
EXHIBIT "11"

HALLANDALE OASIS
TRAFFIC STUDY

KBP CONSULTING, INC.

February 12, 2018

Mr. Jorge M. Szauer, P.E.
Szauer Engineering, Inc.
7251 W. Palmetto Park Road, Suite 100
Boca Raton, Florida 33433

**Re: Oasis Mixed-Use Development – Traffic Statement
Hallandale Beach, Florida**

Dear Jorge:

Oasis is a proposed mixed-use development to be located on the south side of E. Hallandale Beach Boulevard (State Road 858) in the City of Hallandale Beach, Broward County, Florida. More specifically, the site is located approximately 1,250 feet to the east of Federal Highway (State Road 5 / US 1). A mixed-use development scenario was proposed and approved for this site in 2016. Recently, the project team has revisited the approved development scenario and has proposed several revisions. The primary purposes of this traffic statement are to document the comparative trip generation characteristics of the currently proposed development scenario with those of the previously approved development scenario and to document the background traffic conditions in the immediate area of the proposed project.

Previous Traffic Analysis

In December 2015, a traffic impact study was prepared for the proposed Oasis development. At that time, the development program consisted of 500 high-rise residential apartment dwelling units, a hotel with 200 guest rooms, 59,631 square feet of office space, 26,489 square feet of specialty retail space, and a 7,340 square foot quality restaurant. The resulting trip generation analysis comparing the proposed development with the existing development on the site (i.e. 64,880 square feet of office space, a 6,250 square foot fitness center, and a 5,000 square foot drive-in bank) is summarized in Table 1 below.

Table 1 Trip Generation Summary Hallandale Oasis - Hallandale Beach, Florida								
Land Use	Size	Daily Trips	AM Peak Hour Trips			PM Peak Hour Trips		
			In	Out	Total	In	Out	Total
Existing Development								
Office	64,880 SF	945	119	16	135	26	125	151
Fitness Center	6,250 SF	206	5	4	9	14	10	24
Drive-in Bank	5,000 SF	741	34	26	60	61	61	122
- Pass-By (Bank - 47%)		-348	-16	-12	-28	-29	-28	-57
Total		1,544	142	34	176	72	168	240
Proposed Development								
Office	59,631 SF	886	112	15	127	25	120	145
Specialty Retail	26,489 SF	1,174	0	0	0	32	40	72
- Pass-By (Retail - 34%)		-399	0	0	0	-11	-13	-24
Quality Restaurant	7,340 SF	660	3	3	6	37	18	55
Hotel	200 Rooms	1,417	63	43	106	61	59	120
Residential	500 DU	2,118	38	112	150	105	67	172
Sub-Total		5,856	216	173	389	249	291	540
Deductions								
Internalization (2% @ 11%)		-351	-4	-4	-8	-27	-32	-59
Total		5,505	212	169	381	222	259	481
Difference (Proposed - Existing)		3,961	70	135	205	150	91	241

Source: KBP Consulting, Inc., December 2015.

Institute of Transportation Engineers (ITE) Trip Generation Manual (9th Edition).

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As indicated in Table 1 on the previous page, the previously proposed development scenario would have resulted in 3,961 additional daily vehicle trips, 205 additional AM peak hour vehicle trips (70 inbound and 135 outbound), and 241 additional PM peak hour vehicle trips (150 inbound and 91 outbound) when compared with the existing development (i.e. office / fitness center / bank) on the site.

Currently Proposed Development

The currently proposed development scenario for the Oasis project consists of 34,691 square feet of office space, 59,219 square feet of retail space, and 500 residential apartment dwelling units. (The latest site plan for this project is presented in Attachment A.) This trip generation analysis was prepared based upon information contained in the current edition of the Institute of Transportation Engineer's (ITE) *Trip Generation Manual (10th Edition)*. The applicable land uses and associated trip generation rates / equations for the existing and proposed development at this site are presented below.

ITE Land Use #710 – General Office Building

- Weekday: $\text{Ln}(T) = 0.97 \text{Ln}(X) + 2.50$
where T = number of trips and X = 1,000 square feet of gross floor area
- AM Peak: $T = 0.94 (X) + 26.49$ (86% in / 14% out)
- PM Peak: $\text{Ln}(T) = 0.95 \text{Ln}(X) + 0.36$ (16% in / 84% out)

ITE Land Use #492 – Health / Fitness Club

- Weekday: $T = 32.93 (X)$
where T = number of trips and X = 1,000 square feet of gross floor area¹
- AM Peak: $T = 1.31 (X)$ (51% in / 49% out)
- PM Peak: $\text{Ln}(T) = 0.67 \text{Ln}(X) + 2.44$ (57% in / 43% out)

ITE Land Use #912 – Drive-in Bank

- Weekday: $T = 82.87 (X) + 117.10$
where T = number of trips and X = 1,000 square feet of gross floor area
- AM Peak: $T = 9.50 (X)$ (58% in / 42% out)
- PM Peak: $T = 20.45 (X)$ (50% in / 50% out)
 - Pass-By = 47%

ITE Land Use #820 – Shopping Center

- Weekday: $\text{Ln}(T) = 0.68 \text{Ln}(X) + 5.57$
where T = number of trips and X = 1,000 square feet of gross leasable area
- AM Peak: $T = 0.50 (X) + 151.78$ (62% in / 38% out)
- PM Peak: $\text{Ln}(T) = 0.74 \text{Ln}(X) + 2.89$ (48% in / 52% out)
 - Pass-By = 34%

¹ Weekday trip generation data for this land use is not presented in the 10th Edition of the *Trip Generation Manual*. The rate presented is from the 9th Edition of this manual.

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ITE Land Use #222 – Multifamily Housing (High-Rise)

- Weekday: $T = 3.94 (X) + 211.81$
where T = number of trips and X = number of dwelling units
- AM Peak: $T = 0.28 (X) + 12.86$ (24% in / 76% out)
- PM Peak: $T = 0.34 (X) + 8.56$ (61% in / 39% out)

The resulting trip generation analysis for the currently proposed development scenario is summarized in Table 2 below.

Land Use	Size	Daily Trips	AM Peak Hour Trips			PM Peak Hour Trips		
			In	Out	Total	In	Out	Total
Existing Development								
Office	64,880 SF	697	75	12	87	12	63	75
Fitness Center	6,250 SF	206	4	4	8	22	17	39
Drive-in Bank	5,000 SF	531	28	20	48	51	51	102
- Pass-By (Bank - 47%)		(250)	(13)	(10)	(23)	(24)	(24)	(48)
Total		1,184	94	26	120	61	107	168
Proposed Development								
Office	34,691 SF	380	51	8	59	7	35	42
General Retail	59,219 SF	4,210	112	69	181	177	192	369
- Pass-By (Retail - 34%)		(1,431)	(38)	(24)	(62)	(60)	(65)	(125)
Residential	500 DU	2,182	37	116	153	109	70	179
Sub-Total		5,341	162	169	331	233	232	465
Deductions								
Internalization (5%/25%)		(801)	(8)	(9)	(17)	(58)	(58)	(116)
Total		4,540	154	160	314	175	174	349
Difference (Proposed - Existing)		3,356	60	134	194	114	67	181

Source: KBP Consulting, Inc., February 2018.

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

As indicated in Table 2 above, the currently proposed development scenario for the Oasis is expected to generate 3,356 additional daily vehicle trips, 194 additional AM peak hour vehicle trips (60 inbound and 134 outbound), and 181 additional PM peak hour vehicle trips (114 inbound and 67 outbound) when compared with the existing development on the site. (The internalization analysis for this scenario is presented in Attachment B to this memorandum.) The number of additional daily, AM peak hour, and PM peak hour vehicle trips expected to be generated by the currently proposed development scenario is fewer in all cases than the additional trips that were projected to be generated by the previously approved development scenario. The resulting trip generation differential is presented in Table 3 below.

Development Scenario	Daily Trips	AM Peak Hour Trips			PM Peak Hour Trips		
		In	Out	Total	In	Out	Total
Previously Approved (2015/16)	3,961	70	135	205	150	91	241
Currently Proposed (2018)	3,356	60	134	194	114	67	181
Difference (Proposed - Approved)	(605)	(10)	(1)	(11)	(36)	(24)	(60)

Source: KBP Consulting, Inc., February 2018.

Institute of Transportation Engineers (ITE) Trip Generation Manual (9th & 10th Editions).

Background Traffic Volumes

The Florida Department of Transportation (FDOT) maintains a traffic count station (#865029) on Hallandale Beach Boulevard just east of Federal Highway (US 1 / State Road 5). The Annual Average Daily Traffic (AADT) volumes for this count station for the past 10 years are presented in Table 4 below.

Table 4 Average Annual Daily Traffic (AADT) Oasis - Hallandale Beach, Florida	
Year	AADT Station #865029
2016	41,500
2015	41,500
2014	38,500
2013	39,500
2012	45,000
2011	42,000
2010	42,500
2009	46,500
2008	55,000
2007	39,500
2006	45,500

*Station #865029 - SR 858 / Hallandale Beh Blvd - E of US 1
Source: Florida Department of Transportation
Compiled by: KBP Consulting, Inc. (February 2018)*

As indicated in Table 4, the Annual Average Daily Traffic volumes in the vicinity of the Oasis project have declined in recent years and remain unchanged since the 2015 / 2016 timeframe when this project was previously approved. (The data from FDOT is presented in Attachment C to this memorandum.)

Project Traffic Assignment and Volumes

Since the roadway network assumed in the previously approved analysis has generally remained constant and the proposed land uses are similar, the trip distribution patterns are expected to be similar as well. The previously approved trip distribution and traffic assignment is presented in Attachment D and the currently proposed distribution and assignment is presented in Attachment E.

Background Traffic, Committed Development and Total Traffic Volumes

As mentioned previously, background traffic volumes within the project study area have declined slightly in recent years. However, there are several approved projects within the project study area which have committed traffic that should be considered as part of this analysis. The traffic analysis for the previously approved project considered the following projects:

- Village at Gulfstream / Gulfstream Park
- 7th Avenue Village (Hallandale Retail Beach)
- Hallandale ArtSquare
- Gulfstream Point

Recently, several additional projects have been approved that should be considered in this analysis. These projects are:

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- Accesso
- Diplomat
- Peninsula Tower

The traffic volumes and patterns for these projects were obtained from the City's database. The future traffic calculations (peak season adjustments, background traffic growth, committed project traffic, and the traffic associated with the proposed Hallandale Oasis project) for the study intersections are contained in Attachment F in tabular format. The previously approved intersection traffic volumes are presented graphically in Attachment G and the currently proposed intersection traffic volumes are presented graphically in Attachment H.

Westbound U-Turns at Hallandale Beach Boulevard and Gulfstream Way

As requested by City staff, a review of the westbound U-turn volumes at Hallandale Beach Boulevard and Gulfstream Way has been conducted. Given the overall reduction in vehicle trips to be generated by the revised Oasis project (when compared with the previously approved development plan) and a greater reliance upon the eastern driveway on Hallandale Beach Boulevard to serve project traffic (i.e. the eastern driveway in the previously proposed plan was primarily a "service" entrance), the number of westbound U-turn maneuvers at the subject intersection is expected to be reduced. A detailed analysis of this movement reveals the following with respect to this movement:

- In the AM peak hour, the number of U-turns will be reduced from 53 vehicles per hour (vph) to 38 vph (a 28% reduction).
- In the PM peak hour, the number of U-turns will be reduced from 58 vph to 47 vph (a 19% reduction).

