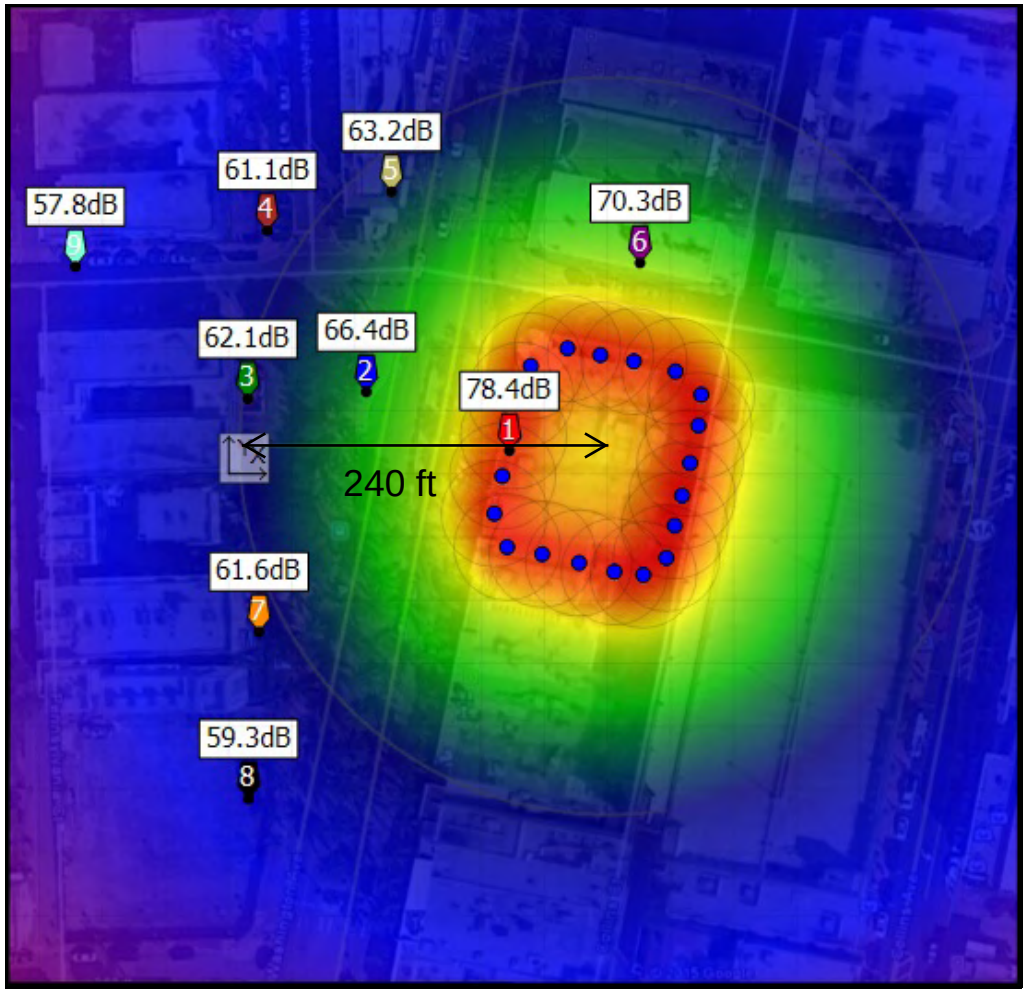
THE AUDIO BUG, INC.
3800 HILLCREST DRIVE, # 102 • HOLLYWOOD, FL 33021-7937 • PHONE: 954-983-2788 • FAX: 954-983-2789 • audiobug1@aol.com

Sound Propagation Map

601 Washington Avenue, Miami Beach, Florida
(A-Weighted)



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Sound Propagation Map

601 Washington Avenue, Miami Beach, Florida
(A-Weighted)

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Rooftop Sound System Specification

601 Washington Avenue, Miami Beach, Florida

Systems for the rooftop outdoor venue shall be designed to fully comply with local noise ordinances, employing several special techniques to accomplish this goal. These techniques include:

A. Deployment of multiple small, closely spaced speakers driven at low individual volumes. The system design is intended to physically distribute sound uniformly within the listening area in such a manner as not to interfere with normal conversational level of the clientele. Maximum long-term system levels will be limited to LeqA 78 dB/LeqC 82 dB (measured at 10 ft.) with user access restricted to the selection of program material and manual reduction only of system levels. No increase above maximum design sound levels shall be possible.

B. Size of outdoor speakers shall be limited to small woofers (not to exceed 8" nominal) incapable of producing appreciable levels of low frequency energy, as lower frequencies (longer wavelengths) can travel greater distances than higher frequencies (shorter wavelengths). The lowest frequencies, which are essential to the reproduction of musical styles such as hip-hop and rap, are to be significantly attenuated by electronic means.

C. A BSS "Soundweb™ London" Digital Signal Processing System (or approved equal), a centralized computer control and digital signal processor, shall form the heart of each system. With this device, the system is equipped with the following functions:

1. All controls under lock and key, with limited access via password security.
2. The system will provide for preset maximum level and equalization.
3. Local control will consist only of source selection and the ability to turn the system down.
4. A leveling program which will minimize the inevitable disparities between source and selection volumes, further ensuring consistent playback levels.

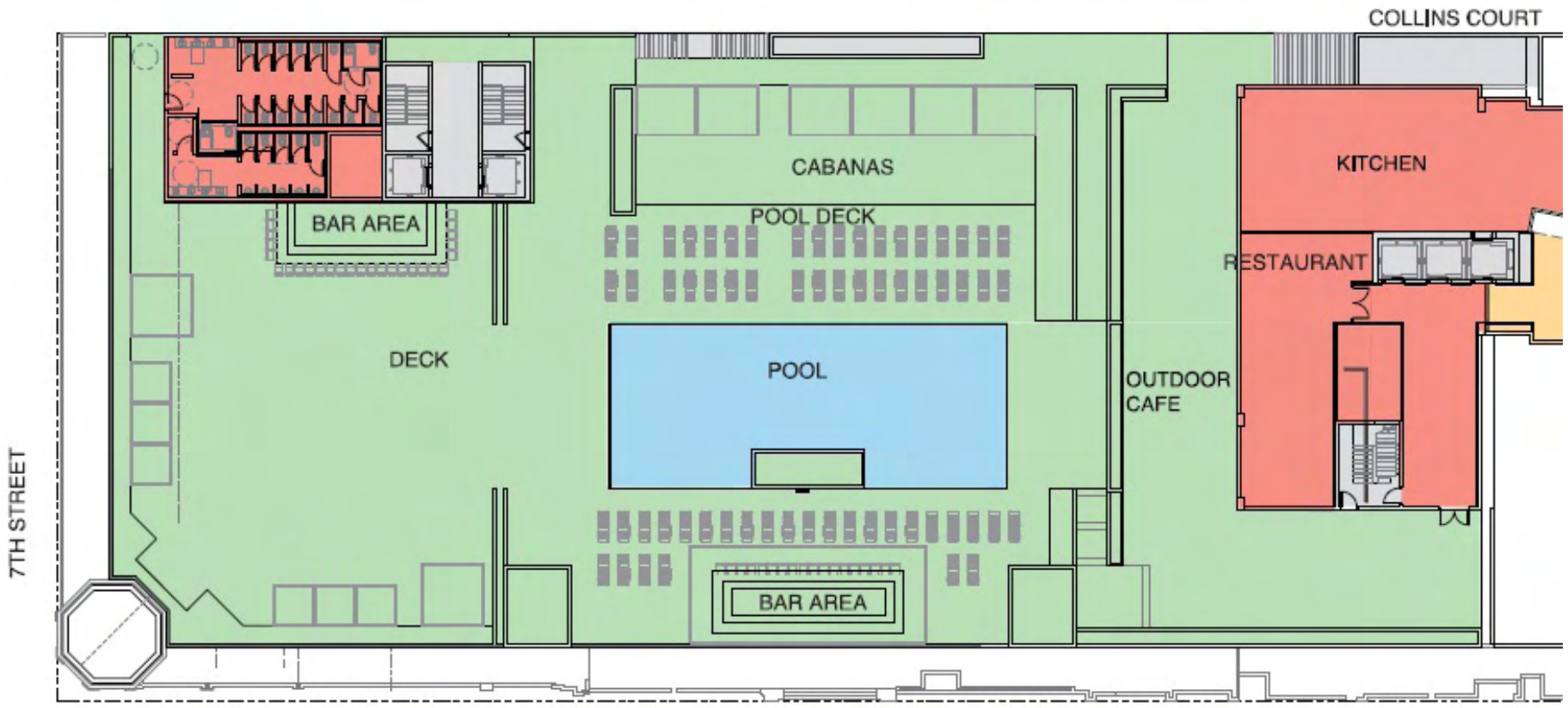
D. All outdoor speakers shall be oriented in such a way as to minimize sound propagation towards adjacent properties. A combination of ground-mounted and wall-mounted speaker systems shall be permitted as dictated by site conditions. Only the system installers and programmers shall have access to the full complement of controls and adjustments, ensuring compliance with the stated standard. Volume levels will be automated so as not to exceed the specified maximum, predetermined level. Once final adjustments have been made to the system, all controls are to be locked to prevent intentional or inadvertent adjustments.

E. Live entertainers and DJs will be prohibited from bringing portable loudspeakers and amplifiers to the venue. They will only be permitted to provide their own music sources (computers, iPads, iPods, CD players, turntable) and mixing console. Connections will be provided at locations to be selected during the sound system design process.

The system, once completely installed, shall be tested and adjusted under the supervision of Don Washburn of the Audio Bug, Inc. to ensure that all aspects of the system's performance comply with the design intent, City Ordinance and good technical practices.

Rooftop Plan View

601 Washington Avenue, Miami Beach, Florida

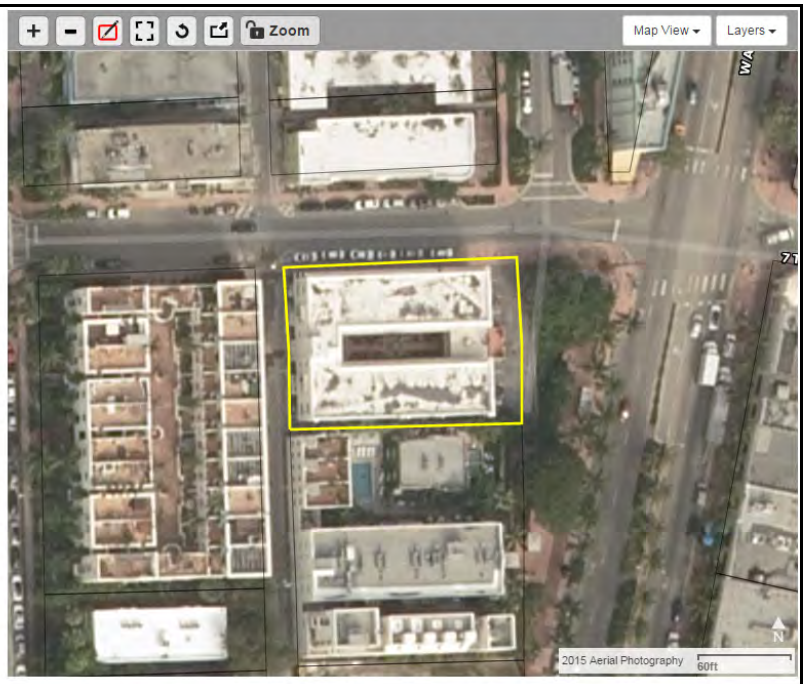


Property Records

601 Washington Avenue, Miami Beach, Florida

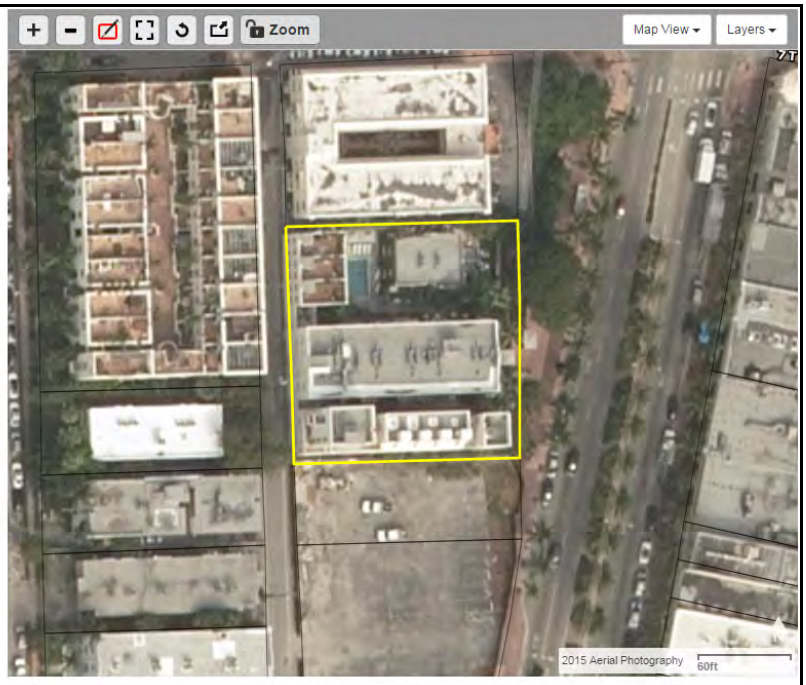
PROPERTY INFORMATION

Folio: 02-4203-208-0001 **(Reference)**	
Sub-Division: ARCADIA HOUSE CONDO	
Property Address	
Owner REFERENCE ONLY	
Mailing Address	
Primary Zone 4700 MULTI-FAMILY - CO-OPS	
Primary Land Use 0000 REFERENCE FOLIO	
Beds / Baths / Half	0 / 0 / 0
Floors	0
Living Units	0
Actual Area	0
Living Area	0
Adjusted Area	0
Lot Size	0 Sq.Ft
Year Built	0



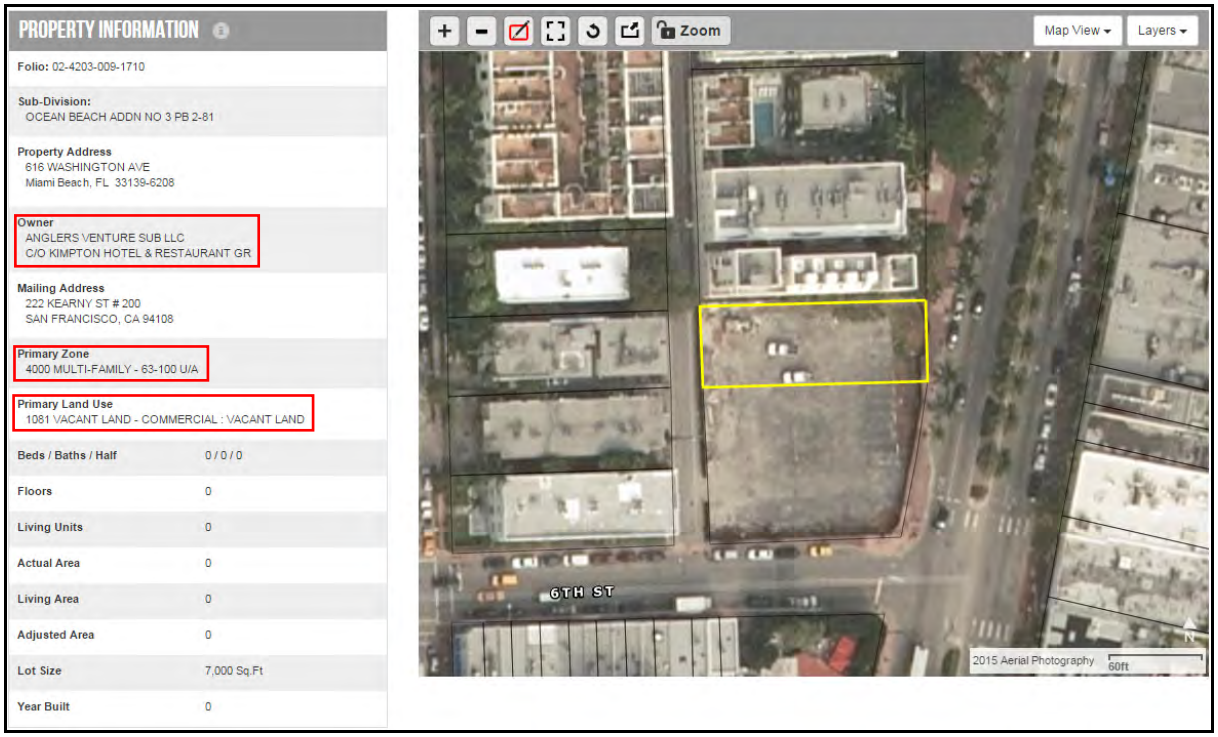
PROPERTY INFORMATION

Folio: 02-4203-009-1690	
Sub-Division: OCEAN BEACH ADDN NO 3 PB 2-81	
Property Address 660 WASHINGTON AVE Miami Beach, FL 33139-6208	
Owner ANGLERS RESORT LLC	
Mailing Address 660 WASHINGTON AVE MIAMI BEACH, FL 33139	
Primary Zone 4000 MULTI-FAMILY - 63-100 U/A	
Primary Land Use 3921 HOTEL OR MOTEL : HOTEL	
Beds / Baths / Half	28 / 52 / 12
Floors	3
Living Units	45
Actual Area	
Living Area	
Adjusted Area	32,722 Sq.Ft
Lot Size	21,000 Sq.Ft
Year Built	1923



