Traf Tech
ENGINEERING, INC.

Park Central Hotel
c/o Carli Koshal, Esq.
Bercow Radell & Fernandez, P.A.
200 S. Biscayne Boulevard, Suite 850
Miami, Florida 33131

June 15, 2017

Re: Park Central Hotel (626-650 Ocean Drive) – Traffic Study

Dear Carli:

Per your request, Traf Tech Engineering, Inc. conducted a traffic evaluation associated with the proposed improvements to the existing Park Central Hotel (626 – 650 Ocean Drive) located in the City of Miami Beach in Miami-Dade County, Florida. Figure 1 on the following Page shows the location of the project site. This report documents the existing roadway characteristics, projected trip generation and traffic impacts to the surrounding street system as a result of the proposed improvements, traffic circulation, pedestrian circulation and pedestrian facilities analysis (sidewalks and crosswalks). The following is a summary of our findings:

Existing Roadway Conditions

The roadway system adjacent to the project site includes Ocean Drive, a two-lane north-south facility with on-street parking on both sides of the street and a posted speed limit of 30 miles per hour. North of the site is the signalized intersection of 7th Street with pedestrian crosswalks on the north, south and west legs of the intersection. Valet stations are provided on the west side of Ocean Drive serving the numerous restaurants and hotel located within South Beach.

Trip Generation Estimate

A trip generation analysis was performed using the trip generation rates published in the Institute of Transportation Engineer's (ITE) *Trip Generation Manual* (9th Edition). The trip generation analysis was undertaken for daily, AM peak hour and PM peak hour conditions. The analysis was based on the following assumptions:

EXISTING LAND USE
- Hotel (127 rooms)

PROPOSED LAND USES
- Hotel (120 rooms)
- Terrace Improvements (110 new seats, other seats are at previous existing seating areas)

According to ITE's *Trip Generation Manual* (9th Edition), the trip generation rates used for the existing and proposed land uses are:

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PROJECT LOCATION MAP

FIGURE 1
Park Central Hotel
Miami Beach, Florida

HOTEL (ITE Land Use 310)

Daily Trip Generation
T = 8.17 (X)
Where T = number of daily trips, X = number of hotel rooms

PM Peak Hour of the Adjacent Street
T = 0.60 (X) (51% inbound and 49% outbound)
Where T = number of peak hour trips, X = number of hotel rooms

RESTAURANT (ITE Land Use 931)

Daily Trip Generation
T = 2.86 (X)
Where T = number of daily trips, X = number of seats

PM Peak Hour of the Adjacent Street
T = 0.26 (X) (67% inbound and 33% outbound)
Where T = number of peak hour trips, X = number of seats

Using the above-listed equations from the ITE document, a trip generation analysis was undertaken for the existing and proposed land uses. The results of this effort are documented in Tables 1 and 2. As indicated in the tables, the proposed hotel improvements are projected to generate approximately 224 new daily trips and approximately 22 new peak hour trips (16 inbound and 6 outbound). Therefore, the proposed hotel improvements are anticipated to have minimal traffic impact to the surrounding street system (one new peak hour trip every two minutes and 43 seconds). Figures 2 and 3 illustrate the traffic circulation for new trips (arrival, parking, retrieval and departing trips) assuming valet usage of the parking garage located on 7th Street just west of Collins Avenue.

Pedestrian Counts

Pedestrian counts were collected on Friday, May19, 2017 near the intersection of Ocean Drive and 7th Street. The pedestrian counts included pedestrian counts travelling north-south along the west sidewalk of Ocean Drive south of 7th Street. Additionally, pedestrian counts crossing Ocean Drive at the signalized intersection of 7th Street were also undertaken. The pedestrian counts indicate that during peak 15-minute period the sidewalk volume includes approximately 185 pedestrians during the peak 15-minutes traveling north and south on the west side of Ocean Drive. The data also shows that approximately 150 pedestrians during a one-hour period. The pedestrian counts are contained in Appendix B.

Pedestrian Circulation

A sidewalk that varies between 5.4 feet and 10.9 feet is provided on the west side of Ocean Drive and adjacent and near to the 626-650 Ocean Drive site (refer to Photos depicted in Appendix B).

The sidewalk provides north-south pedestrian mobility within the immediate area of the project. From the sidewalk, access to the 626-650 Ocean Drive site is provided via pedestrian access path/stairs including new ramp railings immediately west of the sidewalk. Moreover, a signalized pedestrian crossing is provided at 7th Street located approximately 100 feet north of the site.

Pedestrian Facilities Analysis (Sidewalks and Crosswalks)

Based on the pedestrian counts contained in Appendix B, approximately 185 pedestrians/15-minutes travel north and south along the west side of Ocean Drive. As shown in the signal timing plans contained in Appendix C for the signalized located at 7th Street, the subject pedestrian crossing operates with an off-line signal cycle of 52 seconds, which results in approximately 69 pedestrian crossing opportunities per hour. Hence, the signalized pedestrian crossing at 7th Street has 69 opportunities per hour to accommodate 150 pedestrians per hour (sufficient pedestrian capacity is available at the subject signalized pedestrian crossing).

The traffic counts contained in Appendix B show a maximum of 185 pedestrians during the peak 15-minute period traveling north-south along the west side of Ocean Drive. With a sidewalk width of 5.4 feet (5 feet, 5 inches), the resulting pedestrian flow rate is approximately 2.284 pedestrians/minute/foot of sidewalk width (185 pedestrians per peak 15-minute period divided by 15 divided by 5.4). According to the 2010 Highway Capacity Manual (refer to Appendix D), the sidewalk adjacent to the site has adequate capacity to accommodate the peak pedestrian traffic recorded within this area.

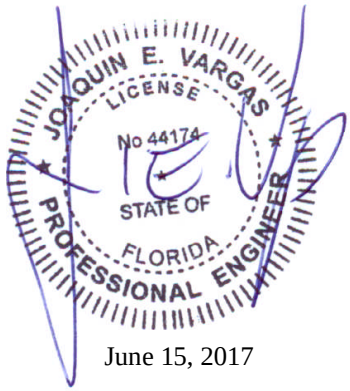
Summary

The Park Central Hotel improvements are projected to generate approximately 79 new daily trips and approximately eight (8) new peak hour trips (five inbound and two outbound). Therefore, the proposed hotel improvements are anticipated to have a De-Minimus impact to the surrounding street system (one new peak hour trip every seven and one-half minutes). Adequate traffic and pedestrian circulation is provided for the project. Sufficient pedestrian capacity is available at the signalized pedestrian crossing located at 7th Street (approximately 100 feet from the site). Finally, the sidewalk located adjacent to the site has adequate capacity to accommodate the peak pedestrian traffic.

Sincerely,

TRAF TECH ENGINEERING, INC.

