DOCKET 508

EXHIBIT CSC-12-1

APPENDIX A



Fairfield to New Haven Asset Condition Assessment

The United Illuminating Company June 30,2018

APPENDIX A CONCEPTUAL COST ESTIMATE SUMMARIES



The United Illuminating Company
June 30,2018

APPENDIX A.1 MILVON TO WEST RIVER (MWR) COST ESTIMATE SUMMARY



The United Illuminating Company June 30,2018

APPENDIX A.1.1 MWR ALTERNATIVE 1 COST ESTIMATE SUMMARY

WORK CODE	ACCOUNTS		EQUIP AND MATERIAL COST	TAX	LABOR COST	TOTAL
	MATERIALS					
T03	SURVEYING	no horsen	so	\$0	\$41,000	\$41,
T04	SOIL BORINGS		\$321,000	\$20,384	\$0	\$341,
T05	RIGHT-OF-WAY		\$0	\$0	\$0	Ψ0-11,
T06	CLEARING		\$5,265	\$335	\$704,927	\$710,
T07	ACCESS	A	\$1,455,144	\$92,402	\$2,731,017	\$4,278,
T08	TREE RESTORATION ALLOWANCE		\$0	\$0	\$100,000	\$100,
T09	69 KV STRUCTURES		\$0	\$0	\$0	4.00,
T09	115 KV STRUCTURES		\$2,753,259	\$174,832	\$1,582,721	\$4,510,
T09	138 KV STRUCTURES		\$0	\$0	\$0	4 / 10 / 10 /
T09	161 KV STRUCTURES		\$0	\$0	\$0	
T09	230 KV STRUCTURES	- 1	\$0	\$0	\$0	
T09	345 KV STRUCTURES	1	\$0	\$0	\$0	
T09	500 KV STRUCTURES	1	\$0	\$0	\$0	
T10	FOUNDATIONS		\$781,390	\$49,618	\$5,538,307	\$6,369,
T11	CONDUCTOR		\$386,100	\$24,517	\$665,054	\$1,075,
T12	SHIELD WIRES (OPGW)		\$81,069	\$5,148	\$202,982	\$289,
T13	SPECIAL MATERIAL 1	4	\$0	\$0	\$0	
T14	SUBSTATION FIBER CONDUIT	-	\$0	\$0	\$50,000	\$50,
T15	DISTRIBUTION		\$0	\$0	\$0	
T16	REMOVALS		\$0	\$0	\$3,000,000	\$3,000
T17	BORING		\$0	\$0	\$0	
T18	RISER & TERMINATION STRUCTURES		\$0	\$0	\$0	
T19	TRENCHING		\$0	\$0	\$0	
T20	XLPE CABLE SYSTEM	2 mil	\$0	\$0	\$0	
T21	PIPE TYPE CABLE SYSTEM		\$0	\$0	\$0	
T22	FIBER SYSTEM		\$0	\$0	\$0	
T23	STREAM DIVERSION		\$0	\$0	\$0	
	INSURANCE	- 1000	\$0	\$0	\$300,000.00	\$300.
	RAILROAD PROTECTIVE LIABILITY INSURANCE		\$0	\$0	\$250,000.00	\$250
	FLAGMEN	1000	\$0	\$0	\$3,000,000	\$3,000
	SIGNALMAN/GROUNDMEN		\$0	\$0	\$1,000,000	\$1,000
	LAYDOWN/SECURITY		\$0	\$0	\$100,000	\$100
	SITE DEV. SUBCONTRACTOR STANDBY TIME		\$0	\$0	\$40,000	\$40.
	FOUNDATION SUBCONTRACTOR STANDBY TIME		\$0	\$0	\$120,000	\$120
	GENERAL SUBCONTRACTOR STANDBY TIME		\$0	\$0	\$100,000	\$100
	MOBILIZATION/DEMOBILIZATION		\$0	\$0	\$40,000	\$40.
	TRAFFIC PERMITS & CONTROL		\$5,000	\$0	\$40,000	\$45
		SUBTOTAL	\$5,788,227	\$367,236	\$19,606,008	\$25,761
	CONTINGENCY - MISC EQUIP/MAT/LABOR (25%)		\$1,365,557	\$86,713	\$4,151,502	\$5,603,
	CONTRACTOR'S OH/PROFIT (10%)	1	\$0	\$00,713	\$2,375,751	\$2,375
	ENGINEERING		\$0	\$0	\$3,200,000	\$3,200
	CONSTRUCTION MANAGEMENT		\$0	\$0	\$3,200,000	\$3,200
	ESCALATION @1.75% PER YEAR FOR 8.5 YEARS		\$1,136,671	\$72,128	\$5,169,239	\$6,378
	ECONEMION & 1.70% EN TENT ON 0.5 TENTO	TOTAL	\$8,290,455	\$526,077	\$37,702,499	\$46,519
	INITIAL CONTRACT PRICE - TARGET CO	ST OF WORK		STATE OF THE STATE		\$46.519
	UI COSTS		- 1			ten4
	PRE-2018					\$681
	PERMITTING (CSC)/LEGAL LAND ACQUISITION		1			\$1,251
	UI PROJECT MANAGEMENT & ADMINISTRATION					\$2,938 \$631
	UI ENGINEERING					\$727
	UI CONSTRUCTION INSPECTION					\$266
	UI T&S LABOR					\$200 \$51
	UI OVERHEADS/ALLOCATIONS					\$3,893
	ENVIRONMENTAL HOURS					\$83 \$83
	REAL ESTATE HOURS					\$23
	ENVIRONMENTAL PERMITTING					\$249
	OTHER CONSULTANTS					\$431
	ENVIRONMENTAL REMEDIATION					\$792
	REMOTE END MODIFICATIONS					
	AFUDC					\$50 \$12,463
	CONTINGENCY					
	UI TAXES	-				\$8,631
	U IANES		4			\$562
	1	UI TOTAL		1		\$33,730

				THE PARTY OF THE P	
ccuracy ontingency linimum laximum	Order of Magnitude: +50%/-25% 25% \$60,187,146 \$120,374,292	Engineering Const Mgmt		MH MH	
&V Project No	195880				
PPROVALS					
	Kisa Bandyopadhyay	in Bolow			6/29/18
	Estimator	Signature		25	Date
	K. A	ale Way			7/2/18
	Kimberly D. Waggoner B&V Project Manager	Signature			Date
	Amendants	Irron L. Le	wis		7/2/2018
	Arron Lewis B&V Project Director	Signature			Date
	/-	M Clada	1		7/26/18
	Jim Yeske UI Project Manager	Clarabase	V		Date
	Of Project Manager	Signature		#1 18 _ O.	Date
HISTORY	STAGES	ACCURACY	CONTINGENCY	CONTRACTED PRICE	TOTAL
ept. 29, 2017	UPDATED PROPOSED PROJECT/ORDER OF MAGNITUDE ESTIMATE - INCLUDE ADDT'L UI COSTS	+50%/-25%	25%	\$42,285,490	\$62,158,814
eb. 16, 2018	UPDATED PROPOSED PROJECT/ORDER OF MAGNITUDE ESTIMATE - INCLUDE ADDT'L UI COSTS	+50%/-25%	25%	\$46,519,032	\$64,967,356
arch 30, 2018	UPDATED PROPOSED PROJECT/ORDER OF MAGNITUDE ESTIMATE - UPDATE REAL ESTATE COST	+50%/-25%	25%	\$46,519,032	\$67,905,737
ad 25 2019	UPDATED PROPOSED PROJECT/ORDER OF MAGNITUDE ESTIMATE - ADDED CSC	+50%/-25%	25%	\$46,519,032	\$69,114,191
April 25, 2018	UPDATED PROPOSED PROJECT/ORDER OF MAGNITUDE				

