

APPENDIX A

TABLE A-1

**Watershed Study No. 3
Sugar Creek Watershed
ALTERNATIVE BENEFIT: COST EVALUATION
(Present value in 2001 dollars)**

Problem Areas		BENEFIT	COST					
ID	Description	Benefit ¹	Improvement Cost ²	O&M ³	Residual Damage	Property Buyout	Total Cost	B:C Ratio
		in \$1,000	in \$1,000	in \$1,000	in \$1,000	in \$1,000	in \$1,000	
A	Levee A, Wetland	3,034	2,217	339	-	-	2,556	1.2
B	Floodwall B	559	170	169	-	-	339	1.7
C	Floodwall C	840	196	169	-	133	498	1.7
D ⁴	No Action	-	-	-	107	-	107	-
E	Floodwall E	4,092	287	85	-	-	372	11.0
F	Floodwall F	4,412	360	85	-	-	445	9.9
G	Floodwall G	1,007	135	42	-	-	177	5.7
H	Floodwall H	1,392	404	42	-	-	446	3.4
I ⁴	No Action	-	-	-	127	-	127	-
J	Elevate Structures	2,470	330	-	70	-	400	6.2
K	Elevate Structures	1,154	210	-	60	-	270	4.3
L ⁵	No Action	-	-	-	149	-	149	-

¹ Benefit is defined as the total damage **removed** by the improvement.

² Improvement Cost is defined as the construction cost of the improvement.

³ O&M Costs are the operating and maintenance costs associated with the proposed improvement.

⁴ No Action is recommended for three structures.

⁵ No Action is recommended for 12 structures.

Levee Description (see Figures E-8 through E-12 for locations)

- A Earthen berm with observation deck at upper reach of Sugar Creek on right bank with two pump stations, channel improvement, and wetland construction.
- B Concrete floodwall on right bank of Sugar Creek with one pump station.
- C Concrete floodwall on right bank of Sugar Creek with one pump station.
- E Concrete floodwall on left bank of Coffey Creek with one pump station.
- F Concrete floodwall on both banks of Coffey Creek with two pump stations total.
- G Concrete floodwalls on left bank of Sugar Creek with one pump station.
- H Concrete floodwalls on left bank of Sugar Creek with one pump station.

The floodwalls and berm construction costs include pump stations, standby generator, and contingencies. No utility relocations were considered in the analysis.

Table A-2
Watershed Study No. 3
Sugar Creek Watershed
Flooding Structures Summary

All Elevations are based on 1988 NAVD.

Count	Parcel ID	Stream	Address	Land Use Type ¹	HEC-RAS Station	Finished Floor Elevation	FCF		FIRM		Problem Location ID
							1% Annual Chance Flood Elevation	Flood Depth ² (ft)	1% Annual Chance Flood Elevation	Flood Depth ² (ft)	
1	16722156	Sugar	6425 MOUNTING ROCK RD	R	49133	587.9	588.1	0.2	586.9	-1.0	A
2	16722157	Sugar	6429 MOUNTING ROCK RD	R	49060	586.8	588.1	1.3	586.8	0.0	A
3	16722158	Sugar	6433 MOUNTING ROCK RD	R	48987	585.3	588.1	2.8	586.8	1.5	A
4	16722159	Sugar	6439 MOUNTING ROCK RD	R	48925	584.6	588.1	3.5	586.8	2.2	A
5	16722160	Sugar	6445 MOUNTING ROCK RD	R	48830	584.8	588.0	3.2	586.7	1.9	A
6	16722161	Sugar	6451 MOUNTING ROCK RD	R	48760	586.3	588.0	1.7	586.7	0.4	A
7	16722162	Sugar	6501 MOUNTING ROCK RD	R	48760	587.4	588.0	0.6	586.7	-0.7	A
8	16722163	Sugar	6507 MOUNTING ROCK RD	R	48687	587.6	587.9	0.3	586.7	-0.9	A
9	16722164	Sugar	6515 MOUNTING ROCK RD	R	48571	586.8	587.9	1.1	586.6	-0.2	A
10	16722121	Sugar	6519 MOUNTING ROCK RD	R	48496	585.7	587.9	2.2	586.6	0.9	A
11	16722122	Sugar	6525 MOUNTING ROCK RD	R	48437	584.7	587.9	3.2	586.6	1.9	A
12	16722123	Sugar	6601 MOUNTING ROCK RD	R	48364	583.6	587.8	4.2	586.5	2.9	A
13	16722233	Sugar	6600 MOUNTING ROCK RD	R	48336	587.5	587.8	0.3	586.5	-1.0	A
14	16722124	Sugar	6605 MOUNTING ROCK RD	R	48290	583.5	587.8	4.3	586.5	3.0	A
15	16722301	Sugar	6611 MOUNTING ROCK RD	R	48204	585.5	587.8	2.3	586.5	1.0	A
16	16722302	Sugar	6617 MOUNTING ROCK RD	R	48164	584.6	587.8	3.2	586.5	1.9	A
17	16722303	Sugar	6623 MOUNTING ROCK RD	R	48078	585.1	587.7	2.6	586.4	1.3	A
18	16722304	Sugar	6629 MOUNTING ROCK RD	R	48013	585.7	587.7	2.0	586.4	0.7	A
19	16722305	Sugar	6635 MOUNTING ROCK RD	R	47937	585.1	587.7	2.6	586.3	1.2	A
20	16722306	Sugar	6701 MOUNTING ROCK RD	R	47860	586.1	587.6	1.5	586.3	0.2	A
21	16722307	Sugar	6711 MOUNTING ROCK RD	R	47823	584.9	587.6	2.7	586.3	1.4	A
22	16722308	Sugar	6717 MOUNTING ROCK RD	R	47800	584.9	587.6	2.7	586.3	1.4	A
23	16722309	Sugar	6725 MOUNTING ROCK RD	R	47759	584.5	587.6	3.1	586.2	1.7	A
24	16722310	Sugar	6723 MOUNTING ROCK RD	R	47672	585.0	587.5	2.5	586.1	1.1	A
25	16722311	Sugar	6729 MOUNTING ROCK RD	R	47494	584.9	587.3	2.4	586.0	1.1	A
26	16722312	Sugar	6728 MOUNTING ROCK RD	R	47464	584.7	587.3	2.6	585.9	1.2	A
27	16724310	Sugar	911 YORKDALE DRIVE	R	45804	583.7	586.0	2.3	584.7	1.0	B
28	16724309	Sugar	907 YORKDALE DR	R	45804	583.5	586.0	2.5	584.7	1.2	B
29	16724324	Sugar	7319 FLODDEN FIELD CT	R	45804	585.5	586.0	0.5	584.7	-0.8	B
30	16724306	Sugar	827 YORKDALE DR	R	45649	585.0	585.9	0.9	584.6	-0.4	B
31	16724308	Sugar	901 YORKDALE DR	R	45804	583.5	586.0	2.5	584.7	1.2	B
32	16724307	Sugar	831 YORKDALE DR	R	45804	583.7	586.0	2.3	584.7	1.0	B
33	16724325	Sugar	7325 FLODDEN FIELD CT	R	45804	584.6	586.0	1.4	584.7	0.1	B
34	16724326	Sugar	7331 FLODDEN FIELD CT	R	45804	584.6	586.0	1.4	584.7	0.1	B
35	16724327	Sugar	7401 FLODDEN FIELD CT	R	45804	585.3	586.0	0.7	584.7	-0.6	B
36	16724328	Sugar	7407 FLODDEN FIELD CT	R	45804	585.2	586.0	0.8	584.7	-0.5	B
37	16715410	Sugar	1932 BANGOR RD	R	45145	583.7	585.7	2.0	584.3	0.6	C
38	16721418	Sugar	1900 BANGOR RD	R	45186	585.6	585.7	0.1	584.4	-1.2	C
39	16715411	Sugar	1924 BANGOR RD	R	45122	581.5	585.6	4.1	584.3	2.8	C
40	16715702	Sugar	1927 BANGOR RD	R	45075	581.3	585.5	4.2	584.2	2.9	C
41	16715730	Sugar	1919 BANGOR RD	R	45060	581.8	585.5	3.7	584.2	2.4	C
42	201301111	Coffey	2415 WHITEHALL ESTATES	R	7301	583.8	586.4	2.6	582.4	-1.4	E
43	201301114	Coffey	2415 WHITEHALL ESTATES	R	7301	584.3	586.4	2.1	582.4	-1.9	E
44	201301115	Coffey	2415 WHITEHALL ESTATES	R	7301	584.7	586.4	1.7	582.4	-2.3	E
45	201301112	Coffey	2415 WHITEHALL ESTATES	R	7301	580.4	586.4	6.0	582.4	2.0	E
46	16721414	Sugar	1710 RANCHWOOD DR	R	44690	583.2	584.9	1.7	583.6	0.4	D
47	16721413	Sugar	1704 RANCHWOOD DR	R	44670	583.3	584.8	1.5	583.6	0.3	D
48	16721412	Sugar	1700 RANCHWOOD DR	R	44658	584.1	584.8	0.7	583.6	-0.5	D
49	201301113	Coffey	2415 WHITEHALL ESTATES	R	7301	586.0	586.4	0.4	582.4	-3.6	E