Joaquin E. Vargas, P.E.
Senior Transportation Engineer



June 15, 2017

TABLE 1 Trip Generation Summary (Current Use) 626 - 650 Ocean Drive					
			PM Peak Hour		
Land Use	**Size**	**Daily Trips**	**Total Trips**	**Inbound**	**Outbound**
Hotel (LUC 310)	127	1,038	76	39	37
External Trips		**1,038**	**76**	**39**	**37**

Source: ITE Trip Generation Manual (9th Edition)

TABLE 2 Trip Generation Summary (Proposed Uses) 626 - 650 Ocean Drive					
			PM Peak Hour		
Land Use	**Size**	**Daily Trips**	**Total Trips**	**Inbound**	**Outbound**
Hotel (LUC 310)	120	980	72	37	35
Terrace Seats (LUC 931)	110	315	29	19	10
Internal Trips (1)		-33	-3	-1	-2
External Trips		**1,262**	**98**	**55**	**43**

Source: ITE Trip Generation Manual (9th Edition)

Difference in Trips		**224**	**22**	**16**	**6**

(1) See internal calculations on the following page

PROPOSED LAND USES

Trip Generation and Internal Capture Summary

Analyst: Vargas

Date: 15-Jun-17
PM Peak Hour

LAND USE A:

ITE LU Code:
SIZE:

	Total	Internal	External
Enter		0	0
Exit		0	0
Total	0	0	0
%	#DIV/0!	#DIV/0!	#DIV/0!

Exit to External: 0

Enter from External: 0

20% 0 Demand → 0 Balanced → 8% 2 Demand

31% 0 Demand → 0 Balanced → 2% 0 Demand

2% 0 Demand → 0 Balanced → 4% 1 Demand

57% 0 Demand → 0 Balanced → 4% 1 Demand

LAND USE B: Restaurant

ITE LU Code: Code 931
SIZE:

	Total	Internal	External
Enter	19	1	18
Exit	10	1	9
Total	29	2	27
%	100%	6%	94%

Exit to External: 9

ter from External: 18

7% 1 Demand → 1 Balanced → 71% 26 Demand

5% 1 Demand → 1 Balanced → 68% 24 Demand

LAND USE C: Hotel

ITE LU Code: Codes 310
SIZE:

	Total	Internal	External
Enter	37	1	36
Exit	35	1	34
Total	72	2	70
%	100%	2%	98%

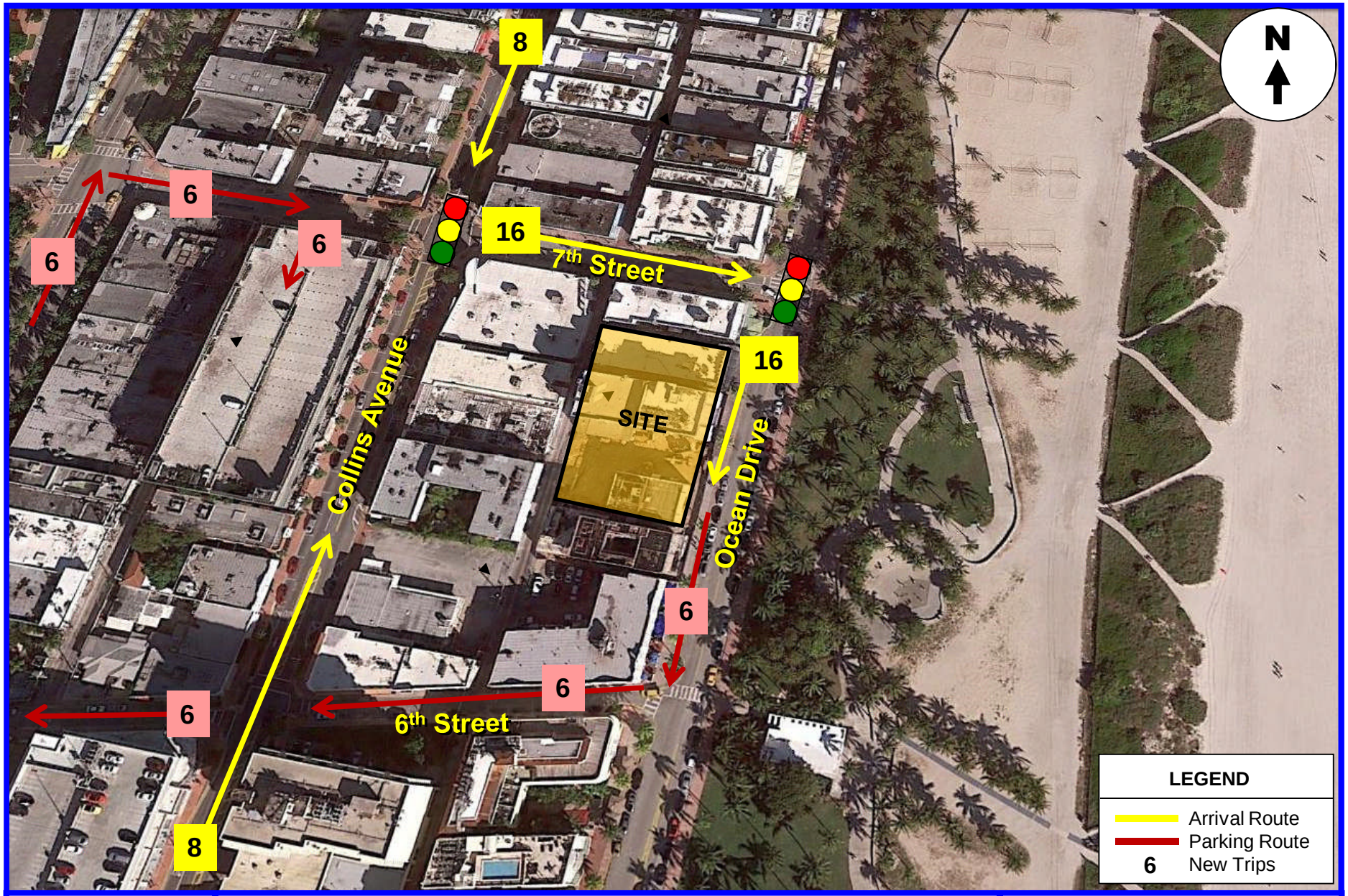
Enter from External: 36

Exit to External: 34

Net External Trips for Multi-Use Development

	LAND USE A	LAND USE B	LAND USE C	TOTAL
Enter	0	18	36	55
Exit	0	9	34	43
Total	0	27	70	98
Single-Use Trip Gen. Est.	0	29	72	101

