

Engineer's Opinion of Probable Construction Cost
AACE Class 4.5 (-30% to +50% Accuracy of Estimate)
City of Lee Summit



Summary Report

Project name	Lee Summit Water Utility Expansion
Labor rate table	HDR_2024_Union
Equipment rate table	HDR_EQ_2024
Report format	Sorted by 'WBS_MAIN/UNIFORMAT2/UNIFORMAT3' 'Detail' summary Allocate addons
Factor table	Kansas-Kansas City



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Design Stage: 15%
Estimate Version:

Summary Report

Item	Description	Takeoff Qty	Labor	Material	Subcontract	Name	Equipment	Other	Total		
			Amount	Amount	Amount		Amount	Amount	Unit Cost	Amount	
10 New Building											
A10 Foundations											
A1010 Standard Foundations											
n	0725 CIP Foundations	3,350.00 sf	-	46,230	-		-	-	13.80 /sf	46,230	
	A1010 Standard Foundations			46,230						46,230	
A1030 Slab On Grade											
n	0725 SOG 8"	3,350.00 sf	-	57,788	-		-	-	17.25 /sf	57,788	
n	0725 Trench Drain	1.00 ea	-	1,725	-		-	-	1,725.00 /ea	1,725	
	A1030 Slab On Grade			59,513						59,513	
A10 Foundations			0	105,743	0		0	0		105,743	
A20 Basements											
A2020 Basement Walls											
n	0725 French Drain	160.00 lf	-	2,760	-		-	-	17.25 /lf	2,760	
	A2020 Basement Walls			2,760						2,760	
A20 Basements			0	2,760	0		0	0		2,760	
B10 Superstructure											
B1020 Roof Construction											
	2620 2" x 4" miscellaneous wood blocking, to wood construction, per M.B.F.	0.50 mbf	1,326	339	-		-	-	3,328.70 /mbf	1,664	
n	9900 Pre-engineered steel bldg,clear span rigid frame,incl roof & siding, excludes footng,slab,& anchor bolt	3,350.00 sf		269,675	-			-	80.50 /sf	269,675	
	B1020 Roof Construction		1,326	270,014						271,339	
	805.185 Labor hours										
	111.656 Equipment hours										
B10 Superstructure			1,326	270,014	0		0	0		271,339	
	805.185 Labor hours										
	111.656 Equipment hours										
B20 Exterior Enclosure											

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Upper Range +50%

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B2010	Exterior Walls										
n	0200	Wainscot - Cntr blk,extrr,toolld jnts both sides,norml wt,2000 psi,8"8"16",incld mortr and hrznt joint rnfrnc every other cours,exclcd scffl,grout and vrtcl rnfrnc	500.00	sf	17,675	4,136	-	-	-	43.622 /sf	21,811
		B2010 Exterior Walls			17,675	4,136					21,811
	285.083	Labor hours									
B2020	Exterior Windows										
	3800	Windows, aluminum, commercial grade, stock units, single hung, enameled, insulating glass, 3'-4" x 5'-0" opening, incl. frame and glazing	235.00	sf	4,531	18,100	-	-	-	96.302 /sf	22,631
		B2020 Exterior Windows			4,531	18,100					22,631
	75.020	Labor hours									
B2030	Exterior Doors										
	0100	PER LEAF Doors, hollow metal - salvage / reinstall	2.00	ea	1,298	1,150	-	-	-	1,223.97 /ea	2,448
	0050	Doors, vertical lift, motorized, steel, 14 gauge, 16' x 16', incl. frame and control panel	4.00	ea	8,495	34,500	-	4,267	-	11,815.44 /ea	47,262
		B2030 Exterior Doors			9,793	35,650		4,267			49,710
	80.00	Labor hours									
	64.00	Equipment hours									
	B20 Exterior Enclosure				31,999	57,886	0	4,267	0		94,152
	440.103	Labor hours									
	64.00	Equipment hours									
C30	Interior Finishes										
C3010	Wall Finishes										
n	3255	Liner Panel	2,500.00	SF	13,448	18,773	-	-	-	12.888 /SF	32,221
		C3010 Wall Finishes			13,448	18,773					32,221
	196.515	Labor hours									
C3020	Floor Finishes										
n	1630	Concrete surface treatment, sealer, hardener and dustproofer, solvent-based, 250 SF/Gal, 55 gallon drum, includes material only	3,350.00	sf	-		12,730	-	-	3.80 /sf	12,730
		C3020 Floor Finishes					12,730				12,730
C3030	Ceiling Finishes										
n	0580	Warehouse - Dry fall painting, ceilings, structural steel, bar joists or metal deck, two coat, spray	3,350.00	sf	1,791	570	-	-	-	0.705 /sf	2,361

