KITTELSON & ASSOCIATES
225 E. Robinson Street, Suite 355
Orlando, FL 32801
P 407.540.0555

TECHNICAL MEMORANDUM

November 3, 2025 Project# 293110.026

To: Bridget Kean, Deputy Director of Planning
City of Port St. Lucie
121 SW Port St. Lucie Blvd
Port St. Lucie, FL 34984

From: Raissa Bianco, EI, Kok Wan Mah, PE

RE: P25-145 – City of PSL Luca Bay Comp. Plan Amendment

Introduction

Kittelson has been retained by the City of Port St. Lucie to conduct traffic engineering and transportation planning services on behalf of the proposed comprehensive plan amendment land use change for the property generally located on NW East Torino Parkway, immediately west of Florida's Turnpike and southeast of Glades Cut-Off Road.

The proposed Comprehensive Plan Amendment (CPA) will change the current land use designation of the property described in **Table 1** to OSR/I – Open Space Recreation and Institutional.

Table 1- Current and Future Land Uses and Zoning

Parcel ID	Current		Proposed	
	FLU	Zoning	FLU	Zoning
3313-111-0001-000-8	RL- Residential Low	GU- General Use	OSR/I – Open Space Recreation and Institutional	GU- General Use
3313-111-0001-010-1	U- Utility			
3418-211-0001-000-7				

The parcel IDs for the property include 3313-111-0001-000-8 (42 Ac), 3313-111-0001-010-1 (0.16 Ac), and 3418-211-0001-000-7 (4.13Ac). The site location is shown in ***Figure 1***.

Figure 1. Project Location

The methodology and procedures used in this analysis are consistent with the guidelines for the CITY, the Florida Department of Economic Opportunity (FDEO), and the Florida Department of Transportation (FDOT).

Trip Generation for Current vs Proposed FLU Designation

The average daily trips and the p.m. and a.m. peak hour trips for the current and proposed Future land use are listed in **Table 2**. The site has City of Port St. Lucie Utility Future Land Use (FLU) Designation for all 46.3 acres. The trip generation was determined using the Institute of Transportation Engineers (ITE) document*, Trip Generation Manual, 12th Edition*.

First, the existing FLU trip generation potential was examined. Based on the allowable intensities and densities of the currently assigned FLU, a maximum development program of approximately 55.7 KSF of utility space is possible. This is based on a total of 4.3 acres with a 0.3 FAR. Utility (land use code 170) was used as the highest trip-generating use permitted. Additionally, the property possesses 42 Ac of low density residential, based on the intensity listed on the comprehensive plan, 1-5 DU are allowed per acre. It was calculated that 210 DU are allowed with the current land use. Based on ITE Formulas, there will potentially be a total of **2,681** daily trips with the current land use, with **276** occurring during the a.m. peak hour and **320** occurring during p.m. peak hour.

Next, the maximum development potential of the requested OSR/I – Open Space Recreation and Institutional designation was examined. Based on the allowable intensities and densities of the proposed land use and 46.3 Ac, Public Park (land use 411) was used as the highest trip-generating use permitted.

Based on ITE average rates, there will potentially be **118** daily trips, **1** a.m. peak-hour trips, and **5** p.m. peak-hour trips.

Table 2 Summary of Trip Generation

Land Use		ITE Code	FAR	Acres	Intensity (KSF)	Intensity (DU)	Daily Trip Ends	AM Peak Period					PM Peak Period				
								In		Out			In		Out		
								%	Trips	%	Trips	Total	%	Trips	%	Trips	Total
Current Land Use	Residential Low	210		42.0	-	210	1,997	25%	37	75%	110	146	63%	126	37%	74	200
	Utility		0.3	0.2	2.1		684	87%	113	13%	17	130	18%	22	82%	99	120
		170	0.3	4.1	53.6												
Total					55.7		2,681					276					320
Proposed Land Use	OSR/I Open Space Recreation and Institutional	411	-	46.3	-	-	118	59%	1	41%	0	1	45%	2	55%	3	5
			-		-	-											
			-		-	-											
Net Decrease							2,563					275					315

As exhibited in **Table 2** the trip difference between the currently assigned FLU and the requested Open Space Recreational and Institutional designation is determined by subtracting trips generated by the currently assigned FLU from the trips generated by the proposed designation. This results in a **potential trip decrease** of **2,563** daily trips, **275** a.m. peak-hour trips, and **315** p.m. peak-hour trips.

CONCLUSION

The study was conducted to evaluate the potential impact of the proposed Comprehensive Plan Amendment, which involves a change in land use designation from Utility and Low-Density Residential to Open Space Recreational and Institutional. Based on the trip generation analysis, the amendment would result in a net decrease in potential vehicular trips. The proposed change in the future land use is consistent with the City's Comprehensive Plan and no significant transportation impacts are anticipated as a result of the proposed land use change.

Appendix A
Property Record Card

Property Identification

Site Address:	TBD
Sec/Town/Range:	13/36S/39E
Parcel ID:	**3313-111-0001-000-8**
Jurisdiction:	Port Saint Lucie
Land Use Code:	8000 - VAC GOVT
Account #:	**35564**
Map ID:	34/18N
Zoning:	

Legal Description

13 36 39/18 36 40 N 1/2 OF N 1/2 OF N 1/2 OF SEC 13-36-39 LYG E OF E TORINO PKWY-LESS N 18.51 FT- AND N 1/2 OF N 1/2 OF N 1/2 OF SEC 18-36-40 LYG W OF TRNPK R/W-LESS R/W OF CANAL 106 FT- (42 AC) (OR 1289-1679)

Total Areas

Finished/Under Air (SF):	0
Gross Sketched Area (SF):	0
Land Size (acres):	42
Land Size (SF):	1,829,520

Building Wind Speed

Occupancy Category	**I**	**II**	**III & IV**
Speed	140	150	160

Sources/links:

Map

State of Florida, Maxar Powered by Esri

Ownership

Port St Lucie City of
121 SW Port St Lucie BLVD
Port St Lucie, FL 34984-5042

Current Values

Just/Market value:	$735,000
Assessed value:	$526,330
Exemption value:	$526,330
Taxable value:	$0

Important

Property taxes are subject to change upon change of ownership.

- **Past taxes are not a reliable projection of future taxes.**
- **The sale of a property will prompt the removal of all exemptions, assessment caps, and special classifications.**

Links

Taxes for this parcel: SLC Tax Collector's Office
Download TRIM for this Parcel: Download PDF
File for homestead exemptions.
View associated Tax Map.
Report Homestead Fraud on this parcel.

Property Identification

Site Address:	TBD
Sec/Town/Range:	13/36S/39E
Parcel ID:	**3313-111-0001-010-1**
Jurisdiction:	Port Saint Lucie
Land Use Code:	8200 - FRST PRKS
Account #:	**132133**
Map ID:	33/13N
Zoning:	

Legal Description

13 36 39 N 18.51 FT OF THAT PART OF N 1/2 OF N 1/2 OF N 1/2 OF SEC LYG E OF EAST TORINO PKWY (.16 AC) (OR 754-807)

Total Areas

Finished/Under Air (SF):	0
Gross Sketched Area (SF):	0
Land Size (acres):	0.16
Land Size (SF):	6,969.6

Building Wind Speed

Occupancy Category	**I**	**II**	**III & IV**
Speed	140	150	160

Sources/links:

Map

State of Florida, Vantor Powered by Esri

Ownership

Port St Lucie City Of
121 SW Port St Lucie Blvd
Port St Lucie, FL 34984-5099

Current Values

Just/Market value:	$600
Assessed value:	$600
Exemption value:	$600
Taxable value:	$0

Important

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Links

Taxes for this parcel: SLC Tax Collector's Office
Download TRIM for this Parcel: Download PDF
File for homestead exemptions.
View associated Tax Map.
Report Homestead Fraud on this parcel.

Sale History

Date	Book/Page	Sale Code	Deed	Grantor	Price
Sep 6, 1991	0754/0807	XX01	WD	General Development Corp	$4,016,400

Special Features and Yard Items

Type	Qty	Units	Year Blt

Building Information

(1 of 1)
Finished Area: 0 SF
Gross Area: 0 SF

Image or Sketch unavailable for display

Exterior

Interior

Building Type:		Bedrooms:	0
Quality:		Full Baths:	0
Number of Units:	0	Half Baths:	0
Year Built:		A/C %:	0%
Effective Year:		Electric:	
Story Height:		Heat Type:	
Roof Structure:		Heat Fuel:	
Roof Cover:		Heated %:	%
Primary Wall:		Primary Int Wall:	
Secondary Wall:		Primary Floors:	
View:			

Values Breakdown

2025

Building	$0
SFYI	$0
Land	$600
Just/Market	$600
Ag Credit	$0
Save Our Homes or 10% Cap	$0
Assessed	$600
Exemptions	$600
Taxable	$0

Current Year Exemption Value Breakdown

Tax Year	Grant Year	Description	Amount
2025		City of Port St Lucie	$600

Important

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- **The sale of a property will prompt the removal of all exemptions, assessment caps, and special classifications.**

Current Year Special Assessment Breakdown

Start Year	Units	Description	Amount

This does not necessarily represent the total Special Assessments that could be charged against this property.
The total amount charged for special assessments is reflected on the most current tax statement and information is available with the **SLC Tax Collector's Office**

Permits

Number	Issue Date	Description	Amount	Fees

Notice: This does not necessarily represent all the permits for this property.
Click the following link to check for additional permit data in **Port Saint Lucie**

Property Identification

Site Address:	TBD
Sec/Town/Range:	18/36S/40E
Parcel ID:	**3418-211-0001-000-7**
Jurisdiction:	Port Saint Lucie
Land Use Code:	8200 - FRST PRKS
Account #:	**132125**
Map ID:	34/18N
Zoning:	

Image or Sketch unavailable for display

Legal Description

18 36 40 BEG NW COR SEC RUN SLY ALG W LI OF SEC 18.51, TH N 89 DEG 40 MIN 27 SEC E 39.17 M/L TO PC CURVE CONC SLY, R OF 3400 FT, CA 06 DEG 12 MIN 23 SEC, TH ELY ALG ARC 368.29 FT, TH S 84 DEG 07 MIN 10 SEC E 189.23 FT TO PC CURVE CONC NLY, R OF 3600 FT, CA 06 DEG 12 MIN 23 SEC, TH ELY ALG ARC 389.96 FT, TH N 89 DEG 40 MIN 26 SEC E 1656.49 FT TO PT ON WLY R/W SUNSHINE STATE PKWY, TH NWLY ALG SD R/W 86.06 FT M/L TO N LI OF SEC, TH WLY ALG SD N LI 2633.58 FT M/L TO POB (4.13 AC) (OR 754-807)

Total Areas

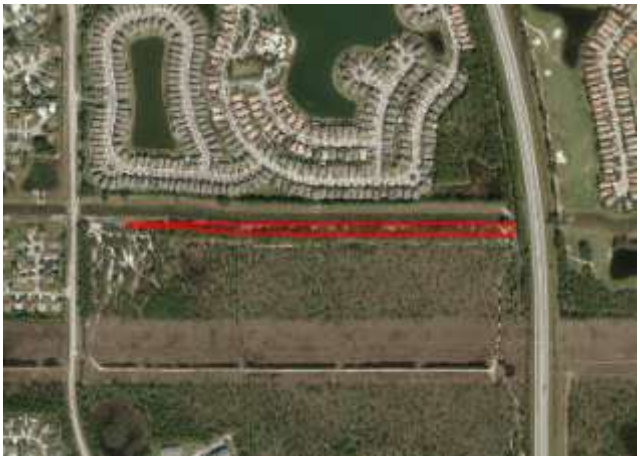
Finished/Under Air (SF):	0
Gross Sketched Area (SF):	0
Land Size (acres):	4.13
Land Size (SF):	179,902.8

Building Wind Speed

Occupancy Category	I	II	III & IV
Speed	140	150	160

Sources/links:

Map



State of Florida, Maxar Powered by Esri

Ownership

Port St Lucie City Of
121 SW Port St Lucie Blvd
Port St Lucie, FL 34984-5099

Current Values

Just/Market value:	$18,600

Assessed value:	$18,600
Exemption value:	$18,600
Taxable value:	$0

Important

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Links

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Download TRIM for this Parcel: Download PDF
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Appendix B
ITE Trip Generation Sheets

Land Use: 170
Utility

Description

A utility is a free-standing building that can house office space, a storage area, and electromechanical or industrial equipment that support a local electrical, communication, water supply or control, or sewage treatment utility.

Additional Data

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 California, Delaware, Oregon, and Texas.

Source Numbers

422, 443, 538, 876

Utility
(170)

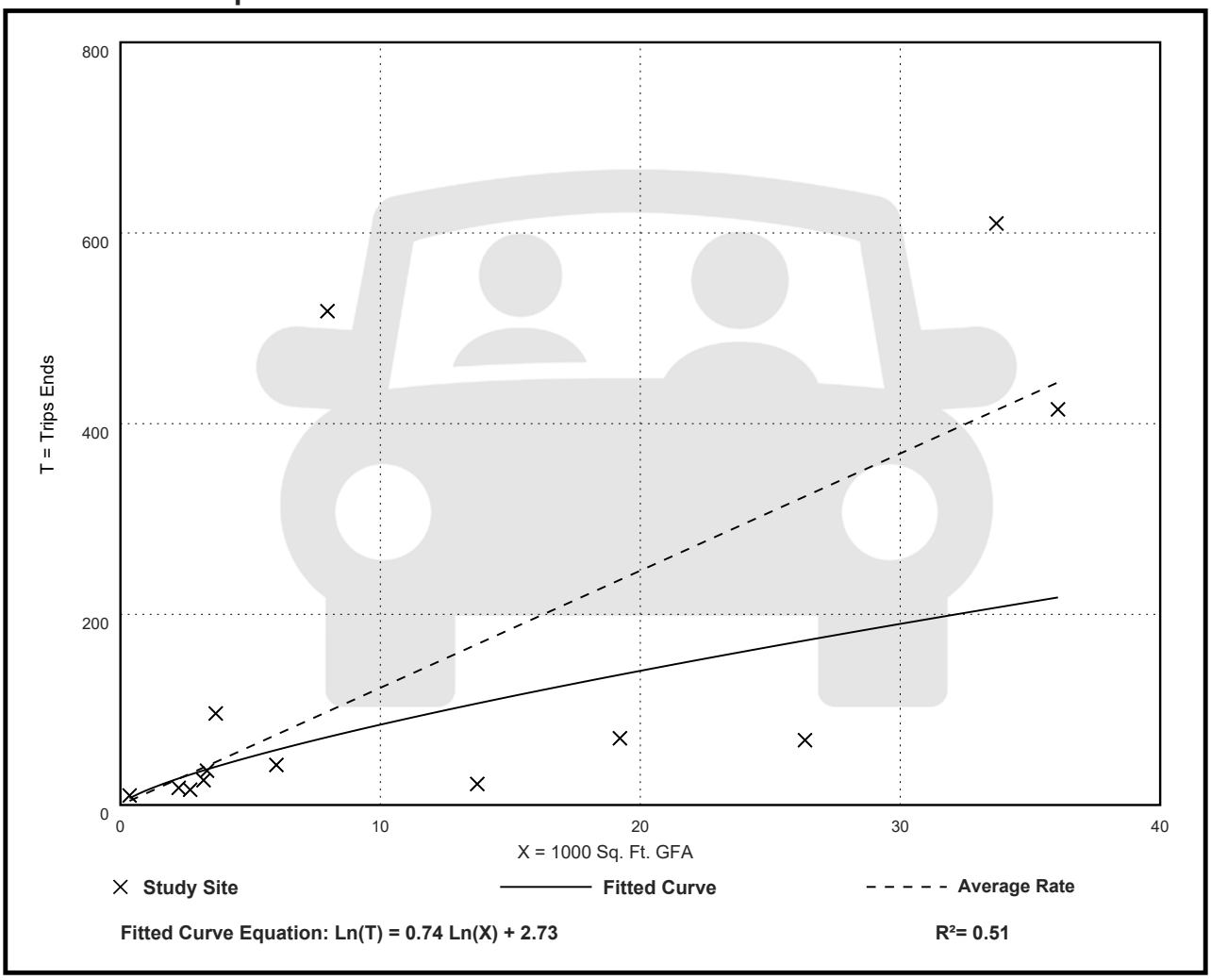
Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 13
Avg. 1000 Sq. Ft. GFA: 12
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
12.29	1.60 - 65.03	14.32

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.74 Ln(X) + 2.73

R^2= 0.51

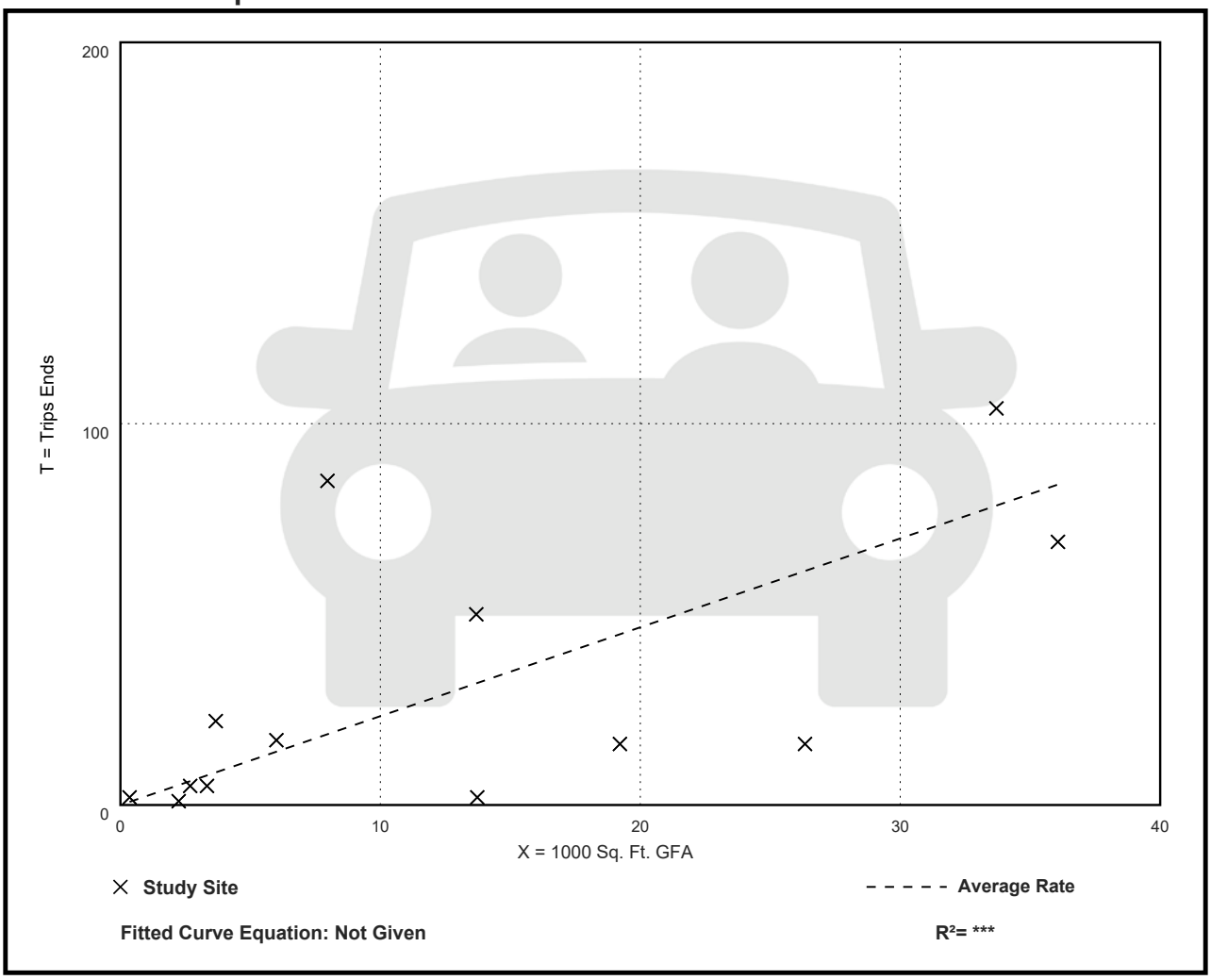
Utility
(170)

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: 13
Avg. 1000 Sq. Ft. GFA: 13
Directional Distribution: 87% entering, 13% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
2.33	0.15 - 10.67	2.34

Data Plot and Equation



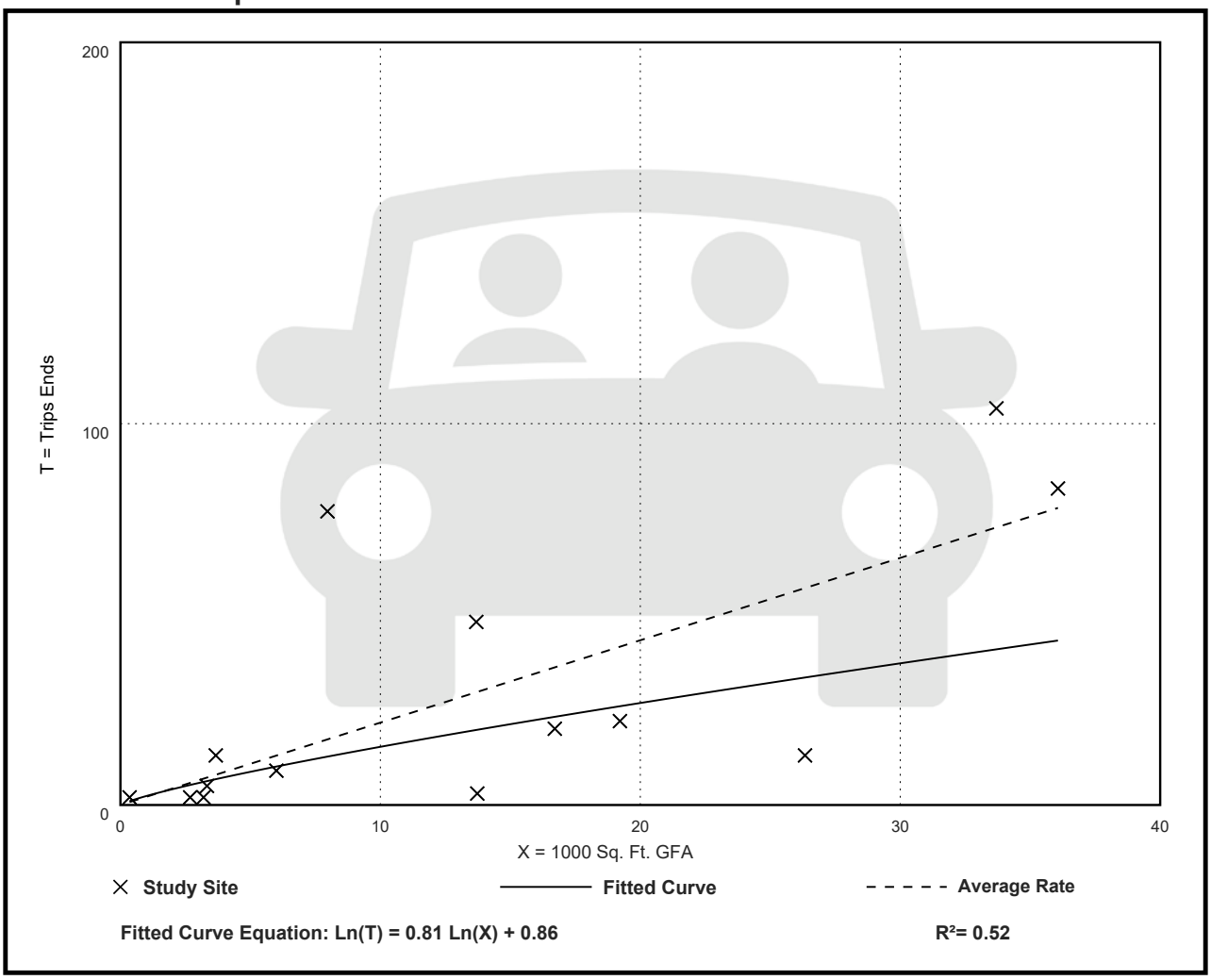
Utility
(170)

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: 14
Avg. 1000 Sq. Ft. GFA: 13
Directional Distribution: 18% entering, 82% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
2.16	0.22 - 9.67	2.00

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.81 Ln(X) + 0.86

R^2= 0.52

Utility
(170)

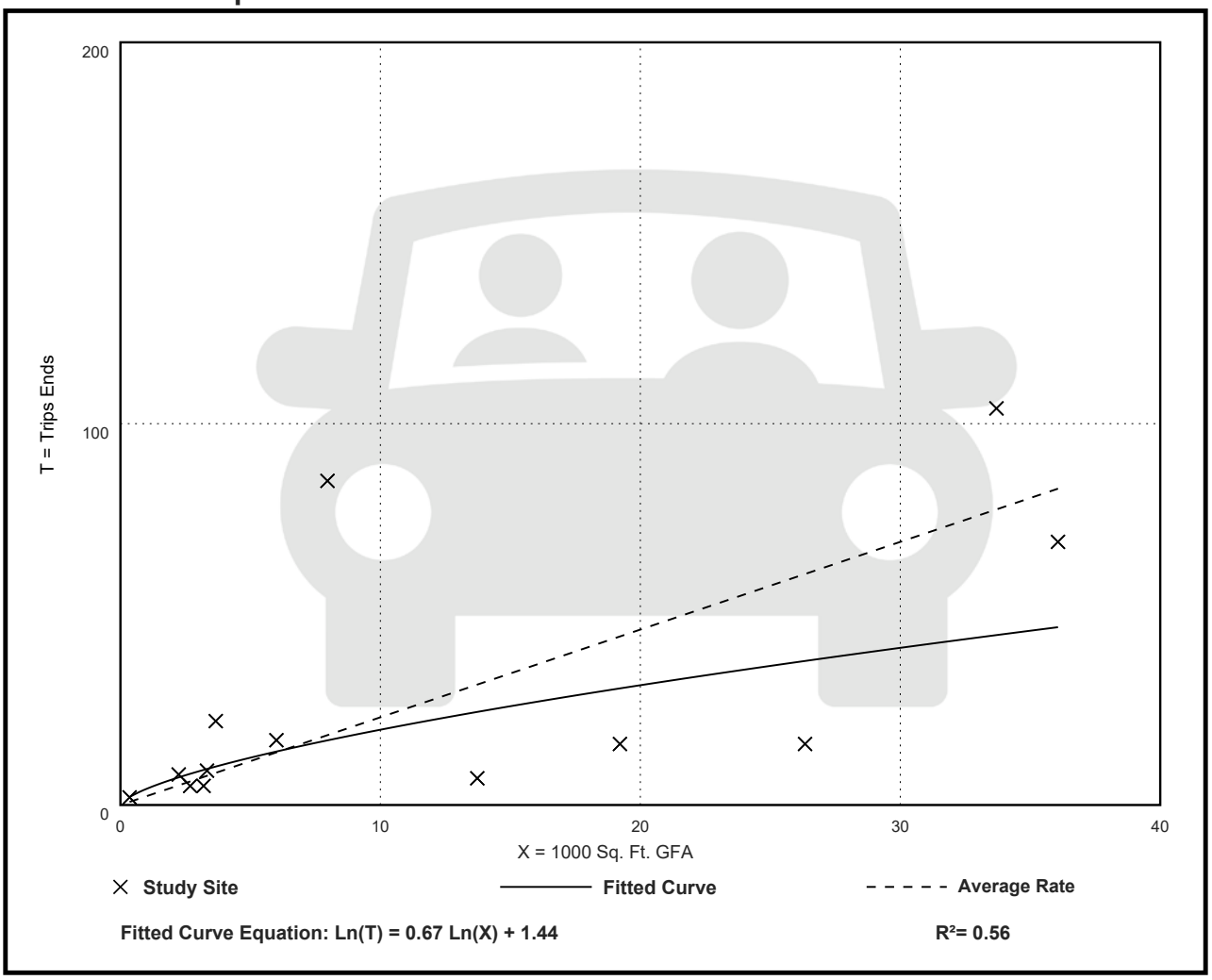
Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday,
AM Peak Hour of Generator

