Appendix D
Unit Costs And Cost Opinions

Storm	enworth, Kansas nwater Master Plan				P.N. 26529.1
Unit (Costs for Stormwater Facility Improvemen	nts		Septe	ember 27, 19
					-
ltem	ltem				
À.	per Description	Unit			1995 Dolla
1.	Pipe and Inlet (Enclosed) System Curb and Gutter				
2.		lf			12.0
2.1	Storm Sewer Inlets Curb Inlet				
2.2	Area Inlet	ea			775.
3.		ea			680.0
3.1	Reinforced Concrete Pipe *(1) 6 inch RCP				
3.2	12 inch RCP	lf			
3.3		lf			21.0
3.4	15 inch RCP	lf			25.0
3.5	18 inch RCP	lf			34.0
3.6	21 inch RCP	lf			37.0
3.7	24 inch RCP	lf		1	42.0
	27 inch RCP	lf			47.0
3.8	30 inch RCP	lf			52.0
3.9	36 inch RCP	lf			66.0
3.10	42 inch RCP	If			
3.11	48 inch RCP	lf			90.0
3.12	54 inch RCP	If		 	110.0
3.13	60 inch RCP	lf		 	135.0
3.14	66 inch RCP	lf		-	200.0
3.15	72 inch RCP	If		-	220.0
3.16	78 inch RCP	lf		-	250.0
3.17	84 inch RCP	lf		-	270.0
3.18	90 inch RCP	lf			286.0
3.19	96 inch RCP	lf			321.0
3.20	102 inch RCP	lf			357.0
3.21	108 inch RCP	If			428.0
3.22	114 inch RCP	If			518.00
3.23	120 inch RCP	lf If			564.00
3.24	126 inch RCP	lf If			612.00
3.25	132 inch RCP	lf			660.00
3.26	138 inch RCP	If			670.00
3.27	144 inch RCP	lf			750.00
3.28	156 inch RCP	lf			820.00
		11			
	Reinforced Concrete Box Sections (Re Storm Sewer Manholes	ier to Sec	tion B. Culverts	, Items 3, 4,	and 5)
5.1	4 ft, 5 ft, and 6 ft Inside Diameter				
.2	Greater than 6 ft Inside Diameter	ea			2,350.00
	Culverts	ea			5,250.00
	Excavation and Backfill				
<u> </u>		су			4.00
.1	Reinforced Concrete Pipe Culverts *(1			1	50
.1	12 inch RCP culvert	lf			15.00
	15 inch RCP culvert	lf			20.00
.3	18 inch RCP culvert	lf			21.00
.4	21 inch RCP culvert	lf			25.00
.5	24 inch RCP culvert	lf			28.00
.6	27 inch RCP culvert	If			32.00

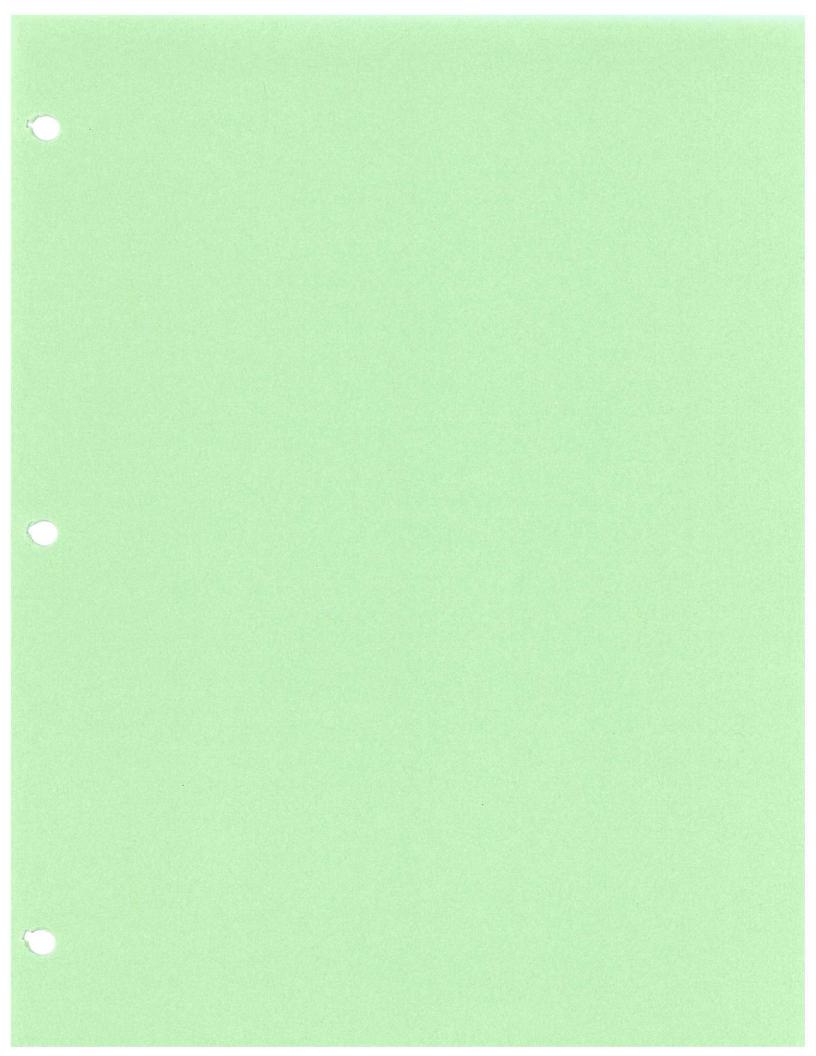
Stormwa	worth, Kansas ater Master Plan		B&V P.N. 26529.11
Unit Cos	sts for Stormwater Facility Impr	ovements	September 27, 199
	The state of the s	overnents	
Item	ltem		
	Description	Linit	
2.7	30 inch RCP culvert	Unit If	1995 Dollar
2.8	36 inch RCP culvert	lf lf	47.0
2.9	42 inch RCP culvert	lf lf	65.0
2.10	48 inch RCP culvert	III I	77.0
2.11	54 inch RCP culvert	if if	91.0
2.12	60 inch RCP culvert	if	110.0
2.13	66 inch RCP culvert	lf l	135.0
2.14	72 inch RCP culvert	if i	158.0
2.15	78 inch RCP culvert	if if	175.0
2.16	84 inch RCP culvert	lf lf	216.0
2.17	90 inch RCP culvert	lf l	255.0
2.18	96 inch RCP culvert	if if	282.0
2.19	102 inch RCP culvert	if	305.00
2.20	108 inch RCP culvert	lf l	359.00
2.21	114 inch RCP culvert	if if	403.00
2.22	120 inch RCP culvert	if i	425.00
2.23	126 inch RCP culvert	lf l	448.00
2.24	132 inch RCP culvert	lf l	483.00
2.25	138 inch RCP culvert	if if	530.00
2.26	144 inch RCP culvert	lf	580.00
3.	Reinforced Concrete Box Culv	erts. Single Cell (ASTM C789)	630.00
		If	x (2)
	1 - 2 x 1.5 RCB	lf l	160.00
	1 - 2 x 2 RCB	if if	170.00
	1 - 2.5 x 2 RCB	lf l	180.00
	1 - 2.5 x 2.5 RCB	lf l	190.00
	1 - 3 X 2 RCB	lf l	200.00
	1 - 3 X 3 RCB	lf .	215.00
	1 - 4 X 2 RCB	lf	240.00 245.00
	1 - 4 X 3 RCB	lf .	
	1 - 4 X 4 RCB	lf	270.00 295.00
3.6	1 - 5 X 3 RCB	lf	320.00
3.7	1 - 5 X 4 RCB	lf	348.00
	1 - 5 X 5 RCB	lf	
3.9	1 - 5.5 X 5.5 RCB	lf l	380.00
	1 - 6 X 3 RCB	If	245.00
3.11	1 - 6 X 4 RCB	If	345.00
	1 - 6 X 5 RCB	If	355.00 360.00
3.12			
3.12 1 3.13 1	1 - 6 X 6 RCB	lf l	
3.12 1 3.13 1 3.14 1	1 - 6 X 6 RCB 1 - 7 X 4 RCB		366.00
3.12 1 3.13 1 3.14 1 3.15 1	1 - 6 X 6 RCB 1 - 7 X 4 RCB 1 - 7 X 5 RCB	lf	366.00 375.00
3.12 1 3.13 1 3.14 1 3.15 1 3.16 1	1 - 6 X 6 RCB 1 - 7 X 4 RCB 1 - 7 X 5 RCB 1 - 7 X 6 RCB	lf lf	366.00 375.00 384.00
3.12 1 3.13 1 3.14 1 3.15 1 3.16 1 3.17 1	1 - 6 X 6 RCB 1 - 7 X 4 RCB 1 - 7 X 5 RCB 1 - 7 X 6 RCB 1 - 7 X 7 RCB	If If If	366.00 375.00 384.00 378.00
3.12 1 3.13 1 3.14 1 3.15 1 3.16 1 3.17 1	1 - 6 X 6 RCB 1 - 7 X 4 RCB 1 - 7 X 5 RCB 1 - 7 X 6 RCB 1 - 7 X 7 RCB I - 8 X 4 RCB	If If If If	366.00 375.00 384.00 378.00 395.00
3.12 1 3.13 1 3.14 1 3.15 1 3.16 1 3.17 1 3.18 1	1 - 6 X 6 RCB 1 - 7 X 4 RCB 1 - 7 X 5 RCB 1 - 7 X 6 RCB 1 - 7 X 7 RCB I - 8 X 4 RCB I - 8 X 5 RCB	If If If If If If	366.00 375.00 384.00 378.00 395.00 423.00
3.12 1 3.13 1 3.14 1 3.15 1 3.16 1 3.17 1 3.18 1 3.19 1	1 - 6 X 6 RCB 1 - 7 X 4 RCB 1 - 7 X 5 RCB 1 - 7 X 6 RCB 1 - 7 X 7 RCB I - 8 X 4 RCB	If If If If If If If	366.00 375.00 384.00 378.00 395.00

Stormwa	vorth, Kansas ater Master Plan		B&V F	N. 26529.110
			Septe	mber 27, 199
Offic Cos	sts for Stormwater Facility Improvements	-		
Item	Item			
more comments.	Description	- 		
3.22	1 - 8 X 8 RCB	Unit		1995 Dollars
3.23	1 - 9 X 5 RCB	lf		477.00
3.24	1 - 9 X 6 RCB	lf		452.00
3.25	1 - 9 X 7 RCB	lf		468.00
3.26	1 - 9 X 8 RCB	lf us		487.00
3.27	1 - 9 X 9 RCB	lf lf		531.00
3.28	1 - 10 X 4 RCB	lf l		568.00
3.29	1 - 10 X 5 RCB	lf lf		
3.30	1 - 10 X 6 RCB	lf l		497.00
3.31	1 - 10 X 7 RCB	and the state of t		501.00
3.32	1 - 10 X 8 RCB	lf lf		506.00
3.33	1 - 10 X 9 RCB	The second secon		530.00
3.34	1 - 10 X 10 RCB	lf lf		569.00
3.35	1 - 11 X 4 RCB	lf		591.00
3.36	1 - 11 X 6 RCB	lf		526.00
3.37	1 - 11 X 8 RCB	llf		552.00
3.38	1 - 11 X 10 RCB			581.00
3.39	1 - 11 X 11 RCB	lf If		671.00
3.40	1 - 12 X 4 RCB	1000		723.00
3.41	1 - 12 X 6 RCB	lf lf		563.00
	1 - 12 X 8 RCB	lf		577.00
3.43	1 - 12 X 9 RCB	lf lf		646.00
	1 - 12 X 10 RCB	lf lf		
	1 - 12 X 12 RCB	lf		717.00
	1 - 14 X 8 RCB	lf		809.00
3.47	1 - 14 X 10 RCB	lf If		
	1 - 14 X 12 RCB	lf		827.00
	1 - 14 X 14 RCB	lf		952.00
	1 - 15 X 8 RCB	lf		1,055.00
	1 - 15 X 10 RCB	lf		
	1 - 16 X 12 RCB	lf I		
	1 - 16 X 14 RCB	lf		775.00
	1 - 16 X 16 RCB	lf		829.00
	1 - 17 X 10 RCB	lf		883.00
	1 - 18 X 14 RCB	If		
	1 - 18 X 16 RCB	lf		
	1 - 18 X 18 RCB	lf .		
	1 - 20 X 14 RCB	lf		
	1 - 20 X 16 RCB	If		
3.61	1 - 20 X 18 RCB	lf		
3.62	1 - 20 X 20 RCB	If		
	Reinforced Concrete Box Culverts, Double	Cell (Kr	OT) Span y Bion */0)	
1.1 2	2 - 5 X 2 RCB	If	(2)	F00 05
	TVODOD	If		500.00
		lf		545.00
		lf		580.00
		lf		605.00
				535.00

Stormw	worth, Kansas ater Master Plan		B&V P.N. 26529.110
	sts for Stormwater Facility Improve	monto	September 27, 199
	to other water racinty improve	anents	
Item	Item		
	Description	11-24	
4.6	2 - 6 X 3 RCB	Unit	1995 Dollars
4.7	2 - 6 X 4 RCB	lf uc	575.00
4.8	2 - 6 X 5 RCB	lf u	580.00
4.9	2 - 6 X 6 RCB	lf lif	580.00
4.10	2 - 7 X 3 RCB	lf If	585.00
4.11	2 - 7 X 4 RCB	lf ,	630.00
4.12	2 - 7 X 5 RCB	If	665.00
4.13	2 - 7 X 6 RCB	If If	675.00
4.14	2 - 7 X 7 RCB	lf	660.00
4.15	2 - 8 X 4 RCB	A STATE OF THE PARTY OF THE PAR	680.00
4.16	2 - 8 X 5 RCB	lf lf	750.00
4.17	2 - 8 X 6 RCB	lf l	765.00
4.18	2 - 8 X 7 RCB		770.00
4.19	2 - 8 X 8 RCB		810.00
4.20	2 - 9 X 5 RCB	lf lf	860.00
4.21	2 - 9 X 6 RCB	lf L	815.00
4.22	2 - 9 X 7 RCB	lf le	855.00
4.23	2 - 9 X 8 RCB	lf le	905.00
4.24	2 - 9 X 9 RCB	lf lf	970.00
4.25	2 - 10 X 6 RCB		1,025.00
4.26	2 - 10 X 7 RCB	lf le	940.00
4.27	2 - 10 X 8 RCB	lf lf	965.00
	2 - 10 X 9 RCB		995.00
	2 - 10 X 10 RCB	lf u	1,030.00
	2 - 12 X 10 RCB	lf	1,060.00
	2 - 12 X 12 RCB	lf lf	1,350.00
	Reinforced Concrete Box Culverts	If	1,500.00
5.1	3 - 6 X 2 RCB	s, Triple Cell (KDOT), Spai	
	3 - 6 X 3 RCB	lf If	775.00
	3 - 6 X 4 RCB	lf us	830.00
	3 - 6 X 5 RCB	lf us	825.00
	3 - 6 X 6 RCB	lf	820.00
	3 - 7 X 3 RCB	lf lf	825.00
	3 - 7 X 4 RCB		835.00
	3 - 7 X 5 RCB	lf IE	880.00
	3 - 7 X 6 RCB	lf (6	890.00
	3 - 7 X 7 RCB	lf	885.00
	3 - 8 X 4 RCB	If If	925.00
	3 - 8 X 5 RCB		985.00
	3 - 8 X 6 RCB	lf lf	1,020.00
	3 - 8 X 7 RCB	lf If	1,015.00
	3 - 8 X 8 RCB	lf LE	1,040.00
	3 - 9 X 4 RCB	lf 'r	1,085.00
	3 - 9 X 5 RCB	If If	970.00
	3 - 9 X 6 RCB	lf	1,020.00
	3 - 9 X 7 RCB	If If	1,060.00
	3 - 9 X 8 RCB	If If	1,106.00
	0 X 0 X 0 X	If	1,165.00

Storma	worth, Kansas vater Master Plan				V P.N. 26529.11
				Se	eptember 27, 199
OTIIL CO	sts for Stormwater Facility Improvements				
Item	Item				
Number					
5.21	3 - 9 X 9 RCB	Unit			1995 Dollar
5.22	3 - 10 X 6 RCB	lf			1,205.0
5.23	3 - 10 X 7 RCB	lf			1,120.0
5.24	3 - 10 X 8 RCB	lf			1,135.0
5.25	3 - 10 X 9 RCB	lf 			1,150.0
5.26	3 - 10 X 10 RCB	If			1,175.0
5.27	3 - 12 X 10 RCB	lf			1,190.0
5.28	3 - 12 X 12 RCB	lf			1,410.00
5.29	3 - 14 X 10 RCB	lf			1,555.00
5.30	3 - 14 X 12 RCB	If			1,650.00
5.31	3 - 14 X 14 RCB	lf			1,775.00
5.61	Open Channel Improvements	lf			2,020.00
<u>1.</u> –	Excavation & Embankments				
2.	Trapezoidal Channels	су			5.00
2.1	Channel Bottom				
2.1.1	Gabion Mattress (6 inches)	_			
2.1.2	Gabion Mattress (6 inches)	sy			30.00
2.1.3	Gabion Mattress (18 inches)	sy			46.00
2.1.4	Paved Concrete	sy			63.00
2.2		sy			31.00
2.2.1	Channel Banks (Lining Material) Seed				
2.2.2	Sod (Staked)	sy			1.00
2.2.3	Erosion Control Blanket	sy			
2.2.4	Riprap	sy			5.00
2.2.5		sy			30.00
2.2.6	Grouted Riprap (3/8 to 1/4 cy pieces) Gabion Revetment (6 inches)	sy			50.00
2.2.7	Paved Concrete (6 inches)	sy			30.00
3.	Vertical Wall Channels	sy			31.00
3.1	Channel Bottom - Refer to Item 2.1				
3.2	Channel Walls				
	Concrete				
	Gabion Basket Channel Walls	су			300.00
3.3	Channel Banks (Lister Mark)	су			130.00
	Channel Banks (Lining Materials Above)	(Valls) -	Refer to Item	22	
	Erosion Control - Refer to Section C. Ope	en Cha	nnel Improver	nents	
	Detention/Retention Facilities	ac			
	Miscellaneous Costs Applicable to All Pro	ects			
	Structure Removal (%)				20.00
	Clear/Grub Small Trees & Light Brush	sy			1.00
	Clear/Grub Large Trees & Heavy Brush	sy	100000000000000000000000000000000000000		1.00
	Driveway and Sidewalk removal	sy			9.00
	Street Removal		0. (1		5.50
	2-lane, Gravel	sy			4.00
	2-lane, Asphalt, w/ C&G	sy			8.00
	4-lane, Asphalt, w/ C&G	sy			9.00
	Site Restoration				0.00
	Seeding	sy			1.00
:	Sodding	sy			4.00

Leaveny	vorth, Kansas		B&V P.N. 26529.110
	ater Master Plan		September 27, 1995
Unit Cos	ts for Stormwater Facility Improvements		2001001 27, 1000
Item	Item		
Number	Description	Unit	1995 Dollars
3.3	Driveway and Sidewalk replacement	sy	27.00
3.4	Street Replacement		27.00
	2-lane, Gravel	sy	10.00
3.4.2	2-lane, Asphalt, w/ C&G	sy	30.00
3.4.3	4-lane, Asphalt, w/ C&G	SV	35.00
G.	Additional Items as Percent of Total Cons	struction Cost	33.00
1	Contingencies	%	15.00
2. 3.	Utility Relocation Costs	%	2.00
	Engineering	%	15.00
4.	Legal & Admin. Costs	%	
		70	3.00
(1)	Pipe cost assumes total installation cost v	with 4 ft cover	-
(2)	Box culvert cost assumes total installation	n cost with 8 ft cover	



	PRELIMINARY COST ESTIMAT	'E		DATE:	11/19/9
	PROJECT: LEAVENWORTH, KANSAS STORMWATER MASTER PLAN			EST:	VLD
ENGINEER	BLACK & VEATCH			CHCKD:	JWH
ELEMENT#	3 MILE CREEK - 1 L				
	DESCRIPTION	QUANT.	UNIT	U. PRICE	AMOUNT
B.3.10	Reinforced Concrete Box Culverts, 6 x 3	825	LF	\$345.00	\$284.62
B.3,6	Reinforced Concrete Box Culverts, 5 x 3	466	LF	\$320.00	\$149.120
B.3.2	Reinforced Concrete Box Culverts, 3 x 3	232	LF	\$240.00	\$55.680
B.3.4	Reinforced Concrete Box Culverts. 4 x 3	423	LF	\$270.00	\$114.210
ļ	Structural Removal			1	\$37,171
A.5.2	Storm Sewer Manholes > 6ft Diameter	12	ea	\$5,250.00	\$63,000
F.2.3	Street Removal - 4-lane, Aspalt, w/ C&G	3281	sy	\$9.00	\$29,529
F.3.4.3	Street Replacement, 4-lane, Asphalt w/ C&G	3281	sy	\$35.00	\$114,835
F.2.2	Street Removal - 2-lane, Aspalt, w/ C&G	1043	sv	\$8.00	
F.3.4.2	Street Replacement, 2-lane, Asphalt w/ C&G	1043	sy	\$30.00	\$8,344
				1 230.00	\$31,290
				 	
				1	
				-	-
				 	
			=		
CONTINGE	NCY			TOTAL =	\$887,804
		20 PERC	ENT		\$177,561
			S	UB TOTAL =	\$1,065,365
ENGINEERI	NG. LEGAL AND ADMINISTRATIVE	20 PER			\$213,073

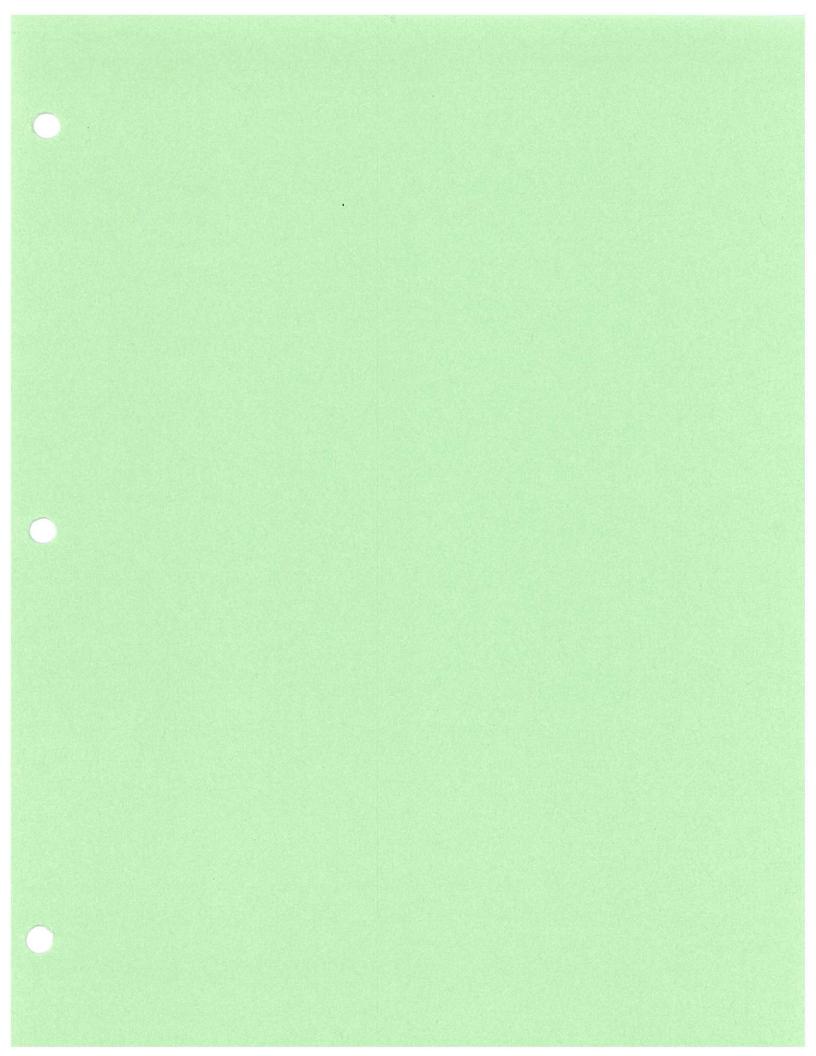
ITEM No	ITEM DESCRIPTION	UNIT	UNIT COST	QUANTITY	TOTAL COST
Subsyster	n 1 L 3 Mile Creek	(
NODE	92595 Junction Str	ucture			
CONDUIT		ea	\$5,250.00	1	\$5,250.00
CONDUIT	1322 Parallel box 0 inch RCP		6 x 3	RCB	054 755 66
	U IIICH RCP	LF width	\$345.00 length	150 sq ft	\$51,750.00
	Parallel street	20	150	3000	
	4-lane, Asphalt, w/ C&G	sy	\$44.00	333	\$14,666.67
NODE	86601 Junction Stru	ıcture			
CONDUIT	1232 Decelled how	ea	\$5,250.00	1	\$5,250.00
CONDON	1323 Parallel box 0 inch RCP	added LF	6 x 3	RCB	200 700 00
	0 IIICII NCF	width	\$345.00 length	182	\$62,790.00
	Parallel street	20	182	sq ft 3640	
	4-lane, Asphalt, w/ C&G	sy	\$44.00	404	\$17,795.56
NODE	86603 Junction Stru	ıcture			
COMPUTE		ea	\$5,250.00	1	\$5,250.00
CONDUIT	1324 Parallel box		6 x 3	RCB	
	0 inch RCP	LF	\$345.00	150	\$51,750.00
	Parallel street	width 20	length 150	sq ft	
	4-lane, Asphalt, w/ C&G	sy	\$44.00	3000	¢14 666 67
NODE	86607 Junction Stru	cture	Ψ44.00		\$14,666.67
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	ea	\$5,250.00	1	\$5,250.00
CONDUIT	1089 Parallel box a	added	The second secon	RCB	
	0 inch RCP	LF	\$345.00	343	\$118,335.00
	Parallel street	width	length	sq ft	
	4-lane, Asphalt, w/ C&G	20	343	6860	
NODE	92754 Junction Stru	sy cture	\$44.00	762	\$33,537.78
	January Cu	ea	\$5,250.00	1	\$5,250.00
			45,255.55		\$5,250.00
NODE	OOEDO III-AE OI				
NODL	92593 Junction Stru		¢E 050 00	-	
CONDUIT	1311 Parallel box a	ea	\$5,250.00 3 x 3	1 RCB	\$5,250.00
	0 inch RCP	LF	\$240.00	186	\$44,640.00
	200	width	length	sq ft	Ψ44,040.00
	Parallel street	20	186	3720	
NODE	4-lane, Asphalt, w/ C&G	sy	\$44.00	413	\$18,186.67
NODE	92594 Junction Struction				
CONDUIT	1316 Parallel box a	ea	\$5,250.00	1	\$5,250.00
CONDON	0 inch RCP	LF	5 x 3 \$320.00	RCB	000 400 00
	s men itel	width	length	291	\$93,120.00
	Parallel street	20	291	sq ft 5820	
	4-lane, Asphalt, w/ C&G	sy	\$44.00	647	\$28,453.33
NODE	86605 Junction Struc	cture			+=0,100.00
0010111		ea	\$5,250.00	1	\$5,250.00
CONDUIT	2323 Parallel box a			RCB	
	0 inch RCP	LF	\$320.00	175	\$56,000.00
	Parallel street	width 20	length	sq ft	
	4-lane, Asphalt, w/ C&G	sy	175 \$44.00	3500 389	C17 114 44
NODE	92595	<u> </u>	ψ44.00	309	\$17,111.11

ITEM	ITEM		UNIT		TOTAL
No	DESCRIPTION	UNIT	COST	QUANTITY	COST
NODE	86591 Junction Stru	cture		-3	
		ea	\$5,250.00	1	\$5,250.00
CONDUIT	1317 Parallel box a	dded	3 x 3	RCB	
	0 inch RCP	LF	\$240.00	46	\$11,040.00
		width	length	sq ft	
	Parallel street	20	46	920	
	2-lane, Asphalt, w/ C&G	sy	\$38.00	102	\$3,884.44
	Structural removal			\$20,174	\$4,034.89
NODE	86592 Junction Stru	cture			
	E. Section telephonoments	ea	\$5,250.00	1	\$5,250.00
CONDUIT	1319 Parallel box a	dded	4 x 3	RCB	
	0 inch RCP	LF	\$270.00	206	\$55,620.00
		width	length	sq ft	
	Parallel street	20	206	4120	
	2-lane, Asphalt, w/ C&G	sy	\$38.00	458	\$17,395.56
7.	Structural removal			\$78,266	\$15,653.11
NODE	86606 Junction Struc	cture			
		ea	\$5,250.00	1	\$5,250.00
CONDUIT	2373 Parallel box a	dded	4 x 3	RCB	
	0 inch RCP	LF	\$270.00	79	\$21,330.00
		width	length	sq ft	
	Parallel street	20	79	1580	
	2-lane, Asphalt, w/ C&G	sy	\$38.00	176	\$6,671.11
T	Structural removal			\$33,251	\$6,650.22
NODE	86594 Junction Struc	cture			
		ea	\$5,250.00	1	\$5,250.00
CONDUIT	2355 Parallel box a		4 x 3	RCB	
	0 inch RCP	LF	\$270.00	138	\$37,260.00
		width	length	sq ft	300.
	Parallel street	20	138	2760	
	2-lane, Asphalt, w/ C&G	sy	\$38.00	307	\$11,653.33
1100	Structural removal			\$54,163	\$10,832.67
NODE	92595				

SUBTOTAL \$887,828.11

20% Contingency \$1,065,393.73

20% Engineering, legal and administrative \$1,278,472.48



	PRELIMINARY COST ESTIMAT	E		DATE:	11/19/9
PROJECT:	LEAVENWORTH. KANSAS STORMWATER MASTER PLAN			EST:	VLD
ENGINEER	BLACK & VEATCH			CHCKD:	JLF
ELEMENT #	3 MILE CREEK - 4 L				
	DESCRIPTION	QUANT.	UNIT	U. PRICE	AMOUNT
Λ.3.8	Pipe and Inlet (Enclosed) System, 30 inch RCP	475	LF	\$52.00	\$24,70
A.3.9	Pipe and Inlet (Enclosed) System, 36 inch RCP	124	LF	\$66.00	\$8.18
A.3.11	Pipe and Inlet (Enclosed) System, 48 inch RCP	449	LF	\$110.00	\$49,39
A.3.12	Pipe and Inlet (Enclosed) System, 54 inch RCP	1188	LF	\$135.00	\$160,38
A.3.13	Pipe and Inlet (Enclosed) System, 60 inch RCP	794	LF	\$200.00	\$158,80
A.3.14	Pipe and Inlet (Enclosed) System, 66 inch RCP	123	LF	\$220.00	\$27.06
A.5.2	Storm Sewer Manholes > 6ft Diameter	40	ea	\$5,250.00	\$210,00
F.2.2	Street Removal - 2-lane, Aspalt, w/ C&G	284	sy	\$8.00	\$2.27
F.3.4.2	Street Replacement, 2-lane, Asphalt w/ C&G	284	5y	\$30.00	\$8,52
F.2.3	Street Removal - 4-lane, Aspalt, w/ C&G	89	sy	\$9.00	\$80
F.3.4.3	Street Replacement, 4-lane, Asphalt w/ C&G	89	sy	\$35.00	\$3,11
				TOTAL	
CONTINGE	NCY	20 PER	CENT	TOTAL =	\$653,22 \$130,64
				SUB TOTAL =	\$783,86
ENGINEERI	NG, LEGAL AND ADMINISTRATIVE	20 PER			\$156,77
				TOTAL =	\$940,64

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ITEM No	ITEM DESCRIPTION	UNIT	UNIT COST	QUANTITY	TOTAL COST
Subsysten	m 4 L 3 Mile Creek				
NODE	86910 Junction Stru		EE 050 00		05.050.00
CONDUIT	1529 Parallel pipe	ea added	\$5,250.00 2.5	TRCP	\$5,250.00
NODE	30 inch RCP 86624 Junction Stru	LF	\$52.00	181	\$9,412.00
		ea	\$5,250.00	1	\$5,250.00
CONDUIT	1331 Parallel pipe : 30 inch RCP	added LF	2.5 \$52.00	RCP 34	\$1,768.00
	Dakota	width	length	sq ft	ψ1,7 GG.GG
	Street Crossing 2-lane, Asphalt, w/ C&G	20 sy	32 \$38.00	640 71	\$2,702.22
NODE	86625 Junction Struc	cture			
CONDUIT	1333 Parallel pipe	ea added	\$5,250.00 2.5	TRCP	\$5,250.00
NODE	30 inch RCP 86626 Junction Struc	LF	\$52.00	260	\$13,520.00
		ea	\$5,250.00	1	\$5,250.00
CONDUIT	2375 Parallel pipe a 36 inch RCP	added LF	\$66.00	RCP 36	\$2,376.00
NODE	86628 Junction Struc	cture			
		ea	\$5,250.00	1	\$5,250.00
NODE	86629 Junction Struc				
		ea	\$5,250.00	1	\$5,250.00
CONDUIT	1335 Parallel pipe a 36 inch RCP	idded LF		RCP	
NODE	86633 Junction Struc		\$00.00	88	\$5,808.00
		ea	\$5,250.00	1	\$5,250.00
NODE	92622 Junction Struc	ture			
CONDUIT		ea	\$5,250.00	1	\$5,250.00
	1337 Parallel pipe a 48 inch RCP	LF	\$110.00	RCP 143	\$15,730.00
NODE	86634 Junction Struc		ANNOTAL PROPERTY OF THE		
		ea	\$5,250.00	1	\$5,250.00
	*				
NODE	86637 Junction Struc	ture			
CONDUIT	3032 Pipe added	ea	\$5,250.00 5.5	1	\$5,250.00
	66 inch RCP	LF	\$220.00	123	\$27,060.00
NODE	86640 Junction Struc	ture ea	\$5,250.00	1	\$5,250.00
CONDUIT	1340 Parallel pipe a	dded	4	RCP	Ψ5,230.00
NODE	48 inch RCP 86639 Junction Struct	LF ture	\$110.00	60	\$6,600.00
CONDUIT		ea	\$5,250.00	11	\$5,250.00
	2383 Parallel pipe a 48 inch RCP	LF	\$110.00	RCP 89	\$9,790.00
NODE	86641 Junction Struct				
		ea	\$5,250.00	1	\$5,250.00

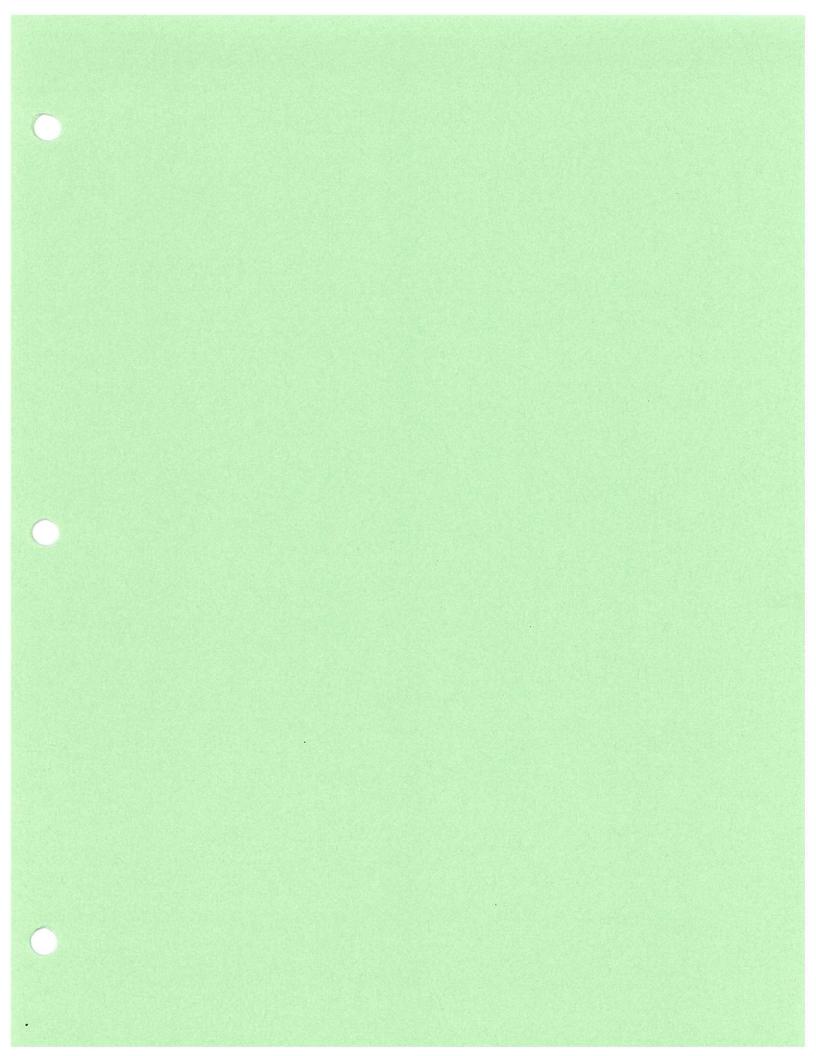
ITEM No	ITEM DESCRIPTION	INIT	UNIT COST	OLIANITITY	TOTAL
NODE	86643 Junction Structur	re	0031	QUANTITY	COST
		ea G	\$5,250.00	1	\$5,250.00
CONDUI	200000000000000000000000000000000000000	led	4		
NODE		LF	\$110.00	34	\$3,740.00
NODE	86644 Junction Structur		°E 250.00	<u> </u>	05.050.00
CONDUIT	1343 Parallel pipe add	ea \$	55,250.00 4	PCP	\$5,250.00
	48 inch RCP	LF		108	\$11,880.00
NODE	92623 Junction Structur	е			Ψ11,000.00
CONDUIT		ea \$	5,250.00	1	\$5,250.00
CONDON	minimum and pipe add			RCP	
NODE	48 inch RCP I 92624 Junction Structur	_F	\$110.00	15	\$1,650.00
			5,250.00	4	CE 350 00
CONDUIT	1346 Parallel pipe add		4.5	RCP .	\$5,250.00
7 2 7	54 inch RCP L	_F	\$135.00	142	\$19,170.00
NODE	86646 Junction Structure	е			
	•	ea \$	5,250.00	1	\$5,250.00
NODE	86646 Junction Structure				
W	6	a \$	5,250.00	1	\$5,250.00
CONDUIT	2387 Parallel pipe adde		4.5		\$5,230.00
11055	54 inch RCP L	.F .	135.00	30	\$4,050.00
NODE	92778 Junction Structure				
CONDUIT	1344 Parallel pipe adde		5,250.00	1	\$5,250.00
CONDON		800000	4.5		
NODE	86647 Junction Structure		135.00	98	\$13,230.00
	е	a \$5	5,250.00	1	\$5,250.00
CONDUIT	2388 Parallel pipe adde		4.5		Ψ3,230.00
NODE	54 inch RCP L	F \$	135.00	37	\$4,995.00
NODE	92625 Junction Structure				
CONDUIT	e 1345 Parallel pipe adde	a \$5	5,250.00	1	\$5,250.00
	54 inch RCP L	600,000	4.5 F 135.00		P47 445 00
NODE	86648 Junction Structure	<u> </u>	133.00	127	\$17,145.00
	e	a \$5	,250.00	1	\$5,250.00
CONDUIT	2389 Parallel pipe adde	d	4.5 F	RCP	40,200.00
	54 inch RCP LI		135.00	36	\$4,860.00
	Osage wid Street Crossing 20		length	sq ft	
			32	640	
NODE	2-lane, Asphalt, w/ C&G si 86649 Junction Structure	у	38.00	71	\$2,702.22
	ea	a \$5	,250.00	1	\$5,250.00
CONDUIT	1347 Parallel pipe adde	d	4.5 F	CP	\$3,230.00
	54 inch RCP LF	- \$	135.00	136	\$18,360.00
NODE	92626 Junction Structure				
	ea	a \$5	,250.00	1	\$5,250.00
NODE	92627 Junction Structure				
	ea	\$5	,250.00	1	\$5,250.00
CONDUIT	1607 Parallel pipe added	d l	4.5 R	953	+0,200.00
	54 inch RCP LF	\$	135.00	112	\$15,120.00

ITEM	ITEM		UNIT		TOTAL
No	DESCRIPTION	UNIT	COST	QUANTITY	COST
NODE	86652 Junction Stru				
CONDUIT	2392 Parallel pipe	ea	\$5,250.00	1	\$5,250.00
CONDON	54 inch RCP	LF	4.5 \$135.00	Secretaria de la constante de	¢4 500 00
	Miami	width	length	34 sq ft	\$4,590.00
	Street Crossing	20	32	640	
	2-lane, Asphalt, w/ C&G	sy	\$38.00	71	\$2,702.22
NODE	86653 Junction Stru	icture			
CONDUIT		ea	\$5,250.00	11	\$5,250.00
CONDUIT	5000 CONTRACTOR CONTRA		4.5		
NODE	54 inch RCP 86654 Junction Stru	LF	\$135.00	29	\$3,915.00
NODE	50034 Junction Stru		\$E 250.00	4	#F 0F0 00
CONDUIT	1350 Parallel pipe	ea	\$5,250.00	1 RCP	\$5,250.00
	54 inch RCP	LF	\$135.00	266	\$35,910.00
NODE	86655 Junction Stru		Ψ100.00	200	\$55,910.00
	000000000000000000000000000000000000000	ea	\$5,250.00	1	\$5,250.00
CONDUIT	720000000000000000000000000000000000000	added		RCP	Ψ0,200.00
	60 inch RCP	LF	\$200.00	35	\$7,000.00
	Seneca	width	length	sq ft	
	Street Crossing	20	32	640	
NODE	2-lane, Asphalt, w/ C&G	sy	\$38.00	71	\$2,702.22
NODE	86656 Junction Stru				
CONDUIT	1352 Parallel pipe	ea	\$5,250.00	1	\$5,250.00
CONDON	60 inch RCP	LF	\$200.00	RCP	* 22.222.22
NODE	86657 Junction Stru		φ200.00	143	\$28,600.00
	ouncion on a	ea	\$5,250.00	1	\$5,250.00
CONDUIT	1353 Parallel pipe			RCP	\$3,230.00
	60 inch RCP	LF	\$200.00	141	\$28,200.00
NODE	86658 Junction Stru	cture			410,200.00
		ea	\$5,250.00	1	\$5,250.00
CONDUIT	2393 Parallel pipe			RCP	
	60 inch RCP Shawnee	LF	\$200.00	45	\$9,000.00
	Street Crossing	width	length	sq ft	
	4-lane, Asphalt, w/ C&G	20	40	800	
NODE	86659 Junction Struc	sy	\$44.00	89	\$3,911.11
	canonon on a	ea	\$5,250.00	1	\$5,250.00
CONDUIT	1354 Parallel pipe a			RCP	\$3,250.00
	60 inch RCP	LF	\$200.00	170	\$34,000.00
NODE	86370 Junction Struc	cture			
		ea	\$5,250.00	1	\$5,250.00
CONDUIT	1197 Parallel pipe a			RCP	
NODE	60 inch RCP	LF	\$200.00	151	\$30,200.00
NODE	86371 Junction Struc		05.050.00		
		ea	\$5,250.00	1	\$5,250.00
NODE	86372 Junction Struc	ture			
NAC SYSTEMS	Janouon Olluc	ea	\$5,250.00	1	\$5.250.00
CONDUIT	1199 Parallel pipe a			RCP	\$5,250.00
	60 inch RCP	LF	\$200.00	109	\$21,800.00
NODE	92705 Junction Struc				Ψ= 1,000.00
	ero e succe de Control de Control de Roma de Control Co	ea	\$5,250.00	1	\$5,250.00

ITEM No NODE	ITEM DESCRIPTION	UNIT	UNIT COST	QUANTITY	TOTAL COST
NODE	92706 Junction Stru	icture			
201151115		ea	\$5,250.00	1	\$5,250.00
CONDUIT	1201 Parallel pipe	added	4.5	RCP	
	54 inch RCP	LF	\$135.00	141	\$19,035.00
NODE	86373 Junction Stru	cture		Treeson out the control of the	
		ea	\$5,250.00	1	\$5,250.00
				=	
				SUBTOTAL	\$653,234.00

20% Contingency \$783,880.80

20% Engineering, legal and administrative \$940,656.96

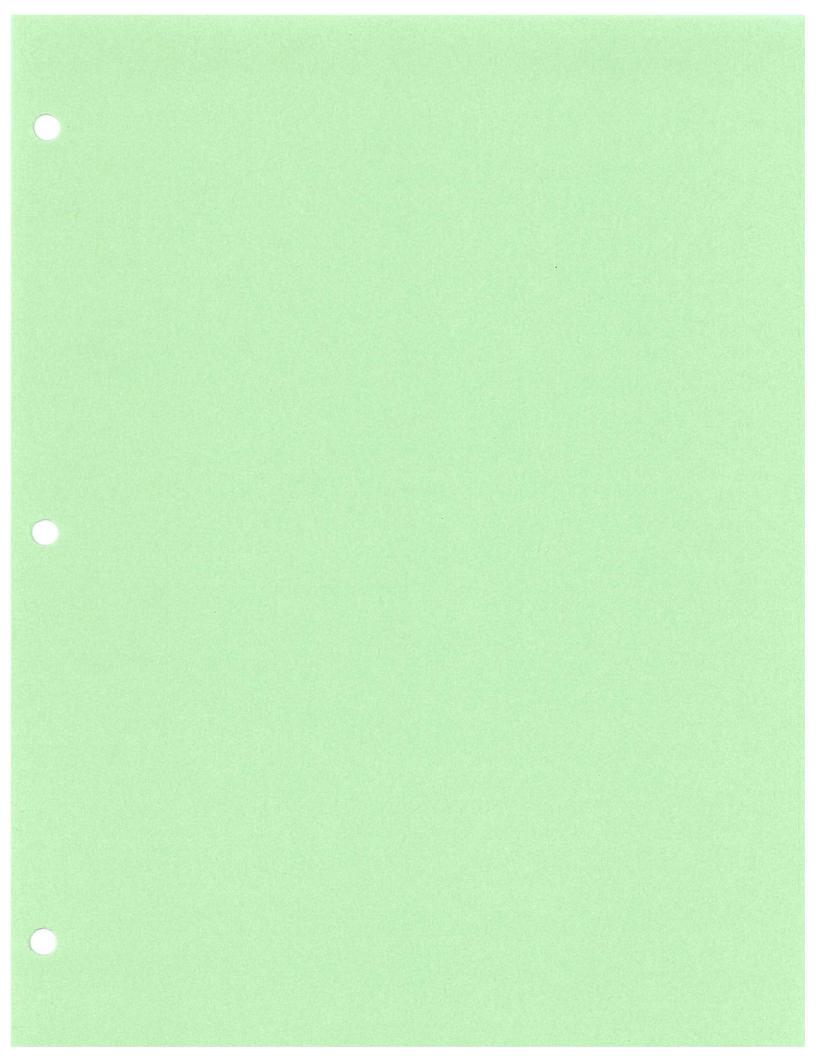


	PRELIMINARY COST ESTIMATE			DATE:	11/19/
PROJECT:	LEAVENWORTH. KANSAS STORMWATER MASTER PLAN			EST:	VLD
ENGINEER	BLACK & VEATCH			CHCKD:	JLF
ELEMENT#	3 MILE CREEK - 5 L				
	DESCRIPTION	QUANT.	UNIT	U. PRICE	AMOUNT
A.3.3	Pipe and Inlet (Enclosed) System, 15 inch RCP	104	LF	\$25.00	\$2,6
A.3.4	Pipe and inlet (Enclosed) System, 18 inch RCP	260	LF	\$34.00	\$8,8
F.2.3	Street Removal - 4-lane, Aspalt, w/ C&G	231	sy	\$9.00	\$2.0
F.3.4.3	Street Replacement, 4-lane, Asphalt w/ C&G	231	sy	\$35.00	\$8.0
A.5.1	Storm Sewer Manholes < 6ft Diameter	4	ea	\$2.350.00	\$9.4
C.3.2.1	Concrete - Wing walls and apron	4	cy	\$300.00	\$1.3
B.1_	Excavation and Backfill	9	cy	\$4.00	S
CONTINGE	NCY	20 PER	CENT	TOTAL =	\$32,3 \$6,4
				ELID TOTAL	
ENGINEERI	NG, LEGAL AND ADMINISTRATIVE	20 PPP		SUB TOTAL =	\$38,8
		20 PER	CENT		\$7,7

ITEM No	ITEM DESCRIPTION	UNIT	UNIT	QUANTITY	TOTAL COST
Subsysten	n 5 L 3 Mile Creek		0001	QUANTITI	CO31
TIESE-					
NODE	86364 Junction Stru				
CONDUIT	1194 Parallel pipe	ea	\$2,350.00	11	\$2,350.00
CONDON	15 inch RCP	LF	1.25 \$25.00	RCP 58	61 450 00
	Cherokee St	width	length	sq ft	\$1,450.00
	Street Crossing	20	58	1160	
T	4-lane, Asphalt, w/ C&G	sy	\$44.00	129	\$5,671.11
NODE	86365 Junction Stru	cture			
CONDUIT	****	ea	\$2,350.00	1	\$2,350.00
CONDON	1195 Parallel pipe 18 inch RCP			RCP	_
NODE	18 inch RCP 86368 Concrete Wir	LF	\$34.00	88	\$2,992.00
	Quantity	Height	Width	ou vd	
	Pipe 1	1.		cu yd RCP	
	Pipe 2	1.			
	Wing walls 2	2.5	5	0.93	
	Apron	5	5	0.93	
	Face (less pipe opening	2.5	5	0.33	
			Total	2.18	
	Concrete	су	\$300.00	2.18	\$655.17
	Excavation and Backfill	су	\$4.00	4.37	\$17.47
NODE	86366 Junction Stru	cture			
CONDUIT	****	ea	\$2,350.00	1	\$2,350.00
CONDUIT	1256 Parallel pipe		1.25	******	
	15 inch RCP Cherokee St	LF	\$25.00	46	\$1,150.00
	Street Crossing	width 20	length	sq ft	
	4-lane, Asphalt, w/ C&G	sy	46 \$44.00	920	04.407.70
NODE	86367 Junction Struc	cture	φ44.00	102	\$4,497.78
		ea	\$2,350.00	1	\$2,350.00
CONDUIT	1196 Parallel pipe a		1.5	RCP	Ψ2,330.00
	18 inch RCP	LF	\$34.00	172	\$5,848.00
NODE	86369 Concrete Win		Apron	·····	40,010.00
	Quantity	Height	Width	cu yd	
	Pipe 1 1	1.5		RCP	
	Pipe 2 †	1.5	1.5	RCP	
	Wing walls 2	2.5	5	0.93	
	Apron	5	5	0.93	
	Face (less pipe opening	2.5	_5 _	0.33	
	Concrete		Total	2.18	200
	Excavation and Backfill	cy	\$300.00	2.18	\$655.17
	Excavation and Dackill	су	\$4.00	4.37	\$17.47
				=	
			S	SUBTOTAL	\$32,354.18

20% Contingency \$38,825.02

20% Engineering, legal and administrative \$46,590.02



	PRELIMINARY COST ESTIMATE			DATE:	11/19/	
ROJECT:	ROJECT: LEAVENWORTH, KANSAS STORMWATER MASTER PLAN					
NGINEER	CHCKD:	JLF				
LEMENT#	3 MILE CREEK - 6 L					
	DESCRIPTION	QUANT.	UNIT	U. PRICE	AMOUNT	
A.3.5	Pipe and Inlet (Enclosed) System, 21 inch RCP	324	LF	\$37.00	\$11.9	
A.3.6	Pipe and Inlet (Enclosed) System, 24 inch RCP	187	LF	\$42.00	\$7,8	
A.3.7	Pipe and Inlet (Enclosed) System, 27 inch RCP	165	LF	\$47.00	\$7.7	
A.3.9	Pipe and Inlet (Enclosed) System, 36 inch RCP	321	LF	\$66.00	\$21.1	
A.3.11	Pipe and Inlet (Enclosed) System, 48 inch RCP	40	LF	\$110.00	\$4,4	
B.3.4	Reinforced Concrete Box Culverts, 4 x 3	53	LF	\$270.00	\$14.3	
	Structural Removal				\$6,7	
A.5.1	Storm Sewer Manholes < 6ft Diameter	3	ea	\$2,350.00	\$7,0	
Λ.5.2	Storm Sewer Manholes > 6ft Diameter	1	ea	\$5.250.00	\$5.2	
F.2.2	Street Removal - 2-lane, Aspalt, w/ C&G	1202	sy	\$8.00	\$9,6	
F.3.4.2	Street Replacement, 2-lane. Asphalt w/ C&G	1202	sy	\$30.00	\$36.0	
F.2.1	Street Removal - 2-lane, Gravel	801	sy	\$4.00	\$3,2	
F.3.4.1	Street Replacement - 2-lane, Gravel	801	sv	\$10.00	\$8.0	
C.3.2.1	Concrete - Wing walls and apron	33	cy	\$300.00		
B.1	Excavation and Backfill	66	ey	\$4.00	\$9.9	
				\$4.00	\$20	
CONTINGE	NCY	20 PER	CENT	TOTAL =	\$153,5 \$30,7	
					\$30,1	
ENGINEERI	ING, LEGAL AND ADMINISTRATIVE	30 PER		CUB TOTAL =	\$184,29	
		20 PER	CENT		\$36,8	

ITEM	ITEM		UNIT		TOTAL
No	DESCRIPTION	UNIT	COST	QUANTITY	COST
Subsysten	n 6 L 3 Mile Creek	·			
NODE	92601 Junction Stru	icture			
* * * * * *	ozoga bandion ott	ea	\$2,350.00	1	\$2,350.00
CONDUIT	1541 Parallel pipe			RCP	Ψ2,550.00
	21 inch RCP	LF	\$37.00	324	\$11,988.00
		width	length	sq ft	
	21 1	20	324	6480	
NODE	2-lane, Asphalt, w/ C&G 92602 Junction Stru	Sy	\$38.00	720	\$27,360.00
NODE	SZOSZ JUNCTION STIL	ea	\$2,350.00	1	\$2,350.00
CONDUIT	1542 Parallel pipe		2.25		\$2,330.00
	27 inch RCP	LF	\$47.00	165	\$7,755.00
		width	length	sq ft	
		20	165	3300	
NODE	2-lane, Asphalt, w/ C&G	sy	\$38.00	367	\$13,933.33
NODE	92603 Junction Stru				
CONDUIT	1543 Replacemen	ea + Dina	\$2,350.00	1	\$2,350.00
CONDON	36 inch RCP	LF	\$66.00	RCP	004 400 00
	30 menter	width	length	321	\$21,186.00
		20	321	sq ft 6420	
	2-lane, Gravel	sy	\$14.00	713	\$9,986.67
	Structural removal	- 2	4	\$33,523	\$6,704.53
NODE	92604 Junction Stru	cture		_17=15=1	Ψσ,τ σ τ.σσ
		ea	\$5,250.00	1	\$5,250.00
CONDUIT	2499 Parallel box a			RCB	
	0 inch RCP	LF	\$270.00	53	\$14,310.00
		width	length	sq ft	
	2-lane, Asphalt, w/ C&G	20 sy	20 \$38.00	400	£4 000 00
NODE	86944 Concrete Win	ng walls &	Apron	44	\$1,688.89
	Quantity	Height	Width	cu yd	
	Pipe 1 1	2		RCB	
	Pipe 2 1	Ž	2	RCP	
	Wing walls 2	4	5	1.48	
	Apron	5	8	1.48	
	Face (less pipe opening	4	8 4 1	0.59	
	Concrete	су	Total \$300.00	3.56	£4 000 07
	Excavation and Backfill	cy	\$4.00	3.56 7.11	\$1,066.67
		o,	Ψ4.00	7.11	\$28.44
NODE	86664 Concrete Win	g walls &	Apron		
	Quantity	Height	Width	cu yd	
	Pipe 1 1	2		RCP	
	Pipe 2 1	4.5		RCP	
	Wing walls 2 Apron	5.5	5	2.04	
	Face (less pipe opening	5 5.5	8.5 8.5	1.57	
	. ass (1666 pipe opening	J.J	o.5 Total	1.03 4.64	
	Concrete	су	\$300.00	4.64	¢1 201 16
	Excavation and Backfill	cy	\$4.00	9.27	\$1,391.16 \$37.10
CONDUIT	1363 Parallel pipe a	added		RCP	Ψ57.10
	24 inch RCP	LF	\$42.00	127	\$5,334.00
		width	length	sq ft	+=,== 1.00
		20	20	400	
	2-lane, Gravel	sy	\$14.00	44	\$622.22

ITEM	ITEM		UNIT		TOTAL
No	DESCRIPTION	UNIT	COST	QUANTITY	COST
NODE	\$6665 Concrete W	ing walls &	Apron		is the one of woods
	Quantity	Height	Width	cu yd	
	Pipe 1 1	2	2	RCP	
	Pipe 2 1	4.5	4.5	RCP	
	Wing walls 2	5.5	5	2.04	
	Apron	5	8.5	1.57	
	Face (less pipe opening	5.5	8.5	1.03	
			Total	4.64	
	Concrete	су	\$300.00	4.64	\$1,391.16
	Excavation and Backfill	су	\$4.00	9.27	\$37.10

NODE 92145 Concrete Wing walls & Apron						
		Quantity	Height	Width	cu yd	
	Pipe 1	1	2	2	RCP	
	Pipe 2	1	5	Ę	RCP	
	Wing walls	2	6	5	2.22	
	Apron		5	9	1.67	
	Face (less p	oipe opening	6	9	1.16	
				Total	5.05	
	Concrete		су	\$300.00	5.05	\$1,513.59
	Excavation a		су	\$4.00	10.09	\$40.36
CONDUIT		Parallel pipe	added	2	RCB	
	24	inch RCP	LF	\$42.00	60	\$2,520.00
	Osage		width	length	sq ft	
			32	20	640	
		halt, w/ C&G	sy	\$38.00	71	\$2,702.22
NODE	92146	Concrete Wir				
		Quantity	Height	Width	cu yd	
	Pipe 1	1	2	2	RCP	
	Pipe 2	1	5	5	RCP	
	Wing walls	2	6	5	2.22	
	Apron		5	9	1.67	
	Face (less p	ipe opening	6	9	1.16	
				Total	5.05	
	Concrete	97E V CA	су	\$300.00	5.05	\$1,513.59
	Excavation a	and Backfill	су	\$4.00	10.09	\$40.36

