

November 22, 2023

Ms. Diana Spriggs, P.E.
Regulatory Division Director
City of St. Port Lucie Public Works Department
121 S.W. Port St. Lucie Blvd, Building B
Port St. Lucie, FL 34984

RE: ***Starbucks Cashmere – Starbucks Queuing Analysis; St. Lucie, FL
Kimley-Horn Project No. 047427053***

Dear Ms. Spriggs:

Kimley-Horn and Associates, Inc. has undertaken the following queuing analysis to evaluate anticipated drive-through queues for a proposed Starbucks coffee shop generally located in the southwest quadrant of the intersection of Cashmere Boulevard & St Lucie West Boulevard in the City of Port St. Lucie, Florida. The subject property is located within an existing commercial retail development which includes a Walmart Neighborhood Market, gas station, and additional commercial uses. The proposed Starbucks coffee shop will be approximately 2,160 square feet with a drive through lane and pass-by lane.

Per Section 158.221(I) of the City of Port St Lucie's Land Development Code, the stacking area is required to be of sufficient length so that it will not block traffic circulation within the development during peak queuing periods. Kimley-Horn has prepared this stacking analysis to be included as a part of the Special Exception Use (SEU) application to the City of Port St Lucie to determine if adequate stacking is provided on-site. The conceptual site plan for the project site is included in **Attachment A**.

Starbucks Coffee Shop Drive-Through Queueing Calculations

Queueing counts were collected at three nearby Starbucks locations from the hours of 7:00AM to 10:00AM. These queueing counts considered the number of vehicles in the drive-through during five-minute intervals. Both the total number of queued cars and the number of queued cars after the menu board were counted. Based upon the queueing count data of the nearby Starbucks coffee shops, the maximum number of queued vehicles occurred between 8:00AM and 9:00AM. Data from the other Starbucks in the area include the addresses of 1789 St Lucie W Blvd, 2209 SW Gatlin Blvd, and 11121 SW Village Pkwy. The collected queuing counts are provided in **Attachment B**.

Proposed Starbucks Coffee Shop

For this analysis, customer demand at the Starbucks drive-through was evaluated to determine a conservative peak queue that could form after the menu board upon buildout. Then, the capacity of the proposed drive-through design was evaluated for adequacy to provide for the peak stacking demand. As shown in **Table 1** below, the average drive-through stacking demand is four (4) vehicles including two (2) after the menu board, while the peak queuing demand is eleven (11) vehicles including five (5) after the menu board. It should be noted that the number of vehicles queuing after menu board includes the car at the menu board providing their order. The proposed drive-through has enough stacking to adequately handle both the average and peak drive-through stacking demand.

Table 1 - Proposed On-Site Drive-Through Queueing Demand Summary

Provided On-Site Drive-Through Vehicle Queueing (TOTAL/AFTER MENU)	Maximum Queueing Vehicle Demand (TOTAL/AFTER MENU)	Average Queueing Vehicle Demand (TOTAL/AFTER MENU)	Total Required Vehicle Queueing (TOTAL/AFTER MENU)	Adequate Queueing Provided?
11/5	11/5	4/2	11/5	Yes

Conclusion

A queuing analysis was performed for a proposed Starbucks generally located in the southwest quadrant of the intersection of Cashmere Boulevard & St Lucie West Boulevard in the City of Port St. Lucie, Florida. The subject property is located within an existing commercial retail development which includes a Walmart Neighborhood Market, gas station, and additional commercial uses.

Based upon the queueing data from the other nearby Starbucks Coffees Shops within a 10-mile radius, the maximum queue demand for existing Starbucks coffee shops is eleven (11) vehicles including five (5) after the menu board. It should be noted that the number of vehicles queuing after menu board includes the car at the menu board providing their order. The proposed drive-through has enough stacking to adequately handle both the average and peak drive-through stacking demand as there is enough stacking for eleven (11) vehicles including five (5) after the menu board.

Please contact us if you have any questions or need additional information.

Sincerely,

KIMLEY-HORN



Alex Memering, P.E.

