

KBP CONSULTING, INC.

January 18, 2021

Matthew H. Scott, Esq.
Partner
Dunay, Miskel & Backman, LLP
14 SE 4th Street, Suite 36
Boca Raton, FL 33432

**Re: Clutch Coffee – Margate, Florida
Traffic Statement**

Dear Matt:

Clutch Coffee is a proposed drive-through only coffee shop to be located within the existing Crossroads Shopping Center in the southeast quadrant of the intersection at Coconut Creek Parkway and State Road 7 in Margate, Broward County, Florida. More specifically, the subject outparcel is located at 5300 Coconut Creek Parkway and the Folio Number is 4842 31 15 0016. This parcel has a land area of 17,444 square feet and a building area of approximately 497 square feet. The previous use on this site was a drive-in bank with four (4) drive-through lanes. A project location map is presented in Attachment A to this memorandum.

The proposed drive-through coffee shop will utilize the existing building, drive-through facilities and vehicular access points. A preliminary site plan for this project is presented in Attachment B to this memorandum. The purpose of this technical memorandum is to document the trip generation characteristics of the previous use (i.e. drive-in bank) and the proposed use (i.e. drive-through only coffee shop), the adequacy of the drive-through queuing area, and the current levels of service for the adjacent street network.

Trip Generation Analysis

Consistent with the foregoing description of the previous and the proposed uses at the subject site, a trip generation analysis has been conducted utilizing the trip generation rates and equations contained in the Institute of Transportation Engineer's (ITE) *Trip Generation Manual (10th Edition)*. According to the subject ITE manual, the most appropriate land use categories for this analysis are Land Use #912 – Drive-In Bank and Land Use #938 – Coffee / Donut Shop with Drive-Through Window and No Indoor Seating. The trip generation rates used to determine the vehicle trips associated with this analysis are presented below.

Drive-In Bank – ITE Land Use #912

- ❑ Daily: $T = 124.76 (X)$
where T = number of trips and X = number of drive-in lanes
- ❑ AM Peak Hour: $T = 8.83 (X)$ (61% in / 39% out)
- ❑ PM Peak Hour: $T = 27.15 (X)$ (49% in / 51% out)
- ❑ Pass-By: Daily = 32%, AM Peak Hour = 29%, and PM Peak Hour = 35%

Coffee/Donut Shop with Drive-Thru Window and No Indoor Seating – ITE Land Use #938

- Daily: $T = 2000.00 (X)$
where T = number of trips and X = 1,000 square feet of gross floor area
- AM Peak Hour: $T = 337.04 (X)$ (50% in / 50% out)
- PM Peak Hour: $T = 83.33 (X)$ (50% in / 50% out)
- Pass-By: 89%

Table 1 below summarizes the trip generation characteristics associated with the previous drive-in bank use and the proposed drive-in coffee shop to be located within the Crossroads Shopping Center in Margate, Florida. Relevant excerpts from the referenced ITE manual are presented in Attachment C to this memorandum. Pass-by rates are obtained from the ITE *Trip Generation Handbook* (3rd Edition).

Table 1 Trip Generation Summary Clutch Coffee - Margate, Florida								
Land Use	Size	Daily Trips	AM Peak Hour Trips			PM Peak Hour Trips		
			In	Out	Total	In	Out	Total
Previous Drive-In Bank Pass-By (-32%/-29%/-35%)	4 Lanes	499 (160)	21 (6)	14 (4)	35 (10)	53 (19)	56 (19)	109 (38)
Sub Total		339	15	10	25	34	37	71
Proposed Coffee w/DT & No Indoor Seating Pass-By (-89%)	497 SF	994 (885)	84 (75)	84 (75)	168 (150)	21 (19)	20 (17)	41 (36)
Sub Total		109	9	9	18	2	3	5
Difference (Proposed - Previous) Change in Driveway Volumes		(230) 495	(6) 63	(1) 70	(7) 133	(32) (32)	(34) (36)	(66) (68)

Compiled by: KBP Consulting, Inc. (January 2021).

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

As indicated in Table 1 above, the proposed drive-through only coffee shop is estimated to generate 994 daily vehicle trips, 168 AM peak hour vehicle trips (84 inbound and 84 outbound), and 41 PM peak hour vehicle trips (21 inbound and 20 outbound). These values represent an increase of 495 daily vehicle trips, an increase of 133 AM peak hour vehicle trips, and a decrease of 68 PM peak hour vehicle trips when compared with the former drive-in bank use.

