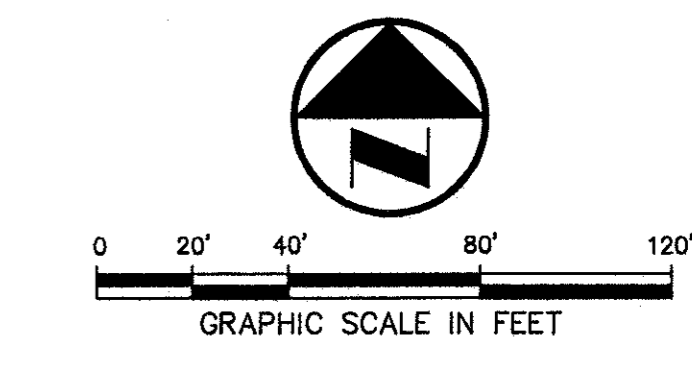


VICINITY MAP



LEGEND

- B₁ BOLLARD
- EM₁ ELECTRIC METER
- PP₁ POWER POLE
- LS₁ LIGHT STANDARD
- WM₁ WATER METER
- WV₁ WATER VALVE
- ICV₁ IRRIGATION CONTROL VALVE
- FH₁ FIRE HYDRANT
- CO₁ CLEANOUT
- MH₁ MANHOLE
- GM₁ GAS METER
- TSP₁ TRAFFIC SIGNAL CONTROL
- TSP₂ TRAFFIC SIGNAL POLE
- TELE₁ TELEPHONE BOX
- TV₁ TV BOX
- FP₁ FLAG POLE
- EM₂ ELECTRIC METER
- TRAF₁ TRAFFIC SIGN
- PR₁ PROPERTY LINE
- O.H. O.H. POWER LINE
- TEL₁ U/G TELEPHONE LINE
- W₁ U/G WATER LINE
- G₁ U/G GAS LINE
- F₁ FENCE
- B.F.R. BARRIER FREE RAMP
- DR₁ DRAINAGE DIVIDE

DRAINAGE CRITERIA

Q=cfs	Q=0.80
C=0.80	Tc=10
Tc=10	100=8.74

MATCH LINE SEE SHEET

INLET SIZE CALCULATIONS
 $Q = CA^{2/3}h^{5/4}$
 $C = 0.65$ (discharge coefficient)
 $A =$ AREA INLET OPENING (sq ft)
 $g = 32.2$ ft/sec
 $h = 0.25'$ (depth of water)
 AREA GRATE INLET No.30 = 4.23 sq ft
 MAX Q GRATE INLET No.30 = 16.80 cfs

REQUIRED DETENTION VOLUME:
 (USING MODIFIED RATIONAL METHOD TO DETERMINE VOLUMES)
 Q_{25} (NET ALLOWABLE RELEASE) = 82.23 cfs
 Q_{100} (BYPASS) = 38.17 cfs
 Allowable Q out/Detention = 44.05 cfs
 TOTAL REQUIRED DETENTION VOLUME = 19,191 cubic feet
 VOLUME PROVIDED IN PIPE = 6,579 cubic feet
 TOTAL ON GROUND STORAGE REQUIRED = 12,601 cubic feet
 VOLUME PROVIDED ON GROUND = 12,644 cubic feet

RECORD DRAWING

THIS DRAWING HAS BEEN REVISED TO REFLECT CONSTRUCTION RECORDS MAINTAINED AND PROVIDED BY THE CONTRACTOR FOR THIS PROJECT.
 CONTRACTOR: HILL & WILKINSON
 DATE REVISED: 05/04/01

