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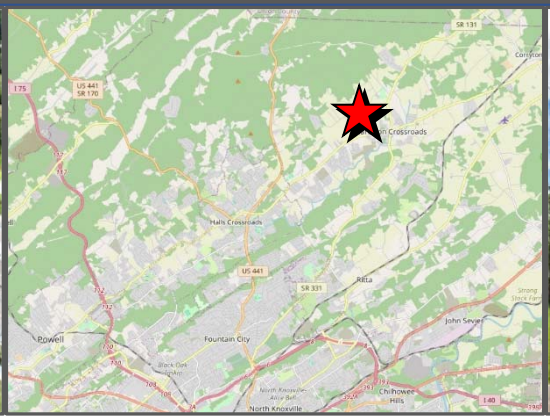
Transportation Impact Study

Thompson Meadows – Phase 2 Subdivision

Knox County, Tennessee



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Prepared for:
Mesana Investments, LLC
P.O. Box 11315
Knoxville, TN 37939

ROBERT WILLIAM JACKS III
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 105730
STATE OF TENNESSEE
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11812 Black Road / Knoxville, TN 37932 • (865) 556-0042 • ajaxengineering@gmail.com

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EXECUTIVE SUMMARY

Preface:

Mesana Investments, LLC, proposes an additional phase of residential development off Thompson School Road in North Knox County, TN. The proposed addition will include the construction of up to a maximum of 117 multi-family duplexes on approximately 29.3 acres. The development is referred to as "Thompson Meadows – Phase 2" in this study. The first phase of the Thompson Meadows Subdivision, which was recently constructed and completed, is now 100% occupied and includes a total of 189 single-family detached houses. The first phase constructed an entrance, Squirrel Run Lane, to Thompson School Road, and this initial phase is located adjacent to and northeast of the proposed Phase 2 property.

Phase 2 of the Thompson Meadows Subdivision proposes using the same primary entrance to Thompson School Road via Squirrel Run Lane. The two subdivision phases of Thompson Meadows are proposed to be connected via an extension of Squirrel Run Lane into the Phase 2 property. The proposed Thompson Meadows – Phase 2 Subdivision is anticipated to be fully built and occupied by 2028.

The primary purpose of this study is to determine and evaluate the potential impacts of the development on the adjacent transportation system. The study includes a review of the primary access road and the entrance intersection of Thompson School Road at Squirrel Run Lane. This report is a Level 1 study established by Knoxville/Knox County Planning. Recommendations and mitigation measures are offered if transportation operations are projected to be below recognized engineering standards.

It should be noted that in addition to the duplexes, four single-family detached houses on large lots will be constructed with individual driveways to Majors Road and are not included in the study analyses, as they will not have access to the extension of Squirrel Run Lane in Phase 2.

Study Results:

The significant findings of this study include the following:

- The Thompson Meadows – Phase 2 Subdivision, with up to a maximum of 117 multi-family duplexes, is estimated to generate 1,009 vehicle trips on an average weekday at full build-out and occupancy. Of these daily trips, 62 are estimated to occur during the AM peak hour and 88 in the PM peak hour in 2028.

- The entrance intersection of Thompson School Road at Squirrel Run Lane is calculated to have minimal vehicle delays and queues during the projected 2028 morning and afternoon peak hours, with it operating under two-way stop-controlled conditions.
- The projected 2028 northbound left-turn entering volumes into the subdivision from Thompson School Road onto Squirrel Run Lane are estimated to just barely meet the threshold for a separate lane in the PM peak hour only. However, this left-turn lane threshold warrant is only expected to be met in these conditions due to the additional thru trips at the intersection that the nearby Thompson Creek Subdivision will generate, a bit further to the north on Thompson School Road, which has recently begun construction. Southbound right turns from Thompson School Road onto Squirrel Run Lane are not projected to meet warrants for a separate right-turn lane in the 2028 conditions.

Recommendations:

The following summary recommendations are presented based on the study's analyses to minimize the impacts of the proposed development on the adjacent transportation system, while aiming to achieve an acceptable traffic flow and improved safety. More details regarding all the recommendations are discussed at the end of the report.

Thompson School Road at Squirrel Run Lane:

- The single exiting lane currently provided on Squirrel Run Lane for Phase 1 of the Thompson Meadows Subdivision and future Phase 2, allowing both left and right turn movements, will be sufficient according to the calculations. The delays associated with these exiting vehicle movements are projected to be minimal in the projected 2028 conditions.
- In 2028, a separate northbound left-turn lane on Thompson School Road at Squirrel Run Lane will not be warranted strictly based on the additional trips generated by the future residences in the second phase of the Thompson Meadows Subdivision. However, due to the estimated thru trips generated by the Thompson Creek Subdivision to the north, which is assumed to be constructed and fully built out by 2028, the entrance intersection is projected to experience volumes that just barely warrant the need for a northbound left-turn lane on Thompson School Road at Squirrel Run. This warrant is only projected to be met during the PM peak hour, not the AM peak hour. Thus, it is recommended that the need for a northbound left-turn lane be re-examined in 2028 or when both developments are entirely

constructed and occupied. This re-examination would require conducting new traffic counts at the intersection at that time to determine if the trips generated by the developments, plus the general growth in the area, will actually meet the threshold for a northbound left-turn lane.

- Any future landscaping, existing vegetation, or additional signage must not impact the intersection sight distances looking from Squirrel Run Lane in both the north and south directions on Thompson School Road.

Thompson Meadows – Phase 2 Subdivision Internal Roads:

- A 25 mph Speed Limit Sign (R2-1) with additional plaque signage, as shown in the report, is recommended to be posted near the beginning of the extension of Squirrel Run Lane into Phase 2. An additional 25 mph Speed Limit (R2-1) sign is recommended to be installed on Squirrel Run Lane between the two phases of the Thompson Meadows Subdivision for eastbound motorists traveling into Phase 1 from Phase 2.
- A Stop Sign (R1-1) is recommended to be installed at the new internal road intersection in Phase 2.
- Sight distance at the new internal intersection must not be impacted by new signage, parked cars, or future landscaping. The civil site designer should ensure that appropriate internal sight distances are met.
- The civil site designer should provide a centralized mail delivery center location within the development for the additional subdivision residents in Phase 2.
- All drainage grates and covers for Phase 2 of the residential development must be pedestrian and bicycle-safe.
- All road and intersection elements should be designed in accordance with the American Association of State Highway and Transportation Officials (AASHTO) and Knox County specifications and guidelines to ensure proper transportation operations.

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DESCRIPTION OF EXISTING CONDITIONS

- **STUDY AREA:**

The location of the proposed Thompson Meadows - Phase 2 Subdivision is shown on a map in Figure 1. This development will be situated southwest of Phase 1, west of Thompson School Road, south of Coppock Road, and east of Majors Road in North Knox County, Tennessee, within the Corryton/Gibbs community. Primary external road access to the new subdivision phase will be provided by Squirrel Run Lane, which was constructed for Phase 1, and it will not have access to either Coppock Road or Majors Road. In addition to constructing Squirrel Run Lane to Thompson School Road, the first phase of Thompson Meadows also included constructing a road interconnection to Wheatmeadow Subdivision. Wheatmeadow Subdivision was constructed in the early 2000s and was built with a single entrance to Thompson School Road.

The Thompson Meadows - Phase 2 Subdivision will be constructed from a single parcel that abuts Phase 1, as well as Coppock Road and Majors Road. The parcel containing Phase 2 will be accessed by roadway via an extension of Squirrel Run Lane at its eastern corner. Squirrel Run Lane currently abruptly ends in Phase 1 on its western edge near Grasshopper Lane.

As requested, transportation impacts associated with the development were analyzed at the intersection of Thompson School Road at Squirrel Run Lane, where Phase 2 (and Phase 1) of the subdivision will have primary road access to and from external destinations.

The proposed development property is located in a transitional area of Knox County, from a rural to a more suburban setting. Besides the initial phase of Thompson Meadows, many other residential subdivisions have been constructed in the surrounding area. These other nearby subdivisions, located off and along Thompson School Road, include Wheatmeadow, Edwards Place, and Harbison Plantation. Another residential development, Thompson Creek, has recently begun construction. It is north of Thompson Meadows Subdivision, off Thompson School Road, and will include two separate sections with a total of 313 housing units with a mix of townhouses and single-family detached houses.

The majority of the Thompson Meadows - Phase 2 Subdivision property is currently cleared, with a minor amount of trees and vegetation along fence lines. The topography for the proposed subdivision property is defined by moderate terrain and is partially bisected by the Kern Branch tributary, with flows from north to south.

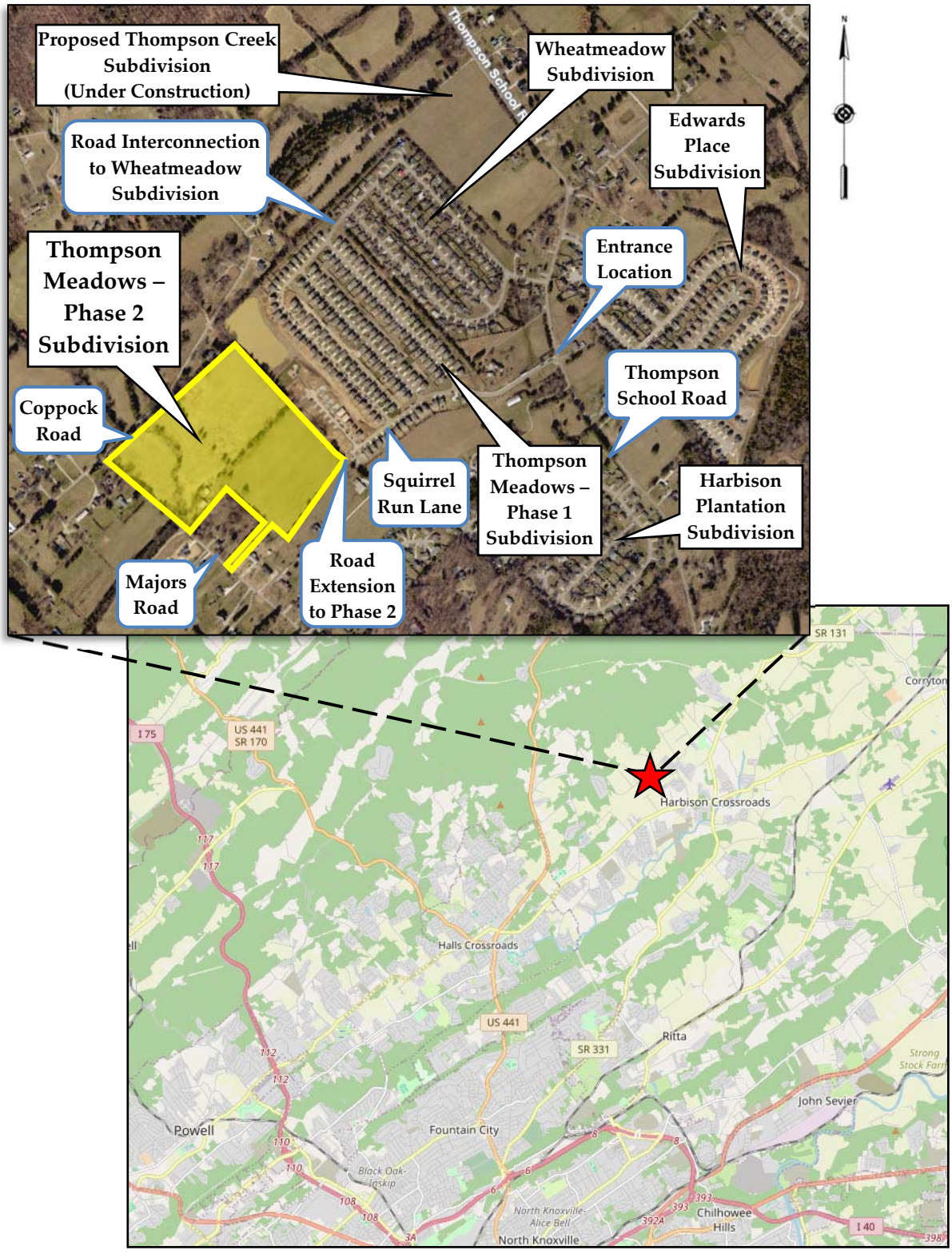


Figure 1
Location Map

- **EXISTING ROADWAYS:**

Table 1 lists the characteristics of the existing primary roadways near the development property and included in the study:

TABLE 1
STUDY CORRIDOR CHARACTERISTICS

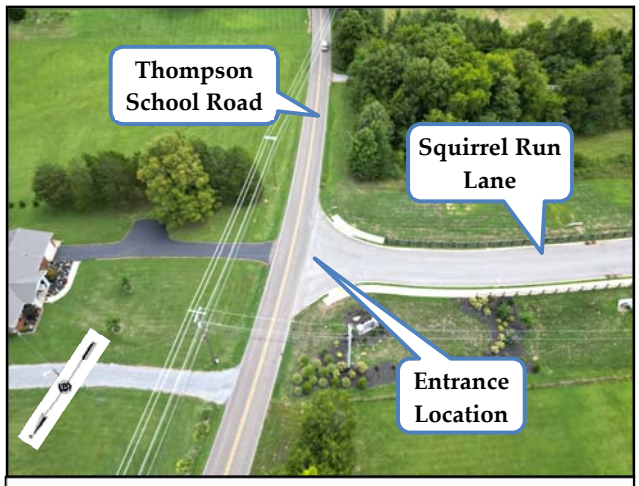
NAME	CLASSIFICATION [1]	SPEED LIMIT	LANES	ROAD WIDTH [2]	TRANSIT [3]	PEDESTRIAN FACILITIES	BICYCLE FACILITIES
Thompson School Road	Major Collector	30 mph	2 lanes undivided	19 - 20 feet	None	None	No bike lanes
Squirrel Run Lane	Local Street	25 mph	2 lanes undivided	26 feet	None	Sidewalk on north side (for approximately 800 ')	No bike lanes

[1] 2018 Major Road Plan by Knoxville/Knox County Planning
[2] Edge of pavements at Proposed Entrance location
[3] According to Knoxville Area Transit System Map

Thompson School Road is categorized as a Major Collector and generally traverses in a north-to-south direction. Adjacent to the site's proposed entrance at Squirrel Run Lane, the roadway has a 2-lane section with one lane in each direction. To the north, Thompson School Road begins at a Y-intersection with Wood Road. 2.2 miles to the south, Thompson School Road transitions to Fairview Road at a signalized intersection with E Emory Road, and the roadway continues towards Tazewell Pike.

Thompson School Road has a posted speed limit of 30 mph and has some minor horizontal and vertical curves along its length near the development site.

Sidewalks, bike lanes, and roadway illumination are not provided along Thompson School Road at its intersection with Squirrel Run Lane. Thompson School Road is delineated with white edge lines and grooved rumble strips located in the center of the road along the double yellow centerline.



Thompson School Road at Squirrel Run Lane Entrance Location

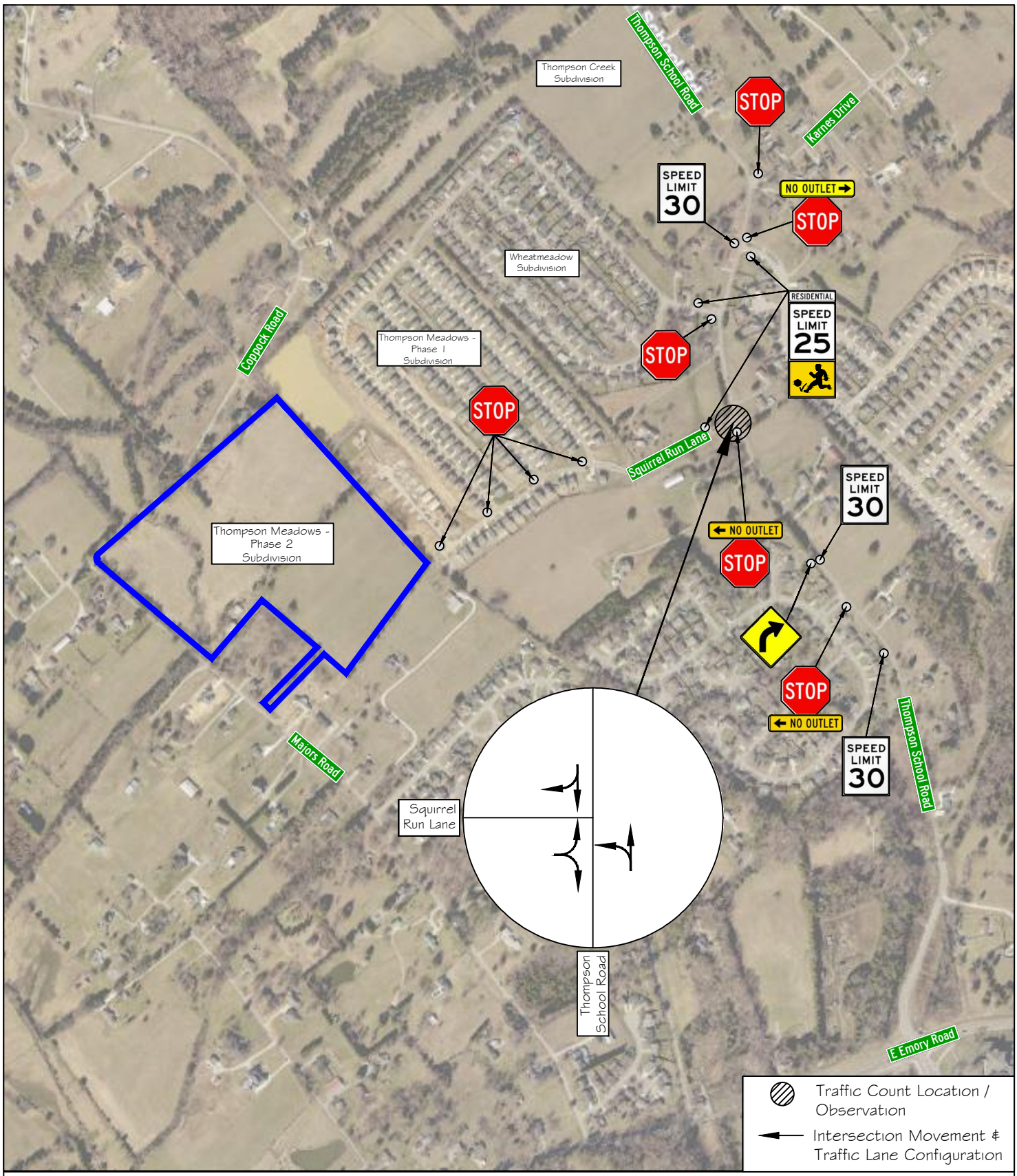
The width of Thompson School Road is slightly variable adjacent to Squirrel Run Lane, with a range between 19 and 20 feet. No edge treatments, such as curb and gutter, are provided, and the surfaces outside the edges of Thompson School Road consist of grass, vegetation, private driveways, and ditches.

Squirrel Run Lane is a Local Street that generally traverses in a west-to-east direction. Squirrel Run Lane was constructed to provide access to the first phase of Thompson Meadows and will be extended on its western end to provide external road access to Thompson School Road for future residents in Phase 2. The current length of Squirrel Run Lane is approximately 1,725 feet and provides access to internal streets in Phase 1, which includes Grasshopper Lane, Bill Keaton Drive, Cottontail Street, and Game Bird Street. Its western end currently ends abruptly at Phase 2's parcel near Grasshopper Lane.

Current End of Squirrel Run Lane in Thompson Meadows – Phase 1 Subdivision

Squirrel Run Lane has a roadway width of 26 feet, with its edges lined by concrete curbs, and features a 5-foot concrete sidewalk on its northern end, between Thompson School Road and Game Bird Street, in Phase 1. Between Thompson School Road and Game Bird Street, a crossbuck wooden fence lines its southern side. The same style fence also lines the northern side of Squirrel Run Lane for a short distance of approximately 150 feet, between Thompson School Road and the mail delivery center for the Phase 1 residents of the Thompson Meadows Subdivision.

Figure 2 shows the traffic count location for the study and the current traffic signage along Thompson School Road near the study area. The traffic signage shown in Figure 2 only includes warning and regulatory signage near the proposed development site. The pages following Figure 2 provide a further overview of the site study area, accompanied by photographs.



AJAX ENGINEERING
11812 Black Road
Knoxville, TN 37932
Phone: (865) 556-0042
Email: ajaxengineering@gmail.com

NOT TO SCALE

NORTH

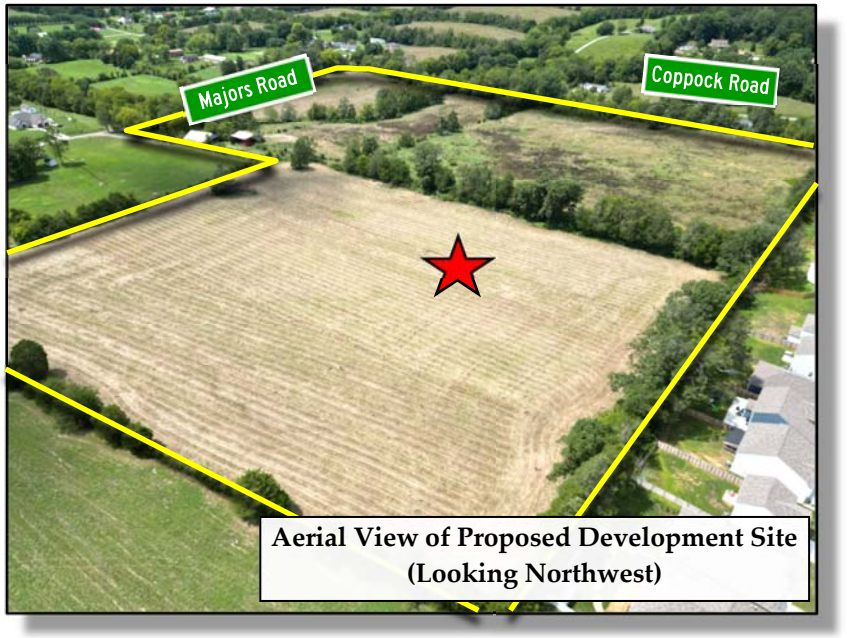
FIGURE 2

Thompson Meadows - Phase 2 Subdivision

Traffic Count Location, Traffic Signage & Existing Lane Configurations

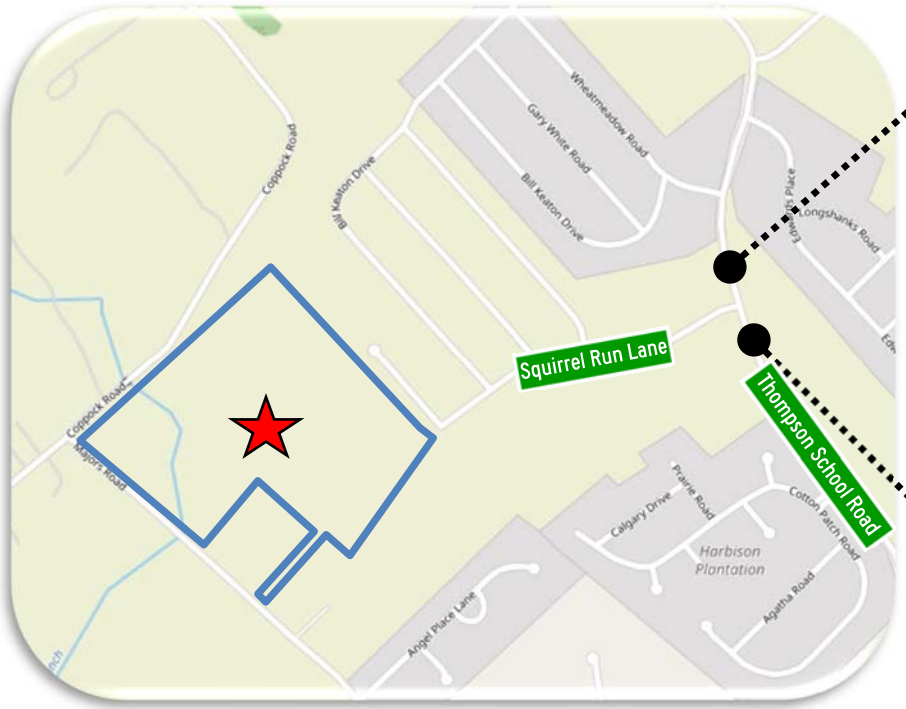
PHOTO EXHIBITS

Proposed Development Site



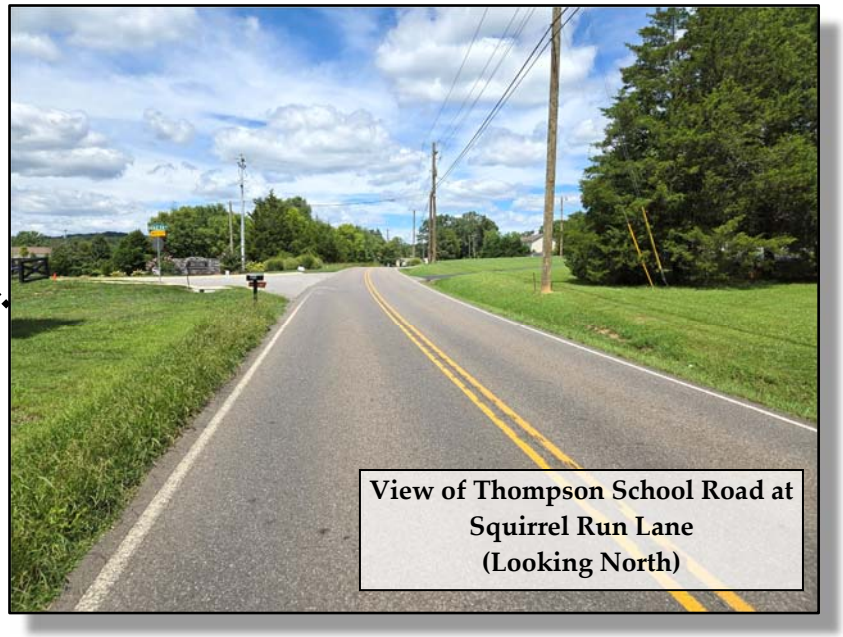
Aerial View of Proposed Development Site (Looking Northwest)