However, it is very important to note that the proposed land use (i.e. a drive-through coffee shop with no indoor seating) generates very few primary trips but instead derives the overwhelming majority of its trips from vehicles already on the nearby / adjacent roadway network. When considering these “pass-by trip” characteristics for this land use, the net new external vehicle trips are estimated to consist of 109 daily vehicle trips, 18 AM peak hour vehicle trips, and five (5) PM peak hour vehicle trips.

When comparing these net new external trips for the proposed use with those of the previous drive-in bank use on this site, this represents a decrease of 230 daily vehicle trips, a decrease of seven (7) AM peak hour vehicle trips, and a decrease of 66 PM peak hour vehicle trips. In summary, the proposed coffee shop is expected to generate more daily and AM peak hour vehicle trips than that of the previous bank use; however, the actual traffic impacts to the external roadway network are expected to be less as a result of the significantly higher pass-by rate exhibited by drive-through coffee shops with no indoor seating.

Vehicle Queuing

The drive-through facilities for this proposed tenant include a primary service lane and a by-pass lane. The primary service lane provides 80 feet of queuing distance from the service window to the menu board and an additional 30 feet to the property line. The total vehicle queuing distance provided is 110 feet which will accommodate approximately five (5) vehicles. The City of Margate Code of Ordinances (Section 33.11) requires that a drive-through lane for beverage or food sales must provide at least four (4) reservoir spaces. (The dimensions of a reservoir space are 10 feet wide by 20 feet long.) As such, the City Code with respect to reservoir areas for drive-through facilities is satisfied. Furthermore, operational information provided by the Applicant indicates that the vehicle queuing area will be sufficient to accommodate the anticipated vehicular demand.

State Road 7 & Coconut Creek Parkway – Levels of Service

As mentioned previously, the subject site is located in the southeast quadrant of the intersection at Coconut Creek Parkway and State Road 7. As such, all of the project traffic associated with the proposed use will access these roadways. As a point of reference, the latest Broward County Level of Service (LOS) tables have been reviewed with respect to the current operating conditions of these roadways. This information is summarized as follows:

- **Coconut Creek Parkway – East of State Road 7**
 - Daily: 27,000 vehicles per day (vpd) / LOS “D”
 - Peak Hour: 2,565 vehicles per hour (vph) / LOS “D”
- **State Road 7 – North of Margate Boulevard**
 - Daily: 53,500 vehicles per day (vpd) / LOS “C”
 - Peak Hour: 5,083 vehicles per hour (vph) / LOS “C”

Both of these existing roadways are currently operating at an acceptable LOS.

Conclusions

The trip generation analysis for the Clutch Coffee project indicates that the proposed drive-through only coffee shop is anticipated to generate fewer external daily and peak hour vehicle trips than that of the previous drive-in bank use on this same site. As such, the external traffic impacts associated with the proposed use are expected to be less than that of the previous use. The drive-through queuing area satisfies City Code and both of the directly access roadways (State Road 7 and Coconut Creek Parkway) are operating at an acceptable LOS.

KBP CONSULTING, INC.

If you have any questions or require additional information, please do not hesitate to contact me.

Sincerely,

KBP CONSULTING, INC.

