

Agency:	Phoenix		Title of Project:		RRFB Pedestrian crosswalk and Lighting Improvements
Date:	11/4/2019				
Contact Name and Title:		Phone:		E-Mail:	
Carl Langford		602-262-4613		Carl.langford@phoenix.gov	
Roadway Safety Program (RSP) Project Scope					
1.	Describe your safety improvement project in detail: (50 words or less)				
1a.	The project will install a RRFB pedestrian crosswalk with advanced yield or stop markings and signs across Hatcher Road near 13th Avenue. In addition, intersection lighting will be installed. First countermeasure uses CMF ID 9125 for rear end crashes. Second countermeasure is Intersection Illumination CMF 441.				
2.	Describe the project location, include pertinent demographic and land development information:				
2a.	Intersection of Hatcher Road and 13th Avenue.				
3	For projects on State System:	BMP: (Begin Milepost)		EMP: (End Milepost)	
4.	What network screening method was used to identify this project?				<input type="checkbox"/> MAG <input type="checkbox"/> ADOT <input checked="" type="checkbox"/> Other (Below)
4a	City of Phoenix				
5.	Was this project identified as a recommendation in a study? If so, what kind? (check all that apply)				
5a	<input checked="" type="checkbox"/> RSA <input type="checkbox"/> PA <input type="checkbox"/> SRTS Study <input type="checkbox"/> LASS Study <input type="checkbox"/> Other				
6.	Was the project identified using an agency adopted predictive safety analysis?				<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
7.	What is the safety justification for the proposed project?				
7a	The intent of the RRFB crosswalk is to provide a safe crossing for pedestrians. Pedestrian crash data (2014-2018) identified high pedestrian fatalities at and around 13th Avenue. There are no traffic control devices at this intersection.				
8.	Is Public outreach required for your project? If "yes" Provide what was done, the date(s) and outcomes. (Attach documentation if applicable)				
8a	No public outreach is required for this project.				
9.	What safety related public education will your agency be providing before placing the safety improvement in service, if applicable?				
9a	There will be no safety related public education for this project.				
10.	Equity: Input the largest percent for each element for the one-mile radius or offset (Click on the hyperlinks in the text to open maps. See directions on side on maps):				
	65 yrs and Older	Minority Groups	No Vehicle Households	Disabled	Living in Poverty
10a	22	19	69	20	90
11.	Avg Daily Traffic (ADT) Volume:		17102	Year Collected:	
12.	Total Crash Frequency:		19	Crash Rate (MVM or MEV):	
13.	What is the posted speed limit?		35	Benefit/Cost:	
				14.5	

PROJECT COST ESTIMATE WORKSHEET

(Cost Estimates Are Required Regardless of Programming)

DESIGN	REQUESTED PROGRAMMING (Complete if Item will be programmed in the MAG TIP)	Location Description	RRFB Pedestrian Crosswalk at Hatcher Rd and 13th Ave			
		Work Description	Install a RRFB Pedestrian crosswalk Hatcher Rd and 13th Ave			
		Funding Source	Local			
		Preferred Year to Program Work	2020			
COST ESTIMATE FOR DESIGN			UNITS	QUANTITY	UNIT COST	TOTAL
PRELIMINARY ENGINEERING (15% plans) (Required for Budget)		Topographic Survey	LS	1		\$ -
		Design Concept Report (DCR)	LS	1		\$ -
		Federal Project Environmental Determination	LS	1		\$ -
		HAZMAT Assessment	LS	1		\$ -
	SUBTOTAL - PRELIMINARY ENGINEERING COSTS					\$
FINAL DESIGN (30, 60, 95, 100% plans) (Required for Budget)		Plans, Specifications, Cost Estimates, Bidding	LS	1	23,000.00	\$ 23,000.00
		Geotechnical Report	LS	1		\$ -
		Drainage Report	LS	1		\$ -
		SWPPP	LS	1		\$ -
	SUBTOTAL - FINAL DESIGN COSTS					\$
TOTAL PRELIMINARY ENGINEERING AND DESIGN COST AVAILABLE FOR PROGRAMMING						\$ 23,000.00
CONSTRUCTION	REQUESTED PROGRAMMING (Complete only if Construction will be programmed in the MAG TIP)	Location Description	RRFB Pedestrian Crosswalk at Hatcher Rd and 13th Ave			
		Work Description	Install a RRFB Pedestrian crosswalk Hatcher Rd and 13th Ave			
		Funding Source	RSP			
		Preferred Year to Program Work	2021			
COST ESTIMATE FOR CONSTRUCTION			UNITS	QUANTITY	UNIT COST	TOTAL
UTILITY RELOCATIONS (Required for Budget, May be 0 if no Utilities)		Relocate 69 kv (+) Poles	EA	1		\$ -
		Relocate/Underground 12 kv lines	LF			\$ -
		Relocate/Underground Irrigation Canal	LF			\$ -
		SWG Relocations	LS	1		\$ -
		Telephone/Cable TV Relocations	LS	1		\$ -
		Upgrade Railroad Crossings	LS	1		\$ -
		Power SRP	LS	1	8,000.00	\$ 8,000.00
		Under Ground conduit	LS	1	20,000.00	\$ 20,000.00
	SUBTOTAL - UTILITY RELOCATION COSTS					\$
CONSTRUCTION (Required for Budget)		Contractor Mobilization	LS	1		\$ -
		Dress All Poles	EA	36	162.00	\$ 5,832.00
		Temporary Traffic Control (Barricades)	LS	1	1,500.00	\$ 1,500.00
		Electrical Service	HR	6	162.00	\$ 972.00
		Install Controller Cabinet	EA	1	1,296.00	\$ 1,296.00
		Install Field Wire	HR	16	162.00	\$ 2,592.00
		Grouting	LS	1	324.00	\$ 324.00
		Technical Labor	HR	20	162.00	\$ 3,240.00
		A-Pole w/ Foundation-15 ft	EA	1	1,392.00	\$ 1,392.00
		SQ Pole w/ Foundation-40ft thru 60ft	EA	1	7,419.00	\$ 7,419.00
		Luminaire Head w/ Photo Cell & Lamp	EA	2	425.00	\$ 850.00
		Power Service Pedestal Foundation	EA	1	1,480.00	\$ 1,480.00
		12" 3 Section Hawk Head (Type T)	EA	2	331.00	\$ 662.00
		12" 3 Section Hawk Head w/ Riser(Type T)	EA	4	480.00	\$ 1,920.00
		Audible Push Button	EA	2	600.00	\$ 1,200.00
		Pedestrian Mounting Arms (Pair)	EA	4	57.20	\$ 228.80
		Astro Brackets	EA	2	100.00	\$ 200.00
	Wireless Radio & Wire	LS	1	5,361.45	\$ 5,361.45	
	#10 THHN Wire	LF	220	0.21	\$ 46.20	
	#10 Bond Wire	LF	220	0.23	\$ 50.60	

