

APPENDIX A – ACCESS MANAGEMENT ISSUES

Access Issues Noted in the Field

The majority of the thirty sites where data was collected had relatively safe driveway designs. The team did note three problem areas, however. Figure 6 is a fuel center with fast food located in Robbinsville, NC along US 129. Local knowledge of the site disclosed that there was an addition added to the side of the structure making it approximately twenty feet wider. There is little to no internal circulation as vehicles tend to park all around each other. In addition, vehicles tend to park on the south end of the establishment leading to vehicles parking on the adjacent roadway.



Figure 6. Aerial of Fueling Station in Robbinsville, NC along US 129

A second site with access issues was just off I-40 in Burlington, shown in Figure 7. This site is a very large fuel center with fast food and significant vehicular and truck traffic. The adjacent roadway is a 3-lane rural road with three access points to separate truck and vehicular traffic. Internal circulation was very good; however, the large amount of conflicting traffic with those entering and exiting the facility was very dangerous. The driveways are very close to the adjacent intersection leading to heavy queuing during the peak periods along the adjacent roadway. In addition, the site is located directly across the road from a primarily truck fueling site and a truck wash north of the site which only complicate safety issues in and around this site.



Figure 7. Aerial of Fueling Station at Interchange Ramp of I-40 in Burlington, NC.

The last access issue observed was at two differing sites, one where data was collected, and the other was just an observation. Figure 8 is of a fuel center with fast food located in New Bern, NC. The location is just east of US 70 with a frontage road running parallel to the highway. The internal circulation at this site is reasonable; however, the primary driveway entrance IS one of the approach legs at this major signalized intersection. An aerial of another site, located in southern Wake County along US 401, is shown in Figure 9. This site is similar in that it also has a driveway as an approach leg; however, there is an alternate entrance just west of the intersection. This entrance is primarily a right-in, right-out entrance during peak traffic conditions. Although many engineers would not think this is a huge issue, this additional approach causes other legs of the intersection to receive a shorter bandwidth because a percentage of the cycle now has to be dedicated to an additional approach.



Figure 8. Aerial of Fueling Station in New Bern, NC along US 70



Figure 9. Aerial of Fueling Station in Southern Wake County of US 401

APPENDIX B – DATA COLLECTION

Data Collection Summary – Fast Food & Convenience: Page # B – 2

Data Collection Summary – Convenience Only: Page # B - 3

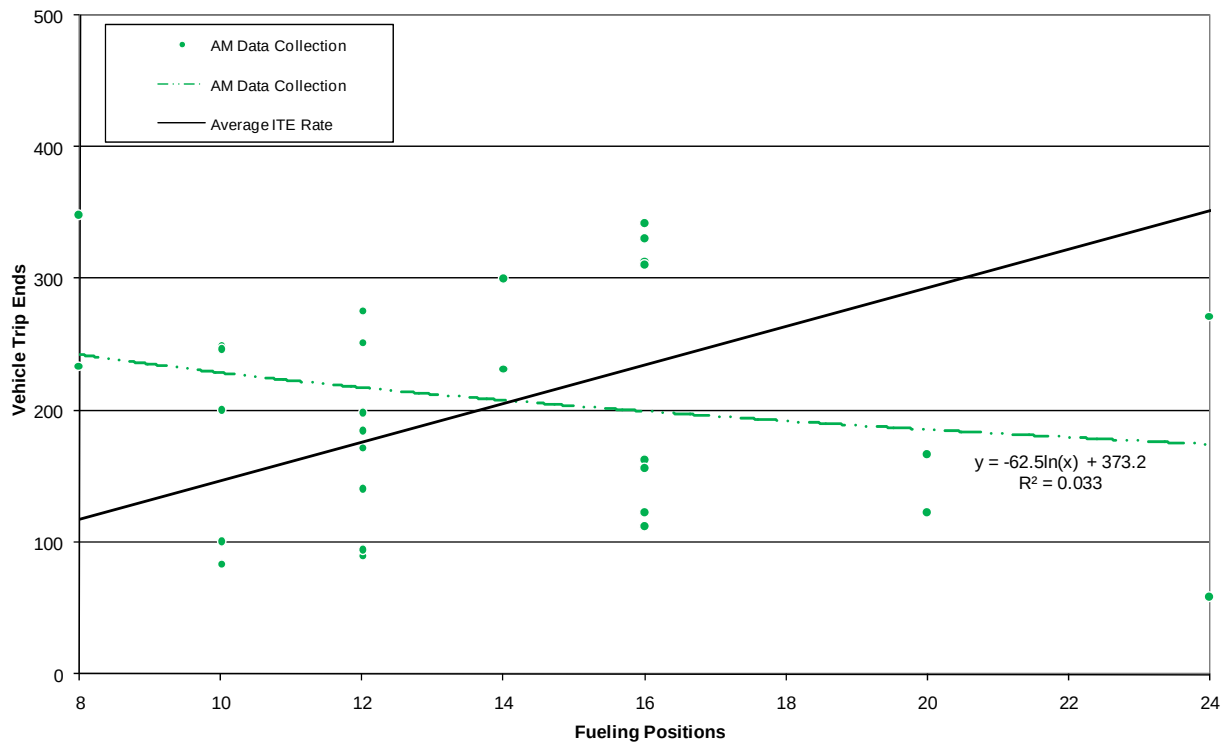
Site	4	7	24	26	27	35	37	40	44	56	60	61	62	67	72
Vehicle Fueling Positions	10	20	12	16	16	10	16	12	10	12	8	12	10	8	12
Interstate ADT	89,000	59,000	25,000	0	31,651	61,000	53,000	0	70,000	0	47,000	83,000	46,000	0	0
ADT Exposure	115,268	95,514	56,337	86,416	31,651	82,000	70,054	28,229	93,674	21,380	80,450	101,721	49,109	55,016	18,425
Fast Food (0=no, 1 = yes)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Location (1=East, 2=West, 3=Central)	3	3	2	1	1	2	1	1	3	2	3	3	2	1	2
Conv. Sq Ft	8,100	4,100	4,300	3,000	5,000	150	11,000	940	3,600	1,350	7,500	17,250	5,400	2,700	2,500
Fast Food Sq Ft	5,250	2,300	2,100	3,000	2,500	3,200	5,500	1,260	1,400	2,700	1,500	6,500	3,500	2,700	1,500
Total Sq Ft	13,350	6,400	6,400	6,000	7,500	3,350	16,500	2,200	5,000	4,050	9,000	23,750	8,900	5,400	4,000
Fast Food Seats	132	44	56	62	104	0	0	72	36	60	54	188	24	40	28
Diesel Only Pumps	12	0	8	0	4	0	5	0	0	0	11	13	7	2	2
% Pass-by (AM)	20	60	53	87	69	63	47	67	60	93	67	20	47	73	87
% Pass-by (PM)	33	73	47	93	50	63	0	80	67	73	40	27	13	80	67
Vehicle Spaces	80	30	40	55	50	26	45	55	65	36	46	225	30	30	20
Truck Parking Spaces	150	0	45	0	0	55	0	0	0	0	0	270	45	0	0
Car Wash (0=No, 1=Yes)	0	1	0	0	0	0	0	0	1	0	1	0	0	0	0
Number of Seats	132	44	56	62	104	54			72	36	60	188	24	40	28
Drive Through (0=No, 1=Yes)	1	0	0	1	1	0	1	1	1	0	1	0	0	1	0
Interstate (0=No, 1=Yes)	1	1	1	0	1	1	1	0	1	0	1	1	1	0	0
AM Peak Hour Total Volume	248	166	198	314	162	310	276	472	90	348	246	172	100	234	184
PM Peak Hour Total Volume	432	184	308	384	280	264	308	394	124	288	268	302	142	196	134
AM Peak Hour Gas Volume	136	166	118	154	152	32	230	240	78	96	148	86	52	56	182
AM Peak Hour Fast Food Volume	36	0	0	158	10	262	24	226	12	250	0	10	0	172	0
AM Peak Hour Both Volume	2	0	0	2	0	16	2	6	0	2	0	0	0	6	0
AM Peak Hour Truck Volume	74	0	80	0	0	0	20	0	0	0	98	76	48	0	2
PM Peak Hour Gas Volume	306	168	168	280	194	56	246	266	88	98	186	112	54	62	116
PM Peak Hour Fast Food Volume	50	16	16	96	82	200	50	120	32	190	0	18	20	128	16
PM Peak Hour Both Volume	2	0	4	8	4	8	4	8	4	0	0	6	4	6	2
PM Peak Hour Truck Volume	74	0	120	0	0	0	8	0	0	0	82	166	64	0	0

Site	5	6	9	29	30	33	34	42	45	46	47	52	53	63	70
Vehicle Fueling Positions	16	16	12	16	16	10	10	12	20	24	14	12	24	14	16
Interstate ADT	83,000	0	0	132,000	0	0	104,000	0	31,937	52,600	22,000	0	28,945	0	68,000
ADT Exposure	94,264	21,013	45,349	205,890	39,938	55,682	153,194	40,595	32,586	90,600	35,324	13,471	34,065	50,634	119,483
Fast Food (0=no, 1 = yes)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Location (1=East, 2=West, 3=Central)	3	3	3	3	3	3	2	2	2	2	1	1	1	1	3
Conv. Sq Ft	5,600	7,000	3,500	5,400	4,500	3,500	2,400	4,500	3,800	3,600	5,040	3,600	3,400	5,600	4,500
Fast Food Sq Ft	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Sq Ft	5,600	7,000	3,500	5,400	4,500	3,500	2,400	4,500	3,800	3,600	5,040	3,600	3,400	5,600	4,500
Fast Food Seats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Diesel Only Pumps	0	0	0	0	0	0	0	0	0	0	6	7	0	0	0
% Pass-by (AM)	19	33	80	60	93	100	75	73	63	80	35	87	100	73	
% Pass-by (PM)	6	67	100	53	87	93	81	87	81	73	60	73	75	80	0
Vehicle Spaces	56	30	60	26	20	11	18	21	16	26	20	20	10	54	25
Truck Parking Spaces	0	0	0	0	0	0	0	0	0	0	20	4	0	0	0
Car Wash (0=No, 1=Yes)	0	1	1	0	1	0	1	1	0	0	0	1	1	1	1
Number of Seats	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Drive Through (0=No, 1=Yes)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Interstate (0=No, 1=Yes)	1	0	0	1	0	0	1	0	1	1	1	0	1	0	1
AM Peak Hour Total Volume	232	330	156	252	122	140	58	200	94	122	342	272	112	300	84
PM Peak Hour Total Volume	130	318	188	410	174	158	104	228	236	174	352	324	154	314	124
AM Peak Hour Gas Volume	232	330	156	252	122	132	58	200	94	122	342	272	112	300	84
AM Peak Hour Fast Food Volume															
AM Peak Hour Both Volume															
AM Peak Hour Truck Volume	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0
PM Peak Hour Gas Volume	130	318	188	410	174	154	104	228	236	174	352	324	154	314	124
PM Peak Hour Fast Food Volume															
PM Peak Hour Both Volume															
PM Peak Hour Truck Volume	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0

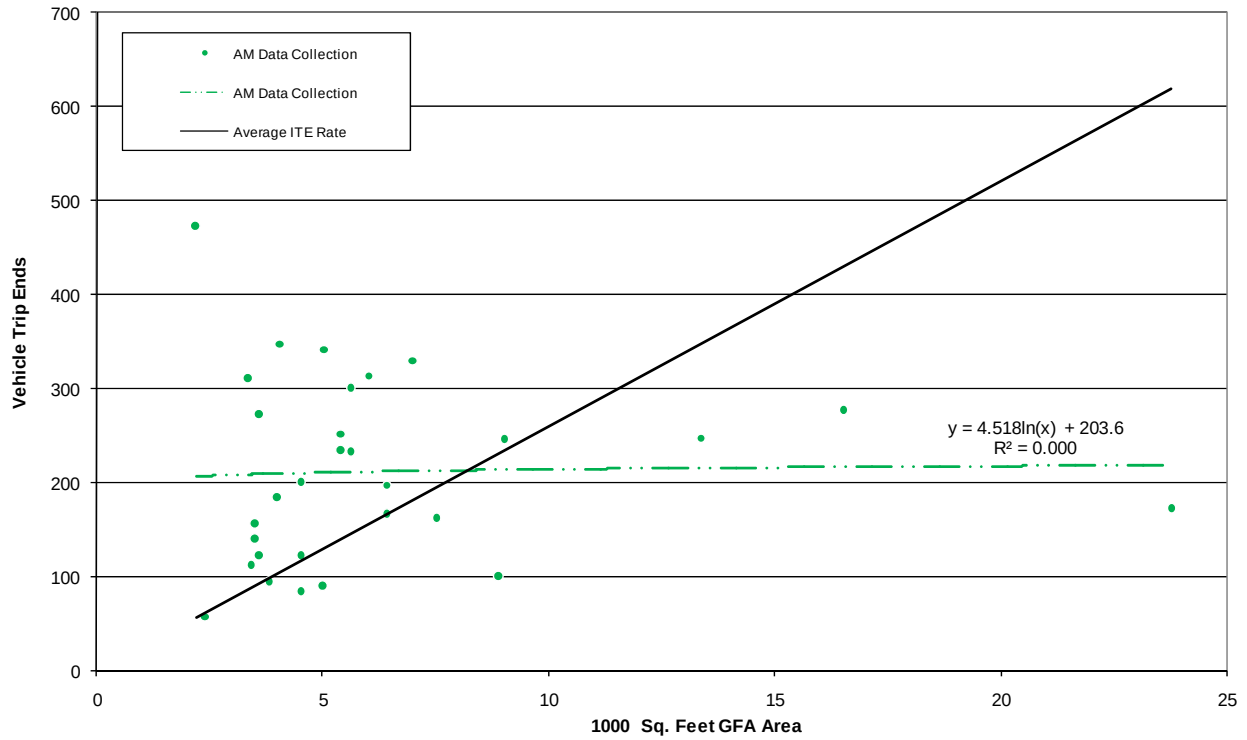
APPENDIX C - ALL SITES DATA

Site Description		Sample Size	Peak Hour	R ² - FP	R ² - GFA	Page #
All Sites	All Sites	30	AM	0.033	0.000	B - 2
			PM	0.018	0.094	B - 3

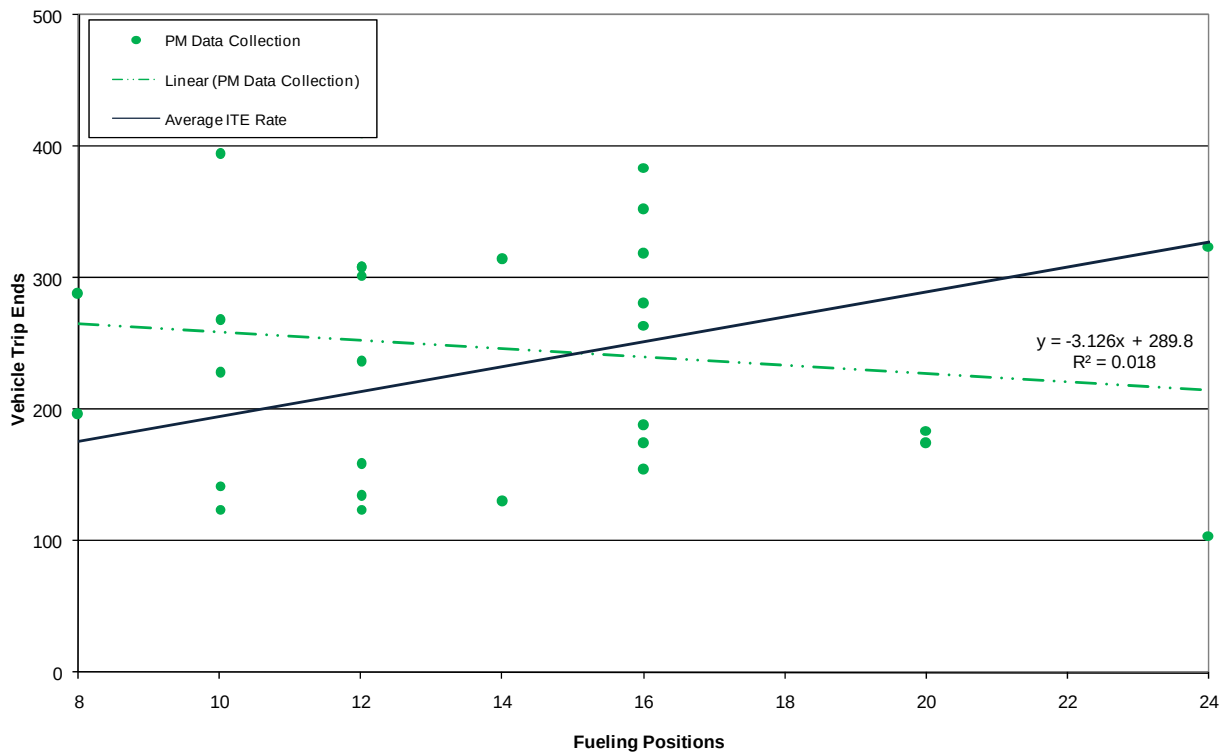
All Sites - Fueling Positions vs Trip Ends (AM)



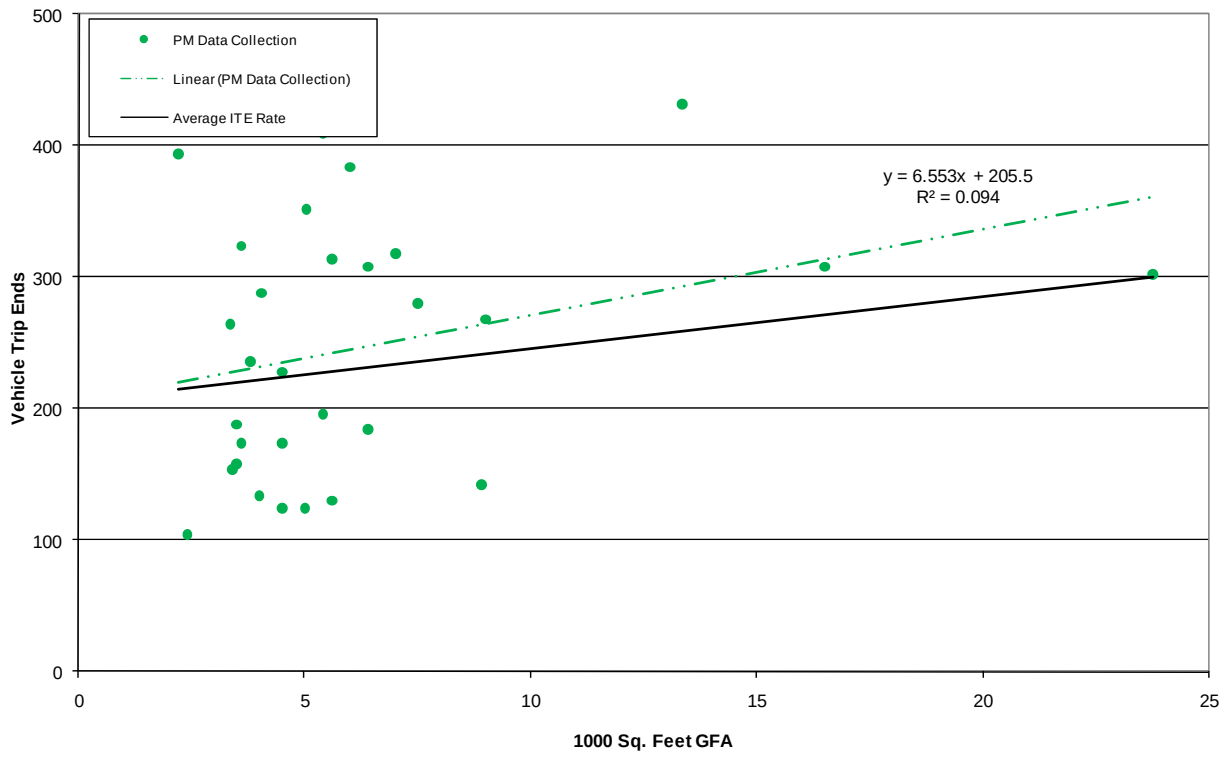
All Sites - 1000 Sq Feet GFA vs Trip Ends (AM)



All Sites - Fueling Positions vs Trip Ends (PM)



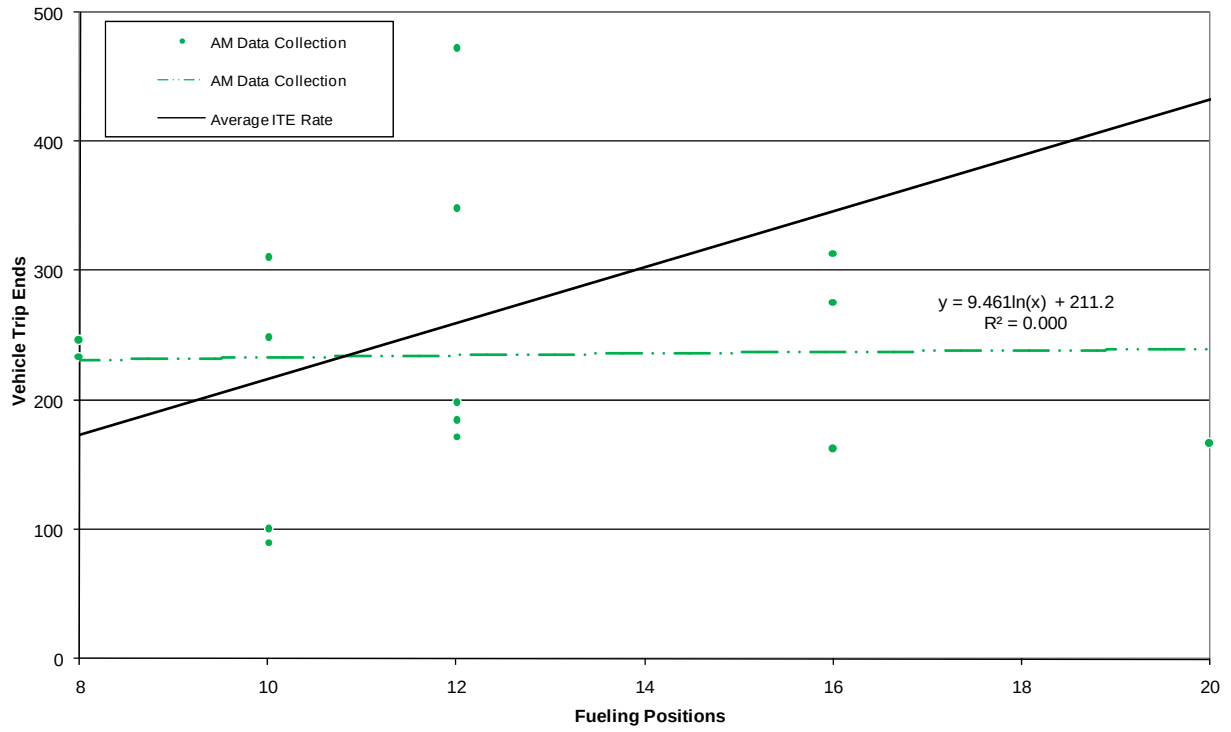
All Sites - 1000 Sq. Feet GFA vs Trip Ends (PM)



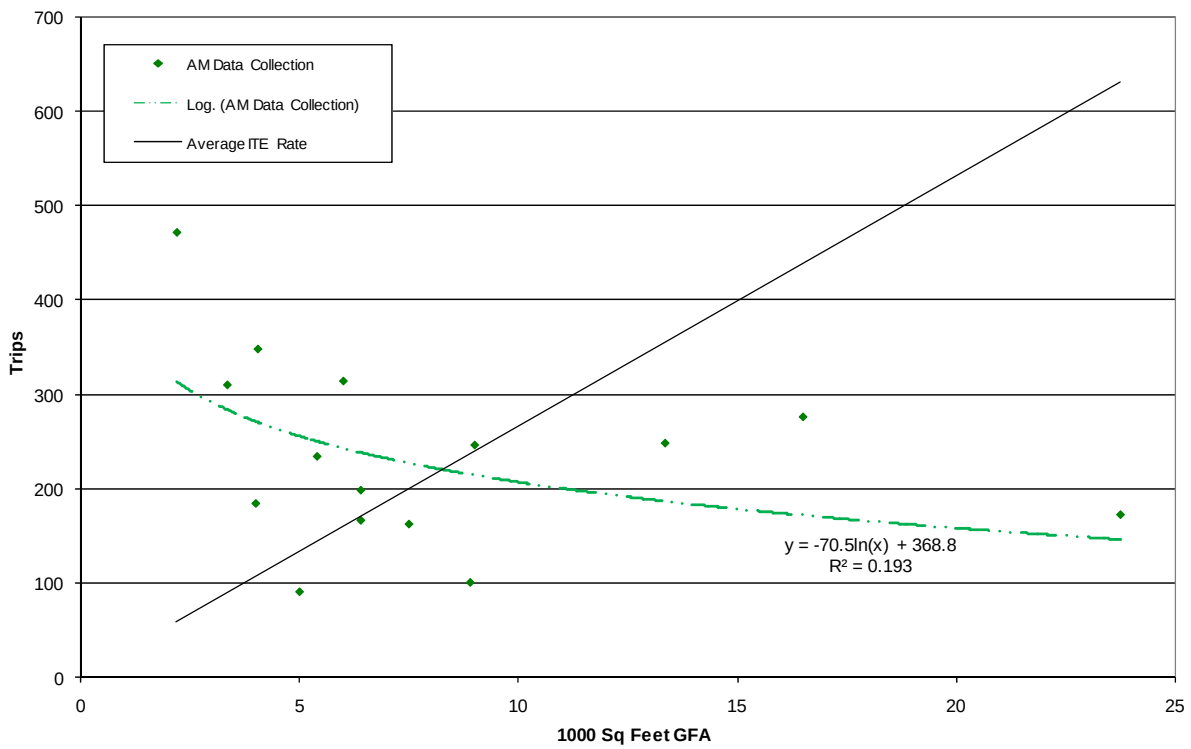
APPENDIX D - FAST FOOD SITES DATA

Site Description		Sample Size	Peak Hour	R ² - FP	R ² - GFA	Page #
Fast Food	All Sites	15	AM	0.000	0.193	C - 2
			PM	0.024	0.057	C - 3
	ADT < 45,000	5	AM	0.027	0.235	C - 4
			PM	0.086	0.072	C - 5
	45,000 ≤ ADT < 90,000	6	AM	0.094	0.037	C - 6
			PM	0.283	0.013	C - 7
	ADT ≥ 90,000	4	AM	0.365	0.366	C - 8
			PM	0.927	0.012	C - 9
	Without Drivethrough	7	AM	0.005	0.017	C - 10
			PM	0.005	0.390	C - 11
	With Drivethrough	8	AM	0.012	0.435	C - 12
			PM	0.092	0.056	C - 13
	Non-Interstate Location	5	AM	0.096	0.056	C - 14
			PM	0.624	0.446	C - 15
	Interstate Location	10	AM	0.060	0.179	C - 16
			PM	0.150	0.052	C - 17
	Western NC Location	5	AM	0.015	0.218	C - 18
			PM	0.005	0.002	C - 19
	Central NC Location	5	AM	0.152	0.360	C - 20
			PM	0.747	0.015	C - 21
	Eastern NC Location	5	AM	0.006	0.062	C - 22
			PM	0.664	0.034	C - 23

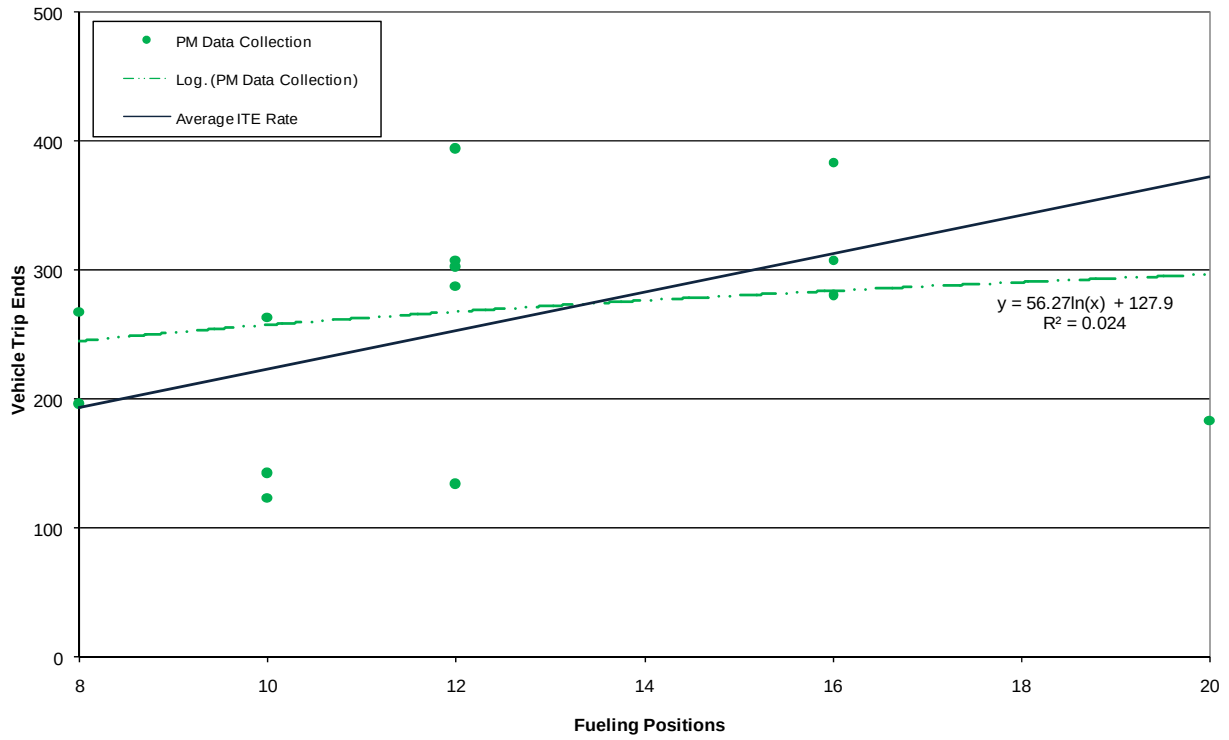
All Fast-Food Sites: Fueling Positions vs Trip Ends (AM)



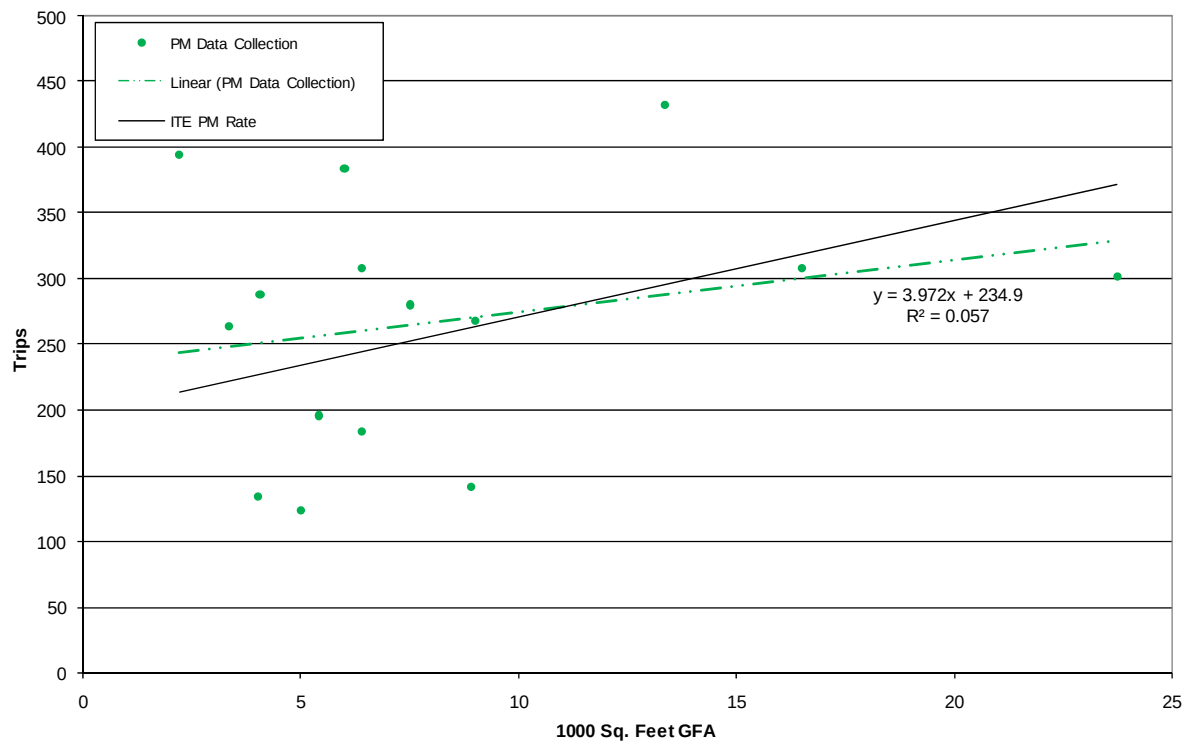
All Fast-Food Sites: 1000 Sq. Feet GFA vs Fast Food Trip Ends (AM)



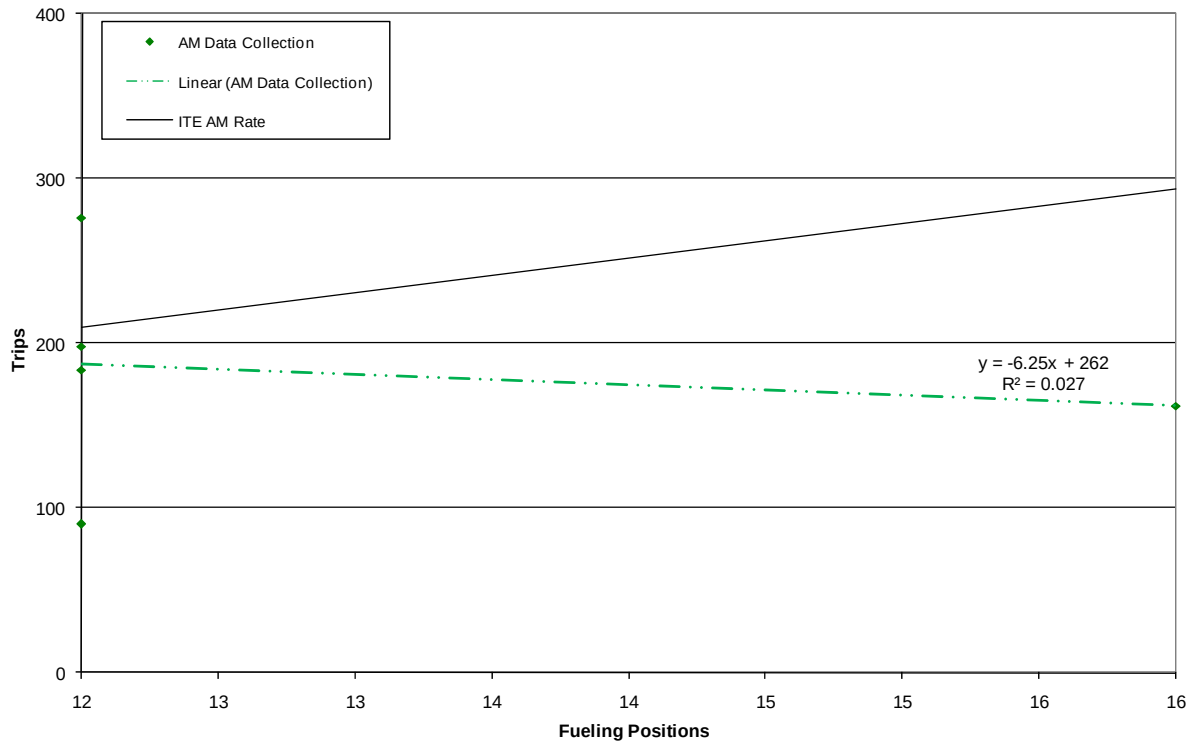
All Fast-Food Sites: Fueling Positions vs Trip Ends (PM)



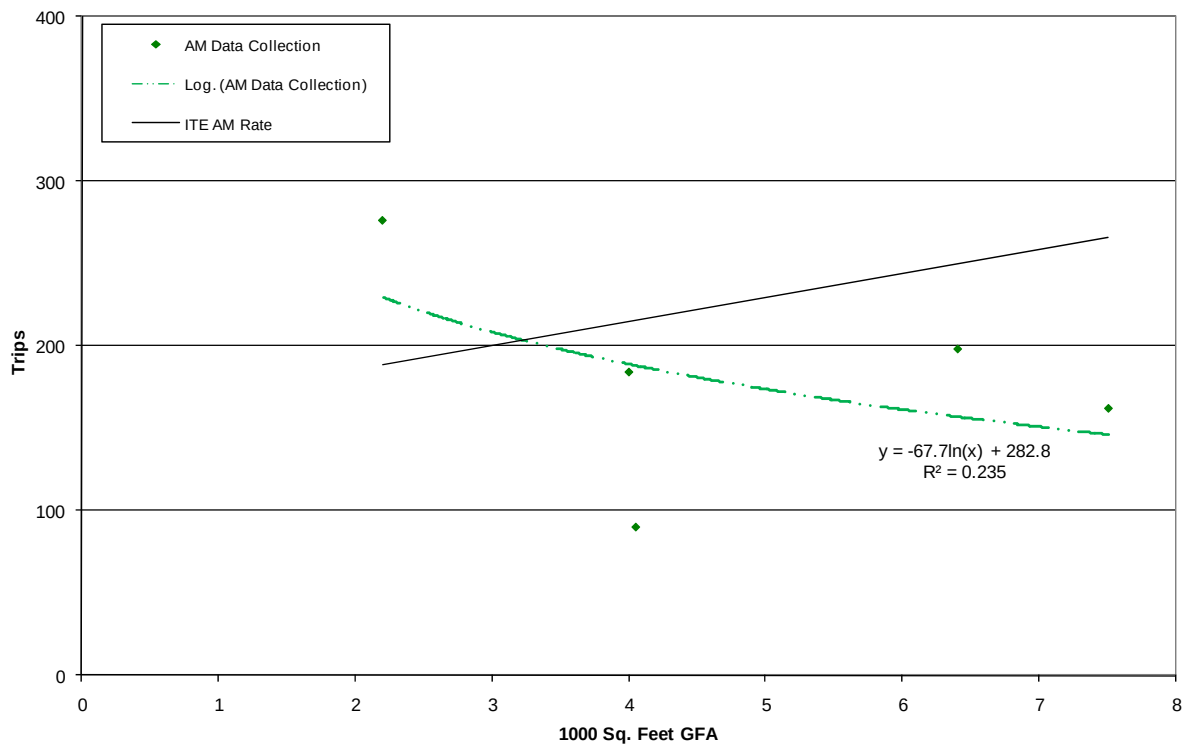
All Fast-Food Sites: 1000 Sq. Feet GFA vs Fast Food Trip Ends (PM)



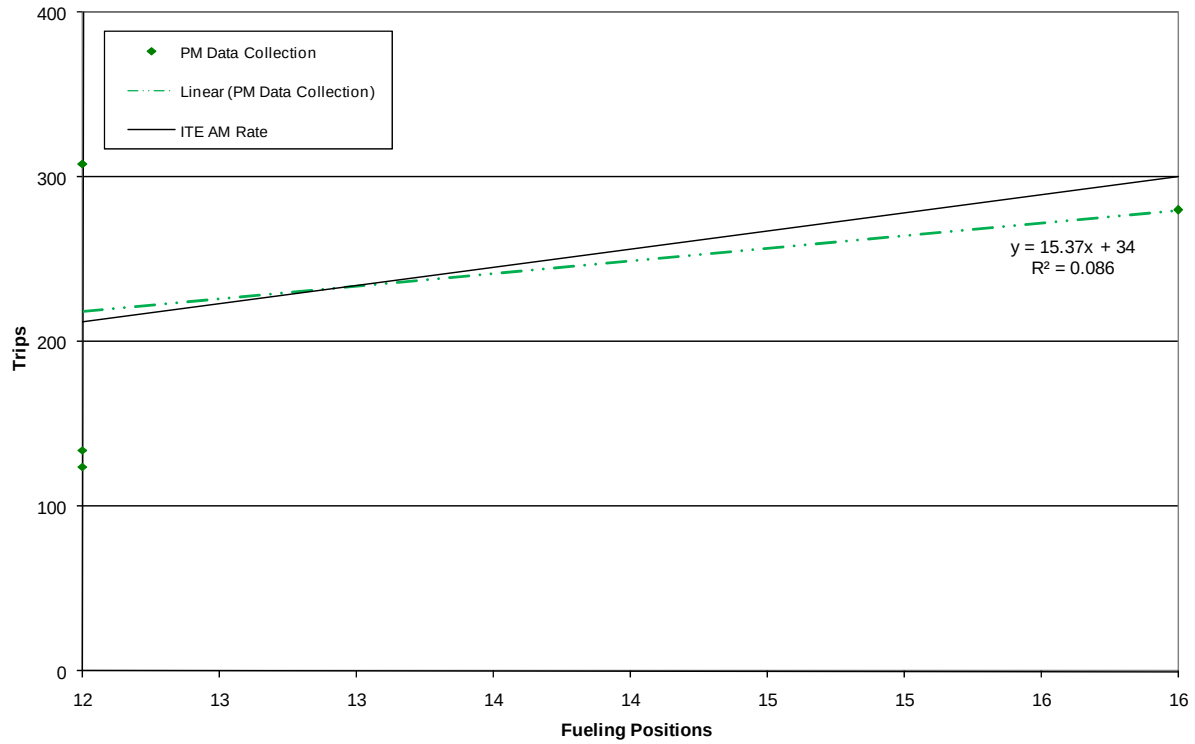
Fast Food Sites Less Than 45,000 ADT (AM)



