

MEMORANDUM

To: Mr. David Sprinkle, *Duke Realty*

From: Mr. John D. Walker, P.E., PTOE, *Kimley-Horn and Associates, Inc.*
Mr. Harrison Forder, P.E., *Kimley-Horn and Associates, Inc.*

Date: March 2, 2022

RE: ***Discovery Boulevard – Cobb County, Georgia – Trip Generation and Traffic Technical Memorandum***

Kimley-Horn is pleased to provide this memorandum regarding the proposed *Discovery Boulevard* development in Cobb County, Georgia. The purpose of this memorandum is to get approval from Cobb County DOT regarding analysis assumptions for the traffic impact study. This memo has been submitted to Cobb County with the filing of the rezoning application and includes information and proposed assumptions for the Traffic Impact Study.

PROJECT OVERVIEW

The *Discovery Boulevard* development is a proposed light industrial warehouse on an approximately 8.75-acre site located in the northeast quadrant of the intersection of Mableton Parkway (SR 139) at Discovery Boulevard in unincorporated Cobb County, Georgia. The site is currently split between LI (Light Industrial) and GC (General Commercial). The entirety of the site is proposed to be rezoned to LI.

As currently envisioned, the *Discovery Boulevard* development will consist of 137,200 SF of light industrial warehousing in one (1) building.

Figure 1 provides a location map. **Figure 2** provides an aerial image of the site.

TRIP GENERATION AND TRIP DISTRIBUTION

Trip Generation

Project traffic, for the purposes of this evaluation, is defined as the vehicle trips expected to be generated by the proposed development. Anticipated trip generation for the *Discovery Boulevard* development was calculated using rates and equations contained in the Institute of Transportation Engineers' (ITE) *Trip Generation Manual, 10th Edition, 2017*.

The density and the anticipated project trip generation are summarized in **Table 1**.

Table 1: Trip Generation (Gross Trips)											
Land Use	ITE Code	Density	Daily Traffic			AM Peak			PM Peak Hour		
			Total	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit
Warehousing	150	137,200 SF	262	131	131	42	32	10	44	12	32
Total			262	131	131	42	32	10	44	12	32
Heavy Vehicle (Truck) Trips			82	41	41	3	2	1	4	2	2
Passenger Car (Employee) Trips			180	90	90	39	30	9	40	10	30

Based on **Table 1**, the proposed development is projected to generate approximately 262 total daily trips (131 in; 131 out), 42 AM peak hour trips, and 44 PM peak hour trips.

Trip Distribution

The proposed directional distribution of new project trips is based on the project land use, engineering judgement, and a review of land use densities in the area. Detailed trip distribution of the project site is shown on **Figure 3** and **Figure 4**.

ANALYSIS METHODOLOGY

Study Network

Given the existing roadway network and the projected trip generation, the following two (2) intersections are recommended for detailed intersection analyses:

1. Mableton Parkway (SR 139) at Discovery Boulevard (signalized)
2. Lee Industrial Boulevard at Six Flags Parkway (unsignalized, all-way stop)

Traffic Data Methodology

Due to the COVID-19 situation, traffic patterns and volumes may have changed. For the traffic impact study, new traffic counts will be collected at the proposed study intersections and adjusted based on historical GDOT count data.

A 24-hour tube count will be collected along Mableton Parkway (SR 139), west of Discovery Boulevard to align with GDOT count station 067-2544. The tube counts will be compared to GDOT count data from May 10th, 2018 (pre-COVID) to determine if a COVID adjustment factor is necessary for the study intersections. Using the available data, traffic at the study intersections will be estimated for estimated 2022 conditions and various future conditions.

Growth Rate

Based on the recent trends in traffic along the area roadways according to Georgia's Traffic Analysis and Data Application (TADA), population forecasts and knowledge of proposed developments in the area, we recommend a background growth rate of 2.5% per year for two (2) years to the build-out year of 2024. A background growth rate of 1.5% per year for ten (10) years to the Cobb County mandated 10-year horizon year, 2034.

