



MEMORANDUM

November 25, 2015

Re: Green Valley Lot 3, 4 & 5
Tier 1 Traffic Impact Study
Project № 15-103

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 7.39 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**.

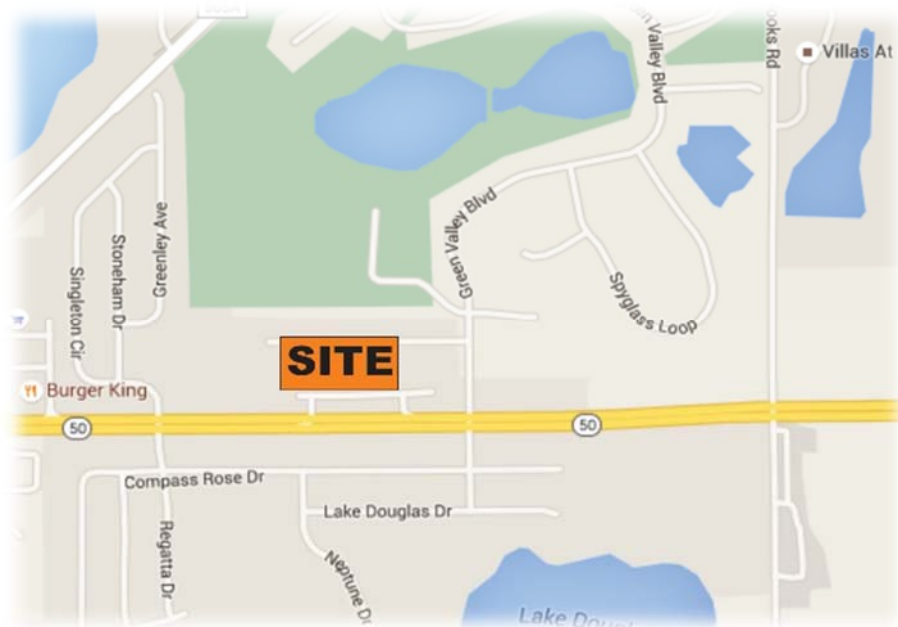


Figure 1 – Site Location Map

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 101,750 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	101.8 KSF	2.50	254	0.26	26	13	13
<i>Pass-by (8%)</i>				20		2	1	1
Net New Trip Generation				234		24	12	12

Notes:

1. Trip Generation analysis based on ITE Trip Generation Manual, 9th Edition
2. Pass-by rate based on Lake County Transportation Impact Fee Schedule included in the LSMPO Traffic Impact Study Methodology Guidelines

From the calculation, the proposed development is projected to generate 234 daily trips on a typical weekday, of which 24 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 = 8 vph EB & 8 vph WB)
- To/from East on SR 50 – 35% (PM Peak = 4 vph EB & 4 vph WB)

5. Deminimis Impact

The proposed development of a 101,750 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,

