

SUBCONSULTANT MANHOURLY WORKSHEET

COMPANY: CASC Engineering and Consulting
 PROJECT: Replacement of Chuckwalla Valley Road over Sutoro Ditch [Br. No. 56C0104, FPN BRLO-5956(226)]
 PHASE: Phase II
 DATE: March 27, 2017

TASK

PROJECT ENGINEER
 SR. ENV. ANALYST
 ENGINEERING DIRECTOR
 SW TECHNICAL SUPPORT II

\$117.04 \$128.30 \$210.08 \$75.03

Total Manhours	23	4	3	20	50
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	23	4	3	20	HOURS	COST
1.1 Project Management						
1.2 Project Team Meetings	1		1		2	\$ 327
1.3 Quality Control and Quality Assurance (QC/QA)						
5.1 Foundation Design Report						
5.2 Storm Water Pollution Prevention Plan (SWPPP)	22	4	2	20	48	\$ 5,009
5.3 Utility Relocation Coordination						
5.4 65% Roadway Plans						
5.5 65% Signing, Striping and Detour Plans						
5.6 95% Civil Roadway PS&E						
5.7 Bridge Type Selection						
5.8 65% Unchecked Structure Plans						
5.9 Bridge Design Independent Check						
5.10 95% Structure PS&E						
5.11 Final 100% Design PS&E and Contract Bid Documents						
5.12 Right-of-Way Legal Descriptions and Plats (by County)						
5.13 Right-of-Way Appraisal and Acquisition (by County)						
6.0 Permitting						
6.1 ACOE Section 404 Nationwide Permit						
6.2 RWQCB Section 401 Water Quality Certification						
6.3 CDFW Section 1602 Streambed Alteration Agreement						
6.4 Caltrans Encroachment Permit (Step 2)						

SUBCONSULTANT MANHOUR WORKSHEETCOMPANY: **CASC Engineering and Consulting** PHASE: **Phase IV**PROJECT: **Replacement of Chuckwalla Valley Road over Suto Ditch [Br. No. 56C0104, FPN BRLO-5956(226)]** DATE: **March 27, 2017**TASK: **PROJECT ENGINEER****SR ENV ANALYST****ENGINEERING DIRECTOR****SM TECHNICAL SUPPORT II**

HOURS

COST

\$113.90

\$124.85

\$204.44

\$73.01

Total Manhours **2 2 2 4**7.3 Attend a Pre-Construction Meeting and Site Meeting **2**7.4 Administration, Respond Contractor's RFIs and Review Shop Drawings/Submittals **2**

7.5 Prepare Construction Change Orders

7.6 Prepare As-built Plans

4**\$ 637**

SUBCONSULTANT FEE PROPOSAL WORKSHEET

COMPANY: CASC Engineering and Consulting		SCOPE OF WORK: Water Quality	PHASE: All Phases
PROJECT: Replacement of Chuckwalla Valley Road over Acari Ditch [Br. No. 56C0108, FPN BRLO-5956(225)]		DATE: December 22, 2016	

DIRECT LABOR

PERSONNEL	POSITION	HOURS	RATE	AMOUNT
Chris Ogaz, EIT, CPESC, QSD/P	Project Engineer	54	@ \$39.00	\$2,106.00
Dan Secrist, CPESC, CESSWI, QSD/P	Sr. Env. Analyst	11	@ \$42.75	\$470.25
Jeff Endicott, P.E., BCEE, CPESC, QSD/P	Engineering Director *	13	@ \$70.00	\$910.00
SW Technical Support II	SW Technical Support II	33	@ \$25.00	\$825.00

* Key Personnel

TOTAL HOURS **111** TOTAL DIRECT LABOR **\$4,311.25**

MULTIPLIERS

ESCALATION @	2.76%	(of Direct Labor)	\$118.99
FRINGE BENEFIT @	57.60%	(of Direct Labor + Escalation)	\$2,551.82
GENERAL AND ADMINISTRATIVE @	107.90%	(of Direct Labor + Escalation)	\$4,780.23
PROFIT (FIXED FEE) @	10.0%	(of Direct Labor + Escalation + Overhead + Payroll Additives)	\$1,176.23

TOTAL MULTIPLIERS **\$8,627.27**

OTHER DIRECT COSTS

*** Billed at Actual Cost (See ODC Cost Estimate Work Sheet) ***

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
Mailing and Special Delivery	1	LS @	\$35.00	\$35.00
Mileage and Travel	1	LS @	\$192.60	\$192.60
Miscellaneous (CD or Thumb Drive)	1	LS @	\$10.00	\$10.00

TOTAL ODC'S **\$237.60**

TOTAL **\$13,176.12**

ESTIMATE OF OTHER DIRECT COST (ODC) ITEMS
REPLACEMENT OF CHUCKWALLA VALLEY ROAD BRIDGE OVER ACARI DITCH
(BR. NO. 56C0108)

FPN: BRLO-5956(225)

Consultant: CASC Engineering and Consulting

Contract No.: _____

Date: 27-Mar-17

Reproduction Cost Breakdown			
DESCRIPTION OF ITEMS	UNIT COST	ESTIMATED QUANTITY	TOTAL COST
		0	\$0.00
		0	\$0.00
		0	\$0.00
		0	\$0.00
		0	\$0.00
SUBTOTAL COST			\$0.00
Mailing and Special Delivery Cost Breakdown			
DESCRIPTION OF ITEMS	UNIT COST	ESTIMATED QUANTITY	TOTAL COST
		0	\$0.00
FedEx	\$35.00	1	\$35.00
		0	\$0.00
SUBTOTAL COST			\$35.00
Mileage & Travel			
DESCRIPTION OF ITEMS	UNIT COST	ESTIMATED QUANTITY	TOTAL COST
Mileage (2017 IRS Standard Rate)	\$0.535	360	\$192.60
		0	\$0.00
TOTAL BUDGET			\$192.60
Miscellaneous			
DESCRIPTION OF ITEMS	UNIT COST	ESTIMATED QUANTITY	TOTAL COST
CD-ROM or Thumb Drive	\$5.00	2	\$10.00
			\$0.00
			\$0.00
			\$0.00
SUBTOTAL COST			\$10.00
TOTAL ODCs			\$237.60

NOTES:

1. ODC items should be based on actual costs and supported by historical data and other documentation.
2. ODC items that would be considered "tools of the trade" are not reimbursable.
3. ODC items should be consistently billed directly to all clients, not just when client will pay for them as a direct cost.
4. ODC items when incurred for the same purpose, in like circumstance, should not be included in any indirect cost pool or in overhead rate.

SUBCONSULTANT FEE PROPOSAL WORKSHEET

COMPANY: CASC Engineering and Consulting	SCOPE OF WORK: Preliminary Engineering & Environmental Documentation	PHASE: Phase I
PROJECT: Replacement of Chuckwalla Valley Road over Acari Ditch [Br. No. 56C0108, FPN BRLO-5956(225)]		DATE: March 27, 2017

DIRECT LABOR

PERSONNEL	POSITION	HOURS		RATE	AMOUNT		
Chris Ogaz, EIT, CPESC, QSD/P	Project Engineer	28	@	\$39.00	\$1,092.00		
Dan Secrist, CPESC, CESSWI, QSD/P	Sr. Env. Analyst	7	@	\$42.75	\$299.25		
Jeff Endicott, P.E., BCEE, CPESC, QSD/P	Engineering Director	7	@	\$70.00	\$490.00		
SW Technical Support II	SW Technical Support II	13	@	\$25.00	\$325.00		
TOTAL HOURS					55	TOTAL DIRECT LABOR	\$2,206.25

MULTIPLIERS

ESCALATION @	2.76%	(of Direct Labor)	\$60.89
FRINGE BENEFIT @	57.60%	(of Direct Labor + Escalation)	\$1,305.87
GENERAL AND ADMINISTRATIVE @	107.90%	(of Direct Labor + Escalation)	\$2,446.25
PROFIT (FIXED FEE) @	10.0%	(of Direct Labor + Escalation + Overhead + Payroll Additives)	\$601.93
TOTAL MULTIPLIERS			\$4,414.94

OTHER DIRECT COSTS

*** Billed at Actual Cost (See ODC Cost Estimate Work Sheet) ***

ITEM	QUANTITY	UNIT		UNIT COST	AMOUNT
Mailing and Special Delivery	1	LS	@	\$35.00	\$35.00
Mileage and Travel	1	LS	@	\$192.60	\$192.60
Miscellaneous (CD or Thumb Drive)	1	LS	@	\$10.00	\$10.00
TOTAL ODC'S					\$237.60

TOTAL **\$6,858.79**

SUBCONSULTANT FEE PROPOSAL WORKSHEET

COMPANY: CASC Engineering and Consulting		SCOPE OF WORK: Plans, Specifications & Estimate (PS&E)	PHASE: Phase II
PROJECT: Replacement of Chuckwalla Valley Road over Acari Ditch [Br. No. 56C0108, FPN BRLO-5956(225)]			DATE: December 22, 2016

DIRECT LABOR

PERSONNEL	POSITION	HOURS	RATE	AMOUNT	
Chris Ogaz, EIT, CPESC, QSD/P	Project Engineer	23	@ \$39.00	\$897.00	
Dan Secrist, CPESC, CESSWI, QSD/P	Sr. Env. Analyst	4	@ \$42.75	\$171.00	
Jeff Endicott, P.E., BCEE, CPESC, QSD/P	Engineering Director	3	@ \$70.00	\$210.00	
SW Technical Support II	SW Technical Support II	20	@ \$25.00	\$500.00	
		TOTAL HOURS	50	TOTAL DIRECT LABOR	\$1,778.00

MULTIPLIERS

ESCALATION @	2.76%	(of Direct Labor)	\$49.07
FRINGE BENEFIT @	57.60%	(of Direct Labor + Escalation)	\$1,052.39
GENERAL AND ADMINISTRATIVE @	107.90%	(of Direct Labor + Escalation)	\$1,971.41
PROFIT (FIXED FEE) @	10.0%	(of Direct Labor + Escalation + Overhead + Payroll Additives)	\$485.09
TOTAL MULTIPLIERS			\$3,557.97

OTHER DIRECT COSTS

*** Billed at Actual Cost (See ODC Cost Estimate Work Sheet) ***

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
Mailing and Special Delivery		LS		
Mileage and Travel		LS		
Miscellaneous (CD or Thumb Drive)		LS		
				TOTAL ODC'S

TOTAL **\$5,335.97**

SUBCONSULTANT FEE PROPOSAL WORKSHEET

COMPANY: CASC Engineering and Consulting	SCOPE OF WORK: Construction Bidding and Award Supports	PHASE: Phase III
PROJECT: Replacement of Chuckwalla Valley Road over Acari Ditch [Br. No. 56C0108, FPN BRLO-5956(225)]		DATE: December 22, 2016

DIRECT LABOR

PERSONNEL	POSITION	HOURS	RATE	AMOUNT
Chris Ogaz, EIT, CPESC, QSD/P	Project Engineer	1	@ \$39.00	\$39.00
Dan Secrist, CPESC, CESSWI, QSD/P	Sr. Env. Analyst		\$42.75	
Jeff Endicott, P.E., BCEE, CPESC, QSD/P	Engineering Director	1	@ \$70.00	\$70.00
SW Technical Support II	SW Technical Support II		\$25.00	

TOTAL HOURS 2 TOTAL DIRECT LABOR \$109.00

MULTIPLIERS

ESCALATION @	2.76%	(of Direct Labor)	\$3.01
FRINGE BENEFIT @	57.60%	(of Direct Labor + Escalation)	\$64.52
GENERAL AND ADMINISTRATIVE @	107.90%	(of Direct Labor + Escalation)	\$120.86
PROFIT (FIXED FEE) @	10.0%	(of Direct Labor + Escalation + Overhead + Payroll Additives)	\$29.74

TOTAL MULTIPLIERS \$218.12

OTHER DIRECT COSTS

*** Billed at Actual Cost (See ODC Cost Estimate Work Sheet) ***

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
Mailing and Special Delivery		LS		
Mileage and Travel		LS		
Miscellaneous (CD or Thumb Drive)		LS		

TOTAL ODC'S

TOTAL \$327.12

SUBCONSULTANT FEE PROPOSAL WORKSHEET

COMPANY: CASC Engineering and Consulting	SCOPE OF WORK: Design Construction Supports	PHASE: Phase IV
PROJECT: Replacement of Chuckwalla Valley Road over Acari Ditch [Br. No. 56C0108, FPN BRLO-5956(225)]		DATE: March 27, 2017

DIRECT LABOR

PERSONNEL	POSITION	HOURS	RATE	AMOUNT
Chris Ogaz, EIT, CPESC, QSD/P	Project Engineer	2	@ \$39.00	\$78.00
Dan Secrist, CPESC, CESSWI, QSD/P	Sr. Env. Analyst		\$42.75	
Jeff Endicott, P.E., BCEE, CPESC, QSD/P		2	@ \$70.00	\$140.00
SW Technical Support II	SW Technical Support II		\$25.00	
		TOTAL HOURS	4	TOTAL DIRECT LABOR
				\$218.00

MULTIPLIERS

ESCALATION @	2.76% (of Direct Labor)	\$6.02
FRINGE BENEFIT @	57.60% (of Direct Labor + Escalation)	\$129.03
GENERAL AND ADMINISTRATIVE @	107.90% (of Direct Labor + Escalation)	\$241.71
PROFIT (FIXED FEE) @	10.0% (of Direct Labor + Escalation + Overhead + Payroll Additives)	\$59.48
TOTAL MULTIPLIERS		\$436.24

OTHER DIRECT COSTS

*** Billed at Actual Cost (See ODC Cost Estimate Work Sheet) ***

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
Mailing and Special Delivery		LS		
Mileage and Travel		LS		
Miscellaneous (CD or Thumb Drive)		LS		
			TOTAL ODC'S	

TOTAL **\$654.24**

SUBCONSULTANT MANHOUR WORKSHEET SUMMARY

COMPANY:	CASC Engineering and Consulting	PHASE:	All Phases
PROJECT:	Replacement of Chuckwalla Valley Road over Acari Ditch [Br. No. 56C0108, FPN BRLO-9956(225)]	DATE:	March 27, 2017

