

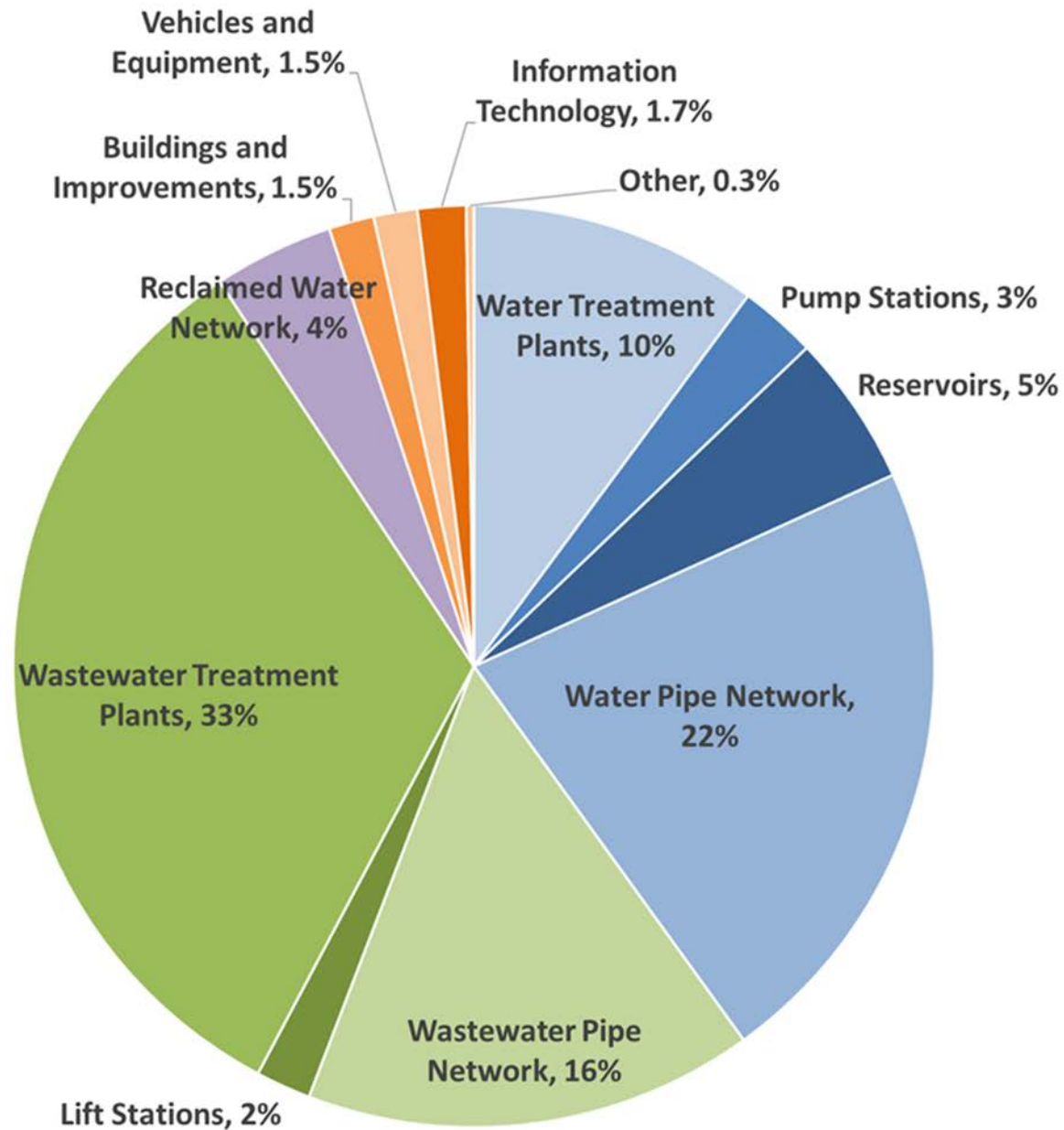
Wastewater CIP Update

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and Kevin Koeller, PE



May 6, 2020

5 Year Capital Improvement Plan (by funding category)



Facility Engineering Wastewater CIP FY 2020

Wastewater Treatment and Lift Station Major CIP Projects

<u>SPID</u>	<u>PROJECT</u>	<u>FY21-25</u>	<u>Rank</u>
3023.046	Walnut Creek WWTP Expansion to 100 Million Gallons Per Day	\$68,150,000 *	1
3333.017	South Austin Regional WWTP Trains A & B Improvements	\$57,037,553 *	2
3333.032	South Austin Regional WWTP Electrical Substation No.1 Replacement	\$26,913,187 *	3
3023.019	Walnut Creek Wastewater Treatment Plant Headworks Improvements	\$25,200,000 *	4
3023.039	Walnut Creek Wastewater Treatment Plant Secondary Process Improvements	\$23,124,480	5
7265.040	Brushy Creek Regional Wastewater Treatment Plant Expansion Participation	\$20,677,800	6
7265.004	Wild Horse Ranch Wastewater Treatment Plant Expansion	\$17,941,913 *	7
3164.070	Hornsby Bend Transfer Pump Station and Irrigation System Improvements	\$13,240,000	8
3023.022	Walnut Creek Wastewater Treatment Plant Pumping System Improvements	\$12,212,654	9
3023.035	Walnut Creek Wastewater Treatment Plant Sludge Thickener Rehab	<u>\$9,416,445</u>	10
		\$273,914,032	

