

PROJECT: Wilson Farms Addition TO: Ms. Vicky Huang
PROJECT NO: 96186-154 City of Wichita - Engineering Dept.
DATE: March 12, 1997 455 N. Main - 7th Floor
Wichita, Kansas 67202

We are sending you the following items: ☒ Attached
☐ Under separate cover
☐ Via

☒ Prints ☐ Specifications ☐ Computer Disks
☐ Contracts ☐ Petitions ☐ Other

COMMENTS: Enclosed is the Drainage and Utility plan for Wilson Farms Addition with drainage calculations.

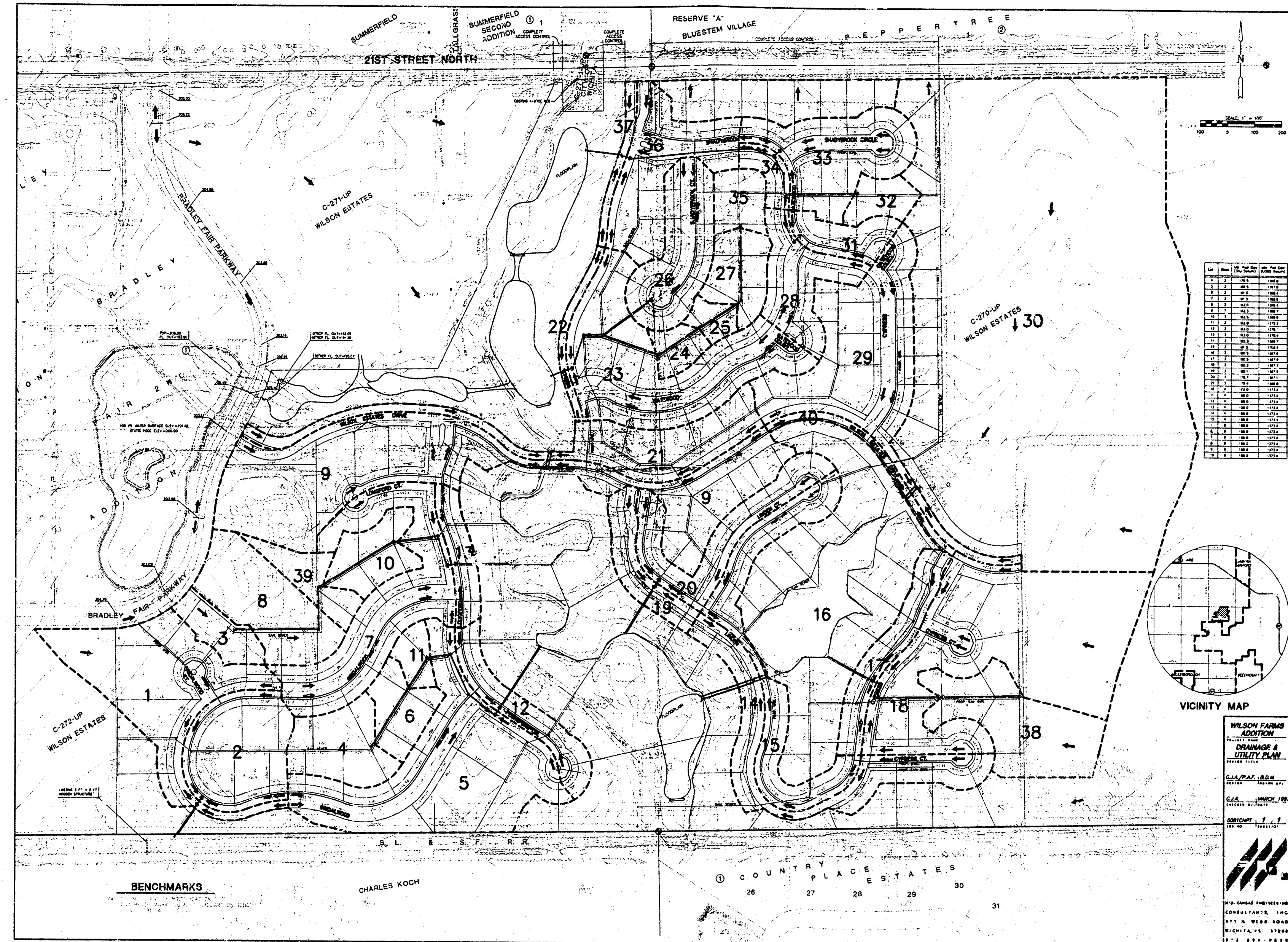
☐ For Your Approval ☐ As Requested
☒ For Your Use ☐ For Your Files
☐ Approved As Noted ☐ For Review and Comment

