

Project Cost Estimates

Appendix I

9/1/2020 **Basis:**
Project: Lois Drive & 32nd Avenue Pathway
Project Number: 19-08

Prepared By: CRW
Alternative 1 - Lois
[B]=local bond; [S]=state grant; [F]= federal grant

Ver. 5.1

DESIGN		Design Management	\$24,015	
	<i>Start 20??</i>	PM&E Design Services	\$0	
		PM&E Design Survey	\$0	
		PM&E Design Soil	\$0	
		Contractual Dsgn Sers (Basic)	\$213,000	
		Contractual Dsgn Sers (Add'l)	\$27,500	
		Contractual Design Survey	\$41,000	
		Contractual Design Soils	\$20,000	
		Miscellaneous	\$0	
Subtotal				\$325,515
UTILITIES		AWWU	\$0	
	<i>Start 20??</i>	CEA	\$0	
		ACS	\$135,000	
		GCI	\$0	
		Enstar	\$42,000	
Subtotal				\$177,000
ROW		Real Estate Services	\$70,820	
	<i>Start 20??</i>	Land Acquisition	\$69,000	
Subtotal				\$139,820
CONSTRUCTION		Construction Management	\$40,025	
	<i>Start 20??</i>	Inspection	\$107,267	
		Materials Testing	\$16,010	
		Survey	\$16,010	
		Miscellaneous	\$0	
		Construction Contract	\$1,601,000	
Subtotal				\$1,780,312
MISCELLANEOUS		Bond Overhead (15.0%)	\$469,879	
		Grant Overhead (0.0%)	\$0	
		Contingency (15%)	\$240,000	
Subtotal				\$709,879
PROJECT TOTAL				\$3,132,526

**Lois Drive West 32nd Avenue Pathway - Benson Boulevard To Minnesota Drive
MOA Project No. 19-08**

ENGINEER'S ESTIMATE - DRAFT DSR - ALTERNATIVE 1 - LOIS DRIVE

ITEM No.	MASS No.	ITEM DESCRIPTION	UNIT	CALC. QUANT	CONT. FACTOR	ROUND FACTOR	EST QUANT	UNIT PRICE	TOTAL COST
Schedule A - Roadway Improvements									
A-1	20.02	Storm Water Pollution Prevention Plan (Type 3)	LS	1	1.00	0	1	\$10,000	\$10,000
A-2	20.03	Test Pit for Utility Locate	Hour	8	1.00	0	8	\$800	\$6,400
A-3	20.04	Clearing and Grubbing	LS	1	1.00	0	1	\$12,000	\$12,000
A-4	20.08	Remove Curb and Gutter	LF	239	1.00	0	239	\$7	\$1,673
A-5	20.09	Remove Pavement	SY	3,855	1.00	0	3,855	\$4	\$15,420
A-6	20.10	Unusable Excavation	CY	7,986	1.25	-2	10,000	\$15	\$150,000
A-7	20.21	Classified Fill and Backfill (Type II)	Ton	2,451	1.25	-2	3,100	\$18	\$55,800
A-8	20.21	Classified Fill and Backfill (Type II-A)	Ton	7,805	1.25	-2	9,800	\$18	\$176,400
A-9	20.22	Leveling Course	Ton	515	1.08	-1	560	\$35	\$19,600
A-10	20.25	Geotextile (Type A)	SY	8,673	1.00	-1	8,670	\$2	\$17,340
A-11	20.26	Insulation Board (R-9)	SF	50,905	1.01	-1	51,410	\$3	\$154,230
A-12	20.26	Insulation Board (R-4.5)	SF	7,987	1.01	-1	8,070	\$2	\$16,140
A-13	20.28	Reconstruct Driveway	EA	12	1.00	0	12	\$3,250	\$39,000
A-14	30.02	P.C.C. Curb and Gutter (All Types)	LF	2,000	1.00	0	2,000	\$27	\$54,000
A-15	30.03	P.C.C. Sidewalk	SY	413	1.00	0	413	\$60	\$24,780
A-16	30.04	P.C.C. Curb Ramp (6" Thick)	EA	11	1.00	0	11	\$2,000	\$22,000
A-17	40.06	A.C. Pavement (Class D)	Ton	534	1.06	-1	570	\$105	\$59,850
A-18	40.06	A.C. Pavement (Class E)	Ton	425	1.06	-1	450	\$110	\$49,500
A-19	50.06	Remove and Replace Manhole Cone Section	EA	1	1.00	0	1	\$1,800	\$1,800
A-20	50.06	Remove and Replace Manhole Cover and Frame	EA	1	1.00	0	1	\$700	\$700
A-21	60.03	Remove and Replace Valve Box Top Section	EA	6	1.00	0	6	\$500	\$3,000
A-22	60.04	Furnish and Install Fire Hydrant Assembly Single Pumper	EA	1	1.00	0	1	\$9,000	\$9,000
A-23	60.05	Adjust Key Box	EA	10	1.00	0	10	\$450	\$4,500
A-24	60.08	Decommission Fire Hydrant Assembly	EA	1	1.00	0	1	\$3,000	\$3,000
A-25	65.02	Construction Survey Measurement	LS	1	1.00	0	1	\$20,000	\$20,000
A-26	65.02	Two-Person Survey Crew	Hour	10	1.00	0	10	\$225	\$2,250
A-27	70.08	Remove and Reset Fence	LF	732	1.10	0	805	\$40	\$32,200
A-28	70.10	Inlaid Traffic Markings (Methyl Methacrylate) (4" Yellow) (90 Mil)	LF	1,992	1.00	0	1,992	\$6	\$11,952
A-29	70.10	Inlaid Traffic Markings (Methyl Methacrylate) (4" White) (90 Mil)	LF	1,792	1.00	0	1,792	\$6	\$10,752
A-30	70.10	Inlaid Traffic Markings (Methyl Methacrylate) (24" White) (90 Mil)	LF	90	1.00	0	90	\$30	\$2,700
A-31	70.11	Standard Sign	SF	162	1.00	0	162	\$100	\$16,200
A-32	70.12	Traffic Maintenance	LS	1	1.00	0	1	\$100,000	\$100,000
A-33	70.16	Temporary Group Mailboxes	LS	1	1.00	0	1	\$10,000	\$10,000
A-34	70.17	Relocate Mailbox	EA	6	1.00	0	6	\$500	\$3,000
A-35	70.23	Temporary Fencing	LF	732	1.10	0	805	\$10	\$8,050
A-36	75.02	Trees (type to be determined)	EA	9	1.00	0	9	\$500	\$4,500
A-37	75.02	Shrubs (type to be determined)	EA	18	1.00	0	18	\$75	\$1,350
A-38	75.03	Topsoil (4-inch Depth)	MSF	24.3	1.30	0	32	\$550	\$17,600
A-39	75.04	Seeding (Schedule A)	MSF	24.3	1.30	0	32	\$450	\$14,400
A-40	75.12	Temporary Tree Protection Fence	LF	200	1.00	0	200	\$7	\$1,400
A-41	75.13	Root Pruning	LF	70	1.00	0	70	\$25	\$1,750
A-42	80.18	Install Loop Detector - New Work	LS	1	1.00	0	1	\$20,000	\$20,000
								TOTAL	\$1,184,237

Schedule B - Drainage Improvements									
B-1	20.13	Trench Dewatering	LS	1	1.00	0	1	\$5,000	\$5,000
B-2	20.13	Trench Excavation and Backfill (Various Depths)	LF	877	1.00	0	877	\$25	\$21,925
B-3	20.15	Furnish Trench Backfill (Type II)	Ton	590	1.30	0	767	\$17	\$13,039
B-4	20.16	Bedding Material (Class D)	LF	877	1.00	0	877	\$30	\$26,310
B-5	20.26	Insulation Board (R-20)	SF	128	1.00	0	128	\$5	\$640
B-6	20.27	Disposal of Unusable or Surplus Material	CY	610	1.30	0	793	\$20	\$15,860
B-7	55.02	Furnish, Install, and Televiser Pipe (12-Inch, Type S, CPEP)	LF	189	1.00	0	189	\$60	\$11,340
B-8	55.02	Furnish, Install, and Televiser Pipe (18-Inch, Type S, CPEP)	LF	688	1.00	0	688	\$70	\$48,160
B-9	55.04	Connect to Existing Storm Drain System	EA	1	1.00	0	1	\$2,500	\$2,500
B-10	55.05	Construct (Type II) Catch Basin Manhole	EA	4	1.00	0	4	\$10,000	\$40,000
B-11	55.05	Construct (Type II) Bypass Manhole	EA	1	1.00	0	1	\$25,000	\$25,000
B-12	55.09	Construct Catch Basin	EA	5	1.00	0	5	\$4,500	\$22,500
B-13	55.11	Remove Manhole	EA	5	1.00	0	5	\$1,000	\$5,000
B-14	55.11	Remove Catch Basin	EA	4	1.00	0	4	\$900	\$3,600
B-15	55.22	Oil and Grit Separator	EA	1	1.00	0	1	\$25,000	\$25,000
B-16	55.27	Storm Drain Bypass System	LS	1	1.00	0	1	\$10,000	\$10,000
B-17	70.07	Remove Pipe	LF	840	1.00	0	840	\$13	\$10,920
								TOTAL	\$286,794

**Lois Drive West 32nd Avenue Pathway - Benson Boulevard To Minnesota Drive
MOA Project No. 19-08**

ENGINEER'S ESTIMATE - DRAFT DSR - ALTERNATIVE 1 - LOIS DRIVE

ITEM No.	MASS No.	ITEM DESCRIPTION	UNIT	CALC. QUANT	CONT. FACTOR	ROUND FACTOR	EST QUANT	UNIT PRICE	TOTAL COST
Schedule C - Illumination Improvements									
C-1	80.02	Trench and Backfill (2'W x 3.5'D)	LF	875	1.10	-1	960	\$24	\$23,424
C-2	80.04	Driven Pole Luminaire Pole Foundations	EA	6	1.00	0	6	\$2,778	\$16,668
C-3	80.05	Fixed Base Luminaire Pole	EA	6	1.00	0	6	\$3,940	\$23,640
C-4	80.06	Luminaire Arm	EA	6	1.00	0	6	\$775	\$4,650
C-5	80.07	Steel Conduit (2 inch)	FT	875	1.10	-1	960	\$39	\$37,440
C-6	80.08	Junction Box (Type IA)	EA	6	1.00	0	6	\$1,263	\$7,578
C-7	80.10	3 Conductor 8 AWG Type XHHW-2 Cable	FT	875	1.10	-1	960	\$7	\$6,720
C-8	80.23	Luminaire (6,000 Lm, Medium, Type 2)	EA	3	1.00	0	3	\$1,000	\$3,000
C-9	80.23	Luminaire (6,000 Lm, Medium, Type 3)	EA	1	1.00	0	1	\$1,000	\$1,000
C-10	80.23	Luminaire (10,000 Lm, Medium, Type 2)	EA	1	1.00	0	1	\$1,150	\$1,150
C-11	80.23	Luminaire (13,000 Lm, Medium, Type 3)	EA	1	1.00	0	1	\$1,250	\$1,250
C-12	80.23	Spare Luminaire (6,000 Lm, Medium, Type 3)	EA	1	1.00	0	1	\$850	\$850
C-13	80.23	Spare Luminaire (6,000 Lm, Medium, Type 3)	EA	1	1.00	0	1	\$850	\$850
C-14	80.23	Spare Luminaire (10,000 Lm, Medium, Type 2)	EA	1	1.00	0	1	\$1,000	\$1,000
C-15	80.23	Spare Luminaire (13,000 Lm, Medium, Type 3)	EA	1	1.00	0	1	\$1,100	\$1,100
								TOTAL	\$130,320

SUMMARY	
Schedule A - Roadway Improvements	\$1,184,237
Schedule B - Drainage Improvements	\$286,794
Schedule C - Illumination Improvements	\$130,320
Subtotal	\$1,601,351
Total Estimated Construction Cost:	\$1,601,000

Utility Relocation Summary	
Lois/32nd Avenue Upgrades: Alternative 1	
Electric (CEA)	\$0
Telecommunications (ACS)	\$123,110
Cable Television (GCI)	\$0
Natural Gas (Enstar)	\$38,253
<i>Subtotal:</i>	<i>\$161,363</i>
<i>Construction Contingency (10%)</i>	<i>\$16,136</i>
Total Utility Relocation Cost:	\$177,499

Id No.	APPROX. STATION	OFFSET	UTILITY CONFLICT	DESCRIPTION OF CONFLICT	RECOMMENDED ACTION	AMOUNT	UNIT	UNIT PRICE	COST	COMMENTS
ACS-1	12+50 - 12+88	RT	underground T line	within proposed improvements	Relocate as needed	40	LF	\$80	\$3,200	
ACS-2	11+53 - 20+68	RT/LT	underground T line	within proposed improvements	Relocate as needed	980	LF	\$80	\$78,400	
ACS-3	18+50	RT	telephone pedestal	within proposed improvements	Relocate	1	EA	\$4,300	\$4,300	
ACS-4	19+26 - 19+49	RT	underground T line	within proposed improvements	Relocate as needed	25	LF	\$80	\$2,000	
ACS-5	19+86 - 20+20	RT	underground T line	within proposed improvements at driveway	Relocate as needed	35	LF	\$80	\$2,800	
ACS-6	20+88 - 21+36	RT	underground T line	within proposed improvements at driveway	Relocate as needed	50	LF	\$80	\$4,000	
ACS-7	21+44	Crossing	underground T line	within proposed improvements	Verify Depth. Relocate as needed.	40	LF	\$0	\$0	
ACS-8	21+90 - 21+97	RT	underground T line	within proposed improvements	Verify Depth. Relocate as needed.	8	LF	\$0	\$0	

Construction Costs: \$94,700
 Engineering/Administration (30%): \$28,410
Total: \$123,110

Id No.	APPROX. STATION	OFFSET	UTILITY CONFLICT	DESCRIPTION OF CONFLICT	RECOMMENDED ACTION	AMOUNT	UNIT	UNIT PRICE	COST	COMMENTS
Enstar-1	12+31 - 12+51	LT	2-Inch Steel	Within Driveway Limits	Locate and protect	20	LF	\$0	\$0	
Enstar-2	14+30 - 14+66	LT	2-Inch Steel	within proposed improvements	adjust	30	LF	\$125	\$3,750	
Enstar-3	15+78	Crossing	2-Inch Steel	within proposed improvements	adjust	75	LF	\$125	\$9,375	
Enstar-4	16+70 - 16+88	LT	2-Inch Steel	Within Driveway Limits	Locate and protect	20	LF	\$0	\$0	
Enstar-5	17+04 - 17+18	LT	2-Inch Steel	Within Driveway Limits	Locate and protect	20	LF	\$0	\$0	
Enstar-6	17+86 - 18+02	LT	2-Inch Steel	Within Driveway Limits	Locate and protect	20	LF	\$0	\$0	
Enstar-7	18+32 - 18+52	LT	2-Inch Steel	Within Driveway Limits	Locate and protect	20	LF	\$0	\$0	
Enstar-8	18+83 - 19+03	LT	2-Inch Steel	Within Driveway Limits	Locate and protect	20	LF	\$0	\$0	
Enstar-9	19+31 - 19+51	LT	2-Inch Steel	Within Driveway Limits	Locate and protect	20	LF	\$0	\$0	
Enstar-10	19+70 - 19+88	LT	2-Inch Steel	Within Driveway Limits	Locate and protect	20	LF	\$0	\$0	
Enstar-11	20+03 - 20+13	Crossing	5/8"-Plastic Service	within proposed roadway improvements	adjust	1	EA	\$2,250	\$2,250	
Enstar-12	20+20 - 20+64	LT	2-Inch Steel	within proposed improvements	adjust	75	LF	\$125	\$9,375	
Enstar-13	21+60	Crossing	3-Inch Steel	within proposed improvements	adjust	30	LF	\$135	\$4,050	
Enstar-14	21+95 - 21+99	LT	2-Inch Steel	within proposed improvements	adjust	5	LF	\$125	\$625	

Construction Costs: \$29,425
 Engineering/Administration (30%) \$8,828
Total: \$38,253

Lois Drive West 32nd Avenue Pathway - Benson Boulevard to Minnesota Drive
MOA Project No. 19-08

ROW REQUIREMENTS ESTIMATE - DRAFT DSR - ALTERNATIVE 1 - LOIS DRIVE

Lois & 32nd Ave Upgrade - Alternative 1 - Lois Drive					
PARCEL	Purchase Entire Property	PUE	SE	TCE	# Of TCP's
100					0
101		X	X		1
102		X	X		1
103		X	X		1
104		X	X		1
105		X	X		1
106		X	X		1
107		X	X		1
108		X	X		0
109		X	X		1
110		X	X		0
111		X	X		0
112		X	X		1
123		X	X		2
124		X			3
125		X			1
TOTAL	0	15	13	0	15

9/1/2020 **Basis:**
Project: Lois Drive & 32nd Avenue Pathway
Project Number: 19-08

Prepared By: CRW
Alternative 1 - 32nd Avenue
[B]=local bond; [S]=state grant; [F]= federal grant

Ver. 5.1

DESIGN	Design Management	\$36,255	
<i>Start 20??</i>	PM&E Design Services	\$0	
	PM&E Design Survey	\$0	
	PM&E Design Soil	\$0	
	Contractual Dsgn Sers (Basic)	\$283,000	
	Contractual Dsgn Sers (Add'l)	\$37,500	
	Contractual Design Survey	\$55,000	
	Contractual Design Soils	\$25,000	
	Miscellaneous	\$0	
Subtotal			\$436,755
UTILITIES	AWWU	\$0	
<i>Start 20??</i>	CEA	\$277,000	
	ACS	\$254,000	
	GCI	\$294,000	
	Enstar	\$288,000	
Subtotal			\$1,113,000
ROW	Real Estate Services	\$50,220	
<i>Start 20??</i>	Land Acquisition	\$4,599,000	
Subtotal			\$4,649,220
CONSTRUCTION	Construction Management	\$58,008	
<i>Start 20??</i>	Inspection	\$154,688	
	Materials Testing	\$24,170	
	Survey	\$24,170	
	Miscellaneous	\$0	
	Construction Contract	\$2,417,000	
Subtotal			\$2,678,036
MISCELLANEOUS	Bond Overhead (15.0%)	\$1,630,590	
	Grant Overhead (0.0%)	\$0	
	Contingency (15%)	\$363,000	
Subtotal			\$1,993,590
PROJECT TOTAL			<u><u>\$10,870,601</u></u>