Property Records

601 Washington Avenue, Miami Beach, Florida



PROPERTY INFORMATION

Folio: 02-4203-009-1710

Sub-Division:
OCEAN BEACH ADDN NO 3 PB 2-81

Property Address
616 WASHINGTON AVE
Miami Beach, FL 33139-6208

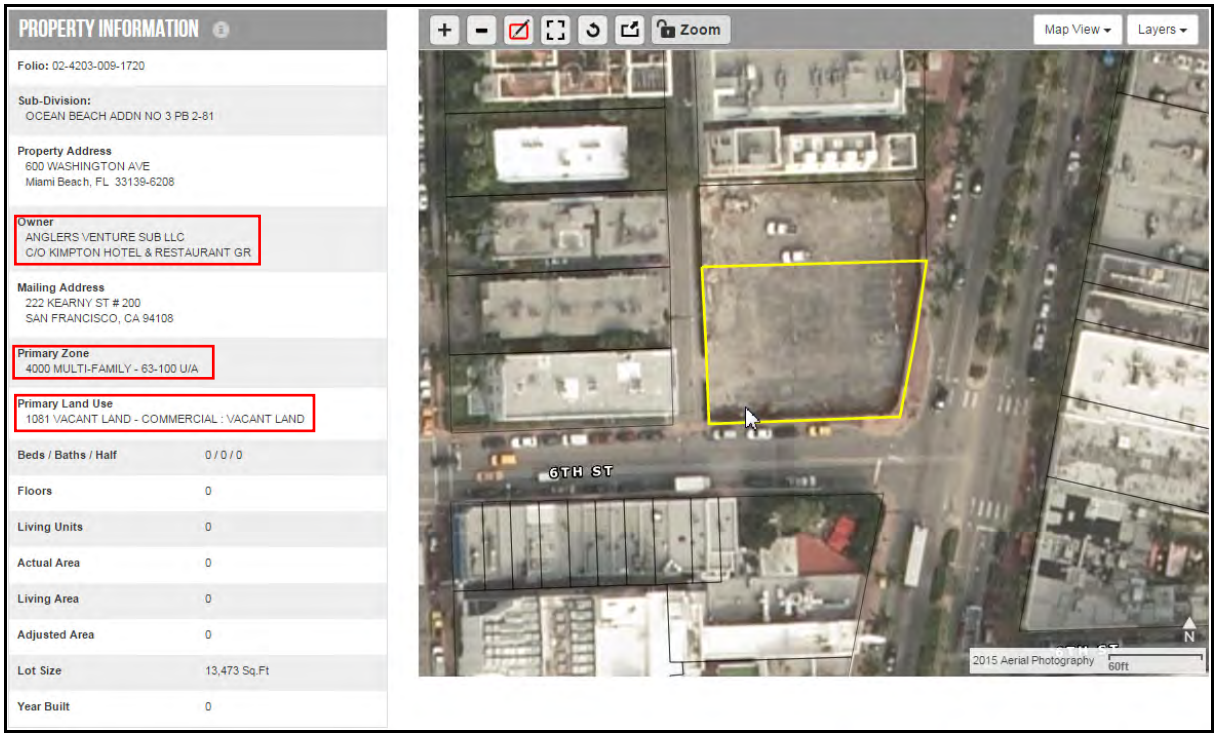
Owner
ANGLERS VENTURE SUB LLC
C/O KIMPTON HOTEL & RESTAURANT GR

Mailing Address
222 KEARNY ST # 200
SAN FRANCISCO, CA 94108

Primary Zone
4000 MULTI-FAMILY - 63-100 U/A

Primary Land Use
1081 VACANT LAND - COMMERCIAL : VACANT LAND

Beds / Baths / Half	0 / 0 / 0
Floors	0
Living Units	0
Actual Area	0
Living Area	0
Adjusted Area	0
Lot Size	7,000 Sq.Ft
Year Built	0



PROPERTY INFORMATION

Folio: 02-4203-009-1720

Sub-Division:
OCEAN BEACH ADDN NO 3 PB 2-81

Property Address
600 WASHINGTON AVE
Miami Beach, FL 33139-6208

Owner
ANGLERS VENTURE SUB LLC
C/O KIMPTON HOTEL & RESTAURANT GR

Mailing Address
222 KEARNY ST # 200
SAN FRANCISCO, CA 94108

Primary Zone
4000 MULTI-FAMILY - 63-100 U/A

Primary Land Use
1081 VACANT LAND - COMMERCIAL : VACANT LAND

Beds / Baths / Half	0 / 0 / 0
Floors	0
Living Units	0
Actual Area	0
Living Area	0
Adjusted Area	0
Lot Size	13,473 Sq.Ft
Year Built	0

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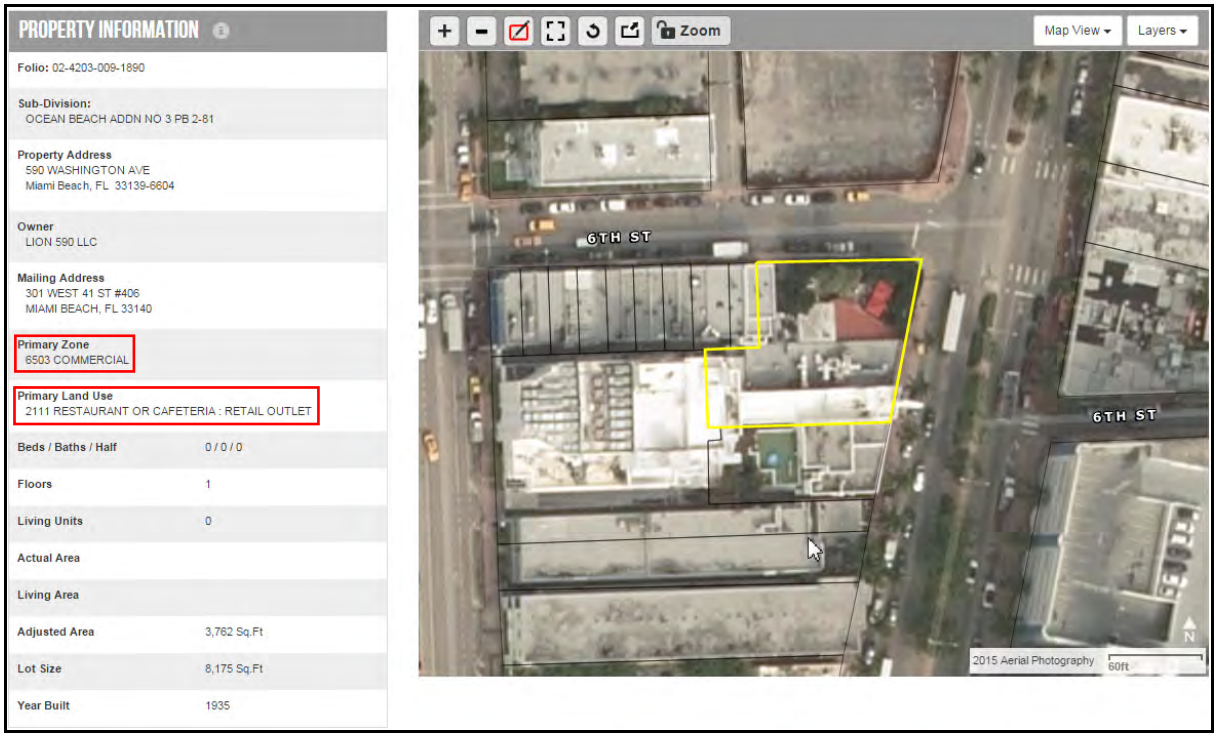
Property Records

601 Washington Avenue, Miami Beach, Florida



PROPERTY INFORMATION

Folio: 02-4203-009-1890

Sub-Division:
OCEAN BEACH ADDN NO 3 PB 2-81

Property Address
590 WASHINGTON AVE
Miami Beach, FL 33139-6604

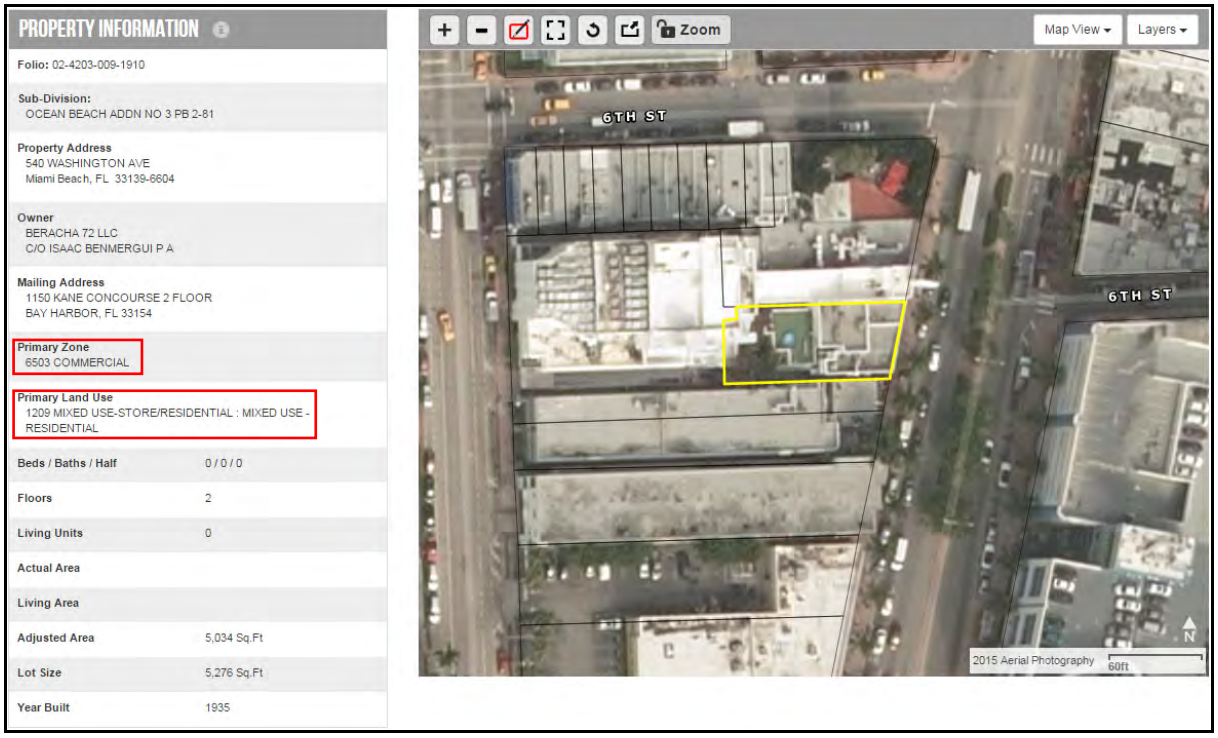
Owner
LION 590 LLC

Mailing Address
301 WEST 41 ST #406
MIAMI BEACH, FL 33140

Primary Zone
6503 COMMERCIAL

Primary Land Use
2111 RESTAURANT OR CAFETERIA : RETAIL OUTLET

Beds / Baths / Half	0 / 0 / 0
Floors	1
Living Units	0
Actual Area	
Living Area	
Adjusted Area	3,762 Sq.Ft
Lot Size	8,175 Sq.Ft
Year Built	1935



PROPERTY INFORMATION

Folio: 02-4203-009-1910

Sub-Division:
OCEAN BEACH ADDN NO 3 PB 2-81

Property Address
540 WASHINGTON AVE
Miami Beach, FL 33139-6604

Owner
BERACHA 72 LLC
C/O ISAAC BENMERGUI P A

Mailing Address
1150 KANE CONCOURSE 2 FLOOR
BAY HARBOR, FL 33154

Primary Zone
6503 COMMERCIAL

Primary Land Use
1209 MIXED USE-STORE/RESIDENTIAL : MIXED USE - RESIDENTIAL

Beds / Baths / Half	0 / 0 / 0
Floors	2
Living Units	0
Actual Area	
Living Area	
Adjusted Area	5,034 Sq.Ft
Lot Size	5,276 Sq.Ft
Year Built	1935

Property Records

601 Washington Avenue, Miami Beach, Florida

PROPERTY INFORMATION

Folio: 02-4203-002-0110

Sub-Division:
FRIEDMAN & COPES SUB

Property Address
555 WASHINGTON AVE
Miami Beach, FL 33139-6603

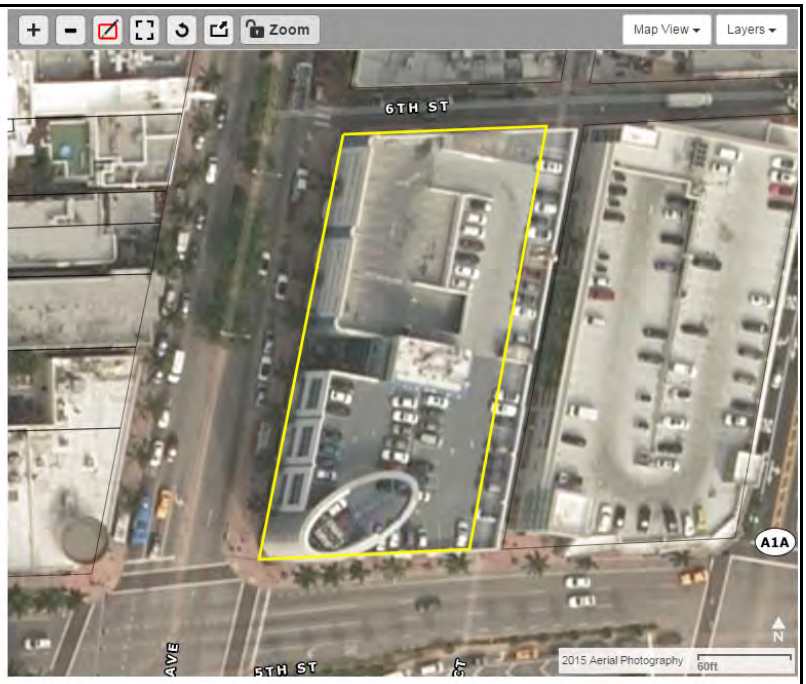
Owner
EOSII AT 555 WASHINGHTON LLC
C/O KBS REALTY ADVISORS LLC

Mailing Address
620 NEWPORT CENTER DR STE 1300
NEWPORT BEACH, CA 92660

Primary Zone
6503 COMMERCIAL

Primary Land Use
1813 OFFICE BUILDING - MULTISTORY : OFFICE BUILDING

Beds / Baths / Half	0 / 0 / 0
Floors	4
Living Units	0
Actual Area	141,807 Sq.Ft
Living Area	141,807 Sq.Ft
Adjusted Area	137,579 Sq.Ft
Lot Size	39,911 Sq.Ft
Year Built	2001



PROPERTY INFORMATION

Folio: 02-4203-002-0100

Sub-Division:
FRIEDMAN & COPES SUB

Property Address
500 COLLINS AVE
Miami Beach, FL 33139-6612
530 COLLINS AVE
590 COLLINS AVE