REMARKS:

Signed: *Greg Allison*
Greg Allison

GA/pf

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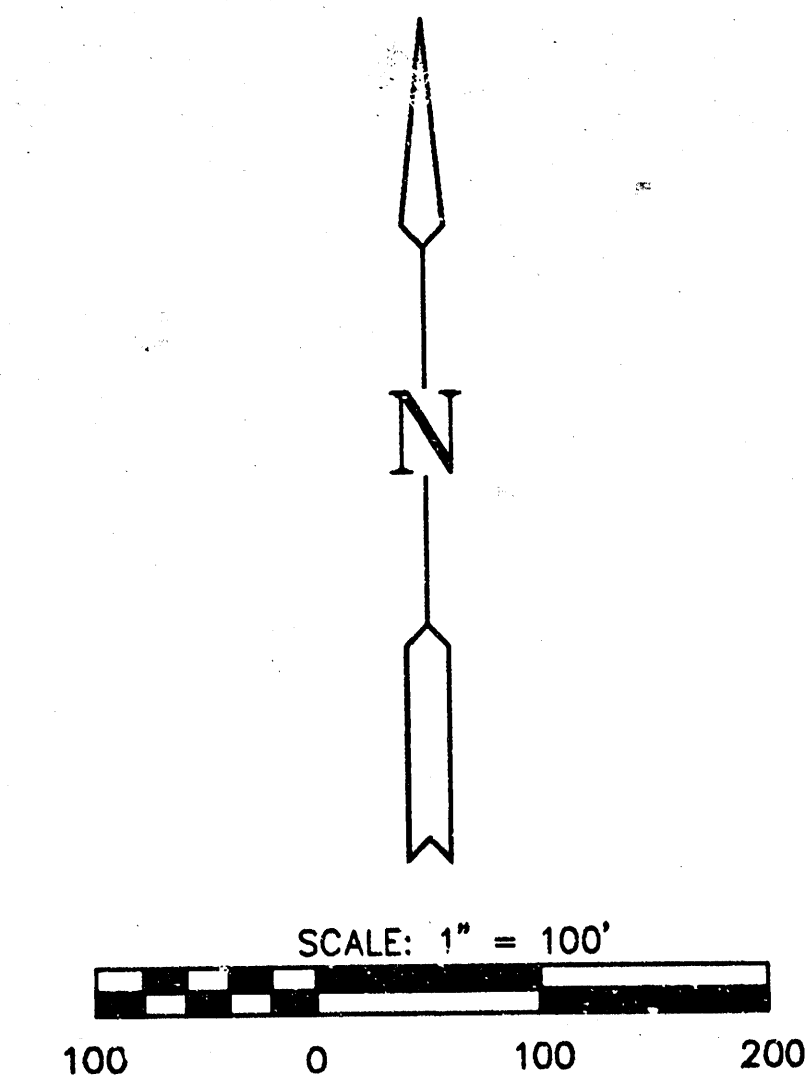
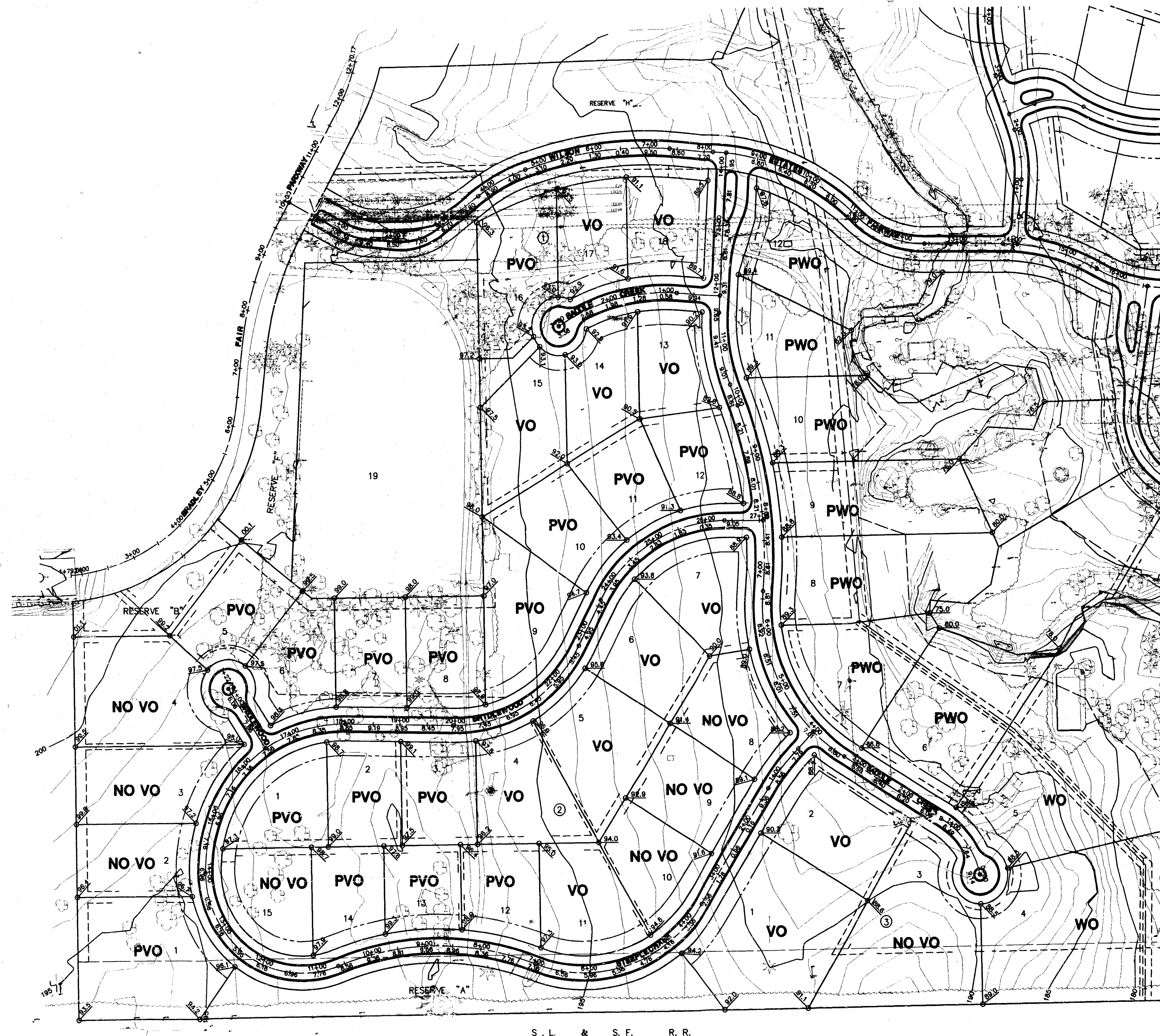