TASK	PROJECT ENGINEER	Sr. ENV. ANALYST	ENGINEERING DIRECTOR	SR. TECHNICAL SUPPORT II	HOURS
	\$117.04	\$128.30	\$210.08	\$75.03	

PHASE TOTALS	54	11	13	33	111
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PHASE I	28	7	7	13	55
PHASE II	23	4	3	20	50
PHASE III	1		1		2
PHASE IV	2		2		4

SUBCONSULTANT MANHOURLY WORKSHEET

COMPANY: CASC Engineering and Consulting
 PROJECT: Replacement of Chuckwalla Valley Road over Acari Ditch [Br. No. 56C0108, FPN BRLO-5956(225)]
 PHASE: Phase I
 DATE: March 27, 2017

TASK	PROJECT ENGINEER	SR ENV. ANALYST	ENGINEERING DIRECTOR	SR TECHNICAL SUPPORT II	HOURS	COST

\$117.04 \$128.30 \$210.08 \$75.03

Total Manhours: 28 7 7 13 55

TASK	PROJECT ENGINEER	SR ENV. ANALYST	ENGINEERING DIRECTOR	SR TECHNICAL SUPPORT II	HOURS	COST
1.1 Project Management						
1.2 Project Team Meetings	1		1		2	\$ 327
1.3 Quality Control and Quality Assurance (QC/QA)						
2.0 Research and Data Gathering						
2.1 Collect and Review Existing Information						
2.2 Conduct Field Review						
3.0 Preliminary Engineering						
3.1 Traffic Study (Technical Memorandum/Traffic Summary)						
3.2 Preliminary Utility Mapping						
3.3 Permits						
3.4 Surveying and Right-of-Way Mapping (by County)						
3.5 Preliminary Geotechnical Studies						
3.6 Right-of-Way Requirements Map						
3.7 Geometric Approval Drawings						
3.8 Structure Advance Planning Study						
3.9 Hydrologic, Hydraulic and Scour Studies						
3.10 Advisory and Mandatory Fact Sheets						
3.11 Engineer's Estimate						
4.0 Environmental Clearance & Documentation						
4.1 Project Initiation						
4.2 Preliminary Environmental Study (PES)						
4.3 Technical Studies						
4.3.1 Hazardous Waste (Initial Site Assessment)						
4.3.2 Preliminary Site Assessment (Step-2)						
4.3.3 Water Quality Assessment Studies	27	7	6	13	53	\$ 6,294
4.3.4 Natural Environmental Study						
4.3.5 Wetland Delineation and Assessment						

SUBCONSULTANT MANHOOR WORKSHEET

COMPANY: CASC Engineering and Consulting
 PROJECT: Replacement of Chuckwalla Valley Road over Acari Ditch [Br. No. 56C0108, FPN BRLO-5956(225)]
 PHASE: Phase I
 DATE: March 27, 2017

TASK	PROJECT ENGINEER	SR. ENV. ANALYST	ENGINEERING DIRECTOR	SR. TECHNICAL SUPPORT II	HOURS	COST
4.3.6 Section 4(f) Evaluation (Individual Finding)						
4.3.7 Visual Resources (Visual Impact Assessment)						
4.3.8 Culture Resources Study (APE/ASR/HRER/HPSR)						
4.3.9A Finding of Effect (FoE) (Step-2)						
4.3.9B Section 106 Memorandum of Agreement (MOA) (Step 2)						
4.3.10 CEQA Notice of Exemption (NOE) Assessment (IS/EA) (Step-2)						
4.5.1 Administrative Draft IS/EA						
4.5.2 Draft IS/EA for Public Review						

SUBCONSULTANT MANHOUR WORKSHEET

COMPANY: **CASC Engineering and Consulting**

PROJECT: **Replacement of Chuckwalla Valley Road over Acari Ditch [B: No. 56C0108, FPN BRLO-5956(225)]**

PHASE: **Phase II**

DATE: **March 27, 2017**

TASK

PROJECT ENGINEER

SR ENV ANALYST

ENGINEERING DIRECTOR

SR TECHNICAL SUPPORT II

HOURS COST

\$117.04 \$128.30 \$210.08 \$75.03

TASK	Total Manhours					HOURS	COST
	23	4	3	20	50		
1.1 Project Management							
1.2 Project Team Meetings	1		1			2	\$ 327
1.3 Quality Control and Quality Assurance (QC/QA)							
5.1 Foundation Design Report							
5.2 Storm Water Pollution Prevention Plan (SWPPP)	22	4	2	20		48	\$ 5,009
5.3 Utility Relocation Coordination							
5.4 65% Roadway Plans							
5.5 65% Signing, Striping and Detour Plans							
5.6 95% Civil Roadway PS&E							
5.7 Bridge Type Selection							
5.8 65% Unchecked Structure Plans							
5.9 Bridge Design Independent Check							
5.10 95% Structure PS&E							
5.11 Final 100% Design PS&E and Contract Bid Documents							
5.12 Right-of-Way Legal Descriptions and Plats (by County)							
5.13 Right-of-Way Appraisal and Acquisition (by County)							
6.0 Permitting							
6.1 ACOE Section 404 Nationwide Permit							
6.2 RWQCB Section 401 Water Quality Certification							
6.3 CDFW Section 1602 Streambed Alteration Agreement							
6.4 Caltrans Encroachment Permit (Step 2)							

SUBCONSULTANT FEE PROPOSAL WORKSHEET

COMPANY: KOA Corporation	SCOPE OF WORK: Traffic	PHASE: All Phases
PROJECT: Replacement of Six Chuckwalla Valley Road and Railroad Avenue Bridges [BRLO-5956(228), BRLO-5956(229), BRLO-5956(239), BRLO-5956(227), BRLO-5956(226), BRLO-5956(225)]		DATE: March 27, 2017

DIRECT LABOR

PERSONNEL	POSITION	HOURS		RATE	AMOUNT
Min Zhou	Principal Engineer *	38	@	\$83.00	\$3,154.00
Kahono Oei	Senior Engineer	32	@	\$66.00	\$2,112.00
Ryan Calad	Senior Engineer	104	@	\$52.00	\$5,408.00
Frank Barrera	Associate Planner	36	@	\$42.00	\$1,512.00
Scott Voigt	Associate Designer	160	@	\$37.00	\$5,920.00
Alan Yasuda	Engineering Assistant	144	@	\$32.00	\$4,608.00
Elizabeth Ibarra	Administrative	56	@	\$25.00	\$1,400.00

* Key Personnel

TOTAL HOURS 570 TOTAL DIRECT LABOR \$24,114.00

MULTIPLIERS

ESCALATION @	4.83%	(of Direct Labor)	\$1,164.71
FRINGE BENEFIT @	54.79%	(of Direct Labor + Escalation)	\$13,850.20
GENERAL AND ADMINISTRATIVE @	97.51%	(of Direct Labor + Escalation)	\$24,649.27
PROFIT (FIXED FEE) @	10.0%	(of Direct Labor + Escalation + Overhead)	\$6,377.82
TOTAL MULTIPLIERS			\$46,041.99

OTHER DIRECT COSTS

*** Billed at Actual Cost (See ODC Cost Estimate Work Sheet) ***

ITEM	QUANTITY	UNIT		UNIT COST	AMOUNT
Mileage and Travel	1	LS	@	\$963.00	\$963.00
Miscellaneous (Collect Traffic Counts)	1	LS	@	\$1,500.00	\$1,500.00

TOTAL ODC'S \$2,463.00

TOTAL **\$72,618.99**

EXHIBIT 10-H COST PROPOSAL
ACTUAL COST-PLUS-FIXED FEE OR LUMP SUM (FIRM FIXED PRICE) CONTRACTS
(CALCULATIONS FOR ANTICIPATED SALARY INCREASES)

Consultant KOA Contract No. _____ Date 3/27/2017

1. Calculate Average Hourly Rate for 1st year of the contract (Direct Labor Subtotal divided by total hours)

Direct Labor Subtotal per Cost Proposal	Total Hours per Cost Proposal	=	Avg Hourly Rate	5 Year Contract Duration
\$24,114	570	=	\$42.31	Year 1 Avg Hourly Rate

2. Calculate hourly rate for all years (Increase the Average Hourly Rate for a year by proposed escalation %)

	Avg Hourly Rate		Proposed Escalation		
Year 1	\$42.31	+	2.5%	=	\$43.36 Year 2 Avg Hourly Rate
Year 2	\$43.36	+	2.5%	=	\$44.45 Year 3 Avg Hourly Rate
Year 3	\$44.45	+	2.5%	=	\$45.56 Year 4 Avg Hourly Rate
Year 4	\$45.56	+	2.5%	=	\$46.70 Year 5 Avg Hourly Rate

3. Calculate estimated hours per year (Multiply estimate % each year by total hours)

	Estimated % Completed Each Year	*	Total Hours per Cost Proposal	=	Total Hours per Year	
Year 1	15.00%	*	570.0	=	86	Estimated Hours Year 1
Year 2	0.00%	*	570.0	=	0	Estimated Hours Year 2
Year 3	70.00%	*	570.0	=	399	Estimated Hours Year 3
Year 4	10.00%	*	570.0	=	57	Estimated Hours Year 4
Year 5	5.00%	*	570.0	=	29	Estimated Hours Year 5
Total	100.0%		Total	=	570.0	

4. Calculate Total Costs including Escalation (Multiply Average Hourly Rate by the number of hours)

	Avg Hourly Rate (calculated above)	*	Estimated hours (calculated above)	=	Cost per Year	
Year 1	\$42.31	*	86	=	\$3,617.10	Estimated Hours Year 1
Year 2	\$43.36	*	0	=	\$0.00	Estimated Hours Year 2
Year 3	\$44.45	*	399	=	\$17,734.34	Estimated Hours Year 3
Year 4	\$45.56	*	57	=	\$2,596.81	Estimated Hours Year 4
Year 5	\$46.70	*	29	=	\$1,330.87	Estimated Hours Year 5
	Total Direct Labor Cost with Escalation			=	\$25,279.12	
	Direct Labor Subtotal before Escalation			=	\$24,114.00	
	Estimated total of Direct Labor Salary Increase (Dollar Amount)			=	\$1,165.12	Transfer to Cost Proposal
	Estimated total of Direct Labor Salary Increase (%)			=	4.83%	Transfer to Cost Proposal

NOTES:

- This is not the only way to estimate salary increases. Other methods will be accepted if they clearly indicate the % increase, the # of years of the contract, and a breakdown of the labor to be performed each year.
- An estimation that is based on direct labor multiplied by salary increase % multiplied by the # of years is not acceptable. (i.e. \$250,000 x 2% x 5 yrs = \$25,000 is not an acceptable methodology)
- This assumes that one year will be worked at the rate on the cost proposal before salary increases are granted.

ESTIMATE OF OTHER DIRECT COST (ODC) ITEMS

REPLACEMENT OF SIX CHUCKWALLA VALLEY ROAD AND RAILROAD AVENUE BRIDGES
 FPN: BRLO-5956(228), BRLO-5956(229), BRLO-5956(239), BRLO-5956(227), BRLO-5956(226),
 BRLO-5956(225)

Consultant: KOA Corporation

Contract No.:

Date: 3/27/2017

Reproduction Cost Breakdown			
DESCRIPTION OF ITEMS	UNIT COST	ESTIMATED QUANTITY	TOTAL COST
		0	\$0.00
		0	\$0.00
		0	\$0.00
		0	\$0.00
		0	\$0.00
SUBTOTAL COST			\$0.00
Mailing and Special Delivery Cost Breakdown			
DESCRIPTION OF ITEMS	UNIT COST	ESTIMATED QUANTITY	TOTAL COST
		0	\$0.00
		0	\$0.00
		0	\$0.00
SUBTOTAL COST			\$0.00
Mileage & Travel			
DESCRIPTION OF ITEMS	UNIT COST	ESTIMATED QUANTITY	TOTAL COST
Mileage (2017 IRS Standard Rate)	\$0.535	1800	\$963.00
		0	\$0.00
TOTAL BUDGET			\$963.00
Miscellaneous			
DESCRIPTION OF ITEMS	UNIT COST	ESTIMATED QUANTITY	TOTAL COST
Traffic Counts - ADT	\$100.00	6	\$600.00
Traffic Counts - Turning Movement AM/PM	\$150.00	6	\$900.00
	\$0.00	0	\$0.00
	\$0.00	0	\$0.00
	\$0.00	0	\$0.00
SUBTOTAL COST			\$1,500.00
TOTAL ODCs			\$2,463.00

NOTES:

1. ODC items should be based on actual costs and supported by historical data and other documentation.
2. ODC items that would be considered "tools of the trade" are not reimbursable.
3. ODC items should be consistently billed directly to all clients, not just when client will pay for them as a direct cost.
4. ODC items when incurred for the same purpose, in like circumstance, should not be included in any indirect cost pool or in overhead rate.

SUBCONSULTANT FEE PROPOSAL WORKSHEET

COMPANY: KOA Corporation	SCOPE OF WORK: Plans, Specifications & Estimate (PS&E)	PHASE: Phase II
PROJECT: Replacement of Six Chuckwalla Valley Road and Railroad Avenue Bridges [BRLO-5956(228), BRLO-5956(229), BRLO-5956(239), BRLO-5956(227), BRLO-5956(226), BRLO-5956(225)]		DATE: March 27, 2017

DIRECT LABOR

PERSONNEL	POSITION	HOURS		RATE	AMOUNT
Min Zhou	Principal Engineer	26	@	\$83.00	\$2,158.00
Kahono Oei	Senior Engineer	18	@	\$66.00	\$1,188.00
Ryan Calad	Senior Engineer	76	@	\$52.00	\$3,952.00
Frank Barrera	Associate Planner			\$42.00	
Scott Voigt	Associate Designer	124	@	\$37.00	\$4,588.00
Alan Yasuda	Engineering Assistant	132	@	\$32.00	\$4,224.00
Elizabeth Ibarra	Administrative	38	@	\$25.00	\$950.00
		TOTAL HOURS			
				TOTAL DIRECT LABOR	\$17,060.00

MULTIPLIERS

ESCALATION @	4.83%	(of Direct Labor)	\$824.00
FRINGE BENEFIT @	54.79%	(of Direct Labor + Escalation)	\$9,798.64
GENERAL AND ADMINISTRATIVE @	97.51%	(of Direct Labor + Escalation)	\$17,438.69
PROFIT (FIXED FEE) @	10.0%	(of Direct Labor + Escalation + Overhead)	\$4,512.13
			TOTAL MULTIPLIERS
			\$32,573.46

OTHER DIRECT COSTS

... Billed at Actual Cost (See ODC Cost Estimate Work Sheet) ...

