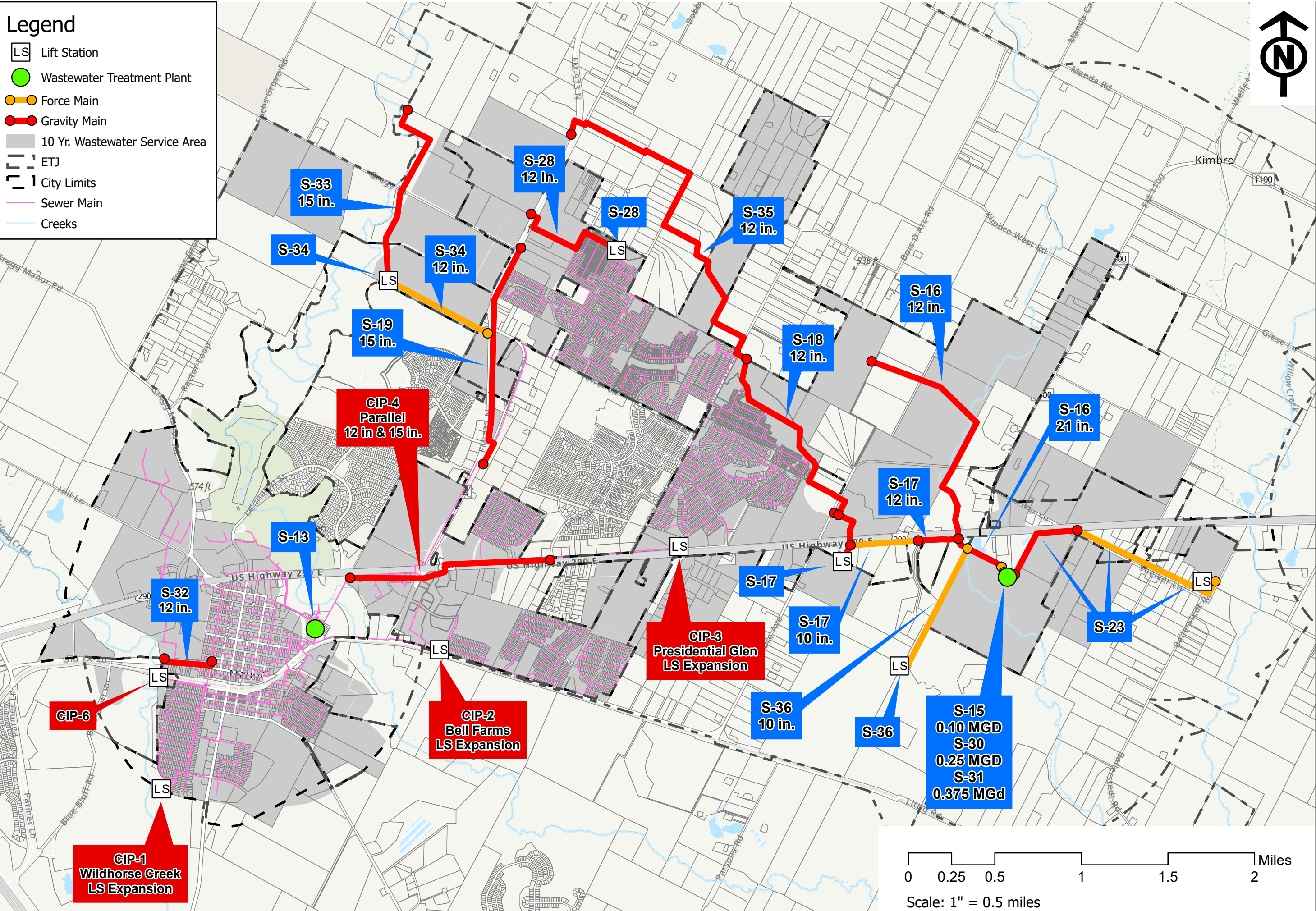
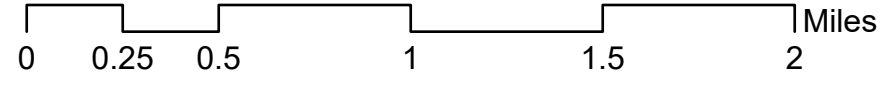


# Legend

- LS Lift Station
- Wastewater Treatment Plant
- Force Main
- Gravity Main
- 10 Yr. Wastewater Service Area
- ETJ
- City Limits
- Sewer Main
- Creeks



PROJECT NUMBER	14966.00
DATE	9/22/2021



Scale: 1" = 0.5 miles

**CIP-1**  
Wildhorse Creek  
LS Expansion

**CIP-2**  
Bell Farms  
LS Expansion

**CIP-3**  
Presidential Glen  
LS Expansion

**CIP-4**  
Parallel  
12 in & 15 in.

**CIP-6**

**S-33**  
15 in.

**S-28**  
12 in.

**S-35**  
12 in.

**S-34**

**S-34**  
12 in.

**S-19**  
15 in.

**S-18**  
12 in.

**S-16**  
12 in.

**S-16**  
21 in.

**S-13**

**S-17**  
12 in.

**S-32**  
12 in.

**S-17**

**S-17**  
10 in.

**S-23**

**S-36**  
10 in.

**S-36**

**S-15**  
0.10 MGD  
**S-30**  
0.25 MGD  
**S-31**  
0.375 MGD

EXHIBIT A-4  
CITY OF MANOR WASTEWATER IMPROVEMENTS  
10-YEAR CAPITAL IMPROVEMENTS PLAN  
NOVEMBER 202

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

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.