Aerial View of Proposed Development Site (Looking East)



Thompson School Road at Squirrel Run Lane

View of Thompson School Road at Squirrel Run Lane (Looking South)



View of Thompson School Road at Squirrel Run Lane (Looking North)

Squirrel Run Lane at Proposed Development Site Connection

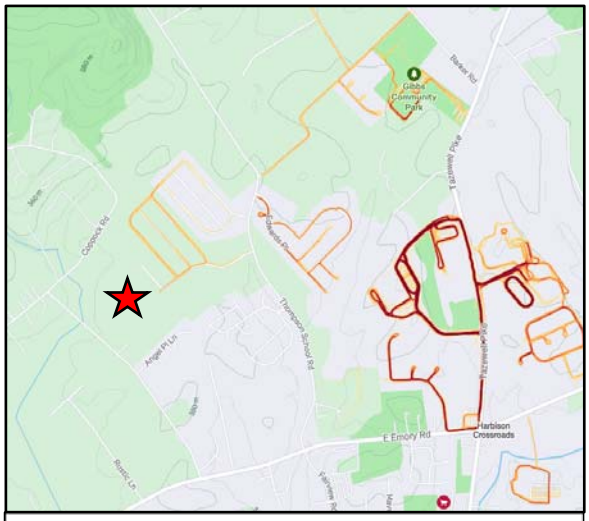
- **EXISTING TRANSPORTATION VOLUMES PER MODE**:

One annual vehicular traffic count location is located near the study area, and the Tennessee Department of Transportation (TDOT) conducts this count. The count location data is the following and can be viewed with further details in Appendix A:

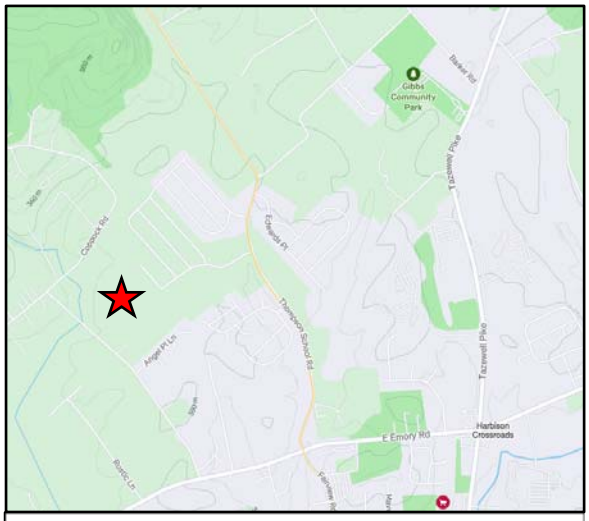
- Existing vehicular roadway traffic:
  The TDOT reported the following Average Annual Daily Traffic (AADT):
  - Thompson School Road, southeast of the project site, at 3,606 vehicles per day in 2024. This count station location was first initiated in 2016. From 2016 – 2024, this count station has indicated a +1.4% average annual growth rate.

- Existing bicycle and pedestrian volumes:
  The average daily pedestrian and bicycle traffic along Thompson School Road and Squirrel Run Lane is unknown. However, without sidewalks on Thompson School Road, this roadway is assumed to have minimal pedestrian and bicyclist activity. During the traffic counts for this project, no bicyclists or pedestrians were observed along Thompson School Road. However, about two dozen school-age children from Phase 1 of the subdivision were observed using the sidewalk on Squirrel Run Lane during school bus arrivals and dismissals.

  An online website, strava.com, provides "heat" maps detailing routes taken by pedestrians, joggers, and bicyclists. The provided heat maps display data from the last two years, are updated monthly, and are compiled from individuals who have allowed their smart devices to track and record their routes (millions of users). The activities in the maps are represented on the roads by color intensities, with darker colors indicating higher activity. The Strava heat maps show no pedestrian activity along Thompson School Road near the development site, but a minor amount of bicycle activity. A fair amount of pedestrian activity is shown in the nearby and adjacent residential subdivisions of Thompson Meadows – Phase 1, Wheatmeadow, and Edwards Place. Some pedestrian activity is also shown occurring to the northeast in the Gibbs Ruritan Club Park. This park provides baseball, softball, and football fields, playgrounds, picnic areas, and tennis courts.



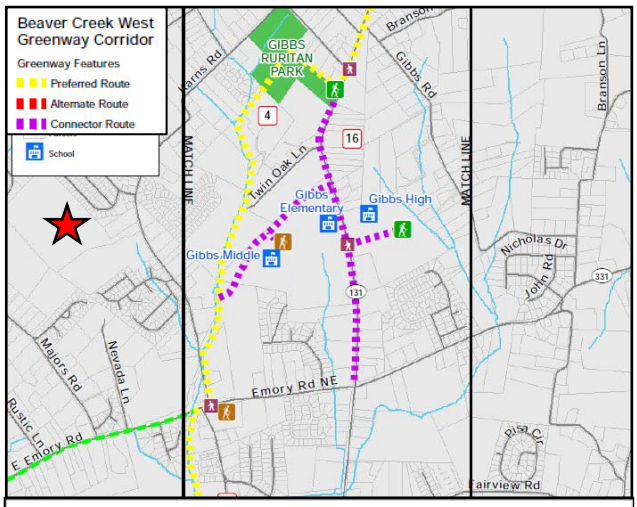
Strava Heat Map for Pedestrian and Joggers



Strava Heat Map for Bicyclists

- **PEDESTRIAN AND BICYCLE FACILITIES**:

Knox County completed a Greenway Corridor Study in 2020. This study evaluated potential alignments for greenways throughout Knox County. The study identified and evaluated one of the corridors, Beaver Creek East. This corridor would run from Interstate 75 in Powell to the Union County line in Gibbs. The preferred route for this corridor is shown running north and south to the east of the proposed development site, with connector routes traversing towards the Gibbs public schools located along Tazewell Pike. These proposed routes will not be directly accessible to residents in the existing and proposed phases of the Thompson Meadows subdivision.

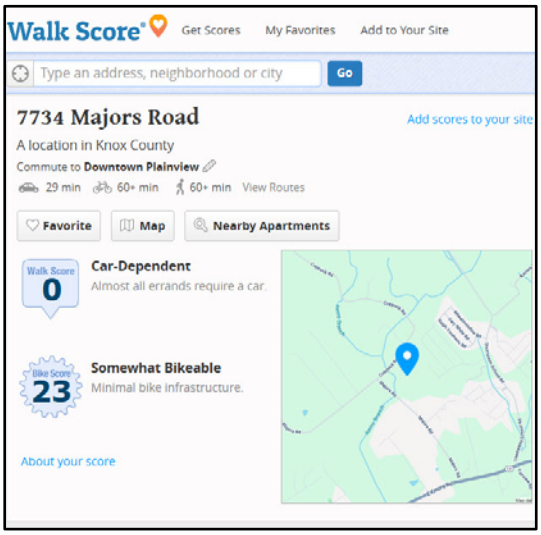


Knox County Greenway Corridor Study - Beaver Creek East

The executive summary in the Knox County study states: "The greenway corridor study will be utilized when asking for greenway easements from developers and property owners as their proposed construction projects go through Knoxville-Knox County Planning for approval. The County's policy is to acquire property or easements for greenways only through voluntary donation or sale."

- **WALK SCORE**:

A private company offers a website at walkscore.com that grades and gives scores to locations within the United States based on "walkability", "bikeability", and transit availability based on a patented system. According to the website, the numerical values assigned to the Walk Score and Bike Score are based on the distance to the closest amenity in various relevant categories (such as businesses, schools, and parks) and are graded from 0 to 100.



The project site location is graded with a Walk Score of 0 at the development property's official address (7734 Majors Road). This Walk Score indicates that almost all errands currently require a vehicle for travel at the development property location. The Walk Score is graded very low due to the lack of sidewalks and nearby amenities. The site is assigned a Bike Score of 23, indicating minimal infrastructure. A Transit Score is not provided since there are no public transportation opportunities near the development site. Overall, this study assumed no reductions in vehicle trips due to pedestrian or bicyclist activity by future residents of the Thompson Meadows - Phase 2 Subdivision.

- **TRANSIT SERVICES:**

The City of Knoxville offers a network of public transit options through Knoxville Area Transit (KAT). However, bus service is not available near the development site.

The closest public transit bus stop to the development site is 8.5 miles to the south on Route 22, "Broadway". The closest bus station is located at the corner of Jacksboro Pike and Garden Drive. This route has established bus service every 60 minutes at this bus stop, and this route map is also included in Appendix B. It operates on weekdays and weekends. Other transit services in the area include the East Tennessee Human Resource Agency (ETHRA) and the Community Action Committee (CAC), which provides transportation services when requested.

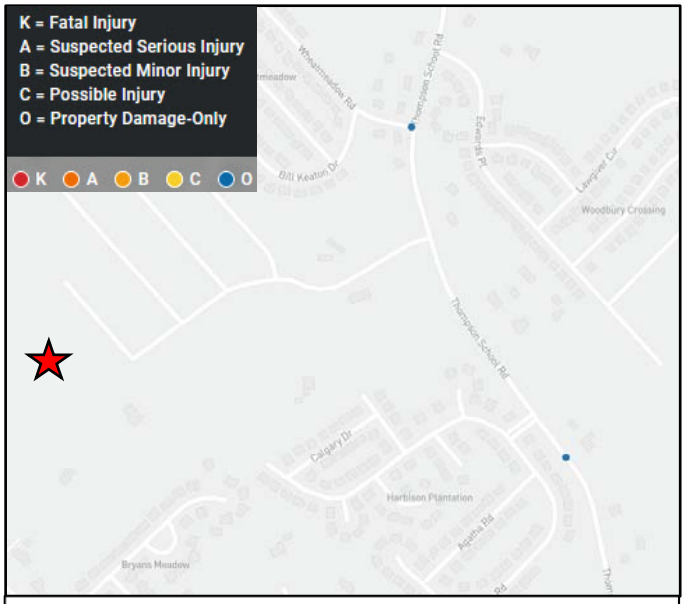
KAT Route 22, "Broadway"

Given that the distance to the nearest public bus service is several miles, with no sidewalks or bike lanes available to access the bus stop without a vehicle, the proposed subdivision is not expected to experience a reduction in vehicle trips due to public transit usage.

- **CRASH DATA**:

For this project, access to the AASHTOWare Safety online platform was provided. This AASHTO (American Association of State Highway and Transportation Officials) platform is a component of several offerings that include compiling crash data for local state DOTs to use in safety analyses. TDOT provides vehicle crash data to this system and is an extension of its existing E-TRIMS (Enhanced Tennessee Roadway Information Management System) database. The crash data in the E-TRIMS system is from the statewide TITAN (Tennessee Integrated Traffic Analysis Network) database. The TITAN database includes all reportable vehicle crash data from Tennessee law enforcement agencies.

In the vicinity of the proposed residential subdivision along Thompson School Road, two crashes occurred during the past 3 years between August 7th, 2022, and August 7th, 2025, with none at the intersection with Squirrel Run Lane. Both of these were angle crashes and resulted in property-damage-only (PDO) without injuries or fatalities. One occurred north of Squirrel Run Lane, at the intersection of Wheatmeadow Road and Thompson School Road, and the other was at a private driveway on Thompson School Road to the south.



Crashes in Study Area from AASHTOWare Safety Platform

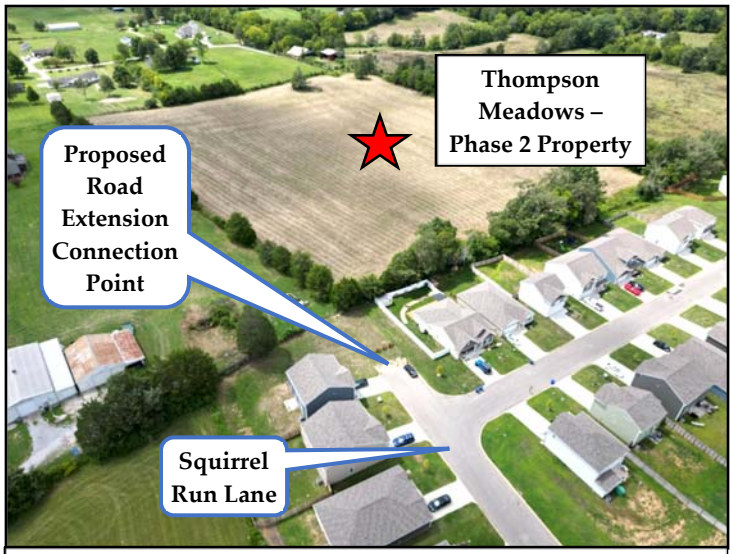
Overall, the crash data along Thompson School Road does not readily indicate potential issues with additional vehicles generated to and from the proposed Phase 2 residential development.

PROJECT DESCRIPTION

- **LOCATION AND SITE PLAN:**

The proposed plan layout with up to a maximum of 117 multi-family duplexes on 29.3 +/- acres is designed by Urban Engineering and illustrated in Figure 3. The design features one new internal street and an extension of Squirrel Run Lane from the first phase of the subdivision. As shown in the figure, access to Phase 2 will be provided by tying into the current end of Squirrel Run Lane via a road extension. Due to physical property constraints, the connection point between Phase 2 and Phase 1 will necessitate a short section of narrowed road width and right-of-way.

Primary external road access to and from outside destinations for Phase 2 (and Phase 1) will be provided by the existing t-intersection of Thompson School Road at Squirrel Run Lane. Auxiliary external road access will also be provided via the road interconnection to Wheatmeadow Subdivision to the northeast, but is expected to experience little to no vehicular activity from Phase 1 or Phase 2 residents since Squirrel Run Lane provides much shorter, quicker, and direct access to Thompson School Road. The new internal road and the extension of Squirrel Run Lane will end at cul-de-sacs, with Squirrel Run Lane having two "bulb-outs" at horizontal curves for additional access and lots to the corners of the development property.



View of Development Site at Current End of Squirrel Run Lane (Looking West)

The Thompson Meadows - Phase 2 Subdivision will have some open space and common areas for the residents. In addition to open common areas, the developer has already provided a playground and pavilion in Phase 1, and it is accessible via a sidewalk at the end of Grasshopper Lane. Phase 2 of the subdivision will not have any internal sidewalks provided.

The typical lot dimensions for the duplexes in Phase 2 of the subdivision will be between 110 to 130 feet deep and 32.5 feet wide, providing a typical duplex lot area of between 3,575 to 4,225 square feet. Each

duplex will have a garage and driveway.

It should be noted that in addition to the proposed duplexes, a portion of the development parcel will be constructed with four single-family detached houses in its northwestern corner near the intersection of Majors Road and Coppock Road. These house lots will all be approximately one acre in size. These houses will not be connected to the internal roads for the duplexes via roadway and will have individual separate driveways on Majors Road. The generated trips from these proposed houses are not expected to be minimal and are not included in the analysis.

The completion schedule for this second phase of residential development depends on economic factors and construction timelines. This project is also contingent on permitting, design, and other regulatory approvals. Overall, the local real estate market for new housing remains quite competitive due to population growth and other factors. Thus, this study assumed that the total construction build-out of the Thompson Meadows - Phase 2 Subdivision and full occupancy would occur by 2028.

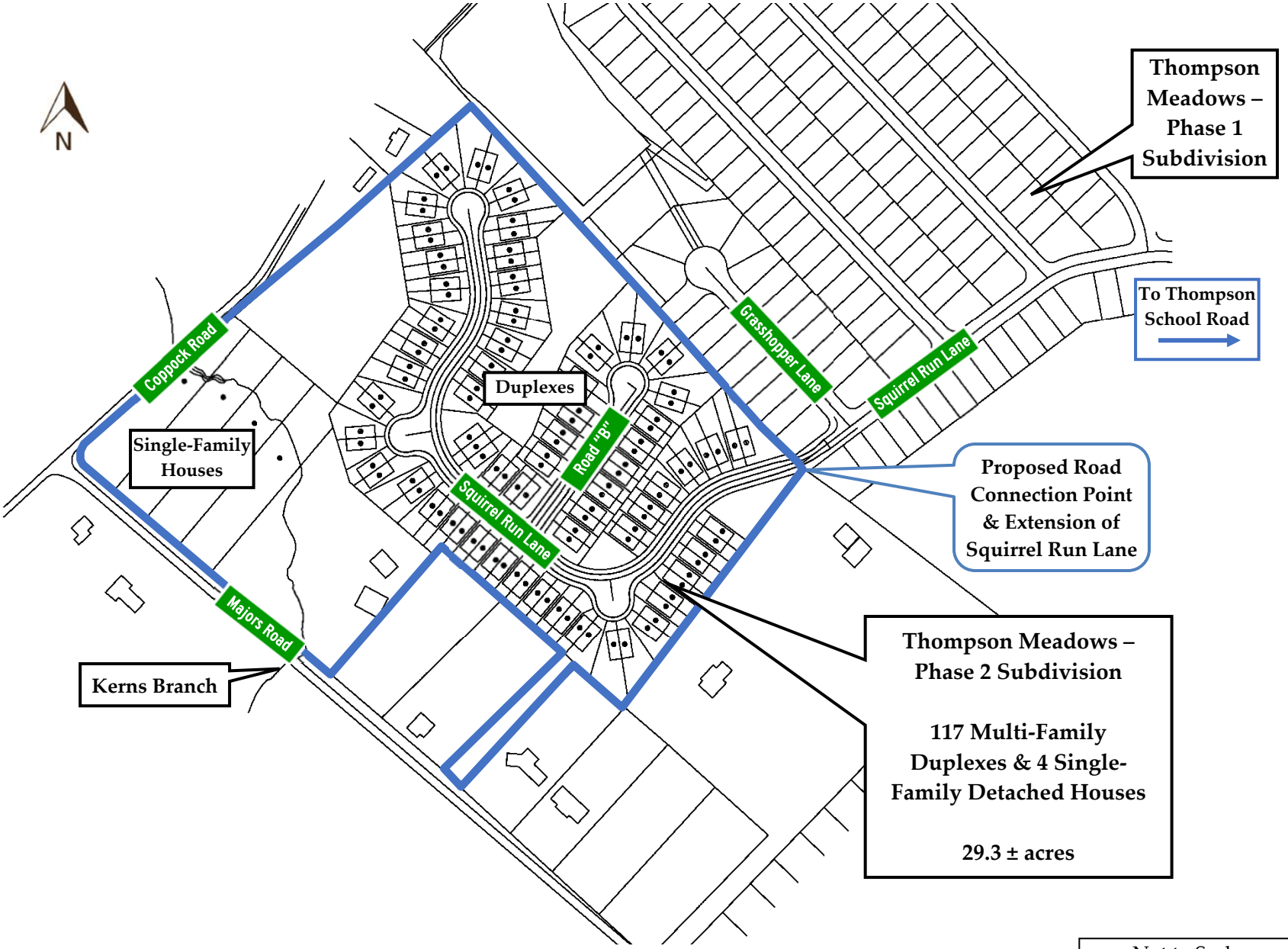


Figure 3
Proposed Plan Layout
Thompson Meadows – Phase 2 Subdivision

Not to Scale – Annotated by Ajax Engineering for Display Purposes

- **PROPOSED USES AND ZONING REQUIREMENTS:**

The existing parcel comprising the Thompson Meadows - Phase 2 Subdivision development property is in Knox County, TN. In June 2025, the parcel was approved for rezoning to Planned Residential (PR) by the Knox County Commission, with a density of up to 4.75 units per acre. Uses permitted in the Planned Residential (PR) zone include single-family dwellings, duplexes, and multi-dwelling structures and developments. The most recently published online KGIS zoning map is provided in Appendix C and shown here. The existing adjacent surrounding zoning and land uses are the following:

KGIS Existing Zoning Map

- All of the properties to the north are zoned Agricultural (A) and consist of three small lots on the south side of Coppock Road, with one lot containing a single-family detached house, and the rest remaining unoccupied. Single-family detached houses on large lots line the north side of Coppock Road. All of these properties have external access via Coppock Road.
- To the west and across Majors Road, the properties consist of single-family detached houses on larger lots and are zoned as Agricultural (A). One sizable parcel with a single-family detached house, barns, fields, and outbuildings is zoned as Low Density Residential (RA) on the other side of Majors Road. All of these properties to the west have external road access via Majors Road.
- The properties to the south and southwest are zoned Agricultural (A) and consist of single-family detached houses on large lots, located on the east side of Majors Road. All these properties have external access via Majors Road.
- The Thompson Meadows – Phase 2 Subdivision property will be bound by Phase 1 to the east-northeast, which is zoned as Planned Residential (PR). All the houses in Phase 1 are single-family detached and have external road access to Thompson School Road via Squirrel Run Lane or Wheatmeadow Road in the adjacent Wheatmeadow Subdivision.

- **ON-SITE CIRCULATION:**

The total length of the new internal road and the extension of Squirrel Run Lane in the Thompson Meadows - Phase 2 Subdivision will be 0.42 miles (2,206 feet), designed and constructed to Knox County specifications. The development will have asphalt-paved internal roadways with extruded concrete curbs. The lane widths internally will be 13 feet each, for a total pavement width of 26 feet. Due to physical property constraints, the connection point between Phase 2 and Phase 1 will necessitate a short section of narrowed road width and right-of-way. Within this area, Squirrel Run Lane will have a pavement width of 20 feet, and the roadway will be reduced from the standard width of 26 feet for approximately 135 feet. While this section will be 6 feet less than the prescribed by Knox County, this narrowed road area will operate as a means of traffic calming between the two phases.

No sidewalks are proposed on the new internal streets. All internal roads within the subdivision will be designated as public roads. The public right-of-way within the development will be 50 feet wide, and the internal streets will be dedicated as public roads. Knox County will maintain the public roads in the development after construction.

- **SERVICE AND DELIVERY VEHICLE ACCESS AND CIRCULATION:**

In addition to residential passenger vehicles, the internal roadways will provide service, delivery, maintenance, and access for fire protection/rescue vehicles. These vehicle types will not impact roadway operations except when they occasionally enter and exit the development. Curbside private garbage collection services are expected to be available for this phase of the residential subdivision if desired. Except for the narrowed road section, which will require a variance, the new public streets will be designed and constructed to Knox County specifications and are expected to be adequate for fire protection and rescue vehicles, trash collection trucks, and single-unit delivery trucks. The development's internal drives will accommodate larger vehicle types and residents' standard passenger vehicles, and be sufficiently sized to allow vehicles to turn around within the proposed cul-de-sacs.

