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April 27, 2021

Ms. Miryam Jimenez
c/o Kyle B. Teal, Esq.
Buchanan Ingersoll & Rooney PC
One Biscayne Tower
Two South Biscayne Boulevard, Ste. 1500
Miami, FL 33131-1822

RE: Margate Cares for Heroes Traffic Statement (Revised)
Project No. 202027.01

Dear Ms. Jimenez:

On October 21, 2021, Thomas A. Hall, Inc., completed a second traffic statement for a proposed new business plan for this site in the City of Margate, Florida that addressed comments received at an October 13, 2020 DRC meeting. Subsequent to completion of that traffic statement, we received comments from Mr. Randy L. Daniel, P.E., PMP, CFM, Assistant City Engineer, in a memorandum dated March 16, 2021. This traffic statement was completed to address Mr. Daniel's comments and has been prepared under the engineering supervision of Peter Partington, P.E., former City Traffic Engineer for the City of Fort Lauderdale.

According to the project site plan, the proposed new plan is for an 8,885-square-foot residential rehabilitation facility located at 603 Melaleuca Drive. The prior development is a 10-unit, multi-family apartment building, which was reconstructed to serve as a group care facility in accordance with City-approved permits. The enclosed **Figure 1 – Site Location** shows the location of the proposed project. A copy of the project's site plan is also enclosed.

1. Trip Generation Analysis

In order to determine the traffic impacts associated with the proposed residential rehabilitation facility, an analysis of trips expected to be generated by both the prior and proposed developments was conducted. The majority of the following traffic statement provides the details of the analysis and a summary of the results that compare the prior development with the proposed development. Trip generation characteristics provided in the Institute of Transportation Engineers' (ITE) *Trip Generation* manual, 10th Edition, were consulted and the trips generated by the prior multi-family residential land use (ITE Code 220 – Multi-Family Housing, Low-Rise) were calculated, as was the (ITE Code 620 – Nursing Home) land use. Note that Nursing Home was selected as the proposed development's land use. ITE's manual does not contain trip generation characteristics for a residential rehabilitation facility. However, nursing homes have similar operational and trip generation characteristics, based upon the description provided in the ITE manual, and offer the best match to the proposed land use.

While not discussed in depth at the October 13th DRC meeting, notes contained in a staff memorandum dated October 16, 2020, recommending the City Commission affirm the City Manager's denial of a reasonable accommodation request, take issue with the selection of independent variables for both the existing, multi-family residential land use and the proposed, nursing home land use presented in the trip generation tables provided by this firm. We have amended the report to include discussion of the use of alternative independent variables for the proposed use. In addition we would like to elaborate upon the use of "dwelling unit" as the preferred approach to the analysis of the trip generation of the prior land use as follows:

ITE's database for multi-family residential land use trip generation based on "dwelling units" as an independent variable is twice as large (or larger) than the databases supporting the other independent variables. The "dwelling unit" database also has a very good R^2 value for the three time periods [daily traffic, am peak and pm peak] to be analyzed: that is, the coefficient of determination closely matches the fitted regression line. The closer the R^2 value is to "1," the better, and more accurate, the statistical model. For a general urban/suburban location such as is found in the City of Margate, ITE provides trip generation characteristics for three independent variables. Those independent variables are: dwelling units; occupied dwelling units; and residents. Of the three, "dwelling units" is the independent variable with the most statistical validity based upon the size of the supporting database. It is usual for projections to be based on the largest sample size data because that gives the most robust and defensible results. [More samples equals more accuracy]. In this case it also yields very similar results to the use of "occupied dwelling units." The "residents" independent variable, which is based on only a single site observation in the ITE database, does result in a different projection, which has to be viewed with suspicion because it is only based on one sample. For these reasons, we have continued to use "dwelling units" as the independent variable in our analysis of the prior land use.

Regarding the proposed "nursing home" trip generation please note that we have provided trip generation analyses for all of the independent variables available in the ITE manual for general urban/suburban areas such as the City of Margate. Note also that this trip generation analysis is the same whether used to consider a re-zoning application or a request for reasonable accommodation for the subject property.

Table 1 – Trip Generation Summary – Maximum Net New Trips

Staff has requested that we use the maximum net new trips expected to be generated by the proposed project. Table 1 summarizes the trip generation resulting from four different independent variables as provided in the ITE manual for Nursing Homes. The values shown in Table 1 may be found in the bottom right corner of Tables 2 through 13 and are a summary of the net new trips generated by using each different independent variable for daily traffic volumes and the am and pm peak-hours volumes. The ITE manual provides trip generation characteristics for: building square footage, beds, occupied beds and employees. The highest trip generation is found to result from the 'employees' independent variable. Table 1 shows that the project site is expected to generate 70 additional daily trips [144 gross – 74 existing = 70 additional daily trips], nine (9) additional a.m. peak-hour trips [14 – 5 = 9 morning peak-hour trips], and eight (8) additional p.m. peak-hour trips [14 – 6 = 8 afternoon peak-hour trips].