Owner
CSM COLLINS EQUITIES LP
% RABINA REALTY

Mailing Address
670 WHITE PLAINS RD STE 305
SCARSDALE, NY 10583

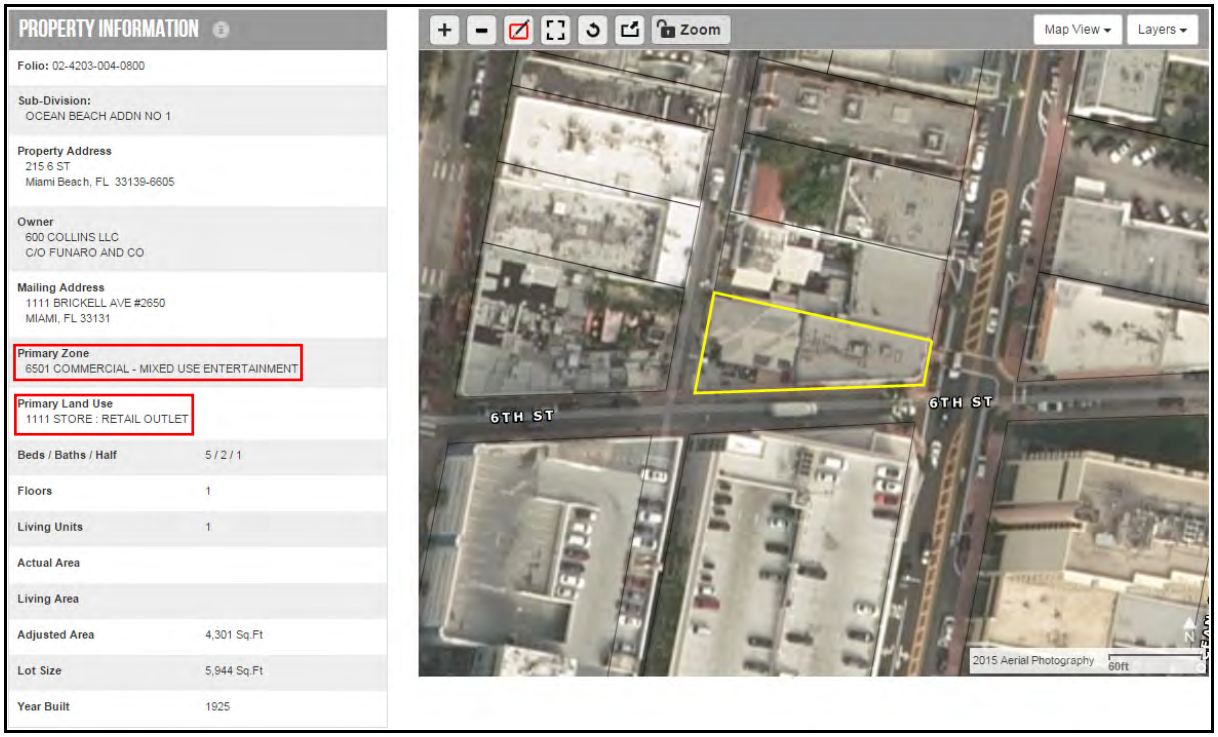
Primary Zone
6503 COMMERCIAL

Primary Land Use
1111 STORE : RETAIL OUTLET

Beds / Baths / Half	0 / 0 / 0
Floors	4
Living Units	0
Actual Area	
Living Area	
Adjusted Area	123,897 Sq.Ft
Lot Size	38,094 Sq.Ft
Year Built	2004

Property Records

601 Washington Avenue, Miami Beach, Florida



PROPERTY INFORMATION

Folio: 02-4203-004-0800

Sub-Division:
OCEAN BEACH ADDN NO 1

Property Address
215 6 ST
Miami Beach, FL 33139-6605

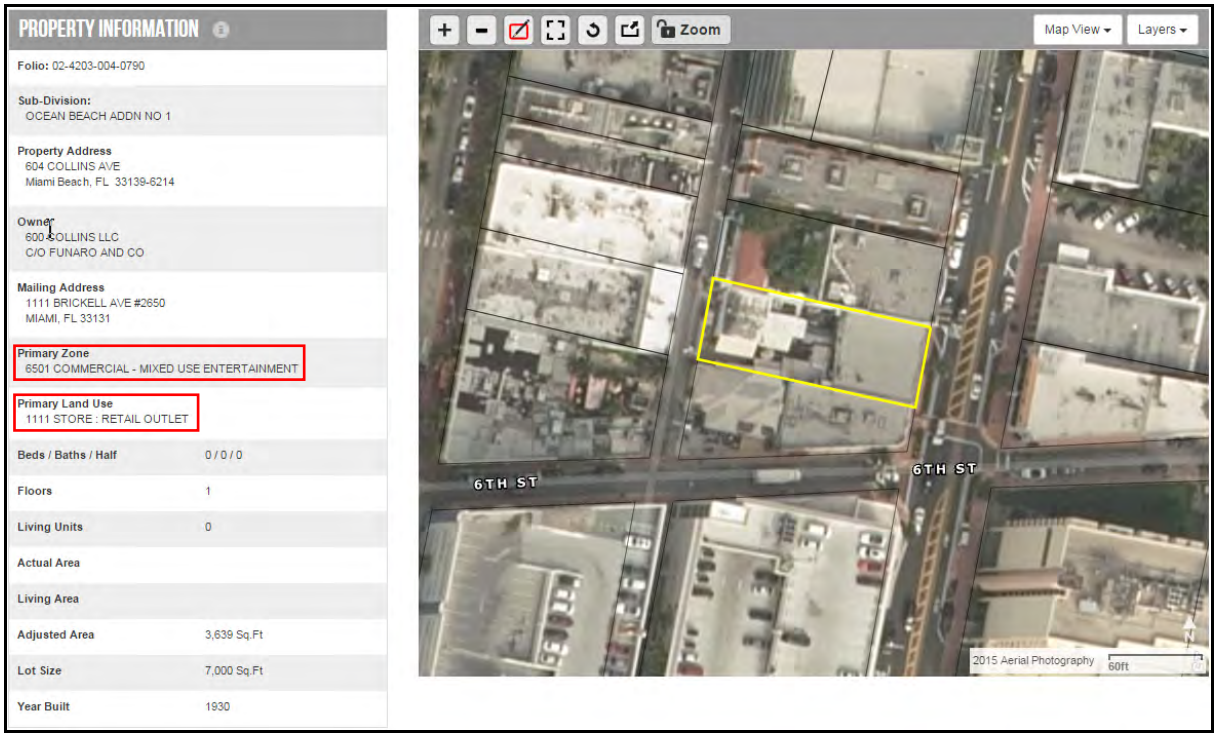
Owner
600 COLLINS LLC
C/O FUNARO AND CO

Mailing Address
1111 BRICKELL AVE #2650
MIAMI, FL 33131

Primary Zone
6501 COMMERCIAL - MIXED USE ENTERTAINMENT

Primary Land Use
1111 STORE : RETAIL OUTLET

Beds / Baths / Half	5 / 2 / 1
Floors	1
Living Units	1
Actual Area	
Living Area	
Adjusted Area	4,301 Sq.Ft
Lot Size	5,944 Sq.Ft
Year Built	1925



PROPERTY INFORMATION

Folio: 02-4203-004-0790

Sub-Division:
OCEAN BEACH ADDN NO 1

Property Address
604 COLLINS AVE
Miami Beach, FL 33139-6214

Owner
600 COLLINS LLC
C/O FUNARO AND CO

Mailing Address
1111 BRICKELL AVE #2650
MIAMI, FL 33131

Primary Zone
6501 COMMERCIAL - MIXED USE ENTERTAINMENT

Primary Land Use
1111 STORE : RETAIL OUTLET

Beds / Baths / Half	0 / 0 / 0
Floors	1
Living Units	0
Actual Area	
Living Area	
Adjusted Area	3,639 Sq.Ft
Lot Size	7,000 Sq.Ft
Year Built	1930

Property Records

601 Washington Avenue, Miami Beach, Florida

PROPERTY INFORMATION

Folio: 02-4203-004-0780

Sub-Division:
OCEAN BEACH ADDN NO 1

Property Address
614 COLLINS AVE
Miami Beach, FL 33139-6214

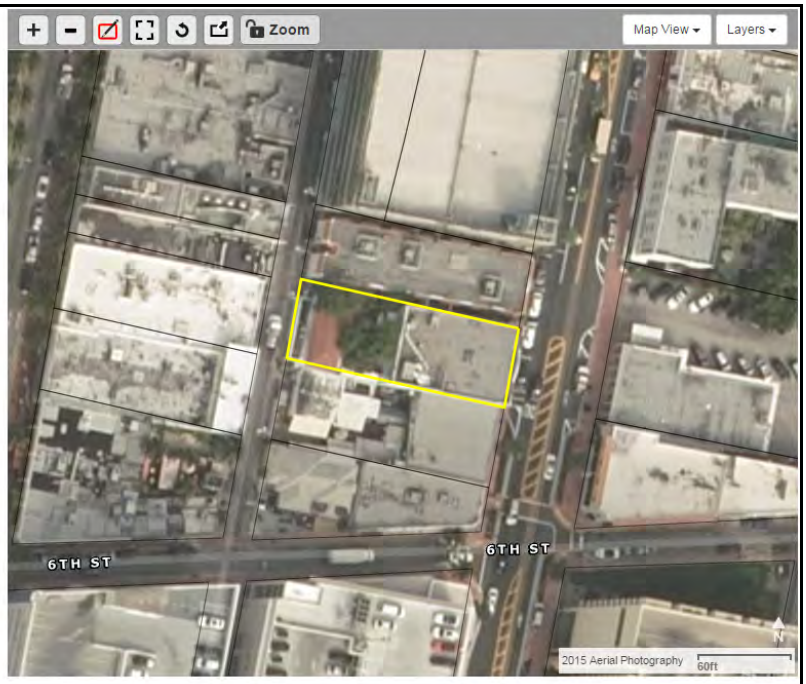
Owner
616 COLLINS ASSOCIATES LLC
JOSEPH KLEIN

Mailing Address
150 E 58 ST 39TH FL
NEW YORK, NY 10155

Primary Zone
6501 COMMERCIAL - MIXED USE ENTERTAINMENT

Primary Land Use
1229 MIXED USE-STORE/RESIDENTIAL : MIXED USE - COMMERCIAL

Beds / Baths / Half	0 / 0 / 0
Floors	2
Living Units	0
Actual Area	
Living Area	
Adjusted Area	9,476 Sq.Ft
Lot Size	7,000 Sq.Ft
Year Built	1926



PROPERTY INFORMATION

Folio: 02-4203-004-0770

Sub-Division:
OCEAN BEACH ADDN NO 1

Property Address
624 COLLINS AVE
Miami Beach, FL 33139-6214

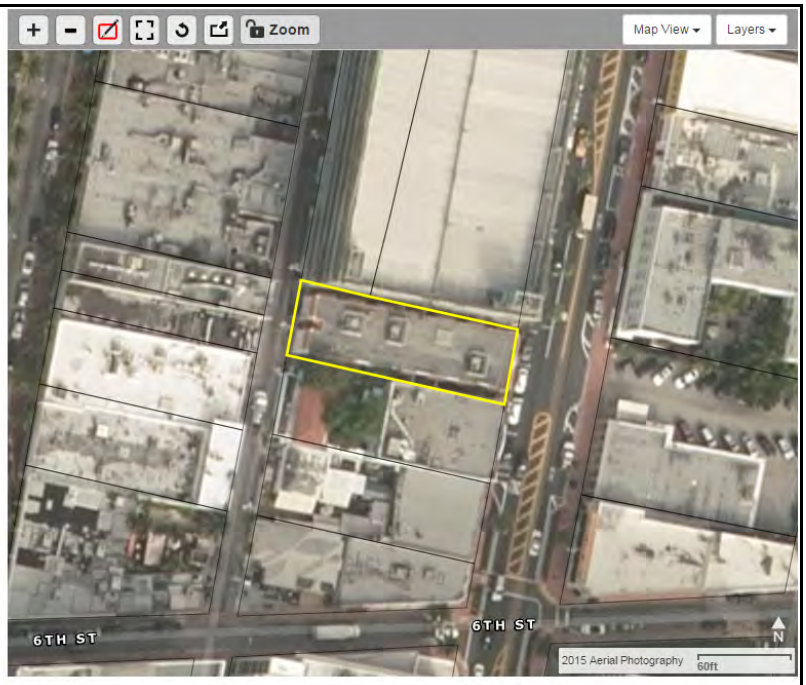
Owner
ACH COLLINS LLC
COLLINS PROPERTIES LLC
624 COLLINS ASSOCIATE II LLC

Mailing Address
PO BOX 150262
NASHVILLE, TN 37215

Primary Zone
6501 COMMERCIAL - MIXED USE ENTERTAINMENT

Primary Land Use
1111 STORE : RETAIL OUTLET

Beds / Baths / Half	0 / 0 / 0
Floors	2
Living Units	0
Actual Area	
Living Area	
Adjusted Area	8,445 Sq.Ft
Lot Size	7,000 Sq.Ft
Year Built	1922



Property Records

601 Washington Avenue, Miami Beach, Florida

PROPERTY INFORMATION

Folio: 02-4203-004-0730

Sub-Division:
OCEAN BEACH ADDN NO 1

Property Address
634 COLLINS AVE
Miami Beach, FL 33139-6281

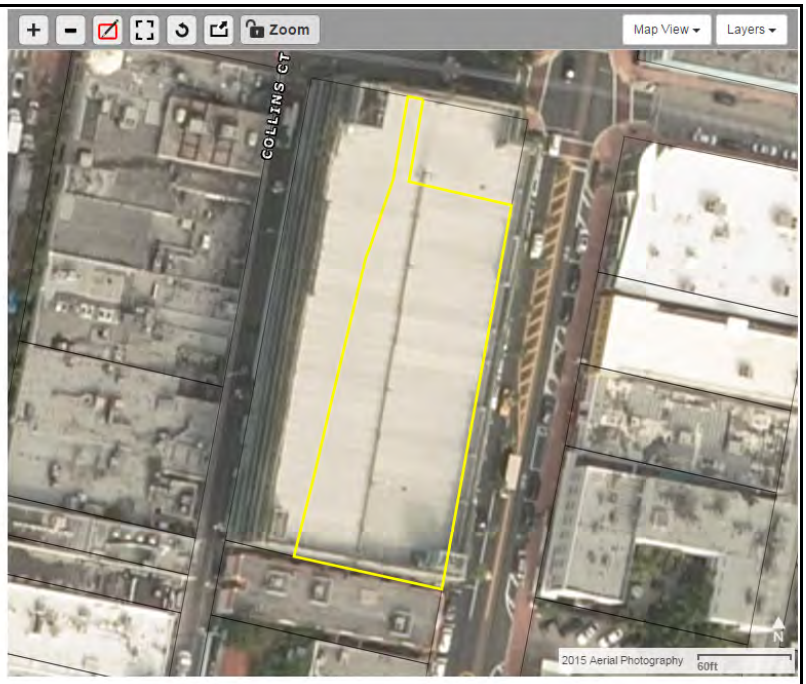
Owner
THE BALLET VALET PARKING CO LTD

Mailing Address
804 OCEAN DRIVE
MIAMI BEACH, FL 33139

Primary Zone
6501 COMMERCIAL - MIXED USE ENTERTAINMENT

Primary Land Use
1111 STORE : RETAIL OUTLET

Beds / Baths / Half	0 / 0 / 0
Floors	1
Living Units	0
Actual Area	
Living Area	
Adjusted Area	19,674 Sq.Ft
Lot Size	23,537 Sq.Ft
Year Built	1996



