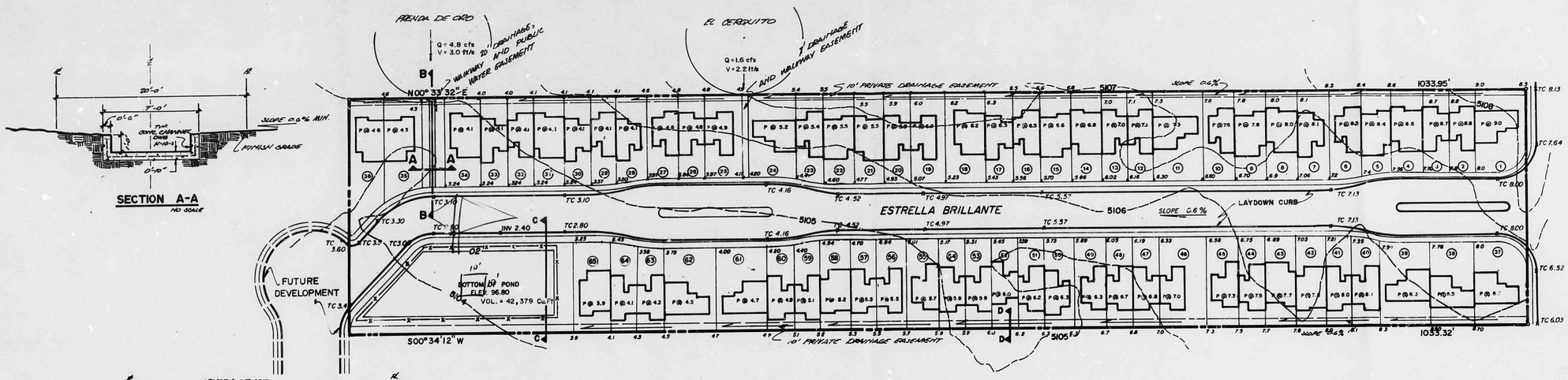
HYDROLOGY

G11/D19
1 PLAN

G 11/D19

1 PLAN



HYDROLOGY DATA SHEET

(Chapter 2 - Engineering Field Manual for Conservation Practices)

DRAINAGE AREA:	A =	4.97	acres
LENGTH: (longest waterway to the ridge)	L =	1000'	ft.
ELEVATION DIFFERENCE: (to farthest ridge)	H	6'	ft.
SOIL TYPE MwA "B"			
RUNOFF CURVE NUMBER: (Table 2-1) Plate 22.2 C2	CN	85	
TIME OF CONCENTRATION: (Fig. 2-2	Tc	0.5	hr.
RAINFALL, 24 hr. (Plate 22.2 D-1) freq. 100 yr.	RV-6	2.2	in.
RAINFALL INTENSITIES (Plate 22.2 D-2	I 6	1.25	
DIRECT RUNOFF: (Use 2.2)	Q	2.2	in.
DISTRIBUTION CURVE NO. (Exhibit 2-3)	DC	75	c.f.s.
C.F.S. PER ACRE PER INCH OF RUNOFF	cfs/ac/in	1.5	c.f.s.

PEAK DISCHARGE: q = A x Q x qfs/ac/in

4.97 2.2 1.5 — 14.9- c.f.s.

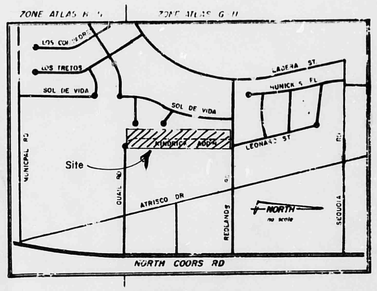
VOLUME OF RUNOFF: Q x A / 12 — 0.91 ac. ft. — 39,690 cu. ft.

DRAINAGE CALCULATIONS

RATIONAL METHOD

TOTAL AREA	216,930	sq. ft.	
IMPERVIOUS AREA			
ROOF	58,240	sq. ft.	
PAVING	37,815	sq. ft.	
DRIVEWAYS	32,250	sq. ft.	
SIDEWALKS	10,020	sq. ft.	
TOTAL IMPERVIOUS AREA	138,325	sq. ft.	
LENGTH: (longest)	1015'	ft.	
SLOPE:	0.006	ft./ft.	
OVERLAND VELOCITY (ground)	0.5	ft./sec.	PLATE 22.2 B-1
OVERLAND VELOCITY (street)	1.0	ft./sec.	PLATE 22.2 B-1
TIME OF CONCENTRATION Tc 760/0.5	1520	sec.	25.3 min.
Tc 245/1.0	245	sec.	4.0 min.
TOTAL Tc			29.3 min.
RUNOFF CURVE NO.	85		PLATE 22.2 C-2
RUNOFF COEFICIENT	0.65		PLATE 22.2 C-1
INTENSITY 100 yr.	5.4		PLATE 22.2 D-2
VOLUME 2.2/12 x 4.97 x 43,560	39,690	cu. ft.	
PEAK DISCHARGE: 0.65 x 5.4 x 4.97	17.4	c.f.s.	

RATIONAL METHOD 17.4 c.f.s. S.C.S. METHOD 14.9 c.f.s.



VICINITY MAP

NORTH

SCALE 1"=50'

0 10 20 30 50 75 100

LEGEND

- EXISTING CONTOUR — 5106
- DESIGNED CONTOUR — 02
- PROPERTY LINE
- SPOT ELEVATION x TC 7.13
- LOT NUMBER (37)
- P = PAD
- TC = TOP OF CURB
- FENCE LINE
- FLOW LINE

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GRADING AND DRAINAGE PLAN

GILL SUBDIVISION
KINDRICK ADDITION
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