Ms. Miryam Jimenez

April 27, 2021

Page 3 of 4

Please note that none of the ITE land uses take into account the specific operational characteristics of the proposed facility. Because clients will arrive and depart by means of chauffeurs and will not drive themselves, the actual maximum net new trips generated by the development is expected to be lower than that estimated by using any of the ITE rates.

An analysis was undertaken comparing the maximum net new project trips to the maximum Level of Service C service volume for a two-lane, undivided roadway such as Melaleuca Drive. The City of Margate's Comprehensive Plan Transportation Element shows, in Table II-3 and II-4, that the City will continue to use the LOS "C" standard as the roadway concurrency standard for local roadways. Further, it is noted on page II-12 that, "To be consistent with Broward County, the City is using the two-way peak-hour volumes instead of the directional peak-hour volumes because the FDOT also uses two-way peak hour volumes."

Tables II-3 and II-4 of the City's Transportation Element have footnotes that cite three references as the basis for determining roadway levels of service and capacity. Those references are:

1. *Roadway Capacity Analysis for 2001 and 2025*, Department of Planning and Environmental Protection, Transportation Planning Division, Broward County Metropolitan Planning Organization, September 2002.
2. *Year 2001 Traffic Count Report*, Broward County Department of Planning and Environmental Protection, Transportation Planning Division, March 2002.
3. *2002 Quality/Level of Service Handbook*, Florida Department of Transportation, 2002.

Of these three references, the Florida Department of Transportation's (FDOT) *2002 Quality/Level of Service Handbook* shows the generalized levels of service and maximum service volumes for roadways in the State of Florida. Table 4 - 'Generalized Peak Hour Two-Way Volumes for Florida's Urbanized Areas', which is appended to this traffic statement, is taken from the most recent version of the Handbook. Table 4 is also the basis for Broward County's own peak-hour roadway capacity evaluations based on an examination of Broward County's roadway capacities in Reference [1] above against Table 4.

FDOT does not publish a separate table for local, unsignalized roadways. What they do provide, as highlighted in Table 4, are factors that serve to reduce the capacity of a signalized roadway based on it not being a State Roadway and not having a median divider or turn lanes. These factors are listed for use on a 'signalized roadway'. [There is no FDOT table for unsignalized roadways].

Traffic signals reduce the capacity of a given roadway as they introduce stops. Therefore applying the reduction factors to the 'signalized roadway' capacity is a conservative estimation of a local roadway's capacity. Given Melaleuca Drive's status as a local road with a maximum acceptable level of service of "C," its capacity calculation is as follows:

LOS C maximum two-way peak-hour service volume = [660 trips – 10% for being a non-state road (66 trips) – 20% for not having either left- or right-turn lanes (119 trips)] = 475 trips.

Ms. Miryam Jimenez

April 27, 2021

Page 4 of 4

This is the maximum level of service "C" service peak hour volume for this roadway as both FDOT and Broward County would calculate it. Comparing the maximum two-way peak-hour LOS "C" service volume to the project's 9 net new peak-hour trips (one trip every 6.7 minutes) reveals that the project would use less than an additional two percent of Melaleuca Drive's capacity:

[9 peak-hour trips / 475 LOS C maximum service volume peak-hour trips = 1.89 percent of the LOS C maximum service volume]

At the direction of staff, we have removed the parking analysis from this document. It continues to be available upon request.


1. Conclusion

Based upon the findings shown in Tables 1 through 13, and discussed above, it appears that the Margate Cares for Heroes development proposed to be located at 603 Melaleuca Drive will result in the worst case of a maximum increase of 70 daily trips, nine (9) a.m. peak-hour trips, and eight (8) p.m. peak-hour trips when compared to the existing land use. This is less than two percent of the Level of Service "C" maximum service volume for Melaleuca Drive and represents an increase of only one vehicle every 6.7 minutes during the traffic peak hour.

Should you have any questions or comments regarding this statement, please do not hesitate to contact this office.