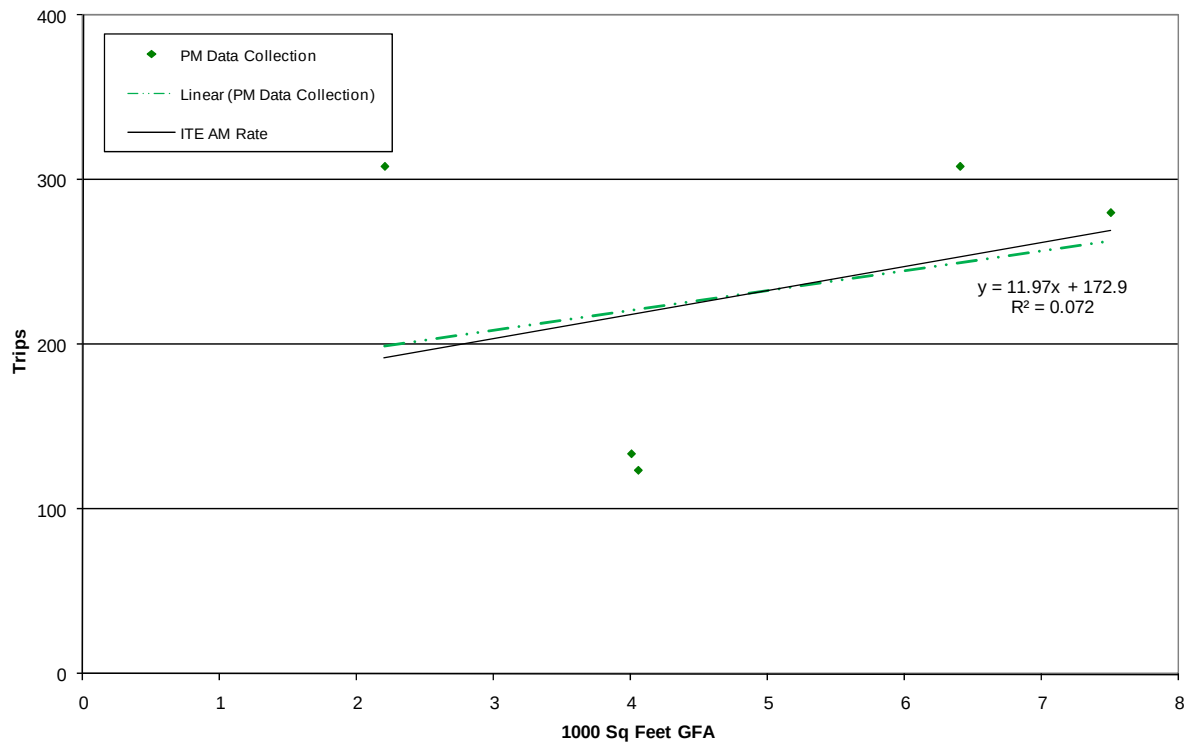
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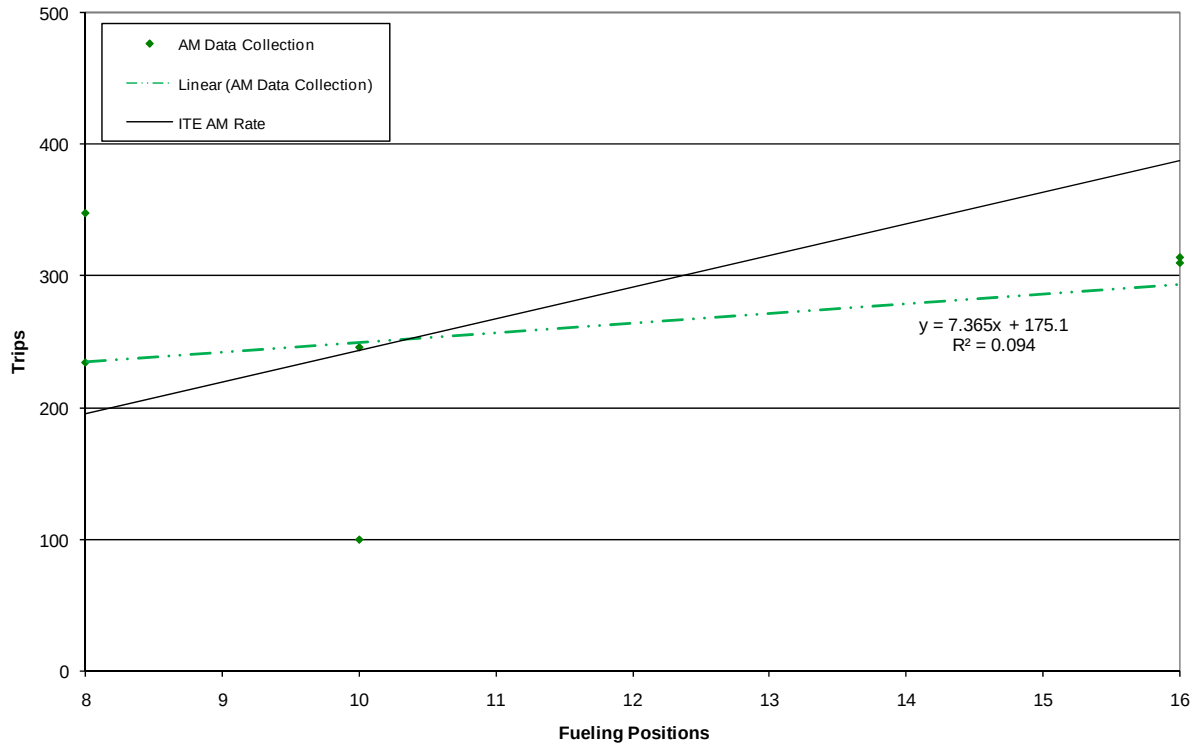
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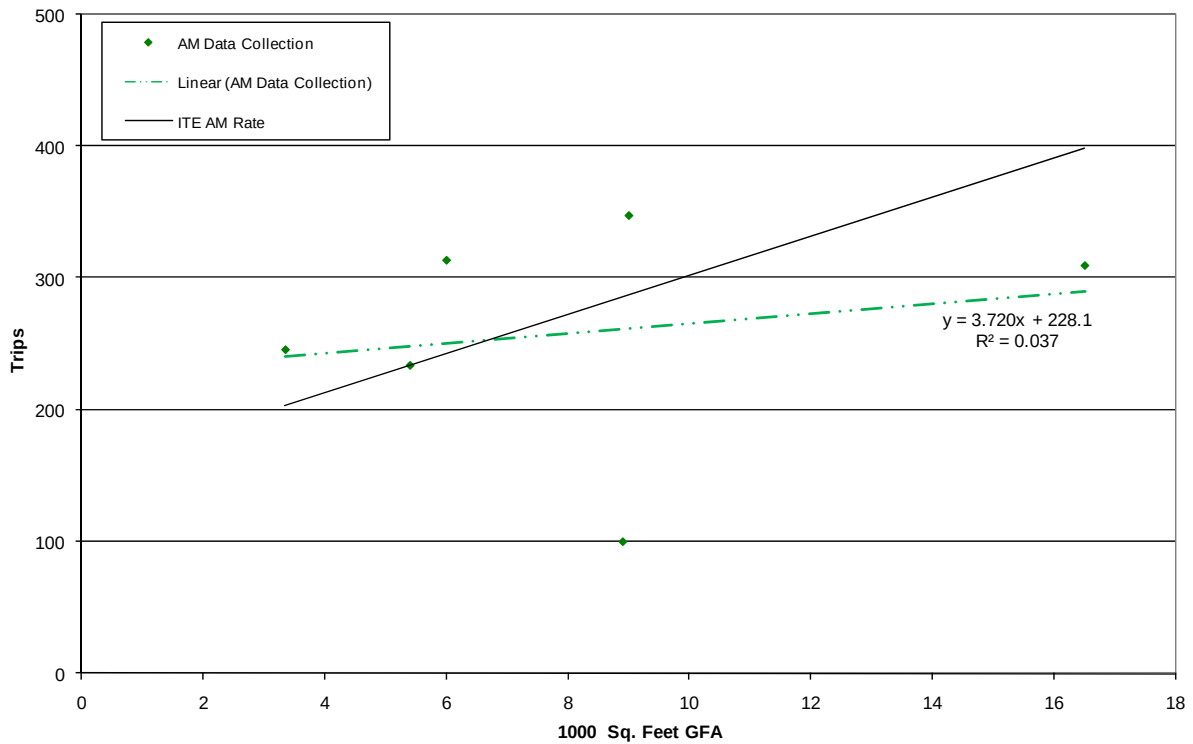
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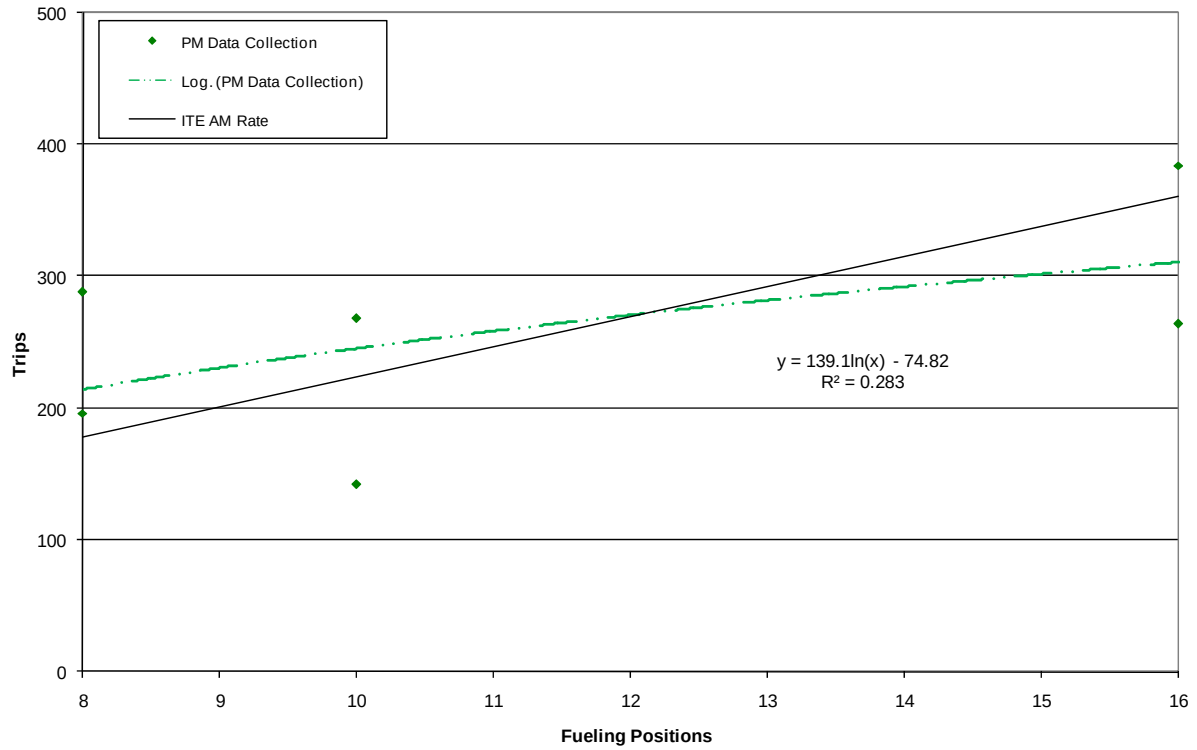
Fast Food Sites Between 45,000 and 90,000 ADT (AM)



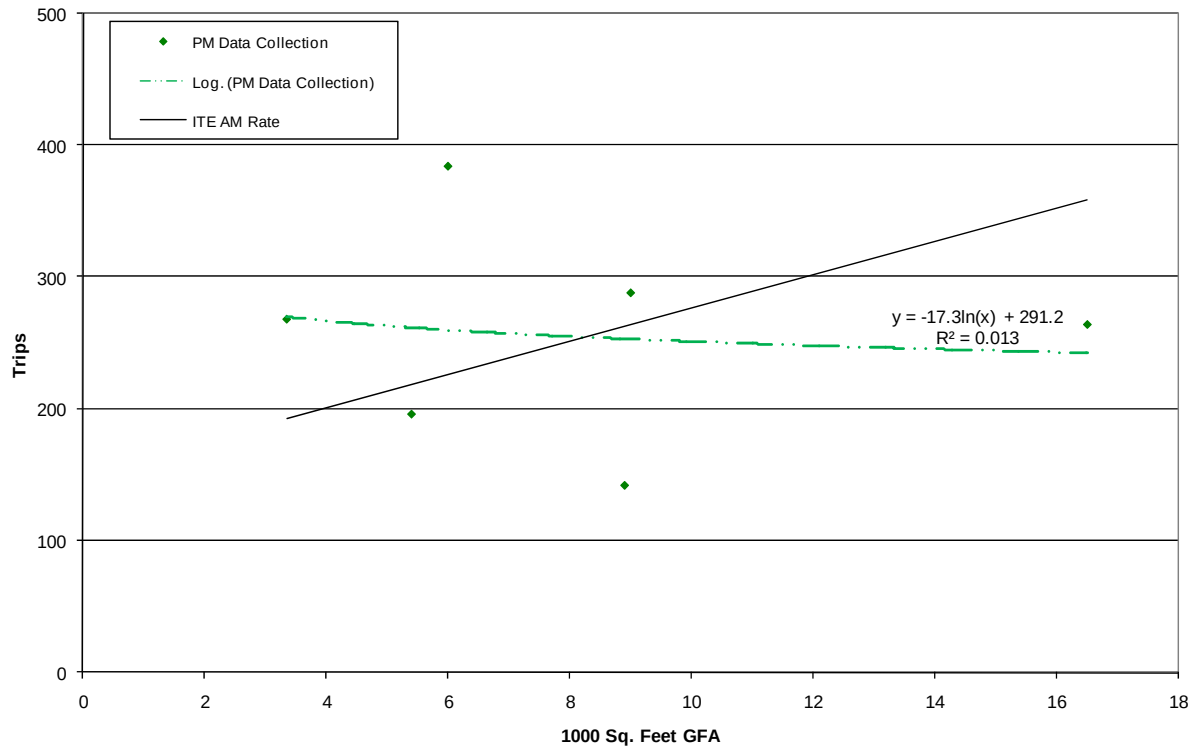
Fast Food Sites Between 45,000 and 90,000 ADT (AM)



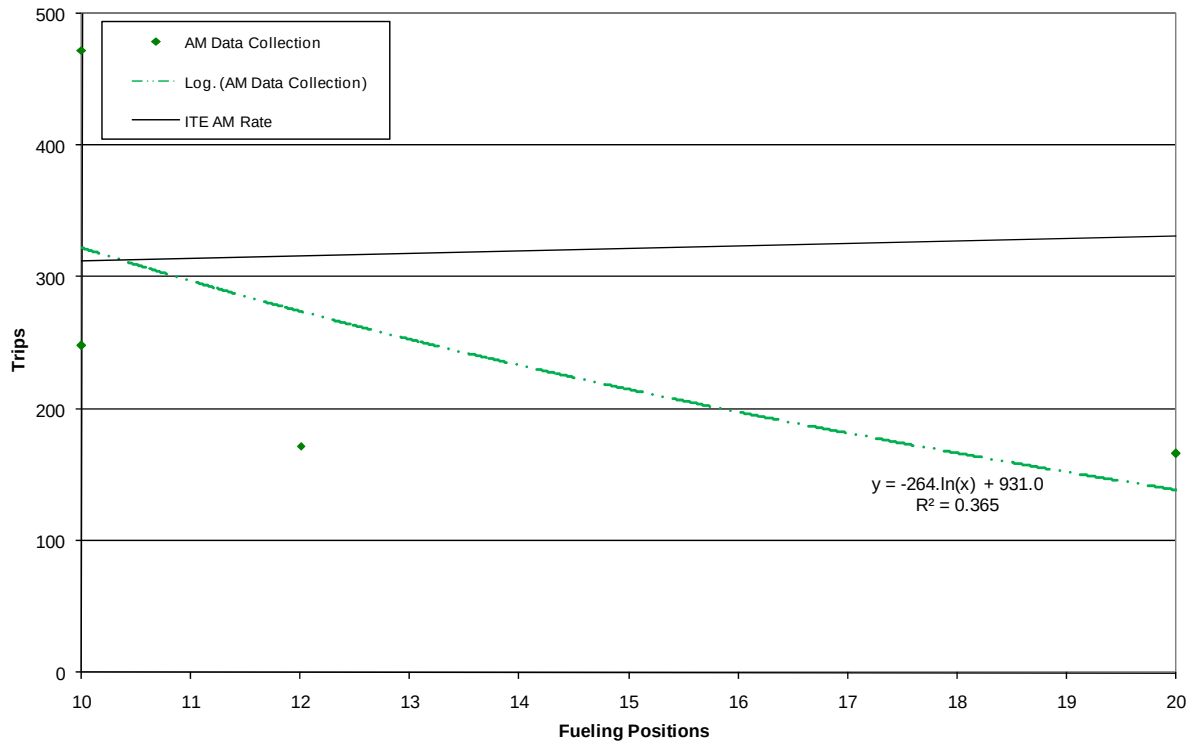
Fast Food Sites Between 45,000 and 90,000 ADT (PM)



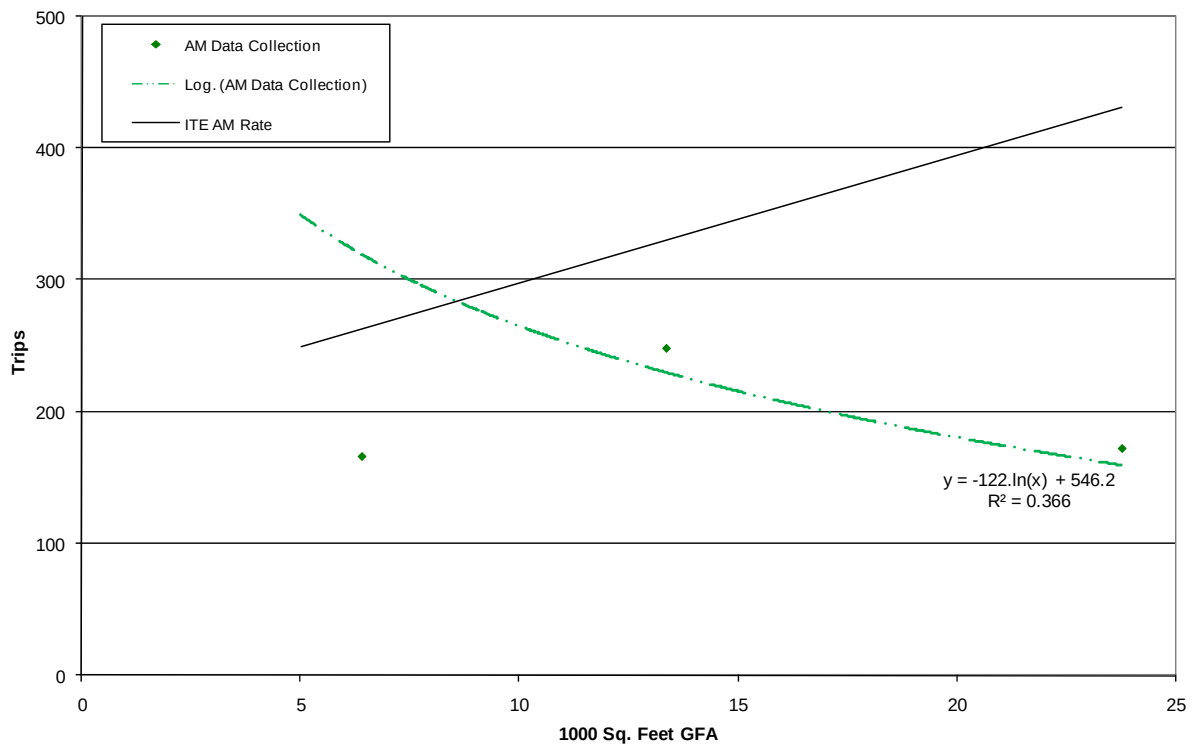
Fast Food Sites Between 45,000 and 90,000 ADT (PM)



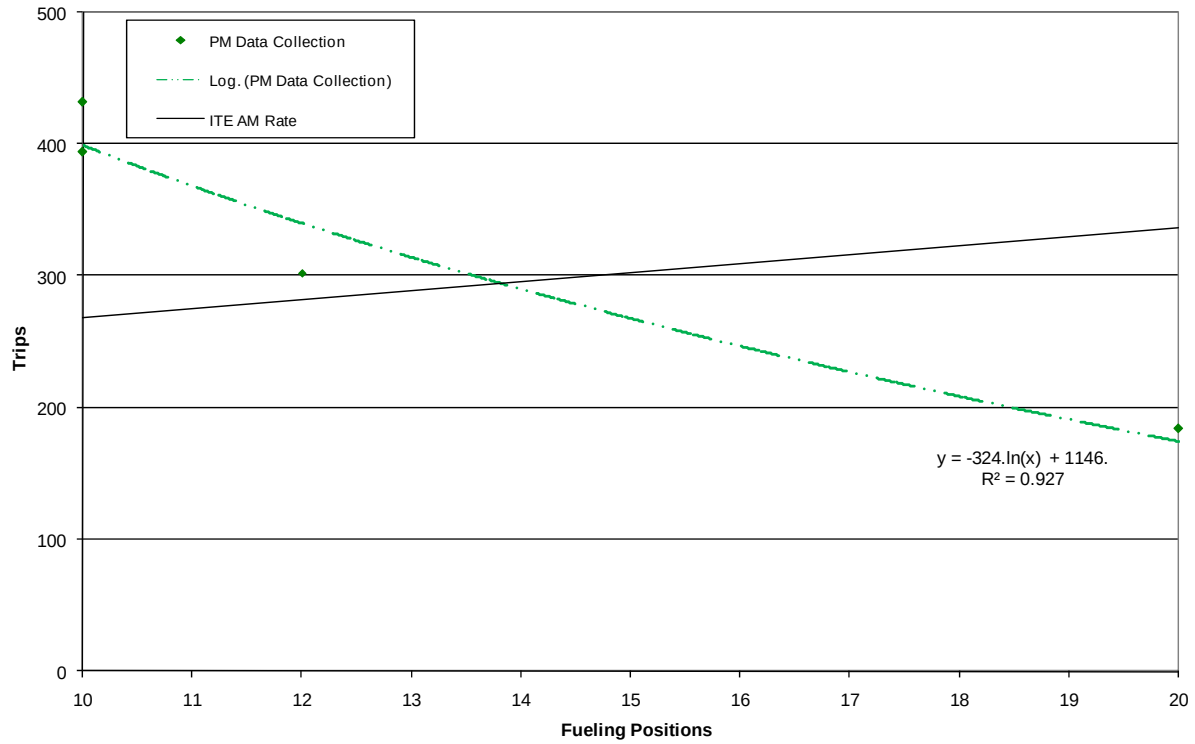
Fast Food Sites Greater Than 90,000 ADT (AM)



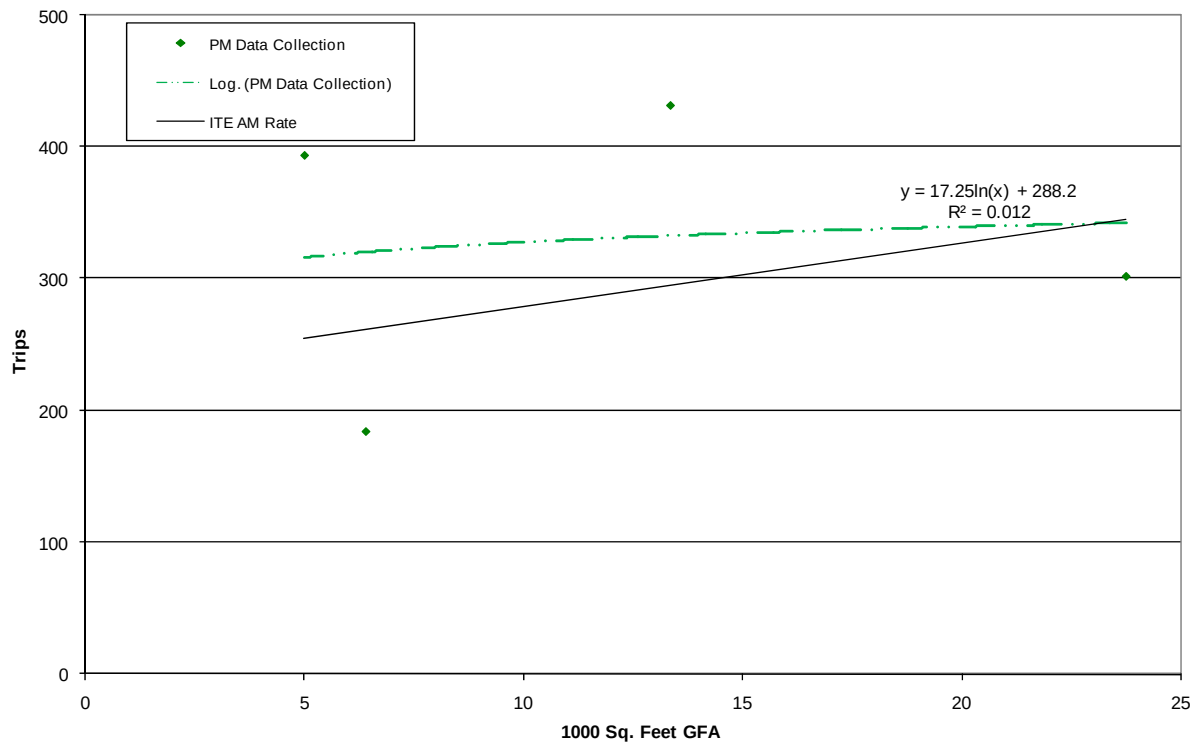
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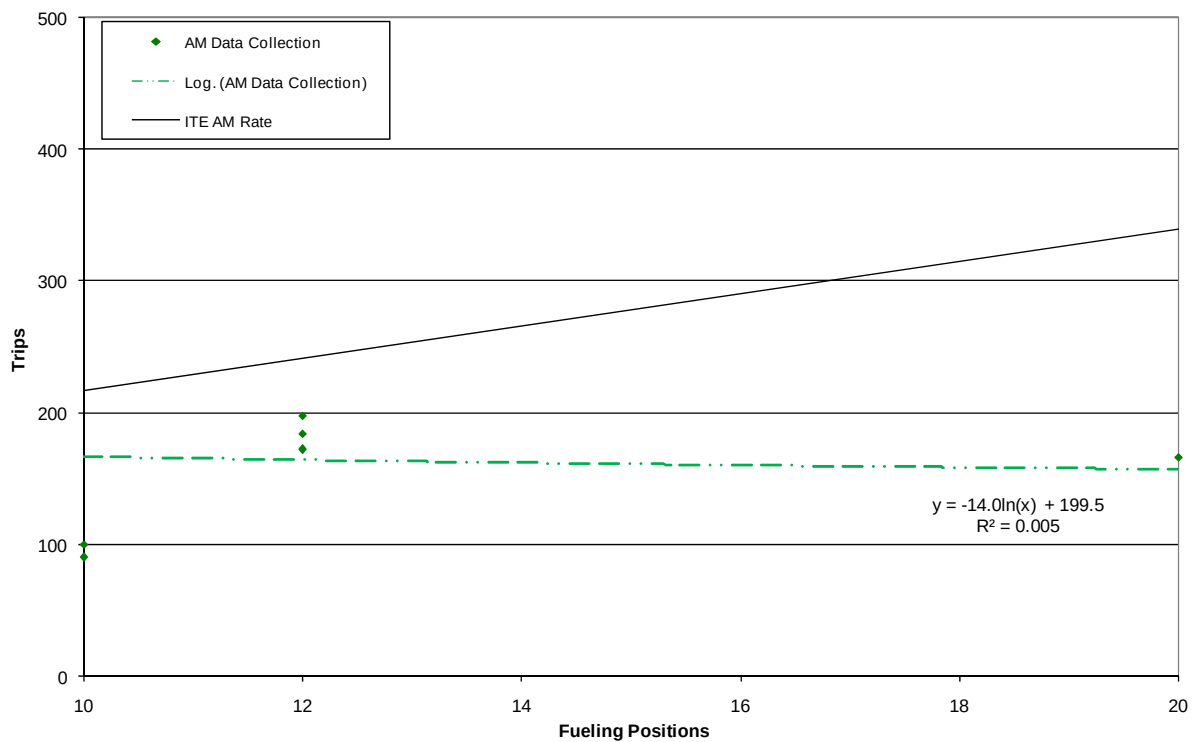
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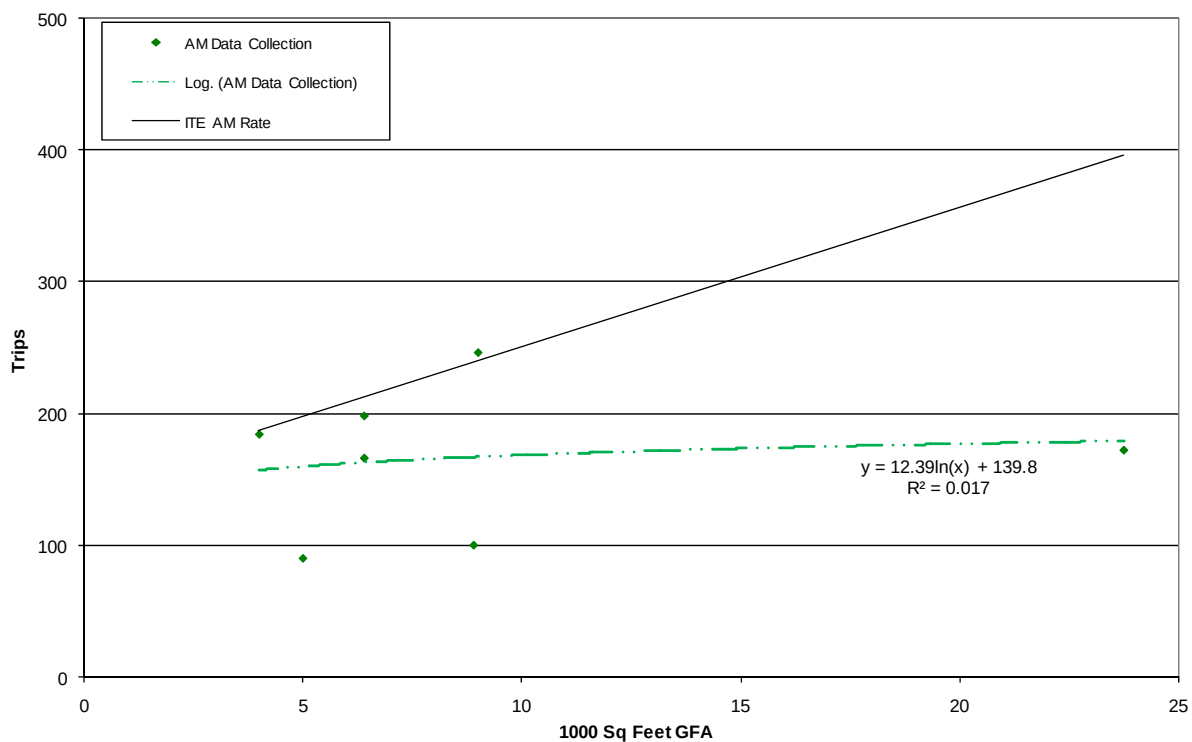
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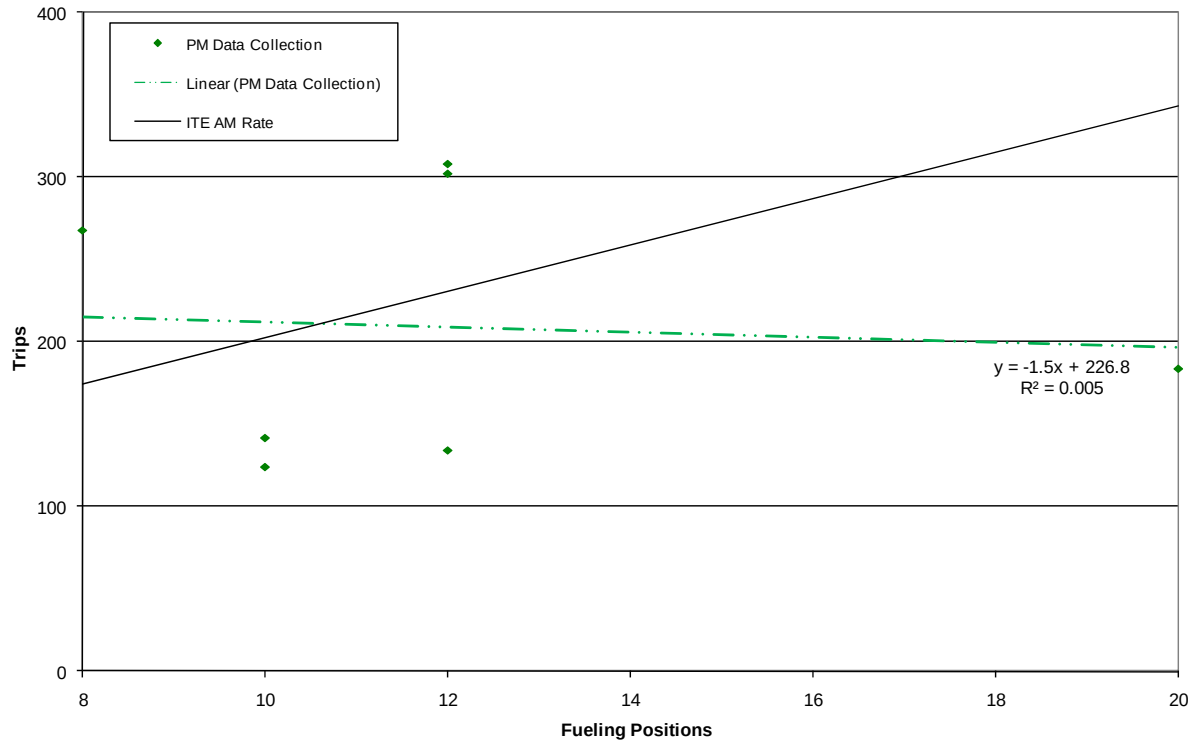
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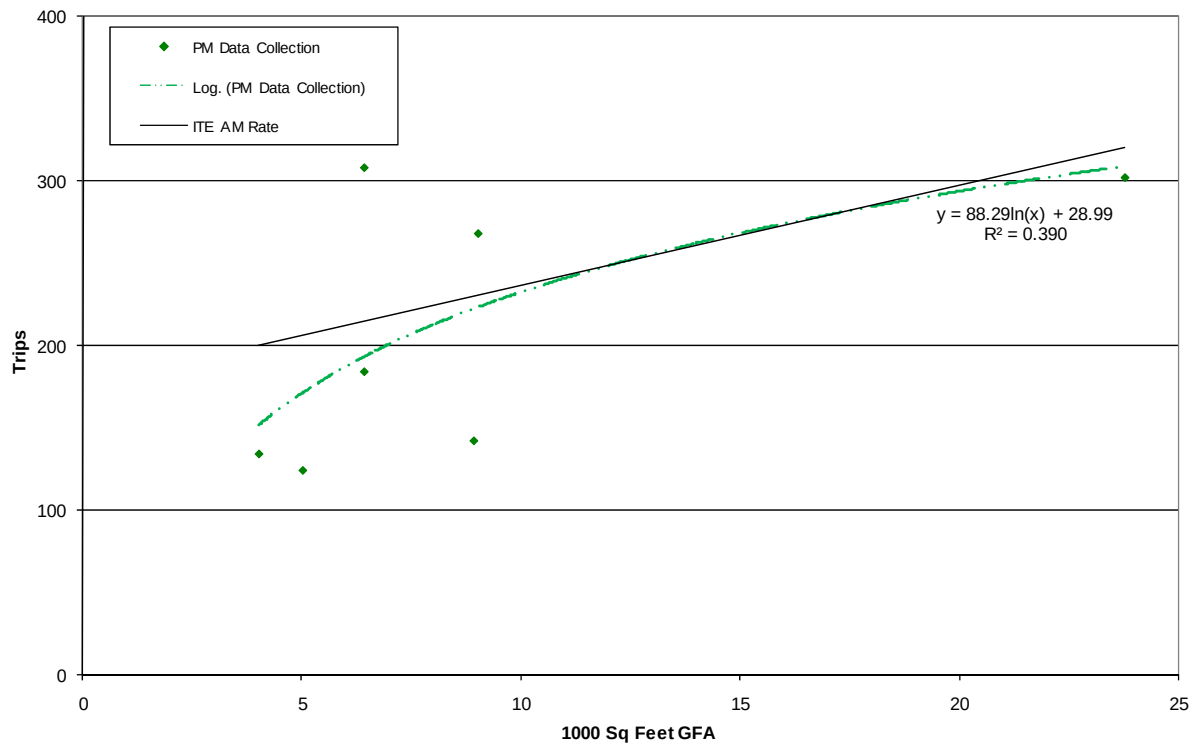
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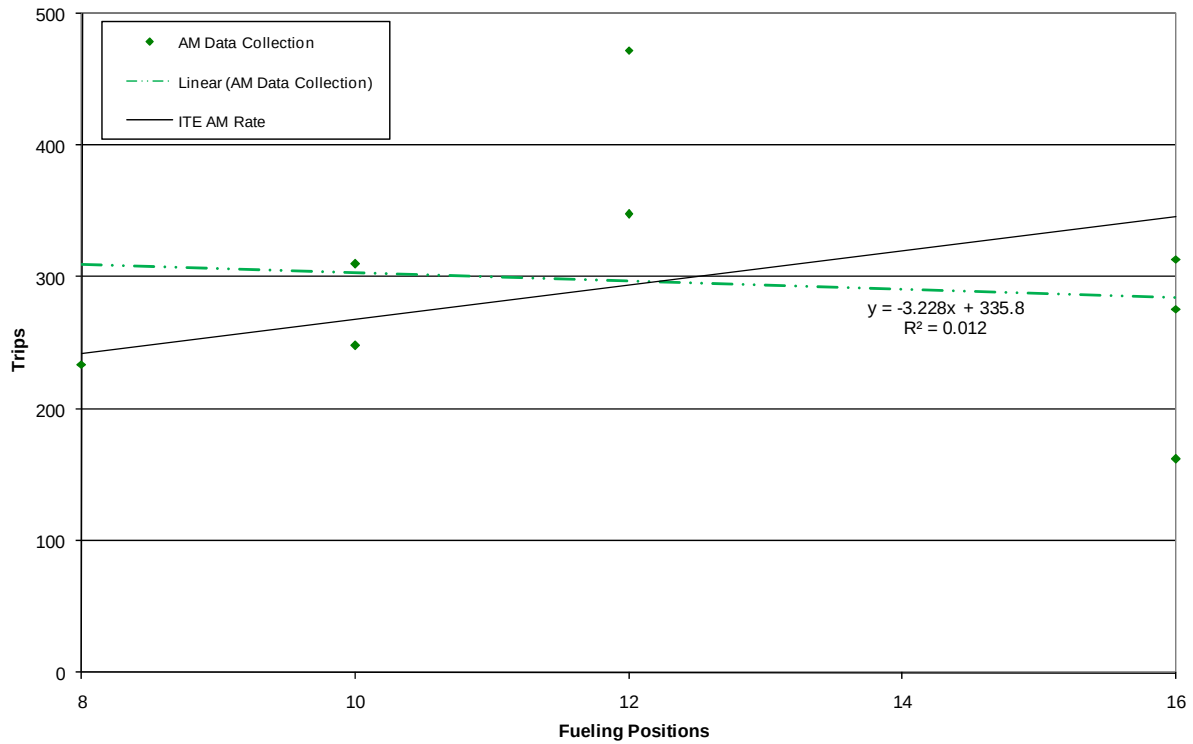
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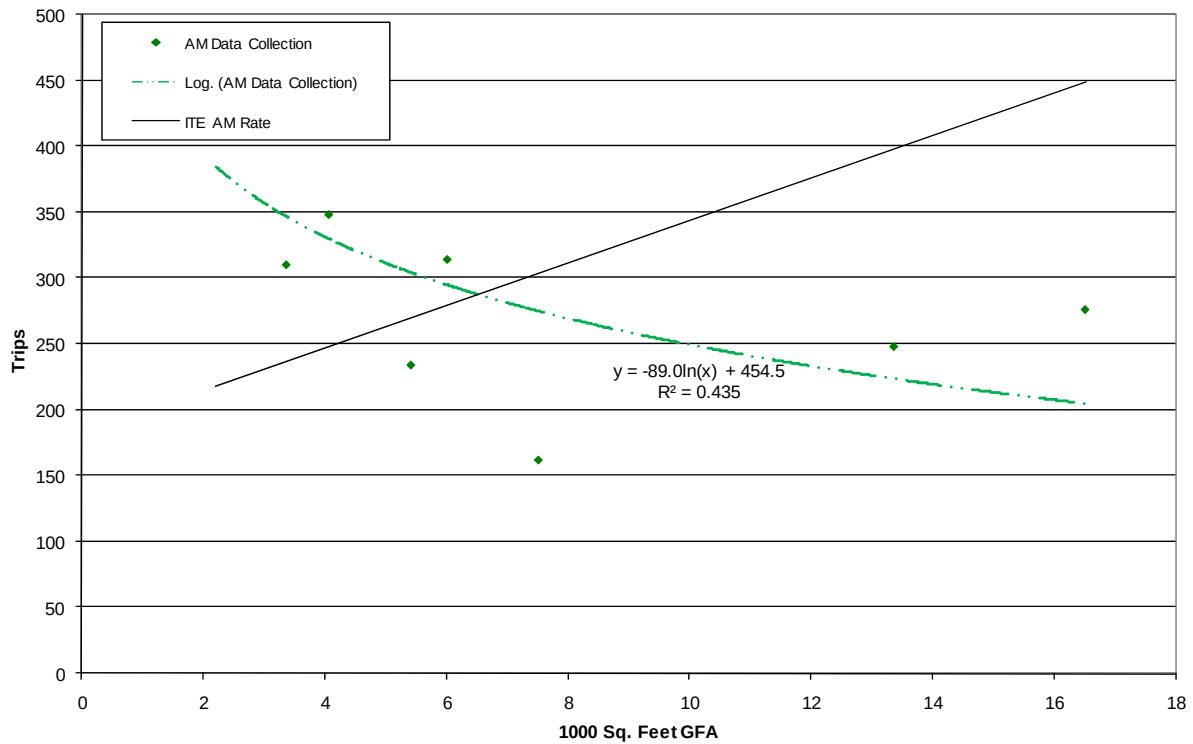
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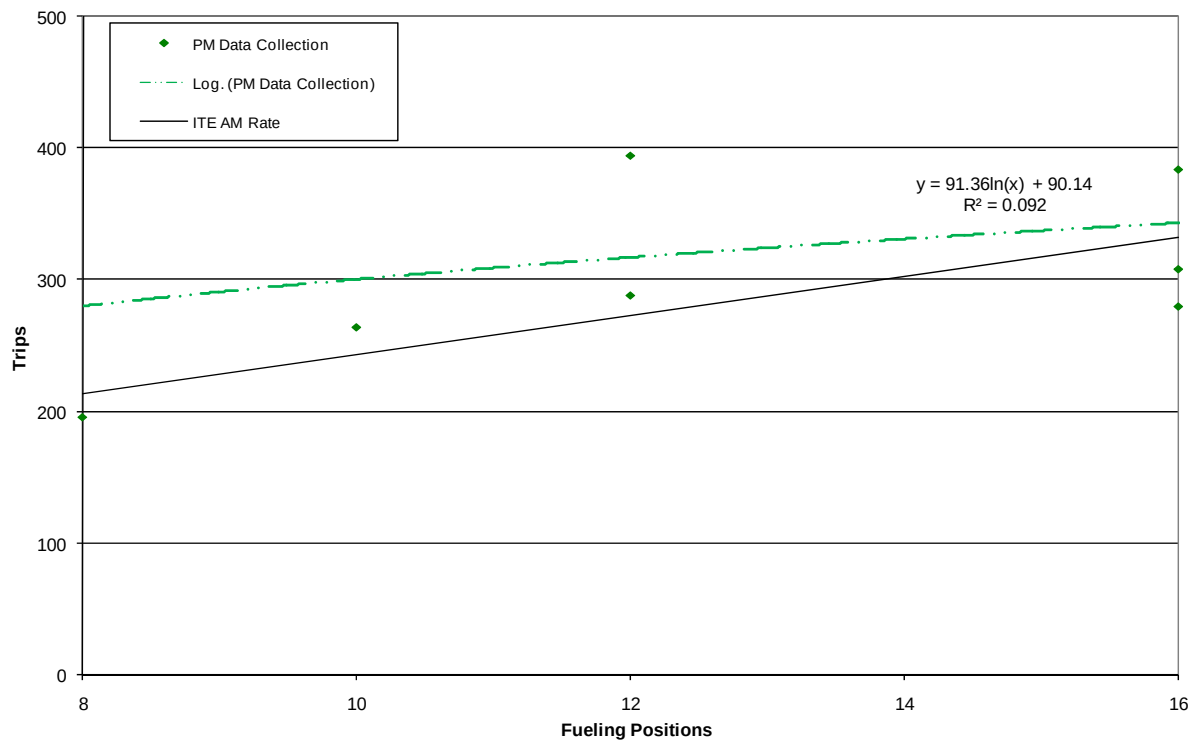
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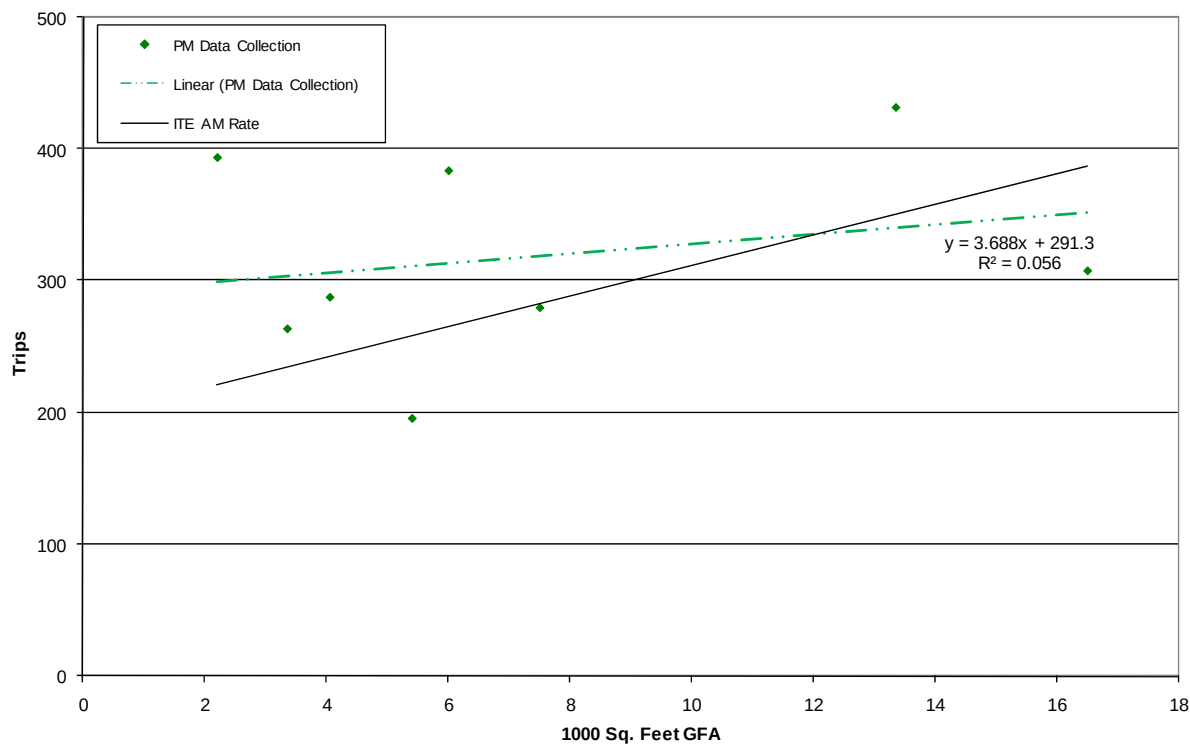
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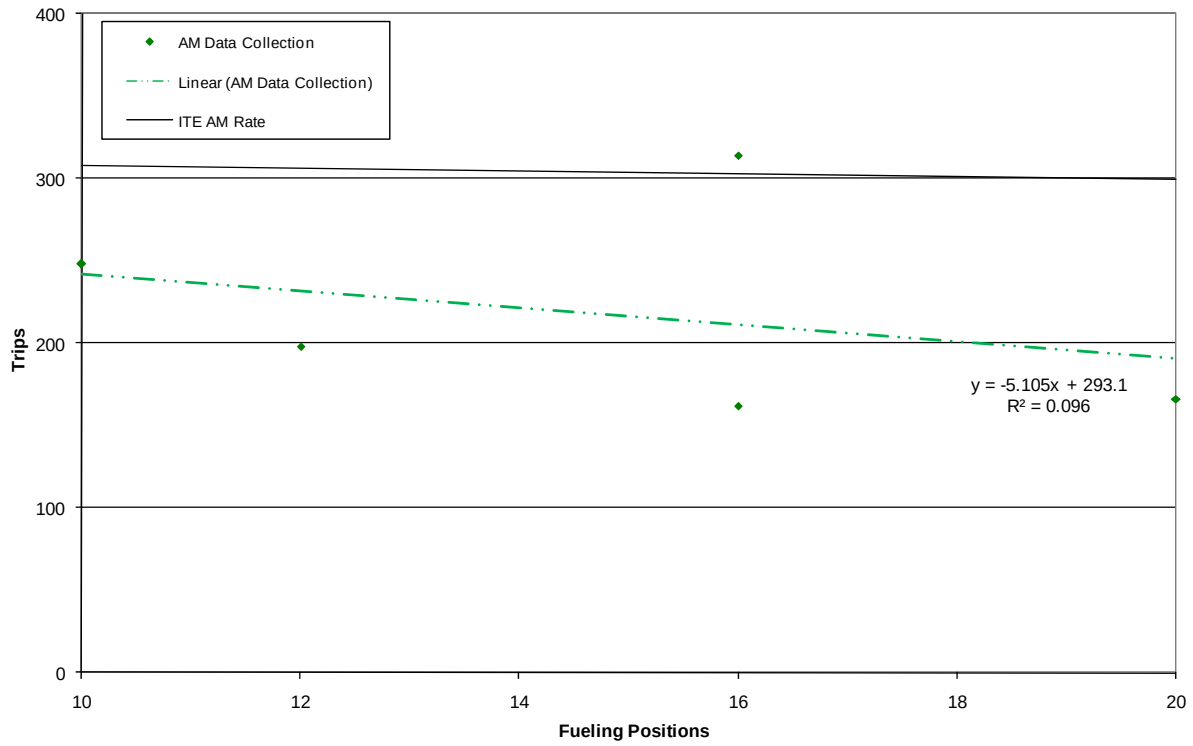
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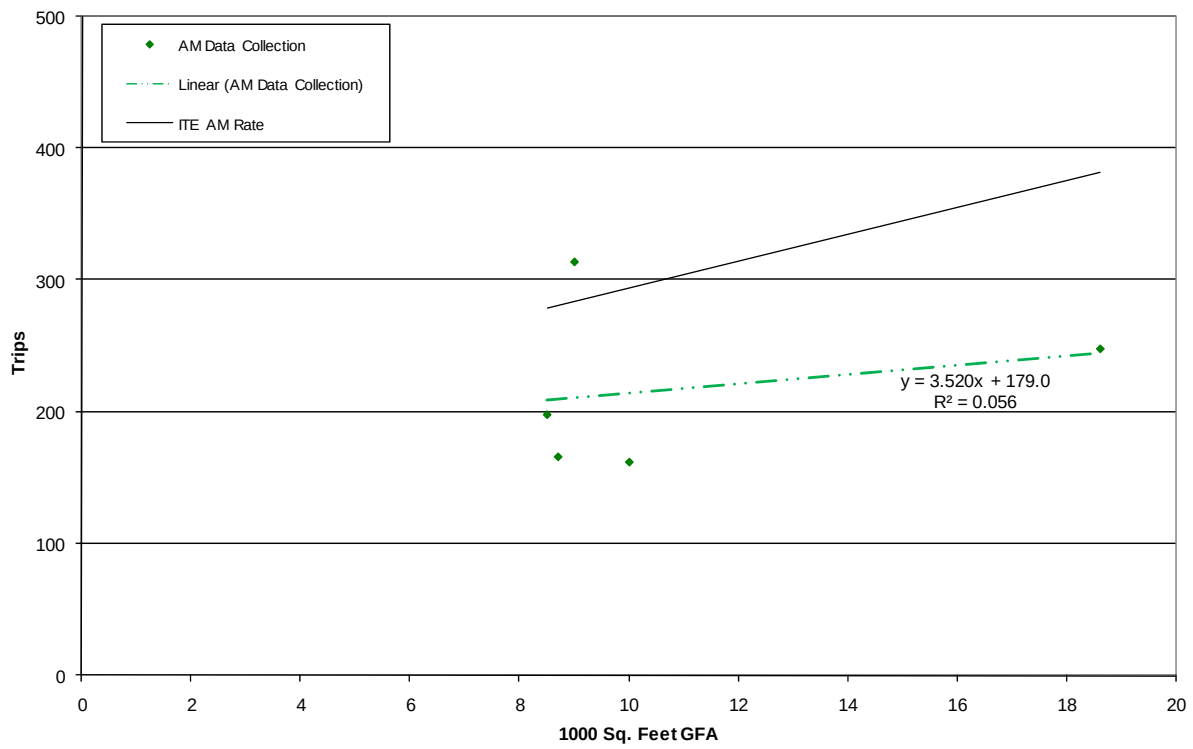
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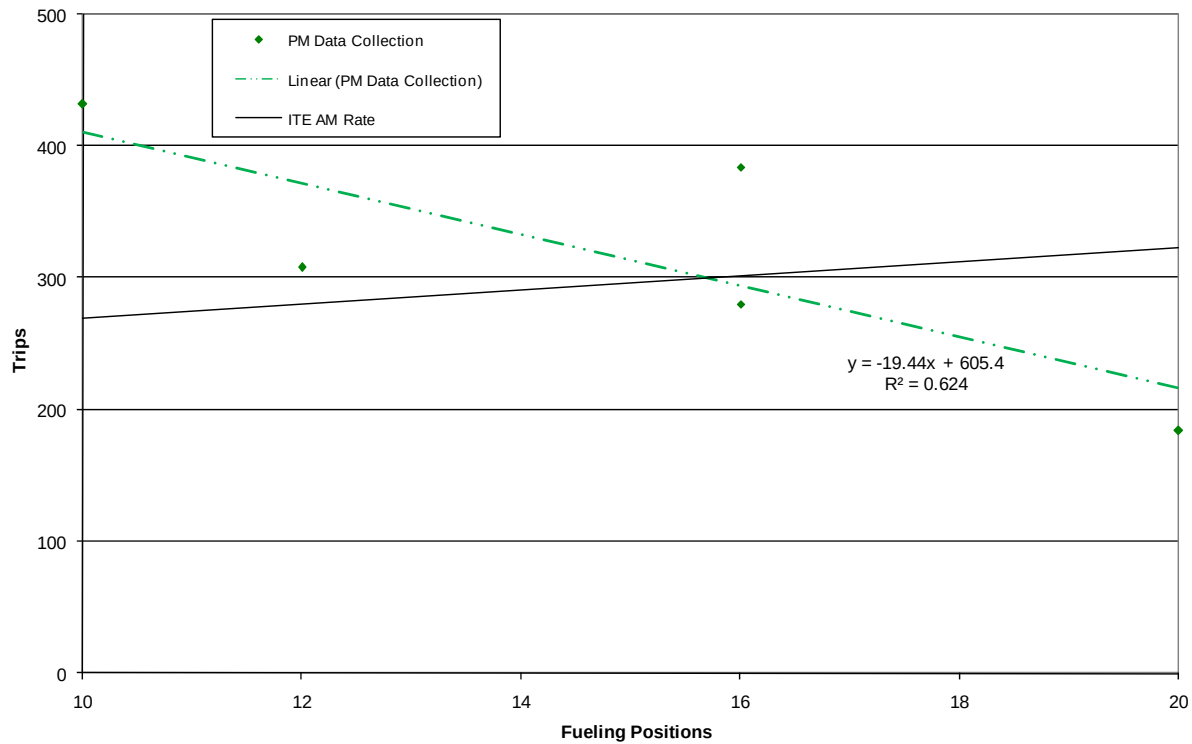
Fast Food at Non-Interstate Location (AM)