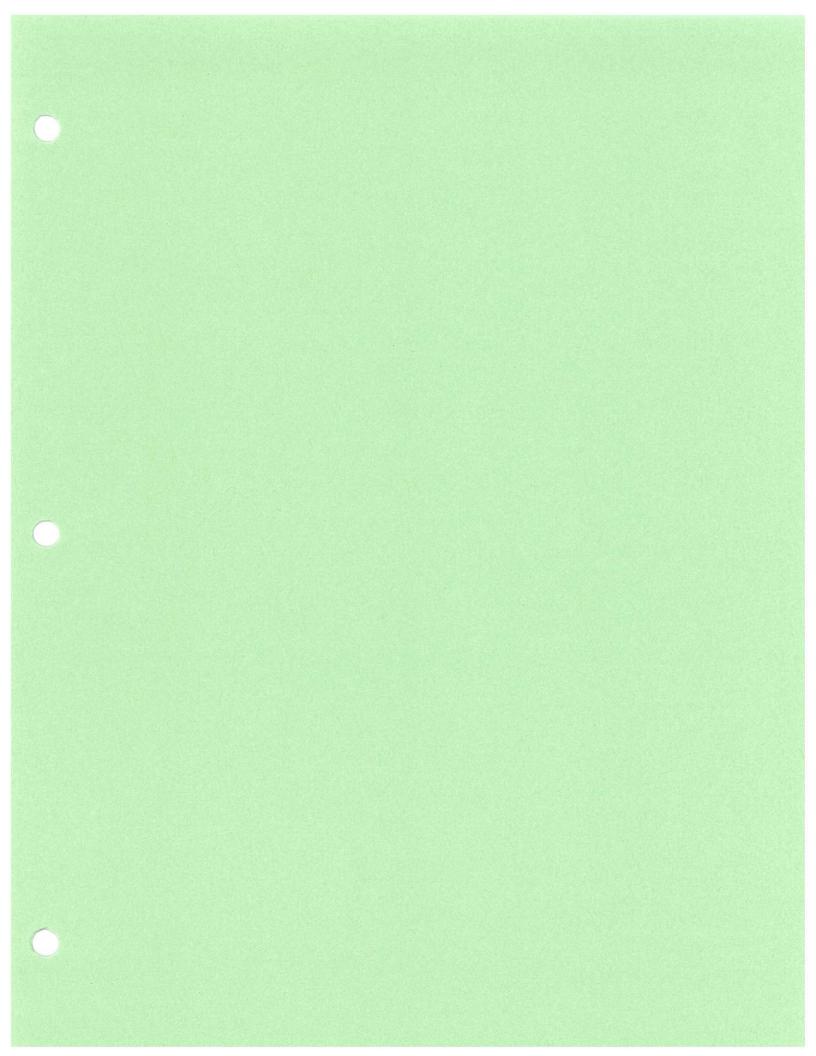
NODE	92148 Concrete Wil	ng walls &	Apron		
	Quantity	Height	Width	cu yd	
	Pipe 1 1	4	4	RCP	
	Pipe 2	4.5	4.5	RCP	
	Wing walls 2	5.5	5	2.04	
	Apron	5	10.5	1.94	
	Face (less pipe opening	5.5	10.5	1.08	
			Total	5.07	
	Concrete	су	\$300.00	5.07	\$1,519.77
	Excavation and Backfill	су	\$4.00	10.13	\$40.53
CONDUIT	1365 Parallel pipe	added	4 1	RCB	
	48 inch RCP	LF	\$110.00	40	\$4,400.00
		width	length	sq ft	
		20	20	400	
	2-lane, Gravel	sy	\$14.00	44	\$622.22

ITEM No	ITEM DESCRIPTION	UNIT	UNIT COST	QUANTITY	TOTAL COST
NODE	92150 Conc	rete Wing walls &	Apron		The second secon
	Qua	antity Height	Width	cu yd	
	Pipe 1	1 .	4 4	RCP	
	Pipe 2	1 4.5	5 4.5	RCP	
	Wing walls 2	2 5.5	5	2.04	
	Apron	- 5	10.5	1.94	
	Face (less pipe or	pening 5.5	10.5	1.08	
			Total	5.07	
	Concrete	су	\$300.00	5.07	\$1,519.77
	Excavation and Ba	ackfill cy	\$4.00	10.13	\$40.53

SUBTOTAL \$153,593.22

20% Contingency \$184,311.86

20% Engineering, legal and administrative \$221,174.23



	DATE:	11/19/9			
ROJECT:	LEAVENWORTH, KANSAS STORMWATER MASTER PLAN	EST:	VLD		
NGINEER	BLACK & VEATCH			CHCKD:	JWH
ELEMENT#	3 MILE CREEK - 7 L				
	DESCRIPTION	QUANT.	UNIT	U. PRICE	AMOUNT
A.3.6	Pipe and Inlet (Enclosed) System. 24 inch RCP	118	LF	\$42.00	\$4.9
	Structural Removal				\$1.40
A.3.4	Pipe and Inlet (Enclosed) System, 18 inch RCP	322	LF	\$34.00	\$10.9
F.2.2	Street Removal - 2-lane, Aspalt, w/ C&G	656	sy	\$8.00	\$5.24
F.3.4.2	Street Replacement, 2-lane, Asphalt w/ C&G	656	sy	\$30.00	\$19,61
A.5.1	Storm Sewer Manholes < 6ft Diameter	4	ea	\$2,350.00	\$9,40
C.3.2.1	Concrete - Wing walls and apron	3	cy	\$300.00	\$76
B.1	Excavation and Backfill	5	cy	\$4.00	\$2
				TOTAL -	200.42
CONTINGE	NCY	20 PER	CENT	TOTAL =	\$52,47 \$10,49
ENGINEERI	NG, LEGAL AND ADMINISTRATIVE	20 PEI	RCENT	SUB TOTAL =	\$62,97 \$12,59
				TOTAL =	\$75,56

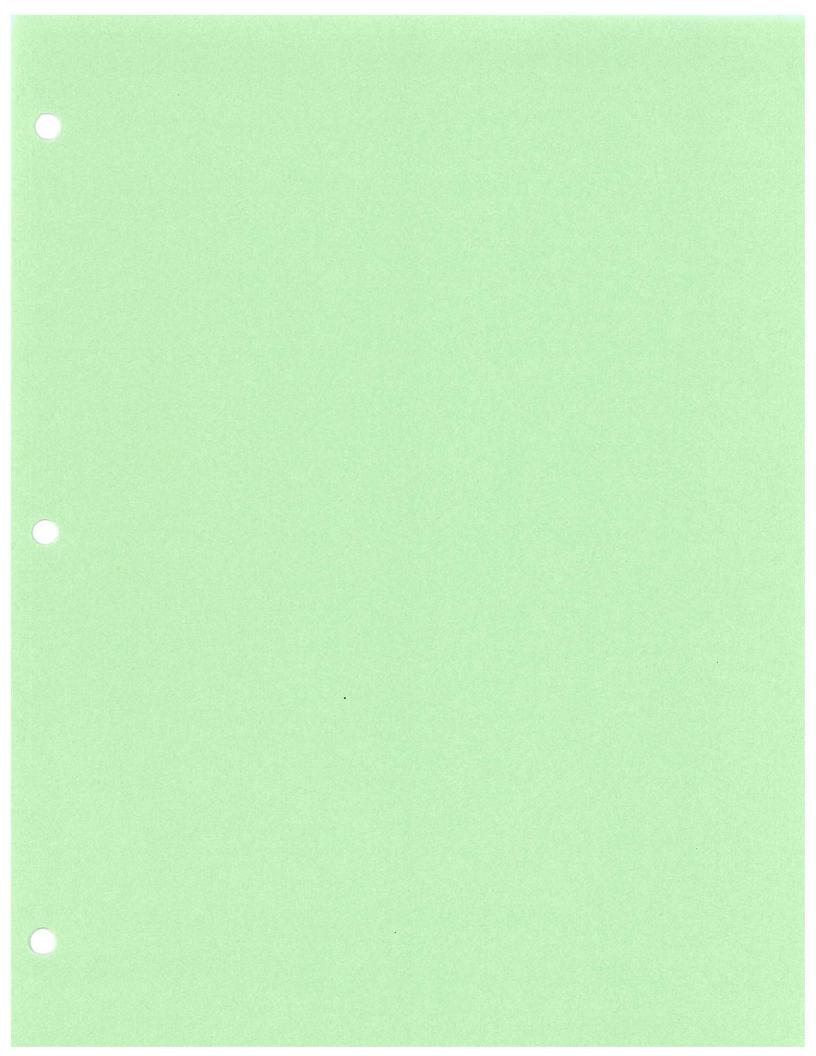
ITEM No	ITEM		UNIT		TOTAL
Cubanata	DESCRIPTION 7 L 3 Mile Creek	UNIT	COST	QUANTITY	COST
Subsystem	n 7 L 3 Mile Creek				
71255	***************************************				
NODE	86971 Junction Struc	cture			
		ea	\$2,350.00	1	\$2,350.00
CONDUIT	1559 Replacement		2	RCP	
	24 inch RCP	LF	\$42.00	118	\$4,956.00
7	Structural removal			\$7,306	\$1,461.20
NODE	86972 Junction Struc	cture		''	
		ea	\$2,350.00	1	\$2,350.00
			72,000.00		Ψ2,000.00
NODE	86973 Junction Struc	turo.			
NOBL	ooses Junction Struc		00.050.00	·	
CONDUIT	4505 D	ea	\$2,350.00	1	\$2,350.00
COMPON	1565 Parallel pipe a		***********	RCP	
	18 inch RCP	LF	\$34.00	295	\$10,030.00
		width	length	sq ft	
		20	295	5900	
-	2-lane, Asphalt, w/ C&	sy	\$38.00	656	\$24,911.11
NODE	86975 Junction Struc		· · · · · · · · · · · · · · · · · · ·		
	200000000000000000000000000000000000000	ea	\$2,350.00	1	\$2,350.00
		Ou .	Ψ2,000.00	Ï.	φ ∠ ,330.00

NODE	92070	Concrete Wir	ng walls &	Apron		
		Quantity	Height	Width	cu yd	
	Pipe 1	1	1.5	1.5		
	Pipe 2 1		2		RCP	
	Wing walls	2	3	5	1.11	
	Apron		5	5.5	1.02	
	Face (less p	ipe openin	3	5.5	0.43	
				Total	2.56	
	Concrete	0.45	су	\$300.00	2.56	\$767.68
OOLIDI IIT	Excavation a		су	\$4.00	5.12	\$20.47
CONDUIT		Parallel pipe	added	1.5	RCP	
NODE	18	inch RCP	LF	\$34.00	27	\$918.00
NODE	86975					

SUBTOTAL\$52,464.46

20% Contingency \$62,957.36

20% Engineering, legal and administrative \$75,548.83

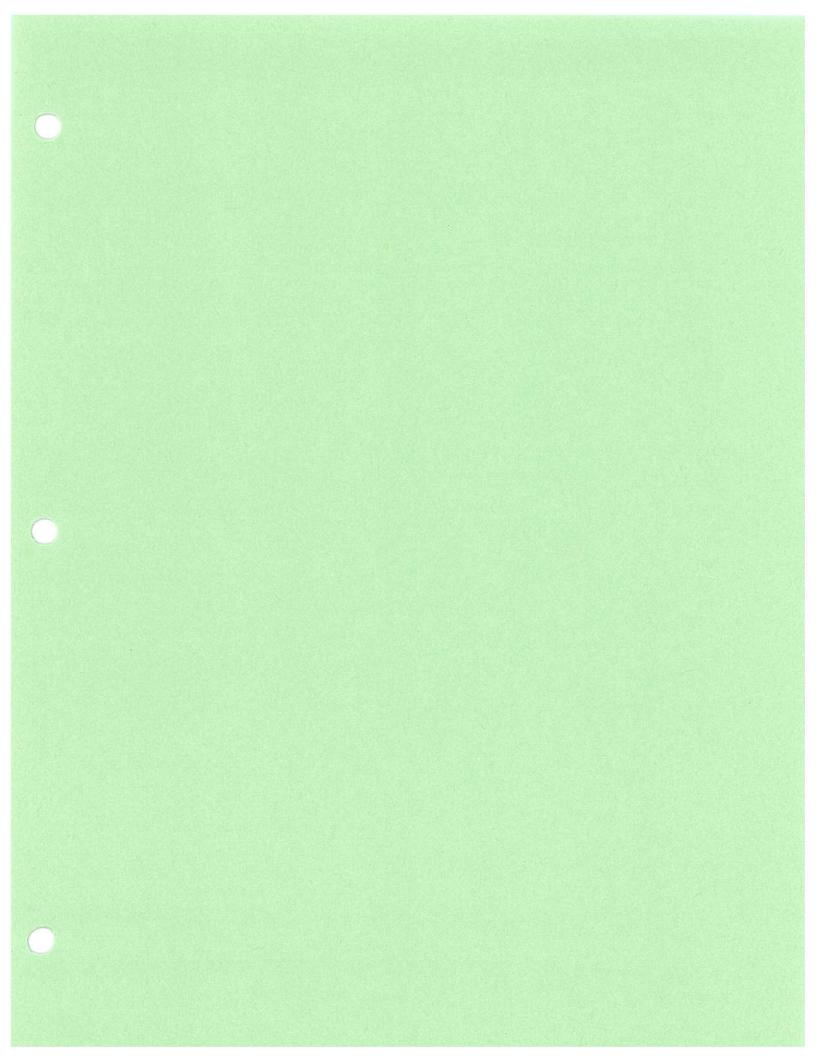


	PRELIMINARY COST ESTIMATE			DATE:	11/19/
PROJECT:	LEAVENWORTH. KANSAS STORMWATER MASTER PLAN			EST:	VLD
ENGINEER	BLACK & VEATCH			CHCKD:	lwii
ELEMENT#	3 MILE CREEK - 8 L				
	DESCRIPTION	QUANT.	UNIT	U. PRICE	AMOUNT
A.3.3	Pipe and Inlet (Enclosed) System, 15 inch RCP	69	LF	\$25.00	\$1.7
A.3.5	Pipe and Inlet (Enclosed) System, 21 inch RCP	120	LF	\$37.00	\$4,4
A.3.6	Pipe and Inlet (Enclosed) System, 36 inch RCP	92	LF	\$66.00	\$6,0
A.5.2	Storm Sewer Manholes > 6ft Diameter	1	ea	\$5.250.00	\$5.2
F.2.2	Street Removal - 2-lane, Aspalt, w/ C&G	267	sy	\$8.00	\$2,1
F.3.4.2	Street Replacement, 2-lane, Asphalt w/ C&G	267	sy	\$30.00	\$8.0
C.3.2.1	Concrete - Wing walls and apron	7	cy	\$300.00	\$1.9
B.1	Excavation and Backfill	13	cy	\$4.00	S
C.1	Embankments	6259	cy	\$5.00	\$31,29
C.3.2.1	Concrete lined channel	108	cy	\$300.00	\$32.4
-					
V-					
				TOTAL	
TOTAL = CONTINGENCY 20 PERCENT					\$93,33
		201ER	CENT		\$18,66
			S	L'B TOTAL =	\$112.00
ENGINEERING, LEGAL AND ADMINISTRATIVE 20 PERCENT					\$22.40
				TOTAL =	\$134,40

ITEM No Subsysten	ITEM DESCRIPTION 3 Mile Creek	UNIT	UNIT COST	QUANTITY	TOTAL COST		
NODE 87016 Concrete Wing walls & Apron							
	Quantity	Height	Width	cu yd	ļ		
	Pipe 1 1	2					
	Pipe 2 1 Wing walls 2	1.25					
	Wing walls 2 Apron	3 5	5 5 25	1.11			
	Face (less pipe opening	3	5.25 5.25	0.97			
	, ase (ress pipe opening	3	Total	<u>0.42</u> <u>2.50</u>			
	Concrete	су	\$300.00	2.50	\$751.46		
	Excavation and Backfill	су	\$4.00	5.01	\$20.04		
CONDUIT	1584 Parallel pipe	added		RCP	Ψ20.0Ψ		
	15 inch RCP	LF	\$25.00	69	\$1,725.00		
NODE	87015 Junction Struc	cture					
		ea	\$5,250.00	1	\$5,250.00		
					Control of the Contro		
NODE	87013 Concrete Win						
	Quantity	Height	Width	cu yd			
	Pipe 1 1	1.75					
	Pipe 2	0		RCP			
	Wing walls 2	2.75	5	1.02			
	Apron	5	3.75	0.69			
	Face (less pipe opening	2.75	3.75	0.29			
	0		Total	2.01			
	Concrete	су	\$300.00	2.01	\$601.75		
CONDUIT	Excavation and Backfill 7777 New pipe	су	\$4.00	4.01	\$16.05		
CONDON	21 inch RCP	LF	1.75		04 440 00		
	16th Street	width	\$37.00	120	\$4,440.00		
	Street Crossing	20	length 120	sq ft 2400			
	2-lane, Asphalt, w/ C&G	sy	\$38.00	267	£10 122 22		
NODE	87018 Concrete Wing	g walls &	Apron	201	\$10,133.33		
	Quantity	Height	Width	cu yd			
	Pipe 1	1.75	1.75	RCP			
	Pipe 2	0	0	RCP			
	Wing walls 2	2.75	5	1.02			
	Apron	5	3.75	0.69			
	Face (less pipe opening	2.75	3.75	0.29			
			Total	2.01			
	Concrete	су	\$300.00	2.01	\$601.75		
	Excavation and Backfill	су	\$4.00	4.01	\$16.05		
NODE							
NODE	92038	:					
	Upstream of Node 92038,	instan det	ention pasin	w/ earthfill d	am w/ 3:1		
CONDUIT	embankments, emergency Install new pip	spiliway,					
COMBON	36 inch RCP	LF	ა \$66.00	RCP	00.070.00		
EMBANKMI		су	\$5.00	92	\$6,072.00		
	Concrete	cy	\$300.00	6259	\$31,295.00		
	© 3215713735	٠,	Ψ500.00	108.00	\$32,400.00		
				=			
			9	SUBTOTAL	\$93,322.42		
				-JDI JIAL	Ψ00,022. 4 2		
			20% C	ontingency	\$111,986.90		

20% Contingency \$111,986.90

20% Engineering, legal and administrative \$134,384.28

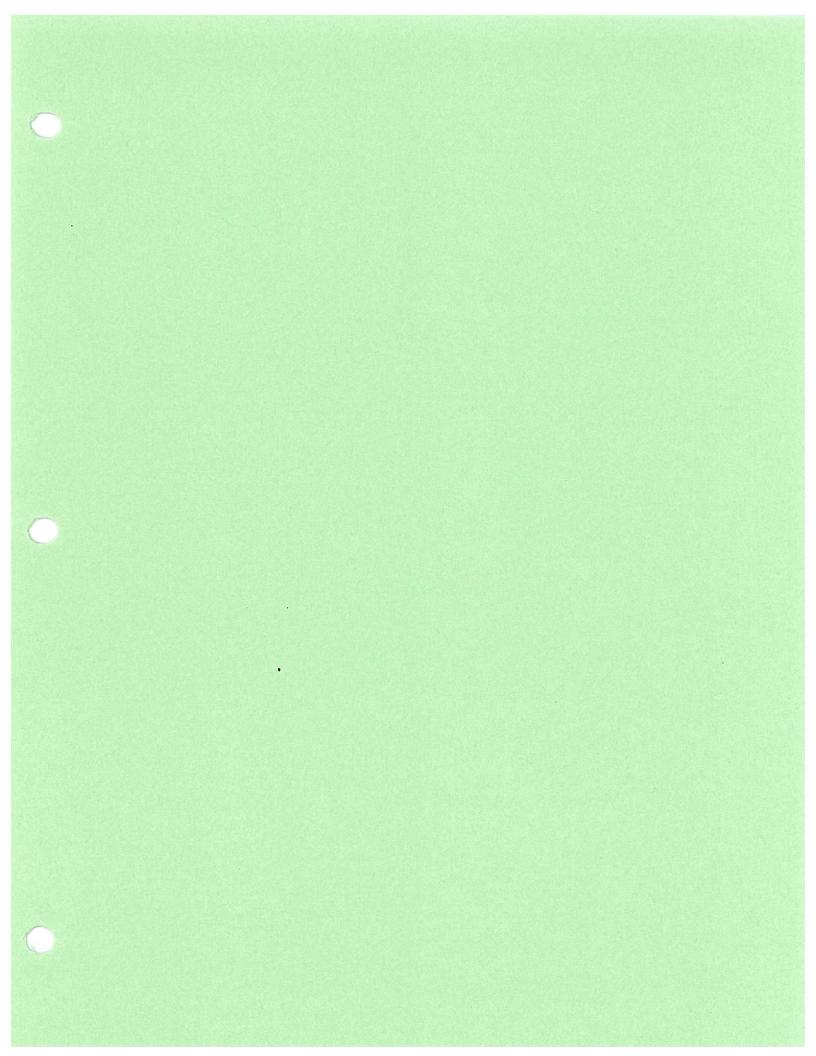


PRELIMINARY COST ESTIMATE					11/19/9
ROJECT:	LEAVENWORTH, KANSAS STORMWATER MASTER PLAN		FST:	VLD	
NGINEER	BLACK & VEATCH		CHCKD:	JWH	
ELEMENT#	3 MILE CREEK - 9 L				
	U. PRICE	AMOUNT			
	Metropolitan Ave Crossing				
A.3.6	Pipe and inlet (Enclosed) System, 24 inch RCP	29	LF	\$42.00	\$1.2
F.2.3	Street Removal - 4-lane, Aspalt, w/ C&G	71	sy	\$9.00	\$6.
F.3.4.3	Street Replacement, 4-lane, Asphalt w/ C&G	71	sy	\$35.00	\$2.4
C.3.2.1	Concrete - Wing walls and apron	5	cy	\$300.00	\$1.5
B.1	Excavation and Backfill	11	cy	\$4.00	Ş-
1427-100-2500-2000-2000-2000-200				TOTAL =	\$5.98
CONTINGENCY 20 PERCENT					\$1,19
ENGINEER	NG LEGAL AND ADMINISTRATION			UB TOTAL =	\$7,17
ENGINEERING, LEGAL AND ADMINISTRATIVE 20 PERCENT					\$1,43
				TOTAL =	\$8,61

ITEM	ITEM		UNIT		TOTAL
No	DESCRIPTION	UNIT	COST	QUANTITY	COST
Subsystem	n 🧣 L 3 Mile Creek				
NODE	87031 Concrete Mi	na welle 0 /			
NODL	87021 Concrete Win				
	Quantity Pipe 1	Height 2	Width	cu yd	
	Pipe 2		2		
	Wing walls 2	2	2	961	
	Apron	3 5	5 6	1.11	
	Face (less pipe opening	3	6	1.11	
	ace (less pipe opening	3	Total	<u>0.43</u> 2.66	
	Concrete	су	\$300.00	2.66	£706.8E
	Excavation and Backfill	cy	\$4.00	5.31	\$796.85
CONDUIT	1587 Parallel pipe	added		RCP	\$21.25
00110011	24 inch RCP	LF	\$42.00	. KCP 29	¢1 210 00
	Metropolitan	width	length	sq ft	\$1,218.00
	Street Crossing	20	32	640	
	4-lane, Asphalt, w/ C&G	SV	\$44.00	71	£2.420.00
NODE	87022 Concrete Wir				\$3,128.89
	Quantity	Height	Width	ou vd	
	Pipe 1	2		cu yd RCP	
	Pipe 2	2	2	20	
	Wing walls 2	3	2 5	1.11	
	Apron	5	6	1.11	
	Face (less pipe opening	3	6		
	ace (less pipe opering	3	Total	0.43	
	Concrete		\$300.00	2.66	6700.05
	Excavation and Backfill	су		2.66	\$796.85
	Excavation and Dackilli	су	\$4.00	5.31	\$21.25
				=	
				SUBTOTAL	\$5,983.09
			20% C	Contingency	\$7,179.71

20% Engineering, legal and administrative

\$8,615.66



PRELIMINARY COST ESTIMATE					11/19/9
PROJECT:	LEAVENWORTH. KANSAS STORMWATER MASTER PLAN		EST:	VLD	
ENGINEER	BLACK & VEATCH		CHCKD:	JWH	
ELEMENT#	3 MILE CREEK - 1R				
	U. PRICE	AMOUNT			
A.3.3	Pipe and Inlet (Enclosed) System, 15 inch RCP	623	LF	\$25.00	\$15,5
A.3.4	Pipe and Inlet (Enclosed) System, 18 inch RCP	1047	LF	\$34.00	\$35,5
A.3.9	Pipe and Inlet (Enclosed) System, 36 inch RCP	502	LF	\$66.00	\$33.1
A.3.10	Pipe and Inlet (Enclosed) System, 42 inch RCP	1417	LF	\$90.00	\$127,5
A.3.15	Pipe and Inlet (Enclosed) System, 72 inch RCP	540	LF	\$250.00	\$135,00
A.5.1	Storm Sewer Manholes < 6ft Diameter	10	ea	\$2,350,00	\$23,50
A.5.2	Storm Sewer Manholes > 6ft Diameter	23	ea	\$5.250.00	\$120,75
F.2.2	Street Removal - 2-lane, Aspalt, w/ C&G	3009	sy	\$8.00	\$24.07
F.3.4.2	Street Replacement, 2-lane, Asphalt w/ C&G	3009	sy	\$30.00	\$90.27
F.2.3	Street Removal - 4-lane, Aspalt, w/ C&G	71	sy	\$9.00	\$63
F.3.4.3	Street Replacement, 4-lane, Asphalt w/ C&G	71		\$35.00	
	Structural Removal		sy	35,5,00	\$2.45
					\$6,04
				-	
					\$614,59
CONTINGENCY 20 PERCENT					
			S	SUB TOTAL =	\$737,50
ENGINEERI	NG, LEGAL AND ADMINISTRATIVE	20 PER	CENT		\$147,50

No Subsystem	ITEM DESCRIPTION THE 3 Mile Creek	UNIT	UNIT COST	QUANTITY	TOTAL COST
NODE	86021 Junction Str				
	3*************************************	ea	\$2,350.00	1	\$2,350.00
CONDUIT	996 Parallel pipe 18 inch RCP		1.5		
NODE	92740 Junction Str	LF ucture	\$34.00	475	\$16,150.00
00110111		ea	\$2,350.00	1	\$2,350.00
CONDUIT	999 Parallel pipe 15 inch RCP	added LF	1.25 \$25.00	RCP 471	C14 775 00
	Kansas Street	width	length	sq ft	\$11,775.00
	Street Crossing	20	32	640	
NODE	2-lane, Asphalt, w/ C&G 86027 Junction Stru	sy_	\$38.00	71	\$2,702.22
NODL	500Zi Junction Str	ea	\$2,350.00	1	\$2,350.00
None					
NODE	86034 Junction Stru		£2.250.00		00.050.00
CONDUIT	2091 Parallel pipe	ea	\$2,350.00 1,25	1 RCP	\$2,350.00
	15 inch RCP	LF	\$25.00	47	\$1,175.00
	9th Street	width	length	sq ft	.,
	Street Crossing	20	47	940	
NODE	2-lane, Asphalt, w/ C&G 92741 Junction Stru	sy	\$38.00	104	\$3,968.89
	ual 41 ounction of t	ea	\$2,350.00	1	\$2,350.00
NODE	86030 Junction Stru	ea	\$2,350.00	1	\$2,350.00
CONDUIT	1001 Parallel pipe 18 inch RCP	added LF	1.5	*********	
NODE	86042 Junction Stru	cture	\$34.00	252	\$8,568.00
		ea	\$2,350.00	1	\$2,350.00
CONDUIT	1002 Parallel pipe		1.5		
	18 inch RCP Charles Ave	LF width	\$34.00 length	192	\$6,528.00
	Street Crossing	20	32	sq ft 640	
	2-lane, Asphalt, w/ C&G	sy	\$38.00	71	\$2,702.22
NODE	86043 Junction Stru		\$5.050.00	2	AND ROOM
CONDUIT	1003 Parallel pipe	ea added	\$5,250.00 3.5 I	1	\$5,250.00
	42 inch RCP	LF	\$90.00	491	\$44,190.00
	Charles Ave	width	length	sq ft	V 11,100.00
	Middle of Street	20	491	9820	
NODE	2-lane, Asphalt, w/ C&G 86049 Junction Stru	sy	\$38.00	1091	\$41,462.22
	Oliver of the state of the stat	ea	\$5,250.00	1	\$5,250.00
CONDUIT	1004 Parallel pipe	added	TELEVISION	RCP	Ψ0,200.00
	36 inch RCP	LF.	\$66.00	232	\$15,312.00
	Frank Street Crossing	width 20	length 50	sq ft	
	2-lane, Asphalt, w/ C&G	sy	\$38.00	1000	\$4,222.22
NODE	86054 Junction Struction	cture	Service Income		* · ,===.
		ea	\$5,250.00	1	\$5,250.00

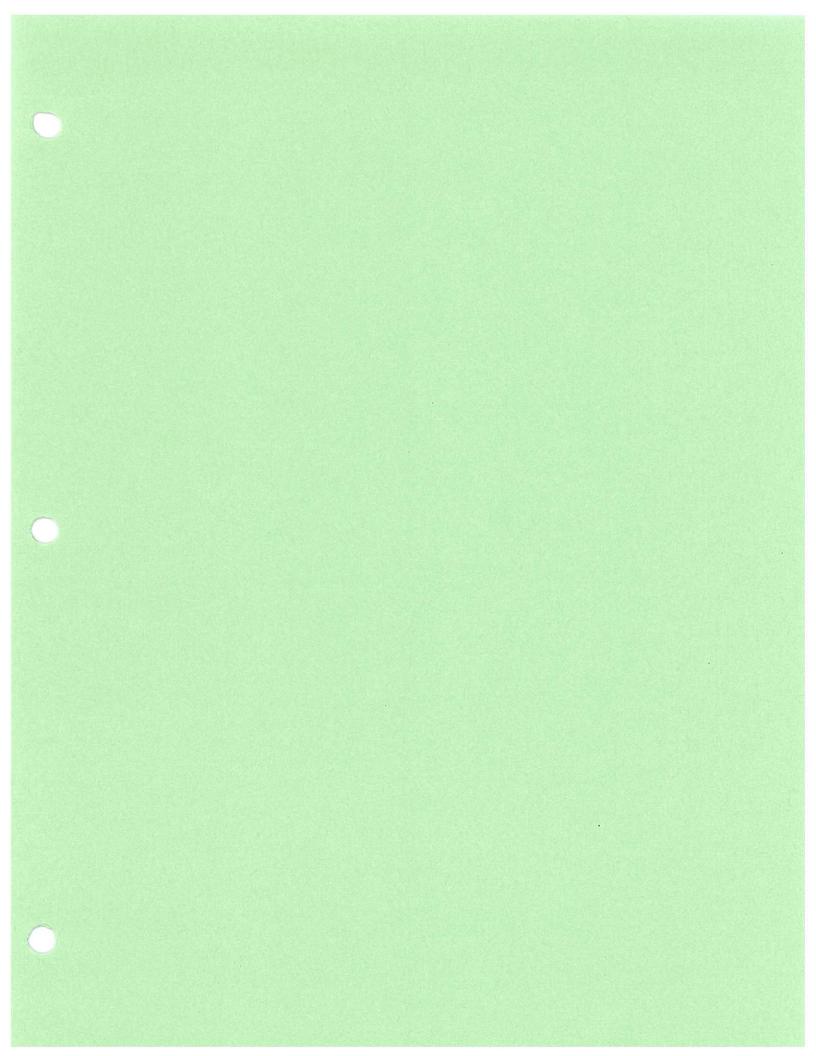
ITEM	ITEM		UNIT		TOTAL
No	DESCRIPTION	UNIT	COST	QUANTITY	COST
CONDUIT				RCP	
Trees	36 inch RCP	LF	\$66.00	270	\$17,820.00
NODE	86055 Junction Stru	ıcture			
		ea	\$5,250.00	1	\$5,250.00
CONDUIT	Very very very very very very very very v		3.5		
	42 inch RCP	LF	\$90.00	81	\$7,290.00
	Spruce	width	length	sq ft	
	Street Crossing	20	32	640	
	4-lane, Asphalt, w/ C&G	sy	\$44.00	71	\$3,128.89
NODE	92717 Junction Stru	cture			
		ea	\$5,250.00	1	\$5,250.00
CONDUIT	1007 Parallel pipe		************************	RCP	
	42 inch RCP	LF	\$90.00	139	\$12,510.00
NODE	92718 Junction Stru	cture			
		ea	\$5,250.00	1	\$5,250.00
CONDUIT	2118 Parallel pipe			RCP	
	42 inch RCP	LF	\$90.00	64	\$5,760.00
	Broadway	width	length	sq ft	
	Street Crossing	20	64	1280	
_	2-lane, Asphalt, w/ C&G	sy	\$38.00	142	\$5,404.44
NODE	86323 Junction Stru	cture			
	***************************************	ea	\$5,250.00	1	\$5,250.00
CONDUIT	2254 Parallel pipe	added	3.5	RCP	
	42 inch RCP	LF	\$90.00	53	\$4,770.00
	Broadway	width	length	sq ft	ψ 1,7 7 G.GG
	Street Crossing	20	53	1060	
	2-lane, Asphalt, w/ C&G	sy	\$38.00	118	\$4,475.56
NODE	86324 Junction Stru	cture	Ψ00.00		Ψ4,47 3.30
		ea	\$5,250.00	1	\$5,250.00
CONDUIT	1169 Parallel pipe		3.5		\$3,230.00
	42 inch RCP	LF	\$90.00	26	\$2,340.00
NODE	92716 Junction Stru		Ψ50.00		φ2,340.00
	east of our out of our	ea	\$5,250.00	1	\$5,250.00
CONDUIT	1170 Parallel pipe	added		RCP	\$3,230.00
	42 inch RCP	LF	\$90.00	133	\$11,970.00
NODE	92777 Junction Stru		Ψ50.00	133_	\$11,970.00
	e di locali di di	ea	\$5,250.00	1	RE 350.00
CONDUIT	1171 Parallel pipe		3.5		\$5,250.00
	42 inch RCP	LF	\$90.00	121	\$10,900,00
NODE	92715 Junction Stru		ψ50.00	141	\$10,890.00
	va, re cuitotton ottu	ea	\$5,250.00	1	CE 3E0 00
CONDUIT	1172 Parallel pipe			RCP	\$5,250.00
	42 inch RCP	LF	\$90.00	66	TE 040 00
	42 1110111101	LI	φ30.00	QΘ	\$5,940.00
			7		
NODE	86015 Junction Stru	cturo			
HODE	Sunction Stru		#2 250 00	4	CO OFD OD
CONDUIT	2116 Parallel pipe	ea	\$2,350.00	1	\$2,350.00
SCINDOIT	15 inch RCP		1.25	WWW.Compression.com.com.com.com.com.com.com.com.com.com	677 5 00
	6th	LF	\$25.00	31	\$775.00
		width	length	sq ft	
	Street Crossing	20	32	640	
NODE	2-lane, Asphalt, w/ C&G	sy	\$38.00	71	\$2,702.22
NODE	86017 Junction Stru				
00115		ea	\$2,350.00	1	\$2,350.00
CONDUIT	993 Parallel pipe		1.25	AAAAAAAAAAAAAAAAAAAAA	
	15 inch RCP	LF	\$25.00	74	\$1,850.00

No DESCRIPTION UNIT COST QUANTITY CONDUIT NODE 86018 Junction Structure ea \$2,350.00 1 \$2,350.00 NODE 86020 Junction Structure ea \$5,250.00 1 \$5,250.00 CONDUIT 1173 Parallel pipe added 1.5 RCP 1.5 RCP 18 inch RCP LF \$34.00 128 \$4,350.00 6th Street width length sq ft	
ea \$2,350.00 1 \$2,350.00 NODE 86020 Junction Structure ea \$5,250.00 1 \$5,250.00 CONDUIT 1173 Parallel pipe added 1.5 RCP 18 inch RCP LF \$34.00 128 \$4,350.00 6th Street width length sq ft	0.00
NODE 86020 Junction Structure ea \$5,250.00 1 \$5,250.00 \$6,00.00 \$6,00.00 \$6,00.00 \$6,00.00 \$6,00.00 \$6,00.00 \$6,00.00 \$6,00.00 \$6,00.00 \$6,00.00 \$6,00.00 \$6,00.00 \$6,00.00 \$6,00.00 \$6,00.00 \$6,00.00 \$6,00	
ea \$5,250.00 1 \$5,250.00 CONDUIT 1173 Parallel pipe added 1.5 RCP 18 inch RCP LF \$34.00 128 \$4,350 6th Street width length sq ft	
ea \$5,250.00 1 \$5,250.00 CONDUIT 1173 Parallel pipe added 1.5 RCP 18 inch RCP LF \$34.00 128 \$4,350 6th Street width length sq ft	
ea \$5,250.00 1 \$5,250.00 CONDUIT 1173 Parallel pipe added 1.5 RCP 18 inch RCP LF \$34.00 128 \$4,350 6th Street width length sq ft	
ea \$5,250.00 1 \$5,250.00 CONDUIT 1173 Parallel pipe added 1.5 RCP 18 inch RCP LF \$34.00 128 \$4,350 6th Street width length sq ft	
CONDUIT 1173 Parallel pipe added 1.5 RCP 18 inch RCP LF \$34.00 128 \$4,355 6th Street width length sq ft	
18 inch RCP LF \$34.00 128 \$4,355 6th Street width length sq ft	0.00
6th Street width length sq ft	
	2.00
Middle of Street 32 128 4096	
2-lane, Asphalt, w/ C&G sy \$38.00 455 \$17,29	14 22
NODE 86325 Junction Structure	7.22
ea \$5,250,00 1 \$5,25	0.00
CONDUIT 1174 Parallel pipe added 3.5 RCP	
42 inch RCP LF \$90.00 198 \$17,82	0.00
Osage St width length sq ft	
Middle of Street 32 198 6336	
2-lane, Asphalt, w/ C&G sy \$38.00 704 \$26,75	2.00
NODE 92713 Junction Structure	
ea \$5,250.00 1 \$5,250	0.00
NODE 92714 Junction Structure	
ea \$5,250.00 1 \$5,250	00
CONDUIT 2255 Parallel pipe added 3.5 RCP	
42 inch RCP LF \$90.00 45 \$4,050	0.00
NODE 86329 Junction Structure	
ea \$5,250.00 1 \$5,250	0.00
CONDUIT 3170 Pipe added 6 RCP	
72 inch RCP LF \$250.00 125 \$31,25 NODE 86330 Junction Structure	0.00
ea \$5,250.00 1 \$5,250	100
CONDUIT 1176 Replacement pipe 6 RCP	
CONDUIT 1176 Replacement pipe 6 RCP 72 inch RCP LF \$250.00 89 \$22,25	
CONDUIT	
CONDUIT 1176 Replacement pipe 6 RCP 72 inch RCP LF \$250.00 \$9 \$22,25 Osage St width length sq ft Street Crossing 20 32 640	0.00
CONDUIT #176 Replacement pipe	0.00
CONDUIT #176 Replacement pipe	0.00
CONDUIT 1176 Replacement pipe 6 RCP 72 inch RCP LF \$250.00 89 \$22,25 Osage St width length sq ft Street Crossing 20 32 640 2-lane, Asphalt, w/ C&G sy \$38.00 71 \$2,702 Structural Removal 20 Percent \$6,040 NODE 86331 Junction Structure ea \$5,250.00 1 \$5.250	0.00 2.22 0.44
CONDUIT 1176 Replacement pipe 72 inch RCP LF \$250.00 89 \$22,25 Osage St width length sq ft Street Crossing 20 32 640 2-lane, Asphalt, w/ C&G sy \$38.00 71 \$2,702 Structural Removal 20 Percent \$6,040 NODE 86331 Junction Structure ea \$5,250.00 1 \$5,250 CONDUIT 3169 Pipe added 6 RCP	0.00 2.22 0.44
CONDUIT 1176 Replacement pipe 72 inch RCP LF \$250.00 89 \$22,25 Osage St width length sq ft Street Crossing 20 32 640 2-lane, Asphalt, w/ C&G sy \$38.00 71 \$2,702 Structural Removal 20 Percent \$6,040 NODE 86331 Junction Structure ea \$5,250.00 1 \$5,250 CONDUIT 3169 Pipe added 6 RCP 72 inch RCP LF \$250.00 139 \$34.750	0.00 2.22 0.44 0.00
CONDUIT 1176 Replacement pipe 6 RCP 72 inch RCP LF \$250.00 89 \$22,25 Osage St width Street Crossing 20 32 640 2-lane, Asphalt, w/ C&G sy Structural Removal 20 Percent \$2,702 Structural Removal 20 Percent \$6,040 NODE 86331 Junction Structure CONDUIT 3 i69 Pipe added 6 RCP 72 inch RCP LF \$250.00 139 \$34,75 NODE 86333 Junction Structure	0.00 2.22 0.44 0.00
CONDUIT 1176 Replacement pipe 72 inch RCP LF \$250.00 89 \$22,25 Osage St width length sq ft Street Crossing 20 32 640 2-lane, Asphalt, w/ C&G sy \$38.00 71 \$2,702 Structural Removal 20 Percent \$6,040 NODE 86331 Junction Structure ea \$5,250.00 1 \$5,250 CONDUIT 3169 Pipe added 6 RCP 72 inch RCP LF \$250.00 139 \$34.750	0.00 2.22 0.44 0.00
CONDUIT 1176 Replacement pipe 6 RCP 72 inch RCP LF \$250.00 89 \$22,25 Osage St width Street Crossing 20 32 640 2-lane, Asphalt, w/ C&G sy Structural Removal 20 Percent \$2,702 Structural Removal 20 Percent \$6,040 NODE 86331 Junction Structure CONDUIT 3 i69 Pipe added 6 RCP 72 inch RCP LF \$250.00 139 \$34,75 NODE 86333 Junction Structure	0.00 2.22 0.44 0.00
CONDUIT 1176 Replacement pipe 6 RCP 72 inch RCP LF \$250.00 89 \$22,25 Osage St width Street Crossing 20 32 640 2-lane, Asphalt, w/ C&G sy Structural Removal 20 Percent \$2,702 Structural Removal 20 Percent \$6,040 NODE 86331 Junction Structure CONDUIT 3 i69 Pipe added 6 RCP 72 inch RCP LF \$250.00 139 \$34,75 NODE 86333 Junction Structure	0.00 2.22 0.44 0.00
CONDUIT 1176 Replacement pipe 6 RCP 72 inch RCP LF \$250.00 89 \$22,25 Osage St width length sq ft	0.00 2.22 0.44 0.00
CONDUIT 1176 Replacement pipe 72 inch RCP LF \$250.00 89 \$22,25 Osage St width length sq ft Street Crossing 20 32 640 2-lane, Asphalt, w/ C&G sy \$38.00 71 \$2,702 Structural Removal 20 Percent \$6,040 NODE 86331 Junction Structure ea \$5,250.00 1 \$5,250 CONDUIT 3169 Pipe added 6 RCP 72 inch RCP LF \$250.00 139 \$34,750 NODE 86333 Junction Structure ea \$5,250.00 1 \$5,250 NODE 86333 Junction Structure ea \$5,250.00 1 \$5,250	0.00 2.22 0.44 0.00 0.00
CONDUIT 1176 Replacement pipe 72 inch RCP LF \$250.00 89 \$22,25	0.00 2.22 0.44 0.00 0.00
CONDUIT 1176 Replacement pipe 72 inch RCP LF \$250.00 89 \$22,25 Osage St width length sq ft Street Crossing 20 32 640 2-lane, Asphalt, w/ C&G sy \$38.00 71 \$2,702 Structural Removal 20 Percent \$6,040 NODE 86331 Junction Structure ea \$5,250.00 1 \$5,250 CONDUIT 3169 Pipe added 6 RCP 72 inch RCP LF \$250.00 139 \$34,75 NODE 86333 Junction Structure ea \$5,250.00 1 \$5,250 NODE 86332 Junction Structure ea \$5,250.00 1 \$5,250 NODE 86332 Junction Structure ea \$5,250.00 1 \$5,250 CONDUIT 3168 Pipe added 6 RCP	0.00 2.22 0.44 0.00 0.00
CONDUIT 1176 Replacement pipe 72 inch RCP LF \$250.00 89 \$22,25	0.00 2.22 0.44 0.00 0.00

ITEM No	ITEM DESCRIPTION	UNIT	UNIT COST	QUANTITY	TOTAL COST
NODE	86378 Junction Stru	cture			
		ea	\$5,250.00	1	\$5,250.00
CONDUIT	3167 Pipe added		6	RCP	
	72 inch RCP	LF	\$250.00	114	\$28,500.00
NODE	92185 Junction Stru	cture		area area (alamenta)	
		ea	\$5,250.00	1	\$5,250.00
				ŧ	
				SUBTOTAL	\$614,642.78
			20%	\!:_	0707 574 00

20% Contingency \$737,571.33

20% Engineering, legal and administrative \$885,085.60



	PRELIMINARY COST ESTIMAT	E		DATE:	11/21/9	
PROJECT:	ROJECT: LEAVENWORTH, KANSAS STORMWATER MASTER PLAN					
ENGINEER	BLACK & VEATCH	CHCKD:	JWH			
ELEMENT#	3 MILE CREEK - 2R					
	DESCRIPTION	QUANT.	UNIT	U. PRICE	AMOUNT	
A.3.3	Pipe and Inlet (Enclosed) System, 15 inch RCP	313	LF	\$25.00	\$7,83	
A.3.4	Pipe and Inlet (Enclosed) System. 18 inch RCP	108	LF	\$34.00	\$3,67	
A.3.5	Pipe and Inlet (Enclosed) System, 21 inch RCP	135	LF	\$37.00	\$5.00	
A.3.6	Pipe and Inlet (Enclosed) System, 24 inch RCP	1371	LF	\$42.00	\$57,59	
A.3.7	Pipe and Inlet (Enclosed) System, 27 inch RCP	267	LF	\$47.00	\$12.55	
A.3.8	Pipe and Inlet (Enclosed) System, 30 inch RCP	214	LF	\$52.00	\$11.15	
A.3.9	Pipe and Inlet (Enclosed) System, 36 inch RCP	1673	LF	\$66.00	\$110.39	
A.3.10	Pipe and Inlet (Enclosed) System, 42 inch RCP	778	LF	\$90.00	\$70.06	
A.3.11	Pipe and Inlet (Enclosed) System, 48 inch RCP	743	LF	\$110.00	\$81,68	
A.3.13	Pipe and Inlet (Enclosed) System, 60 inch RCP	40	LF	\$200.00	\$7,96	
A.5.1	Storm Sewer Manholes < 6ft Diameter	16	ea	\$2,350.00	\$37.60	
A.5.2	Storm Sewer Manholes > 6ft Diameter	24	ea	\$5,250.00	\$126.00	
B.1	Excavation and Backfill	156	cy	\$4.00	\$62	
B.3.0	Reinforced Concrete Box Culverts, 2 x 2	43	LF	\$180.00	\$7.82	
B.3.1	Reinforced Concrete Box Culverts, 3 x 2	85	LF	\$215.00	\$18,27	
C.3.2.1	Concrete - Wing walls and apron	78	cy	\$300.00	\$23,34	
D.1	Structure Removal (20%)		LS		\$7,27	
F.2.1	Street Removal - 2-lane, Gravel	471	sy	\$4.00	\$1,88	
F.3.4.1	Street Replacement, 2-lane, Gravel	471	sy	\$10.00	\$4,71	
F.2.2	Street Removal - 2-lane, Aspalt, w/ C&G	2493	sy	\$8.00	\$19,94	
F.3.4.2	Street Replacement, 2-lane, Asphalt w/ C&G	2493	sy	\$30.00	\$74.79	
F.2.3	Street Removal - 4-lane, Aspalt, w/ C&G	3391	sy	\$9.00	\$30,519	
F.3.4.3	Street Replacement, 4-lane, Asphalt w/ C&G	3391	sy	\$35.00	\$118,68	
				TOTAL =	\$839,38	
CONTINGE	NCY	20 PER	CENT		\$167,87	
			· ·	SUB TOTAL =	\$1,007,264	
ENGINEERI	ING. LEGAL AND ADMINISTRATIVE	20 PE	RCENT		\$201.45	
					2201.43.	
				TOTAL =	\$1,208,717	

ITEM No	ITEM DESCRIPTION	UNIT	UNIT COST	QUANTITY	TOTAL COST
Subsyster	n 2R 3 Mile Creek			40/11/11	0001
NODE	85488 Junction Str	ucture			
==::::::		ea	\$2,350.00	1	\$2,350.00
CONDUIT		added	2	RCP	
	24 inch RCP	LF	\$42.00	27.67	\$1,162.14
		width	length	sq ft	
	Cross Klemp Street	20	20	400	
	2-lane, Asphalt, w/ C&G	sy	\$38.00	44	\$1,688.89
NODE	85489 Junction Stru				
CONDUIT	724 Parallel pipe	ea	\$2,350.00	RCB	\$2,350.00
	24 inch RCP	LF	\$42.00		CC 040 40
NODE	85493 Concrete Wi	ng walle 9	Φ42.00 Aprop	148.01	\$6,216.42
	Quantity				
	Pipe 1	Height	Width	cu yd	
	Pipe 2	2.5			
		*****	2 2		
	Wing walls 2	3.5	5	1.30	
	Apron	5	6.5	1.20	
	Face (less pipe opening	3.5	6.5	0.54	
			Total	3.04	
	Concrete	су	\$300.00	3.04	\$913.33
	Excavation and Backfill	су	\$4.00	6.09	\$24.36
NODE	85494 Concrete Wir	ng walls & Height	Apron Width	cu yd	
	Pipe 1	2		RCP	
	Pipe 2	1.25			
	Wing walls 2	3	5	1.11	
	Apron	5	5.25	0.97	
	Face (less pipe opening	3	5.25		
	. are (rese pipe opening	9	Total =	2.50	
	Concrete	CV	\$300.00		0754.40
	Excavation and Backfill	cy		2.50	\$751.46
CONDUIT	726 Parallel pipe	cy	\$4.00 1.25	5.01	\$20.04
er madamentalisted se	15 inch RCP	LF	າ.∠ວ \$25.00		£4 005 ==
	. a mon to	width		54.63	\$1,365.75
	Cross Klemp Street	20	length 20	sq ft	
	2-lane, Asphalt, w/ C&G	sy	\$38.00	400	£4.000.00
IODE	85495 Concrete Win	oy na walle 9	φοο.υυ Δprop	44	\$1,688.89
_	Quantity	Height	Width		
	Pipe 1	neignt 2	***************************************	cu yd	
	Pipe 2	1.25	30.000 (0	RCP	
	Wing walls 2	3	1. 25 5	RCP	
	Apron			1.11	
		5	5.25	0.97	
	Face (less pipe opening	3	5.25	0.42	
	Concrete		Total	2.50	
	Concrete	су	\$300.00	2.50	\$751.46
	Excavation and Backfill	су	\$4.00	5.01	\$20.04
IODE	85496 Junction Struc	cture			

ITEM	ITEM		UNIT		TOTAL
No	DESCRIPTION	UNIT	COST	QUANTITY	COST
CONDUIT	manufacture and property of the control of the cont	added		RCP	- 0001
	36 inch RCP	LF	\$66.00	150.96	\$9,963.36
		width	length	sq ft	40,000.00
	Parallel Grand Ave.	20	151	3019.2	
None	2-lane, Asphalt, w/ C&G	sy	\$38.00	335	\$12,747.73
NODE	85497 Junction Stru	ucture			
		ea	\$2,350.00	1	\$2,350.00
NODE	05455 1				
NODE	85456 Junction Stru		60.050.00		
CONDUIT	702 Parallel pipe	ea	\$2,350.00	1	\$2,350.00
	21 inch RCP	LF	1.75		4.
	21 Men Ner	width	\$37.00	28.81	\$1,065.97
	Cross Forest Lane	20	length	sq ft	
	2-lane, Asphalt, w/ C&G	sy	22 \$38.00	440	04.055.55
NODE	85455 Junction Stru	cture	\$30.00	49	\$1,857.78
	Canouon One	ea	\$2,350.00	4	00.050.00
CONDUIT	1901 Parallel pipe	added	1.75	1	\$2,350.00
	21 inch RCP	LF	\$37.00		C4 077 07
NODE	85457 Concrete Wir		Apron	29.11	\$1,077.07
	Quantity	Height	Width	cu yd	
	Pipe 1		2 2	RCP	
	Pipe 2	1.75		RCP	
	Wing walls 2	3	5	1.11	
	Apron	5	5.75	1.06	
	Face (less pipe opening	3	5.75	0.43	
			Total	2.61	
	Concrete	су	\$300.00	2.61	\$782.81
	Excavation and Backfill	cy	\$4.00	5.22	\$20.88
				0.22	Ψ20.00
NODE	95470 Consents 105				
HODE	85479 Concrete Win Quantity	g walls &			
	Pipe 1	Height	Width	cu yd	
	Pipe 2	2		RCP	
	Wing walls 2			RCP	
	Apron	3 5	5 6	1.11	
	Face (less pipe opening	3		1.11	
	(rece pipe opening	J	6 Total =	0.43	
	Concrete	су	\$300.00	2.66	0700.05
	Excavation and Backfill	су	\$4.00	2.66	\$796.85
CONDUIT	715 Parallel pipe a	ndded		5.31 RCP	\$21.25
	24 inch RCP	LF	\$42.00	**********	60 057 40
		width	length	56,13	\$2,357.46
	Cross Michigan Street	20	56	sq ft 1122.6	
	2-lane, Asphalt, w/ C&G	sy	\$38.00	125	£4 720 07
NODE	85480 Concrete Wing	walls &	Apron	120	\$4,739.87
	Quantity	Height	Width	cu yd	
	Pipe 1	2	2	RCP	
	Pipe 2 1	2	2	RCP	
	Wing walls 2	3	5	1.11	
	Apron	5	6	1.11	
	Face (less pipe opening	3	6	0.43	
L			Total	2.66	
	Concrete	су	\$300.00	2.66	\$796.85
	Excavation and Backfill	су	\$4.00	5.31	\$21.25
				8000 SEC	T-1.29

ITEM	ITEM			UNIT		TOTAL
No	DESCRIP		UNIT	COST	QUANTITY	COST
NODE	8549	8 Junction Str	ucture			
001151			ea	\$2,350.00	1	\$2,350.00
CONDUI		7 Parallel pipe		3	RCP	
NODE	3(LF	\$66.00	146.62	\$9,676.92
NODE	9 234:	5 Junction Stru		72720		
CONDUI	T 334	(Dorollal nine	ea	\$5,250.00	1	\$5,250.00
0011001	36	Parallel pipe inch RCP			RCP	Control of the second
		IIICII NOP	LF width	\$66.00	116.73	\$7,704.18
	Cross Ohio	Street	20	length 60	sq ft	
220		phalt, w/ C&G	sy	\$44.00	1200 133	\$E 966 67
NODE	9234€	Junction Stru	cture	Ψ11.00	100	\$5,866.67
			ea	\$5,250.00	1	\$5,250.00
CONDUIT	T 1115	Parallel pipe			RCP	\$5,230.00
	36	inch RCP	LF	\$66.00	142.12	\$9,379.92
			width	length	sq ft	40,0,0.02
	Parallel Kir	ngman Street	20	142	2842.4	
NODE	2-lane, Asp	halt, w/ C&G	sy	\$38.00	316	\$12,001.24
NODE	92736	Junction Stru	cture			
CONDUIT	2224	®D	ea	\$5,250.00	1	\$5,250.00
CONDON	*****************	Parallel pipe			RCP	
NODE	30	inch RCP Junction Stru	LF	\$66.00	162.74	\$10,740.84
.,,,,,	OUZZO	Junction Stru		CE OFO DO		
CONDUIT	1116	Parallel pipe	ea	\$5,250.00	1	\$5,250.00
	000000000000000000000000000000000000000	inch RCP	LF		RCP	• • • • • • • • • • • • • • • • • • • •
NODE		Junction Struc		\$66.00	177.45	\$11,711.70
	***************************************	,	ea	\$5,250.00	1	CE 350.00
			10.75.00 h	40,200.00		\$5,250.00
TIE==						
NODE	85976	Concrete Win	g walls &	Apron		
	Di 4	Quantity	Height	Width	cu yd	
	Pipe 1	1	2		RCP	
	Pipe 2	1	1.75	************************	RCP	
	Wing walls Apron	2	3	5	1.11	
			5	5.75	1.06	
	ace (less t	pipe opening	3	5.75	0.43	
	Concrete			Total	2.61	
	Excavation a	and Backfill	су	\$300.00	2.61	\$782.81
CONDUIT	980	Parallel pipe a	cy	\$4.00	5.22	\$20.88
	21	inch RCP	LF	1.75 F \$37.00		
NODE		Concrete Wing	n walls &	ΔDrop	77.27	\$2,858.99
		Quantity	Height	Width	ou vd	
	Pipe 1	1	2	2	cu yd RCP	
	Pipe 2	1	1.75	1.75	RCP	
	Wing walls	2	3	5	1.11	
	Apron		5	5.75	1.06	
	Face (less p	ipe opening	3	5.75	0.43	
				Total	2.61	
	Concrete		су	\$300.00	2.61	\$782.81
	Excavation a	nd Backfill	су	\$4.00	5.22	\$20.88
					= 35-47-54	
MODE				The second second		
NODE	92362 .	Junction Struct		\$2,350.00	1	

ITEM	ITEM		UNIT		TOTAL
No	DESCRIPTION	UNIT	COST	QUANTITY	TOTAL
CONDUIT	7 2688 Parallel pipe	added		RCP	COST
	27 inch RCP	LF	\$47.00	267.06	\$12,551.82
		width	length	sq ft	Ψ12,331.02
	Parallel Ohio Street	20	267	5341.2	
	4-lane, Asphalt, w/ C&G	sy	\$44.00	593	\$26,112.53
NODE	92363 Junction Str	ucture			Ψ20,112.00
		ea	\$5,250.00	1	\$5,250.00
CONDUIT	**************************************	added		RCP	
	36 inch RCP	LF	\$66.00	83.38	\$5,503.08
		width	length	sq ft	
	Parallel Ohio Street	20	83	1667.6	
	4-lane, Asphalt, w/ C&G	sy	\$44.00	185	\$8,152.71
NODE	92364 Junction Str	ucture			
		ea	\$5,250.00	1	\$5,250.00
CONDUIT	Pipo		3	RCP	
	36 inch RCP	LF	\$66.00	194.77	\$12,854.82
		width	length	sq ft	3 30
	Parallel Ohio Street	20	195	3895.4	
	4-lane, Asphalt, w/ C&G	sy	\$44.00	433	\$19,044.18
NODE	92732 Junction Stru	ucture			
		ea	\$5,250.00	1	\$5,250.00
CONDUIT		added		RCP	
	42 inch RCP	LF	\$90.00	49.88	\$4,489.20
		width	length	sq ft	Ψ1,100.20
	Parallel Ohio Street	20	50	997.6	
	4-lane, Asphalt, w/ C&G	sy	\$44.00	111	\$4,877.16
NODE	92733 Junction Stru	cture			Ψ1,077.10
		ea	\$5,250.00	1	\$5,250.00
CONDUIT	3201 Parallel pipe	added		RCP	45,255.55
	42 inch RCP	LF	\$90.00	231.88	\$20,869.20
		width	length	sq ft	420,000.20
	Parallel Ohio Street	20	232	4637.6	
	4-lane, Asphalt, w/ C&G	sy	\$44.00	515	\$22,672.71
NODE	92734 Junction Stru	cture			Ψ <u>L</u> L,012.11
	50-00-000 (0.00 V) 5-000-00-00-00-00-00-00-00-00-00-00-00-0	ea	\$5,250.00	1	\$5,250.00
CONDUIT	3202 Parallel pipe	added		RCP	Ψ0,200.00
	42 inch RCP	LF	\$90.00	52.72	\$4,744.80
		width	length	sq ft	Ψ1,711.00
	Parallel Ohio Street	20	53	1054.4	
	4-lane, Asphalt, w/ C&G	sy	\$44.00	117	\$5,154.84
NODE	92735 Junction Stru	cture			40,101.04
		ea	\$5,250.00	1	\$5,250.00
CONDUIT	3203 Parallel pipe	added	3.5		Ψ0,200.00
	42 inch RCP	LF	\$90.00	132.91	\$11,961.90
		width	length	sq ft	Ψ11,901.90
	Parallel Ohio Street	20	133	2658.2	
	4-lane, Asphalt, w/ C&G	sy	\$44.00	295	\$12,995.64
NODE	85487 Junction Stru	cture			Ψ12,333.04
		ea	\$5,250.00	4	\$5.250.00
CONDUIT	716 Parallel pipe			RCP	\$5,250.00
	36 inch RCP	LF	\$66.00	44.62	¢2.044.02
	T mon to	width	length	***************************************	\$2,944.92
	Cross Ohio Street	20	30	sq ft	
	4-lane, Asphalt, w/ C&G			600	£0 000 00
NODE	85485 Junction Struc	Sy	\$44.00	67	\$2,933.33
	ounction Struct		65 350 00	4 /	05 055 55
		ea	\$5,250.00	1	\$5,250.00