Project No.	Year	Description	Construction Cost (2021 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	\$5,119,897.50	0.00425	240	\$ 49,195.04	\$ 11,806,810.71	0.20 MGD		\$ 6,143,877.00	\$ 398,000.00	\$ 850,400.00	\$ 4,414,533.71	\$ 11,807,000.00	Build plant at Regional Site, road and electrical improvements add \$500,000
S-16	2021	East Cottonwood Gravity Line	\$ 1,750,000.00	0.00425	240	\$ 14,773.93	\$ 3,545,743.72	12"	3,200	\$ 2,100,000.00	\$ 51,000.00	\$ 69,000.00	\$ 1,325,743.72	\$ 3,546,000.00	Extend East Cottonwood gravity ww to Regional Site, sized for 10-year capacity
S-17	2021	West Cottonwood LS and FM	\$ 1,000,000.00	0.00425	240	\$ 8,837.74	\$ 2,121,057.51	6" FM and 350 gpm LS	3,700	\$ 1,200,000.00	\$ 79,000.00	\$ 49,000.00	\$ 793,057.51	\$ 2,121,000.00	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	\$ 984,000.00	0.00425	240	\$ 8,917.60	\$ 2,140,223.69	15"	8,200	\$ 1,230,000.00	\$ 64,000.00	\$ 46,000.00	\$ 800,223.69	\$ 2,140,000.00	Serves West Cottonwood Sub-Basin up to Bois D'Arc Ln, 21" and 24" gravity ww sized for ultimate capacity
S-19	2022	FM 973 Gravity Wastewater Line	\$ 700,000.00	0.00425	240	\$ 6,139.30	\$ 1,473,432.00	15"	5,800	\$ 875,000.00	\$ 131,300.00	\$ 106,100.00	\$ 361,032.00	\$ 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	\$ 750,000.00	0.00425	240	\$ 8,988.81	\$ 2,157,313.53	200 gpm		\$ 1,012,500.00	\$ 151,900.00	\$ 186,300.00	\$ 806,613.53	\$ 2,157,000.00	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-28	2018	High School gravity line to Stonewater Lift Station; Stonewater Lift Station Upgrades	\$ 26,271.96	0.00425	240	\$ 210.84	\$ 50,601.98	12"	3,100	\$ 27,585.56	\$ 4,096.48	\$ -	\$ 18,919.94	\$ 51,000.00	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	\$ 418,097.00	0.00425	240	\$ 4,339.12	\$ 1,041,388.76	12"		\$ 501,716.40	\$ 75,300.00	\$ 75,000.00	\$ 389,372.36	\$ 1,041,000.00	Replacement of existing wastewater line in Bastrop and Parsons; to correct current capacity issues and serve additional growth
S-33	2022	Wilbarger Basin Gravity Line to Lift Station (off Gregg Lane)	\$ 750,000.00	0.00425	240	\$ 8,178.90	\$ 1,962,936.50	15"	6,200	\$ 937,500.00	\$ 140,600.00	\$ 150,900.00	\$ 733,936.50	\$ 1,963,000.00	New wastewater line to serve growth along Gregg Lane.
S-34	2022	Wilbarger Basin lift station and force main (off Gregg Lane)	\$ 1,000,000.00	0.00425	240	\$ 10,906.09	\$ 2,617,461.63	12" FM and 225 gpm LS	3,500	\$ 1,250,000.00	\$ 187,500.00	\$ 201,300.00	\$ 978,661.63	\$ 2,617,000.00	New lift station and force main to servie growth along Gregg Lane.
S-35	2022	Gravity line from City Limits to tie in to Wastewater line to Cottonwood	\$ 850,000.00	0.00425	240	\$ 9,270.31	\$ 2,224,874.33	12"	8,130	\$ 1,062,500.00	\$ 159,400.00	\$ 171,100.00	\$ 831,874.33	\$ 2,225,000.00	Option 1 -New gravity wastewater line to extend wastewater service to City Limits for future growth.
S-36	2022	Lift Station and Force main to Cottonwood WWTP	\$ 2,000,000.00	0.00425	240	\$ 21,811.51	\$ 5,234,763.54	10" FM 1,575 LUEs		\$ 2,500,000.00	\$ 375,000.00	\$ 402,500.00	\$ 1,957,263.54	\$ 5,235,000.00	New lift station and force main to serve areas south of US Hwy 290 along Old Kimbro Road.
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	2022	Bell Farms Lift Station Expansion	\$ 400,000.00	0.00425	240	\$ 3,826.58	\$ 918,379.57	1,400 gpm, 2nd WW		\$ 500,000.00	\$ 45,000.00	\$ 30,000.00	\$ 343,379.57	\$ 918,000.00	Presently at approximately 730 LUES. Current phase 1 capacity is 1264 LUES. Ultimate Capacity at phase 2 is 2172.
CIP-3	2022	Presidential Glen Lift Station Expansion	\$ 400,000.00	0.00425	240	\$ 3,826.58	\$ 918,379.57	2,275 gpm, 2nd WW		\$ 500,000.00	\$ 45,000.00	\$ 30,000.00	\$ 343,379.57	\$ 918,000.00	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: \$ 92,623,000.00**