PROPERTY INFORMATION

Folio: 02-4203-004-0630

Sub-Division:
OCEAN BEACH ADDN NO 1

Property Address
700 COLLINS AVE
Miami Beach, FL 33139-6216

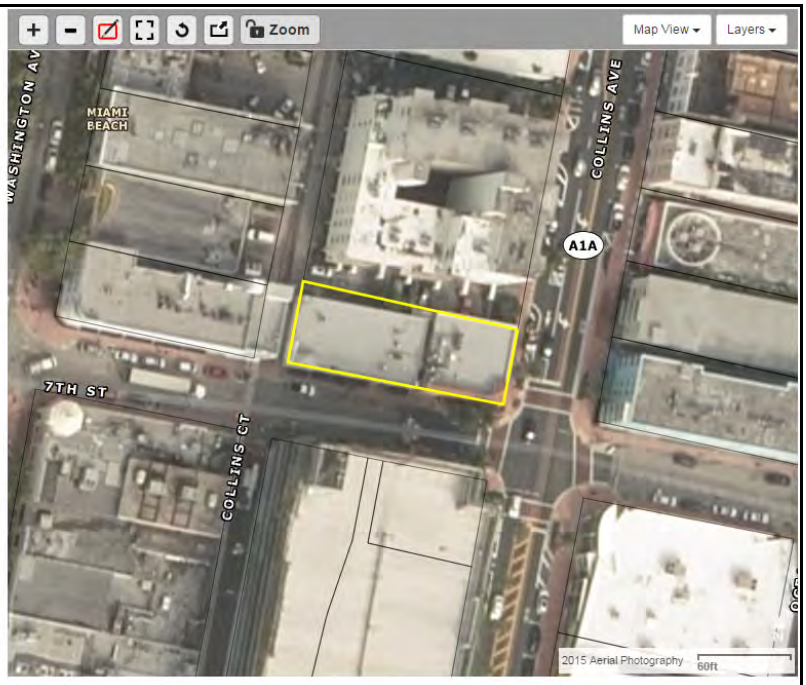
Owner
ERNEST BLUM
LOIS BLUM

Mailing Address
10101 SW 142 ST
MIAMI, FL 33176

Primary Zone
6501 COMMERCIAL - MIXED USE ENTERTAINMENT

Primary Land Use
1111 STORE : RETAIL OUTLET

Beds / Baths / Half	0 / 0 / 0
Floors	1
Living Units	0
Actual Area	
Living Area	
Adjusted Area	6,020 Sq.Ft
Lot Size	7,000 Sq.Ft
Year Built	1925



Property Records

601 Washington Avenue, Miami Beach, Florida

PROPERTY INFORMATION

Folio: 02-4203-127-0001 **(Reference)**

Sub-Division:
COLLINS TOWERS CONDO

Property Address
720 COLLINS AVE
Miami Beach, FL 33139-0000

Owner
REFERENCE ONLY

Mailing Address

Primary Zone
4100 MULTI-FAMILY - 101+ U/A

Primary Land Use
0000 REFERENCE FOLIO

Beds / Baths / Half	0 / 0 / 0
Floors	0
Living Units	0
Actual Area	0
Living Area	0
Adjusted Area	0
Lot Size	0 Sq.Ft
Year Built	0

PROPERTY INFORMATION

Folio: 02-4203-004-0640

Sub-Division:
OCEAN BEACH ADDN NO 1

Property Address
705 WASHINGTON AVE
Miami Beach, FL 33139-6209

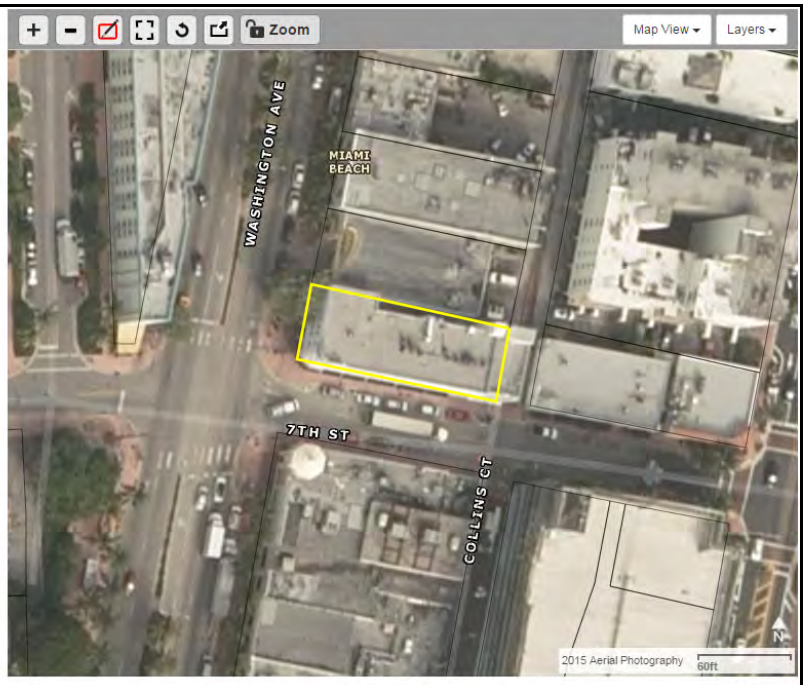
Owner
RLG PROP LLC

Mailing Address
PO BOX 190480
MIAMI BEACH, FL 33119

Primary Zone
6400 COMMERCIAL - CENTRAL

Primary Land Use
1229 MIXED USE-STORE/RESIDENTIAL : MIXED USE - COMMERCIAL

Beds / Baths / Half	0 / 0 / 0
Floors	1
Living Units	38
Actual Area	
Living Area	
Adjusted Area	14,437 Sq.Ft
Lot Size	6,500 Sq.Ft
Year Built	1941



Property Records

601 Washington Avenue, Miami Beach, Florida

PROPERTY INFORMATION

Folio: 02-4203-004-0650

Sub-Division:
OCEAN BEACH ADDN NO 1

Property Address
709 WASHINGTON AVE
Miami Beach, FL 33139-6209

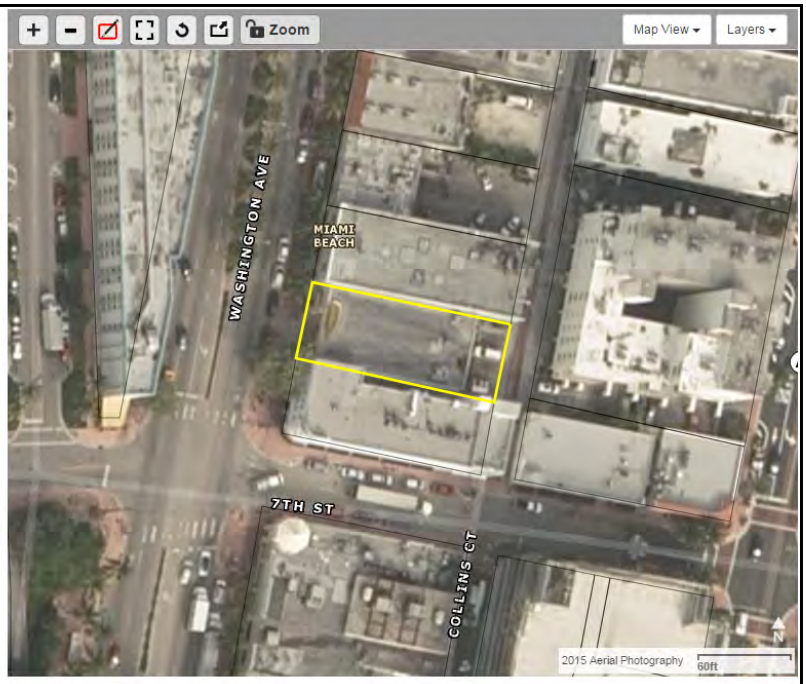
Owner
WASHINGTON SQUARED OWNER 700 LLC

Mailing Address
1691 MICHIGAN AVE STE 445
MIAMI, FL 33139

Primary Zone
6400 COMMERCIAL - CENTRAL

Primary Land Use
1111 STORE : RETAIL OUTLET

Beds / Baths / Half	0 / 0 / 0
Floors	1
Living Units	0
Actual Area	
Living Area	
Adjusted Area	4,684 Sq.Ft
Lot Size	6,500 Sq.Ft
Year Built	2000



PROPERTY INFORMATION

Folio: 02-4203-171-0001 **(Reference)**

Sub-Division:
HAMPTON ON WASHINGTON AVE CONDO

Property Address

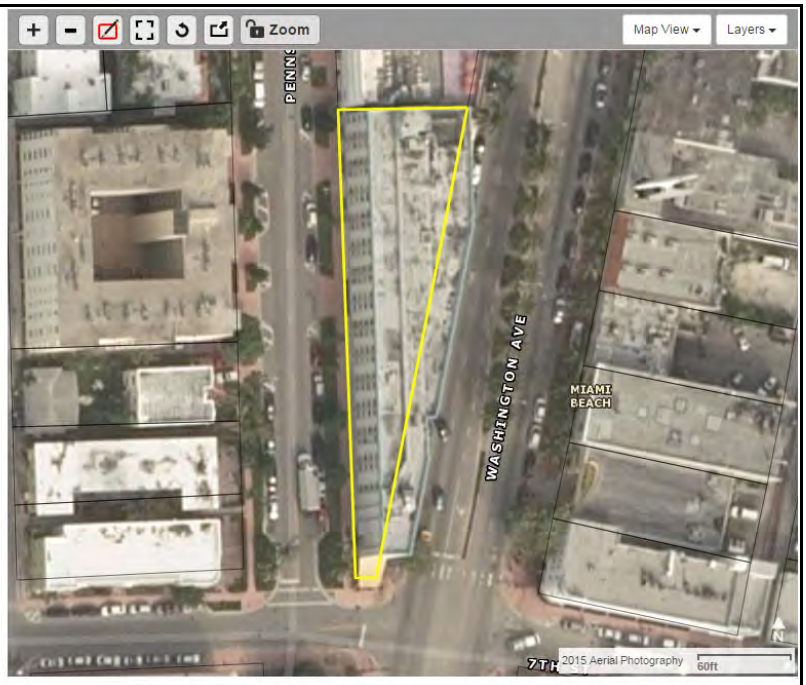
Owner
REFERENCE ONLY

Mailing Address

Primary Zone
6400 COMMERCIAL - CENTRAL

Primary Land Use
0000 REFERENCE FOLIO

Beds / Baths / Half	0 / 0 / 0
Floors	0
Living Units	0
Actual Area	0
Living Area	0
Adjusted Area	0
Lot Size	0 Sq.Ft
Year Built	0



Property Records

601 Washington Avenue, Miami Beach, Florida

PROPERTY INFORMATION

Folio: 02-4203-009-1600

Sub-Division:
OCEAN BEACH ADDN NO 3 PB 2-81

Property Address
603 7 ST
Miami Beach, FL 33139-8608

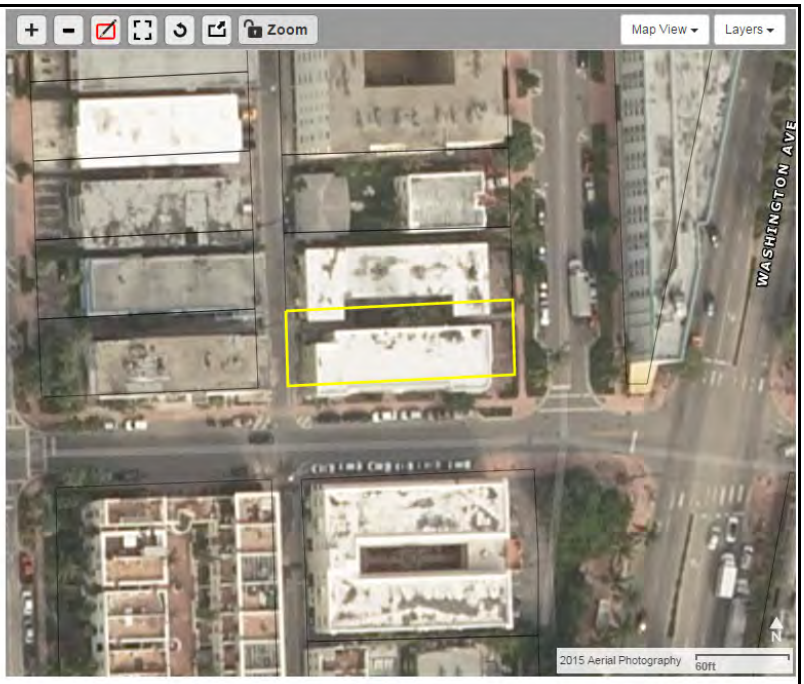
Owner
MOONLIT LLC
C/O KEYSTONE PROPERTY MGMT

Mailing Address
765 W 41 ST
MIAMI BEACH, FL 33140

Primary Zone
3900 MULTI-FAMILY - 38-62 U/A

Primary Land Use
0303 MULTIFAMILY 10 UNITS PLUS : MULTIFAMILY 3 OR MORE UNITS

Beds / Baths / Half	12 / 12 / 0
Floors	2
Living Units	12
Actual Area	
Living Area	
Adjusted Area	7,280 Sq.Ft
Lot Size	7,000 Sq.Ft
Year Built	1948



PROPERTY INFORMATION

Folio: 02-4203-009-1590

Sub-Division:
OCEAN BEACH ADDN NO 3 PB 2-81

Property Address
708 PENNSYLVANIA AVE
Miami Beach, FL 33139-6194

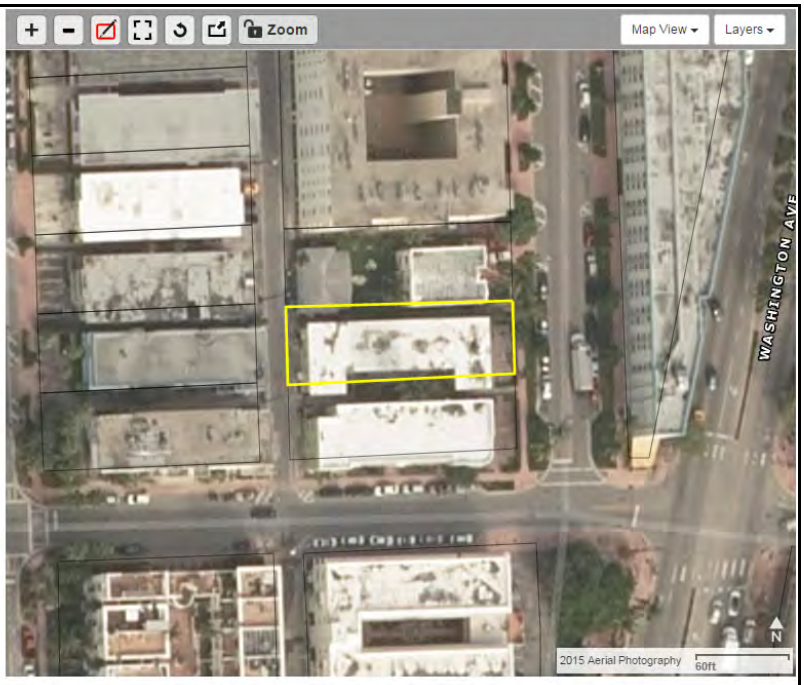
Owner
MOONLIT LLC
C/O KEYSTONE PROPERTY MGMT

Mailing Address
765 W 41 ST
MIAMI BEACH, FL 33140

Primary Zone
3900 MULTI-FAMILY - 38-62 U/A

Primary Land Use
0303 MULTIFAMILY 10 UNITS PLUS : MULTIFAMILY 3 OR MORE UNITS

Beds / Baths / Half	12 / 12 / 0
Floors	2
Living Units	12
Actual Area	
Living Area	
Adjusted Area	5,861 Sq.Ft
Lot Size	7,000 Sq.Ft
Year Built	1948



The Audio Bug, Inc.
3800 Hillcrest Drive, # 102 • Hollywood, FL 33021-7937
Phone: 954-983-2788 • Fax: 954-983-2789
E-mail: audiobug1@aol.com

NOISE LEVEL ANALYSIS TERMS

Sound Pressure Level (SPL) = The RMS sound pressure expressed in dB re 20 microPa, the lowest threshold of hearing for 1 kHz for a healthy auditory system. [As points of reference, 0 dB-SPL equals the threshold of hearing, while 140 dB-SPL equals irreparable hearing damage.] See: **inverse square law** below. 1 Pascal = 94 dB SPL. Average face-to-face conversation equals approximately 65 dB SPL.

Decibel (dB) = means of expressing power ratios, i.e. the difference between two sound levels, or an absolute sound level expressed in Sound Pressure Level (SPL) referenced to a standard pressure, i.e. 94 dB SPL = 1 Pascal.

dBA = "A" weighted sound pressure level. Please refer to the attached discussion of weighting filters and their applications.

SLM = Sound Level Meter. Device used to measure sound pressure levels.

$\mathbf{L_{min}}$ = Lowest, or softest, Sound Pressure Level measured during the test period.