PE Number 91501

11/22/2023

Attachments: Conceptual Site Plan
Starbucks Queueing Data

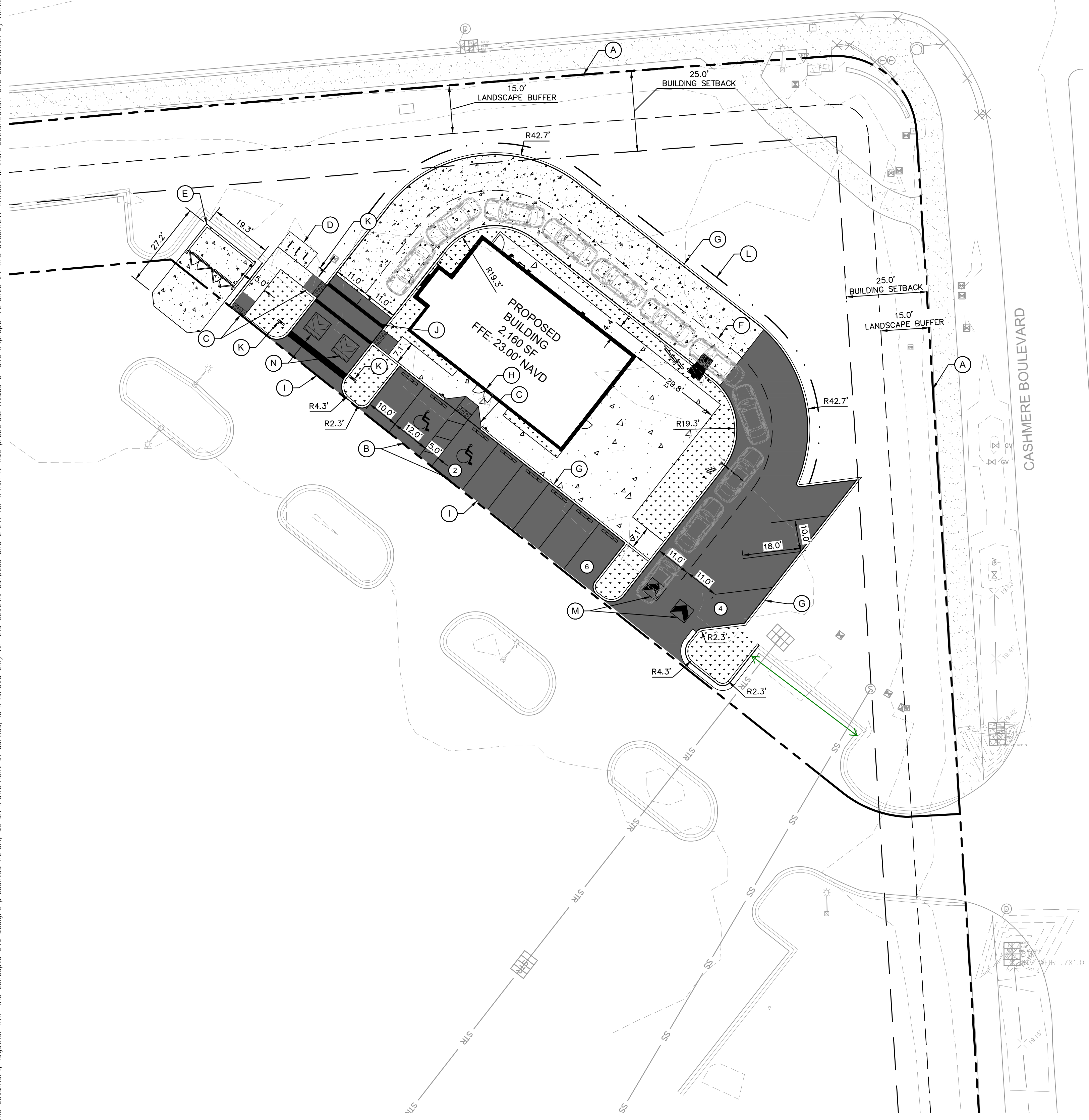
ATTACHMENT A
Conceptual Site Plan

Plotted By: Chan, Jessica - Sheet: Starbucks_Cashmere - Layout: C-100 SITE PLAN - October 16, 2023 03:37:42pm K:\VRB\IDEV\Regency\Florida\Cashmere_starbucks\CAD\plan sheets\C-100 SITE PLAN.dwg
 This document, together with the concepts and designs presented herein, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

SAINT LUCIE WEST BOULEVARD
(150' PUBLIC RIGHT-OF-WAY)

ST. LUCIE WEST BOULEVARD

CASHMERE BOULEVARD
(120' PUBLIC RIGHT-OF-WAY)



SITE DATA:

LOCATION: SECTION 25 TOWNSHIP 36S RANGE 39E
 PARCEL ID: 3430-602-0001-000-5
 ADDRESS: SW CORNER OF ST LUCIE WEST BOULEVARD & SW CASHMERE BOULEVARD
 LEGAL DESCRIPTION: BANKUNITED AT CASHMERE CORNERS ST LUCIE WEST PLAT NO. 188 (PB 59-14) LOT 3A PARCEL 20
 ZONING: GENERAL COMMERCIAL
 FUTURE ZONING: GENERAL COMMERCIAL
 LAND USE: VACANT LAND
 TYPE OF PROJECT: OFFICE/RETAIL
 FLOOD ZONE: "X" (F.I.R.M. PANEL #12111C0260J)
 OVERALL SITE AREA: 477,612 SF 10.96 AC
 PROJECT AREA: 44,431 SF 1.02 AC

