

DRAFT WATER AND WASTEWATER BOND PROJECTS

AS OF: December 21, 2017

CONSENT ORDER

PROJECT REFERENCE #	FUND	TOTAL PROJECTED COST	PROJECT TITLE	PROJECT DESCRIPTION	Type Project
WW6-02	451	\$ 4,349,900	NE 25TH AVE 24" FORCE MAIN REPLACEMENT	This project is for the replacement of a deteriorated 24-inch diameter DIP sewer force main measuring approximately 5500 linear feet (LF). The force main is located along NE 25th Avenue, from Commercial Blvd. to Oakland Park Avenue.	Wastewater Collection System
WW6-04	451	\$ 10,087,900	NE 38TH ST 42" FM AND NE 19TH AVE 24" FORCE MAIN REPLACEMENTS	This project includes rehabilitation of approximately 8,000 feet of deteriorated DIP force main along NE 38th St., from N Dixie Hwy to Coral Ridge Country Club, including installation of approximately 3,000 feet of new 24" force main along NE 19th Ave., from NE 38th St to NE 32nd St, inspection of existing pipe, and performance of all related work.	Wastewater Collection System
WW6-07	451	\$ 17,919,500	SE 10TH AVE 48" FORCE MAIN REPLACEMENT AND 36" BYPASS	This project consists of replacing approximately 13400 linear feet of deteriorated 48-inch diameter sewer force main along SE 10th Ave., between E. Sunrise Blvd and P.S. A15, and installing approximately 5400 linear feet of 36" force main Federal Hwy. to server as a bypass and redundancy.	Wastewater Collection System
WW6-08	451	\$ 13,263,500	54" FORCE MAIN REPLACEMENT ON SE 9TH AND 10TH AVE AND NEW PARALLEL	This project is for the replacement of one section of 54" FM and installing a backup 48" FM. The section being replaced consists of approximately 6000 linear feet of deteriorated 54-inch diameter sewer force main along SE 9th and 10th Avenues, between pump station A15 and GTL treatment facility. In addition, as a back-up, approximately 48" FM will be installed in parallel along US1, which will also serve as a bypass during the placement of the 54 " FM.	Wastewater Collection System
WW6-09	451	\$ 7,440,000	EFFLUENT MAIN REHABILITATION	This project includes rehabilitation of the 54" inch PCCP pipeline leading from GTL to the injection wells, including inspection of existing pipe, and performance of all related work.	Wastewater Collection System
	454	\$ 4,000,000	Water and Wastewater Distribution and Collection System Mapping	This project will allow the Program Manager Consultant develop a mapping plan and submit to Florida Department of Environmental Protection (FDEP) within 9 months of the effective date of the Consent Order. In addition, all mapping services outlined in the mapping plan will have to be completed within 21 month of the effective date of the Consent Order	Systems Improvement
WW6-10	454	\$ 3,011,900	NE 13TH ST24" FORCE MAIN REPLACEMENT	This project includes rehabilitation of approximately 3,300 feet of 24" CIP pipeline along NW 13th St., from SR 845 S to SR 811 , including inspection, and all related work.	Wastewater Collection System
WW6-11	454	\$ 1,920,500	18" FORCE MAIN REPLACEMENT ACROSS THE NEW RIVER FROM NE 9TH ST TO N. BIRCH ROAD	This project includes rehabilitation of approximately 1,000 feet of 18" DIP pipeline across the river from NE 9th St. to N Birch Road, including inspection, and all related work.	Wastewater Collection System
	454	\$ 2,500,000	LAS OLAS BLVD 16" FORCE MAIN FROM LIDO ROAD TO INTRACOASTAL WATERWAY (IN-KIND PROJECT) AND UPGRADE PUMP STATION D-38	This project includes construction of a 16" force main from the Lido Road pumpstation to the Intracoastal waterway and upgrade pump station D-38	Wastewater Collection System
P11563	454	\$ 2,010,515	Victoria Park Sewer Basin A-19 Rehab	Rehabilitate main line sewers, manholes, and service laterals to reduce infiltration and inflow	Wastewater Collection System
P12055	454	\$ 1,135,000	Basin A-18 Sanitary Sewer Collection System	Rehabilitate main line sewers, manholes, and service laterals to reduce infiltration and inflow	Wastewater Collection System
P11566	454	\$ 1,215,964	Rio Vista Sewer Basin Rehab Pump Station D-43	Rehabilitate main line sewers, manholes, and service laterals to reduce infiltration and inflow	Wastewater Collection System
P12202	454	\$ 900,000	Pump Station D-10 and D-11 Flow Analysis and Redesign	This project includes the flow analysis of pump stations D-10 and D-11 to verify the available sewer capacity of each station. Additionally, this project includes the re-design necessary to address and correct any concerns that result fro mthe flow analysis.	Wastewater Collection System
	451/454	\$ 5,799,320	Consent Order Phase II CEI and Project Oversight	This project will encompass the civil engineering inspection/construction services (CEI) and overall project oversight to be provided by the Consent Order Program Manager Consultant. These services will be required to complete and deliver all the Phase II force main projects and miscellaneous services in order to remain compliant with the Consent Agreement between the City and the Florida Department of Environmental Protection (FDEP).	Consent Order Program Management