ANALYSIS OF EXISTING AND PROJECTED CONDITIONS

- **EXISTING TRAFFIC CONDITIONS:**

This study conducted a 6-hour traffic count at the intersection of Thompson School Road at Squirrel Run Lane on Thursday, August 26th, 2025. Local schools were in session at least two weeks after the summer break to allow for traffic patterns to normalize. Manual traffic counts were conducted to identify and tabulate the morning and afternoon peak period volumes, as well as the travel directions, near the proposed development site. The intersection had an observed morning peak hour of 7:15 – 8:15 am and an afternoon peak hour from 4:45 – 5:45 pm. The manual tabulated traffic counts at the intersection can be reviewed in Figure 4 and Appendix D. Some observations of the adjacent Thompson School Road corridor include the following:

- No bicyclists or pedestrians were observed along Thompson School Road during the morning or afternoon traffic counts. However, two distinct groups of school-age children were observed walking down Squirrel Run Lane to Thompson School Road during school bus pickups and departures. In the morning, 18 children were picked up by a school bus traveling southbound on Thompson School Road at 7:00 am, and 15 children were picked up at 7:21 am. In the afternoon, 27 children were dropped off on Thompson School Road at Squirrel Run Lane at 2:51 pm, and 22 were dropped off at 4:12 pm. The afternoon school bus travel was northbound on Thompson School Road. All of the school bus pickups and drop-offs at Squirrel Run Lane caused brief backups on Thompson School Road in both directions.
- The majority of observed vehicles during the traffic count were passenger cars. However, many school buses, dump trucks, and work trucks with construction trailers were observed on Thompson School Road.
- During the afternoon from 3:45 to 4:00 pm, a large influx of southbound vehicles, including many school buses, was observed traveling south on Thompson School Road. This large influx of vehicles may indicate that some motorists use Thompson School Road as a means to avoid the Gibbs public school traffic along Tazewell Pike during afternoon dismissals, since it roughly parallels Tazewell Pike to the west.
- Overall, greater numbers of vehicles traveled southbound on Thompson School Road in the morning peak hour and the opposite direction in the afternoon peak hour. The vast majority of vehicles entering and exiting Thompson Meadows – Phase 1 Subdivision at Squirrel Run Lane were observed traveling to and from the south.

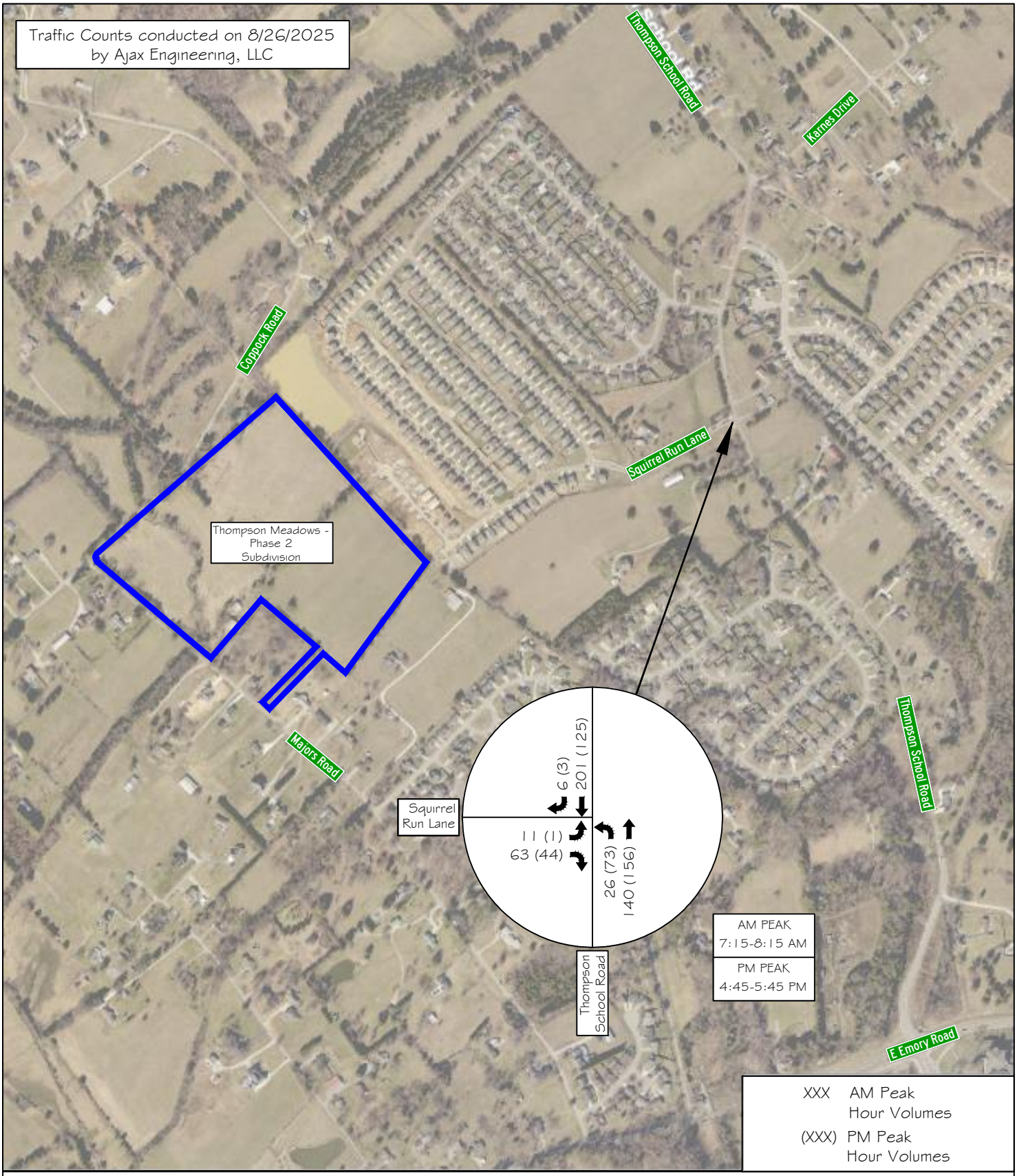


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FIGURE 4

Thompson Meadows - Phase 2 Subdivision

2025 Peak Hour Traffic Volumes -
EXISTING TRAFFIC CONDITIONS

Capacity analyses were undertaken to determine the Level of Service (LOS) for the existing 2025 intersection traffic volumes in Figure 4, shown at the intersection of Thompson School Road at Squirrel Run Lane. The capacity analyses were calculated following the Highway Capacity Manual (HCM) methods and utilizing Synchro (Version 12) traffic software.

Methodology:

LOS is a qualitative measurement developed by the transportation profession to express how well an intersection or roadway performs based on a driver's perception. LOS designations range from LOS A to LOS F. The designation of LOS A signifies a roadway or intersection operating at best, while LOS F signifies road operations at worst. This grading system provides a reliable, straightforward means to communicate road operations to the public. The HCM lists the level of service criteria for unsignalized intersections and signalized intersections.

LOS is defined by the delay per vehicle (in seconds), and roadway facilities are also characterized by the volume-to-capacity ratio (v/c). LOS designations, which are based on delay, are reported differently for unsignalized and signalized intersections. For example, a delay of 20 seconds at an unsignalized intersection would indicate LOS C, representing the additional delay a motorist would experience traveling through the intersection. Also, for example, a v/c ratio of 0.75 for an approach at an unsignalized intersection indicates that it is operating at 75% of its available capacity. This difference is primarily due to motorists' different expectations between the two road facilities. Generally, for most instances, the LOS D / LOS E boundary is considered the upper limit of acceptable delay during peak periods in urban and suburban areas.

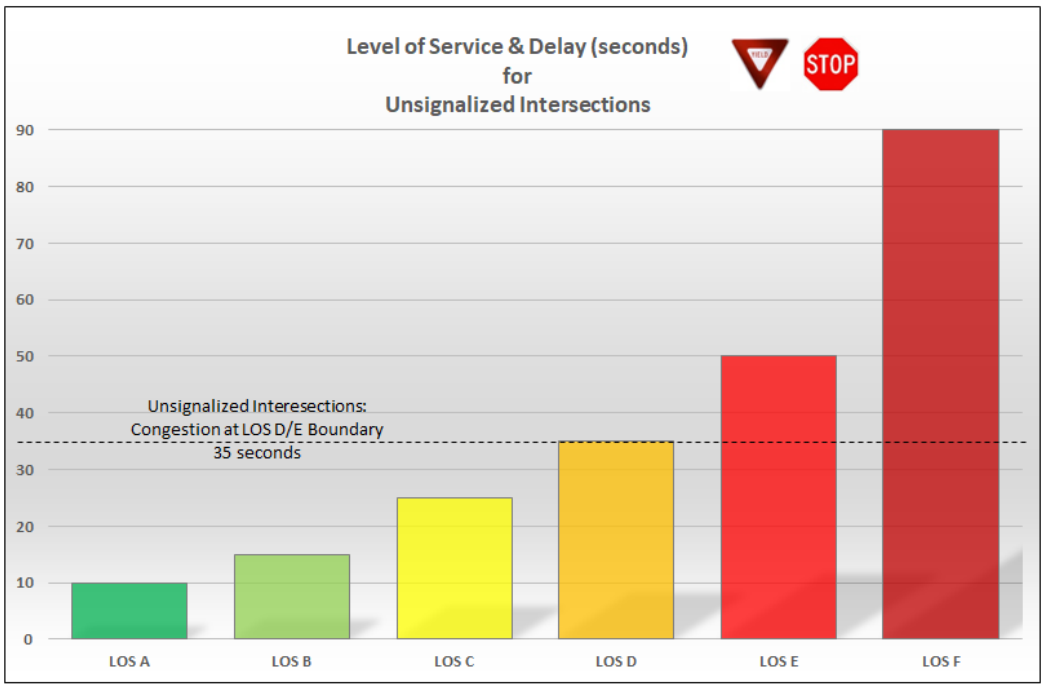
For unsignalized intersections, LOS is measured in terms of delay (in seconds). This measure attempts to quantify delay, including travel time, driver discomfort, and fuel consumption. For unsignalized intersections, the analysis assumes that the mainline thru and right-turn traffic does not stop and is not affected by the traffic on the minor side streets. Thus, the LOS for a two-way stop (or yield) controlled intersection is defined by

the delay for each minor approach and the left-turn movements on the major street. Table 2 lists the level of service criteria for unsignalized intersections. The analysis results of unsignalized intersections using the HCM methodologies are conservative due to the more significant vehicle gap parameters used. More often, in normal road conditions, drivers are more willing to accept smaller gaps in traffic than what is modeled using the HCM methodology. The unsignalized intersection methodology also does not account for more significant gaps that nearby upstream and downstream signalized intersections can sometimes produce. For unsignalized intersections, in most instances, the upper limit of acceptable delay during peak hours is the LOS D/E boundary at 35 seconds.

TABLE 2
LEVEL OF SERVICE AND DELAY FOR UNSIGNALIZED INTERSECTIONS

LEVEL OF SERVICE	DESCRIPTION	CONTROL DELAY (seconds/vehicle)
A	Little or no delay	0 - 10
B	Short Traffic Delays	>10 -15
C	Average Traffic Delays	>15 - 25
D	Long Traffic Delays	>25 - 35
E	Very Long Traffic Delays	>35 - 50
F	Extreme Traffic Delays	>50

Source: Highway Capacity Manual, 7th Edition



The intersection capacity results for the existing 2025 peak hour traffic are shown in Table 3. The intersection in the table is shown with a LOS (Level of Service) designation, delay (in seconds), and v/c ratio (volume-to-capacity ratio) for the AM and PM peak hours. Appendix E includes the software worksheets for the existing 2025 peak hour capacity analyses.

As shown in Table 3, the intersection of Thompson School Road at Squirrel Run Lane is calculated to operate with excellent LOS and short vehicle delays in the 2025 existing peak hour conditions.

TABLE 3
INTERSECTION CAPACITY ANALYSIS RESULTS -
2025 EXISTING PEAK HOUR TRAFFIC CONDITIONS

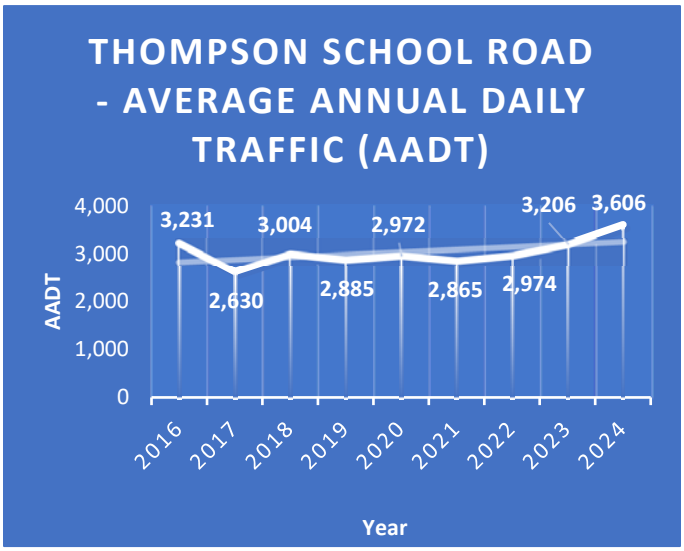
INTERSECTION	TRAFFIC CONTROL	APPROACH/ MOVEMENT	AM PEAK			PM PEAK		
			LOS [a]	DELAY [b] (seconds)	v/c [c]	LOS [a]	DELAY [b] (seconds)	v/c [c]
Thompson School Road (NB & SB) at Squirrel Run Lane (EB)	STOP Unsignalized	Northbound Left	A	7.8	0.024	A	7.7	0.061
		Eastbound Left/Right	B	10.7	0.151	A	9.5	0.065

Note: All analyses were calculated in Synchro 12 software and reported using HCM 7th Edition intersection methodology
[a] Level of Service , [b] Average Delay (sec/vehicle) , [c] Volume-to-Capacity Ratio

- **PROJECTED TRAFFIC CONDITIONS WITHOUT THE PROJECT:**

Horizon year traffic conditions represent the projected traffic volumes in the study area without the proposed project being developed (no-build option). Phase 2 development's build-out and full occupancy are assumed to occur by 2028.

According to the nearby TDOT count station, vehicular traffic has grown just slightly over the past few years. Specifically, the TDOT data shown in Appendix A indicate that Thompson School Road, to the southeast of the development site, has experienced a positive annual growth rate of 1.4% over the past eight years, from 2016 to 2024.



In addition to the normal growth in general traffic volume in the area, a new, substantial, and unrelated residential development has begun construction. This development, Thompson Creek Subdivision, is located north of Squirrel Run Lane and will have external road access to Thompson School Road only. This development will include a total of 313 housing units, a mixture of townhouses and single-family detached houses, and a portion of its residents will travel thru the intersection of Thompson School Road at Squirrel Run Lane. A Transportation Impact Study (TIS) was performed in 2022 by Fulghum MacIndoe for the Thompson Creek Subdivision development. The results of this study projected that at its full build-out, a total of 116 vehicles will exit and travel southbound on Thompson School Road and past Squirrel Run Lane in the AM peak hour and 79 vehicles in the PM peak hour. Likewise, the study projected a total of 41 vehicles will enter by traveling northbound on Thompson School Road past Squirrel Run Lane in the AM peak hour and 133 vehicles in the PM peak hour. This data from the other TIS is included in Appendix F.

Besides this other, unrelated residential development, this study for the Thompson Meadows – Phase 2 Subdivision used an annual growth rate of +2% to calculate general future growth on Thompson School Road up to 2028, higher than recorded by TOT, to ensure a conservative result. The annual growth rate of 2% was applied to the existing 2025 volumes tabulated on Thompson School Road to estimate future volumes in the horizon year of 2028, without including any proposed development traffic from Thompson Meadows – Phase 2 or Thompson Creek

Subdivision.

Figure 5 shows the projected horizon year traffic volumes on Thompson School Road at Squirrel Run Lane during the 2028 AM and PM peak hours without the proposed additional residential subdivision developments.

Although current construction traffic related to Thompson Creek Subdivision's development was tabulated in the collected traffic counts and theoretically should be removed from the analysis data or subtracted from the collected volumes, these vehicles were not identified, and these vehicle volumes were retained in the data, resulting in a further conservative analysis.

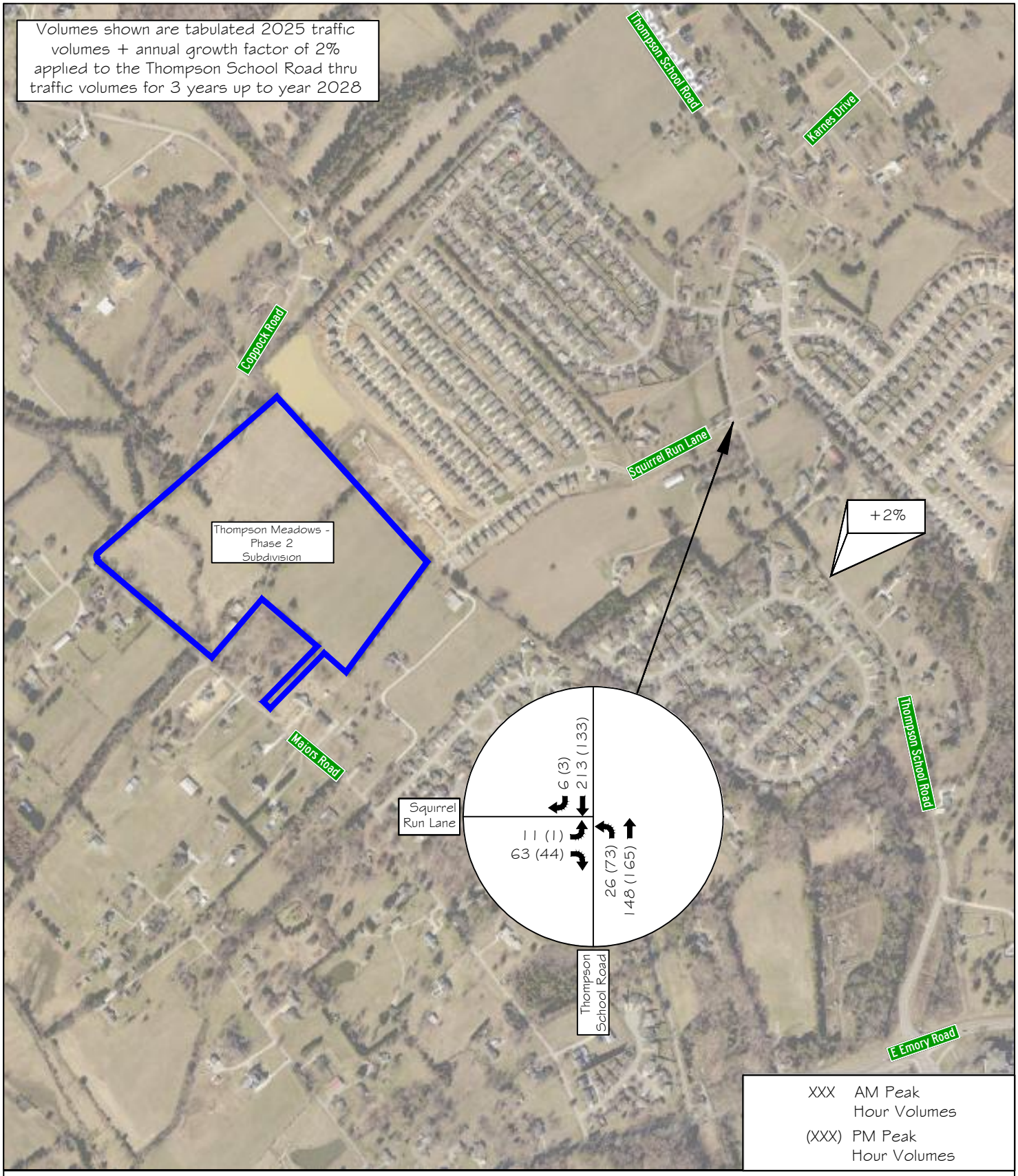


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FIGURE 5

Thompson Meadows - Phase 2 Subdivision

2028 Peak Hour Traffic Volumes - PROJECTED TRAFFIC CONDITIONS WITHOUT THE PROJECT

Capacity analyses were conducted to determine the projected LOS in 2028, without any new development trips, at the studied intersection. The results are presented in Table 4, and Appendix E includes the capacity analysis worksheets generated by the software.

The results in Table 4 indicate just slightly worse vehicle delays at the intersection in the 2028 projected conditions compared to the existing 2025 conditions. This result is due to the small increase in Thompson School Road thru traffic volumes resulting from the assumed general background growth of 2% over three years.

TABLE 4
INTERSECTION CAPACITY ANALYSIS RESULTS -
2028 PROJECTED PEAK HOUR TRAFFIC CONDITIONS WITHOUT THE PROJECT

INTERSECTION	TRAFFIC CONTROL	APPROACH/ MOVEMENT	AM PEAK			PM PEAK		
			LOS [a]	DELAY [b] (seconds)	v/c [c]	LOS [a]	DELAY [b] (seconds)	v/c [c]
Thompson School Road (NB & SB) at Squirrel Run Lane (EB)	STOP Unsignalized	Northbound Left	A	7.9	0.024	A	7.8	0.062
		Eastbound Left/Right	B	10.9	0.154	A	9.5	0.066

Note: All analyses were calculated in Synchro 12 software and reported using HCM 7th Edition intersection methodology
[a] Level of Service , [b] Average Delay (sec/vehicle) , [c] Volume-to-Capacity Ratio

- **TRIP GENERATION:**

A generated trip is a single or one-direction vehicle movement entering or exiting the study site. The estimated traffic generated by a maximum of 117 duplexes in the Thompson Meadows – Phase 2 Subdivision was based on the equations provided by Knoxville/Knox County Planning. These equations from Knoxville/Knox County Planning were developed from an extensive local study in the surrounding area to estimate multi-family housing units, including duplexes, townhouses, and apartment trip generation. For Knox County, this is the preferred rate to use for multi-family residential units. This local rate is slightly higher than the trip rates for similar land uses in the widely used ITE Trip Generation Manual.

The data and calculations from the local trip generation study for the proposed land use are shown in Appendix G. A summary of this information is presented in Table 5:

TABLE 5
TRIP GENERATION FOR THOMPSON MEADOWS - PHASE 2 SUBDIVISION
117 Multi-Family Duplexes

ITE LAND USE CODE	LAND USE DESCRIPTION	# OF UNITS	GENERATED DAILY TRAFFIC	GENERATED TRAFFIC AM PEAK HOUR			GENERATED TRAFFIC PM PEAK HOUR		
				ENTER	EXIT	TOTAL	ENTER	EXIT	TOTAL
Local Trip Rate	Multi-Family Duplexes	117	1,099	22%	78%		55%	45%	
				14	48	62	48	40	88
Total New Volume Site Trips			**1,099**	**14**	**48**	**62**	**48**	**40**	**88**

Data from Local Trip Rates
Trips calculated by using Fitted Curve Equations

For the proposed Thompson Meadows – Phase 2 Subdivision with a maximum total of 117 duplexes, it is estimated that 14 vehicles will enter and 48 will exit, resulting in a total of 62 generated trips during the AM peak hour in 2028. Similarly, it is estimated that 48 vehicles will enter and 40 will exit, resulting in a total of 88 generated trips during the PM peak hour in 2028. The calculated trips generated for an average weekday are estimated to be 1,099 vehicles for the proposed development. No vehicle trip reductions were included in the calculations or analysis. All these estimated vehicle trips will enter and exit via the existing entrance on Squirrel Run Lane at Thompson School Road, as this intersection will be the primary road access point for Phase 2 subdivision residents to and from external destinations.

- **TRIP DISTRIBUTION AND ASSIGNMENT:**

The projected trip distribution and assignment for the Thompson Meadows – Phase 2 Subdivision development are based on several sources and engineering judgment. The first source is based on the existing traffic count volumes and the observed travel directions collected on Thompson School Road.

