October 10, 2023

RE: Johns Creek Retail Development –Trip Generation Memo

A development is proposed in the southwest quadrant of the intersection of McGinnis Ferry Road and Johns Creek Parkway behind Delta Community bank. This lot is currently vacant with full access to both roads via the bank driveways. This memo describes the proposed land uses and the trip generation associated with it.

Site Description and Project Trips

Figure 1: Aerial view of the proposed development

The proposed development is outlined in red in the illustrated aerial view in Figure 1. The site plan in Figure 2 shows the land uses and the square footage associated with them. The trip generation estimates are based on the average rates and equations provided in the Institute of Transportation Engineers (ITE) Manual, 11th Edition.

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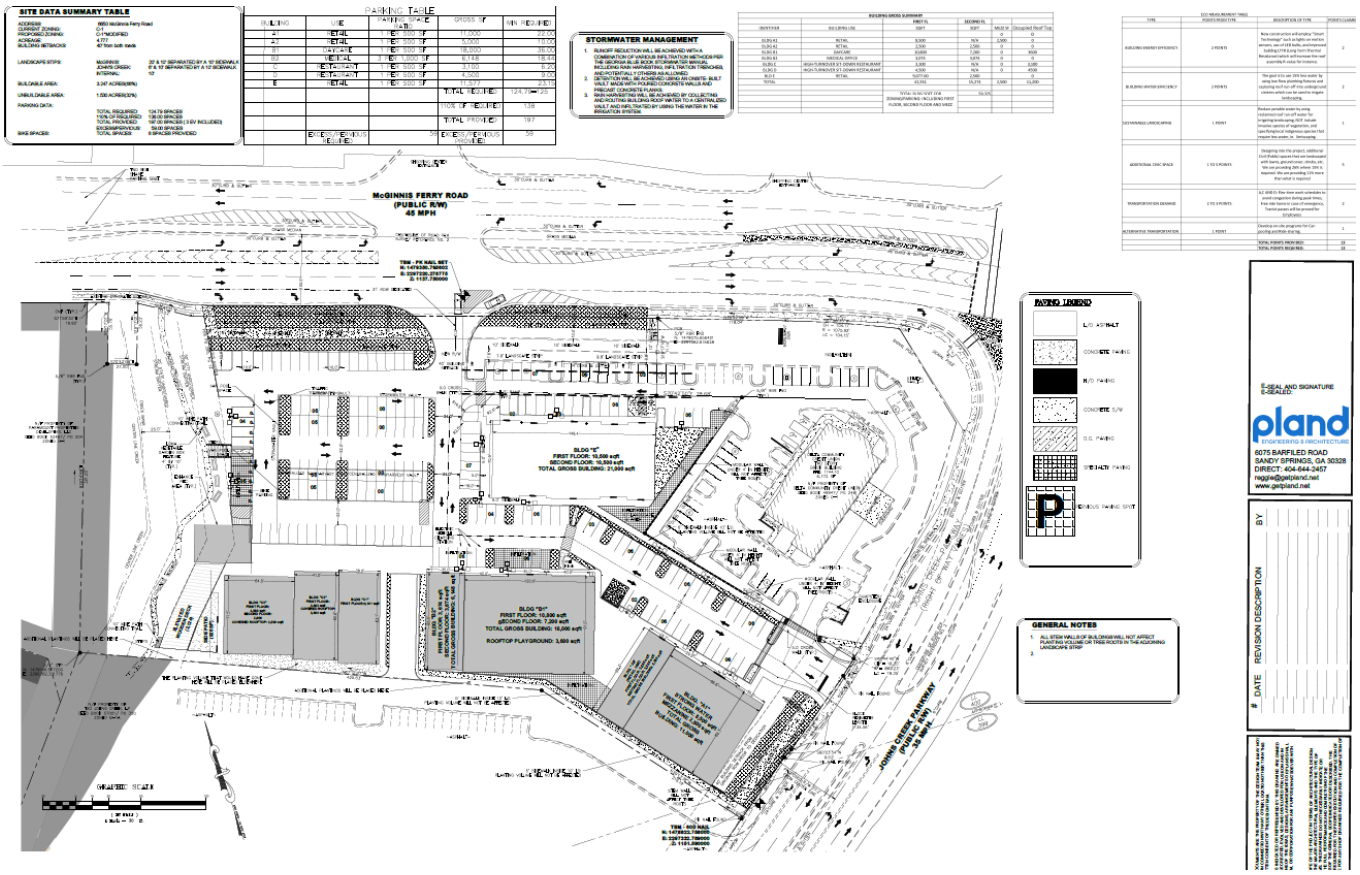


Figure 2: Proposed Site Plan

Table 1 shows the proposed land uses and the associated square footages.

Table 1: Land Use Information

Building	Land Use	Total Square Footage		Total Square Footage
		First Floor	Second Floor/Mezzanine	
A1	Retail	8,500 SF	2,500 SF	11,000 SF
A2	Retail	2,500 SF	2,500 SF	5,000 SF
B1	Daycare Center	10,800 SF	7,200 SF	18,000 SF
B2	Medical Office	3,074 SF	3,074 SF	6,148 SF
C1	Medical Office	3,161 SF	-	3,161 SF
C2	High-Turnover (Sit-down) Restaurant	3,303 SF	-	3,303 SF
C3	High-Turnover (Sit-down) Restaurant	4,580 SF	2,000 SF	6,580 SF
E	Retail	10,500 SF	10,500 SF	21,000 SF

Table 2 illustrates the results of the trip generation analysis based on the ITE Manual, 11th Edition.

Table 2: ITE Trip Generation Results

Land Use Information	Reduction %	Project Trips Total	Inbound	Outbound	Equation Used[1]	In / Out Distribution
822 - Strip Retail Plaza (<40k) (Building A1,A2 & E)					**37,000**	**1000 S.F.**
Daily		2,015	1,008	1,007	T =54.45(X)	50% / 50%
AM Peak Hour		87	52	35	T = 2.36(X)	60% / 40%
PM Peak Hour		244	122	122	T =6.59(X)	50% / 50%
932- High-Turnover (Sit-Down) Restaurant (Building C2 & C3)					**9,883**	**1000 S.F.**
Daily		1,059	530	529	T = 107.20(X)	50% / 50%
AM Peak Hour		95	48	47	T = 9.57(X)	51% / 49%
PM Peak Hour		89	54	35	T =9.05(X)	61% / 39%
Reductions for Pass-By Trips						
Daily	43%	455	228	227		
AM Peak Hour	43%	41	21	20		
PM Peak Hour	43%	38	19	19		
Net New External Vehicle Trips						
Daily		604	302	302		
AM Peak Hour		54	27	27		
PM Peak Hour		51	35	16		
565 - Day Care Center (Building B1)					**18,000**	**1000 S.F.**
Daily		74	37	37	T = 4.09(X)	50% / 50%
AM Peak Hour		14	7	7	T = 0.78(X)	53% / 47%
PM Peak Hour		14	7	7	T =0.79(X)	47% / 53%
Reductions for Pass-By Trips						
Daily	44%	33	16	17		
AM Peak Hour	44%	6	3	3		
PM Peak Hour	44%	6	3	3		
Net New External Vehicle Trips						
Daily		41	21	20		
AM Peak Hour		8	4	4		
PM Peak Hour		8	4	4		
720 - Medical Office (Building B2 & C1)					**9,309**	**1000 S.F.**
Daily		292	146	146	T = 42.97(X)-108.1	50% / 50%
AM Peak Hour		28	22	6	T = e^(0.9LN(X)+1.34)	79% / 21%
PM Peak Hour		35	11	24	T =4.07(X)-3.17	30% / 70%
Total Net New External Vehicle Trips						
Daily		**2,952**	**1,477**	**1,475**		
AM Peak Hour		**177**	**105**	**72**		
PM Peak Hour		**338**	**172**	**166**		

From Table 2 it can be observed that the total proposed development generates 2,952 daily trips (1,477 inbound and 1,475 outbound). It is expected to generate 177 AM Peak hour trips (105 inbound and 72 outbound) and 338 PM peak hour trips (172 inbound and 166 outbound).