INTERNAL CAPTURE: 3%



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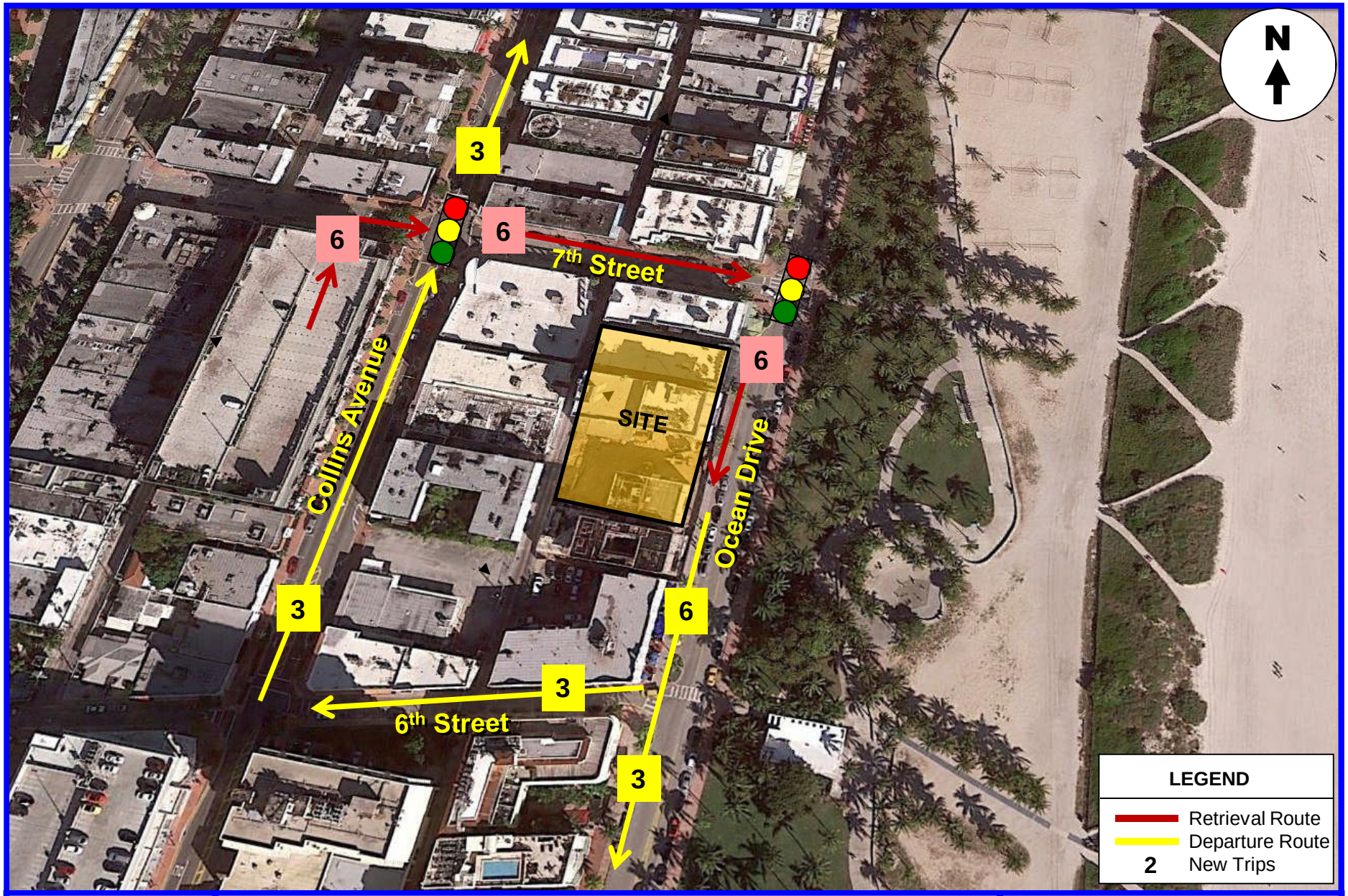
ARRIVAL AND PARKING CIRCULATION
(New Trips)

FIGURE 2
Park Central Hotel
Miami Beach, Florida



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RETRIEVAL AND DEPARTURE CIRCULATION
(New Trips)