Table A-2 (Continued)
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Count	Parcel ID	Stream	Address	Land Use Type ¹	HEC-RAS Station	Finished Floor Elevation	FCF		FIRM		Problem Location ID
							1% Annual Chance Flood Elevation	Flood Depth ² (ft)	1% Annual Chance Flood Elevation	Flood Depth ² (ft)	
50	203011271	Coffey	2000 ARROWCREEK	R	5699	577.7	580.0	2.3	578.0	0.3	F
51	203011272	Coffey	2000 ARROWCREEK	R	5500	577.5	579.5	2.0	577.5	0.0	F
52	203011273	Coffey	2000 ARROWCREEK	R	5378	578.8	579.3	0.5	577.3	-1.5	F
53	203011091	Coffey	2120 YAGER CREEK	R	5545	576.7	579.6	2.9	577.6	0.9	F
54	203011092	Coffey	2120 YAGER CREEK	R	5361	576.6	579.3	2.7	577.3	0.7	F
55	203011093	Coffey	2120 YAGER CREEK	R	5077	576.6	578.8	2.2	576.8	0.2	F
56	203011094	Coffey	2120 YAGER CREEK	R	4916	576.4	578.5	2.1	576.4	0.0	F
57	203011095	Coffey	2120 YAGER CREEK	R	4745	576.6	578.0	1.4	576.0	-0.6	F
58	203011096	Coffey	2120 YAGER CREEK	R	4591	576.6	577.6	1.0	575.6	-1.0	F
59	203021072	Sugar	1263 ARROW PINE DR	C	39914	580.0	581.7	1.7	580.0	0.0	G
60	20302127	Sugar	9400 SOUTHERN PINE	C	37492	577.7	579.1	1.4	577.2	-0.5	H
61	20302126	Sugar	9432 SOUTHERN PINE	C	37000	575.2	578.9	3.7	576.8	1.6	H
62	20303109	Sugar	8350 ARROWRIDGE	C	30608	572.1	572.3	0.2	570.2	-1.9	NC ³
63	20319501	Sugar	809 ECHO COVE LN	R	26227	566.8	569.1	2.3	566.9	0.1	NC ³
64	20506130	Sugar	9220 RODNEY	C	18462	556.6	557.1	0.5	555.4	-1.2	NC ³
65	205041202	Sugar	12428 DOWNS	C	9050	541.4	546.1	4.7	544.2	2.8	J
66	205041203	Sugar	12428 DOWNS	C	9050	541.4	546.1	4.7	544.2	2.8	J
67	205041201	Sugar	12428 DOWNS	C	9068	541.4	546.1	4.7	544.2	2.8	J
68	20504109	Sugar	12432 DOWNS RD	R	8996	543.1	546.1	3.0	544.1	1.0	J
69	205032021	Sugar	12629 DOWNS	C	6800	543.7	544.7	1.0	542.6	-1.1	J
70	20504106	Sugar	12616 DOWNS RD	R	6800	543.7	544.7	1.0	542.6	-1.1	J
71	205031031	Sugar	12716 DOWNS	C	6706	541.3	544.6	3.3	542.6	1.3	J
72	205031032	Sugar	12716 DOWNS	C	6810	537.0	544.7	7.7	542.6	5.6	J
73	205031061	Sugar	12708 DOWNS	C	6646	538.7	544.6	5.9	542.5	3.8	J
74	20503104	Sugar	12600 DOWNS	C	6420	536.9	542.8	5.9	541.1	4.2	J
75	205031021	Sugar	12900 DOWNS	C	6710	541.0	544.6	3.6	542.6	1.6	J
76	205032071	Sugar	12629 DOWNS	C	6704	541.4	544.6	3.2	542.6	1.2	J
77	20502102	Sugar	800 MAIN ST	R	6600	543.2	544.5	1.3	542.4	-0.8	L
78	22102114	Sugar	813 MAIN ST	R	5890	537.0	542.7	5.7	541.0	4.0	K
79	205021041	Sugar	716 MAIN ST	R	6600	543.5	544.5	1.0	542.4	-1.1	L
80	20502306	Sugar	618 MAIN ST	R	4952	541.6	542.4	0.8	540.6	-1.0	L
81	22102108	Sugar	709 MAIN ST	C	5150	540.6	542.5	1.9	540.7	0.1	K
82	22102107	Sugar	705 MAIN ST	R	4966	542.1	542.4	0.3	540.6	-1.5	K
83	22102106	Sugar	701 MAIN ST	R	4968	541.6	542.4	0.8	540.6	-1.0	K
84	20502309	Sugar	606 MAIN ST	R	4650	542.1	542.3	0.2	540.5	-1.6	L
85	22102105	Sugar	617 MAIN ST	R	4895	538.4	542.4	4.0	540.6	2.2	K
86	22102117	Sugar	111 REID LN	R	4915	538.8	542.4	3.6	540.6	1.8	K
87	22102120	Sugar	109 REID LN	R	4940	540.0	542.4	2.4	540.6	0.6	K
88	20502113	Sugar	727 BRIAN CIR	R	6977	545.5	544.7	-0.8	542.7	-2.8	L
89	20502114	Sugar	731 BRIAN CIR	R	6977	546.0	544.7	-1.3	542.7	-3.3	L
90	20502112	Sugar	725 BRIAN CIR	R	6810	545.5	544.7	-0.8	542.6	-2.9	L
91	20502110	Sugar	717 BRIAN CIR	R	6670	546.7	544.6	-2.1	542.6	-4.1	L
92	205021013	Sugar	810 MAIN ST	R	6600	545.7	544.5	0.9	542.4	-3.3	L
93	20502109	Sugar	711 BRIAN CIR	R	6646	545.3	544.6	-0.7	542.5	-2.8	L
94	22102113	Sugar	813 MAIN ST	R	5913	551.6	542.7	-8.9	541.0	-10.6	K
95	221021222	Sugar	112 REID LN	R	4920	543.0	542.4	-0.6	540.6	-2.4	K
96	20502103	Sugar	720 MAIN ST	R	6600	543.0	544.5	1.5	542.4	-0.6	L
97	20502105	Sugar	710 MAIN ST	R	6600	543.4	544.5	1.1	542.4	-1.0	L

¹ Land Use Type R is Residential. Land Use Type C is Commercial.

² Shading indicates all flooding depths over 4 feet.

³ Non-Clustered

Table A-3
Watershed Study No. 3
Sugar Creek Watershed
Repetitive Loss Database

Count	RL Number	Community Number	Date of Loss	Address	City	State	ZIP Code	Pay Building	Pay Cont
1	5276	370158	19901023	5042 SENTINEL POST RD	CHARLOTTE	NC	282267447	\$5,870	\$0
2	5276	370158	19940818	5042 SENTINEL POST RD	CHARLOTTE	NC	282267447	\$5,643	\$0
3	5276	370158	19950827	5042 SENTINEL POST RD	CHARLOTTE	NC	282267447	\$108,426	\$10,870
4	5276	370158	19790323	5042 SENTINEL POST RD	CHARLOTTE	NC	282267447	\$3,504	\$0
5	5276	370158	19820610	5042 SENTINEL POST RD	CHARLOTTE	NC	282267447	\$5,101	\$0
6	9041	370159	19850515	511 QUEENS RD	CHARLOTTE	NC	282071423	\$8,020	\$0
7	9041	370159	19851121	511 QUEENS RD	CHARLOTTE	NC	282071423	\$15,320	\$1,235
8	9041	370159	19870228	511 QUEENS RD	CHARLOTTE	NC	282071423	\$10,953	\$0
9	9075	370159	19920617	3404 COMMONWEALTH AVE	CHARLOTTE	NC	282056229	\$6,018	\$0
10	9075	370159	19930323	3404 COMMONWEALTH AVE	CHARLOTTE	NC	282056229	\$6,363	\$0
11	9394	370159	19901011	3008 HARBINGER CT	CHARLOTTE	NC	282053849	\$1,741	\$0
12	9394	370159	19930323	3008 HARBINGER CT	CHARLOTTE	NC	282053849	\$3,241	\$0
13	9394	370159	19950827	3008 HARBINGER CT	CHARLOTTE	NC	282053849	\$4,063	\$0
14	18140	370159	19940816	5952 SHARON VIEW RD	CHARLOTTE	NC	282266846	\$1,833	\$0
15	18140	370159	19950828	5952 SHARON VIEW RD	CHARLOTTE	NC	282266846	\$22,962	\$14,100
16	18140	370159	19950828	5952 SHARON VIEW RD	CHARLOTTE	NC	282266846	\$1,588	\$5,300
17	18140	370159	19790323	5952 SHARON VIEW RD	CHARLOTTE	NC	282266846	\$5,649	\$5,000
18	18140	370159	19820610	5952 SHARON VIEW RD	CHARLOTTE	NC	282266846	\$17,703	\$8,834
19	18140	370159	19831206	5952 SHARON VIEW RD	CHARLOTTE	NC	282266846	\$1,794	\$0
20	18140	370159	19790323	5952 SHARON VIEW RD	CHARLOTTE	NC	282266846	\$0	\$1,000
21	18140	370159	19820610	5952 SHARON VIEW RD	CHARLOTTE	NC	282266846	\$340	\$2,410
22	18150	370159	19790929	700 KENILWORTH AVE	CHARLOTTE	NC	282042829	\$0	\$25,000
23	18150	370159	19820610	700 KENILWORTH AVE	CHARLOTTE	NC	282042829	\$0	\$78,800
24	26970	370159	19820610	2718 CHILTON PL	CHARLOTTE	NC	282072656	\$0	\$1,387
25	26970	370159	19850515	2718 CHILTON PL	CHARLOTTE	NC	282072656	\$1,765	\$3,563
26	26970	370159	19850607	2718 CHILTON PL	CHARLOTTE	NC	282072656	\$0	\$1,903
27	26970	370159	19850817	2718 CHILTON PL	CHARLOTTE	NC	282072656	\$2,277	\$1,545
28	26970	370159	19950827	2718 CHILTON PL	CHARLOTTE	NC	282072656	\$7,700	\$6,800
29	26980	370159	19901012	4601 PERTH CT	CHARLOTTE	NC	282153324	\$2,418	\$0
30	26980	370159	19910111	4601 PERTH CT	CHARLOTTE	NC	282153324	\$1,220	\$0
31	26981	370159	19901012	4619 PERTH CT	CHARLOTTE	NC	282153355	\$3,908	\$0
32	26981	370159	19910111	4619 PERTH CT	CHARLOTTE	NC	282153355	\$2,290	\$0
33	26982	370159	19820610	2009 MILTON RD	CHARLOTTE	NC	282152467	\$3,418	\$0
34	26982	370159	19850817	2009 MILTON RD	CHARLOTTE	NC	282152467	\$1,723	\$0
35	26982	370159	19890924	2009 MILTON RD	CHARLOTTE	NC	282152467	\$9,135	\$0
36	26982	370159	19901012	2009 MILTON RD	CHARLOTTE	NC	282152467	\$7,153	\$0
37	26982	370159	19910111	2009 MILTON RD	CHARLOTTE	NC	282152467	\$9,094	\$0
38	26983	370159	19820610	4528 PERTH CT	CHARLOTTE	NC	282153323	\$8,035	\$0
39	26983	370159	19890924	4528 PERTH CT	CHARLOTTE	NC	282153323	\$4,280	\$0
40	26983	370159	19901012	4528 PERTH CT	CHARLOTTE	NC	282153323	\$1,908	\$0