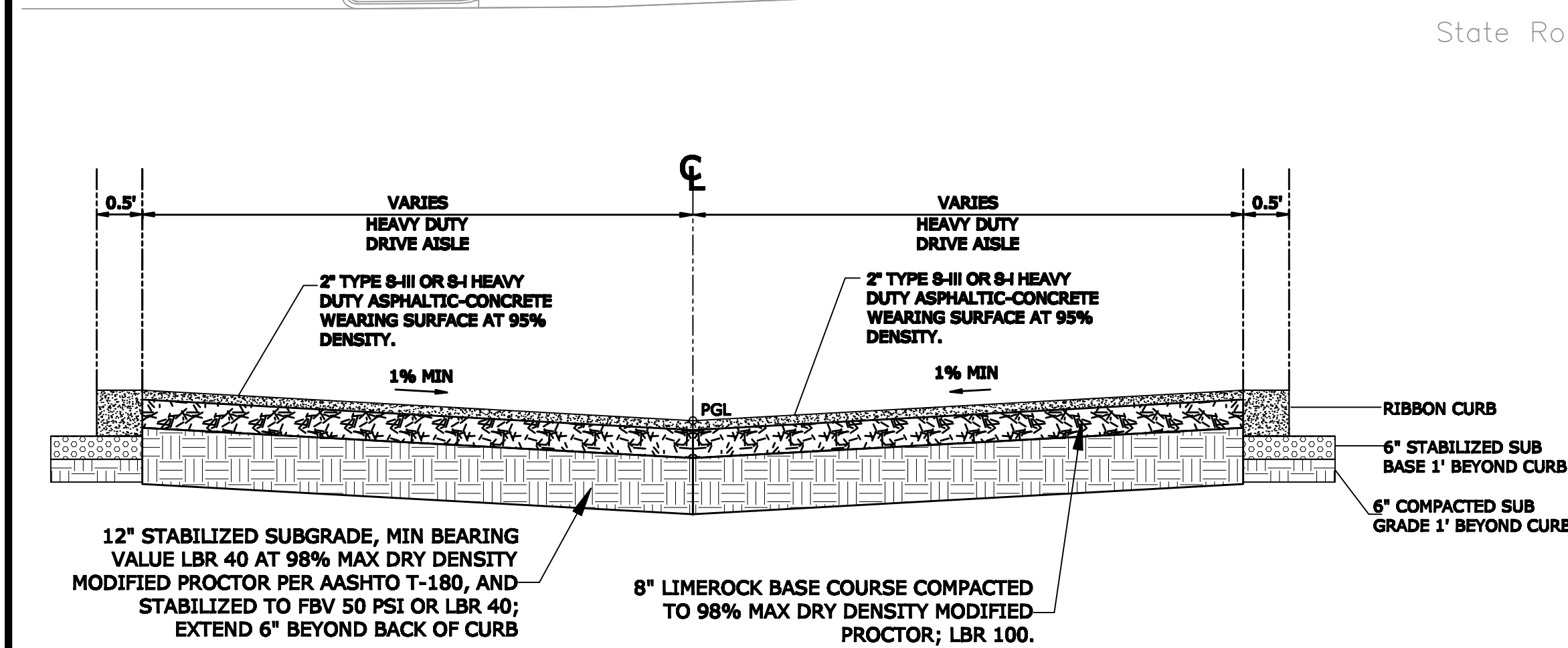
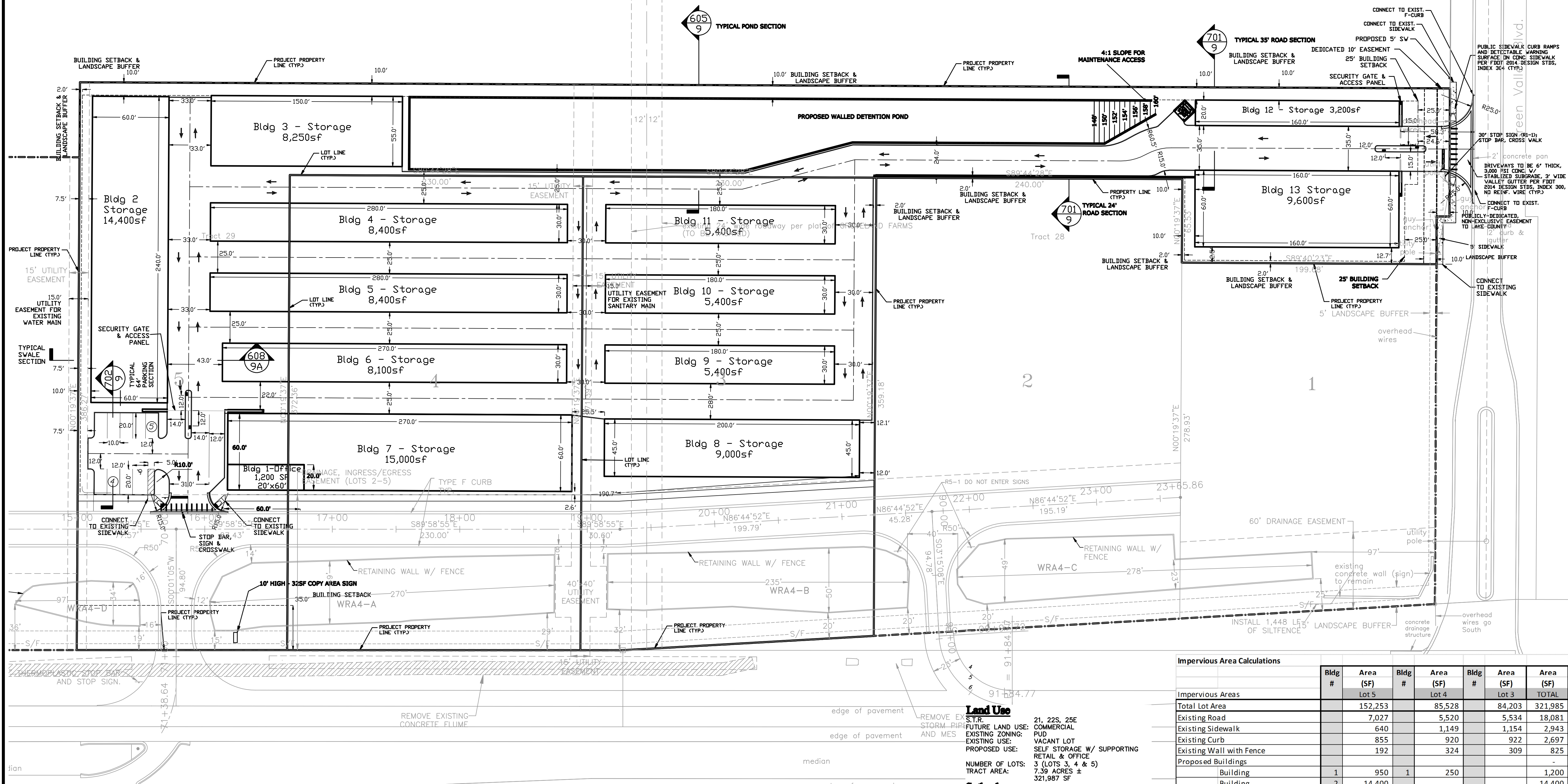


