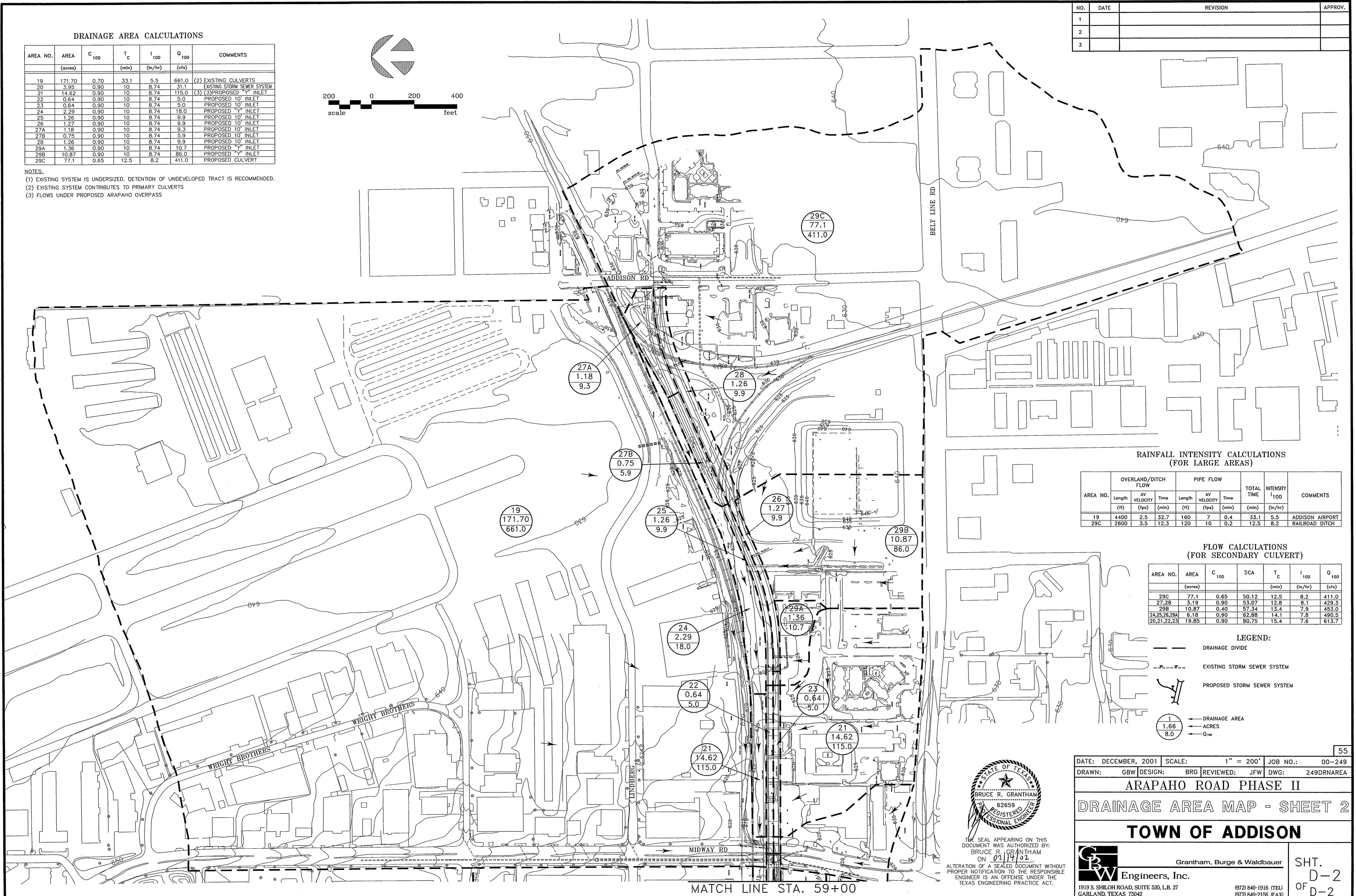
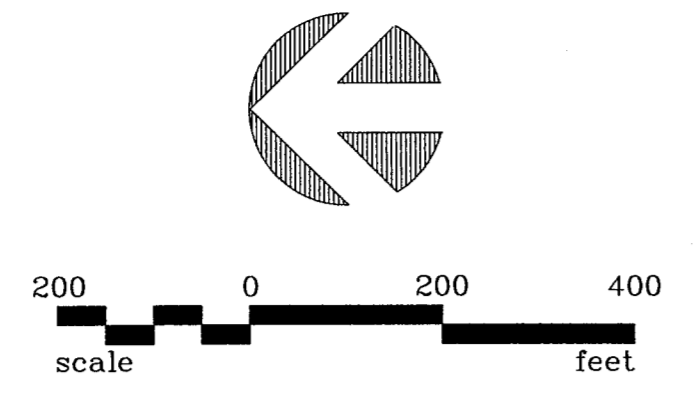