Very truly yours,

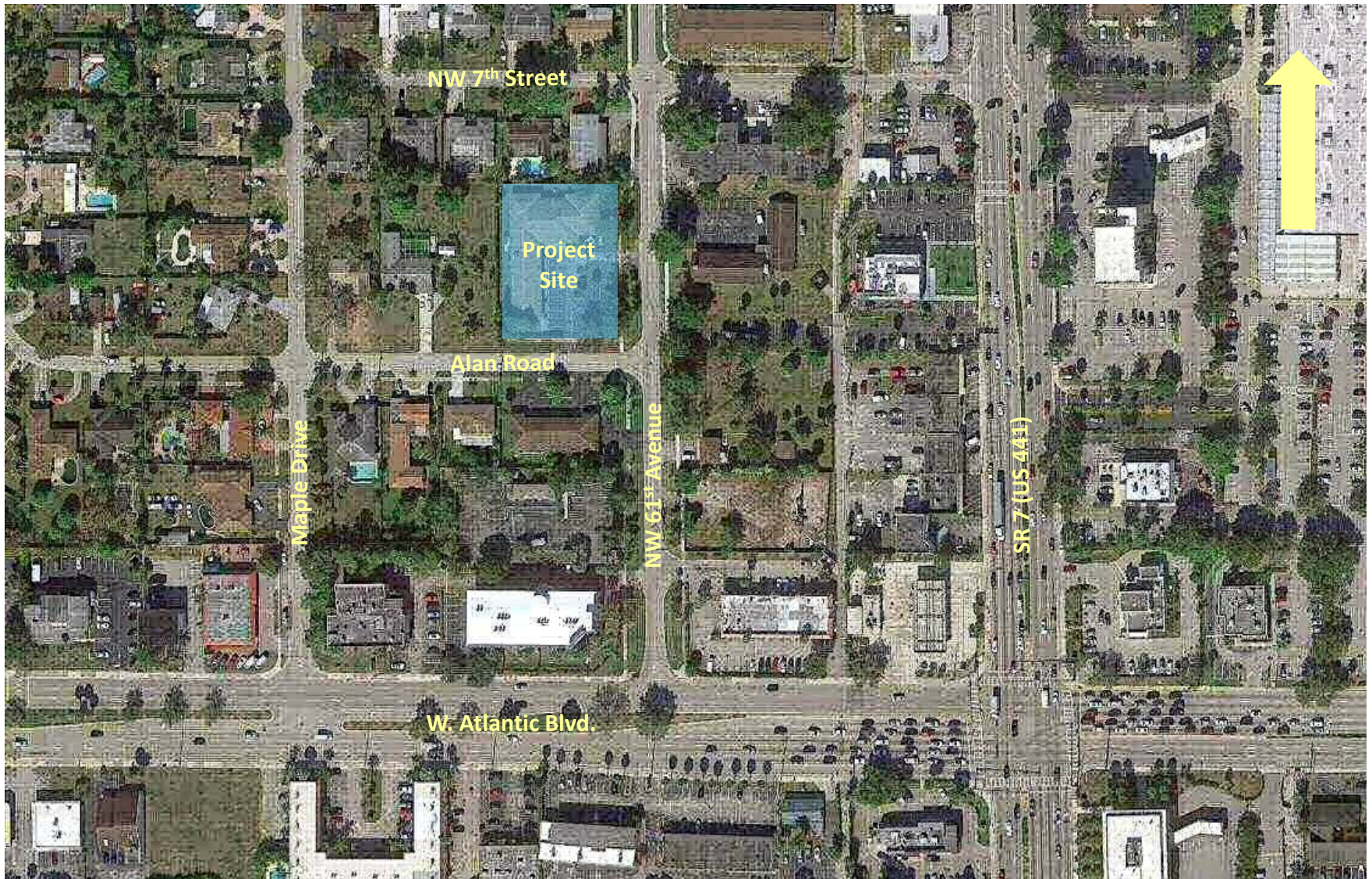
Thomas A. Hall
President



Peter Partington
4/27/2021
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TAH/kh