Mohammed Abdallah, PE, PTOE
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ATTACHMENTS

FUTURE RESIDENTIAL PARCEL
(INCLUDED UNDER GREEN VALLEY COMMONS)

FUTURE RESIDENTIAL PARCEL
(NOT INCLUDED UNDER GREEN VALLEY COMMONS)



- Utilities**
- DRINKING WATER SYSTEM PROVIDER: CITY OF GROVELAND.
 - SANITARY SEWER SYSTEM PROVIDER: CITY OF GROVELAND.
 - REUSE WATER SYSTEM - CITY OF GROVELAND (FUTURE CONNECTION).
 - IRRIGATION TO BE BY WELL WITH FUTURE CONNECTION POSSIBLE TO REUSE SYSTEM SHOULD ONE BECOME AVAILABLE.
 - WATER & SEWER LINES TO BE CITY OWNED & MAINTAINED.
- Storm Water**
- STORM WATER AND DRAINAGE FACILITIES: OFF-SITE STORMWATER FACILITIES PROVIDED BY GREEN VALLEY COMMONS COMMERCIAL SUBDIVISION.
 - ON-SITE SOILS: APOPKA & CHANDLER SANDS, TYPE "A".
 - ON-SITE VEGETATION: POOR COVER OF NATIVE GRASSES.
 - SIDEWALK: 4' WIDE ALONG AND WITHIN ROW.
- Flood Plain**
- THE SITE IS OUTSIDE THE 100 YEAR FLOOD PLAIN.
- State Notes**
- 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**
- CALL SUNSHINE (1-800-432-4770) PRIOR TO ANY CONSTRUCTION OPERATION (WWW.CALLSUNSHINE.COM)
 - THERE ARE NO EXISTING TREES ON SITE TO BE PROTECTED.
 - 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.
 - STREETS TO BE PRIVATELY OWNED & MAINTAINED.