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
Mileage and Travel		LS		
Miscellaneous (Collect Traffic Counts)		LS		

TOTAL ODC'S

TOTAL **\$49,633.46**

SUBCONSULTANT FEE PROPOSAL WORKSHEET

COMPANY: KOA Corporation	SCOPE OF WORK: Construction Bidding and Award Supports	PHASE: Phase III
PROJECT: Replacement of Six Chuckwalla Valley Road and Railroad Avenue Bridges [BRLO-5956(228), BRLO-5956(229), BRLO-5956(239), BRLO-5956(227), BRLO-5956(226), BRLO-5956(225)]		DATE: March 27, 2017

DIRECT LABOR

PERSONNEL	POSITION	HOURS	RATE	AMOUNT		
Min Zhou	Principal Engineer		\$83.00			
Kahono Oei	Senior Engineer	8	@ \$66.00	\$528.00		
Ryan Calad	Senior Engineer		\$52.00			
Frank Barrera	Associate Planner		\$42.00			
Scott Voigt	Associate Designer	12	@ \$37.00	\$444.00		
Alan Yasuda	Engineering Assistant		\$32.00			
Elizabeth Ibarra	Administrative		\$25.00			
TOTAL HOURS				20	TOTAL DIRECT LABOR	\$972.00

MULTIPLIERS

ESCALATION @	4.83%	(of Direct Labor)	\$46.95
FRINGE BENEFIT @	54.79%	(of Direct Labor + Escalation)	\$558.28
GENERAL AND ADMINISTRATIVE @	97.51%	(of Direct Labor + Escalation)	\$993.58
PROFIT (FIXED FEE) @	10.0%	(of Direct Labor + Escalation + Overhead)	\$257.08
TOTAL MULTIPLIERS			\$1,855.89

OTHER DIRECT COSTS

*** Billed at Actual Cost (See ODC Cost Estimate Work Sheet) ***

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
Mileage and Travel		LS		
Miscellaneous (Collect Traffic Counts)		LS		

TOTAL ODC'S

TOTAL **\$2,827.89**

SUBCONSULTANT FEE PROPOSAL WORKSHEET

COMPANY: KOA Corporation	SCOPE OF WORK: Design Construction Supports	PHASE: Phase IV
PROJECT: Replacement of Six Chuckwalla Valley Road and Railroad Avenue Bridges [BRLO-5956(228), BRLO-5956(229), BRLO-5956(239), BRLO-5956(227), BRLO-5956(226), BRLO-5956(225)]		DATE: March 27, 2017

DIRECT LABOR

PERSONNEL	POSITION	HOURS	RATE	AMOUNT
Min Zhou	Principal Engineer		\$83.00	
Kahono Oei	Senior Engineer	6	@ \$66.00	\$396.00
Ryan Calad			\$52.00	
Frank Barrera	Associate Planner		\$42.00	
Scott Voigt	Associate Designer	24	@ \$37.00	\$888.00
Alan Yasuda	Engineering Assistant	12	@ \$32.00	\$384.00
Elizabeth Ibarra	Administrative		\$25.00	

TOTAL HOURS **42** TOTAL DIRECT LABOR **\$1,668.00**

MULTIPLIERS

ESCALATION @	4.83%	(of Direct Labor)	\$80.56
FRINGE BENEFIT @	54.79%	(of Direct Labor + Escalation)	\$958.04
GENERAL AND ADMINISTRATIVE @	97.51%	(of Direct Labor + Escalation)	\$1,705.03
PROFIT (FIXED FEE) @	10.0%	(of Direct Labor + Escalation + Overhead + Payroll Additives)	\$441.16
TOTAL MULTIPLIERS			\$3,184.79

OTHER DIRECT COSTS

*** Billed at Actual Cost (See ODC Cost Estimate Work Sheet) ***

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
Mileage and Travel		LS		
Miscellaneous (Collect Traffic Counts)		LS		

TOTAL ODC'S

TOTAL **\$4,852.79**

SUBCONSULTANT MANHOUR WORKSHEET SUMMARY

COMPANY: KOA Corporation	SCOPE OF WORK: Traffic	PHASE: All Phases
PROJECT: Replacement of Six Chuckwalla Valley Road and Railroad Avenue Bridges [BRL0-5956(228), BRL0-5956(229), BRL0-5956(239), BRL0-5956(227), BRL0-5956(226), BRL0-5956(225)]	DATE: March 27, 2017	

TASK	PRINCIPAL ENGINEER	SENIOR ENGINEER	SENIOR ENGINEER	ASSOCIATE PLANNER	ASSOCIATE DESIGNER	ENGINEERING ASSISTANT	ADMINISTRATIVE	HOURS
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	\$241.48	\$192.02	\$151.29	\$122.19	\$107.65	\$93.10	\$72.73	
PHASE TOTALS	38	32	104	36	160	144	56	570

PHASE I	12		28	36			18	94
PHASE II	26	18	76	124	132	38		414
PHASE III		8		12				20
PHASE IV		6		24	12			42

SUBCONSULTANT MANHOUR WORKSHEET

COMPANY: KOA Corporation	SCOPE OF WORK: Preliminary Engineering & Environment	PHASE: Phase I
PROJECT: Replacement of Six Chuckwalla Valley Road and Railroad Avenue Bridges [BRLO-5956(228), BRLO-5956(229), BRLO-5956(227), BRLO-5956(226), BRLO-5956(225)]	DATE: March 27, 2017	

PRINCIPAL ENGINEER	SENIOR ENGINEER	SENIOR ENGINEER	ASSOCIATE PLANNER	ASSOCIATE DESIGNER	ENGINEERING ASSISTANT	ADMINISTRATIVE
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\$241.48	\$192.02	\$151.29	\$122.19	\$107.65	\$93.10	\$72.73
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TASK	12	28	36	18	94	HOURS	COST
Total Manhours	12	28	36	18	94		
1.1 Project Management		6				18	\$ 1,781
1.2 Project Team Meetings	6	8		12		14	\$ 2,659
1.3 Quality Control and Quality Assurance (QC/QA)							
2.0 Research and Data Gathering							
2.1 Collect and Review Existing Information							
2.2 Conduct Field Review							
3.0 Preliminary Engineering							
3.1 Traffic Study (Technical Memorandum/Traffic Summary)	6	14	36	6		62	\$ 8,402
3.2 Preliminary Utility Mapping							
3.3 Permits							
3.4 Surveying and Right-of-Way Mapping (by County)							
3.5 Preliminary Geotechnical Studies							
3.6 Right-of-Way Requirements Map							
3.7 Geometric Approval Drawings							
3.8 Structure Advance Planning Study							
3.9 Hydrologic, Hydraulic and Scour Studies							
3.10 Advisory and Mandatory Fact Sheets							
3.11 Engineer's Estimate							
4.0 Environmental Clearance & Documentation							
4.1 Project Initiation							
4.2 Preliminary Environmental Study (PES)							
4.3 Technical Studies							
4.3.1 Hazardous Waste (Initial Site Assessment)							
4.3.2 Preliminary Site Assessment (Step-2)							
4.3.3 Water Quality Assessment Studies							
4.3.4 Natural Environmental Study							
4.3.5 Wetland Delineation and Assessment							

SUBCONSULTANT FEE PROPOSAL WORKSHEET

COMPANY: KOA Corporation	SCOPE OF WORK: Traffic	PHASE: All Phases
PROJECT: Replacement of Railroad Avenue Bridge over Fornat Wash [Br. No. 56C0099, FPN BRLO-5956(228)]		DATE: March 27, 2017

DIRECT LABOR

PERSONNEL	POSITION	HOURS	RATE	AMOUNT
Min Zhou	Principal Engineer *	7	@ \$83.00	\$581.00
Kahono Oei	Senior Engineer	6	@ \$66.00	\$396.00
Ryan Calad	Senior Engineer	20	@ \$52.00	\$1,040.00
Frank Barrera	Associate Planner	8	@ \$42.00	\$336.00
Scott Voigt	Associate Designer	24	@ \$37.00	\$888.00
Alan Yasuda	Engineering Assistant	26	@ \$32.00	\$832.00
Elizabeth Ibarra	Administrative	10	@ \$25.00	\$250.00

* Key Personnel

TOTAL HOURS **101** TOTAL DIRECT LABOR **\$4,323.00**

MULTIPLIERS

ESCALATION @	4.83% (of Direct Labor)	\$208.80
FRINGE BENEFIT @	54.79% (of Direct Labor + Escalation)	\$2,482.97
GENERAL AND ADMINISTRATIVE @	97.51% (of Direct Labor + Escalation)	\$4,418.96
PROFIT (FIXED FEE) @	10.0% (of Direct Labor + Escalation + Overhead)	\$1,143.37
TOTAL MULTIPLIERS		\$8,254.11

OTHER DIRECT COSTS

*** Billed at Actual Cost (See ODC Cost Estimate Work Sheet) ***

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
Mileage and Travel	1	LS @	\$160.50	\$160.50
Miscellaneous (Collect Traffic Counts)	1	LS @	\$250.00	\$250.00

TOTAL ODC'S **\$410.50**

TOTAL **\$12,987.61**

**ESTIMATE OF OTHER DIRECT COST (ODC) ITEMS
REPLACEMENT OF RAILROAD AVENUE BRIDGE OVER FORNAT WASH
(BR. NO. 56C0099)**

FPN: BRLO-5956(228)

Consultant: KOA Corporation

Contract No.:

Date: 3/9/2017

Reproduction Cost Breakdown			
DESCRIPTION OF ITEMS	UNIT COST	ESTIMATED QUANTITY	TOTAL COST
		0	\$0.00
		0	\$0.00
		0	\$0.00
		0	\$0.00
		0	\$0.00
SUBTOTAL COST			\$0.00
Mailing and Special Delivery Cost Breakdown			
DESCRIPTION OF ITEMS	UNIT COST	ESTIMATED QUANTITY	TOTAL COST
		0	\$0.00
		0	\$0.00
		0	\$0.00
SUBTOTAL COST			\$0.00
Mileage & Travel			
DESCRIPTION OF ITEMS	UNIT COST	ESTIMATED QUANTITY	TOTAL COST
Mileage (2017 IRS Standard Rate)	\$0.535	300	\$160.50
		0	\$0.00
TOTAL BUDGET			\$160.50
Miscellaneous			
DESCRIPTION OF ITEMS	UNIT COST	ESTIMATED QUANTITY	TOTAL COST
Traffic Counts - ADT	\$100.00	1	\$100.00
Traffic Counts - Turning Movement AM/PM	\$150.00	1	\$150.00
	\$0.00	0	\$0.00
	\$0.00	0	\$0.00
	\$0.00	0	\$0.00
SUBTOTAL COST			\$250.00
TOTAL ODCs			\$410.50

NOTES:

1. ODC items should be based on actual costs and supported by historical data and other documentation.
2. ODC items that would be considered "tools of the trade" are not reimbursable.
3. ODC items should be consistently billed directly to all clients, not just when client will pay for them as a direct cost.
4. ODC items when incurred for the same purpose, in like circumstance, should not be included in any indirect cost pool or in overhead rate.

SUBCONSULTANT FEE PROPOSAL WORKSHEET

COMPANY: KOA Corporation	SCOPE OF WORK: Preliminary Engineering & Environmental Documentation	PHASE: Phase I
PROJECT: Replacement of Railroad Avenue Bridge over Fornat Wash [Br. No. 56C0099, FPN BRLO-5956(228)]		DATE: March 27, 2017

DIRECT LABOR

PERSONNEL	POSITION	HOURS		RATE	AMOUNT
Min Zhou	Principal Engineer	2	@	\$83.00	\$166.00
Kahono Oei	Senior Engineer			\$66.00	
Ryan Calad	Senior Engineer	6	@	\$52.00	\$312.00
Frank Barrera	Associate Planner	8	@	\$42.00	\$336.00
Scott Voigt	Associate Designer			\$37.00	
Alan Yasuda	Engineering Assistant			\$32.00	
Elizabeth Ibarra	Administrative	3	@	\$25.00	\$75.00
TOTAL HOURS					19
TOTAL DIRECT LABOR					\$889.00

MULTIPLIERS

ESCALATION @	4.83%	(of Direct Labor)	\$42.94
FRINGE BENEFIT @	54.79%	(of Direct Labor + Escalation)	\$510.61
GENERAL AND ADMINISTRATIVE @	97.51%	(of Direct Labor + Escalation)	\$908.73
PROFIT (FIXED FEE) @	10.0%	(of Direct Labor + Escalation + Overhead + Payroll Additives)	\$235.13
TOTAL MULTIPLIERS			\$1,697.41

OTHER DIRECT COSTS

*** Billed at Actual Cost (See ODC Cost Estimate Work Sheet) ***

ITEM	QUANTITY	UNIT		UNIT COST	AMOUNT
Mileage and Travel	1	LS	@	\$160.50	\$160.50
Miscellaneous (Collect Traffic Counts)	1	LS	@	\$250.00	\$250.00
TOTAL ODC'S					\$410.50

TOTAL **\$2,996.91**

SUBCONSULTANT FEE PROPOSAL WORKSHEET

COMPANY: KOA Corporation	SCOPE OF WORK: Plans, Specifications & Estimate (PS&E)	PHASE: Phase II
PROJECT: Replacement of Railroad Avenue Bridge over Fomat Wash [Br. No. 56C0099, FPN BRLO-5956(228)]		DATE: March 27, 2017

DIRECT LABOR

PERSONNEL	POSITION	HOURS	RATE	AMOUNT
Min Zhou	Principal Engineer	5	@ \$83.00	\$415.00
Kahono Oei	Senior Engineer	3	@ \$66.00	\$198.00
Ryan Calad	Senior Engineer	14	@ \$52.00	\$728.00
Frank Barrera	Associate Planner		\$42.00	
Scott Voigt	Associate Designer	18	@ \$37.00	\$666.00
Alan Yasuda	Engineering Assistant	24	@ \$32.00	\$768.00
Elizabeth Ibarra	Administrative	7	@ \$25.00	\$175.00
TOTAL HOURS				71
TOTAL DIRECT LABOR				\$2,950.00

MULTIPLIERS

ESCALATION @	4.83%	(of Direct Labor)	\$142.49
FRINGE BENEFIT @	54.79%	(of Direct Labor + Escalation)	\$1,694.37
GENERAL AND ADMINISTRATIVE @	97.51%	(of Direct Labor + Escalation)	\$3,015.48
PROFIT (FIXED FEE) @	10.0%	(of Direct Labor + Escalation + Overhead)	\$780.23
TOTAL MULTIPLIERS			\$5,632.57

OTHER DIRECT COSTS

... Billed at Actual Cost (See ODC Cost Estimate Work Sheet) ...

