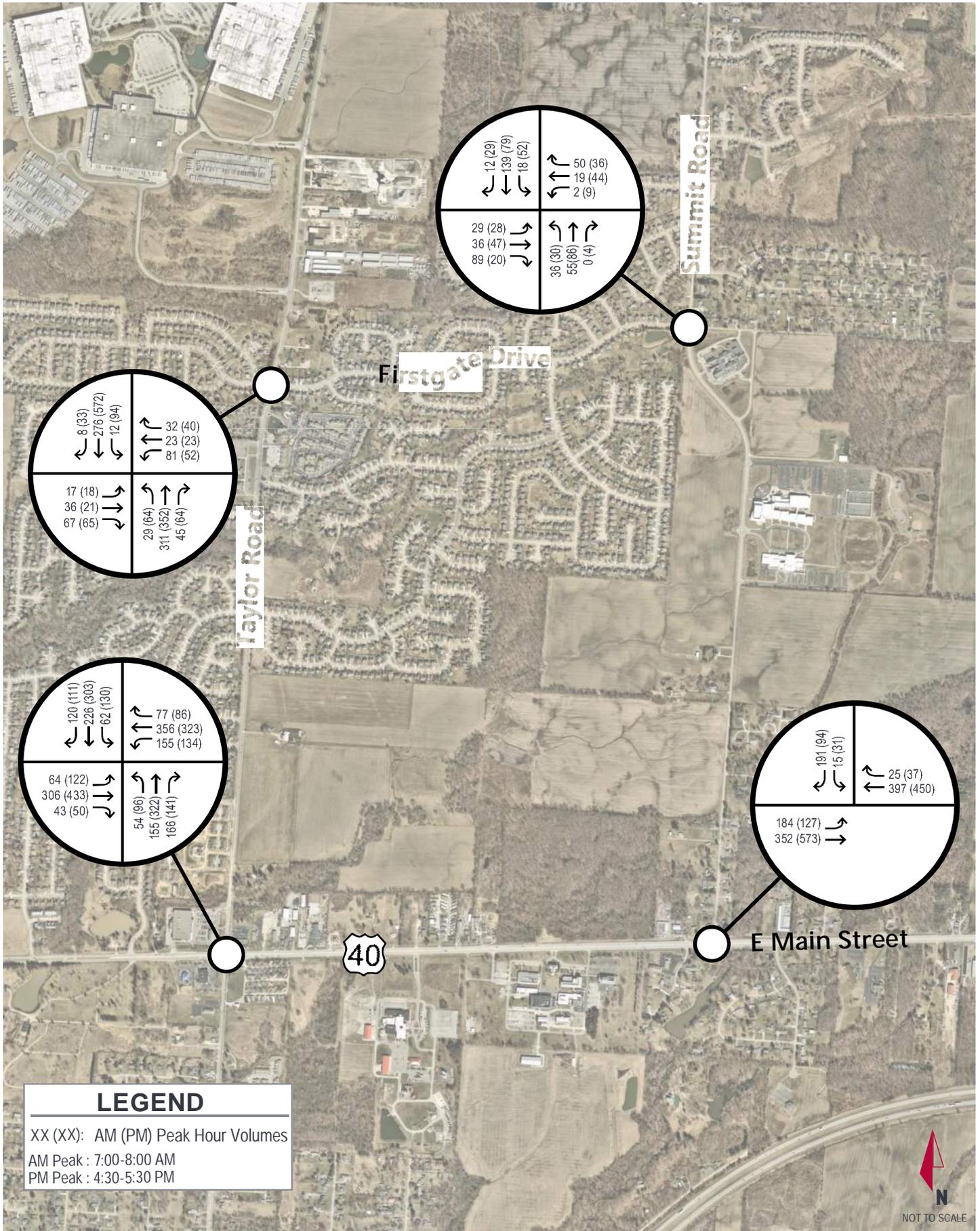
Table 1 – Background Growth Rates

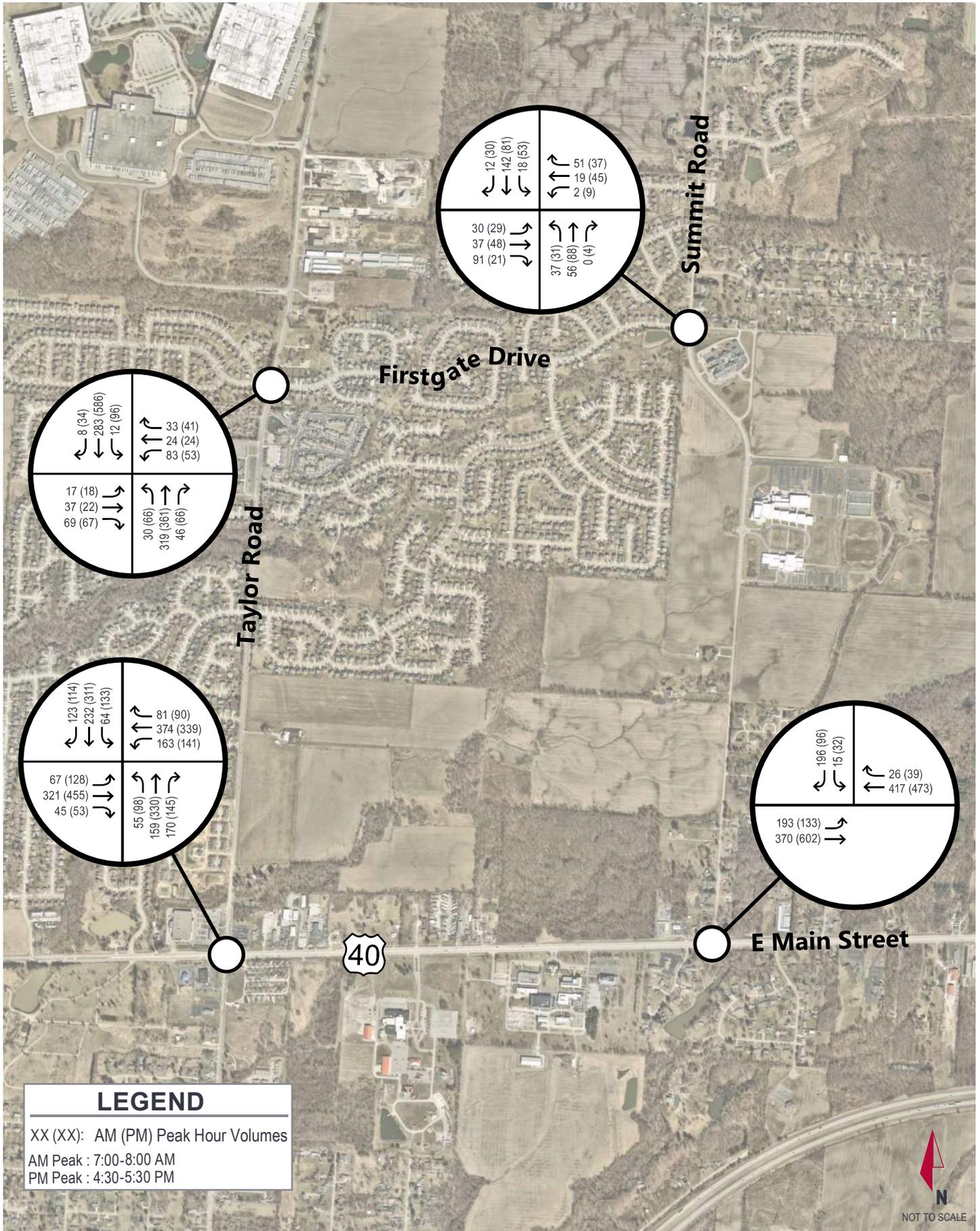
Location	Linear Annual Growth Rate
US-40 (Main Street)	1.00%
Taylor Road	0.50%
Summit Road	0.50%
Firstgate Drive	0.50%

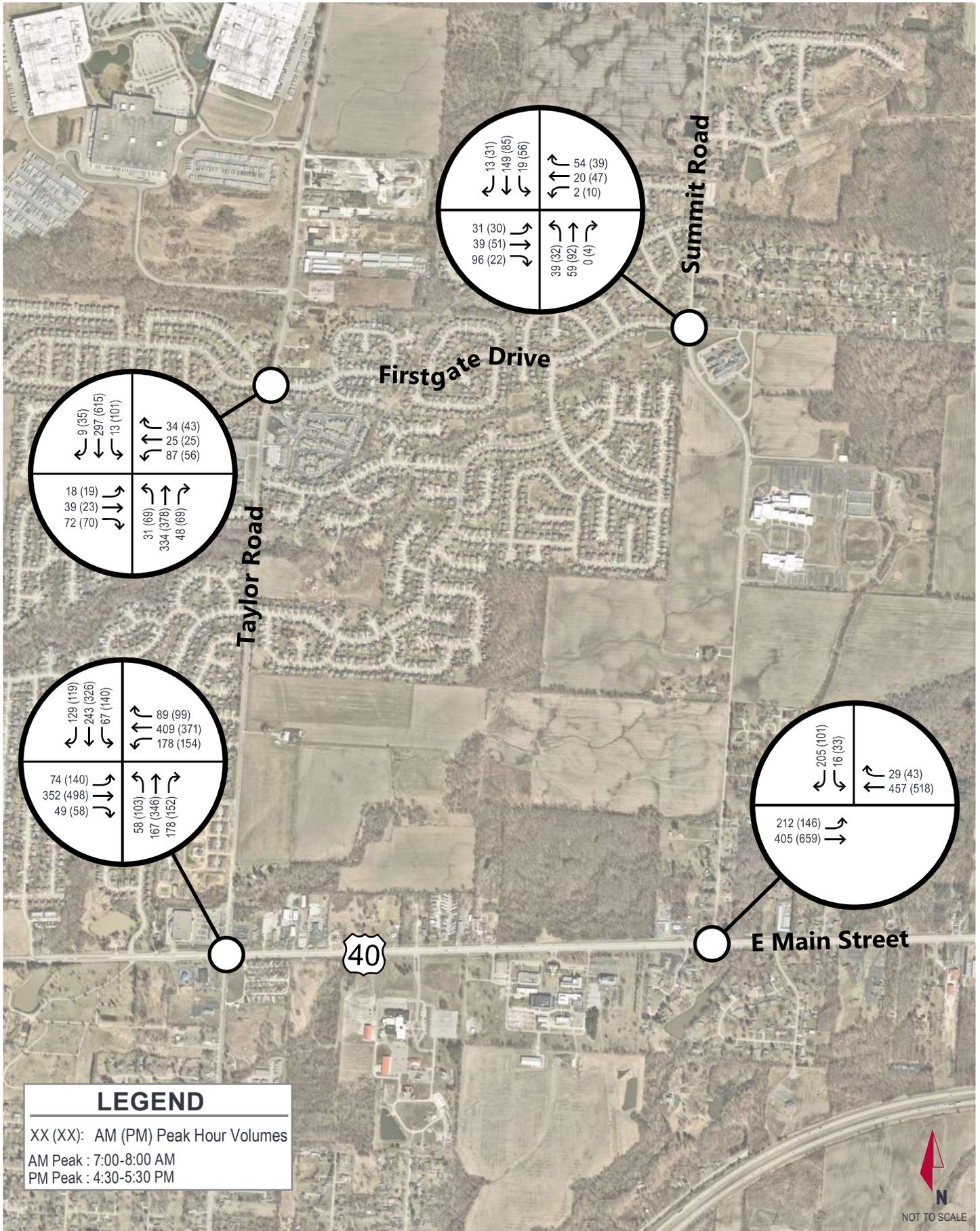












BUILD CONDITIONS

This section of the report outlines the proposed site plan and summarizes site-specific traffic characteristics.

DEVELOPMENT CHARACTERISTICS

A mix of commercial, multifamily, and single-family developments are proposed for the roughly 360-acre site. **Exhibit 1** summarizes the approximate locations, size, and timeline of each piece of the proposed development at the time of this analysis. For this study, it is assumed that the residential component of the proposed development will be complete by 2026, and includes 243 low-rise multifamily dwelling units, 484 mid-rise multifamily dwelling units, and 276 single family dwelling units. These portions of the site will be accessed by two new access points on US-40 and one new access point on Summit Road. The commercial development is not included in the 2026 opening year scenario.

By 2036, the 115,000 square-feet of commercial space, on 13.5 acres of land directly adjacent to US-40 is expected to be completed. The specific land use and building square footage has not yet been determined. The sum of commercial space was estimated using the size of the site, maximum portion of allowable impervious area on the site, and the estimated ratio of parking to building space.

It is estimated that there is the potential for 700 additional single-family dwelling units adjacent to the proposed development that could be constructed by 2036. Of these additional 700 offsite units, it is expected that 360 will be constructed between Taylor Road and the 2026 developments, and 340 offsite units will be constructed north of the 2026 developments along Summit Road. These single-family developments are expected to necessitate new access points along Taylor Road and Summit Road, in addition to the 3 access points identified in 2026. However, these additional entrances are not analyzed in this study as there are no current site plans for the developments.

TRIP GENERATION

The trip generating potential of the proposed development was calculated using the Institute of Transportation Engineers (ITE) *Trip Generation Manual, Tenth Edition*. Standard ITE trip rates were used to develop the trips generated by each portion of the development. The ITE Land Use Codes used for the site are listed below:

- Single-Family Detached Housing (ITE LUC 210)
- Multifamily Housing (Low-Rise) (ITE LUC 220)
- Multifamily Housing (Mid-Rise) (ITE LUC 221)
- Shopping Center (ITE LUC 820)

The ITE Land Use Codes were used to calculate the trip generation potential of the site. Table 2 summarizes the trips generated by the residential development expected to be completed by the opening year (2026). For the purpose of this study, all site generated trips are expected to be “Primary Trips” when traveling to and from the subject site during the opening year. Primary trips are trips to the proposed industrial site would not normally travel on the study roadways and are considered new trips within the study area.

Table 3 summarizes the trips generated by the site residential development and site commercial development expected to be completed by the horizon year (2036). Internal trips (between residential and commercial developments), and pass-by trips (for commercial developments) are expected to occur during the horizon year.

Table 4 summarizes the trips generated by the site residential development, site commercial development, and off-site residential development expected to be completed by the horizon year (2036).

Internal trips (between residential and commercial developments), and pass-by trips (for commercial developments) are expected to occur during the horizon year. Internal site trips and pass-by trips are assumed to be negligible during the AM peak hour. The percentage of pass-by trips occurring during the PM peak hour for the commercial development was determined using the ITE Trip Generation Handbook, 3rd Edition, and are illustrated in **Exhibits 12-14**. The percentage of pass-by trips was assumed to be 35% during the PM Peak Hour. A fitted curve equation is not present for LUC-820, therefore the primary trip percentage was approximated using the data plot provided in the appendix. Additionally, internal trip capture calculations are provided in the appendix.

Table 2 – Opening Year (2026) Residential Site Trip Generation

Land Use	Size	Units	Daily Trips	AM Peak			PM Peak		
				Total	In	Out	Total	In	Out
Single-Family Detached Housing (210)	276	Dwelling Units	2,646	201	50	151	269	169	100
Multi-Family Housing (Low-Rise) (220)	243	Dwelling Units	1,798	111	26	85	130	82	48
Multi-Family Housing (Mid-Rise) (221)	484	Dwelling Units	2,638	161	42	119	201	123	78
Total Opening Year Trips			7,020	473	118	355	600	374	226

Table 3 - Horizon Year (2036) Residential + Commercial Site Trip Generation

Land Use	Size	Units	Daily Trips	AM Peak			PM Peak		
				Total	In	Out	Total	In	Out
Single-Family Detached Housing (210)	276	Units	2,646	201	50	151	269	169	100
Multi-Family Housing (Low-Rise) (220)	243	Units	1,798	111	26	85	130	82	48
Multi-Family Housing (Mid-Rise) (221)	484	Units	2,638	161	42	119	201	123	78
Total - Residential				473	118	355	600	374	226
<i>Internal Capture</i>				-	-	-	-111	-82	-29
Sub Total - Residential (less internal capture)				473	118	355	489	292	197
Shopping Center (820)	115	KSF	6,612	209	130	79	603	289	314
<i>Internal Capture</i>				-	-	-	-111	-29	-82
<i>Pass-by Reduction</i>				-	-	-	-210	-105	-105
Sub Total – Commercial (less internal & pass-by)				209	130	79	282	155	127
Total Project Trips				682	248	434	771	447	324

Table 4 - Horizon Year (2036) Residential + Commercial + Offsite Site Trip Generation

Land Use	Size	Units	Daily Trips	AM Peak			PM Peak		
				Total	In	Out	Total	In	Out
Single-Family Detached Housing (210)	976	Units	8,458	698	174	524	905	570	335
Multi-Family Housing (Low-Rise) (220)	243	Units	1,798	111	26	85	130	82	48
Multi-Family Housing (Mid-Rise) (221)	484	Units	2,638	161	42	119	201	123	78
Total - Residential				970	242	728	1236	775	461
<i>Internal Capture</i>				-	-	-	-111	-82	-29
Sub Total - Residential (less internal capture)				970	242	728	1125	693	432
Shopping Center (820)	115	KSF	6,612	209	130	79	603	289	314
<i>Internal Capture</i>				-	-	-	-111	-29	-82
<i>Pass-by Reduction</i>				-	-	-	-210	-105	-105
Sub Total – Commercial (less internal & pass-by)				209	130	79	282	155	127
Total Project Trips				1179	373	807	1407	848	559

DIRECTIONAL DISTRIBUTION

The estimated distributions of site-generated traffic on the study area roadway network as it enters and departs the site is a function of several variables, such as the nature of the surrounding land uses, prevailing traffic conditions, characteristics of the roadway network internal to and external to the site, and ease of travel to other areas of the greater Columbus region. Separate trip distributions were developed for the 2026 project site residential development, the 2036 project site and offsite residential developments, and the 2036 commercial development. The anticipated directional distributions estimated for site and offsite related trips are outlined in **Table 5** and can be seen on **Exhibits 8-10**.

Table 5 - Estimated Trip Distribution

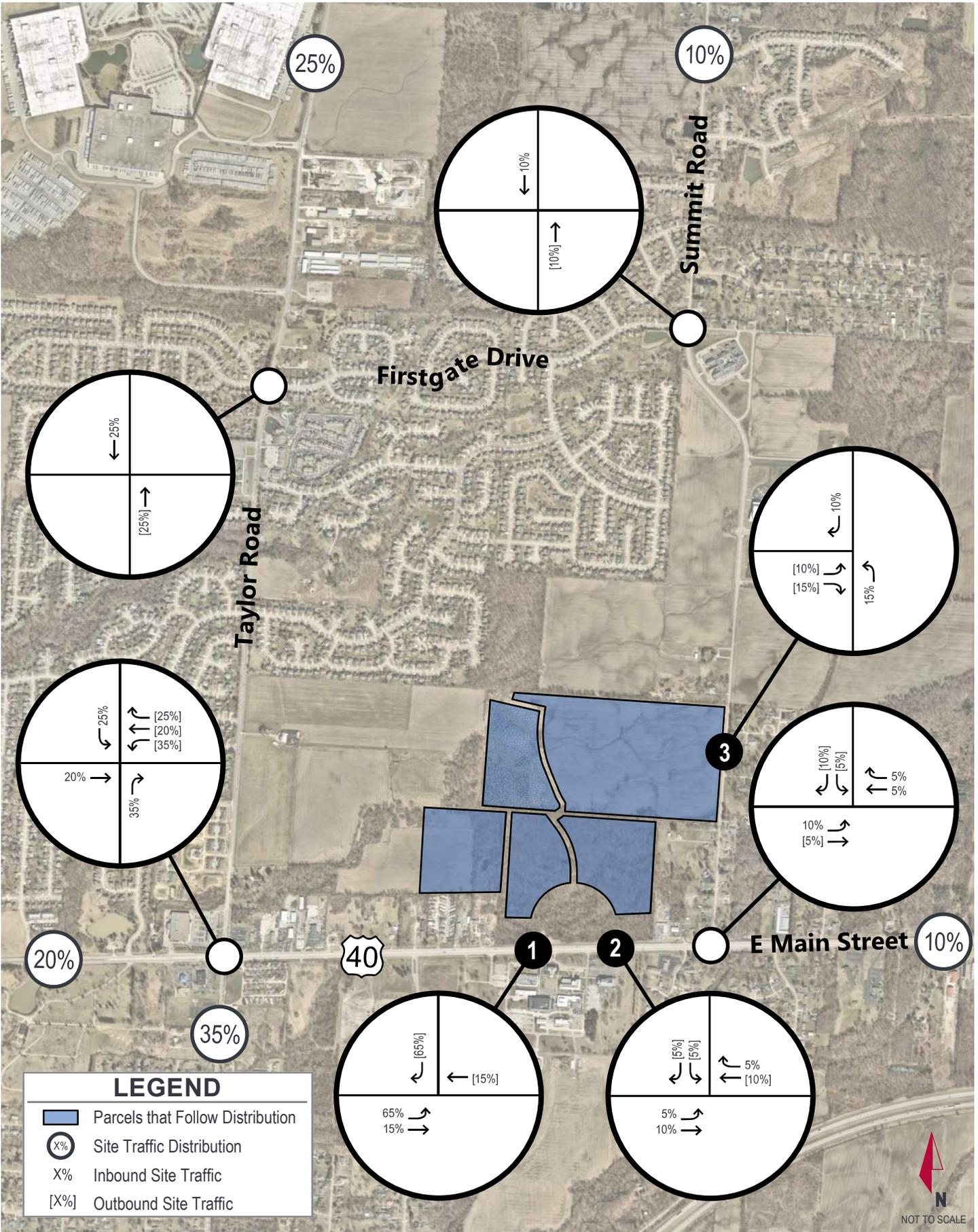
Traveling to/from:	Estimated Trip Distribution		
	2026 Project Site Residential	2036 Project Site Commercial	2036 Offsite + Project Site Residential
South on Taylor Road	35%	40%	35%
West on US-40	20%	35%	20%
North on Taylor Road	25%	15%	20%
East on US-40	10%	10%	10%
North on Summit Road	10%	-	15%