REVISOR: 05/04/01
 REVISOR: 11/27/00

PROJECT NO.: 9956
 PREPARED BY: JLM
 CHECKED BY: CJE
 DATE: 07/26/00
 REVISIONS:
 SHEET NO. + TITLE: C4.2
 DRAINAGE PLAN

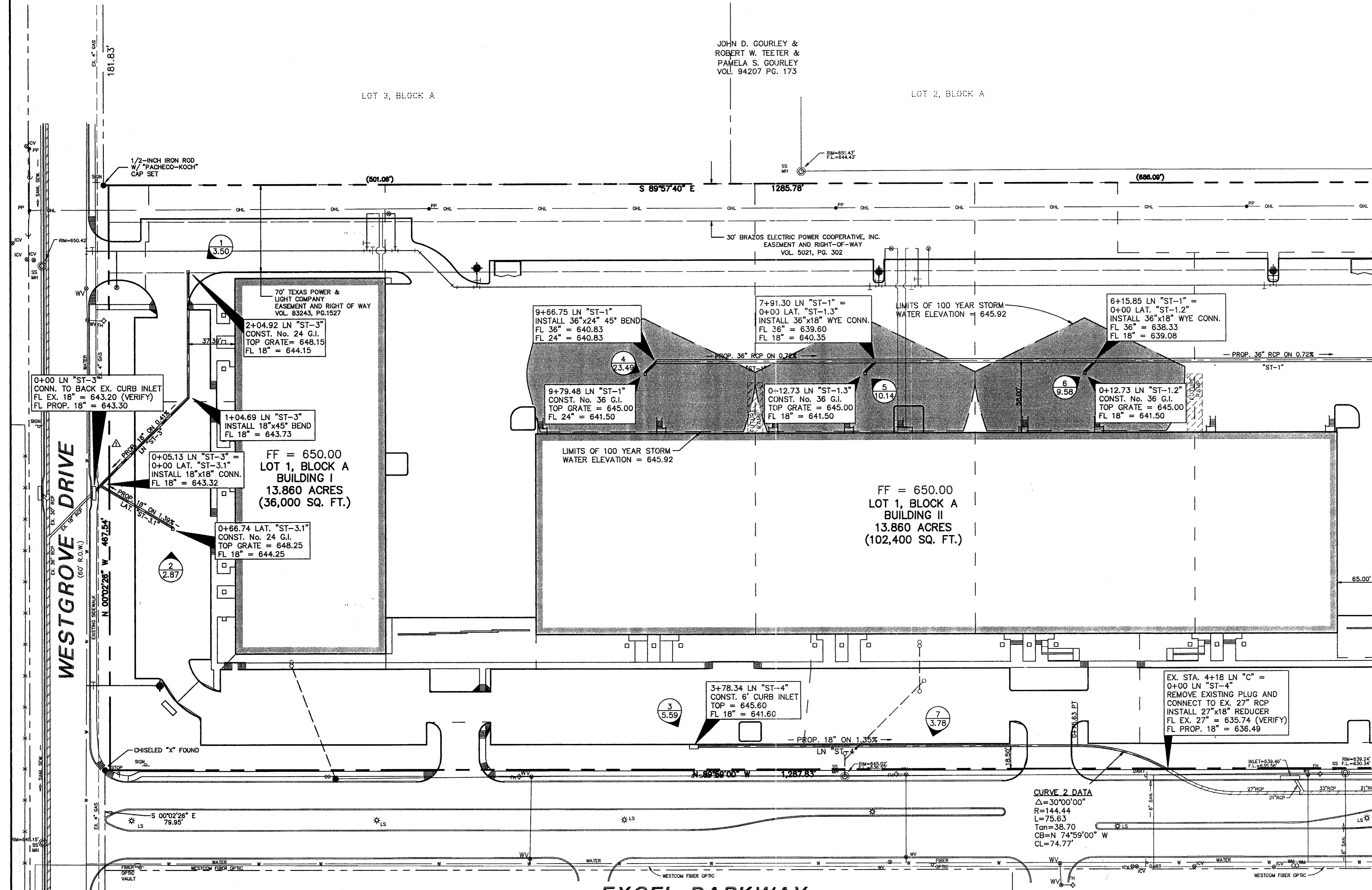
Pacheco Koch Consulting Engineers
 9401 LBJ FREEWAY SUITE 300 DALLAS, TEXAS 75243 972.235.3031

DRAINAGE PLAN
ADDISON OFFICE / WAREHOUSE COMPLEX
LOTS 1 & 2, BLOCK A
WESTGROVE/BENT TREE PLAZA ADDITION
TOWN OF ADDISON, TEXAS

DESIGN	DRAWN	DATE	SCALE	NOTES	FILE	NO.
CJE	JLM	JULY 26, 2000	1"=40'			C4.2



THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY STEVEN A. MARKUSSEN, P.E. 70090 ON 07/26/00. ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT.