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	C3030 Ceiling Finishes		1,791	570								2,361
	25.769 Labor hours											
	C30 Interior Finishes		15,239	19,342	12,730				0	0		47,311
	222.284 Labor hours											
D20 Plumbing												
<i>D2010 Plumbing Fixtures</i>												
n	0005 Access existing drain line - Structural Demolition Crew with Demolition Equipment (5 men x 8 hrs per day) (5 equip hours x 8 hrs per day)	1.50 day	4,925	-	-				7,951	-	8,584.487 /day	12,877
	1600 Floor drains	2.00 ea	4,836	3,312	-				-	-	4,073.975 /ea	8,148
	1600 Hose bibs	2.00 ea	242	166	-				-	-	203.715 /ea	407
	<i>D2010 Plumbing Fixtures</i>		10,003	3,478					7,951			21,432
	112.869 Labor hours											
	60.00 Equipment hours											
<i>D2090 Other Plumbing Systems</i>												
	1600 Domestic water piping	3,350.00 sf	4,995	3,421	-				384	-	2.627 /sf	8,801
	<i>D2090 Other Plumbing Systems</i>		4,995	3,421					384			8,801
	52.009 Labor hours											
	D20 Plumbing		14,998	6,899	0				8,336	0		30,233
	164.878 Labor hours											
	60.00 Equipment hours											
D30 HVAC												
<i>D3040 HVAC Distribution</i>												
n	0700 Wall louver	2.00 ea	72		-				-	-	36.05 /ea	72
	0340 Gas pipe strap	12.00 ea	43	130	-				-	-	14.416 /ea	173
	0640 Gas pipe connection	8.00 ea	288	183	-				-	-	58.88 /ea	471
	0840 Gas pipe	100.00 lf	361	2,099	-				-	-	24.593 /lf	2,459
n	5430 Metal Ductwork, straight lengths, 8" diameter	6.00 lf	43	40	-				-	-	13.88 /lf	83
n	5440 Metal Ductwork, straight lengths, 10" diameter	33.00 lf	297	269	-				-	-	17.155 /lf	566
n	5450 Metal Ductwork, straight lengths, 12" diameter	3.00 lf	36	29	-				-	-	21.773 /lf	65
n	5460 Metal ductwork, straight lengths, 14" diameter	6.00 lf	108	64	-				-	-	28.675 /lf	172
n	5480 Metal Ductwork, straight lengths, 16" diameter	6.00 lf	144	88	-				-	-	38.753 /lf	233
n	5490 Metal Ductwork, straight lengths, 18" diameter	37.00 lf	1,067	660	-				-	-	46.668 /lf	1,727
n	5500 Metal Ductwork, straight lengths, 20" diameter	30.00 lf	998	593	-				-	-	53.060 /lf	1,592
n	5540 Metal Ductwork, straight lengths, 30" diameter	12.00 lf	577	384	-				-	-	80.041 /lf	960
n	5840 Metal Ductwork, galvanized, connector, 8" diameter	1.00 ea	18	5	-				-	-	23.63 /ea	24
n	5860 Metal Ductwork, galvanized, connector, 10" diameter	2.00 ea	41	10	-				-	-	25.755 /ea	52

