



Effingham County, GA

SR 26/US 80 Scoping Study Phase II Traffic Forecasting Technical Memorandum

Prepared for:



County
Effingham
Georgia
Board of Commissioners



Prepared by:

Kimley»Horn

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TECHNICAL MEMORANDUM

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Date: July 10, 2026

Subject: ***SR 26/US 80 Scoping Study Phase II – Traffic Forecasting Technical Memorandum***

Kimley-Horn and Southeastern Engineering, Inc. (SEI) have prepared this technical memorandum to document the data, assumptions, and methodology used to develop existing and future traffic volumes for the SR 26/US 80 Scoping Study Phase II (PI No. 0020786) in Effingham County, Georgia.

Executive Summary

The traffic forecasting methodology for the SR 26/US 80 Scoping Study Phase II (PI No. 0020786) included a comprehensive analysis of current traffic conditions and growth trends to facilitate the development of future year traffic volumes for the short-term (i.e., 2035) and long-term (i.e., 2050) horizon years. These forecasts will guide the development of recommended improvements in support of the Coastal Region Metropolitan Planning Organization (CORE MPO) Metropolitan Transportation Plan (MTP) process. Existing turning movement counts (TMCs) and 48-hour classification counts were collected throughout the SR 26/US 80 corridor to establish the Existing Year (2025) Annual Average Daily Traffic (AADT) and Design Hourly Volumes (DHVs). Future volumes were then developed for the Base Year (2035) and Design Year (2050) by selecting background growth rates and adding trips associated with future developments to the study network. Finally, DHVs were developed from the forecasted AADT volumes by applying the existing K factors (i.e., proportion of daily traffic occurring in the peak hour) and D factors (i.e., percentage of traffic traveling in one direction) in accordance with requirements set forth in the Georgia Department of Transportation's (GDOT) *Design Traffic Forecasting Manual, Version 1.4* (DTFM).

Based on coordination with GDOT, the CORE MPO, the Coastal Regional Commission of Georgia (CRC), and Effingham County ("the County") including Planning and Zoning Services, substantial development is anticipated throughout the study corridor and is expected to drive traffic growth in both the short- and long-term. Key contributors to this anticipated growth include numerous industrial developments in Bryan County to the west, including the Hyundai Motor Group Metaplant America



(HMGMA); planned residential and commercial developments in Effingham County; and continued freight-related growth in Chatham County to the east, including expansion of freight-handling capacity at the Port of Savannah.

Traffic growth is expected to be most pronounced near the western end of the study corridor, driven primarily by the emergence of industrial developments in north Bryan County, as well as near Old River Road where Warnell Parkway, a planned new-location roadway, will introduce a fourth leg at the intersection of SR 26/US 80 and Old River Road and provide a new north-south connection to SR 17/30. Growth along the eastern end of the corridor is anticipated to be modest compared to the rest of the corridor, but relatively high when compared regionally. More broadly, corridor-wide growth is anticipated to accelerate rapidly in the short-term with the addition of development-specific traffic from Bryan County and Effingham County, while long-term growth is expected to be moderate as the majority of known developments have been considered in the 2035 forecasts. By 2035, traffic volumes along the corridor are projected to more than double relative to 2025 volumes. Although long-term growth is expected to slow down following the anticipated widening of I-16 and the associated redistribution of regional east-west traffic, traffic volumes along SR 26/US 80 are still projected to nearly triple by 2050 compared to 2025 due to continued regional growth and additional development potential within Effingham County.

Existing Year, Base Year, and Design Year AADT and DHV traffic diagrams are provided in **Figure ES-1** through **Figure ES-5**.

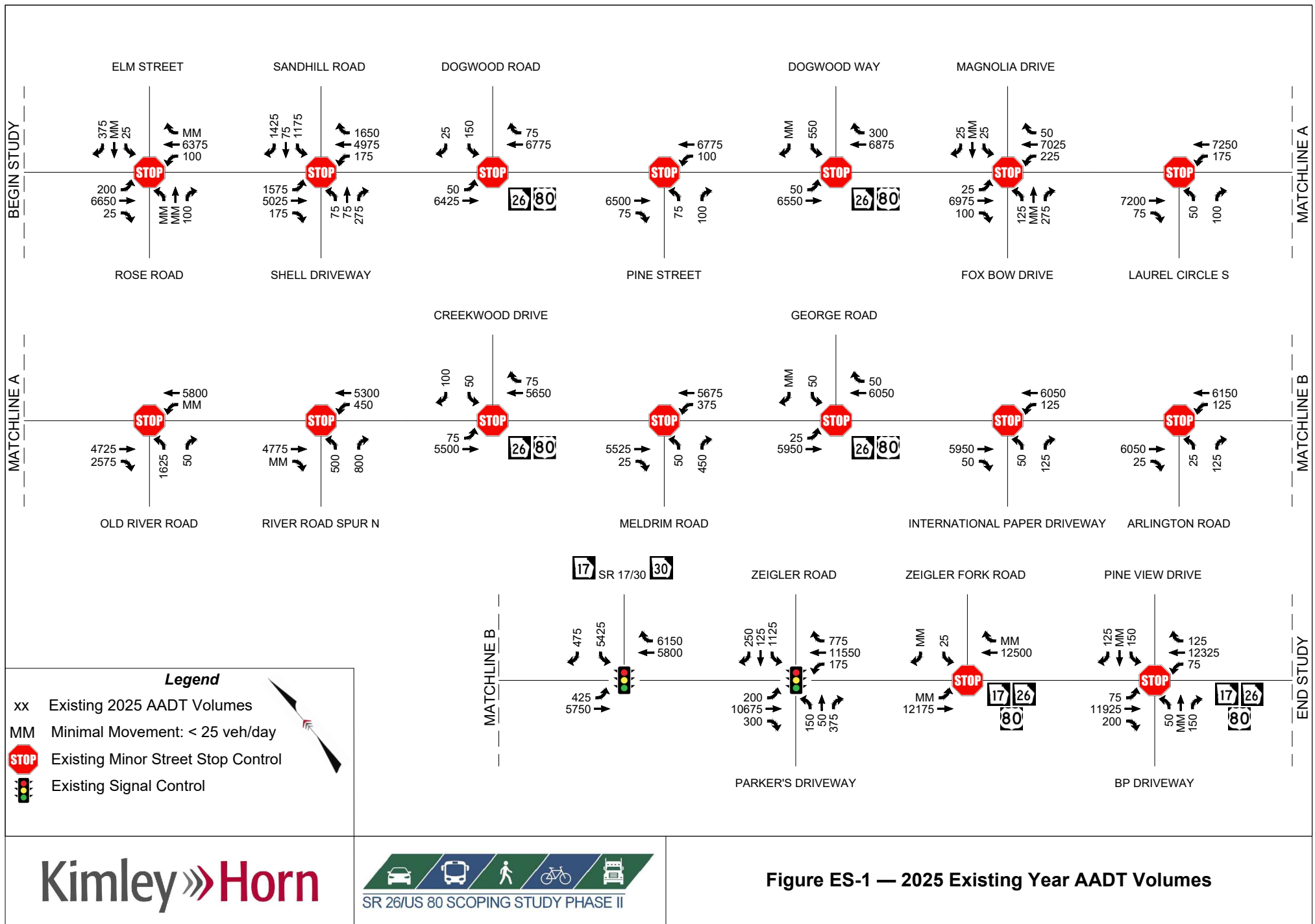
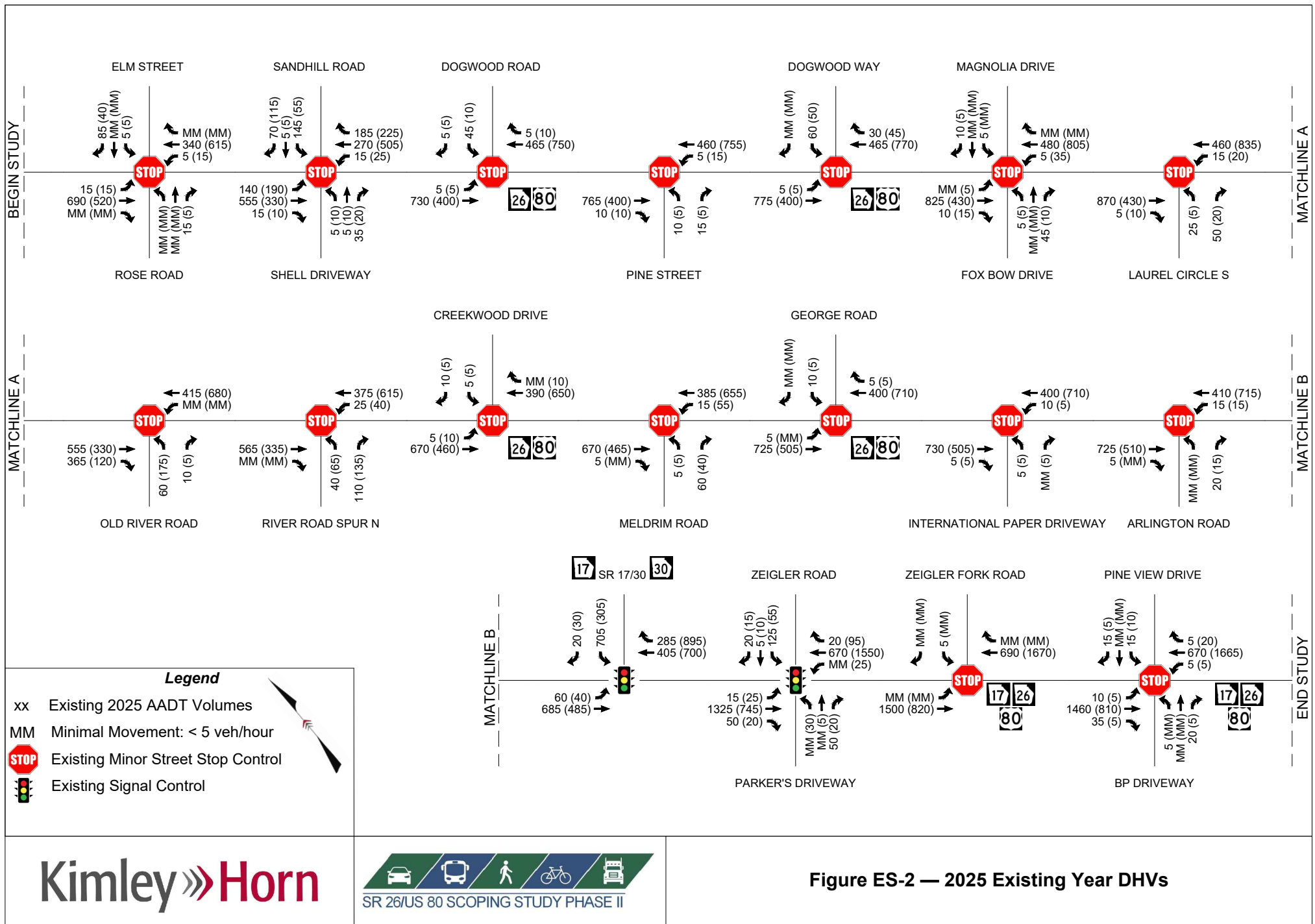
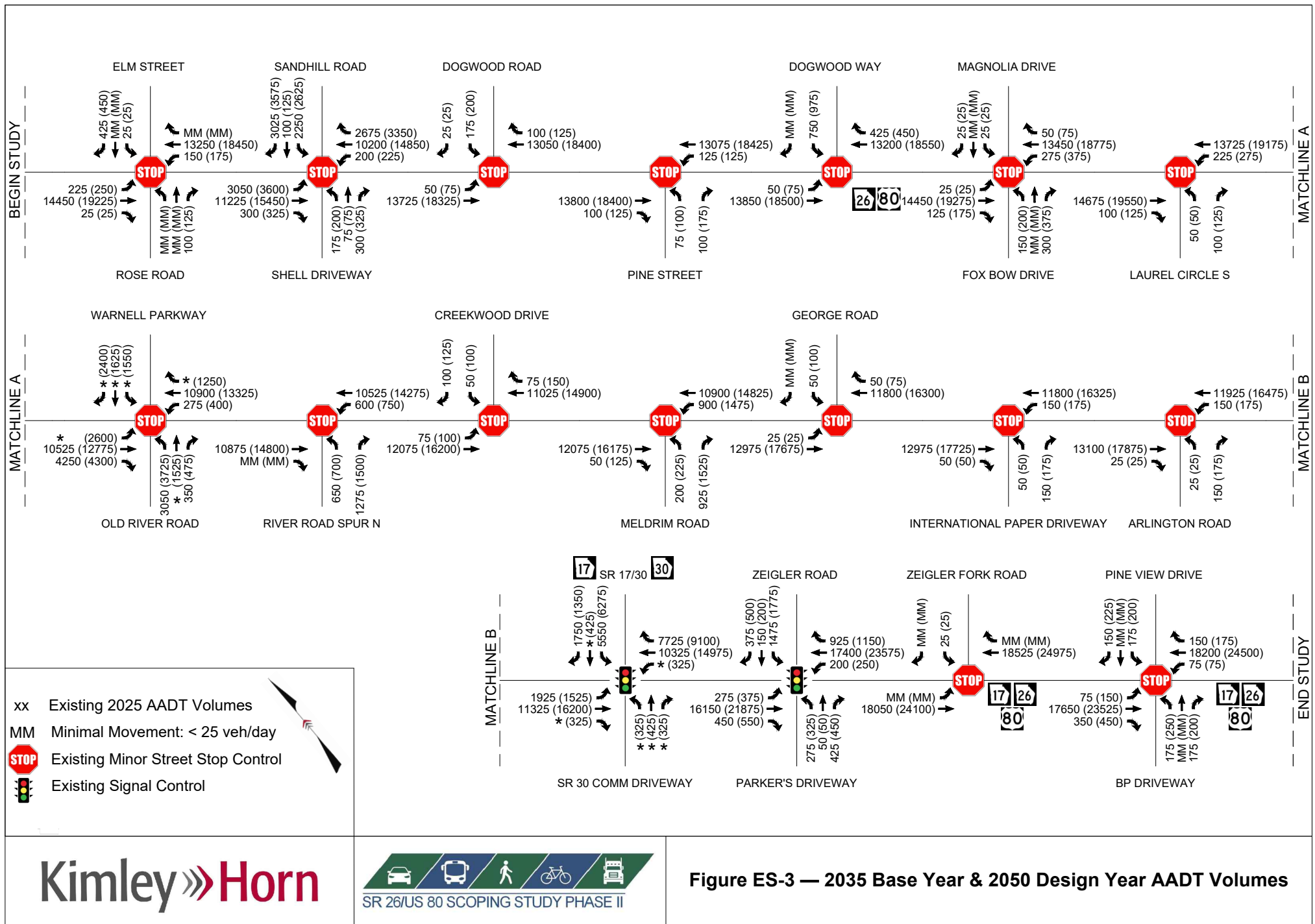
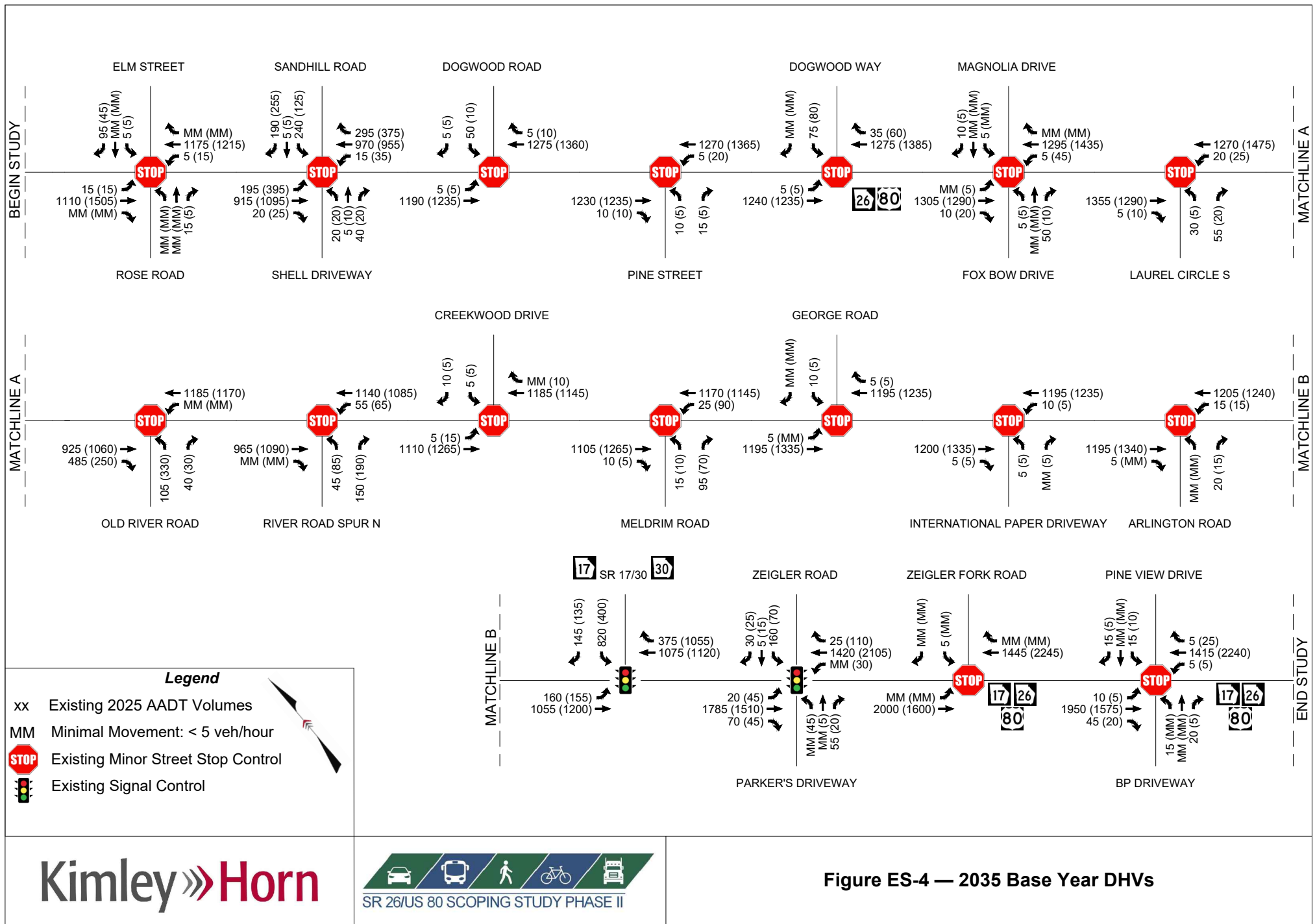
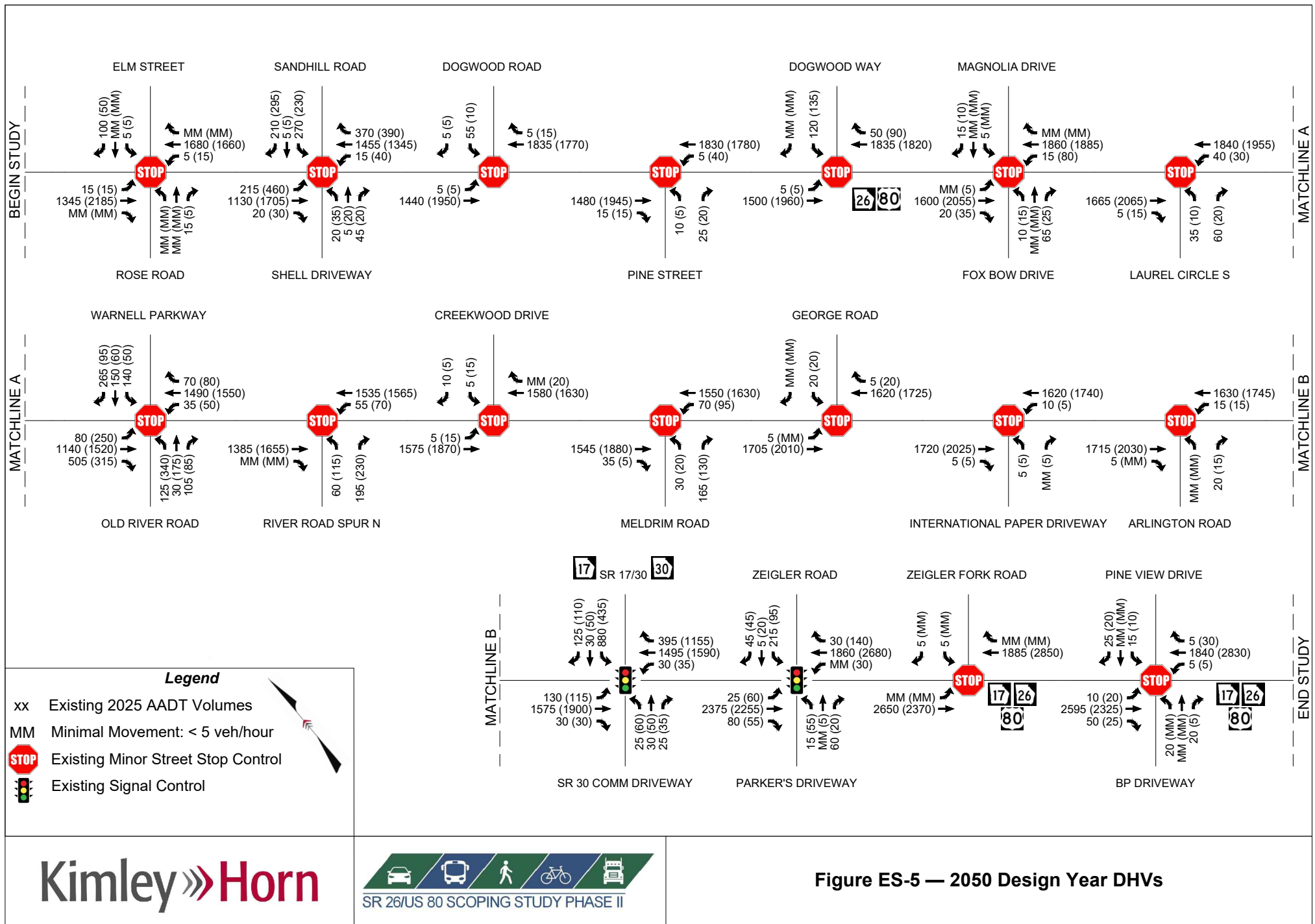


