



FUSS & O'NEILL

April 3, 2023

Chairman Robert Hammersley
Planning and Zoning Commission
358 Hobart Street
Southington, CT 06489

Re: Trip Generation Summary
Cava Restaurant Expansion
1615 West Street
Southington, Connecticut

Dear Chairman Hammersley:

This letter will serve to summarize the expected increase in traffic generation from the proposed 3,000 square foot expansion to the existing Cava Restaurant located at 1615 West Street (SR 229) in Southington, Connecticut. The existing restaurant was expanded to include an additional 3,000 square foot outdoor enclosed steel building with 100 seats under the COVID-19 Emergency Declaration. Cava Restaurant now proposes to permanently maintain the additional restaurant space.

The expected site generated traffic volumes for the proposed fine dining restaurant expansion were calculated using existing empirical data from the Institute of Transportation Engineers (ITE) publication Trip Generation, 11th edition, 2021. This publication is an industry-accepted resource for determining trip generation. Calculations were performed for weekday afternoon and Saturday peak hours using the ITE land use code 931 (Fine Dining Restaurant). Excerpts pertaining to the land use code used in this analysis are attached. For a 3,000 square foot restaurant expansion, a total of 23 vehicle trips (16 entering, and seven exiting) are anticipated during the afternoon peak hour and 32 trips (19 entering and 13 exiting) are anticipated during the Saturday peak hour. Comparatively when reviewing trip generation from the seating perspective, a 100-seat restaurant expansion would generate a similar total of 28 vehicle trips (19 entering, and nine exiting) during the afternoon peak hour and 33 trips (19 entering and 14 exiting) during the Saturday peak hour. Thus, the proposed restaurant expansion will not generate significant additional traffic volumes during the peak hours.

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Chairman Robert Hammersley

April 3, 2023

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Should you have any questions regarding these trip generation projections, please contact us at 860-646-2469.

Sincerely,

Gina DePasquale, EIT
Transportation Engineer

Mark G. Vertucci, PE, PTOE
Vice President

Attachments: ITE Land Use Code 931 Excerpts

cc: Severino Bovino, Kratzert, Jones & Associates, Inc, e-mail only
Stavros Papahristou, Cava Restaurant, e-mail only

Land Use: 931

Fine Dining Restaurant

Description

A fine dining restaurant is a full-service eating establishment with a typical duration of stay of at least 1 hour. A fine dining restaurant generally does not serve breakfast; some do not serve lunch; all serve dinner. This type of restaurant often requests and sometimes requires a reservation and is generally not part of a chain. A patron commonly waits to be seated, is served by wait staff, orders from a menu and pays after the meal. Some of the study sites have lounge or bar facilities (serving alcoholic beverages), but meal service is the primary draw to the restaurant. Fast casual restaurant (Land Use 930) and high-turnover (sit-down) restaurant (Land Use 932) are related uses.

Additional Data

If the fine dining 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 sites were surveyed in the 1980s, the 1990s, and the 2010s in Alberta (CAN), California, Colorado, Florida, Indiana, Kentucky, New Jersey, and Utah.

Source Numbers

126, 260, 291, 301, 338, 339, 368, 437, 440, 976, 1053

Fine Dining Restaurant (931)

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

Setting/Location: General Urban/Suburban

Number of Studies: 10

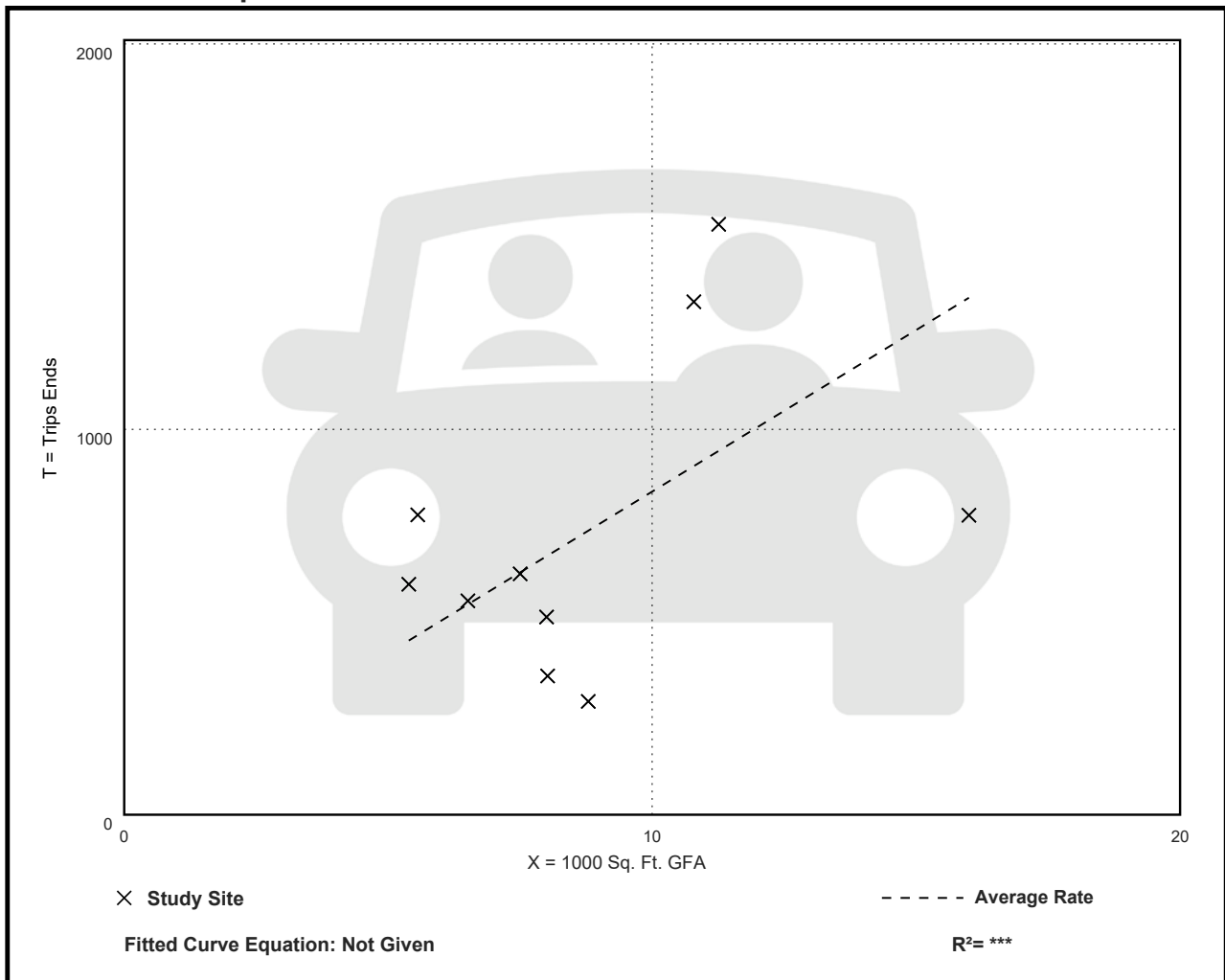
Avg. 1000 Sq. Ft. GFA: 9

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
83.84	33.45 - 139.93	40.01

Data Plot and Equation



Fine Dining Restaurant (931)

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: 7

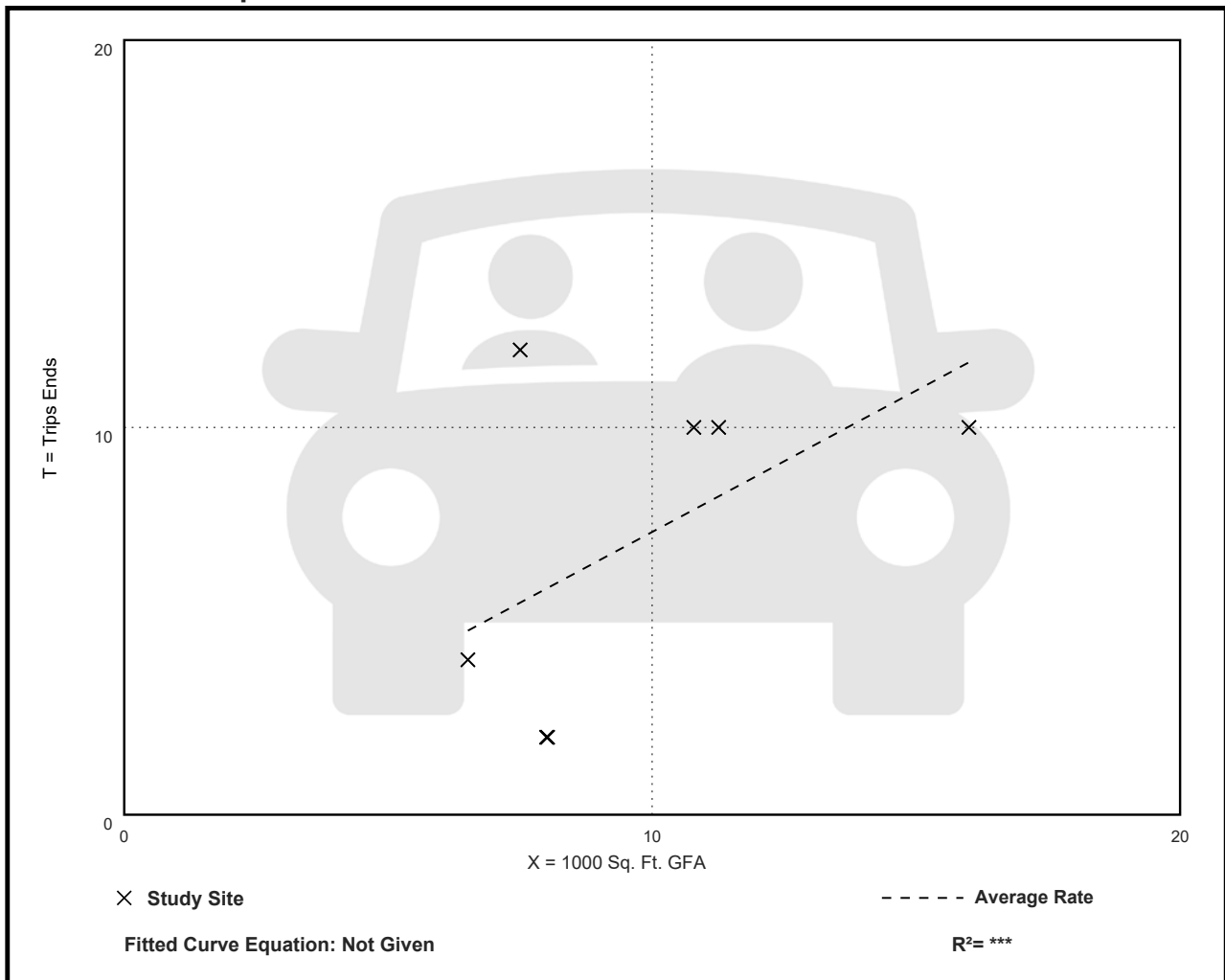
Avg. 1000 Sq. Ft. GFA: 10

Directional Distribution: Not Available

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.73	0.25 - 1.60	0.42

Data Plot and Equation



Fine Dining Restaurant (931)

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: 19

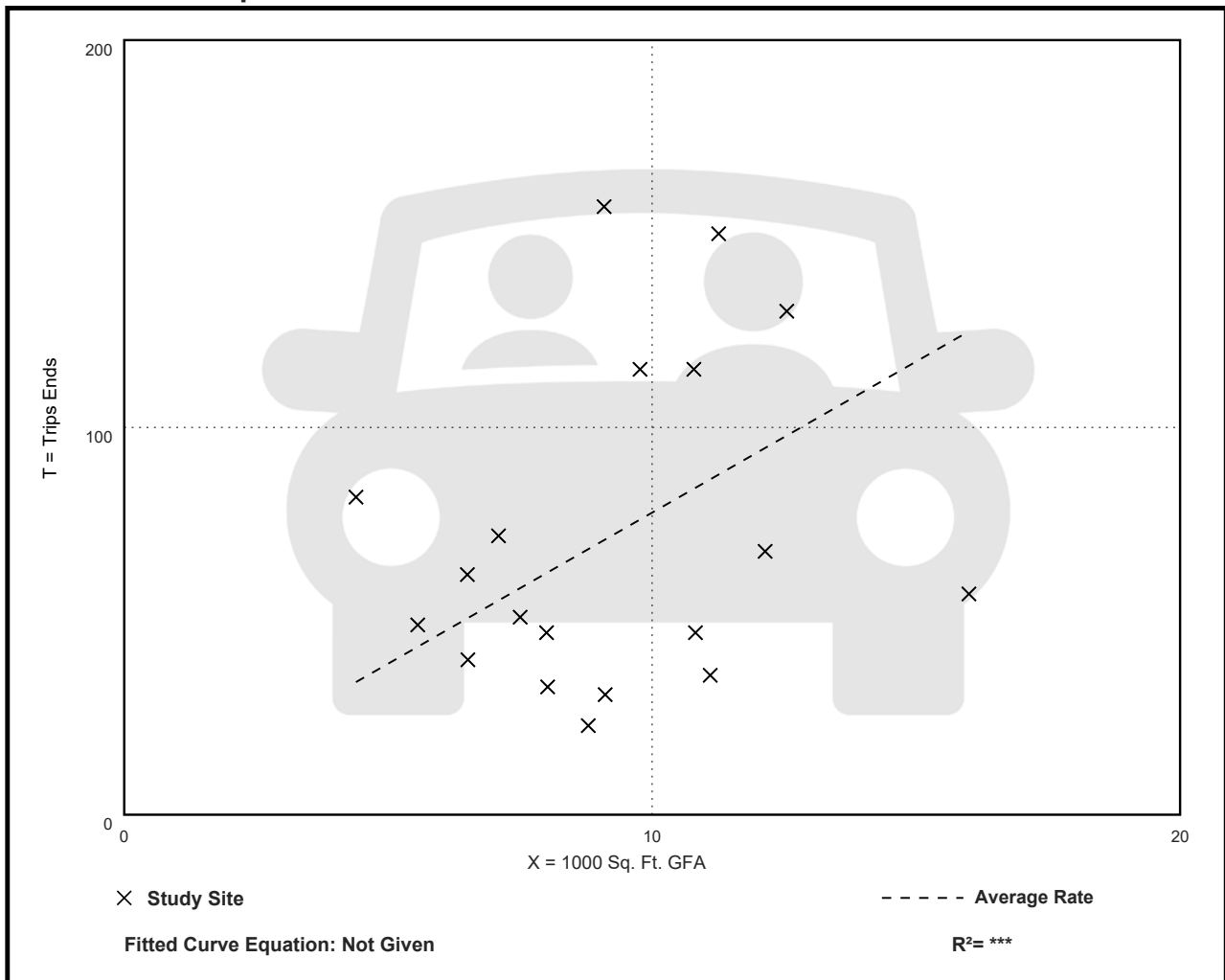
Avg. 1000 Sq. Ft. GFA: 9

Directional Distribution: 67% entering, 33% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
7.80	2.62 - 18.68	4.49