Expansion Projects (\$106,769,713)

Construction Projects (\$92,344,566)

*Have capital cost beyond the FY21-25 CIP Budget



Facility Engineering Wastewater CIP FY 2020

Walnut Creek WWTP 100 MGD Expansion

Capacity:

- ❖ Existing Capacity = 75 MGD
- ❖ Capacity after Expansion = 100 MGD

Capital Cost:

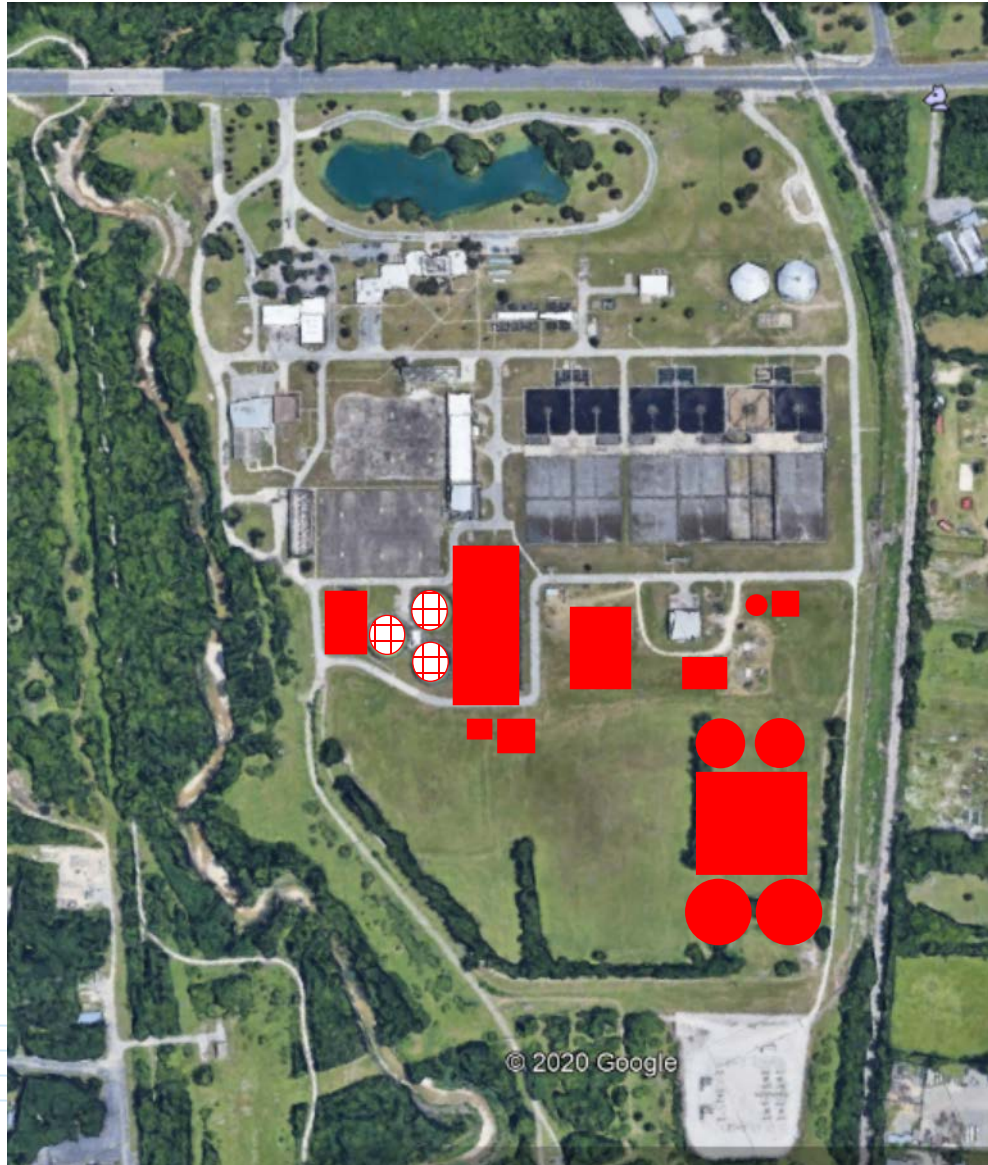
- ❖ FY21-25 Spending Plan is **\$68,150,000 ***
- ❖ Total Project Contribution Cost is **\$297 Million ^**
^ Cost may rise due to Atlas 14 and Permitting

Project Milestones:

- ❖ RFQ Solicitation Due Date: April 22, 2020
- ❖ Preliminary and Final Design: 2024
- ❖ Construction NTP: 2024
- ❖ Substantial Completion: 2028

RCA Commission Actions:

- ❖ July 15, 2020 – RFQ Engineering Selection



Facility Engineering Wastewater CIP FY 2020

East Brushy Creek WWTP 30 MGD Expansion



◆ Project Milestones:

- ❖ Bid Date: February 13, 2020
- ❖ Construction NTP: May 2020
- ❖ Substantial Completion May 2023

◆ RCA Commission Actions:

- ❖ April 8, 2020 – Supplemental Agreement for Cost Participation
- ❖ Future: Amendment to agreement for Leander to become a wholesale customer of Round Rock

- ◆ WWTP is owned by Brushy Creek Regional Wastewater System which is a joint regional facility between the cities of Round Rock, Cedar Park, Leander* and Austin and operated by city of Round Rock.

◆ Capacity:

- ❖ Existing Capacity = 20 MGD
- ❖ Capacity after Expansion = 30 MGD

◆ Ownership:

- ❖ Existing CoA ownership is 3.43% (0.69 MGD)
- ❖ After expansion CoA ownership will be 9.87% (3.26 MGD)

◆ Capital Cost:

- ❖ FY20 Spending Plan is **\$6,892,600**
- ❖ FY21-25 Spending Plan is **\$21,171,600**



Facility Engineering Wastewater CIP FY 2020

Wild Horse WWTP 1.50 MGD Expansion



- **Capacity:**
 - ❖ Existing Capacity = 0.75 MGD
 - ❖ Capacity after Expansion = 1.50 MGD (2.25 MGD Design)
- **Capital Cost:**
 - ❖ FY20 Spending Plan is **\$1,179,391**
 - ❖ FY21-25 Spending Plan is **\$17,941,913 ***
- **Project Milestones:**
 - ❖ Final Design: July 2021
 - ❖ Construction NTP: January 2022
 - ❖ Substantial Completion: January 2025
- **RCA Commission Actions:**
 - ❖ 2022 - Construction Contract & Construction Engineering Services

Hornsby Bend Transfer Pump Station and Irrigation System Improvements

- **Capital Cost:**
 - ❖ FY20 Spending Plan is **\$230,000**
 - ❖ FY21-25 Spending Plan is **\$13,240,000**
- **Project Milestones:**
 - ❖ Final Design: June 2020
 - ❖ Construction NTP: December 2020
 - ❖ Substantial Completion July 2022
- **RCA Commission Actions:**
 - ❖ October 2020 - Construction Contract



Facility Engineering Wastewater CIP FY 2020

South Austin Regional WWTP Trains A & B Improvements



Capital Cost:

- ❖ FY20 Spending Plan is **\$1,960,362**
- ❖ FY21-25 Spending Plan is **\$57,037,553 ***

Project Milestones:

- ❖ Final Design: December 2020
- ❖ Construction NTP: July 2021
- ❖ Substantial Completion July 2025

RCA Commission Actions:

- ❖ 2021 - Construction Contract & Construction Engineering Services

South Austin Regional WWTP Electrical Substation No.1 Replacement

Capital Cost:

- ❖ FY20 Spending Plan is **\$472,618**
- ❖ FY21-25 Spending Plan is **\$26,913,187 ***

Project Milestones:

- ❖ Construction NTP: June 2020
- ❖ Substantial Completion September 2023

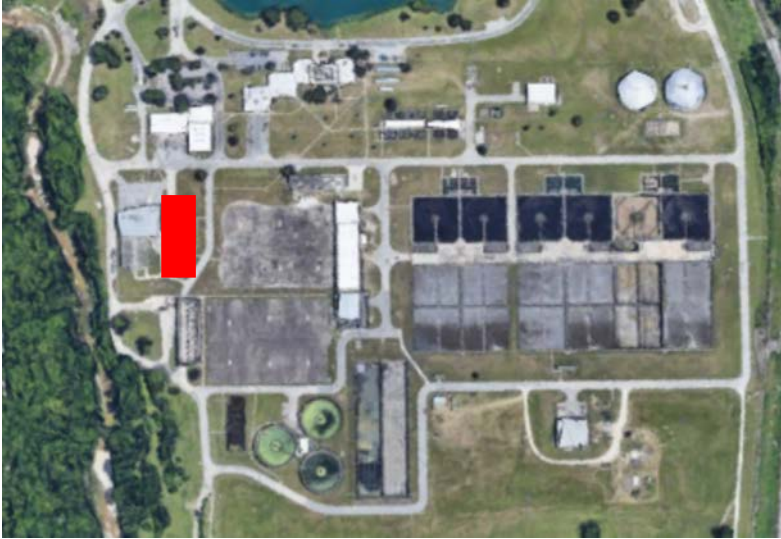
RCA Commission Actions:

- ❖ April 8, 2020 - Construction Contract & Construction Engineering Services



Facility Engineering Wastewater CIP FY 2020

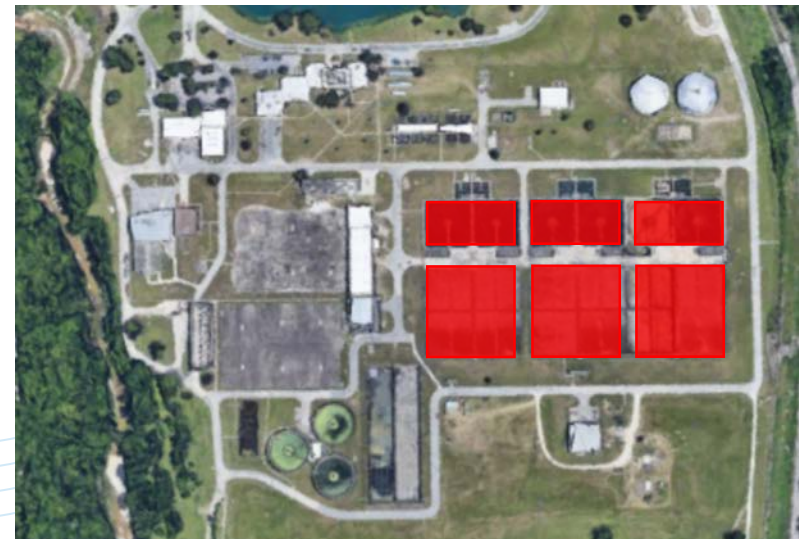
Walnut Creek Wastewater Treatment Plant Headworks Improvements



- **Capital Cost:**
 - ❖ FY20 Spending Plan is **\$330,000**
 - ❖ FY21-25 Spending Plan is **\$25,200,000 ***
- **Project Milestones:**
 - ❖ Preliminary Design: June 2021
 - ❖ Final Design: January 2023
 - ❖ Construction NTP: July 2023
 - ❖ Substantial Completion July 2026
- **RCA Commission Actions:**
 - ❖ 2021 – Final Design

Walnut Creek Wastewater Treatment Plant Secondary Process Improvements

- **Capital Cost:**
 - ❖ FY20 Spending Plan is **\$5,097,391**
 - ❖ FY21-25 Spending Plan is **\$23,124,480**
- **Project Milestones:**
 - ❖ Construction NTP: December 2019
 - ❖ Substantial Completion: January 2022
- **RCA Commission Actions:**
 - ❖ TBD



Facility Engineering Wastewater CIP FY 2020

Walnut Creek Wastewater Treatment Plant Pumping System Improvements



- ♦ **Capital Cost:**
 - ❖ FY20 Spending Plan is **\$3,195,583**
 - ❖ FY21-25 Spending Plan is **\$12,212,654**
- ♦ **Project Milestones:**
 - ❖ Construction NTP: June 2020
 - ❖ Substantial Completion June 2022
- ♦ **RCA Commission Actions:**
 - ❖ March 11, 2020 - Construction Contract

Walnut Creek Wastewater Treatment Plant Sludge Thickener Rehabilitation

- ♦ **Capital Cost:**
 - ❖ FY20 Spending Plan is **\$2,833,865**
 - ❖ FY21-25 Spending Plan is **\$9,416,445**
- ♦ **Project Milestones:**
 - ❖ Construction NTP: April 2020
 - ❖ Substantial Completion: December 2021
- ♦ **RCA Commission Actions:**
 - ❖ January 8, 2020 - Construction Contract



Collection System Engineering CIP FY 2020

Wastewater Collection System and Rehabilitation Major CIP Projects

<u>SPID</u>	<u>PROJECT</u>	<u>FY21-25</u>	<u>Rank</u>
6943.031	Williamson Creek Wastewater Interceptor	\$56,160,000*	1
4769.011	Upper Harris Branch Wastewater Improvements	\$6,089,487*	2
2231.301	Wastewater Line Renewal And Spot Rehab Service Contract (2020 to 2022)	\$5,695,000	3
2231.234	Rosedale/Lawnmont Avenue Water and Wastewater Pipeline Renewal	\$5,366,200*	4
2231.238	North Tarrytown Water and Wastewater Pipeline Renewal	\$5,297,478	5
6943.025	Boggy Creek Lift Station Force Main Extension	\$5,263,803*	6
2231.233	Brentwood Water and Wastewater Pipeline Renewal: Arcadia Avenue Area	\$5,248,501	7
6943.004	Parmer Lane Interceptor	\$4,521,043	8
6943.045	Upper Boggy West Wastewater Line Improvements - Phase 1	\$3,964,988*	9
2231.307	Rosedale North Water and Wastewater Pipeline Renewal Phase 2	\$3,872,029	10
6943.056	Upper Tannehill Wastewater Interceptor Improvements Phase 1: Morris Williams	\$3,400,000*	11
2231.236	Morrow and Gault Water & Wastewater Pipeline Renewal	\$3,213,000*	12
		\$108,091,529	