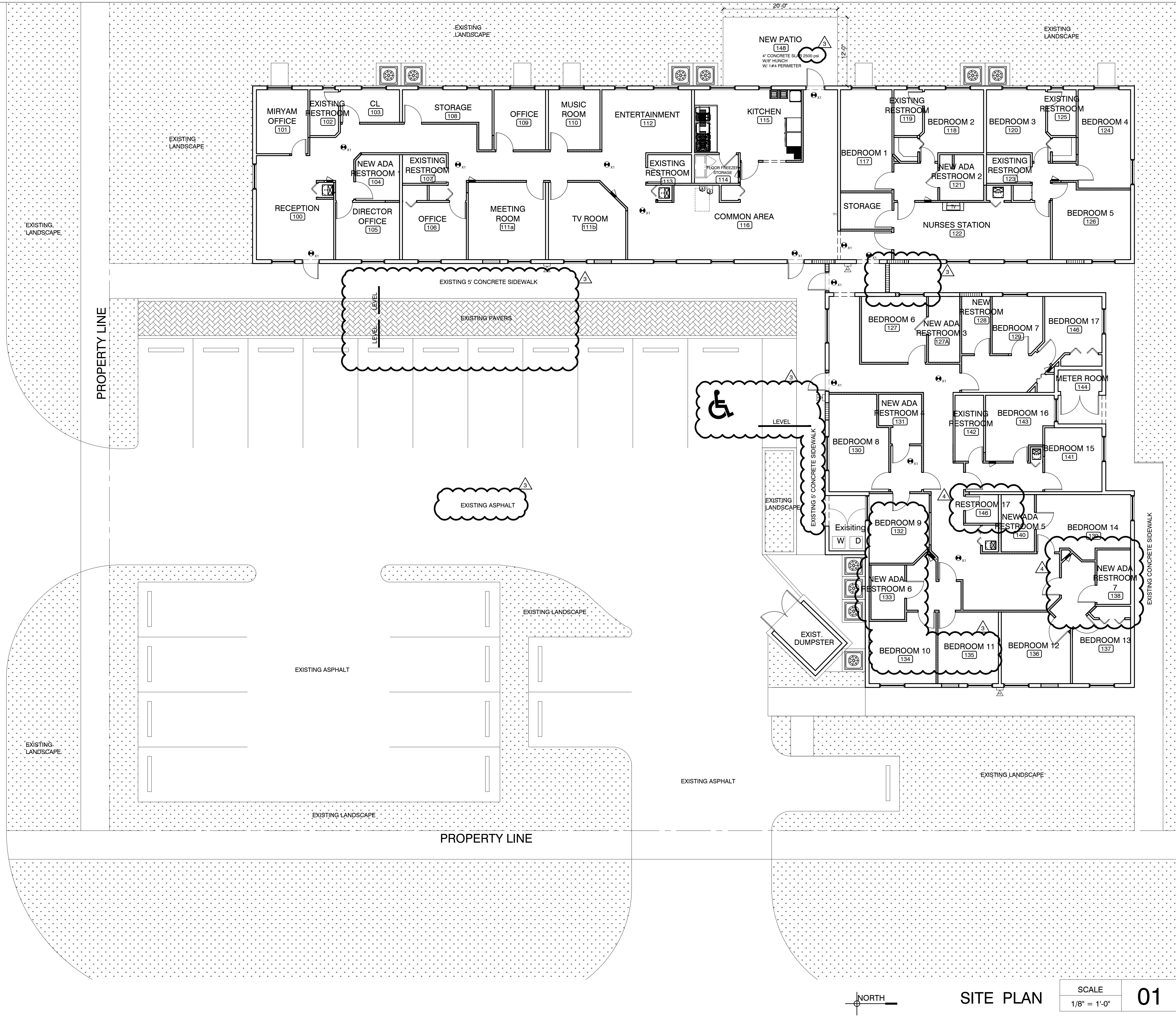
Enclosures



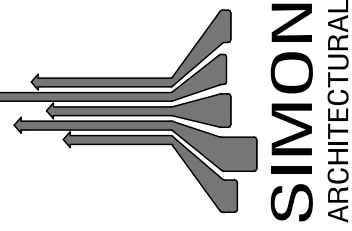
Thomas A. Hall, Inc.

Figure 1 – Site Location
Margate Cares for Heroes
City of Margate, Florida

ALAN RD. (NW 6th STREET)



3331 N.E. 32nd Street
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PROJECT

QUALITY OF LIFE
603 MELALEUCA DRIVE
MARGATE, FL

REVISIONS DATES:
08/03/15 BD COMMENTS
02/08/16 BD COMMENTS
03/01/16 BD COMMENTS
03/18/16 BD COMMENTS
04/04/16 BD COMMENTS
09/07/16 SITE REVISION
PROFESSIONAL SEAL

RICHARD HARRIS SIMON #A0004364
REGISTERED ARCHITECT STATE OF FLORIDA

ISSUE DATE: 10/09/15
PROJECT #: 1429 ALF 100
DRAWN BY: JJT
CHECKED BY: RHS

SITE PLAN

A-1.0

Table 1
Trip Generation Summary - Maximum Net New Trips
Margate Cares for Heroes

Time	Independent Variable				Max Value
	Bldg. Sq. Ft.	Beds	Occ. Beds	Employees	
Weekday	-14	34	34	70	70
A.M. Peak	0	1	3	9	9
P.M. Peak	-1	2	-3	8	8

