

# Legacy Park Wilson Estates 3<sup>rd</sup> Addition

## Wichita, Sedgwick County, Kansas

### Location

---

The subject property is in Wichita, Sedgwick County, Kansas. The proposed development is located south of 21st Street North and west of Webb Road. The site is bordered by Wilson Estates Parkway to the south, Brighton Courts Addition to the west, Legacy Park Wilson Estates to the east, and Legacy Park Wilson Estates 2<sup>nd</sup> Addition to the north. The site was previously platted as a portion of the Legacy Park Wilson Estates Addition. The site lies in the Northeast Quarter of Section 8, Township 27 South, Range 2 East. The dimensions of the property are approximately 700 feet north to south and 300 feet east to west. The area of the plat is 4.9 acres. The site is shown on the Quadrangle Map (Appendix A).

### Soils

---

According to the NRCS (SCS) Sedgwick County Soil Survey in Appendix B, the soils on the site vary. Soils found on the site are shown in the following table. The Hydrological Soil Group (HSG) used to select runoff coefficients is "D".

Table 1. Soil types on site.			
	Symbol	Slope	Hydraulic Soil Group (HSG)
Tabler Silty Loam	Ta	-	D
Irwin Silty Clay Loam	la	1-3%	D

### Pre-Project Conditions

---

#### *Pre-Project Development*

The site is an undeveloped, vacant lot under pre-project conditions. The site was previously platted and was intended for attached four-plex housing units.

#### *Pre-Project Landform and Slope*

Currently the elevation on the site varies from 203 to 196. The site drains from east to west into the Brighton Courts Addition.

#### *Pre-Project Drainage Conditions*

According to the Federal Emergency Management Agency (FEMA), the site is in Zone C – areas of minimal flooding. The nearest Zone A (area of 100-year flooding) is approximately 1000 feet southwest of the site according to the Flood Insurance Rate Map (FIRM) and Flood Boundary and Floodway Map (FBFM) (Appendix C).

#### *Pre-Project Runoff Characteristics*

The site drains into storm sewer constructed with the Brighton Courts Addition. The site is included in area "G" on the Brighton Courts Addition Drainage and Utility Plan. This area is 7.9 acres, contains portions of Legacy Park Wilson Estates and Legacy Park Wilson Estates 2<sup>nd</sup> and is shown on the Drainage and Utility Plan (Appendix D). This basin was modeled using Soil Group D and a land use consistent with Multi-Family, Multi-Unit, attached units with an

impervious area of 65%. The peak flow for this area is 48.6 cfs in the 100-year design event. The following table indicates the design flows calculated with for the Brighton Courts Addition.

Table 2. Brighton Courts Runoff.				
	2-Year	5-Year	10-Year	100-Year
Rational Coefficient (C)	0.64	0.68	0.73	0.83
Time of Concentration (Tc) (min)	17	16	15	15
Brighton Courts "G" (cfs)	18.3	24.6	30.3	48.6

## Post-Project Conditions

---

### ***Post-Project Development***

The site will develop as 12 residential lots for duplex multi-family dwellings.

### ***Post-Project Landform and Slope***

Final slopes in the development have not been determined, but the minimum will be 0.5% within street right-of-way and 1-2% in backyards. The preliminary grading is shown in the Lot Grading Plan (Appendix E).

### ***Post-Project Runoff Characteristics***

The site will continue to drain to the Brighton Courts Addition. The site will remain Multi-Family, Multi-Unit, attached units as modeled in the Brighton Courts Addition. Post-project runoff from the site will equal what was calculated in the Brighton Courts Addition. Both Brighton Courts Addition and Legacy Park Wilson Estates 3<sup>rd</sup> Addition drain into Wilson Farms Addition where detention ponds were designed for the development.

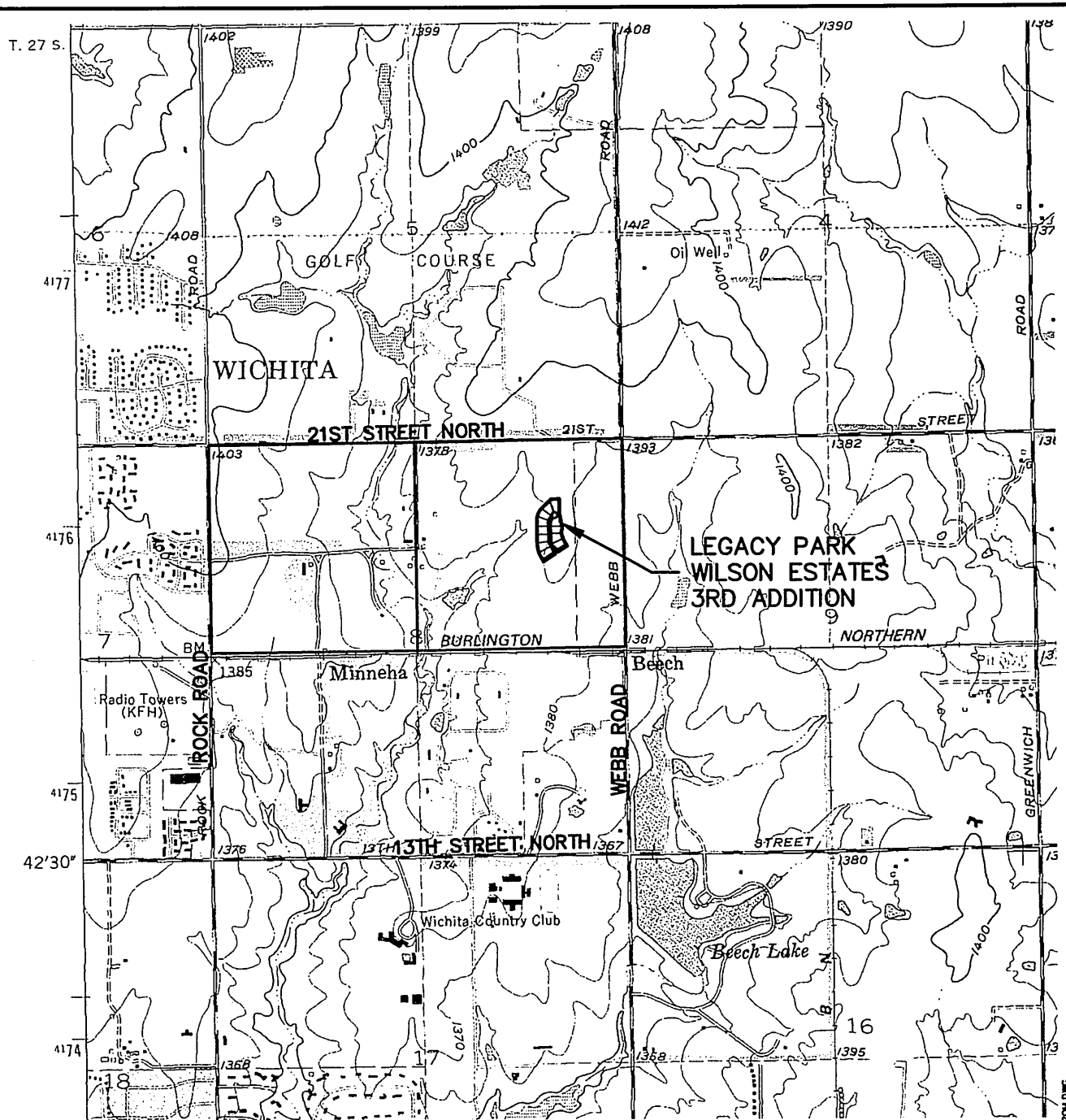
The site was divided into smaller drainage areas as shown in the Drainage and Utility Plan (Appendix D). These smaller drainage areas were used to analyze the storm water sewer system (SWS). The system was modeled using Hydraflow Storm Sewers by Intellisolve (Appendix F). The system modeled with Brighton Courts Addition was revised to include the proposed pipes for this development. The system is designed to handle the 2-year design event in all areas and larger events

## Summary

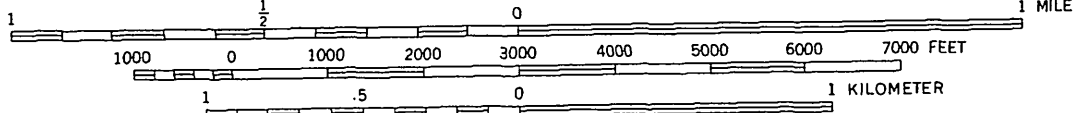
---

Legacy Park Wilson Estates 3<sup>rd</sup> Addition will develop as 12 multi-family residential lots. The surrounding areas planned for this site to be developed as attached, multi-family residential lots. The land use will not change from what was planned during the development of Brighton Courts and Wilson Farms Additions. Runoff from the site will not increase from what was planned with surrounding development.