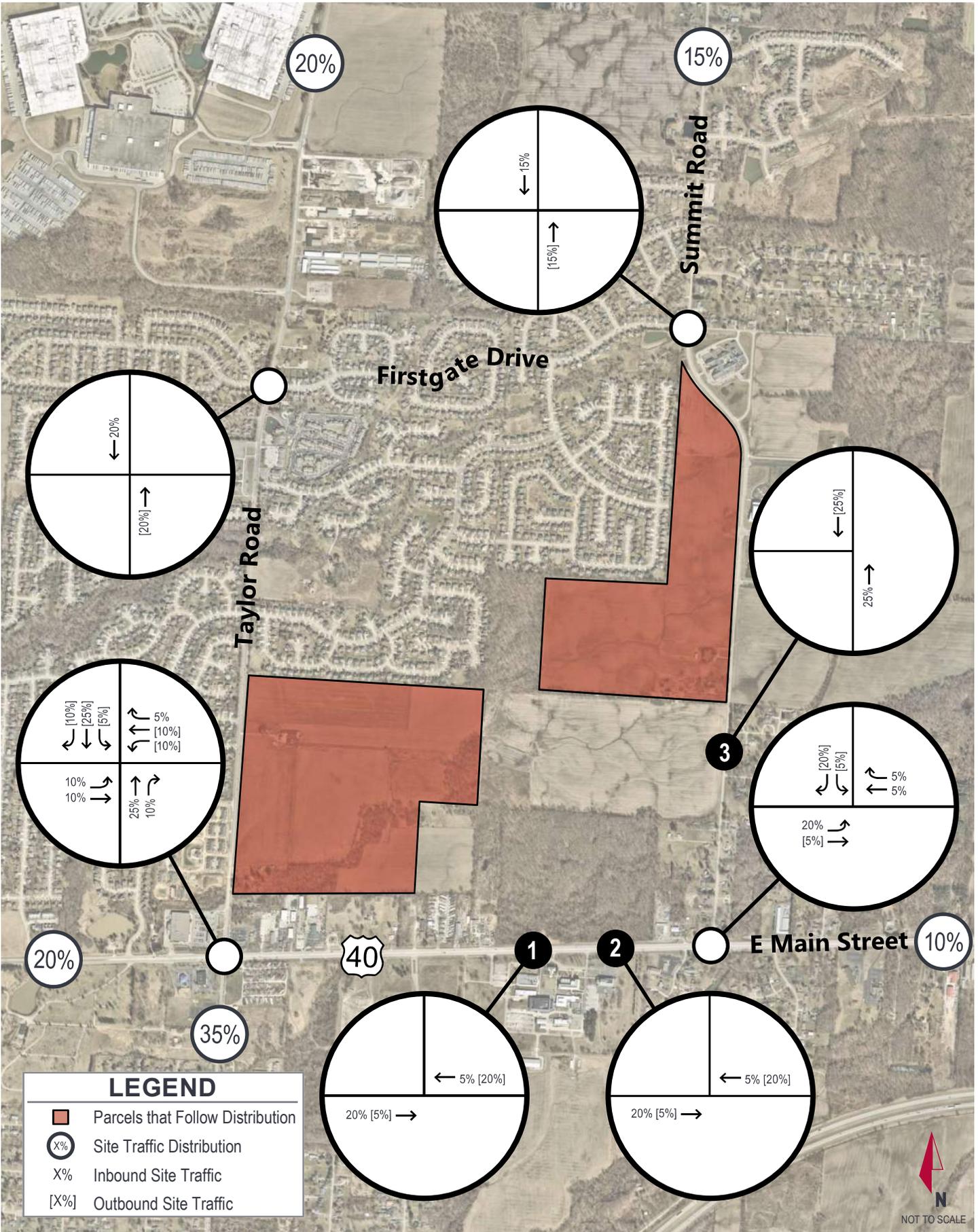
TOTAL BUILD TRAFFIC ASSIGNMENT

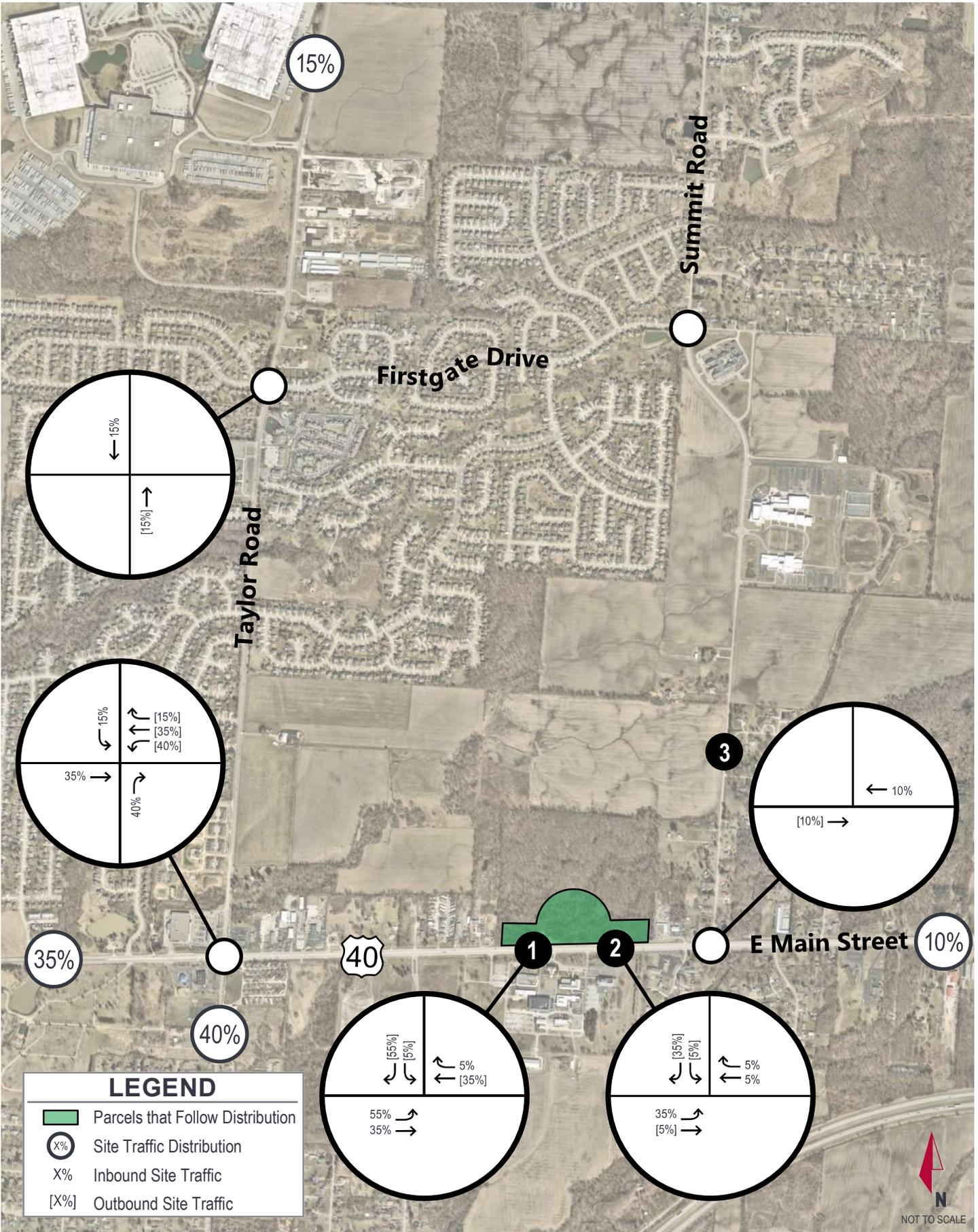
The total traffic assignment represents the additional traffic volumes at study area intersection generated by the proposed site development. **Exhibit 11** summarizes the total project site trip assignment for

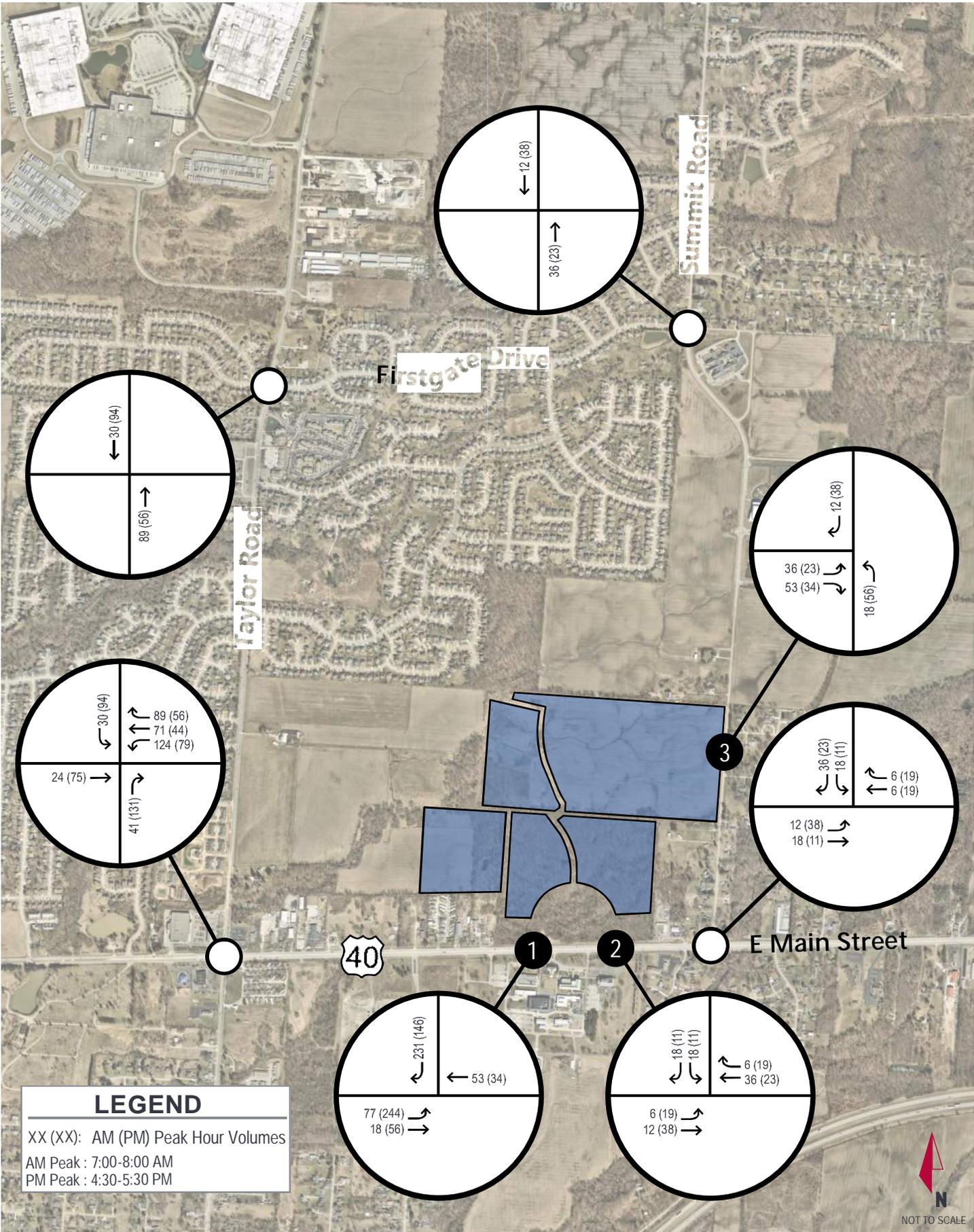
development expected to be completed by the Opening Year (2026) for this study. **Exhibit 15** summarizes the total project site trip assignment for the residential developments and commercial developments to be completed by the Horizon Year (2036). **Exhibit 16** summarizes the total site trip assignment for all development expected to be completed by the Horizon Year (2036) for this study, which includes the offsite residential development expected to be completed prior to 2036.

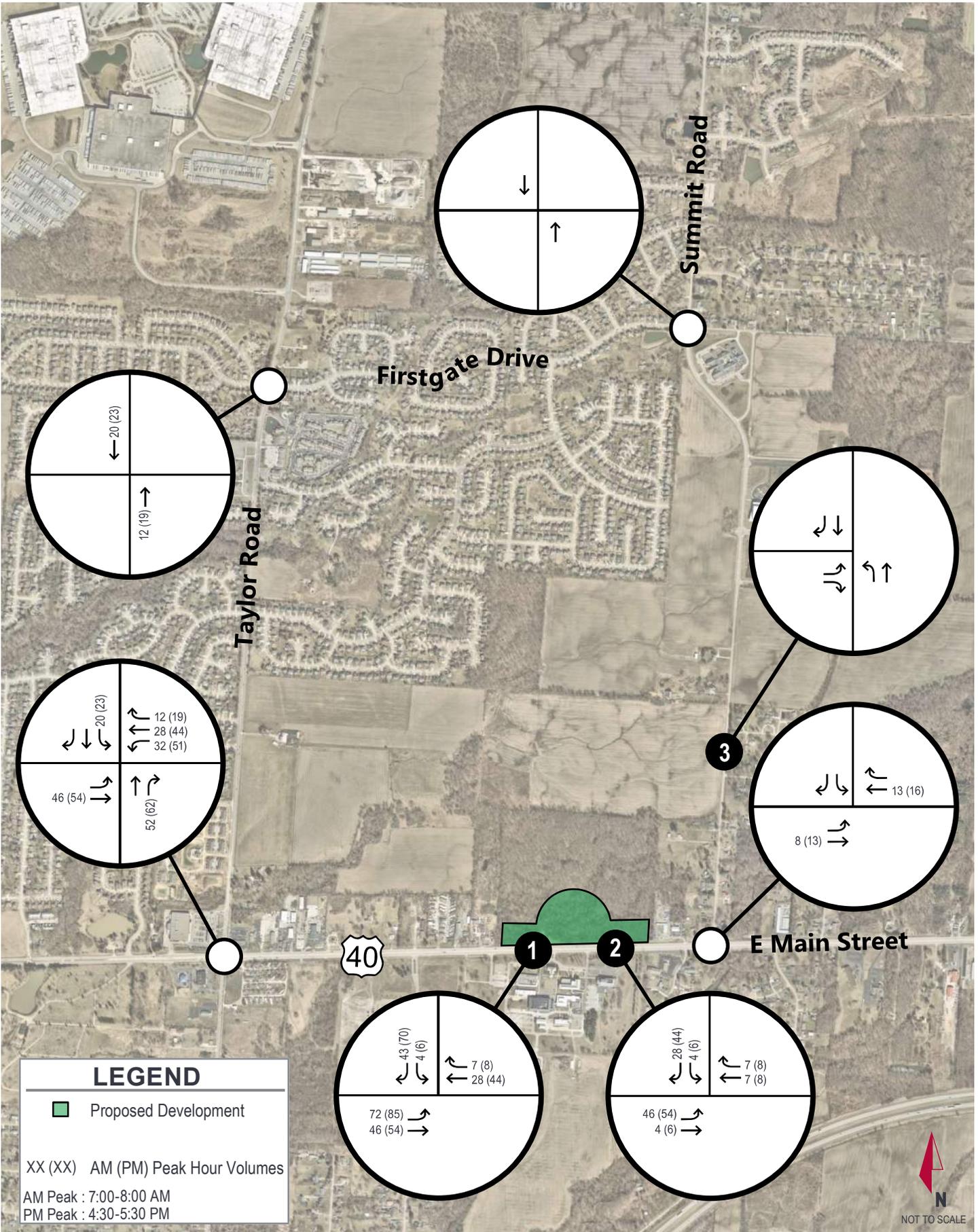
Opening Year (2026) Build, Horizon Year (2036) Build, Horizon Year (2036) No Build + Offsite peak hour, and Horizon Year (2036) Build + Offsite peak hour turning movement volumes are summarized in **Exhibits 17-20**.

