STORMWATER MANAGEMENT REPORT

127 DELAWARE 127 DELAWARE AVE, JERSEY CITY NJ.

Proposed New 5-Story Residential Building With 36 Residential Units Block 16202, Lots 19 City of Jersey City, New Jersey

July 10, 2020

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Introduction

I. Project Description and Location

The property to be developed is designated as Block 16202, Lot 19. The property is outside of any tidal flood zone. The proposed scope of work is the construction of a new 5-story structure, to create 36-unit residential building.

II. Existing Site Conditions

The property is located on Delaware Ave in Jersey City, NJ. It is 12,920 sq. ft. (0.297-acre) site that is currently occupied with an existing building scheduled to be demolished. The site topography ranges between 34.01 ft to 31.63 ft. The soil type for this site is classified as Urban land, Eolian Substratum (UREOLB), 0 to 8 percent slopes.

III. Stormwater Management Description

The pre and post development runoff flows were calculated in accordance with the City of Jersey City Stormwater Ordinance and the Stormwater Best Management Practices (BMP). The proposed site is 12,920 sq. ft. (0.297-acre), does not exceed 1 acre of new development nor does it propose ¹/₄ acre or more of new impervious coverage. Storm water runoff management system is therefore not required in accordance with Jersey City stormwater management plan dated august 2008.

Pre & Post Development Runoff Conditions

It is the purpose of this report to provide information on the methods and techniques employed in the stormwater management analysis that demonstrate that the stormwater runoff will not be increased due to the development.

Accordingly, stormwater management analysis in this report consists of:

- 1. Calculating runoff from the rainfall for 2, 10- and 100-year storm events for the pre- and post-development conditions of each drainage area
- 2. Comparing the results of the pre-developed vs. post-developed conditions to ensure that all stormwater regulations have been met

I. <u>Predevelopment Conditions</u>

The total drainage area for the site is 12,920 sq. ft. (0.297-acre) which is currently an occupied lot with two (2) 1-Story Garage buildings, One (1) Two story dwelling and paved driveway. The design parameters for pre-developed condition are as follows: The rainfall intensities for the 2, 10- and 100-year storm events are 4.3 in/hour, 5.8 in/hour and 8 in/hour, respectively.

Total Site Drainage Area	Existing Area (SF)	Area (ac)	С
Lot	12920	0.297	0.94
Building	6280.91	0.144	0.95
Paved	6363.38	0.146	0.95
Landscape	275.71	0.006	0.30

Total Site Drainage Area	Existing Flows (cfs)
Q(2 year)	1.194
Q(10 year)	1.610
Q(100 year)	2.221

II. <u>Post Development Conditions</u>

The proposed site drainage area is 12,920 sq. ft. (0.297-acre) which consists of a 5-story Residential Building with ground floor parking garage.

Total Site Drainage Area	Proposed Area (SF)	Area (ac)	С
Lot	12920	0.297	0.95
Building	12122.24	0.278	0.95
Paved	797.76	0.018	0.95
Landscape	0.00	0.000	0.30

Total Site Drainage Area	Unreduced Proposed Flows (cfs)	
Q(2 year)	1.212	
Q(10 year)	1.634	
Q(100 year)	2.254	

As demonstrated above the post development conditions have increased by 1.5% relative to pre-development conditions. Though the proposed development shows a slight increase in flow, it is not considered a major development, nor does it propose an increase in impervious coverage over 0.25 Ac. As such, in accordance with

Jersey City stormwater management plan dated august 2008, a stormwater management and control system is not required for this development. All roof drainage will be captured into the roof drainage system and discharged to the combined sewer main along Delaware Ave.

Summary

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In conclusion, the stormwater management system for this project has been analyzed in accordance with the City of Jersey City Storm Water Ordinance and the BMP. This project is not located in the Tidal flood zone. We have demonstrated that our project meets the minimum requirements to be exempt from storm water management set forth by the City of Jersey City Ordinance and the BMP.

Therefore, it is our professional opinion that the proposed exemption for stormwater drainage design has no negative impacts on the existing municipal stormwater system.

National Flood Hazard Layer FIRMette



Legend

74°5'3"W 40°43'45"N SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT Without Base Flood Elevation (BFE) Zone A. V. AS With BFE or Depth Zone AE, AO, AH, VE, AR SPECIAL FLOOD HAZARD AREAS **Regulatory Floodway** 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X Future Conditions 1% Annual Chance Flood Hazard Zone X Area with Reduced Flood Risk due to Levee. See Notes. Zone X OTHER AREAS OF FLOOD HAZARD Area with Flood Risk due to Levee Zone D NO SCREEN Area of Minimal Flood Hazard Zone X Effective LOMRs OTHER AREAS Area of Undetermined Flood Hazard Zone D - — – – Channel, Culvert, or Storm Sewer GENERAL STRUCTURES LIIII Levee, Dike, or Floodwall City of Jersey City 20.2 Cross Sections with 1% Annual Chance 340223 17.5 Water Surface Elevation AREA OF MINIMAL FLOOD HAZARD Coastal Transect Mase Flood Elevation Line (BFE) Limit of Study Zone AE Jurisdiction Boundary (EL9 Feet) **Coastal Transect Baseline** OTHER Profile Baseline 34017 C0102D FEATURES Hydrographic Feature eff. 8/16/2006 **Digital Data Available** No Digital Data Available MAP PANELS Unmapped The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location. This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 7/8/2020 at 3:16 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time. This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, USGS The National Map: Orthoimagery, Data refreshed April 2020 legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for 74°4'26"W 40°43'18"N Feet 1:6,000 unmapped and unmodernized areas cannot be used for regulatory purposes.

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500

1,000

1,500

2,000