Table A-3 (Continued)
Watershed Study No. 3
Sugar Creek Watershed
Repetitive Loss Database

Count	RL Number	Community Number	Date of Loss	Address	City	State	ZIP Code	Pay Building	Pay Cont
41	26983	370159	19910111	4528 PERTH CT	CHARLOTTE	NC	282153323	\$2,445	\$0
42	26984	370159	19890924	4512 PERTH CT	CHARLOTTE	NC	282153323	\$2,491	\$0
43	26984	370159	19901012	4512 PERTH CT	CHARLOTTE	NC	282153323	\$1,908	\$0
44	26984	370159	19910111	4512 PERTH CT	CHARLOTTE	NC	282153323	\$1,580	\$0
45	26985	370159	19780622	4539 PERTH CT	CHARLOTTE	NC	282153322	\$4,138	\$0
46	26985	370159	19820610	4539 PERTH CT	CHARLOTTE	NC	282153322	\$5,214	\$0
47	26985	370159	19890924	4539 PERTH CT	CHARLOTTE	NC	282153322	\$9,296	\$0
48	26985	370159	19901012	4539 PERTH CT	CHARLOTTE	NC	282153322	\$5,320	\$0
49	26986	370159	19890924	4532 PERTH CT	CHARLOTTE	NC	282153323	\$3,394	\$0
50	26986	370159	19901012	4532 PERTH CT	CHARLOTTE	NC	282153323	\$2,418	\$0
51	26986	370159	19910111	4532 PERTH CT	CHARLOTTE	NC	282153323	\$2,200	\$0
52	26987	370159	19780622	4520 PERTH CT	CHARLOTTE	NC	282153337	\$10,284	\$0
53	26987	370159	19820610	4520 PERTH CT	CHARLOTTE	NC	282153337	\$17,939	\$0
54	26987	370159	19840329	4520 PERTH CT	CHARLOTTE	NC	282153337	\$1,718	\$0
55	26987	370159	19850817	4520 PERTH CT	CHARLOTTE	NC	282153337	\$1,550	\$0
56	26987	370159	19890924	4520 PERTH CT	CHARLOTTE	NC	282153337	\$8,983	\$0
57	26987	370159	19901012	4520 PERTH CT	CHARLOTTE	NC	282153337	\$6,819	\$0
58	26987	370159	19910111	4520 PERTH CT	CHARLOTTE	NC	282153337	\$2,923	\$0
59	26988	370159	19890924	4536 PERTH CT	CHARLOTTE	NC	282153340	\$3,765	\$0
60	26988	370159	19901012	4536 PERTH CT	CHARLOTTE	NC	282153340	\$2,967	\$0
61	26988	370159	19910111	4536 PERTH CT	CHARLOTTE	NC	282153340	\$1,590	\$0
62	27024	370159	19800215	816 NORWOOD DR	CHARLOTTE	NC	282083426	\$1,826	\$0
63	27024	370159	19820610	816 NORWOOD DR	CHARLOTTE	NC	282083426	\$2,807	\$0
64	36823	370159	19790415	1308 BRAEBURN RD	CHARLOTTE	NC	282114771	\$1,708	\$0
65	36823	370159	19790905	1308 BRAEBURN RD	CHARLOTTE	NC	282114771	\$5,004	\$0
66	44825	370159	19820610	500 OLD BELL RD	MATTHEWS	NC	28105	\$1,002	\$1,663
67	44825	370159	19901022	500 OLD BELL RD	MATTHEWS	NC	28105	\$1,208	\$2,212
68	48372	370159	19950827	4039 ABINGDON RD	CHARLOTTE	NC	282113822	\$18,058	\$6,841
69	48372	370159	19820610	4039 ABINGDON RD	CHARLOTTE	NC	282113822	\$7,497	\$1,978
70	48372	370159	19890922	4039 ABINGDON RD	CHARLOTTE	NC	282113822	\$3,713	\$0
71	50775	370159	19810906	1242 ROMANY RD	CHARLOTTE	NC		\$1,265	\$0
72	50775	370159	19820610	1242 ROMANY RD	CHARLOTTE	NC		\$3,347	\$0
73	52592	370159	19891001	3801 COUNTRY CLUB DR	CHARLOTTE	NC	282053213	\$6,618	\$220
74	52592	370159	19901011	3801 COUNTRY CLUB DR	CHARLOTTE	NC	282053213	\$2,427	\$310
75	52592	370159	19940801	3801 COUNTRY CLUB DR	CHARLOTTE	NC	282053213	\$23,770	\$4,738
76	52592	370159	19950826	3801 COUNTRY CLUB DR	CHARLOTTE	NC	282053213	\$11,187	\$4,702
77	53919	370158	19850607	608 KENLOUGH DR	CHARLOTTE	NC	282092853	\$1,013	\$0
78	53919	370158	19870618	608 KENLOUGH DR	CHARLOTTE	NC	282092853	\$652	\$680
79	53919	370158	19940719	608 KENLOUGH DR	CHARLOTTE	NC	282092853	\$4,130	\$2,493
80	56878	370159	19870910	217 WELLINGFORD ST	CHARLOTTE	NC	282136635	\$3,744	\$0

Table A-3 (Continued)**Watershed Study No. 3
Sugar Creek Watershed
Repetitive Loss Database**

Count	RL Number	Community Number	Date of Loss	Address	City	State	ZIP Code	Pay Building	Pay Cont
81	56878	370159	19820610	217 WELLINGFORD ST	CHARLOTTE	NC	282136635	\$7,346	\$0
82	56878	370159	19901012	217 WELLINGFORD ST	CHARLOTTE	NC	282136635	\$3,500	\$0
83	56878	370159	19910329	217 WELLINGFORD ST	CHARLOTTE	NC	282136635	\$3,154	\$0
84	56878	370159	19950828	217 WELLINGFORD ST	CHARLOTTE	NC	282136635	\$10,532	\$0
85	64458	370159	19820714	227 CHILLINGWORTH LN	CHARLOTTE	NC	282113007	\$1,849	\$0
86	64458	370159	19920616	227 CHILLINGWORTH LN	CHARLOTTE	NC	282113007	\$13,132	\$1,175
87	64458	370159	19950827	227 CHILLINGWORTH LN	CHARLOTTE	NC	282113007	\$4,865	\$0
88	64459	370159	19890922	2422 CLOISTER DR	CHARLOTTE	NC	282113914	\$2,587	\$250
89	64459	370159	19820610	2422 CLOISTER DR	CHARLOTTE	NC	282113914	\$3,550	\$2,900
90	64460	370159	19901010	5129 DOLPHIN LN	CHARLOTTE	NC	282153101	\$7,729	\$600
91	64460	370159	19930324	5129 DOLPHIN LN	CHARLOTTE	NC	282153101	\$2,014	\$0
92	64461	370159	19820610	400 ALLENDALE PL	CHARLOTTE	NC	282114103	\$4,848	\$2,726
93	64461	370159	19920615	400 ALLENDALE PL	CHARLOTTE	NC	282114103	\$4,777	\$0
94	64461	370159	19940818	400 ALLENDALE PL	CHARLOTTE	NC	282114103	\$2,796	\$0
95	70400	370159	19930313	2009 MILTON RD	CHARLOTTE	NC	282152467	\$1,755	\$0
96	70400	370159	19940729	2009 MILTON RD	CHARLOTTE	NC	282152467	\$2,130	\$0
97	70400	370159	19950827	2009 MILTON RD	CHARLOTTE	NC	282152467	\$2,270	\$0
98	70401	370159	19930313	4539 PERTH CT	CHARLOTTE	NC	282153322	\$1,335	\$0
99	70401	370159	19940729	4539 PERTH CT	CHARLOTTE	NC	282153322	\$1,726	\$0
100	70402	370159	19930313	4520 PERTH CT	CHARLOTTE	NC	282153337	\$1,130	\$0
101	70402	370159	19940729	4520 PERTH CT	CHARLOTTE	NC	282153337	\$1,928	\$0
102	70402	370159	19950827	4520 PERTH CT	CHARLOTTE	NC	282153337	\$2,290	\$0
103	73978	370159	19890922	5130 DOLPHIN LN	CHARLOTTE	NC	282153102	\$3,355	\$0
104	73978	370159	19950828	5130 DOLPHIN LN	CHARLOTTE	NC	282153102	\$41,518	\$0
105	74906	370159	19890922	5331 DOLPHIN LN	CHARLOTTE	NC	282152205	\$1,242	\$0
106	74906	370159	19950827	5331 DOLPHIN LN	CHARLOTTE	NC	282152205	\$3,337	\$0
107	77727	370159	19930323	1100 WILHAVEN DR	CHARLOTTE	NC	282114062	\$1,128	\$0
108	77727	370159	19950826	1100 WILHAVEN DR	CHARLOTTE	NC	282114062	\$7,992	\$0
109	80103	370159	19901212	5515 RUTH DR	CHARLOTTE	NC	282152227	\$3,394	\$0
110	80103	370159	19950827	5515 RUTH DR	CHARLOTTE	NC	282152227	\$4,564	\$0
111	87688	370159	19891001	3032 HANSON DR	CHARLOTTE	NC	282072620	\$1,105	\$0
112	87688	370159	19950827	3032 HANSON DR	CHARLOTTE	NC	282072620	\$44,189	\$0
113	87689	370159	19920615	2500 CLOISTER DR	CHARLOTTE	NC	282113916	\$4,582	\$0
114	87689	370159	19950827	2500 CLOISTER DR	CHARLOTTE	NC	282113916	\$2,624	\$0