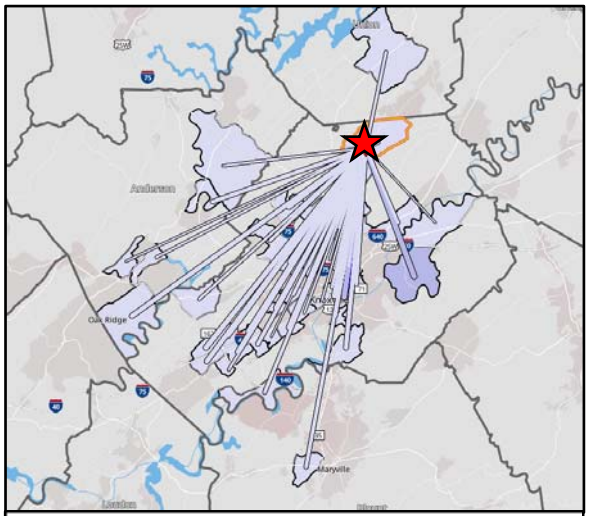
The observed entering and exiting splits on Squirrel Run Lane at Thompson School Road are projected to be a perfect analog for the future residents of the Thompson Meadows – Phase 2 Subdivision development, since this road currently serves Phase 1 and a similar residential land use as proposed for Phase 2. Phase 1 has 189 single-family houses and is 100% fully built out and occupied. The entering and exiting percentages during the observed AM and PM peak hours to and from Squirrel Run Lane are shown in the adjacent table:

Observed Entering and Exiting Vehicle Distribution at Squirrel Run Lane and Thompson School Road

	Volumes	%
AM PEAK HOUR		
ENTER FROM NORTH	6	19%
ENTER FROM SOUTH	26	81%
EXIT TO NORTH	11	15%
EXIT TO SOUTH	63	85%
PM PEAK HOUR		
ENTER FROM NORTH	3	4%
ENTER FROM SOUTH	73	96%
EXIT TO NORTH	1	2%
EXIT TO SOUTH	44	98%

Overall, the entering and exiting motorists for the first phase of Thompson Meadows demonstrated a distinct preference for travel to and from the south on Thompson School Road, particularly during the PM peak hour. In the AM peak hour, entering and exiting travel to and from the north occurred slightly more often, but still with an overwhelming preference to and from the south.

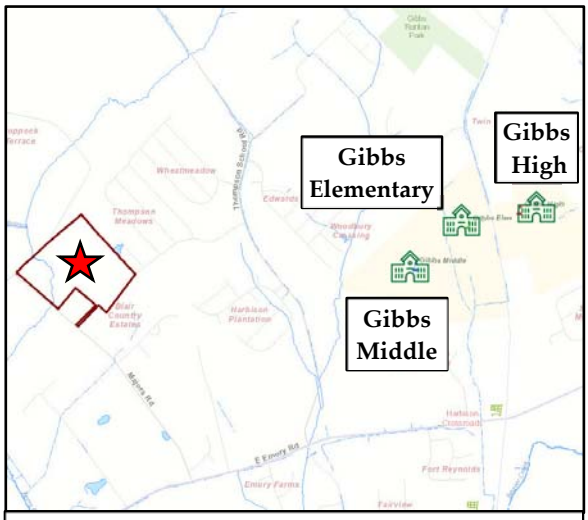
Another source for determining the projected trip distribution is based on work-related trips in the local area. Work-based trips will be a significant impetus for trips generated by the development, and these trips are more likely to travel to and from the southwest and south. This assertion is based on data from the United States Bureau website for Census Tract 64.02, where the proposed subdivision property is located. Based



Top 50 Locations of 2022 Census Bureau Work-Based Trips to & from Census Tract 64.02

on the 2022 (latest available) census data, as presented in Appendix H, most work-based trips in the surrounding area correspond to downtown Knoxville, the University of Tennessee, areas of West Knoxville, and Maryville, TN. Some of the work-based trips also correspond to the Forks of the River Industrial Park, Oak Ridge, and the Alcoa, TN, areas. This data suggests a fairly heavy future preference for travel to and from the south on Thompson School Road for work-related purposes.

In addition to employment centers, some generated traffic will travel to and from public and private schools. Schools will be another incentive for taking external trips. The proposed subdivision property is currently zoned for all the nearby Gibbs Public Schools - elementary, middle, and high school. The zoned public schools for this development property are located relatively close by, to the east of the development site. All these schools are approximately 2.2 miles from the proposed subdivision by roadway. All school-related vehicular travel to and from the proposed subdivision will be required to utilize Thompson School Road. Likely, the majority of school traffic to and from the proposed subdivision will travel using E Emory Road to and from the south. Still, as noted in the previous study for the Thompson Creek Subdivision, some traffic is likely to use Karnes Drive, a bit further north of Squirrel Run Lane off Thompson School Road, which provides an eastward route to Tazewell Pike.



Zoned Public School Locations

The Knox County Schools Transportation Department has developed Parental Responsibility Zones (PRZs) to determine whether students are eligible for transportation services to and from school. The PRZ is defined as being 1.5 miles for grades 6–12 and 1.0 miles for grades K–5, from where the students' parcel is accessed to the point where the buses unload at the school. The proposed subdivision will be outside the PRZ for all the zoned public schools. All school-age children attending these schools in the development will be able to utilize the school bus service if desired.

Based on all these factors, Figure 6 shows the projected distribution of Phase 2 traffic entering and exiting at the intersection of Thompson School Road and Squirrel Run Lane. The percentages shown in the figure pertain only to the trips generated by the proposed dwellings in Phase 2 of

the subdivision, calculated from the local trip rates. Ultimately, the projected trip distribution was heavily based on the observed residential traffic from Phase 1 already occurring at the intersection of Thompson School Road at Squirrel Run Lane.

Figure 7a shows the traffic assignment of the computed trips generated by the Thompson Meadows - Phase 2 Subdivision with a maximum of 117 duplexes based on the assumed distribution of trips shown in Figure 6.

Figure 7b illustrates the trips calculated for the non-related, but nearby, residential development of Thompson Creek Subdivision, as previously discussed and documented in a TIS by Fulghum MacIndoe. This other subdivision is also assumed to be fully built and occupied by 2028.

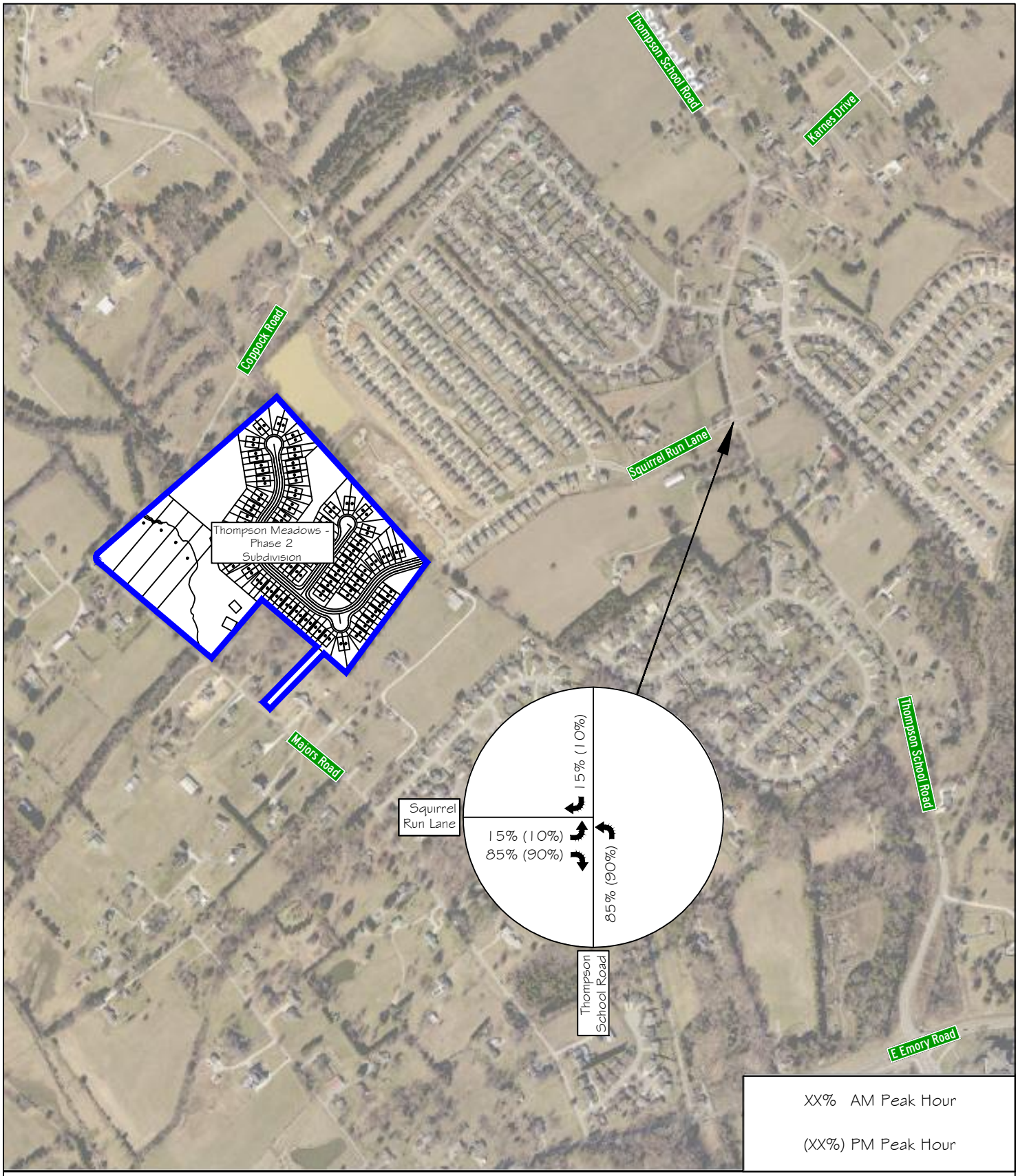


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FIGURE 6

Thompson Meadows - Phase 2 Subdivision

Directional Distribution of Generated Traffic during AM and PM Peak Hours

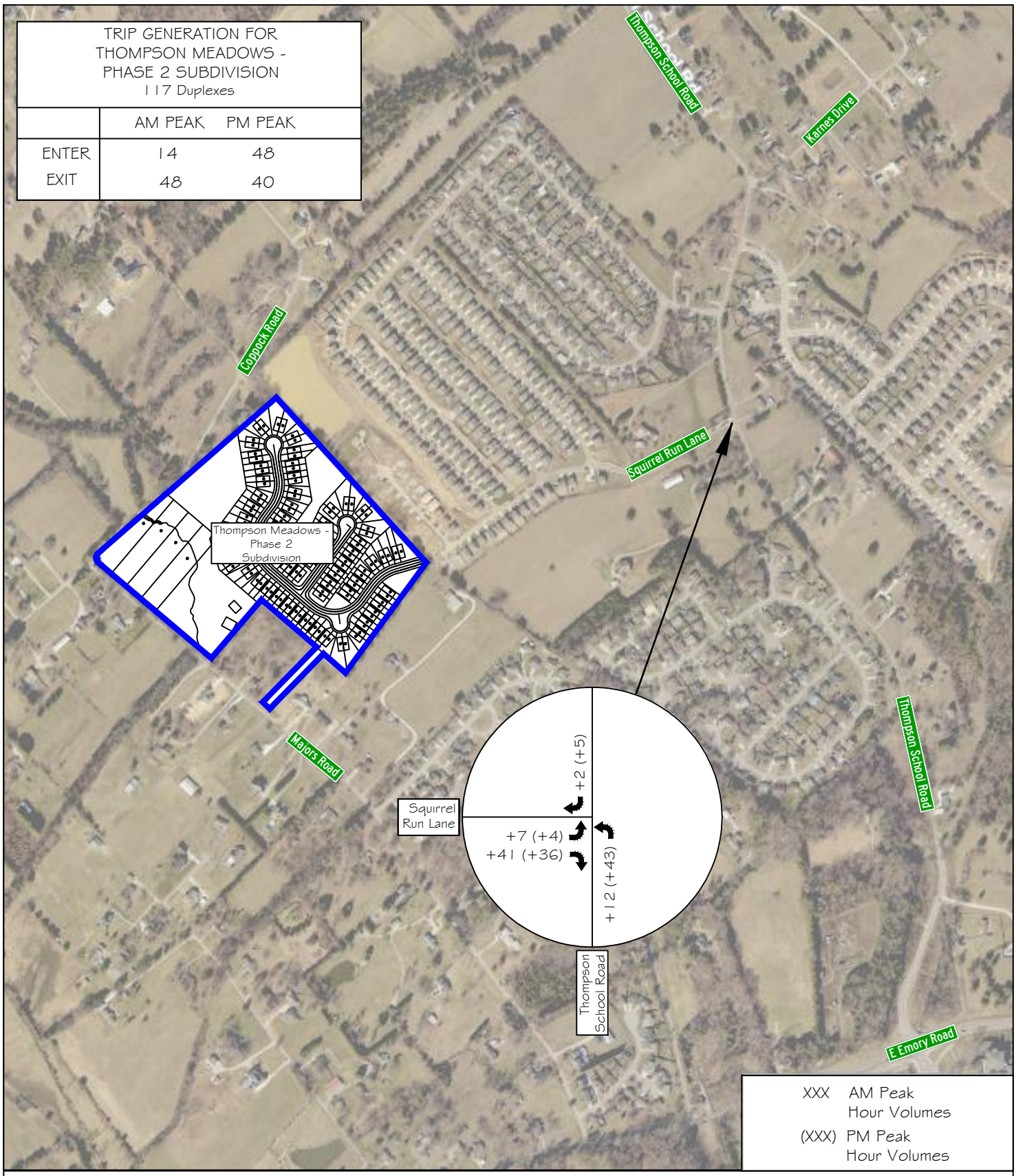

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FIGURE 7a

Thompson Meadows - Phase 2 Subdivision

Traffic Assignment of Generated Trips during AM and PM Peak Hours

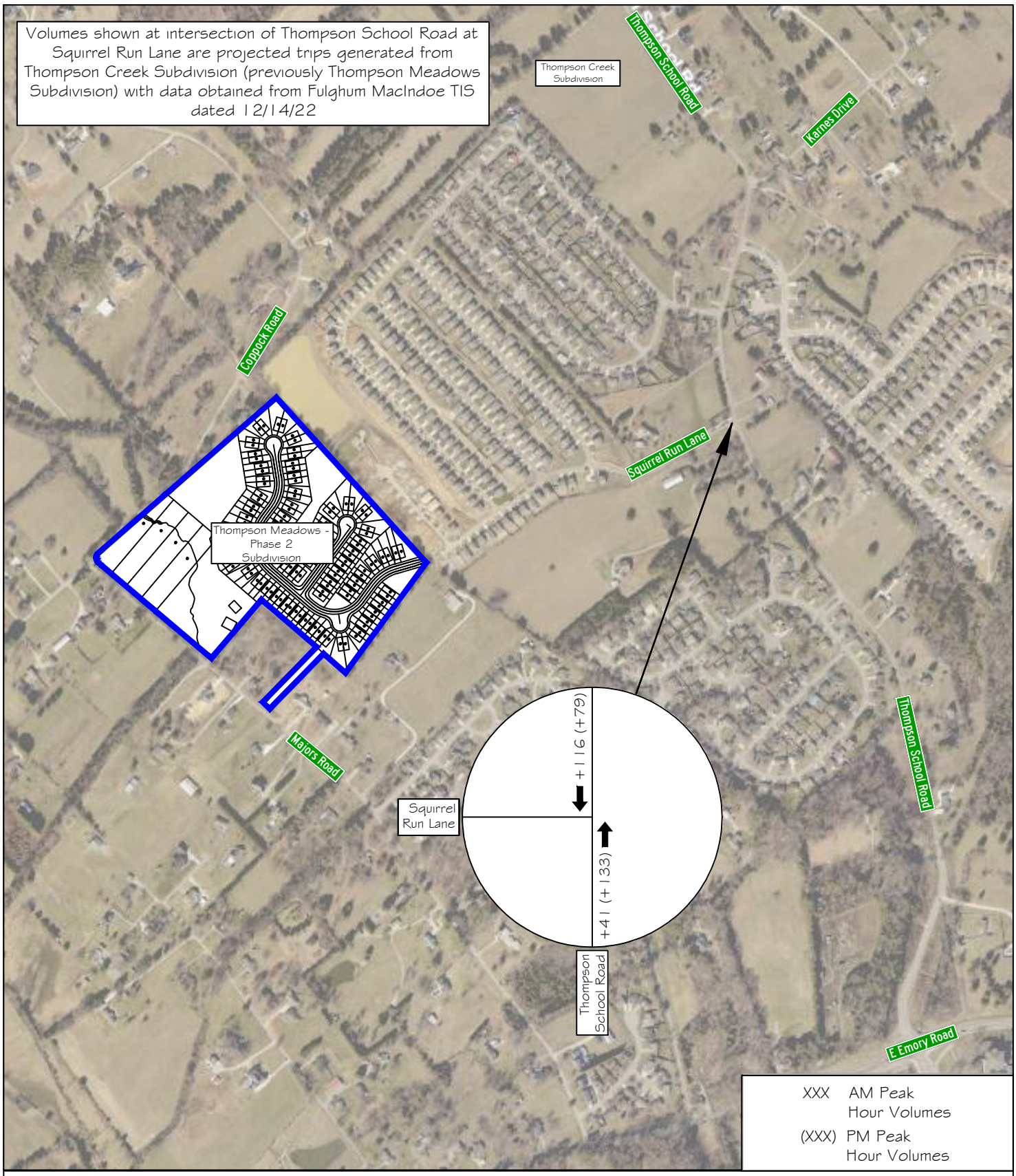

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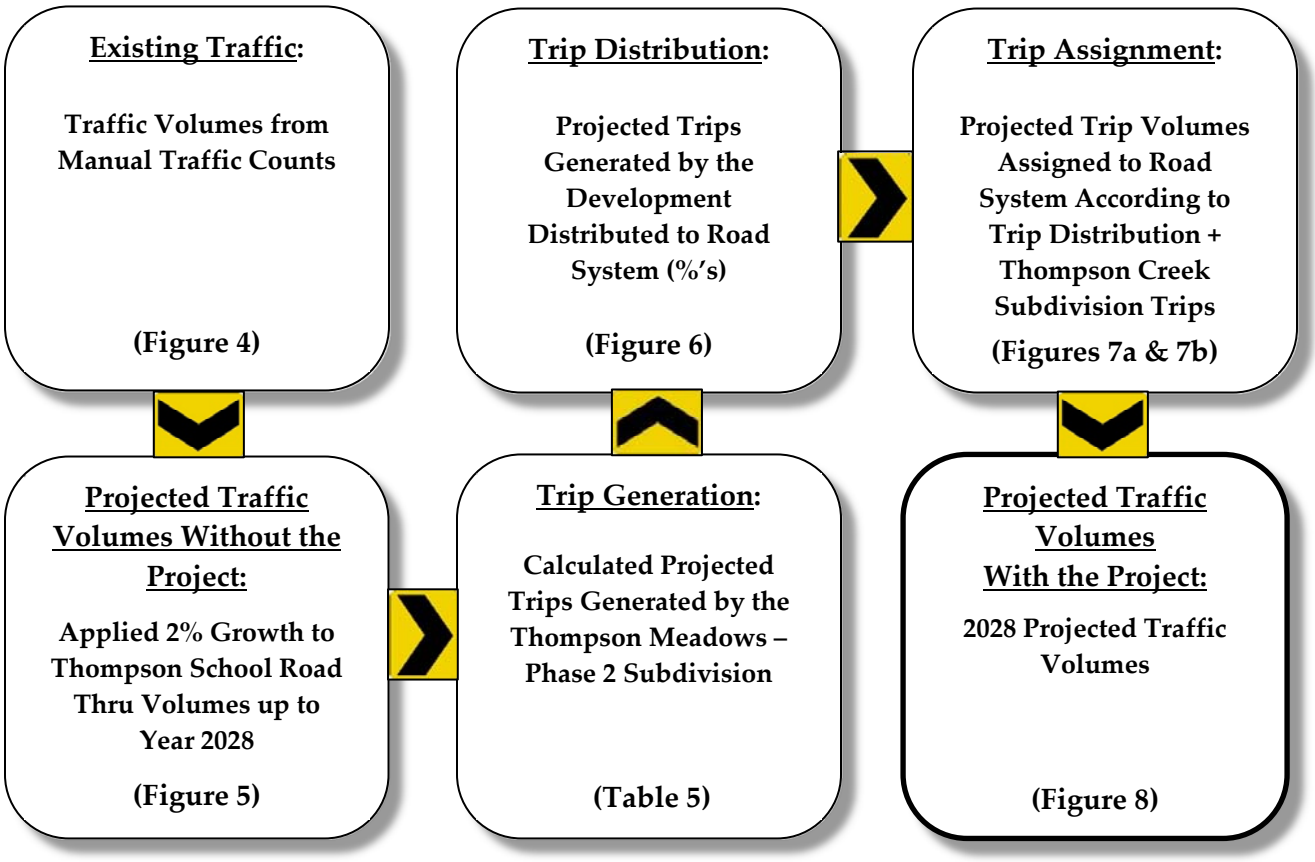
FIGURE 7b

Thompson Meadows - Phase 2 Subdivision

Traffic Assignment of Generated Trips during AM and PM Peak Hours from Thompson Creek Subdivision

- **PROJECTED TRAFFIC CONDITIONS WITH THE PROJECT:**

Several additive steps were taken to estimate the total projected traffic volumes at the intersection of Thompson School Road at Squirrel Run Lane when the Thompson Meadows - Phase 2 Subdivision (and Thompson Creek Subdivision) is constructed and fully occupied in 2028. The steps are illustrated below for clarity and review:



The calculated peak hour traffic generated by the Thompson Meadows - Phase 2 Subdivision was added to the 2028 horizon year traffic by following the predicted trip distributions and assignments, plus the trips generated by the Thompson Creek Subdivision. This procedure was conducted to determine the total projected traffic volumes at the intersection of Thompson School Road and Squirrel Run Lane for the year 2028. Figure 8 shows the projected volumes at this intersection in 2028.

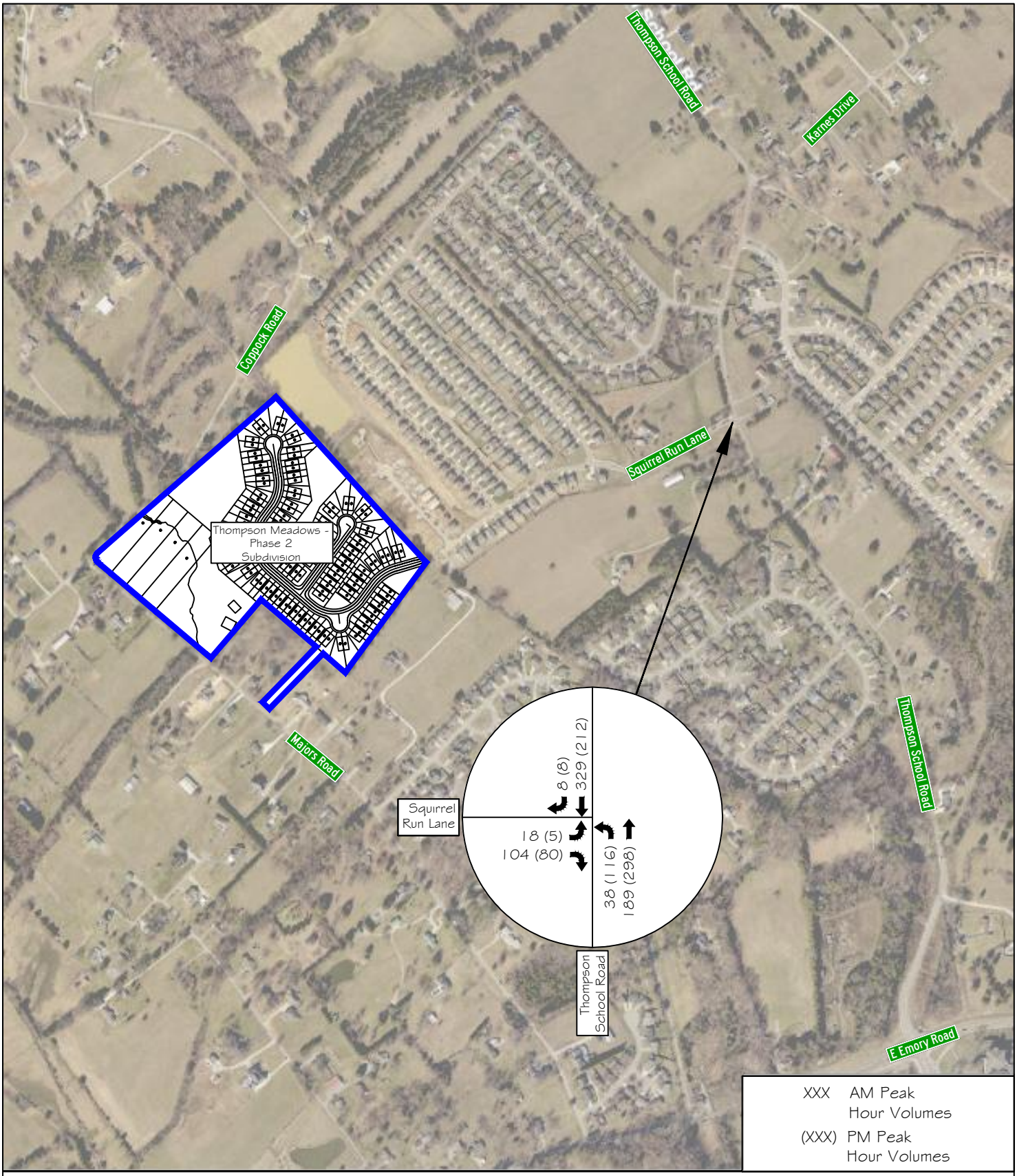


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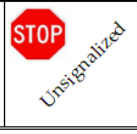
FIGURE 8

Thompson Meadows - Phase 2 Subdivision

2028 Peak Hour Traffic Volumes - PROJECTED TRAFFIC CONDITIONS WITH THE PROJECT

The intersection capacity results from the projected 2028 peak hour traffic with Phase 2 of the subdivision (and the Thompson Creek Subdivision) are shown in Table 6. The results in the table show that the studied intersection is projected to operate with excellent LOS and short vehicle delays in the 2028 AM and PM peak hours. Appendix E includes the capacity analysis worksheets from the software.

