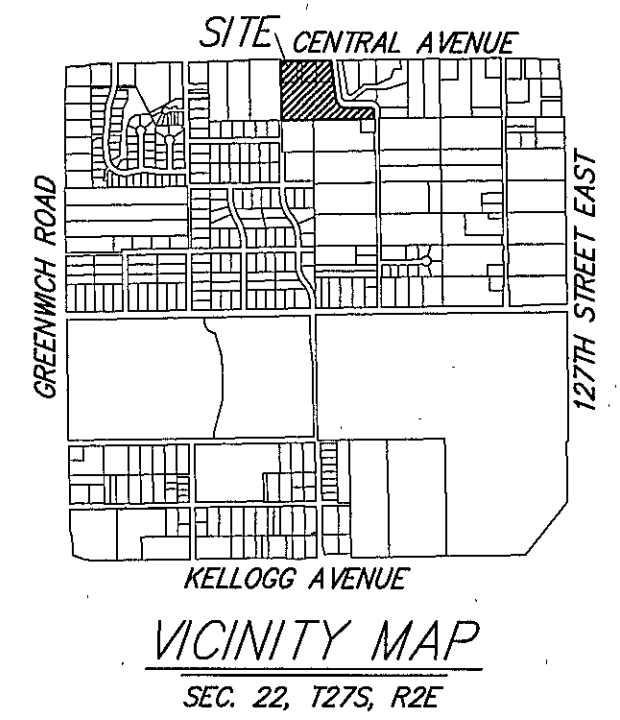
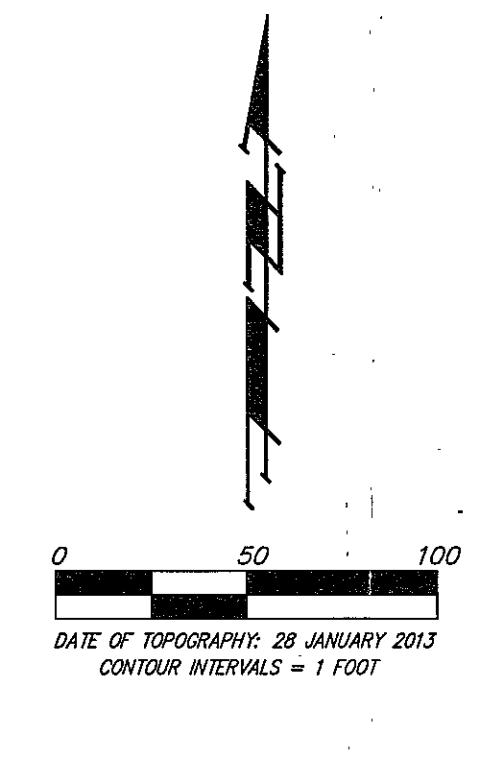
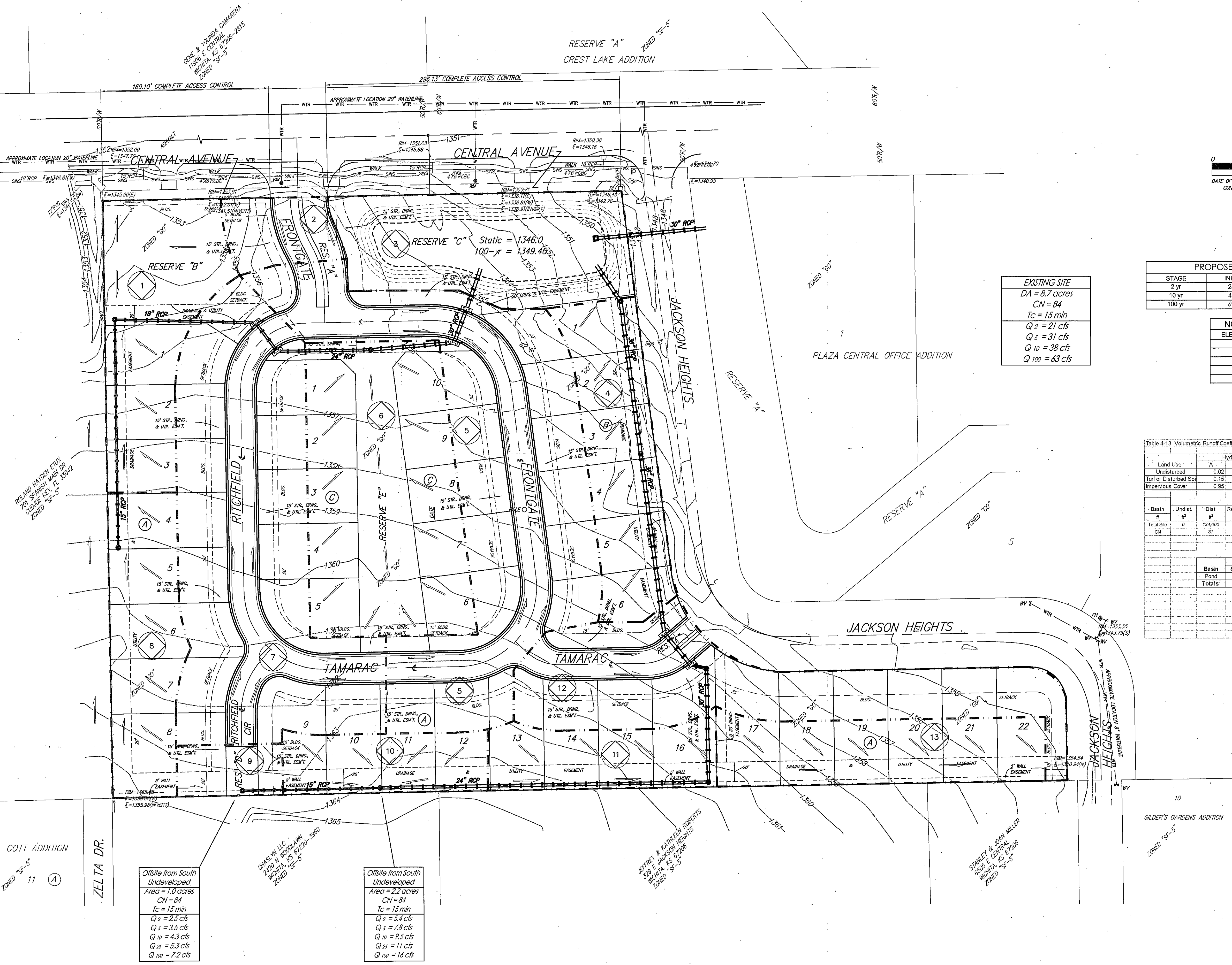