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
Mileage and Travel		LS		
Miscellaneous (Collect Traffic Counts)		LS		

TOTAL ODC'S

TOTAL

\$8,582.57

SUBCONSULTANT FEE PROPOSAL WORKSHEET

COMPANY: KOA Corporation	SCOPE OF WORK: Construction Bidding and Award Supports	PHASE: Phase III
PROJECT: Replacement of Railroad Avenue Bridge over Fornat Wash [Br. No. 56C0099, FPN BRLO-5956(228)]		DATE: March 27, 2017

DIRECT LABOR

PERSONNEL	POSITION	HOURS	RATE	AMOUNT
Min Zhou	Principal Engineer		\$83.00	
Kahono Oei	Senior Engineer	2	@ \$66.00	\$132.00
Ryan Calad	Senior Engineer		\$52.00	
Frank Barrera	Associate Planner		\$42.00	
Scott Voigt	Associate Designer	2	@ \$37.00	\$74.00
Alan Yasuda	Engineering Assistant		\$32.00	
Elizabeth Ibarra	Administrative		\$25.00	
TOTAL HOURS				4
TOTAL DIRECT LABOR				\$206.00

MULTIPLIERS

ESCALATION @	4.83%	(of Direct Labor)	\$9.95
FRINGE BENEFIT @	54.79%	(of Direct Labor + Escalation)	\$118.32
GENERAL AND ADMINISTRATIVE @	97.51%	(of Direct Labor + Escalation)	\$210.57
PROFIT (FIXED FEE) @	10.0%	(of Direct Labor + Escalation + Overhead)	\$54.48
TOTAL MULTIPLIERS			\$393.33

OTHER DIRECT COSTS

*** Billed at Actual Cost (See ODC Cost Estimate Work Sheet) ***

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
Mileage and Travel		LS		
Miscellaneous (Collect Traffic Counts)		LS		
TOTAL ODC'S				

TOTAL \$599.33

SUBCONSULTANT FEE PROPOSAL WORKSHEET

COMPANY: KOA Corporation	SCOPE OF WORK: Design Construction Supports	PHASE: Phase IV
PROJECT: Replacement of Railroad Avenue Bridge over Fornat Wash [Br. No. 56C0099, FPN BRLO-5956(228)]		DATE: March 27, 2017

DIRECT LABOR

PERSONNEL	POSITION	HOURS	RATE	AMOUNT		
Min Zhou	Principal Engineer		\$83.00			
Kahono Oei	Senior Engineer	1	@ \$66.00	\$66.00		
Ryan Calad			\$52.00			
Frank Barrera	Associate Planner		\$42.00			
Scott Voigt	Associate Designer	4	@ \$37.00	\$148.00		
Alan Yasuda	Engineering Assistant	2	@ \$32.00	\$64.00		
Elizabeth Ibarra	Administrative		\$25.00			
TOTAL HOURS				7	TOTAL DIRECT LABOR	\$278.00

MULTIPLIERS

ESCALATION @	4.83%	(of Direct Labor)	\$13.43
FRINGE BENEFIT @	54.79%	(of Direct Labor + Escalation)	\$159.67
GENERAL AND ADMINISTRATIVE @	97.51%	(of Direct Labor + Escalation)	\$284.17
PROFIT (FIXED FEE) @	10.0%	(of Direct Labor + Escalation + Overhead + Payroll Additives)	\$73.53
TOTAL MULTIPLIERS			\$530.80

OTHER DIRECT COSTS

*** Billed at Actual Cost (See ODC Cost Estimate Work Sheet) ***

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
Mileage and Travel		LS		
Miscellaneous (Collect Traffic Counts)		LS		
TOTAL ODC'S				

TOTAL **\$808.80**

SUBCONSULTANT MANHOUR WORKSHEET SUMMARY

COMPANY: KOA Corporation	SCOPE OF WORK: Traffic	PHASE: All Phases
PROJECT: Replacement of Railroad Avenue Bridge over Format Wash [Br. No. 56C0099, FPN BRLO-5956(228)]	DATE: March 27, 2017	

PRINCIPAL ENGINEER	SENIOR ENGINEER	SENIOR ENGINEER	ASSOCIATE PLANNER	ASSOCIATE DESIGNER	ENGINEERING ASSISTANT	ADMINISTRATIVE	HOURS
--------------------	-----------------	-----------------	-------------------	--------------------	-----------------------	----------------	-------

\$241.48	\$192.02	\$151.29	\$122.19	\$107.65	\$93.10	\$72.73	
7	6	20	8	24	26	10	101

PHASE TOTALS

PHASE I	2	6	8	3			19
PHASE II	5	3	14	18	24	7	71
PHASE III		2		2			4
PHASE IV		1		4	2		7

SUBCONSULTANT FEE PROPOSAL WORKSHEET

COMPANY: KOA Corporation	SCOPE OF WORK: Traffic	PHASE: All Phases
PROJECT: Replacement of Railroad Avenue Bridge over East Channel Stubbe Wash [Br. No. 56C0101, FPN BRLO-5956(229)]		DATE: March 27, 2017

DIRECT LABOR

PERSONNEL	POSITION	HOURS	RATE	AMOUNT
Min Zhou	Principal Engineer *	7	@ \$83.00	\$581.00
Kahono Oei	Senior Engineer	6	@ \$66.00	\$396.00
Ryan Calad	Senior Engineer	20	@ \$52.00	\$1,040.00
Frank Barrera	Associate Planner	8	@ \$42.00	\$336.00
Scott Voigt	Associate Designer	24	@ \$37.00	\$888.00
Alan Yasuda	Engineering Assistant	26	@ \$32.00	\$832.00
Elizabeth Ibarra	Administrative	10	@ \$25.00	\$250.00

* Key Personnel

TOTAL HOURS 101 TOTAL DIRECT LABOR \$4,323.00

MULTIPLIERS

ESCALATION @	4.83%	(of Direct Labor)	\$208.80
FRINGE BENEFIT @	54.79%	(of Direct Labor + Escalation)	\$2,482.97
GENERAL AND ADMINISTRATIVE @	97.51%	(of Direct Labor + Escalation)	\$4,418.96
PROFIT (FIXED FEE) @	10.0%	(of Direct Labor + Escalation + Overhead)	\$1,143.37
TOTAL MULTIPLIERS			\$8,254.11

OTHER DIRECT COSTS

*** Billed at Actual Cost (See ODC Cost Estimate Work Sheet) ***

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
Mileage and Travel	1	LS @	\$160.50	\$160.50
Miscellaneous (Collect Traffic Counts)	1	LS @	\$250.00	\$250.00

TOTAL ODC'S \$410.50

TOTAL \$12,987.61

ESTIMATE OF OTHER DIRECT COST (ODC) ITEMS
REPLACEMENT OF RAILROAD AVENUE BRIDGE OVER EAST CHANNEL STUBBE WASH
(BR. NO. 56C0101)

FPN: BRLO-5956(229)

Consultant: KOA Corporation

Contract No.:

Date: 3/9/2017

Reproduction Cost Breakdown			
DESCRIPTION OF ITEMS	UNIT COST	ESTIMATED QUANTITY	TOTAL COST
		0	\$0.00
		0	\$0.00
		0	\$0.00
		0	\$0.00
		0	\$0.00
SUBTOTAL COST			\$0.00
Mailing and Special Delivery Cost Breakdown			
DESCRIPTION OF ITEMS	UNIT COST	ESTIMATED QUANTITY	TOTAL COST
		0	\$0.00
		0	\$0.00
		0	\$0.00
SUBTOTAL COST			\$0.00
Mileage & Travel			
DESCRIPTION OF ITEMS	UNIT COST	ESTIMATED QUANTITY	TOTAL COST
Mileage (2017 IRS Standard Rate)	\$0.535	300	\$160.50
		0	\$0.00
TOTAL BUDGET			\$160.50
Miscellaneous			
DESCRIPTION OF ITEMS	UNIT COST	ESTIMATED QUANTITY	TOTAL COST
Traffic Counts - ADT	\$100.00	1	\$100.00
Traffic Counts - Turning Movement AM/PM	\$150.00	1	\$150.00
	\$0.00	0	\$0.00
	\$0.00	0	\$0.00
	\$0.00	0	\$0.00
SUBTOTAL COST			\$250.00
TOTAL ODCs			\$410.50

NOTES:

1. ODC items should be based on actual costs and supported by historical data and other documentation.
2. ODC items that would be considered "tools of the trade" are not reimbursable.
3. ODC items should be consistently billed directly to all clients, not just when client will pay for them as-a direct cost.
4. ODC items when incurred for the same purpose, in like circumstance, should not be included in any indirect cost pool or in overhead rate.

SUBCONSULTANT FEE PROPOSAL WORKSHEET

COMPANY: KOA Corporation	SCOPE OF WORK: Preliminary Engineering & Environmental Documentation	PHASE: Phase I
PROJECT: Replacement of Railroad Avenue Bridge over East Channel Stubbe Wash [Br. No. 56C0101, FPN BRLO-5956(229)]		DATE: March 27, 2017

DIRECT LABOR

PERSONNEL	POSITION	HOURS		RATE	AMOUNT		
Min Zhou	Principal Engineer	2	@	\$83.00	\$166.00		
Kahono Oei	Senior Engineer			\$66.00			
Ryan Calad	Senior Engineer	6	@	\$52.00	\$312.00		
Frank Barrera	Associate Planner	8	@	\$42.00	\$336.00		
Scott Voigt	Associate Designer			\$37.00			
Alan Yasuda	Engineering Assistant			\$32.00			
Elizabeth Ibarra	Administrative	3	@	\$25.00	\$75.00		
TOTAL HOURS					19	TOTAL DIRECT LABOR	\$889.00

MULTIPLIERS

ESCALATION @	4.83%	(of Direct Labor)	\$42.94
FRINGE BENEFIT @	54.79%	(of Direct Labor + Escalation)	\$510.61
GENERAL AND ADMINISTRATIVE @	97.51%	(of Direct Labor + Escalation)	\$908.73
PROFIT (FIXED FEE) @	10.0%	(of Direct Labor + Escalation + Overhead + Payroll Additives)	\$235.13
TOTAL MULTIPLIERS			\$1,697.41

OTHER DIRECT COSTS

*** Billed at Actual Cost (See ODC Cost Estimate Work Sheet) ***

ITEM	QUANTITY	UNIT		UNIT COST	AMOUNT
Mileage and Travel	1	LS	@	\$160.50	\$160.50
Miscellaneous (Collect Traffic Counts)	1	LS	@	\$250.00	\$250.00
TOTAL ODC'S					\$410.50

TOTAL **\$2,996.91**

SUBCONSULTANT FEE PROPOSAL WORKSHEET

COMPANY: KOA Corporation	SCOPE OF WORK: Plans, Specifications & Estimate (PS&E)	PHASE: Phase II
PROJECT: Replacement of Railroad Avenue Bridge over East Channel Stubbe Wash [Br. No. 56C0101, FPN BRLO-5956(229)]		DATE: March 27, 2017

DIRECT LABOR

PERSONNEL	POSITION	HOURS	RATE	AMOUNT
Min Zhou	Principal Engineer	5	@ \$83.00	\$415.00
Kahono Oei	Senior Engineer	3	@ \$66.00	\$198.00
Ryan Calad	Senior Engineer	14	@ \$52.00	\$728.00
Frank Barrera	Associate Planner		\$42.00	
Scott Voigt	Associate Designer	18	@ \$37.00	\$666.00
Alan Yasuda	Engineering Assistant	24	@ \$32.00	\$768.00
Elizabeth Ibarra	Administrative	7	@ \$25.00	\$175.00
TOTAL HOURS		71	TOTAL DIRECT LABOR	\$2,950.00

MULTIPLIERS

ESCALATION @	4.83% (of Direct Labor)	\$142.49
FRINGE BENEFIT @	54.79% (of Direct Labor + Escalation)	\$1,694.37
GENERAL AND ADMINISTRATIVE @	97.51% (of Direct Labor + Escalation)	\$3,015.48
PROFIT (FIXED FEE) @	10.0% (of Direct Labor + Escalation + Overhead)	\$780.23
TOTAL MULTIPLIERS		\$5,632.57

OTHER DIRECT COSTS

*** Billed at Actual Cost (See ODC Cost Estimate Work Sheet) ***

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
Mileage and Travel		LS		
Miscellaneous (Collect Traffic Counts)		LS		
TOTAL ODC'S				

TOTAL \$8,582.57

SUBCONSULTANT FEE PROPOSAL WORKSHEET

COMPANY:

KOA Corporation

SCOPE OF WORK:

Construction Bidding and Award Supports

PHASE:

Phase III

PROJECT:

Replacement of Railroad Avenue Bridge over East Channel Stubbe Wash [Br. No. 56C0101, FPN BRLO-5956(229)]

DATE:

March 27, 2017

DIRECT LABOR

PERSONNEL	POSITION	HOURS	RATE	AMOUNT	
Min Zhou	Principal Engineer		\$83.00		
Kahono Oei	Senior Engineer	2	@	\$132.00	
Ryan Calad	Senior Engineer		\$52.00		
Frank Barrera	Associate Planner		\$42.00		
Scott Voigt	Associate Designer	2	@	\$74.00	
Alan Yasuda	Engineering Assistant		\$32.00		
Elizabeth Ibarra	Administrative		\$25.00		
		TOTAL HOURS	4	TOTAL DIRECT LABOR	\$206.00

MULTIPLIERS

ESCALATION @	4.83%	(of Direct Labor)	\$9.95	
FRINGE BENEFIT @	54.79%	(of Direct Labor + Escalation)	\$118.32	
GENERAL AND ADMINISTRATIVE @	97.51%	(of Direct Labor + Escalation)	\$210.57	
PROFIT (FIXED FEE) @	10.0%	(of Direct Labor + Escalation + Overhead)	\$54.48	
			TOTAL MULTIPLIERS	\$393.33

