

EMS 1st Addition Drainage Plan

10-2-95
CMB

From soil survey of Sedgwick County, KS.

Soil Type = F₆ = Hydrological SoilTM
Group B

Site (existing) grades from Hillside Ave. to the east to existing channel formed by K-96 to the North & R.R. Road to the South. Channel flow is from the north (new box) to the south (RR Box).

Plot Area = 3.0 Acres.

From FEMA Firm MAP # 200326 0010 B

BFE = 1339.5 (Interpolated)

This elevation line is shown on drainage plan.

New building and parking areas = 0.30 Ac.

For proposed site; calculate C factor

Grossed area = 3 Ac - 0.3 Ac = 2.7 Acres

Imperv area = 0.3 Ac

$$C_s = \frac{2.7 \text{ Ac} (0.26) + 0.3 \text{ Ac} (0.95)}{3} = \frac{0.987}{3} = 0.33 = C_s$$

"B" Type soil - lawn, 5% Bldgs

$$C_{100} = \frac{2.7 \text{ Ac} (0.45) + 0.3 \text{ Ac} (0.95)}{3} = \frac{1.50}{3} = 0.50 = C_{100}$$

$$\begin{aligned} C & T_c = 15 \text{ min} \\ i_s &= 4.56''/\text{mi} \\ i_{100} &= 7.37''/\text{mi} \end{aligned}$$

$$Q_s = (3.0 \text{ Ac}) (0.33) (4.56) = 4.5 \text{ cfs}$$

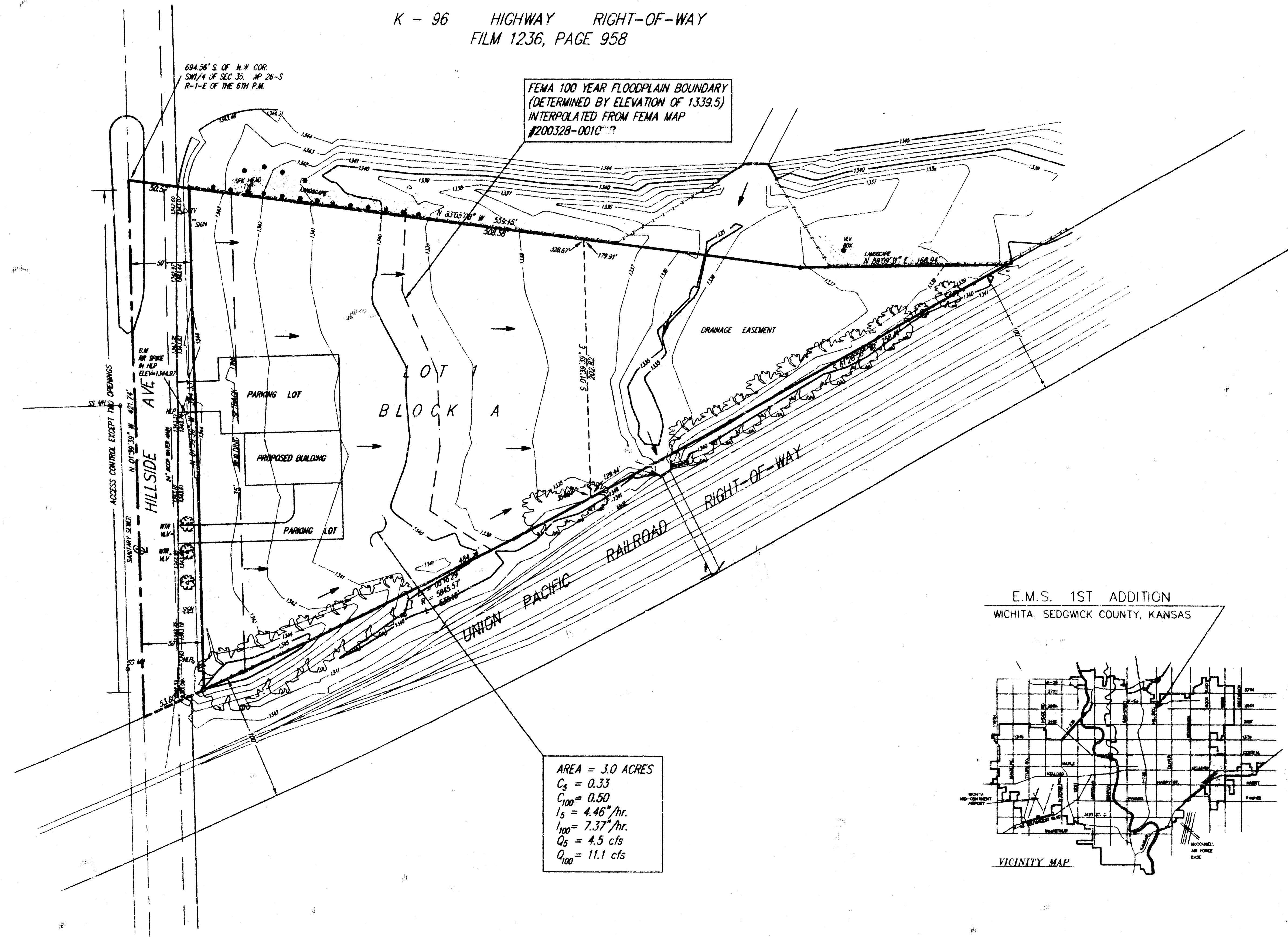
$$Q_{100} = (3.0 \text{ Ac}) (0.50) (7.37) = 11.1 \text{ cfs}$$

Paved areas must be collected and drained via inlet to SWS pipe.

