



February 29, 2024

Mr. Brad Chaffee, President  
Camford Property Group, Inc.  
37 East Central Street  
Franklin, MA 02038

**Re: Traffic Impact Assessment  
Proposed Mixed-Use Development  
100 & 110 East Central Street (Route 140)  
Franklin, Massachusetts**

Dear Mr. Chaffee:

Tetra Tech, Inc. (Tetra Tech) has reviewed the potential traffic impacts associated with the proposed mixed-use residential and commercial development to be located at 100 and 110 East Central Street (Route 140) in Franklin, Massachusetts. The project site currently supports an existing apartment building with 10 residential units and one existing single-family home.

The proposed project calls for the demolition of the existing single-family home to accommodate the construction of a new mixed-use building with 20 additional residential units and 500 square feet of commercial space on the ground floor. The existing apartment building will also remain and incorporated into the proposed mixed-use redevelopment. Access to the site is currently provided by two narrow driveways serving the existing apartment building and a third residential driveway serving the existing family home. As part of the proposed project, two of the existing driveways would be closed, and replaced with a single, 24 foot-wide, site driveway at the center of the property to consolidate access to the site.

Our assessment is based on a review of the proposed site plan<sup>1</sup> prepared by United Consultants, Inc., and the anticipated vehicle trip generation characteristics of the existing and proposed uses on site based on data presented in the Institute of Transportation Engineers' (ITE) *Trip Generation Manual, 11<sup>th</sup> Edition*.

The ITE data indicates that the proposed project is expected to generate approximately 8 additional vehicle trips (3 entering trips and 5 entering trips) during the weekday morning commuter peak hour and 12 additional vehicle trips (6 entering trips and 6 entering trips) during the weekday evening commuter peak hour. These minor traffic increases are not anticipated to have a noticeable impact to future traffic operations on the surrounding area roadways.

This letter documents our findings.

---

<sup>1</sup> *Site Plan, 100 and 110 East Central Street*, prepared by United Consultants, Inc.; January 5, 2024.

## Project Description

The project site includes two residential properties (Tax Map 286, Parcels 30 and 31) located on the south side of East Central Street just east of Ruggles Street in Franklin, Massachusetts. The first parcel (100 East Central Street) consists of approximately 33,061± square feet of land and currently supports an existing multifamily apartment building with 10 residential units and will operate as part of the proposed redevelopment. The second parcel (110 East Central Street) consists of approximately 23,268± of land and currently support an existing single-family home. The proposed project calls for the demolition of the existing single-family home to accommodate the construction of a proposed mixed-use residential and commercial building with 20 additional residential units and 500 square feet of commercial space on the ground floor. A total of 50 off-street parking spaces will be provided to accommodate parking demands associated with the existing apartment building to remain on site and the proposed mixed-use residential and commercial building.

Access to the project site is currently provided by three, narrow driveways (approximately 16 to 18 feet in width) located on the south side of East Central Street. As part of the proposed project, the existing easterly and westerly driveways will be closed, and the existing central driveway will be reconstructed to provide a two-way, 24-foot wide, full access driveway to consolidate future access to the site.

## Trip Generation Summary

Trip generation estimates for the existing single-family home and the proposed mixed-use residential and commercial building were developed based on data presented in the Institute of Transportation Engineers' (ITE) *Trip Generation Manual, 11<sup>th</sup> Edition* (2021). The proposed project will include 20 additional residential units and 500 square feet of commercial space. Vehicle trip estimates for the proposed development were based on the ITE trip generation rates for Land Use Code (LUC) 220 (Multi-Family Housing – Low Rise) assuming 20 residential units and LUC 712 (Small Office Building) assuming 500 square feet of commercial development. Additionally, a credit for vehicle trips associated with the existing single-family home that will be removed as part of the proposed project were estimated using ITE Land Use Code 210 (Single-Family Detached Housing) to determine the net new vehicle trips on the surrounding area roadways associated with the proposed project. The vehicle trip generation calculations are provided in the attachments. A summary of the vehicle trip generation estimates for the weekday daily and weekday morning and evening commuter peak hours is provided in Table 1.

As shown in Table 1, the proposed project is expected to generate a net increase of approximately 92 new trips (46 entering trips and 46 exiting trips) on a typical weekday, with 8 new trips (3 entering trips and 5 exiting trips) during the weekday morning peak hour and 12 new trips (6 entering trips and 6 exiting trips) during the weekday evening peak hour. These minor traffic increases are not anticipated to have a noticeable impact to future traffic operations on the surrounding area roadways.

