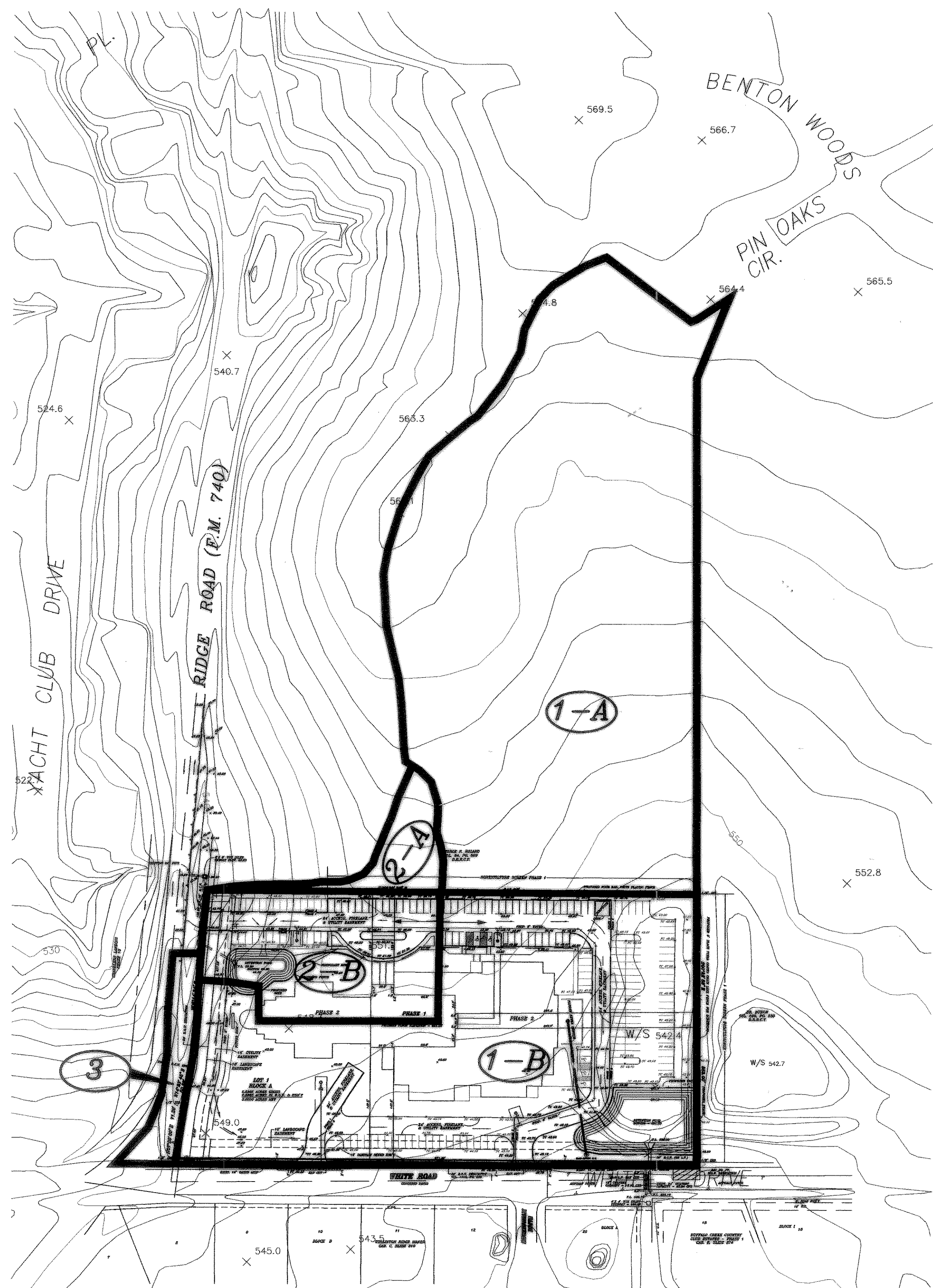


DRAINAGE TABLE						
DRAINAGE AREA NO.	ACRES	T.C.	C	I 100 YR.	Q 100 YR.	SUM Q 100 YR.
1-A	6.44	20	0.35	9.8	22.09	
1-B	4.56	10	0.80	9.8	35.25	57.84
2-A	0.24	20	0.35	9.8	0.82	
2-B	1.28	10	0.80	9.8	10.04	10.86
3	0.26	10	0.80	9.8	2.04	2.04