Valet Queuing Analysis

The residential component of this development will consist of two (2) towers and a total of 500 dwelling units. Parking facilities will be provided on the first five (5) floors and will be limited to residents and their guests only (i.e. these parking facilities will not be available to the office and retail uses within this development). Residents will have access to the secured parking area; however, guests will be required to utilize the valet services. The proposed valet area will have the capacity to accommodate seven (7) vehicles simultaneously in a single-lane configuration. As requested by City staff, an analysis has been conducted to assess the adequacy of the proposed valet area.

Based upon the trip generation analysis presented previously in this report, it is estimated that the peak hour inbound traffic volume for the residential component of the Oasis project will be 109 vehicles during the PM peak hour. According to the Urban Land Institute (ULI), approximately 8% of residential traffic is associated with guests / visitors. Assuming that 10% of the peak hour vehicles are visitors, the number of peak hour visitor vehicles for this development is expected to be 11.

The queuing anticipated at the valet station (for inbound traffic) was determined using information contained in ITE's publication entitled *Transportation and Land Development*, Chapter 8 – Drive-In Facilities². For this analysis, the following input variables were used:

² By Vergil G. Stover and Frank J. Koepke. Please see Attachment I for applicable excerpts from this publication.

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- **Service Rate:** Based upon the proximity of the proposed valet parking spaces to be located on the first floor of the parking garage, the service rate is anticipated to be no more than three (3) minutes per vehicle. That is, the amount of time needed for the valet runner to drive the vehicle to a valet parking space and return to the valet stand on foot is estimated at three (3) minutes. This condition yields a service rate of 20 vehicles per hour.
- **Demand Rate:** Based upon the trip generation analysis, the peak inbound parking demand for the valet operation is expected to be 11 vehicles in the PM peak hour.
- **Number of Service Lanes and Personnel:** In order to achieve the optimal service rate, adequate availability of valet personnel will be required. Based upon an initial evaluation of the service rate, the projected demand rate, and the anticipated operations of the site, one (1) valet runner is anticipated to be adequate during the peak time periods.

Using equation 8-9b and Table 8-11 of ITE's *Transportation and Land Development* publication, the maximum vehicle queue anticipated at the valet station, at the 95% confidence level, is three (3) vehicles. As a result, it is evident that the proposed number of vehicle spaces provided for the valet operation (i.e. 7 spaces) will be sufficient to meet the likely peak demand. The subject queuing analysis worksheet is contained in Attachment J.

Mitigation Measures

As requested by City staff, the following is a summary of the transportation-related mitigation measures, strategies, and improvements that will be implemented as a result of this project:

- The Applicant will pay the required City impact fees as it relates to the transportation impacts incurred by this project. The expenditure of these funds will be implemented in accordance with the City's discretion.
- An eastbound right-turn lane at the western project driveway on Hallandale Beach Boulevard will be constructed by the Applicant.
- The eastern project driveway will be more appropriately aligned (when compared with the previously proposed and approved site plan) with the existing median opening on Hallandale Beach Boulevard at NE 12th Avenue.
- The use of alternate modes of transportation (i.e. walking, bicycling, and public transportation) will be encouraged through the development of this project.
- Traffic signal timing improvements will be implemented following the substantial completion of the Oasis project.

Conclusions

Given that the daily, AM peak hour, and PM peak hour trip generation of the proposed Oasis development on Hallandale Beach Boulevard is lower than that of the previously approved mixed-use development at this site and that the background daily traffic volumes in the immediate area of the project are generally steady to declining in recent years, it is apparent that no further traffic analyses for this project are warranted at this time. Additionally, based upon the queuing analysis for the valet operations it is evident that the vehicle queuing area will be adequate to satisfy the likely peak period demand.

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If you have any questions or require additional information, please do not hesitate to contact me.

Sincerely,

KBP CONSULTING, INC.

A handwritten signature in blue ink, appearing to read "Karl B. Peterson", with a stylized flourish extending to the right.

Karl B. Peterson, P.E.
Florida Registration Number 49897
Engineering Business Number 29939

Attachment A

Oasis – Preliminary Site Plan



OASIS HALLANDALE
 1150 HALLANDALE BEACH BOULEVARD
 HALLANDALE BEACH, FL 33089

OWNER:
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ARQUITECTONICA
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DESIGNER:
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ENGINEER:
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 HALLANDALE BEACH, FL 33089
 TEL: 305.948.1234

DATE:
 11/15/2023

PROJECT NUMBER:
 1000.00

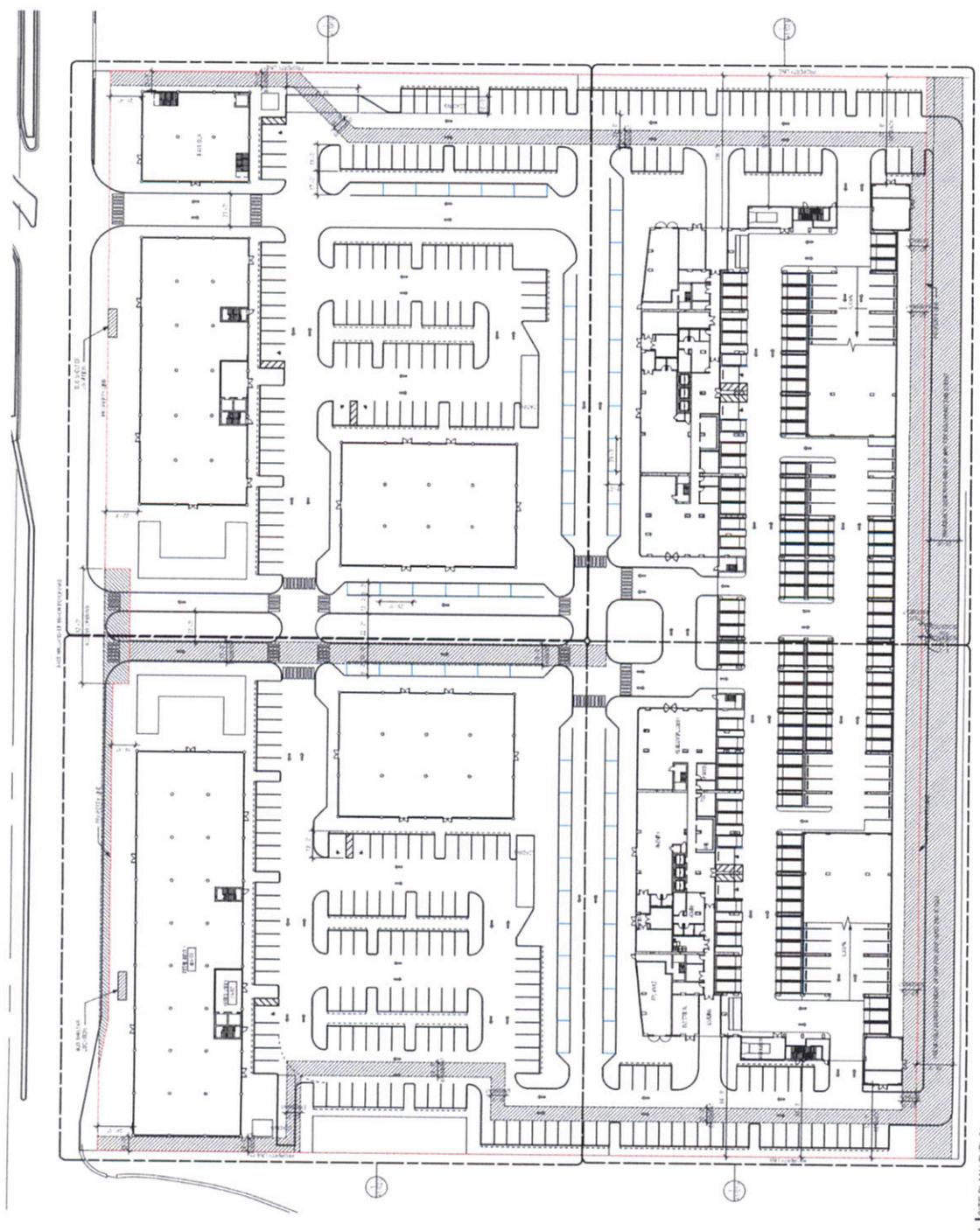
DATE:
 11/15/2023

SCALE:
 1/8" = 1'-0"

NOTES:
 1. ALL DIMENSIONS ARE IN FEET AND INCHES.
 2. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE NOTED.
 3. ALL DIMENSIONS ARE TO CENTERLINE UNLESS OTHERWISE NOTED.
 4. ALL DIMENSIONS ARE TO CENTERLINE UNLESS OTHERWISE NOTED.

LEVEL 01 SITE PLAN

A0.101



SCHEDULE - PARKING

PARKING FLOOR	COUNT
LEVEL 01	100
LEVEL 02	100
LEVEL 03	100
LEVEL 04	100
LEVEL 05	100
LEVEL 06	100
LEVEL 07	100
LEVEL 08	100
LEVEL 09	100
LEVEL 10	100
LEVEL 11	100
LEVEL 12	100
LEVEL 13	100
LEVEL 14	100
LEVEL 15	100
LEVEL 16	100
LEVEL 17	100
LEVEL 18	100
LEVEL 19	100
LEVEL 20	100
LEVEL 21	100
LEVEL 22	100
LEVEL 23	100
LEVEL 24	100
LEVEL 25	100
LEVEL 26	100
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LEVEL 88	100
LEVEL 89	100
LEVEL 90	100
LEVEL 91	100
LEVEL 92	100
LEVEL 93	100
LEVEL 94	100
LEVEL 95	100
LEVEL 96	100
LEVEL 97	100
LEVEL 98	100
LEVEL 99	100
LEVEL 100	100

1 SITE PLAN LEVEL 01



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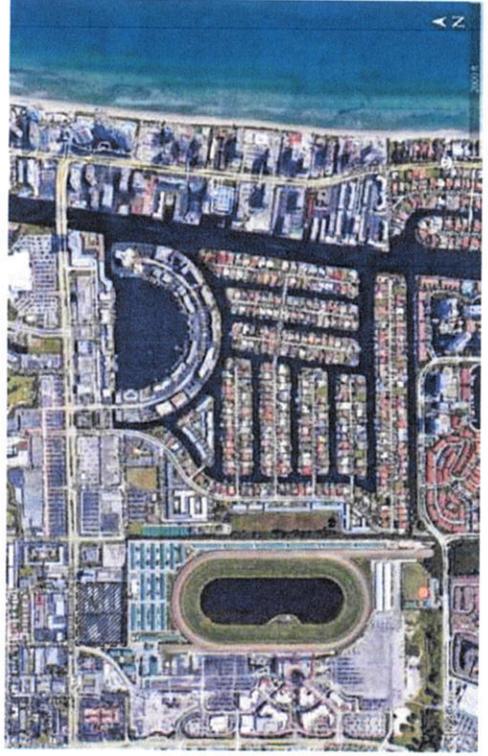
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SITE DATA