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<i>D3040</i>	<i>HVAC Distribution</i>										
n	5880 Metal Ductwork, galvanized, connector, 12" diameter	1.00 ea		29	6	-		-	-	35.28 /ea	35
n	5900 Metal Ductwork, galvanized, connector, 14" diameter	1.00 ea		33	6	-		-	-	39.05 /ea	39
n	5920 Metal Ductwork, galvanized, connector, 16" diameter	1.00 ea		36	7	-		-	-	42.96 /ea	43
n	5930 Metal Ductwork, galvanized, connector, 18" diameter	4.00 ea		156	30	-		-	-	46.505 /ea	186
n	5940 Metal Ductwork, galvanized, connector, 20" diameter	8.00 ea		339	75	-		-	-	51.789 /ea	414
n	5980 Metal Ductwork, galvanized, connector, 30" diameter	2.00 ea		131	35	-		-	-	83.085 /ea	166
n	6726 Metal Ductwork, end cap, max. 10" S.P.W.G., 10"	1.00 ea		18	9	-		-	-	27.23 /ea	27
n	6729 Metal Ductwork, end cap, max. 10" S.P.W.G., 16"	1.00 ea		33	15	-		-	-	48.02 /ea	48
n	6840 Metal Ductwork, reducer, 10" x 8"	1.00 ea		45	25	-		-	-	70.37 /ea	70
n	6880 Metal Ductwork, reducer, 18" x 16"	1.00 ea		72	24	-		-	-	96.26 /ea	96
n	6920 Metal Ductwork, reducer, 20" x 12"	1.00 ea		90	44	-		-	-	134.41 /ea	134
n	6940 Metal Ductwork, reducer, 20" x 14"	1.00 ea		90	57	-		-	-	147.06 /ea	147
n	6950 Metal Ductwork, reducer, 20" x 18"	3.00 ea		282	171	-		-	-	150.973 /ea	453
n	6980 Metal Ductwork, reducer, 30" x 20"	2.00 ea		240	255	-		-	-	247.83 /ea	496
n	7140 Metal Ductwork, tap, max. 10" diameter	1.00 ea		120	32	-		-	-	152.37 /ea	152
n	7176 Metal Ductwork, tap, max. 18" diameter	1.00 ea		240	122	-		-	-	362.26 /ea	362
n	7180 Metal Ductwork, tap, max. 20" diameter	1.00 ea		249	145	-		-	-	393.54 /ea	394
n	7358 Metal Ductwork, 8" x 8" open end duct	1.00 ea		76	16	-		-	-	91.99 /ea	92
n	7366 Metal Ductwork, 12" x 12" open end duct	1.00 ea		160	25	-		-	-	185.55 /ea	186
n	7370 Metal Ductwork, 14" x 12" open end duct	1.00 ea		206	36	-		-	-	242.23 /ea	242
n	6036 Duct accessories, variable dampers, 18" x 12"	1.00 ea		45	64	-		-	-	108.90 /ea	109
n	6070 Duct accessories, variable dampers, 20" x 16"	1.00 ea		52	92	-		-	-	143.50 /ea	144
n	6071 Duct accessories, variable damper, 20" x 18"	1.00 ea		55	101	-		-	-	156.670 /ea	157
n	5520 Exhaust fan	2.00 ea		361		-		-	-	180.265 /ea	361
n	5560 Fans, exhaust	2.00 ea		2,003	13,225	-		-	-	7,613.97 /ea	15,228
n	6200 Fans, propeller exhaust, wall shutter, direct drive, 1/4" S.P., two speed, 4720 CFM, 1 H.P.	1.00 ea		361	1,294	-		-	-	1,654.28 /ea	1,654
	6780 Louver	2.00 ea		111	840	-		-	-	475.215 /ea	950
	1100 Register, 12" x 8"	4.00 ea		152	150	-		-	-	75.328 /ea	301
n	1120 Register, 12" x 10"	2.00 ea		80	85	-		-	-	82.61 /ea	165
	2560 Louver, aluminum, extruded, with screen, mill finish, dual combination, motor for electric or pneumatic operation, intake or exhaust	1.00 ea		52	598	-		-	-	649.51 /ea	650
	800 Allthread	270.00 lf		973	78	-		-	-	3.893 /lf	1,051
	2700 3/8 expansion anchors	54.00 ea		633	57	-		-	-	12.775 /ea	690
	2900 3/8 nuts	108.00 ea		195	6	-		-	-	1.860 /ea	201
	4170 Gas pipe 90 degree elbow	14.00 ea		111	197	-		-	-	21.994 /ea	308
	4430 Gas pipe coupling	14.00 ea		111	190	-		-	-	21.465 /ea	301
n	1140 Make-up air unit, indirect-fired, rooftop unit, natural gas	1.00 ea		1,139	26,278	-		-	-	27,416.02 /ea	27,416
	1030 Infrared unit, gas fired, vented, electric ignition, tubular, single stage	2.00 ea		961	3,565	-		-	-	2,263.21 /ea	4,526

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D3040 HVAC Distribution												
	0350	3/8" washers	108.00	ea	195	4	-		-	-	1.837 /ea	198
	0400	1 1/2" x 1 1/2" unistrut	55.00	lf	149	121	-		-	-	4.903 /lf	270
	0500	1 1/2" unistrut cover	55.00	lf	99	62	-		-	-	2.925 /lf	161
n	0140	Foreman at 15% of 162	24.30	hour	546	-	-		-	-	22.475 /hour	546
n	0160	Journeyman at 10% of 162	16.20	hour	182	-	-		-	-	11.238 /hour	182
n	0180	Cleanup and delivery at 5% of 162	8.10	hour	314	-	-		-	-	38.749 /hour	314
D3040 HVAC Distribution					15,619	52,695						68,314
210.331 Labor hours												
D30 HVAC					15,619	52,695	0		0	0		68,314
210.331 Labor hours												
D40 Fire Protection												
D4010 Sprinklers												
	0150	Elbow, 90 Deg., 3"	2.00	ea	72	17	-		-	-	44.53 /ea	89
	0340	Tee, 3"	3.00	ea	162	39	-		-	-	67.11 /ea	201
	0540	Coupling, 3"	1.00	ea	36	6	-		-	-	41.72 /ea	42
	0750	Cross, 3"	2.00	ea	144	22	-		-	-	83.12 /ea	166
	2660	Sprinkler system component, sprinkler heads, dry, pendent	10.00	ea	468	1,668	-		-	-	213.56 /ea	2,136
	8200	Sprinkler system component, dry pipe, 3"	150.00	ea	983	5,304	-		-	-	41.916 /ea	6,287
	8280	Sprinkler system pipe strap	18.00	ea	147	59	-		-	-	11.458 /ea	206
n	0140	Foreman at 15% of 25	3.75	hour	84	-	-		-	-	22.475 /hour	84
n	0160	Journeyman at 10% of 25	2.50	hour	28	-	-		-	-	11.244 /hour	28
n	0180	Cleanup and delivery at 5% of 25	1.25	hour	48	-	-		-	-	38.75 /hour	48
	0100	Fire Supression - Dry System	3,350.00	sf	-	-	25,125		-	-	7.50 /sf	25,125
D4010 Sprinklers					2,174	7,115	25,125					34,413
32.075 Labor hours												
D4030 Fire Protection Specialties												
n	0900	Fire Extinguishers	1.00	ea	140	100	100		100	100	540.00 /ea	540
D4030 Fire Protection Specialties					140	100	100		100	100		540
D40 Fire Protection					2,314	7,215	25,225		100	100		34,953
32.075 Labor hours												
D50 Electrical												
D5010 Service and Distribution												
	0200	Wiremarkers	410.00	ea	2,345	24	-		-	-	5.778 /ea	2,369
	0300	Scotchloks	138.00	ea	921	23	-		-	-	6.839 /ea	944
	1000	Wire, copper, #14	400.00	lf	228	37	-		-	-	0.662 /lf	265
	1200	Wire, copper, #12	5,105.00	lf	3,398	661	-		-	-	0.795 /lf	4,059

