



January 23, 2023

Mr. Eric Prive, P.E.  
DiPrete Engineering, Inc.  
Two Stafford Court  
Cranston, RI 02920

Re: Proposed Mixed-Use Development  
*The Village at South County Commons – District 5*  
Hampton Way  
South Kingstown, Rhode Island

Dear Mr. Prive:

BETA Group, Inc., is pleased to provide this supplemental letter for submission to the Town of South Kingstown as part of the local review process for the above referenced development project. The letter was prepared to address proposed land use changes made to the previously approved development plan. The subject property is located on the northwest quadrant of the intersection of Tower Hill Road (Route 1) and Hampton Way/Government Center access road. The parcel is defined by Assessor's Plat 50-4 Lot 22, which contains approximately 13.8 acres of partially developed and wooded land. A private access road, Fairfield Way extends from Hampton Way through the center of the parcel to the *Bradley School*.

The original development plan for the parcel reviewed in 2017 by our office included three buildings; a hotel and two smaller structures, one to the front and one to the rear of the hotel. The building to the front of the hotel was proposed to be a bank and the one to the rear, an office use. Access was proposed from driveways off of Fairfield Way. Subsequent to the Preliminary Plan approval, the development concept was modified where the two smaller buildings were both changed to a restaurant land use. As part of the initial construction phase of the project, the *Fairfield Inn & Suites* component was completed and occupied in 2019, while the other two areas on the property planned for the restaurants remain vacant.

Based upon current economic conditions, a new development concept is being proposed to replace the restaurant to the rear of the hotel with a residential apartment building. The site access remains unchanged and will include driveways off of Fairfield Way that were constructed as part of the *Fairfield Inn & Suites* completed in the first phase of the development project as noted.

The purpose of this letter is to quantify the change in the scope of the project in relation to traffic generated by the site and determine if the land use change from a restaurant to apartments substantively impacts the findings of the original proposal relating to estimated operations of the main study intersection. In order to determine this, the estimated site generated vehicle trips were recalculated to define the change in the daily and peak hour traffic volumes expected from the updated development proposal. In addition, the study intersection was reviewed with the updated volumes to define what impacts would be realized at the intersection that presently, and was projected to operate in a safe and efficient manner. The following is a summary of our findings.

### Trip Generation

Projected traffic volumes for the residential component of the project were based on the use of trip generation factors. These factors are taken from the "Trip Generation" manual, an informational report published by the Institute of Transportation Engineers (ITE), a national professional organization for traffic and transportation engineers. For the proposed residential apartment use, Land Use Code 221 Multifamily Housing was reviewed for applicability in developing an estimate of site related vehicle trips. These values were compared to the previously approved restaurant use where trips were estimated under Land Use Code 932 High Turnover Sit Down Restaurant. The table below is a summary of the peak hour volumes estimated for the original and revised development proposal.

#### Trip Generation Estimate

<u>Description</u>		<u>Enter</u>	<u>Exit</u>	<u>Total</u>
Original Proposal (Restaurant - 6,500 SF)				
<u>Daily</u>				
ITE Code 932	High Turnover Sit Down Restaurant	348	348	696
<u>AM Peak Hour</u>				
ITE Code 932	High Turnover Sit Down Restaurant	34	28	62
<u>PM Peak Hour</u>				
ITE Code 932	High Turnover Sit Down Restaurant	36	23	59
Revised Proposal (Apartments - 70 Units)				
<u>Daily</u>				
ITE Code 221	Multifamily Housing (Mid-Rise)	159	159	318
<u>AM Peak Hour</u>				
ITE Code 221	Multifamily Housing (Mid-Rise)	6	20	26
<u>PM Peak Hour</u>				
ITE Code 221	Multifamily Housing (Mid-Rise)	17	11	28

As can be seen in the above table, based upon the change of use to apartments from a proposed restaurant use that was approved for the site, it is estimated a new residential element would potentially generate 378 less daily trips, 36 less AM Peak Hour trips and 31 less PM Peak Hour trips than the previously approved development proposal.

## Operational Analysis

A review of the future intersection operations was completed for the morning and afternoon peak hours at the Tower Hill Road (Route 1)/Hampton Way/Government Center study intersection, which under the previous development proposal operated in an acceptable manner at an overall Level of Service (LOS) C during both peak periods. This good operation is expected to improve slightly with the reduction in site related AM and PM peak hour trips under the new residential development concept as presented in the trip generation table on the previous page and calculations included in the Attachment for reference.