FIGURE 3
Park Central Hotel
Miami Beach, Florida

APPENDIX A

Site Plan – Park Central Hotel

THE PARK CENTRAL HOTEL

626-650 OCEAN DRIVE

MIAMI BEACH FLORIDA

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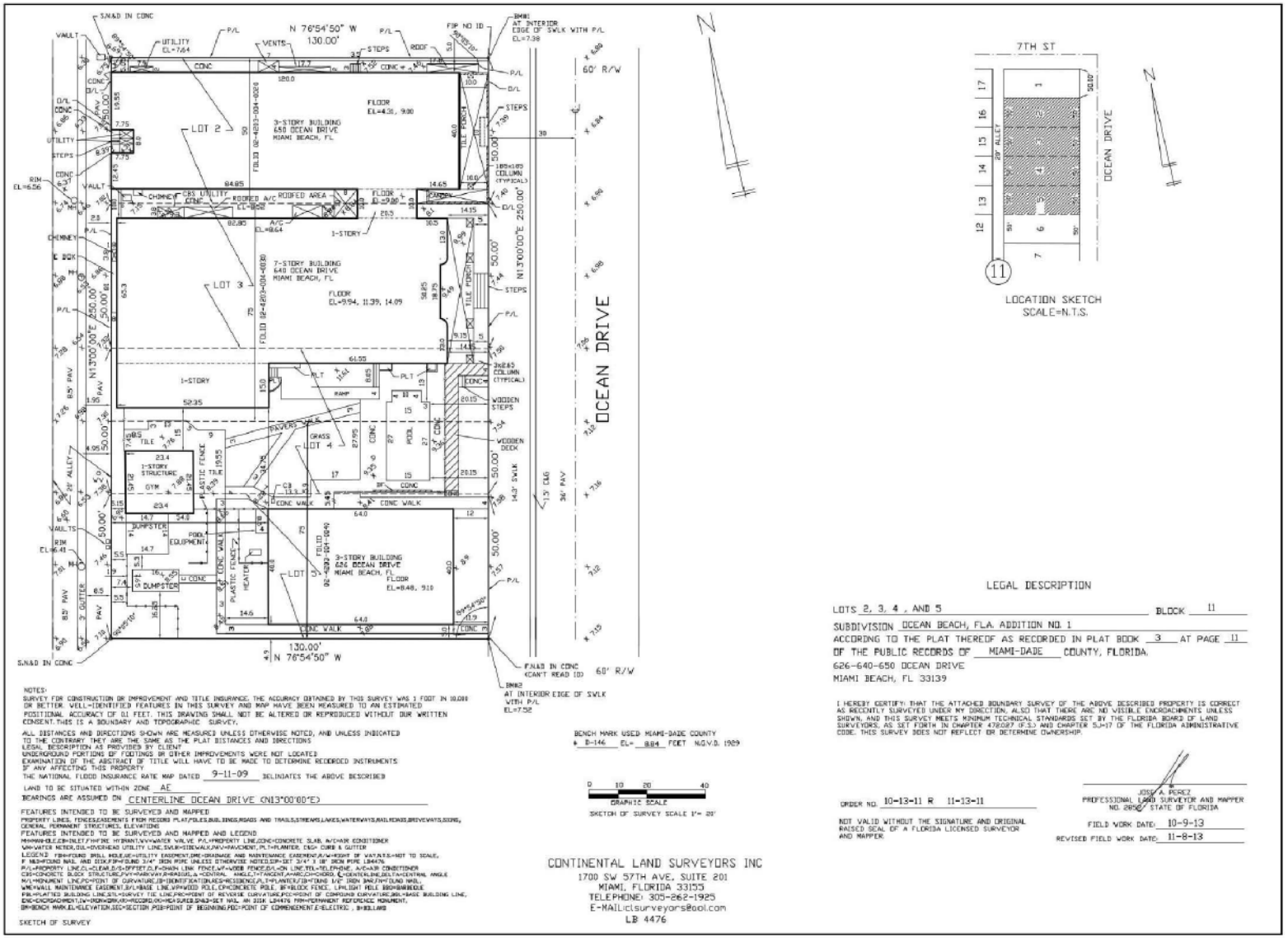
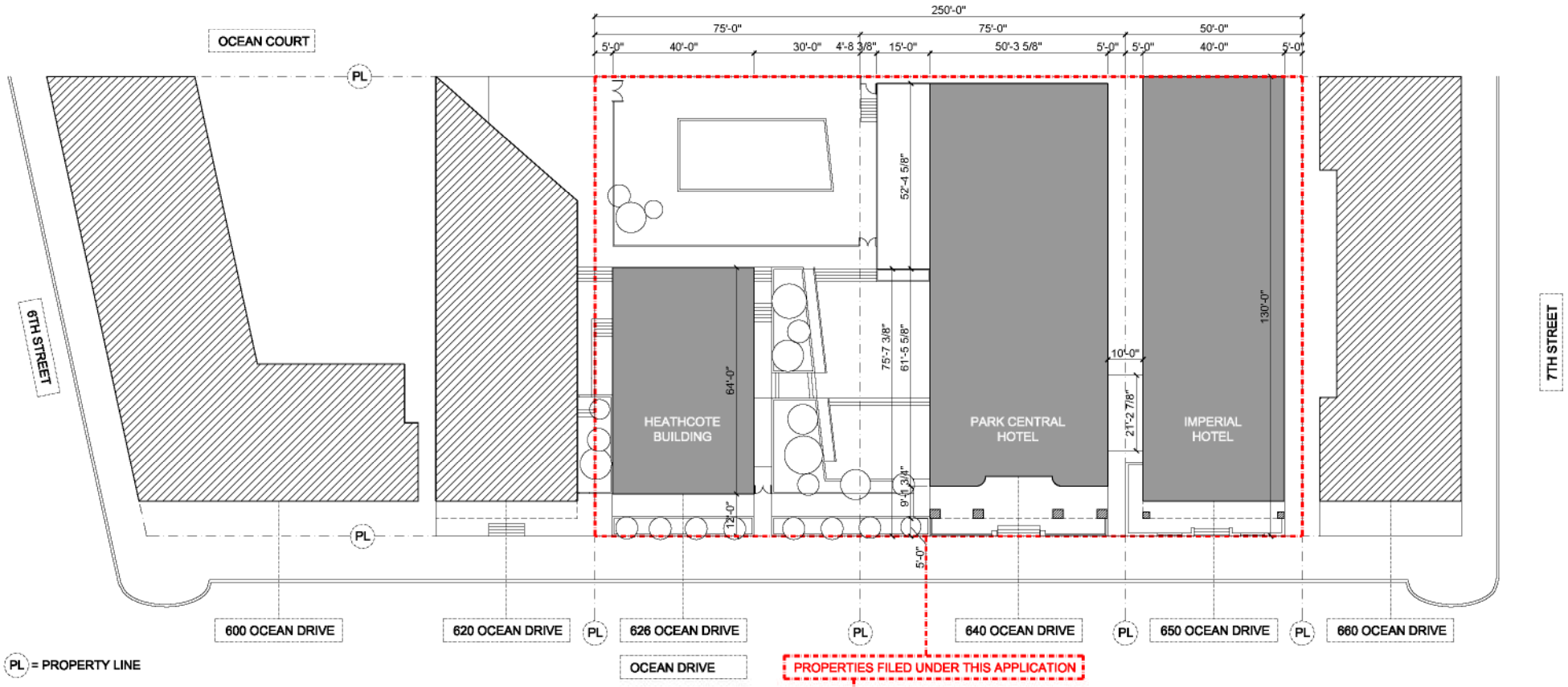
HISTORIC PRESERVATION BOARD SUBMITTAL
(JANUARY 21, 2014)


