

ABBREVIATED STORMWATER MANAGEMENT REPORT

for the

**Washington Street Creative Center
(335 Washington Street)**

Located at

BLOCK 11611; LOT 1.02

In

**CITY OF JERSEY CITY
HUDSON COUNTY, NJ**

Has been prepared for

**335 Washington Realty, LLC
Harborside 3, 210 Hudson Street, Suite 400
Jersey City, NJ 07311**

on

September 16, 2022

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1 INTRODUCTION

The subject property is known as Washington Street Creative Center and is located on Block 11611, Lot 1.02 in City of Jersey City, New Jersey. The proposed project is to renovate the existing boiler building on site and convert it to 10,000 SF flex office space.

This report analyzes the stormwater management & drainage for the site. The analysis presented herein is intended to provide support documentation to meet Jersey City Checklist requirements.

PROJECT SUMMARY

The proposed project is the renovation the existing boiler building on site and converting it to 10,000 SF flex office space. The Jersey City Stormwater Ordinance (Ord. 345-74) was reviewed, and it was determined the site in question does not meet the definition of a “Minor Development” and “Major Development” therefore the site is not subject to the Stormwater Ordinance. The existing building is to remain, and the site has a limit of disturbance under 5,000 SF. Majority of the site’s disturbance is a result of reconstruction of fronting sidewalk/ curb areas. In addition, all new impervious area is less than 1,000 SF and site is not providing any new motor vehicle surface areas. Therefore, the site is under the trigger requirements that classifies site as a “Minor Development” under the Jersey City Stormwater Ordinance. No stormwater detention is proposed on site , however, the roof runoff will be collected and conveyed to a 12” CIP Storm lateral

The project includes the construction of one (1) 12” gravity CIP storm sewer service lateral connection from the proposed buildings to convey building’s roof runoff to an existing 18” CIP storm sewer main that runs along the middle of Bay Street. This connection was reviewed and approved by JCMUA.

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2 STORMWATER FLOW CALCULATIONS

A. 25-Year storm Roof Runoff (Rational Method)

The peak roof runoff for the 25-year storm was determined using the Rational Method as shown below.

$$Q_p = CIA$$

C = C-value (Impervious roof) = 0.99

I = Storm Intensity = 8.0 in/hr (25-year storm with Tc = 6 mins)

A = Roof & Overhang Area = 10,700 SF x (1 Ac/43560 SF) = 0.25 Ac

$$Q_p = 0.99 \times 8.0 \times 0.25 = \mathbf{1.98 \text{ cfs}}$$

B. Proposed Lateral Connection Capacity Analysis

The proposed building contains one (1) - 12-inch CIP storm sewer lateral that has been sized to sufficiently convey the proposed flows from the building as calculated below using Manning's Equation:

$$Q_d = \frac{1.486}{n} \times A \times R^{2/3} \times S^{1/2}$$

where,

Q_d = Pipe capacity, cfs

n = Mannings roughness coefficient (CIP = 0.012)

A = flow area = 0.785 S.F.

R = hydraulic radius = A/WP = 0.25 ft.

S = pipe slope = 0.005 ft/ft.

$$Q_d = (1.486/0.012) \times 0.785 \times 0.25^{2/3} \times 0.005^{1/2} = \mathbf{2.74 \text{ cfs}}$$

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Pipe Capacity > Storm Peak

2.74 cfs > 1.98 cfs ∴ OK

(PIPE CAPACITY EXCEEDS PEAK)

As show above one 12-inch CIP lateral with a minimum slope of 0.5% has the capacity to handle both the the Roof (10,000 SF) & Overhang (700 SF) Areas runoff flow for project.

4 CONCLUSION

The analysis herein demonstrates that the proposed building service connection will adequately convey stormwater flows from the proposed project. In addition, the size of the project does not trigger the stormwater requirements noted in the Jersey City Stormwater Ordinance because the project does not meet the definition of a “Minor Development.” Therefore, no Stormwater detention is proposed for the project.

