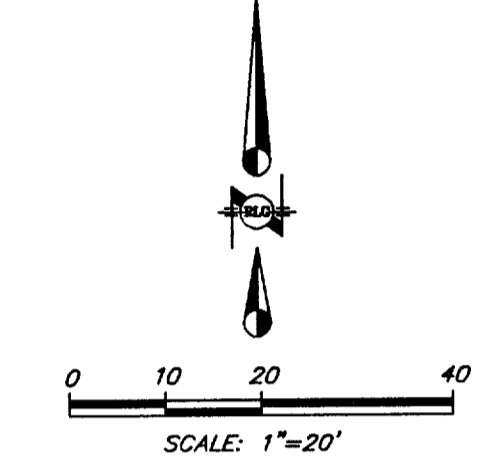


CAUTION!!!
CONTACT:
LONE STAR GAS CO. 1-800-344-8377
SOUTHWESTERN BELL TEL. CO. 1-800-395-0440
T. U. ELECTRIC CO. 1-800-233-2133
TEXAS ONE CALL SYSTEM 1-800-245-4545
AT LEAST 48 HOURS PRIOR
TO CONSTRUCTION

DRAINAGE AREA CALCULATIONS

AREA	AREA (ACRES)	C	T (MIN)	I ₁₀	I ₁₀₀	Q ₁₀ (cfs)	Q ₁₀₀ (cfs)	REMARKS
A	0.50	0.9	10	6.36	8.74	2.88	3.93	PROP 6" INLET
EX 10" INLET	0.9	10	6.36	8.74	4.50	6.50		

Q=CIA



DETENTION CALCULATIONS

EXIST CONDITION DRAIN TO WEST
I₁₀₀=8.74 FOR TC=10min C=0.45
DRAINAGE AREA A:
Q₁₀₀ = (0.45)(8.74)(0.50) = 1.97 CFS

PROP CONDITION DRAIN TO SOUTH
I₁₀₀= 8.74 FOR TC=10min C=0.90
DRAINAGE AREA A:
Q₁₀₀ = (0.90)(8.74)(0.50) = 3.93 CFS

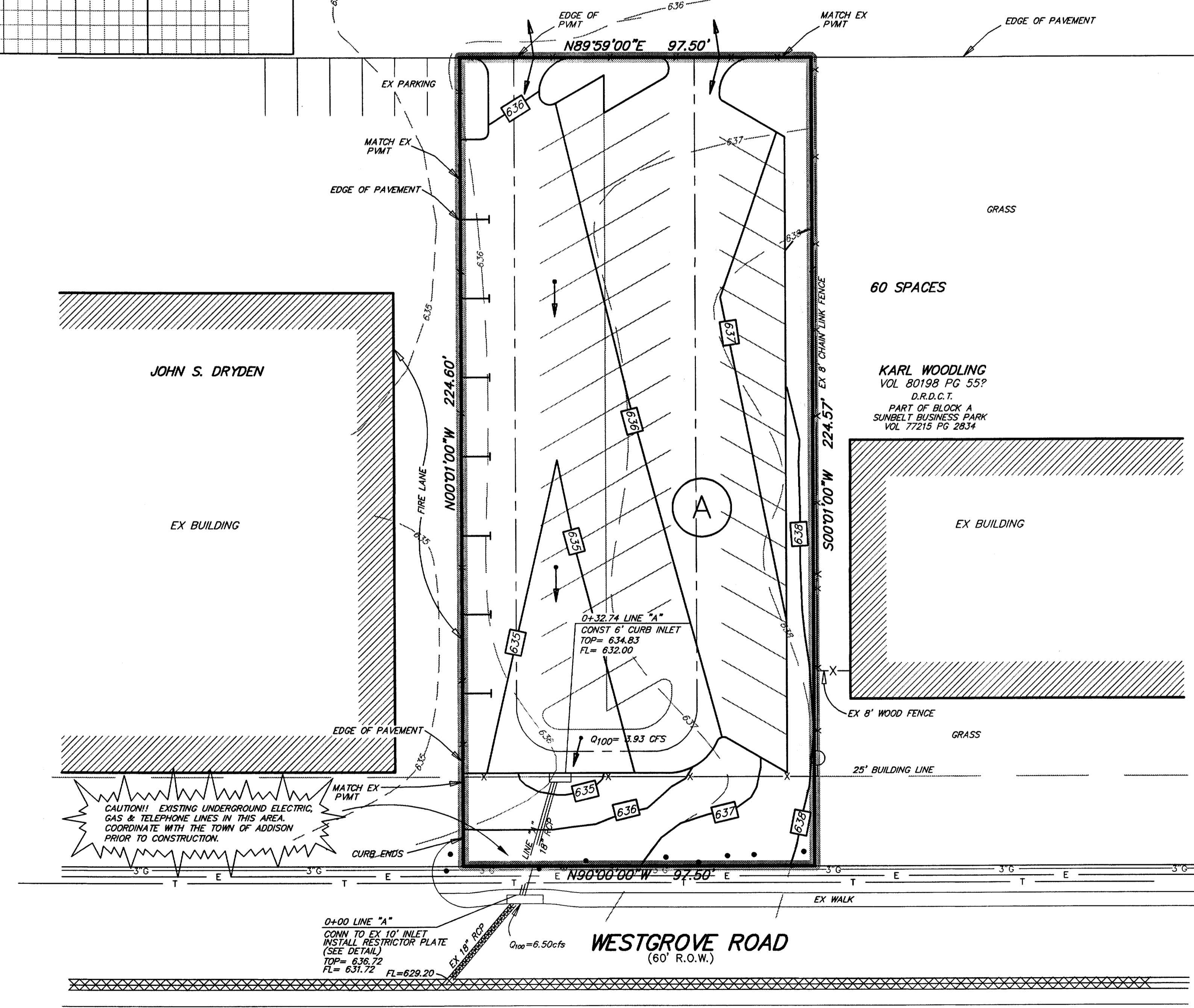
Q RELEASE THROUGH DETENTION= 1.97cfs
DETENTION STORAGE IS PROVIDED THROUGH THE 18" RCP
AND THE PROPOSED 6" CURB INLET

