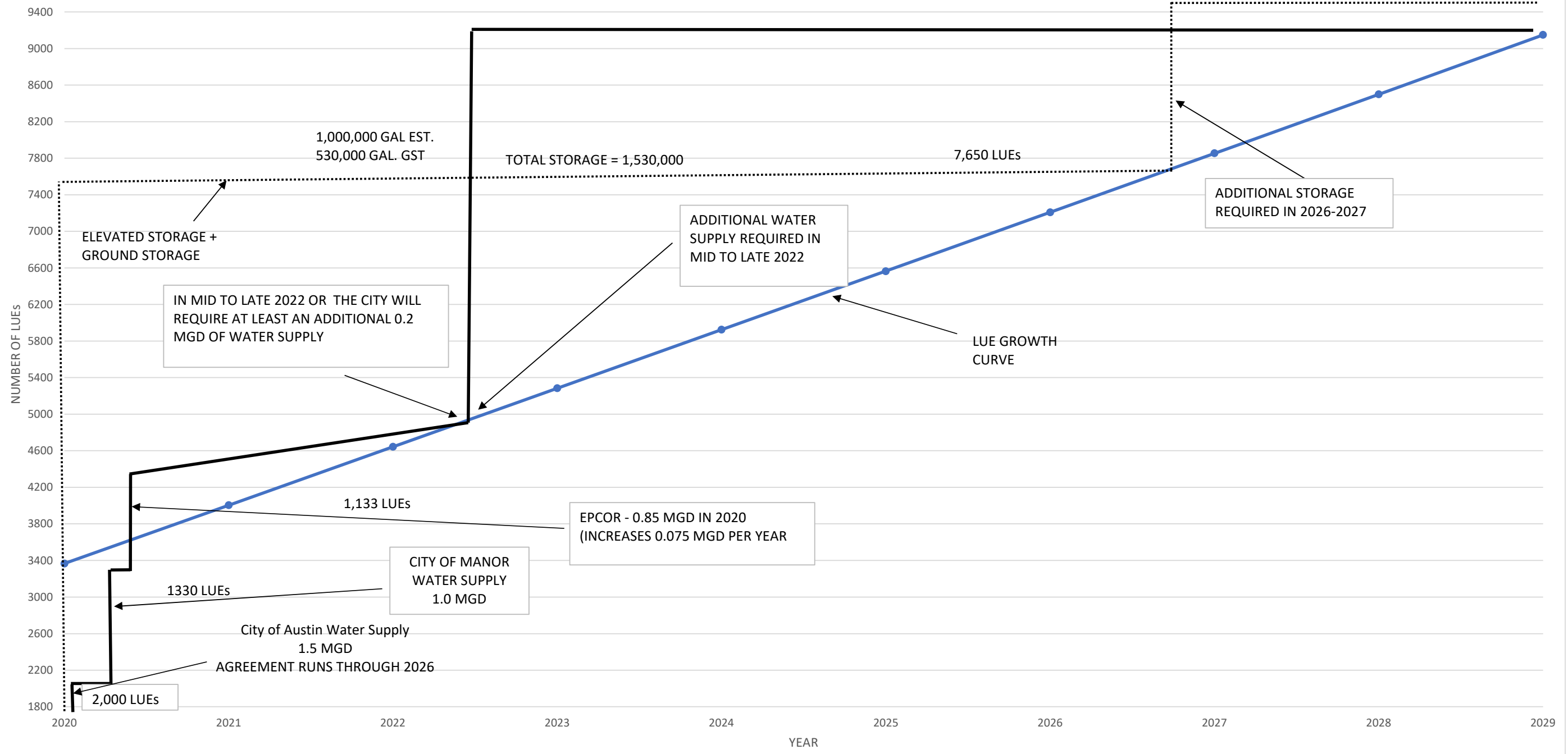











### CITY OF MANOR WATER CAPACITY



LEGEND	
	PROPOSED WATER TANK
	EXISTING WATER TANK
	MANOR ROADS
	10-YR. WATER SERVICE AREA
	MANOR ETJ
	EXISTING OR NON-CIP WATERLINES
	PROPOSED 8-INCH WATERLINES
	PROPOSED 12-INCH WATERLINES
	PROPOSED 16-INCH WATERLINES