ITEM No	ITEM DESCRIPTION	UNIT	UNIT COST	QUANTITY	TOTAL COST
NODE	85482 Junction Stru		COST	QUANTITY	COS1
CONDUIT		ea	\$2,350.00	1	\$2,350.00
CONDON	718 Parallel pipe 24 inch RCP	added LF	\$42.00	RCP 159.46	EE 607 22
	24 IIICII NCF	width	length	sq ft	\$6,697.32
	Parallel Ohio Street	20	159	3189.2	
	4-lane, Asphalt, w/ C&G	sy	\$44.00	354	\$15,591.64
NODE	85484 Junction Stru				Ψ10,001.01
	3	ea	\$2,350.00	1	\$2,350.00
CONDUIT	720 Parallel pipe			RCP	
	30 inch RCP	LF	\$52.00	214.44	\$11,150.88
	District Co. 1	width	length	sq ft	
	Parallel Ohio Street	20	214	4288.8	
NODE	4-lane, Asphalt, w/ C&G	sy	\$44.00	477	\$20,967.47
CONDUIT	85485 721 Parallel pipe	addad	2.5	RCP	
CONDON	42 inch RCP	LF	\$90.00	85.97	¢7 727 20
NODE	86233 Junction Stru		Ψ90.00	00.31	\$7,737.30
	COLOR CANCION CHA	ea	\$5,250.00	1	\$5,250.00
		- Cu	Ψ0,200.00		Ψ5,250.00
NODE	85920 Junction Stru	cture			***************************************
×		ea	\$2,350.00	1	\$2,350.00
CONDUIT	946 Parallel pipe	added	2	RCP	
	24 inch RCP	LF	\$42.00	122.05	\$5,126.10
		width	length	sq ft	
	Cross 15th Street	20	60	1200	
NODE	2-lane, Asphalt, w/ C&G	sy	\$38.00	133	\$5,066.67
NODE	85922 Concrete Win				
	Quantity Pipe 1 1	Height	Width	cu yd	
	Pipe 2	2.5		X I	
	Wing walls 2	3.5	! 2 5	RCP 1.30	
	Apron	5	6.5	1.20	
	Face (less pipe opening	3.5	6.5	0.54	
	. and (loss pipe opening	0.0	Total	3.04	
	Concrete	су	\$300.00	3.04	\$913.33
	Excavation and Backfill	су	\$4.00	6.09	\$24.36
					,
NODE	86237 Concrete Win				
	Quantity	Height	Width	cu yd	
	Pipe 1 1	3			
	Pipe 2 1	1.25			
	Wing walls 2	4	5	1.48	
	Apron Face (less pipe opening	5 4	6.25	1.16	
	ace (less hihe obetiing	4	6.25 Total	0.62	
	Concrete	CV	Total \$300.00	3.26	¢077.07
	Excavation and Backfill	cy cy	\$4.00	3.26 6.52	\$977.27 \$26.06
CONDUIT	1119 Parallel pipe a			RCP	φ20.00
	15 inch RCP	LF	\$25.00	258.81	\$6,470.25
NODE	86238 Junction Struc			20.01	ψ0,410.20
	Maria Ma	ea	\$2,350.00	1	\$2,350.00

ITEM	ITEM		UNIT		TOTAL
No	DESCRIPTION	UNIT	COST	QUANTITY	COST
NODE	86303 Concrete W				
	Quantity	Height	Width	cu yd	
	Pipe 1 1	2		RCB	
	Pipe 2 0	0			
	Wing walls 2	3	5	1.11	
	Apron	5	3	0.56	
	Face (less pipe opening	3	_3	0.19	
	Concrete		Total	1.85	ST SAN JAMES IN CONTRACTOR
	Excavation and Backfill	су	\$300.00	1.85	\$555.56
CONDUIT	1156 Replacemen	cy	\$4.00	3.70	\$14.81
CONDON	2 ft x 2 ft ft W x ft H	LF		RCB	
	ZICAZIC ICVAICH	width	\$180.00	43.48	\$7,826.40
	Cross Madison Street	20	length	sq ft	
	2-lane, Asphalt, w/ C&G	sy	\$38.00	440	04 057 70
	Structural removal (20%	subtotal)	Φ30.00	49	\$1,857.78
NODE	86304 Concrete Wi	ng walls &	Aprop	\$10,255	\$2,050.91
	Quantity	Height	Width		
	Pipe 1 1	rieigiit 2		cu yd	
	Pipe 2	Õ	2	RCB	
	Wing walls 2	3	0 5	1 11	
	Apron	5	3	1.11	
	Face (less pipe opening	3	3	0.56	
	, and (read pipe opening	3	Total	0.19 1.85	
	Concrete	су	\$300.00		0555.50
	Excavation and Backfill	су	\$4.00	1.85	\$555.56
	Executation and Backing	Су	φ4.00	3.70	\$14.81
NODE	86305 Concrete Wir	ng walls &	Apron		
	Quantity	Height	Width	cu yd	
	Pipe 1	2	2	RCP	
	Pipe 2	1.5	1.5	RCP	
	Wing walls 2	3	5	1.11	
	Apron	5	5.5	1.02	
	Face (less pipe opening	3	5.5	0.43	
			Total	2.56	
	Concrete	су	\$300.00	2.56	\$767.68
	Excavation and Backfill	cý	\$4.00	5.12	\$20.47
CONDUIT	1157 Parallel pipe	added	1.5		Ψ20.47
	18 inch RCP	LF	\$34.00	37.31	\$1,268.54
		width	length	sq ft	7.,200.01
	Cross Washington St.	20	20	400	
	2-lane, Asphalt, w/ C&G	sy	\$38.00	44	\$1,688.89
NODE	86306 Concrete Win	g walls & A	Apron		7.11000.00
	Quantity	Height	Width	cu yd	
	Pipe 1 1	2	2	RCP	
	Pipe 2 1	1.5	1.5	RCP	
	Wing walls 2	3	5	1.11	
	Apron	5	5.5	1.02	
	Face (less pipe opening	3	5.5	0.43	
	50 A000 60 50 50 50 50 50 50 50 50 50 50 50 50 50		Total	2.56	
	Concrete	су	\$300.00	2.56	\$767.68
	Excavation and Backfill	су	\$4.00	5.12	\$20.47

ITEM	ITEM		UNIT		TOTAL
No	DESCRIPTION	UNIT	COST	QUANTITY	COST
NODE	86307 Concrete Wi	ing walls &	Apron	QO/MITT	0001
	Quantity	Height	Width	cu yd	
	Pipe 1	1.		RCP	
	Pipe 2	2.7			
	Wing walls 2	3.75	5	1.39	
	Apron	5	6.25	1.16	
	Face (less pipe opening	3.75	6.25	0.58	
			Total	3.13	
	Concrete	су	\$300.00	3.13	\$938.68
CONDITI	Excavation and Backfill	су	\$4.00	6.26	\$25.03
CONDUIT	minimum and pipe		2.75	RCP	
NODE	33 inch RCP	LF	\$66.00	225.13	\$14,858.58
NODE	92723 Junction Stru	ıcture			
		ea	\$2,350.00	1	\$2,350.00
NODE					
NODE	86285 Junction Stru	icture			
CONDUIT	44.47 5 11 1	ea	\$2,350.00	1	\$2,350.00
CONDUIT	1147 Parallel pipe			RCP	
	24 inch RCP	LF	\$42.00	220.26	\$9,250.92
	Deselled Franchis On the	width	length	sq ft	
	Parallel Franklin Street	20	220	4405.2	
NODE	2-lane, Asphalt, w/ C&G	sy	\$38.00	489	\$18,599.73
NODE	86289 Junction Stru		4		
CONDUIT	***** D!! :	ea	\$5,250.00	1	\$5,250.00
CONDON	1149 Parallel pipe			RCP	
	24 inch RCP	LF	\$42.00	424.18	\$17,815.56
	Parallal allaw	width	length	sq ft	
	Parallel alley 2-lane, Gravel	10	424	4241.8	
NODE	92724 Junction Struc	sy	\$14.00	471	\$6,598.36
NODE	SZ#Z# Junction Struc		00.050.00		
CONDUIT	2251 Parallel pipe a	ea	\$2,350.00	1	\$2,350.00
20112011	24 inch RCP	LF		RCP	
NODE	86291 Junction Struc	LF	\$42.00	43.36	\$1,821.12
	Surrending Structure		CO 350 00	52	
CONDUIT	1150 Parallel pipe a	ea	\$2,350.00	1	\$2,350.00
	24 inch RCP			RCP	
	24 111011101	LF width	\$42.00	65.64	\$2,756.88
	Cross Klemp Street	20	length	sq ft	
	2-lane, Asphalt, w/ C&G	sy	30	600	
NODE	86292 Concrete Wing	a walla P	\$38.00	67	\$2,533.33
CUTSTUTE	Quantity				
	Pipe 1 1	Height 3	Width	cu yd	
	Pipe 2	2	3	RCP	
	Wing walls 2	*******************	_ 2	RCP	
	Apron	4	5	1.48	
	Face (less pipe opening	5 4	7	1.30	
	. acc (icas pipe opening	4	7	0.66	
	Concrete		Total	3.44	parted recol w
	Excavation and Backfill	cy	\$300.00	3.44	\$1,031.00
	Executation and Dackill	су	\$4.00	6.87	\$27.49

ITEM	ITEM		UNIT		TOTAL
No.	DESCRIPTION	UNIT	COST	QUANTITY	COST
NODE	86317 Concrete Wi				
	Quantity	Height	Width	cu yd	
	Pipe 1 1	4 3.5			
	Wing walls 2	*******************	3. 5 5	RCP 1.85	
	Apron	5 5	9.5	1.76	
	Face (less pipe opening	5	9.5	0.94	
	, ace (less pipe opening	•	Total	4.55	
	Concrete	су	\$300.00	4.55	\$1,364.58
laboration of the American State Company	Excavation and Backfill	су	\$4.00	9.10	\$36.39
CONDUIT	1164 Parallel pipe	added		RCP	
-	42 inch RCP	LF	\$90.00	225.13	\$20,261.70
NODE	92731 Junction Stru	cture			
		ea	\$5,250.00	1	\$5,250.00
NODE	92075 Concrete Wir			-	
	Quantity	Height	Width	cu yd	
	Pipe 1	3,5	3.5		
	Pipe 2 1	1.5	_ 1.5		
	Wing walls 2	4.5	5	1.67	
	Apron	5	7	1.30	
	Face (less pipe opening	4.5	_7	0.74	
	Concrete		Total	3.71	******
		су	\$300.00	3.71	\$1,112.35
CONDUIT	Excavation and Backfill 1166 Parallel pipe	cy	\$4.00	7.42	\$29.66
CONDON	18 inch RCP	LF	\$34.00	RCP	CO 404 44
NODE	86318 Junction Stru		\$34.00	70.71_	\$2,404.14
	accide danction off a	ea	\$5,250.00	1	\$5,250.00
CONDUIT	1167 Parallel pipe			RCP	\$3,230.00
	24 inch RCP	LF	\$42.00	104.5	\$4,389.00
		width	length	sq ft	\$4,505.00
	Cross Franklin Street	20	20	400	
	2-lane, Asphalt, w/ C&G	sy	\$38.00	44	\$1,688.89
NODE	86319 Concrete Wir	ng walls & /	Apron		Ψ1,000.00
	Quantity	Height	Width	cu yd	
	Pipe 1 1	6	6	RCP	
	Pipe 2 1	2	2		
	Wing walls 2	7	5	2.59	
	Apron	5	10	1.85	
	Face (less pipe opening	7	10	1.43	
			Total	5.87	
	Concrete	су	\$300.00	5.87	\$1,762.05
None	Excavation and Backfill	су	\$4.00	11.75	\$46.99
NODE	86258 Concrete Win				
	Quantity	Height	Width	cu yd	
	Pipe 1 1	5,5	5.5		
	Pipe 2 1	- 4	_ 4		
	Wing walls 2	6.5	5	2.41	
	Apron	5	11.5	2.13	
	Face (less pipe opening	6.5	11.5	1.42	
	Concrete		Total	5.96	04 700
	Concrete Excavation and Backfill	су	\$300.00	5.96	\$1,788.06
	LACAVAGORI ARU DACKIII	су	\$4.00	11.92	\$47.68

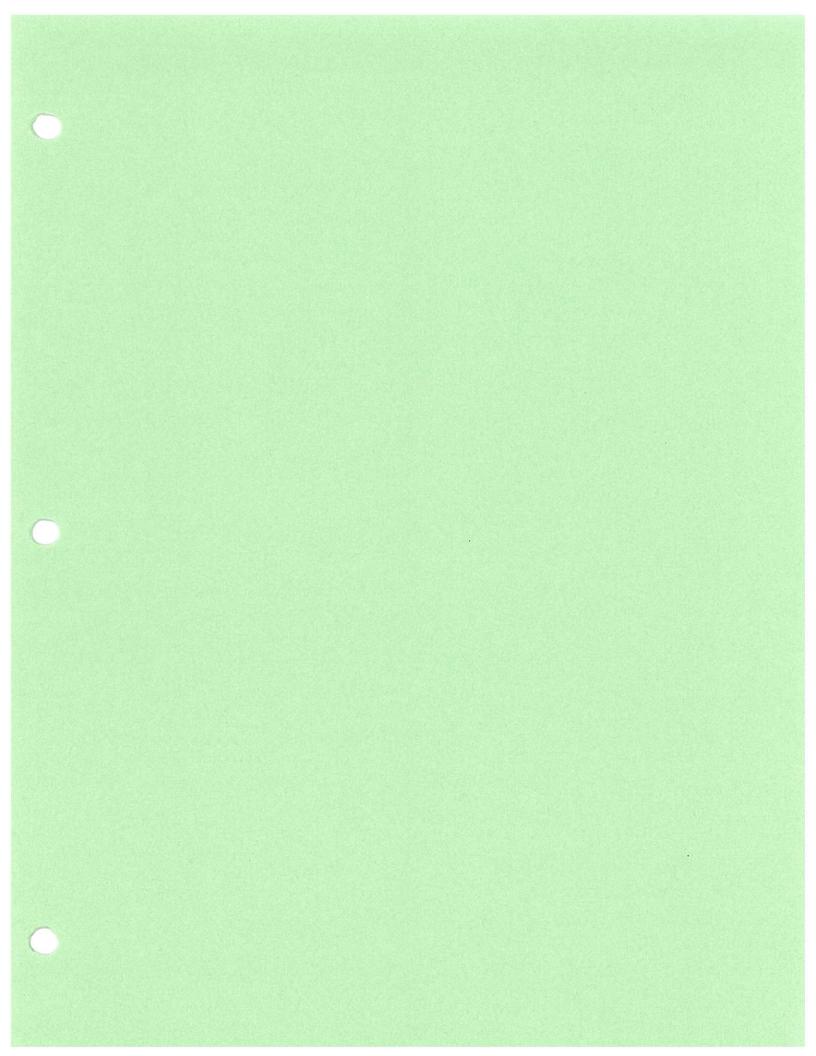
ITEM	ITEM		UNIT		TOTAL
No	DESCRIPTION	UNIT	COST	QUANTITY	COST
CONDUIT	2236 Parallel pipe		200000000000000000000000000000000000000	RCP	
	48 inch RCP	<u>LF</u>	\$110.00	116,96	\$12,865.60
	Cross Noveman Street	width	length	sq ft	
	Cross Newman Street 2-lane, Asphalt, w/ C&G	20	80	1600	CO 755 50
NODE	86259 Junction Stru	sy	\$38.00	178	\$6,755.56
	esage carretter atta	ea	\$5,250.00	1	\$5,250.00
CONDUIT	1128 Parallel pipe			RCP	Ψ0,200.00
	48 inch RCP	LF	\$110.00	229.1	\$25,201.00
		width	length	sq ft	
	Parallel Quincy Street	20	229	4582	
NODE	2-lane, Asphalt, w/ C&G 92729 Junction Stru	sy	\$38.00	509	\$19,346.22
NODE	SZIZS JUNCTION STU		\$5,250.00	1	CE 250 00
		ea	\$5,250.00	1	\$5,250.00
NODE	92098 Concrete Wir	ng walls &	Apron		
	Quantity	Height	Width	cu yd	
	Pipe 1				
	Pipe 2 1	ź			
	Wing walls 2	6	5	2.22	
	Apron	5	11	2.04	
	Face (less pipe opening	6	11 Total	1.25	
	Concrete	су	Total \$300.00	5.51 5.51	C1 CE2 22
	Excavation and Backfill	cy	\$4.00	11.02	\$1,653.32 \$44.09
CONDUIT	1135 Replacement	pipe		RCP	Ψ44.09
	60 inch RCP	LF	\$200.00	39.82	\$7,964.00
	Replacement	pipe		RCP	4.10000
	48 inch RCP	LF	\$110.00	39.82	\$4,380.20
		width	length	sq ft	
	Cross Grand Avenue	20	30	600	Ostoria William Patrici
	2-lane, Asphalt, w/ C&G Structural removal (20% s	sy	\$38.00	67	\$2,533.33
NODE	92728 Junction Struc			\$16,575	\$3,314.99
	DEFECTORICHOR SING	ea	\$5,250.00	1	\$5,250.00
CONDUIT	1136 Parallel pipe			RCP	\$5,250.00
	48 inch RCP	LF	\$110.00	356.7	\$39,237.00
NODE	92727 Junction Struc	cture			+==,==1.00
		ea	\$5,250.00	1	\$5,250.00
NODE	07000				
NODE	85996 Concrete Win				
	Quantity Pipe 1	Height 3	Width 3	cu yd	
	Pipe 2	3		RCP RCP	
	Wing walls 2	4	5	1.48	
	Apron	5	8	1.48	
	Face (less pipe opening	4	8	0.66	
	, , , , , , , , , , , , , , , , , , , ,		Total	3.62	
	Concrete	су	\$300.00	3.62	\$1,087.36
	Excavation and Backfill	су	\$4.00	7.25	\$29.00
CONDUIT	1137 Parallel pipe a			RCP	
NODE	36 inch RCP	_ LF	\$66.00	59.74	\$3,942.84
NODE	92725 Junction Struc		# F # F * * * * * * * * * *	1 2 1	
		ea	\$5,250.00	1	\$5,250.00

ITEM No	ITEM DESCRIPT	TION:	UNIT	TINU	OLIANITITY	TOTAL
CONDUIT		Parallel pipe	added	COST	QUANTITY RCP	COST
	36		LF	\$66.00	58.85	CO 004 40
NODE		Junction Stru		\$00.00	30,00	\$3,884.10
	· · · · · · · · · · · · · · · · · · ·	ouncion on	ea	\$5,250.00	1	¢E 250 00
CONDUIT	1138	Parallel pipe			RCP	\$5,250.00
Audati affat A	36	inch RCP	LF	\$66.00	109.6	\$7,233.60
			width	length	sq ft	\$1,233.00
	Cross 10th	Avenue	20	50	1000	
		halt, w/ C&G	sy	\$44.00	111	\$4,888.89
NODE	85997	Junction Stru	cture	V 1 1.00		\$4,000.09
	***************************************		ea	\$5,250.00	1	\$5,250.00
X_20				40,200.00	n .	Ψ3,230.00
NODE	92721	No new cons	truction			
CONDUIT	3178	Remove culv	ert	8 X 8.5	ARCH	
	8' x 8.5'	ft W x ft H	LF	\$477.00	20	
-	Structural F	Removal and F	Replacem	ent	20 Percent	\$1,908.00
NODE	92722	No new const	truction			Ψ1,000.00
NODE	86334	Concrete Win	ng walls &	Apron		
		Quantity	Height	Width	cu yd	
	Pipe 1	1		2 2		
	Pipe 2	1		2 3		
	Wing walls	2	3	5	1.11	
	Apron		5	7	1.30	
	Face (less	oipe opening	3	7	0.44	
				Total	2.85	
	Concrete		су	\$300.00	2.85	\$853.98
	Excavation	and Backfill	су	\$4.00	5.69	\$22.77
CONDUIT	1178	Parallel box a		3 X 2	RCB	
	3' x 2'	ft W x ft H	LF	\$215.00	84.9	\$18,253.50
NODE	86335	Concrete Win	g walls &		THE OWNER OF THE PARTY OF THE P	
		Quantity	Height	Width	cu yd	
	Pipe 1	1	2		RCP	
	Pipe 2	1	2	2 3	RCB	
	Wing walls	2	3	5	1.11	
	Apron	<u>.</u> 9	5	7	1.30	
	Face (less p	ipe opening	3	7	0.44	
	L			Total	2.85	
	Concrete		су	\$300.00	2.85	\$853.98
	Excavation a	and Backfill	су	\$4.00	5.69	\$22.77
NODE	00784	-		V 537		
NODE	92707	To be replace	d by Lark	ın re-channel	ization project	
NODE NODE	3154		" "	# 1 20	"	
CONDUIT	86357				·	
NODE	1192				"	
CONDUIT	86359			0.25	**	
NODE	1193		 	0 11 544	**	
CONDUIT	86360	11 11 12		"		
NODE	3157	11 11 11		"		
	92702			255	"	

SUBTOTAL \$839,485.07

20% Contingency \$1,007,382.08

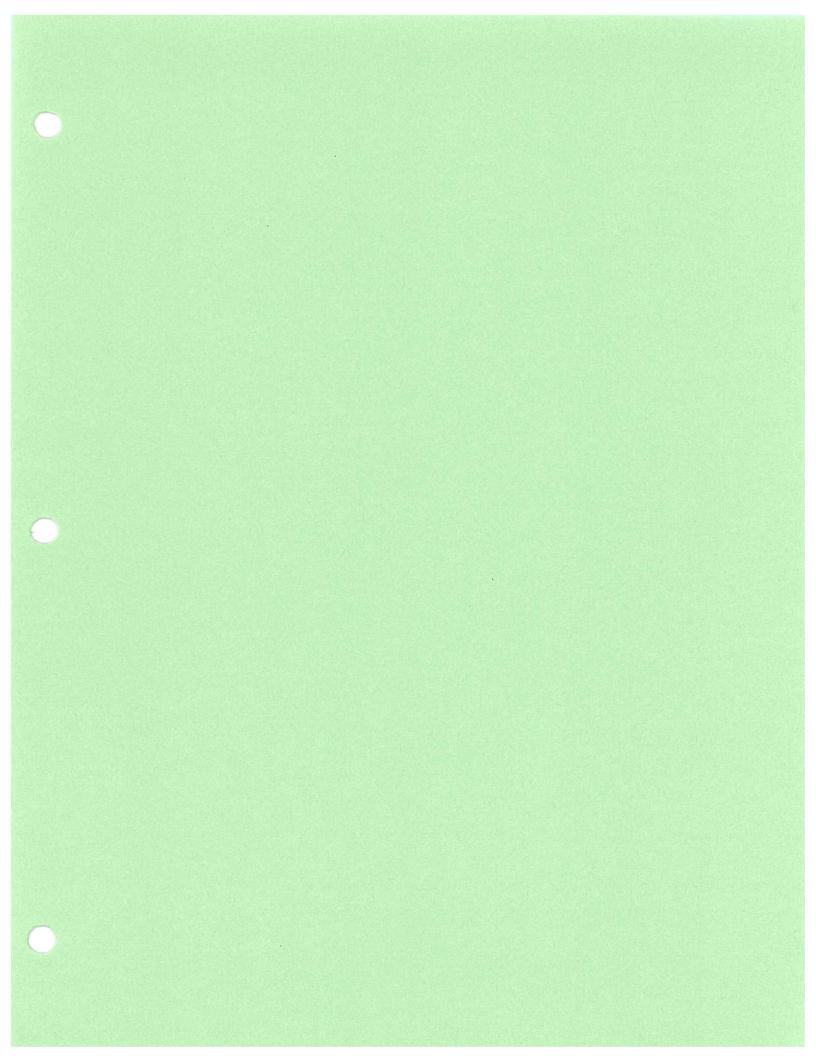
20% Engineering, legal and administrative \$1,208,858.50



	PRELIMINARY COST ESTIMA	ΓE		DATE:	11/19/9		
ROJECT:	OJECT: LEAVENWORTH. KANSAS STORMWATER MASTER PLAN						
ENGINEER	BLACK & VEATCH			CHCKD:	JWH		
ELEMENT #	3 MILE CREEK - 5 R						
	DESCRIPTION	QUANT.	UNIT	U. PRICE	AMOUNT		
A.3.8	Pipe and Inlet (Enclosed) System, 30 inch RCP	129	LF	\$52.00	\$6,70		
	Structural Removal				\$2.19		
A.5.1	Storm Sewer Manholes < 6ft Diameter	1	ea	\$2,350.00	\$2,35		
C.3.2.1	Concrete - Wing walls and apron	3	cy	\$300.00	\$75		
B.1	Excavation and Backfill	5	cy	\$4.00	\$2		
	Lower Channel 4 ft	278	cy	\$4.00	\$1,11		
				1			
				-			
					=======================================		
	and a			TOTAL =	\$13,13		
CONTINGE	NCY	20 PER	CENT		\$2,62		
0.0000000000000000000000000000000000000			S	UB TOTAL =	\$15,76		
ENGINEERI	NG, LEGAL AND ADMINISTRATIVE	20 PER	CENT		\$3,15		
				TOTAL =	\$18,92		

*

ITEM	ITEM			UNIT		TOTAL	
No	DESCRIPTION	V	UNIT	COST	QUANTITY	COST	
Subsystem	5R 3	Mile Creek					
T							
NODE		oncrete Win		Apron			
	Assessor vv.	Quantity	Height	Width	cu yd		
	Pipe 1	1	2.5				
	Pipe 2	1	0	**************************************	en reserve it		
	Wing walls	2	3.5	5_	1.30		
	Apron	er ere ere ere ere ere er	5	4.5	0.83		
	Face (less pipe	e opening	3.5	4.5	0.40		
	Company		Securior Securior	Total	2.53	AND COLUMN CONTRACTOR	
	Concrete	I D. 1 SII	су	\$300.00	2.53	\$759.35	
CONDUIT	Excavation and		су	\$4.00	5.06	\$20.25	
CONDUIT		placement			RCP		
		ch RCP	LF	\$52.00	129	\$6,708.00	
	Channel Shapi		traction to			NAME OF THE OWNER OF THE OWNER.	
	Excavation and		су	\$4.00	278	\$1,111.11	
NODE	Structural remo		1		\$10,949	\$2,189.74	
NODL	92304 Ju	nction Struc		#0.050.00			
			ea	\$2,350.00	1	\$2,350.00	
					=		
					CURTOTAL		
					SUBTOTAL	\$13,138.45	
				20% C	ontingency	\$15,766.14	
	20% Engineering, legal and administrative						



	PRELIMINARY COST ESTIMAT	E		DATE:	11/19/		
PROJECT:			EST:				
ENGINEER	BLACK & VEATCH	снскь:	JLF				
ELEMENT#	3 MILE CREEK - 6 R						
	DESCRIPTION	QUANT.	UNIT	U. PRICE	AMOUNT		
A.3.3	Pipe and Inlet (Enclosed) System, 15 inch RCP	237	LF	\$25.00	\$5.9		
A.3.5	Pipe and Inlet (Enclosed) System, 21 inch RCP	457	LF	\$37.00	\$16.9		
A.3.6	Pipe and Inlet (Enclosed) System, 24 inch RCP	686	LF	\$42.00	\$28.8		
A.3.7	Pipe and Inlet (Enclosed) System. 27 inch RCP	1188	LF	\$47.00	\$55,8		
A.3.8	Pipe and Inlet (Enclosed) System, 30 inch RCP	275	1.F	\$52.00	\$14.3		
Λ.3.9	Pipe and Inlet (Enclosed) System, 36 inch RCP	48	LF	\$66.00	\$3.1		
A.3.10	Pipe and Inlet (Enclosed) System, 42 inch RCP	1412	LF	\$90.00	\$127.0		
A.3.11	Pipe and Inlet (Enclosed) System, 48 inch RCP	325	LF	\$110.00	\$35,7		
A.3.12	Pipe and Inlet (Enclosed) System, 54 inch RCP	983	I.F	\$135.00	\$132,70		
A.5.1	Storm Sewer Manholes < 6ft Diameter	16	ea	\$2,350.00	\$37.60		
A.5.2	Storm Sewer Manholes > 6ft Diameter	19	ea	\$5.250.00	\$99.7		
F.2.2	Street Removal - 2-lane, Aspalt, w/ C&G	4468	sy	\$8.00	\$35.7		
F.3.4.2	Street Replacement. 2-lane, Asphalt w/ C&G	4468	sy	\$30.00	\$134,04		
F.2.3	Street Removal - 4-lane, Aspalt, w/ C&G	720	sv	\$9.00	\$6.48		
F.3.4.3	Street Replacement, 4-lane, Asphalt w/ C&G	720	sy	\$35.00	-		
C.3.2.1	Concrete - Wing walls and apron	7	cy	\$300.00	\$25,20		
B.1	Excavation and Backfill	13	cy	\$4.00	\$2.00		
				34.00			
				TOTAL =	\$761,35		
CONTINGE	NCY	20 PER	CENT		\$152,27		
ENGINEERI	NG LEGAL AND ADMINISTRATE		S	SUB TOTAL =	\$913,62		
ENGINEERI	NG, LEGAL AND ADMINISTRATIVE	20 PER	CENT		\$182,72		

ITEM No	ITEM DESCRIPTION	UNIT	UNIT COST	QUANTITY	TOTAL COST
Subsysten	n 6.R 3 Mile Creek				***************************************
NODE	86842 Junction Stru		£2.250.00		00 050 00
CONDUIT	1477 Parallel pipe	ea added	\$2,350.00 1.25	RCP	\$2,350.00
	15 inch RCP	LF	\$25.00	32	\$800.00
	Osage St	width	length	sq ft	
	Street Crossing 2-lane, Asphalt, w/ C&G	20	32 \$38.00	640 71	£0.700.00
NODE	86841 Junction Stru	sy cture	\$30.00		\$2,702.22
		ea	\$2,350.00	1	\$2,350.00
CONDUIT	2458 Parallel pipe			RCP	
NODE	15 inch RCP 86843 Junction Stru	LF	\$25.00	154	\$3,850.00
NODL	abouta Junction Stru	ea	\$2,350.00	1	\$2,350.00
CONDUIT	1-3033 Replace w/Pi		1.75		\$2,330.00
	21 inch RCP	LF	\$37.00	350	\$12,950.00
NODE	1-86843 Junction Stru		22		
CONDUIT	2-3033 Replace w/Pi	ea	\$2,350.00	1	\$2,350.00
CONDON	24 inch RCP	pe LF	\$42.00	RCP 40	£1 690 00
	20th Street	width	length	sq ft	\$1,680.00
	Street Crossing	20	32	640	
	4-lane, Asphalt, w/ C&G	sy	\$44.00	71	\$3,128.89
NODE	2-86843 Junction Struction		00.050.05	2	
CONDUIT	3-3033 Replace w/Pi	ea	\$2,350.00	TRCP	\$2,350.00
	24 inch RCP	LF	\$42.00	646	\$27,132.00
	Osage Street	width	length	sq ft	Ψ21,132.00
	Parallel Street	20	646	12920	
NODE	2-lane, Asphalt, w/ C&G	sy	\$38.00	1436	\$54,551.11
NODE	86819 Junction Struc	cture ea	\$2,350.00	1	£2.250.00
CONDUIT	1463 Parallel Pipe			RCP	\$2,350.00
	27 inch RCP	LF	\$47.00	37	\$1,739.00
	Osage St	width	length	sq ft	r
	Street Crossing	20	32	640	
NODE	2-lane, Asphalt, w/ C&G 86820 Junction Structure	Sy	\$38.00	71	\$2,702.22
	Janes	ea	\$2,350.00	1	\$2,350.00
CONDUIT	2456 Parallel Pipe	added	2.25	RCP	42,000.00
NODE	27 inch RCP	LF	\$47.00	7_	\$329.00
NODE	86821 Junction Struc		\$2.3E0.00	4	
CONDUIT	1464 Parallel Pipe a	ea	\$2,350.00 2.25	1	\$2,350.00
	27 inch RCP	LF	A . — . — .	178	\$8,366.00
NODE	86817 Junction Struc	ture		_	Ψ0,000.00
NODE	86795 Junction Struc	tura			
.1002	oosoo Junction Struc	ea	\$5,250.00	1	\$5,250.00
CONDUIT	2446 Parallel pipe a		1.25		\$5,250.00
	15 inch RCP	LF	\$25.00	51	\$1,275.00
	Seneca St	width	length	sq ft	
	Street Crossing	20	32	640	
NODE	2-lane, Asphalt, w/ C&G 86803 Junction Structure	sy	\$38.00	71	\$2,702.22
.1002	DUIJO TUILOU SUUC	ea	\$2,350.00	1	\$2,350.00
			Ψ2,000.00	a B	Ψ2,330.00

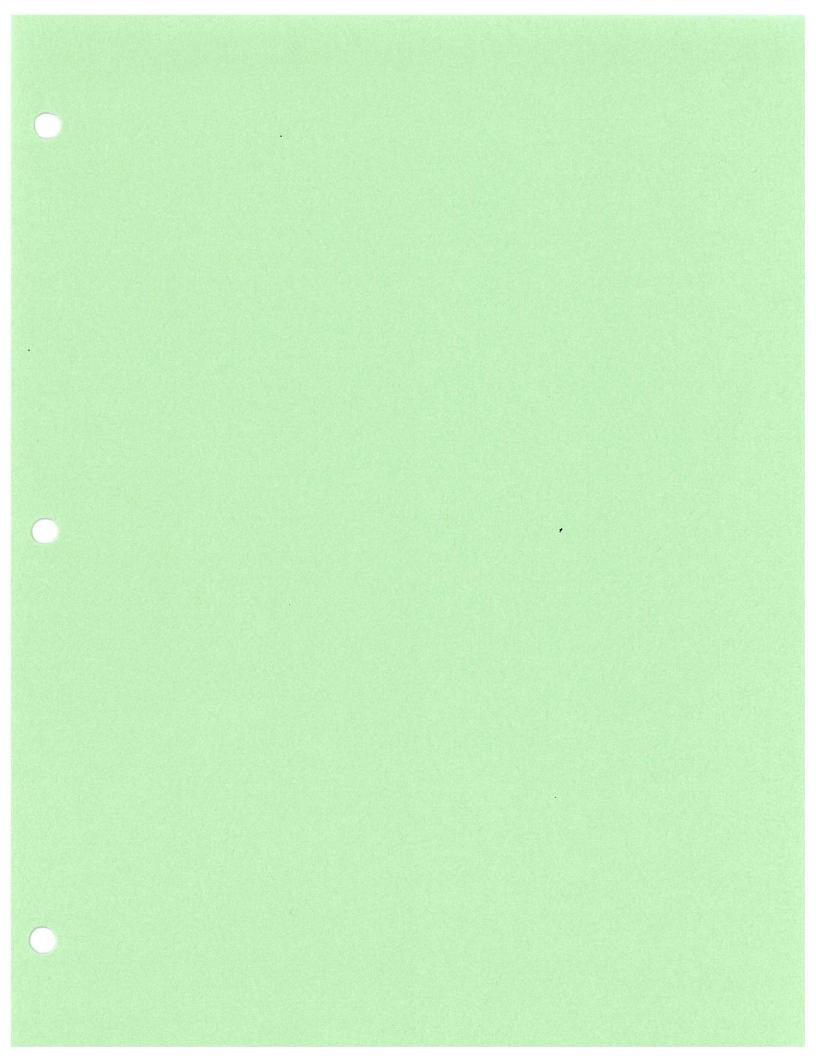
ITEM	ITEM		UNIT		TOTAL
No	DESCRIPTION	UNIT	COST	QUANTITY	COST
NODE	86559 Concrete Wi				
	Quantity	Height	Width	cu yd	
	Pipe 1 1	2.			
	Pipe 2 1	2.			
	Wing walls 2	3.5	5	1.30	
	Apron	5	7	1.30	
	Face (less pipe opening)	3.5	7	0.54	
	Concrete		Total \$300.00	3.14	6046.00
	Excavation and Backfill	cy cy	\$300.00 \$4.00	3.14	\$940.92
CONDUIT	2314 Parallel pipe	added		6.27 RCP	\$25.09
	30 inch RCP	LF	\$52.00	24	\$1,248.00
NODE	92307 Junction Stru			£7	Ψ1,240.00
74 <u></u>		ea	\$5,250.00	1	\$5,250.00
CONDUIT	1304 Parallel pipe	added		RCP.	Ψο,200.00
	30 inch RCP	LF	\$52.00	41	\$2,132.00
	Shawnee St	width	length	sq ft	, -,=
	Street Crossing	20	32	640	
	2-lane, Asphalt, w/ C&G	sy	\$38.00	71	\$2,702.22
NODE	86556 Junction Stru	cture			
		ea	\$5,250.00	1	\$5,250.00
CONDUIT	1303 Parallel pipe		3	RCP	
	36 inch RCP	LF	\$66.00	48	\$3,168.00
	20th Street	width	length	sq ft	
	Street Crossing	20	32	640	
NODE	4-lane, Asphalt, w/ C&G	sy	\$44.00	71	\$3,128.89
NODE	86558 Junction Stru	cture			
CONDUIT	4466 D	ea	\$5,250.00	1	\$5,250.00
COMPON	1455 Parallel pipe 42 inch RCP			RCP	
	42 inch RCP 20th Street	LF	\$90.00	325	\$29,250.00
	Parallel Street	width 16	length	sq ft	
	4-lane, Asphalt, w/ C&G	sy	325 \$44.00	5200	005 400 00
NODE	86804 Junction Stru		Φ44.00	578	\$25,422.22
	accondition on a	ea	\$5,250.00	1	CE DED DO
CONDUIT	1454 Parallel pipe			RCP	\$5,250.00
	42 inch RCP	LF	\$90.00	296	\$26,640.00
	Seneca St	width	length	sq ft	\$20,040.00
	Parallel St	16	296	4736	
	2-lane, Asphalt, w/ C&G	sy	\$38.00	526	\$19,996.44
NODE	86806 Junction Struction				Ψ10,000.44
		ea	\$5,250.00	1	\$5,250.00
CONDUIT	2448 Parallel pipe a	added		RCP	75,255.55
	42 inch RCP	LF	\$90.00	169	\$15,210.00
	Seneca St	width	length	sq ft	
	Parallel St	16	169	2704	
Tions	2-lane, Asphalt, w/ C&G	sy	\$38.00	300	\$11,416.89
NODE	86809 Junction Struc	cture			
001101117		ea	\$5,250.00	1	\$5,250.00
CONDUIT	1457 Parallel pipe a		************************	RCP	
	42 inch RCP	LF	\$90.00	361	\$32,490.00
	Miami St	width	length	sq ft	
	Street Crossing	20	32	640	
NODE	2-lane, Asphalt, w/ C&G	sy	\$38.00	71	\$2,702.22
NODE	86810 Junction Struc			200	
		ea	\$5,250.00	1	\$5,250.00

ITEM	ITEM		UNIT		TOTAL
No	DESCRIPTION	UNIT	COST	QUANTITY	COST
CONDUIT	***************************************		3.5		
	42 inch RCP	LF	\$90.00	85	\$7,650.00
	Miami St	width	length	sq ft	
	Parallel Street	16	85	1360	2
NODE	2-lane, Asphalt, w/ C&G	sy	\$38.00	151	\$5,742.22
NODE	86811 Junction Stru		¢E 250.00	-	65 050 00
CONDUIT	2449 Parallel pipe	ea	\$5,250.00 3.5	1	\$5,250.00
00110011	42 inch RCP	LF	\$90.00	176	C1E 040 00
NODE	86814 Junction Stru		\$90.00	170	\$15,840.00
i ionemora	canonon on	ea	\$5,250.00	Ĭ	\$5,250.00
CONDUIT	1460 Parallel pipe	added		RCP	Ψ3,230.00
	48 inch RCP	LF	\$110.00	325	\$35,750.00
NODE	86815 Junction Stru			VLV	Ψ33,730.00
		ea	\$5,250.00	1	\$5,250.00
CONDUIT	2451 Parallel pipe		4.5	RCP	Ψ5,230.00
_	54 inch RCP	LF	40	175	\$23,625.00
NODE	8681€ Junction Stru	cture			Ψ20,020.00
		ea	\$5,250.00	1	\$5,250.00
CONDUIT	1461 Parallel pipe	added	4.5	RCP	
	54 inch RCP	LF	\$135.00	25	\$3,375.00
NODE	86817 Junction Stru	cture			40,010.00
		ea	\$5,250.00	1	\$5,250.00
CONDUIT	1467 Parallel pipe	added	4.5	RCP	
	54 inch RCP	LF	\$135.00	452	\$61,020.00
	Osage St	width	length	sq ft	
	Street Crossing	20	50	1000	
	2-lane, Asphalt, w/ C&G	sy	\$38.00	111	\$4,222.22
NODE	86825 Junction Struc	cture			
CONDUIT	4400 5	ea	\$5,250.00	1	\$5,250.00
CONDUIT	1468 Parallel pipe a		4.5	VVVVVVVVVVVVVVVVVVVVVVVVVV	
NODE	54 inch RCP	LF	\$135.00	145	\$19,575.00
NODE	86757 Junction Struc		05.050.00		Daniel Amerika da de la companio del la companio de la companio del la companio de la companio dela companio de la companio de la companio de
CONDUIT	1420 Parallel pipe a	ea	\$5,250.00	1	\$5,250.00
CONDON	54 inch RCP	LF		RCP	
	18th Street	width	\$135.00	41	\$5,535.00
	Street Crossing	20	length 41	sq ft	
	2-lane, Asphalt, w/ C&G	sy	\$38.00	820 91	62 460 00
NODE	86758 Junction Struc	ture	Ψ30.00	91	\$3,462.22
		ea	\$5,250.00	1	\$5.250.00
CONDUIT	1421 Parallel pipe a	dded		RCP	\$5,250.00
	54 inch RCP	LF	\$135.00	145	\$19,575.00
NODE	86759 Junction Struc	ture	\$100.00	179	Φ19,575.00
		ea	\$5,250.00	1	\$5,250.00
			,	383	Ψ5,230.00
<u> </u>					
NODE	86770 Junction Struc	ture			
	501 to 100 C 101 Listandoodsto	ea	\$2,350.00	1	\$2,350.00
CONDUIT	1431 Parallel pipe a		1.75	RCP	
	21 inch RCP	LF	\$37.00	107	\$3,959.00
	Terry Street	width	length	sq ft	2000 00 - 1
	Parallel Street	16	107	1712	
NODE	2-lane, Asphalt, w/ C&G	sy	\$38.00	190	\$7,228.44
NODE	86776 Junction Struc	ture	Continue commercial		
00151		ea	\$2,350.00	1	\$2,350.00
CONDUIT	2425 Parallel pipe a		2.25		
	27 inch RCP	LF	\$47.00	134	\$6,298.00

ITEM	ITEM		UNIT		TOTAL
No NODE	DESCRIPTION CO.	UNIT	COST	QUANTITY	COST
NODE	86777 Junction Str		\$2.2E0.00	247	
CONDUIT	1432 Parallel pipe	ea	\$2,350.00	RCP	\$2,350.00
00.10011	27 inch RCP	LF	4.23 \$47.00	260	640,000,00
NODE	86778 Junction Str		φ+1.00	200	\$12,220.00
- (222)		ea	\$2,350.00	1	\$2,350.00
CONDUIT	2426 Parallel pipe	added		RCP	
	27 inch RCP	LF	\$47.00	122	\$5,734.00
	16th Street	width	length	sq ft	
	Parallel Street	16	122	1952	
NODE	2-lane, Asphalt, w/ C&G	sy	\$38.00	217	\$8,241.78
NODE	86779 Junction Str		201		
CONDUIT	2407 5 11 1	ea	\$2,350.00	1	\$2,350.00
CONDUIT	2427 Parallel pipe			RCP	
	27 inch RCP Michael Street	LF	\$47.00	42	\$1,974.00
	Street Crossing	width	length	sq ft	
		20	32	640	
NODE	2-lane, Asphalt, w/ C&G 86780 Junction Stru	sy	\$38.00	71	\$2,702.22
HODE	GOT GO JUNCTION SUI		#0.250.00	120	200
CONDUIT	1433 Parallel pipe	ea	\$2,350.00	<u> </u>	\$2,350.00
00/100/1	27 inch RCP	LF		RCP	
	16th Street	width	\$47.00	408	\$19,176.00
	Parallel	16	length	sq ft	
	2-lane, Asphalt, w/ C&G	sy	408 \$38.00	6528	407 500 00
NODE	86781 Junction Stru	icture	\$30.00	725	\$27,562.67
	ee ee canonon on o	ea	\$2,350.00	1	£2.250.00
CONDUIT	2428 Parallel pipe			RCP	\$2,350.00
	30 inch RCP	LF	\$52.00	83	¢4 216 00
	16th Street	width	length	sq ft	\$4,316.00
	Street Crossing	20	83	1660	
-	2-lane, Asphalt, w/ C&G	sy	\$38.00	184	\$7,008.89
NODE	86782 Junction Stru			101	Ψ1,000.09
		ea	\$5,250.00	1	\$5,250.00
CONDUIT	1434 Parallel pipe	added		RCP	Ψ0,200.00
	30 inch RCP	LF	\$52.00	93	\$4,836.00
	Osage St	width	length	sq ft	,
	Street Crossing	20	50	1000	
NODE	2-lane, Asphalt, w/ C&G	sy	\$38.00	111	\$4,222.22
NODE	86783 Junction Stru	cture			
COMPLUT		ea	\$5,250.00	1	\$5,250.00
CONDUIT	2585 Parallel pipe			RCP	
NODE	30 inch RCP	LF	\$52.00	34	\$1,768.00
NODE	86766 Concrete Wir				
	Quantity Pipe 1	Height	Width	cu yd	
	Pipe 2	3		RCP	
	/*************************************	2,5		RCP	
	Wing walls 2 Apron	4	5	1.48	
	Face (less pipe opening)	5 4	7.5	1.39	
	. doc (icas hihe oheriing)	4	7.5	0.67	
	Concrete	01/	Total	3.54	04.004
	Excavation and Backfill	cy	\$300.00	3.54	\$1,061.36
		су	\$4.00	7.08	\$28.30
			9	SUBTOTAL ⁻	\$761,439.12

20% Contingency \$913,726.94

20% Engineering, legal and administrative \$1,096,472.33

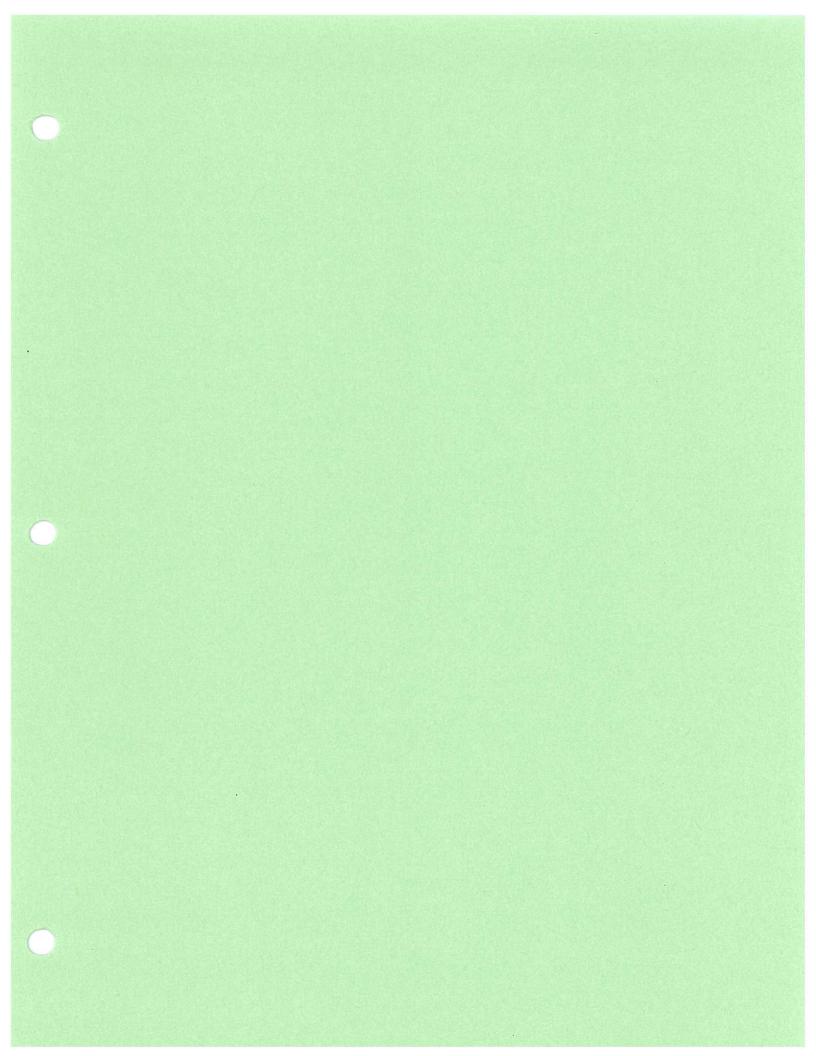


	PRELIMINARY COST ESTIMATE			DATE:	11/19/96
PROJECT:	LEAVENWORTH, KANSAS STORMWATER MASTER PLAN			EST:	VLD
ENGINEER	BLACK & VEATCH			CHCKD:	JWH
ELEMENT#	3 MILE CREEK - 7 R				
	DESCRIPTION	QUANT.	UNIT	U. PRICE	AMOUNT
A.3.3	Pipe and Inlet (Enclosed) System, 15 inch RCP	263	LF	\$25.00	\$6,575
A.3.9	Pipe and Inlet (Enclosed) System, 36 inch RCP	662	LF	\$66.00	\$43,692
	Reinforced Concrete Box Culverts. 5.5 x 1.5	21	LF	\$275.00	\$5,775
F.2.3	Street Removal - 4-lane, Aspalt, w/ C&G	1682	sy	\$9.00	\$15,138
F.3.4.3	Street Replacement, 4-lane, Asphalt w/ C&G	1682	sy	\$35.00	\$58,870
A.5.1	Storm Sewer Manholes < 6ft Diameter	5	ea	\$2,350.00	\$11,750
C.3.2.1	Concrete - Wing walls and apron	3	сy	\$300.00	\$864
B.1	Excavation and Backfill	6	cy	\$4.00	\$23
-					
				TOTAL =	\$142,687
CONTINGE	ENCY	20 PER	CENT	T	\$28,537
				SUB TOTAL =	\$171,224
ENGINEER	ING, LEGAL AND ADMINISTRATIVE	20 PEI	RCENT	T	\$34,245

ITEM No	ITEM DESCRIPTION	UNIT	UNIT COST	QUANTITY	TOTAL COST
Subsystem	n 7 R 3 Mile Creek				3,000
NODE	86838 Concrete Wir	na walle &	Anron		
NODE	Quantity	Height	Width	cu yd	
	Pipe 1	2.5			
	Pipe 2	1.25			
	Wing walls 2	3.5	5	1.30	
	Apron	5	5.75	1.06	
	Face (less pipe opening	3.5	5.75	0.52	
			Total	2.88	
	Concrete	су	\$300.00	2.88	\$863.77
	Excavation and Backfill	су	\$4.00	5.76	\$23.03
CONDUIT	1474 Parallel pipe		1.25	RCP	
	15 inch RCP	LF	\$25.00	29	\$725.00
	Ottawa St	width	length	sq ft	
	Parallel Street	16	29	464	
	4-lane, Asphalt, w/ C&G	sy	\$44.00	52	\$2,268.44
NODE	92008 Junction Stru	cture			
55051 =		ea	\$2,350.00	1	\$2,350.00
CONDUIT	2461 Parallel box a		1.5 X 5.5	· · · · · · · · · · · · · · · · · · ·	
	2 X 5 ft RCB	LF	\$275.00	21	\$5,775.00
	Ottawa St	width	length	sq ft	
	Parallel Street	16	21	336	
NODE	4-lane, Asphalt, w/ C&G	sy	\$44.00	37	\$1,642.67
NODE	86840 Junction Stru		00.050.00	12	22 222 23
CONDUIT	1476 Devellet sine	ea	\$2,350.00	1	\$2,350.00
CONDUIT	1476 Parallel pipe			RCP	
	36 inch RCP 20th Street	LF	\$66.00	662	\$43,692.00
	Parallel Street	width 16	length	sq ft	
	4-lane, Asphalt, w/ C&G		662	10592	654 70 0 44
NODE	86830 Junction Structure	sy	\$44.00	1177	\$51,783.11
NODE	Sunction Structure	ea	\$2,350.00	1	CO OCO OO
		Ca	φ2,330.00		\$2,350.00
NODE	86834 Junction Struc	cture			
		ea	\$2,350.00	1	\$2,350.00
CONDUIT	1472 Parallel pipe			RCP	Ψ2,330.00
	15 inch RCP	LF	\$25.00	234	\$5,850.00
	20th Street	width	length	sq ft	ψ5,050.00
	Parallel Street	16	234	3744	
	4-lane, Asphalt, w/ C&G	sy	\$44.00	416	\$18,304.00
NODE	86835 Junction Struc		<u> </u>		Ψ10,004.00
		ea	\$2,350.00	1	\$2,350.00
				~*	,
				=	
				SUBTOTAL	\$142,677.02
					# \$ \$V=#501 (1.7.55)

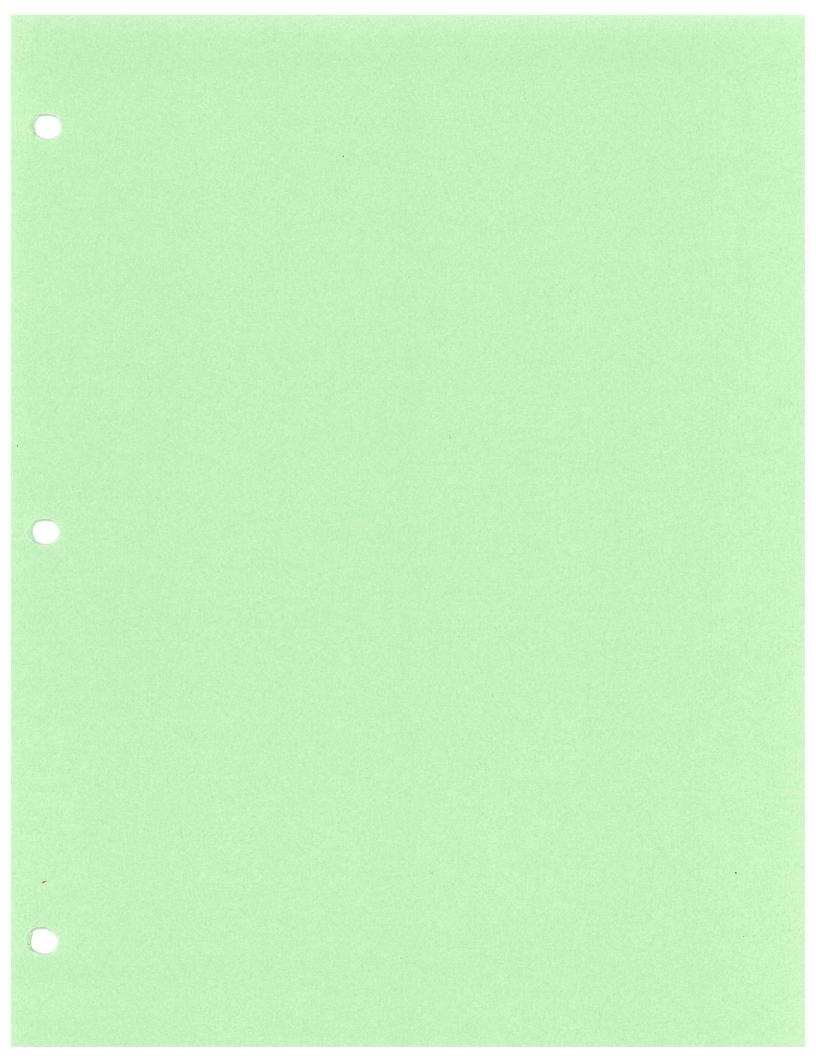
20% Contingency \$171,212.43

20% Engineering, legal and administrative \$205,454.91



	PRELIMINARY COST ESTIMATE			DATE:	11/19/9
PROJECT:	LEAVENWORTH, KANSAS STORMWATER MASTER PLAN			EST:	VLD
ENGINEER	BLACK & VEATCH		CHCKD:	JWH	
ELEMENT#	3 MILE CREEK - 8 R				
	DESCRIPTION	QUANT.	UNIT	U. PRICE	AMOUNT
A.3.4	Pipe and Inlet (Enclosed) System, 18 inch RCP	46	LF	\$34.00	\$1.50
F.2.3	Street Removal - 4-lane, Aspalt, w/ C&G	71	sy	\$9.00	\$63
F.3.4.3	Street Replacement, 4-lane, Asphalt w/ C&G	71	sy	\$35.00	\$2.48
C.3.2.1	Concrete - Wing walls and apron	5	ey	\$300.00	\$1.53
B.1	Excavation and Backfill	10	cy	\$4.00	\$4
				TOTAL -	
CONTINGEN	NCY	20 PER	CENT	TOTAL =	\$6,26
			S	UB TOTAL =	\$7,51
ENGINEERING, LEGAL AND ADMINISTRATIVE 20 PERCENT					\$1,50
				TOTAL =	\$9,01

ITEM No	ITEM DESCRIPTI	ON	LINUT	UNIT	OLIANITITY	TOTAL
Subsystem		3 Mile Creek	UNIT	COST	QUANTITY	COST
Oubsystem	1 GK	3 Mile Creek				
NODE	86844	Concrete Wi	ng walls &	Apron		
		Quantity	Height	Width	cu yd	
	Pipe 1	1	2	2		
	Pipe 2	1	1.5	1.5		
	Wing walls	2	3	5	1.11	
	Apron		5	5.5	1.02	
	Face (less p	ipe opening	3	5.5	0.43	
				Total	2.56	
	Concrete		су	\$300.00	2.56	\$767.68
<u> </u>	Excavation a	and Backfill	cy	\$4.00	5.12	\$20.47
CONDUIT	1478	Parallel pipe	added		RCP	
	18	inch RCP	LF	\$34.00	45.89	\$1,560.26
	Ottawa St		width	length	sq ft	Ψ1,000.20
Street Crossing		ing	20	32	640	
	4-lane, Asph	alt, w/ C&G	sy	\$44.00	71	\$3,128.89
NODE	DE 86845 Concrete Wing walls & Apron					
		Quantity	Height	Width	cu yd	
	Pipe 1	1	2	2		
	Pipe 2	1	1,5	1.5	0 0	
	Wing walls	2	3	5	1.11	
	Apron		5	5.5	1.02	
	Face (less pi	pe opening	3	5.5	0.43	22
				Total	2.56	
	Concrete		су	\$300.00	2.56	\$767.68
	Excavation and Backfill		cý	\$4.00	5.12	\$20.47
			,	*	0.12	Ψ20.41
					14 	
	SUBTOTAL					\$6,265.45
20% Contingency						\$7,518.54
20% Engineering, legal and administrative						\$9,022.25