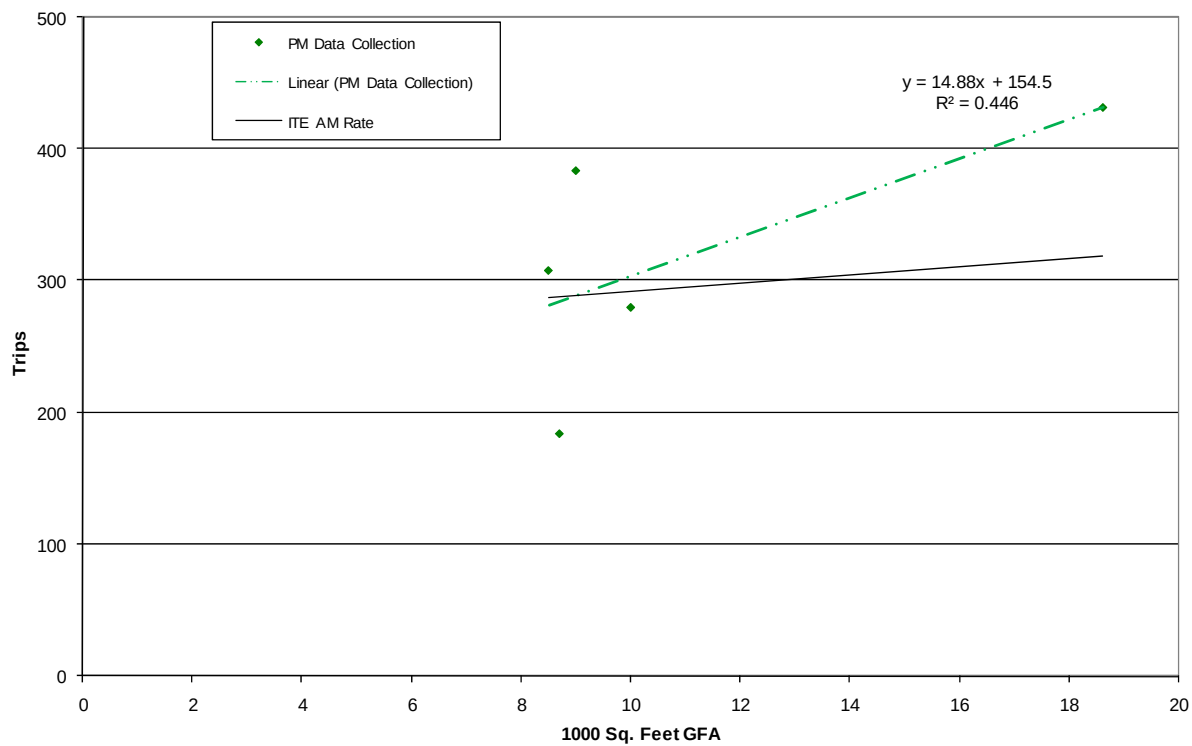
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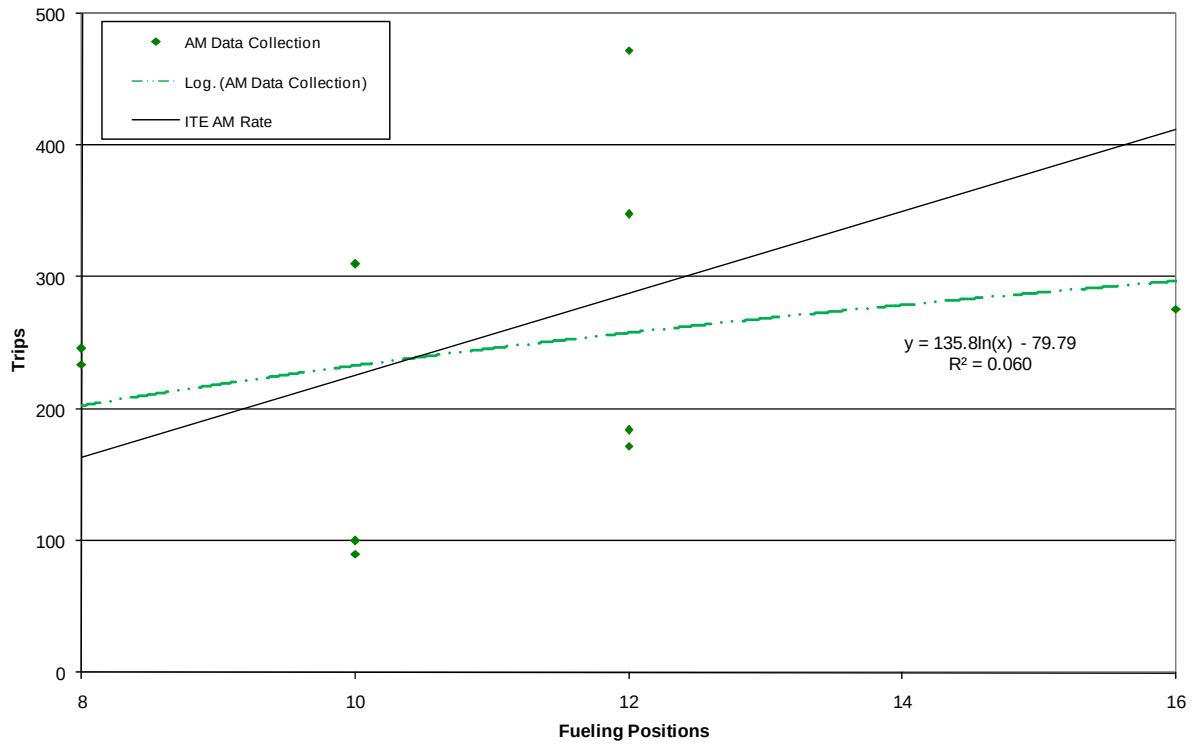
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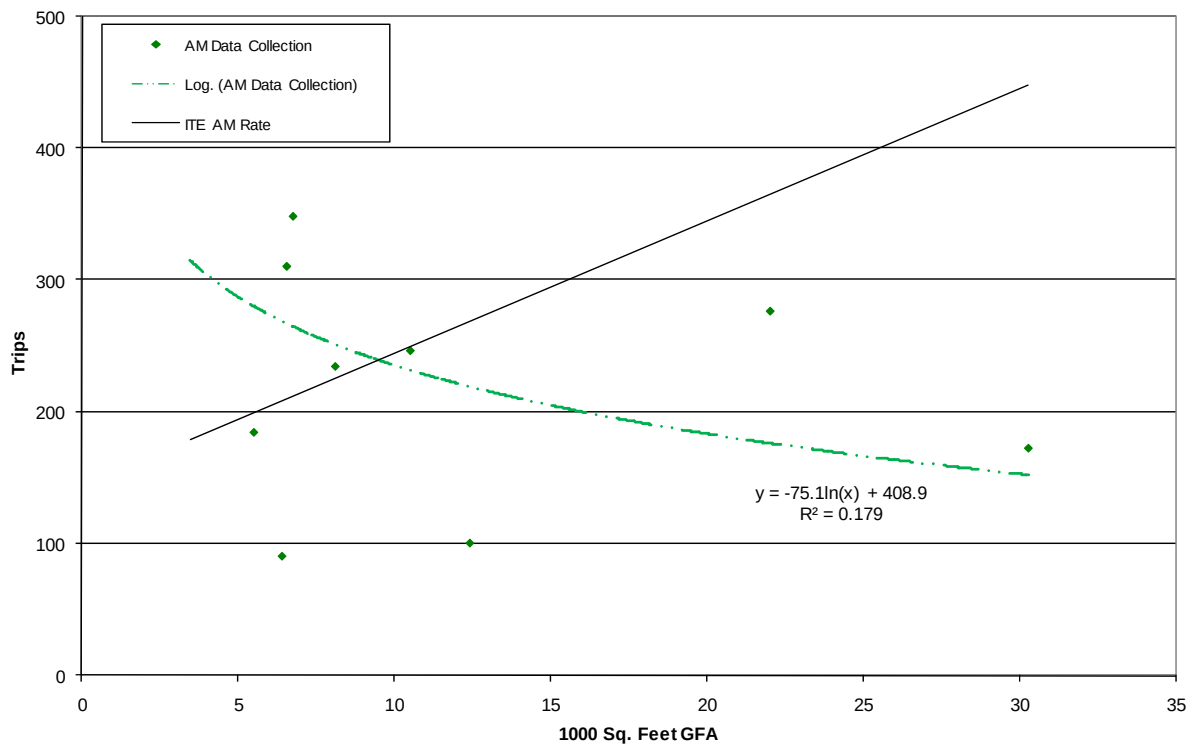
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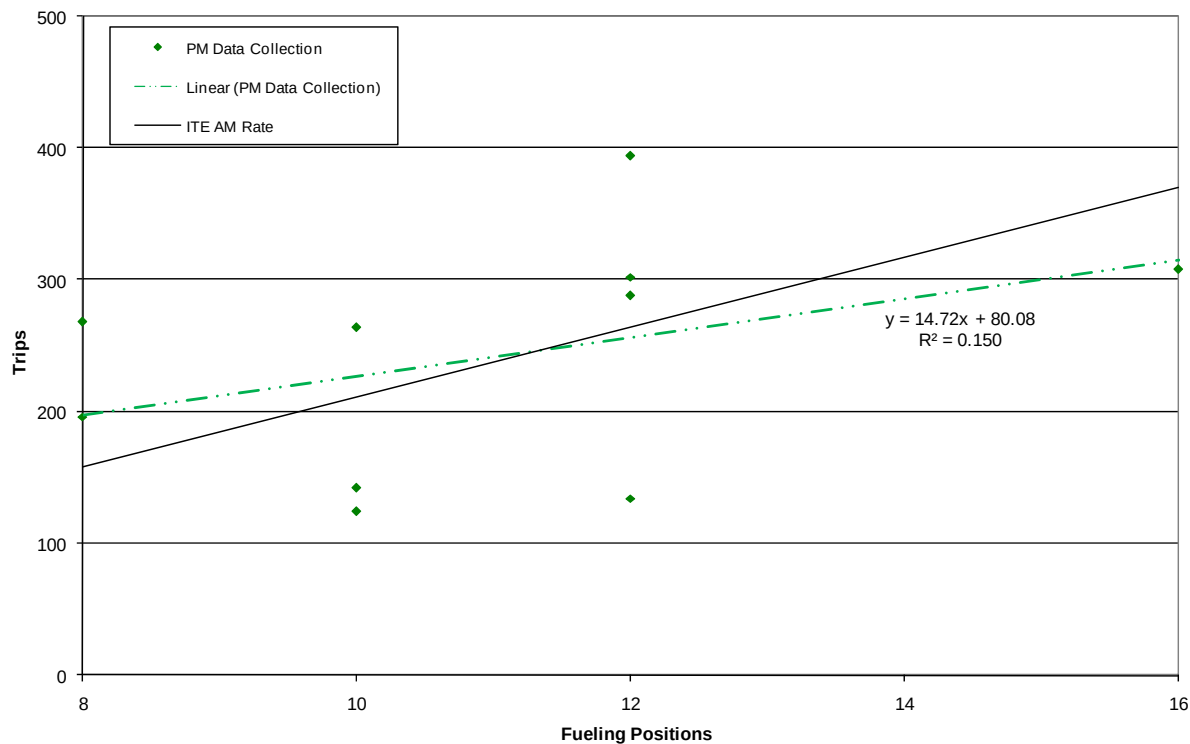
Fast Food at Interstate Location (AM)



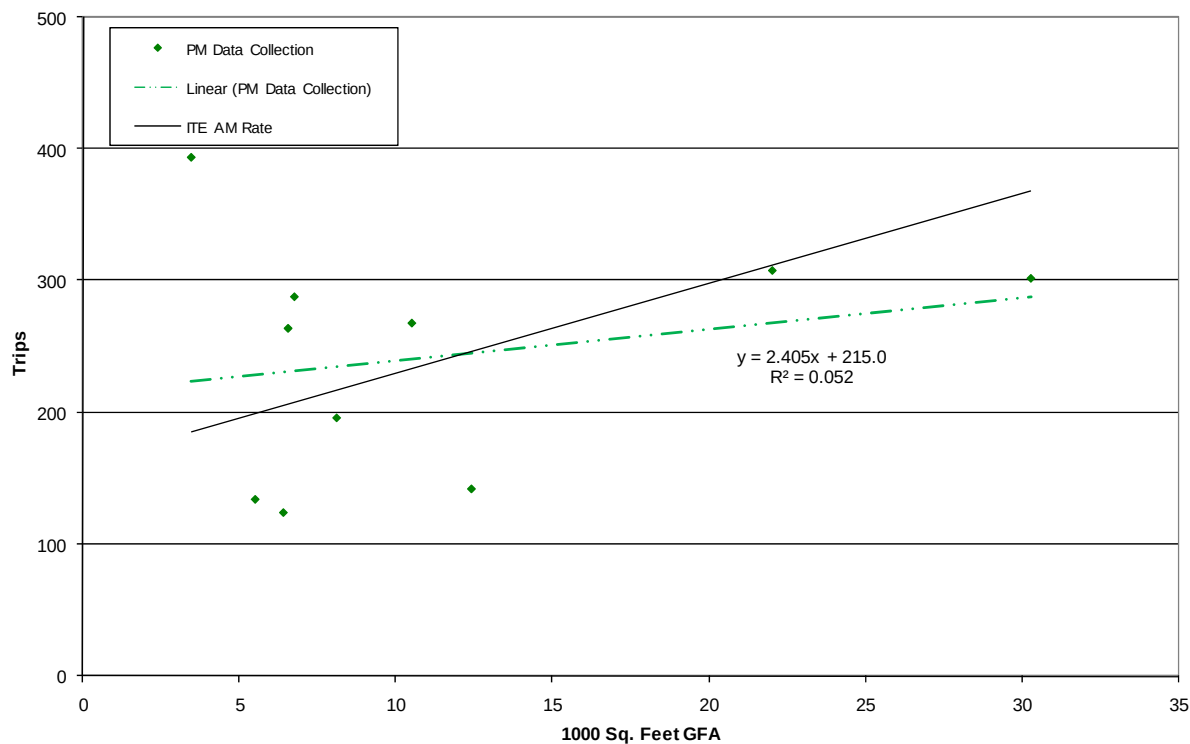
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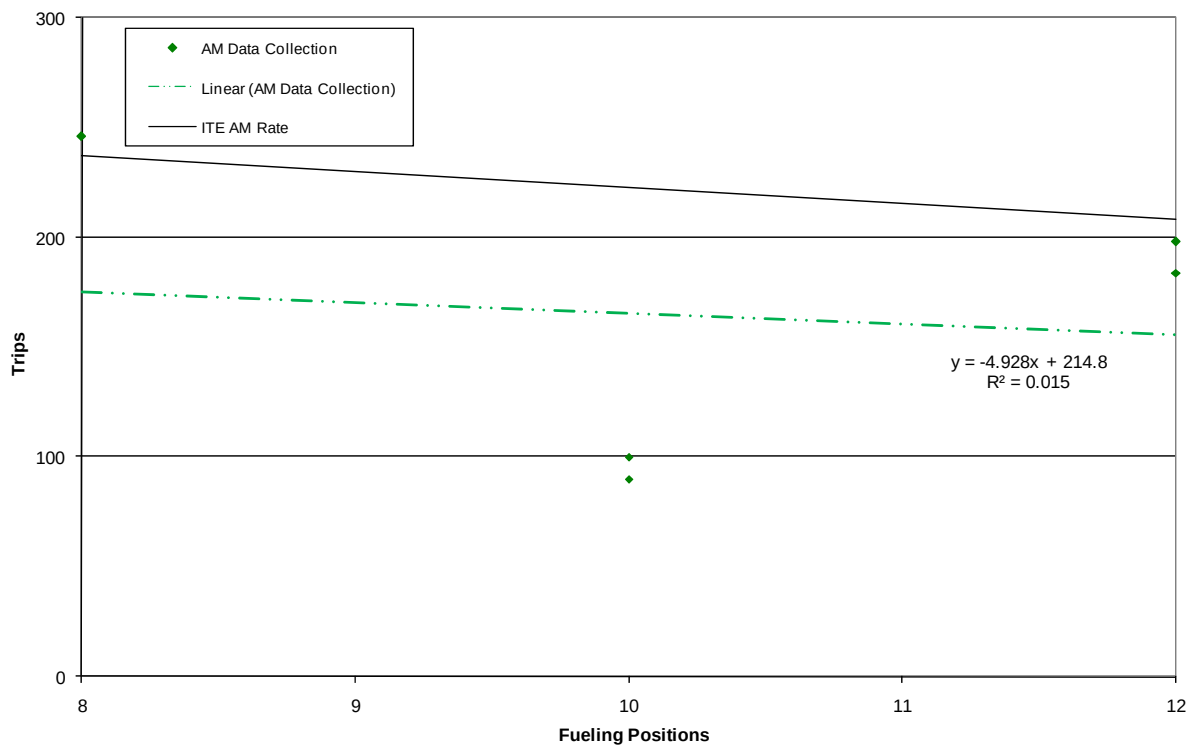
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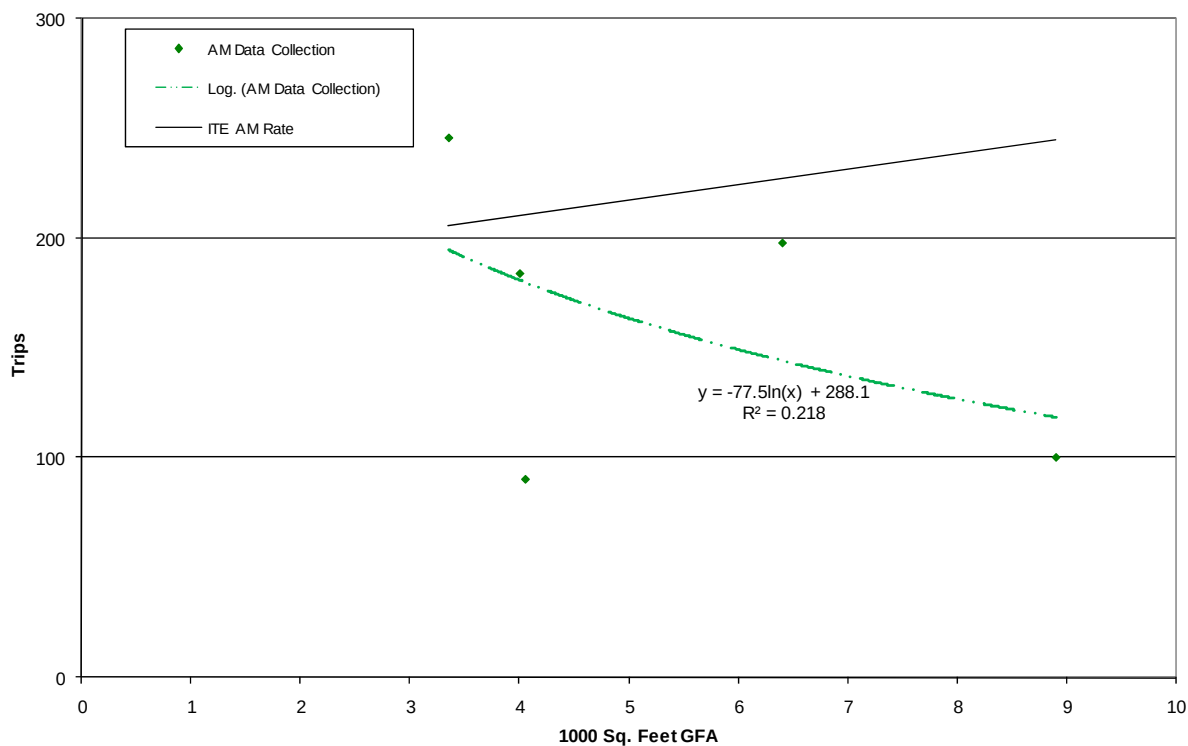
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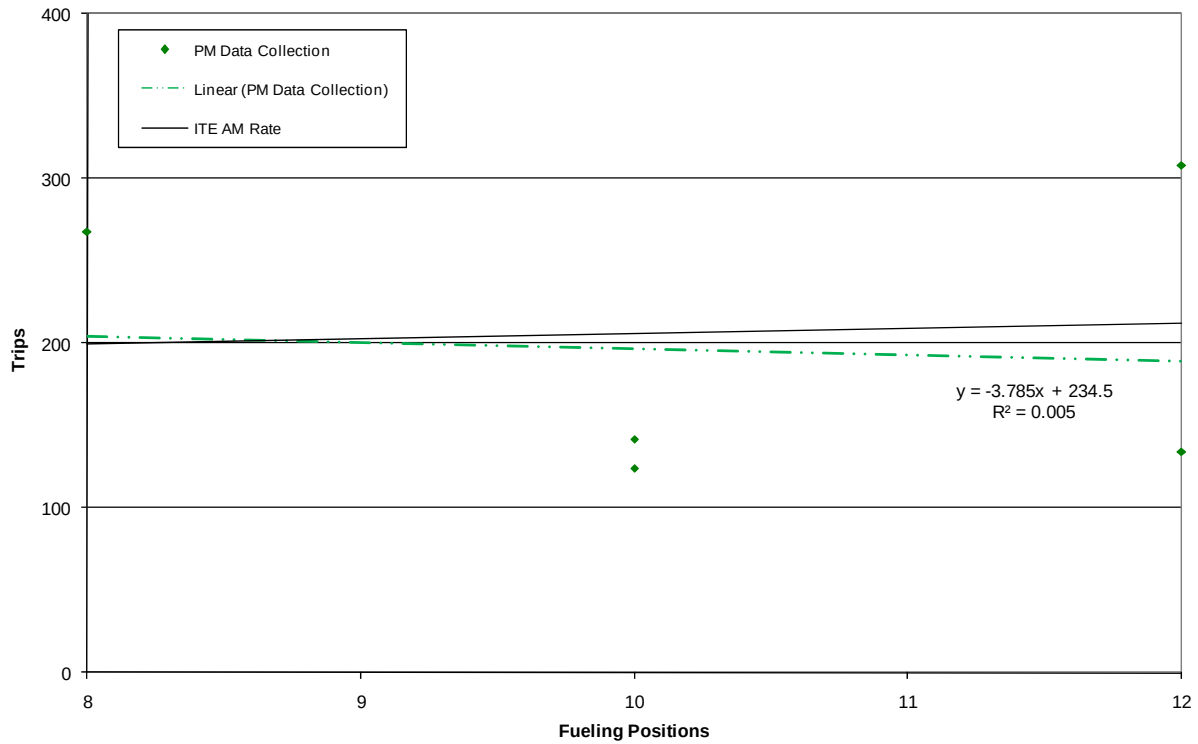
Fast Food Sites Western Locations (AM)



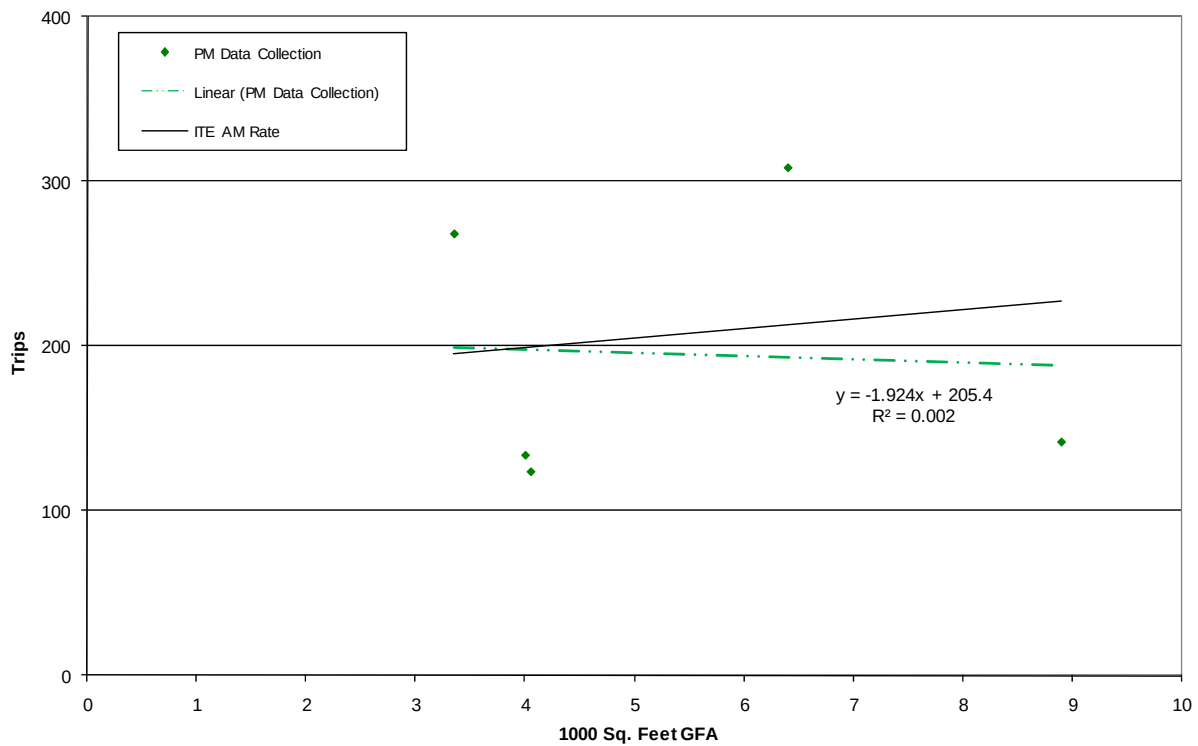
Fast Food Sites Western Locations (AM)



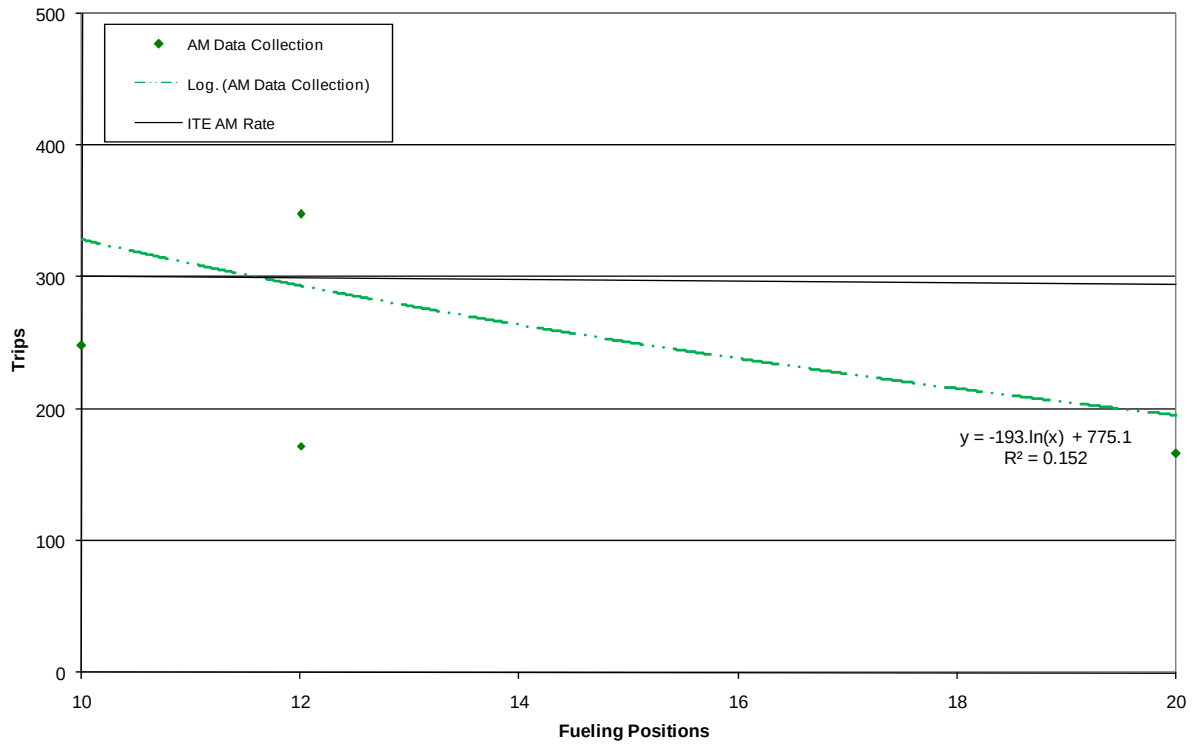
Fast Food Sites Western Locations (PM)



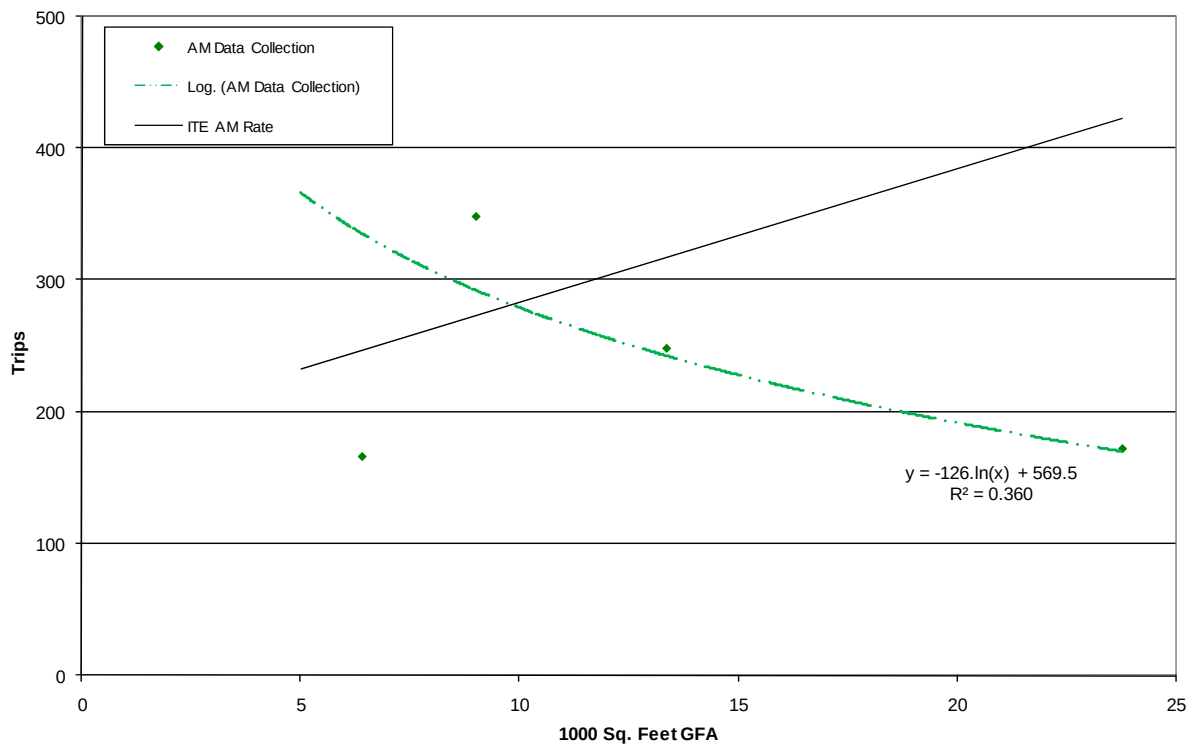
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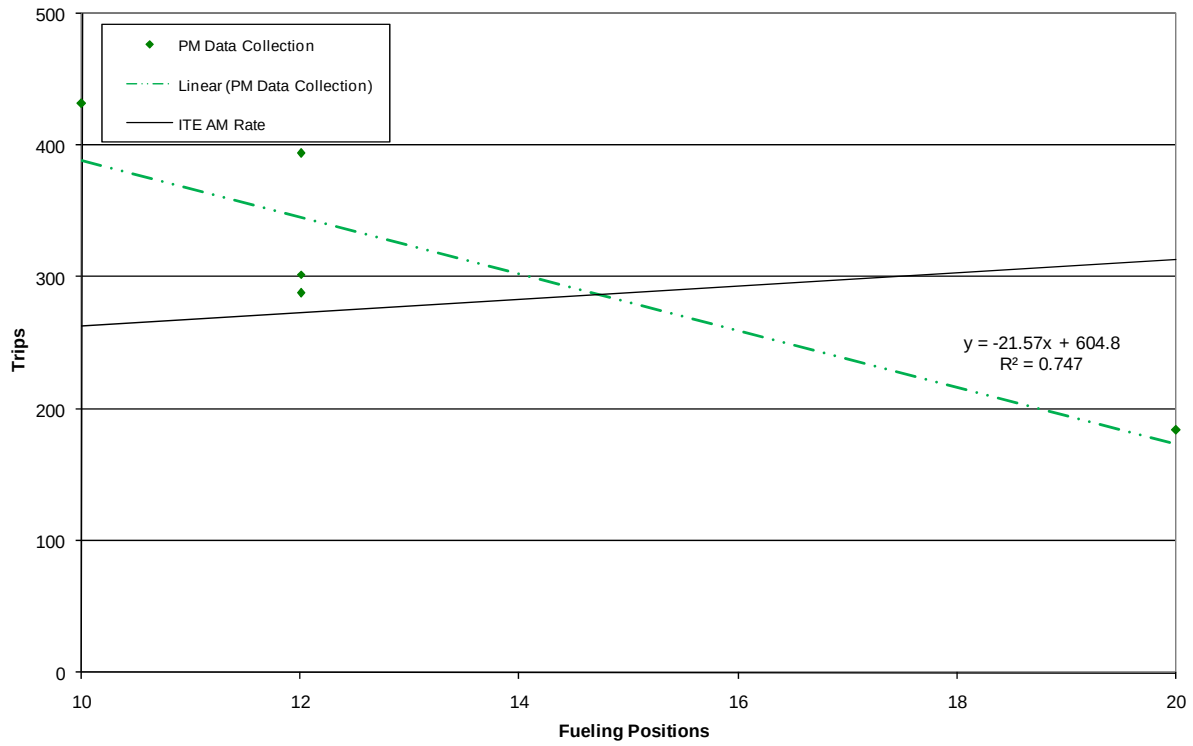
Fast Food Sites Central Locations (AM)



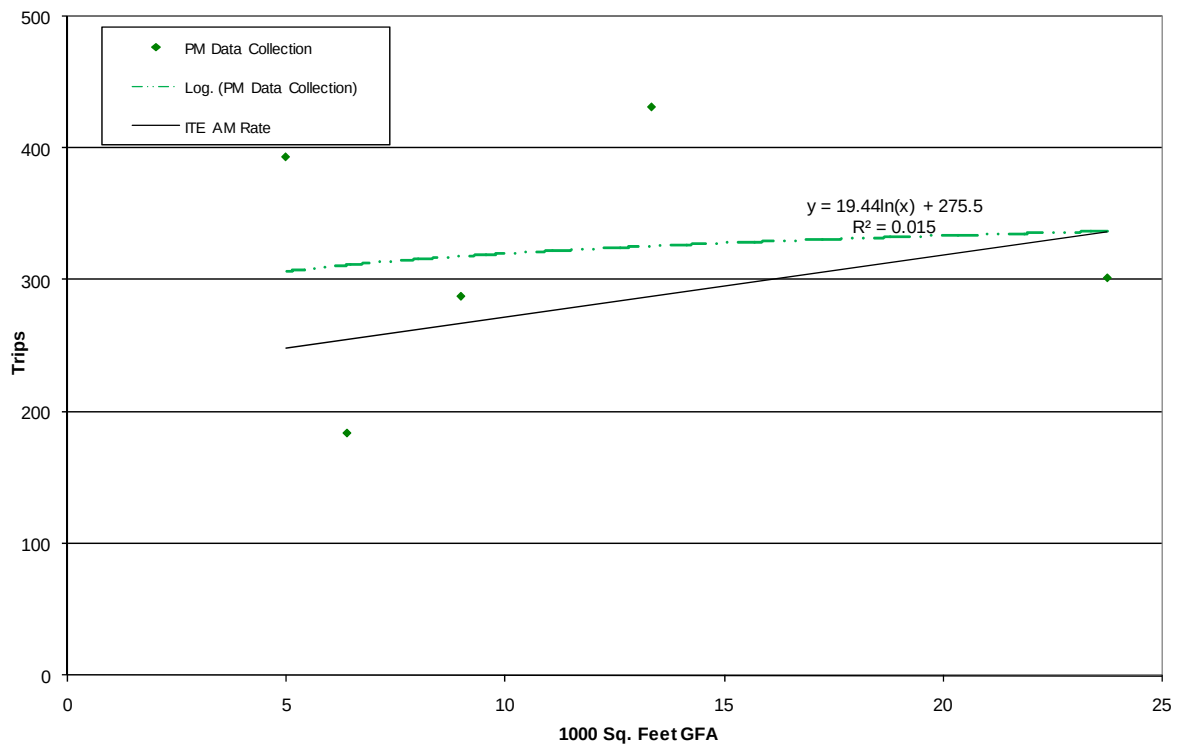
Fast Food Sites Central Locations (AM)