SUMMARY

As currently envisioned, the *Discovery Boulevard* development will consist of 137,200 SF of light industrial warehousing and is currently split zoned between GC (General Commercial) and LI (Light Industrial). The entirety of the site is proposed to be rezoned to LI. The site is located in the northeast quadrant of the intersection of Mableton Parkway (SR 139) at Discovery Boulevard in unincorporated Cobb County, Georgia. The site is expected to generate approximately 262 total daily trips (131 in; 131 out), 42 AM peak hour trips, and 44 PM peak hour trips. The following two (2) intersections are proposed to be studied:

1. Mableton Parkway (SR 139) at Discovery Boulevard (signalized)
2. Lee Industrial Boulevard at Six Flags Parkway (unsignalized, all-way stop)

Additionally, a 24-hour volume count will be collected along Mableton Parkway (SR 139), west of Discovery Boulevard to align with GDOT count station 067-2544. The collected counts will be compared to the historical GDOT count data to develop a COVID-adjustment factor. The estimated 2022 traffic volumes will be grown at 2.5% per year through the 2024 build-out of the project, then 1.5% per year for 10 years to the 2034 10-year horizon year mandated by Cobb County. A proposed trip distribution is attached to this memorandum.

We hope this information is helpful. If you have any questions concerning this letter or need additional information, please do not hesitate to contact me.

Sincerely,
KIMLEY-HORN AND ASSOCIATES, INC.



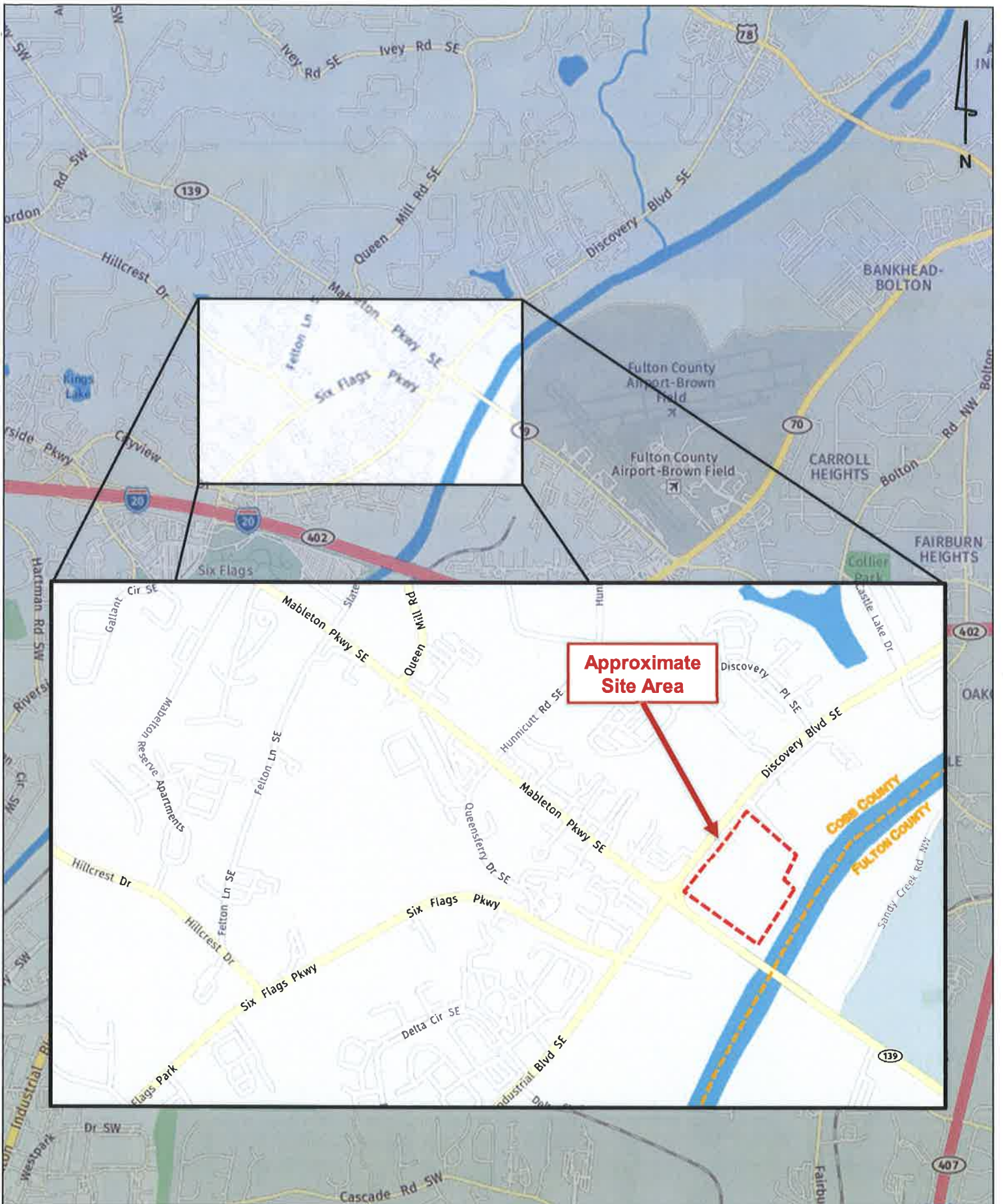
John D. Walker, P.E., PTOE
Senior Vice President