A0.002

Item	Description	Quantity	Unit	Notes
1	Asphalt Paving	1,000	SQ YD	1.000 SQ YD
2	Concrete Paving	500	SQ YD	500 SQ YD
3	Gravel Paving	200	SQ YD	200 SQ YD
4	Excavation	100	CY	100 CY
5	Backfill	100	CY	100 CY
6	Structural Steel	100	LB	100 LB
7	Rebar	100	LB	100 LB
8	Formwork	100	SQ YD	100 SQ YD
9	Paint	100	GA	100 GA
10	Lighting	100	FT	100 FT
11	Landscaping	100	SQ YD	100 SQ YD
12	Drainage	100	FT	100 FT
13	Signage	100	FT	100 FT
14	Security	100	FT	100 FT
15	Accessibility	100	FT	100 FT
16	Fire Safety	100	FT	100 FT
17	Energy Efficiency	100	FT	100 FT
18	Water Conservation	100	FT	100 FT
19	Indoor Air Quality	100	FT	100 FT
20	Acoustic Treatment	100	FT	100 FT
21	Lighting Control	100	FT	100 FT
22	Temperature Control	100	FT	100 FT
23	Humidity Control	100	FT	100 FT
24	CO2 Control	100	FT	100 FT
25	Particulate Matter Control	100	FT	100 FT
26	Ozone Control	100	FT	100 FT
27	Radon Control	100	FT	100 FT
28	Lead Control	100	FT	100 FT
29	Asbestos Control	100	FT	100 FT
30	PCB Control	100	FT	100 FT
31	Mercury Control	100	FT	100 FT
32	Cadmium Control	100	FT	100 FT
33	Chromium Control	100	FT	100 FT
34	Copper Control	100	FT	100 FT
35	Nickel Control	100	FT	100 FT
36	Manganese Control	100	FT	100 FT
37	Selenium Control	100	FT	100 FT
38	Vanadium Control	100	FT	100 FT
39	Zinc Control	100	FT	100 FT
40	Barium Control	100	FT	100 FT
41	Boron Control	100	FT	100 FT
42	Bromine Control	100	FT	100 FT
43	Fluorine Control	100	FT	100 FT
44	Iodine Control	100	FT	100 FT
45	Strontium Control	100	FT	100 FT
46	Tellurium Control	100	FT	100 FT
47	Polonium Control	100	FT	100 FT
48	Astatine Control	100	FT	100 FT
49	Radium Control	100	FT	100 FT
50	Actinium Control	100	FT	100 FT
51	Protactinium Control	100	FT	100 FT
52	Thorium Control	100	FT	100 FT
53	Uranium Control	100	FT	100 FT
54	Neptunium Control	100	FT	100 FT
55	Plutonium Control	100	FT	100 FT
56	Americium Control	100	FT	100 FT
57	Cerium Control	100	FT	100 FT
58	Praseodymium Control	100	FT	100 FT
59	Neodymium Control	100	FT	100 FT
60	Promethium Control	100	FT	100 FT
61	Samarium Control	100	FT	100 FT
62	Europium Control	100	FT	100 FT
63	Gadolinium Control	100	FT	100 FT
64	Terbium Control	100	FT	100 FT
65	Dysprosium Control	100	FT	100 FT
66	Ytterbium Control	100	FT	100 FT
67	Lutetium Control	100	FT	100 FT
68	Hafnium Control	100	FT	100 FT
69	Tantalum Control	100	FT	100 FT
70	Tungsten Control	100	FT	100 FT
71	Rhenium Control	100	FT	100 FT
72	Osmium Control	100	FT	100 FT
73	Iridium Control	100	FT	100 FT
74	Rhodium Control	100	FT	100 FT
75	Palladium Control	100	FT	100 FT
76	Silver Control	100	FT	100 FT
77	Cadmium Control	100	FT	100 FT
78	Mercury Control	100	FT	100 FT
79	Lead Control	100	FT	100 FT
80	Bismuth Control	100	FT	100 FT
81	Polonium Control	100	FT	100 FT
82	Astatine Control	100	FT	100 FT
83	Radon Control	100	FT	100 FT
84	Francium Control	100	FT	100 FT
85	Radium Control	100	FT	100 FT
86	Actinium Control	100	FT	100 FT
87	Protactinium Control	100	FT	100 FT
88	Thorium Control	100	FT	100 FT
89	Uranium Control	100	FT	100 FT
90	Neptunium Control	100	FT	100 FT
91	Plutonium Control	100	FT	100 FT
92	Americium Control	100	FT	100 FT
93	Cerium Control	100	FT	100 FT
94	Praseodymium Control	100	FT	100 FT
95	Neodymium Control	100	FT	100 FT
96	Promethium Control	100	FT	100 FT
97	Samarium Control	100	FT	100 FT
98	Europium Control	100	FT	100 FT
99	Gadolinium Control	100	FT	100 FT
100	Terbium Control	100	FT	100 FT



Category	Quantity	Unit	Notes
TOTAL SURFACE PARKING	100	SPACES	
STRUCTURED PARKING PROPOSED	1,100	SPACES	
TOTAL GARAGE PARKING	1,200	SPACES	
TOTAL REQUIRED SITE PARKING	1,300	SPACES	

Category	Quantity	Unit	Notes
TOTAL SURFACE PARKING	100	SPACES	
STRUCTURED PARKING PROPOSED	1,100	SPACES	
TOTAL GARAGE PARKING	1,200	SPACES	
TOTAL REQUIRED SITE PARKING	1,300	SPACES	

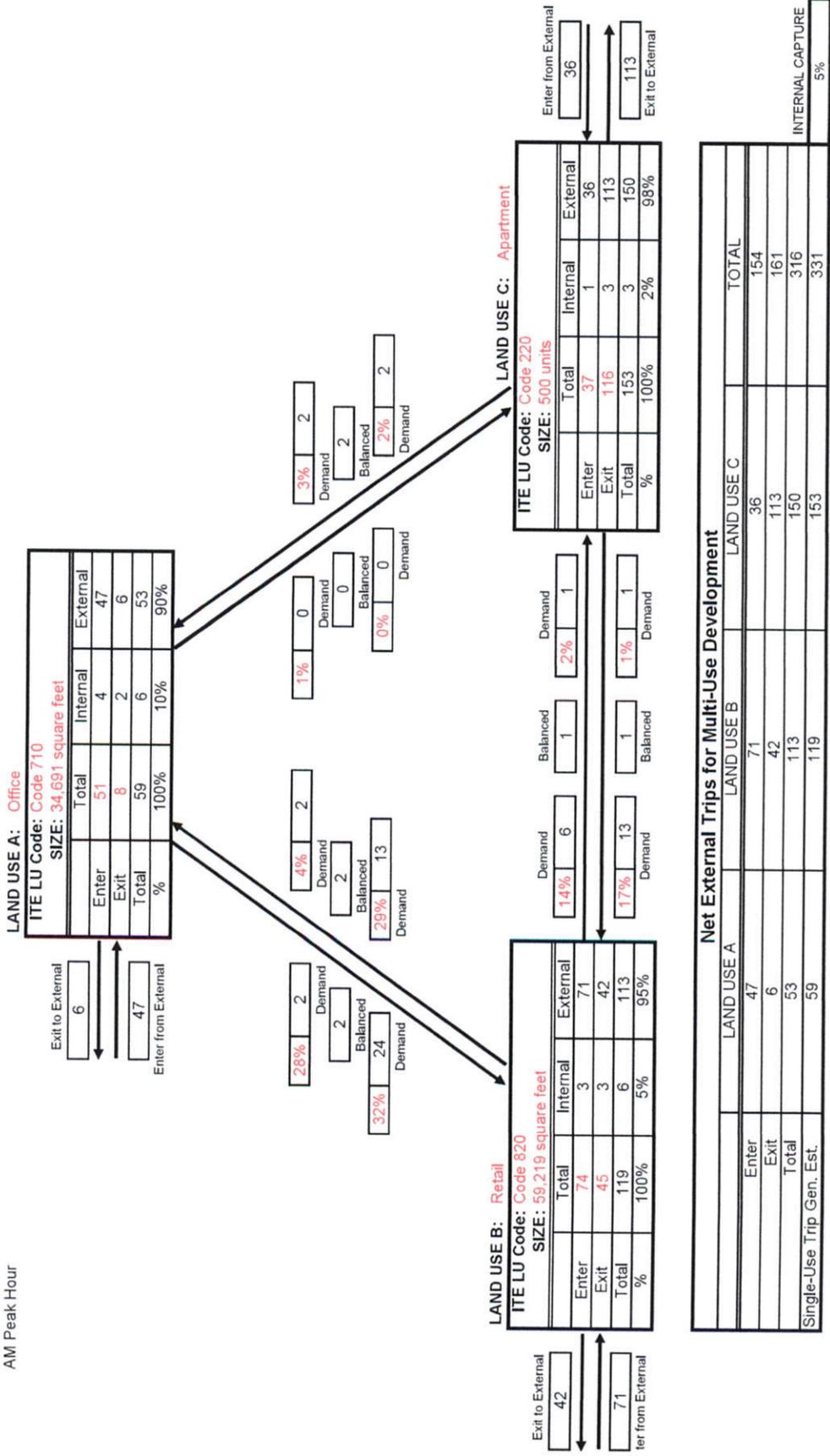
Site Plan Data

Attachment B

Internalization Analysis

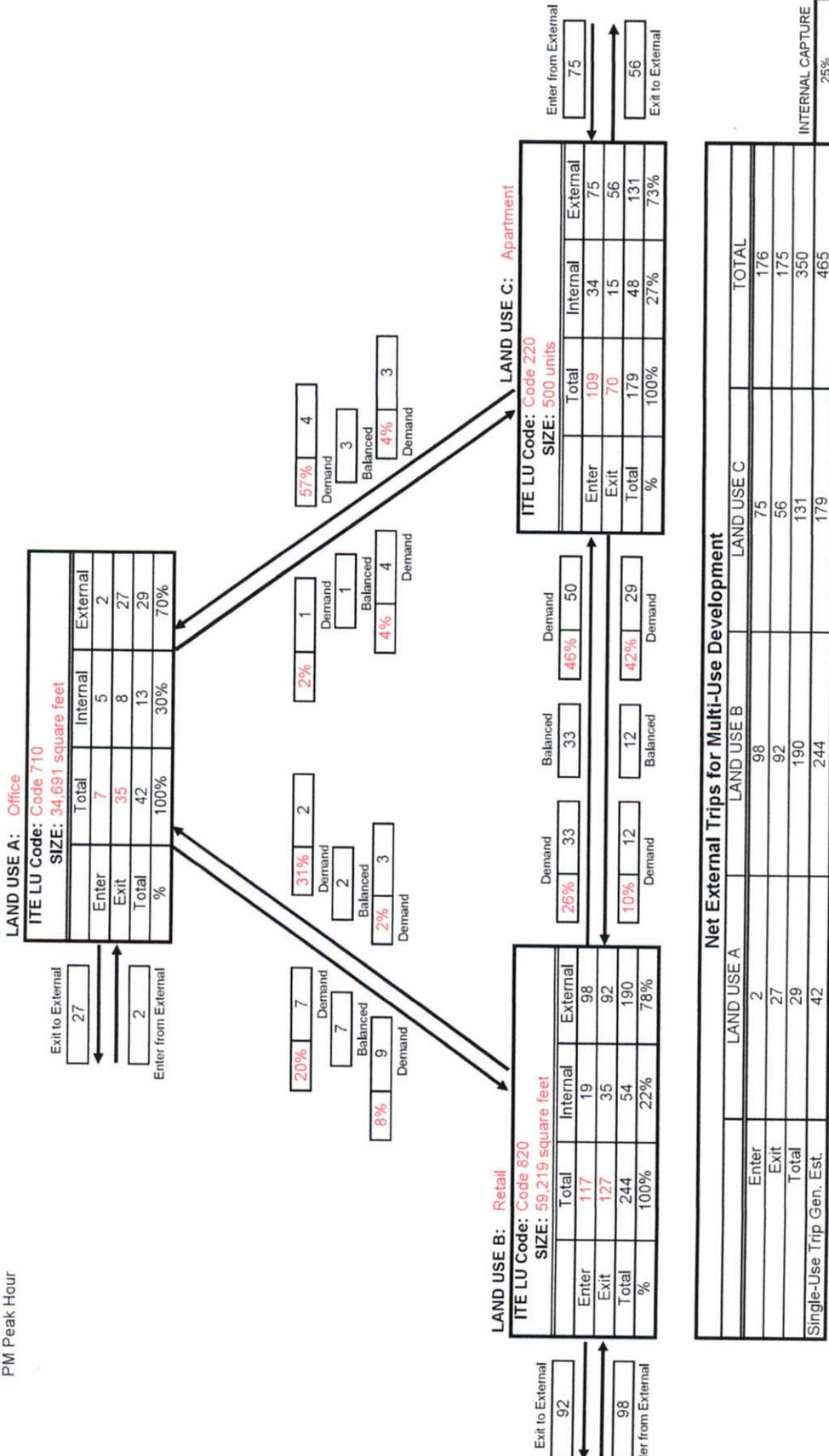
**PROPOSED LAND USES
Trip Generation
and Internal Capture Summary**