30-Jun-18

United Illuminating Company Alternative 1 - Double Circuit Monopole Woodmont to Allings Crossing 115kV Railroad Upgrade

WORK		EQUIP AND MATERIAL		LABOR	
CODE	ACCOUNTS	COST	TAX	COST	TOTAL
TOO	MATERIALS			****	000 000
T03 T04	SURVEYING SOIL BORINGS	\$0 \$275,200	\$0 \$17,475	\$29,000 \$0	\$29,000 \$292,675
T05	RIGHT-OF-WAY	\$275,200	\$17,475	\$0	\$292,675
T06	CLEARING	\$3,789	\$241	\$531,305	\$535,335
T07	ACCESS	\$1,006,948	\$63,941	\$1,934,790	\$3,005,679
T08	TREE RESTORATION ALLOWANCE	\$0	\$0	\$100,000	\$100,000
T09	69 KV STRUCTURES	\$0	\$0	\$0	\$0
T09	115 KV STRUCTURES	\$2,046,806	\$129,972	\$1,271,392	\$3,448,170
T09	138 KV STRUCTURES	\$0	\$0	\$0	\$0
T09	161 KV STRUCTURES	\$0	\$0	\$0	\$0
T09 T09	230 KV STRUCTURES 345 KV STRUCTURES	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0
T09	500 KV STRUCTURES	\$0	\$0	\$0	\$0
T10	FOUNDATIONS	\$613,949	\$38,986	\$4,367,171	\$5,020,106
T11	CONDUCTOR	\$280,800	\$17,831	\$508,108	\$806,739
T12	SHIELD WIRES (OPGW)	\$56,778	\$3,605	\$152,176	\$212,559
T13	SPECIAL MATERIAL 1	\$0	\$0	\$0	\$0
T14	SUBSTATION FIBER CONDUIT	\$0	\$0	\$50,000	\$50,000
T15	DISTRIBUTION	\$0	\$0	\$0	\$0
T16	REMOVALS	\$0	\$0	\$3,000,000	\$3,000,000
T17	BORING	\$0	\$0	\$0	\$0
T18 T19	RISER & TERMINATION STRUCTURES	\$0	\$0	\$0	\$0
T20	TRENCHING XLPE CABLE SYSTEM	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0
T21	PIPE TYPE CABLE SYSTEM	\$0	\$0	\$0	\$0
T22	FIBER SYSTEM	\$0	\$0	\$0	\$0
T23	STREAM DIVERSION	\$0	\$0	\$0	\$0
	INSURANCE	\$0	\$0	\$300,000	\$300,000
	RAILROAD PROTECTIVE LIABILITY INSURANCE	\$0	\$0	\$250,000	\$250,000
	FLAGMEN	\$0	\$0	\$2,121,951	\$2,121,951
	SIGNALMAN/GROUNDMEN	\$0	\$0	\$707,317	\$707,317
	LAYDOWN/SECURITY	\$0	\$0	\$100,000	\$100,000
	SITE DEV. SUBCONTRACTOR STANDBY TIME	\$0	\$0	\$40,000	\$40,000
	FOUNDATION SUBCONTRACTOR STANDBY TIME GENERAL SUBCONTRACTOR STANDBY TIME	\$0 \$0	\$0 \$0	\$120,000 \$100,000	\$120,000
	MOBILIZATION/DEMOBILIZATION	\$0	\$0	\$40,000	\$100,000 \$40,000
	TRAFFIC PERMITS & CONTROL	\$5,000	\$0	\$40,000	\$45,000
		1 40,000	, ,	\$10,000	\$10,000
	SUBTOTA	L \$4,289,270	\$272,052	\$15,763,210	\$20,324,532
	المسالة والمستدار والكافق الأواسوات والمساور				
	CONTINGENCY - MISC EQUIP/MAT/LABOR (25%)	\$1,002,267	\$63,644	\$3,190,802	\$4,256,714
	CONTRACTOR'S OH/PROFIT (10%)	\$0	\$0	\$1,895,401	\$1,895,401
	ENGINEERING	\$0	¢0	f0 000 445	#0.000.44 E
	ENGINEERING	20	\$0	\$2,263,415	\$2,263,415
	CONSTRUCTION MANAGEMENT	so l	\$0	\$2,263,415	\$2,263,415
		**	•	\$2,200,410	ΨΕ,ΕΘΟ, 110
	ESCALATION @1.75% PER YEAR FOR 6.5 YEARS	\$631,652	\$40,072	\$3,029,166	\$3,700,889
	TOTA		\$375,768	\$28,405,408	\$34,704,365
	<u> </u>				
	INITIAL CONTRACT PRICE - TARGET COST OF WOR	K			\$34,704,365
	LILCOSTS	15.2			
	UI COSTS PRE-2018				£404 074
	PERMITTING (CSC)/LEGAL				\$481,871 \$1,481,121
	LAND ACQUISITION				\$684,655
	UI PROJECT MANAGEMENT & ADMINISTRATION		- 1		\$446,596
	UI ENGINEERING				\$514,411
	UI CONSTRUCTION INSPECTION				\$188,262
	UI T&S LABOR				\$36,335
	UI OVERHEADS/ALLOCATIONS		- 1		\$2,754,128
	ENVIRONMENTAL HOURS		- 1		\$59,318
	REAL ESTATE HOURS				\$16,878
	ENVIRONMENTAL PERMITTING				\$200,808
	OTHER CONSULTANTS ENVIRONMENTAL REMEDIATION				\$305,263
	ENVIRONMENTAL REMEDIATION REMOTE END MODIFICATIONS				\$637,864 \$50,000
	AFUDC				\$50,000 \$8,815,326
	CONTINGENCY		1		\$6,105,263
	UITAXES				\$398,213
	UITOTA	L			\$23,176,312
	PROJECT TOTAL	L \$5,923,189	\$375,768	\$28,405,408	\$57,880,677

Accuracy Order of Magnitude: +50%/-25% Engineering - MH Contingency Const Mgmt - MH 25% \$43,410,508 Minimum \$86,821,016 Maximum **B&V Project No** 195880 APPROVALS 6/29/18 Kisa Bandyopadhyay Estimator 7/2/18 Kimberly D. Waggoner Date **B&V Project Manager** 7/2/2018 Arron Lewis Date **B&V Project Director** 7/26/18 Jim Yeske Ul Project Manager Date Signature CONTRACTED HISTORY ACCURACY CONTINGENCY PRICE TOTAL STAGES UPDATED PROPOSED PROJECT/ORDER OF MAGNITUDE ESTIMATE - INCLUDE ADDT'L UI COSTS Sept. 29, 2017 +50%/-25% 25% \$34,307,267 \$47,907,482* UPDATED PROPOSED PROJECT/ORDER OF MAGNITUDE **ESTIMATE - UPDATE ESCALATION COSTS** Oct. 25, 2017 +50%/-25% 25% \$33,231,356 \$46,737,527* UPDATED PROPOSED PROJECT/ORDER OF MAGNITUDE **ESTIMATE - UPDATE ESCALATION COSTS** Feb. 16, 2018 25% \$47,854,580* +50%/-25% \$34,704,365 UPDATED PROPOSED PROJECT/ORDER OF MAGNITUDE March 30,2018 **ESTIMATE - UPDATE REAL ESTATE COSTS** +50%/-25% 25% \$34,704,365 \$48,539,235* UPDATED PROPOSED PROJECT/ORDER OF MAGNITUDE ESTIMATE - ADDED CSC +50%/-25% \$40,989,830* April 25, 2018 25% \$34,704,365 UPDATED PROPOSED PROJECT/ORDER OF MAGNITUDE June 30, 2018 ESTIMATE - ADDE * DOES NOT INCLUDE ALL UI COSTS ESTIMATE - ADDED AFUDC COST; UPDATED UI COSTS +50%/-25% 25% \$34,704,365 \$57,880,677

