

PC
Workshop
for SALT
June 29,
2021

2021
Business
Case
Mobilization
Sept. 30, 2021

2021
Business
Case
Overview
November 17, 2021

**Council
Presentation**
January 25, 2022

Debra Jones – Nathan Theaux – David Smith

City of Angleton, Texas
Capital Improvements and Energy Efficiency Opportunity

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Discussion Topics

2014
Business
Case

2021
Update of
Business
Case

Financing

Timeline

2015

- Comprehensive Building Control System
- Upgrade existing street lighting to LED
- Eco kiosk for parks and recreations
- Update HVAC systems
- City wide building LED retrofits
- Modernize WWTP

Opportunity Matrix

Department Name	Interior Lights	Exterior Lights	Occupancy Sensors	Install BAS or Upgrade BAS	HVAC Improvements	IT Power Management	AMR Water Meter Project	Variable Speed Drives	High Efficiency Blowers	Fine Bubble Diffusers	Dissolved Oxygen Control	Onsite Chlorine Generation	Total
<i>Name</i>	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	<i>Count</i>
City Hall	Y	Y	Y	Y	Y	Y	Y						7
Police Department	Y	Y	Y	Y		Y	Y						6
Fire Department	Y	Y	Y	Y		Y	Y						6
Recreation Center	Y	Y	Y	Y	Y	Y	Y	Y				Y	9
Park Facilities		Y											1
Wastewater Treatment Plant	Y	Y	Y					Y	Y	Y	Y	Y	8
Water Meters							Y						1
Total	5	6	5	4	2	4	5	2	1	1	1	2	38

\$8-10M over 20 yrs. savings

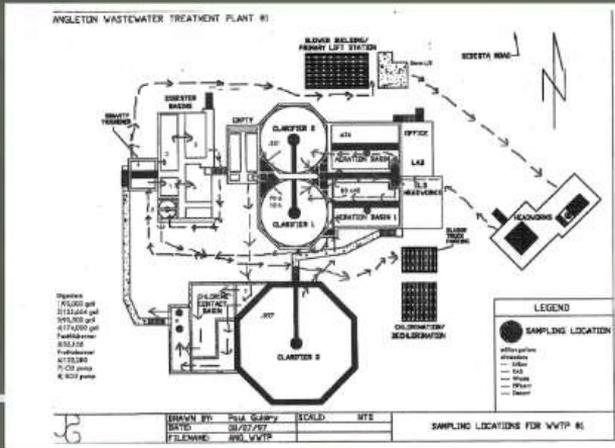


-  Interior Lighting
-  Exterior Lighting
-  Mechanical Retrofits
-  Water Conservation
-  Building Envelope
-  Controls Upgrades
-  Additional Opportunities
-  Waste Water Plant



Savings

Waste Water Treatment Plant



WWTP
Opportunity
Matrix

2. Oyster Creek WWTP

Freese & Nichols (F&N) evaluated the City's WWTP in late 2018. In 2019, F&N presented a report to Council, based on the evaluation that recommended the following improvements to the WWTP; multi-rake screen; screening water sluice; washer/compactor; headwall grit removal; grit classifier; two grit pumps; 48" gate valve; gate valve electric actuator; six slide gates; and grating.

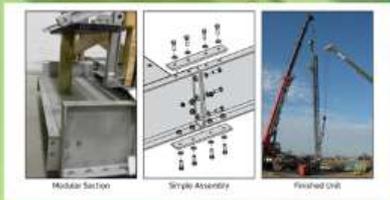
2018 recommendations

IMPACT

- **Improved efficiency** – replaces failed or near end of life equipment
- **Boost Reliability** – Improved operations and allow for preventative maintenance
- **Savings Impact of 50%**

Opportunity Matrix
Waste Water Treatment Plant

Scope Item	Y/N	Benefit of this Scope
Mechanical Bar Screen	Y	Replacement of broken equipment will prevent pass through of inert material, protecting all downgradient equipment. Reduces maintenance and increases equipment life.
Grit Pump	Y	Replacement of broken equipment will prevent pass through of inert material, protecting all downgradient equipment. Reduces maintenance and increases equipment life.
Grit Washer	Y	Replacement of broken equipment will prevent pass through of inert material, protecting all downgradient equipment. Reduces maintenance and increases equipment life.
Aeration Basins	Y	Installation of DO control (on/off) and new diffuser tubes reduce aeration energy use by 50%.
Aerobic Digesters	Y	Rehab of the gravity thickener would allow for sludge thickening prior to dewatering. Needed for on-site dewatering.
Dewatering	Y	Installation of new sludge pumps and volute press would allow staff to perform regular wasting from the aerobic digesters and perform on-site dewatering without the need for a 3rd party contract. Estimate total reduction in T&D costs of biosolids will be 50%.



ECM 1



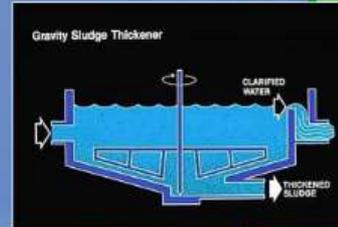
ECM 2



ECM 3



ECM 4



ECM 5



ECM 6



Paying for the Project

- Existing City Budget - general fund or by department
 - Rebates and state funds where available
 - Third party financing (*most common*)
 - Costs are covered by the project including financing

Stimulus

Guarantee

City of Angleton, Texas		Schneider Electric				
Best Case Estimated Timeline Performance Contract Opportunity						
<i>Council Meetings held 4th Tuesday of each month at 6:00 PM, workshop 2nd Tuesdays</i>						
121 S. Veterans						
Initial Meeting with City Manager		June 10, 2021				
Workshop on PC and previously designed project		June 29, 2021				
Letter of Interest		June 21, 2021				
Mobilize PDE team		September 30, 2021				
Present Business Case		November 17, 2021				
WasteWater Workshop		December 15, 2021				
Present PA to Council, consider moving forward w/IGA		January 25, 2022				
Recommend ESCO and sign IGA		February 8, 2022				
Mobilize Development Team		March 25, 2022				
50% development review with client Finance and Contract approval status meeting Select 3rd Party M&V engineering firm		May 24, 2022				
75% completion meeting		June 28, 2022				
Final IGA Results Due to customer		July 28, 2022				
Council approval to purchase project / sign contract		August 1, 2022				
Send Scope for M&V approval from 3rd Party Engineer		August 1, 2022				
Third party engineering review due back		August 22, 2022				
Mobilize team to begin construction		September 3, 2022				
Installation complete		to be determined				
<i>approval dates have been matched up with Council scheduled meetings</i>						
24-Aug	14-Sep	28-Sep	12-Oct	26-Oct	9-Nov	Council meeting dates in yellow
14-Dec	28-Dec	11-Jan	25-Jan	8-Feb	22-Feb	2022 Workshop dates in red
23-Mar	12-Apr	26-Apr	10-May	24-May	7-Jun	
12-Jul	26-Jul					

Estimated late-summer 2022 installation of Phase I - Base Project

Estimated fall 2023 installation of Phase II - WWTP Project



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