

Culver's Restaurant

State Road 7 / US 441 & W. Copans Road
Margate, Florida

TRAFFIC STUDY

prepared for:
Medalist Restaurant Group, LLC

KBP CONSULTING, INC.

September 2018

Culver's Restaurant

State Road 7 / US 441 & W. Copans Road

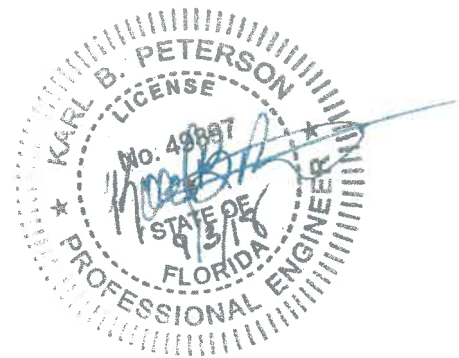
Margate, Florida

Traffic Study

September 2018

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TABLE OF CONTENTS

INTRODUCTION.....	1
INVENTORY	3
Existing Land Use and Access.....	3
Proposed Land Uses and Access	3
Roadway System.....	3
TRIP GENERATION.....	4
TRIP DISTRIBUTION AND DRIVEWAY ASSIGNMENT	6
SUMMARY & CONCLUSIONS.....	10

LIST OF FIGURES

FIGURE 1 – Project Location Map	2
FIGURE 2 – Trip Distribution.....	7
FIGURE 3 – Driveway Traffic Assignment – Culver’s & Retail Building.....	8
FIGURE 4 – Driveway Traffic Assignment – Total Site (Culver’s / Retail / Wawa)	9

LIST OF TABLES

TABLE 1 – Trip Generation Summary	5
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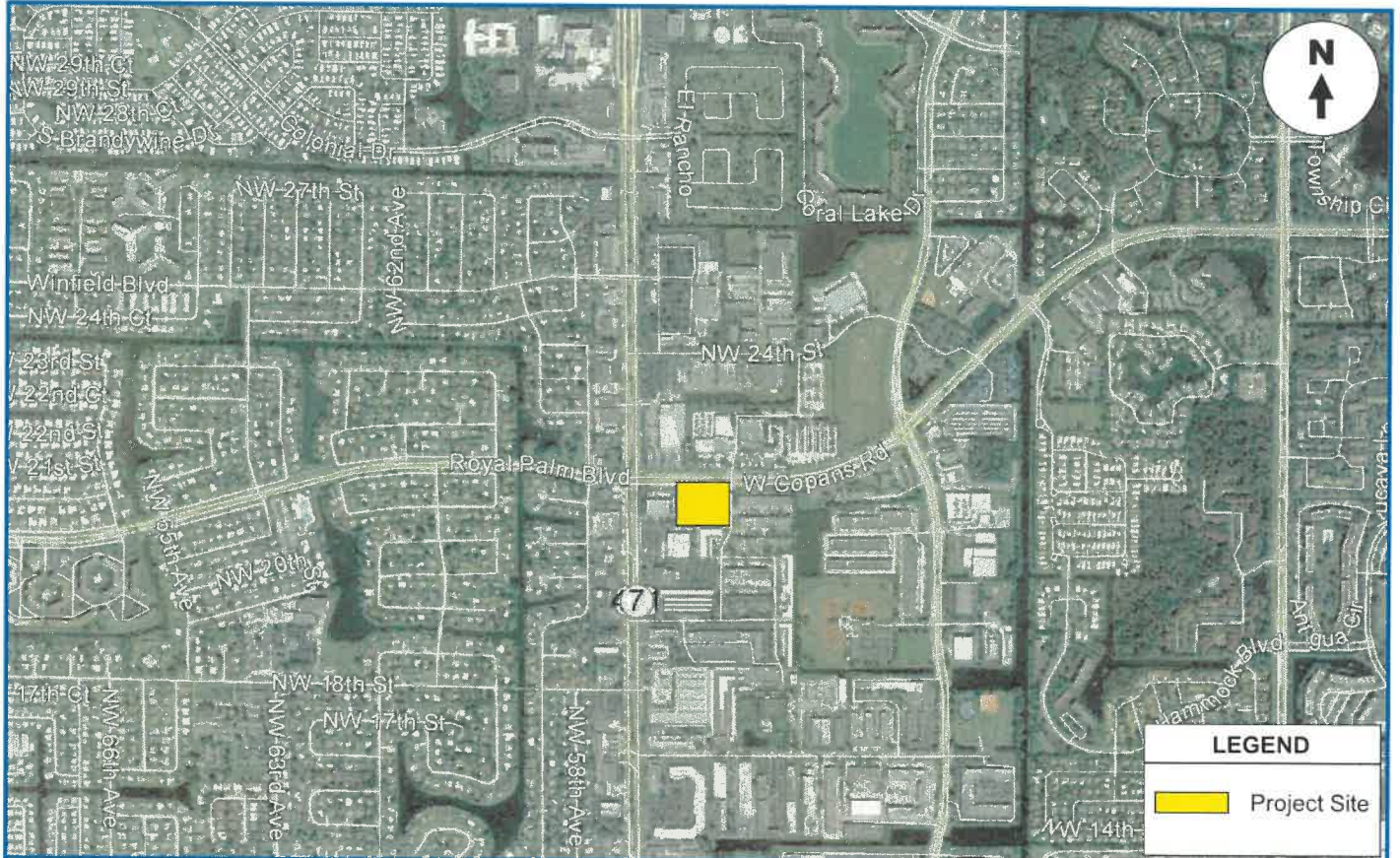
INTRODUCTION