Land Use

S.T.R. 21, 22S, 25E
FUTURE LAND USE: COMMERCIAL PUD
EXISTING ZONING: VACANT LOT
PROPOSED USE: SELF STORAGE W/ SUPPORTING RETAIL & OFFICE
NUMBER OF LOTS: 3 (LOTS 3, 4 & 5)
TRACT AREA: 7.39 ACRES ± 321,987 SF

Setbacks

PUD:
FRONT: 35 FT (LOT 5 @ SR-50)
SIDE: 25 FT (LOT 5 @ GREEN VALLEY BLVD.)
SIDE: 25 FT (LOT 6 @ WEST)
REAR: 10 FT (LOT 5 @ RESIDENTIAL)

LOT 3, 4 & 5:
FRONT: 35 FT (SR-50)
SIDE: 25 FT (LOT 5 @ GREEN VALLEY BLVD.)
SIDE: 2 FT (LOTS 2, 6)
REAR: 10 FT (LOT 5 @ RESIDENTIAL)

Buffers

PUD:
FRONT: 15 FT (LOT 5 @ SR-50)
SIDE: 2 FT (LOT 1 @ GREEN VALLEY BLVD.)
SIDE: 2 FT (LOT 6 @ WEST)
REAR: 10 FT (LOT 5 @ RESIDENTIAL) WAIVER FROM 15 FT

LOTS 3, 4 & 5:
FRONT: 15 FT (SR-50)
SIDE: 2 FT (LOT 1 @ GREEN VALLEY BLVD.)
SIDE: 2 FT (LOTS 2, 6)
REAR: 10 FT (LOT 5)

Building

MAX. STORIES = 2.5
MAX. BLDG. HEIGHT = 35'

Parking

PERMITTED PER CODE FOR "MINI-WAREHOUSE/ PERSONAL STORAGE FACILITIES" USE:
SPACES REQUIRED = 6
SPACES PROVIDED = 9

Impervious Area Calculations

Impervious Areas	Bldg #	Area (SF)	Bldg #	Area (SF)	Bldg #	Area (SF)	Area (SF)
Total Lot Area		152,253		85,528		84,203	321,985
Existing Road		7,027		5,520		5,534	18,081
Existing Sidewalk		640		1,149		1,154	2,943
Existing Curb		855		920		922	2,697
Existing Wall with Fence		192		324		309	825
Proposed Buildings							
Building	1	950	1	250			1,200
Building	2	14,400					14,400
Building	3	8,250					8,250
Building	4	1,860	4	6,540			8,400
Building	5	1,860	5	6,540			8,400
Building	6	1,560	6	6,540			8,100
Building	7	1,900	7	13,100			15,000
Building					8	9,000	9,000
Building					9	5,400	5,400
Building					10	5,400	5,400
Building					11	5,400	5,400
Building	12	3,200					3,200
Building	13	9,600					9,600
Dumpster		144					144
Proposed Retaining Wall		1,238					1,238
Proposed Sidewalk		630		1,150		1,150	2,930
Proposed Road		37,639		23,393		27,006	88,038
Proposed Curb		724		4		100	827
Total Impervious Area		92,669		65,430		61,375	
Impervious Area Provided		60.9%		76.5%		72.9%	
Impervious Area Allowed - City		80.0%		80.0%		80.0%	
Impervious Area Allowed - SJRWMD		8.1%		70.0%		70.0%	

*Lot 5 Imp Area allowed by SJ can go directly to existing pond at SR-50, remainder must be treated on-site in Lot 5 Detention Pond

Areas allowed to discharge directly to existing southern pond:

Area	Area (SF)	Area (SF)	Area (SF)
Total Area allowed	12,363	59,870	58,942
Existing Areas (Frontage Rd.)	8,714	7,913	7,919
Proposed Areas**	3,649	51,957	51,023

