



## MEMORANDUM

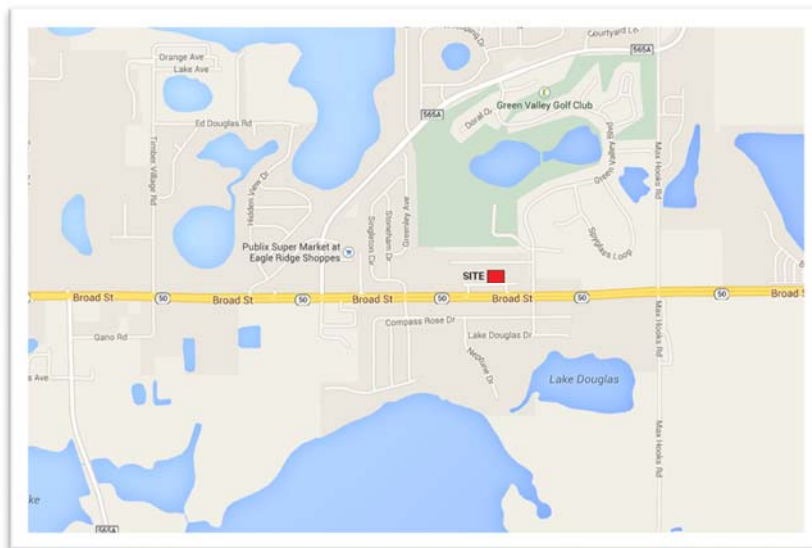
November 7, 2014

**Re: Green Valley Lot 3**  
Tier 1 Traffic Impact Study  
Project № 14-107

### 1. Introduction

The following is a Tier 1 Traffic Impact Study (TIS) for the above referenced project in Lake County, Florida. This letter has been prepared in accordance with Section 5 and Section 7 of the Lake-Sumter Metropolitan Planning Organization's (LSMPO) *Traffic Impact Study Methodology Guidelines*.

The property is approximately 2 acres and is located northwest of the SR 50/Broad Street and Green Valley Boulevard intersection in Lake County, Florida, as illustrated in **Figure 1**.



**Figure 1 – Site Location Map**

### 2. Proposed Development

The property is currently vacant and is part of the Green Valley Commons Planned Urban Development (PUD). The applicant is proposing to construct a 27,590 square foot self-storage facility. A preliminary site plan is attached for reference. Access to the site is provided via a Right-in (only) access and a Right-in/Right-out/Left-in access on SR 50/Broad Street (see **Figure A** attached).

### 3. Trip Generation

The traffic generation of the proposed development was calculated using the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 9th Edition*. The trip generation for the project is summarized in **Table 1** and the detailed trip generation worksheets are attached.

**TABLE 1**  
**Trip Generation Calculation Summary**

ITE Code	Land Use	Size	Daily		PM Peak Hour			
			Rate	Trips	Rate	Total	Enter	Exit
151	Mini-Warehousing	27.59 KSF	2.50	69	0.26	7	4	3

From the calculation, the proposed development is projected to generate 69 daily trips on a typical weekday, of which 7 trips will occur in the PM peak hour. This trip generation classifies this study as a Tier 1 – Traffic Impact Study per the LSMPO *Traffic Impact Study Methodology Guidelines*.

### 4. Distribution

It is estimated that the project traffic will distribute to the roadway network as follow:

To/from West on SR 50 – 65% (PM Peak = 3 vph EB & 2 vph WB)  
To/from East on SR 50 – 35% (PM Peak = 1 vph EB & 1 vph WB)

### 5. Deminimis Impact

The proposed development of a 27,590 square foot self-storage facility will not have a significant impact on the surrounding transportation network during peak hour operations. Left and right turn deceleration lanes at the primary access points on SR 50 are existing to facilitate safe and adequate access to the site.

Therefore, the project should be exempt from the requirements of Concurrency Management Section.

