TRAFFIC ENGINEERING EVALUATION

PROPOSED MIXED-USE DEVELOPMENT 275 OCEAN AVENUE BLOCK 27203, LOT 10 CITY OF JERSEY CITY HUDSON COUNTY, NEW JERSEY

Prepared for:

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Prepared by:

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INTRODUCTION

The purpose of this Traffic Engineering Evaluation is to assess the traffic impacts associated with the redevelopment of the subject property known as Lot 10 in Block 27203 located at 275 Ocean Avenue in the City of Jersey City, Hudson County. The site has approximately 75 feet of frontage along the west side of Ocean Avenue.

The proposal is to demolish the previous house of worship and construct a new, four-story, mixed-use building consisting of 15 units of multifamily housing (mid-rise) and approximately 982 square feet of retail space and 8 on-site parking spaces on the ground floor.

EXISTING CONDITIONS

The site is located on the west side of Ocean Avenue midblock between Sheffield Street and New Street. The site was occupied by a former house of worship. The surrounding properties generally consist of a mix of commercial and residential uses. The subject site is within the R-1 Zone. The adjacent roadways of Ocean Avenue, Sheffield Street, and New Street serving the subject site are described as follows:

Ocean Avenue is categorized as an urban principal arterial and is under the jurisdiction of the City of Jersey City. Ocean Avenue is oriented in a north-south direction, extending between Bramhall Avenue in the north and Merritt Street in the south. Near the proposed site, Ocean Avenue provides one lane in each direction with parking permitted on both sides of the street. There is capacity for a total of approximately 21 on-street parking spaces in the block of Ocean Avenue between Sheffield Street and New Street. There are sidewalks on both sides of the street. The statutory speed limit is 25 miles per hour (MPH).

Sheffield Street is a local street under the jurisdiction of the City of Jersey City, oriented in a one-way westbound direction from Ocean Avenue. There are sidewalks on both sides of the street. Signs are posted "No Parking, 1 PM - 3 PM, Tuesday and Friday on the north side of the street and "No Parking, 1 PM - 3 PM, Monday and Thursday" on the south side of the street. There is capacity for a total of approximately 18 on-street parking spaces in the block of Sheffield Street between Ocean Avenue and Ludlow Street. The statutory speed limit is 25 MPH.

New Street is a local street under the jurisdiction of the City of Jersey City, oriented in a oneway eastbound direction toward Ocean Avenue. There are sidewalks on both sides of the street. Signs are posted "No Parking, 1 PM - 3 PM, Tuesday and Friday on the south side of the street and "No Parking, 1 PM - 3 PM, Monday and Thursday" on the north side of the street. There is capacity for a total of approximately 22 on-street parking spaces in the block of New Street between Ocean Avenue and Ludlow Street. The statutory speed limit is 25 MPH.

Mass Transportation Options

The Danforth Avenue Light Rail Station is an 8-minute/0.4-mile walk from the subject site. At the corner of Sheffield Street, the number 6 bus route provides services to Journal Square, and the number 81 bus provides service to Exchange Place. With frequent mass transportation service during the peak commuting hours, as well as the variety of local commercial, retail, and entertainment options, this location provides an attractive alternative to owning a car.

Bicycle Master Plan 2019

Near the subject site, as of 9/30/2019, the <u>Let's Ride JC Bicycle Master Plan</u> shows shared bicycle lanes for Ocean Avenue (northbound), Garfield Avenue (southbound), Cator Avenue, and Chapel Avenue.

Pedestrian Enhancement Plan 2018

Near the subject site, Ocean Avenue was identified "Key streets identified by the public".

<u>School Travel Plan 2019</u>

Near the subject site, as of July 2019, the Jersey City School Travel Plan shows there are crossing guards at the intersections of Ocean Avenue with Danforth Avenue, Cator Avenue and New Street. The Elementary School 2 is on Ocean Avenue between New Street and Cator Avenue and the Glenn D. Cunningham Early Childhood Center is on Ocean Avenue between Cator Avenue and Danforth Avenue.

Vision Zero

Based on the crash history between the years 2008 and 2017, Ocean Avenue near the subject site is not in the "High Injury Network" of all roads. However, Ocean Avenue near the subject site is in the "High Injury Network on City Streets".

DEVELOPMENT PROPOSAL

The proposed development consists of the construction of 15 new units of multifamily housing (low-rise) on the second floor through sixth floor and approximately 982 square feet of retail space and 8 parking spaces on the ground floor. The parking requirement is 1 parking space per residential unit or 15 parking spaces. Tenants of the proposed residential units who own a vehicle would access the parking area via the proposed 10-foot wide garage door on Ocean Avenue.