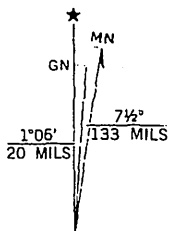
Appendix A  
Quadrangle Map



6559 II SW  
SCALE 1:24 000



CONTOUR INTERVAL 10 FEET  
NATIONAL GEODETIC VERTICAL DATUM OF 1929



UTM GRID AND 1982 MAGNETIC NORTH  
DECLINATION AT CENTER OF SHEET



**MKEC**  
ENGINEERING  
CONSULTANTS  
411 N. WEBB ROAD  
WICHITA, KS. 67206  
316 - 684 - 9400

**LEGACY PARK  
WILSON ESTATES 3RD ADDITION**  
PROJECT NAME

**ANDOVER, KANSAS QUADRANGLE**  
SHEET TITLE

<b>KLA</b> DESIGN BY.	<b>JFL</b> DRAWN BY.	<b>GA</b> CHECKED BY.
--------------------------	-------------------------	--------------------------

<b>JANUARY 2008</b> DATE	<b>05752</b> JOB NO.	<b>1 / 1</b> SHEET/OF
-----------------------------	-------------------------	--------------------------

S:\Data\05752.DWG\PROJ\ORING\0575204.DWG

## Appendix B

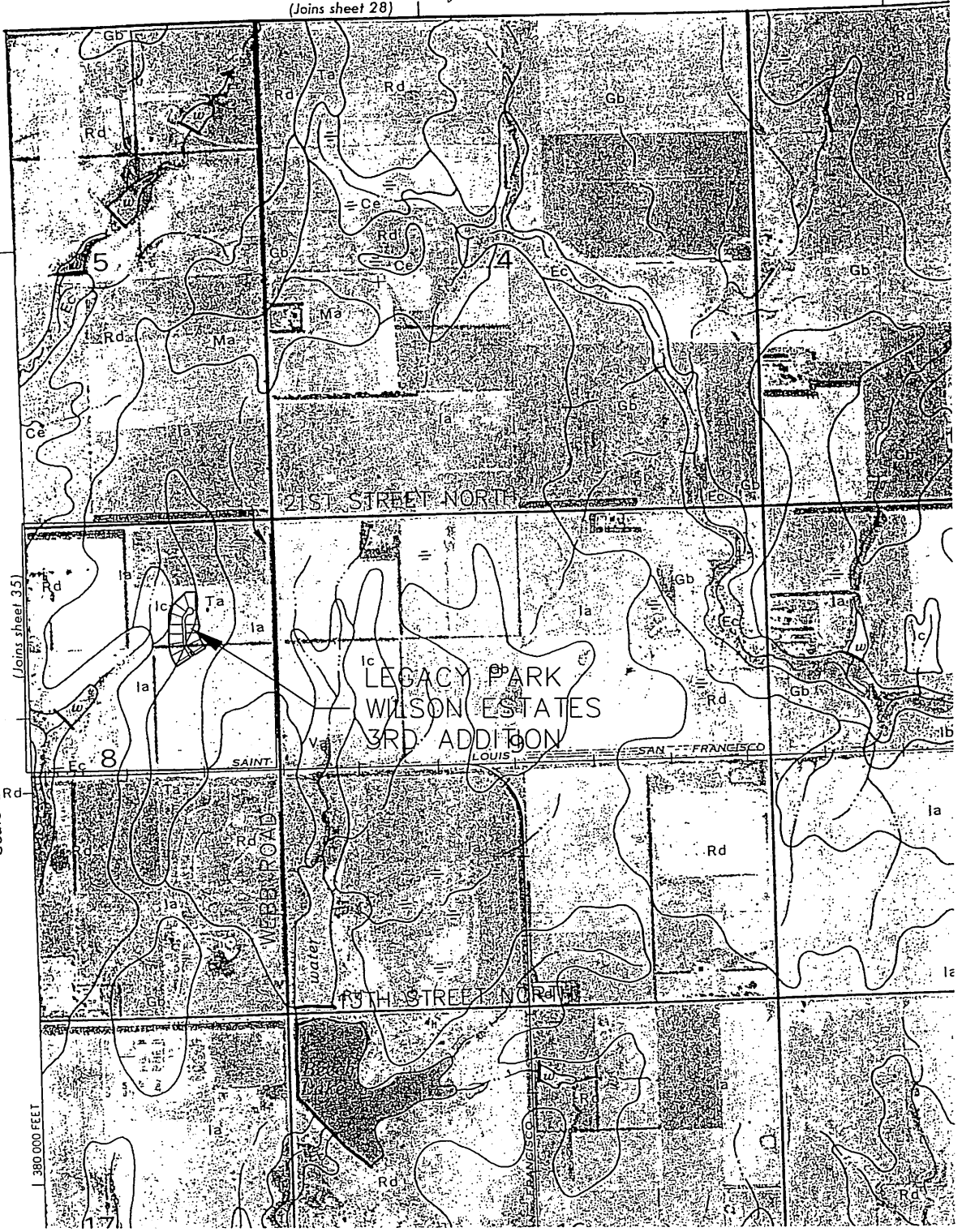
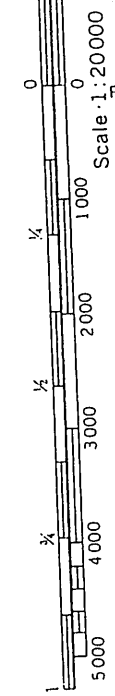
### Soil Survey

36

(Joins sheet 28)



1 Mile  
5000 Feet



**MKEC**  
ENGINEERING  
CONSULTANTS  
411 N. WEBB ROAD  
WICHITA, KS. 67208  
316 - 684 - 9600

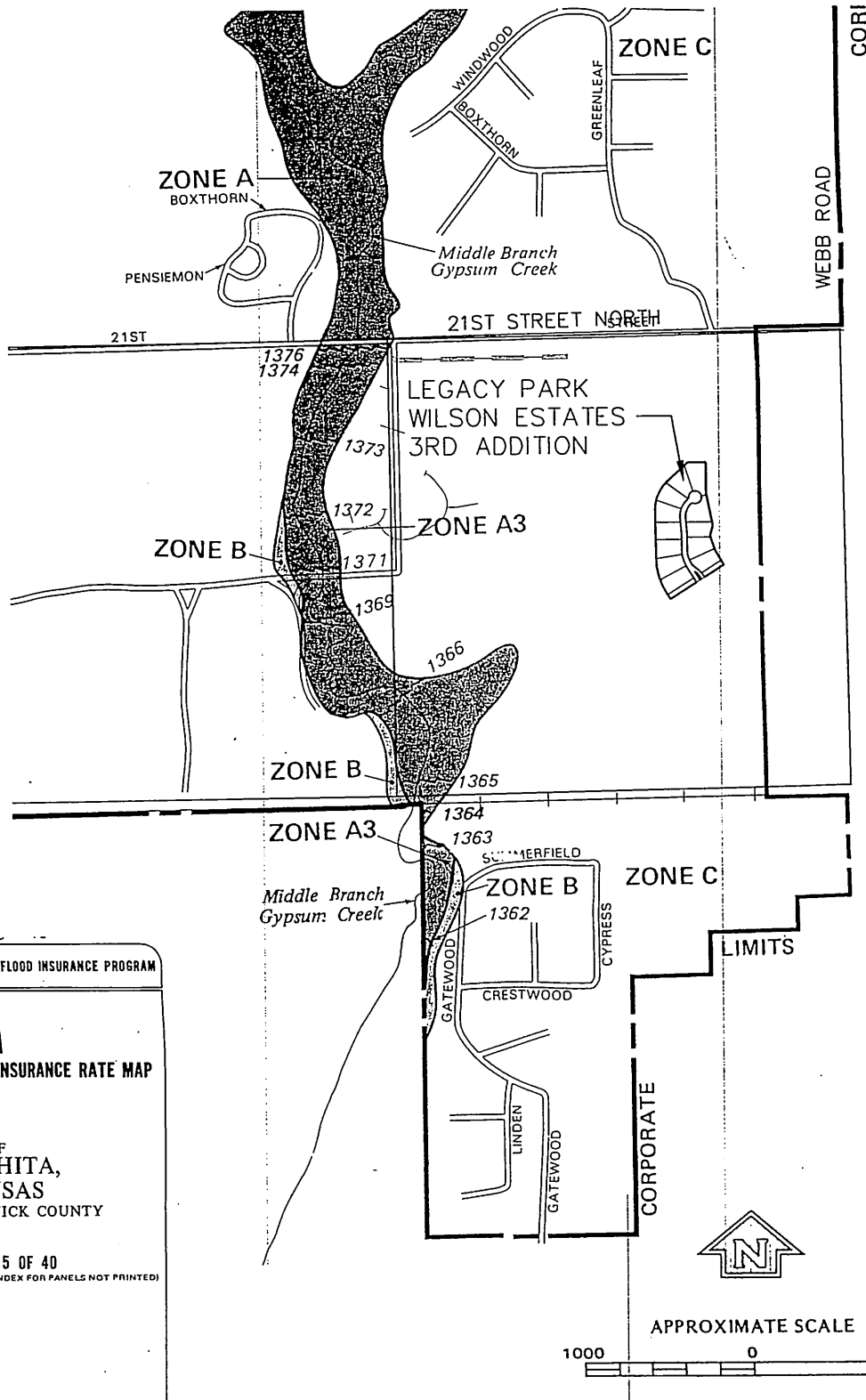
**LEGACY PARK  
WILSON ESTATES 3RD ADDITION**

