

A Traffic Impact Analysis of:

Tank Farm at 3700 Okeechobee Rd

Located in:

St. Lucie County, Florida

Prepared for:

Troil South LLC

Prepared by:



GIANGRANDE
Engineering & Planning

Engineering Business License: 30901

710 SE Ocean Blvd.

Stuart FL, 34994

772.888.9076

Prepared:

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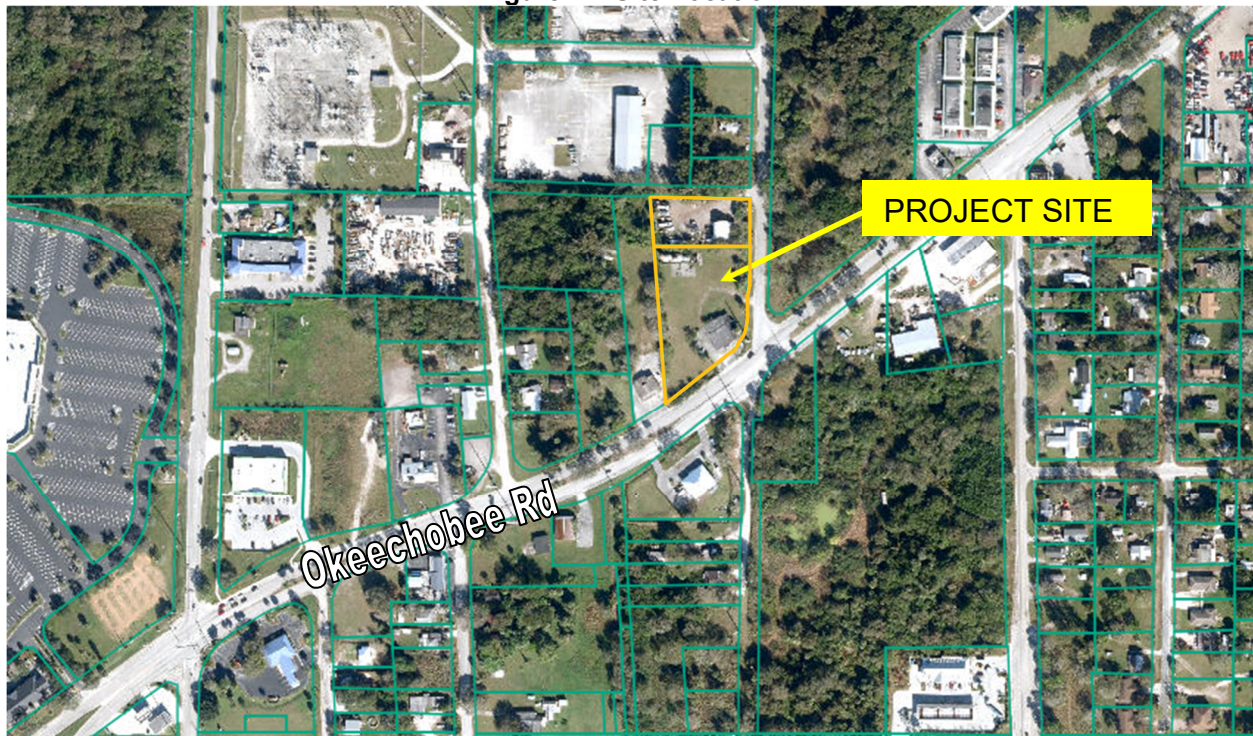
3700 Okeechobee Rd Schematic Site Plan
St. Lucie County 2024 Roadway Level of Service Inventory Report
ITE Trip Generation equations

Purpose and Applicability

Giangrande Engineering and Planning has been requested to perform a traffic impact analysis in support of the proposed Tank Farm at 3700 Okeechobee Rd in St. Lucie County, Florida. The development site is 1.73 acres in size located on the intersection of Okeechobee Rd and 37th St. This project proposes one building which will include one 9,600 SF industrial building which includes 600 SF of office space, all serviced by adjacent parking. A revised site plan has been included in the **Appendix**.

