



Yorktown - Preliminary Sanitary Sewer Sizing

Size (In)	Area (sf)	Radius (ft)	Min. Slope	Manning's "n"	Max Slope	Capacity (CFS)
6	0.196	0.125	0.7	0.009	2.46	0.68
8	0.349	0.167	0.44	0.009	1.73	1.16
10	0.545	0.208	0.33	0.009	1.21	1.81
12	0.785	0.25	0.26	0.009	0.97	2.62
15	1.227	0.313	0.19	0.009	0.72	4.07
18	1.767	0.375	0.15	0.009	0.57	5.88
21	2.405	0.438	0.13	0.009	0.46	8.26
24	3.142	0.5	0.11	0.009	0.38	10.84
27	3.976	0.563	0.09	0.009	0.33	13.43

Sanitary Sewer Demands

Class	Service Units	Peak Flow (GPD)	Demand (CFS)
Multi-Family	405	362,262	0.5605
Single-Family	488	436,930	0.6761
Education	30	26,581	0.0411
Commercial	590	527,855	0.8168
Retail	102	91,335	0.1413

- 5.02.07 WW Line Size**
- The minimum pipe diameter for a WW line shall be 8-in.
 - 4-in. WW lines are only allowed for service leads for individual homes or duplexes
 - 6-in. and larger WW lines are only allowed for commercial properties
 - The City shall have final say as to the configuration of any proposed WW line in regard to the orderly and non-duplicative expansion of the City's WW system
 - The City shall have the final say as to the size and depth required for an WW line, as well as for any exception or waiver requested

Table 5.1: Minimum and Maximum WW Line Slopes

City of Corpus Christi Minimum and Maximum WW Line Slope

Nominal Pipe Size (inches)	Minimum Slope		Maximum Slope	
	(Foot/Foot)	(%)	(Foot/Foot)	(%)
6	0.007	0.70	0.0246	2.46
8	0.0044	0.44	0.0173	1.73
10	0.0033	0.33	0.0121	1.21
12	0.0026	0.26	0.0097	0.97
15	0.0019	0.19	0.0072	0.72
18	0.0015	0.15	0.0057	0.57
21	0.0013	0.13	0.0046	0.46
24	0.0011	0.11	0.0038	0.38
27	0.0009	0.09	0.0033	0.33

PRELIMINARY SANITARY SEWER SIZING
10/21/2022



Yorktown - ISD Roadway

Equivalent Service Units	
Gross Site Area	281.6 AC
Developable Land	156.3 AC

Class	Acreage	SF*	Units	Capita	SUE Factor**	Service Units	Demand (GPD)	PEAK FLOW (GPD)	CFS	Assumptions
Multi-Family	27.3	1,189,188	850	NA	0.4762	405	101,193	362,262	0.561	Condo or Apartments with Washer/Dryer
Single-Family	64.4	2,807,006	322	NA	1.000	322	80,550	288,363	0.446	7,000 SF/Lot
Educational	40	100,247	NA	1500	0.0198	30	7,425	26,581	0.041	# of Students from City of Corpus / Traffic Form
Commercial A	16.98	258,877	NA	NA	0.0021	544	135,910	486,549	0.753	Restaurant, Fast Food
Commercial B	11.32	172,585	NA	NA	0.000237	41	10,226	36,607	0.057	Office (includes Studio, Therapy, & Massage)
Retail	9.2	360,677	NA	NA	0.000281	101	25,338	90,707	0.140	
Single-Family - (Offsite)			80	NA	1	80	20,000	71,599	0.111	From Northern Development thru Oso Pkwy
Commercial - (Offsite)		2,500	NA	NA	0.0021	5	1,313	4,699	0.007	Restaurant, Fast Food (from Northern Dvmt)
Retail - (Offsite)		2,500	NA	NA	0.000281	0.703	176	629	0.001	From Northern Development thru Oso Pkwy
Single-Family - E Collector	19.096	831,822	86	NA	1.000	86	21,500	76,968	0.119	From Northern Development thru Osito Way
Irrigation						TBD	TBD			
Total:						1,615	403,629	1,444,963	2.236	

Notes

*Calculations based on Attachment 1: Site Plan - August 2021.

**Offsite flows, highlighted in blue, were estimated by adjacent developer and included for sizing purposes. Final capacity request will be by others.

***Service Unit Equivalent (SUE) Factor based on Attachment 2: Houston Public Works Impact Fee Service Unit Equivalent Table.