**EXHIBIT A-1**  
 CITY OF MANOR  
 10 YEAR WATER  
 CAPITAL IMPROVEMENTS PLAN  
 JUNE 2020  
**DRAFT**

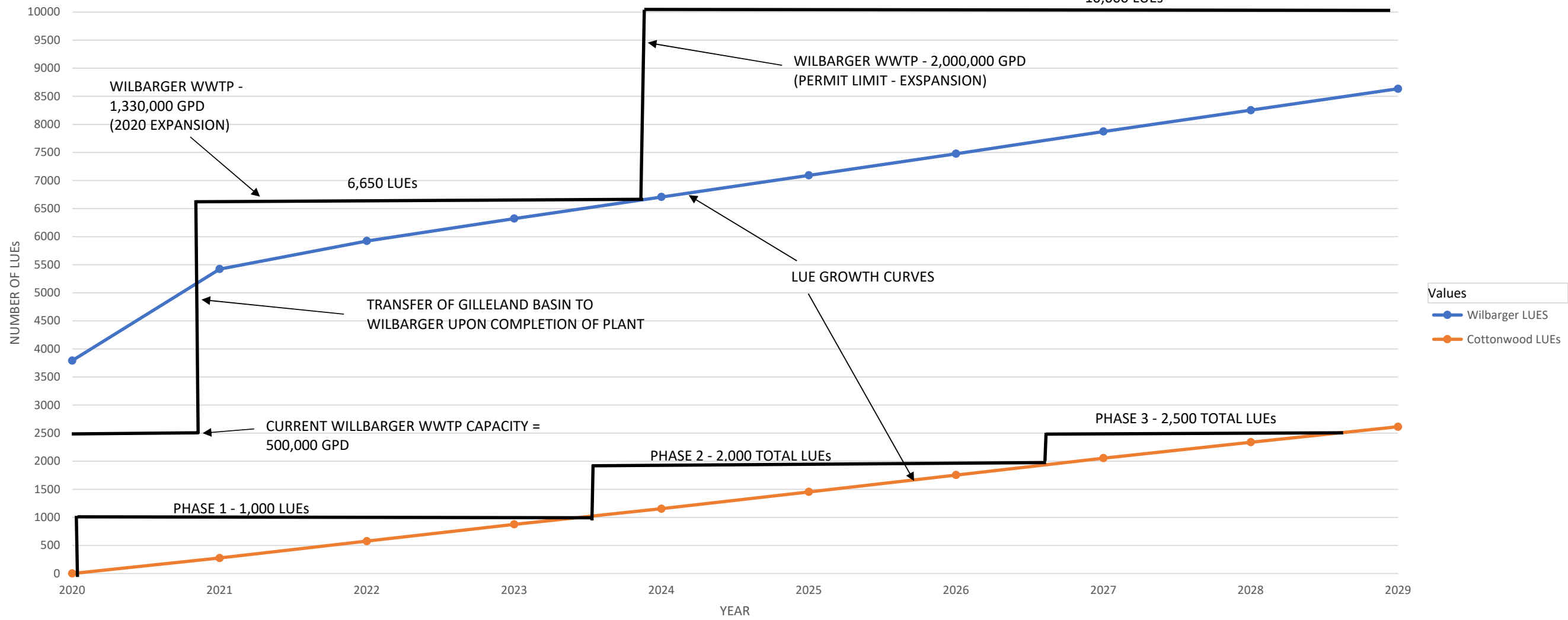
EXHIBIT A-2  
CITY OF MANOR WATER IMPROVEMENTS  
10-YEAR CAPITAL IMPROVEMENTS PLAN  
AUGUST 2020 - DRAFT