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D5010	Service and Distribution										
5080	Instrument cable, CAT6	1,005.00	ft	669	298	-		-	-	0.962 /ft	967
0100	Grounding rod, copper clad, 10' long, 3/4" diameter	3.00	ea	519	137	-		-	-	218.60 /ea	656
0220	Grounding drive studs, 3/4" diameter	3.00	ea		65	-		-	-	21.563 /ea	65
0250	Ground clamp	3.00	ea	71	21	-		-	-	30.787 /ea	92
0390	Ground wire, copper wire, bare #8	10.00	lf	7	3	-		-	-	0.949 /lf	9
1000	Ground wire, copper wire, bare 4/0	170.00	lf	453	652	-		-	-	6.499 /lf	1,105
2730	Exothermic weld, 8 wire to ground rod	1.00	ea	109	12	-		-	-	120.95 /ea	121
2730	Exothermic weld, 4/0 wire to ground rod	2.00	ea	217	25	-		-	-	120.955 /ea	242
2740	Exothermic weld, to rebar, 8 wire	1.00	ea	109	12	-		-	-	120.95 /ea	121
2740	Exothermic weld, to building steel, 4/0 wire	2.00	ea	217	25	-		-	-	120.95 /ea	242
2760	Exothermic weld, 4/0 wire to 4/0 wire	2.00	ea	217	25	-		-	-	120.96 /ea	242
0150	3/8" expansion anchors	48.00	ea	593	52	-		-	-	13.453 /ea	646
0200	3/8" bolts	48.00	ea	137	26	-		-	-	3.387 /ea	163
0300	3/8" nuts	48.00	ea	91	3	-		-	-	1.961 /ea	94
0350	3/8" washers	96.00	ea	183	3	-		-	-	1.937 /ea	186
0900	Nameplates	12.00	ea	285	71	-		-	-	29.709 /ea	357
0950	Tyraps	50.00	ea	143	9	-		-	-	3.031 /ea	152
1000	Wire lube	1.00	ea	95	30	-		-	-	124.78 /ea	125
1770	Rigid galvanized steel conduit, 3/4" diameter	1,545.00	lf	14,689	5,176	-		-	-	12.858 /lf	19,865
1770	Rigid galvanized steel conduit, 3/4" diameter	790.00	lf	7,511	2,646	-		-	-	12.858 /lf	10,158
1800	Rigid galvanized steel conduit, 1" diameter, to 15' H, incl 2 terminations, 2 elbows, 11 beam clamps, and 11 couplings per 100 LF	150.00	lf	1,755	1,372	-		-	-	20.849 /lf	3,127
0020	Outlet boxes, pressed steel, 4" octagon	6.00	ea	228	16	-		-	-	40.668 /ea	244
0200	Outlet boxes, pressed steel, 2G plaster rings, 4" square	6.00	ea	114	27	-		-	-	23.437 /ea	141
0220	Outlet boxes, pressed steel, 4" square, 2-1/8" deep, 1" KO	22.00	ea	837	100	-		-	-	42.592 /ea	937
0220	Outlet boxes, pressed steel, 4" square, 2-1/8" deep, 1" KO	5.00	ea	190	20	-		-	-	42.036 /ea	210
0250	Outlet boxes, pressed steel, covers, blank, 4" square	8.00	ea	95	10	-		-	-	13.073 /ea	105
0250	Outlet boxes, pressed steel, covers, blank, 4" square	3.00	ea	36	4	-		-	-	13.07 /ea	39
0300	Outlet boxes, pressed steel, plaster rings, 4" square, concealed	8.00	ea	95	19	-		-	-	14.309 /ea	114
0300	Outlet boxes, pressed steel, plaster rings, 4" square, concealed	2.00	ea	24	4	-		-	-	13.86 /ea	28
1000	Outlet boxes, cover plate concrete, set flush, 1 gang	8.00	ea	76	79	-		-	-	19.428 /ea	155
1100	Outlet boxes, pressed steel, concrete, floor, 1 gang	8.00	ea	1,148	1,064	-		-	-	276.563 /ea	2,213
1510	Outlet boxes, cast, switch cover, 1 gang, FS	2.00	ea	24	11	-		-	-	17.63 /ea	35
1530	Outlet boxes, cast, duplex receptacle cover, 1 gang, FS	6.00	ea	71	35	-		-	-	17.742 /ea	106
1540	Outlet boxes, cast, duplex receptacle cover, 2 gang, FS	6.00	ea	86	76	-		-	-	26.943 /ea	162