Analyst: Peterson
Date: 22-Dec-17
AM Peak Hour



**PROPOSED LAND USES
Trip Generation
and Internal Capture Summary**

Analyst: Peterson
Date: 22-Dec-17
PM Peak Hour



Attachment C

Historic Traffic Data

FLORIDA DEPARTMENT OF TRANSPORTATION
 TRANSPORTATION STATISTICS OFFICE
 2016 HISTORICAL AADT REPORT

COUNTY: 86 - BROWARD

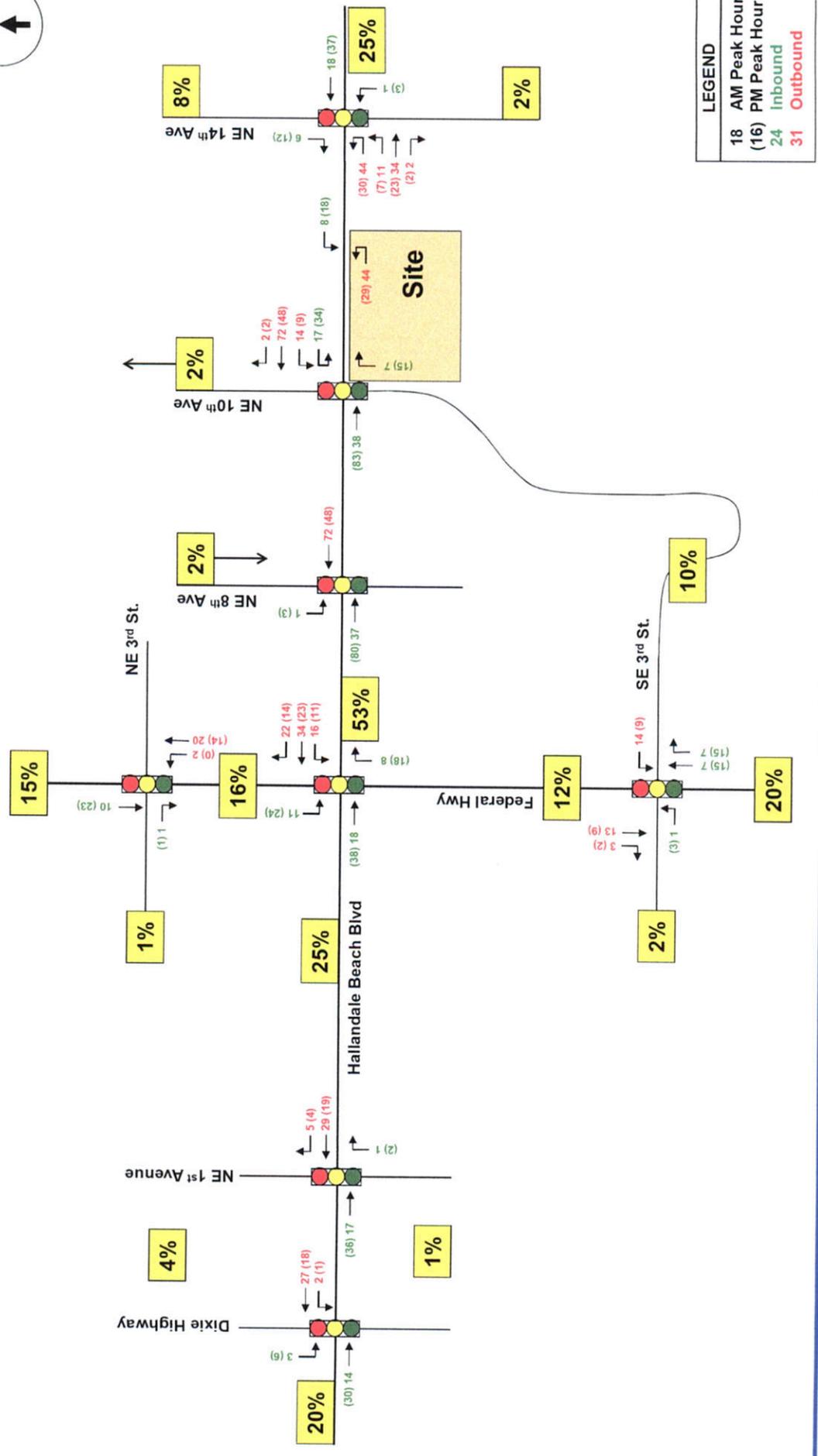
SITE: 5029 - SR 858 / HALLANDALE BCH BLVD - E OF SR 5/US 1

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2016	41500 C	E 20500	W 21000	9.00	55.20	4.10
2015	41500 C	E 21000	W 20500	9.00	54.90	3.50
2014	38500 C	E 20000	W 18500	9.00	54.50	3.50
2013	39500 C	E 22000	W 17500	9.00	54.60	3.50
2012	45000 C	E 23000	W 22000	9.00	55.00	2.70
2011	42000 C	E 21000	W 21000	9.00	54.50	2.70
2010	42500 C	E 21000	W 21500	9.37	54.06	2.70
2009	46500 C	E 23000	W 23500	9.31	53.74	2.20
2008	55000 C	E 27000	W 28000	9.70	54.48	2.20
2007	39500 C	E 19500	W 20000	9.10	53.47	2.50
2006	45500 C	E 24000	W 21500	9.48	53.59	3.80
2005	47000 C	E 24500	W 22500	10.60	58.90	4.70
2004	49500 C	E 25500	W 24000	10.40	56.30	5.00
2003	48500 C	E 24500	W 24000	9.20	55.90	5.90
2002	48000 C	E 23500	W 24500	9.50	55.00	3.50
2001	44500 C	E 22000	W 22500	9.70	55.60	5.90

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
 S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
 V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
 *K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