OCEAN DRIVE
7TH ST
LOCATION SKETCH
SCALE=N.T.S.
LEGAL DESCRIPTION
LOTS 2, 3, 4 , AND 5 BLOCK 11
SUBDIVISION OCEAN BEACH, FLA. ADDITION NO. 1
ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 3 AT PAGE 11
OF THE PUBLIC RECORDS OF MIAMI-DADE COUNTY, FLORIDA.
626-640-650 OCEAN DRIVE
MIAMI BEACH, FL 33139
I HEREBY CERTIFY THAT THE ATTACHED BOUNDARY SURVEY OF THE ABOVE DESCRIBED PROPERTY IS CORRECT AS RECENTLY SURVEYED UNDER MY DIRECTION. ALSO THAT THERE ARE NO VISIBLE ENCROACHMENTS UNLESS SHOWN, AND THIS SURVEY MEETS MINIMUM TECHNICAL STANDARDS SET BY THE FLORIDA BOARD OF LAND SURVEYORS, AS SET FORTH IN CHAPTER 472.027 (F.S.) AND CHAPTER 5J-17 OF THE FLORIDA ADMINISTRATIVE CODE. THIS SURVEY DOES NOT REFLECT OR DETERMINE OWNERSHIP.
ORDER NO. 10-13-11 R 11-13-11
NOT VALID WITHOUT THE SIGNATURE AND ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER
JOSE A. PEREZ
PROFESSIONAL LAND SURVEYOR AND MAPPER
NO. 2852 STATE OF FLORIDA
FIELD WORK DATE: 10-9-13
REVISED FIELD WORK DATE: 11-8-13
BENCH MARK USED MIAMI-DADE COUNTY
B-146 EL= 8.84 FEET N.G.V.D. 1929
GRAPHIC SCALE
SKETCH OF SURVEY SCALE 1"= 20'
CONTINENTAL LAND SURVEYORS INC
1700 SW 57TH AVE. SUITE 201
MIAMI, FLORIDA 33155
TELEPHONE: 305-262-1925
E-MAIL:clsurveyors@aol.com
LB 4476
NOTES:
SURVEY FOR CONSTRUCTION OR IMPROVEMENT AND TITLE INSURANCE. THE ACCURACY OBTAINED BY THIS SURVEY WAS 1 FOOT IN 10,000 OR BETTER. WELL-IDENTIFIED FEATURES IN THIS SURVEY AND MAP HAVE BEEN MEASURED TO AN ESTIMATED POSITIONAL ACCURACY OF 0.1 FEET. THIS DRAWING SHALL NOT BE ALTERED OR REPRODUCED WITHOUT OUR WRITTEN CONSENT. THIS IS A BOUNDARY AND TOPOGRAPHIC SURVEY.
ALL DISTANCES AND DIRECTIONS SHOWN ARE MEASURED UNLESS OTHERWISE NOTED, AND UNLESS INDICATED TO THE CONTRARY THEY ARE THE SAME AS THE PLAT DISTANCES AND DIRECTIONS
LEGAL DESCRIPTION AS PROVIDED BY CLIENT
UNDERGROUND PORTIONS OF FOOTINGS OR OTHER IMPROVEMENTS WERE NOT LOCATED
EXAMINATION OF THE ABSTRACT OF TITLE WILL HAVE TO BE MADE TO DETERMINE RECORDED INSTRUMENTS IF ANY AFFECTING THIS PROPERTY
THE NATIONAL FLOOD INSURANCE RATE MAP DATED 9-11-09 DELINEATES THE ABOVE DESCRIBED
LAND TO BE SITUATED WITHIN ZONE AE
BEARINGS ARE ASSUMED ON CENTERLINE OCEAN DRIVE (N13°00'00"E)
FEATURES INTENDED TO BE SURVEYED AND MAPPED
PROPERTY LINES, FENCES/EASEMENTS FROM RECORD PLAT/DEEDS, BUILDINGS/ROADS AND TRAILS, STREAMS/LAKES/WATERWAYS, RAILROADS, DRIVEWAYS, SIGNS, GENERAL PERMANENT STRUCTURES, ELEVATIONS
FEATURES INTENDED TO BE SURVEYED AND MAPPED AND LEGEND
MH=MAN-HOLE, CB=INLET/CATCH BASIN, FH=FIRE HYDRANT, WV=WATER VALVE, P/L=PROPERTY LINE, CONC=CONCRETE SLAB, A/C=AIR CONDITIONER
WM=WATER METER, OHU=OVERHEAD UTILITY LINE, SW=SIDEWALK, PAV=PAVEMENT, PLT=PLANTER, CG= CURB & GUTTER
LEGEND: FB=FOUND BRASS ROD, UE=UTILITY EASEMENT, DME=DRAINAGE AND MAINTENANCE EASEMENT, R/W=RIGHT OF WAY, N.T.S.=NOT TO SCALE, F NAIL=FOUND NAIL AND DISK, F=FOUND 3/4" IRON PIPE UNLESS OTHERWISE NOTED, S=SET 3/4" I.D. IRON PIPE LB4476
P/L=PROPERTY LINE, CL=CLEAR, D/S=OFFSET, C/L=CHAIN LINK FENCE, W/=WOOD FENCE, O/H=ON LINE, TEL=TELEPHONE, A/C=AIR CONDITIONER
CBS=CONCRETE BLOCK STRUCTURE, PVI=POINT OF VERTICAL INTERSECTION, A=CENTRAL ANGLE, T=TANGENT, A=ARC, CH=CHORD, L=CENTERLINE DELTA=CENTRAL ANGLE
M/L=MONUMENT LINE, POC=POINT OF COMMENCEMENT, ID=IDENTIFICATION, RES=RESIDENCE, PL=PLANTER, TIB=TOWN I/E IRON BAR/PK=PK NAIL
WME=WALL MAINTENANCE EASEMENT, B/L=BASE LINE, WP=WOOD POLE, CP=CONCRETE POLE, BF=BLOCK FENCE, LP=LIGHT POLE, BRH=BARRICADE
PBL=PLATTED BUILDING LINE, STL=SURVEY TIE LINE, POC=POINT OF REVERSE CURVATURE, PCC=POINT OF COMPOUND CURVATURE, BSL=BASE BUILDING LINE, ENC=ENCROACHMENT, LW=IRON WORK, RD=RECORD, OH=MEASURED, SND=SET NAIL AN DISK LB4476 PRM=PERMANENT REFERENCE MONUMENT, BM=BENCH MARK, EL=ELEVATION, SEC=SECTION, POB=POINT OF BEGINNING, POC=POINT OF COMMENCEMENT, E=ELECTRIC , BH=BOLLARD
SKETCH OF SURVEY



PL = PROPERTY LINE

LOCATIONAL SITE PLAN

space4architecture

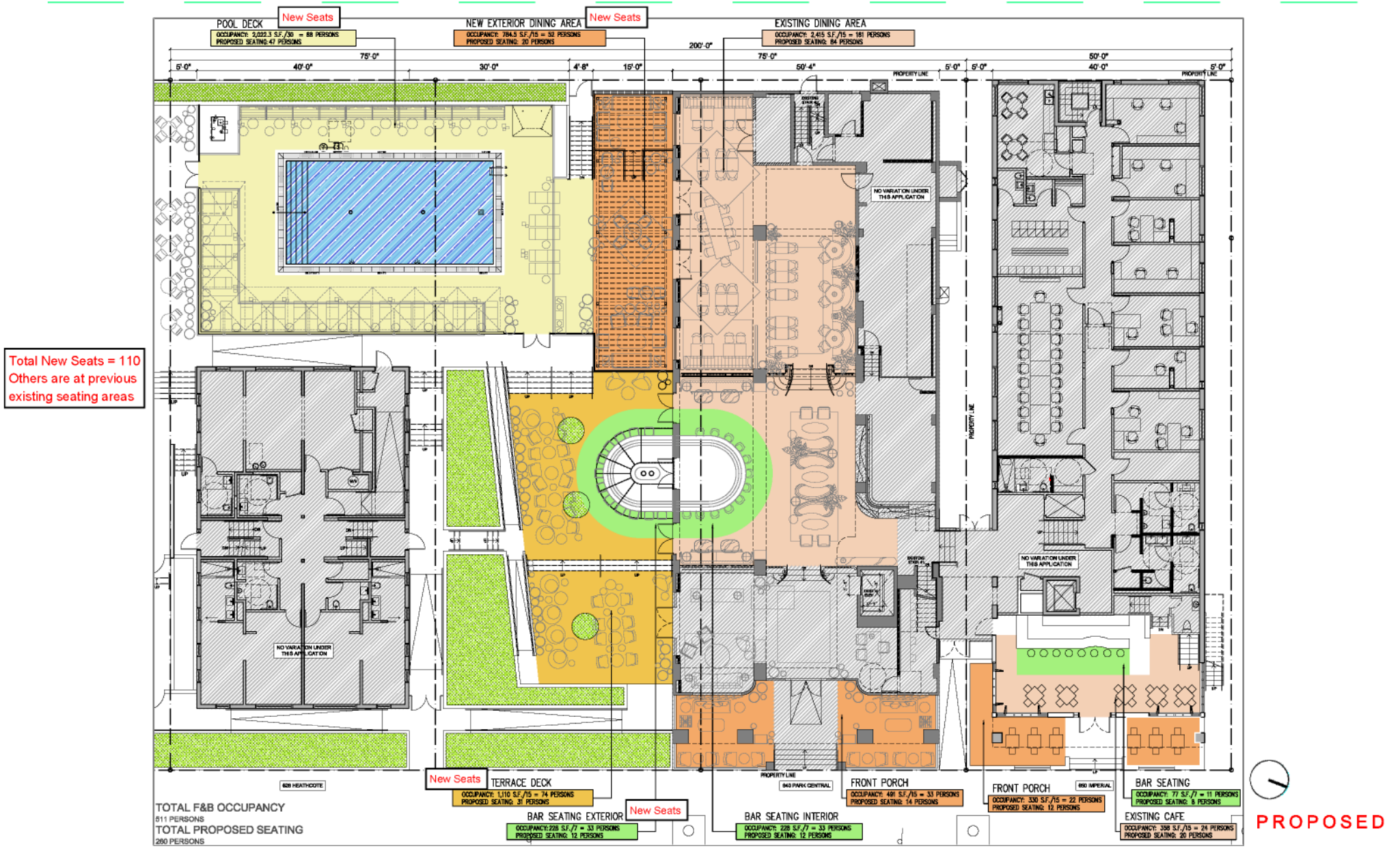
CLIENT
THE PARK CENTRAL PARTNERS LLC
620-650 Ocean Drive, Miami Beach, FL 33139