$\mathbf{L_{max}}$ = Highest, or loudest, Sound Pressure Level measured during the test period.

$\mathbf{L_{eq}}$ = Equivalent continuous sound level. The steady level which would produce the same sound energy over the test period as the specified time-varying sound. This figure is useful for studying long-term trends in environmental noise. A single L_{eq} number is often used to define an entire measurement period.

$\mathbf{L_{10}}$ = Sound level exceeded 10% of the measurement period. Highest of the Ln figures.

$\mathbf{L_{50}}$ = Sound level exceeded 50% of the measurement period. Median of the Ln figures.

$\mathbf{L_{90}}$ = Sound level exceeded 90% of the measurement period. Lowest of the Ln figures. This figure is most commonly used in estimating true ambient noise level.

$\mathbf{L_{mean}}$ = Mathematically averaged Sound Pressure Level.

NC = Noise Criteria, a standardized method of characterizing noise loudness. Extensively used in the analysis of noise and vibration.

Sone = a subjective unit of loudness for an average listener equal to the loudness of a 1 kHz. sound that has an intensity 40 decibels above the listener's own threshold of hearing.

Phon = the unit of loudness on a scale beginning at zero for the faintest audible sound (0.00002 Pascals) and corresponding to the decibel scale of sound intensity with the number of phons of a given sound being equal to the decibels of a pure 1 kHz tone judged by the average listener to be equal in loudness to the given sound.

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Inverse Square Law = inverse square law Sound Pressure Level. Sound propagates in all directions to form a spherical field, thus sound energy is inversely proportional to the square of the distance, i.e., doubling the distance quarters the sound energy (the inverse square law), so SPL is attenuated 6 dB for each doubling of distance from the source.

Noise Reduction Coefficient (NRC) = The average of the individual sound absorption coefficients at 250, 500, 1000 and 2000 Hz, to the nearest .05.

Impact Insulation Class (IIC) = Single-number rating that indicates the amount of impact noise isolation provided by a floor/ceiling assembly. The higher the number, the better the floor/ceiling assembly.

Sound Transmission Class (STC) = A single-number rating that indicates the sound transmission loss of a partition or ceiling system between adjacent closed rooms. STC Ratings are:

25 Normal speech can be understood quite clearly
30 Loud speech can be understood fairly well
35 Loud speech is audible but not intelligible
42 Loud speech is audible as a murmur
45 Must strain to hear loud speech
48 Some loud speech is barely audible
50 Loud speech is not audible

Definitions

1) **sonic**: utilizing, produced by, or relating to sound waves; broadly: of or involving sound: having a frequency within the audibility range of the human ear: of, relating to, or being the speed of sound in air or about 761 miles per hour (1224 kilometers per hour) at sea level at 59°F (15°C)
2) **subsonic**: of, relating to, or being a speed less than that of sound in air
3) **supersonic**: of, being, or relating to speeds from one to five times the speed of sound in air
4) **hypersonic**: of or relating to speed five or more times that of sound in air
5) **audio**: of or relating to acoustic, mechanical, or electrical frequencies corresponding to normally audible sound waves which are of frequencies approximately from 20 to 20,000 hertz
6) **infrasonic**: having or relating to a frequency below the audibility range of the human ear (< 20 Hz)
7) **ultrasonic**: having a frequency above the human ear's audibility limit of about 20,000 hertz
8) **audible**: heard or capable of being heard
9) **intelligible**: capable of being understood or comprehended
10) **aural**: heard or perceived with the ear

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11) **auditory**: of, relating to, or experienced through the sense of hearing

12) **acoustic**: of or relating to the sense or organs of hearing, to sound, or to the science of sounds

13) **vibration**: a periodic motion of the particles of an elastic body or medium in alternately opposite directions from the position of equilibrium when that equilibrium has been disturbed (as when a stretched cord produces musical tones or particles of air transmit sounds to the ear)

14) **noise**:
- **1** loud, confused, or senseless shouting or outcry
- **2** **a:** SOUND; *esp.* **:** one that lacks agreeable musical quality or is noticeably unpleasant
  - **b:** any sound that is undesired or interferes with one's hearing of something
  - **c:** an unwanted signal or a disturbance (as static or a variation of voltage) in an electronic device or instrument (as radio or television); *broadly* **:** a disturbance interfering with the operation of a usu. mechanical device or system
  - **d:** electromagnetic radiation (as light or radio waves) that is composed of several frequencies and that involves random changes in frequency or amplitude
  - **e:** irrelevant or meaningless data or output occurring along with desired information

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Sound Level Meter Weighting Networks

The following brief description of how the various weighting networks are used is intended to provide the reader an understanding of the purposes for and applications of standard weighting networks found in professional sound level meters. The information is an extract from "The New Audio Cyclopedia, Handbook for Sound Engineers", edited by Glen Ballou. It can be found on page 21 of that reference publication.

1.16 Weighting Networks

Sound level meters come with one or more weighting networks built in. The question confronting the user is, "Which one should I use?" The frequency responses of the three standard networks (A, B and C) are shown in figure 1-16. In the simplest terms, these different curves are designed to give readings of sound pressure level that will correspond, at least roughly, with human response to the sound. As we shall see in Chapter 2 "Psycho Acoustics," the Fletcher-Munson curves show that the human ear is less sensitive at lower frequencies than at a frequency of 1 kHz. This effect is greater for lower-level sounds than for louder sounds. Therefore, it makes sense to reduce the sensitivity of the sound level meter (chiefly in the lower frequencies) so that its readings follow the characteristics of the ear more closely.

The A-weighted curve of Fig. 1-16 is based on the 40 phon Fletcher-Munson equal-loudness contour and is to be preferred for measuring lower-level sounds such as background noise. The B-weighted curve is based on the 70-phon equal-loudness contour and is suitable for measuring sounds of intermediate level. Measurements taken with the A and B weighting are called *weighted sound levels*. The C weighting is essentially flat and is used for very loud sounds. It is also used when *sound pressure levels* are to be measured and generally when the sound level meter feeds a signal to other instruments for analysis.

Table 1-4. Use of Weighting Networks

Sound Level Range, in dB	Recommended Weighting Network
20 - 55	A
55 - 85	B
85 - 140	C

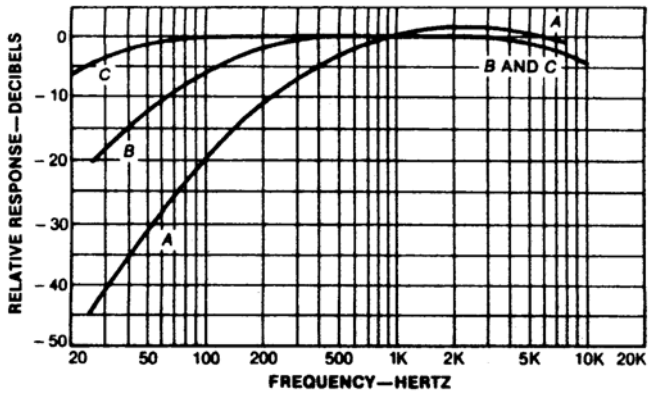
Table 1-4 gives general suggestions as to which weighting to use for different sound level ranges.

When comparing different sound levels, such as in Table 1-5, it may be expedient to use the A-weighting for the entire range rather than to shift weighting in the midst of a series of measurements to be directly compared.

Table 1-5. Typical A-Weighted Sound Levels

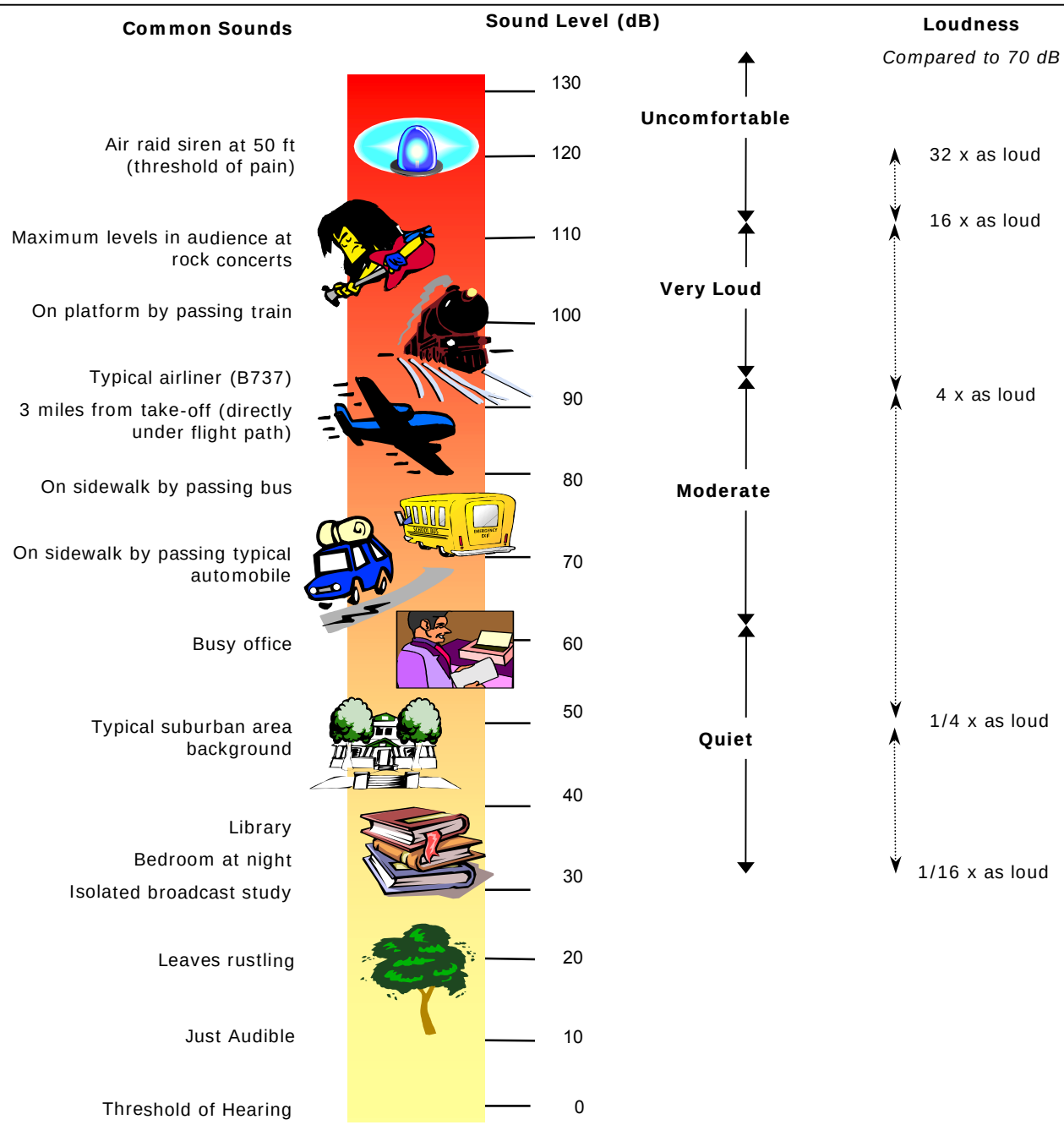
Sound Source	Sound Pressure Level, Decibels, (A-Weighted)
Jet airplane taking off (200 ft.)	120
Subway train (20 ft.)	90
Freight Train (100 ft.)	70
Speech (1 ft.)	70
Shopping Mall	60
Average residence with TV	50
Quiet residential area at night	40
Soft whisper	30
Recording studio background noise	30
Threshold of hearing	20

Figure 1.16 - Weighting Networks



Frequency Response Characteristics in the American National Standard Specification for Sound Level Meters, ANSI-31.4-1971.

Typical Sound Levels



Source: Handbook of Environmental Acoustics, James P. Cowan, 1994

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April 8, 2016

Thomas R. Mooney, Director
City of Miami Beach Planning Department
1700 Convention Center Drive, 2nd Floor
Miami Beach, FL 33139
Phone: (305) 673-7550, Fax: (786) 394-4799

Reference: 601-685 Washington Avenue (PB 2320) Sound Study Peer Review

Dear Mr. Mooney,

I would like to take this opportunity to respond to comments submitted by Arpeggio Acoustic Consulting, LLC in their peer review letter dated March 22, 2016. As always, Mr. Ehnert has provided a thoughtful review of our Sound Study. His description of the project is consistent with information provided by the applicant and our observations. His comments focus attention on several concerns which I will address in the order presented by him. Mr. Ehnert's comments appear in italics, indented to distinguish them from my comments.

> *3.1 Site Sound Survey*
>
> *While the two sets of measurements-one of 5-minute duration at the southeast corner of Washington Avenue and 7th Street and one of 30-minute duration along Washington Avenue-provide some information about the soundscape in the vicinity, they are not sufficient to draw conclusions related to impact upon the Arcadia House Condominium.*
>
> *First, while A-weighted decibels are a ubiquitous metric used to describe sound levels both within buildings and in the environment, where music, particularly that produced by live musicians and DJs, is a source, C-weighted levels (dBC) should be considered as a complement to A-weighted levels. This is due to the fact that C-weighted levels more accurately characterize sound with significant low-frequency content. Should there be any nuisance issues in this case, it is likely that they would be from low-frequency sound (e.g., thumping bass).*

While A-weighted sound level data are the most commonly used metric for characterizing noise, our report also presents C-weighted data in both the sound level data (pages 5 and 6) and computer modeling of predicted sound distribution (pages 9 and 10). This allows an apples-to-apples comparison of noise levels generated by traffic versus music from the rooftop venue. Traffic and other ambient noise sources contain significant low frequency energy as illustrated in the data provided. C-weighted noise levels measured during the site study were consistently 10 dB higher than the A-weighted data. For example, during the shorter testing period, LCeq registered 78.5 dBC while LAeq registered 68.7 dBA (see Equivalent Levels graphic on page 6). The Octave-Band Levels graphic on the same page indicates an accumulated sound level of 69.3 dB in the 125 Hz octave, where much of the low frequency energy in music resides.

As stated on page 13, paragraph B, in the Rooftop Sound System Specification:

> "B. Size of outdoor speakers shall be limited to small woofers (not to exceed 8" nominal) incapable of producing appreciable levels of low frequency energy, as lower frequencies (longer wavelengths) can travel greater distances than higher frequencies (shorter wavelengths). The lowest frequencies, which are essential to the reproduction of musical styles such as hip-hop and rap, are to be significantly attenuated by electronic means."

It should be noted that restrictions on speaker size and type (see specification) will prevent significant low frequency energy (thumping bass) from being generated by the system. This will avoid exposure to this type of energy at any of the surrounding properties. The loudspeakers will be mounted below the top of the rooftop parapet and oriented so as to direct most of their output towards the center of the pool deck. This will further mitigate the amount of energy which will escape the rooftop.

> *Second, while knowledge of ambient sound levels between 11:25 pm and approximately midnight are very useful, we do not know what closing time would be at the rooftop pool deck. The report indicates that background music will be played between 8 pm (when entertainment ends) and this unspecified closing time. If this background music is loud enough, and the ambient level is low enough, audibility may be possible.*

Hours of operation for the rooftop venue are detailed in the attached Proposed Operational Plan. It is to close at 1:00 a.m. daily, with entertainment to cease at 8:00 p.m. It is not anticipated that entertainment will be presented on a daily basis, rather more likely three to four days weekly.

As is frequently the case, uncertainties exist that must be accounted for once this venue is ready to be opened. The hypothetical sound system used in our analysis will be replaced by a system designed specifically to fit the outdoor space. Loudspeakers will be selected and positioned to best restrict sound propagation to the pool deck areas. The sound system's output will automatically be reduced to background levels at 8:00 p.m., ensuring that music will be completely inaudible on the West side of Washington Avenue.

As stated in the last paragraph of the Rooftop Sound System Specification, "The system, once completely installed, shall be tested and adjusted under the supervision of Don Washburn of the Audio Bug, Inc. to ensure that all aspects of the system's performance comply with the design intent, City Ordinance and good technical practices."

This final step to system commissioning ensures that sound levels and spectral content will be contoured to ensure that residential properties along the west side of Washington Avenue will not be adversely impacted. As is common practice, members of the City's Planning Staff will be invited to inspect the finished system to confirm that all design criteria have been met.

