



EDWARD DUGGER + ASSOCIATES, P.A.
Consultants in Architectural Acoustics

PROJECT MEMORANDUM

Date: 22 May 2019

To: Thomas R. Mooney, Director
City of Miami Beach Planning Department
1700 Convention Center Drive, 2nd Floor
Miami Beach, Florida 33139

From: Sam Shroyer, ASA INCE
Edward Dugger, FAIA ASA NCAC INCE

Re: **Fairwind Hotel**
1000 – 1030 Collins Avenue
Miami Beach, Florida 33139
ED+A 191096

Mr. Mooney,

Edward Dugger + Associates, P.A. has prepared this report in response to Arpeggio's peer review concerning our April 8 acoustic study submitted with Fairwind Hotel's application for a Conditional Use Permit for a Neighborhood Impact Establishment and Outdoor Entertainment Establishment. Throughout their report, Arpeggio requests clarification on a number of items which are addressed in the following pages along with additional analysis and discussion relating to the impact of entertainment on the Essex Hotel.

Please contact ED+A with any questions or comments regarding this document or our prior study.

ED+A REPORT: CLARIFICATIONS AND CORRECTIONS

ED+A's long-term sound level measurements were conducted in the courtyard and on the rooftop of 1020 Collins Avenue north of the courtyard as demonstrated by Figure 1. Measurements did not solely occur in the courtyard. The use of two locations demonstrated the differences in sound level in and directly above the courtyard. Note that the site layout included on Page 7 of ED+A's report erroneously labeled two of the buildings which have been corrected in the image included below.

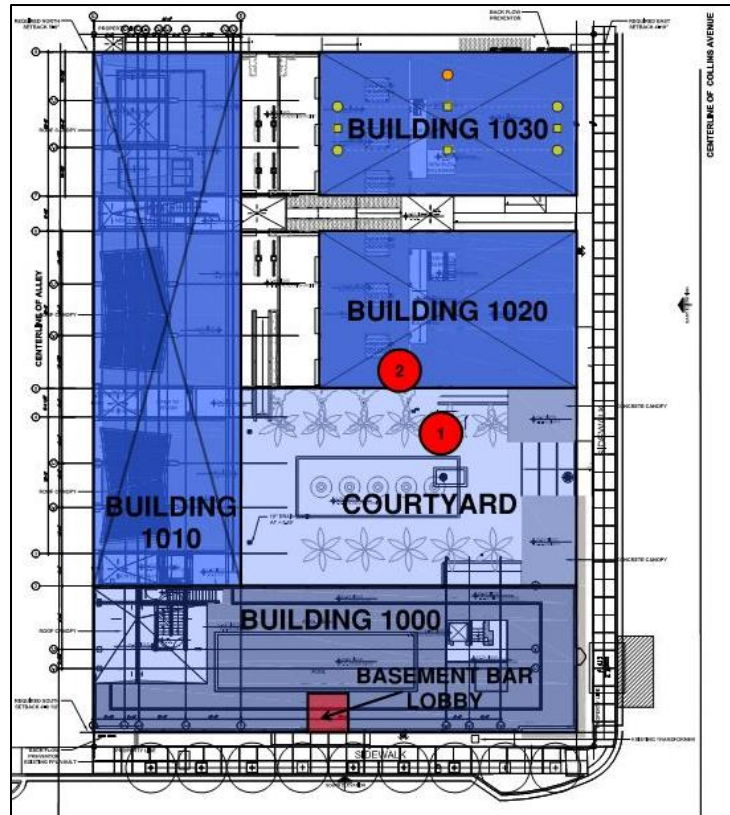


Figure 1. Site plan with building and measurement system locations (corrected).

PROPOSED OPERATIONS AND ENTERTAINMENT

Live entertainment will consist of DJ's and live musicians (amplified and/or acoustic) with live musicians likely performing jazz-type music. Outdoor live entertainment (not including DJ's) will not be permitted after 2:00 a.m. on weekends and midnight on weekdays. Performances including percussion instruments will not be permitted after midnight on all days. DJ performances and music at levels above background will be permitted until 5:00 a.m. DJ's will be stationed near the northwest corner of the courtyard

and live musicians will likely perform in the same general area. All performers will use the existing audio system, which consists of distributed speakers mounted along the façades immediately north and south of the courtyard. There are no east-facing speakers or subwoofers in the courtyard nor will there be in the future.

IMPACT ANALYSIS

Arpeggio agrees with several of our assertions, most notably that the residential building at 1040 Collins Avenue to the north should not be affected so long as entertainment levels are controlled to be appropriate for Fairwind Hotel's own guest rooms surrounding the courtyard.