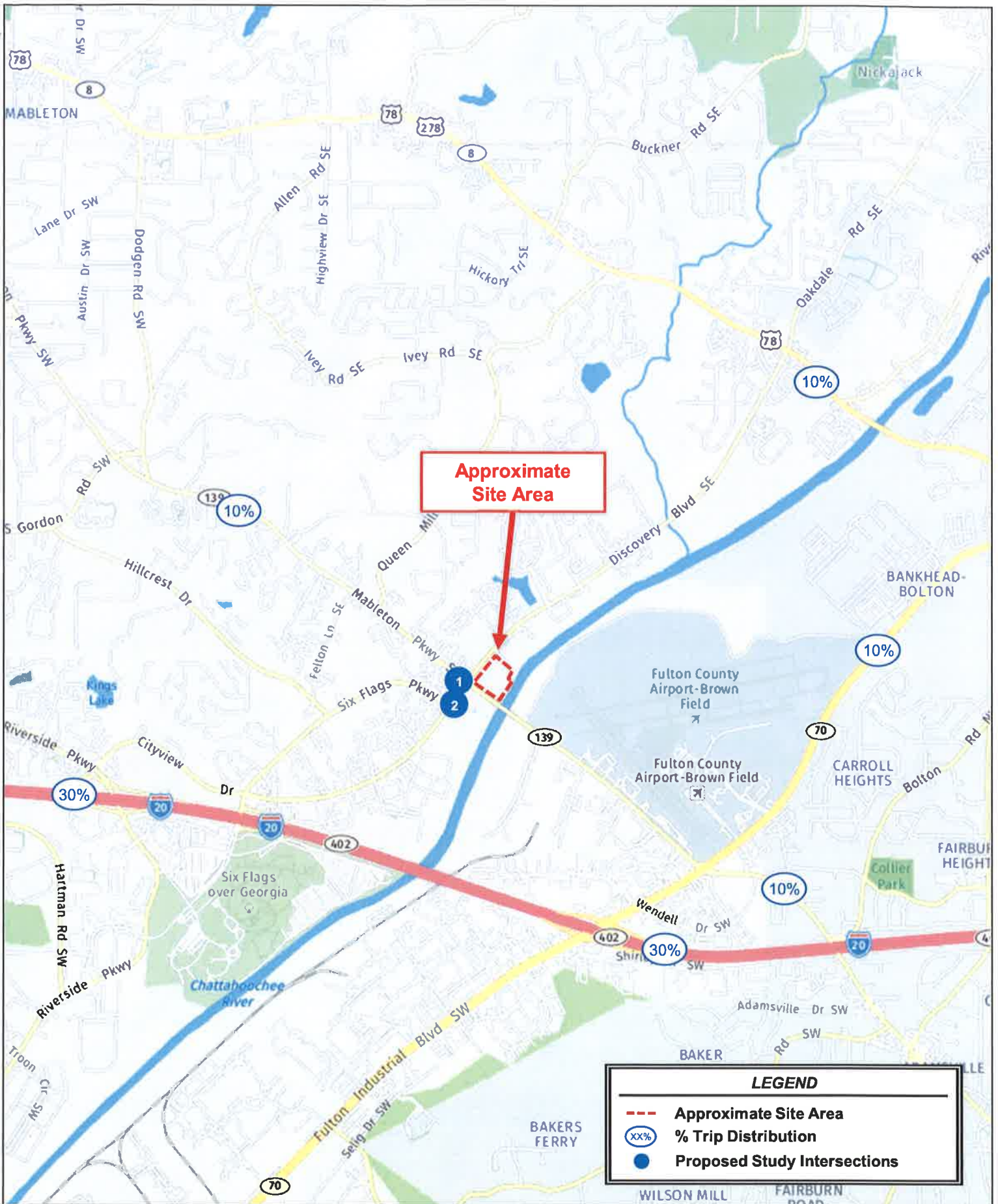
Harrison Forder, P.E.
