

WICHITA FAMILY VISION ADDITION TO WICHITA, SEDGWICK COUNTY, KANSAS

DRAINAGE PLAN

UNDER EXISTING CONDITIONS, THE SITE CONSISTS OF A 0.37 ACRE LOT CONTAINING A HOUSE, A SHED, TREES, AND A FENCE. AT THE TIME OF REDEVELOPMENT, RUNOFF SHALL BE LIMITED TO EXISTING CONDITIONS. CALCULATIONS FOR EXISTING CONDITIONS ARE SHOWN BELOW.

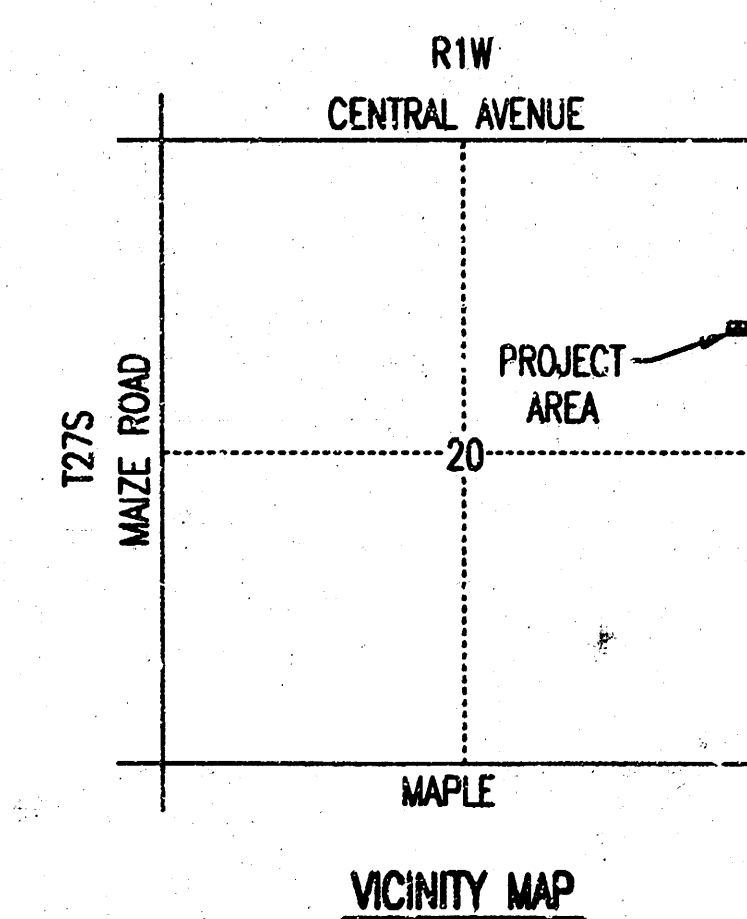
EXISTING CONDITIONS HYDROLOGY: RATIONAL METHOD, $Q=CIA$
SOIL TYPE: Ba (BLANKET SILT LOAM)
HYDROLOGIC SOIL GROUP C

*INTENSITY: ASSUME MINIMUM TIME OF CONCENTRATION FOR ALL BASINS.
THEREFORE, AT $T_c=15$ MINUTES:
 $i_2=3.80$ in/hr, $i_3=4.62$ in/hr, $i_{100}=7.40$ in/hr

-RUNOFF COEFFICIENTS
RESIDENTIAL, SINGLE FAMILY (SOIL GROUP C)
 $C_2=0.43$, $C_3=0.46$, $C_{100}=0.65$

BASIN A
-RUNOFF DRAINS EAST TO TYLER ROAD
-AREA=0.11 AC
-RUNOFF
 $Q_2=C_2i_2A=0.43(3.80)(0.11 \text{ AC})=0.18 \text{ CFS}$
 $Q_3=C_3i_3A=0.46(4.62)(0.11)=0.23 \text{ CFS}$
 $Q_{100}=C_{100}i_{100}A=0.65(7.40)(0.11)=0.53 \text{ CFS}$
BASIN B
-RUNOFF DRAINS WEST TO AN EXISTING CHANNEL BEHIND THE LOT
-AREA=0.26 AC
-RUNOFF
 $Q_2=0.43(3.80)(0.26)=0.42 \text{ CFS}$
 $Q_3=0.46(4.62)(0.26)=0.55 \text{ CFS}$
 $Q_{100}=0.65(7.40)(0.26)=1.25 \text{ CFS}$

DRAINAGE LEGEND
A BASIN IDENTIFIER
--- BASIN BOUNDARY
--- STORM WATER FLOW



N.E. Cor. NE 1/4, Sec. 20,
Twp. 27S, R1W of the 6th P.M.
Found 3/4" IP in Thimble

SCALE: 1" = 20'

• = 1/2" REBAR W/PEC CAP UNLESS OTHERWISE NOTED

BENCHMARKS:
PROJECT BENCHMARK:
#100 - CHISELED SQUARE CUT ON TOP OF CURB AT 437 N. TYLER ROAD.
ELEV. 141.555 CITY DATUM
ELEV. 1328.955 N.G.V.D.
C.O.N. BENCHMARK:
WESTLINK AND CENTRAL TOP OF NORTH HANDRAIL AT EAST END OF RCBG.
ELEV. 147.41 CITY DATUM
ELEV. 1334.81 N.G.V.D.

OWNER: WANDAL BOYLES
UNPLATTED
ZONED: SF-5 SINGLE FAMILY

OWNER: DORA E. LONG
UNPLATTED
ZONED: SF-5 SINGLE FAMILY

Rim Elev. = 137.54
E in 8" VPC (S) = 133.14
E out 8" VPC (S) = 133.09

E 1/4 Cor., Sec. 20,
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