



February 11, 2021

Courtney Crush, P.A. Crush Law 333 S New River Dr E # 2200 Fort Lauderdale, FL 33301

Subject: WATER AND WASTEWATER CAPACITY AVAILABILITY LETTER

The Terraces – DRC Case No. UDP-A20001 527 Orton Ave, Fort Lauderdale FL 33304

Dear Courtney Crush,

According to the information submitted, the project consists of constructing an 18-unit condominium; an existing 3-unit condominium is to be demolished. The applicant is proposing a sewer connection to an existing City sewer along Orton Avenue. This project lies within the City's Pump Station (PS) D-41 basin and will increase the average day water demand by approximately 0.0028 million gallons per day (MGD) and the average day sewer demand by approximately 0.0021 MGD. While the pump station is currently experiencing high run times, the proposed changes are minimal, and the existing water and sewer infrastructure have the capacity to support the proposed development and no improvements are needed.

If there are changes to the proposed development after issuance of this capacity availability letter, the Owner or Owner's authorized representative shall 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 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) 828-6982.

Sincerely,

Dronix Suarez, E.I. Project Manager II

Enclosures: Water and Wastewater Capacity Analysis cc: Raj Verma, P.E., 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

PUBLIC WORKS DEPARTMENT

100 N. ANDREWS AVE, FORT LAUDERDALE, FLORIDA 33301 TELEPHONE (954) 828-5772, FAX (954) 828-5074

WWW.FORTLAUDERDALE.GOV

Printed On Recycled Paper







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

The Terraces – DRC Case No. UDP-A20001 527 Orton Ave, Fort Lauderdale FL 33304

# **PROJECT AND DESCRIPTION**

The project consists of constructing an 18-unit condominium; an existing 3-unit condominium is to be demolished.

# **DESCRIPTION OF EXISTING UTILITIES**

**Water:** The site is currently served by a 6-inch water main along Orton Avenue which connects to 8-inch water mains along Vistamar Street and Riomar Street. See Figure 1.

**Wastewater:** The site is currently served by a 10-inch gravity sewer main which conveys flow downstream to a 10-inch sewer on Riomar and to pumping station D-41. See Figure 2.

Pumping Station: The site is served by PS D-41 which is located along Bayshore Dr.

## **SUMMARY OF ANALYSIS AND REQUIRED ACTION**

While the pump station is currently experiencing high run times, the proposed changes are minimal, and the existing water and sewer infrastructure have the capacity to support the proposed development and no improvements are needed.

PUBLIC WORKS DEPARTMENT

100 N. ANDREWS AVE, FORT LAUDERDALE, FLORIDA 33301 TELEPHONE (954) 828-5772, FAX (954) 828-5074 WWW.FORTLAUDERDALE.GOV

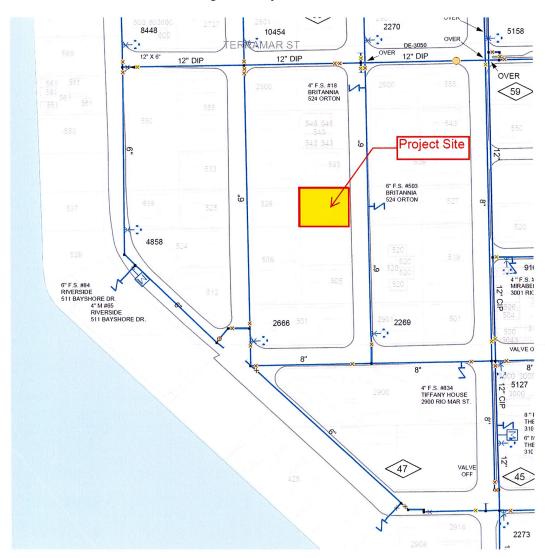
Printed On Recycled Paper.







Figure 1 - City Water Atlas



### PUBLIC WORKS DEPARTMENT

100 N. ANDREWS AVE, FORT LAUDERDALE, FLORIDA 33301 TELEPHONE (954) 828-5772, FAX (954) 828-5074 WWW.FORTLAUDERDALE.GOV









Figure 2 - City Sewer Atlas



## PUBLIC WORKS DEPARTMENT

100 N. ANDREWS AVE, FORT LAUDERDALE, FLORIDA 33301 TELEPHONE (954) 828-5772, FAX (954) 828-5074 WWW.FORTLAUDERDALE.GOV









#### **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 2787 gallons per day (GPD), which equates to 0.0028 MGD. Average day water use demands are calculated by reducing the calculated max day water use demands by a factor of 1.3 as determined in the City's Comprehensive Utility Strategic Master Plan. 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 (condition & capacity**): According to the site plan, the applicant is proposing to utilize the 6-inch water main along Orton Avenue which connects to 8-inch water mains along Vistamar Street and Riomar Street. 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 37.52 MGD. The previously committed demand from development projects in the permitting or the construction stage is 4.78 MGD. Combining these figures with the demand from the proposed project of 0.0028 MGD, the required production would be 42.31 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:** Existing water infrastructure has sufficient capacity to serve the project with no improvements required.