**Lois Drive West 32nd Avenue Pathway - Benson Boulevard To Minnesota Drive
MOA Project No. 19-08**

ENGINEER'S ESTIMATE - DRAFT DSR - ALTERNATIVE 1 - 32ND AVENUE

ITEM No.	MASS No.	ITEM DESCRIPTION	UNIT	CALC. QUANT	CONT. FACTOR	ROUND FACTOR	EST QUANT	UNIT PRICE	TOTAL COST
Schedule A - Roadway Improvements									
A-1	20.02	Storm Water Pollution Prevention Plan (Type 3)	LS	1	1.00	0	1	\$16,000	\$16,000
A-2	20.03	Test Pit for Utility Locate	Hour	8	1.00	0	8	\$800	\$6,400
A-3	20.04	Clearing and Grubbing	LS	1	1.00	0	1	\$19,000	\$19,000
A-4	20.07	Remove Sidewalk or Concrete Apron	SY	896	1.00	0	896	\$15	\$13,440
A-5	20.08	Remove Curb and Gutter	LF	251	1.00	0	251	\$7	\$1,757
A-6	20.09	Remove Pavement	SY	5,397	1.00	0	5,397	\$4	\$21,588
A-7	20.10	Unusable Excavation	CY	12,347	1.25	-2	15,400	\$15	\$231,000
A-8	20.21	Classified Fill and Backfill (Type II)	Ton	3,660	1.25	-2	4,600	\$18	\$82,800
A-9	20.21	Classified Fill and Backfill (Type II-A)	Ton	11,381	1.25	-2	14,200	\$18	\$255,600
A-10	20.22	Leveling Course	Ton	867	1.08	-1	940	\$35	\$32,900
A-11	20.25	Geotextile (Type A)	SY	12,951	1.00	-1	12,950	\$2	\$25,900
A-12	20.26	Insulation Board (R-9)	SF	76,018	1.01	-1	76,780	\$3	\$230,340
A-13	20.26	Insulation Board (R-4.5)	SF	10,936	1.01	-1	11,050	\$2	\$22,100
A-14	20.28	Reconstruct Driveway	EA	8	1.00	0	8	\$3,250	\$26,000
A-15	30.02	P.C.C. Curb and Gutter (All Types)	LF	2,980	1.00	0	2,980	\$27	\$80,460
A-16	30.02	Curb Nose	EA	10	1.00	0	10	\$1,500	\$15,000
A-17	30.03	P.C.C. Sidewalk	SY	601	1.00	0	601	\$60	\$36,060
A-18	30.04	P.C.C. Curb Ramp (6" Thick)	EA	22	1.00	0	22	\$2,000	\$44,000
A-19	30.10	Colored Concrete	SY	64	1.00	0	64	\$160	\$10,240
A-20	40.06	A.C. Pavement (Class D)	Ton	897	1.06	-1	950	\$105	\$99,750
A-21	40.06	A.C. Pavement (Class E)	Ton	756	1.06	-1	800	\$105	\$84,000
A-22	50.06	Remove and Replace Manhole Cone Section	EA	4	1.00	0	4	\$1,800	\$7,200
A-23	55.08	Adjust Storm Drain Manhole Ring	EA	1	1.00	0	1	\$1,400	\$1,400
A-24	60.03	Remove and Replace Valve Box Top Section	EA	5	1.00	0	5	\$500	\$2,500
A-25	60.05	Adjust Key Box	EA	1	1.00	0	1	\$450	\$450
A-26	65.02	Construction Survey Measurement	LS	1	1.00	0	1	\$30,000	\$30,000
A-27	65.02	Two-Person Survey Crew	Hour	10	1.00	0	10	\$225	\$2,250
A-28	70.08	Remove Fence	LF	141	1.00	0	141	\$10	\$1,410
A-29	70.08	Remove and Reset Fence	LF	650	1.10	0	715	\$40	\$28,600
A-30	70.10	Inlaid Traffic Markings (Methyl Methacrylate) (4" Yellow) (90 Mil)	LF	4,272	1.00	0	4,272	\$6	\$25,632
A-31	70.10	Inlaid Traffic Markings (Methyl Methacrylate) (18" Yellow) (90 Mil)	LF	4,045	1.00	0	4,045	\$25	\$101,125
A-32	70.10	Inlaid Traffic Markings (Methyl Methacrylate) (24" White) (90 Mil)	LF	90	1.00	0	90	\$30	\$2,700
A-33	70.10	Inlaid Traffic Markings (Methyl Methacrylate) (Words & Symbols) (90 Mil)	EA	2	1.00	0	2	\$700	\$1,400
A-34	70.11	Standard Sign	SF	72	1.00	0	72	\$100	\$7,200
A-35	70.12	Traffic Maintenance	LS	1	1.00	0	1	\$160,000	\$160,000
A-36	70.13	Bollard (Concrete Pipe, Yellow)	EA	16	1.00	0	16	\$1,250	\$20,000
A-37	70.13	Remove Bollard	EA	3	1.00	0	3	\$200	\$600
A-38	70.16	Temporary Group Mailboxes	LS	1	1.00	0	1	\$10,000	\$10,000
A-39	70.17	Relocate Mailbox	EA	1	1.00	0	1	\$500	\$500
A-40	70.23	Temporary Fencing	LF	650	1.10	0	715	\$10	\$7,150
A-41	75.02	Trees (type to be determined)	EA	9	1.00	0	9	\$500	\$4,500
A-42	75.02	Shrubs (type to be determined)	EA	18	1.00	0	18	\$75	\$1,350
A-43	75.03	Topsoil (4-inch Depth)	MSF	29.6	1.30	0	39	\$550	\$21,450
A-44	75.04	Seeding (Schedule A)	MSF	29.6	1.30	0	39	\$450	\$17,550
A-45	75.12	Temporary Tree Protection Fence	LF	200	1.00	0	200	\$7	\$1,400
A-46	75.13	Root Pruning	LF	70	1.00	0	70	\$25	\$1,750
								TOTAL	\$1,812,452

**Lois Drive West 32nd Avenue Pathway - Benson Boulevard To Minnesota Drive
MOA Project No. 19-08**

ENGINEER'S ESTIMATE - DRAFT DSR - ALTERNATIVE 1 - 32ND AVENUE

ITEM No.	MASS No.	ITEM DESCRIPTION	UNIT	CALC. QUANT	CONT. FACTOR	ROUND FACTOR	EST QUANT	UNIT PRICE	TOTAL COST
Schedule B - Drainage Improvements									
B-1	20.13	Trench Dewatering	LS	1	1.00	0	1	\$5,000	\$5,000
B-2	20.13	Trench Excavation and Backfill (Various Depths)	LF	1,081	1.00	0	1,081	\$25	\$27,025
B-3	20.15	Furnish Trench Backfill (Type II)	Ton	290	1.30	0	377	\$17	\$6,409
B-4	20.16	Bedding Material (Class D)	LF	1,081	1.00	0	1,081	\$30	\$32,430
B-5	20.26	Insulation Board (R-20)	SF	64	1.00	0	64	\$5	\$320
B-6	20.27	Disposal of Unusable or Surplus Material	CY	580	1.30	0	754	\$20	\$15,080
B-7	55.02	Furnish, Install, and Televis Pipe (12-Inch, Type S, CPEP)	LF	135	1.00	0	135	\$60	\$8,100
B-8	55.02	Furnish, Install, and Televis Pipe (18-Inch, Type S, CPEP)	LF	502	1.00	0	502	\$70	\$35,140
B-9	55.02	Furnish, Install, and Televis Pipe (24-Inch, Type S, CPEP)	LF	444	1.00	0	444	\$80	\$35,520
B-10	55.04	Connect to Existing Storm Drain System	EA	2	1.00	0	2	\$2,500	\$5,000
B-11	55.05	Construct (Type II) Catch Basin Manhole	EA	6	1.00	0	6	\$10,000	\$60,000
B-12	55.05	Construct (Type II) Bypass Manhole	EA	1	1.00	0	1	\$25,000	\$25,000
B-13	55.09	Construct Catch Basin	EA	6	1.00	0	6	\$4,500	\$27,000
B-14	55.11	Remove Manhole	EA	1	1.00	0	1	\$1,000	\$1,000
B-15	55.11	Remove Catch Basin	EA	2	1.00	0	2	\$900	\$1,800
B-16	55.22	Oil and Grit Separator	EA	1	1.00	0	1	\$25,000	\$25,000
B-17	55.27	Storm Drain Bypass System	LS	1	1.00	0	1	\$5,000	\$5,000
B-18	70.07	Remove Pipe	LF	509	1.00	0	509	\$13	\$6,617
B-19	80.29	Heat Trace System	LS	1	1.00	0	1	\$96,952	\$96,952
TOTAL									\$418,393
Schedule C - Illumination Improvements									
C-1	80.02	Trench and Backfill (2'W x 3.5'D)	LF	1,246	1.10	-1	1,370	\$24	\$33,428
C-2	80.04	Driven Pole Luminaire Pole Foundations	EA	7	1.00	0	7	\$2,778	\$19,446
C-3	80.04	Cast-In-Place Light Column Foundation	EA	2	1.00	0	2	\$2,500	\$5,000
C-4	80.05	Fixed Base Luminaire Pole	EA	7	1.00	0	7	\$3,940	\$27,580
C-5	80.06	Luminaire Arm	EA	8	1.00	0	8	\$775	\$6,200
C-6	80.07	Steel Conduit (2 inch)	FT	1,293	1.10	-1	1,420	\$39	\$55,380
C-7	80.08	Junction Box (Type IA)	EA	11	1.00	0	11	\$1,263	\$13,893
C-8	80.10	3 Conductor 8 AWG Type XHHW-2 Cable	FT	1,891	1.10	-1	2,080	\$7	\$14,560
C-9	80.29	Pedestrian Light Column	EA	2	1.00	0	2	\$3,900	\$7,800
C-10	80.29	Spare Pedestrian Light Column	EA	1	1.00	0	1	\$2,900	\$2,900
TOTAL									\$186,187

SUMMARY

Schedule A - Roadway Improvements	\$1,812,452
Schedule B - Drainage Improvements	\$418,393
Schedule C - Illumination Improvements	\$186,187
Subtotal	\$2,417,032

Total Estimated Construction Cost: \$2,417,000

Utility Relocation Summary 32nd Avenue Upgrades: Alternative 1	
Electric (CEA)	\$251,323
Telecommunications (ACS)	\$230,815
Cable Television (GCI)	\$267,696
Natural Gas (Enstar)	\$261,950
<i>Subtotal:</i>	<i>\$1,011,784</i>
<i>Construction Contingency (10%)</i>	<i>\$101,178</i>
Total Utility Relocation Cost:	\$1,112,962

Id No.	APPROX. STATION	OFFSET	UTILITY CONFLICT	DESCRIPTION OF CONFLICT	RECOMMENDED ACTION	AMOUNT	UNIT	UNIT PRICE	COST	COMMENTS
CEA-1	32+00 - 44+22	LT	OH 3 Phase - distribution	within proposed improvements	underground	1215	LF	\$95	\$115,425	
CEA-2	33+18 - 33+19	RT	OH 3 Phase - distribution	within proposed improvements	underground	100	LF	\$95	\$9,500	
CEA-3	33+18	RT	Distribution Pole	within proposed improvements	Remove	1	EA	\$2,500	\$2,500	undergrounding costs are separate
CEA-4	33+18	RT	Service to Parcel 115	within proposed improvements	underground	1	EA	\$2,500	\$2,500	
CEA-5	36+27	RT	Distribution Pole	within proposed improvements	Remove	1	EA	\$2,500	\$2,500	undergrounding costs are separate
CEA-6	36+29	RT	OH 3 Phase - distribution	within proposed improvements	underground	100	LF	\$95	\$9,500	
CEA-7	39+74	RT	Distribution Pole	within proposed improvements	Remove	1	EA	\$2,500	\$2,500	undergrounding costs are separate
CEA-8	39+74 - 39+79	Crossing	OH 3 Phase - distribution	within proposed improvements	underground	60	LF	\$95	\$5,700	
CEA-9	37+78 - 37+83	RT	OH 1 Phase - distribution	within proposed improvements	underground	30	LF	\$75	\$2,250	
CEA-10	39+79 - 39+83	RT	OH 3 Phase - distribution	within proposed improvements	underground	60	LF	\$95	\$5,700	
CEA-11	39+81	RT	Service to Parcel 118	within proposed improvements	underground	1	EA	\$2,500	\$2,500	
CEA-12	39+81	RT	Distribution Pole	within proposed improvements	Remove	1	EA	\$2,500	\$2,500	undergrounding costs are separate
CEA-13	39+83 - 40+32	RT	OH 1 Phase - distribution	within proposed improvements	underground	70	LF	\$75	\$5,250	
CEA-14	40+88	RT	Distribution Pole	within proposed improvements	Remove	1	EA	\$2,500	\$2,500	undergrounding costs are separate
CEA-15	43+06	RT	Service to Parcel 121 (2 total)	within proposed improvements	underground	2	EA	\$2,500	\$5,000	
CEA-16	43+06	RT	Distribution Pole	within proposed improvements	Remove	1	EA	\$2,500	\$2,500	undergrounding costs are separate
CEA-17	43+06	RT	OH 1 Phase - distribution	within proposed improvements	underground	200	LF	\$75	\$15,000	

Construction Costs: \$193,325
 Engineering/Administration (30%): \$57,998
Total: \$251,323

Id No.	APPROX. STATION	OFFSET	UTILITY CONFLICT	DESCRIPTION OF CONFLICT	RECOMMENDED ACTION	AMOUNT	UNIT	UNIT PRICE	COST	COMMENTS
ACS-1	32+50 - 33+18	LT	UG 500 pair telephone	within proposed improvements	adjust	80	LF	\$90	\$7,200	
ACS-2	32+00 - 38+06	LT	UG 600 pair telephone	within proposed improvements	adjust	625	LF	\$100	\$62,500	
ACS-3	33+18 - 33+19	RT	OH 100 pair telephone	within proposed improvements	underground	100	LF	\$80	\$8,000	
ACS-4	33+18 - 36+29	RT	OH 200 pair telephone	within proposed improvements	underground	315	LF	\$85	\$26,775	
ACS-5	36+29	RT	OH 100 pair telephone	within proposed improvements	underground	55	LF	\$80	\$4,400	
ACS-6	38+00	LT	Vault	within proposed improvements	adjust	1	EA	\$10,750	\$10,750	
ACS-7	38+06 - 39+83	RT	OH 100 pair telephone	within proposed improvements	underground	195	LF	\$80	\$15,600	
ACS-8	39+83	LT	UG 100 pair telephone	within proposed improvements	relocate	65	LF	\$80	\$5,200	
ACS-9	39+83 - 43+06	RT	OH 50 pair telephone	within proposed improvements	underground	325	LF	\$65	\$21,125	
ACS-10	43+06	LT	OH 100 pair telephone	within proposed improvements	underground	200	LF	\$80	\$16,000	

Construction Costs: \$177,550
 Engineering/Administration (30%): \$53,265
Total: \$230,815

Id No.	APPROX. STATION	OFFSET	UTILITY CONFLICT	DESCRIPTION OF CONFLICT	RECOMMENDED ACTION	AMOUNT	UNIT	UNIT PRICE	COST	COMMENTS
GCI-1	32+00 - 43+06	RT	overhead C line	within proposed improvements	underground	1106	LF	\$20	\$22,120	Additional cost with FO underground
GCI-2	32+00 - 43+06	RT	overhead FO line	within proposed improvements	underground	1106	LF	\$100	\$110,600	
GCI-3	33+16 - 33+18	RT	underground C line	within proposed improvements	adjust	100	LF	\$80	\$8,000	
GCI-4	36+29	RT	overhead C line	within proposed improvements	underground	100	LF	\$80	\$8,000	
GCI-5	36+29	RT	overhead FO line	within proposed improvements	underground	100	LF	\$120	\$12,000	
GCI-6	36+29 - 38+06	LT	underground FO line	within proposed improvements	adjust	200	LF	\$120	\$24,000	
GCI-7	39+80 - 39+83	Crossing	underground C line	within proposed improvements	adjust	70	LF	\$20	\$1,400	
GCI-8	39+80 - 39+81	Crossing	underground FO line	within proposed improvements	adjust	70	LF	\$100	\$7,000	Additional cost with FO underground
GCI-9	39+77 - 39+83	RT	underground C line	within proposed improvements	adjust	60	LF	\$80	\$4,800	
GCI-10	43+06	RT	overhead C line	within proposed improvements	underground	100	LF	\$80	\$8,000	underground to next northern pole

Construction Costs: \$205,920
Engineering/Administration (30%) \$61,776

Total: \$267,696

Id No.	APPROX. STATION	OFFSET	UTILITY CONFLICT	DESCRIPTION OF CONFLICT	RECOMMENDED ACTION	AMOUNT	UNIT	UNIT PRICE	COST	COMMENTS
Enstar-1	32+00 - 45+00	LT	3-Inch Steel	within proposed improvements	relocate	1200	LF	\$135	\$162,000	
Enstar-2	34+45	Crossing	1-1/4"-Inch Steel	within proposed improvements	relocate	50	LF	\$108	\$5,400	
Enstar-3	37+82	Crossing	1-1/4-Inch Steel	within proposed improvements	relocate	50	LF	\$108	\$5,400	
Enstar-4	38+31	Crossing	1-1/4-Inch Steel	within proposed improvements	relocate	50	LF	\$108	\$5,400	
Enstar-5	39+88	Crossing	2-Inch Steel	within proposed improvements	relocate	50	LF	\$125	\$6,250	
Enstar-6	39+97	Crossing	2-Inch Steel	within proposed improvements	relocate	50	LF	\$125	\$6,250	
Enstar-7	41+24	Crossing	1-1/4-Inch Steel	within proposed improvements	relocate	50	LF	\$108	\$5,400	
Enstar-8	41+95	Crossing	1-1/4-Inch Steel	within proposed improvements	relocate	50	LF	\$108	\$5,400	

Construction Costs:	\$201,500
Engineering/Administration (30%)	\$60,450
Total:	\$261,950

Lois Drive West 32nd Avenue Pathway - Benson Boulevard to Minnesota Drive
MOA Project No. 19-08

ROW REQUIREMENTS ESTIMATE - DRAFT DSR - ALTERNATIVE 1 - 32ND AVENUE

Lois & 32nd Ave Upgrade - Alternative 1 - 32nd Avenue					
PARCEL	Purchase Entire Property	PUE	SE	TCE	# Of TCP's
115		X	X		1
116		X	X		1
117	X				0
118		X	X	X	0
119		X	X	X	1
120		X	X		1
121		X	X		1
122	X				0
123		X	X		2
TOTAL	2	7	7	2	7

9/1/2020 **Basis:**
Project: Lois Drive & 32nd Avenue Pathway
Project Number: 19-08

Prepared By: CRW
Alternative 1 - Intersection
[B]=local bond; [S]=state grant; [F]= federal grant

Ver. 5.1

DESIGN		Design Management	\$8,040	
	<i>Start 20??</i>	PM&E Design Services	\$0	
		PM&E Design Survey	\$0	
		PM&E Design Soil	\$0	
		Contractual Dsgn Sers (Basic)	\$71,000	
		Contractual Dsgn Sers (Add'l)	\$10,000	
		Contractual Design Survey	\$12,000	
		Contractual Design Soils	\$5,000	
		Miscellaneous	\$0	
Subtotal				\$106,040
UTILITIES		AWWU	\$0	
	<i>Start 20??</i>	CEA	\$102,000	
		ACS	\$24,000	
		GCI	\$24,000	
		Enstar	\$36,000	
Subtotal				\$186,000
ROW		Real Estate Services	\$15,420	
	<i>Start 20??</i>	Land Acquisition	\$2,130,000	
Subtotal				\$2,145,420
CONSTRUCTION		Construction Management	\$10,720	
	<i>Start 20??</i>	Inspection	\$26,800	
		Materials Testing	\$4,690	
		Survey	\$5,360	
		Miscellaneous	\$0	
		Construction Contract	\$268,000	
Subtotal				\$315,570
MISCELLANEOUS		Bond Overhead (15.0%)	\$492,888	
		Grant Overhead (0.0%)	\$0	
		Contingency (15%)	\$40,000	
Subtotal				\$532,888
PROJECT TOTAL				<u><u>\$3,285,918</u></u>

**Lois Drive West 32nd Avenue Pathway - Benson Boulevard To Minnesota Drive
MOA Project No. 19-08**

ENGINEER'S ESTIMATE - DRAFT DSR - ALTERNATIVE 1 - INTERSECTION

ITEM No.	MASS No.	ITEM DESCRIPTION	UNIT	CALC. QUANT	CONT. FACTOR	ROUND FACTOR	EST QUANT	UNIT PRICE	TOTAL COST
Schedule A - Roadway Improvements									
A-1	20.02	Storm Water Pollution Prevention Plan (Type 3)	LS	1	1.00	0	1	\$1,200	\$1,200
A-2	20.03	Test Pit for Utility Locate	Hour	8	1.00	0	8	\$800	\$6,400
A-3	20.04	Clearing and Grubbing	LS	1	1.00	0	1	\$1,400	\$1,400
A-4	20.09	Remove Pavement	SY	554	1.00	0	554	\$4	\$2,216
A-5	20.10	Unusable Excavation	CY	903	1.25	-2	1,100	\$15	\$16,500
A-6	20.21	Classified Fill and Backfill (Type II)	Ton	270	1.25	-2	300	\$18	\$5,400
A-7	20.21	Classified Fill and Backfill (Type II-A)	Ton	793	1.25	-2	1,000	\$18	\$18,000
A-8	20.22	Leveling Course	Ton	65	1.08	-1	70	\$35	\$2,450
A-9	20.25	Geotextile (Type A)	SY	949	1.00	-1	950	\$2	\$1,900
A-10	20.26	Insulation Board (R-9)	SF	5,569	1.01	-1	5,620	\$3	\$16,860
A-11	20.26	Insulation Board (R-4.5)	SF	743	1.01	-1	750	\$2	\$1,500
A-12	30.02	P.C.C. Curb and Gutter (All Types)	LF	226	1.00	0	226	\$27	\$6,102
A-13	30.03	P.C.C. Sidewalk	SY	134	1.00	0	134	\$60	\$8,040
A-14	30.04	P.C.C. Curb Ramp (6" Thick)	EA	4	1.00	0	4	\$2,000	\$8,000
A-15	40.06	A.C. Pavement (Class D)	Ton	68	1.06	-1	70	\$105	\$7,350
A-16	40.06	A.C. Pavement (Class E)	Ton	68	1.06	-1	70	\$110	\$7,700
A-17	60.03	Remove and Replace Valve Box Top Section	EA	3	1.00	0	3	\$500	\$1,500
A-18	65.02	Construction Survey Measurement	LS	1	1.00	0	1	\$2,100	\$2,100
A-19	65.02	Two-Person Survey Crew	Hour	5	1.00	0	5	\$225	\$1,125
A-20	70.08	Remove Fence	LF	116	1.00	0	116	\$10	\$1,160
A-21	70.10	Inlaid Traffic Markings (Methyl Methacrylate) (24" White) (90 Mil)	LF	25	1.00	0	25	\$30	\$750
A-22	70.11	Standard Sign	SF	18	1.00	0	18	\$100	\$1,800
A-23	70.12	Traffic Maintenance	LS	1	1.00	0	1	\$10,000	\$10,000
A-24	75.02	Trees (type to be determined)	EA	2	1.00	0	2	\$500	\$1,000
A-25	75.02	Shrubs (type to be determined)	EA	4	1.00	0	4	\$75	\$300
A-26	75.03	Topsoil (4-inch Depth)	MSF	5.2	1.30	0	7	\$550	\$3,850
A-27	75.04	Seeding (Schedule A)	MSF	5.2	1.30	0	7	\$450	\$3,150
A-28	75.12	Temporary Tree Protection Fence	LF	10	1.00	0	10	\$7	\$70
A-29	75.13	Root Pruning	LF	10	1.00	0	10	\$25	\$250
TOTAL									\$138,073