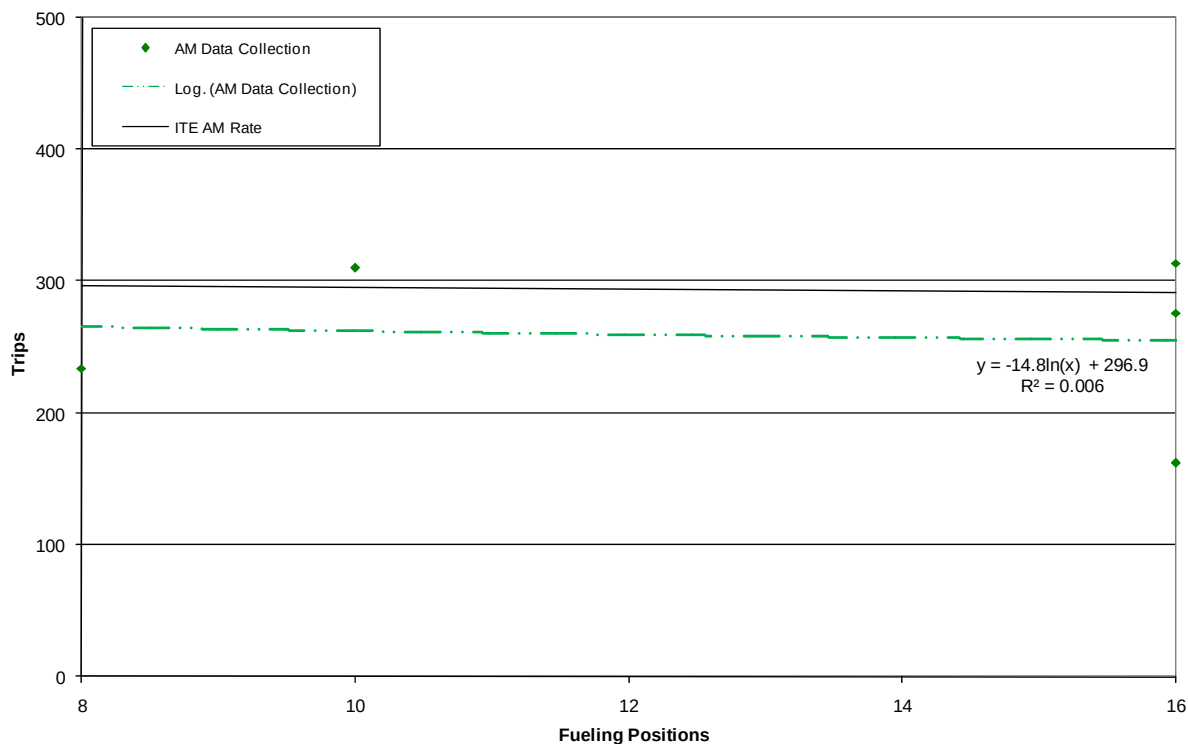
Fast Food Sites Central Locations (PM)



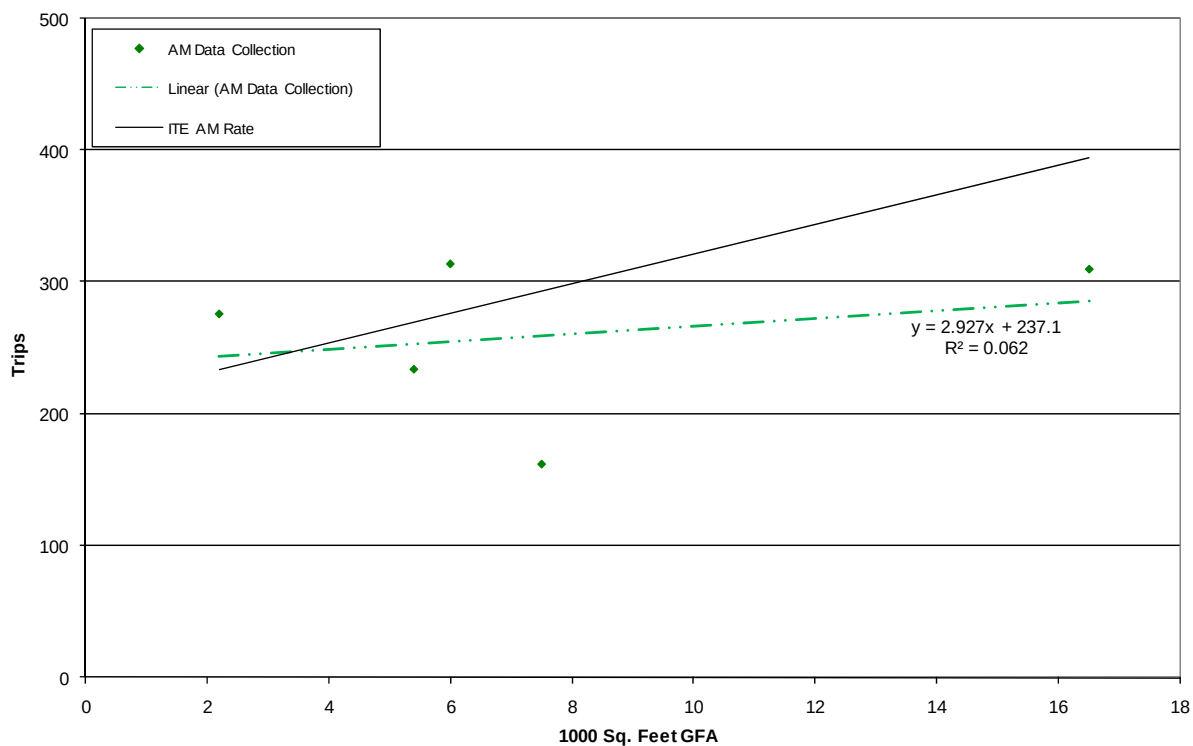
Fast Food Sites Central Locations (PM)



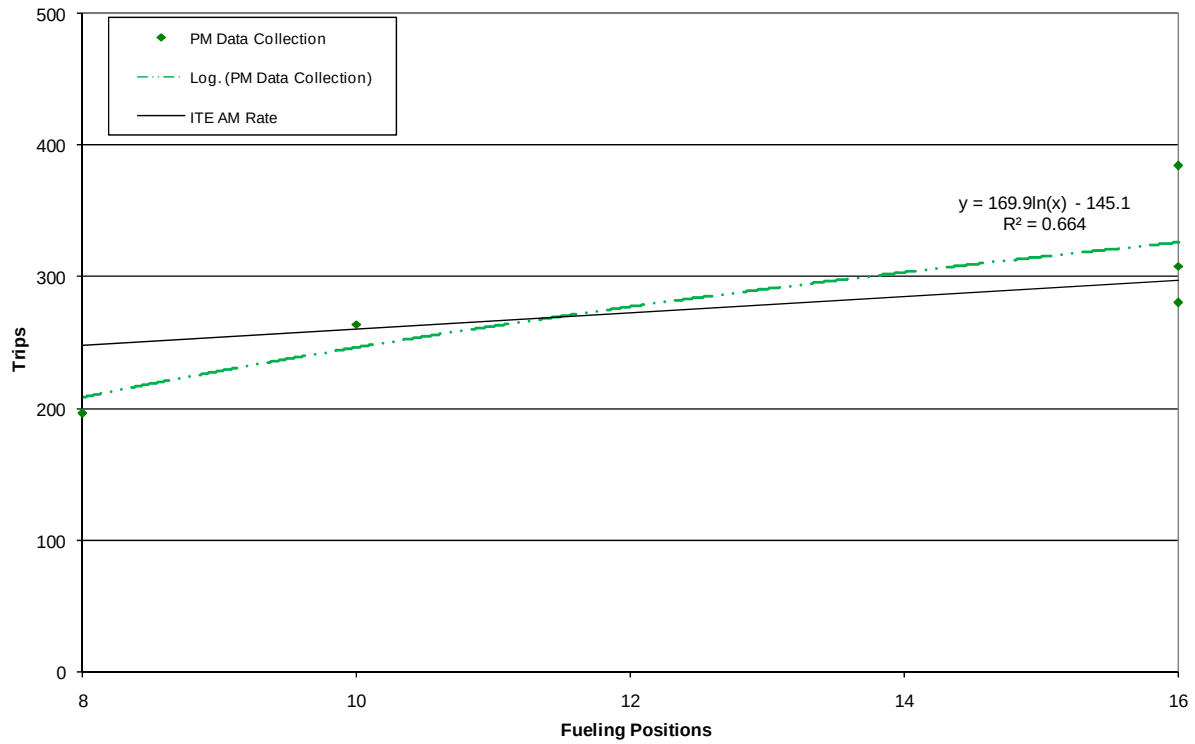
Fast Food Sites Eastern Locations (AM)



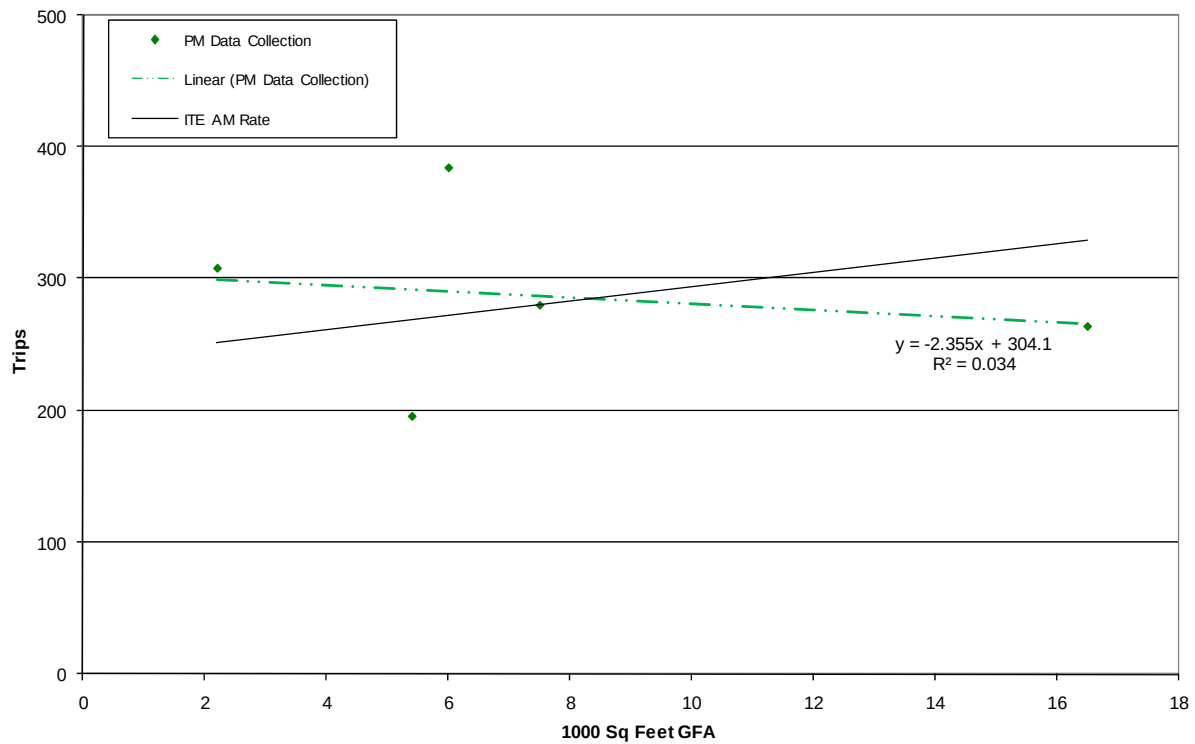
Fast Food Sites Eastern Locations (AM)



Fast Food Sites Eastern Locations (PM)



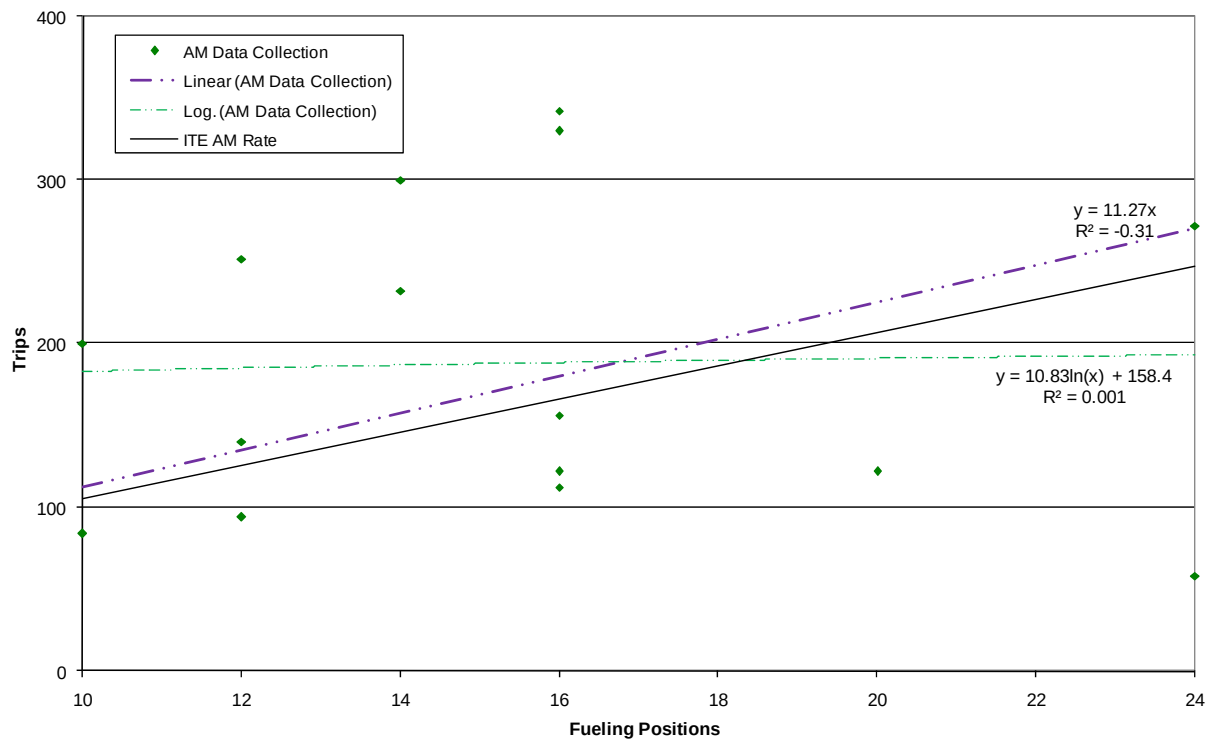
Fast Food Sites Eastern Locations (PM)



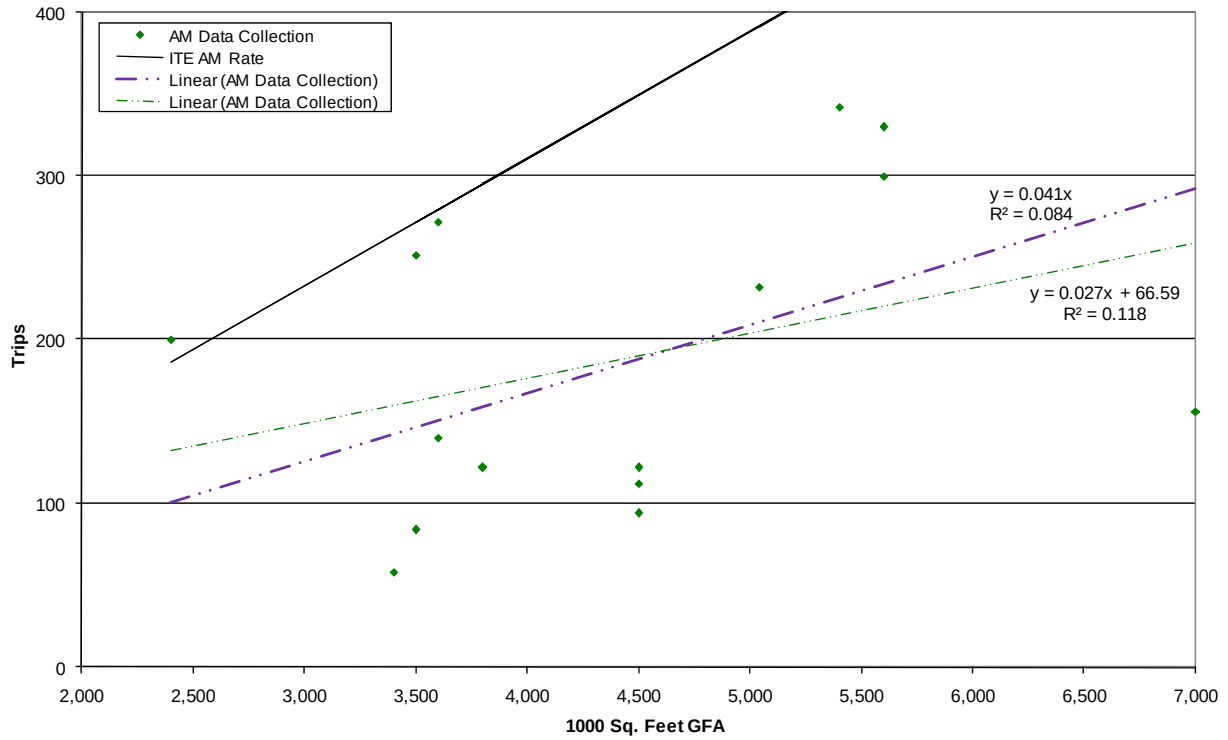
APPENDIX E - NON-FAST FOOD SITES

Site Description		Sample Size	Peak Hour	R ² - FP	R ² - GFA	Page #
Non-Fast Food	All Sites	15	AM	0.001	0.118	D - 2
			PM	0.002	0.020	D - 3
	< 60,000 ADT	10	AM	0.108	0.168	D - 4
			PM	0.129	0.008	D - 5
	≥ 60,000 ADT	5	AM	0.074	0.254	D - 6
			PM	0.092	0.001	D - 7
	Non-Interstate Location	7	AM	0.084	0.311	D - 8
			PM	0.003	0.096	D - 9
	Interstate Location	8	AM	0.062	0.052	D - 10
			PM	0.001	0.000	D - 11
	Western NC Location	4	AM	0.218	0.292	D - 12
			PM	0.161	0.000	D - 13
	Central NC Location	7	AM	0.101	0.097	D - 14
			PM	0.005	0.000	D - 15
	Eastern NC Location	4	AM	0.455	0.939	D - 16
			PM	0.201	0.532	D - 17

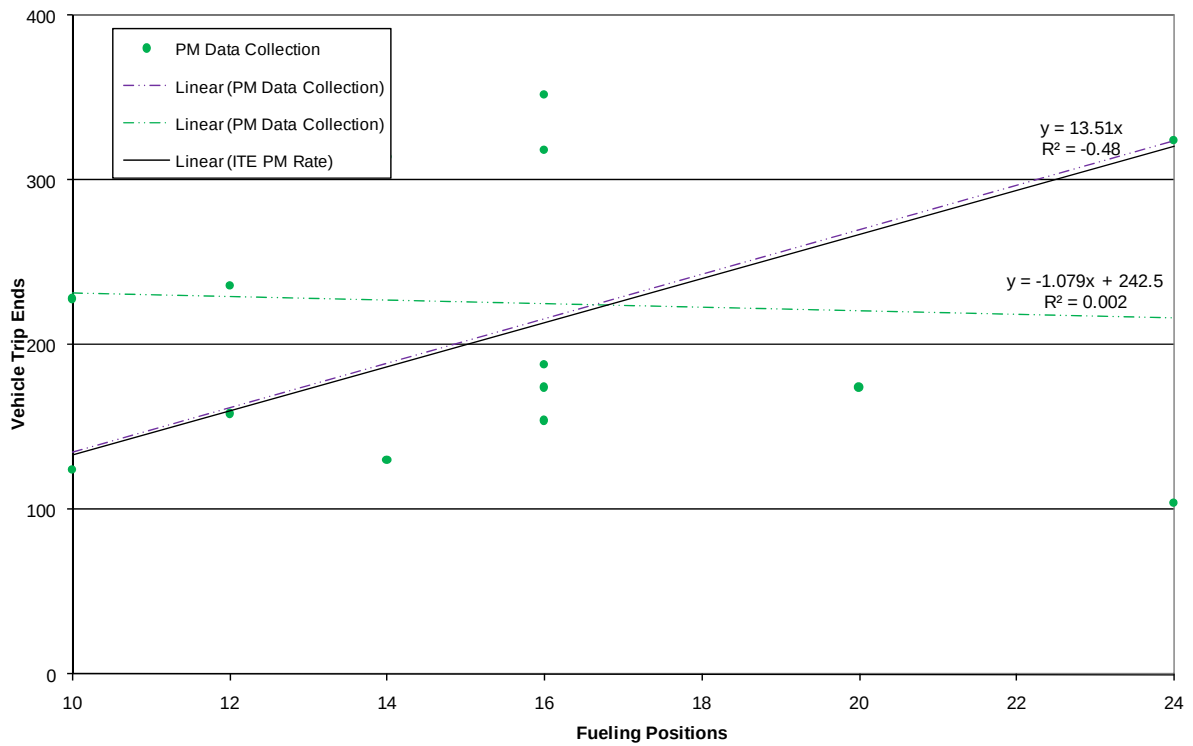
All Sites - Non-Fast Food (AM)



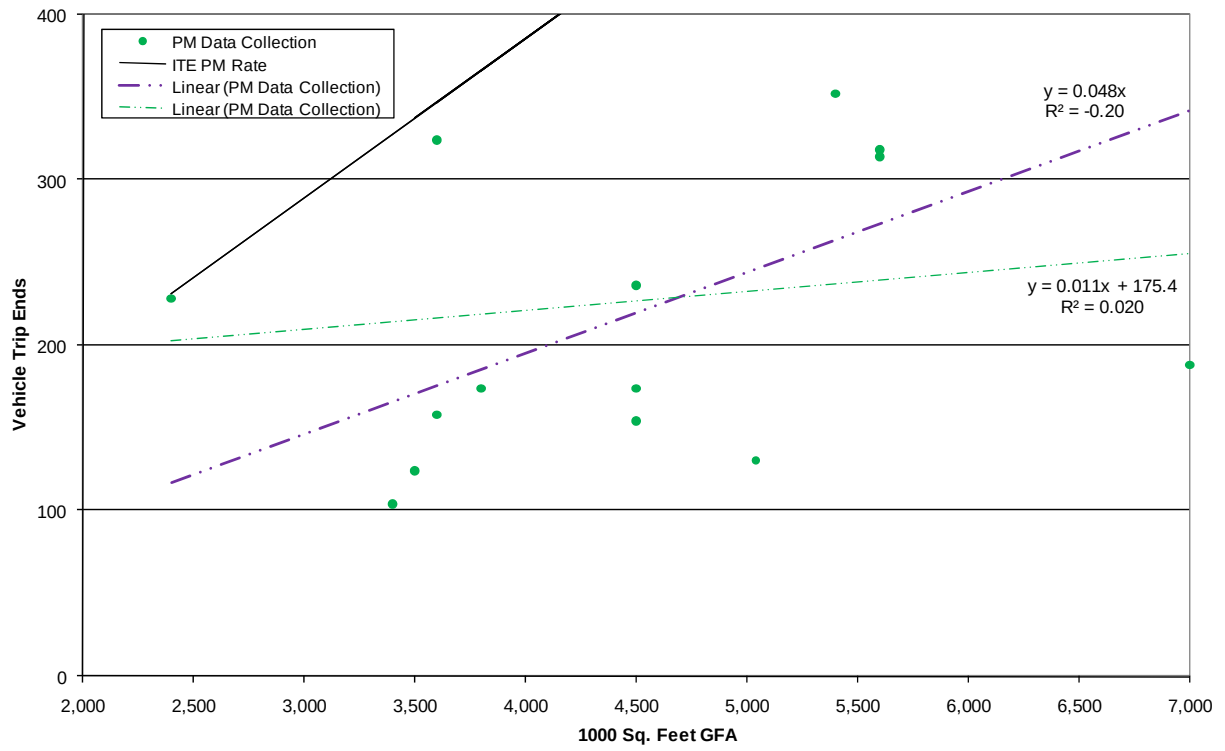
All Sites - Non-Fast Food (AM) By 1,000 Sq Ft GFA



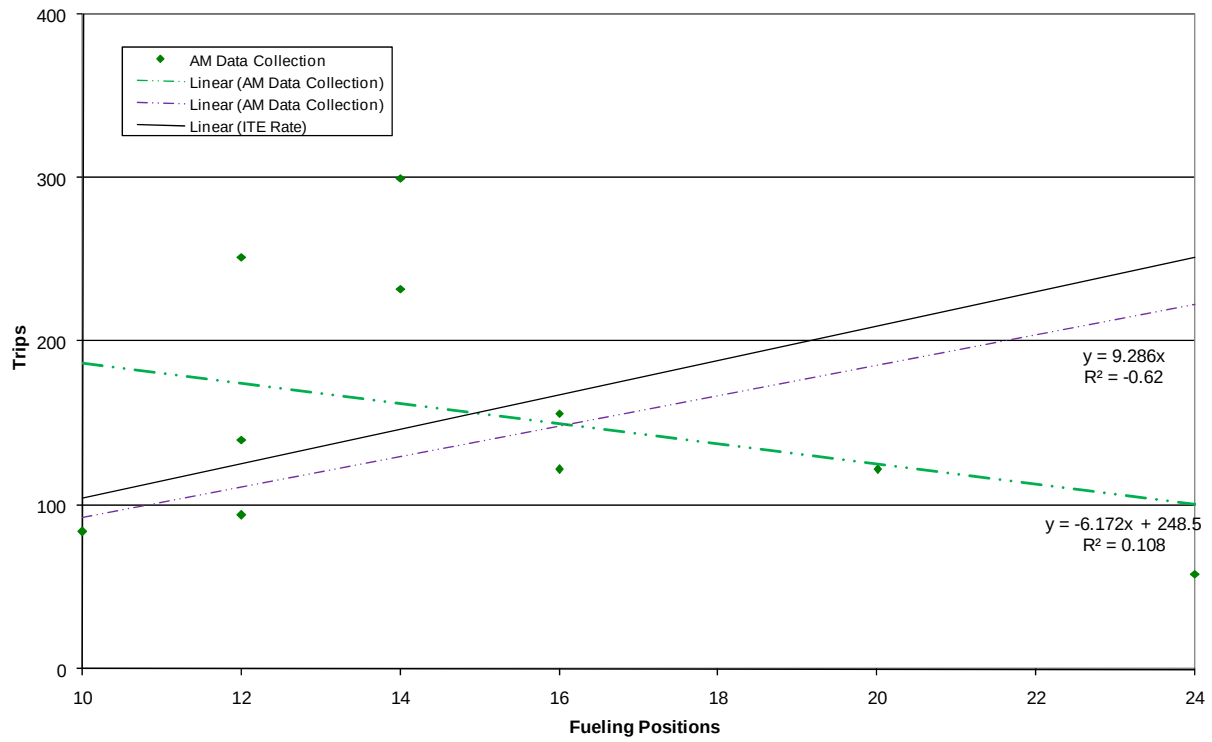
All Sites - Non-Fast Food (PM)



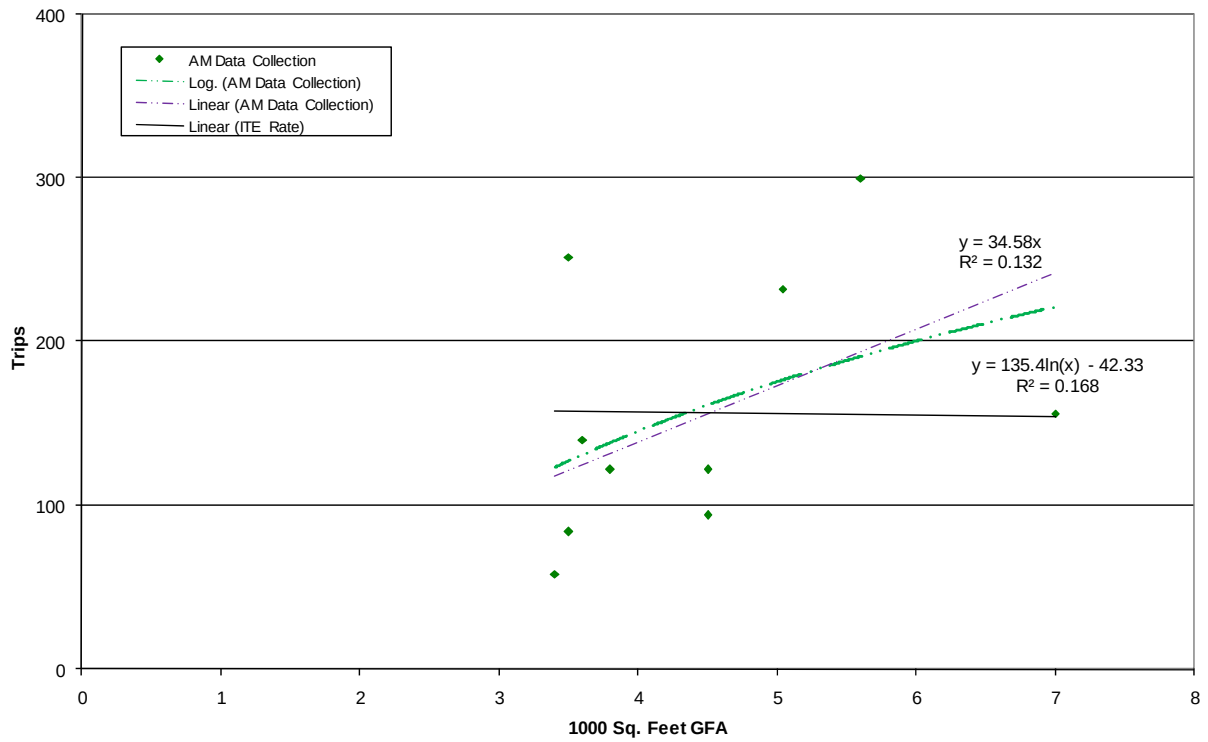
All Sites - Non-Fast Food (PM) by 1,000 Sq Ft GFA



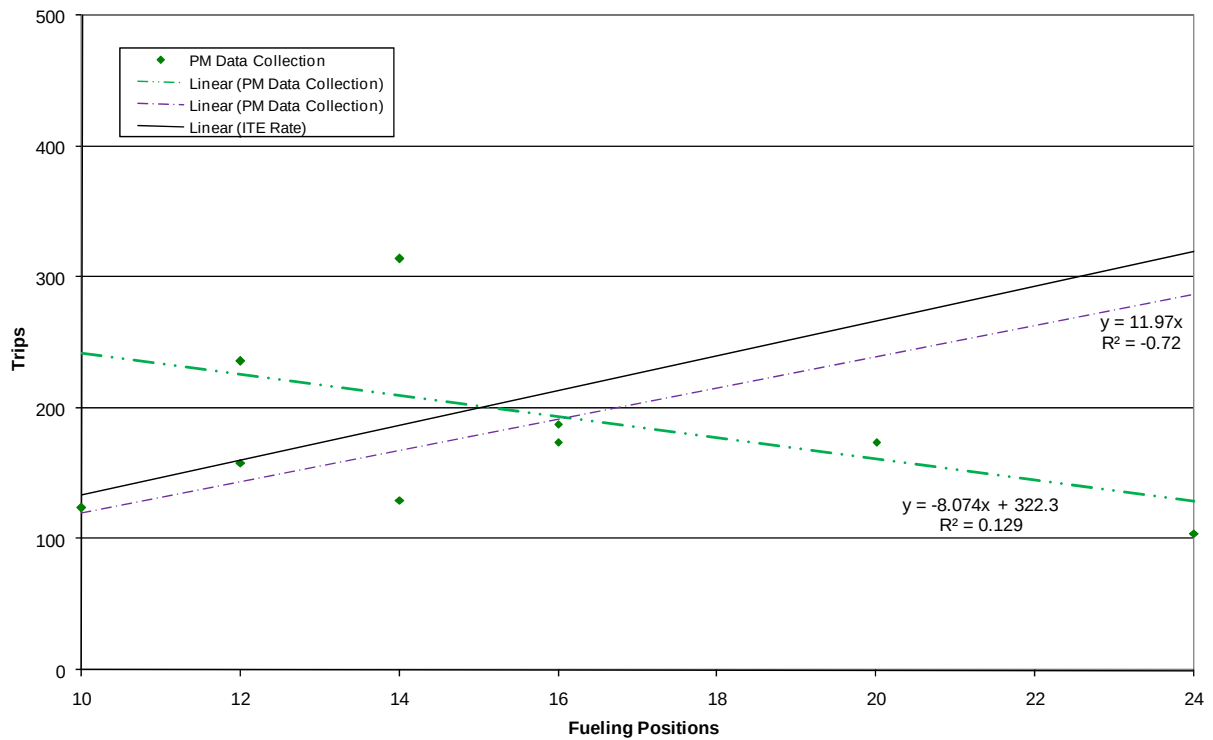
Non-Fast Food Sites ADT < 60,000 (AM)



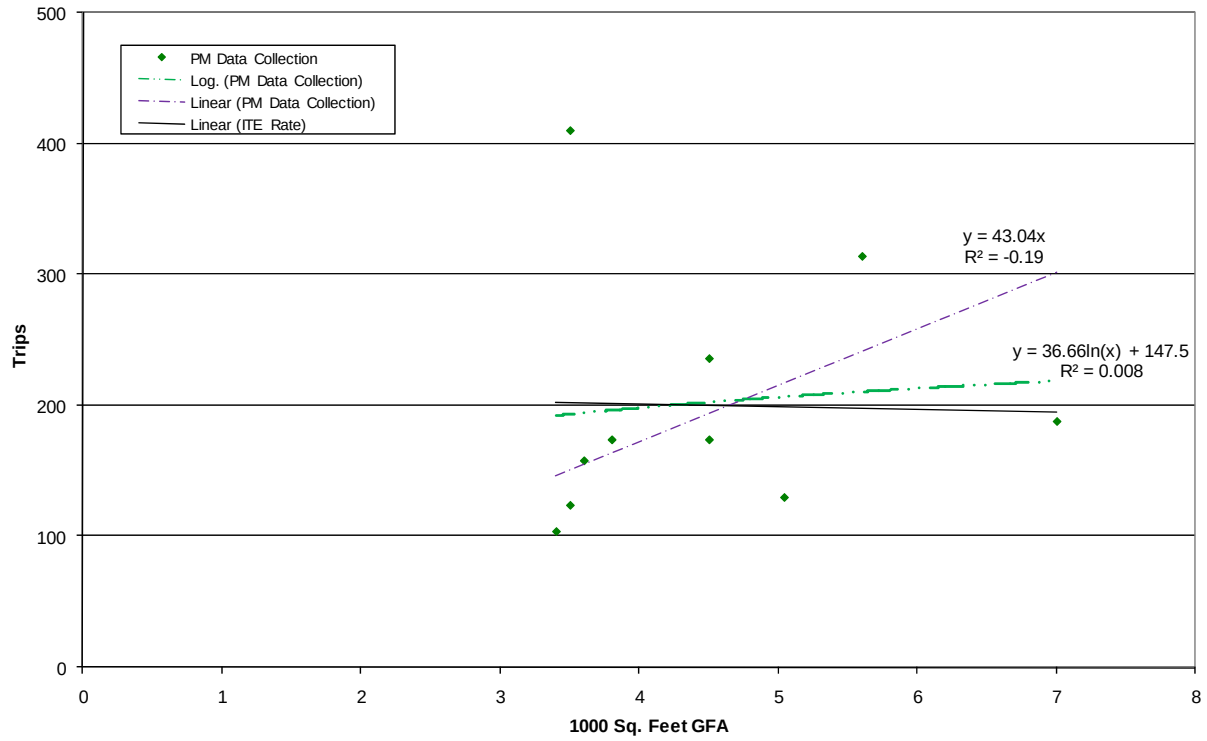
Non-Fast Food Sites ADT < 60,000 (AM)



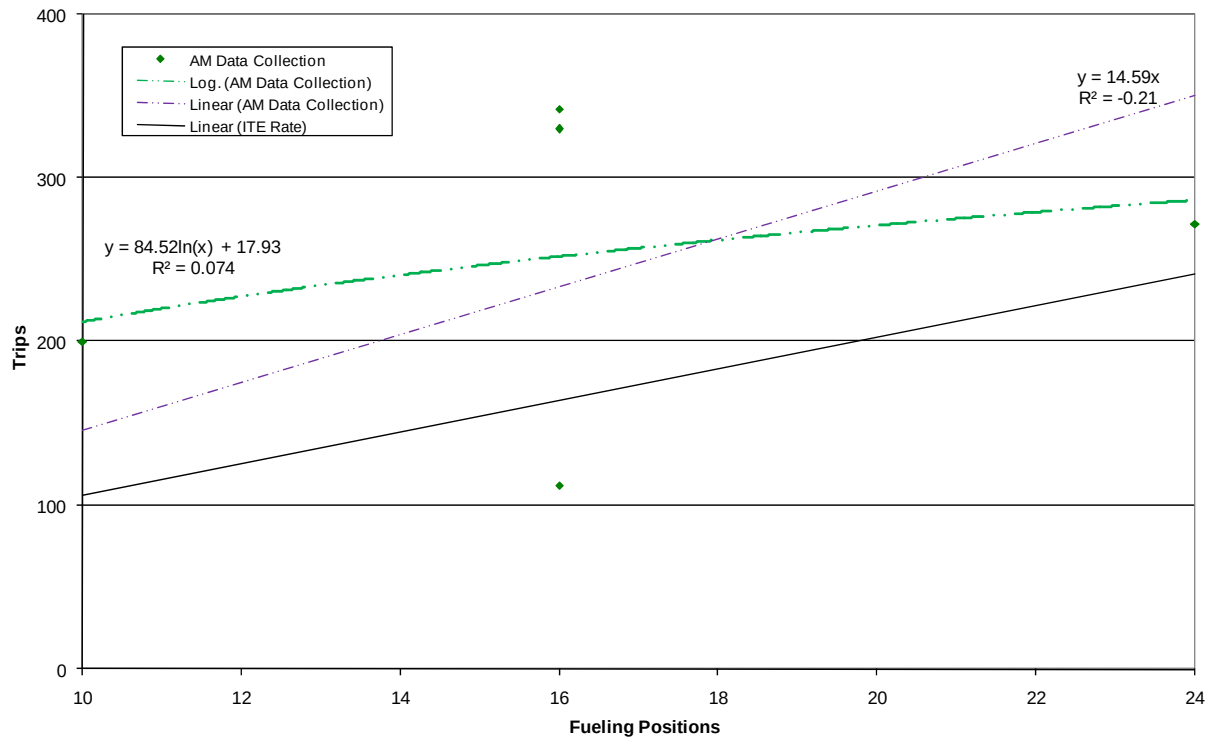
Non-Fast Food Sites < 60,000 ADT (PM)



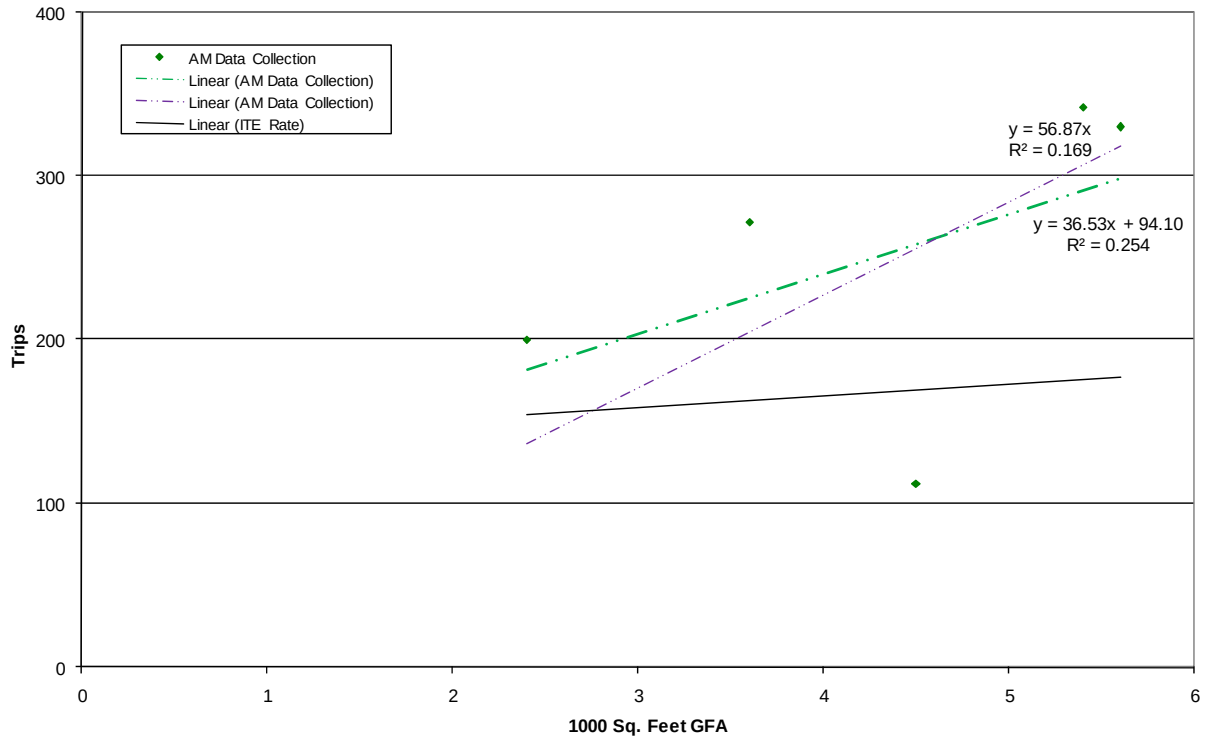
Non-Fast Food Sites < 60,000 ADT (PM)



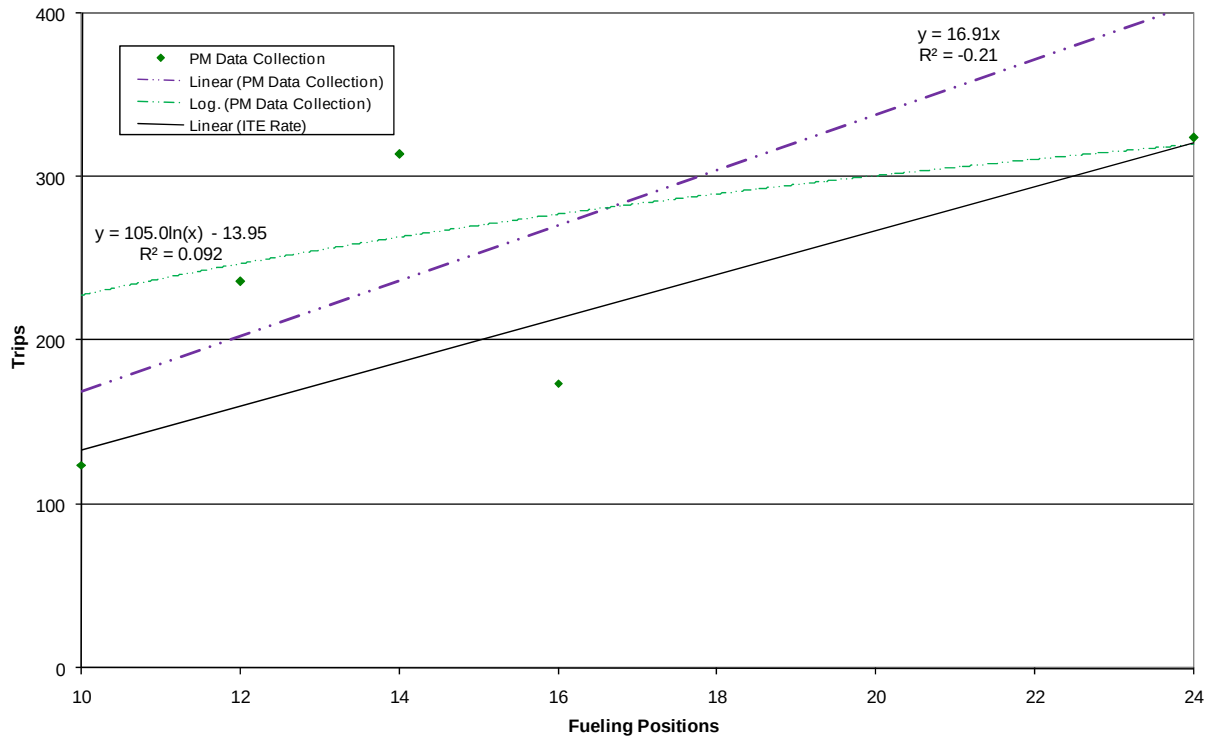
Non-Fast Food Sites > 60,000 ADT (AM)



