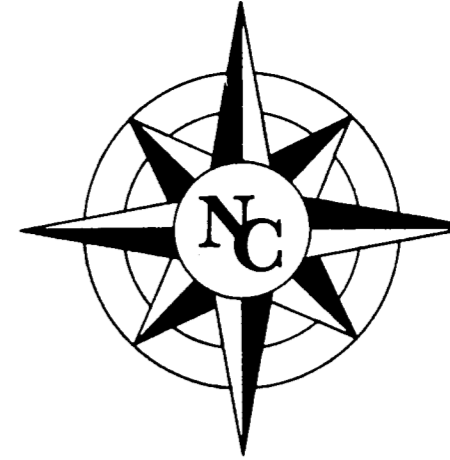
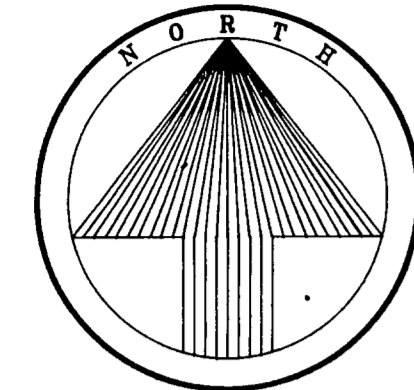


Revisions	Date	Description	