OTHER DIRECT COSTS

*** Billed at Actual Cost (See ODC Cost Estimate Work Sheet) ***

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
Mileage and Travel		LS		
Miscellaneous (Collect Traffic Counts)		LS		
				TOTAL ODC'S

TOTAL **\$599.33**

SUBCONSULTANT FEE PROPOSAL WORKSHEET		
COMPANY: KOA Corporation	SCOPE OF WORK: Design Construction Supports	PHASE: Phase IV
PROJECT: Replacement of Railroad Avenue Bridge over East Channel Stubbe Wash [Br. No. 56C0101, FPN BRLO-5956(229)]		DATE: March 27, 2017

DIRECT LABOR

PERSONNEL	POSITION	HOURS	RATE	AMOUNT
Min Zhou	Principal Engineer		\$83.00	
Kahono Oei	Senior Engineer	1	@ \$66.00	\$66.00
Ryan Calad			\$52.00	
Frank Barrera	Associate Planner		\$42.00	
Scott Voigt	Associate Designer	4	@ \$37.00	\$148.00
Alan Yasuda	Engineering Assistant	2	@ \$32.00	\$64.00
Elizabeth Ibarra	Administrative		\$25.00	

TOTAL HOURS 7 TOTAL DIRECT LABOR \$278.00

MULTIPLIERS

ESCALATION @	4.83%	(of Direct Labor)	\$13.43
FRINGE BENEFIT @	54.79%	(of Direct Labor + Escalation)	\$159.67
GENERAL AND ADMINISTRATIVE @	97.51%	(of Direct Labor + Escalation)	\$284.17
PROFIT (FIXED FEE) @	10.0%	(of Direct Labor + Escalation + Overhead + Payroll Additives)	\$73.53
		TOTAL MULTIPLIERS	\$530.80

OTHER DIRECT COSTS

*** Billed at Actual Cost (See ODC Cost Estimate Work Sheet) ***

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
Mileage and Travel		LS		
Miscellaneous (Collect Traffic Counts)		LS		

TOTAL ODC'S

TOTAL **\$808.80**

SUBCONSULTANT MANHOOR WORKSHEET SUMMARY	
COMPANY: KOA Corporation	SCOPE OF WORK: Traffic
PROJECT: Replacement of Railroad Avenue Bridge over East Channel Stubbe Wash [Br. No. 56C0101, FPN BRLO-5956(z29)]	PHASE: All Phases
	DATE: March 27, 2017

TASK	PRINCIPAL ENGINEER	SENIOR ENGINEER	SENIOR ENGINEER	SENIOR ENGINEER	ASSOCIATE PLANNER	ASSOCIATE DESIGNER	ENGINEERING ASSISTANT	ADMINISTRATIVE	HOURS

	\$241.48	\$192.02	\$151.29	\$122.19	\$107.66	\$93.10	\$72.73	
PHASE TOTALS	7	6	6	20	8	24	26	10
								101

PHASE I	2		6	8			3	19
PHASE II	5	3	14	18	24	7		71
PHASE III		2		2				4
PHASE IV		1		4	2			7

SUBCONSULTANT MANHOUR WORKSHEET

COMPANY: KOA Corporation	SCOPE OF WORK: Preliminary Engineering & Environment	PHASE: Phase I
PROJECT: Replacement of Railroad Avenue Bridge over East Channel Stubbe Wash [Br. No. 56C0101, FPN BRLO-5956(229)]	DATE: March 27, 2017	

PRINCIPAL ENGINEER	SENIOR ENGINEER	SENIOR ENGINEER	ASSOCIATE PLANNER	ASSOCIATE DESIGNER	ENGINEERING ASSISTANT	ADMINISTRATIVE
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\$241.48	\$192.02	\$151.29	\$122.19	\$107.65	\$93.10	\$72.73
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Total Manhours	2	6	8	3	19
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TASK	2	6	8	3	19	HOURS	COST
1.1 Project Management		1				1	
1.2 Project Team Meetings	1	2				3	\$ 297
1.3 Quality Control and Quality Assurance (QC/QA)							
2.0 Research and Data Gathering							
2.1 Collect and Review Existing Information							
2.2 Conduct Field Review							
3.0 Preliminary Engineering							
3.1 Traffic Study (Technical Memorandum/Traffic Summary)	1	3	8	1	13	13	\$ 1,746
3.2 Preliminary Utility Mapping							
3.3 Permits							
3.4 Surveying and Right-of-Way Mapping (by County)							
3.5 Preliminary Geotechnical Studies							
3.6 Right-of-Way Requirements Map							
3.7 Geometric Approval Drawings							
3.8 Structure Advance Planning Study							
3.9 Hydrologic, Hydraulic and Scour Studies							
3.10 Advisory and Mandatory Fact Sheets							
3.11 Engineer's Estimate							
4.0 Environmental Clearance & Documentation							
4.1 Project Initiation							
4.2 Preliminary Environmental Study (PES)							
4.3 Technical Studies							
4.3.1 Hazardous Waste (Initial Site Assessment)							
4.3.2 Preliminary Site Assessment (Step-2)							
4.3.3 Water Quality Assessment Studies							
4.3.4 Natural Environmental Study							
4.3.5 Wetland Delineation and Assessment							

SUBCONSULTANT FEE PROPOSAL WORKSHEET

COMPANY: KOA Corporation	SCOPE OF WORK: Traffic	PHASE: All Phases
PROJECT: Replacement of Chuckwalla Valley Road over Aztec Ditch [Br. No. 56C0102, FPN BRLO-5956(239)]		DATE: March 27, 2017

DIRECT LABOR

PERSONNEL	POSITION	HOURS		RATE	AMOUNT
Min Zhou	Principal Engineer *	6	@	\$83.00	\$498.00
Kahono Oei	Senior Engineer	5	@	\$66.00	\$330.00
Ryan Calad	Senior Engineer	16	@	\$52.00	\$832.00
Frank Barrera	Associate Planner	5	@	\$42.00	\$210.00
Scott Voigt	Associate Designer	28	@	\$37.00	\$1,036.00
Alan Yasuda	Engineering Assistant	23	@	\$32.00	\$736.00
Elizabeth Ibarra	Administrative	9	@	\$25.00	\$225.00

* Key Personnel

TOTAL HOURS 92 TOTAL DIRECT LABOR \$3,867.00

MULTIPLIERS

ESCALATION @	4.83%	(of Direct Labor)	\$186.78
FRINGE BENEFIT @	54.79%	(of Direct Labor + Escalation)	\$2,221.06
GENERAL AND ADMINISTRATIVE @	97.51%	(of Direct Labor + Escalation)	\$3,952.84
PROFIT (FIXED FEE) @	10.0%	(of Direct Labor + Escalation + Overhead)	\$1,022.77
TOTAL MULTIPLIERS			\$7,383.44

OTHER DIRECT COSTS

*** Billed at Actual Cost (See ODC Cost Estimate Work Sheet) ***

ITEM	QUANTITY	UNIT		UNIT COST	AMOUNT
Mileage and Travel	1	LS	@	\$160.50	\$160.50
Miscellaneous (Collect Traffic Counts)	1	LS	@	\$250.00	\$250.00

TOTAL ODC'S \$410.50

TOTAL \$11,660.94

**ESTIMATE OF OTHER DIRECT COST (ODC) ITEMS
REPLACEMENT OF CHUCKWALLA VALLEY ROAD BRIDGE OVER AZTEC DITCH
(BR. NO. 56C0102)**

FPN: BRLO-5956(239)

Consultant: KOA Corporation

Contract No.: _____

Date: 3/9/2017

Reproduction Cost Breakdown			
DESCRIPTION OF ITEMS	UNIT COST	ESTIMATED QUANTITY	TOTAL COST
		0	\$0.00
		0	\$0.00
		0	\$0.00
		0	\$0.00
		0	\$0.00
SUBTOTAL COST			\$0.00
Mailing and Special Delivery Cost Breakdown			
DESCRIPTION OF ITEMS	UNIT COST	ESTIMATED QUANTITY	TOTAL COST
		0	\$0.00
		0	\$0.00
		0	\$0.00
SUBTOTAL COST			\$0.00
Mileage & Travel			
DESCRIPTION OF ITEMS	UNIT COST	ESTIMATED QUANTITY	TOTAL COST
Mileage (2017 IRS Standard Rate)	\$0.535	300	\$160.50
		0	\$0.00
TOTAL BUDGET			\$160.50
Miscellaneous			
DESCRIPTION OF ITEMS	UNIT COST	ESTIMATED QUANTITY	TOTAL COST
Traffic Counts - ADT	\$100.00	1	\$100.00
Traffic Counts - Turning Movement AM/PM	\$150.00	1	\$150.00
	\$0.00	0	\$0.00
	\$0.00	0	\$0.00
	\$0.00	0	\$0.00
SUBTOTAL COST			\$250.00
TOTAL ODCs			\$410.50

NOTES:

1. ODC items should be based on actual costs and supported by historical data and other documentation.
2. ODC items that would be considered "tools of the trade" are not reimbursable.
3. ODC items should be consistently billed directly to all clients, not just when client will pay for them as a direct cost.
4. ODC items when incurred for the same purpose, in like circumstance, should not be included in any indirect cost pool or in overhead rate.

SUBCONSULTANT FEE PROPOSAL WORKSHEET

COMPANY: KOA Corporation	SCOPE OF WORK: Preliminary Engineering & Environmental Documentation	PHASE: Phase I
PROJECT: Replacement of Chuckwalla Valley Road over Aztec Ditch [Br. No. 56C0102, FPN BRLO-5956(239)]		DATE: March 27, 2017

DIRECT LABOR

PERSONNEL	POSITION	HOURS		RATE	AMOUNT		
Min Zhou	Principal Engineer	2	@	\$83.00	\$166.00		
Kahono Oei	Senior Engineer			\$66.00			
Ryan Calad	Senior Engineer	4	@	\$52.00	\$208.00		
Frank Barrera	Associate Planner	5	@	\$42.00	\$210.00		
Scott Voigt	Associate Designer			\$37.00			
Alan Yasuda	Engineering Assistant			\$32.00			
Elizabeth Ibarra	Administrative	3	@	\$25.00	\$75.00		
TOTAL HOURS					14	TOTAL DIRECT LABOR	\$659.00

MULTIPLIERS

ESCALATION @	4.83%	(of Direct Labor)	\$31.83
FRINGE BENEFIT @	54.79%	(of Direct Labor + Escalation)	\$378.51
GENERAL AND ADMINISTRATIVE @	97.51%	(of Direct Labor + Escalation)	\$673.63
PROFIT (FIXED FEE) @	10.0%	(of Direct Labor + Escalation + Overhead + Payroll Additives)	\$174.30
TOTAL MULTIPLIERS			\$1,258.26

OTHER DIRECT COSTS

*** Billed at Actual Cost (See ODC Cost Estimate Work Sheet) ***

ITEM	QUANTITY	UNIT		UNIT COST	AMOUNT
Mileage and Travel	1	LS	@	\$160.50	\$160.50
Miscellaneous (Collect Traffic Counts)	1	LS	@	\$250.00	\$250.00
TOTAL ODC'S					\$410.50

TOTAL **\$2,327.76**

SUBCONSULTANT FEE PROPOSAL WORKSHEET

COMPANY: KOA Corporation	SCOPE OF WORK: Plans, Specifications & Estimate (PS&E)	PHASE: Phase II
PROJECT: Replacement of Chuckwalla Valley Road over Aztec Ditch [Br. No. 56C0102, FPN BRLO-5956(239)]		DATE: March 27, 2017

DIRECT LABOR

PERSONNEL	POSITION	HOURS	RATE	AMOUNT
Min Zhou	Principal Engineer	4	@ \$83.00	\$332.00
Kahono Oei	Senior Engineer	3	@ \$66.00	\$198.00
Ryan Calad	Senior Engineer	12	@ \$52.00	\$624.00
Frank Barrera	Associate Planner		\$42.00	
Scott Voigt	Associate Designer	22	@ \$37.00	\$814.00
Alan Yasuda	Engineering Assistant	21	@ \$32.00	\$672.00
Elizabeth Ibarra	Administrative	6	@ \$25.00	\$150.00
TOTAL HOURS				68
TOTAL DIRECT LABOR				\$2,790.00

MULTIPLIERS

ESCALATION @	4.83%	(of Direct Labor)	\$134.76
FRINGE BENEFIT @	54.79%	(of Direct Labor + Escalation)	\$1,602.47
GENERAL AND ADMINISTRATIVE @	97.51%	(of Direct Labor + Escalation)	\$2,851.93
PROFIT (FIXED FEE) @	10.0%	(of Direct Labor + Escalation + Overhead)	\$737.92
TOTAL MULTIPLIERS			\$5,327.08

OTHER DIRECT COSTS

*** Billed at Actual Cost (See ODC Cost Estimate Work Sheet) ***

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
Mileage and Travel		LS		
Miscellaneous (Collect Traffic Counts)		LS		
TOTAL ODC'S				

TOTAL \$8,117.08

SUBCONSULTANT FEE PROPOSAL WORKSHEET

COMPANY: KOA Corporation	SCOPE OF WORK: Design Construction Supports	PHASE: Phase IV
PROJECT: Replacement of Chuckwalla Valley Road over Aztec Ditch [Br. No. 56C0102, FPN BRLO-5956(239)]		DATE: March 27, 2017

DIRECT LABOR

PERSONNEL	POSITION	HOURS	RATE	AMOUNT		
Min Zhou	Principal Engineer		\$83.00			
Kahono Oei	Senior Engineer	1	@ \$66.00	\$66.00		
Ryan Calad			\$52.00			
Frank Barrera	Associate Planner		\$42.00			
Scott Voigt	Associate Designer	4	@ \$37.00	\$148.00		
Alan Yasuda	Engineering Assistant	2	@ \$32.00	\$64.00		
Elizabeth Ibarra	Administrative		\$25.00			
TOTAL HOURS				7	TOTAL DIRECT LABOR	\$278.00