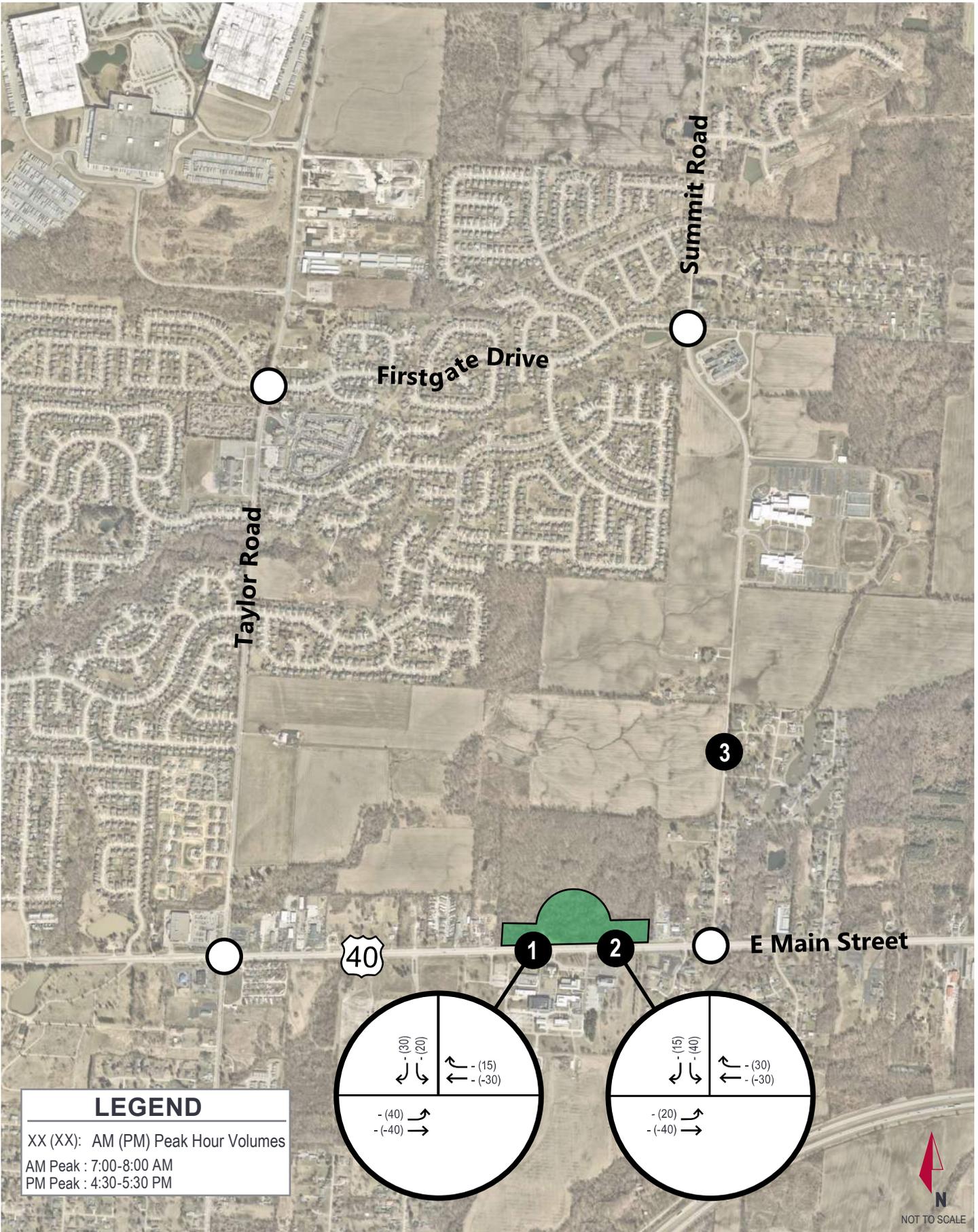


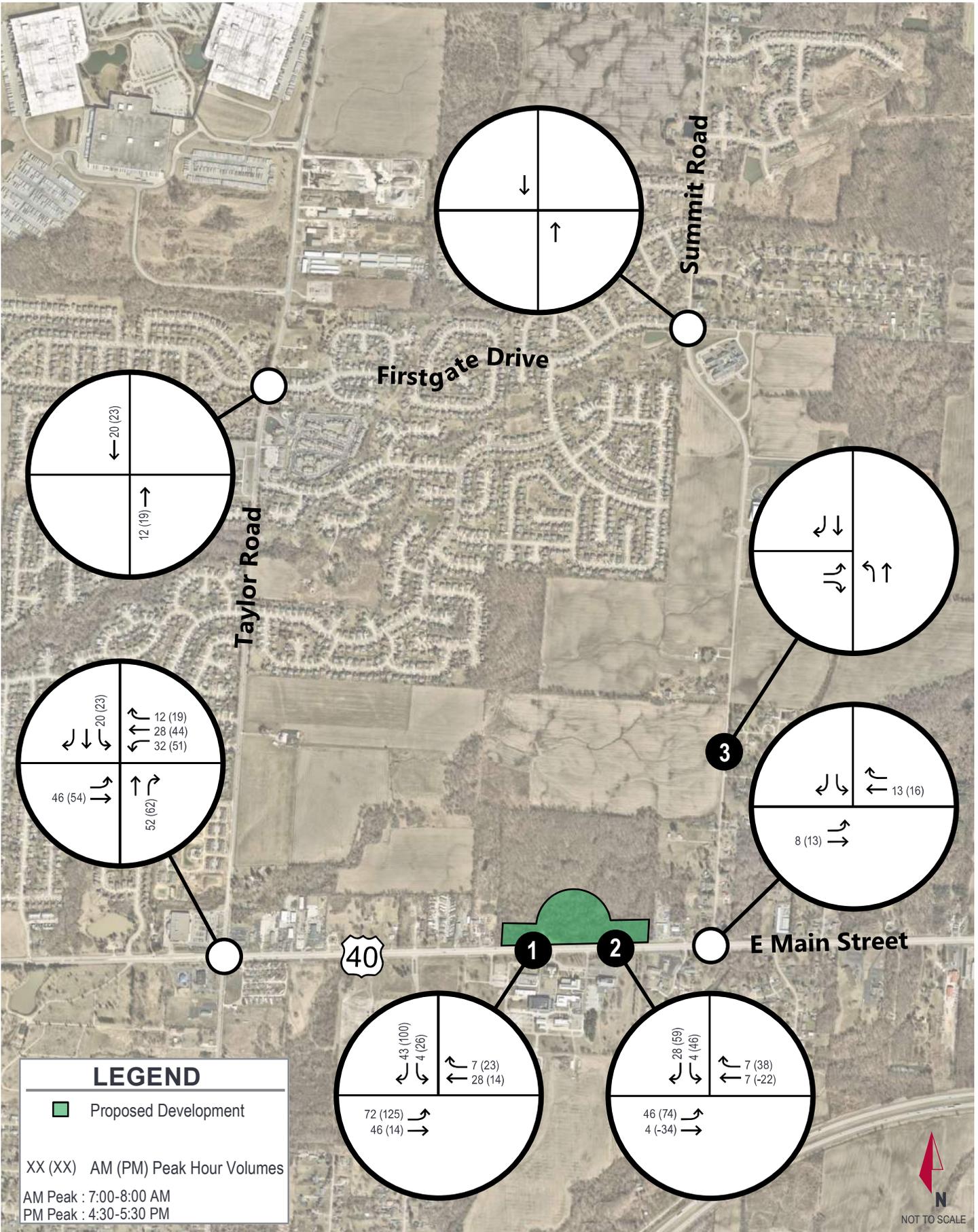


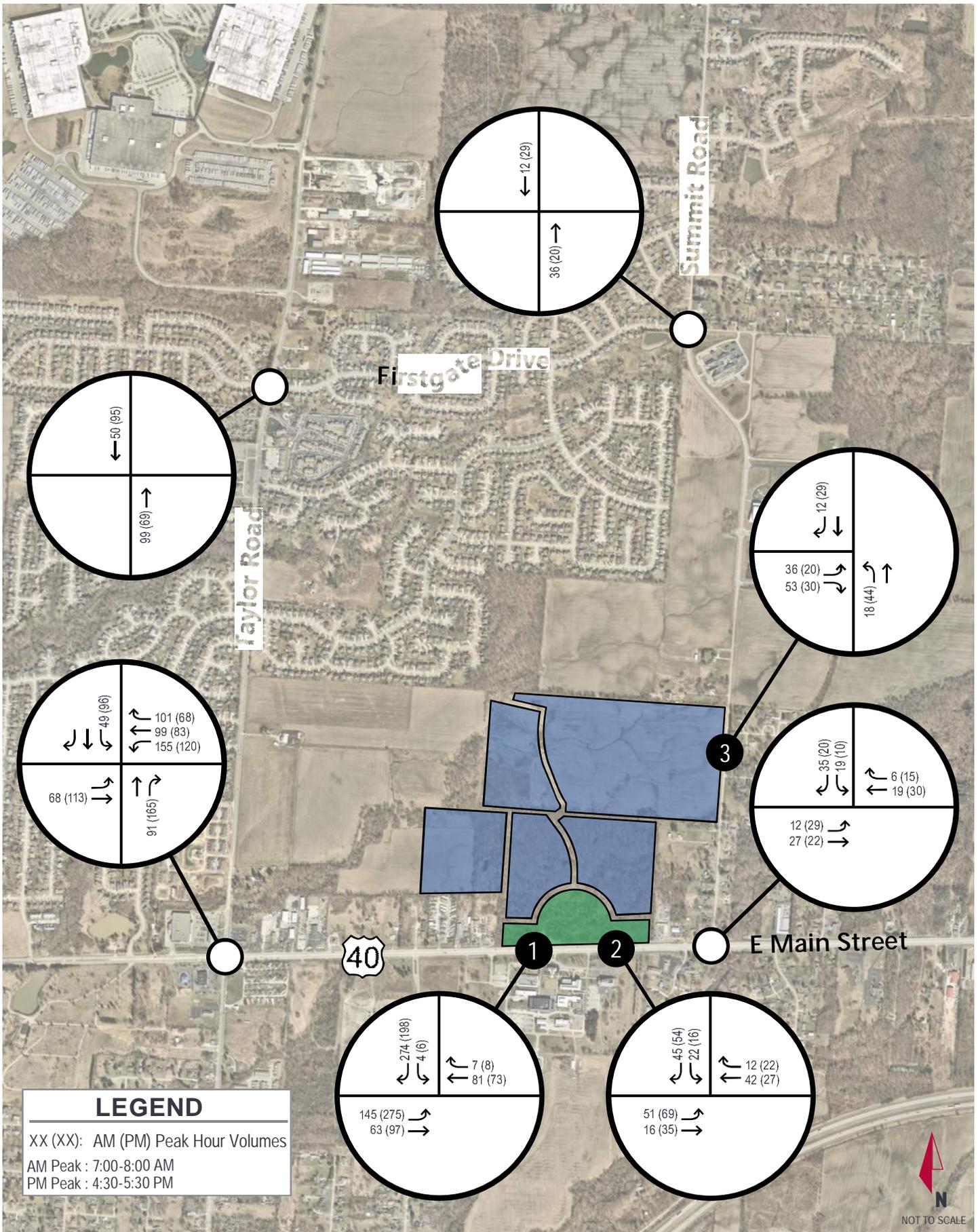


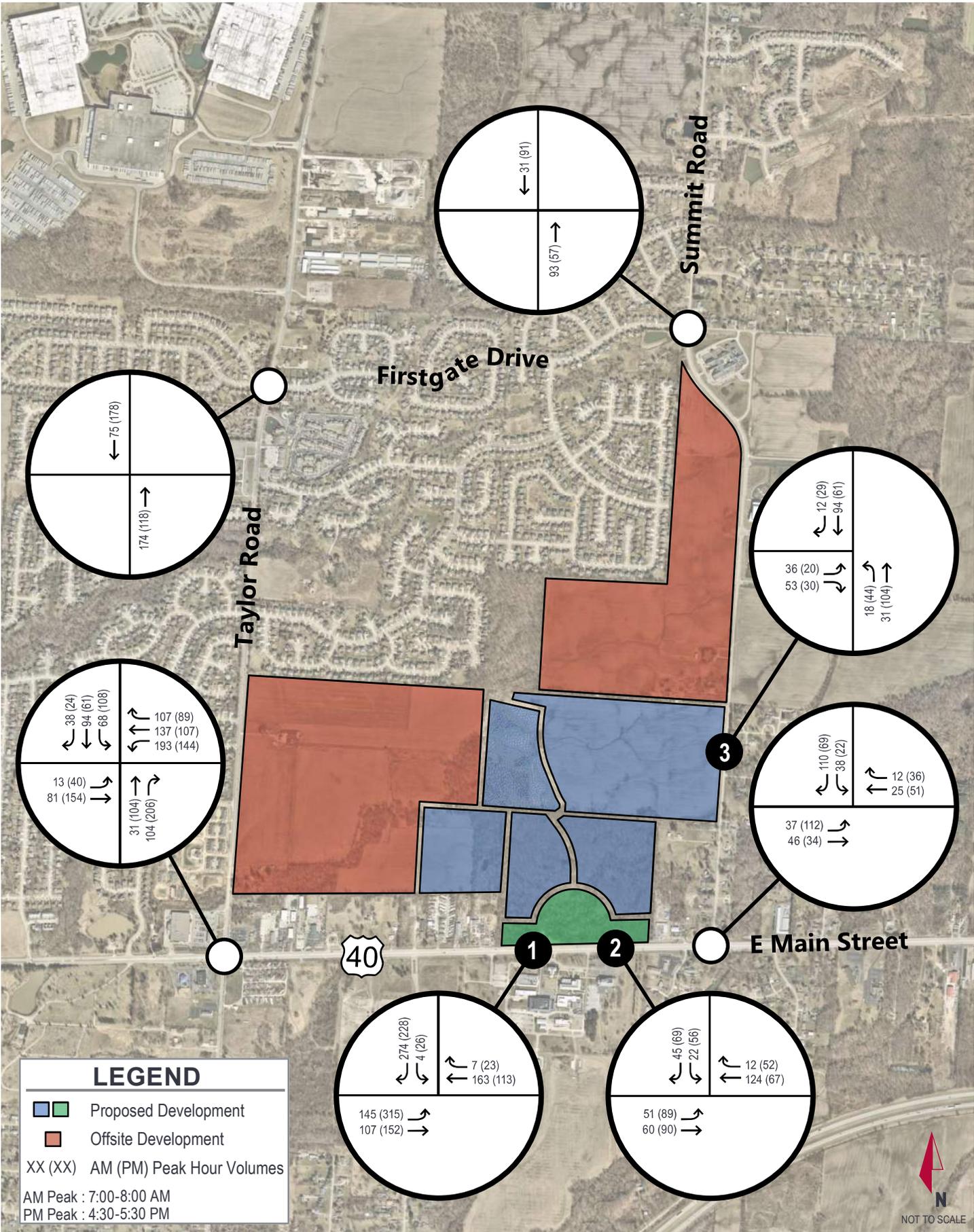


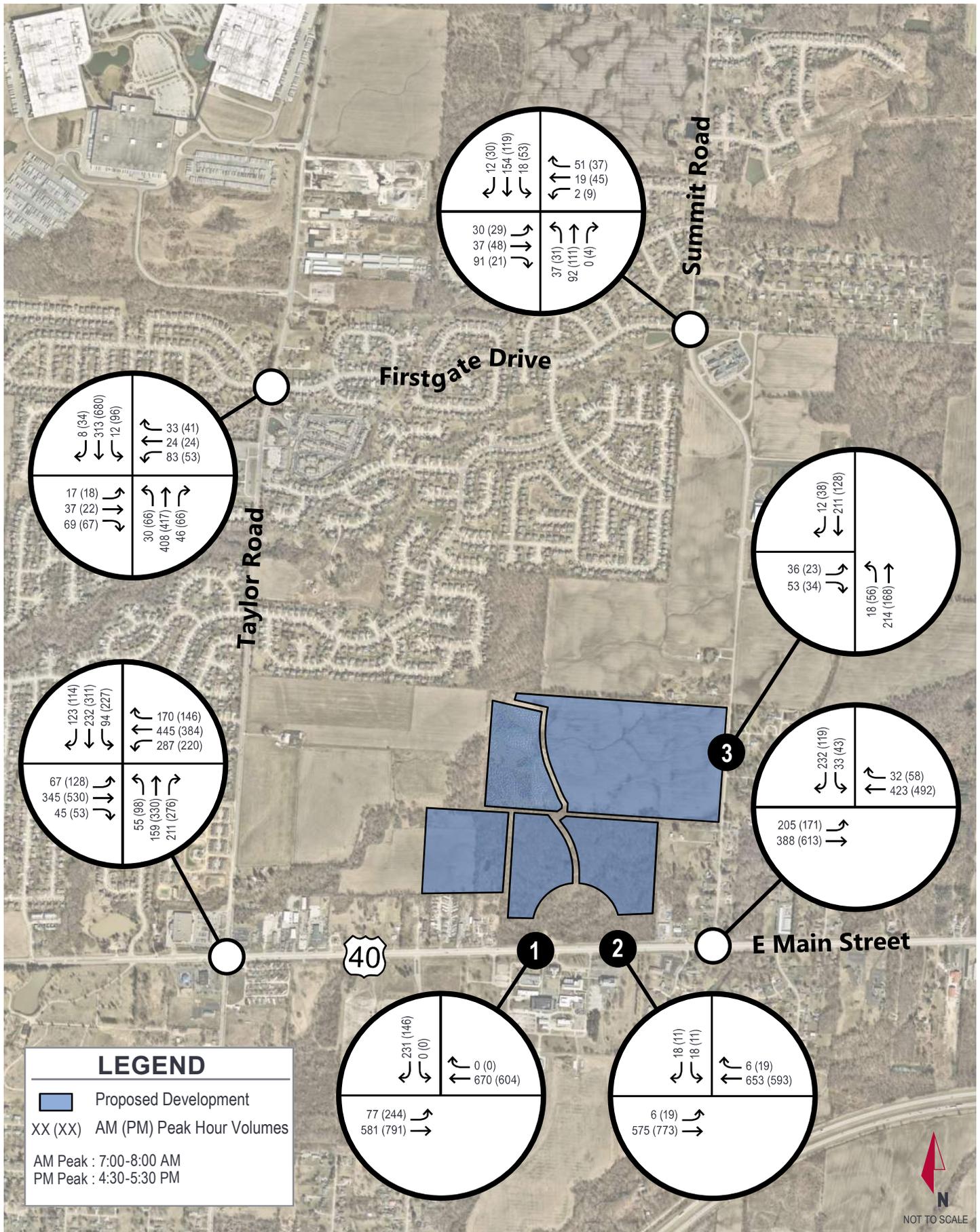


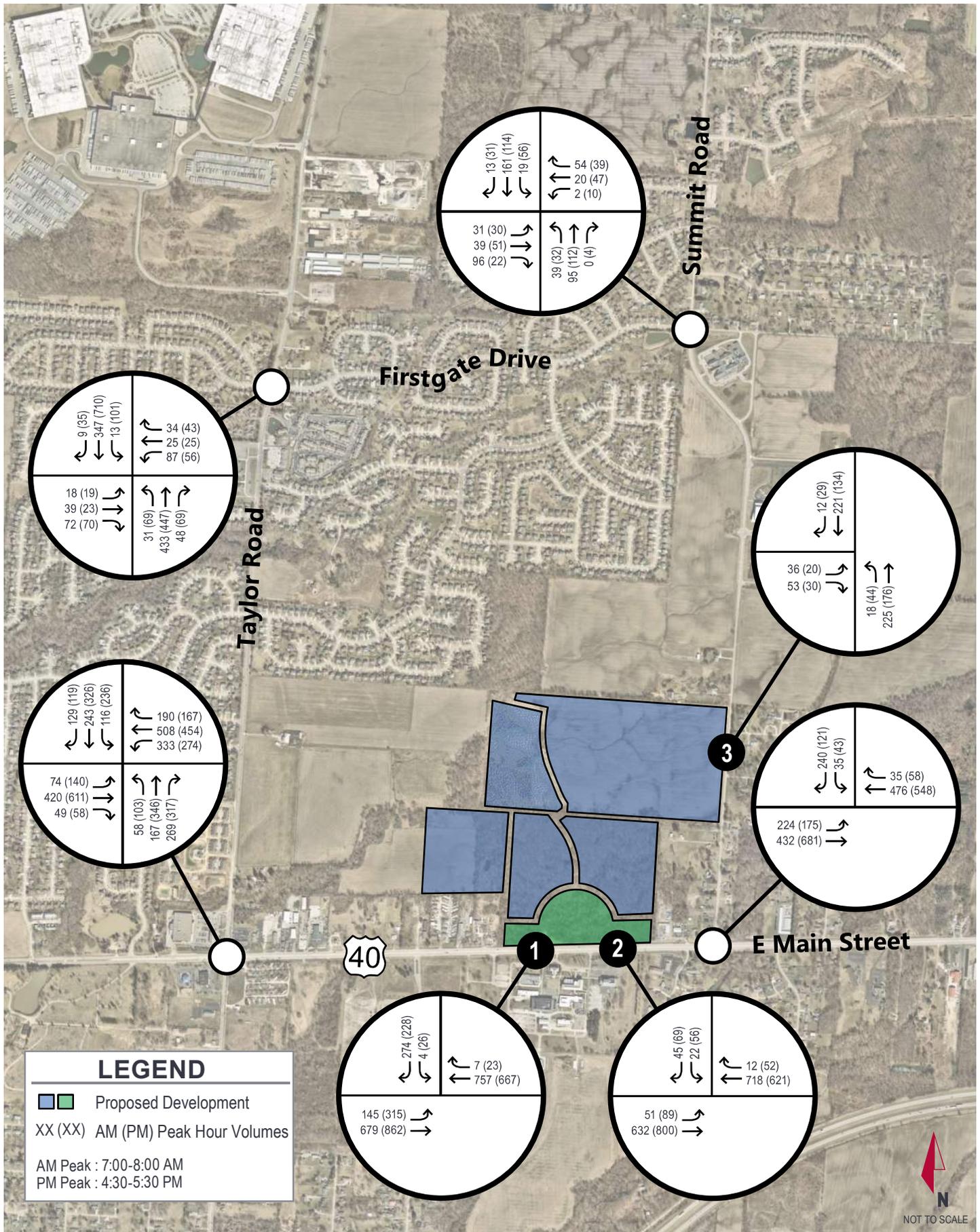


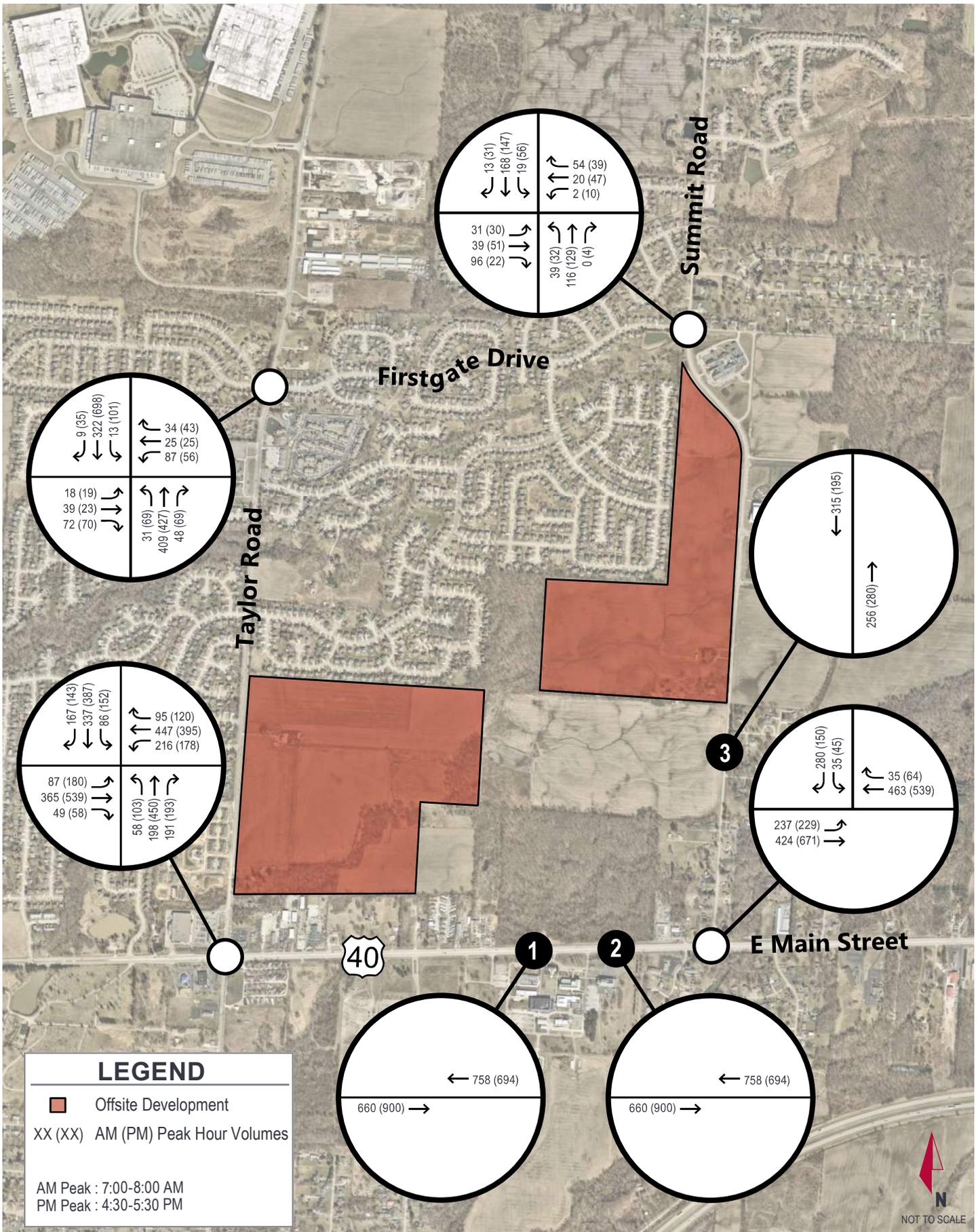


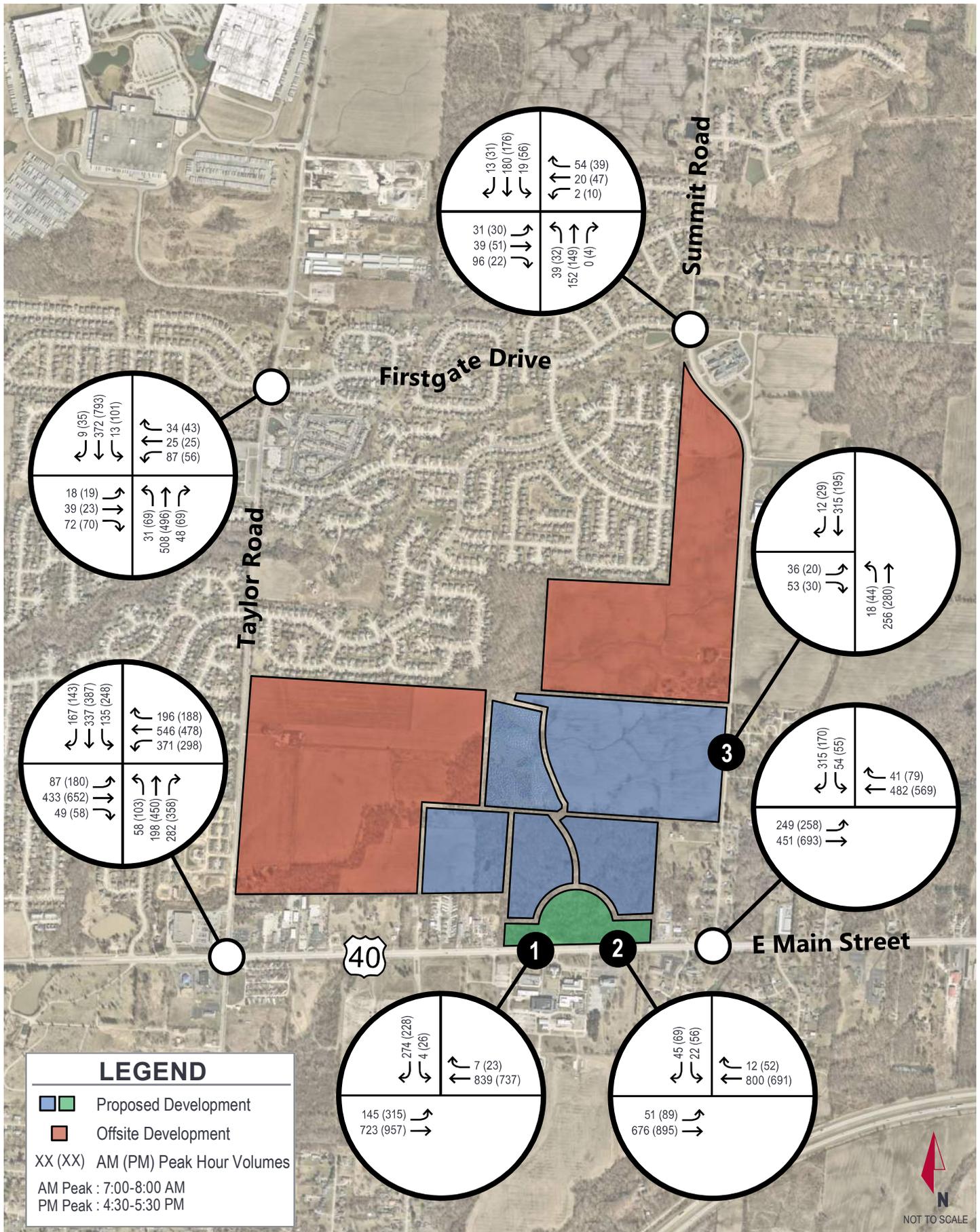












APPENDIX

A - Conceptual Site Plan

B - Traffic MOU

C - Traffic Count Data

D – COVID Adjustment Factors

E – Incremental Traffic Growth Calculations

F – MORPC Growth Rate Data

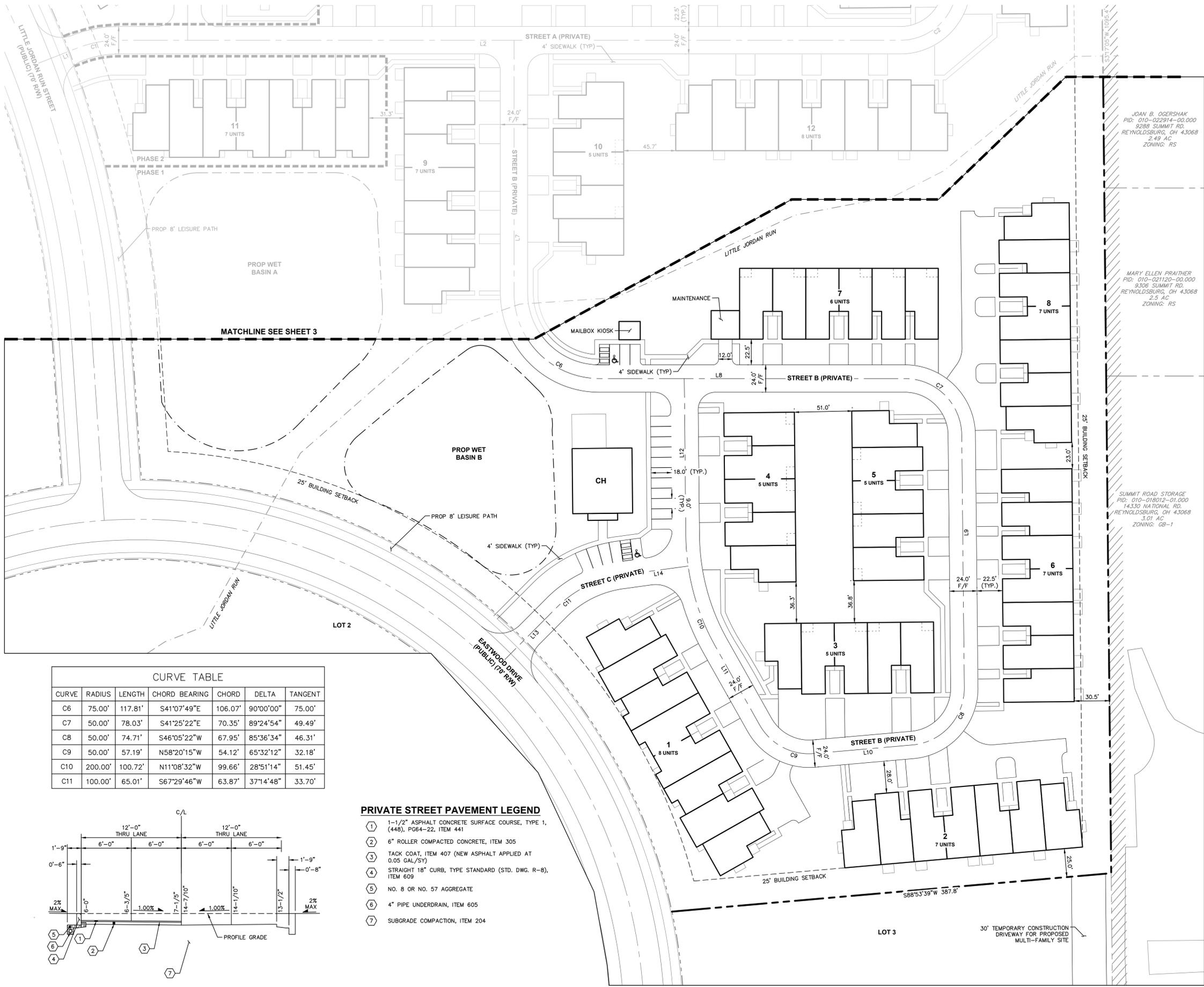
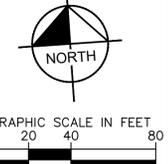
G - Data from ITE Trip Generation, 10th Edition

H – Internal Trip Calculation

I – ODOT Traffic Count Data

A – CONCEPTUAL SITE PLAN

Drawing name: K:\CIB_LDEV\190010007_mhcc-eastwood5\2 Design\CAD\Utilities\Major Site Plan\SITE PLAN.dwg Layout (2) May 13, 2021 8:36am by ToddHootman
This document, together with the concepts and designs presented herein, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.



- LEGEND**
- EXISTING SITE BOUNDARY
 - - - EXISTING PROPERTY LINE
 - - - EXISTING STREAM
 - - - PROPOSED BUILDING SETBACK
 - - - PROPOSED DRIVEWAY
 - - - PROPOSED BUILDING
 - - - PROPOSED FACE OF CURB
 - - - PROPOSED RIGHT OF WAY
 - - - PROPOSED SIDEWALK
 - - - PROPOSED CENTERLINE
 - - - PROPOSED WET BASIN
 - - - PROPOSED PHASE LINE
 - /// MUNICIPALITY BOUNDARY

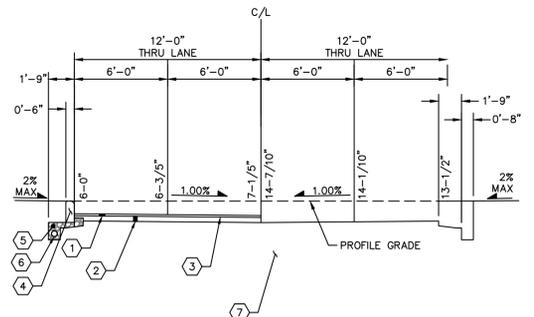
- NOTES**
- ALL DIMENSIONS REFER TO THE FACE OF CURB UNLESS OTHERWISE NOTED.
 - BUILDING DIMENSIONS ARE TO THE OUTSIDE FACE OF BUILDING UNLESS OTHERWISE NOTED.
 - REFER TO SHEET 8 FOR PARKING COUNT & BUILDING LEGEND
 - CURRENT ZONING: MSD

LINE TABLE

LINE	LENGTH	BEARING
L8	268.73	S86°07'48.77"E
L9	221.03	S31°04.81"W
L10	86.90	S88°53'38.63"W
L11	79.22	N25°34'09.27"W
L12	137.89	N31°04.81"E
L13	70.08	S48°52'22.08"W
L14	58.96	S86°07'09.85"W

CURVE TABLE

CURVE	RADIUS	LENGTH	CHORD BEARING	CHORD	DELTA	TANGENT
C6	75.00'	117.81'	S41°07'49"E	106.07'	90°00'00"	75.00'
C7	50.00'	78.03'	S41°25'22"E	70.35'	89°24'54"	49.49'
C8	50.00'	74.71'	S46°05'22"W	67.95'	85°36'34"	46.31'
C9	50.00'	57.19'	N58°20'15"W	54.12'	65°32'12"	32.18'
C10	200.00'	100.72'	N11°08'32"W	99.66'	28°51'14"	51.45'
C11	100.00'	65.01'	S67°29'46"W	63.87'	37°14'48"	33.70'



- PRIVATE STREET PAVEMENT LEGEND**
- 1-1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22, ITEM 441
 - 6" ROLLER COMPACTED CONCRETE, ITEM 305
 - TACK COAT, ITEM 407 (NEW ASPHALT APPLIED AT 0.05 GAL/SY)
 - STRAIGHT 18" CURB, TYPE STANDARD (STD. DWG. R-8), ITEM 609
 - NO. 8 OR NO. 57 AGGREGATE
 - 4" PIPE UNDERDRAIN, ITEM 605
 - SUBGRADE COMPACTION, ITEM 204

PRIVATE STREET 24' FC/FC TYPICAL SECTION
NOT TO SCALE

Kimley»Horn

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COLUMBUS, OH 43235
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SITE PLAN

EASTWOOD LOT 5
E MAIN STREET (U.S. 40)
REYNOLDSBURG, OH 43068

ORIGINAL ISSUE:
05/13/2021
KHA PROJECT NO.
190010007
SHEET NUMBER
4

OF 12

NO.	REVISIONS	DATE	BY

SCALE: 1" = 40'
DESIGNED BY: HNH
DRAWN BY: TJH
CHECKED BY: MCR

B - TRAFFIC MOU



MEMORANDUM

To: Ryan Andrews, PE EMH&T
From: Perry Morgan, PE, Kimley-Horn
Date: May 4, 2021 (Revised May 12, 2021)
Subject: Reynoldsburg Site Traffic Impact Study MOU

The purpose of this memo is to formalize the requirements for the Eastwoods Traffic Impact Study in the City of Reynoldsburg. The Foster-Seymore and Emswiler Properties are proposed to be developed as a mixed-use development on 138 acres on the north side of US-40 (Main Street) between Taylor Road and Summit Road. The location of the proposed development is shown in the Location Exhibit. The proposed development is planned to include 264 mid-rise apartments; 159 single story apartments; 80 condos; 276 single-family homes, and 12 acres for commercial uses. The site is to have three accesses to the existing public street network: two accesses with US-40 and one with Summit Road. A copy of the proposed site plan is attached.

The traffic study for this proposed development would include the following items.

Study Intersections

The study intersections are: Main Street and Taylor Road, Main Street and Street 1, Main Street and Street 2, Main Street and Summit Road, Summit Road and Street 3, Summit Road and Refugee Road, and Taylor Road and Firstgate Drive.

Traffic Volumes

Trip generation estimates will be based on the Institute of Transportation Engineers (ITE), Trip Generation – 10th Edition (2017). The trip estimates will be prepared for the AM and PM peak-hour. Trip assignment of project traffic will utilize existing traffic patterns and engineering judgment from experience within the project area.

Traffic counts will be conducted at the intersections of Main Street and Taylor Road, Main Street and Eastern Ohio Department of Agriculture, Main Street and Summit Road, Summit Road and Refugee Road, and Taylor Road and Firstgate Drive. This will include collection of vehicle classification data for consideration of heavy vehicle percentages and peak hour factors in the capacity analysis. Collected count data will be evaluated to determine whether or not adjustment factors need to be applied relative to the impact of COVID-19.

For this study, it will be assumed that the residential portion of the proposed site will be built out by 2026. A 10-year horizon (2036) will also be included that will include buildout of the commercial

portion of the proposed site, as well as the potential offsite residential development as shown in the Location Exhibit. Analysis will be completed for the following AM & PM peak hour volume scenarios: 2026 – No Build, 2026 – Build, 2036 – No Build, and 2036 – Build. No Build traffic volumes will be projected using historic count data and growth rates. MORPC will be contacted for growth rate information.

Analysis

The study intersections will be evaluated for level-of-service (LOS) and the need for turn lanes. Capacity analysis will be completed using Synchro software. The acceptable level of service for the capacity analysis is LOS D for the overall intersection; LOS D for the approaches; and LOS E for a movement. Exceptions to this will be noted in the study. Signalized intersections will be evaluated with existing signal timings as provided by the agencies.

Turn lane warrants will be completed per the guidance of section 400 of the ODOT Location & Design Manual, Volume 1. The analysis results and recommendations will be documented in a summary report.

If you have any questions, need additional information, or would like to modify these study requirements, please contact me (perry.morgan@kimley-horn.com).

Cc: Mike Reeves, Kimley-Horn
Joe Ciminello