FIRST CHRISTIAN CHURCH

AREA 1:

Area	Acres	C	I	Q
1-A	6.44	0.50	9.80	31.56 CFS
1-B	4.56	0.80	9.80	35.75 CFS
	11.0			67.31 CFS

Calculate Average C
 $67.31 = C (9.8)(11.0)$
 $C = 0.624$

CHECK VARIOUS STORMS:

TIME	I	C	A	Q
10 MIN	9.8	.624	11.00	67.27
15 MIN	9.0	.624	11.00	61.78
20 MIN	8.3	.624	11.00	56.97
30 MIN	6.9	.624	11.00	47.36
40 MIN	5.8	.624	11.00	39.81
50 MIN	5.0	.624	11.00	34.32

Allowed Release $Q 1-A = (6.44)(.50)(9.8) = 31.56$
 $Q 1-B = (4.56)(.80)(9.8) = 35.25$
 44.81

CHECK VARIOUS STORMS:

10 min	Inflow	$(10)(67.27)(60) =$	40,362 cf
	Outflow	$(0.5)(20)(44.81)(60) =$	26,886 cf
			13,476 cf
15 min	Inflow	$(15)(61.78)(60) =$	55,602 cf
	Outflow	$(0.5)(25)(44.81)(60) =$	33,607 cf
			21,995 cf
20 min	Inflow	$(20)(56.97)(60) =$	68,364 cf
	Outflow	$(.50)(30)(44.81)(60) =$	40,392 cf
			28,035 cf
30 min	Inflow	$(30)(47.36)(60) =$	85,248 cf
	Outflow	$(0.5)(40)(44.81)(60) =$	53,772 cf
			31,476 cf
40 min	Inflow	$(40)(39.81)(60) =$	95,544 cf
	Outflow	$(0.5)(50)(44.81)(60) =$	67,215 cf
			28,329 cf

Storage Required 31,476 cf

AREA 2

AREA	ACRE	C	I	Q
2-A	0.24	0.50	9.8	1.18
2-B	1.28	0.80	9.8	10.04
	1.52			11.32

Calculate Average "C"
 $11.32 = C(9.8)(1.52)$
 $C = 0.753$

CHECK VARIOUS STORMS

TIME	I	C	A	Q
10 MIN	9.8	.753	1.52	11.22
15 MIN	9.0	.753	1.52	10.30
20 MIN	8.3	.753	1.52	9.50
30 MIN	6.9	.753	1.52	7.90
40 MIN	5.8	.753	1.52	6.64
50 MIN	5.0	.753	1.52	5.72

Allowed Release $Q 2-A = (0.24)(0.50)(9.8) = 1.18$
 $Q 2-B = (1.28)(0.80)(9.8) = 10.04$
 11.22

CHECK VARIOUS STORMS:

10 min	Inflow	$(10)(11.22)(60) =$	6,732 cf
	Outflow	$(0.5)(20)(4.90)(60) =$	2,940 cf
			3,792 cf
15 min	Inflow	$(15)(10.30)(60) =$	9,270 cf
	Outflow	$(0.5)(25)(4.90)(60) =$	3,675 cf
			5,595 cf
20 min	Inflow	$(20)(9.50)(60) =$	11,400 cf
	Outflow	$(0.5)(30)(4.90)(60) =$	4,410 cf
			6,990 cf
30 min	Inflow	$(30)(7.90)(60) =$	14,220 cf
	Outflow	$(0.5)(40)(4.90)(60) =$	5,880 cf
			8,340 cf
40 min	Inflow	$(40)(6.64)(60) =$	15,936 cf
	Outflow	$(0.5)(50)(4.90)(60) =$	7,350 cf
			8,586 cf
50 min	Inflow	$(50)(5.72)(60) =$	17,160 cf
	Outflow	$(0.5)(60)(4.90)(60) =$	8,820 cf
			8,340 cf