Schedule B - Drainage Improvements									
B-1	20.13	Trench Dewatering	LS	1	1.00	0	1	\$3,000	\$3,000
B-2	20.13	Trench Excavation and Backfill (Various Depths)	LF	320	1.00	0	320	\$25	\$8,000
B-3	20.15	Furnish Trench Backfill (Type II)	Ton	200	1.30	0	260	\$17	\$4,420
B-4	20.16	Bedding Material (Class D)	LF	320	1.00	0	320	\$30	\$9,600
B-5	20.26	Insulation Board (R-20)	SF	128	1.00	0	128	\$5	\$640
B-6	20.27	Disposal of Unusable or Surplus Material	CY	210	1.30	0	273	\$20	\$5,460
B-7	55.02	Furnish, Install, and Televis Pipe (12-Inch, Type S, CPEP)	LF	132	1.00	0	132	\$60	\$7,920
B-8	55.02	Furnish, Install, and Televis Pipe (18-Inch, Type S, CPEP)	LF	189	1.00	0	189	\$70	\$13,230
B-9	55.05	Construct (Type I) Manhole	EA	1	1.00	0	1	\$5,500	\$5,500
B-10	55.05	Construct (Type II) Catch Basin Manhole	EA	2	1.00	0	2	\$10,000	\$20,000
B-11	55.09	Construct Catch Basin	EA	4	1.00	0	4	\$4,500	\$18,000
TOTAL									\$95,770

Schedule C - Illumination Improvements									
C-1	80.02	Trench and Backfill (2'W x 3.5'D)	LF	5	1.10	-1	10	\$24	\$244
C-2	80.04	Driven Pole Luminaire Pole Foundations	EA	1	1.00	0	1	\$2,778	\$2,778
C-3	80.04	Load Center Foundation (Type 1A)	EA	1	1.00	0	1	\$4,900	\$4,900
C-4	80.04	Cast-In-Place Light Column Foundation	EA	1	1.00	0	1	\$3,233	\$3,233
C-5	80.05	Fixed Base Luminaire Pole	EA	1	1.00	0	1	\$3,940	\$3,940
C-6	80.06	Luminaire Arm	EA	2	1.00	0	2	\$775	\$1,550
C-7	80.07	Steel Conduit (2 inch)	FT	5	1.10	-1	10	\$39	\$390
C-8	80.08	Junction Box (Type IA)	EA	1	1.00	0	1	\$1,263	\$1,263
C-9	80.08	Junction Box (Type II)	EA	1	1.00	0	1	\$2,990	\$2,990
C-10	80.10	3 Conductor 8 AWG Type XHHW-2 Cable	FT	5	1.10	-1	10	\$7	\$70
C-11	80.14	Single-Meter Pad-Mount Load Center, Type 1A with Lighting Control	EA	1	1.00	0	1	\$8,612	\$8,612
C-12	80.23	Luminaire (6,000 Lm, Medium, Type 3)	EA	1	1.00	0	1	\$1,150	\$1,150
C-13	80.23	Luminaire (10,000 Lm, Medium, Type 3)	EA	1	1.00	0	1	\$1,200	\$1,200
C-14	80.23	Spare Luminaire (6,000 Lm, Medium, Type 3)	EA	1	1.00	0	1	\$1,000	\$1,000
C-15	80.23	Spare Luminaire (10,000 Lm, Medium, Type 3)	EA	1	1.00	0	1	\$1,050	\$1,050
TOTAL									\$34,370

SUMMARY	
Schedule A - Roadway Improvements	\$138,073
Schedule B - Drainage Improvements	\$95,770
Schedule C - Illumination Improvements	\$34,370
Subtotal	\$268,213
Total Estimated Construction Cost:	\$268,000

Utility Relocation Summary	
Lois/32nd Intersection Upgrades: Alternative 1	
Electric (CEA)	\$92,300
Telecommunications (ACS)	\$21,450
Cable Television (GCI)	\$22,100
Natural Gas (Enstar)	\$32,695
<i>Subtotal:</i>	<i>\$168,545</i>
<i>Construction Contingency (10%)</i>	<i>\$16,855</i>
Total Utility Relocation Cost:	\$185,400

Id No.	APX. STA	OFFSET	UTILITY CONFLICT	DESCRIPTION OF CONFLICT	RECOMMENDED ACTION	AMOUNT	UNIT	UNIT PRICE	COST	COMMENTS
CEA-1	31+35	LT	Utility Pole - Transmission and Distribution	Within proposed improvements	Relocate	1	EA	\$30,000	\$65,000	
CEA-2	31+35	LT	Service Line to Parcel 112	Relocated with pole	Relocate	1	EA		\$0	Parcel to be bought under Alternative 1
CEA-3	31+35	LT	Service Line to Parcel 113	Relocated with pole	Relocate	1	EA	\$3,000	\$3,000	
CEA-3	31+35	LT	Service Line to Parcel	Relocated with pole	Relocate	1	EA	\$3,000	\$3,000	

Construction Costs: \$71,000
 Engineering/Administration (30%): \$21,300
Total: \$92,300

Id No.	APX. STA	OFFSET	UTILITY CONFLICT	DESCRIPTION OF CONFLICT	RECOMMENDED ACTION	AMOUNT	UNIT	UNIT PRICE	COST	COMMENTS
ACS-1	11+49-12+50	RT	underground T line	within proposed improvements	Relocate as needed	100	LF	\$80	\$8,000	
ACS-2	30+87 - 31+35	LT	OH 100 pair telephone	within proposed improvements	underground	50	LF	\$80	\$4,000	
ACS-3	32+00 - 32+50	LT	underground T line	within proposed improvements	Relocate as needed	50	LF	\$90	\$4,500	

Construction Costs: \$16,500
 Engineering/Administration (30%): \$4,950
Total: \$21,450

Id No.	APX. STA	OFFSET	UTILITY CONFLICT	DESCRIPTION OF CONFLICT	RECOMMENDED ACTION	AMOUNT	UNIT	UNIT PRICE	COST	COMMENTS
GCI-1	30+87 - 31+35	LT	overhead C line	within proposed improvements	underground	50	LF	\$80	\$4,000	
GCI-2	31+35 - 32+00	RT	overhead C line	within proposed improvements	underground	65	LF	\$80	\$5,200	
GCI-2	31+35 - 32+00	RT	overhead F line	within proposed improvements	underground	65	LF	\$120	\$7,800	

Construction Costs: \$17,000
 Engineering/Administration (30%) \$5,100

Total: \$22,100

Id No.	APX. STA	OFFSET	UTILITY CONFLICT	DESCRIPTION OF CONFLICT	RECOMMENDED ACTION	AMOUNT	UNIT	UNIT PRICE	COST	COMMENTS
Enstar-1	30+40 - 31+40	LT	1-1/4-Inch Steel	within proposed improvements	relocate	100	LF	\$108	\$10,800	
Enstar-2	31+40	Crossing	2-Inch Steel	within proposed improvements	relocate	50	LF	\$125	\$6,250	
Enstar-3	31+43 - 32+00	LT	3-Inch Steel	within proposed improvements	relocate	60	LF	\$135	\$8,100	

Construction Costs:	\$25,150
Engineering/Administration (30%)	\$7,545
Total:	\$32,695

Lois Drive West 32nd Avenue Pathway - Benson Boulevard to Minnesota Drive
MOA Project No. 19-08

ROW REQUIREMENTS ESTIMATE - DRAFT DSR - ALTERNATIVE 1 - INTERSECTION

Lois & 32nd Ave Upgrade - Alternative 1 - Intersection					
PARCEL	Purchase Entire Property	PUE	SE	TCE	# Of TCP's
112	X				0
113		X			1
114	X				0
TOTAL	2	1	0	0	1

Date: 9/1/2020 **Basis:**
Project: Lois Drive & 32nd Avenue Pathway
Project Number: 19-08

Prepared By: CRW
Alternative 2 - Lois
[B]=local bond; [S]=state grant; [F]= federal grant

Ver. 5.1

DESIGN		Design Management	\$23,565	
	<i>Start 20??</i>	PM&E Design Services	\$0	
		PM&E Design Survey	\$0	
		PM&E Design Soil	\$0	
		Contractual Dsgn Sers (Basic)	\$213,000	
		Contractual Dsgn Sers (Add'l)	\$27,500	
		Contractual Design Survey	\$41,000	
		Contractual Design Soils	\$20,000	
		Miscellaneous	\$0	
Subtotal				\$325,065
UTILITIES		AWWU	\$0	
	<i>Start 20??</i>	CEA	\$0	
		ACS	\$142,000	
		GCI	\$0	
		Enstar	\$42,000	
Subtotal				\$184,000
ROW		Real Estate Services	\$22,700	
	<i>Start 20??</i>	Land Acquisition	\$32,000	
Subtotal				\$54,700
CONSTRUCTION		Construction Management	\$39,275	
	<i>Start 20??</i>	Inspection	\$105,257	
		Materials Testing	\$15,710	
		Survey	\$15,710	
		Miscellaneous	\$0	
		Construction Contract	\$1,571,000	
Subtotal				\$1,746,952
MISCELLANEOUS		Bond Overhead (15.0%)	\$449,421	
		Grant Overhead (0.0%)	\$0	
		Contingency (15%)	\$236,000	
Subtotal				\$685,421
PROJECT TOTAL				<u><u>\$2,996,138</u></u>

**Lois Drive West 32nd Avenue Pathway - Benson Boulevard To Minnesota Drive
MOA Project No. 19-08**

ENGINEER'S ESTIMATE - DRAFT DSR - ALTERNATIVE 2 - LOIS DRIVE

ITEM No.	MASS No.	ITEM DESCRIPTION	UNIT	CALC. QUANT	CONT. FACTOR	ROUND FACTOR	EST QUANT	UNIT PRICE	TOTAL COST
Schedule A - Roadway Improvements									
A-1	20.02	Storm Water Pollution Prevention Plan (Type 3)	LS	1	1.00	0	1	\$10,000	\$10,000
A-2	20.03	Test Pit for Utility Locate	Hour	8	1.00	0	8	\$800	\$6,400
A-3	20.04	Clearing and Grubbing	LS	1	1.00	0	1	\$12,000	\$12,000
A-4	20.08	Remove Curb and Gutter	LF	230	1.00	0	230	\$7	\$1,610
A-5	20.09	Remove Pavement	SY	3,836	1.00	0	3,836	\$4	\$15,344
A-6	20.10	Unusable Excavation	CY	8,091	1.25	-2	10,100	\$15	\$151,500
A-7	20.21	Classified Fill and Backfill (Type II)	Ton	2,343	1.25	-2	2,900	\$18	\$52,200
A-8	20.21	Classified Fill and Backfill (Type II-A)	Ton	7,351	1.25	-2	9,200	\$18	\$165,600
A-9	20.22	Leveling Course	Ton	523	1.08	-1	560	\$35	\$19,600
A-10	20.25	Geotextile (Type A)	SY	8,292	1.00	-1	8,290	\$2	\$16,580
A-11	20.26	Insulation Board (R-9)	SF	48,669	1.01	-1	49,160	\$3	\$147,480
A-12	20.26	Insulation Board (R-4.5)	SF	7,689	1.01	-1	7,770	\$2	\$15,540
A-13	20.28	Reconstruct Driveway	EA	12	1.00	0	12	\$3,250	\$39,000
A-14	30.02	P.C.C. Curb and Gutter (All Types)	LF	2,117	1.00	0	2,117	\$27	\$57,159
A-15	30.03	P.C.C. Sidewalk	SY	400	1.00	0	400	\$60	\$24,000
A-16	30.04	P.C.C. Curb Ramp (6" Thick)	EA	11	1.00	0	11	\$2,000	\$22,000
A-17	40.06	A.C. Pavement (Class D)	Ton	542	1.06	-1	570	\$105	\$59,850
A-18	40.06	A.C. Pavement (Class E)	Ton	436	1.06	-1	460	\$110	\$50,600
A-19	50.06	Remove and Replace Manhole Cone Section	EA	1	1.00	0	1	\$1,800	\$1,800
A-20	50.06	Remove and Replace Manhole Cover and Frame	EA	1	1.00	0	1	\$700	\$700
A-21	60.03	Remove and Replace Valve Box Top Section	EA	6	1.00	0	6	\$500	\$3,000
A-22	60.04	Furnish and Install Fire Hydrant Assembly Single Pumper	EA	1	1.00	0	1	\$9,000	\$9,000
A-23	60.05	Adjust Key Box	EA	10	1.00	0	10	\$450	\$4,500
A-24	60.08	Decommission Fire Hydrant Assembly	EA	1	1.00	0	1	\$3,000	\$3,000
A-25	65.02	Construction Survey Measurement	LS	1	1.00	0	1	\$20,000	\$20,000
A-26	65.02	Two-Person Survey Crew	Hour	10	1.00	0	10	\$225	\$2,250
A-27	70.08	Remove and Reset Fence	LF	656	1.10	0	722	\$40	\$28,880
A-28	70.10	Inlaid Traffic Markings (Methyl Methacrylate) (4" Yellow) (90 Mil)	LF	1,960	1.00	0	1,960	\$6	\$11,760
A-29	70.10	Inlaid Traffic Markings (Methyl Methacrylate) (4" White) (90 Mil)	LF	1,759	1.00	0	1,759	\$6	\$10,554
A-30	70.10	Inlaid Traffic Markings (Methyl Methacrylate) (24" White) (90 Mil)	LF	93	1.00	0	93	\$30	\$2,790
A-31	70.11	Standard Sign	SF	72	1.00	0	72	\$100	\$7,200
A-32	70.12	Traffic Maintenance	LS	1	1.00	0	1	\$100,000	\$100,000
A-33	70.16	Temporary Group Mailboxes	LS	1	1.00	0	1	\$10,000	\$10,000
A-34	70.17	Relocate Mailbox	EA	7	1.00	0	7	\$500	\$3,500
A-35	70.23	Temporary Fencing	LF	656	1.10	0	722	\$10	\$7,220
A-36	75.02	Trees (type to be determined)	EA	9	1.00	0	9	\$500	\$4,500
A-37	75.02	Shrubs (type to be determined)	EA	18	1.00	0	18	\$75	\$1,350
A-38	75.03	Topsoil (4-inch Depth)	MSF	24.3	1.30	0	32	\$550	\$17,600
A-39	75.04	Seeding (Schedule A)	MSF	24.3	1.30	0	32	\$450	\$14,400
A-40	75.12	Temporary Tree Protection Fence	LF	200	1.00	0	200	\$7	\$1,400
A-41	75.13	Root Pruning	LF	70	1.00	0	70	\$25	\$1,750
A-42	80.18	Install Loop Detector - New Work	LS	1	1.00	0	1	\$20,000	\$20,000
								TOTAL	\$1,153,617

**Lois Drive West 32nd Avenue Pathway - Benson Boulevard To Minnesota Drive
MOA Project No. 19-08**

ENGINEER'S ESTIMATE - DRAFT DSR - ALTERNATIVE 2 - LOIS DRIVE

ITEM No.	MASS No.	ITEM DESCRIPTION	UNIT	CALC. QUANT	CONT. FACTOR	ROUND FACTOR	EST QUANT	UNIT PRICE	TOTAL COST
Schedule B - Drainage Improvements									
B-1	20.13	Trench Dewatering	LS	1	1.00	0	1	\$5,000	\$5,000
B-2	20.13	Trench Excavation and Backfill (Various Depths)	LF	877	1.00	0	877	\$25	\$21,925
B-3	20.15	Furnish Trench Backfill (Type II)	Ton	590	1.30	0	767	\$17	\$13,039
B-4	20.16	Bedding Material (Class D)	LF	877	1.00	0	877	\$30	\$26,310
B-5	20.26	Insulation Board (R-20)	SF	128	1.00	0	128	\$5	\$640
B-6	20.27	Disposal of Unusable or Surplus Material	CY	610	1.30	0	793	\$20	\$15,860
B-7	55.02	Furnish, Install, and Televis Pipe (12-Inch, Type S, CPEP)	LF	189	1.00	0	189	\$60	\$11,340
B-8	55.02	Furnish, Install, and Televis Pipe (18-Inch, Type S, CPEP)	LF	688	1.00	0	688	\$70	\$48,160
B-9	55.04	Connect to Existing Storm Drain System	EA	1	1.00	0	1	\$2,500	\$2,500
B-10	55.05	Construct (Type II) Catch Basin Manhole	EA	4	1.00	0	4	\$10,000	\$40,000
B-11	55.05	Construct (Type II) Bypass Manhole	EA	1	1.00	0	1	\$25,000	\$25,000
B-12	55.09	Construct Catch Basin	EA	5	1.00	0	5	\$4,500	\$22,500
B-13	55.11	Remove Manhole	EA	5	1.00	0	5	\$1,000	\$5,000
B-14	55.11	Remove Catch Basin	EA	4	1.00	0	4	\$900	\$3,600
B-15	55.22	Oil and Grit Separator	EA	1	1.00	0	1	\$25,000	\$25,000
B-16	55.27	Storm Drain Bypass System	LS	1	1.00	0	1	\$10,000	\$10,000
B-17	70.07	Remove Pipe	LF	840	1.00	0	840	\$13	\$10,920
								TOTAL	\$286,794

Schedule C - Illumination Improvements									
C-1	80.02	Trench and Backfill (2'W x 3.5'D)	LF	875	1.10	-1	960	\$24	\$23,424
C-2	80.04	Driven Pole Luminaire Pole Foundations	EA	6	1.00	0	6	\$2,778	\$16,668
C-3	80.05	Fixed Base Luminaire Pole	EA	6	1.00	0	6	\$3,940	\$23,640
C-4	80.06	Luminaire Arm	EA	6	1.00	0	6	\$775	\$4,650
C-5	80.07	Steel Conduit (2 inch)	FT	875	1.10	-1	960	\$39	\$37,440
C-6	80.08	Junction Box (Type IA)	EA	6	1.00	0	6	\$1,263	\$7,578
C-7	80.10	3 Conductor 8 AWG Type XHHW-2 Cable	FT	875	1.10	-1	960	\$7	\$6,720
C-8	80.23	Luminaire (6,000 Lm, Medium, Type 2)	EA	3	1.00	0	3	\$1,000	\$3,000
C-9	80.23	Luminaire (6,000 Lm, Medium, Type 3)	EA	1	1.00	0	1	\$1,000	\$1,000
C-10	80.23	Luminaire (10,000 Lm, Medium, Type 2)	EA	1	1.00	0	1	\$1,150	\$1,150
C-11	80.23	Luminaire (13,000 Lm, Medium, Type 3)	EA	1	1.00	0	1	\$1,250	\$1,250
C-12	80.23	Spare Luminaire (6,000 Lm, Medium, Type 3)	EA	1	1.00	0	1	\$850	\$850
C-13	80.23	Spare Luminaire (6,000 Lm, Medium, Type 3)	EA	1	1.00	0	1	\$850	\$850
C-14	80.23	Spare Luminaire (10,000 Lm, Medium, Type 2)	EA	1	1.00	0	1	\$1,000	\$1,000
C-15	80.23	Spare Luminaire (13,000 Lm, Medium, Type 3)	EA	1	1.00	0	1	\$1,100	\$1,100
								TOTAL	\$130,320