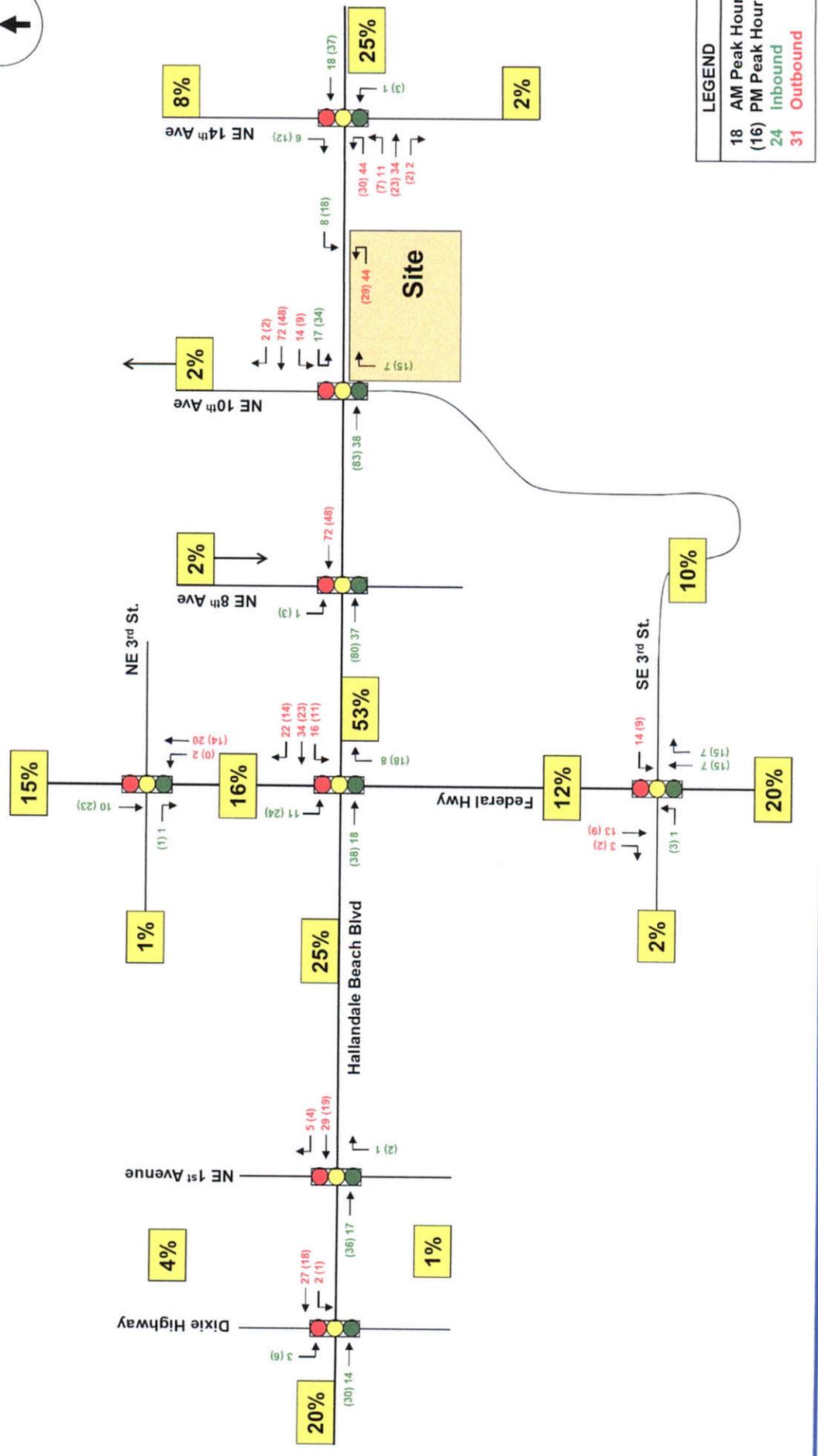
Attachment D

Previously Approved Project Traffic Assignment



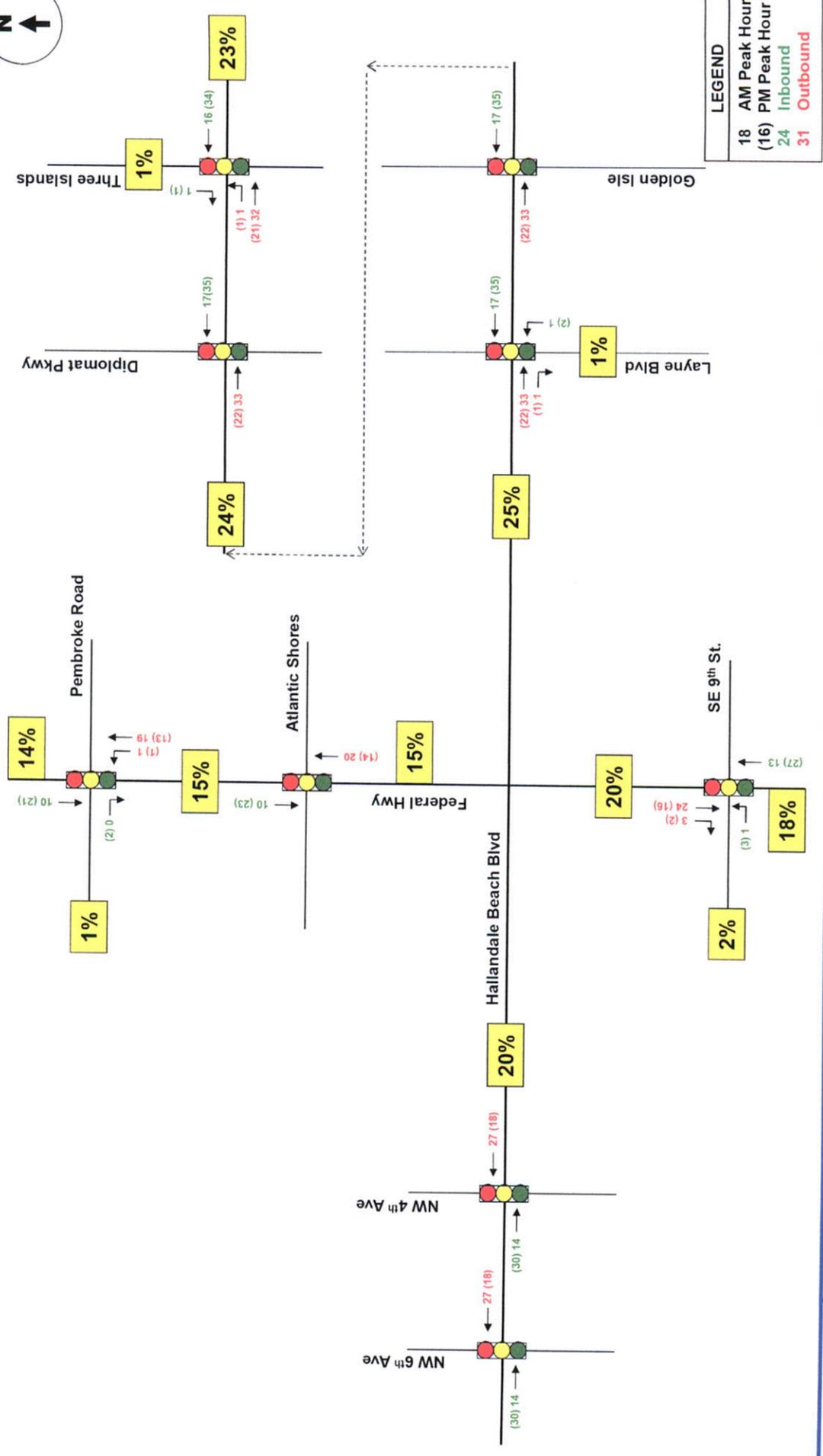
**Project Traffic Assignment – External Trips
Primary Study Intersections**

FIGURE 4
Hollandale Oasis
Hollandale Beach, Florida



**Project Traffic Assignment – External Trips
Primary Study Intersections**

FIGURE 4
Hollandale Oasis
Hollandale Beach, Florida



**Project Traffic Assignment – External Trips
Secondary Study Intersections**

FIGURE 5
Hallandale Oasis
Hallandale Beach, Florida

Attachment E

Currently Proposed Project Traffic Assignment

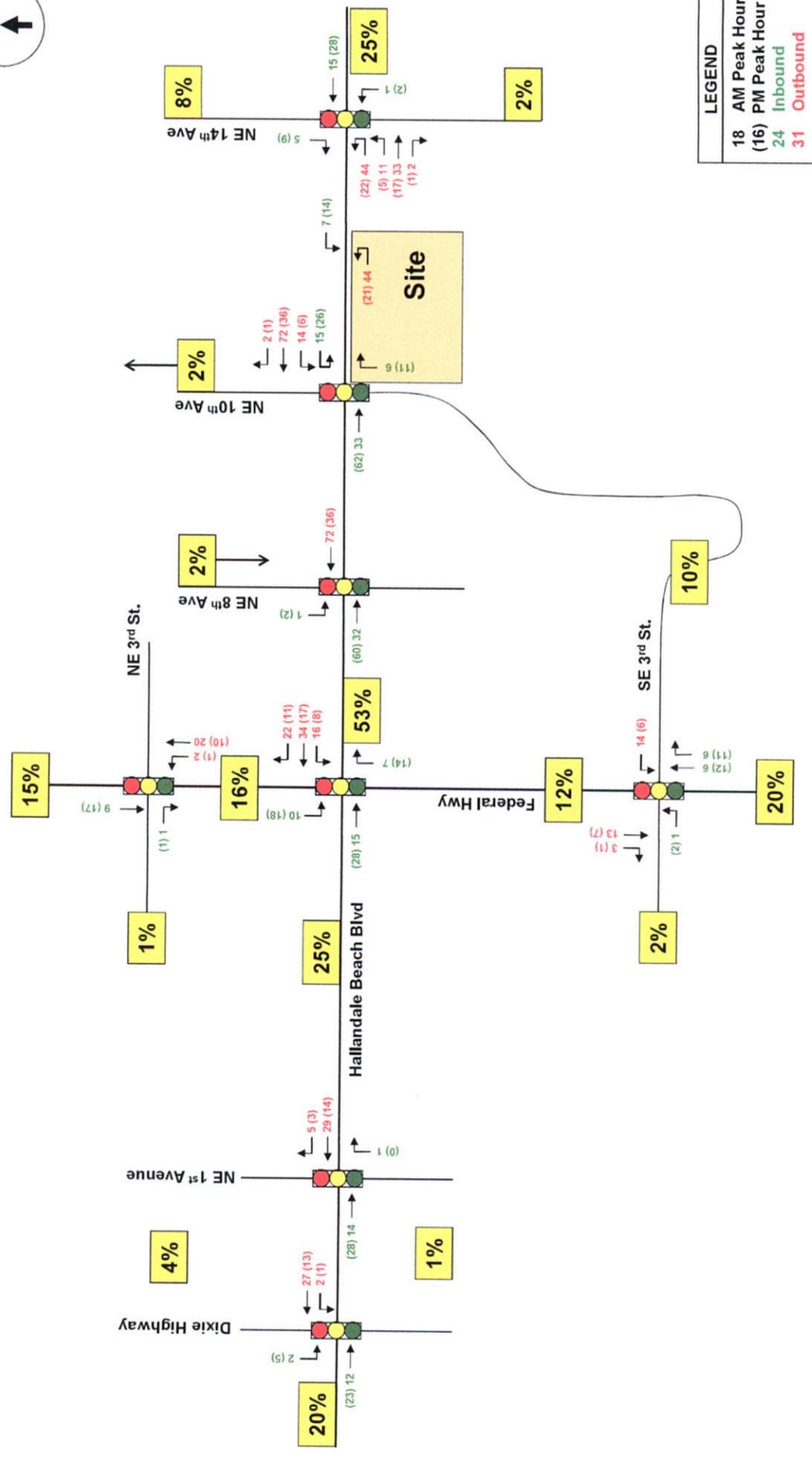
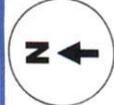
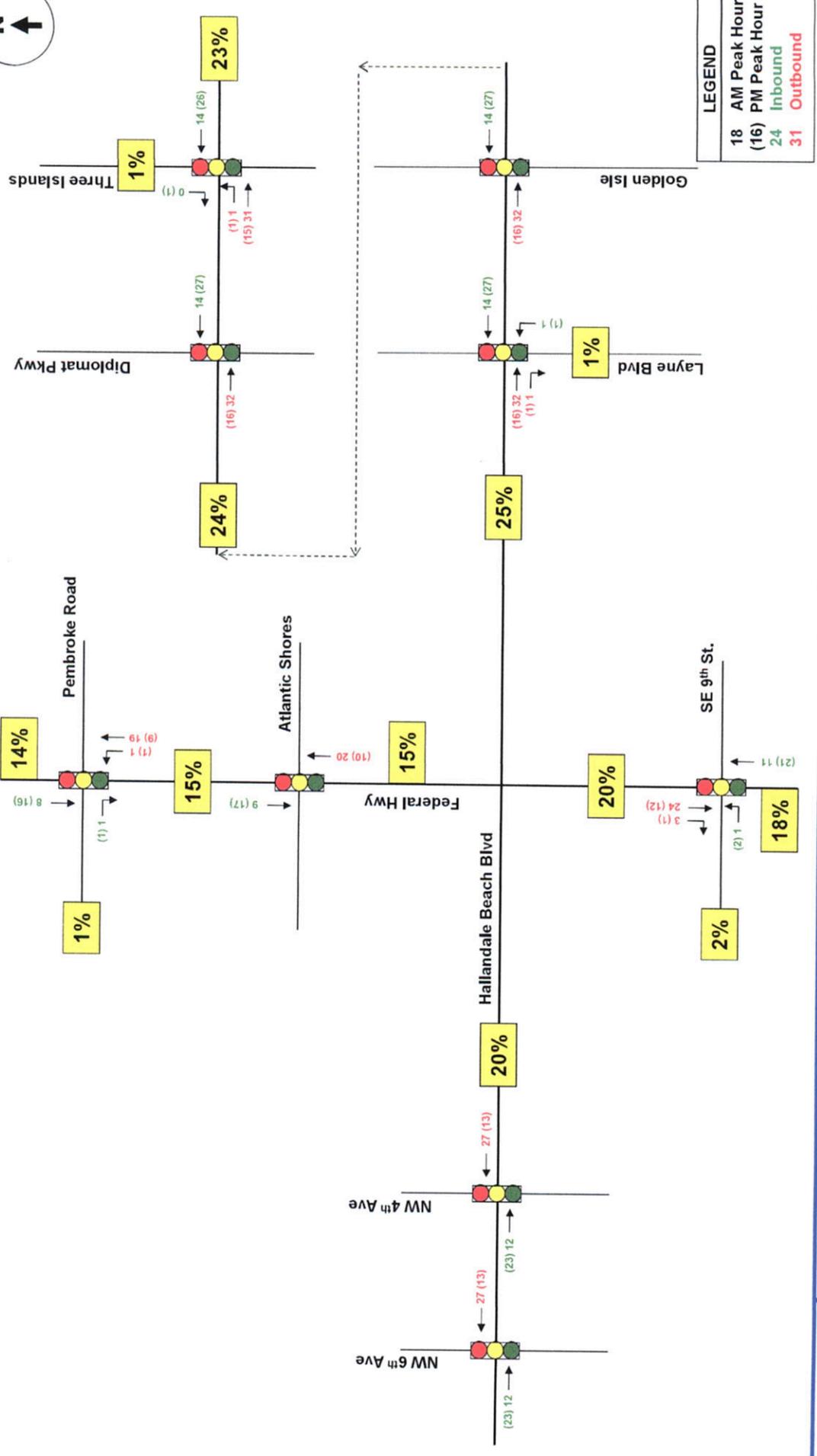