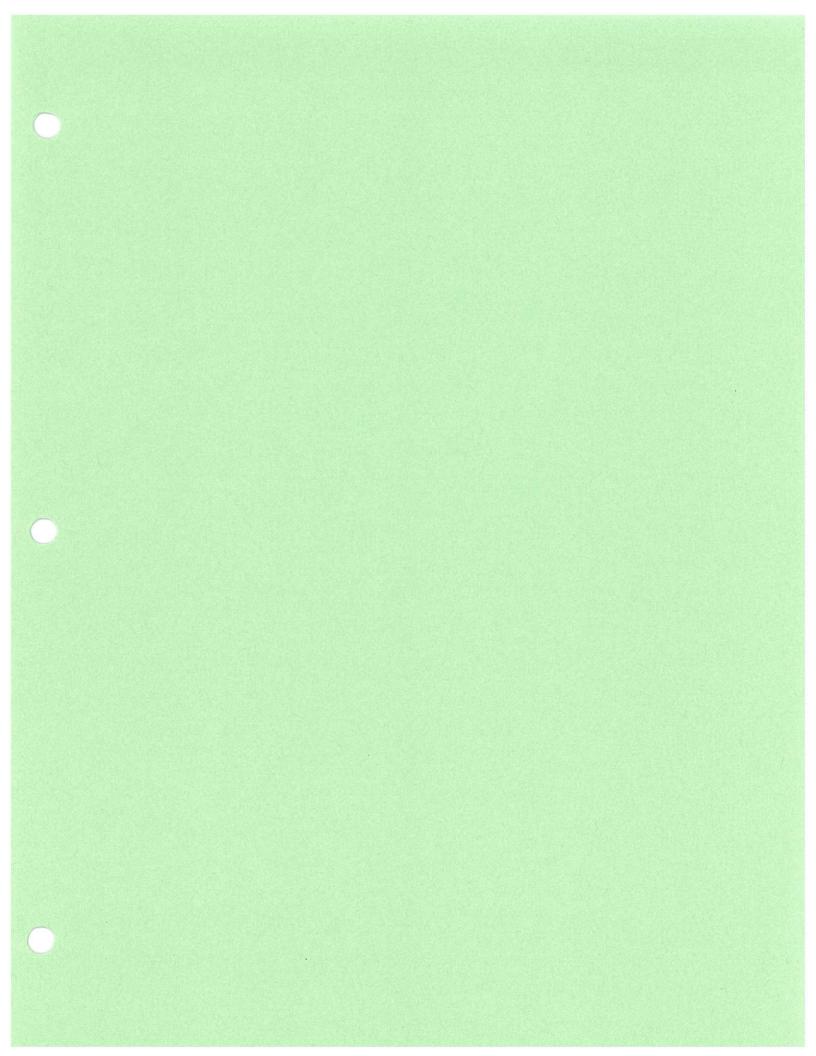
	PRELIMINARY COST ESTIMATE			DATE:	11/19/9
PROJECT:	LEAVENWORTH, KANSAS STORMWATER MASTER PLAN		EST:	VLD	
ENGINEER					JWH
ELEMENT#	3 MILE CREEK - South Branch - 1 L				
	DESCRIPTION	QUANT.	UNIT	U. PRICE	AMOUNT
A.3.3	Pipe and Inlet (Enclosed) System, 15 inch RCP	310	LF	\$25.00	\$7,75
A.3.4	Pipe and Inlet (Enclosed) System, 18 inch RCP	393	LF	\$34.00	\$13.36
F.2.2	Street Removal - 2-lane, Aspalt, w/ C&G	170	sy	\$8.00	\$1.36
F.3.4.2	Street Replacement, 2-lane, Asphalt w/ C&G	170	sy	\$30.00	\$5.10
F.2.1	Street Removal - 2-lane, Gravel	284	sy	\$4.00	\$1,13
F.3.4.1	Street Replacement - 2-lane, Gravel	284	sy	\$10.00	\$2,84
A.5.1	Storm Sewer Manholes < 6ft Diameter	5	ea	\$2,350.00	\$11,75
C.3.2.1	Concrete - Wing walls and apron	4	cy	\$300.00	\$1.23
B.1	Excavation and Backfill	8	cy	\$4.00	\$3
CONTINGE	NCY	10 DED	CENT	TOTAL =	\$44,570
		20 PER	CENI		\$8,914
				SUB TOTAL =	\$53,484
ENGINEER	ING, LEGAL AND ADMINISTRATIVE	20 PEF	RCENT	-	\$10,697
		-		TOTAL =	\$64,18

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ITEM	ITEM		UNIT		TOTAL			
No	DESCRIPTION	UNIT	COST	QUANTITY	COST			
Subsystem † L 3 Mile Creek, South Branch NODE 86462 Concrete Wing walls & Apron								
NODE	Quantity	Height	Width	au vid				
	Pipe 1	1.2		cu yd RCP				
	Pipe 2 1	1.2						
	Wing walls 2	2.25	J 1.23 5	0.83				
	Apron	5	4.5	0.83				
	Face (less pipe opening	2.25	4.5	0.03				
	. ass (1868 pipe spermig	2.20	Total Area	1.95				
	Concrete	су	\$300.00	1.95	\$585.23			
	Excavation and Backfill	су	\$4.00	3.90	\$15.61			
CONDUIT	1252 Parallel pipe			RCP	V10.01			
	15 inch RCP	LF	\$25.00	50	\$1,250.00			
		width	length	sq ft	* 1,1200.00			
	Street Crossing	20	50	1000				
	2-lane, Asphalt, w/ C&G	sy	\$38.00	111	\$4,222.22			
NODE	86463 Junction Stru	cture			Y 1,1-1-1-1-1			
		ea	\$2,350.00	1	\$2,350.00			
CONDUIT	1253 Parallel pipe	added		RCP	Ψ2,000.00			
	15 inch RCP	LF	\$25.00	144	\$3,600.00			
NODE	86464 Junction Stru	cture			Ψο,σσσ.σσ			
		ea	\$2,350.00	1	\$2,350.00			
CONDUIT	2279 Parallel pipe			RCP	Ψ2,000.00			
	15 inch RCP	LF	\$25.00	116	\$2,900.00			
	Gravel Alley	width	length	sq ft	Ψ2,000.00			
	Street Crossing	22	116	2552				
	Gravel Alley	sy	\$14.00	284	\$3,969.78			
NODE	86465 Junction Stru							
		ea	\$2,350.00	1	\$2,350.00			
CONDUIT	1254 Parallel pipe	added		RCP				
	18 inch RCP	LF	\$34.00	152	\$5,168.00			
NODE	86466 Junction Stru	cture		20-2-20-0-002-20-20-00-00-00-00-00-00-00				
		ea	\$2,350.00	1	\$2,350.00			
CONDUIT	2280 Parallel pipe	added	1.5	RCP				
	18 inch RCP	LF	\$34.00	33	\$1,122.00			
	Cherokee Street	width	length	sq ft	W N. Moderne Avidense			
	Street Crossing	16	33	528				
	2-lane, Asphalt, w/ C&G	sy	\$38.00	59	\$2,229.33			
NODE	86467 Junction Stru	cture						
		ea	\$2,350.00	1	\$2,350.00			
CONDUIT	1255 Parallel pipe			RCP				
	18 inch RCP	LF	\$34.00	208	\$7,072.00			
NODE	86468 Concrete Win							
	Quantity	Height	Width	cu yd				
	Pipe 1 1	1.5		RCP				
	Pipe 2 1	1,5	************					
	Wing walls 2	2.5	5	0.93				
	Apron	5	5	0.93				
	Face (less pipe opening	2.5	5	0.33				
			Total Area	2.18				
	Concrete	су	\$300.00	2.18	\$655.17			
	Excavation and Backfill	су	\$4.00	4.37	\$17.47			
				SUBTOTAL	\$44,556.81			

20% Contingency \$53,468.18

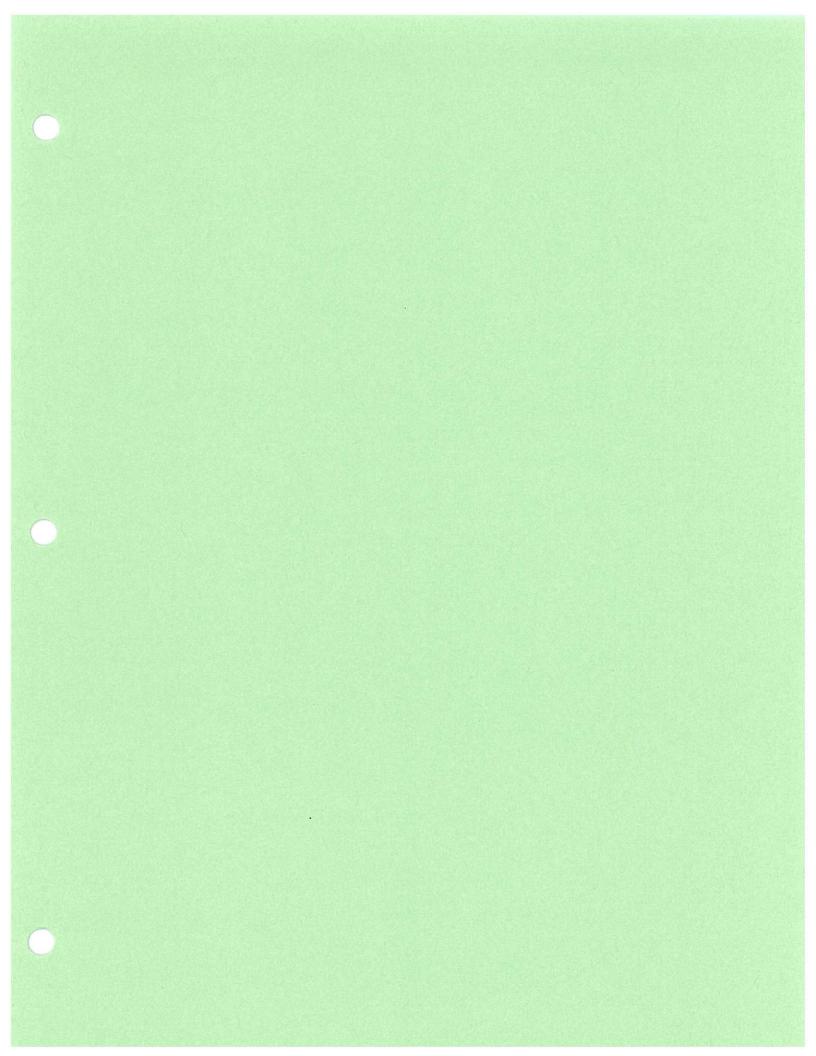
20% Engineering, legal and administrative \$64,161.81



	PRELIMINARY COST ESTIMATE			DATE:	11/19/
ROJECT:	LEAVENWORTH, KANSAS STORMWATER MASTER PLAN		EST:	VLD	
ENGINEER	BLACK & VEATCII	CHCKD:	JWH		
ELEMENT #	3 MILE CREEK - South Branch - 1 R				
	DESCRIPTION	QUANT.	UNIT	U. PRICE	AMOUNT
	10th St Crossing				
A.3.6.3	Pipe and Inlet (Enclosed) System, 15 inch RCP	39	LF	\$25.00	59
	Parallel - 10th and Delaware				
A.3.6.5	Pipe and Inlet (Enclosed) System. 21 inch RCP	24	LF	\$37.00	\$8
F.2.3	Street Removal - 4-lane, Aspalt, w' C&G	112	sy	\$9.00	\$1.0
F.3.4.3	Street Replacement, 4-lane. Asphalt w/ C&G	112	sy	\$35.00	\$3.9
C.3.2.1	Concrete - Wing walls and apron	2	cy	\$300.00	\$5
B.1	Excavation and Backfill	4	cy	\$4.00	5
Λ.5.1	Storm Sewer Manholes < 6ft Diameter	2	ea	\$2,350.00	\$4.7
					7-200-
				 	
				-	
				 -	
				<u> </u>	
TOTAL = CONTINGENCY 20 PER CENT					\$12,0
0011111102		20 PER	CENT		\$2,4
				PLID TOTAL	
SUB TOTAL = ENGINEERING, LEGAL AND ADMINISTRATIVE 20 PERCENT					\$14,5
		2012	CLITI		\$2,9
				TOTAL	
				TOTAL =	\$17,4

ITEM	ITEM		UNIT		TOTAL
No	DESCRIPTION	UNIT	COST	QUANTITY	COST
Subsystem	1 R 3 Mile Creek	, South Bra	anch		Vision Control of the
NODE			==		
NODE	86444 Concrete Wil				
	Quantity	Height	Width	cu yd	
	Pipe 1 1	1.25			
	Pipe 2	1.25	1.25	RCP	
	Wing walls 2	2.25	5	0.83	
	Apron	5	4.5	0.83	
	Face (less pipe opening	2.25	4.5	0.28	
			Total	1.95	
	Concrete	су	\$300.00	1.95	\$585.23
	Excavation and Backfill	су	\$4.00	3.90	\$15.61
CONDUIT	1241 Parallel pipe	added	1.25	RCP	
	15 inch RCP	LF	\$25.00	39	\$975.00
	10th Street	width	length	sq ft	
	Street Crossing	16	39	624	
	4-lane, Asphalt, w/ C&G	sy	\$44.00	69	\$3,050.67
NODE	86441 Junction Stru	cture			
		ea	\$2,350.00	1	\$2,350.00
CONDUIT	2287 Parallel pipe	added	1.75	RCP	
	21 inch RCP	LF	\$37.00	24	\$888.00
	10th & Delaware	width	length	sq ft	4000.00
	Parallel Street	16	24	384	
	4-lane, Asphalt, w/ C&G	sy	\$44.00	43	\$1,877.33
NODE	86442 Junction Stru	cture			Ψ1,077.00
		ea	\$2,350.00	1	\$2,350.00
			,-,	8	Ψ2,000.00
				=	
				SUBTOTAL	\$12,091.84
				CODICIAL	Ψ12,031.04
			20% 0	ontingency	\$14,510.20
			20,00	onangency	Ψ14,510.20

20% Engineering, legal and administrative \$17,412.24



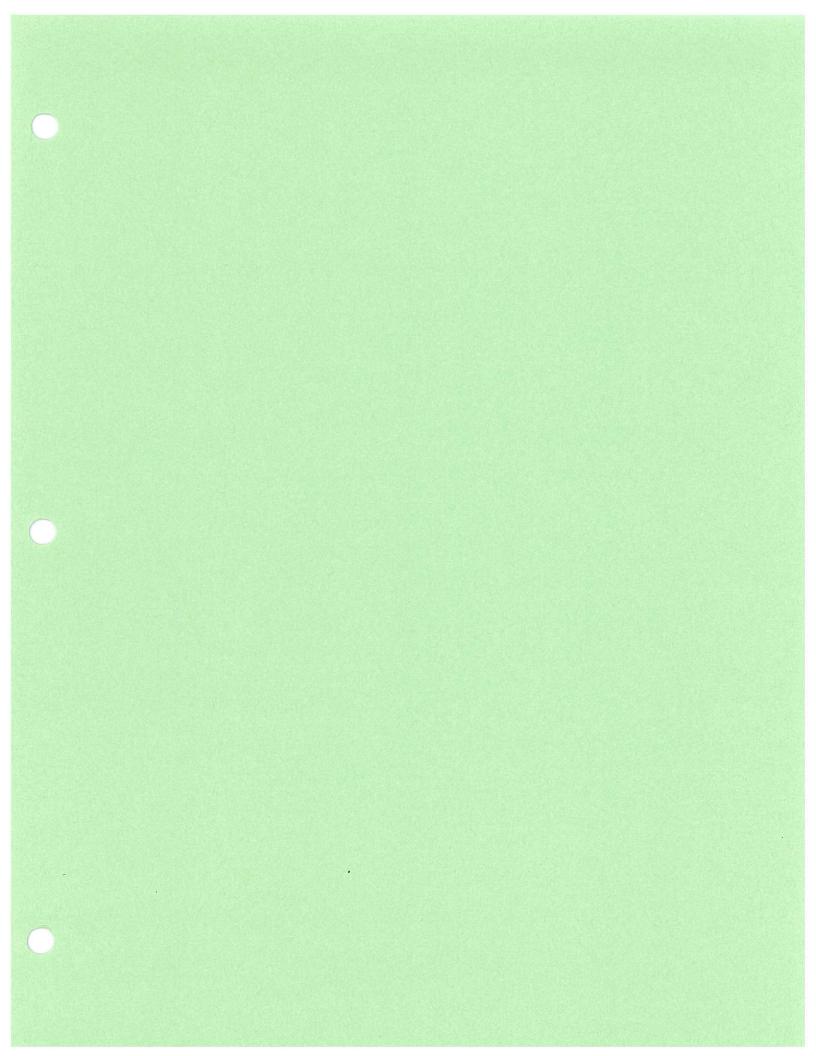
ļ	PRELIMINARY COST ESTIMATE			DATE:	11/19/9
PROJECT:	LEAVENWORTH. KANSAS STORMWATER MASTER PLAN			EST:	VLD
ENGINEER	BLACK & VEATCH			CHCKD:	JWH
ELEMENT #	3 MILE CREEK - South Branch - 3 L				
-	DESCRIPTION	QUANT.	UNIT	U. PRICE	AMOUNT
	18th Street Crossing				
ļ	Reinforced Concrete Box Culverts, 6 x 1.5	54	LF	\$245.00	\$13,230
F.2.3	Street Removal - 4-lane, Aspalt, w/ C&G	71	sy	\$9.00	\$639
F.3.4.3	Street Replacement, 4-lane, Asphalt w/ C&G	71	sy	\$35.00	\$2.485
C.3.2.1	Concrete - Wing walls and apron	6	cy	\$300.00	\$1.902
B.1	Excavation and Backfill	13	cy	\$4.00	\$51
				ļ	
-					
-					
				TOTAL =	\$18,307
CONTING	ENCY	20 PER	CENT	TOTAL -	\$3,661
					33,001
			S	UB TOTAL =	\$21,968
ENGINEER	UNG. LEGAL AND ADMINISTRATIVE	20 PEF			\$4,394
				TOTAL =	\$26,362

ITEM	ITEM			UNIT		TOTAL
No	DESCRIPT	ION	UNIT	COST	QUANTITY	COST
Subsystem	3 L	3 Mile Creek	, South Bra	nch		
2000	***************************************	30.00				
NODE	86512	Concrete Wi	ng walls & /	Apron		
		Quantity	Height	Width	cu yd	
	Pipe 1	1	1.5	1.5		
	Pipe 2	1	1.5	6	RCB	
	Wing walls	2	2.5	5	0.93	
	Apron		5	9.5	1.76	
	Face (less)	pipe opening	2.5	9.5	0.48	
				Total	3.17	
	Concrete		су	\$300.00	3.17	\$949.81
		and Backfill	су	\$4.00	6.33	\$25.33
CONDUIT		Parallel box		1.5 X 6	RCB	
	2 X 4	RCB	LF	\$245.00	54	\$13,230.00
	18th Street		width	length	sq ft	
	Street Cros		20	32	640	
		halt, w/ C&G	sy	\$44.00	71	\$3,128.89
NODE	86513	Concrete Wir				
		Quantity	Height	Width	cu yd	
	Pipe 1	1	1.5	1.5		
	Pipe 2	1	1.5	6	RCB	
	Wing walls	2	2.5	5	0.93	
	Apron		5	9.5	1.76	
	Face (less p	oipe opening	2.5	9.5	0.48	
				Total	3.17	
	Concrete		су	\$300.00	3.17	\$949.81
	Excavation a	and Backfill	су	\$4.00	6.33	\$25.33
					_	70 100 100 100 100 100 100 100 100 100 1

SUBTOTAL \$18,309.16

20% Contingency \$21,971.00

20% Engineering, legal and administrative \$26,365.20



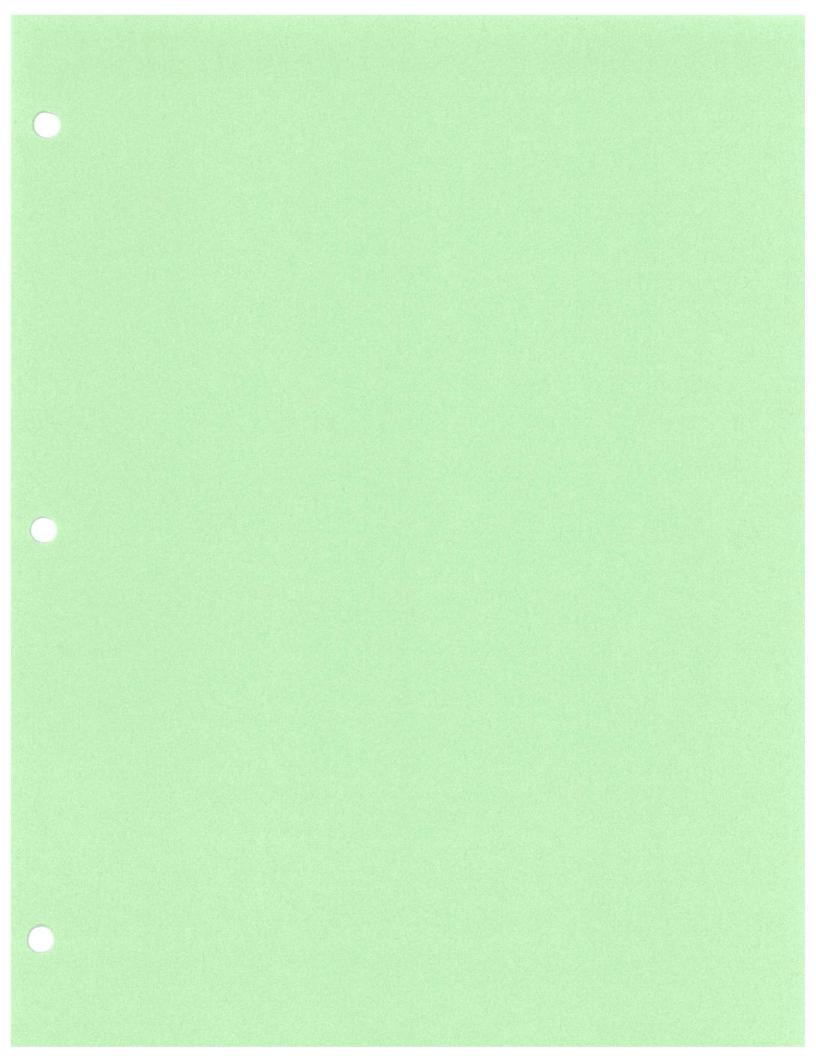
	PRELIMINARY COST ESTIMATE			DATE:	11/19/90
ROJECT:	LEAVENWORTH, KANSAS STORMWATER MASTER PLAN			EST:	VLD
NGINEER	BLACK & VEATCH			CHCKD:	JWH
EMENT#	3 MILE CREEK - South Branch - 4 L				
	DESCRIPTION	QUANT.	UNIT	U. PRICE	AMOUNT
A.3.6	Pipe and Inlet (Enclosed) System, 24 inch RCP	171	LF	\$42.00	\$7.18
F.2.2	Street Removal - 2-lane, Aspalt, w/ C&G	71	sy	\$8.00	\$568
F.3.4.2	Street Replacement, 2-lane, Asphalt w/ C&G	71	sy	\$30.00	\$2,130
C.3.2.1	Concrete - Wing walls and apron	4	cy	\$300.00	\$1,200
B.1	Excavation and Backfill	S	ey	\$4.00	\$32
A.5.1	Storm Sewer Manholes < 6ft Diameter	1	ea	\$2,350.00	\$2.350
				1	
				† -	
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				·	
				ļ	
				-	
				ļ	
				TOTAL =	\$13,462
CONTINGEN	NCY	20 PERG	CENT		\$2,692
			5	SUB TOTAL =	\$16,154
NGINEERII	NG, LEGAL AND ADMINISTRATIVE	20 PER			\$3,231
				TOTAL =	\$19,385

ITEM No	ITEM DESCRIPTION	UNIT	UNIT COST	QUANTITY	TOTAL COST
Subsystem				40/11/11/1	
7.00					
NODE	92639 Junction Str	ucture			
		ea	\$2,350.00	1	\$2,350.00
CONDUIT	3055 Parallel pipe	added	2	RCP	
	24 inch RCP	LF	\$42.00	171.43	\$7,200.06
		width	length	sq ft	
	Street Crossing	20	32	640	
	2-lane, Asphalt, w/ C&G	sy	\$38.00	71	\$2,702.22
NODE	92641 Concrete Wi	ng walls &	Apron		
	Quantity	Height	Width	cu yd	
	Pipe 1 1	4	4	RCP	
	Pipe 2 1	2	2	RCP	
	Wing walls 2	5	5	1.85	
	Apron	5	8	1.48	
	Face (less pipe opening	5	8	0.90	
			Total	4.23	
	Concrete	су	\$300.00	4.23	\$1,269.91
	Excavation and Backfill	су	\$4.00	8.47	\$33.86

SUBTOTAL \$13,556.06

20% Contingency \$16,267.27

20% Engineering, legal and administrative \$19,520.72



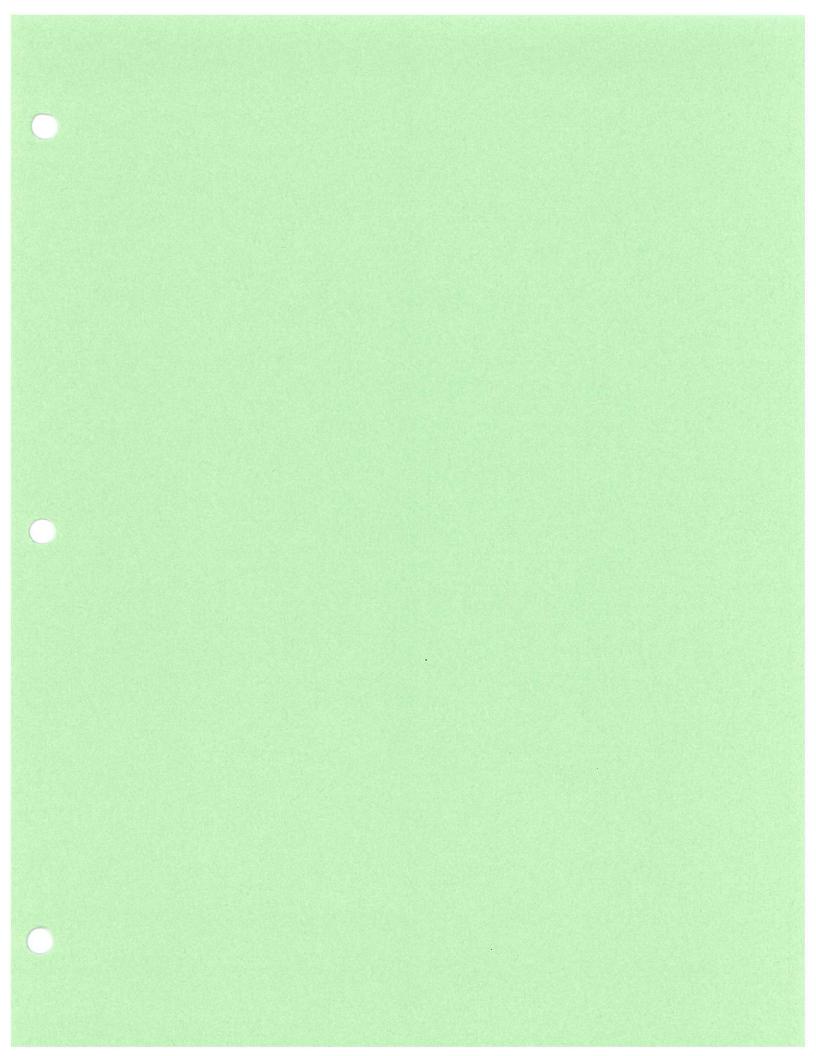
	PRELIMINARY COST ESTIMATE			DATE:	11/19/9
PROJECT:	LEAVENWORTH. KANSAS STORMWATER MASTER PLAN			EST:	VLD
ENGINEER	BLACK & VEATCH	W		CHCKD:	JWH
ELEMENT #	3 MILE CREEK - South Branch - 5 R				
	DESCRIPTION	QUANT.	UNIT	U. PRICE	AMOUNT
	Spruce Street Crossing				
A.3.7	Pipe and Inlet (Enclosed) System, 27 inch RCP	91	LF	\$47.00	\$4.29
F.2.3	Street Removal - 4-lane, Aspalt, w/ C&G	71	sy	\$9.00	\$63
F.3.4.3	Street Replacement, 4-lane. Asphalt w/ C&G	71	sy	\$35.00	\$2,48
C.3.2.1	Concrete - Wing walls and apron	6	cy	\$300.00	\$1,71
B.1	Excavation and Backfill	11	cy	\$4.00	\$4
				TOTAL =	\$9,17
CONTINGE	NCY	20 PEF	CENT		\$1,83
			5	SUB TOTAL =	\$11,00
ENGINEERI	NG, LEGAL AND ADMINISTRATIVE	20 PE	RCENT		\$2,20

ITEM	ITEM	united to		UNIT		TOTAL
No	DESCRIPT	ION	UNIT	COST	QUANTITY	COST
Subsystem	1 5 R	3 Mile Creek	, South Bra	anch		
T.===						
NODE	92014	Concrete Wi				
		Quantity	Height	Width	cu yd	
	Pipe 1	1	2	2	RCP	
	Pipe 2	1	2.25	2.25	RCP	
	Wing walls	2	3.25	5	1.20	
	Apron		5	6.25	1.16	
	Face (less	oipe openin	3.25	6.25	0.49	
				Total Area	2.85	
	Concrete		су	\$300.00	2.85	\$854.94
		and Backfill	су	\$4.00	5.70	\$22.80
CONDUIT	938	Parallel pipe	added	2.25	RCP	
	27	inch RCP	LF	\$47.00	91.33	\$4,292.51
	Spruce Stre		width	length	sq ft	
	Street Cross		20	32	640	
	4-lane, Aspl	halt, w/ C&	sy	\$44.00	71	\$3,128.89
NODE	85913	Concrete Wir	ng walls & /	Apron		
		Quantity	Height	Width	cu yd	
	Pipe 1	1	2	2		
	Pipe 2	1	2.25	2.25	RCP	
	Wing walls	2	3.25	5	1.20	
	Apron		5	6.25	1.16	
	Face (less p	ipe openin	3.25	6.25	0.49	
				Total Area	2.85	
	Concrete		су	\$300.00	2.85	\$854.94
	Excavation	and Backfill	cy	\$4.00	5.70	\$22.80
			5	- 1		

SUBTOTAL \$9,176.88

20% Contingency \$11,012.26

20% Engineering, legal and administrative \$13,214.71



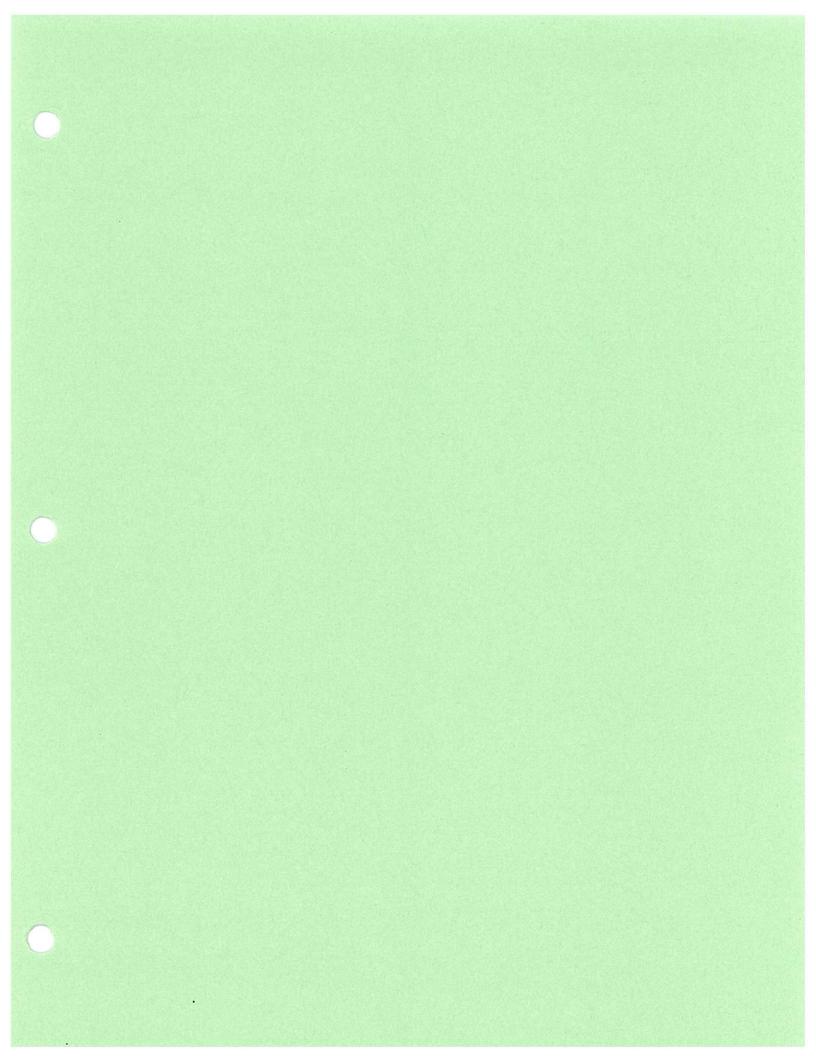
	PRELIMINARY COST ESTIMATE			DATE:	11/19/90
PROJECT:	LEAVENWORTH, KANSAS STORMWATER MASTER PLAN			EST:	VLD
ENGINEER	BLACK & VEATCH			CHCKD:	JWH
ELEMENT#	3 MiLE CREEK - South Branch - 6 R				
	DESCRIPTION	QUANT.	UNIT	U. PRICE	AMOUNT
	Leavenworth Tfwy Crossing				
A.3.7	Pipe and Inlet (Enclosed) System. 15 inch RCP	250	LF	\$25.00	\$6,250
F.2.3	Street Removal - 4-lane, Aspalt, w/ C&G	142	sy	59.00	\$1.278
	Street Replacement, 4-lane, Asphalt w/ C&G	142	sy	\$35.00	\$4.970
C.3.2.1	Concrete - Wing walls and apron - 1	2	cy	\$300.00	\$585
B.1	Excavation and Backfill	4	cy	\$4.00	\$16
A.5.1	Storm Sewer Manholes < 6ft Diameter	1	ea	\$2.350.00	\$2,350
					10
CONTINCE	NOV.			TOTAL =	\$15,449
CONTINGE	NCY	20 PER	CENT		\$3.090
ENGINEERI	NG, LEGAL AND ADMINISTRATIVE	20 000		UB TOTAL =	\$18,538
		20 PER	CENT		\$3,708

ITEM No Subsystem	ITEM DESCRIPT 6 R	ION 3 Mile Creek	UNIT , South Bra	UNIT COST anch	QUANTITY	TOTAL COST
NODE	92413	Junction Stru	ucture			
		,	ea	\$2,350.00	1	\$2,350.00
CONDUIT	2743	Parallel pipe	added	1.25	RCP	
	15	inch RCP	LF	\$25.00	250	\$6,250.00
	leavenworth	•	width	length	sq ft	
	Street Cross	sing	20	64	1280	
*	4-lane, Aspl		sy	\$44.00	142	\$6,257.78
NODE	92414	Concrete Wi	ng walls & .	Apron		
		Quantity	Height	Width	cu yd	
	Pipe 1	1	1.25	1.25	RCP	
	Pipe 2	1	1.25	1.25	RCP	
	Wing walls	2	2.25	5	0.83	
	Apron		5	4.5	0.83	
	Face (less p	ipe openin	2.25	4.5	0.28	
				Total	1.95	
	Concrete		су	\$300.00	1.95	\$585.23
	Excavation	and Backfill	су	\$4.00	3.90	\$15.61

SUBTOTAL\$15,458.61

20% Contingency \$18,550.34

20% Engineering, legal and administrative \$22,260.40

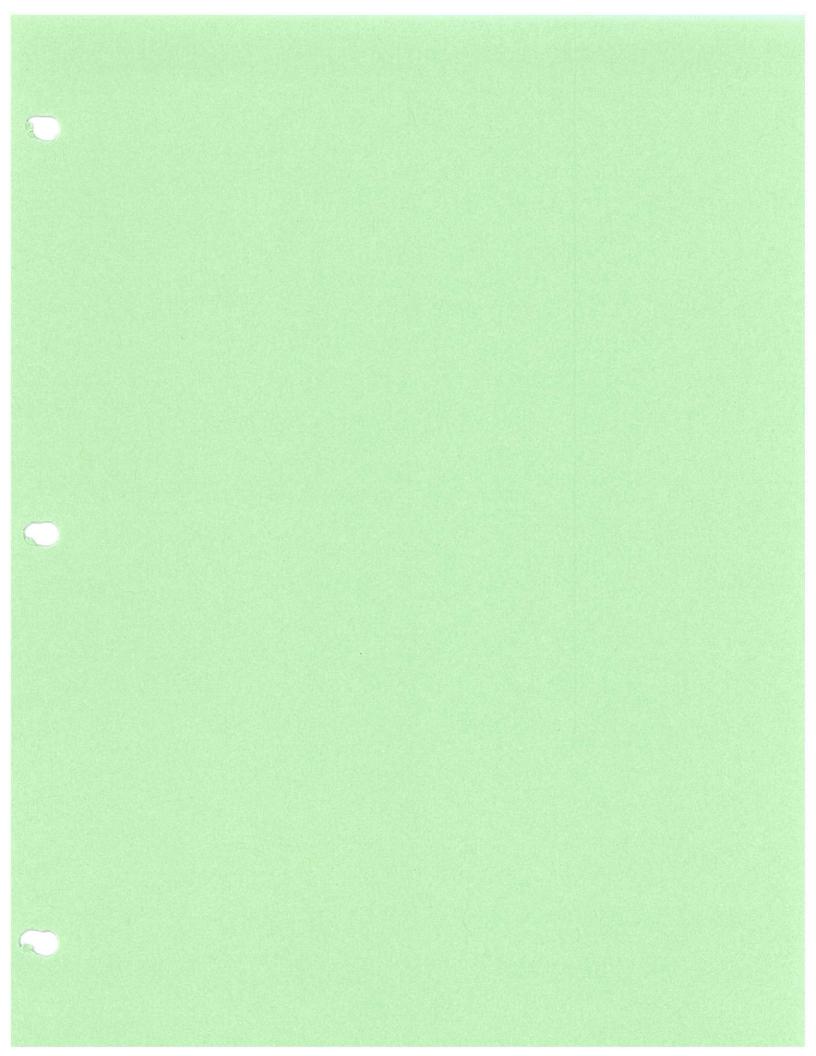


	PRELIMINARY COST ESTIMA	TE		DATE:	11/19/
ROJECT:	LEAVENWORTH, KANSAS STORMWATER MASTER PLAN			EST:	VLD
NGINEER	BLACK & VEATCH			CHCKD:	JWH
LEMENT#	3 MILE CREEK - South Branch - 7 R				
	DESCRIPTION	QUANT.	UNIT	U. PRICE	AMOUNT
A.3.5	Pipe and Inlet (Enclosed) System. 21 inch RCP	30	LF	\$37.00	\$1.1
A.3.6	Pipe and Inlet (Enclosed) System. 24 inch RCP	235	LF	\$42.00	\$9.8
F.2.2	Street Removal - 2-lane, Aspalt, w/ C&G	142	sy	\$8.00	\$1.1
F.3.4.2	Street Replacement, 2-lane, Asphalt w/ C&G	142	sy	\$30.00	54.2
A.5.2	Storm Sewer Manholes > 6ft Diameter	2	ea	\$5.250.00	\$10.5
C.3.2.1	Concrete - Wing walls and apron	9	cy	\$300.00	\$2.7
B.1	Excavation and Backfill	18	cy	\$4.00	<u></u>
				TOTAL =	\$29,60
CONTINGE	NCY	20 PER	CENT		\$5,9
ENGINEED	ING LEGALAND ADMINISTRATIVE			CUB TOTAL =	\$35,60
D. TOTT EERI	NG, LEGAL AND ADMINISTRATIVE	20 PER	CENT		\$7,12

ITEM No	ITEM DESCRIPTION	UNIT	UNIT COST	QUANTITY	TOTAL COST
Subsystem	7 R 3 Mile Creek	South Br	anch		
NODE	85909 Concrete Wir	ng walls &	Apron		
	Quantity	Height	Width	cu yd	
	Pipe 1 1		2 2	RCP	
	Pipe 2	1.75	5 1.75	RCP	
	Wing walls 2	3	5	1.11	
	Apron	5	5.75	1.06	
	Face (less pipe opening	3	5.75	0.43	
	Concrete		Total	2.61	6700.04
	Excavation and Backfill	су	\$300.00 \$4.00	2.61	\$782.81
CONDUIT	935 Parallel pipe	cy		5.22 RCP	\$20.88
CONDON	21 inch RCP	LF	\$37.00	30	\$1,110.00
	21st Street	width	length	sq ft	\$1,110.00
	Street Crossing	20	32	640	
	2-lane, Asphalt, w/ C&G	sy	\$38.00	71	\$2,702.22
NODE	85910 Concrete Wir				4-1,
	Quantity	Height	Width	cu yd	
	Pipe 1 1		? 2		
	Pipe 2	í	? 2	RCP	
	Wing walls 2	3	5	1.11	
	Apron	5	6	1.11	
	Face (less pipe opening	3	6	0.43	
			Total	2.66	
	Concrete	су	\$300.00	2.66	\$796.85
	Excavation and Backfill	су	\$4.00	5.31	\$21.25
NODE	85896 Junction Stru	cture			
HODE	DDDSG Junction Stru	ea	\$5,250.00	1	\$5,250.00
CONDUIT	2067 Parallel pipe			RCP	\$3,230.00
	24 inch RCP	LF	\$42.00	33.04	\$1,387.68
	21st St Court	width	length	sq ft	Ψ1,307.00
	Street Crossing	20	32	640	
	2-lane, Asphalt, w/ C&G	sy	\$38.00	71	\$2,702.22
NODE	85897 Junction Stru				7-1
		ea	\$5,250.00	1	\$5,250.00
CONDUIT	923 Parallel pipe			RCP	
7	24 inch RCP	LF	\$42.00	201.72	\$8,472.24
NODE	85899 Concrete Wir				
	Quantity	Height	Width	cu yd	
	Pipe 1 1	3.5	000000000000000000000000000000000000000		
	Pipe 2 1	1 5		RCP	
	Wing walls 2	4.5	5 7.5	1.67	
	Apron Face (less pipe opening	5 4.5	7.5	1.39	
	i ace (less hihe obeiling	4.5	7.5	0.78	
	Concrete		Total	3.83	£1 140 CC
	Excavation and Backfill	cy	\$300.00	3.83	\$1,149.86
	Excavation and Dackill	су	\$4.00	7.67	\$30.66
				=	
				SUBTOTAL	\$29,676.68
			20% C	ontingency	\$35,612.01

20% Contingency \$35,612.01

20% Engineering, legal and administrative \$42,734.41

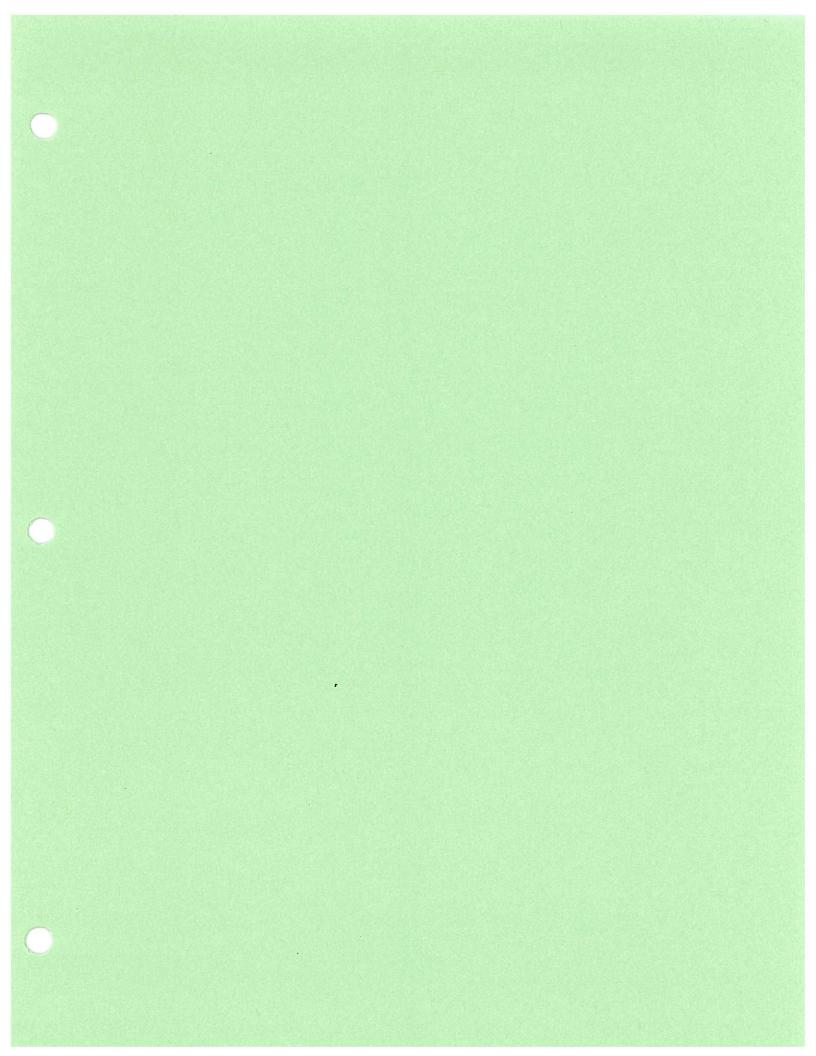


	PRELIMINARY COST ESTIMATE			DATE:	11/19/96
PROJECT:	LEAVENWORTH, KANSAS STORMWATER MASTER PLAN			EST:	VLD
ENGINEER	NGINEER BLACK & VEATCH				
ELEMENT#	3 MILE CREEK - South Branch - 8 R				
	DESCRIPTION	QUANT.	UNIT	U. PRICE	AMOUNT
	Parallel to Spruce St				
A.3.7	Pipe and Inlet (Enclosed) System. 18 inch RCP	138	LF	\$34.00	\$4,698
A.3.7	Pipe and Inlet (Enclosed) System, 27 inch RCP	71	LF	\$47.00	\$3,325
	Reinforced Concrete Box Culverts, 3.5 x 2	- 100	LF	\$245.00	\$24,500
C.3.2.1	Concrete - Wing walls and apron	6	сy	\$300.00	\$1.698
B.1	Excavation and Backfill	11	сy	\$4.00	\$45
A.5.1	Storm Sewer Manholes < 6ft Diameter	2	ea	\$2.350.00	\$4.700
CONTRACT	NOV			TOTAL =	\$38,966
CONTINGE	NC)	20 PER	CENT		\$7,793
				SUB TOTAL =	\$46,760
ENGINEER	NG, LEGAL AND ADMINISTRATIVE	20 PEF	RCENT		\$9,352
				TOTAL =	\$56,111

ITEM No	ITEM DESCRIPTION	ON	UNIT	UNIT COST	QUANTITY	TOTAL COST			
Subsystem		Mile Creek		anch	QUANTITI				
NODE	85904 (Concrete Wi	ng walls &	Apron					
		Quantity	Height	Width	cu yd				
	Pipe 1	1		2 2					
	Pipe 2	1	1.5	5 1.5	RCP				
	Wing walls	2	3	5	1.11				
	Apron		5	5.5	1.02				
	Face (less pi	pe opening	3	5.5	0.43				
			2001	Total Area	2.56				
	Concrete		су	\$300.00	2.56	\$767.68			
	Excavation ar		су	\$4.00	5.12	\$20.47			
CONDUIT		arallel pipe	added	1.5	RCP				
		inch RCP	LF	\$34.00	138.17	\$4,697.78			
NODE	85903 J	unction Stru	cture						
			ea	\$2,350.00	1	\$2,350.00			
CONDUIT		arallel pipe	added	2.25	RCP				
		inch RCP	LF	\$47.00	70.75	\$3,325.25			
NODE	85906 J	unction Stru	cture						
			ea	\$2,350.00	1	\$2,350.00			
CONDUIT	932 P	arallel pipe	added	2 x 3.5	RCB				
	3 X 3	RCB	LF	\$245.00	100	\$24,500.00			
NODE		oncrete Wir							
		Quantity	Height	Width	cu yd				
	Pipe 1	1	2	2					
	Pipe 2	1	2		RCP				
	Wing walls	2	3	5	1.11				
	Apron		5	7.5	1.39				
	Face (less pip	e opening	3	7.5	0.60				
		Herr Sec.		Total Area	3.10				
	Concrete		су	\$300.00	3.10	\$930.19			
	Excavation an	d Backfill	су	\$4.00	6.20	\$24.80			
					110				
					SUBTOTAL	\$38,966.17			
						on order \$ 1840 14 (1000 084) 24000			

20% Contingency \$46,759.41

20% Engineering, legal and administrative \$56,111.29



	PRELIMINARY COST ESTIMATE			DATE:	11/12/9
PROJECT:	LEAVENWORTH, KANSAS STORMWATER MASTER PLAN			EST:	VLD
ENGINEER	NGINEER BLACK & VEATCH				
ELEMENT#	5 MILE CREEK - 1 L				
	DESCRIPTION	QUANT.	UNIT	U. PRICE	AMOUNT
Λ.3.4	Pipe and Inlet (Enclosed) System - 18 inch RCP	785	LF	\$34.00	\$26,69
A.3.6	Pipe and Inlet (Enclosed) System - 24 inch RCP	397	LF	\$42.00	\$16,67
A.3.7	Pipe and Inlet (Enclosed) System - 27 inch RCP	64	LF	\$47.00	\$3.00
A.3.8	Pipe and Inlet (Enclosed) System - 30 inch RCP	67	LF	\$52.00	\$3,48
A.3.10	Pipe and Inlet (Enclosed) System - 42 inch RCP	387	LF	\$90.00	\$34.83
A.3.11	Pipe and Inlet (Enclosed) System - 48 inch RCP	260	LF	\$110.00	\$28.60
A.3.13	Pipe and Inlet (Enclosed) System - 60 inch RCP	460	LF	\$200.00	\$92.00
A.2.1	Storm Sewer Curb Inlet	16	ea	\$775.00	\$12.40
A2.2	Storm Sewer Area Inlet	4	ea	\$680.00	\$2,72
C.3.2.1	Concrete - Wing walls and apron	9	cy	\$300.00	\$2,75
B.1	Excavation and Backfill	18	cy	\$4.00	\$7
A.5.1	Storm Sewer Manholes < 6ft Diameter	2	ea	\$2.350.00	\$4,70
A.5.2	Storm Sewer Manholes > 6ft Diameter	6	ea	\$5,250.00	\$31,50
F.2.2	Street Removal - 2-lane, Aspalt, w/ C&G	64	sy	\$8.00	\$51
F.3.4.2	Street Replacement, 2-lane, Asphalt w/ C&G	64	sy	\$30.00	\$1,92
F.2.3	Street Removal - 4-lane, Aspalt, w/ C&G	2211	sy	\$9.00	\$19,89
F.3.4.3	Street Replacement, 4-lane, Asphalt w/ C&G	2211	sy	\$35.00	\$77.38
F.1.3	Driveway and Sidewalk removal	112	sy	\$9.00	\$1,00
F.3.3	Driveway and Sidewalk replacement	112	sy	\$27.00	\$3.02
					05.02
				1	
				1	
				+	
				TOTAL	63/3.1
CONTINGE	NCY	30 PCP	CENT	101AL =	\$363,18
		20 PER	CENT		\$72,63
				SUB TOTAL =	\$435,82
ENGINEER	ING, LEGAL AND ADMINISTRATIVE	20 PE	RCENT		\$87,16
				TOTAL =	\$522,98

ITEM No	ITEM DESCRIPTION	UNIT	UNIT COST	QUANTITY	TOTAL COST
	1 1 L 5 Mile Creek		0001	QUANTITI	
NODE	Area Inlet				
		ea	\$680.00	1	\$680.00
CONDUIT	*CONTRACTOR ************************************		1.5		
	18 inch RCP	LF	\$34.00	750	\$25,500.00
NODE	Storm Sewer	r Inlets			
		ea	\$775.00	2	\$1,550.00
CONDUIT	1441 Parallel pipe 24 inch RCP	added LF	\$42.00	RCP	£1 202 00
	Evergreen	Width	Length	31 sq ft	\$1,302.00
	Cross Street	12	24	288	
NODE	2-lane, Asphalt, w/ C&G Storm Sewer	Sy r Inlets	\$38.00	32	\$1,216.00
		ea	\$775.00	2	\$1,550.00
CONDUIT	861 Parallel pipe			RCP	
	27 inch RCP	LF Width	\$47.00 Length	54 sq ft	\$3,008.00
	Parking Lot	12	64	768	
NODE	Parking Lot removal & r Area Inlet	sy	\$36.00	85	\$3,072.00
NODE	Area iniet	ea	\$680.00	1	\$680.00
CONDUIT	2016 Parallel pipe	added	2.5		
NODE	30 inch RCP Junction Stru	LF	\$52.00	41	\$2,132.00
		ea	\$2,350.00	1	\$2,350.00
CONDUIT	862 Parallel pipe		4	RCP	
	48 inch RCP	LF Width	\$110.00 Length	135 sq ft	\$14,850.00
	Street Crossing	22	135	2970	
NODE	4-lane, Asphalt, w/ C&G	Sy	\$44.00	330	\$14,520.00
NODE	Storm Sewer	ea	\$775.00	2	\$1,550.00
CONDUIT	2043 Parallel pipe			RCP	Ψ1,000.00
NODE	48 inch RCP Concrete Wir	LF	\$110.00	125	\$13,750.00
11002	Quantity	Height	Width	cu yd	
	Pipe 1	4		RCP	
	Pipe 2 1 Wing walls 2	4.5 5.5	5 4.5 5	RCP 2.04	
	Apron	5	10.5	1.94	
	Face (less pipe opening	5.5	10.5	1.08	
	Concrete	су	Total \$300.00	5.07 5.07	\$1,519.77
	Excavation and Backfill	cy	\$4.00	10.13	\$40.53
NODE	Storm Sewer	Inlets			
CONDUIT	765 Parallel pipe	ea	\$775.00	2	\$1,550.00
CONDON	18 inch RCP	LF	\$34.00	RCP 35	\$1,190.00
	Rose St	Width	Length	sq ft	,
	Street Crossing	12	24	288	