Storage Required 8,586 cf

AREA 1: $A = 11.0, C = 0.624, CA = 6.864$

TIME	I 10	Q 10	I 25	Q 25	I 50	Q 50
10	7.3	50.11	8.6	59.03	9.0	61.78
15	6.4	43.93	7.4	50.79	8.2	56.28
20	5.8	39.81	6.7	45.99	7.3	50.11
30	4.7	32.26	5.4	37.07	6.2	42.56
40	4.0	27.46	4.3	29.52	5.2	35.69

CHECK VARIOUS STORMS

		10 year	25 year	50 year
10 MIN	Inflow	30,066	35,418	37,068
	Outflow	26,886	26,886	26,886
		3,180	8,532	10,182
15 MIN	Inflow	39,537	45,666	50,652
	Outflow	33,607	33,607	33,607
		5,930	12,059	17,045
20 MIN	Inflow	47,772	55,188	60,132
	Outflow	40,329	40,329	40,329
		7,443	14,859	19,803
30 MIN	Inflow	58,068	66,726	76,608
	Outflow	53,772	53,772	53,772
		4,296	12,954	22,836
				85,176
				67,215
				17,961

STORAGE REQUIRED 7,443 C.F. 14,859 C.F. 22,836 C.F.

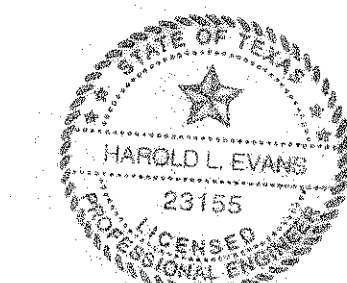
AREA 2: $A = 1.52, C = 0.753, CA = 1.145$

TIME	I 10	Q 10	I 25	Q 25	I 50	Q 50
10	7.3	8.36	8.6	9.85	9.0	10.31
15	6.4	7.33	7.4	8.47	8.2	9.39
20	5.8	6.64	6.7	7.67	7.3	8.36
30	4.7	5.38	5.4	6.18	6.2	7.10
40	4.0	4.58	4.3	4.92	5.2	5.95

CHECK VARIOUS STORMS

		10 year	25 year	50 year
10 MIN	Inflow	5,016	5,610	6,186
	Outflow	2,940	2,940	2,940
		2,076	2,670	3,246
15 MIN	Inflow	6,597	7,623	8,451
	Outflow	3,675	3,675	3,675
		2,922	3,948	4,776
20 MIN	Inflow	7,968	9,204	10,032
	Outflow	4,410	4,410	4,410
		3,558	4,794	5,622
30 MIN	Inflow	9,684	11,124	12,780
	Outflow	5,880	5,880	5,880
		3,804	5,244	6,900
40 MIN	Inflow	10,992	11,808	14,280
	Outflow	7,350	7,350	7,350
		3,642	4,458	6,890

STORAGE REQUIRED 3,804 C.F. 5,244 C.F. 6,900 C.F.



AS BUILT

REVISION PER CITY 7/15/03
 REVISION PER CITY 10/13/03

REVISION DESCRIPTION

DATE

HAROLD L. EVANS
 CONSULTING ENGINEER
 P.O. BOX 28355
 2331 GUS THOMASSON ROAD, SUITE 102
 DALLAS, TEXAS 75228, (214) 328-8133

SCALE

DESIGN

DRAWN

DRAINAGE AREA MAP
 FIRST CHRISTIAN CHURCH
 E. TEAL SURVEY, ABSTRACT NO. 207
 CITY OF ROCKWALL

SHEET NO.

6

10

JOB NO.

9992