FIGURE 4
Hallandale Oasis
Hallandale Beach, Florida

Project Traffic Assignment – External Trips
Primary Study Intersections – Updated February 2018



LEGEND

18	AM Peak Hour
16	PM Peak Hour
24	Inbound
31	Outbound

FIGURE 5
Hallandale Oasis
Hallandale Beach, Florida

Project Traffic Assignment – External Trips
Secondary Study Intersections – Updated February 2018

Attachment F

Future Traffic Volumes Spreadsheets

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

E. Hallandale Beach Boulevard and Dixie Highway
AM Peak Hour

Description	Northbound			Dixie Highway Southbound			E. Hallandale Bch Blvd Eastbound			E. Hallandale Bch Blvd Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (1/21/2015)	1.03	1.03	1.03	218	570	38	0	1,228	34	105	1,353	
Season Adjustment Factor	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
2015 Peak Season Traffic	0	0	0	225	587	39	0	1265	35	108	1394	0
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Committed Developments:												
7th Avenue Village								11			19	
Gulfstream Park								188			208	
Gulfstream Point												
Hallandale ArtSquare												
Accesso								21			3	
Diplomat								48		2	32	
Peninsula				22				88			11	
2020 Background Traffic	0	0	0	258	617	41	0	1,685	37	116	1,738	0
Hallandale Oasis												
Primary Trips				2				12		2	27	
2020 Total Traffic	0	0	0	260	617	41	0	1,697	37	118	1,765	0

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

E. Hallandale Beach Boulevard and Dixie Highway
PM Peak Hour

Description	Northbound		Dixie Highway Southbound		E. Hallandale Bch Blvd Eastbound		E. Hallandale Bch Blvd Westbound	
	Left	Right	Left	Right	Left	Right	Left	Right
Existing Traffic (1/21/2015)								
Season Adjustment Factor	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
2015 Peak Season Traffic	0	0	156	75	0	50	1887	0
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Committed Developments:								
7th Avenue Village								
Gulfstream Park							51	
Gulfstream Point							416	
Hallandale ArtSquare								
Accesso								
Diplomat								
Peninsula			2					
2020 Background Traffic	0	0	165	79	0	53	99	0
Hallandale Oasis								
Primary Trips			5				1	13
2020 Total Traffic	0	0	170	79	0	53	100	0

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

E. Hallandale Beach Boulevard and NE 1st Avenue
AM Peak Hour

Description	SE 1st Avenue Northbound			Southbound			E. Hallandale Bch Blvd Eastbound			E. Hallandale Bch Blvd Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (1/21/2015)	174	132	66				30	1,402	0	0	1,280	22
Season Adjustment Factor	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
2015 Peak Season Traffic	179	136	68	0	0	0	31	1444	0	0	1318	23
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Committed Developments:												
7th Avenue Village												
Gulfstream Park								11			19	
Gulfstream Point								188			208	
Hallandale ArtSquare												
Accesso												
Diplomat												
Peninsula	11	3	3								3	34
2020 Background Traffic	199	146	74	0	0	0	32	1,896	0	0	1,650	24
Hallandale Oasis												
Primary Trips			1					14			29	5
2020 Total Traffic	199	146	75	0	0	0	32	1,910	0	0	1,679	29

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

E. Hallandale Beach Boulevard and NE 1st Avenue
PM Peak Hour

Description	SE 1st Avenue Northbound			Southbound			E. Hallandale Bch Blvd Eastbound			E. Hallandale Bch Blvd Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (1/21/2015)	310	329	93				46	1,121	0	0	1,608	35
Season Adjustment Factor	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
2015 Peak Season Traffic	319	339	96	0	0	0	47	1155	0	0	1656	36
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Committed Developments:												
7th Avenue Village								55			51	
Gulfstream Park								375			416	
Gulfstream Point												
Hallandale ArtSquare												
Accesso								6			32	
Diplomat								44			50	
Peninsula		19	21					9				
2020 Background Traffic	412	375	122	0	0	0	50	1,703	0	0	2,290	38
Hallandale Oasis												
Primary Trips			1					28			14	3
2020 Total Traffic	412	375	123	0	0	0	50	1,731	0	0	2,304	41

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

E. Hallandale Beach Boulevard and Federal Highway
AM Peak Hour

Description	Federal Highway Northbound			Federal Highway Southbound			E. Hallandale Bch Blvd Eastbound			E. Hallandale Bch Blvd Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (4/15/2015)	291	645	318	435	980	42	174	886	285	543	924	87
Season Adjustment Factor	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
2015 Peak Season Traffic	300	664	328	448	1009	43	179	913	294	559	952	90
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Committed Developments:												
7th Avenue Village								11			19	
Gulfstream Park	104				94			22	188		35	
Gulfstream Point	35				36							
Hallandale ArtSquare	17				50							
Accesso	15			6	1	1	21			1	2	12
Diplomat			51				3	51		34	34	
Peninsula					24		3	3		22		
2020 Background Traffic	315	869	395	477	1,266	46	212	1,046	497	645	1,090	106
Hallandale Oasis												
Primary Trips			7	10				15		16	34	22
2020 Total Traffic	315	869	402	487	1,266	46	212	1,061	497	661	1,124	128

FUTURE TURNING MOVEMENT VOLUME ANALYSIS
E. Hallandale Beach Boulevard and Federal Highway
PM Peak Hour

Description	Federal Highway Northbound			Federal Highway Southbound			E. Hallandale Bch Blvd Eastbound			E. Hallandale Bch Blvd Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (4/15/2015)	514	936	323	361	1,028	73	169	898	245	562	1,021	160
Season Adjustment Factor	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
2015 Peak Season Traffic	529	964	333	372	1059	75	174	925	252	579	1052	165
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Committed Developments:												
7th Avenue Village												
Gulfstream Park	208				188			55			51	
Gulfstream Point	34				45			43			69	
Hallandale ArtSquare	41				54							
Accesso	5		47	2	9	9	6			13	23	4
Diplomat							21	47		49	50	
Peninsula				2				19		2		
2020 Background Traffic	556	1,301	397	393	1,411	88	210	1,136	640	672	1,298	177
Hallandale Oasis												
Primary Trips			14	18				28		8	17	11
2020 Total Traffic	556	1,301	411	411	1,411	88	210	1,164	640	680	1,315	188

FUTURE TURNING MOVEMENT VOLUME ANALYSIS
E. Hallandale Beach Boulevard and Federal Highway
PM Peak Hour

Description	Federal Highway Northbound			Federal Highway Southbound			E. Hallandale Bch Blvd Eastbound			E. Hallandale Bch Blvd Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (4/15/2015)	514	936	323	361	1,028	73	169	898	245	562	1,021	160
Season Adjustment Factor	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
2015 Peak Season Traffic	529	964	333	372	1059	75	174	925	252	579	1052	165
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Committed Developments:												
7th Avenue Village												
Gulfstream Park	208				188			55			51	
Gulfstream Point	34				45			43			69	
Hallandale ArtSquare	41				54							
Accesso	5			2	9	9	6			13	23	4
Diplomat			47				21	47		49	50	
Peninsula				2			2	19		2		
2020 Background Traffic	556	1,301	397	393	1,411	88	210	1,136	640	672	1,298	177
Hallandale Oasis												
Primary Trips			14	18				28		8	17	11
2020 Total Traffic	556	1,301	411	411	1,411	88	210	1,164	640	680	1,315	188

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

E. Hallandale Beach Boulevard and NE 8th Avenue
AM Peak Hour

Description	NE 8th Avenue Northbound			NE 8th Avenue Southbound			E. Hallandale Bch Blvd Eastbound			E. Hallandale Bch Blvd Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (4/15/2015)	12	24	174	161	0	174	1,596	20	20	19	1,336	
Season Adjustment Factor	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
2015 Peak Season Traffic	12	25	179	166	0	179	1644	21	21	20	1376	0
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Committed Developments:												
7th Avenue Village												
Gulfstream Park							11					19
Gulfstream Point							22					35
Hallandale ArtSquare												
Accesso				2		3						12
Diplomat												68
Peninsula												22
2020 Background Traffic	13	0	26	176	0	191	1,866	22	22	21	1,602	0
Hallandale Oasis												
Primary Trips				1			32					72
2020 Total Traffic	13	0	26	177	0	191	1,898	22	22	21	1,674	0

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

E. Hallandale Beach Boulevard and NE 8th Avenue
PM Peak Hour

Description	NE 8th Avenue Northbound			NE 8th Avenue Southbound			E. Hallandale Bch Blvd Eastbound			E. Hallandale Bch Blvd Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (4/15/2015)	24	43	1.03	134	4	114	1,452	22	17	1,724		
Season Adjustment Factor	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
2015 Peak Season Traffic	25	44	1.03	138	4	117	1,496	23	18	1,776	0	0
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Committed Developments:												
7th Avenue Village												
Gulfstream Park							55				51	
Gulfstream Point							43				69	
Hallandale ArtSquare												
Accesso				18		36					4	
Diplomat											99	
Peninsula											2	
2020 Background Traffic	26	47	1.03	163	4	159	1,783	24	18	2,091	0	0
Hallandale Oasis												
Primary Trips				1			60				36	
2020 Total Traffic	26	47		164	4	159	1,843	24	18	2,127	0	0

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

E. Hallandale Beach Boulevard and NE 10th Avenue
AM Peak Hour

Description	NE 10th Avenue Northbound			NE 10th Avenue Southbound			E. Hallandale Bch Blvd Eastbound			E. Hallandale Bch Blvd Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (4/15/2015)	34	16	102	1.03	1.03	1.03	78	1,589	44	104	1,296	55
Season Adjustment Factor	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
2015 Peak Season Traffic	35	16	105	0	0	0	80	1637	45	107	1335	57
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Committed Developments:												
7th Avenue Village												
Gulfstream Park			90					11	22		82	19
Gulfstream Point	35											
Hallandale ArtSquare												
Accesso								2				12
Diplomat								102			2	68
Peninsula								3				22
2020 Background Traffic	72	17	200	0	0	0	84	1,838	70	197	1,524	60
Hallandale Oasis												
Primary Trips			6					33		29	72	2
2020 Total Traffic	72	17	206	0	0	0	84	1,871	70	226	1,596	62