PROJECT NAME  
**SOIL SURVEY  
SEDGWICK COUNTY, KANSAS**

SHEET TITLE  
KLA DESIGN BY. JFL DRAWN BY. GJA CHECKED BY.  
JANUARY 2006 DATE 05752 JOB NO. 1 / 1 SHEET OF

## Appendix C

Flood Insurance Rate Map (FIRM) and  
Flood Boundary and Floodway Map (FBFM)



NATIONAL FLOOD INSURANCE PROGRAM


**FIRM**  
FLOOD INSURANCE RATE MAP

CITY OF  
WICHITA,  
KANSAS  
SEDGWICK COUNTY


PANEL 15 OF 40  
(SEE MAP INDEX FOR PANELS NOT PRINTED)

COMMUNITY-PANEL NUMBER  
200328 0015-B?

EFFECTIVE DATE:  
MAY 15, 1986



Federal Emergency Management Agency



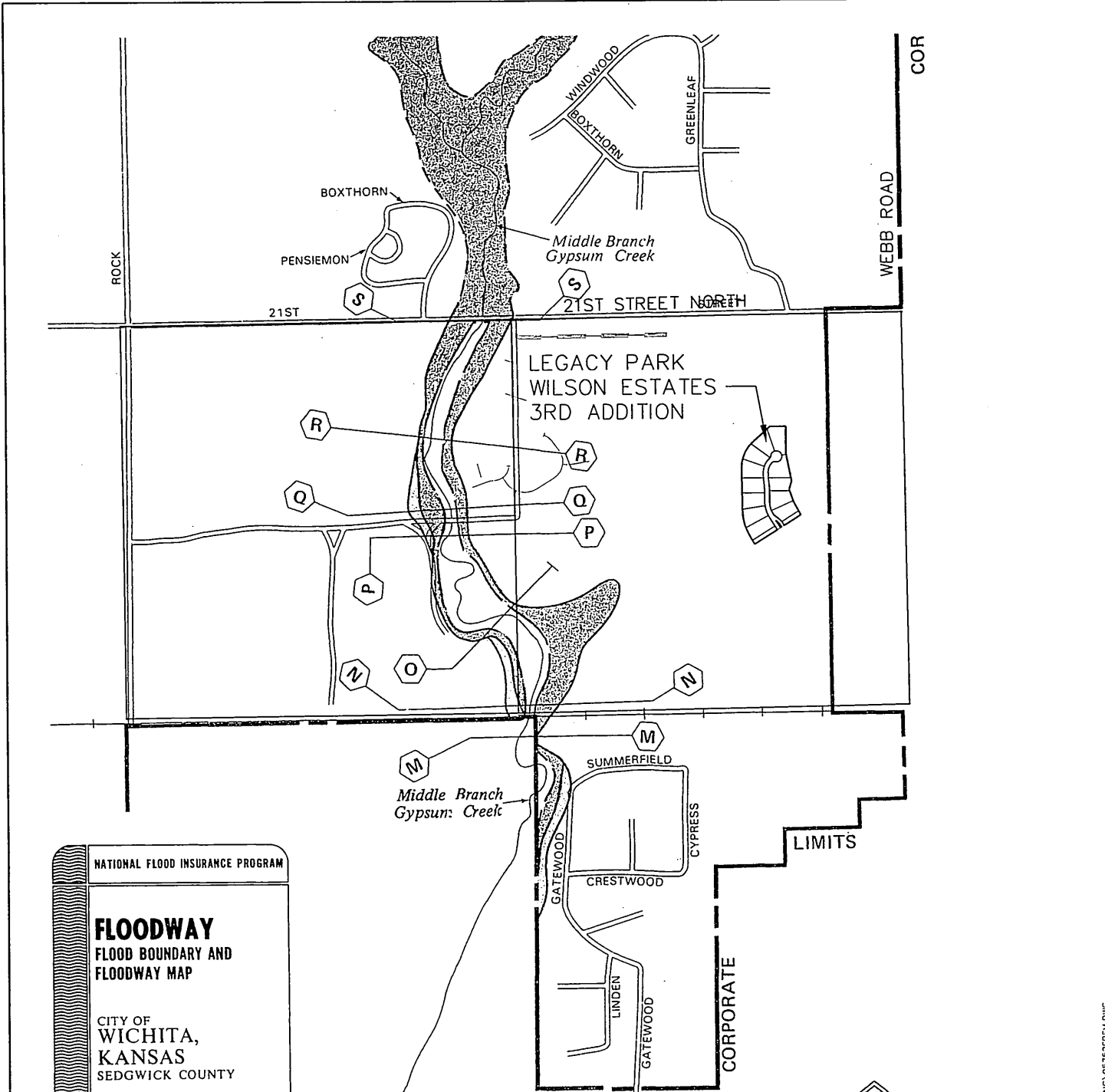
**MKEC**  
ENGINEERING  
CONSULTANTS  
411 N. WEBB ROAD  
WICHITA, KS. 67206  
316 - 684 - 9600

**LEGACY PARK  
WILSON ESTATES 3RD ADDITION**  
PROJECT NAME

**FLOOD INSURANCE RATE MAP  
WICHITA, KANSAS - PANEL 15 OF 40**  
SHEET TITLE

KLA DESIGN BY:	JFL DRAWN BY:	GJA CHECKED BY:
JANUARY 2006 DATE	05752 JOB NO.	1 / 1 SHEET/OF

J:\CIVIL\05752\DWG\PROP\DRNC\05752FIRM.DWG



NATIONAL FLOOD INSURANCE PROGRAM


**FLOODWAY**  
FLOOD BOUNDARY AND  
FLOODWAY MAP

CITY OF  
WICHITA,  
KANSAS  
SEDGWICK COUNTY

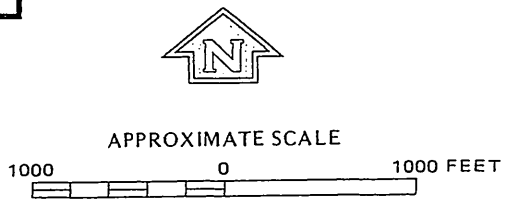

PANEL 15 OF 40  
(SEE MAP INDEX FOR PANELS NOT PRINTED)