TRIP GENERATION

According to the Trip Generation Manual, 11th Edition published by the Institute of Transportation Engineers (ITE), Multifamily Housing (Mid-Rise) "includes apartments and condominiums located in a building that has between four and 10 floors of living space. Access to individual dwelling units is through an outside building entrance, a lobby, elevator, and a set of hallways." Therefore, trip generation for the proposed 15-unit, low-rise, residential building was calculated using the current Trip Generation Manual, 11th Edition for the land use "Multifamily Housing (Mid-Rise)" in a General Urban/Suburban setting/location was used to account for the proximity of the Danforth Avenue Light Rail Station. Table 1, Trip Generation Summary, tabulates the trip generation for the proposed 15 residential units and 982 square feet of retail space. As shown in Table 1, the proposed 15 residential units would generate 6 new vehicle trips during the weekday AM peak hour and 6 new vehicle trips during the weekday PM peak hour. Due to the small size of the retail space, the percentage of trips associated with the retail space would be primarily pass-by trips, which is reflected in the passby rate of 100 percent, which was calculated based on ITE standards and is also shown in Table 1. Pass-by trips are trips that are already on the roadway network and are not new trips to the study intersections. The 982 square feet of retail space would generate 2 trips during a weekday AM peak hour and 6 trips during a weekday PM peak hour, all taken from the passing stream of pedestrian traffic already on Ocean Avenue. Due to the pedestrian activity in the area, all those new trips to and from the retail space would be pedestrian traffic.

The main walking route that a tenant could take between the subject site and the Danforth Avenue Light Rail Station would be Ocean Avenue to Danforth Avenue, crossing at the signalized intersections of Ocean Avenue and Garfield Avenue. The number of pedestrian trips generated by the subject site would be negligible. Therefore, in my professional opinion, the additional pedestrian trips generated by the mixed-use development would not have a significant impact on any one intersection.

According to Transportation Impact Analysis for Site Development, published by the Institute of Transportation Engineers (ITE), an increase of less than 100 vehicle trips would not change the level of service of the local street network nor appreciably increase the volume-to-capacity ratio of an intersection approach. Also, NJDOT Access Management Code considers a significant increase in trips greater than 100 peak hour trips AND greater than a 10 percent increase in previously anticipated daily trips. Therefore, the proposed development is not anticipated to significantly impact the operations of the local streets.

SITE PLAN REVIEW

The parking requirement is 1 parking space per dwelling unit, whereas the site is proposed with 8 parking spaces. <u>Parking Generation, 5th Edition</u>, published by ITE, provides data supporting a lower parking demand for Multifamily Housing (Mid-Rise) in a Dense Multi-Use Urban setting/location within one half-mile of rail transit, Monday through Friday, between 10 PM and 5 AM. The <u>Parking Generation, 5th Edition</u> shows a range of peak parking demand is as low as 0.13 parked vehicles per bedroom. With a parking supply of 0.24 parking spaces per bedroom, the proposed parking supply of 0.24 parking spaces per bedroom is within the range of peak parking demand of 0.14 parked cars per bedroom to 0.91 parked cars per bedroom.

With only 982 square feet of retail space, the Land Development Ordinance does not require any off-street parking and there is no requirement for a loading space.

The bicycle parking could be accommodated within the basement with elevator access to the street.

CONCLUSIONS

Based upon our trip generation evaluation, it is our professional opinion that the proposed 15 units of Multifamily Housing (Mid-Rise) and 982 square feet of retail space would generate less than 100 peak hour vehicle trips and would not have a significant impact on traffic conditions during the weekday AM and PM peak commuter traffic hours. The proposed project would generate 8 trips during the weekday AM peak hour and 6 trips during the weekday PM peak hour. With the proximity of the subject site to the Danforth Avenue Light Rail Station, it is my professional opinion that the pedestrian trips circulating throughout the network of sidewalks and intersections would not have a significant impact to any one intersection.

In conclusion, the development of this project would have no significant impact on the traffic operations of area roadways and intersections and would not have a significant impact on local parking conditions.

The foregoing is a true representation of my findings.

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LEE D. KLEIN, P.E., PTOE Professional Engineer License No. 37104 Professional Traffic Operations Engineer 1627

Walk 0.4 mile, 8 min

275 Ocean Ave, Jersey City, NJ 07305 to Danforth Avenue Light Rail Station, Jersey City, NJ 07305 Google Maps



Map data ©2023 Google 200 ft

275 Ocean Avenue (Block 27203, Lot 10), Jersey City, Hudson County, NJ **Table 1 - Trip Generation Summary**

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|----|--------|--|----------|----|------------------|--------|-----|-----------|-------|
| | | | | AN | 1 PEAK HO | UR | PN | I PEAK HO | UR |
| | CODE | LAND USE | AMOUNT | N | OUT | TOTAL | N | OUT | TOTAL |
| PF | SOPOSI | 0 | | | | | | | |
| | 221 | Multifamily Housing (Mid-Rise)(Average)(Dense Urban) | 15 units | 1 | 5 | 9 | 4 | 2 | 9 |
| | 822 | Strip Retail Plaza (Less than 40 KSF) | 982 SF | 1 | 1 | 2 | 3 | 5 | 6 |
| | | Pass By Percentage (PM) | 100.0% | | | | (3) | (3) | (9) |
| | | Total New Shopping Center Trips | | 1 | 1 | 2 | 0 | 0 | 0 |
| | | | | | | | | | |

TOTAL NEW SITE GENERATED VEHICLE TRIPS

Source: *Trip Generation, 11th Edition,* published by the Institute of Transportation Engineers (ITE)