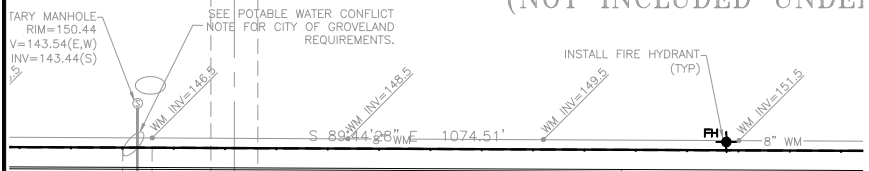
Regards,



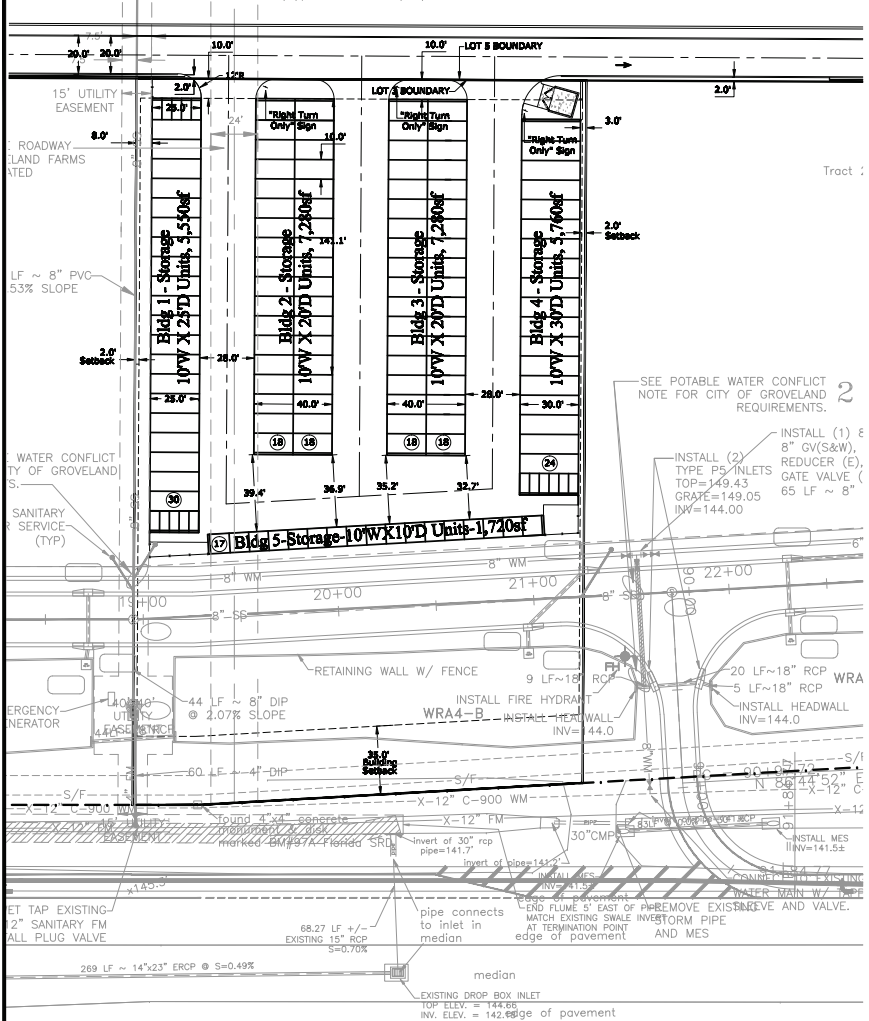
Mohammed Abdallah, PE, PTOE  
[mna@trafficmobility.com](mailto:mna@trafficmobility.com)

## **ATTACHMENTS**

(NOT INCLUDED UNDEI



PROPOSED WALLED DETENTION POND



**Land Use**  
 21, 225, 252  
 FUTURE LAND USE: COMMERCIAL  
 EXISTING ZONING: PUD  
 EXISTING USE: VACANT LOT  
 PROPOSED USE: SELF STORAGE  
 NUMBER OF LOTS: 188 ACRES ±  
 TRACT AREA: 84,203.3 SF

**Setbacks**  
 FRONT: 35 FT (SR-50)  
 SIDE: 2 FT (LOTS 1-4, 6)  
 REAR: 10 FT (RESIDENTIAL)

**Utilities**  
 FRONT: 15 FT (SR-50)  
 SIDE: 2 FT (LOTS 1-4, 6)  
 REAR: 10 FT (RESIDENTIAL)

**Building**  
 MAX. STORES = 3.5  
 MAX. BLDG. HEIGHT = 35'

**Parking**  
 PARKING PER CODE FOR "MIN-WAREHOUSE/PERSONAL STORAGE FACILITIES" USE:  
 SPACES REQUIRED = 0  
 SPACES PROVIDED = 0

**Utilities**  
 1. DRAINAGE WATER SYSTEM PROVIDER: CITY OF GROVELAND.  
 2. SANITARY SEWER SYSTEM PROVIDER: CITY OF GROVELAND.  
 3. REUSE WATER SYSTEM - CITY OF GROVELAND (FUTURE CONNECTION).  
 4. IRRIGATION TO BE BY WELL, WITH FUTURE CONNECTION POSSIBLE TO REUSE SYSTEM SHOULD ONE BECOME AVAILABLE.  
 5. WATER & SEWER LINES TO BE CITY OWNED & MAINTAINED.