If you have any questions/ concerns/ comments, please feel free to reach out to me at 205.222.1034 or email me at sameer@loweengineers.com.

Sincerely,

Sameer Patharkar, PE
Traffic Engineer

Attachments

SITE DATA SUMMARY TABLE

ADDRESS:	6650 McGinnis Ferry Road	
CURRENT ZONING:	C-1	
PROPOSED ZONING:	C-1*MODIFIED	
ACREAGE:	4.777	
BUILDING SETBACKS:	40' from both roads	
LANDSCAPE STIPS:	McGINNIS:	20' & 10' SEPARATED BY A 10' SIDEWALK
	JOHN'S CREEK:	6' & 10' SEPARATED BY A 10' SIDEWALK
	INTERNAL:	10'
BUILDABLE AREA:	3.247 ACRES(68%)	
UNBUILDABLE AREA:	1.530 ACRES(32%)	
PARKING DATA:		
	TOTAL REQUIRED:	124.79 SPACES
	110% OF REQUIRED:	138.00 SPACES
	TOTAL PROVIDED:	197.00 SPACES (3 EV INCLUDED)
	EXCESS/PERVIOUS:	59.00 SPACES
BIKE SPACES:	TOTAL SPACES:	8 SPACES PROVIDED

PARKING TABLE

BUILDING	USE	PARKING SPACE RATIO	GROSS SF	MIN REQUIRED
A1	RETAIL	1 PER 500 SF	11,000	22.00
A2	RETAIL	1 PER 500 SF	5,000	10.00
B1	DAYCARE	1 PER 500 SF	18,000	36.00
B2	MEDICAL	3 PER 1,000 SF	6,148	18.44
C	RESTAURANT	1 PER 500 SF	3,100	6.20
D	RESTAURANT	1 PER 500 SF	4,500	9.00
E	RETAIL	1 PER 500 SF	11,577	23.15
			TOTAL REQUIRED	124.79=125
			110% OF REQUIRED	138
			TOTAL PROVIDED	197
	EXCESS/PERVIOUS REQUIRED	59	EXCESS/PERVIOUS PROVIDED	59

STORMWATER MANAGEMENT

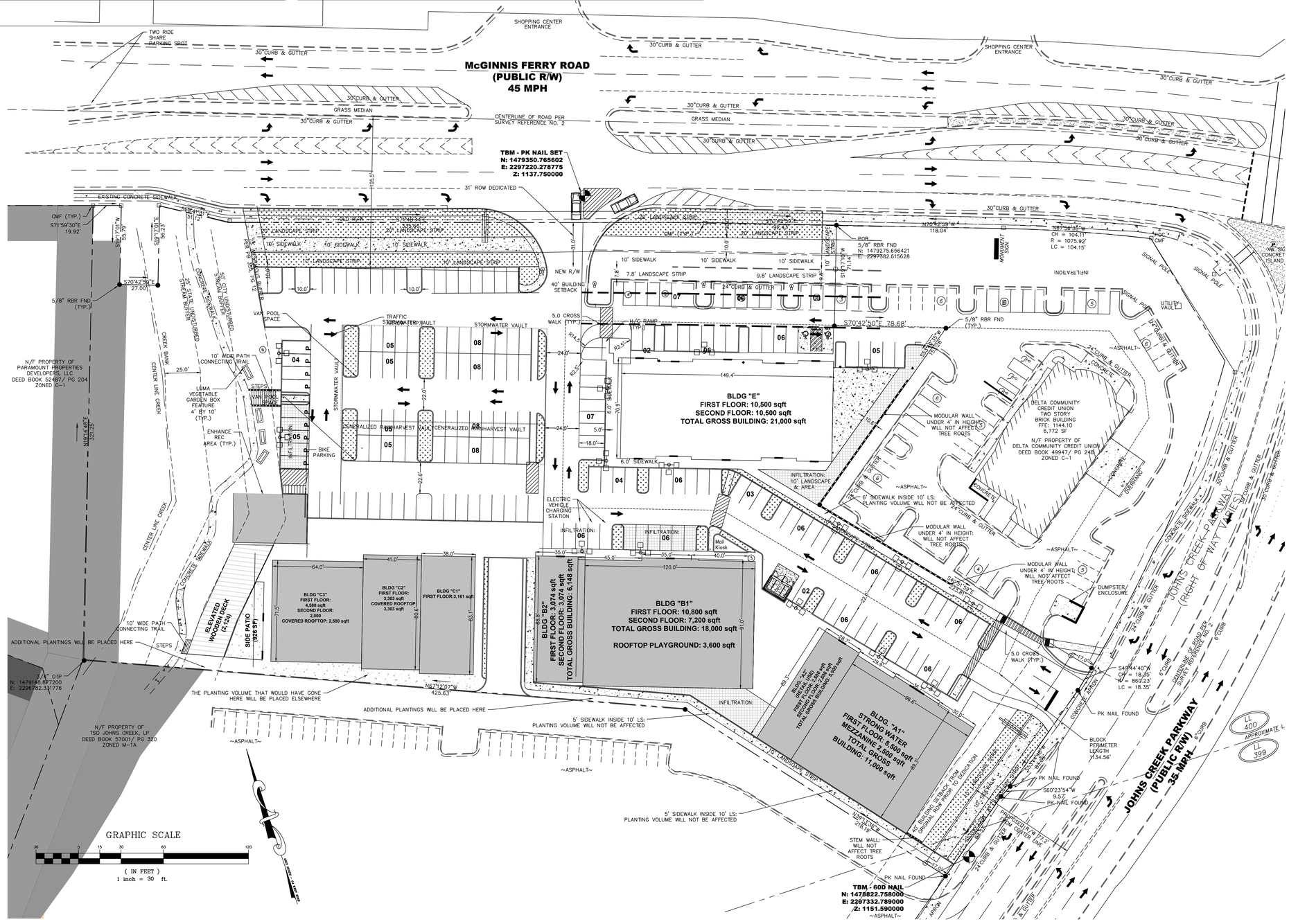
1. RUNOFF REDUCTION WILL BE ACHIEVED WITH A COMBINATION OF VARIOUS INFILTRATION METHODS PER THE GEORGIA BLUE BOOK STORMWATER MANUAL INCLUDING RAIN HARVESTING, INFILTRATION TRENCHES, AND POTENTIALLY OTHERS AS ALLOWED.
2. DETENTION WILL BE ACHIEVED USING AN ONSITE- BUILT VAULT MADE WITH POURED CONCRETE WALLS AND PRECAST CONCRETE PLANKS.
3. RAIN HARVESTING WILL BE ACHIEVED BY COLLECTING AND ROUTING BUILDING ROOF WATER TO A CENTRALIZED VAULT AND INFILTRATED BY USING THE WATER IN THE IRRIGATION SYSTEM.