SUMMARY	
Schedule A - Roadway Improvements	\$1,153,617
Schedule B - Drainage Improvements	\$286,794
Schedule C - Illumination Improvements	\$130,320
Subtotal	\$1,570,731
Total Estimated Construction Cost:	\$1,571,000

Utility Relocation Summary	
Lois/32nd Avenue Upgrades: Alternative 2	
Electric (CEA)	\$0
Telecommunications (ACS)	\$129,350
Cable Television (GCI)	\$0
Natural Gas (Enstar)	\$38,253
<i>Subtotal:</i>	<i>\$167,603</i>
<i>Construction Contingency (10%)</i>	<i>\$16,760</i>
Total Utility Relocation Cost:	\$184,363

Id No.	APPROX. STATION	OFFSET	UTILITY CONFLICT	DESCRIPTION OF CONFLICT	RECOMMENDED ACTION	AMOUNT	UNIT	UNIT PRICE	COST	COMMENTS
ACS-1	12+00 - 12+88	RT	underground T line	within proposed improvements	adjust	100	LF	\$80	\$8,000	
ACS-2	11+53 - 20+68	RT	underground T line	within proposed improvements	adjust	980	LF	\$80	\$78,400	
ACS-3	18+50	RT	telephone pedestal	within proposed improvements	Relocate	1	EA	\$4,300	\$4,300	
ACS-4	19+26 - 19+49	RT	underground T line	within proposed improvements	adjust	25	LF	\$80	\$2,000	
ACS-5	19+86 - 20+20	RT	underground T line	within proposed improvements	adjust	35	LF	\$80	\$2,800	
ACS-6	20+88 - 21+36	RT	underground T line	within proposed improvements	adjust	50	LF	\$80	\$4,000	
ACS-7	21+44	Crossing	underground T line	within proposed improvements	Verify Depth. Relocate as needed	40	LF	\$0	\$0	
ACS-8	21+90 - 21+97	RT	underground T line	within proposed improvements	Verify Depth. Relocate as needed	8	LF	\$0	\$0	

Construction Costs: \$99,500
 Engineering/Administration (30%): \$29,850
Total: \$129,350

Id No.	APPROX. STATION	OFFSET	UTILITY CONFLICT	DESCRIPTION OF CONFLICT	RECOMMENDED ACTION	AMOUNT	UNIT	UNIT PRICE	COST	COMMENTS
Enstar-1	12+31 - 12+51	LT	2-Inch Steel	within proposed improvemnts	Locate and protect	20	LF	\$0	\$0	
Enstar-2	14+30 - 14+66	LT	2-Inch Steel	within proposed improvemnts	adjust	30	LF	\$125	\$3,750	
Enstar-3	15+78	Crossing	2-Inch Steel	within proposed improvemnts	adjust	75	LF	\$125	\$9,375	
Enstar-4	16+70 - 16+88	LT	2-Inch Steel	within proposed improvemnts	Locate and protect	20	LF	\$0	\$0	
Enstar-5	17+04 - 17+18	LT	2-Inch Steel	within proposed improvemnts	Locate and protect	20	LF	\$0	\$0	
Enstar-6	17+86 - 18+02	LT	2-Inch Steel	within proposed improvemnts	Locate and protect	20	LF	\$0	\$0	
Enstar-7	18+32 - 18+52	LT	2-Inch Steel	within proposed improvemnts	Locate and protect	20	LF	\$0	\$0	
Enstar-8	18+83 - 19+03	LT	2-Inch Steel	within proposed improvemnts	Locate and protect	20	LF	\$0	\$0	
Enstar-9	19+31 - 19+51	LT	2-Inch Steel	within proposed improvemnts	Locate and protect	20	LF	\$0	\$0	
Enstar-10	19+70 - 19+88	LT	2-Inch Steel	within proposed improvemnts	Locate and protect	20	LF	\$0	\$0	
Enstar-11	20+03 - 20+13	Crossing	5/8"-Plastic Service	within proposed improvemnts	adjust	1	EA	\$2,250	\$2,250	
Enstar-12	20+20 - 20+64	LT	2-Inch Steel	within proposed improvemnts	adjust	75	LF	\$125	\$9,375	
Enstar-13	21+60	Crossing	3-Inch Steel	within proposed improvemnts	adjust	30	LF	\$135	\$4,050	
Enstar-14	21+95 - 21+99	LT	2-Inch Steel	within proposed improvemnts	modify	5	LF	\$125	\$625	

Construction Costs:	\$29,425
Engineering/Administration (30%)	\$8,828
Total:	\$38,253

Lois Drive West 32nd Avenue Pathway - Benson Boulevard to Minnesota Drive
MOA Project No. 19-08

ROW REQUIREMENTS ESTIMATE - DRAFT DSR - ALTERNATIVE 2 - LOIS DRIVE

Lois & 32nd Ave Upgrade - Alternative 2 - Lois						
PARCEL	Purchase Entire Property	PUE	SE	Drainage Easement	TCE	# Of TCP's
100						0
101						1
102						1
103						1
104						1
105						1
106						1
107			X			1
108			X			0
109						1
110			X			0
111			X			0
123		X				1
124		X				3
125		X				1
TOTAL	0	3	4	0	0	13

9/1/2020 **Basis:**
Project: Lois Drive & 32nd Avenue Pathway
Project Number: 19-08

Prepared By: CRW
Alternative 2 - 32nd Avenue
[B]=local bond; [S]=state grant; [F]= federal grant

Ver. 5.1

DESIGN	Design Management	\$34,890	
<i>Start 20??</i>	PM&E Design Services	\$0	
	PM&E Design Survey	\$0	
	PM&E Design Soil	\$0	
	Contractual Dsgn Sers (Basic)	\$283,000	
	Contractual Dsgn Sers (Add'l)	\$37,500	
	Contractual Design Survey	\$55,000	
	Contractual Design Soils	\$25,000	
	Miscellaneous	\$0	
Subtotal			\$435,390
UTILITIES	AWWU	\$0	
<i>Start 20??</i>	CEA	\$0	
	ACS	\$124,000	
	GCI	\$69,000	
	Enstar	\$288,000	
Subtotal			\$481,000
ROW	Real Estate Services	\$35,200	
<i>Start 20??</i>	Land Acquisition	\$3,923,000	
Subtotal			\$3,958,200
CONSTRUCTION	Construction Management	\$55,824	
<i>Start 20??</i>	Inspection	\$148,864	
	Materials Testing	\$23,260	
	Survey	\$23,260	
	Miscellaneous	\$0	
	Construction Contract	\$2,326,000	
Subtotal			\$2,577,208
MISCELLANEOUS	Bond Overhead (15.0%)	\$1,376,611	
	Grant Overhead (0.0%)	\$0	
	Contingency (15%)	\$349,000	
Subtotal			\$1,725,611
PROJECT TOTAL			<u><u>\$9,177,409</u></u>

**Lois Drive West 32nd Avenue Pathway - Benson Boulevard To Minnesota Drive
MOA Project No. 19-08**

ENGINEER'S ESTIMATE - DRAFT DSR - ALTERNATIVE 2 - 32ND AVENUE

ITEM No.	MASS No.	ITEM DESCRIPTION	UNIT	CALC. QUANT	CONT. FACTOR	ROUND FACTOR	EST QUANT	UNIT PRICE	TOTAL COST
Schedule A - Roadway Improvements									
A-1	20.02	Storm Water Pollution Prevention Plan (Type 3)	LS	1	1.00	0	1	\$15,000	\$15,000
A-2	20.03	Test Pit for Utility Locate	Hour	8	1.00	0	8	\$800	\$6,400
A-3	20.04	Clearing and Grubbing	LS	1	1.00	0	1	\$18,000	\$18,000
A-4	20.07	Remove Sidewalk or Concrete Apron	SY	896	1.00	0	896	\$15	\$13,440
A-5	20.08	Remove Curb and Gutter	LF	341	1.00	0	341	\$7	\$2,387
A-6	20.09	Remove Pavement	SY	5,339	1.00	0	5,339	\$4	\$21,356
A-7	20.10	Unusable Excavation	CY	10,489	1.25	-2	13,100	\$15	\$196,500
A-8	20.21	Classified Fill and Backfill (Type II)	Ton	3,247	1.25	-2	4,100	\$18	\$73,800
A-9	20.21	Classified Fill and Backfill (Type II-A)	Ton	9,673	1.25	-2	12,100	\$18	\$217,800
A-10	20.22	Leveling Course	Ton	896	1.08	-1	970	\$35	\$33,950
A-11	20.25	Geotextile (Type A)	SY	11,489	1.00	-1	11,490	\$2	\$22,980
A-12	20.26	Insulation Board (R-9)	SF	67,433	1.01	-1	68,110	\$3	\$204,330
A-13	20.26	Insulation Board (R-4.5)	SF	9,791	1.01	-1	9,890	\$2	\$19,780
A-14	20.28	Reconstruct Driveway	EA	8	1.00	0	8	\$3,250	\$26,000
A-15	30.02	P.C.C. Curb and Gutter (All Types)	LF	4,751	1.00	0	4,751	\$27	\$128,277
A-16	30.02	Curb Nose	EA	11	1.00	0	11	\$1,500	\$16,500
A-17	30.03	P.C.C. Sidewalk	SY	456	1.00	0	456	\$60	\$27,360
A-18	30.04	P.C.C. Curb Ramp (6" Thick)	EA	24	1.00	0	24	\$2,000	\$48,000
A-19	30.10	Colored Concrete	SY	612	1.00	0	612	\$160	\$97,920
A-20	40.06	A.C. Pavement (Class D)	Ton	812	1.06	-1	860	\$105	\$90,300
A-21	40.06	A.C. Pavement (Class E)	Ton	674	1.06	-1	710	\$110	\$78,100
A-22	50.06	Remove and Replace Manhole Cone Section	EA	4	1.00	0	4	\$1,800	\$7,200
A-23	55.08	Adjust Storm Drain Manhole Ring	EA	1	1.00	0	1	\$1,400	\$1,400
A-24	60.03	Remove and Replace Valve Box Top Section	EA	5	1.00	0	5	\$500	\$2,500
A-25	60.05	Adjust Key Box	EA	1	1.00	0	1	\$450	\$450
A-26	65.02	Construction Survey Measurement	LS	1	1.00	0	1	\$30,000	\$30,000
A-27	65.02	Two-Person Survey Crew	Hour	10	1.00	0	10	\$225	\$2,250
A-28	70.08	Remove and Reset Fence	LF	778	1.10	0	856	\$40	\$34,240
A-29	70.10	Inlaid Traffic Markings (Methyl Methacrylate) (24" White) (90 Mil)	LF	128	1.00	0	128	\$30	\$3,840
A-30	70.10	Inlaid Traffic Markings (Methyl Methacrylate) (Words & Symbols) (90 Mil)	EA	2	1.00	0	2	\$700	\$1,400
A-31	70.11	Standard Sign	SF	198	1.00	0	198	\$100	\$19,800
A-32	70.12	Traffic Maintenance	LS	1	1.00	0	1	\$150,000	\$150,000
A-33	70.13	Bollard (Concrete Pipe, Yellow)	EA	36	1.00	0	36	\$1,250	\$45,000
A-34	70.13	Remove Bollard	EA	3	1.00	0	3	\$200	\$600
A-35	70.16	Temporary Group Mailboxes	LS	1	1.00	0	1	\$10,000	\$10,000
A-36	70.17	Relocate Mailbox	EA	1	1.00	0	1	\$500	\$500
A-37	70.23	Temporary Fencing	LF	778	1.10	0	856	\$10	\$8,560
A-38	75.02	Trees (type to be determined)	EA	9	1.00	0	9	\$500	\$4,500
A-39	75.02	Shrubs (type to be determined)	EA	18	1.00	0	18	\$75	\$1,350
A-40	75.03	Topsoil (4-inch Depth)	MSF	29.6	1.30	0	39	\$550	\$21,450
A-41	75.04	Seeding (Schedule A)	MSF	29.6	1.30	0	39	\$450	\$17,550
A-42	75.12	Temporary Tree Protection Fence	LF	100	1.00	0	100	\$7	\$700
A-43	75.13	Root Pruning	LF	10	1.00	0	10	\$25	\$250
								TOTAL	\$1,721,720

**Lois Drive West 32nd Avenue Pathway - Benson Boulevard To Minnesota Drive
MOA Project No. 19-08**

ENGINEER'S ESTIMATE - DRAFT DSR - ALTERNATIVE 2 - 32ND AVENUE

ITEM No.	MASS No.	ITEM DESCRIPTION	UNIT	CALC. QUANT	CONT. FACTOR	ROUND FACTOR	EST QUANT	UNIT PRICE	TOTAL COST
Schedule B - Drainage Improvements									
B-1	20.13	Trench Dewatering	LS	1	1.00	0	1	\$5,000	\$5,000
B-2	20.13	Trench Excavation and Backfill (Various Depths)	LF	1,081	1.00	0	1,081	\$25	\$27,025
B-3	20.15	Furnish Trench Backfill (Type II)	Ton	290	1.30	0	377	\$17	\$6,409
B-4	20.16	Bedding Material (Class D)	LF	1,081	1.00	0	1,081	\$30	\$32,430
B-5	20.26	Insulation Board (R-20)	SF	64	1.00	0	64	\$5	\$320
B-6	20.27	Disposal of Unusable or Surplus Material	CY	580	1.30	0	754	\$20	\$15,080
B-7	55.02	Furnish, Install, and Televis Pipe (12-Inch, Type S, CPEP)	LF	135	1.00	0	135	\$60	\$8,100
B-8	55.02	Furnish, Install, and Televis Pipe (18-Inch, Type S, CPEP)	LF	502	1.00	0	502	\$70	\$35,140
B-9	55.02	Furnish, Install, and Televis Pipe (24-Inch, Type S, CPEP)	LF	444	1.00	0	444	\$80	\$35,520
B-10	55.04	Connect to Existing Storm Drain System	EA	2	1.00	0	2	\$2,500	\$5,000
B-11	55.05	Construct (Type II) Catch Basin Manhole	EA	6	1.00	0	6	\$10,000	\$60,000
B-12	55.05	Construct (Type II) Bypass Manhole	EA	1	1.00	0	1	\$25,000	\$25,000
B-13	55.09	Construct Catch Basin	EA	6	1.00	0	6	\$4,500	\$27,000
B-14	55.11	Remove Manhole	EA	1	1.00	0	1	\$1,000	\$1,000
B-15	55.11	Remove Catch Basin	EA	2	1.00	0	2	\$900	\$1,800
B-16	55.22	Oil and Grit Separator	EA	1	1.00	0	1	\$25,000	\$25,000
B-17	55.27	Storm Drain Bypass System	LS	1	1.00	0	1	\$5,000	\$5,000
B-18	70.07	Remove Pipe	LF	509	1.00	0	509	\$13	\$6,617
B-19	80.29	Heat Trace System	LS	1	1.00	0	1	\$96,952	\$96,952
								TOTAL	\$418,393

Schedule C - Illumination Improvements									
C-1	80.02	Trench and Backfill (2'W x 3.5'D)	LF	1,246	1.10	-1	1,370	\$24	\$33,428
C-2	80.04	Driven Pole Luminaire Pole Foundations	EA	7	1.00	0	7	\$2,778	\$19,446
C-3	80.04	Cast-In-Place Light Column Foundation	EA	2	1.00	0	2	\$2,500	\$5,000
C-4	80.05	Fixed Base Luminaire Pole	EA	7	1.00	0	7	\$3,940	\$27,580
C-5	80.06	Luminaire Arm	EA	8	1.00	0	8	\$775	\$6,200
C-6	80.07	Steel Conduit (2 inch)	FT	1,293	1.10	-1	1,420	\$39	\$55,380
C-7	80.08	Junction Box (Type IA)	EA	11	1.00	0	11	\$1,263	\$13,893
C-8	80.10	3 Conductor 8 AWG Type XHHW-2 Cable	FT	1,891	1.10	-1	2,080	\$7	\$14,560
C-9	80.29	Pedestrian Light Column	EA	2	1.00	0	2	\$3,900	\$7,800
C-10	80.29	Spare Pedestrian Light Column	EA	1	1.00	0	1	\$2,900	\$2,900
								TOTAL	\$186,187

SUMMARY	
Schedule A - Roadway Improvements	\$1,721,720
Schedule B - Drainage Improvements	\$418,393
Schedule C - Illumination Improvements	\$186,187
Subtotal	\$2,326,300
Total Estimated Construction Cost:	\$2,326,000

Utility Relocation Summary 32nd Avenue Upgrades: Alternative 2	
Electric (CEA)	\$0
Telecommunications (ACS)	\$112,385
Cable Television (GCI)	\$62,400
Natural Gas (Enstar)	\$261,950
<i>Subtotal:</i>	<i>\$436,735</i>
<i>Construction Contingency (10%)</i>	<i>\$43,674</i>
Total Utility Relocation Cost:	\$480,409

Id No.	APPROX. STATION	OFFSET	UTILITY CONFLICT	DESCRIPTION OF CONFLICT	RECOMMENDED ACTION	AMOUNT	UNIT	UNIT PRICE	COST	COMMENTS
ACS-1	32+20 - 33+18	LT	UG 500 pair telephone	within proposed improvements	adjust	100	LF	\$90	\$9,000	
ACS-2	32+00 - 38+06	LT	UG 600 pair telephone	within proposed improvements	adjust	615	LF	\$100	\$61,500	
ACS-3	33+18 - 33+19	CL	OH 100 pair telephone	within proposed improvements	protect in place	60	LF	\$0	\$0	
ACS-4	33+18 - 36+29	RT	OH 200 pair telephone	within proposed improvements	protect in place	315	LF	\$0	\$0	
ACS-5	36+29	RT	OH 100 pair telephone	within proposed improvements	protect in place	55	LF	\$0	\$0	
ACS-6	38+00	LT	Vault	within proposed improvements	adjust	1	EA	\$10,750	\$10,750	
ACS-7	38+06 - 39+83	RT	OH 100 pair telephone	within proposed improvements	protect in place	195	LF	\$0	\$0	
ACS-8	39+83	RT	UG 100 pair telephone	within proposed improvements	adjust	65	LF	\$80	\$5,200	
ACS-9	39+83 - 43+06	RT	OH 50 pair telephone	within proposed improvements	protect in place	325	LF	\$0	\$0	
ACS-10	43+06	LT	OH 100 pair telephone	within proposed improvements	protect in place	35	LF	\$0	\$0	

Construction Costs: \$86,450
Engineering/Administration (30%): \$25,935

Total: \$112,385

Id No.	APPROX. STATION	OFFSET	UTILITY CONFLICT	DESCRIPTION OF CONFLICT	RECOMMENDED ACTION	AMOUNT	UNIT	UNIT PRICE	COST	COMMENTS
GCI-1	32+00 - 43+06	RT	overhead C line	within proposed improvements	protect in place	1215	LF	\$0	\$0	
GCI-2	32+07 - 39+83	RT	overhead FO line	within proposed improvements	protect in place	780	LF	\$0	\$0	
GCI-3	33+16 - 33+18	RT	underground C line	within proposed improvements	adjust	65	LF	\$80	\$5,200	
GCI-4	36+29	RT	overhead C line	within proposed improvements	protect in place	55	LF	\$0	\$0	
GCI-5	36+29	RT	overhead FO line	within proposed improvements	protect in place	55	LF	\$0	\$0	
GCI-6	36+29 - 38+06	LT	underground FO line	within proposed improvements	adjust	200	LF	\$120	\$24,000	
GCI-7	39+80 - 39+83	Crossing	underground C line	within proposed improvements	adjust	70	LF	\$80	\$5,600	
GCI-8	39+80 - 39+81	Crossing	underground FO line	within proposed improvements	adjust	70	LF	\$120	\$8,400	
GCI-9	39+77 - 39+83	RT	underground C line	within proposed improvements	adjust	60	LF	\$80	\$4,800	
GCI-10	43+06	RT	overhead C line	within proposed improvements	protect in place	35	LF	\$0	\$0	