Setting/Location: General Urban/Suburban
Number of Studies: 13
Avg. 1000 Sq. Ft. GFA: 12
Directional Distribution: 84% entering, 16% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
2.30	0.51 - 10.67	2.35

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.67 Ln(X) + 1.44

R^2= 0.56

Utility
(170)

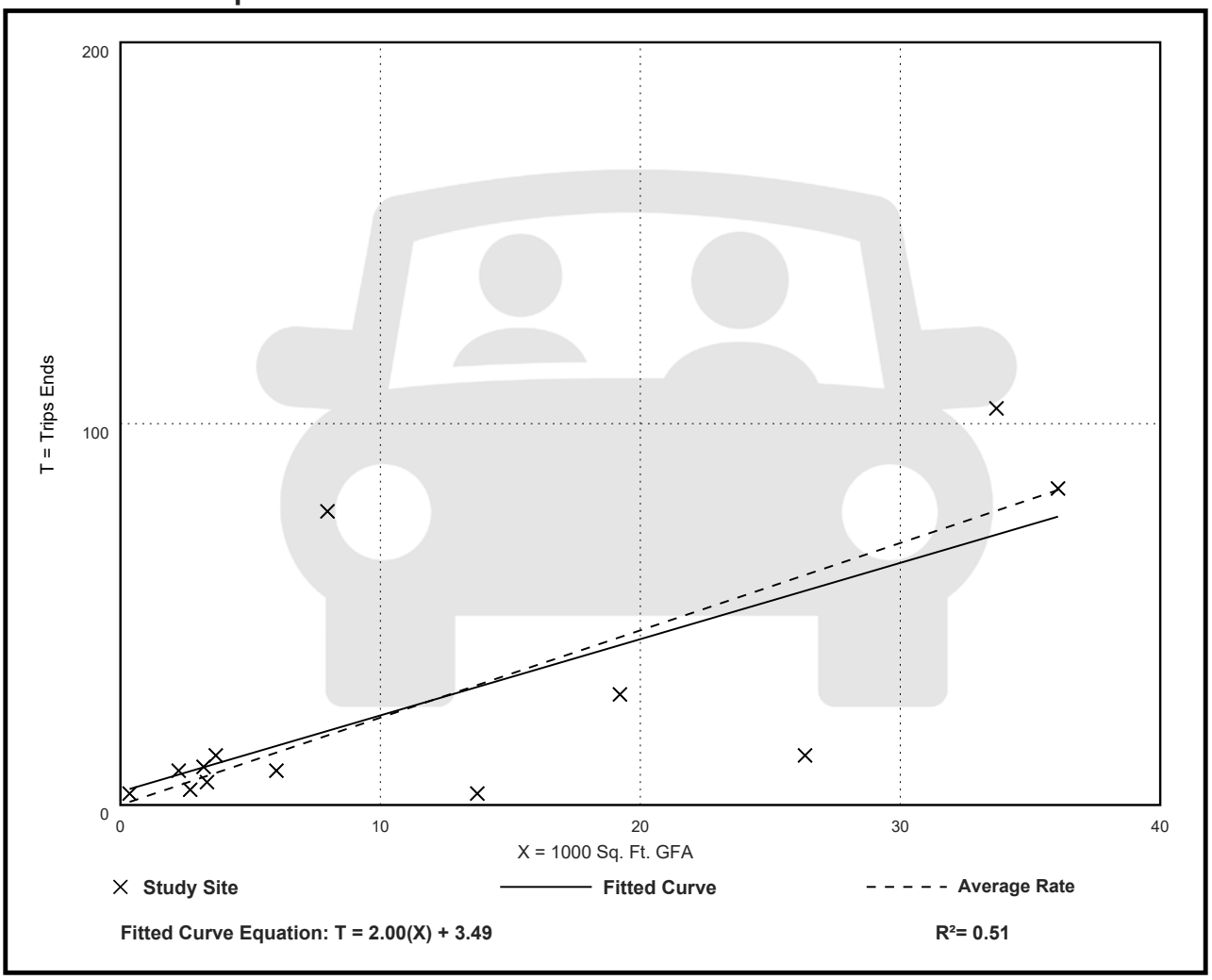
Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday,
PM Peak Hour of Generator

Setting/Location: General Urban/Suburban
Number of Studies: 13
Avg. 1000 Sq. Ft. GFA: 12
Directional Distribution: 18% entering, 82% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
2.29	0.22 - 9.67	2.10

Data Plot and Equation



Fitted Curve Equation: T = 2.00(X) + 3.49

R^2= 0.51

Utility
(170)

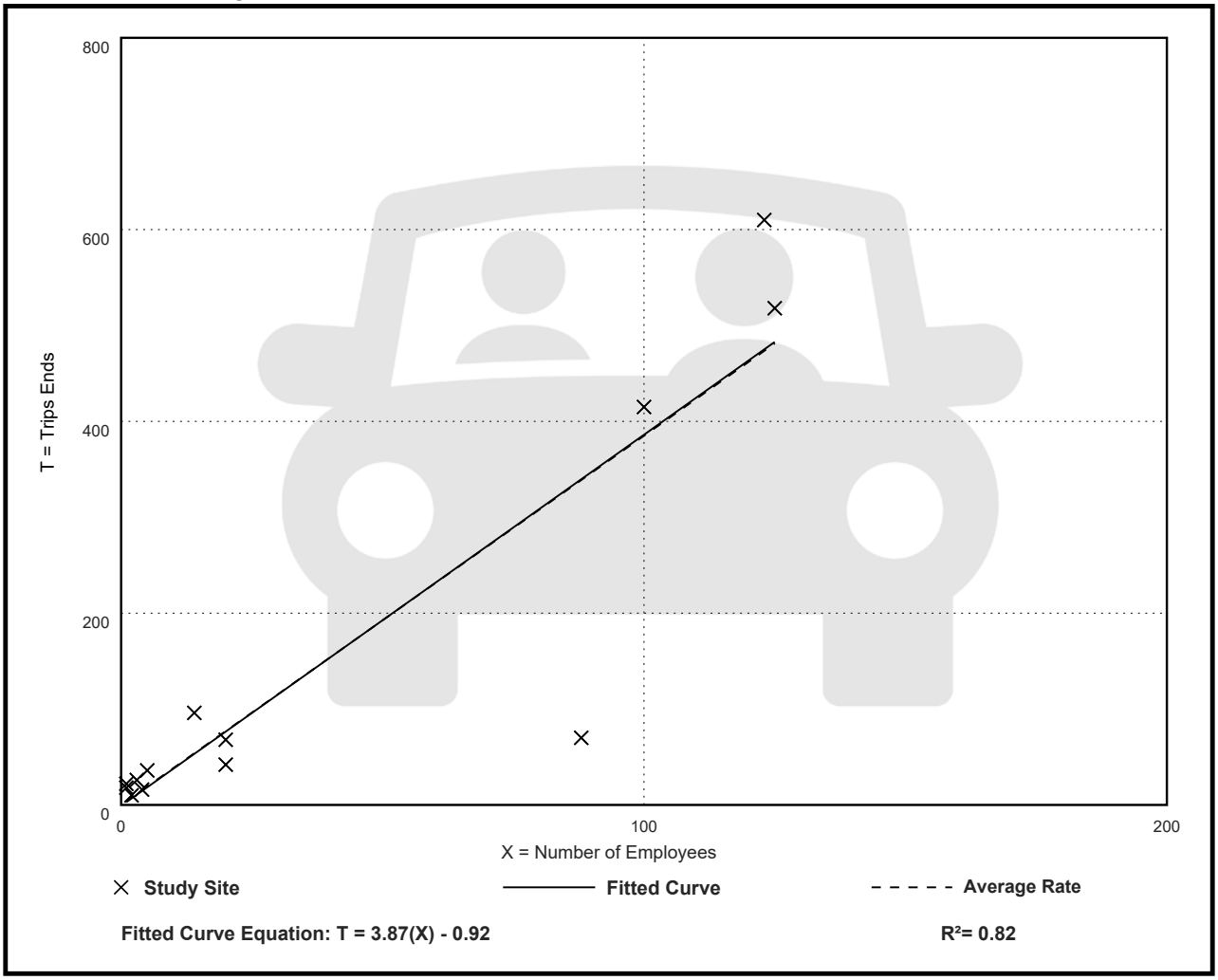
Vehicle Trip Ends vs: Employees
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 13
Avg. Num. of Employees: 39
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
3.85	0.80 - 22.00	1.99

Data Plot and Equation



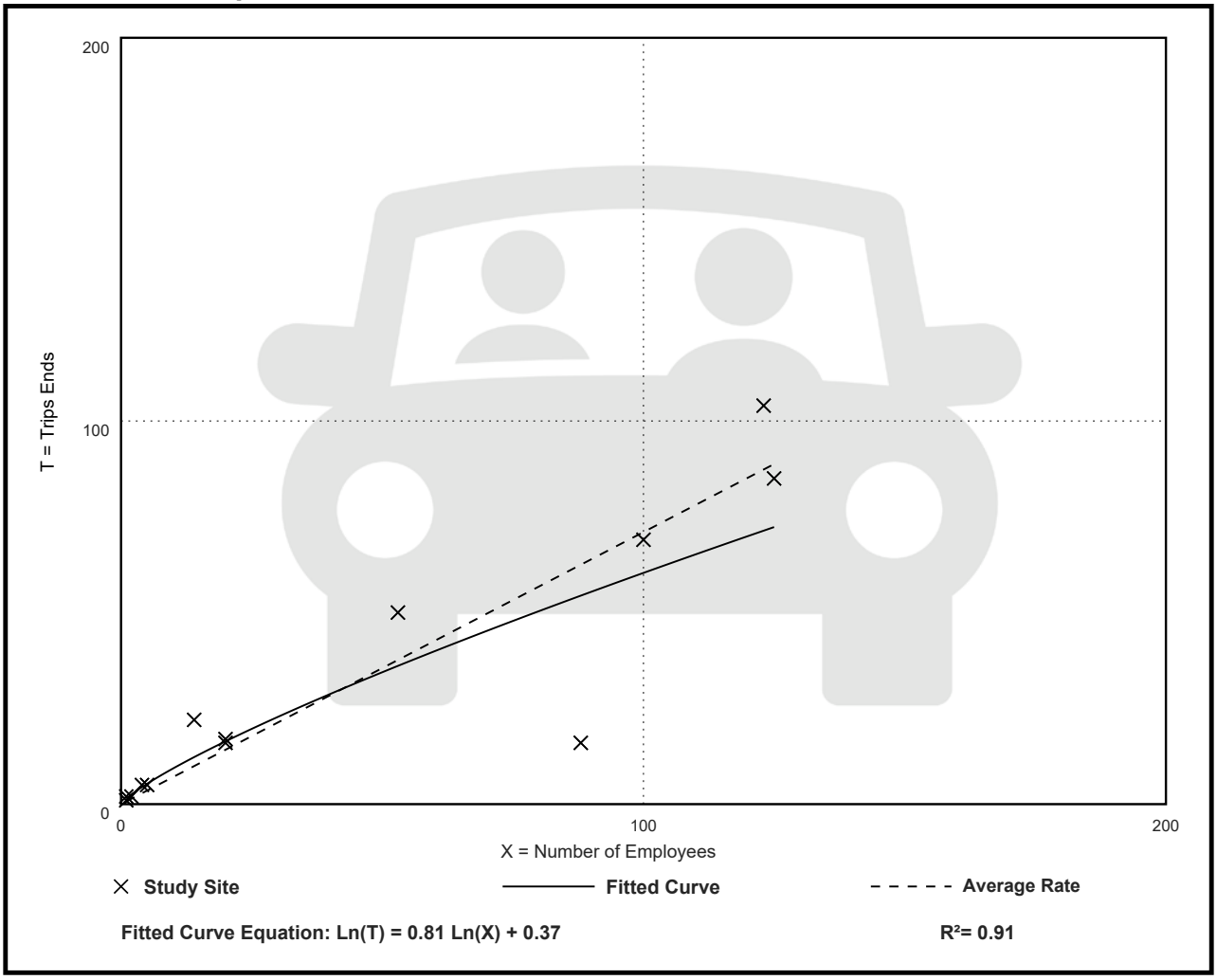
Utility
(170)

Vehicle Trip Ends vs: Employees
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: 13
Avg. Num. of Employees: 43
Directional Distribution: 87% entering, 13% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
0.71	0.18 - 2.00	0.29

Data Plot and Equation



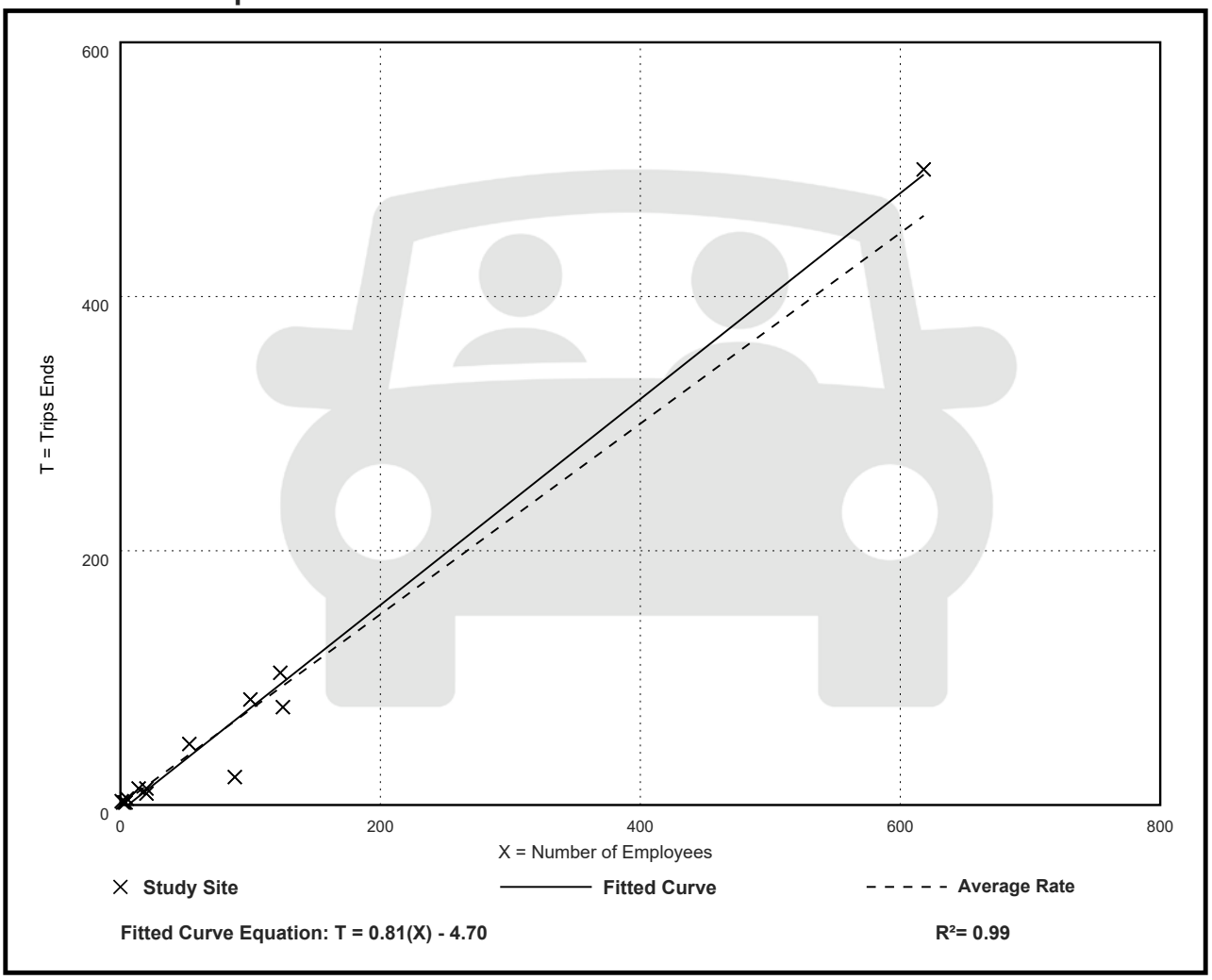
Utility
(170)

Vehicle Trip Ends vs: Employees
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: 14
Avg. Num. of Employees: 84
Directional Distribution: 14% entering, 86% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
0.75	0.25 - 3.00	0.19

Data Plot and Equation



Utility
(170)

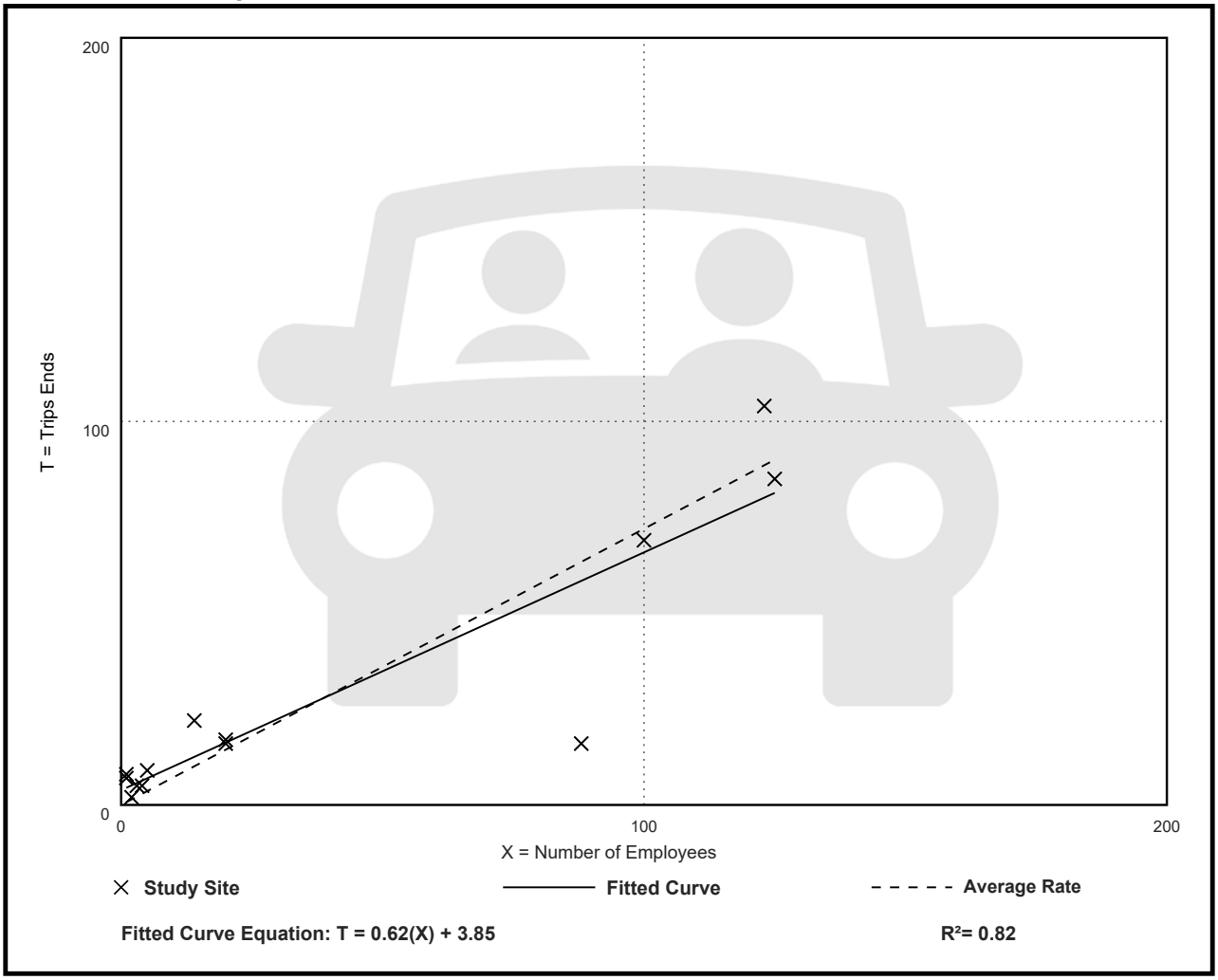
Vehicle Trip Ends vs: Employees
On a: Weekday,
AM Peak Hour of Generator

Setting/Location: General Urban/Suburban
Number of Studies: 13
Avg. Num. of Employees: 39
Directional Distribution: 84% entering, 16% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
0.72	0.18 - 8.00	0.55

Data Plot and Equation



Utility
(170)

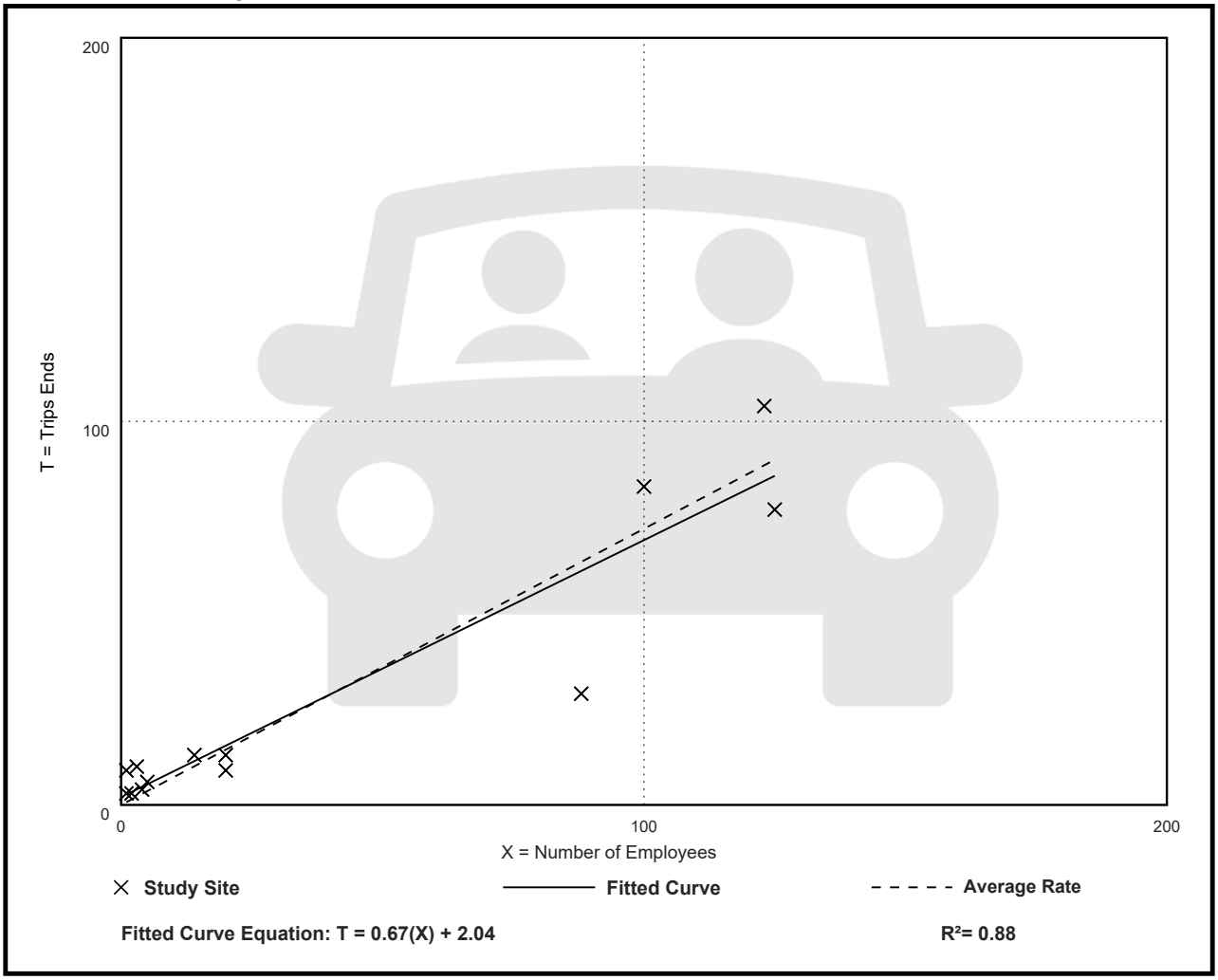
Vehicle Trip Ends vs: Employees
On a: Weekday,
PM Peak Hour of Generator

Setting/Location: General Urban/Suburban
Number of Studies: 13
Avg. Num. of Employees: 39
Directional Distribution: 18% entering, 82% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
0.72	0.33 - 9.00	0.50

Data Plot and Equation



Land Use: 210
Single-Family Detached Housing

Description

A single-family detached housing site includes any single-family detached home on an individual lot. A typical site surveyed is a suburban subdivision.

Specialized Land Use

Data have been submitted for several single-family detached housing developments with homes that are commonly referred to as patio homes. A patio home is a detached housing unit that is located on a small lot with little (or no) front or back yard. In some subdivisions, communal maintenance of outside grounds is provided for the patio homes. The three patio home sites total 299 dwelling units with overall weighted average trip generation rates of 5.35 vehicle trips per dwelling unit for weekday, 0.26 for the AM adjacent street peak hour, and 0.47 for the PM adjacent street peak hour. These patio home rates based on a small sample of sites are lower than those for single-family detached housing (Land Use 210), lower than those for single-family attached housing (Land Use 251), and higher than those for senior adult housing -- single-family (Land Use 251). Further analysis of this housing type will be conducted in a future edition of *Trip Generation Manual*.

Additional Data

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/).

For 30 of the study sites, data on the number of residents and number of household vehicles are available. The overall averages for the 30 sites are 3.6 residents per dwelling unit and 1.5 vehicles per dwelling unit.

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Arizona, California, Connecticut, Delaware, Illinois, Indiana, Kentucky, Maryland, Massachusetts, Minnesota, Montana, New Jersey, North Carolina, Ohio, Ontario (CAN), Oregon, Pennsylvania, South Carolina, South Dakota, Tennessee, Vermont, Virginia, and West Virginia.