Drawn By	Checked By

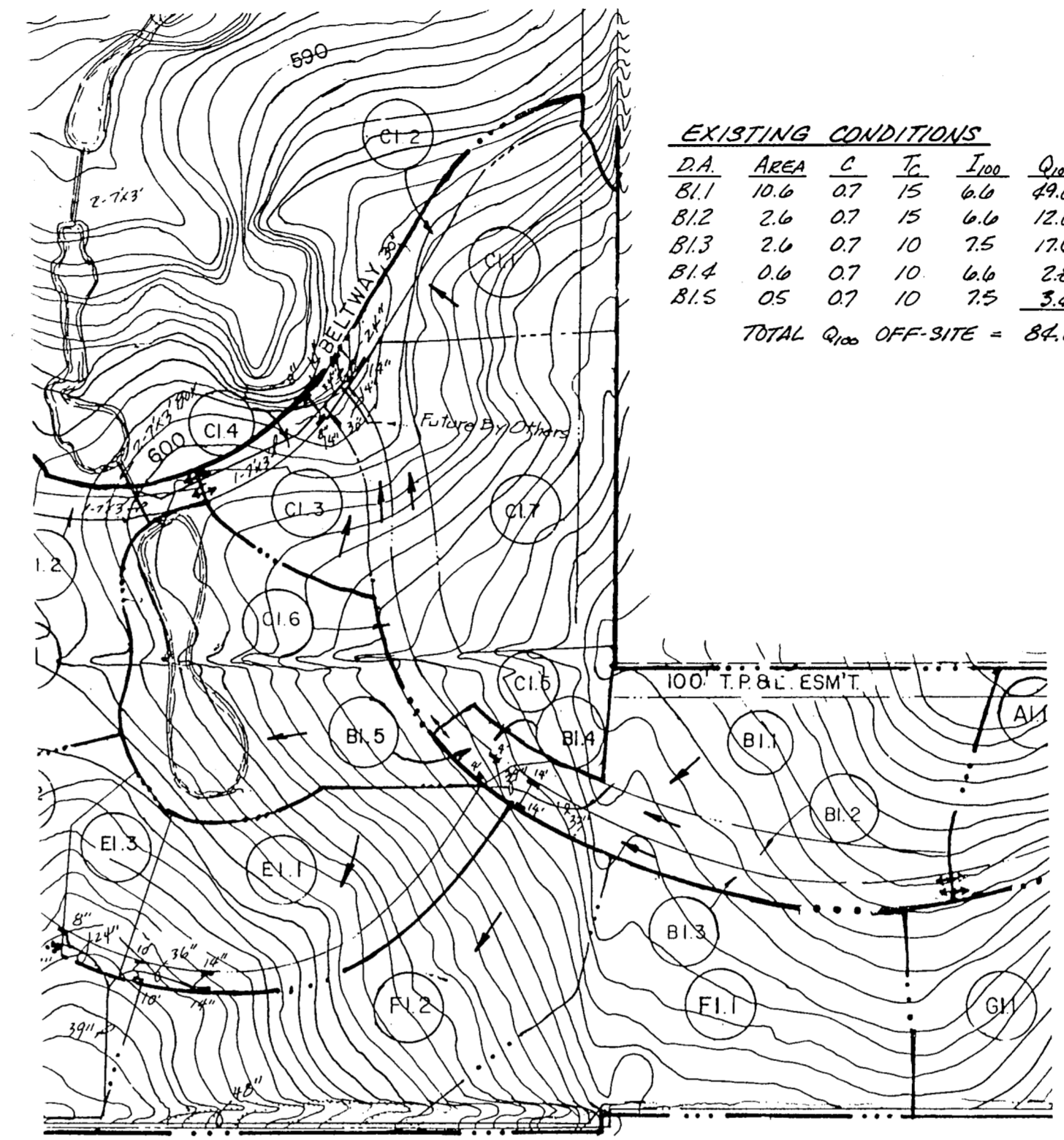
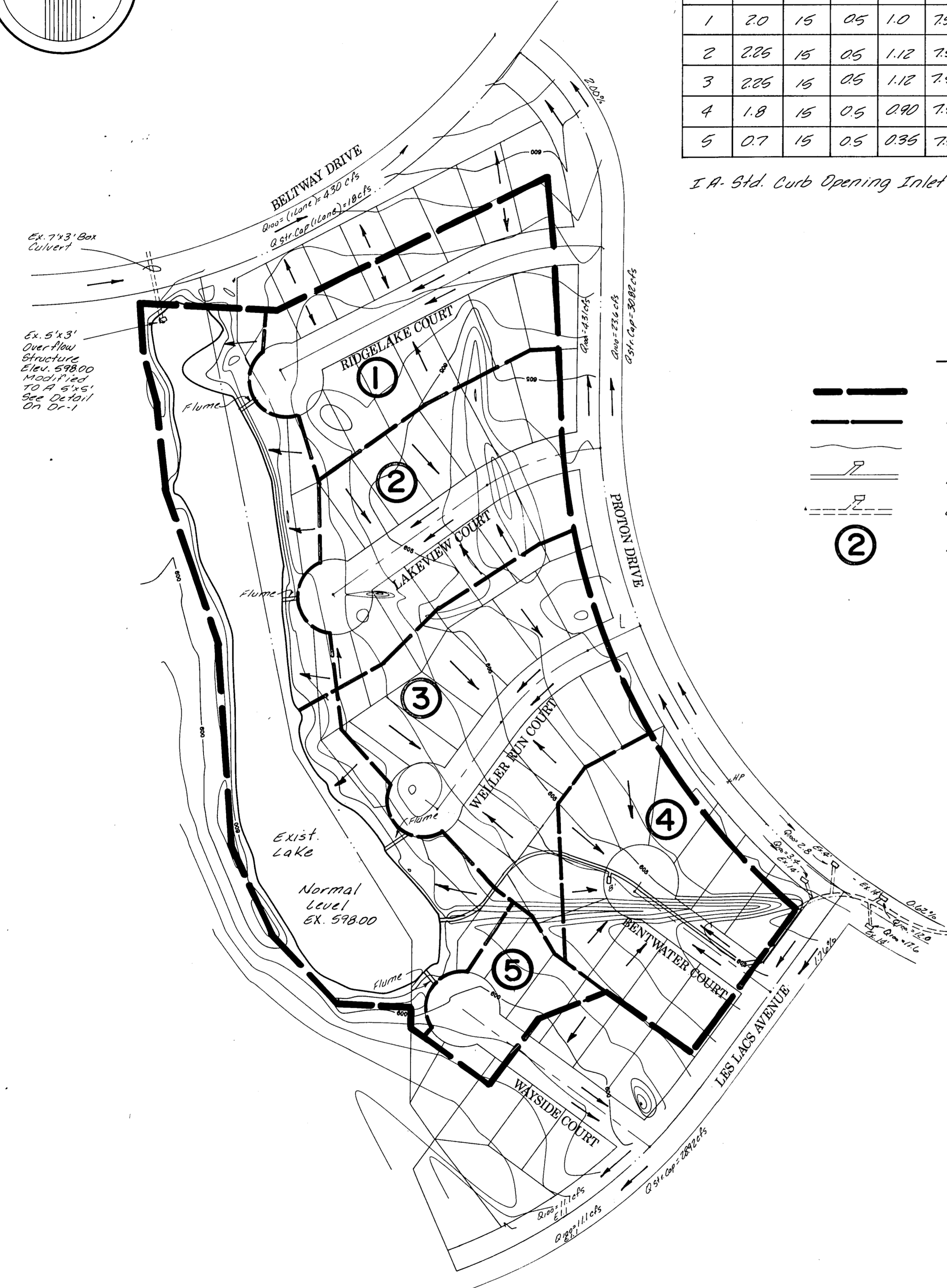