Figure A-1 Study No. 3, Sugar Creek Watershed Existing Conditions, Sheet 1

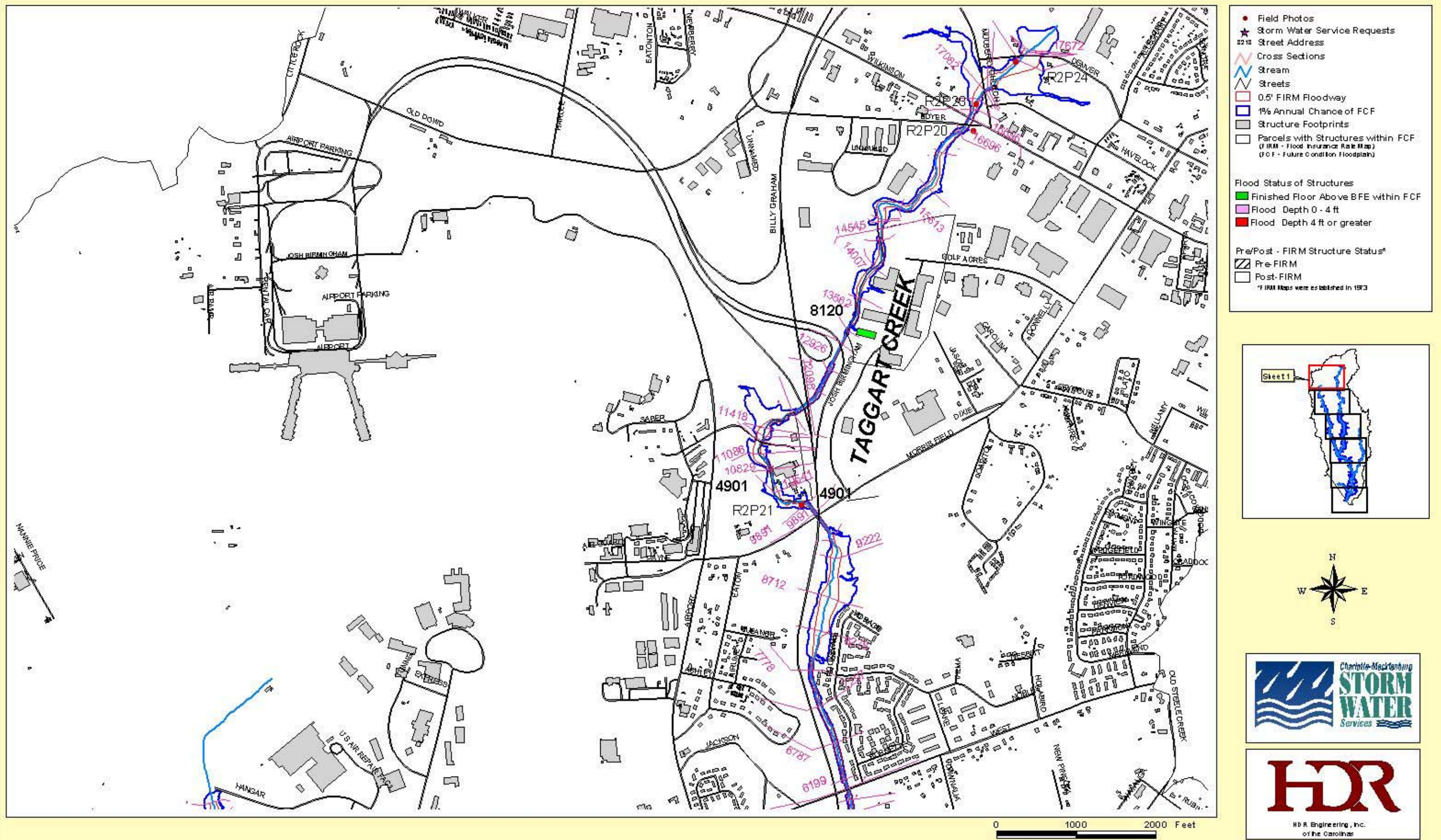


Figure A-1 Study No. 3, Sugar Creek Watershed Existing Conditions, Sheet 2

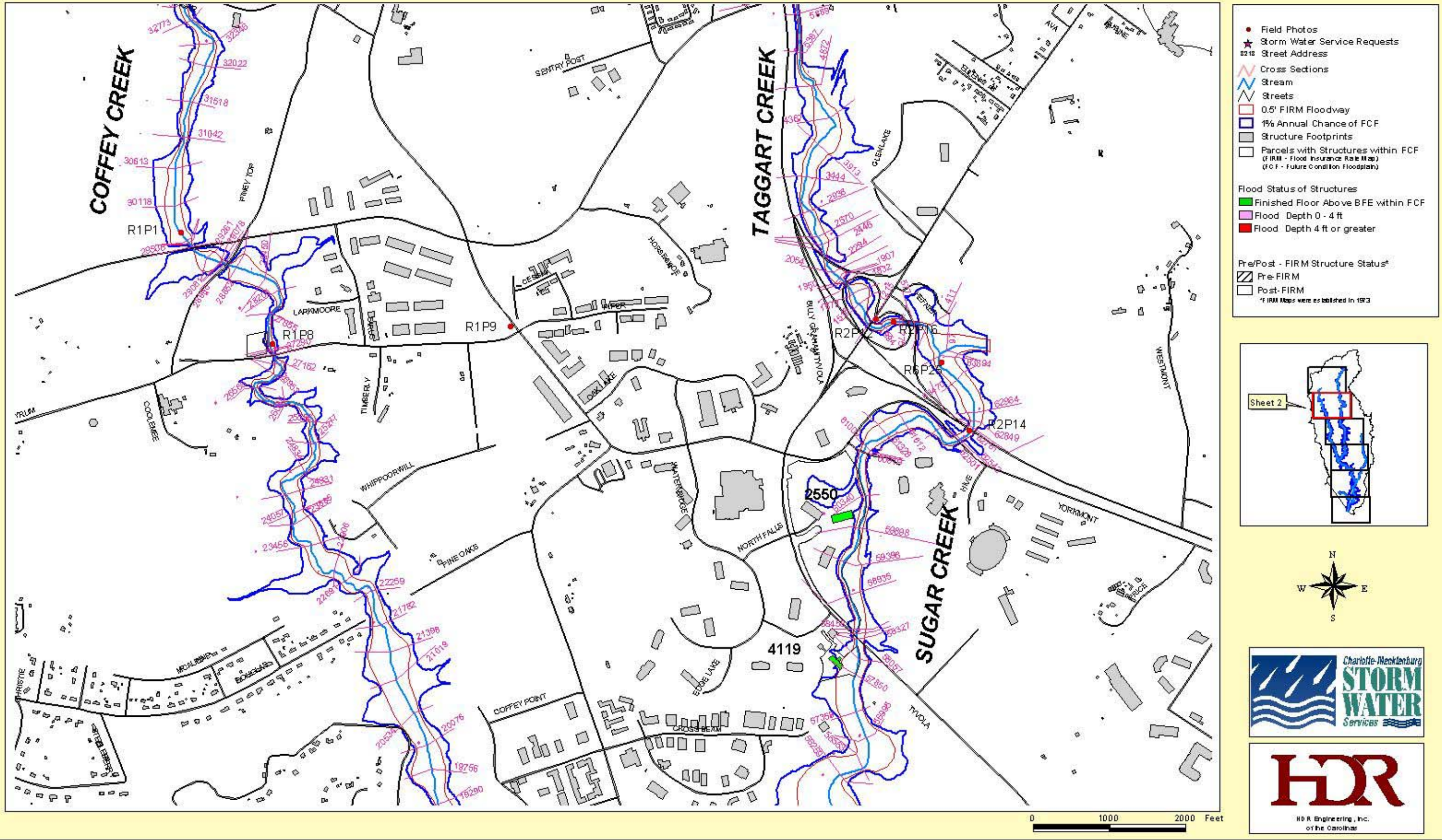


Figure A-1 Study No. 3, Sugar Creek Watershed Existing Conditions, Sheet 3