PROJECT NAME
THE PARK CENTRAL HOTEL
626/640/650 Ocean Drive, Miami Beach, FL 33139

LANDSCAPE ARCHITECT
URBAN ROBOT ASSOCIATES
420 Lincoln Road Ste. #406, Miami Beach, FL 33139
T: 786-246-4857

EXECUTIVE ARCHITECT
borges+ associates
1200 Brickell Avenue Suite 1525 Miami, FL 33131
T: 305-374-9216

DESIGN ARCHITECT
SPACE 4 ARCHITECTURE
22 E 21st St # 8F New York, NY 10010
T: 212-253-7095



S4ARCHITECTURE
borges architects + associates
NAVIGATE DESIGN

CLIENT
THE PARK CENTRAL PARTNERS LLC
620-650 Ocean Drive, Miami Beach, FL 33139

PROJECT NAME
THE PARK CENTRAL HOTEL
626/640/650 Ocean Drive, Miami Beach, FL 33139

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DESIGN ARCHITECT
SPACE4ARCHITECTURE
22 E 21st St #6F New York, NY 10010
T: 212 253 7095

THE PARK CENTRAL HOTEL / MIAMI FLORIDA

1ST FLOOR CONSTRUCTION PLAN_F&B OCCUPANCY

SCALE: 1/16" = 1'-0"

APPENDIX B

Pedestrian Counts

7TH STREET AND OCEAN DR., MIAMI BEACH

DATE: MAY 19, 2017

PEDESTRIAN COUNT (W SIDEWALK & CROSSWALKS)

TIME	OCEAN DRIVE SOUTHBOUND	OCEAN DRIVE NORTHBOUND	N CROSSWALK EB	N CROSSWALK WB	S CROSSWALK EB	S CROSSWALK WB
16:30-16:45	25	13	5	13	12	22
16:45-17:00	53	51	5	3	17	18
17:00-17:15	46	55	0	4	14	27
17:15-17:30	38	29	4	8	8	29
17:30-17:45	59	35	5	31	8	29
17:45-18:00	57	58	1	23	8	28
18:00-18:15	78	52	3	12	7	17
18:15-18:30	67	62	9	2	9	9
18:30-18:45	80	68	2	0	1	15
18:45-19:00	90	79	8	1	2	28
19:00-19:15	97	76	2	0	2	9
19:15-19:30	92	93	0	0	2	4

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SIDEWALK MEASUREMENT

FIGURE B-1
1787 Purdy Avenue
Miami Beach, Florida

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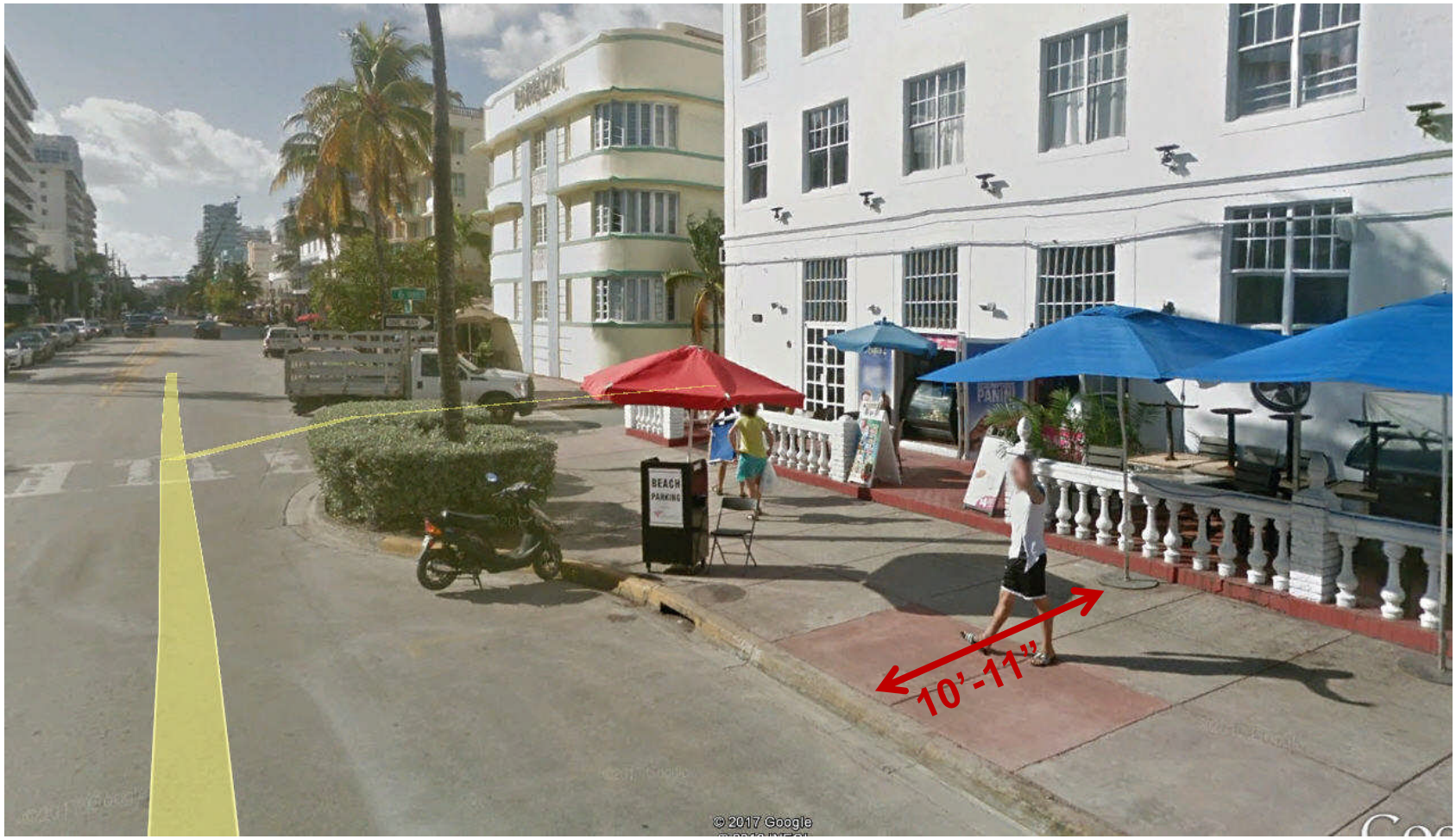
ENGINEERING, INC.