The level of service and delay remain essentially the same as determined in the original development proposal as a result of the small reduction of peak hour trips. During both the morning and afternoon peak hours as was the case previously, all critical movements at the signalized intersection of Tower Hill Road (Route 1) with Hampton Way/Government Center will continue to operate in an acceptable manner with critical movements experiencing minor delays representing LOS C or better.

## Conclusions and Recommendations

Based upon our review of the modified build condition to include residential apartments, it was determined that the revised use of the property to include an apartment building instead of a restaurant will result in fewer daily and peak hour site related vehicle trips. In addition, with this lower site volume, the study intersection of Tower Hill Road (Route 1) with Hampton Way/Government Center servicing the property, will continue to operate in an acceptable manner at Level of Service C during the peak daily traffic conditions. As compared with the restaurant land use in the originally approved development proposal, the apartment use should result in a minor decrease in delays at the study intersection during both the morning and afternoon peak hours with the lower volume estimate from the less intensive land use.

The updated information provided as part of this supplemental letter determined that the change of use from a restaurant to residential apartments should not change the findings in the original town approvals where adequate and safe access was determined available to the proposed development. Therefore, based upon the information provided it can be concluded that the project will not have detrimental impact on traffic safety and operations in the immediate project area. We trust that this letter sufficiently addresses the changes in the development proposal relating to traffic demands as you proceed through the local review process. If you should have any questions, please do not hesitate to contact our office.

Very truly yours,  
BETA Group, Inc.



Paul J. Bannon  
Associate

Attachment

# ATTACHMENTS

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## A. Trip Generation

# ATTACHMENT A – Trip Generation

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ITE Trip Generation Summary

ITE Land Use Code

ITE Land Use Code 221 – Multifamily Housing (Mid-Rise)

ITE Land Use Code 932 – High Turnover Sit Down Restaurant

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## ITE Trip Generation Summary

## Trip Generation Summary

### **Summary;**

	<u>Description</u>	<u>Enter</u>	<u>Exit</u>	<u>Total</u>
Proposed Residential Use (70 Units)				
<i>Daily</i>				
ITE Code 221	Multifamily Housing (Mid-Rise)	159	159	318
<i>AM Peak Hour</i>				
ITE Code 221	Multifamily Housing (Mid-Rise)	6	20	26
<i>PM Peak Hour</i>				
ITE Code 221	Multifamily Housing (Mid-Rise)	17	11	28
Previously Approved Restaurant Use (6,500 Square Feet)				
<i>Daily</i>				
ITE Code 932	High Turnover Sit Down Restaurant	348	348	696
<i>AM Peak Hour</i>				
ITE Code 932	High Turnover Sit Down Restaurant	34	28	62
<i>PM Peak Hour</i>				
ITE Code 932	High Turnover Sit Down Restaurant	36	23	59

**Calculations;****Code 221 – Multifamily Housing (Mid-Rise) (70 Units)**

Independent Variable (X) = Number of Units                      X = 70

Daily    *Directional Distribution 50% Entering, 50% Exiting*

T = 4.54 (X)	Enter: 159
T = 4.54 (70)	<u>Exit: 159</u>
T = 318	Total 318

AM Peak    *Directional Distribution 23% Entering, 77% Exiting*

T = 0.37 (X)	Enter: 6
T = 0.37 (70)	<u>Exit: 20</u>
T = 26	Total 26

PM Peak    *Directional Distribution 61% Entering, 39% Exiting*

T = 0.39 (X)	Enter: 17
T = 0.39 (70)	<u>Exit: 11</u>
T = 28	Total 28

**Code 932 – High Turnover Sit Down Restaurant (6,500 Square Feet)**

Independent Variable (X) = 1000 SF GFA                      X = 6.5

Daily    *Directional Distribution 50% Entering, 50% Exiting*

T = 107.2 (X)	Enter: 348
T = 107.2 (6.5)	<u>Exit: 348</u>
T = 696	Total 696

AM Peak    *Directional Distribution 55% Entering, 45% Exiting*

T = 9.57 (X)	Enter: 34
T = 9.57 (6.5)	<u>Exit: 28</u>
T = 62	Total 62

PM Peak    *Directional Distribution 61% Entering, 39% Exiting*

T = 9.05 (X)	Enter: 36
T = 9.05 (6.5)	<u>Exit: 23</u>
T = 59	Total 59



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ITE Land Use Code

ITE Land Use Code 221 – Multifamily Housing (Mid-Rise)