Project Analyst

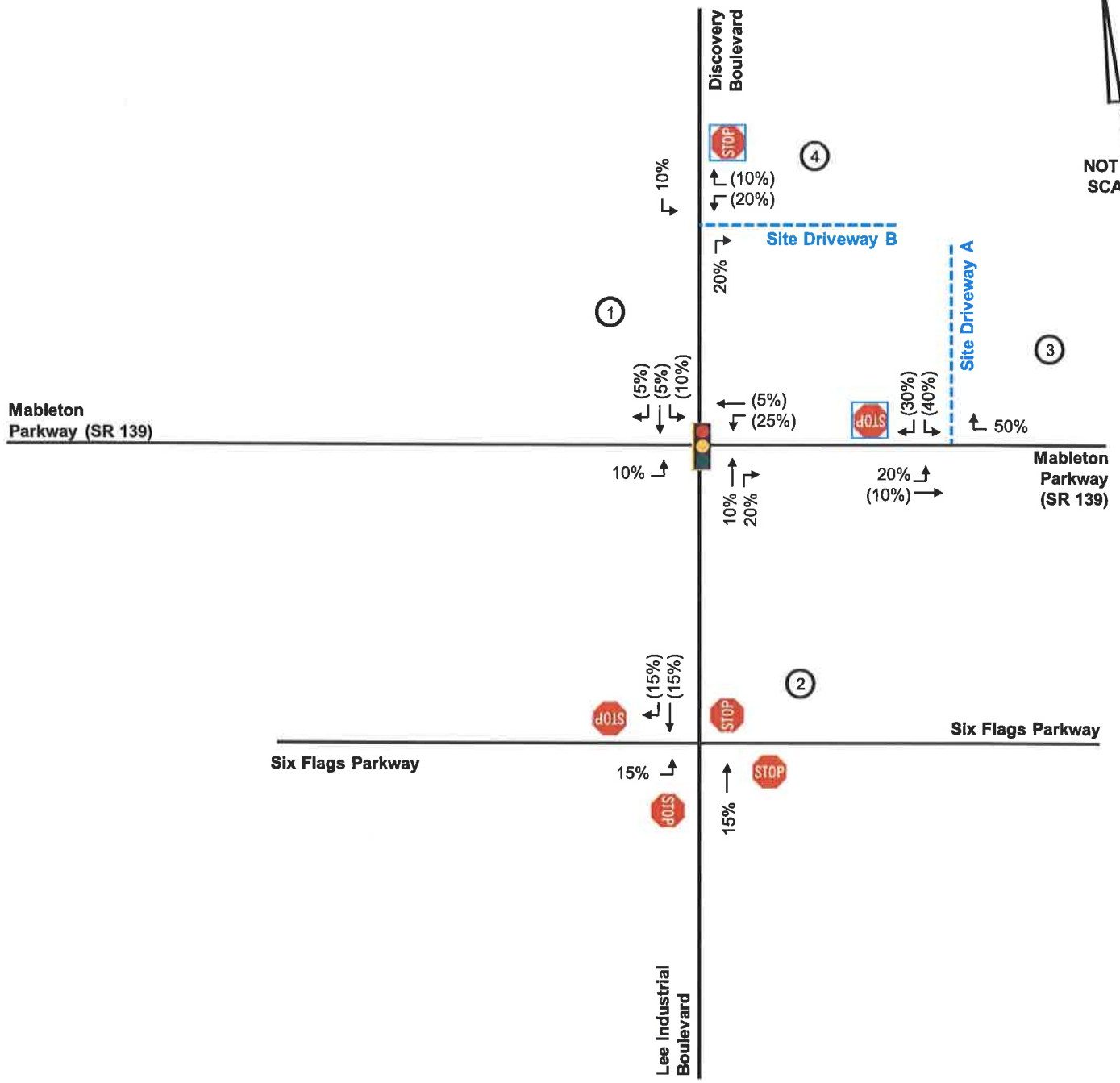
Attachments:

- Figure 1: Site Location Map
- Figure 2: Site Aerial Photography
- Figure 3: Heavy Vehicle (Truck) Project Trip Distribution
- Figure 4: Heavy Vehicle (Truck) Trip Distribution & Assignment
- Figure 5: Employee (Car) Project Trip Distribution
- Figure 6: Employee (Car) Trip Distribution & Assignment
- Growth Rate and Trip Generation Table
- Proposed Site Plan





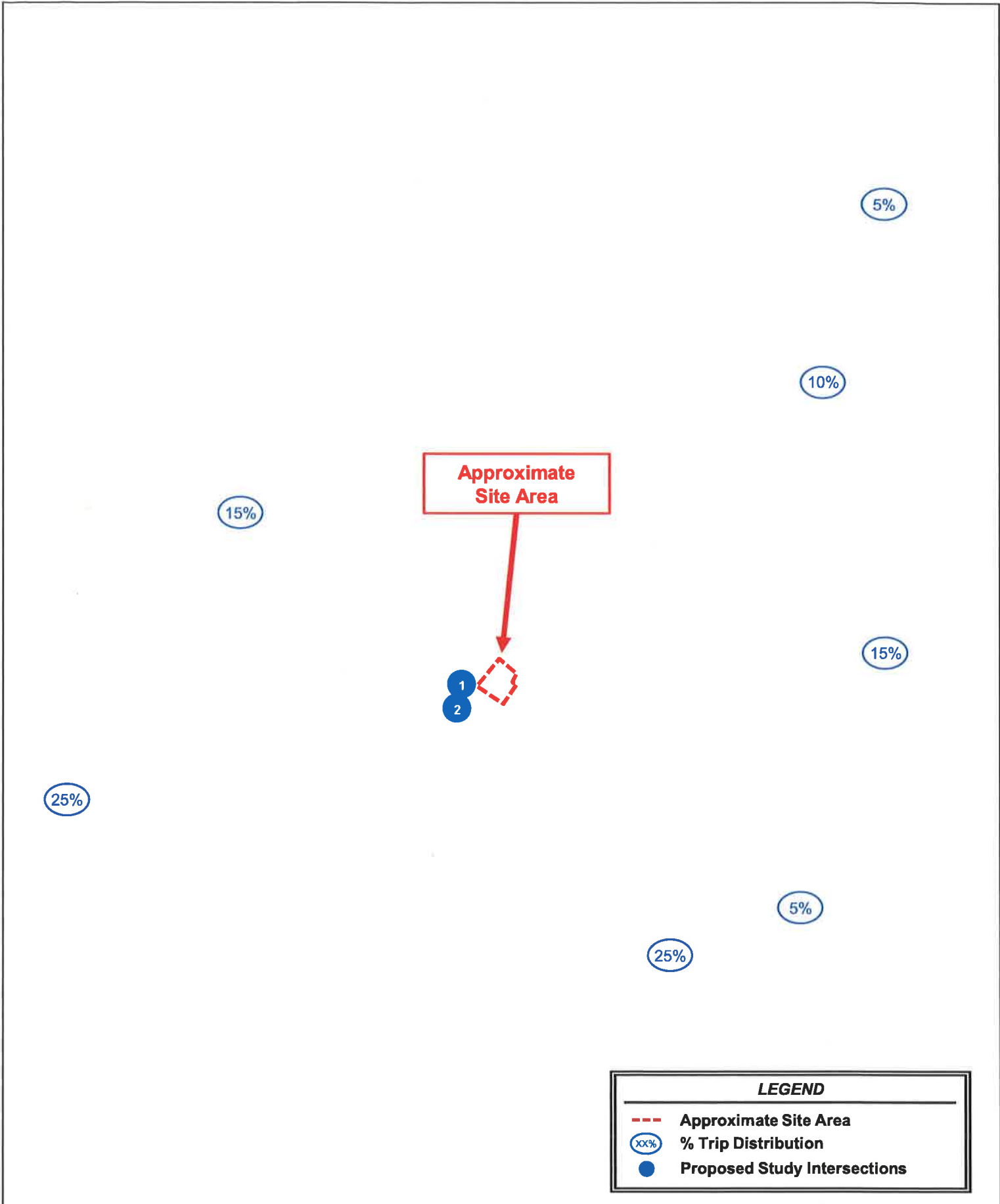




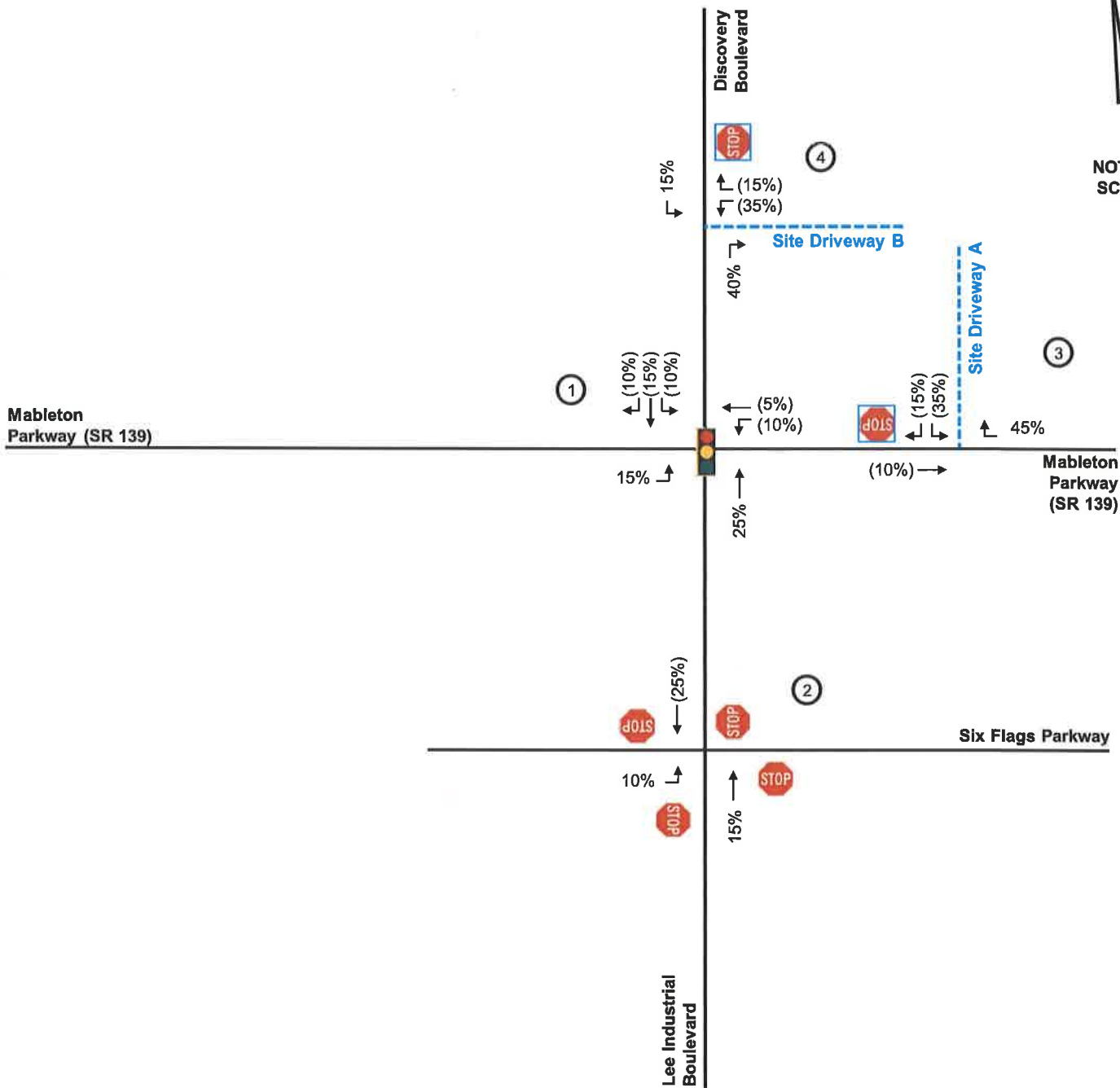
LEGEND

- Turning Movement
- XX % Traffic Entering
- (XX) % Traffic Exiting
- - - Proposed Driveway
- 🚦 Existing Traffic Signal
- 🛑 Existing STOP Control
- 🛑 Proposed STOP Control
- ⊗ Intersection Reference Number

The proposed distributions may change based on traffic counts collected along Six Flags Parkway, Discovery Boulevard, Lee Industrial Boulevard, and Mableton Parkway (SR 139).



NOT TO SCALE



The proposed distributions may change based on traffic counts collected along Six Flags Parkway, Discovery Boulevard, Lee Industrial Boulevard, and Mableton Parkway (SR 139).