Figure ES-1 — 2025 Existing Year AADT Volumes











Project Background

Once nicknamed the “Broadway of America,” US 80 has long been one of the most important east-west routes in the country and was the first major highway to connect Georgia to California. Locally, the SR 26/US 80 corridor—from the Bryan County line to the Chatham County line in Effingham County—serves as a critical link in Georgia’s freight and commuter network. It is one of the most heavily utilized access routes serving the Georgia Ports Authority’s (GPA’s) Garden City Terminal (GCT) and connects to major freight and commuter corridors in Effingham County such as Sand Hill Road, Old River Road, and SR 17/30. Further, SR 26/US 80 is a key east-west alternate to I-16 that serves freight traffic from the Hyundai Motor Group Metaplant America (HMGMA) in Bryan County to the Port of Savannah in Chatham County. However, SR 26/US 80 is more than just a critical freight and commuter corridor; it serves as a hurricane evacuation route, and the entire corridor is utilized by Georgia State Bike Routes 35 and 40. The 6.4-mile-long study corridor within Effingham County is functionally classified as a minor arterial and includes a diverse mix of industrial, commercial, residential, religious, and recreational facilities. Additionally, the community of Eden relies on SR 26/US 80 as its main street which indicates that the corridor is both a place and a thoroughfare. This study, PI No. 0020786, will evaluate existing and future capacity, operations, and safety conditions and will consider traffic counts, crash data, land use, community data, and future traffic projections throughout the corridor. This data will be used to evaluate access management strategies with a primary focus of developing operational and safety improvements along the corridor. The study will consider freight, commuter, and pedestrian/bicycle traffic, and future traffic projections will account for anticipated growth based on historical data, population projections, the Coastal Region Metropolitan Planning Organization’s (CORE MPO’s) Travel Demand Model (TDM), the HMGMA, and potential development adjacent to and near the corridor.

The primary goals and objectives of the *SR 26/US 80 Scoping Study Phase II* are:

- Identify and prioritize short-term (0-5 years), mid-term (5-10 years), and long-term (10+ years) improvement projects needed for the SR 26/US 80 corridor to operate at an acceptable level of service;
- Prioritize recommended improvements to facilitate the planning and programming of projects through the CORE MPO Metropolitan Transportation Plan (MTP) process; and
- Justify the future programming of projects in the CORE MPO Transportation Improvement Program (TIP).

In alignment with these goals and objectives and to support the CORE MPO MTP process, this study focuses on several key performance measures used to inform transportation investment decisions over short- (0-5 years), mid- (5-10 years), and long-term (10+ years) horizons. This technical memorandum provides detailed information on the methodology utilized to develop Annual Average Daily Traffic (AADT) volumes and Design Hourly Volumes (DHVs) for the 2035 Base Year and 2050 Design Year including the data and assumptions used to develop these projections. Additionally, this study's forecast methodology and traffic projections were coordinated with GDOT’s ongoing SR 26/US 80 Corridor Study from SR 119 in Bulloch County to the Bryan County/Effingham County line (“the Bryan County Study”). Further details and comparisons between the two studies are detailed on **page 32**.