Data Plot and Equation



Fine Dining Restaurant (931)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Weekday,

AM Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 12

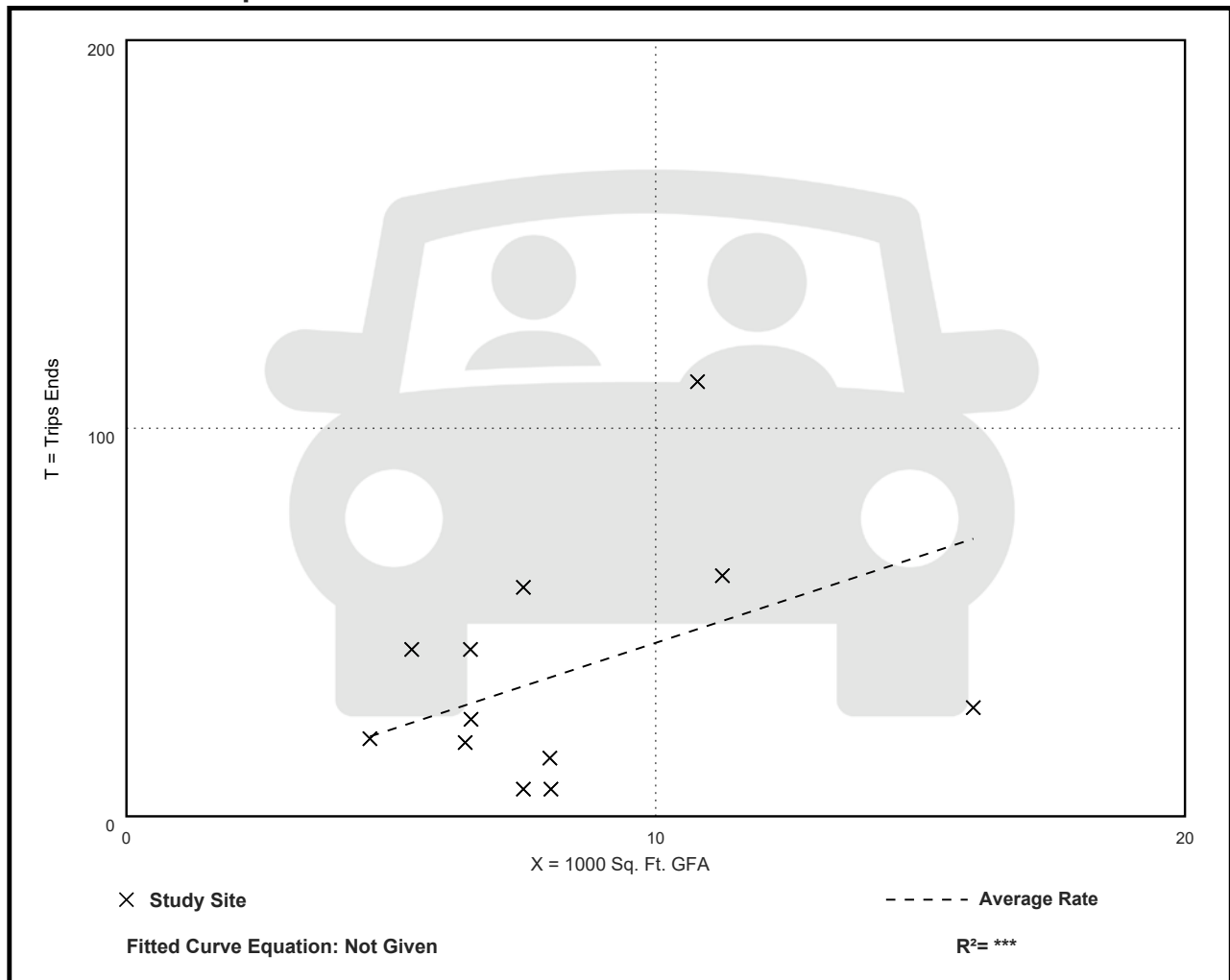
Avg. 1000 Sq. Ft. GFA: 8

Directional Distribution: 80% entering, 20% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
4.47	0.87 - 10.38	3.26

Data Plot and Equation



Fine Dining Restaurant (931)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Weekday,

PM Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 15

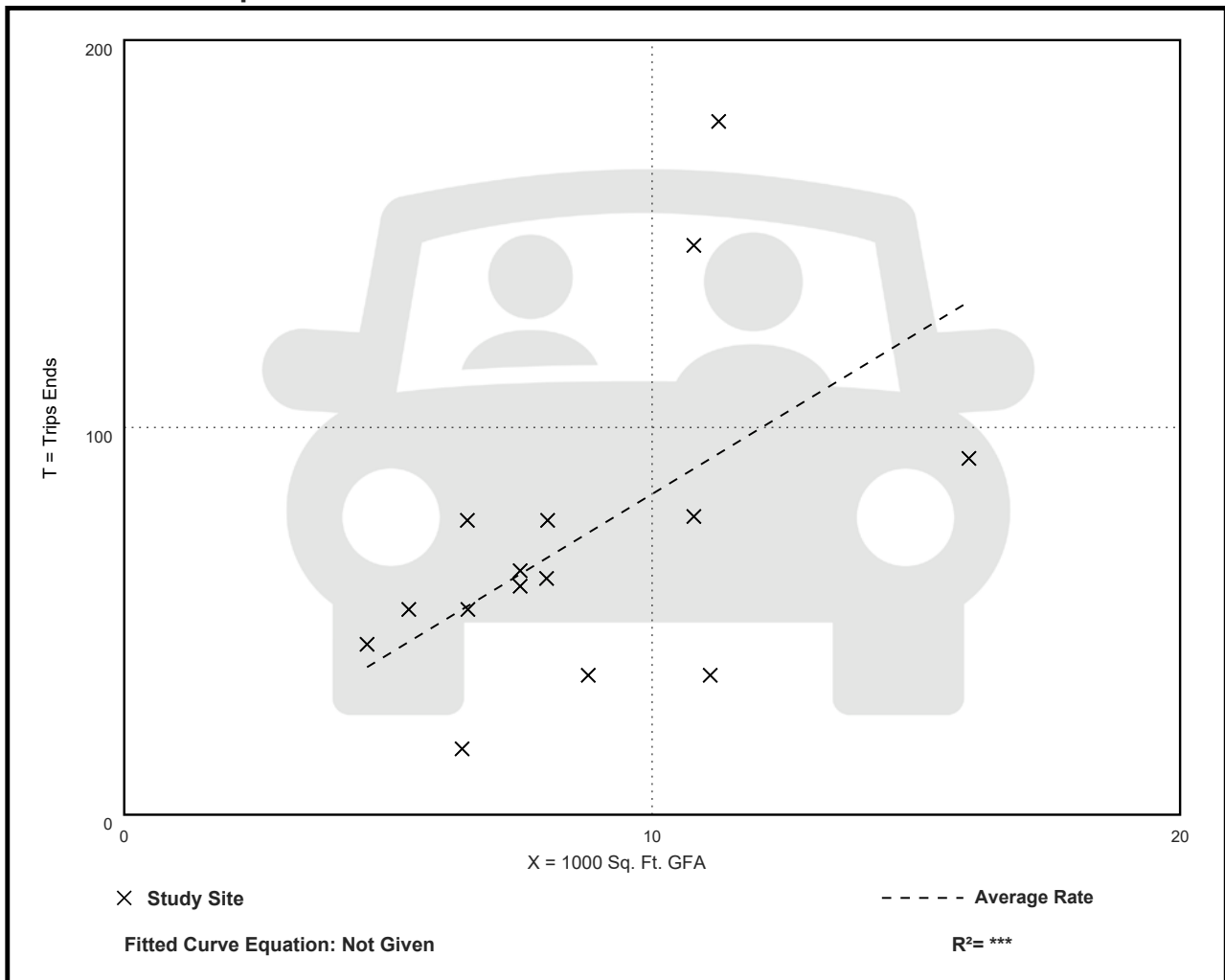
Avg. 1000 Sq. Ft. GFA: 9

Directional Distribution: 61% entering, 39% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
8.28	2.66 - 15.90	3.89

Data Plot and Equation



Fine Dining Restaurant (931)

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

Setting/Location: General Urban/Suburban

Number of Studies: 6

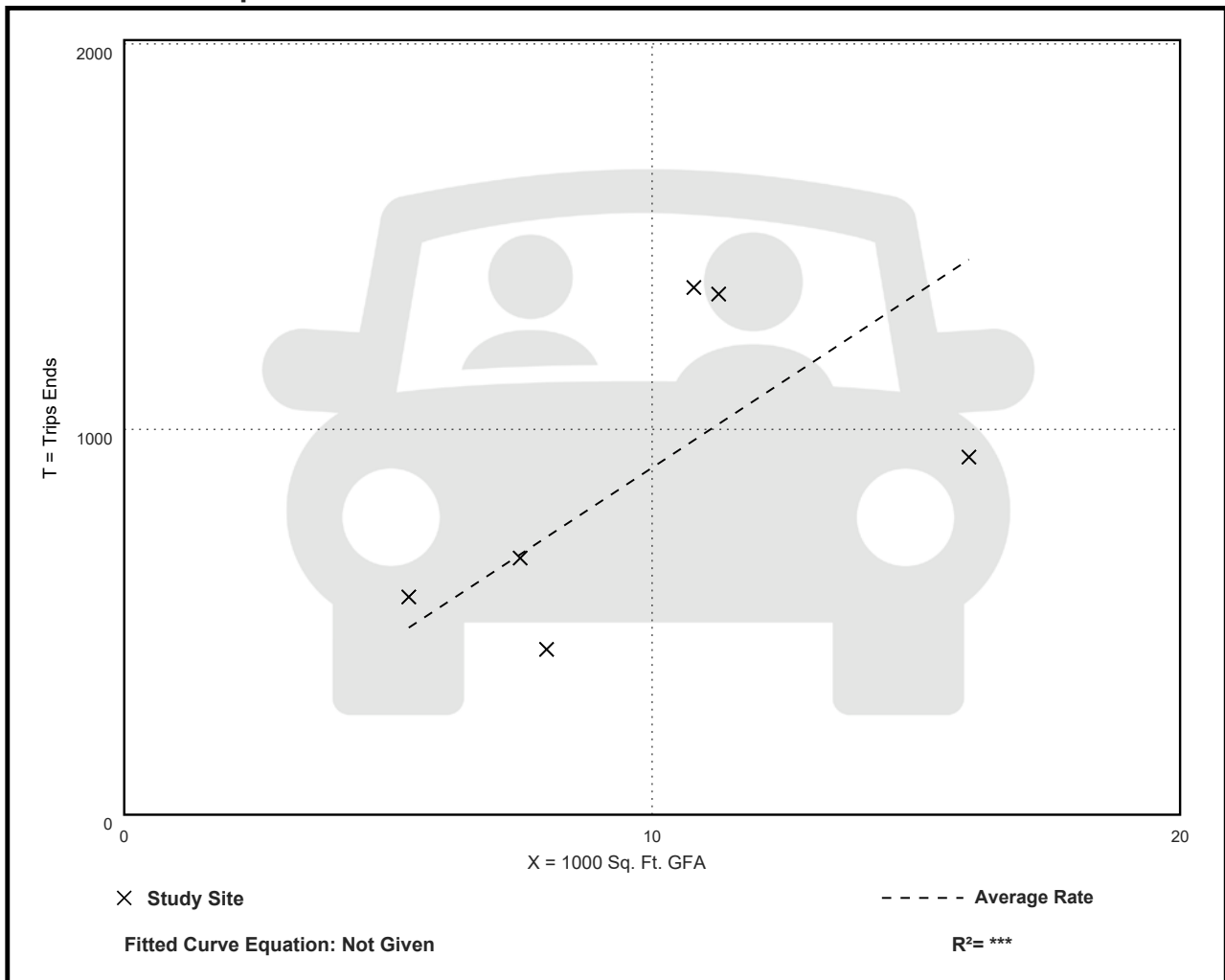
Avg. 1000 Sq. Ft. GFA: 10

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
90.04	53.63 - 126.78	32.81

Data Plot and Equation



Fine Dining Restaurant (931)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Saturday, Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 7