30-Jun-18

United Illuminating Company Alternative 1 - Double Circuit Monopole Allings Crossing to Elmwest 115kV Railroad Upgrade

WORK CODE	ACCOUNTS	EQUIP AND MATERIAL COST	TAX	LABOR COST	TOTAL
	MATERIALS				
T03	SURVEYING	\$0	\$0	\$13,000	\$13,00
T04	SOIL BORINGS	\$102,500	\$6,509	\$0	\$109,00
T05	RIGHT-OF-WAY	\$0	\$0	\$0	\$
T06	CLEARING	\$928	\$60	\$194,800	\$195,78
T07	ACCESS	\$427,331	\$27,135	\$940,761	\$1,395,22
T08	TREE RESTORATION ALLOWANCE	\$0	\$0	\$100,000	\$100,00
T09 T09	69 KV STRUCTURES 115 KV STRUCTURES	\$0	\$0 \$78,379	\$0	\$2,185,45
T09	138 KV STRUCTURES	\$1,234,309 \$0	\$78,379	\$872,772 \$0	\$2,105,45 \$
T09	161 KV STRUCTURES	\$0	\$0	\$0	5
T09	230 KV STRUCTURES	\$0	\$0	\$0	
T09	345 KV STRUCTURES	\$0	\$0	\$0	
T09	500 KV STRUCTURES	\$0	\$0	\$0	
T10	FOUNDATIONS	\$241,859	\$15,358	\$1,732,257	\$1,989,47
T11	CONDUCTOR	\$122,850	\$7,801	\$272,690	\$403,34
T12	SHIELD WIRES (OPGW)	\$24,840	\$1,577	\$80,243	\$106,66
T13	SPECIAL MATERIAL 1	\$0	\$0	\$0	
T14	SUBSTATION FIBER CONDUIT	\$0	\$0	\$50,000	\$50,0
T15	DISTRIBUTION	\$0	\$0	\$0	***
T16	REMOVALS	\$0	\$0	\$3,000,000	\$3,000,0
T17 T18	BORING RISER & TERMINATION STRUCTURES	\$0 \$0	\$0 \$0	\$0 \$0	
T19	TRENCHING	\$0	\$0	\$0	
T20	XLPE CABLE SYSTEM	\$0	\$0	\$0	10.70
T21	PIPE TYPE CABLE SYSTEM	\$0	\$0	\$0	
T22	FIBER SYSTEM	\$0	\$0	\$0	1000
T23	STREAM DIVERSION	\$0	\$0	\$0	
	INSURANCE	\$0	\$0	\$300,000	\$300,0
	RAILROAD PROTECTIVE LIABILITY INSURANCE	\$0	\$0	\$250,000	\$250,0
	FLAGMEN	\$0	\$0	\$951,220	\$951,2
	SIGNALMAN/GROUNDMEN	\$0	\$0	\$317,073	\$317,0
	LAYDOWN/SECURITY	\$0	\$0	\$100,000	\$100,0
	SITE DEV. SUBCONTRACTOR STANDBY TIME	\$0	\$0	\$40,000	\$40,0
	FOUNDATION SUBCONTRACTOR STANDBY TIME	\$0	\$0	\$120,000	\$120,0
	GENERAL SUBCONTRACTOR STANDBY TIME	\$0	\$0	\$100,000	\$100,0
	MOBILIZATION/DEMOBILIZATION TRAFFIC PERMITS & CONTROL	\$0 \$5,000	\$0 \$0	\$40,000 \$40,000	\$40,0 \$45,0
	SUBTOTAL	\$2,159,617	\$136,819	\$9,514,815	\$11,811,2
	CONTINGENCY - MISC EQUIP/MAT/LABOR (25%)	\$513,029	\$32,578	\$1,628,704	\$2,174,3
	CONTRACTOR'S OH/PROFIT (10%)	\$0	\$0	\$1,114,352	\$1,114,3
	ENGINEERING	\$0	\$0	\$1,014,634	\$1,014,6
	CONSTRUCTION MANAGEMENT	\$0	\$0	\$1,014,634	\$1,014,6
	ESCALATION @1.75% PER YEAR FOR 4.5 YEARS	\$217,011	\$13,755	\$1,160,075	\$1,390,8
	TOTAL	\$2,889,657	\$183,151	\$15,447,213	\$18,520,0
	INITIAL CONTRACT PRICE - TARGET COST OF WORK				\$18,520,0
	UI COSTS PRE-2018				\$216,0
	PERMITTING (CSC)/LEGAL		1		\$210,0 \$577,9
	LAND ACQUISITION			1	\$977,s
	UI PROJECT MANAGEMENT & ADMINISTRATION				\$200,1
	UI ENGINEERING				\$230,5
	UI CONSTRUCTION INSPECTION				\$84,3
	UI T&S LABOR				\$16,2
	UI OVERHEADS/ALLOCATIONS				\$1,234,6
	ENVIRONMENTAL HOURS				\$26,5
	REAL ESTATE HOURS				\$7,5
	ENVIRONMENTAL PERMITTING				\$74,5
	OTHER CONSULTANTS ENVIRONMENTAL REMEDIATION		11		\$136,8 \$236,9
	REMOTE END MODIFICATIONS	1			\$230,8 \$50,0
	AFUDC				\$3,951,6
	CONTINGENCY				\$2,736,8
	UITAXES				\$178,5
	UI TOTAL				\$10,881,0
		1			

Recognition for		THE	100000000000000000000000000000000000000	art Same	
PARAMETERS		TERRITORIA DE LA CONTRACTORIA DE L			No. of the last
Accuracy Contingency Minimum Maximum B&V Project No	Order of Magnitude: +50%/-25% 25% \$22,050,798 \$44,101,596 195880	Engineering Const Mgmt		MH MH	AND THE RES
APPROVALS					Sales and the sales
			4 11 11 11		
0, =	Kisa Bandyopadhyay	Kin Blow Signature			6/29/18
	Estimator				Date
- x - 1c - c	Kimberly D. Waggoner	Kinberly Wa	88		7/2/18
00 100 00	B&V Project Manager	Signature		return tra	Date
L "	Arron Lewis	arron L.	Leurs		7/2/2018
	B&V Project Director	Signature		-	Date
	Party of the state	1 my	He /		7/26/18
	Jim Yeske UI Project Manager	Signature	V		Date
				CONTRACTED	
HISTORY	STAGES UPDATED PROPOSED PROJECT/ORDER OF	ACCURACY	CONTINGENCY	PRICE	TOTAL
Sept. 29, 2017	MAGNITUDE ESTIMATE - INCLUDE ADDT'L UI COSTS	+50%/-25%	25%	\$19,635,112	\$25,935,587*
Oct. 25, 2017	UPDATED PROPOSED PROJECT/ORDER OF MAGNITUDE ESTIMATE - UPDATE ESCALATION COSTS	+50%/-25%	25%	\$18,478,339	\$24,778,814*
March 30, 2018	UPDATED PROPOSED PROJECT/ORDER OF MAGNITUDE ESTIMATE - UPDATE REAL ESTATE COSTS	+50%/-25%	25%	\$18,520,021	\$25,271,940*
April 25, 2018	UPDATED PROPOSED PROJECT/ORDER OF MAGNITUDE ESTIMATE - ADDED CSC	+50%/-25%	25%	\$18,520,021	\$25,836,203*
	UPDATED PROPOSED PROJECT/ORDER OF MAGNITUDE ESTIMATE - ADDED AFUDC COST;			1	
June 30, 2018 * DOES NOT INC	UPDATED UI COSTS LUDE ALL UI COSTS	+50%/-25%	25%	\$18,520,021	\$29,401,064