Construction Costs: \$48,000
Engineering/Administration (30%) \$14,400

Total: \$62,400

Id No.	APPROX. STATION	OFFSET	UTILITY CONFLICT	DESCRIPTION OF CONFLICT	RECOMMENDED ACTION	AMOUNT	UNIT	UNIT PRICE	COST	COMMENTS
Enstar-1	32+00 - 45+00	LT	3-Inch Steel	within proposed improvemnts	adjust	1200	LF	\$135	\$162,000	
Enstar-2	34+45	Crossing	1-1/4"-Inch Steel	within proposed improvemnts	adjust	50	LF	\$108	\$5,400	
Enstar-3	37+82	Crossing	1-1/4-Inch Steel	within proposed improvemnts	adjust	50	LF	\$108	\$5,400	
Enstar-4	38+31	Crossing	1-1/4-Inch Steel	within proposed improvemnts	adjust	50	LF	\$108	\$5,400	
Enstar-5	39+88	Crossing	2-Inch Steel	within proposed improvemnts	adjust	50	LF	\$125	\$6,250	
Enstar-6	39+97	Crossing	2-Inch Steel	within proposed improvemnts	adjust	50	LF	\$125	\$6,250	
Enstar-7	41+24	Crossing	1-1/4-Inch Steel	within proposed improvemnts	adjust	50	LF	\$108	\$5,400	
Enstar-8	41+95	Crossing	1-1/4-Inch Steel	within proposed improvemnts	adjust	50	LF	\$108	\$5,400	

Construction Costs:	\$201,500
Engineering/Administration (30%)	\$60,450
Total:	\$261,950

Lois Drive West 32nd Avenue Pathway - Benson Boulevard to Minnesota Drive
MOA Project No. 19-08

ROW REQUIREMENTS ESTIMATE - DRAFT DSR - ALTERNATIVE 2 - 32ND AVENUE

Lois & 32nd Ave Upgrade - Alternative 2 - 32nd					
PARCEL	Purchase Entire Property	PUE	SE	TCE	# Of TCP's
115			X	X	2
116		X	X	X	1
117		X	X	X	0
118			X	X	1
119				X	1
120					1
121					1
122	X				0
123		X	X		2
TOTAL	1	3	5	5	9

9/1/2020 **Basis:**
Project: Lois Drive & 32nd Avenue Pathway
Project Number: 19-08

Prepared By: CRW
Alternative 2 - Intersection
[B]=local bond; [S]=state grant; [F]= federal grant

Ver. 5.1

DESIGN		Design Management	\$8,340	
	<i>Start 20??</i>	PM&E Design Services	\$0	
		PM&E Design Survey	\$0	
		PM&E Design Soil	\$0	
		Contractual Dsgn Sers (Basic)	\$71,000	
		Contractual Dsgn Sers (Add'l)	\$10,000	
		Contractual Design Survey	\$12,000	
		Contractual Design Soils	\$5,000	
		Miscellaneous	\$0	
Subtotal				\$106,340
UTILITIES		AWWU	\$0	
	<i>Start 20??</i>	CEA	\$0	
		ACS	\$8,000	
		GCI	\$0	
		Enstar	\$36,000	
Subtotal				\$44,000
ROW		Real Estate Services	\$18,600	
	<i>Start 20??</i>	Land Acquisition	\$1,319,000	
Subtotal				\$1,337,600
CONSTRUCTION		Construction Management	\$11,120	
	<i>Start 20??</i>	Inspection	\$27,800	
		Materials Testing	\$4,865	
		Survey	\$5,560	
		Miscellaneous	\$0	
		Construction Contract	\$278,000	
Subtotal				\$327,345
MISCELLANEOUS		Bond Overhead (15.0%)	\$327,756	
		Grant Overhead (0.0%)	\$0	
		Contingency (15%)	\$42,000	
Subtotal				\$369,756
PROJECT TOTAL				<u><u>\$2,185,041</u></u>

**Lois Drive West 32nd Avenue Pathway - Benson Boulevard To Minnesota Drive
MOA Project No. 19-08**

ENGINEER'S ESTIMATE - DRAFT DSR - ALTERNATIVE 2 - INTERSECTION

ITEM No.	MASS No.	ITEM DESCRIPTION	UNIT	CALC. QUANT	CONT. FACTOR	ROUND FACTOR	EST QUANT	UNIT PRICE	TOTAL COST
Schedule A - Roadway Improvements									
A-1	20.02	Storm Water Pollution Prevention Plan (Type 3)	LS	1	1.00	0	1	\$1,000	\$1,000
A-2	20.03	Test Pit for Utility Locate	Hour	8	1.00	0	8	\$800	\$6,400
A-3	20.04	Clearing and Grubbing	LS	1	1.00	0	1	\$2,000	\$2,000
A-4	20.09	Remove Pavement	SY	824	1.00	0	824	\$4	\$3,296
A-5	20.10	Unusable Excavation	CY	868	1.25	-2	1,100	\$15	\$16,500
A-6	20.21	Classified Fill and Backfill (Type II)	Ton	260	1.25	-2	300	\$18	\$5,400
A-7	20.21	Classified Fill and Backfill (Type II-A)	Ton	753	1.25	-2	900	\$18	\$16,200
A-8	20.22	Leveling Course	Ton	67	1.08	-1	70	\$35	\$2,450
A-9	20.25	Geotextile (Type A)	SY	919	1.00	-1	920	\$2	\$1,840
A-10	20.26	Insulation Board (R-9)	SF	5,395	1.01	-1	5,450	\$3	\$16,350
A-11	20.26	Insulation Board (R-4.5)	SF	719	1.01	-1	730	\$2	\$1,460
A-12	30.02	P.C.C. Curb and Gutter (All Types)	LF	188	1.00	0	188	\$27	\$5,076
A-13	30.02	Curb Nose	EA	3	1.00	0	3	\$1,500	\$4,500
A-14	30.03	P.C.C. Sidewalk	SY	91	1.00	0	91	\$60	\$5,460
A-15	30.04	P.C.C. Curb Ramp (6" Thick)	EA	4	1.00	0	4	\$2,000	\$8,000
A-16	30.10	Colored Concrete	SY	5	1.00	0	5	\$160	\$800
A-17	40.06	A.C. Pavement (Class D)	Ton	68	1.06	-1	70	\$105	\$7,350
A-18	40.06	A.C. Pavement (Class E)	Ton	68	1.06	-1	70	\$110	\$7,700
A-19	60.03	Remove and Replace Valve Box Top Section	EA	3	1.00	0	3	\$500	\$1,500
A-20	65.02	Construction Survey Measurement	LS	1	1.00	0	1	\$2,300	\$2,300
A-21	65.02	Two-Person Survey Crew	Hour	5	1.00	0	5	\$225	\$1,125
A-22	70.08	Remove and Reset Fence	LF	82	1.10	0	90	\$40	\$3,600
A-23	70.10	Inlaid Traffic Markings (Methyl Methacrylate) (24" White) (90 Mil)	LF	29	1.00	0	29	\$30	\$870
A-24	70.11	Standard Sign	SF	18	1.00	0	18	\$100	\$1,800
A-25	70.12	Traffic Maintenance	LS	1	1.00	0	1	\$10,000	\$10,000
A-26	70.13	Bollard (Concrete Pipe, Yellow)	EA	4	1.00	0	4	\$1,250	\$5,000
A-27	70.23	Temporary Fencing	LF	82	1.10	0	90	\$10	\$900
A-28	75.02	Trees (type to be determined)	EA	2	1.00	0	2	\$500	\$1,000
A-29	75.02	Shrubs (type to be determined)	EA	4	1.00	0	4	\$75	\$300
A-30	75.03	Topsoil (4-inch Depth)	MSF	5.2	1.30	0	7	\$550	\$3,850
A-31	75.04	Seeding (Schedule A)	MSF	5.2	1.30	0	7	\$450	\$3,150
A-32	75.12	Temporary Tree Protection Fence	LF	100	1.00	0	100	\$7	\$700
A-33	75.13	Root Pruning	LF	10	1.00	0	10	\$25	\$250
								TOTAL	\$148,127

Schedule B - Drainage Improvements									
B-1	20.13	Trench Dewatering	LS	1	1.00	0	1	\$3,000	\$3,000
B-2	20.13	Trench Excavation and Backfill (Various Depths)	LF	320	1.00	0	320	\$25	\$8,000
B-3	20.15	Furnish Trench Backfill (Type II)	Ton	200	1.30	0	260	\$17	\$4,420
B-4	20.16	Bedding Material (Class D)	LF	320	1.00	0	320	\$30	\$9,600
B-5	20.26	Insulation Board (R-20)	SF	128	1.00	0	128	\$5	\$640
B-6	20.27	Disposal of Unusable or Surplus Material	CY	210	1.30	0	273	\$20	\$5,460
B-7	55.02	Furnish, Install, and Televiser Pipe (12-Inch, Type S, CPEP)	LF	132	1.00	0	132	\$60	\$7,920
B-8	55.02	Furnish, Install, and Televiser Pipe (18-Inch, Type S, CPEP)	LF	189	1.00	0	189	\$70	\$13,230
B-9	55.05	Construct (Type I) Manhole	EA	1	1.00	0	1	\$5,500	\$5,500
B-10	55.05	Construct (Type II) Catch Basin Manhole	EA	2	1.00	0	2	\$10,000	\$20,000
B-11	55.09	Construct Catch Basin	EA	4	1.00	0	4	\$4,500	\$18,000
								TOTAL	\$95,770

**Lois Drive West 32nd Avenue Pathway - Benson Boulevard To Minnesota Drive
MOA Project No. 19-08**

ENGINEER'S ESTIMATE - DRAFT DSR - ALTERNATIVE 2 - INTERSECTION

ITEM No.	MASS No.	ITEM DESCRIPTION	UNIT	CALC. QUANT	CONT. FACTOR	ROUND FACTOR	EST QUANT	UNIT PRICE	TOTAL COST
Schedule C - Illumination Improvements									
C-1	80.02	Trench and Backfill (2'W x 3.5'D)	LF	5	1.10	-1	10	\$24	\$244
C-2	80.04	Driven Pole Luminaire Pole Foundations	EA	1	1.00	0	1	\$2,778	\$2,778
C-3	80.04	Load Center Foundation (Type 1A)	EA	1	1.00	0	1	\$4,900	\$4,900
C-4	80.04	Cast-In-Place Light Column Foundation	EA	1	1.00	0	1	\$3,233	\$3,233
C-5	80.05	Fixed Base Luminaire Pole	EA	1	1.00	0	1	\$3,940	\$3,940
C-6	80.06	Luminaire Arm	EA	2	1.00	0	2	\$775	\$1,550
C-7	80.07	Steel Conduit (2 inch)	FT	5	1.10	-1	10	\$39	\$390
C-8	80.08	Junction Box (Type IA)	EA	1	1.00	0	1	\$1,263	\$1,263
C-9	80.08	Junction Box (Type II)	EA	1	1.00	0	1	\$2,990	\$2,990
C-10	80.10	3 Conductor 8 AWG Type XHHW-2 Cable	FT	5	1.10	-1	10	\$7	\$70
C-11	80.14	Single-Meter Pad-Mount Load Center, Type 1A with Lighting Control	EA	1	1.00	0	1	\$8,612	\$8,612
C-12	80.23	Luminaire (6,000 Lm, Medium, Type 3)	EA	1	1.00	0	1	\$1,150	\$1,150
C-13	80.23	Luminaire (10,000 Lm, Medium, Type 3)	EA	1	1.00	0	1	\$1,200	\$1,200
C-14	80.23	Spare Luminaire (6,000 Lm, Medium, Type 3)	EA	1	1.00	0	1	\$1,000	\$1,000
C-15	80.23	Spare Luminaire (10,000 Lm, Medium, Type 3)	EA	1	1.00	0	1	\$1,050	\$1,050
								TOTAL	\$34,370

SUMMARY	
Schedule A - Roadway Improvements	\$148,127
Schedule B - Drainage Improvements	\$95,770
Schedule C - Illumination Improvements	\$34,370
Subtotal	\$278,267

Total Estimated Construction Cost: \$278,000

Utility Relocation Summary	
Lois/32nd Avenue Intersection: Alternative 2	
Electric (CEA)	\$0
Telecommunications (ACS)	\$7,540
Cable Television (GCI)	\$0
Natural Gas (Enstar)	\$32,695
<i>Subtotal:</i>	<i>\$40,235</i>
<i>Construction Contingency (10%)</i>	<i>\$4,024</i>
Total Utility Relocation Cost:	\$44,259

Id No.	APPROX. STATION	OFFSET	UTILITY CONFLICT	DESCRIPTION OF CONFLICT	RECOMMENDED ACTION	AMOUNT	UNIT	UNIT PRICE	COST	COMMENTS
ACS-1	11+49-12+00	RT	underground T line	within proposed improvements	Relocate as needed	50	LF	\$80	\$4,000	
ACS-2	30+87 - 31+36	LT	OH 100 pair telephone	within proposed improvements	protect in place	50	LF	\$0	\$0	
ACS-3	32+00 - 32+20	LT	underground T line	within proposed improvements	Relocate as needed	20	LF	\$90	\$1,800	

Construction Costs: \$5,800
 Engineering/Administration (30%): \$1,740

Total:	\$7,540
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Id No.	APPROX. STATION	OFFSET	UTILITY CONFLICT	DESCRIPTION OF CONFLICT	RECOMMENDED ACTION	AMOUNT	UNIT	UNIT PRICE	COST	COMMENTS
Enstar-1	30+40 - 31+40	LT	1-1/4-Inch Steel	within proposed improvemnts	adjust	100	LF	\$108	\$10,800	
Enstar-2	31+40	Crossing	2-Inch Steel	within proposed improvemnts	adjust	50	LF	\$125	\$6,250	
Enstar-3	31+43 - 32+00	LT	3-Inch Steel	within proposed improvemnts	adjust	60	LF	\$135	\$8,100	

Construction Costs:	\$25,150
Engineering/Administration (30%)	\$7,545
Total:	\$32,695

Lois Drive West 32nd Avenue Pathway - Benson Boulevard to Minnesota Drive
 MOA Project No. 19-08

ROW REQUIREMENTS ESTIMATE - DRAFT DSR - ALTERNATIVE 2 - INTERSECTION

Lois & 32nd Ave Upgrade - Alternative 2 - Intersection					
PARCEL	Purchase Entire Property	PUE	SE	TCE	# Of TCP's
112		X	X		1
113		X	X		1
114	X				0
123		X			0
TOTAL	1	3	2	0	2

Date: 9/1/2020 Basis:
 Project: Lois Drive & 32nd Avenue Pathway
 Project Number: 19-08

Prepared By: CRW
 Alternative 3 - Lois
 [B]=local bond; [S]=state grant; [F]= federal grant

Ver. 5.1

DESIGN		Design Management	\$21,525	
	<i>Start 20??</i>	PM&E Design Services	\$0	
		PM&E Design Survey	\$0	
		PM&E Design Soil	\$0	
		Contractual Dsgn Sers (Basic)	\$213,000	
		Contractual Dsgn Sers (Add'l)	\$27,500	
		Contractual Design Survey	\$41,000	
		Contractual Design Soils	\$20,000	
		Miscellaneous	\$0	
Subtotal				\$323,025
UTILITIES		AWWU	\$0	
	<i>Start 20??</i>	CEA	\$0	
		ACS	\$53,000	
		GCI	\$0	
		Enstar	\$30,000	
Subtotal				\$83,000
ROW		Real Estate Services	\$10,960	
	<i>Start 20??</i>	Land Acquisition	\$2,000	
Subtotal				\$12,960
CONSTRUCTION		Construction Management	\$35,875	
	<i>Start 20??</i>	Inspection	\$96,145	
		Materials Testing	\$14,350	
		Survey	\$14,350	
		Miscellaneous	\$0	
		Construction Contract	\$1,435,000	
Subtotal				\$1,595,720
MISCELLANEOUS		Bond Overhead (15.0%)	\$393,477	
		Grant Overhead (0.0%)	\$0	
		Contingency (15%)	\$215,000	
Subtotal				\$608,477
PROJECT TOTAL				<u><u>\$2,623,182</u></u>

**Lois Drive West 32nd Avenue Pathway - Benson Boulevard To Minnesota Drive
MOA Project No. 19-08**

ENGINEER'S ESTIMATE - DRAFT DSR - ALTERNATIVE 3 - LOIS DRIVE

ITEM No.	MASS No.	ITEM DESCRIPTION	UNIT	CALC. QUANT	CONT. FACTOR	ROUND FACTOR	EST QUANT	UNIT PRICE	TOTAL COST
Schedule A - Roadway Improvements									
A-1	20.02	Storm Water Pollution Prevention Plan (Type 3)	LS	1	1.00	0	1	\$9,000	\$9,000
A-2	20.03	Test Pit for Utility Locate	Hour	8	1.00	0	8	\$800	\$6,400
A-3	20.04	Clearing and Grubbing	LS	1	1.00	0	1	\$11,000	\$11,000
A-4	20.08	Remove Curb and Gutter	LF	230	1.00	0	230	\$7	\$1,610
A-5	20.09	Remove Pavement	SY	3,836	1.00	0	3,836	\$4	\$15,344
A-6	20.10	Unusable Excavation	CY	6,874	1.25	-2	8,600	\$15	\$129,000
A-7	20.21	Classified Fill and Backfill (Type II)	Ton	2,040	1.25	-2	2,500	\$18	\$45,000
A-8	20.21	Classified Fill and Backfill (Type II-A)	Ton	6,156	1.25	-2	7,700	\$18	\$138,600
A-9	20.22	Leveling Course	Ton	497	1.08	-1	540	\$35	\$18,900
A-10	20.25	Geotextile (Type A)	SY	7,218	1.00	-1	7,220	\$2	\$14,440
A-11	20.26	Insulation Board (R-9)	SF	42,367	1.01	-1	42,790	\$3	\$128,370
A-12	20.26	Insulation Board (R-4.5)	SF	6,849	1.01	-1	6,920	\$2	\$13,840
A-13	20.28	Reconstruct Driveway	EA	12	1.00	0	12	\$3,250	\$39,000
A-14	30.02	P.C.C. Curb and Gutter (All Types)	LF	1,948	1.00	0	1,948	\$27	\$52,596
A-15	30.03	P.C.C. Sidewalk	SY	371	1.00	0	371	\$60	\$22,260
A-16	30.04	P.C.C. Curb Ramp (6" Thick)	EA	13	1.00	0	13	\$2,000	\$26,000
A-17	40.06	A.C. Pavement (Class D)	Ton	515	1.06	-1	550	\$105	\$57,750
A-18	40.06	A.C. Pavement (Class E)	Ton	424	1.06	-1	450	\$110	\$49,500
A-19	50.06	Remove and Replace Manhole Cone Section	EA	1	1.00	0	1	\$1,800	\$1,800
A-20	50.06	Remove and Replace Manhole Cover and Frame	EA	1	1.00	0	1	\$700	\$700
A-21	60.03	Remove and Replace Valve Box Top Section	EA	6	1.00	0	6	\$500	\$3,000
A-22	60.04	Furnish and Install Fire Hydrant Assembly Single Pumper	EA	1	1.00	0	1	\$9,000	\$9,000
A-23	60.05	Adjust Key Box	EA	10	1.00	0	10	\$450	\$4,500
A-24	60.08	Decommission Fire Hydrant Assembly	EA	1	1.00	0	1	\$3,000	\$3,000
A-25	65.02	Construction Survey Measurement	LS	1	1.00	0	1	\$20,000	\$20,000
A-26	65.02	Two-Person Survey Crew	Hour	10	1.00	0	10	\$225	\$2,250
A-27	70.08	Remove and Reset Fence	LF	22	1.10	0	24	\$40	\$960
A-28	70.10	Inlaid Traffic Markings (Methyl Methacrylate) (4" Yellow) (90 Mil)	LF	1,791	1.00	0	1,791	\$6	\$10,746
A-29	70.10	Inlaid Traffic Markings (Methyl Methacrylate) (4" White) (90 Mil)	LF	1,578	1.00	0	1,578	\$6	\$9,468
A-30	70.10	Inlaid Traffic Markings (Methyl Methacrylate) (24" White) (90 Mil)	LF	116	1.00	0	116	\$30	\$3,480
A-31	70.11	Standard Sign	SF	99	1.00	0	99	\$100	\$9,900
A-32	70.12	Traffic Maintenance	LS	1	1.00	0	1	\$90,000	\$90,000
A-33	70.16	Temporary Group Mailboxes	LS	1	1.00	0	1	\$10,000	\$10,000
A-34	70.17	Relocate Mailbox	EA	7	1.00	0	7	\$500	\$3,500
A-35	70.23	Temporary Fencing	LF	22	1.10	0	24	\$10	\$240
A-36	75.02	Trees (type to be determined)	EA	9	1.00	0	9	\$500	\$4,500
A-37	75.02	Shrubs (type to be determined)	EA	18	1.00	0	18	\$75	\$1,350
A-38	75.03	Topsoil (4-inch Depth)	MSF	23.1	1.30	0	30	\$550	\$16,500
A-39	75.04	Seeding (Schedule A)	MSF	23.1	1.30	0	30	\$450	\$13,500
A-40	75.12	Temporary Tree Protection Fence	LF	100	1.00	0	100	\$7	\$700
A-41	75.13	Root Pruning	LF	10	1.00	0	10	\$25	\$250
A-42	80.18	Install Loop Detector - New Work	LS	1	1.00	0	1	\$20,000	\$20,000
								TOTAL	\$1,017,954