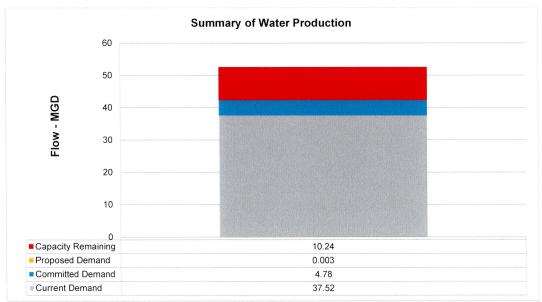


Figure 3

PUBLIC WORKS DEPARTMENT

100 N. ANDREWS AVE, FORT LAUDERDALE, FLORIDA 33301 TELEPHONE (954) 828-5772, FAX (954) 828-5074 WWW.FORTLAUDERDALE.GOV









#### **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 2113 GPD, which equates to 0.0021 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 (condition and capacity**): According to the site plan, the applicant is proposing to utilize the 10-inch gravity sewer main which conveys flow downstream to a 10-inch sewer on Riomar and to pumping station D-41. 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 pipes downstream of the proposed development will flow less than the ASCE-recommended 70% during peak flows. Therefore, the pipes downstream of the developments are adequate to serve the project.

**Evaluation of impact on pumping station:** PS D-41 has a duty point of 319 gallons per minute (GPM) and has a Nominal Average Pumping Operating Time (NAPOT) of approximately 21.57 hours per day. Based on projected sewage flows, the pumping run times would increase approximately 7 minutes per day. Additionally, there are other committed flows from proposed developments within the PS D-41 basin resulting in 235.63 minutes of additional runtime. PS D-41 will have a NAPOT of 25.61 hours once the proposed developments are complete. While the pump station is currently experiencing high run times, the proposed changes are minimal, and the existing sewer infrastructure has the capacity to support the proposed development and no improvements are needed. See Figure 4 below.

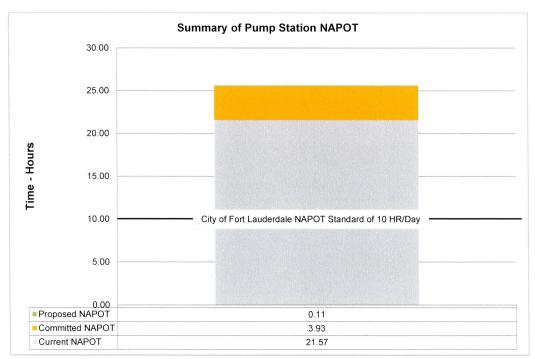


Figure 4

### **PUBLIC WORKS DEPARTMENT**

100 N. ANDREWS AVE, FORT LAUDERDALE, FLORIDA 33301 TELEPHONE (954) 828-5772, FAX (954) 828-5074 WWW.FORTLAUDERDALE.GOV

Printed On Recycled Paper.







**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-AADF (Million Gallons per Day – Annual Average Daily Flow). The annual average daily flow (AADF) to the plant is 42.50 MGD. Combining the committed flows for previously approved projects of 4.62 MGD plus the 0.0021 MGD net contribution from the project results in a total projected flow of 47.12 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.

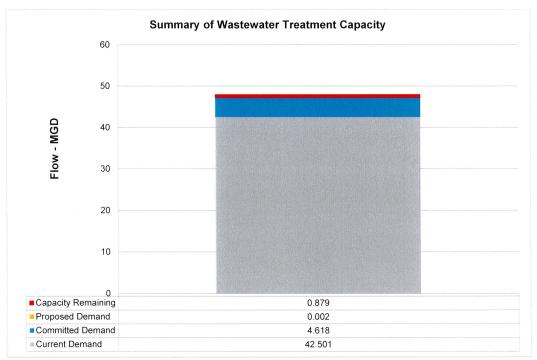


Figure 5

### PUBLIC WORKS DEPARTMENT

100 N. ANDREWS AVE, FORT LAUDERDALE, FLORIDA 33301 TELEPHONE (954) 828-5772, FAX (954) 828-5074



