



181 WEST HIGH STREET
SOMERVILLE, NJ 08876

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TRAFFIC IMPACT STATEMENT FOR PROPOSED CANNABIS RETAILER

BLOCK 40.05, LOT 11
1002 MANTUA PIKE (ROUTE 45)
BOROUGH OF WOODBURY HEIGHTS
GLOUCESTER COUNTY, NEW JERSEY

REVISED: MAY 2, 2023
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INTRODUCTION

Dolan & Dean Consulting Engineers, LLC (D&D) has prepared this Traffic Impact Statement in support of an application for the redevelopment of the property known as 1002 Mantua Pike (Route 45) in the Borough of Woodbury Heights, Gloucester County. The site is currently developed with a 3,802 square foot, two-story, building that was previously occupied by a bank with two drive-thru windows. Access is provided via a right-in only driveway along Mantua Pike and separate ingress & egress driveways along Alliance Street.

Under the development program, the existing building will be retrofitted for use as a recreational cannabis dispensary. The first floor is 3,147 square feet and will operate with the retail portion of the operation. The second floor is 655 square feet and will be the dispensary's office space and break room. The dispensary will operate with approximately 15 employees.

The access to Mantua Pike will remain and the site access will be modified along Alliance Street to provide one full movement driveway. Twenty-one (21) parking spaces are proposed.

D&D has therefore been retained by the applicant to prepare a Traffic Impact Statement to address trip generation characteristics of the existing and proposed uses. This report further assesses the suitability of on-site circulation, and the proposed parking supply to accommodate the dispensary use.



EXISTING CONDITIONS

The site is a 0.60-acre parcel with frontage along Mantua Pike (Route 45) and Alliance Street and is designated as Lot 11 in Block 40.05. Neighboring land uses include the College Square retail plaza which surrounds the property. As previously mentioned, the site is currently developed with a 3,802 square foot building formerly occupied by a bank with two drive-thru windows.

Mantua Pike is designated as NJ Route 45 and has a general north/south orientation and generally provides two lanes in each travel direction. Mantua Pike has a grass median separating northbound and southbound traffic. Along the site frontage, three lanes are provided and the roadway operates with a posted speed limit of 50 miles per hour.

Alliance Street is a local roadway connecting Mantua Pike to Fordham Road. One lane is provided in each direction with an east/west orientation. Alliance Street is STOP controlled at its intersection with Mantua Pike.



TRAFFIC CHARACTERISTICS OF THE PROPOSED USE

Traffic projections for the proposed cannabis dispensary were prepared to evaluate potential increases in peak hour trip generation. Estimates were developed using data published by the Institute of Transportation Engineers (ITE) within the 11th Edition of the ITE Trip Generation Manual. To generate future traffic estimates, Land Use 882 – “Marijuana Dispensary” was utilized based on the proposed building area. The ITE trip generation printouts are appended.

Using the ITE rates, the following trip projections are calculated for the proposed dispensary:

TABLE I
TRIP GENERATION PROJECTIONS
PROPOSED 3,802 SF CANNABIS DISPENSARY

Morning Peak Hour			Evening Peak Hour			Saturday Peak Hour		
Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
21	19	40	36	36	72	55	55	110

It is important to note the application is for a retail cannabis facility absent of medical cannabis sales, whereas the closest ITE land use is “Marijuana Dispensary”. The ITE “Marijuana Dispensary” land use forecasts traffic volumes based on data collected at dispensary style facilities supporting both medical and recreational sales. As the proposed retail cannabis facility will not cater to medical cannabis sales, the traffic volumes experienced at the facility will likely be lower than those shown in Table I.

The ITE weekday peak hour estimates displayed in Table I represent the average volumes experienced on a typical weekday (Monday-Friday). To further support the application, reference is made to research counts conducted by D&D on Friday, November 11, 2022, at the 9,725 square foot Zen Leaf Marijuana Dispensary located at 3256 Brunswick Pike in Lawrence Township, NJ. The traffic counts were conducted during the critical Friday evening peak period when marijuana dispensaries tend to experience the highest weekday

traffic volumes. Table II displays peak hour traffic data as collected at the Zen Leaf facility from 4:00 p.m. to 5:00 p.m., and further proportionally reduces the data based on the proposed building area for the subject cannabis dispensary.

