

EXHIBIT A-4
CITY OF MANOR WASTEWATER IMPROVEMENTS
10-YEAR CAPITAL IMPROVEMENTS PLAN
AUGUST 2020 - DRAFT

The following projects have been identified as required to serve new growth within the service area, in accordance with approved land use assumptions and as part of the 10-year Capital Improvements Plan

Project No.	Year	Description	Construction Cost (2019 Dollars)	Interest	Period (months)	Payment	Total Payment	Size	Length	Construction Cost (adjusted for inflation @ 5% per annum)	Soft Costs	Contingency (10% + 1% per annum)	Financing Cost (5.1% over 20 Years)	Total Project Costs	Detailed Description
S-13	2020	Addl. Wilbarger WWTP Capacity	\$ 16,825,000.00	0.00425	240	\$ 145,667.98	\$ 34,960,314.38	1.33 MGD		\$ 19,348,750.00	\$ 2,140,000.00	\$ 400,000.00	\$ 13,071,564.38	\$ 34,960,000.00	New Treatment Plant Capacity to Serve Addl Growth
S-15	2021	Cottonwood WWTP, Phase 1, 0.20 MGD	\$ 4,191,000.00	0.00425	240	\$ 40,812.65	\$ 9,795,037.18	0.20 MGD		\$ 5,029,200.00	\$ 398,000.00	\$ 705,500.00	\$ 3,662,337.18	\$ 9,795,000.00	Build plant at Regional Site, road and electrical improvements add \$500,000
S-16	2021	East Cottonwood Gravity Line	\$ 750,000.00	0.00425	240	\$ 6,788.02	\$ 1,629,125.49	12"	3,200	\$ 900,000.00	\$ 51,000.00	\$ 69,000.00	\$ 609,125.49	\$ 1,629,000.00	Extend East Cottonwood gravity ww to Regional Site, sized for 10-year capacity
S-17	2021	West Cottonwood LS and FM	\$ 849,000.00	0.00425	240	\$ 7,631.87	\$ 1,831,648.15	6" FM and 350 gpm LS	3,700	\$ 1,018,800.00	\$ 79,000.00	\$ 49,000.00	\$ 684,848.15	\$ 1,832,000.00	Extend 27" and 30" gravity ww from confluence with East Cottonwood to US 290, ultimate capacity
S-18	2022	West Cottonwood Gravity Line, Phase 2	\$ 464,000.00	0.00425	240	\$ 4,591.90	\$ 1,102,055.48	15"	8,200	\$ 580,000.00	\$ 64,000.00	\$ 46,000.00	\$ 412,055.48	\$ 1,102,000.00	Serves West Cottonwood Sub-Basin up to Bois D'Arc Ln, 21" and 24" gravity ww sized for ultimate capacity
S-19	2021	FM 973 Gravity Wastewater Line	\$ 591,600.00	0.00425	240	\$ 6,139.30	\$ 1,473,432.21	12"	5,800	\$ 709,920.00	\$ 106,500.00	\$ 106,100.00	\$ 550,912.21	\$ 1,473,000.00	Serves FM 973 Corridor up to Wilbarger Basin divide (approx. Gregg Ln)
S-23	2024	Willow Lift Station and Force Main	\$ 466,320.00	0.00425	240	\$ 5,588.35	\$ 1,341,204.72	200 gpm		\$ 629,532.00	\$ 94,400.00	\$ 115,800.00	\$ 501,472.72	\$ 1,341,000.00	Lift Station and Force Main to serve 220 LUEs in Willow Basin along US 290. 10-Yr ADF approx. 60,000 gpd, PWWF approx 200 gpm
S-27	2026	Wilbarger Lift Station and Force Main to CoP WWTP	\$ 700,000.00	0.00425	240	\$ 9,166.49	\$ 2,199,958.29	8"	5,100	\$ 1,015,000.00	\$ 152,300.00	\$ 210,100.00	\$ 822,558.29	\$ 2,200,000.00	Lift Station and Force Main to serve area north of Shadowglen in Wilbarger Basin
