THE CORRADINO GROUP, INC.

CORRADINO

ENGINEERS · PLANNERS · PROGRAM MANAGERS · ENVIRONMENTAL SCIENTISTS

date:	March 9, 2018
to:	Kathryn Lyon, Planning Director
from:	Gregory A. Prytyka, P.E., Chief Engineer
project #:	3896*76
subject:	Cutler Gate Traffic Impact Study

MEMORANDUM

The Corradino Group, Inc (Corradino) has been requested to review a "Traffic Impact Statement" for the "Cutler Gate" development (the report) submitted by Richard Garcia & Associates (RGA), dated January 23, 2018. As reported, the proposed Cutler Gate development is sited at 8495 SW 200th Street in Cutler Bay, and will be comprised of a 36-unit, mid-rise, multi-family housing complex, and a retail element of 4,186 square feet (ft^2). The following are our comments:

Roadway Analysis – LOS & Capacity

- Despite the one-day data collection performed at the site, based on information readily available from the FDOT website Florida Traffic Online (2016), the AADT on Old Cutler Road at Site 878310 – Old Cutler Road, 200' South of Franjo Rd, is 17,900, with a K factor of 9%. Performing the proper calculations on these data indicate that the peak hour traffic on Old Cutler Road is approximately 1,611 vehicles per hour (vph). The report references the 2013 FDOT Quality/Level of Service (QLOS) Handbook as the standard for determining Level of Service versus traffic volumes. Because the speed limit on Old Cutler Road is 40 mph, the report places this roadway in the "State Signalized Arterials" category, with a two-lane Level of Service (LOS) D capacity of 1,600 vph. Although we disagree with this categorization, giving the benefit of the doubt, Old Cutler Road currently operates at LOS F. References given above are attached.

Trip Generation

- The site plan provided does not provide sufficient detail to determine which area is being used for retail as opposed to housing. This, in turn will govern the types of land use classifications used to determine trip generation. The description given for ITE Trip Generation Land Use Code (LUC) 221, Multifamily Housing (Mid-Rise) indicates "Mid-Rise Multifamily Housing includes apartments, townhouses, and condominiums located within the same building with at least three other dwelling units and that have between three and 10 levels (floors)."

  It is unknown if the dwelling units in this development occupy two or three floors, internally or separately, excluding the retail space which is assumed to occupy the street level. If the housing element of the development occupies only two floors of the buildings, LUC 220, Multifamily Housing (Low-Rise) should be used.

- The use of Land Use Code (LUC) 820 – Shopping Center for 4,186 ft^2 of retail is questionable. The additional data description given for LUC 820, Shopping Center states "Shopping centers, including neighborhood centers, community centers, regional centers, and super regional centers, were surveyed for this land use. Some of these centers contained non-merchandising facilities, such as office buildings, movie theaters, restaurants, post offices, banks, health clubs, and recreational facilities (for example, ice skating rinks or indoor miniature golf courses)." The average size of shopping centers surveyed for the ITE AM peak trip generation rates was 251,000 ft^2, and 327,000 ft^2 for the PM peak, with a daily survey representing shopping centers of 435,000 ft^2. Because the retail use (4,186 ft^2) is minimal, trip generation should be calculated for each shop individually, based on anticipated uses.

- If it is acceptable to Cutler Bay, trip generation calculations based on LUC 820, Shopping Center, should be calculated using fitted curve equations rather than on average rates. Using the fitted curve equations, our analysis indicates that there should be a total of 101 trips in the AM peak and 69 trips during the PM peak. Calculations reflecting these results are attached.

- Once an accurate accounting of trip generation is presented, allowances should be made for multimodal trips, internal capture using NCHRP 684 methodology, and pas-by capture based on ITE Trip Generation Handbook, 3rd Edition.

Trip Distribution

- Trip distribution will require recalculation based upon actual trip generation results.

Proposed Future Conditions

- Proposed future conditions will require recalculation based upon actual trip generation results.

Thank you for the opportunity to review this traffic impact statement. If you have any questions or comments, please feel free to contact me.

Site Information	
Feature	**1**
Road Name	OLD CUTLER RD
Site	878310
Description	OLD CUTLER RD, 200' SOUTH OF FRANJO R D
Section	87067500
Milepoint	2.222
AADT	**17900**
Site Type	Portable
Class Data	No
K Factor	9
D Factor	56.1
T Factor	13.5
TRAFFIC REPORTS (provided in format)	
Miami-Dade County	**Annual Average Daily Traffic**
	Historical AADT Data
	Synopsis 878310

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TABLE 4

Generalized **Peak Hour Two-Way** Volumes for Florida's **Urbanized Areas**[1]

12/18/12

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 MODE[2]

(Multiply motorized 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	1,770	>1,770	**

PEDESTRIAN MODE[2]

(Multiply motorized 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

Lanes	B	C	D	E
4	4,120	5,540	6,700	7,190
6	6,130	8,370	10,060	11,100
8	8,230	11,100	13,390	15,010
10	10,330	14,040	16,840	18,930
12	14,450	18,880	22,030	22,860

Freeway Adjustments

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

UNINTERRUPTED FLOW HIGHWAYS

Lanes	Median	B	C	D	E
2	Undivided	770	1,530	2,170	2,990
4	Divided	3,300	4,660	5,900	6,530
6	Divided	4,950	6,990	8,840	9,790

Uninterrupted Flow Highway Adjustments

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

[1] Values shown are presented as peak hour two-way 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 Highway Capacity Manual and the Transit Capacity and Quality of Service Manual.

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

[3] Buses 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 Planning Office
www.dot.state.fl.us/planning/systems/sm/los/default.shtm

TABLE 1 - WEEKDAY AM PEAK HOUR TRIP GENERATION

PROPOSED DEVELOPMENT								
ITE TRIP GENERATION CHARACTERISTICS				DIRECTIONAL DISTRIBUTION		GROSS VOLUMES		
Land Use	LUC	Qty	Units	Percent		AM Peak		AM Total
				In	Out	In	Out	
Multifamily Housing (Mid-Rise)	221	36	DU	26%	74%	3	9	13
Shopping Center (LUC 820)	820	4,186	sq ft	62%	38%	55	34	89
TOTALS						**58**	**43**	**101**

Source: Institute of Transportation Engineers' Trip Generation Manual, 10th Edition

TABLE 4 - WEEKDAY PM PEAK HOUR TRIP GENERATION

PROPOSED DEVELOPMENT								
ITE TRIP GENERATION CHARACTERISTICS				DIRECTIONAL DISTRIBUTION		GROSS VOLUMES		
Land Use	LUC	Qty	Units	Percent		PM Peak		PM Total
				In	Out	In	Out	
Multifamily Housing (Mid-Rise)	221	36	DU	61%	39%	10	6	17
Shopping Center (LUC 820)	820	4,186	sq ft	48%	52%	25	27	52
TOTALS						**35**	**33**	**69**

Source: Institute of Transportation Engineers' Trip Generation Manual, 10th Edition