** Remainder of Impervious Areas will flow to new pond on Lot 5

Ephesians 6:11-17

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

Rocker Family Trust
Rocker's Lockers
Green Valley Commons Lots 3-5
Groveland, FL

Site Plans
Dimension Plan

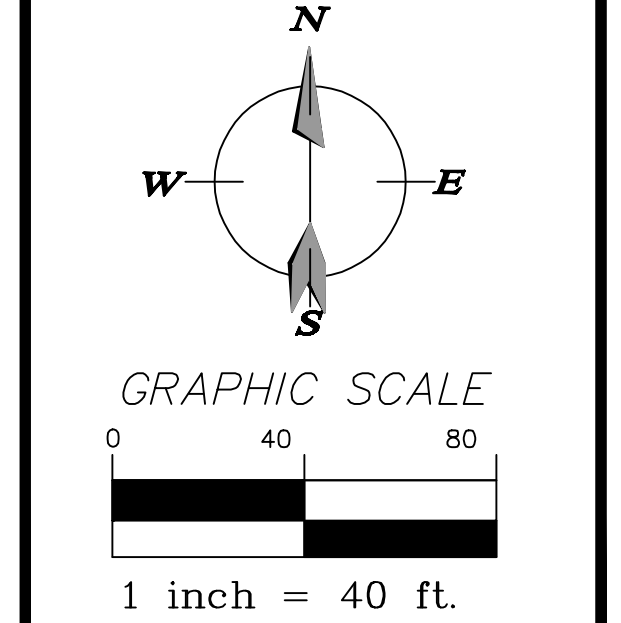
Revisions

NO.	DATE	DESCRIPTION
08-20-15		Initial Issue
1	08-21-15	Building Area Revisions per Client
2	08-27-15	Building Area Revisions per BETCO
3	09-02-15	Office Area Revisions
10-02-15		Building Area Revisions per Client
10-07-15		Building Area Revisions per Client
10-12-15		Unit Calculation Update
7	10-30-15	Combination of Lots 3, 4 & 5

Plans not valid unless Signed, Dated and Sealed below.

J. Brian Denham, P.E.

Date: 10-30-15
FL Registration #58008
Certificate of Authorization #29666



Mini-Warehouse (151)

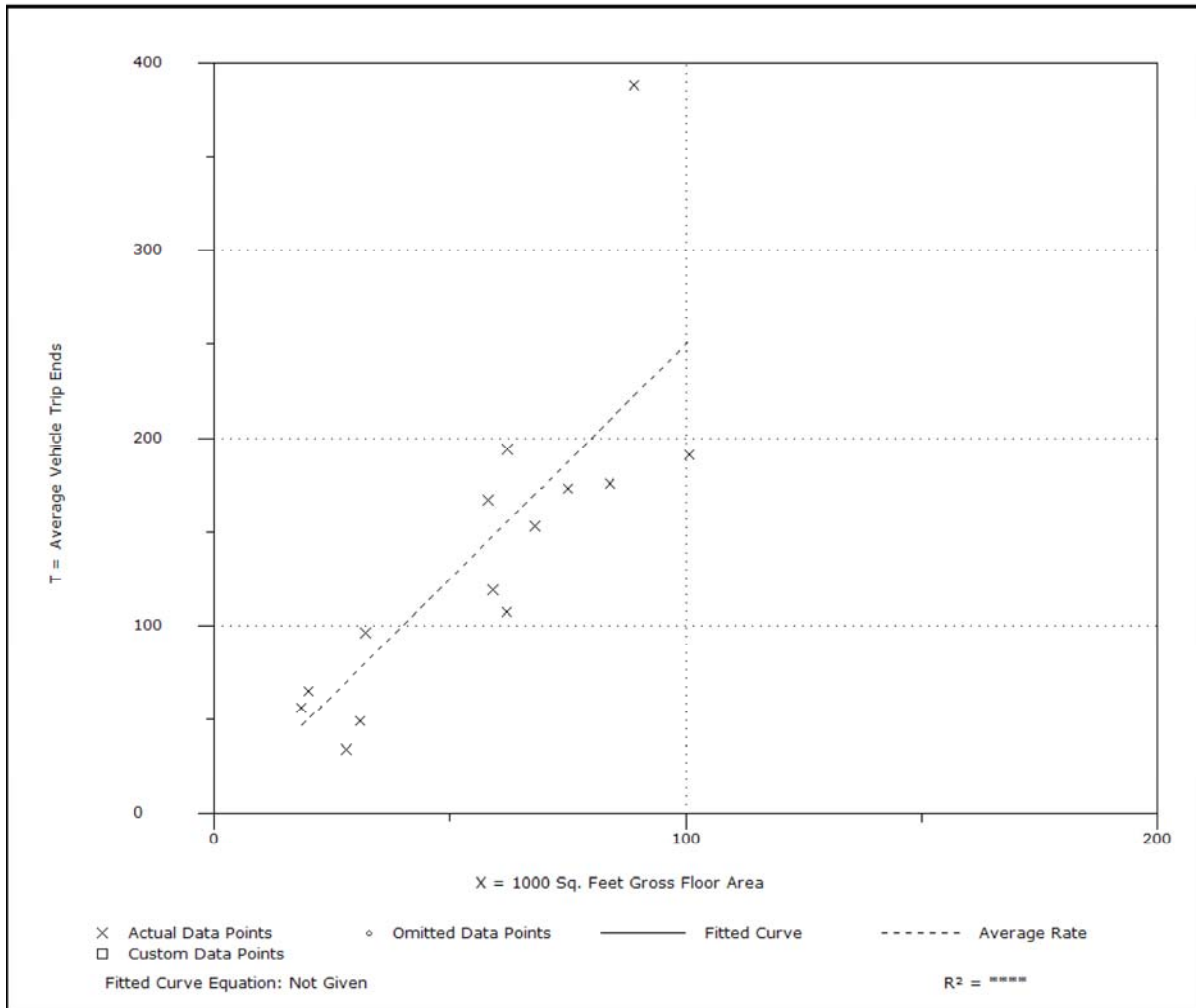
Average Vehicle Trip Ends vs: 1000 Sq. Feet Gross Floor Area
On a: Weekday

