



To: Mr. Marc Gauthier
 Atlantic Housing Partners. LLC
 200 E. Canton Avenue, Suite 102
 Winter Park, FL 32789

Date: March 19, 2019

Memorandum

Project #: 63227.00

From: Karl Krichbaum
 Project Manager

Re: Technical Memorandum – Beasley Property Traffic Impacts

The purpose of this memorandum is to summarize the traffic impacts created by the proposed Beasley Property Development located in Seminole County. The project is geographically located in the northeast quadrant at the intersection of SR 434 and Beasley Road. For the purpose of this analysis, the proposed Development will consist of 92 apartments with a build-out year of 2020. Consistent with the revised Conceptual Plan, the project will have access to SR 434 with a right in/right out lane configuration.

The proposed land use is Mid-Rise Multi Family (three stories) which corresponds to ITE land use category ITE 221. For a conservative analysis, at maximum, the projected density for the site is 92 units. This produces 500 Daily trips. A summary of the trip generation is provided in Table 1.

For comparison, the current zoning allows for permitted uses within the C-1, CS, and CN land use designations. An example of another allowable land use of these designations is a grocery store which is categorized in the Institute of Transportation Engineers (ITE) Trip Generation Manual as “Supermarket, ITE 850”. For a conservative analysis, the Daily trip generation is based on a floor area ratio (FAR) of 0.35 even though Seminole County allows a FAR of 0.65. This equates to a building size of 70,589 square feet. The associated trip generation for this land use produces a Daily trip generation of 7,538 trips or 15 times the proposed multi-family use.

Table 1
 Beasley Property
 Trip Generation Summary

Maximum Allowable Land Use

AM Peak

Land Use	ITE Code	Size	/ Units	Daily	AM Peak Hour		
				Total	Total	Enter	Exit
Supermarket	850	70,589	SF	7,538	270	162	108
Total				7,538	270	162	108

PM Peak

Land Use	ITE Code	Size	/ Units	Daily	PM Peak Hour		
				Total	Total	Enter	Exit
Supermarket	850	70,589	SF	7,538	652	333	320
Total				7,538	652	333	320

Proposed Land Use

AM Peak

Land Use	ITE Code	Size	/ Units	Daily	AM Peak Hour		
				Total	Total	Enter	Exit
Mid-Rise Multi Family	221	92	DU	500	34	9	25
Total				500	34	9	25

PM Peak

Land Use	ITE Code	Size	/ Units	Daily	PM Peak Hour		
				Total	Total	Enter	Exit
Mid-Rise Multi Family	221	92	DU	500	41	25	16
Total				500	41	25	16

Source:

Institute of Transportation (ITE) Trip Generation Manual 10th Edition.

Access to the property on SR 434 is a proposed right in/right out only. This restriction will prevent motorists utilizing internal roadways to navigate further south. There is no proposed access to Beasley Road.

Per Seminole County, the average annual daily traffic (AADT) capacity for SR 434 is 60,000. The pre-development daily background traffic for future year 2020 is 40,210 vehicles with a remaining capacity of 19,790 vehicles. The post development daily traffic, with project trips included, for future year 2020 is 40,710 with a remaining capacity of 19,290 vehicles. To improve the Beasley Road/ SR 434 intersection, it is recommended that the southbound left turn lane on SR 434 is extended from approximately 230 feet to 365 feet to accommodate vehicular queue. This provides 240 feet of deceleration to safely channel traffic from southbound through mainline traffic. A northbound U-turn is recommended to be constructed north of the project entrance to allow vehicles leaving the project to travel southbound. The storage length for the U-turn north of the project entrance should be approximately 265 feet to accommodate the vehicular queue. This provides 240 feet of deceleration to safely channel traffic from northbound through mainline traffic. Additionally, a northbound right turn lane is provided entering the project. The approximate length is 175 feet. The recommended improvements prescribed above are subject to FDOT review.

If you have any questions and / or comments, please don't hesitate to contact us at (407) 839-4006.