ITE Land Use Code 932 – High Turnover Sit Down Restaurant

ITE Land Use Code 221 – Multifamily Housing (Mid-Rise)

# Land Use: 221

## Multifamily Housing (Mid-Rise)

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### Description

Mid-rise multifamily housing includes apartments and condominiums located in a building that has between four and 10 floors of living space. Access to individual dwelling units is through an outside building entrance, a lobby, elevator, and a set of hallways.

Multifamily housing (low-rise) (Land Use 220), multifamily housing (high-rise) (Land Use 222), off-campus student apartment (mid-rise) (Land Use 226), and mid-rise residential with ground-floor commercial (Land Use 231) are related land uses.

### Land Use Subcategory

Data are presented for two subcategories for this land use: (1) not close to rail transit and (2) close to rail transit. A site is considered close to rail transit if the walking distance between the residential site entrance and the closest rail transit station entrance is ½ mile or less.

### Additional Data

For the six sites for which both the number of residents and the number of occupied dwelling units were available, there were an average of 2.5 residents per occupied dwelling unit.

For the five sites for which the numbers of both total dwelling units and occupied dwelling units were available, an average of 96 percent of the total dwelling units were occupied.

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (<https://www.ite.org/technical-resources/topics/trip-and-parking-generation/>).

***It is expected that the number of bedrooms and number of residents are likely correlated to the trips generated by a residential site. To assist in future analysis, trip generation studies of all multifamily housing should attempt to obtain information on occupancy rate and on the mix of residential unit sizes (i.e., number of units by number of bedrooms at the site complex).***

The sites were surveyed in the 1990s, the 2000s, the 2010s, and the 2020s in Alberta (CAN), California, District of Columbia, Florida, Georgia, Illinois, Maryland, Massachusetts, Minnesota, Montana, New Jersey, New York, Ontario (CAN), Oregon, Utah, and Virginia.

### Source Numbers

168, 188, 204, 305, 306, 321, 818, 857, 862, 866, 901, 904, 910, 949, 951, 959, 963, 964, 966, 967, 969, 970, 1004, 1014, 1022, 1023, 1025, 1031, 1032, 1035, 1047, 1056, 1057, 1058, 1071, 1076