S-28	2018	High School gravity line to Stonewater Lift Station; Stonewater Lift Station Upgrades	\$ 26,271.96	0.00425	240	\$ 202.10	\$ 48,503.92	12"	3,100	\$ 26,271.96	\$ 4,096.48	\$ -	\$ 18,135.48	\$ 49,000.00	Gravity main to serve new high school; upgrades to existing Stonewater Lift Station.
S-30	2022	Expand Cottonwood WWTP to 0.40 MGD Capacity	\$ 2,000,000.00	0.00425	240	\$ 21,811.51	\$ 5,234,763.54	0.40 MGD		\$ 2,500,000.00	\$ 375,000.00	\$ 402,500.00	\$ 1,957,263.54	\$ 5,235,000.00	New Treatment Plant Capacity to Serve Addl Growth
S-31	2025	Expand Cottonwood WWTP to 0.50 MGD Capacity	\$ 2,500,000.00	0.00425	240	\$ 31,340.04	\$ 7,521,608.52	0.50 MGD		\$ 3,500,000.00	\$ 525,000.00	\$ 684,300.00	\$ 2,812,308.52	\$ 7,522,000.00	New Treatment Plant Capacity to Serve Addl Growth
S-32	2021	Bastrop-Parsons WW Improvements	\$ 390,000.00	0.00425	240	\$ 4,047.53	\$ 971,406.01	12"		\$ 468,000.00	\$ 70,200.00	\$ 70,000.00	\$ 363,206.01	\$ 971,000.00	Replacement of existing wastewater line in Bastrop and Parsons; to correct current capacity issues and serve additional growth
CIP-1	2021	Wildhorse Creek Lift Station Expansion	\$ 750,000.00	0.00425	240	\$ 7,520.06	\$ 1,804,815.50	1,075 gpm, 2nd WW		\$ 900,000.00	\$ 135,000.00	\$ 95,000.00	\$ 75,900.00	\$ 1,206,000.00	Change in discharge point increased Phase 1 capacity from 440 to 1026 LUEs, currently at about 706 LUEs. Will need to expand LS when Lagos develops to ultimate 1586 LUE capacity.
CIP-2	2021	Bell Farms Lift Station Expansion	\$ 300,000.00	0.00425	240	\$ 2,894.89	\$ 694,774.11	1,400 gpm, 2nd WW		\$ 360,000.00	\$ 45,000.00	\$ 30,000.00	\$ 259,774.11	\$ 695,000.00	Presently at approximately 730 LUES. Current phase 1 capacity is 1264 LUES. Ultimate Capacity at phase 2 is 2172.
CIP-3	2021	Presidential Glen Lift Station Expansion	\$ 300,000.00	0.00425	240	\$ 2,894.89	\$ 694,774.11	2,275 gpm, 2nd WW		\$ 360,000.00	\$ 45,000.00	\$ 30,000.00	\$ 259,774.11	\$ 695,000.00	Presently at approximately 1281 LUES. Actual phase 1 capacity with current wastewater flows is in excess of 1500 LUES. Ultimate Capacity at phase 2 is 3517.
CIP-4	2022	US 290 WW Line Expansion	\$ 603,378.00	0.00425	240	\$ 6,579.87	\$ 1,579,169.64	12" & 15"	2,760	\$ 754,222.50	\$ 113,100.00	\$ 121,400.00	\$ 590,447.14	\$ 1,579,000.00	Presently at approximately 264 PG+308 SW = 572 LUEs out of 1800 LUE capacity, expansion will double capacity.
CIP-6	2020	Travis County Rural Center Lift Station, force main	\$ 1,931,000.00	0.00425	240	\$ 16,288.93	\$ 3,909,342.17	500 gpm	500	\$ 2,220,650.00	\$ 127,000.00	\$ 100,000.00	\$ 1,461,692.17	\$ 3,909,000.00	Lift Station and Force Main from Rural Center to existing wastewater line
Total:														\$ 76,193,000.00	

Notes:
Wastewater LUEs are defined as producing 275 gallons of wastewater per day per single family residence as determined in the the City of Manor Wastewater Master Plan.