The site is located on the intersection of Okeechobee Road and 37th Street. The St. Lucie County Parcel Identification Numbers are 2417-331-0001-000-0, and 2417-331-0010-000-6. **Figure 1** below details the location of the site in relation to the surrounding roadway network.

Figure 1 – Site Location



TRIP GENERATION

The peak hour traffic generation for the site was available from the Institute of Transportation Engineers (ITE) *Trip Generation Manual*, 11th Edition for Warehousing (ITE Code 150) and for Small Office Building (ITE Code 712). The full build-out development will replace an existing small office building with an industrial building used for warehousing and some office unit space as described in the *Introduction*. Pass-by reduction percentages were not utilized for this type of land use. The calculation of the trip generation is summarized below in **Table 1**.

Table 1 – Proposed Trip Generation

Tank Farm at 3700 Okeechobee Rd										
11th Generation ITE Generation Rates										
	ITE Code	Type	Amount	AM			PM			ADT
				In	Out	Total	In	Out	Total	Total
(+) Proposed	150	Light Industrial	9,600 SF	21	7	28	8	22	30	66
(-) Existing	712	Small Office Building	3,745 SF	5	1	6	5	7	12	54
		Total		16	6	22	3	15	18	12

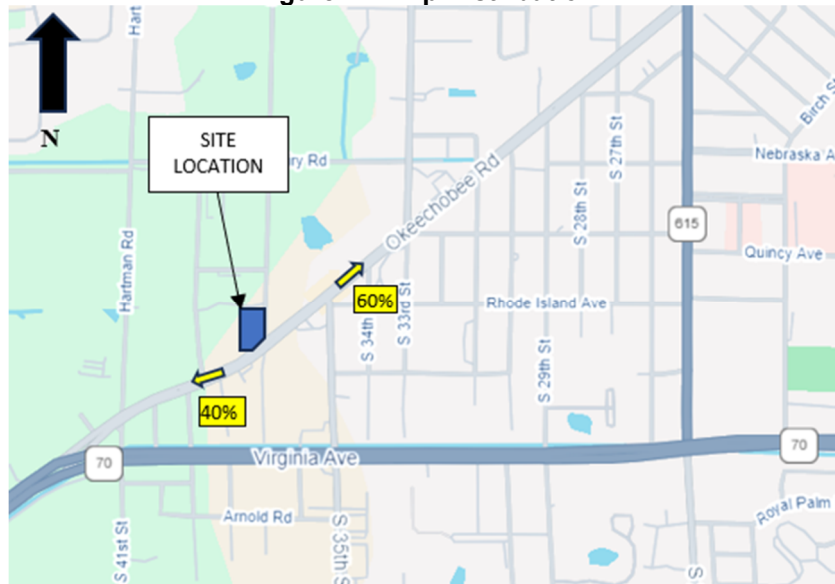
The equations utilized in the trip generation are provided in the appendix of this report.

TRIP DISTRIBUTION

The distribution of trips generally assumes that 60% of the traffic generated from the project will leave the site and travel eastbound on Okeechobee Rd, and 40% of the traffic heading westbound.

The development of the trip distributions from the project site to the surrounding communities were based on the location of population and major roadways within the vicinity of the project. Assumptions made in previous traffic studies in the area were also taken into account for the project. **Figure 2** is provided as a graphical representation of the trip distribution percentages to roadway links and intersections within the project vicinity. Project trip distribution can also be viewed in **Table 2**.

Figure 2 – Trip Distribution



BACKGROUND & BUILD-OUT CONDITIONS

Background conditions for the completion year, 2024, have been calculated using the annual growth percentages shown in **Table 2**. The growth factor of 2% was utilized with consideration of the information contained in the St. Lucie County 2023 Roadway Level of Service Inventory Reports. The recent LOS reports provide a negative short term growth rate. The applicable pages can be found in the **Appendix**.