Attachment 1
Site Plan – August 2021



SITE PLAN
YORKTOWN BOULEVARD, CORPUS CHRISTI

AUGUST 2021

Kimley»Horn

Attachment 2

Houston Public Works Impact Fee Service Unit Equivalent Table

How to calculate:

Multiply Service Units Equivalent (SUE) by Sq ft, Occ, number of bowls etc...(SUE column x Per column) to obtain the "approximate" total number of service units.

Recommended SUs are based on 1.0 SU = 250 gpd.

*Please keep in mind that some proposed developments may require multiple SUEs

Line No.	Type of Development	Service Unit Equivalent	Per
1.	Bakery	0.0019	Square Foot
2.	Banquet Hall (No Cooking, Warming Kitchen Only)	0.0200	Occupant
3.	Barber Shop	0.6048	Bowl
4.	Beauty Shop or Beauty Salon	0.6048	Bowl
5.	Bowling Alley (Dining Additional Charge)	0.8000	Lane
6.	Car Repair (Office Additional Charge)	0.00020	Square Foot
7.	Carwash, Tunnel, Self-Service	8.00	Carwash
8.	Carwash, Tunnel, With Attendant	39.60	Carwash
9.	Carwash, Wand Type, Self-Serve	1.54	Carwash Bay
10.	Church or Fellowship Hall	0.0037	Occupant
11.	Club, Tavern, or Lounge	0.0399	Occupant
12.	Concert Hall	0.0399	Occupant
13.	Country Club	0.4032	Member
		0.1008	Guest
14.	Dance School or Dance Studio	0.0399	Occupant
15.	Day Care Center	0.0399	Occupant
16.	Dormitory (Dining Additional Charge)	0.3604	Bed
17.	Fire Station (Dining Additional Charge)	0.3604	Capita
18.	Fitness Center/Club – Freestanding	0.0015	Square Foot
19.	Fitness Club – Within Shopping Center	0.0399	Occupant
20.	Funeral Home (Services Per Week)	0.39	Service
21.	Gas Station with Carwash	11.78	Station
22.	Gas Station Without Carwash	2.21	Station
23.	Grocery Store, 5,000-28,999 Sq. Ft	0.00033	Square Foot
24.	Grocery Store, 29,000 + Sq. Ft	0.0009	Square Foot
25.	Homeless Shelter (No Cooking or Dining)	0.1323	Bed
26.	Hospital (Dining Additional Charge))	0.8001	Bed
27.	Hotel or Motel, With or W/O Kitchenettes	0.7554	Room
28.	Manufacturing	0.00020	Square Foot
29.	Mobile Home Park	1.00	Space
30.	Movie Theater	0.0200	Seat
31.	Nail Salon (Manicure or Pedicure)	0.0004	Square Foot
		0.3024	Bowl
32.	Nursing Home (Salon & Dining Additional Charge)	0.3604	Bed
33.	Office (Includes Studio, Therapy & Massage)	0.000237	Square Foot
34.	Park	0.0200	Occupant
35.	Post Office, Excluding Dock	0.000320	Square Foot
36.	Prison	0.3654	Capita
37.	Racquetball Court	0.6426	Court
38.	Recreational Vehicle Park	0.3000	Vehicle
39.	Residence, Apartment with Washer / Dryer	0.4762	Unit

Line No.	Type of Development	Service Unit Equivalent	Per
40.	Residence. Apartment Without Washer / Dryer	0.4046	Unit
41.	Residence, Condominium	0.4762	Unit
42.	Residence, Single Family or Townhouse, Up To 3000 Sq. Ft (Additional Charge Of 0.0002 SU Per Sq. Ft Over 3000 Sq. Ft)	1.000	Unit
43.	Restaurant, Fast Food	0.0021	Square Foot
44.	Restaurant, Full Service / Dining / Bar Area	0.0033	Square Foot
45.	Retail	0.000281	Square Foot
46.	School (College, High, Middle, Elementary)	0.0198	Seat
47.	Skating Rink	0.0200	Capita
48.	Stadium	0.0126	Seat
49.	Swimming Pool	0.0200	Swimmer
50.	Toilet (Park Amenity)	0.1640	Toilet
51.	Transportation Terminal (Dining Additional Charge)	0.0200	Passenger
52.	Warehouse	0.000121	Square Foot
53.	Washeteria	0.5639	Machine
54.	Water Dispensing Unit – Freestanding	4.5630	Unit