Source Numbers

100, 105, 114, 126, 157, 167, 177, 197, 207, 211, 217, 267, 275, 293, 300, 319, 320, 356, 357, 367, 384, 387, 407, 435, 522, 550, 552, 579, 598, 601, 603, 614, 637, 711, 716, 720, 728, 735, 868, 869, 903, 925, 936, 1005, 1007, 1008, 1010, 1033, 1066, 1077,1078, 1079

Single-Family Detached Housing
(210)

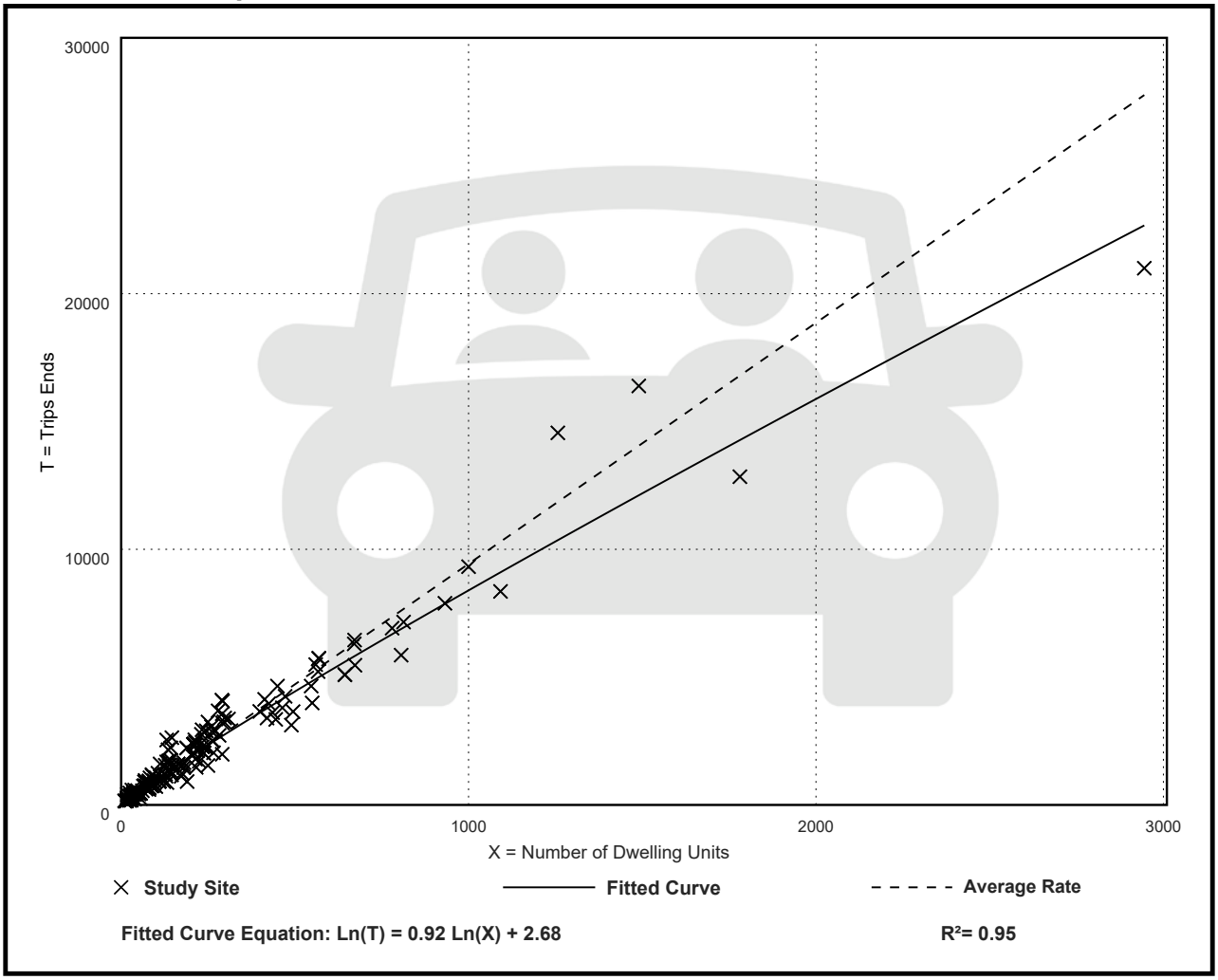
Vehicle Trip Ends vs: Dwelling Units
On a: Weekday

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



Fitted Curve Equation: Ln(T) = 0.92 Ln(X) + 2.68

R^2= 0.95

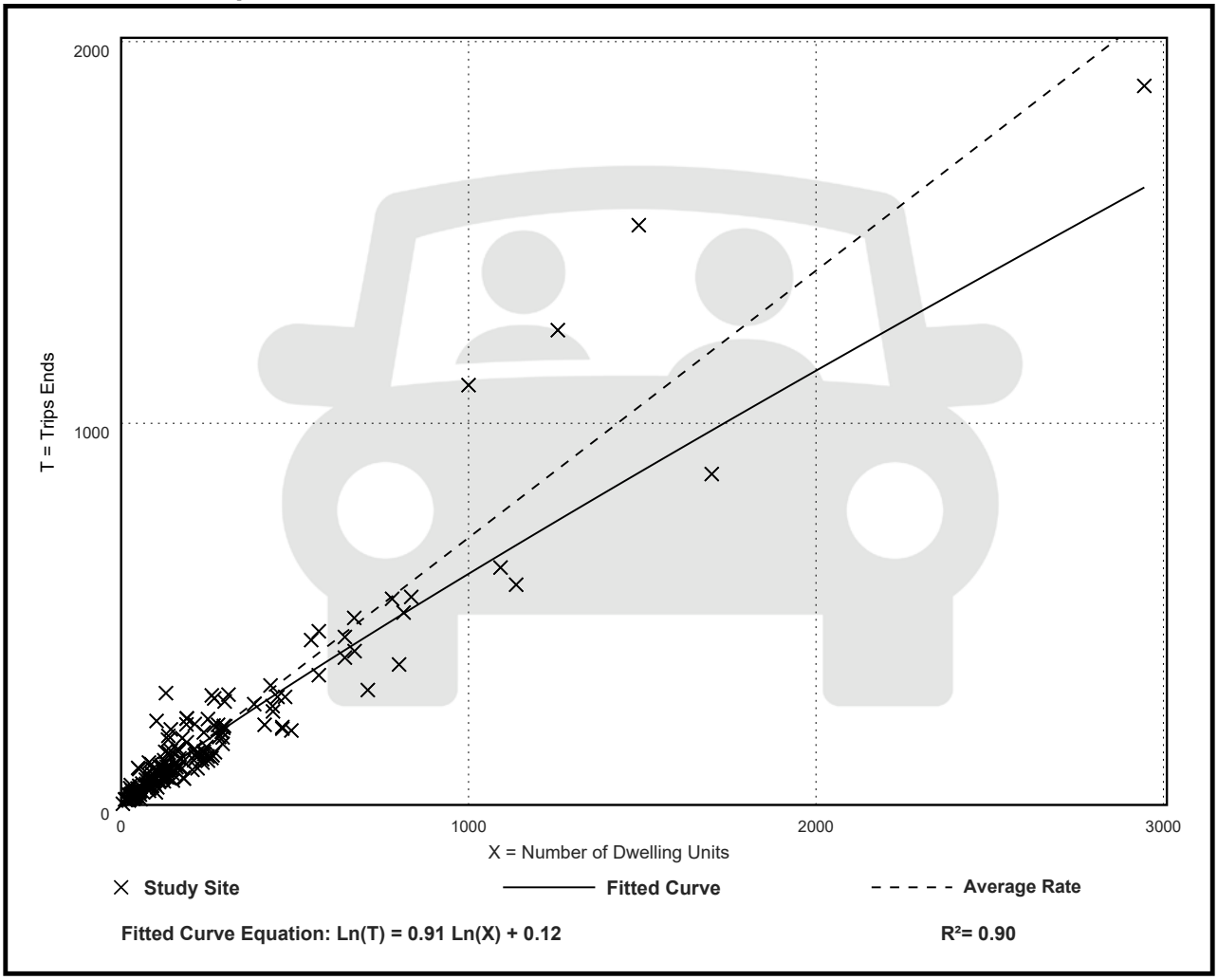
Single-Family Detached Housing
(210)

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: 26% entering, 74% 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



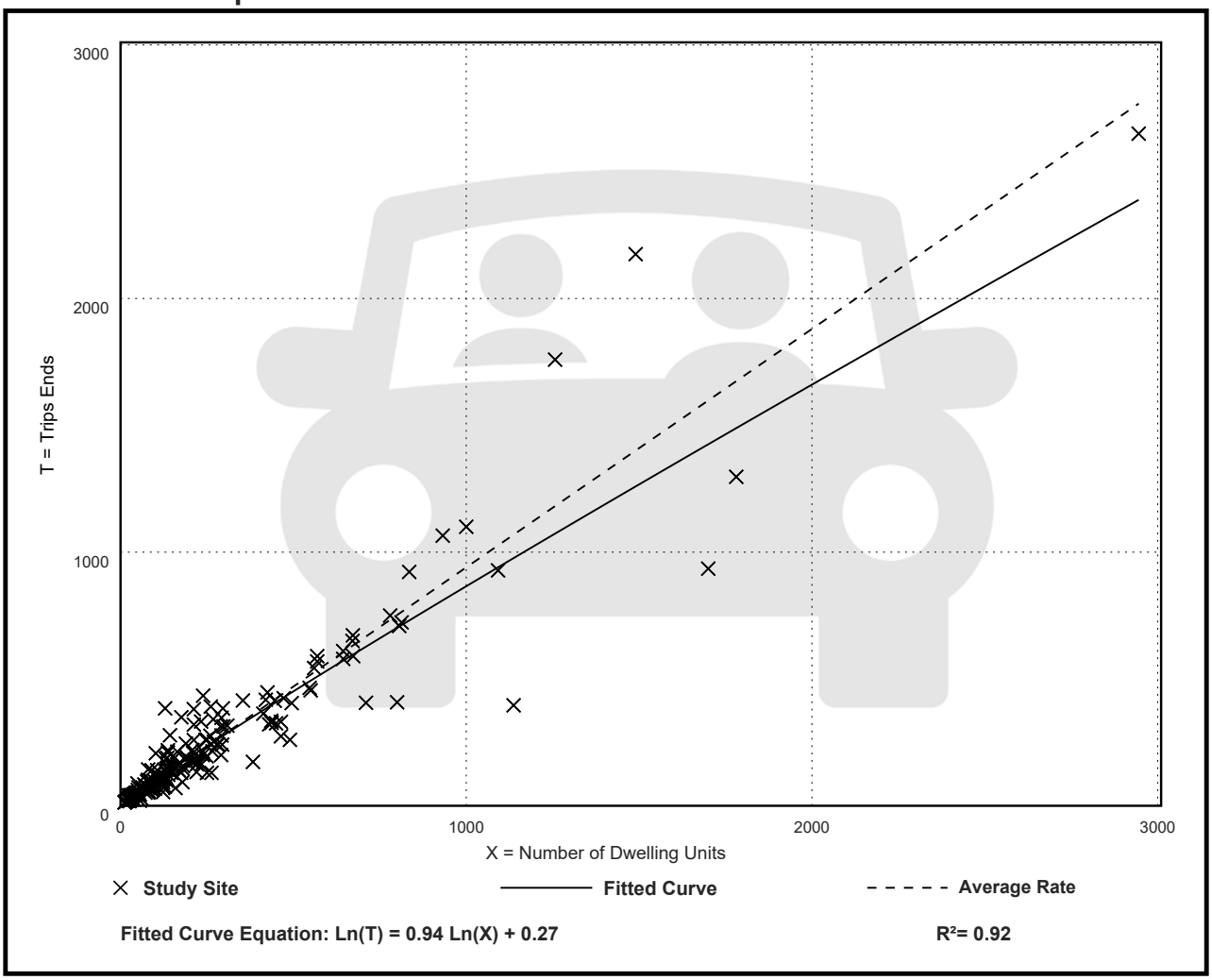
Single-Family Detached Housing
(210)

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



Single-Family Detached Housing
(210)

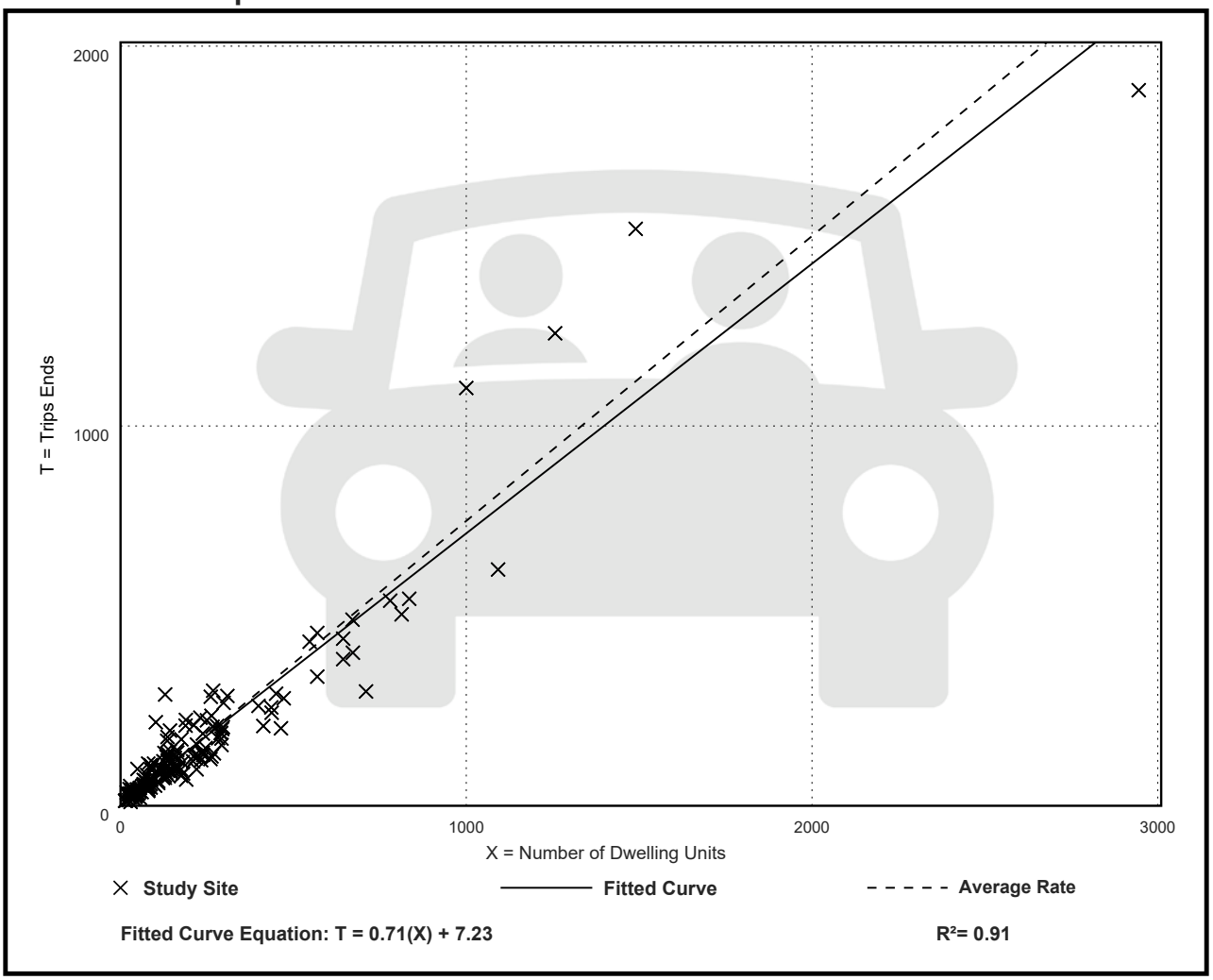
Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
AM Peak Hour of Generator

Setting/Location: General Urban/Suburban
Number of Studies: 169
Avg. Num. of Dwelling Units: 217
Directional Distribution: 26% entering, 74% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.75	0.34 - 2.27	0.25

Data Plot and Equation



Fitted Curve Equation: T = 0.71(X) + 7.23

R^2= 0.91

Single-Family Detached Housing
(210)

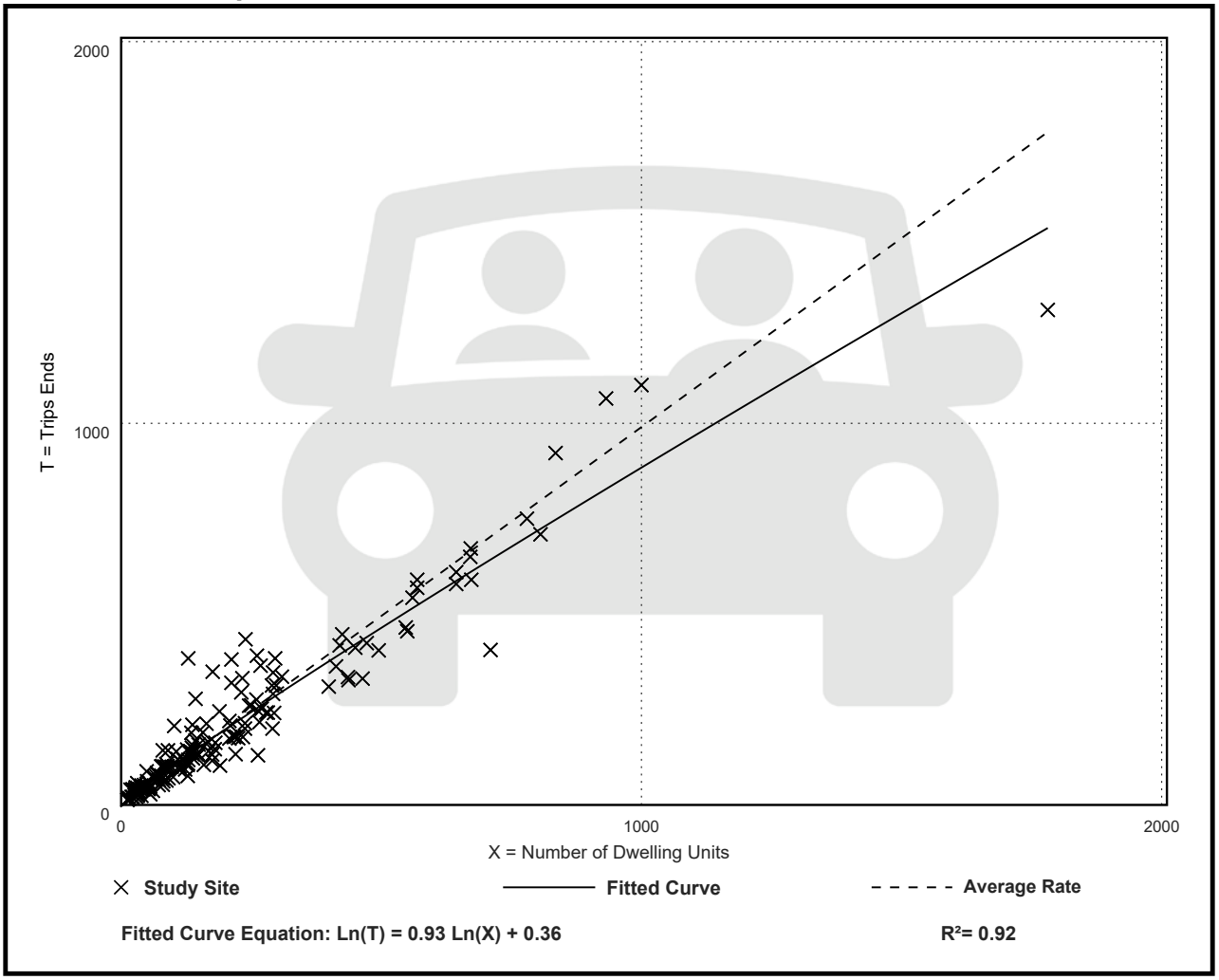
Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
PM Peak Hour of Generator

Setting/Location: General Urban/Suburban
Number of Studies: 178
Avg. Num. of Dwelling Units: 203
Directional Distribution: 64% entering, 36% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.99	0.49 - 2.98	0.28

Data Plot and Equation



Single-Family Detached Housing
(210)

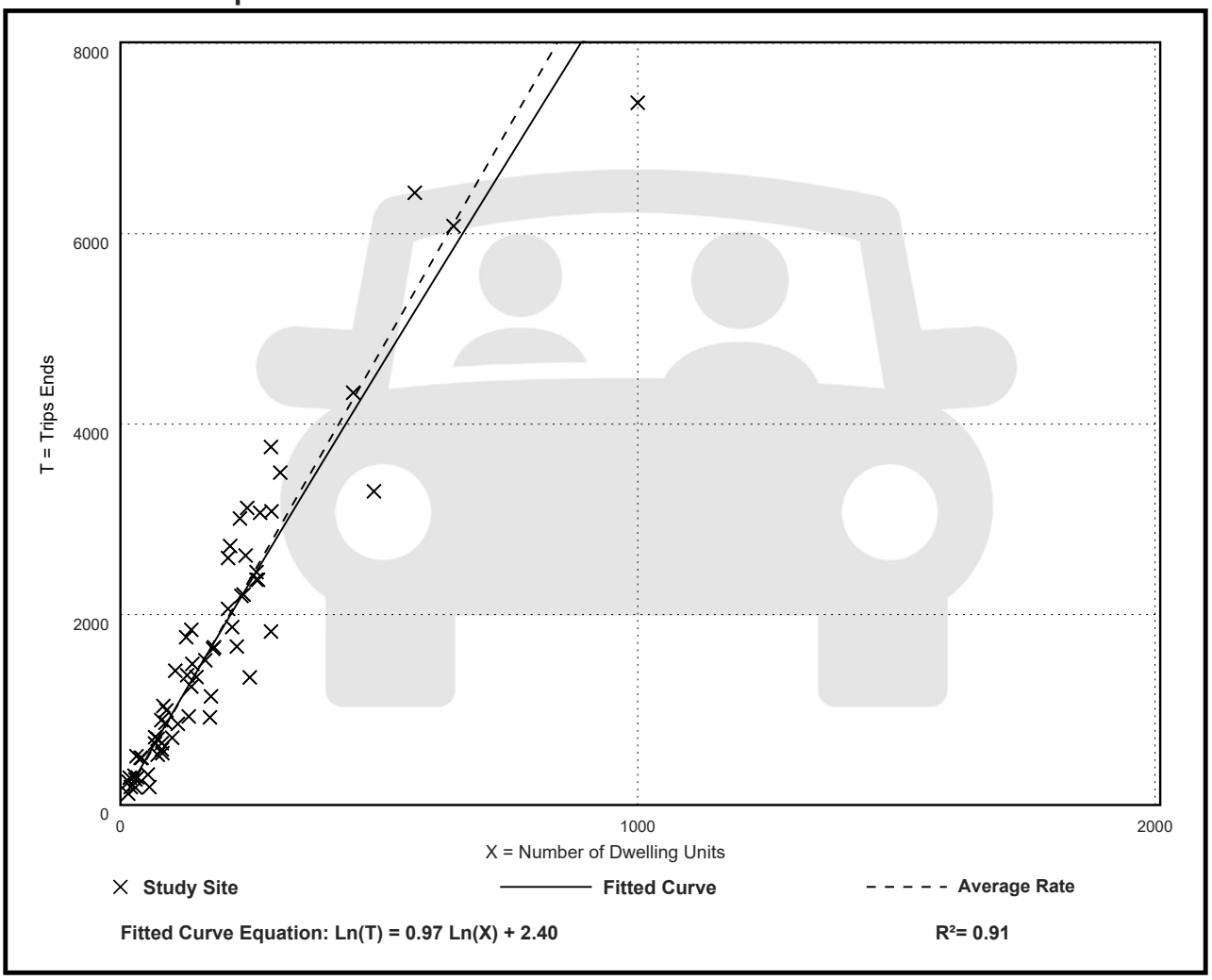
Vehicle Trip Ends vs: Dwelling Units
On a: Saturday

Setting/Location: General Urban/Suburban
Number of Studies: 63
Avg. Num. of Dwelling Units: 179
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
9.48	3.36 - 16.52	2.26

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.97 Ln(X) + 2.40

R^2= 0.91

Single-Family Detached Housing
(210)

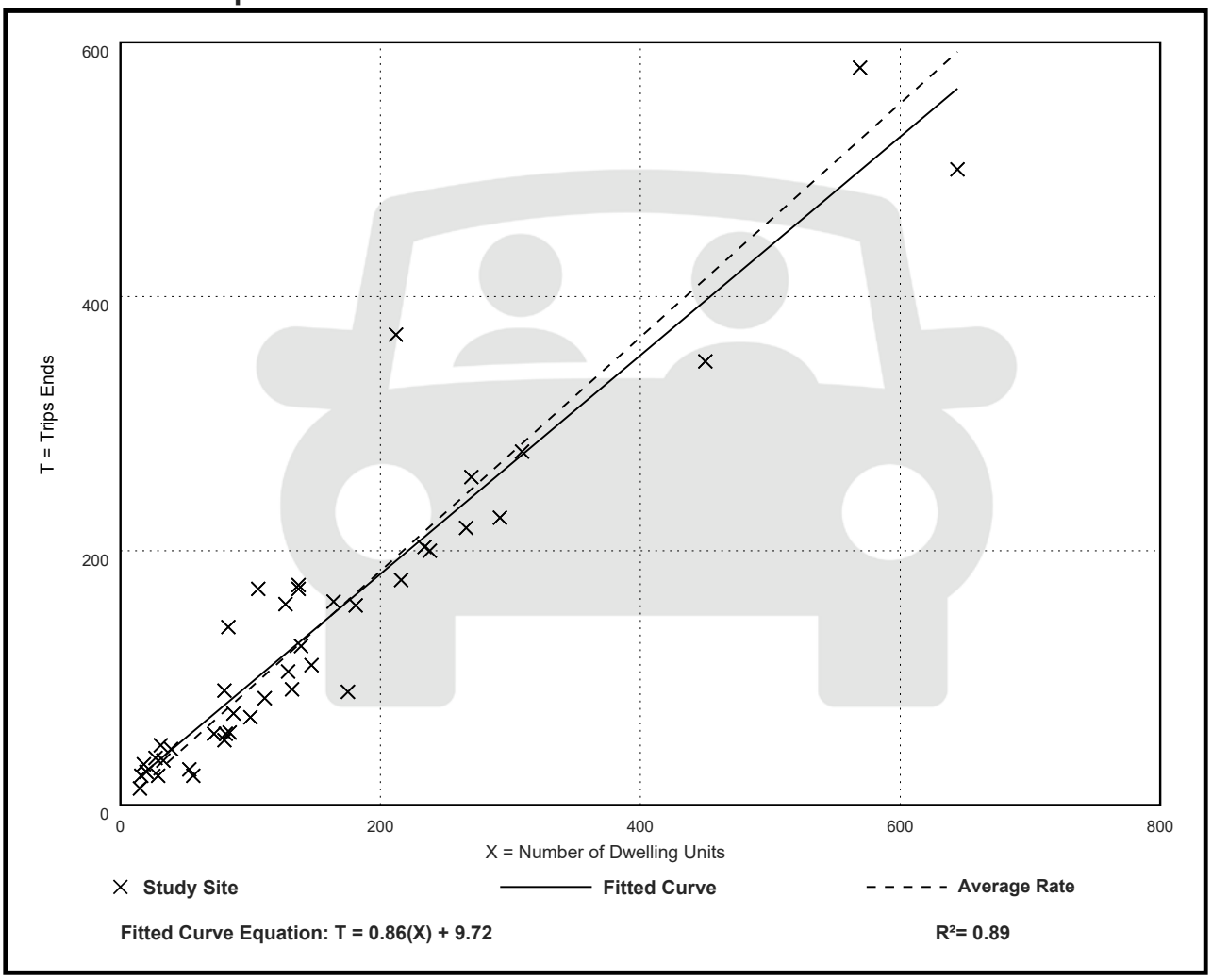
Vehicle Trip Ends vs: Dwelling Units
On a: Saturday, Peak Hour of Generator

Setting/Location: General Urban/Suburban
Number of Studies: 42
Avg. Num. of Dwelling Units: 152
Directional Distribution: 54% entering, 46% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.92	0.41 - 1.78	0.27

Data Plot and Equation



Fitted Curve Equation: T = 0.86(X) + 9.72

R^2= 0.89

Single-Family Detached Housing
(210)

