

# MIAMI BEACH

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## TRANSPORTATION DEPARTMENT

## MEMORANDUM

TO: Michael Belush, AICP, Planning and Zoning Manager

FROM: Jose R. Gonzalez, PE, Director

DATE: October 5, 2018

SUBJECT: 1759 Purdy Avenue – Traffic Impact Study

The Transportation Department has reviewed the subject Traffic Impact Study (TIS) submitted by the applicant as part of the Planning Board application for the proposed mixed use development located at 1759 Purdy Avenue (Project). Traftech Engineering, Inc. prepared and submitted the TIS for the Project. Florida Transportation Engineering, Inc. (FTE) was retained by the City to perform a peer review of the TIS for the Project.

The proposed development will consist of 19,988 square-feet of retail, and 12 residential units. The Project site is located between Bay Road and Purdy Avenue, south of 18<sup>th</sup> Street and north of Dade Boulevard. The proposed Project will have 250 feet of façade facing Purdy Avenue and 200 feet facing Bay Road. A proposed private port cochere will provide access to residents only, which will also serve as a pedestrian path between Purdy Avenue and Bay Road. Parking for the Project will be provided within the development. Access to parking is proposed from Bay Road.

### Data Collection:

As requested by the City, turning movement counts (TMC) were collected at the following intersections:

1. Dade Boulevard and Purdy Avenue (Signalized)
2. Dade Boulevard and Bay Road (Signalized)
3. Dade Boulevard and West Avenue (Signalized)
4. 17<sup>th</sup> Street and West Avenue (Signalized)
5. 18<sup>th</sup> Street and West Avenue (Unsignalized – AWSC)
6. 18<sup>th</sup> Street and Purdy Avenue (Unsignalized – AWSC)
7. 20<sup>th</sup> Street and West Avenue (Unsignalized – AWSC)
8. 20<sup>th</sup> Street and Bay Road (Unsignalized – AWSC)

Due to the site conditions, during review, special attention was given to the trip distribution proposed by the applicant's traffic engineer to ensure conservative assumptions relative to the travel patterns of the Sunset Harbour Neighborhood. 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 639. Following discussions with Transportation Department staff and revisions by

the applicant's traffic engineer, the following traffic assignment was approved based on the proposed retail and residential development:

- 16% to/from the west via Dade Boulevard/Venetian Causeway
- 30% to/from the west via MacArthur Causeway via Alton Road/West Avenue
- 5.5% to/from the east via Dade Boulevard
- 3.5% to/from the east via 17<sup>th</sup> Street
- 25% to/from the north via Alton Road
- 20% to/from the south via West Avenue

### Trip Generation and Trip Distribution

The trip generation for the Project was based on information obtained from the Institute of Transportation Engineers' (ITE) Trip Generation Manual (10th Edition). According to the ITE manual, the most appropriate "land use" categories for the proposed development are:

- Land Use Code 220 – Residential
- Land Use Code 820 – Shopping Center

Although there are café and restaurant uses depicted on the site plan, to ensure a conservative analysis, the applicant's traffic engineer was directed by Transportation Department staff to use the Shopping Center Land Use Code because the trip rates are higher than the combination of the proposed uses.

As indicated in Table 1 of the TIS report, the proposed development is anticipated to generate approximately 92 net new trips (44 inbound and 48 outbound) during the typical PM peak hour. Since the Project is generating a significantly higher number of trips during PM peak period in comparison to the AM peak period, the PM peak period was taken into consideration for the traffic operations analysis.

As agreed with the applicant's traffic engineer during the methodology meeting, the following trip reduction factors and percentages have been applied to the trip generation analysis:

- 20% multimodal reduction factor:
  - The Sunset Harbour neighborhood is a walkable area with significant pedestrian activity, comfortable sidewalks and pedestrian crosswalks at intersections. In addition, the neighborhood is served by the South Beach Trolley.
- Internal capture rates for proposed land uses:
  - 5% during PM peak hour (ITE Internal Capture Factor for this mix of uses)
- Pass-by trip capture rate:
  - 34.0% during PM peak hour for shopping center

### Level of Service Analysis

Intersection capacity/level of service (LOS) analyses were conducted for the eight (8) study intersections. The analyses were undertaken following the capacity/level of service procedures outlined in the 2010 Highway Capacity Manual (HCM) using the SYNCHRO Volume 10 software. The intersection capacity analyses results for existing, future with background growth, and future with Project conditions are summarized in Table 3 and Table 4 of the TIS. In addition to the aforementioned intersections, LOS analysis was performed for the proposed driveway on Bay Road. The results of the analysis indicate all study intersections are currently operating adequately and will continue to operate at an acceptable level of service in the year 2020 with the Project in place.

## **SITE ACCESS, PARKING & VALET OPERATIONS, LOADING ZONES**

The access to the parking garage will be provided on Bay Road. Ingress to the private port-cochere will be located on Purdy Avenue with an egress onto Bay Road. Access to the port-cochere will be exclusive to residents and the access will be managed by automatic bollards. Residents can choose to valet or self-park their vehicles. Residents who choose to valet their vehicles will be allowed to access this service on the port-cochere or on Purdy Avenue. All retail patrons will be limited to valet parking use only. The valet drop-off and pick-up location for retail patrons will be limited to Purdy Avenue. For a conservative analysis of the valet operation, the City requested that the applicant's traffic engineer assume that both residents and retail patrons would drop-off and pick-up their vehicles at the Purdy Avenue valet location.

Following drop-off, the valet runners will drive the vehicle north and turn right onto 18<sup>th</sup> Street, then make another right turn at Bay Road to access the parking garage. When delivering the vehicles, the valet runner will drive south on Bay Road and turn right onto Dade Boulevard followed by a right onto Purdy Avenue. The valet drop-off/pick-up area may also be used by ride-share vehicles when dropping-off or picking-up passengers. However, the valet analysis did not include rideshare trips.

The Applicant's traffic engineer has performed a valet queueing analysis. The valet queueing operations analysis was based on the methodology outlined in ITE's Transportation and Land Development Manual. The valet operations analysis was conducted considering that vehicles accessing the development will utilize the Purdy Avenue drop-off/pick-up area. The results of this analysis demonstrate that with 95% confidence and eight (8) valet attendants, the queue on Purdy Avenue will not exceed one (1) vehicle. The valet analysis was performed utilizing 8-valet runners.

The Project proposes a total of two (2) loading bays for delivery. The access to the loading area is located on Bay Road, adjacent to the upper level garage access. Trash pick-up will also be performed at this location. The maneuverability analysis performed for loading and trash pick-ups demonstrates that the trucks can adequately enter (head-in or back-in) and exit the proposed space.

## **CONDITIONS**

1. Given that the Traffic Impact Study did not include an analysis of ride-share transportation, the applicant shall designate one (1) space for ride-share pick-up and drop-off on Purdy Avenue and two (2) spaces shall be designated for the proposed valet service (for a total of three (3) spaces).
2. The gate analysis and valet operational plan is based on the technical specifications provided by the applicant consisting of a minimum gate operating speed of 20 inches per second and minimum bollard operating speed of 6 centimeters per second. The developer shall not use any gate or bollard slower than the aforementioned figures.
3. The Applicant shall work with the Transportation Department to provide a comprehensive Transportation Demand Management Plan prior to receiving Certificate of Occupancy for the development.

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