**Lois Drive West 32nd Avenue Pathway - Benson Boulevard To Minnesota Drive
MOA Project No. 19-08**

ENGINEER'S ESTIMATE - DRAFT DSR - ALTERNATIVE 3 - LOIS DRIVE

ITEM No.	MASS No.	ITEM DESCRIPTION	UNIT	CALC. QUANT	CONT. FACTOR	ROUND FACTOR	EST QUANT	UNIT PRICE	TOTAL COST
Schedule B - Drainage Improvements									
B-1	20.13	Trench Dewatering	LS	1	1.00	0	1	\$5,000	\$5,000
B-2	20.13	Trench Excavation and Backfill (Various Depths)	LF	877	1.00	0	877	\$25	\$21,925
B-3	20.15	Furnish Trench Backfill (Type II)	Ton	590	1.30	0	767	\$17	\$13,039
B-4	20.16	Bedding Material (Class D)	LF	877	1.00	0	877	\$30	\$26,310
B-5	20.26	Insulation Board (R-20)	SF	128	1.00	0	128	\$5	\$640
B-6	20.27	Disposal of Unusable or Surplus Material	CY	610	1.30	0	793	\$20	\$15,860
B-7	55.02	Furnish, Install, and Televis Pipe (12-Inch, Type S, CPEP)	LF	189	1.00	0	189	\$60	\$11,340
B-8	55.02	Furnish, Install, and Televis Pipe (18-Inch, Type S, CPEP)	LF	688	1.00	0	688	\$70	\$48,160
B-9	55.04	Connect to Existing Storm Drain System	EA	1	1.00	0	1	\$2,500	\$2,500
B-10	55.05	Construct (Type II) Catch Basin Manhole	EA	4	1.00	0	4	\$10,000	\$40,000
B-11	55.05	Construct (Type II) Bypass Manhole	EA	1	1.00	0	1	\$25,000	\$25,000
B-12	55.09	Construct Catch Basin	EA	5	1.00	0	5	\$4,500	\$22,500
B-13	55.11	Remove Manhole	EA	5	1.00	0	5	\$1,000	\$5,000
B-14	55.11	Remove Catch Basin	EA	4	1.00	0	4	\$900	\$3,600
B-15	55.22	Oil and Grit Separator	EA	1	1.00	0	1	\$25,000	\$25,000
B-16	55.27	Storm Drain Bypass System	LS	1	1.00	0	1	\$10,000	\$10,000
B-17	70.07	Remove Pipe	LF	840	1.00	0	840	\$13	\$10,920
								TOTAL	\$286,794

Schedule C - Illumination Improvements									
C-1	80.02	Trench and Backfill (2'W x 3.5'D)	LF	875	1.10	-1	960	\$24	\$23,424
C-2	80.04	Driven Pile Luminaire Pole Foundations	EA	6	1.00	0	6	\$2,778	\$16,668
C-3	80.05	Fixed Base Luminaire Pole	EA	6	1.00	0	6	\$3,940	\$23,640
C-4	80.06	Luminaire Arm	EA	6	1.00	0	6	\$775	\$4,650
C-5	80.07	Steel Conduit (2 inch)	FT	875	1.10	-1	960	\$39	\$37,440
C-6	80.08	Junction Box (Type IA)	EA	6	1.00	0	6	\$1,263	\$7,578
C-7	80.10	3 Conductor 8 AWG Type XHHW-2 Cable	FT	875	1.10	-1	960	\$7	\$6,720
C-8	80.23	Luminaire (6,000 Lm, Medium, Type 2)	EA	3	1.00	0	3	\$1,000	\$3,000
C-9	80.23	Luminaire (6,000 Lm, Medium, Type 3)	EA	1	1.00	0	1	\$1,000	\$1,000
C-10	80.23	Luminaire (10,000 Lm, Medium, Type 2)	EA	1	1.00	0	1	\$1,150	\$1,150
C-11	80.23	Luminaire (13,000 Lm, Medium, Type 3)	EA	1	1.00	0	1	\$1,250	\$1,250
C-12	80.23	Spare Luminaire (6,000 Lm, Medium, Type 3)	EA	1	1.00	0	1	\$850	\$850
C-13	80.23	Spare Luminaire (6,000 Lm, Medium, Type 3)	EA	1	1.00	0	1	\$850	\$850
C-14	80.23	Spare Luminaire (10,000 Lm, Medium, Type 2)	EA	1	1.00	0	1	\$1,000	\$1,000
C-15	80.23	Spare Luminaire (13,000 Lm, Medium, Type 3)	EA	1	1.00	0	1	\$1,100	\$1,100
								TOTAL	\$130,320

SUMMARY

Schedule A - Roadway Improvements	\$1,017,954
Schedule B - Drainage Improvements	\$286,794
Schedule C - Illumination Improvements	\$130,320
Subtotal	\$1,435,068

Total Estimated Construction Cost: \$1,435,000

Utility Relocation Summary	
Lois/32nd Avenue Upgrades: Alternative 3	
Electric (CEA)	\$0
Telecommunications (ACS)	\$48,230
Cable Television (GCI)	\$0
Natural Gas (Enstar)	\$27,300
<i>Subtotal:</i>	<i>\$75,530</i>
<i>Construction Contingency (10%)</i>	<i>\$7,553</i>
Total Utility Relocation Cost:	\$83,083

Id No.	APPROX. STATION	OFFSET	UTILITY CONFLICT	DESCRIPTION OF CONFLICT	RECOMMENDED ACTION	AMOUNT	UNIT	UNIT PRICE	COST	COMMENTS
ACS-1	12+99 - 13+28	RT	underground T line	within proposed improvements	adjust	35	LF	\$80	\$2,800	
ACS-2	15+71 - 18+52	RT	underground T line	within proposed improvements	adjust	155	LF	\$80	\$12,400	
ACS-3	18+50	RT	telephone pedestal	within proposed improvements	Relocate	1	EA	\$4,300	\$4,300	
ACS-4	18+83 - 19+03	LT	underground T line	within proposed improvements	adjust	20	LF	\$80	\$1,600	
ACS-5	19+26 - 19+49	RT	underground T line	within proposed improvements	adjust	25	LF	\$80	\$2,000	
ACS-6	19+31 - 19+51	LT	underground T line	within proposed improvements	adjust	20	LF	\$80	\$1,600	
ACS-7	19+70 - 19+88	LT	underground T line	within proposed improvements	adjust	20	LF	\$80	\$1,600	
ACS-8	19+86 - 20+20	RT	underground T line	within proposed improvements	adjust	35	LF	\$80	\$2,800	
ACS-9	20+17 - 20+66	LT	underground T line	within proposed improvements	adjust	50	LF	\$80	\$4,000	
ACS-10	20+86 - 21+36	RT	underground T line	within proposed improvements	adjust	50	LF	\$80	\$4,000	
ACS-11	21+44	Crossing	underground T line	within proposed improvements	Verify Depth. Relocate as needed	40	LF	\$0	\$0	
ACS-12	21+90 - 21+97	RT	underground T line	within proposed improvements	Verify Depth. Relocate as needed	8	LF	\$0	\$0	

Construction Costs: \$37,100
 Engineering/Administration (30%): \$11,130
Total: \$48,230

Id No.	APPROX. STATION	OFFSET	UTILITY CONFLICT	DESCRIPTION OF CONFLICT	RECOMMENDED ACTION	AMOUNT	UNIT	UNIT PRICE	COST	COMMENTS
Enstar-1	14+30 - 14+66	LT	2-Inch Steel	within proposed improvemnts	adjust	30	LF	\$125	\$3,750	
Enstar-2	15+78	Crossing	2-Inch Steel	within proposed improvemnts	adjust	75	LF	\$125	\$9,375	
Enstar-3	16+70 - 16+88	LT	2-Inch Steel	Within Driveway Limits	Locate and protect	20	LF	\$0	\$0	
Enstar-4	17+04 - 17+18	LT	2-Inch Steel	Within Driveway Limits	Locate and protect	20	LF	\$0	\$0	
Enstar-5	17+86 - 18+02	LT	2-Inch Steel	Within Driveway Limits	Locate and protect	20	LF	\$0	\$0	
Enstar-6	18+32 - 18+52	LT	2-Inch Steel	Within Driveway Limits	Locate and protect	20	LF	\$0	\$0	
Enstar-7	18+83 - 19+03	LT	2-Inch Steel	Within Driveway Limits	Locate and protect	20	LF	\$0	\$0	
Enstar-8	19+31 - 19+51	LT	2-Inch Steel	Within Driveway Limits	Locate and protect	20	LF	\$0	\$0	
Enstar-9	19+70 - 19+88	LT	2-Inch Steel	Within Driveway Limits	Locate and protect	20	LF	\$0	\$0	
Enstar-10	20+03 - 20+13	Crossing	5/8"-Plastic Service	within proposed improvemnts	adjust	1	EA	\$2,250	\$2,250	
Enstar-11	20+40 - 20+62	LT	2-Inch Steel	within proposed improvemnts	adjust	45	LF	\$125	\$5,625	
Enstar-12	21+60	Crossing	3-Inch Steel	within proposed improvemnts	protect as needed	30	LF	\$0	\$0	
Enstar-13	21+95 - 21+99	LT	2-Inch Steel	within proposed improvemnts	protect as needed	5	LF	\$0	\$0	

Construction Costs: \$21,000
Engineering/Administration (30%) \$6,300

Total: \$27,300

Lois Drive West 32nd Avenue Pathway - Benson Boulevard to Minnesota Drive
MOA Project No. 19-08

ROW REQUIREMENTS ESTIMATE - DRAFT DSR - ALTERNATIVE 3 - LOIS DRIVE

Lois & 32nd Ave Upgrade - Alternative 3 - Lois					
PARCEL	Purchase Entire Property	PUE	SE	TCE	# Of TCP's
100					0
101					1
102					1
103					1
104					1
105					1
106					1
107					1
108					0
109					1
110					0
111			X		0
123			X		0
124					3
125					1
TOTAL	0	0	2	0	12

Date: 9/1/2020 Basis:
 Project: Lois Drive & 32nd Avenue Pathway
 Project Number: 19-08

Prepared By: CRW
 Alternative 3 - 32nd Avenue
 [B]=local bond; [S]=state grant; [F]= federal grant

Ver. 5.1

DESIGN		Design Management	\$26,295	
	<i>Start 20??</i>	PM&E Design Services	\$0	
		PM&E Design Survey	\$0	
		PM&E Design Soil	\$0	
		Contractual Dsgn Sers (Basic)	\$283,000	
		Contractual Dsgn Sers (Add'l)	\$37,500	
		Contractual Design Survey	\$55,000	
		Contractual Design Soils	\$25,000	
		Miscellaneous	\$0	
Subtotal				\$426,795
UTILITIES		AWWU	\$0	
	<i>Start 20??</i>	CEA	\$71,000	
		ACS	\$97,000	
		GCI	\$205,000	
		Enstar	\$178,000	
Subtotal				\$551,000
ROW		Real Estate Services	\$47,340	
	<i>Start 20??</i>	Land Acquisition	\$569,000	
Subtotal				\$616,340
CONSTRUCTION		Construction Management	\$43,825	
	<i>Start 20??</i>	Inspection	\$117,451	
		Materials Testing	\$17,530	
		Survey	\$17,530	
		Miscellaneous	\$0	
		Construction Contract	\$1,753,000	
Subtotal				\$1,949,336
MISCELLANEOUS		Bond Overhead (15.0%)	\$671,730	
		Grant Overhead (0.0%)	\$0	
		Contingency (15%)	\$263,000	
Subtotal				\$934,730
PROJECT TOTAL				<u><u>\$4,478,201</u></u>

**Lois Drive West 32nd Avenue Pathway - Benson Boulevard To Minnesota Drive
MOA Project No. 19-08**

ENGINEER'S ESTIMATE - DRAFT DSR - ALTERNATIVE 3 - 32ND AVENUE

ITEM No.	MASS No.	ITEM DESCRIPTION	UNIT	CALC. QUANT	CONT. FACTOR	ROUND FACTOR	EST QUANT	UNIT PRICE	TOTAL COST
Schedule A - Roadway Improvements									
A-1	20.02	Storm Water Pollution Prevention Plan (Type 3)	LS	1	1.00	0	1	\$10,000	\$10,000
A-2	20.03	Test Pit for Utility Locate	Hour	8	1.00	0	8	\$800	\$6,400
A-3	20.04	Clearing and Grubbing	LS	1	1.00	0	1	\$12,000	\$12,000
A-4	20.07	Remove Sidewalk or Concrete Apron	SY	514	1.00	0	514	\$15	\$7,710
A-5	20.08	Remove Curb and Gutter	LF	223	1.00	0	223	\$7	\$1,561
A-6	20.09	Remove Pavement	SY	3,855	1.00	0	3,855	\$4	\$15,420
A-7	20.10	Unusable Excavation	CY	7,120	1.25	-2	8,900	\$15	\$133,500
A-8	20.21	Classified Fill and Backfill (Type II)	Ton	2,323	1.25	-2	2,900	\$18	\$52,200
A-9	20.21	Classified Fill and Backfill (Type II-A)	Ton	7,183	1.25	-2	9,000	\$18	\$162,000
A-10	20.22	Leveling Course	Ton	560	1.08	-1	600	\$35	\$21,000
A-11	20.25	Geotextile (Type A)	SY	8,220	1.00	-1	8,220	\$2	\$16,440
A-12	20.26	Insulation Board (R-9)	SF	54,681	1.01	-1	55,230	\$3	\$165,690
A-13	20.26	Insulation Board (R-4.5)	SF	7,233	1.01	-1	7,310	\$2	\$14,620
A-14	20.28	Reconstruct Driveway	EA	8	1.00	0	8	\$3,250	\$26,000
A-15	30.02	P.C.C. Curb and Gutter (All Types)	LF	2,750	1.00	0	2,750	\$27	\$74,250
A-16	30.03	P.C.C. Sidewalk	SY	37	1.00	0	37	\$60	\$2,220
A-17	30.04	P.C.C. Curb Ramp (6" Thick)	EA	12	1.00	0	12	\$2,000	\$24,000
A-18	30.05	P.C.C. Retaining Wall	CY	5	1.00	0	5	\$2,000	\$10,000
A-19	40.06	A.C. Pavement (Class D)	Ton	579	1.06	-1	610	\$105	\$64,050
A-20	40.06	A.C. Pavement (Class E)	Ton	455	1.06	-1	480	\$110	\$52,800
A-21	50.06	Remove and Replace Manhole Cone Section	EA	4	1.00	0	4	\$1,800	\$7,200
A-22	55.08	Adjust Storm Drain Manhole Ring	EA	1	1.00	0	1	\$1,400	\$1,400
A-23	60.03	Remove and Replace Valve Box Top Section	EA	5	1.00	0	5	\$500	\$2,500
A-24	60.05	Adjust Key Box	EA	1	1.00	0	1	\$450	\$450
A-25	65.02	Construction Survey Measurement	LS	1	1.00	0	1	\$20,000	\$20,000
A-26	65.02	Two-Person Survey Crew	Hour	20	1.00	0	20	\$225	\$4,500
A-27	70.08	Remove Fence	LF	202	1.00	0	202	\$10	\$2,020
A-28	70.08	Remove and Reset Fence	LF	865	1.10	0	952	\$40	\$38,080
A-29	70.10	Inlaid Traffic Markings (Methyl Methacrylate) (24" White) (90 Mil)	LF	160	1.00	0	160	\$30	\$4,800
A-30	70.11	Standard Sign	SF	144	1.00	0	144	\$100	\$14,400
A-31	70.12	Traffic Maintenance	LS	1	1.00	0	1	\$100,000	\$100,000
A-32	70.13	Bollard (Concrete Pipe, Yellow)	EA	12	1.00	0	12	\$1,250	\$15,000
A-33	70.13	Remove Bollard	EA	3	1.00	0	3	\$200	\$600
A-34	70.16	Temporary Group Mailboxes	LS	1	1.00	0	1	\$10,000	\$10,000
A-35	70.17	Relocate Mailbox	EA	1	1.00	0	1	\$500	\$500
A-36	70.23	Temporary Fencing	LF	865	1.10	0	952	\$10	\$9,520
A-37	75.02	Trees (type to be determined)	EA	9	1.00	0	9	\$500	\$4,500
A-38	75.02	Shrubs (type to be determined)	EA	18	1.00	0	18	\$75	\$1,350
A-39	75.03	Topsoil (4-inch Depth)	MSF	28.2	1.30	0	37	\$550	\$20,350
A-40	75.04	Seeding (Schedule A)	MSF	28.2	1.30	0	37	\$450	\$16,650
A-41	75.12	Temporary Tree Protection Fence	LF	200	1.00	0	200	\$7	\$1,400
A-42	75.13	Root Pruning	LF	70	1.00	0	70	\$25	\$1,750
								TOTAL	\$1,148,831

**Lois Drive West 32nd Avenue Pathway - Benson Boulevard To Minnesota Drive
MOA Project No. 19-08**

ENGINEER'S ESTIMATE - DRAFT DSR - ALTERNATIVE 3 - 32ND AVENUE

ITEM No.	MASS No.	ITEM DESCRIPTION	UNIT	CALC. QUANT	CONT. FACTOR	ROUND FACTOR	EST QUANT	UNIT PRICE	TOTAL COST
Schedule B - Drainage Improvements									
B-1	20.13	Trench Dewatering	LS	1	1.00	0	1	\$5,000	\$5,000
B-2	20.13	Trench Excavation and Backfill (Various Depths)	LF	1,081	1.00	0	1,081	\$25	\$27,025
B-3	20.15	Furnish Trench Backfill (Type II)	Ton	290	1.30	0	377	\$17	\$6,409
B-4	20.16	Bedding Material (Class D)	LF	1,081	1.00	0	1,081	\$30	\$32,430
B-5	20.26	Insulation Board (R-20)	SF	64	1.00	0	64	\$5	\$320
B-6	20.27	Disposal of Unusable or Surplus Material	CY	580	1.30	0	754	\$20	\$15,080
B-7	55.02	Furnish, Install, and Televis Pipe (12-Inch, Type S, CPEP)	LF	135	1.00	0	135	\$60	\$8,100
B-8	55.02	Furnish, Install, and Televis Pipe (18-Inch, Type S, CPEP)	LF	502	1.00	0	502	\$70	\$35,140
B-9	55.02	Furnish, Install, and Televis Pipe (24-Inch, Type S, CPEP)	LF	444	1.00	0	444	\$80	\$35,520
B-10	55.04	Connect to Existing Storm Drain System	EA	2	1.00	0	2	\$2,500	\$5,000
B-11	55.05	Construct (Type II) Catch Basin Manhole	EA	6	1.00	0	6	\$10,000	\$60,000
B-12	55.05	Construct (Type II) Bypass Manhole	EA	1	1.00	0	1	\$25,000	\$25,000
B-13	55.09	Construct Catch Basin	EA	6	1.00	0	6	\$4,500	\$27,000
B-14	55.11	Remove Manhole	EA	1	1.00	0	1	\$1,000	\$1,000
B-15	55.11	Remove Catch Basin	EA	2	1.00	0	2	\$900	\$1,800
B-16	55.22	Oil and Grit Separator	EA	1	1.00	0	1	\$25,000	\$25,000
B-17	55.27	Storm Drain Bypass System	LS	1	1.00	0	1	\$5,000	\$5,000
B-18	70.07	Remove Pipe	LF	509	1.00	0	509	\$13	\$6,617
B-19	80.29	Heat Trace System	LS	1	1.00	0	1	\$96,952	\$96,952
								TOTAL	\$418,393
Schedule C - Illumination Improvements									
C-1	80.02	Trench and Backfill (2'W x 3.5'D)	LF	1,246	1.10	-1	1,370	\$24	\$33,428
C-2	80.04	Driven Pile Luminaire Pole Foundations	EA	7	1.00	0	7	\$2,778	\$19,446
C-3	80.04	Cast-In-Place Light Column Foundation	EA	2	1.00	0	2	\$2,500	\$5,000
C-4	80.05	Fixed Base Luminaire Pole	EA	7	1.00	0	7	\$3,940	\$27,580
C-5	80.06	Luminaire Arm	EA	8	1.00	0	8	\$775	\$6,200
C-6	80.07	Steel Conduit (2 inch)	FT	1,293	1.10	-1	1,420	\$39	\$55,380
C-7	80.08	Junction Box (Type IA)	EA	11	1.00	0	11	\$1,263	\$13,893
C-8	80.10	3 Conductor 8 AWG Type XHHW-2 Cable	FT	1,891	1.10	-1	2,080	\$7	\$14,560
C-9	80.29	Pedestrian Light Column	EA	2	1.00	0	2	\$3,900	\$7,800
C-10	80.29	Spare Pedestrian Light Column	EA	1	1.00	0	1	\$2,900	\$2,900
								TOTAL	\$186,187