**Storm Water**  
 6. STORM WATER AND DRAINAGE FACILITIES: OFF-SITE STORMWATER FACILITIES PROVIDED BY GREEN VALLEY COMMONS COMMERCIAL SUBDIVISION.  
 7. ON-SITE SOILS: APOPKA & CHANDLER SANDS, TYPE "A".  
 8. ON-SITE VEGETATION: POOR COVER OF NATIVE GRASSES.  
 9. SIDEWALK: 4' WIDE ALONG AND WITHIN ROW.

**Flood Plain**  
 THE SITE IS OUTSIDE THE 100 YEAR FLOOD PLAIN.

**Storm Water**  
 A COPY OF THE NPDES NOTICE OF INTENT, THE ISSUED NPDES STORM WATER RUNOFF PERMIT FOR CONSTRUCTION ACTIVITIES, AND THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) SHALL BE KEPT ON SITE AND AVAILABLE FOR INSPECTION AT ANY TIME.

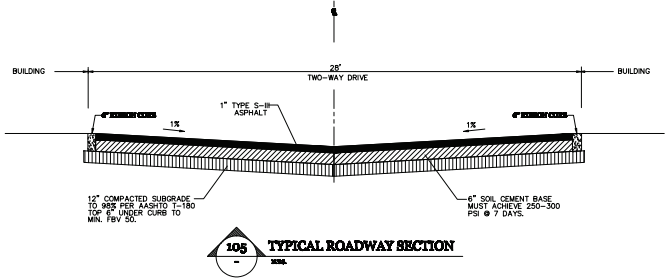
**General Notes**  
 1. CALL SUNSHINE (1-800-432-4770) PRIOR TO ANY CONSTRUCTION OPERATION (WWW.CALLSUNSHINE.COM)  
 2. THERE ARE NO EXISTING TREES ON SITE TO BE PROTECTED.  
 3. CONTRACTOR TO PROTECT EXISTING TREES, SHRUBS AND OTHER LANDSCAPING ALONG R.O.W.'S. SHOULD CONFLICT ARISE BETWEEN EXISTING LANDSCAPING AND PROPOSED SIDEWALKS, DRIVEWAYS AND OTHER IMPROVEMENTS, CONTRACTOR TO RELOCATE LANDSCAPING TO THE SATISFACTION OF CITY OR COUNTY INSPECTOR.  
 4. STREETS TO BE PRIVATELY OWNED & MAINTAINED.

**UNIT CALCULATIONS**

Building Number	5'x10'		10'x10'		10'x20'		10'x25'		10'x30'		Width FT	Depth FT	Area SF
	EA	Units	EA	Units	EA	Units	EA	Units					
1	10	-	-	-	20	-	222	25	5,550				
2	-	-	36	-	182	40	7,280						
3	-	-	36	-	182	40	7,280						
4	6	-	-	-	18	192	30	5,760					
5	-	17	-	-	-	172	10	1,720					
<b>Total</b>	<b>16</b>	<b>17</b>	<b>68</b>	<b>20</b>	<b>18</b>				<b>27,590</b>				

**IMPERVIOUS CALCULATIONS**

Category	Area (SF)	Percentage
Total Site	84,203	
Impervious Areas		
Existing Roadway	5,534	
Existing Sidewalk	1,152	
Existing Curb	922	
Existing Wall with Fence	372	
Proposed Buildings - 5	27,590	
Proposed Roadway	22,823	
Proposed Dumpster with Wall	311	
<b>Total Area Impervious</b>	<b>58,704</b>	
Impervious Area Provided	69.7%	
Impervious Area Allowed - City	80%	
Impervious Area Allowed - SJRWMD Perm	70%	



FINAL LAYER THICKNESSES TO BE DETERMINED BY THE GEOTECHNICAL ENGINEERS PAVEMENT DESIGN CALCULATIONS.

