Angleton CIP Priority Plan

Priority		Project	Description	Objective
1	1A	Influent Lift Station, Electrical/MCC Building, Operator Building, and Site Lighting at Oyster Creek WWTP	Construct new submersible Influent LS, complete with all new mechanical, structural, electrical, HVAC and I&C. Modify force main routing to headworks accordingly. New Electrical MCC to be elevated for flood protection and combined with other plant MCC's and loads. Recommendation is to implement CIP 1 and 2 at the same time and include the MCC's for new influent pumps in the MCC/electrical room constructed for the new blowers, adjacent to the north wall of the aeration basin complex. Control building needs to be expanded and reconfigured to allow for separation between electrical, laboratory and SCADA monitoring equipment. Alternately, balance of plant MCC's could be relocated to new, larger MCC building as part of CIP projects 1 and 2. Change all lights to LED light fixtures. Repair/replace guard posts and bollards.	The original two lift stations has exceeded is life cycle and is becoming a safety hazard to City staff. The newer lift station is showing major signs of deterioration. This project will abandon both existing lift stations and install one large lift station. Due to its size a Master Control Center (MCC) will be required. The MCC can also be use to operate not only the new lift station but also the proposed Blower room. Also this is a good time to upgrade the lighting at the plant to more energy efficient fixtures. These improvements will allow the plant to operate more efficiently providing cost savings to the City. These cost saving can help offset project cost.
	1B	Oyster Creek Stormwater Pump Station and Outfall Repair	This project will replace the entire Stormwater Pump Station at the Oyster Creek WWTP. Major Components include: Demolish existing Stormwater Pump Station, Construct new submersible pump station, complete with all new mechanical, structural, electrical and I&C, and discharge over the levee. Make improvements to the Stormwater Pump Station pipeline to increase the integrity of the levee. Rehab by CIP-line, slip-line, or otherwise replace plant effluent line from chlorine contact tank to manhole, and potentially from manhole to Oyster Creek. Regrade site drainage swales. Regrade drainage near the thickeners and digestors.	This will allow the plant to continue to operate during extreme storm events by removing the storm water captured inside the levee and keep water out of existing blower room and the plant operational.
	1C	Secondary Treatment Oyster Creek WWTP – Package 1	Perform first round of equipment replacement, including replacement of air header, diffuser piping and diffusers, re-routing of air header overhead to clear walkways, replacement of gates, replacement of manual butterfly valve between clarifiers 1 and 2 connection to clarifier 3 using motor-operated butterfly valve, install DO and pH meters, associated electrical and SCADA/I&C work. Replace (4) slide gates and (2) telescope valves in Aeration Basin Nos. 1 and 2. Replace (10+) slide gates and (10) telescope valves in Clarifier area. Evaluate concrete structure condition of Aeration Basin Nos. 1 and 2 and Clarifier Basin Nos. Conduct leak test and provide recommendations for structural repairs.	The City has already purchased fine bubble defuses and is ready to have them installed. This will improve the efficiency of the entire operation process and provide the City with substantial energy cost savings. This project should accompany 1D to make the plant as efficient as possible and to maximize potential cost saving to the City. These cost savings from energy efficiencies can be utilize to offset the cost of the improvements.
	1D	Blower Building and Aeration at Oyster Creek WWTP	Demolish the current blower building and replace with a new blower building and blowers, elevated for flood protection. Replace existing 4 blowers with 5 new blowers. This includes the blower to the digester. Replace air header up to the aeration basin. Replace electrical and I&C (place blower MCC's in the new MCC building for the influent lift station or co-locate in the same building as the blowers).	The existing blowers are old and inefficient . Also there is not sufficient number of them. The existing head has rotted away and staff has implement a temporary solution to allow the plant to continue to operate. New blowers will provide efficiencies and provide cost savings. These cost saving can be utilized to off set project cost.
	1E	Influent Collection Gravity System at Oyster Creek WWTP	The existing 24-inch concrete sanitary sewer line beginning in the southeast corner of the WWTP site has reached its expected life cycle and is undersized. This will also allow to tie the two force mains into the new system at a different location and reduce the amount of force mains in the City.	The existing pipe size inside the plan is actually smaller than the upstream pipe. This section of pipe was noted in the Utility master plan as undersized and in need of replacement to the proper size.
Priority #1 Opinion of Probable Project Cost				