BUILDING GROSS SUMMARY

IDENTIFIER	BUILDING USE	FIRST FL SQFT	SECOND FL SQFT	MEZZ SF	Occupied Roof Top
				0	0
BLDG A1	RETAIL	8,500	N/A	2,500	0
BLDG A2	RETAIL	2,500	2,500	0	0
BLDG B1	DAYCARE	10,800	7,200	0	3600
BLDG B2	MEDICAL OFFICE	3,074	3,074	0	0
BLDG C	HIGH-TURNOVER SIT-DOWN RESTAURANT	3,100	N/A	0	3,100
BLDG D	HIGH-TURNOVER SIT-DOWN RESTAURANT	4,500	N/A	0	4500
BLD E	RETAIL	9,077.00	2,500		0
TOTAL		41,551	15,274	2,500	11,200
		TOTAL BLDG SQFT FOR ZONING/PARKING: INCLUDING FIRST FLOOR, SECOND FLOOR AND MEZZ	59,325		

ECO MEASUREMENT TABLE

TYPE	POINTS FROM TYPE	DESCRIPTION OF TYPE	POINTS CLAIMED
BUILDING ENERGY EFFICIENCY	2 POINTS	New construction will employ "Smart Technology" such as lights on motion sensors, use of LED bulbs, and improved building LTTR (Long Term Thermal Resistance) which will increase the roof assembly R-value for instance.	2
BUILDING WATER EFFICIENCY	2 POINTS	The goal is to use 15% less water by using low flow plumbing fixtures and capturing roof run-off into underground cisterns which can be used to irrigate landscaping.	2
SUSTAINABLE LANDSCAPING	1 POINT	Reduce potable water by using reclaimed roof run-off water for irrigating landscaping, NOT include invasive species of vegetation, and specifying local indigenous species that require less water, ie. Xeriscaping.	1
ADDITIONAL CIVIC SPACE	1 TO 5 POINTS	Designing into the project, additional Civil (Public) spaces that are landscaped with lawns, ground cover, shrubs, etc. We are providing 26% where 15% is required. We are providing 11% more than what is required	5
TRANSPORTATION DEMAND	2 TO 3 POINTS	A,C AND D: Flex-time work schedules to avoid congestion during peak times, Free ride home in case of emergency, Tranist passes will be proved for Employees	2
ALTERNATIVE TRANSPORTATION	1 POINT	Develop on-site programs for Car-pooling and Ride-sharing.	1
		TOTAL POINTS PROVIDED:	**13**
		TOTAL POINTS REQUIRED:	**13**



PAVING LEGEND

- L/D ASPHALT
- CONCRETE PAVING
- H/D PAVING
- CONCRETE S/W
- D.G. PAVING
- SPECIALTY PAVING
- P — PERVIOUS PAVING SPOT

GENERAL NOTES

1. ALL STEM WALLS OF BUILDINGS WILL NOT AFFECT PLANTING VOLUME OR TREE ROOTS IN THE ADJOINING LANDSCAPE STRIP
2.

E-SEAL AND SIGNATURE
E-SEALED:

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reggie@getpland.net
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#	DATE	REVISION DESCRIPTION	BY

SCOPE OF DOCUMENT
THESE CONSTRUCTION DOCUMENTS INDICATE THE GENERAL SCOPE OF THE PROJECT IN TERMS OF ARCHITECTURAL DESIGN CONCEPTS; THE DIMENSIONS OF THE BUILDING, THE MAJOR ARCHITECTURAL ELEMENTS AND THE TYPE OF STRUCTURAL, MECHANICAL, ELECTRICAL SYSTEMS. THE DRAWINGS DO NOT NECESSARILY INDICATE OR DESCRIBE ALL WORK ITEMS REQUIRED FOR THE PROPER EXECUTION AND COMPLETION OF THE CONTRACT. THE REQUIREMENTS OF THE CONTRACT ON THE BASIS OF THE GENERAL SCOPE INDICATED OR DESCRIBED, THE TRADE CONTRACTOR SHALL FURNISH ALL ITEMS REQUIRED FOR THE PROPER EXECUTION AND COMPLETION OF THE WORK. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR ANY SHOP DRAWINGS REQUIRED FOR THE COMPLETION OF WORK AS NECESSARY.

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

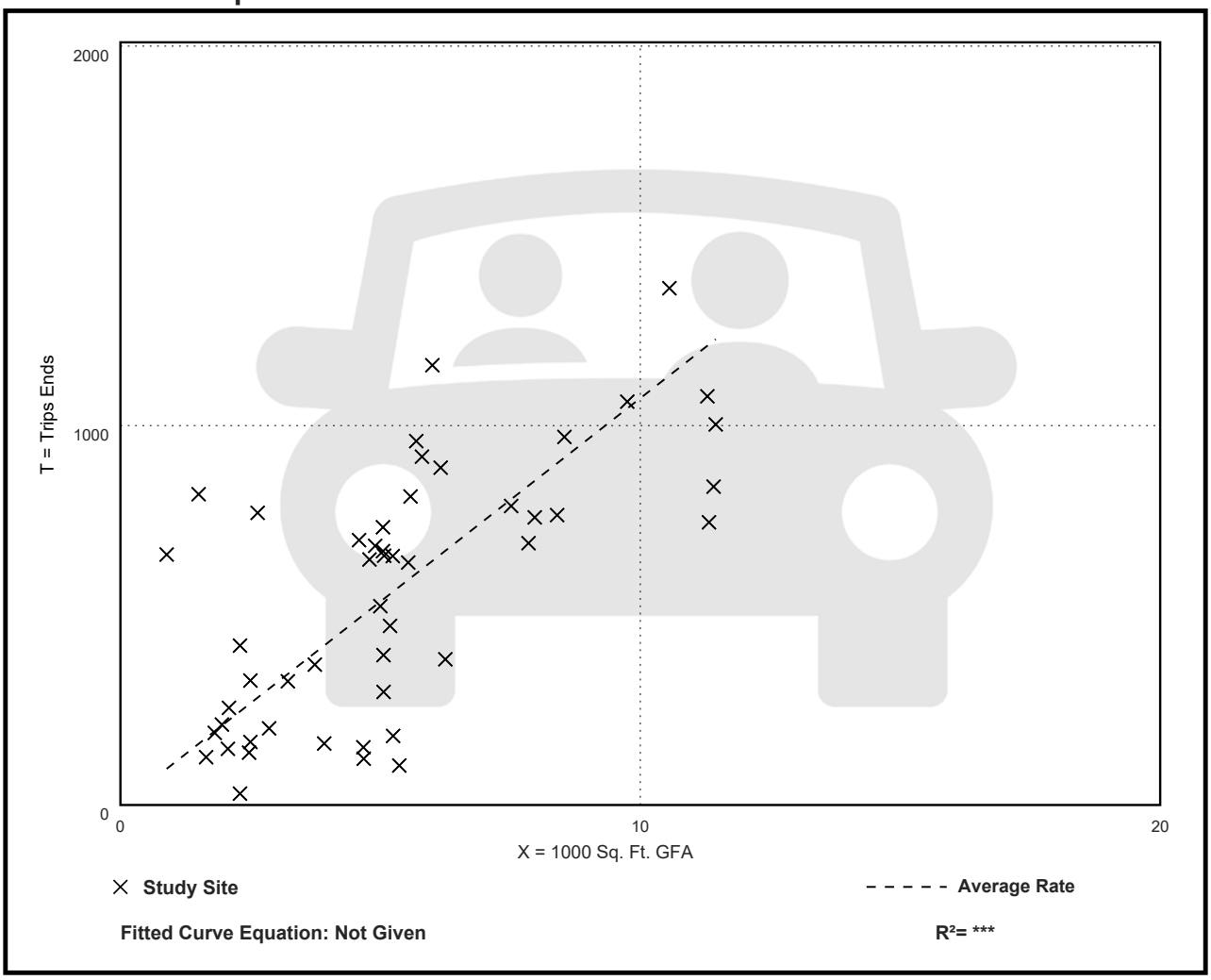
Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday

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



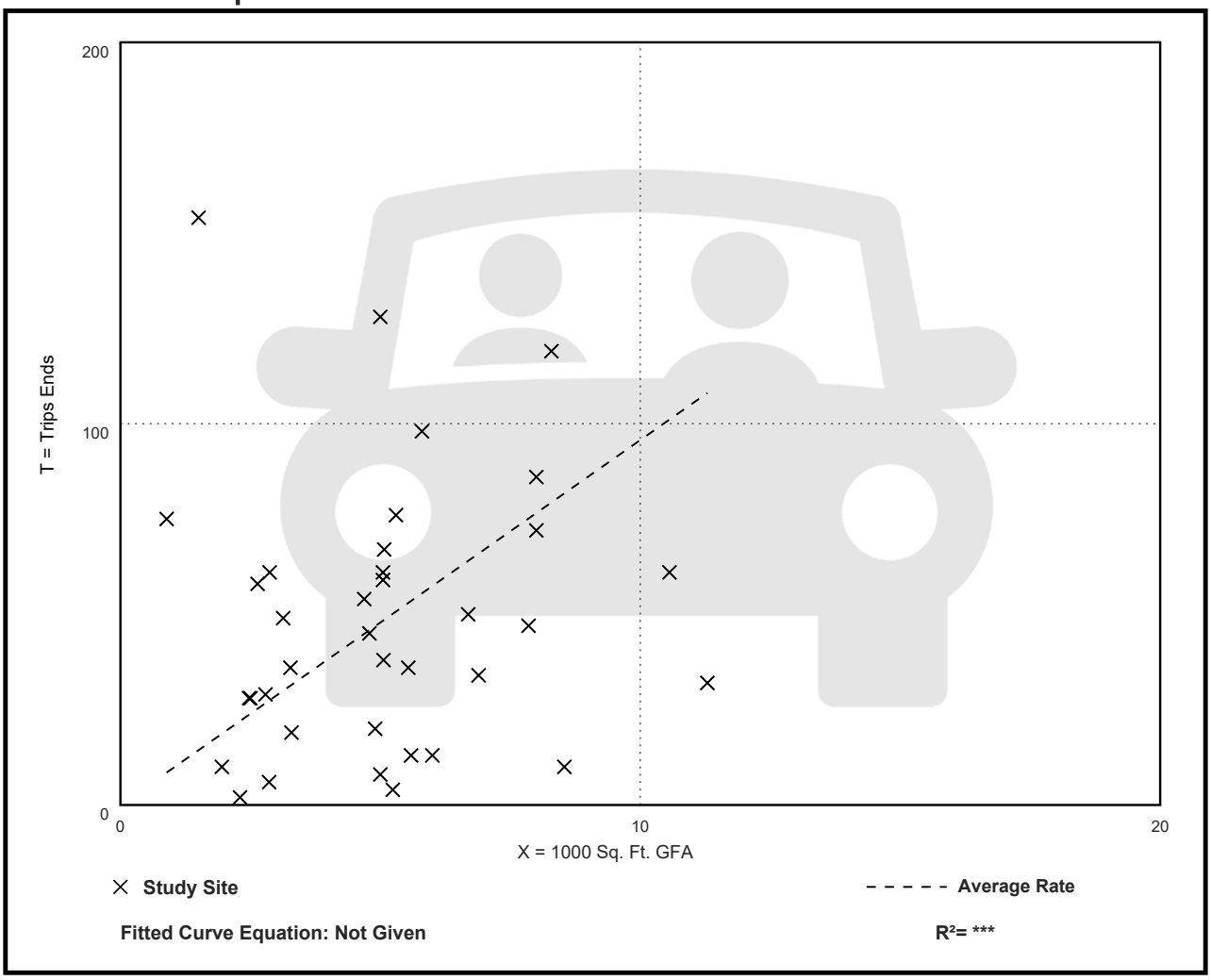
High-Turnover (Sit-Down) Restaurant
(932)

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



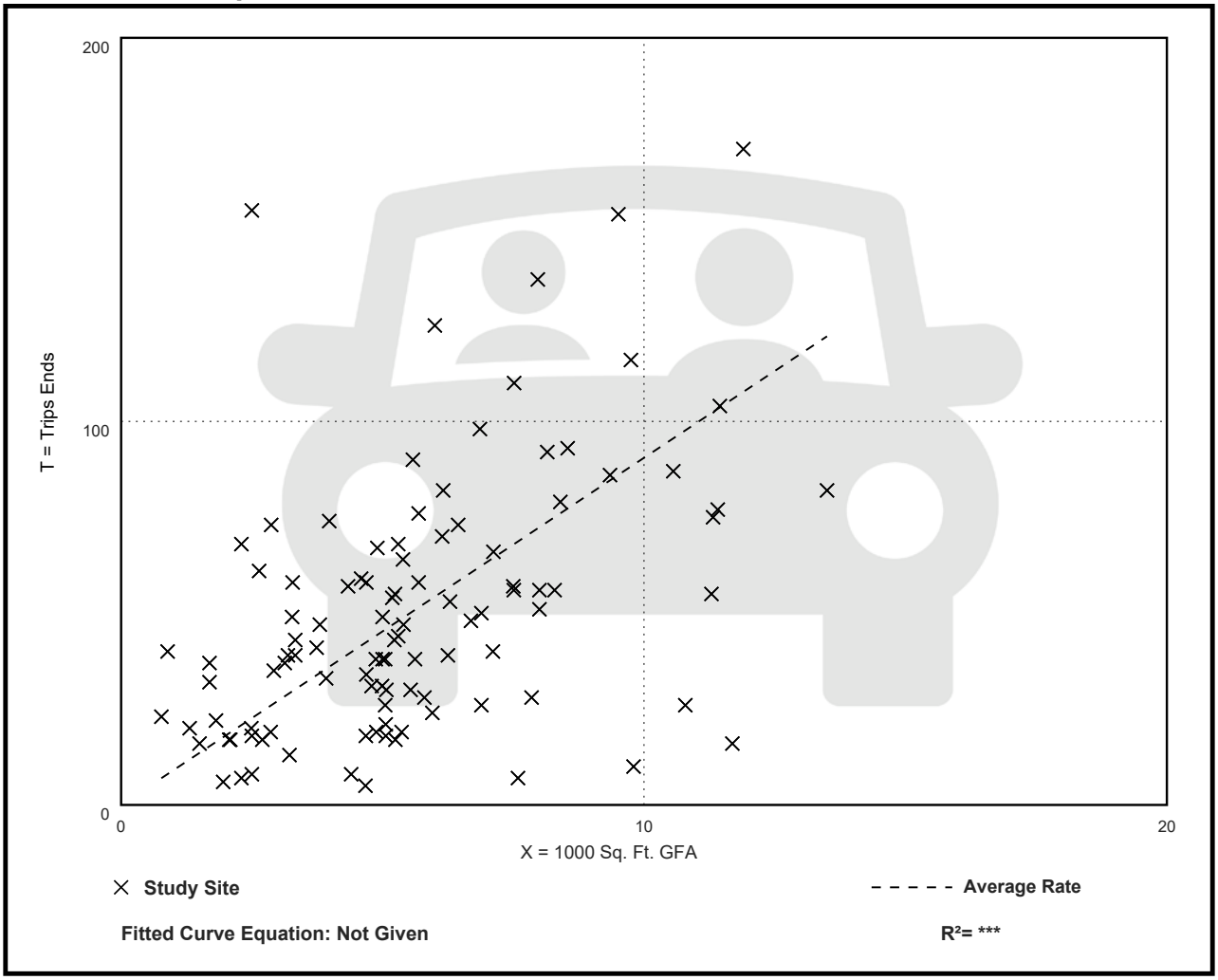
High-Turnover (Sit-Down) Restaurant (932)

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



Day Care Center
(565)