There is a proposed restaurant and retail development to be located generally in the southeast quadrant of the intersection at State Road 7 / US 441 and W. Copans Road in Margate, Broward County, Florida. The location of this project site is illustrated in Figure 1 on the following page.

KBP Consulting, Inc. has been retained by the Medalist Restaurant Group, LLC to prepare a traffic study in connection with this proposed development. This study addresses the anticipated trip generation characteristics of the subject restaurant / retail development and the projected turning movement volumes at the site driveways as well as the project access driveways on State Road 7, W. Copans Road, and NW 55th Avenue.

This traffic study is divided into four (4) sections, as listed below:

1. Inventory
2. Trip Generation
3. Trip Distribution and Driveway Assignment
4. Summary & Conclusions



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Project Location Map

FIGURE 1
Culver's Restaurant
Margate, Florida

INVENTORY

Existing Land Use and Access

The subject site is approximately 1.68 acres and is currently vacant. Access to this site is currently provided by one (1) full access driveway on NW 55th Avenue. Access to the site is also provided by two (2) full access driveway connections to the existing Wawa located immediately to the west. The Wawa has 14 fueling positions, one (1) right-in / right-out only driveway on State Road 7 / US 441, and one (1) right-in / right-out only driveway on W. Copans Road.

Proposed Land Uses and Access

The subject site will be developed with a 4,443 square foot Culver's fast food restaurant with drive-through lane and a 4,000 square foot general retail building. Access to the adjacent Wawa and the surrounding street network will remain as is. Appendix A contains the preliminary site plan for the project.

Roadway System

State Road 7 / US 441, located to the west side of the site, is a state-maintained six-lane divided arterial roadway oriented in the north-south direction. On the north side of the site is W. Copans Road. This roadway is a county-maintained four-lane divided arterial roadway oriented in the east-west direction. The east side of the site is bounded by NW 55th Avenue which is a two-lane local roadway oriented in the north-south direction.

TRIP GENERATION

A trip generation analysis was conducted for the existing development to the west of the site (Wawa) and the proposed development on the subject site (Culver's Restaurant and Retail Building). The analysis was performed using the trip generation rates and equations published in the Institute of Transportation Engineer's (ITE) *Trip Generation Manual (10th Edition)*. The trip generation analysis was undertaken for daily, AM peak hour, and PM peak hour conditions. According to the ITE report, the most appropriate "land use" categories for the existing and proposed development are as follows:

ITE Land Use #945 – Gasoline / Service Station with Convenience Market

- Weekday: $T = 205.36 (X)$
where T = number of trips and X = number of fueling positions
- AM Peak Hour: $T = 12.47 (X)$ (51% in / 49% out)
- PM Peak Hour: $T = 13.99 (X)$ (51% in / 49% out)
 - Pass-By: Daily = 59%, AM Peak = 62%, PM Peak = 56%

ITE Land Use #934 – Fast-Food Restaurant with Drive-Through Window

- Weekday: $T = 470.95 (X)$
where T = number of trips and X = 1,000 square feet of gross floor area
- AM Peak Hour: *Culver's does not serve breakfast. They are open for lunch /dinner.*
- PM Peak Hour: $T = 32.67 (X)$ (52% in / 48% out)
 - Pass-By = 49%

ITE Land Use #820 – Shopping Center

- Weekday: $T = 37.75 (X)$
where T = number of trips and X = 1,000 square feet of gross leasable area
- AM Peak Hour: $T = 0.94 (X)$ (62% in / 38% out)
- PM Peak Hour: $T = 3.81 (X)$ (48% in / 52% out)
 - Pass-By = 34%

Utilizing the above-listed trip generation rates from the referenced ITE document, a trip generation analysis was undertaken for the existing Wawa and the proposed restaurant / retail development on the subject site at State Road 7 / US 441 and W. Copans Road in Margate. The results of this effort are documented in Table 1 on the following page.