- Dimension Notes**
- Contractor shall immediately notify the owner's representative of any discrepancies found between these plans, municipality specifications, the construction plans, and/or field conditions prior to construction.
  - All work shall be accomplished in accordance with the plans and specifications contained herein as well as applicable municipality specifications from another authority required by applicable federal, state and local codes, ordinances, and regulations. It is the contractor's responsibility to obtain a copy of the municipality specifications from the authority having jurisdiction. In the event of a conflict between the requirements, the most stringent shall apply to the contractor's representation.
  - Topographic information, boundary information and vertical control provided within these construction plans is shown from a survey by a surveyor listed on the plans and can be obtained from the owner.
  - Geotechnical investigation report can be obtained from the owner or a geotechnical engineer as listed on the plans.
  - Contractor shall verify all of ground conditions during construction. Dimensions shown are measured before the face of each, property line, property corner, or face of building.
  - Contractor shall make all improvements using the dimension lines and offsets provided on this sheet. It is the contractor's sole responsibility to completely make and check all improvements to these standards prior to final payment and final inspection. The contractor shall be responsible for the location of all utility lines and shall be held liable for any damage to them.
  - Location of the proposed building shown on this plan may assist as a reference for replotting utility improvements. The actual location and dimensions of proposed building improvements shall be determined from the construction plan and field located by a surveyor retained by the contractor.
  - All paving, grading, utility trench, water table and clay base to be determined. Material quantities shall be required for all paving and drainage structures and materials do not contain base.
  - Minimum through paving access to be established according to the applicable property codes.
  - All pavement materials to comply with the PDOT roadway and traffic design standards, manual of uniform control devices and the municipality local development code.
  - All installed concrete retaining walls shall be constructed with a minimum 10% slope.
  - All concrete structures during construction shall be constructed with a minimum 10% slope.
  - The contractor shall be responsible for the location of all utility lines and shall be held liable for any damage to them. All utility lines shall be located by a surveyor retained by the contractor.
  - All lighting to be provided for by contractor per owner's and utility company's specifications as well as any applicable municipal code.
  - Contractor to meet the minimum requirements for vertical separation whenever proposed access roads and lanes shall use to cross under proposed water mains.
  - The contractor shall verify the city, county or PDOT utility all lines prior to any work within their respective RCHW.
  - Refer to PDOT roadway and traffic design standards below on 682 for dimensions of traffic (M.G.T.).
  - M.G.T. camp shall be constructed by a certified M.G.T. individual.
  - All light poles and structures to be located in field by surveyor retained by contractor.
  - Shop drawings to be provided by contractor to respective governing agencies and shall engineer for review prior to purchase and field installation.
  - All work to be provided by contractor to be shown based on site as well as on field plan to respective governing agencies and shall engineer for review.
  - Contractor to construct structures along each lot in accordance with municipality standards. Location of structures shall vary as required by utility to maintain protection of existing lines.
  - All structures to be constructed by contractor in front of all lots and at ADA ramp building by home builder in front of all houses at the time of final field development.

Ephesians 6:11-17

**Denham Engineering, LLC**  
 Orlando: 407-217-5487  
 Clermont: 352-989-1915  
 Brian@DenhamENG.com  
 www.DenhamENG.com

**Rocker Family Trust**

**Rockers Lockers**  
 Lot 3  
 Green Valley Commons  
 Groveland, FL

**Site Plans**

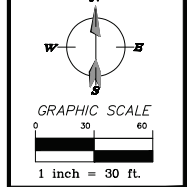
**Dimension Plan**

**Revisions**

No.	DATE	DESCRIPTION
1	10-15-14	Initial Issue
2		
3		
4		
5		
6		
7		

Plans not valid unless signed, dated and sealed below.