TABLE 6
INTERSECTION CAPACITY ANALYSIS RESULTS -
2028 PROJECTED PEAK HOUR TRAFFIC CONDITIONS WITH THE PROJECT

INTERSECTION	TRAFFIC CONTROL	APPROACH/ MOVEMENT	AM PEAK			PM PEAK		
			LOS [a]	DELAY [b] (seconds)	v/c [c]	LOS [a]	DELAY [b] (seconds)	v/c [c]
Thompson School Road (NB & SB) at Squirrel Run Lane (EB)		Northbound Left	A	8.3	0.040	A	8.2	0.108
		Eastbound Left/Right	B	13.9	0.314	B	11.2	0.155

Note: All analyses were calculated in Synchro 12 software and reported using HCM 7th Edition intersection methodology
[a] Level of Service , [b] Average Delay (sec/vehicle) , [c] Volume-to-Capacity Ratio

- **POTENTIAL TRANSPORTATION SAFETY ISSUES:**

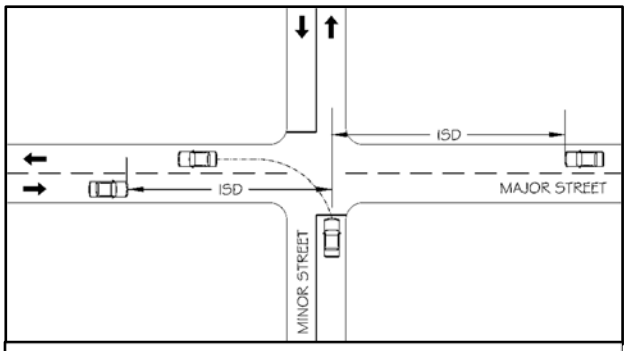
The study area was investigated for potential existing and future safety issues when the development is constructed. These transportation features are discussed in the following pages.

- **EVALUATION OF SIGHT DISTANCE**

For intersections, sight distance evaluations are categorized into two types: Stopping Sight Distance (SSD) and Intersection Sight Distance (ISD).

Methodology:
SSD is the distance required for a motorist on a major street to perceive, react, and the vehicle to come to a complete stop before colliding with an object on the road. For evaluating intersections, this object would be another vehicle entering the intersection from a minor street. SSD can be considered the minimum visibility distance standard for evaluating the safety of an intersection.

ISD is the required visibility distance standard for evaluating the safety of an intersection. ISD is based on the time required to perceive, react, and complete the desired traffic maneuver once a motorist on a minor street decides to perform a traffic maneuver. Three traffic maneuvers are available for vehicles stopped on a minor street at a 4-way intersection: (1) a left-turn, (2) a right-turn, or (3) a crossing maneuver across the major street. For turns from the minor street, the ISD is needed to allow a stopped motorist to turn onto a major street without being overtaken by an approaching vehicle. The most critical ISD is for left turns from the minor street. The ISD for this maneuver includes the time to turn left and clear half of the intersection without conflicting with the oncoming traffic from the left and accelerating to the road's operating speed without causing the approaching vehicles from the right to reduce their speed substantially.



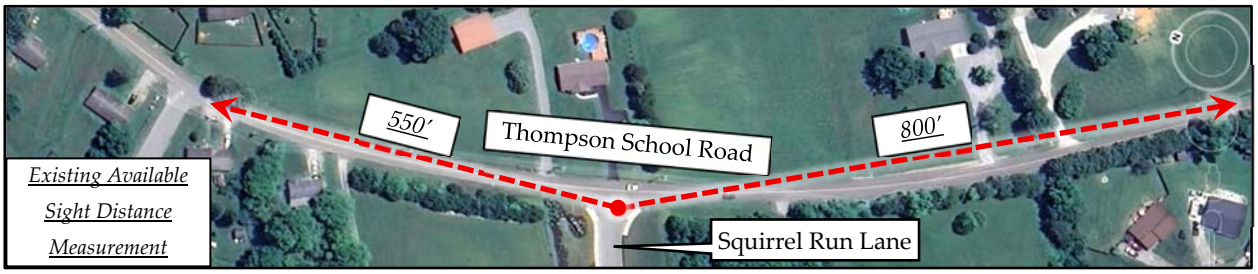
Intersection Sight Distance Diagram

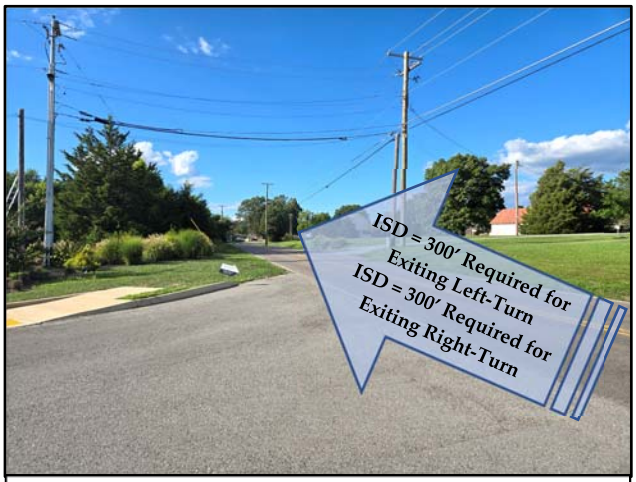
Thompson Creek Road has a posted speed limit of 30 mph. Based on Knox County's policy of requiring 10 feet of sight distance per 1 mph of speed, the required intersection sight distance is

300 feet. This distance is required for a motorist to exit safely to the left or right from Squirrel Run Lane onto Thompson School Road.

As a safety check, visual observations of the sight distances from Squirrel Run Lane at Thompson School Road were undertaken. Using a Nikon Laser Rangefinder at the exiting point on Squirrel Run Lane location, the available sight distance was visually estimated to be 550 feet to the north and 800 feet to the south on Thompson School Road. Based on visual observation, the available sight distances from Squirrel Run Lane are adequate for Phase 1 and will be adequate for Phase 2 vehicles exiting the Thompson Meadows Subdivision. Horizontal curves and vegetation on Thompson School Road restrict further sight distance to the south and north beyond what was observed.

Images of the existing sight distances from Squirrel Run Lane at Thompson School Road are labeled in the following with the required ISD and rangefinder-measured sight distances.





View of Sight Distance on Thompson School Road at Squirrel Run Lane (Looking North)

View of Sight Distance on Thompson School Road at Squirrel Run Lane (Looking South)

- **EVALUATION OF TURN LANE THRESHOLDS**

The need for separate entering turn lanes on Thompson School Road at Squirrel Run Lane was evaluated in the projected 2028 conditions.

The criteria used for these turn lane evaluations were based on Knox County's "Access Control and Driveway Design Policy". This design policy relates vehicle volume thresholds based on prevailing speeds for two-lane and four-lane roadways. The location of this entrance intersection is within a 30 mph speed zone; therefore, the intersection was evaluated based on the posted speed limit of 30 mph. The worksheets for these evaluations are provided in Appendix I.

Based on the projected 2028 traffic volumes at the entrance intersection, a separate southbound right-turn lane entering from Thompson School Road at Squirrel Run Lane will not be warranted. However, a separate northbound left-turn entering lane on Thompson School Road just barely meets the warrant threshold based on projected 2028 PM peak hour volumes.

- **PROJECTED VEHICLE QUEUES**

An additional software program calculated the projected vehicle queues at the entrance intersection during the 2028 AM and PM peak hours. The previously mentioned Synchro traffic software includes SimTraffic. The Synchro portion of the software performs macroscopic calculations for intersections, while SimTraffic handles micro-simulation and animation of vehicular traffic. SimTraffic software was utilized to estimate the projected vehicle queues at the intersections.

The 95th percentile vehicle queue is the recognized measurement in the transportation engineering profession, serving as the design standard for considering vehicle queue lengths. A 95th percentile vehicle queue length means 95% certainty that the vehicle queue will not extend beyond that point. The calculated vehicle queue results were based on averaging the outcomes obtained during ten one-hour traffic simulations in the software.

The 95th percentile vehicle queue lengths at the entrance intersection are presented in Table 7 for the projected 2028 peak hour conditions. The vehicle queue worksheet results from the SimTraffic software are in Appendix J.

TABLE 7
VEHICLE QUEUE SUMMARY -
2028 PROJECTED PEAK HOUR TRAFFIC CONDITIONS WITH THE PROJECT

INTERSECTION	TRAFFIC CONTROL	APPROACH/ MOVEMENT	95th PERCENTILE VEHICLE QUEUE LENGTH (ft)	
			AM PEAK HOUR	PM PEAK HOUR
Thompson School Road (NB & SB) at Squirrel Run Lane (EB)	STOP Unsignalized	Northbound Left	42	57
		Eastbound Left/Right	65	54

Note: 95th percentile vehicle queues were calculated in SimTraffic 12 software

Table 7 shows minimal vehicle queue lengths on the intersection's approaches in the 2028 AM and PM peak hours. The longest vehicle queues for the intersection are calculated for the exiting approach of Squirrel Run Lane, with a queue of 65 feet in the AM peak hour. Based on these results, the longest vehicle queue at this intersection will be on Squirrel Run Lane. It will consist of nearly three passenger vehicles, assuming each vehicle is 25 feet in length.

The longest vehicle queue for northbound left turns on Thompson School Road at Squirrel Run Lane is calculated to be 57 feet (approximately two passenger cars) in the PM peak hour. These obtained results did not include or model the provision of a separate northbound left-turn lane on Thompson School Road.

CONCLUSIONS & RECOMMENDATIONS

The following is an overview of recommendations to minimize the transportation impacts of the Thompson Meadows - Phase 2 Subdivision on the adjacent transportation system while attempting to achieve an acceptable traffic flow and safety level.

Thompson School Road at Squirrel Run Lane: This intersection is projected to operate with minimal vehicle delays and short queues for all movements. The single exiting lane currently provided on Squirrel Run Lane for Phase 1 of the Thompson Meadows Subdivision and future Phase 2, allowing both left and right turn movements, will be sufficient according to the calculations. The delays associated with these exiting vehicle movements are projected to be minimal in the projected 2028 conditions.

1a) In 2028, a separate northbound left-turn lane on Thompson School Road at Squirrel Run Lane will not be warranted strictly based on the additional trips generated by the future residences in the second phase of the Thompson Meadows Subdivision. However, due to the estimated thru trips generated by the Thompson Creek Subdivision to the north, which is assumed to be constructed and fully built out by 2028, the entrance intersection is projected to experience volumes that just barely warrant the need for a northbound left-turn lane on Thompson School Road at Squirrel Run. This warrant is only projected to be met during the PM peak hour, not the AM peak hour. Thus, it is recommended that the need for a northbound left-turn lane be re-examined in 2028 or when both developments are entirely constructed and occupied. This re-examination would require conducting new traffic counts at the intersection at that time to determine if the trips generated by the developments, plus the general growth in the area, will actually meet the threshold for a northbound left-turn lane.

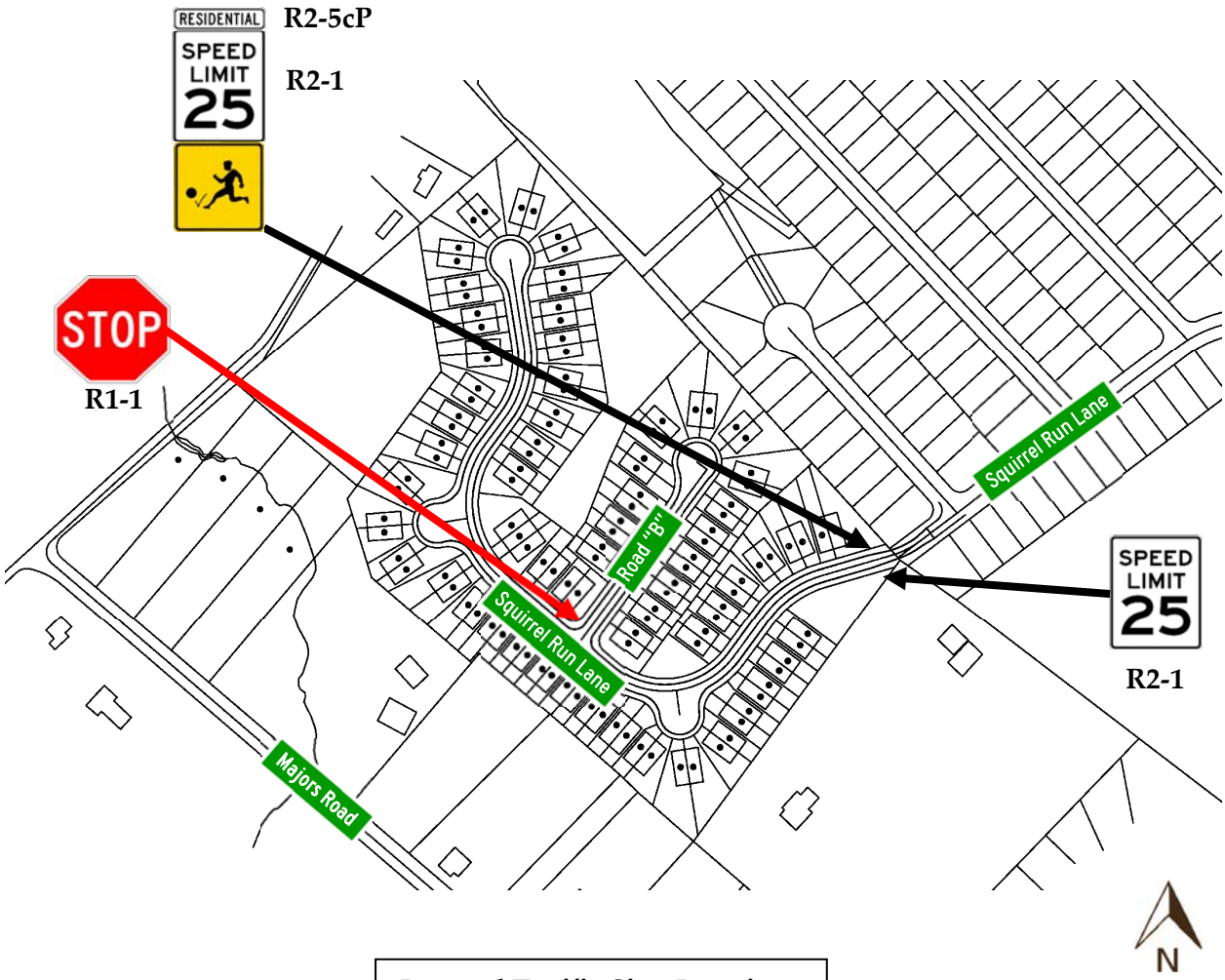
1b) Any future landscaping, existing vegetation, or additional signage must not impact the intersection sight distances looking from Squirrel Run Lane in both the north and south directions on Thompson School Road.

1c) Based on the posted speed limit of 30 mph on Thompson School Road at Squirrel Run Lane, the required intersection sight distance is 300 feet for exiting left and right-turning vehicles. The existing sight distances from Squirrel Run Lane at Thompson School Road were estimated visually to be adequate in both directions.

Thompson Meadows - Phase 2 Subdivision Internal Roads: The layout plan shows an extension of Squirrel Run Lane and one new street, as shown in Figure 3.

2a) A 25 mph Speed Limit Sign (R2-1) with additional plaque signage, as shown in the image below, is recommended to be posted near the beginning of the extension of Squirrel Run Lane into Phase 2. An additional 25 mph Speed Limit (R2-1) sign is recommended to be installed on Squirrel Run Lane between the two phases of the Thompson Meadows Subdivision for eastbound motorists traveling into Phase 1 from Phase 2. This recommendation will provide a reinforcement notification of the speed limit within the subdivision phases.

2b) A Stop Sign (R1-1) is recommended to be installed at the new internal road intersection in Phase 2, as shown in the image below.



Internal Traffic Sign Locations

2c) Sight distance at the new internal intersection must not be impacted by new signage, parked cars, or future landscaping. The civil site designer should ensure that appropriate internal sight distances are met.

2d) The civil site designer should provide a centralized mail delivery center location within the development for the additional subdivision residents in Phase 2.

2e) All drainage grates and covers for Phase 2 of the residential development must be pedestrian and bicycle-safe.

2f) For residential subdivisions with more than 150 housing units, Knox County has a longstanding unwritten design policy requiring a boulevard road section at the entrance if a secondary access point is not provided. Together, both phases of the Thompson Meadows Subdivision will include 306 (189+117) housing units. However, both Phase 1 and 2 will have two means of ingress and egress, one via Squirrel Run Lane and the other via a road interconnection to the adjacent Wheatmeadow Subdivision. Thus, a boulevard roadway section will not be required for Squirrel Run Lane.

2g) All road and intersection elements should be designed in accordance with the American Association of State Highway and Transportation Officials (AASHTO) and Knox County specifications and guidelines to ensure proper transportation operations.

APPENDIX A

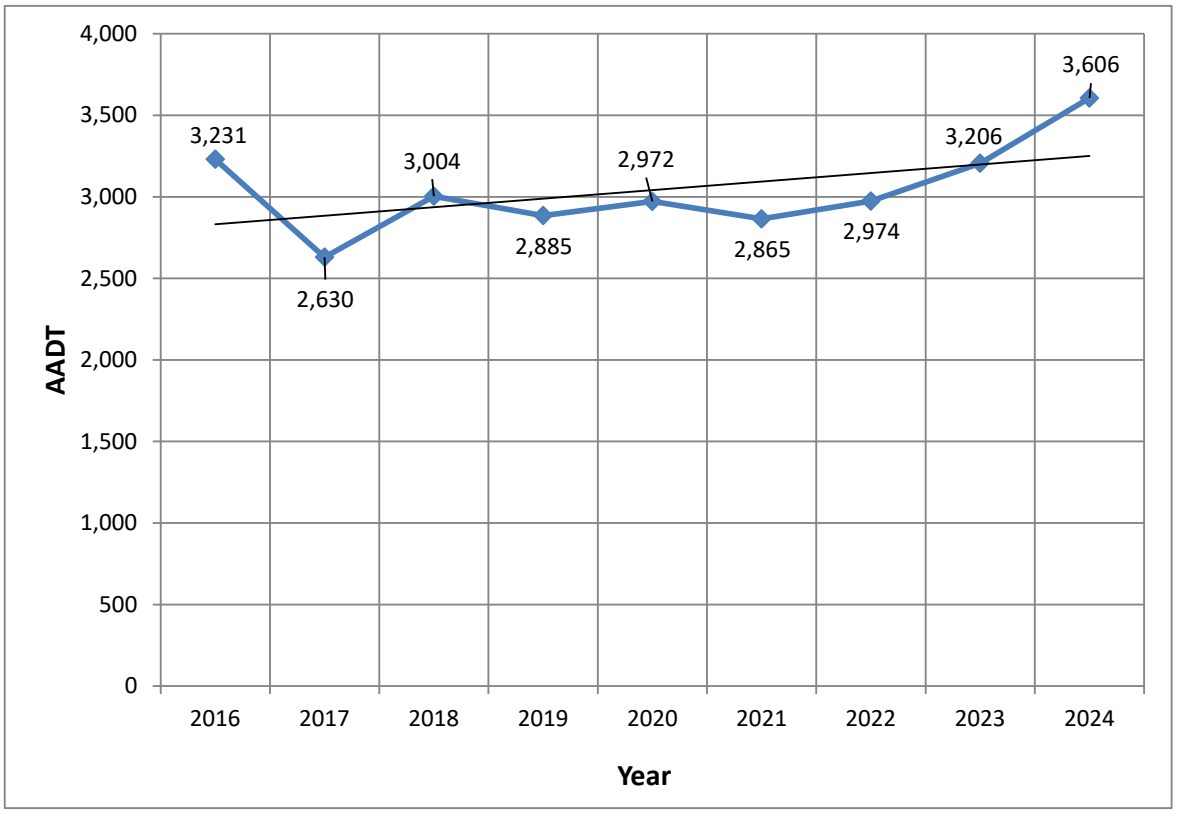
HISTORICAL TRAFFIC COUNT DATA

Historical Traffic Counts

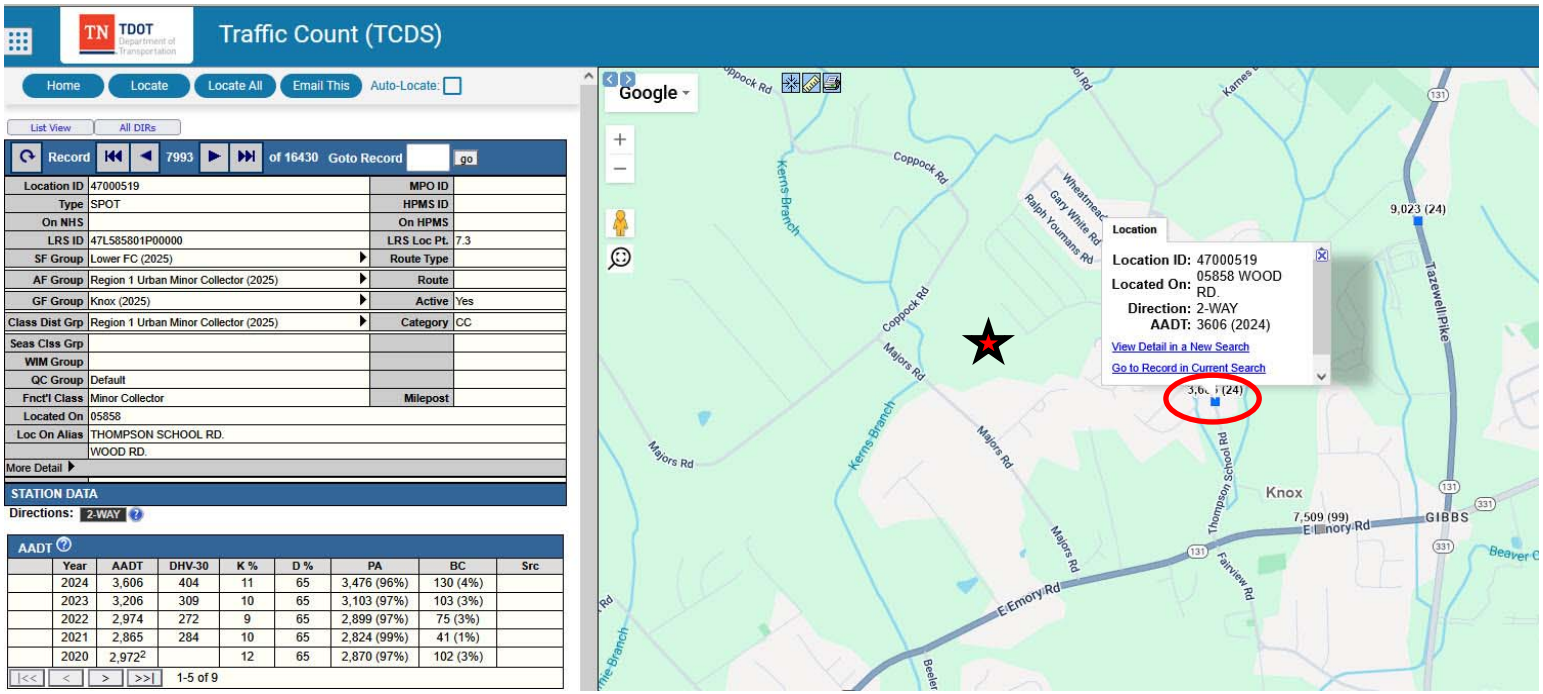
Organization: TDOT
Station ID #: 47000519
Location: Thompson School Road, north of East Emory Road

