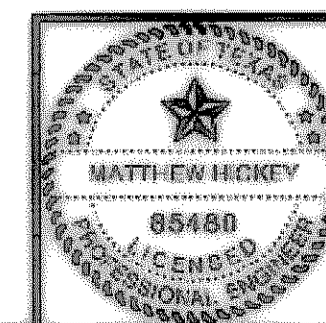


PROPOSED STORM SEWER CALCULATIONS

Storm Sewer/ Lateral Number	Runoff Collection Point		Distance Between Collection Points	Area No.	Incremental Drainage Area				Time of Concentration (MIN.)			Design Storm Freq. (Yrs.)	Intensity (I) (In./Hr.)	Runoff (Q) (c.f.s.)	Actual Q from Inlet (c.f.s.)	Slope of Hydraulic Gradient (Ft./Ft.)	No of Pipes/ Boxes	Selected Storm Sewer Pipe Size (In.)	Box Width (Ft.)	Box Depth (Ft.)	Cor. Clip (In.)	Velocity Between Points (F.P.S.)	Upstream Minor Losses			Flow Time Distance/ (Vel*60) (Min.)	Time at Downstream Station (Min.)	Remarks		
	Upstream Station	Downstream Station			Drainage Area (Ac.)	Runoff Coeff. "C"	Incremental "CA"	Accumulated "CA"	Inlet Time (MIN.)	Along Sewer Line (MIN.)	Used in Design (MIN.)												Upstream Point of Turbulence	Head Loss Coeff. "K"	Velocity Head Loss (Feet)					
Lateral C-3	5.89	0.00	5.89	C3	0.29	0.90	0.26	0.26	10.00	0.00	10.00	100	9.80	2.56		0.0008	1	18.0						0.07	10.07	Into St Sew C-1				
Lateral C-4	24.46	0.00	24.46	C4	6.40	0.56	3.60	3.60	10.00	0.00	10.00	100	9.80	35.24	17.67	0.0081	1	24.0						0.07	10.07	Into St Sew C-1 / 17.57 cfs CO to Inlet C5				
Lateral C-5	26.50	0.00	26.50	C5	0.10	0.90	0.09	0.09	10.00	0.00	10.00	100	9.80	0.88	12.82	0.0198	1	18.0						0.08	10.08	Into St Sew C-1 / + Inlet C4-11.94 cfs C.O.				
Storm Sewer C-1	115.62	46.68	69.14	Lateral C3(B) & C4	6.40	0.56	3.60	3.60	10.00	0.00	10.00	100	9.80	35.24		0.0243	1	24.0					11.22	60 Degree Wye	0.60	1.95	0.10	10.10		
	46.68	39.41	7.27	Lateral C3	0.29	0.90	0.26	3.86	10.00	0.10	10.10	100	9.80	37.79		0.0279	1	24.0					12.03	60 Degree Wye	0.60	1.06	0.01	10.11		
	39.41	0.00	39.41	Lateral C5	0.10	0.90	0.09	3.95	10.10	0.01	10.11	100	9.78	36.60		0.0291	1	24.0					12.29	60 Degree Wye	0.60	1.00	0.05	10.17	Into Junction Box A / St Sew C-2	
Lateral C-1	22.50	0.00	22.50	C1	1.17	0.50	0.59	0.59	10.00	0.00	10.00	100	9.80	5.73		0.0040	1	18.0						0.12	10.12	Into St Sew C-2				
Lateral C-2	18.60	0.00	18.60	C2	0.10	0.90	0.09	0.09	10.00	0.00	10.00	100	9.80	0.88		0.0001	1	18.0						0.62	10.62	Into St Sew C-2				
Lateral C-6	20.80	0.00	20.80	C6	1.03	0.50	0.52	0.52	10.00	0.00	10.00	100	9.80	5.05	10.40	0.0131	1	18.0						0.08	10.08	Into St Sew C-2 / + Inlet C5-5.35 cfs C.O.				
Storm Sewer C-2	299.21	284.70	14.51	Lateral C2	0.10	0.90	0.09	0.09	10.00	0.00	10.00	100	9.80	0.88		0.0001	1	18.0					0.50	60 Degree Wye	0.60	0.00	0.48	10.48		