Table 1 Trip Generation Summary Culver's Restaurant - Margate, Florida								
Land Use	Size	Daily Trips	AM Peak Hour Trips			PM Peak Hour Trips		
			In	Out	Total	In	Out	Total
Existing								
Service Station w/ Convenience Market - Pass-By (59% / 62% / 56%)	14 FP	2,875 (1,696)	89 (55)	86 (54)	175 (109)	100 (56)	96 (54)	196 (110)
Existing Sub-Total		1,179	34	32	66	44	42	86
Proposed								
Fast-Food Restaurant w/ Drive-Thru - Pass-By (49%)	4,443 SF	2,092 (1,025)	0 0	0 0	0 0	75 (37)	70 (34)	145 (71)
General Retail (Shopping Center) - Pass-By (34%)	4,000 SF	151 (51)	2 (1)	2 0	4 (1)	8 (3)	7 (2)	15 (5)
Proposed Sub-Total		1,167	1	2	3	43	41	84
Culver's / Retail Driveway Volumes		2,243	2	2	4	83	77	160
Total (Wawa / Culver's / Retail) Driveway Volumes		5,118	91	88	179	183	173	356

Compiled by: KBP Consulting, Inc. (September 2018).

Source: Institute of Transportation Engineers (ITE) Trip Generation Manual (10th Edition).

As indicated in Table 1, the proposed restaurant / retail development is anticipated to generate approximately 1,167 net new daily vehicle trips, approximately three (3) net new AM peak hour vehicle trips (1 inbound and 2 outbound) and approximately 84 net new vehicle trips (43 inbound and 41 outbound) during the typical afternoon peak hour.

The driveway volumes (including pass-by trips) associated with the proposed Culver's Restaurant and the proposed retail building are 2,243 daily vehicle trips, four (4) AM peak hour vehicle trips, and 160 PM peak hour vehicle trips. When considering the existing Wawa adjacent to the site, the total external driveway volumes are projected to be 5,118 daily vehicle trips, 179 AM peak hour vehicle trips, and 356 PM peak hour vehicle trips.

TRIP DISTRIBUTION AND DRIVEWAY ASSIGNMENT

The trip distribution and driveway assignment for the proposed restaurant / retail development at State Road 7 / US 441 and W. Copans Road was developed based upon knowledge of the study area, examination of the surrounding roadway network characteristics, review of current traffic volumes, and existing land use patterns. Figure 2 on the following page depicts the anticipated trip distribution for this project. *(Note: This trip distribution is consistent with the trip distribution documented in the traffic study prepared for the proposed Wawa in December 2015.)*

The projected peak hour traffic generated by the proposed restaurant / retail development was assigned to the project driveways using the traffic assignment documented in Figure 2 and is presented in Figure 3. The total site driveway volumes (including the existing Wawa traffic and the traffic associated with the proposed Culver's Restaurant and the proposed retail building) are presented in Figure 4.