Table 2
Daily Trip Generation - Square Footage
Margate Cares for Heroes

Land Use	ITE Code	Intensity	Trip Generation Rate ⁽¹⁾	Total Trips			Internal Trips				External Trips			Pass-by Trips		New Trips		
				In	Out	Total	In	Out	Total	%	In	Out	Total			In	Out	Total
Prior Use																		
Multi-Family Housing (Low-Rise)	220	10 d.u.	T=7.32(X) (50/50)	37	37	74	0	0	0	0.0%	37	37	74	0	0.0%	37	37	74
Subtotal				37	37	74	0	0	0		37	37	74	0		37	37	74
Proposed Use																		
Nursing Home	620	8,885 s.f. ⁽²⁾	T=6.64(X) (50/50)	30	30	60	0	0	0	0.0%	30	30	60	0	0.0%	30	30	60
Subtotal				30	30	60	0	0	0	0	30	30	60	0	0	30	30	60
NetDifference				-7	-7	-14	0	0	0		-7	-7	-14	0		-7	-7	-14

⁽¹⁾Trip generation rate obtained from ITE *Trip Generation* manual, 10th Edition.

⁽²⁾Square footage obtained from the Broward County Property Appraiser's website.

Table 3
AM Peak Hour Trip Generation - Square Footage
Margate Cares for Heroes

Land Use	ITE Code	Intensity	Trip Generation Rate ⁽¹⁾	Total Trips			Internal Trips				External Trips			Pass-by Trips		New Trips		
				In	Out	Total	In	Out	Total	%	In	Out	Total			In	Out	Total
Prior Use																		
Multi-Family Housing (Low-Rise)	220	10 d.u.	T=0.46(X) (23/77)	1	4	5	0	0	0	0.0%	1	4	5	0	0.0%	1	4	5
Subtotal				1	4	5	0	0	0		1	4	5	0		1	4	5
Proposed Use																		
Nursing Home	620	8,885 s.f. ⁽²⁾	T=0.55(X) (78/22)	4	1	5	0	0	0	0.0%	4	1	5	0	0.0%	4	1	5
Subtotal				4	1	5	0	0	0	0	4	1	5	0	0	4	1	5
NetDifference				3	-3	0	0	0	0		3	-3	0	0		3	-3	0

⁽¹⁾Trip generation rate obtained from ITE *Trip Generation* manual, 10th Edition.

⁽²⁾Square footage obtained from the Broward County Property Appraiser's website.

Table 4
PM Peak Hour Trip Generation - Square Footage
Margate Cares for Heroes

Land Use	ITE Code	Intensity	Trip Generation Rate ⁽¹⁾	Total Trips			Internal Trips				External Trips			Pass-by Trips		New Trips		
				In	Out	Total	In	Out	Total	%	In	Out	Total			In	Out	Total
Prior Use																		
Multi-Family Housing (Low-Rise)	220	10 d.u.	T=0.56(X) (63/37)	4	2	6	0	0	0	0.0%	4	2	6	0	0.0%	4	2	6
Subtotal				4	2	6	0	0	0		4	2	6	0		4	2	6
Proposed Use																		
Nursing Home	620	8,885 s.f. ⁽²⁾	T=0.59(X) (41/59)	2	3	5	0	0	0	0.0%	2	3	5	0	0.0%	2	3	5
Subtotal				2	3	5	0	0	0	0	2	3	5	0	0	2	3	5
NetDifference				-2	1	-1	0	0	0		-2	1	-1	0		-2	1	-1

⁽¹⁾Trip generation rate obtained from ITE *Trip Generation* manual, 10th Edition.

⁽²⁾Square footage obtained from the Broward County Property Appraiser's website.

Table 5
Daily Trip Generation - Beds
Margate Cares for Heroes

Land Use	ITE Code	Intensity	Trip Generation Rate ⁽¹⁾	Total Trips			Internal Trips				External Trips			Pass-by Trips		New Trips		
				In	Out	Total	In	Out	Total	%	In	Out	Total			In	Out	Total
Prior Use																		
Multi-Family Housing (Low-Rise)	220	10 d.u.	T=7.32(X) (50/50)	37	37	74	0	0	0	0.0%	37	37	74	0	0.0%	37	37	74
Subtotal				37	37	74	0	0	0		37	37	74	0		37	37	74
Proposed Use																		
Nursing Home	620	35 beds	T=3.06(X) (50/50)	54	54	108	0	0	0	0.0%	54	54	108	0	0.0%	54	54	108
Subtotal				54	54	108	0	0	0	0	54	54	108	0	0	54	54	108
NetDifference				17	17	34	0	0	0		17	17	34	0		17	17	34

⁽¹⁾Trip generation rate obtained from ITE *Trip Generation* manual, 10th Edition.

