Quality & Prompt
Engineering
Services

Yahya Consultants Inc.

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Subject:

Acoustic Study
7300 Royal Palm Blvd
Margate, FL 33063

Introduction

In drive-thru, the source of sound is mainly due to two reasons (1) the vehicle noise and (2) the communication system noise. In our case precautions will be made to control both of those factors. For the vehicle aspect, by its nature the path limits the speed of the approaching vehicles, and only vehicle intended to place orders will get into the path. For the communication system, adjustable speakers will be used to keep the outbound levels to the minimum necessary for being heard. And the speaker post will be placed close to the vehicle allowing to keep the outbound levels to a minimum.

Measurements

Since the site intended for this study does not have a communications system installed yet, the measurements were performed at two locations.

(1) At the intended site, measurements were taken with:
   a. Multiple vehicles, parked / running in the drive thru location,
   b. A truck included with the vehicles used.
   c. Simulated customer ordering in the location of the speaker.
   d. A truck driving in the direction and approaching the drive thru

(2) At the Dunkin Donuts located at 7135 West McNab Road, Fort Lauderdale, a similar location, measurements were taken with:
   a. Multiple vehicles, parked / running in the drive thru,
   b. A truck included with the vehicles used.
   c. Multiple vehicles advancing in the drive thru.
   d. The attendant speaking to the customer
   e. The customer speaking back to the attendant.

The timing of the measurement was between 6:00 am – 6:30 am.

The proposed menu board and speaker location on the subject property are located 60 feet from the adjacent residential property boundaries. However, for allowing a safety margin measurements were taken at a distance of 50 feet from proposed speaker panel during simulations on the subject property and actual readings at existing locations. Please refer to Figure 2 for a plan showing the location of measurement on the subject property

The distance between the reading point and the intended speaker point is 50 feet.
The distance between the reading point and the actual speaker is 50 feet.

Measurements were done with: RISEPRO DIGITAL SOUND LEVEL METER 30-130 Db audio noise measure device HT-80a

For the first case the measurement showed a reading of 44 dba, with a peak when the truck was approaching the drive thru of 48 dba.

For the second case the measurement showed a reading between 51 dba – 52 dba with a peak of 54 dba when the attendant was communicating with the customer.

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Conclusion

Based on the data collected from existing locations and simulation of proposed operations at the subject property, all sound levels were found to remain below 55 dBA in accordance with the maximum noise levels permitted in Section 33-82 of the City of Margate Code of Ordinances.

Exhibit "A"