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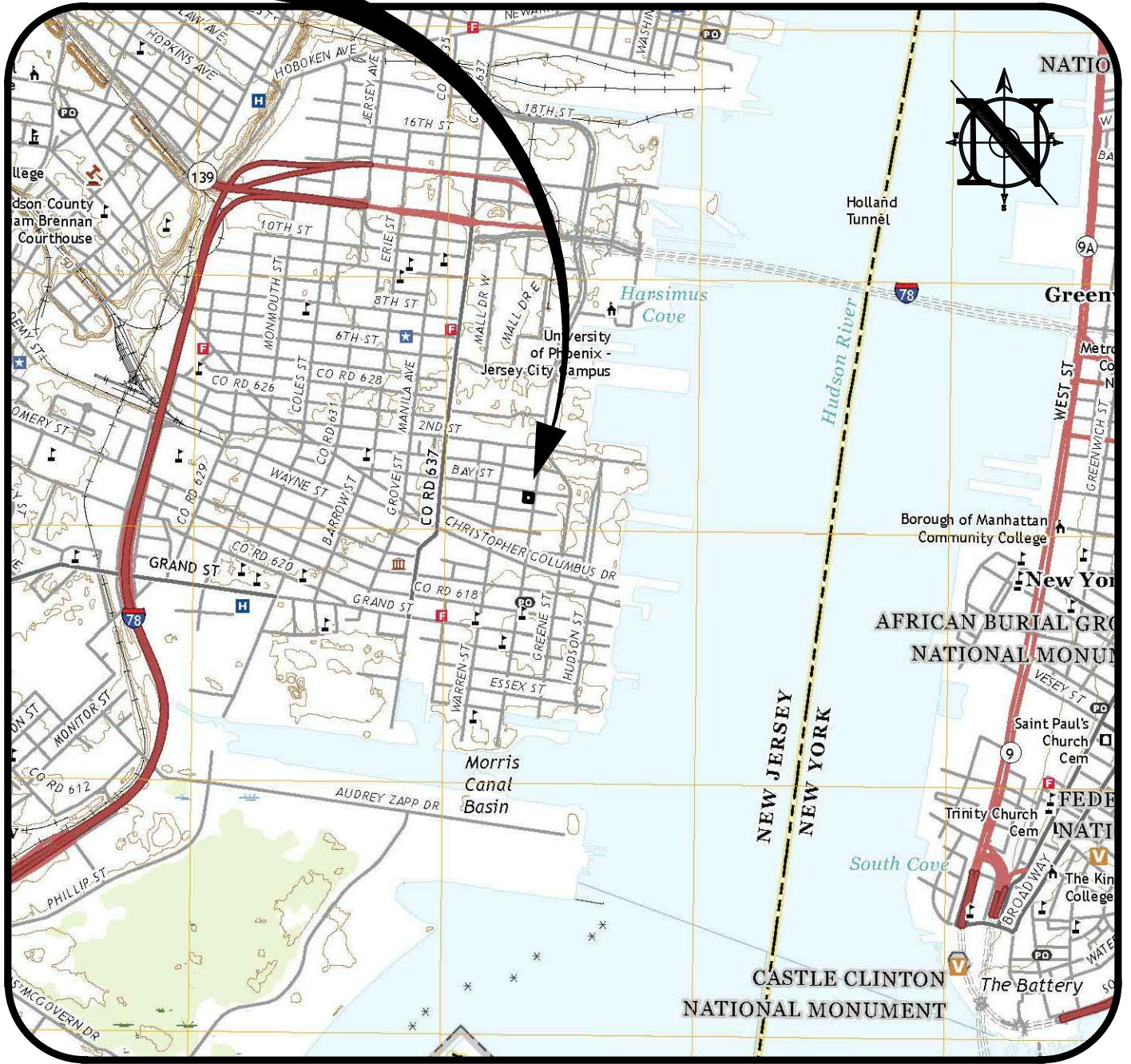
A P P E N D I X A

USGS MAP

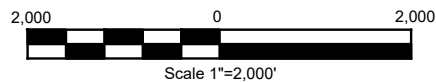
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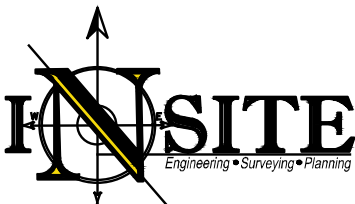
SITE



PLAN



USGS MAP EXHIBIT



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Site Location:
 335 Washington Street
 Block 11611, Lot 1.02
 City of Jersey City, Hudson County, NJ

Reference:
 US Geological Survey
 Jersey City Quadrangle-2019

InSite Project No.
 21-1618-02
Drawing No.
 21-1618-02r0
Date
 March 8, 2022

Revisions