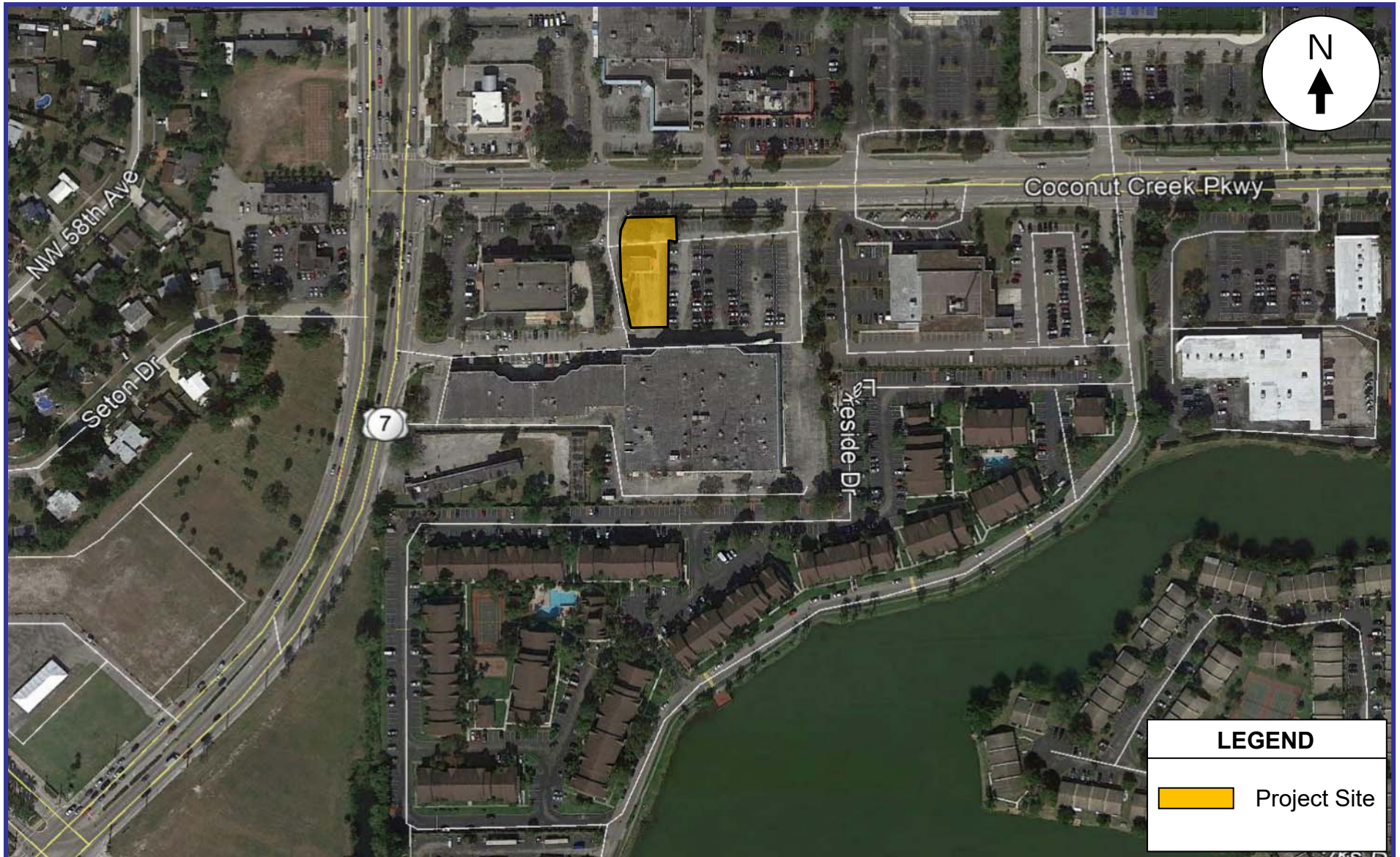


Karl B. Peterson, P.E.
Florida Registration Number 49897
Engineering Business Number 29939

Attachment A

Clutch Coffee – Margate, Florida

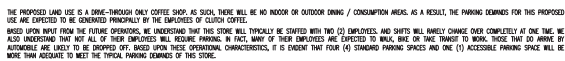
Project Location Map















Attachment B

Clutch Coffee – Margate, Florida

Proposed Site Plan



	PROPOSED SIGNS EXISTING SIGNS
	PROPOSED 24" WHITE PAINTED STOP BAR
	PROPOSED WHITE PAINTED THROUGH LANE-USE ARROW IN DRIVE AWAYS PER FOOT INDEX 711-701.
	PROPOSED YELLOW 36" WIDE 45' 4" O.C. PER WIDT. 35-2.02
	EXISTING DIRECTIONAL ARROW
	EXISTING SIDEWALK
	PROPOSED CONCRETE PAD
	PARKING COUNT (ONSITE)
	PARKING COUNT (OFFSITE)
	5' ACCESS AISLE WHITE PAINTED STRIPING PER FOOT INDEX 711-701.
	
	
	PROPOSED 12" WHITE PEDESTRIAN CROSSWALK STRIPING, PER FOOT INDEX 711-701



Attachment C

Clutch Coffee – Margate, Florida

***ITE Trip Generation Manual (10th Edition)* – Relevant Excerpts**

Land Use: 912

Drive-in Bank

Description

A drive-in bank provides banking facilities for motorists who conduct financial transactions from their vehicles; many also serve patrons who walk into the building. The drive-in lanes may or may not provide automatic teller machines (ATMs). Walk-in bank (Land Use 911) is a related use.

Additional Data

The independent variable, drive-in lanes, refers to all lanes at a banking facility used for financial transactions, including ATM-only lanes.