**J. Brian Denham, P.E.**  
 Date: 10-15-14  
 PE Registration #03908  
 Certificate of Authorization #26666



Sheet Number  
**3 of 4**

WEST State Road #50

## Mini-Warehouse (151)

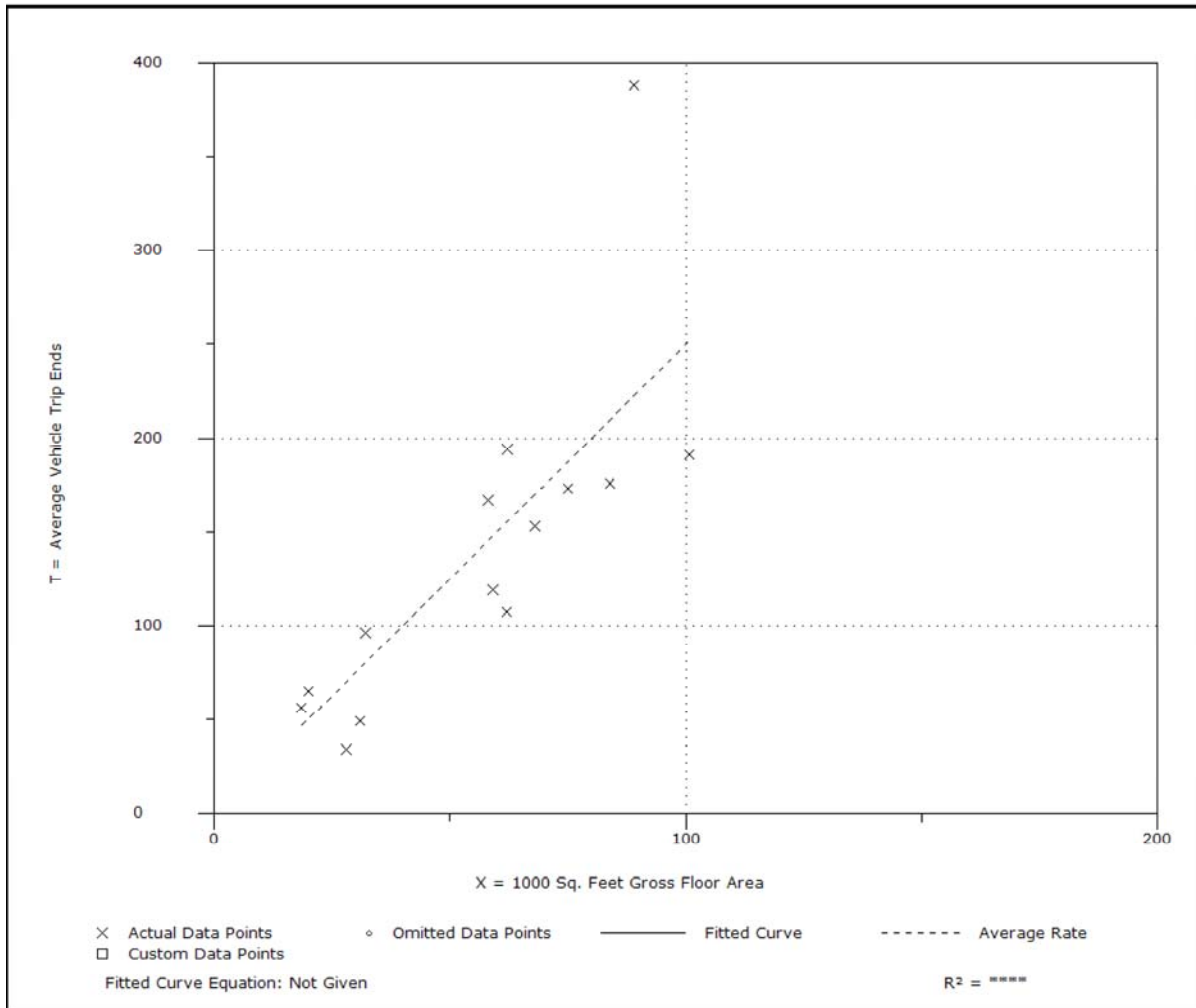
**Average Vehicle Trip Ends vs: 1000 Sq. Feet Gross Floor Area**  
**On a: Weekday**

Number of Studies: 14  
Average 1000 Sq. Feet GFA: 56  
Directional Distribution: 50% entering, 50% exiting