LOCATION EXHIBIT – REYNOLDSBURG SITE



Location Info	
Location ID	345_EB
Type	I-SECTION
Functional Class	3
Located On	US-40
	US40 W OF T26 SUMMIT RD, IN REYNOLDSBURG
Direction	EB
Community	IN REYNOLDSBURG
MPO_ID	
HPMS ID	40000510
Agency	Ohio Department of Transportation

Count Data Info	
Start Date	12/2/2021
End Date	12/3/2021
Start Time	12:00 AM
End Time	12:00 AM
Direction	
Notes	odot
Count Source	3453200
File Name	
Weather	
Study	
Owner	southerntraffic
QC Status	Accepted

Interval: 15 mins					
Time	15 Min				Hourly Count
	1st	2nd	3rd	4th	
00:00 - 01:00	6	7	7	8	28
01:00 - 02:00	10	10	4	3	27
02:00 - 03:00	5	9	13	5	32
03:00 - 04:00	2	8	4	4	18
04:00 - 05:00	23	13	33	23	92
05:00 - 06:00	36	69	132	130	367
06:00 - 07:00	147	148	122	170	587
07:00 - 08:00	113	104	93	129	439
08:00 - 09:00	126	95	86	72	379
09:00 - 10:00	85	80	78	84	327
10:00 - 11:00	68	72	72	80	292
11:00 - 12:00	76	80	99	104	359
12:00 - 13:00	105	116	112	110	443
13:00 - 14:00	109	130	136	129	504
14:00 - 15:00	128	116	105	127	476
15:00 - 16:00	124	137	168	148	577
16:00 - 17:00	151	169	174	175	669
17:00 - 18:00	203	195	215	209	822
18:00 - 19:00	198	206	136	140	680
19:00 - 20:00	127	109	66	74	376
20:00 - 21:00	69	46	51	41	207
21:00 - 22:00	41	25	29	35	130
22:00 - 23:00	27	26	15	8	76
23:00 - 24:00	17	7	10	12	46
TOTAL					7953

Location Info	
Location ID	345_WB
Type	I-SECTION
Functional Class	3
Located On	US-40
	US40 W OF T26 SUMMIT RD, IN REYNOLDSBURG
Direction	WB
Community	IN REYNOLDSBURG
MPO_ID	
HPMS ID	40000510
Agency	Ohio Department of Transportation

Count Data Info	
Start Date	12/2/2021
End Date	12/3/2021
Start Time	12:00 AM
End Time	12:00 AM
Direction	
Notes	odot
Count Source	3457200
File Name	
Weather	
Study	
Owner	southerntraffic
QC Status	Accepted

Interval: 15 mins					
Time	15 Min				Hourly Count
	1st	2nd	3rd	4th	
00:00 - 01:00	12	6	2	6	26
01:00 - 02:00	8	8	12	9	37
02:00 - 03:00	16	13	13	7	49
03:00 - 04:00	20	29	13	11	73
04:00 - 05:00	38	17	32	28	115
05:00 - 06:00	34	59	163	107	363
06:00 - 07:00	165	147	141	113	566
07:00 - 08:00	139	133	140	142	554
08:00 - 09:00	138	139	104	112	493
09:00 - 10:00	105	97	83	106	391
10:00 - 11:00	121	122	108	106	457
11:00 - 12:00	102	109	114	131	456
12:00 - 13:00	116	113	91	107	427
13:00 - 14:00	120	119	100	120	459
14:00 - 15:00	180	111	179	145	615
15:00 - 16:00	111	128	133	150	522
16:00 - 17:00	161	143	167	136	607
17:00 - 18:00	140	139	253	227	759
18:00 - 19:00	204	197	121	85	607
19:00 - 20:00	60	55	47	55	217
20:00 - 21:00	45	44	41	52	182
21:00 - 22:00	91	55	35	26	207
22:00 - 23:00	42	32	21	17	112
23:00 - 24:00	19	15	13	9	56
TOTAL					8350

C - TRAFFIC COUNT DATA

Leg Direction Start Time	Eastbound SR-40 Eastbound					Westbound SR-40 Westbound					Northbound Taylor Rd Northbound					Southbound Taylor Rd Southbound					App Total	Int Total
	Left	Thru	Right	U-Turn	App Total	Left	Thru	Right	U-Turn	App Total	Left	Thru	Right	U-Turn	App Total	Left	Thru	Right	U-Turn	App Total		
2021-04-28 16:00:00	33	89	13	0	135	38	80	23	0	141	30	73	38	0	141	29	84	23	0	136	553	
2021-04-28 16:15:00	35	89	19	0	143	35	89	17	0	141	28	81	36	0	145	44	90	23	0	157	586	
2021-04-28 16:30:00	33	87	15	0	135	35	81	27	0	143	21	68	22	0	111	34	69	29	0	132	521	
2021-04-28 16:45:00	26	87	9	0	122	34	85	21	0	140	28	75	44	0	147	33	70	29	1	133	542	
2021-04-28 17:00:00	26	116	7	0	149	22	82	24	0	128	20	87	22	0	129	30	76	22	0	128	534	
2021-04-28 17:15:00	26	102	14	0	142	48	87	17	0	152	18	63	40	0	121	21	60	21	0	102	517	
2021-04-28 17:30:00	32	62	9	0	103	39	87	33	0	159	18	72	24	0	114	19	67	19	0	105	481	
2021-04-28 17:45:00	19	48	7	0	74	21	36	11	0	68	21	53	17	0	91	15	43	18	0	76	309	
Grand Total	230	680	93	0	1003	272	627	173	0	1072	184	572	243	0	999	225	559	184	1	969	4043	
% Approach	22.9%	67.8%	9.3%	0.0%	24.8%	25.4%	58.5%	16.1%	0.0%	26.5%	18.4%	57.3%	24.3%	0.0%	24.7%	23.2%	57.7%	19.0%	0.1%	24.0%		
% Total	5.7%	16.8%	2.3%	0.0%	24.8%	6.7%	15.5%	4.3%	0.0%	26.5%	4.6%	14.1%	6.0%	0.0%	24.7%	5.6%	13.8%	4.6%	0.0%	24.0%		
Lights and Motorcycles	230	671	92	0	993	270	619	173	0	1062	183	565	241	0	989	219	553	184	1	957	4001	
% Lights and Motorcycles	100.0%	98.7%	98.9%	0.0%	99.0%	99.3%	98.7%	100.0%	0.0%	99.1%	99.5%	98.8%	99.2%	0.0%	99.0%	97.3%	98.9%	100.0%	100.0%	98.8%	99.0%	
Heavy	0	9	1	0	10	2	8	0	0	10	1	7	2	0	10	6	6	0	0	12	42	
% Heavy	0.0%	1.3%	1.1%	0.0%	1.0%	0.7%	1.3%	0.0%	0.0%	0.9%	0.5%	1.2%	0.8%	0.0%	1.0%	2.7%	1.1%	0.0%	0.0%	1.2%	1.0%	

Leg Direction Start Time	Eastbound SR-40 Eastbound			Westbound SR-40 Westbound			Northbound Private Drive Northbound			App Total	Int Total		
	Thru	Right	U-Turn	App Total	Left	Thru	U-Turn	App Total	Left			Right	U-Turn
2021-04-28 16:00:00	151	0	0	151	0	155	0	155	4	13	0	17	323
2021-04-28 16:15:00	174	0	0	174	0	124	0	124	2	2	0	4	302
2021-04-28 16:30:00	163	0	0	163	0	103	0	103	4	6	0	10	276
2021-04-28 16:45:00	177	1	0	178	0	140	0	140	1	3	0	4	322
2021-04-28 17:00:00	173	0	0	173	0	145	0	145	1	0	0	1	319
2021-04-28 17:15:00	161	0	0	161	0	167	0	167	1	0	0	1	329
2021-04-28 17:30:00	99	0	0	99	0	104	0	104	0	0	0	0	203
2021-04-28 17:45:00	83	0	0	83	0	67	0	67	0	0	0	0	150
Grand Total	1181	1	0	1182	0	1005	0	1005	13	24	0	37	2224
% Approach	99.9%	0.1%	0.0%		0.0%	100.0%	0.0%		35.1%	64.9%	0.0%		
% Total	53.1%	0.0%	0.0%	53.1%	0.0%	45.2%	0.0%	45.2%	0.6%	1.1%	0.0%	1.7%	
Lights and Motorcycles	1167	0	0	1167	0	995	0	995	13	23	0	36	2198
% Lights and Motorcycles	98.8%	0.0%	0.0%	98.7%	0.0%	99.0%	0.0%	99.0%	100.0%	95.8%	0.0%	97.3%	98.8%
Heavy	14	1	0	15	0	10	0	10	0	1	0	1	26
% Heavy	1.2%	100.0%	0.0%	1.3%	0.0%	1.0%	0.0%	1.0%	0.0%	4.2%	0.0%	2.7%	1.2%

Leg Direction Start Time	Eastbound SR-40 Eastbound				Westbound SR-40 Westbound				Southbound Summit Rd Southbound				App Total	Int Total
	Left	Thru	U-Turn	App Total	Thru	Right	U-Turn	App Total	Left	Right	U-Turn	App Total		
2021-04-28 16:00:00	21	122	0	143	103	6	0	109	2	24	0	26	278	
2021-04-28 16:15:00	15	138	0	153	102	5	0	107	4	15	0	19	279	
2021-04-28 16:30:00	22	135	1	158	90	9	1	100	4	19	0	23	281	
2021-04-28 16:45:00	29	107	0	136	94	5	0	99	8	15	0	23	258	
2021-04-28 17:00:00	37	137	0	174	123	10	0	133	10	26	0	36	343	
2021-04-28 17:15:00	27	142	1	170	102	10	0	112	6	25	0	31	313	
2021-04-28 17:30:00	27	144	0	171	93	8	0	101	9	6	0	15	287	
2021-04-28 17:45:00	33	158	0	191	114	13	0	127	11	23	0	34	352	
Grand Total	211	1083	2	1296	821	66	1	888	54	153	0	207	2391	
% Approach	16.3%	83.6%	0.2%		92.5%	7.4%	0.1%		26.1%	73.9%	0.0%			
% Total	8.8%	45.3%	0.1%	54.2%	34.3%	2.8%	0.0%	37.1%	2.3%	6.4%	0.0%	8.7%		
Lights and Motorcycles	207	1049	1	1257	792	64	1	857	54	151	0	205	2319	
% Lights and Motorcycles	98.1%	96.9%	50.0%	97.0%	96.5%	97.0%	100.0%	96.5%	100.0%	98.7%	0.0%	99.0%	97.0%	
Heavy	4	34	1	39	29	2	0	31	0	2	0	2	72	
% Heavy	1.9%	3.1%	50.0%	3.0%	3.5%	3.0%	0.0%	3.5%	0.0%	1.3%	0.0%	1.0%	3.0%	