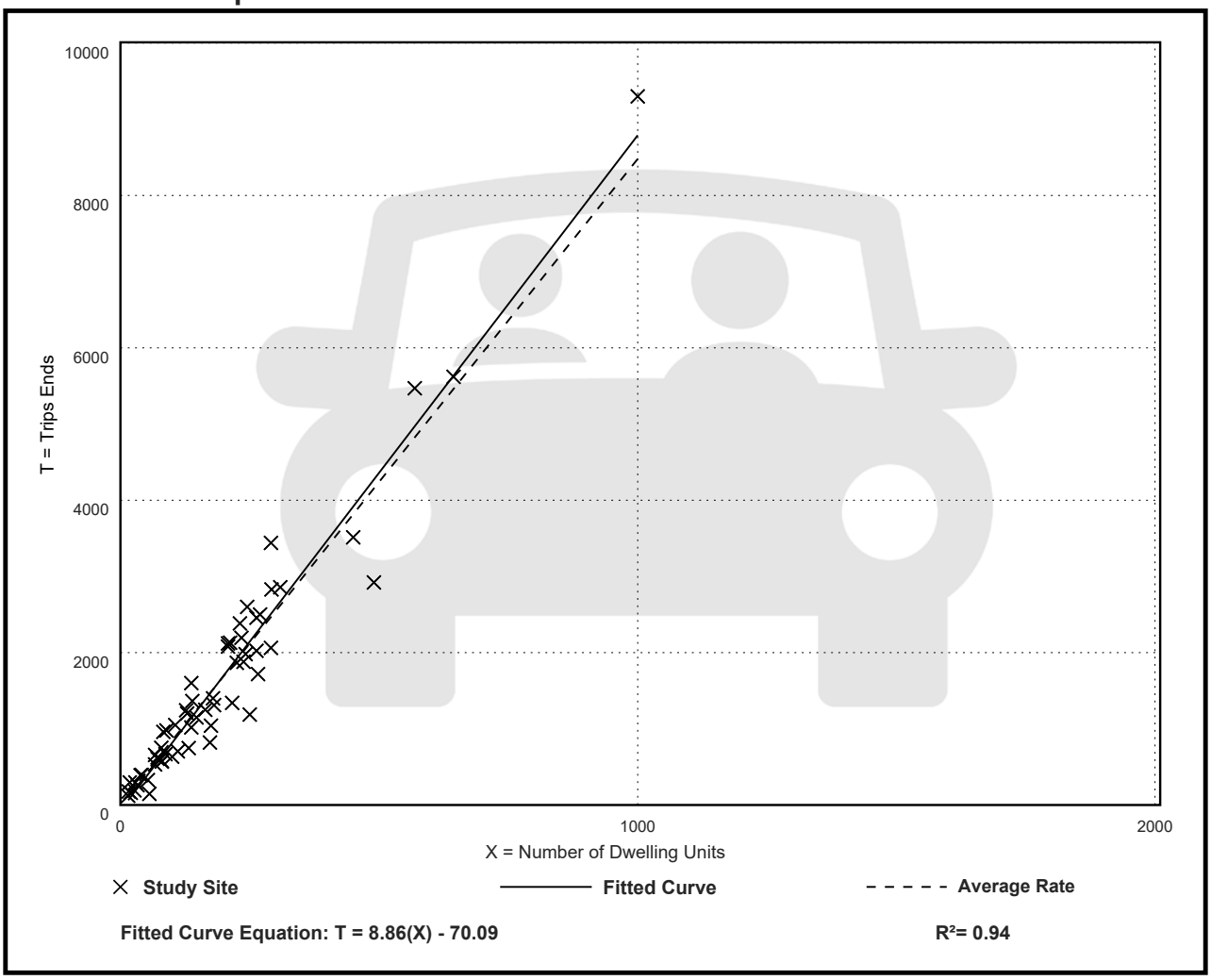
Vehicle Trip Ends vs: Dwelling Units
On a: Sunday

Setting/Location: General Urban/Suburban
Number of Studies: 60
Avg. Num. of Dwelling Units: 186
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
8.48	2.61 - 16.44	1.74

Data Plot and Equation



Single-Family Detached Housing
(210)

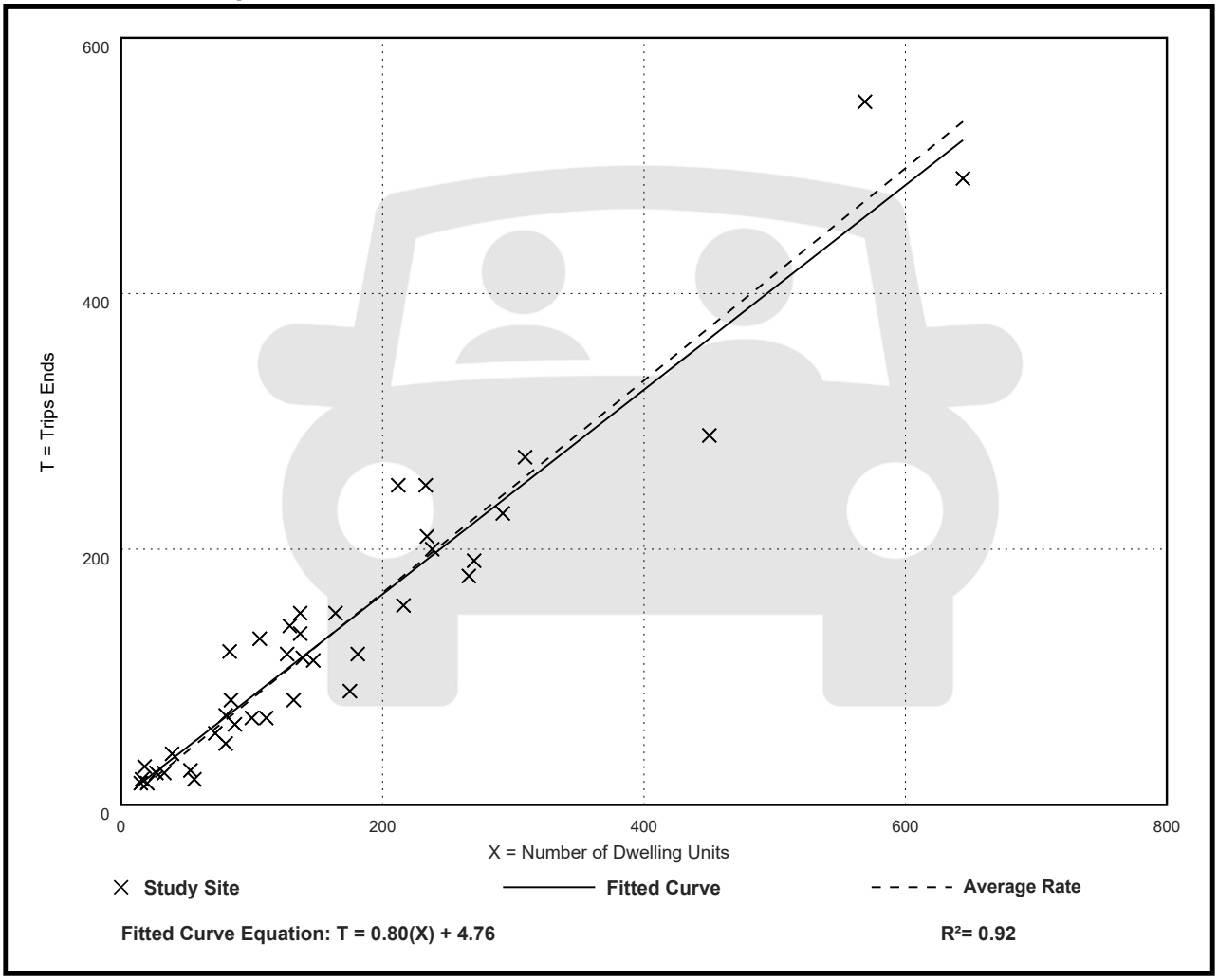
Vehicle Trip Ends vs: Dwelling Units
On a: Sunday, Peak Hour of Generator

Setting/Location: General Urban/Suburban
Number of Studies: 40
Avg. Num. of Dwelling Units: 162
Directional Distribution: 53% entering, 47% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.83	0.36 - 1.67	0.19

Data Plot and Equation



Fitted Curve Equation: T = 0.80(X) + 4.76

R^2= 0.92

Single-Family Detached Housing
(210)

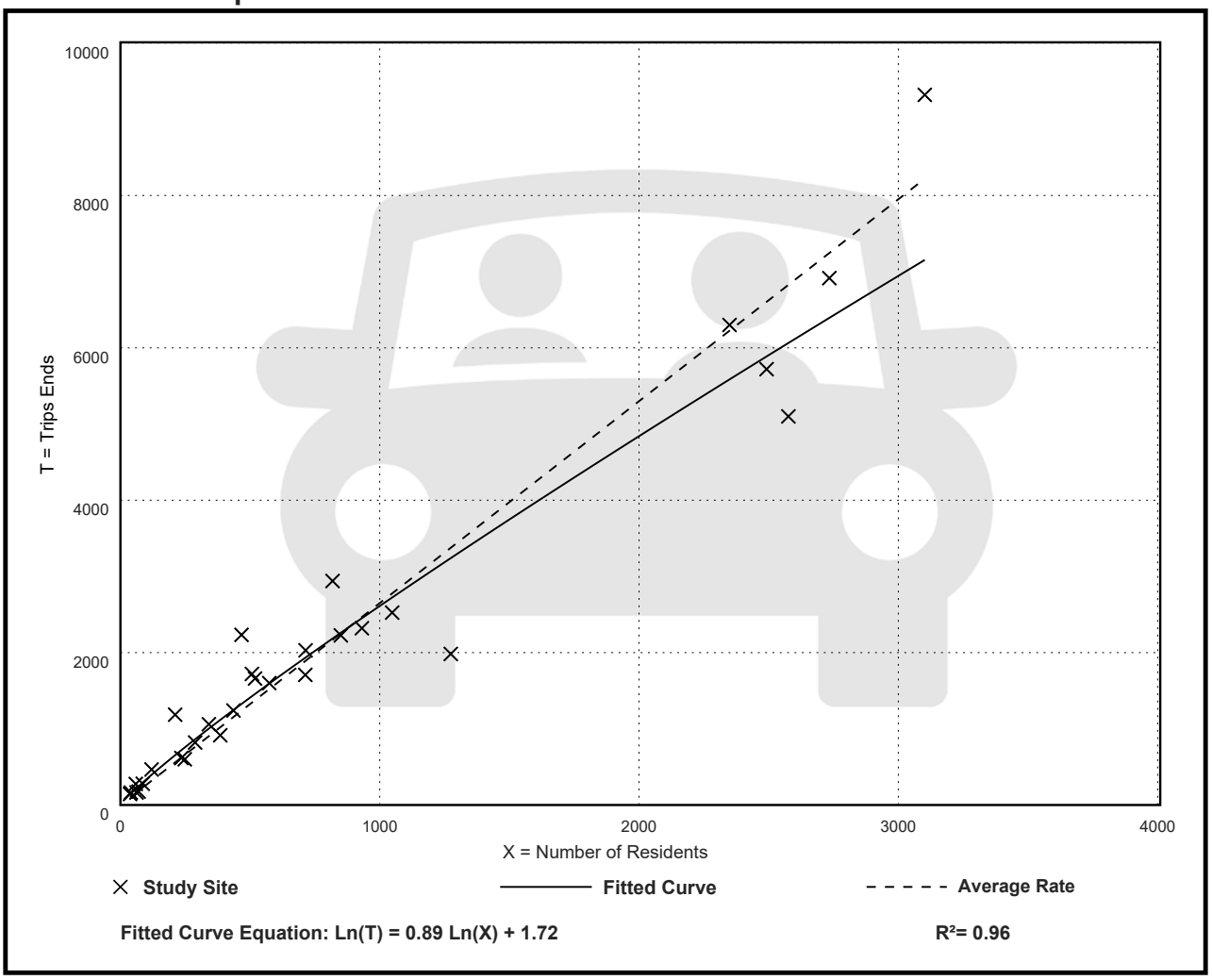
Vehicle Trip Ends vs: Residents
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 30
Avg. Num. of Residents: 810
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Resident

Average Rate	Range of Rates	Standard Deviation
2.65	1.56 - 5.62	0.64

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.89 Ln(X) + 1.72

R^2= 0.96

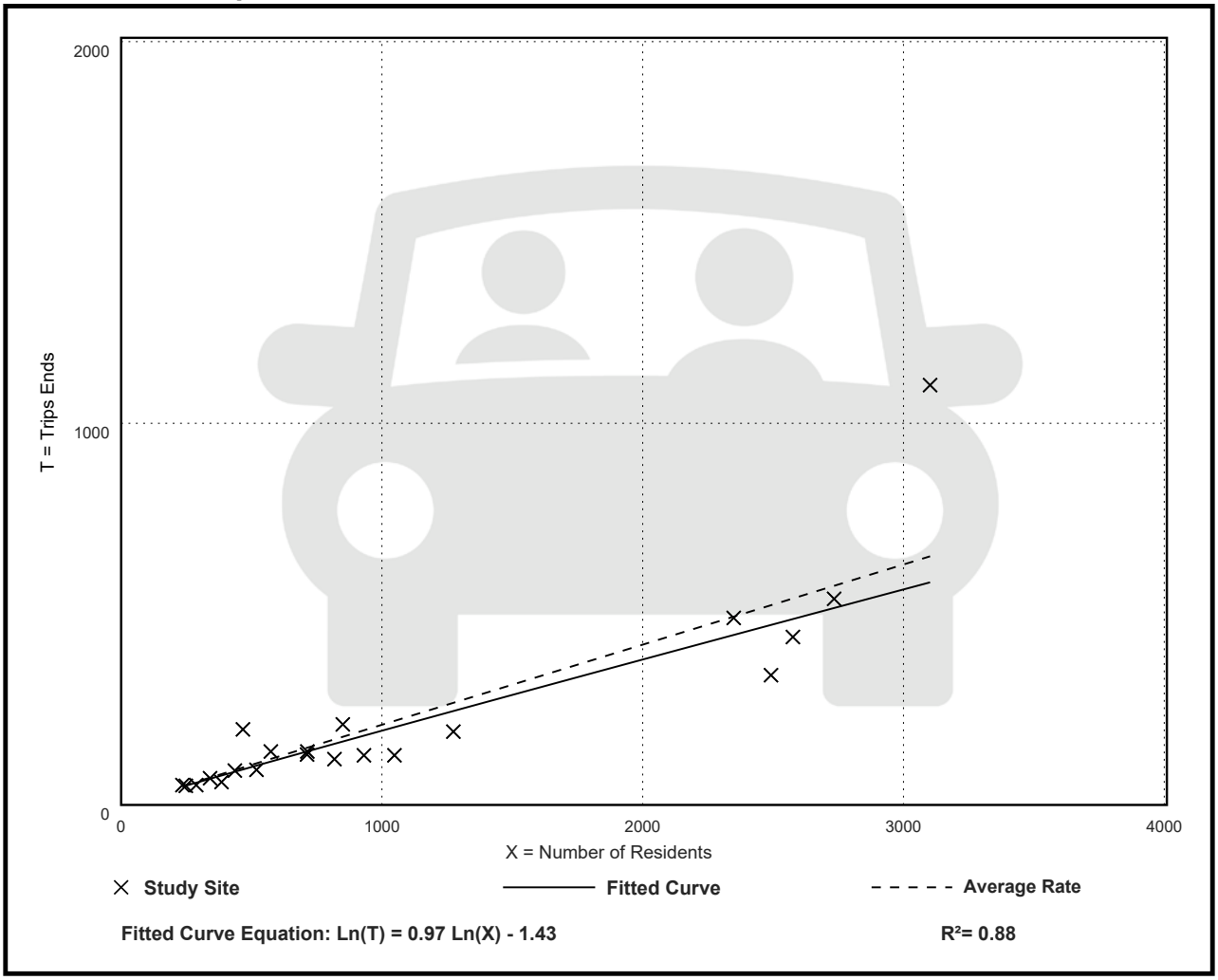
Single-Family Detached Housing
(210)

Vehicle Trip Ends vs: **Residents**
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: 21
Avg. Num. of Residents: 1100
Directional Distribution: 31% entering, 69% exiting

Vehicle Trip Generation per Resident

Average Rate	Range of Rates	Standard Deviation
0.21	0.12 - 0.42	0.08

Data Plot and Equation



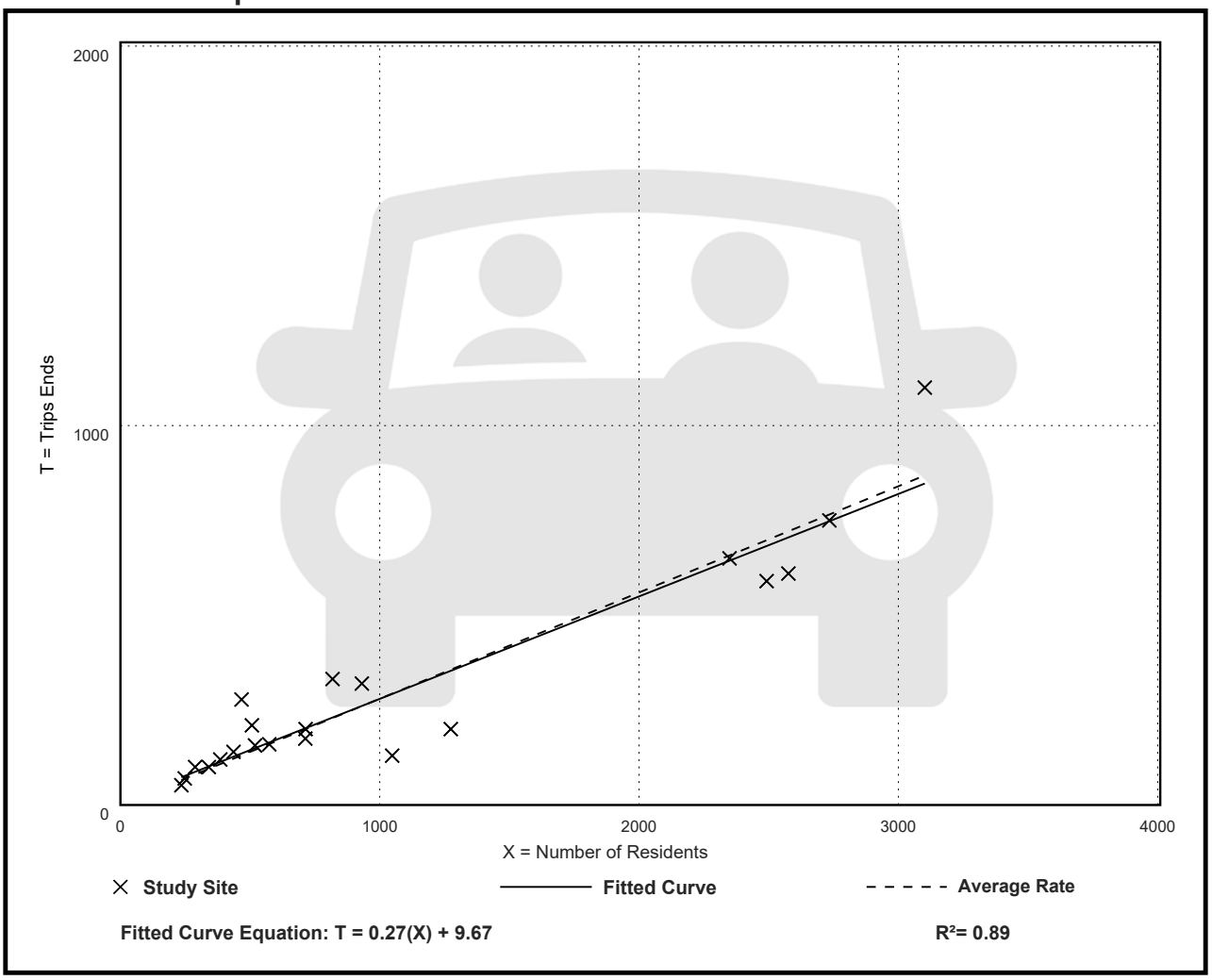
Single-Family Detached Housing
(210)

Vehicle Trip Ends vs: Residents
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: 21
Avg. Num. of Residents: 1083
Directional Distribution: 66% entering, 34% exiting

Vehicle Trip Generation per Resident

Average Rate	Range of Rates	Standard Deviation
0.28	0.12 - 0.60	0.08

Data Plot and Equation



Single-Family Detached Housing
(210)

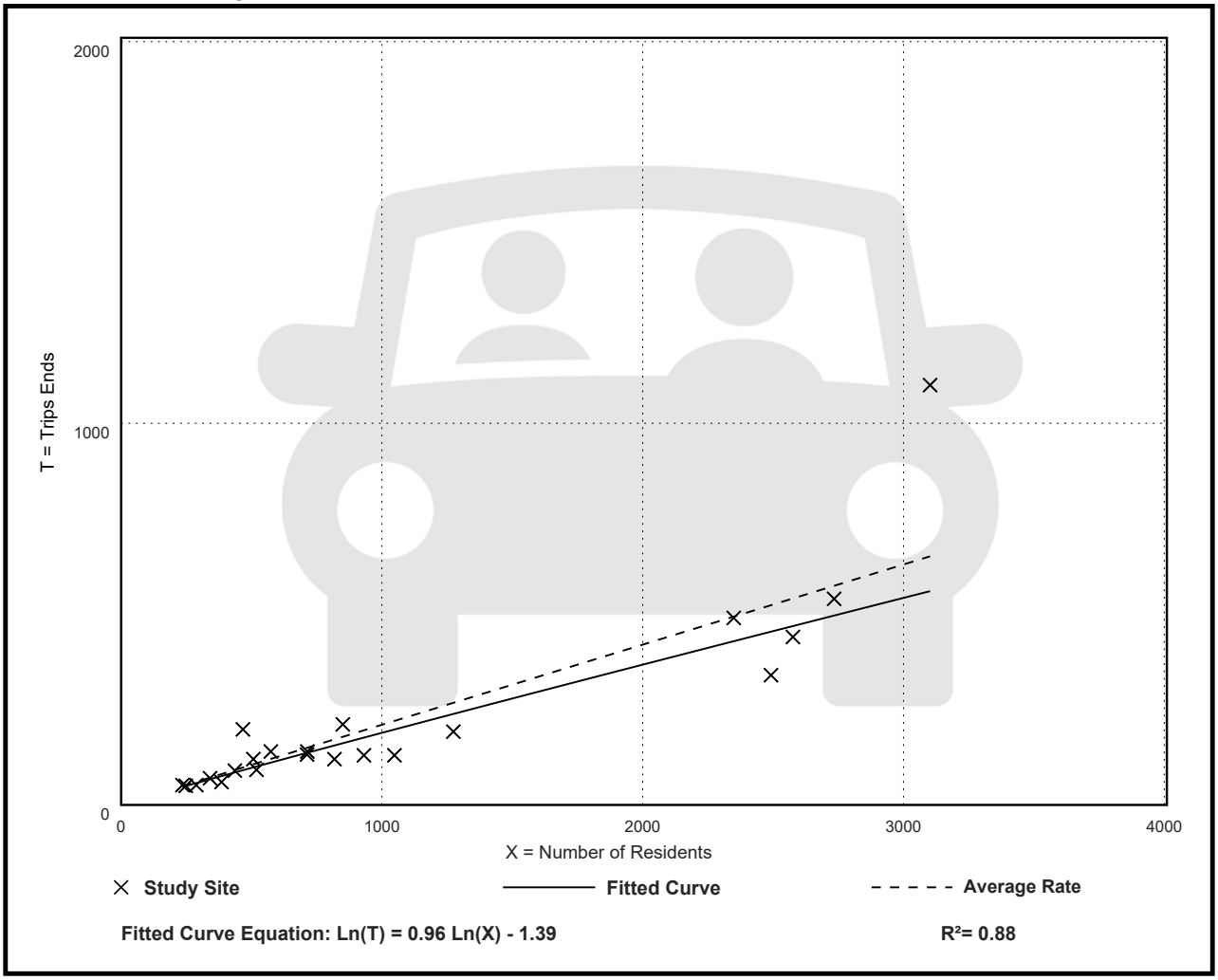
Vehicle Trip Ends vs: Residents
On a: Weekday,
AM Peak Hour of Generator

Setting/Location: General Urban/Suburban
Number of Studies: 22
Avg. Num. of Residents: 1073
Directional Distribution: 30% entering, 70% exiting

Vehicle Trip Generation per Resident

Average Rate	Range of Rates	Standard Deviation
0.21	0.12 - 0.42	0.08

Data Plot and Equation



Single-Family Detached Housing
(210)

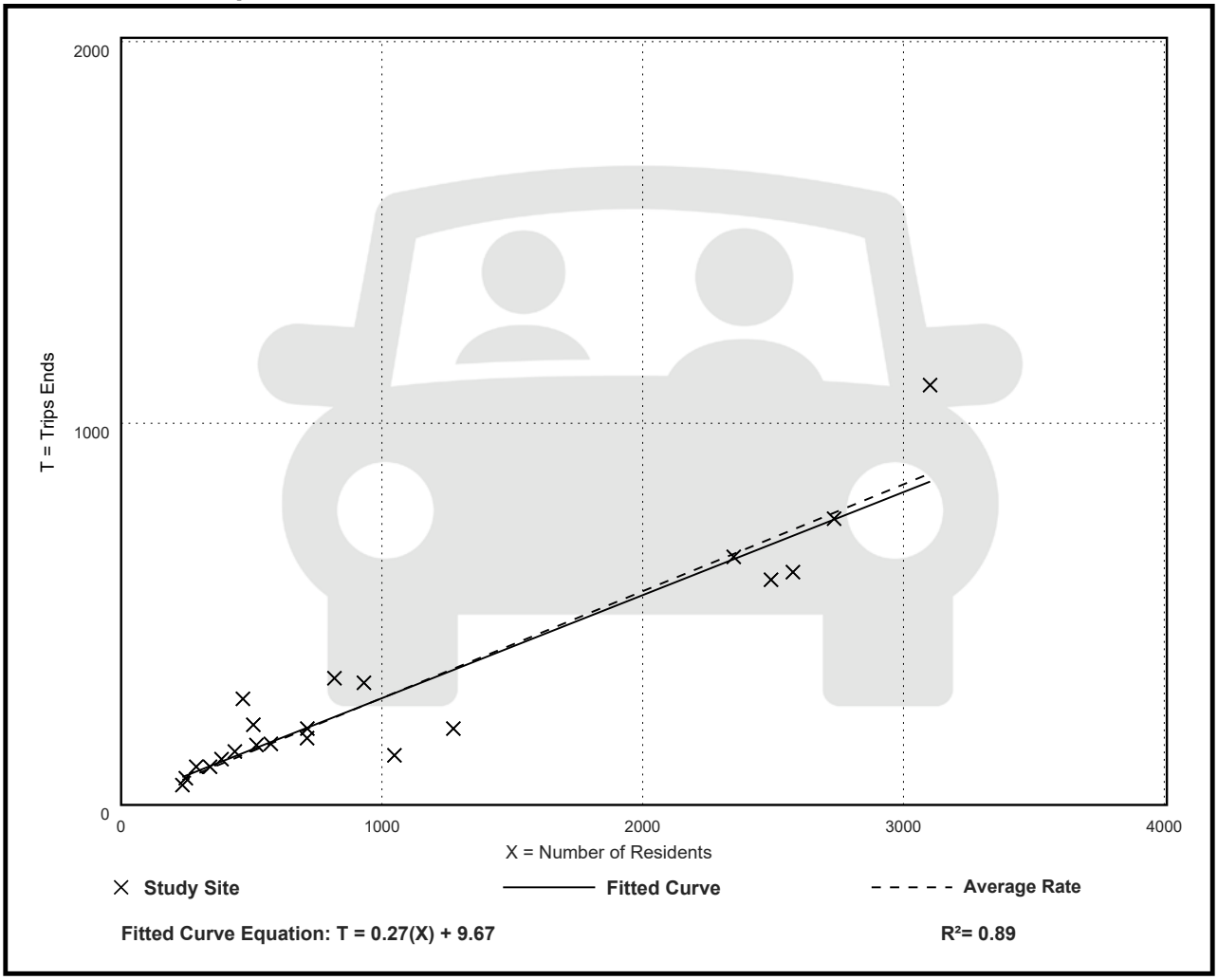
Vehicle Trip Ends vs: Residents
On a: Weekday,
PM Peak Hour of Generator

Setting/Location: General Urban/Suburban
Number of Studies: 21
Avg. Num. of Residents: 1083
Directional Distribution: 66% entering, 34% exiting

Vehicle Trip Generation per Resident

Average Rate	Range of Rates	Standard Deviation
0.28	0.12 - 0.60	0.08

Data Plot and Equation



Single-Family Detached Housing
(210)

