ENGINEER'S REPORT
WATER & SANITARY SEWER

FOR

MIXED USE BUILDING
43 Columbia Street
City of Albany
Albany County, New York

Submitted To:

City of Albany
Albany County
New York

Project Proponent:

Redburn Development Partners
204 Lafayette Street
Schenectady, NY 12305

October 30, 2018

Project No. 5005C

Prepared By:

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Schenectady, NY 12305
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# Engineer's Report

## Water & Sanitary Sewer

For

Mixed Use Building  
43 Columbia Street  
City of Albany  
Albany County, New York

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### Exhibits

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ENGINEER'S REPORT
WATER & SANITARY SEWER
FOR
MIXED USE BUILDING
43 Columbia Street
City of Albany
Albany County, New York

PROJECT LOCATION

The proposed mixed-use development is located at 43 Columbia Street in the City of Albany, Albany County, New York (see Exhibit 1). The site is bordered on the north by Van Tromp Street, on the east by the building of 39 Columbia St, on the south by Columbia Street, and on the west by the alley included in the 93 North Pearl Street Parcel.

SOIL TYPES & GROUNDWATER

According to the Albany County NRCS, the primary soil group is urban land. The existing site is fully developed and ground cover is impervious.

GENERAL SITE DEVELOPMENT

The applicant is proposing to redevelop the 0.37± acre parcel in order to construct twenty-seven (27) apartment units while retaining 50,560± square feet as 130 parking spaces. The existing 5-story parking garage will remain and be modified to accommodate the new uses.

The water supply and sanitary sewer will require new laterals. The proposed water service consists of one (1) 4-inch lateral connected to the 12-inch main along Columbia Street. The proposed sanitary line consists of one (1) 6” service connection to the 12” VCP sewer main along Columbia Street at the manhole.
WATER & SEWER DEMAND, SUPPLY & USE

The existing space, being a parking garage, currently only has capacity for storm water. Since no additional structures are being erected, the storm water capacity will not change.

The proposed 27 residential dwelling units consist of 36 bedrooms. The total of 36 bedrooms will generate an average daily demand of 55 gallons per day per bedroom (GPD/BR) based on efficient fixture design. The owner will use 1.5 GPM showerheads, 1 GMP aerators on all faucet fixtures, and 0.8 GPF toilets. See Appendix C for owner provided cut sheets pertaining to designed low flow fixtures. Sewer usage is based on 90% of the water usage.

Avg. daily residential water demand = (36 BR)*(55 GPD/BR) = 1,980 GPD [1.38 GPM]
Avg. daily residential sewer demand = (1,815 GPD)*(90%) = 1,782 GPD [1.24 GPM]

As shown above, this project is not expected to generate enough water and sewer demand to warrant further investigation. Also attached, in Appendix B, are actual water usage from similar apartment projects. Note that the usage is right in line with design standards. The proposed water and sanitary sewer service should be adequate and no further infrastructure modifications are necessary.

WATER & SEWER DISTRIBUTION

The proposed water lateral will be utilized to service the proposed project. The lateral will have a shutoff valve.

The proposed sewer lateral will be utilized to service the building. The lateral will be connected to the existing manhole on Columbia Street.

DESIGN STANDARDS

The proposed system will be designed and constructed in accordance with the requirements of the City of Albany and the Albany County Health Department. The existing water and sanitary sewer systems will remain and continue to be compliant with current standards and specifications.
OWNERSHIP

Both the existing water and sewer laterals will be privately owned and maintained by the property owner.

SUMMARY

Based on the assessment of the proposed water and sewer demand, this water and sewer improvement will not adversely impact the area water and/or sewer distribution system. The area network is capable of handling the anticipated demands generated by this project to the best of my knowledge.
EXHIBIT 1
SITE LOCATION MAP
APPENDIX A
SITE PLAN (REDUCED 11X17)
APPENDIX B
WATER USAGE DATA
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<th>Usage</th>
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