

DRAINAGE AREA CALCULATIONS

AREA	C	I	A	Q100
1	0.8	9.8	2.69	21.11
2	0.5	9.8	9.20	45.08
3	0.5	9.8	3.09	15.13
4	0.5	9.8	0.43	2.11
5	0.5	9.8	0.32	1.55
6	0.5	9.8	0.24	1.16

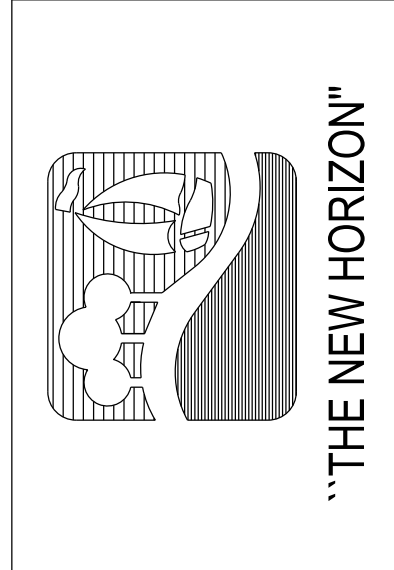
NOTE 1:
 BEGINNING DOWNSTREAM HGL OF 538.29 WAS OBTAINED FROM THE RECORD DRAWINGS, SHEET 8 - STORM SEWER PLAN, LINE A, STA 9+55.29, FOR THE WELLINGTON RIDGE MANOR RESIDENTIAL DEVELOPMENT LOCATED IN THE CITY OF HEATH, PREPARED BY TIPTON ENGINEERING, INC., SEALED BY RICHARD HOVAS P.E. NO. 58877 ON 1/19/08 AND ON FILE WITH THE CITY OF HEATH. (FREEBOARD REQUIREMENTS COULD NOT BE MET DUE TO STARTING HGL CONDITION)

NOTE 2:
 THE DISCHARGE FROM THE EXISTING DETENTION BASIN LOCATED ON THE FIRST CHRISTIAN CHURCH PROPERTY IS IDENTIFIED AS AREA "2" ON THIS DRAINAGE AREA MAP. FLOW AND DRAINAGE AREA INFORMATION RELATED TO THE EXISTING DETENTION BASIN WAS OBTAINED FROM THE RECORD DRAWINGS, SHEET 6 OF 10 - DRAINAGE AREA MAP FOR THE FIRST CHRISTIAN CHURCH PREPARED BY HAROLD L. EVANS CONSULTING ENGINEER AND SEALED BY HAROLD L. EVANS, P.E. NO. 23155 ON 2/25/03.