Table 2 – Build-out Calculation

Road Name	From	To	Type	2024 AADT	2024 PH (dir) Existing	2024 Gen. LOS	Annual Growth	2029 PH (dir) Growth	Project Assign.	Project Trips	2029 PH (dir) Build-out	Service Volume*	Project % of Service	2% Test	Concurrency Test
Okeechobee Rd (EB)	site	33rd St	2-ln	15,615	813	D	2.00%	898	60%	10	907	1,630	0.6%	33	OK
Okeechobee Rd (WB)	site	Hartman Rd	2-ln	13,178	681	C	2.00%	752	40%	6	758	1,630	0.4%	33	OK

CONCURRENCY REQUIREMENTS

The St. Lucie County has adopted a Concurrency Management System. Included in the ordinance are specific requirements for determining the extent of the study area and the links impacted by the development. Project trips have been added to the 2029 growth trips to determine build-out trips. Links must be included in the analysis if they consume at least 2% of the service volume for the link. **Table 3** is provided to show the concurrency analysis for each of the links potentially impacted by the project. As indicated in **Table 3**, all links will be below capacity in the 2029 build-out year.

Table 3 – Link Analysis

Road Name	From	To	Type	Project Assign.	Project Trips	2029 PH (dir) Build-out	Service Volume*	Project % of Service	2% Test	Concurrency Test
Okeechobee Rd (EB)	site	33rd St	2-ln	60%	10	907	1,630	0.6%	33	OK
Okeechobee Rd (WB)	site	Hartman Rd	2-ln	40%	6	758	1,630	0.4%	33	OK