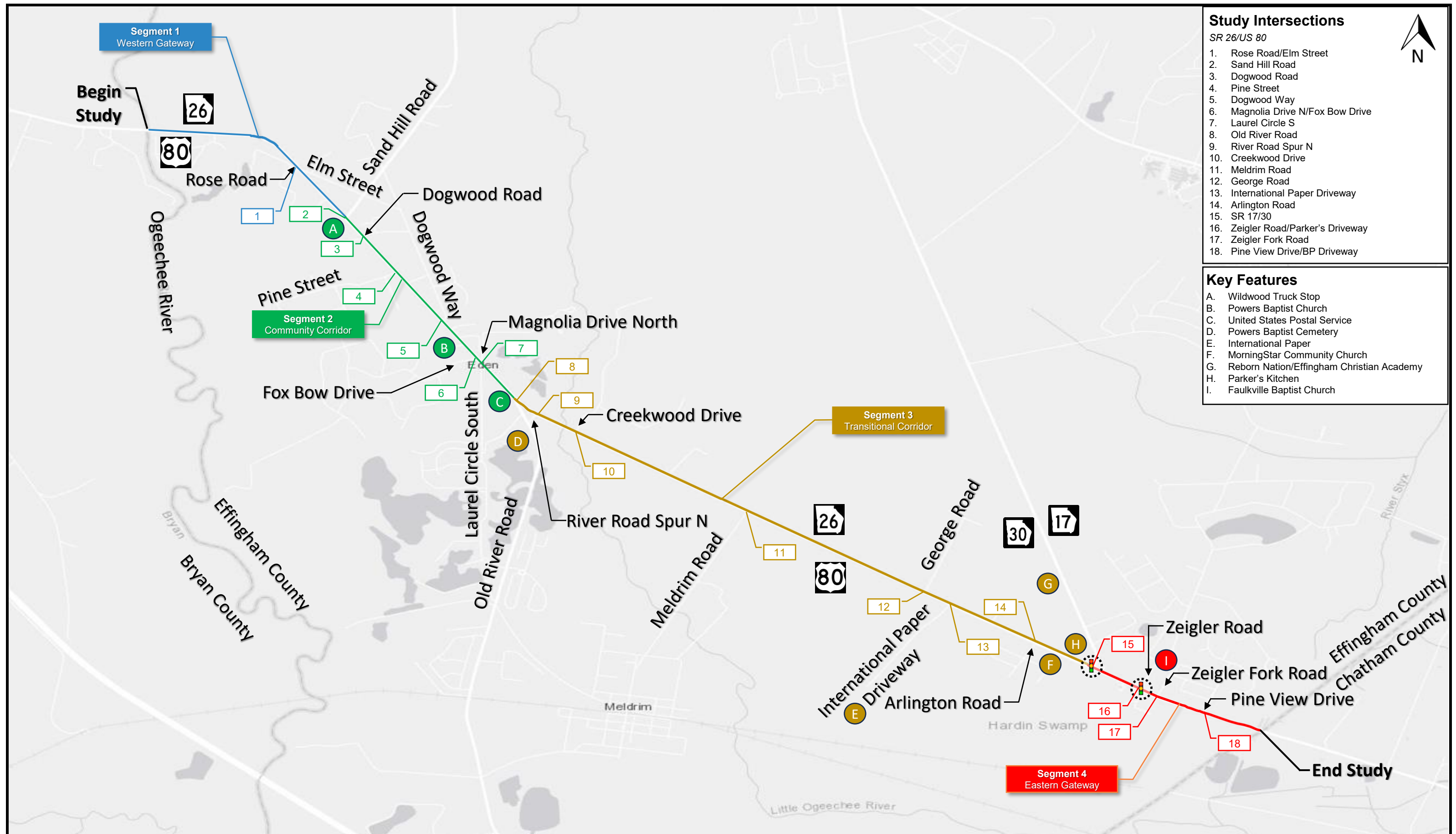


Study Area, Roadway Projects, and Other Studies

Study Area and Existing Conditions

The planning area for this study is illustrated in **Figure 1** and includes the SR 26/US 80 corridor from the Effingham County/Bryan County line to the Effingham County/Chatham County line. Throughout the entirety of the 6.4-mile-long study corridor, SR 26/US 80 is classified as a minor arterial by GDOT. The existing conditions along the study corridor are documented in the *SR 26/US 80 Scoping Study Phase II Existing Conditions Memorandum* (“the ECM”), dated January 2026. Based on the findings of the ECM and field visits conducted in August 2025, the following observations are noteworthy with respect to the subject traffic forecast:

- The study corridor generally operates with minimal disruptions at the western end near the Effingham County/Bryan County line.
- Long peak hour delays are experienced at the intersection of SR 26/US 80 and Sand Hill Road, where the southbound approach operates with oversaturated conditions during both peak hours. PI No. 0019658 is expected to mitigate operational deficiencies at this intersection via the installation of a multi-lane roundabout, and an interim traffic signal will be installed prior to roundabout construction. As of July 2026, the management let date for the roundabout project is scheduled for April 15, 2027.
- Long peak hour delays are experienced at the intersection of SR 26/US 80 and Old River Road, where northbound queues frequently extend more than 300 feet during the PM peak hour. The *Effingham County Transportation Master Plan Update* (Pond, 2025) (“the TMP”) recommended realignment and signalization of this intersection.
- Bottlenecks and congestion between the two signalized intersections at SR 17/30 and at Zeigler Road contribute to significant delays along the corridor and often block adjacent minor street movements at unsignalized intersections. Recurring congestion occurs along the southbound approach at the intersection of SR 26/US 80 and SR 17/30 during both peak periods.
- Segment 3 (i.e., SR 26/US 80 from Old River Road to SR 17/30) includes industrial land use potential based on the future land use map in the *2040 Effingham County Comprehensive Plan*.
- Segment 4 (i.e., SR 26/US 80 from SR 17/30 to the Effingham County/Chatham County line) includes commercial land use potential based on the future land use map in the *2040 Effingham County Comprehensive Plan*.
- The County intends to construct Warnell Parkway, a new-location roadway connecting SR 26/US 80 at Old River Road to SR 17/30 at Jabez Jones Road, prior to 2050. Warnell Parkway will provide a new north-south route within southwest Effingham County and is expected to redistribute traffic from the intersections of SR 26/US 80 at SR 17/30 and at Sand Hill Road; this redistribution is expected to mitigate observed operational deficiencies at those intersections.



SR 26/US 80 Scoping Study Phase II – Existing Conditions/Needs Assessment

Figure 1 – Corridor Context Areas and Study Intersections



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Roadway Projects and Other Studies

Programmed roadway projects along and adjacent to the SR 26/US 80 corridor that could impact future travel patterns were identified by reviewing projects on GDOT's GeoPI database and through coordination with the County. Other planning and traffic studies were obtained through coordination with GDOT, the County, and the CORE MPO. These projects and studies include:

- **Roadway Projects**

- PI No. 0020168 – I-16 FROM I-95/CHATHAM TO SR 67/BULLOCH – This project proposes to widen I-16 from four to six lanes from I-95 in Chatham County to SR 67 in Bulloch County. The improvements include widening and replacement of bridges, median-based lane additions, shoulder reconstruction, and pavement improvements. The project is currently in preliminary design, but construction funding is not currently programmed. Accordingly, project implementation will be determined through future GDOT planning and funding allocations.
- PI No. 0019658 – SR 26/US 80 @ CR 311/SAND HILL ROAD – Roundabout – This project will construct a multi-lane roundabout at the intersection of SR 26/US 80 and Sand Hill Road, which will replace the existing minor-street stop control to improve operational efficiency and safety. As of July 2026, the management let date for the roundabout project is scheduled for April 15, 2027.
- SR 26/US 80 at Sand Hill Road – Interim Traffic Signal – This project will construct an interim and temporary traffic signal prior to the multi-lane roundabout as part of PI No. 0019658.
- PI No. 0021723 – Old River Road from John Carter Road to I-16 – This project includes the widening of Old River Road from two to four lanes from SR 204/Fort Argyle Road in Chatham County to I-16 in Effingham County. Construction is programmed for Fiscal Year (FY) 2030.

- **Additional Planning Documents and Traffic Studies**

- *Old River Road/Warnell Parkway Corridor Study* (Kimley-Horn, completion anticipated in 2027)
- *SR 26/US 80 Corridor Study from SR 119 in Bulloch County to Bryan County/Effingham County Line* (GDOT, under development; completion anticipated in 2026)
- *Coastal Empire Transportation Study* (GDOT, 2023)
- *Effingham County Transportation Master Plan Update* (Pond, 2025)
- *2050 Metropolitan Transportation Plan* (CORE MPO, 2024)
- *CORE MPO Regional Freight Transportation Plan* (Cambridge Systemics, 2023)
- *Georgia's Freight Infrastructure: A Business-Focused Planning Analysis* (GDOT, 2024)
- *Effingham County Safety Action Plan – SS4A* (Foresite Group, 2024)
- *Georgia Hi-Lo Trail Plan* (Path Foundation & Kaizen Collaborative, 2024)
- *Concept Plan for the Georgia Hi-Lo Effingham County Model Project* (Kaizen Collaborative, 2024)
- *Active Effingham Multimodal Mobility Framework Plan* (Foresite Group, 2025)
- *Atlas Park Project* (Effingham County, Ongoing)
- *Regional Transit Development Plan* (CRC and GDOT, 2024)
- *Construction Plans for Ellianos Coffee Shop, Bloomingdale, Georgia* (Pittman Engineering, 2023)



- *Construction Plans for 7-Eleven, Ellabell Georgia* (Forge Design Consultants, 2022)
- *Interstate Centre II Traffic Impact Analysis* (Thomas & Hutton, 2021)
- *Van Trust – Kelley Tract Traffic Impact Analysis* (Thomas & Hutton, 2020)
- *North Bryan Transportation Study* (Thomas & Hutton, 2021)
- *Haiseal Tract Industrial Site Traffic Impact Analysis* (Thomas & Hutton, 2022)
- *Smith Tract Traffic Impact Analysis* (Thomas & Hutton, 2022)
- *Parker's Kitchen Truck Stop Development of Regional Impact* (Lumin8, 2021)
- *US 280 Container Storage Facility Traffic Impact Study* (SEI, 2022)
- *Baca Ready-Mix Concrete Plant Development of Regional Impact Site Plan* (Coleman Company, 2025)

Select sheets from the planning documents and traffic studies listed above are provided in **Attachment A**.

Existing Traffic Data Collection

Existing Traffic Counts

To determine existing traffic conditions on the study corridor, bi-directional traffic counts were collected at 32 locations and peak hour turning movement counts (TMCs) were collected at 14 of the 18 study intersections. A traffic count location map is provided in **Attachment B** and raw traffic count data is provided in **Attachment C**. At specific locations, TMCs were applied to adjacent intersections to develop turning movement proportions, and TMCs for the intersection at Sand Hill Road were obtained from the *PI No. 0019658 Concept Report*, dated June 2024.

Based on the guidelines set forth in the *GDOT Design Traffic Forecasting Manual, Version 1.4* (DTFM), 48-hour bi-directional counts were collected across two days along the corridor: Tuesday, August 19, 2025 and Wednesday, August 20, 2025 while Effingham County schools were in session. The TMCs were collected on Tuesday, August 19, 2025, from 6:00 to 9:00 AM and from 3:30 to 6:30 PM. The raw traffic counts were used to develop the 2025 Existing Year AADT volumes and establish the distribution of traffic volumes and vehicle classes over a typical day along the study corridor. Additional 48-hour classification counts from PI No. 0019658 and GDOT's Traffic Analysis and Data Application (TADA) website were compiled and adjusted to the 2025 Existing Year by using historic growth rates and applying the most recent available GDOT traffic factors.

The overall peak hours for the study corridor were identified by summing all approach volumes along SR 26/US 80 over the two-day-long collection period. The morning peak hour was determined to occur from 7:00 to 8:00 AM, and the evening peak hour was determined to occur from 4:30 to 5:30 PM. These time periods were utilized throughout the forecasting process documented herein.

Design Hourly Volume Factors

The 48-hour classification counts, counts from associated traffic studies, and data from adjacent count stations were used to calculate the K and D factors for the peak periods. The 2025 Existing Year K and D factors are summarized in **Table 1**, and detailed calculations are included in **Attachment D**.