Table 6
AM Peak Hour Trip Generation - Beds
Margate Cares for Heroes

Land Use	ITE Code	Intensity	Trip Generation Rate ⁽¹⁾	Total Trips			Internal Trips				External Trips			Pass-by Trips		New Trips		
				In	Out	Total	In	Out	Total	%	In	Out	Total			In	Out	Total
Prior Use																		
Multi-Family Housing (Low-Rise)	220	10 d.u.	T=0.46(X) (23/77)	1	4	5	0	0	0	0.0%	1	4	5	0	0.0%	1	4	5
Subtotal				1	4	5	0	0	0		1	4	5	0		1	4	5
Proposed Use																		
Nursing Home	620	35 beds	T=0.17(X) (72/28)	4	2	6	0	0	0	0.0%	4	2	6	0	0.0%	4	2	6
Subtotal				4	2	6	0	0	0	0	4	2	6	0	0	4	2	6
NetDifference				3	-2	1	0	0	0		3	-2	1	0		3	-2	1

⁽¹⁾Trip generation rate obtained from ITE *Trip Generation* manual, 10th Edition.

Table 7
PM Peak Hour Trip Generation - Beds
Margate Cares for Heroes

Land Use	ITE Code	Intensity	Trip Generation Rate ⁽¹⁾	Total Trips			Internal Trips				External Trips			Pass-by Trips		New Trips		
				In	Out	Total	In	Out	Total	%	In	Out	Total			In	Out	Total
Prior Use																		
Multi-Family Housing (Low-Rise)	220	10 d.u.	T=0.56(X) (63/37)	4	2	6	0	0	0	0.0%	4	2	6	0	0.0%	4	2	6
Subtotal				4	2	6	0	0	0		4	2	6	0		4	2	6
Proposed Use																		
Nursing Home	620	35 beds	T=0.22(X) (33/67)	3	5	8	0	0	0	0.0%	3	5	8	0	0.0%	3	5	8
Subtotal				3	5	8	0	0	0	0	3	5	8	0	0	3	5	8
NetDifference				-1	3	2	0	0	0		-1	3	2	0		-1	3	2

⁽¹⁾Trip generation rate obtained from ITE *Trip Generation* manual, 10th Edition.

Table 8
Daily Trip Generation - Occupied Beds
Margate Cares for Heroes

Land Use	ITE Code	Intensity	Trip Generation Rate ⁽¹⁾	Total Trips			Internal Trips				External Trips			Pass-by Trips		New Trips		
				In	Out	Total	In	Out	Total	%	In	Out	Total			In	Out	Total
Prior Use																		
Multi-Family Housing (Low-Rise)	220	10 d.u.	T=7.32(X) (50/50)	37	37	74	0	0	0	0.0%	37	37	74	0	0.0%	37	37	74
Subtotal				37	37	74	0	0	0		37	37	74	0		37	37	74
Proposed Use																		
Nursing Home	620	35 beds ⁽²⁾	T=3.06(X) (50/50)	54	54	108	0	0	0	0.0%	54	54	108	0	0.0%	54	54	108
Subtotal				54	54	108	0	0	0	0	54	54	108	0	0	54	54	108
NetDifference				17	17	34	0	0	0		17	17	34	0		17	17	34

⁽¹⁾Trip generation rate obtained from ITE *Trip Generation* manual, 10th Edition.

⁽²⁾ITE doesn't provide a daily trip generation rate for "occupied beds."

Table 9
AM Peak Hour Trip Generation - Occupied Beds
Margate Cares for Heroes

Land Use	ITE Code	Intensity	Trip Generation Rate ⁽¹⁾	Total Trips			Internal Trips				External Trips			Pass-by Trips		New Trips		
				In	Out	Total	In	Out	Total	%	In	Out	Total			In	Out	Total
Prior Use																		
Multi-Family Housing (Low-Rise)	220	10 d.u.	T=0.46(X) (23/77)	1	4	5	0	0	0	0.0%	1	4	5	0	0.0%	1	4	5
Subtotal				1	4	5	0	0	0		1	4	5	0		1	4	5
Proposed Use																		
Nursing Home	620	35 occupied beds	T=0.10(X)+4.87 (72/28)	6	2	8	0	0	0	0.0%	6	2	8	0	0.0%	6	2	8
Subtotal				6	2	8	0	0	0	0	6	2	8	0	0	6	2	8
NetDifference				5	-2	3	0	0	0		5	-2	3	0		5	-2	3

⁽¹⁾Trip generation rate obtained from ITE *Trip Generation* manual, 10th Edition.

