

April 15, 2019

Chris Bray
Synalovski Romanik Saye
1800 Eller Drive, Suite 500,
Fort Lauderdale, Florida 33316

Subject: **WATER AND WASTEWATER CAPACITY AVAILABILITY LETTER**
LA Lee YMCA Mizell Community Center – DRC Case No. R19004
1409 NW 6th Street, Fort Lauderdale, Florida 33311

Dear Mr. Bray,

According to the information submitted, the project consists of constructing an approximately 72,000-square-foot 4-story building with fitness/wellness spaces, office spaces, retail space, a restaurant, and other uses. Water connections to City of Fort Lauderdale (City) utilities are proposed along the west side of the property along NW 14th Terrace and sanitary sewer connections are proposed along the east side of the property along NW 14th Avenue. This project lies within the City's Pump Station (PS) A-23 basin and it is anticipated that this project will increase water and sewer demand by 0.015 million gallons per day (MGD). The existing water and sewer infrastructure have the capacity to support the proposed development and no improvements are needed.

If Public Works staff issue comments on the proposed flow calculations after the issuance of this capacity availability letter, the consultant shall request a revised letter with the correct approved flow calculations. The determination of capacity availability is based upon tools and data analysis as of the date of this letter. Availability of capacities, as calculated in the attached analysis, is not guaranteed and no existing system capacity shall be considered "committed" for this project until a permit has been issued and all fees have been paid. The City reserves the right to re-evaluate the availability of capacities at the time of permit application. If sufficient capacities are not available, the City may deny the permit application or ask the Owner/Developer to submit an alternate design prior to approval. Information contained in this letter will expire one year from the date issued.

Should you have any questions or require any additional information, please contact me at (954) 828-6126.

Sincerely,



Thomas Lawrence, P.E.
Project Manager II

Enclosures: Water and Wastewater Capacity Analysis

cc: Joe Kenney, P.E., Assistant Public Works Director
Talal Abi-Karam, P.E., Assistant Public Works Director
Omar Castellon, P.E., Chief Engineer
Dennis Girisgen, P.E., City Engineer
File: Water and Sewer Capacity Letters

City of Fort Lauderdale
Public Works Department
Water and Wastewater Capacity Analysis

LA Lee YMCA Mizell Community Center – DRC Case No. R19004
1409 NW 6th Street, Fort Lauderdale, Florida 33311

PROJECT AND DESCRIPTION

Construction of a 72,000-square-foot 4-story building with fitness/wellness spaces, office spaces, retail space, a restaurant, and other uses.

DESCRIPTION OF EXISTING UTILITIES

Water: The site is currently served by a 6-inch water main to the west of the property along NW 14th Terrace. See Figure 1.

Wastewater: The site is currently served by a 10-inch gravity sewer main to the east of the property along NW 14th Avenue. See Figure 2.

Pumping Station: The site is served by PS A-23 which is located directly north of the project site along NW 8th Street.

SUMMARY OF ANALYSIS AND REQUIRED ACTION

The existing water and sewer infrastructure have capacity to serve the project with no improvements required.