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

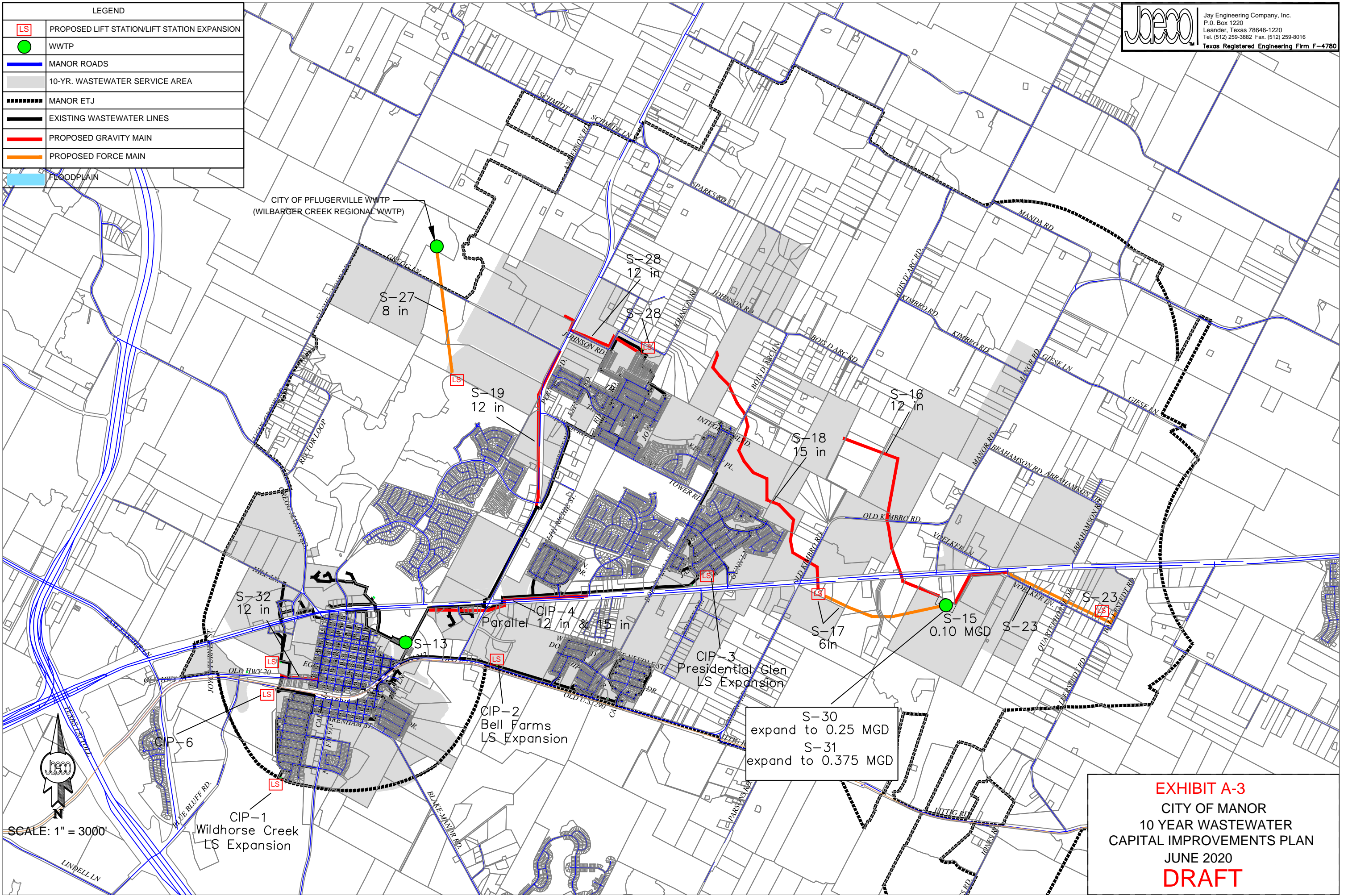
Project No.	Year	Description	Size	Unit	Length (ft)	Construction Cost (2020 Dollars)	Annual Interest	Period (yr)	Construction Cost (adjusted for Inflation @ 5% per annum)	Soft Costs	Contingency (10% + 1% per annum)	Financing Cost (5% over 20 Years)	Total Project Costs	Detailed Description
W-6	2021	Blake Manor Road Water Line	12	inch	3,200	\$ 268,800.00	0.050	20	\$ 322,560.00	\$ 48,400.00	\$ 48,200.00	\$ 253,529.66	\$ 673,000.00	Transmission main from downtown along Blake Manor Road to future FM 973. Includes replacing 400 LF of 6" pipe in Downtown Plant
W-10	2020	Hill Lane Water Line	12	inch	3,450	\$ 289,800.00	0.050	20	\$ 333,270.00	\$ 50,000.00	\$ 46,000.00	\$ 259,644.71	\$ 689,000.00	Water Distribution main along Hill Lane to serve new growth
W-13	2025	US 290 Crossing at Golf Course	12	inch	250	\$ 100,000.00	0.050	20	\$ 140,000.00	\$ 21,000.00	\$ 27,400.00	\$ 113,954.07	\$ 302,000.00	Connect 12" water lines on north and south sides of US 290
W-14	2021	Gregg Manor Road Water Supply - Ground Storage Tank and Pumps	250,000	gallon		\$ 2,000,000.00	0.050	20	\$ 2,400,000.00	\$ 360,000.00	\$ 358,800.00	\$ 1,886,411.62	\$ 5,005,000.00	250,000 gal Ground Storage Tank and 1,400 gpm expandable pump station for wholesale water supply connection
W-15	2021	FM 973 Water Line	12	inch	4000	\$ 336,000.00	0.050	20	\$ 403,200.00	\$ 60,500.00	\$ 60,300.00	\$ 316,942.31	\$ 841,000.00	Transmission main from US 290 to serve new growth on the east and west sides of FM 973
W-16	2021	US 290 Water Line	12	inch	2900	\$ 243,600.00	0.050	20	\$ 292,320.00	\$ 43,800.00	\$ 43,700.00	\$ 229,734.79	\$ 610,000.00	Parallel 12" waterline to increase US 290 capacity
W-17	2020	US 290 Water Line	16	inch	4400	\$ 540,000.00	0.050	20	\$ 621,000.00	\$ 93,200.00	\$ 85,700.00	\$ 483,820.91	\$ 1,284,000.00	Extend transmission main from Presidential Glen to Old Kimbro Road
W-18	2020	Old Kimbro Road Water Line	12	inch	3000	\$ 474,000.00	0.050	20	\$ 545,100.00	\$ 81,800.00	\$ 75,200.00	\$ 424,666.41	\$ 1,127,000.00	Transmission main to serve new growth north of US 290
