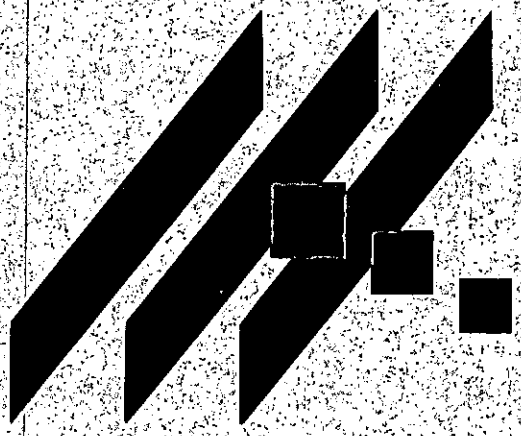
MKEC ENGINEERING CONSULTANTS, INC



PRELIMINARY DRAINAGE REPORT

FOR

REGENCY PARK THIRD ADDITION

Wichita, Sedgwick County, Kansas

April 2005

411 N. WEBB ROAD • WICHITA, KS 67206 • 316-684-9600 • FAX 316-684-5100

Preliminary Drainage Report for the Regency Park 3rd Addition Wichita, Sedgwick County, Kansas

Location

The subject property is in Wichita, Sedgwick County, Kansas. The site has been platted as Lot 9 of the Regency Park Addition. The proposed development is located north of K-96 and west of Greenwich Rd.

Pre-developed Conditions

Current Development
The site is currently vacant land zoned as light industrial.

Current Landform and Slope
Slopes in the site vary from 0.5% to 3.5%.

Current Drainage Conditions
The site currently drains into the K-96 right-of-way and into a pond designed for the developed Regency Park Addition.

Developed Conditions

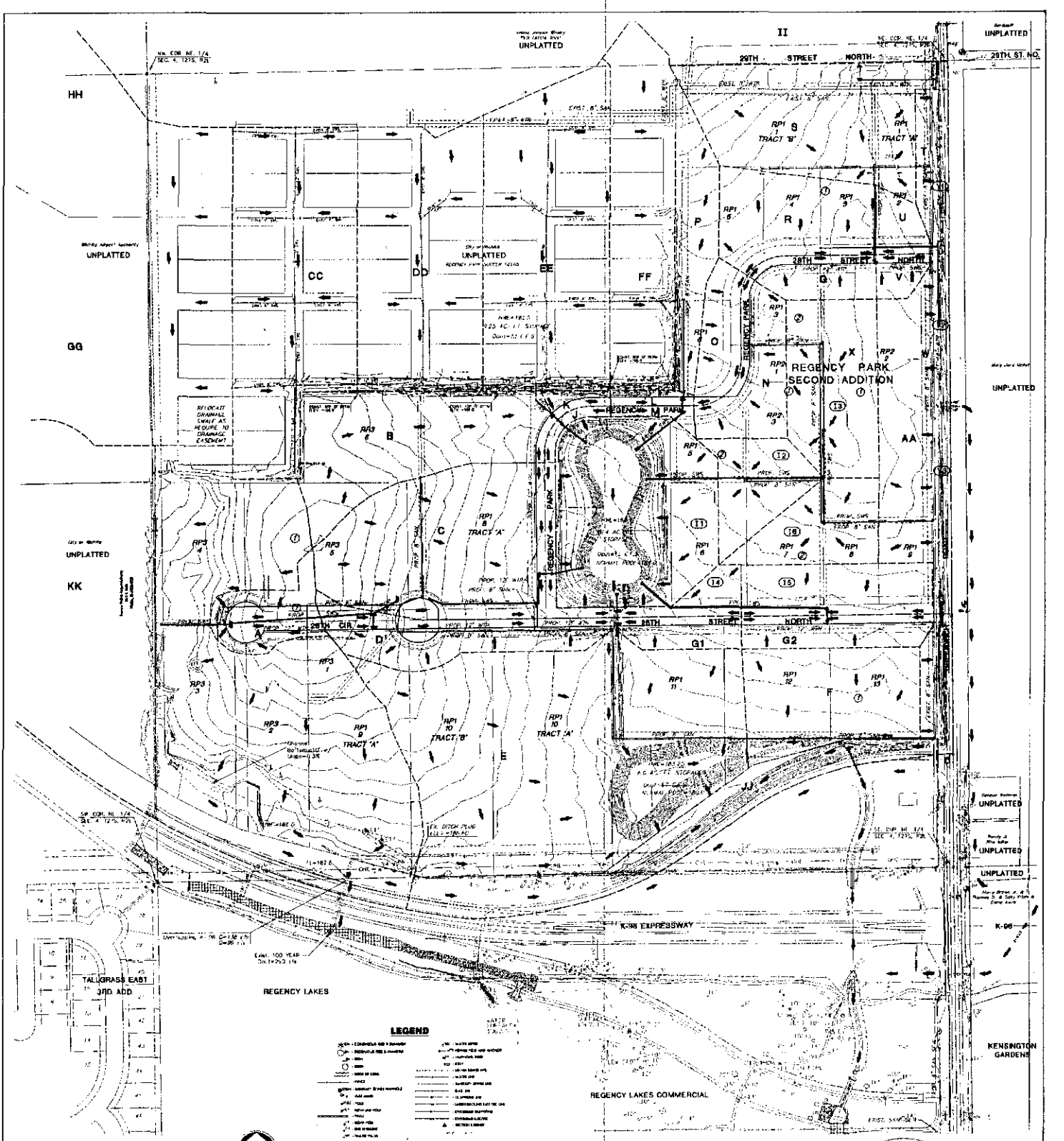
Proposed Development
Lot 9 in the Regency Park 1st & 2nd Addition will be divided into 5 separate lots. The land use for these lots will remain light industrial.