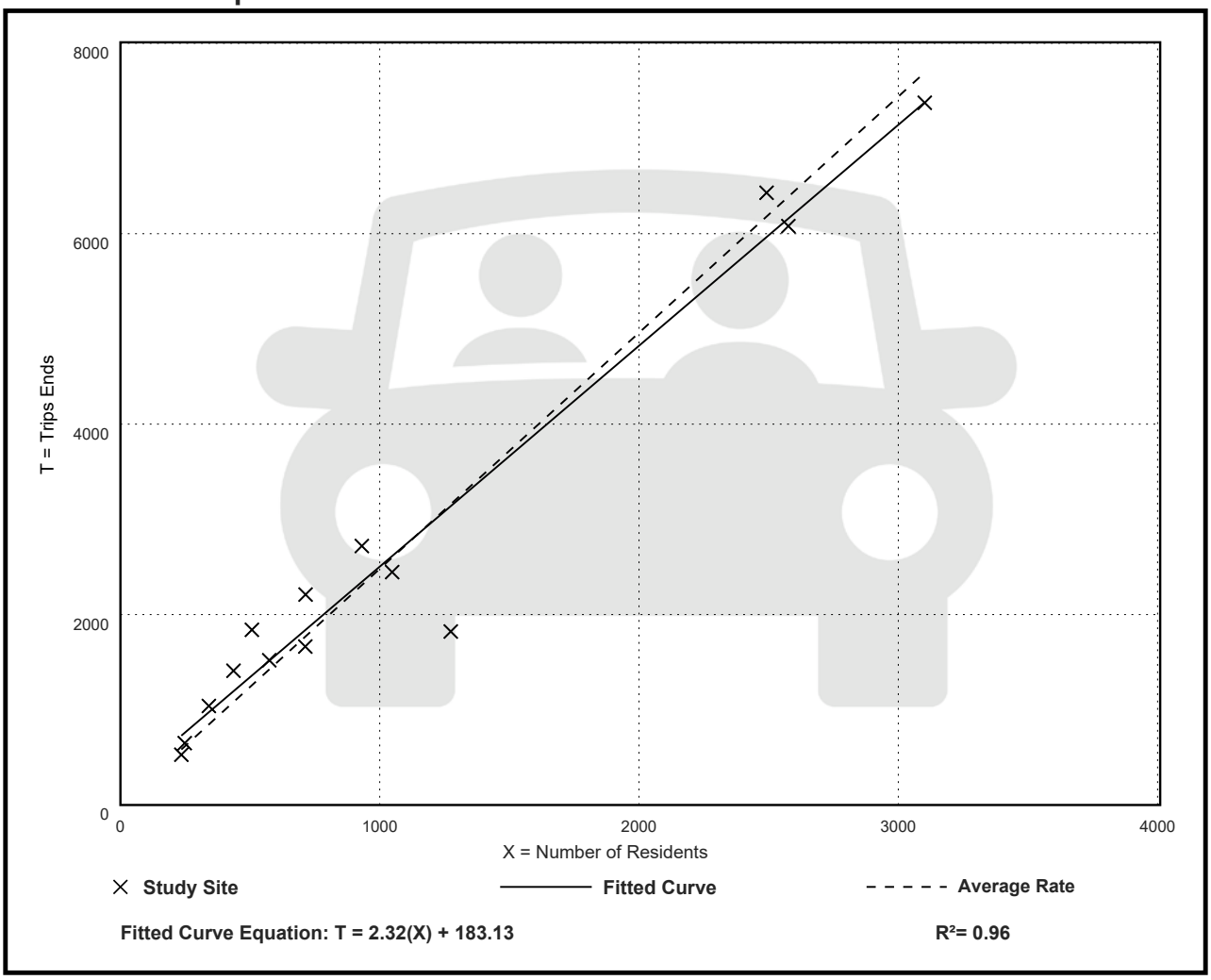
Vehicle Trip Ends vs: Residents
On a: Saturday

Setting/Location: General Urban/Suburban
Number of Studies: 14
Avg. Num. of Residents: 1085
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Resident

Average Rate	Range of Rates	Standard Deviation
2.48	1.43 - 3.63	0.46

Data Plot and Equation



Fitted Curve Equation: T = 2.32(X) + 183.13

R^2= 0.96

Single-Family Detached Housing
(210)

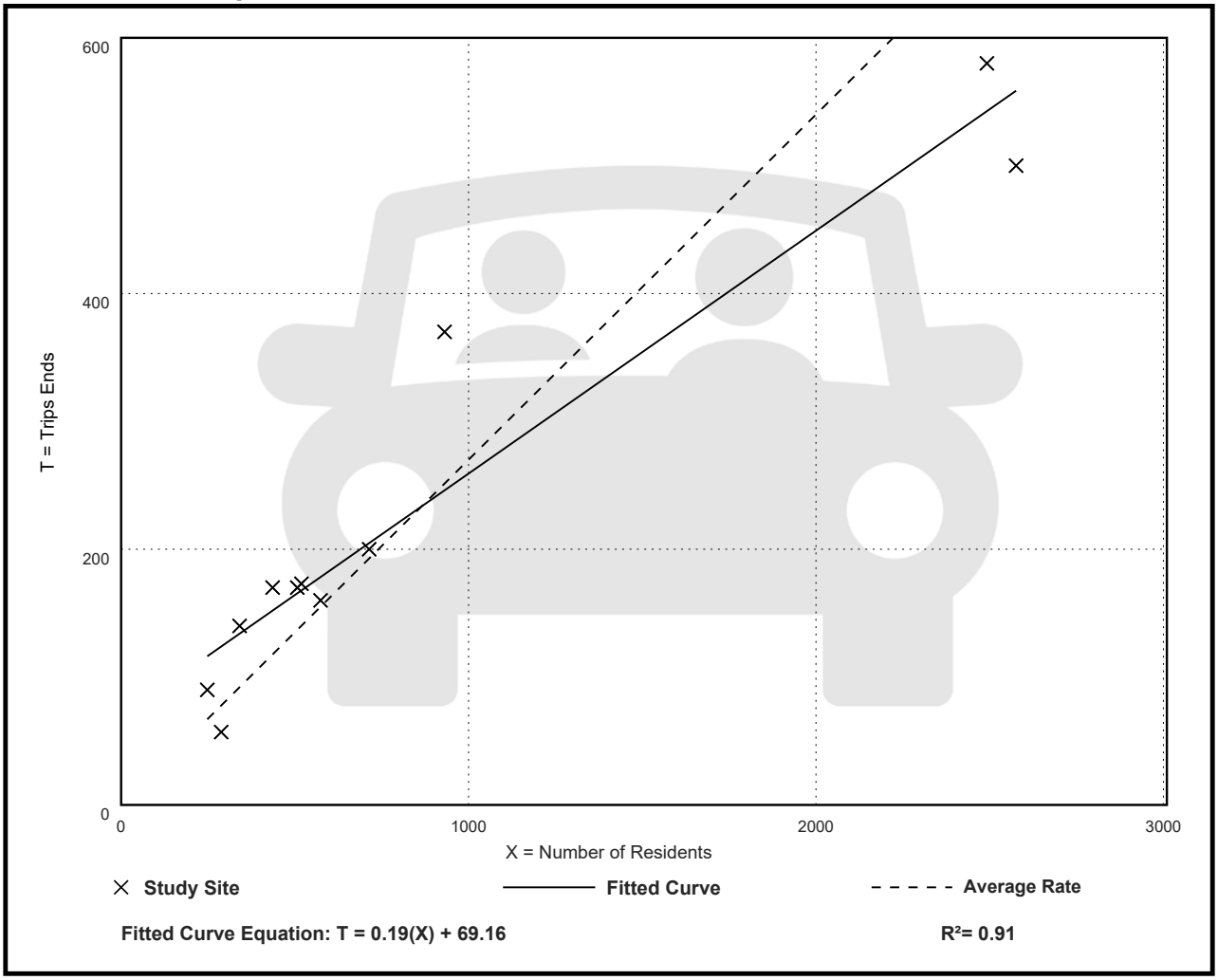
Vehicle Trip Ends vs: Residents
On a: Saturday, Peak Hour of Generator

Setting/Location: General Urban/Suburban
Number of Studies: 11
Avg. Num. of Residents: 875
Directional Distribution: 54% entering, 46% exiting

Vehicle Trip Generation per Resident

Average Rate	Range of Rates	Standard Deviation
0.27	0.19 - 0.41	0.08

Data Plot and Equation



Single-Family Detached Housing
(210)

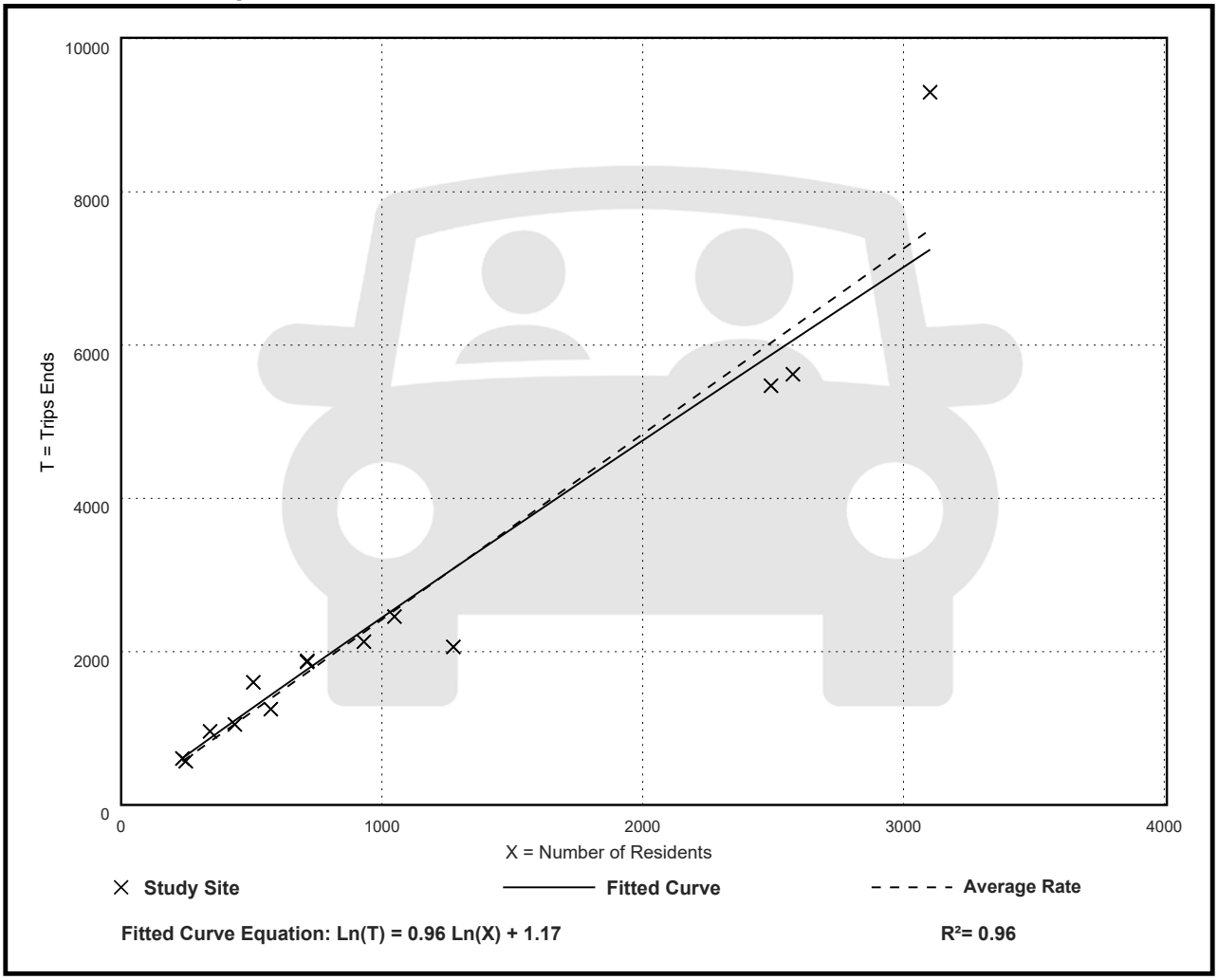
Vehicle Trip Ends vs: Residents
On a: Sunday

Setting/Location: General Urban/Suburban
Number of Studies: 14
Avg. Num. of Residents: 1085
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Resident

Average Rate	Range of Rates	Standard Deviation
2.42	1.62 - 3.16	0.43

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.96 Ln(X) + 1.17

R^2= 0.96

Single-Family Detached Housing
(210)

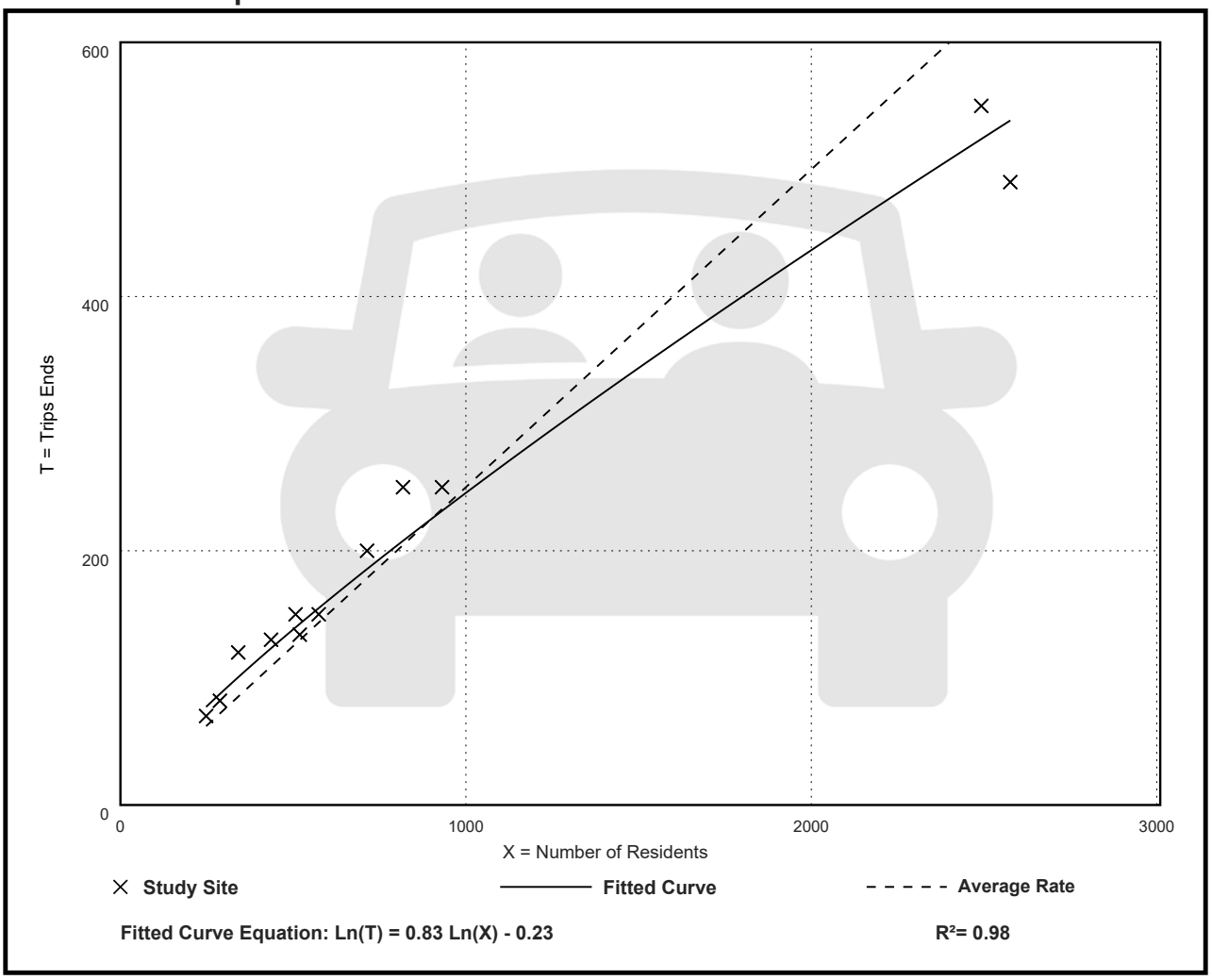
Vehicle Trip Ends vs: Residents
On a: Sunday, Peak Hour of Generator

Setting/Location: General Urban/Suburban
Number of Studies: 12
Avg. Num. of Residents: 870
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Resident

Average Rate	Range of Rates	Standard Deviation
0.25	0.19 - 0.35	0.05

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.83 Ln(X) - 0.23

R^2= 0.98

Land Use: 411
Public Park

Description

A public park is owned and operated by a municipal, county, state, or federal agency. The parks surveyed vary widely as to location, type, and number of facilities, including boating or swimming facilities, beaches, hiking trails, ball fields, soccer fields, campsites, and picnic facilities. Seasonal use of the individual sites differs widely as a result of the varying facilities and local conditions, such as weather. For example, some of the sites are used primarily for boating or swimming; others are used for softball games. Soccer complex (Land Use 488) is a related use.

Additional Data

The percentage of the park area that is used most intensively varies considerably within the studies contained in this land use. Therefore, caution should be used when using acres as an independent variable.

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 Arizona, California, New Jersey, New York, North Carolina, and Oregon.

Source Numbers

186, 392, 407, 709, 729, 852, 905

Public Park
(411)

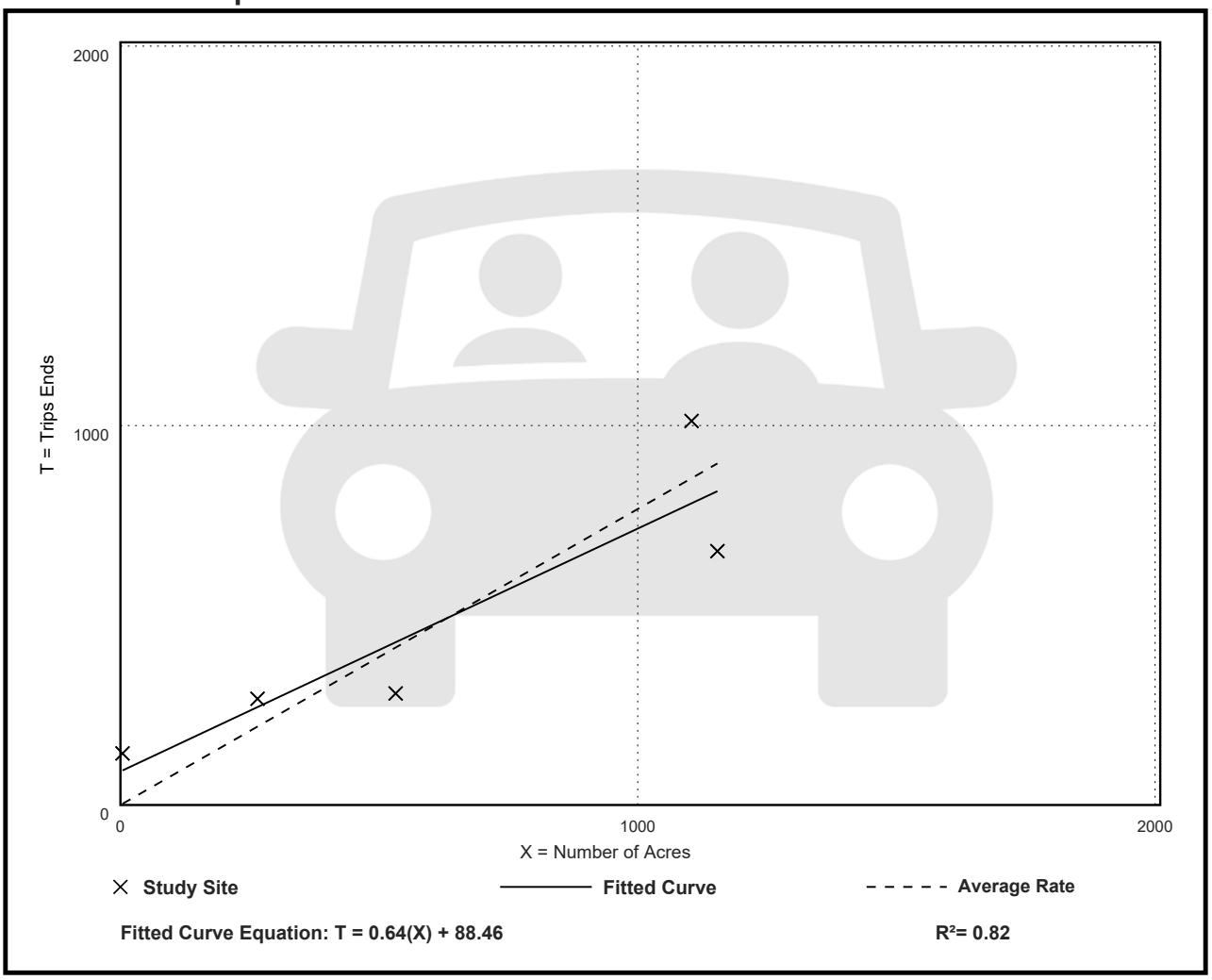
Vehicle Trip Ends vs: Acres
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 5
Avg. Num. of Acres: 612
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Acre

Average Rate	Range of Rates	Standard Deviation
0.78	0.55 - 34.00	1.36

Data Plot and Equation



Fitted Curve Equation: T = 0.64(X) + 88.46

R^2= 0.82

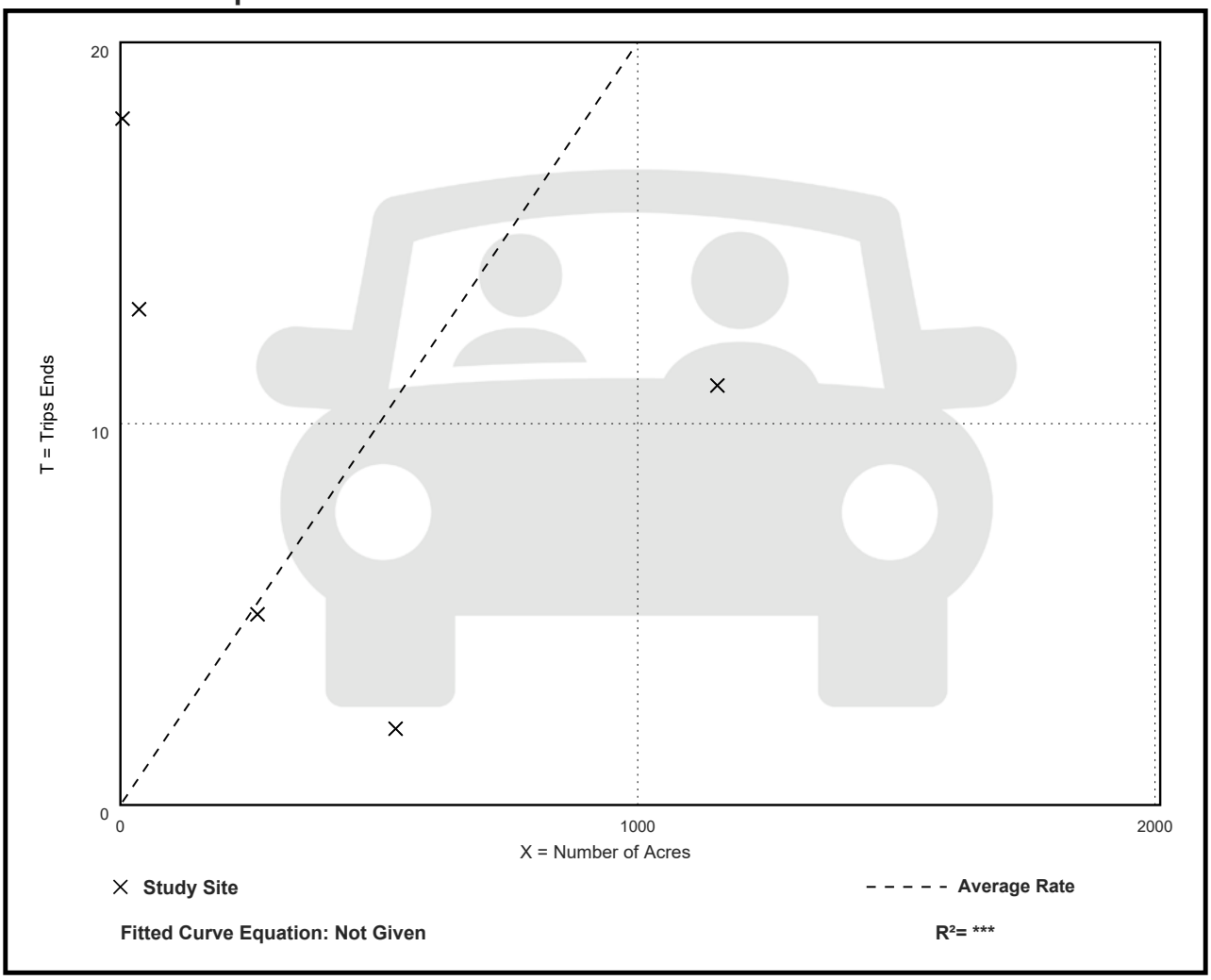
Public Park
(411)

Vehicle Trip Ends vs: Acres
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: 5
Avg. Num. of Acres: 398
Directional Distribution: 59% entering, 41% exiting

Vehicle Trip Generation per Acre

Average Rate	Range of Rates	Standard Deviation
0.02	0.00 - 4.50	0.23

Data Plot and Equation



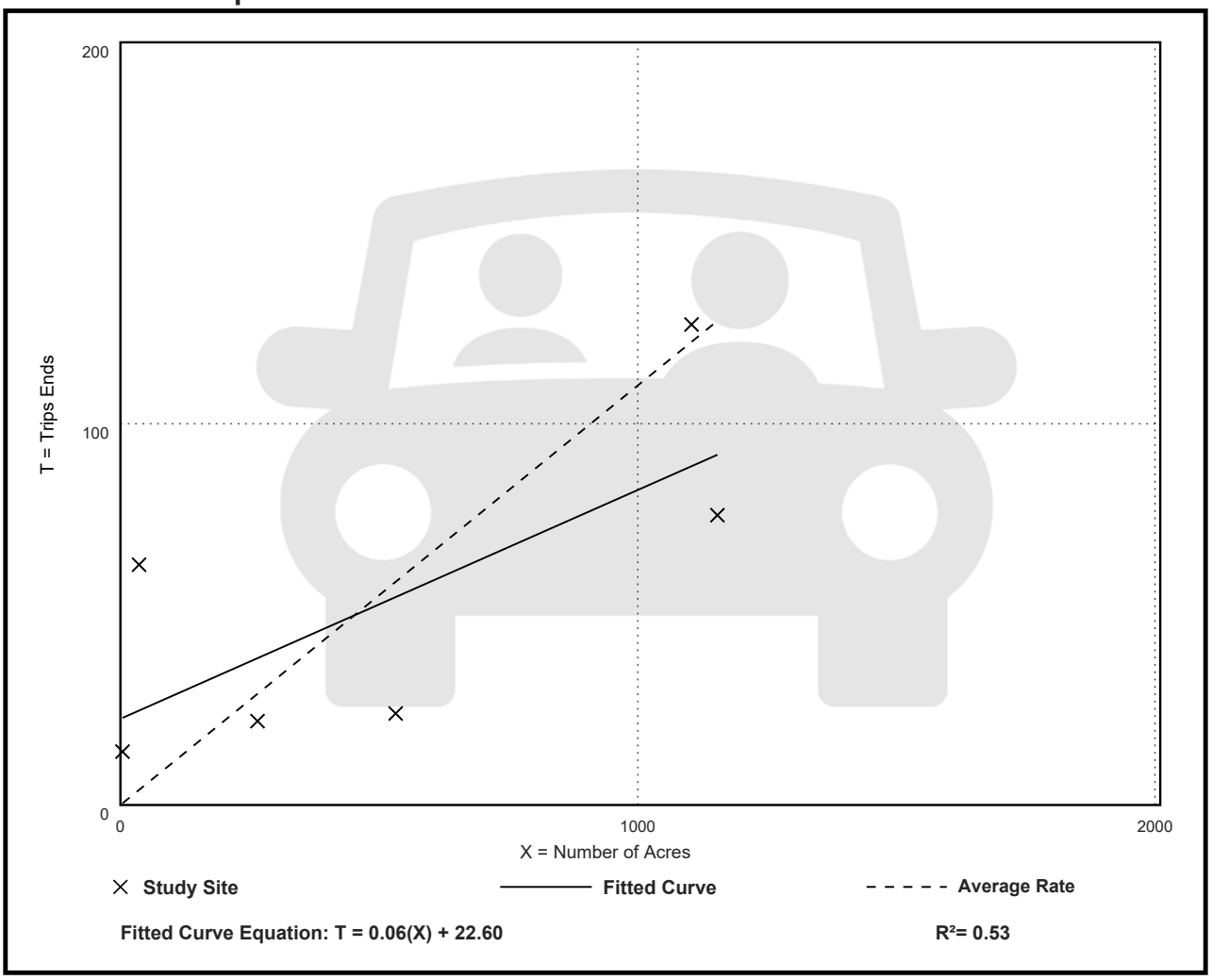
Public Park
(411)