3		Annual Sanitary Sewer Rehabilitation Project	The City of Angleton is experiencing major Inflow and Infiltration (I/I) issue in its sanitary sewer collection system. This amount of I/I can lead to sanitary sewer overflows in the City, increased run time at City lift stations, and significantly increases the cost of processing all the additional flow at the waste water treatment plant. Also the City is experiencing sink holes that cause structural failures under roads, fences, and landscaping due to soil migration into the collection system.	Rehabilitating these lines will significantly reduce inflow and infiltration, increase the system's overall performance, and provide long-term cost savings
Priority #3 Opinion of Probable Project Cost				
4		Annual Water Line Replacement Project	In the 2015 Utility Master Plan it was identified that the City need a significant amount of water lines replaced due to material size, type, historical maintenance, and fire Hydrant spacing.	The City experiences a massive amount of water line breaks during times of drought due to the material type. Also there are portions of the City that require water line replacement due to the size of the existing and water quality issues. The engineers opinion of project cost (Construction plus engineering is $58,000,000.
Priority #4 Opinion of Probable Project Cost				
5	**5A**	Henderson Transmission Line	The existing transmission water main that supplies treated water from the Henderson Water Plant to the Chenango Water Plant is also utilized as a well supply line when Water Wells 8, 9, and 10 are required to meet water demands. The City staff is able to operate valves on the existing transmission line and direct well water from Water Wells 8, 9, and 10 to the Henderson Water Plant or Chenango Water Plant. However, during this time, the Chenango Water Plant cannot receive any treated water from the Henderson Plant (combined surface water and well water – Chloraminated water) and can only utilize well water that has been disinfected with chlorine at the site. City staff would like to have two separate lines (one for wells (existing transfer Line) and one for supply (New Line – 9,400 LF)). This will allow water quality to remain consistent in the City and more efficient to operate when Water Wells #8, 9, & 10 are required to meet water demands.	Having raw water transported in the same line that treated water is transported could lead to issues of water quality. Also the new transmission main that is used daily will be constructed with PVC material and provide a better level of protection during times of droughts.
	5B	Chenango Booster Pump Building and Disinfection Room	The Chenango Water Plant receives all of its water from the Henderson Plant. The water from Henderson Plant is treated surface water that has been treated with Chloramines. Have two different disinfections in the same system can cause issue with taste and odor. During times that Henderson can not receive treated water it can only disinfect with Chorine. Also The existing building is small and limited space inside. This would provide a new building, pumps, piping, upgraded disinfection (including a pump and container for Ammonia to make Chloramines), and increase the booster pump capacity.	The chloramine treated water from the Henderson Plant and Jamison Plant mixing with the Chlorine treated water from the Chenango Plant will cause odor and taste issues as well as potentially cause a disinfection byproduct. The City can also upgrade the booster pumps at this time to 1,000 gpm at the Chenango plant and increase the City's booster pump capacity .
Priority #5 Opinion of Probable Project Cost				
6		Rehabilitation of LS 9	Rehabilitation of wet well and seal wall penetrations, move discharge piping to a vault or above ground, security and surveillance upgrade.	The station was rated high in the Lift station assessment document and must be rehab in the near future to keep it operational and in compliance with TCEQ.
Priority #6 Opinion of Probable Project Cost				