Leg Direction Start Time	Eastbound SR-40 Eastbound					Westbound SR-40 Westbound					Northbound Taylor Rd Northbound					Southbound Taylor Rd Southbound					App Total	Int Total
	Left	Thru	Right	U-Turn	App Total	Left	Thru	Right	U-Turn	App Total	Left	Thru	Right	U-Turn	App Total	Left	Thru	Right	U-Turn	App Total		
2021-04-29 07:00:00	18	60	15	0	93	30	80	14	0	124	15	51	28	0	94	13	60	30	0	103	414	
2021-04-29 07:15:00	12	38	5	0	55	16	46	10	0	72	17	32	19	0	68	11	36	27	0	74	269	
2021-04-29 07:30:00	14	41	7	0	62	25	42	13	0	80	8	30	17	0	55	7	65	22	0	94	291	
2021-04-29 07:45:00	14	43	12	0	69	19	39	8	0	66	9	28	34	0	71	7	44	30	0	81	287	
2021-04-29 08:00:00	13	39	9	0	61	21	41	5	0	67	4	45	22	0	71	6	35	12	0	53	252	
2021-04-29 08:15:00	15	62	12	0	89	23	51	10	0	84	15	33	22	0	70	12	51	13	0	76	319	
2021-04-29 08:30:00	5	52	11	0	68	19	69	6	0	94	11	48	20	0	79	13	47	18	0	78	319	
2021-04-29 08:45:00	12	35	4	0	51	30	52	12	0	94	5	43	21	0	69	10	57	23	0	90	304	
Grand Total	103	370	75	0	548	183	420	78	0	681	84	310	183	0	577	79	395	175	0	649	2455	
% Approach	18.8%	67.5%	13.7%	0.0%	22.3%	26.9%	61.7%	11.5%	0.0%	27.7%	14.6%	53.7%	31.7%	0.0%	23.5%	12.2%	60.9%	27.0%	0.0%	26.4%		
% Total	4.2%	15.1%	3.1%	0.0%	22.3%	7.5%	17.1%	3.2%	0.0%	27.7%	3.4%	12.6%	7.5%	0.0%	23.5%	3.2%	16.1%	7.1%	0.0%	26.4%		
Lights and Motorcycles	92	354	74	0	520	158	390	74	0	622	79	281	169	0	529	75	373	168	0	616	2287	
% Lights and Motorcycles	89.3%	95.7%	98.7%	0.0%	94.9%	86.3%	92.9%	94.9%	0.0%	91.3%	94.0%	90.6%	92.3%	0.0%	91.7%	94.9%	94.4%	96.0%	0.0%	94.9%	93.2%	
Heavy	11	16	1	0	28	25	30	4	0	59	5	29	14	0	48	4	22	7	0	33	168	
% Heavy	10.7%	4.3%	1.3%	0.0%	5.1%	13.7%	7.1%	5.1%	0.0%	8.7%	6.0%	9.4%	7.7%	0.0%	8.3%	5.1%	5.6%	4.0%	0.0%	5.1%	6.8%	

Leg Direction Start Time	Eastbound SR-40 Eastbound			Westbound SR-40 Westbound				Northbound Private Drive Northbound				App Total	Int Total
	Thru	Right	U-Turn	App Total	Left	Thru	U-Turn	App Total	Left	Right	U-Turn		
2021-04-29 07:00:00	86		4	90	5	120	0	125	1	2	0	3	218
2021-04-29 07:15:00	56		3	59	3	65	0	68	0	0	0	0	127
2021-04-29 07:30:00	49		3	52	0	88	0	88	1	0	0	1	141
2021-04-29 07:45:00	62		4	66	1	67	0	68	0	0	0	0	134
2021-04-29 08:00:00	61		1	62	2	66	0	68	1	0	0	1	131
2021-04-29 08:15:00	95		2	97	0	81	0	81	1	1	0	2	180
2021-04-29 08:30:00	74		0	74	0	91	0	91	1	1	0	2	167
2021-04-29 08:45:00	58		2	60	0	78	0	78	2	0	0	2	140
Grand Total	541	19	0	560	11	656	0	667	7	4	0	11	1238
% Approach	96.6%	3.4%	0.0%		1.6%	98.4%	0.0%		63.6%	36.4%	0.0%		
% Total	43.7%	1.5%	0.0%	45.2%	0.9%	53.0%	0.0%	53.9%	0.6%	0.3%	0.0%	0.9%	
Lights and Motorcycles	511	19	0	530	11	603	0	614	6	3	0	9	1153
% Lights and Motorcycles	94.5%	100.0%	0.0%	94.6%	100.0%	91.9%	0.0%	92.1%	85.7%	75.0%	0.0%	81.8%	93.1%
Heavy	30	0	0	30	0	53	0	53	1	1	0	2	85
% Heavy	5.5%	0.0%	0.0%	5.4%	0.0%	8.1%	0.0%	7.9%	14.3%	25.0%	0.0%	18.2%	6.9%

Leg Direction Start Time	Eastbound SR-40 Eastbound				Westbound SR-40 Westbound				Southbound Summit Rd Southbound				App Total	Int Total
	Left	Thru	U-Turn	App Total	Thru	Right	U-Turn	App Total	Left	Right	U-Turn	App Total		
2021-04-29 07:00:00	53	79	0	132	61	10	0	71	3	55	0	58	261	
2021-04-29 07:15:00	49	109	0	158	77	6	0	83	5	54	0	59	300	
2021-04-29 07:30:00	20	73	0	93	103	5	0	108	3	34	0	37	238	
2021-04-29 07:45:00	45	59	0	104	120	2	0	122	3	31	0	34	260	
2021-04-29 08:00:00	33	57	0	90	54	3	0	57	2	68	0	70	217	
2021-04-29 08:15:00	13	43	0	56	51	2	0	53	4	15	0	19	128	
2021-04-29 08:30:00	9	39	0	48	71	4	0	75	2	19	0	21	144	
2021-04-29 08:45:00	10	52	0	62	56	3	0	59	2	13	0	15	136	
Grand Total	232	511	0	743	593	35	0	628	24	289	0	313	1684	
% Approach	31.2%	68.8%	0.0%		94.4%	5.6%	0.0%		7.7%	92.3%	0.0%			
% Total	13.8%	30.3%	0.0%	44.1%	35.2%	2.1%	0.0%	37.3%	1.4%	17.2%	0.0%	18.6%		
Lights and Motorcycles	219	482	0	701	540	33	0	573	23	259	0	282	1556	
% Lights and Motorcycles	94.4%	94.3%	0.0%	94.3%	91.1%	94.3%	0.0%	91.2%	95.8%	89.6%	0.0%	90.1%	92.4%	
Heavy	13	29	0	42	53	2	0	55	1	30	0	31	128	
% Heavy	5.6%	5.7%	0.0%	5.7%	8.9%	5.7%	0.0%	8.8%	4.2%	10.4%	0.0%	9.9%	7.6%	

Leg Direction Start Time	Southbound Taylor Rd					Westbound Firstgate Dr					Northbound Taylor Rd					Eastbound Firstgate Dr					App Total	Int Total
	Right	Thru	Left	U-Turn	App Total	Right	Thru	Left	U-Turn	App Total	Right	Thru	Left	U-Turn	App Total	Right	Thru	Left	U-Turn	App Total		
2021-05-25 07:00:00	1	71	4	0	76	8	4	15	0	27	9	50	3	0	62	8	7	3	0	18	183	
2021-05-25 07:15:00	3	62	1	0	66	6	1	13	0	20	5	80	3	0	88	10	7	6	0	23	197	
2021-05-25 07:30:00	1	45	3	0	49	7	11	23	0	41	7	80	6	0	93	19	4	5	0	28	211	
2021-05-25 07:45:00	2	73	3	0	78	8	5	23	0	36	20	73	14	0	107	24	15	1	0	40	261	
2021-05-25 08:00:00	2	51	4	0	57	16	10	12	0	38	21	77	15	0	113	11	9	5	0	25	233	
2021-05-25 08:15:00	0	52	1	0	53	24	6	12	0	42	6	71	5	0	82	4	3	8	0	15	192	
2021-05-25 08:30:00	3	55	2	0	60	13	3	6	0	22	6	76	3	0	85	4	3	5	0	12	179	
2021-05-25 08:45:00	4	59	4	0	67	9	7	11	0	27	8	64	11	0	83	10	3	3	0	16	193	
2021-05-25 16:00:00	7	107	15	0	129	10	6	12	0	28	12	81	11	0	104	12	6	4	0	22	283	
2021-05-25 16:15:00	8	121	11	0	140	9	7	14	0	30	20	82	8	0	110	14	12	4	0	30	310	
2021-05-25 16:30:00	6	126	19	0	151	6	6	13	0	25	13	71	15	0	99	16	3	4	0	23	298	
2021-05-25 16:45:00	9	141	17	0	167	8	5	11	0	24	17	63	12	0	92	13	8	7	0	28	311	
2021-05-25 17:00:00	5	127	22	0	154	11	4	7	0	22	13	97	19	0	129	15	4	2	0	21	326	
2021-05-25 17:15:00	10	126	27	0	163	11	6	16	0	33	15	89	12	0	116	15	4	3	0	22	334	
2021-05-25 17:30:00	6	117	18	0	141	8	5	13	0	26	16	87	11	0	114	11	7	4	0	22	303	
2021-05-25 17:45:00	7	109	17	0	133	6	4	13	0	23	15	94	12	0	121	14	6	7	0	27	304	
Grand Total	74	1442	168	0	1684	160	90	214	0	464	203	1235	160	0	1598	200	101	71	0	372	4118	
% Approach	4.4%	85.6%	10.0%	0.0%		34.5%	19.4%	46.1%	0.0%		12.7%	77.3%	10.0%	0.0%		53.8%	27.2%	19.1%	0.0%			
% Total	1.8%	35.0%	4.1%	0.0%	40.9%	3.9%	2.2%	5.2%	0.0%	11.3%	4.9%	30.0%	3.9%	0.0%	38.8%	4.9%	2.5%	1.7%	0.0%	9.0%		
Lights and Motorcycles	73	1327	165	0	1565	157	83	203	0	443	193	1126	149	0	1468	195	97	68	0	360	3836	
% Lights and Motorcycles	98.6%	92.0%	98.2%	0.0%	92.9%	98.1%	92.2%	94.9%	0.0%	95.5%	95.1%	91.2%	93.1%	0.0%	91.9%	97.5%	96.0%	95.8%	0.0%	96.8%	93.2%	
Heavy	1	115	3	0	119	3	7	11	0	21	10	109	11	0	130	5	4	3	0	12	282	
% Heavy	1.4%	8.0%	1.8%	0.0%	7.1%	1.9%	7.8%	5.1%	0.0%	4.5%	4.9%	8.8%	6.9%	0.0%	8.1%	2.5%	4.0%	4.2%	0.0%	3.2%	6.8%	

Leg Direction Start Time	Southbound Summit Rd					Westbound Firstgate Dr					Northbound Summit Rd					Eastbound Firstgate Dr					App Total	Int Total
	Right	Thru	Left	U-Turn	App Total	Right	Thru	Left	U-Turn	App Total	Right	Thru	Left	U-Turn	App Total	Right	Thru	Left	U-Turn	App Total		
2021-05-25 07:00:00	1	29	2	0	32	9	4	0	0	13	0	8	9	0	17	16	15	4	0	35	97	
2021-05-25 07:15:00	4	33	9	0	46	8	5	2	0	15	0	22	10	0	32	24	4	7	0	35	128	
2021-05-25 07:30:00	2	26	1	0	29	19	5	0	0	24	0	8	5	0	13	8	8	6	0	22	88	
2021-05-25 07:45:00	4	38	4	0	46	9	3	0	0	12	0	12	9	0	21	33	6	9	0	48	127	
2021-05-25 08:00:00	2	15	7	0	24	12	4	0	0	16	2	19	31	0	52	26	11	8	0	45	137	
2021-05-25 08:15:00	2	14	3	0	19	19	11	2	0	32	0	13	7	0	20	20	7	4	0	31	102	
2021-05-25 08:30:00	1	13	5	0	19	14	3	1	0	18	0	14	11	0	25	10	4	7	0	21	83	
2021-05-25 08:45:00	4	11	6	0	21	15	2	2	0	19	0	13	1	0	14	5	10	7	0	22	76	
2021-05-25 16:00:00	10	9	19	0	38	5	6	0	0	11	1	14	4	0	19	4	10	4	0	18	86	
2021-05-25 16:15:00	6	18	11	0	35	7	6	1	0	14	0	23	4	0	27	2	10	6	0	18	94	
2021-05-25 16:30:00	5	13	11	0	29	11	14	3	0	28	1	15	6	0	22	9	8	6	0	23	102	
2021-05-25 16:45:00	8	11	11	0	30	6	11	1	0	18	1	22	3	0	26	0	11	7	0	18	92	
2021-05-25 17:00:00	5	20	13	0	38	11	10	2	0	23	1	22	9	0	32	5	10	8	0	23	116	
2021-05-25 17:15:00	8	28	12	0	48	5	5	2	0	12	1	19	9	0	29	4	14	4	0	22	111	
2021-05-25 17:30:00	7	32	16	0	55	5	14	1	0	20	0	14	7	0	21	5	9	7	0	21	117	
2021-05-25 17:45:00	5	29	18	0	52	6	7	0	0	13	0	12	5	0	17	4	8	5	0	17	99	
Grand Total	74	339	148	0	561	161	110	17	0	288	7	250	130	0	387	175	145	99	0	419	1655	
% Approach	13.2%	60.4%	26.4%	0.0%		55.9%	38.2%	5.9%	0.0%		1.8%	64.6%	33.6%	0.0%		41.8%	34.6%	23.6%	0.0%			
% Total	4.5%	20.5%	8.9%	0.0%	33.9%	9.7%	6.6%	1.0%	0.0%	17.4%	0.4%	15.1%	7.9%	0.0%	23.4%	10.6%	8.8%	6.0%	0.0%	25.3%		
Lights and Motorcycles	72	327	144	0	543	159	110	17	0	286	6	241	119	0	366	170	143	94	0	407	1602	
% Lights and Motorcycles	97.3%	96.5%	97.3%	0.0%	96.8%	98.8%	100.0%	100.0%	0.0%	99.3%	85.7%	96.4%	91.5%	0.0%	94.6%	97.1%	98.6%	94.9%	0.0%	97.1%	96.8%	
Heavy	2	12	4	0	18	2	0	0	0	2	1	9	11	0	21	5	2	5	0	12	53	
% Heavy	2.7%	3.5%	2.7%	0.0%	3.2%	1.2%	0.0%	0.0%	0.0%	0.7%	14.3%	3.6%	8.5%	0.0%	5.4%	2.9%	1.4%	5.1%	0.0%	2.9%	3.2%	

D – COVID ADJUSTMENT FACTORS

Statewide Traffic Analysis

The analysis in this report is from permanent traffic counters at ODOT and compares average day of the week by month in 2019 to specific days in 2020
Data refreshes daily at 5:00 AM

Total Percent Change

-3%

Total

-6%

Passenger

10%

Truck



District
 Select all
 5

Date

Functional Class
 Select all
 1
 2

County
 Select all
 Guernsey
 Licking
 MUSKINGUM

MS2 ID	Station Alias	County	ODOT District	Month	Day	DAY_OF_THE_WEEK	2020 Total	2019 Total Average	Total % Change	2020 Passenger	2019 Passenger Average	PA % Change	2020 Truck	2019 Truck Average	Truck % Change
30645	707	Licking	5	May	25	Tuesday	63368	65035	-3%	46604	49812	-6%	16764	15223	10%

E – INCREMENTAL TRAFFIC GROWTH CALCULATIONS

INCREMENTAL TRAFFIC GROWTH CALCULATIONS

			Offsite Only				Total (Site + Offsite) Traffic Less Pass-By		Horizon Year (2036) No Build + Offsite		Horizon Year (2036) Build + Offsite		
			2036 Residential Trips		Total OffSite Traffic		AM	PM	AM	PM	AM	PM	
			% IN	% OUT	AM	PM	AM	PM	AM	PM	AM	PM	
1	US-40 (Main Street) & Taylor Road	US-40 (Main Street)	EBL	10%		13	40	13	40	87	180	87	180
			EBT	10%		13	41	81	154	365	539	433	652
			EBR			0	0	0	0	49	58	49	58
			WBL		10%	38	24	193	144	216	178	371	298
			WBT		10%	38	24	137	107	447	395	546	478
			WBR	5%		6	21	107	89	95	120	196	188
		Taylor Road	NBL			0	0	0	0	58	103	58	103
			NBT	25%		31	104	31	104	198	450	198	450
			NBR	10%		13	41	104	206	191	193	282	358
			SBL		5%	19	12	68	108	86	152	135	248
			SBT		25%	94	61	94	61	337	387	337	387
			SBR		10%	38	24	38	24	167	143	167	143
2	US-40 (Main Street) & Summit Road	US-40 (Main Street)	EBL	20%		25	83	37	112	237	229	249	258
			EBT		5%	19	12	46	34	424	671	451	693
			EBR			0	0	0	0	0	0	0	0
			WBL			0	0	0	0	0	0	0	0
			WBT	5%		6	21	25	51	463	539	482	569
			WBR	5%		6	21	12	36	35	64	41	79
		Summit Road	NBL			0	0	0	0	0	0	0	0
			NBT			0	0	0	0	0	0	0	0
			NBR			0	0	0	0	0	0	0	0
			SBL		5%	19	12	38	22	35	45	54	55
			SBT			0	0	0	0	0	0	0	0
			SBR		20%	75	49	110	69	280	150	315	170
3	Summit Road & Refugee Road/Firstgate Drive	Firstgate Drive	EBL			0	0	0	0	31	30	31	30
			EBT			0	0	0	0	39	51	39	51
			EBR			0	0	0	0	96	22	96	22
		Refugee Road	WBL			0	0	0	0	2	10	2	10
			WBT			0	0	0	0	20	47	20	47
			WBR			0	0	0	0	54	39	54	39
		Summit Road	NBL			0	0	0	0	39	32	39	32
			NBT		15%	57	37	93	57	116	129	152	149
			NBR			0	0	0	0	0	4	0	4
			SBL			0	0	0	0	19	56	19	56
			SBT		15%	19	62	31	91	168	147	180	176
			SBR			0	0	0	0	13	31	13	31
4	Taylor Road & Firstgate Drive	Firstgate Drive	EBL			0	0	0	0	18	19	18	19
			EBT			0	0	0	0	39	23	39	23
			EBR			0	0	0	0	72	70	72	70
			WBL			0	0	0	0	87	56	87	56
			WBT			0	0	0	0	25	25	25	25
			WBR			0	0	0	0	34	43	34	43
		Taylor Road	NBL			0	0	0	0	31	69	31	69
			NBT		20%	75	49	174	118	409	427	508	496
			NBR			0	0	0	0	48	69	48	69
			SBL			0	0	0	0	13	101	13	101
			SBT		20%	25	83	75	178	322	698	372	793
			SBR			0	0	0	0	9	35	9	35
5	US-40 (Main Street) & Site Access #1	US-40 (Main Street)	EBL			0	0	145	315	0	0	145	315
			EBT	20%	5%	44	95	107	152	660	900	723	957
			EBR			0	0	0	0	0	0	0	0
			WBL			0	0	0	0	0	0	0	0
			WBT	5%	20%	82	70	163	113	758	694	839	737
			WBR			0	0	7	23	0	0	7	23
		Site Access #1	NBL			0	0	0	0	0	0	0	0
			NBT			0	0	0	0	0	0	0	0
			NBR			0	0	0	0	0	0	0	0
			SBL			0	0	4	26	0	0	4	26
			SBT			0	0	0	0	0	0	0	0
			SBR			0	0	274	228	0	0	274	228
6	US-40 (Main Street) & Site Access #2	US-40 (Main Street)	EBL			0	0	51	89	0	0	51	89
			EBT	20%	5%	44	95	60	90	660	900	676	895
			EBR			0	0	0	0	0	0	0	0
			WBL			0	0	0	0	0	0	0	0
			WBT	5%	20%	82	70	124	67	758	694	800	691
			WBR			0	0	12	52	0	0	12	52
		Site Access #2	NBL			0	0	0	0	0	0	0	0
			NBT			0	0	0	0	0	0	0	0
			NBR			0	0	0	0	0	0	0	0
			SBL			0	0	22	56	0	0	22	56
			SBT			0	0	0	0	0	0	0	0
			SBR			0	0	45	69	0	0	45	69
7	Summit Road & Site Access #3	Site Access #3	EBL			0	0	36	20	0	0	36	20
			EBT			0	0	0	0	0	0	0	0
			EBR			0	0	53	30	0	0	53	30
			WBL			0	0	0	0	0	0	0	0
			WBT			0	0	0	0	0	0	0	0
			WBR			0	0	0	0	0	0	0	0
		Summit Road	NBL			0	0	18	44	0	0	18	44
			NBT	25%		31	104	31	104	256	280	256	280
			NBR			0	0	0	0	0	0	0	0
			SBL			0	0	0	0	0	0	0	0
			SBT		25%	94	61	94	61	315	195	315	195
			SBR			0	0	12	29	0	0	12	29

F – MORPC GROWH RATE DATA

Campbell, Jacob

From: Hwashik Jang <hjang@morpc.org>
Sent: Friday, July 2, 2021 2:25 PM
To: Campbell, Jacob
Cc: Morgan, Perry; Nick Gill; Zhuojun Jiang
Subject: RE: Reynoldsburg OH Growth Rate

Follow Up Flag: Follow up
Flag Status: Completed

Categories: External

Jacob,

We have completed processing growth rates for your traffic study intersections. Please use linear annual growth rates as summarized below.

<u>Location</u>	<u>Linear Annual Growth Rate</u>
US 40 e/o Taylor Rd	1.00%
Taylor Rd n/o US 40	0.50%
US 40 w/o Taylor Rd	1.00%
Taylor Rd s/o US 40	0.50%
US 40 e/o Private Dr	1.00%
US 40 w/o Private Dr	1.00%
Private Dr s/o US 40	0.50%
US 40 e/o Summit Rd	1.00%
Summit Rd n/o US 40	0.50%
US 40 w/o Summit Rd	1.00%

Note: The above rate was derived based on planning level analysis by using MORPC's regional travel demand model.

If you have any questions, please let me know.

Thanks,

HWASHIK JANG

Senior Planner, Transportation & Infrastructure Development | Mid-Ohio Regional Planning Commission

T: 614.233.4145 | hjang@morpc.org

111 Liberty Street, Suite 100 | Columbus, OH 43215



Given increasing concerns and rapid changing conditions due to COVID-19, MORPC offices are currently closed to the public. In taking such steps, we are protecting the health and safety of our staff, members and the general public. During

G - DATA FROM ITE TRIP GENERATION, 10TH EDITION

Land Use: 210

Single-Family Detached Housing

Description

Single-family detached housing includes all single-family detached homes on individual lots. A typical site surveyed is a suburban subdivision.