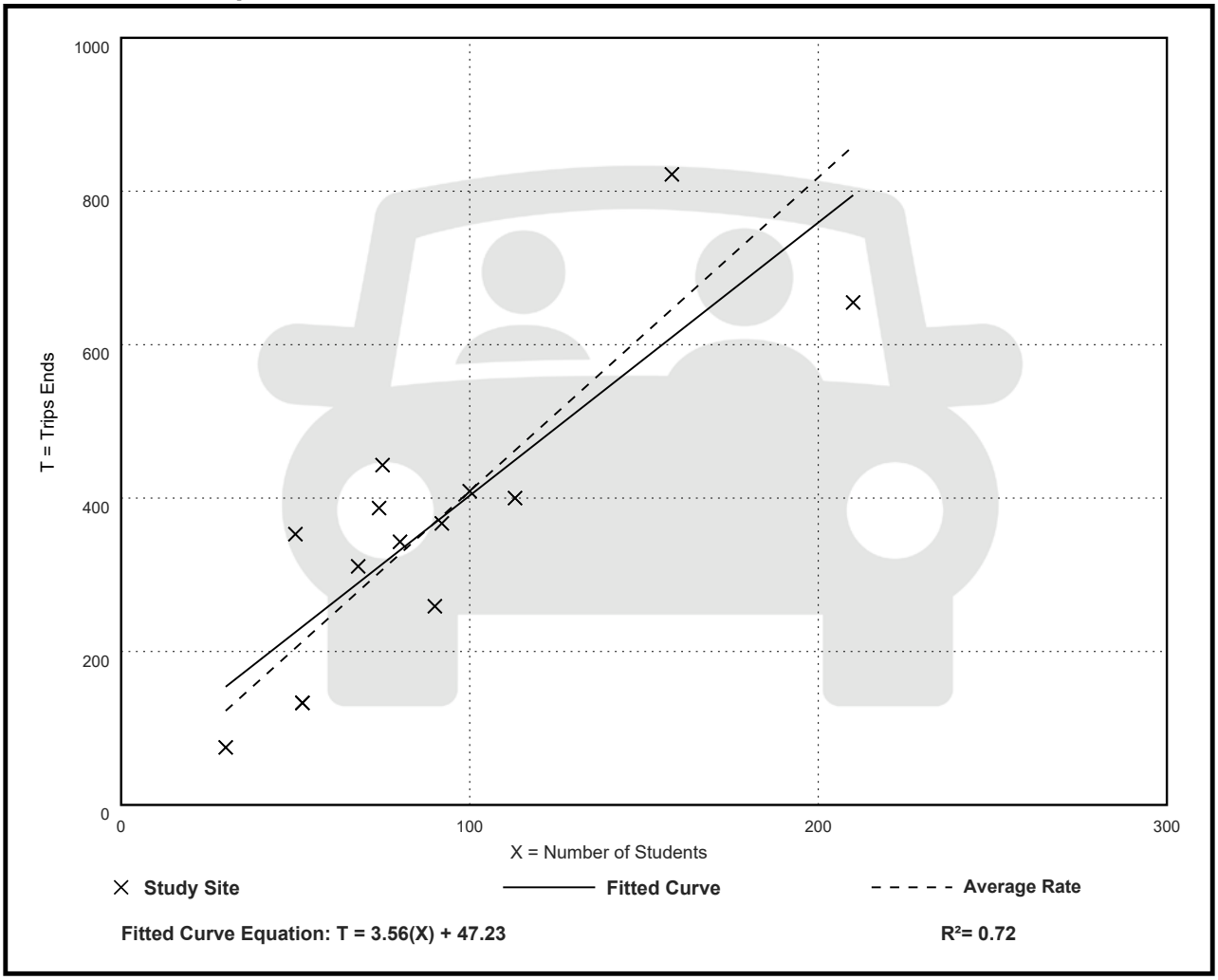
Vehicle Trip Ends vs: Students
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 14
Avg. Num. of Students: 89
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Student

Average Rate	Range of Rates	Standard Deviation
4.09	2.50 - 7.06	1.21

Data Plot and Equation



Fitted Curve Equation: T = 3.56(X) + 47.23

R^2= 0.72

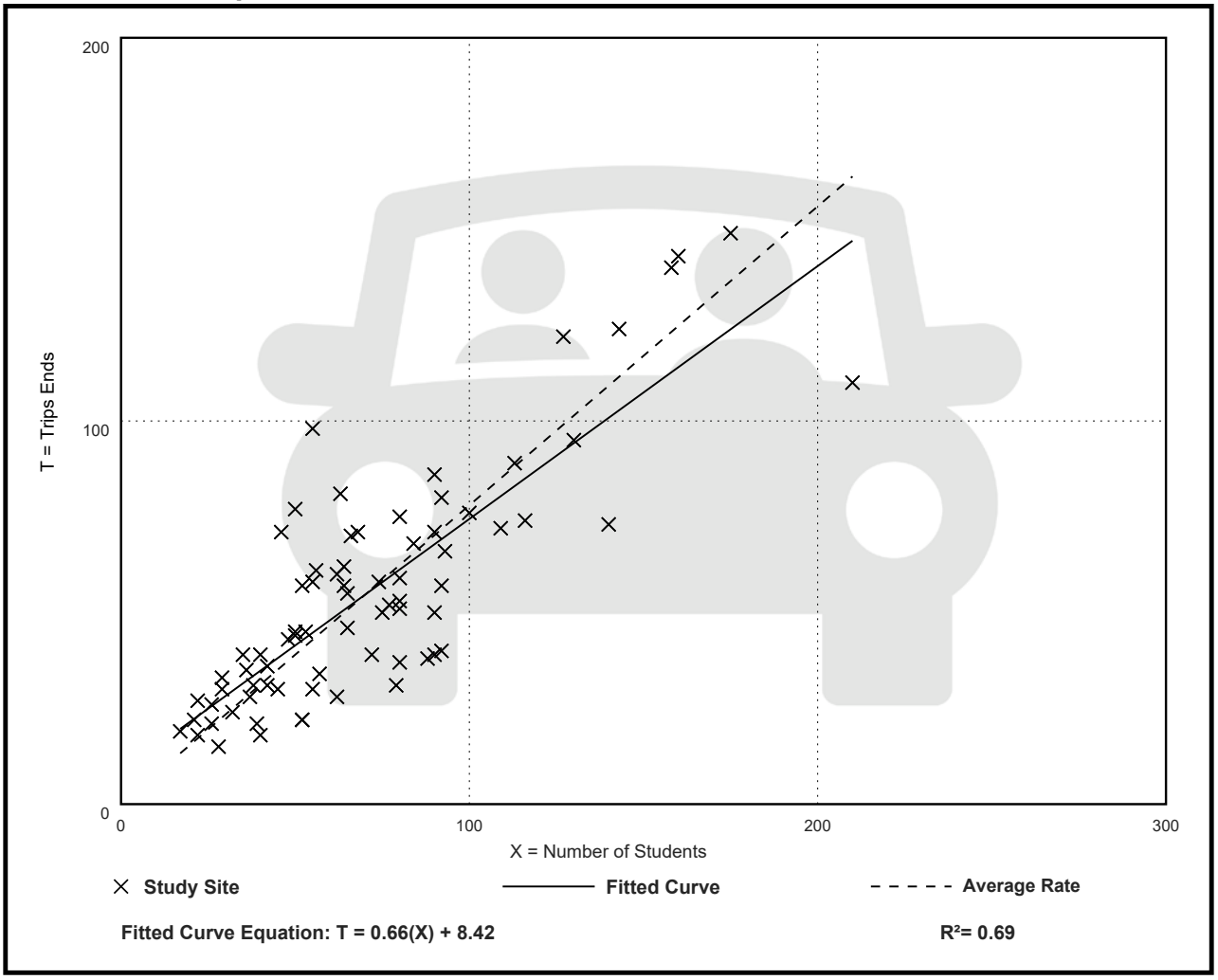
Day Care Center
(565)

Vehicle Trip Ends vs: Students
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: 75
Avg. Num. of Students: 71
Directional Distribution: 53% entering, 47% exiting