The project site is also located within approximately one-quarter mile of the Franklin Commuter Rail Station, and within convenient walking distance of a multitude of nearby area businesses which is anticipated to minimize the number of vehicle trips generated to and from the proposed development.

**Table 1 Trip Generation Summary**

Time Period	Proposed Development			Existing Single-Family Home Trips <sup>3</sup>	Net Traffic Increase Due to Project <sup>4</sup>
	Residential <sup>1</sup> (20 Units)	Commercial <sup>2</sup> (500 Square Feet)	Total Project Trips		
<b>Weekday Daily</b>					
Enter	47	4	51	-5	<b>46</b>
Exit	<u>47</u>	<u>3</u>	<u>50</u>	<u>-4</u>	<b>46</b>
<i>Total</i>	94	7	101	-9	<b>92</b>
<b>Weekday Morning Peak Hour</b>					
Enter	2	1	3	-0	<b>3</b>
Exit	<u>6</u>	<u>0</u>	<u>6</u>	<u>-1</u>	<b>5</b>
<i>Total</i>	8	1	9	-1	<b>8</b>
<b>Weekday Evening Peak Hour</b>					
Enter	7	0	7	-1	<b>6</b>
Exit	<u>5</u>	<u>1</u>	<u>6</u>	<u>-0</u>	<b>6</b>
<i>Total</i>	12	1	13	-1	<b>12</b>

<sup>1</sup>Source: ITE Trip Generation, 11<sup>th</sup> Edition, Land Use Code 220 (Multifamily Housing – Low Rise)

<sup>2</sup>Source: ITE Trip Generation, 11<sup>th</sup> Edition, Land Use Code 712 (Small Office)

<sup>3</sup>Source: ITE Trip Generation, 11<sup>th</sup> Edition, Land Use Code 210 (Single-Family Detached Housing)

<sup>4</sup>Net new trips = Proposed Development Trips – Existing Single Single-Family Home Trips

**Conclusion**

The proposed development is expected to have minimal impacts to the surrounding area roadways. The site is expected to generate approximately 92 new vehicles trips on a typical weekday, with 8 to 12 new vehicle trips during the morning and evening peak hours. These minor traffic increases are not expected to have a noticeable impact on future traffic operations on the surrounding area roadways. The project site’s proximity to nearby businesses and the Franklin Commuter Rail Station will help to minimize the number of vehicle trips generated to and from the site. In addition, the proposed reduction in the number of driveways serving the site (from 3 existing driveways to one proposed driveway) will reduce the number of potential vehicle conflict points along this portion of East Central Street.

We trust that this letter will prove useful to the Town of Franklin in their review of this proposed mixed-use redevelopment project. Please do not hesitate to contact us if you have any questions or need additional information.

Sincerely,



Robert Woodland, PE  
Senior Project Manager

**Attachments**

**Trip Generation Summary**  
**100 and 110 East Central Street**  
**Franklin, Massachusetts**

Time Period	LUC 220 Multi-Family Housing (Low Rise)		LUC 712 Small Office Building		LUC 210 Single-Family Detached Housing		Total Trips <sup>3</sup>
	20	units	500	SF	1	dwelling units	
	Rate/Directional Split <sup>1</sup>	# Trips	Rate/Directional Split	# Trips	Rate/Directional Split	# Trips <sup>2</sup>	
Weekday Daily	<b>4.72</b>		<b>14.39</b>		<b>9.43</b>		
Enter	50%	47	50%	4	50%	5	<b>46</b>
Exit	50%	<u>47</u>	50%	<u>3</u>	50%	<u>4</u>	<b>46</b>
Total		94		7		9	<b>92</b>
AM Peak Hour	<b>0.40</b>		<b>1.67</b>		<b>0.70</b>		
Enter	24%	2	82%	1	26%	0	<b>3</b>
Exit	76%	<u>6</u>	18%	<u>0</u>	74%	<u>1</u>	<b>5</b>
Total		8		1		1	<b>8</b>
PM Peak Hour	<b>0.61</b>		<b>2.16</b>		<b>0.94</b>		
Enter	60%	7	34%	0	63%	1	<b>6</b>
Exit	40%	<u>5</u>	66%	<u>1</u>	37%	<u>0</u>	<b>6</b>
Total		12		1		1	<b>12</b>

Notes:

1. Limited data available for LUC 220 "close to rail transit" for weekday AM and PM peak hours. Rates shown for these time periods are the maximum of the "close to rail transit" and "not close to rail transit" subcategories to provide a conservative assessment.
2. Single-Family Detached Housing trips to be removed
3. Total Trips = Multi-Family Housing Trips + Small Office Building Trips - Single-Family Detached Housing Trips

# Multifamily Housing (Low-Rise) Close to Rail Transit (220)

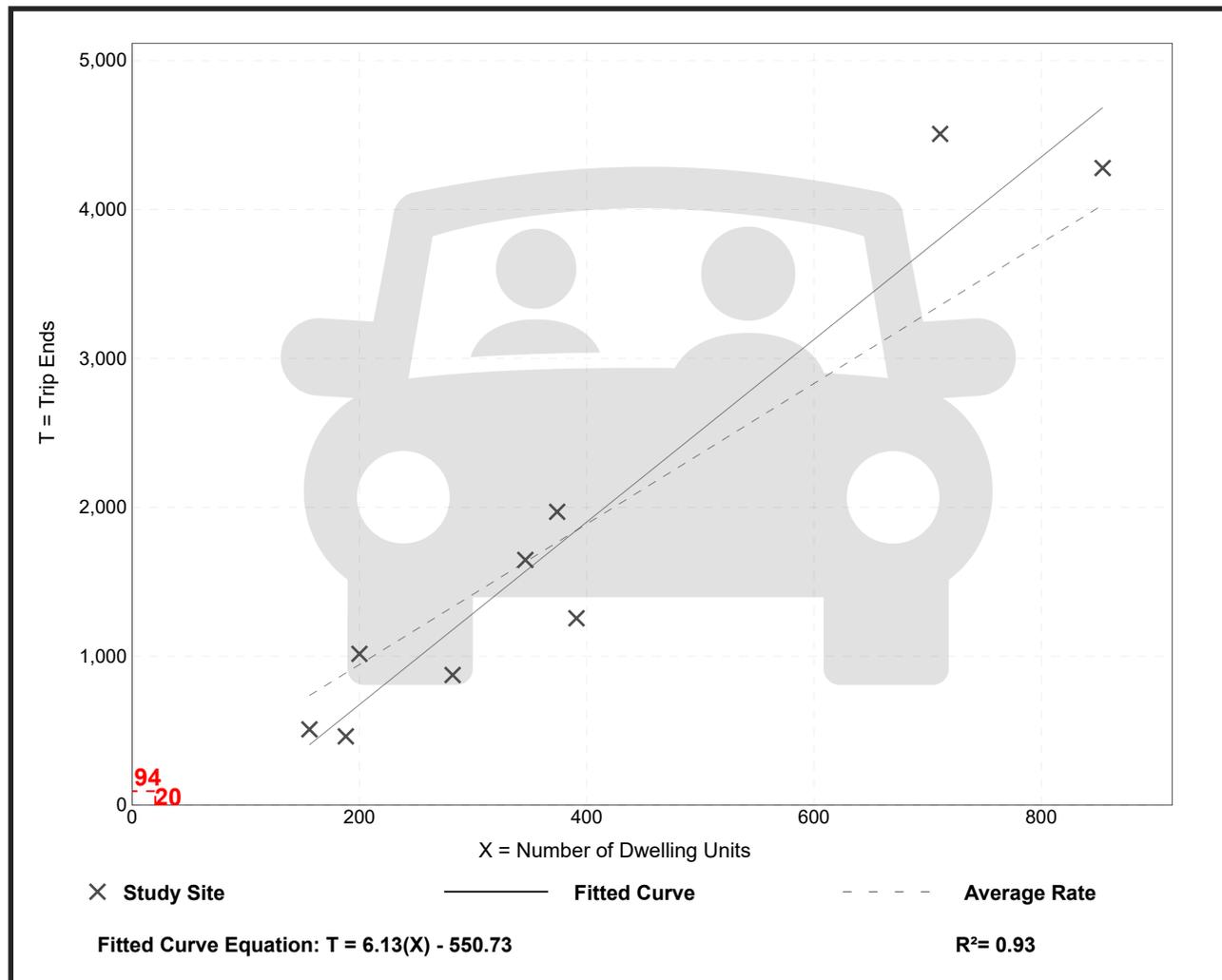
Vehicle Trip Ends vs: Dwelling Units  
On a: Weekday