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

**E. Hallandale Beach Boulevard and NE 10th Avenue
PM Peak Hour**

Description	NE 10th Avenue Northbound			NE 10th Avenue Southbound			E. Hallandale Bch Blvd Eastbound			E. Hallandale Bch Blvd Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (4/15/2015)	71	186	281	1.03	1.03	1.03	124	1,457	50	218	1,620	96
Season Adjustment Factor	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
2015 Peak Season Traffic	73	192	289	0	0	0	128	1501	52	225	1669	99
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Committed Developments:												
7th Avenue Village												
Gulfstream Park	69		180					55	43		51	
Gulfstream Point										163		
Hallandale ArtSquare												
Accesso								18			4	
Diplomat								94			99	
Peninsula								19			2	
2020 Background Traffic	146	201	484	0	0	0	134	1,763	97	402	1,910	104
Hallandale Oasis												
Primary Trips			11					61		32	35	1
2020 Total Traffic	146	201	495	0	0	0	134	1,824	97	434	1,945	105

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

E. Hallandale Beach Boulevard and NE 14th Avenue
AM Peak Hour

Description	NE 14th Avenue Northbound			NE 14th Avenue Southbound			E. Hallandale Bch Blvd Eastbound			E. Hallandale Bch Blvd Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (1/21/2015)	225	45	23	79	70	129	82	1,166	205	42	1,208	30
Season Adjustment Factor	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
2015 Peak Season Traffic	239	48	24	84	74	137	87	1236	217	45	1280	32
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Committed Developments:												
7th Avenue Village								11			19	
Gulfstream Park								90			82	
Gulfstream Point												
Hallandale ArtSquare												
Accesso								2			12	
Diplomat								105			70	
Peninsula						2		3			20	
2020 Background Traffic	251	50	26	88	78	146	91	1,510	228	47	1,549	33
Hallandale Oasis												
Primary Trips	1					5	55	33	2		15	
2020 Total Traffic	252	50	26	88	78	151	146	1,543	230	47	1,564	33

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

E. Hallandale Beach Boulevard and NE 14th Avenue
PM Peak Hour

Description	NE 14th Avenue Northbound			NE 14th Avenue Southbound			E. Hallandale Bch Blvd Eastbound			E. Hallandale Bch Blvd Westbound			
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right	
Existing Traffic (1/21/2015)	296	120	81	93	82	141	187	1,394	317	59	1,536	49	
Season Adjustment Factor	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	
2015 Peak Season Traffic	314	127	86	99	87	149	198	1478	336	63	1628	52	
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	
Committed Developments:													
7th Avenue Village										51			
Gulfstream Park										163			
Gulfstream Point													
Hallandale ArtSquare													
Accesso										4			
Diplomat										102			
Peninsula										2			
2020 Background Traffic	330	134	90	104	91	157	210	1,920	353	66	2,033	55	
Hallandale Oasis													
Primary Trips	2							27	17	1	28		
2020 Total Traffic	332	134	90	104	91	166	237	1,937	354	66	2,061	55	

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

**Federal Highway & NE 3rd Street
AM Peak Hour**

Description	Federal Highway Northbound			Federal Highway Southbound			NE 3rd Street Eastbound			NE 3rd Street Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (4/15/2015)	50	900	5	25	1,263	40	71	67	63	43	48	14
Season Adjustment Factor	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
2015 Peak Season Traffic	52	927	5	26	1301	41	73	69	65	44	49	14
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Committed Developments:												
7th Avenue Village												
Gulfstream Park		104			94							
Gulfstream Point		35			36							
Hallandale ArtSquare	17				25	7	49		25			
Accesso		1		6	6							
Diplomat		3			20				2			
Peninsula												
2020 Background Traffic	71	1,117	5	33	1,548	50	126	73	95	49	52	15
Hallandale Oasis												
Primary Trips	2	20		9	9				1			
2020 Total Traffic	73	1,137	5	33	1,557	50	126	73	96	49	52	15

Note: NB and SB Through taken from Counts conducted at Pembroke Road and US 1

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

Federal Highway & NE 3rd Street
PM Peak Hour

Description	Federal Highway Northbound			Federal Highway Southbound			NE 3rd Street Eastbound			NE 3rd Street Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (4/15/2015)	86	1,284	11	26	1,277	37	91	96	63	46	104	10
Season Adjustment Factor	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
2015 Peak Season Traffic	89	1323	11	27	1315	38	94	99	65	47	107	10
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Committed Developments:												
7th Avenue Village												
Gulfstream Park	208				188							
Gulfstream Point	34				45							
Hallandale ArtSquare	41				27	16	54		27			
Accesso		18		2	2							
Diplomat		17	2		2							
Peninsula												
2020 Background Traffic	136	1,667	14	30	1,646	56	153	104	95	50	113	11
Hallandale Oasis												
Primary Trips		10			17				1			
2020 Total Traffic	136	1,677	14	30	1,663	56	153	104	96	50	113	11

Note: NB and SB Through taken from Counts conducted at Pembroke Road and US 1

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

Federal Highway and SE 3rd Street
AM Peak Hour

Description	Federal Highway Northbound			Federal Highway Southbound			SE 3rd Street Eastbound			SE 3rd Street Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (4/15/2015)	64	1,124	16	41	1,699	6	142	102	396	23	8	9
Season Adjustment Factor	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
2015 Peak Season Traffic	66	1158	16	42	1750	6	146	105	408	24	8	9
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Committed Developments:												
7th Avenue Village												
Gulfstream Park		185		87	174							93
Gulfstream Point	1	35	1		36				5	1		
Hallandale ArtSquare		17			50							
Accesso		15			2							
Diplomat		48			32	2	3					
Peninsula	31	31			7				1			
2020 Background Traffic	101	1,548	18	131	2,140	8	157	110	435	26	9	103
Hallandale Oasis												
Primary Trips		6	6		13	3	1			14		
2020 Total Traffic	101	1,554	24	131	2,153	11	158	110	435	40	9	103

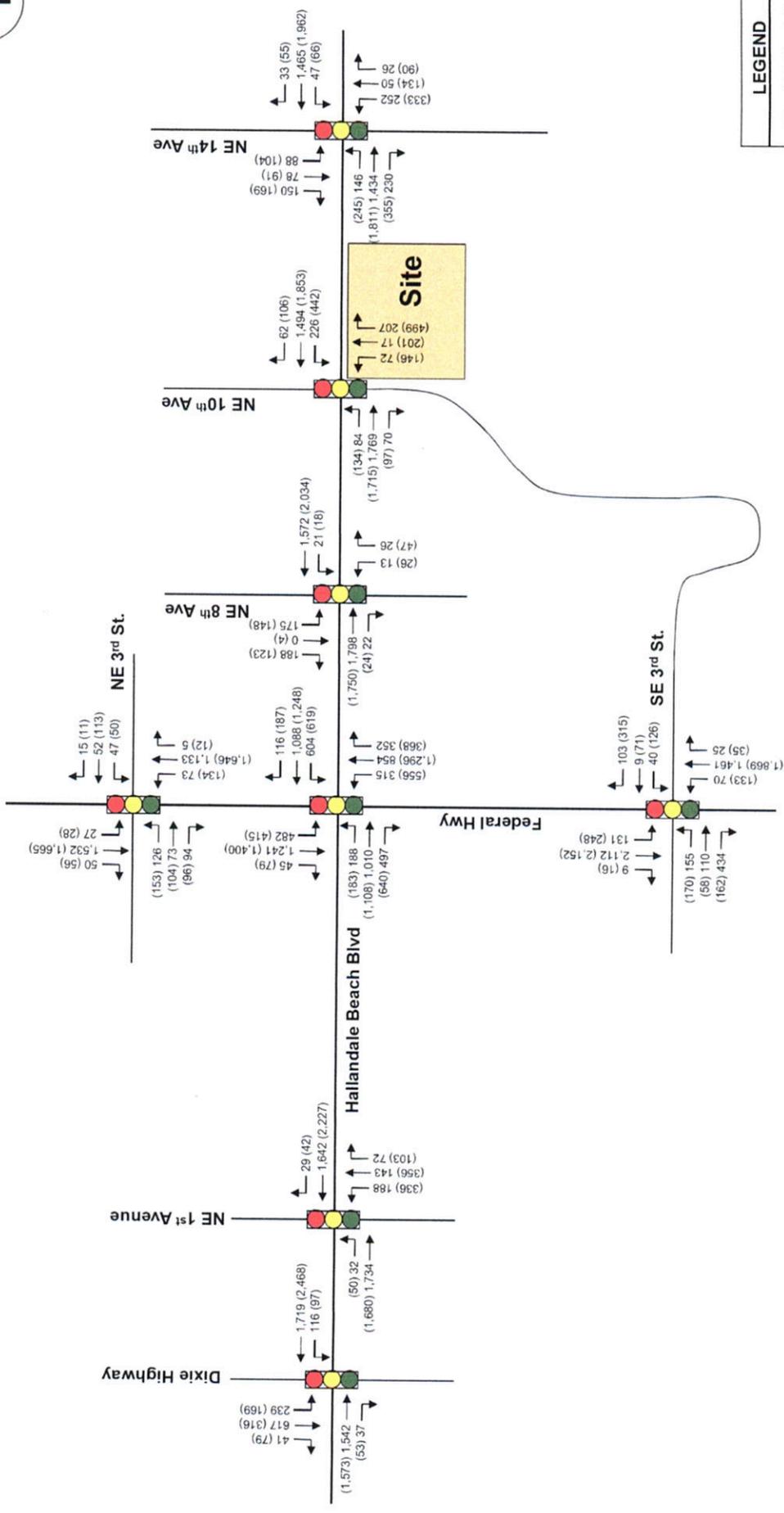
FUTURE TURNING MOVEMENT VOLUME ANALYSIS

**Federal Highway and SE 3rd Street
PM Peak Hour**

Description	Federal Highway Northbound			Federal Highway Southbound			SE 3rd Street Eastbound			SE 3rd Street Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (4/15/2015)	121	1,302	17	69	1,568	13	154	54	145	106	66	120
Season Adjustment Factor	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
2015 Peak Season Traffic	125	1341	18	71	1615	13	159	56	149	109	68	124
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Committed Developments:												
7th Avenue Village												
Gulfstream Park		370		173	347							185
Gulfstream Point	2	34	2		45				5	2		
Hallandale ArtSquare		41			54							
Accesso		5			22							
Diplomat		44			46	3	3					
Peninsula	3	2			47				6			
2020 Background Traffic	136	1,905	20	248	2,258	17	170	58	168	117	71	315
Hallandale Oasis												
Primary Trips		12	11		7	1	2			6		
2020 Total Traffic	136	1,917	31	248	2,265	18	172	58	168	123	71	315

