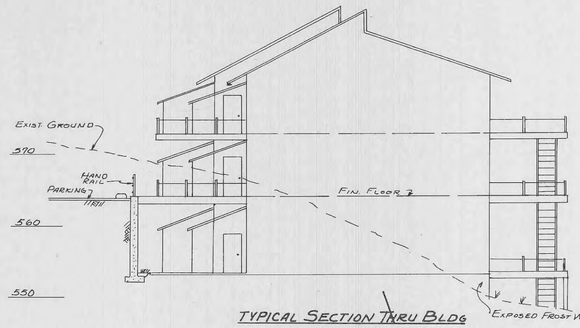
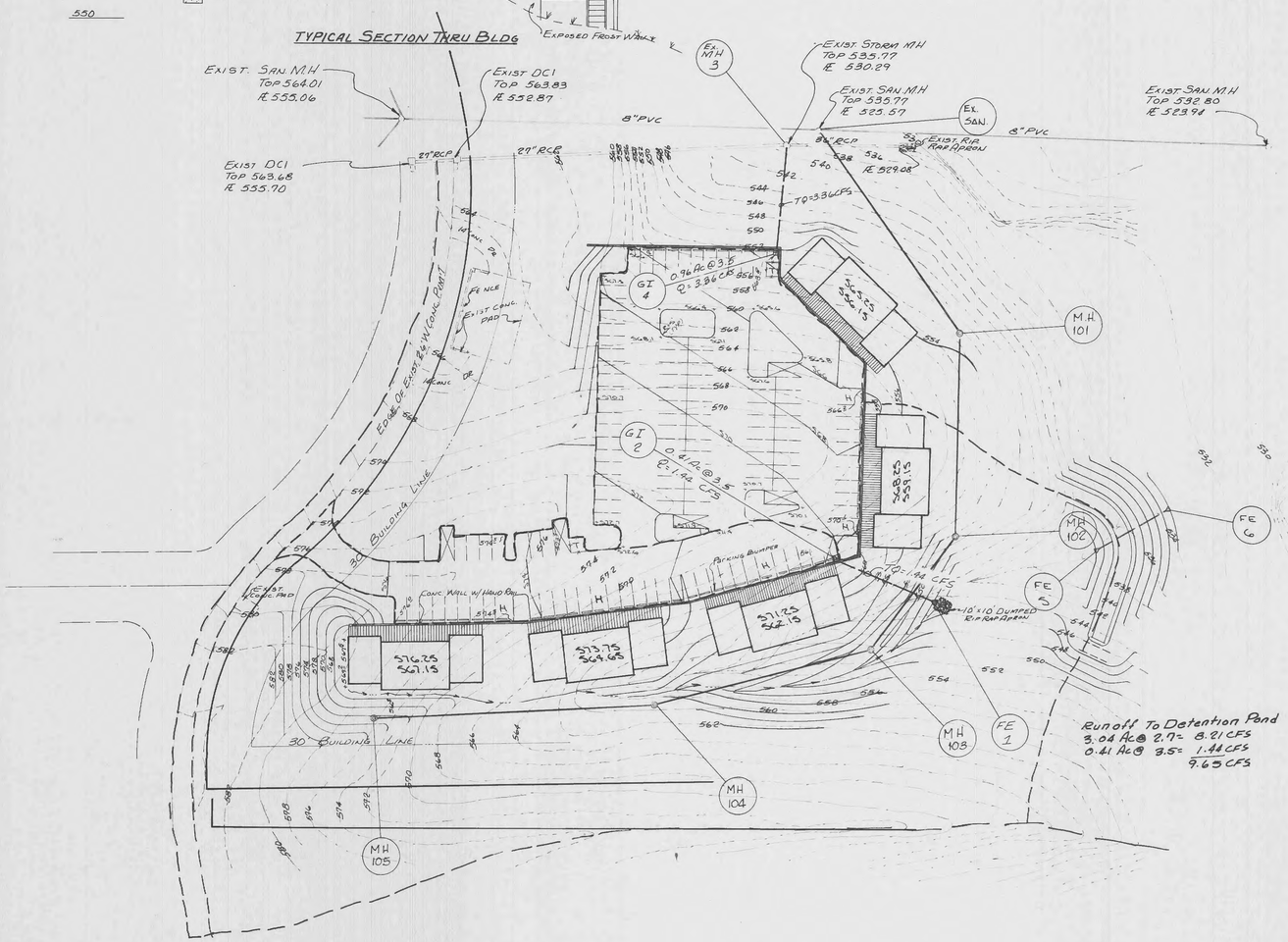
Flat Plan & Grading Plan
PEBBLE CREEK CONDOMINIUMS

Feb., 1986 — 85-124



TYPICAL SECTION THRU BLDG



N
1" = 50'

Stormwater Calculations

Undeveloped Runoff: 4.99 Ac. x 1.7 cfs/Ac. = 8.48 cfs
Developed Runoff: 4.99 Ac. x 2.7 cfs/Ac. = 13.47 cfs

Required Storage = 4.99 Ac. (2.7 - 1.7) x 1800 = 8,982 cf
Area @ Elev. 540 = 1000 s.f.
Area @ Elev. 542 = 2950 s.f.
Area @ Elev. 543.5 = 4181 s.f.

Volume Between Elev. 540 & 542 = 3,950 c.f.
Volume Between Elev. 542 & 544 = 5,648 c.f.
Total Volume: 9,598 c.f.

9.65 cfs to Pond - 4.99 Stored = 4.66 cfs

Calculate Discharge in 12" Pipe

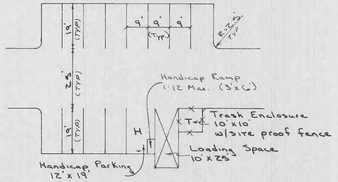
Q = 4.66 cfs
c = 0.6
a = unknown
g = 32.2'/sec²
h = 3.0'

$Q = ca\sqrt{2gh}$
$4.66 = 0.6a\sqrt{2 \times 32.2 \times 3}$
a = .56 s.f.

Q_{100} = 9.65 cfs x 1.39 = 13.41 cfs
C = 3.0
L = unknown
H = 1.0'

$Q = CLH^{3/2}$
20 cfs = 3 x L x H
L = 4.47

Provide square opening at pipe end and restrict area to .56 s.f.
(Use 10" pipe 0.55 s.f.)
Set Emergency Spillway @ Elev. 543.5 Width = 5'

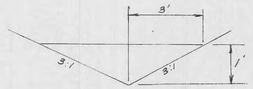


Parking Layout
(Typical)

SWALE CALCULATIONS
$V = \frac{1.486}{n}\left(\frac{A}{WP}\right)^{2/3}(S^{1/2})$
$V = \frac{1.486}{.05}\left(\frac{3}{6.32}\right)^{2/3}(.07\ Max)^{1/2}$
V = 4.70 FPS

Q = VA
Q = 4.7 x 3
Q = 14.1 CFS

n = .05
A = 3
WP = 6.32
S = .07 Max



NOTE: This Drawing To Be Used For Drainage Areas Only.

NOTE: EXISTING TREES NOT DISTURBED BY CONSTRUCTION ARE TO REMAIN.

DRAINAGE AREA MAP