Additional Data

The number of vehicles and residents had a high correlation with average weekday vehicle trip ends. The use of these variables was limited, however, because the number of vehicles and residents was often difficult to obtain or predict. The number of dwelling units was generally used as the independent variable of choice because it was usually readily available, easy to project, and had a high correlation with average weekday vehicle trip ends.

This land use included data from a wide variety of units with different sizes, price ranges, locations, and ages. Consequently, there was a wide variation in trips generated within this category. Other factors, such as geographic location and type of adjacent and nearby development, may also have had an effect on the site trip generation.

Single-family detached units had the highest trip generation rate per dwelling unit of all residential uses because they were the largest units in size and had more residents and more vehicles per unit than other residential land uses; they were generally located farther away from shopping centers, employment areas, and other trip attractors than other residential land uses; and they generally had fewer alternative modes of transportation available because they were typically not as concentrated as other residential land uses.

Time-of-day distribution data for this land use are presented in Appendix A. For the six general urban/suburban sites with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 7:15 and 8:15 a.m. and 4:00 and 5:00 p.m., respectively. For the two sites with Saturday data, the overall highest vehicle volume was counted between 3:00 and 4:00 p.m. For the one site with Sunday data, the overall highest vehicle volume was counted between 10:15 and 11:15 a.m.

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in California, Connecticut, Delaware, Illinois, Indiana, Maryland, Minnesota, Montana, New Jersey, North Carolina, Ohio, Oregon, Pennsylvania, South Carolina, South Dakota, Tennessee, Vermont, and Virginia.

Source Numbers

100, 105, 114, 126, 157, 167, 177, 197, 207, 211, 217, 267, 275, 293, 300, 319, 320, 356, 357, 367, 384, 387, 407, 435, 522, 550, 552, 579, 598, 601, 603, 614, 637, 711, 716, 720, 728, 735, 868, 903, 925, 936

Single-Family Detached Housing (210)

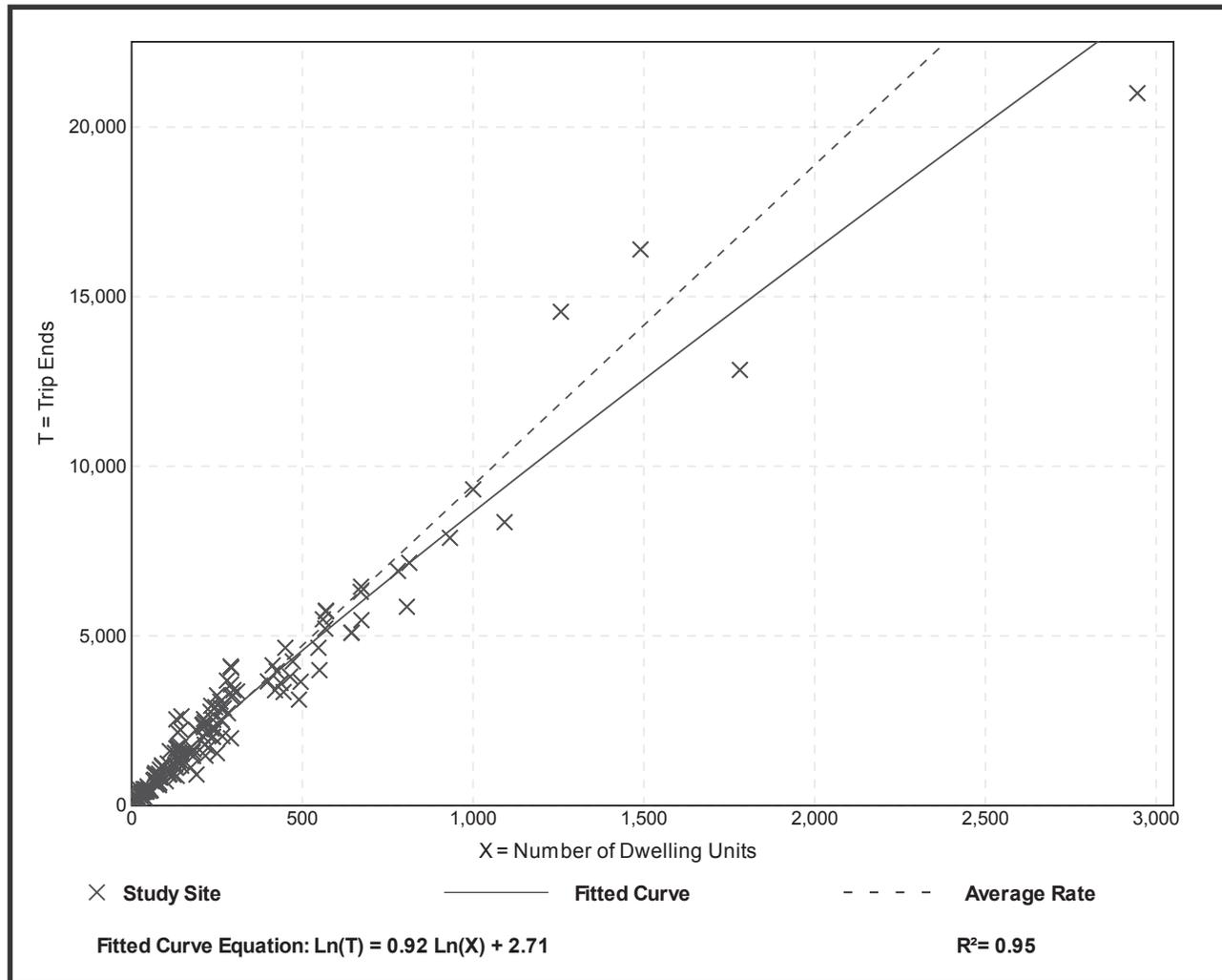
Vehicle Trip Ends vs: Dwelling Units
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 159
Avg. Num. of Dwelling Units: 264
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
9.44	4.81 - 19.39	2.10

Data Plot and Equation



Single-Family Detached Housing (210)

Vehicle Trip Ends vs: Dwelling Units

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

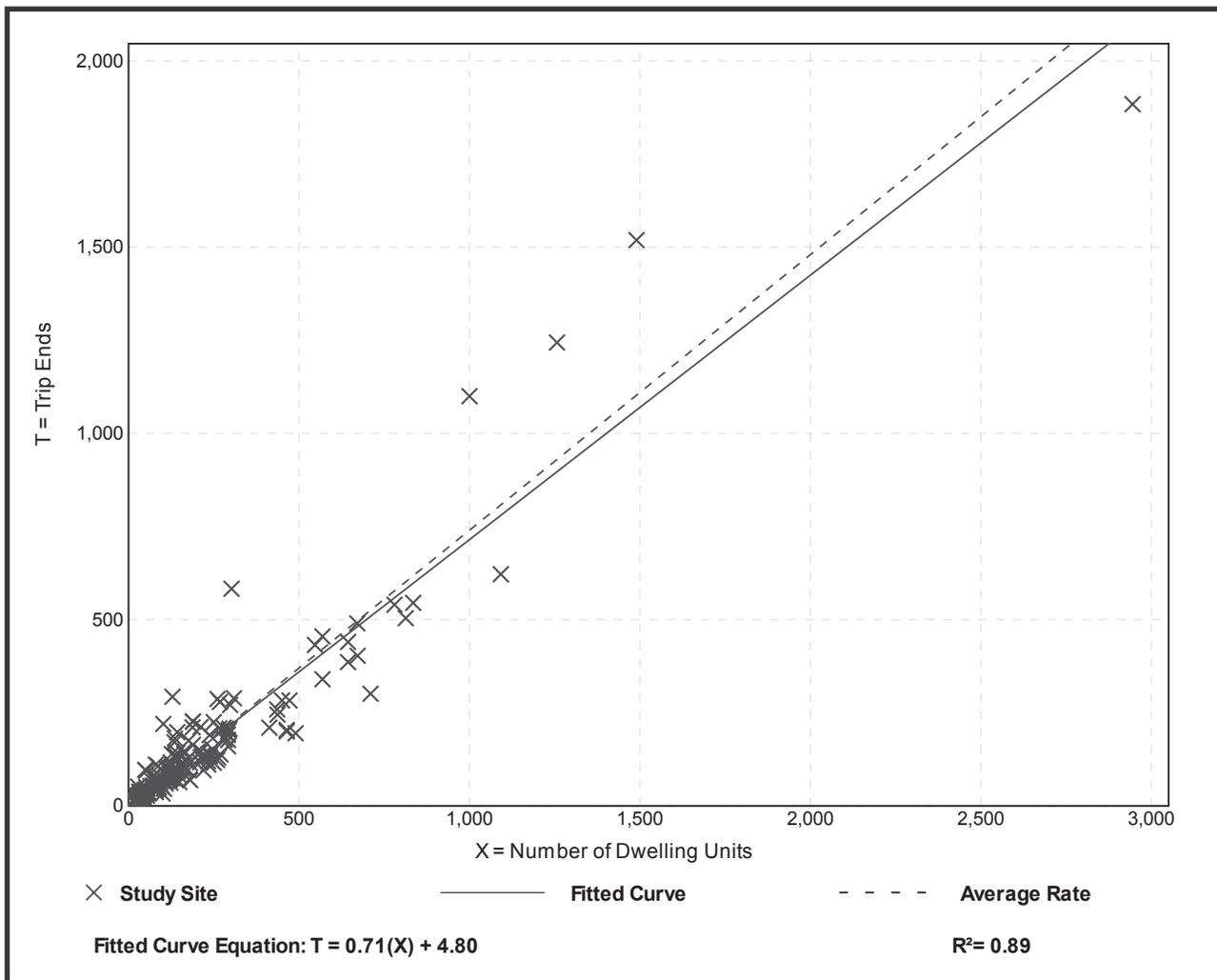
Setting/Location: General Urban/Suburban

Number of Studies: 173
Avg. Num. of Dwelling Units: 219
Directional Distribution: 25% entering, 75% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.74	0.33 - 2.27	0.27

Data Plot and Equation



Single-Family Detached Housing (210)

Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.

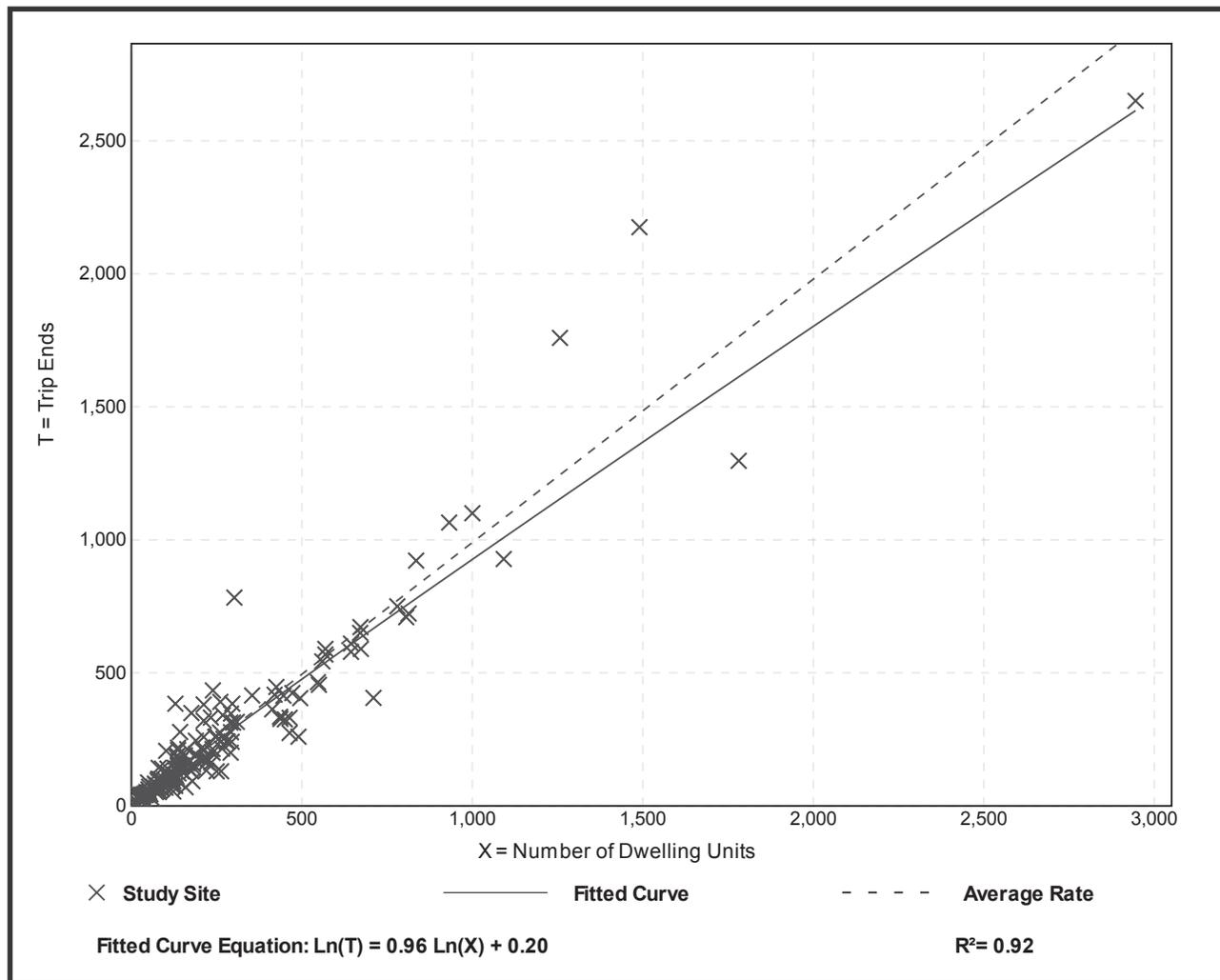
Setting/Location: General Urban/Suburban

Number of Studies: 190
 Avg. Num. of Dwelling Units: 242
 Directional Distribution: 63% entering, 37% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.99	0.44 - 2.98	0.31

Data Plot and Equation



Land Use: 220

Multifamily Housing (Low-Rise)

Description

Low-rise multifamily housing includes apartments, townhouses, and condominiums located within the same building with at least three other dwelling units and that have one or two levels (floors). Multifamily housing (mid-rise) (Land Use 221), multifamily housing (high-rise) (Land Use 222), and off-campus student apartment (Land Use 225) are related land uses.

Additional Data

In prior editions of *Trip Generation Manual*, the low-rise multifamily housing sites were further divided into rental and condominium categories. An investigation of vehicle trip data found no clear differences in trip making patterns between the rental and condominium sites within the ITE database. As more data are compiled for future editions, this land use classification can be reinvestigated.

For the three sites for which both the number of residents and the number of occupied dwelling units were available, there were an average of 2.72 residents per occupied dwelling unit.

For the two sites for which the numbers of both total dwelling units and occupied dwelling units were available, an average of 96.2 percent of the total dwelling units were occupied.

This land use included data from a wide variety of units with different sizes, price ranges, locations, and ages. Consequently, there was a wide variation in trips generated within this category. Other factors, such as geographic location and type of adjacent and nearby development, may also have had an effect on the site trip generation.

Time-of-day distribution data for this land use are presented in Appendix A. For the 10 general urban/suburban sites with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 7:15 and 8:15 a.m. and 4:45 and 5:45 p.m., respectively. For the one site with Saturday data, the overall highest vehicle volume was counted between 9:45 and 10:45 a.m. For the one site with Sunday data, the overall highest vehicle volume was counted between 11:45 a.m. and 12:45 p.m.

For the one dense multi-use urban site with 24-hour count data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 7:00 and 8:00 a.m. and 6:15 and 7:15 p.m., respectively.

For the three sites for which data were provided for both occupied dwelling units and residents, there was an average of 2.72 residents per occupied dwelling unit.

The average numbers of person trips per vehicle trip at the five general urban/suburban sites at which both person trip and vehicle trip data were collected were as follows:

- 1.13 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 7 and 9 a.m.
- 1.21 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 4 and 6 p.m.

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in British Columbia (CAN), California, District of Columbia, Florida, Georgia, Illinois, Indiana, Maine, Maryland, Minnesota, New Jersey, New York, Ontario, Oregon, Pennsylvania, South Dakota, Tennessee, Texas, Utah, Virginia, and Washington.

It is expected that the number of bedrooms and number of residents are likely correlated to the number of trips generated by a residential site. Many of the studies included in this land use did not indicate the total number of bedrooms. To assist in the future analysis of this land use, it is important that this information be collected and included in trip generation data submissions.

Source Numbers

168, 187, 188, 204, 211, 300, 305, 306, 319, 320, 321, 357, 390, 412, 418, 525, 530, 571, 579, 583, 864, 868, 869, 870, 896, 903, 918, 946, 947, 948, 951

Multifamily Housing (Low-Rise) (220)

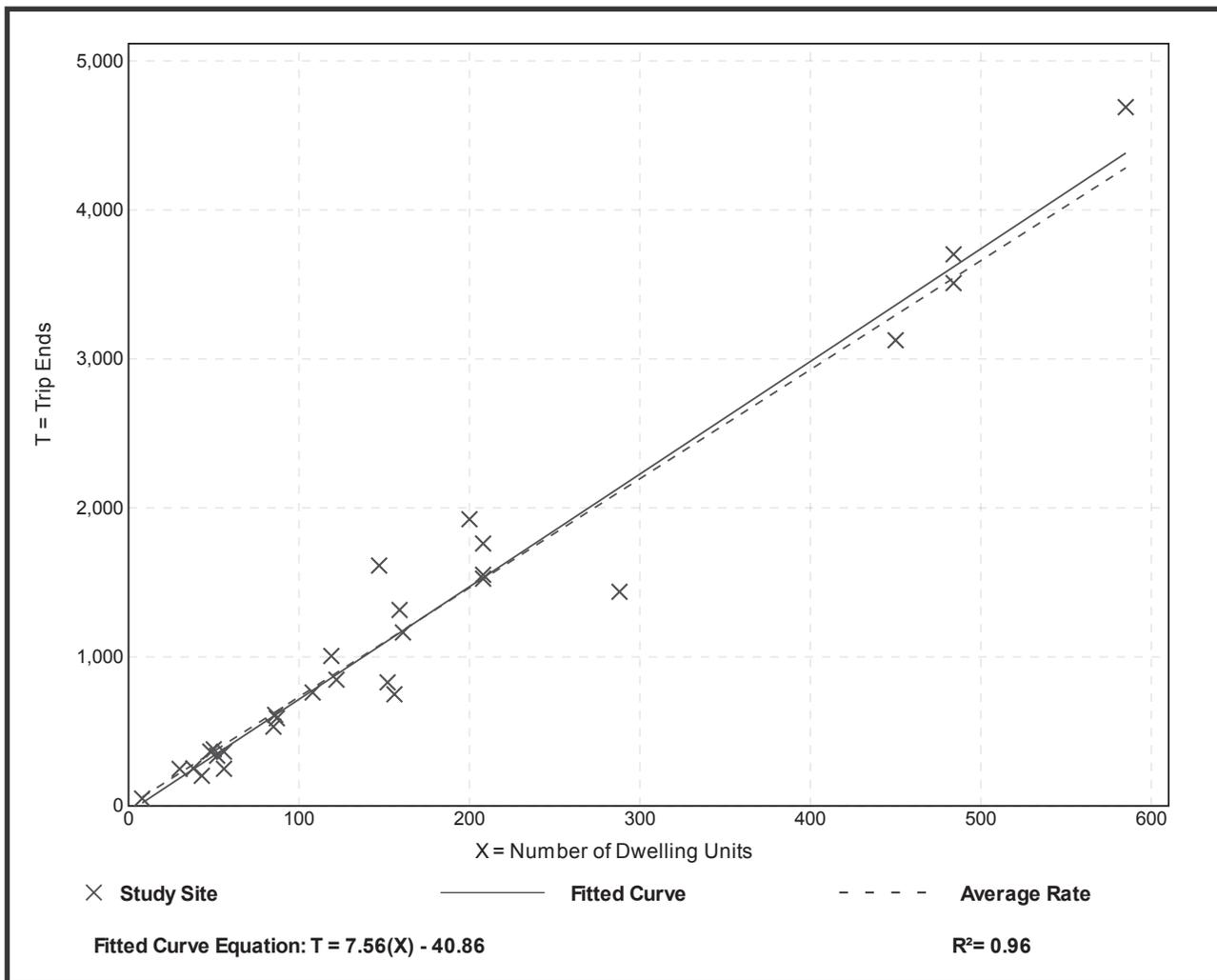
Vehicle Trip Ends vs: Dwelling Units
On a: Weekday

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

Vehicle Trip Generation per Dwelling Unit

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

Data Plot and Equation



Multifamily Housing (Low-Rise) (220)