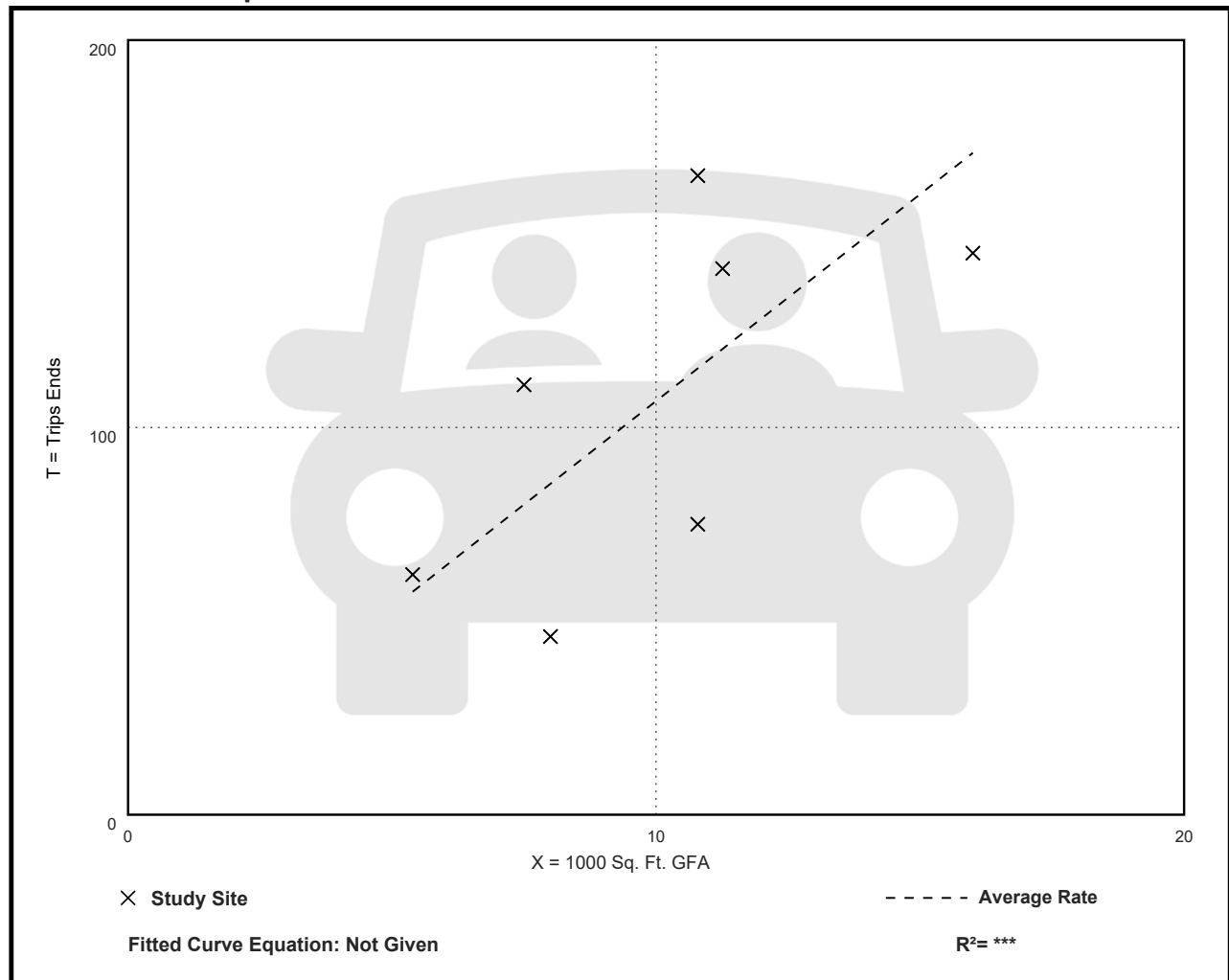
Avg. 1000 Sq. Ft. GFA: 10

Directional Distribution: 59% entering, 41% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
10.68	5.75 - 15.29	3.62

Data Plot and Equation



Fine Dining Restaurant (931)

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

Setting/Location: General Urban/Suburban

Number of Studies: 6

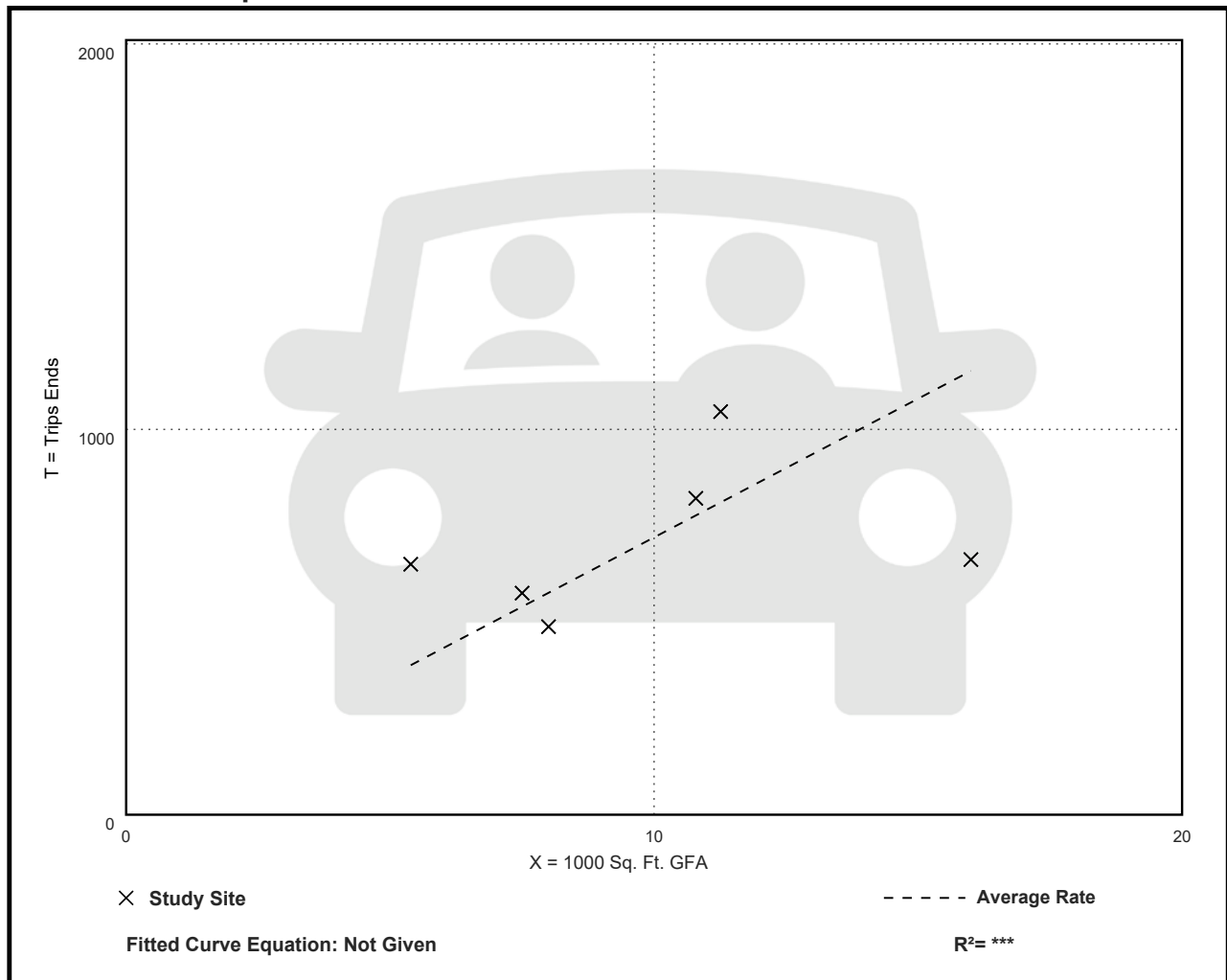
Avg. 1000 Sq. Ft. GFA: 10

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
71.97	41.38 - 120.59	26.30

Data Plot and Equation



Fine Dining Restaurant (931)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Sunday, Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 6

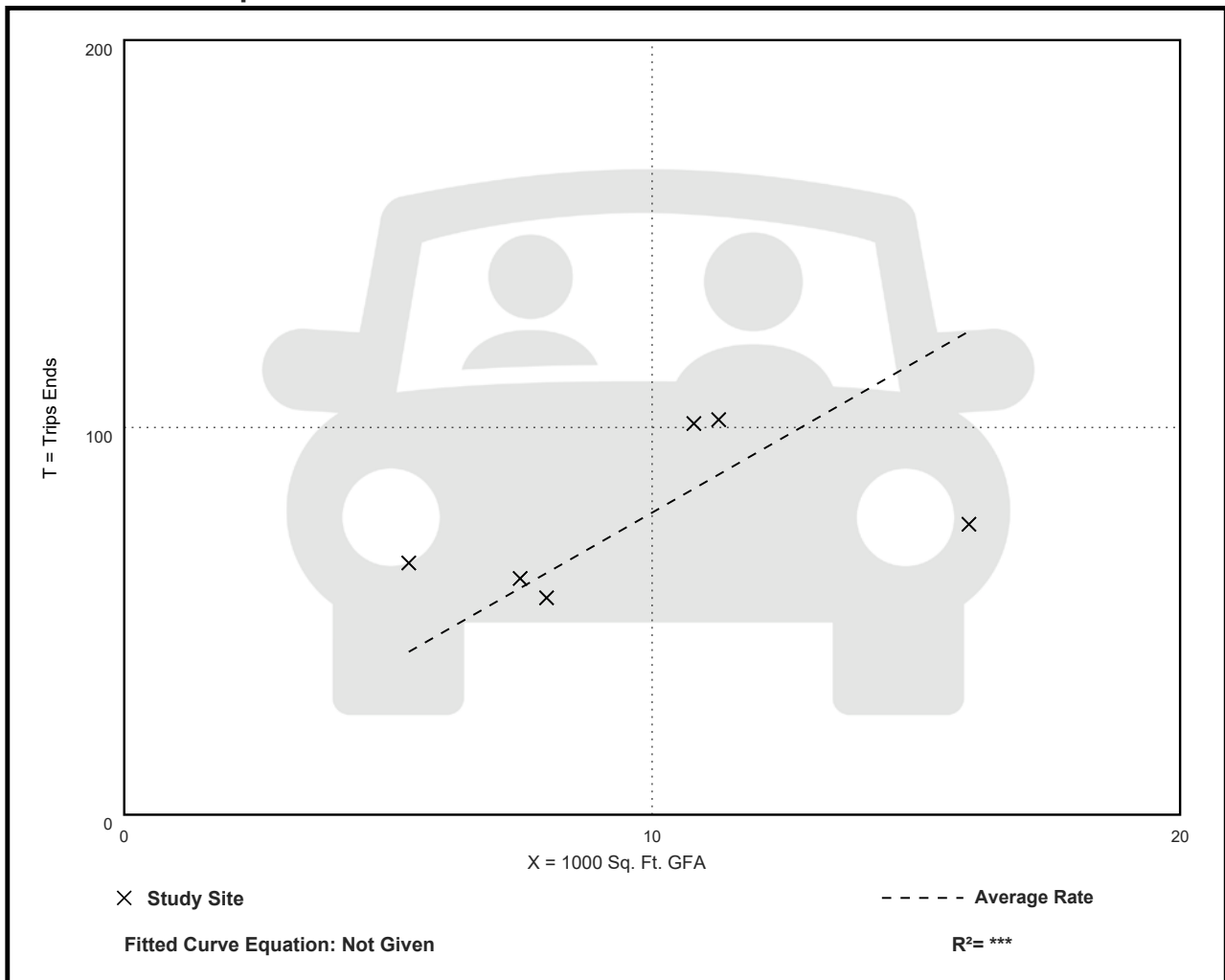
Avg. 1000 Sq. Ft. GFA: 10

Directional Distribution: 63% entering, 37% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
7.80	4.69 - 12.06	2.48

Data Plot and Equation



Fine Dining Restaurant (931)