COMMUNITY-PANEL NUMBER  
200328 0015

EFFECTIVE DATE:  
MAY 15, 1986



Federal Emergency Management Agency

**MKEC**  
ENGINEERING  
CONSULTANTS  
411 N. WEBB ROAD  
WICHITA, KS. 67206  
316 - 684 - 9600

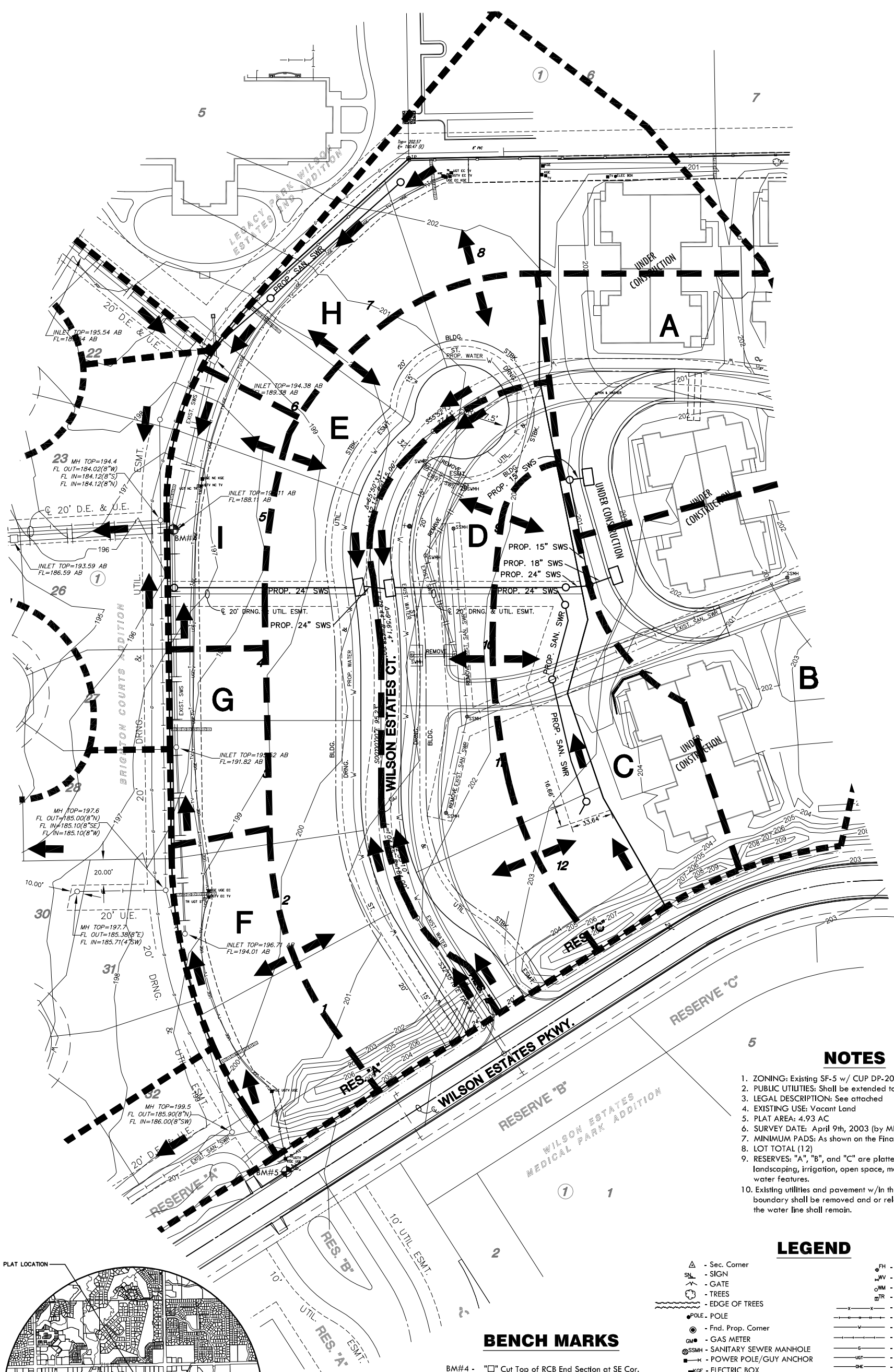
**LEGACY PARK  
WILSON ESTATES 3RD ADDITION**  
PROJECT NAME

**FLOOD BOUNDARY AND FLOODWAY MAP  
WICHITA, KANSAS - PANEL 15 OF 40**  
SHEET TITLE

KLA DESIGN BY.	JFL DRAWN BY.	GJA CHECKED BY.
JANUARY 2006 DATE	05752 JOB NO.	1 / 1 SHEET/OF

J:\CIVIL\05752\DWG\PROP\DRNC\05752FBFM.DWG

**Appendix D**  
**Drainage and Utility Plan**



**NOTES**

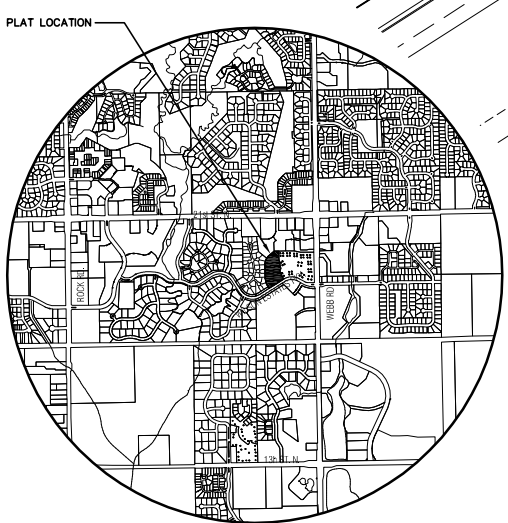
1. ZONING: Existing SF-5 w/ CUP DP-201
2. PUBLIC UTILITIES: Shall be extended to site by petitions
3. LEGAL DESCRIPTION: See attached
4. EXISTING USE: Vacant Land
5. PLAT AREA: 4.93 AC
6. SURVEY DATE: April 9th, 2003 (by MKEC)
7. MINIMUM PADS: As shown on the Final Drainage Plan
8. LOT TOTAL (12)
9. RESERVES: "A", "B", and "C" are platted for sidewalks, landscaping, irrigation, open space, monuments, and water features.
10. Existing utilities and pavement w/in the platted boundary shall be removed and or relocated, however the water line shall remain.

**LEGEND**

- |                                     |                       |
|-------------------------------------|-----------------------|
| △ - Sec. Corner                     | △ - FIRE HYDRANT      |
| SL - SIGN                           | WV - WATER VALVE      |
| ⊗ - GATE                            | WM - WATER METER      |
| ⊙ - TREES                           | TR - TELEPHONE RISER  |
| - EDGE OF TREES                     | - FENCE               |
| ● - POLE                            | - STORM SEWER PIPE    |
| ○ - Fnd. Prop. Corner               | - WATER LINE          |
| GM - GAS METER                      | - SANITARY SEWER LINE |
| SSMH - SANITARY SEWER MANHOLE       | - GAS LINE            |
| ⊕ - POWER POLE/GUY ANCHOR           | - TELEPHONE LINE      |
| ⊠ - ELECTRIC BOX                    | - OVERHEAD ELECTRIC   |
| --- BRIGHTON CTS. DRAINAGE BOUNDARY |                       |
| --- PROPOSED DRAINAGE BOUNDARY      |                       |
| A - DRAINAGE AREA LABEL             |                       |
| ← - FLOW ARROW                      |                       |

**BENCH MARKS**

- BM#4 - "□" Cut Top of RCB End Section at SE Cor. of Lot 23, Blk. 1, Brighton Courts Addition. Elev.= 197.07
- BM#5 - "□" Cut Top of Curb on the N. side of Wilson Estates Parkway at SE. Cor. of Brighton Courts Addition. Elev.= 197.07