LEGEND

- Turning Movement
- XX % Traffic Entering
- (XX) % Traffic Exiting
- - - Proposed Driveway
- 🚦 Existing Traffic Signal
- STOP Existing STOP Control
- STOP Proposed STOP Control
- ⊗ Intersection Reference Number

Discovery Boulevard TIA Growth Rate Table

Source:	GDOT
Location:	Mableton Parkway (SR 139) w/o Discovery Boulevard
Route #:	00013900
Route Type:	Minor Arterial
Station:	067-2544
Capacity:	

Count Year	Volume	Growth Rate
2014	21,300	
2015	22,900	7.51%
2016	22,300	-2.62%
2017	23,600	5.83%
2018	25,000	5.93%
2019	25,200	0.80%
Avg. 1 Year Rates 2014-2019		3.42%

Source:	GDOT
Location:	Lee Industrial Boulevard s/o Rowland Road
Route #:	00440800
Route Type:	Minor Arterial
Station:	067-0789
Capacity:	

Count Year	Volume	Growth Rate
2014	6,500	
2015	6,990	7.54%
2016	7,210	3.15%
2017	7,630	5.83%
2018	7,620	-0.13%
2019	8,390	10.10%
Avg. 1 Year Rates 2014-2019		5.24%

Source:	GDOT
Location:	Queen Mill Road r/o Ivey Road
Route #:	00279300
Route Type:	Minor Collector
Station:	067-8343
Capacity:	