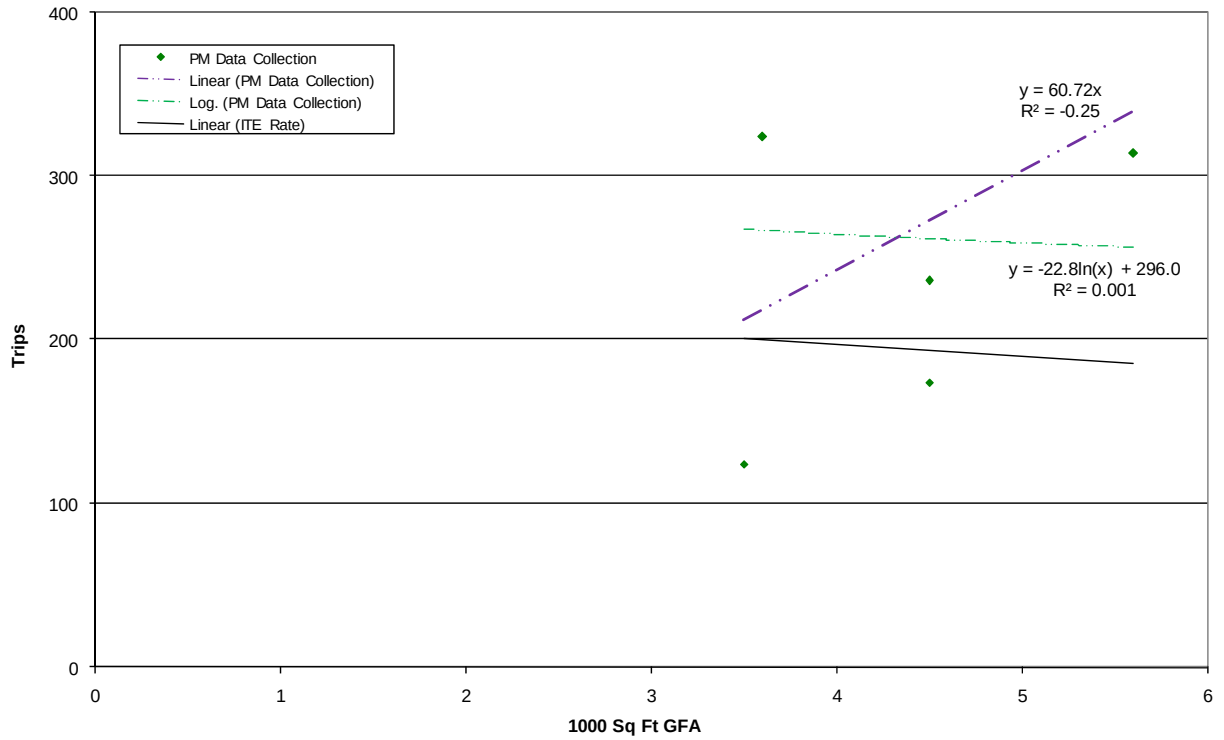
Non-Fast Food Sites > 60,000 ADT (AM)



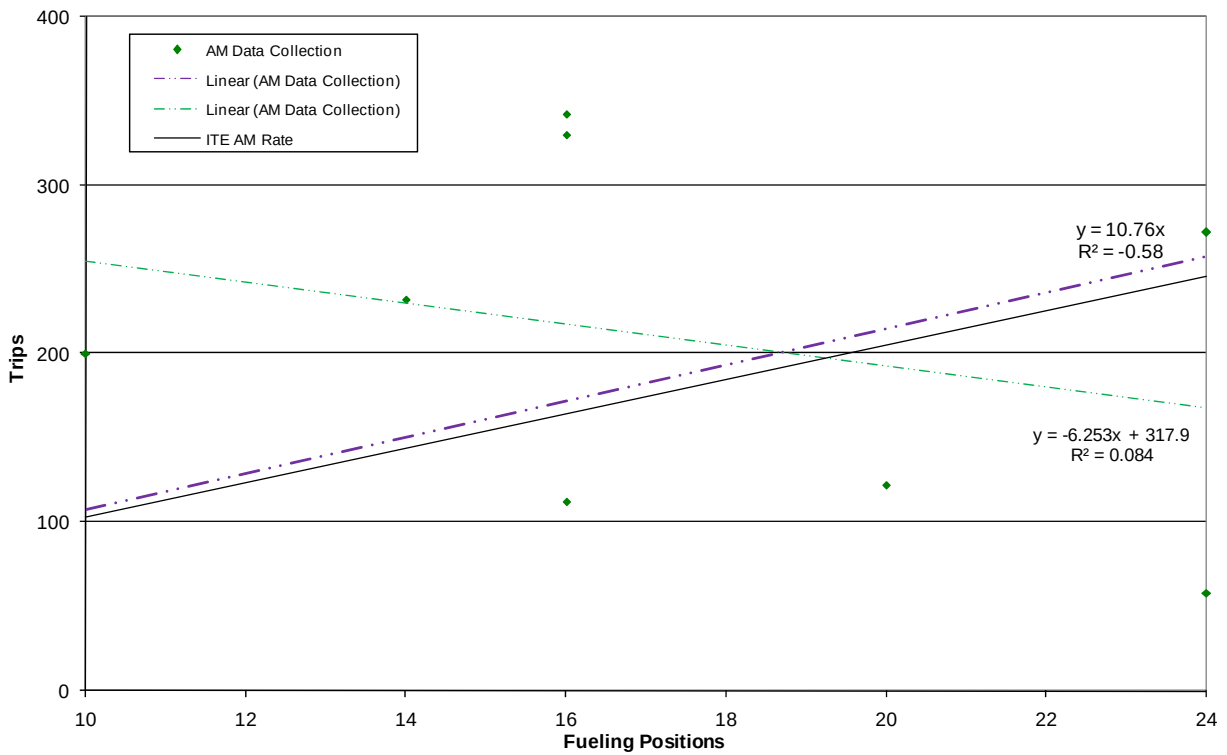
Non-Fast Food Sites > 60,000 ADT (PM)



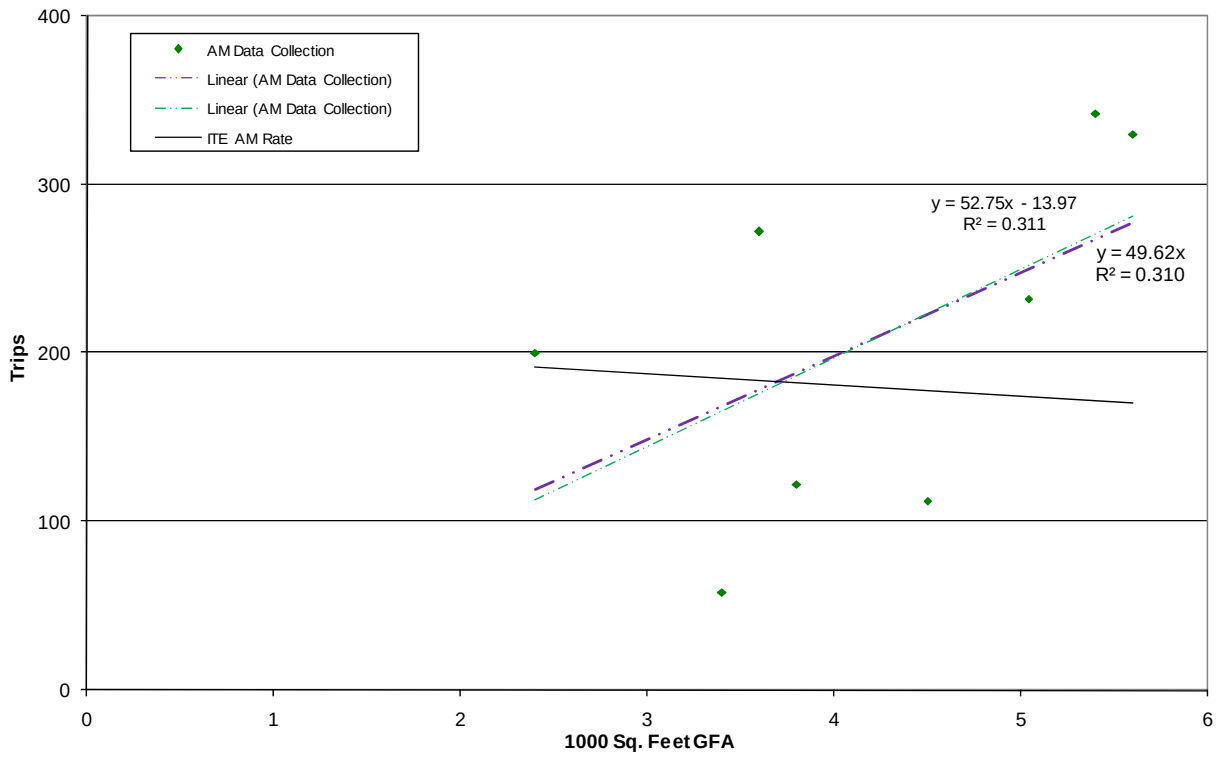
Non-Fast Food Sites > 60,000 ADT (PM)



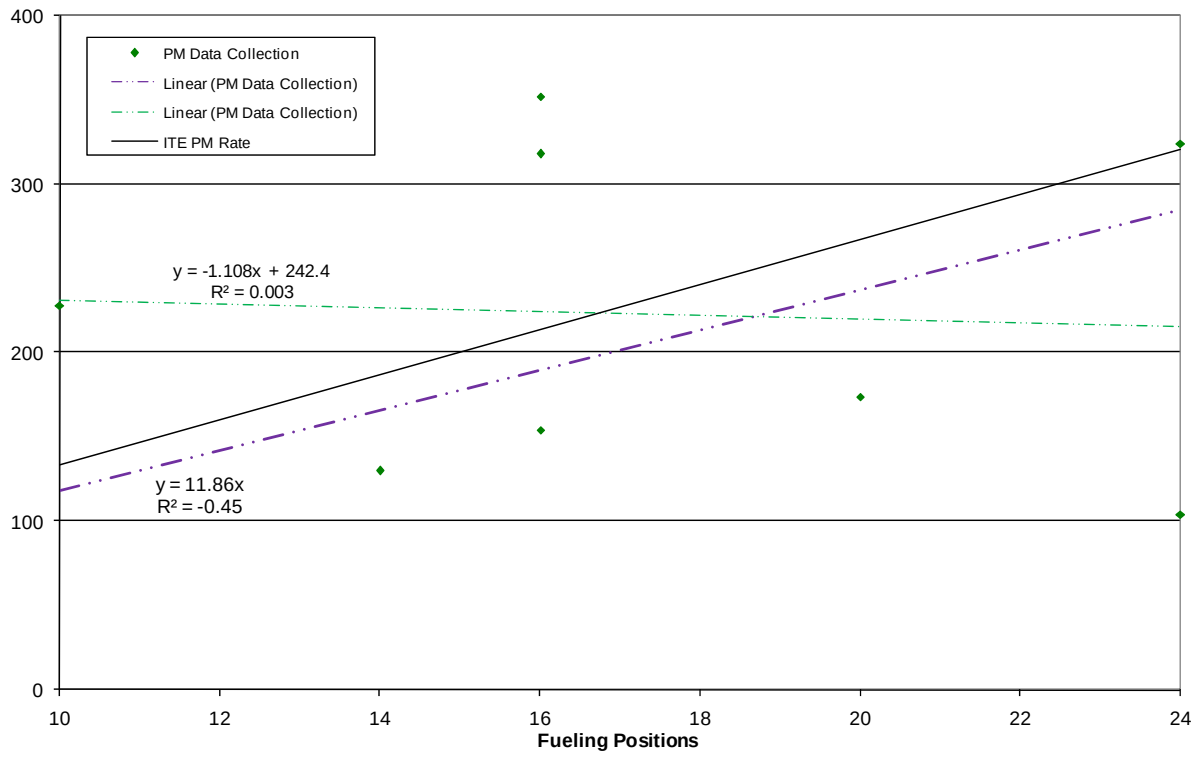
Non-Fast Food Sites - Non-Interstate Locations (AM)



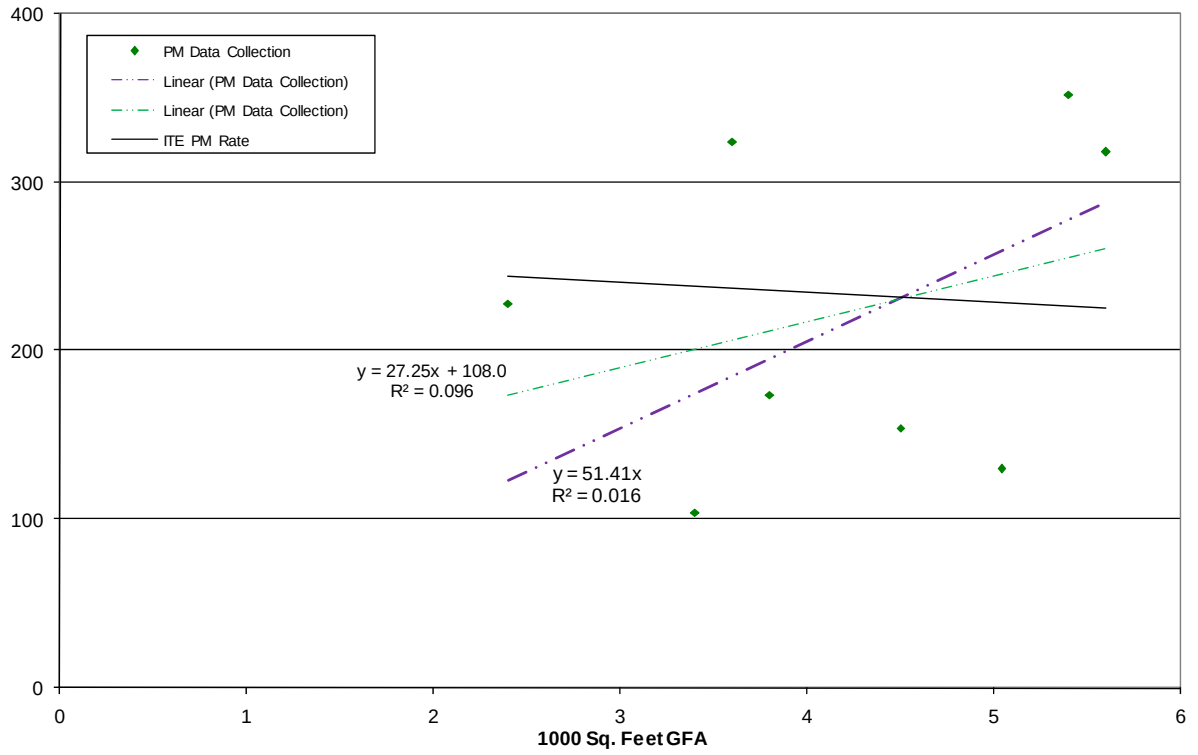
Non-Fast Food Sites - Non-Interstate Locations (AM)



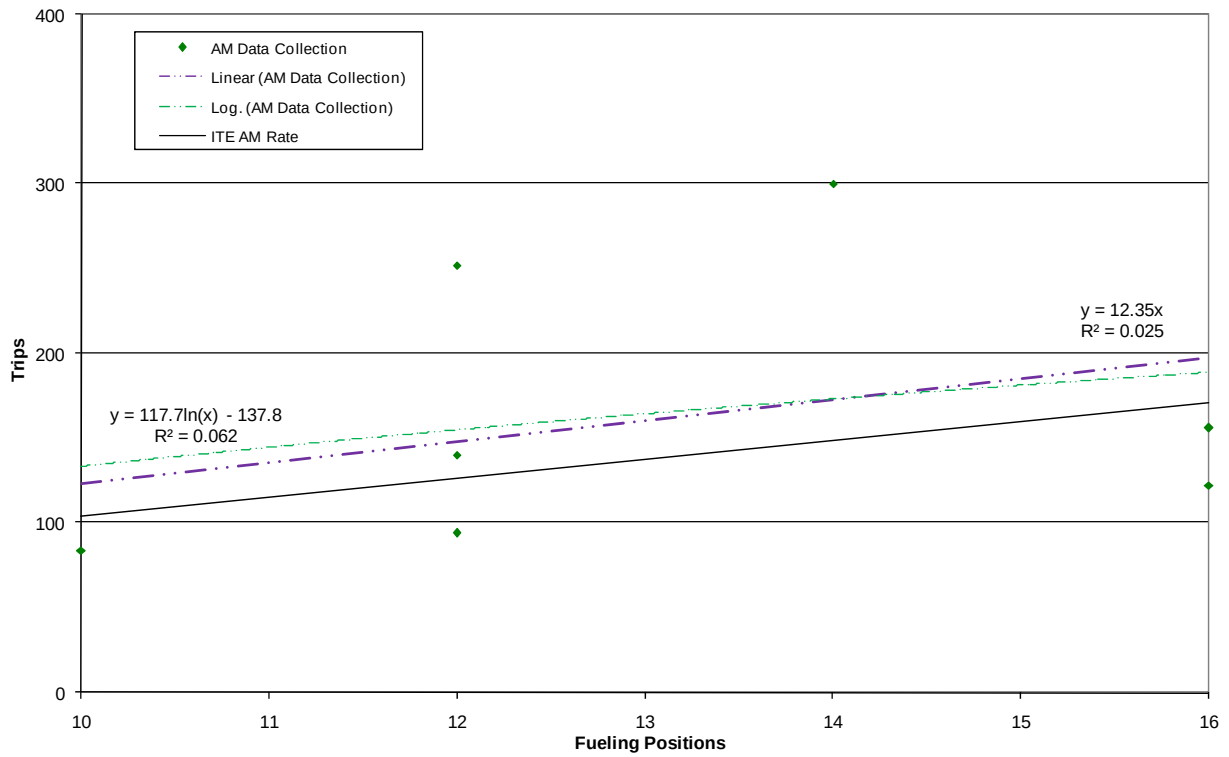
Non-Fast Food Sites - Non-Interstate Locations (PM)



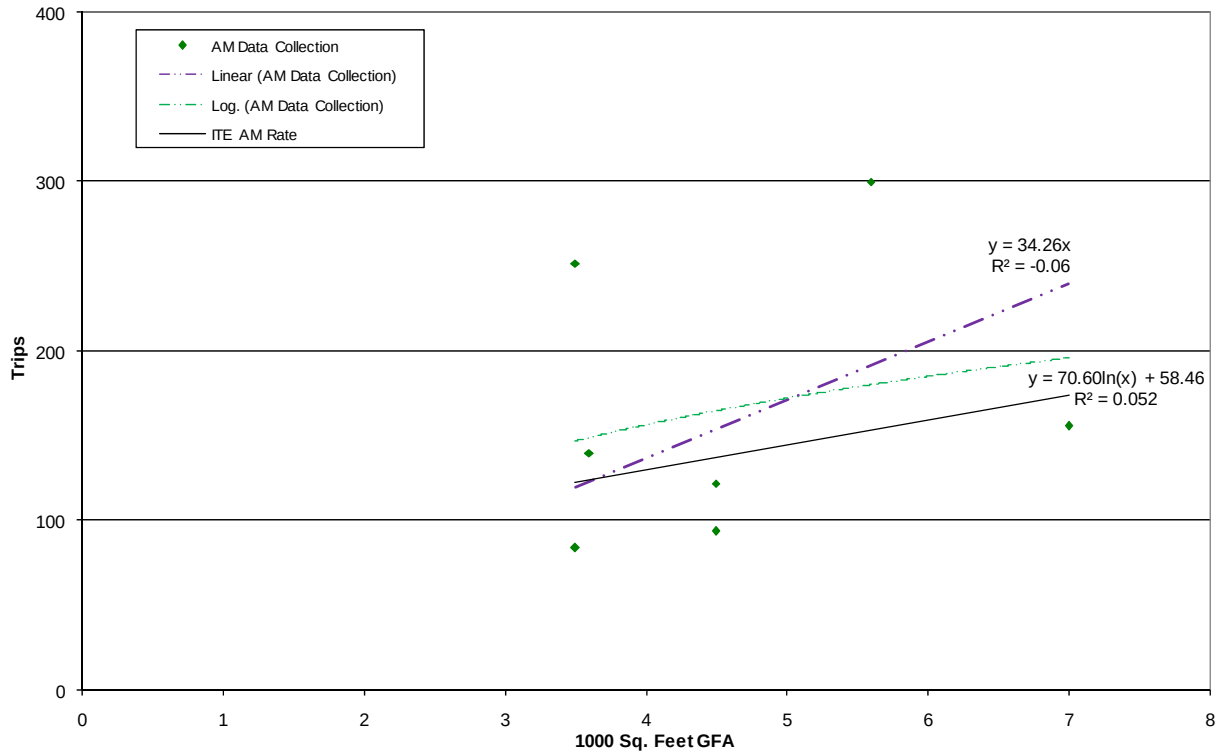
Non-Fast Food Sites - Non-Interstate Locations (PM)



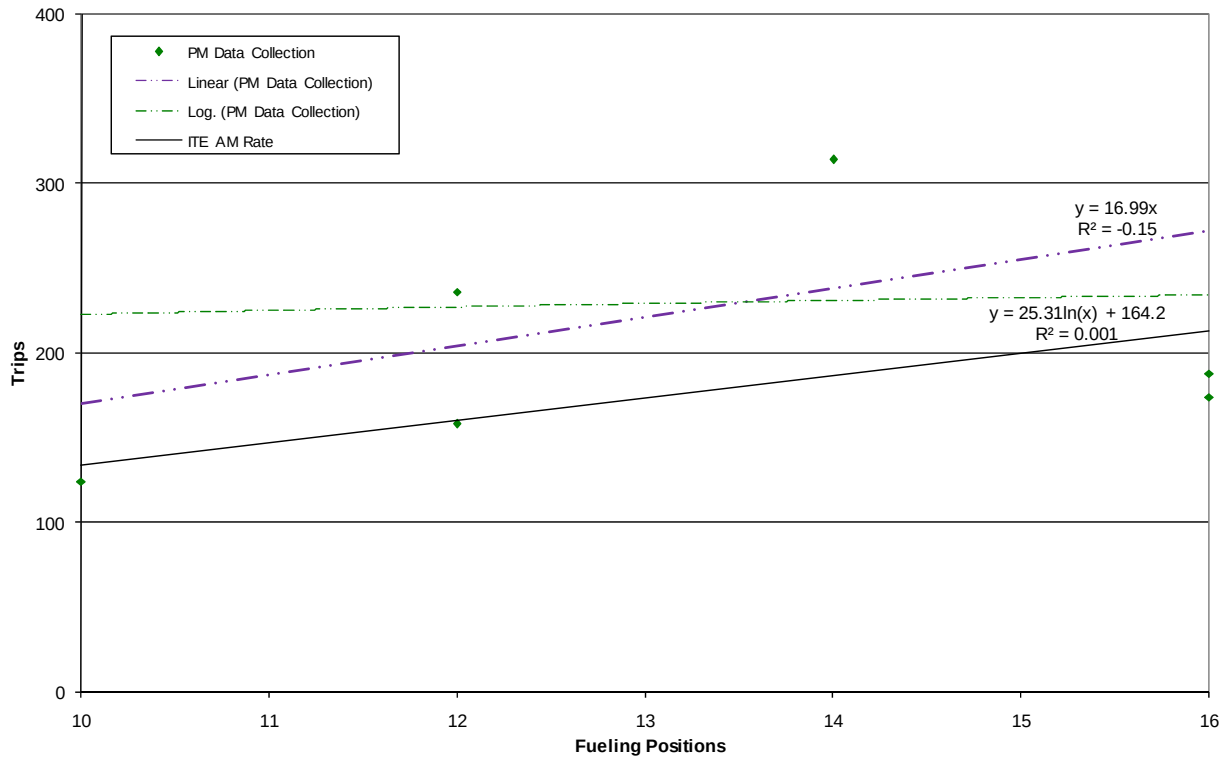
Non-Fast Food Sites - Interstate Locations (AM)



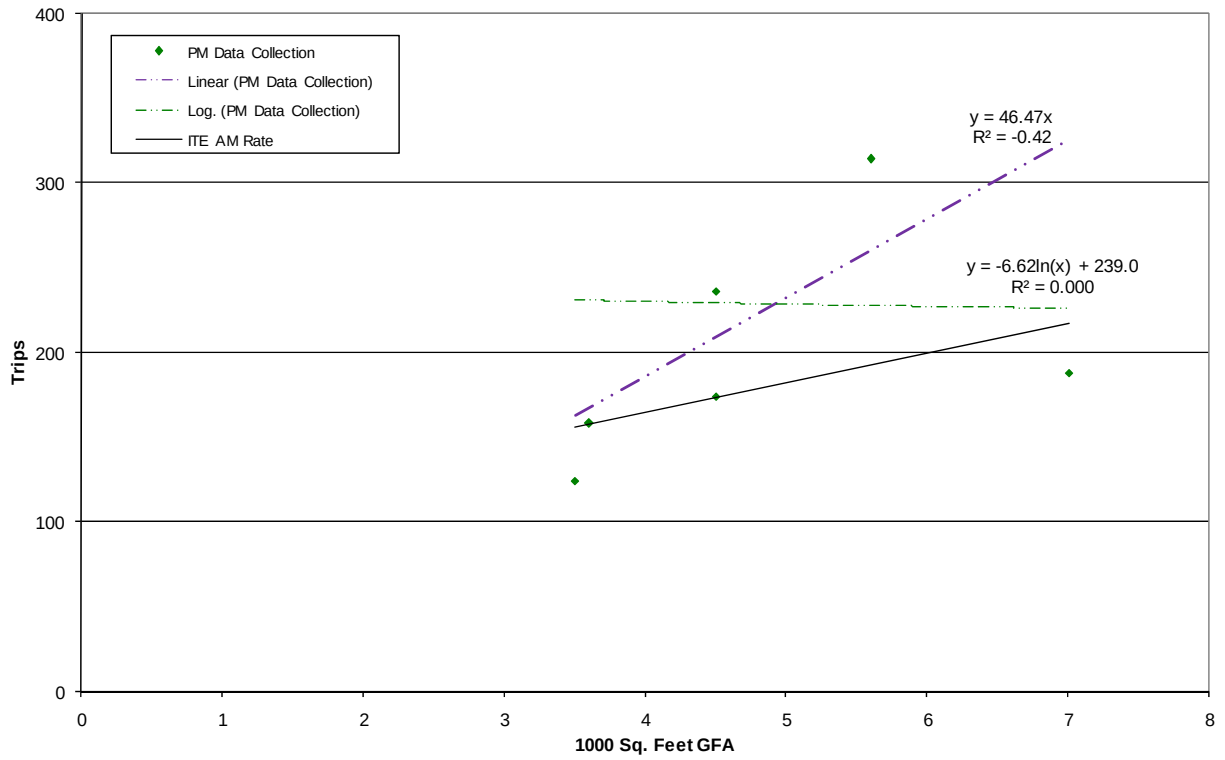
Non-Fast Food Sites - Interstate Locations (AM)



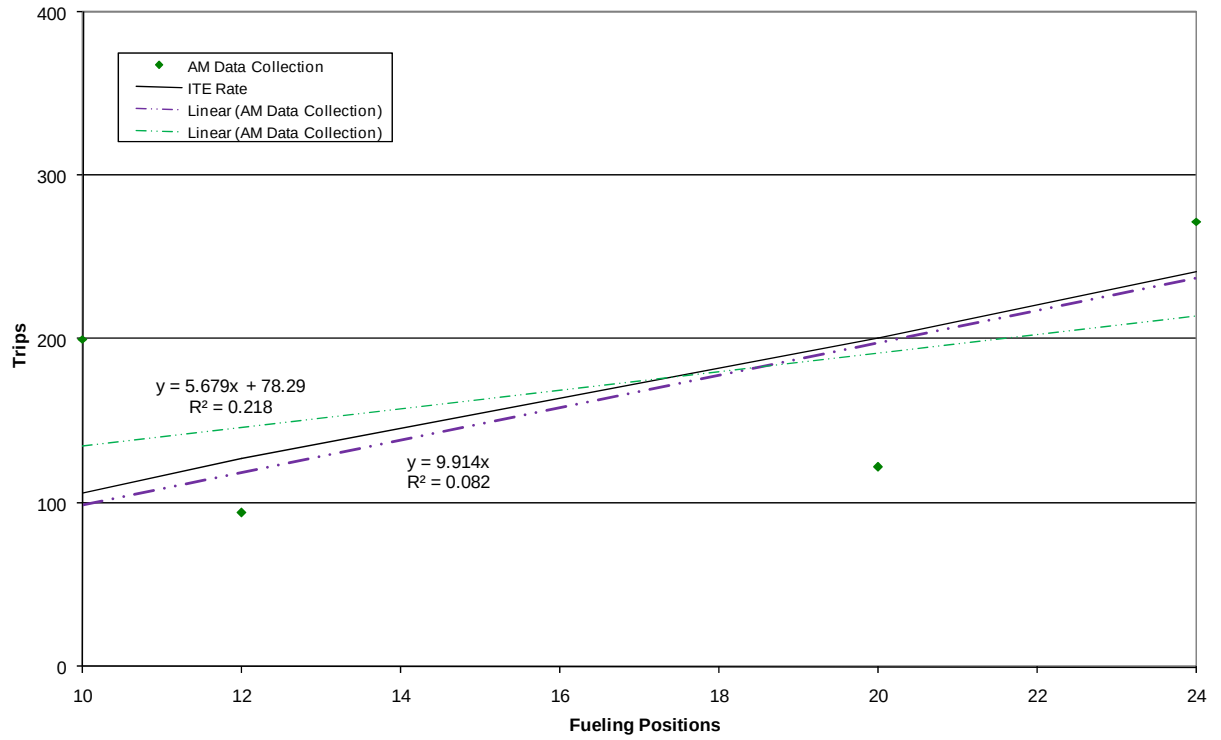
Non-Fast Food Sites - Interstate Locations (PM)



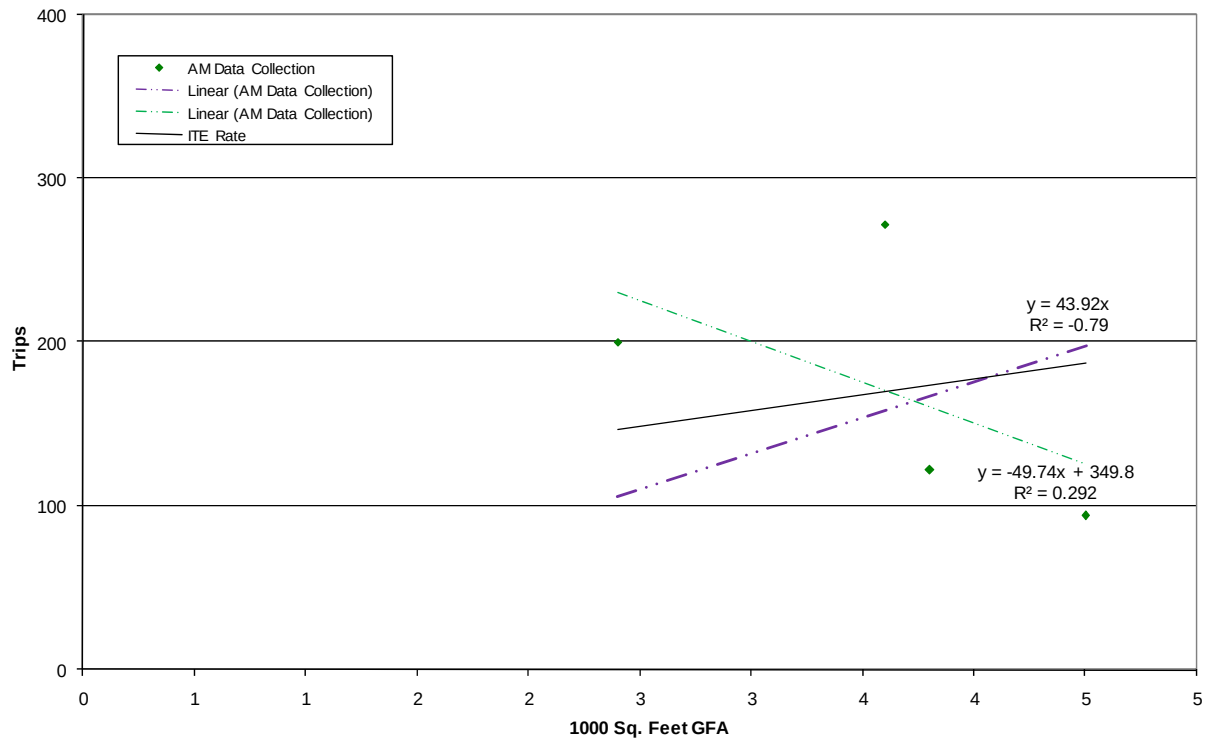
Non-Fast Food Sites - Interstate Locations (PM)



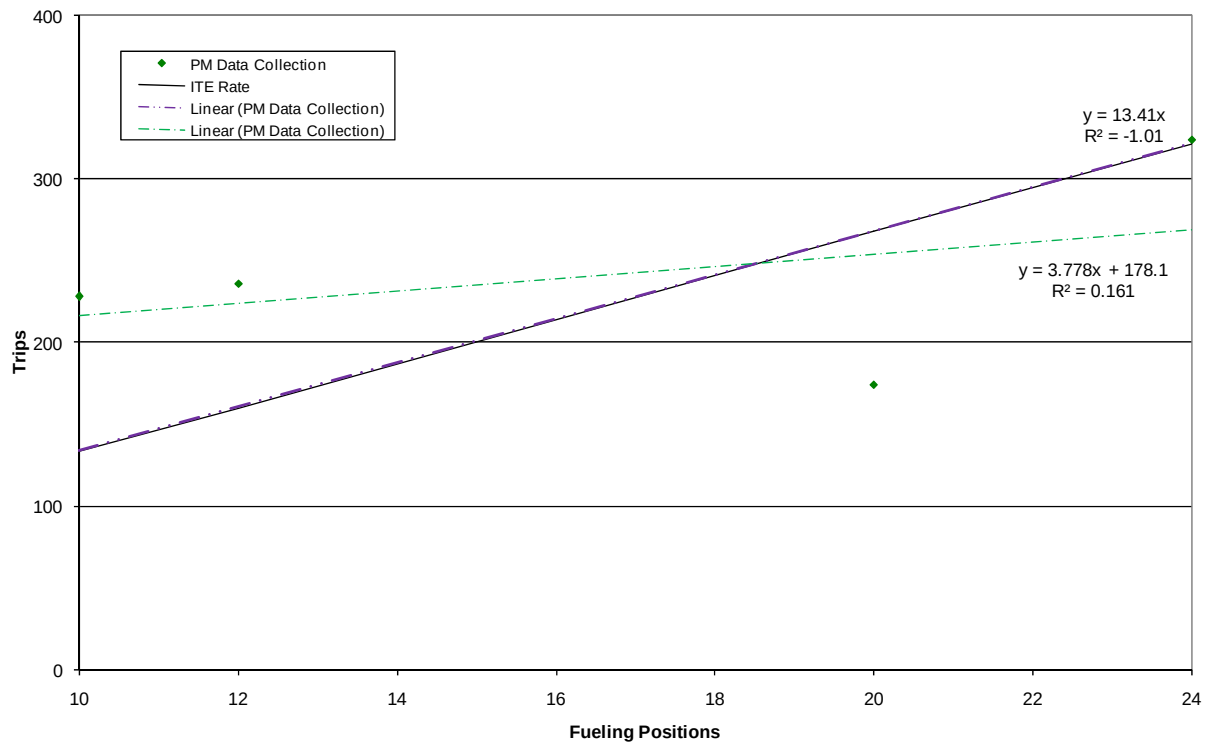
Non-Fast Food Sites Western Locations (AM)



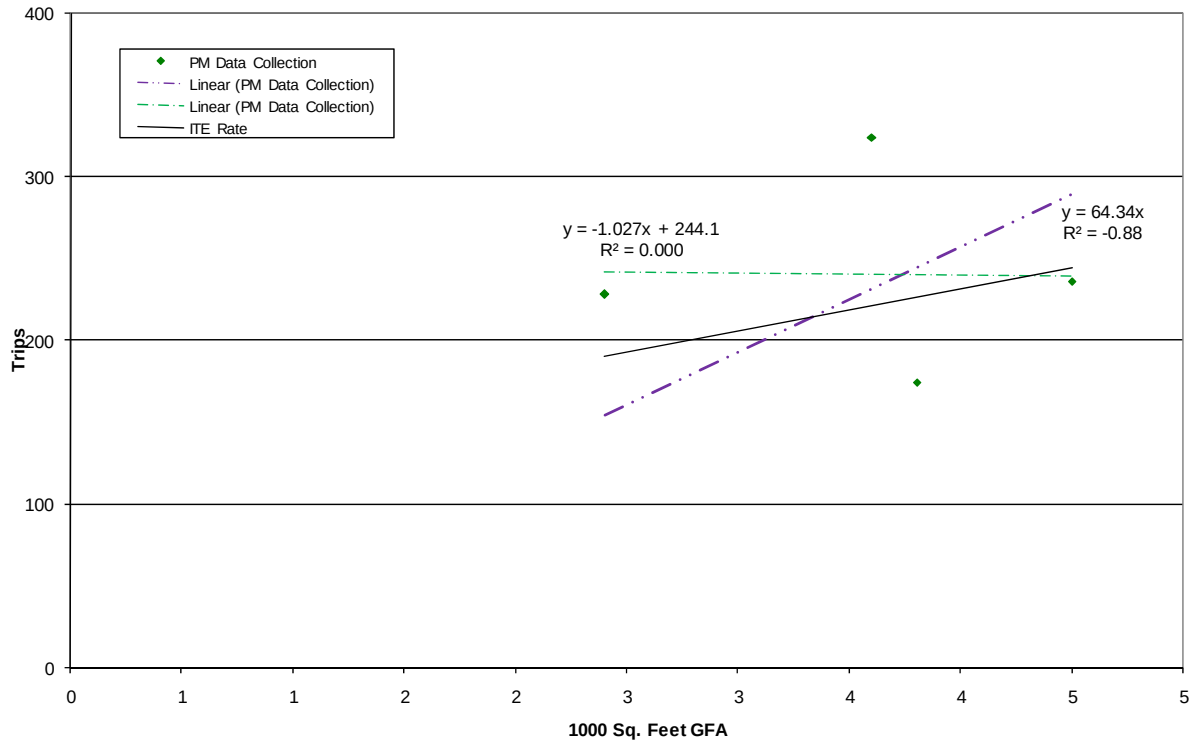
Non-Fast Food Sites Western Locations (AM)



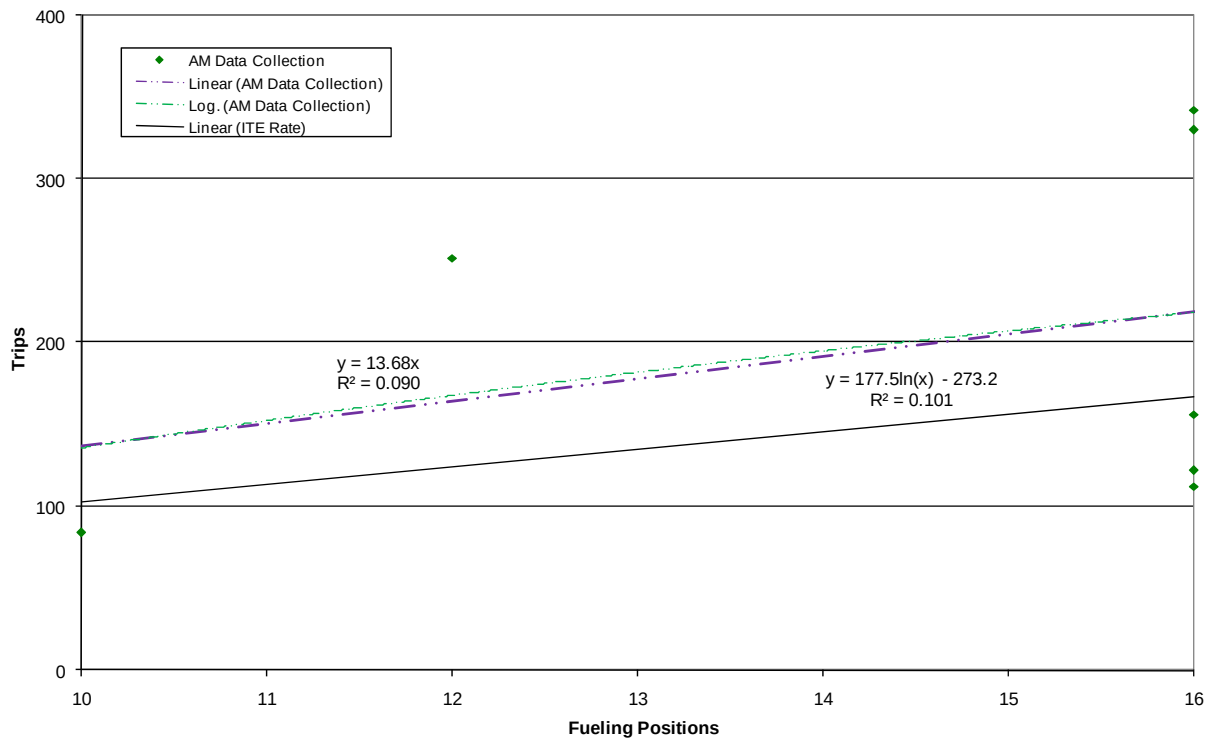
Non-Fast Food Sites Western Locations (PM)



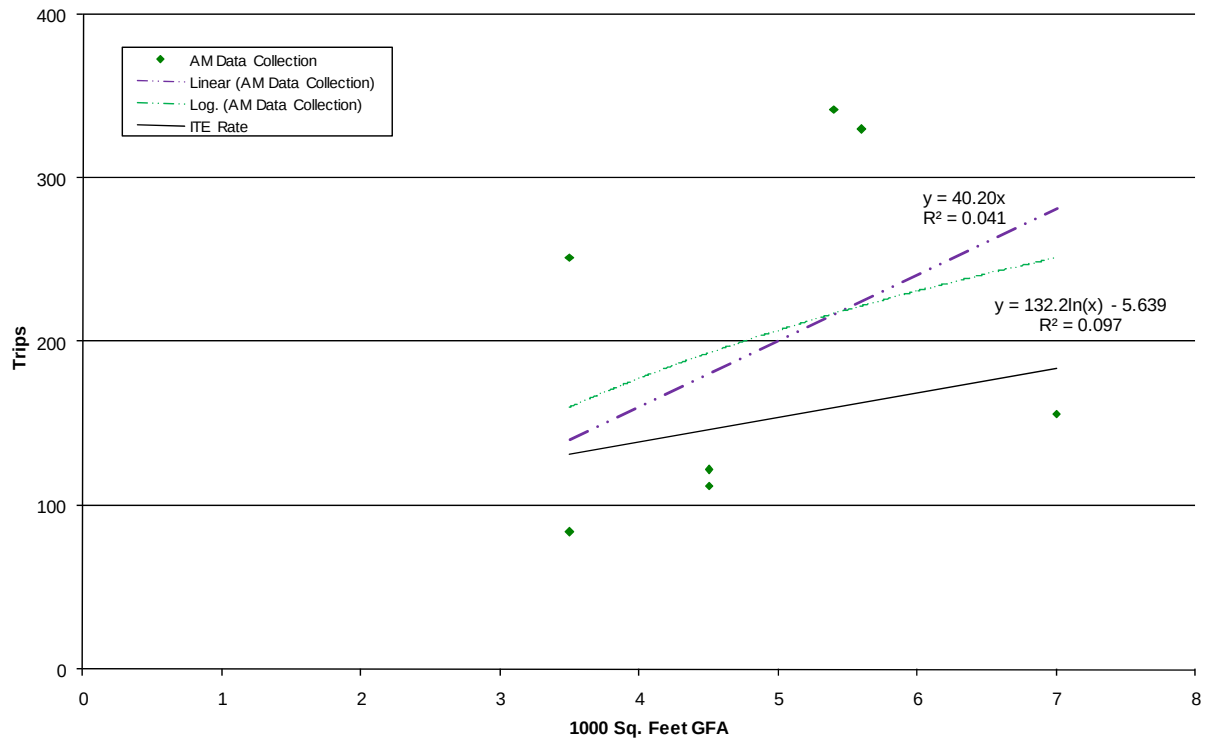
Non-Fast Food Sites Western Locations (PM)



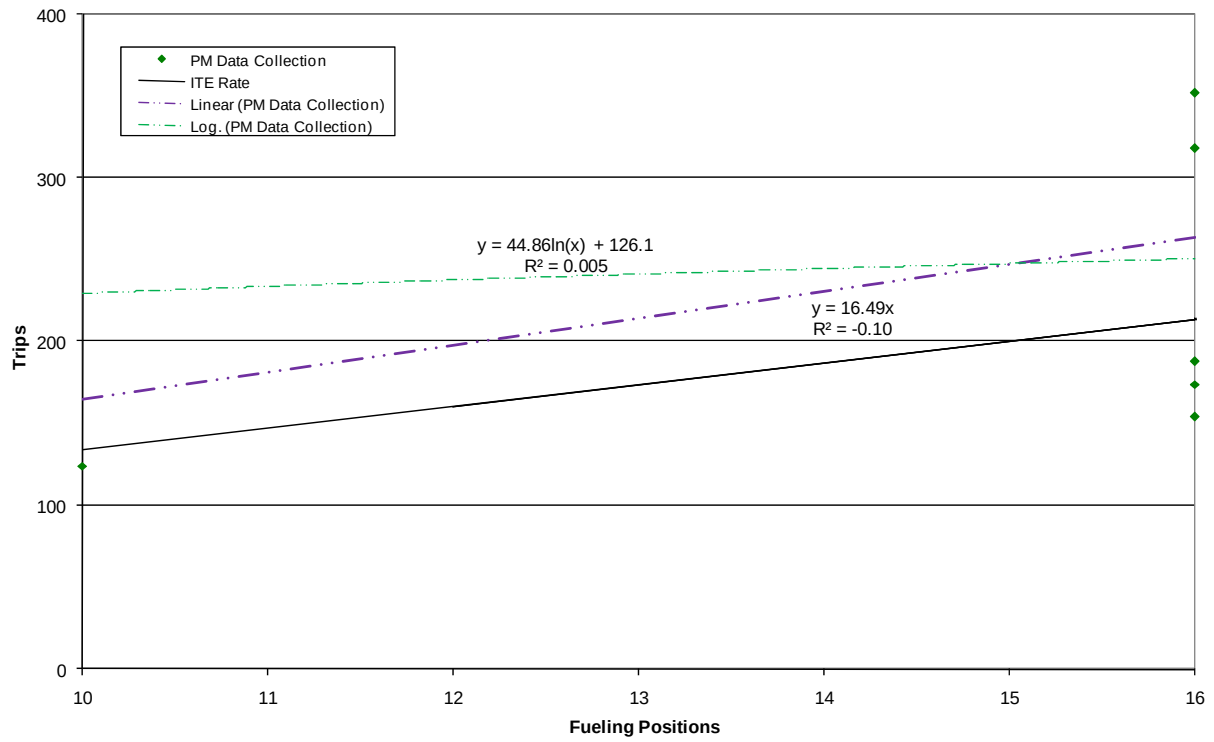
Non-Fast Food Sites Central Locations (AM)