SUMMARY	
Schedule A - Roadway Improvements	\$1,148,831
Schedule B - Drainage Improvements	\$418,393
Schedule C - Illumination Improvements	\$186,187
Subtotal	\$1,753,411
Total Estimated Construction Cost:	\$1,753,000

Utility Relocation Summary	
32nd Avenue Upgrades: Alternative 3	
Electric (CEA)	\$64,545
Telecommunications (ACS)	\$88,010
Cable Television (GCI)	\$186,160
Natural Gas (Enstar)	\$161,389
<i>Subtotal:</i>	<i>\$500,104</i>
<i>Construction Contingency (10%)</i>	<i>\$50,010</i>
Total Utility Relocation Cost:	\$550,114

Id No.	APPROX. STATION	OFFSET	UTILITY CONFLICT	DESCRIPTION OF CONFLICT	RECOMMENDED ACTION	AMOUNT	UNIT	UNIT PRICE	COST	COMMENTS
CEA-1	32+00 - 43+06	LT	OH 3 Phase - distribution	construction clearance	provide cable watch	1200	LF	\$5	\$6,000	
CEA-2	36+27	RT	Distribution Pole	within proposed improvements	Relocate Pole	1	EA	\$15,000	\$15,000	undergrounding costs are separate
CEA-3	36+29	RT	OH 3 Phase - distribution	within proposed improvements	Relocate with pole	1	EA	\$1,500	\$1,500	
CEA-4	37+78 - 37+84	RT	OH 1 Phase - distribution	construction clearance	provide cable watch	40	LF	\$5	\$200	
CEA-5	37+74	RT	Distribution Pole	within proposed improvements	Protect in place	1	EA	\$1,500	\$1,500	undergrounding costs are separate
CEA-6	39+74 - 39+79	Crossing	OH 3 Phase - distribution	within proposed improvements	Relocate Overhead to new pole	1	EA	\$1,500	\$1,500	
CEA-7	37+78 - 37+83	RT	OH 1 Phase - distribution	within proposed improvements	provide cable watch	30	LF	\$5	\$150	
CEA-8	39+79 - 39+83	RT	OH 3 Phase - distribution	within proposed improvements	Relocate Overhead to new pole	1	EA	\$1,500	\$1,500	
CEA-9	39+81	RT	Service to Parcel 118	within proposed improvements	Relocate Overhead to new pole	1	EA	\$1,000	\$1,000	
CEA-10	39+81	RT	Distribution Pole	within proposed improvements	Relocate Pole	1	EA	\$15,000	\$15,000	undergrounding costs are separate
CEA-11	39+83 - 40+32	RT	OH 1 Phase - distribution	within proposed improvements	Relocate Overhead to new pole	1	EA	\$1,500	\$1,500	
CEA-12	40+88	RT	Distribution Pole	within proposed improvements	Protect in Place	1	EA	\$1,500	\$1,500	undergrounding costs are separate
CEA-13	43+06	RT	Service to Parcel 121 (2 total)	construction clearance	provide cable watch	2	EA	\$400	\$800	
CEA-14	43+06	RT	Distribution Pole	within proposed improvements	Protect in place	1	EA	\$1,500	\$1,500	undergrounding costs are separate
CEA-15	43+06	RT	OH 1 Phase - distribution	construction clearance	provide cable watch	200	LF	\$5	\$1,000	

Construction Costs: \$49,650
 Engineering/Administration (30%): \$14,895
Total: \$64,545

Id No.	APPROX. STATION	OFFSET	UTILITY CONFLICT	DESCRIPTION OF CONFLICT	RECOMMENDED ACTION	AMOUNT	UNIT	UNIT PRICE	COST	COMMENTS
ACS-1	33+15 - 33+19	Crossing	OH 100 pair telephone	within proposed improvements	underground	60	LF	\$80	\$4,800	
ACS-2	33+18 - 36+29	RT	OH 200 pair telephone	within proposed improvements	underground	315	LF	\$85	\$26,775	
ACS-3	35+99 - 36+26	RT	OH 600 pair telephone	within proposed improvements	underground	30	LF	\$100	\$3,000	
ACS-4	36+29	RT	OH 100 pair telephone	within proposed improvements	underground	60	LF	\$80	\$4,800	
ACS-5	38+00	LT	Vault	within proposed improvements	adjust	1	EA	\$4,300	\$4,300	
ACS-6	38+06 - 39+83	RT	OH 100 pair telephone	within proposed improvements	underground	195	LF	\$80	\$15,600	
ACS-7	39+61 - 39+83	LT	OH 600 pair telephone	within proposed improvements	underground	40	LF	\$100	\$4,000	
ACS-8	39+83	RT	OH 100 pair telephone	within proposed improvements	underground	35	LF	\$80	\$2,800	
ACS-9	39+83 - 40+09	RT	OH 50 pair telephone	within proposed improvements	underground	25	LF	\$65	\$1,625	

Construction Costs: \$67,700
 Engineering/Administration (30%): \$20,310
Total: \$88,010

Id No.	APPROX. STATION	OFFSET	UTILITY CONFLICT	DESCRIPTION OF CONFLICT	RECOMMENDED ACTION	AMOUNT	UNIT	UNIT PRICE	COST	COMMENTS
GCI-1	33+00 - 40+09	RT	overhead C line	within proposed improvements	underground	700	LF	\$20	\$14,000	Joint trench with FO
GCI-2	33+00 - 39+83	RT	overhead FO line	within proposed improvements	underground	670	LF	\$120	\$80,400	
GCI-3	33+16 - 33+18	RT	underground C line	within proposed improvements	adjust	60	LF	\$80	\$4,800	
GCI-4	36+29	RT	overhead C line	within proposed improvements	underground	100	LF	\$20	\$2,000	Joint trench with FO
GCI-5	36+29	RT	overhead FO line	within proposed improvements	underground	100	LF	\$120	\$12,000	
GCI-6	39+77 - 39+83	RT	underground C line	within proposed improvements	adjust	70	LF	\$80	\$5,600	
GCI-7	39+80 - 39+83	Crossing	underground C line	within proposed improvements	adjust	45	LF	\$80	\$3,600	
GCI-8	39+81 - 39+83	Crossing	underground FO line	within proposed improvements	adjust	40	LF	\$120	\$4,800	
GCI-9	43+06	RT	overhead C line	within proposed improvements	underground	100	LF	\$80	\$8,000	underground to next northern pole
GCI-10	44+02 - 44+22	LT	overhead C line	within proposed improvements	underground	100	LF	\$80	\$8,000	underground to next northern pole

Construction Costs: \$143,200
 Engineering/Administration (30%) \$42,960
Total: \$186,160

Id No.	APPROX. STATION	OFFSET	UTILITY CONFLICT	DESCRIPTION OF CONFLICT	RECOMMENDED ACTION	AMOUNT	UNIT	UNIT PRICE	COST	COMMENTS
Enstar-1	33+00 - 39+29	LT	3-Inch Steel	within proposed improvemnts	Relocate as needed	635	LF	\$135	\$85,725	
Enstar-2	34+45	Crossing	1-1/4"-Inch Steel	within proposed improvemnts	Relocate as needed	50	LF	\$108	\$5,400	
Enstar-3	37+82	Crossing	1-1/4"-Inch Steel	within proposed improvemnts	Relocate as needed	50	LF	\$108	\$5,400	
Enstar-4	38+31	Crossing	1-1/4"-Inch Steel	within proposed improvemnts	Relocate as needed	50	LF	\$108	\$5,400	
Enstar-5	39+59 - 39+95	LT	3-Inch Steel	within proposed improvemnts	Relocate as needed	40	LF	\$135	\$5,400	
Enstar-6	39+88	Crossing	2-Inch Steel	within proposed improvemnts	Relocate as needed	50	LF	\$125	\$6,250	
Enstar-7	39+97	Crossing	2-Inch Steel	within proposed improvemnts	Relocate as needed	50	LF	\$125	\$6,250	
Enstar-8	41+24	Crossing	1-1/4"-Inch Steel	within proposed improvemnts	Relocate as needed	40	LF	\$108	\$4,320	

Construction Costs: \$124,145
 Engineering/Administration (30%) \$37,244
Total: \$161,389

Lois Drive West 32nd Avenue Pathway - Benson Boulevard to Minnesota Drive
MOA Project No. 19-08

ROW REQUIREMENTS ESTIMATE - DRAFT DSR - ALTERNATIVE 3 - 32ND AVENUE

Lois & 32nd Ave Upgrade - Alternative 3 - 32nd					
PARCEL	Purchase Entire Property	PUE	SE	TCE	# Of TCP's
115		X	X		2
116		X	X	X	1
117		X		X	1
118		X	X	X	1
119		X	X	X	1
120		X	X		1
121	X				1
122		X	X		3
123					2
TOTAL	1	7	6	4	13

Date: 9/1/2020 **Basis:**
Project: Lois Drive & 32nd Avenue Pathway
Project Number: 19-08

Prepared By: CRW
Alternative 3 - Intersection
[B]=local bond; [S]=state grant; [F]= federal grant

Ver. 5.1

DESIGN		Design Management	\$13,530	
	<i>Start 20??</i>	PM&E Design Services	\$0	
		PM&E Design Survey	\$0	
		PM&E Design Soil	\$0	
		Contractual Dsgn Sers (Basic)	\$71,000	
		Contractual Dsgn Sers (Add'l)	\$10,000	
		Contractual Design Survey	\$12,000	
		Contractual Design Soils	\$5,000	
		Miscellaneous	\$0	
Subtotal				\$111,530
UTILITIES		AWWU	\$0	
	<i>Start 20??</i>	CEA	\$58,000	
		ACS	\$53,000	
		GCI	\$29,000	
		Enstar	\$55,000	
Subtotal				\$195,000
ROW		Real Estate Services	\$11,800	
	<i>Start 20??</i>	Land Acquisition	\$41,000	
Subtotal				\$52,800
CONSTRUCTION		Construction Management	\$18,040	
	<i>Start 20??</i>	Inspection	\$45,100	
		Materials Testing	\$7,893	
		Survey	\$9,020	
		Miscellaneous	\$0	
		Construction Contract	\$451,000	
Subtotal				\$531,053
MISCELLANEOUS		Bond Overhead (15.0%)	\$169,126	
		Grant Overhead (0.0%)	\$0	
		Contingency (15%)	\$68,000	
Subtotal				\$237,126
PROJECT TOTAL				<u><u>\$1,127,509</u></u>

**Lois Drive West 32nd Avenue Pathway - Benson Boulevard To Minnesota Drive
MOA Project No. 19-08**

ENGINEER'S ESTIMATE - DRAFT DSR - ALTERNATIVE 3 - INTERSECTION

ITEM No.	MASS No.	ITEM DESCRIPTION	UNIT	CALC. QUANT	CONT. FACTOR	ROUND FACTOR	EST QUANT	UNIT PRICE	TOTAL COST
Schedule A - Roadway Improvements									
A-1	20.02	Storm Water Pollution Prevention Plan (Type 3)	LS	1	1.00	0	1	\$2,000	\$2,000
A-2	20.03	Test Pit for Utility Locate	Hour	8	1.00	0	8	\$800	\$6,400
A-3	20.04	Clearing and Grubbing	LS	1	1.00	0	1	\$2,000	\$2,000
A-4	20.09	Remove Pavement	SY	682	1.00	0	682	\$4	\$2,728
A-5	20.10	Unusable Excavation	CY	1,480	1.25	-2	1,900	\$15	\$28,500
A-6	20.21	Classified Fill and Backfill (Type II)	Ton	424	1.25	-2	500	\$18	\$9,000
A-7	20.21	Classified Fill and Backfill (Type II-A)	Ton	1,269	1.25	-2	1,600	\$18	\$28,800
A-8	20.22	Leveling Course	Ton	116	1.08	-1	130	\$35	\$4,550
A-9	20.25	Geotextile (Type A)	SY	1,502	1.00	-1	1,500	\$2	\$3,000
A-10	20.26	Insulation Board (R-9)	SF	8,816	1.01	-1	8,900	\$3	\$26,700
A-11	20.26	Insulation Board (R-4.5)	SF	1,176	1.01	-1	1,190	\$2	\$2,380
A-12	30.02	P.C.C. Curb and Gutter (All Types)	LF	398	1.00	0	398	\$27	\$10,746
A-13	30.03	P.C.C. Sidewalk	SY	54	1.00	0	54	\$60	\$3,240
A-14	30.04	P.C.C. Curb Ramp (6" Thick)	EA	3	1.00	0	3	\$2,000	\$6,000
A-15	30.10	Colored Concrete	SY	39	1.00	0	39	\$160	\$6,240
A-16	40.06	A.C. Pavement (Class D)	Ton	109	1.06	-1	120	\$105	\$12,600
A-17	40.06	A.C. Pavement (Class E)	Ton	94	1.06	-1	100	\$110	\$11,000
A-18	60.03	Remove and Replace Valve Box Top Section	EA	3	1.00	0	3	\$500	\$1,500
A-19	65.02	Construction Survey Measurement	LS	1	1.00	0	1	\$3,700	\$3,700
A-20	65.02	Two-Person Survey Crew	Hour	10	1.00	0	10	\$225	\$2,250
A-21	70.08	Remove and Reset Fence	LF	225	1.10	0	248	\$40	\$9,920
A-22	70.10	Inlaid Traffic Markings (Methyl Methacrylate) (4" Yellow) (250 Mil)	LF	259	1.00	0	259	\$12	\$3,108
A-23	70.10	Inlaid Traffic Markings (Methyl Methacrylate, 18" White, 250 Mil)	LF	41	1.00	0	41	\$110	\$4,510
A-24	70.10	Inlaid Traffic Markings (Methyl Methacrylate) (24" White) (90 Mil)	LF	61	1.00	0	61	\$30	\$1,830
A-25	70.10	Inlaid Traffic Markings (Methyl Methacrylate) (Words & Symbols) (250 Mil)	EA	3	1.00	0	3	\$1,200	\$3,600
A-26	70.11	Standard Sign	SF	63	1.00	0	63	\$100	\$6,300
A-27	70.12	Traffic Maintenance	LS	1	1.00	0	1	\$20,000	\$20,000
A-28	70.13	Bollard (Concrete Pipe, Yellow)	EA	2	1.00	0	2	\$1,250	\$2,500
A-29	70.23	Temporary Fencing	LF	225	1.10	0	248	\$10	\$2,480
A-30	75.02	Trees (type to be determined)	EA	5	1.00	0	5	\$500	\$2,500
A-31	75.02	Shrubs (type to be determined)	EA	10	1.00	0	10	\$75	\$750
A-32	75.03	Topsoil (4-inch Depth)	MSF	5.4	1.30	0	7	\$550	\$3,850
A-33	75.04	Seeding (Schedule A)	MSF	5.4	1.30	0	7	\$450	\$3,150
A-34	75.12	Temporary Tree Protection Fence	LF	150	1.00	0	150	\$7	\$1,050
A-35	75.13	Root Pruning	LF	30	1.00	0	30	\$25	\$750
								TOTAL	\$239,632

**Lois Drive West 32nd Avenue Pathway - Benson Boulevard To Minnesota Drive
MOA Project No. 19-08**

ENGINEER'S ESTIMATE - DRAFT DSR - ALTERNATIVE 3 - INTERSECTION

ITEM No.	MASS No.	ITEM DESCRIPTION	UNIT	CALC. QUANT	CONT. FACTOR	ROUND FACTOR	EST QUANT	UNIT PRICE	TOTAL COST
Schedule B - Drainage Improvements									
B-1	20.13	Trench Dewatering	LS	1	1.00	0	1	\$3,000	\$3,000
B-2	20.13	Trench Excavation and Backfill (Various Depths)	LF	320	1.00	0	320	\$25	\$8,000
B-3	20.15	Furnish Trench Backfill (Type II)	Ton	200	1.30	0	260	\$17	\$4,420
B-4	20.16	Bedding Material (Class D)	LF	320	1.00	0	320	\$30	\$9,600
B-5	20.26	Insulation Board (R-20)	SF	128	1.00	0	128	\$5	\$640
B-6	20.27	Disposal of Unusable or Surplus Material	CY	210	1.30	0	273	\$20	\$5,460
B-7	55.02	Furnish, Install, and Televis Pipe (12-Inch, Type S, CPEP)	LF	132	1.00	0	132	\$60	\$7,920
B-8	55.02	Furnish, Install, and Televis Pipe (18-Inch, Type S, CPEP)	LF	189	1.00	0	189	\$70	\$13,230
B-9	55.05	Construct (Type I) Manhole	EA	1	1.00	0	1	\$5,500	\$5,500
B-10	55.05	Construct (Type II) Catch Basin Manhole	EA	2	1.00	0	2	\$10,000	\$20,000
B-11	55.09	Construct Catch Basin	EA	4	1.00	0	4	\$4,500	\$18,000
								TOTAL	\$95,770

Schedule C - Illumination Improvements									
C-1	80.02	Trench and Backfill (2'W x 3.5'D)	LF	393	1.10	-1	430	\$24	\$10,492
C-2	80.04	Load Center Foundation (Type 1A)	EA	1	1.00	0	1	\$4,900	\$4,900
C-3	80.04	Driven Pole Luminaire Pole Foundations	EA	4	1.00	0	4	\$2,778	\$11,112
C-4	80.04	Cast-In-Place Light Column Foundation	EA	2	1.00	0	2	\$2,500	\$5,000
C-5	80.05	Fixed Base Luminaire Pole	EA	4	1.00	0	4	\$3,940	\$15,760
C-6	80.06	Luminaire Arm	EA	5	1.00	0	5	\$775	\$3,875
C-7	80.07	Steel Conduit (2 inch)	FT	507	1.10	-1	560	\$39	\$21,840
C-8	80.08	Junction Box (Type IA)	EA	8	1.00	0	8	\$1,263	\$10,104
C-9	80.08	Junction Box (Type II)	EA	1	1.00	0	1	\$2,990	\$2,990
C-10	80.10	3 Conductor 8 AWG Type XHHW-2 Cable	FT	429	1.10	-1	470	\$7	\$3,290
C-11	80.14	Single-Meter Pad-Mount Load Center, Type 1A with Lighting Control	EA	1	1.00	0	1	\$8,612	\$8,612
C-12	80.23	Luminaire (5,000 Lm, Medium, Type 2)	EA	1	1.00	0	1	\$850	\$850
C-13	80.23	Luminaire (6,000 Lm, Medium, Type 2)	EA	3	1.00	0	3	\$1,000	\$3,000
C-14	80.23	Luminaire (6,000 Lm, Medium, Type 3)	EA	1	1.00	0	1	\$1,000	\$1,000
C-15	80.23	Spare Luminaire (5,000 Lm, Medium, Type 2)	EA	1	1.00	0	1	\$700	\$700
C-16	80.23	Spare Luminaire (6,000 Lm, Medium, Type 2)	EA	1	1.00	0	1	\$850	\$850
C-17	80.23	Spare Luminaire (6,000 Lm, Medium, Type 3)	EA	1	1.00	0	1	\$850	\$850
C-18	80.29	Pedestrian Light Column	EA	2	1.00	0	2	\$3,900	\$7,800
C-19	80.29	Spare Pedestrian Light Column	EA	1	1.00	0	1	\$2,900	\$2,900
								TOTAL	\$115,925