Time-of-day distribution data for this land use are presented in Appendix A. For the 18 general urban/suburban sites with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 11:45 a.m. and 12:45 p.m. and 12:15 and 1:15 p.m., respectively. For the one center city core site with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 11:15 a.m. and 12:15 p.m. and 12:45 and 1:45 p.m., respectively.

The sites were surveyed in the 2000s and the 2010s in Colorado, Kentucky, Minnesota, Nebraska, New Jersey, New York, Oregon, Pennsylvania, Texas, Vermont, Virginia, Washington, and Wisconsin.

To assist in the future analysis of this land use, it is important that Friday data be collected and reported separately from weekday data. It is also important to specify the date and month of the data collection period and the number of drive-through lanes that are open at the time of the study.

Source Numbers

535, 539, 553, 555, 573, 577, 600, 624, 626, 629, 630, 637, 656, 657, 710, 724, 728, 866, 869, 883, 884, 927, 935, 961

Drive-in Bank (912)

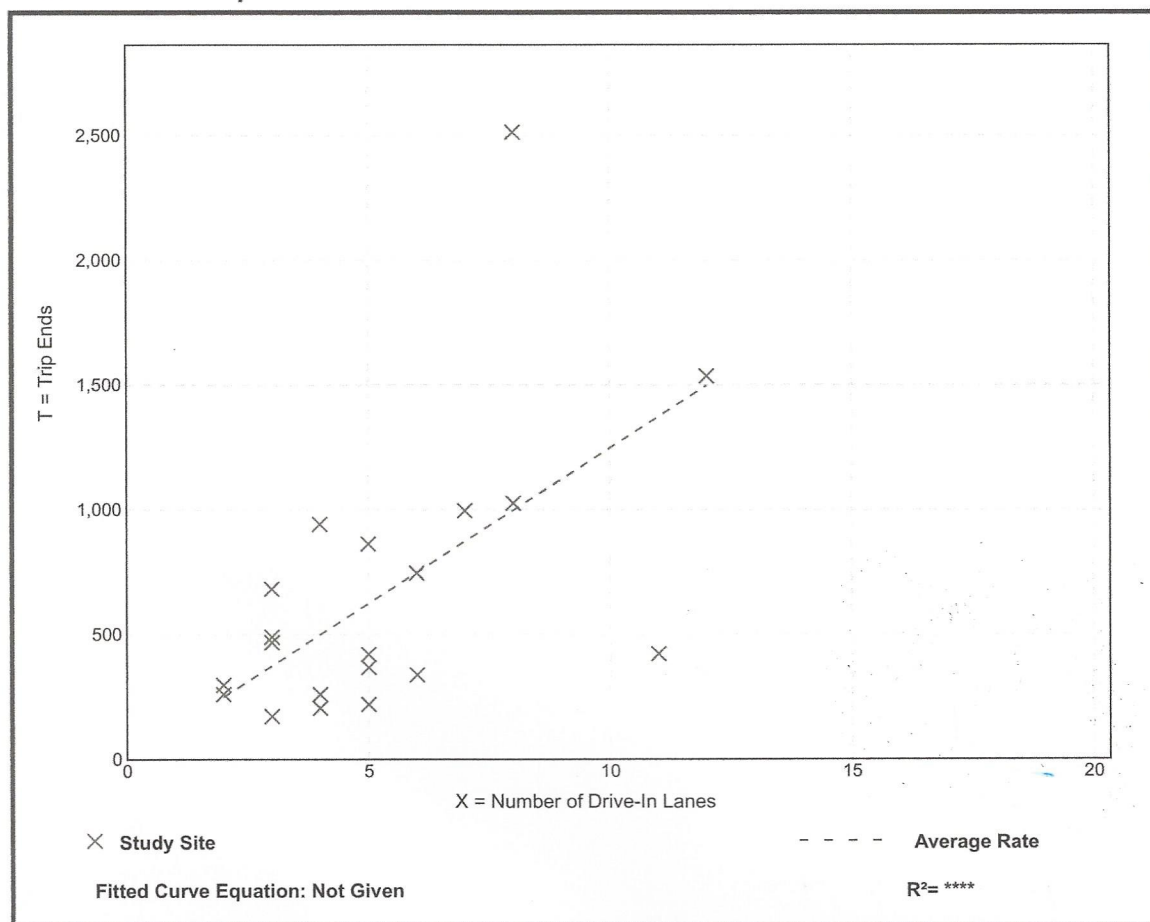
Vehicle Trip Ends vs: Drive-In Lanes
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 20
Avg. Num. of Drive-In Lanes: 5
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Drive-In Lane