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	451/454	\$ 100,000	Asset Management and CMOM Program Development Plan	This project will allow the Program Manager Consultant develop a plan for an Asset Management and Capacity Management, Operations and Maintenance (CMOM) Program to be submitted to Florida Department of Environmental Protection (FDEP) for approval within 11 months of the effective date of the Consent Order.	Systems Improvement
	451/454	\$ 800,000	Sewer Capacity Analysis for Gravity and Force Mains	This project will allow the Program Manager Consultant to conduct a citywide capacity analysis of the force mains, gravity mains and pump stations within 20 months of the effective date of the Consent Order, and submit a report summarizing the findings to Florida Department of Environmental Protection (FDEP) within 22 months of the effective date of the Consent Order.	Systems Improvement
	451/454	\$ 400,000	Consent Order Asset Management Program	This project will allow the Program Manager Consultant develop and implement an Asset Management Program, as mandated in the Consent Order Agreement between the City and Florida Department of Environmental Protection (FDEP).	Systems Improvement
	451/454	\$ 400,000	Consent Order Capacity Management, Operations and Maintenance Program	This project will allow the Program Manager Consultant develop and implement an Capacity Management, Operation and Maintenance (CMOM) Program, as mandated in the Consent Order Agreement between the City and Florida Department of Environmental Protection (FDEP).	Systems Improvement
	451/454	\$ 4,000,000	Force Main Condition Assessment	This project will allow the Program Manager Consultant develop a force main assessment plan and submit to Florida Department of Environmental Protection (FDEP) within 9 months of the effective date of the Consent Order. Pending approval by FDEP of the submitted plan, all the force mains outlined in the plan will have to be assessed within 18 months of the approval.	Wastewater Collection System
		\$ 53,060,800	Central Region/Wastewater Fund (451)		
		\$ 16,693,879	Water/Sewer Master Plan Fund (454)		
		\$ 11,499,320	Joint 451 and 454 funded		
		\$ 81,253,999	TOTAL		

Deferred Projects/Additional Funding Required

PROJECT REFERENCE #	FUND	TOTAL PROJECTED COST	PROJECT TITLE	PROJECT DESCRIPTION	Type Project
FY 20150186	454	\$ 5,276,700	BERMUDA RIVIERA SMALL WATERMAIN IMPROVEMENTS	This project is for small water main improvements in the Bermuda Riviera neighborhood. This project will replace existing water mains, which are undersized and deteriorated, with approximately 16,400 linear feet of 6" water mains.	Water Distribution System
P10814	454	\$ 1,632,562	CENTRAL NEW RIVER WATERMAIN RIVER CROSSINGS	The City's existing water transmission system includes a 16-inch pipe that crosses the New River at SE 1st Avenue and an existing 12-inch pipe that crosses the New River at SW 7 Avenue. Both of these river crossings are sub-aqueous pipelines. The 16-inch pipe has suffered repeated failures and these pipe crossings are important to the downtown water supply. Replacement pipelines are currently under design. The staff recommends running a transmission system hydraulic model to determine the impact of changes to the existing and proposed river crossings.	Water Distribution System
P12180	454	\$ 3,460,125	CROISSANT PARK SMALL WATERMAINS	This project is for small water main improvements in the Croissant Park Neighborhood. The project will replace existing undersized and deteriorated small water mains with approximately 16,500 linear feet of 6" and/or 8" water mains. These improvements will result in improved fire hydrant coverage.	Water Distribution System
P12184	454	\$ 525,500	DAVIE BLVD. 18" WATER MAIN ABANDONMENT I95 TO SW 9	A new 24" water main was installed to replace the old 18" cast iron water main under the Waterworks Program in 2005-2007, but the old main was never properly abandoned. This work will include identifying and relocating all the service lines currently tied to the 18" main and moving them to the 24" main. This work includes abandonment of approximately 7,788 linear feet of pipe to be abandoned from SW 18th Avenue to Andrews Avenue.	Water Distribution System

