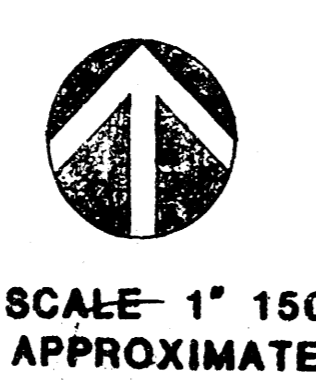

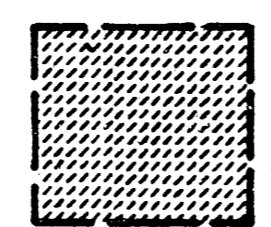


NOTES:
 1. FOR SYSTEM LAYOUT, SEE DRAINAGE PLAN DATED 9-18-87.
 2. FOR LOT/PARCEL AREAS, SEE ATTACHED AREA LIST.



 Property to be assessed at Residential Use Valuation

 Property to be assessed at Commercial Use Valuation

PROPOSED IMPROVEMENT DISTRICT
 FOR
DRAINAGE IMPROVEMENTS
 IN THE AREA FROM KELLOGG TO MAPLE
 AND FROM DUGAN TO THE BIG DITCH

Rev. Oct. 2, 1987
SEPT. 18, 1987
BAUGHMAN COMPANY, P.A.
 SURVEYING & ENGINEERING
 31600-721 - 216 ELLIS - WICHITA, KANSAS 67214

Final (2) D110 (1) D110
 1. For 20' dia. 100' long
 2. For 20' dia. 100' long
 3. For 20' dia. 100' long
 4. For 20' dia. 100' long
 5. For 20' dia. 100' long
 6. For 20' dia. 100' long
 7. For 20' dia. 100' long
 8. For 20' dia. 100' long
 9. For 20' dia. 100' long
 10. For 20' dia. 100' long
 Total 20' dia. 100' long

Final (2) D110 (1) D110
 1. For 20' dia. 100' long
 2. For 20' dia. 100' long
 3. For 20' dia. 100' long
 4. For 20' dia. 100' long
 5. For 20' dia. 100' long
 6. For 20' dia. 100' long
 7. For 20' dia. 100' long
 8. For 20' dia. 100' long
 9. For 20' dia. 100' long
 10. For 20' dia. 100' long
 Total 20' dia. 100' long