No	ITEM	LINUT	UNIT	OLIANITE (TOTAL
No	DESCRIPTION 2-lane, Asphalt, w/	UNIT	COST	QUANTITY	COST
NODE		C&G sy Sewer Inlets	\$38.00	32	\$1,216.00
		ea	\$775.00	1	\$775.00
NODE	Area l	nlet ea	\$680.00	1	\$680.00
CONDUIT	766 Paralle	el pipe added		RCP	Ψ000.00
	24 inch f		\$42.00	125	\$5,250.00
NODE	Storm	Sewer Inlets		100 May 200 100 100 100 100 100 100 100 100 100	
		ea	\$775.00	1	\$775.00
NODE	Area I	nlet			,
		ea	\$680.00	1	\$680.00
CONDUIT		el pipe added		RCP	
NODE	24 inch F		\$42.00	112	\$4,704.00
NODE	Storm	Sewer Inlets	¢775.00	2	64 550 00
CONDUIT	768 Paralle	ea el pipe added	\$775.00	RCP	\$1,550.00
CONDON	24 inch F		\$42.00	129	\$5,418.00
	Z4 IIICI11	Width	Length	sq ft	\$3,410.00
	Driveway	12	20	240	
	Driveway	sy	\$36.00	27	\$960.00
NODE		Sewer Inlets			Ψ500.00
	***************************************	ea	\$775.00	1	\$775.00
NODE	Junctio	on Structure			
		ea	\$2,350.00	1	\$2,350.00
CONDUIT	1938 Paralle	el pipe added		RCP	
	30 inch F	RCP LF	\$52.00	26	\$1,352.00
NODE	0.	D			
NODE	Storm		6775.00	2	£4 550 00
CONDUIT	1961 Paralle	ea	\$775.00 5	2 RCP	\$1,550.00
CONDON		ei bibe added		RUP	
					£27.400.00
	60 inch F	RCP LF	\$200.00	137	\$27,400.00
	60 inch F 4th St	RCP LF Width	\$200.00 Length	137 sq ft	\$27,400.00
	60 inch F 4th St Parallel St	RCP LF Width 20	\$200.00 Length 137	137 sq ft 2740	
NODE	60 inch F 4th St Parallel St 4-lane, Asphalt, w/	C&G Sy	\$200.00 Length	137 sq ft	\$27,400.00 \$13,395.56
NODE	60 inch F 4th St Parallel St 4-lane, Asphalt, w/	CP LF Width 20 C&G sy on Structure	\$200.00 Length 137 \$44.00	137 sq ft 2740 304	\$13,395.56
NODE CONDUIT	60 inch F 4th St Parallel St 4-lane, Asphalt, w/	Width 20 C&G sy on Structure ea	\$200.00 Length 137 \$44.00 \$5,250.00	137 sq ft 2740	
	60 inch F 4th St Parallel St 4-lane, Asphalt, w/	Width 20 C&G sy on Structure ea el pipe added	\$200.00 Length 137 \$44.00 \$5,250.00	137 sq ft 2740 304	\$13,395.56 \$10,500.00
	4th St Parallel St 4-lane, Asphalt, w/ Junction 779 Parallel 60 inch F	Width 20 C&G sy on Structure ea el pipe added	\$200.00 Length 137 \$44.00 \$5,250.00	137 sq ft 2740 304 2 RCP	\$13,395.56
	60 inch F 4th St Parallel St 4-lane, Asphalt, w/ Junction 779 Paralle 60 inch F 4th St Parallel St	CP LF Width 20 C&G sy on Structure ea el pipe added CCP LF Width 20	\$200.00 Length 137 \$44.00 \$5,250.00 \$5	137 sq ft 2740 304 2 RCP	\$13,395.56 \$10,500.00
CONDUIT	60 inch F 4th St Parallel St 4-lane, Asphalt, w/ Junction 779 Parallel 60 inch F 4th St Parallel St 4-lane, Asphalt, w/	CP LF Width 20 C&G sy on Structure ea el pipe added RCP LF Width 20 C&G sy	\$200.00 Length 137 \$44.00 \$5,250.00 \$200.00 Length	137 sq ft 2740 304 2 RCP 144 sq ft	\$13,395.56 \$10,500.00
	60 inch F 4th St Parallel St 4-lane, Asphalt, w/ Junction 779 Parallel 60 inch F 4th St Parallel St 4-lane, Asphalt, w/	CP LF Width 20 C&G sy on Structure ea el pipe added CCP LF Width 20	\$200.00 Length 137 \$44.00 \$5,250.00 \$200.00 Length 144 \$44.00	137 sq ft 2740 304 2 RCP 144 sq ft 2880	\$13,395.56 \$10,500.00 \$28,800.00
NODE	60 inch F 4th St Parallel St 4-lane, Asphalt, w/ Junction 779 Parallel 60 inch F 4th St Parallel St 4-lane, Asphalt, w/ Junction	CP LF Width 20 C&G sy on Structure ea el pipe added CCP LF Width 20 C&G sy on Structure ea	\$200.00 Length 137 \$44.00 \$5,250.00 \$200.00 Length 144 \$44.00	137 sq ft 2740 304 2 RCP 144 sq ft 2880 320	\$13,395.56 \$10,500.00 \$28,800.00
CONDUIT	60 inch F 4th St Parallel St 4-lane, Asphalt, w/ Junction 779 Parallel 60 inch F 4th St Parallel St 4-lane, Asphalt, w/ Junction 1964 Parallel	CP LF Width 20 C&G sy on Structure ea el pipe added CCP LF Width 20 C&G sy on Structure ea el pipe added	\$200.00 Length 137 \$44.00 \$5,250.00 \$200.00 Length 144 \$44.00 \$5,250.00	137 sq ft 2740 304 2 RCP 144 sq ft 2880 320 2 RCP	\$13,395.56 \$10,500.00 \$28,800.00 \$14,080.00 \$10,500.00
NODE	60 inch F 4th St Parallel St 4-lane, Asphalt, w/ Junction 779 Parallel 60 inch F 4th St Parallel St 4-lane, Asphalt, w/ Junction 1964 Parallel 60 inch F	CP LF Width 20 C&G sy on Structure ea el pipe added CCP LF Width 20 C&G sy on Structure ea el pipe added CCP LF	\$200.00 Length 137 \$44.00 \$5,250.00 \$200.00 Length 144 \$44.00 \$5,250.00 \$5,250.00	137 sq ft 2740 304 2 RCP 144 sq ft 2880 320 2 RCP	\$13,395.56 \$10,500.00 \$28,800.00 \$14,080.00
NODE	60 inch F 4th St Parallel St 4-lane, Asphalt, w/ Junction 779 Parallel 60 inch F 4th St Parallel St 4-lane, Asphalt, w/ Junction 1964 Parallel 60 inch F 4th St	CP LF Width 20 C&G sy on Structure ea el pipe added CP LF Width 20 C&G sy on Structure ea el pipe added CP LF Width 20 C&G sy on Structure ea el pipe added CP LF Width	\$200.00 Length 137 \$44.00 \$5,250.00 \$200.00 Length 144 \$44.00 \$5,250.00 \$5,250.00 Length 144 \$44.00	137 sq ft 2740 304 2 RCP 144 sq ft 2880 320 2 RCP 69 sq ft	\$13,395.56 \$10,500.00 \$28,800.00 \$14,080.00 \$10,500.00
NODE	60 inch F 4th St Parallel St 4-lane, Asphalt, w/ Junction 779 Parallel 60 inch F 4th St Parallel St 4-lane, Asphalt, w/ Junction 1964 Parallel 60 inch F 4th St Parallel St 4th St Parallel St	CP LF Width 20 C&G sy on Structure ea el pipe added RCP LF Width 20 C&G sy on Structure ea el pipe added RCP LF Width 20 C&G sy on Structure ea el pipe added RCP LF Width 20 C&G sy on Structure	\$200.00 Length 137 \$44.00 \$5,250.00 \$5,250.00 Length 144 \$44.00 \$5,250.00 Length 69	137 sq ft 2740 304 2 RCP 144 sq ft 2880 320 2 RCP 69 sq ft 1380	\$13,395.56 \$10,500.00 \$28,800.00 \$14,080.00 \$10,500.00 \$13,800.00
NODE CONDUIT	4th St Parallel St 4-lane, Asphalt, w/ Junction 779 Parallel 60 inch F 4th St Parallel St 4-lane, Asphalt, w/ Junction 1964 Parallel 60 inch F 4th St Parallel St 4-lane, Asphalt, w/ 4th St Parallel St 4-lane, Asphalt, w/	CP LF Width 20 C&G sy on Structure ea el pipe added RCP LF Width 20 C&G sy on Structure ea el pipe added RCP LF Width 20 C&G sy on Structure ea el pipe added RCP LF Width 20 C&G sy on Structure ea el pipe added RCP LF Width 20 C&G sy	\$200.00 Length 137 \$44.00 \$5,250.00 \$200.00 Length 144 \$44.00 \$5,250.00 \$5,250.00 Length 144 \$44.00	137 sq ft 2740 304 2 RCP 144 sq ft 2880 320 2 RCP 69 sq ft	\$13,395.56 \$10,500.00 \$28,800.00 \$14,080.00 \$10,500.00
NODE	4th St Parallel St 4-lane, Asphalt, w/ Junction 779 Parallel 60 inch F 4th St Parallel St 4-lane, Asphalt, w/ Junction 1964 Parallel 60 inch F 4th St Parallel St 4-lane, Asphalt, w/ 4th St Parallel St 4-lane, Asphalt, w/	CEP LF Width 20 C&G sy on Structure ea el pipe added CCP LF Width 20 C&G sy on Structure ea el pipe added CCP LF Width 20 C&G sy on Structure ea el pipe added CCP LF Width 20 C&G sy on Structure es el pipe added CCP LF Width 20 C&G sy on Structure	\$200.00 Length 137 \$44.00 \$5,250.00 \$200.00 Length 144 \$44.00 \$5,250.00 \$200.00 Length 69 \$44.00	137 sq ft 2740 304 2 RCP 144 sq ft 2880 320 2 RCP 69 sq ft 1380 153	\$13,395.56 \$10,500.00 \$28,800.00 \$14,080.00 \$10,500.00 \$13,800.00 \$6,746.67
NODE CONDUIT	4th St Parallel St 4-lane, Asphalt, w/ Junction 779 Parallel 60 inch F 4th St Parallel St 4-lane, Asphalt, w/ Junction 1964 Parallel 60 inch F 4th St Parallel St 4-lane, Asphalt, w/ Junction 4th St Parallel St 4-lane, Asphalt, w/ Junction	CP LF Width 20 C&G sy on Structure ea el pipe added CP LF Width 20 C&G sy on Structure ea el pipe added CP LF Width 20 C&G sy on Structure ea el pipe added CP LF Width 20 C&G sy on Structure ea el pipe added CP LF Width 20 C&G sy on Structure ea	\$200.00 Length 137 \$44.00 \$5,250.00 \$200.00 Length 144 \$44.00 \$5,250.00 Length 69 \$44.00 \$5,250.00	137 sq ft 2740 304 2 RCP 144 sq ft 2880 320 2 RCP 69 sq ft 1380 153	\$13,395.56 \$10,500.00 \$28,800.00 \$14,080.00 \$10,500.00 \$13,800.00
NODE CONDUIT	60 inch F 4th St Parallel St 4-lane, Asphalt, w/ 779 Paralle 60 inch F 4th St Parallel St 4-lane, Asphalt, w/ Junction 1964 Parallel 60 inch F 4th St Parallel St 4-lane, Asphalt, w/ Junction 2019 Parallel	CP LF Width 20 C&G sy on Structure ea el pipe added CCP LF Width 20 C&G sy on Structure ea el pipe added CCP LF Width 20 C&G sy on Structure ea el pipe added CCP LF Width 20 C&G sy on Structure ea el pipe added	\$200.00 Length 137 \$44.00 \$5,250.00 \$5,250.00 Length 144 \$44.00 \$5,250.00 Length 69 \$44.00 \$5,250.00 \$5,250.00	137 sq ft 2740 304 2 RCP 144 sq ft 2880 320 2 RCP 69 sq ft 1380 153 2 RCP	\$13,395.56 \$10,500.00 \$28,800.00 \$14,080.00 \$10,500.00 \$13,800.00 \$6,746.67 \$10,500.00
NODE CONDUIT	4th St Parallel St 4-lane, Asphalt, w/ Junction 779 Parallel 60 inch F 4th St Parallel St 4-lane, Asphalt, w/ Junction 1964 Parallel 60 inch F 4th St Parallel St 4-lane, Asphalt, w/ Junction 2019 Parallel 60 inch F	CP LF Width 20 C&G sy on Structure ea el pipe added CCP LF Width 20 C&G sy on Structure ea el pipe added CCP LF Width 20 C&G sy on Structure ea el pipe added CCP LF Width 20 C&G sy on Structure ea el pipe added CCP LF	\$200.00 Length 137 \$44.00 \$5,250.00 \$5,250.00 Length 144 \$44.00 \$5,250.00 Length 69 \$44.00 \$5,250.00 \$5,250.00 \$5,250.00	137 sq ft 2740 304 2 RCP 144 sq ft 2880 320 2 RCP 69 sq ft 1380 153 2 RCP	\$13,395.56 \$10,500.00 \$28,800.00 \$14,080.00 \$10,500.00 \$13,800.00 \$6,746.67
NODE CONDUIT	4th St Parallel St 4-lane, Asphalt, w/ Junction 779 Parallel St 60 inch F 4th St Parallel St 4-lane, Asphalt, w/ Junction 1964 Parallel St 4-lane, Asphalt, w/ 4th St Parallel St 4-lane, Asphalt, w/ Junction 2019 Parallel St 4th St	CP LF Width 20 C&G sy on Structure ea el pipe added CP LF Width 20 C&G sy on Structure ea el pipe added CP LF Width 20 C&G sy on Structure ea el pipe added CP LF Width 20 C&G sy on Structure ea el pipe added CP LF Width 20 C&G sy on Structure ea el pipe added CP LF Width	\$200.00 Length 137 \$44.00 \$5,250.00 \$5,250.00 Length 144 \$44.00 \$5,250.00 Length 69 \$44.00 \$5,250.00 Length 69 \$44.00	137 sq ft 2740 304 2 RCP 144 sq ft 2880 320 2 RCP 69 sq ft 1380 153 2 RCP 110 sq ft	\$13,395.56 \$10,500.00 \$28,800.00 \$14,080.00 \$10,500.00 \$13,800.00 \$6,746.67 \$10,500.00
NODE CONDUIT	4th St Parallel St 4-lane, Asphalt, w/ Junction 779 Parallel 60 inch F 4th St Parallel St 4-lane, Asphalt, w/ Junction 1964 Parallel 60 inch F 4th St Parallel St 4-lane, Asphalt, w/ Junction 2019 Parallel 60 inch F	CP LF Width 20 C&G sy on Structure ea el pipe added CP LF Width 20 C&G sy on Structure ea el pipe added CP LF Width 20 C&G sy on Structure ea el pipe added CP LF Width 20 C&G sy on Structure ea el pipe added CP LF Width 20 C&G sy on Structure ea el pipe added CP LF Width 20 C&G sy on Structure ea el pipe added	\$200.00 Length 137 \$44.00 \$5,250.00 \$5,250.00 Length 144 \$44.00 \$5,250.00 Length 69 \$44.00 \$5,250.00 \$5,250.00 \$5,250.00	137 sq ft 2740 304 2 RCP 144 sq ft 2880 320 2 RCP 69 sq ft 1380 153 2 RCP	\$13,395.56 \$10,500.00 \$28,800.00 \$14,080.00 \$10,500.00 \$13,800.00 \$6,746.67 \$10,500.00

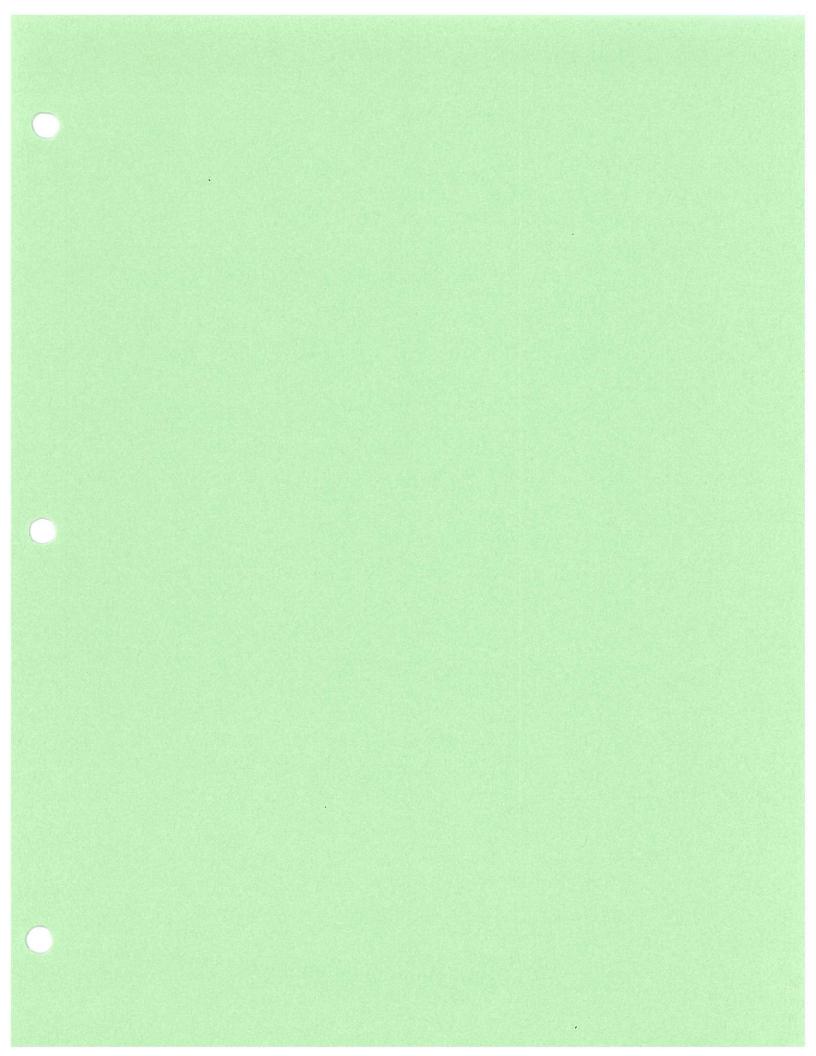
ITEM	ITEM		UNIT		TOTAL
No	DESCRIPTION	UNIT	COST	QUANTITY	COST

NODE		Storm Sewer	Inlets			
			ea	\$775.00	1	\$775.00
CONDUIT	918	Parallel pipe	added	3.5	RCP	
	42	inch RCP	LF	\$90.00	387	\$34,830.00
	Marion St		Width	Length	sq ft	2 4
	Parallel St		20	387	7740	
		nalt, w/ C&G	sy	\$44.00	860	\$37,840.00
NODE		Concrete Wir	ng walls &	Apron		
		Quantity	Height	Width	cu yd	
	Pipe 1	1	3.5	3.5	RCP	
	Pipe 2	1	3.5	3.5	RCP	
	Wing walls	2	4.5	5	1.67	
	Apron		5	9	1.67	
	Face (less p	ipe opening	4.5	9	0.79	
				Total	4.12	
	Concrete		су	\$300.00	4.12	\$1,236.20
	Excavation a	and Backfill	су	\$4.00	8.24	\$32.97

SUBTOTAL \$363,237.24

20% Contingency \$435,884.69

20% Engineering, legal and administrative \$523,061.62



	PRELIMINARY COST ESTIMATE			DATE:	11/12/	
PROJECT:		EST:	VLD			
ENGINEER	NGINEER BLACK & VEATCH					
ELEMENT #	5 MILE CREEK - 2 L					
	DESCRIPTION	QUANT.	UNIT	U. PRICE	AMOUNT	
A.3.3	Pipe and Inlet (Enclosed) System - 15 inch RCP	608	LF	\$25.00	\$15,2	
A.3.4	Pipe and Inlet (Enclosed) System - 18 inch RCP	587	LF	\$34.00	\$19.9	
A.3.5	Pipe and Inlet (Enclosed) System - 21 inch RCP	46	LF	\$37.00	\$1.7	
A.3.6	Pipe and Inlet (Enclosed) System - 24 inch RCP	129	LF	\$42.00	\$5,4	
A.3.7	Pipe and Inlet (Enclosed) System - 27 inch RCP	434	LF	\$47.00	\$20,3	
A.3.9	Pipe and Inlet (Enclosed) System - 36 inch RCP	1002	LF	\$66.00	\$66.1	
A.3.11	Pipe and Inlet (Enclosed) System - 48 inch RCP	420	LF	\$110.00	\$46.2	
	Reinforced Concrete Box - 3.5 X 3	68	ea	\$255.00	\$17,3	
C.3.2.1	Concrete - Wing walls and apron	6	cy	\$300.00	\$1.8	
B.1	Exeavation and Backfill	12	cy	\$4.00	5	
A.5.1	Storm Sewer Manholes < 6ft Diameter	8	ea	\$2,350.00	\$18,8	
A.5.2	Storm Sewer Manholes > 6ft Diameter	11	ea	\$5.250.00	\$57.7	
F.2.2	Street Removal - 2-lane. Aspalt, w/ C&G	4052	sy	\$8.00	\$32.4	
F.3.4.2	Street Replacement, 2-lane, Asphalt w/ C&G	4052	sy	\$30.00	\$121.5	
F.2.1	Street Removal - 2-lane. Gravel	576	sy	\$4.00	\$2,3	
F.3.4.1	Street Replacement, 2-lane, Gravel	576	sy	\$10.00	\$5,7	
CONTINGE	ENCY	20 PER	CENT	TOTAL =	\$432,8 \$86,5	
				SUB TOTAL =	\$519,3	
ENGINEER	ING, LEGAL AND ADMINISTRATIVE	20 PER	RCENT		\$103,8	
				TOTAL =	\$623,2	

ITEM	ITEM		UNIT		TOTAL
No	DESCRIPTION	UNIT	COST	QUANTITY	COST
Subsystem	n 2 L 5 Mile Creek	22			
NODE	85642 Junction Stru				
COMPUTE	***	ea	\$2,350.00	1	\$2,350.00
CONDUIT	796 Parallel pipe		CONTRACTOR	RCP	
NODE	15 inch RCP	LF	\$25.00	45	\$1,125.00
NODE	85643 Junction Stru		00 050 00		
		ea	\$2,350.00	1	\$2,350.00
NODE					
NODE	85510 Concrete Wir				
	Quantity	Height	Width	cu yd	
	Pipe 1 1	1.2			
	Pipe 2		2 _ 2		
	Wing walls 2	3	_ 5	1.11	
	Apron	5	5.25	0.97	
	Face (less pipe opening	3	5.25	0.42	
			Total	2.50	
	Concrete	су	\$300.00	2.50	\$751.46
	Excavation and Backfill	су	\$4.00	5.01	\$20.04
CONDUIT	752 Parallel pipe			RCP	
	15 inch RCP	LF	\$25.00	563	\$14,075.00
NODE	85554 Junction Stru				\$11,070.00
o managarity provided III (Article)		ea	\$2,350.00	1	\$2,350.00
			+=,=00.00	•	Ψ2,000.00
NODE	92339 Junction Stru			8 - 8	
0015111		ea	\$2,350.00	1	\$2,350.00
CONDUIT	820 Parallel pipe		1.75		
	21 inch RCP	LF	\$37.00	46	\$1,702.00
	Cleveland Terr	Width	Length	sq ft	AND THE PROPERTY OF THE PROPER
	Cross Street	20	24	480	
	2-lane, Asphalt, w/ C&G	sy	\$38.00	53	\$2,026.67
NODE	85698 Junction Stru	cture			
		ea	\$2,350.00	1	\$2,350.00
CONDUIT	2649 Install Pipe			RCP	
	48 inch RCP	LF	\$110.00	420	\$46,200.00
NODE	85515 Junction Stru				,
		ea	\$5,250.00	1	\$5,250.00
			· · · · · · · · · · · · · · · · · · ·	·B.)	¥5,200.00
			offic persons are persons		
NODE	85541 Junction Stru	cture			
		ea	\$2,350.00	1	\$2,350.00
CONDUIT	743 Parallel pipe	added	1.5	RCP	
	18 inch RCP	LF	\$34.00	587	\$19,958.00
	Second Ave	Width	Length	sq ft	
	Parallel Street	20	587	11740	
	2-lane, Asphalt, w/ C&G	sy	\$38.00	1304	\$49,568.89
NODE	85543 Junction Stru		Ψ00.00	1507	Ψ+3,300.03
	occus defication on a	ea	\$2,350,00	1	\$2 350 00

\$2,350.00 1

\$2,350.00

ITEM	ITEM		UNIT		TOTAL
No	DESCRIPTION	UNIT	COST	QUANTITY	COST
CONDUIT	1926 Parallel pipe			RCP	0001
*	24 inch RCP	LF	\$42.00	55	\$2,310.00
	Cleveland Terr	Width	Length	sq ft	
	Parallel Street	20	55	1100	
	2-lane, Asphalt, w/ C&G	sy	\$38.00	122	\$4,644.44
NODE	92310 Junction Stru	cture			
		ea	\$2,350.00	1	\$2,350.00
CONDUIT	746 Parallel pipe		2.25		
	27 inch RCP	LF	\$47.00	175	\$8,225.00
	Cleveland Terr	Width	Length	sq ft	
	Parallel Street	20	175	3500	
NODE	2-lane, Asphalt, w/ C&G	sy	\$38.00	389	\$14,777.78
NODE	85547 Junction Stru		65.050.00	2	
CONDUIT	747 Derellel sine	ea	\$5,250.00	11	\$5,250.00
CONDON	747 Parallel pipe 36 inch RCP	LF		RCP	647 550 00
	Cleveland Terr	Width	\$66.00	266	\$17,556.00
	Parallel Street	20	Length 266	sq ft 5320	
	2-lane, Asphalt, w/ C&G	sy	\$38.00	591	F22 462 22
NODE	85550 Junction Stru		\$30.00	291	\$22,462.22
NODE	COCCO Sunction Stru	ea	\$5,250.00	1	\$5,250.00
CONDUIT	749 Parallel pipe			RCP	\$5,230.00
CONDON	36 inch RCP	LF	\$66.CO	106	\$6,996.00
	Cleveland Terr	Width	Length	sq ft	\$0,990.00
	Parallel Street	20	106	2120	
	2-lane, Asphalt, w/ C&G	sy	\$38.00	236	\$8,951.11
NODE	85507 Junction Stru				Ψο,σοτ.ττ

NODE	85792 Junction Stru	cture			
		ea	\$5,250.00	1	\$5,250.00
CONDUIT	2004 Parallel pipe			RCP	
	24 inch RCP	LF	\$42.00	74	\$3,108.00
	Sherman St	Width	Length	sq ft	
	Cross Street	20	24	480	CRANCE PRODUCTIONS - SACRESS
NODE	2-lane, Asphalt, w/ C&G	sy	\$38.00	53	\$2,026.67
NODE	85793 Junction Stru		AE 050 00	×2	
CONDUIT	970 Decelled pine	ea	\$5,250.00	1	\$5,250.00
CONDON	870 Parallel pipe		2.25		010 170 00
	27 inch RCP Alley	LF Width	\$47.00	259	\$12,173.00
	Parallel	Width	Length	sq ft	
	2-lane, Gravel	20	259	5180	40 057 70
NODE	2-lane, Gravel 85794 Junction Stru	sy	\$14.00	576	\$8,057.78
HODE	OURSA JUNCTION SITU		\$5.250.00	4	¢E 250 00
CONDUIT	2005 Parallel pipe	ea	\$5,250.00	RCP	\$5,250.00
SCINDOIT	36 inch RCP	LF	్త \$66.00	Assessment and a second of the	¢0 100 00
	Santa Fe St	Width		138	\$9,108.00
	Parallel Street	20	Length 138	sq ft	
	2-lane, Asphalt, w/ C&G	sy	\$38.00	2760 307	¢11 652 22
NODE	85798 Junction Stru		φ30.00		\$11,653.33
.1002	oo aaa ounction ou u	oluie			

\$5,250.00

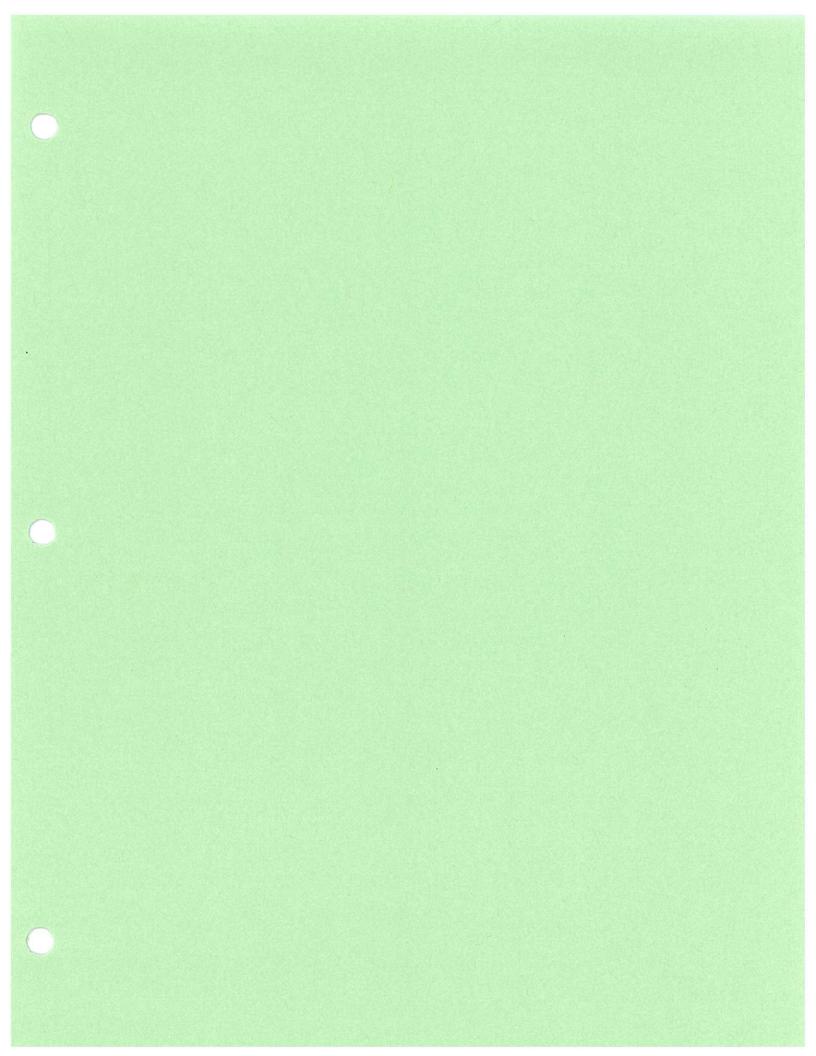
\$5,250.00 1

ITEM No	ITEM DESCRIPTION	UNIT	UNIT	OLIANTITY	TOTAL
CONDUIT	872 Parallel pipe		COST	QUANTITY RCP	COST
CONDON	36 inch RCP	LF	\$66.00	217	\$14,322.00
	Santa Fe St	Width	Length	sq ft	\$14,322.00
	Parallel Street	20	217	4340	
	2-lane, Asphalt, w/ C&G	sy	\$38.00	482	\$18,324.44
NODE	85802 Junction Stru	cture	V		ψ10,024.44
EDITOR COMPANY MADE OF THE PROPERTY OF THE PRO		ea	\$5,250.00	1	\$5,250.00
CONDUIT	874 Parallel pipe	added		RCP	
	36 inch RCP	LF	\$66.00	176	\$11,616.00
	Santa Fe St	Width	Length	sq ft	
	Parallel Street	20	176	3520	
	2-lane, Asphalt, w/ C&G	sy	\$38.00	391	\$14,862.22
NODE	85804 Junction Stru	cture			
		ea	\$5,250.00	1	\$5,250.00
CONDUIT	2013 Parallel pipe			RCP	
	36 inch RCP	LF	\$66.00	20	\$1,320.00
	Second Ave	Width	Length	sq ft	
	Parallel Street	20	20	400	
	2-lane, Asphalt, w/ C&G	sy	\$38.00	44	\$1,688.89
NODE	85805 Junction Stru				
CONDUIT	2022 5 11 1 1	ea	\$5,250.00	1	\$5,250.00
CONDUIT	2014 Parallel pipe			RCP	4
	36 inch RCP	LF	\$66.00	79	\$5,214.00
	Second Ave	Width	Length	sq ft	
	Cross Street	20	36	720	W
NODE	2-lane, Asphalt, w/ C&G	sy	\$38.00	80	\$3,040.00
NODE	92325 Junction Stru		PE 050 00	9	
CONDUIT	9#8 DII-I B	ea	\$5,250.00	1	\$5,250.00
CONDON	876 Parallel Box a		100000000000000000000000000000000000000	RCB	
NODE	0 inch RCP	LF	\$255.00	68	\$17,340.00
NODE	85808 Concrete Win				
	Quantity Pipe 1 1	Height	Width	cu yd	
			3.5	RCB	
	Pipe 2 1			RCP	
	Wing walls 2 Apron	4	5	1.48	
		5	8.5	1.57	
	Face (less pipe opening	4	8.5	0.54	
	Concrete	•	Total	3.59	0.4.0
		су	\$300.00	3.59	\$1,077.78
	Excavation and Backfill	су	\$4.00	7.19	\$28.74
				=	

SUBTOTAL \$432,860.46

20% Contingency \$519,432.55

20% Engineering, legal and administrative \$623,319.06



	PRELIMINARY COST ESTIMATI	<u> </u>		DATE:	11/12/9
ROJECT:		EST:	VLD		
NGINEER	CHCKD:	JWH			
ELEMENT#	5 MILE CREEK - 3 L				
	DESCRIPTION	QUANT.	UNIT	U. PRICE	AMOUNT
A.3.3	Pipe and Inlet (Enclosed) System - 15 inch RCP	1538	LF	\$25.00	\$38.4
A.3.4	Pipe and Inlet (Enclosed) System - 18 inch RCP	369	LF	534.00	\$12,5
A.3.5	Pipe and Inlet (Enclosed) System - 21 inch RCP	120	LF	\$37.00	\$4.4
A.3.6	Pipe and Inlet (Enclosed) System - 24 inch RCP	316	LF	\$42.00	\$13.2
A.3.7	Pipe and Inlet (Enclosed) System - 27 inch RCP	245	LF	\$47.00	\$11.5
A.3.8	Pipe and Inlet (Enclosed) System - 30 inch RCP	538	LF	\$52.00	\$27.9
A.3.9	Pipe and Inlet (Enclosed) System - 36 inch RCP	476	LF	\$66.00	\$31.4
A.3.10	Pipe and Inlet (Enclosed) System - 42 inch RCP	69	LF	\$90.00	\$6.2
A.3.11	Pipe and Inlet (Enclosed) System - 48 inch RCP	280	LF	\$110.00	\$30,7
A.3.13	Pipe and Inlet (Enclosed) System - 60 inch RCP	83	LF	\$200.00	\$16,5
A.3.15	Pipe and Inlet (Enclosed) System - 72 inch RCP	177	LF	\$250.00	\$44.1
	Reinforced Concrete Box - 3 X 2	35	LF	\$215.00	\$7.63
	Reinforced Concrete Box - 3 X 2.5	724	LF	\$240.00	\$173.8
	Reinforced Concrete Box - 3.5 X 2	165	LF	\$245.00	\$40.4
	Reinforced Concrete Box - 4 X 2	229	LF	\$245.00	\$56.0
	Reinforced Concrete Box - 4 X 2.5	269	LF	\$270.00	\$72,50
	Reinforced Concrete Box - 5 X 3	122	LF	\$320.00	\$39,1
	Reinforced Concrete Box - 7 X 6	254	LF	\$378.00	\$95.8
C.3.2.1	Concrete - Wing walls and apron	75	cy	\$300.00	\$22.60
B.1	Excavation and Backfill	151	cy	\$4.00	\$60
A.5.1	Storm Sewer Manholes < 6ft Diameter	16	ea	\$2,350.00	\$37,60
A.5.2	Storm Sewer Manholes > 6ft Diameter	19	ea	\$5,250.00	\$99,75
F.2.2	Street Removal - 2-lane, Aspalt, w/ C&G	7591	sy	\$8.00	
F.3.4.2	Street Replacement, 2-lane, Asphalt w/ C&G	7591		\$30.00	\$60,72
F.2.3	Street Removal - 4-lane, Aspalt, w/ C&G	5817	sy	94,94,94,94	\$227,72
	Street Replacement, 4-lane, Asphalt w/ C&G	5817	sy	\$9.00	\$52,35
	Structural Removal and Replacement	3817	sy	\$35.00	\$203,59
986	Fill	54890		\$4.00	\$1,62
		34890	cy	\$4.00	\$219,56
				TOTAL =	\$1,648,9
CONTINGE	NCY	20 PER	CENT		\$329,7
				SUB TOTAL =	\$1,978,7
ENGINEER	ING, LEGAL AND ADMINISTRATIVE	20 PER	RCENT		\$296,8
				TOTAL =	\$2,275,5

ITEM No	ITEM DESCRIPTION	UNIT	UNIT	OLIANITITY.	TOTAL
Subsysten	n 3 L 5 Mile Creel		COST	QUANTITY	COST
NODE	85463 Junction Str	ucture			
COMPLUT		ea	\$2,350.00	1	\$2,350.00
CONDUIT				RCP	
	15 inch RCP Halderman St	LF	\$25.00	603.81	\$15,095.25
	Parallel Street	Width 20	Length	sq ft	
	2-lane, Asphalt, w/ C&G	sy	604 \$38.00	12076.2	CEO ODO 40
NODE	92343 Junction Stru	icture	\$30.00	1342	\$50,988.40
		ea	\$5,250.00	1	\$5,250.00
CONDUIT	1904 Parallel pipe			RCP	Ψ3,230.00
	36 inch RCP	LF	\$66.00	44,39	\$2,929.74
	Halderman St	Width	Length	sq ft	Ψ2,020.14
	Cross Street	20	44	887.8	
None	2-lane, Asphalt, w/ C&G	sy	\$38.00	99	\$3,748.49
NODE	92344 Junction Stru	ıcture			
CONDUIT	724 D!! 1	ea	\$5,250.00	1	\$5,250.00
COMPON	731 Parallel pipe		**************************************	RCP	8.0
	36 inch RCP	LF	\$66.00	46.76	\$3,086.16
	Cross Street	Width 20	Length	sq ft	
	4-lane, Asphalt, w/ C&G	sy	47 \$44.00	935.2	04.570.00
NODE	85466 Junction Stru	icture	- 944.00	104	\$4,572.09
		ea	\$5,250.00	1	\$5.350.00
CONDUIT	807 Parallel pipe	added		RCP RCP	\$5,250.00
	36 inch RCP	LF	\$66.00	320.68	\$21,164.88
	Halderman St.	Width	Length	sq ft	Ψ21,104.00
	Parallel Street	20	321	6413.6	
None	2-lane, Asphalt, w/ C&G	sy	\$38.00	713	\$27,079.64
NODE	85669 Junction Stru	cture			
CONDUIT	4677 D 11 1 1	ea	\$5,250.00	1	\$5,250.00
CONDUIT	1977 Parallel pipe		3.5		
	42 inch RCP Lawrence Ave.	LF	\$90.00	69,16	\$6,224.40
	Cross Street	Width 20	Length	sq ft	
	2-lane, Asphalt, w/ C&G	sy	40 \$38.00	800	
NODE	92155 Concrete Wir	ng walls &	Anron	89	\$3,377.78
	Quantity	Height	Width	cu yd	
	Pipe 1	3.5	***************************************	RCP	
	Pipe 2 #	3		RCP	
	Wing walls 2	4.5	5	1.67	
	Apron	5	8.5	1.57	
	Face (less pipe opening)	4.5	8.5	0.80	
			Total Area	4.04	
	Concrete	су	\$300.00	4.04	\$1,211.78
	Excavation and Backfill	су	\$4.00	8.08	\$32.31
NODE	85470 Junction Struc	turo			
	July Julicuon Suut	ea	\$2,350.00	4	60.050.05
CONDUIT	711 Parallel pipe a		\$2,350.00 1.5 F	1	\$2,350.00
	18 inch RCP	LF	\$34.00	40,04	£1 261 26
ſ	South St.	Width	Length	sq ft	\$1,361.36
	Cross St.	20	40	800.8	
	2-lane, Asphalt, w/ C&G	sy	\$38.00	89	\$3,381.16
	\$ S	•			ψο,ου Ι. ΙΟ

ITEM No	ITEM DESCRIPTION	UNIT	UNIT	OLIANITITY	TOTAL
NODE	85471 Junction Stru		COST	QUANTITY	COST
NODE	5547 i Sunction Stru	\$2,350.00			
CONDUIT	712 Parallel pipe	ea	\$2,350.00	RCP	\$2,330.00
	24 inch RCP	LF	\$42.00	272,11	\$11,428.62
	10th Ave.	Width	Length	sq ft	Ψ11, 4 20.02
	Parallel Street	20	272	5442.2	
	4-lane, Asphalt, w/ C&G	sy	\$44.00	605	\$26,606.31
NODE	85473 Junction Stru				
	100000000000000000000000000000000000000	ea	\$2,350.00	1	\$2,350.00
CONDUIT	1909 Parallel pipe	added	2.25	RCP	
	27 inch RCP	LF	\$47.00	89.31	\$4,197.57
	10th Ave	Width	Length	sq ft	
	Cross Street	20	50	1000	
	4-lane, Asphalt, w/ C&G	sy	\$44.00	111	\$4,888.89
NODE	85475 Junction Stru	cture			
==::=:::=		ea	\$2,350.00	1	\$2,350.00
CONDUIT	1915 Parallel pipe	added	100000000000000000000000000000000000000	RCP	
11055	27 inch RCP	LF	\$47.00	65.85	\$3,094.95
NODE	92342 Junction Stru	cture			
		ea	\$5,250.00	1	\$5,250.00
CONDUIT	809 Parallel pipe			RCP	
Tiess-	30 inch RCP	LF	\$52.00	147.17	\$7,652.84
NODE	85670 Concrete Wir				
	Quantity	Height	Width	cu yd	
	Pipe 1 1	2,5		5 10 10 10 10 10	
	Pipe 2	2.5	000000000000000000000000000000000000000		
	Wing walls 2	3.5	5	1.30	
	Apron	5	7	1.30	
	Face (less pipe opening)	3.5	_ 7	0.54	
			Total Area	3.14	
	Concrete	су	\$300.00	3.14	\$940.92
	Excavation and Backfill	су	\$4.00	6.27	\$25.09
NODE	85668 Concrete Win		\		
NODL	Quantity	Height	Npron Width		
	Pipe 1	7 reignt 3		cu yd	
	Pipe 2	3			
	Wing walls 2	4	3 5		
	Apron	5	8	1.48	
	Face (less pipe opening)	4	8	1.48	
	ase (less pipe opening)	7	Total Area	0.66	
	Concrete	су	\$300.00	3.62	£1 007 20
	Excavation and Backfill	cy	\$4.00	3.62 7.25	\$1,087.36
CONDUIT	808 Replace with			RCP	\$29.00
The second section of the second seco	36 inch RCP	LF	\$66.00	32.27	\$2,129.82
	36 inch RCP	LF	\$66.00	32.27	\$2,129.82
	Halderman St.	Width	Length	sq ft	Ψ Δ , 1 Δ 3.0 Δ
	Cross Street	20	32	645.4	
	2-lane, Asphalt, w/ C&G	sy	\$38.00	72	\$2,725.02
	Structural Removal and Re			20 Percent	\$1,620.20
NODE	85669 Concrete Win				Ψ1,020.20

ITEM	ITEM		UNIT		TOTAL	
No	DESCRIPTION	UNIT	COST	QUANTITY	COST	
NODE	85162 Concrete Wing walls & Apron					
	Quantity	Height	Width	cu yd		
	Pipe 1 1		6 6			
	Pipe 2		6 6	RCP		
	Wing walls 2	. 7	5	2.59		
	Apron	5	14	2.59		
	Face (less pipe opening)	7	14	1.54		
			Total Area	6.72		
	Concrete	су	\$300.00	6.72	\$2,016.13	
	Excavation and Backfill	су	\$4.00	13.44	\$53.76	
CONDUIT	494 Parallel pipe	added		RCP		
	72 inch RCP	LF	\$250.00	176.71	\$44,177.50	
	Garland Ave.	Width	Length	sq ft	SOME BY A SERVICE STANDING SECURES.	
	Cross Street	20	30	600		
	2-lane, Asphalt, w/ C&G	sy	\$38.00	67	\$2,533.33	
NODE	85163 Concrete Wir	ng walls &	Apron			
	Quantity	Height	Width	cu yd		
	Pipe 1 1		6	RCP		
	Pipe 2	ŧ	6	RCP		
	Wing walls 2	7	5	2.59		
	Apron	5	14	2.59		
	Face (less pipe opening)	7	14	1.54		
		70	Total Area	6.72		
	Concrete	су	\$300.00	6.72	\$2.016.12	
	Excavation and Backfill	су	\$4.00	13.44	\$2,016.13 \$53.76	
		- 2	3 1123	10.44	Ψ55.70	
NODE	85672 Junction Struc	oturo				
	COURT OUNCION OUT		\$2,350.00	ž.	00.050.00	
CONDUIT	811 Parallel pipe a	ea		1	\$2,350.00	
	18 inch RCP	LF		RCP		
	Lawrence St	Width	\$34.00	45.9	\$1,560.60	
	Cross Street	20	Length	sq ft		
	2-lane, Asphalt, w/ C&G		46	918	***	
NODE	85671 Junction Struc	sy	\$38.00	102	\$3,876.00	
	Surger Surgers		¢0.250.00			
CONDUIT	810 Parallel pipe a	ea	\$2,350.00	1	\$2,350.00	
CONDON			1.75			
NODE		LF	\$37.00	120.33	\$4,452.21	
NODL	85673 Concrete Win					
	Quantity Quantity	Height	Width	cu yd		
	Pipe 1	1.5		RCP		
	Pipe 2	1.75		RCF		
	Wing walls 2	2.75	_5	1.02		
	Apron	5	5.25	0.97		
	Face (less pipe opening)	2.75	5.25	0.38		
			Total Area	2.37		
	Concrete	су	\$300.00	2.37	\$711.28	
	Excavation and Backfill	су	\$4.00	4.74	\$18.97	

ITEM	ITEM		UNIT		TOTAL
No	DESCRIPTION	UNIT	COST	QUANTITY	COST
NODE	85659 Concrete Wi				The second second control of the second seco
	Quantity	Height	Width	cu yd	
	Pipe 1 1	1	,5 1.5	RCP	
	Pipe 2		2 2		
	Wing walls 2	3	5	1.11	
	Apron	5	5.5	1.02	
	Face (less pipe opening)	3	5.5	0.43	
	Company		Total Area	2.56	
	Concrete	су	\$300.00	2.56	\$767.68
CONDUIT	Excavation and Backfill	cy	\$4.00	5.12	\$20.47
CONDON	804 Parallel pipe			RCP	80 80 ===
NODE	18 inch RCP	LF	\$34.00	51.31	\$1,744.54
NODE	85660 Concrete Wir				
	Quantity	Height	Width	cu yd	
	Pipe 1		5 1.5	RCP	
	Pipe 2		2 2	RCP	
	Wing walls 2	3	5	1.11	
	Apron	5	5.5	1.02	
	Face (less pipe opening)	3	5.5	0.43	
			Total Area	2.56	
	Concrete	су	\$300.00	2.56	\$767.68
	Excavation and Backfill	су	\$4.00	5.12	\$20.47
11055					
NODE	85664 Junction Struc	cture			
00110111		ea	\$5,250.00	1	\$5,250.00
CONDUIT	1989 Parallel pipe a	added	2.25	RCP	
None	27 inch RCP	LF	\$47.00	89.82	\$4,221.54
NODE	92165 Concrete Win		Apron		
	Quantity	Height	Width	cu yd	
	Pipe 1	2.2		RCP	
	Pipe 2 1		3 3	RCP	
	Wing walls 2	4	5	1.48	
	Apron	5	7.25	1.34	
	Face (less pipe opening)	4	7.25	0.67	
			Total Area	3.49	
	Concrete	су	\$300.00	3.49	\$1,046.73
	Excavation and Backfill	су	\$4.00	6.98	\$27.91
		- 5			···
70					
NODE	92334 Junction Struc	ture			
		ea	\$2,350.00	1	\$2,350.00
CONDUIT	476 Parallel pipe a	dded		RCP	42,000.00
	24 inch RCP	LF	\$42.00	43.41	\$1,823.22
NODE	85138 Concrete Wing	g walls &	Apron		Ψ1,020.22
	Quantity	Height	Width	cu yd	
	Pipe 1	2		RCP	
	Pipe 2	2		RCP	
	Wing walls 2	3	5	1.11	
	Apron	5	6	1.11	
	Face (less pipe opening)	3	6	0.43	
	, , , , , , , , , , , , , , , , , , , ,	i.	Total Area	2.66	
	Concrete	су	\$300.00	2.66	¢700.05
	Excavation and Backfill	cy	\$4.00		\$796.85
		~ ,	ψτ.υυ	5.31	\$21.25

ITEM	ITEM		UNIT		TOTAL
No	DESCRIPTION	UNIT	COST	QUANTITY	COST
NODE	92331 Junction Stru	ucture	THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS NAMED IN C	The second secon	12 TO 10 TO
CONDUIT		ea	\$5,250.00	1	\$5,250.00
CONDON	468 Parallel box		7 X 6	RCB	
NODE	0 inch RCP 92332 Junction Stru	LF	\$378.00	171.01	\$64,641.78
	SESSE SUITCHON SITE	icture ea	\$5.250.00	2	05.050.00
CONDUIT	1485 Parallel box	added	\$5,250.00 7 X 6	T RCB	\$5,250.00
	0 inch RCP	LF	\$378.00	82.57	\$31,211.46
	Limit Street	Width	Length	sq ft	\$51,211.40
	Cross Street	20	60	1200	
NODE	4-lane, Asphalt, w/ C&G	sy	\$44.00	133	\$5,866.67
NODE	92191 Concrete Wi				
	Quantity	Height	Width	cu yd	
	Pipe 1 1		7 6		
	1 1		0 10		
	Wing walls 2 Apron	11	5	4.07	
		5	18	3.33	
	Face (less pipe opening)	11	18	2.07	
	Concrete		Total Area	9.48	
	Excavation and Backfill	су	\$300.00	9.48	\$2,844.44
	Exouvation and Dackilli	су	\$4.00	18.96	\$75.85
NODE	85743 Junction Struc				
	Quantity Pipe 1 1	Height	Width	cu yd	
	Pipe 1 1 1 Pipe 2 1		2 3.5	RCB	
	Wing walls 2	2		RCP	
	Apron	3 5	5 7.5	1.11	
	Face (less pipe opening)	3	7.5 7.5	1.39	
	(rese pipe operating)	3	Total Area	0.43	
	Concrete	су	\$300.00	2.93	0077
	Excavation and Backfill	cy	\$4.00	2.93 5.85	\$877.78
CONDUIT	1999 Parallel box a	dded	***************************************	RCB	\$23.41
	0 inch RCP	LF	\$245.00	56,7	\$13,891.50
	Limit Street	Width	Length	sq ft	Ψ15,091.50
	Remove & Replace	50	240	12000	
	4-lane, Asphalt, w/ C&G	sy	\$44.00	1333	\$58,666.67
	Fill	су	\$4.00	6240	\$24,960.00
NODE	85745 Junction Struc	ture			+= :,0 = 0.00
CONDUIT		ea	\$5,250.00	1	\$5,250.00
CONDUIT	848 Parallel box ac			RCB	
IODE	0 inch RCP	LF	\$245.00	108,31	\$26,535.95
ODE	92329 Concrete Wing				
	Quantity Pipe 1	Height	Width	cu yd	
	n	2	3.5	RCB	
	Pipe 2 Wing walls 2	2	2	RCP	
	Apron	3	5	1.11	
	Face (less pipe opening)	5 3	7.5	1.39	
	(less pipe opening)	3	7.5	0.43	
	Concrete	CV	Total Area	2.93	
	Excavation and Backfill	cy cy	\$300.00 \$4.00	2.93	\$877.78
		٠,	ΨΨ.00	5.85	\$23.41

ITEM	ITEM		UNIT		TOTAL
No	DESCRIPTION	UNIT	COST	QUANTITY	
NODE	85746 Junction Stru		VIII - 10-71 - 10-10 - 10-10-10-10-10-10-10-10-10-10-10-10-10-1		
	Quantity	Height	Width	cu yd	1
	Pipe 1	Ŭ.	2 4		
	Pipe 2		2 2	X	
	Wing walls 2	3	5	1.11	
	Apron	5	8	1.48	
	Face (less pipe opening)	3	8	0.44	
	(FFF - F	_	Total Area	3.04	
	Concrete	су	\$300.00	3.04	CO11 11
	Excavation and Backfill	cy	\$4.00	6.07	\$911.11 \$24.30
CONDUIT	849 Parallel box a	added	4 X 2	RCB	\$24.50
	0 inch RCP	LF	\$245.00	58.33	£14 200 0E
	Limit Street	Width	Length		\$14,290.85
	Remove and Replace	50	250	sq ft	
	4-lane, Asphalt, w/ C&G		\$44.00	12500	004.444.44
	2nd Avenue	Sy		1389	\$61,111.11
	Remove and Replace	Width	Length	sq ft	
		32	190	6080	
	2-lane, Asphalt, w/ C&G	sy	\$38.00	676	\$25,671.11
NODE	Fill	су	\$4.00	48650	\$194,600.00
NODE	85747 Junction Stru	cture		_	
		ea	\$5,250.00	1	\$5,250.00
CONDUIT	2002 Parallel box a	dded	4 X 2	RCB	
	0 inch RCP	LF	\$245.00	170,58	\$41,792.10
NODE	92220 Concrete Wir	ig walls &	Apron		
	Quantity	Height	Width	cu yd	
	Pipe 1		2 4	RCB	
	Pipe 2		2 2		
	Wing walls 2	3	- 5	1.11	
	Apron	5	8	1.48	
	Face (less pipe opening)	3	8	0.44	
	(coo pipe opening)	•	Total Area		
	Concrete	су	\$300.00	3.04	004444
	Excavation and Backfill			3.04	\$911.11
	Exodivation and Backilli	су	\$4.00	6.07	\$24.30
NODE	84959 Junction Struc	4			
NODL	owaga Junction Struc			151	
CONDUIT	4763 D II I	ea	\$2,350.00	1	\$2,350.00
COMPON	1783 Parallel pipe a		1.25		
	15 inch RCP	LF	\$25.00	70.22	\$1,755.50
	Limit Street	Width	Length	sq ft	The second secon
	Parallel Street	20	70	1404.4	
	4-lane, Asphalt, w/ C&G	sy	\$44.00	156	\$6,865.96
NODE	84957 Junction Struc	ture			+5,500.50
-		ea	\$2,350.00	1	\$2,350.00
CONDUIT	337 Parallel pipe a		1.25		Ψ2,330.00
	15 inch RCP	LF	\$25.00	352.53	¢0 042 25
	Limit Street	Width	Length		\$8,813.25
	Parallel Street	20	353	sq ft	
	4-lane, Asphalt, w/ C&G			7050.6	604 400
NODE	84956 Junction Struc	sy	\$44.00	783	\$34,469.60
	On 1999 June 1011 Struc		60 000 00	120	
CONDUIT	474 Descuelation	ea	\$2,350.00	1	\$2,350.00
COMPON	471 Parallel pipe a		1.25		
	15 inch RCP	LF	\$25.00	135.99	\$3,399.75
	Limit Street	Width	Length	sq ft	a per la constitución de constitución (COSTO)
	Parallel Street	20	136	2719.8	
	4-lane, Asphalt, w/ C&G	sy	\$44.00	302	\$13,296.80

ITEM	ITEM		UNIT		TOTAL
No	DESCRIPTION	UNIT	COST	QUANTITY	COST
NODE	84954 Junction Stru				
A 300		ea	\$2,350.00	1	\$2,350.00
CONDUIT	472 Parallel pipe	added		RCP	
	15 inch RCP	LF	\$25.00	173.22	\$4,330.50
	Limit Street	Width	Length	sq ft	
	Parallel Street	20	173	3464.4	
11000	4-lane, Asphalt, w/ C&G	sy	\$44.00	385	\$16,937.07
NODE	85124 Junction Stru	ıcture			
COMPUT	***************************************	ea	\$2,350.00	1 .	\$2,350.00
CONDUIT	473 Parallel pipe			RCP	
	15 inch RCP	LF	\$25.00	174.6	\$4,365.00
	Limit Street	Width	Length	sq ft	
	Parallel Street	20	175	3492	
===	4-lane, Asphalt, w/ C&G	sy	\$44.00	388	\$17,072.00
NODE	85125 Junction Stru	cture			
======		ea	\$2,350.00	1	\$2,350.00
CONDUIT	1816 Parallel pipe	added	1.25	RCP	
	15 inch RCP	LF	\$25.00	27.5	\$687.50
	Limit Street	Width	Length	sq ft	
	Parallel Street	20	28	550	
	4-lane, Asphalt, w/ C&G	sy	\$44.00	61	\$2,688.89
NODE	85126 Junction Stru	cture			
		ea	\$2,350.00	1	\$2,350.00

	85160 Concrete Wir Quantity	Height	Width	cuvd				
	Pipe 1 1	±		cu yd RCP				
	Pipe 2 1			RCP				
	Wing walls 2	6	5	2.22				
	Apron	5	12	2.22				
	Face (less pipe opening)	6	12	1.21				
			Total Area	5.66				
	Concrete	су	\$300.00	5.66	\$1,697.00			
00110111	Excavation and Backfill	су	\$4.00	11.31	\$45.25			
CONDUIT	493 Parallel pipe a	added	5 I	RCP				
	60 inch RCP	LF	\$200.00	82.78	\$16,556.00			
	Garland Ave	Width	Length	sq ft	t restaurantes			
	Cross Street	20	24	480				
IODE	2-lane, Asphalt, w/ C&G	sy	\$38.00	53	\$2,026.67			
ODE	85161 Concrete Wing walls & Apron							
	Quantity	Height	Width	cu yd				
	Pipe 1	5	5	RCP				
	Pipe 2	5	5	RCP				
	Wing walls 2	6	5	2.22				
	Apron	5	12	2.22				
	Face (less pipe opening)	6	12	1.21				
			Total Area	5.66				
	Concrete	су	\$300.00	5.66	\$1,697.00			
	Excavation and Backfill	су	\$4.00	11.31	\$45.25			