SUMMARY	
Schedule A - Roadway Improvements	\$239,632
Schedule B - Drainage Improvements	\$95,770
Schedule C - Illumination Improvements	\$115,925
Subtotal	\$451,327
Total Estimated Construction Cost:	\$451,000

Utility Relocation Summary	
Lois/32nd Intersection Upgrades: Alternative 3	
Electric (CEA)	\$53,040
Telecommunications (ACS)	\$48,360
Cable Television (GCI)	\$26,000
Natural Gas (Enstar)	\$50,180
<i>Subtotal:</i>	<i>\$177,580</i>
<i>Construction Contingency (10%)</i>	<i>\$17,758</i>
Total Utility Relocation Cost:	\$195,338

Id No.	APPROX. STATION	OFFSET	UTILITY CONFLICT	DESCRIPTION OF CONFLICT	RECOMMENDED ACTION	AMOUNT	UNIT	UNIT PRICE	COST	COMMENTS
CEA-1	31+35 - 32+07	LT	OH 3-phase electric line	within proposed improvements	underground	100	LF	\$90	\$9,000	service to school
CEA-2	31+35 - 33+18	RT	OH 3-phase electric line	within proposed improvements	underground	200	LF	\$90	\$18,000	
CEA-3	33+18	RT	Distribution Pole	within proposed improvements	Remove	1	EA	\$2,500	\$2,500	undergrounding costs are separate
CEA-4	33+18 - 33+19	RT	OH 3 Phase - distribution	within proposed improvemnts	underground	50	LF	\$95	\$4,750	
CEA-5	33+18	RT	Service to Parcel 115	within proposed improvements	underground	1	EA	\$2,500	\$2,500	
CEA-6	32+55 - 33+00	RT	OH 3-phase electric line	within proposed improvements	underground	45	LF	\$90	\$4,050	

Construction Costs: \$40,800
 Engineering/Administration (30%): \$12,240
Total: \$53,040

Id No.	APPROX. STATION	OFFSET	UTILITY CONFLICT	DESCRIPTION OF CONFLICT	RECOMMENDED ACTION	AMOUNT	UNIT	UNIT PRICE	COST	COMMENTS
ACS-1	32+06 - 32+10	LT	underground T line	within proposed improvements	adjust	165	LF	\$80	\$13,200	
ACS-2	32+10 - 32+12	LT	underground T line	within proposed improvements	adjust	155	LF	\$80	\$12,400	
ACS-3	32+27 - 32+95	LT	underground T line	within proposed improvements	adjust	70	LF	\$80	\$5,600	
ACS-4	32+33 - 33+05	LT	underground T line	within proposed improvements	adjust	75	LF	\$80	\$6,000	

Construction Costs: \$37,200
 Engineering/Administration (30%): \$11,160
Total: \$48,360

Id No.	APPROX. STATION	OFFSET	UTILITY CONFLICT	DESCRIPTION OF CONFLICT	RECOMMENDED ACTION	AMOUNT	UNIT	UNIT PRICE	COST	COMMENTS
GCI-1	31+35 - 31+95	RT	overhead C line	within proposed improvements	underground	55	LF	\$80	\$4,400	
GCI-2	32+55 - 33+00	RT	overhead C Line	within proposed improvements	underground	45	LF	\$80	\$3,600	
GCI-3	31+35 - 31+95	RT	overhead F line	within proposed improvements	underground	55	LF	\$120	\$6,600	
GCI-4	32+55 - 33+00	RT	overhead F line	within proposed improvements	underground	45	LF	\$120	\$5,400	

Construction Costs: \$20,000
 Engineering/Administration (30%) \$6,000

Total: \$26,000

Id No.	APPROX. STATION	OFFSET	UTILITY CONFLICT	DESCRIPTION OF CONFLICT	RECOMMENDED ACTION	AMOUNT	UNIT	UNIT PRICE	COST	COMMENTS
Enstar-1	30+48 - 31+40	LT	1-1/4-Inch Steel	within proposed improvemnts	adjust	100	LF	\$108	\$10,800	
Enstar-2	31+40	Crossing	2-Inch Steel	within proposed improvemnts	adjust	55	LF	\$125	\$6,875	
Enstar-3	31+43 - 33+00	LT	3-Inch Steel	within proposed improvemnts	adjust	155	LF	\$135	\$20,925	

Construction Costs:	\$38,600
Engineering/Administration (30%)	\$11,580
Total:	\$50,180

Lois Drive West 32nd Avenue Pathway - Benson Boulevard to Minnesota Drive
MOA Project No. 19-08

ROW REQUIREMENTS ESTIMATE - DRAFT DSR - ALTERNATIVE 3 - INTERSECTION

Lois & 32nd Ave Upgrade - Alternative 3 - Intersection					
PARCEL	Purchase Entire Property	PUE	SE	TCE	# Of TCP's
112		X			1
113		X			1
114		X		X	1
123		X			0
TOTAL	0	4	0	1	3

Date: 9/1/2020 **Basis:**
Project: Lois Drive & 32nd Avenue Pathway
Project Number: 19-08

Prepared By: CRW
Alternative 4 - Lois
[B]=local bond; [S]=state grant; [F]= federal grant

Ver. 5.1

DESIGN		Design Management	\$10,320	
	<i>Start 20??</i>	PM&E Design Services	\$0	
		PM&E Design Survey	\$0	
		PM&E Design Soil	\$0	
		Contractual Dsgn Sers (Basic)	\$70,500	
		Contractual Dsgn Sers (Add'l)	\$9,750	
		Contractual Design Survey	\$13,500	
		Contractual Design Soils	\$6,250	
		Miscellaneous	\$0	
Subtotal				\$110,320
UTILITIES		AWWU	\$0	
	<i>Start 20??</i>	CEA	\$0	
		ACS	\$0	
		GCI	\$0	
		Enstar	\$0	
Subtotal				\$0
ROW		Real Estate Services	\$6,100	
	<i>Start 20??</i>	Land Acquisition	\$4,000	
Subtotal				\$10,100
CONSTRUCTION		Construction Management	\$13,760	
	<i>Start 20??</i>	Inspection	\$34,400	
		Materials Testing	\$6,020	
		Survey	\$6,880	
		Miscellaneous	\$0	
		Construction Contract	\$344,000	
Subtotal				\$405,060
MISCELLANEOUS		Bond Overhead (15.0%)	\$101,908	
		Grant Overhead (0.0%)	\$0	
		Contingency (15%)	\$52,000	
Subtotal				\$153,908
PROJECT TOTAL				<u><u>\$679,388</u></u>

**Lois Drive West 32nd Avenue Pathway - Benson Boulevard To Minnesota Drive
MOA Project No. 19-08**

ENGINEER'S ESTIMATE - DRAFT DSR - ALTERNATIVE 4 - LOIS DRIVE

ITEM No.	MASS No.	ITEM DESCRIPTION	UNIT	CALC. QUANT	CONT. FACTOR	ROUND FACTOR	EST QUANT	UNIT PRICE	TOTAL COST
Schedule A - Roadway Improvements									
A-1	20.02	Storm Water Pollution Prevention Plan (Type 3)	LS	1	1.00	0	1	\$1,000	\$1,000
A-2	20.03	Test Pit for Utility Locate	Hour	8	1.00	0	8	\$800	\$6,400
A-3	20.04	Clearing and Grubbing	LS	1	1.00	0	1	\$1,000	\$1,000
A-4	20.09	Remove Pavement	SY	412	1.00	0	412	\$4	\$1,648
A-5	20.10	Unusable Excavation	CY	1,184	1.25	-2	1,500	\$15	\$22,500
A-6	20.21	Classified Fill and Backfill (Type II-A)	Ton	2,095	1.25	-2	2,600	\$18	\$46,800
A-7	20.22	Leveling Course	Ton	119	1.08	-1	130	\$35	\$4,550
A-8	20.25	Geotextile (Type A)	SY	1,483	1.00	-1	1,480	\$2	\$2,960
A-9	20.28	Reconstruct Driveway	EA	2	1.00	0	2	\$3,250	\$6,500
A-10	30.04	P.C.C. Curb Ramp (6" Thick)	EA	1	1.00	0	1	\$2,000	\$2,000
A-11	40.06	A.C. Pavement (Class D)	Ton	123	1.06	-1	130	\$105	\$13,650
A-12	50.06	Remove and Replace Manhole Cover and Frame	EA	1	1.00	0	1	\$700	\$700
A-13	65.02	Construction Survey Measurement	LS	1	1.00	0	1	\$2,000	\$2,000
A-14	65.02	Two-Person Survey Crew	Hour	10	1.00	0	10	\$225	\$2,250
A-15	70.08	Remove and Reset Fence	LF	90	1.10	0	99	\$40	\$3,960
A-16	70.11	Standard Sign	SF	63	1.00	0	63	\$100	\$6,300
A-17	70.12	Traffic Maintenance	LS	1	1.00	0	1	\$10,000	\$10,000
A-18	70.23	Temporary Fencing	LF	90	1.10	0	99	\$10	\$990
A-19	75.03	Topsoil (4-inch Depth)	MSF	5.0	1.30	0	7	\$550	\$3,850
A-20	75.04	Seeding (Schedule A)	MSF	5.0	1.30	0	7	\$450	\$3,150
A-21	75.12	Temporary Tree Protection Fence	LF	100	1.00	0	100	\$7	\$700
A-22	75.13	Root Pruning	LF	50	1.00	0	50	\$25	\$1,250
								TOTAL	\$144,158

Schedule B - Illumination Improvements									
B-1	80.02	Trench and Backfill (2'W x 3.5'D)	LF	913	1.10	-1	1,000	\$24	\$24,400
B-2	80.04	Load Center Foundation (Type 1A)	EA	1	1.00	0	1	\$4,900	\$4,900
B-3	80.04	Cast-In-Place Light Column Foundation	EA	14	1.00	0	14	\$2,500	\$35,000
B-4	80.07	Steel Conduit (2 inch)	FT	913	1.10	-1	1,000	\$39	\$39,000
B-5	80.08	Junction Box (Type IA)	EA	14	1.00	0	14	\$1,263	\$17,682
B-6	80.08	Junction Box (Type II)	EA	1	1.00	0	1	\$2,990	\$2,990
B-7	80.10	3 Conductor 8 AWG Type XHHW-2 Cable	FT	913	1.10	-1	1,000	\$7	\$7,000
B-8	80.14	Single-Meter Pad-Mount Load Center, Type 1A with Lighting Control	EA	1	1.00	0	1	\$8,612	\$8,612
B-9	80.29	Pedestrian Light Column (35W)	EA	14	1.00	0	14	\$3,900	\$54,600
B-10	80.29	Spare Pedestrian Light Column (35W)	EA	2	1.00	0	2	\$2,900	\$5,800
								TOTAL	\$199,984

SUMMARY	
Schedule A - Roadway Improvements	\$144,158
Schedule B - Illumination Improvements	\$199,984
Subtotal	\$344,142
Total Estimated Construction Cost:	\$344,000

Lois Drive West 32nd Avenue Pathway - Benson Boulevard to Minnesota Drive
MOA Project No. 19-08

ROW REQUIREMENTS ESTIMATE - DRAFT DSR - ALTERNATIVE 4 - LOIS DRIVE

Lois & 32nd Ave Upgrade - Alternative 4 - Lois Drive					
PARCEL	Purchase Entire Property	PUE	SE	TCE	# Of TCP's
123			X		0
124					2
125			X		1
TOTAL	0	0	2	0	3

Date: 9/1/2020 Basis:
 Project: Lois Drive & 32nd Avenue Pathway
 Project Number: 19-08

Prepared By: CRW
 Alternative 4 - 32nd Avenue
 [B]=local bond; [S]=state grant; [F]= federal grant

Ver. 5.1

DESIGN		Design Management	\$10,020	
	<i>Start 20??</i>	PM&E Design Services	\$0	
		PM&E Design Survey	\$0	
		PM&E Design Soil	\$0	
		Contractual Dsgn Sers (Basic)	\$70,500	
		Contractual Dsgn Sers (Add'l)	\$9,750	
		Contractual Design Survey	\$13,500	
		Contractual Design Soils	\$6,250	
		Miscellaneous	\$0	
Subtotal				\$110,020
UTILITIES		AWWU	\$0	
	<i>Start 20??</i>	CEA	\$0	
		ACS	\$0	
		GCI	\$7,000	
		Enstar	\$0	
Subtotal				\$7,000
ROW		Real Estate Services	\$27,680	
	<i>Start 20??</i>	Land Acquisition	\$498,000	
Subtotal				\$525,680
CONSTRUCTION		Construction Management	\$15,030	
	<i>Start 20??</i>	Inspection	\$40,080	
		Materials Testing	\$7,515	
		Survey	\$7,515	
		Miscellaneous	\$0	
		Construction Contract	\$501,000	
Subtotal				\$571,140
MISCELLANEOUS		Bond Overhead (15.0%)	\$227,442	
		Grant Overhead (0.0%)	\$0	
		Contingency (15%)	\$75,000	
Subtotal				\$302,442
PROJECT TOTAL				<u><u>\$1,516,282</u></u>

**Lois Drive West 32nd Avenue Pathway - Benson Boulevard To Minnesota Drive
MOA Project No. 19-08**

ENGINEER'S ESTIMATE - DRAFT DSR - ALTERNATIVE 4 - 32ND AVENUE

ITEM No.	MASS No.	ITEM DESCRIPTION	UNIT	CALC. QUANT	CONT. FACTOR	ROUND FACTOR	EST QUANT	UNIT PRICE	TOTAL COST
Schedule A - Roadway Improvements									
A-1	20.02	Storm Water Pollution Prevention Plan (Type 3)	LS	1	1.00	0	1	\$2,000	\$2,000
A-2	20.03	Test Pit for Utility Locate	Hour	8	1.00	0	8	\$800	\$6,400
A-3	20.04	Clearing and Grubbing	LS	1	1.00	0	1	\$2,000	\$2,000
A-4	20.09	Remove Pavement	SY	641	1.00	0	641	\$4	\$2,564
A-5	20.10	Unusable Excavation	CY	1,506	1.25	-2	1,900	\$15	\$28,500
A-6	20.21	Classified Fill and Backfill (Type II-A)	Ton	2,544	1.25	-2	3,200	\$18	\$57,600
A-7	20.22	Leveling Course	Ton	194	1.08	-1	210	\$35	\$7,350
A-8	20.25	Geotextile (Type A)	SY	2,296	1.00	-1	2,300	\$2	\$4,600
A-9	20.28	Reconstruct Driveway	EA	3	1.00	0	3	\$3,250	\$9,750
A-10	30.02	P.C.C. Curb and Gutter (All Types)	LF	488	1.00	0	488	\$27	\$13,176
A-11	30.04	P.C.C. Curb Ramp (6" Thick)	EA	6	1.00	0	6	\$2,000	\$12,000
A-12	40.06	A.C. Pavement (Class D)	Ton	200	1.06	-1	210	\$105	\$22,050
A-13	40.06	A.C. Pavement (Class E)	Ton	58	1.06	-1	60	\$105	\$6,300
A-14	60.05	Adjust Key Box	EA	1	1.00	0	1	\$450	\$450
A-15	65.02	Construction Survey Measurement	LS	1	1.00	0	1	\$4,000	\$4,000
A-16	65.02	Two-Person Survey Crew	Hour	10	1.00	0	10	\$225	\$2,250
A-17	70.08	Remove and Reset Fence	LF	308	1.10	0	339	\$40	\$13,560
A-18	70.10	Inlaid Traffic Markings (Methyl Methacrylate) (24" White) (90 Mil)	LF	68	1.00	0	68	\$30	\$2,040
A-19	70.11	Standard Sign	SF	27	1.00	0	27	\$100	\$2,700
A-20	70.12	Traffic Maintenance	LS	1	1.00	0	1	\$20,000	\$20,000
A-21	70.23	Temporary Fencing	LF	308	1.10	0	339	\$10	\$3,390
A-22	75.03	Topsoil (4-inch Depth)	MSF	5.0	1.30	0	7	\$550	\$3,850
A-23	75.04	Seeding (Schedule A)	MSF	5.0	1.30	0	7	\$450	\$3,150
A-24	75.12	Temporary Tree Protection Fence	LF	100	1.00	0	100	\$7	\$700
A-25	75.13	Root Pruning	LF	50	1.00	0	50	\$25	\$1,250
								TOTAL	\$231,630

Schedule B - Illumination Improvements									
B-1	80.02	Trench and Backfill (2'W x 3.5'D)	LF	1,422	1.10	-1	1,560	\$24	\$38,064
B-2	80.04	Load Center Foundation (Type 1A)	EA	1	1.00	0	1	\$4,900	\$4,900
B-3	80.04	Cast-In-Place Light Column Foundation	EA	18	1.00	0	18	\$2,500	\$45,000
B-4	80.07	Steel Conduit (2 inch)	FT	1,328	1.10	-1	1,460	\$39	\$56,940
B-5	80.08	Junction Box (Type IA)	EA	19	1.00	0	19	\$1,263	\$23,997
B-6	80.08	Junction Box (Type II)	EA	1	1.00	0	1	\$2,990	\$2,990
B-7	80.10	3 Conductor 8 AWG Type XHHW-2 Cable	FT	1,328	1.10	-1	1,460	\$7	\$10,220
B-8	80.14	Single-Meter Pad-Mount Load Center, Type 1A with Lighting Control	EA	1	1.00	0	1	\$8,612	\$8,612
B-9	80.29	Pedestrian Light Column (35W)	EA	15	1.00	0	15	\$3,900	\$58,500
B-10	80.29	Pedestrian Light Column (55W)	EA	3	1.00	0	3	\$3,900	\$11,700
B-11	80.29	Spare Pedestrian Light Column (35W)	EA	2	1.00	0	2	\$2,900	\$5,800
B-12	80.29	Spare Pedestrian Light Column (55W)	EA	1	1.00	0	1	\$2,900	\$2,900
								TOTAL	\$269,623

SUMMARY	
Schedule A - Roadway Improvements	\$231,630
Schedule B - Illumination Improvements	\$269,623
Subtotal	\$501,253
Total Estimated Construction Cost:	\$501,000

Utility Relocation Summary 32nd Avenue Upgrade: Alternative 4	
Electric (CEA)	\$0
Telecommunications (ACS)	\$0
Cable Television (GCI)	\$6,500
Natural Gas (Enstar)	\$0
<i>Subtotal:</i>	<i>\$6,500</i>
<i>Construction Contingency (10%)</i>	<i>\$650</i>
Total Utility Relocation Cost:	\$7,150

Id No.	APPROX. STATION	OFFSET	UTILITY CONFLICT	DESCRIPTION OF CONFLICT	RECOMMENDED ACTION	AMOUNT	UNIT	UNIT PRICE	COST	COMMENTS
GCI-1	23+60 - 25+50	LT	underground FO line	within proposed improvements	protect in place	180	LF	\$0	\$0	
GCI-2	25+50	CL	FO manhole	within proposed improvements	adjust as needed	1	EA	\$5,000	\$5,000	
GCI-3	27+60	LT	overhead FO line	within proposed improvements	protect in place	10	LF	\$0	\$0	
GCI-4	27+60 - 31+00	LT	overhead C line	within proposed improvements	protect in place	10	LF	\$0	\$0	
GCI-5	30+90	CL	overhead C line	within proposed improvements	protect in place	6	LF	\$0	\$0	

Construction Costs: \$5,000
Engineering/Administration (30%) \$1,500

Total: \$6,500

Lois Drive West 32nd Avenue Pathway - Benson Boulevard to Minnesota Drive
MOA Project No. 19-08

ROW REQUIREMENTS ESTIMATE - DRAFT DSR - ALTERNATIVE 4 - 32ND AVENUE

Lois & 32nd Ave Upgrade - Alternative 4 - 32nd Avenue					
PARCEL	Purchase Entire Property	PUE	SE	TCE	# Of TCP's
118		X	X	X	0
119		X	X	X	1
120		X	X		1
121	X				0
122					2
123			X		2
TOTAL	1	3	4	2	6