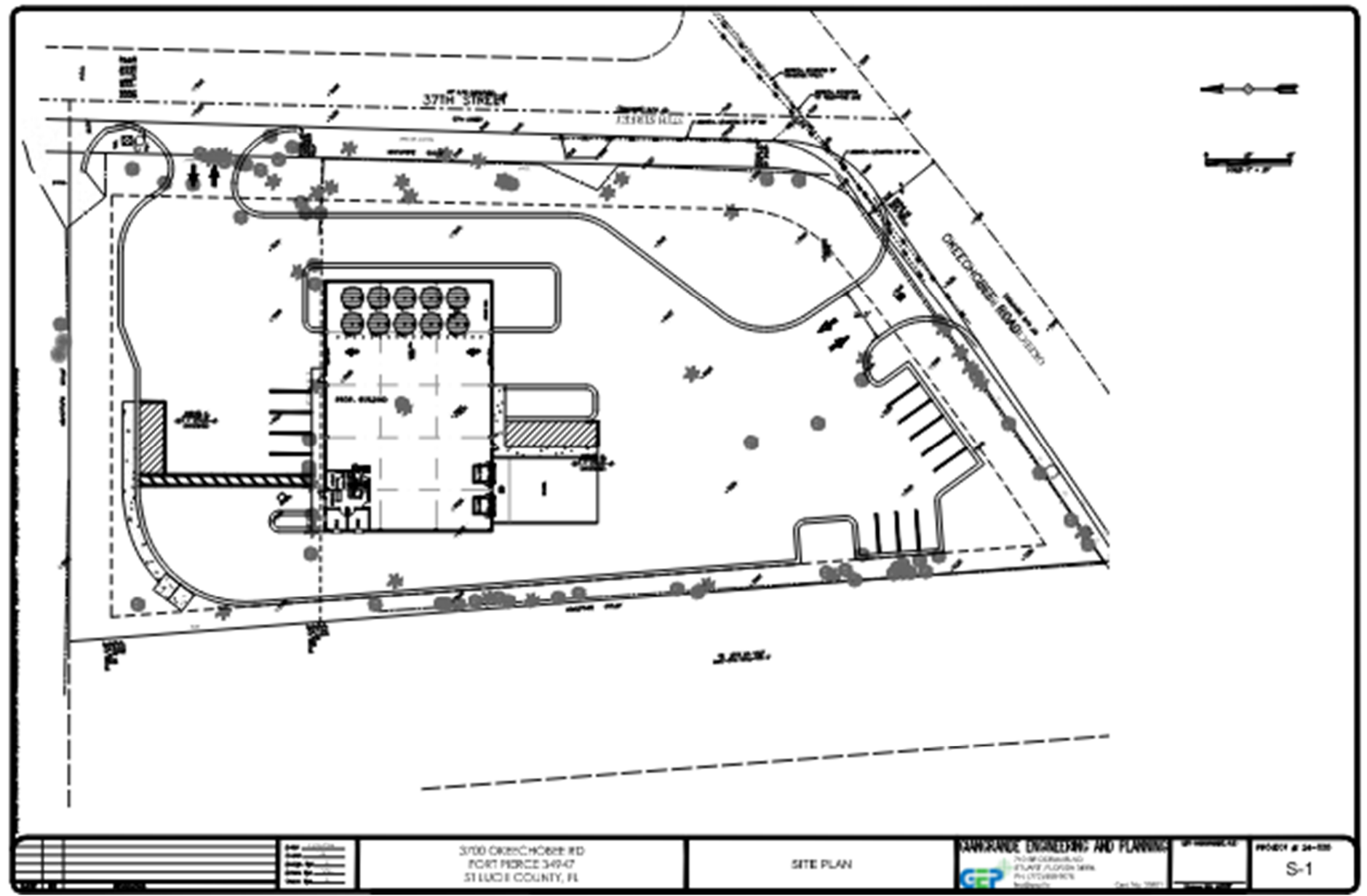
PROJECT ACCESS

The site is located on the intersection of Okeechobee Rd and 37th St. The site will be serviced by one driveway connection to Okeechobee Rd and one driveway connection to 37th St.

CONCLUSION

Based on this traffic analysis, the proposed development is not anticipated to have adverse impacts to the surrounding roadway network based on build-out conditions. The projected volumes generated by the anticipated uses indicate that the adjacent roadway links will operate at an acceptable Level of Service with no mitigation improvements. The existing roadway network is capable of accommodating the additional new vehicle trips the development is anticipated to generate.

APPENDIX





**Traffic Counts and Level of Service Report
2024**

Coco Vista Centre
466 SW Port St. Lucie Blvd, Suite 111
Port St. Lucie, FL 34953
772-462-1593 www.stlucietpo.org

Roadway Name	Location	STATION ID	2024 AADT *	Last Physical Count Year	Pk Hr Service Capacity	AM Pk Hr Pk Dir			PM Pk Hr Pk Dir		
						Volume	LOS	V/C	Volume	LOS	V/C
OKEECHOBEE RD	BLUEFIELD RD to CARLTON RD	687	9,900	2024	2,000	536	B	0.27	542	B	0.27
OKEECHOBEE RD	CARLTON RD to SNEED RD	940039	9,696	2023							
OKEECHOBEE RD	IDEAL HOLDING RD to HEADER CANAL RD	940039	9,696	2023							
OKEECHOBEE RD	SNEED RD to IDEAL HOLDING RD	940039	9,696	2023							
OKEECHOBEE RD	HEADER CANAL RD to MIDWAY RD	940039	9,696	2023							
OKEECHOBEE RD	MIDWAY RD to SHINN RD	940039	9,696	2023							
OKEECHOBEE RD	SHINN RD to MCCARTY RD	940195	7,267	2023							
OKEECHOBEE RD	MCCARTY RD to FLORIDA'S TURNPIKE	940025	10,118	2023							
OKEECHOBEE RD	FLORIDA'S TURNPIKE to KINGS HWY	940025	10,118	2023							
OKEECHOBEE RD	KINGS HWY to CROSSROADS PKWY	940748	24,489	2023							
OKEECHOBEE RD	CROSSROADS PKWY to I-95	940106	26,459	2023							
OKEECHOBEE RD	I-95 to JENKINS RD	940029	33,776	2023							
OKEECHOBEE RD	JENKINS RD to MCNEIL RD	940029	33,776	2023							
OKEECHOBEE RD	MCNEIL RD to VIRGINIA AVE	940742	32,311	2023							
OKEECHOBEE RD	VIRGINIA AVE to HARTMAN RD	688	13,178	2023	2,100	681	C	0.32	672	C	0.32
OKEECHOBEE RD	HARTMAN RD to 35TH ST	688	13,178	2023	1,630	681	C	0.42	672	C	0.41
OKEECHOBEE RD	35TH ST to 33RD ST	689	15,615	2023	1,630	813	D	0.50	778	D	0.48
OKEECHOBEE RD	33RD ST to 25TH ST	689	15,615	2023	1,630	813	D	0.50	778	D	0.48

* **NOTE:** A six digit number in the "STATION ID" column identifies segment counted by FDOT. FDOT count stations use standard K and D factors to determine peak hour values. Peak hour data is not available for locations on State roads due to differences in data availability, LOS Methodologies, and service level thresholds. Please refer to FDOT sources for detailed data on FDOT traffic counts.