TABLE II
TRIP GENERATION COMPARISON

LAND USE	FRIDAY EVENING PEAK HOUR		
	ENTER	EXIT	TOTAL
Zen Leaf Dispensary – Lawrence, NJ – 9,725 SF	134	139	273
Adjusted – Proposed Cannabis Retailer – 3,802 SF	53	55	108

As shown, based on the Friday evening Zen Leaf data, and the proposed building area for the subject site dispensary, the development could experience a peak Friday evening demand of approximately 55 customers. As expected, this is higher than the average weekday evening peak hour volumes as forecasted by ITE, however the same as the volumes projected during the Saturday peak hour.

As previously mentioned, the existing site use is a bank with two drive-in windows provided. Table III shows the overall traffic comparison between the existing bank, and the proposed dispensary. Vehicle trip generation estimates for the existing use were calculated using ITE land use code 912 – “Drive-in Bank”.

TABLE III
TRIP GENERATION COMPARISON – ITE DATA

Use	Size	Morning Peak Hour	Evening Peak Hour	Saturday Peak Hour
Dispensary	3,802 SF	40	72	110
Drive-in Bank	2 Windows	17	54	55
Difference		+23	+18	+55

As shown based on ITE data, the proposed dispensary will generate a maximum of 55 peak hour trips, over the former bank use.

In the ITE Manual of Transportation Engineering Studies, guidelines are provided for the preparation of traffic impact studies for new developments. The ITE recommends that traffic studies be performed when a development generates 100 or more new trips during an hour. Similarly, the NJDOT State Highway Access Management Code defines “significant” traffic as 100 or more additional trips in an hour. When compared to the previous bank, the proposed cannabis dispensary will generate less than 100 more trips in any hour, and therefore the volume of traffic generated will produce a minimal impact on the adjacent roadway system.

It is anticipated that most dispensary customers will visit the site via Mantua Pike. A limited number of trips will originate and depart to/from the residential neighborhood to the east. The increase in trips from the prior bank use and the highway proximate to the site will result in minimal traffic impacts and delays to the adjacent neighborhood, local roadways. The increase in traffic will not be noticeably different from that which occurred when the bank was in operation.

SITE PLAN REVIEW

The following is a review of the proposed site access and parking as shown on the Site Plan.

The Ordinance requires 20 parking spaces for the 3,802 square-foot building, based on a ratio of 1 space for every 200 square feet. A total of 21 parking spaces are proposed for the property.

