



INITIAL DATA -

GROSS AREA SUBDIVISION = 11.29 Ac.  
 S.C.S. SOIL GROUP "D"  
 AVERAGE SLOPE OF SITE = 1/4% = 1.5%  
 DEVELOPMENT PLAN = 200 DU'S @ 448'² EACH  
 ROOF AREA = 200x448'² = 2.057 Ac.  
 310 PARKING SPACES @ 200'²/EA = 1.423 Ac.  
 310' of 24' WIDE STREETS = 0.661 Ac.  
 10'x200' PAVEMENT = 0.096 Ac.  
 STAIRS = 0.008 Ac.  
 CONC. WALKS 6200'x4' = 0.569 Ac.  
 200 CONC. PATIOS @ 200'²/EA = 0.918 Ac.  
 TOTAL IMPERVIOUS AREA = 7.162 Ac.

PERCENT IMPERVIOUS AREA = 7.162/10.9 = 63.5%  
 PERCENT PERVIOUS = 36.5%  
 DETERMINE WEIGHTED "C" FACTOR  
 Use 0.70 for Imperv. Areas -  
 Use 0.30 for Open Areas -

11.28 x 63.5% x 0.70 = 6.4465  
 11.28 x 36.5% x 0.30 = 1.2352  
 7.6817

WEIGHTED "C" = 7.6817/11.28Ac = 0.68  
 T<sub>c</sub> = T<sub>a</sub> + T<sub>e</sub> (N.B. T<sub>e</sub> by FARMETHOD & T<sub>e</sub> @ 2'/Sec.)

INTERIOR DRAINAGE AREAS -  
 BASIN "A" = 3.79 Acres ; T<sub>c</sub> = 17 Min.  
 BASIN "B" = 3.17 Acres ; T<sub>c</sub> = 17 Min.  
 BASIN "C" = 2.04 Acres ; T<sub>c</sub> = 15 Min.

TOTAL 9.00 Acres ; Av. T<sub>c</sub> = 17 Min.  
 W/T<sub>c</sub> = 17 Min., I<sub>2</sub> = 3.86"/hr.

INTERIOR DRAINAGE AREA PEAK Q<sub>p</sub>  
 Q<sub>p</sub> = C I<sub>2</sub> A = 0.48 x 3.86"/hr x 9.0Ac  
 Q<sub>p</sub> = 23.6 cfs. Use 24 cfs

SITE  
 DEVELOPMENT PLAN  
 FOR  
 BAXTER PLACE

MOEHRING & ASSOCIATES  
 CONSULTING ENGINEERS  
 WICHITA

Note:  
 Present Culvert Capacity (Under Lewis) = 35.5 cfs  
 before overflowing road section - adjacent to site