Vehicle Trip Ends vs: Acres
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: 6
Avg. Num. of Acres: 516
Directional Distribution: 55% entering, 45% exiting

Vehicle Trip Generation per Acre

Average Rate	Range of Rates	Standard Deviation
0.11	0.05 - 3.50	0.24

Data Plot and Equation



Public Park
(411)

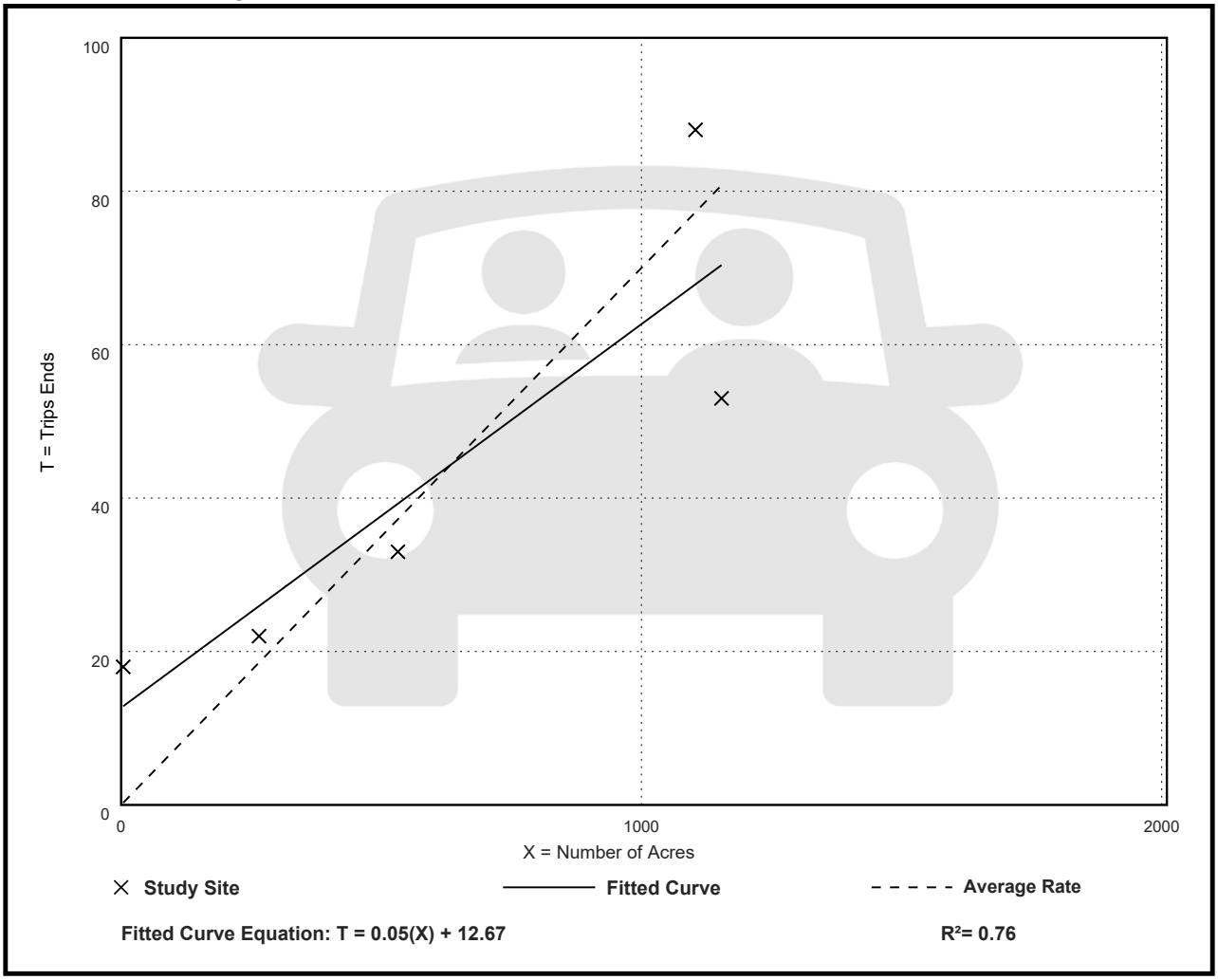
Vehicle Trip Ends vs: Acres
On a: Weekday,
AM Peak Hour of Generator

Setting/Location: General Urban/Suburban
Number of Studies: 5
Avg. Num. of Acres: 612
Directional Distribution: 63% entering, 37% exiting

Vehicle Trip Generation per Acre

Average Rate	Range of Rates	Standard Deviation
0.07	0.05 - 4.50	0.18

Data Plot and Equation



Fitted Curve Equation: T = 0.05(X) + 12.67

R^2= 0.76

Public Park
(411)

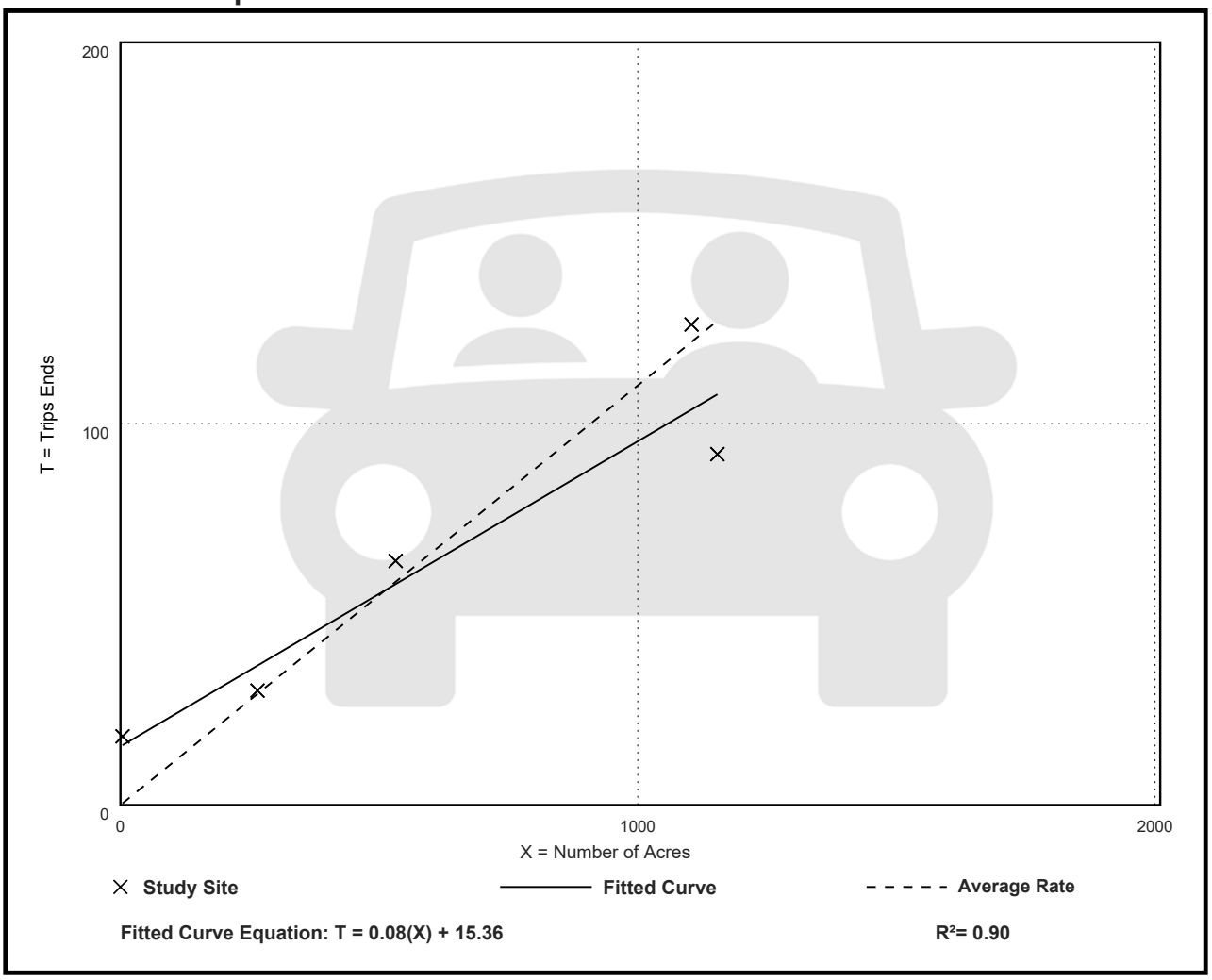
Vehicle Trip Ends vs: Acres
On a: Weekday,
PM Peak Hour of Generator

Setting/Location: General Urban/Suburban
Number of Studies: 5
Avg. Num. of Acres: 612
Directional Distribution: 40% entering, 60% exiting

Vehicle Trip Generation per Acre

Average Rate	Range of Rates	Standard Deviation
0.11	0.08 - 4.50	0.18

Data Plot and Equation



Fitted Curve Equation: T = 0.08(X) + 15.36

R^2= 0.90

Public Park
(411)

Vehicle Trip Ends vs: Acres
On a: Saturday

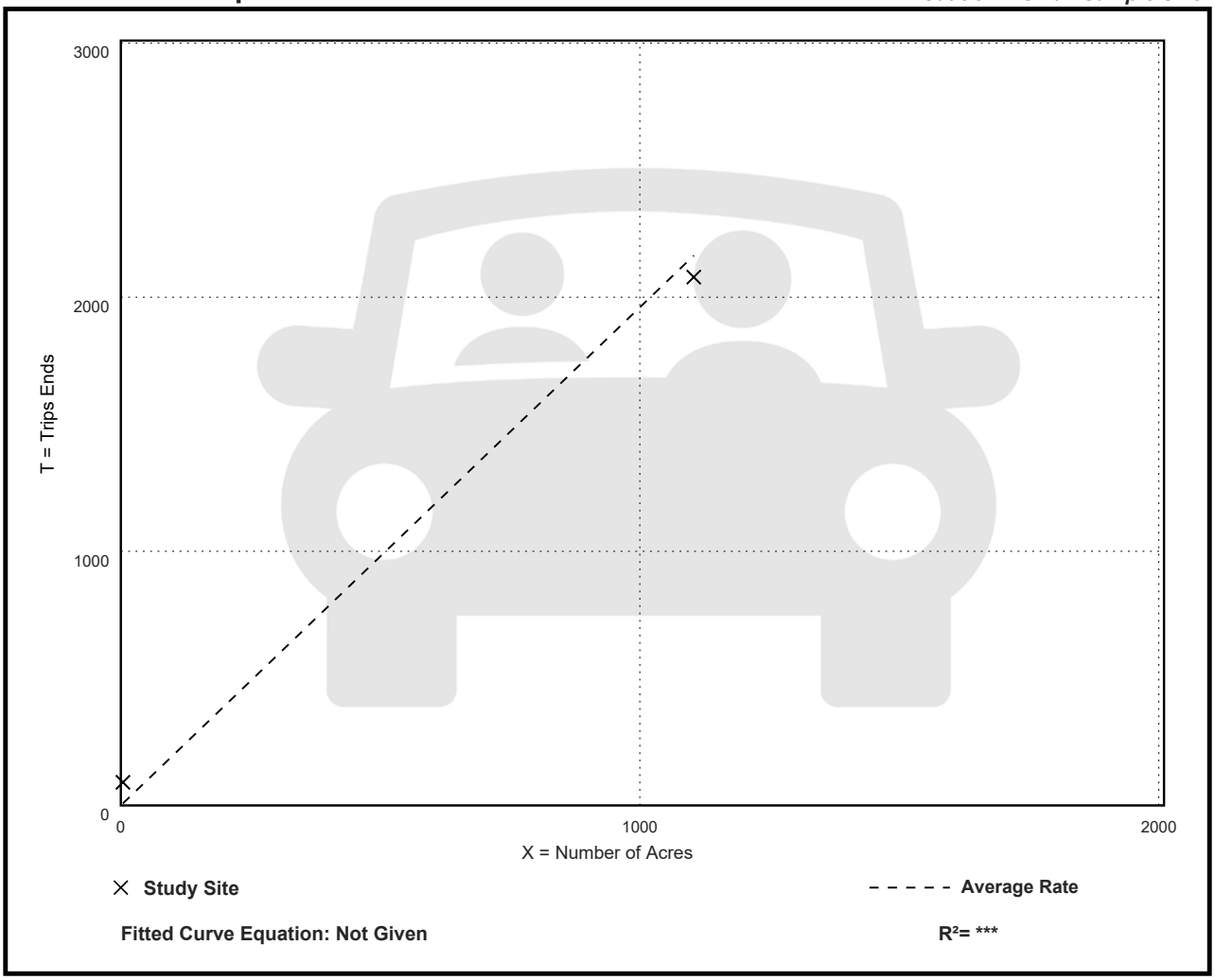
Setting/Location: General Urban/Suburban
Number of Studies: 2
Avg. Num. of Acres: 554
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Acre

Average Rate	Range of Rates	Standard Deviation
1.96	1.88 - 22.75	***

Data Plot and Equation

Caution – Small Sample Size



Public Park
(411)

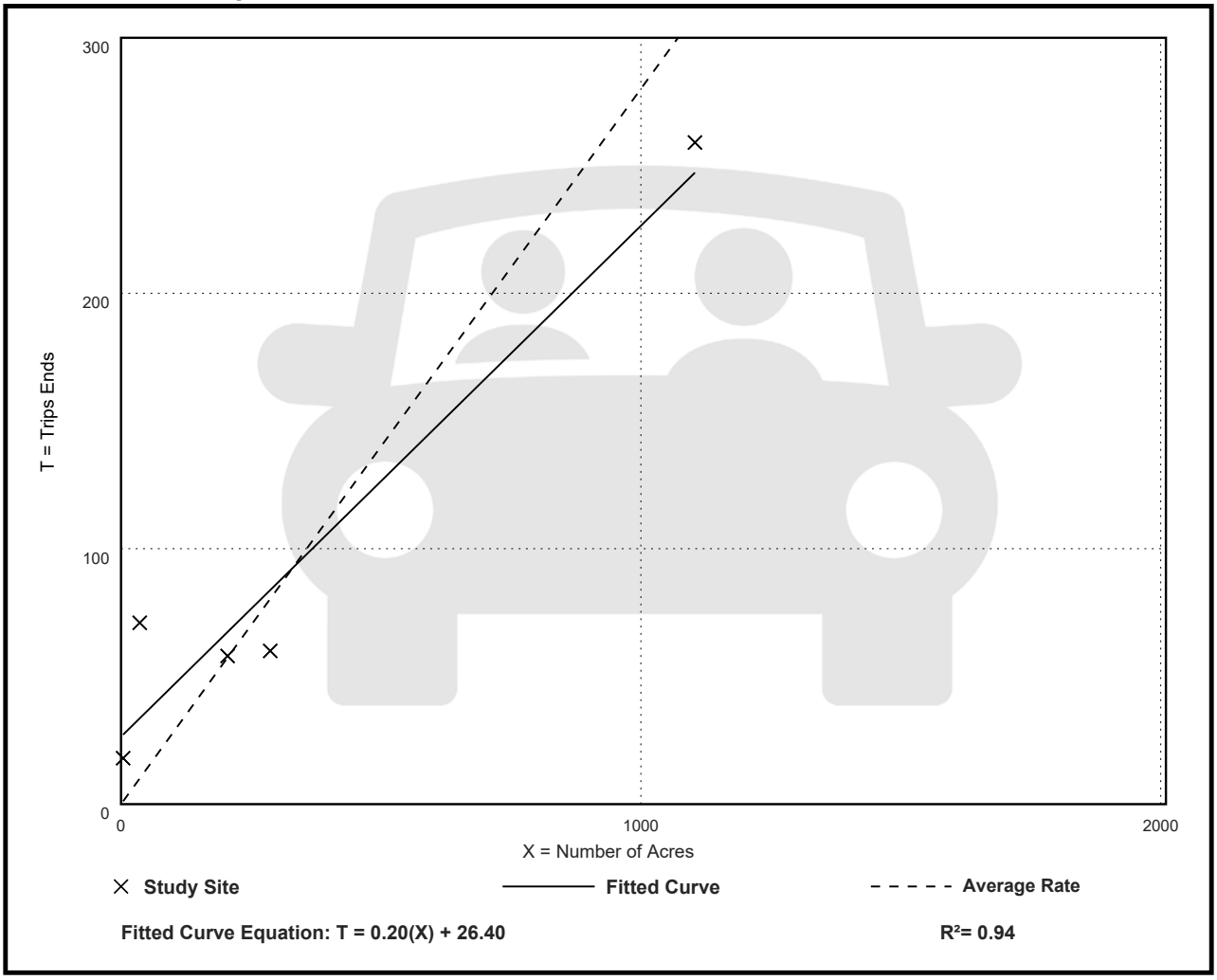
Vehicle Trip Ends vs: Acres
On a: Saturday, Peak Hour of Generator

Setting/Location: General Urban/Suburban
Number of Studies: 5
Avg. Num. of Acres: 327
Directional Distribution: 55% entering, 45% exiting

Vehicle Trip Generation per Acre

Average Rate	Range of Rates	Standard Deviation
0.28	0.21 - 4.50	0.37

Data Plot and Equation



Fitted Curve Equation: T = 0.20(X) + 26.40

R^2= 0.94

Public Park
(411)

Vehicle Trip Ends vs: Acres
On a: Sunday

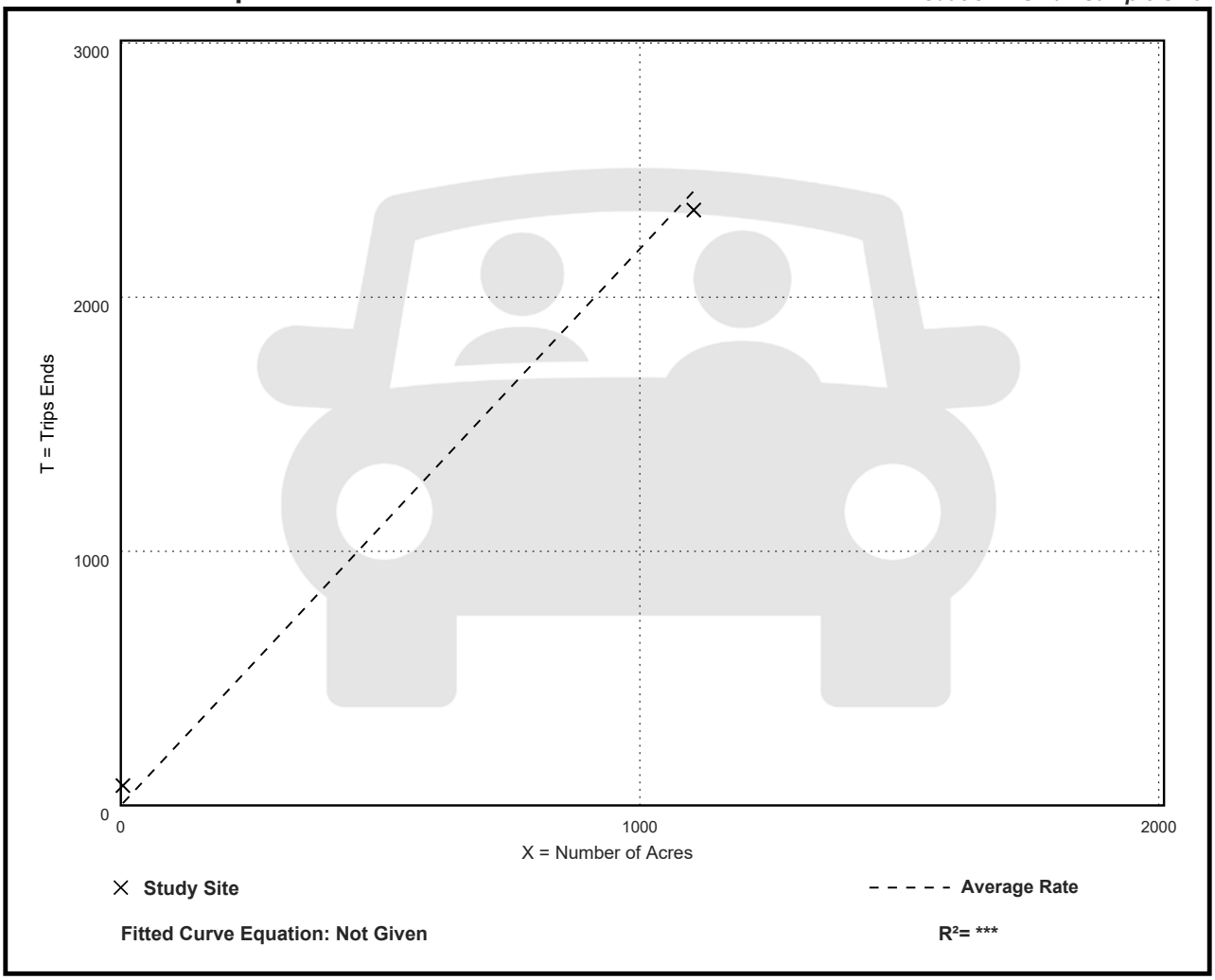
Setting/Location: General Urban/Suburban
Number of Studies: 2
Avg. Num. of Acres: 554
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Acre

Average Rate	Range of Rates	Standard Deviation
2.19	2.12 - 19.50	***

Data Plot and Equation

Caution – Small Sample Size



Fitted Curve Equation: Not Given

R^2= ***

Public Park
(411)

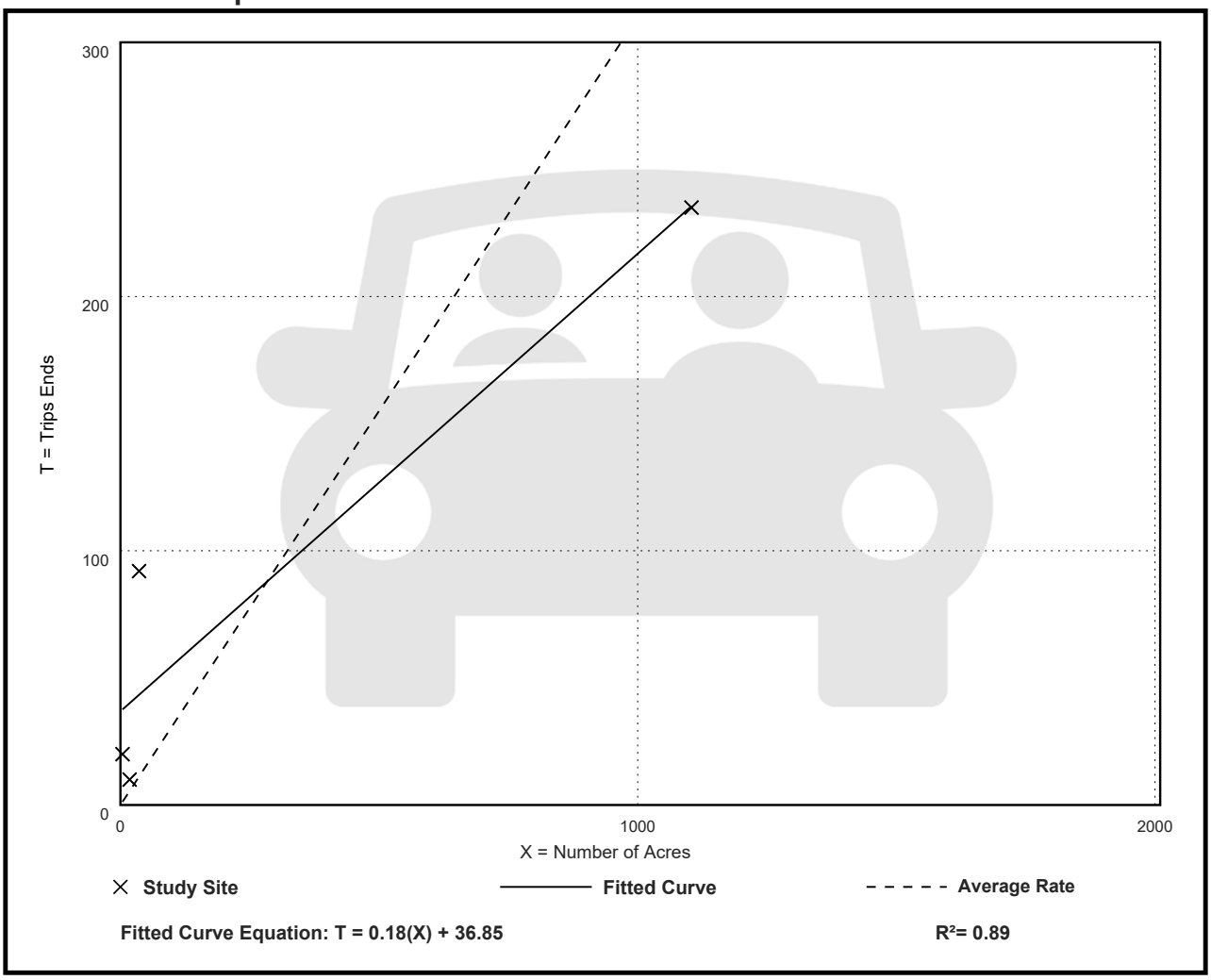
Vehicle Trip Ends vs: Acres
On a: Sunday, Peak Hour of Generator

Setting/Location: General Urban/Suburban
Number of Studies: 4
Avg. Num. of Acres: 290
Directional Distribution: 39% entering, 61% exiting

Vehicle Trip Generation per Acre

Average Rate	Range of Rates	Standard Deviation
0.31	0.21 - 5.00	0.57

Data Plot and Equation



Fitted Curve Equation: T = 0.18(X) + 36.85

R^2= 0.89

Public Park
(411)