> *Finally, and most importantly, no measurements were made at or near the façade of the Arcadia House. An L90 of 57.4 dBA was reported along Washington Avenue; however, the façade of the condominium is set back approximately 75' to 100' from Washington Avenue. It is quite likely that ambient levels that would tend to mask sound from the rooftop pool deck would be 5 to 10 decibels lower at the building façade than along Washington Avenue, assuming that traffic is the most prominent source, as the report states that it is. It is this lower sound level at or near the building façade that should form the basis of any audibility or impact assessments.*

Portions of the measurements taken along Washington Avenue did include sampling of sound levels in the parking area outside the Arcadia House. Since we were mostly interested in obtaining an overview of the areas around the residential properties, no stationary measurements were conducted. It's not likely that data obtained at static test locations would yield significantly different results than those obtained while moving around the area along Washington Avenue. This is a very busy artery with heavy traffic present well into the early mornings.

3.2 Prediction of Rooftop Pool Deck Impact on Surroundings

The computer model results provide a very informative visual representation of the propagation of sound from a hypothetical sound system comprising 20 loudspeakers distributed about the pool deck. The model assumes a program level of 82 decibels (unweighted), presumably at 10'. What is unclear is whether this system will, in fact, be the system that is installed and whether this system and its parameters will be implemented, not only for background music, but also live and DJ entertainment. If not, then one or more supplemental models would need to be developed for those scenarios.

The hypothetical system design used in modeling sound propagation should be considered a worst-case scenario. Omni-directional loudspeakers were used and no effort was made to interrupt sound from these devices via structural elements on the rooftop. As stated above, speaker size and type (see specification) will prevent significant low frequency energy (thumping bass) from being generated by the system, avoiding exposure to this type of energy at any of the surrounding properties. The loudspeakers will be mounted below the top of the rooftop parapet and oriented so as to direct most of their output towards the center of the pool deck, further mitigating the amount of energy that will escape the rooftop.

The Rooftop Sound System Specification, Paragraph E, states "Live entertainers and DJs will be prohibited from bringing portable loudspeakers and amplifiers to the venue. They will only be permitted to provide their own music sources (computers, iPads, iPods, CD players, turntable) and mixing console. Connections will be provided at locations to be selected during the sound system design process."

Additionally, while we have no reason to question the results of the modeling, the conclusions drawn from it would need to be adjusted in light of our earlier point concerning what the actual sound levels are at the condominium façade. In other words, modeling results should not be compared to an L90 of 57.4 dBA measured near Washington Avenue when assessing impact on the condominium. They should, instead, be compared to the likely lower ambient (L90) sound level at the condominium, some 75' to 100' away from Washington Avenue. In fact, the report predicts a level, from the sound system, of approximately 62 dBA at the condominium façade. This is higher than the 57.4 dBA L90 near the street. It would be even more prominent against the likely lower ambient level at the condominium.

In addition to this, the figure showing predicted sound system levels indicates levels in the low 70s (dBA) at a distance of 100', near Washington Avenue. This is significantly over the L90 of 57.4 dBA measured in this area. This is salient given the fact that the Miami Beach noise code states the following:

"The using, operating, or permitting to be played, used or operated any radio receiving set, television set, musical instrument, phonograph, or other machine or device for the producing or reproducing of sound in such manner as to disturb the peace, quiet and comfort of the neighboring inhabitants, or at any time with louder volume than is necessary for convenient hearing for the person or persons who are in the room, vehicle or chamber in which such machine or device is operated and who are voluntary listeners thereto. The operation of any such set, instrument, phonograph, machine or device between the hours of 11:00 p.m. and 7:00 a.m. in

such manner as to be plainly audible at a distance of one hundred (100) feet from the building, structure or vehicle in which it is located shall be prima facie evidence of a violation of this section."

As stated above, the most restrictive hours referred to in the ordinance are those between 11:00 p.m. and 7:00 a.m. In recognition of this criteria, the rooftop venue will restrict entertainment to between 11:00 a.m. to 8:00 p.m., after which the system will operate at background levels. Sound levels generated on the roof will be much lower, therefore music will not be audible outside the rooftop venue.

3.3 Analysis Regarding Restaurant

The report briefly mentions an interior restaurant where entertainment level music is being proposed. However, aside from this reference, no other information is given. In order to assess potential impact, one would need information such as restaurant location, enclosing construction, anticipated interior sound levels, and an estimate of sound transmission through any intervening building components.

The restaurant design is detailed on pages 6, 7 and 10 of the Proposed Operational Plan. Hours of operation are included on page 19. Hours of entertainment inside will extend from 11:00 a.m. to 1:00 a.m. Construction is a combination of concrete and storefront glazing with a single door opening onto the outdoor seating area. The restaurant space is quite small, seating 76, and may not lend itself to having an area where a stage could be provided for entertainment, even a DJ.

While we cannot provide exact details relating to anticipated sound levels inside the restaurant nor sound transmission loss from inside to the outside at this time, this portion of the system will undergo the same process of calibration and tailoring of these parameters prior to be certified as complete. This will include inspection by members of the City's Planning Staff. We do not anticipate that activities within this space will be problematic.

4 Conclusions

The sound study report prepared by The Audio Bug provides valuable information but lacks the information necessary from which one can draw a conclusion that there will be no impact upon adjacent areas, particularly the Arcadia House Condominium (but also the Collins Tower Condominium to the northeast and residential building at the northwest corner of Washington Avenue and 7th Street). In fact, data presented in the report seems to imply the opposite with respect to the Arcadia House, when considered in the context of the points contained herein, that sound from the rooftop pool deck will be audible at the condominium and will exceed ambient levels (thus, be audible) at a distance of 100' from the source. Additionally, no information is given related to proposed entertainment level music inside an interior restaurant.

In summary, we believe the sound system which will ultimately be designed and installed, along with the strict operating conditions which will be imposed on the system, will result in a soundscape that will not intrude on surrounding properties.

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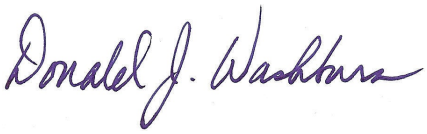
Precautions and restrictions enumerated above will greatly reduce chances that it will generate sound levels capable of impacting neighboring residential properties along the West side of Washington Avenue. These include:

1. Restricted size of the outdoor speakers will significantly limit low frequency energy.
2. Limited hours of operation for the rooftop venue, with entertainment to cease at 8:00 p.m.
3. Automatic control of sound levels based on pre-programmed settings in the digital signal processor.
4. The system will be subjected to comprehensive testing and calibration system during the commissioning process to ensure that sound levels and spectral content will be contoured to ensure that residential properties along the west side of Washington Avenue will not be adversely impacted.
5. Members of the City's Planning Staff will be invited to inspect the finished system to confirm that all design criteria have been met.
6. The use of outside equipment will be prohibited. The "house system" will permit performers to connect only their music sources (computers, iPads, iPods, CD players, turntable) and mixing console to the system. This will ensure consistent sound levels with all sources.

I welcome questions and comments from all interested parties and look forward to assisting in achieving a successful outcome for this property and its neighbors.

Respectfully submitted,



Donald J. Washburn
President

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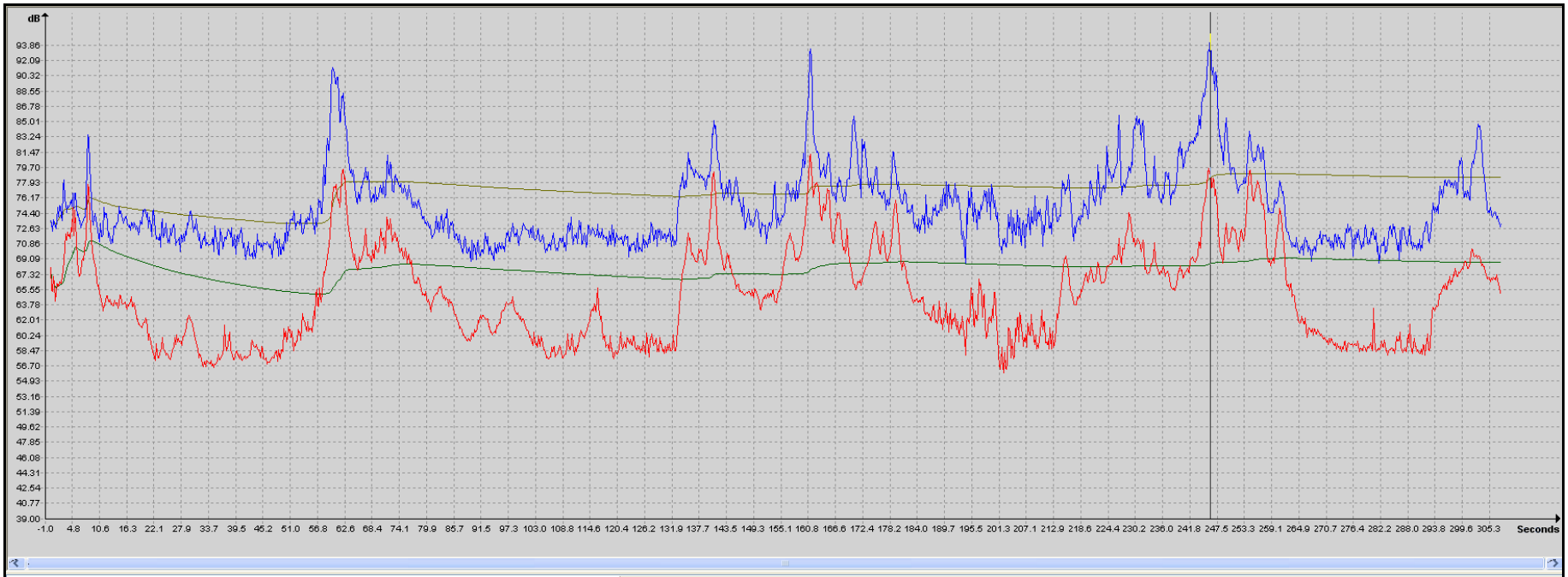
Nighttime Ambient Sound Level Measurements

601 Washington Avenue, Miami Beach, Florida



Color	Data Type	Cursor Value	Avg Selection Value	Cumulative Value
Select	A fast	79.60		
Select	A leq	68.52		68.72
Select	C fast	94.69		
Select	C leq	78.46		78.55

Measurement started at 11:25 p.m.

5-minute LAeq at intersection of 7th Street and Washington Avenue, Miami Beach, FL

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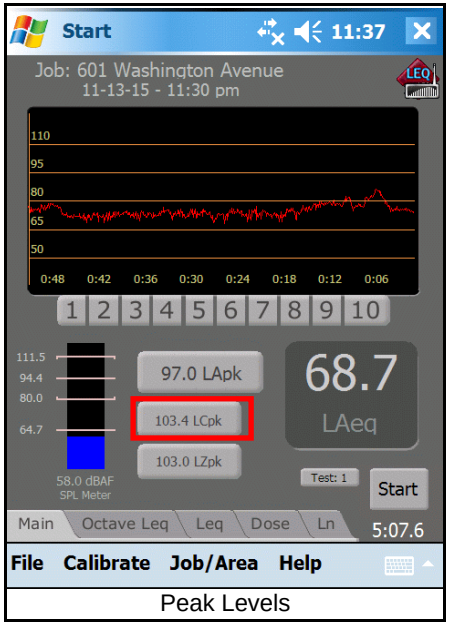
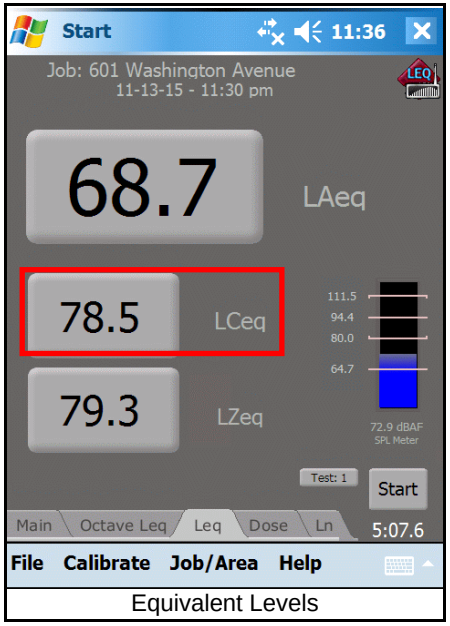
Nighttime Ambient Sound Level Measurements

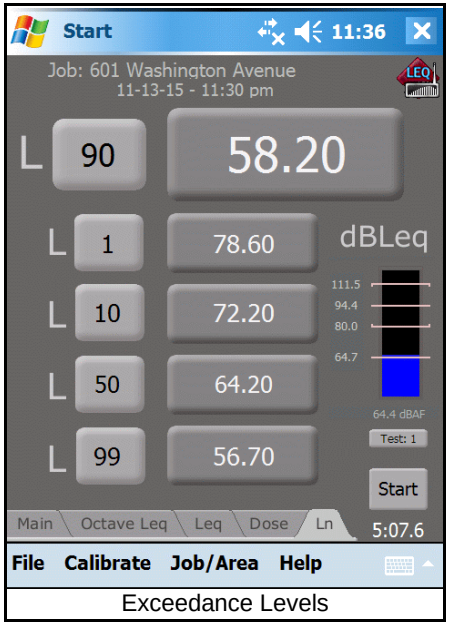
601 Washington Avenue, Miami Beach, Florida



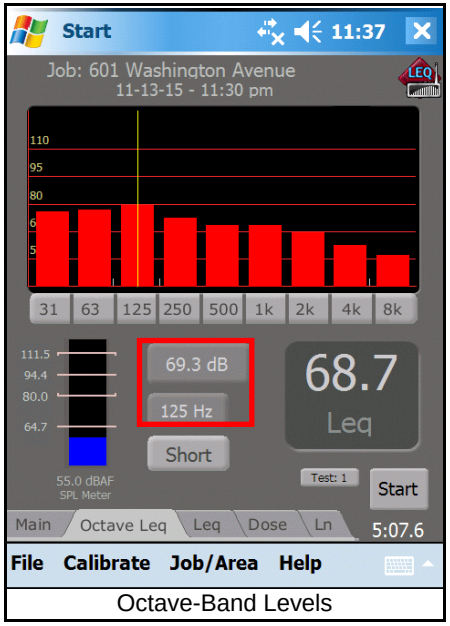
Peak Levels



Equivalent Levels



Exceedance Levels



Octave-Band Levels

Measurement started at 11:25 p.m.