SIDEWALK MEASUREMENT

FIGURE B-2
1787 Purdy Avenue
Miami Beach, Florida



Traf Tech
ENGINEERING, INC.

SIDEWALK MEASUREMENT

FIGURE B-3
1787 Purdy Avenue
Miami Beach, Florida

Traf Tech
ENGINEERING, INC.

SIDEWALK MEASUREMENT

FIGURE B-4
1787 Purdy Avenue
Miami Beach, Florida

APPENDIX C

Signal Timing (Ocean Drive and 7th Street)

TOD Schedule Report
for 6345: Ocean Dr&7 St

Print Date: 1/25/2016

Print Time: 4:09 PM

Asset	Intersection	TOD Schedule	Op Mode	Plan #	Cycle	Offset	TOD Setting	Active PhaseBank	Active Maximum
6345	Ocean Dr&7 St	DOW-2		N/A	0	0	N/A	0	Max 0

Splits

PH 1	PH 2	PH 3	PH 4	PH 5	PH 6	PH 7	PH 8
-	SBT	-	-	-	NBT	-	EBT
0	0	0	0	0	0	0	0

Active Phase Bank: Phase Bank 1

Phase	Walk (Phase Bank 1 - 2 - 3)	Don't Walk (1 - 2 - 3)	Min Initial (1 - 2 - 3)	Veh Ext (1 - 2 - 3)	Max Limit (1 - 2 - 3)	Max 2 (1 - 2 - 3)	Yellow	Red
1 -	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0	0
2 SBT	7 - 7 - 7	12 - 12 - 12	7 - 7 - 7	1 - 1 - 1	25 - 25 - 25	0 - 0 - 0	4	2
3 -	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0	0
4 -	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0	0
5 -	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0	0
6 NBT	7 - 7 - 7	12 - 12 - 12	7 - 7 - 7	1 - 1 - 1	25 - 25 - 25	0 - 0 - 0	4	2
7 -	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0	0
8 EBT	7 - 7 - 7	10 - 10 - 10	7 - 7 - 7	2.5 - 2.5 - 2.5	15 - 15 - 15	0 - 0 - 0	4	2

Last In Service Date: unknown

Permitted Phases

	12345678
Default	-2---6-8
External Permit 0	--------
External Permit 1	--------
External Permit 2	--------

Current TOD Schedule	Plan	Cycle	1	2	3	4	5	6	7	8	Ring Offset	Offset
			-	SBT	-	-	-	NBT	-	EBT		

Local TOD Schedule

Time	Plan	DOW
0000	Free	Su M T W Th F S

TOD Schedule Report

for 6345: Ocean Dr&7 St

Print Date: **1/25/2016**

Print Time: **4:09 PM**

Current Time of Day Function

Time	Function	Settings *	Day of Week
0000	TOD OUTPUTS	--------	SuM T W ThF S

Local Time of Day Function

Time	Function	Settings *	Day of Week
0000	TOD OUTPUTS	--------	SuM T W ThF S

*** Settings**

Blank - FREE - Phase Bank 1, Max 1
Blank - Plan - Phase Bank 1, Max 2
1 - Phase Bank 2, Max 1
2 - Phase Bank 2, Max 2
3 - Phase Bank 3, Max 1
4 - Phase Bank 3, Max 2
5 - EXTERNAL PERMIT 1
6 - EXTERNAL PERMIT 2
7 - X-PED OMIT
8 - TBA

No Calendar Defined/Enabled

SIGNAL HEAD & SIGNS DETAILS

2
6 8

R Y G

ITEM NO. 650-1-131
6 - REQ'D

P2 P4
P8

ITEM NO. 653-171
6 - REQ'D

PUSH BUTTON WAIT FOR TO CROSS OCEAN DR

R10-4B
ITEM NO. 700-48-11
4 - REQ'D

OCEAN DR
42"
18"
D3-1S
ITEM NO. 700-48-11
1 - REQ'D
SERIES "C"
6" LETTERS
WHITE LETTERS ON GREEN BACKGROUND

7 STREET
42"
18"
D3-1S
ITEM NO. 700-48-11
2 - REQ'D
SERIES "C"
8" NUMBERS
6" LETTERS
WHITE LETTERS ON GREEN BACKGROUND

NOTES:
1. DEMAND WATTAGE FOR THIS INTERSECTION IS 955 WATTS.
2. F.P.L. REPRESENTATIVE TOM HODGDON TEL. (305) 442-5128
3. B.S.T. REPRESENTATIVE ALAN BOXFORD TEL. (305) 793-1461
4. SIGNAL TIMING TO BE PROVIDED TO CONTRACTOR BY DADE COUNTY SIGNALS & SIGNS DIVISION.
5. PEDESTRIAN PUSH BUTTONS AND SIGNS MUST BE ALIGNED WITH EACH OTHER AND WITH THE APPROPRIATE CROSSWALK.
6. BELLSOUTH PICK-UP POINT LOCATION TO BE PROVIDED PRIOR TO CONSTRUCTION. QUANTITIES INCLUDE 2 PULLBOXES (635-1-11) AND 250' OF CONDUIT UNDER PAVEMENT (630-1-13) FOR THE INSTALLATION OF THE PICK-UP POINT.

CONTROLLER OPERATIONS
1. MAJOR STREET IS OCEAN DRIVE, MINOR STREET IS 7 STREET.
2. SIGNAL OPERATING PLAN IS AS SHOWN.
3. PHASE(S) 2 ACTUATED, PHASE 1 RECALL.
4. MOVEMENT(S) N/A IS (ARE) PROTECTED/PERMISSIVE.
5. SIGNAL COORDINATION PHASE IS .
6. FLASHING OPERATION: OCEAN DR YELLOW; 11 ST RED.
7. WIRE/PROGRAM CONTROLLER TO SKIP MOVEMENT(S) N/A.