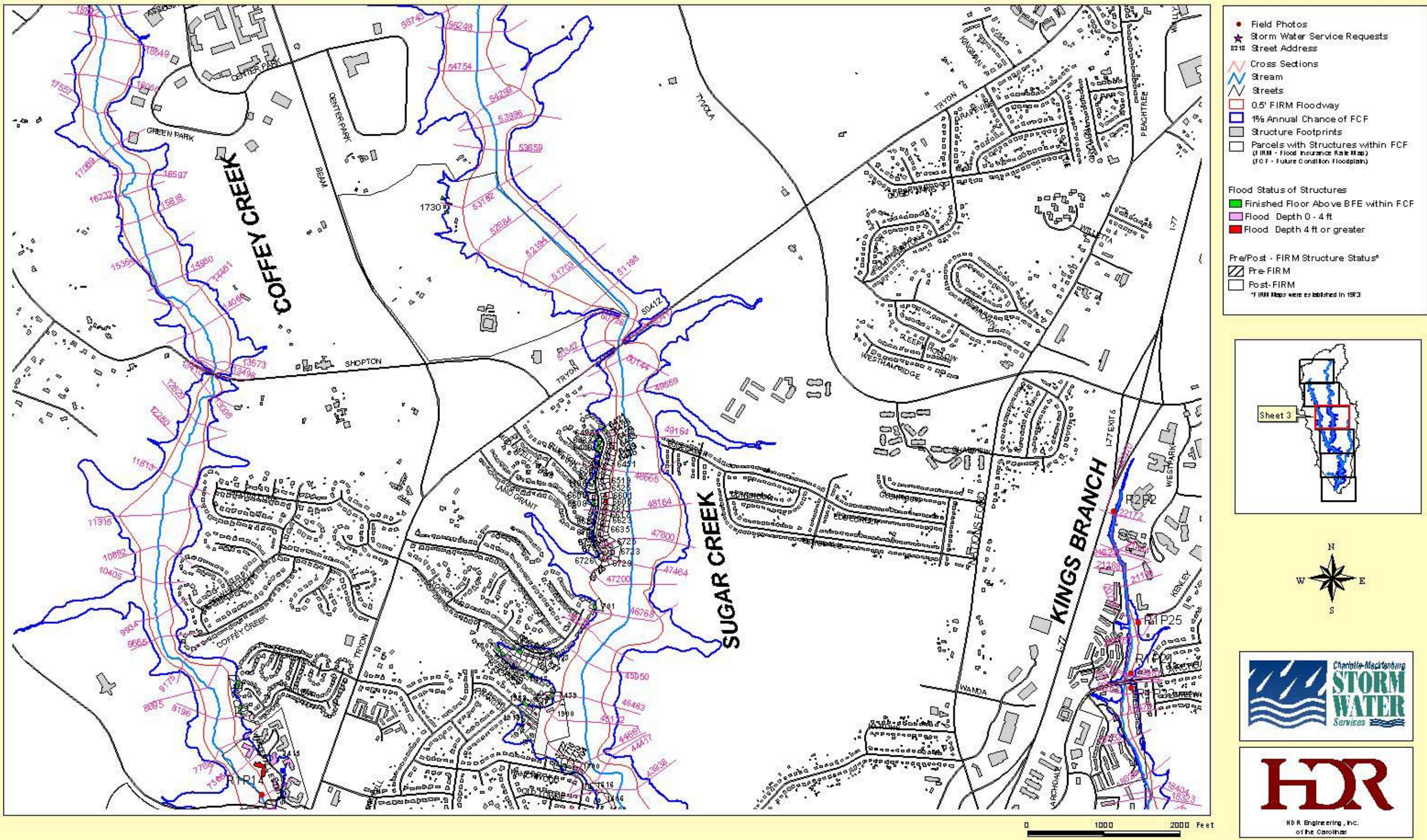


Figure A-1 Study No. 3 Sugar Creek Watershed Existing Conditions, Sheet 4

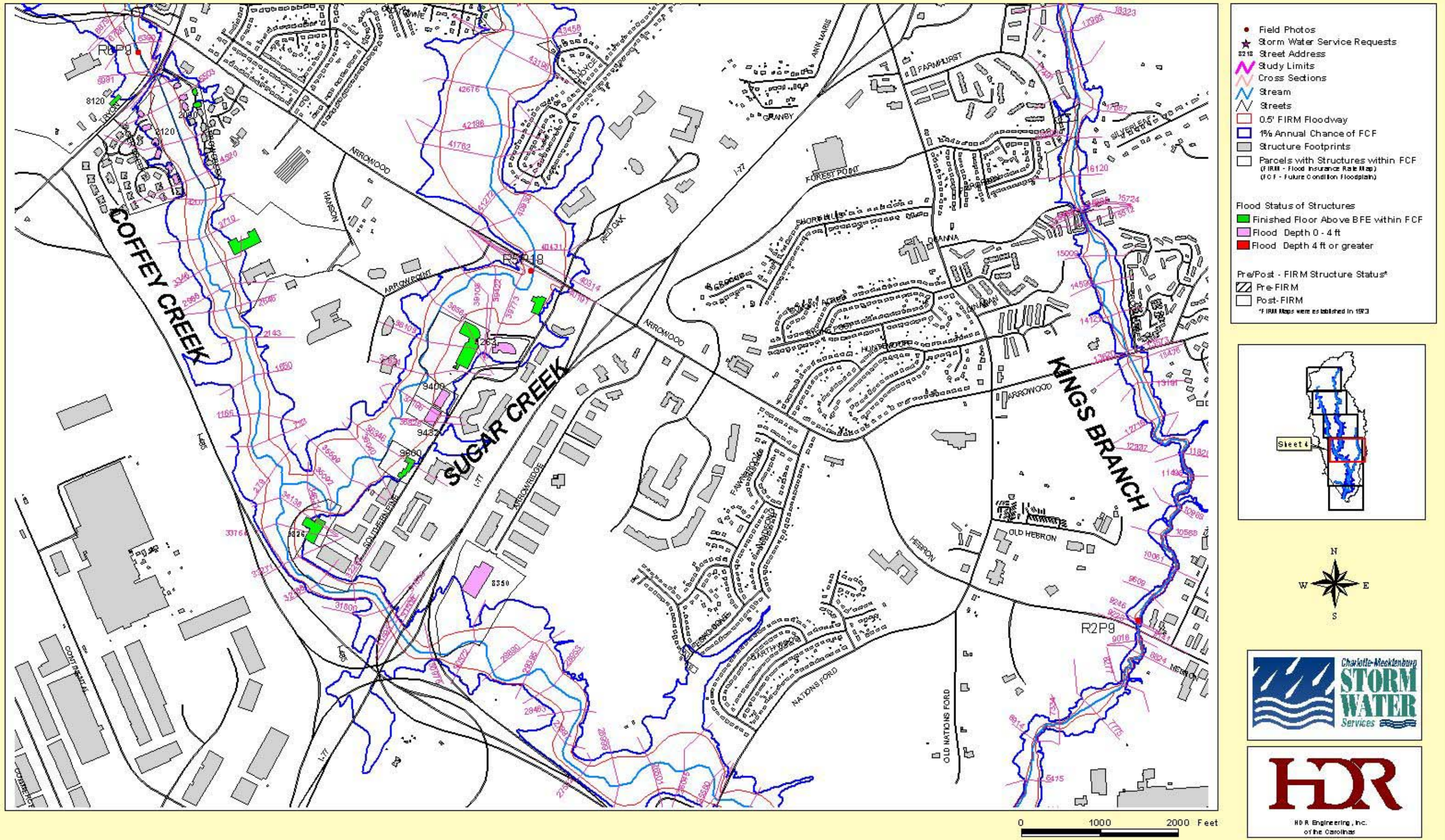


Figure A-1 Study No. 3, Sugar Creek Watershed Existing Conditions, Sheet 5

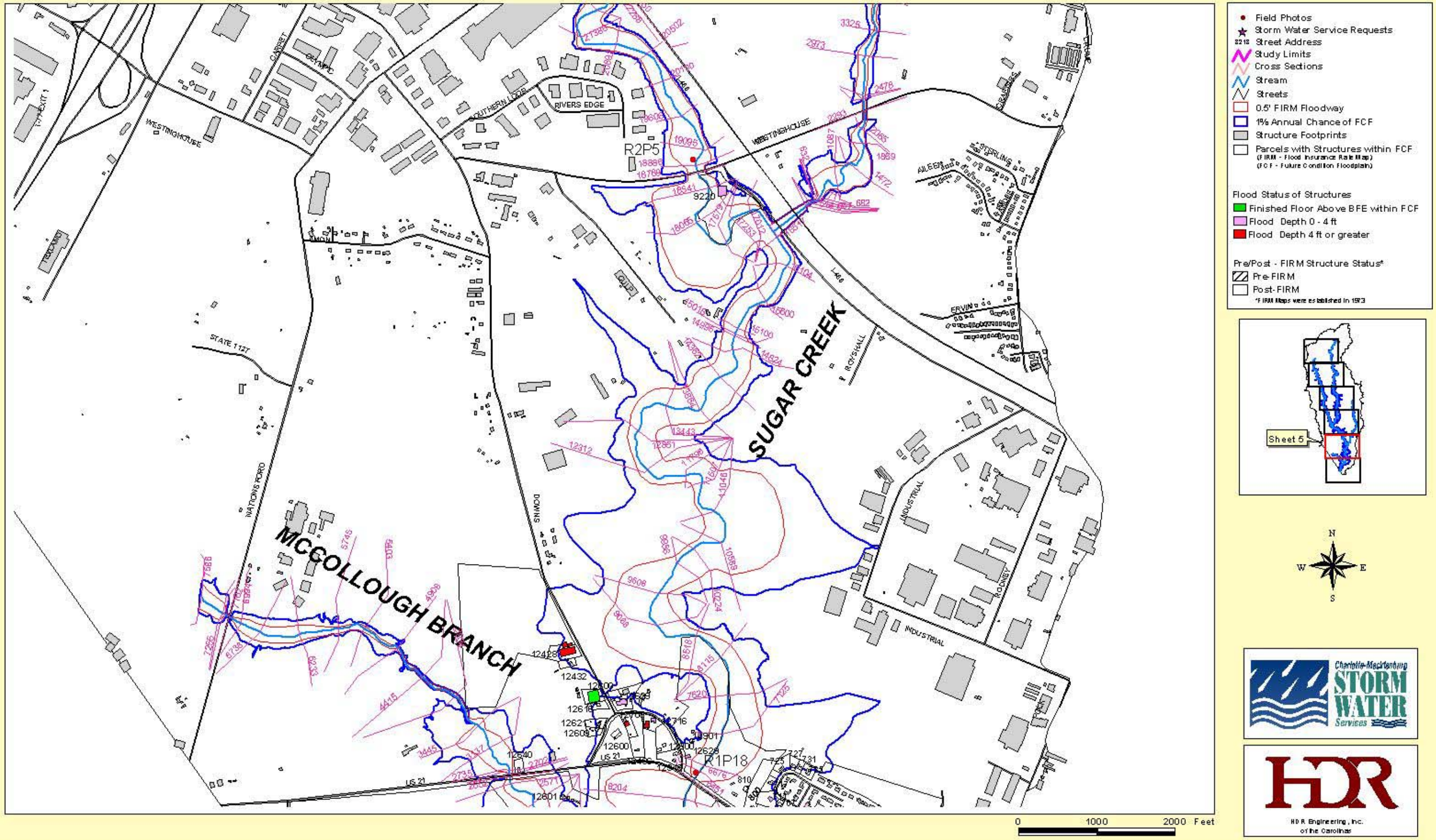
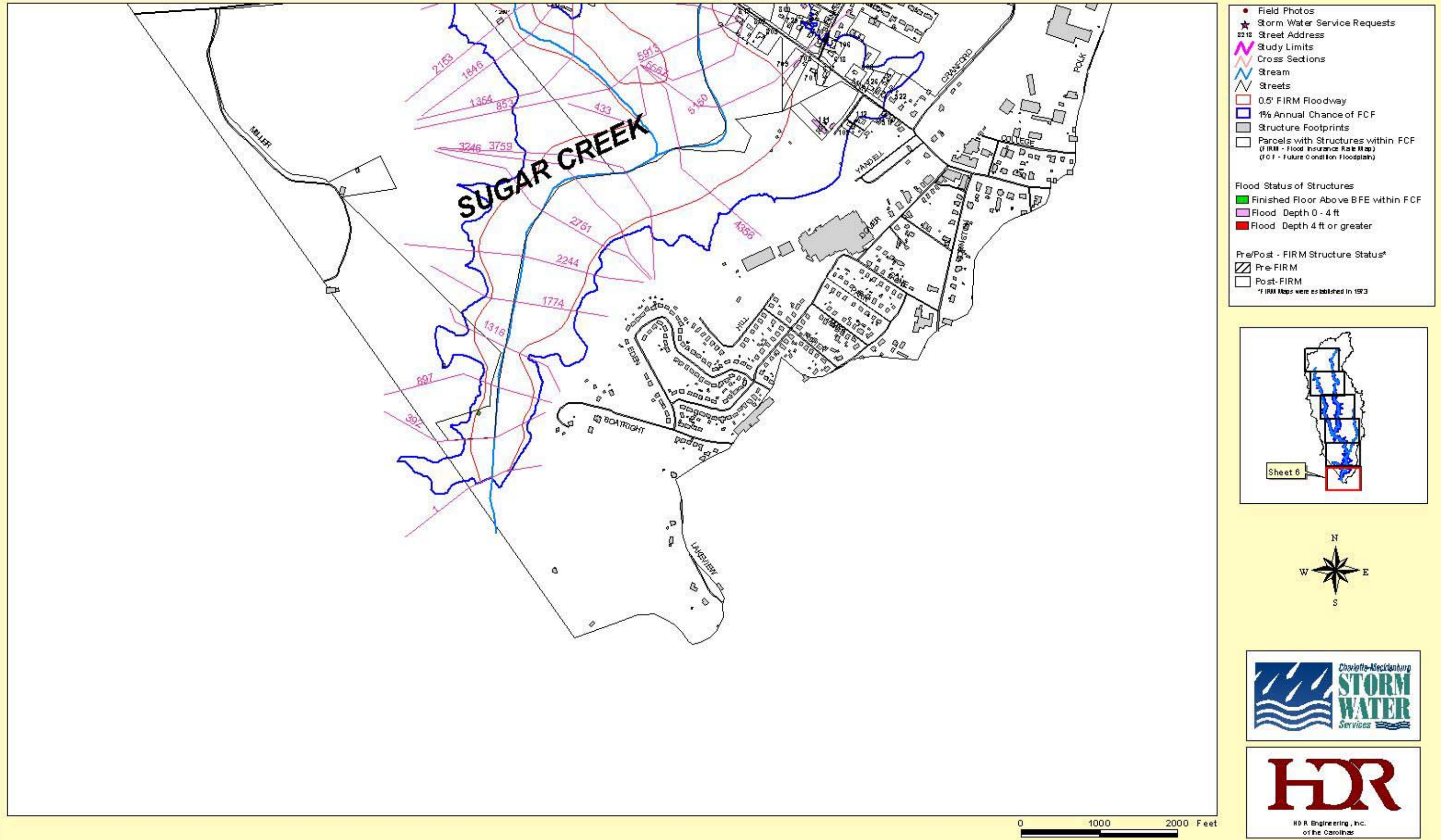