Table 10
PM Peak Hour Trip Generation - Occupied Beds
Margate Cares for Heroes

Land Use	ITE Code	Intensity	Trip Generation Rate ⁽¹⁾	Total Trips			Internal Trips				External Trips			Pass-by Trips		New Trips		
				In	Out	Total	In	Out	Total	%	In	Out	Total			In	Out	Total
Prior Use																		
Multi-Family Housing (Low-Rise)	220	10 d.u.	T=0.56(X) (63/37)	4	2	6	0	0	0	0.0%	4	2	6	0	0.0%	4	2	6
Subtotal				4	2	6	0	0	0		4	2	6	0		4	2	6
Proposed Use																		
Nursing Home	620	35 occupied beds	T=0.12(X)-1.51 (33/67) ⁽²⁾	1	2	3	0	0	0	0.0%	1	2	3	0	0.0%	1	2	3
Subtotal				1	2	3	0	0	0	0	1	2	3	0	0	1	2	3
NetDifference				-3	0	-3	0	0	0		-3	0	-3	0		-3	0	-3

⁽¹⁾Trip generation rate obtained from ITE *Trip Generation* manual, 10th Edition.

⁽²⁾No directional distribution provided by ITE. The same distribution provided for "beds" was assumed.

Table 11
Daily Trip Generation - Employees
Margate Cares for Heroes

Land Use	ITE Code	Intensity	Trip Generation Rate ⁽¹⁾	Total Trips			Internal Trips				External Trips			Pass-by Trips		New Trips		
				In	Out	Total	In	Out	Total	%	In	Out	Total			In	Out	Total
Prior Use																		
Multi-Family Housing (Low-Rise)	220	10 d.u.	$T=7.32(X) (50/50)$	37	37	74	0	0	0	0.0%	37	37	74	0	0.0%	37	37	74
Subtotal				37	37	74	0	0	0		37	37	74	0		37	37	74
Proposed Use																		
Nursing Home	620	31 employees	$T=2.43(X)+68.33 (50/50)$	72	72	144	0	0	0	0.0%	72	72	144	0	0.0%	72	72	144
Subtotal				72	72	144	0	0	0	0	72	72	144	0	0	72	72	144
NetDifference				35	35	70	0	0	0		35	35	70	0		35	35	70

⁽¹⁾Trip generation rate obtained from ITE *Trip Generation* manual, 10th Edition.

Table 12
AM Peak Hour Trip Generation - Employees
Margate Cares for Heroes

Land Use	ITE Code	Intensity	Trip Generation Rate ⁽¹⁾	Total Trips			Internal Trips				External Trips			Pass-by Trips		New Trips		
				In	Out	Total	In	Out	Total	%	In	Out	Total			In	Out	Total
Prior Use																		
Multi-Family Housing (Low-Rise)	220	10 d.u.	$T=0.46(X) (23/77)$	1	4	5	0	0	0	0.0%	1	4	5	0	0.0%	1	4	5
Subtotal				1	4	5	0	0	0		1	4	5	0		1	4	5
Proposed Use																		
Nursing Home	620	31 employees	$T=0.29(X)+4.76 (79/21)$	11	3	14	0	0	0	0.0%	11	3	14	0	0.0%	11	3	14
Subtotal				11	3	14	0	0	0	0	11	3	14	0	0	11	3	14
NetDifference				10	-1	9	0	0	0		10	-1	9	0		10	-1	9

⁽¹⁾Trip generation rate obtained from ITE *Trip Generation* manual, 10th Edition.

Table 13
PM Peak Hour Trip Generation - Employees
Margate Cares for Heroes

Land Use	ITE Code	Intensity	Trip Generation Rate ⁽¹⁾	Total Trips			Internal Trips				External Trips			Pass-by Trips		New Trips		
				In	Out	Total	In	Out	Total	%	In	Out	Total			In	Out	Total
Prior Use																		
Multi-Family Housing (Low-Rise)	220	10 d.u.	$T=0.56(X) (63/37)$	4	2	6	0	0	0	0.0%	4	2	6	0	0.0%	4	2	6
Subtotal				4	2	6	0	0	0		4	2	6	0		4	2	6
Proposed Use																		
Nursing Home	620	31 employees	$\ln(T)=0.65\ln(X)+0.40 (32/68)$	4	10	14	0	0	0	0.0%	4	10	14	0	0.0%	4	10	14
Subtotal				4	10	14	0	0	0	0	4	10	14	0	0	4	10	14
NetDifference				0	8	8	0	0	0		0	8	8	0		0	8	8

⁽¹⁾Trip generation rate obtained from ITE *Trip Generation* manual, 10th Edition.