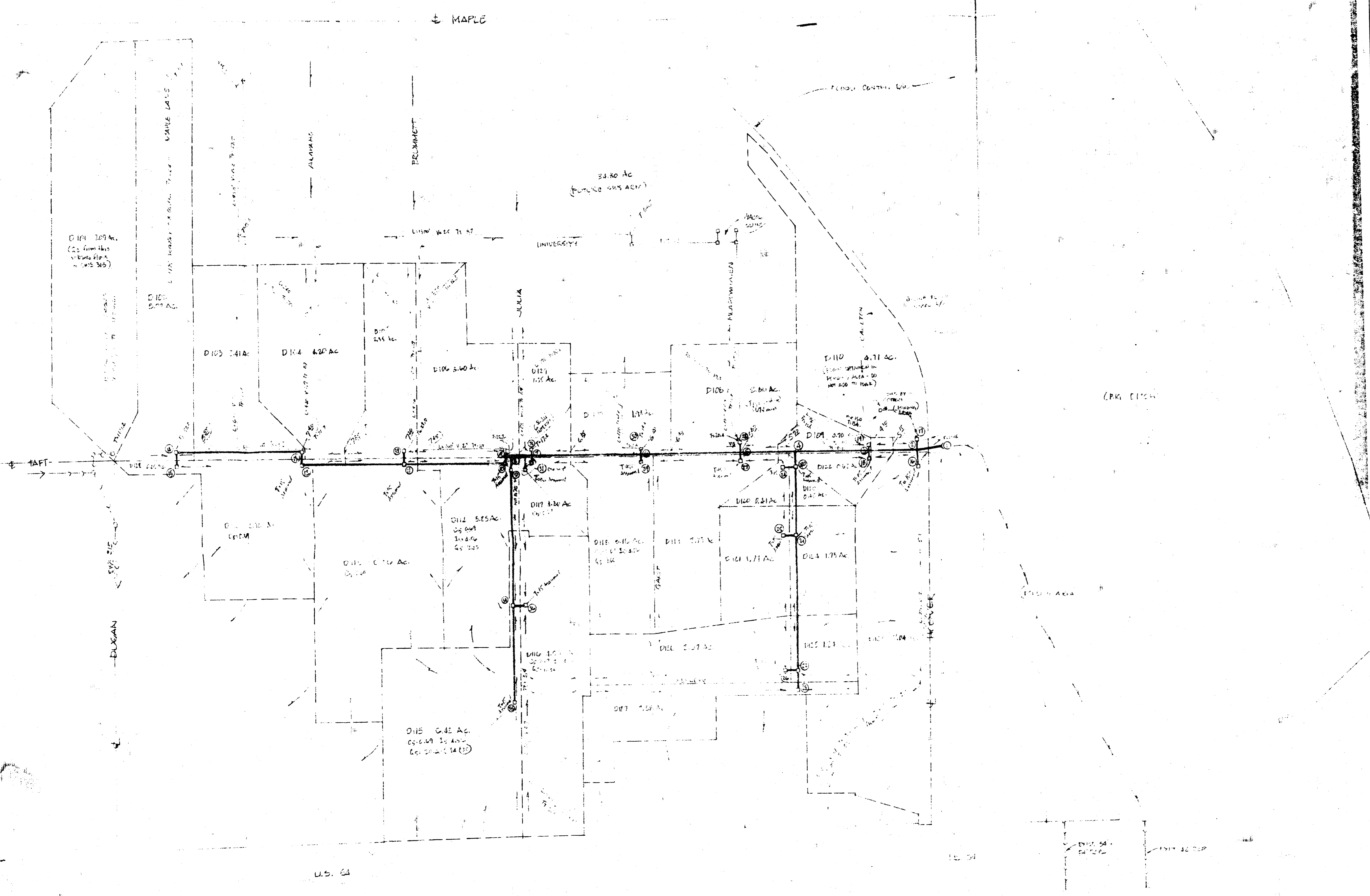
Station	Length	Area	Volume
1+00	100.00	100.00	100.00
2+00	100.00	100.00	100.00
3+00	100.00	100.00	100.00
4+00	100.00	100.00	100.00
5+00	100.00	100.00	100.00
6+00	100.00	100.00	100.00
7+00	100.00	100.00	100.00
8+00	100.00	100.00	100.00
9+00	100.00	100.00	100.00
10+00	100.00	100.00	100.00
11+00	100.00	100.00	100.00
12+00	100.00	100.00	100.00
13+00	100.00	100.00	100.00
14+00	100.00	100.00	100.00
15+00	100.00	100.00	100.00
16+00	100.00	100.00	100.00
17+00	100.00	100.00	100.00
18+00	100.00	100.00	100.00
19+00	100.00	100.00	100.00
20+00	100.00	100.00	100.00
21+00	100.00	100.00	100.00
22+00	100.00	100.00	100.00
23+00	100.00	100.00	100.00
24+00	100.00	100.00	100.00
25+00	100.00	100.00	100.00
26+00	100.00	100.00	100.00
27+00	100.00	100.00	100.00
28+00	100.00	100.00	100.00
29+00	100.00	100.00	100.00
30+00	100.00	100.00	100.00
31+00	100.00	100.00	100.00
32+00	100.00	100.00	100.00
33+00	100.00	100.00	100.00
34+00	100.00	100.00	100.00
35+00	100.00	100.00	100.00
36+00	100.00	100.00	100.00
37+00	100.00	100.00	100.00
38+00	100.00	100.00	100.00
39+00	100.00	100.00	100.00
40+00	100.00	100.00	100.00
41+00	100.00	100.00	100.00
42+00	100.00	100.00	100.00
43+00	100.00	100.00	100.00
44+00	100.00	100.00	100.00
45+00	100.00	100.00	100.00
46+00	100.00	100.00	100.00
47+00	100.00	100.00	100.00
48+00	100.00	100.00	100.00
49+00	100.00	100.00	100.00
50+00	100.00	100.00	100.00
51+00	100.00	100.00	100.00
52+00	100.00	100.00	100.00
53+00	100.00	100.00	100.00
54+00	100.00	100.00	100.00
55+00	100.00	100.00	100.00
56+00	100.00	100.00	100.00
57+00	100.00	100.00	100.00
58+00	100.00	100.00	100.00
59+00	100.00	100.00	100.00
60+00	100.00	100.00	100.00