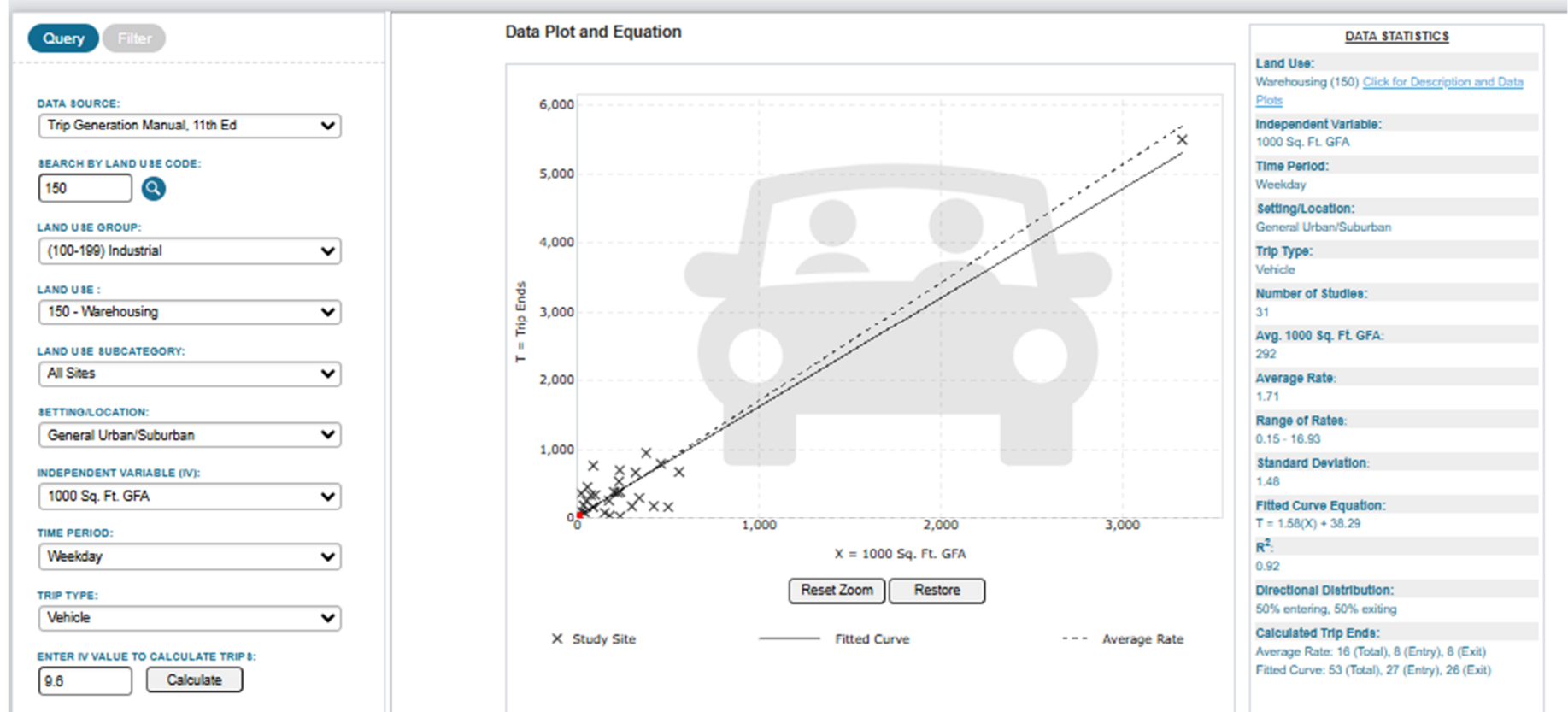
* Volumes shown were adjusted using FDOT Seasonal Factors

* AADT = Annual Average Daily Traffic (volumes for both directions where applicable)

* **NOTE:** If the Last Count Year is older than the year of the report, the AADT is projected from historical traffic count data.

