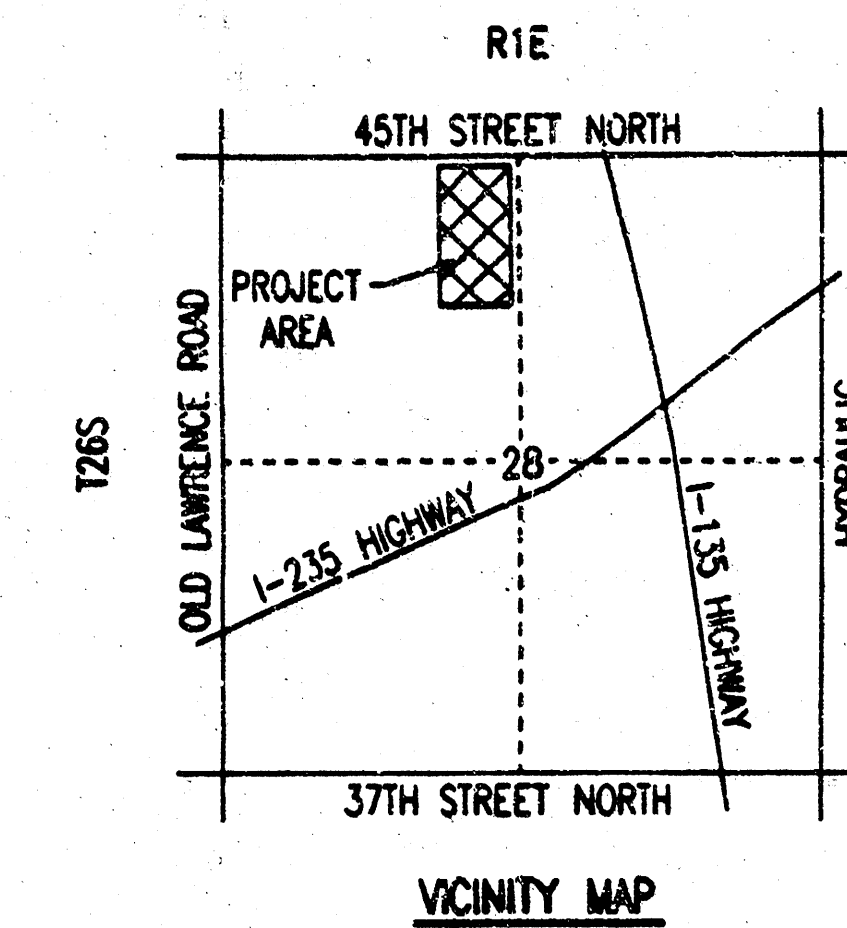


DRAINAGE PLAN UNITED WAREHOUSE ADDITION TO SEDGWICK COUNTY, KANSAS



DRAINAGE TO BE CONVEYED TO THE DRAINAGE EASEMENT TO THE SOUTHWEST VIA DRIVES, FLUMES, PRIVATE STORM SEWERS, SWALES OR OTHER APPROVED DRAINAGE DEVICES.

SCALE: 1" = 100'

• = 3/4" IRON PIPE W/PEC CAP UNLESS OTHERWISE NOTED

BM: RR SPIKE IN TOP WEST END, NORTH ABUTMENT OF RR BOX AT SOUTH SIDE OF 45TH STREET NORTH, APPROX. 60' WEST OF NE COR., NW 1/4, SEC. 28 ELEV. = 1327.95

CA: CHISELED "A" AT WEST END NORTH HUB GUARD OF A RCB 1/4 MILE EAST OF OLD LAWRENCE ROAD ON 45TH STREET NORTH. ELEV. = 1327.94

MINIMUM OPENING FOR LOT 1, BLOCK 1 = 1325.0 M.S.L.

LEGEND

- 1322— PROPOSED CONTOUR
- 1320— EXISTING CONTOUR
- ➡ MAJOR STORM WATER OVERFLOW (Q100)
- ➡ MINOR STORM WATER FLOW (Q2)
- SPOT ELEVATION

Existing Conditions

Cultivated farmland
soil: Teller Silty Clay Loam (Soil Type "D")
Nearly level

Rational Method (Q=A/C)

Area =	20	Acres	
$L_r =$	25	Min	
(Drainage from northeast corner to southwest corner, 1500ft at 1 ft/sec)			
$C_u =$	0.3	$I_r =$ 2.93	$Q_u =$ 17.6 cfs
$C_{100} =$	0.65	$I_{100} =$ 5.97	$Q_{100} =$ 77.8 cfs

Developed Conditions

Industrial Site
70-80% impervious

Rational Method (Q=A/C)

Rational Method (USAC)		Acres	
Area =	20		
$L_r =$	15	Min	
(Drainage from northeast corner to southwest corner, 1500ft at 2 ft/sec)			
$C_u =$	0.68	$I_r =$	3.80
$C_{100} =$	0.80	$I_{100} =$	7.36
		$Q_u =$	51.7 cfs
		$Q_{100} =$	117.8 cfs

Pond Design

Area = 200'x550' = 2.5 Acres

Dry Detention Basin

Wear Outfall

Q = CL²

L = 5 ft

C = 3

Outfall Elevation = 1320.0

Designed High Water = 1322.8

Peak Outfall = 71 cfs (100-yr storm)

Elevation	Pond Area	Q _{out}
M.S.L.	Acres	cfs
1320	0	0.0
1321	0.5	15.0
1322	1.5	42.4
1322.8	2.22	71.0
1323	2.4	77.9
1324	2.5	120.0

Center Section 28,
T26S, R1E
of the 5th P.M.
Found Stone

DSMR: KCR OPER S&D SCALE: 1"=100.00'
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