Project: THE LANDING - PRELIMINARY STORM SEWER DESIGN
 Date: 7/1/1988
 Time: 1:45:2

INPUT DATA LISTING

CD	L2	MAX 0	ADJ 0	LENGTH	FL 1	FL 2	CTL/TW	D	U	S	KJ	KE	KM	LC	L1	L3	L4	A1	A3	A4	J	N	
2	2	158.0	158.0	100.00	111.10	111.14	.00	36	120	3	.10	.10	.00	1	3	13	16	30	60	20	5.00	.013	
2	3	126.0	126.0	195.00	111.14	111.21	.00	36	120	3	.10	.10	.00	0	4	0	15	0	0	0	90	5.00	.013
2	4	107.0	107.0	420.00	111.21	111.38	.00	36	120	3	.10	.10	.00	0	5	0	16	0	0	0	90	5.00	.013
2	5	85.4	85.4	300.00	111.38	111.50	.00	36	120	3	.10	.10	.00	0	6	0	0	0	0	0	0	5.00	.013
2	6	85.4	85.4	30.00	111.50	111.52	.00	36	120	3	.10	.10	.00	0	7	0	17	0	0	0	90	5.00	.013
2	7	72.9	72.9	350.00	111.52	111.66	.00	36	120	3	.10	.10	.00	0	8	0	18	0	0	0	90	5.00	.013
2	8	65.3	65.3	90.00	111.66	111.70	.00	36	120	3	.10	.10	.00	0	9	19	0	90	90	0	5.00	.013	
2	9	50.8	50.8	50.00	111.70	111.80	.00	48	0	3	.10	.10	.00	0	10	0	0	90	0	0	5.00	.013	
2	10	46.1	46.1	330.00	111.80	112.46	.00	48	0	3	.10	.10	.00	0	11	20	0	0	0	0	5.00	.013	
2	11	19.3	19.3	330.00	113.46	114.12	.00	36	0	3	.10	.10	.00	0	12	21	0	0	0	0	5.00	.013	
2	12	6.9	6.9	420.00	114.87	115.71	.00	21	0	1	.10	.10	.00	0	0	0	0	0	0	0	5.00	.013	
2	13	31.6	31.6	50.00	111.54	111.64	.00	36	0	1	.10	.10	.00	3	0	0	0	0	0	0	5.00	.013	
2	14	1.3	1.0	50.00	110.89	110.99	.00	15	0	1	.10	.10	.00	4	0	0	0	0	0	0	5.00	.013	
2	15	6.9	5.1	50.00	111.96	112.04	.00	18	0	1	.10	.10	.00	4	0	0	0	0	0	0	5.00	.013	
2	16	19.8	13.7	50.00	111.88	111.98	.00	24	0	1	.10	.10	.00	0	0	0	0	0	0	0	5.00	.013	
2	17	2.6	2.1	50.00	112.27	112.37	.00	15	0	1	.10	.10	.00	7	0	0	0	0	0	0	5.00	.013	
2	18	2.7	2.3	50.00	111.41	111.51	.00	15	0	1	.10	.10	.00	8	0	0	0	0	0	0	5.00	.013	
2	19	9.7	8.1	270.00	111.95	112.45	.00	24	0	1	.10	.10	.00	9	0	0	0	0	0	0	5.00	.013	
2	20	26.9	22.2	50.00	113.46	113.56	.00	30	0	1	.10	.10	.00	11	0	0	0	0	0	0	5.00	.013	
2	21	12.3	10.4	50.00	114.87	114.97	.00	21	0	1	.10	.10	.00	12	0	0	0	0	0	0	5.00	.013	