Table 1 – 2025 Existing Peak Hour K Factors and D Factors

Location	Project Count ID	AM		PM	
		K ¹	D ²	K ¹	D ²
SR 26/US 80 west of Rose Road/Elm Street	1	8.3%	62.4%	8.7%	55.0%
Rose Road south of SR 26/US 80	2	8.9%	75.0%	8.9%	75.0%
Elm Street north of SR 26/US 80	3	17.5%	85.7%	10.0%	75.0%
SR 26/US 80 west of Sand Hill Road	PI 0019658 N	8.0%	67.3%	8.8%	54.3%
Shell Driveway south of SR 26/US 80	PI 0019658 W	9.4%	56.3%	9.4%	50.0%
Sand Hill Road north of SR 26/US 80	PI 0019658 E	9.2%	60.0%	10.0%	70.8%
SR 26/US 80 east of Sand Hill Road	PI 0019658 S	9.1%	61.0%	8.7%	65.1%
SR 26/US 80 west of Dogwood Road	4	9.1%	61.0%	8.7%	65.1%
Dogwood Road north of SR 26/US 80	5	20.0%	83.3%	10.0%	50.0%
Pine Street south of SR 26/US 80	6	11.4%	62.5%	10.0%	71.4%
SR 26/US 80 west of Dogwood Way	CS 103-0162	9.2%	62.7%	8.7%	65.5%
Dogwood Way north of SR 26/US 80	7	10.6%	63.2%	11.1%	50.0%
SR 26/US 80 west of Magnolia Drive N	8	9.3%	62.8%	8.9%	64.4%
Fox Bow Drive south of SR 26/US 80	9	9.0%	76.9%	9.0%	76.9%
Magnolia Drive N north of SR 26/US 80	10	12.0%	100.0%	8.0%	50.0%
Laurel Circle S south of SR 26/US 80	11	23.8%	78.9%	13.8%	54.5%
SR 26/US 80 west of Old River Road	12	9.5%	65.9%	8.9%	65.5%
Old River Road south of SR 26/US 80	13	10.2%	83.9%	7.1%	60.0%
River Road Spur N south of SR 26/US 80	14	10.0%	85.7%	13.7%	83.3%
SR 26/US 80 west of Creekwood Drive	15	9.5%	62.8%	9.9%	58.2%
Creekwood Drive north of SR 26/US 80	16	6.7%	75.0%	10.0%	66.7%
SR 26/US 80 west of Meldrim Road	17	9.4%	63.4%	10.0%	58.7%
Meldrim Road south of SR 26/US 80	18	9.4%	76.5%	11.1%	55.0%
SR 26/US 80 west of George Road	CS 103-0159	9.4%	64.6%	10.1%	58.4%
George Road north of SR 26/US 80	19	16.0%	50.0%	8.0%	50.0%
International Paper Driveway south of SR 26/US 80	20	5.00%	75.00%	5.00%	50.00%
SR 26/US 80 west of Arlington Road	21	9.3%	64.0%	10.0%	58.4%
Arlington Road south of SR 26/US 80	22	13.3%	50.0%	10.0%	50.0%
SR 26/US 80 west of SR 17/30	23	9.4%	63.7%	10.1%	58.2%
SR 17/30 north of SR 26/US 80	24	8.6%	67.8%	10.2%	73.6%
SR 26/US 80 west of Zeigler Road	25	9.0%	66.8%	10.3%	66.9%
Zeigler Road north of SR 26/US 80	26	7.3%	81.1%	8.1%	61.0%
Parker's Driveway south of SR 26/US 80	27	8.9%	52.4%	9.4%	50.0%
SR 26/US 80 west of Zeigler Fork Road	28	8.9%	68.5%	10.1%	67.1%
Zeigler Fork Road north of SR 26/US 80	29	20.0%	100.0%	0.0%	0.0%
SR 26/US 80 east of Zeigler Fork Road	CS 103-0102	8.9%	68.5%	10.1%	67.1%
SR 26/US 80 west of Pine View Drive	30	8.9%	68.6%	10.1%	67.1%
Pine View Drive north of SR 26/US 80	31	9.5%	66.7%	8.4%	62.5%
SR 26/US 80 east of Pine View Drive	32	8.8%	68.7%	10.2%	67.2%

¹K Factor is the percent of the daily volume occurring during the peak hour

²D Factor is the percent of traffic traveling in the peak direction during the peak hour

As described in the Existing Conditions Memorandum (ECM), the study corridor is divided into four segments. Segment-wide K and D factors were calculated for each of the segments by averaging the K and D factors for the counts located along SR 26/US 80 within each contextual segment. For the side streets, approach-specific K and D factors were utilized. The 2025 Existing segment-wide K and D factors are shown in **Table 2**.

**Table 2 – 2025 Existing Segment K Factors and D Factors**

Location(s)	K ¹ (AM/PM)	D ² (AM/PM)
Segment 1 SR 26/US 80 from Effingham/Bryan County Line to Sand Hill Road	7.4%/9.0%	66.7%/56.6%
Segment 2 SR 26/US 80 from Sand Hill Road to Old River Road	9.6%/9.5%	68.1%/66.1%
Segment 3 SR 26/US 80 from Old River Road to SR 17/30	11.1%/9.4%	66.4%/61.9%
Segment 4 SR 26/US 80 from SR 17/30 to Effingham/Chatham County Line	9.9%/9.4%	73.5%/69.3%

¹K Factor is the percent of the daily volume occurring during the peak hour²D Factor is the percent of traffic traveling in the peak direction during the peak hour**2025 Existing Year AADT Calculations**

The raw 48-hour bi-directional daily count data was adjusted by applying monthly and daily 2024 GDOT Traffic Factors (the most recent available GDOT Traffic Factors) from GDOT's Road and Traffic Data website to develop 2025 Existing Year AADT volumes. The seasonal factors used for this study are shown in **Table 3**.

Table 3 – Applied 2024 GDOT Traffic Factors

Roadway Classification	GDOT Factor Group	Day of the Week			Month of Year											
		Tue	Wed	Thu	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Local	01	0.97	0.94	0.92	1.13	1.04	1.00	0.98	0.98	0.97	1.00	0.95	0.97	0.91	1.02	1.08
Minor Collector	04	0.90	0.88	0.89	1.07	1.01	0.98	0.98	0.98	1.00	1.05	0.96	0.98	0.94	1.02	1.06
Major Collector	04	0.90	0.88	0.89	1.07	1.01	0.98	0.98	0.98	1.00	1.05	0.96	0.98	0.94	1.02	1.06
Minor Arterial	07	0.94	0.92	0.91	1.07	0.99	0.97	0.97	0.99	0.99	1.03	0.98	0.99	0.96	1.03	1.06

The factored and balanced 2025 Existing Year traffic volumes with the applied AM and PM K and D factors are provided in **Figure 2** and **Figure 3** on the following pages. These factors were also applied to applicable bi-directional data from PI No. 0019658 and TADA count stations which were utilized to supplement traffic counts along the corridor.

2025 Existing Year Truck Percentages

The 48-hour classification counts, counts from associated traffic studies, and data from adjacent count stations were used to calculate daily and peak hour truck percentages. In accordance with the GDOT *Design Traffic Forecasting Manual*, truck percentages are rounded to the nearest half-percent. **Table 4** summarizes the existing truck percentages for all 48-hour classification counts along SR 26/US 80, and detailed truck percentage calculations are provided in **Attachment E**. Since the majority of future developments along and adjacent to the corridor will be industrial, truck percentages along SR 26/US 80 are expected to increase in the horizon years. Future year truck percentages are discussed further on **page 31**.


Table 4 – 2025 Existing Truck Percentages

Project Location	Project Count ID	2025 Existing Truck Percentages								
		Daily			AM Peak Hour			PM Peak Hour		
		Total	S.U. ¹	COMB. ²	Total	S.U. ¹	COMB. ²	Total	S.U. ¹	COMB. ²
SR 26/US 80 west of Rose Road/Elm Street	1	18.5%	4.5%	14.0%	16.5%	4.5%	12.0%	11.0%	3.0%	8.0%
SR 26/US 80 west of Sand Hill Road	PI 0019658	23.5%	5.0%	18.5%	23.5%	6.5%	17.0%	12.0%	1.5%	10.5%
SR 26/US 80 east of Sand Hill Road	PI 0019658	25.0%	6.5%	18.5%	25.0%	8.0%	17.0%	12.0%	2.0%	10.0%
SR 26/US 80 east of Pine Street	4	19.0%	4.5%	14.5%	16.5%	4.5%	12.0%	11.5%	3.5%	8.0%
SR 26/US 80 west of Dogwood Way	CS 103-0162	22.0%	9.5%	12.5%	27.0%	14.0%	13.0%	11.0%	5.5%	5.5%
SR 26/US 80 west of Magnolia Drive N	8	18.0%	4.5%	13.5%	14.5%	4.0%	10.5%	11.0%	3.5%	7.5%
SR 26/US 80 west of Old River Road	12	17.0%	4.0%	13.0%	14.0%	4.0%	10.0%	10.0%	3.0%	7.0%
SR 26/US 80 west of Creekwood Drive	15	22.0%	5.5%	16.5%	20.5%	6.0%	14.5%	14.0%	4.5%	9.5%
SR 26/US 80 west of Meldrim Road	17	22.0%	5.5%	16.5%	21.0%	7.0%	14.0%	13.5%	4.5%	9.0%
SR 26/US 80 west of George Road	CS 103-0159	21.5%	7.0%	14.5%	23.0%	9.5%	13.5%	10.5%	2.5%	8.0%
SR 26/US 80 west of Arlington Road	21	22.0%	6.5%	15.5%	21.5%	8.0%	13.5%	13.5%	4.0%	9.5%
SR 26/US 80 west of SR 17/30	23	22.0%	6.5%	15.5%	20.5%	7.5%	13.0%	13.0%	4.0%	9.0%
SR 26/US 80 west of Zeigler Road	25	13.0%	4.5%	8.5%	12.0%	5.0%	7.0%	7.0%	2.5%	4.5%
SR 26/US 80 west of Zeigler Fork Road	28	12.0%	4.0%	8.0%	11.0%	4.5%	6.5%	7.0%	2.5%	4.5%
SR 26/US 80 west of Pine View Drive	30	12.0%	4.0%	8.0%	11.0%	4.5%	6.5%	7.0%	2.5%	4.5%
SR 26/US 80 east of Pine View Drive	32	12.0%	4.0%	8.0%	11.0%	4.5%	6.5%	7.0%	2.5%	4.5%

¹Single-Unit (SU) Trucks: Federal Highway Administration Vehicle Classes 4 through 7

²Combination (COMB or MU) Trucks: Federal Highway Administration Vehicle Classes 8 through 13