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D5010	Service and Distribution										
0200	Pull boxes, steel, type SC, 8" W x 8" H x 4" D, NEMA 1	2.00	ea	190	31	-		-	-	110.405 /ea	221
2170	Conduit fittings for rigid galvanized steel, boxes connector, 3/4" diameter	90.00	ea	1,141	366	-		-	-	16.740 /ea	1,507
2170	Conduit fittings for rigid galvanized steel, boxes connector, 3/4" diameter	26.00	ea	330	106	-		-	-	16.740 /ea	435
2180	Conduit fittings for rigid galvanized steel, boxes connector with set screw, plain, 1" diameter	4.00	ea	61	33	-		-	-	23.528 /ea	94
1090	Flexible metallic conduit, sealite, 3/4" diameter	36.00	lf	274	63	-		-	-	9.353 /lf	337
1090	Flexible metallic conduit, sealite, 3/4" diameter	15.00	lf	114	26	-		-	-	9.354 /lf	140
1700	Flexible metallic conduit, sealite, connectors, straight, 3/4" diameter	12.00	ea	183	67	-		-	-	20.831 /ea	250
1700	Flexible metallic conduit, sealite, connectors, straight, 3/4" diameter	5.00	ea	76	28	-		-	-	20.828 /ea	104
2400	Flexible metallic conduit, sealite, connectors, 90 Deg., 3/4" diameter	12.00	ea	183	96	-		-	-	23.172 /ea	278
2400	Flexible metallic conduit, sealite, connectors, 90 Deg., 3/4" diameter	5.00	ea	76	40	-		-	-	23.172 /ea	116
4500	Flexible metallic conduit, coupling sealite to rigid, 3/4" diameter	12.00	ea	507	77	-		-	-	48.671 /ea	584
4500	Flexible metallic conduit, coupling sealite to rigid, 3/4" diameter	5.00	ea	211	32	-		-	-	48.67 /ea	243
0110	Hole drilling, fire caulk	12.00	ea	761	143	-		73	-	81.326 /ea	976
0120	Hole drilling, concrete wall, 8" thick, 3/4" pipe size, to 10' high	12.00	ea	761	356	-		73	-	99.145 /ea	1,190
3250	PVC conduit, schedule 40, 3/4" diameter, in concrete slab, incl terminations, fittings and supports	40.00	lf	132	28	-		-	-	4.007 /lf	160
3270	PVC conduit, schedule 40, 1" diameter, in concrete slab, incl terminations, fittings and supports	10.00	lf	38	9	-		-	-	4.706 /lf	47
3270	PVC conduit, schedule 40, 1" diameter, in concrete slab, incl terminations, fittings and supports	30.00	lf	114	27	-		-	-	4.706 /lf	141
3530	PVC conduit, schedule 40, 90 elbow, 1" diameter, in concrete slab	1.00	ea	24	49	-		-	-	72.48 /ea	72
3530	PVC conduit, schedule 40, 90 elbow, 1" diameter, in concrete slab	2.00	ea	48	97	-		-	-	72.48 /ea	145
3530	PVC conduit, schedule 40, sweep, 30" radius, 3/4" diameter, in concrete slab	16.00	ea	380	182	-		-	-	35.114 /ea	562
3750	PVC conduit, schedule 40, couplings, 3/4" diameter, in concrete slab	16.00	ea	-	3	-		-	-	0.178 /ea	3
3770	PVC conduit, schedule 40, adapter / coupling, 1" diameter, in concrete slab	2.00	ea		1	-		-	-	0.355 /ea	1
3770	PVC conduit, schedule 40, adapter / coupling, 1" diameter, in concrete slab	2.00	ea		1	-		-	-	0.36 /ea	1
4030	PVC conduit, schedule 40, end bells, 1" diameter, in concrete slab	1.00	ea	13	4	-		-	-	16.61 /ea	17

AACE Classification Accuracy Range

Upper Range +50%

Lower Range -30%

Engineer's Opinion of Probable Construction Cost
AACE Class 4.5 (-30% to +50% Accuracy of Estimate)
City of Lee Summit



