

Date 36-82522-1 MWS Page 1 of
 Project Slothower C.U.P. Amendment
 Item Drainage Plan Summary

1) Hydrology by SCS TR-55 Methods. Hydrographs by tabular method
 (Chapter 5, TR-55)

2) Pre-developed conditions assumed to be pasture in good condition.
 Pre-developed $Q_p = 32$ cfs with runoff volume = 3.6 Ac-Ft.

3) Developed condition assumptions:
 Parcels 1 & 2: 9.1 Acres Commercial w/ 85% Impervious Area
 Parcels 3 & 4: 10.6 Acres Apt./Multi-Family w/ 80% Impervious Area
 Composite CN = 86
 $Q_p = 135$ cfs with runoff volume = 7.3 Ac-Ft.

4) Detention Facility

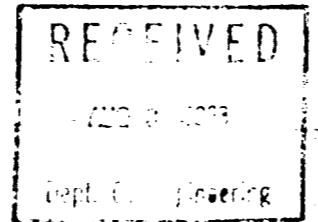
Minor Storms: Flr Elev = 126.65 Top Elev = 130 5:1 slope Vol = 0.3 Ac-Ft	Major Storms: Flr Elev = 130.0 (Tennis Court) Top Elev = 135.0 100-Yr W.S. El = 137.0 2:1 slope Vol = 3.4 Ac-Ft
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Total Avail. Storage = 3.7 Ac-Ft

5) Outfall Control Structure

H.G.L. = 0.0234 Ft/Ft (Assume 100-Yr peak on Dry Creek does not coincide)

24" RCP: $K = 226$ ($n = 0.013$) $Q = K\sqrt{S} = 35$ cfs
 30" CMP: $K = 223$ ($n = 0.024$) $Q = K\sqrt{S} = 34$ cfs



Computation of Peak Discharge Date: 07-05-1983	
Title: Slothower C.U.P. Amendment Drainage Plan - Undeveloped Conditions	
Rainfall	7.8 inches
Recurrence Interval (yrs.)	100
Runoff Curve Number	61
Hyd. Len. (feet)	1500
Slope	1.5 %
% of HLM	0 %
% Imp.	0 %
Area of basin	12.7 acres
Computed Data	
Basic Lag Factor (hrs.)	0.61
Hydr. Length Adj.	1.00
Imp. Area Adj.	1.00
Runoff Volume (in.)	3.29
Computed Time of Conc. (hrs.)	1.01
Peak Discharge by Technical Release No. 55 (1975)	
Peak Dis. (cfs) =	31.97
Csm/in. =	315.40
Tc (hrs.) =	1.01
Peak Discharge by Modified Rational Formula (Rossmiller) Discharge for 100-year freq.	
Time of Conc. (Tc) =	60.69 minutes
Intensity =	3.90 inches/hr.
C factor =	0.21
Peak Dis. (cfs) =	16.37

Project No: 36-82522
 Project: Slothower

TR-55
 Location:
 Remarks:

- INPUT
- 7.8
Rainfall
 - 86
CN
 - 1500
Runoff Cur.
 - 1.5
Hydraulic L
 - 75
Watershed S
 - 66
Hydr. Leng
 - 19.7
Impervious
 - 0
Drainage F
 - 0
Pages, Sw

$K = 6.14 \times 19.7$