Vehicle Trip Ends vs: Seats
On a: Weekday

Setting/Location: General Urban/Suburban

Number of Studies: 6

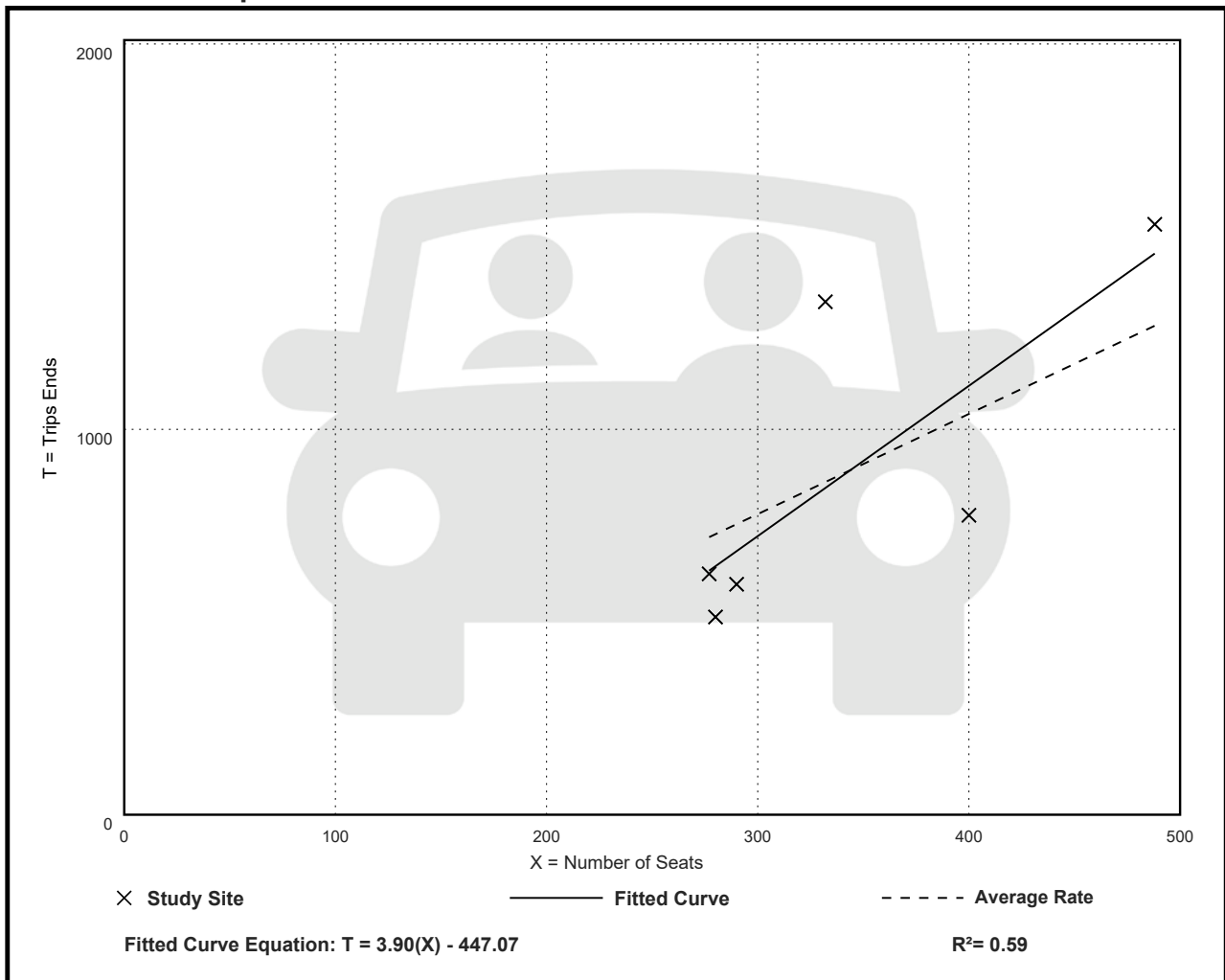
Avg. Num. of Seats: 345

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Seat

Average Rate	Range of Rates	Standard Deviation
2.60	1.83 - 4.01	0.85

Data Plot and Equation



Fine Dining Restaurant (931)

Vehicle Trip Ends vs: Seats

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

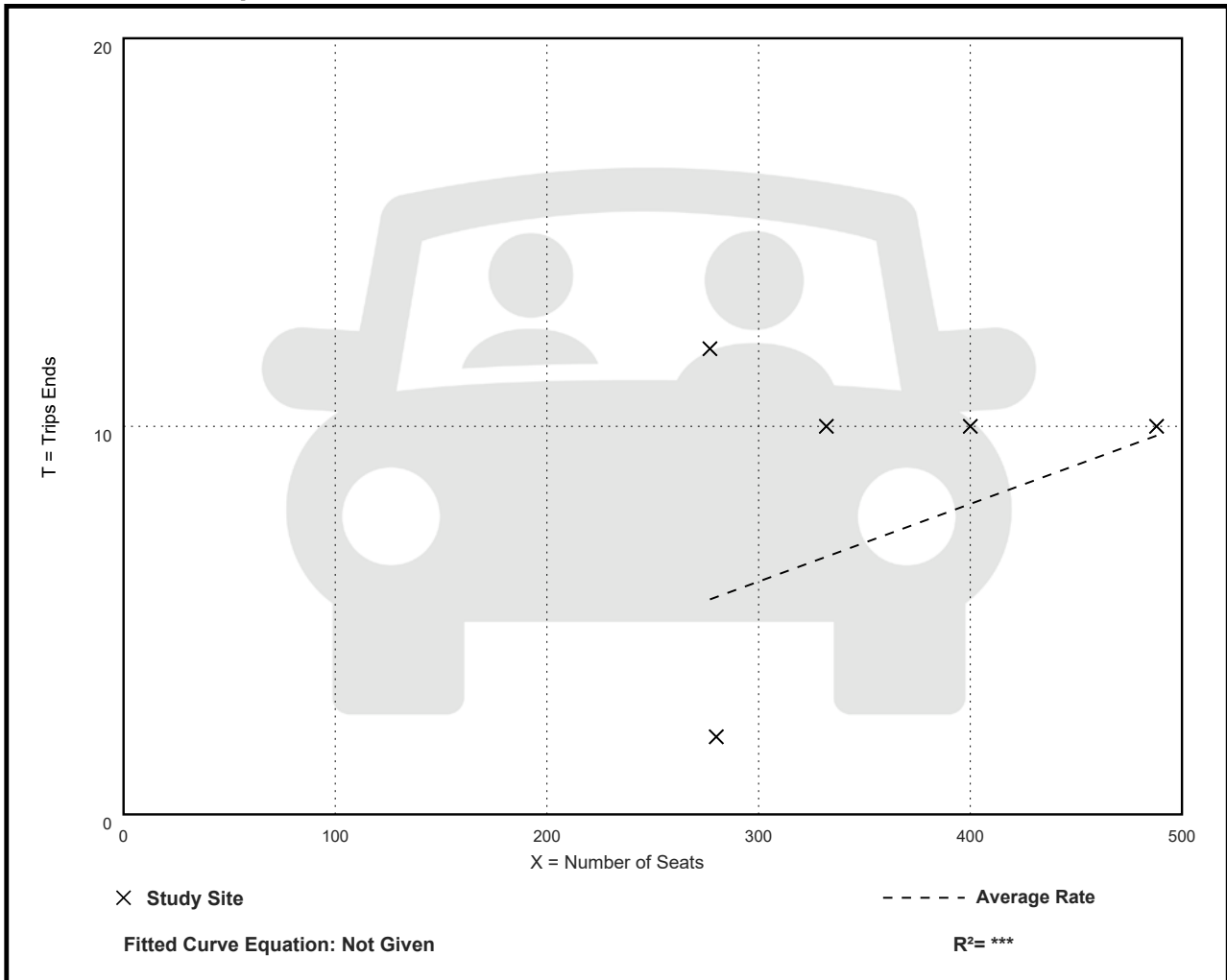
Avg. Num. of Seats: 355

Directional Distribution: Not Available

Vehicle Trip Generation per Seat

Average Rate	Range of Rates	Standard Deviation
0.02	0.01 - 0.04	0.01

Data Plot and Equation



Fine Dining Restaurant (931)

Vehicle Trip Ends vs: Seats

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: 11

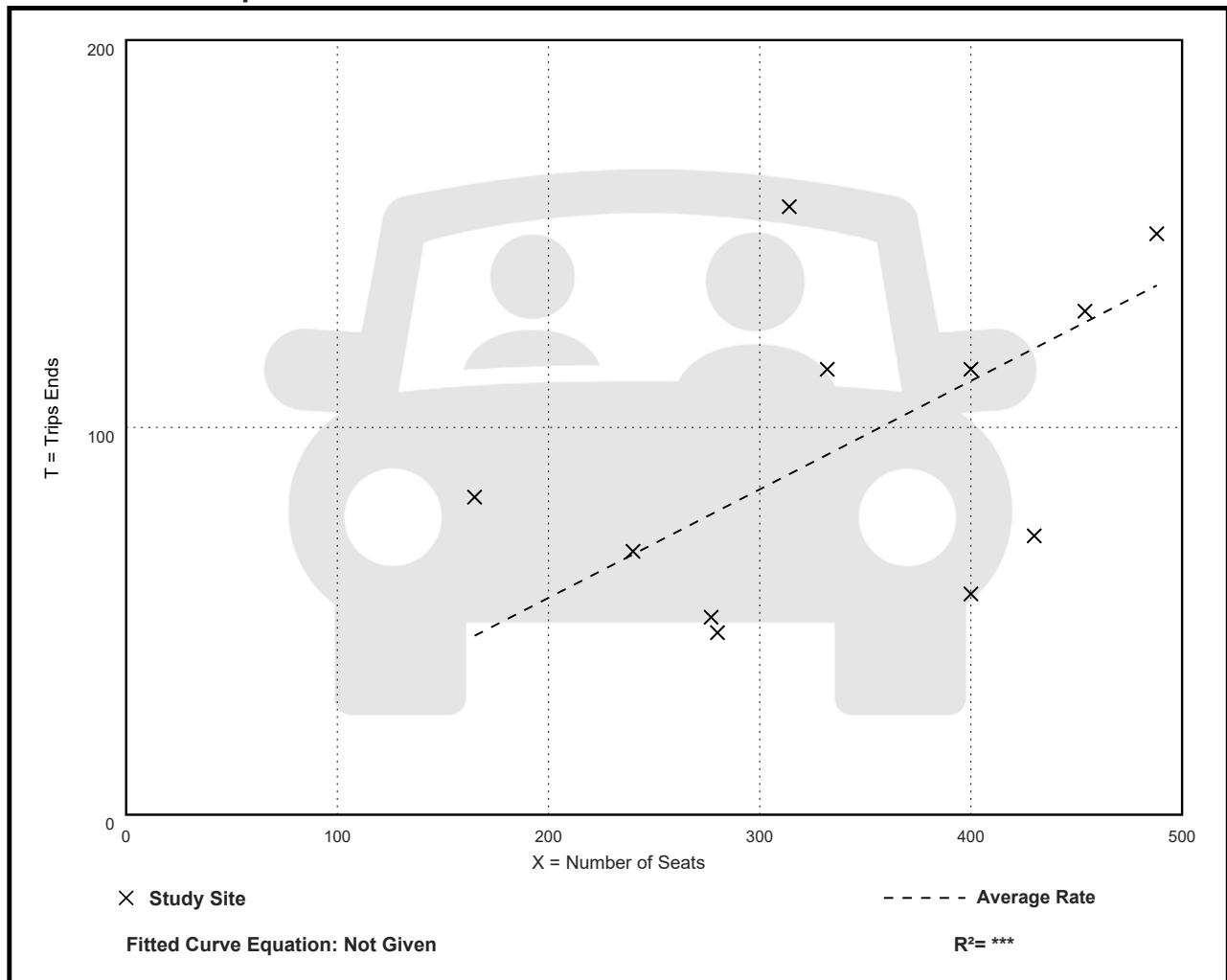
Avg. Num. of Seats: 344

Directional Distribution: 67% entering, 33% exiting

Vehicle Trip Generation per Seat

Average Rate	Range of Rates	Standard Deviation
0.28	0.14 - 0.50	0.11

Data Plot and Equation



Fine Dining Restaurant (931)