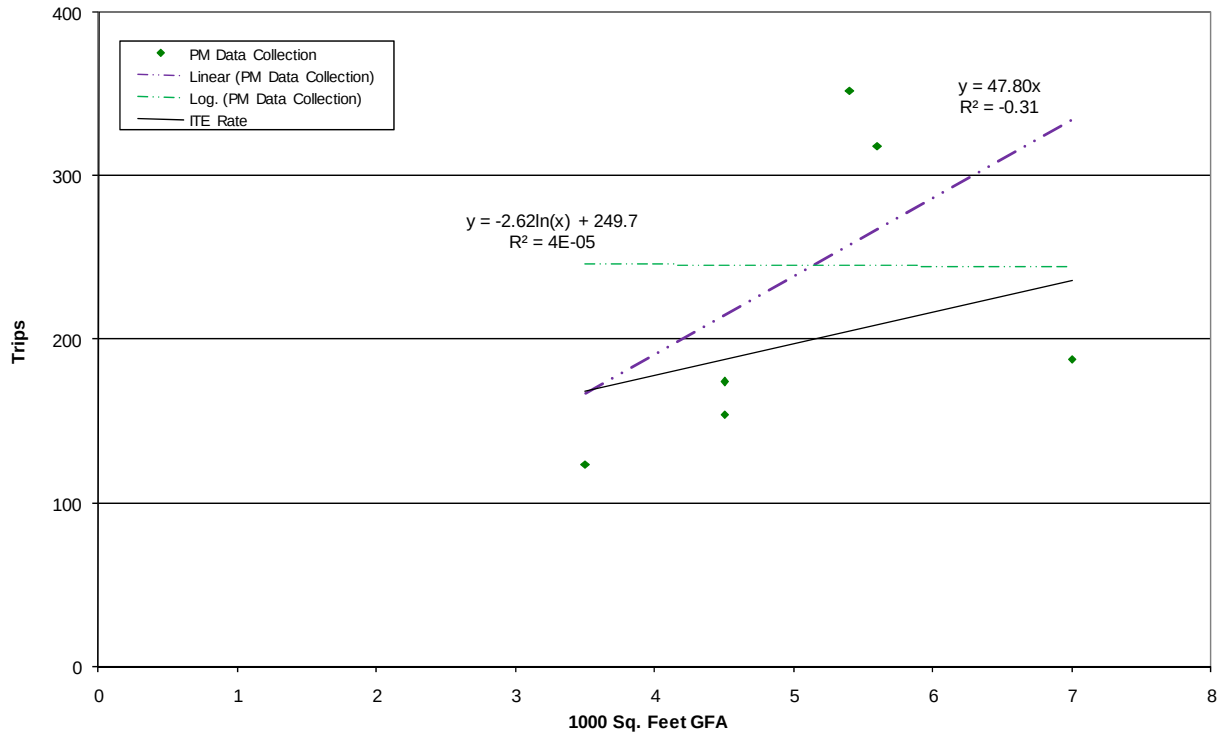
Non-Fast Food Sites Central Locations (AM)



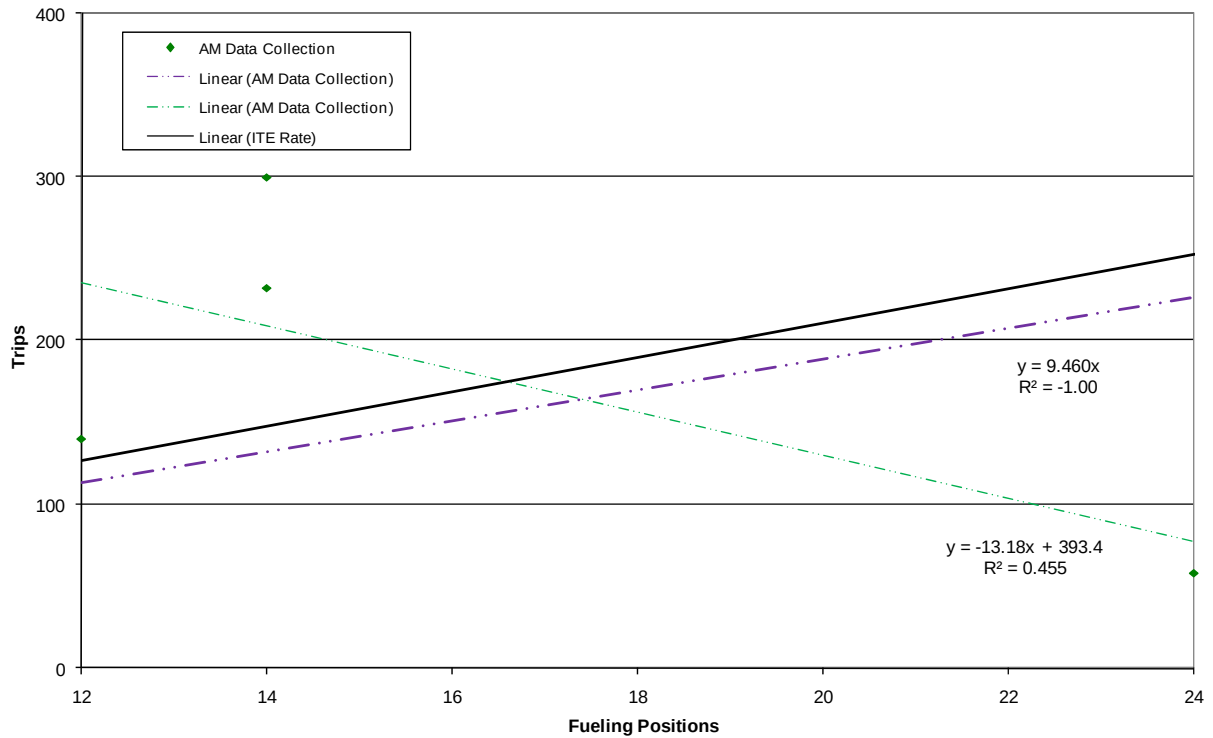
Non-Fast Food Sites Central Locations (PM)



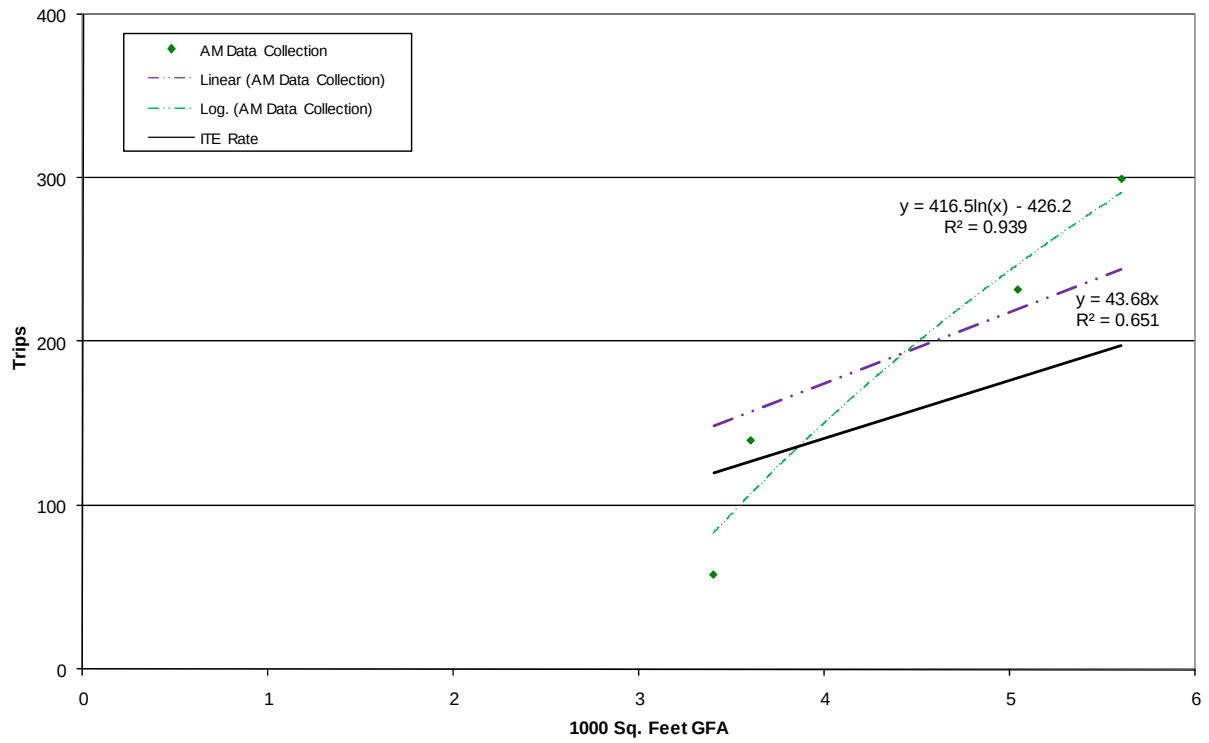
Non-Fast Food Sites Central Locations (PM)



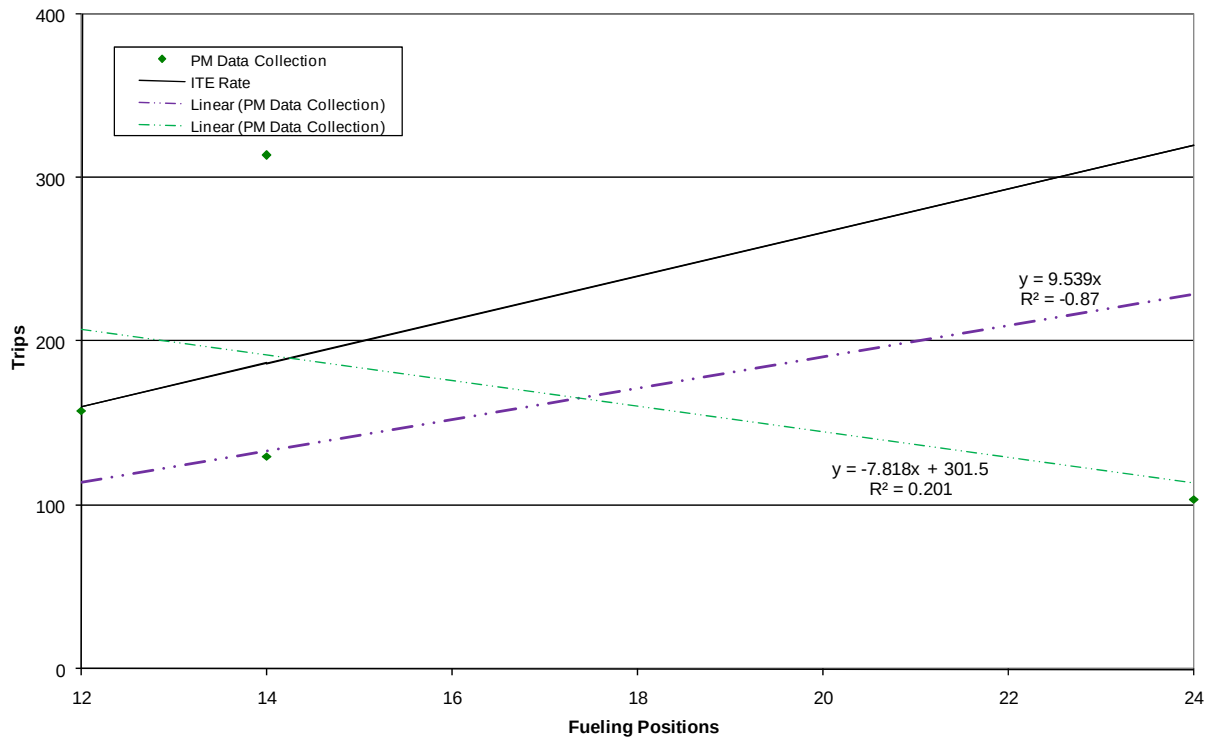
Non-Fast Food Sites Eastern Locations (AM)



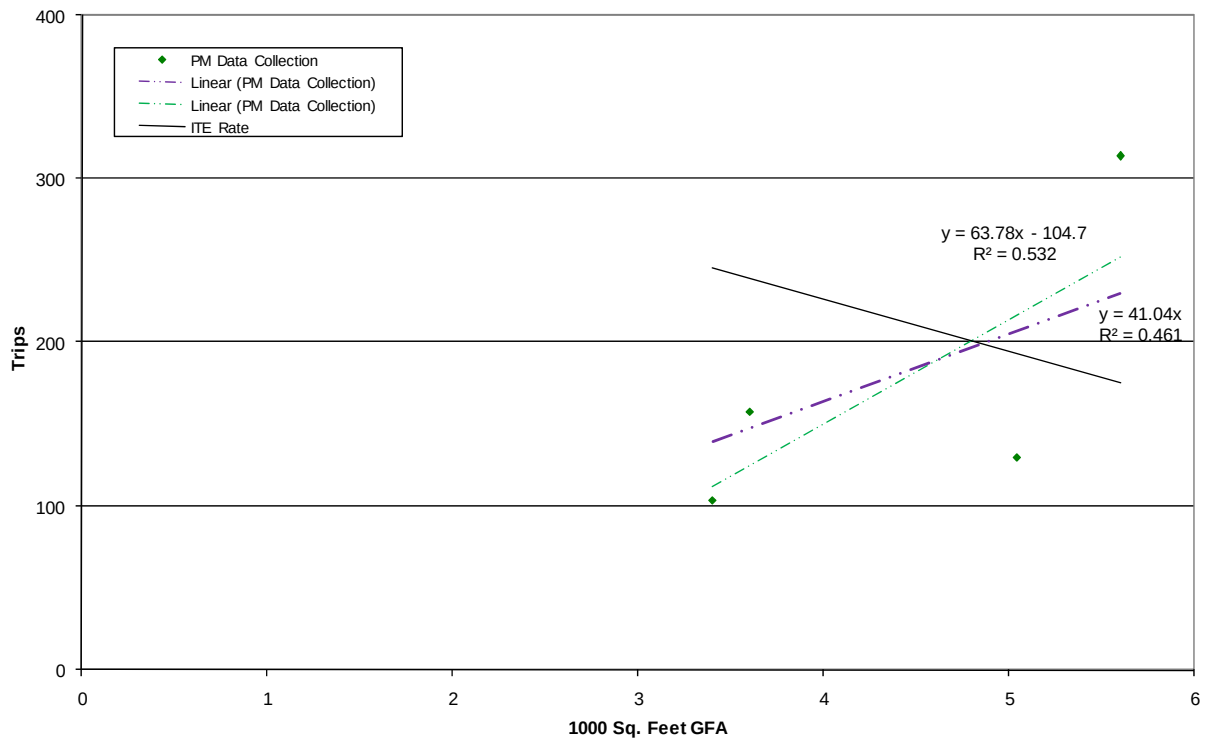
Non-Fast Food Sites Eastern Locations (AM)



Non-Fast Food Sites Eastern Locations (PM)



Non-Fast Food Sites Eastern Locations (PM)



APPENDIX F – AVERAGE RATES

Gasoline/Service Station with Convenience Market

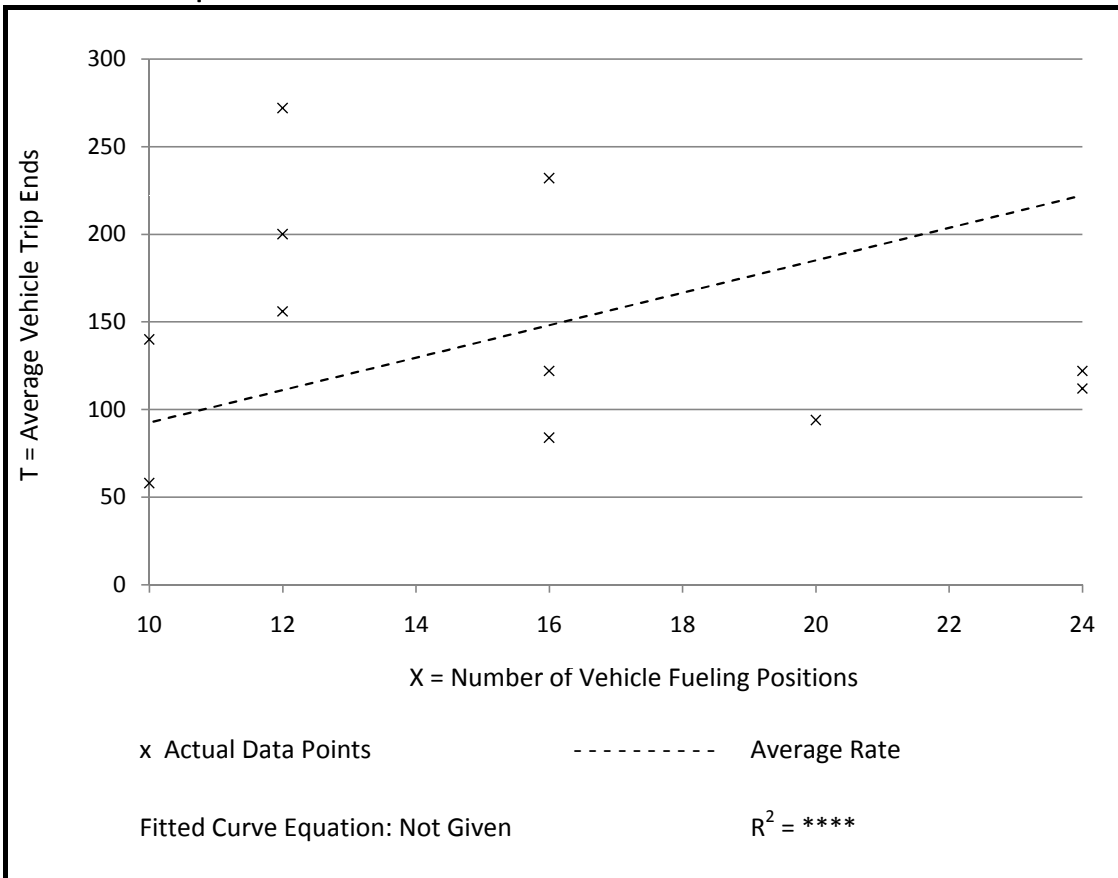
Average Vehicle Trip Ends vs: Vehicle Fueling Positions
On a: Weekday
A.M. Peak Hour of Generator

Number of Studies: 11
 Average Vehicle Fueling Positions: 16
 Average Truck Fueling Positions: 1
 Directional Distribution: 50 % entering, 50% exiting

Trip Generation per Vehicle Fueling Position

	Average Rate	Range of Rates	Standard Deviation
All Vehicles	9.26	4.67 - 22.67	6.23
Heavy Trucks	1.14	0.00 - 8.00	9.71

Data Plot and Equation



Gasoline/Service Station with Convenience Market

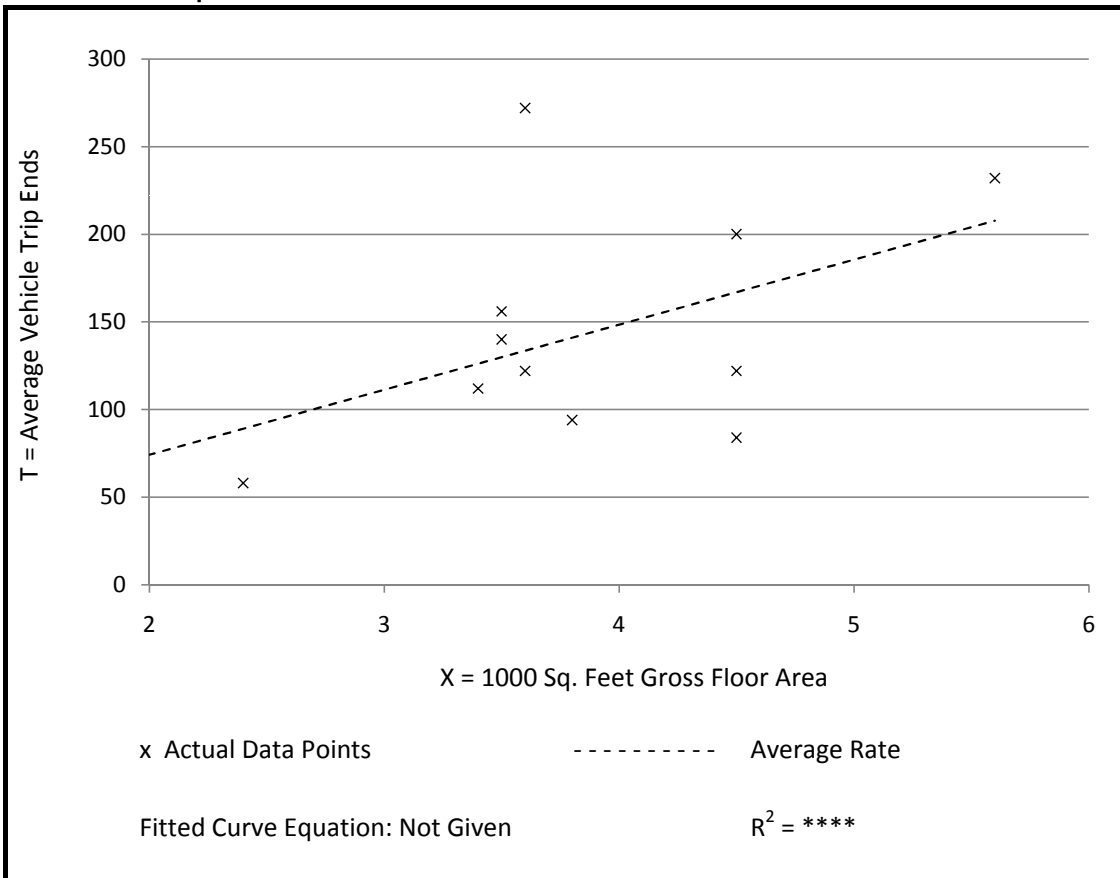
Average Vehicle Trip Ends vs: 1000 Sq. Feet Gross Floor Area
On a: Weekday
A.M. Peak Hour of Generator

Number of Studies: 11
Average 1000 Sq. Feet GFA: 4
Directional Distribution: 50 % entering, 50% exiting

Trip Generation per 1000 Sq. Feet Gross Floor Area

	Average Rate	Range of Rates	Standard Deviation
All Vehicles	37.11	18.67 - 75.56	15.50
Heavy Trucks	0.19	0.00 - 2.29	38.71

Data Plot and Equation



Gasoline/Service Station with Convenience Market & Fast Food Restaurant

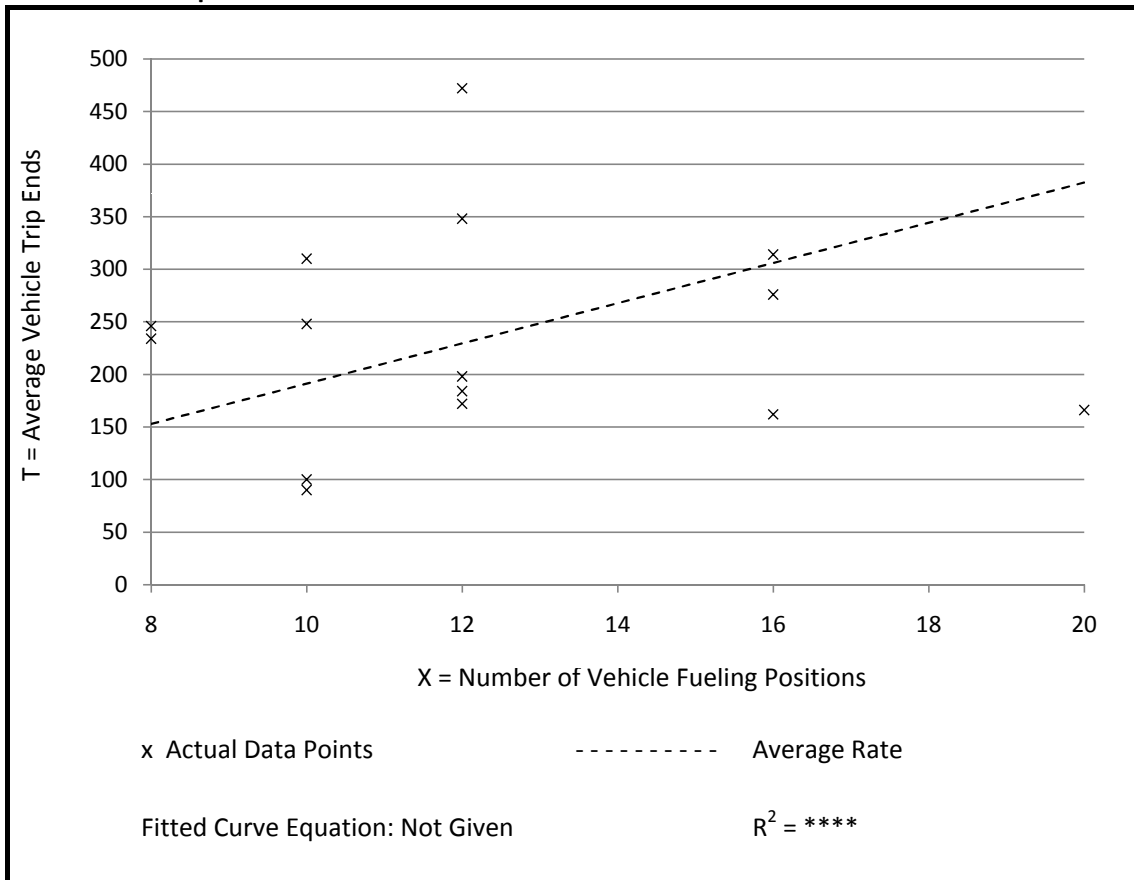
Average Vehicle Trip Ends vs: Vehicle Fueling Positions
On a: Weekday
A.M. Peak Hour of Generator

Number of Studies: 15
Average Vehicle Fueling Positions: 12
Average Truck Fueling Positions: 4
Directional Distribution: 50 % entering, 50% exiting

Trip Generation per Vehicle Fueling Position

	Average Rate	Range of Rates	Standard Deviation
All Vehicles	19.13	8.30 - 39.33	9.81
Heavy Trucks	6.22	0.00 - 10.00	17.26

Data Plot and Equation



Gasoline/Service Station with Convenience Market & Fast Food Restaurant

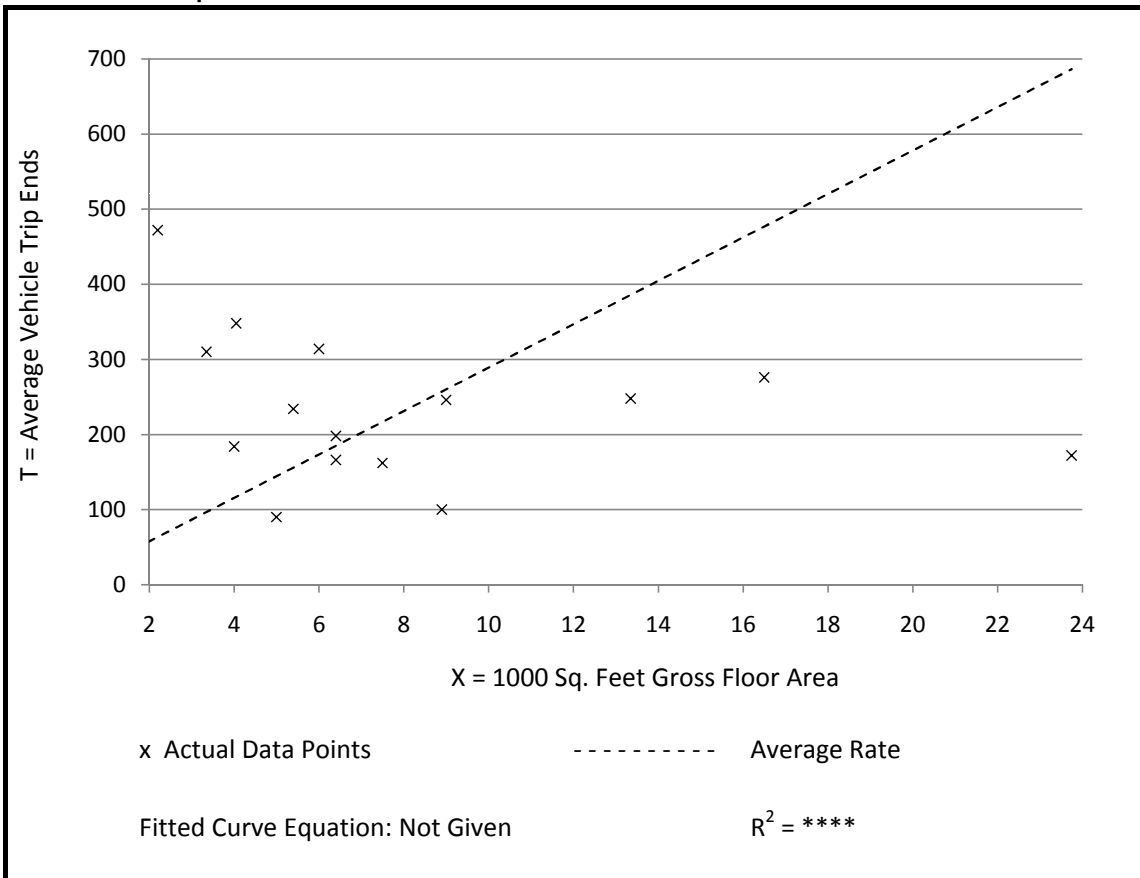
Average Vehicle Trip Ends vs: 1000 Sq. Feet Gross Floor Area
On a: Weekday
A.M. Peak Hour of Generator

Number of Studies: 15
Average 1000 Sq. Feet GFA: 8
Directional Distribution: 50 % entering, 50% exiting

Trip Generation per Vehicle Fueling Position

	Average Rate	Range of Rates	Standard Deviation
All Vehicles	28.90	7.24 - 214.55	56.09
Heavy Trucks	3.27	0.00 - 12.50	27.52

Data Plot and Equation



Hybrid

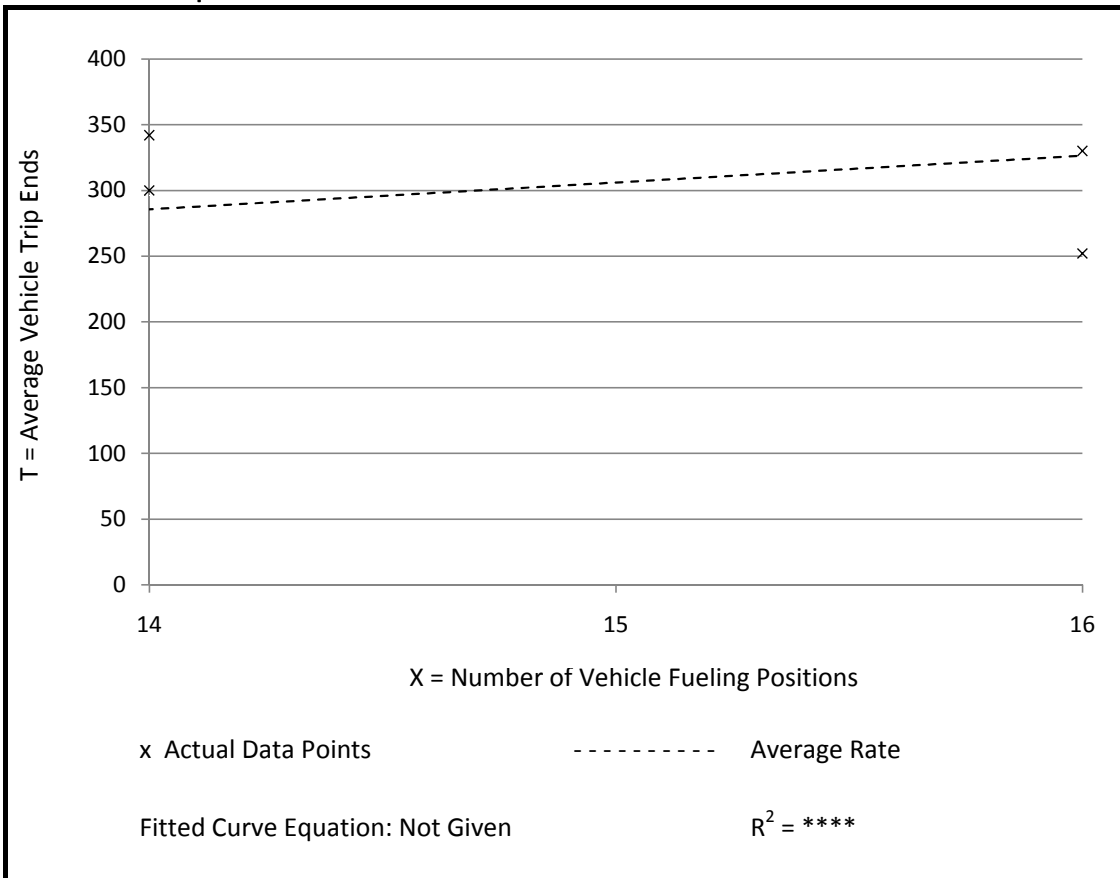
Average Vehicle Trip Ends vs: Vehicle Fueling Positions
On a: Weekday
A.M. Peak Hour of Generator

Number of Studies: 4
Average Vehicle Fueling Positions: 15
Average Truck Fueling Positions: 2
Directional Distribution: 50 % entering, 50% exiting

Trip Generation per Vehicle Fueling Position

	Average Rate	Range of Rates	Standard Deviation
All Vehicles	20.40	15.75 - 24.43	3.60
Heavy Trucks	0.00	0.00 - 0.00	0.00

Data Plot and Equation



Hybrid

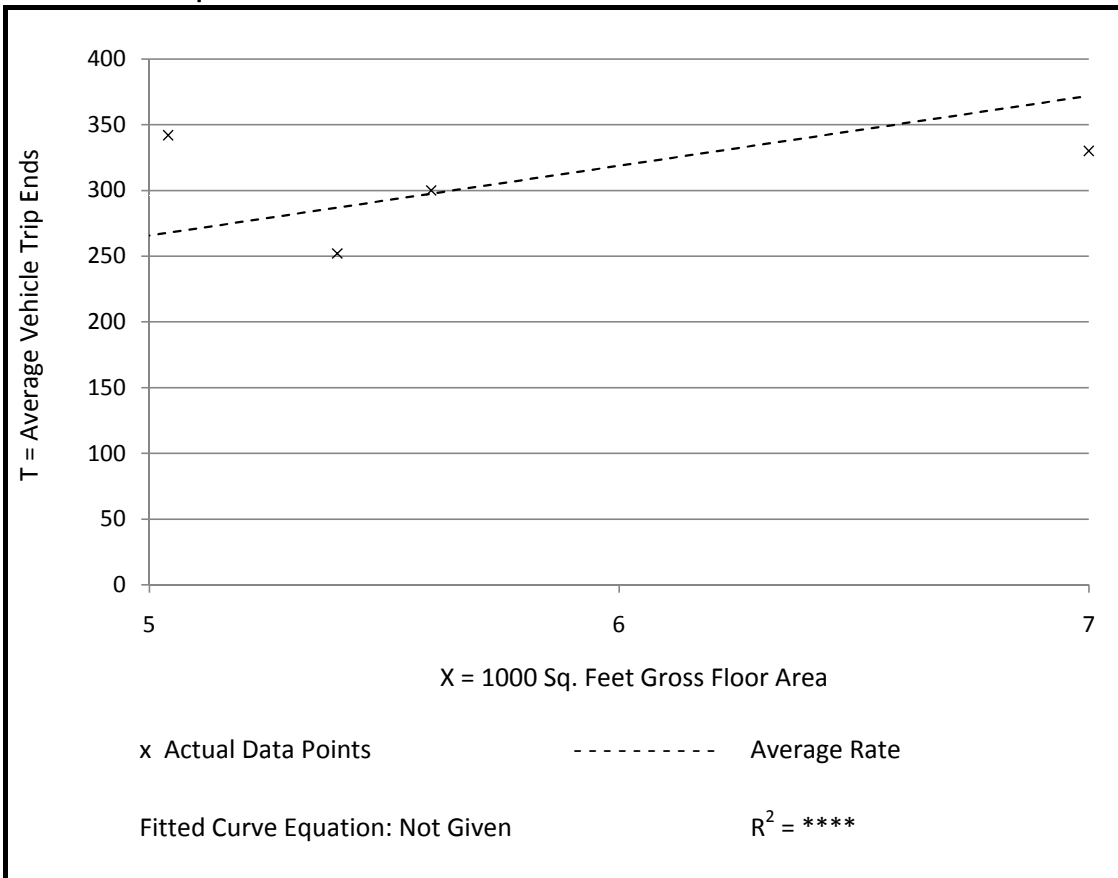
Average Vehicle Trip Ends vs: 1000 Sq. Feet Gross Floor Area
On a: Weekday
A.M. Peak Hour of Generator

Number of Studies: 4
Average 1000 Sq. Feet GFA: 6
Directional Distribution: 50 % entering, 50% exiting

Trip Generation per Vehicle Fueling Position

	Average Rate	Range of Rates	Standard Deviation
All Vehicles	53.13	46.67 - 67.86	9.91
Heavy Trucks	0.00	0.00 - 0.00	0.00

Data Plot and Equation



Gasoline/Service Station with Convenience Market

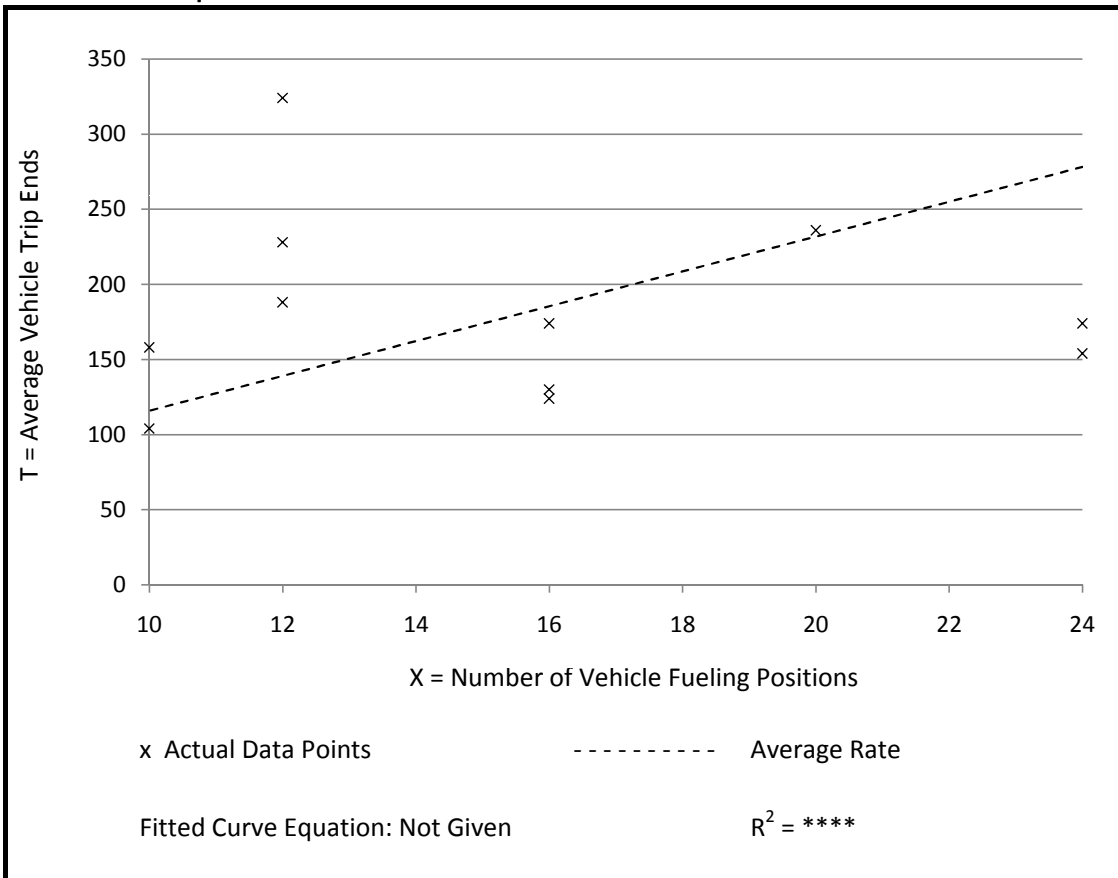
Average Vehicle Trip Ends vs: Vehicle Fueling Positions
On a: Weekday
P.M. Peak Hour of Generator

Number of Studies: 11
Average Vehicle Fueling Positions: 16
Average Truck Fueling Positions: 1
Directional Distribution: 50 % entering, 50% exiting

Trip Generation per Vehicle Fueling Position

	Average Rate	Range of Rates	Standard Deviation
All Vehicles	11.59	6.42 - 27.00	6.33
Heavy Trucks	0.00	0.00 - 0.00	0.00

Data Plot and Equation



Gasoline/Service Station with Convenience Market

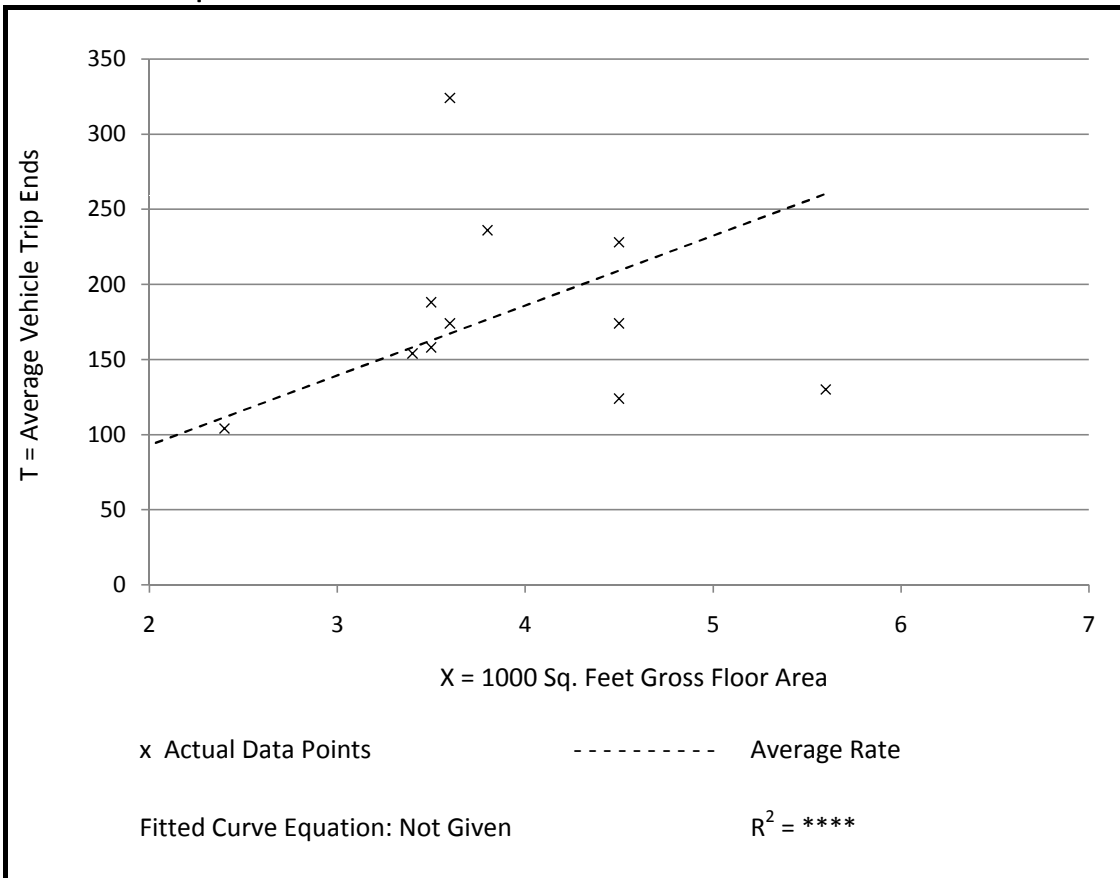
Average Vehicle Trip Ends vs: 1000 Sq. Feet Gross Floor Area
On a: Weekday
P.M. Peak Hour of Generator

Number of Studies: 11
Average 1000 Sq. Feet GFA: 4
Directional Distribution: 50 % entering, 50% exiting

Trip Generation per Vehicle Fueling Position

	Average Rate	Range of Rates	Standard Deviation
All Vehicles	46.48	23.21 - 90.00	17.85
Heavy Trucks	0.09	0.00 - 1.14	48.64