Setting/Location: General Urban/Suburban  
Number of Studies: 9  
Avg. Num. of Dwelling Units: 389  
Directional Distribution: 50% entering, 50% exiting

## Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
4.72	2.46 - 6.34	1.27

## Data Plot and Equation







# Small Office Building (712)

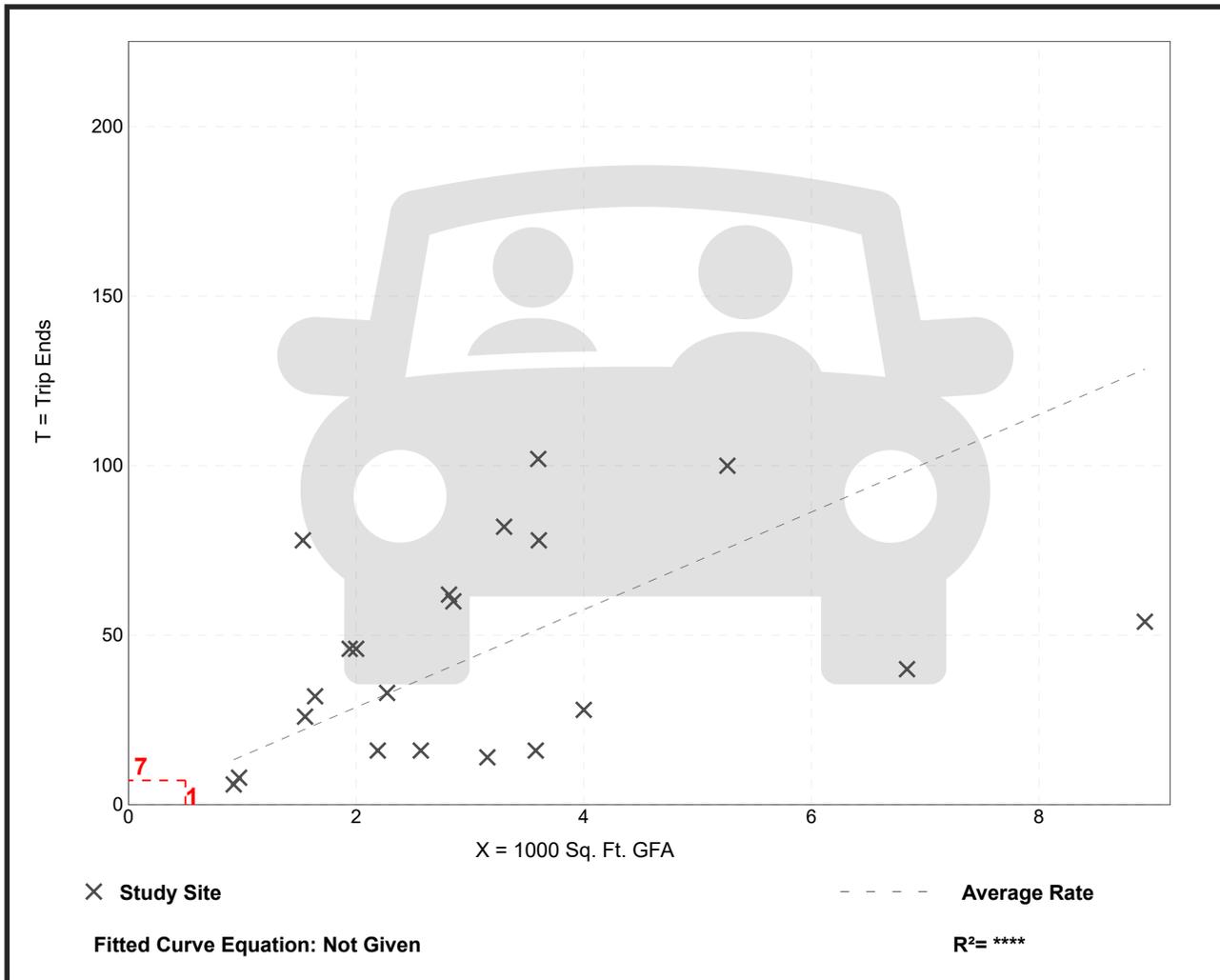
**Vehicle Trip Ends vs: 1000 Sq. Ft. GFA**  
**On a: Weekday**

**Setting/Location: General Urban/Suburban**  
Number of Studies: 21  
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
14.39	4.44 - 50.91	10.16