Figure 1 – City Water Atlas

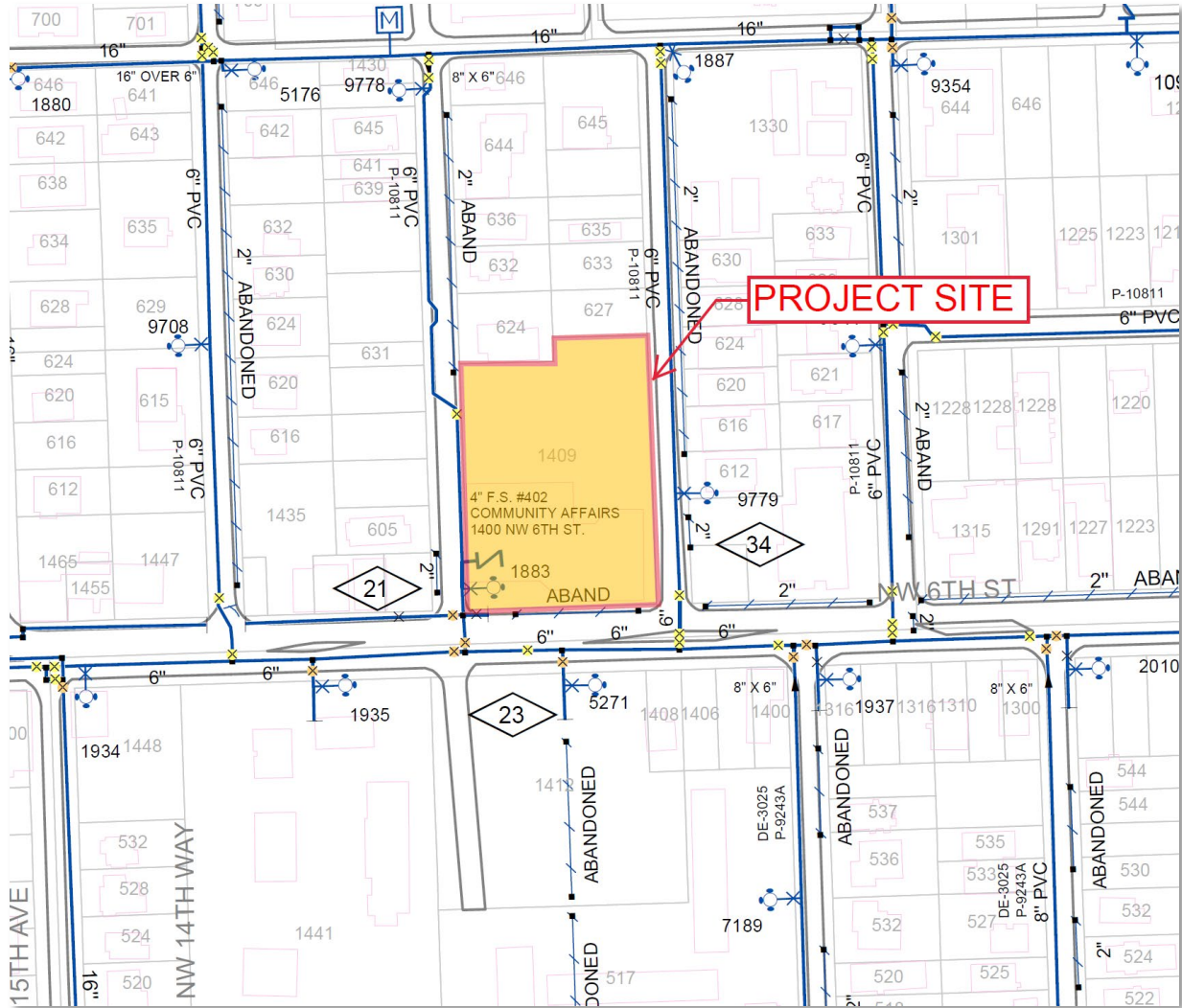
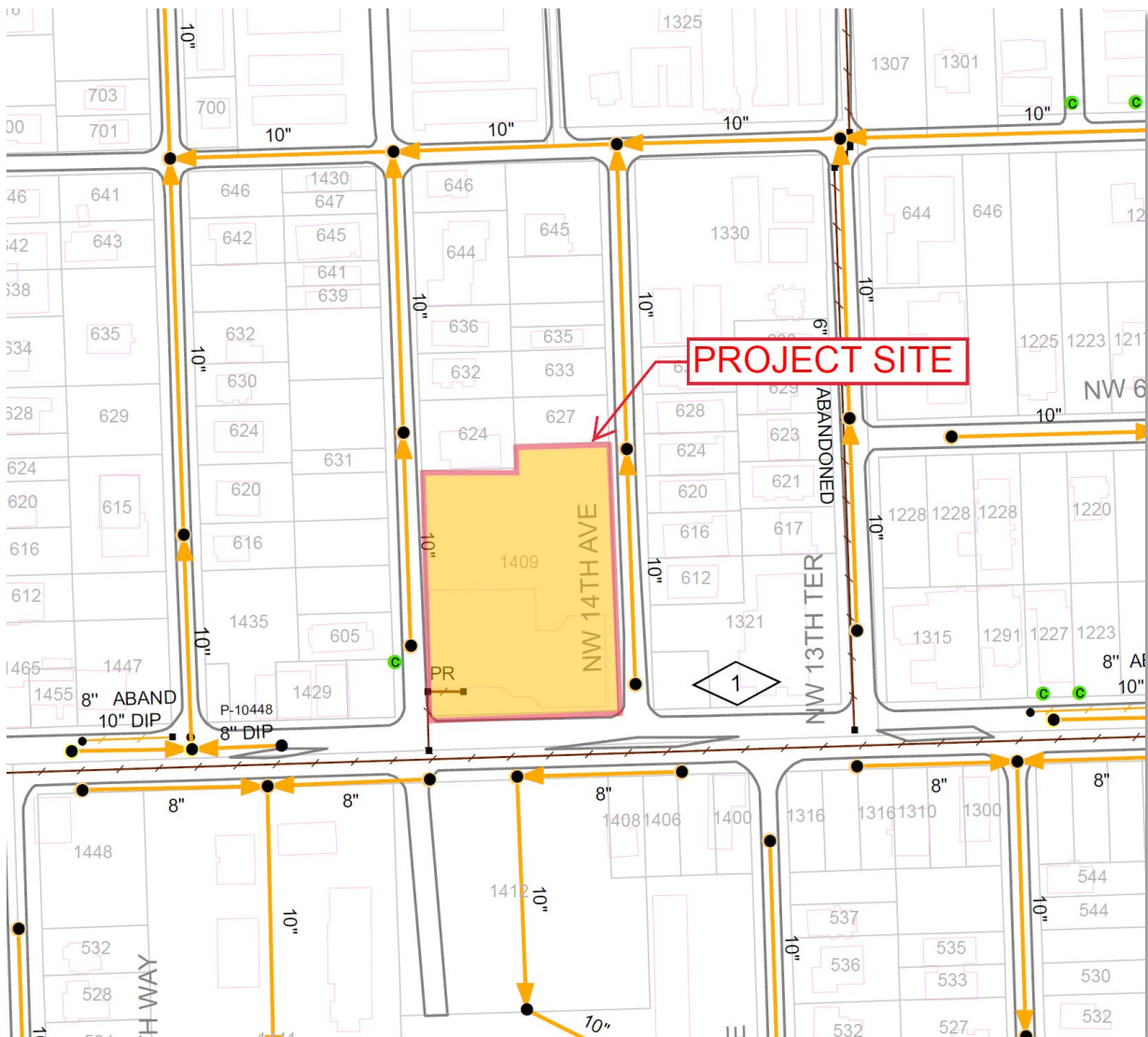