Figure A-1 Study No. 3, Sugar Creek Watershed Existing Conditions, Sheet 6



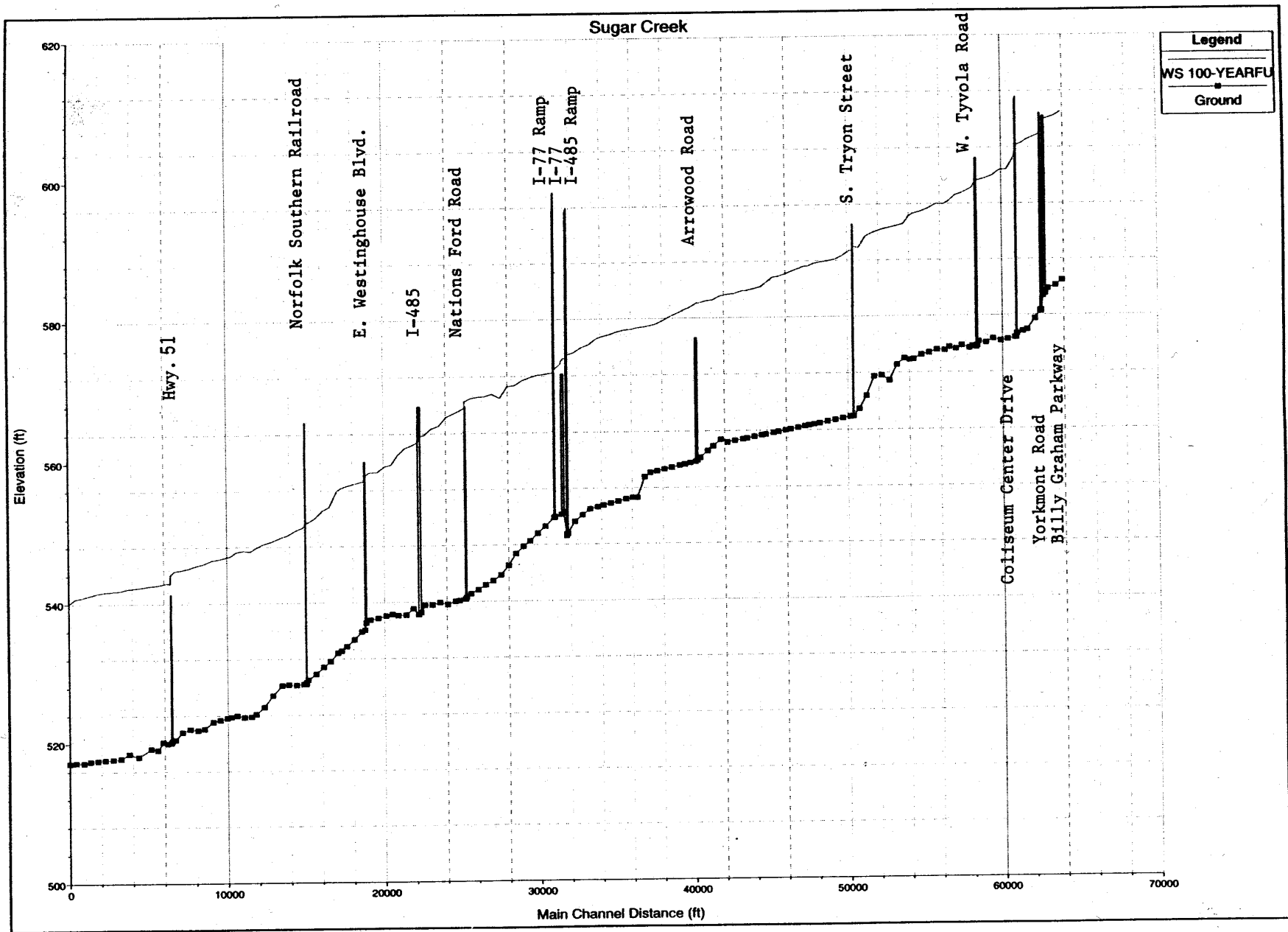


Figure A-2

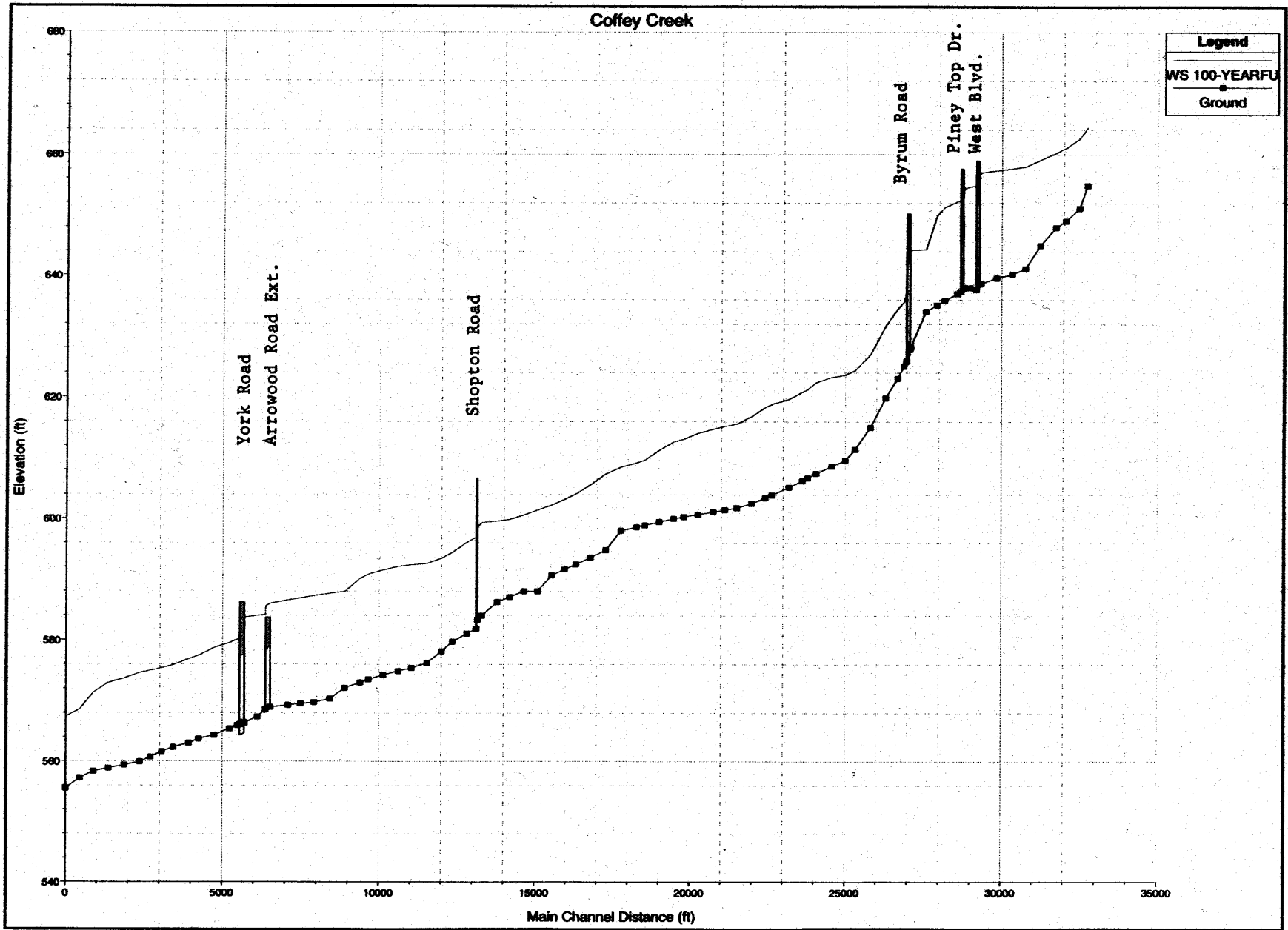


Figure A-3

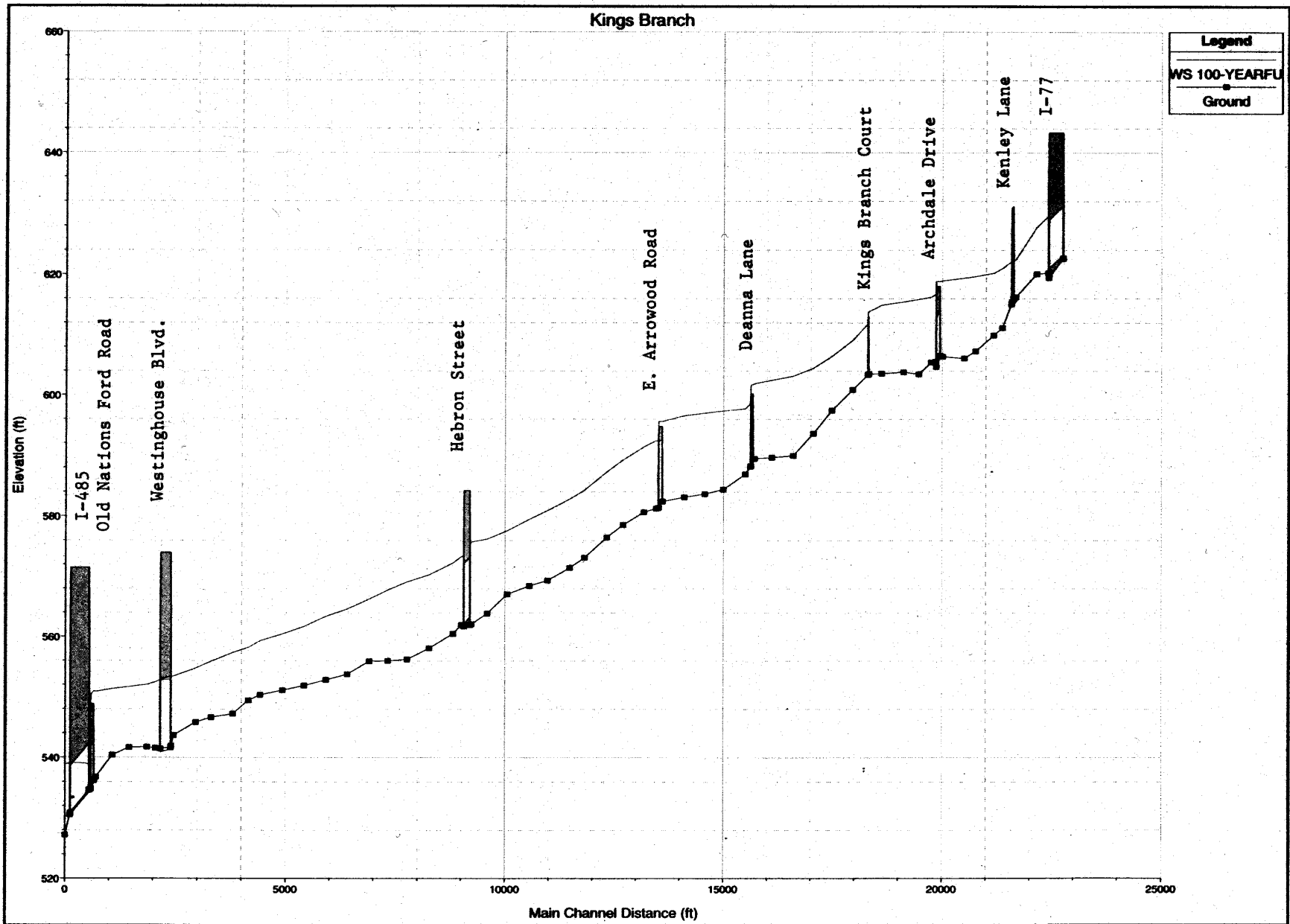


Figure A-4

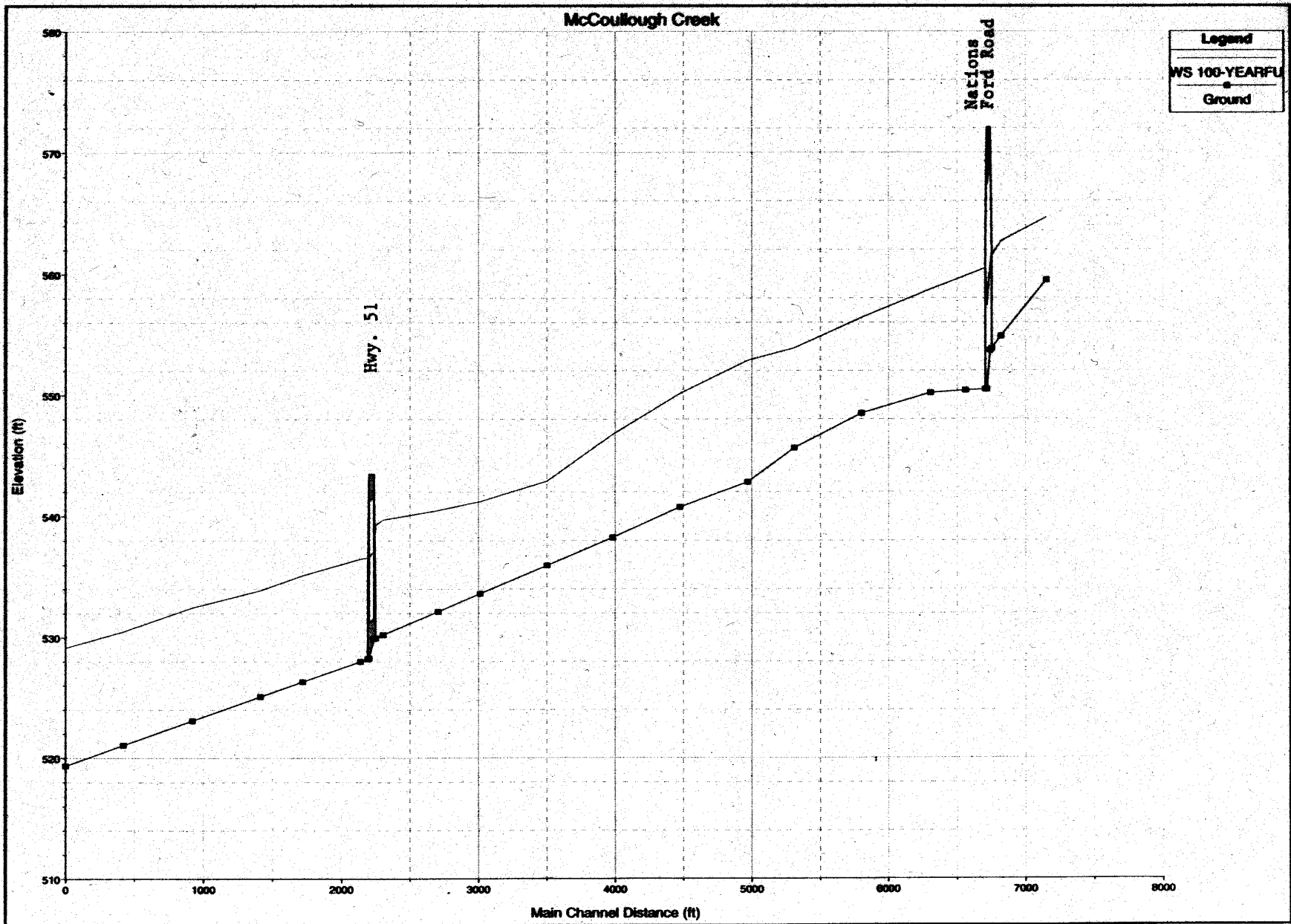


Figure A-5

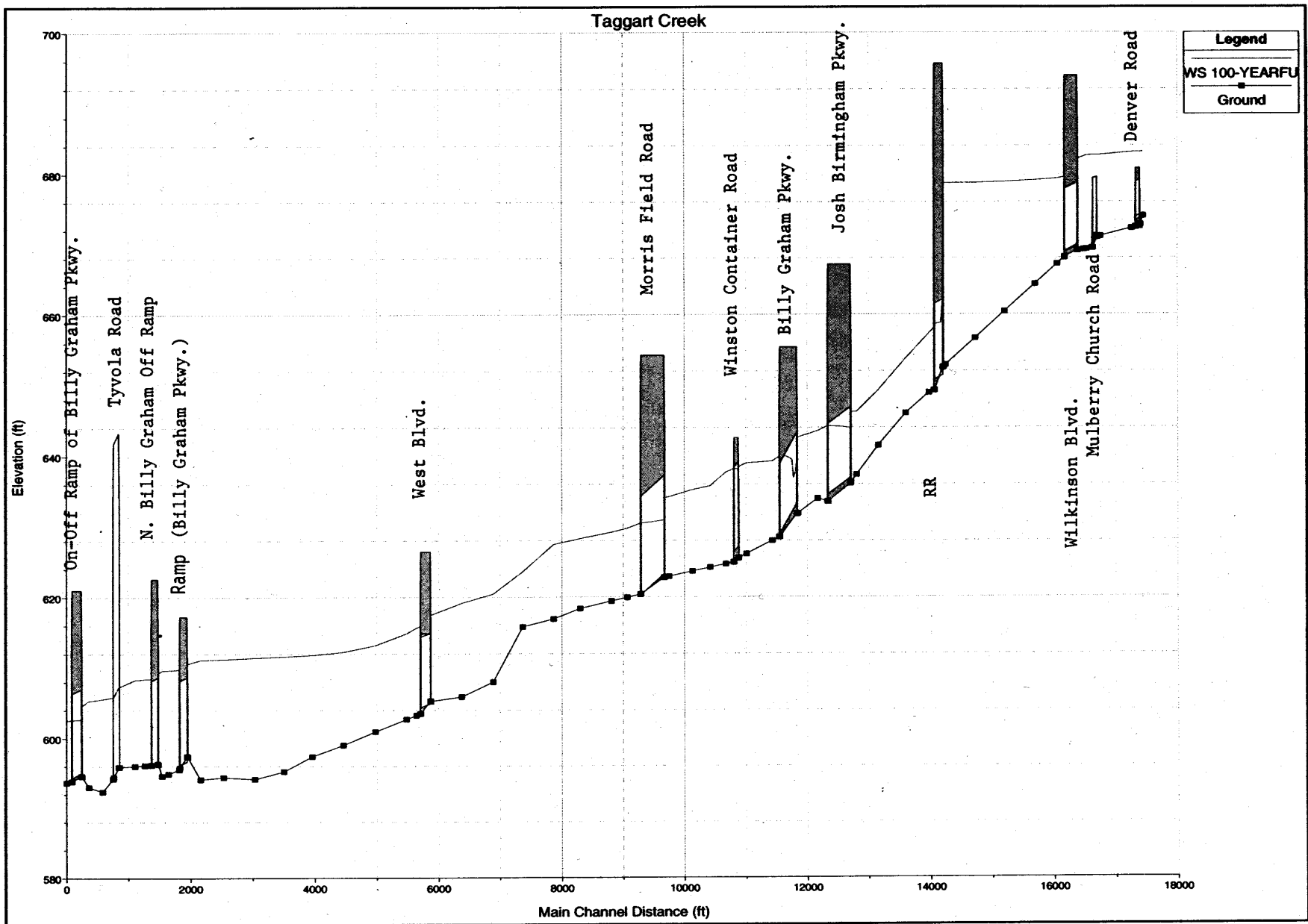


Figure A-6

APPENDIX B



Coffey Creek View, D/S Face Roll #1 Photo #1
LOOKING AT D/S FACE OF WEST BLVD, TRASH RACKS ACROSS THREE BOX CULVERTS.
ONE BOX HAS 2.5 FT OF DEPOSITED SEDIMENT.



Coffey Creek View, U/S Roll #1 Photo #8
LOOKING UPSTREAM OF BYRUM DRIVE. ROCKY BOTTOM PROVIDES GOOD HABITAT.
VEGETATED BANKS.



Coffey Creek View, D/S

Roll #1

Photo #9

NEW DEVELOPMENT IN COFFEY CREEK WATERSHED AT BYRUM DRIVE AND YORKMONT ROAD.



Coffey Creek View, U/S FACE

Roll #1

Photo #14

UPSTREAM FACE OF FOUR BARREL BOX CULVERT AT ARROWOOD ROAD. CREEK IS NARROWING ITSELF; AGRA DATION VISIBLE IN CHANNEL. DEBRIS (SHOPPING CARTS) IN STREAM.



Kings Branch View, U/S Roll #1 Photo #21
VIEW UPSTREAM OF ARCHDALE DRIVE. WIDE, SHALLOW CHANNEL WITH VEGETATED BANKS.



Kings Branch View, U/S Face Roll #1 Photo #22