7	Headworks Rehabilitation	This project is to replace select equipment which are not part of the on-going CIP upgrade project. Major components include: Replace blower for grit removal system, replace all (6) slide gates, (2) sluice gates and manual screens, replace missing, broken, damaged or corroded pipe supports, miscellaneous valves and other appurtenances, evaluate concrete structure condition, conduct structure leak test, provide recommendation, implement recommended repairs, structural repairs include crack injection, spall repair, expansion joint repair, limited concrete patching, and repair/replacement of structural supports such as grading supports and their connections replace all associated electrical equipment connect local controls to SCADA	These improvements will improve the efficiency to the WWTP and allow the plant operators to better control the process.
Priority #7 Opinion of Probable Project Cost			
8	Henderson Roadway Improvements	The Henderson Road corridor is the only major east west roadway that collects Hwy 35 to SH 288b and to SH 288. It also is adjacent to the Angleton Middle School and has pedestrian and bicycle traffic. The drainage in the area consist of a large open ditch and currently holds water. A lot of development is occurring in this busy roadway and due to the future traffic loading it is project that the roadway must be upsize to a Blvd. section. In order to install the proposed roadway cross section large culvert will be required to close in the existing open ditches.	This will help the mobility and improve safety in the area that is adjacent to a middle school (Pedestrian, bicycles, and vehicles) . The City is currently pursuing possible funding opportunity for this project. They are currently tracking HGAC's TIP funding project. This project should be very eligible for selection.
Priority #8 Opinion of Probable Project Cost			
9	Rehabilitation of LS 5	Rehab Wet Well, Install generator quick connect, and security and surveillance upgrades.	This station is a key station in the City's collection system and requires rehabilitation.
Priority #9 Opinion of Probable Project Cost			
10	Rehabilitation of LS 15	Replace electrical panels, install SCADA system, convert abandoned wet well to manhole, rehabilitate wet well and seal wall penetrations, Security and surveillance upgrades, and convert to submersible lift station including new pumps, piping, and mechanical.	The station was rated high in the Lift station assessment document and must be rehab in the near future to keep it operational and in compliance with TCEQ.
Priority #10 Opinion of Probable Project Cost			
11	Rehabilitation of LS 13	Install quick connect for generator, Rehabilitate wet well and seal wall penetrations, Convert to submersible lift station including new pumps, piping, mechanical, and electrical, and Security and surveillance upgrades.	The station was rated high in the Lift station assessment document and must be rehab in the near future to keep it operational and in compliance with TCEQ.
Priority #11 Opinion of Probable Project Cost			
12	Rehabilitation of LS 14	Replace electrical conduits, install SCADA system, and security and surveillance upgrades	This will improve the efficiency at the station and extend its life expectancy.
Priority #12 Opinion of Probable Project Cost			
13A	**Rehabilitation of LS 44***	Convert dry pit to expanded wet well and disconnect pipe to abandoned plant, demolish abandoned plant, and security and surveillance upgrades	This proposed improvements is only to bring the lift station up to a city standard level of operation. This does not address the sanitary sewer capacity issues on the north side.