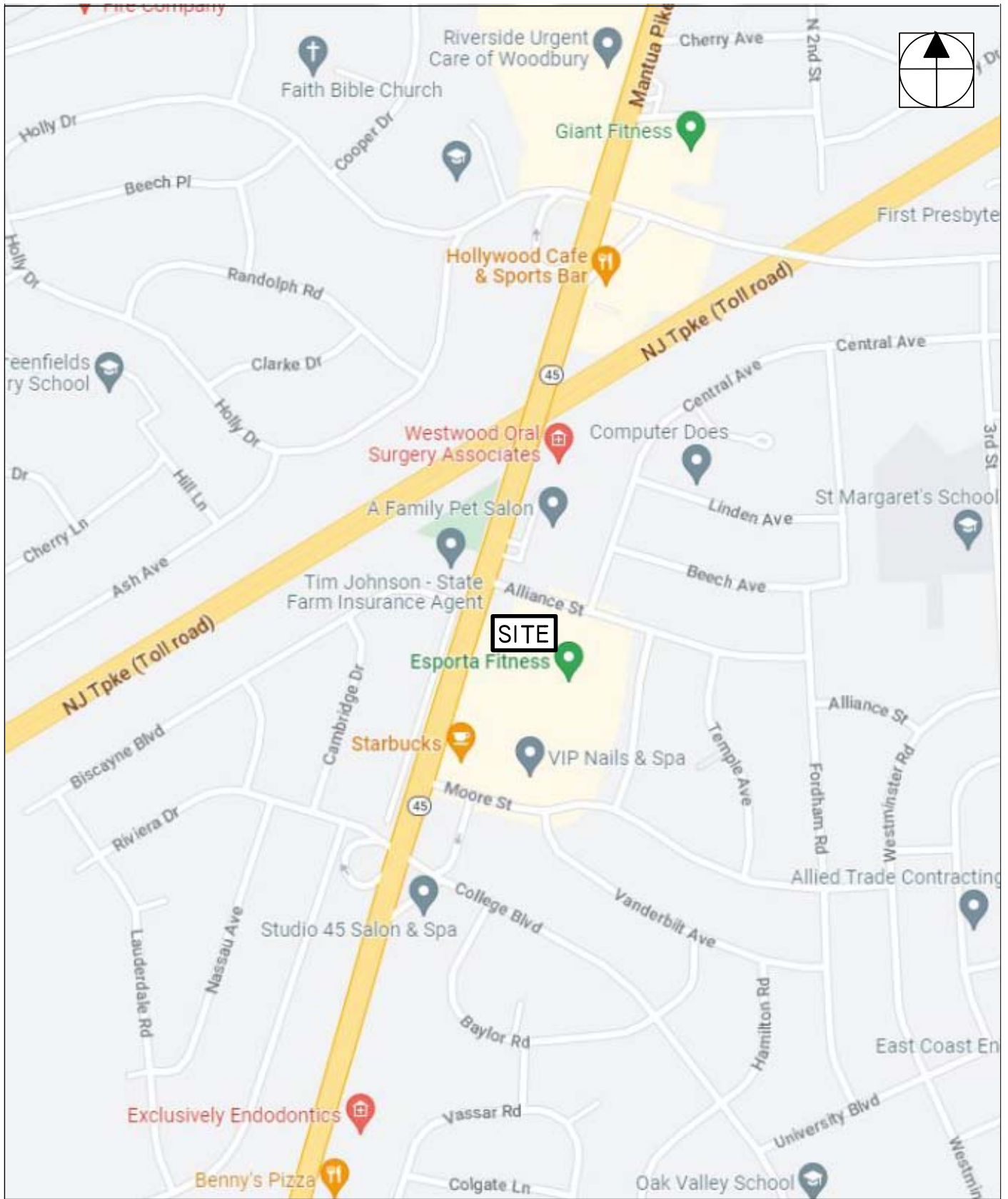
Further, the average time spent on-site by retail customers at cannabis dispensaries is generally less than 15 minutes per visit. Thus, each parking space has the potential to turn over 4 times or 84 times overall within an hour, providing sufficient parking.

The Site Plan proposes 9-foot-wide by minimum 18 foot-deep car parking spaces served by at least 24-foot drive aisles. These dimensions will provide efficient two-way flow and parking maneuvers. Product deliveries to the site will be made by single unit “sprinter” type vehicles (vans) which can be accommodated on site. Approximately 6 to 10 product deliveries will be made to the site weekly. Each delivery will take approximately 10 minutes as the packages are dropped off and verified with the manifest.

Based on this review, it is concluded that safe and efficient access and circulation can be provided to the site with reasonable and prudent driver behavior. Consequently, from a traffic engineering perspective, the site is particularly well suited for the proposed development and will have no detrimental impact on traffic conditions on the roads surrounding the site; particularly the residential roads to the east.