JOHN D. GOURLEY &
ROBERT W. TEETER &
PAMELA S. GOURLEY
VOL. 94207 PG. 173

LOT 3, BLOCK A

LOT 2, BLOCK A

70' TEXAS POWER &
LIGHT COMPANY
EASEMENT AND RIGHT OF WAY
VOL. 83243, PG.1527

30' BRAZOS ELECTRIC POWER COOPERATIVE, INC.
EASEMENT AND RIGHT-OF-WAY
VOL. 5021, PG. 302

FF = 650.00
LOT 1, BLOCK A
BUILDING I
13.860 ACRES
(36,000 SQ. FT.)

FF = 650.00
LOT 1, BLOCK A
BUILDING II
13.860 ACRES
(102,400 SQ. FT.)

EXCEL PARKWAY
(80' R.O.W.) (Volume 83220, Page 2655)

RUNOFF CALCULATIONS

DRAINAGE AREA	AREA (ACRES)	Tc (Minutes)	C	I ₃₀ (in/hr)	I ₁₀₀ (in/hr)	Q ₃₀ (cfs)	Q ₁₀₀ (cfs)
1	0.50	10	0.8	7.29	8.74	2.92	3.50
2	0.41	10	0.8	7.29	8.74	2.39	2.87
3	0.80	10	0.8	7.29	8.74	4.67	5.59
4	3.36	10	0.8	7.29	8.74	19.60	23.49
5	1.45	10	0.8	7.29	8.74	8.46	10.14
6	1.37	10	0.8	7.29	8.74	7.99	9.58
7	0.54	10	0.8	7.29	8.74	3.15	3.78
8	0.68	10	0.8	7.29	8.74	3.97	4.75
9	2.46	10	0.8	7.29	8.74	14.35	17.20
10	0.46	10	0.8	7.29	8.74	2.68	3.22
11	0.25	10	0.8	7.29	8.74	1.46	1.75
12	0.34	10	0.8	7.29	8.74	1.98	2.38
13	0.62	10	0.8	7.29	8.74	3.62	4.34
14	0.55	10	0.8	7.29	8.74	3.21	3.85
15	0.59	10	0.8	7.29	8.74	3.44	4.15
16	0.53	10	0.8	7.29	8.74	3.09	3.71
17	0.36	10	0.8	7.29	8.74	2.10	2.52
18	0.48	10	0.8	7.29	8.74	2.80	3.36
19	0.82	10	0.8	7.29	8.74	4.78	5.73
20	0.25	10	0.8	7.29	8.74	1.46	1.75
21	15.7	10	0.8	7.29	8.74	91.56	109.77

LOT 4
PORTION OF TRACT II
VOL. 92115, PG. 4018

STORM SEWER CALCULATIONS

LINE / STATION	SIZE	Q ₁₀₀ (cfs)	C (cfs)	V (fps)	V ² /2g	S _f
LINE "ST-1" (0+00.00 - 0+34.52)	36"	44.05	56.95	6.23	0.60	0.004362
LINE "ST-1" (0+34.52 - 3+58.48)	36"	44.05	56.95	6.23	0.60	0.004362
LINE "ST-1" (3+58.48 - 6+15.85)	36"	43.21	56.95	6.11	0.58	0.004197
LINE "ST-1" (6+15.85 - 7+91.30)	36"	33.63	56.95	4.76	0.35	0.002543
LINE "ST-1" (7+91.30 - 9+66.75)	36"	23.49	56.95	3.32	0.17	0.001240
LINE "ST-1" (9+66.75 - 9+79.48)	24"	23.49	51.83	7.48	0.87	0.010783
LAT "ST-1.1" (0+00.00 - 0+6.36)	18"	17.20	63.58	9.73	1.47	0.026914
LAT "ST-1.2" (0+00.00 - 0+12.73)	18"	9.58	40.79	5.42	0.46	0.008318
LAT "ST-1.3" (0+00.00 - 0+12.73)	18"	10.14	23.74	5.74	0.51	0.009319
LINE "ST-3" (0+00.00 - 0+5.13)	18"	6.37	17.45	3.60	0.20	0.003678
LINE "ST-3" (0+5.13 - 2+04.92)	18"	3.50	17.45	1.98	0.06	0.001110
LAT "ST-3.1" (0+00.00 - 0+66.74)	18"	2.87	30.46	1.62	0.04	0.000747
LINE "ST-4" (0+00.00 - 3+78.34)	18"	5.59	12.20	3.16	0.16	0.002832

* REFER TO SHEET C4.3 FOR THE PLAN VIEW OF THIS PORTION OF LINE "ST-1"