Attachment G

Previously Approved Intersection Volumes



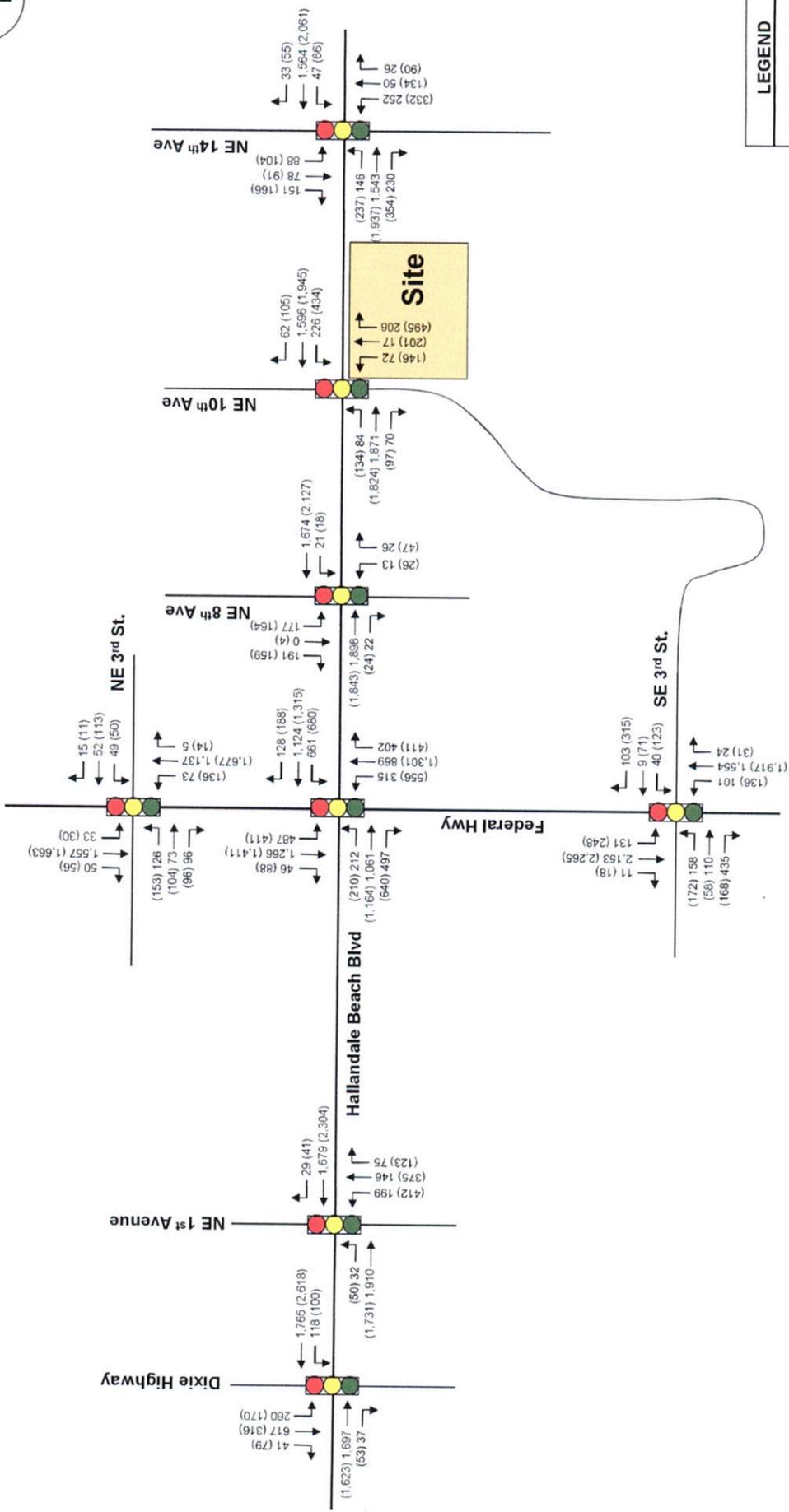
LEGEND	
18	AM Peak Hour
(16)	PM Peak Hour

FIGURE 8
Hallandale Oasis
Hallandale Beach, Florida

Future (2020) Total (with Project) Traffic Volumes

Attachment H

Currently Proposed Intersection Volumes



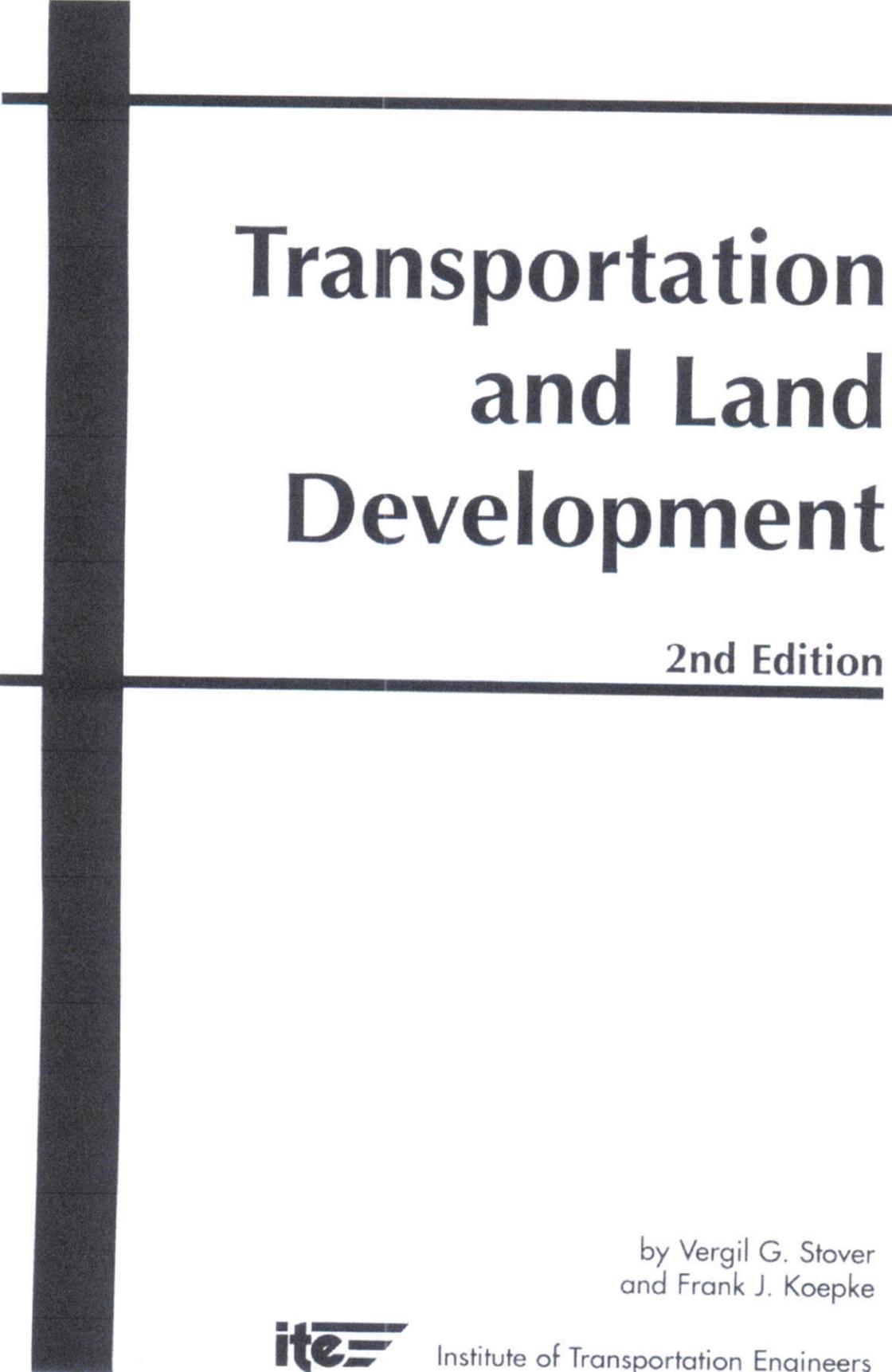
LEGEND	
18	AM Peak Hour
(16)	PM Peak Hour

FIGURE 8
Hallandale Oasis
Hallandale Beach, Florida

Future (2020) Total (with Project) Traffic Volumes
Updated February 2018

Attachment I

ITE Transportation and Land Development
Excerpt Relative to Queuing



Transportation and Land Development

2nd Edition

by Vergil G. Stover
and Frank J. Koepke



Institute of Transportation Engineers

location, a 5% probability of back-up onto the adjacent street is judged to be acceptable. Demand on the system for design is expected to be 110 vehicles in a 45-minute period. Average service time was expected to be 2.2 minutes. Is the queue storage adequate?

Such problems can be quickly solved using Equation (8.9b) given in Table 8-10 and repeated below for convenience.

$$M = \left\lceil \frac{\ln P(\alpha > M) - \ln Q_w}{\ln \rho} \right\rceil + 1$$

where

M = queue length which is exceeded p percent of the time

N = number of service channels (drive-in positions)

Q = service rate per channel (vehicles per hour)

ρ = demand rate / service rate = utilization factor

q = demand rate on the system (vehicles per hour)

Q_w = tabled values of the relationship between queue length, number of channels, and utilization factor (see Table 8-11)

TABLE 8-11

Table of Q_w Values

	N = 1	2	3	4	6	8	10
0.0	0.0000	0.0000	0.0000	0.0000			
0.1	1.000	.0182	.0037	.0008	.0000	0.0000	0.0000
2	2.000	.0668	.0247	.0096	.0015	.0002	.0000
3	3.000	.1385	.0700	.0370	.0111	.0036	.0011
4	4.000	.2288	.1411	.0907	.0400	.0185	.0088
5	5.000	.3333	.2368	.1739	.0991	.0591	.0360
6	6.000	.4501	.3548	.2870	.1965	.1395	.1013
7	7.000	.5766	.4923	.4286	.3359	.2706	.2218
8	8.000	.7111	.6472	.5964	.5178	.4576	.4093
9	9.000	.8526	.8172	.7878	.7401	.7014	.6687
1.0	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

q = arrival rate, total
 $\rho = \frac{q}{NQ}$ = number of channels / service rate per channel
 N = number of channels / service positions

Solution

Step 1: $Q = \frac{60 \text{ min/hr}}{2.2 \text{ min/service}} = 27.3$ services per hour

Step 2: $q = (10 \text{ veh/45 min}) \times (60 \text{ min/hr}) = 146.7$ vehicles per hour

Step 3: $\rho = \frac{q}{NQ} = \frac{146.7}{(6)(27.3)} = 0.8956$

Step 4: $Q_w = 0.7303$ by interpolation between 0.8 and 0.9 for $N = 6$ from the table of Q_w values (see Table 8-11)

Step 5: The acceptable probability of the queue, M , being longer than the storage, 18 spaces in this example, was stated to be 5%: $P(\alpha > M) = 0.05$, and:

$$M = \left\lceil \frac{\ln 0.05 - \ln 0.7303}{\ln 0.8956} \right\rceil + 1 = \left\lceil \frac{-2.996 - (-0.314)}{-0.110} \right\rceil + 1 = 24.98 \approx 25.98, \text{ say } 26 \text{ vehicles}$$

Attachment J

Queuing Analysis

Oasis – Hallandale Beach – Valet Operations
Queuing Analysis based on ITE Procedures

$$q = 11 \text{ veh/hr (demand rate)}$$

$$Q = 20 \text{ veh/hr (service rate @ 3 min/veh)}$$

$$p = \frac{q}{NQ} = 0.550 \text{ (N = one)}$$

$$Q_M = 0.550 \text{ (for N = 1)}$$

Using Acceptable Probability of 5% (95% Confidence Level)

$$M = \left(\frac{\text{Ln}(x > M) - \text{Ln}(Q_M)}{\text{Ln}(p)} \right) - 1$$

$$M = \left(\frac{\text{Ln}(0.05) - \text{Ln}(0.550)}{\text{Ln}(0.550)} \right) - 1$$

$$M = \left(\frac{-2.996 - (-0.598)}{-0.598} \right) - 1$$

$$M = 4.0 - 1 = 3.0 \text{ vehicles}$$

or, 3 vehicles