TECHNICAL APPENDIX



PROPOSED DISPENSARY
 BOROUGH OF WOODBURY HEIGHTS
 GLOUCESTER COUNTY, NEW JERSEY

FIGURE 1

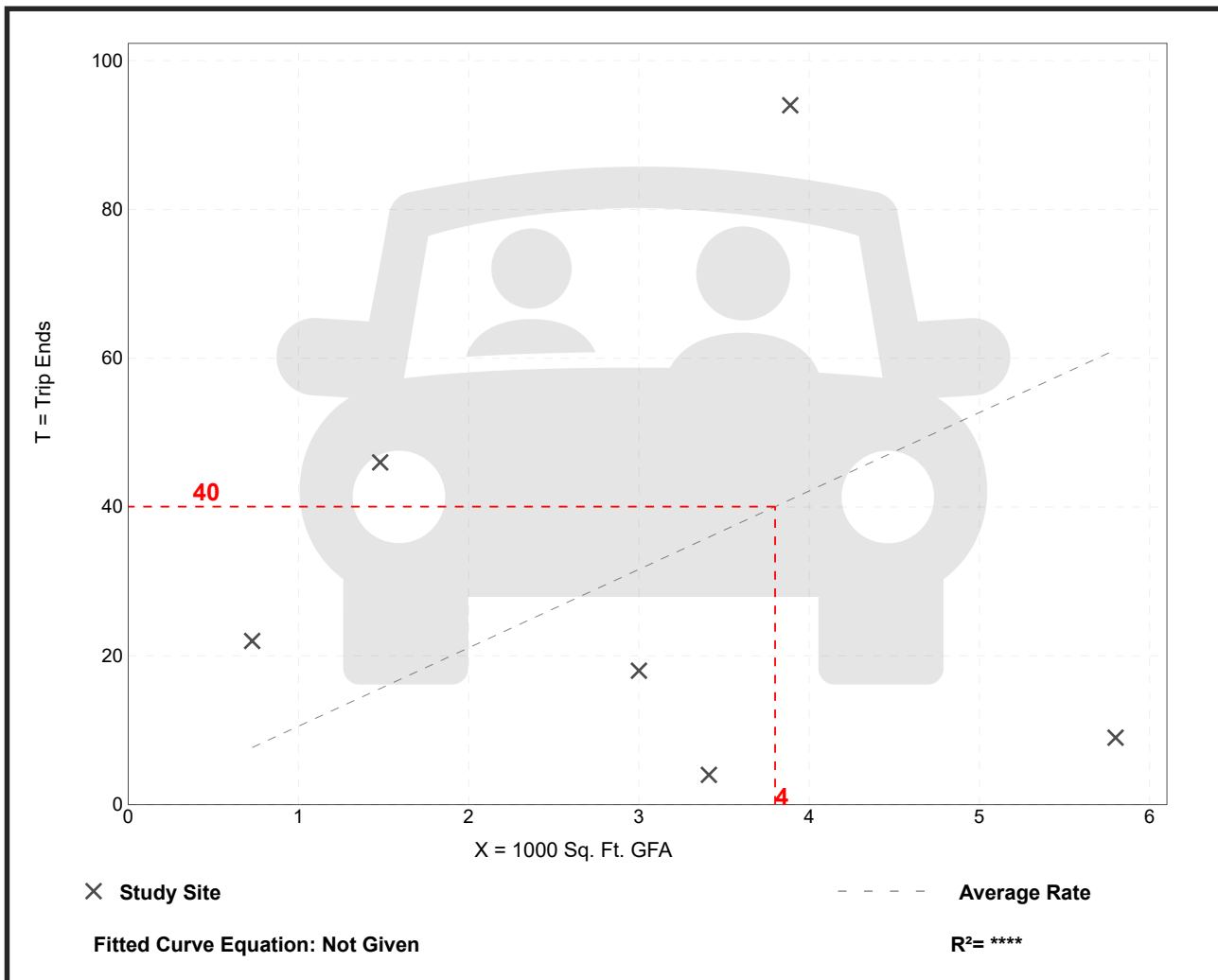
Marijuana Dispensary (882)

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: 6
 Avg. 1000 Sq. Ft. GFA: 3
 Directional Distribution: 52% entering, 48% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
10.54	1.17 - 31.08	12.69

Data Plot and Equation



Marijuana Dispensary (882)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Saturday, Peak Hour of Generator