Vehicle Trip Ends vs: Employees
On a: Weekday

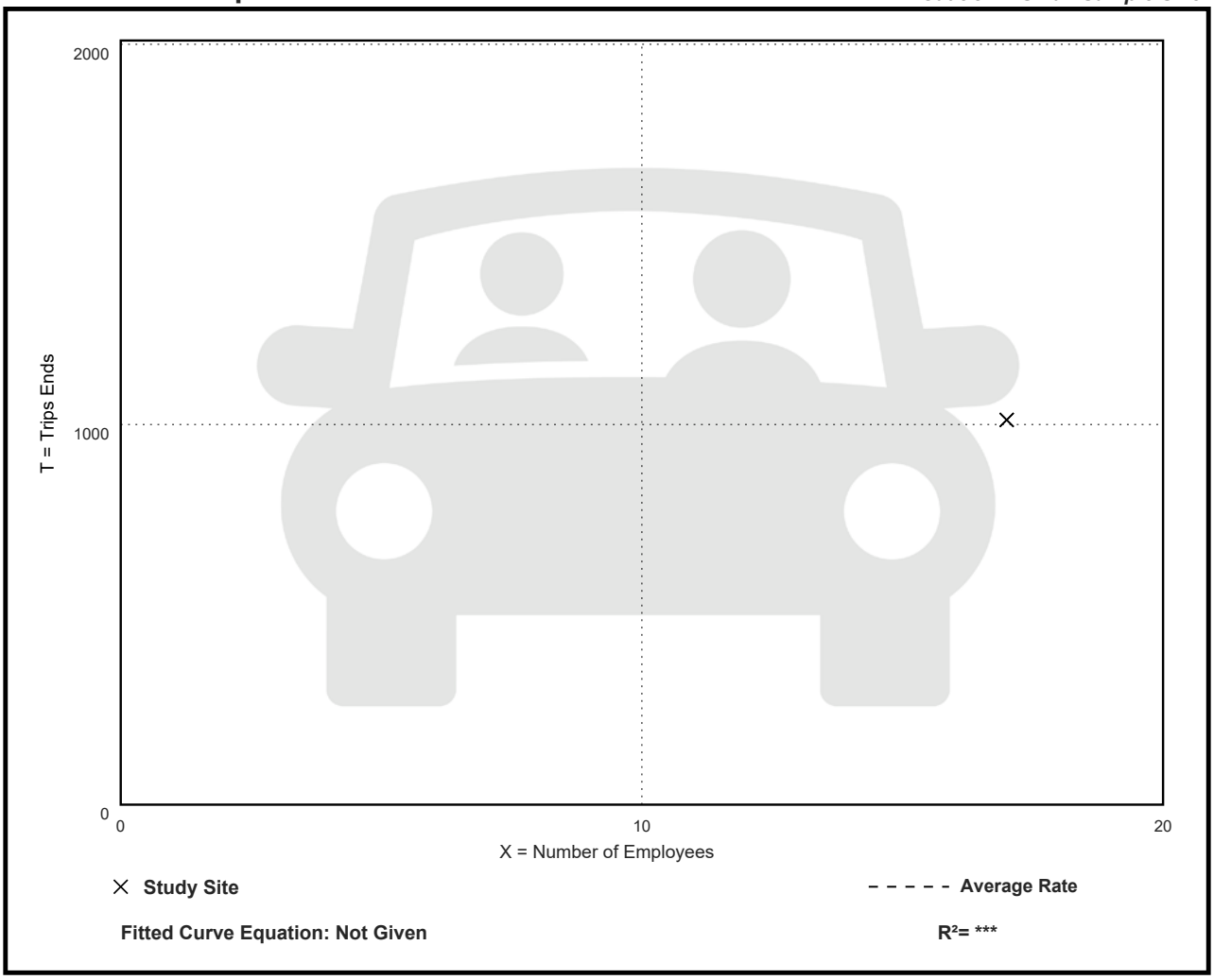
Setting/Location: General Urban/Suburban
Number of Studies: 1
Avg. Num. of Employees: 17
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
59.53	59.53 - 59.53	***

Data Plot and Equation

Caution – Small Sample Size



Fitted Curve Equation: Not Given

R^2= ***

Public Park
(411)

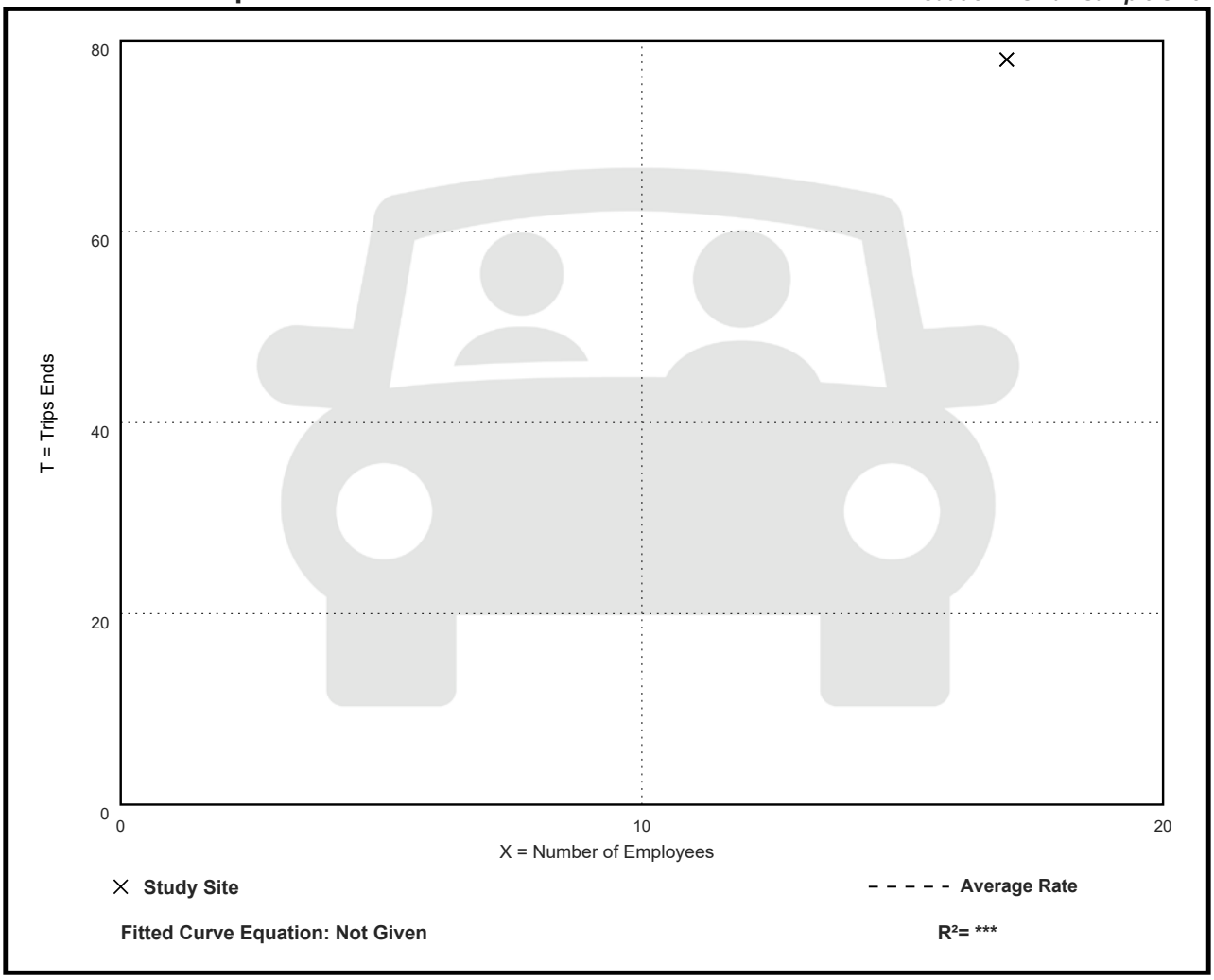
Vehicle Trip Ends vs: Employees
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: General Urban/Suburban
Number of Studies: 1
Avg. Num. of Employees: 17
Directional Distribution: 65% entering, 35% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
4.59	4.59 - 4.59	***

Data Plot and Equation

Caution – Small Sample Size



Public Park
(411)

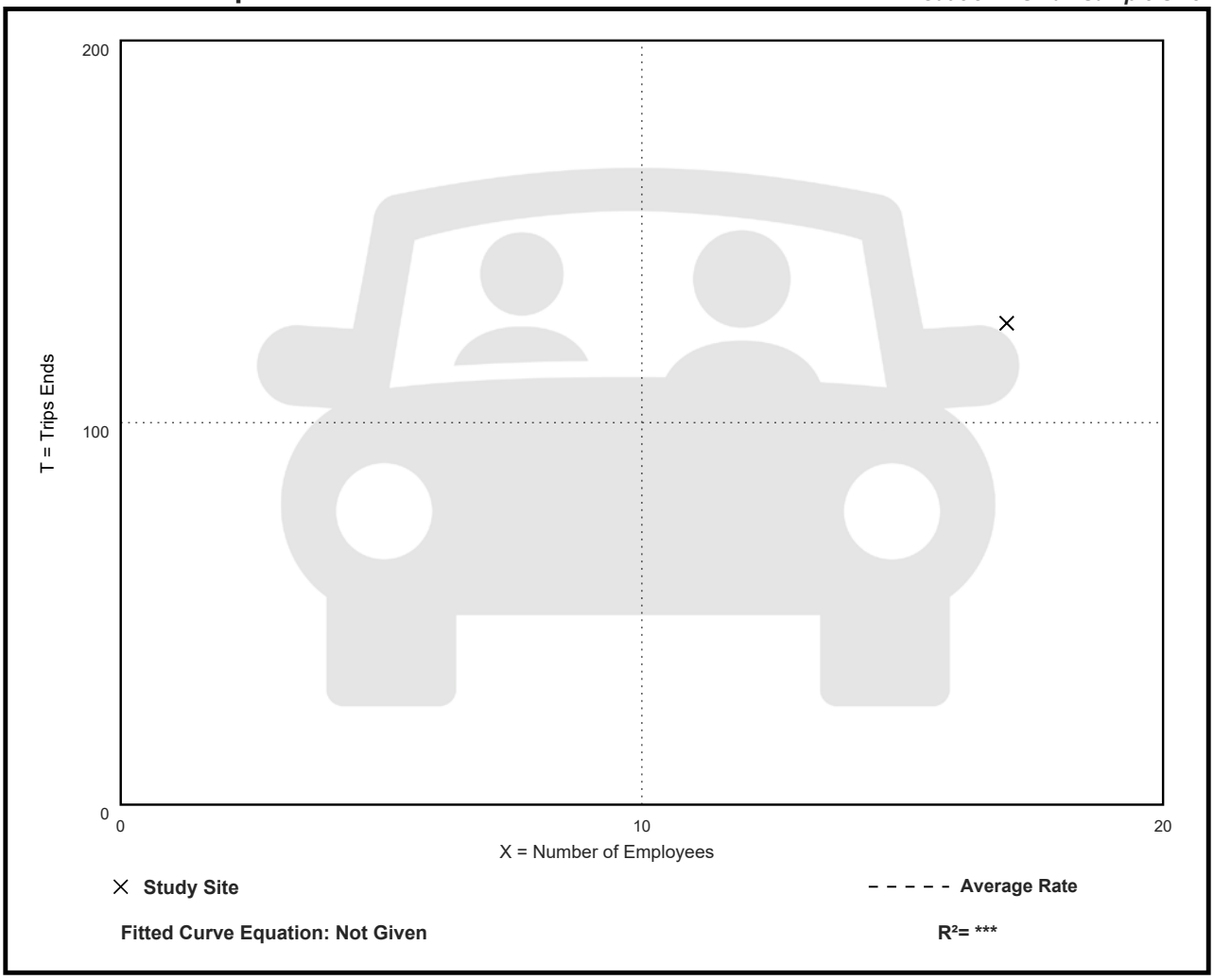
Vehicle Trip Ends vs: Employees
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
Number of Studies: 1
Avg. Num. of Employees: 17
Directional Distribution: 45% entering, 55% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
7.41	7.41 - 7.41	***

Data Plot and Equation

Caution – Small Sample Size



Public Park
(411)

Vehicle Trip Ends vs: Employees
On a: Weekday,
AM Peak Hour of Generator

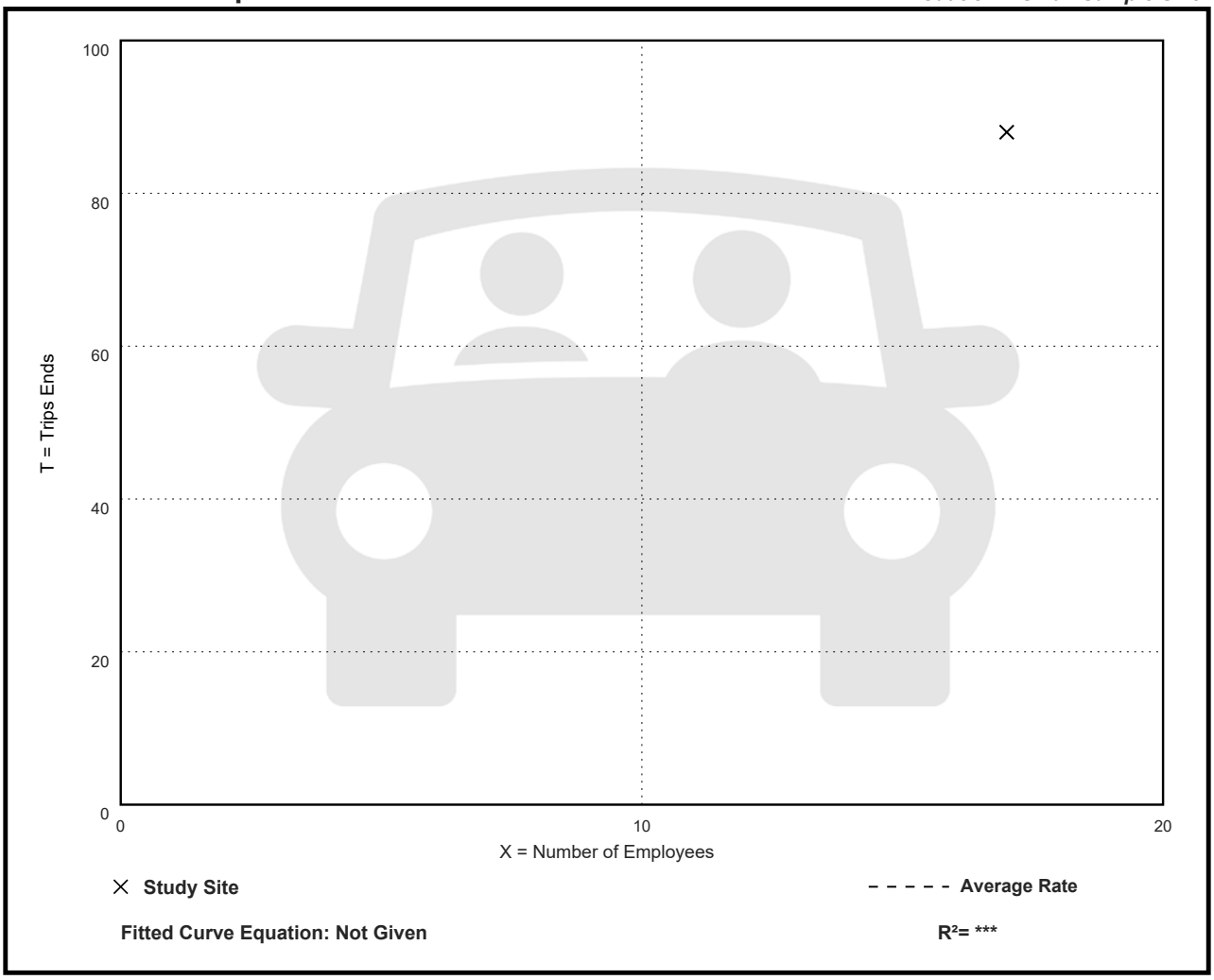
Setting/Location: General Urban/Suburban
Number of Studies: 1
Avg. Num. of Employees: 17
Directional Distribution: 57% entering, 43% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
5.18	5.18 - 5.18	***

Data Plot and Equation

Caution – Small Sample Size



Fitted Curve Equation: Not Given

R^2= ***

Public Park
(411)

Vehicle Trip Ends vs: Employees
On a: Weekday,
PM Peak Hour of Generator

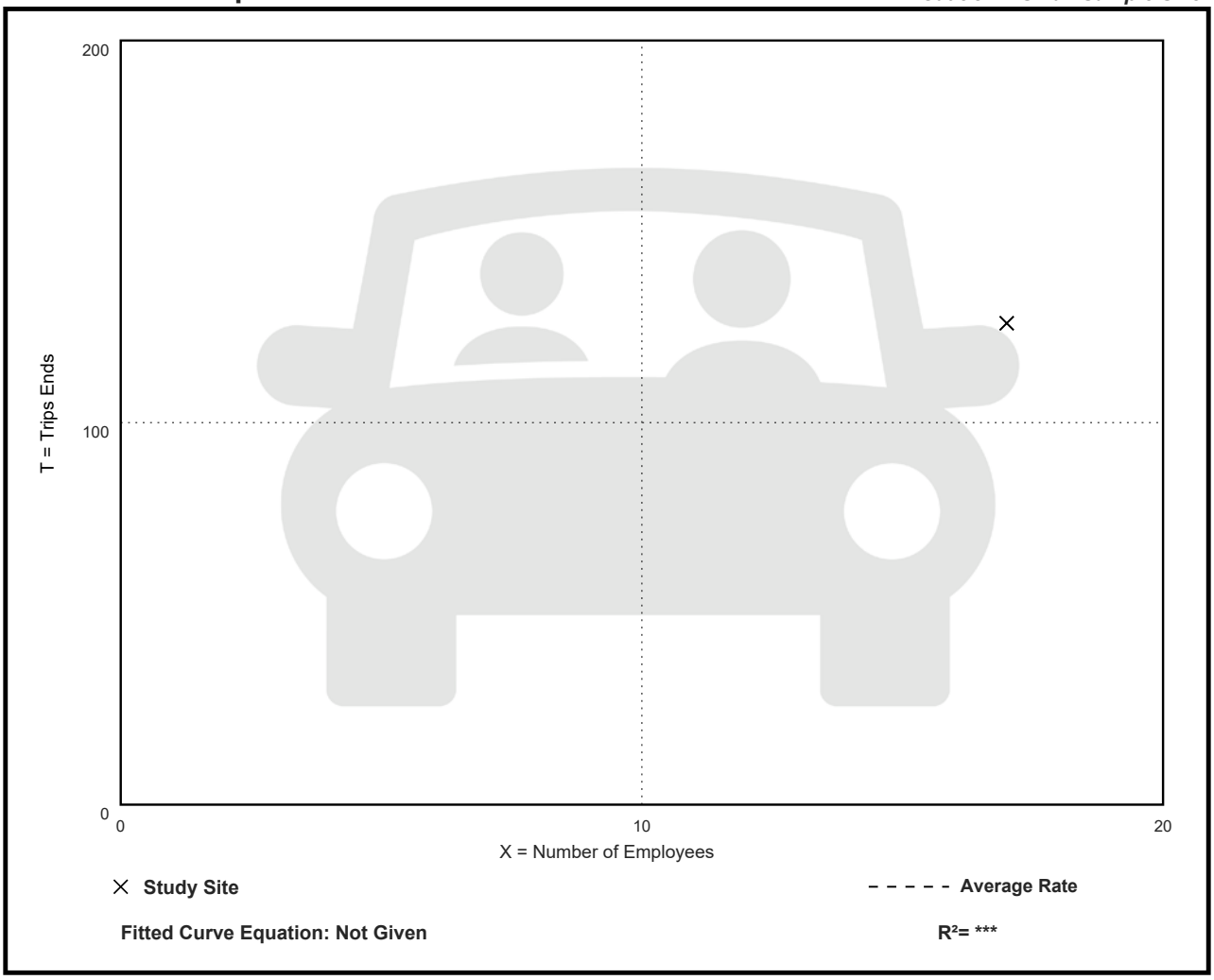
Setting/Location: General Urban/Suburban
Number of Studies: 1
Avg. Num. of Employees: 17
Directional Distribution: 44% entering, 56% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
7.41	7.41 - 7.41	***

Data Plot and Equation

Caution – Small Sample Size



Fitted Curve Equation: Not Given

R^2= ***

Public Park
(411)

Vehicle Trip Ends vs: Employees
On a: Saturday

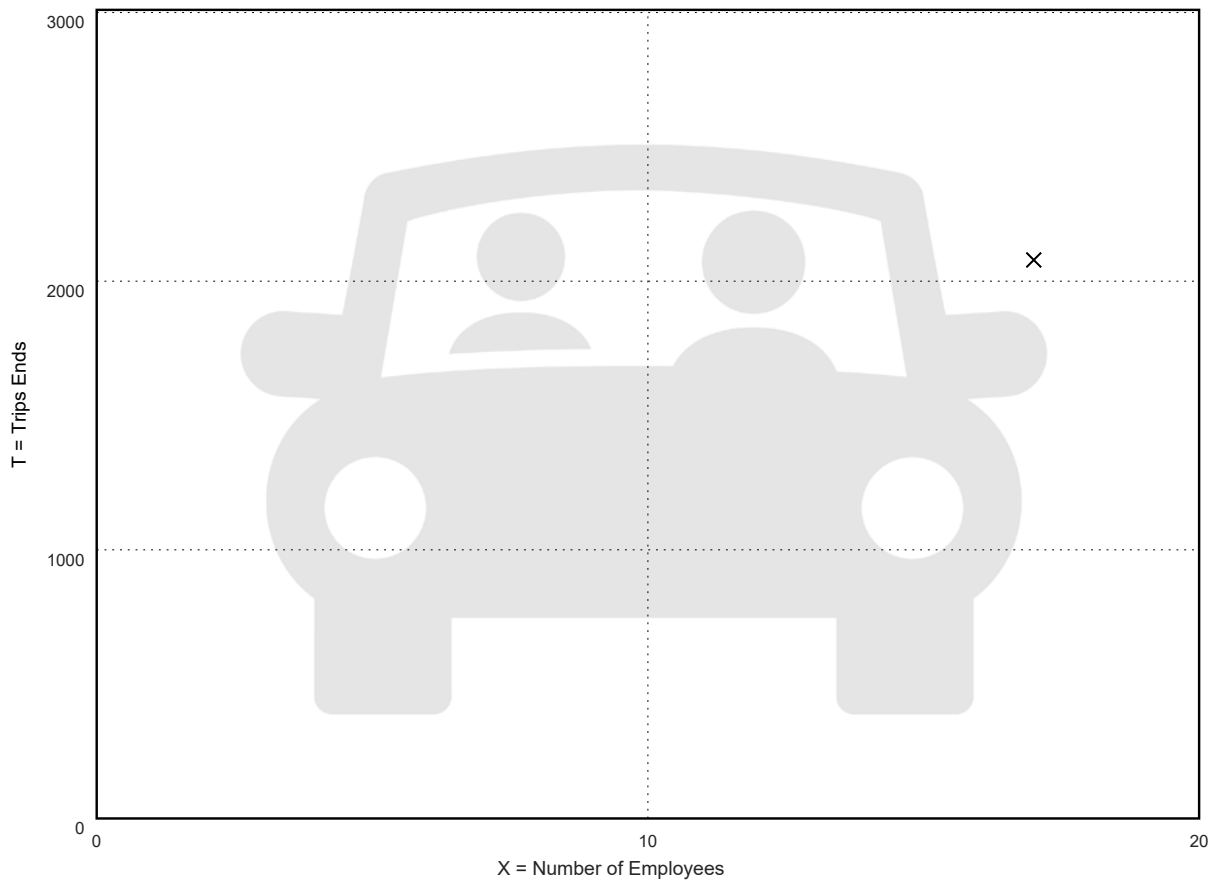
Setting/Location: General Urban/Suburban
Number of Studies: 1
Avg. Num. of Employees: 17
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
122.29	122.29 - 122.29	***

Data Plot and Equation

Caution – Small Sample Size



Fitted Curve Equation: Not Given

R^2= *

Public Park
(411)

Vehicle Trip Ends vs: Employees
On a: Saturday, Peak Hour of Generator

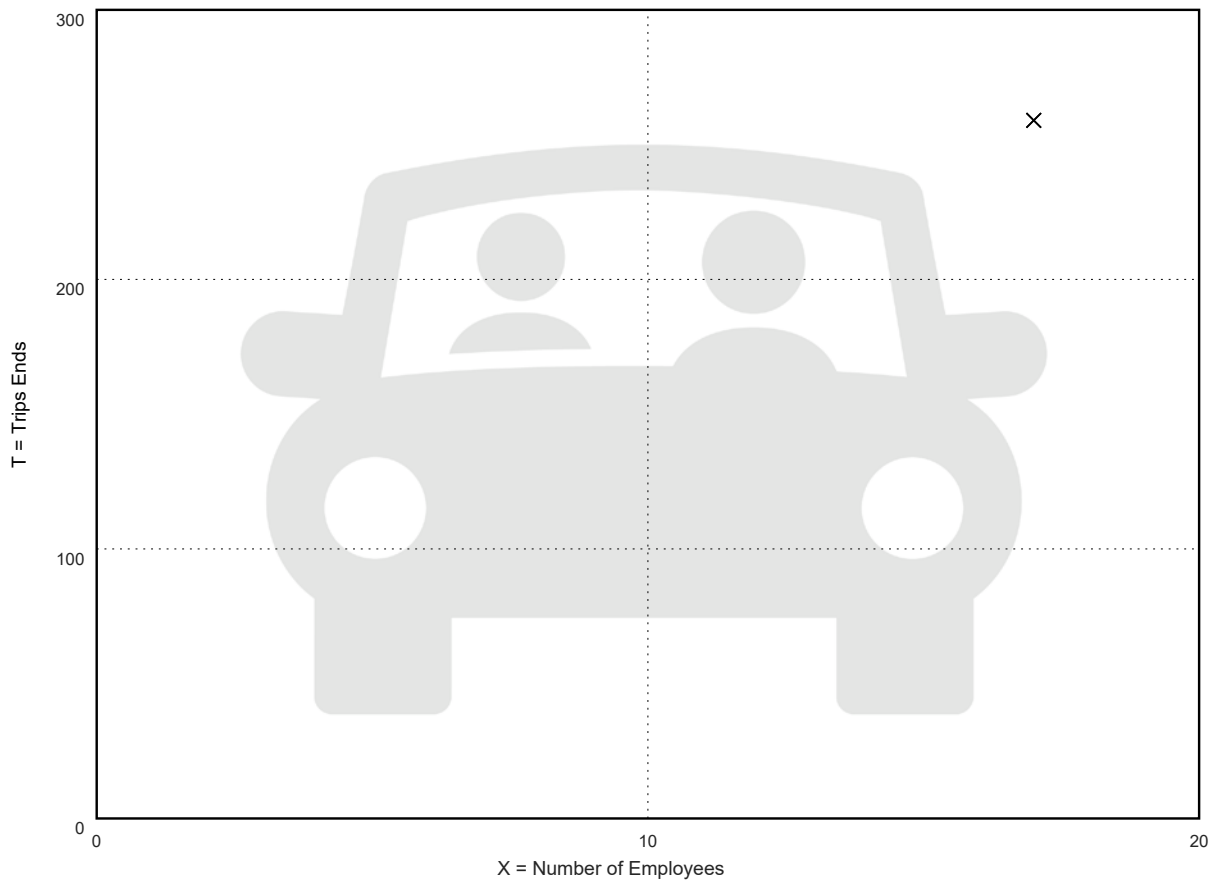
Setting/Location: General Urban/Suburban
Number of Studies: 1
Avg. Num. of Employees: 17
Directional Distribution: 48% entering, 52% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
15.24	15.24 - 15.24	***

Data Plot and Equation

Caution – Small Sample Size



Fitted Curve Equation: Not Given

R^2= ***

Public Park
(411)