30-Jun-18

United Illuminating Company Alternative 1 - Double Circuit Monopole Elmwest to West River 115kV Railroad Upgrade

WORK CODE	ACCOUNTS	EQUIP AND MATERIAL COST	TAX	LABOR COST	TOTAL
	MATERIALO				
T03	MATERIALS SURVEYING	\$0	\$0	\$12,000	\$12,0
T04	SOIL BORINGS	\$111,400	\$7,074	\$0	\$118,4
T05	RIGHT-OF-WAY	\$0	\$0	\$0	\$110,7
T06	CLEARING	\$943	\$61	\$196,590	\$197,5
T07	ACCESS	\$418,045	\$26,546	\$919,704	\$1,364,2
T08	TREE RESTORATION ALLOWANCE	\$0	\$0	\$100,000	\$100,0
T09	69 KV STRUCTURES	\$0	\$0	\$0	*,-
T09	115 KV STRUCTURES	\$1,052,584	\$66,839	\$806,698	\$1,926,1
T09	138 KV STRUCTURES	\$0	\$0	\$0	
T09	161 KV STRUCTURES	\$0	\$0	\$0	
T09	230 KV STRUCTURES	\$0	\$0	\$0	
T09	345 KV STRUCTURES	\$0	\$0	\$0	
T09	500 KV STRUCTURES	\$0	\$0	\$0	
T10	FOUNDATIONS	\$279,068	\$17,721	\$2,004,795	\$2,301,5
T11	CONDUCTOR	\$122,850	\$7,801	\$272,690	\$403,3
T12	SHIELD WIRES (OPGW)	\$24,840	\$1,577	\$80,243	\$106,6
T13	SPECIAL MATERIAL 1	\$0	\$0	\$0	
T14	SUBSTATION TIE FIBER CONDUIT	\$0	\$0	\$50,000	\$50,0
T15	DISTRIBUTION	\$0	\$0	\$0	
T16	REMOVALS	\$0	\$0	\$3,000,000	\$3,000,0
T17	BORING	\$0	\$0	\$0	
T18	RISER & TERMINATION STRUCTURES	\$0	\$0	\$0	
T19	TRENCHING	\$0	\$0	\$0	
T20	XLPE CABLE SYSTEM	\$0	\$0	\$0	
T21	PIPE TYPE CABLE SYSTEM	\$0	\$0	\$0	
T22	FIBER SYSTEM	\$0	\$0	\$0	
T23	STREAM DIVERSION	\$0	\$0	\$0	
	INSURANCE	\$0	\$0	\$300,000	\$300,0
	RAILROAD PROTECTIVE LIABILITY INSURANCE	\$0	\$0	\$250,000	\$250,0
	FLAGMEN	\$0	\$0	\$878,049	\$878,0
	SIGNALMAN/GROUNDMEN	\$0	\$0	\$292,683	\$292,6
	LAYDOWN/SECURITY	\$0	\$0	\$100,000	\$100,0
	SITE DEV. SUBCONTRACTOR STANDBY TIME	\$0	\$0	\$40,000	\$40,0
	FOUNDATION SUBCONTRACTOR STANDBY TIME	\$0	\$0	\$120,000	\$120,0
	GENERAL SUBCONTRACTOR STANDBY TIME	\$0	\$0	\$100,000	\$100,0
	MOBILIZATION/DEMOBILIZATION TRAFFIC PERMITS & CONTROL	\$0 \$5,000	\$0 \$0	\$40,000 \$40,000	\$40,0 \$45,0
	SUBTOTAL	\$2,014,731	\$127,619	\$9,603,451	\$11,745,8
	CONTINGENCY - MISC EQUIP/MAT/LABOR (25%) CONTRACTOR'S OH/PROFIT (10%)	\$474,583 \$0	\$30,136 \$0	\$1,650,863 \$1,125,431	\$2,155,5 \$1,125,4
	ENGINEERING	\$0	\$0	\$936,585	\$936,5
	CONSTRUCTION MANAGEMENT	\$0	\$0	\$936,585	\$936,5
	FOOAL ATION OA TOW DED VEAD FOR 5 VEADO	\$005 570	644.005	£4 004 550	64 504
	ESCALATION @1.75% PER YEAR FOR 5 YEARS TOTAL	\$225,573 \$2,714,887	\$14,295 \$172,050	\$1,291,550 \$15,544,466	\$1,531,4 \$18,431,4
Tomas	INITIAL CONTRACT PRICE - TARGET COST OF WORK			Office Advanced	\$18,431,4
	III COSTS				
	UI COSTS PRE-2018				6400
					\$199,
	PERMITTING (CSC)/LEGAL LAND ACQUISITION				\$574,
	UI PROJECT MANAGEMENT & ADMINISTRATION				\$1,370,4 \$184,
	UI ENGINEERING				\$212,8
	UI CONSTRUCTION INSPECTION				\$77,9
	UI T&S LABOR				\$15,0 \$15,0
	UI OVERHEADS/ALLOCATIONS				\$1,139,
	ENVIRONMENTAL HOURS				\$24,
	REAL ESTATE HOURS				\$6,
	ENVIRONMENTAL PERMITTING	85	_		\$80,
	OTHER CONSULTANTS				\$126,
		I			\$255,
	ENVIRONMENTAL REMEDIATION				+=-00 ;
	ENVIRONMENTAL REMEDIATION REMOTE END MODIFICATIONS				\$50.6
	1				
	REMOTE END MODIFICATIONS				\$50,0 \$3,647,7 \$2,526,3
	REMOTE END MODIFICATIONS AFUDC				\$3,647,7 \$2,526,3
	REMOTE END MODIFICATIONS AFUDC CONTINGENCY				\$3,647,7

		Marie Santa	PERCENT OF	10000000 1100	
PARAMETERS					
Accuracy Contingency Minimum Maximum B&V Project No	Order of Magnitude: +50%/-25% 25% \$21,816,262 \$43,632,524 195880	Engineering Const Mgmt		MH MH	
APPROVALS					
1,300	Kisa Bandyopadhyay	L'a Bfr Signature			6/29/18
	Estimator	Signature			Date
No.	Kimberly D. Waggoner	Kinberly Wa	81		7/2/18
	B&V Project Manager	Signature			Date
i pe tee li ef	Arron Lewis	Person L.	Leurs		7/2/2018
	B&V Project Director	Signature			Date
17.11		My.	de l		7/26/18
	Jim Yeske UI Project Manager	Signature	V		Date
				CONTRACTED	
HISTORY	STAGES	ACCURACY	CONTINGENCY	PRICE	TOTAL
Sept. 29, 2017	UPDATED PROPOSED PROJECT/ORDER OF MAGNITUDE ESTIMATE - INCLUDE ADDT'L UI COSTS	+50%/-25%	25%	\$20,054,157	\$26,549,058
Oct. 25, 2017	UPDATED PROPOSED PROJECT/ORDER OF MAGNITUDE ESTIMATE - UPDATE ESCALATION COSTS	+50%/-25%	25%	\$18,387,908	\$24,882,809
Feb. 16, 2018	UPDATED PROPOSED PROJECT/ORDER OF MAGNITUDE ESTIMATE - UPDATE ESCALATION COSTS	+50%/-25%	25%	\$18,431,403	\$23,861,304
March 30, 2018	UPDATED PROPOSED PROJECT/ORDER OF MAGNITUDE ESTIMATE - UPDATE REAL ESTATE COSTS	+50%/-25%	25%	\$18,431,403	\$25,231,752
April 25, 2018	UPDATED PROPOSED PROJECT/ORDER OF MAGNITUDE ESTIMATE - ADDED CSC UPDATED PROPOSED PROJECT/ORDER OF MAGNITUDE ESTIMATE - ADDED AFUDC COST;	+50%/-25%	25%	\$18,431,403	\$25,793,859
June 30, 2018	UPDATED UI COSTS	+50%/-25%	25%	\$18,431,403	\$29,088,349