Proposed Landform and Slope
Final slopes in the development have not been determined, but the minimum will be 0.5% within street right-of-way.

Proposed Runoff Characteristics
The runoff from this site closely follows previously planned drainage paths. However a storm sewer system will be place to drain the Lot 5 Block 1 site and the extended 26th street to the south of the Lot 5 Block 1 into a drainage ditch to the west of the Regency Park Addition. The proposed utility locations as well as drainage areas for the site are shown on the drainage and utility plan, Appendix A. Pipe sizing calculations are shown in a spreadsheet in Appendix B.

Appendix A

Drainage & Utility Plan



REVISED: APRIL 2005 - REGENCY PARK 3RD
REVISED: JUNE 2004 - SWB TO LOT 1, BLOCK 1, REGENCY PARK 1ST
REVISED: JUNE 2004 - REGENCY PARK 2ND

DRAINAGE & UTILITY PLAN

REGENCY PARK 1ST, 2ND, & 3RD ADDITIONS

OWNER / DEVELOPER:

Appendix B

Pipe sizing Calculations

4/20/2005

COMPUTATION FORM
REGENCY PARK 3RD ADDITION
STORM DRAINAGE SYSTEM DESIGN
BY THE RATIONAL METHOD

X Preliminary
____ Final
Design

Drainage Area
Project No.
Design Storm 5 year
n = 0.013

Area ID	Area	Accum. Area	Runoff Coefficients								Rainfall Intensity				Storm Flows				Sys. Q	System Design				
																				Pipe	Slope		V des.	Cap.
	ac	ac	C2	C5	C10	C100	Tc2 min	Tc5 min	Tc10 min	Tc100 min	I2 in/hr	I5 in/hr	I10 in/hr	I100 in/hr	Q2 cfs	Q5 cfs	Q10 cfs	Q100 cfs	(5 yr stm) c.f.s.	Size Descr. (in)	min. %	des. %	f.p.s.	(all.) c.f.s.
Inlet 1	1.42	1.42	0.68	0.69	0.73	0.80	15	15	15	15	3.83	4.56	5.22	7.37	3.70	4.47	5.41	8.38	4.47	18	0.18	0.32	3.4	5.9
Inlet 2	1.05	1.05	0.68	0.69	0.73	0.80	15	15	15	15	3.83	4.56	5.22	7.37	2.74	3.31	4.00	6.19	3.31	18	0.10	0.32	3.4	5.9
Inlet 3	0.27	2.74	0.68	0.69	0.73	0.80	15	15	15	15	3.83	4.56	5.22	7.37	7.15	8.63	10.46	16.18	8.63	24	0.15	0.21	3.3	10.4
Inlet 4	1.27	4.01	0.68	0.69	0.73	0.80	15	15	15	15	3.83	4.56	5.22	7.37	10.46	12.63	15.30	23.67	12.63	30	0.09	0.21	3.8	18.8