# Multifamily Housing (Mid-Rise) Not Close to Rail Transit (221)

Vehicle Trip Ends vs: Dwelling Units  
On a: Weekday

Setting/Location: General Urban/Suburban

Number of Studies: 11

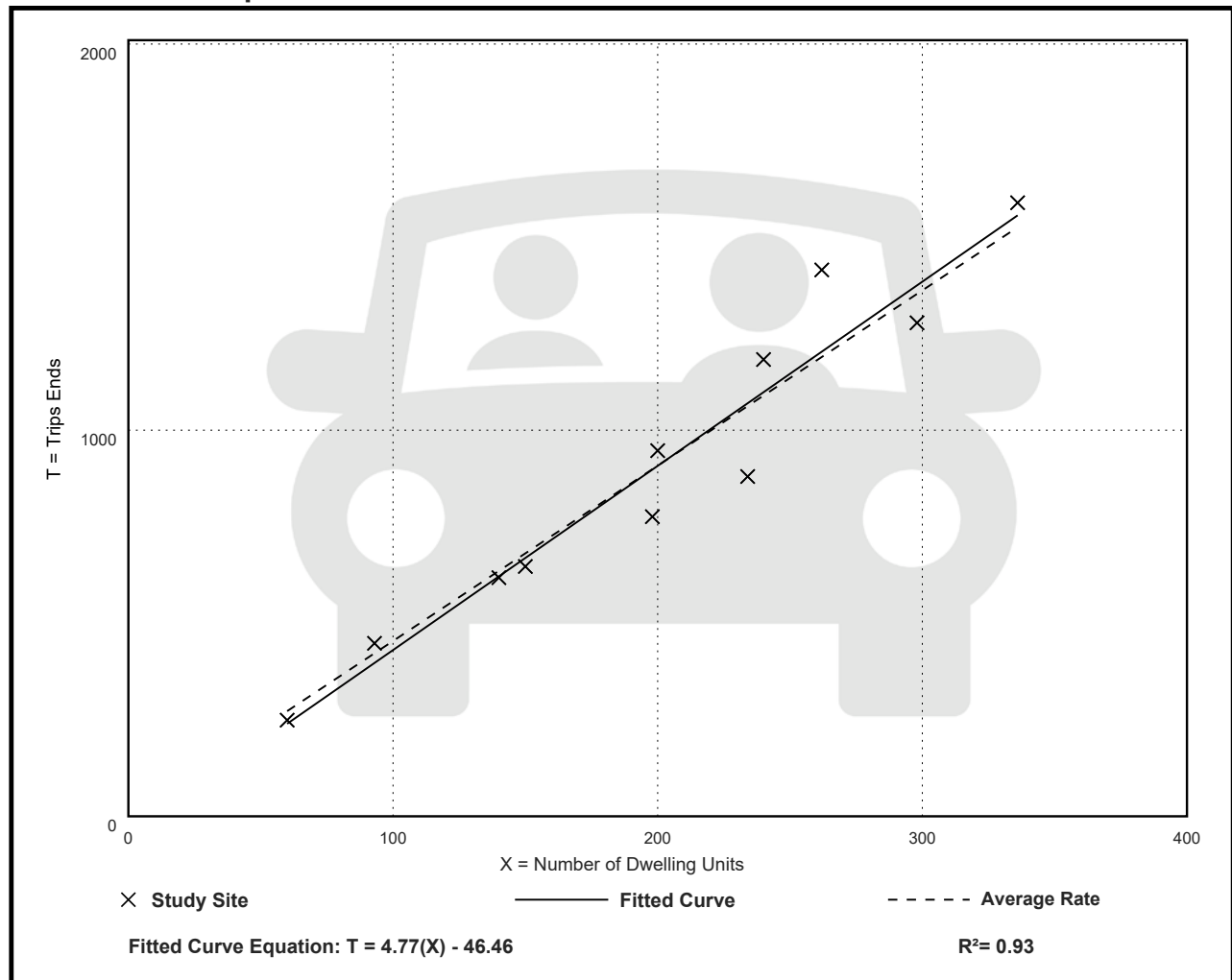
Avg. Num. of Dwelling Units: 201

Directional Distribution: 50% entering, 50% exiting

## Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
4.54	3.76 - 5.40	0.51

## Data Plot and Equation



# Multifamily Housing (Mid-Rise) Not Close to Rail Transit (221)

## Vehicle Trip Ends vs: Dwelling Units

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: 30

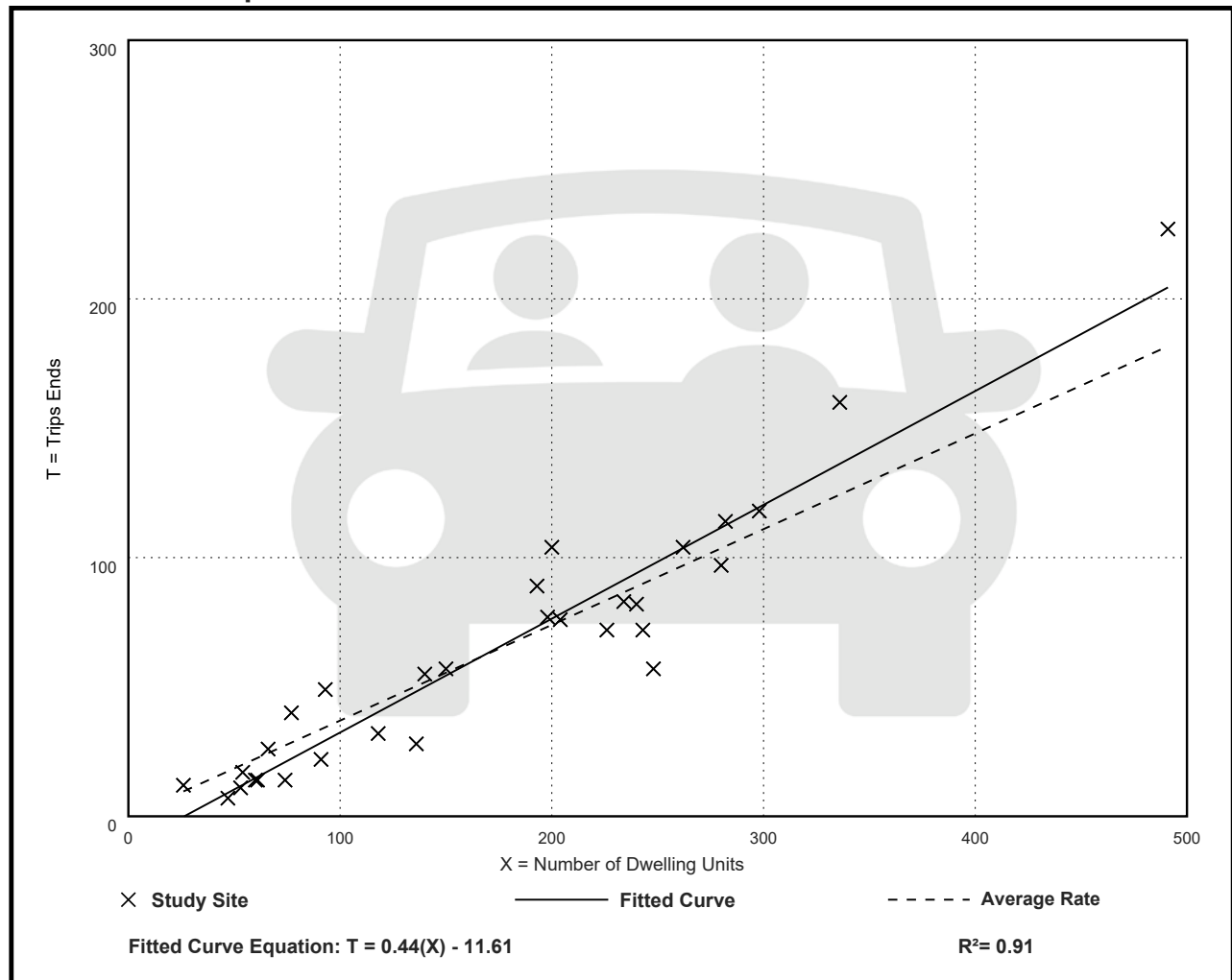
Avg. Num. of Dwelling Units: 173

Directional Distribution: 23% entering, 77% exiting

## Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.37	0.15 - 0.53	0.09

## Data Plot and Equation



# Multifamily Housing (Mid-Rise) Not Close to Rail Transit (221)

## Vehicle Trip Ends vs: Dwelling Units

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: 31

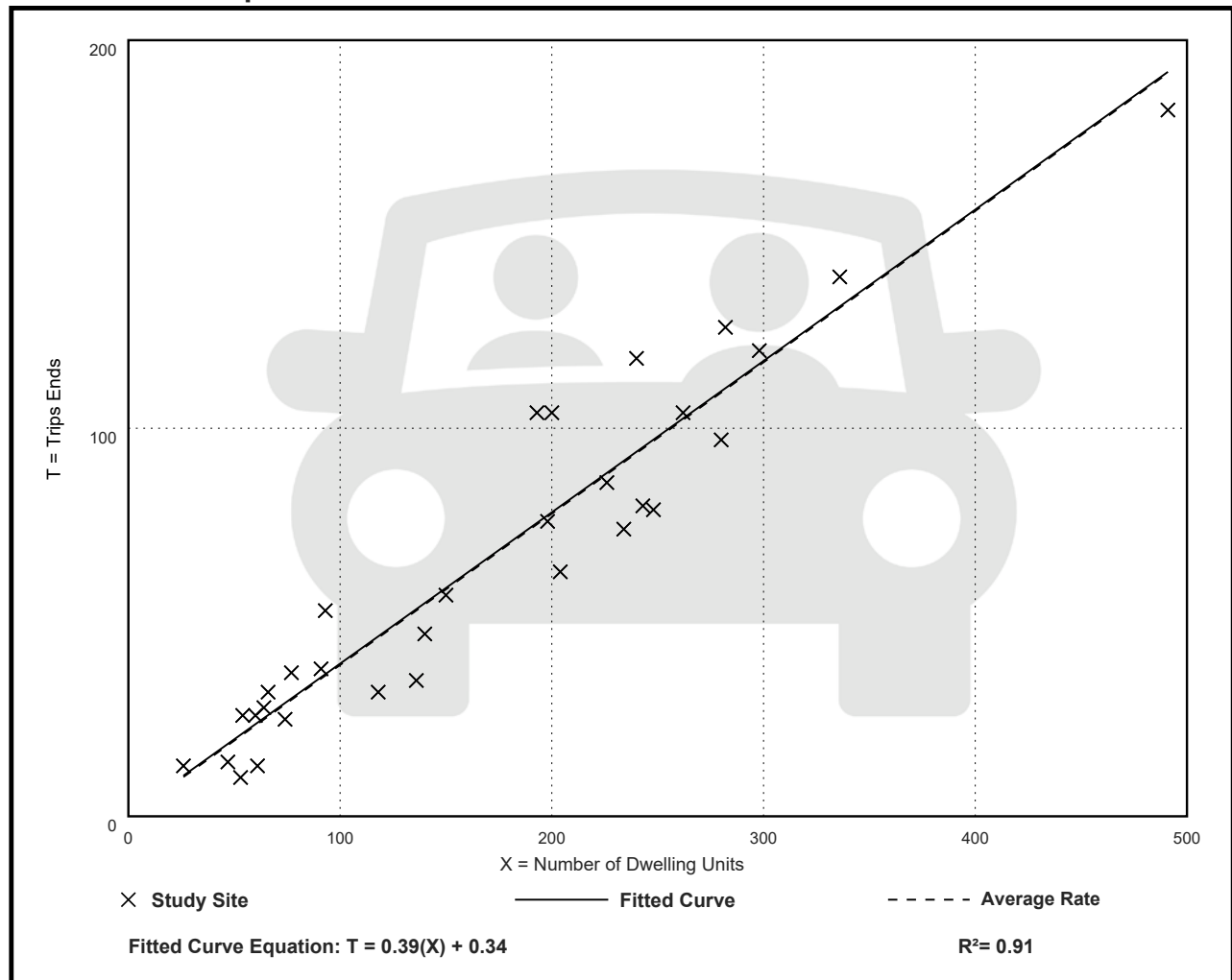
Avg. Num. of Dwelling Units: 169

Directional Distribution: 61% entering, 39% exiting

## Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.39	0.19 - 0.57	0.08

## Data Plot and Equation



ITE Land Use Code 932 – High Turnover Sit Down Restaurant

# Land Use: 932

## High-Turnover (Sit-Down) Restaurant

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### Description

This land use consists of sit-down, full-service eating establishments with a typical duration of stay of 60 minutes or less. This type of restaurant is usually moderately priced, frequently belongs to a restaurant chain, and is commonly referred to as casual dining. Generally, these restaurants serve lunch and dinner; they may also be open for breakfast and are sometimes open 24 hours a day. These restaurants typically do not accept reservations. A patron commonly waits to be seated, is served by wait staff, orders from a menu, and pays after the meal.

Some facilities offer carry-out for a small proportion of its customers. Some facilities within this land use may also contain a bar area for serving food and alcoholic drinks.

Fast casual restaurant (Land Use 930), fine dining restaurant (Land Use 931), fast-food restaurant without drive-through window (Land Use 933), and fast-food restaurant with drive-through window (Land Use 934) are related uses.

### Additional Data

***Users should exercise caution when applying statistics during the AM peak periods, as the sites contained in the database for this land use may or may not be open for breakfast. In cases where it was confirmed that the sites were not open for breakfast, data for the AM peak hour of the adjacent street traffic were removed from the database.***

If the restaurant has outdoor seating, its area is not included in the overall gross floor area. For a restaurant that has significant outdoor seating, the number of seats may be more reliable than GFA as an independent variable on which to establish a trip generation rate.

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (<https://www.ite.org/technical-resources/topics/trip-and-parking-generation/>).

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Alberta (CAN), California, Florida, Georgia, Indiana, Kentucky, Massachusetts, Minnesota, New Hampshire, New Jersey, New York, Ohio, Oklahoma, Oregon, Pennsylvania, South Carolina, South Dakota, Texas, Vermont, and Wisconsin.