13	**13B**	**Northside WWTP***	Lift station's 44 available capacity has been purchased by The Windrose Green Subdivision and the City is still receiving interest from developer on the north side of town. The capacity in the force main has also reached its limit. Therefor the City has to increase the capacity of the wet well, upsize the pump, install 5.3 miles of force main to the Oyster Creek Treatment Plant or build a north side waste water treatment plant. HDR has completed a study on the proposed northside treatment plant.	The City has always believe a north side treatment plant will be required in the future. Currently it pump sewage over 5 miles to the Oyster Creek Treatment plant. The City has selected to evaluate a new north side treatment plant instead of continuing pumping sewer 5 miles across the City. This will provide new treatment plant on the north side and increase the available capacity to the existing Oyster Creek Treatment Plant.
Priority #13 Opinion of Probable Project Cost				
14	Rehabilitation of LS 37		Install SCADA system, install generator quick connect, replace discharge piping and put into a valve vault, security and surveillance upgrades, and replace small submersible pumps	The station was rated high in the Lift station assessment document and must be rehab in the near future to keep it operational and in compliance with TCEQ.
Priority #14 Opinion of Probable Project Cost				
15	Secondary Treatment Package 2 &3		This project includes any structural rehabilitation. Major components include: Replace RAS (air lift type) pumps for Clarifiers 1 and 2 with progressive cavity or submersible pumps and metering capability replace WAS (air lift) pumps for Clarifiers 1 and 2 with new pumps and metering capability repair and replace additional gates in Clarifier area replace missing, broken, damaged or rusted hardware on pipes and other appurtenances, replace clarifier mechanisms, rakes, drives, motors, containment baffle and associated appurtenances of Clarifier Nos. 1, 2 and 3, replace missing, broken, damaged or rusted hardware on pipes, replace associated electrical, and install torque switches, local control panels as part of clarifier mechanism replacements.	This will improve the efficiency at the station and extend its life expectancy.
Priority #15 Opinion of Probable Project Cost				
16	Rehabilitation of LS 27		The City has expressed a desire to improve the Security and surveillance at the site. Other improvements identified are replace two Flygt pumps, replace two 30hp Gorman Rupp pumps with submersibles, rehabilitate wet well and seal wall penetrations, replace discharge piping and put into a valve vault, Replace MCC panel, and Replace 155kw generator.	This will improve the efficiency at the station and extend its life expectancy.
Priority #16 Opinion of Probable Project Cost				
17	Rehabilitation of LS 14		The City has expressed a desire to improve the Security and surveillance at the site. Other improvements identified are replace two Flygt pumps, replace two 30hp Gorman Rupp pumps with submersibles, rehabilitate wet well and seal wall penetrations, replace discharge piping and put into a valve vault, Replace MCC panel, and Replace 155kw generator.	This will improve the efficiency at the station and extend its life expectancy.
Priority #17 Opinion of Probable Project Cost				
18	Disinfection System and Solids processing System		This project includes any structural rehabilitation. Major components include: Replace RAS (air lift type) pumps for Clarifiers 1 and 2 with progressive cavity or submersible pumps and metering capability replace WAS (air lift) pumps for Clarifiers 1 and 2 with new pumps and metering capability repair and replace additional gates in Clarifier area replace missing, broken, damaged or rusted hardware on pipes and other appurtenances, replace clarifier mechanisms, rakes, drives, motors, containment baffle and associated appurtenances of Clarifier Nos. 1, 2 and 3, replace missing, broken, damaged or rusted hardware on pipes, replace associated electrical, and install torque switches, local control panels as part of clarifier mechanism replacements.	This will improve the efficiency at the station and extend its life expectancy.
Priority #18 Opinion of Probable Project Cost				

19	North Side Elevated Storage Tank	The City of Angleton is experiencing a significant growth in development in the City or developers wishing to purchase retail utility services from the City. Base of the best available information, the City currently has approximately 1,493 ESFU remaining in its water distribution system. The limiting factor is the available elevated storage. The proposed project will be to install a new 1,000,000 gallon Elevated Storage Tank (EST) on the north side. HDR has previously evaluated two potential sites and identified the best location to install the EST. HDR followed up this evaluation and held conversations with the identified property owners.	This will provide additional amount of elevated storage capacity and increase the total water storage volume. This will provide an additional elevated storage capacity for 10,000 connection for future development in the City. The City has discuss potential location and HDR evaluated them. There has been communication with property owners and they have show interest in allowing the City to install a new EST on their property.
Priority #19 Opinion of Probable Project Cost			
20	Western Ave	The City has been receiving residents request to improve the paving and drainage conditions on Western Ave. HDR provide an OPCC for paving and drainage improvements on Western Avenue.	This project will bring the paving and drainage up to a City standard.
Priority #20 Opinion of Probable Project Cost			
21	Dwyer Street Improvements	The City is in the process of establishing a new use for the old public swimming pool and reuse their property. To better use the property, Dwyer street can be relocated to a different location where it connect to 288B providing a better use of the property	This will allow the City to have better use of the property and make the area safer around the new usage of the property.
Priority #21 Opinion of Probable Project Cost			
22	Harvin Drive Expansion Improvements	The City is planning to expand Harvin Drive by matching the existing 60' ROW and reducing the roadway width from 36' to a 28' City standard, while adding sidewalks on both sides; additionally, a new water line will be installed to connect the 12" water line on Harvin to the 8" water line on Valderas, enhancing water quality, pressure, and system resilience.	This project will provide a connection between Harvin Drive and N. Valderas Street, helping to control the volume of traffic on Pine Way Street, making it safer and less congested, while also reducing traffic flow on the residential area of E. Bronco Bend.
Priority #22 Opinion of Probable Project Cost			
23	Chenango Street Improvements	The City wanted to perform improvement to the down town area along Chenango. There is no existing drainage in the area. HDR did a H&H study and identified the effected area, pipe sizing mitigation, and a OPCC.	This will allow the City to redeveloped the down town portion of the City and provide depth and capacity need to the drainage system. Staff has begun conversations with TxDOT on a team opportunity that TxDOT has should interest in. This will help with the funding of the project.
Priority #23 Opinion of Probable Project Cost			
24	Downing Street Improvements	The City receive complaints in this area of high water during rain events. APD even blocks the road to keep cares from pushing wake inside of homes. HDR did a H&H study and identified the effected area, pipe sizing mitigation, and a OPCC.	This will allow the City to install the required drainage for the area. Conversations with TxDOT should be held to discuss improvements to this area.
Priority #24 Opinion of Probable Project Cost			
25	Rehabilitation of LS 26	Install SCADA system, install generator quick connect, security and surveillance upgrades.	City staff working on it currently and will continue to be rehabilitated.
Priority #25 Opinion of Probable Project Cost			
27	WWTP Gravel Roadway	The City of Angleton has requested us to put a proposal together to install a gravel roadway around the outside levee at the WWTP. This will keep non-operation staff out of the WWTP and still allow access to the acres outside of the treatment plant.	This will improve surcurity and safety in the WWTP. Non-operational employee will still have access to the area outside of the WWTP but will not be allowed to enter the WWTP work site