Vehicle Trip Ends vs: Seats

On a: **Weekday,**

AM Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 9

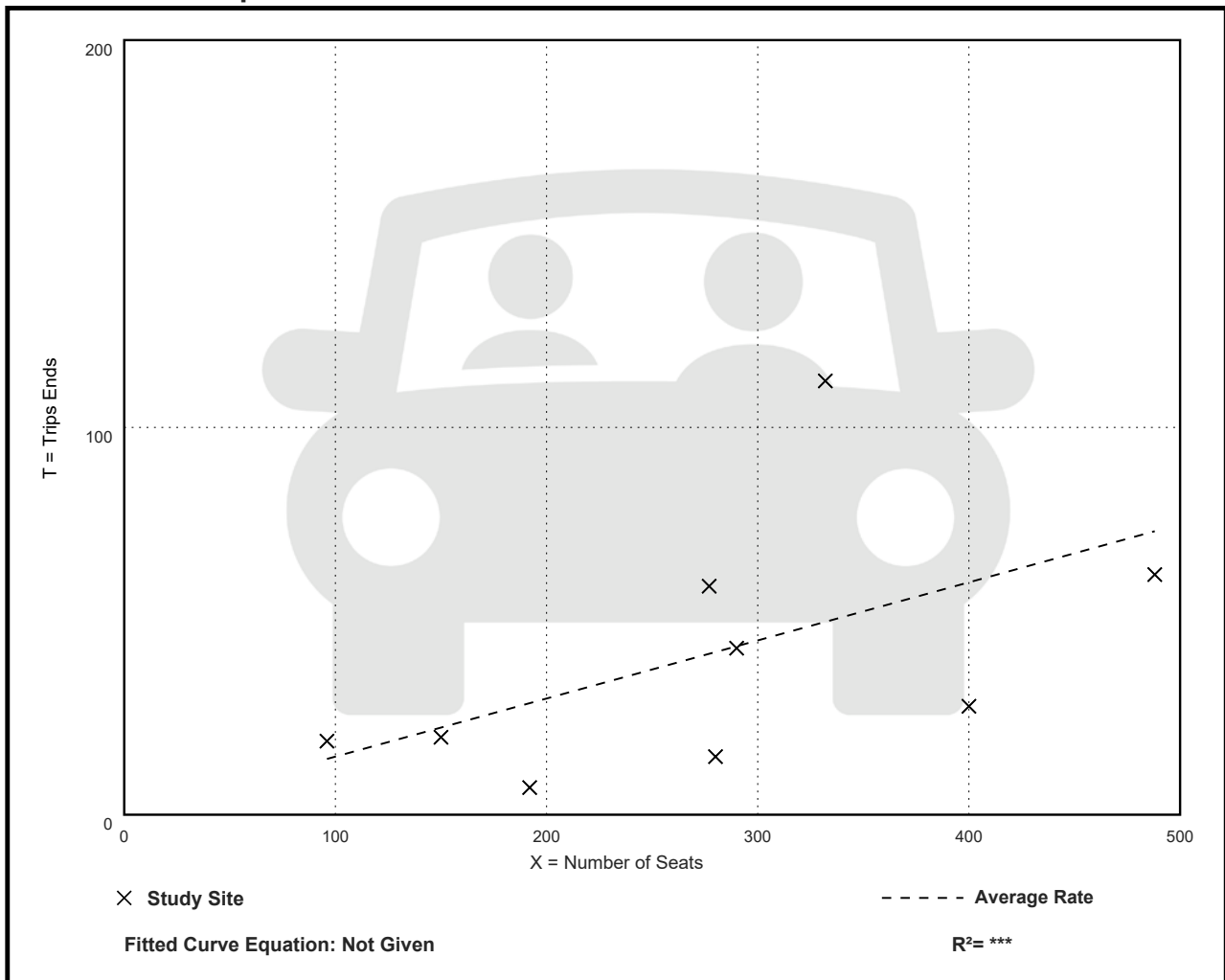
Avg. Num. of Seats: 278

Directional Distribution: 69% entering, 31% exiting

Vehicle Trip Generation per Seat

Average Rate	Range of Rates	Standard Deviation
0.15	0.04 - 0.34	0.10

Data Plot and Equation



Fine Dining Restaurant (931)

Vehicle Trip Ends vs: Seats

On a: **Weekday,**
PM Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 10

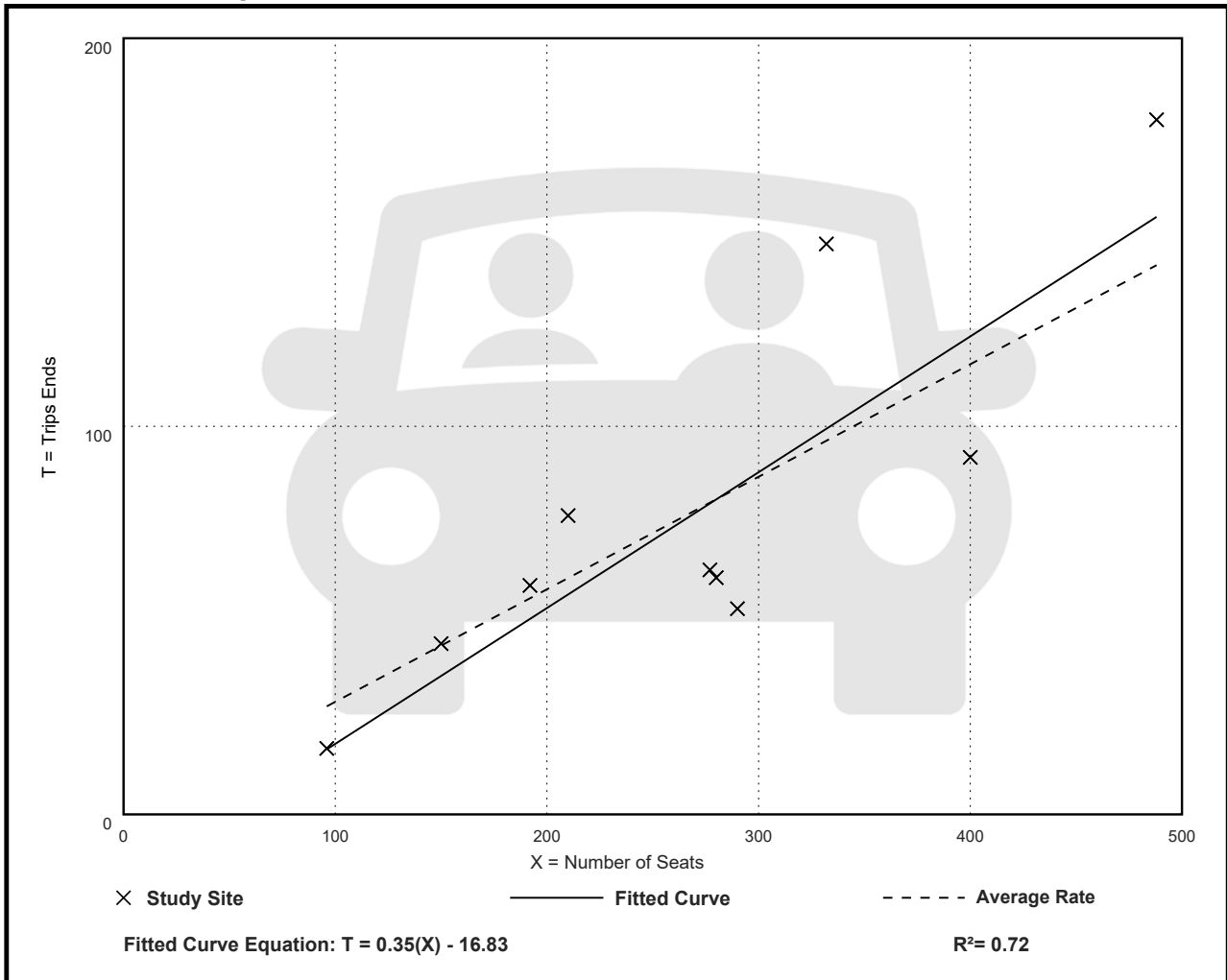
Avg. Num. of Seats: 272

Directional Distribution: 59% entering, 41% exiting

Vehicle Trip Generation per Seat

Average Rate	Range of Rates	Standard Deviation
0.29	0.18 - 0.44	0.09

Data Plot and Equation



Fine Dining Restaurant (931)

Vehicle Trip Ends vs: Seats
On a: Saturday

Setting/Location: General Urban/Suburban

Number of Studies: 6

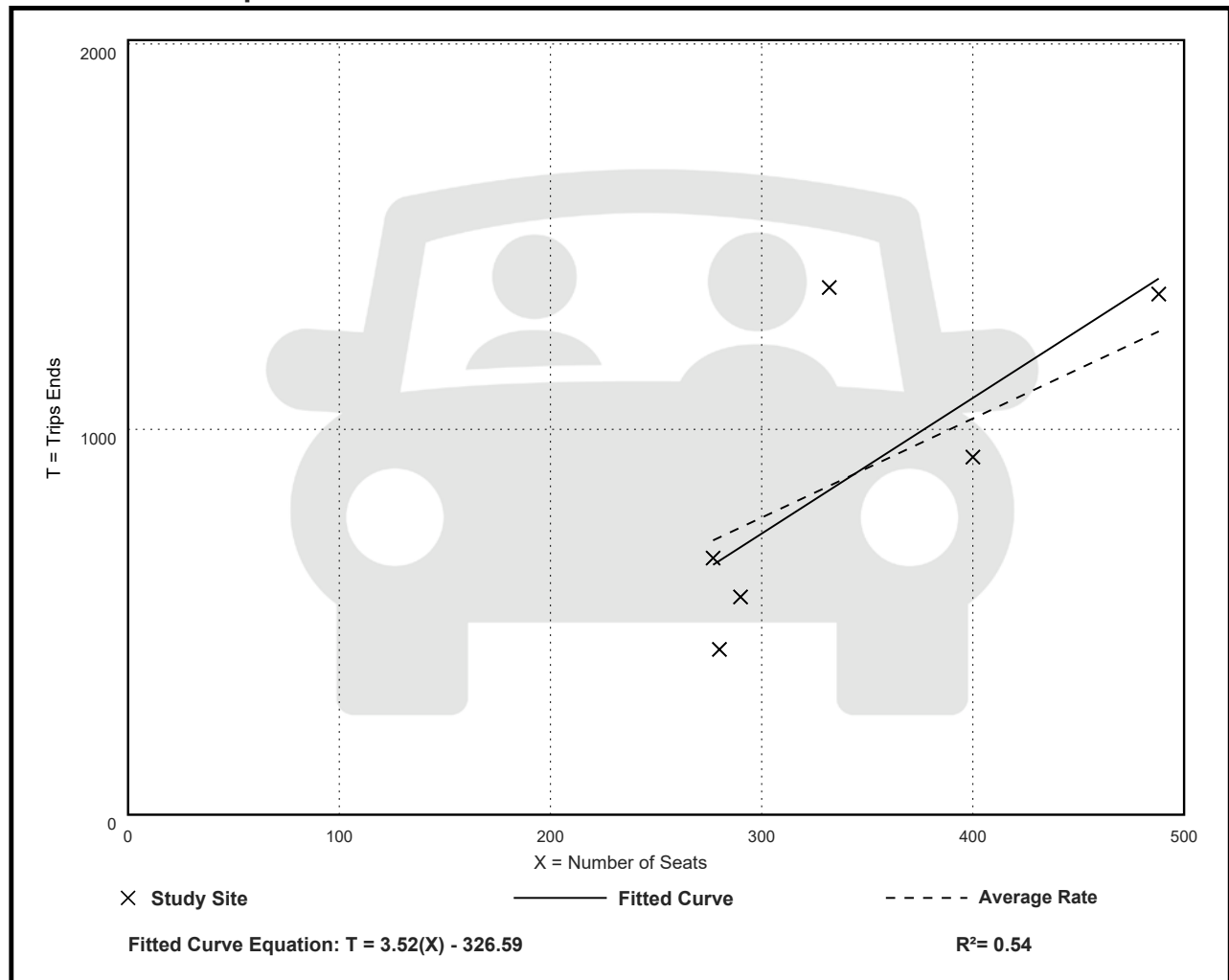
Avg. Num. of Seats: 345

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Seat

Average Rate	Range of Rates	Standard Deviation
2.57	1.53 - 4.12	0.86

Data Plot and Equation



Fine Dining Restaurant (931)