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)

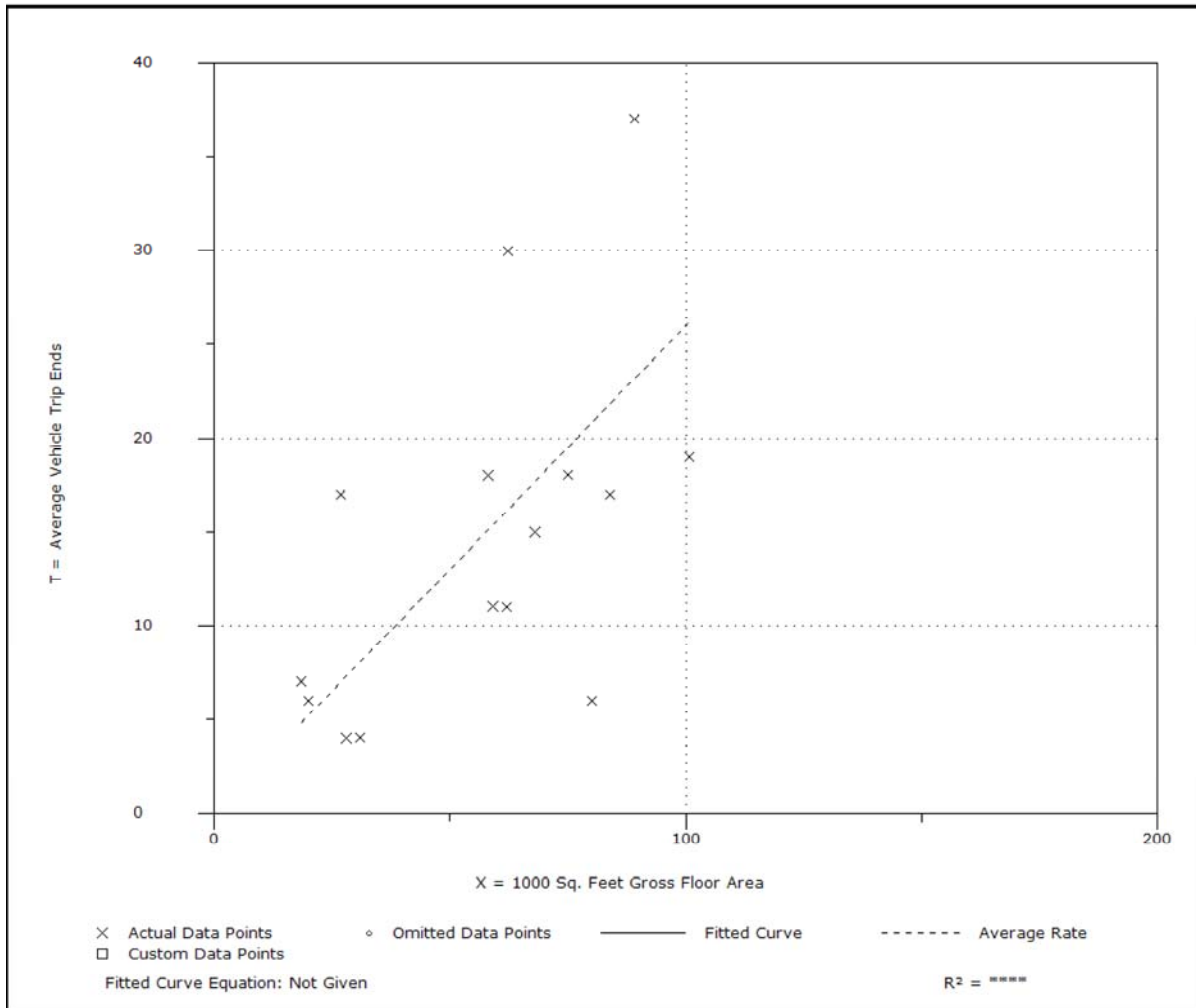
Average Vehicle Trip Ends vs: 1000 Sq. Feet Gross Floor Area
On a: Weekday
Peak Hour of Adjacent Street Traffic
One Hour Between 4 and 6 p.m.