Count Year	Volume	Growth Rate
2014	3,370	
2015	3,510	4.15%
2016	3,590	2.28%
2017	4,020	11.98%
2018	4,080	1.49%
2019	4,160	1.96%
Avg. 1 Year Rates 2014-2019		4.30%

Cobb County Population Annual Growth (2000-2010):
Cobb County Population Annual Growth (2010-2019):
Cobb County ARC Population Forecast (2015-2050):

Annual Growth
1.25%
1.11%
0.98%

CHOSEN GROWTH RATE: 2.5%

DESIGN GROWTH RATE: 1.5%

**Trip Generation Analysis (10th Ed.)
Discovery Boulevard TIA
Cobb County, GA**

Land Use	Intensity	Daily Trips	AM Peak Hour		PM Peak Hour					
			Total	In	Out	Total	In	Out		
Proposed Site Traffic										
150 Warehousing	137,200 s.f.	262	42	32	10	44	12	32		
Gross Trips		262	42	32	10	44	12	32		
Truck Trips (per ITE 10th Edition Supplement)		82	3	2	1	4	2	2		
Car Trips (per ITE 10th Edition Supplement)		180	39	30	9	40	10	30		
New Trips		262	42	32	10	44	12	32		
Driveway Volumes		262	42	32	10	44	12	32		

k:\alp_tpo\013498010_discovery boulevard tia - cobb county - january 2022\analysis\discovery boulevard analysis.xls\trip generation