

MIAMI BEACH

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TRANSPORTATION DEPARTMENT

MEMORANDUM

TO: Michael Belush, AICP, Planning and Zoning Manager

FROM:  Jose R. Gonzalez, PE, Director

DATE: September 22, 2017

SUBJECT: 1045 5th Street – Traffic Impact Study

The Transportation Department has coordinated the review of the subject traffic study submitted by the applicant as part of the Planning Board application for the 1045 5th Street proposed project (Project). Kimley-Horn and Associates, Inc. prepared and submitted the TIS for this project.

The subject site currently consists of a 5,568 square foot car rental facility and a 9,812 square foot night club. The Project will comprise the following land uses and intensity:

- Retail – 66,100 Square Feet

Access to the site will be provided by a new access driveway on Lenox Avenue approximately 300 feet north of 5th street. The proposed development also includes a 229 space self-parking garage.

TRAFFIC ANALYSIS

The two hour peak period for this study after performing two (2) 96-hour continuous traffic counts collected on 5th Street between Alton Road and Michigan Avenue and on Lenox Avenue between 5th Street and 6th Street was determined to be between 2:00 pm and 4:00 pm. Consistent with this peak period, traffic counts were collected at the following intersections:

1. 5th Street and Alton Road
2. 5th Street and Lenox Avenue
3. 5th Street and Michigan Avenue
4. 6th Street and Alton Road
5. 6th Street and Lenox Avenue
6. 6th Street and Michigan Avenue

The PM peak hour volumes were determined and adjusted for peak seasonal variations by utilizing the Florida Department of Transportation Seasonal Factor.

The trip generation for the Project was based on information contained in the Institute of Transportation Engineers' (ITE) Trip Generation Manual (9th Edition). According to the subject

ITE manual, the most appropriate “land use” category for the proposed land uses are: Land Use 820 – Shopping Center. As indicated in Tables 1 of the TIS report, the proposed 1045 5th Street development is anticipated to generate approximately 216 gross trips (104 inbound and 112 outbound) during the PM peak hour. The net new trips (proposed trips minus trip from existing land uses) include approximately 111 additional PM peak hour trips (35 inbound and 76 outbound).

The trip distribution and traffic assignment for the project were based on Miami-Dade County’s Cardinal Distribution information for the study area. Table 2 of the TIS report summarizes the County’s cardinal distribution data for Traffic Analysis Zone 652, which is applicable to the project site from the latest SERPM data published by Miami-Dade County. The following traffic assignment was estimated for the proposed retail development:

Inbound:

- 70% from the north via;
 - Alton Road (43%)
 - Lennox Avenue (10%)
 - Michigan Avenue and 6th Street (17%)
- 30% from the south via;
 - MacArthur Causeway (10%)
 - Lennox Avenue (8%)
 - 5th Street (12%)

Outbound:

- 70% to north via;
 - Alton Road (43%)
 - Lennox Avenue (10%)
 - Michigan Avenue and 6th Street (17%)
- 30% to south via;
 - MacArthur Causeway (10%)
 - Lennox Avenue (8%)
 - 5th Street (12%)

Intersection capacity/level of service analyses were conducted for the six (6) study intersections and the garage driveway. The analyses were undertaken following the capacity/level of service procedures outlined in the Highway Capacity Manual (HCM) using the SYNCHRO software. The results of the capacity analyses are summarized in Table 3 of the TIS report. As indicated in Table 3, all study intersections are currently operating adequately and will continue to operate at an acceptable level of service in the year 2018 with the proposed project in place, with an exception. The exception includes the intersection of SR A1A/5th Street and Alton Road. The Alton Road intersection is currently operating at LOS F and will continue to operate at deficient level of service with the project in place. Turn lane queue length analysis was performed to determine if the existing exclusive turn lanes at study intersections can sufficiently accommodate expected vehicle queue lengths under existing, future background, and future total traffic conditions. The results of this analysis are summarized in Table 4 of the TIS report. As indicated in Table 4, all study turn lanes are currently operating adequately and will continue to operate at an acceptable level of service in the year 2018 with the proposed project in place, with two exceptions. The exceptions include the northbound left turn lane of SR A1A/5th Street and Alton Road, and, eastbound left turn lane of Michigan Avenue and 5th Street. Both left turn lanes are currently insufficient and will continue to operate at a deficient level with the project in place.

ENTRY GATE ANALYSIS

The Traffic Impact Study for this development initially proposed a right-in/right-out driveway on Lennox Avenue. Subsequently, the Developer approached the City with additional access proposal for consideration. Following various meetings, the Traffic Engineer for the Developer submitted a revised Traffic Impact Study which proposed a southbound left turn access from Lennox Avenue into development. Staff has reviewed the design and operation of the proposed southbound left turn access and determined it would operate satisfactorily from a Level of Service and safety perspective. In addition, this additional access will reduce the impact to the failing intersection of 5th Street and Alton Road. Whereas under the previous proposal all development traffic was accessing the site from the 5th Street and Lenox Avenue intersection, under the new proposal, vehicles will be able to access the proposed development from both north and south, thus not over burdening any particular intersection.

TRANSPORTATION DEMAND MANAGEMENT

Transportation Demand Management (TDM) strategies should be developed to reduce the impact of project traffic on the surrounding roadway network and promote trip reduction. The 1045 5th Street project proposes the following TDM strategies for the project:

- Bicycle racks to be provided on-site
- Transit information including route schedules and maps will be provided on-site.

In addition, there are two Citibike stations with 16 bicycle docks each located along Lenox Avenue just north of 6th Street and along Michigan Avenue just north of 5th Street.

RECOMMENDATION

Following the review of the development's Traffic Impact Study, the Transportation Department has no further comments and approves the proposed access modification.

Please feel free to contact me if you have any questions on the above.

cc: Josiel Ferrer-Diaz, E.I., Transportation Manager
Firat Akcay, Transportation Analyst