Average Rate	Range of Rates	Standard Deviation
124.76	38.36 - 314.25	77.44

Data Plot and Equation



Drive-in Bank (912)

Vehicle Trip Ends vs: Drive-In Lanes

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

Setting/Location: General Urban/Suburban

Number of Studies: 36

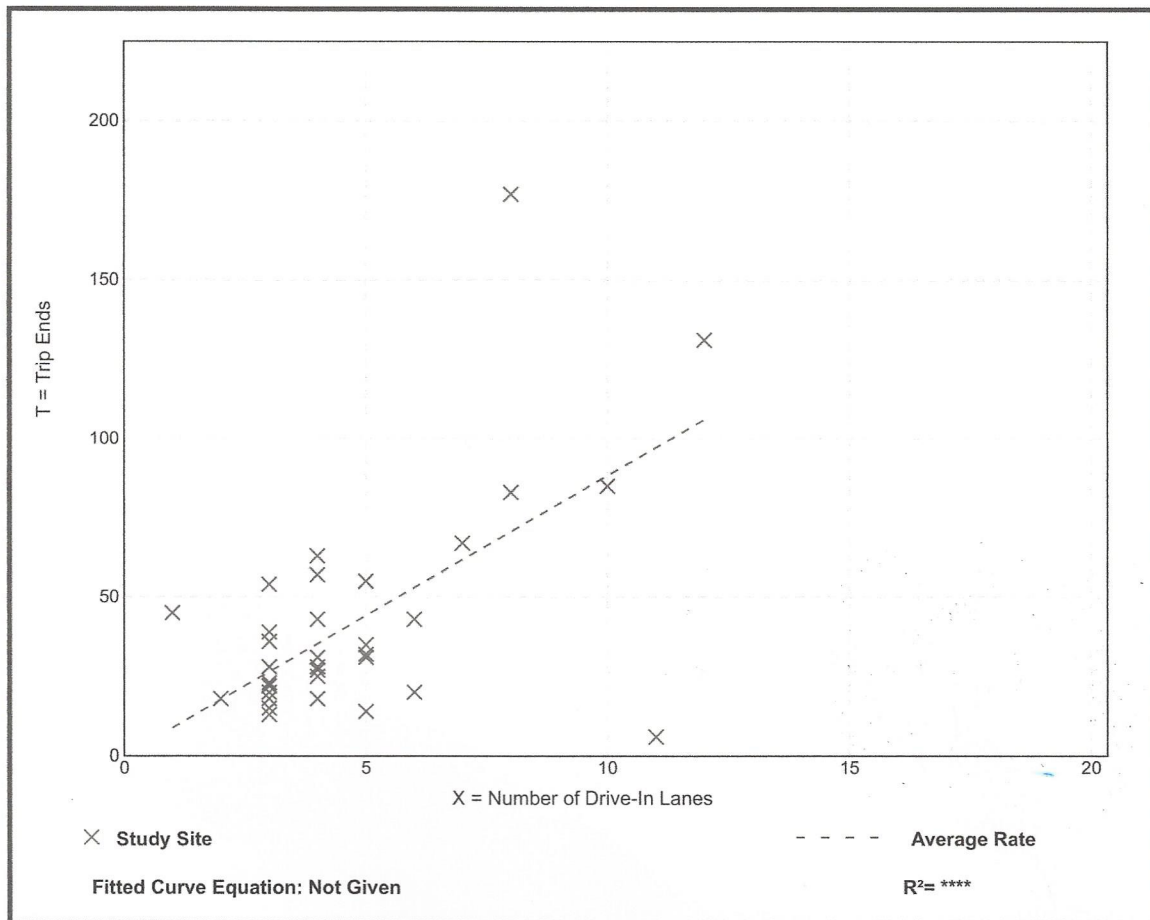
Avg. Num. of Drive-In Lanes: 5

Directional Distribution: 61% entering, 39% exiting

Vehicle Trip Generation per Drive-In Lane

Average Rate	Range of Rates	Standard Deviation
8.83	0.55 - 45.00	5.55

Data Plot and Equation



Drive-in Bank (912)

Vehicle Trip Ends vs: Drive-In Lanes
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