Expansion Projects (\$73,741,031)

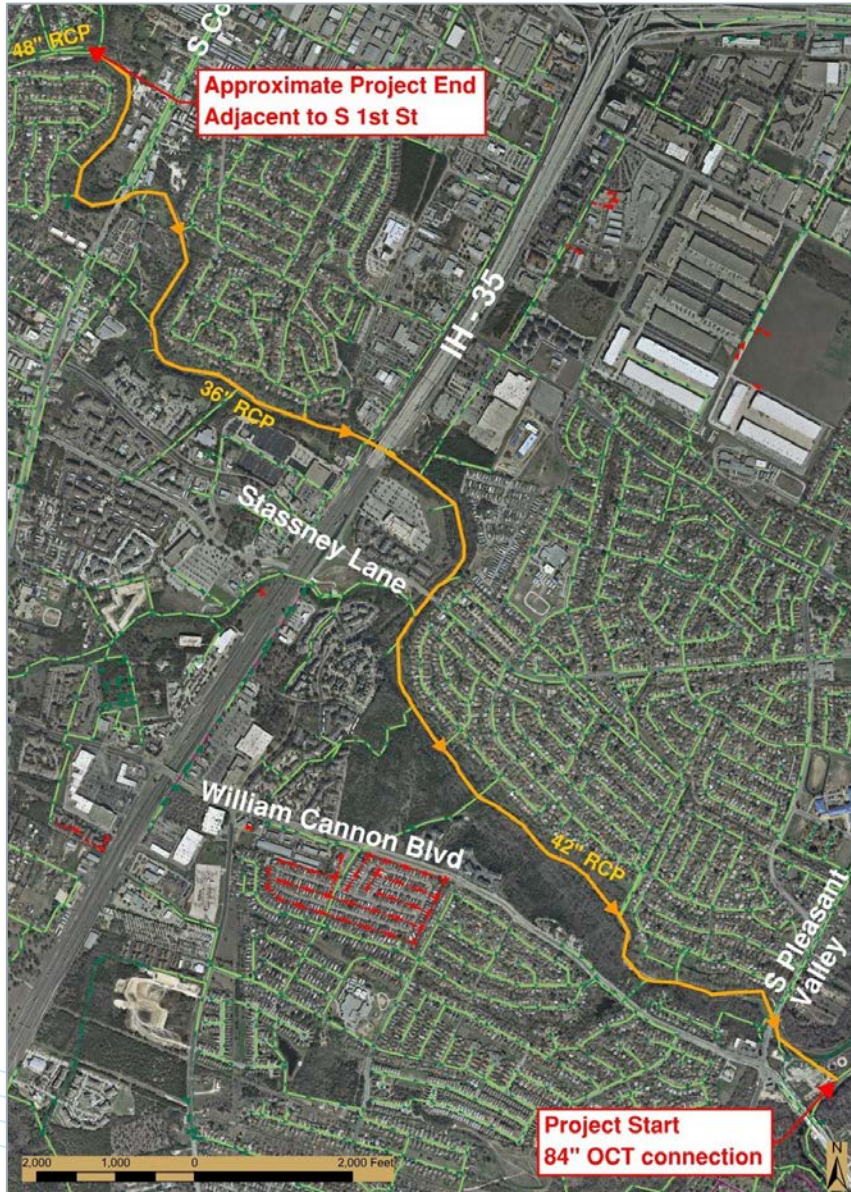
Construction Projects (\$10,216,043)

*Have capital cost beyond the FY21-25 CIP Budget



Collection System Engineering CIP FY 2020

Williamson Creek Wastewater Interceptor



♦ Purpose:

- ❖ Replace 60 year-old infrastructure in creek
 - Two downstream segments to be CIPP-lined due to condition assessment
 - Insufficient capacity to handle wet weather events – since late 1990s
- ❖ Improve infrastructure stability
 - Need for project is driven by capacity AND condition issues

♦ Project Scope:

- ❖ 18,000 LF of new 66-inch and 72-inch diameter gravity interceptor along/near Williamson Creek
- ❖ Flow will be diverted from the existing interceptor into the new interceptor to abandon as much of the existing interceptor as possible
- ❖ TWDB Funding (CWSRF)

♦ Capital Cost:

- ❖ FY20 Spending Plan is **\$1,030,000**
- ❖ FY21-25 Spending Plan is **\$56,160,000**
- ❖ Total Project Cost is **\$64.M**