Figure 2 – City Sewer Atlas



WATER CAPACITY ANALYSIS

Requested Demand: Based on the applicant's site plan and building use information the estimated potable water demand is approximately 15,102 gallons per day (GPD), which equates to 0.015 million gallons per day (MGD). Water use demands are calculated based on the City's "Guidelines for the Calculations of Sanitary Sewer Connection Fees".

Evaluation of impact on existing distribution pipe (flow & capacity): According to the site plan the applicant is proposing to utilize the 6-inch water main along NW 14th Terrace to the west of the property. The InfoWater hydraulic model was analyzed to determine the impact of this project on the existing 6-inch water main and it was determined that the existing main can sufficiently serve the project.

Evaluation of impact of Permitted Water Plant Capacity: The Fiveash and the Peele Dixie Water Treatment Plants are designed to treat 70 MGD and 12 MGD of raw water respectively (82 MGD total). The total permitted Biscayne aquifer water withdrawals for these plants is limited to 52.55 MGD per the South Florida Water Management District (SFWMD) permit number 06-00123-W.

The current twelve-month rolling average production at the two plants is 39.42 MGD. The previously committed demand from the development projects in the permitting or the construction stage is 4.454 MGD. Combining these figures with the demand from the proposed project of 0.015 MGD, the required production would be 43.89 MGD. This is less than the allowable withdrawal limit of 52.55 MGD. Therefore, the water plants have sufficient capacity to serve this project. See Figure 3 below.

Recommended Water Infrastructure Improvements: No improvements required.