Number of Studies: 108

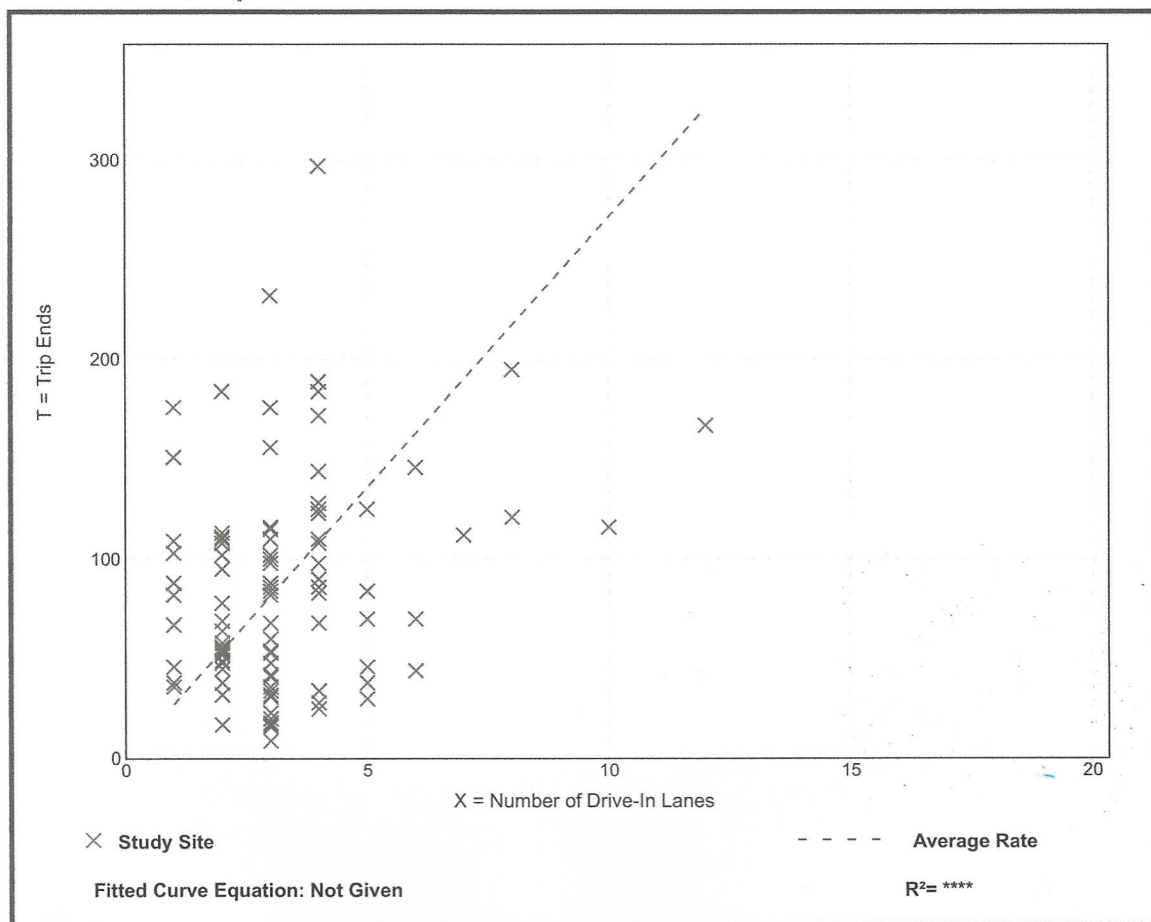
Avg. Num. of Drive-In Lanes: 3

Directional Distribution: 49% entering, 51% exiting

Vehicle Trip Generation per Drive-In Lane

Average Rate	Range of Rates	Standard Deviation
27.15	3.00 - 176.00	22.14

Data Plot and Equation



Land Use: 938

Coffee/Donut Shop with Drive-Through Window and No Indoor Seating

Description

This land use includes single-tenant coffee and donut restaurants with drive-through windows. Freshly brewed coffee and a variety of coffee-related accessories are the primary retail products sold at these sites. They may also sell other refreshment items, such as donuts, bagels, muffins, cakes, sandwiches, wraps, salads, and other hot and cold beverages. Some sites may also sell newspapers, music, CDs, and books. The coffee and donut shops contained in this land use typically hold long store hours (over 15 hours) with an early morning opening. Coffee/donut shop without drive-through window (Land Use 936), coffee/donut shop with drive-through window (Land Use 937), bread/donut/bagel shop without drive-through window (Land Use 939), and bread/donut/bagel shop with drive-through window (Land Use 940) are related uses.