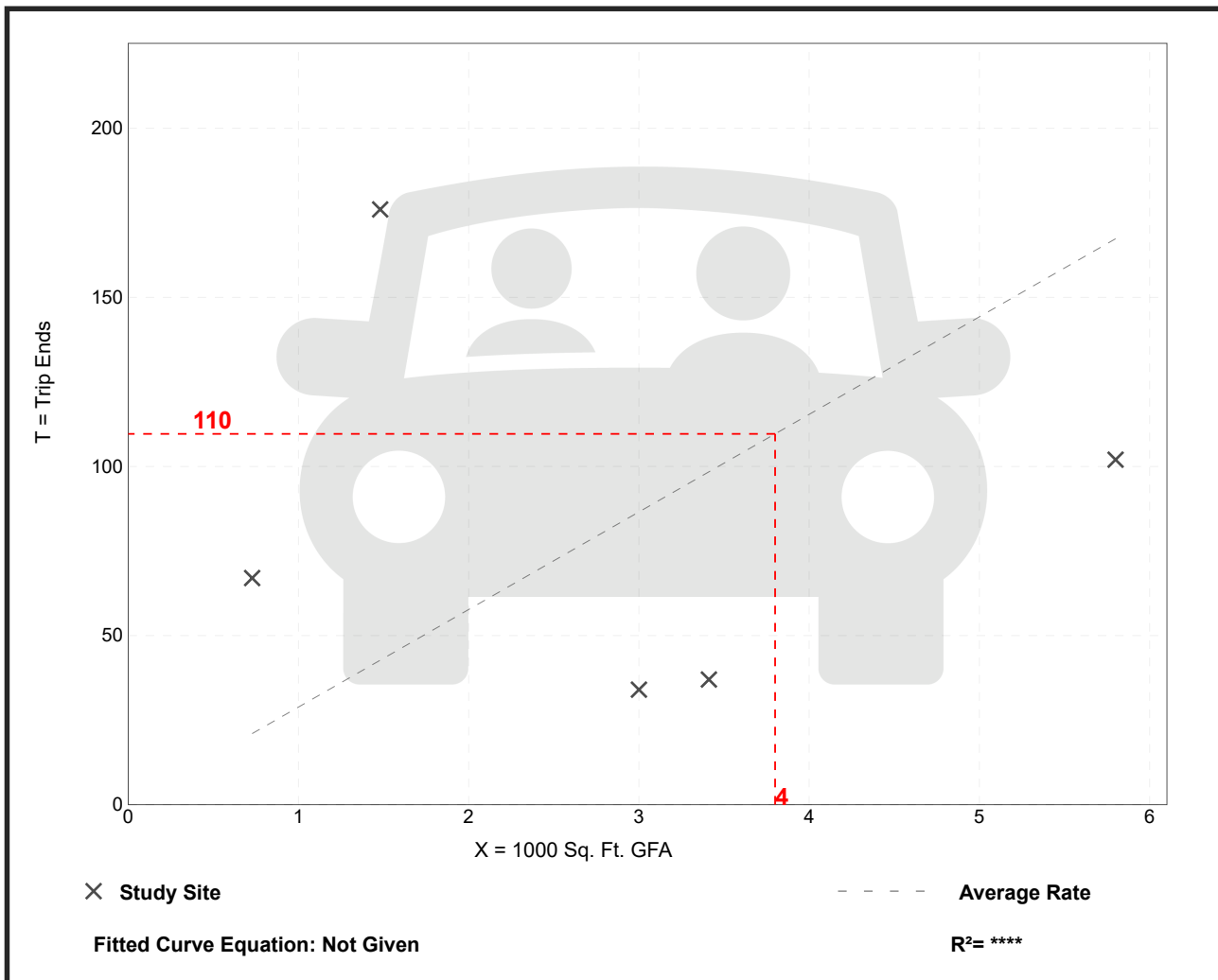
Setting/Location: General Urban/Suburban
 Number of Studies: 5
 Avg. 1000 Sq. Ft. GFA: 3
 Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
28.85	10.85 - 118.92	39.14

Data Plot and Equation

Caution – Small Sample Size



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.