The United Illuminating Company June 30,2018

APPENDIX A.1.2 MWR ALTERNATIVE 2 COST ESTIMATE SUMMARIES

WORK CODE	ACCOUNTS	EQUIP AND MATERIAL COST	TAX	LABOR COST	TOTAL
	MATERIALO				
T03	MATERIALS SURVEYING	\$0	\$0	\$82,000	\$82,0
T04	SOIL BORINGS	\$678,600	\$43,091	\$0	\$721,69
T05	RIGHT-OF-WAY	\$0	\$0	\$0	4,21,0
T06	CLEARING	\$4,367	\$278	\$599,322	\$603,9
T07	ACCESS	\$2,772,609	\$176,061	\$5,095,375	\$8,044,04
T08	TREE RESTORATION ALLOWANCE	\$0	\$0	\$200,000	\$200,00
T09	69 KV STRUCTURES	\$0	\$0	\$0	
T09	115 KV STRUCTURES	\$3,342,128	\$212,225	\$2,318,874	\$5,873,2
T09	138 KV STRUCTURES	\$0	\$0	\$0	
T09	161 KV STRUCTURES	\$0	\$0	\$0	
T09	230 KV STRUCTURES	\$0	\$0	\$0	
T09	345 KV STRUCTURES	\$0	\$0	\$0	
T09	500 KV STRUCTURES	\$0	\$0	\$0	
T10	FOUNDATIONS	\$1,171,662	\$74,401	\$8,280,464	\$9,526,5
T11	CONDUCTOR	\$386,100	\$24,517	\$665,054	\$1,075,6
T12	SHIELD WIRES (OPGW)	\$84,069	\$5,338	\$205,832	\$295,2
T13	SPECIAL MATERIAL 1	\$0	\$0	\$0	fro o
T14 T15	SUBSTATION FIBER CONDUIT	\$0	\$0 \$0	\$50,000 \$0	\$50,0
T16	DISTRIBUTION	\$0 \$0	\$0		\$3,000,0
T17	REMOVALS BORING	\$0	\$0	\$3,000,000 \$0	φ3,000,0
T18	RISER & TERMINATION STRUCTURES	\$0	\$0	\$0	
T19	TRENCHING	\$0	\$0	\$0	
T20	XLPE CABLE SYSTEM	\$0	\$0	\$0	
T21	PIPE TYPE CABLE SYSTEM	\$0	\$0	\$0	
T22	FIBER SYSTEM	\$0	\$0	\$0	
T23	STREAM DIVERSION	\$0	\$0	\$0	
	INSURANCE	\$0	\$0	\$300,000	\$300,0
	RAILROAD PROTECTIVE LIABILITY INSURANCE	\$0	\$0	\$250,000	\$250,0
	FLAGMEN	\$0	\$0	\$3,250,000	\$3,250,0
	SIGNALMAN/GROUNDMEN	\$0	\$0	\$1,250,000	\$1,250,0
	LAYDOWN/SECURITY	\$0	\$0	\$100,000	\$100,0
	SITE DEV. SUBCONTRACTOR STANDBY TIME	\$0	\$0	\$40,000	\$40,0
	FOUNDATION SUBCONTRACTOR STANDBY TIME	\$0	\$0	\$120,000	\$120,0
	GENERAL SUBCONTRACTOR STANDBY TIME	\$0	\$0	\$100,000	\$100,0
	MOBILIZATION/DEMOBILIZATION	\$0	\$0	\$40,000	\$40,0
	TRAFFIC PERMITS & CONTROL	\$5,000	\$0	\$40,000	\$45,0
	SUBTOTAL	\$8,444,535	\$535,911	\$25,986,921	\$34,967,3
	CONTINGENCY - MISC EQUIP/MAT/LABOR (25%) CONTRACTOR'S OH/PROFIT (10%)	\$1,940,234 \$0	\$123,205 \$0	\$5,746,730 \$3,173,365	\$7,810,1 \$3,173,3
	ENGINEERING	\$0	\$0	\$3,000,000	\$3,000,0
	CONSTRUCTION MANAGEMENT	\$0	\$0	\$3,000,000	\$3,000,0
	ESCALATION @1.75% PER YEAR FOR 11.5 YEARS TOTAL	\$2,292,994 \$12,677,763	\$145,535 \$804,652	\$9,032,417 \$49,939,433	\$11,470,9 \$63,421,8
	INITIAL CONTRACT PRICE - TARGET COST OF WORK				\$63,421,8
	LU COCTO				
	UI COSTS				8084
	PRE-2018 PERMITTING (CSCVI EGA)				\$681, \$1,683,
	PERMITTING (CSC)/LEGAL LAND ACQUISITION				\$1,683, \$5,987,
	UI PROJECT MANAGEMENT & ADMINISTRATION		- 1		\$5,987, \$631,
	UI ENGINEERING				\$727,
	UI CONSTRUCTION INSPECTION		4		\$266,
	UI T&S LABOR		- 1		\$51,
	UI OVERHEADS/ALLOCATIONS				\$4,919,
	ENVIRONMENTAL HOURS				\$83,
	REAL ESTATE HOURS				\$23,
	ENVIRONMENTAL PERMITTING				\$499,
	OTHER CONSULTANTS	1			\$431,
	ENVIRONMENTAL REMEDIATION	1			\$1,585,
	REMOTE END MODIFICATIONS		1		\$ 50,
	AFUDC	1	1		\$10,671,
	CONTINGENCY UI TAXES		1 2		\$8,631, \$724,
	ULIMAES				\$124,
	UITOTAL				\$37,650,

Order of Magnitude: +50%/-25% Accuracy Engineering - MH Contingency 25% Const Mgmt - MH \$75,804,257 Minimum \$151,608,514 Maximum **B&V Project No** 195880 APPROVALS Kisa Bandyopadhyay Estimator 7/2/18 Kimberly D. Waggoner **B&V Project Manager** Date 7/2/2018 Arron Lewis **B&V Project Director** Date 7/26/18 Jim Yeske Ul Project Manager Signature Date CONTRACTED HISTORY CONTINGENCY PRICE **STAGES** ACCURACY TOTAL UPDATED PROPOSED PROJECT/ORDER OF MAGNITUDE Sept. 29, 2017 ESTIMATE - INCLUDE ADDT'L UI COSTS +50%/-25% 25% \$55,684,042 \$80,832,744* UPDATED PROPOSED PROJECT/ORDER OF MAGNITUDE Feb. 16, 2018 **ESTIMATE - INCLUDE ADDT'L UI COSTS** \$83,020,549* +50%/-25% 25% \$63,421,847 UPDATED PROPOSED PROJECT/ORDER OF MAGNITUDE ESTIMATE - UPDATE REAL ESTATE UI COSTS March 30, 2018 +50%/-25% 25% \$63,421,847 \$89,008,031* UPDATED PROPOSED PROJECT/ORDER OF MAGNITUDE April 25, 2018 **ESTIMATE - ADDED CSC COST** +50%/-25% 25% \$90,648,416* \$63,421,847 UPDATED PROPOSED PROJECT/ORDER OF MAGNITUDE ESTIMATE - ADDED AFUDC COST; UPDATED UI COSTS June 30, 2018 +50%/-25% 25% \$63,421,847 \$101,072,342