Vehicle Trip Ends vs: Seats

On a: Saturday, Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 7

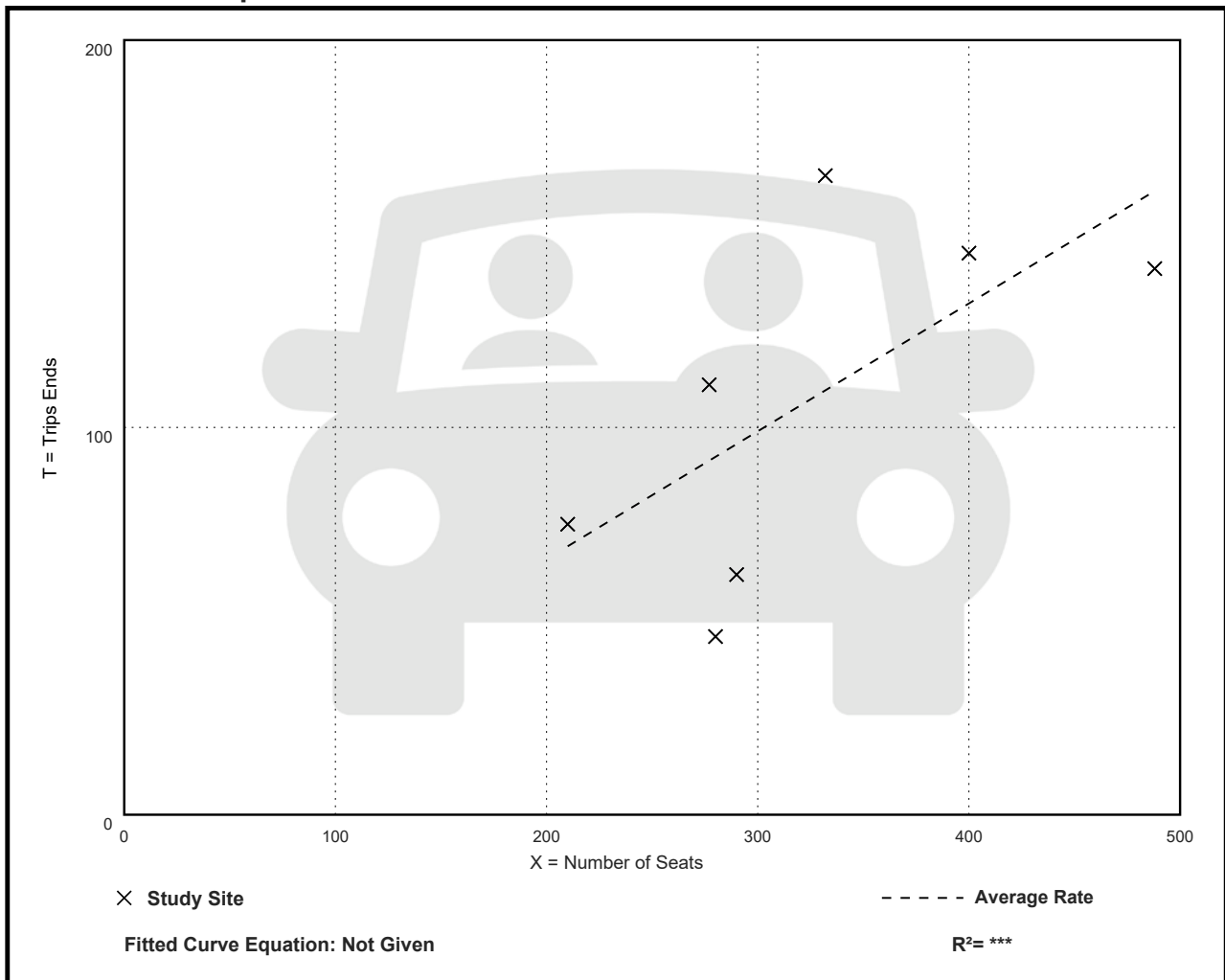
Avg. Num. of Seats: 325

Directional Distribution: 59% entering, 41% exiting

Vehicle Trip Generation per Seat

Average Rate	Range of Rates	Standard Deviation
0.33	0.16 - 0.50	0.11

Data Plot and Equation



Fine Dining Restaurant (931)

Vehicle Trip Ends vs: Seats
On a: Sunday

Setting/Location: General Urban/Suburban

Number of Studies: 6

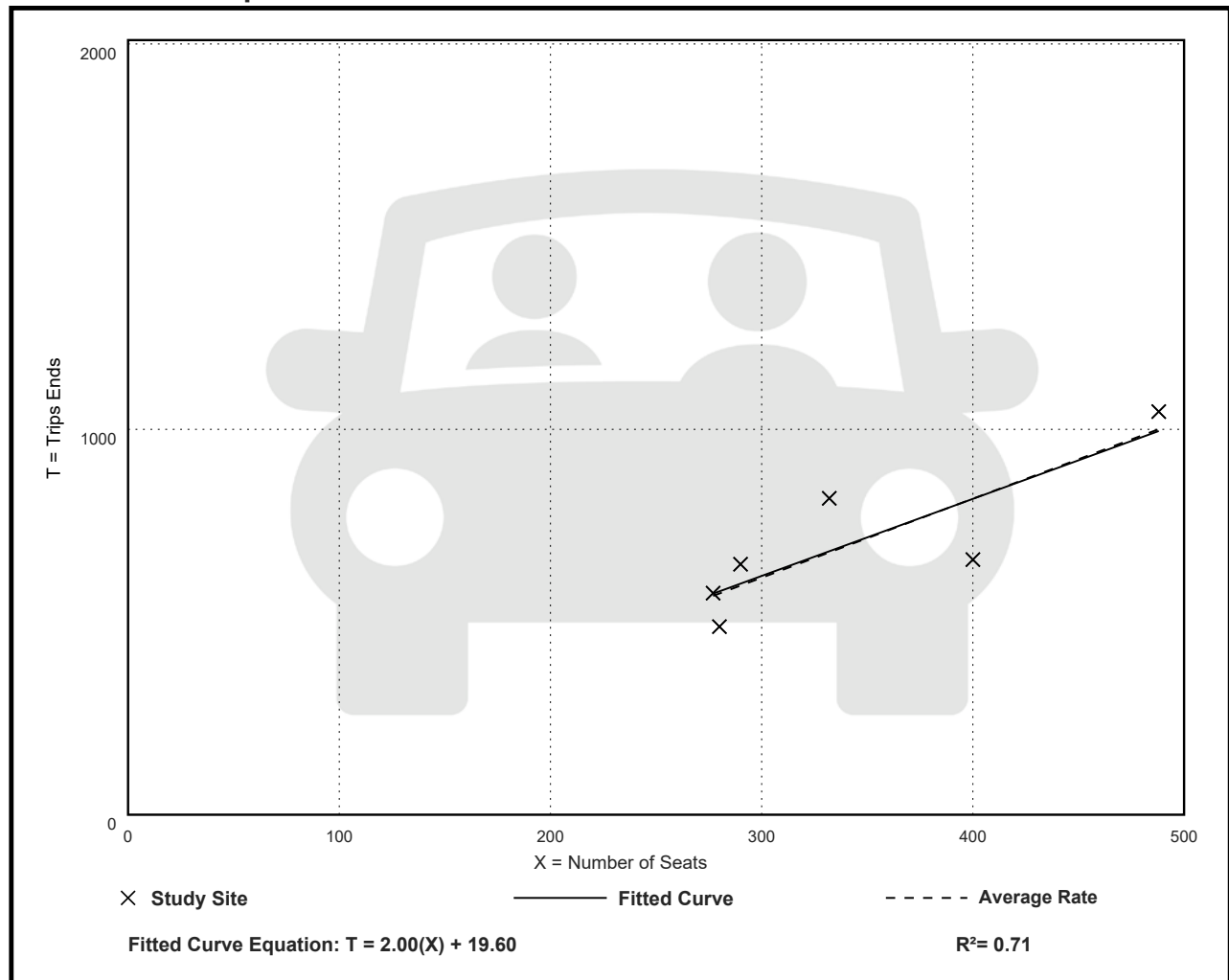
Avg. Num. of Seats: 345

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Seat

Average Rate	Range of Rates	Standard Deviation
2.05	1.66 - 2.47	0.31

Data Plot and Equation



Fine Dining Restaurant (931)

Vehicle Trip Ends vs: Seats

On a: Sunday, Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 6

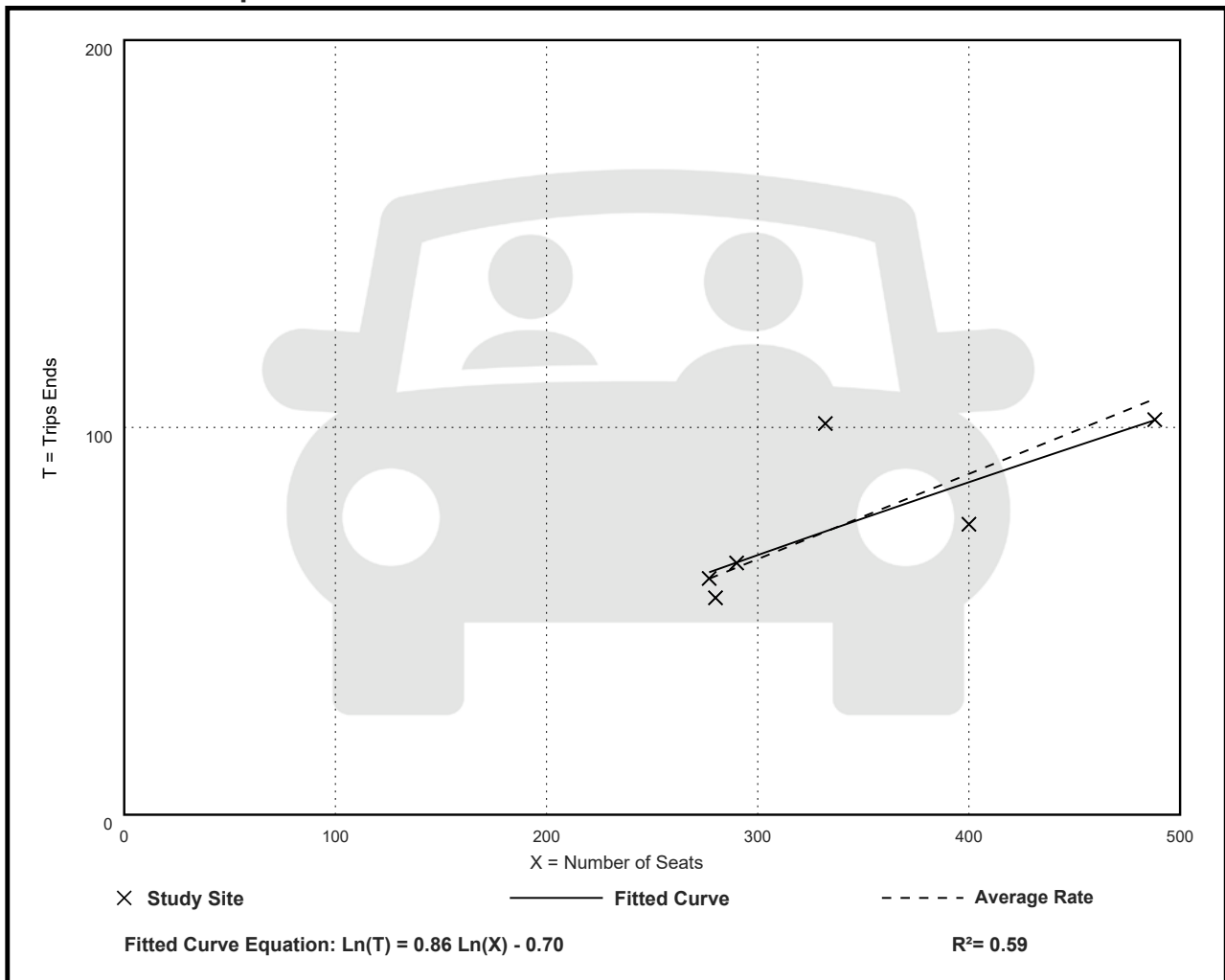
Avg. Num. of Seats: 345

Directional Distribution: 63% entering, 37% exiting

Vehicle Trip Generation per Seat

Average Rate	Range of Rates	Standard Deviation
0.22	0.19 - 0.30	0.04

Data Plot and Equation



Fine Dining Restaurant (931)

Vehicle Trip Ends vs: Employees

On a: **Weekday,**
AM Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 3

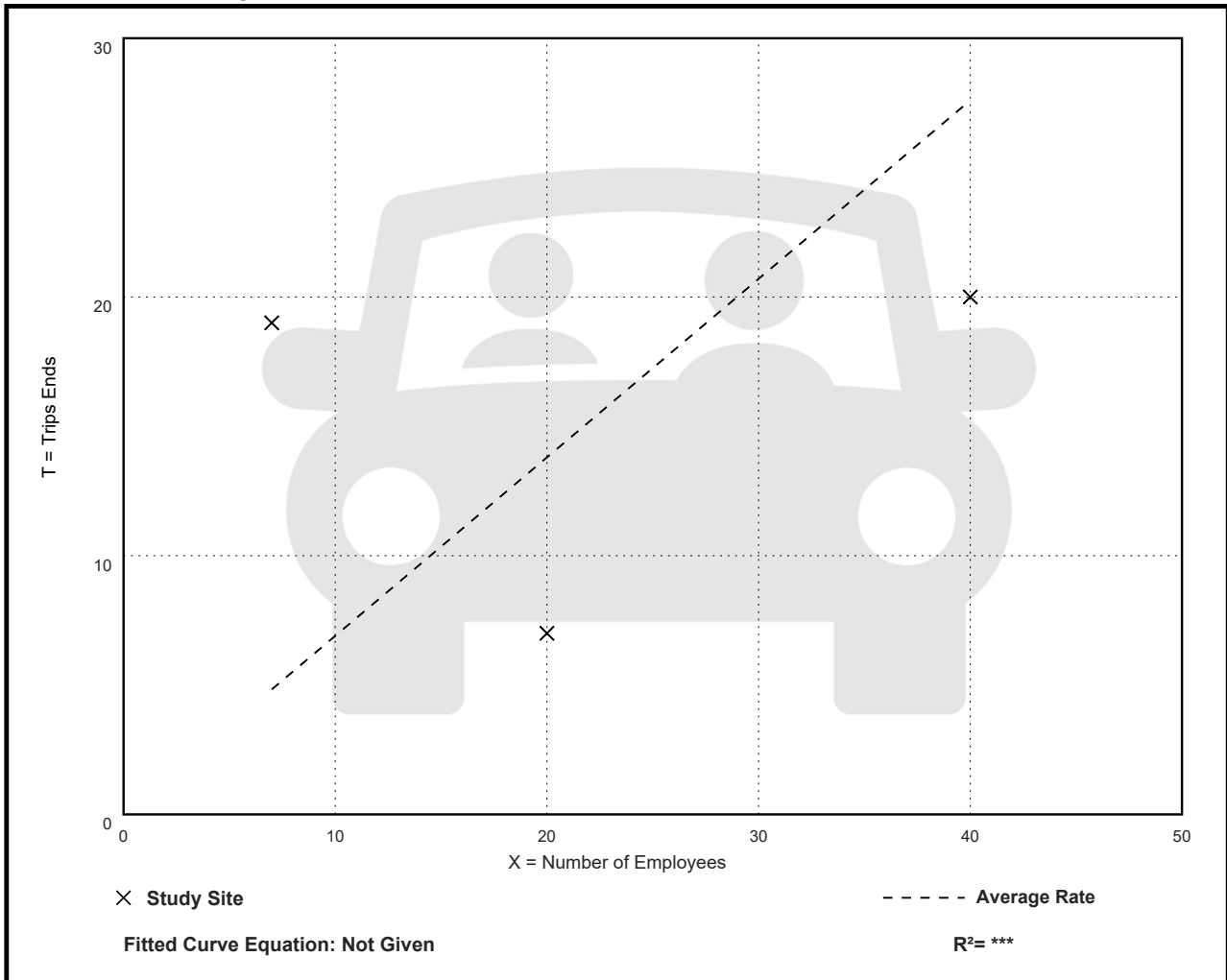
Avg. Num. of Employees: 22

Directional Distribution: 56% entering, 44% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
0.69	0.35 - 2.71	0.85