UPSTREAM FACE OF ARCHDALE DRIVE CROSSING. SANITARY SEWER CROSSING 3.5 FEET ABOVE STREAM.



Kings Branch View, U/S Roll #2 Photo #9
LOOKING UPSTREAM OF HEBRON STREET. STREAM DOWNCUTTING WITH STEEP,
SEVERLY ERODED BANKS. BOULDERS PRESENT IN CHANNEL.



McCullough Creek View, D/S FACE Roll #1 Photo #18
DOWNSTREAM FACE OF THREE BARREL BOX CULVERT UNDER US 51. EVIDENCE
OF HEADCUTTING. STABLE BANKS WITH RIPARIAN VEGETATION.



Sugar Creek View, U/S Roll #2 Photo #5
VIEW UPSTREAM OF WESTINGHOUSE BLVD BRIDGE. CHLORINE SMELL OBSERVED. WIDE CHANNEL AND FLOODPLAIN.



Sugar Creek View, U/S Roll #2 Photo #12
VIEW UPSTREAM OF TYVOLA ROAD. DEVELOPMENT NEARBY INCLUDES COLISEUM, OFFICE PARK, AND GOLF COURSE. BANKS COVERED BY KUDZU. LARGE SAND BARS AND SANDY BOTTOM.



Sugar Creek View, D/S FACE Roll #2 Photo #14
UNDER YORKMONT ROAD BRIDGE. DOWNSTREAM FACE OF BILLY GRAHAM
PARKWAY BRIDGES IN DISTANCE. BOTTOM MATERIAL IS COBBLES AND
BOULDERS. VEGETATION PROTECTS BANKS.



Sugar Creek View, D/S Roll #6 Photo #9
SUGAR CREEK BETWEEN ARROWOOD ROAD AND S. TRYON STREET. SANITARY SEWER
CROSSING WITH POOL BELOW 4-6 FEET DEEP. LIVE CLAMS IN SAND.