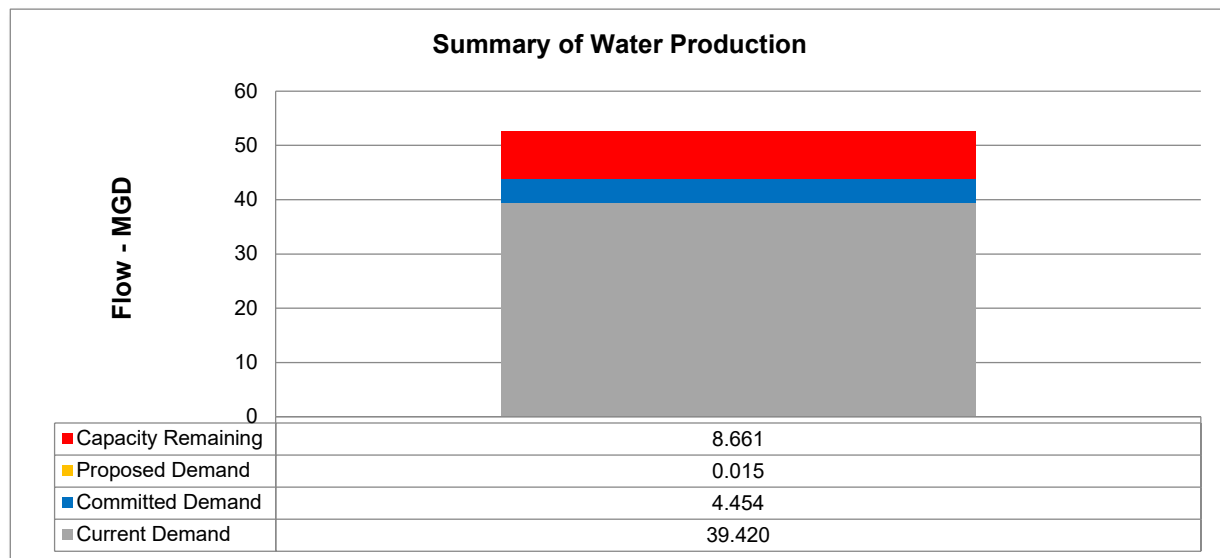


Figure 3

WASTEWATER CAPACITY ANALYSIS

Requested Demand: Based on the applicant's site plan and building use information the estimated additional potable water demand is 15,102 GPD, which equates to 0.015 MGD (although wastewater is usually 80% of the potable water, a higher, conservative figure has been used for calculations). Sewer use demands are calculated based on the City's "*Guidelines for the Calculations of Sanitary Sewer Connection Fees*".

Evaluation of impact on existing collection pipe (gravity system capacity): The existing site and adjacent buildings are served by an 10-inch gravity sewer main along NW 14th Avenue to the east of the property.

Manual of Practice (MOP) 60, published by American Society of Civil Engineers (ASCE) for the gravity sewer design and used by the City staff, recommends that pipe diameters 15-inch or less be designed to flow half full during peak flows. The City uses a peak hourly flow factor of 3.0. Accounting for existing flows and based on the tools and information available to the City staff, it has been calculated that the 10-inch diameter pipe will flow approximately 24% full during peak conditions, which is less than the ASCE-recommended 50%. Therefore, the 10-inch pipe is adequate to serve the project.

Evaluation of impact on pumping station: PS A-23 has a capacity of 1400 gallons per minute (GPM) and currently has a Nominal Average Pumping Operating Time (NAPOT) of approximately 6.2 hours per day. Based on projected sewage flows, the pumping run times would increase approximately 11 minutes per day. The total NAPOT of PS A-23 will have a NAPOT of approximately 6.4 hours once the proposed developments are complete, less than the recommended average of 10 hours per day (see Figure 4).