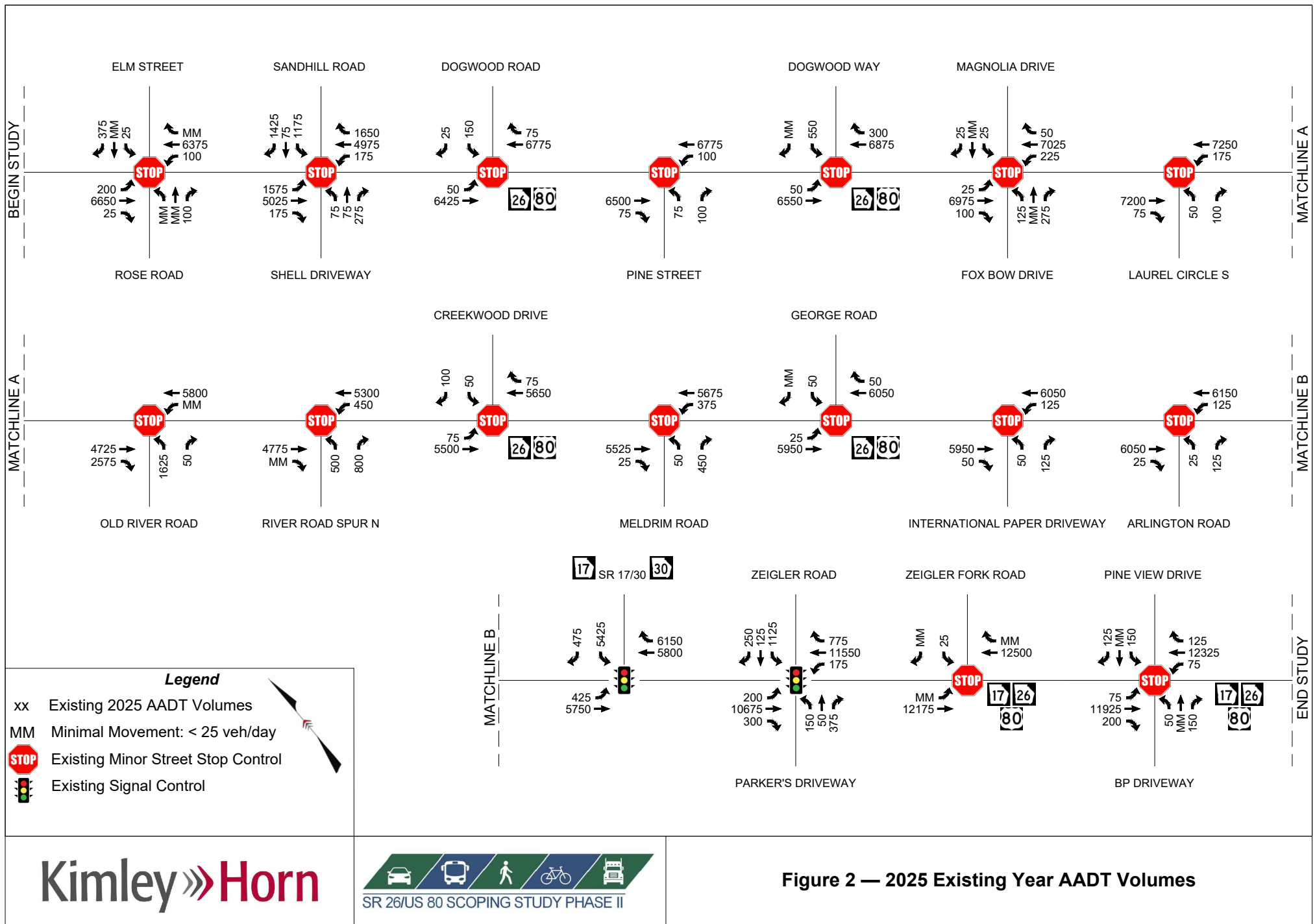


Figure 2 — 2025 Existing Year AADT Volumes

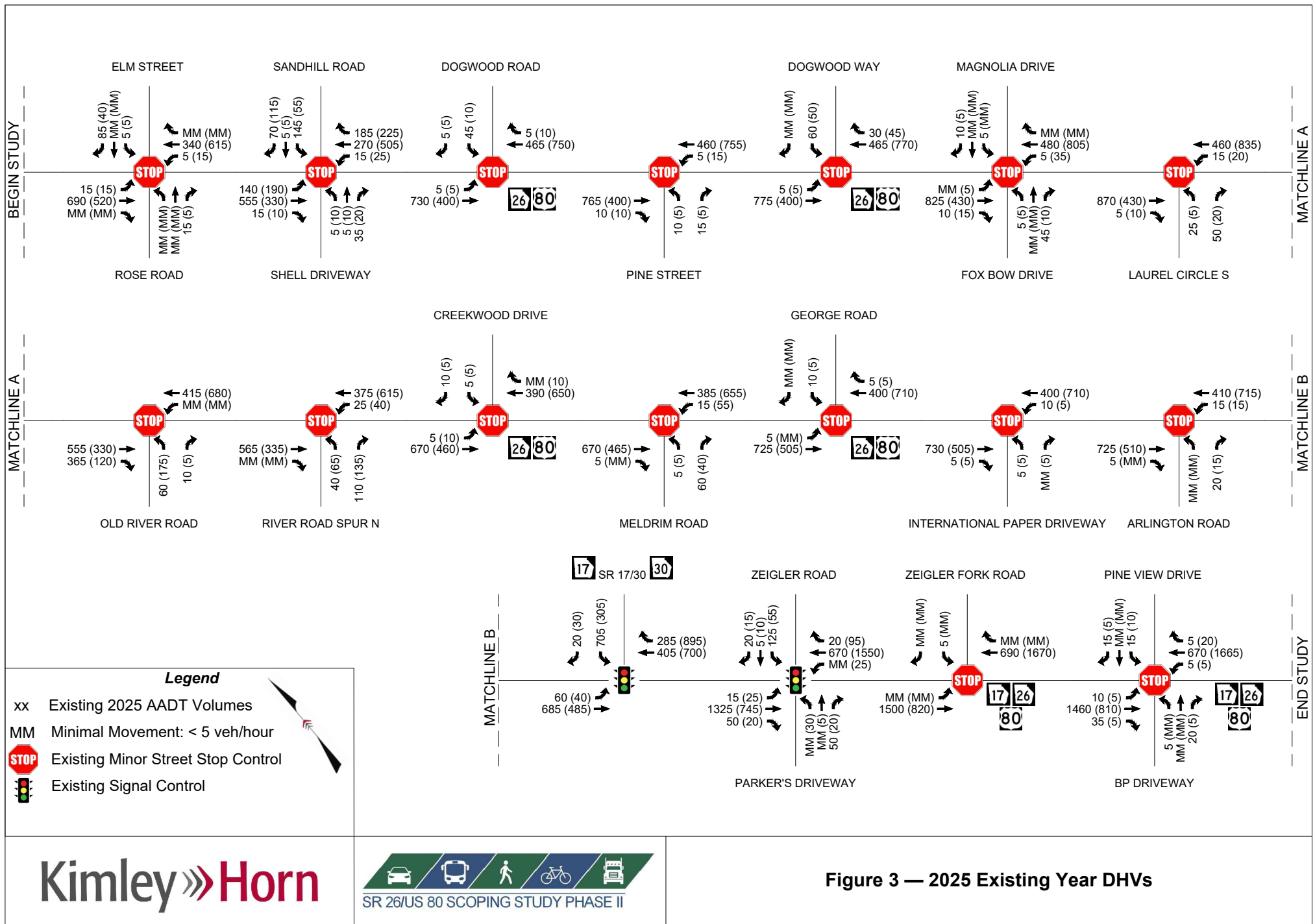


Figure 3 — 2025 Existing Year DHVs



Future Traffic Volume Development

The future traffic volumes for the SR 26/US 80 corridor were developed for the short- (i.e., Base Year or 2035) and long-term (i.e., Design Year or 2050) horizon years. Separate baseline background growth rates were calculated for the period from the Existing Year to the Base Year (i.e., 10 years from 2025 to 2035) and from Base Year to the Design Year (i.e., 15 years from 2035 to 2050). Background growth rates were determined for the corridor segments based on the CORE MPO Travel Demand Model (TDM) outputs, historic AADT data from the GDOT TADA website, and population projections from the Georgia Governors' Office of Planning and Budget (OPB).

The trip generation rates and equations published in the Institute of Transportation Engineers' (ITE) *Trip Generation Manual, 12th Edition* along with recently completed Traffic Impact Analyses (TIAs) and other planning studies were utilized to estimate the trip generation potential of each known development which could influence future traffic volumes and travel patterns along SR 26/US 80. Each of these steps are discussed in greater detail in the following subsections.

Baseline Corridor Growth Rate Determination

GDOT TADA Historic AADT

Historic AADT data was obtained from GDOT's TADA website for 2015 through 2025 at seven count stations along and adjacent to SR 26/US 80, including three on SR 26/US 80 and one each on Sand Hill Road, Old River Road, Meldrim Road, and SR 17/30. The GDOT TADA count station locations reviewed for this analysis are shown in **Figure 4**.

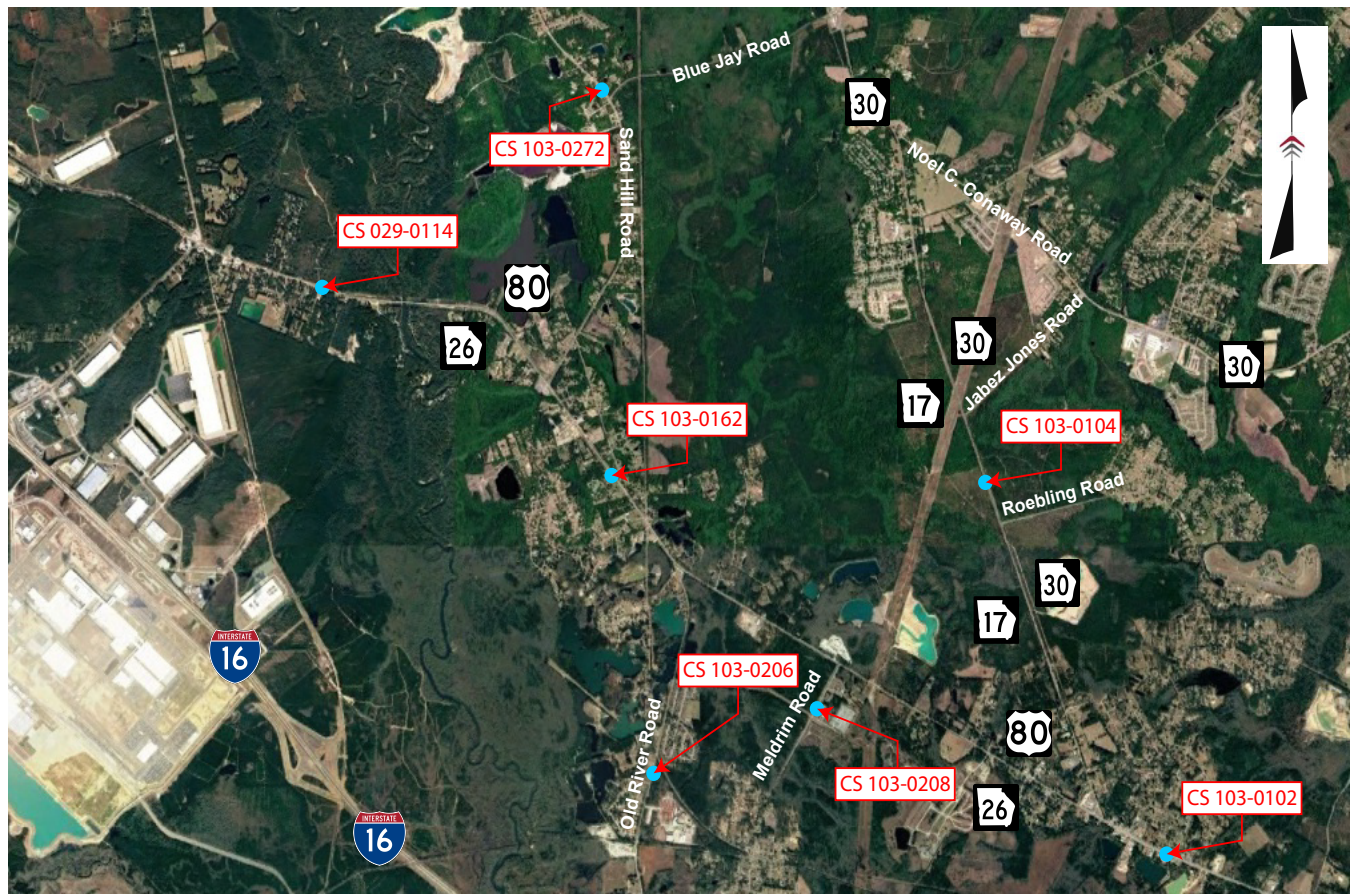


Figure 4: GDOT TADA Count Station Locations



Only data from years with actual counts (i.e., not estimated counts) were considered to calculate growth rates. Further, data between March 2020 and July 2022 was excluded from the growth rate calculations due to COVID-19 travel impacts consistent with GDOT policy. Additionally, traffic volumes for 2016, 2021, and 2025 were interpolated and utilized to calculate growth rates and to ensure consistency with the historical data. The calculated historic growth rates using GDOT historic AADT data are summarized in **Table 5**.

Table 5 – GDOT Historic AADT Data

Location (TADA ID)	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Short- Term Growth (%)	Long- Term Growth (%)
SR 26/US 80													
SR 26/US 80 west of Ogeechee River (029-0114)	9,825	9,590 ^B	13,775	12,300 ^B	11,525	10,900 ^{A,B}	13,225 ^A	11,800 ^{A,B}	12,450	12,375	–	1.2%	1.2%
SR 26/US 80 west of Dogwood Way (103-0162)	9,675	9,890 ^B	10,200 ^B	13,800	12,300 ^B	11,700 ^{A,B}	13,975 ^A	14,100 ^{A,B}	14,400 ^B	14,225	–	3.1%	3.4%
SR 26/US 80 east of SR 17/30 (103-0102)	22,400 ^B	26,900	25,000 ^B	23,550	26,875	22,500 ^{A,B}	24,200 ^{A,B}	26,675 ^A	25,375	24,500 ^B	–	1.0%	1.0%
Side Streets													
Sand Hill Road north of SR 26/US 80 (103-0272)	4,210 ^B	4,430 ^B	3,750	3,480 ^B	3,480 ^B	3,340 ^{A,B}	4,575 ^A	4,630 ^{A,B}	4,690 ^B	4,575	–	2.7%	2.9%
Old River Road south of SR 26/US 80 (103-0206)	3,825	3,770 ^B	3,880 ^B	4,700	4,620 ^B	4,440 ^{A,B}	4,670 ^{A,B}	4,720 ^{A,B}	5,550	5,590 ^B	–	3.9%	4.3%
Meldrim Road south of SR 26/US 80 (103-0208)	650 ^B	1,025	1,000 ^B	990 ^B	1,000	890 ^{A,B}	940 ^{A,B}	950 ^{A,B}	1,125	1,060 ^B	1,050	0.6%	0.5%
SR 17/30 north of SR 26/US 80 (103-0104)	10,125	9,770 ^B	11,050	12,800	12,100 ^B	10,900 ^{A,B}	11,025 ^A	10,900 ^{A,B}	13,575	12,900 ^B	13,525	2.5%	2.7%

^A Count traffic data excluded from growth rate calculations due to effects of COVID-19

^B Estimated count shown for informational purposes but not considered in growth rate calculations

The growth rates calculated for individual segments of the SR 26/US 80 corridor and side streets are summarized in **Table 6**. Historical traffic volume data from TADA count stations was used to interpolate volumes for 2025, 2021, and 2016. These volumes were then utilized to calculate a growth rate for each station. Further, the growth rate for each station was used to compute a weighted average growth rate for the four contextual segments.

**Table 6 – GDOT Historic AADT Summary**

Location	Weighted Average Growth Rate	
	Short-Term Growth (%/Year)	Long-Term Growth (%/Year)
Segment 1 SR 26/US 80 from Effingham/Bryan County Line to Sand Hill Road	1.2%	1.2%
Segment 2 SR 26/US 80 from Sand Hill Road to Old River Road	3.1%	3.4%
Segment 3 SR 26/US 80 from Old River Road to SR 17/30	No Count Station	
Segment 4 SR 26/US 80 from SR 17/30 to Effingham/Chatham County Line	1.0%	1.0%
Side Streets	2.8%	3.0%

The data shown in **Table 5** and **Table 6** indicates that the historical growth rates are notably higher from Sand Hill Road to Old River Road (i.e., Segment 2) and along the side streets, while lower growth was observed on Segment 1 and Segment 4. No individual TADA count stations are located within Segment 3; therefore, the other growth rate sources described in subsequent sections were utilized at a higher weight for overall growth rate determination for that segment.