Summary Report

Item	Description	Takeoff Qty		Labor	Material	Subcontract		Equipment	Other	Total	
				Amount	Amount	Amount	Name	Amount	Amount	Unit Cost	Amount
D5010 Service and Distribution											
	4030	PVC conduit, schedule 40, end bells, 1" diameter, in concrete slab	2.00 ea	25	8	-		-	-	16.615 /ea	33
	4350	Underground marking tape	160.00 lf	122	55	-		-	-	1.105 /lf	177
	4350	Underground marking tape	10.00 lf	8	3	-		-	-	1.107 /lf	11
	4350	Underground marking tape	5.00 lf	4	2	-		-	-	1.104 /lf	6
	4350	Underground marking tape	40.00 lf	30	14	-		-	-	1.105 /lf	44
	0200	Trench No 1	160.00 lf	456	162	-		-	-	3.862 /lf	618
	0200	Trench No 1	10.00 lf	29	10	-		-	-	3.862 /lf	39
	0200	Trench No 1	5.00 lf	14	5	-		-	-	3.862 /lf	19
	0200	Trench No 1	40.00 lf	114	40	-		-	-	3.862 /lf	154
	1400	Compaction	160.00 lf	411	475	-		-	-	5.537 /lf	886
	1400	Compaction	10.00 lf	26	30	-		-	-	5.537 /lf	55
	1400	Compaction	5.00 lf	13	15	-		-	-	5.536 /lf	28
	1400	Compaction	40.00 lf	103	119	-		-	-	5.537 /lf	221
	0020	Motor connections (including cord reels)	10.00 ea	951	66	-		-	-	101.67 /ea	1,017
	0120	Lighting devices, occupancy sensors, dual technology, ceiling mounted	2.00 ea	234	321	-		-	-	277.385 /ea	555
	0100	Circuit breakers, bolt-on, 10 k A I.C., 1 pole, 120 volt, 20 amp	10.00 ea	761	594	-		-	-	135.459 /ea	1,355
	0100	Panelboard directory	1.00 ea	380	59	-		-	-	439.71 /ea	440
	0500	Toggle switch, quiet type, single pole, 20 amp	2.00 ea	56	8	-		-	-	32.155 /ea	64
	2470	Duplex receptacle, grounded, 120 volt, 20 amp	18.00 ea	507	170	-		-	-	37.615 /ea	677
	0610	Safety switches, 3 pole, nonfusible, 240 volt, 30 amp, NEMA 1	8.00 ea	1,902	480	-		-	-	297.685 /ea	2,381
	0200	Hand / off / auto control stations, heavy duty	4.00 ea	491	461	-		-	-	237.908 /ea	952
	0400	Lightning protection point	7.00 ea	333	131	-		-	-	66.25 /ea	464
	0500	Lightning protection point holder	7.00 ea	87	62	-		-	-	21.269 /ea	149
	0540	Lightning protection cable	190.00 ea	723	560	-		-	-	6.749 /ea	1,282
	1000	Lightning protection bonding plate	2.00 ea	238	42	-		-	-	139.815 /ea	280
	1020	Lightning protection cadweld	4.00 ea	380	89	-		-	-	117.23 /ea	469
	1040	Lightning protection adhesive clip	54.00 ea	154	26	-		-	-	3.327 /ea	180
	1100	Lightning protection adhesive glue	1.00 ea	24	25	-		-	-	48.31 /ea	48
	4020	Master label certification	1.00 ea	380	374	-		-	-	754.06 /ea	754
	0120	Type EXIT lighting fixture	2.00 ea	380	416	-		-	-	398.04 /ea	796
	0160	Type H2 lighting fixture	8.00 ea	1,521	950	-		-	-	308.95 /ea	2,472
	0180	Type W1E lighting fixture	2.00 ea	380	594	-		-	-	487.14 /ea	974
	1000	Type W4 lighting fixture	2.00 ea	380	772	-		-	-	576.24 /ea	1,152
	3030	Type pole with fixture head relocation	1.00 ea	761	58	-		-	-	818.12 /ea	818
	7340	Light pole bases w/anchor bolts	1.00 ea	380	144	-		-	-	524.050 /ea	524
	0360	Fixture whips, three #12, 6' long	8.00 ea	190	89	-		-	-	34.935 /ea	279
n	0140	Foreman at 15% of 660	99.00 hour	2,225	-	-		-	-	22.475 /hour	2,225
n	0160	Journeyman at 10% of 660	66.00 hour	742	-	-		-	-	11.237 /hour	742
n	0180	Cleanup and delivery at 5% of 660	33.00 hour	1,279	-	-		-	-	38.75 /hour	1,279
D5010 Service and Distribution				60,792	22,163			145			83,101
792.748 Labor hours											
16.000 Equipment hours											

AACE Classification Accuracy Range

Upper Range +50%

Lower Range -30%

Engineer's Opinion of Probable Construction Cost
AACE Class 4.5 (-30% to +50% Accuracy of Estimate)

City of Lee Summit



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Design Stage: 15%

Estimate Version:

Summary Report

Item	Description	Takeoff Qty		Labor	Material	Subcontract		Equipment	Other	Total	
				Amount	Amount	Amount	Name	Amount	Amount	Unit Cost	Amount
D5030	Communication and Security (Fire Alarm)										
0200	Wiremarkers	8.00	ea	46	0	-		-	-	5.779 /ea	46
0300	Scotchlocks	4.00	ea	27	1	-		-	-	6.84 /ea	27
5080	Instrument cable, CAT6	250.00	ft	166	74	-		-	-	0.962 /ft	241
1770	Rigid galvanized steel conduit, 3/4" diameter	120.00	lf	1,141	402	-		-	-	12.858 /lf	1,543
0220	Outlet boxes, pressed steel, 4" square, 2-1/8" deep, 1" KO	1.00	ea	38	4	-		-	-	42.04 /ea	42
0300	Outlet boxes, pressed steel, plaster rings, 4" square, concealed	1.00	ea	12	2	-		-	-	13.86 /ea	14
2170	Conduit fittings for rigid galvanized steel, boxes connector, 3/4" diameter	2.00	ea	25	8	-		-	-	16.745 /ea	33
1090	Flexible metallic conduit, sealite, 3/4" diameter	3.00	lf	23	5	-		-	-	9.357 /lf	28
1700	Flexible metallic conduit, sealite, connectors, straight, 3/4" diameter	1.00	ea	15	6	-		-	-	20.82 /ea	21
2400	Flexible metallic conduit, sealite, connectors, 90 Deg., 3/4" diameter	1.00	ea	15	8	-		-	-	23.16 /ea	23
4500	Flexible metallic conduit, coupling sealite to rigid, 3/4" diameter	1.00	ea	42	6	-		-	-	48.68 /ea	49
0920	CCTV, electrical demolition, remove, excl rough-in	7.00	ea	666		-		-	-	95.076 /ea	666
1000	Detection system, card reader, flush type, existing	2.00	ea	563		-		-	-	281.715 /ea	563
2600	Closed circuit television system (CCTV), industrial quality, ceiling mounted camera station, existing	1.00	ea	282		-		-	-	281.710 /ea	282
2800	Closed circuit television system (CCTV), industrial quality, weatherproof camera station, existing	2.00	ea	563		-		-	-	281.715 /ea	563
1400	Detection system, door switches, magnetic switch, existing	2.00	ea	287		-		-	-	143.51 /ea	287
0500	Wireless receiver/control module	1.00	ea	95	329	-		-	-	423.98 /ea	424
	D5030 Communication and Security (Fire Alarm)			4,007	846						4,852

42.142 Labor hours

D5090	Other Electrical Systems										
0200	Wiremarkers	40.00	ea	229	2	-		-	-	5.778 /ea	231
0300	Scotchlocks	12.00	ea	80	2	-		-	-	6.839 /ea	82
1000	Wire, copper, #14	360.00	lf	205	33	-		-	-	0.662 /lf	238
1000	Wire lube	1.00	ea	95	30	-		-	-	124.78 /ea	125
1770	Rigid galvanized steel conduit, 3/4" diameter	80.00	lf	761	268	-		-	-	12.858 /lf	1,029
0200	Outlet boxes, pressed steel, extension rings, 4" square	2.00	ea	38	12	-		-	-	24.78 /ea	50
0220	Outlet boxes, pressed steel, 4" square, 2-1/8" deep, 1" KO	4.00	ea	152	16	-		-	-	42.033 /ea	168
0300	Outlet boxes, pressed steel, plaster rings, 4" square, concealed	2.00	ea	24	4	-		-	-	13.86 /ea	28
2170	Conduit fittings for rigid galvanized steel, boxes connector, 3/4" diameter	8.00	ea	101	33	-		-	-	16.739 /ea	134
6600	Detection system, EOLR	2.00	ea	48	23	-		-	-	35.27 /ea	71

AACE Classification Accuracy Range

Upper Range +50%

Lower Range -30%

Engineer's Opinion of Probable Construction Cost
AACE Class 4.5 (-30% to +50% Accuracy of Estimate)
City of Lee Summit



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Summary Report

Item	Description	Takeoff Qty	Labor Amount	Material Amount	Subcontract Amount	Equipment Amount	Other Amount	Total Unit Cost	Amount
D5090 Other Electrical Systems									
7010	Detection system, break glass station, addressable, excluding wires & conduits	2.00 ea	210	343	-	-	-	276.265 /ea	553
5100	Detection system, strobe for fire alarm, detector, fixed temperature, excl. wires & conduit	2.00 ea	217	350	-	-	-	283.710 /ea	567
	D5090 Other Electrical Systems		2,160	1,115					3,275
	22.717 Labor hours								
	D50 Electrical		66,959	24,123	0	145	0		91,228
	857.608 Labor hours								
	16.000 Equipment hours								
F20 Selective Building Demolition									
F2010 Building Elements Demolition									
0005	Footing & Slab prep Structural Demolition Crew with Demolition Equipment (5 men x 8 hrs per day) (5 equip hours x 8 hrs per day)	5.00 day	16,418	-	-	26,505	-	8,584.486 /day	42,922
0005	Wall Removal - Architectural Demolition Crew with Demolition Equipment (4 men x 8 hrs per day) (4 equip hours x 8 hrs per day)	5.00 day	13,134	-	-	21,204	-	6,867.588 /day	34,338
	F2010 Building Elements Demolition		29,552			47,708			77,260
	360.00 Labor hours								
	360.00 Equipment hours								
	F20 Selective Building Demolition		29,552	0	0	47,708	0		77,260
	360.00 Labor hours								
	360.00 Equipment hours								
Z10 General Requirements									
Z1010 Administration									
0550	MBE DEB Premium - 10% (10% of COW x 5M x 10% premium)	1.00 ea	0	-	50,000	0	-	50,000.00 /ea	50,000
	Z1010 Administration				50,000				50,000
	Z10 General Requirements		0	0	50,000	0	0		50,000
	10 New Building		178,007	546,676	87,955	60,556	100	260.685/SF	873,294
	3,350.00 SF								
	3,092.463 Labor hours								
	611.656 Equipment hours								