Data Plot and Equation



Gasoline/Service Station with Convenience Market & Fast Food Restaurant

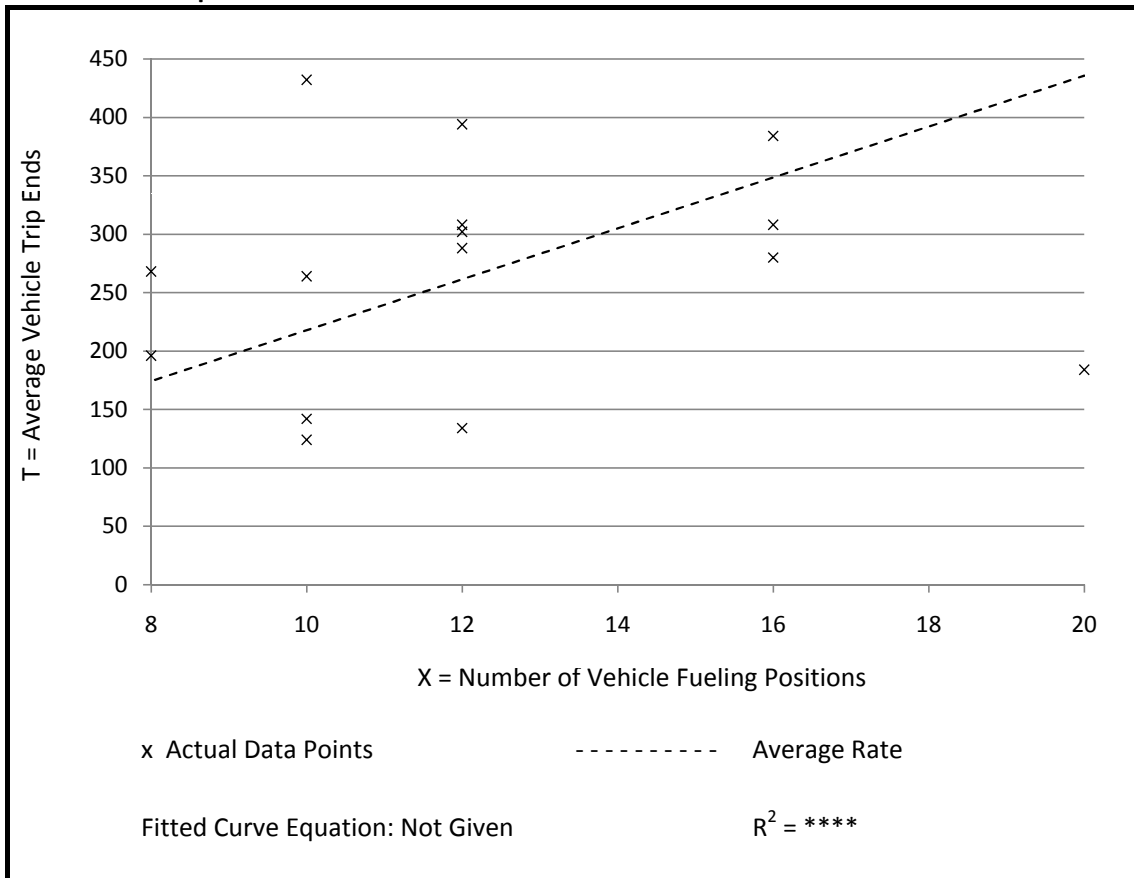
Average Vehicle Trip Ends vs: Vehicle Fueling Positions
On a: Weekday
P.M. Peak Hour of Generator

Number of Studies: 15
Average Vehicle Fueling Positions: 12
Average Truck Fueling Positions: 4
Directional Distribution: 50 % entering, 50% exiting

Trip Generation per Vehicle Fueling Position

	Average Rate	Range of Rates	Standard Deviation
All Vehicles	21.78	9.20 - 43.20	9.35
Heavy Trucks	8.03	0.00 - 15.00	19.66

Data Plot and Equation



Gasoline/Service Station with Convenience Market & Fast Food Restaurant

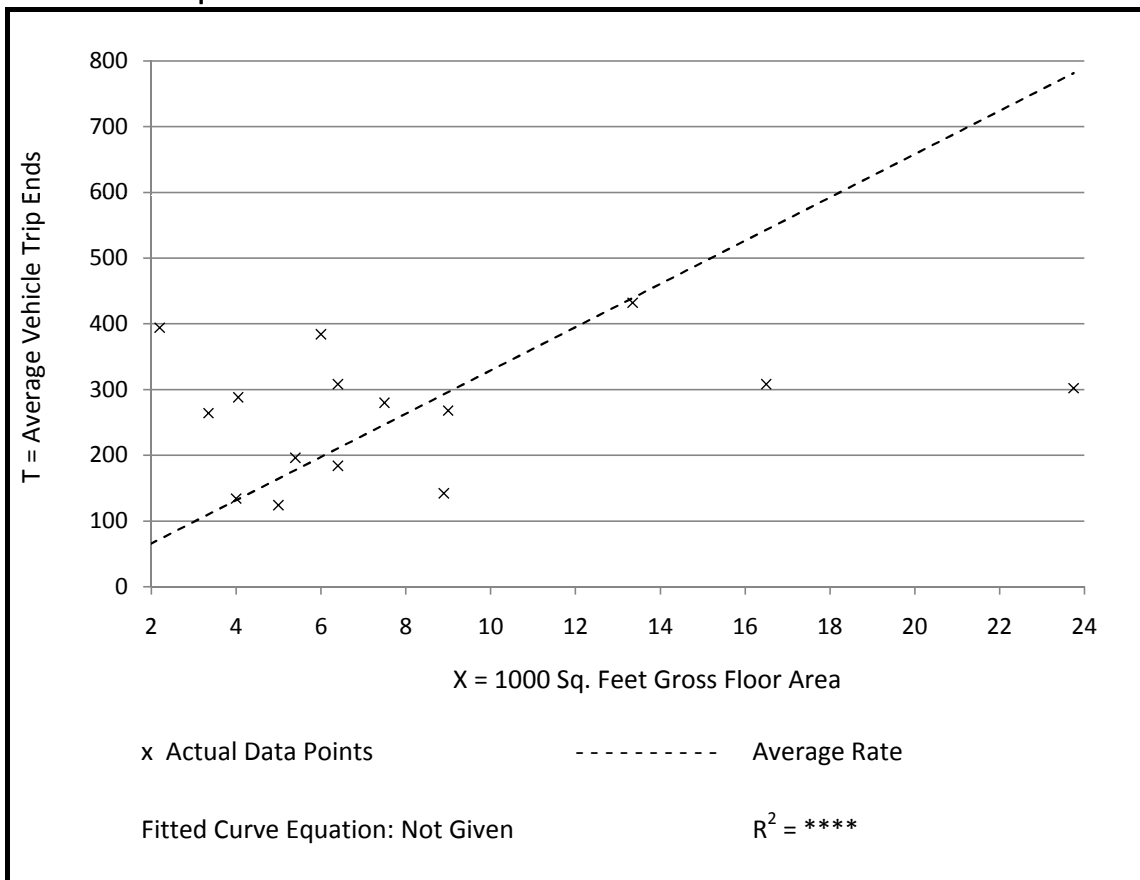
Average Vehicle Trip Ends vs: 1000 Sq. Feet Gross Floor Area
On a: Weekday
P.M. Peak Hour of Generator

Number of Studies: 15
Average 1000 Sq. Feet GFA: 8
Directional Distribution: 50 % entering, 50% exiting

Trip Generation per Vehicle Fueling Position

	Average Rate	Range of Rates	Standard Deviation
All Vehicles	32.91	12.72 - 179.09	44.04
Heavy Trucks	4.22	0.00 - 18.75	31.22

Data Plot and Equation



Hybrid

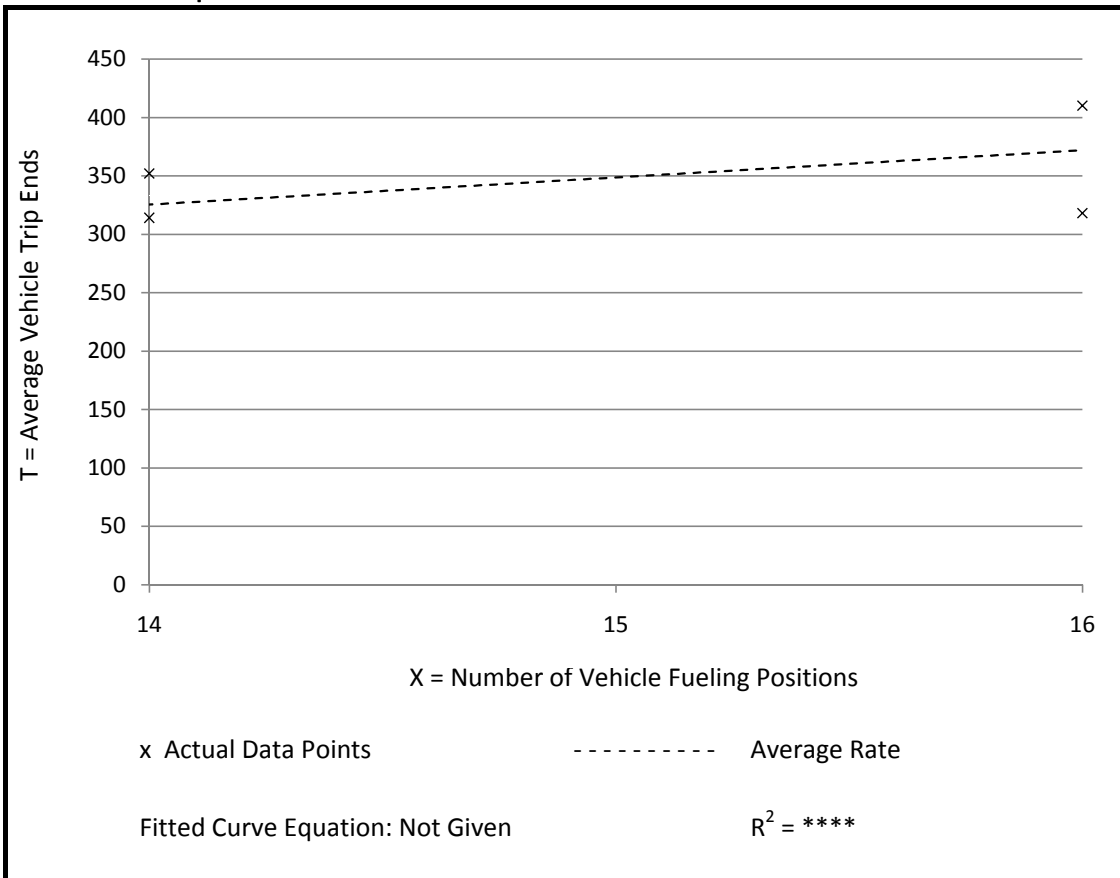
Average Vehicle Trip Ends vs: Vehicle Fueling Positions
On a: Weekday
P.M. Peak Hour of Generator

Number of Studies: 4
Average Vehicle Fueling Positions: 15
Average Truck Fueling Positions: 2
Directional Distribution: 50 % entering, 50% exiting

Trip Generation per Vehicle Fueling Position

	Average Rate	Range of Rates	Standard Deviation
All Vehicles	23.23	19.88 - 25.63	2.66
Heavy Trucks	0.00	0.00 - 0.00	0.00

Data Plot and Equation



Hybrid

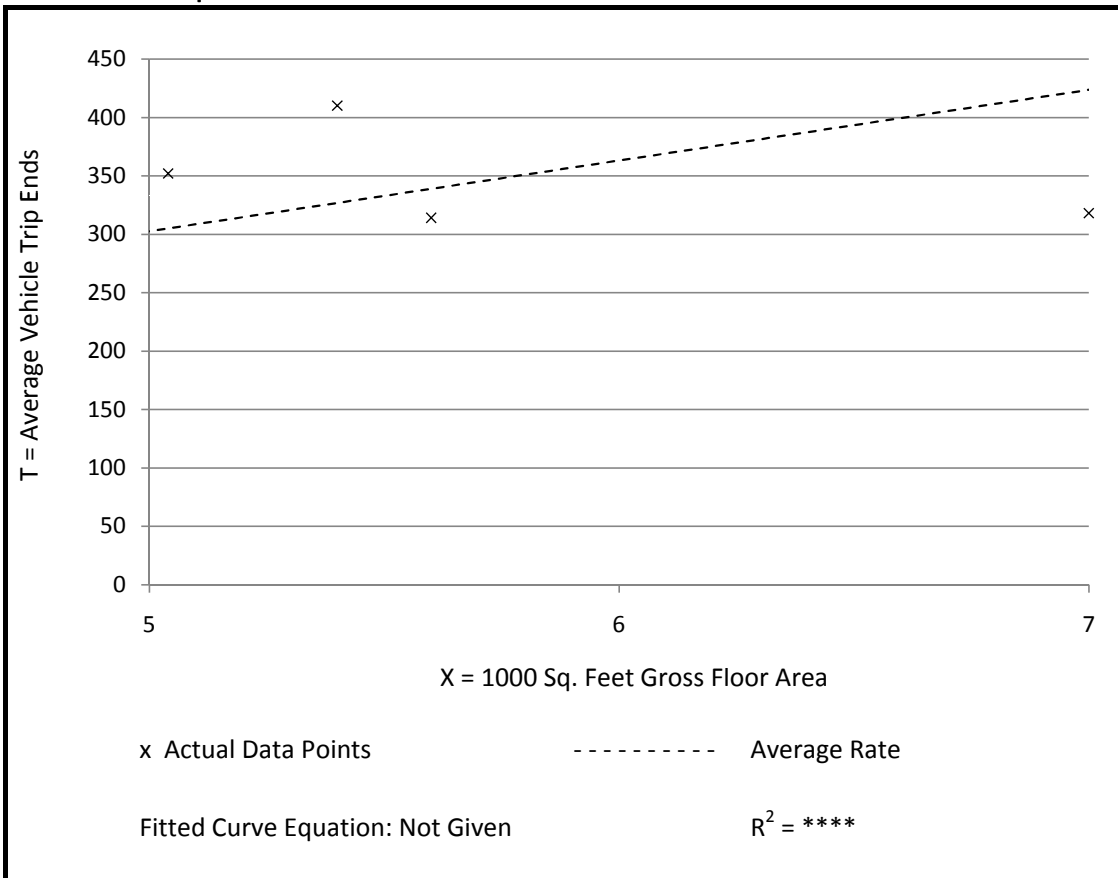
Average Vehicle Trip Ends vs: 1000 Sq. Feet Gross Floor Area
On a: Weekday
P.M. Peak Hour of Generator

Number of Studies: 4
Average 1000 Sq. Feet GFA: 6
Directional Distribution: 50 % entering, 50% exiting

Trip Generation per Vehicle Fueling Position

	Average Rate	Range of Rates	Standard Deviation
All Vehicles	60.50	45.43 - 75.93	13.81
Heavy Trucks	0.00	0.00 - 0.00	0.00

Data Plot and Equation



APPENDIX G – CORRELATION COEFFICIENTS

AM – All Sites

Pearson Correlation Coefficients, N = 30 Prob > r under H0: Rho=0																					
	AM_TRIPS	LN_AM	AM_Trips_Pu mp	LOC	FF	FUEL	DIESEL	SQFT	FF	FF_SQFT	TOT_SQFT	SEATS	INT_AADT	TOT_AADT	tot_AADT_10 00	int_AADT_10 00	V_PARK	T_PARK	WASH	INT	DRIVE
AM_TRIPS																					
AM_TRIPS																					
LN_AM	0.96424																				
LN_AM	<.0001																				
AM_Trips_Pump	0.85841	0.80854																			
AM_Trips_Pump	<.0001	<.0001																			
LOC	0.05992	0.03489	0.11817																		
LOC	0.7531	0.8548	0.534																		
FF	0.57336	0.58113	0.46362	0.1022																	
FF	0.0009	0.0008	0.0099	0.591																	
FUEL	-0.17964	-0.20793	-0.55362	-0.11363	-0.2308																
FUEL	0.3422	0.2702	0.0015	0.5499	0.2198																
DIESEL	-0.07079	0.03288	0.06739	-0.06698	0.06179	-0.37245															
DIESEL	0.7101	0.8631	0.7235	0.7251	0.7457	0.0427															
SQFT	0.08485	0.11463	0.0374	0.12035	-0.00319	0.31455															
SQFT	0.6557	0.5464	0.8444	0.25478	0.5264	0.9866	0.0905														
FF	0.57336	0.58113	0.46362	0.1022	1	-0.2308	0.06179	0.12035													
FF	0.0009	0.0008	0.0099	0.591		0.2198	0.7457	0.5264													
FF_SQFT	0.11225	0.16183	0.18818	-0.05419	0.28255	-0.28528	0.59829	0.53075	0.28255												
FF_SQFT	0.5548	0.3929	0.3193	0.7761	0.1303	0.1265	0.0005	0.0025	0.1303												
TOT_SQFT	0.10749	0.14948	0.10551	0.15878	0.20415	-0.12183	0.47481	0.93479	0.20415	0.79718											
TOT_SQFT	0.5718	0.4305	0.579	0.402	0.2792	0.5213	0.008	<.0001	0.2792	<.0001											
SEATS	0.05839	0.11149	0.16915	0.07625	0.2317	-0.256	0.59556	0.5019	0.2317	0.73592	0.66595										
SEATS	0.7592	0.5575	0.3716	0.6888	0.218	0.1721	0.0005	0.0047	0.218	<.0001	<.0001										
INT_AADT	0.35355	0.33466	0.25921	0.41904	0.21736	0.05786	0.18126	0.33818	0.21736	0.22496	0.33519	0.16284									
INT_AADT	0.0553	0.0707	0.1666	0.0212	0.2486	0.7614	0.3378	0.0676	0.2486	0.232	0.0702	0.3899									
TOT_AADT	0.433	0.4202	0.31624	0.43289	0.26943	-0.0072	-0.01065	0.21226	0.26943	0.11088	0.19768	0.0818	0.87466								
TOT_AADT	0.0168	0.0208	0.0887	0.0169	0.1499	0.9699	0.9554	0.2601	0.1499	0.5597	0.2951	0.6674	<.0001								
tot_AADT_1000	0.433	0.4202	0.31624	0.43289	0.26943	-0.0072	-0.01065	0.21226	0.26943	0.11088	0.19768	0.0818	0.87466	1							
tot_AADT_1000	0.0168	0.0208	0.0887	0.0169	0.1499	0.9699	0.9554	0.2601	0.1499	0.5597	0.2951	0.6674	<.0001	<.0001							
int_AADT_1000	0.35355	0.33466	0.25921	0.41904	0.21736	0.05786	0.18126	0.33818	0.21736	0.22496	0.33519	0.16284	1	0.87466	0.87466						
int_AADT_1000	0.0553	0.0707	0.1666	0.0212	0.2486	0.7614	0.3378	0.0676	0.2486	0.232	0.0702	0.3899	<.0001	<.0001	<.0001						
V_PARK	0.22509	0.26034	0.22494	0.22088	0.35239	-0.19453	0.50791	0.74641	0.35239	0.62786	0.79484	0.79137	0.26653	0.1953	0.1953	0.26653					
V_PARK	0.2317	0.1647	0.232	0.2408	0.0562	0.303	0.0042	<.0001	0.0562	0.0002	<.0001	<.0001	0.1545	0.301	0.301	0.1545					
T_PARK	-0.05383	0.01067	0.03392	0.24517	0.10267	-0.22998	0.78659		0.10267	0.68137	0.78157	0.75403	0.34923	0.21406	0.21406	0.34923					
T_PARK	0.7776	0.9554	0.8588	0.1916	0.5893	0.2215	<.0001	0.69629	0.5893	<.0001	<.0001	<.0001	0.0585	0.256	0.256	0.0585	<.0001				
WASH	-0.08049	-0.14625	0.03425	0.22935	-0.22426	0.05979	-0.40343	-0.06337	-0.22426	-0.46894	-0.24167	-0.33975	-0.1064	-0.03109	-0.03109	-0.1064	-0.17694	-0.28561			
WASH	0.6724	0.4406	0.8574	0.2228	0.2335	0.7536	0.0271	0.7394	0.2335	0.0089	0.1982	0.0662	0.5757	0.8705	0.8705	0.5757	0.3496	0.126			
INT	0.2029	0.17722	0.13594	0.18021	0.02039	0.23917	0.25087	0.31215	0.02039	0.24997	0.32712	0.14733	0.799	0.52593	0.52593	0.799	0.1538	0.28561	-0.16667		
INT	0.2822	0.3488	0.4738	0.3406	0.9148	0.2031	0.1812	0.0931	0.9148	0.1828	0.0776	0.4372	<.0001	0.0028	0.0028	<.0001	0.4171	0.126	0.3787		
DRIVE	0.52563	0.49319	0.60935	-0.25408	0.21079	-0.27477	0.04632	0.08984	0.21079	0.45316	0.25391	0.43301	0.00152	0.04016	0.04016	0.00152	0.18484	-0.00965	-0.18464	0.03077	
DRIVE	0.0029	0.0056	0.0004	0.1754	0.2635	0.1417	0.808	0.6368	0.2635	0.0119	0.1758	0.0168	0.9936	0.8331	0.8331	0.9936	0.3281	0.9596	0.3287	0.8718	

AM – FF Only Sites

Pearson Correlation Coefficients, N = 30 Prob > r under H0: Rho=0																						
	AM_TRIPS	LN_AM	AM_Trips_Pump	LOC	FF	FUEL	DIESEL	SQFT	FF	FF_SQFT	TOT_SQFT	SEATS	INT_AADT	TOT_AADT	tot_AADT_1000	int_AADT_1000	V_PARK	T_PARK	WASH	INT	DRIVE	
AM_TRIPS																						
AM_TRIPS																						
LN_AM	0.96446																					
LN_AM	<.0001																					
AM_Trips_Pump	0.88192	0.83																				
AM_Trips_Pump	<.0001	0.0001																				
LOC	0.09295	0.02506	0.26149																			
LOC	0.7418	0.9293	0.3465																			
FF	.	.	.	.																		
FF	.	.	.	.																		
FUEL	-0.19641	-0.14582	-0.57971	-0.20067	.																	
FUEL	0.4829	0.6041	0.0235	0.4733	.																	
DIESEL	-0.29035	-0.18882	-0.17043	0.24636	.	-0.30486																
DIESEL	0.2938	0.5003	0.5437	0.3761	.	0.2692																
SQFT	-0.0024	0.03397	-0.03813		.	0.06228	0.34405															
SQFT	0.9932	0.9043	0.8927	0.34217	.	0.8255	0.2092															
FF	.	.	.	.	.	.	.	.														
FF	.	.	.	.	.	.	.	.														
FF_SQFT	-0.20166	-0.14486	-0.27998	0.10537	.	0.09196	0.53187	0.77325	.													
FF_SQFT	0.4711	0.6065	0.3122	0.7086	.	0.7445	0.0413	0.0007	.													
TOT_SQFT	-0.05785	-0.01409	-0.10709	0.29261	.	0.07347	0.4125	0.98437	.	0.87283												
TOT_SQFT	0.8377	0.9603	0.704	0.2899	.	0.7947	0.1265	<.0001	.	<.0001												
SEATS	-0.19365	-0.13975	-0.15582	0.29983	.	0.00684	0.51443	0.59134	.	0.45401	0.5812											
SEATS	0.4892	0.6194	0.5792	0.2776	.	0.9807	0.0498	0.0202	.	0.0891	0.0231											
INT_AADT	0.20355	0.19154	0.21667	0.69357	.	-0.03962	0.49006	0.6093	.	0.55738	0.62373	0.3106										
INT_AADT	0.4668	0.4941	0.438	0.0041	.	0.8885	0.0637	0.0159	.	0.0309	0.013	0.2599										
TOT_AADT	0.43862	0.46504	0.37725	0.58377	.	0.0217	0.29252	0.48083	.	0.47925	0.50316	0.28452	0.78361									
TOT_AADT	0.1019	0.0807	0.1657	0.0223	.	0.9388	0.29	0.0696	.	0.0707	0.0559	0.3041	0.0005									
tot_AADT_1000	0.43862	0.46504	0.37725	0.58377	.	0.0217	0.29252	0.48083	.	0.47925	0.50316	0.28452	0.78361	1								
tot_AADT_1000	0.1019	0.0807	0.1657	0.0223	.	0.9388	0.29	0.0696	.	0.0707	0.0559	0.3041	0.0005	<.0001								
int_AADT_1000	0.20355	0.19154	0.21667	0.69357	.	-0.03962	0.49006	0.6093	.	0.55738	0.62373	0.3106	1	0.78361	0.78361							
int_AADT_1000	0.4668	0.4941	0.438	0.0041	.	0.8885	0.0637	0.0159	.	0.0309	0.013	0.2599	<.0001	0.0005	0.0005							
V_PARK	0.00702	0.03136	-0.01252	0.35999	.	-0.03772	0.51696	0.79549	.	0.6366	0.78903	0.82762	0.48769	0.45055	0.45055	0.48769						
V_PARK	0.9802	0.9117	0.9647	0.1875	.	0.8938	0.0485	0.0004	.	0.0107	0.0005	0.0001	0.0652	0.0919	0.0919	0.0652						
T_PARK	-0.20637	-0.14456	-0.1319	0.46611	.	-0.18113	0.81619		.	0.75149	0.76695	0.76117	0.615	0.50861	0.50861	0.615	0.87011					
T_PARK	0.4606	0.6072	0.6394	0.0799	.	0.5183	0.0002	0.72535	.	0.0012	0.0008	0.001	0.0147	0.0529	0.0529	0.0147	<.0001					
WASH	0.4864	0.38992	0.52727	0.61237	.	0.06144	-0.45978	-0.00694	.	-0.40876	-0.11886	-0.15996	0.33906	0.40183	0.40183	0.33906	-0.08916	-0.25598				
WASH	0.066	0.1508	0.0434	0.0152	.	0.8278	0.0846	0.9804	.	0.1303	0.6731	0.569	0.2164	0.1376	0.1376	0.2164	0.752	0.3571				
INT	0.11026	0.10082	0.12041	0.51962	.	0.05793	0.37591	0.50099	.	0.34941	0.48262	0.11213	0.85857	0.55873	0.55873	0.85857	0.24133	0.36202	0.35355			
INT	0.6957	0.7207	0.6691	0.0471	.	0.8375	0.1673	0.0571	.	0.2018	0.0684	0.6907	<.0001	0.0304	0.0304	<.0001	0.3862	0.1849	0.1961			
DRIVE	0.67303	0.68402	0.5787	-0.32733	.	-0.08758	-0.32064	0.02601	.	-0.07297	-0.00024	0.05576	-0.04524	0.15665	0.15665	-0.04524	-0.05101	-0.27487	0.13363	-0.09449		
DRIVE	0.006	0.0049	0.0238	0.2337	.	0.7563	0.2439	0.9267	.	0.7961	0.9993	0.8435	0.8728	0.5772	0.5772	0.8728	0.8567	0.3215	0.6349	0.7377		

AM – Non-FF Only Sites

Pearson Correlation Coefficients, N = 30 Prob > r under H0: Rho=0																					
	AM_TRIPS	LN_AM	AM_Trips_Pump	LOC	FF	FUEL	DIESEL	SQFT	FF	FF_SQFT	TOT_SQFT	SEATS	INT_AADT	TOT_AADT	tot_AADT_1000	int_AADT_1000	V_PARK	T_PARK	WASH	INT	DRIVE
AM_TRIPS																					
AM_TRIPS																					
LN_AM	0.97327																				
LN_AM	<.0001																				
AM_Trips_Pump	0.74155	0.78238																			
AM_Trips_Pump	0.009	0.0044																			
LOC	-0.185	-0.08646	-0.18971																		
LOC	0.586	0.8004	0.5764																		
FF	.	.	.	.																	
FF	.	.	.	.																	
FUEL	0.0954	-0.03924	-0.51591	-0.1875	.																
FUEL	0.7802	0.9088	0.1043	0.5809	.																
DIESEL	0.28379	0.31609	0.40525	-0.64655	.	-0.28432															
DIESEL	0.3977	0.3437	0.2163	0.0316	.	0.3968															
SQFT	0.02702	0.10269	-0.14633		.	0.02782	0.04045														
SQFT	0.9371	0.7638	0.6677	0.33416	.	0.9353	0.906														
FF	.	.	.	.	.	.	.	.													
FF	.	.	.	.	.	.	.	.													
FF_SQFT	.	.	.	.	.	.	.	.	.												
FF_SQFT	.	.	.	.	.	.	.	.	.	.											
TOT_SQFT	0.02702	0.10269	-0.14633	0.33416	.	0.02782	0.04045	1	.	.											
TOT_SQFT	0.9371	0.7638	0.6677	0.3152	.	0.9353	0.906	<.0001	.	.											
SEATS	.	.	.	.	.	.	.	.	.	.											
SEATS	.	.	.	.	.	.	.	.	.	.	.										
INT_AADT	0.39305	0.35746	0.43667	-0.03792	.	0.09687	-0.25361	-0.50198	.	.	-0.50198	.									
INT_AADT	0.2318	0.2805	0.1793	0.9119	.	0.7769	0.4518	0.1156	.	.	0.1156	.									
TOT_AADT	0.32053	0.30441	0.44107	0.25921	.	-0.1336	-0.38097	-0.4725	.	.	-0.4725	.	0.9043								
TOT_AADT	0.3365	0.3627	0.1745	0.4415	.	0.6953	0.2477	0.1422	.	.	0.1422	.	0.0001								
tot_AADT_1000	0.32053	0.30441	0.44107	0.25921	.	-0.1336	-0.38097	-0.4725	.	.	-0.4725	.	0.9043	1							
tot_AADT_1000	0.3365	0.3627	0.1745	0.4415	.	0.6953	0.2477	0.1422	.	.	0.1422	.	0.0001	<.0001							
int_AADT_1000	0.39305	0.35746	0.43667	-0.03792	.	0.09687	-0.25361	-0.50198	.	.	-0.50198	.	1	0.9043	0.9043						
int_AADT_1000	0.2318	0.2805	0.1793	0.9119	.	0.7769	0.4518	0.1156	.	.	0.1156	.	<.0001	0.0001	0.0001						
V_PARK	0.5216	0.60557	0.24918	0.3253	.	0.04457	0.02232	0.63918	.	.	0.63918	.	0.05491	0.10753	0.10753	0.05491					
V_PARK	0.0998	0.0483	0.46	0.329	.	0.8965	0.9481	0.0342	.	.	0.0342	.	0.8726	0.753	0.753	0.8726					
T_PARK	0.4371	0.41925	0.47485	-0.52234	.	-0.1707	0.75182	.	.	.	0.21242	.	-0.11074	-0.23478	-0.23478	-0.11074	0.01804				
T_PARK	0.1788	0.1993	0.14	0.0993	.	0.6158	0.0076	0.21242	.	.	0.5306	.	0.7458	0.4871	0.4871	0.7458	0.958				
WASH	-0.39667	-0.32979	-0.11593	0.08671	.	-0.18678	-0.09559	0.1219	.	.	0.1219	.	0.03024	0.07635	0.07635	0.03024	0.19461	-0.37052			
WASH	0.2271	0.322	0.7343	0.7999	.	0.5824	0.7798	0.7211	.	.	0.7211	.	0.9297	0.8235	0.8235	0.9297	0.5664	0.262			
INT	0.37312	0.26914	0.16077	-0.35603	.	0.49971	-0.07916	-0.36563	.	.	-0.36563	.	0.77408	0.51168	0.51168	0.77408	-0.10702	0.21939	-0.31053		
INT	0.2584	0.4235	0.6368	0.2825	.	0.1176	0.817	0.2688	.	.	0.2688	.	0.0052	0.1076	0.1076	0.0052	0.7541	0.5169	0.3527		
DRIVE	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
DRIVE	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

AM – Hybrid Only Sites

Pearson Correlation Coefficients, N = 30 Prob > r under H0: Rho=0																						
	AM_TRIPS	LN_AM	AM_Trips_Pump	LOC	FF	FUEL	DIESEL	SQFT	FF	FF_SQFT	TOT_SQFT	SEATS	INT_AADT	TOT_AADT	tot_AADT_1000	int_AADT_1000	V_PARK	T_PARK	WASH	INT	DRIVE	
AM_TRIPS																						
AM_TRIPS																						
LN_AM	0.99921																					
LN_AM	0.0008																					
AM_Trips_Pump	0.0429	0.05109																				
AM_Trips_Pump	0.9571	0.9489																				
LOC	0.09975	0.06343	-0.57338																			
LOC	0.9002	0.9366	0.4266																			
FF	.	.	.	.																		
FF	.	.	.	.																		
FUEL	0.98977	0.98815	-0.09981	0.17408	.																	
FUEL	0.0102	0.0118	0.9002	0.8259	.																	
DIESEL	.	.	.	.	.	.																
DIESEL	.	.	.	.	.	.																
SQFT	0.86461	0.88389	0.14975		.	0.84394	.															
SQFT	0.1354	0.1161	0.8502	-0.37544	.	0.1561	.															
FF	.	.	.	.	.	.	.	.														
FF	.	.	.	.	.	.	.	.														
FF_SQFT	.	.	.	.	.	.	.	.	.													
FF_SQFT	.	.	.	.	.	.	.	.	.	.												
TOT_SQFT	0.86461	0.88389	0.14975	-0.37544	.	0.84394	.	1	.													
TOT_SQFT	0.1354	0.1161	0.8502	0.6246	.	0.1561	.	<.0001	.													
SEATS	.	.	.	.	.	.	.	.	.	.	.											
SEATS	.	.	.	.	.	.	.	.	.	.	.	.										
INT_AADT	0.85969	0.83872	-0.06375	0.54951	.	0.86092	.	0.48675	.	0.48675	.											
INT_AADT	0.1403	0.1613	0.9363	0.4505	.	0.1391	.	0.5132	.	0.5132	.											
TOT_AADT	0.77197	0.74998	0.2527	0.43292	.	0.72763	.	0.40021	.	0.40021	.	0.94021										
TOT_AADT	0.228	0.25	0.7473	0.5671	.	0.2724	.	0.5998	.	0.5998	.	0.0598										
tot_AADT_1000	0.77197	0.74998	0.2527	0.43292	.	0.72763	.	0.40021	.	0.40021	.	0.94021	1									
tot_AADT_1000	0.228	0.25	0.7473	0.5671	.	0.2724	.	0.5998	.	0.5998	.	0.0598	<.0001									
int_AADT_1000	0.85969	0.83872	-0.06375	0.54951	.	0.86092	.	0.48675	.	0.48675	.	1	0.94021	0.94021								
int_AADT_1000	0.1403	0.1613	0.9363	0.4505	.	0.1391	.	0.5132	.	0.5132	.	<.0001	0.0598	0.0598								
V_PARK	-0.68706	-0.66986	-0.52288	-0.21457	.	-0.6051	.	-0.38878	.	-0.38878	.	-0.80782	-0.95682	-0.95682	-0.80782							
V_PARK	0.3129	0.3301	0.4771	0.7854	.	0.3949	.	0.6112	.	0.6112	.	0.1922	0.0432	0.0432	0.1922							
T_PARK	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.						
T_PARK	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.					
WASH	-0.86387	-0.8468	0.33104	-0.57735	.	-0.90453	.	-0.53719	.	-0.53719	.	-0.95178	-0.79078	-0.79078	-0.95178	0.59464	.					
WASH	0.1361	0.1532	0.669	0.4226	.	0.0955	.	0.4628	.	0.4628	.	0.0482	0.2092	0.2092	0.0482	0.4054	.					
INT	0.86387	0.8468	-0.33104	0.57735	.	0.90453	.	0.53719	.	0.53719	.	0.95178	0.79078	0.79078	0.95178	-0.59464	.	-1				
INT	0.1361	0.1532	0.669	0.4226	.	0.0955	.	0.4628	.	0.4628	.	0.0482	0.2092	0.2092	0.0482	0.4054	.	<.0001				
DRIVE	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
DRIVE	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	

AM – Non-FF and Hybrid Sites

Pearson Correlation Coefficients, N = 30 Prob > r under H0: Rho=0																					
	AM_TRIPS	LN_AM	AM_Trips_Pump	LOC	FF	FUEL	DIESEL	SQFT	FF	FF_SQFT	TOT_SQFT	SEATS	INT_AADT	TOT_AADT	tot_AADT_1000	int_AADT_1000	V_PARK	T_PARK	WASH	INT	DRIVE
AM_TRIPS																					
AM_TRIPS																					
LN_AM	0.97508																				
LN_AM	<.0001																				
AM_Trips_Pump	0.88395	0.89061																			
AM_Trips_Pump	<.0001	<.0001																			
LOC	0.09228	0.10615	0.06349																		
LOC	0.7436	0.7065	0.8221																		
FF	0.78432	0.69924	0.77697	0.21726																	
FF	0.0005	0.0037	0.0007	0.4367																	
FUEL	-0.01425	-0.10014	-0.42233	-0.15919	-0.13798																
FUEL	0.9598	0.7225	0.1168	0.5709	0.6239																
DIESEL	-0.02266	0.05188	0.06457	-0.56335	-0.23572	-0.23535															
DIESEL	0.9361	0.8543	0.8192	0.0288	0.3977	0.3985															
SQFT	0.34412	0.33647	0.18266		0.33405	0.04569	-0.04523														
SQFT	0.2091	0.2201	0.5147	0.22366	0.2237	0.8715	0.8728														
FF	0.78432	0.69924	0.77697	0.21726	1	-0.13798	-0.23572	0.33405													
FF	0.0005	0.0037	0.0007	0.4367		0.6239	0.3977	0.2237													
FF_SQFT	.	.	.	.	.	.	.	.	.												
FF_SQFT	.	.	.	.	.	.	.	.	.												
TOT_SQFT	0.34412	0.33647	0.18266	0.22366	0.33405	0.04569	-0.04523	1	0.33405	.											
TOT_SQFT	0.2091	0.2201	0.5147	0.4229	0.2237	0.8715	0.8728	<.0001	0.2237	.											
SEATS	.	.	.	.	.	.	.	.	.	.	.										
SEATS	.	.	.	.	.	.	.	.	.	.	.										
INT_AADT	0.48429	0.42519	0.39299	0.24224	0.27058	0.14626	-0.22881	-0.06074	0.27058	.	-0.06074	.									
INT_AADT	0.0673	0.1141	0.1473	0.3844	0.3294	0.603	0.4121	0.8297	0.3294	.	0.8297	.									
TOT_AADT	0.4993	0.44622	0.4655	0.36893	0.34751	-0.04354	-0.3372	-0.05938	0.34751	.	-0.05938	.	0.9248								
TOT_AADT	0.0581	0.0955	0.0804	0.176	0.2044	0.8776	0.219	0.8335	0.2044	.	0.8335	.	<.0001								
tot_AADT_1000	0.4993	0.44622	0.4655	0.36893	0.34751	-0.04354	-0.3372	-0.05938	0.34751	.	-0.05938	.	0.9248	1							
tot_AADT_1000	0.0581	0.0955	0.0804	0.176	0.2044	0.8776	0.219	0.8335	0.2044	.	0.8335	.	<.0001	<.0001							
int_AADT_1000	0.48429	0.42519	0.39299	0.24224	0.27058	0.14626	-0.22881	-0.06074	0.27058	.	-0.06074	.	1	0.9248	0.9248						
int_AADT_1000	0.0673	0.1141	0.1473	0.3844	0.3294	0.603	0.4121	0.8297	0.3294	.	0.8297	.	<.0001	<.0001	<.0001						
V_PARK	0.69193	0.68504	0.69283	0.21397	0.83562	-0.1566	-0.19009	0.38185	0.83562	.	0.38185	.	-0.01282	0.04123	0.04123	-0.01282					
V_PARK	0.0043	0.0048	0.0042	0.4438	0.0001	0.5773	0.4974	0.1602	0.0001	.	0.1602	.	0.9638	0.884	0.884	0.9638					
T_PARK	0.10147	0.15578	0.1437	-0.45958	-0.1923	-0.13587	0.76232		-0.1923	.	0.11346	.	-0.1248	-0.22569	-0.22569	-0.1248	-0.15508				
T_PARK	0.719	0.5793	0.6094	0.0848	0.4923	0.6292	0.001	0.11346	0.4923	.	0.6872	.	0.6577	0.4186	0.4186	0.6577	0.581				
WASH	-0.38252	-0.33335	-0.15239	-0.13074	-0.12309	-0.23192	-0.0491	-0.06759	-0.12309	.	-0.06759	.	-0.36326	-0.26335	-0.26335	-0.36326	0.0896	-0.28208			
WASH	0.1594	0.2247	0.5877	0.6423	0.6621	0.4056	0.862	0.8108	0.6621	.	0.8108	.	0.1832	0.343	0.343	0.1832	0.7508	0.3084			
INT	0.24415	0.18483	0.05064	-0.09629	-0.04029	0.51452	-0.05625	-0.16806	-0.04029	.	-0.16806	.	0.77282	0.54762	0.54762	0.77282	-0.2007	0.19176	-0.49099		
INT	0.3805	0.5096	0.8577	0.7328	0.8866	0.0497	0.8422	0.5494	0.8866	.	0.5494	.	0.0007	0.0346	0.0346	0.0007	0.4732	0.4936	0.0631		
DRIVE	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
DRIVE	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

PM – All Sites

Pearson Correlation Coefficients, N = 30 Prob > r under H0: Rho=0																					
	AM_TRIPS	LN_AM	AM_Trips_Pump	LOC	FF	FUEL	DIESEL	SQFT	FF	FF_SQFT	TOT_SQFT	SEATS	INT_AADT	TOT_AADT	tot_AADT_1000	int_AADT_1000	V_PARK	T_PARK	WASH	INT	DRIVE
PM_TRIPS																					
PM_TRIPS																					
LN_PM	0.98475																				
LN_PM	<.0001																				
PM_Trips_Pump	0.82992	0.81003																			
PM_Trips_Pump	<.0001	<.0001																			
LOC	0.18798	0.17236	0.24099																		
LOC	0.3198	0.3624	0.1995																		
FF	0.59526	0.5799	0.51081	0.1022																	
FF	0.0005	0.0008	0.0039	0.591																	
FUEL	-0.1356	-0.14438	-0.59117	-0.11363	-0.2308																
FUEL	0.4749	0.4465	0.0006	0.5499	0.2198																
DIESEL	0.15291	0.14874	0.31361	-0.06698	0.06179	-0.37245															
DIESEL	0.4199	0.4328	0.0915	0.7251	0.7457	0.0427															
SQFT	0.20776	0.23052	0.15926		0.12035	-0.00319	0.31455														
SQFT	0.2706	0.2204	0.4005	0.25478	0.5264	0.9866	0.0905														
FF	0.59526	0.5799	0.51081	0.1022		-0.2308	0.06179	0.12035													
FF	0.0005	0.0008	0.0039	0.591	1	0.2198	0.7457	0.5264													
FF_SQFT	0.25242	0.2544	0.34662	-0.05419	0.28255	-0.28528	0.59829	0.53075	0.28255												
FF_SQFT	0.1784	0.1749	0.0606	0.7761	0.1303	0.1265	0.0005	0.0025	0.1303												
TOT_SQFT	0.25379	0.27083	0.25872	0.15878	0.20415	-0.12183	0.47481	0.93479	0.20415	0.79718											
TOT_SQFT	0.176	0.1477	0.1674	0.402	0.2792	0.5213	0.008	<.0001	0.2792	<.0001											
SEATS	0.34737	0.33339	0.42261	0.07625	0.2317	-0.256	0.59556	0.5019	0.2317	0.73592	0.66595										
SEATS	0.06	0.0718	0.02	0.6888	0.218	0.1721	0.0005	0.0047	0.218	<.0001	<.0001										
INT_AADT	0.34711	0.35554	0.28231	0.41904	0.21736	0.05786	0.18126	0.33818	0.21736	0.22496	0.33519	0.16284									
INT_AADT	0.0602	0.0538	0.1307	0.0212	0.2486	0.7614	0.3378	0.0676	0.2486	0.232	0.0702	0.3899									
TOT_AADT	0.45535	0.46071	0.35775	0.43289	0.26943	-0.0072	-0.01065	0.21226	0.26943	0.11088	0.19768	0.0818	0.87466								
TOT_AADT	0.0115	0.0104	0.0523	0.0169	0.1499	0.9699	0.9554	0.2601	0.1499	0.5597	0.2951	0.6674	<.0001								
tot_AADT_1000	0.45535	0.46071	0.35775	0.43289	0.26943	-0.0072	-0.01065	0.21226	0.26943	0.11088	0.19768	0.0818	0.87466	1							
tot_AADT_1000	0.0115	0.0104	0.0523	0.0169	0.1499	0.9699	0.9554	0.2601	0.1499	0.5597	0.2951	0.6674	<.0001	<.0001							
int_AADT_1000	0.34711	0.35554	0.28231	0.41904	0.21736	0.05786	0.18126	0.33818	0.21736	0.22496	0.33519	0.16284	1	0.87466	0.87466						
int_AADT_1000	0.0602	0.0538	0.1307	0.0212	0.2486	0.7614	0.3378	0.0676	0.2486	0.232	0.0702	0.3899	<.0001	<.0001	<.0001						
V_PARK	0.46296	0.46333	0.44231	0.22088	0.35239	-0.19453	0.50791	0.74641	0.35239	0.62786	0.79484	0.79137	0.26653	0.1953	0.26653						
V_PARK	0.01	0.0099	0.0144	0.2408	0.0562	0.303	0.0042	<.0001	0.0562	0.0002	<.0001	<.0001	0.1545	0.301	0.301	0.1545					
T_PARK	0.25175	0.23851	0.33329	0.24517	0.10267	-0.22998	0.78659		0.10267	0.68137	0.78157	0.75403	0.34923	0.21406	0.21406	0.34923	0.84315				
T_PARK	0.1796	0.2043	0.0719	0.1916	0.5893	0.2215	<.0001	0.69629	0.5893	<.0001	<.0001	<.0001	0.0585	0.256	0.256	0.0585	<.0001				
WASH	-0.09107	-0.08141	-0.00097	0.22935	-0.22426	0.05979	-0.40343	-0.06337	-0.22426	-0.46894	-0.24167	-0.33975	-0.1064	-0.03109	-0.03109	-0.1064	-0.17694	-0.28561			
WASH	0.6322	0.6689	0.9959	0.2228	0.2335	0.7536	0.0271	0.7394	0.2335	0.0089	0.1982	0.0662	0.5757	0.8705	0.8705	0.5757	0.3496	0.126			
INT	0.15015	0.15955	0.09479	0.18021	0.02039	0.23917	0.25087	0.31215	0.02039	0.24997	0.32712	0.14733	0.799	0.52593	0.52593	0.799	0.1538	0.28561	-0.16667		
INT	0.4284	0.3997	0.6183	0.3406	0.9148	0.2031	0.1812	0.0931	0.9148	0.1828	0.0776	0.4372	<.0001	0.0028	0.0028	<.0001	0.4171	0.126	0.3787		
DRIVE	0.45793	0.45364	0.55571	-0.25408	0.21079	-0.27477	0.04632	0.08984	0.21079	0.45316	0.25391	0.43301	0.00152	0.04016	0.04016	0.00152	0.18484	-0.00965	-0.18464	0.03077	
DRIVE	0.0109	0.0118	0.0014	0.1754	0.2635	0.1417	0.808	0.6368	0.2635	0.0119	0.1758	0.0168	0.9936	0.8331	0.8331	0.9936	0.3281	0.9596	0.3287	0.8718	

