

DRAINAGE SYSTEM																										
STRUCTURE NO.	DESCRIPTION																									
		Cu.Yd.	Cu.Yd.	Cu.Yd.	Cu.Yd.	Cu.Yd.	lb.	lb.	Lin.Ft.	Lin.Ft.	Lin.Ft.	Lin.Ft.	Lin.Ft.	Lin.Ft.	Lin.Ft.	C.Y.	C.Y.	Lin.Ft.	Ea.	Ea.						
1	Type "C" C.B. 24" E.S. RCCP	130.62 47		4.42 5.5			89 88			18.5 13.5*																
2	Type "D" C.B. 24" E.S. RCCP	43.22 39		7.09 5.8			66 81			129 110*																
3	Type "C" C.B. 24" E.S. RCCP	55.18 45		4.87 4.6			89 85			43 59*																
4	Type "C" C.B. 24" E.S. RCCP	271.46 63		6.92 6.7			110 88		249 250*																	
5	Type "D" C.B. 24" E.S. RCCP	68.77 86		3.30 3.2			65 60			90*																
6	Type "A" SDMH 24" E.S. RCCP	126.12 83		0.55 6.7			24 32			105*	103															
7	Type "B" C.B. 24" E.S. RCCP	61.01 89		4.04 7.2			89 114		47 56*																	
8	Type "A" SDMH 36" E.S. RCCP	35.59 88		0.55 6.7			24 32					152 170*														
9	Type "C" C.B. 36" E.S. RCCP	169.23 84		6.51 5.4			467 91					173 148														
10	Type "D" C.B. 24" E.S. RCCP	187.10 215		4.62 4.8			66 73			221																
11	Type "D" C.B. 24" E.S. RCCP	70.01 98		4.27 5.3			66 73			92 80																
12	Type "D" C.B. 24" E.S. RCCP	200.30 222		4.08 5.2			65 73			231 234																
13	Type "D" C.B. 24" S.S. RCCP	150.10 178		4.36 5.3			68 73		168.43 168																	
14	Type "A" Special C.B. 24" E.S. RCCP	37.10 46		7.96 9.8			139 143			57.42 57																
15	Type "A" C.B. Standard Headwall 24" S.S. RCCP, GRP Spillway	32.60 39	8	7.96 8.2	1.42		184 170		11 13																	
16	Standard D.I. 24" E.S. RCCP	22.01 24		2.98 1.7						62.53 59																
17	Type "C" C.B. 24" E.S. RCCP	31.30 35		6.17 6.8			111 98			68.15 62																
18	Type "C" C.B. 24" E.S. RCCP	28.90 32		5.46 6.6			111 98			39.2 39																
19	Type "D" C.B. 24" E.S. RCCP	20.30 26		4.60 5.8			68 73			37.65 39																
20	Type "D" C.B. 30" E.S. RCCP	188.01 23		3.70 5.1			68 73				29 24															
21	Type "C" C.B. Std Headwall 30" S.S. RCCP, GRP Spillway	35.60 39	16	5.47 7.0	2.35 2.2		111 133				11						5.32 6.0									
22	Type "D" C.B. 24" E.S. RCCP	18.07 23		3.61 5.0			77 73			38 37																
23	Type "D" C.B. 24" E.S. RCCP	22.85 23		3.98 4.7			69 73			35.5 36																
24	Type "D" C.B. 24" E.S. RCCP	16.73 20		3.75 4.7			68 73			9.5 12																
25	5'x4'x12' Reinf. Conc. Box Culvert 4'x4'x7' Reinf. Conc. Box Culvert Type "A" C.B. CRIM Wall	10.58 101				142		17,428		8						1.84 2										
26	Type "D" C.B. 24" E.S. RCCP	32.01 46		4.72 5.9			68 73			33 29																
27	Type "D" Special C.B. 5'x4'x24' RCB Culvert	67.50 486				131		16,079																		
28	5'x3'x12' Reinforced Concrete Box Culvert, Headwall	18.00 199				58		7,741								1.1 2										
29	5'x3'x12' Reinforced Concrete Box Culvert, Headwall	30.60 240				37		4,986								0.65 4.3										
30	Type "A" Special C.B. 24" E.S. RCCP	14.90 156		7.24 8.6			173 143			161.8 164																
31	Type "C" C.B. 24" E.S. RCCP	53.80 60		5.97 5.8			89 98			107 105																
32	Type "B" C.B. Standard Headwall 24" E.S. RCCP, GRP Spillway	27.60 36	5	4.22 6.0	1.54 1.4		131 140			45 41							1.52 3.2									
33	Type "C" C.B. 24" E.S. RCCP	44		6.0			98			29																
34	Type "B" C.B. Standard Headwall 24" S.S. RCCP, GRP Spillway	40.55 34	13	5.99 6.2	1.38 1.4		132 140		46.70 28								4.2 6.9									
35	Standard D.I. 24" S.S. RCCP	12.60 2		2.75 1.7					6																	
36	Type "A" C.B. Standard Headwall 24" E.S. RCCP	35.08 97		5.51 6.7	1.39 1.4		134 170			107 101																
37	Type "C" C.B. 24" E.S. RCCP	28.41 108		5.67 5.1			89 98			129 126																
38	Type "B" C.B. Standard Headwall 24" E.S. RCCP	35.38 33		5.49 5.9	1.39 1.4		131 140			56 57																
39	Std. D.I. - 2 Standard Headwall 24" E.S. RCCP, GRP Spillway	26	24																							
40	Type "D" C.B. 24" S.S. RCCP	19.68 26		5.8 5.3			100 98																			
41	Existing Culvert 18" S.S. RCCP	14.40 18		1.1 1.4			49 57																			
42	Type "D" C.B.	5.81 6		2.13 3.8			68 73																			
43	2-36" x 22" Corrugated Metal Pipe Arches	4 8																								
44	36" x 3' 6" Manhole to G.R.P. Spillway, Peace St. Sta. 5+00	43.72		5.50	1.77		30.0			33.5																
TOTAL		4804.72 4090	44 68	170.70 187.5	18.07 18.5		368 3410	40,234		300* 333	350* 1551	143 24	152 170*	173 175	379/18.04 428	12.70 13.4	2 2	33 33	30 34	32 33						
* Reinforced Concrete Culvert Pipe with Collars.																										
DRAINAGE DITCHES																										
STRUCTURE NO.	DESCRIPTION																									
		Cu.Yd.	Cu.Yd.																							
	NOTE:																									
	Sta. 331+00 to 335+10 ± Lt. Plain Ditch 488 Lin. Ft.	107 60																								
	Sta. 336+00 to 339+50 ± Lt. GRP Ditch "A" 386 Lin. Ft.	190 133	66.78 66.5																							
	Sta. 340+50 ± Lt. GRP Ditch "A" 14 Lin. Ft.	4.9 9	2.0 2.8																							
	Sta. 343+85 to 345+45 ± Lt. GRP Ditch "B" 168 Lin. Ft.	47.12 436	75.47 71.6																							
TOTAL		173.1 634	144.25 140.6																							
This project requires alternate bids on drainage culvert pipes, sizes 18" to 36". The items on this Drainage System sheet call for concrete pipes of various strengths and sizes. Corrugated galvanized sheet metal pipes shall be of the same sizes as indicated on this sheet except that 30" corrugated metal pipe shall be substituted for the 24" concrete pipe shown on line "G".																										
The gauges of metal pipes are as follows:																										
18" pipe - #16 gauge																										
24" pipe - #14 gauge																										
30" pipe - #14 gauge																										
36" pipe - #12 gauge																										