\$5,250.00

NODE

85251 Junction Structure

\$5,250.00

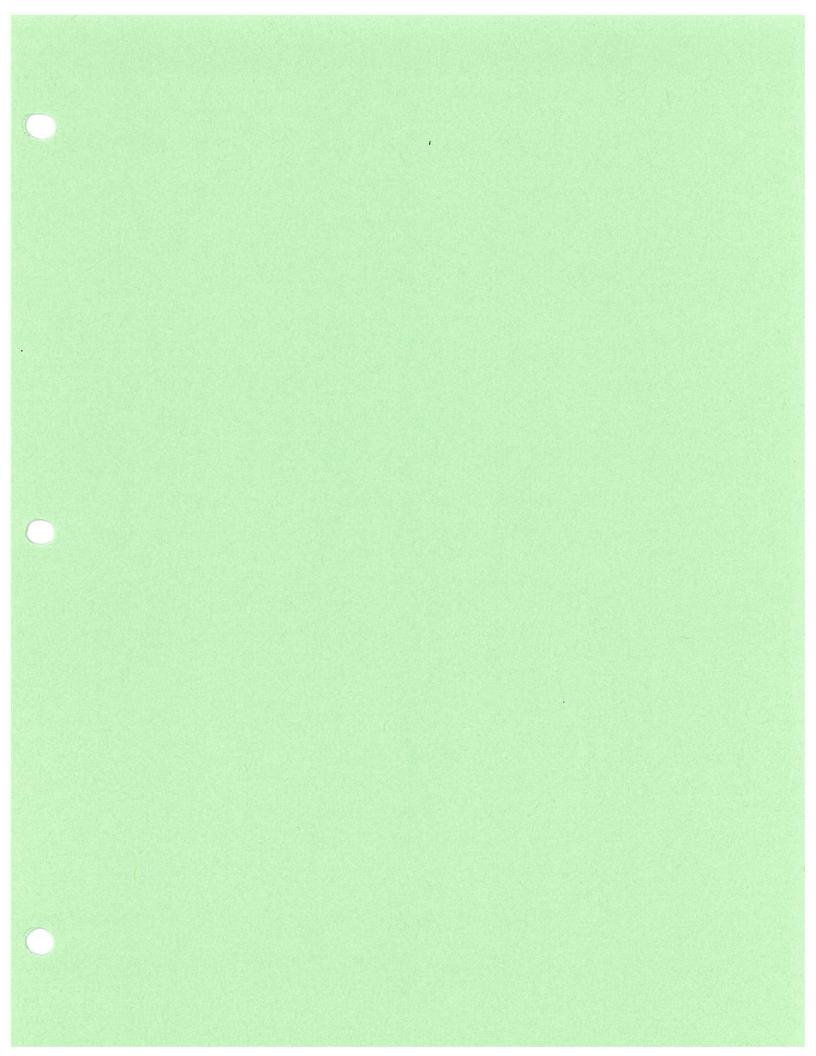
ITEM	ITEM		UNIT		TOTAL
No	DESCRIPTION	UNIT	COST	QUANTITY	COST
CONDUIT	554 Parallel box		3 X 2	RCB	
	0 inch RCP	LF	\$215.00	35,45	\$7,621.75
	Grand Ave	Width	Length	sq ft	Ψ1,021.13
	Cross Street	20	35	709	
	2-lane, Asphalt, w/ C&G	sy	\$38.00	79	\$2,993.56
NODE	85253 Junction Stru		Ψοσ.σσ		Ψ2,993.00
		ea	\$5,250.00	1	\$5,250.00
CONDUIT	555 Parallel box		3 X 2.5	RCB .	Ψ0,200.00
	0 inch RCP	LF	\$240.00	348.4	\$83,616.00
	Marion Street	Width	Length	sq ft	Ψ05,010.00
	Parallel Street	20	348	6968	
	2-lane, Asphalt, w/ C&G	sy	\$38.00	774	\$29,420.44
NODE	85257 Junction Stru				Ψ25,726.77
	S*************************************	ea	\$5,250.00	1	\$5,250.00
CONDUIT	556 Parallel box		3 X 2.5	RCB	Ψ5,250.00
	0 inch RCP	LF	\$240.00	375.82	\$90,196.80
	Kingman Street	Width	Length	sq ft	Ψ50,190.00
	Parallel Street	20	376	7516.4	
	2-lane, Asphalt, w/ C&G	sy	\$38.00	835	\$31,735.91
NODE	85261 Junction Stru	icture	Ψ00.00		451,755.91
		ea	\$5,250.00	1	\$5,250.00
CONDUIT	558 Parallel box a		4 X 2.5	RCB	\$5,250.00
	0 inch RCP	LF	\$270.00	268.76	\$70 ECE 20
	Kingman Street	Width	Length	****************	\$72,565.20
	Parallel Street	20	269	sq ft 5375.2	
	2-lane, Asphalt, w/ C&G	sy	\$38.00	597	¢22 cor 20
NODE	85247 Junction Stru	cture	Ψ50.00	391	\$22,695.29
NODE	85230 Junction Stru	cture			
COMPLUT		ea	\$2,350.00	1	\$2,350.00
CONDUIT	1850 Parallel pipe			RCP	
	18 inch RCP	LF	\$34.00	231.91	\$7,884.94
	Limit Street	Width	Length	sq ft	
	Parallel Street	20			
NODE	2-lane, Asphalt, w/ C&G	sy	232	4638.2	
NODE	WARA HINCTION Stru		\$38.00	4638.2 515	\$19,583.51
	92347 Junction Stru	cture	\$38.00		
CONDINE		cture ea	\$38.00 \$5,250.00	515 1	\$19,583.51 \$5,250.00
CONDUIT	543 Parallel pipe	cture ea added	\$38.00 \$5,250.00 2.5	515 1 RCP	
CONDUIT	543 Parallel pipe a	cture ea added LF	\$38.00 \$5,250.00 2.5 \$52.00	515 1	
CONDUIT	543 Parallel pipe a 30 inch RCP Sherman Street	cture ea added LF Width	\$38.00 \$5,250.00 2.5 \$52.00 Length	515 1 RCP 390 52 sq ft	\$5,250.00
CONDUIT	543 Parallel pipe a 30 inch RCP Sherman Street Parallel Street	cture ea added LF Width 20	\$38.00 \$5,250.00 2.5 \$52.00 Length 391	515 1 RCP 390.52 sq ft 7810.4	\$5,250.00
	543 Parallel pipe a 30 inch RCP Sherman Street Parallel Street 2-lane, Asphalt, w/ C&G	cture ea added LF Width 20 sy	\$38.00 \$5,250.00 2.5 \$52.00 Length	515 1 RCP 390 52 sq ft	\$5,250.00
NODE	543 Parallel pipe a 30 inch RCP Sherman Street Parallel Street	cture ea added LF Width 20 sy	\$38.00 \$5,250.00 2.5 \$52.00 Length 391 \$38.00	515 1 RCP 390.52 sq ft 7810.4	\$5,250.00 \$20,307.04
NODE	543 Parallel pipe a 30 inch RCP Sherman Street Parallel Street 2-lane, Asphalt, w/ C&G 85247 Junction Struc	cture ea added LF Width 20 sy cture ea	\$38.00 \$5,250.00 2.5 \$52.00 Length 391 \$38.00 \$5,250.00	515 1 RCP 390.52 sq ft 7810.4 868	\$5,250.00 \$20,307.04
	543 Parallel pipe a 30 inch RCP Sherman Street Parallel Street 2-lane, Asphalt, w/ C&G 85247 Junction Structure	cture ea added LF Width 20 sy cture ea added	\$38.00 \$5,250.00 2.5 \$52.00 Length 391 \$38.00 \$5,250.00	515 1 RCP 390.52 sq ft 7810.4 868 1 RCP	\$5,250.00 \$20,307.04 \$32,977.24
NODE	543 Parallel pipe a 30 inch RCP Sherman Street Parallel Street 2-lane, Asphalt, w/ C&G 85247 Junction Structure 553 Parallel pipe a 48 inch RCP	cture ea added LF Width 20 sy cture ea added LF	\$38.00 \$5,250.00 2.5 \$52.00 Length 391 \$38.00 \$5,250.00	515 1 RCP 390.52 sq ft 7810.4 868	\$5,250.00 \$20,307.04 \$32,977.24
NODE	543 Parallel pipe a 30 inch RCP Sherman Street Parallel Street 2-lane, Asphalt, w/ C&G 85247 Junction Structure 553 Parallel pipe a 48 inch RCP Sherman Street	cture ea added LF Width 20 sy cture ea added LF Width	\$38.00 \$5,250.00 2.5 \$52.00 Length 391 \$38.00 \$5,250.00	515 1 RCP 390.52 sq ft 7810.4 868 1 RCP	\$5,250.00 \$20,307.04 \$32,977.24 \$5,250.00
NODE	543 Parallel pipe a 30 inch RCP Sherman Street Parallel Street 2-lane, Asphalt, w/ C&G 85247 Junction Struct 553 Parallel pipe a 48 inch RCP Sherman Street Parallel Street	cture ea added LF Width 20 sy cture ea added LF	\$38.00 \$5,250.00 2.5 \$52.00 Length 391 \$38.00 \$5,250.00 \$110.00 Length 125	515 1 RCP 390.52 sq ft 7810.4 868 1 RCP 125.37	\$5,250.00 \$20,307.04 \$32,977.24 \$5,250.00
NODE	543 Parallel pipe a 30 inch RCP Sherman Street Parallel Street 2-lane, Asphalt, w/ C&G 85247 Junction Structure 48 inch RCP Sherman Street Parallel Street 2-lane, Asphalt, w/ C&G	cture ea added LF Width 20 sy cture ea added LF Width 20 sys	\$38.00 \$5,250.00 2.5 \$52.00 Length 391 \$38.00 \$5,250.00 \$110.00 Length	515 1 RCP 390.52 sq ft 7810.4 868 1 RCP 125.37 sq ft	\$5,250.00 \$20,307.04 \$32,977.24 \$5,250.00 \$13,790.70
NODE	543 Parallel pipe a 30 inch RCP Sherman Street Parallel Street 2-lane, Asphalt, w/ C&G 85247 Junction Struct 553 Parallel pipe a 48 inch RCP Sherman Street Parallel Street	cture ea added LF Width 20 sy cture ea added LF Width 20 sys	\$38.00 \$5,250.00 2.5 \$52.00 Length 391 \$38.00 \$5,250.00 \$110.00 Length 125	515 1 RCP 390.52 sq ft 7810.4 868 1 RCP 125.37 sq ft 2507.4	\$5,250.00 \$20,307.04 \$32,977.24 \$5,250.00
NODE CONDUIT	543 Parallel pipe a 30 inch RCP Sherman Street Parallel Street 2-lane, Asphalt, w/ C&G 85247 Junction Struct 553 Parallel pipe a 48 inch RCP Sherman Street Parallel Street 2-lane, Asphalt, w/ C&G 85248 Junction Struct	cture ea added LF Width 20 sy cture ea added LF Width 20 sy cture ea	\$38.00 \$5,250.00 2.5 \$52.00 Length 391 \$38.00 \$5,250.00 4 \$110.00 Length 125 \$38.00 \$5,250.00	515 1 RCP 390.52 sq ft 7810.4 868 1 RCP 125.37 sq ft 2507.4 279	\$5,250.00 \$20,307.04 \$32,977.24 \$5,250.00 \$13,790.70 \$10,586.80
NODE	543 Parallel pipe a 30 inch RCP Sherman Street Parallel Street 2-lane, Asphalt, w/ C&G 85247 Junction Struct 553 Parallel pipe a 48 inch RCP Sherman Street Parallel Street 2-lane, Asphalt, w/ C&G 85248 Junction Struct 552 Parallel pipe a	cture ea added LF Width 20 sy cture ea added LF Width 20 sy cture ea added added sy cture ea	\$38.00 \$5,250.00 2.5 \$52.00 Length 391 \$38.00 \$5,250.00 4 \$110.00 Length 125 \$38.00 \$5,250.00	515 1 RCP 390.52 sq ft 7810.4 868 1 RCP 125.37 sq ft 2507.4 279	\$5,250.00 \$20,307.04 \$32,977.24 \$5,250.00 \$13,790.70
NODE CONDUIT	543 Parallel pipe a 30 inch RCP Sherman Street Parallel Street 2-lane, Asphalt, w/ C&G 85247 Junction Struct 553 Parallel pipe a 48 inch RCP Sherman Street Parallel Street 2-lane, Asphalt, w/ C&G 85248 Junction Struct 552 Parallel pipe a 48 inch RCP	cture ea added LF Width 20 sy cture ea added LF Width 20 sy cture ea added LF added LF	\$38.00 \$5,250.00 2.5 \$52.00 Length 391 \$38.00 \$5,250.00 4 \$110.00 Length 125 \$38.00 \$5,250.00	515 1 RCP 390.52 sq ft 7810.4 868 1 RCP 125.37 sq ft 2507.4 279	\$5,250.00 \$20,307.04 \$32,977.24 \$5,250.00 \$13,790.70 \$10,586.80 \$5,250.00
NODE CONDUIT	543 Parallel pipe a 30 inch RCP Sherman Street Parallel Street 2-lane, Asphalt, w/ C&G 85247 Junction Struct 553 Parallel pipe a 48 inch RCP Sherman Street Parallel Street 2-lane, Asphalt, w/ C&G 85248 Junction Struct 552 Parallel pipe a 48 inch RCP Sherman Street	cture ea added LF Width 20 sy cture ea added LF Width 20 sy cture ea added LF Width 20 sy cture ea added LF	\$38.00 \$5,250.00 2.5 \$52.00 Length 391 \$38.00 \$5,250.00 4 \$110.00 Length 125 \$38.00 \$5,250.00	515 1 RCP 390.52 sq ft 7810.4 868 1 RCP 125.37 sq ft 2507.4 279 1 RCP	\$5,250.00 \$20,307.04 \$32,977.24 \$5,250.00 \$13,790.70 \$10,586.80
NODE CONDUIT	543 Parallel pipe a 30 inch RCP Sherman Street Parallel Street 2-lane, Asphalt, w/ C&G 85247 Junction Struct 553 Parallel pipe a 48 inch RCP Sherman Street Parallel Street 2-lane, Asphalt, w/ C&G 85248 Junction Struct 552 Parallel pipe a 48 inch RCP Sherman Street Parallel Street Parallel Street	cture ea added LF Width 20 sy cture ea added LF Width 20 sy cture ea added LF added LF	\$38.00 \$5,250.00 2.5 \$52.00 Length 391 \$38.00 \$5,250.00 4 \$110.00 Length 125 \$38.00 \$5,250.00	515 1 RCP 390.52 sq ft 7810.4 868 1 RCP 125.37 sq ft 2507.4 279 1 RCP 68.4	\$5,250.00 \$20,307.04 \$32,977.24 \$5,250.00 \$13,790.70 \$10,586.80 \$5,250.00
NODE CONDUIT	543 Parallel pipe a 30 inch RCP Sherman Street Parallel Street 2-lane, Asphalt, w/ C&G 85247 Junction Struct 553 Parallel pipe a 48 inch RCP Sherman Street Parallel Street 2-lane, Asphalt, w/ C&G 85248 Junction Struct 552 Parallel pipe a 48 inch RCP Sherman Street	cture ea added LF Width 20 sy cture ea added LF Width 20 sy cture ea added LF Width 20 sy cture ea added LF	\$38.00 \$5,250.00 2.5 \$52.00 Length 391 \$38.00 \$5,250.00 4 \$110.00 Length 125 \$38.00 \$5,250.00 4 \$110.00 Length	515 1 RCP 390.52 sq ft 7810.4 868 1 RCP 125.37 sq ft 2507.4 279 1 RCP 68.4 sq ft	\$5,250.00 \$20,307.04 \$32,977.24 \$5,250.00 \$13,790.70 \$10,586.80 \$5,250.00

ITEM	ITEM		UNIT		TOTAL
No	DESCRIPTION	UNIT	COST	QUANTITY	COST
NODE	85249 Junction Str			QC/((TITIT	0031
		ea	\$5,250.00	1	\$5,250.00
CONDUIT	1602 Parallel pipe	added		RCP	
	48 inch RCP	LF	\$110.00	85,98	\$9,457.80
	Sherman Street	Width	Length	sq ft	A * 100
	Parallel Street	20	86	1719.6	
-	2-lane, Asphalt, w/ C&G	sy	\$38.00	191	\$7,260.53
NODE	85154 Junction Stru	ucture			
		ea	\$5,250.00	1	\$5,250.00
CONDUIT	488 Parallel box	added	5 X 3	RCB	
	0 inch RCP	LF	\$320.00	122.29	\$39,132.80
	10th Ave	Width	Length	sq ft	
	Cross Street	20	30	600	
	4-lane, Asphalt, w/ C&G	sy	\$44.00	67	\$2,933.33
NODE	85155 Junction Stru	icture			
	Quantity	Height	Width	cu yd	
	Pipe 1 1	5	3		
	Pipe 2	4	4		
	Wing walls 2	6	5	2.22	
	Apron	5	9	1.67	
	Face (less pipe opening)	6	9	0.85	
			Total Area	4.74	
	Concrete	су	\$300.00	4.74	\$1,422.22
	Excavation and Backfill	су	\$4.00	9.48	\$37.93
					,

SUBTOTAL \$1,648,989.33

20% Contingency \$1,978,787.20

20% Engineering, legal and administrative \$2,374,544.64



	PRELIMINARY COST ESTIMATE			DATE:	11/12/9
ROJECT:	LEAVENWORTH, KANSAS STORMWATER MASTER PLAN			EST:	VLD
NGINEER	BLACK & VEATCH			CHCKD:	JLF
ELEMENT#	5 MILE CREEK - 4 L			T	0.000.0000.0000000000000000000000000000
	DESCRIPTION	QUANT.	UNIT	U. PRICE	AMOUNT
A.3.3	Pipe and Inlet (Enclosed) System- 15 inch RCP	216	LF	\$25.00	\$5.40
A.3.6	Reinforced Concrete Box Culverts - 5 x 2.5	83	LF	\$320.00	\$26,56
A.4.2	Double - Reinforced Concrete Box Culverts - 5 x 2.5	690	LF	\$545.00	\$376.05
A.5.1	Storm Sewer Manholes < 6ft Diameter	2	ea	\$2.350.00	\$4.70
A.5.2	Storm Sewer Manholes > 6ft Diameter	6	ea	\$5.250.00	\$31.50
C.3.2.1	Concrete - Wing walls and apron	10	cy	\$300.00	\$3,12
B.1	Excavation and Backfill	21	cy	\$4.00	\$8
	Structural Removal				\$29.22
F.2.3	Street Removal - 4-lane, Aspalt, w/ C&G	1718	sy	\$9.00	\$15,46
F.3.4.3	Street Replacement, 4-lane, Asphalt w/ C&G	1718	sy.	\$35.00	\$60,13
F.2.2	Street Removal - 2-lane, Aspalt, w/ C&G	69	sy	\$8.00	\$55
F.3.4.2	Street Replacement, 2-lane, Asphalt w/ C&G	69	sy	\$30.00	\$2,07
				1	
*************************************				-	
•					
					-
				TOTAL =	\$554.85
CONTINGE	NCY	20 PER	CENT	1.5.276	\$110,97
		- TER			J110,97.
				SUB TOTAL =	\$665,83
ENGINEERI	NG, LEGAL AND ADMINISTRATIVE	20 PER		TOTAL -	
		20125	CELTI		\$133,16
				TOTAL =	\$798,99

ITEM	ITEM		UNIT		TOTAL
No	DESCRIPTION	UNIT	COST	QUANTITY	COST
Subsystem	1 4 L 5 Mile Creek				
None					
NODE	84946 Junction Stru	cture			
001151115		ea	\$2,350.00	1	\$2,350.00
CONDUIT	331 Parallel pipe		1.25	RCP	
	15 inch RCP	LF	\$25.00	31	\$775.00
	Virginia Circle	Width	Length	sq ft	
	Street Crossing	20	31	620	
11222	2-lane, Asphalt, w/ C&G	sy	\$38.00	69	\$2,617.78
NODE	92503 Junction Stru	cture			
		ea	\$2,350.00	1	\$2,350.00
CONDUIT	332 Parallel pipe	added	1.25	RCP	
	15 inch RCP	LF	\$25.00	185	\$4,625.00
NODE	84947 Concrete Wir	ig walls &	Apron		
	Quantity	Height	Width	cu yd	
	Pipe 1 1	1.5	1.5		
	Pipe 2 1	1.25	1.25	RCP	
	Wing walls 2	2.5	5	0.93	
	Apron	5	4.75	0.88	
	Face (less pipe opening	2.5	4.75	0.33	
			Total Area	2.13	
	Concrete	су	\$300.00	2.13	\$640.34
	Excavation and Backfill	су	\$4.00	4.27	\$17.08
		****	AND DESCRIPTIONS		¥11.00

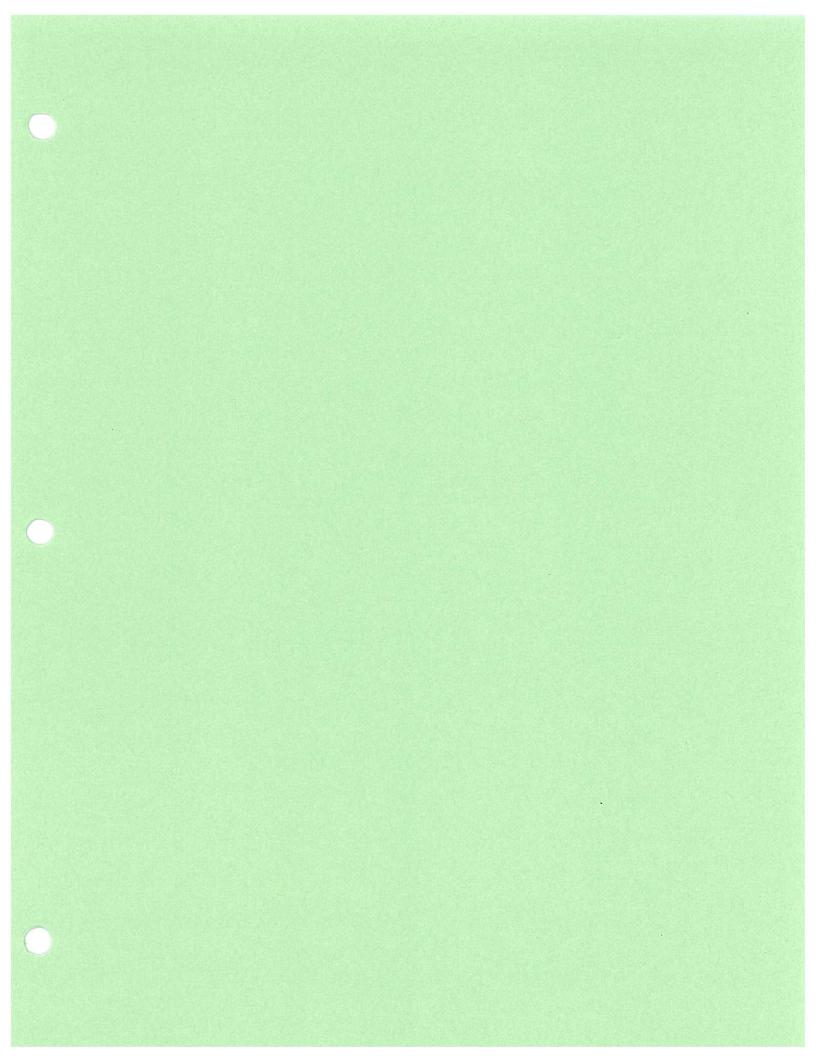
NODE	0/10/4/10				
NODE	84944 Concrete Wi				1
	Quantity Pipe 1	Height	Width	cu yd	
	Pipe 2	2.5	·	RCB	
	Wing walls 2	2.5			
	Apron	3.5	5	1.30	
		5	12	2.22	
	Face (less pipe opening	3.5	12	0.63	
	Concrete	-	Total Area	10	
		су	\$300.00	4.15	\$1,244.44
CONDUIT	Excavation and Backfill	cy	\$4.00	8.30	\$33.19
CONDON	330 Replace w/D			RCB	
	0 inch RCP	LF	\$545.00	42	\$22,890.00
	Shrine Park Rd	Width	Length	sq ft	
	Parallel Street	20	42	840	
None	4-lane, Asphalt, w/ C&G	sy	\$44.00	93	\$4,106.67
NODE	84945 Junction Stru	cture			
		ea	\$5,250.00	1	\$5,250.00
	Structural Removal & Re	placement		20 Percent	\$6,704.86
CONDUIT	2843 Replace w/D	ouble Box	5 X 2,5	RCB	3-12-2-11-2
	0 inch RCP	LF	\$545.00	218	\$118,810.00
	Shrine Park Rd	Width	Length	sq ft	,
	Parallel Street	20	218	4360	
	4-lane, Asphalt, w/ C&G	sy	\$44.00	484	\$21,315.56
NODE	84942 Junction Stru	cture			- +21,010.00
00110111		ea	\$5,250.00	1	\$5,250.00
CONDUIT	329 Parallel Box		5 X 2.5	RCB	
	0 inch RCP	LF	\$320.00	58	\$18,560.00
	Shrine Park Rd	Width	Length	sq ft	
	Parallel Street	20	58	1160	
	4-lane, Asphalt, w/ C&G	sy	\$44.00	129	\$5,671.11
				10.000(C)	+-1-1 1.11

ITEM No	ITEM DESCRIPTION	111.07	UNIT		TOTAL
NODE	84943 Junction Stru	UNIT	COST	QUANTITY	COST
	O4048 Junction Stit	ea	\$5,250.00	1	EE 250.00
CONDUIT	2844 Replace w/D	ouble Box	5 X 2.5	RCB	\$5,250.00
	0 inch RCP	LF	\$545.00	159	\$86,655.00
	Shrine Park Rd	Width	Length	sq ft	Ψ00,033.00
	Parallel Street	20	159	3180	
	4-lane, Asphalt, w/ C&G	sy	\$44.00	353	\$15,546.67
NODE	84941 Junction Stru	icture			7.072.000
COMPLUT		ea	\$5,250.00	1	\$5,250.00
CONDUIT	328 Parallel Box		5 X 2.5	RCB	
	0 inch RCP	LF	\$320.00	25	\$8,000.00
	Shrine Park Rd	Width	Length	sq ft	
	Parallel Street	20	25	500	
NODE	4-lane, Asphalt, w/ C&G	sy	\$44.00	56	\$2,444.44
NODE	84940 Junction Stru		@		
CONDUIT	2015 D. I. I.	ea	\$5,250.00	1	\$5,250.00
COMDON	2845 Replace w/D	ouble Box		RCB	
	0 inch RCP	LF	\$545.00	106	\$57,770.00
	Shrine Park Rd	Width	Length	sq ft	
	Parallel Street	20	106	2120	
NODE	4-lane, Asphalt, w/ C&G	sy	\$44.00	236	\$10,364.44
NODE	84937 Junction Stru				
CONDUIT	222 D!	ea	\$5,250.00	1	\$5,250.00
CONDON	327 Replace w/Do			RCB	
	0 inch RCP Shrine Park Rd	LF	\$545.00	165	\$89,925.00
	Parallel Street	Width	Length	sq ft	
		20	165	3300	
NODE	4-lane, Asphalt, w/ C&G	sy	\$44.00	367	\$16,133.33
NODE	92504 Concrete Win	g walls & /	Apron		
	Quantity Pipe 1	Height	Width	cu yd	
	Pipe 2	2.5	5	RCB	
	Wing walls 2	2.5	_ 5	RCB	
	Apron	3.5	5	1.30	
	Face (less pipe opening	5	12	2.22	
	ace (less pipe opening	3.5	12	0.63	
	Concrete		Total Area	4.15	\$2000 000s to \$1.00 = 50.00
	Excavation and Backfill	су	\$300.00	4.15	\$1,244.44
		cy	\$4.00	8.30	\$33.19
	Structural Removal & Rep	iacement		20 Percent	\$22,517.19
				=	

SUBTOTAL \$554,844.73

20% Contingency \$665,813.67

20% Engineering, legal and administrative \$798,976.41



	PRELIMINARY COST ESTIMATE			DATE:	11/12/9
PROJECT:	LEAVENWORTH, KANSAS STORMWATER MASTER PLAN			EST:	VLD
ENGINEER BLACK & VEATCH					JWH
ELEMENT#	5 MILE CREEK - 5 L				
	DESCRIPTION	QUANT.	UNIT	U. PRICE	AMOUNT
A.3.3	Pipe and Inlet (Enclosed) System - 15 inch RCP	65	LF	\$25.00	\$1.62
A.3.4	Pipe and Inlet (Enclosed) System - 18 inch RCP	673	LF	\$34.00	\$22.88
A.3.5	Pipe and Inlet (Enclosed) System - 21 inch RCP	191	LF	\$37.00	\$7.06
A.3.6	Pipe and Inlet (Enclosed) System - 24 inch RCP	226	LF	\$42.00	\$9,49
A.3.8	Pipe and Inlet (Enclosed) System - 30 inch RCP	170	LF	\$52.00	\$8,84
A.3.10	Pipe and Inlet (Enclosed) System - 42 inch RCP	224	LF	\$90.00	\$20.16
B.3.1	Reinforced Concrete Box Culverts - 3 x 2	286	LF	\$215.00	\$61.49
B.3.1	Reinforced Concrete Box Culverts - 4 x 2	70	LF	\$245.00	\$17.15
A.5.1	Storm Sewer Manholes < 6ft Diameter	7	ea	\$2.350.00	\$16,45
A.5.2	Storm Sewer Manholes > 6ft Diameter	7	ea	\$5,250.00	\$36.75
F.2.2	Street Removal - 2-lane. Aspalt, w/ C&G	379	sy	\$8.00	\$3.03
F.3.4.2	Street Replacement, 2-lane. Asphalt w/ C&G	379	sy	\$30.00	\$11,37
F.2.3	Street Removal - 4-lane, Aspalt, w/ C&G	3518	sy	\$9.00	\$31.66
F.3.4.3	Street Replacement, 4-lane, Asphalt w/ C&G	3518	sy	\$35.00	\$123.13
C.3.2.1	Concrete - Wing walls and apron - 2	15	cy	\$300.00	\$4.53
B.1	Excavation and Backfill	30	cy	\$4.00	\$12
				TOTAL =	\$375,75
CONTINGE	NCY	20 PER	CENT		\$75,15
				SUB TOTAL =	\$450,90
ENGINEERI	NG, LEGAL AND ADMINISTRATIVE	20 PEF	CENT		\$90,18
				TOTAL =	\$541,09

ITEM No	ITEM DESCRIPTION	UNIT	UNIT COST	QUANTITY	TOTAL COST
Subsystem	n 5 L 5 Mile Creek				
NODE	85183 Junction Stru	icture			
		ea	\$2,350.00	1	\$2,350.00
CONDUIT			1.25		
	15 inch RCP Holman Street		\$25.00	34	\$850.00
	Street Crossing	width	length	sq ft	
	2-lane, Asphalt, w/ C&G	20 sy	34 \$38.00	680 76	CO 071 11
NODE	85184 Junction Stru		\$30.00	70	\$2,871.11
		ea	\$2,350.00	1	\$2,350.00
CONDUIT	507 Parallel pipe		1.5	RCP	Ψ2,000.00
	18 inch RCP	LF	\$34.00	71	\$2,414.00
	10 th Ave	width	length	sq ft	
	Street Crossing	20	71	1420	
	4-lane, Asphalt, w/ C&G	sy	\$44.00	158	\$6,942.22
NODE	85185 Junction Stru	cture			
00000		ea	\$2,350.00	1	\$2,350.00
CONDUIT	508 Parallel pipe		1.5		
	18 inch RCP	LF	\$34.00	134	\$4,556.00
	10 th Ave	width	length	sq ft	
	Parallel Street	24	134	3216	
NODE	4-lane, Asphalt, w/ C&G	sy	\$44.00	357	\$15,722.67
NODE	85186 Junction Stru	ea	\$2,350.00	°4	PO 250 00
CONDUIT	509 Parallel pipe		1.5	BCB I	\$2,350.00
	18 inch RCP	LF	\$34.00	206	\$7,004.00
	10 th Ave	width	length	sq ft	Ψ1,004.00
	Parallel Street	24	206	4944	
	4-lane, Asphalt, w/ C&G	sy	\$44.00	549	\$24,170.67
NODE	84973 Junction Stru	cture			42 1,11 0.01
	SANSO DESCRIPTION DE CONTRACTOR DE CONTRACTO	ea	\$5,250.00	1	\$5,250.00
CONDUIT	1776 Parallel pipe			RCP	
	24 inch RCP	LF	\$42.00	48	\$2,016.00
	10 th Ave & Cross Limit	width	length	sq ft	
	Parallel Street	24	48	1152	
NODE	4-lane, Asphalt, w/ C&G	sy	\$44.00	128	\$5,632.00
NODE	84975 Junction Struc		CE OFO 00	1.4	
CONDUIT	350 Parallel pipe a	ea	\$5,250.00	1	\$5,250.00
CONDON	24 inch RCP	LF	********************	RCP	67 470 00
	10 th Ave	width	\$42.00 length	178	\$7,476.00
	Parallel Street	24	178	sq ft	
	4-lane, Asphalt, w/ C&G	sy	\$44.00	4272 475	¢20 005 22
NODE	84977 Junction Struc	cture	Ψ+1.00	4/3	\$20,885.33
computation and a land	Janou On Out	ea	\$5,250.00	1	\$5,250.00
CONDUIT	1778 Parallel pipe a		***************************************	RCP	ψυ,200.00
	42 inch RCP	LF	\$90.00	224	\$20,160.00
	10 th Ave	width	length	sq ft	Ψ20,100.00
	Parallel Street	24	224	5376	
	4-lane, Asphalt, w/ C&G	sy	\$44.00	597	\$26,282.67

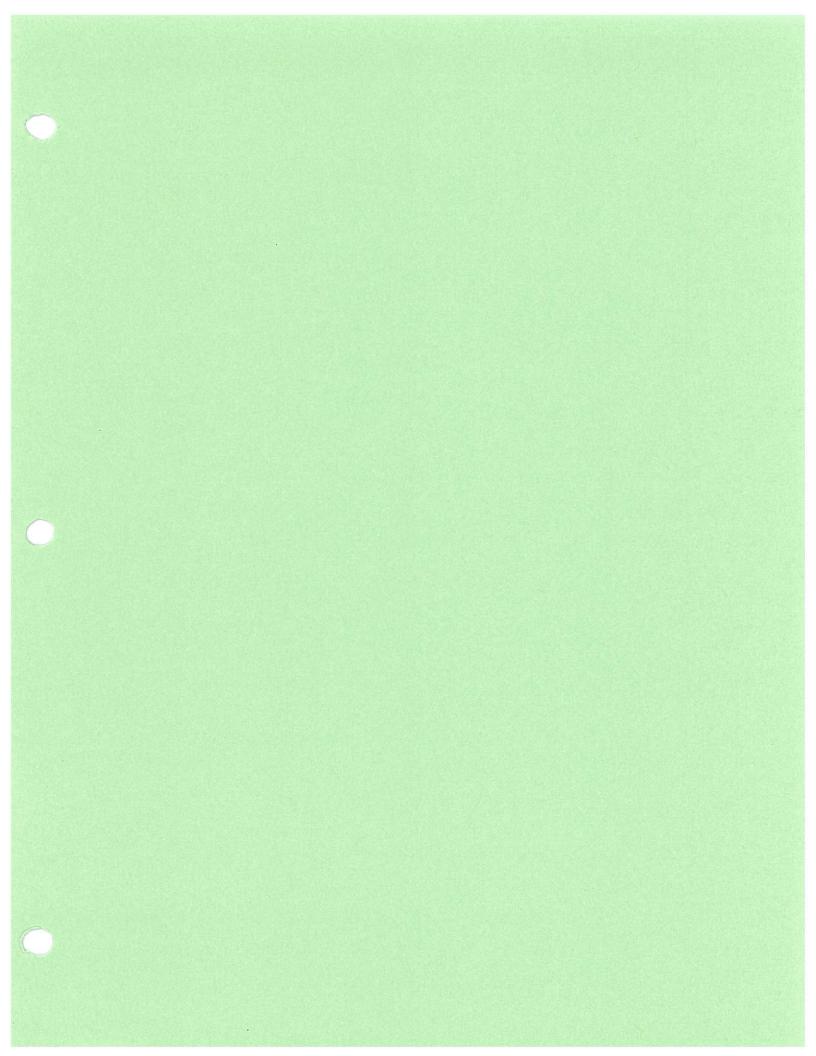
ITEM	ITEM		UNIT		TOTAL
No	DESCRIPTION	UNIT	COST	QUANTITY	COST
NODE	84979 Concrete Wi				
	Quantity	Height	Width	cu yd	
	Pipe 1 1	2.		RCP	
	Pipe 2 1	3.	5 3.5	RCP	
	Wing walls 2	4.5	5	1.67	
	Apron	5	8	1.48	
	Face (less pipe opening	4.5	8	0.80	
			Total Area	3.94	
	Concrete	су	\$300.00	3.94	\$1,183.00
	Excavation and Backfill	су	\$4.00	7.89	\$31.55
NODE	92482 Junction Stru	icture			
		ea	\$5,250.00	1	\$5,250.00
CONDUIT	377 Parallel pipe	added	1.5	RCP	
	18 inch RCP	LF	\$34.00	174	\$5,916.00
NODE	85015 Junction Stru	cture			
		ea	\$2,350.00	1	\$2,350.00
CONDUIT	378 Parallel pipe	added		RCP	Ψ2,000.00
	18 inch RCP	LF	\$34.00	35	\$1,190.00
	Meadow Rd	width	length	sq ft	Ψ1,190.00
	Street Crossing	20	35		
	2-lane, Asphalt, w/ C&G			700	00 0== ==
NODE	92481 Junction Stru	sy	\$38.00	78	\$2,955.56
NODL	SZ461 Junction Stru		05.050.00	0.00	
CONDINE		ea	\$5,250.00	1	\$5,250.00
CONDUIT	379 Parallel pipe			RCP	
	30 inch RCP	LF	\$52.00	170	\$8,840.00
NODE	85014 Concrete Wir				
	Quantity	Height	Width	cu yd	
	Pipe 1	2.5	5 2.5	RCP	
	Pipe 2 1	2.5	5 2.5	RCP	
	Wing walls 2	3.5	5	1.30	
	Apron	5	7	1.30	
	Face (less pipe opening	3.5	7	0.54	
	(rese pipe spermig	0.0	Total Area	3.14	
	Concrete	O14			001000
	Excavation and Backfill	су	\$300.00	3.14	\$940.92
	Excavation and backilli	су	\$4.00	6.27	\$25.09
NODE	84982 Concrete Wir	e welle 0	A		
TODE					
	Quantity	Height	Width	cu yd	
	Pipe 1 1	1.5	200000000000000000000000000000000000000	RCP	
	Pipe 2 #	1.5	000000000000000000000000000000000000000	RCP	
	Wing walls 2	2.5	5	0.93	
	Apron	5	5	0.93	
	Face (less pipe opening	2.5	5	0.33	
			Total Area	2.18	
	Concrete	су	\$300.00	2.18	\$655.17
	Excavation and Backfill	су	\$4.00	4.37	\$17.47
CONDUIT	352 Parallel pipe		1.5		Φ17.47
	18 inch RCP	LF			£4 000 00
	10 th Ave		\$34.00	53	\$1,802.00
		width	length	sq ft	
	Cross Street	20	53	1060	
NODE	4-lane, Asphalt, w/ C&G	sy	\$44.00	118	\$5,182.22
NODE	84983 Junction Struc	cture			
		ea	\$5,250.00	1	\$5,250.00

ITEM	ITEM		UNIT		TOTAL
No	DESCRIPTION	UNIT	COST	QUANTITY	COST
CONDUIT	353 Parallel box	added	3 x 2	RCB	
	0 inch RCP	LF	\$215.00	286	\$61,490.00
	10 th Ave	width	length	sq ft	
	Parallel Street	24	286	6864	
	4-lane, Asphalt, w/ C&G	sy	\$44.00	763	\$33,557.33
NODE	84981 Junction Stru	ıcture			
OOMBUIL		ea	\$5,250.00	1	\$5,250.00
CONDUIT	351 Parallel box		4 x 2	RCP	
	0 inch RCP	LF.	\$245.00	70	\$17,150.00
		width	length	sq ft	
	Cross Street	48	70	3360	
NODE	4-lane, Asphalt, w/ C&G 84981 Concrete Wii	Sy	\$44.00	373	\$16,426.67
NODL	Quantity		Width		
	Pipe 1 1	Height		cu yd	
	Pipe 2				
	Wing walls 2	3	2 4 5	1.11	
	Apron	5	8	1.48	
	Face (less pipe opening	3	8	0.66	
	i des (less pipe opening	5	Total Area	3.25	
	Concrete	су	\$300.00	3.25	\$974.63
	Excavation and Backfill	cy	\$4.00	6.50	\$25.99
		o,	Ψ4.00	0.50	ΨZJ.99
NODE	84989 Junction Stru	cture			
		ea	\$2,350.00	1	\$2,350.00
CONDUIT	1786 Parallel pipe	added	1.25	RCP	Ψ2,000.00
	15 inch RCP	LF	\$25.00	31	\$775.00
	Brookside St	width	length	sq ft	Ţ
	Street Crossing	20	31	620	
17 11 11 11 11 11	2-lane, Asphalt, w/ C&G	sy	\$38.00	69	\$2,617.78
NODE	84990 Junction Stru	cture			
		ea	\$2,350.00	1	\$2,350.00
CONDUIT	356 Parallel pipe		1.75	RCP	
	21 inch RCP	LF	\$37.00	191	\$7,067.00
	Brookside St	width	length	sq ft	
	Street Crossing	20	70	1400	
NODE	2-lane, Asphalt, w/ C&G	sy	\$38.00	156	\$5,911.11
NODE	84988 Concrete Win				
	Quantity	Height	Width	cu yd	
	Pipe 1 1		2 2	RCP	
	Pipe 2	1.75		RCP	
	Wing walls 2	3	5	1.11	
	Apron	5	5.75	1.06	
	Face (less pipe opening	3	5.75	0.43	
	Consoli	4007	Total Area	2.61	
	Concrete	су	\$300.00	2.61	\$782.81
	Excavation and Backfill	су	\$4.00	5.22	\$20.88
				=	

SUBTOTAL \$375,720.84

20% Contingency \$450,865.01

20% Engineering, legal and administrative \$541,038.02

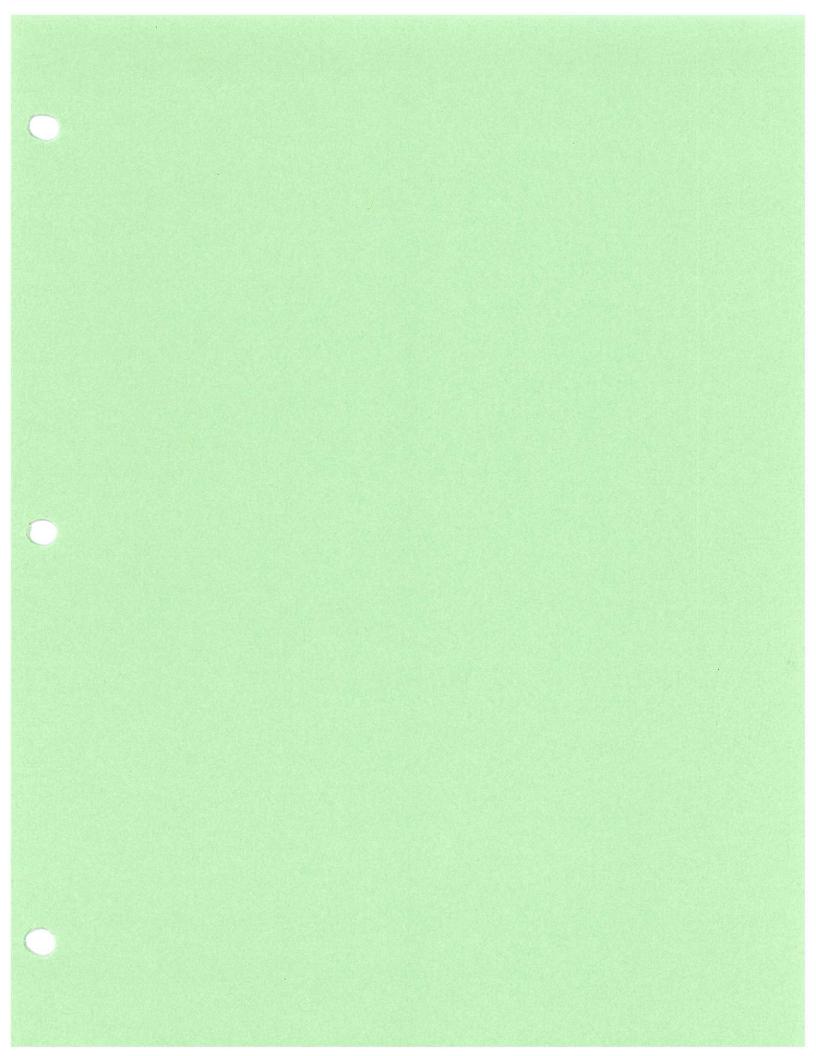


11/12/9	DATE:			PRELIMINARY COST ESTIMATE	
VLD	EST:			EAVENWORTH, KANSAS STORMWATER MASTER PLAN	ROJECT:
JWH	CHCKD:			I.ACK & VEATCH	NGINEER
				MILE CREEK - 6 L	LEMENT#
AMOUNT	U. PRICE	UNIT	QUANT.	DESCRIPTION	
\$7.47	\$25.00	LF	299	pe and Inlet (Enclosed) System- 15 inch RCP	A.3.3
\$12,85	\$42.00	LF	306	pe and Inlet (Enclosed) System- 24 inch RCP	A.3.6
\$19.70	\$52.00	LF	379	pe and inlet (Enclosed) System- 30 inch RCP	A.3.8
\$61,82	\$110.00	LF	562	pe and Inlet (Enclosed) System- 48 inch RCP	B.2.10
\$83.28	\$240.00	LF	347	inforced Concrete Box Culverts - 3 x 3	B.3.2
\$14,10	\$2.350.00	ea	6	orm Sewer Manholes < 6ft Diameter	A.5.1
\$42.00	\$5,250.00	ea		orm Sewer Manholes > 6ft Diameter	A.5.2
\$1,38	\$300.00	cy	5	ncrete - Wing walls and apron	C.3.2.1
\$3	\$4.00	cy	9	cavation and Backfill	B.1
\$18.24	\$8.00	sy	2280	reet Removal - 2-lane, Aspalt, w/ C&G	F.2.2
\$68.40	\$30.00	sy	2280	eet Replacement, 2-lane. Asphalt w/ C&G	F.3.4.2
\$1.18	\$9.00	sy	132	eet Removal - 4-lane, Aspalt, w/ C&G	F.2.3
\$4.62	\$35.00	sy	132	eet Replacement, 4-lane, Asphalt w/ C&G	F.3.4.3
\$335,10 \$67,02	TOTAL =	CENT	20 PER	Y	CONTINGE
\$402,12	SUB TOTAL =				
\$80,42		CENT	20 PER	G, LEGAL AND ADMINISTRATIVE	ENGINEERI

ITEM No	ITEM DESCRIPTION		UNIT		TOTAL
	n 6 L 5 Mile Cree	UNIT	COST	QUANTITY	COST
	11 WE STORE OTER	N.			
NODE	85202 Junction Str	ucture			
		ea	\$2,350.00	1	\$2,350.00
CONDUIT	······································	e added	2	RCP	42,000.00
	24 inch RCP	LF	\$42.00	306	\$12,852.00
	14 th Street	Width	Length	sq ft	
	Parallel Street 2-lane, Asphalt, w/ C&G	16	306	4896	
NODE	85206 Junction Str	sy	\$38.00	544	\$20,672.00
	odeos odnicilon du	ea	\$2,350.00	4	£0.050.00
CONDUIT	1830 Parallel pipe	added		1 RCP	\$2,350.00
	30 inch RCP	LF	\$52.00	66	£2 422 00
	14 th Street	Width	Length	sq ft	\$3,432.00
	Parallel Street	16	66	1056	
	2-lane, Asphalt, w/ C&G	sy	\$38.00	117	\$4,458.67
NODE	85208 Junction Str	ucture			+ 1,100.07
CONDUIT		ea	\$5,250.00	1	\$5,250.00
CONDUIT	525 Parallel pipe		2.5	RCP	
	30 inch RCP	LF	\$52.00	313	\$16,276.00
	14 th Street	Width	Length	sq ft	
	Parallel Street	16	313	5008	
NODE	2-lane, Asphalt, w/ C&G 85035 Junction Stru	sy	\$38.00	556	\$21,144.89
NOBL	paga Junction Stre		* F 2 F 2 2 2	2	
CONDUIT	1795 Parallel box	ea	\$5,250.00	1	\$5,250.00
00112011	0 inch RCP	LF		RCB	0.1
	Limit Street	Width	\$240.00	74	\$17,760.00
	Parallel Street	16	Length 74	sq ft	
	4-lane, Asphalt, w/ C&G	sy	\$44.00	1184 132	EE 700 44
NODE	85038 Junction Stru	cture	Ψ11.00	132	\$5,788.44
		ea	\$5,250.00	1	\$5,250.00
CONDUIT	397 Parallel box	added		RCB.	Ψ3,230.00
	0 inch RCP	LF	\$240.00	273	\$65,520.00
	14 th Street	Width	Length	sq ft	***,***********************************
	Parallel Street	16	273	4368	
NODE	2-lane, Asphalt, w/ C&G	sy	\$38.00	485	\$18,442.67
NODE	85041 Junction Stru				
		ea	\$5,250.00	1	\$5,250.00
NODE	85043 Junction Stru	cture			
	ere te danouch on a	ea	\$5,250.00	4	# 5 050 00
CONDUIT	405 Parallel pipe			1 RCP	\$5,250.00
	48 inch RCP	LF	\$110.00	103	\$11,330.00
	Revolutionary Ct	Width	Length	sq ft	\$11,330.00
	Parallel Street	16	103	1648	
	2-lane, Asphalt, w/ C&G	sy	\$38.00	183	\$6,958.22
NODE	85045 Junction Stru	cture			Ψ0,000.22
GOUSTING T		ea	\$5,250.00	1	\$5,250.00
CONDUIT	1800 Parallel pipe		4 F	RCP	
1	48 inch RCP	LF	\$110.00	222	\$24,420.00
	Lakeview Dr.	Width	Length	sq ft	THE PROPERTY CONTRACTOR
	Parallel Street	16	222	3552	
	2-lane, Asphalt, w/ C&G	sy	\$38.00	395	\$14,997.33

ITEM	ITEM		UNIT		TOTAL
No	DESCRIPTION	UNIT	COST	OLIANITITY	TOTAL
NODE	85046 Junction Stru	cture	0031	QUANTITY	COST
		ea	\$5,250.00	1	\$5,250.00
			Ψ0,200.00		Ψ5,250.00
NODE	85047 Junction Stru	cture			
201211		ea	\$5,250.00	1	\$5,250.00
CONDUIT	407 Parallel pipe			RCP	
NODE	48 inch RCP	LF	\$110.00	237	\$26,070.00
NODE	85048 Concrete Wir				
	Quantity Pipe 1	Height	Width	cu yd	
	Pipe 2		4 4		
	Wing walls 2	E	4 4		
	Apron	5 5	5	1.85	
	Face (less pipe opening	5	10	1.85	
	ace (less pipe opening	5	10	0.92	
	Concrete		Total Area	4.62	2.
	Excavation and Backfill	су	\$300.00	4.62	\$1,387.41
	Excavation and Backilli	су	\$4.00	9.25	\$37.00
NODE	85027 Junction Struc	cture			
		ea	\$2,350.00	1	\$2,350.00
CONDUIT	387 Parallel pipe a		1.25		Ψ2,330.00
	15 inch RCP	LF	\$25.00	147	\$3,675.00
NODE	85028 Junction Struc	ture	720.00	4 7.1	Ψ5,075.00
		ea	\$2,350.00	1	\$2,350.00
			,	•	Ψ2,550.00
T125=					
NODE	85029 Junction Struc	ture			
		ea	\$2,350.00	1	\$2,350.00
CONDUIT	389 Parallel pipe a		1.25	RCP	
NODE	15 inch RCP	LF	\$25.00	152	\$3,800.00
NODE	85031 Junction Struc	ture	VARIANTA CONTRACTOR VARIANTES		
		ea	\$2,350.00	1	\$2,350.00
				_	
			-		
			\$	SUBTOTAL	\$335,121.63
			200/ 2		
			20% C	ontingency	\$402,145.96
	20% ===			2 NO 2	8

20% Engineering, legal and administrative \$482,575.15



	PRELIMINARY COST ESTIMAT	<u>'E </u>		DATE:	11/12/9
PROJECT:	LEAVENWORTH, KANSAS STORMWATER MASTER PLAN			EST:	VLD
ENGINEER		CHCKD:	JWH		
ELEMENT#	5 MILE CREEK - 7 L				
	DESCRIPTION	QUANT.	UNIT	U. PRICE	AMOUNT
A.3.3	Pipe and Inlet (Enclosed) System- 15 inch RCP	1394	LF	\$25.00	\$34.83
A.3.6	Pipe and Inlet (Enclosed) System- 24 inch RCP	325	LF	\$42.00	\$13.65
A.3.9	Pipe and Inlet (Enclosed) System- 36 inch RCP	382	LF	\$66.00	\$25.2
B.2.10	Pipe and Inlet (Enclosed) System- 48 inch RCP	162	LF	\$110.00	\$17.8
A.5.1	Storm Sewer Manholes < 6ft Diameter	16	ea	\$2.350.00	\$37.6
A.5.2	Storm Sewer Manholes > 6ft Diameter	5	ea	\$5,250.00	\$26.2
C.3.2.1	Concrete - Wing walls and apron	28	cy	\$300.00	\$8.3
B.1	Excavation and Backfill	463	cy	\$4.00	\$1.8
F.2.2	Street Removal - 2-lane, Aspalt, w/ C&G	2000	sy	\$8.00	\$16,0
F.3.4.2	Street Replacement, 2-lane, Asphalt w/ C&G	2000	sy	\$30.00	\$60,0
F.2.3	Street Removal - 4-lane, Aspalt, w/ C&G	173	sy	\$9.00	\$1.5
F.3.4.3	Street Replacement, 4-lane, Asphalt w/ C&G	173	sy	\$35.00	\$6.0
				TOTAL =	\$249,16
CONTINGE	NCY	20 PEF	CENT		\$49.8
				SUB TOTAL =	\$299,00
ENGINEER	ING, LEGAL AND ADMINISTRATIVE	20 PE	RCENT		\$59,80
				TOTAL =	\$358,8

ITEM No	ITEM DESCRIPTION	UNIT	UNIT	011415	TOTAL
	n 7 L 5 Mile Creek	CINIT	COST	QUANTITY	COST
NODE					
NODE	85370 Junction Stru		£2.250.00	4	#0.050.00
CONDUIT	669 Parallel pipe	ea	\$2,350.00	1 RCP	\$2,350.00
	15 inch RCP	LF	\$25.00	32.28	\$807.00
	18th Street	Width	Length	sq ft	Ψου1.00
	Street Crossing	20	28	560	
None	2-lane, Asphalt, w/ C&G	sy	\$38.00	62	\$2,364.44
NODE	85371 Junction Stru		3		
		ea	\$2,350.00	1	\$2,350.00
NODE	85386 Junction Stru	ıcture			
	904 (200 CONTROL OF CO	ea	\$2,350.00	1	\$2,350.00
CONDUIT	647 Parallel pipe	added	1.25		42,000.00
	15 inch RCP	LF	\$25.00	185	\$4,625.00
	Evergreen St	Width	Length	sq ft	ž.
	Parallel Street	15	185	2775	
NODE	2-lane, Asphalt, w/ C&G 85388 Junction Stru	sy	\$38.00	308	\$11,716.67
NODL	asses Junction Stru		£2.250.00	4	
CONDUIT	649 Parallel pipe	ea	\$2,350.00	RCP	\$2,350.00
	24 inch RCP	LF	\$42.00	113	\$4.746.00
	Evergreen Street	Width	Length	sq ft	\$4,746.00
	Parallel Street	15	113	1695	
	2-lane, Asphalt, w/ C&G	sy	\$38.00	188	\$7,156.67
NODE	92016 Junction Stru	cture			+1,1100.07
		ea	\$2,350.00	1	\$2,350.00
NODE	85407 Junction Stru	cture			
	James James James	ea	\$2,350.00	1	\$2,350.00
CONDUIT	658 Parallel pipe		1.25		Ψ2,550.00
	15 inch RCP	LF	\$25.00	144.04	\$3,601.00
	Thornton St	Width	Length	sq ft	70,001.00
	Cross Street	20	50	1000	
NODE	4-lane, Asphalt, w/ C&G	sy	\$44.00	111	\$4,888.89
NODE	85405 Junction Struction		60.050.00		
		ea	\$2,350.00	1	\$2,350.00
NODE	85406 Junction Struc	cture			
		ea	\$5,250.00	1	\$5,250.00
CONDUIT	661 Parallel pipe a		3	RCP	, -,
	36 inch RCP	LF	\$66.00	70	\$4,620.00
	Cambridge St	Width	Length	sq ft	~ 03
	Parallel Street	15	70	1050	-
	2-lane, Asphalt, w/ C&G	sy	\$38.00	117	\$4,433.33

NODE	ITEM No	ITEM DESCRIPTION	UNIT	UNIT COST	QUANTITY	TOTAL COST
Pipe 1	NODE					
Pipe 2						
Wing walls				000000000000000000000000000000000000000		
Apron Face (less pipe opening 5.5 9.5 1.08 Total Area 4.88 Concrete Cy \$300.00 4.88 \$1.464.19 \$39.05						
Face (less pipe opening 5.5 7.08 Total Area 4.88 Concrete Cy \$300.00 4.88 \$1.464.19 \$39.05 \$39.00 \$39.05 \$39.00 \$39.05 \$39.00 \$39.0						
NODE					1	
NODE		the contract of the sperming	0.0			
NODE		Concrete	CV			\$1 464 19
CONDUIT 631 Parallel pipe added 1.25 RCP 102 \$2,550.00 1 \$2,350.00		Excavation and Backfill				
CONDUIT 631 Parallel pipe added 1.25 RCP 102 \$2,550.00 1 \$2,350.00						
CONDUIT	NODE	85362 Junction Stru		£2 250 00	ä	£0.050.00
15 Inch RCP	CONDUIT	631 Parallel pine				\$2,350.00
CONDUIT						£2 EE0 00
Excavation and Backfill Cy \$4.00 408 \$1,632.00 117 st terr Width Length sq ft 1530 2-lane, Asphalt, w/ C&G sy \$38.00 170 \$6,460.00 NODE 85365 Junction Structure ea \$2,350.00 1 \$2,350.00	CONDUIT					\$2,550.00
117 st terr						\$1.622.00
Parallel Street 15						\$1,032.00
2-lane Asphalt W C&G sy \$38.00 170 \$6,460.00		Parallel Street				
NODE		2-lane, Asphalt, w/ C&G	sy			\$6,460,00
15 inch RCP	NODE	85365 Junction Stru	cture			++,100.00
S34 Parallel pipe added 1.25 RCP				\$2,350.00	1	\$2,350.00
117 st terr	CONDUIT	634 Parallel pipe	added		RCP	,_,
117 st terr				\$25.00	263	\$6,575.00
2-lane, Asphalt, w/ C&G sy \$38.00 438 \$16,656.67 NODE 85366 Junction Structure ea \$2,350.00 1 \$2,350.00 NODE 85328 Junction Structure ea \$5,250.00 1 \$5,250.00 CONDUIT 611 Parallel pipe added 2 RCP 24 inch RCP LF \$42.00 212 \$8,904.00 NODE 84590 Concrete Wing walls & Apron Quantity Height Width cu yd Pipe 1 4.5 4.5 RCP Pipe 2 1 2 2 RCP Wing walls 2 5.5 5 2.04 Apron 5 8.5 1.57 Face (less pipe opening 5.5 8.5 1.57 Face (less pipe opening 5.5 8.5 1.03 Total Area 4.64 Concrete cy \$300.00 4.64 \$1,391.16 Excavation and Backfill cy \$4.00 9.27 \$37.10 NODE 92356 Junction Structure ea \$5,250.00 1 \$5,250.00 CONDUIT \$89 Parallel pipe added 3 RCP				Length	sq ft	60 Th 10 80% an
NODE					3945	
Rode Section Structure Ea	NODE			\$38.00	438	\$16,656.67
NODE 85328 Junction Structure	NODE	Bases Junction Struction				
CONDUIT 611 Parallel pipe added 2 RCP 24 inch RCP LF \$42.00 212 \$8,904.00			ea	\$2,350.00	1	\$2,350.00
CONDUIT 611 Parallel pipe added 2 RCP 24 inch RCP LF \$42.00 212 \$8,904.00						
Second S	NODE	85328 Junction Struc	cture			
NODE S4590 Concrete Wing walls & Apron					1.50	\$5,250.00
NODE Second	CONDUIT			***************************************	222222222222222222222222222222222222222	
Quantity Height Width cu yd	NODE			\$42.00	212	\$8,904.00
Pipe 1	NODE	84590 Concrete Win				
Pipe 2						
Wing walls 2 5.5 5 2.04 Apron 5 8.5 1.57 Face (less pipe opening 5.5 8.5 1.03 Total Area 4.64 Concrete cy \$300.00 4.64 \$1,391.16 Excavation and Backfill cy \$4.00 9.27 \$37.10 NODE 92356 Junction Structure ea \$5,250.00 1 \$5,250.00 CONDUIT 589 Parallel pipe added 3 RCP		* *************************************				
Apron 5 8.5 1.57 Face (less pipe opening 5.5 8.5 1.03 Total Area 4.64 Concrete cy \$300.00 4.64 \$1,391.16 Excavation and Backfill cy \$4.00 9.27 \$37.10 NODE 92356 Junction Structure ea \$5,250.00 1 \$5,250.00 CONDUIT 589 Parallel pipe added		1 * * * * * * * * * * * * * * * * * * *	***************************************	*************************		
Face (less pipe opening 5.5 8.5 1.03 Total Area 4.64						
Total Area 4.64 Concrete cy \$300.00 4.64 \$1,391.16 Excavation and Backfill cy \$4.00 9.27 \$37.10		E				
Concrete cy \$300.00 4.64 \$1,391.16 Excavation and Backfill cy \$4.00 9.27 \$37.10 NODE 92356 Junction Structure ea \$5,250.00 1 \$5,250.00 CONDUIT 589 Parallel pipe added 3 RCP		. ass (loss pipe opening	5.5	_		
Excavation and Backfill cy \$4.00 9.27 \$37.10		Concrete	CV			64 204 46
NODE 92356 Junction Structure ea \$5,250.00 1 \$5,250.00 CONDUIT 589 Parallel pipe added 3 RCP			2500			
ea \$5,250.00 1 \$5,250.00 CONDUIT 589 Parallel pipe added 3 RCP			٠,	Ψ1.00	3.21	φ37.10
ea \$5,250.00 1 \$5,250.00 CONDUIT 589 Parallel pipe added 3 RCP	NODE	92356 Junction Struc	ture			
CONDUIT 589 Parallel pipe added 3 RCP				\$5,250,00	1	\$5.250.00
	CONDUIT	589 Parallel pine a			CP.	φυ,200.00
					*******************	\$20.592.00