* DOES NOT INCLUDE ALL UI COSTS

COST	ESTIMATE	SUMMARY
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ORK ODE	ACCOUNTS	EQUIP AND MATERIAL COST	TAX	LABOR COST	TOTAL
T03	MATERIALS SURVEYING	so	so	\$58,000	\$58,0
T04	SOIL BORINGS	\$546,000	\$34,671	\$30,000	\$580,6
T05			\$34,671	\$0	\$350,t
	RIGHT-OF-WAY	\$0 \$3,446	\$220	\$491,032	\$494,6
706	CLEARING				
T07	ACCESS TOPE TOPE ALLOWANCE	\$2,099,528	\$133,320	\$3,849,465	\$6,082,
807	TREE RESTORATION ALLOWANCE 69 KV STRUCTURES	\$0 \$0	\$0 \$0	\$200,000 \$0	\$200,
T09				\$1,930,851	\$4 E77
T09	115 KV STRUCTURES 138 KV STRUCTURES	\$2,582,491 \$0	\$163,988 \$0	\$1,930,651	\$4,677,
T09 T09	161 KV STRUCTURES	\$0	\$0	\$0	
T09	230 KV STRUCTURES	\$0	\$0	\$0	
T09	345 KV STRUCTURES	\$0	\$0	\$0	
T09	500 KV STRUCTURES	\$0	\$0	\$0	
T10	FOUNDATIONS	\$970,395	\$61,620	\$6,876,187	\$7,908.
T11	CONDUCTOR	\$280,800	\$17,831	\$508,108	\$806,
T12	SHIELD WIRES (OPGW)	\$57,778	\$3,669	\$157,876	\$219,
T13	SPECIAL MATERIAL 1	\$0,,770	\$0,009	\$157,070	Ψ210,
Γ14	SUBSTATION FIBER CONDUIT	\$0	\$0	\$50,000	\$50,
T15	DISTRIBUTION	\$0	\$0	\$0,000	Ψ30,
Γ16	REMOVALS	\$0	\$0	\$3,000,000	\$3,000,
Γ17	BORING	\$0	\$0	\$0,000,000	\$3,000,
Г18	RISER & TERMINATION STRUCTURES	\$0	\$0	\$0	
T19	TRENCHING	\$0	\$0	\$0	
Γ20	XLPE CABLE SYSTEM	\$0	\$0	\$0	
Γ21	PIPE TYPE CABLE SYSTEM	\$0	\$0	\$0	
Γ22	FIBER SYSTEM	\$0	\$0	\$0	
T23	STREAM DIVERSION	\$0	\$0	\$0	
123	INSURANCE	\$0	\$0	\$300,000	\$300,
	RAILROAD PROTECTIVE LIABILITY INSURANCE	\$0	\$0	\$250,000	\$250,
	FLAGMEN	\$0	\$0	\$2,298,780	\$2,298
	SIGNALMAN/GROUNDMEN	\$0	\$0	\$884,146	\$884,
	LAYDOWN/SECURITY	\$0	\$0	\$100,000	\$100
	SITE DEV. SUBCONTRACTOR STANDBY TIME	\$0	\$0	\$40,000	\$40.
	FOUNDATION SUBCONTRACTOR STANDBY TIME	\$0	\$0	\$120,000	\$120
	GENERAL SUBCONTRACTOR STANDBY TIME	\$0	\$0	\$100,000	\$100,
	MOBILIZATION/DEMOBILIZATION	\$0	\$0	\$40,000	\$40,
	TRAFFIC PERMITS & CONTROL	\$5,000	\$0	\$40,000	\$45,
	SUBTOTAL	\$6,545,438	\$415,319	\$21,294,446	\$28,255,
	CONTINGENCY - MISC EQUIP/MAT/LABOR (25%) CONTRACTOR'S OH/PROFIT (10%)	\$1,498,610 \$0	\$95,162 \$0	\$4,573,611 \$2,586,806	\$6,167, \$2,586,
	ENGINEERING	\$0	\$0	\$2,121,951	\$2,121,
	CONSTRUCTION MANAGEMENT	\$0	\$0	\$2,121,951	\$2,121
	ESCALATION @1.75% PER YEAR FOR 8.5 YEARS	\$1,278,126	\$81,111	\$5,195,536	\$6,554
	TOTAL	\$9,322,174	\$591,591	\$37,894,301	\$47,808
	INITIAL CONTRACT PRICE - TARGET COST OF WORK				\$47,808
	ui costs				0.01
	PRE-2018				\$481
	PERMITTING (CSC)/LEGAL				\$2,042
	LAND ACQUISITION				\$1,083
	UI PROJECT MANAGEMENT & ADMINISTRATION UI ENGINEERING				\$446 \$514
	UI CONSTRUCTION INSPECTION				\$188
	UI T&S LABOR				\$36
	UI OVERHEADS/ALLOCATIONS				\$3,479
	ENVIRONMENTAL HOURS				\$5,479 \$59
	REAL ESTATE HOURS				\$35 \$16
	ENVIRONMENTAL PERMITTING		+		\$401
	OTHER CONSULTANTS				\$305
	ENVIRONMENTAL REMEDIATION				\$1,275
	REMOTE END MODIFICATIONS				\$50
	AFUDC				\$7,548
	CONTINGENCY				\$6,105
	UITAXES				\$512
	UITOTAL				\$24,548
	3110172	1			,0 70
		\$9,322,174	\$591,591		

PARAMETERS Accuracy Order of Magnitude: +50%/-25% - MH Engineering Contingency 25% Const Mgmt - MH Minimum \$54,267,345 Maximum \$108,534,691 **B&V Project No** 195880 APPROVALS 6/29/18 Kisa Bandyopadhyay Estimator 7/2/18 Kimberly D. Waggoner **B&V Project Manager** Date 7/2/2018 Arron Lewis **B&V Project Director** Date 7/26/18 Jim Yeske Date Ul Project Manager Signature CONTRACTED STAGES PRICE HISTORY **ACCURACY** CONTINGENCY TOTAL UPDATED PROPOSED PROJECT/ORDER OF MAGNITUDE Sept. 29, 2017 ESTIMATE - INCLUDE ADDT'L UI COSTS +50%/-25% 25% \$47,011,969 \$63,847,266 UPDATED PROPOSED PROJECT/ORDER OF MAGNITUDE **ESTIMATE - UPDATE ESCALATION COSTS** Oct. 25, 2017 \$62,244,053* +50%/-25% 25% \$45,408,756 UPDATED PROPOSED PROJECT/ORDER OF MAGNITUDE Feb. 16, 2018 **ESTIMATE - UPDATE ESCALATION COSTS** +50%/-25% 25% \$61,873,364 \$47,808,067 UPDATED PROPOSED PROJECT/ORDER OF MAGNITUDE March 30, 2018 **ESTIMATE - UPDATE REAL ESTATE COSTS** 25% +50%/-25% \$47,808,067 \$62,956,642 UPDATED PROPOSED PROJECT/ORDER OF MAGNITUDE April 25, 2018 **ESTIMATE - ADDED CSC COSTS** +50%/-25% 25% \$47,808,067 \$64,968,807 UPDATED PROPOSED PROJECT/ORDER OF MAGNITUDE June 30, 2018 ESTIMATE - ADDE
* DOES NOT INCLUDE ALL UI COSTS ESTIMATE - ADDED AFUDC COSTS; UPDATED UI COSTS +50%/-25% 25% \$47,808,067 \$72,356,461