Data Plot and Equation



Fine Dining Restaurant (931)

Vehicle Trip Ends vs: Employees

On a: **Weekday,**
PM Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 3

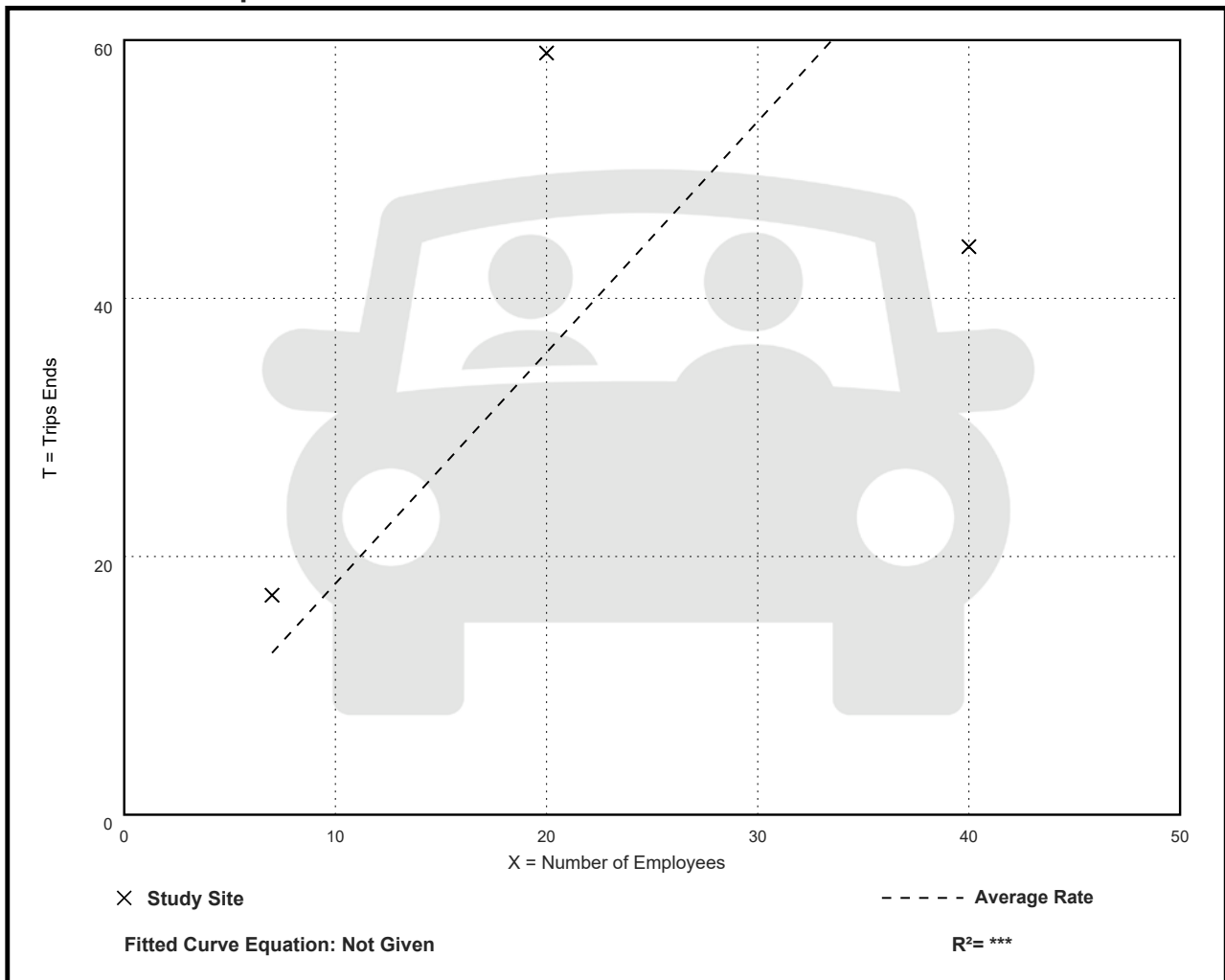
Avg. Num. of Employees: 22

Directional Distribution: 58% entering, 42% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
1.79	1.10 - 2.95	1.05

Data Plot and Equation



Fine Dining Restaurant (931)

Walk+Bike+Transit Trip Ends vs: 1000 Sq. Ft. GFA

**On a: Weekday,
AM Peak Hour of Generator**

Setting/Location: General Urban/Suburban

Number of Studies: 1

Avg. 1000 Sq. Ft. GFA: 5

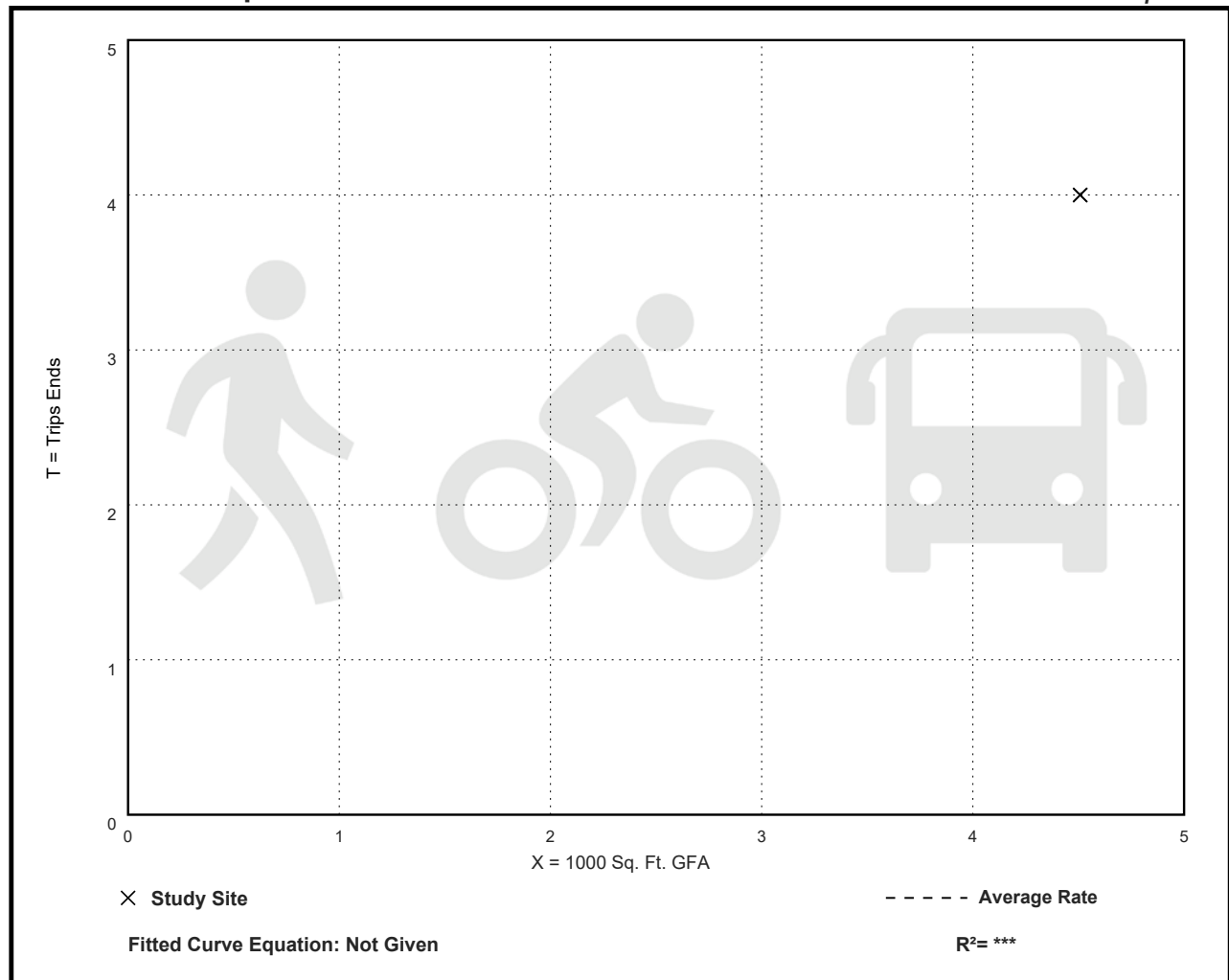
Directional Distribution: 50% entering, 50% exiting

Walk+Bike+Transit Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.89	0.89 - 0.89	***

Data Plot and Equation

Caution – Small Sample Size



Fine Dining Restaurant (931)

Walk+Bike+Transit Trip Ends vs: 1000 Sq. Ft. GFA

On a: **Weekday,**
PM Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 5

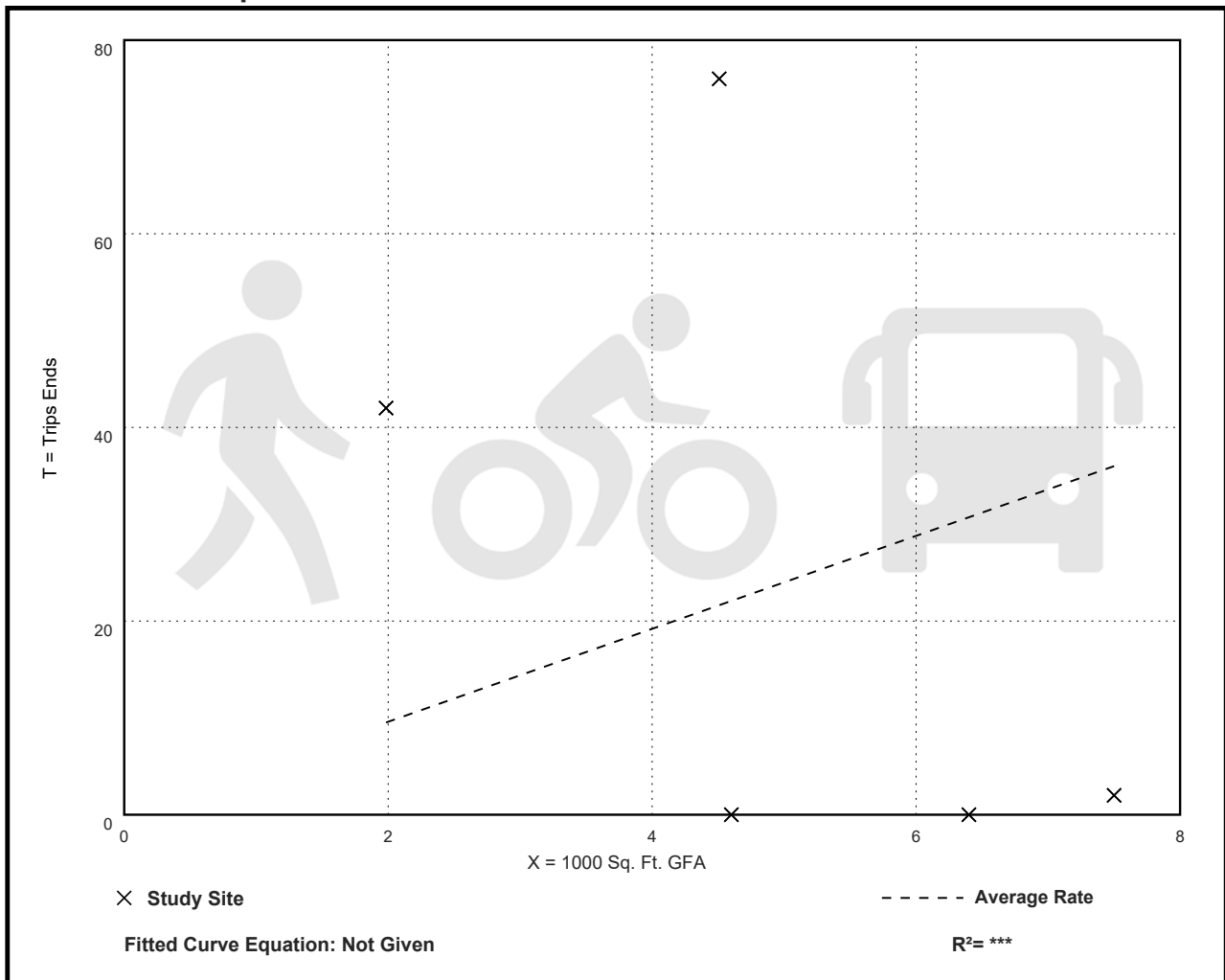
Avg. 1000 Sq. Ft. GFA: 5

Directional Distribution: 47% entering, 53% exiting

Walk+Bike+Transit Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
4.80	0.00 - 21.17	8.93