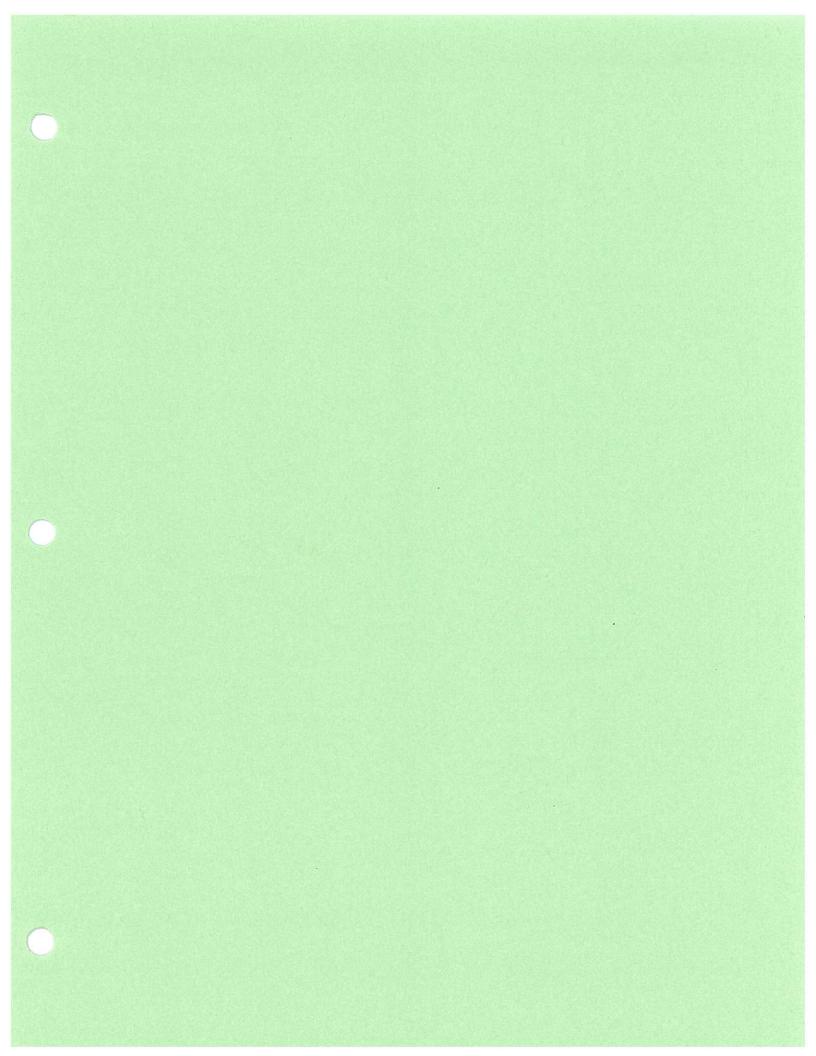
ITEM No	ITEM DESCRIPTION	UNIT	UNIT COST	QUANTITY	TOTAL
NODE	85294 Concrete Wi	ng walls 8	ξ Aprop	QUANTITY	COST
	Quantity	Height	Width	cu yd	
	Pipe 1 1	3	5 5	RCP	
	Pipe 2 1		3 3	RCP	
	Wing walls 2	6	5	2.22	
	Apron	5	10	1.85	
	Face (less pipe opening	6	10	1.23	
			Total Area	5.31	
	Concrete	су	\$300.00	5.31	\$1,592.18
	Excavation and Backfill	су	\$4.00	10.61	\$42.46
NODE	*****				
NODE	85336 Junction Stru				
CONDUIT	647 Derellalaina	ea	\$2,350.00	1	\$2,350.00
COMDON	617 Parallel pipe 15 inch RCP		1.25		are on ar
	15 inch RCP Marion St	LF	\$25.00	113	\$2,825.00
	Parallel Street	Width 15	Length	sq ft	
	2-lane, Asphalt, w/ C&G		50	750	00 100 00
NODE	85337 Junction Stru	sy	\$38.00	83	\$3,166.67
	Sacon Sunction Stra	ea	\$2,350.00	1	#2 250 00
CONDUIT	1870 Parallel pipe		1.25		\$2,350.00
	15 inch RCP	LF	\$25.00	33	\$825.00
	Francis St Court	Width	Length	sq ft	\$625.00
	Cross Street	20	33	660	
	2-lane, Asphalt, w/ C&G	sy	\$38.00	73	\$2,786.67
NODE	85338 Junction Stru	cture		. 0	Ψ2,100.01
		ea	\$2,350.00	1	\$2,350.00
CONDUIT	1871 Parallel pipe		1.25 F	RCP	
	15 inch RCP	LF	\$25.00	21	\$525.00
	Marion St	Width	Length	sq ft	
	Parallel Street	15	21	315	
NODE	2-lane, Asphalt, w/ C&G	sy	\$38.00	35	\$1,330.00
NODE	85339 Junction Stru		*** *** ***		2 2 2 10 2 2 10 2
CONDUIT	618 Parallel pipe	ea	\$2,350.00	1	\$2,350.00
COMBON	15 inch RCP	LF	1.25 F		#0.750.00
	Marion St	Width	\$25.00 Length	270	\$6,750.00
	Parallel Street	15	270	sq ft 4050	
	2-lane, Asphalt, w/ C&G	sy	\$38.00	450	\$17,100.00
NODE	85342 Junction Struc		400.00	100	Ψ17,100.00
		ea	\$2,350.00	1	\$2,350.00
					,
NODE	85311 Junction Struc				
NOBL	OSSITE SUFFICION SITU	ea	\$5,250.00	1	\$5.050.00
CONDUIT	2799 Parallel pipe a		***************************************	RCP	\$5,250.00
	48 inch RCP	LF	\$110.00	34	\$3,740.00
	16th St	Width	Length	sq ft	ψ5,740.00
	Cross Street	20	34	680	
	2-lane, Asphalt, w/ C&G	sy	\$38.00	76	\$2,871.11
NODE	92464 Junction Struc				je: 1.11
-	The state of the s	ea	\$5,250.00	1	\$5,250.00
CONDUIT	601 Parallel pipe a		4 F	RCP	
	48 inch RCP	LF	\$110.00	128	\$14,080.00

ITEM No	ITEM DESCRIPTION	UNIT	UNIT COST	QUANTITY	TOTAL COST
NODE	85307 Concrete Wi		Apron	QUANTITI	0001
	Quantity	Height	Width	cu yd	
	Pipe 1		4 4		
	Pipe 2		4 4	RCP	
	Wing walls 2	5	5	1.85	
	Apron	5	10	1.85	
	Face (less pipe opening	5	10	0.92	
	6		Total Area	4.62	
	Concrete	су	\$300.00	4.62	\$1,387.41
	Excavation and Backfill	су	\$4.00	9.25	\$37.00
NODE	85086 Junction Stru	icture			
		ea	\$2,350.00	1	\$2,350.00
CONDUIT	1805 Parallel pipe	added	1.25	RCP	
	15 inch RCP	LF	\$25.00	170	\$4,250.00
	16th St	Width	Length	sq ft	A \$4
	Cross Street	20	28	560	
NODE	4-lane, Asphalt, w/ C&G	sy	\$44.00	62	\$2,737.78
NODE	85262 Concrete Wir				
	Quantity	Height	Width	cu yd	
	Pipe 1 1		3	RCP	
	Pipe 2	1.2			
	Wing walls 2	4	5	1.48	
	Apron Face (less pipe opening	5	6.25	1.16	
	ace (less pipe opening	4	6.25	0.62	
	Concrete		Total Area	3.26	4725_50
	Excavation and Backfill	су	\$300.00	3.26	\$977.27
	Excavation and Dackilli	су	\$4.00	6.52	\$26.06
NODE	84778 Concrete Wir	ng walls &	Apron		
	Quantity	Height	Width	cu yd	
	Pipe 1 1	2	? 2		
	Pipe 2 1	1.25	1.25	RCP	
	Wing walls 2	3	5	1.11	
	Apron	5	5.25	0.97	
	Face (less pipe opening	3	5.25	0.42	
			Total Area	2.50	
	Concrete	су	\$300.00	2.50	\$751.46
CONDINE	Excavation and Backfill	су	\$4.00	5.01	\$20.04
CONDUIT	227 Parallel pipe		1.25		
NODE	15 inch RCP	LF	\$25.00	61	\$1,525.00
NODE	84777 Concrete Win	g walls &			
	Quantity	Height	Width	cu yd	
	Pipe 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	2	· · · · · · · · · · · · · · · · · · ·	RCP	
	1 1	1.25		RCP	
	Wing walls 2 Apron	3	5	1.11	
	Face (less pipe opening	5	5.25	0.97	
	i ace (less pipe opening	3	5.25	0.42	
	Concrete	ov:	Total Area	2.50	
	Excavation and Backfill	су	\$300.00	2.50	\$751.46
	Executation and Dackill	су	\$4.00	5.01	\$20.04

SUBTOTAL \$249,227.75

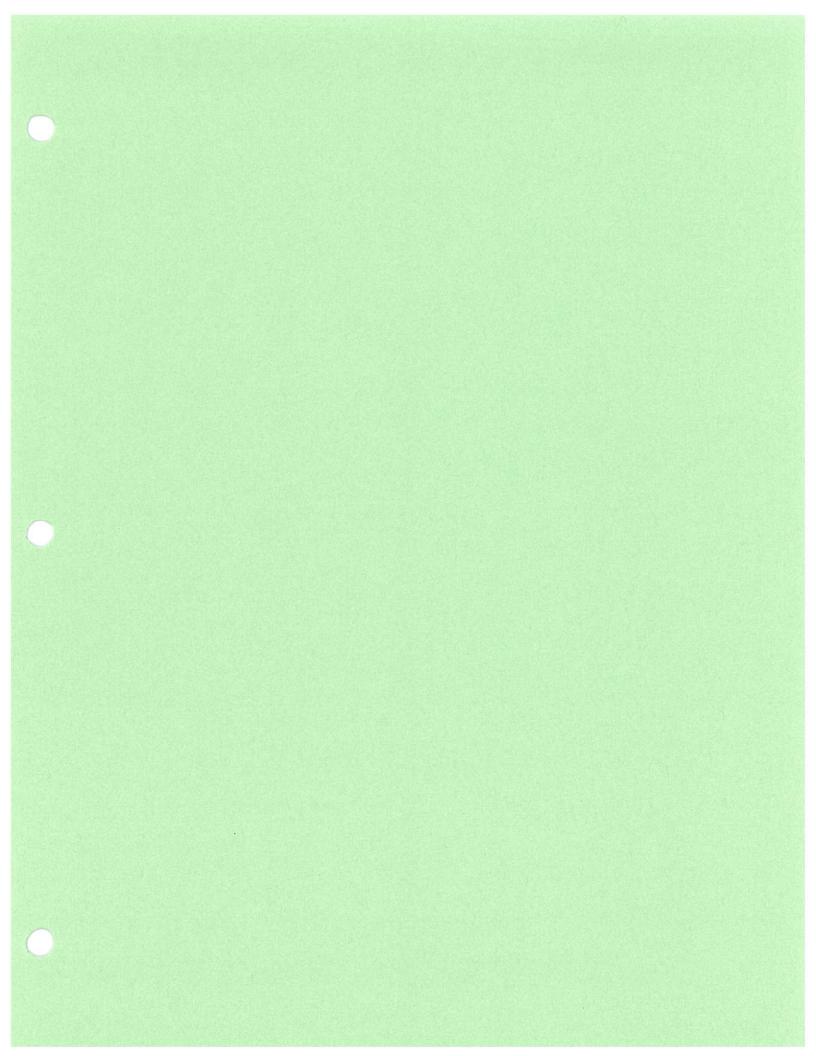
20% Contingency \$299,073.31

20% Engineering, legal and administrative \$358,887.97



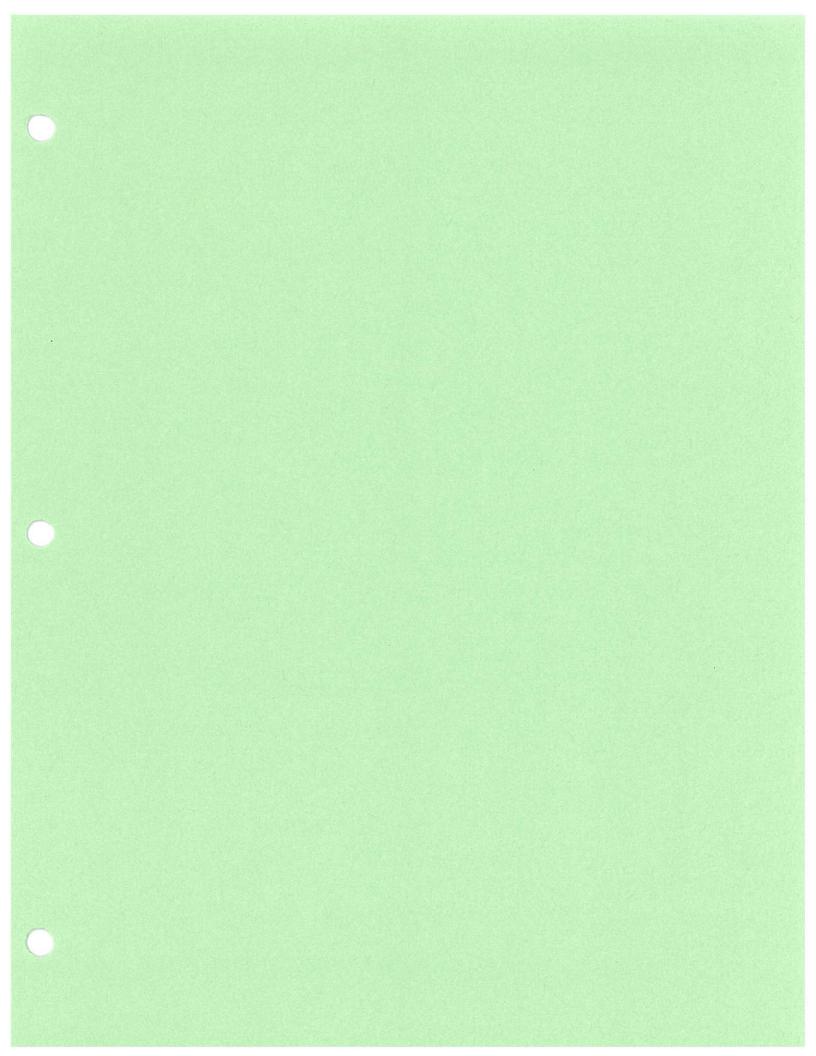
PRELIMINARY COST ESTIMAT	l E		DATE:	11/12/
LEAVENWORTH. KANSAS STORMWATER MASTER PLAN			EST:	VLD
BLACK & VEATCH			CHCKD:	JWH
5 MILE CREEK - 8 L				
DESCRIPTION	QUANT.	UNIT	U. PRICE	AMOUNT
Pipe and Inlet (Enclosed) System - 15 inch RCP	234	LF	\$25.00	\$5.8
Storm Sewer Manholes < 6ft Diameter	2	ea	\$2.350.00	\$4.7
Street Removal - 2-lane, Aspalt, w/ C&G	520	sy	\$8.00	\$4.1
Street Replacement, 2-lane, Asphalt w/ C&G	520	sy	\$30.00	\$15,6
			TOTAL =	\$30,3
ENCY	20 PE	RCENT		\$6,0
			SUB TOTAL =	\$36,3
RING, LEGAL AND ADMINISTRATIVE	20 PI	RCENT		\$7,2
	LEAVENWORTH. KANSAS STORMWATER MASTER PLAN BLACK & VEATCH 5 MILE CREEK - 8 L DESCRIPTION Pipe and Inlet (Enclosed) System - 15 inch RCP Storm Sewer Manholes < 6ft Diameter Street Removal - 2-lane, Aspalt, w/ C&G	LEAVENWORTH, KANSAS STORMWATER MASTER PLAN BLACK & VEATCH 5 MILE CREEK - 8 L DESCRIPTION QUANT. Pipe and Inlet (Enclosed) System - 15 inch RCT 234 Storm Sewer Manholes < 6ft Diameter 2 Street Removal - 2-lane, Aspalt, w/ C&G 520 Street Replacement, 2-lane, Asphalt w/ C&G 520 Street Replacement, 2-lane, Asphalt w/ C&G 520 ENCY 20 PE	LEAVENWORTH, KANSAS STORMWATER MASTER PLAN BLACK & VEATCH 5 MILE CREEK - 8 L DESCRIPTION QUANT. UNIT Pipe and Inlet (Enclosed) System - 15 inch RUP 234 LF Storm Sewer Manholes < 6ft Diameter 2 eas Street Removal - 2-lane, Aspalt, w/ C&G 520 sy Street Replacement, 2-lane, Asphali w/ C&G 520 sy Street Replacement, 2-lane, Asphali w/ C&G 520 sy Brook Street Replacement, 2-lane, Asphali w/ C&G 520 sy Stre	LEAVENWORTH, KANSAS STORMWATER MASTER PLAN

ITEM No Subsystem	ITEM DESCRIPTION 8 L 5 Mile Creek	UNIT	UNIT COST	QUANTITY	TOTAL COST
NODE	92451 Junction Stru	cture			
CONDUIT		ea	\$2,350.00	1	\$2,350.00
CONDON	427 Parallel pipe 15 inch RCP	added LF	1.25 \$25.00	RCP 234	\$5,850.00
	Candlewood Parallel Street	width 20	length	sq ft	40,000.00
None	2-lane, Asphalt, w/ C&G	sy	234 \$38.00	4680 520	\$19,760.00
NODE	85066 Junction Stru	cture ea	\$2,350.00	1	\$2,350.00
				SUBTOTAL	\$30,310.00
			20% C	ontingency	\$36,372.00
	20% Eng	gineering,	legal and ad	ministrative	\$43,646.40



		PRELIMINARY COST ESTIMAT	I E	DATE:	11/12/9
	PROJECT:	LEAVENWORTH. KANSAS STORMWATER MASTER PLAN		EST:	VLD
	ENGINEER	BLACK & VEATCH		CHCKD:	JWH
	ELEMENT #	5 MILE CREEK - 9 L			
	-	DESCRIPTION	QUANT.	UNIT U. PRICE	AMOUNT
	A.3.3	Pipe and Inlet (Enclosed) System - 15 inch RCP	200	LF \$25.00	\$5.00
	A.5.1	Storm Sewer Manholes < 6ft Diameter	2	ea \$2.350.00	\$4,70
					Nolley Words
	1				
	ļ				
	-				
				TOTAL =	\$9,7
	CONTINGE	NCY	20 PERC		\$1,9
				SUB TOTAL =	\$11.6
	ENGINEER	ING, LEGAL AND ADMINISTRATIVE	20 PERC		\$11,6
			201 ERC	ENI	\$2,3

ITEM No Subsystem	ITEM DESCRIPTION 9 L 5 Mile Creek	UNIT	UNIT COST	QUANTITY	TOTAL COST
NODE	92438 Junction Struc	ture			
======		ea	\$2,350.00	1	\$2,350.00
CONDUIT	2769 Parallel pipe a	added	1.25	RCP	
1.===	15 inch RCP	LF	\$25.00	200	\$5,000.00
NODE	92439 Junction Struc	ture			
		ea	\$2,350.00	1	\$2,350.00
				=	
				SUBTOTAL	\$9,700.00
			20% C	Contingency	\$11,640.00
	20% Eng	\$13,968.00			



	PRELIMINARY COST ESTIMATE			DATE:	11/12/9	
ROJECT:	LEAVENWORTH, KANSAS STORMWATER MASTER PLAN			EST:	VLD	
NGINEER	GINEER BLACK & VEATCH					
LEMENT#	5 MILE CREEK - 10 L					
	DESCRIPTION	QUANT.	UNIT	U. PRICE	AMOUNT	
A.3.5	Pipe and Inlet (Enclosed) System - 21 inch RCP	44	LF	\$37.00	\$1.63	
A.3.8	Pipe and Inlet (Enclosed) System - 30 inch RCP	77	LF	\$52.00	\$4.00	
A.3.9	Pipe and Inlet (Enclosed) System - 36 inch RCP	67	LF	\$66.00	\$4.4	
C.3.2.1	Concrete - Wing walls and apron	21	cy	\$300.00	\$6,3	
B.1	Excavation and Backfill	42	cy	\$4.00	\$10	
F.2.2	Street Removal - 2-lane, Aspalt, w/ C&G	174	sy	\$8.00	\$1,3	
F.3.4.2	Street Replacement, 2-lane, Asphalt w/ C&G	174	sy	\$30.00	\$5,2	
					\$23,1	
CONTINGENCY 20 PERCENT						
				SUB TOTAL =	\$27,8	
ENGINEERING, LEGAL AND ADMINISTRATIVE 20 PERCENT						
				TOTAL =	\$33,3	

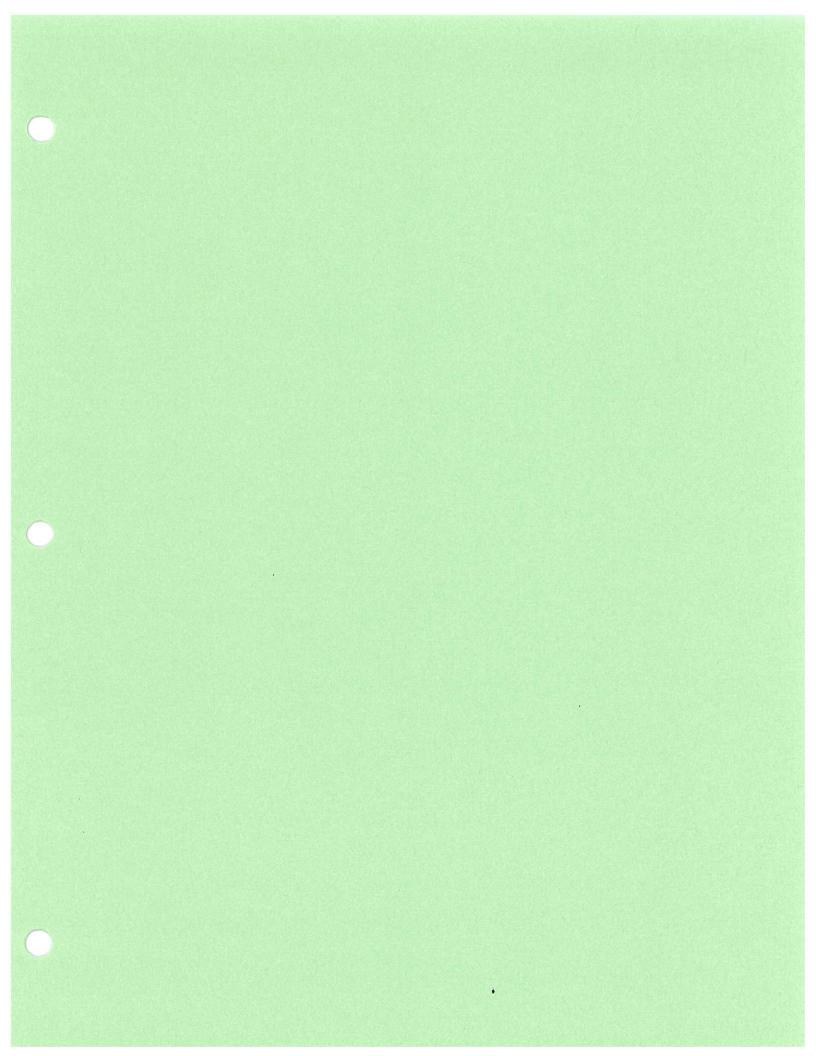
ITEM No	ITEM DESCRIPTION	UNIT	UNIT COST	QUANTITY	TOTAL COST
Subsyster	m 10 L 5 Mile Creek	C		QUANTIT	0051
T.===					
NODE	85111 Concrete Wi				
	Quantity	Height	Width	cu yd	
	Pipe 1 1	2.8			
	Pipe 2 1	ASSASSASSASSASSASSASSASSASSASSASSASSASS	4		
	Wing walls 2 Apron	5	5	1.85	
	Face (less pipe openin	5 5	8.5	1.57	
	ace (less pipe operiin	5	8.5	0.93	4
	Concrete	су	Total Area \$300.00	4.35 4.35	£4 305 00
	Excavation and Backfill	сy	\$4.00	8.71	\$1,305.83
CONDUIT	458 Parallel pipe	added		RCP	\$34.82
	30 inch RCP	LF	\$52.00		\$4,004.00
	Limit & 22nd	width	length	sq ft	ψ4,004.00
	Street Crossing	20	32	640	
	2-lane, Asphalt, w/ C&	sy	\$38.00	71	\$2,702.22
NODE	85112 Concrete Wir	ng walls &	Apron		42,102.22
	Quantity	Height	Width	cu yd	1
	Pipe 1 1	2.5	2.5	RCP	
	Pipe 2	4	4	RCP	
	Wing walls 2	5	5	1.85	
	Apron	5	8.5	1.57	
	Face (less pipe openin	5	8.5	0.93	
			Total Area	4.35	
	Concrete	су	\$300.00	4.35	\$1,305.83
	Excavation and Backfill	су	\$4.00	8.71	\$34.82
NODE	95376 Concrete Win				
NODE	85376 Concrete Wir Quantity	ig walls &			1
	Pipe 1	Height 3	Width	cu yd	
	Pipe 2	3 3		RCP	
	Wing walls 2	4	3 5	RCP	
	Apron	5	8	1.48	
	Face (less pipe openin	4	8	1.48 0.66	
	(Total Area	3.62	
	Concrete	су	\$300.00	3.62	\$1,087.36
	Excavation and Backfill	CV	\$4.00	7.25	\$29.00
CONDUIT	639 Parallel pipe a	added		RCP	Ψ25.00
	36 inch RCP	LF	\$66.00	NAMES OF THE PARTY	\$4,422.00
	Limit & 22nd	width	length	sq ft	Ψ1,122.00
	Street Crossing	15	40	600	
	2-lane, Asphalt, w/ C&	sy	\$38.00	67	\$2,533.33
NODE	85377 Concrete Win		Apron		
	Quantity	Height	Width	cu yd	
	Pipe 1	3	3	RCP	
	Pipe 2	3	3	RCP	
	Wing walls 2	4	5	1.48	
	Apron	5	8	1.48	
	Face (less pipe openin	4	8 =	0.66	
	00000000		Total Area	3.62	
	Concrete	су	\$300.00	3.62	\$1,087.36
	Excavation and Backfill	су	\$4.00	7.25	\$29.00

ITEM	ITEM		LINUT					
No	DESCRIPTION	LIKUT	UNIT		TOTAL			
NODE	85375 Congrete	UNIT	COST	QUANTITY	COST			
	85375 Concrete Wing walls & Apron							
	Quantity	***************************************	Width	cu yd				
	Pipe 1	1 1.75	1.75	RCP				
	Pipe 2	1 2	2	RCP				
	Wing walls 2	3	5	1.11				
	Apron	5	5.75	1.06				
	Face (less pipe opening	n 3	5.75	0.43				
			Total Area	2.61				
	Concrete	су	\$300.00	2.61	\$782.81			
==::===	Excavation and Backf		\$4.00	5.22	\$20.88			
CONDUIT	638 Parallel pi	pe added	1.75		Ψ20.00			
	21 inch RCF	P LF	\$37.00	VANANANANANANANANANANANANANANANANANANAN	\$1,628.00			
	Vilas West of 19th Ter	r width	length	sq ft	Ψ1,020.00			
	Street Crossing	10	32	320				
	2-lane, Asphalt, w/ C&	sv	\$38.00	36	\$1,351.11			
NODE	85374 Concrete	Wing walls &	Apron		\$1,331.11			
	Quantity	Height	Width	CHAN				
	Pipe 1	1 1.75	1.75	cu yd RCP				
	Pipe 2	1 2						
	Wing walls 2	3	_ 2	RCP				
	Apron	5	5	1.11				
	Face (less pipe openin	3	5.75	1.06				
	i dec (less pipe openii)	3	5.75	0.43				
	Canarata		Total Area	2.61				
	Concrete	су	\$300.00	2.61	\$782.81			
	Excavation and Backfi	ll cy	\$4.00	5.22	\$20.88			

SUBTOTAL\$23,162.07

20% Contingency \$27,794.49

20% Engineering, legal and administrative \$33,353.38



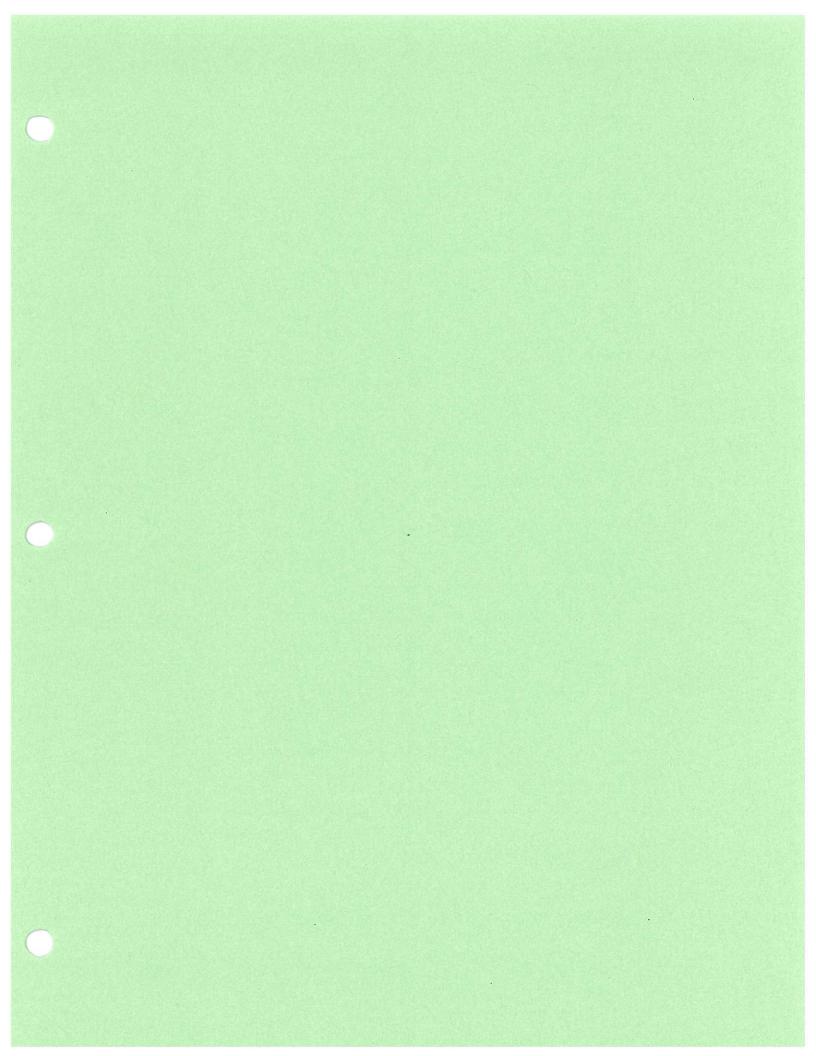
11/12/96	DATE:	PRELIMINARY COST ESTIMATE				
VLD	EST:		ROJECT: LEAVENWORTH, KANSAS STORMWATER MASTER PLAN			
JWH	CHCKD:		ER BLACK & VEATCH			
				5 MILE CREEK - 1 R	LEMENT#	
AMOUNT	U. PRICE	UNIT	QUANT.	DESCRIPTION		
\$14,982	\$66.00	LF	227	Pipe and Inlet (Enclosed) System- 36 inch RCP	A.3.9	
\$59,310	\$90.00	LF	659	Pipe and Inlet (Enclosed) System - 42 inch RCP	A.3.10	
\$8,856	\$9.00	sy	984	Street Removal - 4-lane, Aspalt, w/ C&G	F.2.3	
\$34,440	\$35.00	sy	984	Street Replacement, 4-lane, Asphalt w/ C&G	F.3.4.3	
\$975	\$300.00	cy	3	Concrete - Wing walls and apron	C.3.2.1	
\$26	\$4.00	су	7	Excavation and Backfill	B.1	
\$5,425	\$775.00	ea	7	Curb Inlet	A.2.1	
\$24,651				Structural Removal		
	-					
\$148,665	TOTAL =					
\$29,733	CONTINGENCY 20 PERCENT					
\$178,398	SUB TOTAL =				-	
\$35,680	ENGINEERING, LEGAL AND ADMINISTRATIVE 20 PERCENT					

ITEM No	ITEM DESCRIPTION	UNIT	UNIT COST	QUANTITY	TOTAL COST
Subsystem	1 ₹ 5 Mile Creek				
NODE	85870 Storm Sewer	Inlets		7-10-11-11-11-11-11-11-11-11-11-11-11-11-	
		ea	\$775.00	2	\$1,550.00
CONDUIT	903 Parallel pipe	added		RCP	
	36 inch RCP	LF	\$66.00	227	\$14,982.00
	Marion St	Width	Length	sq ft	
	Parallel Street	10	227	2270	
	4-lane, Asphalt, w/ C&G	sy	\$44.00	252	\$11,097.78
	Structural Removal			20 Percent	\$5,525.96
NODE	85873 Storm Sewer				
		ea	\$775.00	2	\$1,550.00
CONDUIT	905 Parallel pipe			RCP	
	42 inch RCP	LF	\$90.00	324	\$29,160.00
	Marion St	Width	Length	sq ft	
	Parallel Street	10	324	3240	
	4-lane, Asphalt, w/ C&G	sy	\$44.00	360	\$15,840.00
	Structural Removal			20 Percent	\$9,310.00
NODE	85876 Storm Sewer	Inlets			
		ea	\$775.00	2	\$1,550.00
CONDUIT	908 Parallel pipe		********************	RCP	
	42 inch RCP	LF	\$90.00	246	\$22,140.00
	Marion St	Width	Length	sq ft	
	Parallel Street	10	246	2460	
	4-lane, Asphalt, w/ C&G	sy	\$44.00	273	\$12,026.67
	Structural Removal			20 Percent	\$7,143.33
NODE	85878 Storm Sewer	Inlets			
		ea	\$775.00	1	\$775.00
CONDUIT	909 Parallel pipe		3.5	RCP	
	42 inch RCP	LF	\$90.00	89	\$8,010.00
	Marion St	Width	Length	sq ft	
	Parallel Street	10	89	890	
	4-lane, Asphalt, w/ C&G	sy	\$44.00	99	\$4,351.11
NODE	92250 Concrete Wir		Apron		
	Quantity	Height	Width	cu yd	
	Pipe 1 1	3.5		RCP	
	Pipe 2	Đ	0	RCP	
	Wing walls 2	4.5	5	1.67	
	Apron	5	5.5	1.02	
	Face (less pipe opening	4.5	5.5	0.56	
			Total	3.25	
	Concrete	су	\$300.00	3.25	\$973.65
	Excavation and Backfill	су	\$4.00	6.49	\$25.96
	Structural Removal			20 Percent	\$2,672.15
					81

SUBTOTAL \$148,683.61

20% Contingency \$178,420.33

20% Engineering, legal and administrative \$214,104.40



	PRELIMINARY COST ESTIMAT	E		DATE:	11/12/9
PROJECT:	EST:	JLF			
ENGINEER	BLACK & VEATCH	•		CHCKD:	JWH
ELEMENT#	5 MILE CREEK - 2 R				
	DESCRIPTION	QUANT.	UNIT	U. PRICE	AMOUNT
Α.3.5	Pipe and Inlet (Enclosed) System- 21 inch RCP	33	LF	\$37.00	\$1,22
A.3.6	Pipe and Inlet (Enclosed) System- 24 inch RCP	1005	LF	\$42.00	\$42.21
A.3.11	Pipe and Inlet (Enclosed) System- 48 inch RCP	226	LF	\$110.00	\$24.86
A.5.1	Storm Sewer Manholes < = 6ft Inside Diameter	9	ea	\$2.350.00	\$21,15
A.5.2	Storm Sewer Manholes > 6st Inside Diameter	6	ea	\$5.250.00	\$31.500
B.1	Excavation and Backfill	98	cy	\$4.00	\$39:
B.3.0	Reinforced Concrete Box Culverts - 2 x 2	315	LF	\$180.00	\$56,700
B.3.1	Reinforced Concrete Box Culverts - 3 x 2	496	LF	\$215.00	\$106,640
B.3.4	Reinforced Concrete Box Culverts - 4 x 3	1247	LF	\$270.00	\$336,690
C.3.2.1	Concrete - Wing walls and apron	42	cy	\$300.00	\$12,600
D.1	Structure Removal (20%)		LS		\$65.86
F.2.1	Street Removal - 2-lane, Gravel	33	sy	\$4.00	\$13:
F.3.4.1	Street Replacement, 2-lane, Gravel	33	sy	\$10.00	\$330
F.2.2	Street Removal - 2-lane, Aspalt, w/ C&G	755	sy	\$8.00	\$6,040
F.3.4.2	Street Replacement, 2-lane, Asphalt w/ C&G	755	sy	\$30.00	\$22,650
F.2.3	Street Removal - 4-lane, Aspalt, w/ C&G	2769	sy	\$9.00	\$24,921
F.3.4.3	Street Replacement, 4-lane, Asphalt w/ C&G	2769		\$35.00	
		2703	sy	\$33.00	\$96,915
				TOTAL =	\$850,812
CONTINGE	NCY	20 PER	CENT		\$170,162
				SUB TOTAL =	\$1.020,975
ENGINEER	ING. LEGAL AND ADMINISTRATIVE	20 PEF	CENT		\$204,195
				TOTAL =	
				TOTAL =	\$1,225,17

ITEM No	ITEM DESCRIPTION	UNIT	UNIT COST	QUANTITY	TOTAL COST
Subsystem	2 R 5 Mile Creek				
NODE	92278 Concrete Wir				
	Quantity	Height	Width	cu yd	
	Pipe 1 1		3 4		
	Pipe 2 0		0 _ 0		
	Wing walls 2	4	5	1.48	
	Apron	5	5	0.93	
	Face (less pipe opening	4	_5	0.30	
			Total	2.70	
	Concrete	су	\$300.00	2.70	\$811.11
CONDUIT	Excavation and Backfill	cy	\$4.00	5.41	\$21.63
CONDUIT	3240 Replace with		4 X 3	RCB	CEO 000 00
	4' x 3' L x W RCP	LF	\$270.00	194	\$52,380.00
	VA entrance drive	Width	Length	sq ft	
	Cross Street	20	70	1400	CE 044 44
	2-lane, Asphalt, w/ C&G	sy	\$38.00	156	\$5,911.11
NODE	Structural Removal and F		ent	20 Percent	\$11,824.77
NODE	84666 Junction Stru		#2.250.00	2	60.050.00
CONDITIE	t 40 Danlage with	ea	\$2,350.00	1	\$2,350.00
CONDUIT	148 Replace with 4' x 3' L x W RCP		4 X 3	RCB	£444 700 00
		LF	\$270.00	414	\$111,780.00
NODE	Structural Removal and F		ent	20 Percent	\$22,826.00
NODE	92276 Junction Stru		#0.050.00	2. 4	00 050 00
COMPLUT	2222	ea	\$2,350.00	1	\$2,350.00
CONDUIT	2883 Install culvert		4 X 3	RCB	
NODE	4' x 3' L x W RCP	LF	\$270.00	111	\$29,970.00
NODE	84673 Junction Stru		CE 250 00	_	640 500 00
CONDUIT	OCOT I t- II t	ea	\$5,250.00	2	\$10,500.00
CONDUIT	2885 Install culvert 4' x 3' L x W RCP		4 X 3	RCB	£74 000 00
NODE		LF	\$270.00	266	\$71,820.00
NODE	92273 Junction Stru		#2 250 00		60.050.00
CONDUIT	154 Replace with	ea	\$2,350.00	1	\$2,350.00
CONDON	154 Replace with 4' x 3' L x W RCP	LF	4 X 3	RCB	£40.440.00
	Structural Removal and F		\$270.00	182 20 Percent	\$49,140.00
NODE	84683 Junction Stru		ent	20 Percent	\$10,298.00
NODL	64663 Junction Stru		\$5,250.00	1	¢ E 250 00
CONDUIT	155 Replace with	ea	4 X 3	RCB	\$5,250.00
CONDON	4' x 3' L x W RCP	LF	\$270.00	56	¢1E 120 00
	Structural Removal and F			20 Percent	\$15,120.00
NODE	84684 Concrete Wir			20 Percent	\$4,074.00
NODL	Quantity	Height	Width	ou vid	
	Pipe 1 1		3 4	cu yd	
	Pipe 2 0 Wing walls 2	4	0 0 5	RCP 1.48	
	Apron	5	5		
	Face (less pipe opening	4	5	0.93	
	ace (less pipe opening	4	Total	0.30	
	Concrete	01/	\$300.00	2.70	C011 11
	Excavation and Backfill	су	\$4.00	2.70	\$811.11
	LACAVAGOR AND DACKIIII	су	φ4.00	5.41	\$21.63

ITEM No	ITEM DESCRIPTION	UNIT	UNIT COST	QUANTITY	TOTAL COST
NODE	84685 Concrete Win			QO/ IIIII	
NODE	Quantity	Height	Width	cu yd	
	Pipe 1 1	5		RCP	
	Pipe 2 1	4			
	Wing walls 2	6	5	2.22	
	Apron	5	11	2.04	
	Face (less pipe opening	6	11	1.25	
	dec (less pipe opering		Total	5.51	
	Concrete	су	\$300.00	5.51	\$1,653.32
	Excavation and Backfill	су	\$4.00	11.02	\$44.09
CONDUIT	156 Parallel pipe			RCP	
CONDON	48 inch RCP	LF	\$110.00	127	\$13,970.00
	Saint Mary Street	Width	Length	sq ft	V ,
	Cross Street	20	50	1000	
	2-lane, Asphalt, w/ C&G	sy	\$38.00	111	\$4,222.22
NODE	84689 Concrete Win			111	Ψ+,∠∠∠.∠∠
NODE	Quantity	Height	Width	cu yd	
	Pipe 1 1	1 leight 5		RCP	
		4		¥0.	
	Pipe 2		5	2.22	
	Wing walls 2	6		2.22	
	Apron	5	11		
	Face (less pipe opening	6	11	1.25	
			Total	5.51	04 050 00
	Concrete	су	\$300.00	5.51	\$1,653.32
	Excavation and Backfill	су	\$4.00	11.02	\$44.09
NODE	84804 No new cons				
CONDUIT	258 Remove culv		4 X 3	RCB	
	4' x 3' L x W RCP	LF	\$270.00	24	
	Structural Removal and F	Replaceme	ent	20 Percent	\$1,296.00
NODE	84803 No new cons				
NODE	84823 Concrete Wir	ng walls &			
	Quantity	Height	Width	cu yd	
	Pipe 1 1	2	5	RCP	
	Pipe 2		4	RCP	
	Wing walls 2	6	5	2.22	
	Apron	5	11	2.04	
	Face (less pipe opening	6	11	1.25	
			Total	5.51	
	Concrete	су	\$300.00	5.51	\$1,653.32
	Excavation and Backfill	су	\$4.00	11.02	\$44.09
CONDUIT	266 Parallel pipe			RCP	
SCHOOL	48 inch RCP	LF	\$110.00	99	\$10,890.00
	Ash Street	Width	Length	sq ft	7.0,000.00
	Cross Street	20	60	1200	
	2-lane, Asphalt, w/ C&G		\$38.00	133	\$5,066.67
	z-iane, Asphait, w/ C&G	sy	φ30.00	133	φυ,υυυ.υ1

ITEM No	ITEM DESCRIPTION	UNIT	UNIT COST	QUANTITY	TOTAL COST
NODE	84824 Concrete Wir				
	Quantity	Height	Width	cu yd	
	Pipe 1 1		5 5		
	Pipe 2 1		4 4	44 M. Stanish	
	Wing walls 2	6	5	2.22	
	Apron	5	11	2.04	
	Face (less pipe opening	6	11	1.25	
	, ,, ,		Total	5.51	
	Concrete	су	\$300.00	5.51	\$1,653.32
	Excavation and Backfill	cy	\$4.00	11.02	\$44.09
NODE	84815 Concrete Wir				
	Quantity	Height	Width	cu yd	
	Pipe 1		2 3		
	Pipe 2 0		0 0		
	Wing walls 2	3	5	1.11	
	Apron	5	4	0.74	
	Face (less pipe opening	3	4	0.22	
			Total	2.07	
	Concrete	су	\$300.00	2.07	\$622.22
	Excavation and Backfill	су	\$4.00	4.15	\$16.59
CONDUIT	263 Replace with		3 X 2	RCB	
00.12011	3' x 2' L x W RCP	LF	\$215.00	132	\$28,380.00
	Frontage Rd. entrance	Width	Length	sq ft	Ψ20,300.00
	Cross Street	20	80	1600	
			\$38.00	178	60 755 50
	2-lane, Asphalt, w/ C&G	sy			\$6,755.56
NODE	Structural Removal and F 84816 Junction Stru		ent	20 Percent	\$7,154.87
NODE	84816 Junction Stru		¢2 250 00	4	£2.250.00
CONDUIT	2891 Install culvert	ea	\$2,350.00 3 X 2	RCB	\$2,350.00
COMDON			4044444444444444444444444444		£47.000.00
NODE		LF	\$215.00	220	\$47,300.00
NODE	84806 Junction Stru		CE OED DO	24	AF OF 0 00
COMPUNE	000 D. I	ea	\$5,250.00	1	\$5,250.00
CONDUIT	259 Replace with		3 X 2	RCB	
	3' x 2' L x W RCP	LF	\$215.00	72	\$15,480.00
	Structural Removal and F		ent	20 Percent	\$4,146.00
NODE	84808 Junction Stru	cture			9500 F 55
		ea	\$2,350.00	1	\$2,350.00
CONDUIT	260 Replace with		3 X 2	RCB	1024 1006V, 107667446 177664
	3' x 2' L x W RCP	LF	\$215.00	72	\$15,480.00
	Saint Mary Street	Width	Length	sq ft	
	Cross Street	20	40	800	
	2-lane, Asphalt, w/ C&G	sy	\$38.00	89	\$3,377.78
	Structural Removal and F	Replacem	ent	20 Percent	\$4,241.56
NODE	84807 Concrete Wir				
	Quantity	Height	Width	cu yd	
	Pipe 1 1		2 3	RCB	
	Pipe 2		0 0	88	
	Wing walls 2	3	5	1.11	
	Apron	5	4	0.74	
	Face (less pipe opening	3	4		
	ace (less hipe opening	3		0.22	
	Concrete		Total	2.07	0000 00
	Concrete	су	\$300.00	2.07	\$622.22
	Excavation and Backfill	су	\$4.00	4.15	\$16.59
NODE	84795 Concrete Wir	ad walla o	Apron		
NODE	84795 Concrete Wir	ig walls 6	Ahioii		

ITEM	ITEM		UNIT		TOTAL
No	DESCRIPTION	UNIT	COST	QUANTITY	COST
	Quantity	Height	Width	cu yd	
	Pipe 1 1 1 1	2 2			
	Wing walls 2	3	5	1.11	
	Apron	5	6	1.11	
	Face (less pipe opening	3	6	0.40	
	dee (less pipe opening	J	Total	2.62	
	Concrete	су	\$300.00	2.62	\$787.32
	Excavation and Backfill	су	\$4.00	5.25	\$21.00
CONDUIT	250 Parallel pipe	added	2 X 2	RCB	
	2' x 2' L x W RCP	LF	\$180.00	42	\$7,560.00
	Wilson Ave.	Width	Length	sq ft	
	Cross Street	20	20	400	
	2-lane, Asphalt, w/ C&G	sy	\$38.00	44	\$1,688.89
NODE	84794 Concrete Wir		Apron		
	Quantity	Height	Width	cu yd	
	Pipe 1	2			
	Pipe 2	2	2		
	Wing walls 2	3	5	1.11	
	Apron	5	6	1.11	
	Face (less pipe opening	3	6	0.40	
		-	Total	2.62	
	Concrete	су	\$300.00	2.62	\$787.32
	Excavation and Backfill	су	\$4.00	5.25	\$21.00
NODE	84793 Concrete Wir	ng walls &	Apron		
	Quantity	Height	Width	cu yd	
	Pipe 1 1	2			
	Pipe 2	1.75			
	Wing walls 2	3	5	1.11	
	Apron	5	5.75	1.06	
	Face (less pipe opening	3	5.75	0.43	
			Total	2.61	
	Concrete	су	\$300.00	2.61	\$782.81
	Excavation and Backfill	су	\$4.00	5.22	\$20.88
CONDUIT	249 Parallel pipe			RCP	
	21 inch RCP	LF	\$37.00	33	\$1,221.00
	Wilson Ave.	Width	Length	sq ft	
	Cross Street	20	20	400	
NODE	2-lane, Asphalt, w/ C&G	sy	\$38.00	44	\$1,688.89
NODE	84802 Concrete Wir				
	Quantity	Height	Width	cu yd	
	Pipe 1 1	2			
	Pipe 2	1.75			
	Wing walls 2	3	5 5 7 5	1.11	
	Apron	5	5.75	1.06	
	Face (less pipe opening	3	5.75	0.43	
	C		Total	2.61	0700
	Concrete	су	\$300.00	2.61	\$782.81
	Excavation and Backfill	су	\$4.00	5.22	\$20.88

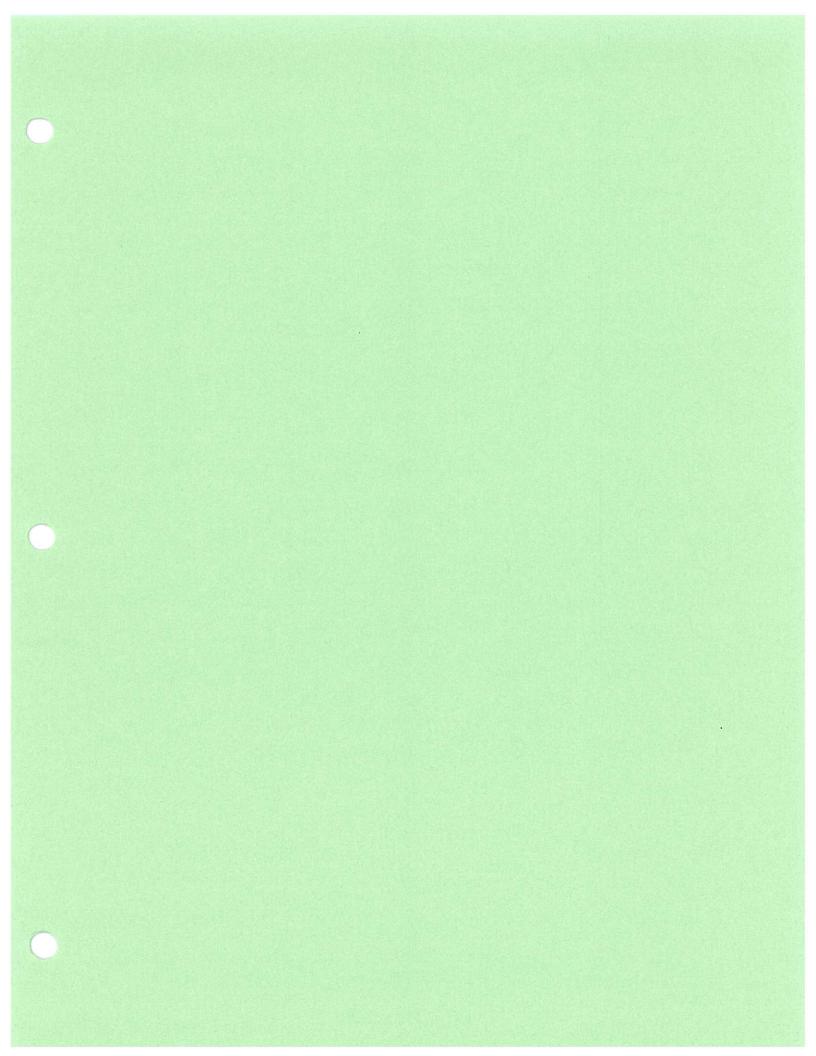
ITEM	ITEM		UNIT		TOTAL
No	DESCRIPTION	UNIT	COST	QUANTITY	COST
NODE	85825 Concrete Wir			au vid	
	Quantity Pipe 1 1	Height	Width	cu yd RCP	
	Pipe 2	2			
	Wing walls 2	4	. 5	1.48	
	Apron	5	7	1.30	
	Face (less pipe opening	4	7	0.66	
			Total	3.44	
	Concrete	су	\$300.00	3.44	\$1,031.00
	Excavation and Backfill	су	\$4.00	6.87	\$27.49
CONDUIT	886 Parallel pipe			RCP	01.011.00
	24 inch RCP	LF	\$42.00	32	\$1,344.00
	Alley Cross Street	Width 20	Length 15	sq ft	
	2-lane, Gravel	sy	\$14.00	300	\$466.67
NODE	85826 Concrete Wir				Ψ+00.07
,,,,,,,	Quantity	Height	Width	cu yd	
	Pipe 1 1				
	Pipe 2	- 2		O(1)	
	Wing walls 2	4	5	1.48	
	Apron	5	7	1.30	
	Face (less pipe opening	4	7	0.66	
			Total	3.44	·u
	Concrete	су	\$300.00	3.44	\$1,031.00
	Excavation and Backfill	су	\$4.00	6.87	\$27.49
NODE	84791 Junction Stru	icture			
NODE	gara surretion out	ea	\$5,250.00	1	\$5,250.00
CONDUIT	304 Parallel pipe	and the second s	2 X 2	RCB	Ψ0,200.00
	2'x2' LxWRCP	LF	\$180.00	273	\$49,140.00
	Limit Street	Width	Length	sq ft	65/(0.47.00.16* (1.07. No.00.00.00 (1.04.00.00)
	Parallel Street	20	273	5460	
	4-lane, Asphalt, w/ C&G	sy	\$44.00	607	\$26,693.33
NODE	84897 Junction Stru	ıcture		Y**	
COMPUIT	#### D II - I - I - I	ea	\$2,350.00	1	\$2,350.00
CONDUIT	1756 Parallel pipe			RCP	£4.4.40C.00
	24 inch RCP Limit Street	LF Width	\$42.00 Length	343	\$14,406.00
	Parallel Street	20	343	sq ft 6860	
	4-lane, Asphalt, w/ C&G	sy	\$44.00	762	\$33,537.78
NODE	84899 Junction Stru		Ψ11.00	702	φου,σογ.γο
		ea	\$2,350.00	1	\$2,350.00
CONDUIT	308 Parallel pipe			RCP	
	24 inch RCP	LF	\$42.00	307	\$12,894.00
	Limit Street	Width	Length	sq ft	
	Parallel Street	20	307	6140	
-	4-lane, Asphalt, w/ C&G	sy	\$44.00	682	\$30,017.78
NODE	84902 Junction Stru				
0015111		ea	\$2,350.00	1	\$2,350.00
CONDUIT	1442 Parallel pipe		200000000000000000000000000000000000000	RCP	CE OC 4 OC
	24 inch RCP	LF Width	\$42.00	142	\$5,964.00
	Limit Street Parallel Street	Width 20	Length 142	sq ft	
	4-lane, Asphalt, w/ C&G		\$44.00	2840 316	\$13,884.44
	-lane, Asphall, W/ CaG	sy	Ψ++.00	310	φ13,004.44

ITEM No	ITEM DESCRIPTION	UNIT	UNIT COST	QUANTITY	TOTAL COST
NODE	84903 Junction Stru	cture			
		ea	\$2,350.00	1	\$2,350.00
CONDUIT	309 Parallel pipe	added	2	RCP	
	24 inch RCP	LF	\$42.00	181	\$7,602.00
	Limit Street	Width	Length	sq ft	
	Parallel Street	20	181	3620	
	4-lane, Asphalt, w/ C&G	sy	\$44.00	402	\$17,697.78
NODE	84904 Junction Stru	cture	-		
		ea	\$5,250.00	1	\$5,250.00

SUBTOTAL \$846,434.81

20% Contingency \$1,015,721.77

20% Engineering, legal and administrative \$1,218,866.12



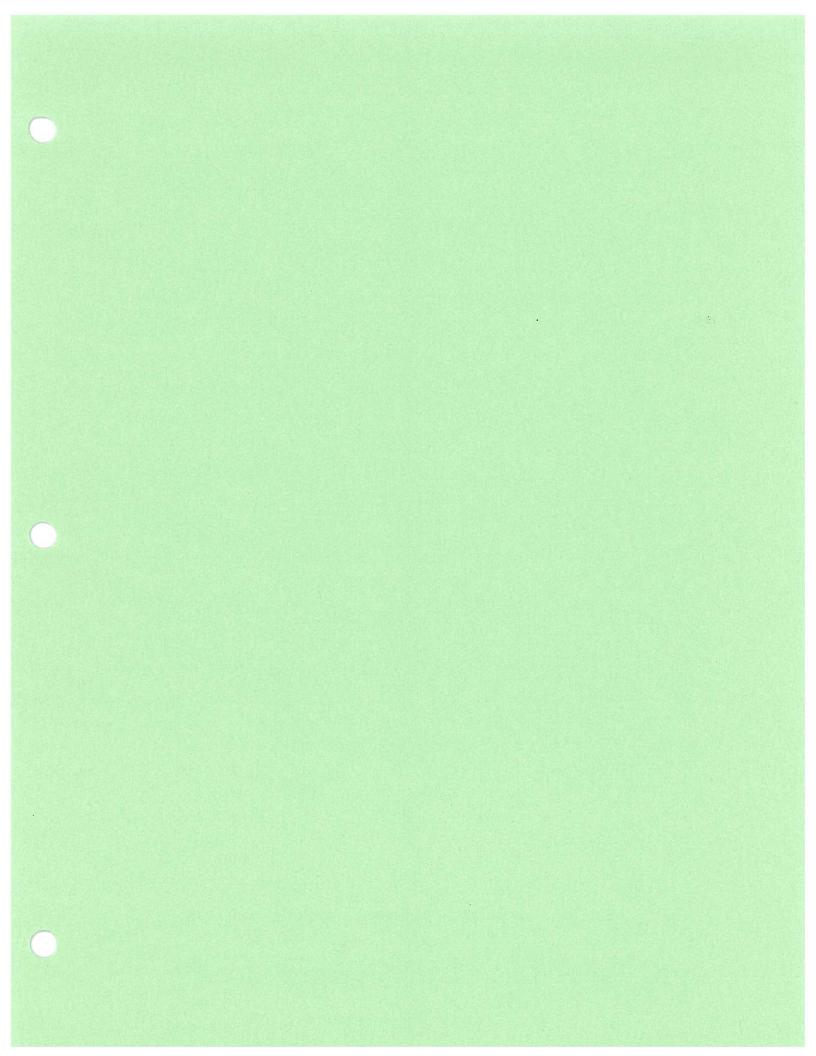
	PRELIMINARY COST ESTIMAT	E		DATE:	11/12/9
ROJECT:	LEAVENWORTH, KANSAS STORMWATER MASTER PLAN			EST:	VLD
NGINEER	BLACK & VEATCI!			CHCKD:	JWH
LEMENT#	5 MILE CREEK - 3 R			7	
	DESCRIPTION	QUANT.	UNIT	U. PRICE	AMOUNT
A.3.3	Pipe and Inlet (Enclosed) System- 15 inch RCP	178	LF	\$25.00	\$4.45
A.3.6	Pipe and Inlet (Enclosed) System- 24 inch RCP	255	LF	\$42.00	\$10.71
A.3.7	Pipe and Inlet (Enclosed) System- 27 inch RCP	358	LF	\$47.00	\$16,82
A.5.1	Storm Sewer Manholes < 6ft Diameter	5	ea	\$2,350.00	\$11,75
C.3.2.1	Concrete - Wing walls and apron	3	cy	\$300.00	\$92
B.1	Excavation and Backfill	6	cy	\$4.00	
F.2.3	Street Removal - 4-lane, Aspalt, w/ C&G	1759	sy	\$9.00	\$15,83
F.3.4.3	Street Replacement, 4-lane, Asphalt w/ C&G	1759	sy	\$35.00	\$61.50
				TOTAL =	\$122,0
CONTING	ENCY	20 PE	RCENT		\$24,4
				SUB TOTAL =	\$146.5
ENGINEER	RING, LEGAL AND ADMINISTRATIVE	20 PE	RCENT		\$29,3

ITEM No	ITEM DESCRIPTION	UNIT	UNIT COST	QUANTITY	TOTAL COST
	3 R 5 Mile Creek			QU/IIIIII	
NODE	BEATE L				
NODE	85845 Junction Stru	ea	\$2,350.00	1	\$2,350.00
CONDUIT	893 Parallel pipe			RCP	Ψ2,330.00
	15 inch RCP	LF	\$25.00	88	\$2,200.00
	4 th Avenue	Width	Length	sq ft	
	Parallel Street	20	88	1760	
NODE	4-lane, Asphalt, w/ C&G	sy	\$44.00	196	\$8,604.44
NODE	85847 Junction Stru		¢2 250 00	4	#2 250 00
CONDUIT	2037 Parallel pipe	ea	\$2,350.00	RCP	\$2,350.00
COMBON	15 inch RCP	LF	\$25.00	90	\$2,250.00
	4 th Avenue	Width	Length	sq ft	Ψ2,230.00
	Parallel Street	20	90	1800	
	4-lane, Asphalt, w/ C&G	sy	\$44.00	200	\$8,800.00
NODE	85848 Junction Stru	cture			
		ea	\$2,350.00	1	\$2,350.00
CONDUIT	894 Parallel pipe			RCP	
	24 inch RCP	LF	\$42.00	255	\$10,710.00
	4 th Avenue	Width	Length	sq ft	
	Parallel Street	20	255	5100	004 000 00
NODE	4-lane, Asphalt, w/ C&G 85850 Junction Stru	sy	\$44.00	567	\$24,933.33
NODE	asese sunction stru	ea	\$2,350.00	1	¢2.250.00
CONDUIT	2038 Parallel pipe	10115107	2.25		\$2,350.00
30113011	27 inch RCP	LF	\$47.00	88	\$4,136.00
	4 th Avenue	Width	Length	sq ft	Ψ+,150.00
	Parallel Street	20	88	1760	
	4-lane, Asphalt, w/ C&G	sy	\$44.00	196	\$8,604.44
NODE	86466 Junction Stru	cture			
		ea	\$2,350.00	1	\$2,350.00
CONDUIT	2280 Parallel pipe		2.25		
	27 inch RCP	LF	\$47.00	270	\$12,690.00
	4 th Avenue	Width	Length	sq ft	
	Parallel Street 4-lane, Asphalt, w/ C&G	20	270	5400	#00.400.00
NODE	85855 Concrete Wir	Sy walls &	\$44.00	600	\$26,400.00
NODE	Quantity	Height	Width	cu yd	
	Pipe 1 #	2.2			
	Pipe 2	2.5		S. Committee of the com	
	Wing walls 2	3.5	5	1.30	
	Apron	5	6.75	1.25	
	Face (less pipe opening	3.5	6.75	0.55	
			Total Area	3.09	
	Concrete	су	\$300.00	3.09	\$927.67
	Excavation and Backfill	су	\$4.00	6.18	\$24.74
				=	