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Graph Look Up



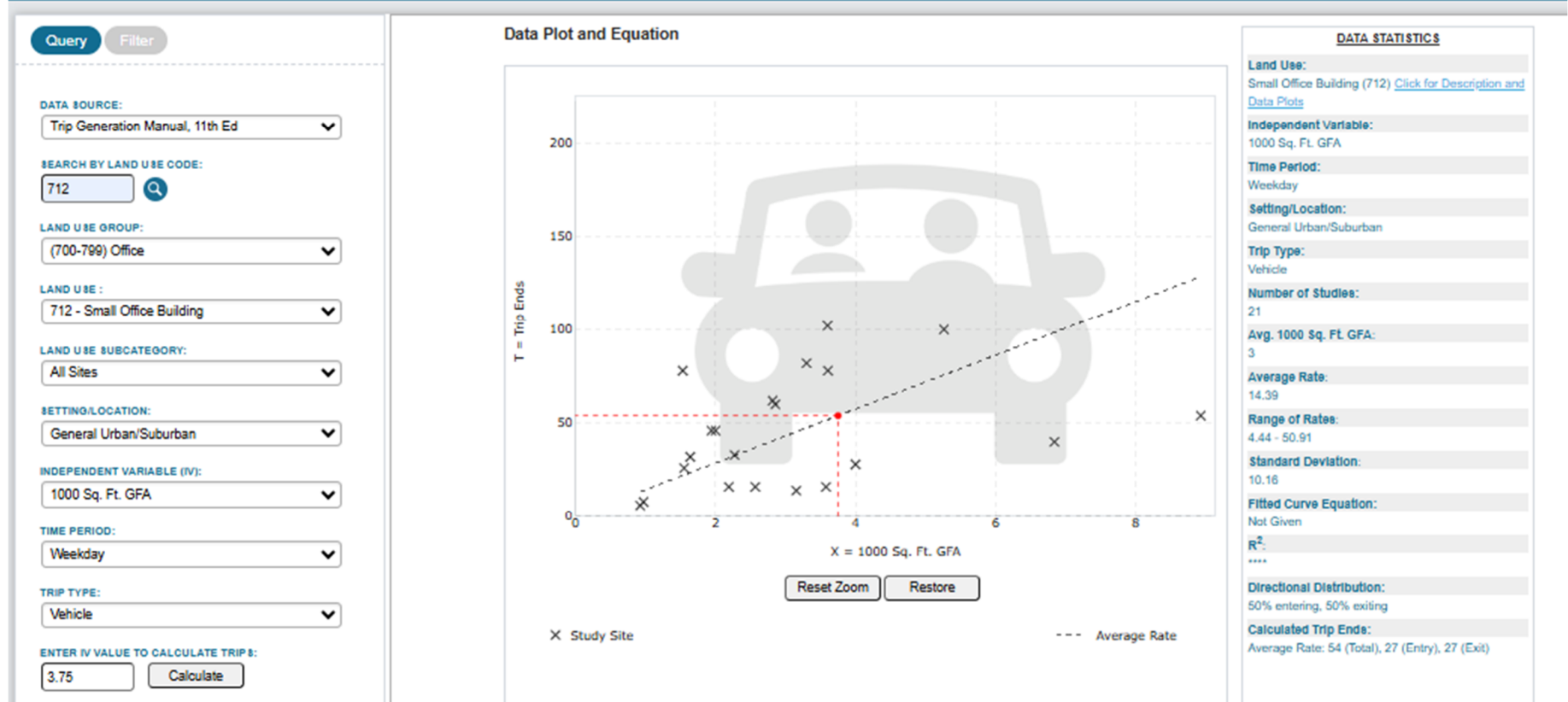
Proposed Use: Vehicles

Graph Look Up



Proposed Use: Trucks

Graph Look Up



Existing Use: Vehicles