WORK CODE	ACCOUNTS		EQUIP AND MATERIAL COST	TAX	LABOR COST	TOTAL
T03	MATERIALS SURVEYING	This could be	\$0	\$0	\$26,000	\$26,00
T04	SOIL BORINGS	CHICAGO ST. D. St.	\$202,800	\$12,878	\$0	\$215,67
T05	RIGHT-OF-WAY		\$0	\$0	\$0	\$2.0,01
T06	CLEARING	2.0	\$1,187	\$76	\$225,229	\$226,49
T07	ACCESS	- 24	\$832,201	\$52,845	\$1,699,194	\$2,584,24
T08	TREE RESTORATION ALLOWANCE		\$0	\$0	\$200,000	\$200,00
T09	69 KV STRUCTURES		\$0	\$0	\$0	5
T09	115 KV STRUCTURES	11-13	\$1,517,099	\$96,336	\$1,105,280	\$2,718,71
T09	138 KV STRUCTURES		\$0	\$0	\$0	5
T09	161 KV STRUCTURES		\$0	\$0	\$0	5
T09	230 KV STRUCTURES		\$0	\$0	\$0	
T09	345 KV STRUCTURES	-	\$0	\$0	\$0	
T09	500 KV STRUCTURES		\$0	\$0	\$0	
T10	FOUNDATIONS		\$395,346	\$25,104	\$2,804,047	\$3,224,4
T11	CONDUCTOR		\$122,850	\$7,801	\$272,690	\$403,3
T12	SHIELD WIRES (OPGW)		\$24,840	\$1,577	\$80,243	\$106,6
T13	SPECIAL MATERIAL 1		\$0	\$0	\$0	
T14	SUBSTATION FIBER CONDUIT		\$0	\$0	\$50,000	\$50,0
T15	DISTRIBUTION		\$0	\$0	\$0	
T16	REMOVALS		\$0	\$0	\$3,000,000	\$3,000,0
T17	BORING		\$0	\$0	\$0	
T18	RISER & TERMINATION STRUCTURES	. 101	\$0	\$0	\$0	
T19	TRENCHING	199	\$0	\$0	\$0	
T20	XLPE CABLE SYSTEM	100	\$0	\$0	\$0	
T21	PIPE TYPE CABLE SYSTEM		\$0	\$0	\$0	
T22	FIBER SYSTEM	2000	\$0	\$0	\$0	
T23	STREAM DIVERSION		\$0	\$0	\$0	****
	INSURANCE	907.18	\$0	\$0	\$300,000	\$300,0
	RAILROAD PROTECTIVE LIABILITY INSURANCE	=	\$0	\$0	\$250,000	\$250,0
	FLAGMEN	The state of	\$0	\$0	\$1,030,488	\$1,030,4
	SIGNALMAN/GROUNDMEN		\$0	\$0	\$396,341	\$396,3
	LAYDOWN/SECURITY	26.94	\$0	\$0	\$100,000	\$100,0
	SITE DEV! SUBCONTRACTOR STANDBY TIME FOUNDATION SUBCONTRACTOR STANDBY TIME	133	\$0 \$0	\$0 \$0	\$40,000	\$40,0
			\$0	7 - 1	\$120,000	\$120,0
	GENERAL SUBCONTRACTOR STANDBY TIME MOBILIZATION/DEMOBILIZATION		\$0	\$0	\$100,000	\$100,0
	TRAFFIC PERMITS & CONTROL		\$5,000	\$0 \$0	\$40,000 \$40,000	\$40,0
	TRAFFIC PERIMITS & CONTROL	. 1	\$5,000	20	\$40,000	\$45,0
		SUBTOTAL	\$3,101,323	\$196,617	\$11,879,512	\$15,177,4
	CONTINGENCY - MISC EQUIP/MAT/LABOR (25%) CONTRACTOR'S OH/PROFIT (10%)		\$723,381 \$0	\$45,935 \$0	\$2,219,878 \$1,409,939	\$2,989,1 \$1,409,9
	ENGINEERING	- 1	\$0	\$0	\$951,220	\$951,2
	CONSTRUCTION MANAGEMENT		\$0	\$0	\$951,220	\$951,2
	ESCALATION @1.75% PER YEAR FOR 6 YEARS		\$419,579	\$26,609	\$1,910,112	\$2,356,3
	ESCALATION @ 1.73% PER TEAR FOR 0 TEARS	TOTAL	\$4,244,283	\$269,161	\$19,321,880	\$23,835,3
SQUE	INITIAL CONTRACT PRICE - TARGET COS	ST OF WORK				\$23,835,3
	UI COSTS					
	PRE-2018					\$216,0
	PERMITTING (CSC)/LEGAL					\$737,6
	LAND ACQUISITION					\$753,
	UI PROJECT MANAGEMENT & ADMINISTRATION					\$200,
	UI ENGINEERING			I.		\$230,
	UI CONSTRUCTION INSPECTION	1		ľ		\$84,3
	UI T&S LABOR	1				\$16,2
	UI OVERHEADS/ALLOCATIONS	1				\$1,559,9
	ENVIRONMENTAL HOURS					\$26,
	REAL ESTATE HOURS			I		\$7,
	ENVIRONMENTAL PERMITTING			I		\$149,
	OTHER CONSULTANTS					\$136,
	ENVIRONMENTAL REMEDIATION			I		\$473,
	REMOTE END MODIFICATIONS			I		\$50,0
	AFUDC				1 2 -	\$3,383,
	CONTINGENCY					\$2,736,8
	UI TAXES					\$229,8
		UI TOTAL				\$229,8 \$10,992,5

Order of Magnitude: +50%/-25% Engineering - MH Accuracy 25% Contingency Const Mgmt - MH Minimum \$26,120,941 Maximum \$52,241,883 **B&V** Project No 195880 **APPROVALS** 6/29/18 Kisa Bandyopadhyay Estimator 7/2/18 Kimberly D. Waggoner **B&V Project Manager** Date 7/2/2018 Arron Lewis **B&V Project Director** Date 7/26/18 Jim Yeske Date UI Project Manager Signature CONTRACTED HISTORY CONTINGENCY PRICE **STAGES** ACCURACY TOTAL UPDATED PROPOSED PROJECT/ORDER OF MAGNITUDE \$25,249,487 Sept. 29, 2017 **ESTIMATE - INCLUDE ADDT'L UI COSTS** \$33,554,222* +50%/-25% 25% UPDATED PROPOSED PROJECT/ORDER OF MAGNITUDE Oct. 25, 2017 **ESTIMATE - UPDATE ESCALATION COSTS** \$32,273,701* +50%/-25% 25% \$23,968,966 UPDATED PROPOSED PROJECT/ORDER OF MAGNITUDE Feb. 16, 2018 **ESTIMATE - UPDATE ESCALATION COSTS** +50%/-25% 25% \$23,835,324 \$30,011,559* UPDATED PROPOSED PROJECT/ORDER OF MAGNITUDE March 30, 2018 **ESTIMATE - UPDATE REAL ESTATE COSTS** \$23,835,324 \$30,764,712* +50%/-25% 25% UPDATED PROPOSED PROJECT/ORDER OF MAGNITUDE April 25, 2018 **ESTIMATE - ADDED CSC COSTS** +50%/-25% \$23,835,324 \$31,488,630* 25% UPDATED PROPOSED PROJECT/ORDER OF MAGNITUDE June 30, 2018 ESTIMATE - ADDE * DOES NOT INCLUDE ALL UI COSTS ESTIMATE - ADDED AFUDC COSTS; UPDATED UI COSTS +50%/-25% 25% \$23,835,324 \$34,827,922