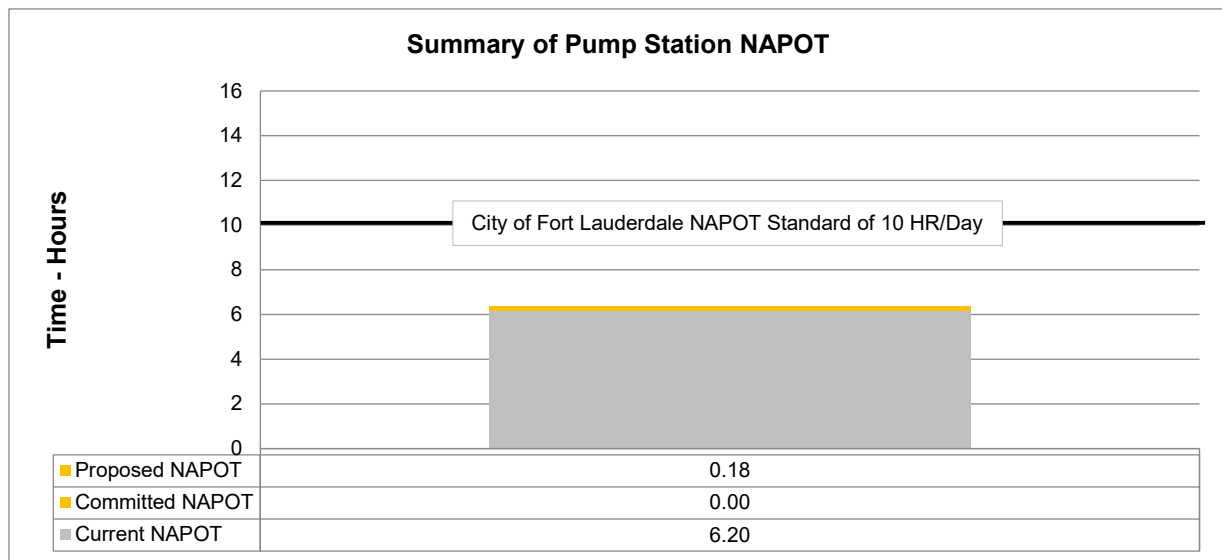


Figure 4

Evaluation of impact of Permitted Wastewater Plant Capacity: The City of Fort Lauderdale owns and operates the George T. Lohmeyer Regional Wastewater Treatment Plant (GTL), which provides wastewater treatment for the City of Fort Lauderdale. The Broward County's Environmental Protection and Growth Management Department's (EPGMD) Environmental Licensing & Building Permitting Division's licensed capacity for GTL is 48 MGD Annual Average Daily Flow (AADF). The current AADF to the plant is 38.236 MGD. Combining the committed flows for previously approved projects of 4.454 MGD plus the 0.015 MGD net contribution from the project results in a total projected flow of 42.71 MGD. This is less than the permitted treatment plant capacity of 48 MGD. Therefore, the treatment plant has sufficient capacity to serve this project. See Figure 5 below.

Recommended Wastewater Infrastructure Improvements: No improvements required.

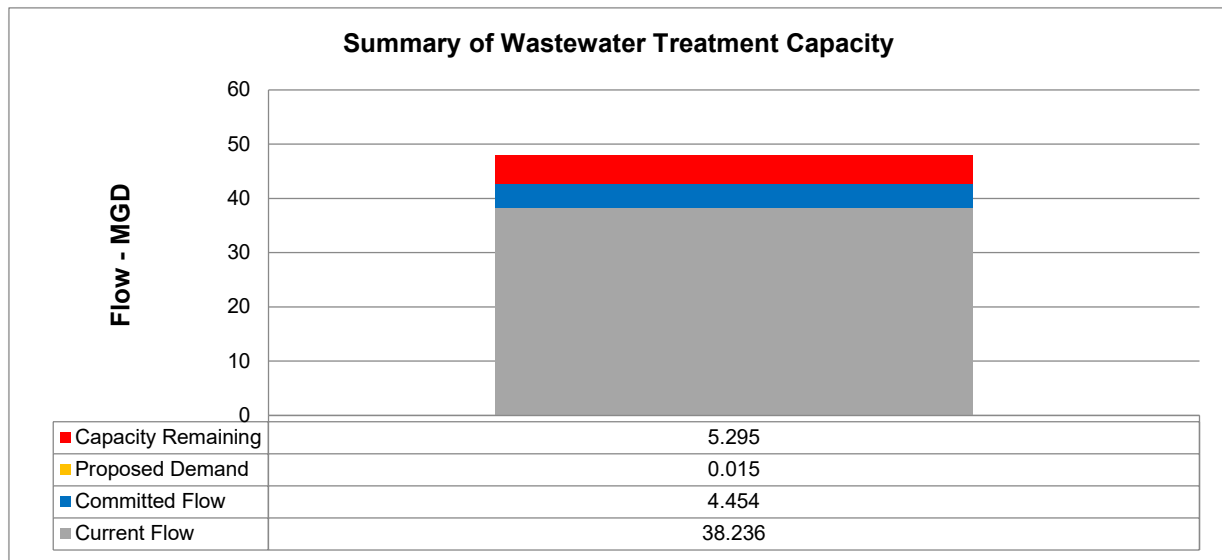


Figure 5