MULTIPLIERS

ESCALATION @	4.83%	(of Direct Labor)	\$13.43
FRINGE BENEFIT @	54.79%	(of Direct Labor + Escalation)	\$159.67
GENERAL AND ADMINISTRATIVE @	97.51%	(of Direct Labor + Escalation)	\$284.17
PROFIT (FIXED FEE) @	10.0%	(of Direct Labor + Escalation + Overhead + Payroll Additives)	\$73.53
TOTAL MULTIPLIERS			\$530.80

OTHER DIRECT COSTS

*** Billed at Actual Cost (See ODC Cost Estimate Work Sheet) ***

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
Mileage and Travel		LS		
Miscellaneous (Collect Traffic Counts)		LS		
TOTAL ODC'S				

TOTAL \$808.80

SUBCONSULTANT MANHOOR WORKSHEET SUMMARY	
COMPANY: KOA Corporation	SCOPE OF WORK: Traffic
PROJECT: Replacement of Chuckwalla Valley Road over Aztec Ditch [Br. No. 56C0102, FPN BRLO-5956(239)]	PHASE: All Phases
	DATE: March 27, 2017

TASK	PRINCIPAL ENGINEER	SENIOR ENGINEER	SENIOR ENGINEER	SENIOR ENGINEER	ASSOCIATE PLANNER	ASSOCIATE DESIGNER	ENGINEERING ASSISTANT	ADMINISTRATIVE	HOURS
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	\$241.48	\$192.02	\$151.29	\$122.19	\$107.65	\$93.10	\$72.73		
PHASE TOTALS	6	5	16	5	28	23	9	9	92

PHASE I	2		4	5			3		14
PHASE II	4	3	12		22	21	6		68
PHASE III		1			2				3
PHASE IV		1			4	2			7

SUBCONSULTANT MANHOUR WORKSHEET

COMPANY: KOA Corporation

PROJECT: Replacement of Chuckwalla Valley Road over Aztec Ditch [Br. No. 55C0102, FPN BRLO-5956(239)]

SCOPE OF WORK: Plans, Specifications & Estimate (PS&E)

PHASE: Phase II

DATE: March 27, 2017

1 x

PRINCIPAL ENGINEER
SENIOR ENGINEER
SENIOR ENGINEER
ASSOCIATE PLANNER
ASSOCIATE DESIGNER
ENGINEERING ASSISTANT
ADMINISTRATIVE

HOURS COST

	4	3	12	22	21	6	68
Total Manhours	4	3	12	22	21	6	68
1.1 Project Management	1		1				4
1.2 Project Team Meetings	1		1			2	2
1.3 Quality Control and Quality Assurance (QC/QA)							
5.1 Foundation Design Report							
5.2 Storm Water Pollution Prevention Plan (SWPPP)							
5.3 Utility Relocation Coordination							
5.4 65% Roadway Plans							
5.5 65% Signing, Striping and Detour Plans	2	2	6	16	16	2.0	44
5.6 95% Civil Roadway PS&E		1	2	3	3	1	10
5.7 Bridge Type Selection							
5.8 65% Unchecked Structure Plans							
5.9 Bridge Design Independent Check							
5.10 95% Structure PS&E							
5.11 Final 100% Design PS&E and Contract Bid Documents			2	3	2	1	8
5.12 Right-of-Way Legal Descriptions and Plats (by County)							
5.13 Right-of-Way Appraisal and Acquisition (by County)							
6.0 Permitting							
6.1 ACOE Section 404 Nationwide Permit							
6.2 RWQCB Section 401 Water Quality Certification							
6.3 CDFW Section 1602 Streambed Alteration Agreement							
6.4 Caltrans Encroachment Permit (Step 2)							

SUBCONSULTANT FEE PROPOSAL WORKSHEET

COMPANY: KOA Corporation	SCOPE OF WORK: Traffic	PHASE: All Phases
PROJECT: Replacement of Chuckwalla Valley Road over Tarantula Ditch [Br. No. 56C0103, FPN BRLO-5956(227)]		DATE: March 27, 2017

DIRECT LABOR

PERSONNEL	POSITION	HOURS		RATE	AMOUNT
Min Zhou	Principal Engineer *	6	@	\$83.00	\$498.00
Kahono Oei	Senior Engineer	5	@	\$66.00	\$330.00
Ryan Calad	Senior Engineer	16	@	\$52.00	\$832.00
Frank Barrera	Associate Planner	5	@	\$42.00	\$210.00
Scott Voigt	Associate Designer	28	@	\$37.00	\$1,036.00
Alan Yasuda	Engineering Assistant	23	@	\$32.00	\$736.00
Elizabeth Ibarra	Administrative	9	@	\$25.00	\$225.00

* Key Personnel

TOTAL HOURS 92 TOTAL DIRECT LABOR \$3,867.00

MULTIPLIERS

ESCALATION @	4.83%	(of Direct Labor)	\$186.78
FRINGE BENEFIT @	54.79%	(of Direct Labor + Escalation)	\$2,221.06
GENERAL AND ADMINISTRATIVE @	97.51%	(of Direct Labor + Escalation)	\$3,952.84
PROFIT (FIXED FEE) @	10.0%	(of Direct Labor + Escalation + Overhead)	\$1,022.77
TOTAL MULTIPLIERS			\$7,383.44

OTHER DIRECT COSTS

*** Billed at Actual Cost (See ODC Cost Estimate Work Sheet) ***

ITEM	QUANTITY	UNIT		UNIT COST	AMOUNT
Mileage and Travel	1	LS	@	\$160.50	\$160.50
Miscellaneous (Collect Traffic Counts)	1	LS	@	\$250.00	\$250.00

TOTAL ODC'S \$410.50

TOTAL \$11,660.94

ESTIMATE OF OTHER DIRECT COST (ODC) ITEMS
REPLACEMENT OF CHUCKWALLA VALLEY ROAD BRIDGE OVER TARANTULA DITCH
(BR. NO. 56C0103)

FPN: BRLO-5956(227)

Consultant: KOA Corporation

Contract No.:

Date: 3/9/2017

Reproduction Cost Breakdown			
DESCRIPTION OF ITEMS	UNIT COST	ESTIMATED QUANTITY	TOTAL COST
		0	\$0.00
		0	\$0.00
		0	\$0.00
		0	\$0.00
		0	\$0.00
SUBTOTAL COST			\$0.00
Mailing and Special Delivery Cost Breakdown			
DESCRIPTION OF ITEMS	UNIT COST	ESTIMATED QUANTITY	TOTAL COST
		0	\$0.00
		0	\$0.00
		0	\$0.00
SUBTOTAL COST			\$0.00
Mileage & Travel			
DESCRIPTION OF ITEMS	UNIT COST	ESTIMATED QUANTITY	TOTAL COST
Mileage (2017 IRS Standard Rate)	\$0.535	300	\$160.50
		0	\$0.00
TOTAL BUDGET			\$160.50
Miscellaneous			
DESCRIPTION OF ITEMS	UNIT COST	ESTIMATED QUANTITY	TOTAL COST
Traffic Counts - ADT	\$100.00	1	\$100.00
Traffic Counts - Turning Movement AM/PM	\$150.00	1	\$150.00
	\$0.00	0	\$0.00
	\$0.00	0	\$0.00
	\$0.00	0	\$0.00
SUBTOTAL COST			\$250.00
TOTAL ODCs			\$410.50

NOTES:

1. ODC items should be based on actual costs and supported by historical data and other documentation.
2. ODC items that would be considered "tools of the trade" are not reimbursable.
3. ODC items should be consistently billed directly to all clients, not just when client will pay for them as a direct cost.
4. ODC items when incurred for the same purpose, in like circumstance, should not be included in any indirect cost pool or in overhead rate.

SUBCONSULTANT FEE PROPOSAL WORKSHEET

COMPANY: KOA Corporation	SCOPE OF WORK: Preliminary Engineering & Environmental Documentation	PHASE: Phase I
PROJECT: Replacement of Chuckwalla Valley Road over Tarantula Ditch [Br. No. 56C0103, FPN BRLO-5956(227)]		DATE: March 27, 2017

DIRECT LABOR

PERSONNEL	POSITION	HOURS	RATE	AMOUNT
Min Zhou	Principal Engineer	2	@ \$83.00	\$166.00
Kahono Oei	Senior Engineer		\$66.00	
Ryan Calad	Senior Engineer	4	@ \$52.00	\$208.00
Frank Barrera	Associate Planner	5	@ \$42.00	\$210.00
Scott Voigt	Associate Designer		\$37.00	
Alan Yasuda	Engineering Assistant		\$32.00	
Elizabeth Ibarra	Administrative	3	@ \$25.00	\$75.00
TOTAL HOURS		14	TOTAL DIRECT LABOR	\$659.00

MULTIPLIERS

ESCALATION @	4.83%	(of Direct Labor)	\$31.83
FRINGE BENEFIT @	54.79%	(of Direct Labor + Escalation)	\$378.51
GENERAL AND ADMINISTRATIVE @	97.51%	(of Direct Labor + Escalation)	\$673.63
PROFIT (FIXED FEE) @	10.0%	(of Direct Labor + Escalation + Overhead + Payroll Additives)	\$174.30
TOTAL MULTIPLIERS			\$1,258.26

OTHER DIRECT COSTS

*** Billed at Actual Cost (See ODC Cost Estimate Work Sheet) ***

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
Mileage and Travel	1	LS @	\$160.50	\$160.50
Miscellaneous (Collect Traffic Counts)	1	LS @	\$250.00	\$250.00
TOTAL ODC'S				\$410.50

TOTAL \$2,327.76

SUBCONSULTANT FEE PROPOSAL WORKSHEET

COMPANY: KOA Corporation	SCOPE OF WORK: Preliminary Engineering & Environmental Documentation	PHASE: Phase II
PROJECT: Replacement of Chuckwalla Valley Road over Tarantula Ditch [Br. No. 56C0103, FPN BRLO-5956(227)]		DATE: March 27, 2017

DIRECT LABOR

PERSONNEL	POSITION	HOURS	RATE	AMOUNT
Min Zhou	Principal Engineer	4	@ \$83.00	\$332.00
Kahono Oei	Senior Engineer	3	@ \$66.00	\$198.00
Ryan Calad	Senior Engineer	12	@ \$52.00	\$624.00
Frank Barrera	Associate Planner		\$42.00	
Scott Voigt	Associate Designer	22	@ \$37.00	\$814.00
Alan Yasuda	Engineering Assistant	21	@ \$32.00	\$672.00
Elizabeth Ibarra	Administrative	6	@ \$25.00	\$150.00

TOTAL HOURS **68** TOTAL DIRECT LABOR **\$2,790.00**

MULTIPLIERS

ESCALATION @	4.83%	(of Direct Labor)	\$134.76
FRINGE BENEFIT @	54.79%	(of Direct Labor + Escalation)	\$1,602.47
GENERAL AND ADMINISTRATIVE @	97.51%	(of Direct Labor + Escalation)	\$2,851.93
PROFIT (FIXED FEE) @	10.0%	(of Direct Labor + Escalation + Overhead)	\$737.92
TOTAL MULTIPLIERS			\$5,327.08

OTHER DIRECT COSTS

*** Billed at Actual Cost (See ODC Cost Estimate Work Sheet) ***

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
Mileage and Travel		LS		
Miscellaneous (Collect Traffic Counts)		LS		

TOTAL ODC'S

TOTAL **\$8,117.08**

SUBCONSULTANT FEE PROPOSAL WORKSHEET

COMPANY: KOA Corporation		SCOPE OF WORK: Construction Bidding and Award Supports	PHASE: Phase III
PROJECT: Replacement of Chuckwalla Valley Road over Tarantula Ditch [Br. No. 56C0103, FPN BRLO-5956(227)]			DATE: March 27, 2017

DIRECT LABOR

PERSONNEL	POSITION	HOURS		RATE	AMOUNT
Min Zhou	Principal Engineer			\$83.00	
Kahono Oei	Senior Engineer	1	@	\$66.00	\$66.00
Ryan Calad	Senior Engineer			\$52.00	
Frank Barrera	Associate Planner			\$42.00	
Scott Voigt	Associate Designer	2	@	\$37.00	\$74.00
Alan Yasuda	Engineering Assistant			\$32.00	
Elizabeth Ibarra	Administrative			\$25.00	
TOTAL HOURS				3	
				TOTAL DIRECT LABOR	\$140.00

MULTIPLIERS

ESCALATION @	4.83%	(of Direct Labor)	\$6.76
FRINGE BENEFIT @	54.79%	(of Direct Labor + Escalation)	\$80.41
GENERAL AND ADMINISTRATIVE @	97.51%	(of Direct Labor + Escalation)	\$143.11
PROFIT (FIXED FEE) @	10.0%	(of Direct Labor + Escalation + Overhead)	\$37.03
TOTAL MULTIPLIERS			\$267.31

OTHER DIRECT COSTS

*** Billed at Actual Cost (See ODC Cost Estimate Work Sheet) ***

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
Mileage and Travel		LS		
Miscellaneous (Collect Traffic Counts)		LS		
TOTAL ODC'S				

TOTAL \$407.31

SUBCONSULTANT FEE PROPOSAL WORKSHEET		
COMPANY: KOA Corporation	SCOPE OF WORK: Design Construction Supports	PHASE: Phase IV
PROJECT: Replacement of Chuckwalla Valley Road over Tarantula Ditch [Br. No. 56C0103, FPN BRLO-5956(227)]		DATE: March 27, 2017

DIRECT LABOR

PERSONNEL	POSITION	HOURS	RATE	AMOUNT	
Min Zhou	Principal Engineer		\$83.00		
Kahono Oei	Senior Engineer	1	@ \$66.00	\$66.00	
Ryan Calad			\$52.00		
Frank Barrera	Associate Planner		\$42.00		
Scott Voigt	Associate Designer	4	@ \$37.00	\$148.00	
Alan Yasuda	Engineering Assistant	2	@ \$32.00	\$64.00	
Elizabeth Ibarra	Administrative		\$25.00		
		TOTAL HOURS	7	TOTAL DIRECT LABOR	\$278.00

MULTIPLIERS

ESCALATION @	4.83%	(of Direct Labor)	\$13.43	
FRINGE BENEFIT @	54.79%	(of Direct Labor + Escalation)	\$159.67	
GENERAL AND ADMINISTRATIVE @	97.51%	(of Direct Labor + Escalation)	\$284.17	
PROFIT (FIXED FEE) @	10.0%	(of Direct Labor + Escalation + Overhead + Payroll Additives)	\$73.53	
			TOTAL MULTIPLIERS	\$530.80