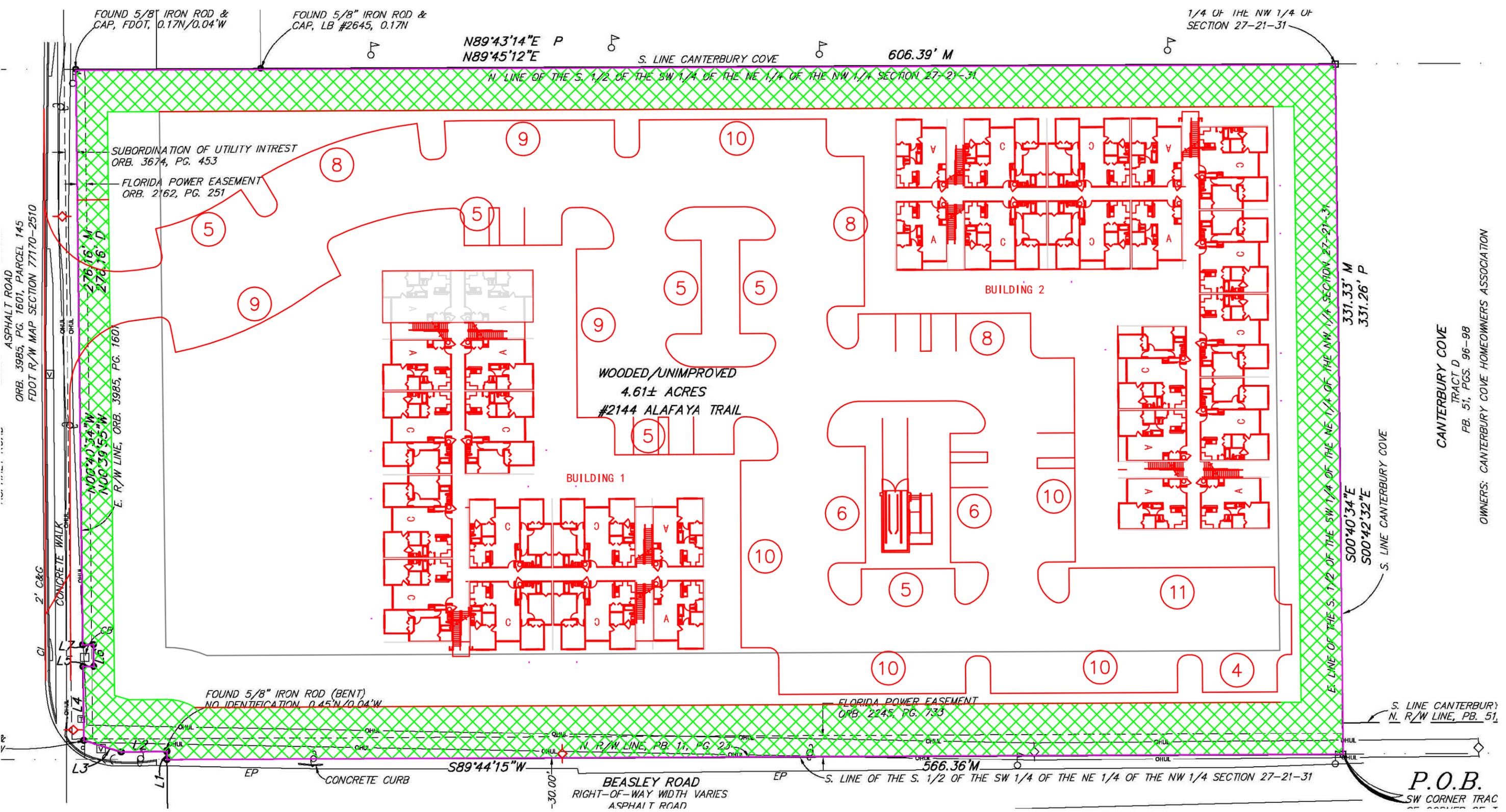
Regards,
VHB, INC.



Karl Krichbaum
Project Manager

Attachments:

Site Plan
Synchro 10 Summary Sheet
Turning Movement Counts



ASPHALT ROAD
ORB. 3985, PG. 1601, PARCEL 145
FDOT R/W MAP SECTION 77170-2510

FOUND 5/8" IRON ROD & CAP, FDOT, 0.17N/0.04"W

FOUND 5/8" IRON ROD & CAP, LB #2645, 0.17N

N89°43'14"E P
N89°45'12"E

S. LINE CANTERBURY COVE

606.39' M

1/4 OF THE NW 1/4 OF SECTION 27-21-31

N. LINE OF THE S. 1/2 OF THE SW 1/4 OF THE NE 1/4 OF THE NW 1/4 SECTION 27-21-31

SUBORDINATION OF UTILITY INTREST
ORB. 3674, PG. 453

FLORIDA POWER EASEMENT
ORB. 2162, PG. 251

8

5

9

10

8

9

9

5

5

WOODED/UNIMPROVED
4.61± ACRES
#2144 ALAFAYA TRAIL

BUILDING 1

BUILDING 2

6

6

10

5

11

10

10

10

4

FOUND 5/8" IRON ROD (BENT)
NO IDENTIFICATION, 0.45"N/0.04"W

FLORIDA POWER EASEMENT
ORB. 2245, PG. 733

S89°44'15"W

566.36' M

S. LINE OF THE S. 1/2 OF THE SW 1/4 OF THE NE 1/4 OF THE NW 1/4 SECTION 27-21-31

S00°40'34"E

S00°42'32"E

S. LINE CANTERBURY COVE

331.33' M

331.26' P

E. LINE OF THE S. 1/2 OF THE SW 1/4 OF THE NE 1/4 OF THE NW 1/4 SECTION 27-21-31

S. LINE CANTERBURY COVE
N. R/W LINE, PB. 51,

P.O.B.
SW CORNER TRAC

CANTERBURY COVE
TRACT D

PB. 51, PGS. 96-98

OWNERS: CANTERBURY COVE HOMEOWNERS ASSOCIATION

Intersection													
Int Delay, s/veh	3												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations		↕			↕		↕ ↑↑↑				↕ ↑↑↑		
Traffic Vol, veh/h	3	0	1	1	0	14	15	2523	1	45	24	1563	1
Future Vol, veh/h	3	0	1	1	0	14	15	2523	1	45	24	1563	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	-	None
Storage Length	-	-	-	-	-	-	230	-	-	-	230	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	92	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	0	1	1	0	15	16	2656	1	49	25	1645	1

Major/Minor	Minor2		Minor1		Major1			Major2					
Conflicting Flow All	2888	4483	823	3495	4483	1329	1646	0	0	1939	2657	0	0
Stage 1	1794	1794	-	2689	2689	-	-	-	-	-	-	-	-
Stage 2	1094	2689	-	806	1794	-	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	7.14	6.44	6.54	7.14	5.34	-	-	5.64	5.34	-	-
Critical Hdwy Stg 1	7.34	5.54	-	7.34	5.54	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	6.74	5.54	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	3.82	4.02	3.92	3.12	-	-	2.32	3.12	-	-
Pot Cap-1 Maneuver	17	1	272	7	1	125	189	-	-	130	57	-	-
Stage 1	54	131	-	12	45	-	-	-	-	-	-	-	-
Stage 2	205	45	-	310	131	-	-	-	-	-	-	-	-
Platoon blocked, %								-	-			-	-
Mov Cap-1 Maneuver	4	0	272	2	0	125	189	-	-	85	85	-	-
Mov Cap-2 Maneuver	31	36	-	8	2	-	-	-	-	-	-	-	-
Stage 1	49	18	-	11	41	-	-	-	-	-	-	-	-
Stage 2	166	41	-	41	18	-	-	-	-	-	-	-	-

Approach	EB		WB		NB			SB			
HCM Control Delay, s	105.3		80.3		0.2			6.4			
HCM LOS	F		F								

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	189	-	-	40	63	85	-
HCM Lane V/C Ratio	0.084	-	-	0.105	0.251	0.873	-
HCM Control Delay (s)	25.8	-	-	105.3	80.3	149.3	-
HCM Lane LOS	D	-	-	F	F	F	-
HCM 95th %tile Q(veh)	0.3	-	-	0.3	0.9	4.6	-

Intersection							
Int Delay, s/veh	0.1						
Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations		↗	↘	↑↑↑			↑↑↑
Traffic Vol, veh/h	0	1	15	1303	0	0	2396
Future Vol, veh/h	0	1	15	1303	0	0	2396
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	-	None	-	None
Storage Length	-	0	250	-	-	-	-
Veh in Median Storage, #	0	-	-	0	-	-	0
Grade, %	0	-	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2
Mvmt Flow	0	1	16	1416	0	0	2604

Major/Minor	Minor1	Major1	Major2				
Conflicting Flow All	-	708	1901	0	-	-	-
Stage 1	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-
Critical Hdwy	-	7.14	5.64	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	2.32	-	-	-	-
Pot Cap-1 Maneuver	0	324	137	-	0	0	-
Stage 1	0	-	-	-	0	0	-
Stage 2	0	-	-	-	0	0	-
Platoon blocked, %				-			-
Mov Cap-1 Maneuver	-	324	137	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	16.1	0.4	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBU	NBTWBLn1	SBT
Capacity (veh/h)	137	-	324
HCM Lane V/C Ratio	0.119	-	0.003
HCM Control Delay (s)	34.8	-	16.1
HCM Lane LOS	D	-	C
HCM 95th %tile Q(veh)	0.4	-	0