DRAINAGE PLAN
FRONTGATE ADDITION
 WICHITA, SEDGWICK COUNTY, KANSAS



EXISTING SITE

DA = 8.7 acres
 CN = 84
 Tc = 15 min
 Q 2 = 21 cfs
 Q 5 = 31 cfs
 Q 10 = 38 cfs
 Q 100 = 63 cfs

PROPOSED POND (Bottom = 1346.0)

STAGE	INFLOW	OUTFLOW	ELEVATION
2 yr	28 cfs	14 cfs	1348.7
10 yr	44 cfs	28 cfs	1347.1
100 yr	67 cfs	43 cfs	1347.4

NORTH WEST BASIN

ELEVATION	AREA (sq ft)
1348	12000
1347	14000
1346	16000
1345	18000
1350	21000

The pond outfall will consist of a 30" RCP at flowline elevation 1342.0. The RCP will extend under Jackson Heights and discharge directly into the adjacent channel. Channel protection will be provided via a 2" office of static elevation with a larger storm overflow via a box structure (if) at elevation 1348.2.

Table 6-13 Volumetric Runoff Coefficients by Land Use and Hydrologic Soil Group

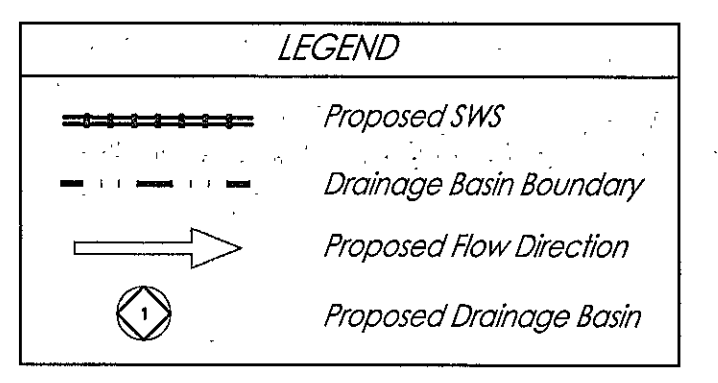
Land Use	Hydrologic Soil Group A				Hydrologic Soil Group B				Hydrologic Soil Group C				Hydrologic Soil Group D			
	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D
Undisturbed	0.02	0.03	0.04	0.05	0.02	0.03	0.04	0.05	0.02	0.03	0.04	0.05	0.02	0.03	0.04	0.05
Turf or Disturbed Soil	0.10	0.30	0.20	0.25	0.20	0.30	0.20	0.25	0.20	0.30	0.20	0.25	0.20	0.30	0.20	0.25
Impervious Cover	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95

Developed

Intensity	2yr	10yr	100yr
Rational C	3.8	5.19	7.36
Rational C	0.82	0.72	0.82

Basin ID

Basin ID	Area (acres)	Developed Flowrates		
		2yr (cfs)	10yr (cfs)	100yr (cfs)
1	0.62	1.5	2.3	3.7
2	0.17	0.4	0.6	1.0
3	0.70	1.6	2.8	4.2
4	0.53	1.2	2.0	3.2
5	1.60	3.5	5.8	9.1
6	1.00	2.4	3.7	6.0
7	1.48	3.5	5.5	8.9
8	0.48	1.2	1.8	3.0
9	0.13	0.3	0.5	0.8
10	0.29	0.7	1.1	1.8
11	0.33	0.8	1.2	2.0
12	0.91	2.1	3.4	5.5
13	0.50	1.2	1.9	3.0
TOTAL	8.7	20.4	32.3	52.2



NOTES: There is no FEMA SFHA located on this property as of this date per FEMA FIRM Panel 375 of 700, for Wichita, Sedgwick County, Kansas; effective February 2, 2007.

The Internal Storm Water Sewer will drain the developed lots/streets into the proposed pond system. SWS has been preliminarily sized for this plan and will be finalized upon SWD and street engineering plans submitted.

DRAINAGE PLAN
FRONTGATE ADDITION

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