YEAR	AADT
2014	'
2015	'
2016	3,231
2017	2,630
2018	3,004
2019	2,885
2020	2,972
2021	2,865
2022	2,974
2023	3,206
2024	3,606

Trendline

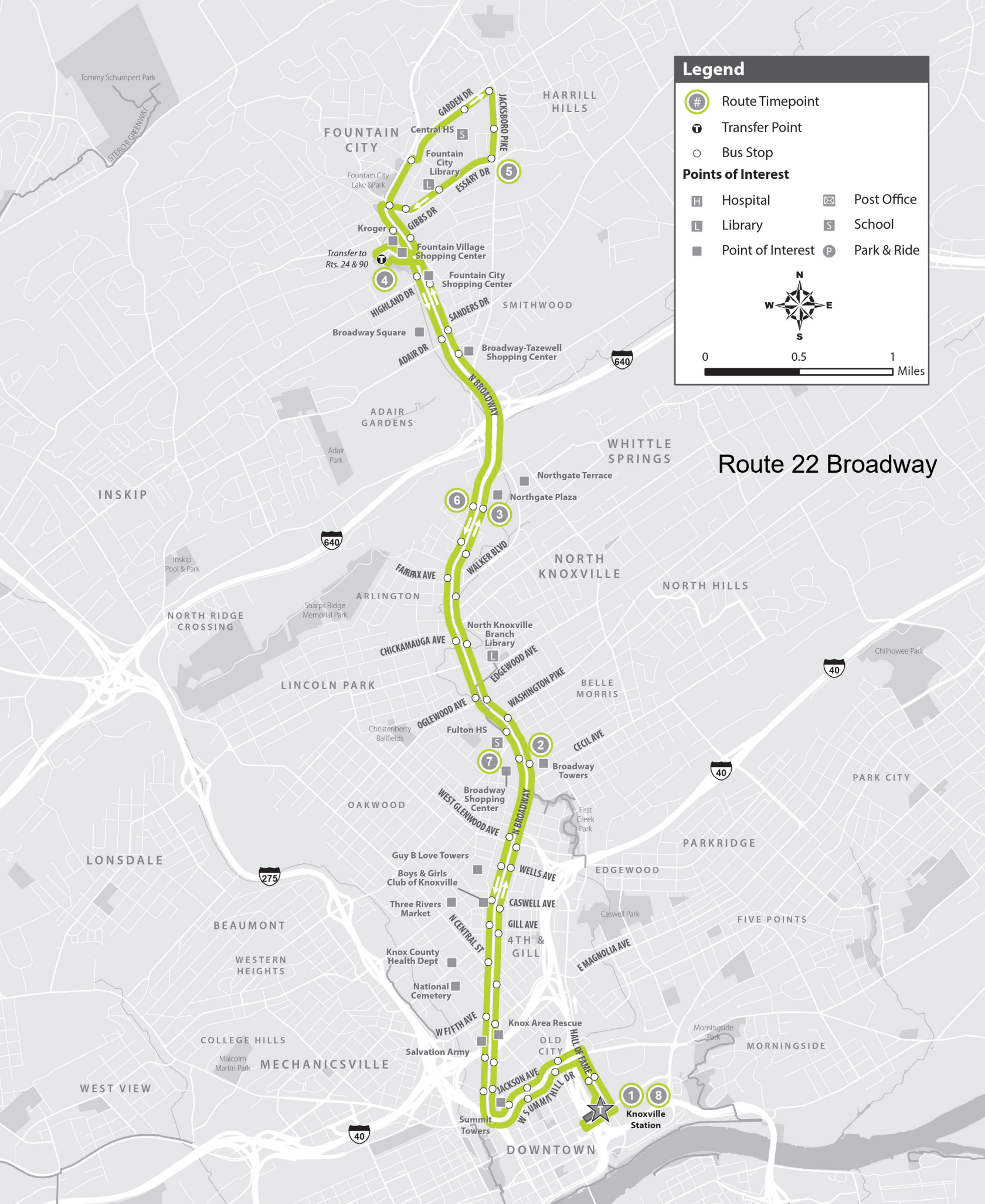


2016 - 2024 Growth Rate = 11.6%
Average Annual Growth Rate = 1.4%


TN TDOT Department of Transportation
Traffic Count (TCDS)
Home
Locate
Locate All
Email This
Auto-Locate:
List View
All DIRs
Record 7993 of 16430 Goto Record go
Location ID 47000519
Type SPOT
On NHS
LRS ID 47L585801P00000
SF Group Lower FC (2025)
AF Group Region 1 Urban Minor Collector (2025)
GF Group Knox (2025)
Class Dist Grp Region 1 Urban Minor Collector (2025)
Seas Clss Grp
WIM Group
QC Group Default
Fnct'l Class Minor Collector
Located On 05858
Loc On Alias THOMPSON SCHOOL RD.
WOOD RD.
More Detail
MPO ID
HPMS ID
On HPMS
LRS Loc Pt. 7.3
Route Type
Route
Active Yes
Category CC
Milepost
STATION DATA
Directions: 2-WAY
AADT
Year AADT DHV-30 K % D % PA BC Src
2024 3,606 404 11 65 3,476 (96%) 130 (4%)
2023 3,206 309 10 65 3,103 (97%) 103 (3%)
2022 2,974 272 9 65 2,899 (97%) 75 (3%)
2021 2,865 284 10 65 2,824 (99%) 41 (1%)
2020 2,972[2] 12 65 2,870 (97%) 102 (3%)
1-5 of 9
Google
Location
Location ID: 47000519
Located On: 05858 WOOD RD.
Direction: 2-WAY
AADT: 3606 (2024)
View Detail in a New Search
Go to Record in Current Search
9,023 (24)
7,509 (99)
Knox
GIBBS
Coppock Rd
Kerns Branch
Majors Rd
E Emory Rd
Thompson School Rd
Fairview Rd
Tazewell Pike

APPENDIX B

KNOXVILLE AREA TRANSIT (KAT) MAP AND INFORMATION


Legend
Route Timepoint
Transfer Point
Bus Stop
Points of Interest
Hospital
Library
Point of Interest
Post Office
School
Park & Ride
N
W
E
S
0
0.5
1
Miles
Route 22 Broadway
Tommy Schumpert Park
STERCHI GREENWAY
FOUNTAIN CITY
HARRILL HILLS
GARDEN DR
JACKSBORO PIKE
Central HS
Fountain City Library
Fountain City Lake &Park
ESSARY DR
GIBBS DR
Kroger
Transfer to Rts. 24 & 90
Fountain Village Shopping Center
Fountain City Shopping Center
HIGHLAND DR
SANDERS DR
SMITHWOOD
Broadway Square
ADAIR DR
Broadway-Tazewell Shopping Center
N BROADWAY
640
ADAIR GARDENS
Adair Park
WHITTLE SPRINGS
Northgate Terrace
Northgate Plaza
INSKIP
Inskip Pool & Park
WALKER BLVD
FAIRFAX AVE
NORTH KNOXVILLE
NORTH HILLS
ARLINGTON
Sharps Ridge Memorial Park
NORTH RIDGE CROSSING
North Knoxville Branch Library
CHICKAMAUGA AVE
EDGEWOOD AVE
WASHINGTON PIKE
LINCOLN PARK
BELLE MORRIS
Chilhowee Park
40
OGLEWOOD AVE
Christenberry Ballfields
Fulton HS
CECIL AVE
Broadway Towers
Broadway Shopping Center
WEST GLENWOOD AVE
OAKWOOD
First Creek Park
PARK CITY
PARKRIDGE
LONSDALE
Guy B Love Towers
Boys & Girls Club of Knoxville
WELLS AVE
EDGEWOOD
275
Three Rivers Market
CASWELL AVE
Caswell Park
BEAUMONT
N CENTRAL ST
GILL AVE
4TH & GILL
FIVE POINTS
E MAGNOLIA AVE
WESTERN HEIGHTS
Knox County Health Dept
National Cemetery
W FIFTH AVE
Knox Area Rescue
Morningside Park
COLLEGE HILLS
Salvation Army
OLD CITY
HALL OF FAME
MORNINGSIDE
Malcolm Martin Park
MECHANICSVILLE
JACKSON AVE
W SUMMIT HILL DR
WEST VIEW
Knoxville Station
Summit Towers
DOWNTOWN

Route 22 - Broadway: Weekdays

Going away from downtown				*Going toward downtown*			
Knoxville Station Bay H	**Broadway Shopping Center**	**Northgate Shopping Center**	**Fountain City Superstop**	**Jacksboro @ Essary**	**Northgate Shopping Center**	**Broadway Shopping Center**	**Knoxville Station Bay H**
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
				5:55 AM	6:06 AM	6:11 AM	6:25 AM
				6:25 AM	6:36 AM	6:41 AM	6:55 AM
6:00 AM	6:13 AM	6:20 AM	6:35 AM	6:40 AM	6:51 AM	6:56 AM	7:10 AM
6:30 AM	6:43 AM	6:50 AM	7:05 AM	7:10 AM	7:21 AM	7:26 AM	7:40 AM
7:00 AM	7:13 AM	7:20 AM	7:35 AM	7:40 AM	7:51 AM	7:56 AM	8:10 AM
7:15 AM	7:28 AM	7:35 AM	7:50 AM	7:55 AM	8:06 AM	8:11 AM	8:25 AM
7:45 AM	7:58 AM	8:05 AM	8:20 AM	8:25 AM	8:36 AM	8:41 AM	8:55 AM
8:15 AM	8:28 AM	8:35 AM	8:50 AM	8:55 AM	9:06 AM	9:11 AM	9:25 AM
8:30 AM	8:43 AM	8:50 AM	9:05 AM	9:10 AM	9:21 AM	9:26 AM	9:40 AM
9:00 AM	9:13 AM	9:20 AM	9:35 AM	9:40 AM	9:51 AM	9:56 AM	10:10 AM
9:30 AM	9:43 AM	9:50 AM	10:05 AM	10:10 AM	10:21 AM	10:26 AM	10:40 AM
10:00 AM	10:13 AM	10:20 AM	10:35 AM	10:40 AM	10:51 AM	10:56 AM	11:10 AM
10:30 AM	10:43 AM	10:50 AM	11:05 AM	11:10 AM	11:21 AM	11:26 AM	11:40 AM
11:00 AM	11:13 AM	11:20 AM	11:35 AM	11:40 AM	11:51 AM	11:56 AM	12:10 PM
11:30 AM	11:43 AM	11:50 AM	12:05 PM	12:10 PM	12:21 PM	12:26 PM	12:40 PM
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9:15 PM	9:28 PM	9:35 PM	9:50 PM	9:55 PM	10:06 PM	10:11 PM	10:25 PM
9:45 PM	9:58 PM	10:05 PM	10:20 PM	10:25 PM	10:36 PM	10:41 PM	10:55 PM
10:15 PM	10:28 PM	10:35 PM	10:50 PM	10:55 PM	11:06 PM	11:11 PM	11:25 PM
11:15 PM	11:28 PM	11:35 PM	11:40 PM				

Route 22 - Broadway: SATURDAYS

Going away from downtown				*Going toward downtown*			
Knoxville Station Bay H	**Broadway Shopping Center**	**Northgate Shopping Center**	**Fountain City Superstop**	**Jacksboro @ Essary**	**Northgate Shopping Center**	**Broadway Shopping Center**	**Knoxville Station Bay H**
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
7:00 AM	7:13 AM	7:20 AM	7:35 AM	7:40 AM	7:51 AM	7:56 AM	8:10 AM
7:30 AM	7:43 AM	7:50 AM	8:05 AM	8:10 AM	8:21 AM	8:26 AM	8:40 AM
8:00 AM	8:13 AM	8:20 AM	8:35 AM	8:40 AM	8:51 AM	8:56 AM	9:10 AM
8:30 AM	8:43 AM	8:50 AM	9:05 AM	9:10 AM	9:21 AM	9:26 AM	9:40 AM
9:00 AM	9:13 AM	9:20 AM	9:35 AM	9:40 AM	9:51 AM	9:56 AM	10:10 AM
9:30 AM	9:43 AM	9:50 AM	10:05 AM	10:10 AM	10:21 AM	10:26 AM	10:40 AM
10:00 AM	10:13 AM	10:20 AM	10:35 AM	10:40 AM	10:51 AM	10:56 AM	11:10 AM
10:30 AM	10:43 AM	10:50 AM	11:05 AM	11:10 AM	11:21 AM	11:26 AM	11:40 AM
11:00 AM	11:13 AM	11:20 AM	11:35 AM	11:40 AM	11:51 AM	11:56 AM	12:10 PM
11:30 AM	11:43 AM	11:50 AM	12:05 PM	12:10 PM	12:21 PM	12:26 PM	12:40 PM
12:00 PM	12:13 PM	12:20 PM	12:35 PM	12:40 PM	12:51 PM	12:56 PM	1:10 PM
12:30 PM	12:43 PM	12:50 PM	1:05 PM	1:10 PM	1:21 PM	1:26 PM	1:40 PM
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7:00 PM	7:13 PM	7:20 PM	7:35 PM	7:40 PM	7:51 PM	7:56 PM	8:10 PM
7:30 PM	7:43 PM	7:50 PM	8:05 PM	8:10 PM	8:21 PM	8:26 PM	8:40 PM
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8:30 PM	8:43 PM	8:50 PM	9:05 PM	9:10 PM	9:21 PM	9:26 PM	9:40 PM
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10:30 PM	10:43 PM	10:50 PM	11:05 PM	11:10 PM	11:21 PM	11:26 PM	
11:15 PM	11:28 PM	11:35 PM	11:50 PM	11:55 PM	12:06 AM	12:11 AM	

Route 22 - Broadway: SUNDAYS

Going away from downtown				*Going toward downtown*			
Knoxville Station Bay H	**Broadway Shopping Center**	**Northgate Shopping Center**	**Fountain City Superstop**	**Jacksboro @ Essary**	**Northgate Shopping Center**	**Broadway Shopping Center**	**Knoxville Station Bay H**
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
8:15 AM	8:28 AM	8:35 AM	8:44 AM		8:53 AM	9:00 AM	9:15 AM
9:15 AM	9:28 AM	9:35 AM	9:44 AM		9:53 AM	10:00 AM	10:15 AM
10:15 AM	10:28 AM	10:35 AM	10:44 AM		10:53 AM	11:00 AM	11:15 AM
11:15 AM	11:28 AM	11:35 AM	11:44 AM		11:53 AM	12:00 PM	12:15 PM
12:15 PM	12:28 PM	12:35 PM	12:44 PM		12:53 PM	1:00 PM	1:15 PM
1:15 PM	1:28 PM	1:35 PM	1:44 PM		1:53 PM	2:00 PM	2:15 PM
2:15 PM	2:28 PM	2:35 PM	2:44 PM		2:53 PM	3:00 PM	3:15 PM
3:15 PM	3:28 PM	3:35 PM	3:44 PM		3:53 PM	4:00 PM	4:15 PM
4:15 PM	4:28 PM	4:35 PM	4:44 PM		4:53 PM	5:00 PM	5:15 PM
5:15 PM	5:28 PM	5:35 PM	5:44 PM		5:53 PM	6:00 PM	6:15 PM
6:15 PM	6:28 PM	6:35 PM	6:44 PM		6:53 PM	7:00 PM	7:15 PM
7:15 PM	7:28 PM	7:35 PM	7:44 PM		7:53 PM	8:00 PM	8:15 PM
8:15 PM	8:28 PM	8:35 PM	8:40 PM				

Highlighted times are service additions

APPENDIX C

ZONING MAP

Zoning Map

8.16.25

Knoxville - Knox County - KUB Geographic Information System

Printed: 8/16/2025 at 3:30:05 PM

0 250 500 1,000

ft

APPENDIX D

MANUAL TRAFFIC COUNT DATA

TRAFFIC COUNT DATA

Major Street: Thompson School Road (SB and NB)
Minor Street: Squirrel Run Lane (EB)
Traffic Control: Stop Sign on Minor Street

8/26/2025 (Tuesday)
Mostly Sunny and Temperate
Conducted by: Ajax Engineering

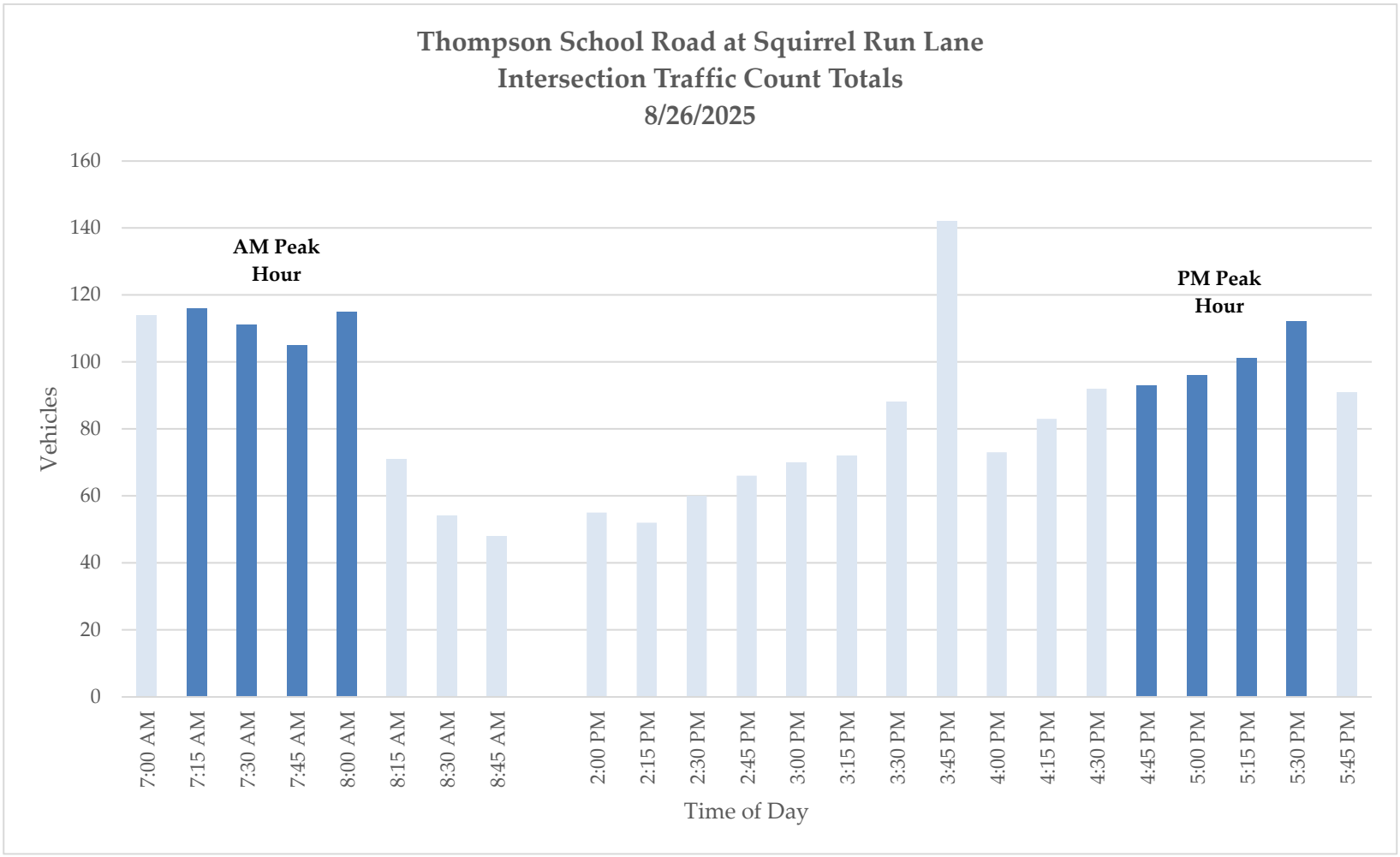
	Thompson School Road		Thompson School Road		Squirrel Run Lane			
TIME	SOUTHBOUND		NORTHBOUND		EASTBOUND		VEHICLE	PEAK
BEGIN	THRU	RT	LT	THRU	LT	RT	TOTAL	HOUR
7:00 AM	58	0	4	17	6	29	114	
7:15 AM	36	2	6	44	7	21	116	**7:15 AM - 8:15 AM**
7:30 AM	49	1	7	29	3	22	111	
7:45 AM	65	2	3	27	0	8	105	
8:00 AM	51	1	10	40	1	12	115	
8:15 AM	42	1	2	15	1	10	71	
8:30 AM	26	1	4	15	0	8	54	
8:45 AM	21	1	5	10	0	11	48	
TOTAL	348	9	41	197	18	121	734	
2:00 PM	15	0	9	16	4	11	55	
2:15 PM	15	0	9	22	0	6	52	
2:30 PM	17	0	13	23	0	7	60	
2:45 PM	20	1	5	29	2	9	66	
3:00 PM	21	2	12	29	1	5	70	
3:15 PM	26	0	16	25	0	5	72	
3:30 PM	48	4	9	21	0	6	88	
3:45 PM	55	5	19	53	1	9	142	
4:00 PM	26	0	12	31	0	4	73	
4:15 PM	16	1	8	54	0	4	83	
4:30 PM	29	1	21	33	1	7	92	
4:45 PM	28	1	13	39	0	12	93	**4:45 PM - 5:45 PM**
5:00 PM	19	1	17	50	0	9	96	
5:15 PM	34	0	14	39	1	13	101	
5:30 PM	44	1	29	28	0	10	112	
5:45 PM	18	0	21	38	5	9	91	
TOTAL	431	17	227	530	15	126	1346	

2025 AM Peak Hour **7:15 AM - 8:15 AM**

	Thompson School Road		Thompson School Road		Squirrel Run Lane	
TIME	SOUTHBOUND		NORTHBOUND		EASTBOUND	
BEGIN	THRU	RT	LT	THRU	LT	RT
7:15 AM	36	2	6	44	7	21
7:30 AM	49	1	7	29	3	22
7:45 AM	65	2	3	27	0	8
8:00 AM	51	1	10	40	1	12
TOTAL	**201**	**6**	**26**	**140**	**11**	**63**
TRUCK %	**1.0%**	**0.0%**	**0.0%**	**3.6%**	**0.0%**	**0.0%**
PHF $_{mvmt}$	**0.77**	**0.75**	**0.65**	**0.80**	**0.39**	**0.72**
PHF $_{app}$	**0.77**		**0.83**		**0.66**	
PHF $_{int}$	**0.96**					

2025 PM Peak Hour **4:45 PM - 5:45 PM**

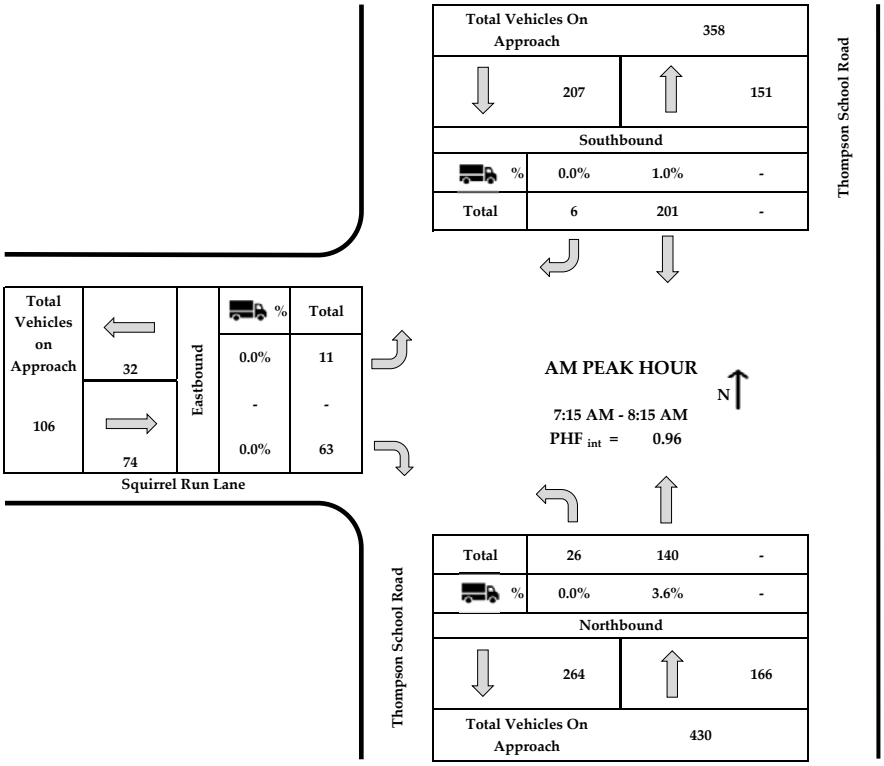
	Thompson School Road		Thompson School Road		Squirrel Run Lane	
TIME	SOUTHBOUND		NORTHBOUND		EASTBOUND	
BEGIN	THRU	RT	LT	THRU	LT	RT
4:45 PM	28	1	13	39	0	12
5:00 PM	19	1	17	50	0	9
5:15 PM	34	0	14	39	1	13
5:30 PM	44	1	29	28	0	10
TOTAL	**125**	**3**	**73**	**156**	**1**	**44**
TRUCK %	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**
PHF $_{mvmt}$	**0.71**	**0.75**	**0.63**	**0.78**	**0.25**	**0.85**
PHF $_{app}$	**0.71**		**0.85**		**0.80**	
PHF $_{int}$	**0.90**					