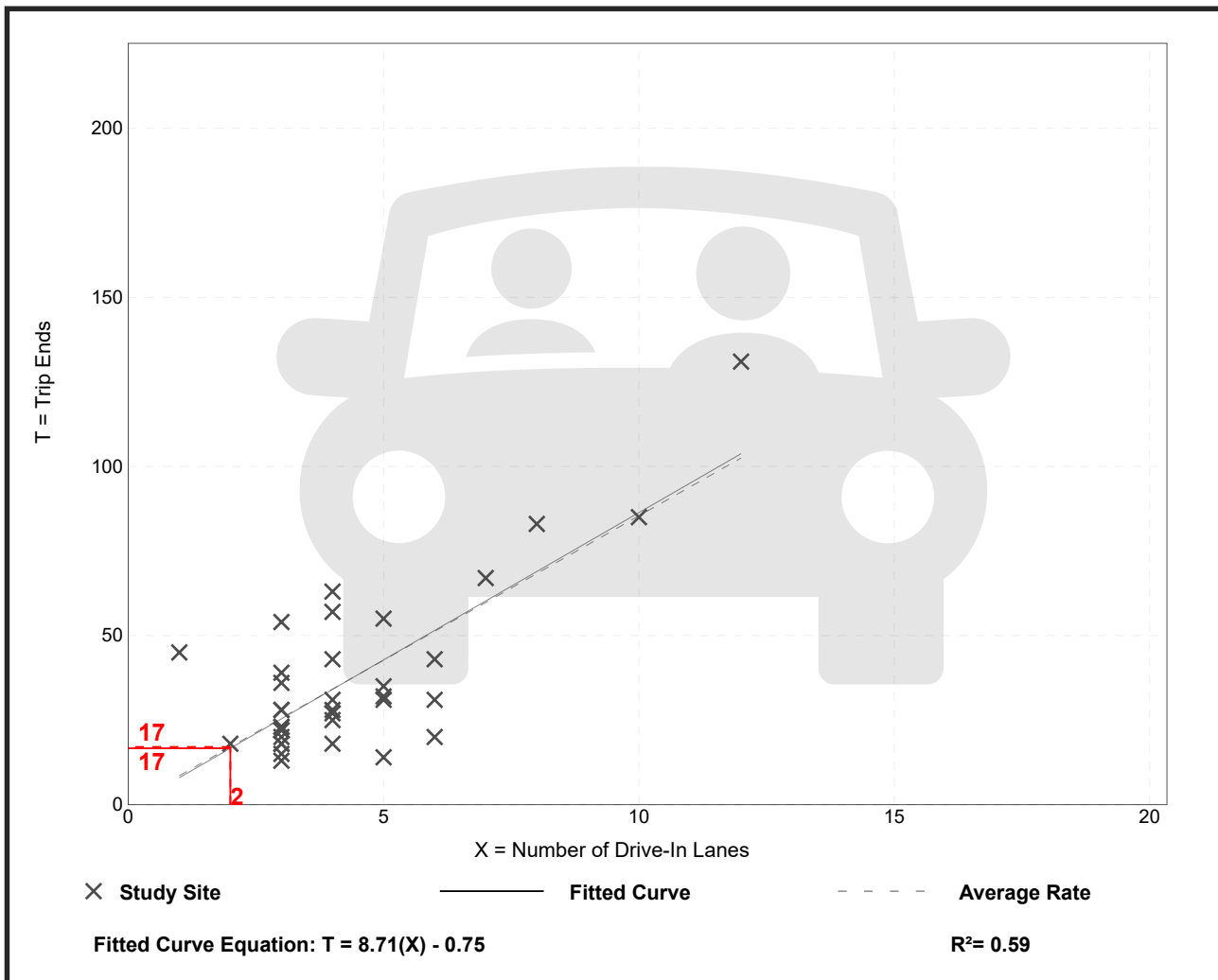
Setting/Location: General Urban/Suburban

Number of Studies: 36
 Avg. Num. of Drive-In Lanes: 4
 Directional Distribution: 61% entering, 39% exiting

Vehicle Trip Generation per Drive-In Lane

Average Rate	Range of Rates	Standard Deviation
8.54	2.80 - 45.00	4.37

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.