DRAINAGE ANALYSIS SUMMARY
WILSON FARMS ADDITION

Area ID**	Area ac	C2	C5	C100	Tc2 min	Tc5	Tc100 min	I2" in/hr	I5	I100" in/hr	Q2 cfs	Q5	Q100 cfs	Size ft	Size in	Min Slope %	COMMENTS
2	3.28	0.46	0.50	0.73	21	19	12	3.25	4.1	7.37	4.9	6.7	17.6	5	18	0.4	2 year design overflow to railroad ditch
1	5.17	0.46	0.50	0.73	29	27	18	2.72	3.43	6.84	6.5	8.9	25.8	5			overflow to railroad ditch
1+2	8.45	0.46	0.50	0.73	29	27	18	2.72	3.43	6.84	10.6	14.5	42.2	24		0.4	2 year design overflow to railroad ditch
3	0.99	0.46	0.50	0.73	21	19	12	3.25	4.1	7.37	1.5	2.0	5.3	area inlet	15	1.0	2 year design with 100 year design from area 8
8	2.99	0.46	0.50	0.73	30	28	17	2.67	3.37	7	3.7	5.0	15.3	area inlet			
3+8	3.98	0.46	0.50	0.73	30	28	17	2.67	3.37	7	4.9	6.7	20.3	24		1.0	100 year design from area 8 only
39	1.28	0.46	0.50	0.73	21	18	15	3.25	4.21	7.37	1.9	2.7	6.9	area inlet			
3+8+39	5.26	0.46	0.50	0.73	30	28	17	2.67	3.37	7	6.5	8.9	26.9	24		1.0	100 year design from area 8 only
10	1.49	0.45	0.50	0.73	17	16	15	3.61	4.56	7.37	2.5	3.4	8.0	area inlet			
3+8+39+10	6.75	0.46	0.50	0.73	30	28	17	2.67	3.37	7	8.3	11.1	34.5	24		1.0	100 year design from area 8 only
7	4.87	0.46	0.50	0.73	18	18	15	3.51	4.2	7.37	7.9	10.2	26.2				
3+8+39+10+7	11.52	0.46	0.50	0.73	30	28	17	2.67	3.37	7.00	14.3	19.6	59.4	2-10'	30	2.0	100 year design
13	1.01	0.39	0.41	0.57	15	15	15	3.83	4.56	7.37	1.5	1.9	4.2				
3+8+39+10+7+13	12.63	0.45	0.49	0.72	30	28	17	2.67	3.37	7	15.2	20.9	63.7	2-10'	42	2.0	100 year design
4	2.04	0.46	0.50	0.73	16	15	15	3.72	4.56	7.37	3.5	4.7	11.0	area inlet	15	1.25	2 year design
6+11	1.82	0.46	0.50	0.73	21	19	15	3.25	4.1	7.37	2.7	3.7	9.8	area inlet	15	0.8	2 year design
4+6+11	3.6	0.46	0.50	0.73	21	19	15	3.25	4.1	7.37	5.6	7.9	20.8	area inlet	15	1.2	2 year design
5	7.05	0.46	0.50	0.73	17	17	15	3.61	4.31	7.37	11.7	15.2	37.9				
4+6+11+5	19.91	0.46	0.50	0.73	21	19	15	3.25	4.1	7.37	16.3	22.4	58.7	2-10'	30	2.1	100 year design
12	1.68	0.44	0.47	0.68	15	15	15	3.83	4.56	7.37	2.8	3.6	8.4				
4+6+11+5+12	12.59	0.46	0.50	0.72	21	19	15	3.25	4.1	7.37	18.8	25.8	66.8	2-10'	36	2.5	100 year design
20	2.45	0.46	0.50	0.73	18	17	15	3.51	4.31	7.37	4.0	5.3	13.2	10	24	1.5	100 year design
19	1.28	0.44	0.48	0.69	15	15	15	3.83	4.56	7.37	2.1	2.8	6.4	5'			