W-20	2025	Bois D'Arc Lane Water Line	16	inch	2700	\$ 302,400.00	0.050	20	\$ 423,360.00	\$ 63,500.00	\$ 82,800.00	\$ 344,559.84	\$ 914,000.00	Transmission main to improve delivery of water from East EST
W-22	2025	Bois D'Arc Lane Water Line	12	inch	2500	\$ 210,000.00	0.050	20	\$ 294,000.00	\$ 44,100.00	\$ 57,500.00	\$ 239,279.35	\$ 635,000.00	Transmission main to serve new growth north of Tower Rd
W-24	2025	Gregg Manor Road Pump Improvements	1200	gpm		\$ 200,000.00	0.050	20	\$ 280,000.00	\$ 42,000.00	\$ 54,700.00	\$ 227,847.65	\$ 605,000.00	Increase Pump Capacity (and contracted supply) at wholesale water connection
W-31	2021	FM 973 Water Line	12	inch	5200	\$ 436,800.00	0.050	20	\$ 524,160.00	\$ 78,600.00	\$ 78,400.00	\$ 412,000.81	\$ 1,093,000.00	Transmission main along FM 973 from Tower Road to Canopy Lane to serve new growth.
Water CIP-1	2020	Gregg Lane to Tower Road Waterline	12	inch	3400	\$ 1,560,000.00	0.050	20	\$ 1,794,000.00	\$ 269,100.00	\$ 247,600.00	\$ 1,397,630.92	\$ 3,708,000.00	Transmission main from Manville WSC Booster Station to East Elevated Storage Tank
Water CIP-2	2017	AMR Water Meters				\$ 300,000.00	0.05	20	\$ 300,000.00	\$ 45,000.00	\$ 31,100.00	\$ 227,484.74	\$ 604,000.00	1350 Meter bodies and AMR registers, 810 replacement meter box lids, software, two vehicle transmitter units, two laptops.
Water CIP-3	2018	AMR Water Meters				\$ 400,000.00	0.05	20	\$ 420,000.00	\$ 63,000.00	\$ 48,300.00	\$ 321,357.73	\$ 853,000.00	1350 Meter bodies and AMR registers, 810 replacement meter box lids, software, two vehicle transmitter units, two laptops.
<b>Total</b>												<b>\$ 18,943,000.00</b>		

Notes:  
Water LUEs are defined as requiring 451 gallons of water per day per single family residence as determined in the the City of Manor Water Master Plan.

CITY OF MANOR WASTEWATER CAPACITY



LEGEND	
	PROPOSED LIFT STATION/LIFT STATION EXPANSION
	WWTP
	MANOR ROADS
	10-YR. WASTEWATER SERVICE AREA
	MANOR ETJ
	EXISTING WASTEWATER LINES
	PROPOSED GRAVITY MAIN
	PROPOSED FORCE MAIN
	FLOODPLAIN



**EXHIBIT A-3**  
CITY OF MANOR  
10 YEAR WASTEWATER  
CAPITAL IMPROVEMENTS PLAN  
JUNE 2020  
**DRAFT**

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
													<b>Total:</b>	<b>\$ 76,193,000.00</b>	

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.