EXHIBIT B-5
CITY OF MANOR WASTEWATER IMPROVEMENTS
10-YEAR CAPITAL IMPROVEMENTS PLAN
PRO RATA CALCULATIONS
JUNE 2020 - DRAFT

Project No.	Year	Description	Size	Total LUE Capacity	10-Year LUE Demand	Total Project Cost in 2015 Dollars	Pro Rata Share	Pro Rata Project Cost in 2020 Dollars
S-13	2020	Addl. Wilbarger WWTP Capacity	1.33 MGD	5354	4200	\$34,960,000.00	78.45%	\$ 27,425,000.00
		Cottonwood WWTP, Phase 1, 0.20						
S-15	2021	MGD	0.1 MGD	363	363	\$ 9,795,000.00	100.00%	\$ 9,795,000.00
S-16	2021	East Cottonwood Gravity Line	12"	1000	375	\$ 1,629,000.00	37.50%	\$ 611,000.00
S-17	2021	West Cottonwood LS and FM	12"	1200	540	\$ 1,832,000.00	45.00%	\$ 824,000.00
		West Cottonwood Gravity Line,						
S-18	2022	Phase 2	15"	1200	540	\$ 1,102,000.00	45.00%	\$ 496,000.00
S-19	2021	FM 973 Gravity Wastewater Line	12"	754	75	\$ 1,473,000.00	9.95%	\$ 147,000.00
S-23	2024	Willow Lift Station and Force Main	200 gpm	210	100	\$ 1,341,000.00	47.62%	\$ 639,000.00
		Wilbarger Lift Station and Force						
S-27	2026	Main to CoP WWTP	8"	1000	100	\$ 2,200,000.00	10.00%	\$ 220,000.00
		High School gravity line to						
		Stonewater Lift Station; Stonewater						
S-28	2018	Lift Station Upgrades	12"	1000	500	\$ 49,000.00	50.00%	\$ 25,000.00
		Expand Cottonwood WWTP to 0.40						
S-30	2022	MGD Capacity	0.40 MGD	909	909	\$ 5,235,000.00	100.00%	\$ 5,235,000.00
		Expand Cottonwood WWTP to 0.50						
S-31	2025	MGD Capacity	0.50 MGD	1272	1272	\$ 7,522,000.00	100.00%	\$ 7,522,000.00
S-32	2021	Bastrop-Parsons WW Improvements	12"	1272	1272	\$ 971,000.00	100.00%	\$ 971,000.00
		Wildhorse Creek Lift Station						
CIP-1	2021	Expansion	1,075 gpm, 2nd WW	1586	1586	\$ 1,206,000.00	100.00%	\$ 1,206,000.00
CIP-2	2021	Bell Farms Lift Station Expansion	1,400 gpm, 2nd WW	2172	2172	\$ 695,000.00	100.00%	\$ 695,000.00
		Presidential Glen Lift Station						
CIP-3	2021	Expansion	2,275 gpm, 2nd WW	3517	1119	\$ 695,000.00	31.82%	\$ 221,000.00
CIP-4	2022	US 290 WW Line Expansion	12" & 15"	3600	2300	\$ 1,579,000.00	63.89%	\$ 1,009,000.00
		Travis County Rural Center Lift						
CIP-6	2020	Station, force main	500 gpm	679	340	\$ 3,909,000.00	50.07%	\$ 1,957,000.00
								\$ 58,998,000.00