UPSTREAM STATION (ft)	DOWNSTREAM STATION (ft)	UPSTREAM FLOWLINE (ft)	DOWNSTREAM FLOWLINE (ft)	RUN DISTANCE (ft)	INPUT SOURCE AT US STA	INPUT TC (min)	RUNOFF COEFF. (c)	INPUT AREA (ac)	INC C*A @ US STA	CUMULATIVE C*A	TC UPSTREAM (min)	INTENSITY (in/hr)	Q (cfs)	N=0.013		FULL FLOW VELOCITY (fps)	FULL FLOW CAPACITY (cfs)	PARTIAL DEPTH (ft)	PARTIAL DEPTH VELOCITY (fps)	SLOPE HGL (ft/ft)	HGL VELOCITY (fps)	HGL HEAD LOSS (ft)	HGL VELOCITY HEAD LOSS (ft)	HEAD LOSS COEFF. (kj)	Kj HEAD LOSS (ft)	FLOW TIME (min)	DOWNSTREAM TC (min)	HGL UPSTREAM (ft)	HGL DOWNSTREAM (ft)		
														PIPE SIZE (in)	PIPE SLOPE (ft/ft)																
LINE A																															
52.65	43.41	534.16	533.76	9.24	MH	10	0.5	9.20	4.60	4.60	10.00	9.8	45.1	48	0.0431	23.79	299.01	1.05	17.14	0.0010	3.59	0.01	0.00	1.25	0.25	0.04	10.04	539.84	FF	539.83	FF
43.41	18.26	533.76	532.68	25.15	LAT	10	0.64	2.89	1.85	6.45	10.04	9.8	63.2	48	0.0431	23.79	299.01	1.25	18.88	0.0019	5.03	0.05	0.19	0.5	0.20	0.08	10.13	539.44	FF	539.39	FF
18.26	12.16	532.68	532.41	6.10	LAT	10	0.5	0.43	0.21	6.66	10.13	9.8	65.3	48	0.0431	23.79	299.01	1.27	19.05	0.0021	5.20	0.01	0.03	0.5	0.21	0.02	10.15	539.16	FF	539.14	FF
12.16	5.13	532.41	532.11	7.03	BEND	10	0	0.00	0.00	6.66	10.15	9.8	65.3	48	0.0431	23.79	299.01	1.27	19.05	0.0021	5.20	0.01	0.00	0.45	0.19	0.02	10.17	538.96	FF	538.94	FF
5.13	0.0	532.11	531.89	5.13	LAT	10	0.64	2.89	1.85	8.51	10.17	9.8	83.4	48	0.0431	23.79	299.01	1.45	20.43	0.0034	6.64	0.02	0.29	0.5	0.34	0.01	10.18	538.31	FF	538.29	FF
LINE B																															
167.84	156.81	536.00	535.78	11.0	INLET	10	0.5	0.43	0.21	0.21	10.00	9.8	2.1	24	0.0198	10.16	31.92	0.35	5.77	0.0001	0.67	0.00	0.00	1.25	0.01	0.27	10.27	539.41	FF	539.41	FF
156.81	4.19	535.78	532.76	152.6	BEND	10	0	0.00	0.00	0.21	10.27	9.8	2.1	24	0.0198	10.16	31.92	0.35	5.77	0.0001	0.67	0.01	0.00	0.5	0.00	3.80	14.07	539.41	FF	539.40	FF
4.19	0.00	532.76	532.68	4.2	BEND	10	0	0.00	0.00	0.21	14.07	9.8	2.1	24	0.0198	10.16	31.92	0.35	5.77	0.0001	0.67	0.00	0.45	0.00	0.10	14.17	539.39	FF	539.39	FF	
LAT A1																															
7.00	0.0	534.96	534.76	7.0	INLET	10	0.64	2.89	1.85	1.85	10.00	9.8	18.1	24	0.029	12.20	38.34	0.97	12.05	0.0064	5.77	0.04	0.52	1.25	0.65	0.02	10.02	539.88	FF	539.83	FF
LAT B1																															
8.72	0.0	534.96	533.11	8.7	INLET	10	0.5	0.43	0.21	0.21	10.00	9.8	2.1	24	0.212	33.26	104.49	0.2	13.34	0.0001	0.67	0.00	0.01	1.25	0.01	0.22	10.22	539.40	FF	539.40	FF

RECORD DRAWING
 THE SEAL THAT ORIGINALLY APPEARED ON THIS DRAWING IS HEREBY REVOKED. THESE RECORD DRAWINGS WERE PREPARED BY Tipton Engineering, Inc. FOR THE CITY OF HEATH, TEXAS. THESE RECORD DRAWINGS REPRESENTED THAT ALL FIELD CHANGES AND DEVIATIONS FROM THE APPROVED RECORD DRAWINGS WERE INCLUDED ON FEBRUARY 22, 2011.

CITY OF ROCKWALL
WHITE ROAD & RANCH TRAIL
WHITE ROAD
DRAINAGE AREA MAP



DATE	BY	REVISION	CHECKED	APPROVED
			PBS&J	PBS&J

DESIGN: CRH / TBS
 DRAWN: CRH / TBS
 DATE: JULY 2009
 FILE: \$FILES\$

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