**VICINITY MAP**



J:\CIVIL\05752.DWG DRAINAGE 057520.DWG

**LEGACY PARK WILSON ESTATES 3RD ADDITION**  
PROJECT NAME

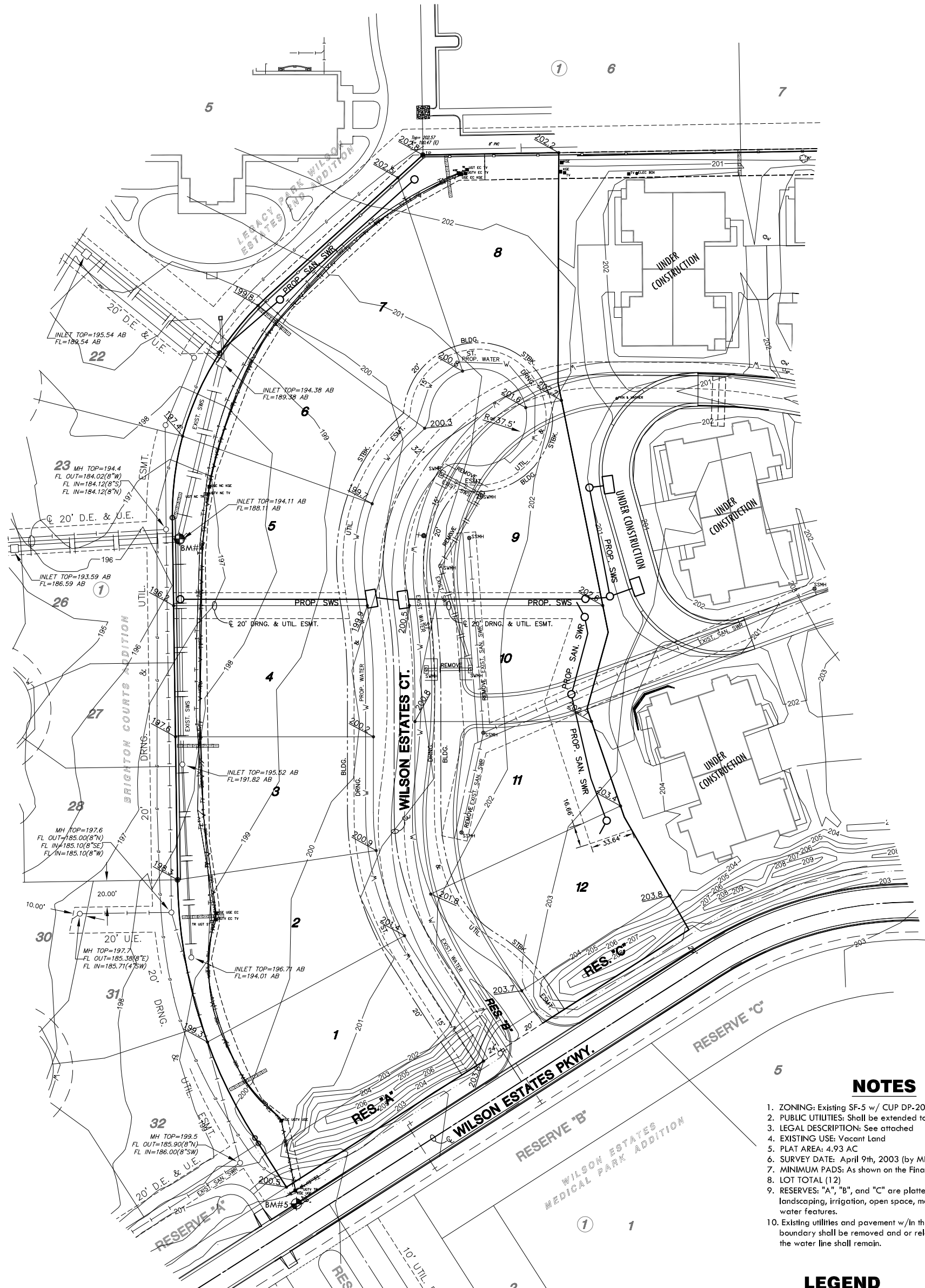
---

**DRAINAGE & UTILITY PLAN**  
SHEET TITLE

---

KLA DESIGN BY:	JWC DRAWN BY:	GJA CHECKED BY:
JANUARY 2006 DATE	05752 JOB NO.	1 / 1 SHEET/OF

**Appendix E**  
**Lot Grading Plan**



**NOTES**

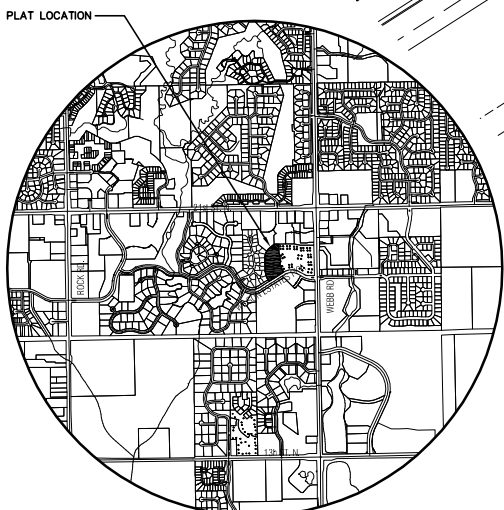
1. ZONING: Existing SF-5 w/ CUP DP-201
2. PUBLIC UTILITIES: Shall be extended to site by petitions
3. LEGAL DESCRIPTION: See attached
4. EXISTING USE: Vacant Land
5. PLAT AREA: 4.93 AC
6. SURVEY DATE: April 9th, 2003 (by MKEC)
7. MINIMUM PADS: As shown on the Final Drainage Plan
8. LOT TOTAL (12)
9. RESERVES: "A", "B", and "C" are platted for sidewalks, landscaping, irrigation, open space, monuments, and water features.
10. Existing utilities and pavement w/in the platted boundary shall be removed and or relocated, however the water line shall remain.

**LEGEND**

- |                               |                               |
|-------------------------------|-------------------------------|
| △ - Sec. Corner               | △ - FIRE HYDRANT              |
| SL - SIGN                     | WV - WATER VALVE              |
| ⊕ - GATE                      | WM - WATER METER              |
| ⊙ - TREES                     | TR - TELEPHONE RISER          |
| - - - - - EDGE OF TREES       | - - - - - FENCE               |
| ● - POLE - POLE               | - - - - - STORM SEWER PIPE    |
| ⊙ - Fnd. Prop. Corner         | - - - - - WATER LINE          |
| GM - GAS METER                | - - - - - SANITARY SEWER LINE |
| SSMH - SANITARY SEWER MANHOLE | - - - - - GAS LINE            |
| ⊕ - POWER POLE/GUY ANCHOR     | - - - - - TELEPHONE LINE      |
| ⊕ - ELECTRIC BOX              | - - - - - OVERHEAD ELECTRIC   |

**BENCH MARKS**

- BM#4 - "□" Cut Top of RCB End Section at SE Cor. of Lot 23, Blk. 1, Brighton Courts Addition. Elev.= 197.07
- BM#5 - "□" Cut Top of Curb on the N. side of Wilson Estates Parkway at SE. Cor. of Brighton Courts Addition. Elev.= 197.07



**VICINITY MAP**



**MKEC**  
ENGINEERING  
CONSULTANTS  
411 N. WEBB ROAD  
WICHITA, KS. 67206  
316 - 684 - 9600

**LEGACY PARK WILSON ESTATES 3RD ADDITION**  
PROJECT NAME

---

**PRELIMINARY LOT GRADING PLAN**  
SHEET TITLE

---

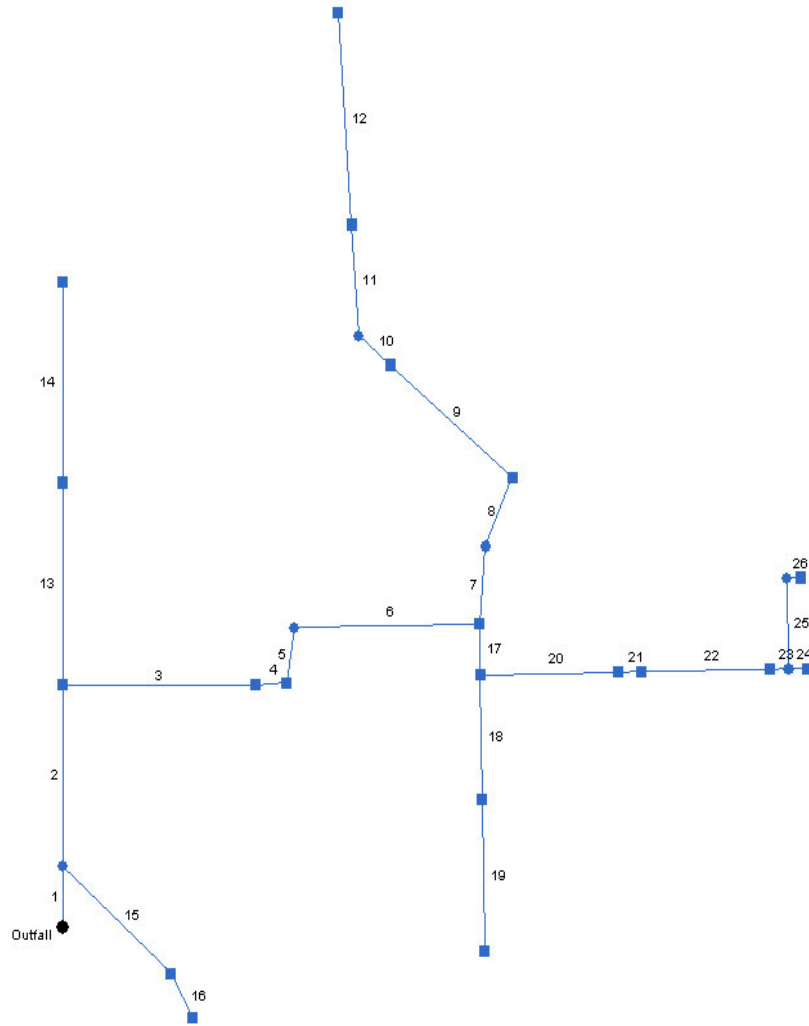
DESIGN BY: <b>KLA</b>	DRAWN BY: <b>JWC</b>	CHECKED BY: <b>GJA</b>
DATE: <b>JANUARY 2006</b>	JOB NO.: <b>05752</b>	SHEET/OF: <b>1 / 1</b>