	284.70	266.34	18.36	Lateral C1	1.17	0.50	0.59	0.68	10.00	0.48	10.48	100	9.72	6.56		0.0039	1	18.0					3.71	60 Degree Wye	0.60	0.21	0.08	10.57		
	266.34	64.90	201.44	Storm Sewer C-1			3.95	4.63	10.48	0.08	10.57	100	9.72	44.96		0.0045	1	36.0					6.36	Junction Box B	0.60	0.50	0.53	11.09		
	64.90	0.00	64.90	Lateral C-6	1.03	0.50	0.52	5.14	10.57	0.53	11.09	100	9.64	49.55		0.0055	1	36.0					7.01	60 Degree Wye	0.60	0.39	0.15	11.25	Into Junction Box B / St Sew E-1	
Lateral D-1	21.80	0.00	21.80	D1	2.53	0.65	1.65	1.65	10.00	0.00	10.00	100	9.80	16.20		0.0317	1	18.0						0.04	10.04	Into St Sew D-1				
Lateral D-1b	85.00	0.00	85.00	D1	2.53	0.65	1.65	1.65	10.00	0.00	10.00	100	9.80	16.20		0.0317	1	18.0						0.15	10.15	Into St Sew D-1				
Lateral D-2	16.20	0.00	16.20	D2	0.26	0.90	0.23	0.23	10.00	0.00	10.00	100	9.80	2.29		0.0006	1	18.0						0.21	10.21	Into St Sew D-1				
Lateral D-2b	47.52	0.00	47.52	D2	0.26	0.90	0.23	0.23	10.00	0.00	10.00	100	9.80	2.29		0.0006	1	18.0						0.61	10.61	Into St Sew D-1				
Storm Sewer D-1	44.60	39.90	4.90	Lateral D2	0.26	0.90	0.23	0.23	10.00	0.00	10.20	100	9.78	2.29		0.0003	1	21.0					0.95	60 Degree Wye	0.60	0.01	0.09	10.29		
	39.90	0.00	39.90	Lateral D1	2.53	0.65	1.65	1.89	10.20	0.09	10.29	100	9.78	18.45		0.0136	1	21.0					7.67	60 Degree Wye	0.60	0.91	0.09	10.37		
Lateral E-3	22.00	12.00	10.00	E3A, E3B & E3C	10.00	0.50	5.00	5.00	20.00	0.00	20.00	100	8.20	41.00		0.0050	1	36.0						0.03	20.03	Into St Sew E-1				
	12.00	0.00	12.00		15.00	0.50	7.50	7.50	20.00	0.00	20.00	100	8.20	61.50		0.0013	1	54.0						0.05	20.05	Into St Sew E-1				
Lateral E-4	53.60	0.00	53.60	E4	8.88	0.50	4.44	4.44	10.00	0.00	10.00	100	9.80	43.51		0.0057	1	36.0						0.15	10.15	Into St Sew E-1				
Lateral E-4b	613.65	0.00	613.65	E4	8.88	0.50	4.44	4.44	10.00	0.00	10.00	100	9.80	43.51		0.2284	1	18.0						0.42	10.42	Into St Sew E-1				
Storm Sewer E-1	99.96	57.56	42.40	Lateral E-3	25.00	0.50	12.50	12.50	0.00	0.00	0.00	100	8.20	102.50		0.0027	1	54.0					6.44	60 Degree Wye	0.60	0.64	0.11	0.11		
	57.56	0.00	57.56	Lateral E-4	8.88	0.50	4.44	16.94	0.00	0.11	0.11	100	8.20	138.91		0.0028	1	60.0						7.07	60 Degree Wye	0.60	0.39	0.14	0.25	Into Junction Box C / Storm Sewer E-2
Lateral E-2	15.00	0.00	15.00	E2	0.56	0.68	0.38	0.38	10.00	0.00	10.00	100	9.80	3.72		0.0017	1	18.0						0.12	10.12	Into St Sew E-2				
Lateral E-1	15.00	0.00	15.00	E1	1.00	0.50	0.50	0.50	10.00	0.00	10.00	100	9.80	4.90		0.0029	1	18.0						0.09	10.09	Into St Sew E-2				