Line No	D (ft)	U (ft)	Dn (ft)	Dc (ft)	Flow (cfs)	Sr-Full	V1 (ft/s)	V2 (ft/s)	FL 1 (ft)	FL 2 (ft)	HG 1 (ft)	HG 2 (ft)	D1 (ft)	D2 (ft)	T1 (ft)	T2 (ft)	
1																	
2	158.0	36	120	3.00	1.98	Full	.00175	5.3	111.10	111.14	114.15	114.23	2.05	3.19	.00	.00	
3	126.0	36	120	3.00	1.70	Full	.00112	4.2	111.14	111.21	114.56	114.75	3.44	3.54	.00	.00	
4	107.0	36	120	3.00	1.52	Full	.00080	3.6	111.21	111.38	114.88	115.22	3.67	3.88	.00	.00	
5	85.4	36	120	2.61	1.31	Full	.00051	2.8	111.38	111.50	115.34	115.49	3.96	3.99	.00	.00	
6	85.4	36	120	2.18	1.10	Full	.00037	2.3	111.50	111.52	115.52	115.53	4.02	4.01	.00	.00	
7	72.9	36	120	2.33	1.18	Full	.00037	2.4	111.52	111.66	115.60	115.73	4.08	4.07	.00	.00	
8	65.3	36	120	2.09	1.10	Full	.00030	2.2	111.66	111.70	115.76	115.79	4.10	4.09	.00	.00	
9	50.8	48	0	2.69	2.13	Full	.00125	4.0	111.70	111.80	116.30	116.36	4.30	4.26	.00	.00	
10	46.1	48	0	2.51	2.03	Full	.00103	3.7	111.80	112.46	116.57	116.91	4.77	4.45	.00	.00	
11	19.3	36	0	1.76	1.40	Full	.00084	2.7	112.46	114.12	117.05	117.33	3.59	3.21	.00	.00	
12	6.9	21	0	1.39	.97	Full	.00190	2.9	114.87	115.71	117.34	118.14	2.47	2.49	118.26	.00	
3																	
13	31.6	36	0	3.00	1.82	Part	.00224	4.5	111.54	111.64	114.45	114.57	2.91	2.93	114.81	.00	
3																	
14	1.3	15	0	.59	.45	Full	.00042	1.1	110.89	110.99	111.45	114.47	2.56	3.48	114.49	.00	
4																	
15	6.9	18	0	1.50	1.01	Full	.00429	3.9	111.96	112.04	114.62	115.33	2.86	2.90	115.29	.00	



September 21, 1987

Preliminary Storm Sewer Estimate (The Landing and adjacent areas)

Estimated Cost of Construction + 25%	\$547,920
Project Cost	\$684,900

Assessment Areas

The Landing	= 15.2P Ac.
Other Commercial	= 19.76 Ac.
Residential	= 56.12 Ac.
Total B.D. Area	= 91.16 Ac.

Limit assessment for The Landing to \$100,000

\$100,000 ÷ 665,603 s.f. = \$0.15/s.f.	129,118
Other commercial @ \$0.15/s.f. x 1,042,198 s.f. =	156,330
Residential @ \$0.0375/s.f. x 2,444,663 s.f. =	91,675
Total assessed share of cost	\$376,793

City share of Project Cost = \$364,307 (-53.7%)

Average residential lot (17,000 s.f.) assessment @ \$0.0375/s.f. = \$637.50

Revised September 22, 1987

Preliminary Storm Sewer Estimate - Alternate A (The Landing and adjacent areas - includes system in Taft, Hoover, Meadowlark and Garst)

Estimated Cost of Construction + 25%	\$147,000
Project Cost	\$184,000

Assessment Areas

The Landing	= 15.20 Ac.
Other Commercial	= 23.93 Ac.
Residential	= 56.11 Ac.
Total B.D. Area	= 95.24 Ac.

Limit assessment for The Landing to \$100,000

\$100,000 ÷ 665,603 s.f. = \$0.15/s.f.	156,330
Other commercial @ \$0.15/s.f. x 1,042,198 s.f. =	156,330
Residential @ \$0.0375/s.f. x 2,444,663 s.f. =	91,675
Total assessed share of cost	\$404,335