J:\CIVIL\05752.DWG PROP. 05752 LOT GRADING PLAN.DWG

## Appendix F

### Hydraflow Storm Sewers by Intellisolve

# Hydraflow Plan View



Legacy Park Wilson 3rd - 2-YR

No. Lines: 26

01-20-2006

# Storm Sewer Inventory Report

Line No.	Alignment				Flow Data				Physical Data							Line ID	
	Dnstr line No.	Line length (ft)	Defl angle (deg)	Junc type	Known Q (cfs)	Drng area (ac)	Runoff coeff (C)	Inlet time (min)	Invert EI Dn (ft)	Line slope (%)	Invert EI Up (ft)	Line size (in)	Line type	N value (n)	J-loss coeff (K)		Inlet/ Rim EI (ft)
1	End	60.0	-90.0	MH	0.00	0.00	0.00	0.0	183.50	1.83	184.60	54	Cir	0.013	1.00	191.20	
2	1	179.0	0.0	Genr	1.20	0.00	0.00	0.0	184.70	0.23	185.12	54	Cir	0.013	1.50	193.60	BC-.5L
3	2	209.0	90.0	Curb	2.82	0.00	0.00	0.0	185.23	0.20	185.65	54	Cir	0.013	0.50	192.27	BC-J
4	3	34.0	-4.0	Curb	3.94	0.00	0.00	0.0	185.75	0.24	185.83	54	Cir	0.013	1.47	192.31	BC-I
5	4	55.0	-77.0	MH	0.00	0.00	0.00	0.0	185.93	0.20	186.04	54	Cir	0.013	0.99	193.40	
6	5	201.0	80.0	Genr	0.00	1.20	0.64	15.0	186.14	0.68	187.51	54	Cir	0.013	1.50	194.00	BC-G+BC-H
7	6	77.0	-84.0	MH	0.00	0.00	0.00	0.0	187.60	2.97	189.89	42	Cir	0.013	0.36	195.55	
8	7	74.0	18.0	Genr	0.00	2.50	0.64	15.0	190.00	0.20	190.15	42	Cir	0.013	1.45	194.75	BC-.75E+BC-.75F
9	8	173.0	-73.0	Genr	1.11	0.00	0.00	0.0	190.25	0.21	190.61	42	Cir	0.013	0.50	197.75	BC-.25E+BC-.25F+LP
10	9	45.0	0.0	MH	0.00	0.00	0.00	0.0	190.61	0.20	190.70	42	Cir	0.013	0.76	195.62	
11	10	110.0	46.0	Genr	10.27	0.00	0.00	0.0	191.20	1.40	192.74	36	Cir	0.013	0.50	196.52	BC-C+BC-D
12	11	210.0	0.0	Genr	3.86	0.00	0.00	0.0	192.74	1.36	195.59	36	Cir	0.013	1.00	200.32	BC-A+BC-B
13	2	200.0	0.0	Genr	1.20	0.00	0.00	0.0	187.15	0.21	187.57	12	Cir	0.013	0.50	196.30	BC-.5L
14	13	198.0	0.0	Genr	0.80	0.00	0.00	0.0	187.67	0.21	188.09	12	Cir	0.013	1.00	200.20	BC-K
15	1	158.0	132.0	Curb	1.68	0.00	0.00	0.0	184.70	1.22	186.63	36	Cir	0.013	0.59	191.79	BC-O
16	15	50.0	20.0	Curb	2.30	0.00	0.00	0.0	186.70	0.16	186.78	36	Cir	0.013	1.00	191.81	BC-Q
17	6	50.0	90.0	Genr	0.00	0.40	0.64	15.0	190.06	0.80	190.46	24	Cir	0.013	1.50	194.80	LPWF3-I
18	17	123.7	0.0	Genr	0.00	0.30	0.64	15.0	190.46	0.80	191.45	24	Cir	0.013	0.50	195.52	LPWF3-G
19	18	149.0	0.0	Genr	0.00	0.50	0.64	15.0	192.45	0.70	193.49	12	Cir	0.013	1.00	196.71	LPWF3-F
20	17	150.0	-90.0	Curb	0.00	1.50	0.64	15.0	191.45	0.50	192.20	24	Cir	0.013	0.50	200.00	LPWF3-E
21	20	25.0	0.0	Curb	0.00	1.10	0.64	15.0	192.20	0.52	192.33	24	Cir	0.013	0.50	200.00	LPWF3-D

Legacy Park Wilson 3rd - 2-YR

Number of lines: 26

Date: 01-20-2006

# Storm Sewer Inventory Report

Line No.	Alignment				Flow Data				Physical Data								Line ID
	Dnstr line No.	Line length (ft)	Defl angle (deg)	Junc type	Known Q (cfs)	Drng area (ac)	Runoff coeff (C)	Inlet time (min)	Invert El Dn (ft)	Line slope (%)	Invert El Up (ft)	Line size (in)	Line type	N value (n)	J-loss coeff (K)	Inlet/ Rim El (ft)	
22	21	140.0	0.0	Genr	0.00	0.90	0.64	15.0	192.33	0.50	193.03	24	Cir	0.013	0.50	201.00	LPWF3-C
23	22	20.0	0.0	MH	0.00	0.00	0.64	15.0	193.03	0.50	193.13	24	Cir	0.013	1.00	201.50	
24	23	20.0	0.0	Curb	0.00	1.10	0.64	15.0	193.13	0.50	193.23	18	Cir	0.013	1.00	201.50	LPWF3-B
25	23	90.0	-90.0	MH	0.00	0.00	0.64	15.0	193.03	0.50	193.48	15	Cir	0.013	1.00	201.50	
26	25	15.0	90.0	Curb	0.00	0.90	0.64	15.0	193.48	0.53	193.56	15	Cir	0.013	1.00	201.50	LPWF3-A
Legacy Park Wilson 3rd - 2-YR												Number of lines: 26				Date: 01-20-2006	

# Storm Sewer Tabulation

Station		Len (ft)	Drng Area		Rnoff coeff (C)	Area x C		Tc		Rain (l) (in/hr)	Total flow (cfs)	Cap full (cfs)	Vel (ft/s)	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID
Line	To Line		Incr (ac)	Total (ac)		Incr	Total	Inlet (min)	Syst (min)					Size (in)	Slope (%)	Up (ft)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Dn (ft)	
1	End	60.0	0.00	10.40	0.00	0.00	6.66	0.0	24.4	3.0	49.21	266.3	5.55	54	1.83	184.60	183.50	186.61	186.79	191.20	187.70	
2	1	179.0	0.00	10.40	0.00	0.00	6.66	0.0	23.4	3.1	45.71	95.26	2.92	54	0.23	185.12	184.70	189.28	189.20	193.60	191.20	BC-.5L
3	2	209.0	0.00	10.40	0.00	0.00	6.66	0.0	22.1	3.2	43.13	88.16	2.76	54	0.20	185.65	185.23	189.81	189.73	192.27	193.60	BC-J
4	3	34.0	0.00	10.40	0.00	0.00	6.66	0.0	21.9	3.2	40.42	95.40	2.55	54	0.24	185.83	185.75	190.26	190.25	192.31	192.27	BC-I
5	4	55.0	0.00	10.40	0.00	0.00	6.66	0.0	21.5	3.2	36.68	87.95	2.31	54	0.20	186.04	185.93	190.45	190.43	193.40	192.31	
6	5	201.0	1.20	10.40	0.64	0.77	6.66	15.0	20.1	3.3	37.44	162.4	2.75	54	0.68	187.51	186.14	190.66	190.64	194.00	193.40	BC-G+BC-H
7	6	77.0	0.00	2.50	0.00	0.00	1.60	0.0	15.6	3.8	21.30	173.5	4.03	42	2.97	189.89	187.60	191.30	191.10	195.55	194.00	
8	7	74.0	2.50	2.50	0.64	1.60	1.60	15.0	15.0	3.8	21.40	45.30	2.24	42	0.20	190.15	190.00	193.53	193.50	194.75	195.55	BC-.75E+BC-.75F
9	8	173.0	0.00	0.00	0.00	0.00	0.00	0.0	7.8	0.0	15.24	45.89	1.62	42	0.21	190.61	190.25	193.78	193.75	197.75	194.75	BC-.25E+BC-.25F
10	9	45.0	0.00	0.00	0.00	0.00	0.00	0.0	7.3	0.0	14.13	44.99	1.47	42	0.20	190.70	190.61	194.12	194.11	195.62	197.75	
11	10	110.0	0.00	0.00	0.00	0.00	0.00	0.0	6.4	0.0	14.13	78.91	3.25	36	1.40	192.74	191.20	194.11	194.20	196.52	195.62	BC-C+BC-D
12	11	210.0	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	3.86	77.70	2.08	36	1.36	195.59	192.74	196.22	195.74	200.32	196.52	BC-A+BC-B
13	2	200.0	0.00	0.00	0.00	0.00	0.00	0.0	3.2	0.0	2.00	1.63	2.55	12	0.21	187.57	187.15	190.16	189.53	196.30	193.60	BC-.5L
14	13	198.0	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.80	1.64	1.02	12	0.21	188.09	187.67	190.39	190.29	200.20	196.30	BC-K
15	1	158.0	0.00	0.00	0.00	0.00	0.00	0.0	2.6	0.0	3.98	73.71	1.17	36	1.22	186.63	184.70	187.70	187.70	191.79	191.20	BC-O
16	15	50.0	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	2.30	26.68	0.33	36	0.16	186.78	186.70	189.70	189.70	191.81	191.79	BC-Q
17	6	50.0	0.40	6.70	0.64	0.26	4.29	15.0	20.0	3.4	14.37	20.23	4.77	24	0.80	190.46	190.06	192.19	192.06	194.80	194.00	LPWF3-I
18	17	123.7	0.30	0.80	0.64	0.19	0.51	15.0	16.6	3.7	1.88	20.23	0.63	24	0.80	191.45	190.46	193.15	193.15	195.52	194.80	LPWF3-G
19	18	149.0	0.50	0.50	0.64	0.32	0.32	15.0	15.0	3.8	1.23	2.98	2.48	12	0.70	193.49	192.45	193.96	193.45	196.71	195.52	LPWF3-F
20	17	150.0	1.50	5.50	0.64	0.96	3.52	15.0	17.4	3.6	12.64	15.99	4.30	24	0.50	192.20	191.45	193.84	193.45	200.00	194.80	LPWF3-E
21	20	25.0	1.10	4.00	0.64	0.70	2.56	15.0	17.2	3.6	9.23	16.31	2.96	24	0.52	192.33	192.20	194.23	194.20	200.00	200.00	LPWF3-D

Legacy Park Wilson 3rd - 2-YR

Number of lines: 26

Run Date: 01-20-2006

NOTES: Intensity = 76.31 / (Inlet time + 14.30) ^ 0.88; Return period = 2 Yrs.