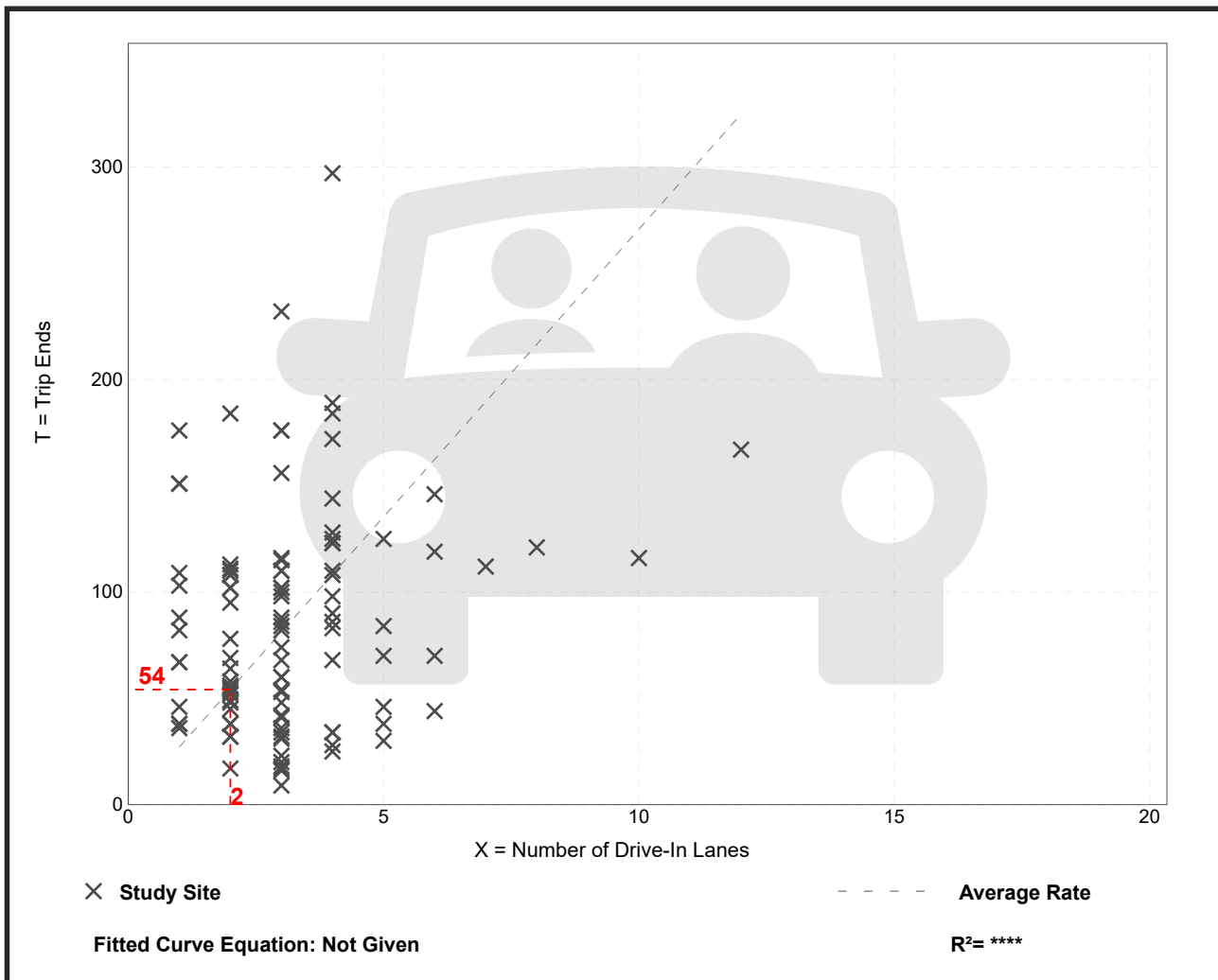
Setting/Location: General Urban/Suburban

Number of Studies: 109
 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
27.07	3.00 - 176.00	22.13

Data Plot and Equation



Drive-in Bank (912)

Vehicle Trip Ends vs: Drive-In Lanes
On a: Saturday, Peak Hour of Generator

Setting/Location: General Urban/Suburban
Number of Studies: 31
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
27.67	7.60 - 107.00	17.13

Data Plot and Equation