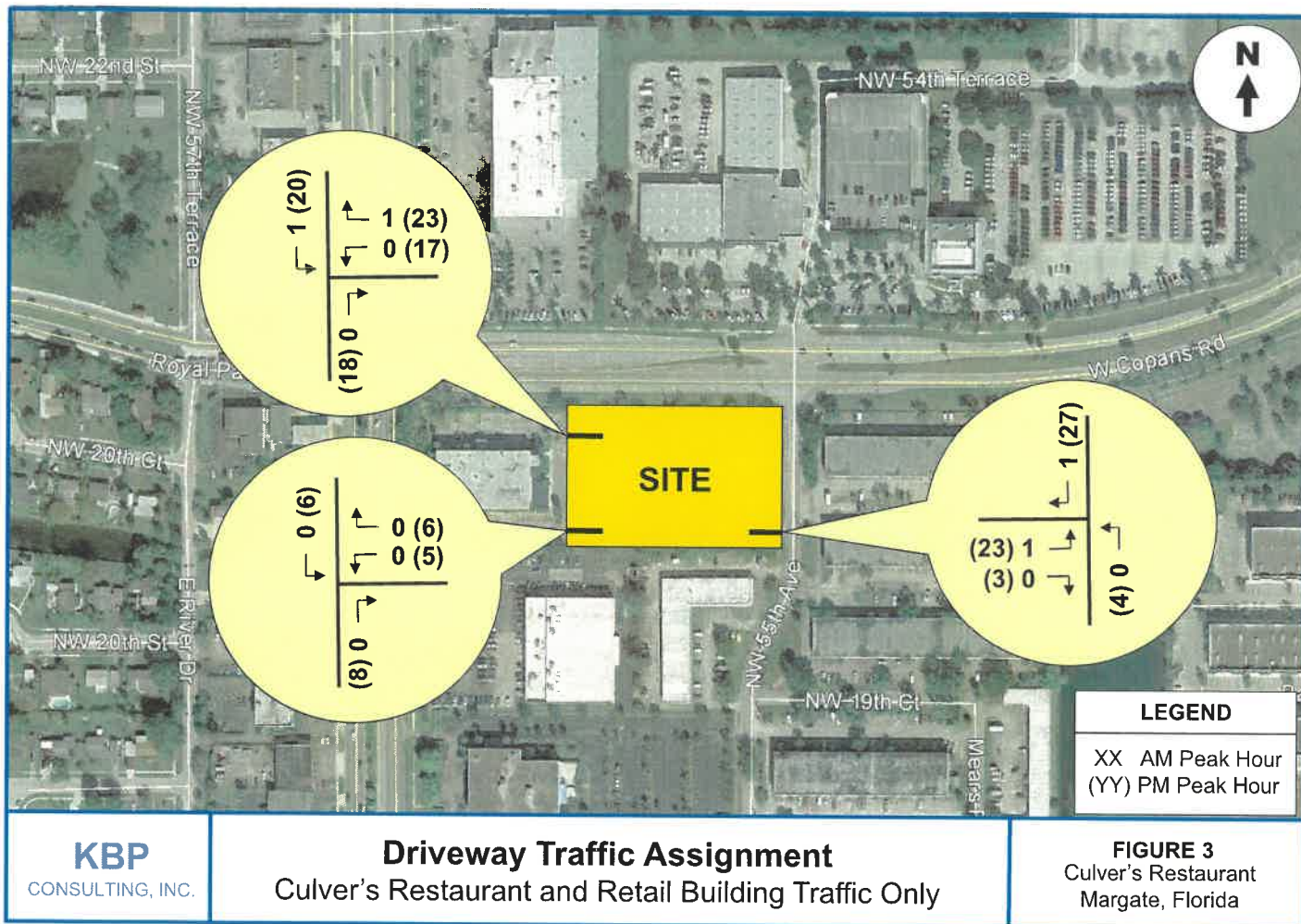
Concerning access to the site, there is an existing northbound right-turn lane on State Road 7 / US 441 and an existing eastbound right-turn lane on W. Copans Road. These dedicated turn lanes serve the existing right-turn in / right-turn out only driveways on State Road 7 and W. Copans Road, respectively. Along with the existing westbound left-turn lane on W. Copans Road at NW 55th Avenue, the appropriate turn lanes are already present to accommodate the anticipated traffic to be generated by the proposed restaurant / retail development.