# Storm Sewer Tabulation

Station		Len (ft)	Drng Area		Rnoff coeff (C)	Area x C		Tc		Rain (l) (in/hr)	Total flow (cfs)	Cap full (cfs)	Vel (ft/s)	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID
Line	To Line		Incr (ac)	Total (ac)		Incr	Total	Inlet (min)	Syst (min)					Size (in)	Slope (%)	Up (ft)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Dn (ft)	
22	21	140.0	0.90	2.90	0.64	0.58	1.86	15.0	16.2	3.7	6.90	15.99	2.57	24	0.50	193.03	192.33	194.43	194.33	201.00	200.00	LPWF3-C
23	22	20.0	0.00	2.00	0.64	0.00	1.28	15.0	16.0	3.7	4.79	15.99	1.54	24	0.50	193.13	193.03	195.04	195.03	201.50	201.00	
24	23	20.0	1.10	1.10	0.64	0.70	0.70	15.0	15.0	3.8	2.71	7.43	1.53	18	0.50	193.23	193.13	195.09	195.08	201.50	201.50	LPWF3-B
25	23	90.0	0.00	0.90	0.64	0.00	0.58	15.0	15.1	3.8	2.21	4.57	1.80	15	0.50	193.48	193.03	195.18	195.08	201.50	201.50	LPWF3-A
26	25	15.0	0.90	0.90	0.64	0.58	0.58	15.0	15.0	3.8	2.22	4.72	1.81	15	0.53	193.56	193.48	195.25	195.23	201.50	201.50	

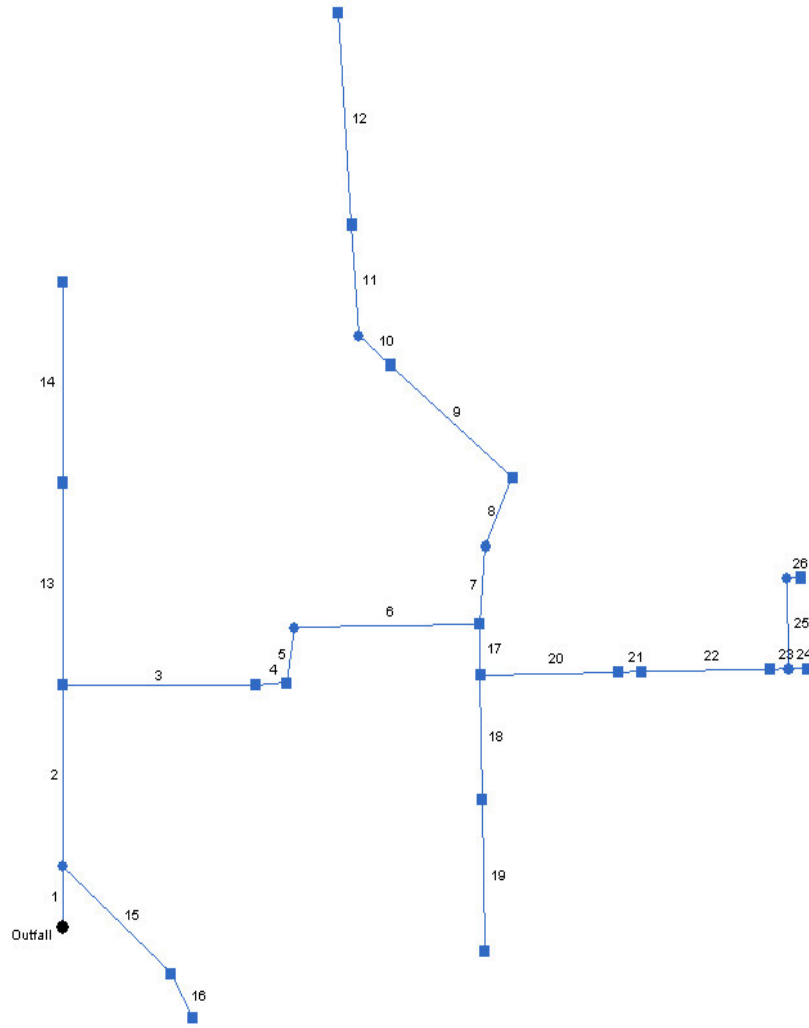
Legacy Park Wilson 3rd - 2-YR

Number of lines: 26

Run Date: 01-20-2006

NOTES: Intensity = 76.31 / (Inlet time + 14.30) ^ 0.88; Return period = 2 Yrs.

# Hydraflow Plan View



Legacy Park Wilson 3rd 100-YR

No. Lines: 26

01-20-2006

# Storm Sewer Inventory Report

Line No.	Alignment				Flow Data				Physical Data							Line ID	
	Dnstr line No.	Line length (ft)	Defl angle (deg)	Junc type	Known Q (cfs)	Drng area (ac)	Runoff coeff (C)	Inlet time (min)	Invert EI Dn (ft)	Line slope (%)	Invert EI Up (ft)	Line size (in)	Line type	N value (n)	J-loss coeff (K)		Inlet/ Rim EI (ft)
1	End	60.0	-90.0	MH	0.00	0.00	0.00	0.0	183.50	1.15	184.19	54	Cir	0.013	1.00	191.20	
2	1	179.0	0.0	Genr	3.01	0.00	0.00	0.0	184.29	0.35	184.92	54	Cir	0.013	1.50	193.60	BC-.5L
3	2	209.0	90.0	Curb	8.21	0.00	0.00	0.0	185.02	0.35	185.75	54	Cir	0.013	0.50	192.27	BC-J
4	3	34.0	-4.0	Curb	11.47	0.00	0.00	0.0	185.75	0.24	185.83	54	Cir	0.013	1.47	192.31	BC-I
5	4	55.0	-77.0	MH	0.00	0.00	0.00	0.0	185.93	0.20	186.04	54	Cir	0.013	0.99	193.40	
6	5	201.0	80.0	Genr	0.00	1.20	0.83	15.0	186.14	0.50	187.15	54	Cir	0.013	1.50	194.00	BC-H + LPWF3-I
7	6	77.0	-84.0	MH	0.00	0.00	0.00	0.0	187.25	0.51	187.64	42	Cir	0.013	0.36	195.55	
8	7	74.0	18.0	Genr	0.00	2.50	0.83	15.0	187.74	0.50	188.11	42	Cir	0.013	1.45	194.75	BC-.75E+BC-.75F+LP
9	8	173.0	-73.0	Genr	2.69	0.00	0.00	0.0	188.21	0.50	189.08	42	Cir	0.013	0.50	197.75	BC-.25E+BC-.25F
10	9	45.0	0.0	MH	0.00	0.00	0.00	0.0	189.18	0.51	189.41	42	Cir	0.013	0.76	195.62	
11	10	110.0	46.0	Genr	15.40	0.00	0.00	0.0	189.51	0.50	190.06	36	Cir	0.013	0.50	196.52	BC-C+BC-D
12	11	210.0	0.0	Genr	10.67	0.00	0.00	0.0	190.06	2.00	194.26	36	Cir	0.013	1.00	200.32	BC-A+BC-B
13	2	200.0	0.0	Genr	3.01	0.00	0.00	0.0	187.15	0.21	187.57	12	Cir	0.013	0.50	196.30	BC-.5L
14	13	198.0	0.0	Genr	2.98	0.00	0.00	0.0	187.67	0.21	188.09	12	Cir	0.013	1.00	200.20	BC-K
15	1	158.0	132.0	Curb	4.89	0.00	0.00	0.0	184.70	1.22	186.63	24	Cir	0.013	0.59	191.79	BC-O
16	15	50.0	20.0	Curb	8.37	0.00	0.00	0.0	186.70	0.16	186.78	18	Cir	0.013	1.00	191.81	BC-Q
17	6	50.0	90.0	Genr	0.00	0.40	0.83	15.0	190.06	0.80	190.46	24	Cir	0.013	1.50	194.80	LPWF3-I
18	17	123.7	0.0	Genr	0.00	0.30	0.83	15.0	190.46	0.80	191.45	24	Cir	0.013	0.50	195.52	LPWF3-G
19	18	149.0	0.0	Genr	0.00	0.50	0.83	15.0	192.45	0.70	193.49	12	Cir	0.013	1.00	196.71	LPWF3-F
20	17	150.0	-90.0	Curb	0.00	1.50	0.83	15.0	191.45	0.50	192.20	24	Cir	0.013	0.50	200.00	LPWF3-E
21	20	25.0	0.0	Curb	0.00	1.10	0.83	15.0	192.20	0.52	192.33	24	Cir	0.013	0.50	200.00	LPWF3-D

