



LEGEND

- A AREA DESIGNATION
- 0.45 AREA IN ACRES
- FLOW ARROWS
- PROPOSED INLETS
- PROPOSED STORM SEWER SYSTEM
- DRAINAGE AREA BOUNDARY
- Q DISCHARGE
- V_p PARTIAL VELOCITY
- V_f FULL VELOCITY
- S_h FRICTION SLOPE
- PROP. CONTOURS
- EXIST. CONTOURS

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W.H. BAIRD SURVEY, ABSTRACT NO. 25
CITY OF ROCKWALL
ROCKWALL COUNTY, TEXAS
CONTINENTAL HOMES
621 WEST COLLEGE STREET
GRAPEVINE, TEXAS 76051

STORM SEWER PIPE CALCULATIONS

Scale: 1"=100' Date: 1-5-00
Designed By: NK/DA DA
Drawn By: DA
Checked By: FEM
File: 5200RCP.DWG View:
Project No.: 3200101

STORM SEWER PIPE CALCULATIONS

AREA DESIGNATION	LINE NAME	Design Storm Frequency (yrs.)	Q = CIA				TOTAL "Q" (c.f.s.)	DRAINAGE AREA (c.f.a.)	PIPE SIZE	V _p (f.p.s.)	V _f (f.p.s.)	S _h (%)	CONDUIT CAPACITY (c.f.s.)		
			Time of Conc. (min)	Intensity (in./hr)	Runoff Coeff. "C"	Area (ac.)									
R	LINE "1"	100	10	9.8	0.50	5.88	28.81	28.81	R	30" RCP @ 0.60%	7.33	5.87	0.493	31.77	
T	LINE "7"	100	10	9.8	0.50	0.57	2.79		T+S	30" RCP @ 2.61%					
S	LINE "7"	100	10	9.8	0.50	2.65	12.99	15.78							
D	LINE "1"	100	10	9.8	0.50	1.35	6.62	6.62	44.59	R+T+S	36" RCP @ 0.60%	8.22	6.31	0.477	51.66
E	LINE "1"	100	10	9.8	0.50	1.92	9.41	9.41	60.62	LINE "7"+D+E	36" RCP @ 1.50%	12.20	7.24	0.589	81.69
B	LINE "2"	100	10	9.8	0.50	2.54	12.45	12.45		B	18" RCP @ 7.40%	15.62	7.05	1.405	28.50
A	LINE "2"	100	10	9.8	0.50	1.08	5.29	5.29	17.74	A+B	27" RCP @ 0.60%	6.60	4.46	0.328	23.99
F	LINE "3"	100	10	9.8	0.50	2.50	12.25	12.25		F	21" RCP @ 0.70%	6.25	5.09	0.598	13.26
G	LINE "3"	100	10	9.8	0.50	1.02	5.00	5.00	17.25	F+G	24" RCP @ 0.70%	6.83	5.49	0.581	18.93
I	LINE "2"	100	10	9.8	0.50	0.60	2.94	2.94	34.99	A+B+LINE "3"	33" RCP @ 0.60%	7.75	5.89	0.438	40.97
H	LINE "2"	100	10	9.8	0.50	1.06	5.19	5.19	37.93	A+B+LINE "3"+I	36" RCP @ 0.60%	7.83	6.39	0.514	40.97
O	LINE "4"	100	10	9.8	0.50	4.22	20.68	20.68	43.12	A+B+LINE "3"+I+H	36" RCP @ 0.60%	8.18	6.10	0.418	51.66
V	LINE "5"	100	10	9.8	0.50	0.71	3.48	3.48	103.74	R+LINE "7"+D+E+LINE "2"	54" RCP @ 0.77%	13.54	6.52	0.278	218.09
L	LINE "5"	100	10	9.8	0.50	1.12	5.49	5.49		O	24" RCP @ 1.00%	7.78	6.58	0.836	21.16
C	LINE "5"	100	10	9.8	0.50	2.28	11.17	11.17		V	21" RCP @ 0.70%	4.64	1.45	0.048	13.26
M	LINE "5"	100	10	9.8	0.50	1.78	8.72	8.72		V+L	21" RCP @ 0.70%	5.92	3.73	0.320	13.26
J	LINE "5"	100	10	9.8	0.50	1.84	9.02	9.02		V+L+C	30" RCP @ 0.60%	6.85	4.10	0.241	31.77
K	LINE "5"	100	10	9.8	0.50	1.97	9.65	9.65		V+L+C+M	30" RCP @ 0.60%	7.33	5.88	0.495	31.77
N	LINE "5"	100	10	9.8	0.50	2.83	13.00	13.00		V+L+C+M+J	5'X2' BOX @ 0.40%	-	3.79	0.400	57.77
Q	LINE "5"	100	10	9.8	0.50	0.73	3.57	3.57		V+L+C+M+J+K	5'X2' BOX @ 0.40%	-	4.75	0.400	57.77
P	LINE "5"	100	10	9.8	0.50	0.43	2.98	2.98		V+L+C+M+J+K+N	6'X2' BOX @ 0.40%	-	5.04	0.400	71.61
U	LINE "6"	100	10	9.8	0.50	3.19	15.63	15.63		V+L+C+M+J+K+N+Q	6'X2' BOX @ 0.40%	-	5.34	0.400	71.61
		100	10	9.8	0.50	0.43	2.98	2.98		V+L+C+M+J+K+N+Q+P	6'X2' BOX @ 0.40%	-	5.59	0.400	71.61
		100	10	9.8	0.50	3.19	15.63	15.63		U	24" RCP @ 0.50%	6.30	4.98	0.477	17.52
		100	10	9.8	0.50	3.19	15.63	15.63		U+LINE "5"	6'X2' BOX @ 0.50%	-	6.62	0.500	87.71

BENCHMARK: ELEV. = 600.69
CITY OF ROCKWALL R-19
BRASS MONUMENT AT THE N/W CORNER OF
SILVERVIEW & DIAMOND WAY, 500' ± SOUTH OF
S.H. 276.

BENCHMARK: ELEV. = 583.56
R.R. SPIKE SET IN THE CENTERLINE OF S.H. 276
3600± WEST OF F.M. 549