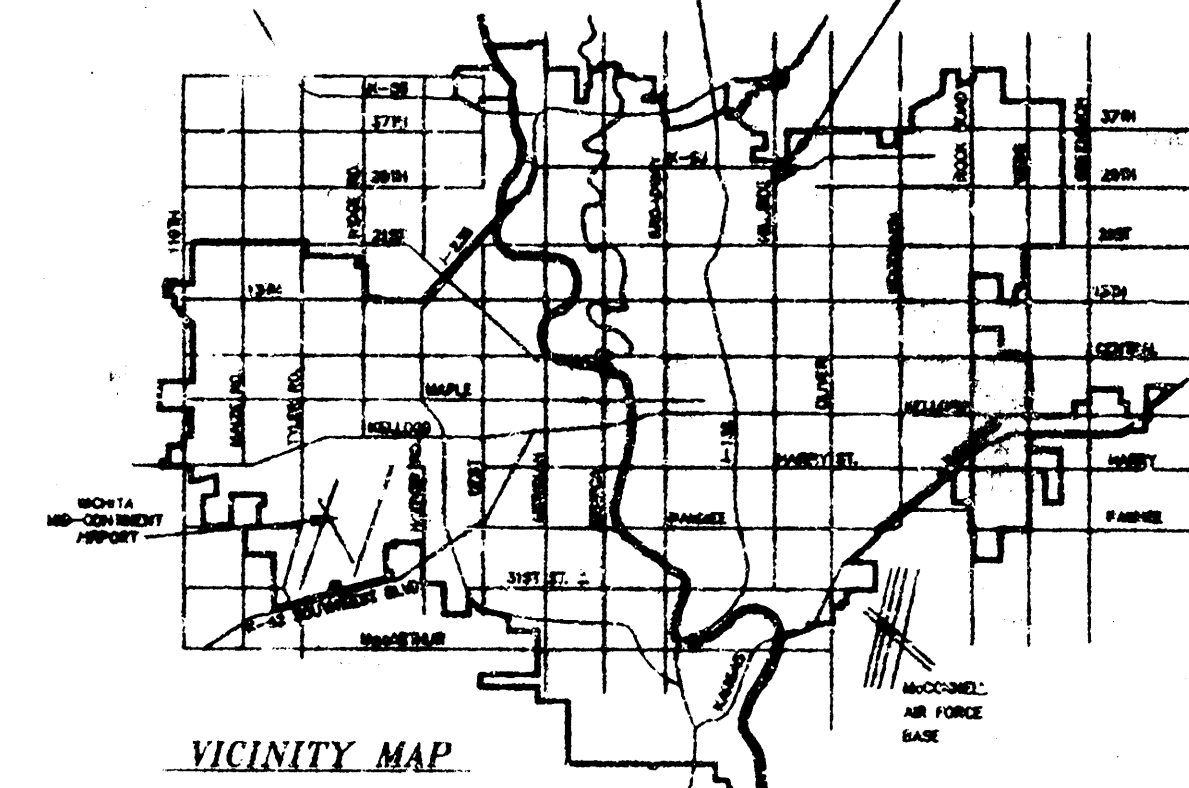
DRAINAGE PLAN E.M.S. 1ST ADDITION

WICHITA, SEDGWICK COUNTY, KANSAS

A tract of land in the SW1/4 of Sec. 35, Twp. 26-S, R-1-E of the 6th P.M., Sedgwick County, Kansas, lying south of K-96 Highway right-of-way and north of the Union Pacific Railroad right-of-way.



E.M.S. 1ST ADDITION
WICHITA, SEDGWICK COUNTY, KANSAS



1" = 50'
CLAY = 800

BECHTOLD MARK
RAILROAD SPRE IN MAP 800'S S
8 1/2 S. E. OF N.W. COR. SW1/4
SEC. 35-26-1E
EAST SIDE OF HILLSIDE
CLAY = 1144.57' WIDE

DRAINAGE PLAN -- E.M.S. 1ST ADDITION

SRB		924 NORTH MAIN WICHITA, KANSAS 67203		316-284-8008 FAX 316-284-4621	
SAVOY, RUGGLES & BOHM, P. A. ENGINEERING & SURVEYING					
PROJECT NUMBER					
DESIGNED CMB	DRAWN CMB	REVIEW	DATE 10-4-95	UTILITY	JOB NO.