AREA NO.	AREA (AC.)	Tc	Cf	Cf x A	I ₁₀₀	Q ₁₀₀ (cfs)	Q ₁₀₀ + Bypass	INLET	INLET TYPE
1	2.0	15	0.5	1.0	7.52	7.5	0	-	Flume
2	2.26	15	0.5	1.12	7.52	8.4	0	-	Flume
3	2.26	15	0.5	1.12	7.52	8.4	0	-	Flume
4	1.8	15	0.5	0.90	7.52	6.8	0	1-8'	IA
5	0.7	15	0.5	0.35	7.52	2.6	0	-	Flume

1 A Std. Curb Opening Inlet At Low Point.

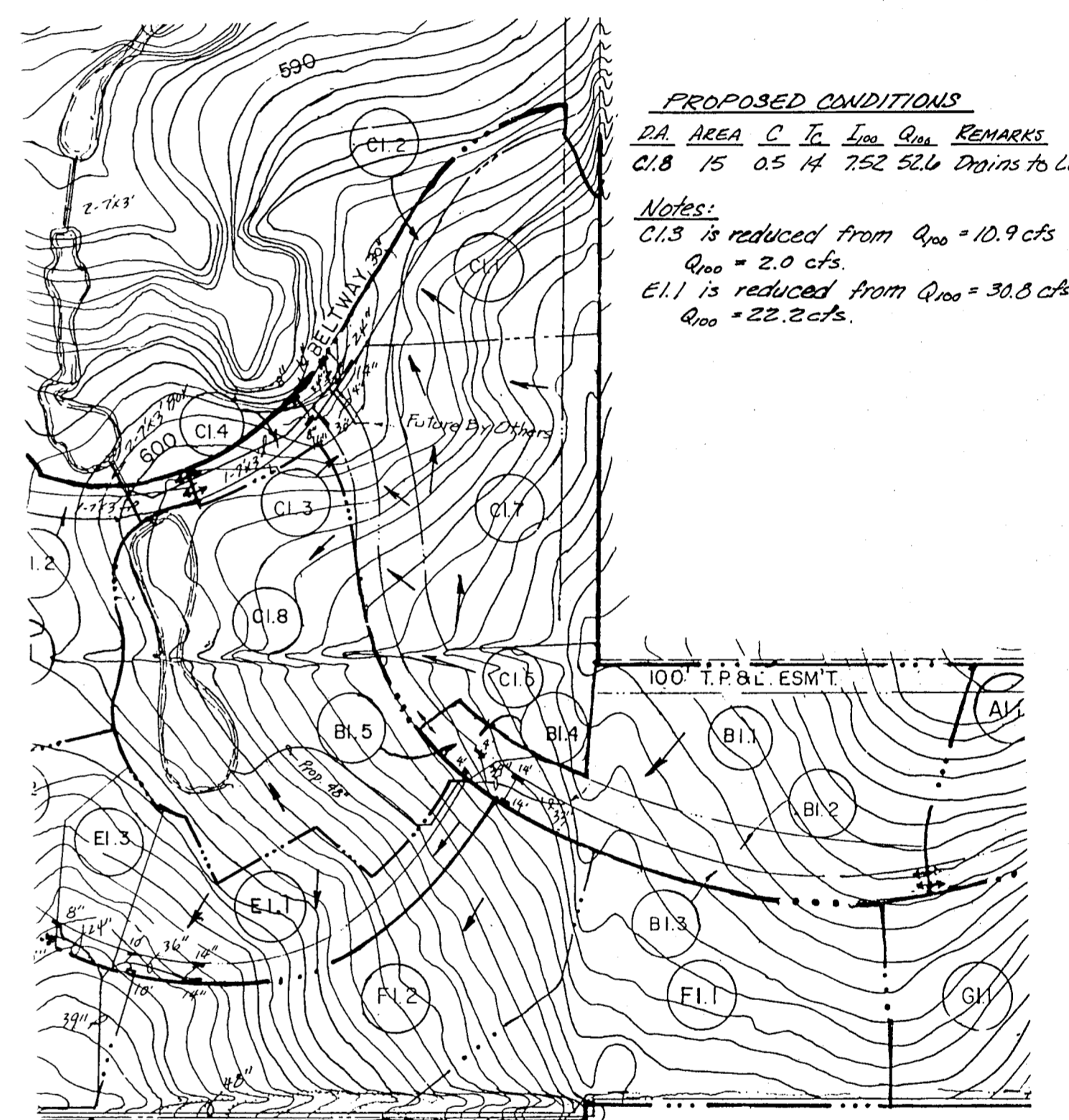
LEGEND

- LAKE AREA DRAINAGE
- DRAINAGE AREA LINE
- EXIST. CONTOUR LINE
- PROP. STORM SWR. LINE
- EXIST. STORM SWR. LINE
- DRAINAGE AREA



EXISTING CONDITIONS

DA	AREA	C	Tc	I ₁₀₀	Q ₁₀₀	REMARKS
BI.1	10.6	0.7	15	6.6	49.0	Conveys to Ex. 33" RCP
BI.2	2.6	0.7	15	6.6	12.0	Collected in 1-14" Inlet
BI.3	2.6	0.7	10	7.5	17.6	Collected in 1-14" Inlet
BI.4	0.6	0.7	10	6.6	2.8	Collected in 1-4" Inlet
BI.5	0.5	0.7	10	7.5	3.4	Collected in 1-4" Inlet
TOTAL Q ₁₀₀ OFF-SITE = 84.8 cfs						



PROPOSED CONDITIONS

DA	AREA	C	Tc	I ₁₀₀	Q ₁₀₀	REMARKS
CI.8	15	0.5	14	7.52	52.6	Drains to Lake

Notes:
 CI.3 is reduced from Q₁₀₀ = 10.9 cfs to Q₁₀₀ = 2.0 cfs.
 EI.1 is reduced from Q₁₀₀ = 30.8 cfs to Q₁₀₀ = 22.2 cfs.