Sugar Creek View, U/S Roll #5 Photo #18
DOWNSTREAM FACE OF ARROWOOD ROAD BRIDGE (WEST BOUND). EROSION AROUND
PIERS ON THE RIGHT SIDE (LOOKING DOWNSTREAM).



Sugar Creek View, RIGHT BANK Roll #6 Photo #25
SUGAR CREEK BETWEEN ARROWOOD DRIVE AND S. TRYON STREET. TRIBUTARY
ENTERS ON LEFT BANK (LOOKING DOWNSTREAM), ALL TRIBUTARIES DEEPLY
INCISED BECAUSE OF HEADCUTTING.



Taggart Creek View, D/S Roll #2 Photo #16
VIEW OF CHANNEL DOWNSTREAM OF TYVOLA ROAD AND BILLY GRAHAM PKWY. WIDE CHANNEL WITH GOOD RIPARIAN ZONE.



Taggart Creek View, D/S Roll #2 Photo #20
LOOKING DOWNSTREAM OF RAILROAD CROSSING (BELOW WILKINSON BOULEVARD). BOULDERS PLACED IN CHANNEL. NARROW RIPARIAN ZONE IN DEVELOPING AREA.



Taggart Creek View, U/S Roll #2 Photo #21
LOOKING UPSTREAM FROM MORRIS FIELD ROAD. RIPARIAN ZONE WITH VEGETATION
PROTECTING BANKS.



Taggart Creek View, U/S FACE Roll #2 Photo #23
UPSTREAM FACE OF DOUBLE BARREL BOX CULVERT UNDER WILKINSON BLVD.
BOULDERS IN CHANNEL WITH SANDY-SILTLY BOTTOM. SOME MILD LOWER BANK
EROSION.



Taggart Creek View, D/S FACE Roll #2 Photo #24
DOWNSTREAM FACE OF DOUBLE BARREL CULVERT UNDER DENVER AVENUE.
UPSTREAM AREA IS HEAVILY FORESTED.