Georgia Governor's OPB Population Projections

Population projections from the OPB for Effingham County were reviewed for the short-term period between 2025 and 2035 and the long-term period between 2035 and 2050. The growth rates estimated using population projections are summarized in **Table 7**. Based on the OPB data, the population of Effingham County is expected to increase at an annual rate of approximately 1.8% from 2025 to 2035. From 2035 to 2050, population growth is anticipated to slow down, but only slightly, to 1.6% per year.

Table 7 – OPB Population Projections

Year	Effingham County	
	Population	Growth Rate (Incremental %/Year)
2025	74,853	–
2035	89,726	1.8%
2050	112,231	1.6%

CORE MPO Travel Demand Model Outputs

The latest version of the CORE MPO TDM was obtained and reviewed to assess future changes in population and employment within the study area and the surrounding region. Before processing model outputs, the model's network and socioeconomic inputs were reviewed for consistency with existing and committed roadway projects and known major developments. Based on this review, it was determined that the Existing plus Committed (E+C) model does not fully reflect several significant transportation infrastructure projects and industrial developments in north Bryan County. Notably, the model does not incorporate the planned widening of I-16 which is anticipated to increase regional east-west travel capacity and divert a portion of traffic currently utilizing SR 26/US 80. In addition, the model does not account for the planned widening or truck route designation of Old River Road or the planned new-location roadway known as Warnell Parkway within Effingham County, described further on **page 25**.

The CORE MPO's 2020 and 2050 E+C models were used to calculate weighted average annual growth rates for the four contextual segments along SR 26/US 80. Separate weighted average annual growth rates were also calculated for the side streets along the study corridor. **Table 8** summarizes the calculated growth rates.


Table 8 – CORE MPO Travel Demand Model Outputs Summary

Link Description	2020	2050 (E+C)	Annual Growth (%)
Segment 1 – Effingham/Bryan County Line to Sand Hill Road			
SR 26/US 80 east of SR 30/US 280	6,580	11,003	1.7%
SR 26/US 80 west of Sand Hill Road	7,526	11,769	1.5%
Weighted Average			1.6%
Segment 2 – Sand Hill Road to Old River Road			
SR 26/US 80 east of Sand Hill Road	7,713	13,586	1.9%
SR 26/US 80 east of Dogwood Way	8,482	13,307	1.5%
Weighted Average			1.7%
Segment 3 – Old River Road to SR 17/30			
SR 26/US 80 east of Old River Road	6,625	8,656	0.9%
SR 26/US 80 west of Meldrim Road	7,970	11,008	1.1%
SR 26/US 80 east of Meldrim Road	7,707	11,927	1.5%
Weighted Average			1.2%
Segment 4 – SR 17/30 to Effingham/Chatham County Line			
SR 26/US 80 east of SR 17/30	13,124	23,846	2.0%
SR 26/US 80 east of Zeigler Road	15,934	26,708	1.7%
Weighted Average			1.9%
Side Streets			
Sand Hill Road north of SR 26/US 80	5,795	16,164	3.5%
Old River Road south of SR 26/US 80	1,857	5,593	3.7%
Meldrim Road south of SR 26/US 80	534	2,522	5.3%
SR 17/30 north of SR 26/US 80	5,563	14,536	3.3%
Weighted Average			3.5%

Selected Baseline Growth Rates

Growth rates were selected for the study corridor based on data obtained from GDOT's TADA website, OPB population projections, and CORE MPO TDM outputs. For annual growth rate calculations, the CORE MPO TDM outputs and OPB population projections were weighted more heavily than GDOT count station data, as these sources are better suited for the evaluation of long-term regional trends. When selecting growth rates for the period from 2025 to 2035, GDOT historic data was weighted at 20%, while the OPB population projections and CORE MPO TDM outputs were weighted at 40% each. As noted on **page 20**, GDOT historic data was not available within Segment 3; therefore, both OPB population projections and CORE MPO TDM outputs were weighted 50% for that segment. For long-term growth rate development (i.e., 2035 to 2050), GDOT historic data was omitted from the growth rate calculations, and OPB population projections and CORE MPO TDM outputs were weighted evenly. The forecasted 2050 Design Year traffic volumes were compared with the 2050 E+C TDM model outputs for reasonableness and were found to be consistently higher throughout the study area. The higher forecasted volumes are primarily attributable to the concentration of industrial development in north Bryan County, and as previously noted, the E+C model does not incorporate several significant planned infrastructure improvement projects anticipated to influence travel patterns along the corridor. Therefore, the forecasted volumes developed in this study are more representative of anticipated future conditions along the SR 26/US 80 corridor. The selected project growth rates are summarized in **Table 9**.


Table 9 – Selected Project Growth Rates

Location	2025 – 2035	2035 – 2050
Segment 1 SR 26/US 80 from Effingham/Bryan County Line to Sand Hill Road	1.5%	1.0%
Segment 2 SR 26/US 80 from Sand Hill Road to Old River Road	2.0%	1.5%
Segment 3 SR 26/US 80 from Old River Road to SR 17/30	1.5%	1.0%
Segment 4 SR 26/US 80 from SR 17/30 to Effingham/Chatham County Line	1.5%	1.0%
Collector Side Streets	2.5%	2.0%
Local Side Streets	1.0%	0.5%

Known Adjacent Development and Additional Studies

Based on coordination with GDOT, the County, and the CORE MPO, multiple developments are expected to be constructed and operational along the study corridor by 2035 and 2050. To account for traffic associated with partially constructed developments at the time of traffic data collection in August 2025, the percentage of development construction was estimated using aerial imagery and publicly available sources, and site-generated trips were scaled accordingly. More specifically, the North Bryan Tracts industrial development was estimated to be 50 percent constructed by 2035 and fully constructed by 2050. Select sheets from site plans and related traffic or planning studies are provided in **Attachment A**. In addition to known developments, future land use from the *2040 Effingham County Comprehensive Plan* was used to estimate development potential along the study corridor. Further, potential development traffic associated with anticipated commercial rezoning along SR 26/US 80 from SR 17/30 to the Chatham County/Effingham County line (“the Commercial Corridor”) was accounted for in long-term 2050 forecasts. **Table 10** summarizes known and potential developments that are anticipated to influence travel patterns along the study corridor. Where trip generation estimates were not provided by a supporting study, the *ITE Trip Generation Manual, 12th Edition* was used to estimate the peak hour trip-making characteristics of the developments, and development trips were assigned and distributed to the network. Detailed trip generation calculations are provided in **Attachment F** for applicable developments.

Table 10 – Summary of Known and Potential Developments

Development Name	Description/Land Use(s)	Source	Horizon
Bryan County (West of Study Area)			
Kelly Tract	4,728,880 square feet of warehousing space	<i>Traffic Impact Analysis</i> (Thomas & Hutton, 2020)	Short-Term (2035)
Interstate Centre III	4,263,680 square feet of warehousing space	<i>Traffic Impact Analysis</i> (Thomas & Hutton, 2021)	Short-Term (2035)
Haiseal Tract	3,943,500 square feet of warehousing space	<i>Traffic Impact Analysis</i> (Thomas & Hutton, 2022)	Short-Term (2035)
Interstate Exchange/ St. Joseph's	55 acres for commercial space	GDOT	Short-Term (2035)
Interstate Centre II	505 acres for industrial space	GDOT	Short-Term (2035)
US 280 Container Storage	540 storage spaces	<i>Traffic Impact Analysis</i> (SEI, 2022)	Short-Term (2035)
Smith Tract	547,200 square feet of warehousing space	<i>Traffic Impact Analysis</i> (Thomas & Hutton, 2022)	Short-Term (2035)
Parker's Kitchen Truck Stop	128,000 square feet of warehousing space and 4,900 square feet of commercial space	<i>Traffic Impact Study</i> (Lumin8, 2021)	Short-Term (2035)
Butler Tract	175 acres for industrial space	GDOT	Short-Term (2035)



Development Name	Description/Land Use(s)	Source	Horizon
7-Eleven	4,874 square feet of commercial space	Site Plan (Forge Design Consultants, 2022)	Short-Term (2035)
North Bryan Tracts	19,487,530 square feet of warehousing space	North Bryan Transportation Study (Thomas & Hutton, 2021)	Short- and Long-Term (2035 & 2050)
HMGMA	2,960 acres for industrial space	GDOT	Short-Term (2035)
SR 30/Noel C. Conaway Road (North of Study Area)			
Bulls Run Subdivision	217 single family attached units	Effingham County Planning and Zoning Services	Short-Term (2035)
Townes of Windfield	34 single family attached units	Effingham County Planning and Zoning Services	Short-Term (2035)
Laurel Grove	105 single family detached units	Effingham County Planning and Zoning Services	Short-Term (2035)
Pine Grove Townhomes	141 single family attached units	Effingham County Planning and Zoning Services	Short-Term (2035)
Buckingham Plantation - Phase 3	55 single family detached units	Site Plan (Horizon Home Builders, 2025)	Short-Term (2035)
Brunson Station	340 single family detached units and 136 single family attached units	Site Plan (Stanley Martin Homes, LLC, 2025)	Short-Term (2035)
Palm Ridge Subdivision	100 single family detached units	Site Plan (D. R. Horton, Inc., 2025)	Short-Term (2035)
Blue Jay & Hwy 17 Apartments	288 multifamily units	Effingham County Planning and Zoning Services	Short-Term (2035)
Ale Tract	203 single family detached units	Effingham County Planning and Zoning Services	Short-Term (2035)
Sand Hill Road (North of Study Area)			
Atlas Park	138 acre public park	Effingham County Planning and Zoning Services	Short-Term (2035)
Sand Hill Road Commercial	95,575 square feet of commercial space	Effingham County Planning and Zoning Services	Long-Term (2050)
Hinely Tract	429 single family detached units	Effingham County Planning and Zoning Services	Short-Term (2035)
SR 26/US 80 west of George Road (South of Study Area)			
Warehouses on SR 26/US 80	1,005,320 square feet of warehousing space	Site Plan (Kimley-Horn, 2024)	Short-Term (2035)
SR 26/US 80 Industrial	3,329,000 square feet of warehousing space	Effingham County Planning and Zoning Services	Long-Term (2050)
SR 26/US 80 west of International Paper Driveway (South of Study Area)			
2388 SR 26/US 80 Industrial and Commercial	22 acres used for industrial and commercial space	Rezoning Application (Effingham County, 2025)	Short-Term (2035)
SR 26/US 80 west of SR 17/30 (South of Study Area)			
Ellianos Coffee Shop	800-square-foot coffee shop	Site Plan (Pittman Engineering Co., LLC, 2023)	Short-Term (2035)
SR 26/US 80 near SR 17/30			
SR 26/US 80 at SR 17/30 South Commercial	39,205 square feet of commercial space	Effingham County Planning and Zoning Services	Long-Term (2050)
SR 26/US 80 at SR 17/30 North Commercial	174,240 square feet of commercial space	Effingham County Planning and Zoning Services	Long-Term (2050)
SR 26/US 80 near Zeigler Fork Road			
SR 26/US 80 at Zeigler Fork Road South Commercial	22,650 square feet of commercial space	Effingham County Planning and Zoning Services	Long-Term (2050)
SR 26/US 80 at Zeigler Fork Road North Commercial	95,920 square feet of commercial space	Effingham County Planning and Zoning Services	Long-Term (2050)



Development of Regional Impact Review

Developments of Regional Impact (DRIs) were reviewed to determine whether additional development-specific traffic should be added to the SR 26/US 80 forecasts. The following DRIs were reviewed as part of the traffic forecasting process:

DRI #4412 – 1056784 7-Eleven New Development

DRI #4412 proposes a 7-Eleven gas station and convenience store along Old River Road in the southwest quadrant of the Old River Road and Savannah Portside International Parkway intersection, approximately 3.1 miles south of SR 26/US 80. Based on its proximity to I-16, traffic associated with the development is expected to primarily utilize I-16 rather than SR 26/US 80. Additionally, traffic utilizing convenience store and fueling land uses is expected to consist largely of pass-by trips from vehicles already traveling near the site, rather than new trips originating from or near the SR 26/US 80 corridor. Therefore, DRI #4412 is not anticipated to materially impact traffic operations along SR 26/US 80, and traffic associated with this development was not directly included in the SR 26/US 80 traffic forecasts.

DRI #4500 – Exley Tract 7-Eleven

DRI #4500 proposes a 7-Eleven gas station and convenience store in the southwest quadrant at the intersection of SR 21/Augusta Road and Trade Center Boulevard. The traffic study for DRI #4500 estimated 6,173 daily trips; however, since the development is located over 10 miles from SR 26/US 80 and outside the influence area of the study corridor, development-specific traffic is not expected to materially impact traffic volumes or operations along SR 26/US 80. Therefore, DRI #4500 was not directly included in the SR 26/US 80 traffic forecasts.