Vehicle Trip Ends vs: Employees
On a: Sunday

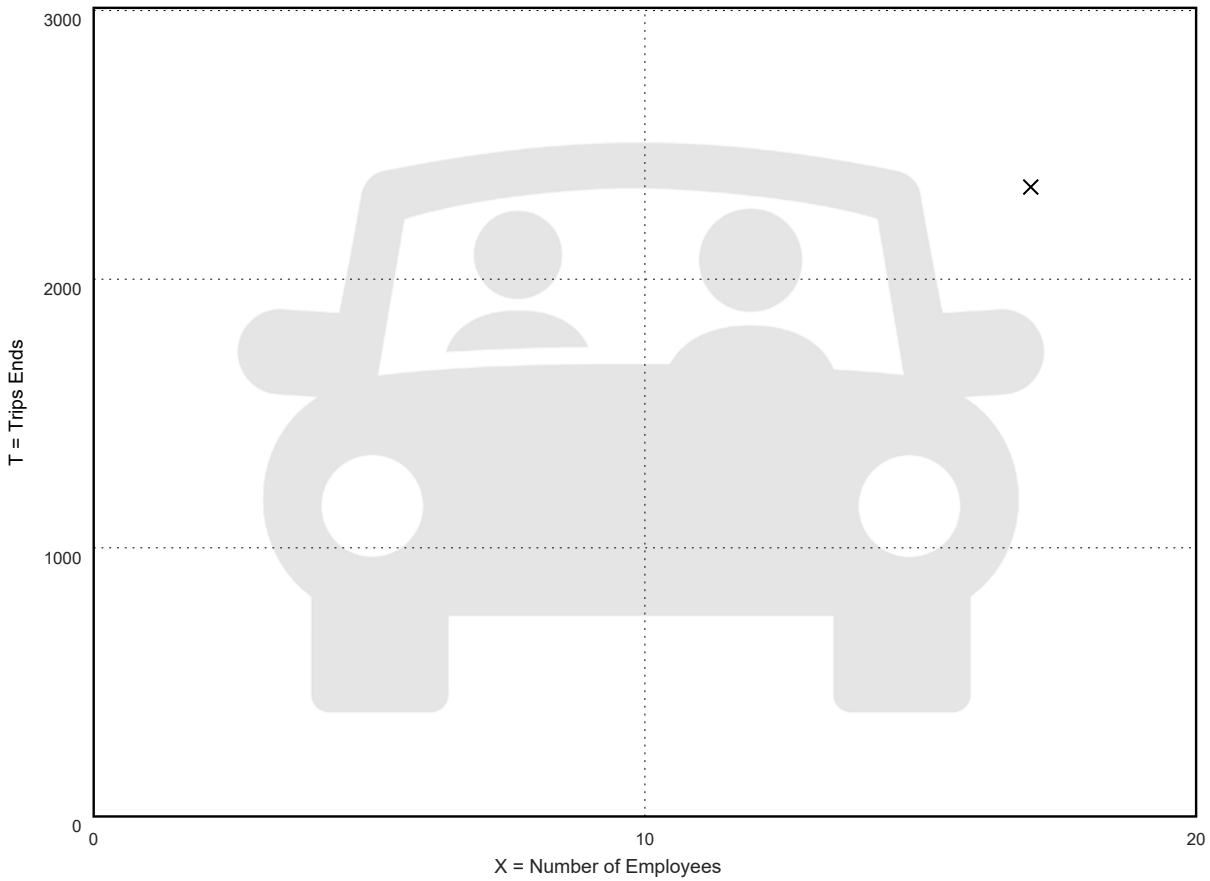
Setting/Location: General Urban/Suburban
Number of Studies: 1
Avg. Num. of Employees: 17
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
137.82	137.82 - 137.82	***

Data Plot and Equation

Caution – Small Sample Size



Fitted Curve Equation: Not Given

R^2= *

Public Park
(411)

Vehicle Trip Ends vs: Employees
On a: Sunday, Peak Hour of Generator

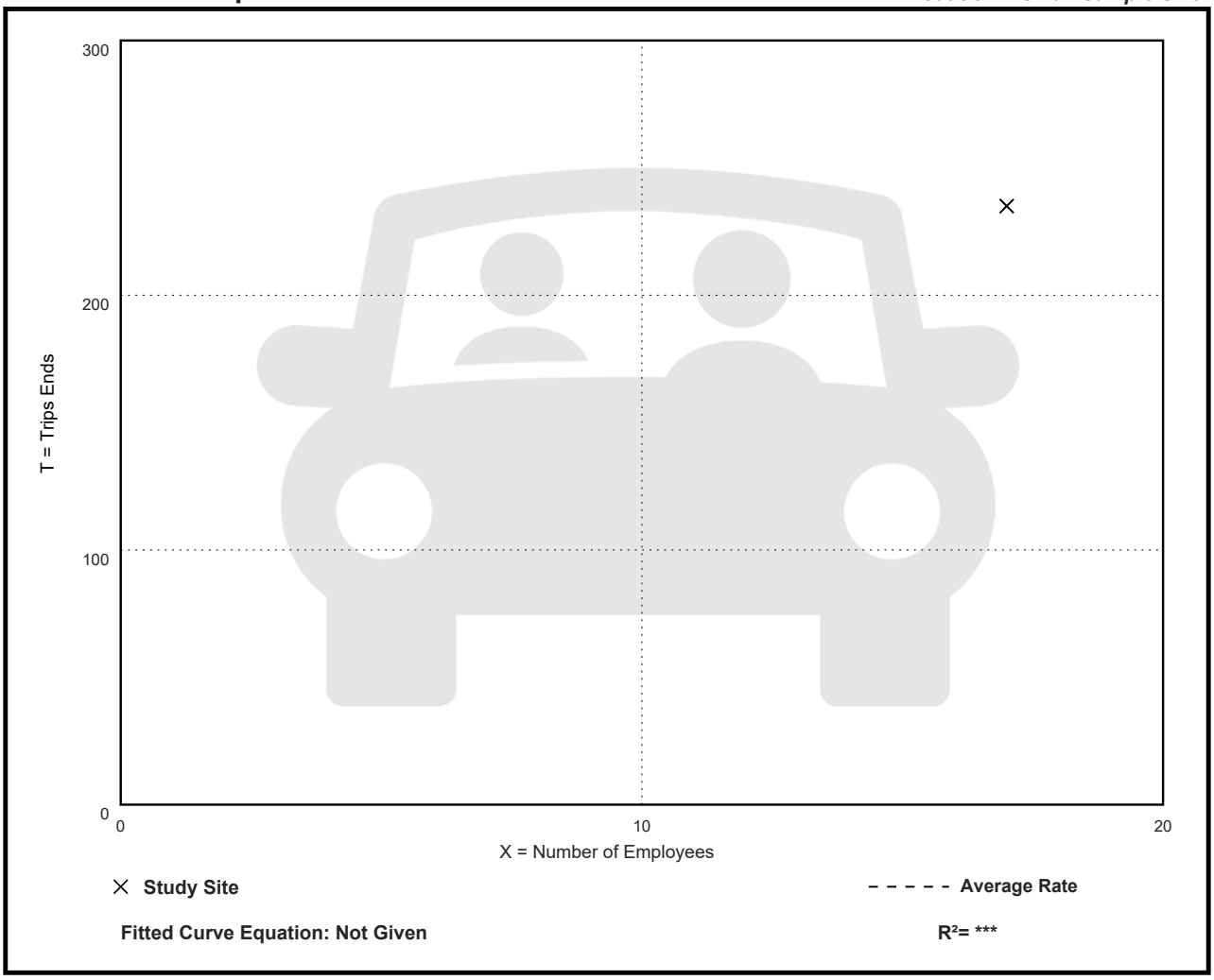
Setting/Location: General Urban/Suburban
Number of Studies: 1
Avg. Num. of Employees: 17
Directional Distribution: 34% entering, 66% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
13.82	13.82 - 13.82	***

Data Plot and Equation

Caution – Small Sample Size



Public Park
(411)

Vehicle Trip Ends vs: Daily Trail Users
On a: Saturday

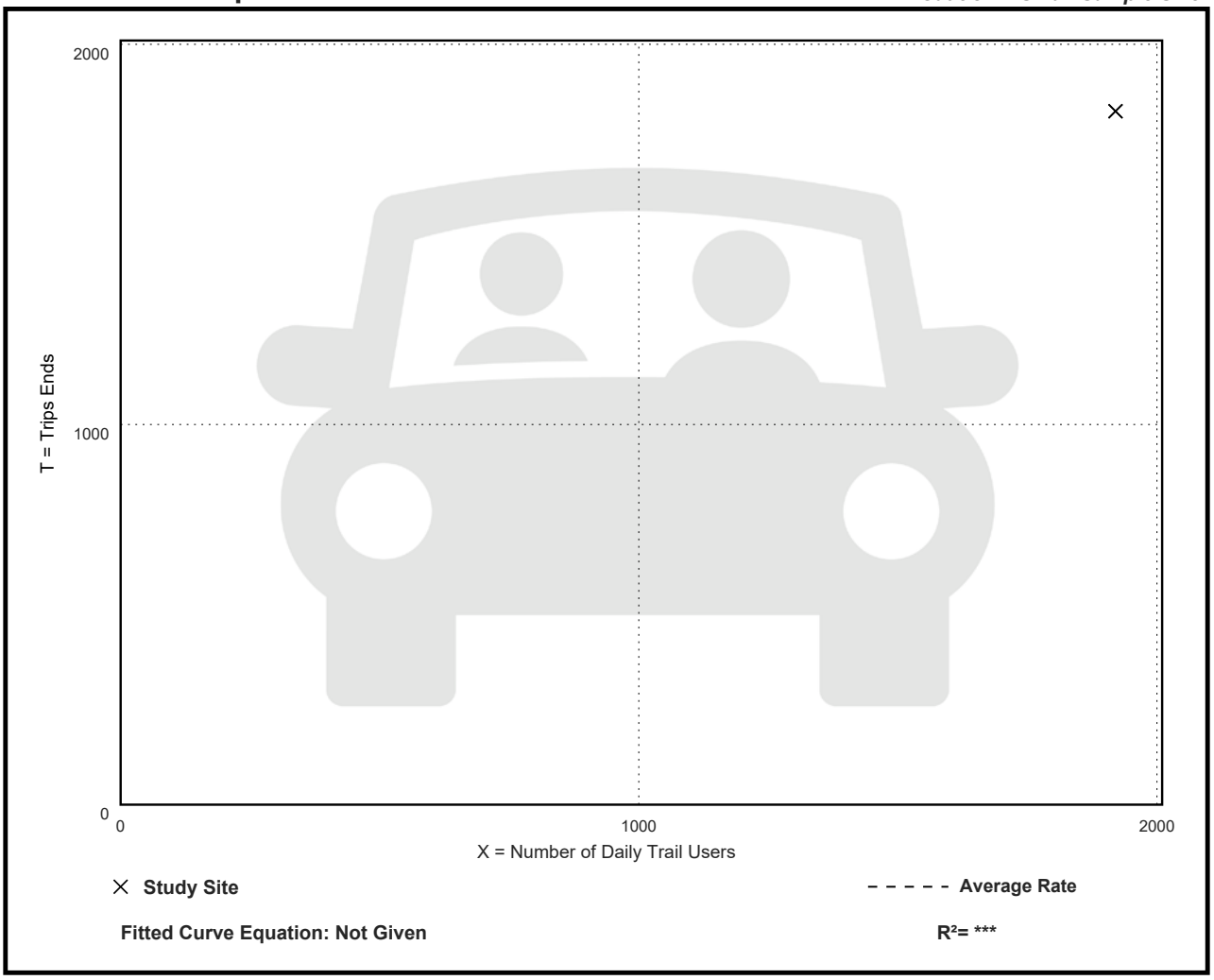
Setting/Location: General Urban/Suburban
Number of Studies: 1
Avg. Num. of Daily Trail Users: 1920
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Daily Trail User

Average Rate	Range of Rates	Standard Deviation
0.95	0.95 - 0.95	***

Data Plot and Equation

Caution – Small Sample Size



Fitted Curve Equation: Not Given

R^2= *

Public Park
(411)

Vehicle Trip Ends vs: Daily Trail Users
On a: Saturday, Peak Hour of Generator

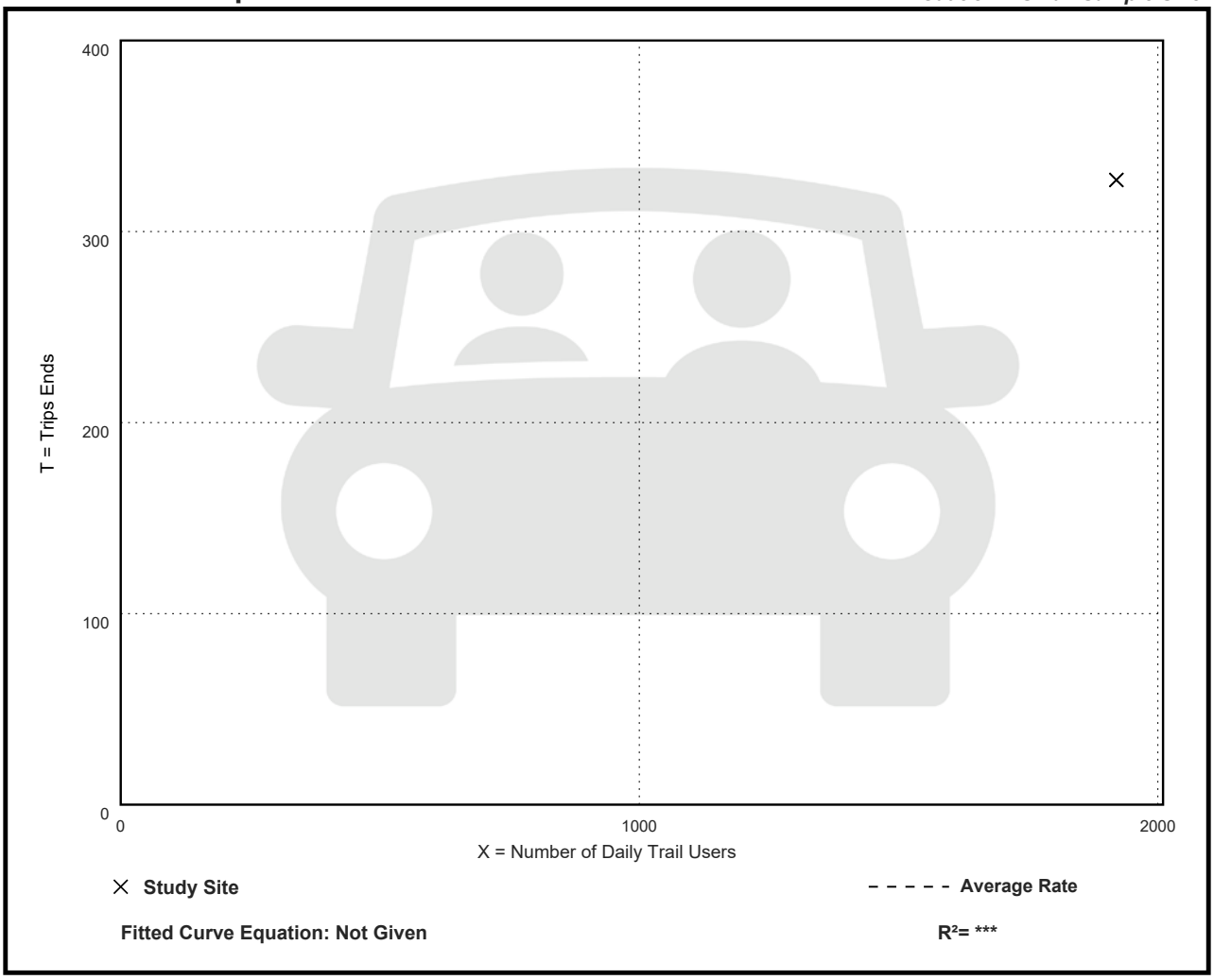
Setting/Location: General Urban/Suburban
Number of Studies: 1
Avg. Num. of Daily Trail Users: 1920
Directional Distribution: 26% entering, 74% exiting

Vehicle Trip Generation per Daily Trail User

Average Rate	Range of Rates	Standard Deviation
0.17	0.17 - 0.17	***

Data Plot and Equation

Caution – Small Sample Size



Public Park
(411)

Vehicle Trip Ends vs: Daily Trail Users
On a: Sunday

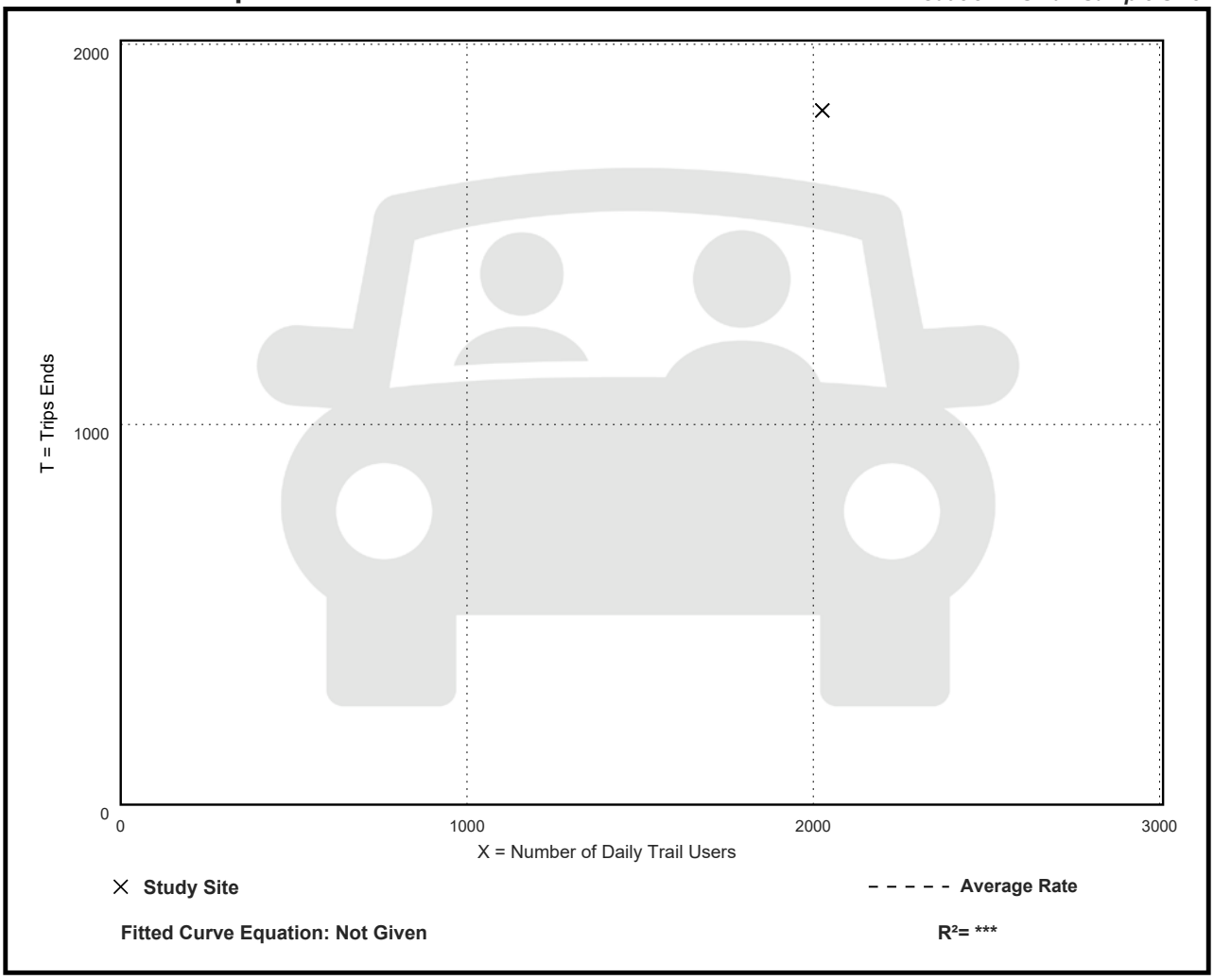
Setting/Location: General Urban/Suburban
Number of Studies: 1
Avg. Num. of Daily Trail Users: 2026
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Daily Trail User

Average Rate	Range of Rates	Standard Deviation
0.90	0.90 - 0.90	***

Data Plot and Equation

Caution – Small Sample Size



Fitted Curve Equation: Not Given

R^2= *

Public Park
(411)

Vehicle Trip Ends vs: Daily Trail Users
On a: Sunday, Peak Hour of Generator

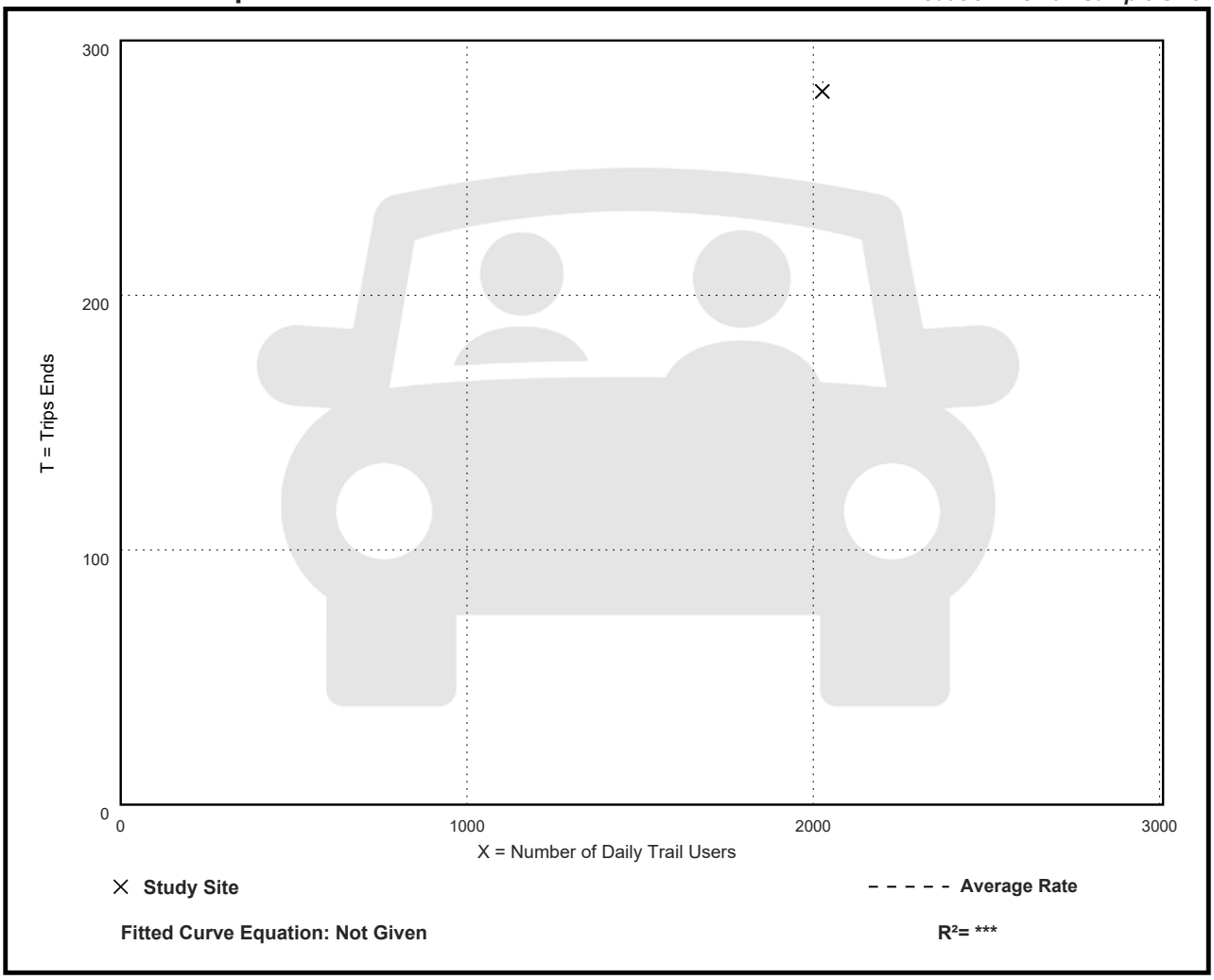
Setting/Location: General Urban/Suburban
Number of Studies: 1
Avg. Num. of Daily Trail Users: 2026
Directional Distribution: 30% entering, 70% exiting

Vehicle Trip Generation per Daily Trail User

Average Rate	Range of Rates	Standard Deviation
0.14	0.14 - 0.14	***

Data Plot and Equation

Caution – Small Sample Size



Public Park
(411)

Walk+Bike+Transit Trip Ends vs: Acres
On a: Saturday, Peak Hour of Generator

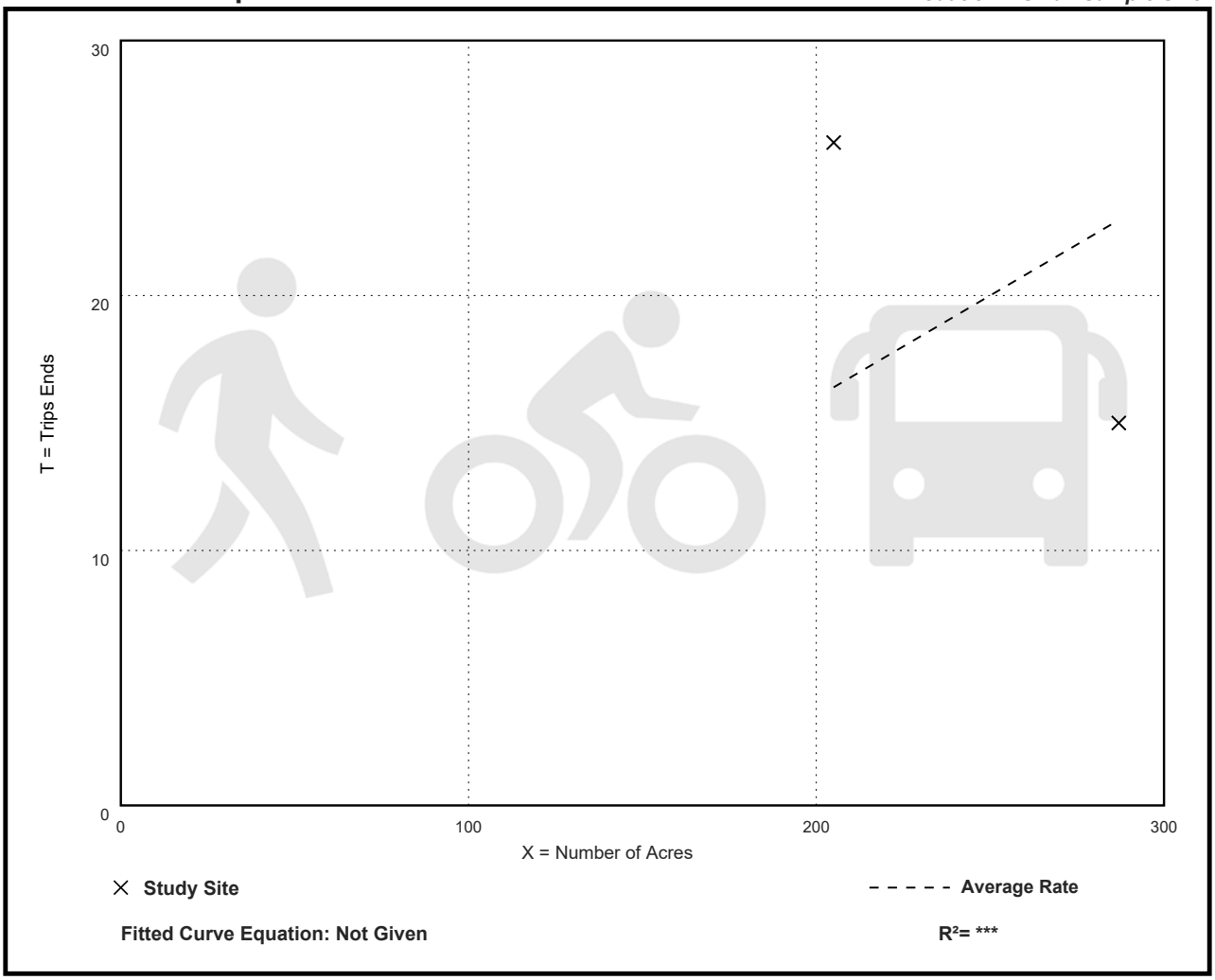
Setting/Location: General Urban/Suburban
Number of Studies: 2
Avg. Num. of Acres: 246
Directional Distribution: Not Available

Walk+Bike+Transit Trip Generation per Acre

Average Rate	Range of Rates	Standard Deviation
0.08	0.05 - 0.13	***

Data Plot and Equation

Caution – Small Sample Size



Public Park
(411)

Walk+Bike+Transit Trip Ends vs: Acres
On a: Sunday, Peak Hour of Generator

Setting/Location: General Urban/Suburban
Number of Studies: 1
Avg. Num. of Acres: 18
Directional Distribution: Not Available

Walk+Bike+Transit Trip Generation per Acre

Average Rate	Range of Rates	Standard Deviation
1.98	1.98 - 1.98	***

Data Plot and Equation

Caution – Small Sample Size