TOTAL ON SITE DRAINAGE INTO EXIST. LAKE: 14.0 ACRES

$$Q = C I A$$

$$C = 0.50$$

$$I = 7.52 \text{ In (TC = 15 min)}$$

$$A = 14.0 \text{ ACRES}$$

$$Q_{100} = (.5) (7.52) (14)$$

On Site Q₁₀₀ = 52.64 cfs
 Off Site Q₁₀₀ = 84.8 cfs

TOTAL Q₁₀₀ = 137.44 cfs

EXISTING OVERFLOW STRUCTURE (INLET CONTROL)

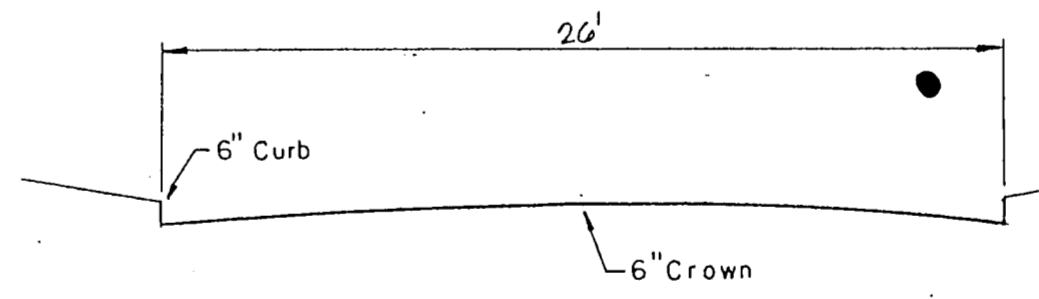
5' x 6' Box Intake
 Overflow Structure Elev. 598.00

$$Q = CA \sqrt{2gh}$$

$$H = \frac{(Q/CA)^2}{2g}$$

$$H = \frac{(137.44 / (6 \times 5))^2}{2(32.2)} = 1.00'$$

100 YEAR ELEV. = 598.00
 + 1.00
 599.00



$$Q = \frac{1.486}{n} A R^{2/3} S^{1/2}$$

$$n = 0.016$$

$$A = 4.33 \text{ Ft.}^2$$

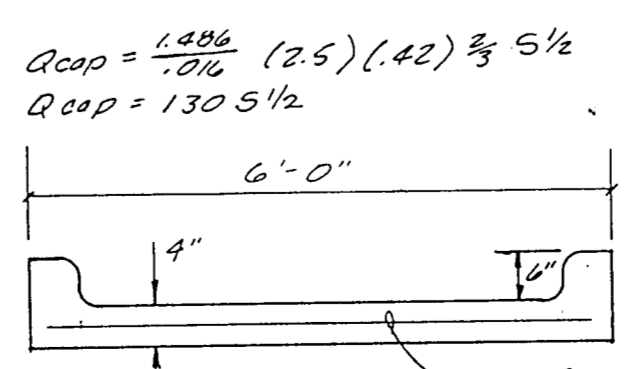
$$Q = \frac{1.486}{0.016} (4.33) (0.33)^{2/3} S^{1/2}$$

$$Q_{\text{Str. Cap}} = 118.70 \text{ S}^{1/2}$$

$$= 118.70 (0.005)^{1/2}$$

$$= 8.4 \text{ cfs (4.2 cfs/Gutter)}$$

STREET CAPACITY



REINFORCEMENT PER TOWN OF ADDISON'S SPECIFICATION
 CONC. FLUME / SIDEWALK
 N.T.S.

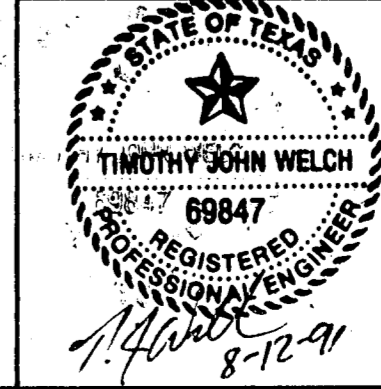
AS BUILTS
 I CERTIFY THIS PROJECT WAS CONSTRUCTED IN GENERAL CONFORMANCE WITH THESE CONSTRUCTION PLANS AND WILL FUNCTION AS DESIGNED.

DRAINAGE AREA MAP

WATERFORD PARK I

TOWN OF ADDISON, TEXAS

Date: AUGUST, 1991	Scale: 1" = 100'	SHEET DA-1 OF
Drawn By: T.N.C.	Approved By: T.N.C.	SHEETS



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