Upper Range +50%

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Summary Report

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Item	Description	Takeoff Qty		Labor	Material	Subcontract	Name	Equipment	Other	Total	Amount
				Amount	Amount	Amount		Amount	Amount	Unit Cost	
20 Sitework											
G10 Site Preparation											
G1030 Earthwork											
n	1500	Geosynthetic soil stabilization, geotextile fabric, woven, 200 lb. tensile strength	200.00 sy	173	376	-		-	-	2.747 /sy	549
n	5150	Load Haul Export	50.00 bcy	4,362	-	-		2,514	-	137.514 /bcy	6,876
n	5150	Excavating,bulk bank measure - Export	50.00 bcy	644	-	-		385	-	20.576 /bcy	1,029
	1700	Backfill, bulk, 6" to 12" lifts, dozer backfilling, compaction with sheepsfoot roller	10.00 ecy	113	-	-		261	-	37.416 /ecy	374
		G1030 Earthwork		5,292	376			3,160			8,828
		47.228 Labor hours									
		23.595 Equipment hours									
		G10 Site Preparation		5,292	376	0		3,160	0		8,828
		47.228 Labor hours									
		23.595 Equipment hours									
G20 Site Improvements											
G2020 Parking Lots											
n	0005	Site Demolition Crew with Demolition Equipment (6 men x 8 hrs per day) (7 equip hours x 8 hrs per day)	0.25 day	985	-	-		1,855	-	11,361.50 /day	2,840
	2000	Relocated C&G	95.00 lnft	2,023	793	-		-	-	29.646 /lnft	2,816
	2000	Parking - Curb & gutter - allowance	170.00 lnft	3,620	1,419	-		-	-	29.646 /lnft	5,040
	0570	West Parking - Asphalt paving, plant mixed asphaltic base courses for roadways and large paved areas, bituminous concrete, 10" thick	266.00 sy	1,796	32,905	-		941	-	133.993 /sy	35,642
n	0310	Striping	200.00 lf	165	-	-		180	-	1.724 /lf	345
n	0310	Bollards	4.00 ea	5,007	-	-		5,485	-	2,623.053 /ea	10,492
n	0310	Light Pole Bse	1.00 ea	1,252	-	-		1,371	-	2,623.05 /ea	2,623
		G2020 Parking Lots		14,848	35,118			9,833			59,799
		235.334 Labor hours									
		111.079 Equipment hours									
G2050 Landscaping											
n	0900	Landscaping Allowance (mulch, planting, hardscapes, SWPP)	1,000.00 sf	1,400	1,000	1,000		1,000	1,000	5.40 /sf	5,400
		G2050 Landscaping		1,400	1,000	1,000		1,000	1,000		5,400

AACE Classification Accuracy Range

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Engineer's Opinion of Probable Construction Cost
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City of Lee Summit



Summary Report

Item	Description	Takeoff Qty	Labor	Material	Subcontract	Name	Equipment	Other	Total	
			Amount	Amount	Amount		Amount	Amount	Unit Cost	Amount
	G20 Site Improvements		16,248	36,118	1,000		10,833	1,000		65,199
	235.334 Labor hours									
	111.079 Equipment hours									
G30 Site Civil and Mechanical Utilities										
<i>Storm Sewer</i>										
G3030	0900 4" Storm Sewer Piping	20.00 Inft	1,120	800	800		800	800	216.00 /Inft	4,320
n	G3030 Storm Sewer		1,120	800	800		800	800		4,320
	G30 Site Civil and Mechanical Utilities		1,120	800	800		800	800		4,320
	20 Sitework		22,660	37,294	1,800		14,792	1,800	#####/AC	78,347
	0.07 AC									
	282.562 Labor hours									
	134.674 Equipment hours									

Upper Range +50%

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City of Lee Summit



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Estimate Version:

Summary Report

Estimate Totals

Description	Amount	Totals	Rate
Labor	200,667		
Material	583,970		
Equipment	75,348		
Subcontract	89,755		
Other	1,900		
Subtotal Direct Project Costs	951,640	951,640	
Contractor's Mob	28,549		3.000 %
Contractor's Field Overhead	95,164		10.000 %
Contractor's General Condition	38,066		4.000 %
Subtotal Field Const Costs	161,779	1,113,419	
Sales Tax Estimate (Mat & Eq)	49,359		8.600 %
Subtotal Field Const Costs	49,359	1,162,778	
Contractor's Fee	69,767		6.000 %
Subtotal Field Const Costs	69,767	1,232,545	
Construction Contingency	246,509		20.000 %
Subtotal Field Const Costs	246,509	1,479,054	
Escalation Project (Year)	44,372		3.000 %
Subtotal	44,372	1,523,426	
Contractor's Bonds & Insurance	30,469		2.000 %
Subtotal	30,469	1,553,895	
Total		1,553,895	

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Summary Report

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Design Stage: 15%

Estimate Version:

Upper Range +50%

AACE Classification Accuracy Range

Lower Range -30%