



PROJECT ADDRESS: 3013 Harbor Drive

Date request was received:1/11/2023

DRC CASE#: UDP-S23002

**Project Name: Harbor FTL** 

IF NO DRC CASE NUMBER PROVIDED, WATER & SEWER AVAILABILITY LETTER TO BE PROVIDED UPON PAYMENT OF ENCLOSED A/R INVOICE.

#### \*\*\*\*\*IMPORTANT INFORMATION\*\*\*\*\*

The following analysis is only VALID FOR A PERIOD OF ONE YEAR FROM THE DATE OF ISSUANCE. After which point, a reanalysis must be conducted to ensure adequate availability for projects.

Water and Sanitary Sewer Capacity Allocation Letter (Small Project)	\$960
Modifications to small project that require capacity re-analysis	\$960
Water and Sanitary Sewer Capacity Allocation Letter (Large Project)	\$2,400
Modifications to large project that require capacity re-analysis	\$2,400

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July 10, 2023

Chad Edwards Craven Thompson & Associates, Inc 3563 NW 53rd St Fort Lauderdale, FL 33309

#### Subject: WATER AND WASTEWATER CAPACITY AVAILABILITY LETTER Harbor FTL – DRC Case No. UDP-S23002 3013 Harbor Drive, Fort Lauderdale, FL 33316

Dear Chad Edwards,

According to the information submitted, the project consists of an addition 12 new apartment units to an existing 24-unit apartment complex. There are proposed water and sewer connections to City of Fort Lauderdale (City) utilities along Harbor Drive. This project lies within the City's Pump Station (PS) D-33 basin and will increase the average day water demand by approximately 0.0025 million gallons per day (MGD) and the average day sewer demand by approximately 0.0017 MGD. The pump station and sewer infrastructure require improvements to meet the increased demand of the proposed project. The sewer improvements shall be constructed, certified, and in operation prior to issuance of any Certification of Occupancy.

The determination of capacity availability is based upon an analysis of the City's water and sewer system models, average daily flows at the treatment plants, and previously committed flows, as of the date of this letter, in conjunction with the demand created by the proposed subject project. 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 development permit approval has been achieved and all fees have been paid. The City reserves the right to re-evaluate the availability of capacities at the time of building permit application. If sufficient capacities are not available at that time, the City may deny the permit application or ask the Owner/Developer to submit an alternate design for consideration prior to approval.

If there are changes to the proposed development after issuance of this capacity availability letter, the Owner or Owner's authorized representative for the subject project must submit a revised request based on the updated plans. Failure to seek approval prior to changing the plans may result in revocation of permit and capacity allocation. The information contained in this letter will expire one year from the date issued.

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Should you have any questions or require any additional information, please contact me at (954) 828-5115.

Sincerely, Chily Cele

Chelsey Corneille, E.I. Project Manager II

Enclosures: Water and Wastewater Capacity Analysis cc: Alan Dodd, P.E., Public Works Director Talal Abi-Karam, P.E., Assistant Public Works Director Christopher Bennett, P.E., Assistant Public Works Director Daniel Rey, P.E., City Engineer File: Water and Sewer Capacity Letters

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

#### Harbor FTL – DRC Case No. UDP-S23002 3013 Harbor Drive, Fort Lauderdale, FL 33316

## **PROJECT AND DESCRIPTION**

The project consists of an addition 12 new apartment units to an existing 24-unit apartment complex.

#### **DESCRIPTION OF EXISTING UTILITIES**

**Water:** The site is currently served by a 6-inch water main along Harbor Drive, south of the project site. See Figure 1.

**Wastewater:** The site is currently served by an 8-inch gravity sewer main to south of the project site along Harbor Drive. See Figure 2.

Pumping Station: The site is served by PS D-33 which is located along Holiday Drive.

#### SUMMARY OF ANALYSIS AND REQUIRED ACTION

The existing water infrastructure has the capacity to support the proposed development. The sewer infrastructure requires improvements to meet the increased demand of the proposed project, see Figure 3.

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## Figure 1 – City Water Atlas



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## Figure 2 – City Sewer Atlas



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## Figure 3 – City Sewer Atlas Improvements



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# WATER CAPACITY ANALYSIS

**Requested Demand:** Based on the applicant's site plan and building use information, the estimated average day potable water demand is approximately 2456 gallons per day (GPD), which equates to 0.0025 MGD. Average day water use demands are calculated by reducing the calculated max day water use demands by a factor of 1.18. The max day water use demands are calculated using the City's Guidelines for the Calculations of Sanitary Sewer Connection Fees and are based on City Ordinance No. C-19-29.

**Evaluation of impact on existing distribution pipe:** According to the site plan, the applicant is proposing to utilize the 6-inch water main along Harbor Drive. The InfoWater hydraulic model was analyzed to determine the impact of this project on the existing 6-inch water main.

**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 34.78 MGD. The previously committed demand from development projects in the permitting or the construction stage is 4.88 MGD. Combining these figures with the demand from the proposed project of 0.0025 MGD, the required production would be 39.66 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 4 below.



Recommended Water Infrastructure Improvements: No improvements required.

Figure 4

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## WASTEWATER CAPACITY ANALYSIS

**Requested Demand:** Based on the applicant's site plan and building use information, the estimated average day sewer use demand is approximately 1691 GPD, which equates to 0.0017 MGD. Average day sewer use demands are calculated using the City's Guidelines for the Calculations of Sanitary Sewer Connection Fees and are based on City Ordinance No. C-19-29.

**Evaluation of impact on existing collection pipe:** According to the site plan, the applicant is proposing to utilize the 8-inch gravity sewer main to south of the project site along Harbor Drive. Accounting for existing flows and based on the tools and information available to the City staff, it has been calculated that the pipes downstream of the proposed development will flow greater than the City's governance plan threshold of 70% during peak flows. Therefore, the pipes downstream of the developments are not adequate to serve the proposed project.

**Evaluation of impact on pumping station:** PS D-33 has a duty point of 1200 gallons per minute (GPM) and has a Nominal Average Pumping Operating Time (NAPOT) of approximately 1.90 hours per day. Based on projected sewage flows, the pumping run times would increase approximately 1 minutes per day. Additionally, there are other committed flows from proposed developments within the PS D-33 basin resulting in 52.87 minutes of additional runtime. PS D-33 will have a NAPOT of 2.80 hours once the proposed developments are complete, less than the recommended average of 10 hours per day. See Figure 5 below.



Figure 5

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**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 Florida Department of Environmental Protection's (FDEP) permitted capacity for GTL is 56.6 MGD-TMADF (Million Gallons per Day – Three Month Average Daily Flow). The three-month average daily flow (TMADF) to the plant is 46.70 MGD. Combining the committed flows for previously approved projects of 3.92 MGD plus the 0.0017 MGD net contribution from the project results in a total projected flow of 50.62 MGD. This is less than the permitted treatment plant capacity of 56.6 MGD. Therefore, the treatment plant has sufficient capacity to serve this project. See Figure 6 below.

**Recommended Wastewater Infrastructure Improvements:** Prior to issuance of a Certificate of Occupancy, approximately 70 LF of new 10" to 12" pipe and improvements to the pump station will be required (see Figure 3).



Figure 6

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