DRI #4750 – Old River Road Highway Infrastructure Facility

DRI #4750 proposes the redevelopment of the former Interfor Meldrim Division lumber mill into a 50-acre asphalt plant, concrete plant, and aggregate yard. The site is located along Old River Road approximately 1.5 miles south of SR 26/US 80, and this type of industrial use is expected to generate low daily and peak-hour traffic volumes. Additionally, the provided site plan indicates that the development would be served by a rail spur, further reducing the potential for traffic generation. Therefore, based on its anticipated negligible impact on SR 26/US 80 traffic operations, DRI #4750 was not directly included in the SR 26/US 80 traffic forecasts.

DRI #4753 – Baca Ready-Mix Concrete Plant

DRI #4753 proposes a ready-mix concrete plant with commercial space along the southern side of SR 26/US 80, approximately 750 feet west of George Road. Since a traffic study had not been completed for this development, trip generation was developed for this DRI based on developable acreage, and traffic associated with this development is included in the SR 26/US 80 traffic forecasts.

DRI #4772 – Old River Road Logistics

DRI #4772 proposes a logistics/distribution development along Old River Road. The site is located in the northwest quadrant of the I-16 at Old River Road interchange, approximately two miles south of SR 26/US 80. Based on its proximity to I-16, traffic associated with the development is expected to primarily utilize I-16 rather than SR 26/US 80. Therefore, DRI #4772 is not anticipated to materially impact traffic operations along SR 26/US 80, and traffic associated with this development was not directly included in the SR 26/US 80 traffic forecasts.

**DRI #4777 – Warnell Tract Mixed-Use Development**

DRI #4777 proposes a mixed-use development at the intersection of SR 26/US 80 and El Dora Road in north Bryan County. Traffic associated with this development is accounted for in the SR 26/US 80 traffic forecasts as part of the North Bryan Tracts development.

Future New Location Roadway – Warnell Parkway

Warnell Parkway is a planned new-location roadway within Effingham County that is anticipated to introduce a fourth leg at the intersection of SR 26/US 80 and Old River Road and provide a direct north-south connection to the existing three-leg intersection of SR 17/30 and Jabez Jones Road. Alignment alternatives are being evaluated as part of the *Old River Road/Warnell Parkway Corridor Study*, and these preliminary alignments are shown in **Figure 5**. This new facility will create an alternate north-south route within southwest Effingham County and will likely redistribute a portion of traffic currently concentrated at the intersections of SR 26/US 80 at Sand Hill Road and at SR 17/30. The alignment and design of Warnell Parkway are currently being evaluated as part of the *Old River Road/Warnell Parkway Corridor Study*; however, its anticipated influence on travel patterns has been incorporated in this study.

Based on the implementation timeline of Warnell Parkway as discussed with the County in March 2026, its long-term traffic redistribution impacts were applied to the 2050 Design Year forecasts. These redistributions were developed based on surrounding land use, anticipated origin-destination pairs, and engineering judgment. More specifically, traffic volume reductions were applied to the eastbound left-turn and southbound right-turn movements at the SR 17/30 intersection as well as the westbound right-turn and southbound left-turn movements at the Sand Hill Road intersection to reflect the anticipated diversion of north-south traffic to the new facility. Given Warnell Parkway's direct connection to SR 17/30 and anticipated influence on adjacent north-south facilities, a higher reduction was applied to the movements at the intersection of SR 26/US 80 and SR 17/30 than at the intersection with Sand Hill Road.

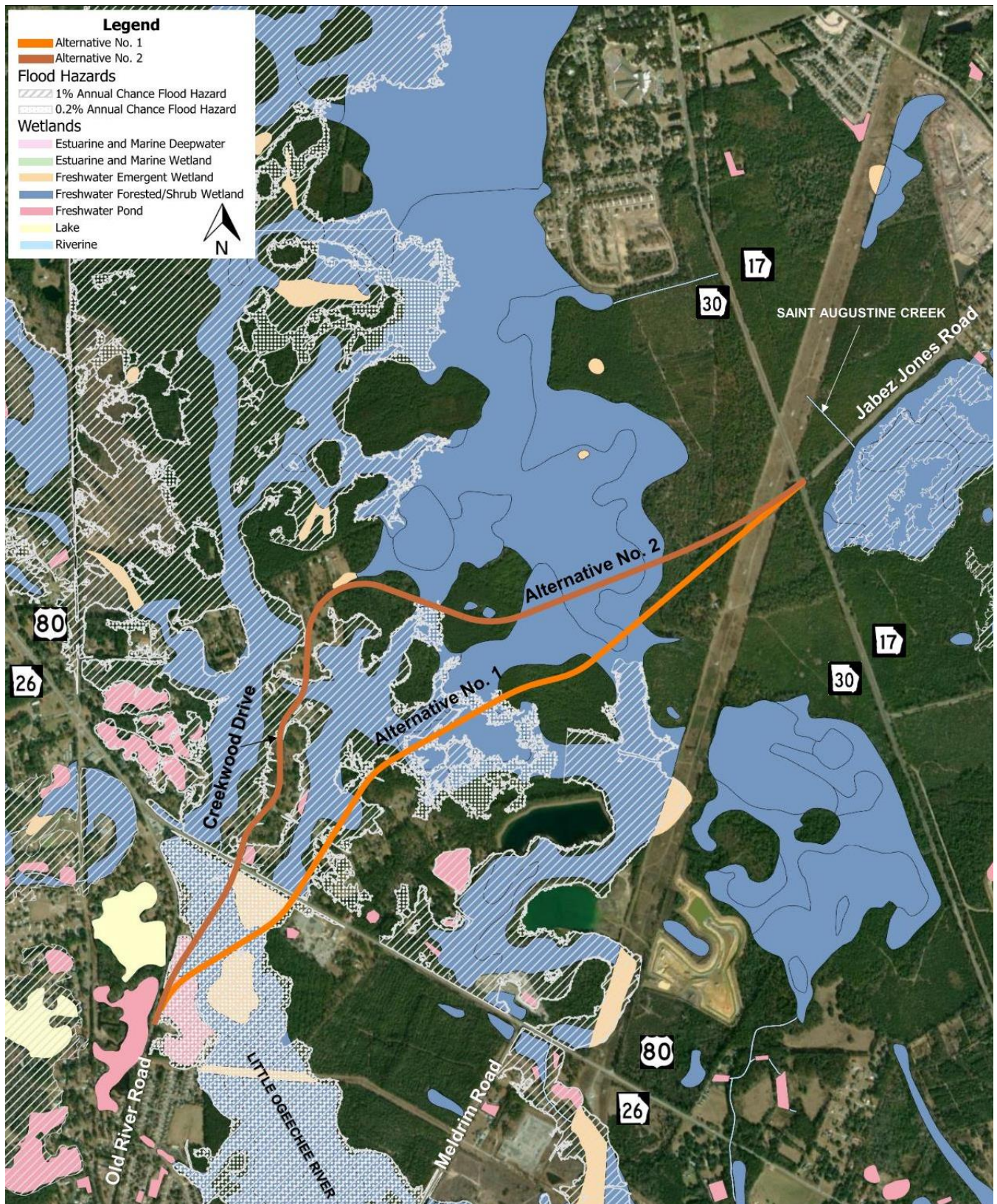


Figure 5: Warnell Parkway Preliminary Alignment Alternatives



2035 Base Year and 2050 Design Year Traffic Volume Forecasts

The 2035 Base Year and 2050 Design Year traffic volume forecasts were developed as follows:

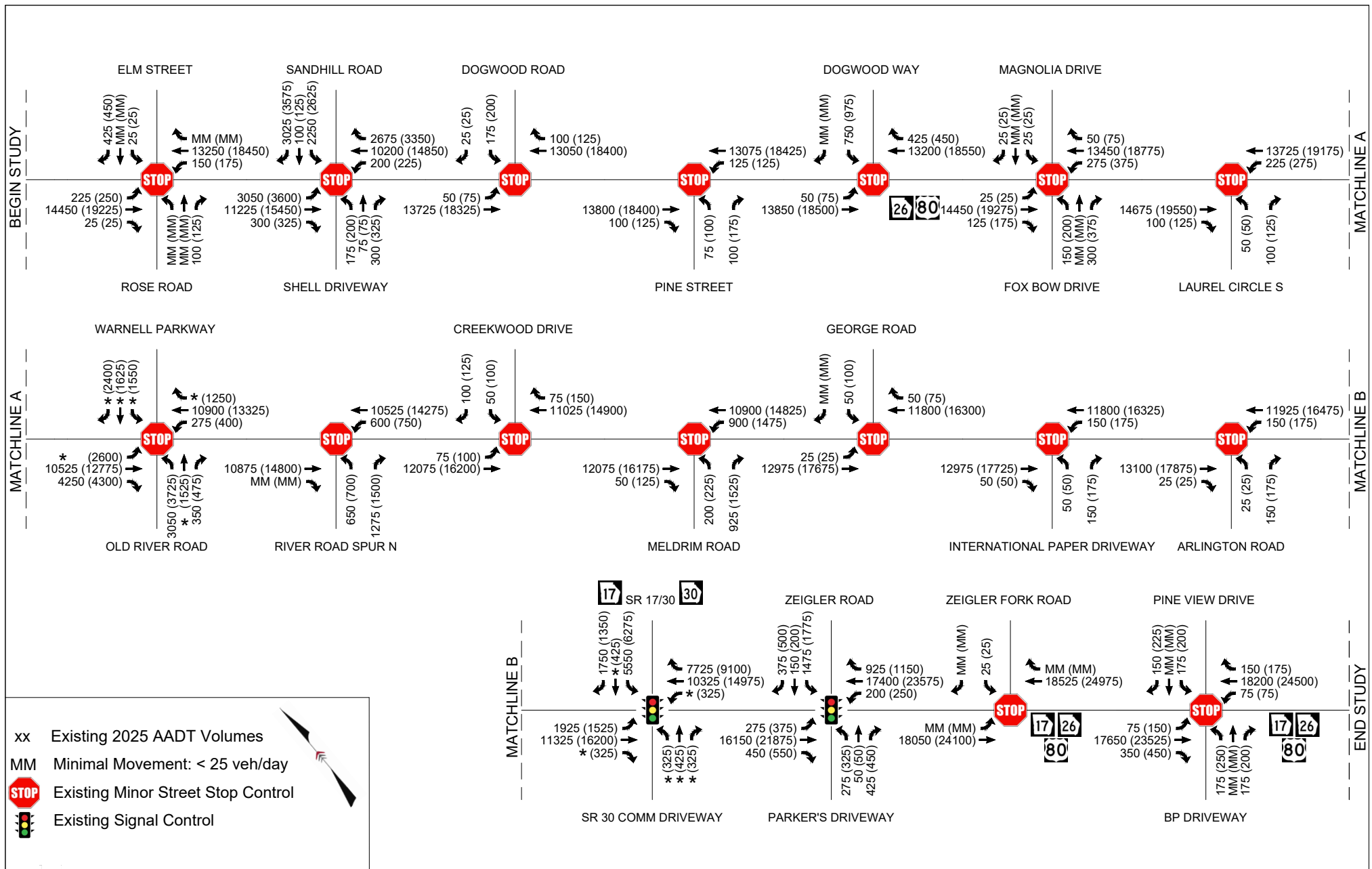
1. The balanced and factored 2025 Existing Year AADT volumes were adjusted using the chosen baseline growth rates.
2. Existing K and D factors were applied to calculate baseline future DHVs.
3. The 2035 Base Year and 2050 Design Year daily, AM peak hour, and PM peak hour traffic volumes were balanced as appropriate.
4. Daily, AM peak hour, and PM peak hour trips associated with known developments and development potential were assigned to the balanced study network. Development trip distribution and assignment estimates from Bryan County were adjusted based on the planned I-16 widening as described below.
5. For the 2050 Design Year, future movements were added for roadways or driveways expected to be constructed after the 2035 Base Year, including Warnell Parkway and the future commercial driveway at the intersection of SR 26/US 80 and SR 17/30.
6. For the 2050 Design Year, volume redistributions were applied at the intersections of SR 26/US 80 at Sand Hill Road and at SR 17/30 as described on **page 25** to reflect the anticipated diversion of north-south traffic to Warnell Parkway.