### Trip Generation per 1000 Sq. Feet Gross Floor Area

Average Rate	Range of Rates	Standard Deviation
2.50	1.21 - 4.36	1.78

### Data Plot and Equation



Trip Generation, 9th Edition

## Mini-Warehouse (151)

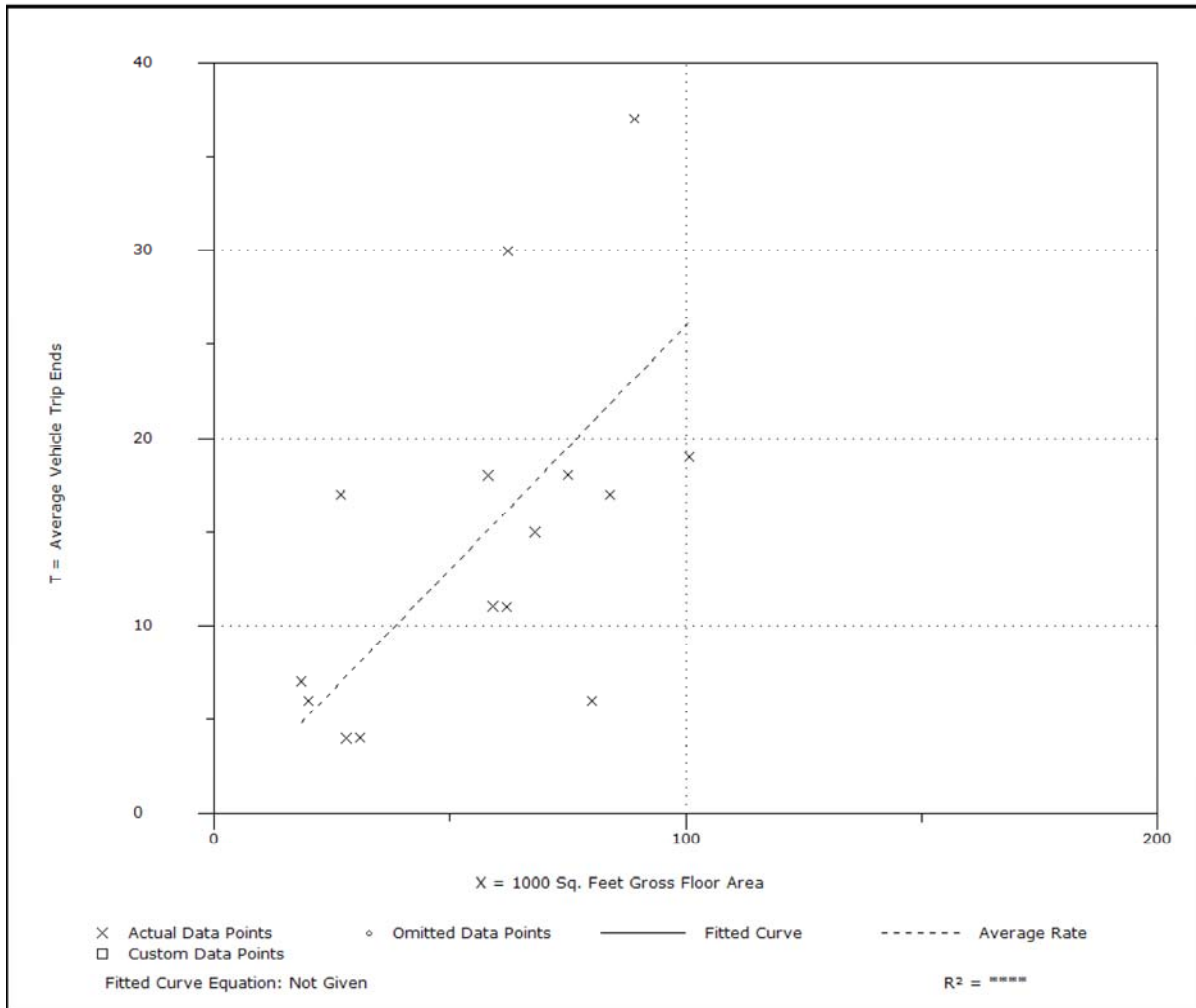
**Average Vehicle Trip Ends vs: 1000 Sq. Feet Gross Floor Area**  
**On a: Weekday**  
**Peak Hour of Adjacent Street Traffic**  
**One Hour Between 4 and 6 p.m.**

Number of Studies: 15  
 Average 1000 Sq. Feet GFA: 57  
 Directional Distribution: 50% entering, 50% exiting

### Trip Generation per 1000 Sq. Feet Gross Floor Area

Average Rate	Range of Rates	Standard Deviation
0.26	0.07 - 0.64	0.52

### Data Plot and Equation



Trip Generation, 9th Edition



1507 S. Hiawasse Rd - Ste 212  
 Orlando, Florida 32835  
 P: (407) 531-5332  
 F: (407) 531-5331  
 www.trafficmobility.com

Figure:  
**SITE LOCATION & ACCESS**

Project:  
 Green Valley Lot 3

Project No.:  
 14-107



Figure:

**A**