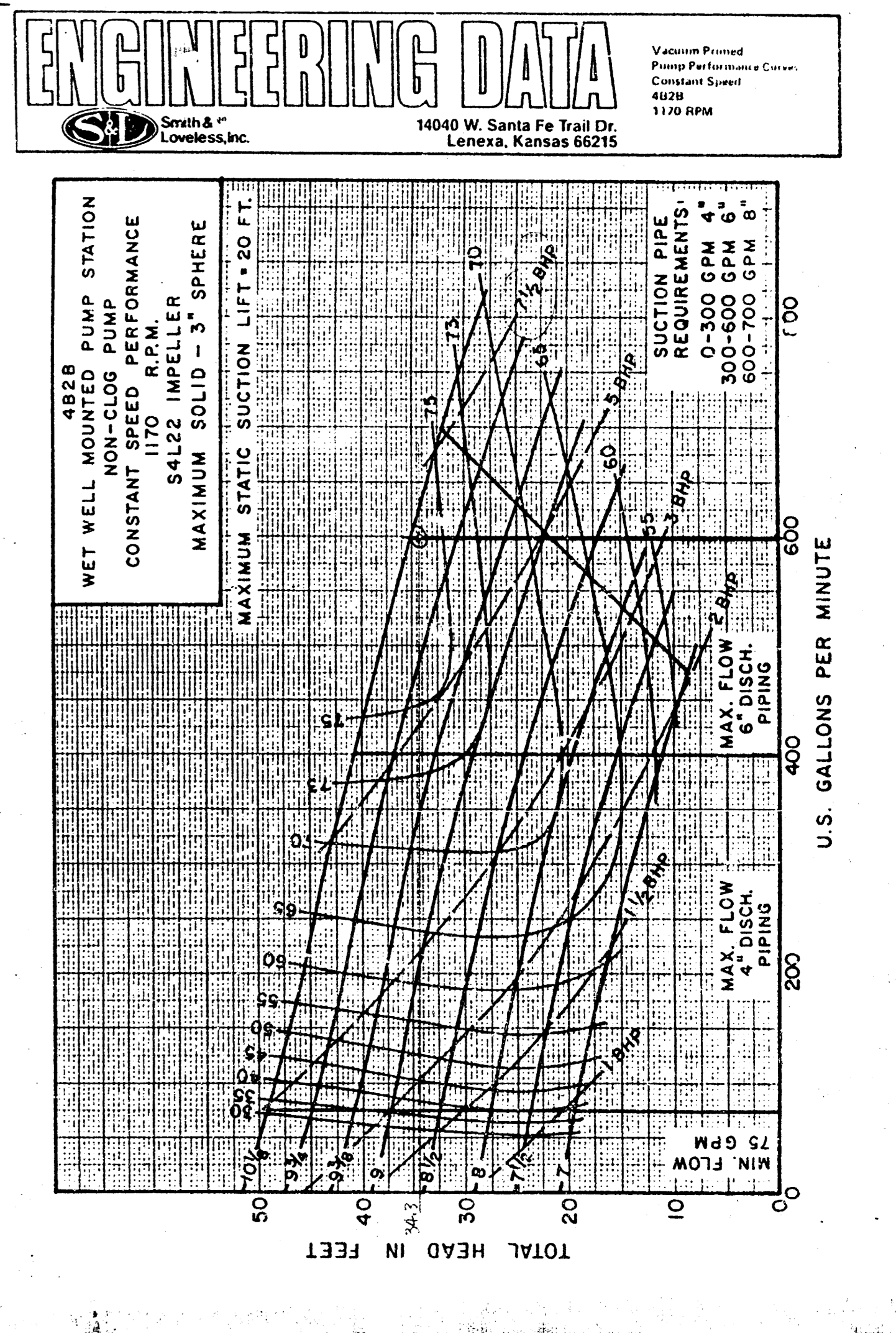
City share of Project Cost = \$392,335 (-53.7%)

Average residential lot (17,000 s.f.) assessment @ \$0.0375/s.f. = \$637.50

All areas within Taft assumed residential use (0.0375/s.f.)
 The part of the Landing from the old highway and portion of the existing driveway assumed to be 70% commercial (0.0375/s.f.) All other commercial areas assumed to be residential (0.0375/s.f.) and multi-family (0.0375/s.f.) with weighted 0.0375/s.f.

FRICITION OF WATER IN PIPES AND FITTINGS
 WILLIAMS & HAZEN FORMULA C-100
 Loss of Head in Feet Due to Friction per 100 Feet of 15 year old Cast Iron Pipe

Flow Rate (GPM)	1/2" Pipe	3/4" Pipe	1" Pipe	1 1/4" Pipe	1 1/2" Pipe	2" Pipe	2 1/2" Pipe	3" Pipe	4" Pipe	6" Pipe	8" Pipe	10" Pipe	12" Pipe	14" Pipe	16" Pipe	18" Pipe	20" Pipe
40	1.02	0.22	0.10	0.05	0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100	1.05	0.41	0.19	0.10	0.05	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
200	1.10	0.82	0.38	0.20	0.10	0.04	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300	1.15	1.23	0.57	0.30	0.15	0.06	0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
400	1.20	1.64	0.76	0.40	0.20	0.08	0.04	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
500	1.25	2.05	1.14	0.50	0.25	0.10	0.05	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
600	1.30	2.46	1.52	0.60	0.30	0.12	0.06	0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
700	1.35	2.87	1.90	0.70	0.35	0.14	0.07	0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
800	1.40	3.28	2.28	0.80	0.40	0.16	0.08	0.04	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
900	1.45	3.69	2.66	0.90	0.45	0.18	0.09	0.04	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1000	1.50	4.10	3.04	1.00	0.50	0.20	0.10	0.05	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00