EXHIBIT B-5  
CITY OF MANOR WASTEWATER IMPROVEMENTS  
10-YEAR CAPITAL IMPROVEMENTS PLAN  
PRO RATA CALCULATIONS  
NOVEMBER 2021

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	95.00%	\$ 33,212,000.00
		Cottonwood WWTP, Phase 1, 0.20 MGD	0.1 MGD	363	363	\$ 11,807,000.00	100.00%	\$ 11,807,000.00
S-16	2021	East Cottonwood Gravity Line	12"	1000	375	\$ 3,546,000.00	50.00%	\$ 1,773,000.00
S-17	2021	West Cottonwood LS and FM	12"	1200	540	\$ 2,121,000.00	50.00%	\$ 1,061,000.00
		West Cottonwood Gravity Line, Phase 2	15"	1200	540	\$ 2,140,000.00	45.00%	\$ 963,000.00
S-19	2022	FM 973 Gravity Wastewater Line	15"	754	75	\$ 1,473,000.00	50.00%	\$ 737,000.00
S-23	2024	Willow Lift Station and Force Main	200 gpm	210	100	\$ 2,157,000.00	47.62%	\$ 1,027,000.00
		High School gravity line to Stonewater Lift Station; Stonewater Lift Station Upgrades	12"	1000	500	\$ 51,000.00	100.00%	\$ 51,000.00
S-30	2022	Expand Cottonwood WWTP to 0.40 MGD Capacity	0.40 MGD	909	909	\$ 5,235,000.00	100.00%	\$ 5,235,000.00
S-31	2025	Expand Cottonwood WWTP to 0.50 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	\$ 1,041,000.00	100.00%	\$ 1,041,000.00
		Wilbarger Basin Gravity Line to Lift Station (off Gregg Lane)	15"	1200	1200	\$ 1,963,000.00	100.00%	\$ 1,963,000.00
S-34	2022	Wilbarger Basin lift station and force main (off Gregg Lane)	12" FM and 225 gpm LS	1200	1200	\$ 2,617,000.00	100.00%	\$ 2,617,000.00
		Gravity line from City Limits to tie in to Wastewater line to Cottonwood	12"	1200	600	\$ 2,225,000.00	60.00%	\$ 1,335,000.00
S-35	2022	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	2022	Bell Farms Lift Station Expansion	1,400 gpm, 2nd WW	2172	2172	\$ 918,000.00	100.00%	\$ 918,000.00
		Presidential Glen Lift Station						
CIP-3	2022	Expansion	2,275 gpm, 2nd WW	3517	1119	\$ 918,000.00	65.00%	\$ 597,000.00
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 Station, force main	500 gpm	679	340	\$ 3,909,000.00	50.07%	\$ 1,957,000.00
								\$ 76,031,000.00

**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
<b>Totals</b>				<b>\$ 3,495,852.45</b>				<b>\$ 1,245,000.00</b>

**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  
NOVEMBER 2021

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
<b>Total Sewer-Related Costs</b>	<b>\$ 101,050.00</b>

EXHIBIT A-4  
 CITY OF MANOR WASTEWATER IMPROVEMENTS  
 10-YEAR CAPITAL IMPROVEMENTS PLAN  
 FEE FACTORS  
 NOVEMBER 2021

**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.

<b>Dwelling Type</b>	<b>Units</b>	<b>LUE Factor</b>
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.

<b>Meter Size (Inch)</b>	<b>Type</b>	<b>LUE Factor</b>
5/8	Positive	1
	Displacement	
3/4	Positive	1.5
	Displacement	
1	Positive	2.5
	Displacement	
1-1/2	Positive	5
	Displacement	
2	Positive	8
	Displacement	
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  
NOVEMBER 2021

<b>CATEGORY</b>	<b>AMOUNT</b>
Total CIP Eligible Project Cost :	\$ 77,377,000.00
Number of LUEs added:	8,655.00
<b>Maximum Wastewater CIF:</b>	<b>\$ 8,940.00</b>
<b>50% Credit:</b>	<b>\$ (4,470.00)</b>
<b>MAXIMUM ASSESSABLE CIF:</b>	<b>\$ 4,470.00</b>