PM – FF Only Sites

Pearson Correlation Coefficients, N = 30 Prob > r under H0: Rho=0																					
	AM_TRIPS	LN_AM	AM_Trips_Pump	LOC	FF	FUEL	DIESEL	SQFT	FF	FF_SQFT	TOT_SQFT	SEATS	INT_AADT	TOT_AADT	tot_AADT_1000	int_AADT_1000	V_PARK	T_PARK	WASH	INT	DRIVE
PM_TRIPS																					
PM_TRIPS																					
LN_PM	0.98404																				
LN_PM	<.0001																				
PM_Trips_Pump	0.82944	0.80559																			
PM_Trips_Pump	0.0001	0.0003																			
LOC	0.14853	0.09865	0.36311																		
LOC	0.5973	0.7265	0.1834																		
FF																					
FF																					
FUEL	-0.06493	-0.03534	-0.56265	-0.20067																	
FUEL	0.8182	0.9005	0.029	0.4733																	
DIESEL	0.26995	0.27568	0.32009	0.24636		-0.30486															
DIESEL	0.3305	0.32	0.2448	0.3761		0.2692															
SQFT	0.23731	0.26823	0.16616			0.06228	0.34405														
SQFT	0.3944	0.3337	0.554	0.34217		0.8255	0.2092														
FF																					
FF																					
FF_SQFT	0.18552	0.18539	0.05965	0.10537		0.09196	0.53187	0.77325													
FF_SQFT	0.508	0.5083	0.8328	0.7086		0.7445	0.0413	0.0007													
TOT_SQFT	0.23416	0.25792	0.14445	0.29261		0.07347	0.4125	0.98437	0.87283												
TOT_SQFT	0.4009	0.3533	0.6075	0.2899		0.7947	0.1265	<.0001	<.0001												
SEATS	0.39075	0.36973	0.28855	0.29983		0.00684	0.51443	0.59134	0.45401	0.5812											
SEATS	0.1498	0.175	0.297	0.2776		0.9807	0.0498	0.0202	0.0891	0.0231											
INT_AADT	0.42016	0.42375	0.45588	0.69357		-0.03962	0.49006	0.6093	0.55738	0.62373	0.3106										
INT_AADT	0.1189	0.1155	0.0877	0.0041		0.8885	0.0637	0.0159	0.0309	0.013	0.2599										
TOT_AADT	0.63175	0.62782	0.5904	0.58377		0.0217	0.29252	0.48083	0.47925	0.50316	0.28452	0.78361									
TOT_AADT	0.0115	0.0122	0.0205	0.0223		0.9388	0.29	0.0696	0.0707	0.0559	0.3041	0.0005	1								
tot_AADT_1000	0.63175	0.62782	0.5904	0.58377		0.0217	0.29252	0.48083	0.47925	0.50316	0.28452	0.78361	0.0005	<.0001							
tot_AADT_1000	0.0115	0.0122	0.0205	0.0223		0.9388	0.29	0.0696	0.0707	0.0559	0.3041	0.0005	<.0001	<.0001							
int_AADT_1000	0.42016	0.42375	0.45588	0.69357		-0.03962	0.49006	0.6093	0.55738	0.62373	0.3106	1	0.78361	0.78361							
int_AADT_1000	0.1189	0.1155	0.0877	0.0041		0.8885	0.0637	0.0159	0.0309	0.013	0.2599	<.0001	0.0005	0.0005							
V_PARK	0.37441	0.38444	0.28247	0.35999		-0.03772	0.51696	0.79549	0.6366	0.78903	0.82762	0.48769	0.45055	0.45055	0.48769						
V_PARK	0.1692	0.1571	0.3077	0.1875		0.8938	0.0485	0.0004	0.0107	0.0005	0.0001	0.0652	0.0919	0.0919	0.0652						
T_PARK	0.29789	0.28755	0.30457	0.46611		-0.18113	0.81619		0.75149	0.76695	0.76117	0.615	0.50861	0.50861	0.615	0.87011					
T_PARK	0.2809	0.2987	0.2697	0.0799		0.5183	0.0002	0.72535	0.0012	0.0008	0.001	0.0147	0.0529	0.0529	0.0147	<.0001					
WASH	0.11622	0.12804	0.24387	0.61237		0.06144	-0.45978	-0.00694	-0.40876	-0.11886	-0.15996	0.33906	0.40183	0.40183	0.33906	-0.08916	-0.25598				
WASH	0.68	0.6493	0.3811	0.0152		0.8278	0.0846	0.9804	0.1303	0.6731	0.569	0.2164	0.1376	0.1376	0.2164	0.752	0.3571				
INT	0.29094	0.34	0.29153	0.51962		0.05793	0.37591	0.50099	0.34941	0.48262	0.11213	0.85857	0.55873	0.55873	0.85857	0.24133	0.36202	0.35355			
INT	0.2928	0.215	0.2918	0.0471		0.8375	0.1673	0.0571	0.2018	0.0684	0.6907	<.0001	0.0304	0.0304	<.0001	0.3862	0.1849	0.1961			
DRIVE	0.59092	0.59865	0.53688	-0.32733		-0.08758	-0.32064	0.02601	-0.07297	-0.00024	0.05576	-0.04524	0.15665	0.15665	-0.04524	-0.05101	-0.27487	0.13363	-0.09449		
DRIVE	0.0204	0.0184	0.0391	0.2337		0.7563	0.2439	0.9267	0.7961	0.9993	0.8435	0.8728	0.5772	0.5772	0.8728	0.8567	0.3215	0.6349	0.7377		

PM – Non-FF Only Sites

Pearson Correlation Coefficients, N = 30 Prob > r under H0: Rho=0																					
	AM_TRIPS	LN_AM	AM_Trips_Pump	LOC	FF	FUEL	DIESEL	SQFT	FF	FF_SQFT	TOT_SQFT	SEATS	INT_AADT	TOT_AADT	tot_AADT_1000	int_AADT_1000	V_PARK	T_PARK	WASH	INT	DRIVE
PM_TRIPS																					
PM_TRIPS																					
LN_PM	0.98302																				
LN_PM	<.0001																				
PM_Trips_Pump	0.60054	0.66359																			
PM_Trips_Pump	0.0507	0.026																			
LOC	0.12877	0.19609	0.12915																		
LOC	0.7059	0.5634	0.7051																		
FF	.	.	.	.																	
FF	.	.	.	.																	
FUEL	0.17093	0.06166	-0.61922	-0.1875	.																
FUEL	0.6153	0.8571	0.0422	0.5809	.																
DIESEL	-0.28602	-0.27161	-0.09606	-0.64655	.	-0.28432															
DIESEL	0.3939	0.4191	0.7787	0.0316	.	0.3968															
SQFT	-0.09355	-0.03366	-0.25498	.	.	0.02782	0.04045														
SQFT	0.7844	0.9217	0.4492	0.33416	.	0.9353	0.906														
FF	.	.	.	.	.	.	.	.													
FF	.	.	.	.	.	.	.	.	.												
FF_SQFT	.	.	.	.	.	.	.	.	.												
FF_SQFT	.	.	.	.	.	.	.	.	.	.											
TOT_SQFT	-0.09355	-0.03366	-0.25498	0.33416	.	0.02782	0.04045	1	.	.											
TOT_SQFT	0.7844	0.9217	0.4492	0.3152	.	0.9353	0.906	<.0001	.	.											
SEATS	.	.	.	.	.	.	.	.	.	.											
SEATS	.	.	.	.	.	.	.	.	.	.	.										
INT_AADT	0.32085	0.30127	0.30472	-0.03792	.	0.09687	-0.25361	-0.50198	.	.	-0.50198	.									
INT_AADT	0.336	0.368	0.3622	0.9119	.	0.7769	0.4518	0.1156	.	.	0.1156	.									
TOT_AADT	0.38819	0.37902	0.48717	0.25921	.	-0.1336	-0.38097	-0.4725	.	.	-0.4725	.	0.9043								
TOT_AADT	0.2381	0.2503	0.1285	0.4415	.	0.6953	0.2477	0.1422	.	.	0.1422	.	0.0001								
tot_AADT_1000	0.38819	0.37902	0.48717	0.25921	.	-0.1336	-0.38097	-0.4725	.	.	-0.4725	.	0.9043	1							
tot_AADT_1000	0.2381	0.2503	0.1285	0.4415	.	0.6953	0.2477	0.1422	.	.	0.1422	.	0.0001	<.0001							
int_AADT_1000	0.32085	0.30127	0.30472	-0.03792	.	0.09687	-0.25361	-0.50198	.	.	-0.50198	.	1	0.9043	0.9043						
int_AADT_1000	0.336	0.368	0.3622	0.9119	.	0.7769	0.4518	0.1156	.	.	0.1156	.	<.0001	0.0001	0.0001						
V_PARK	0.55061	0.60758	0.22114	0.3253	.	0.04457	0.02232	0.63918	.	.	0.63918	.	0.05491	0.10753	0.10753	0.05491					
V_PARK	0.0792	0.0474	0.5135	0.329	.	0.8965	0.9481	0.0342	.	.	0.0342	.	0.8726	0.753	0.753	0.8726					
T_PARK	-0.29753	-0.30865	-0.18988	-0.52234	.	-0.1707	0.75182	.	.	.	0.21242	.	-0.11074	-0.23478	-0.23478	-0.11074	0.01804				
T_PARK	0.3742	0.3557	0.576	0.0993	.	0.6158	0.0076	0.21242	.	.	0.5306	.	0.7458	0.4871	0.4871	0.7458	0.958				
WASH	-0.08555	-0.01464	0.21722	0.08671	.	-0.18678	-0.09559	0.1219	.	.	0.1219	.	0.03024	0.07635	0.07635	0.03024	0.19461	-0.37052			
WASH	0.8025	0.9659	0.5211	0.7999	.	0.5824	0.7798	0.7211	.	.	0.7211	.	0.9297	0.8235	0.8235	0.9297	0.5664	0.262			
INT	0.08098	0.00737	-0.22436	-0.35603	.	0.49971	-0.07916	-0.36563	.	.	-0.36563	.	0.77408	0.51168	0.51168	0.77408	-0.10702	0.21939	-0.31053		
INT	0.8129	0.9829	0.5072	0.2825	.	0.1176	0.817	0.2688	.	.	0.2688	.	0.0052	0.1076	0.1076	0.0052	0.7541	0.5169	0.3527		
DRIVE	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
DRIVE	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

PM – Hybrid Only Sites

Pearson Correlation Coefficients, N = 30 Prob > r under H0: Rho=0																					
	AM_TRIPS	LN_AM	AM_Trips_Pump	LOC	FF	FUEL	DIESEL	SQFT	FF	FF_SQFT	TOT_SQFT	SEATS	INT_AADT	TOT_AADT	tot_AADT_1000	int_AADT_1000	V_PARK	T_PARK	WASH	INT	DRIVE
PM_TRIPS																					
PM_TRIPS																					
LN_PM	0.99944																				
LN_PM	0.0006																				
PM_Trips_Pump	0.92718	0.91509																			
LOC	0.0728	0.0849																			
LOC	0.51798	0.53198	0.22579																		
FF	0.482	0.468	0.7742																		
FF																					
FUEL																					
FUEL	-0.6939	-0.67266	-0.91085	0.17408																	
FUEL	0.3061	0.3273	0.0892	0.8259																	
DIESEL																					
DIESEL																					
SQFT	-0.9547	-0.94421	-0.98647			0.84394															
SQFT	0.0453	0.0558	0.0135	-0.37544		0.1561															
FF																					
FF																					
FF_SQFT																					
FF_SQFT																					
TOT_SQFT	-0.9547	-0.94421	-0.98647	-0.37544		0.84394		1													
TOT_SQFT	0.0453	0.0558	0.0135	0.6246		0.1561		<.0001													
SEATS																					
SEATS																					
INT_AADT	-0.23824	-0.20845	-0.58459	0.54951		0.86092		0.48675		0.48675											
INT_AADT	0.7618	0.7916	0.4154	0.4505		0.1391		0.5132		0.5132											
TOT_AADT	-0.11203	-0.07886	-0.4593	0.43292		0.72763		0.40021		0.40021		0.94021									
TOT_AADT	0.888	0.9211	0.5407	0.5671		0.2724		0.5998		0.5998		0.0598									
tot_AADT_1000	-0.11203	-0.07886	-0.4593	0.43292		0.72763		0.40021		0.40021		0.94021	1								
tot_AADT_1000	0.888	0.9211	0.5407	0.5671		0.2724		0.5998		0.5998		0.0598	<.0001								
int_AADT_1000	-0.23824	-0.20845	-0.58459	0.54951		0.86092		0.48675		0.48675		1	0.94021	0.94021							
int_AADT_1000	0.7618	0.7916	0.4154	0.4505		0.1391		0.5132		0.5132		<.0001	0.0598	0.0598							
V_PARK	0.10148	0.06882	0.40204	-0.21457		-0.6051		-0.38878		-0.38878		-0.80782	-0.95682	-0.95682	-0.80782						
V_PARK	0.8985	0.9312	0.598	0.7854		0.3949		0.6112		0.6112		0.1922	0.0432	0.0432	0.1922						
T_PARK																					
T_PARK																					
WASH	0.35106	0.32738	0.65747	-0.57735		-0.90453		-0.53719		-0.53719		-0.95178	-0.79078	-0.79078	-0.95178	0.59464					
WASH	0.6489	0.6726	0.3425	0.4226		0.0955		0.4628		0.4628		0.0482	0.2092	0.2092	0.0482	0.4054					
INT	-0.35106	-0.32738	-0.65747	0.57735		0.90453		0.53719		0.53719		0.95178	0.79078	0.79078	0.95178	-0.59464			-1		
INT	0.6489	0.6726	0.3425	0.4226		0.0955		0.4628		0.4628		0.0482	0.2092	0.2092	0.0482	0.4054			<.0001		
DRIVE																					
DRIVE																					

PM – Non-FF and Hybrid Sites

Pearson Correlation Coefficients, N = 30 Prob > r under H0: Rho=0																					
	AM_TRIPS	LN_AM	AM_Trips_Pump	LOC	FF	FUEL	DIESEL	SQFT	FF	FF_SQFT	TOT_SQFT	SEATS	INT_AADT	TOT_AADT	tot_AADT_1000	int_AADT_1000	V_PARK	T_PARK	WASH	INT	DRIVE
PM_TRIPS																					
PM_TRIPS																					
LN_PM	0.9851																				
LN_PM	<.0001																				
PM_Trips_Pump	0.85159	0.83743																			
PM_Trips_Pump	<.0001	<.0001																			
LOC	0.29293	0.30499	0.26489																		
LOC	0.2894	0.269	0.34																		
FF	0.80428	0.75235	0.72934	0.21726																	
FF	0.0003	0.0012	0.002	0.4367																	
FUEL	-0.04961	-0.08362	-0.51023	-0.15919	-0.13798																
FUEL	0.8606	0.767	0.052	0.5709	0.6239																
DIESEL	-0.34347	-0.34756	-0.22444	-0.56335	-0.23572	-0.23535															
DIESEL	0.2101	0.2043	0.4213	0.0288	0.3977	0.3985															
SQFT	0.1416	0.18169	-0.03309	0.33405	0.04569	-0.04523															
SQFT	0.6147	0.517	0.9068	0.22366	0.8715	0.8728															
FF	0.80428	0.75235	0.72934	0.21726	1	-0.13798	-0.23572	0.33405													
FF	0.0003	0.0012	0.002	0.4367		0.6239	0.3977	0.2237													
FF_SQFT	.	.	.	.	.	.	.	.													
FF_SQFT	.	.	.	.	.	.	.	.													
TOT_SQFT	0.1416	0.18169	-0.03309	0.22366	0.33405	0.04569	-0.04523	1	0.33405	.											
TOT_SQFT	0.6147	0.517	0.9068	0.4229	0.2237	0.8715	0.8728	<.0001	0.2237	.											
SEATS	.	.	.	.	.	.	.	.	.	.											
SEATS	.	.	.	.	.	.	.	.	.	.											
INT_AADT	0.30097	0.31424	0.1547	0.24224	0.27058	0.14626	-0.22881	-0.06074	0.27058	.	-0.06074	.									
INT_AADT	0.2757	0.254	0.582	0.3844	0.3294	0.603	0.4121	0.8297	0.3294	.	0.8297	.									
TOT_AADT	0.4123	0.42323	0.3288	0.36893	0.34751	-0.04354	-0.3372	-0.05938	0.34751	.	-0.05938	.	0.9248								
TOT_AADT	0.1267	0.116	0.2315	0.176	0.2044	0.8776	0.219	0.8335	0.2044	.	0.8335	.	<.0001								
tot_AADT_1000	0.4123	0.42323	0.3288	0.36893	0.34751	-0.04354	-0.3372	-0.05938	0.34751	.	-0.05938	.	0.9248	1							
tot_AADT_1000	0.1267	0.116	0.2315	0.176	0.2044	0.8776	0.219	0.8335	0.2044	.	0.8335	.	<.0001	<.0001							
int_AADT_1000	0.30097	0.31424	0.1547	0.24224	0.27058	0.14626	-0.22881	-0.06074	0.27058	.	-0.06074	.	1	0.9248	0.9248						
int_AADT_1000	0.2757	0.254	0.582	0.3844	0.3294	0.603	0.4121	0.8297	0.3294	.	0.8297	.	<.0001	<.0001	<.0001						
V_PARK	0.77859	0.75711	0.71911	0.21397	0.83562	-0.1566	-0.19009	0.38185	0.83562	.	0.38185	.	-0.01282	0.04123	0.04123	-0.01282					
V_PARK	0.0006	0.0011	0.0025	0.4438	0.0001	0.5773	0.4974	0.1602	0.0001	.	0.1602	.	0.9638	0.884	0.884	0.9638					
T_PARK	-0.31631	-0.34	-0.24508	-0.45958	-0.1923	-0.13587	0.76232		-0.1923	.	0.11346	.	-0.1248	-0.22569	-0.22569	-0.1248	-0.15508				
T_PARK	0.2507	0.215	0.3787	0.0848	0.4923	0.6292	0.001	0.11346	0.4923	.	0.6872	.	0.6577	0.4186	0.4186	0.6577	0.581				
WASH	-0.09887	-0.07731	0.14789	-0.13074	-0.12309	-0.23192	-0.0491	-0.06759	-0.12309	.	-0.06759	.	-0.36326	-0.26335	-0.26335	-0.36326	0.0896	-0.28208			
WASH	0.7259	0.7842	0.5989	0.6423	0.6621	0.4056	0.862	0.8108	0.6621	.	0.8108	.	0.1832	0.343	0.343	0.1832	0.7508	0.3084			
INT	-0.03333	-0.04907	-0.26974	-0.09629	-0.04029	0.51452	-0.05625	-0.16806	-0.04029	.	-0.16806	.	0.77282	0.54762	0.54762	0.77282	-0.2007	0.19176	-0.49099		
INT	0.9061	0.8621	0.3309	0.7328	0.8866	0.0497	0.8422	0.5494	0.8866	.	0.5494	.	0.0007	0.0346	0.0346	0.0007	0.4732	0.4936	0.0631		
DRIVE	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
DRIVE	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

APPENDIX H – SAS OUTPUT

AM – All Sites

Simple Statistics							
Variable	N	Mean	Std Dev	Sum	Minimum	Maximum	Label
AM_TRIPS	30	211.2	98.3654	6336	58	472	AM TRIPS
LN_AM	30	5.23718	0.50901	157.11546	4.06044	6.15698	LN_AM
AM_Trips_Pump	30	16.88556	10.29059	506.56667	2.41667	47.2	
LOC	30	2.1	0.84486	63	1	3	LOC
FF	30	0.76667	0.67891	23	0	2	FF
FUEL	30	13.86667	4.16664	416	8	24	FUEL
DIESEL	30	2.56667	4.08262	77	0	13	DIESEL
SQFT	30	4761	3202	142830	150	17250	SQFT
FF_SQFT	30	0.76667	0.67891	23	0	2	FF
FF_SQFT	30	1497	1884	44910	0	6500	FF SQFT
TOT_SQFT	30	6258	4495	187740	2200	23750	TOT SQFT
SEATS	30	30	46.03447	900	0	188	SEATS
INT_AADT	30	36238	37664	1087133	0	132000	INT_AADT
TOT_AADT	30	67244	43527	2017332	13471	205890	TOT_AADT
tot_AADT_1000	30	67.2444	43.52669	2017	13.471	205.89	
int_AADT_1000	30	36.23777	37.66415	1087	0	132	
V_PARK	30	41.53333	38.878	1246	10	225	V_PARK
T_PARK	30	19.63333	56.11778	589	0	270	T_PARK
WASH	30	0.4	0.49827	12	0	1	WASH
INT	30	0.6	0.49827	18	0	1	INT
DRIVE	30	0.26667	0.44978	8	0	1	DRIVE
p_critical =		0.10		Corr_Critical=		0.4	

AM – FF Only Sites

Simple Statistics							
Variable	N	Mean	Std Dev	Sum	Minimum	Maximum	Label
AM_TRIPS	15	234.66667	100.01905	3520	90	472	AM TRIPS
LN_AM	15	5.36966	0.44783	80.54489	4.49981	6.15698	LN_AM
AM_Trips_Pump	15	20.89611	11.88076	313.44167	7.5	47.2	
LOC	15	2	0.84515	30	1	3	LOC
FF	15	1	0	15	1	1	FF
FUEL	15	12.26667	3.36933	184	8	20	FUEL
DIESEL	15	4.26667	4.80278	64	0	13	DIESEL
SQFT	15	5126	4424	76890	150	17250	SQFT
FF_SQFT	15	1	0	15	1	1	FF
FF_SQFT	15	2994	1596	44910	1260	6500	FF SQFT
TOT_SQFT	15	8120	5748	121800	2200	23750	TOT SQFT
SEATS	15	60	49.60991	900	0	188	SEATS
INT_AADT	15	37643	32091	564651	0	89000	INT_AADT
TOT_AADT	15	65683	31164	985244	18425	115268	TOT_AADT
tot_AADT_1000	15	65.68293	31.16425	985.244	18.425	115.268	
int_AADT_1000	15	37.6434	32.09072	564.651	0	89	
V_PARK	15	55.53333	49.53623	833	20	225	V_PARK
T_PARK	15	37.66667	76.1546	565	0	270	T_PARK
WASH	15	0.2	0.41404	3	0	1	WASH
INT	15	0.66667	0.48795	10	0	1	INT
DRIVE	15	0.53333	0.5164	8	0	1	DRIVE
p_critical =		0.10		Corr_Critical=		0.4	

AM – Non-FF Only Sites

Simple Statistics							
Variable	N	Mean	Std Dev	Sum	Minimum	Maximum	Label
AM_TRIPS	11	144.72727	65.50281	1592	58	272	AM TRIPS
LN_AM	11	4.88213	0.45607	53.70345	4.06044	5.6058	LN_AM
AM_Trips_Pump	11	9.88149	4.92198	108.69643	2.41667	20	
LOC	11	2.09091	0.83121	23	1	3	LOC
FF	11	0	0	0	0	0	FF
FUEL	11	15.81818	5.01634	174	10	24	FUEL
DIESEL	11	1.18182	2.63887	13	0	7	DIESEL
SQFT	11	4167	1185	45840	2400	7000	SQFT
FF_SQFT	11	0	0	0	0	0	FF_SQFT
TOT_SQFT	11	4167	1185	45840	2400	7000	TOT_SQFT
SEATS	11	0	0	0	0	0	SEATS
INT_AADT	11	27953	34574	307482	0	104000	INT_AADT
TOT_AADT	11	57814	44298	635951	13471	153194	TOT_AADT
tot_AADT_1000	11	57.81373	44.29764	635.951	13.471	153.194	
int_AADT_1000	11	27.95291	34.57388	307.482	0	104	
V_PARK	11	19.72727	6.01815	217	10	30	V_PARK
T_PARK	11	2.18182	6.03023	24	0	20	T_PARK
WASH	11	0.63636	0.50452	7	0	1	WASH
INT	11	0.54545	0.52223	6	0	1	INT
DRIVE	11	0	0	0	0	0	DRIVE
p_critical =		0.10		Corr_Critical=		0.4	

AM – Hybrid Only Sites

Simple Statistics							
Variable	N	Mean	Std Dev	Sum	Minimum	Maximum	Label
AM_TRIPS	4	306	40.09988	1224	252	342	AM TRIPS
LN_AM	4	5.71678	0.1366	22.86711	5.52943	5.83481	LN_AM
AM_Trips_Pump	4	21.10714	0.37372	84.42857	20.625	21.42857	
LOC	4	2.5	1	10	1	3	LOC
FF	4	2	0	8	2	2	FF
FUEL	4	14.5	1.91485	58	12	16	FUEL
DIESEL	4	0	0	0	0	0	DIESEL
SQFT	4	5025	1021	20100	3500	5600	SQFT
FF_SQFT	4	2	0	8	2	2	FF_SQFT
TOT_SQFT	4	5025	1021	20100	3500	5600	TOT_SQFT
SEATS	4	0	0	0	0	0	SEATS
INT_AADT	4	53750	65209	215000	0	132000	INT_AADT
TOT_AADT	4	99034	74533	396137	45349	205890	TOT_AADT
tot_AADT_1000	4	99.03425	74.53321	396.137	45.349	205.89	
int_AADT_1000	4	53.75	65.20928	215	0	132	
V_PARK	4	49	15.53491	196	26	60	V_PARK
T_PARK	4	0	0	0	0	0	T_PARK
WASH	4	0.5	0.57735	2	0	1	WASH
INT	4	0.5	0.57735	2	0	1	INT
DRIVE	4	0	0	0	0	0	DRIVE
p_critical =		0.10		Corr_Critical=		0.4	

AM – Non-FF and Hybrid Sites

Simple Statistics							
Variable	N	Mean	Std Dev	Sum	Minimum	Maximum	Label
AM_TRIPS	15	187.73333	94.1211	2816	58	342	AM TRIPS
LN_AM	15	5.1047	0.54638	76.57057	4.06044	5.83481	LN_AM
AM_Trips_Pump	15	12.875	6.61342	193.125	2.41667	21.42857	
LOC	15	2.2	0.86189	33	1	3	LOC
FF	15	0.53333	0.91548	8	0	2	FF
FUEL	15	15.46667	4.37308	232	10	24	FUEL
DIESEL	15	0.86667	2.29492	13	0	7	DIESEL
SQFT	15	4396	1175	65940	2400	7000	SQFT
FF	15	0.53333	0.91548	8	0	2	FF
FF_SQFT	15	0	0	0	0	0	FF_SQFT
TOT_SQFT	15	4396	1175	65940	2400	7000	TOT_SQFT
SEATS	15	0	0	0	0	0	SEATS
INT_AADT	15	34832	43640	522482	0	132000	INT_AADT
TOT_AADT	15	68806	54296	1032088	13471	205890	TOT_AADT
tot_AADT_1000	15	68.80587	54.29583	1032	13.471	205.89	
int_AADT_1000	15	34.83213	43.64007	522.482	0	132	
V_PARK	15	27.53333	16.03508	413	10	60	V_PARK
T_PARK	15	1.6	5.1934	24	0	20	T_PARK
WASH	15	0.6	0.50709	9	0	1	WASH
INT	15	0.53333	0.5164	8	0	1	INT
DRIVE	15	0	0	0	0	0	DRIVE
		p_critical =		0.10	Corr_Critical=		0.4

PM – All Sites

Simple Statistics							
Variable	N	Mean	Std Dev	Sum	Minimum	Maximum	Label
PM_TRIPS	30	246.53333	96.05449	7396	104	432	PM TRIPS
LN_PM	30	5.42831	0.41421	162.84919	4.64439	6.06843	LN_PM
PM_Trips_Pump	30	19.46242	9.80456	583.87262	4.33333	43.2	
LOC	30	2.1	0.84486	63	1	3	LOC
FF	30	0.76667	0.67891	23	0	2	FF
FUEL	30	13.86667	4.16664	416	8	24	FUEL
DIESEL	30	2.56667	4.08262	77	0	13	DIESEL
SQFT	30	4761	3202	142830	150	17250	SQFT
FF	30	0.76667	0.67891	23	0	2	FF
FF_SQFT	30	1497	1884	44910	0	6500	FF_SQFT
TOT_SQFT	30	6258	4495	187740	2200	23750	TOT_SQFT
SEATS	30	30	46.03447	900	0	188	SEATS
INT_AADT	30	36238	37664	1087133	0	132000	INT_AADT
TOT_AADT	30	67244	43527	2017332	13471	205890	TOT_AADT
tot_AADT_1000	30	67.2444	43.52669	2017	13.471	205.89	
int_AADT_1000	30	36.23777	37.66415	1087	0	132	
V_PARK	30	41.53333	38.878	1246	10	225	V_PARK
T_PARK	30	19.63333	56.11778	589	0	270	T_PARK
WASH	30	0.4	0.49827	12	0	1	WASH
INT	30	0.6	0.49827	18	0	1	INT
DRIVE	30	0.26667	0.44978	8	0	1	DRIVE
		p_critical =		0.10	Corr_Critical=		0.4

PM – FF Only Sites

Simple Statistics							
Variable	N	Mean	Std Dev	Sum	Minimum	Maximum	Label
PM_TRIPS	15	267.2	95.59677	4008	124	432	PM TRIPS
LN_PM	15	5.51985	0.39708	82.79773	4.82028	6.06843	LN PM
PM_Trips_Pump	15	23.28667	10.42739	349.3	9.2	43.2	
LOC	15	2	0.84515	30	1	3	LOC
FF	15	1	0	15	1	1	FF
FUEL	15	12.26667	3.36933	184	8	20	FUEL
DIESEL	15	4.26667	4.80278	64	0	13	DIESEL
SQFT	15	5126	4424	76890	150	17250	SQFT
FF	15	1	0	15	1	1	FF
FF_SQFT	15	2994	1596	44910	1260	6500	FF SQFT
TOT_SQFT	15	8120	5748	121800	2200	23750	TOT SQFT
SEATS	15	60	49.60991	900	0	188	SEATS
INT_AADT	15	37643	32091	564651	0	89000	INT_AADT
TOT_AADT	15	65683	31164	985244	18425	115268	TOT AADT
tot_AADT_1000	15	65.68293	31.16425	985.244	18.425	115.268	
int_AADT_1000	15	37.6434	32.09072	564.651	0	89	
V_PARK	15	55.53333	49.53623	833	20	225	V PARK
T_PARK	15	37.66667	76.1546	565	0	270	T PARK
WASH	15	0.2	0.41404	3	0	1	WASH
INT	15	0.66667	0.48795	10	0	1	INT
DRIVE	15	0.53333	0.5164	8	0	1	DRIVE
		p_critical =		0.10	Corr_Critical=		0.4

PM – Non-FF Only Sites

Simple Statistics							
Variable	N	Mean	Std Dev	Sum	Minimum	Maximum	Label
PM_TRIPS	11	181.27273	62.34275	1994	104	324	PM TRIPS
LN_PM	11	5.15093	0.3235	56.66023	4.64439	5.78074	LN PM
PM_Trips_Pump	11	12.37294	5.1153	136.10238	4.33333	22.8	
LOC	11	2.09091	0.83121	23	1	3	LOC
FF	11	0	0	0	0	0	FF
FUEL	11	15.81818	5.01634	174	10	24	FUEL
DIESEL	11	1.18182	2.63887	13	0	7	DIESEL
SQFT	11	4167	1185	45840	2400	7000	SQFT
FF	11	0	0	0	0	0	FF
FF_SQFT	11	0	0	0	0	0	FF SQFT
TOT_SQFT	11	4167	1185	45840	2400	7000	TOT SQFT
SEATS	11	0	0	0	0	0	SEATS
INT_AADT	11	27953	34574	307482	0	104000	INT_AADT
TOT_AADT	11	57814	44298	635951	13471	153194	TOT AADT
tot_AADT_1000	11	57.81373	44.29764	635.951	13.471	153.194	
int_AADT_1000	11	27.95291	34.57388	307.482	0	104	
V_PARK	11	19.72727	6.01815	217	10	30	V PARK
T_PARK	11	2.18182	6.03023	24	0	20	T PARK
WASH	11	0.63636	0.50452	7	0	1	WASH
INT	11	0.54545	0.52223	6	0	1	INT
DRIVE	11	0	0	0	0	0	DRIVE
		p_critical =		0.10	Corr_Critical=		0.4

PM – Hybrid Only Sites

Simple Statistics							
Variable	N	Mean	Std Dev	Sum	Minimum	Maximum	Label
PM_TRIPS	4	348.5	44.40345	1394	314	410	PM_TRIPS
LN_PM	4	5.84781	0.12333	23.39123	5.74939	6.01616	LN_PM
PM_Trips_Pump	4	24.61756	6.46324	98.47024	19.875	34.16667	
LOC	4	2.5	1	10	1	3	LOC
FF	4	2	0	8	2	2	FF
FUEL	4	14.5	1.91485	58	12	16	FUEL
DIESEL	4	0	0	0	0	0	DIESEL
SQFT	4	5025	1021	20100	3500	5600	SQFT
FF	4	2	0	8	2	2	FF
FF_SQFT	4	0	0	0	0	0	FF_SQFT
TOT_SQFT	4	5025	1021	20100	3500	5600	TOT_SQFT
SEATS	4	0	0	0	0	0	SEATS
INT_AADT	4	53750	65209	215000	0	132000	INT_AADT
TOT_AADT	4	99034	74533	396137	45349	205890	TOT_AADT
tot_AADT_1000	4	99.03425	74.53321	396.137	45.349	205.89	
int_AADT_1000	4	53.75	65.20928	215	0	132	
V_PARK	4	49	15.53491	196	26	60	V_PARK
T_PARK	4	0	0	0	0	0	T_PARK
WASH	4	0.5	0.57735	2	0	1	WASH
INT	4	0.5	0.57735	2	0	1	INT
DRIVE	4	0	0	0	0	0	DRIVE

p_critical =

0.10

Corr_Critical=

0.4

PM – Non-FF and Hybrid Sites

Simple Statistics							
Variable	N	Mean	Std Dev	Sum	Minimum	Maximum	Label
PM_TRIPS	15	225.86667	95.17343	3388	104	410	PM_TRIPS
LN_PM	15	5.33676	0.42399	80.05146	4.64439	6.01616	LN_PM
PM_Trips_Pump	15	15.63817	7.68477	234.57262	4.33333	34.16667	
LOC	15	2.2	0.86189	33	1	3	LOC
FF	15	0.53333	0.91548	8	0	2	FF
FUEL	15	15.46667	4.37308	232	10	24	FUEL
DIESEL	15	0.86667	2.29492	13	0	7	DIESEL
SQFT	15	4396	1175	65940	2400	7000	SQFT
FF	15	0.53333	0.91548	8	0	2	FF
FF_SQFT	15	0	0	0	0	0	FF_SQFT
TOT_SQFT	15	4396	1175	65940	2400	7000	TOT_SQFT
SEATS	15	0	0	0	0	0	SEATS
INT_AADT	15	34832	43640	522482	0	132000	INT_AADT
TOT_AADT	15	68806	54296	1032088	13471	205890	TOT_AADT
tot_AADT_1000	15	68.80587	54.29583	1032	13.471	205.89	
int_AADT_1000	15	34.83213	43.64007	522.482	0	132	
V_PARK	15	27.53333	16.03508	413	10	60	V_PARK
T_PARK	15	1.6	5.1934	24	0	20	T_PARK
WASH	15	0.6	0.50709	9	0	1	WASH
INT	15	0.53333	0.5164	8	0	1	INT
DRIVE	15	0	0	0	0	0	DRIVE

p_critical =

0.10

Corr_Critical=

0.4

APPENDIX I – USER’S GUIDE

Traffic Operational Impacts of Contemporary Multi-pump Fueling Centers

A Supplement to the ITE Trip Generation Handbook

INTRODUCTION

Newer, contemporary fueling centers have many commodities that traditional fueling centers do not offer. Pay at the pump, increased numbers of fueling islands, car wash facilities, convenience markets, and fast food restaurants at these updated gas station facilities have brought increased numbers of trips as fueling and dining becomes more 'convenient'. However, methods based on outdated data on more traditional types of fueling centers may not be good indicators of trips generated at more contemporary types of facilities and therefore underestimate actual trips. In addition, methods used in the ITE Trip Generation Handbook, 7th Edition, for Land Uses 945 and 946, do not provide trip generation equations because the scatter plot of information varies widely¹, indicated by significantly low R^2 values. Only average rates are given, and these averages may not represent trips for the newer fueling centers for North Carolina installations.

If the magnitude of the trips generated at these newer facilities is accurately predicted, the placement of access points and installation of roadway treatments could be accounted for during the initial review phase. This planning could help alleviate the risk of spillback into adjacent roadways and collisions.

WHEN TO USE

The trip generation equations documented in this document should **only** be applied to fuel centers with **ten or more fueling positions**. A site with less than ten pumps should apply the ITE Handbook rates as currently recommended by NCDOT. AM and PM peak hour equations are available to be applied to sites with ten or more fueling positions.

TRIP GENERATION MODELS

$$\text{AM Trips} = (0.625 * \text{ADT}) + (128 * \text{Hybrid}) + (136 * \text{Drive Through}) + 116$$

$$[R^2 = 0.591]$$

$$\text{PM Trips} = (0.654 * \text{ADT}) + (130 * \text{Hybrid}) + (119 * \text{Drive Through}) + 153$$

$$[R^2 = 0.558]$$

Where:

¹ Trip Gen Handbook Second Edition – An ITE Recommended Practice

ADT, Average Daily Traffic (in thousands of vehicles). The ADT represents traffic "exposure" at a given site and should be composed of a maximum of three volumes, including:

1. Primary Street ADT (minimum)
2. Side Street ADT (utilized for a fuel center located at an intersection)
3. Full Access Control Facility ADT (utilized for a fuel center located within one mile of a freeway interchange). Examples of this criterion are a fuel centers located within one mile of an interchange with I-40, I-85, I-95, or other full access control facilities. However, full access control loops, such as I-440 in Raleigh, I-240 in Asheville, I-485 in Charlotte, should not be included in the ADT exposure because of differences in travel/trip patterns along these loops. The drivers on loops tend to be local commuters, particularly during the peak hour, who typically choose fuel centers along surface streets near their origin or destination.

Hybrid. Yes = 1, No = 0. Hybrid sites typically offer the following services: convenience market, fast food (store brand which are not found at stand-alone facilities), indoor and outdoor seating, pay at the pump, order at the pump, and car wash. For the calculation of trips, a hybrid site cannot have the presence of a drive through window.

Drive Through. Yes = 1, No = 0. At a fast food restaurant, is a drive through window present?

ADDITIONAL INFORMATION

In addition to trip generation, the analyst should know the following information:

	Pass-by trips (%)		Truck Trips (trips/FP)	
	AM	PM	AM	PM
FF	61	54	6.22	8.03
Non-FF	72	69		
Hybrid	53	53		

CASE STUDY

The fuel center in Figure 2 consists of a fueling center with a stand-alone type fast food restaurant, convenience market, ten vehicle fueling positions, and eight heavy vehicle fueling positions. The facility will primarily serve vehicular traffic; therefore, this facility should be analyzed using this trip generation methodology. The fast food restaurant is expected to be 6,500 square feet and will have a drive through window. The convenience market is expected to be 5,000 square feet. The fuel center site is located at the intersection of A Street and B Street which is about 4,000 feet from the interchange with I-40. A Street has an ADT of 10,000, B Street has an ADT of 16,000, and I-40 has an ADT of 85,000 vpd.

TRIP GENERATION CALCULATION

In the calculation of trips, the values of three variables are needed: ADT, Hybrid, and Drive Through. The ADT variable is defined as the ADT "Exposure" of the site, which will include the ADT of A Street and B Street because the fuel center has direct access to both streets. The ADT of I-40 should also be included since the fuel center is within one mile of the interchange.

Therefore, the ADT term will be the sum of the three ADT's divided by 1,000: $(10,000 + 16,000 + 85,000) / 1,000 = 111$. The Hybrid term will be zero since the site is not a hybrid site due to the presence of a stand-alone type fast food restaurant. The fast food restaurant has a drive through; therefore, the Drive Through term will be equal to one.

$$\begin{aligned}\text{AM Trips} &= (0.625 * \text{ADT}) + (128 * \text{Hybrid}) + (136 * \text{Drive Through}) + 116 \\ &= (0.625 * 111) + (128 * 0) + (136 * 1) + 116 \\ &= 69.4 + 0 + 136 + 116\end{aligned}$$

$$\text{AM Trips} = 321 \text{ trips in the AM peak hour}$$

$$\begin{aligned}\text{PM Trips} &= (0.654 * \text{ADT}) + (130 * \text{Hybrid}) + (119 * (\text{Drive Through}) + 153 \\ &= (0.654 * 111) + (130 * 0) + (119 * 1) + 153 \\ &= 72.6 + 0 + 119 + 153\end{aligned}$$

$$\text{PM Trips} = 345 \text{ trips in the PM peak hour}$$

Based on the given site characteristics and traffic conditions, 321 trips are predicted in the AM peak hour and 345 trips are predicted in the PM peak hour.

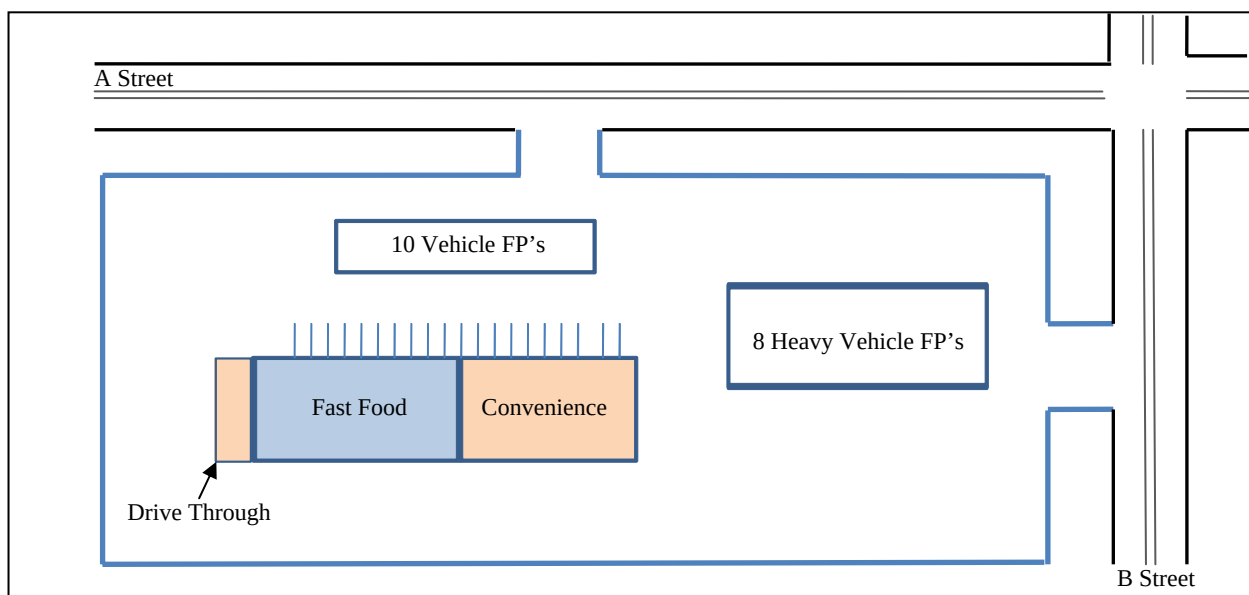


Figure 2: Fuel Center Site Sketch