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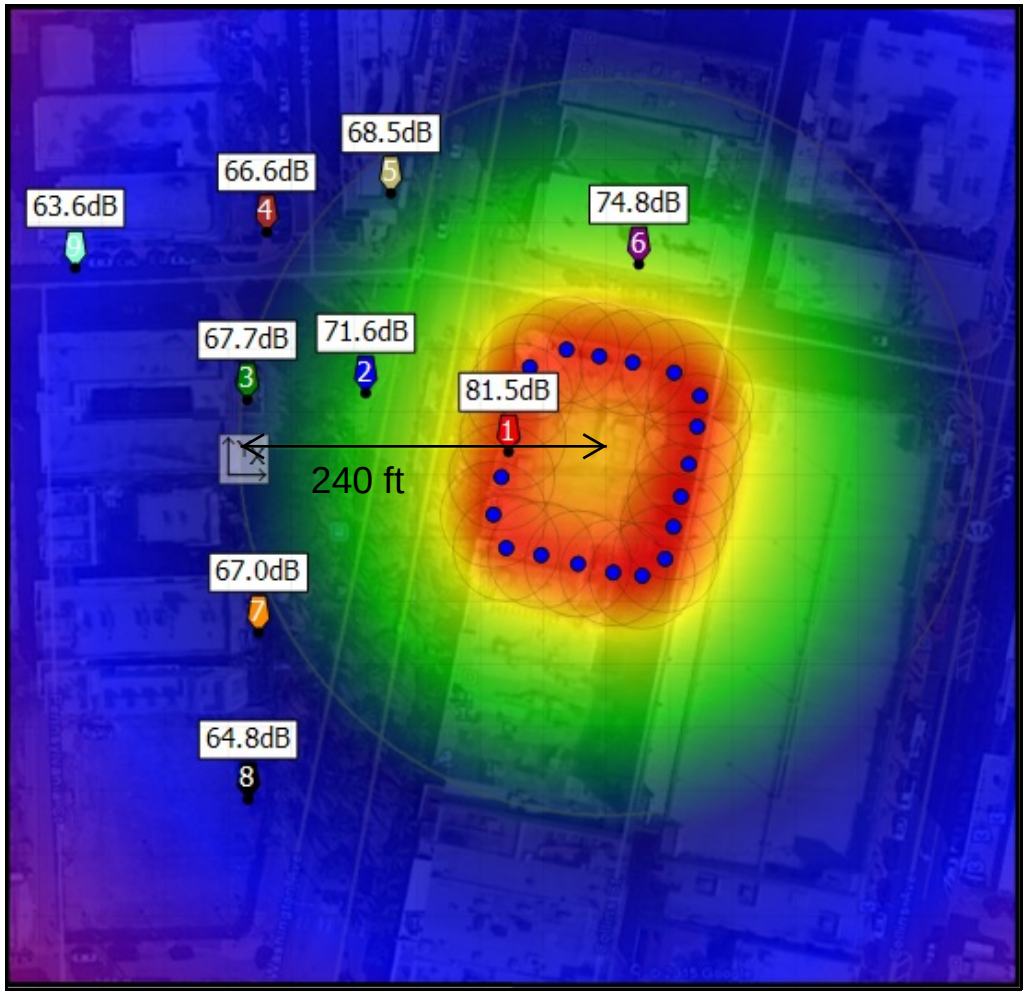
Sound Propagation Map

601 Washington Avenue, Miami Beach, Florida
(Unweighted)



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Sound Propagation Map

601 Washington Avenue, Miami Beach, Florida
(Unweighted)

601 WASHINGTON AVENUE
HOTEL DEVELOPMENT

WASHINGTON AVENUE
MIAMI BEACH, FLORIDA

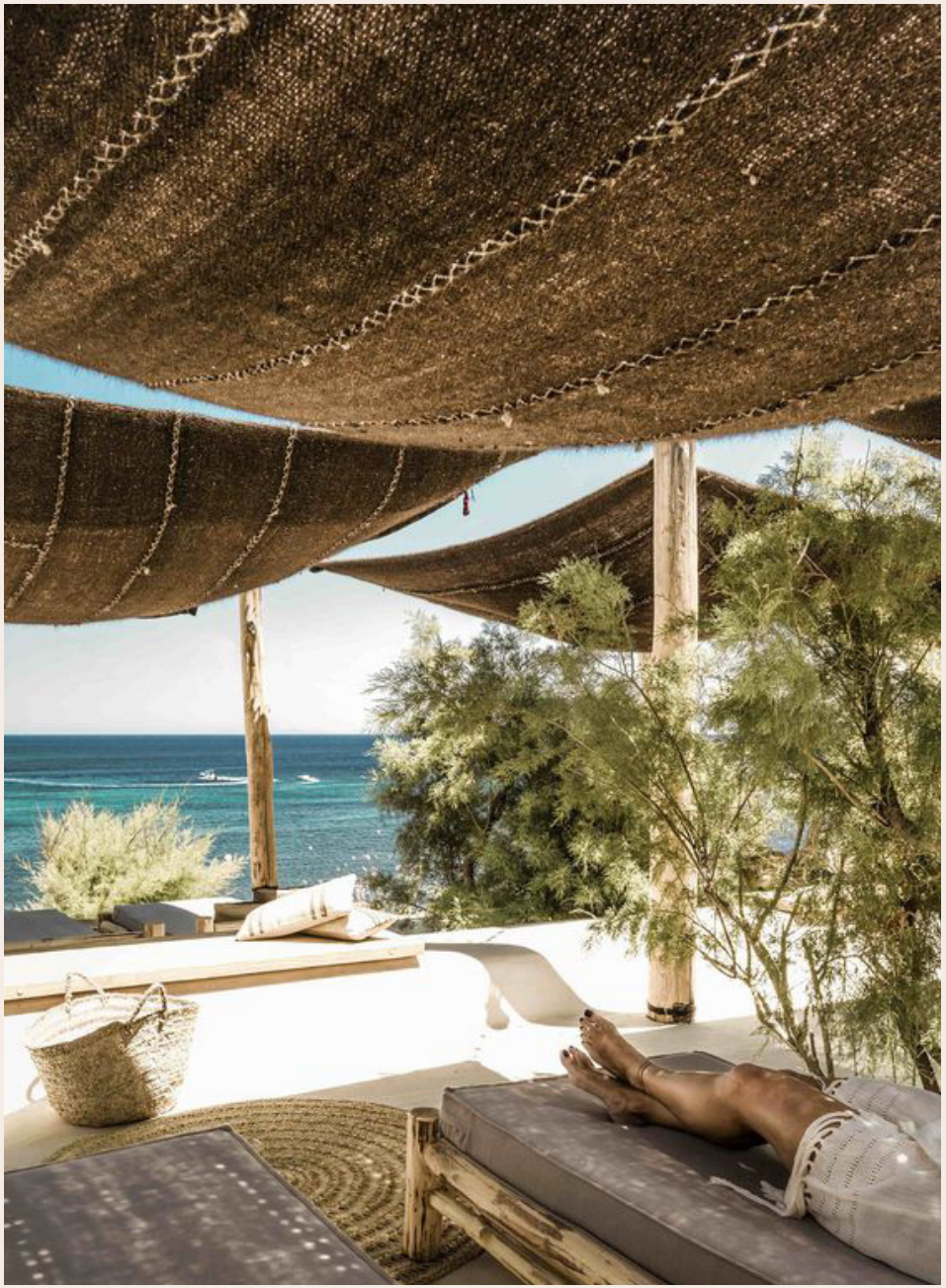
WASHINGTON SQUARED OWNER LLC
1691 MICHIGAN AVENUE, SUITE 445
MIAMI BEACH, FL 33139

TABLE OF CONTENTS

AN IDYLLIC EXPERIENCE FROM THE MOMENT YOU WALK IN.

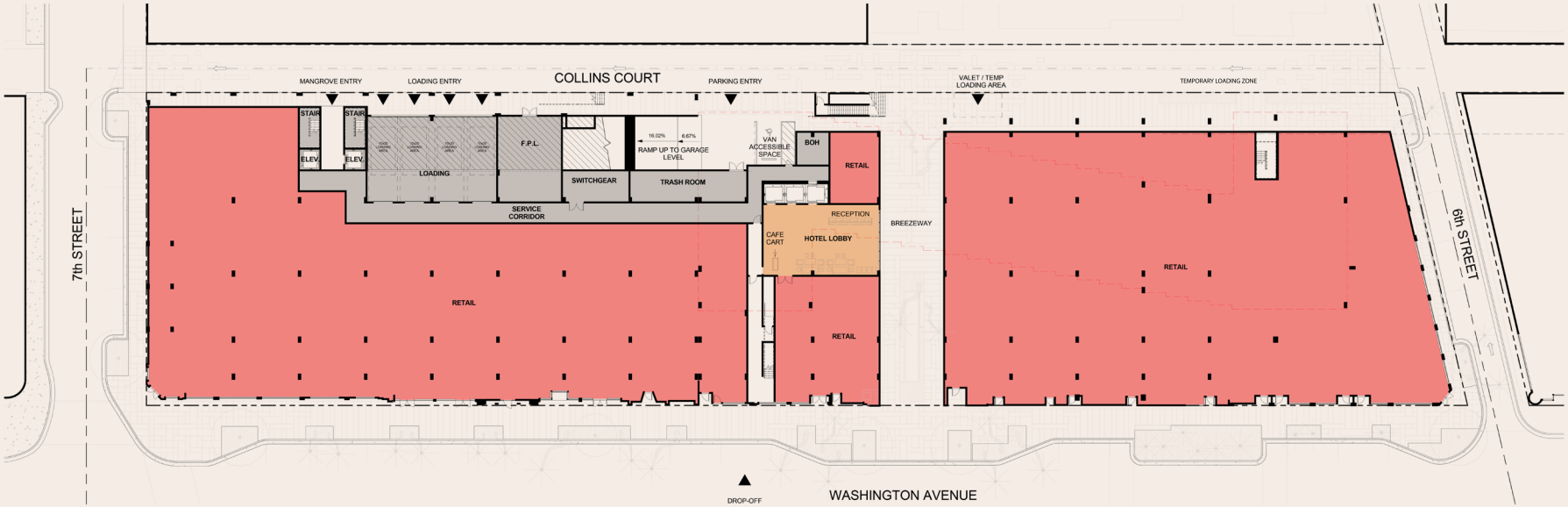
THE FOOD AND BEVERAGE COMPONENTS OF 601 WASHINGTON ARE DESIGNED TO TRANSPORT AND REJUVENATE. EFFORTLESSLY CHIC AND RELAXED IN STYLE, THE INDOOR/OUTDOOR DINING AND LOUNGE AREAS ARCHITECTURALLY EMBRACE THE PRISTINE NATURAL BEAUTY OF MIAMI BEACH. INNOVATIVE SEASONAL OFFERINGS THROUGHOUT THE DAY—FROM SMALL BITES AND COCKTAILS TO SHARED PLATES SERVED AT COMMUNAL TABLES—ENHANCE THE ARTISTIC, BOHEMIAN SENSIBILITY.

A HAVEN FOR HOTEL GUESTS, IT'S SURE TO BECOME AN INSTANT DESTINATION FOR LOCALS IN THE KNOW.

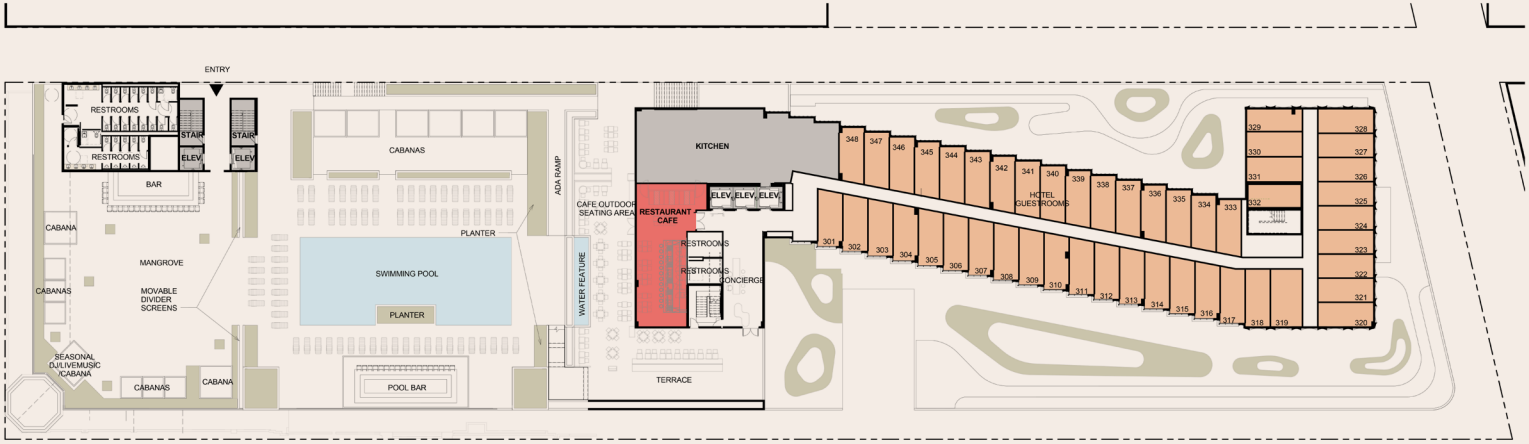


FLOOR PLANS

GROUND FLOOR



THIRD FLOOR



INDOOR RESTAURANT & OUTDOOR CAFE

& INDOOR CAFE CART

OPERATOR: WASHINGTON SQUARED OWNER, LLC

EMPLOYEES: 25 FRONT OF THE HOUSE, 10 BACK OF THE HOUSE

CONCEPT: TBD

HOURS OF OPERATION: 7AM-1AM (LIMITED SERVICE THEREAFTER)

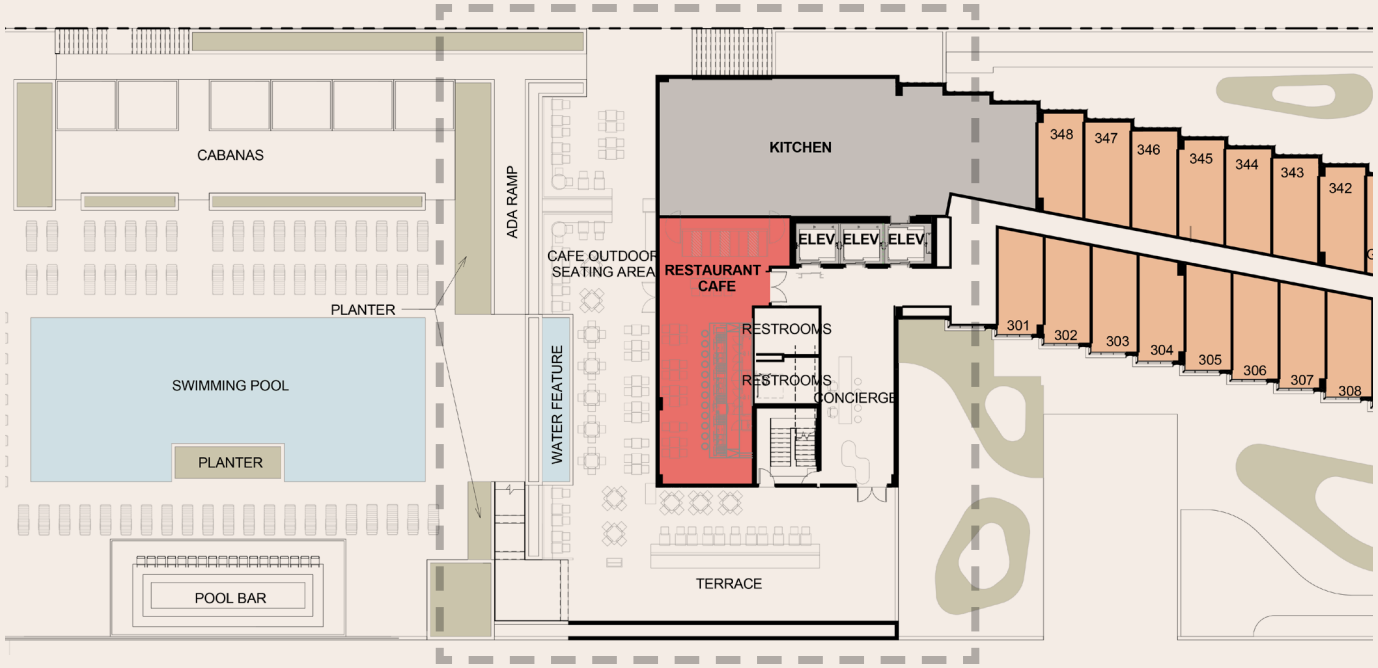
OCCUPANCY: INDOOR 76, OUTDOOR 105, TERRACE 120, CAFE CART 24