Vehicle Trip Ends vs: Dwelling Units

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

Setting/Location: General Urban/Suburban

Number of Studies: 42

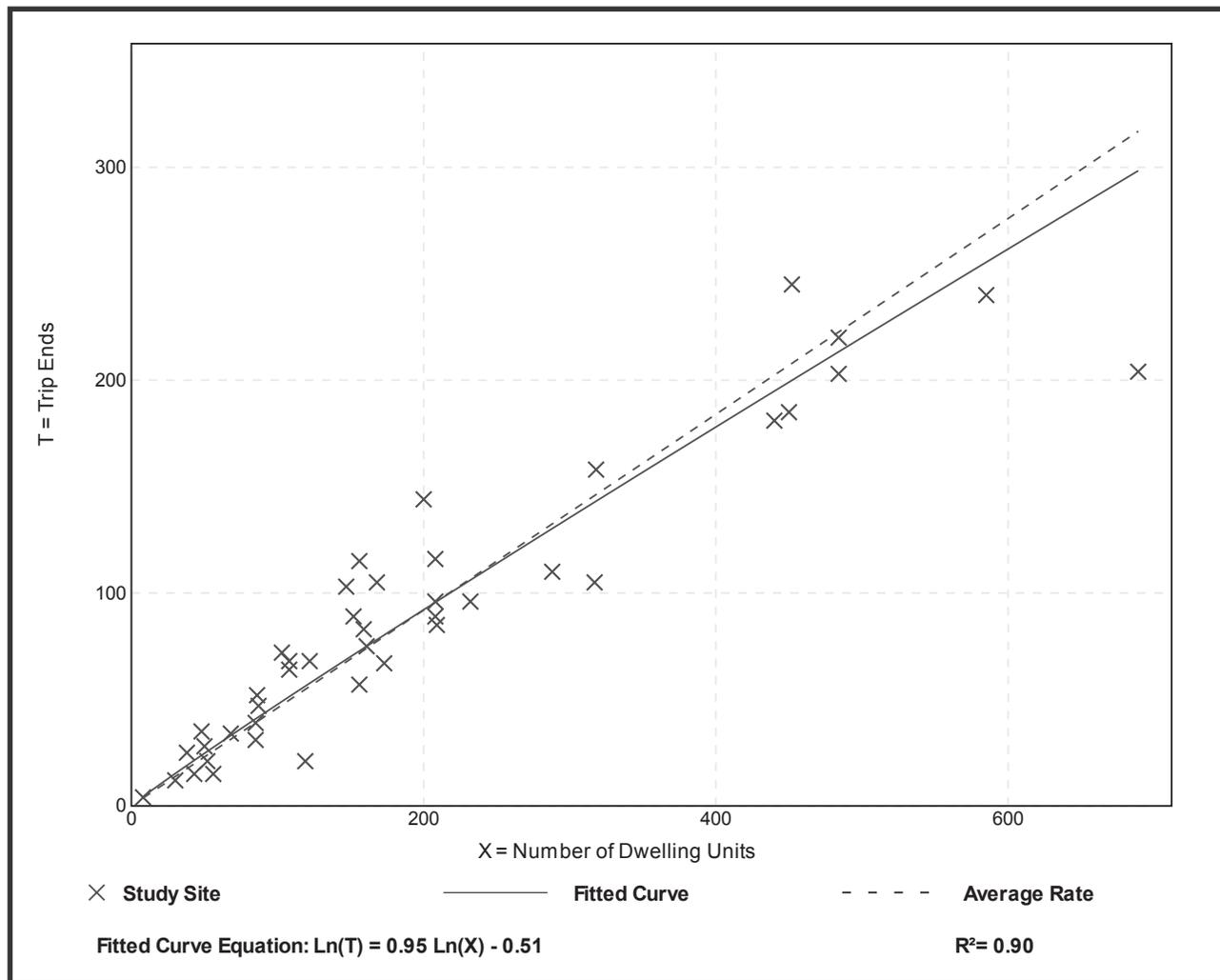
Avg. Num. of Dwelling Units: 199

Directional Distribution: 23% entering, 77% exiting

Vehicle Trip Generation per Dwelling Unit

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

Data Plot and Equation



Multifamily Housing (Low-Rise) (220)

Vehicle Trip Ends vs: Dwelling Units

On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

Number of Studies: 50

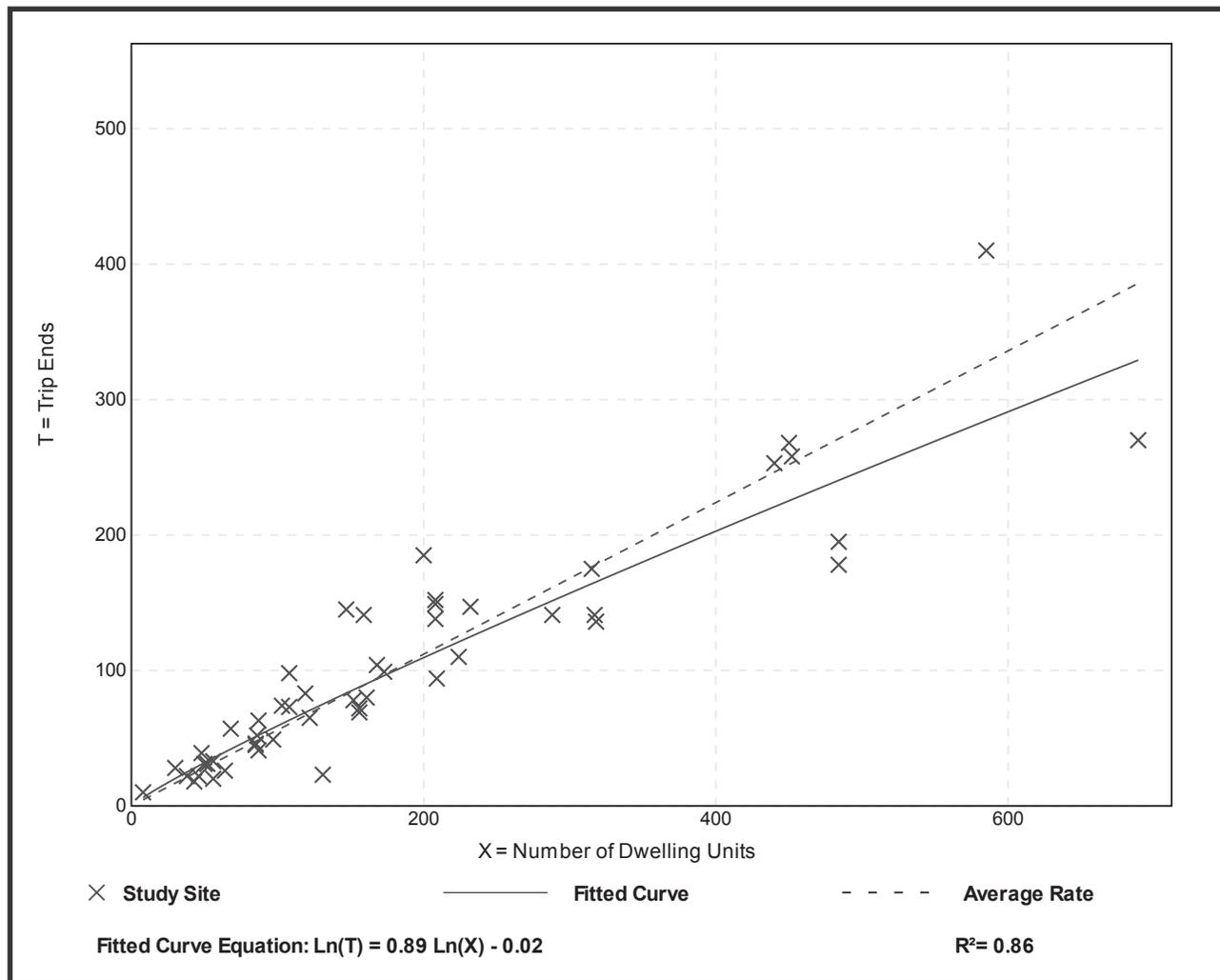
Avg. Num. of Dwelling Units: 187

Directional Distribution: 63% entering, 37% exiting

Vehicle Trip Generation per Dwelling Unit

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

Data Plot and Equation



Land Use: 221

Multifamily Housing (Mid-Rise)

Description

Mid-rise multifamily housing includes apartments, townhouses, and condominiums located within the same building with at least three other dwelling units and that have between three and 10 levels (floors). Multifamily housing (low-rise) (Land Use 220), multifamily housing (high-rise) (Land Use 222), off-campus student apartment (Land Use 225), and mid-rise residential with 1st-floor commercial (Land Use 231) are related land uses.

Additional Data

In prior editions of *Trip Generation Manual*, the mid-rise multifamily housing sites were further divided into rental and condominium categories. An investigation of vehicle trip data found no clear differences in trip making patterns between the rental and condominium sites within the ITE database. As more data are compiled for future editions, this land use classification can be reinvestigated.

For the six sites for which both the number of residents and the number of occupied dwelling units were available, there were an average of 2.46 residents per occupied dwelling unit.

For the five sites for which the numbers of both total dwelling units and occupied dwelling units were available, an average of 95.7 percent of the total dwelling units were occupied.

Time-of-day distribution data for this land use are presented in Appendix A. For the eight general urban/suburban sites with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 7:00 and 8:00 a.m. and 4:45 and 5:45 p.m., respectively.

For the four dense multi-use urban sites with 24-hour count data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 7:15 and 8:15 a.m. and 4:15 and 5:15 p.m., respectively. For the three center city core sites with 24-hour count data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 6:45 and 7:45 a.m. and 5:00 and 6:00 p.m., respectively.

For the six sites for which data were provided for both occupied dwelling units and residents, there was an average of 2.46 residents per occupied dwelling unit.

For the five sites for which data were provided for both occupied dwelling units and total dwelling units, an average of 95.7 percent of the units were occupied.

The average numbers of person trips per vehicle trip at the five center city core sites at which both person trip and vehicle trip data were collected were as follows:

- 1.84 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 7 and 9 a.m.
- 1.94 during Weekday, AM Peak Hour of Generator
- 2.07 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 4 and 6 p.m.
- 2.59 during Weekday, PM Peak Hour of Generator

The average numbers of person trips per vehicle trip at the 32 dense multi-use urban sites at which both person trip and vehicle trip data were collected were as follows:

- 1.90 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 7 and 9 a.m.
- 1.90 during Weekday, AM Peak Hour of Generator
- 2.00 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 4 and 6 p.m.
- 2.08 during Weekday, PM Peak Hour of Generator

The average numbers of person trips per vehicle trip at the 13 general urban/suburban sites at which both person trip and vehicle trip data were collected were as follows:

- 1.56 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 7 and 9 a.m.
- 1.88 during Weekday, AM Peak Hour of Generator
- 1.70 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 4 and 6 p.m.
- 2.07 during Weekday, PM Peak Hour of Generator

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Alberta (CAN), British Columbia (CAN), California, Delaware, District of Columbia, Florida, Georgia, Illinois, Maryland, Massachusetts, Minnesota, New Hampshire, New Jersey, Ontario, Oregon, Pennsylvania, South Carolina, South Dakota, Tennessee, Utah, Virginia, and Wisconsin.

Source Numbers

168, 188, 204, 305, 306, 321, 357, 390, 436, 525, 530, 579, 638, 818, 857, 866, 901, 904, 910, 912, 918, 934, 936, 939, 944, 947, 948, 949, 959, 963, 964, 966, 967, 969, 970

Multifamily Housing (Mid-Rise) (221)

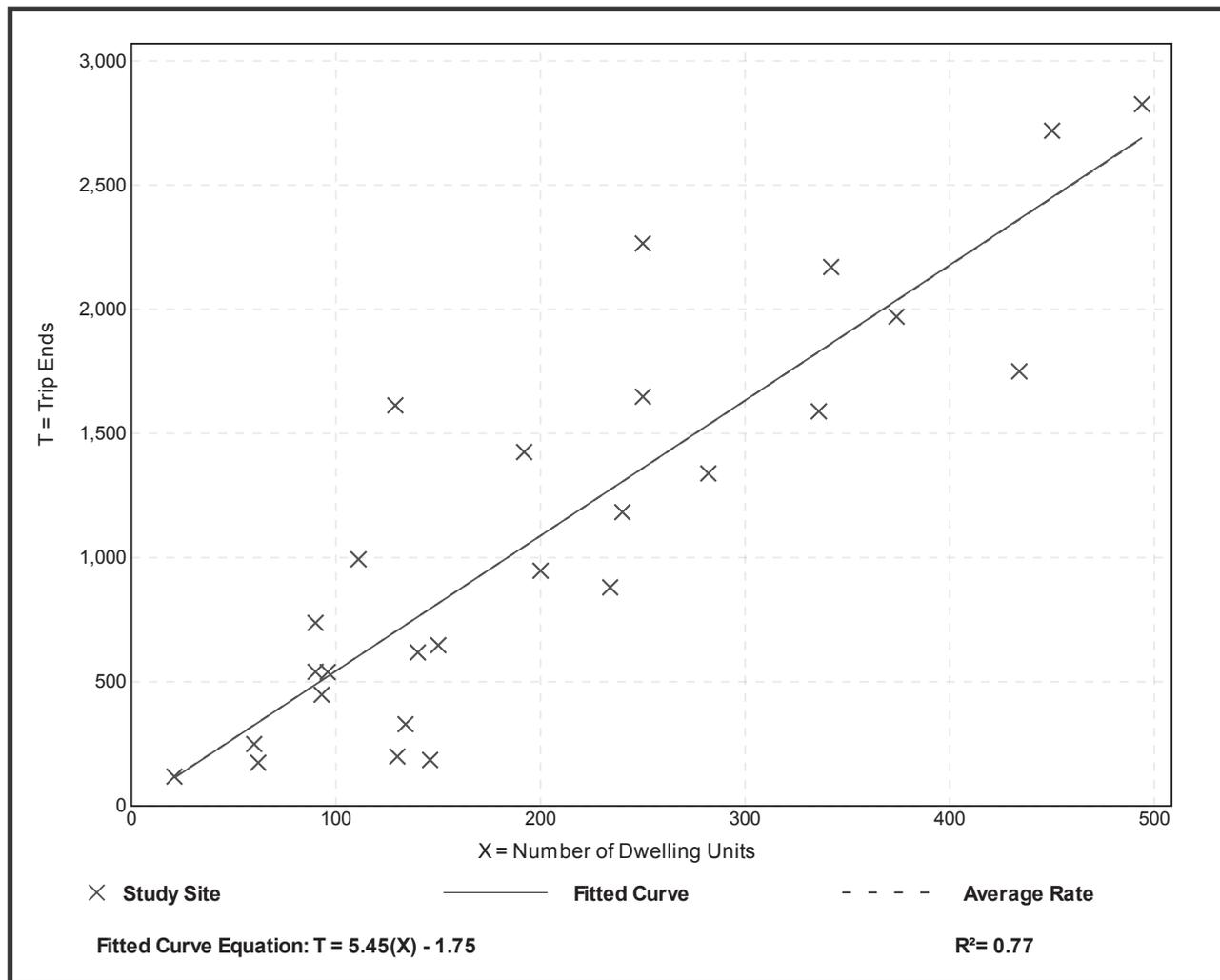
Vehicle Trip Ends vs: Dwelling Units
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 27
Avg. Num. of Dwelling Units: 205
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
5.44	1.27 - 12.50	2.03

Data Plot and Equation



Multifamily Housing (Mid-Rise) (221)

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

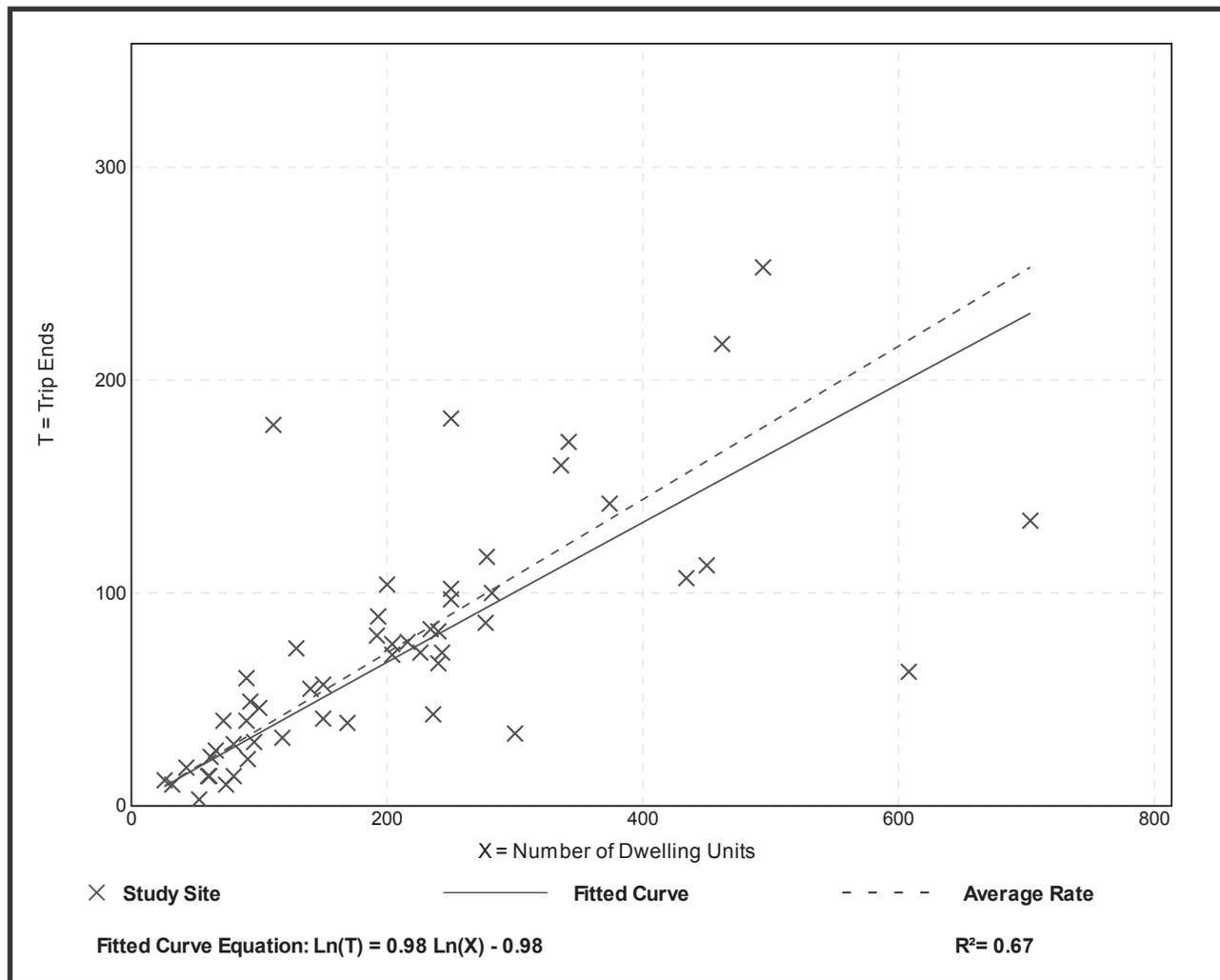
Setting/Location: General Urban/Suburban

Number of Studies: 53
 Avg. Num. of Dwelling Units: 207
 Directional Distribution: 26% entering, 74% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.36	0.06 - 1.61	0.19

Data Plot and Equation



Multifamily Housing (Mid-Rise) (221)

Vehicle Trip Ends vs: Dwelling Units

**On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.**

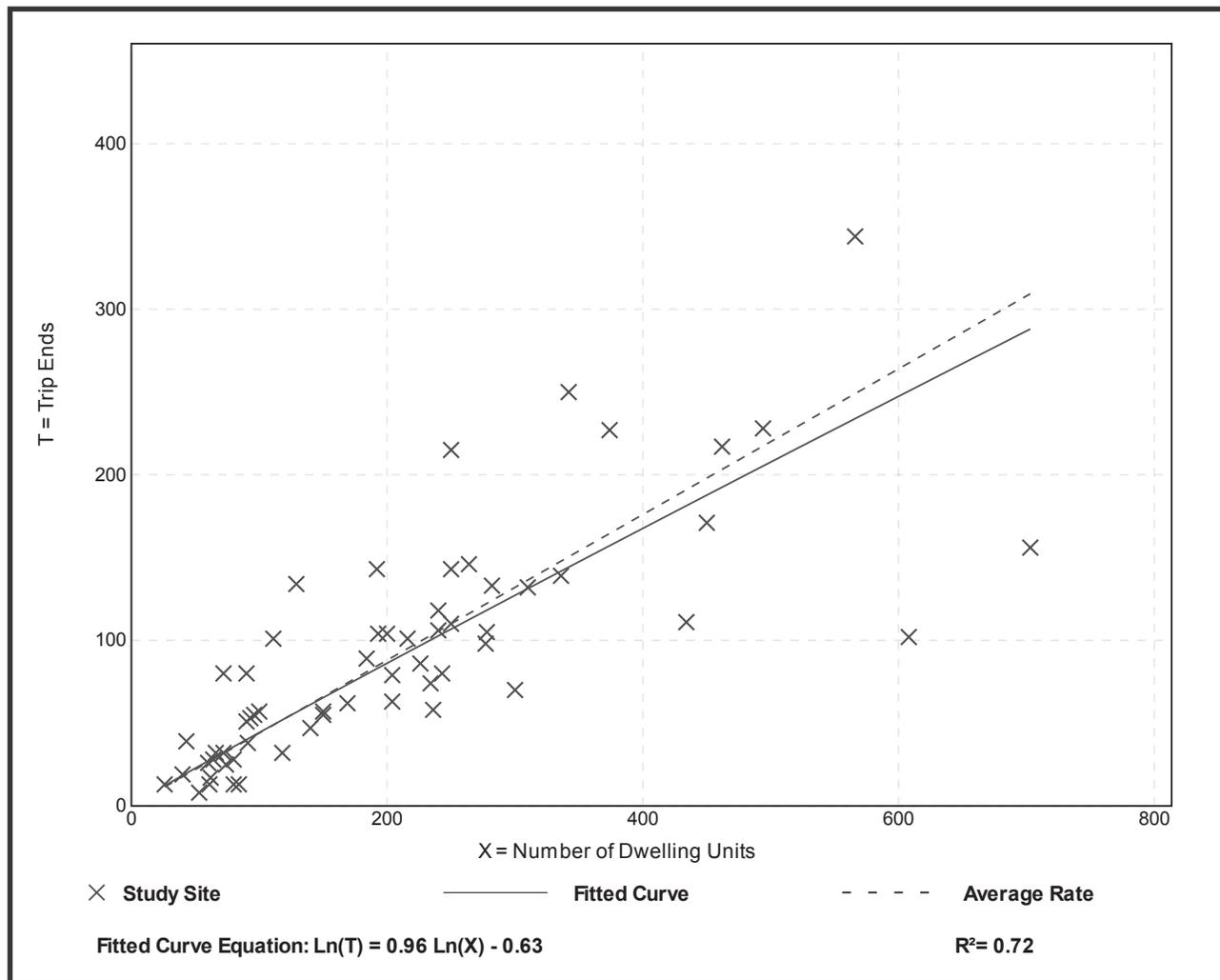
Setting/Location: General Urban/Suburban

Number of Studies: 60
Avg. Num. of Dwelling Units: 208
Directional Distribution: 61% entering, 39% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.44	0.15 - 1.11	0.19

Data Plot and Equation



Land Use: 820

Shopping Center

Description

A shopping center is an integrated group of commercial establishments that is planned, developed, owned, and managed as a unit. A shopping center's composition is related to its market area in terms of size, location, and type of store. A shopping center also provides on-site parking facilities sufficient to serve its own parking demands. Factory outlet center (Land Use 823) is a related use.

Additional Data

Shopping centers, including neighborhood centers, community centers, regional centers, and super regional centers, were surveyed for this land use. Some of these centers contained non-merchandising facilities, such as office buildings, movie theaters, restaurants, post offices, banks, health clubs, and recreational facilities (for example, ice skating rinks or indoor miniature golf courses).

Many shopping centers, in addition to the integrated unit of shops in one building or enclosed around a mall, include outparcels (peripheral buildings or pads located on the perimeter of the center adjacent to the streets and major access points). These buildings are typically drive-in banks, retail stores, restaurants, or small offices. Although the data herein do not indicate which of the centers studied included peripheral buildings, it can be assumed that some of the data show their effect.