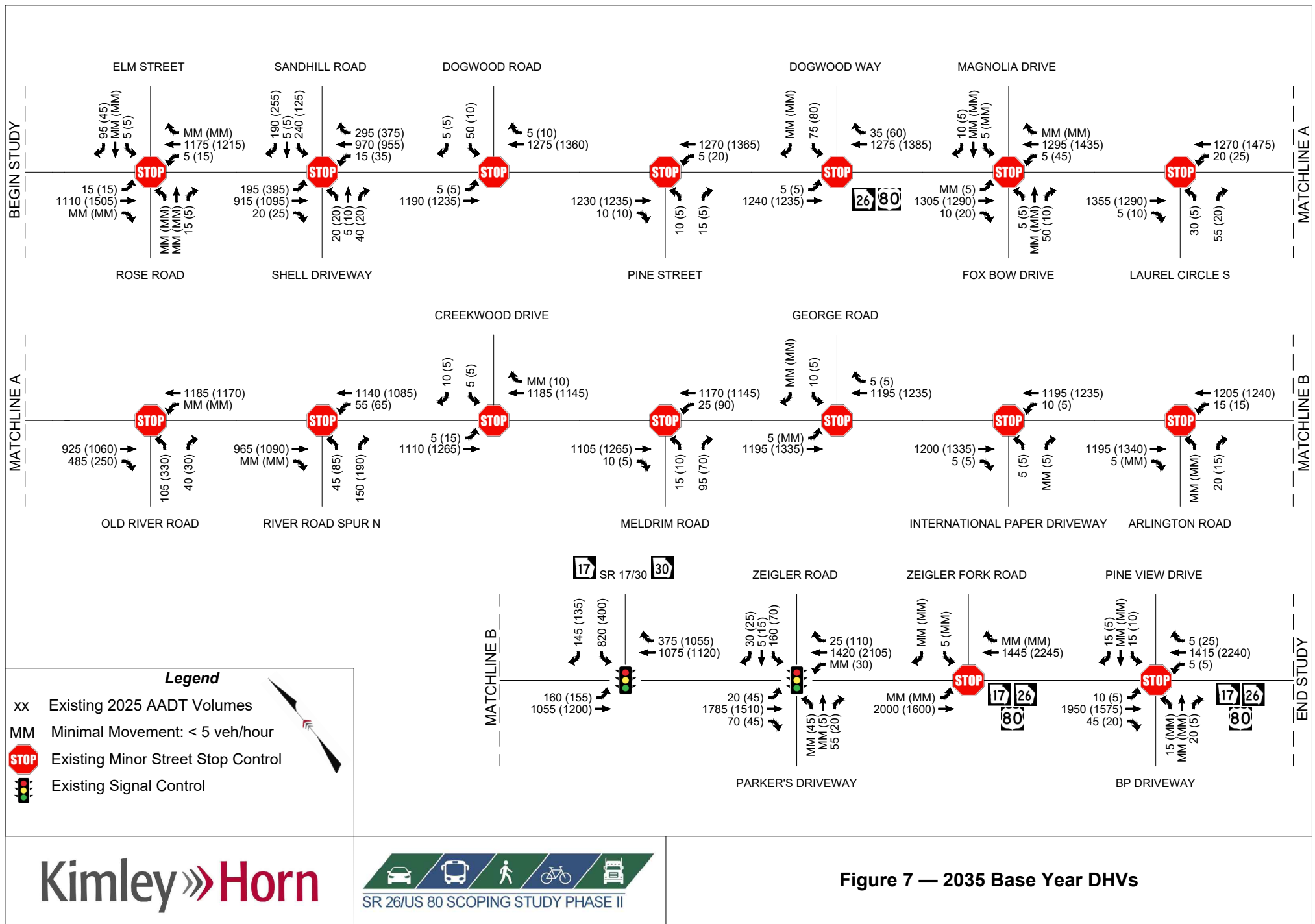
The balanced 2035 Base Year and 2050 Design Year traffic volumes are provided in **Figure 6** through **Figure 8**. Future year AM and PM peak hour K and D factors are provided in **Attachment D**.

Influence of Future I-16 Widening

As noted on **page 20**, the CORE MPO TDM does not incorporate the planned widening of I-16 from a four-lane divided facility to a six-lane divided facility from I-95 in Chatham County to SR 67 in Bulloch County (PI No. 0020168). This improvement is anticipated to increase regional east-west travel capacity and divert a portion of traffic currently utilizing SR 26/US 80. Therefore, the influence of the planned I-16 widening was accounted for in this study's forecasts through the following adjustments:

1. Long-term growth rates (i.e., from 2035 to 2050) were developed by averaging OPB population projections with CORE MPO TDM outputs and then rounding downward to account for the potential reduction in corridor growth that may have otherwise been reflected if the I-16 widening had been included in the TDM.
2. Bryan County development trip distribution and assignment estimates entering and exiting the western terminus of the study corridor were reduced by 5% to account for the anticipated shift in travel demand toward the higher-capacity interstate facility to and from US 280.





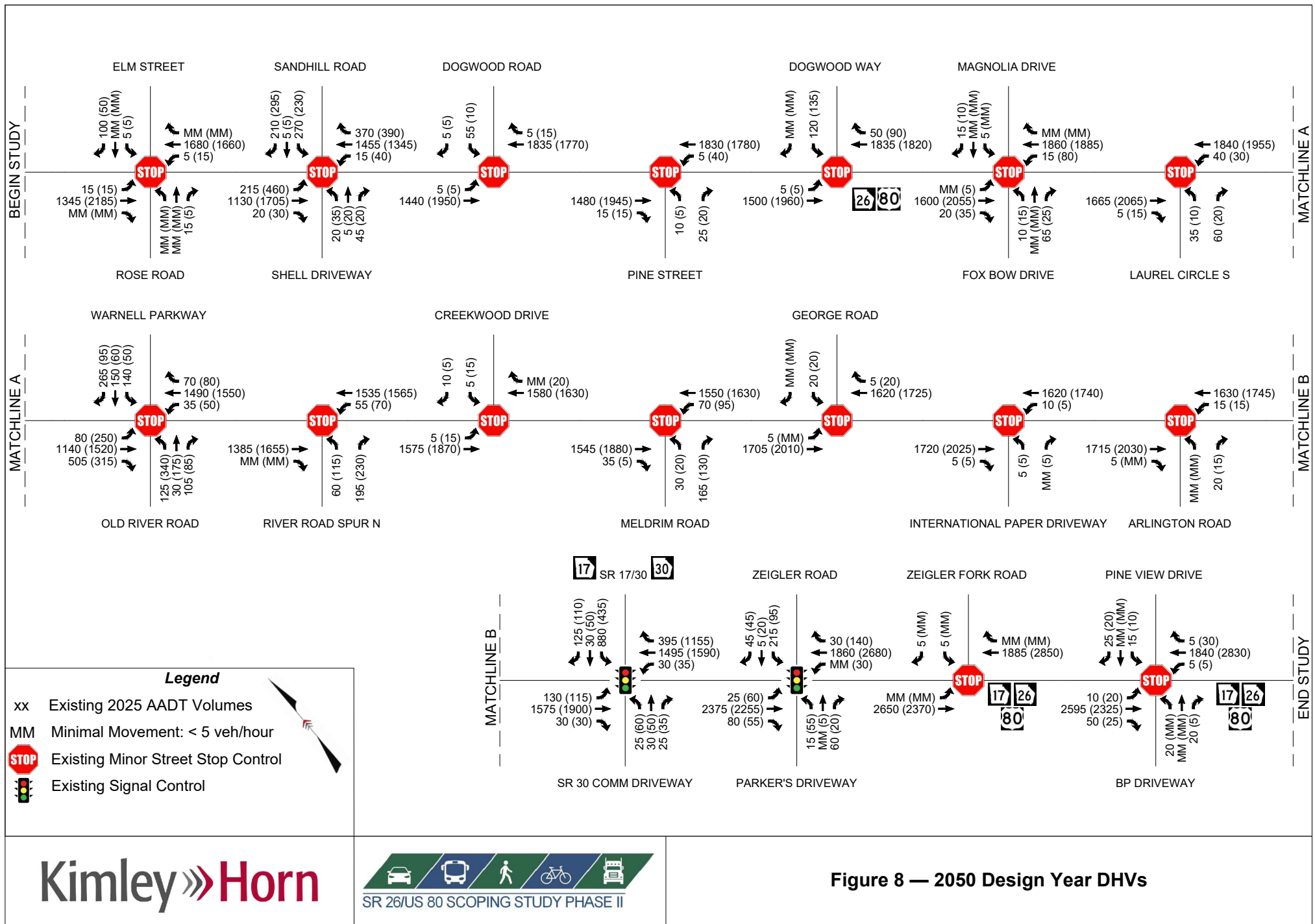


Figure 8 — 2050 Design Year DHVs



Future Year Truck Percentages

Due to the nature of the planned developments along and adjacent to the SR 26/US 80 corridor, and in alignment with the *Effingham County Comprehensive Plan*, truck percentages are anticipated to increase in the horizon years. The planned developments along and adjacent to the corridor are predominantly industrial in nature, and key traffic generators such as planned industrial developments along SR 26/US 80, the continued build-out of the North Bryan County industrial area, growth associated with the HMGMA, and the planned truck route designation of Old River Road are expected to introduce a significant volume of heavy vehicles along the study corridor. As a result, truck percentages are anticipated to increase in both the 2035 Base Year and 2050 Design Year relative to existing conditions. Truck traffic growth is expected to be most significant in the short-term and most pronounced at the western end of the corridor near the Effingham County/Bryan County line. Detailed future year truck percentage calculations are included in **Attachment E**. Future year truck percentages along SR 26/US 80 were calculated using the following methodology:

- Existing daily, AM peak hour, and PM peak hour truck percentages were applied to the respective future year volumes to establish a baseline future truck volume at each count location.
- Truck trips associated with known developments were estimated based on the *ITE Trip Generation Manual, 12th Edition*, and added to the baseline future truck volume to determine the total future truck volume.
- The total future truck volume was divided by the total future volume to calculate the future year truck percentage at each count location.

Based on coordination with the County and recommendations included in Effingham County's TMP, Old River Road is anticipated to receive a truck route designation by 2035. To evaluate the designation's anticipated impact on truck percentages along Old River Road, truck percentages were reviewed at GDOT TADA count stations on adjacent regional freight corridors and statewide freight-oriented collectors in accordance with forecasting methodology described in the *Freight Intermodal Connectors Study* (FHWA, 2016). The following data and guidance were considered in evaluating the anticipated impact of the truck route designation:

- US 280 and SR 17/Jimmy DeLoach Parkway, two nearby regional freight corridors, carry combined truck percentages of 31.5 percent and 30 percent, respectively.
- *The Georgia Freight Plan* identifies collector roadways as carrying a notable share of statewide truck travel within Georgia's freight network.
- Freight-oriented connectors and designated truck routes commonly exhibit truck percentages that are higher than comparable non-freight facilities due to their direct connection to industrial, warehousing, port, and freight distribution activities.

Based on the data and guidance summarized above, truck percentages along Old River Road were increased by 15 percentage points for all future-year scenarios (i.e., from 7.5% to 22.5% for 2035 peak periods and from 6.0% to 21.0% for 2050 peak periods). This adjustment reflects the anticipated truck route designation, the roadway's direct connectivity to I-16, and the expected growth in industrial and freight-related development within the study area. This conservative estimate will be utilized in future year operational analyses to guide recommendations that support sustainable long-term transportation infrastructure along the corridor.



Long-Term Horizon Comparison at the Effingham County/Bryan County Line

To promote continuity between PI No. 0020786 and the Bryan County Study, applicable traffic data and traffic forecast methodologies and assumptions were coordinated from the onset of each study. Additionally, forecasted peak hour and daily traffic volumes were compared at the Effingham County/Bryan County line, the shared terminus between the two studies. The following coordination meetings were conducted between the study teams:

- **September 29, 2025** — Initial coordination meeting to discuss scopes and schedules, traffic count collection plans, and data sharing
- **February 18, 2026** — Forecast methodology coordination to support consistent assumptions and growth projections
- **March 26, 2026** — Comparison and discussion of preliminary traffic volume forecasts at the Effingham County/Bryan County line

The resulting 2050 AADT and DHV volumes from both studies at the Effingham County/Bryan County line are summarized in **Table 11**.

Table 11: Bryan County/Effingham County Line Volume Comparison

Location (Direction)	PI No. 0020786			The Bryan County Study			Percent Difference		
	2050 AADT	2050 AM DHV	2050 PM DHV	2050 AADT	2050 AM DHV	2050 PM DHV	2050 AADT	2050 AM DHV	2050 PM DHV
Effingham County/ Bryan County Line (Eastbound)	19,500	1,360	2,200	19,375	1,410	2,090	+0.6%	-3.6%	+5.1%
Effingham County/ Bryan County Line (Westbound)	18,900	1,780	1,710	18,200	1,825	1,645	+3.8%	-2.5%	+3.9%
Effingham County/ Bryan County Line (Bidirectional)	38,400	3,140	3,910	37,575	3,235	3,735	+2.2%	-3.0%	+4.6%

Overall, this comparison indicates similar 2050 Design Year traffic volumes at the Effingham County/Bryan County line for both daily and peak hour volumes. Differences in bidirectional volumes between the two studies are nominal and are less than three percent for AADT and five percent for DHV, which is likely attributable to different existing traffic count data and the natural fluctuations in traffic volumes from day-to-day. Further, PI No. 0020786 forecasts slightly higher 2050 AADT volumes and PM DHVs, while the Bryan County Study forecasts slightly higher AM DHVs. These minor differences are likely due to slight differences in the respective studies' peak periods, calculated K factors, and volume balancing techniques. However, these comparison results generally reflect aligned forecasts that will support continuity between study recommendations during the Alternatives Development and Analysis phase of PI No. 0020786.



Attachments:

- A – Select Sheets from Related Traffic and Planning Studies
- B – Count Location Map
- C – Raw Traffic Count Data
- D – K and D Factor Calculations
- E – Detailed Truck Percentage Calculations
- F – Detailed Development Trip Generation Calculations