SANITARY SEWER ENGINEER'S 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

May 27, 2022

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APPENDIX

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 proposed building service connection. The analysis presented herein is intended to support applications for approval of the service connections by the Jersey City MUA as the collection entity, the Passaic Valley Sewerage Commission (PVSC) as the treatment entity.

2 PROJECT SUMMARY

The project includes the construction of one 6" gravity CIP sanitary sewer service connection from the proposed buildings to convey building's wastewater flows to an existing 24" CIP sanitary sewer main along the northern side of Bay Street. Flow rate calculations as well as conveyance system details and specifications are in accordance with the requirements of New Jersey Pollutant Discharge Elimination System (NJPDES) Rules, NJAC 7:14-23.3. The projected flow is ultimately conveyed to Passaic Valley Sewerage Commission (PVSC) Treatment Plant located 600 Wilson Avenue in Newark, NJ and treated. Treated water is then discharged to the Upper New York Bay via PVSC outfall pipe.

3 SANITARY DESIGN FLOW CALCULATIONS

A. Proposed Average Daily Flow (per N.J.A.C. 7:14A-23.3):

Projected Sewer Flow (based on NJAC 7:14A-23.3) For 335 Washington Street			
Non-Residential Type	**Gross Floor Area (SF)**	**GPD per SF**	**Flow (GPD)**
Office Space	10,000	0.1	1,000
		Total Projected Sewer Flow (GPD)	**1,000**
		Total Projected Sewer Flow (MGD)	**0.001**
		2 x Total Projected Sewer Flow (GPD)	**2,000**
		2 x Total Projected Sewer Flow (MGD)	**0.002**

B. Proposed Lateral Connection Capacity Analysis

The proposed building for contains one (1) - 6-inch CIP sanitary sewer laterals that have been sized to sufficiently convey the proposed flows from the buildings as calculated below:

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

where,
Q_d = design capacity, cfs (1/2 full)
n = Mannings roughness coefficient (CIP = 0.012)
A = flow area (1/2 full) = 0.098 S.F.
R = hydraulic radius = A/WP = 0.125 ft.
S = pipe slope = 0.02 ft/ft.

$$Q_d = (1.486/0.012) \times 0.098 \times 0.125^{2/3} \times 0.02^{1/2} = 0.43 \text{ cfs}$$

Q_d = 0.43 cfs x 0.6463 mgd/cfs = 0.278 mgd per lateral

Minimum Design Capacity Requirement = 2 x $Q_{avg.}$ (flowing 1/2 full)

Q_{avg} = 0.001 mgd

$$\frac{Q_d}{Q_{avg.}} = \frac{0.278 \text{ mgd}}{0.001 \text{ mgd}} = 277 > 2 \quad \therefore \text{ OK}$$

(CAPACITY GREATLY EXCEEDS DEMAND)

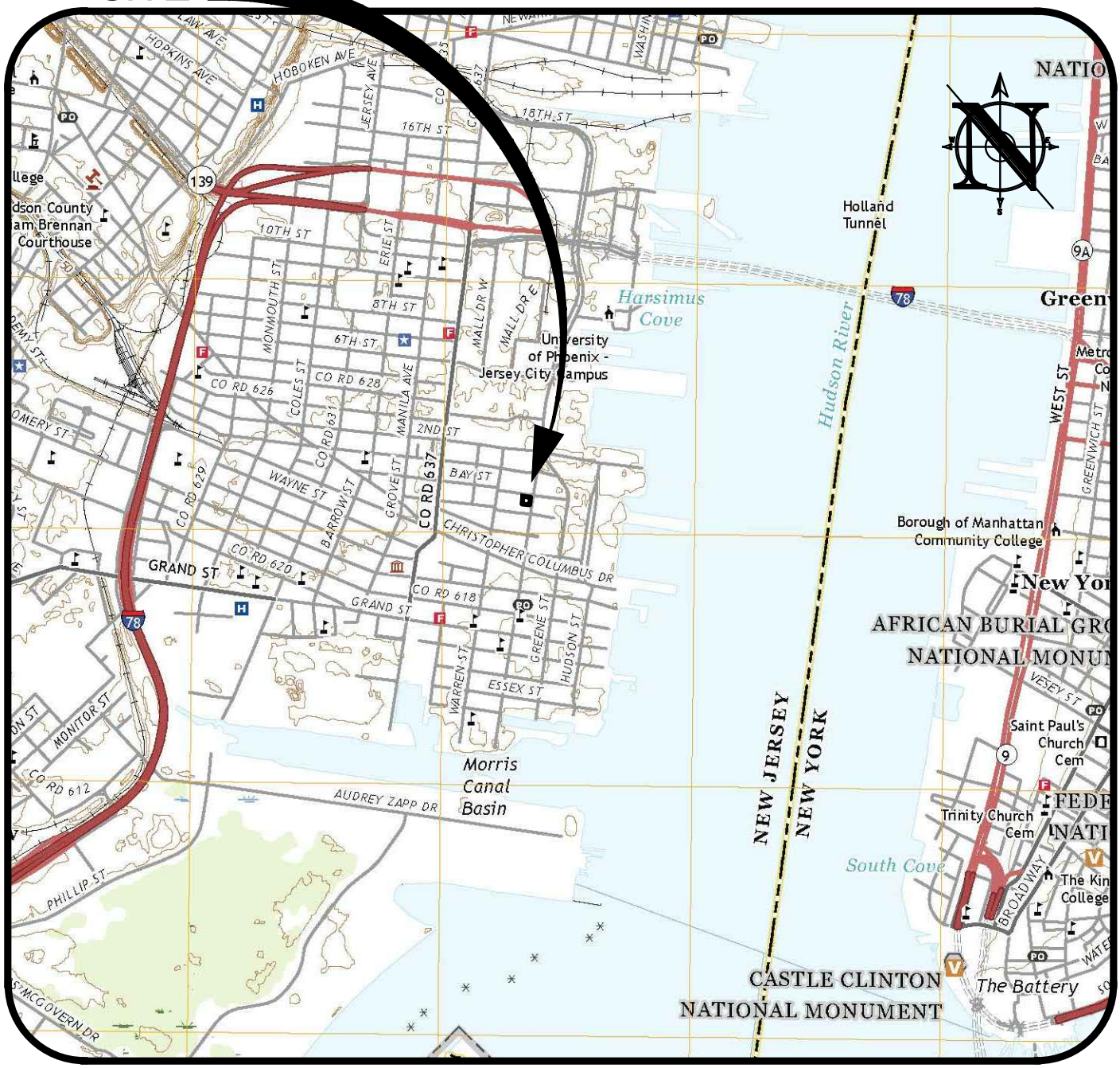
As show above one 6-inch CIP lateral with a minimum slope of 2% flowing half full has the capacity to handle the total flow for project.

4 CONCLUSION

The analysis herein demonstrates that the proposed building service connection will adequately convey wastewater flows from the proposed project.

A P P E N D I X A

USGS MAP



PLAN

2,000 0 2,000

Scale 1"=2,000'

USGS MAP EXHIBIT

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Engineering • Surveying • Planning

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