TOTAL PROVIDED DETENTION STORAGE = 106 CF

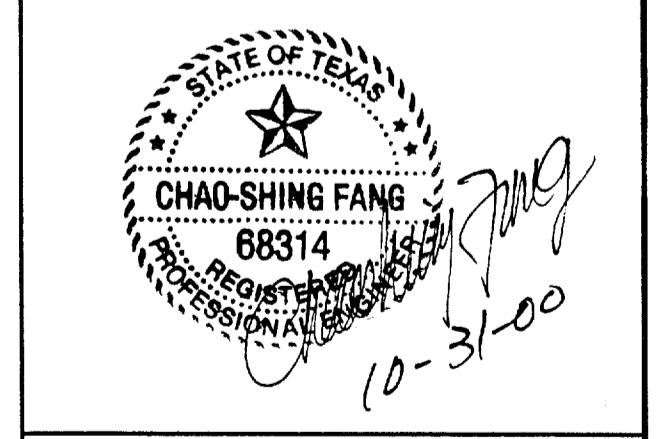
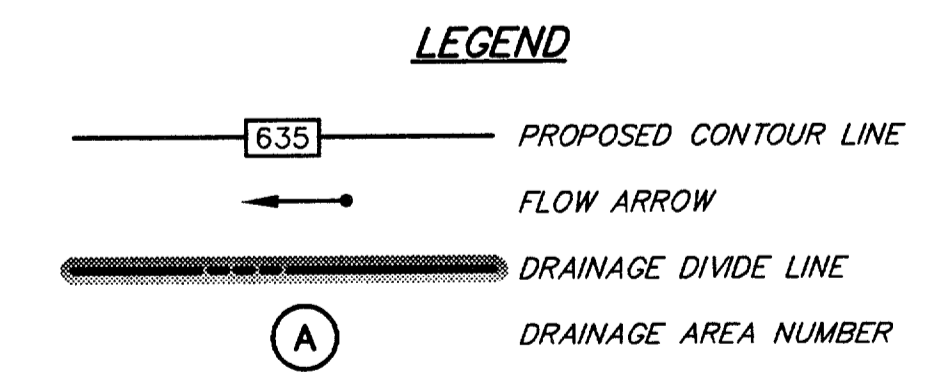
RESTRICTOR PLATE CALCULATIONS:

Q = CA(2GH)^{1/2}
Q = DISCHARGE ALLOWED (1.97 CFS)
C = COEFFICIENT OF DISCHARGE (0.7, UNPAINTED METAL)
G = GRAVITY (32.2 FPS)
A = AREA OF DISCHARGE ALLOWED (UNKNOWN)
H = HEAD (DEPTH OF FLOW DURING 100-YR STORM IN 18" RCP, 0.66 FT)

AREA OF DISCHARGE ALLOWED = 0.43 SQ.FT
FLOW AREA PROVIDED = 0.42 SQ.FT
DISCHARGE THROUGH RESTRICTOR PLATE = 1.75 CFS
PLATE SIZE = 22" X 13.3"



- BENCHMARKS:**
- SQUARE CUT ON INLET IN NORTHEAST CORNER @ SUNBELT DRIVE AND WESTGROVE RD. ELEV = 628.54
 - SQUARE CUT IN BASE OF STREET LIGHT IN CENTER LINE OF EXCEL PKWY, WEST OF ADDISON RD. ELEV = 644.41



SHEET NO.
4
7

DRAINAGE PLAN

4397 WESTGROVE RD

JOHN S. DRYDEN COMPANY

TOWN OF ADDISON, TEXAS

RAYMOND L. GOODSON JR., INC. CONSULTING ENGINEERS

DESIGN	DRAWN	DATE	SCALE	NOTES	FILE	NO.
RLG	RLG	10-23-00	1"=20'	0406DAM	00	406