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

**Table 9-1
Lake County Transportation Impact Fee Schedule (100.0 Percent of Cost) including Sales Tax Credit
as of 12-21-01**

Fee Schedule Assumptions:

Gasoline Tax		Unit Construction Cost: \$1,702,843	Local Trip Length: 0.5
\$ per gallon to capital:	\$0.191	Capacity per lane: 8,487	Interstate Mileage %: 20.5%
Facility life (years):	25	Fuel efficiency: 16.0	Across-the-Board Adjustment: 0.0%
Interest rate:	5.0%	Effective days per year: 365	

ITE Code	Land Use (A)	Unit (B)	Trip Rate (C)	Trip Length (D)	Total Trip Length (E)	Percent New Trips (F)	Total Impact Cost (G)	Annual Gas Tax (H)	Gas Tax Credit (I)	Across the Board Adjustment (J)	Net Impact Fee (K)	Current Fee (L)	Percent Difference (M)
Industrial:													
110	General Light Industrial	1,000 sf	6.97	11.14	11.64	92%	\$5,697	\$163	\$2,294	\$0	\$3,403	\$1,907	78%
120	General Heavy Industrial	1,000 sf	1.50	11.14	11.64	92%	\$1,226	\$35	\$494	\$0	\$732	\$410	79%
130	Industrial Park	1,000 sf	6.96	11.14	11.64	89%	\$5,504	\$157	\$2,216	\$0	\$3,287	\$1,430	130%
140	Manufacturing	1,000 sf	3.82	11.14	11.64	92%	\$3,122	\$89	\$1,257	\$0	\$1,865	\$1,054	77%
150	Warehouse	1,000 sf	4.96	11.14	11.64	92%	\$4,054	\$116	\$1,633	\$0	\$2,422	\$1,335	81%
151	Mini-Warehouse	1,000 sf	2.50	4.37	4.87	92%	\$802	\$24	\$344	\$0	\$457	\$713	-36%
152	High Cube Warehouse (4)	1,000 sf	1.20	15.90	16.40	92%	\$1,400	\$39	\$557	\$0	\$843	(3)	
N/A	Airport Hanger	1,000 sf	4.96	11.14	11.64	92%	\$4,054	\$116	\$1,633	\$0	\$2,422	(3)	
170	Utilities Building	1,000 sf	5.44	11.14	11.64	92%	\$4,447	\$127	\$1,791	\$0	\$2,656	\$216	1130%

Notes:

- N/A - Does not have an ITE Land Use Code
- (1) Mobile Homes on a single lot of record are included in the single family home categories; the Mobile Home Park is a new category for mobile homes clustered together where the land is typically rented to the mobile home owner.
- (2) Different Unit of measurement between Current Impact Fee schedule and Revised Impact Fee Schedule
- (3) New land use category, does not exist in Current Impact Fee Schedule
- (4) Source: The Goodyear Tire & Rubber Co. Independent Impact Fee Study Supplemental Analysis, Griffey Engineering, Inc. 2001

Source: Tindale-Oliver and Associates, Inc. 2001

C:\Documents and Settings\gweistead\Desktop\Road Impact Fee[table9-1.xls]Detail Fee Schedule