SUBTOTAL \$122,030.63

20% Contingency \$146,436.75

20% Engineering, legal and administrative \$175,724.11



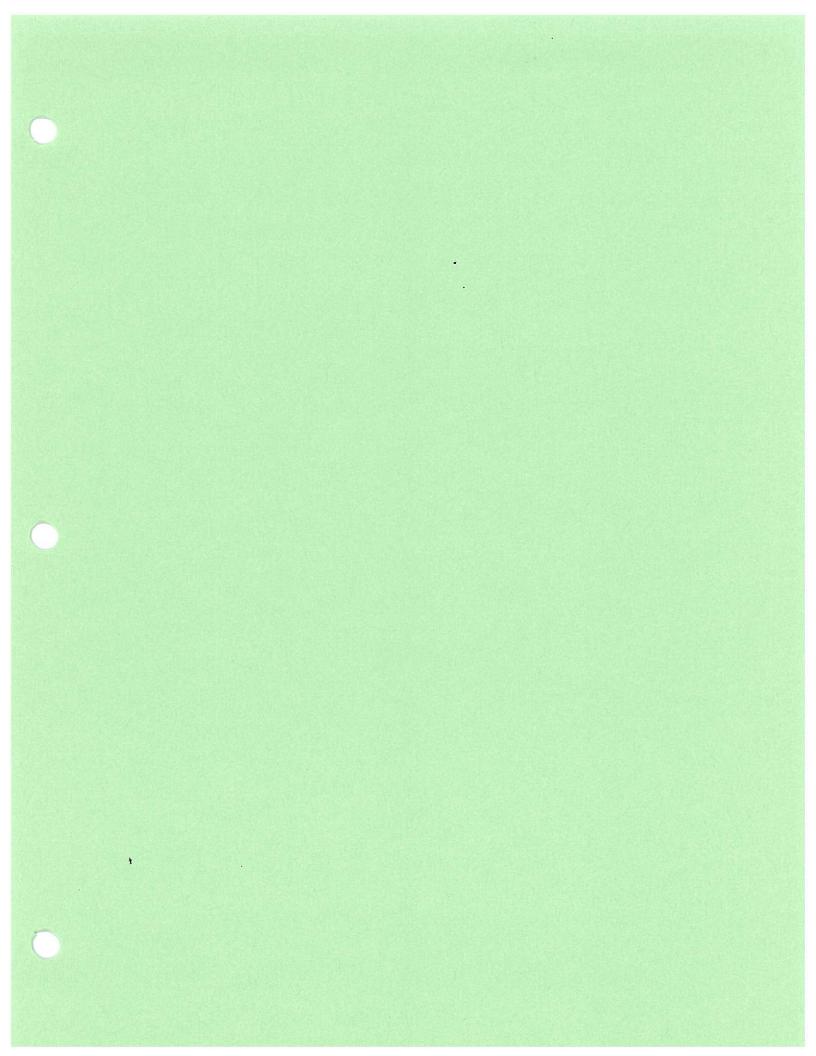
	PRELIMINARY COST ESTIMAT	CE .		DATE:	11/12/9
PROJECT:	LEAVENWORTH, KANSAS STORMWATER MASTER PLAN			EST:	VLD
ENGINEER	BLACK & VEATCH			CHCKD:	JWH
ELEMENT#	5 MILE CREEK - 4 R				
	DESCRIPTION	QUANT.	UNIT	U. PRICE	AMOUNT
A.3.13	Pipe and Inlet (Enclosed) System- 60 inch RCP	574	LF	\$200.00	\$114.80
A.3.15	Pipe and Inlet (Enclosed) System - 72 inch RCP	267	LF	\$250.00	\$66.75
A.5.2	Storm Sewer Manholes > 6ft Diameter	4	ea	\$5.250.00	\$21.00
C.3.2.1	Concrete - Wing walls and apron		cy	\$300.00	\$1.5
B.1	Excavation and Backfill	10	cy	\$4.00	54
F.2.3	Street Removal - 4-lane, Aspalt, w/ C&G	242	sy	\$9.00	\$2.17
F.3.4.3	Street Replacement, 4-lane, Asphalt w/ C&G	242	sy	\$35.00	\$8,47
	Parking lot removal	222	sy	\$9.00	\$2.00
	Parking lot replacement	222	sy	\$27.00	\$6.00
	Structural Replacement				\$44,55
					n-
	,				
			-		
				TOTAL -	\$267.2
CONTINGE	ENCY	20 PE	RCENT	TOTAL =	\$53,4
				SUB TOTAL =	\$320,7
ENGINEER	RING, LEGAL AND ADMINISTRATIVE	20 PE	RCENT		\$64,15
				TOTAL =	\$384,9

ITEM No	ITEM DESCRIPTION	UNIT	UNIT COST	QUANTITY	TOTAL COST
Subsystem	1 4尺 5 Mile Creek			<u> </u>	
NODE	84876 Junction Struc	cture			
		ea	\$5,250.00	1	\$5,250.00
CONDUIT	845 Replace Pipe			RCP	
	60 inch RCP	LF	\$200.00	339	\$67,800.00
		Width	Length	sq ft	
	Parallel Street	20	60	1200	
	4-lane, Asphalt, w/ C&G	sy	\$44.00	133	\$5,866.67
	_	Width	Length	sq ft	
	Parking Lot	20	100	2000	
NODE-	Parking Lot Remove/Re	sy	\$36.00	222	\$8,000.00
NODE	85738 Replace Pipe				
COMPLUE		ea	\$5,250.00	1	\$5,250.00
CONDUIT	1479 Parallel pipe a			RCP	
NODE	60 inch RCP	LF	\$200.00	186	\$37,200.00
NODE	85739 Junction Struc		N2004-100-100-100-100-100-100-100-100-100-		
COMPUT		ea	\$5,250.00	1	\$5,250.00
CONDUIT	847 Replace Pipe			RCP	
	60 inch RCP	LF	\$200.00	49	\$9,800.00
	D 11.00	Width	Length	sq ft	
	Parallel Street	20	49	980	
NODE	4-lane, Asphalt, w/ C&G	sy	\$44.00	109	\$4,791.11
NODE	85740 Junction Struc	ture			
COMPUIT		ea	\$5,250.00	1	\$5,250.00
CONDUIT	853 Replace Pipe	2 ==		RCP	
NODE	72 inch RCP	LF	\$250.00	267	\$66,750.00
NODE	93328 Concrete Wing				
	Quantity	Height	Width	cu yd	
	Pipe 1 1	6	6	RCP	
	Pipe 2 1	_ 0	0		
	Wing walls 2	7	5	2.59	
	Apron	5	8	1.48	
	Face (less pipe opening	7	_ 8	1.03	
	0 - 1		Total Area	5.10	
	Concrete	су	\$300.00	5.10	\$1,530.29
	Excavation and Backfill	су	\$4.00	10.20	\$40.81
	Strucural Replacement			20 Percent	\$44,555.77

SUBTOTAL \$267,334.64

20% Contingency \$320,801.57

20% Engineering, legal and administrative \$384,961.89



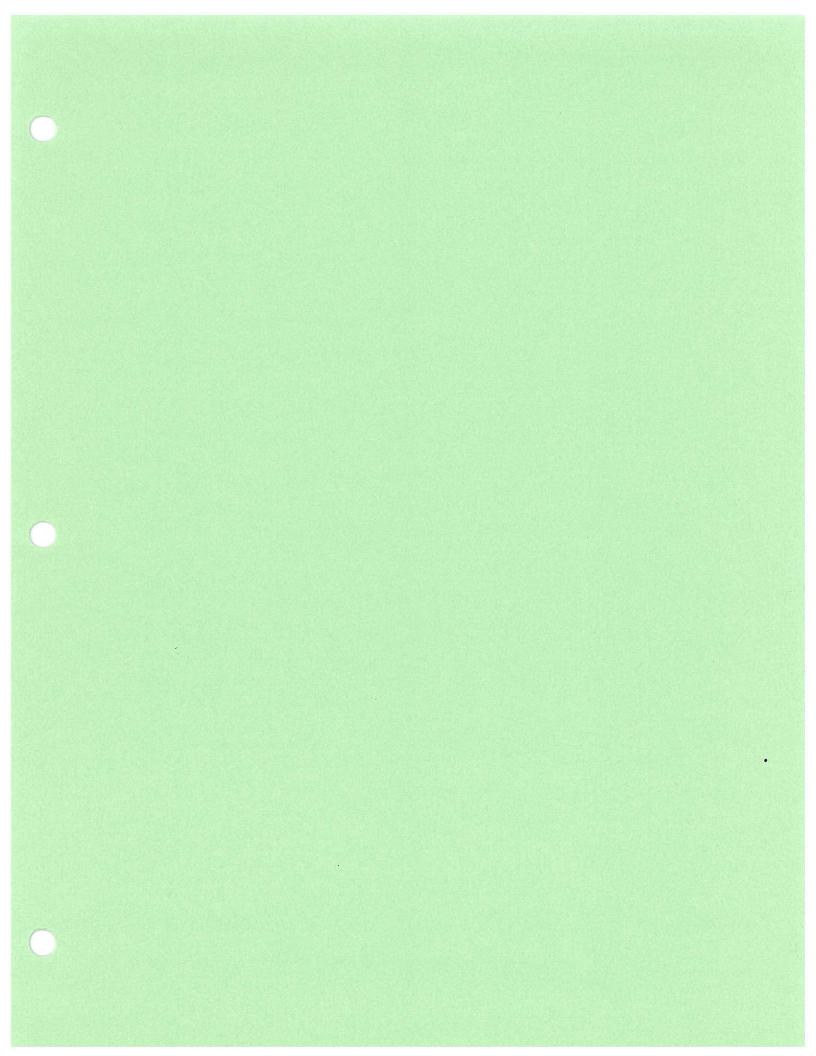
	PRELIMINARY COST ESTIMATE			DATE:	11/12/96
PROJECT:	LEAVENWORTH, KANSAS STORMWATER MASTER PLAN			EST:	VLD
ENGINEER	NGINEER BLACK & VEATCH				JWH
ELEMENT#	5 MILE CREEK - 5 R				
	DESCRIPTION	QUANT.	UNIT	U. PRICE	AMOUNT
A.3.3	Pipe and Inlet (Enclosed) System- 15 inch RCP	35	LF	\$25.00	\$875
A.3.7	Pipe and Inlet (Enclosed) System- 27 inch RCP	297	LF	\$47.00	\$13,959
A.3.8	Pipe and Inlet (Enclosed) System- 30 inch RCP	185	LF	\$52.00	\$9,620
A.3.9	Pipe and Inlet (Enclosed) System- 36 inch RCP	50	LF	\$66.00	\$3,300
A.2.1	Storm Sewer Curb Inlet	4	ea	\$775.00	\$3,100
C.3.2.1	Concrete - Wing walls and apron	4	cy	\$300.00	\$1.086
B.1	Excavation and Backfill	7	cy.	\$4.00	\$29
F.2.2	Street Removal - 2-lane, Aspalt, w/ C&G	469	sy	\$8.00	\$3.752
F.3.4.2	Street Replacement, 2-lane. Asphalt w/ C&G	469	sy	\$30.00	\$14.070
F.2.3	Street Removal - 4-lane. Aspalt, w/ C&G	660	sy	\$9.00	\$5,940
F.3.4.3	Street Replacement, 4-lane, Asphalt w/ C&G	660	sy	\$35.00	\$23,100
A.5.1	Storm Sewer Manholes < 6ft Diameter	2	ea	\$2.350.00	\$4.700
				TOTAL =	\$83,53
CONTING	ENCY	20 PE	RCENT		\$16,70
				SUB TOTAL =	\$100,23
ENGINEER	RING, LEGAL AND ADMINISTRATIVE	20 PI	ERCENT		\$20,04
				TOTAL =	\$120,28

ITEM	ITEM		UNIT		TOTAL
No	DESCRIPTION	UNIT	COST	QUANTITY	COST
Subsystem	5 R 5 Mile Creek				
NODE	Inlet Structure				
NOBL	inlet Structure	ea	\$775.00	2	\$1,550.00
CONDUIT	170 Replace Pipe			RCP	Ψ1,000.00
	27 inch RCP	LF	\$47.00	297	\$13,959.00
		Width	Length	sq ft	
	Parallel Street	20	297	5940	
	4-lane, Asphalt, w/ C&G	sy	\$44.00	660	\$29,040.00
NODE	Inlet Structure	S			
:		ea	\$775.00	2	\$1,550.00
CONDUIT	170 Replace Pipe			RCP	
	15 inch RCP	LF	\$25.00	35	\$875.00
		Width	Length	sq ft	
	Parallel Street	15	35	525	
	2-lane, Asphalt, w/ C&G	sy	\$38.00	58	\$2,216.67
NODE	92517 Junction Struc	ture			
		ea	\$2,350.00	1	\$2,350.00
CONDUIT	1481 Replace Pipe			RCP	
	30 inch RCP	LF	\$52.00	185	\$9,620.00
		Width	Length	sq ft	
	Parallel Street	20	185	3700	
None	2-lane, Asphalt, w/ C&G	sy	\$38.00	411	\$15,622.22
NODE	92516 Junction Struc		00 050 00		
CONDUIT	*CCE Poplace Dine	ea	\$2,350.00	1	\$2,350.00
CONDON	1665 Replace Pipe 36 inch RCP	LF	\$66.00	RCP 50	¢2 200 00
NODE	93328 Concrete Wing			<u> </u>	\$3,300.00
	Quantity	Height	Width	cu yd	
	Pipe 1 1	3			
	Pipe 2	3			
	Wing walls 2	4	5	1.48	
	Apron	5	8	1.48	
	Face (less pipe opening	4	8	0.66	
			Total Area	3.62	
	Concrete	су	\$300.00	3.62	\$1,087.36
	Excavation and Backfill	су	\$4.00	7.25	\$29.00
				=	

SUBTOTAL \$83,549.25

20% Contingency \$100,259.10

20% Engineering, legal and administrative \$120,310.92

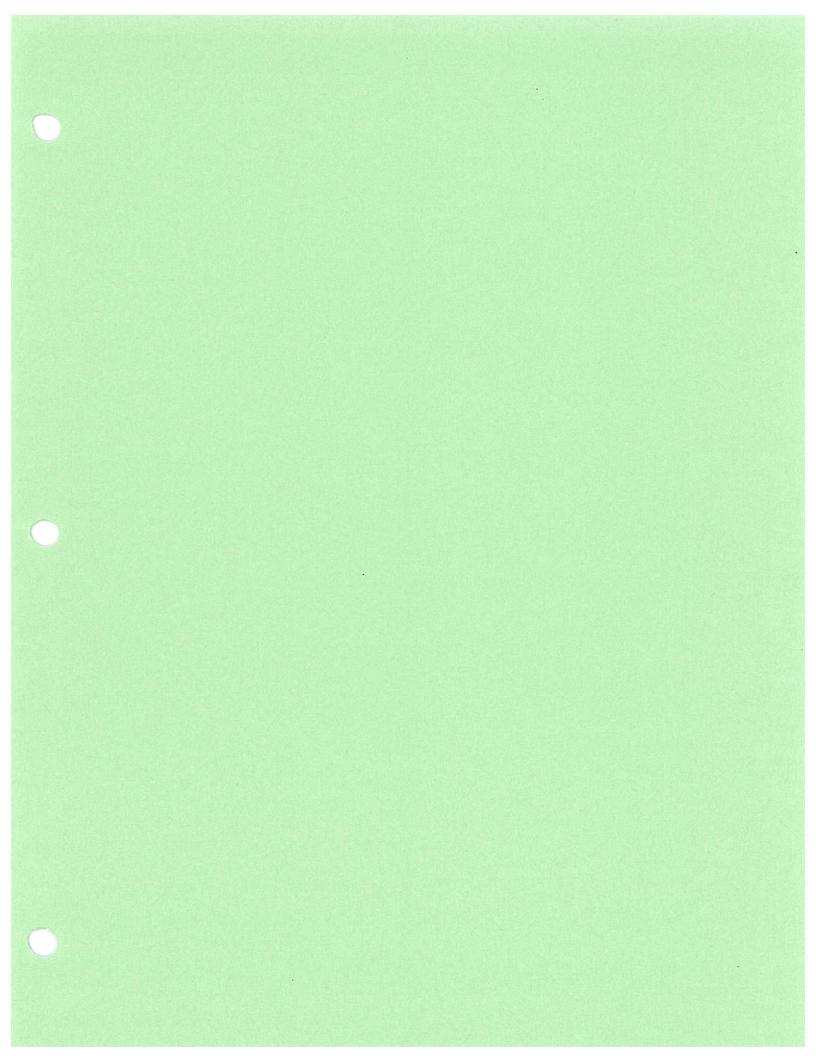


	PRELIMINARY COST ESTIMA	ΓE		DATE:	11/12/96
ROJECT:	LEAVENWORTH, KANSAS STORMWATER MASTER PLAN			EST:	VLD
NGINEER BLACK & VEATCH				CHCKD:	JLF
LEMENT#	5 MILE CREEK - 6 R				
	DESCRIPTION	QUANT.	UNIT	U. PRICE	AMOUNT
A.3.8	Pipe and Inlet (Enclosed) System- 30 inch RCP	204	LF	\$52.00	\$10,60
A.5.2	Storm Sewer Manholes > 6ft Diameter	1	ea	\$5,250.00	\$5,25
C.3.2.1	Concrete - Wing walls and apron	7	cy	\$300.00	\$2,00
B.1	Excavation and Backfill	13	cy	\$4.00	\$5
F.2.2	Street Removal - 2-lane, Aspalt, w/ C&G	44	sy	\$8.00	\$35
F.3.4.2	Street Replacement, 2-lane, Asphalt w/ C&G	44	sy	\$30.00	\$1,32
					212
CONTING	ENCY	20 PE	RCENT	TOTAL =	\$19,5 \$3,9
				SUB TOTAL =	\$23,50
ENGINEER	RING, LEGAL AND ADMINISTRATIVE	20 PE	RCENT		\$4,70
				TOTAL =	\$28,20

ITEM No	ITEM DESCRIPTION	UNIT	UNIT COST	QUANTITY	TOTAL COST
Subsystem	6 R 5 Mile Creek	0,111	0001	Q0/((1111)	0001
NODE	D4744 C 100				
NODE	84741 Concrete Win				
	Quantity	Height	Width	cu yd	
	Pipe 1 1	2.5	2.5	20	
	Pipe 2 1	2.5	2.5		
	Wing walls 2	3.5	5	1.30	
	Apron	5	7	1.30	
	Face (less pipe opening	3.5	7	0.54	
			Total Area	3.14	
	Concrete	су	\$300.00	3.14	\$940.92
	Excavation and Backfill	су	\$4.00	6.27	\$25.09
CONDUIT	196 Parallel pipe	added	2.5	RCP	
	30 inch RCP	LF	\$52.00	58.38	\$3,035.76
	Lakeview Drive	Width	Length	sq ft	*-1
	Street Crossing	20	20	400	
	2-lane, Asphalt, w/ C&G	sy	\$38.00	44	\$1,688.89
NODE	84740 Junction Stru			•	Ψ1,000.00
		ea	\$5,250.00	1	\$5,250.00
CONDUIT	197 Parallel pipe	added		RCP	
	30 inch RCP	LF	\$52.00	145.54	\$7,568.08
NODE	92524 Concrete Wir	o walls & A	Apron		Ψ1,000.00
	Quantity	Height	Width	cu yd	
	Pipe 1 1	3	3		
	Pipe 2 1	2.5	2.5		
	Wing walls 2	4	5	1.48	
	Apron	5	7.5	1.39	
	Face (less pipe opening	4	7.5	0.67	
	dec (less pipe opening	7	Total Area		
	Concrete	0)/		3.54	04.004.00
	Excavation and Backfill	су	\$300.00	3.54	\$1,061.36
	Excavation and backilli	су	\$4.00	7.08	\$28.30
				=	
				SUBTOTAL	£10 E09 40
				GODIOTAL	\$19,598.40
			20% C	ontingency	\$23,518.08

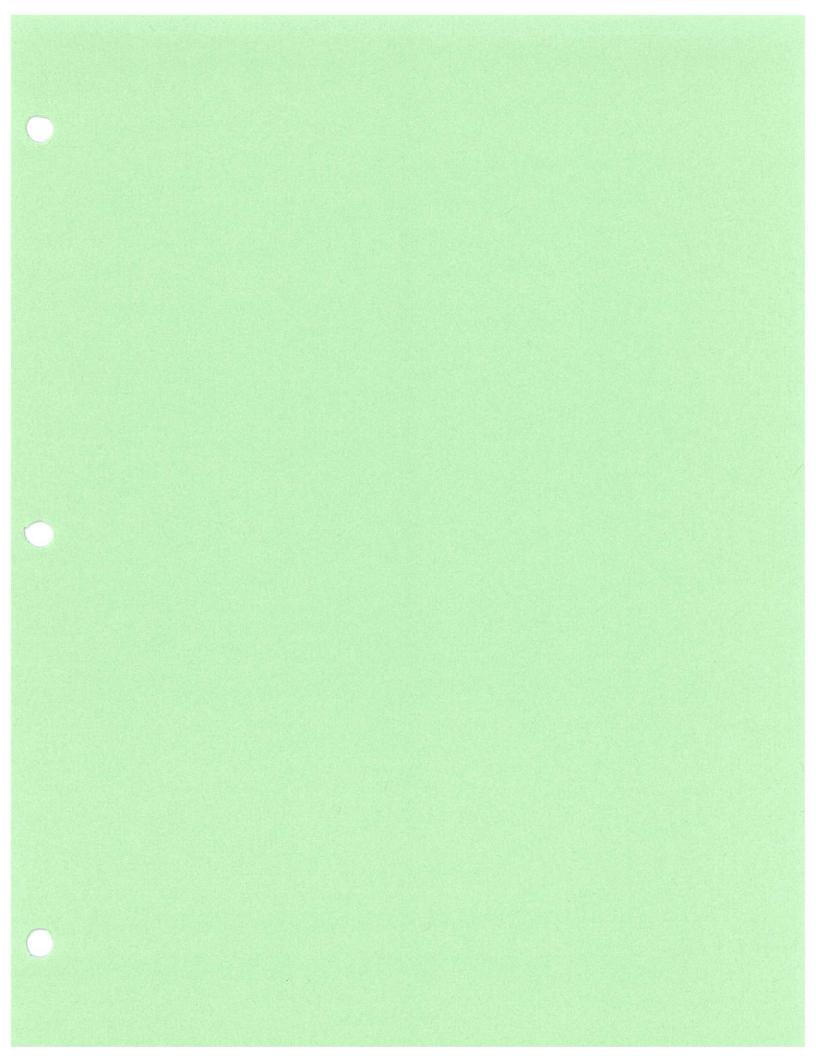
20% Engineering, legal and administrative

\$28,221.70



	PRELIMINARY COST ESTIMAT	E		DATE:	11/12/
PROJECT:	LEAVENWORTH. KANSAS STORMWATER MASTER PLAN			EST:	VLD
ENGINEER	BLACK & VEATCH			CHCKD:	JWH
ELEMENT#	5 MILE CREEK - 7 R			T	
	DESCRIPTION	QUANT.	UNIT	U. PRICE	AMOUNT
A.3,4	Pipe and Inlet (Enclosed) System- 18 inch RCP	100	LF	\$34.00	\$3.4
A.3.12	Pipe and Inlet (Enclosed) System- 54 inch RCP	70	LF	\$135.00	\$9.4
Λ.5.1	Storm Sewer Manholes < 6ft Diameter	2	ea	\$2.350.00	\$4.7
A.5.2	Storm Sewer Manholes > 6ft Diameter	2	ea	\$5,250.00	\$10.5
F.2.2	Street Removal - 2-lane, Aspalt, w/ C&G	233	sy	\$8.00	\$1.8
F.3.4.2	Street Replacement, 2-lane. Asphalt w/ C&G	233	sy	\$30.00	\$6,9
F.1.3	Driveway and Sidewalk removal	33	sy	\$9.00	\$3
F.3.3	Driveway and Sidewalk replacement	33	sy	\$27.00	\$9
		-			
				TOTAL =	\$38,1
CONTING	ENCY	20 PE	RCENT		\$7,6
ENGINEER	DING LEGAL AND ADMINISTRATIVE			SUB TOTAL =	\$45,7
ENGINEER	RING, LEGAL AND ADMINISTRATIVE	20 PE	RCENT		\$9,1
				TOTAL =	

ITEM No	ITEM DESCRIPTION	UNIT	UNIT COST	QUANTITY	TOTAL COST
Subsystem	7 R 5 Mile Creek				
NODE	92497 Junction Stru	cture			
		ea	\$5,250.00	1	\$5,250.00
CONDUIT	201 Parallel pipe			RCP	20 020 00
	18 inch RCP Deerfiels	LF	\$34.00	100	\$3,400.00
	Deerlieis	Width 20	Length 15	sq ft	
	Driveway	sy	\$36.00	300	\$1,200.00
NODE	84749 Junction Stru		Ψ00.00	- 55	Ψ1,200.00
		ea	\$5,250.00	1	\$5,250.00
					2 3
NODE	84722 Junction Stru	cturo			
	UTLES JUNCTION STU	ea	\$2,350.00	1	\$2,350.00
CONDUIT	221 Parallel pipe			RCP	Φ2,330.00
	54 inch RCP	LF	\$135.00	70	\$9,450.00
	Fawncreek	Width	Length	sq ft	,
	Parallel Street	30	70	2100	
NODE	2-lane, Asphalt, w/ C&G	sy	\$38.00	233	\$8,866.67
NODE	82501 Junction Struc			2	
		ea	\$2,350.00	1	\$2,350.00
				=	
				SUBTOTAL	\$38,116.67
			20% C	ontingency	\$45,740.00
	20% Eng	gineering,	legal and ad	ministrative	\$54,888.00



ROJECT:					11/12/9
	LEAVENWORTH, KANSAS STORMWATER MASTER PLAN			EST:	VLD
NGINEER	BLACK & VEATCH			CHCKD:	JLF
LEMENT#	5 MILE CREEK - 8 R				
	DESCRIPTION	QUANT.	UNIT	U. PRICE	AMOUNT
A.3.3	Pipe and Inlet (Enclosed) System - 15 inch RCP	136	LF	\$25.00	\$3,4
A.3.6	Pipe and Inlet (Enclosed) System- 24 inch RCP	250	LF	\$42.00	\$10.50
A.3.7	Pipe and Inlet (Enclosed) System- 27 inch RCP	900	LF	\$47.00	\$42.2
A.3.8	Pipe and Inlet (Enclosed) System- 30 inch RCP	713	L.F	\$52.00	\$37.0
A.3.9	Pipe and Inlet (Enclosed) System- 36 inch RCP	64	LF	\$66,00	\$4.2
B.3.2	Reinforced Concrete Box Culverts - 3.5 x 2	186	LF	\$245.00	\$45,6
A.2.2	Area inlet	2	ea	\$680.00	\$1.3
A.5.1	Storm Sewer Manholes < 6ft Diameter	2	ea	\$2,350.00	\$4.70
A.5.2	Storm Sewer Manholes > 6ft Diameter	15	ea	\$5,250.00	\$78.7
C.3.2.1	Concrete - Wing walls and apron	37	cy	\$300.00	\$10.9
B.1	Excavation and Backfill	73	cy	\$4.00	\$2
F.2.2	Street Removal - 2-lane, Aspalt, w/ C&G	611	sy	\$8.00	\$4,8
A COMPANY OF A STATE O	Street Replacement, 2-lane, Asphalt w/ C&G	611	sy	\$30.00	\$18,3
	Street Removal - 4-lane, Aspalt, w/ C&G	939	sy	\$9.00	\$8,4
Opposition of the last	Street Replacement, 4-lane, Asphalt w/ C&G	939	sy	\$35.00	\$32,8
		7,53		333,00	332,6
				-	
				-	
_					
				TOTAL =	\$303.7
CONTINGE	NCY	20 PEF	CENT		\$60,7
					0.00,7
				SUB TOTAL =	\$364,5
ENGINEERI	NG, LEGAL AND ADMINISTRATIVE	20 PE	RCENT		\$72,9
					J. 2,7

ITEM No	ITEM DESCRIPTION	UNIT	UNIT COST	QUANTITY	TOTAL COST
Subsyster	n 8R 5 Mile Creek	(
NODE	PARON Concrete W				
NODE	84591 Concrete Wi	Height			
	Pipe 1 1		Width 3 3	cu yd RCP	
	Pipe 2	3.			
	Wing walls 2	4.5	5	1.67	
	Apron	5	8.5	1.57	
	Face (less pipe opening	4.5	8.5	0.80	
			Total Area	4.04	
	Concrete	су	\$300.00	4.04	\$1,211.78
TO NEW	Excavation and Backfill	су	\$4.00	8.08	\$32.31
CONDUIT	manor pipo			RCP	
	36 inch RCP	LF	\$66.00	64	\$4,224.00
	Eisenhower	width	length	sq ft	
	Street Crossing	20	24	480	
NODE	4-lane, Asphalt, w/ C&G	Sy	\$44.00	53	\$2,346.67
NODE	84590 Concrete Wi				
	Pipe 1 1	Height	Width	cu yd	
	Pipe 2	3.5	3 3	RCP	
	Wing walls 2	4.5	5 3,5 5	RCP	
	Apron	5	8.5	1.67 1.57	
	Face (less pipe opening	4.5	8.5	0.80	
		10.0.00m	Total Area	4.04	
	Concrete	су	\$300.00	4.04	\$1,211.78
	Excavation and Backfill	сý	\$4.00	8.08	\$32.31
					732.01
2.2					
NODE	84593 Concrete Wir	ng walls &	Apron		
	Quantity	Height	Width	cu yd	
	Pipe 1	3		RCP	
	Pipe 2	1.25	310000000000000000000000000000000000000	RCP	
	Wing walls 2	4	5	1.48	
	Apron	5	6.25	1.16	
	Face (less pipe opening	4	6.25	0.62	
	Concrete		Total Area	3.26	
	Excavation and Backfill	cy	\$300.00	3.26	\$977.27
CONDUIT	88 Parallel pipe	cy	\$4.00 1.25 I	6.52	\$26.06
	15 inch RCP	LF	\$25.00	***********	£4 CE0 OD
	Eisenhower	width	length	sq ft	\$1,650.00
	Street Crossing	20	24	480	
Participation (1911)	4-lane, Asphalt, w/ C&G	sy	\$44.00	53	\$2,346.67
NODE	84592 Concrete Win	g walls &	Apron		Ψ2,540.07
	Quantity	Height	Width	cu yd	
	Pipe 1 1	3		RCP	
	Pipe 2 1	1.25	1.25	RCP	
	Wing walls 2	4	5	1.48	
	Apron	5	6.25	1.16	
	Face (less pipe opening	4	6.25	0.62	
			Total Area	3.26	
	Concrete	су	\$300.00	3.26	\$977.27
	Excavation and Backfill	су	\$4.00	6.52	\$26.06

ITEM	ITEM		UNIT		TOTAL
No NODE	DESCRIPTION	UNIT	COST	QUANTITY	COST
NODE	84595 Concrete W	ing walls	& Apron		
	Quantity	Height	THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS NAMED IN COLUMN TW	cu yd	
	Pipe 1		3 3	RCP	
	Pipe 2		2 2	RCP	
	Wing walls 2	4	5	1.48	
	Apron	5	7	1.30	
	Face (less pipe opening	4	_ 7	0.66	
	Concrete		Total Area	3.44]
	Excavation and Backfill	су	\$300.00	3.44	\$1,031.00
CONDUIT	Parallal and Backilli	су	\$4.00	6.87	\$27.49
CONDON				RCP	
	24 inch RCP Eisenhower	LF	\$42.00	69	\$2,898.00
	Street Crossing	width	length	sq ft	
	4-lane, Asphalt, w/ C&G	20	24	480	
NODE	84504 Constate W	sy	\$44.00	53	\$2,346.67
HODE	84594 Concrete Wi	ng walls d			,
	Quantity Pipe 1	Height	Width	cu yd	
	Pipe 2		3 3	RCP	
			2 2	RCP	
	Wing walls 2	4	5	1.48	
	Apron	5	7	1.30	
	Face (less pipe opening	4	_ 7 _	0.66	
	Concrete		Total Area	3.44	
	Excavation and Backfill	су	\$300.00	3.44	\$1,031.00
	Excavation and Backfill	су	\$4.00	6.87	\$27.49
NODE	94674 Constate Mi				
HODE	84621 Concrete Wir				
	Quantity Pipe 1	Height	Width	cu yd	
	Pipe 2		2 3	RCB	
	Wing walls 2	5-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1	2 2	RCP	
	Apron	3	5	1.11	
	Face (less pipe opening	5	7	1.30	
	i ace (less pipe opening	3	7 =	0.41	
	Concrete		Total Area	2.81	
		су	\$300.00	2.81	\$844.44
CONDUIT	Excavation and Backfill	cy	\$4.00	5.63	\$22.52
CONDON	104 Parallel box a			CB	
Ĭ	0 inch RCP Parkway Drive	LF	\$245.00	126.05	\$30,882.25
	Parallel Street	width	length	sq ft	
		14	126	1764.7	
NODE	2-lane, Asphalt, w/ C&G	sy	\$38.00	196	\$7,450.96
NODE	84622 Junction Struc				
CONDUIT	1647 Desell-11	ea	\$5,250.00	1	\$5,250.00
CONDON	1647 Parallel box a			CB	
Γ	0 inch RCP	LF	\$245.00	60.4	\$14,798.00
	Parkway Drive	width	length	sq ft	
	Street Crossing	20	28	560	
NODE	2-lane, Asphalt, w/ C&G	sy	\$38.00	62	\$2,364.44
NODE	84623 Junction Struc				
CONDUIT	*06.0	ea	\$5,250.00	1	\$5,250.00
CONDUIT	105 Parallel pipe a		2 R		
	24 inch RCP	_LF	\$42.00	181.08	\$7,605.36
,	Deselled Oteres	width	length	sq ft	ya 92
	Parallel Street	14	181	2534	
2	2-lane, Asphalt, w/ C&G	sy	\$38.00	282	\$10,699.11
					190 (190)

ITEM No	ITEM DESCRIPTION	UNIT	UNIT COST	QUANTITY	TOTAL COST
NODE	84624 Junction Str	ructure ea	\$5,250.00	1	\$5,250.00
NODE	84609 Junction Str	ucture ea	\$5,250.00	1	\$5,250.00
CONDUIT	97 Parallel pipe 27 inch RCP		2.25	RCP	
	10 th Ave Street Crossing	LF width 20	\$47.00 length 48	54 sq ft 960	\$2,538.00
NODE	4-lane, Asphalt, w/ C&G	sv	\$44.00	107	\$4,693.33
NODE	84608 Junction Str	ucture ea	\$5,250.00	1	TE 250.00
CONDUIT	Pipe	added	2.25	RCP	\$5,250.00
NODE	27 inch RCP 84612 Concrete W	LF	\$47.00	22	\$1,034.00
NODL	Quantity	Height	Width	cu yd	
	Pipe 1 1	2.9			
	Pipe 2	2.25	************	RCP	
	Wing walls 2 Apron	3.5	5	1.30	
	Face (less pipe opening	5 3.5	6.75 6.75	1.25	
	, are (rest pipe opening	5.5	Total Area	0.55 3.09	
	Concrete	су	\$300.00	3.09	\$927.67
	Excavation and Backfill	сý	\$4.00	6.18	\$24.74
NODE	84625 Junction Stru	ucture			
CONDUIT	109 Parallel pipe	ea	\$5,250.00	1	\$5,250.00
	27 inch RCP	LF	2.25 \$47.00	319.58	\$15,020.26
NODE	84628 Junction Stru	ucture	<u> </u>	0,0,00	Ψ13,020.20
		ea	\$5,250.00	1	\$5,250.00
NODE	92859 Area Inlet				
CONDUIT	3316 Parallel pipe	ea	\$680.00	1	\$680.00
COMBON	27 inch RCP	LF	2.25 \$47.00		PF F40 00
NODE	92857 Junction Stru		Ψ47.00	118	\$5,546.00
		ea	\$5,250.00	1	\$5,250.00
CONDUIT	3317 Parallel pipe		2.25	RCP	
	27 inch RCP Muncie	LF.	\$47.00	37	\$1,739.00
	Street Crossing	width 20	length	sq ft	
	4-lane, Asphalt, w/ C&G	sy	\$44.00	480 53	PO 040 07
NODE	92856 Junction Stru	cture	Ψ+4.00		\$2,346.67
CONDUIT		ea	\$5,250.00	1	\$5,250.00
CONDUIT	3318 Parallel pipe		2.25		
	27 inch RCP Muncie	LF	\$47.00	239	\$11,233.00
	Parallel	width 20	length 239	sq ft	
	4-lane, Asphalt, w/ C&G	sy	\$44.00	4780 531	£23 360 00
NODE	92854 Junction Stru	cture	Ψ-1-1.00	551	\$23,368.89
		ea	\$5,250.00	1	\$5,250.00

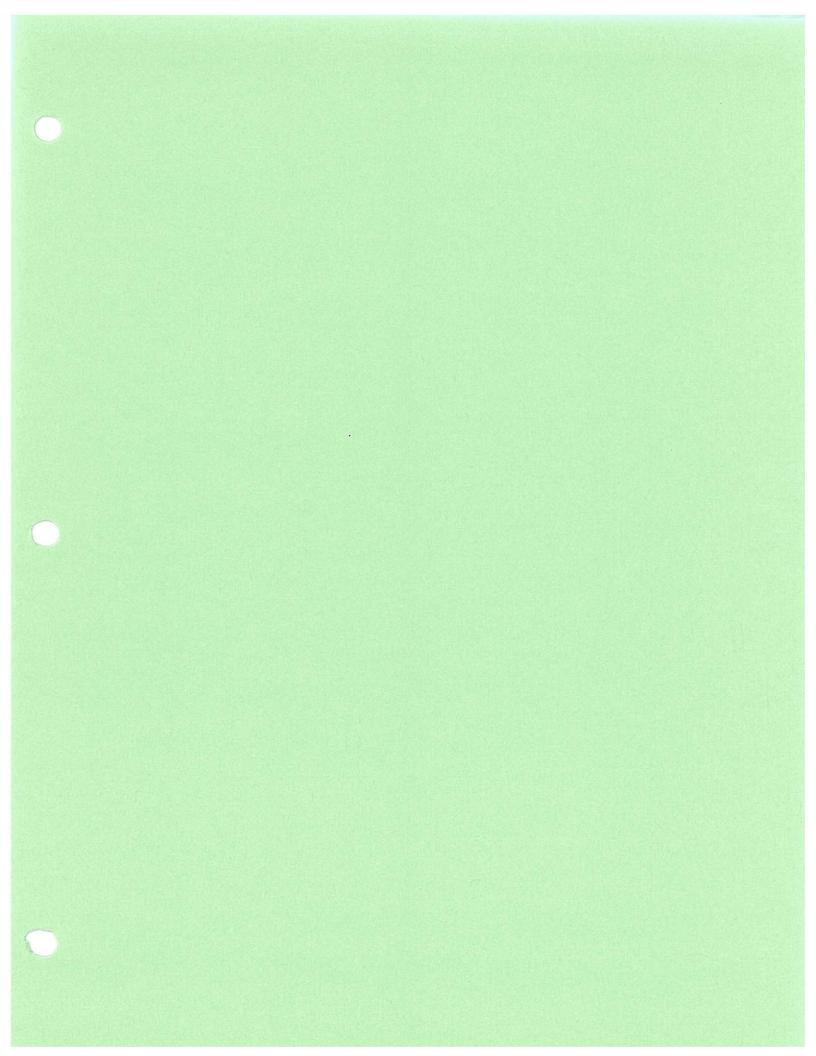
ITEM	ITEM		UNIT		TOTAL
No	DESCRIPTION	UNIT	COST	QUANTITY	COST
CONDUIT	3320 Parallel pipe	added		RCP	
	27 inch RCP	LF	\$47.00	110	\$5,170.00
	Muncie	width	length	sq ft	
	Parallel	20	40	800	
NODE	4-lane, Asphalt, w/ C&G	sy	\$44.00	89	\$3,911.11
NODE	92563 Concrete Wir Quantity				
	Pipe 1	Height 2.2		cu yd	
	Pipe 2		.5 2.5		
	Wing walls 2	3.5	.5 2.3	RCP 1.30	
	Apron	5	6.75	1.25	
	Face (less pipe opening	3.5	6.75	0.55	
			Total Area	3.09	
	Concrete	су	\$300.00	3.09	\$927.67
	Excavation and Backfill	сý	\$4.00	6.18	\$24.74
		#.//			Ψ= 1.1.1
NODE					
NODE	92855 Concrete Win	g walls			
	Quantity	Height	Width	cu yd	
	Pipe 1 1 1 Pipe 2 1	2.		RCP	
	Wing walls 2	2.		RCP	
	Apron	3.5 5	5	1.30	
	Face (less pipe opening	3.5	7	1.30	
	ace (less pipe opening	3.5	7	0.54	
	Concrete	су	Total Area \$300.00	3.14	0040.00
	Excavation and Backfill	су	\$4.00	3.14 6.27	\$940.92
CONDUIT	3319 Parallel pipe a	added		RCP	\$25.09
	30 inch RCP	LF	\$52.00	15	£780.00
			Ψ02.00	13	\$780.00
T:===					
NODE	92860 Area Inlet				
CONDUIT		ea	\$680.00	1	\$680.00
CONDUIT	3321 Parallel pipe a			RCP	
NODE	30 inch RCP	_ LF	\$52.00	114.87	\$5,973.24
NODE	92861 Junction Struc		05.055.55	-	1132-12-12-12-12-12-12-12-12-12-12-12-12-12
CONDUIT	3322 Parallel pipe a	ea	\$5,250.00	1	\$5,250.00
CONDON	30 inch RCP	LF	2.5	**********	
NODE	92862 Junction Struc		\$52.00	122.5	\$6,370.00
9	Carrollott Cital	ea	\$5,250.00	4	PF 050 00
CONDUIT	3323 Parallel pipe a		2.5	PCP	\$5,250.00
	30 inch RCP	LF	\$52.00	40	¢2 090 00
NODE	92863 Junction Struc		Ψ02.00	40	\$2,080.00
		ea	\$5,250.00	1	\$5,250.00
CONDUIT	3324 Parallel pipe a		2.5		Ψ5,230.00
	30 inch RCP	LF	\$52.00	31	\$1,612.00
	Parkway	width	length	sq ft	Ψ1,012.00
	Cross Street	20	32	640	
	2-lane, Asphalt, w/ C&G	sy	\$38.00	71	\$2,702.22
NODE	92864 Junction Struc	ture			
55N5U= 3		ea	\$5,250.00	1	\$5,250.00
CONDUIT	3325 Parallel pipe a		2.5	**********	
NODE	30 inch RCP	LF	\$52.00	89.5	\$4,654.00
NODE	92865 Junction Struct			32 3463 566 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	Secretary County
		ea	\$5,250.00	1	\$5,250.00

ITEM No CONDUIT	ITEM DESCRIPTION 3326 Parallel pipe			QUANTITY RCP	TOTAL COST
NODE	30 inch RCP	LF	\$52.00	300	\$15,600.00
NODE	92564 Junction Str Quantity Pipe 1 1 Pipe 2 1 Wing walls 2 Apron Face (less pipe opening Concrete Excavation and Backfill	Height 2.5 2.5 2.5 3.5 5			\$913.33 \$24.36
NODE	92565 Junction Str	ucture			
	JAPAN GUIIGIOII OU	ea	\$2,350.00	1	\$2,350.00
CONDUIT	2946 Parallel pipe	added	1.25	RCP	7-12-33-5
NODE	15 inch RCP	LF	\$25.00	70	\$1,750.00
NODE	92566 Junction Str	ucture ea	\$2,350.00	1	\$2,350.00
				=	

SUBTOTAL \$303,831.14

20% Contingency \$364,597.37

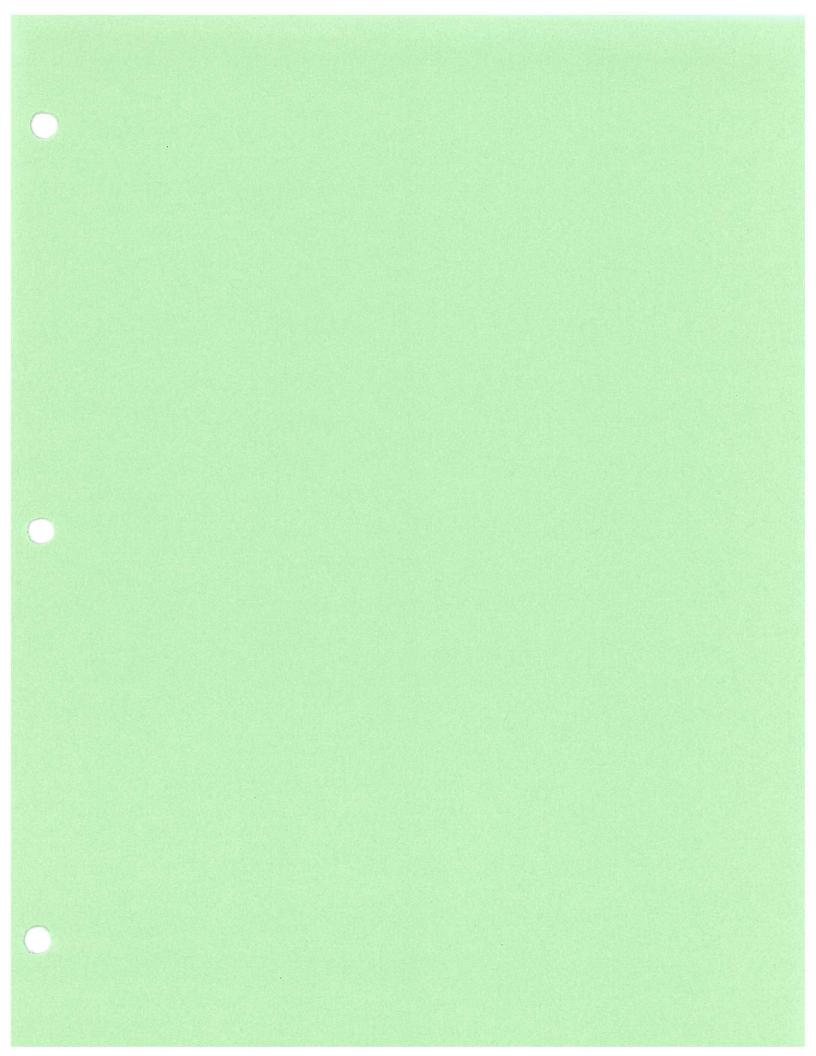
20% Engineering, legal and administrative \$437,516.85



	PRELIMINARY COST ESTIMAT	LE		DATE:	11/12/9
ROJECT:	LEAVENWORTH, KANSAS STORMWATER MASTER PLAN			EST:	VLD
NGINEER	BLACK & VEATCH			CHCKD:	JWH
LEMENT#	5 MILE CREEK - 9 R				
	DESCRIPTION	QUANT.	UNIT	U. PRICE	AMOUNT
A.3.10	Pipe and Inlet (Enclosed) System - 42 inch RCP	81	LF	\$90.00	\$7.2
B3.20	Reinforced Concrete Box Culverts - 8 X 6	420	LF	\$434.00	\$182,2
C.3.2.1	Concrete - Wing walls and apron	22	cy	\$300.00	\$6,6
B.1	Excavation and Backfill	44	cy	\$4.00	\$1
F.2.3	Street Removal - 4-lane, Aspalt, w/ C&G	435	sy	\$9.00	\$3.9
F.3.4.3	Street Replacement, 4-lane. Asphalt w/ C&G	435	sy	\$35.00	\$15,2
	Structural Removal				\$40.6
				TOTAL =	\$256,1
CONTINGE	ENCY	20 PER	CENT		\$51,2
				SUB TOTAL =	\$307,3
ENGINEER	ING, LEGAL AND ADMINISTRATIVE	20 PEF	CENT		\$61,4

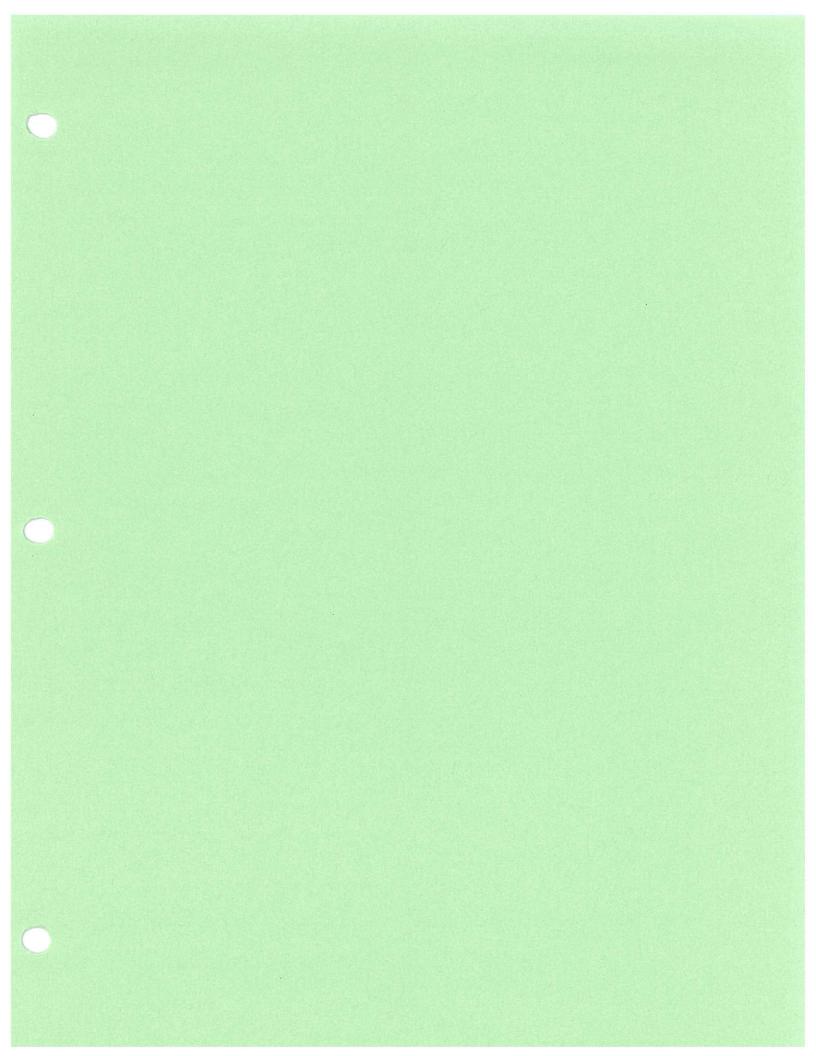
ITEM No Subsyster	ITEM DESCRIPTION 9 R 5 Mile Cree	UNIT	UNIT COST	QUANTITY	TOTAL COST
	·· · · · · · · · · · · · · · · · · · ·	N.			
NODE	84782 Junction Str	ucture			
	Quantity	Height	Width	cu yd	
	Pipe 1 1		6 8		
	Wing walls 2		6 8		
	Apron	7 5	5 18	2.59 3.33	
	Face (less pipe opening	7	18	1.11	
			Total Area	7.04	
	Concrete	су	\$300.00	7.04	\$2,111.11
CONDUIT	Excavation and Backfill	су	\$4.00	14.07	\$56.30
CONDON	244 Double Rep	lacement LF	8 X 6	RCP	4
		LF	\$434.00 \$434.00	210	\$91,140.00
	10th Ave	width	length	210 sq ft	\$91,140.00
	Parallel Street	16	210	3360	
NODE	4-lane, Asphalt, w/ C&G	sy	\$44.00	373	\$16,426.67
NODE	84783 Junction Stru				
	Quantity Pipe 1	Height	Width	cu yd	
	Pipe 2	6		RCB	
	Wing walls 2	7	} 8 5	RCB 2.59	
	Apron	5	18	3.33	
	Face (less pipe opening	7	18	1.11	
			Total Area	7.04	
	Concrete	су	\$300.00	7.04	\$2,111.11
	Excavation and Backfill Structural Removal	су	\$4.00	14.07	\$56.30
	Ottuctural Removal			20 Percent	\$40,608.30
NODE	84633 Junction Stru	cture			
	Quantity	Height	Width	cu yd	
	Pipe 1	3.5		RCP	
	Pipe 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	3	_ 3	RCP	
	Apron	4.5 5	5	1.67	
	Face (less pipe opening	4.5	8.5 8.5	1.57 0.80	
			Total Area	4.04	
	Concrete	су	\$300.00	4.04	\$1,211.78
CONDUIT	Excavation and Backfill	су	\$4.00	8.08	\$32.31
COMPON	112 Parallel pipe		3.5 F	******************	
	42 inch RCP Eisenhower	LF width	\$90.00	81	\$7,290.00
	Cross Street	width 20	length 28	sq ft	
3	4-lane, Asphalt, w/ C&G	sy	\$44.00	560 62	\$2 727 70
NODE	84632 Junction Struc	cture	Ψ11.00		\$2,737.78
	Quantity	Height	Width	cu yd	
	Pipe 1	3,5	3.5	RCP	
	Pipe 2 1	3	_ 3	RCP	
	Wing walls 2 Apron	4.5	5	1.67	
	Face (less pipe opening	5 4.5	8.5	1.57	
	. 230 (1863 Pipe opening	4.5	8.5 Total Area	0.80	
· ·	Concrete	су	\$300.00	4.04	\$1,211.78
	Excavation and Backfill	су	\$4.00	8.08	\$32.31
					1930-190-1800-1801-1

ITEM No	ITEM DESCRIPTION	UNIT	UNIT COST	QUANTITY	TOTAL COST
				SUBTOTAL	\$256,165.75
			20% Contingency		\$307,398.90
		20% Engineering	, legal and a	dministrative	\$368,878.67



PRELIMINARY COST ESTIMATE					11/12/9	
ROJECT:	DIECT: LEAVENWORTH, KANSAS STORMWATER MASTER PLAN				VLD	
NGINEER	R BLACK & VEATCH			CHCKD:	JWH	
LEMENT#	5 MILE CREEK - 10 R					
	DESCRIPTION	QUANT.	UNIT	U. PRICE	AMOUNT	
B.2.7	Reinforced Concrete Pipe Culverts - 30 inch	321	LF	\$52.00	\$16.6	
C.3.2.1	Concrete - Wing walls and apron	7	cy	\$300.00	\$2,1	
B.1	Excavation and Backfill	14	сy	\$4.00	\$	
F.2.3	Street Removal - 4-lane, Aspalt, w/ C&G	178	sy	\$9.00	\$1.6	
F.3.4.3	Street Replacement, 4-lane. Asphalt w/ C&G	178	sy	\$35.00	\$6,2	
				TOTAL =	\$26,70	
CONTINGENCY 20 PERCENT					\$5,3	
				SUB TOTAL =	\$32,04	
ENGINEERING, LEGAL AND ADMINISTRATIVE 20 PERCENT					\$6,40	

ITEM No Subsystem	ITEM DESCRIPTION 10 R 5 Mile Creek	UNIT	UNIT COST	QUANTITY	TOTAL COST
NODE	92470 Concrete W	ing walls &	Apron		
	Quantity	Height	Width	cu yd	
	Pipe 1	2.5	2.5		
	Pipe 2 1	3	3	RCP	
	Wing walls 2	4	5	1.48	
	Apron	5	7.5	1.39	
	Face (less pipe opening	4	7.5	0.67	
			Total Area	3.54	
	Concrete	су	\$300.00	3.54	\$1,061.36
COVIDITIE	Excavation and Backfill	су	\$4.00	7.08	\$28.30
CONDUIT	Z,3 RCP			RCP	
	30 inch RCP	LF	\$52.00	321	\$16,692.00
	West Leavenworth Rd	width	length	sq ft	
	Street Crossing	20	80	1600	
NODE	4-lane, Asphalt, w/ C&G	sy	\$44.00	178	\$7,822.22
NODE	86215 Concrete Wil				
	Quantity	Height	Width	cu yd	
	Pipe 1 1	2.5	2.5	RCP	
	1	. 3	3		
	Wing walls 2	4	5	1.48	
	Apron	5	7.5	1.39	
	Face (less pipe opening	4	7.5	0.67	
	Concrete		Total Area	3.54	
		су	\$300.00	3.54	\$1,061.36
	Excavation and Backfill	су	\$4.00	7.08	\$28.30
				_	
				SUBTOTAL	
	\$26,693.55				
	\$32,032.27				
	¥=2,002.21				
	\$38,438.72				



PRELIMINARY COST ESTIMATE					11/12/9	
ROJECT:	LEAVENWORTH, KANSAS STORMWATER MASTER PLAN		EST:	VLD		
NGINEER	BLACK & VEATCH			CHCKD:	JWH	
LEMENT#	5 MILE CREEK - 11 L					
	DESCRIPTION	QUANT.	UNIT	U. PRICE	AMOUNT	
B.3.10	Reinforced Concrete Pipe Culverts - 48 inch	254	LF	\$110.00	\$27.94	
C.3.2.1	Concrete - Wing walls and apron - 2	9	cy.	\$300.00	\$2,670	
B.1	Excavation and Backfill	18	cy	\$4.00	\$7	
F.2.2	Street Removal - 2-lane, Aspalt, w/ C&G	53	sy	\$8.00	542	
F.3.4.2	Street Replacement, 2-lane, Asphalt w/ C&G	53	sy	\$30,00	\$1.59	
					\$32,70	
	TOTAL =					
CONTINGE	:NCY	20 PER	CENT		\$6,54	
ENGINEER	INC LEGAL AND ADMINISTRATION	yanata		SUB TOTAL =	\$39,24	
ENGINEER	ING, LEGAL AND ADMINISTRATIVE	20 PE	RCENT		\$7,84	

ITEM No Subsysten	ITEM DESCRIPTION 11 L 5 Mile Creek	UNIT	UNIT COST	QUANTITY	TOTAL COST
NODE					
NODE	86214 Concrete Wir				
	Quantity	Height	Width	cu yd	
	Pipe 1 1	4		((
	Pipe 2 1		3	RCP	
	Wing walls 2	5	5	1.85	
	Apron	5	9	1.67	
	Face (less pipe opening	5	9	0.94	
			Total Area	4.46	
	Concrete	су	\$300.00	4.46	\$1,337.39
CONDUIT	Excavation and Backfill	су	\$4.00	8.92	\$35.66
CONDUIT	1113 Parallel pipe added 4 RCP				
	48 inch RCP	LF	\$110.00	254	\$27,940.00
	Hebbeln Rd	width	length	sq ft	
	Street Crossing	20	24	480	
::===	2-lane, Asphalt, w/ C&G	sy	\$38.00	53	\$2,026.67
NODE	86215 Concrete Win	g walls &	Apron		42,020.01
	Quantity	Height	Width	cu yd	
	Pipe 1	4	4	RCP	
	Pipe 2	3	3	RCP	
	Wing walls 2	5	5	1.85	
	Apron	5	9	1.67	
	Face (less pipe opening	5	9	0.94	
			Total Area	4.46	
	Concrete	су	\$300.00	4.46	\$1,337.39
	Excavation and Backfill	cý	\$4.00	8.92	\$35.66
				0.02	Ψ33.00
				=	
				SUBTOTAL	\$32,712.77
	\$39,255.33				
	\$47,106.39				