Vehicle Trip Generation per Student

Average Rate	Range of Rates	Standard Deviation
0.78	0.39 - 1.78	0.25

Data Plot and Equation



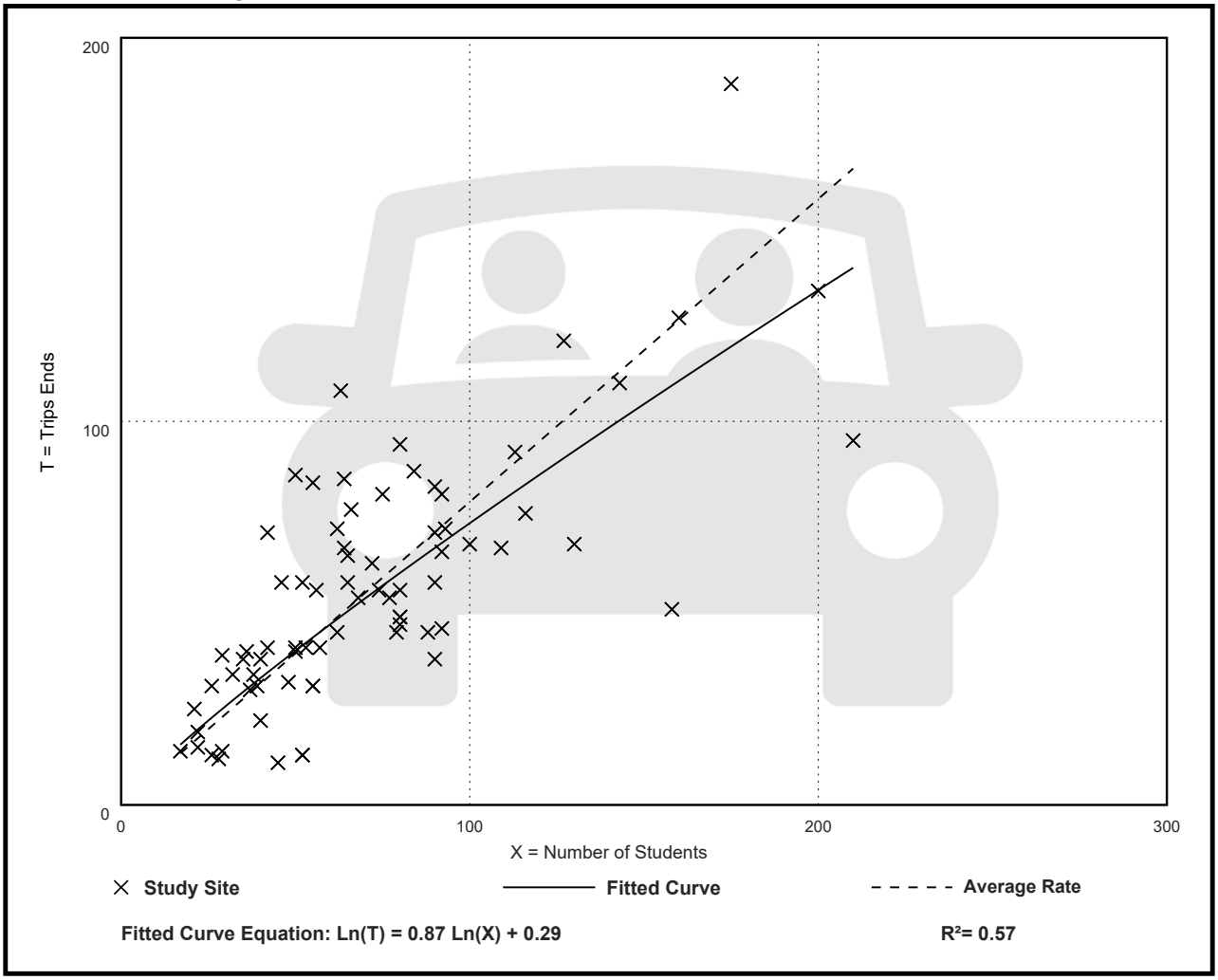
Day Care Center
(565)

Vehicle Trip Ends vs: Students
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: 75
Avg. Num. of Students: 72
Directional Distribution: 47% entering, 53% exiting

Vehicle Trip Generation per Student

Average Rate	Range of Rates	Standard Deviation
0.79	0.24 - 1.72	0.30

Data Plot and Equation



Clinic
(630)

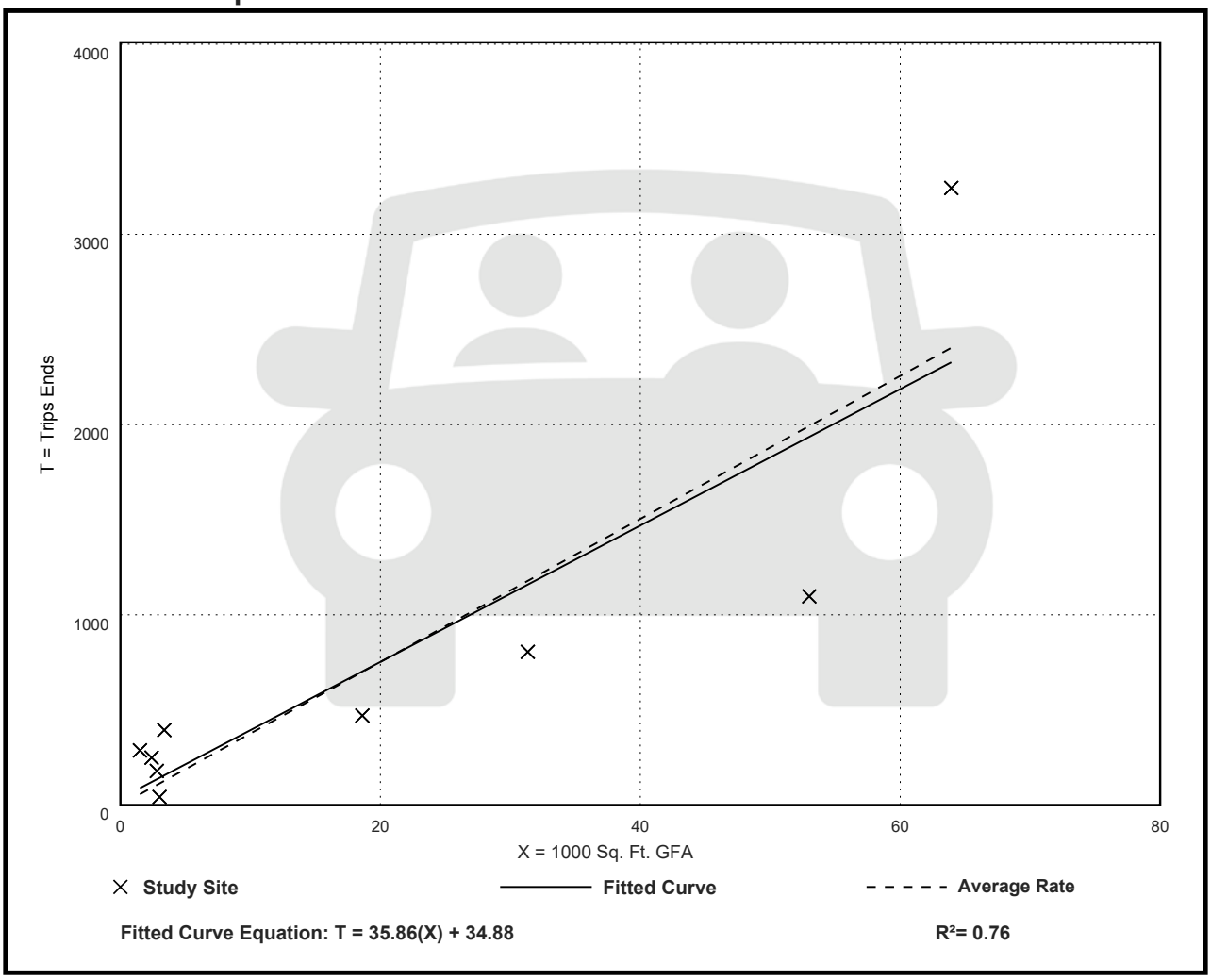
Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 9
Avg. 1000 Sq. Ft. GFA: 20
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
37.60	13.96 - 191.33	25.52