Lateral E-6	20.20	0.00	20.20	E6	0.91	0.50	0.46	0.46	10.00	0.00	10.00	100	9.80	4.46		0.0024	1	18.0						0.13	10.13	Into St Sew E-2				
Lateral E-7	22.50	0.00	22.50	E7+Carryover from Inlet E2	0.45	0.90	0.41	0.41	10.00	0.00	10.00	100	9.80	3.97	4.03	0.0020	1	18.0						0.16	10.16	Into St Sew E-2 / + Inlet E2-0.06 cfs C.O.				
Lateral E-5	20.80	0.00	20.80	E5+Carryover from Inlet D1	0.92	0.50	0.46	0.46	10.00	0.00	10.00	100	9.80	4.51	9.03	0.0098	1	18.0						0.07	10.07	Into St Sew E-2 / + Inlet D1-4.25 cfs C.O.				
Storm Sewer E-2	354.97	352.47	2.50	Lateral E-2	0.56	0.68	0.38	0.38	10.00	0.00	10.00	100	9.80	3.72		0.0017	1	18.0					2.11	60 Degree Wye	0.60		0.02	10.02		
	352.47	273.32	79.15	Lateral E-1	1.00	0.50	0.50	0.86	10.00	0.02	10.02	100	9.60	8.62		0.0067	1	18.0					4.88	60 Degree Wye	0.60	0.33	0.27	10.29	Into Junction Box C	
	273.32	126.38	146.94	Storm Sewer E-1			16.94	17.82	10.02	0.27	20.20	100	8.20	146.12		0.0031	1	60.0					7.44	Junction Box D	1.00	0.49	0.33	20.53		
	126.38	122.38	4.00	Lateral E-6	0.91	0.50	0.46	18.27	20.20	0.33	20.53	100	8.15	148.94		0.0033	1	60.0					7.59	60 Degree Wye	0.60	0.38	0.01	20.54		
	122.38	47.09	75.29	Lateral E-7	0.45	0.90	0.41	18.68	20.53	0.01	20.54	100	8.15	152.24		0.0034	1	60.0					7.75	60 Degree Wye	0.60	0.40	0.16	20.70		
	47.09	0.00	47.09	Lateral E-5	0.92	0.50	0.46	19.14	20.54	0.16	20.70	100	8.00	153.12		0.0035	1	60.0					7.80	60 Degree Wye	0.60	0.38	0.10	20.80	Into St Sewer E-3	
Lateral E-8	33.00	0.00	33.00	E8	1.92	0.35	0.67	0.67	10.00	0.00	10.00	100	9.80	8.59		0.0052	1	18.0					3.73			0.15	10.15	Into St Sew E-3		
Storm Sewer E-3	158.56	63.67	94.89	St. Sewers C-2, D-1 & E-2			26.17	26.17	20.00	0.00	20.80	100	7.98	208.84		0.0030	1		7.0	4.0	4.0	7.52	Junction Box C	0.60	0.42	0.21	21.01			
	63.67	0.00	63.67	Lateral E-8	1.92	0.35	0.67	26.84	20.80	0.21	21.01	100	7.95	213.39		0.0032	1		7.0	4.0	4.0	7.68	60 Degree Wye	0.60	0.39	0.14	21.15	Outfall Basins C, D & E		

REVISED TO CONFORM
TO CONSTRUCTION RECORDS
BY M.H. DATE 12/04/2006

THESE DOCUMENTS ARE FOR
BIDDING, CONSTRUCTION,
AND PERMIT PURPOSES.
Matthew Hickey
DATE: 8/26/04



CITY OF ROCKWALL, TEXAS

CLARK STREET
PROPOSED STORM SEWER
CALCULATIONS

BIRKHOFF, HENDRICKS & CONWAY, L.L.P.
CONSULTING ENGINEERS
Dallas, Texas

DESIGNED BY: M.H. PROJECT: 2003-120 SHEET NO. 59
DRAWN BY: L.B.S. DATE: AUGUST, 2004 OF X SHEETS

H:\ROCKWALL\2003120\PLAN-SHEETS\2003120-ST-SEWER-2.DWG SCALE: 1"=20' BLOCS: ROCKWALL_2003120.VXD XREF: ROCKWALL_2003120.VXD 08/23/04 RLL