LOT COVERAGE:	ACRES	SF	PERCENTAGE %
SITE AREA:	1.02	44,431	100.00
IMPERVIOUS AREA	0.31	13,688	30.39
BUILDING COVERAGE	0.05	2,355	4.90
PAVEMENT & SIDEWALK	0.26	11,313	25.49
PERVIOUS AREA:	0.71	30,743	69.61

PARKING SUMMARY

REQUIRED PARKING RATIO: 1 SPOT PER 75 SF (BUILDING)

STANDARD ACCESSIBLE PER ADA	REQUIRED	PROVIDED
	10	10
TOTAL PARKING	11	12

SITE LEGEND

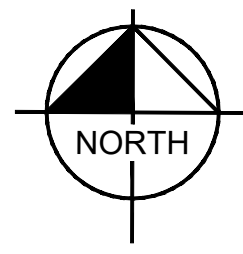
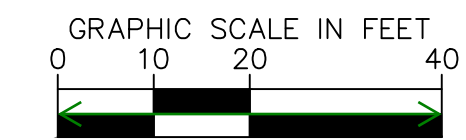
- PROPERTY LINE
- - - PROPOSED LANDSCAPE BUFFER
- - - PROPOSED BUILDING SETBACK
- PROPOSED D CURB
- STANDARD DUTY ASPHALT PAVEMENT
- HEAVY DUTY CONCRETE
- CONCRETE SIDEWALK

KEYNOTES:

- (A) PROPERTY LINE
- (B) ACCESSIBLE PARKING SPACE (TYP.) (REFER TO DETAIL SHEET C-150)
- (C) ACCESSIBLE RAMP (REFER TO DETAIL SHEET C-150)
- (D) PROPOSED BIKE RACK
- (E) PROPOSED DUMPSTER
- (F) 6" WHITE SKIP STRIPING
- (G) PROPOSED D CURB
- (H) PROPOSED BUILDING ENTRANCE
- (I) PROPOSED ASPHALT TO MATCH EXISTING PAVEMENT
- (J) PROPOSED CROSSWALK
- (K) STOP SIGN (REFER TO FDOT R1-1)
- (L) 6' HIGH CONTINUOUS VEGETATION BUFFER
- (M) TRAFFIC ENTRY FLOW ARROW (REFER TO DETAIL SHEET C-150)
- (N) TRAFFIC EXIT FLOW ARROW (REFER TO DETAIL SHEET C-150)

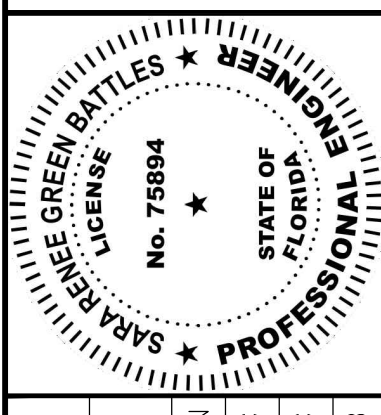
SITE NOTES:

- ALL WORK AND MATERIALS SHALL COMPLY WITH ALL CITY/COUNTY REGULATIONS AND CODES AND O.S.H.A. STANDARDS.
- CONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF VESTIBULES, SLOPE PAVING, SIDEWALKS, EXIT PORCHES, TRUCK DOCKS, PRECISE BUILDING DIMENSIONS, EXACT BUILDING UTILITY ENTRANCE LOCATIONS AND FOR THE SITE LIGHTING ELECTRICAL PLAN.
- ALL DISTURBED AREAS ARE TO RECEIVE FOUR INCHES OF TOPSOIL, SEED, MULCH AND WATER UNTIL A HEALTHY STAND OF GRASS IS ESTABLISHED.
- ALL DIMENSIONS AND RADI ARE TO THE FACE OF CURB UNLESS OTHERWISE NOTED.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL RELOCATIONS, (UNLESS OTHERWISE NOTED ON PLANS) INCLUDING BUT NOT LIMITED TO, ALL UTILITIES, STORM DRAINAGE, SIGNS, TRAFFIC SIGNALS & POLES, ETC. AS REQUIRED. ALL WORK SHALL BE IN ACCORDANCE WITH GOVERNING AUTHORITIES REQUIREMENTS AND PROJECT SITE WORK SPECIFICATIONS AND SHALL BE APPROVED BY SUCH. ALL COST SHALL BE INCLUDED IN BASE BID.
- SITE BOUNDARY, TOPOGRAPHY, UTILITY AND ROAD INFORMATION TAKEN FROM A SURVEY BY A LAND SURVEYOR.
- NO WETLANDS ARE PRESENT.
- MONUMENT SIGN FACES SHALL BE CONSTRUCTED BY OTHERS.
- REFER TO ARCH. PLANS FOR SITE LIGHTING ELECTRICAL PLAN.
- TYPICAL 90° PARKING STALL DEPTH IS 18' AND TYPICAL PARKING STALL WIDTH IS 9.5' UNLESS OTHERWISE NOTED.
- EXISTING CONDITIONS MAY ALTER EXACT SIZE OF PARKING STALL DEPTH AND WIDTH.
- THE DEVELOPMENT AND USE OF THIS SITE WILL COMPLY WITH CITY OF PORT ST. LUCIE ACCESS STANDARDS DEFINED BY SECTION 158.222.
- (FFFC 1-18.3.2.4.1) FIRE DEPARTMENT ACCESS ROADS SHALL HAVE AN UNOBSTRUCTED WIDTH OF NOT LESS THAN 20 FT. THE DRIVING SURFACE SHALL BE MAINTAINED DURING ALL PHASES OF CONSTRUCTION AND MUST BE AN ALL-WEATHER DRIVING SURFACE CAPABLE OF SUPPORTING A 32-TON EMERGENCY VEHICLE.
- CONTRACTOR IS RESPONSIBLE TO PROTECT AND/OR REPLACE POST CONSTRUCTION ALL SURVEY MONUMENTATION WITHIN THE PROJECT LIMITS BY A FLORIDA LICENSED LAND SURVEYOR.



No.	REVISIONS	DATE	BY

Kimley»Horn
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 445 24TH STREET, SUITE 200, VERO BEACH, FL 32960
 PHONE: 772-794-4100
 WWW.KIMLEY-HORN.COM REGISTRY NO. 35106



KHA PROJECT 047427053	DATE 08/23/2023	SCALE AS SHOWN	DESIGNED BY JC	DRAWN BY JC	CHECKED BY SRE
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SITE PLAN

STARBUCKS
CASHMERE
PREPARED FOR
REGENCY
CITY OF PORT ST. LUCIE
FLORIDA

CALL 48 HOURS BEFORE YOU DIG
IT'S THE LAW! DIAL 811
Know what's below. Call before you dig.
SUNSHINE STATE ONE CALL OF FLORIDA, INC.

ATTACHMENT B
Starbucks Queueing Data

Time	Site 1		Site 2		Site 3	
	Total #	# after menu	Total #	# after menu	Total #	# after menu
700	1	1	3	2	4	4
705	2	2	0	0	3	2
710	1	1	1	1	1	0
715	3	0	2	1	3	2
720	3	2	3	2	4	2
725	5	1	1	1	2	1
730	3	2	2	2	4	2
735	6	0	4	3	8	3
740	4	1	5	2	8	4
745	6	1	6	4	7	3
750	1	1	4	3	6	1
755	7	1	5	2	4	2
800	6	2	4	4	6	1
805	7	1	5	3	3	2
810	10	1	3	1	4	3
815	6	1	6	3	3	3
820	5	1	5	4	4	2
825	4	1	5	3	5	2
830	4	2	3	3	8	1
835	2	2	5	3	9	2
840	4	0	9	4	6	0
845	8	1	6	4	7	1
850	8	3	4	2	7	4
855	8	3	1	0	10	2
900	2	0	3	1	5	3
905	4	0	2	1	11	3
910	2	1	4	3	6	2
915	4	2	2	1	2	2
920	6	1	5	3	5	4
925	5	1	7	3	5	3
930	4	1	6	4	9	3
935	2	1	5	2	11	5
940	3	1	5	3	5	3
945	2	1	5	1	4	2
950	4	3	8	4	4	4
955	6	3	7	4	1	1
1000	1	4	2	1	4	3
Average (in Queue)	4	1	4	2	5	2
MAX (In Queue)	10	4	9	4	11	5

Average in queue across all sites:	4	Sites:	
Peak in queue across all sites:	11	1	1789 St Lucie W Blvd
		2	2209 SW Gatlin Blvd
Average after menu board across all sites:	2	3	11121 SW Village Pkwy
Peak after menu board across all sites:	5		