The vehicle trips generated at a shopping center are based upon the total GLA of the center. In cases of smaller centers without an enclosed mall or peripheral buildings, the GLA could be the same as the gross floor area of the building.

Time-of-day distribution data for this land use are presented in Appendix A. For the 10 general urban/suburban sites with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 11:45 a.m. and 12:45 p.m. and 12:15 and 1:15 p.m., respectively.

The average numbers of person trips per vehicle trip at the 27 general urban/suburban sites at which both person trip and vehicle trip data were collected were as follows:

- 1.31 during Weekday, AM Peak Hour of Generator
- 1.43 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 4 and 6 p.m.
- 1.46 during Weekday, PM Peak Hour of Generator

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Alberta (CAN), British Columbia (CAN), California, Colorado, Connecticut, Delaware, District of Columbia, Florida, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Maine, Maryland, Massachusetts, Michigan, Minnesota, Nevada, New Jersey, New York, North Carolina, Ohio, Oklahoma, Oregon, Pennsylvania, South Dakota, Tennessee, Texas, Vermont, Virginia, Washington, West Virginia, and Wisconsin.

Source Numbers

105, 110, 154, 156, 159, 186, 190, 198, 199, 202, 204, 211, 213, 239, 251, 259, 260, 269, 294, 295, 299, 300, 301, 304, 305, 307, 308, 309, 310, 311, 314, 315, 316, 317, 319, 358, 365, 376, 385, 390, 400, 404, 414, 420, 423, 428, 437, 440, 442, 444, 446, 507, 562, 580, 598, 629, 658, 702, 715, 728, 868, 870, 871, 880, 899, 908, 912, 915, 926, 936, 944, 946, 960, 961, 962, 973, 974, 978

Shopping Center (820)

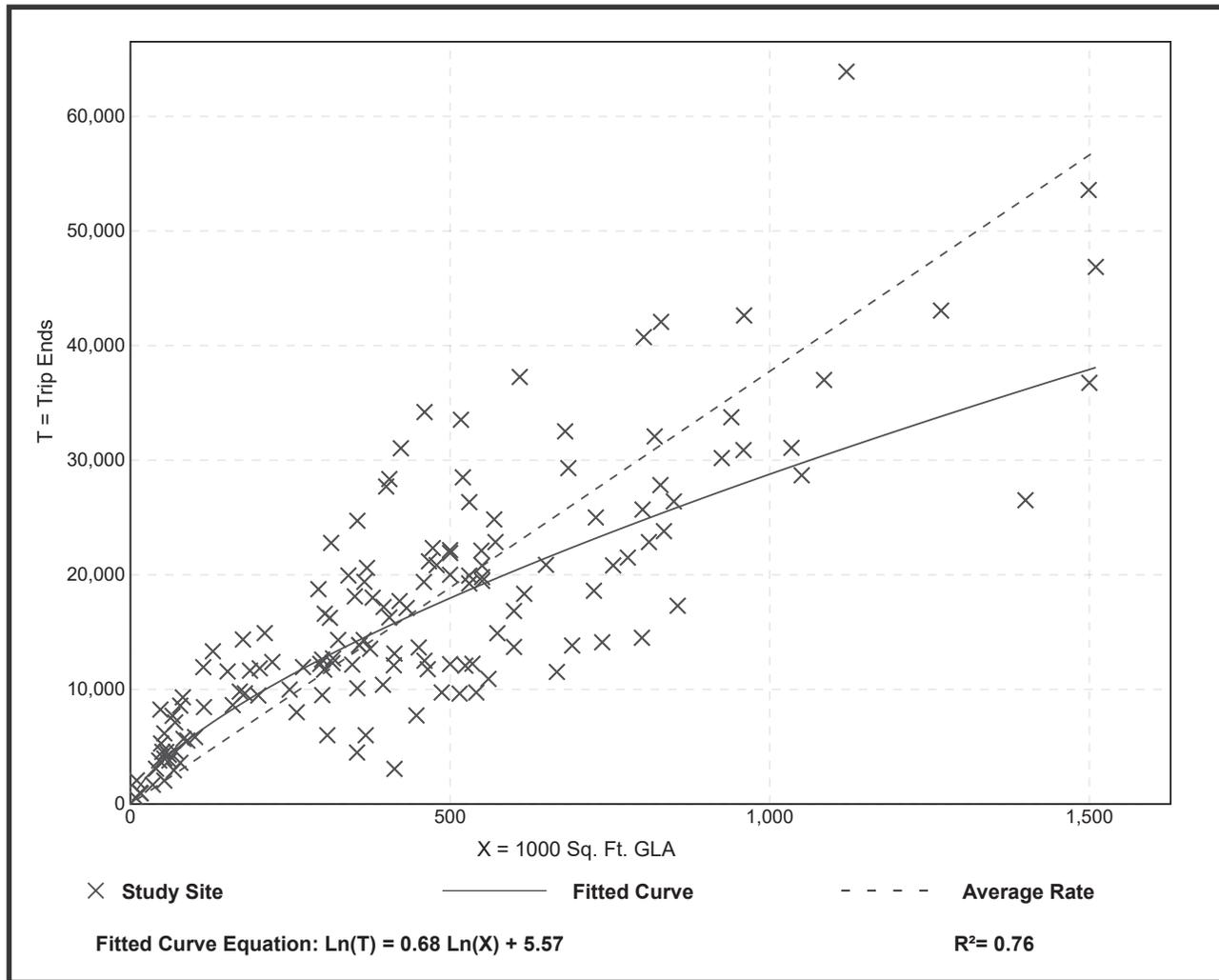
Vehicle Trip Ends vs: 1000 Sq. Ft. GLA
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 147
1000 Sq. Ft. GLA: 453
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
37.75	7.42 - 207.98	16.41

Data Plot and Equation



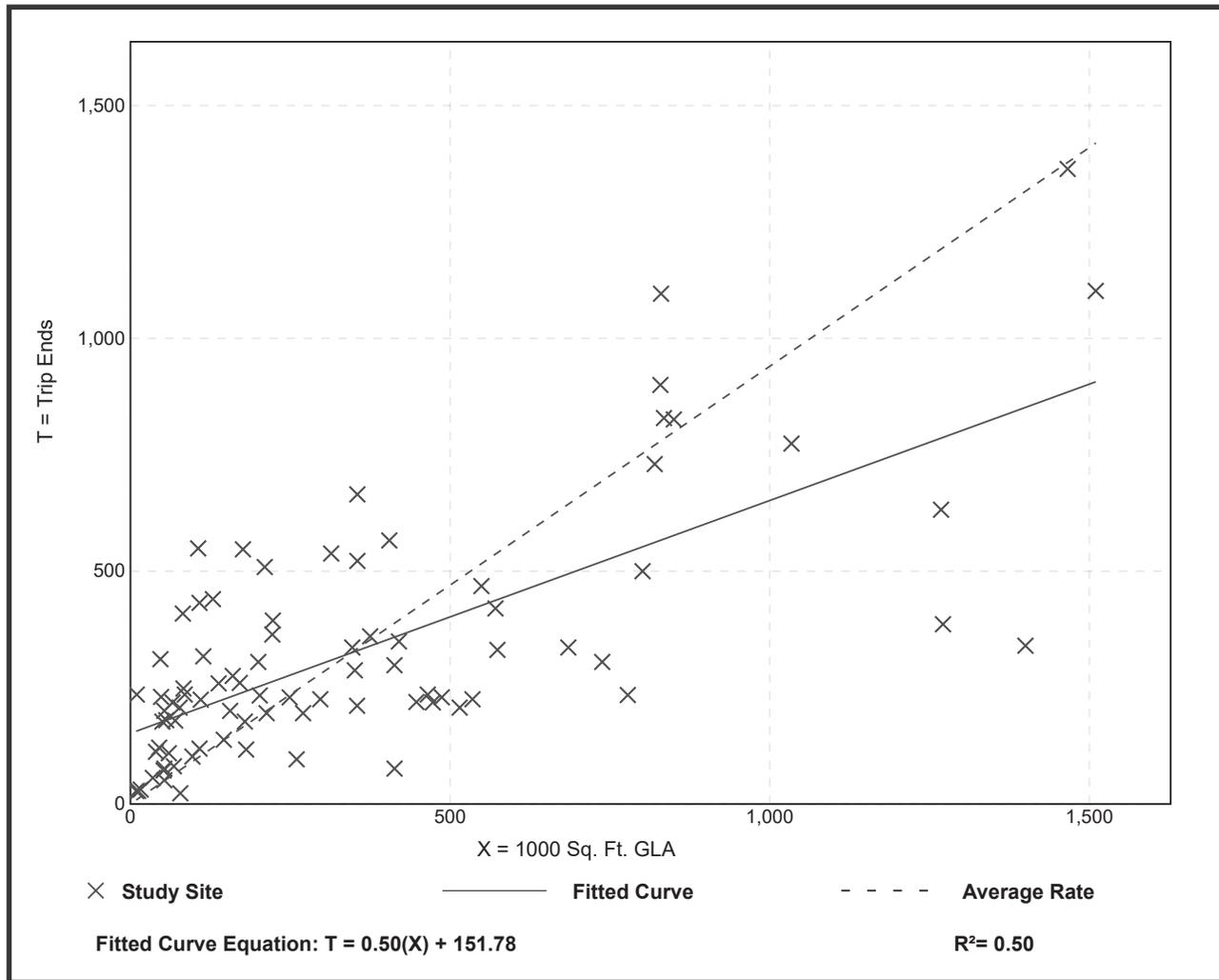
Shopping Center (820)

Vehicle Trip Ends vs: 1000 Sq. Ft. GLA
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: General Urban/Suburban
 Number of Studies: 84
 1000 Sq. Ft. GLA: 351
 Directional Distribution: 62% entering, 38% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
0.94	0.18 - 23.74	0.87

Data Plot and Equation



Shopping Center (820)

Vehicle Trip Ends vs: 1000 Sq. Ft. GLA
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
 Number of Studies: 261
 1000 Sq. Ft. GLA: 327
 Directional Distribution: 48% entering, 52% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
3.81	0.74 - 18.69	2.04

Data Plot and Equation

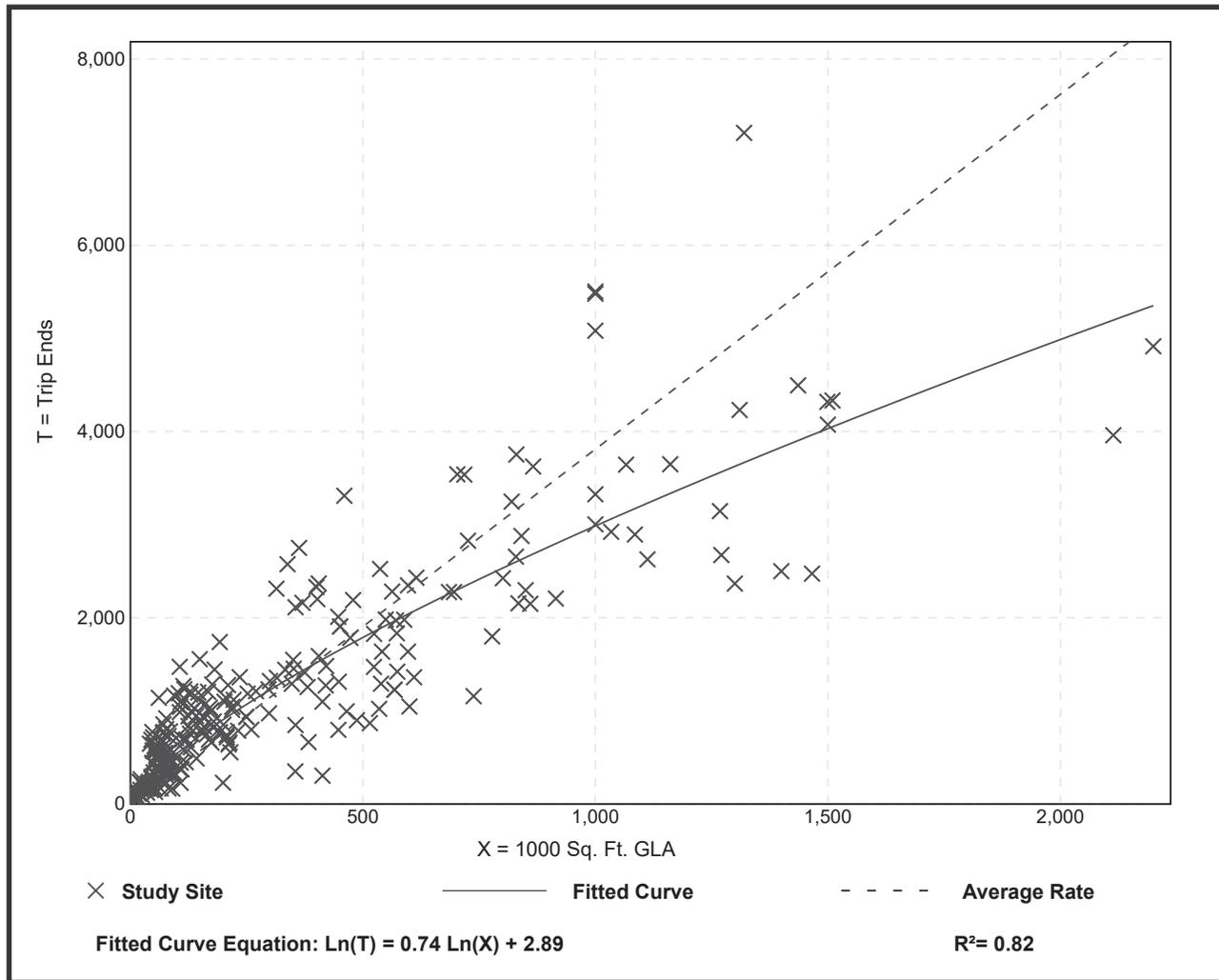
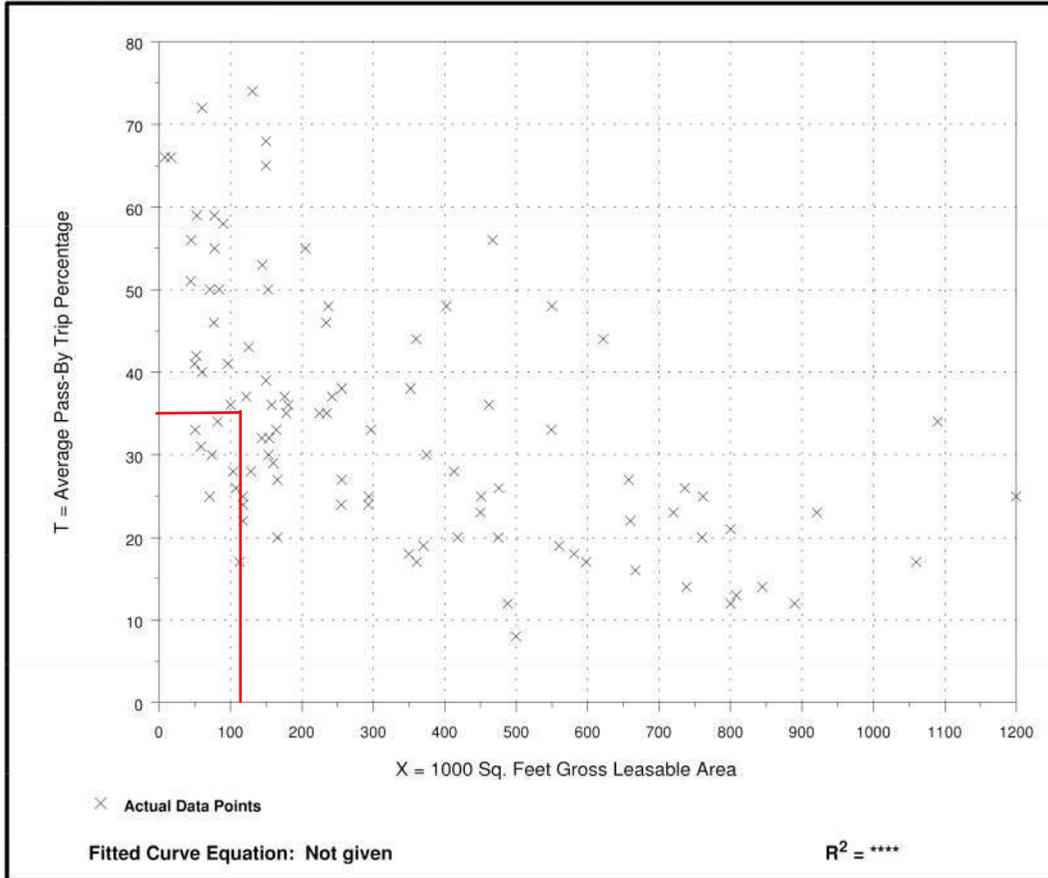


Figure E.7 Shopping Center (820)

Average Pass-By Trip Percentage vs: 1000 Sq. Feet Gross Leasable Area
On a: Weekday, P.M. Peak Period
Number of Studies: 100
Average 1000 Sq. Feet GLA: 329

Data Plot



H – INTERNAL TRIP CALCULATION

Internal Capture Reduction Calculations

Methodology for A.M. Peak Hour and P.M. Peak Hour
based on the *Trip Generation Handbook*, 3rd Edition, published by the Institute of Transportation Engineers

Methodology for Daily
based on the average of the Unconstrained Rates for the A.M. Peak Hour and P.M. Peak Hour

SUMMARY

GROSS TRIP GENERATION

INPUT	Land Use	Daily		A.M. Peak Hour		P.M. Peak Hour	
		Enter	Exit	Enter	Exit	Enter	Exit
	Office						
	Retail					289	314
	Restaurant						
	Cinema/Entertainment						
	Residential					374	226
	Hotel						
		0	0	0	0	663	540

INTERNAL TRIPS

OUTPUT	Land Use	Daily		A.M. Peak Hour		P.M. Peak Hour	
		Enter	Exit	Enter	Exit	Enter	Exit
	Office	0	0	0	0	0	0
	Retail	0	0	0	0	29	82
	Restaurant	0	0	0	0	0	0
	Cinema/Entertainment	0	0	0	0	0	0
	Residential	0	0	0	0	82	29
	Hotel	0	0	0	0	0	0
		0	0	0	0	111	111
	% Reduction	0.0%		0.0%		18.5%	

EXTERNAL TRIPS

OUTPUT	Land Use	Daily		A.M. Peak Hour		P.M. Peak Hour	
		Enter	Exit	Enter	Exit	Enter	Exit
	Office	0	0	0	0	0	0
	Retail	0	0	0	0	260	232
	Restaurant	0	0	0	0	0	0
	Cinema/Entertainment	0	0	0	0	0	0
	Residential	0	0	0	0	292	197
	Hotel	0	0	0	0	0	0
		0	0	0	0	552	429

I – ODOT TRAFFIC COUNT DATA

Location Info	
Location ID	345_EB
Type	I-SECTION
Functional Class	3
Located On	US-40
	US40 W OF T26 SUMMIT RD, IN REYNOLDSBURG
Direction	EB
Community	IN REYNOLDSBURG
MPO_ID	
HPMS ID	40000510
Agency	Ohio Department of Transportation

Count Data Info	
Start Date	12/2/2021
End Date	12/3/2021
Start Time	12:00 AM
End Time	12:00 AM
Direction	
Notes	odot
Count Source	3453200
File Name	
Weather	
Study	
Owner	southerntraffic
QC Status	Accepted

Interval: 15 mins					
Time	15 Min				Hourly Count
	1st	2nd	3rd	4th	
00:00 - 01:00	6	7	7	8	28
01:00 - 02:00	10	10	4	3	27
02:00 - 03:00	5	9	13	5	32
03:00 - 04:00	2	8	4	4	18
04:00 - 05:00	23	13	33	23	92
05:00 - 06:00	36	69	132	130	367
06:00 - 07:00	147	148	122	170	587
07:00 - 08:00	113	104	93	129	439
08:00 - 09:00	126	95	86	72	379
09:00 - 10:00	85	80	78	84	327
10:00 - 11:00	68	72	72	80	292
11:00 - 12:00	76	80	99	104	359
12:00 - 13:00	105	116	112	110	443
13:00 - 14:00	109	130	136	129	504
14:00 - 15:00	128	116	105	127	476
15:00 - 16:00	124	137	168	148	577
16:00 - 17:00	151	169	174	175	669
17:00 - 18:00	203	195	215	209	822
18:00 - 19:00	198	206	136	140	680
19:00 - 20:00	127	109	66	74	376
20:00 - 21:00	69	46	51	41	207
21:00 - 22:00	41	25	29	35	130
22:00 - 23:00	27	26	15	8	76
23:00 - 24:00	17	7	10	12	46
TOTAL					7953

Location Info	
Location ID	345_WB
Type	I-SECTION
Functional Class	3
Located On	US-40
	US40 W OF T26 SUMMIT RD, IN REYNOLDSBURG
Direction	WB
Community	IN REYNOLDSBURG
MPO_ID	
HPMS ID	40000510
Agency	Ohio Department of Transportation

Count Data Info	
Start Date	12/2/2021
End Date	12/3/2021
Start Time	12:00 AM
End Time	12:00 AM
Direction	
Notes	odot
Count Source	3457200
File Name	
Weather	
Study	
Owner	southerntraffic
QC Status	Accepted

Interval: 15 mins					
Time	15 Min				Hourly Count
	1st	2nd	3rd	4th	
00:00 - 01:00	12	6	2	6	26
01:00 - 02:00	8	8	12	9	37
02:00 - 03:00	16	13	13	7	49
03:00 - 04:00	20	29	13	11	73
04:00 - 05:00	38	17	32	28	115
05:00 - 06:00	34	59	163	107	363
06:00 - 07:00	165	147	141	113	566
07:00 - 08:00	139	133	140	142	554
08:00 - 09:00	138	139	104	112	493
09:00 - 10:00	105	97	83	106	391
10:00 - 11:00	121	122	108	106	457
11:00 - 12:00	102	109	114	131	456
12:00 - 13:00	116	113	91	107	427
13:00 - 14:00	120	119	100	120	459
14:00 - 15:00	180	111	179	145	615
15:00 - 16:00	111	128	133	150	522
16:00 - 17:00	161	143	167	136	607
17:00 - 18:00	140	139	253	227	759
18:00 - 19:00	204	197	121	85	607
19:00 - 20:00	60	55	47	55	217
20:00 - 21:00	45	44	41	52	182
21:00 - 22:00	91	55	35	26	207
22:00 - 23:00	42	32	21	17	112
23:00 - 24:00	19	15	13	9	56
TOTAL					8350



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