OTHER DIRECT COSTS

*** Billed at Actual Cost (See ODC Cost Estimate Work Sheet) ***

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
Mileage and Travel		LS		
Miscellaneous (Collect Traffic Counts)		LS		
				TOTAL ODC'S

TOTAL **\$808.80**

SUBCONSULTANT MANHOUR WORKSHEET SUMMARY

COMPANY: KOA Corporation	SCOPE OF WORK: Traffic	PHASE: All Phases
PROJECT: Replacement of Chuckwalla Valley Road over Tarantula Ditch [Br. No. 56C0103, FPN BRL0-5956(227)]		DATE: March 27, 2017

YSAVT	PRINCIPAL ENGINEER												
	SENIOR ENGINEER												
	SENIOR ENGINEER												
	SENIOR ENGINEER												
	ASSOCIATE PLANNER												
	ASSOCIATE DESIGNER												
	ENGINEERING ASSISTANT												
	ADMINISTRATIVE												

	\$241.48	\$192.02	\$151.29	\$122.19	\$107.65	\$93.10	\$72.73			
PHASE TOTALS	6	5	5	16	5	28	23	9	9	92

PHASE I	2		4	4	5			3		14
PHASE II	4	3	12	22	21	6				68
PHASE III		1		2						3
PHASE IV		1		4	2					7

SUBCONSULTANT MANHOUR WORKSHEET

COMPANY: KOA Corporation
 PROJECT: Replacement of Chuckwalla Valley Road over Tarantula Ditch [Br. No. 56C0103, FPN BRLO-5956(227)]
 SCOPE OF WORK: Preliminary Engineering & Environment
 PHASE: Phase I
 DATE: March 27, 2017

PRINCIPAL ENGINEER	SENIOR ENGINEER	SENIOR ENGINEER	ASSOCIATE PLANNER	ASSOCIATE DESIGNER	ENGINEERING ASSISTANT	ADMINISTRATIVE
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\$241.48	\$192.02	\$151.29	\$122.19	\$107.65	\$93.10	\$72.73
2	4	5	3	14		

TASK	2	4	5	3	HOURS	COST
1.1 Project Management						
1.2 Project Team Meetings	1	1		2	3	\$ 297
1.3 Quality Control and Quality Assurance (QC/QA)					2	\$ 393
2.0 Research and Data Gathering						
2.1 Collect and Review Existing Information						
2.2 Conduct Field Review						
3.0 Preliminary Engineering						
3.1 Traffic Study (Technical Memorandum/Traffic Summary)	1	2	5	1	9	\$ 1,228
3.2 Preliminary Utility Mapping						
3.3 Permits						
3.4 Surveying and Right-of-Way Mapping (by County)						
3.5 Preliminary Geotechnical Studies						
3.6 Right-of-Way Requirements Map						
3.7 Geometric Approval Drawings						
3.8 Structure Advance Planning Study						
3.9 Hydrologic, Hydraulic and Scour Studies						
3.10 Advisory and Mandatory Fact Sheets						
3.11 Engineer's Estimate						
4.0 Environmental Clearance & Documentation						
4.1 Project Initiation						
4.2 Preliminary Environmental Study (PES)						
4.3 Technical Studies						
4.3.1 Hazardous Waste (Initial Site Assessment)						
4.3.2 Preliminary Site Assessment (Step-2)						
4.3.3 Water Quality Assessment Studies						
4.3.4 Natural Environmental Study						
4.3.5 Wetland Delineation and Assessment						
4.3.6 Section 4(f) Evaluation (Individual Finding)						
4.3.7 Visual Resources (Visual Impact Assessment)						

SUBCONSULTANT FEE PROPOSAL WORKSHEET

COMPANY: KOA Corporation	SCOPE OF WORK: Traffic	PHASE: All Phases
PROJECT: Replacement of Chuckwalla Valley Road over Suro Ditch [Br. No. 56C0104, FPN BRLO-5956(226)]		DATE: March 27, 2017

DIRECT LABOR

PERSONNEL	POSITION	HOURS	RATE	AMOUNT
Min Zhou	Principal Engineer *	6	@ \$83.00	\$498.00
Kahono Oei	Senior Engineer	5	@ \$66.00	\$330.00
Ryan Calad	Senior Engineer	16	@ \$52.00	\$832.00
Frank Barrera	Associate Planner	5	@ \$42.00	\$210.00
Scott Voigt	Associate Designer	28	@ \$37.00	\$1,036.00
Alan Yasuda	Engineering Assistant	23	@ \$32.00	\$736.00
Elizabeth Ibarra	Administrative	9	@ \$25.00	\$225.00

* Key Personnel

TOTAL HOURS **92** TOTAL DIRECT LABOR **\$3,867.00**

MULTIPLIERS

ESCALATION @	4.83% (of Direct Labor)	\$186.78
FRINGE BENEFIT @	54.79% (of Direct Labor + Escalation)	\$2,221.06
GENERAL AND ADMINISTRATIVE @	97.51% (of Direct Labor + Escalation)	\$3,952.84
PROFIT (FIXED FEE) @	10.0% (of Direct Labor + Escalation + Overhead)	\$1,022.77
TOTAL MULTIPLIERS		\$7,383.44

OTHER DIRECT COSTS

*** Billed at Actual Cost (See ODC Cost Estimate Work Sheet) ***

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
Mileage and Travel	1	LS @	\$160.50	\$160.50
Miscellaneous (Collect Traffic Counts)	1	LS @	\$250.00	\$250.00

TOTAL ODC'S **\$410.50**

TOTAL **\$11,660.94**

ESTIMATE OF OTHER DIRECT COST (ODC) ITEMS
REPLACEMENT OF CHUCKWALLA VALLEY ROAD BRIDGE OVER SUTRO DITCH
(BR. NO. 56C0104)

FPN: BRLO-5956(226)

Consultant: KOA Corporation

Contract No.:

Date: 3/9/2017

Reproduction Cost Breakdown			
DESCRIPTION OF ITEMS	UNIT COST	ESTIMATED QUANTITY	TOTAL COST
		0	\$0.00
		0	\$0.00
		0	\$0.00
		0	\$0.00
		0	\$0.00
SUBTOTAL COST			\$0.00
Mailing and Special Delivery Cost Breakdown			
DESCRIPTION OF ITEMS	UNIT COST	ESTIMATED QUANTITY	TOTAL COST
		0	\$0.00
		0	\$0.00
		0	\$0.00
SUBTOTAL COST			\$0.00
Mileage & Travel			
DESCRIPTION OF ITEMS	UNIT COST	ESTIMATED QUANTITY	TOTAL COST
Mileage (2017 IRS Standard Rate)	\$0.535	300	\$160.50
		0	\$0.00
TOTAL BUDGET			\$160.50
Miscellaneous			
DESCRIPTION OF ITEMS	UNIT COST	ESTIMATED QUANTITY	TOTAL COST
Traffic Counts - ADT	\$100.00	1	\$100.00
Traffic Counts - Turning Movement AM/PM	\$150.00	1	\$150.00
	\$0.00	0	\$0.00
	\$0.00	0	\$0.00
	\$0.00	0	\$0.00
SUBTOTAL COST			\$250.00
TOTAL ODCs			\$410.50

NOTES:

1. ODC items should be based on actual costs and supported by historical data and other documentation.
2. ODC items that would be considered "tools of the trade" are not reimbursable.
3. ODC items should be consistently billed directly to all clients, not just when client will pay for them as a direct cost.
4. ODC items when incurred for the same purpose, in like circumstance, should not be included in any indirect cost pool or in overhead rate.

SUBCONSULTANT FEE PROPOSAL WORKSHEET

COMPANY: KOA Corporation	SCOPE OF WORK: Preliminary Engineering & Environmental Documentation	PHASE: Phase II
PROJECT: Replacement of Chuckwalla Valley Road over Sutro Ditch [Br. No. 56C0104, FPN BRLO-5956(226)]		DATE: March 27, 2017

DIRECT LABOR

PERSONNEL	POSITION	HOURS	RATE	AMOUNT
Min Zhou	Principal Engineer	4	@ \$83.00	\$332.00
Kahono Oei	Senior Engineer	3	@ \$66.00	\$198.00
Ryan Calad	Senior Engineer	12	@ \$52.00	\$624.00
Frank Barrera	Associate Planner		\$42.00	
Scott Voigt	Associate Designer	22	@ \$37.00	\$814.00
Alan Yasuda	Engineering Assistant	21	@ \$32.00	\$672.00
Elizabeth Ibarra	Administrative	6	@ \$25.00	\$150.00

TOTAL HOURS **68** TOTAL DIRECT LABOR **\$2,790.00**

MULTIPLIERS

ESCALATION @	4.83% (of Direct Labor)	\$134.76
FRINGE BENEFIT @	54.79% (of Direct Labor + Escalation)	\$1,602.47
GENERAL AND ADMINISTRATIVE @	97.51% (of Direct Labor + Escalation)	\$2,851.93
PROFIT (FIXED FEE) @	10.0% (of Direct Labor + Escalation + Overhead)	\$737.92

TOTAL MULTIPLIERS **\$5,327.08**

OTHER DIRECT COSTS

*** Billed at Actual Cost (See ODC Cost Estimate Work Sheet) ***

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
Mileage and Travel		LS		
Miscellaneous (Collect Traffic Counts)		LS		

TOTAL ODC'S

TOTAL **\$8,117.08**

SUBCONSULTANT FEE PROPOSAL WORKSHEET

COMPANY: KOA Corporation	SCOPE OF WORK: Construction Bidding and Award Supports	PHASE: Phase III
PROJECT: Replacement of Chuckwalla Valley Road over Sutro Ditch [Br. No. 56C0104, FPN BRLO-5956(226)]	DATE: March 27, 2017	

DIRECT LABOR

PERSONNEL	POSITION	HOURS	RATE	AMOUNT	
Min Zhou	Principal Engineer		\$83.00		
Kahono Oei	Senior Engineer	1	@ \$66.00	\$66.00	
Ryan Calad	Senior Engineer		\$52.00		
Frank Barrera	Associate Planner		\$42.00		
Scott Voigt	Associate Designer	2	@ \$37.00	\$74.00	
Alan Yasuda	Engineering Assistant		\$32.00		
Elizabeth Ibarra	Administrative		\$25.00		
		TOTAL HOURS	3	TOTAL DIRECT LABOR	\$140.00

MULTIPLIERS

ESCALATION @	4.83%	(of Direct Labor)	\$6.76
FRINGE BENEFIT @	54.79%	(of Direct Labor + Escalation)	\$80.41
GENERAL AND ADMINISTRATIVE @	97.51%	(of Direct Labor + Escalation)	\$143.11
PROFIT (FIXED FEE) @	10.0%	(of Direct Labor + Escalation + Overhead)	\$37.03
TOTAL MULTIPLIERS			\$267.31

OTHER DIRECT COSTS

*** Billed at Actual Cost (See ODC Cost Estimate Work Sheet) ***

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
Mileage and Travel		LS		
Miscellaneous (Collect Traffic Counts)		LS		

TOTAL ODC'S

TOTAL **\$407.31**

SUBCONSULTANT FEE PROPOSAL WORKSHEET

COMPANY: KOA Corporation	SCOPE OF WORK: Design Construction Supports	PHASE: Phase IV
PROJECT: Replacement of Chuckwalla Valley Road over Sutro Ditch [Br. No. 56C0104, FPN BRLO-5956(226)]		DATE: March 27, 2017

DIRECT LABOR

PERSONNEL	POSITION	HOURS	RATE	AMOUNT
Min Zhou	Principal Engineer		\$83.00	
Kahono Oei	Senior Engineer	1	@ \$66.00	\$66.00
Ryan Calad			\$52.00	
Frank Barrera	Associate Planner		\$42.00	
Scott Voigt	Associate Designer	4	@ \$37.00	\$148.00
Alan Yasuda	Engineering Assistant	2	@ \$32.00	\$64.00
Elizabeth Ibarra	Administrative		\$25.00	
TOTAL HOURS		7	TOTAL DIRECT LABOR	\$278.00

MULTIPLIERS

ESCALATION @	4.83%	(of Direct Labor)	\$13.43
FRINGE BENEFIT @	54.79%	(of Direct Labor + Escalation)	\$159.67
GENERAL AND ADMINISTRATIVE @	97.51%	(of Direct Labor + Escalation)	\$284.17
PROFIT (FIXED FEE) @	10.0%	(of Direct Labor + Escalation + Overhead + Payroll Additives)	\$73.53
TOTAL MULTIPLIERS			\$530.80

OTHER DIRECT COSTS

*** Billed at Actual Cost (See ODC Cost Estimate Work Sheet) ***

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
Mileage and Travel		LS		
Miscellaneous (Collect Traffic Counts)		LS		
TOTAL ODC'S				

TOTAL ODC'S

TOTAL **\$808.80**

SUBCONSULTANT MANHOUR WORKSHEET SUMMARY

COMPANY: KOA Corporation	SCOPE OF WORK: Traffic	PHASE: All Phases
PROJECT: Replacement of Chuckwalla Valley Road over Sutro Ditch [Br. No. 56C0104, FPN BRLO-5956(226)]		DATE: March 27, 2017

PRINCIPAL ENGINEER	SENIOR ENGINEER	SENIOR ENGINEER	ASSOCIATE PLANNER	ASSOCIATE DESIGNER	ENGINEERING ASSISTANT	ADMINISTRATIVE	HOURS
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\$230.35 \$183.17 \$144.32 \$116.56 \$102.69 \$88.81 \$69.38

PHASE TOTALS	6	5	16	5	28	23	9	92
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PHASE I	2		4	5			3	14
PHASE II	4	3	12		22	21	6	68
PHASE III		1		2				3
PHASE IV		1		4		2		7

SUBCONSULTANT MANHOURLY WORKSHEET

COMPANY: KOA Corporation
 PROJECT: Replacement of Chuckwalla Valley Road over Sutro Ditch [Br. No. 56C0104, FPN BRLO-5956(226)]
 SCOPE OF WORK: Preliminary Engineering & Environment
 PHASE: Phase I
 DATE: March 27, 2017