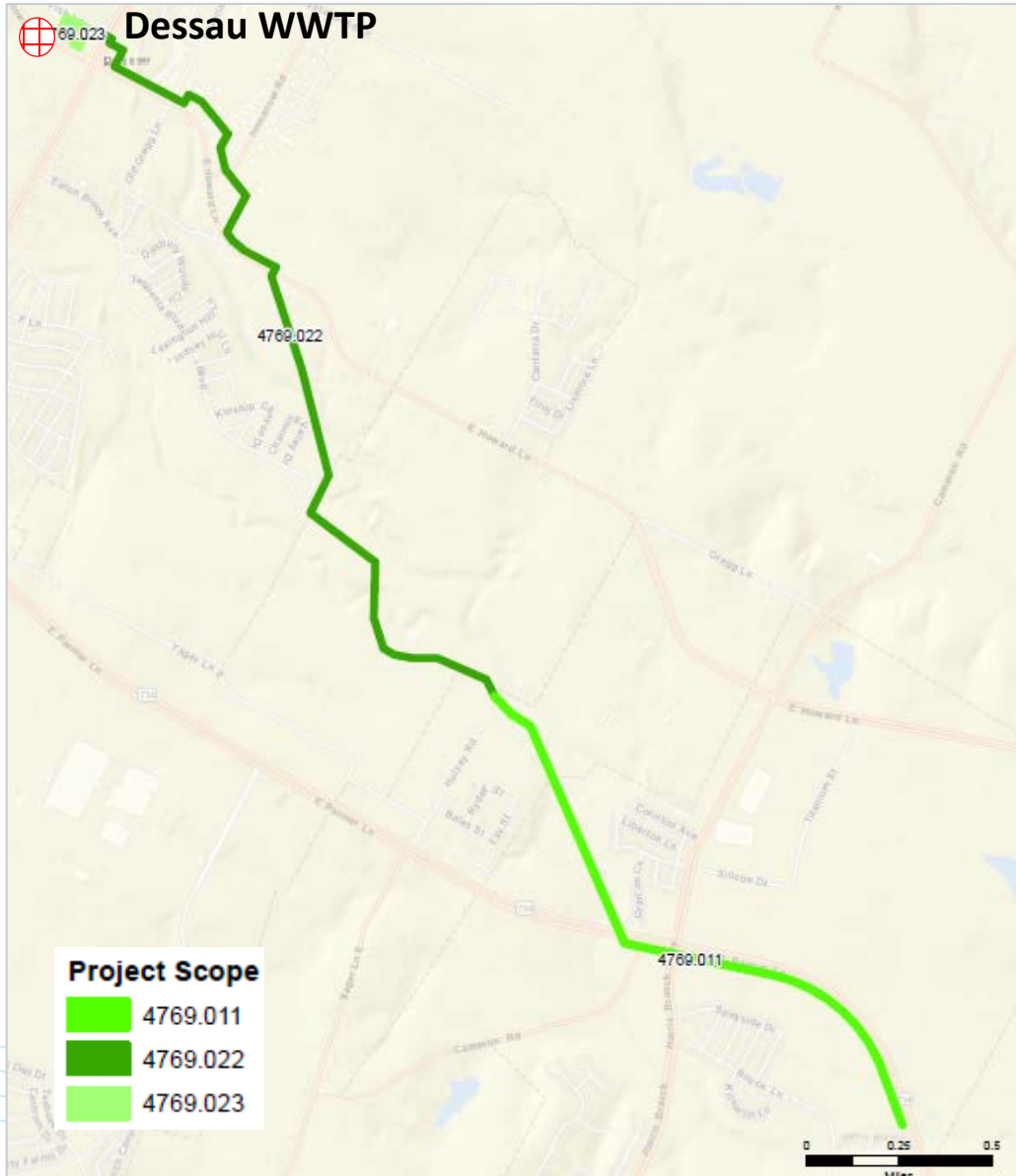
♦ Project Milestones:

- ❖ Construction NTP May 2022
- ❖ Substantial Completion 2026



Collection System Engineering CIP FY 2020

Upper Harris Branch Wastewater Improvements



Project:

- ❖ Rapid development and growth causing increased wastewater service demand
- ❖ Diminishing available real estate that will allow interceptor to be constructed
- ❖ Interceptor will save utility construction and operations and maintenance costs by preventing expansion of Dessau WWTP to over 1 MGD capacity as predicted by 2032

Project Specs:

- ❖ 23,000 LF of 30- and 36-inch gravity wastewater interceptor

Capital Cost:

- ❖ FY20 Spending Plan is **\$223,376**
- ❖ FY21-25 Spending Plan is **\$6,089,487**
- ❖ Total Project Cost is **\$26.8M**