However, Arpeggio raises concerns regarding the proposed entertainment's impact on Essex House at 1001 Collins Avenue located east of the courtyard across Collins Avenue, citing:

1. The direct line-of-sight between the courtyard and Essex House's guest rooms;
2. Speculation that ambient sound levels are lower than those at Fairwind Hotel;
3. The lack of information relative to Essex House's building façade elements, most notably its windows; and
4. The increased potential impact at low-frequencies.

Ambient Sound Levels

Ambient sound levels at Essex House would be expected to be lower than those measured in the courtyard only when background music was being provided through the courtyard's audio system, but similar ambient sound levels would likely be observed at the two locations without music in the courtyard. Background levels currently provided in the courtyard would have little to no impact at Essex House due to the distance between the two locations, the orientation of the speakers, and their location within the courtyard.

In fact, noise from pedestrian activity and motor and pedestrian traffic on Collins Avenue would likely have greater impact in front of Essex House than those measured at Fairwind Hotel as the measurement locations were away from the road near the middle of the courtyard. Activity on Ocean Drive including traffic, pedestrian noise, and sound emanating from nearby establishments such as the Cleveland and Ocean's Ten, would also be more likely to influence the ambient sound levels at Essex House than they would Fairwind Hotel.

The five-minute L_{Aeq} measured in the courtyard and on the roof typically differed by 2 to 3 dB. This difference in level was less when sources off of the property (traffic, etc.)

caused significant sound level increases at both locations. That is, the impact of these sources was more or less the same at both measurement locations.

Thus, the ambient sound level resulting from city noise/activity across the street at Essex House would be expected to be similar if not slightly greater than that measured at Fairwind Hotel with no background music. This was between 60 and 65 dBA at the courtyard measurement location. Similar levels were measured at the elevated location but levels here were also measured to be as low as 57 dBA for limited periods of time.

Arpeggio note that ambient sound levels were lowest between midnight and 5:00 a.m. As outlined above, allowing background music during these hours would not be expected to impact Essex House. However, the control of the audio system and its components – which face inward toward the courtyard – will be crucial in ensuring that entertainment during late-night/early morning hours does not result in any significant sound level increase (A- or C-weighted) directly across the street from the courtyard.

Building Façade and Window Elements

ED+A is not aware of the specific glazing assemblies on Essex House's western façade, but suspect they meet the Miami-Dade County requirements to receive a notice of approval (NOA) for impact- and wind-resistance if their windows were replaced within the last 10 to 15 years. If the existing windows are not impact-rated, it is our understanding that Essex House is proposing to rehabilitate its property which would likely include replacing these windows with impact-rated assemblies.

At minimum, these systems incorporate laminated glazing consisting of two glass panes separated by an inner PVB layer. ED+A has found 5/8 in. glazing made up of two ¼ in. layers and 0.090 in. PVB to be common in restaurants and hotels in Miami Beach. Laminated glazing provides increased sound insulation when compared to single-pane assemblies. Laminated-insulating glazing typically provides increased sound insulation at low frequencies. These assemblies are less common but have been utilized more often in recent years due to their energy benefits and changes in Miami-Dade County's energy requirements.

ED+A will factor the sound attenuation provided by Essex House's building façade into our analysis should the Miami Beach Planning Department, Arpeggio, or Essex House provide architectural details demonstrating its constructional elements. In any case, the window glazing will provide the least amount of sound insulation at low-frequencies. This is also true of the window and sliding glass door assemblies overlooking the courtyard at Fairwind Hotel.



Increased Sound Levels and Low-Frequency Sound

Arpeggio is correct that low frequency sound is more likely to impact neighboring properties as these sounds are more capable of propagating greater distances and transmitting through panel structures such as windows as discussed above. For this reason, percussion and live performances (not including DJ's) are limited to before midnight and 2:00 a.m., respectively. The impact of bass-heavy DJ performances including electronic dance music or similar genres is dependent on the configuration and control of the audio system in the courtyard. To reiterate, the distributed audio system does not include any east-facing speakers, nor does it include any subwoofers. These factors will assist in containing sound within the courtyard to reduce any impact at other properties, including Essex House.

However, ED+A agrees that the impact of low-frequency sound generated by the audio system should be evaluated further upon operating in a manner consistent with the Conditional Use Permit to inform the configuration and processing controls set for the audio system by conducting a "test run" of the audio system to determine whether the current limits sufficiently address low frequency sound after its overall output levels have been increased. The most effective means of doing so would involve conducting sound level measurements in the courtyard and across the street (and in Essex House guest rooms, if possible) while entertainment levels including low-frequency sound are generated. Levels could also be measured in the guest rooms surrounding the courtyard to determine how the system should be set to prevent disturbances on the Fairwind Hotel property.