Additional Data

The sites were surveyed in the 1990s and the 2000s in New Hampshire, Oregon, and Washington.

Specialized Land Use Data

A 2003 study by the Oregon Department of Transportation provided trip generation information on portable coffee stands with drive-through service (source 755). The coffee stands were portable trailers with dimensions of approximately 8 feet by 12 feet and were operated by one or two employees. All sites (stands) were located near major roadways in urban areas. The sites were surveyed between 7:00 and 9:00 a.m. The trip generation characteristics of these sites differ from the facilities typically contained in this land use; therefore, trip generation information for these sites is presented here and was excluded from the data plots. The average number of vehicle trips during the weekday AM peak hour of adjacent street traffic for the nine sites was 33. The numbers of trips ranged between 16 and 56.

Source Numbers

514, 644, 755, 981

Coffee/Donut Shop with Drive-Through Window and No Indoor Seating (938)

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

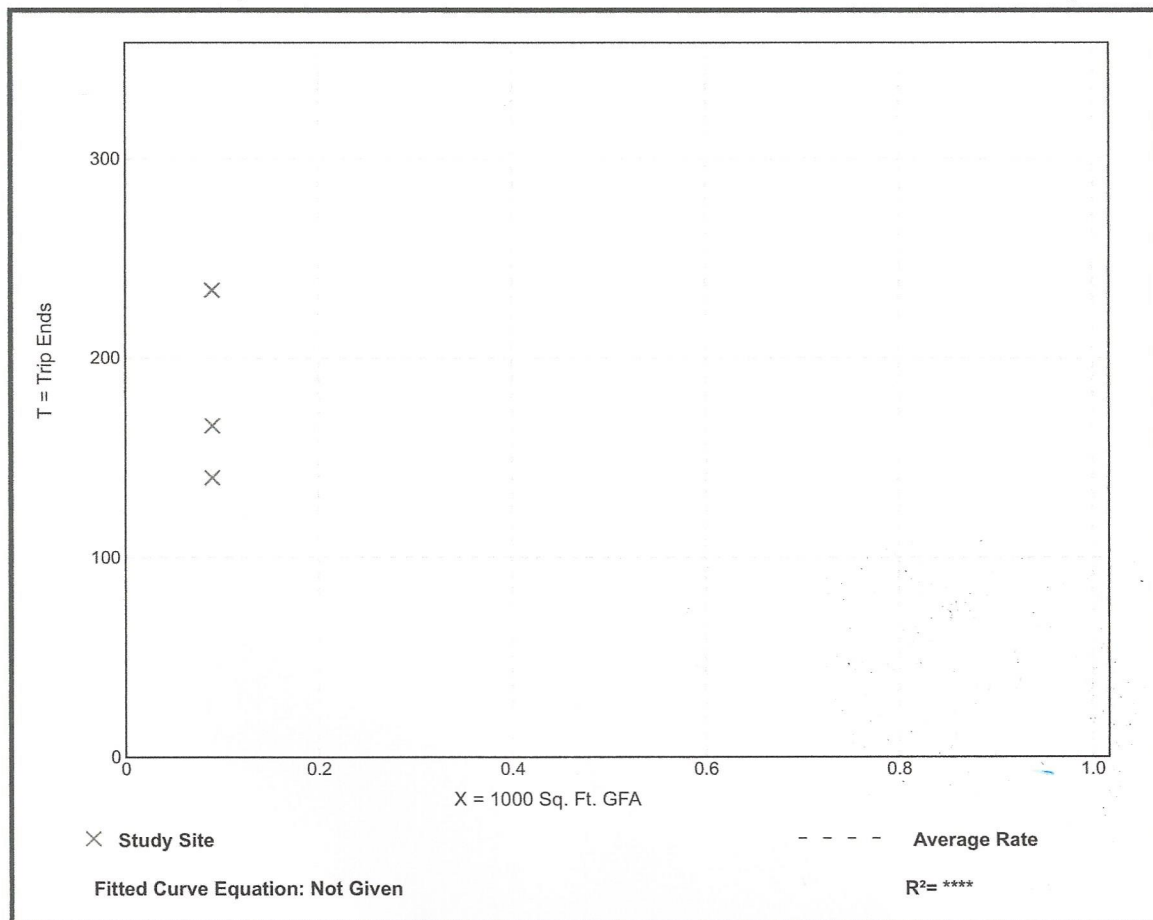
Setting/Location: General Urban/Suburban
Number of Studies: 3
1000 Sq. Ft. GFA: 0.09
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
2000.00	1555.56 - 2600.00	2508.16