September 22, 1987

Preliminary Storm Sewer Estimate - Alternate B (The Landing and adjacent areas - excluding that part of storm sewer north of Taft)

Estimated Cost of Construction + 25%	\$498,358
Project Cost	\$622,947

Assessment Areas

The Landing	= 15.28 Ac.
Other Commercial	= 23.93 Ac.
Residential (see Drainage Plan)	= 24.55 Ac.
Total B.D. area	= 63.80 Ac.

Limit assessment for The Landing to \$100,000

\$100,000 ÷ 665,603 s.f. = \$0.15/s.f.	156,330
Other commercial @ \$0.15/s.f. x 1,042,198 s.f. =	156,330
Residential @ \$0.0375/s.f. x 1,071,297 s.f. =	40,174
Total assessed share of cost	\$352,834

City share of Project Cost = \$270,110 (-43.4%)

Average residential lot (17,000 s.f.) assessment @ \$0.0375/s.f. = \$637.50

The Landing Storm Sewer - complete system

Tract	Area	S/s.f.	Share
West Maple Gardens	29,854	0.0375	\$1,119.53
Lot 1, Block A	816,133		604.99
Lot 2, Block A	816,133		604.99
Lot 3, Block A	816,133		604.99
Lot 4, Block A	816,133		604.99
Lot 5, Block A	816,133		604.99
Lot 6, Block A	816,133		604.99
Lot 7, Block A	816,133		604.99
Lot 8, Block A	816,133		604.99
Lot 9, Block A	816,133		604.99
Lot 10, Block A	816,133		604.99
Lot 11, Block A	816,133		604.99
Lot 12, Block A	816,133		604.99
Lot 13, Block A	816,133		604.99
Lot 14, Block A	816,133		604.99
Lot 15, Block A	816,133		604.99
Lot 16, Block A	816,133		604.99
Lot 17, Block A	816,133		604.99
Lot 18, Block A	816,133		604.99
Lot 19, Block A	816,133		604.99
Lot 20, Block A	816,133		604.99
Lot 21, Block A	816,133		604.99
Lot 22, Block A	816,133		604.99
Lot 23, Block A	816,133		604.99
Lot 24, Block A	816,133		604.99
Lot 25, Block A	816,133		604.99
Lot 26, Block A	816,133		604.99
Lot 27, Block A	816,133		604.99
Lot 28, Block A	816,133		604.99
Lot 29, Block A	816,133		604.99
Lot 30, Block A	816,133		604.99
Lot 31, Block A	816,133		604.99
Lot 32, Block A	816,133		604.99
Lot 33, Block A	816,133		604.99
Lot 34, Block A	816,133		604.99
Lot 35, Block A	816,133		604.99
Lot 36, Block A	816,133		604.99
Lot 37, Block A	816,133		604.99
Lot 38, Block A	816,133		604.99
Lot 39, Block A	816,133		604.99
Lot 40, Block A	816,133		604.99
Lot 41, Block A	816,133		604.99
Lot 42, Block A	816,133		604.99
Lot 43, Block A	816,133		604.99
Lot 44, Block A	816,133		604.99
Lot 45, Block A	816,133		604.99
Lot 46, Block A	816,133		604.99
Lot 47, Block A	816,133		604.99
Lot 48, Block A	816,133		604.99
Lot 49, Block A	816,133		604.99
Lot 50, Block A	816,133		604.99
Lot 51, Block A	816,133		604.99
Lot 52, Block A	816,133		604.99
Lot 53, Block A	816,133		604.99
Lot 54, Block A	816,133		604.99
Lot 55, Block A	816,133		604.99
Lot 56, Block A	816,133		604.99
Lot 57, Block A	816,133		604.99
Lot 58, Block A	816,133		604.99
Lot 59, Block A	816,133		604.99
Lot 60, Block A	816,133		604.99
Lot 61, Block A	816,133		604.99
Lot 62, Block A	816,133		604.99
Lot 63, Block A	816,133		604.99
Lot 64, Block A	816,133		604.99
Lot 65, Block A	816,133		604.99
Lot 66, Block A	816,133		604.99
Lot 67, Block A	816,133		604.99
Lot 68, Block A	816,133		604.99
Lot 69, Block A	816,133		604.99
Lot 70, Block A	816,133		604.99
Lot 71, Block A	816,133		604.99
Lot 72, Block A	816,133		604.99
Lot 73, Block A	816,133		604.99
Lot 74, Block A	816,133		604.99
Lot 75, Block A	816,133		604.99
Lot 76, Block A	816,133		604.99
Lot 77, Block A	816,133		604.99
Lot 78, Block A	816,133		604.99
Lot 79, Block A	816,133		604.99
Lot 80, Block A	816,133		604.99
Lot 81, Block A	816,133		604.99
Lot 82, Block A	816,133		604.99
Lot 83, Block A	816,133		604.99
Lot 84, Block A	816,133		604.99
Lot 85, Block A	816,133		604.99
Lot 86, Block A	816,133		604.99
Lot 87, Block A	816,133		604.99
Lot 88, Block A	816,133		604.99
Lot 89, Block A	816,133		604.99
Lot 90, Block A	816,133		604.99
Lot 91, Block A	816,133		604.99
Lot 92, Block A	816,133		604.99
Lot 93, Block A	816,133		604.99
Lot 94, Block A	816,133		604.99
Lot 95, Block A	816,133		604.99
Lot 96, Block A	816,133		604.99
Lot 97, Block A	816,133		604.99
Lot 98, Block A	816,133		604.99
Lot 99, Block A	816,133		604.99
Lot 100, Block A	816,133		604.99