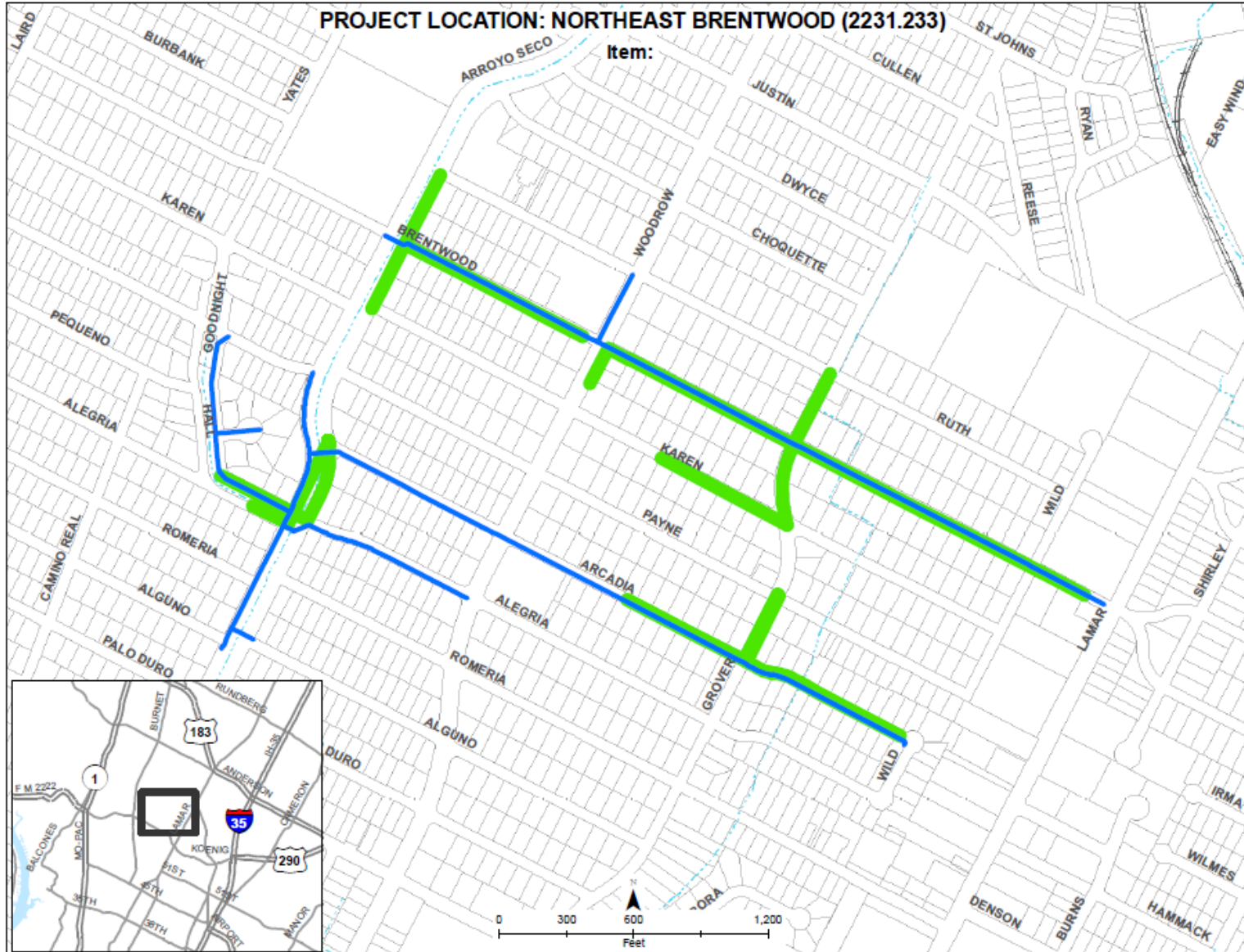
Project Milestones:

- ❖ Construction NTP 2023 to 2024
- ❖ Substantial Completion 2027 to 2028



Collection System Engineering CIP FY 2020

Brentwood Water and Wastewater Pipeline Renewal: Arcadia Avenue Area



Project:

- ❖ 8,914 LF of wastewater footage rehabilitated or replaced and water system renewal of 9,544 LF of water line

Project Bid:

- ❖ Santa Clara Construction, Ltd.
- ❖ Approved at Water and Wastewater Commission Meeting March 11, 2020

Capital Cost:

- ❖ FY20 Spending Plan is **\$413,500**
- ❖ FY21-25 Spending Plan is **\$5,248,501**
- ❖ Total Project Cost is **\$6.6M**

Project Milestones:

- ❖ Construction NTP May 2020
- ❖ Substantial Completion 2022



Collection System Engineering CIP FY 2020

Parmer Lane Interceptor Wastewater Improvements Plan



Project:

- ❖ 12,000 LF of 8-foot diameter tunnel enclosed 42-inch wastewater gravity interceptor
- ❖ From North Walnut Creek, on the east side of Parmer Lane to Lake Creek on the west side of Parmer Lane
- ❖ Interceptor will be installed via tunnel methods and will be installed between 15 and 80-feet below grade
- ❖ Rattan Creek and Lake Creek Lift Stations and associated forcemains/gravity mains will be decommissioned and demolished
- ❖ Existing flows will be bypassed to the proposed interceptor at completion of the project

Capital Cost:

- ❖ FY20 Spending Plan is **\$8,927,391**
- ❖ FY21-25 Spending Plan is **\$4,521,043**
- ❖ Total Project Cost is **\$37M**

