



Site Planning	Environmental Studies
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## MEMORANDUM

DATE: February 24, 2020

TO: City of Beacon Planning Board

FROM: Mr. Stephen Spina, JMC

RE: JMC Project 18119  
Beacon Commons  
16 West Main Street  
City of Beacon, New York

SUBJECT: **Inflow & Infiltration Study**

On Monday, December 30, 2019, and Tuesday, February 11, 2020, JMC visited the site to review the existing drainage conditions relative to any potential inflow and infiltration (I&I) into the existing City sanitary sewer collection system.

### December 30, 2019:

The site and interior of the building were reviewed for any possible sources of drainage that could be inadvertently connected to a pipe that discharges to the City sanitary sewer collection system within West Main Street and Bank Street. The building has an existing floor drain and hand wash sink as shown on JMC Figure 1 “Existing Conditions Inflow & Infiltration Plan.” There are existing drain inlets at the rear of the existing building in the parking area that drain to the City drainage system in West Main Street and Bank Street. There is also a rain garden stormwater practice with an outlet control structure which controls stormwater discharges from the front parking area. The building roof drains all spill directly onto either the adjacent pavement or adjacent lawn/vegetated ground cover and then flow into one of the above described exterior drain inlets. This visit was for exploratory purposes only.

### February 11, 2020:

There was a rain event from February 10 to February 11, which had a recorded rainfall depth of 0.29 inches according to Accuweather. JMC revisited the site to finalize the study. Fluorescent dye tablets were inserted into the wash sink in the rear of the building which drains into the existing floor drain through the middle of the building as shown on JMC Figure 1 “Existing Conditions Inflow & Infiltration Plan.” The dye was observed in several locations as indicated on the figure and as noted in the photos below.



Photo 1: Dye Inserted in Sink



Photo 2: Dye Observed in Floor Drain inside Building



Photo 3: Location of Rear Storm Drain Inlet



Photo 4: Dye Observed in Rear Storm Drain Inlet



Photo 5: Dye Observed in Bank Street Upgrade Storm Drain Inlet



Photo 6: Close-Up of Dye Observed in Bank Street Upgrade Storm Drain Inlet



Photo 7: Location of Bank Street Downgrade Storm Curb Inlet



Photo 8: Dye Observed in Bank Street Downgrade Storm Curb Inlet



Photo 9: Close-Up of Dye Observed in Bank Street Downgrade Storm Curb Inlet



Photo 10: Location of West Main Street Storm Drain Manhole



Photo 11: Dye Observed in West Main Street Storm Drain Manhole

It was determined that the wash sink in the rear of the building which drains into the existing floor drain through the middle of the building eventually drains to the exterior rear parking lot drainage system. There is a drain inlet in the rear parking lot drainage system that receives discharge from the interior of the building as noted on the figure. The other exterior drains at the rear of the building did not receive discharge from the interior of the building since the fluorescent dye was not observed in those structures. The existing City storm drain inlets in Bank Street and at the intersection of Bank Street and West Main Street also contained fluorescent dye which indicates that they receive flows from the rear parking area drain inlet.

The sanitary sewer manhole in West Main Street did not receive any dye which indicates that there are no illegal or inadvertent stormwater discharges into the City sewer system. A considerable amount of stormwater from the recent storm was observed flowing through the sanitary sewer as shown in the photos below.



Photo 12: Location of West Main Street Sanitary Sewer Manhole



Photo 13: Heavy Stormwater Flow in West Main Street Sanitary Sewer Manhole  
(Dye Not Observed)