SIGNAL OPERATING PLAN

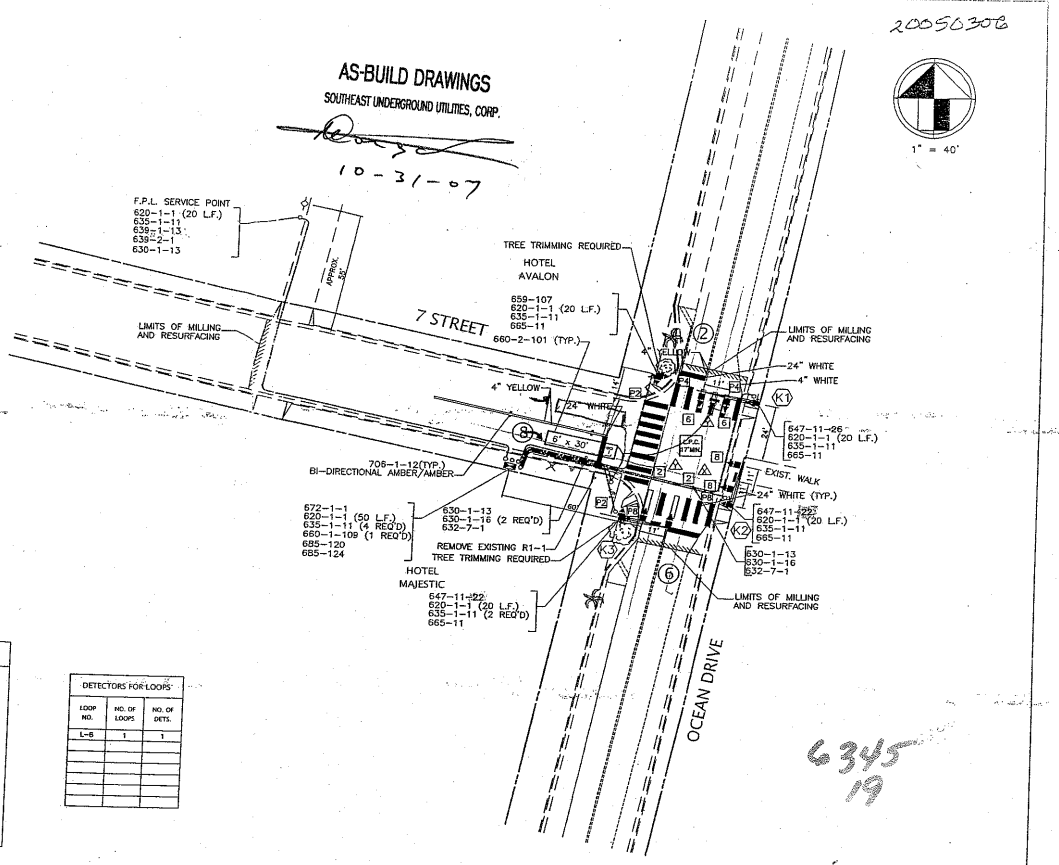
DETECTORS FOR LOOPS

LOOP NO.	NO. OF LOOPS	NO. OF DETS.
L-6	1	1

AS-BUILD DRAWINGS
SOUTHEAST UNDERGROUND UTILITIES, CORP.
10-31-07

20050308

1" = 40'



6345
19

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

TRANSPORT ANALYSIS PROFESSIONALS, INC.
A Transportation Consulting Group
State of Florida Engineering Business #3765
8701 S.W. 137th Avenue • Suite 210
Miami, Florida 33183 • Ph (305) 385-6777

MIAMI-DADE COUNTY
PUBLIC WORKS DEPARTMENT

DESIGN	DRAWN	DATE	T.A.P. PROJECT No.
DRM	DRM	9/02	1902-3

SIGNALIZATION PLAN
OCEAN DRIVE & 7 STREET
INTERSECTION ID No. 6345

SHEET NO.
T-18

APPENDIX D

Pedestrian Flow and LOS for Sidewalks

parts of the walkway. In cross-flow locations, the LOS E–F threshold is 13 ft²/p, as indicated in the notes for Exhibit 23-1 and Exhibit 23-2.

Exhibit 23-1
Average Flow LOS Criteria for Walkways

LOS	Average Space (ft²/p)	Related Measures: Flow Rate (p/min/ft)[a]	Related Measures: Average Speed (ft/s)	Related Measures: v/c Ratio[b]	Comments
A	>60	≤5	>4.25	≤0.21	Ability to move in desired path, no need to alter movements
B	>40–60	>5–7	>4.17–4.25	>0.21–0.31	Occasional need to adjust path to avoid conflicts
C	>24–40	>7–10	>4.00–4.17	>0.31–0.44	Frequent need to adjust path to avoid conflicts
D	>15–24	>10–15	>3.75–4.00	>0.44–0.65	Speed and ability to pass slower pedestrians restricted
E	>8–15[c]	>15–23	>2.50–3.75	>0.65–1.00	Speed restricted, very limited ability to pass slower pedestrians
F	≤8[c]	Variable	≤2.50	Variable	Speeds severely restricted, frequent contact with other users

Notes: Exhibit 23-1 does not apply to walkways with steep grades (>5%). See the Special Cases section for further discussion.
[a] Pedestrians per minute per foot of walkway width.
[b] *v/c* ratio = flow rate/23. LOS is based on average space per pedestrian.
[c] In cross-flow situations, the LOS E–F threshold is 13 ft²/p.

Exhibit 23-2
Platoon-Adjusted LOS Criteria for Walkways

LOS	Average Space (ft²/p)	Related Measure Flow Rate[a] (p/min/ft)[b]	Comments
A	>530	≤0.5	Ability to move in desired path, no need to alter movements
B	>90–530	>0.5–3	Occasional need to adjust path to avoid conflicts
C	>40–90	>3–6	Frequent need to adjust path to avoid conflicts
D	>23–40	>6–11	Speed and ability to pass slower pedestrians restricted
E	>11–23[c]	>11–18	Speed restricted, very limited ability to pass slower pedestrians
F	≤11[c]	>18	Speeds severely restricted, frequent contact with other users

Notes: [a] Rates in the table represent average flow rates over a 5-min period. Flow rate is directly related to space; however, LOS is based on average space per pedestrian.
[b] Pedestrians per minute per foot of walkway width.
[c] In cross-flow situations, the LOS E–F threshold is 13 ft²/p.

Stairways

Exhibit 23-3 provides the LOS criteria for stairways.

Exhibit 23-3
LOS Criteria for Stairways

LOS	Average Space (ft²/p)	Related Measures: Flow Rate (p/min/ft)[a]	Related Measures: v/c Ratio[b]	Comments
A	>20	≤5	≤ 0.33	No need to alter movements
B	>17–20	>5–6	>0.33–0.41	Occasional need to adjust path to avoid conflicts
C	>12–17	>6–8	>0.41–0.53	Frequent need to adjust path to avoid conflicts
D	>8–12	>8–11	>0.53–0.73	Limited ability to pass slower pedestrians
E	>5–8	>11–15	>0.73–1.00	Very limited ability to pass slower pedestrians
F	≤5	Variable	Variable	Speeds severely restricted, frequent contact with other users

Notes: [a] Pedestrians per minute per foot of walkway width.
[b] *v/c* ratio = flow rate/15. LOS is based on average space per pedestrian.