Data Plot and Equation



Fitted Curve Equation: T = 35.86(X) + 34.88

R^2= 0.76

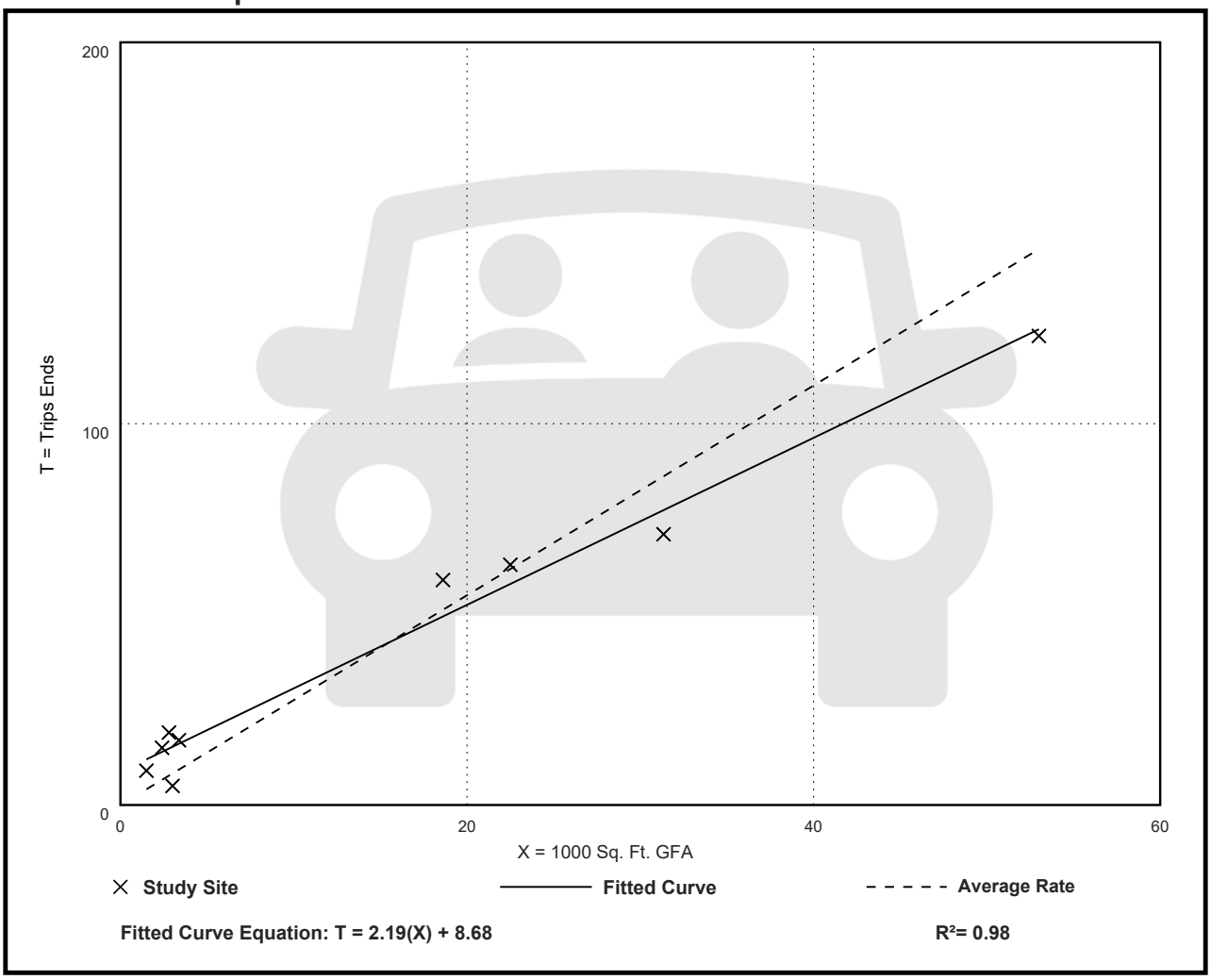
Clinic
(630)

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: 9
Avg. 1000 Sq. Ft. GFA: 15
Directional Distribution: 81% entering, 19% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
2.75	1.66 - 6.79	1.04

Data Plot and Equation



Fitted Curve Equation: T = 2.19(X) + 8.68

R^2= 0.98

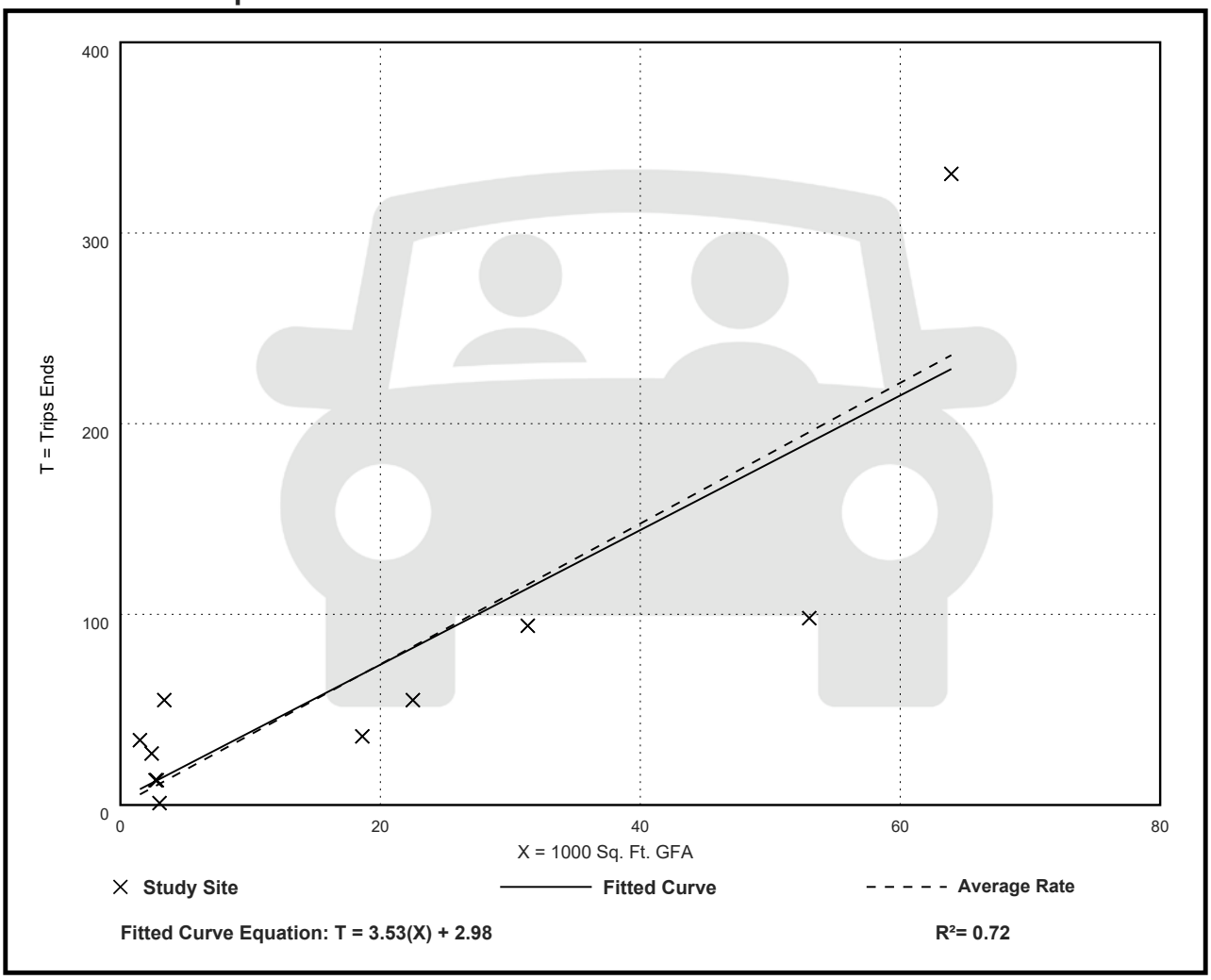
Clinic
(630)

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: 11
Avg. 1000 Sq. Ft. GFA: 19
Directional Distribution: 30% entering, 70% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
3.69	0.33 - 22.67	3.00

Data Plot and Equation



Fitted Curve Equation: T = 3.53(X) + 2.98

R^2= 0.72

Medical-Dental Office Building - Stand-Alone
(720)