Previously Completed Projects

Year	Total LUE Capacity	Name	Description	Project Cost	LUEs Used	10-Year LUE Demand	Pro Rata Share	Pro Rata Project Cost
2001	300	Hamilton Point Sewer Main	Gravity Sewer Line to Serve Hamilton Point Sub	\$ 128,000.00	300	0	0%	\$ -
2003	1091	Creekside Offsite/Onsite and Wilbarger WWTP	Lift Station, Forced Main and WWTP	\$ 1,033,000.00	726	375	34%	\$ 355,000.00
2004	1264	East Old Highway 20 Gravity Line, Lift Station, Forced Main (Bell Farms FM)	Gravity Line Lift Station and Forced Main to Serve new growth along Old Highway 20	\$ 1,034,873.04	616	650	51%	\$ 532,000.00
2005	1885	Greenbury Gravity Line	Gravity Line Along US 290 to Serve Greenbury Sub	\$ 619,007.39	308	682	36%	\$ 224,000.00
2008	888	Carriage Hills Lift Station and Forced Main	Lift Station and Forced Main to Serve Carriage Hills Sub	\$ 680,972.01	165	175	20%	\$ 134,000.00
Totals				\$ 3,495,852.45				\$ 1,245,000.00

CIF Ineligible Projects

2009	727	Wilbarger WWTP Capacity Buyback						
		Creekside Lift Station Forced Main						
	2005	Adjustment						

EXHIBIT B-6
CITY OF MANOR WASTEWATER IMPROVEMENTS
10-YEAR CAPITAL IMPROVEMENTS PLAN
MISCELLANEOUS PROJECT COSTS
JUNE 2020- DRAFT

Description	Total Cost
CIF Studies	\$ 13,450.00
Gilleland Creek COA Impact Fee (34 LUEs @ \$1,400)	\$ 47,600.00
Study Cost for Wastewater, Mapping, Modeling	\$ 40,000.00
Total Sewer-Related Costs \$ 101,050.00	

EXHIBIT A-4
 CITY OF MANOR WASTEWATER IMPROVEMENTS
 10-YEAR CAPITAL IMPROVEMENTS PLAN
 FEE FACTORS
 JUNE 2020 - DRAFT

1. RESIDENTIAL DEVELOPMENT

Community Impact Fees for residential development shall be assessed based upon the number of dwelling units proposed for development times the appropriate LUE Factor for wastewater as shown below.

Dwelling Type	Units	LUE Factor
Single Family Residential	Per Housing Unit	1
Two-Family Residential	Per Residential Unit	0.7
Three-Family Residential	Per Residential Unit	0.7
Multi-Family Residential	Per Residential Unit	0.5

2. NON-RESIDENTIAL DEVELOPMENT

Community Impact Fees for all non-residential development shall be assessed based upon the water meter size and type installed to serve the proposed development water, as shown below.

Meter Size (Inch)	Type	LUE Factor
5/8	Positive	1
3/4	Displacement	1.5
	Positive	
1	Displacement	2.5
	Positive	
1-1/2	Displacement	5
	Positive	
2	Displacement	8
	Positive	
2	Compound	8
2	Turbine	10
3	Compound	16
3	Turbine	24
4	Compound	25
4	Turbine	42
6	Compound	50
6	Turbine	92
8	Compound	80
8	Turbine	160
10	Compound	115
10	Turbine	250
12	Turbine	330

EXHIBIT B-7
CITY OF MANOR WASTEWATER
IMPACT FEE CALCULATION
JUNE 2020 - DRAFT

CATEGORY	AMOUNT
Total CIP Eligible Project Cost :	\$ 60,344,000.00
Number of LUEs added:	7,455.00
Maximum Wastewater CIF:	\$ 8,094.00
50% Credit:	\$ (4,047.00)
MAXIMUM ASSESSABLE CIF:	\$ 4,047.00
2017 ASSESSED WASTEWATER CIF:	\$ 3,200.00
(CURRENT IMPACT FEE AMOUNT)	