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P11589	454	\$ 33,500,000	FIVEASH DISINFECTION/ RELIABILITY UPGRADES	This project is for the construction of two separately designed projects under one construction contract. Combining the projects is necessary because both projects need to be completed at the same time. Having one construction contract will avoid disputes between two contractors working at the same time, and competing for staging areas and storage space on the crowded water treatment plant site. Under this approach, both projects can be constructed in three years. The first project, Reliability Upgrades, installs various repairs and replacements throughout the plant. Major items include replacement of the control system for the entire plant, replacement of the obsolete emergency generators, modifications to the high service pumps, and increasing the weather resistance of the plant buildings .The second project, Disinfection System Replacement, replaces the existing gaseous chlorine system with a new facility.	Plant Improvements
P11080	454	\$ 557,559	PORT CONDO LARGE WATERMAIN IMPROVEMENTS	This project is for the replacement of a small 6" water main with approximately 1,300 linear feet of large 12" water main on SE 17th Street's north access road, bounded by Eisenhower Boulevard and the intracoastal waterway.	Water Distribution System
P10850	454	\$ 4,961,073	VICTORIA PARK A - NORTH SMALL WATERMAIN	This project is for a small water main replacement in the Victoria Park - North neighborhood. Replace approximately 23,740 linear feet (LF) of existing undersized and deteriorated small water mains with new 6" and 8" PVC (poly-vinyl chloride) water mains, and improve fire hydrant coverage on NE 16th Avenue and NE 19th Avenue. In 2014, 2,760 linear feet of water main were installed.	Water Distribution System
P11901	454	\$ 5,437,049	VICTORIA PARK B-SOUTH SMALL WATERMAINS IMPROV	This project is for small water main replacements and improved fire hydrant coverage in the Victoria Park - South Neighborhood. Approximately 29,000 linear feet of existing undersized and deteriorated small water mains will be replaced with new 6" and 8" polyvinyl chloride (PVC) water mains.	Water Distribution System
		\$ 55,350,568	Water/Sewer Master Plan Fund (454)		
		\$ 55,350,568	TOTAL		