Priority #27 Opinion of Probable Project Cost			
28	Lift Station 25 Sanitary Sewer Rehabilitation	The City of Angleton performed smoke testing to identify Inflow and Inflitration into its sanitary sewer collection system. LS 25 was identified as one of the worst contributers to I/I into the collection system. The existing pipe material is vitrified clay and it requires rehablitation/	Rehabilitating this collection system will significantly reduce inflow and infiltration, increase the system's overall performance, and provide long-term cost savings
Priority #28 Opinion of Probable Project Cost			
29	Loop 274 Sidewalk Project	The City of Angleton is actively working with TxDOT on funding for two shared path projects to improve the mobility and safety in the City. The main goal of the proposed projects is to bring both alignments into compliance with the Texas Department of License and Registration (TDRL) and the American Disability Act (ADA). This will increase safety for citizens along the corridor, establish protected bicycle lanes, and enhance connectivity to the surrounding areas and merchants. Once developed into more defined projects, the City will provide additional information and project schedules.	This project is proposed to improve mobility along the Loop 274 corridor, including 10'-8' wide shared paths (bicyclists and pedestrians) along Loop 274 and Front Street from East Plum Street to East Cedar Street.
Priority #29 Opinion of Probable Project Cost			

Pablo's Update

Project Cost
$9,600,000.00
$3,100,000.00
$3,100,000.00
$3,500,000.00
$1,300,000.00
$20,600,000.00

$130,530,000.00	Previous	$96,687,500.00
$130,530,000.00		
$97,875,000.00	Previous	$72,500,000.00
$97,875,000.00		
$2,100,000.00		
$4,000,000.00		
$6,100,000.00		
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$2,200,000.00					
$2,200,000.00					
$65,762,644.00					
	$56,823,759.00	$65,762,644.00	(Previously was here $31,000,000)	5) Opinions of Probable Cost	
$65,762,644.00					
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$14,000,000.00		Time of OPCC: 2018
$14,000,000.00		
$15,000,000.00		Time of OPCC: 2018
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$200,000.00		
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$951,878.40	
$6,682,048.80	pw://pwhdruscen01:HDR_US_Central_01/Documents/City_of_Angleton_Texas/Angleton_On-Going_Services/5.0_Proj_Dev/5.2_WIP/202
$6,682,048.80	

!4/On-going&space;Projects/11.10&space;Dwyer&space;St/

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:4/On-going&space;Projects/11.05&space;LS&space;25/

:3/From&space;2022&space;CoA&space;Admin&space;Ongoing/Sidewalk&space;Along&space;288B/