DRAINAGE ANALYSIS SUMMARY
WILSON FARMS ADDITION

Area ID**	Area ac	C2	C5	C100	Tc2 min	Tc5	Tc100 min	I2" in/hr	I5	I100" in/hr	Q2 cfs	Q5	Q100 cfs	Size ft	Size in	Min Slope %	COMMENTS
20+19	3.72	0.45	0.49	0.72	18	17	15	3.51	4.31	7.37	5.9	7.9	19.7		24	1.1	100 year design
35	0.94	0.46	0.50	0.73	16	15	15	3.72	4.56	7.37	1.6	2.1	5.1	area inlet	15	0.4	2 year design
27	1.40	0.46	0.50	0.73	19	17	15	3.42	4.31	7.37	2.2	3.0	7.5	area inlet			
35+27	2.34	0.46	0.50	0.73	19	17	15	3.42	4.31	7.37	3.7	5.0	12.6		15	1.5	2 year design
25	0.46	0.46	0.50	0.73	15	15	15	3.83	4.56	7.37	0.8	1.0	2.5	area inlet			
35+27+25	2.80	0.46	0.50	0.73	19	17	15	3.42	4.31	7.37	4.4	6.0	12.1		15	1.0	2 year design
24	0.63	0.46	0.50	0.73	15	15	15	3.83	4.56	7.37	1.1	1.4	3.4	area inlet			
24+35+27+25	3.43	0.46	0.50	0.74	19	17	15	3.42	4.31	7.37	5.4	7.4	18.7		15	2.0	2 year design
26	2.69	0.46	0.50	0.73	15	15	15	3.83	4.56	7.37	4.7	6.1	14.5	10	18	2.0	2 year design
26+24+35+27+25	6.12	0.46	0.50	0.73	19	17	15	3.83	4.56	7.37	10.8	14.0	32.9		15	2.0	100 year design from area 26
23	5.78	0.45	0.49	0.70	19	18	15	3.42	4.2	7.37	8.9	11.9	29.6	2-10'			2 year design
23+26+24+35+27+25	11.90	0.46	0.50	0.72	19	18	15	3.42	4.2	7.37	18.7	25.0	63.1		30	2.5	100 year design
22	0.44	0.67	0.68	0.93	15	15	15	3.83	4.56	7.37	1.5	1.8	3.0	2-10'			100 year design
22+23+26+24+35+27+25	12.34	0.45	0.49	0.71	18	18	15	3.42	4.2	7.37	19.0	25.4	64.6		36	2.5	100 year design
31	1.08	0.46	0.50	0.73	15	15	15	3.83	4.56	7.37	1.9	2.5	5.6	5	18	0.4	100 year design
28	2.11	0.46	0.50	0.73	15	15	15	3.83	4.56	7.37	3.7	4.8	11.4	10			
28+31	3.19	0.46	0.50	0.73	15	15	15	3.83	4.56	7.37	5.6	7.3	17.2		30	0.4	100 year design
32	0.75	0.46	0.50	0.73	16	15	15	3.72	4.56	7.37	1.3	1.7	4.0	area inlet	15	0.6	2 year design
12+28+31	3.94	0.46	0.50	0.73	16	15	15	3.72	4.56	7.37	6.7	9.0	21.2		24	1.4	
33	3.39	0.46	0.50	0.73	15	15	15	3.83	4.56	7.37	6.0	7.7	18.2	15	24	1.0	100 year design
34	0.99	0.46	0.50	0.73	15	15	15	3.83	4.56	7.37	1.0	1.3	3.2	5			100 year design
34+33+32+28+31	7.92	0.46	0.50	0.73	16	15	15	3.72	4.56	7.37	13.6	18.1	42.6		30	1.4	100 yr design
36	3.13	0.44	0.48	0.68	17	16	15	3.61	4.43	7.37	5.0	6.7	15.7	15			100 year design



APPROVED
DRAINAGE PLAN

WILSON ESTATES ADDITION
PROJECT NAME

GRADING
SHEET TITLE

GJA DESIGN BY:	KKL/GJR DRAWN BY:	GJA CHECKED BY:
JUL 1997 DATE	GRADING.DWG JOB NO.	1 / 1 SHEET OF

MID-KANSAS ENGINEERING CONSULTANTS, INC.
411 N. WEBB ROAD
WICHITA, KS. 67206
316-684-9600