TASK	PRINCIPAL ENGINEER	SENIOR ENGINEER	SENIOR ENGINEER	ASSOCIATE PLANNER	ASSOCIATE DESIGNER	ENGINEERING ASSISTANT	ADMINISTRATIVE	HOURS	COST
	\$236.55	\$183.17	\$144.32	\$116.56	\$102.69	\$88.81	\$69.38		

Total Manhours: 2 4 5 3 14

TASK	2	4	5	3	14	HOURS	COST
1.1 Project Management		1				1	\$183.17
1.2 Project Team Meetings	1	1				2	\$236.55
1.3 Quality Control and Quality Assurance (QC/QA)							
2.0 Research and Data Gathering							
2.1 Collect and Review Existing Information							
2.2 Conduct Field Review							
3.0 Preliminary Engineering							
3.1 Traffic Study (Technical Memorandum/Traffic Summary)	1	2	5	1		9	\$1,171
3.2 Preliminary Utility Mapping							
3.3 Permits							
3.4 Surveying and Right-of-Way Mapping (by County)							
3.5 Preliminary Geotechnical Studies							
3.6 Right-of-Way Requirements Map							
3.7 Geometric Approval Drawings							
3.8 Structure Advance Planning Study							
3.9 Hydrologic, Hydraulic and Scour Studies							
3.10 Advisory and Mandatory Fact Sheets							
3.11 Engineer's Estimate							
4.0 Environmental Clearance & Documentation							
4.1 Project Initiation							
4.2 Preliminary Environmental Study (PES)							
4.3 Technical Studies							
4.3.1 Hazardous Waste (Initial Site Assessment)							
4.3.2 Preliminary Site Assessment (Step-2)							
4.3.3 Water Quality Assessment Studies							
4.3.4 Natural Environmental Study							
4.3.5 Wetland Delineation and Assessment							
4.3.6 Section 4(f) Evaluation (Individual Finding)							

SUBCONSULTANT FEE PROPOSAL WORKSHEET

COMPANY: KOA Corporation	SCOPE OF WORK: Traffic	PHASE: All Phases
PROJECT: Replacement of Chuckwalla Valley Road over Acari Ditch [Br. No. 56C0108, FPN BRLO-5956(225)]		DATE: March 27, 2017

DIRECT LABOR

PERSONNEL	POSITION	HOURS	RATE	AMOUNT
Min Zhou	Principal Engineer *	6	@ \$83.00	\$498.00
Kahono Oei	Senior Engineer	5	@ \$66.00	\$330.00
Ryan Calad	Senior Engineer	16	@ \$52.00	\$832.00
Frank Barrera	Associate Planner	5	@ \$42.00	\$210.00
Scott Voigt	Associate Designer	28	@ \$37.00	\$1,036.00
Alan Yasuda	Engineering Assistant	23	@ \$32.00	\$736.00
Elizabeth Ibarra	Administrative	9	@ \$25.00	\$225.00

* Key Personnel

TOTAL HOURS **92** TOTAL DIRECT LABOR **\$3,867.00**

MULTIPLIERS

ESCALATION @	4.83% (of Direct Labor)	\$186.78
FRINGE BENEFIT @	54.79% (of Direct Labor + Escalation)	\$2,221.06
GENERAL AND ADMINISTRATIVE @	97.51% (of Direct Labor + Escalation)	\$3,952.84
PROFIT (FIXED FEE) @	10.0% (of Direct Labor + Escalation + Overhead)	\$1,022.77
TOTAL MULTIPLIERS		\$7,383.44

OTHER DIRECT COSTS

*** Billed at Actual Cost (See ODC Cost Estimate Work Sheet) ***

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
Mileage and Travel	1	LS	@ \$160.50	\$160.50
Miscellaneous (Collect Traffic Counts)	1	LS	@ \$250.00	\$250.00

TOTAL ODC'S **\$410.50**

TOTAL **\$11,660.94**

**ESTIMATE OF OTHER DIRECT COST (ODC) ITEMS
REPLACEMENT OF CHUCKWALLA VALLEY ROAD BRIDGE OVER ACARI DITCH
(BR. NO. 56C0108)**

FPN: BRLO-5956(225)

Consultant: KOA Corporation

Contract No.:

Date: 3/9/2017

Reproduction Cost Breakdown			
DESCRIPTION OF ITEMS	UNIT COST	ESTIMATED QUANTITY	TOTAL COST
		0	\$0.00
		0	\$0.00
		0	\$0.00
		0	\$0.00
		0	\$0.00
SUBTOTAL COST			\$0.00
Mailing and Special Delivery Cost Breakdown			
DESCRIPTION OF ITEMS	UNIT COST	ESTIMATED QUANTITY	TOTAL COST
		0	\$0.00
		0	\$0.00
		0	\$0.00
SUBTOTAL COST			\$0.00
Mileage & Travel			
DESCRIPTION OF ITEMS	UNIT COST	ESTIMATED QUANTITY	TOTAL COST
Mileage (2017 IRS Standard Rate)	\$0.535	300	\$160.50
		0	\$0.00
TOTAL BUDGET			\$160.50
Miscellaneous			
DESCRIPTION OF ITEMS	UNIT COST	ESTIMATED QUANTITY	TOTAL COST
Traffic Counts - ADT	\$100.00	1	\$100.00
Traffic Counts - Turning Movement AM/PM	\$150.00	1	\$150.00
	\$0.00	0	\$0.00
	\$0.00	0	\$0.00
	\$0.00	0	\$0.00
SUBTOTAL COST			\$250.00
TOTAL ODCs			\$410.50

NOTES:

1. ODC items should be based on actual costs and supported by historical data and other documentation.
2. ODC items that would be considered "tools of the trade" are not reimbursable.
3. ODC items should be consistently billed directly to all clients, not just when client will pay for them as a direct cost.
4. ODC items when incurred for the same purpose, in like circumstance, should not be included in any indirect cost pool or in overhead rate.

SUBCONSULTANT FEE PROPOSAL WORKSHEET

COMPANY: KOA Corporation	SCOPE OF WORK: Preliminary Engineering & Environmental Documentation	PHASE: Phase I
PROJECT: Replacement of Chuckwalla Valley Road over Acari Ditch [Br. No. 56C0108, FPN BRLO-5956(225)]		DATE: March 27, 2017

DIRECT LABOR

PERSONNEL	POSITION	HOURS		RATE	AMOUNT
Min Zhou	Principal Engineer	2	@	\$83.00	\$166.00
Kahono Oei	Senior Engineer			\$66.00	
Ryan Calad	Senior Engineer	4	@	\$52.00	\$208.00
Frank Barrera	Associate Planner	5	@	\$42.00	\$210.00
Scott Voigt	Associate Designer			\$37.00	
Alan Yasuda	Engineering Assistant			\$32.00	
Elizabeth Ibarra	Administrative	3	@	\$25.00	\$75.00

TOTAL HOURS **14** TOTAL DIRECT LABOR **\$659.00**

MULTIPLIERS

ESCALATION @	4.83%	(of Direct Labor)	\$31.83
FRINGE BENEFIT @	54.79%	(of Direct Labor + Escalation)	\$378.51
GENERAL AND ADMINISTRATIVE @	97.51%	(of Direct Labor + Escalation)	\$673.63
PROFIT (FIXED FEE) @	10.0%	(of Direct Labor + Escalation + Overhead + Payroll Additives)	\$174.30
TOTAL MULTIPLIERS			\$1,258.26

OTHER DIRECT COSTS

*** Billed at Actual Cost (See ODC Cost Estimate Work Sheet) ***

ITEM	QUANTITY	UNIT		UNIT COST	AMOUNT
Mileage and Travel	1	LS	@	\$160.50	\$160.50
Miscellaneous (Collect Traffic Counts)	1	LS	@	\$250.00	\$250.00

TOTAL ODC'S **\$410.50**

TOTAL **\$2,327.76**

SUBCONSULTANT FEE PROPOSAL WORKSHEET

COMPANY: KOA Corporation	SCOPE OF WORK: Construction Bidding and Award Supports	PHASE: Phase III
PROJECT: Replacement of Chuckwalla Valley Road over Acari Ditch [Br. No. 56C0108, FPN BRLO-5956(225)]		DATE: March 27, 2017

DIRECT LABOR

PERSONNEL	POSITION	HOURS	RATE	AMOUNT
Min Zhou	Principal Engineer		\$83.00	
Kahono Oei	Senior Engineer	1	@ \$66.00	\$66.00
Ryan Calad	Senior Engineer		\$52.00	
Frank Barrera	Associate Planner		\$42.00	
Scott Voigt	Associate Designer	2	@ \$37.00	\$74.00
Alan Yasuda	Engineering Assistant		\$32.00	
Elizabeth Ibarra	Administrative		\$25.00	

TOTAL HOURS 3 TOTAL DIRECT LABOR \$140.00

MULTIPLIERS

ESCALATION @	4.83%	(of Direct Labor)	\$6.76
FRINGE BENEFIT @	54.79%	(of Direct Labor + Escalation)	\$80.41
GENERAL AND ADMINISTRATIVE @	97.51%	(of Direct Labor + Escalation)	\$143.11
PROFIT (FIXED FEE) @	10.0%	(of Direct Labor + Escalation + Overhead)	\$37.03
TOTAL MULTIPLIERS			\$267.31

OTHER DIRECT COSTS

*** Billed at Actual Cost (See ODC Cost Estimate Work Sheet) ***

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
Mileage and Travel		LS		
Miscellaneous (Collect Traffic Counts)		LS		

TOTAL ODC'S

TOTAL **\$407.31**

SUBCONSULTANT FEE PROPOSAL WORKSHEET

COMPANY: KOA Corporation		SCOPE OF WORK: Design Construction Supports	PHASE: Phase IV
PROJECT: Replacement of Chuckwalla Valley Road over Acari Ditch [Br. No. 56C0108, FPN BRLO-5956(225)]			DATE: March 27, 2017

DIRECT LABOR

PERSONNEL	POSITION	HOURS	RATE	AMOUNT
Min Zhou	Principal Engineer		\$83.00	
Kahono Oei	Senior Engineer	1	@	\$66.00
Ryan Calad			\$52.00	
Frank Barrera	Associate Planner		\$42.00	
Scott Voigt	Associate Designer	4	@	\$37.00
Alan Yasuda	Engineering Assistant	2	@	\$32.00
Elizabeth Ibarra	Administrative		\$25.00	

TOTAL HOURS 7 TOTAL DIRECT LABOR \$278.00

MULTIPLIERS

ESCALATION @	4.83%	(of Direct Labor)	\$13.43
FRINGE BENEFIT @	54.79%	(of Direct Labor + Escalation)	\$159.67
GENERAL AND ADMINISTRATIVE @	97.51%	(of Direct Labor + Escalation)	\$284.17
PROFIT (FIXED FEE) @	10.0%	(of Direct Labor + Escalation + Overhead + Payroll Additives)	\$73.53

TOTAL MULTIPLIERS \$530.80

OTHER DIRECT COSTS

*** Billed at Actual Cost (See ODC Cost Estimate Work Sheet) ***

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
Mileage and Travel		LS		
Miscellaneous (Collect Traffic Counts)		LS		

TOTAL ODC'S

TOTAL **\$808.80**

SUBCONSULTANT MANHOUR WORKSHEET SUMMARY

COMPANY: KOA Corporation

PROJECT: Replacement of Chuckwalla Valley Road over Acari Ditch [Br. No. 56C0108, FPN BRLO-5956(225)]

SCOPE OF WORK: Traffic

PHASE: All Phases

DATE: March 27, 2017

TASK	PRINCIPAL ENGINEER	SENIOR ENGINEER	SENIOR ENGINEER	SENIOR ENGINEER	ASSOCIATE PLANNER	ASSOCIATE DESIGNER	ENGINEERING ASSISTANT	ADMINISTRATIVE	HOURS
	\$230.35	\$183.17	\$144.32	\$116.56	\$102.69	\$88.81	\$69.38		

PHASE TOTALS	6	5	5	16	5	28	23	9	92
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PHASE I	2		4	4	5			3	14
PHASE II	4	3	12		22	21		6	68
PHASE III		1			2				3
PHASE IV		1			4		2		7

SUBCONSULTANT MANHOUR WORKSHEET

COMPANY: KOA Corporation
 PROJECT: Replacement of Chuckwalla Valley Road over Acari Ditch [Br. No. 56C0108, FPN BRLO-5956(225)]
 SCOPE OF WORK: Preliminary Engineering & Environment
 PHASE: Phase I
 DATE: March 27, 2017

PRINCIPAL ENGINEER	\$230.35	\$183.17	\$144.32	\$116.56	\$102.69	\$88.81	\$69.38
SENIOR ENGINEER							
SENIOR ENGINEER							
ASSOCIATE PLANNER							
ASSOCIATE DESIGNER							
ENGINEERING ASSISTANT							
ADMINISTRATIVE							

TASH

	2	4	5	3	14	HOURS	COST
Total Manhours	2	4	5	3	14		
1.1 Project Management							
1.2 Project Team Meetings	1	1		2		3	\$ 283
1.3 Quality Control and Quality Assurance (QC/QA)						2	\$ 375
2.0 Research and Data Gathering							
2.1 Collect and Review Existing Information							
2.2 Conduct Field Review							
3.0 Preliminary Engineering							
3.1 Traffic Study (Technical Memorandum/Traffic Summary)	1	2	5	1		9	\$ 1,171
3.2 Preliminary Utility Mapping							
3.3 Permits							
3.4 Surveying and Right-of-Way Mapping (by County)							
3.5 Preliminary Geotechnical Studies							
3.6 Right-of-Way Requirements Map							
3.7 Geometric Approval Drawings							
3.8 Structure Advance Planning Study							
3.9 Hydrologic, Hydraulic and Scour Studies							
3.10 Advisory and Mandatory Fact Sheets							
3.11 Engineer's Estimate							
4.0 Environmental Clearance & Documentation							
4.1 Project Initiation							
4.2 Preliminary Environmental Study (PES)							
4.3 Technical Studies							
4.3.1 Hazardous Waste (Initial Site Assessment)							
4.3.2 Preliminary Site Assessment (Step-2)							
4.3.3 Water Quality Assessment Studies							
4.3.4 Natural Environmental Study							
4.3.5 Wetland Delineation and Assessment							
4.3.6 Section 4(f) Evaluation (Individual Finding)							
4.3.7 Visual Resources (Visual Impact Assessment)							