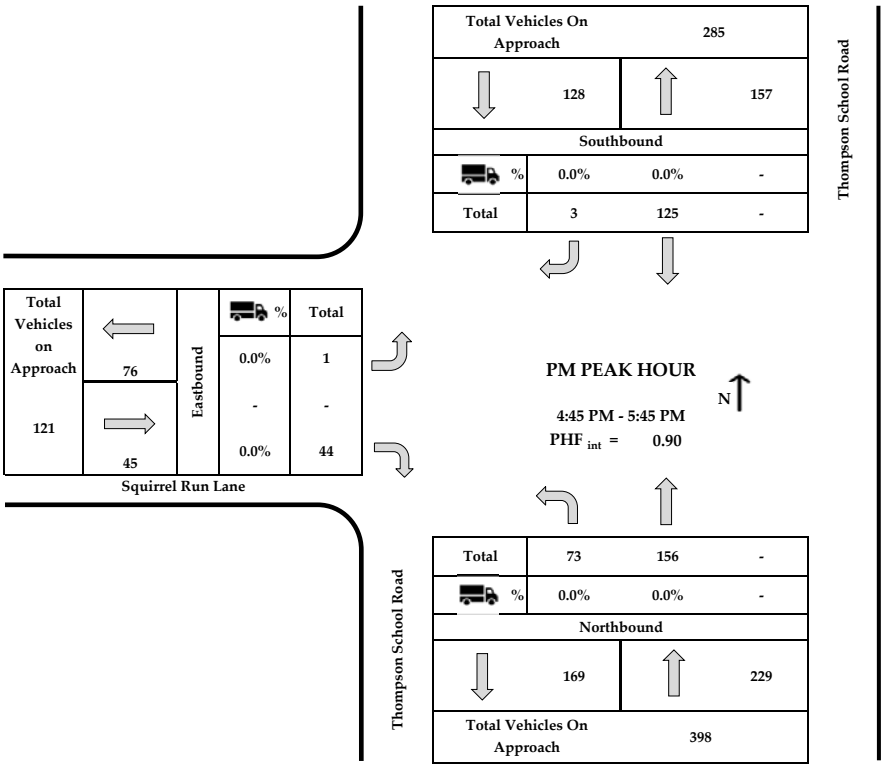

Thompson School Road at Squirrel Run Lane
Intersection Traffic Count Totals
8/26/2025
160
140
120
100
80
60
40
20
0
Vehicles
AM Peak Hour
PM Peak Hour
7:00 AM
7:15 AM
7:30 AM
7:45 AM
8:00 AM
8:15 AM
8:30 AM
8:45 AM
2:00 PM
2:15 PM
2:30 PM
2:45 PM
3:00 PM
3:15 PM
3:30 PM
3:45 PM
4:00 PM
4:15 PM
4:30 PM
4:45 PM
5:00 PM
5:15 PM
5:30 PM
5:45 PM
Time of Day

PEAK HOUR DATA

Major Street: Thompson School Road (SB and NB)
Minor Street: Squirrel Run Lane (EB)
Traffic Control: Stop Sign on Minor Street

8/26/2025 (Tuesday)
Mostly Sunny and Temperate
Conducted by: Ajax Engineering





APPENDIX E

CAPACITY ANALYSES – HCM WORKSHEETS (SYNCHRO 12)

EXISTING CONDITIONS

Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	11	63	26	140	201	6
Future Vol, veh/h	11	63	26	140	201	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-2	-	-	3	-3	-
Peak Hour Factor	66	66	83	83	77	77
Heavy Vehicles, %	0	0	0	4	1	0
Mvmt Flow	17	95	31	169	261	8

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	496	265	269	0	-	0
Stage 1	265	-	-	-	-	-
Stage 2	231	-	-	-	-	-
Critical Hdwy	6	6	4.1	-	-	-
Critical Hdwy Stg 1	5	-	-	-	-	-
Critical Hdwy Stg 2	5	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	567	790	1306	-	-	-
Stage 1	808	-	-	-	-	-
Stage 2	833	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	552	790	1306	-	-	-
Mov Cap-2 Maneuver	552	-	-	-	-	-
Stage 1	786	-	-	-	-	-
Stage 2	833	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	10.71	1.23	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	282	-	743	-	-
HCM Lane V/C Ratio	0.024	-	0.151	-	-
HCM Ctrl Dly (s/v)	7.8	0	10.7	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.5	-	-

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	44	73	156	125	3
Future Vol, veh/h	1	44	73	156	125	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-2	-	-	3	-3	-
Peak Hour Factor	80	80	85	85	71	71
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1	55	86	184	176	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	533	178	180	0	-	0
Stage 1	178	-	-	-	-	-
Stage 2	355	-	-	-	-	-
Critical Hdwy	6	6	4.1	-	-	-
Critical Hdwy Stg 1	5	-	-	-	-	-
Critical Hdwy Stg 2	5	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	542	879	1407	-	-	-
Stage 1	875	-	-	-	-	-
Stage 2	743	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	505	879	1407	-	-	-
Mov Cap-2 Maneuver	505	-	-	-	-	-
Stage 1	815	-	-	-	-	-
Stage 2	743	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	9.45	2.46	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	574	-	864	-	-
HCM Lane V/C Ratio	0.061	-	0.065	-	-
HCM Ctrl Dly (s/v)	7.7	0	9.5	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.2	-	0.2	-	-

PROJECTED CONDITIONS WITHOUT THE PROJECT

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	11	63	26	148	213	6
Future Vol, veh/h	11	63	26	148	213	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-2	-	-	3	-3	-
Peak Hour Factor	66	66	83	83	77	77
Heavy Vehicles, %	0	0	0	4	1	0
Mvmt Flow	17	95	31	178	277	8

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	521	281	284	0	-	0
Stage 1	281	-	-	-	-	-
Stage 2	241	-	-	-	-	-
Critical Hdwy	6	6	4.1	-	-	-
Critical Hdwy Stg 1	5	-	-	-	-	-
Critical Hdwy Stg 2	5	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	550	775	1289	-	-	-
Stage 1	796	-	-	-	-	-
Stage 2	826	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	535	775	1289	-	-	-
Mov Cap-2 Maneuver	535	-	-	-	-	-
Stage 1	775	-	-	-	-	-
Stage 2	826	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	10.86	1.17	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	269	-	727	-	-
HCM Lane V/C Ratio	0.024	-	0.154	-	-
HCM Ctrl Dly (s/v)	7.9	0	10.9	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.5	-	-

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	44	73	165	133	3
Future Vol, veh/h	1	44	73	165	133	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-2	-	-	3	-3	-
Peak Hour Factor	80	80	85	85	71	71
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1	55	86	194	187	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	555	189	192	0	-	0
Stage 1	189	-	-	-	-	-
Stage 2	366	-	-	-	-	-
Critical Hdwy	6	6	4.1	-	-	-
Critical Hdwy Stg 1	5	-	-	-	-	-
Critical Hdwy Stg 2	5	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	528	867	1394	-	-	-
Stage 1	866	-	-	-	-	-
Stage 2	735	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	491	867	1394	-	-	-
Mov Cap-2 Maneuver	491	-	-	-	-	-
Stage 1	806	-	-	-	-	-
Stage 2	735	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	9.52	2.38	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	552	-	852	-	-
HCM Lane V/C Ratio	0.062	-	0.066	-	-
HCM Ctrl Dly (s/v)	7.8	0	9.5	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.2	-	0.2	-	-

PROJECTED CONDITIONS WITH THE PROJECT

Intersection	
Int Delay, s/veh	3.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	18	104	38	189	329	8
Future Vol, veh/h	18	104	38	189	329	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-2	-	-	3	-3	-
Peak Hour Factor	66	66	83	83	77	77
Heavy Vehicles, %	0	0	0	4	1	0
Mvmt Flow	27	158	46	228	427	10

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	752	432	438	0	-	0
Stage 1	432	-	-	-	-	-
Stage 2	319	-	-	-	-	-
Critical Hdwy	6	6	4.1	-	-	-
Critical Hdwy Stg 1	5	-	-	-	-	-
Critical Hdwy Stg 2	5	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	414	643	1133	-	-	-
Stage 1	691	-	-	-	-	-
Stage 2	768	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	395	643	1133	-	-	-
Mov Cap-2 Maneuver	395	-	-	-	-	-
Stage 1	659	-	-	-	-	-
Stage 2	768	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	13.9	1.39	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	301	-	588	-	-
HCM Lane V/C Ratio	0.04	-	0.314	-	-
HCM Ctrl Dly (s/v)	8.3	0	13.9	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	1.3	-	-

Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	80	116	298	212	8
Future Vol, veh/h	5	80	116	298	212	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-2	-	-	3	-3	-
Peak Hour Factor	80	80	85	85	71	71
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	6	100	136	351	299	11

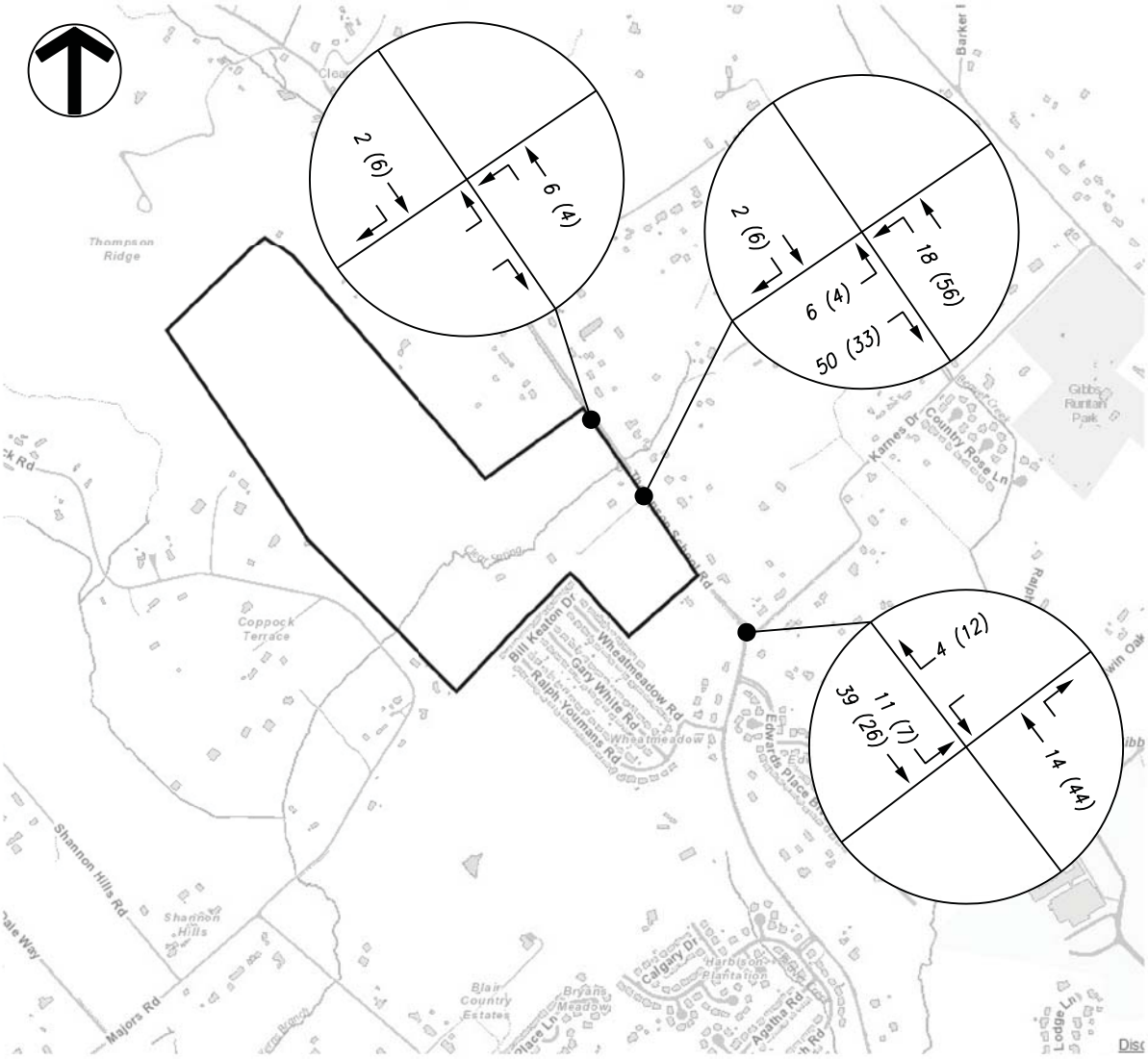
Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	928	304	310	0	-	0
Stage 1	304	-	-	-	-	-
Stage 2	624	-	-	-	-	-
Critical Hdwy	6	6	4.1	-	-	-
Critical Hdwy Stg 1	5	-	-	-	-	-
Critical Hdwy Stg 2	5	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	333	753	1262	-	-	-
Stage 1	779	-	-	-	-	-
Stage 2	577	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	288	753	1262	-	-	-
Mov Cap-2 Maneuver	288	-	-	-	-	-
Stage 1	674	-	-	-	-	-
Stage 2	577	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	11.19	2.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	504	-	688	-	-
HCM Lane V/C Ratio	0.108	-	0.155	-	-
HCM Ctrl Dly (s/v)	8.2	0	11.2	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.4	-	0.5	-	-

APPENDIX F

THOMPSON CREEK SUBDIVISION TRIP GENERATION DATA



LEGEND:

← 5 (16) TURNING MOVEMENT VOLUME AM (PM)

Figure 7: Peak Hour Site Trips - Access #1

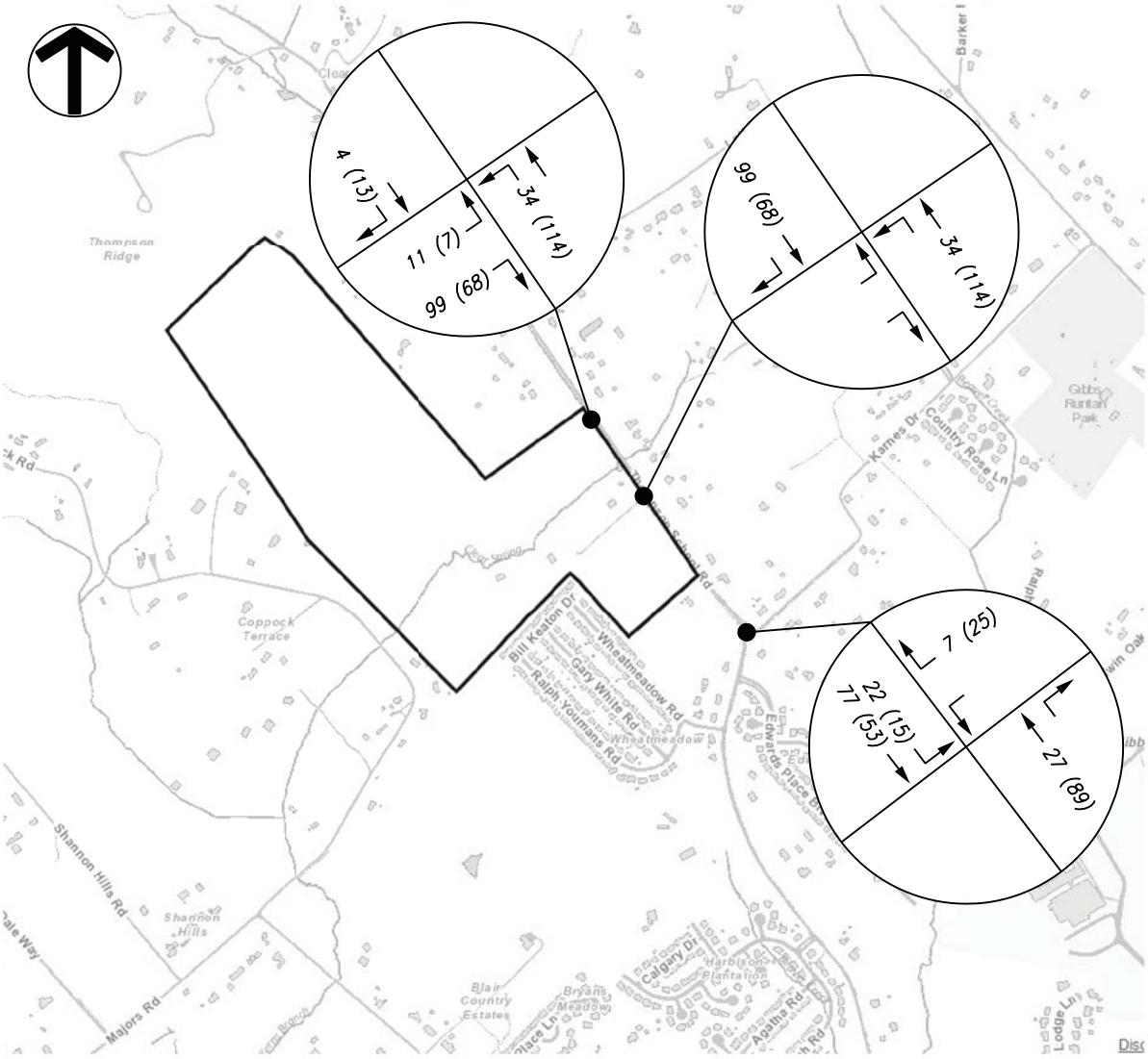


Figure 8: Peak Hour Site Trips - Access #2

APPENDIX G

LOCAL TRIP GENERATION DATA

Local Apartment
Trip Generation Study

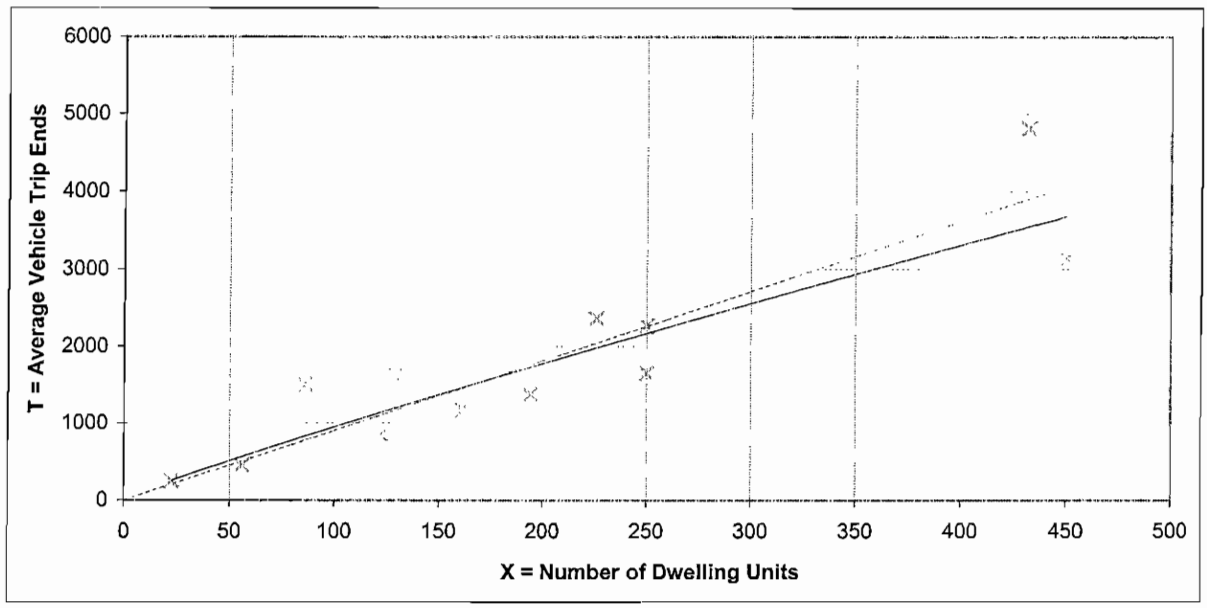
Average Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday**

Number of Studies: 13
Average Number of Dwelling Units: 193
Directional Distribution: 50% entering, 50% exiting

Trip Generation Per Dwelling Unit

Average Rate	Ranges of Rates	Standard Deviation
9.03	6.59 - 17.41	2.47

Data Plot and Equation



X Actual Data Points ———— Fitted Curve Average Rate

Fitted Curve Equation: $T = 15.193(X)^{0.899}$ $R^2 = 0.88$

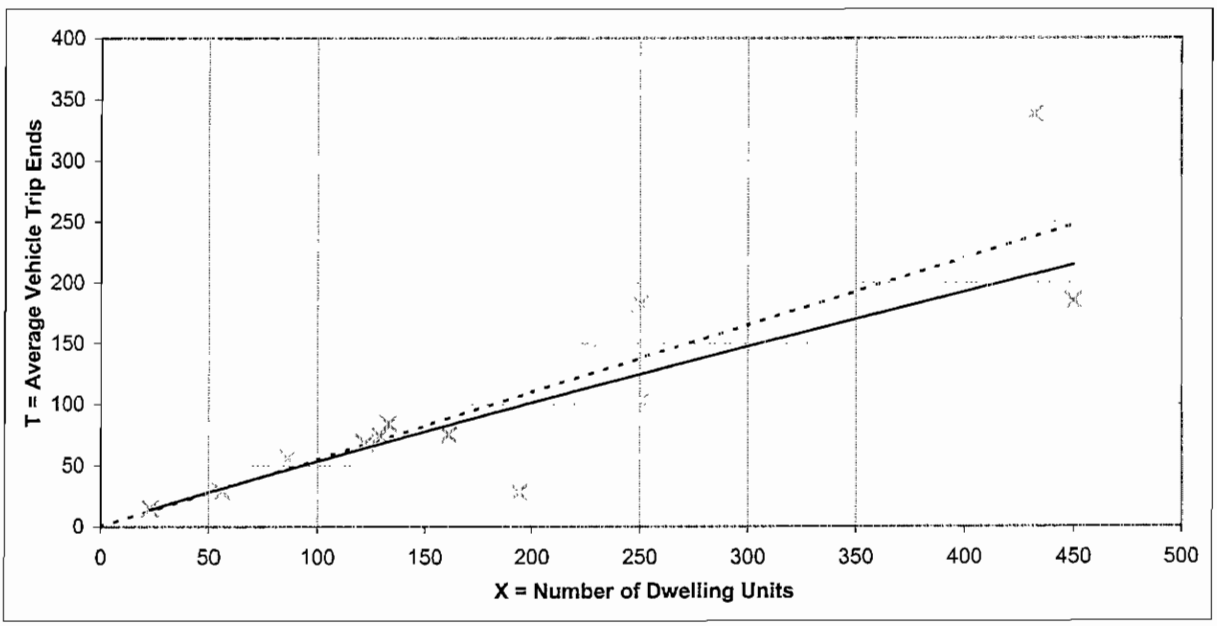
Local Apartment
Trip Generation Study

Average Vehicle Trip Ends vs:	**Dwelling Units**
On a:	**Weekday,** **Peak Hour of Adjacent Street Traffic,** **One Hour Between 7 and 9 a.m.**
Number of Studies:	13
Average Number of Dwelling Units:	193
Directional Distribution:	22% entering, 78% exiting