NO.	DATE	REVISION	APPROV.
1			
2			
3			

DRAINAGE AREA CALCULATIONS

AREA NO.	AREA (acres)	C ₁₀₀	T _c (min)	I ₁₀₀ (in/hr)	Q ₁₀₀ (cfs)	COMMENTS
19	171.70	0.70	33.1	5.5	661.0	(2) EXISTING CULVERTS
20	3.95	0.90	10	8.74	31.1	EXISTING STORM SEWER SYSTEM
21	14.62	0.90	10	8.74	115.0	(3) PROPOSED "Y" INLET
22	0.64	0.90	10	8.74	5.0	PROPOSED 10" INLET
23	0.64	0.90	10	8.74	5.0	PROPOSED 10" INLET
24	2.29	0.90	10	8.74	18.0	PROPOSED "Y" INLET
25	1.26	0.90	10	8.74	9.9	PROPOSED 10" INLET
26	1.27	0.90	10	8.74	9.9	PROPOSED 10" INLET
27A	1.18	0.90	10	8.74	9.3	PROPOSED 10" INLET
27B	0.75	0.90	10	8.74	5.9	PROPOSED 10" INLET
28	1.26	0.90	10	8.74	9.9	PROPOSED 10" INLET
29A	1.36	0.90	10	8.74	10.7	PROPOSED "Y" INLET
29B	10.87	0.90	10	8.74	86.0	PROPOSED "Y" INLET
29C	77.1	0.65	12.5	8.2	411.0	PROPOSED CULVERT

NOTES:
 (1) EXISTING SYSTEM IS UNDERSIZED. DETENTION OF UNDEVELOPED TRACT IS RECOMMENDED.
 (2) EXISTING SYSTEM CONTRIBUTES TO PRIMARY CULVERTS
 (3) FLOWS UNDER PROPOSED ARAPAHO OVERPASS



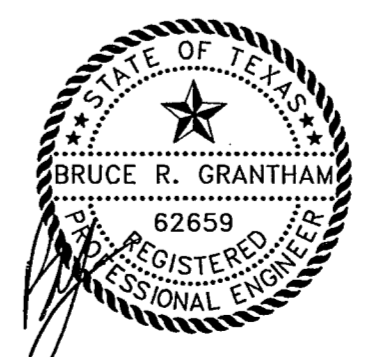
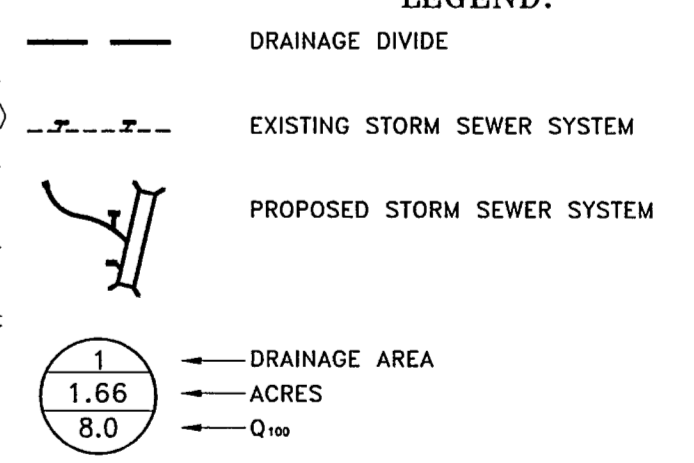
**RAINFALL INTENSITY CALCULATIONS
(FOR LARGE AREAS)**

AREA NO.	OVERLAND/DITCH FLOW			PIPE FLOW			TOTAL TIME (min)	INTENSITY I ₁₀₀ (in/hr)	COMMENTS
	Length (ft)	AV VELOCITY (fps)	Time (min)	Length (ft)	AV VELOCITY (fps)	Time (min)			
19	4400	2.5	32.7	160	7	0.4	33.1	5.5	ADDISON AIRPORT
29C	2600	3.5	12.3	120	10	0.2	12.5	8.2	RAILROAD DITCH

**FLOW CALCULATIONS
(FOR SECONDARY CULVERT)**

AREA NO.	AREA (acres)	C ₁₀₀	ΣCA	T _c (min)	I ₁₀₀ (in/hr)	Q ₁₀₀ (cfs)
29C	77.1	0.65	50.12	12.5	8.2	411.0
27,28	3.19	0.90	53.07	12.8	8.1	429.3
29B	10.87	0.40	57.34	13.4	7.9	453.0
24,25,26,29A	6.18	0.90	62.88	14.1	7.8	490.5
20,21,22,23	19.85	0.90	80.75	15.4	7.6	613.7

LEGEND:



THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY:
 BRUCE R. GRANTHAM
 ON 02/14/02
 ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT.

DATE: DECEMBER, 2001 | SCALE: 1" = 200' | JOB NO.: 00-249
 DRAWN: GBW | DESIGN: BRG | REVIEWED: JFW | DWG: 249DRNAREA

**ARAPAHO ROAD PHASE II
DRAINAGE AREA MAP - SHEET 2
TOWN OF ADDISON**

Grantham, Burge & Waldbauer
Engineers, Inc.
 1919 S. SHILOH ROAD, SUITE 530, L.B. 27 GARLAND, TEXAS 75042
 (972) 840-1916 (TEL)
 (972) 840-2156 (FAX)

SHT. D-2
 OF D-2

MATCH LINE STA. 59+00