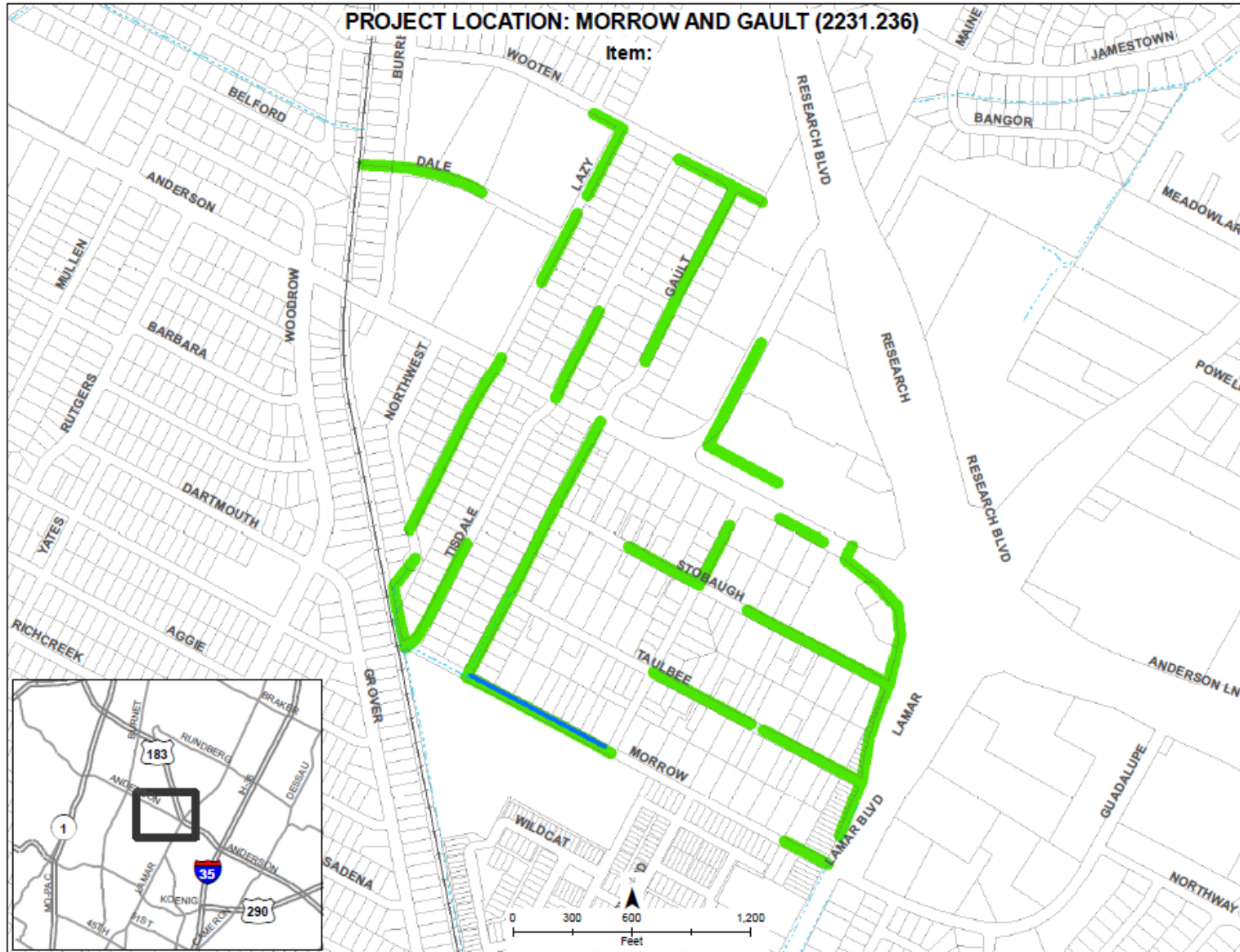
Project Milestones:

- ❖ Construction began March 2017
- ❖ Substantial Completion September 2020



Collection System Engineering CIP FY 2020

Morrow and Gault Water and Wastewater Pipeline Renewal



Project:

- ❖ Replacement, lining, and spot repair of deteriorated water and wastewater segments
- ❖ System improvements to approximately 1,150 LF of water and 15,850 LF of wastewater line

Capital Cost:

- ❖ FY20 Spending Plan is **\$70,000**
- ❖ FY21-25 Spending Plan is **\$3,213,000**
- ❖ Total Project Cost is **\$5.7M**

Project Milestones:

- ❖ Bid Summer 2020
- ❖ Construction NTP Fall 2020
- ❖ Substantial Completion 2022



Collection System Engineering CIP FY 2020

Indefinite Delivery Indefinite Quantity Contracts



- ◆ **Current List of IDIQ Projects in Construction:**
 - ❖ Relay and Spot Repair IDIQ FY2020-FY2022 (2231.301) – Construction continues at multiple locations.
 - ❖ CIPP IDIQ FY2019-FY2021 (2231.314) – TV inspection and lining work is underway at 10 to 12 site locations
 - ❖ Manhole Rehab IDIQ FY2019-FY2023 (2231.354) – Work is under way. Two assignments have been issued.