T03 T04 T05 T06				TAX	COST	TOTAL
T03 T04 T05 T06						
T04 T05 T06	MATERIALS SURVEYING	STERROOM COLD	\$0	\$0	\$24,000	\$24,000
T05 T06	SOIL BORINGS		\$218,400	\$13,868	\$24,000	\$232,268
T06	RIGHT-OF-WAY		\$210,400	\$13,868	\$0	\$232,200
	CLEARING	1	\$806	\$52	\$180,481	\$181,339
T07	ACCESS		\$825,170	\$52,398	\$1,692,633	\$2,570,201
T08	TREE RESTORATION ALLOWANCE		\$0	\$0	\$200,000	\$200,000
T09	69 KV STRUCTURES		\$0	\$0	\$0	\$0
T09	115 KV STRUCTURES	İ	\$1,315,110	\$83,509	\$1,088,078	\$2,486,697
T09	138 KV STRUCTURES		\$0	\$0	\$0	\$0
T09	161 KV STRUCTURES		\$0	\$0	\$0	\$0
T09	230 KV STRUCTURES		\$0	\$0	\$0	\$0
T09	345 KV STRUCTURES		\$0	\$0	\$0	\$0
T09	500 KV STRUCTURES		\$0	\$0	\$0	\$0
T10	FOUNDATIONS		\$431,287	\$27,387	\$3,073,119	\$3,531,793
T11	CONDUCTOR		\$122,850	\$7,801	\$272,690	\$403,341
T12	SHIELD WIRES (OPGW)		\$24,840	\$1,577	\$80,243	\$106,660
T13	SPECIAL MATERIAL 1		\$0	\$0	\$0	\$0
T14	SUBSTATION FIBER CONDUIT		\$0	\$0	\$50,000	\$50,000
T15	DISTRIBUTION		\$0	\$0	\$0	\$0
T16	REMOVALS		\$0	\$0	\$3,000,000	\$3,000,000
T17	BORING		\$0	\$0	\$0	\$0
T18	RISER & TERMINATION STRUCTURES		\$0	\$0	\$0	\$0
T19	TRENCHING		\$0	\$0	\$0	\$0
T20	XLPE CABLE SYSTEM	. 10	\$0	\$0	\$0	\$0
T21	PIPE TYPE CABLE SYSTEM		\$0	\$0 \$0	\$0 \$0	\$0 \$0
T22	FIBER SYSTEM	314	\$0 \$0	\$0	\$0	\$0 \$0
T23	STREAM DIVERSION INSURANCE		\$0	\$0	\$300,000	\$300,000
	RAILROAD PROTECTIVE LIABILITY INSURANCE		\$0	\$0	\$250,000	\$250,000
- TEARING	FLAGMEN		\$0	\$0	\$951,220	\$951,220
	SIGNALMAN/GROUNDMEN		\$0	\$0	\$365,854	\$365,854
100	LAYDOWN/SECURITY		\$0	\$0	\$100,000	\$100,000
	SITE DEV. SUBCONTRACTOR STANDBY TIME		\$0	\$0	\$40,000	\$40,000
100	FOUNDATION SUBCONTRACTOR STANDBY TIME		\$0	\$0	\$120,000	\$120,000
	GENERAL SUBCONTRACTOR STANDBY TIME		\$0	\$0	\$100,000	\$100,000
	MOBILIZATION/DEMOBILIZATION		\$0	\$0	\$40,000	\$40,000
	TRAFFIC PERMITS & CONTROL	1	\$5,000	\$0	\$40,000	\$45,000
		SUBTOTAL	\$2,943,464	\$186,593	\$11,968,316	\$15,098,373
	CONTINGENCY - MISC EQUIP/MAT/LABOR (25%) CONTRACTOR'S OH/PROFIT (10%)		\$680,016 \$0	\$43,181 \$0	\$2,242,079 \$1,421,040	\$2,965,276 \$1,421,040
	ENGINEERING		\$0	\$0	\$878,049	\$878,049
	CONSTRUCTION MANAGEMENT		\$0	\$0	\$878,049	\$878,049
	ESCALATION @1.75% PER YEAR FOR 7 YEARS		\$467,871	\$29,669	\$2,245,115	\$2,742,656
		TOTAL	\$4,091,351	\$259,444	\$19,632,648	\$23,983,443
	INITIAL CONTRACT PRICE - TARGET COS	T OF WORK				\$23,983,443
	UI COSTS					
l l	PRE-2018			- 1		\$199,395
	PERMITTING (CSC)/LEGAL			- 1		\$733,469
	LAND ACQUISITION					\$3,716,090
	UI PROJECT MANAGEMENT & ADMINISTRATION			- 1		\$184,798
	UI ENGINEERING			- 1		\$212,860
	UI CONSTRUCTION INSPECTION			- 1	1	\$77,902
	UI T&S LABOR				1	\$15,035
	UI OVERHEADS/ALLOCATIONS					\$1,439,912
	ENVIRONMENTAL HOURS			1	1	\$24,546
- 1	REAL ESTATE HOURS			1		\$6,984
	ENVIRONMENTAL PERMITTING			1		\$160,646
	OTHER CONSULTANTS			1		\$126,316
ļ	ENVIRONMENTAL REMEDIATION			- 1		\$510,291
	REMOTE END MODIFICATIONS					\$50,000
į	AFUDC					\$3,123,486
l	CONTINGENCY					\$2,526,316
I	UITAXES	L				\$212,141
		UI TOTAL				\$13,320,187
the state of the s		JECT TOTAL	•	\$259,444		

PARAMETERS Order of Magnitude: +50%/-25% - MH Accuracy Engineering Contingency 25% Const Mgmt - MH Minimum \$27,977,722 \$55,955,444 Maximum B&V Project No 195880 **APPROVALS** Kisa Bandyopadhyay Estimator 7/2/18 Kimberly D. Waggoner B&V Project Manager Date 7/2/2018 Arron Lewis **B&V Project Director** Signature Date 7/26/18 Jim Yeske Ul Project Manager Signature Date CONTRACTED **HISTORY STAGES** ACCURACY CONTINGENCY **PRICE** TOTAL UPDATED PROPOSED PROJECT/ORDER OF MAGNITUDE ESTIMATE - INCLUDE ADDT'L UI COSTS Sept. 29, 2017 +50%/-25% 25% \$26,220,467 \$34,392,455* UPDATED PROPOSED PROJECT/ORDER OF MAGNITUDE Oct. 25, 2017 **ESTIMATE - UPDATE ESCALATION COSTS** +50%/-25% 25% \$24,041,875 \$32,213,863* UPDATED PROPOSED PROJECT/ORDER OF MAGNITUDE Feb. 16, 2018 **ESTIMATE - UPDATE ESCALATION COSTS** +50%/-25% 25% \$23,983,443 \$29,780,431* UPDATED PROPOSED PROJECT/ORDER OF MAGNITUDE March 30, 2018 **ESTIMATE - UPDATE REAL ESTATE COSTS** +50%/-25% 25% \$23,983,443 \$33,496,521* UPDATED PROPOSED PROJECT/ORDER OF MAGNITUDE April 25, 2018 ESTIMATE - ADDED CSC COSTS +50%/-25% 25% \$23,983,443 \$34,217,358* UPDATED PROPOSED PROJECT/ORDER OF MAGNITUDE ESTIMATE - ADDED AFUDC COSTS; UPDATED UI COSTS June 30, 2018 +50%/-25% 25% \$23,983,443 \$37,303,630

* DOES NOT INCLUDE ALL UI COSTS