Data Plot and Equation



Fine Dining Restaurant (931)

Walk+Bike+Transit Trip Ends vs: 1000 Sq. Ft. GFA

On a: Saturday, Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 2

Avg. 1000 Sq. Ft. GFA: 3

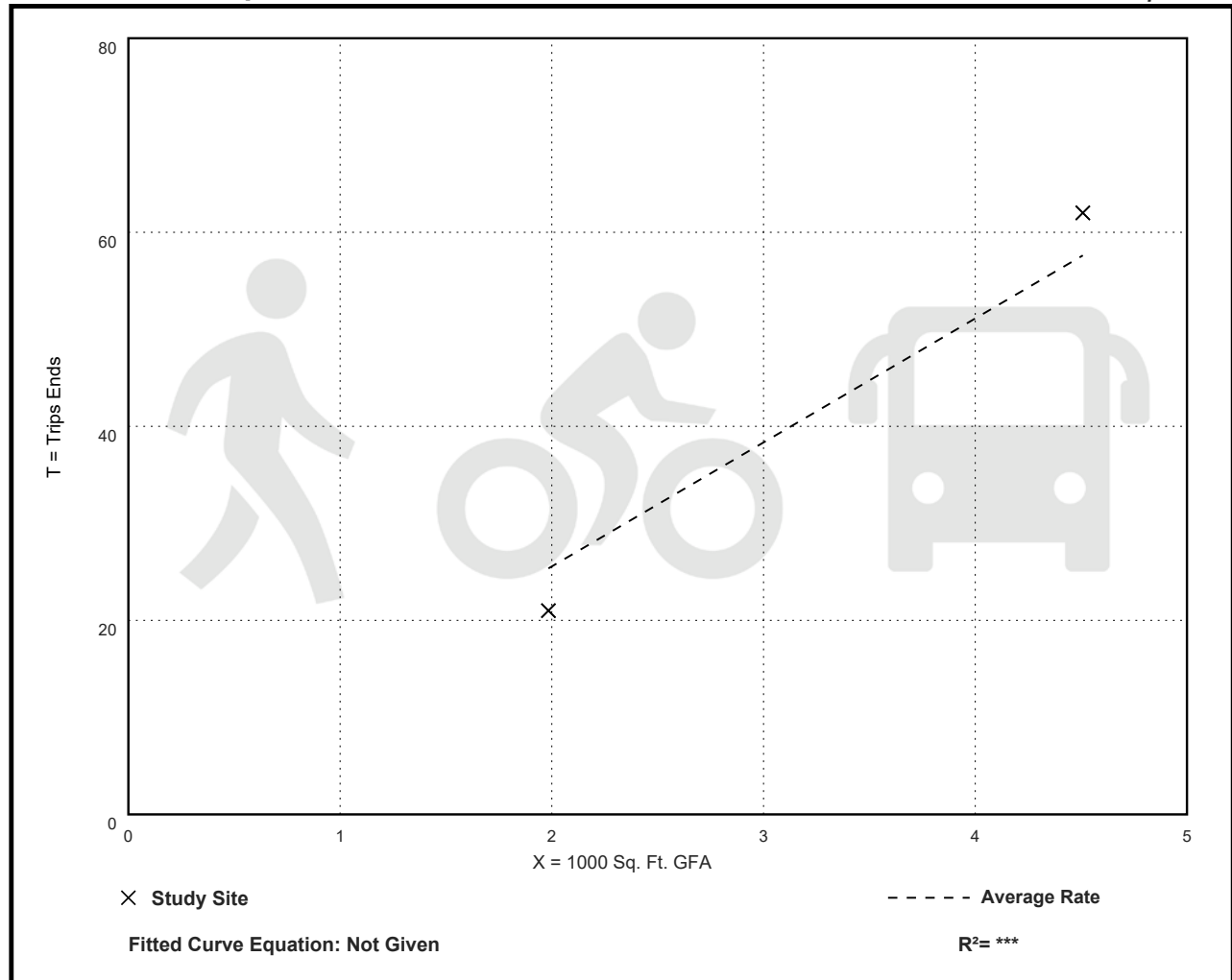
Directional Distribution: 40% entering, 60% exiting

Walk+Bike+Transit Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
12.78	10.58 - 13.75	***

Data Plot and Equation

Caution – Small Sample Size



Fine Dining Restaurant (931)

Walk+Bike+Transit Trip Ends vs: 1000 Sq. Ft. GFA

On a: Sunday, Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 2

Avg. 1000 Sq. Ft. GFA: 3

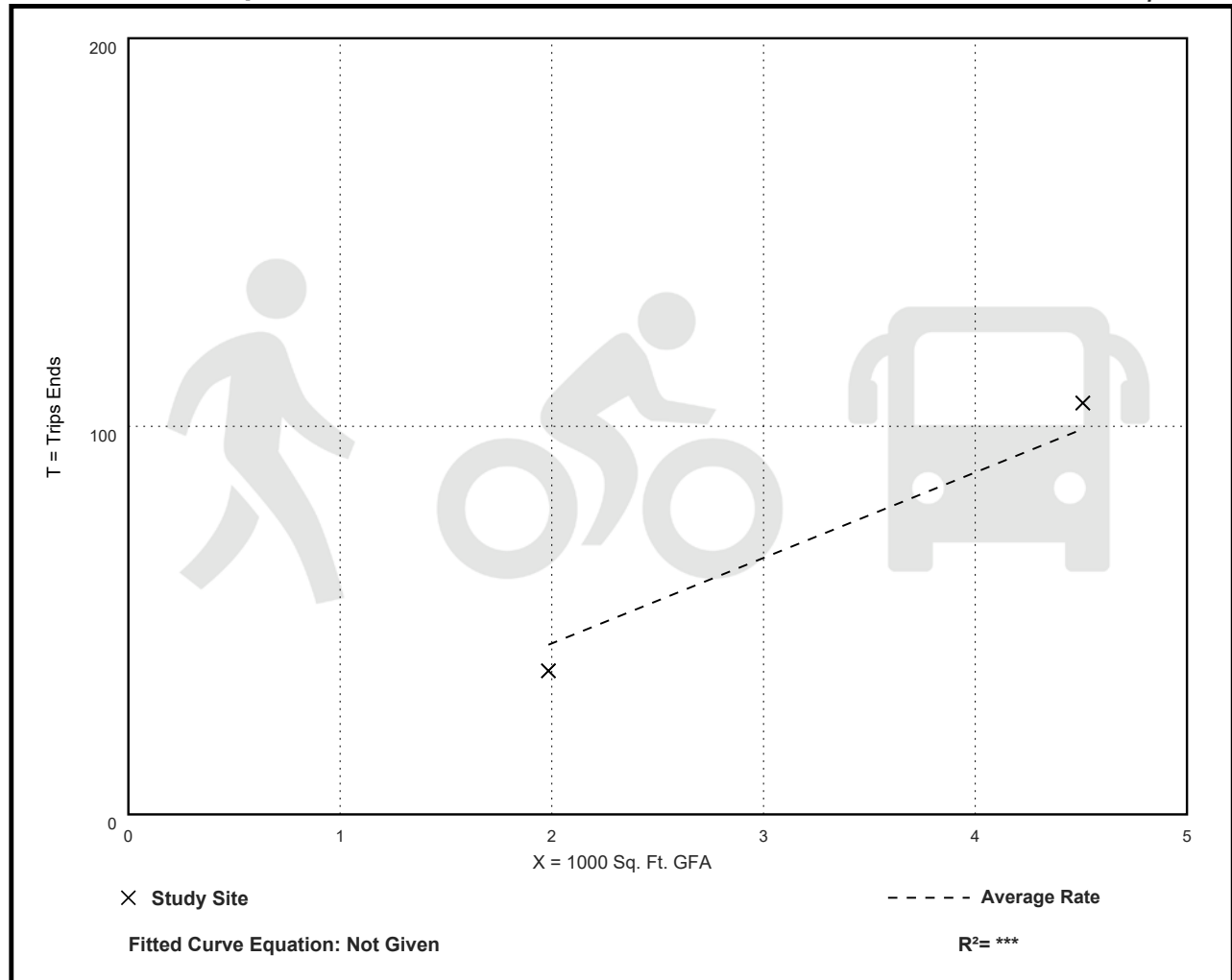
Directional Distribution: 59% entering, 41% exiting

Walk+Bike+Transit Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
22.03	18.65 - 23.51	***

Data Plot and Equation

Caution – Small Sample Size



Fine Dining Restaurant (931)

Walk+Bike+Transit Trip Ends vs: Seats

On a: **Weekday,**
PM Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 3

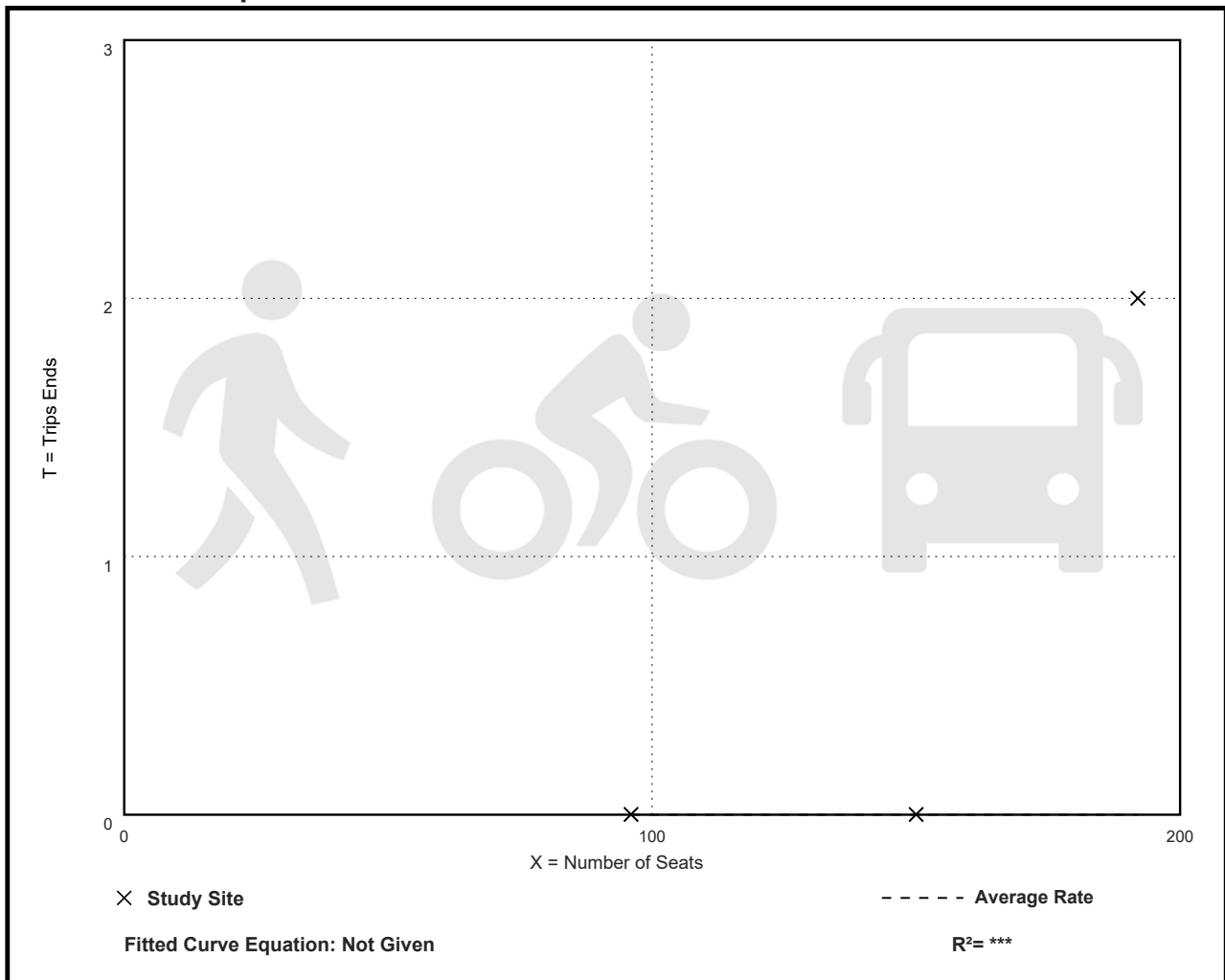
Avg. Num. of Seats: 146

Directional Distribution: 47% entering, 53% exiting

Walk+Bike+Transit Trip Generation per Seat

Average Rate	Range of Rates	Standard Deviation
0.00	0.00 - 0.01	0.01

Data Plot and Equation



Fine Dining Restaurant (931)

Walk+Bike+Transit Trip Ends vs: Employees

On a: Weekday,
PM Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 3

Avg. Num. of Employees: 22

Directional Distribution: 47% entering, 53% exiting

Walk+Bike+Transit Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
0.03	0.00 - 0.10	0.06

Data Plot and Equation