West Maple Gardens

Lot 1, Block A	29,854	0.0375	\$1,119.53
Lot 2, Block A	816,133		604.99
Lot 3, Block A	816,133		604.99
Lot 4, Block A	816,133		604.99
Lot 5, Block A	816,133		604.99
Lot 6, Block A	816,133		604.99
Lot 7, Block A	816,133		604.99
Lot 8, Block A	816,133		604.99
Lot 9, Block A	816,133		604.99
Lot 10, Block A	816,133		604.99
Lot 11, Block A	816,133		604.99
Lot 12, Block A	816,133		604.99
Lot 13, Block A	816,133		604.99
Lot 14, Block A	816,133		604.99
Lot 15, Block A	816,133		604.99
Lot 16, Block A	816,133		604.99
Lot 17, Block A	816,133		604.99
Lot 18, Block A	816,133		604.99
Lot 19, Block A	816,133		604.99
Lot 20, Block A	816,133		604.99
Lot 21, Block A	816,133		604.99
Lot 22, Block A	816,133		604.99
Lot 23, Block A	816,133		604.99
Lot 24, Block A	816,133		604.99
Lot 25, Block A	816,133		604.99
Lot 26, Block A	816,133		604.99
Lot 27, Block A	816,133		604.99
Lot 28, Block A	816,133		604.99
Lot 29, Block A	816,133		604.99
Lot 30, Block A	816,133		604.99
Lot 31, Block A	816,133		604.99
Lot 32, Block A	816,133		604.99
Lot 33, Block A	816,133		604.99
Lot 34, Block A	816,133		604.99
Lot 35, Block A	816,133		604.99
Lot 36, Block A	816,133		604.99
Lot 37, Block A	816,133		604.99
Lot 38, Block A	816,133		604.99
Lot 39, Block A	816,133		604.99
Lot 40, Block A	816,133		604.99
Lot 41, Block A	816,133		604.99
Lot 42, Block A	816,133		604.99
Lot 43, Block A	816,133		604.99
Lot 44, Block A	816,133		604.99
Lot 45, Block A	816,133		604.99
Lot 46, Block A	816,133		604.99
Lot 47, Block A	816,133		604.99
Lot 48, Block A	816,133		604.99
Lot 49, Block A	816,133		604.99
Lot 50, Block A	816,133		604.99
Lot 51, Block A	816,133		604.99
Lot 52, Block A	816,133		604.99
Lot 53, Block A	816,133		604.99
Lot 54, Block A	816,133		604.99
Lot 55, Block A	816,133		