### Source Numbers

126, 269, 275, 280, 300, 301, 305, 338, 340, 341, 358, 384, 424, 432, 437, 438, 444, 507, 555, 577, 589, 617, 618, 728, 868, 884, 885, 903, 927, 939, 944, 961, 962, 977, 1048



# High-Turnover (Sit-Down) Restaurant (932)

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

Setting/Location: General Urban/Suburban

Number of Studies: 50

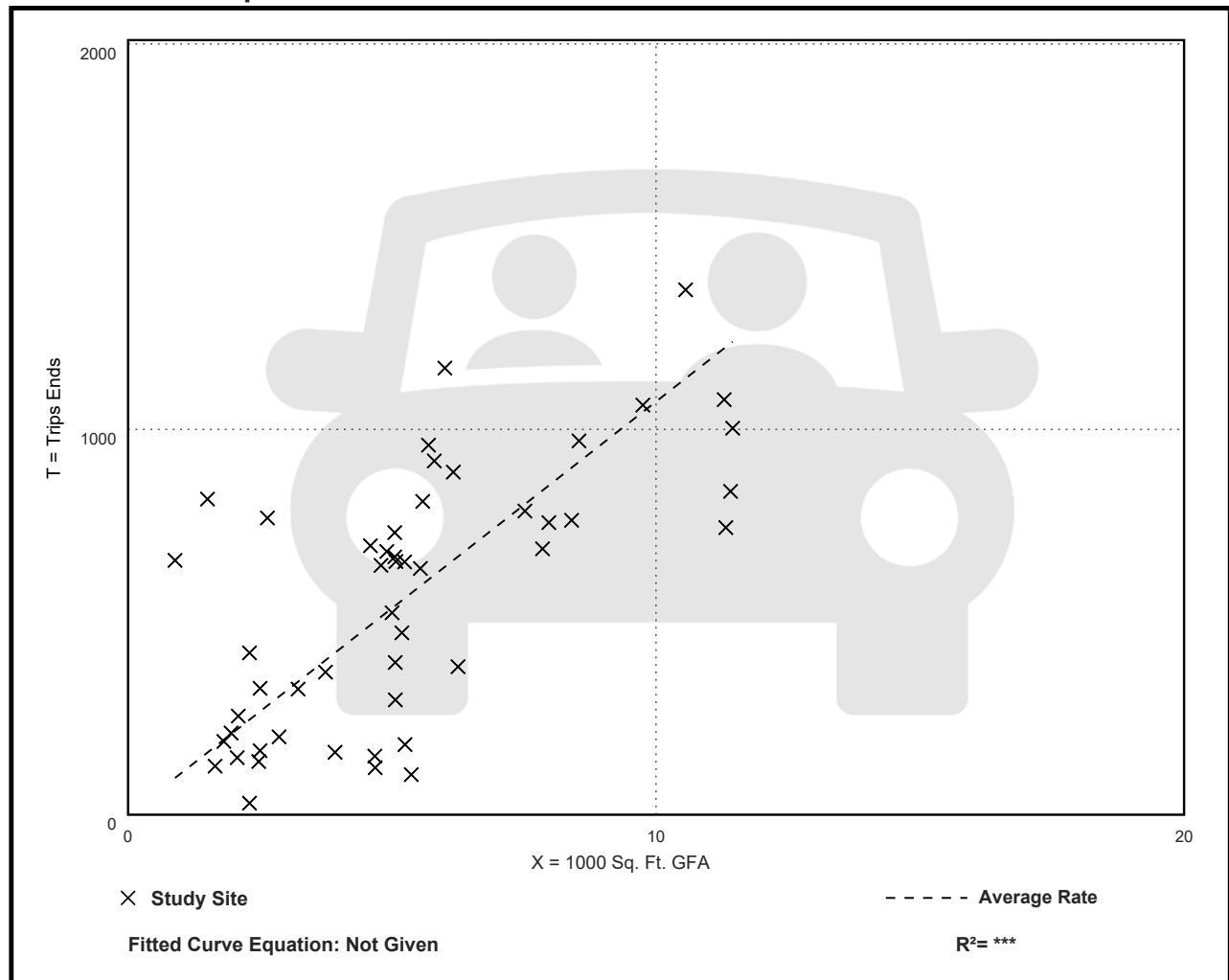
Avg. 1000 Sq. Ft. GFA: 5

Directional Distribution: 50% entering, 50% exiting

## Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
107.20	13.04 - 742.41	66.72