Trip Generation Per Dwelling Unit

Average Rate	Ranges of Rates	Standard Deviation
0.55	0.14 - 0.78	0.18

Data Plot and Equation



X Actual Data Points ——— Fitted Curve Average Rate

Fitted Curve Equation: $T = 0.758(X)^{0.924}$ $R^2 = 0.75$

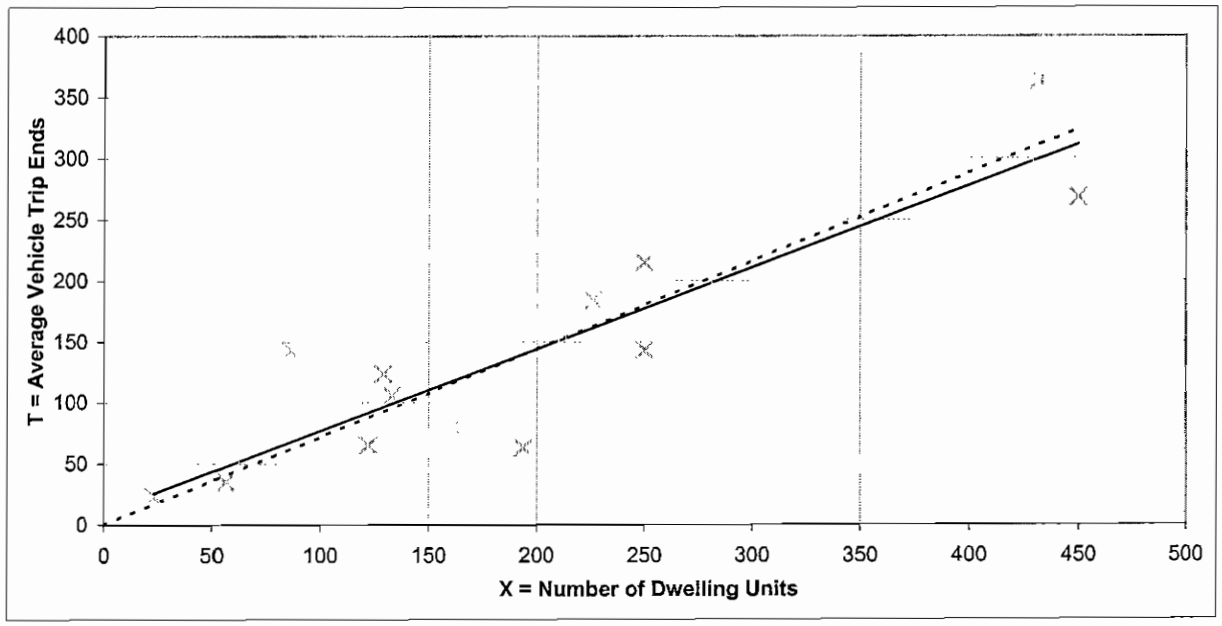
Local Apartment
Trip Generation Study

Average Vehicle Trip Ends vs:	**Dwelling Units**
On a:	**Weekday,** **Peak Hour of Adjacent Street Traffic,** **One Hour Between 4 and 6 p.m.**
Number of Studies:	13
Average Number of Dwelling Units:	193
Directional Distribution:	55% entering, 45% exiting

Trip Generation Per Dwelling Unit

Average Rate	Ranges of Rates	Standard Deviation
0.72	0.32 - 1.66	0.25

Data Plot and Equation



X Actual Data Points ——— Fitted Curve Average Rate

Fitted Curve Equation: T = 0.669(X) + 10.069 **R^2 = 0.79**

TRIP GENERATION FOR THOMPSON MEADOWS - PHASE 2 SUBDIVISION

117 Multi-Family Duplexes

ITE LAND USE CODE	LAND USE DESCRIPTION	# OF UNITS	GENERATED DAILY TRAFFIC	GENERATED TRAFFIC AM PEAK HOUR			GENERATED TRAFFIC PM PEAK HOUR		
				ENTER	EXIT	TOTAL	ENTER	EXIT	TOTAL
Local Trip Rate	Multi-Family Duplexes	117	1,099	22%	78%		55%	45%	
				14	48	62	48	40	88
Total New Volume Site Trips			**1,099**	**14**	**48**	**62**	**48**	**40**	**88**

Data from Local Trip Rates

Trips calculated by using Fitted Curve Equations

TRIP GENERATION FOR THOMPSON MEADOWS - PHASE 2 SUBDIVISION

117 Attached Townhouses

117 Units = X

Weekday:

Fitted Curve Equation: $T = 15.193(X)^{0.899}$

T = 15 * 72.33

T = 1,099 trips

Peak Hour of Adjacent Traffic between 7 and 9 am:

Fitted Curve Equation: $T = 0.758(X)^{0.924}$

T = 0.758 * 81

T = 62 trips

Peak Hour of Adjacent Traffic between 4 and 6 pm:

Fitted Curve Equation: $T = 0.669(X)+10.069$

T = 0.669 * 117 + 10.07

T = 88 trips

APPENDIX H

2022 CENSUS BUREAU DATA

United States Census Bureau OnTheMap

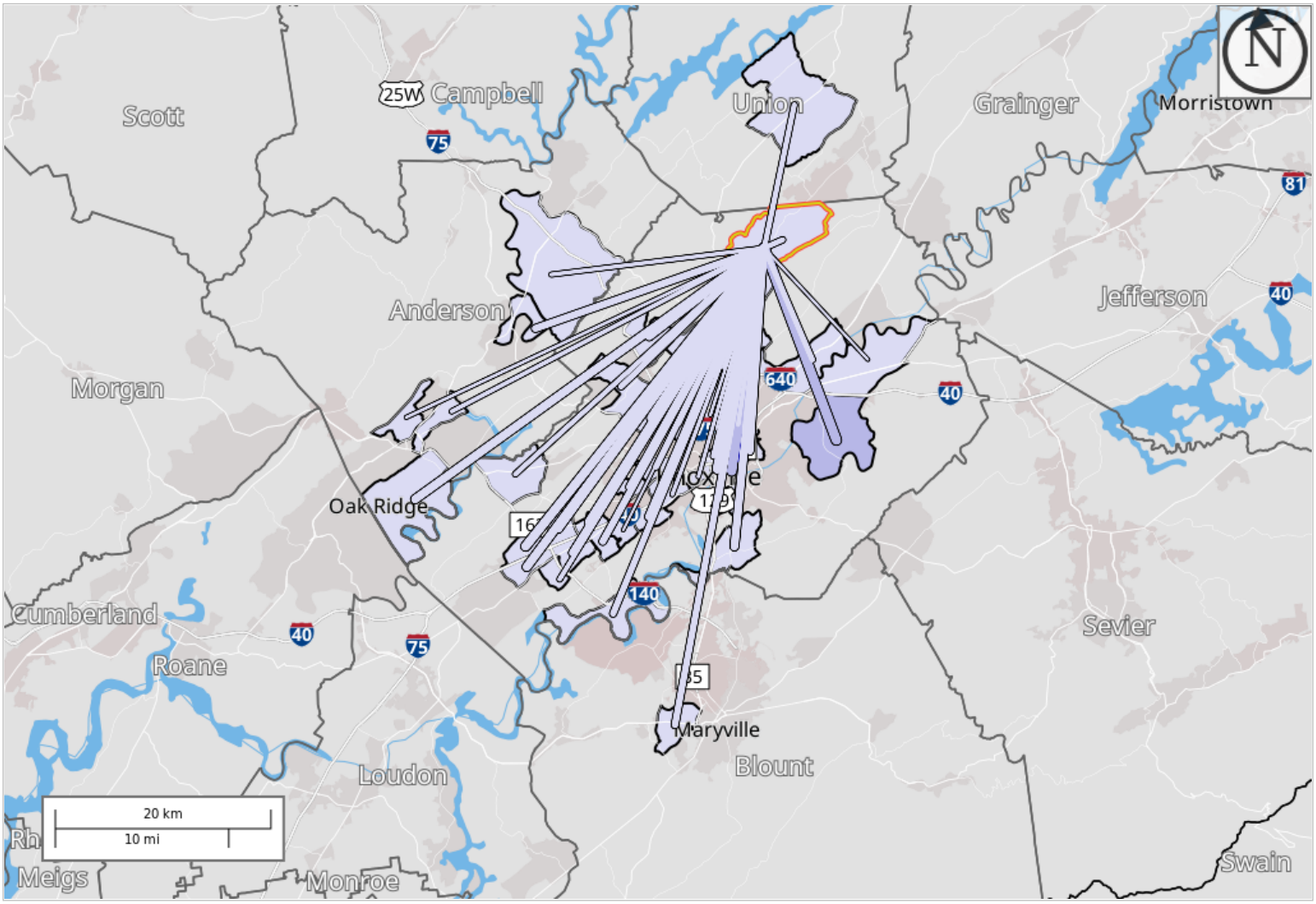
Destination Analysis

Workers: *Living in 64.02 (Knox, TN)*
Showing: *Employment locations grouped by Census Tracts*

Created by the U.S. Census Bureau's OnTheMap `https://onthemap.ces.census.gov` on 08/16/2025

Counts of All Jobs from Home Selection Area to Work Census Tracts in 2022

All Workers



Map Legend

Job Count
- 220 - 254
- 186 - 219
- 151 - 185
- 117 - 150
- 82 - 116
- 48 - 81
- 13 - 47

Selection Areas
- Home Area

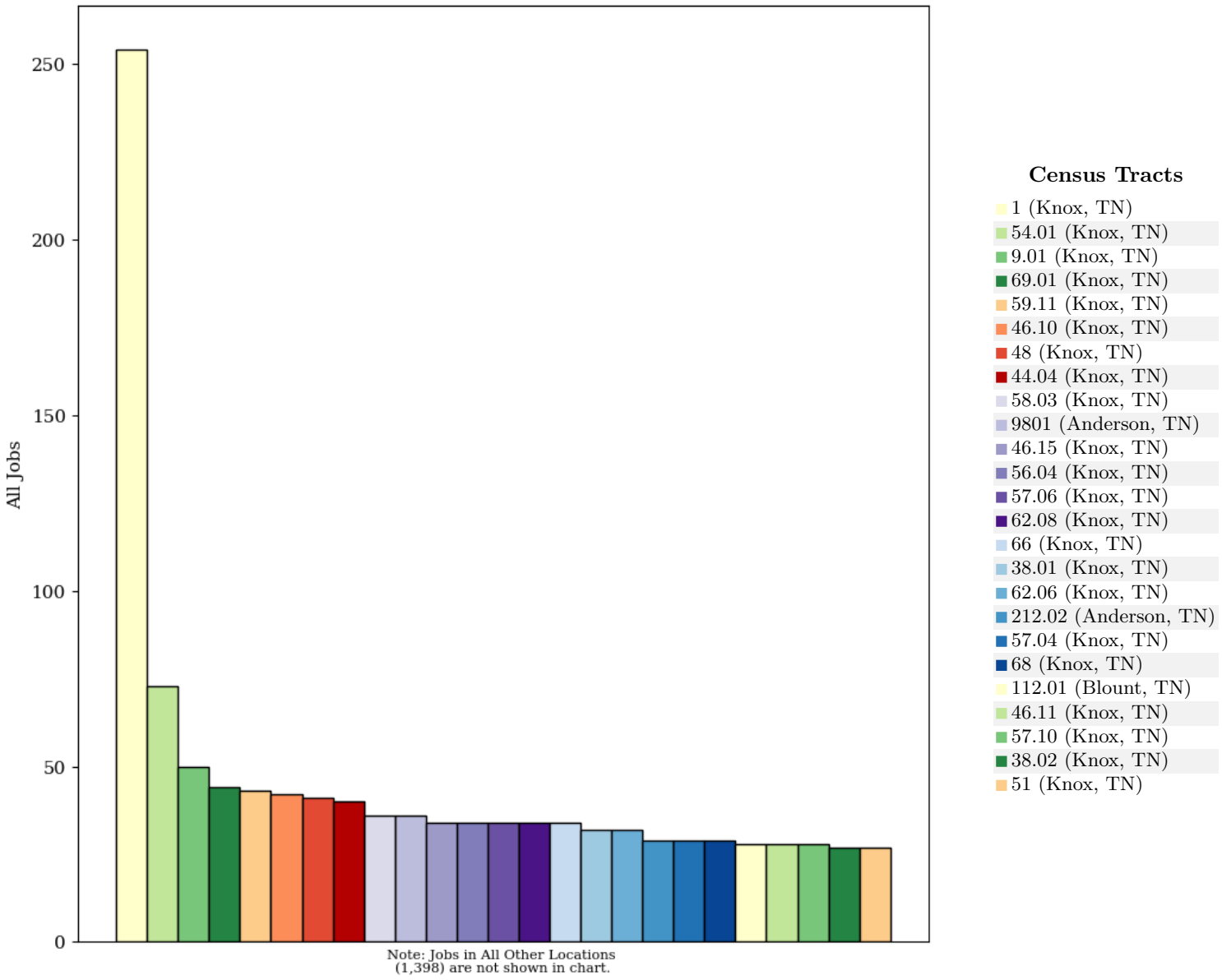
Job Count
- 220 - 254
- 186 - 219
- 151 - 185
- 117 - 150
- 82 - 116
- 48 - 81
- 13 - 47

United States Census Bureau

All Jobs from Home Selection Area to Work Census Tracts in 2022

All Workers

(Only the first 25 entries are shown in the chart.)



All Jobs from Home Selection Area to Work Census Tracts in 2022

All Workers

Census Tracts as Work Destination Area	2022 Count	2022 Share
All Census Tracts	2,516	100.0%
1 (Knox, TN)	254	10.1%
54.01 (Knox, TN)	73	2.9%
9.01 (Knox, TN)	50	2.0%
69.01 (Knox, TN)	44	1.7%
59.11 (Knox, TN)	43	1.7%
46.10 (Knox, TN)	42	1.7%
48 (Knox, TN)	41	1.6%
44.04 (Knox, TN)	40	1.6%

Census Tracts as Work Destination Area	2022 Count	Share
58.03 (Knox, TN)	36	1.4%
9801 (Anderson, TN)	36	1.4%
46.15 (Knox, TN)	34	1.4%
56.04 (Knox, TN)	34	1.4%
57.06 (Knox, TN)	34	1.4%
62.08 (Knox, TN)	34	1.4%
66 (Knox, TN)	34	1.4%
38.01 (Knox, TN)	32	1.3%
62.06 (Knox, TN)	32	1.3%
212.02 (Anderson, TN)	29	1.2%
57.04 (Knox, TN)	29	1.2%
68 (Knox, TN)	29	1.2%
112.01 (Blount, TN)	28	1.1%
46.11 (Knox, TN)	28	1.1%
57.10 (Knox, TN)	28	1.1%
38.02 (Knox, TN)	27	1.1%
51 (Knox, TN)	27	1.1%
61.04 (Knox, TN)	27	1.1%
52.02 (Knox, TN)	25	1.0%
42 (Knox, TN)	24	1.0%
64.02 (Knox, TN)	24	1.0%
402.01 (Union, TN)	23	0.9%
70 (Knox, TN)	22	0.9%
59.08 (Knox, TN)	21	0.8%
64.01 (Knox, TN)	21	0.8%
58.07 (Knox, TN)	20	0.8%
17 (Knox, TN)	19	0.8%
43 (Knox, TN)	19	0.8%
202.02 (Anderson, TN)	18	0.7%
209.02 (Anderson, TN)	18	0.7%
37 (Knox, TN)	18	0.7%
49 (Knox, TN)	18	0.7%
26 (Knox, TN)	17	0.7%
35.02 (Knox, TN)	17	0.7%
41 (Knox, TN)	17	0.7%
204 (Anderson, TN)	16	0.6%
29 (Knox, TN)	16	0.6%
67 (Knox, TN)	16	0.6%
53.01 (Knox, TN)	15	0.6%
44.03 (Knox, TN)	14	0.6%
15 (Knox, TN)	13	0.5%
39.02 (Knox, TN)	13	0.5%
All Other Locations	927	36.8%

Additional Information

Analysis Settings

Analysis Type	Destination
Destination Type	Census Tracts
Selection area as	Home
Year(s)	2022
Job Type	All Jobs
Selection Area	64.02 (Knox, TN) from Census Tracts
Selected Census Blocks	74
Analysis Generation Date	08/16/2025 15:24 - OnTheMap 6.25.2
Code Revision	bd5bc0a714230c9c2b909d905c8753cb532970e8
LODES Data Vintage	20241022_1605

Data Sources

Source: U.S. Census Bureau, OnTheMap Application and LEHD Origin-Destination Employment Statistics (Beginning of Quarter Employment, 2nd Quarter of 2002-2022).

Notes

1. Race, Ethnicity, Educational Attainment, and Sex statistics are beta release results and are not available before 2009.
2. Educational Attainment is only produced for workers aged 30 and over.
3. Firm Age and Firm Size statistics are beta release results for All Private jobs and are not available before 2011.

APPENDIX I

KNOX COUNTY TURN LANE VOLUME THRESHOLD WORKSHEETS

TABLE 4A

LEFT-TURN LANE VOLUME THRESHOLDS FOR TWO-LANE ROADWAYS WITH A PREVAILING SPEED OF 35 MPH OR LESS

(If the left-turn volume exceeds the table value a left -turn lane is needed)

189

OPPOSING VOLUME	THROUGH VOLUME PLUS RIGHT-TURN VOLUME *					
	100 - 149	150 - 199	200 - 249	250 - 299	300 - 349	350 - 399
100 - 149 150 - 199	300 245	235 200	185 160	145 130	120 110	100 90
200 - 249 250 - 299	205 175	170 150	140 125	115 105	100 90	80 70
300 - 349 350 - 399	155 135	135 120	110 100	95 [illegible]	80 [illegible]	65 60
400 - 449 450 - 499	120 105	105 90	90 80	[illegible]	[illegible]	55 50
500 - 549 550 - 599	95 85	80 70	70 65	[illegible]	[illegible]	50 45
600 - 649 650 - 699	75 70	65 60	60 55	[illegible]	[illegible]	40 35
700 - 749 750 or More	65 60	55 50	50 45	40	35	30 30

8 + 329 = 337

Thompson School Road at Squirrel Run Lane

2028 Projected AM NB Left Turns = 38

Left Turn Lane NOT Warranted

OPPOSING VOLUME	THROUGH VOLUME PLUS RIGHT-TURN VOLUME *					
	350 - 399	400 - 449	450 - 499	500 - 549	550 - 599	= / > 600
100 - 149 150 - 199	100 90	80 75	70 65	60 55	55 50	50 45
200 - 249 250 - 299	80 70	72 65	460 55	55 50	50 45	45 40
300 - 349 350 - 399	65 60	60 55	50 50	50 45	45 40	40 40
400 - 449 450 - 499	55 50	50 45	45 45	45 40	40 35	35 35
500 - 549 550 - 599	50 45	45 40	40 40	40 35	35 35	35 35
600 - 649 650 - 699	40 35	35 35	35 35	35 30	35 30	30 30
700 - 749 750 or More	30 30	30 30	30 30	30 30	30 30	30 30

* Or through volume only if a right-turn lane exists.

TABLE 4B

RIGHT-TURN LANE VOLUME THRESHOLDS

FOR TWO-LANE ROADWAYS WITH A PREVAILING SPEED OF 35 MPH OR LESS

329

8

RIGHT-TURN VOLUME	THROUGH VOLUME PLUS LEFT-TURN VOLUME *					
	<100	100 - 199	200 - 249	250 - 299	300 - 349	350 - 399
Fewer Than 25 25 - 49 50 - 99						
100 - 149 150 - 199						
200 - 249 250 - 299						Yes
300 - 349 350 - 399				Yes	Yes Yes	Yes Yes
400 - 449 450 - 499			Yes Yes	Yes Yes	Yes Yes	Yes Yes
500 - 549 550 - 599		Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes
600 or More	Yes	Yes	Yes	Yes	Yes	Yes

Thompson School Road at Squirrel Run Lane

2028 Projected AM SB Right Turns = 8

Right Turn Lane NOT Warranted

RIGHT-TURN VOLUME	THROUGH VOLUME PLUS LEFT-TURN VOLUME *					
	350 - 399	400 - 449	450 - 499	500 - 549	550 - 600	+ / > 600
Fewer Than 25 25 - 49 50 - 99					Yes	Yes Yes
100 - 149 150 - 199			Yes	Yes Yes	Yes Yes	Yes Yes
200 - 249 250 - 299	Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes
300 - 349 350 - 399	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes
400 - 449 450 - 499	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes
500 - 549 550 - 599	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes
600 or More	Yes	Yes	Yes	Yes	Yes	Yes

* Or through volume only if a left-turn lane exists.

TABLE 4A

LEFT-TURN LANE VOLUME THRESHOLDS FOR TWO-LANE ROADWAYS WITH A PREVAILING SPEED OF 35 MPH OR LESS

(If the left-turn volume exceeds the table value a left -turn lane is needed)

298

OPPOSING VOLUME	THROUGH VOLUME PLUS RIGHT-TURN VOLUME *					
	100 - 149	150 - 199	200 - 249	250 - 299	300 - 349	350 - 399
100 - 149	300	235	185	145	120	100
150 - 199	245	200	160	130	110	90
200 - 249	205	170	140	115	100	80
250 - 299	175	150	125	105	90	70
300 - 349	155	135	110	95	80	65
350 - 399	135	115	100	85	70	60
400 - 449	120	105	90	75	65	55
450 - 499	105	90	80	70	60	50
500 - 549	95	80	70	65	55	50
550 - 599	85	75	65	60	50	45
600 - 649	75	65	60	55	45	40
650 - 699	70	60	55	50	40	35
700 - 749	65	55	50	45	35	30
750 or More	60	50	45	40	35	30

8 + 212 = 220

Thompson School Road at Squirrel Run Lane

2028 Projected PM NB Left Turns = 116

Left Turn Lane Warranted

OPPOSING VOLUME	THROUGH VOLUME PLUS RIGHT-TURN VOLUME *					
	350 - 399	400 - 449	450 - 499	500 - 549	550 - 599	= / > 600
100 - 149	100	80	70	60	55	50
150 - 199	90	75	65	55	50	45
200 - 249	80	72	460	55	50	45
250 - 299	70	65	55	50	45	40
300 - 349	65	60	50	50	45	40
350 - 399	60	55	50	45	40	40
400 - 449	55	50	45	45	40	35
450 - 499	50	45	45	40	35	35
500 - 549	50	45	40	40	35	35
550 - 599	45	40	40	35	35	35
600 - 649	40	35	35	35	35	30
650 - 699	35	35	35	30	30	30
700 - 749	30	30	30	30	30	30
750 or More	30	30	30	30	30	30

* Or through volume only if a right-turn lane exists.

TABLE 4B

RIGHT-TURN LANE VOLUME THRESHOLDS

FOR TWO-LANE ROADWAYS WITH A PREVAILING SPEED OF 35 MPH OR LESS

212

RIGHT-TURN VOLUME	THROUGH VOLUME PLUS LEFT-TURN VOLUME *					
	<100	100 - 199	200 - 249	250 - 299	300 - 349	350 - 399
8 Fewer Than 25 25 - 49 50 - 99						
100 - 149 150 - 199						
200 - 249 250 - 299						Yes
300 - 349 350 - 399				Yes	Yes Yes	Yes Yes
400 - 449 450 - 499			Yes Yes	Yes Yes	Yes Yes	Yes Yes
500 - 549 550 - 599		Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes
600 or More	Yes	Yes	Yes	Yes	Yes	Yes

Thompson School Road at Squirrel Run Lane

2028 Projected PM SB Right Turns = 8

Right Turn Lane NOT Warranted

RIGHT-TURN VOLUME	THROUGH VOLUME PLUS LEFT-TURN VOLUME *					
	350 - 399	400 - 449	450 - 499	500 - 549	550 - 600	+ / > 600
Fewer Than 25 25 - 49 50 - 99					 Yes	 Yes Yes
100 - 149 150 - 199			 Yes	Yes Yes	Yes Yes	Yes Yes
200 - 249 250 - 299	 Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes
300 - 349 350 - 399	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes
400 - 449 450 - 499	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes
500 - 549 550 - 599	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes
600 or More	Yes	Yes	Yes	Yes	Yes	Yes

* Or through volume only if a left-turn lane exists.

APPENDIX J

VEHICLE QUEUE WORKSHEETS (SIMTRAFFIC 12)

Intersection: 4: Thompson School Road & Squirrel Run Lane

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	84	59
Average Queue (ft)	41	12
95th Queue (ft)	65	42
Link Distance (ft)	492	467
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 0

Intersection: 4: Thompson School Road & Squirrel Run Lane

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	62	68
Average Queue (ft)	34	22
95th Queue (ft)	54	57
Link Distance (ft)	492	467
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 0

Ajax Engineering, LLC
11812 Black Road
Knoxville, TN 37932
ajaxengineering@gmail.com

AJAX ENGINEERING
CIVIL ENGINEERING / TRAFFIC ENGINEERING