Recommended Priority Projects for Bond Funding

PROJECT REFERENCE #	FUND	TOTAL PROJECTED COST	PROJECT TITLE	PROJECT DESCRIPTION	Type Project
UW3-01	454	\$ 660,000	FIVEASH WTP ELECTRICAL STUDIES AND TESTING	Perform Short Circuit Device Coordination and Arc Flash Study; Perform Electrical Maintenance Testing.	Plant Improvements
UW3-02	454	\$ 6,800,000	FIVEASH ELECTRICAL SYSTEM REPLACEMENTS (2015-2020)	Replace medium voltage fused service disconnect switches; Replace medium voltage MCC_5201 and MCC_5202; Replace PNL_5602 (LPHS-3); Replace XFMR5501 and XFMR 5502; Replace MCC_5504 and MCC_5503; Replace MCC_5311; add second feed; incorporate/eliminate MCC_5313; Replace/Convert MCC_5614 to 480V and dedicated to HYD_2103; Replace/Convert MCC_5615 to 480V and dedicate to HYD_2104; Replace SWBD5616; Replace XFMR 5612; Replace PNL 5630; Replace General Circuit Breaker Panel boards, transformers, and branch circuits; Replace Surface Wash Pump 1 starter; Replace 2 HSP starters with VFDs; Convert 240V motors to 480V and re-feed; Replace MSTR3202 (Backwash Pump 2).	Plant Improvements
	454	\$ 10,000,000	FIVEASH UPGRADE/REDESIGN	Design of new Water Treatment Facility to replace Fiveash Water Treatment Facility	Plant Improvements
UW3-06	454	\$ 210,000	PEELE DIXIE ELECTRICAL STUDIES AND TESTING	Update Short Circuit Device Coordination and Arc Flash Study; Perform Electrical Maintenance Testing.	Plant Improvements
UW3-07	454	\$ 100,000	PEELE DIXIE SURGE PROTECTION UPGRADES	Replace/Retrofit existing panel boards with integral surge protective devices to external mounted units connected through a branch circuit breaker.	Plant Improvements
WA5A-5	454	\$ 740,000	WELL REHABILITATION	Rehabilitation work on wells less than 30 years old prior to replacement. This includes maintaining pumps and motors, and replacement of mechanical and electrical components	Plant Improvements
WA5B-2	454	\$ 800,000	FIVEASH WTP GST AND CLEARWELL UPGRADES	Modify the existing piping and system such that the water from the filters drops into a clearwell which the transfer pumps will deliver to the ground storage tanks. The water from the ground storage tanks will flow to a common clearwell for the high service pumps to deliver water.	Plant Improvements
WA5B-4	454	\$ 4,000,000	FIVEASH WTP PCCP REPLACEMENT	Replace PCCP pipe feeding the high service pumps.	Plant Improvements
UW3-10	454	\$ 185,000	PROSPECT WELLFIELD ELECTRICAL STUDIES AND TESTING	Perform Short Circuit Device Coordination and Arc Flash Study; Perform Electrical Maintenance Testing; Generate Accurate As-Built One Line Drawings and plans of the entire wellfield.	Plant Improvements
UW3-11	454	\$ 60,000	PROSPECT WELLFIELD BONDING AND GROUNDING TESTING AND LIGHTING PROTECTION	Perform Bonding and Grounding survey and testing; Add lightning protection to generator buildings.	Plant Improvements