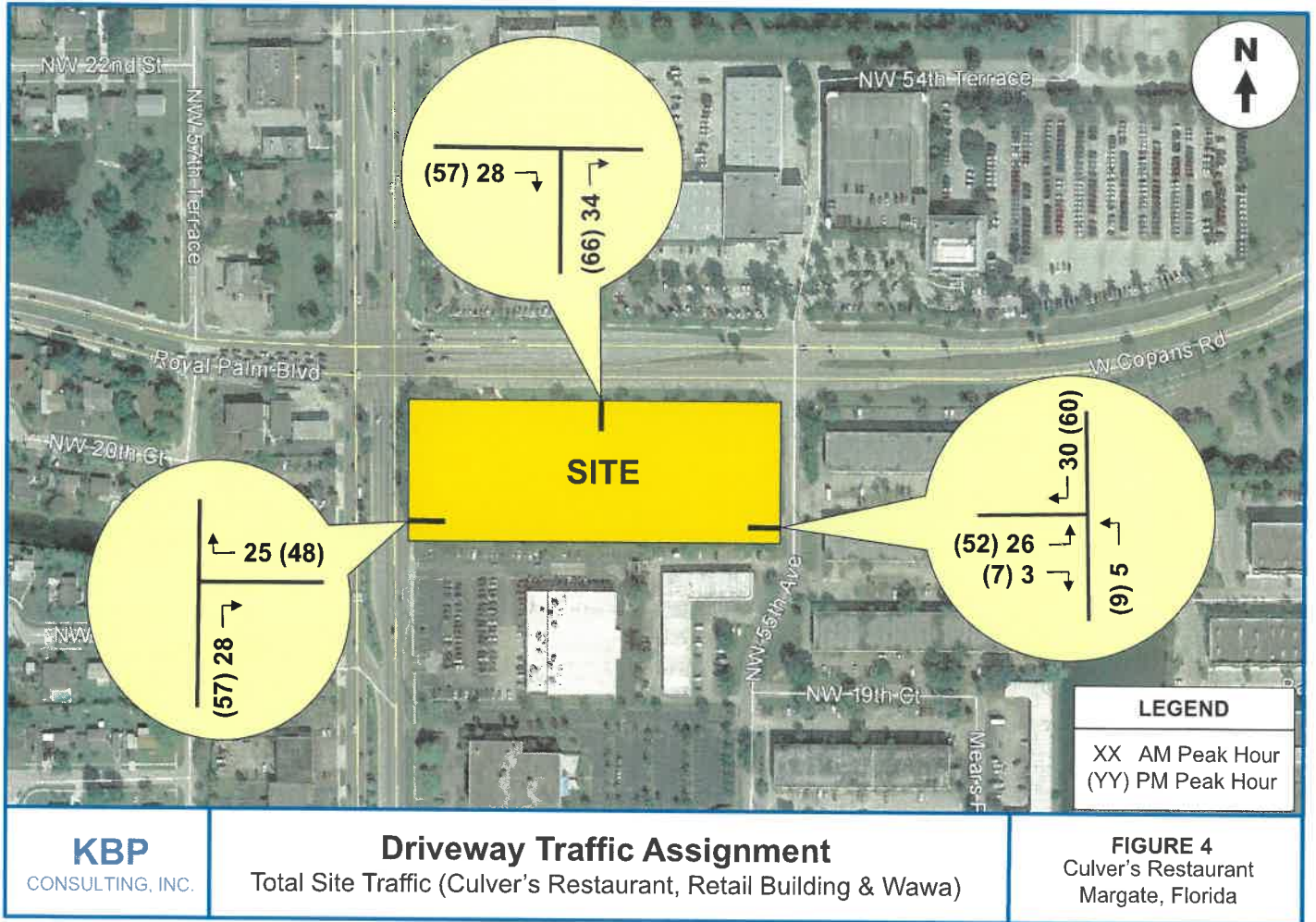


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Trip Distribution

FIGURE 2
Culver's Restaurant
Margate, Florida





SUMMARY & CONCLUSIONS

There is a proposed restaurant (Culver's Restaurant) and retail development to be located generally in the southeast quadrant of the intersection at State Road 7 / US 441 and W. Copans Road in Margate, Broward County, Florida. The subject site is currently vacant. Access to the site is shared with the existing Wawa adjacent to the site and a full access driveway located on NW 55th Avenue. The subject site will be developed with a 4,443 square foot fast food restaurant with drive-through lane and a 4,000 square foot general retail building.

The proposed restaurant / retail development is anticipated to generate approximately 1,167 net new daily vehicle trips, approximately three (3) net new AM peak hour vehicle trips (1 inbound and 2 outbound) and approximately 84 net new vehicle trips (43 inbound and 41 outbound) during the typical afternoon peak hour.

The driveway volumes (including pass-by trips) associated with the Culver's Restaurant and the proposed retail building are 2,243 daily vehicle trips, four (4) AM peak hour vehicle trips, and 160 PM peak hour vehicle trips. When considering the existing Wawa adjacent to the site, the total external driveway volumes are projected to be 5,118 daily vehicle trips, 179 AM peak hour vehicle trips, and 356 PM peak hour vehicle trips.

The appropriate turn lanes (a northbound right-turn lane on State Road 7 / US 441, an eastbound right-turn lane on W. Copans Road, and a westbound left-turn lane on W. Copans Road at NW 55th Avenue) are already present to accommodate the anticipated traffic to be generated by the proposed restaurant / retail development.

APPENDIX A
Culver's Restaurant
Site Plan

GRAPHIC SCALE

(IN FEET)
1 inch = 50 ft

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