Data Plot and Equation

Caution – Small Sample Size



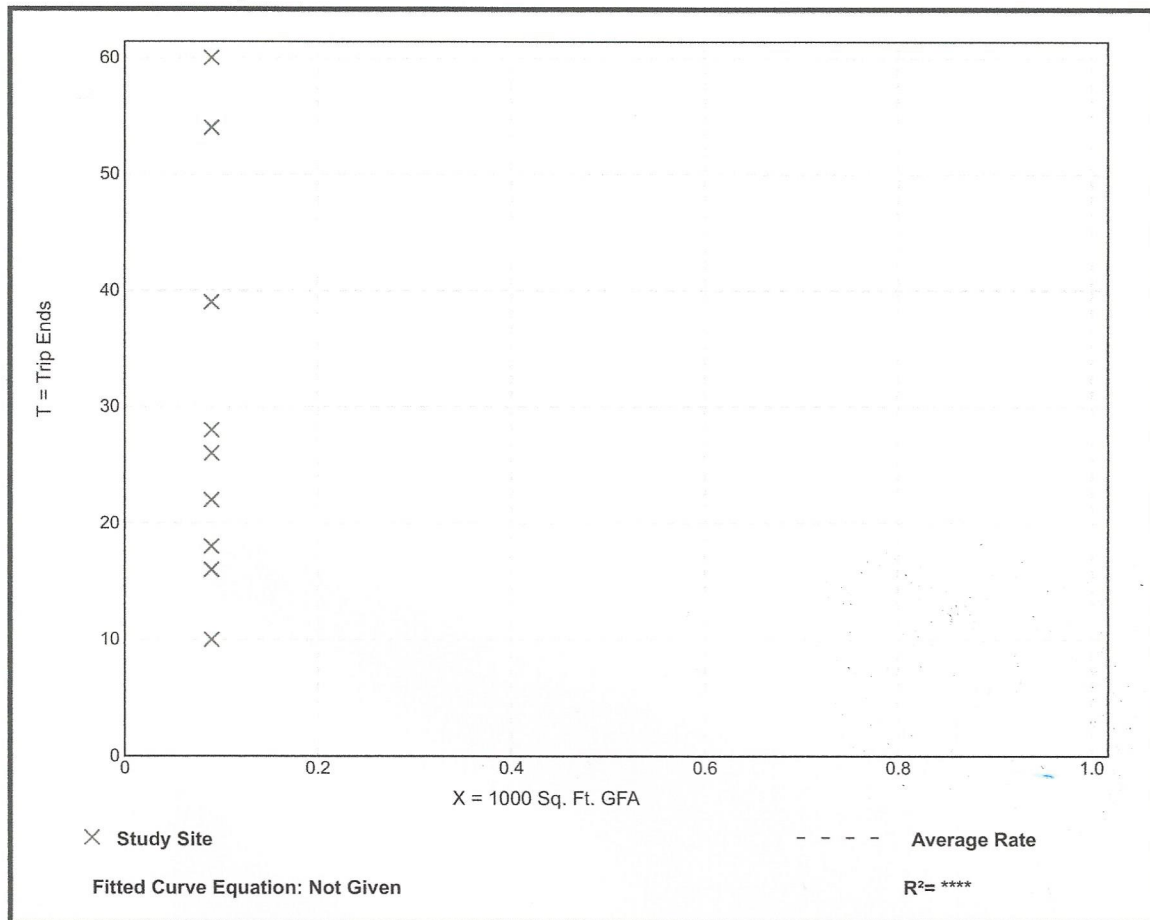
Coffee/Donut Shop with Drive-Through Window and No Indoor Seating (938)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
 On a: Weekday,
 Peak Hour of Adjacent Street Traffic,
 One Hour Between 7 and 9 a.m.
 Setting/Location: General Urban/Suburban
 Number of Studies: 9
 1000 Sq. Ft. GFA: 0.09
 Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
337.04	111.11 - 666.67	191.65

Data Plot and Equation



Coffee/Donut Shop with Drive-Through Window and No Indoor Seating (938)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
 On a: Weekday,
 Peak Hour of Adjacent Street Traffic,
 One Hour Between 4 and 6 p.m.
 Setting/Location: General Urban/Suburban
 Number of Studies: 4
 1000 Sq. Ft. GFA: 0.09
 Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
83.33	55.56 - 111.11	26.45

Data Plot and Equation

Caution – Small Sample Size