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UW3-31	454	\$ 150,000	PEELE DIXIE WELLFIELD ELECTRICAL STUDIES AND TESTING	Perform Short Circuit Device Coordination and Arc Flash Study; Perform Electrical Maintenance Testing.	Plant Improvements
WA5C-2	454	\$ 850,000	PEELE-DIXIE WTP CHEMICAL STORAGE IMPROVEMENTS	The anti-scalant and corrosion inhibitor bulk chemical tanks do not allow for a full load delivery of chemicals. Investigate the addition of another tank and/or the replacement with multiple, smaller tanks. Also the day tanks for the sodium hydroxide and sulfuric acid do not hold enough chemical to last a whole day and additional storage is required.	Plant Improvements
WA12-2	454	\$ 2,600,000	EXCAVATE AND DISPOSE OF DRY LIME SLUDGE	This project includes the excavation and disposal of dry lime sludge from the west cell sludge pit or delivery to a cement kiln.	Plant Improvements
UW2-7	454	\$ 4,669,090	UTILITIES WIDE AREA NETWORK SCADA IMPROVEMENTS	Upgrade/Improve SCADA Systems and improve flowmeters	Wastewater Collection System
WW-XX	451	\$23,400,000	REDUNDANT FORCE MAIN FROM B-REPUMP TO GTL	This project includes 38,850 linear feet 42"-54" force main from B-Repump to GTL. To provide redundancies (Central Region Large Users System)	Wastewater Collection System
WW3-07	454	\$ 609,000	SUBAQUOUS ORCE MAIN CROSSING REINSTATEMENT (FROM PUMP STATION A-14)	Reinstate the pipeline crossing directly after pump station A-14 to assist with high velocities in the force mains downstream of A-14. Pipe section is 2,100 LF from the corner of NE 22nd Ave and NE 19th across Bal Harbour and connects to the existing main at Middle River Dr.	Wastewater Collection System
WW3-15	454	\$ 988,000	FORCE MAIN (FROM PUMP STATION A-54 TO A-10) UPSIZE - REDUNDANCY	Install approximately 1900 LF of 30" force main parallel to the existing 30" force main running from pump station A-54 to pump station A-10 starting at SW4th Ave. Running east along SW19th St to S Andrews Ave.	Wastewater Collection System
WW3-16	454	\$ 100,000	FORCE MAIN (NEAR PUMP STATION D-34) UPSIZE	Upsize approximately 100 LF of force main running from the discharge side of pump station D-34 to SE 17th St from two smaller 4" and 8" mains to a single 12" main.	Wastewater Collection System
WW3-23	454	\$ 1,300,000	PUMP STATIONS C-1 AND C-2 REPLACEMENT	Replacement of C-1 and C-2 stations. Upgrade C-1 pumps with higher capacity models. Replace station piping, valves and appurtenances and wet well as necessary.	Wastewater Collection System
WW3-27	454	\$ 150,000	FORCE MAIN (B-1 DISCHARGE) IMPROVEMENTS	Tie in the 10" and 18" force main cross over on Bayview Dr (approximately 350 LF) to NE 37th Ct. in order to reduce velocity. A valve closure may be required to implement.	Wastewater Collection System
WW3-29	454	\$ 1,500,000	PUMP STATION A-16 UPGRADE	Replacement of A-16 pumps with higher capacity models. Rehabilitate/replace station piping, valves and appurtenances and wet well as necessary.	Wastewater Collection System
WW3-30	454	\$ 580,000	FORCE MAIN (FROM PUMP STATIONS D-35 TO D-36) UPSIZE	Upsize the existing 8" and 10" force mains to approximately 2,000 LF of new 12" force main, along Harbour Inlet Dr, from A1A to Barbara Dr, and along Barbara Dr, from Harbour Inlet Drive to the Stranahan River.	Wastewater Collection System
WW7-1	454	\$ 843,000	GRAVITY PIPE IMPROVEMENTS TO THE DOWNTOWN COLLECTION SYSTEM	<ul style="list-style-type: none"> • Upsize 920 feet of the existing 12" gravity pipe to a 15" gravity pipe along E Las Olas Blvd from SE 1st Ave to SE 4th Ave. • Upsize 750 feet of the existing 14" gravity pipe to 21" gravity pipe right by the pump station and along SE 2nd St. from SW 1st Ave to SE 1st Ave. • Upsize 84 feet of the existing 14" gravity pipe to 24" gravity pipe right by the pump station A-7 along SW 2nd St. • Upsize 560 feet of the existing 15" gravity pipe to 18" gravity pipe right along SE 1st Ave. from East Las Olas to SE 2nd St. (Need to ensure pipe segments are not lined in current I&I contract) 	Wastewater Collection System
	454	\$ 1,500,000	PUMP STATION A-7 UPGRADE	Evaluation and upgrading of A-7 pumps with higher capacity models. Rehabilitate/replacement of station piping, valves and appurtenances and wet well as necessary.	Wastewater Collection System
WA4-1	454	\$ 338,000	WATERMAIN IMPROVEMENTS AREA 1	<ul style="list-style-type: none"> • Bring the 54-inch water main on 38th Street back into service. • Add approximately 400 feet of 30-inch discharge from the Peel-Dixie high service pumps to the old west existing 30-inch discharge. • Upsize approximately 100 feet of 36 and 30-inch from the 42-inch reducer to the intersection of NE 37th Street and NE 11th Avenue with 42-inch. 	Water Distribution System

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WA5F-2	454	\$ 25,000	MISCELLANEOUS WATER QUALITY IMPROVEMENTS	Investigate adding additional automatic flushers at the following locations to reduce water age: PLUG_F10015 – Snyder Park PLUG_F5472 – SW 15th Avenue/SW 33rd Street PLUG_F4373 – SW 32nd Place PLUG_F4366 – SW 32nd Street	Water Distribution System
		\$ 660,000	Central Region/Wastewater Fund (451)		
		\$ 62,497,090	Water/Sewer Master Plan Fund (454)		
		\$ 63,157,090	TOTAL		
TOTAL BOND FUNDING		\$ 53,720,800	Central Region/Wastewater Fund (451)		
		\$ 134,541,537	Water/Sewer Master Plan Fund (454)		
		\$ 11,499,320	Joint 451 and 454		
		\$ 199,761,657	TOTAL		