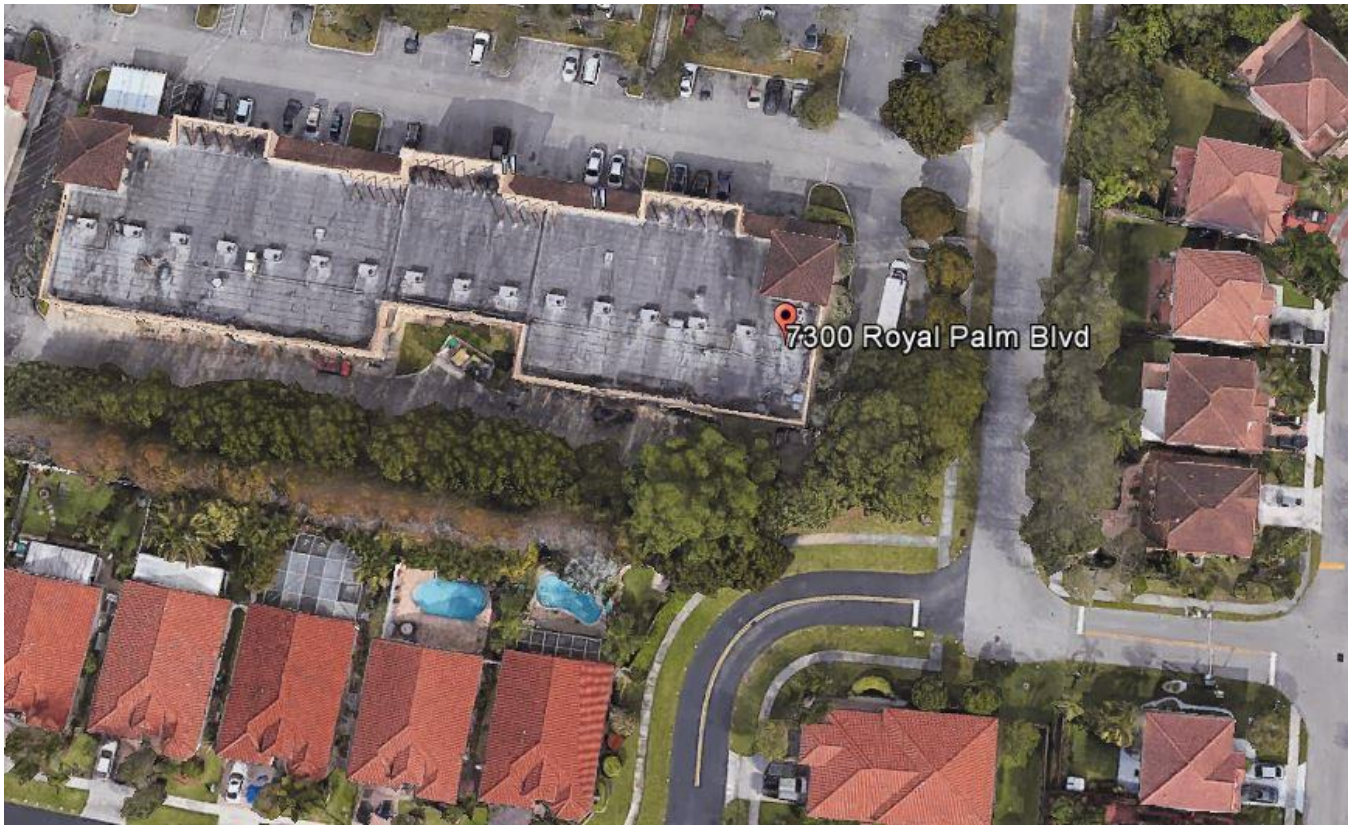

Figure 1 Site Vicinity

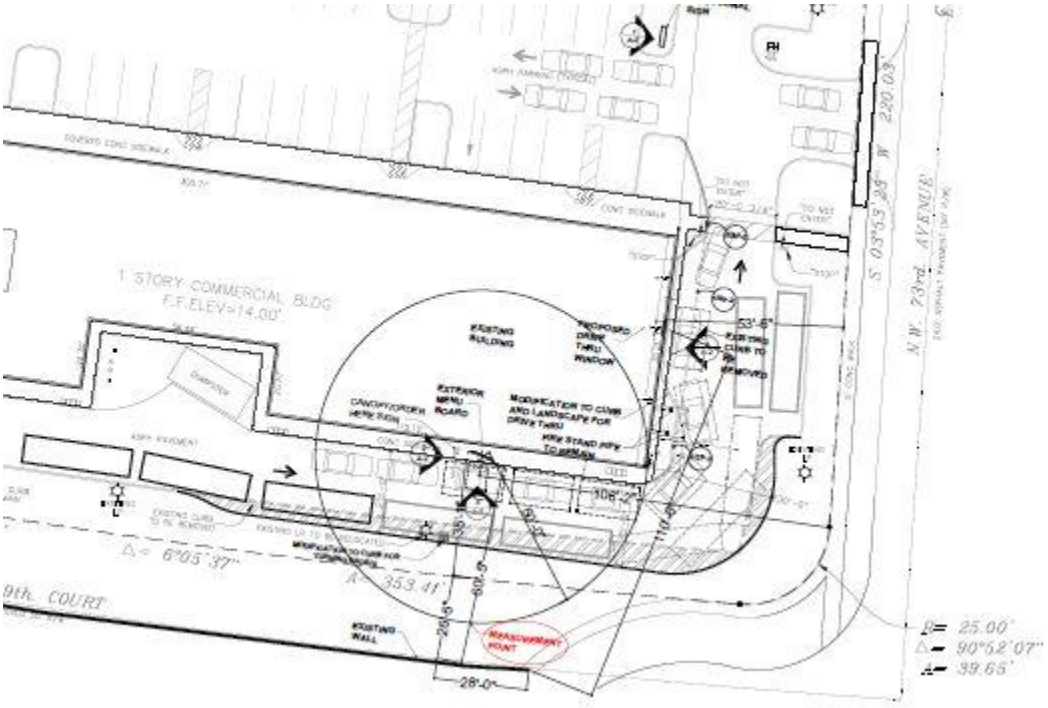

Figure 2 Relative intended speaker location and measurement point

Ramzi Yehia

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Date: 2021.12.19 01:01:47 -05'00'

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