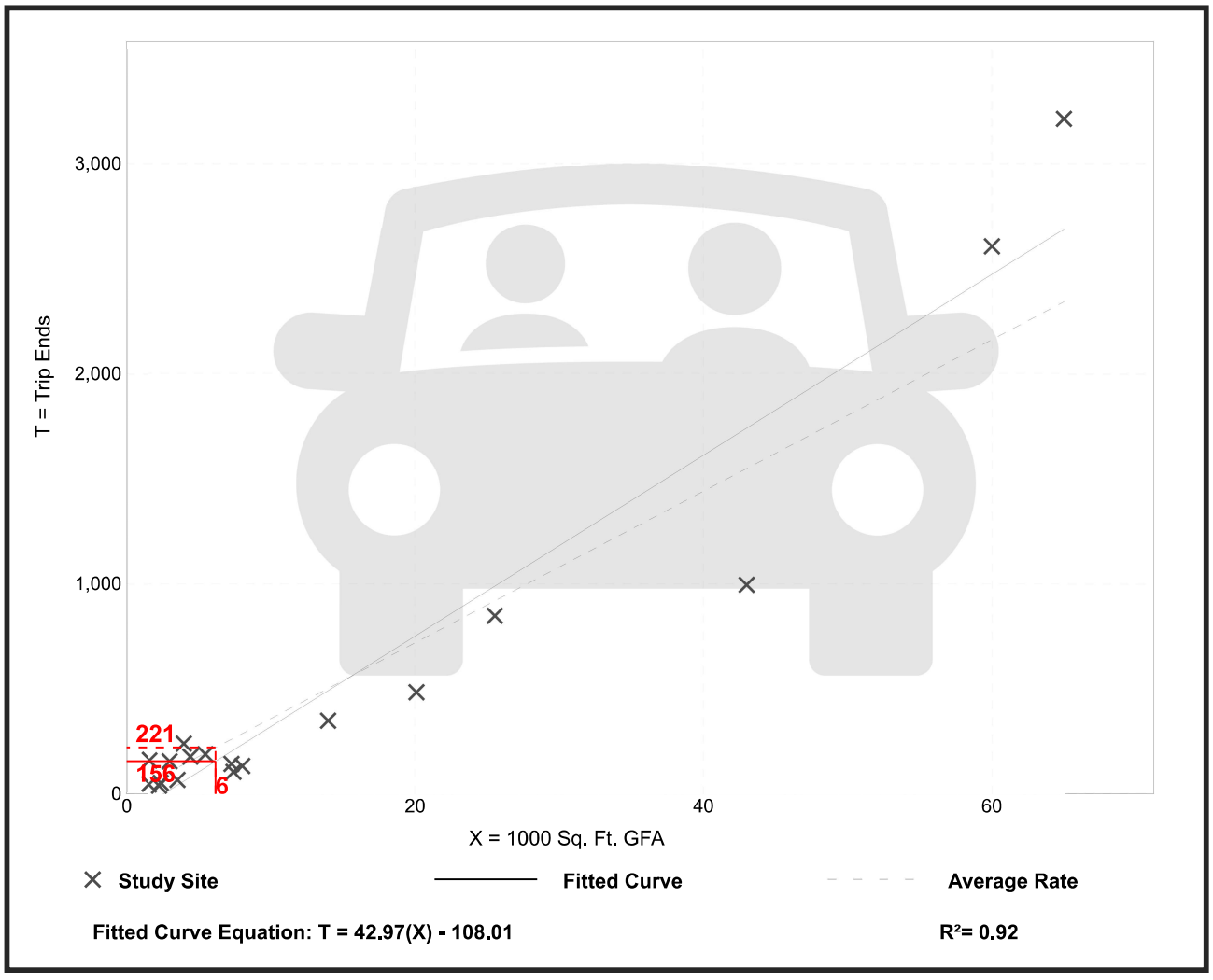
Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 18
Avg. 1000 Sq. Ft. GFA: 15
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
36.00	14.52 - 100.75	13.38

Data Plot and Equation



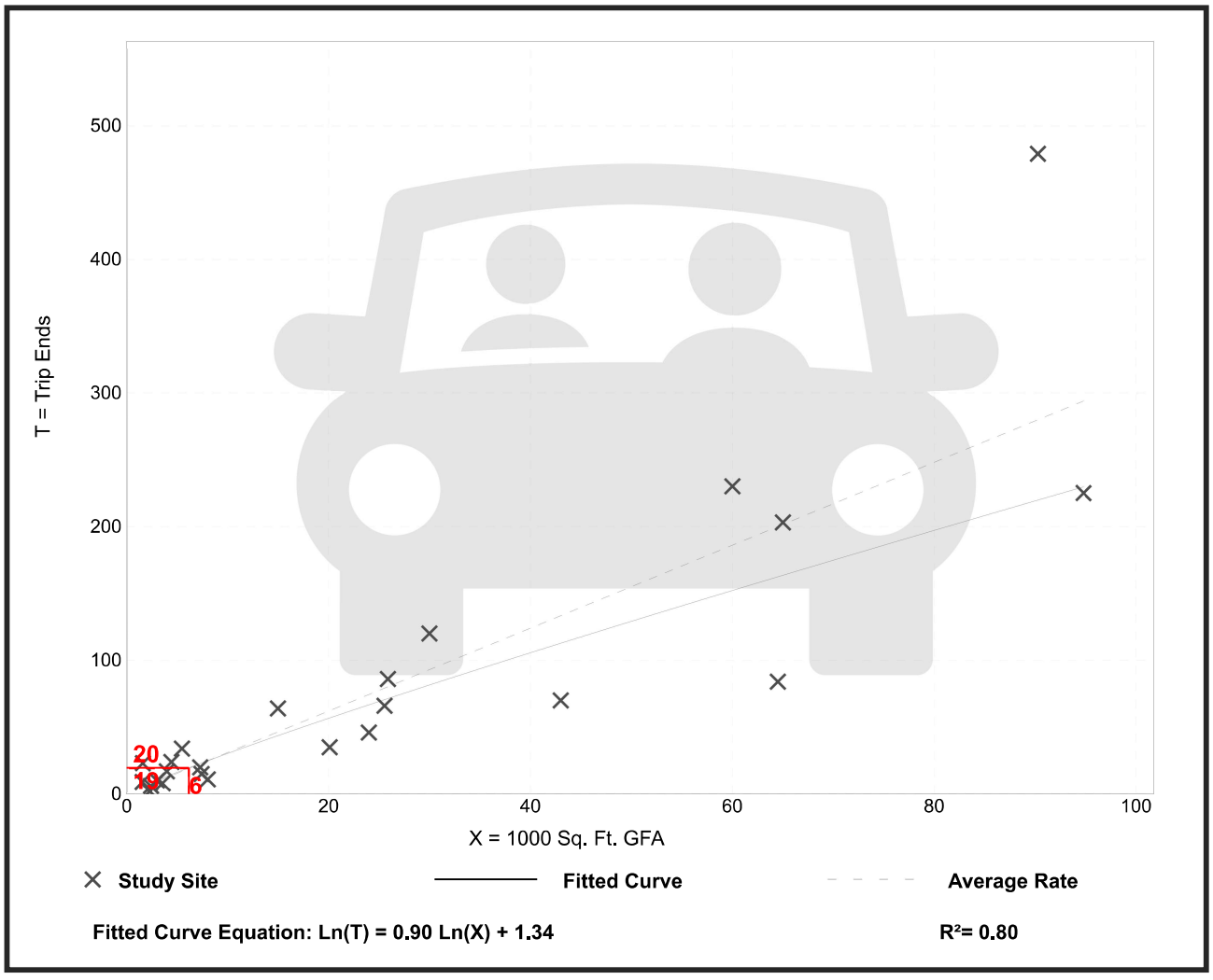
Medical-Dental Office Building - Stand-Alone
(720)

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: 24
Avg. 1000 Sq. Ft. GFA: 25
Directional Distribution: 79% entering, 21% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
3.10	0.87 - 14.30	1.49

Data Plot and Equation



Medical-Dental Office Building - Stand-Alone
(720)

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: 30
Avg. 1000 Sq. Ft. GFA: 23
Directional Distribution: 30% entering, 70% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
3.93	0.62 - 8.86	1.86

Data Plot and Equation