## Data Plot and Equation



# High-Turnover (Sit-Down) Restaurant (932)

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: 37

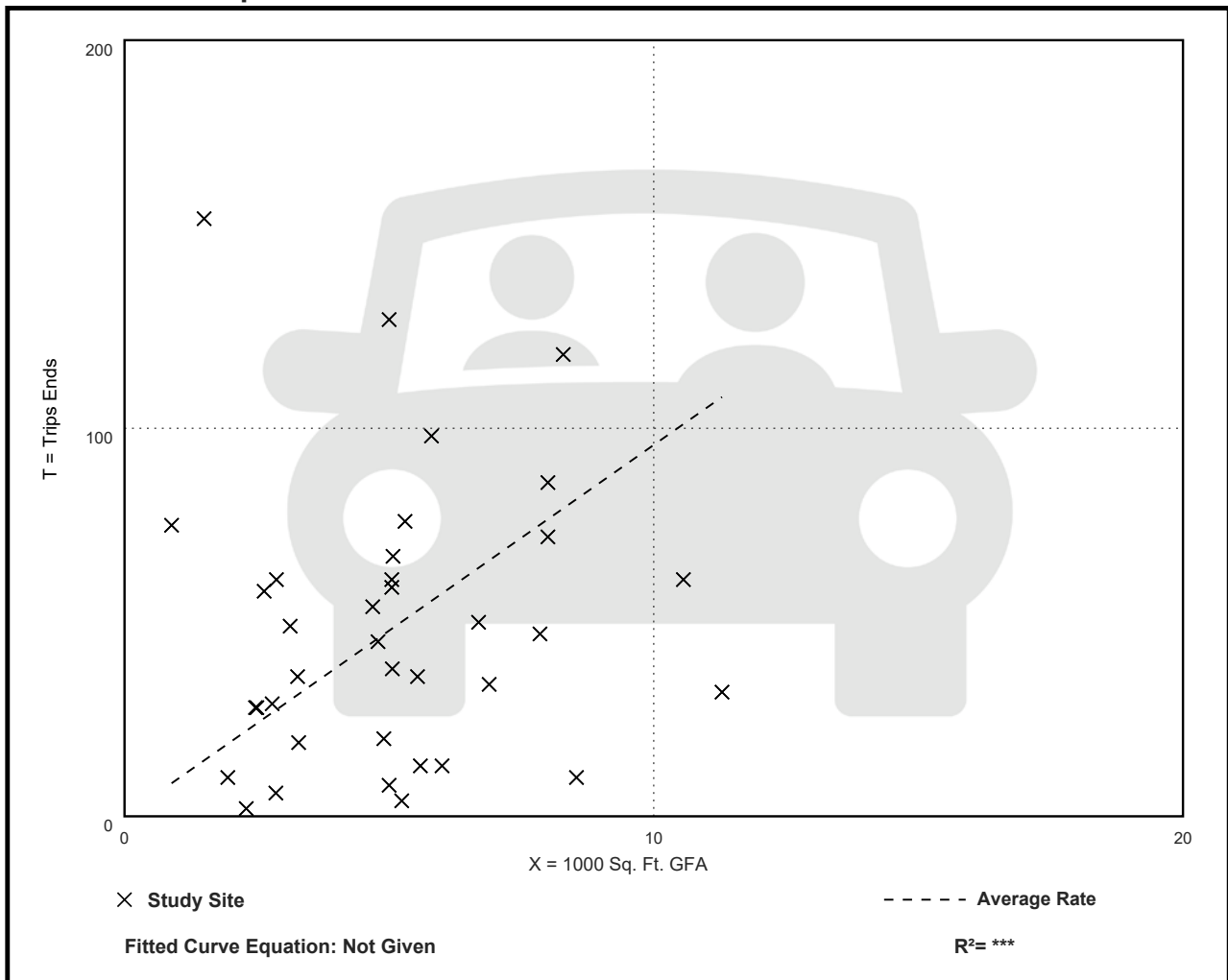
Avg. 1000 Sq. Ft. GFA: 5

Directional Distribution: 55% entering, 45% exiting

## Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
9.57	0.76 - 102.39	11.61

## Data Plot and Equation



# High-Turnover (Sit-Down) Restaurant (932)

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: 104

Avg. 1000 Sq. Ft. GFA: 6

Directional Distribution: 61% entering, 39% exiting

## Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
9.05	0.92 - 62.00	6.18

## Data Plot and Equation