## Data Plot and Equation







# Single-Family Detached Housing (210)

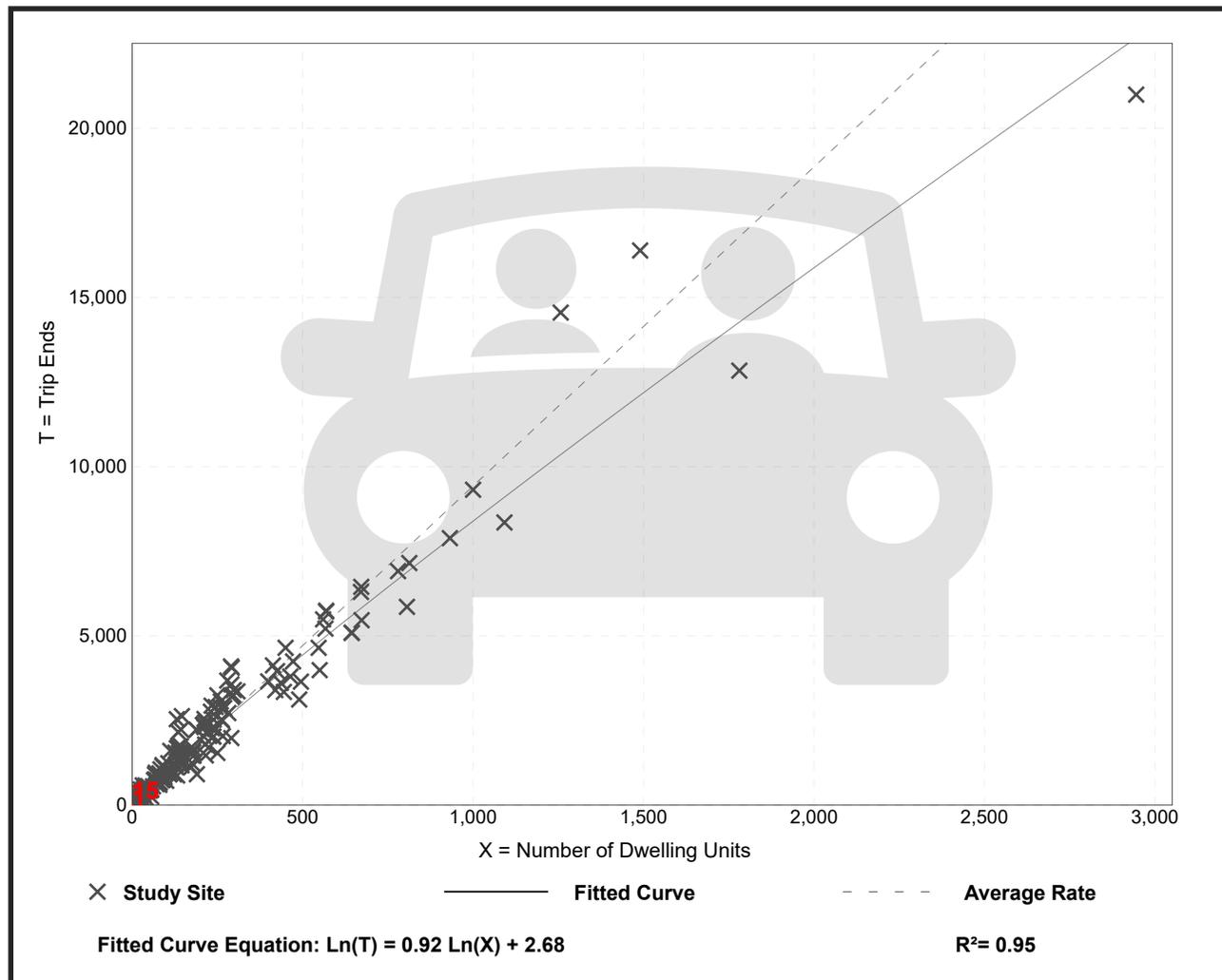
**Vehicle Trip Ends vs: Dwelling Units**  
**On a: Weekday**

**Setting/Location: General Urban/Suburban**  
Number of Studies: 174  
Avg. Num. of Dwelling Units: 246  
Directional Distribution: 50% entering, 50% exiting

## Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
9.43	4.45 - 22.61	2.13

## Data Plot and Equation



# Single-Family Detached Housing (210)

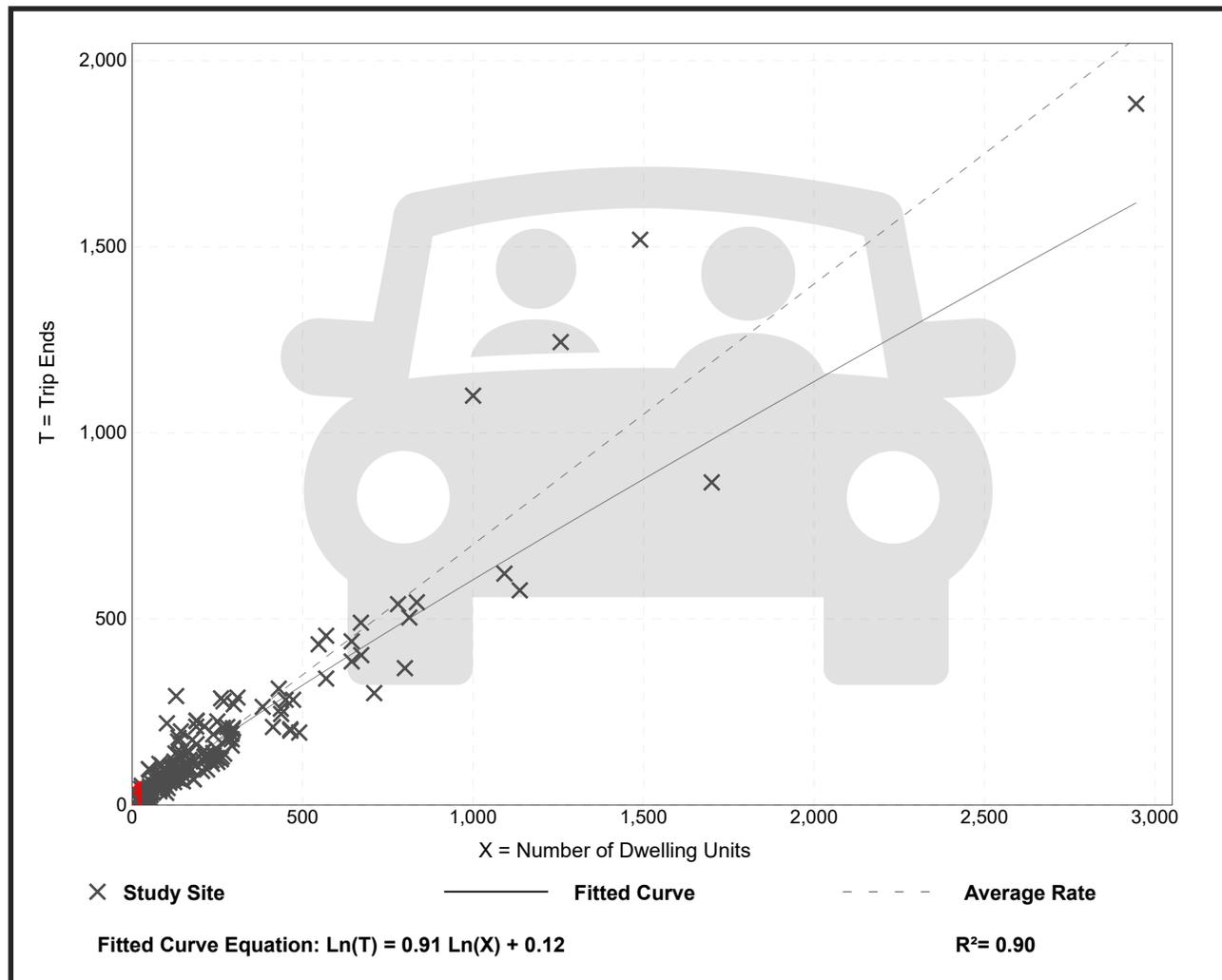
**Vehicle Trip Ends vs: Dwelling Units**  
**On a: Weekday,**  
**Peak Hour of Adjacent Street Traffic,**  
**One Hour Between 7 and 9 a.m.**

**Setting/Location: General Urban/Suburban**  
 Number of Studies: 192  
 Avg. Num. of Dwelling Units: 226  
 Directional Distribution: 25% entering, 75% exiting

## Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.70	0.27 - 2.27	0.24

## Data Plot and Equation



# Single-Family Detached Housing (210)

**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: 208  
 Avg. Num. of Dwelling Units: 248  
 Directional Distribution: 63% entering, 37% exiting

## Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.94	0.35 - 2.98	0.31

## Data Plot and Equation