Legacy Park Wilson 3rd 100-YR

Number of lines: 26

Date: 01-20-2006

# Storm Sewer Inventory Report

Line No.	Alignment				Flow Data				Physical Data								Line ID
	Dnstr line No.	Line length (ft)	Defl angle (deg)	Junc type	Known Q (cfs)	Drng area (ac)	Runoff coeff (C)	Inlet time (min)	Invert El Dn (ft)	Line slope (%)	Invert El Up (ft)	Line size (in)	Line type	N value (n)	J-loss coeff (K)	Inlet/ Rim El (ft)	
22	21	140.0	0.0	Genr	0.00	0.90	0.83	15.0	192.33	0.50	193.03	24	Cir	0.013	0.50	201.00	LPWF3-C
23	22	20.0	0.0	MH	0.00	0.00	0.83	15.0	193.03	0.50	193.13	24	Cir	0.013	1.00	201.50	
24	23	20.0	0.0	Curb	0.00	1.10	0.83	15.0	193.13	0.50	193.23	18	Cir	0.013	1.00	201.50	LPWF3-B
25	23	90.0	-90.0	MH	0.00	0.00	0.83	15.0	193.03	0.50	193.48	15	Cir	0.013	1.00	201.50	
26	25	15.0	90.0	Curb	0.00	0.90	0.83	15.0	193.48	0.53	193.56	15	Cir	0.013	1.00	201.50	LPWF3-A
Legacy Park Wilson 3rd 100-YR												Number of lines: 26				Date: 01-20-2006	

# Storm Sewer Tabulation

Station		Len (ft)	Drng Area		Rnoff coeff (C)	Area x C		Tc		Rain (l) (in/hr)	Total flow (cfs)	Cap full (cfs)	Vel (ft/s)	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID
Line	To Line		Incr (ac)	Total (ac)		Incr	Total	Inlet (min)	Syst (min)					Size (in)	Slope (%)	Up (ft)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Dn (ft)	
1	End	60.0	0.00	10.40	0.00	0.00	8.63	0.0	18.9	6.7	128.5	210.9	10.06	54	1.15	184.19	183.50	187.44	187.00	191.20	187.70	
2	1	179.0	0.00	10.40	0.00	0.00	8.63	0.0	18.5	6.8	115.8	116.7	7.28	54	0.35	184.92	184.29	189.39	188.79	193.60	191.20	BC-.5L
3	2	209.0	0.00	10.40	0.00	0.00	8.63	0.0	17.9	6.8	107.5	116.2	6.76	54	0.35	185.75	185.02	191.37	190.74	192.27	193.60	BC-J
4	3	34.0	0.00	10.40	0.00	0.00	8.63	0.0	17.8	6.9	99.44	95.40	6.25	54	0.24	185.83	185.75	191.91	191.82	192.31	192.27	BC-I
5	4	55.0	0.00	10.40	0.00	0.00	8.63	0.0	17.7	6.9	88.21	87.95	5.55	54	0.20	186.04	185.93	193.05	192.93	193.40	192.31	
6	5	201.0	1.20	10.40	0.83	1.00	8.63	15.0	17.1	7.0	89.09	139.4	5.60	54	0.50	187.15	186.14	193.93	193.52	194.00	193.40	BC-H + LPWF3-I
7	6	77.0	0.00	2.50	0.00	0.00	2.08	0.0	15.3	7.3	43.93	71.60	4.57	42	0.51	187.64	187.25	194.97	194.83	195.55	194.00	
8	7	74.0	2.50	2.50	0.83	2.08	2.08	15.0	15.0	7.4	44.04	71.14	4.58	42	0.50	188.11	187.74	195.23	195.09	194.75	195.55	BC-.75E+BC-.75F
9	8	173.0	0.00	0.00	0.00	0.00	0.00	0.0	3.1	0.0	28.76	71.35	2.99	42	0.50	189.08	188.21	196.03	195.89	197.75	194.75	BC-.25E+BC-.25F
10	9	45.0	0.00	0.00	0.00	0.00	0.00	0.0	2.8	0.0	26.07	71.93	2.71	42	0.51	189.41	189.18	196.16	196.13	195.62	197.75	
11	10	110.0	0.00	0.00	0.00	0.00	0.00	0.0	2.3	0.0	26.07	47.16	3.69	36	0.50	190.06	189.51	196.41	196.24	196.52	195.62	BC-C+BC-D
12	11	210.0	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	10.67	94.32	1.61	36	2.00	194.26	190.06	196.74	196.69	200.32	196.52	BC-A+BC-B
13	2	200.0	0.00	0.00	0.00	0.00	0.00	0.0	0.9	0.0	5.99	1.63	7.63	12	0.21	187.57	187.15	196.29	190.63	196.30	193.60	BC-.5L
14	13	198.0	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	2.98	1.64	3.79	12	0.21	188.09	187.67	198.81	197.42	200.20	196.30	BC-K
15	1	158.0	0.00	0.00	0.00	0.00	0.00	0.0	0.2	0.0	13.26	25.00	4.22	24	1.22	186.63	184.70	189.40	188.86	191.79	191.20	BC-O
16	15	50.0	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	8.37	4.20	4.74	18	0.16	186.78	186.70	189.88	189.57	191.81	191.79	BC-Q
17	6	50.0	0.40	6.70	0.83	0.33	5.56	15.0	17.0	7.0	38.93	20.23	12.39	24	0.80	190.46	190.06	196.15	194.66	194.80	194.00	LPWF3-I
18	17	123.7	0.30	0.80	0.83	0.25	0.66	15.0	15.6	7.2	4.81	20.23	1.53	24	0.80	191.45	190.46	202.13	202.08	195.52	194.80	LPWF3-G
19	18	149.0	0.50	0.50	0.83	0.42	0.42	15.0	15.0	7.4	3.06	2.98	3.89	12	0.70	193.49	192.45	203.25	202.15	196.71	195.52	LPWF3-F
20	17	150.0	1.50	5.50	0.83	1.25	4.57	15.0	16.0	7.2	32.80	15.99	10.44	24	0.50	192.20	191.45	203.58	200.42	200.00	194.80	LPWF3-E
21	20	25.0	1.10	4.00	0.83	0.91	3.32	15.0	15.9	7.2	23.89	16.31	7.60	24	0.52	192.33	192.20	205.50	205.22	200.00	200.00	LPWF3-D

Legacy Park Wilson 3rd 100-YR

Number of lines: 26

Run Date: 01-20-2006

NOTES: Intensity = 62.28 / (Inlet time + 10.10) ^ 0.66; Return period = 100 Yrs.

# Storm Sewer Tabulation

Station		Len (ft)	Drng Area		Rnoff coeff (C)	Area x C		Tc		Rain (l) (in/hr)	Total flow (cfs)	Cap full (cfs)	Vel (ft/s)	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID
Line	To Line		Incr (ac)	Total (ac)		Incr	Total	Inlet (min)	Syst (min)					Size (in)	Slope (%)	Up (ft)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Dn (ft)	
22	21	140.0	0.90	2.90	0.83	0.75	2.41	15.0	15.5	7.3	17.51	15.99	5.57	24	0.50	193.03	192.33	207.20	206.36	201.00	200.00	LPWF3-C
23	22	20.0	0.00	2.00	0.83	0.00	1.66	15.0	15.4	7.3	12.10	15.99	3.85	24	0.50	193.13	193.03	207.75	207.70	201.50	201.00	
24	23	20.0	1.10	1.10	0.83	0.91	0.91	15.0	15.0	7.4	6.72	7.43	3.81	18	0.50	193.23	193.13	208.07	207.99	201.50	201.50	LPWF3-B
25	23	90.0	0.00	0.90	0.83	0.00	0.75	15.0	15.1	7.4	5.49	4.57	4.48	15	0.50	193.48	193.03	208.63	207.98	201.50	201.50	LPWF3-A
26	25	15.0	0.90	0.90	0.83	0.75	0.75	15.0	15.0	7.4	5.50	4.72	4.48	15	0.53	193.56	193.48	209.06	208.95	201.50	201.50	

Legacy Park Wilson 3rd 100-YR

Number of lines: 26

Run Date: 01-20-2006

NOTES: Intensity = 62.28 / (Inlet time + 10.10) ^ 0.66; Return period = 100 Yrs.