MUSIC: INDOOR (DJ/LIVE), 11AM-1AM & OUTDOOR (DJ/LIVE), 11AM-8PM

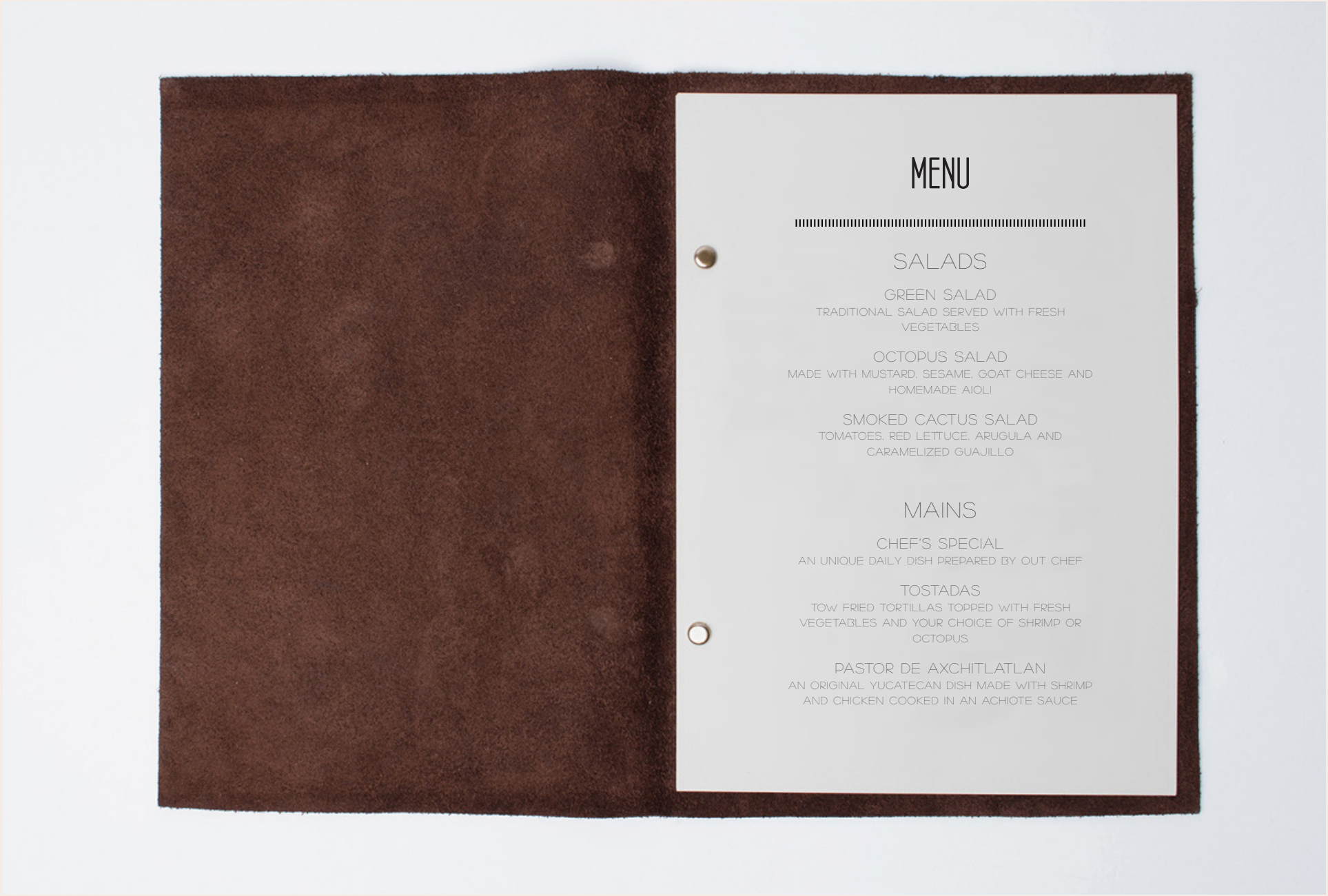
THREE MEAL RESTAURANT AND OUTDOOR CAFE SERVING BREAKFAST, LUNCH, DINNER AND LATE NIGHT BITES. ENTRY THROUGH HOTEL LOBBY OR FROM POOL DECK THROUGH TERRACE.

* POTENTIAL AFTER HOURS GRAB & GO STAND DURING LIMITED SERVICE OPERATION.

** RESTROOMS IN ADJACENT CONCIERGE AREA



INDOOR RESTAURANT & OUTDOOR CAFE


MENU
SALADS
GREEN SALAD
TRADITIONAL SALAD SERVED WITH FRESH VEGETABLES
OCTOPUS SALAD
MADE WITH MUSTARD, SESAME, GOAT CHEESE AND HOMEMADE AIOLI
SMOKED CACTUS SALAD
TOMATOES, RED LETTUCE, ARUGULA AND CARAMELIZED GUAJILLO
MAINS
CHEF'S SPECIAL
AN UNIQUE DAILY DISH PREPARED BY OUT CHEF
TOSTADAS
TOW FRIED TORTILLAS TOPPED WITH FRESH VEGETABLES AND YOUR CHOICE OF SHRIMP OR OCTOPUS
PASTOR DE AXCHITLATLAN
AN ORIGINAL YUCATECAN DISH MADE WITH SHRIMP AND CHICKEN COOKED IN AN ACHIOTE SAUCE

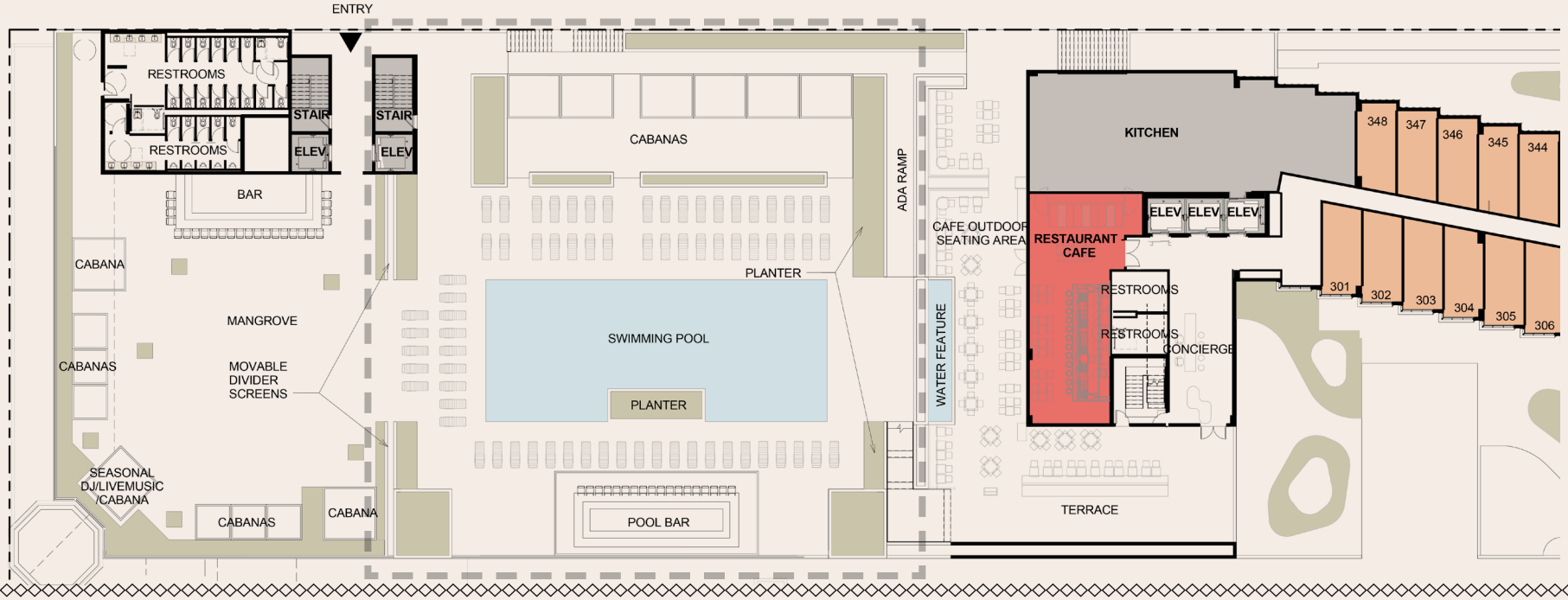
POOL VENUE

OPERATOR: WASHINGTON SQUARED OWNER, LLC

EMPLOYEES: 10 POOL, 10 BAR.

CONCEPT: TBD
HOURS OF OPERATION: 7AM-1AM
HOURS OF ENTERTAINMENT: 11AM-8PM
OCCUPANCY: 520
MUSIC: DJ & LIVE

DESCRIPTION: THE HOTEL POOL WILL BE OPEN TO THE HOTEL GUESTS AND THE PUBLIC WITH ACCESS THROUGH THE BREEZEWAY COMING FROM WASHINGTON AVENUE OR COLLINS COURT THROUGH HOTEL RECEPTION. UP ELEVATORS TO 3RD FLOOR HOTEL LOBBY. QUEUING ON WEST END OF TERRACE, PAST POOL CHECK IN AND UP STEPS TO POOL DECK. ACCESS TO RESTROOMS AT NORTH EAST CORNER OF PROPERTY.



POOL VENUE INSPIRATION

MANGROVE

OPERATOR: WASHINGTON SQUARED OWNER, LLC

EMPLOYEES: 25

CONCEPT: TBD

DAYS OF OPERATION: SEASONAL, WEEKEND.

HOURS OF OPERATION: 11AM-1AM

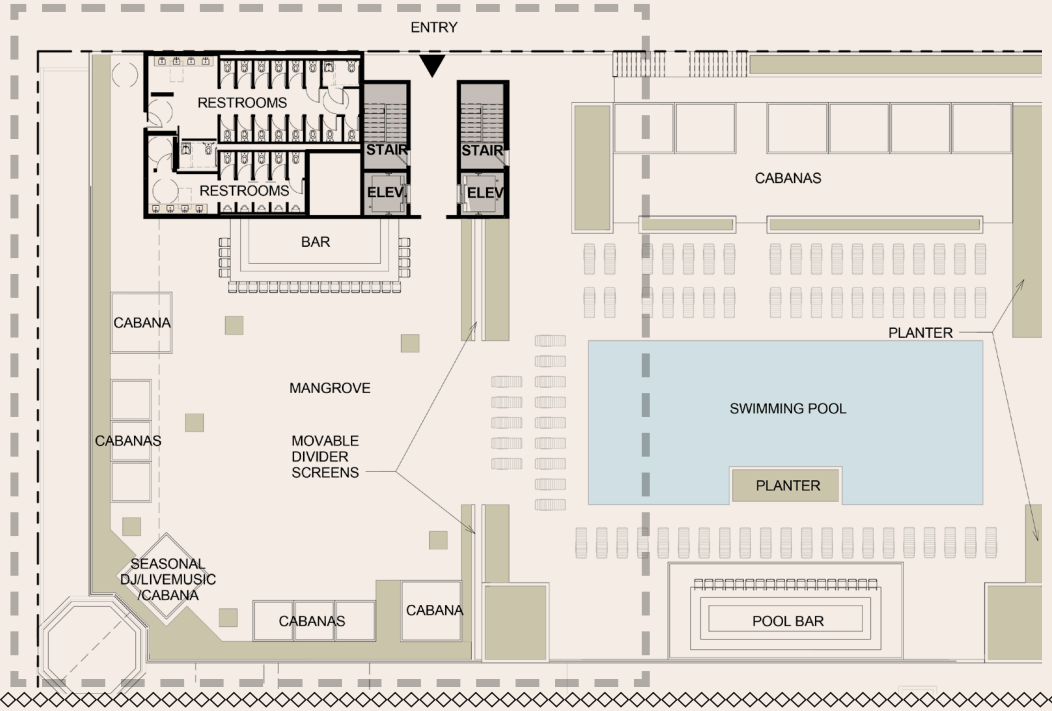
HOURS OF ENTERTAINMENT: 11AM-8PM (AMBIENT MUSIC AFTER 8PM)

OCCUPANCY: 336

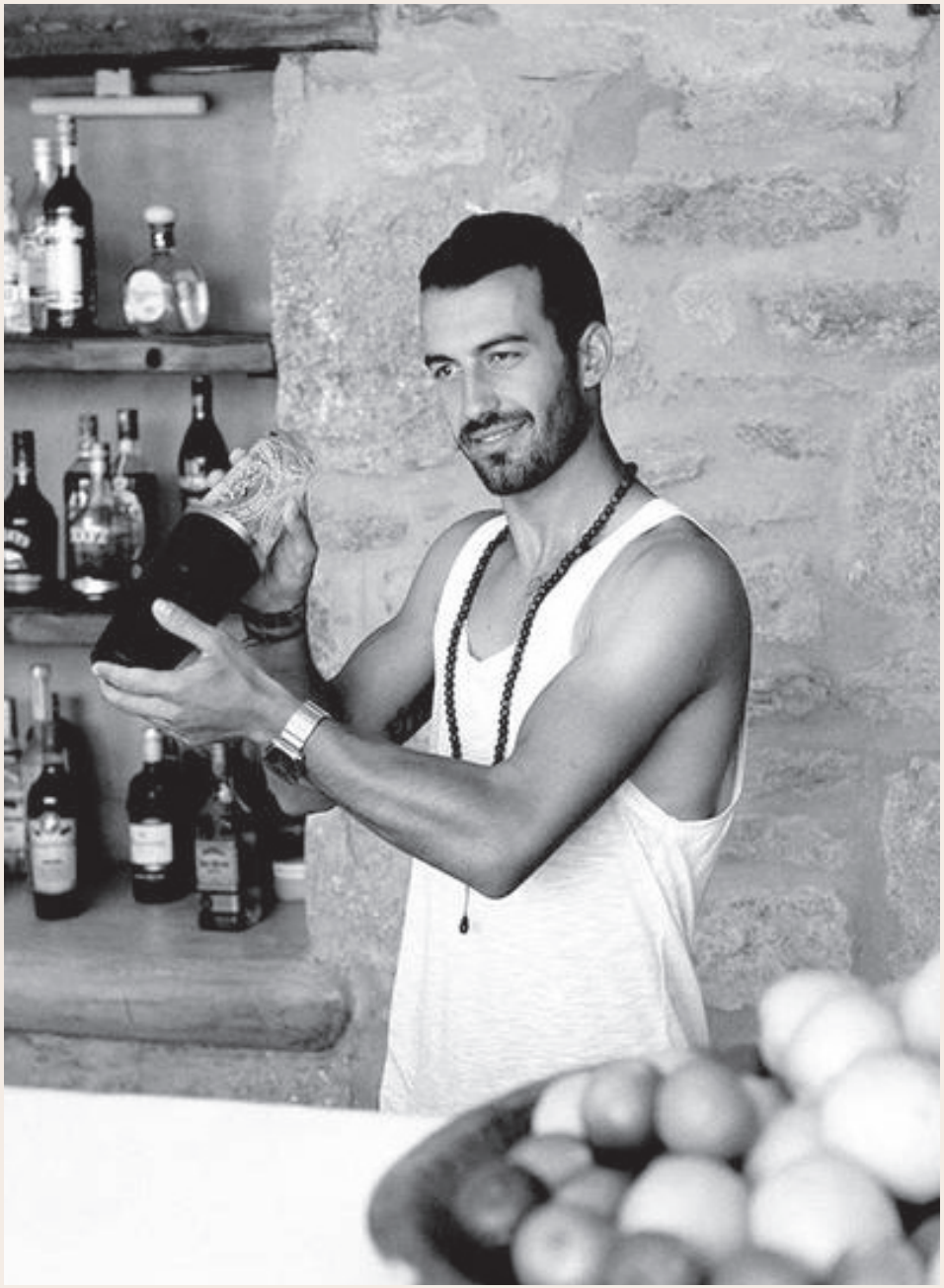
MUSIC: DJ & LIVE

DESCRIPTION: A UNIQUE TYPE OF PARADISE, THE MANGROVE IS DEFINED BY ITS RESERVED VIBE AND CREATIVE PROGRAMMING. LIVE MUSIC AND ACTIVITIES SET THE STAGE FOR RELAXING WITH OLD FRIENDS AND BEING INSPIRED BY NEW ONES.

UTILIZATION OF THE SPACE: POOL EXTENSION FOR SPILLOVER GUESTS. SPACE WILL BE PROGRAMMED ON THE WEEKENDS WITH DJ/LIVE MUSIC. THE MANGROVE WILL BE OPEN TO THE PUBLIC WITH ACCESS COMING FROM COLLINS COURT THROUGH ON PROPERTY ARCADE AND UP THE ELEVATORS TO THE 3RD FLOOR AND DIRECTLY TO OPEN AIR SPACE. ACCESS TO RESTROOMS AT NORTH EAST CORNER OF PROPERTY. MOVABLE SLIDING DIVIDING SCREENS CLOSE OFF THIS AREA TO POOL.



MANGROVE INSPIRATION



MANGROVE INSPIRATION

FOOD & BEVERAGE STAFFING LEVELS - HIGH SEASON

OUTLET	FRONT OF HOUSE ASSOCIATES	BACK OF HOUSE ASSOCIATES
INDOOR RESTAURANT, OUTDOOR CAFE & INDOOR CAFE CART	25	10
POOL VENUE	10	10
MANGROVE VENUE	25	NA
TOTAL	60	20

THE EMPLOYEE COUNT AS NOTED ABOVE IS BASED ON HIGH SEASON AND HIGH OCCUPANCY AT ANY GIVEN TIME.