Generalized **Peak Hour Two-Way** Volumes for Florida's
Urbanized Areas¹

INTERRUPTED FLOW FACILITIES

STATE SIGNALIZED ARTERIALS

Class I (40 mph or higher posted speed limit)

Lanes	Median	B	C	D	E
2	Undivided	*	1,510	1,600	**
4	Divided	*	3,420	3,580	**
6	Divided	*	5,250	5,390	**
8	Divided	*	7,090	7,210	**

Class II (35 mph or slower posted speed limit)

Lanes	Median	B	C	D	E
2	Undivided	*	660	1,330	1,410
4	Divided	*	1,310	2,920	3,040
6	Divided	*	2,090	4,500	4,590
8	Divided	*	2,880	6,060	6,130

Non-State Signalized Roadway Adjustments

(Alter corresponding state volumes
by the indicated percent.)

Non-State Signalized Roadways -10%

Median & Turn Lane Adjustments

Lanes	Median	Exclusive Left Lanes	Exclusive Right Lanes	Adjustment Factors
2	Divided	Yes	No	+5%
2	Undivided	No	No	-20%
Multi	Undivided	Yes	No	-5%
Multi	Undivided	No	No	-25%
-	-	-	Yes	+5%

One-Way Facility Adjustment

Multiply the corresponding two-directional
volumes in this table by 0.6

BICYCLE MODE²

(Multiply vehicle volumes shown below by number of
directional roadway lanes to determine two-way maximum service
volumes.)

Paved Shoulder/Bicycle Lane Coverage	B	C	D	E
0-49%	*	260	680	1,770
50-84%	190	600	1,770	>1,770
85-100%	830	1,700	>1,770	**

PEDESTRIAN MODE²

(Multiply vehicle volumes shown below by number of
directional roadway lanes to determine two-way maximum service
volumes.)

Sidewalk Coverage	B	C	D	E
0-49%	*	*	250	850
50-84%	*	150	780	1,420
85-100%	340	960	1,560	>1,770

BUS MODE (Scheduled Fixed Route)³

(Buses in peak hour in peak direction)

Sidewalk Coverage	B	C	D	E
0-84%	> 5	≥ 4	≥ 3	≥ 2
85-100%	> 4	≥ 3	≥ 2	≥ 1

UNINTERRUPTED FLOW FACILITIES

FREEWAYS

Core Urbanized

Lanes	B	C	D	E
4	4,050	5,640	6,800	7,420
6	5,960	8,310	10,220	11,150
8	7,840	10,960	13,620	14,850
10	9,800	13,510	17,040	18,580
12	11,600	16,350	20,930	23,200

Urbanized

Lanes	B	C	D	E
4	4,130	5,640	7,070	7,690
6	6,200	8,450	10,510	11,530
8	8,270	11,270	13,960	15,380
10	10,350	14,110	17,310	19,220

Freeway Adjustments

Auxiliary Lanes Present in Both Directions	Ramp Metering
+1,800	+5%

UNINTERRUPTED FLOW HIGHWAYS

Lanes	Median	B	C	D	E
2	Undivided	1,050	1,620	2,180	2,930
4	Divided	3,270	4,730	5,960	6,780
6	Divided	4,910	7,090	8,950	10,180

Uninterrupted Flow Highway Adjustments

Lanes	Median	Exclusive left lanes	Adjustment factors
2	Divided	Yes	+5%
Multi	Undivided	Yes	-5%
Multi	Undivided	No	-25%

¹Values shown are presented as peak hour directional volumes for levels of service and are for the automobile/truck modes unless specifically stated. This table does not constitute a standard and should be used only for general planning applications. The computer models from which this table is derived should be used for more specific planning applications. The table and deriving computer models should not be used for corridor or intersection design, where more refined techniques exist. Calculations are based on planning applications of the HCM and the Transit Capacity and Quality of Service Manual.

²Level of service for the bicycle and pedestrian modes in this table is based on number of vehicles, not number of bicyclists or pedestrians using the facility.

³Buses per hour shown are only for the peak hour in the single direction of the higher traffic flow.

* Cannot be achieved using table input value defaults.

** Not applicable for that level of service letter grade. For the automobile mode, volumes greater than level of service D become F because intersection capacities have been reached. For the bicycle mode, the level of service letter grade (including F) is not achievable because there is no maximum vehicle volume threshold using table input value defaults.

Source:
Florida Department of Transportation
Systems Implementation Office
<https://www.fdot.gov/planning/systems/>