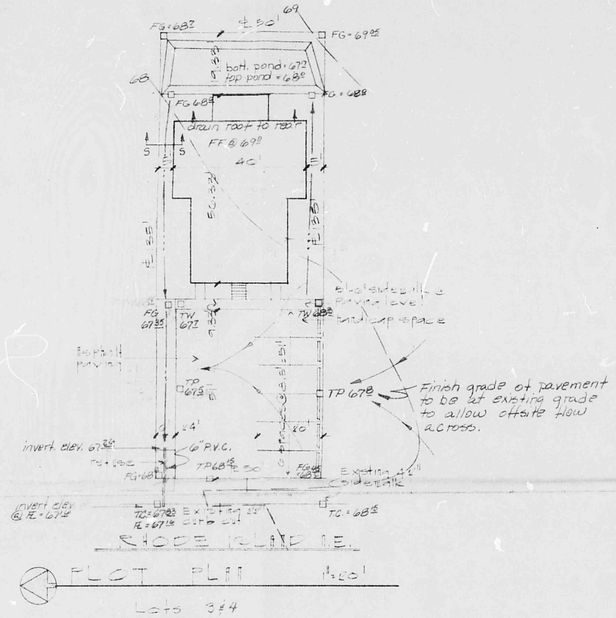
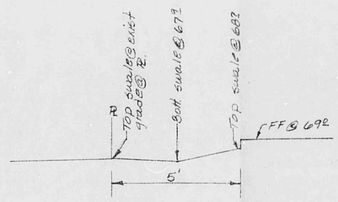
HYDROLOGY

K19/D53
ONE PLAN



PLOT PLAN 1"=20'

Lots 3&4
Block 16
Mesa Verde Addition



SEC. S-S
SWALE

DRAINAGE CALCULATIONS

① Volume natural runoff
$A_{gross} = 50 \times 135 = 6750$ s.f.
$C = 0.40$, $L = 2.4/12 = 0.20$
$V_{NAT.} = C\,L\,A = 0.40(0.20)\,6750 = 540$ cu.ft.

② Volume developed runoff
use $C = 0.95$ for all impervious areas.
$C = 0.40$ for all pervious areas.
$A@C=0.95 = 4537.5$ s.f. Comp. $C = 0.77$
$A@C=0.40 = 2212.5$ s.f.
$V_{DEV.} = 0.77(0.20)\,6750 = 1039.5$ cu.ft.

③ Required volume of on site ponding
$V_{req.} = V_{DEV.} - V_{NAT.} = 1039.5 - 540 = 499.5$ cu.ft.

④ Rear Pond
depth = 0.83'
side slopes = 3:1
top area = 752 s.f.
bott. area = 468 s.f.
Volume = $(468+752)/2 \times 0.83 = 506$ cu.ft. > V_{req}

The rear yard area is to be depressed to an elevation of 67.2 with no side slopes exceeding 3:1. This pond volume will satisfy the on site pond volume requirement. All roof drainage is to be to the rear, directly into the pond. The pond overspill is directed along the North side yard area by a depressed swale (see Sec. S-S) The overspill is allowed to leave the site thru a 6" P.V.C. pipe as shown.

LEGEND

- FG finish grade
- FF finish floor
- TP top pavement
- TW top walk
- swale
- existing contour

K19/053 (1)

APPROVAL		
HYDROLOGY ENGINEER	DRAINAGE/GRADING PLAN	DATE: 10-3-78
DATE 10/4/78	REVISIONS	DRAWN: JLL
	GODWIN ENGINEERING CORPORATION	CHKD: NFG
		SCALE: 1:20'
		JOB NO: 17-4
		SHT. NO. 1 OF

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