PROJECT COST ESTIMATE WORKSHEET
(Cost Estimates Are Required Regardless of Programming)

		Service Wire	LF	80	0.44	\$	35.20	
		#3 Conductor IMSA Cable	LF	150	0.33	\$	49.50	
		#5 Conductor IMSA Cable	LF	25	0.56	\$	14.00	
		#7 Conductor IMSA Cable	LF	175	0.82	\$	143.50	
		#20 Conductor IMSA Cable	LF	150	2.60	\$	390.00	
		Service Pedestal	EA	1	892.36	\$	892.36	
		ADA Ramps	EA	2	2,000.00	\$	4,000.00	
		Misc	LS	1	1,541.39	\$	1,541.39	
		97 Watt Streetlight	EA	1	3,969.75	\$	3,969.75	
		371 Watt Streetlight	EA	1	2,843.93	\$	2,843.93	
		Light Poles	EA	2	2,170.00	\$	4,340.00	
		Overhead Feed Streetlights, incl underground services	LS	1	11,153.68	\$	11,153.68	
		SUBTOTAL - CONSTRUCTION COST					\$	93,939.36
	MOBILIZATION AND ADMINISTRATION COSTS	CONTRACTOR MOBILIZATION (Typically 8% of construction cost)			8%	\$	7,515.15	
		TRAFFIC CONTROL (0-8% of construction cost)			5%	\$	4,696.97	
		CONSTRUCTION CONTINGENCIES (Typically 5% of construction cost)			5%	\$	4,696.97	
		CONSTRUCTION ADMINISTRATION (Averaging 18% of construction cost)			15%	\$	14,090.90	
		SUBTOTAL - MOBILIZATION & ADMINISTRATION COSTS					\$	30,999.99
	TOTAL UTILITIES, CONSTRUCTION AND MOBILIZATION FOR PROGRAMMING						\$	152,939.35
TOTAL COST ESTIMATE							\$	175,939

Budget and Signature Page

Please describe the agency programming of this project in the agency's CIP	Funds are available in our CIP, once award is determined we will submit for formal project funds.				
Phase	Location Description	Work Description	Year to be Programmed	Funding Source	Amount
Design	RRFB Pedestrian Crosswalk at Hatcher Rd and 13th Ave	Install a RRFB Pedestrian crosswalk Hatcher Rd and 13th Ave	2020	Local	\$ 23,000.00
Construction	RRFB Pedestrian Crosswalk at Hatcher Rd and 13th Ave	Install a RRFB Pedestrian crosswalk Hatcher Rd and 13th Ave	2021	RSP	\$ 152,939.35
Total Cost					\$ 175,939

Signature: To be signed with printed hard copy that is sent to MAG

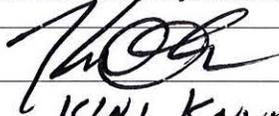
As the jurisdiction's manager/administrator or designated representative, I certify that the information contained in this application is accurate and complete and that the local funds for this project will be included in the Lead Agency's local current CIP/TIP or budget document if the project is selected for MAG Roadway Safety Program funding. I also certify the Lead Agency's commitment to maintain or operate the facility.

Signature:

Name:

Title:

Date:



ICINI KNUDSON

DIRECTOR OF STREET TRANSPORTATION

11/6/2019

RSP Application Benefit-Cost Tabulation Sheet

Agency:	Phoenix	Title of Project:	RRFB Pedestrian crosswalk and Lighting Improvements		
Annual Benefit Tabulation					
Severity	Annual Average	Estimated CRF* Reduction	Total Reduction	Unit Cost	Annual Benefit
Fatal	0.20	14%	0.03	\$9,515,371	\$266,430
Incapacitating Injury	0.40	14%	0.06	\$550,499	\$30,828
Non-Incapacitating	1.20	14%	0.17	\$149,132	\$25,054
Possible Injury	0.80	14%	0.11	\$103,145	\$11,552
Total Annual Benefits					\$333,865
Costs					
Total Project Cost					\$175,939
Project Life (years)					20
Interest Rate (%)					8%
Capital Recovery Factor					0.1019
Annual Construction Cost					\$17,920
Annual Maintenance Cost					\$5,000.00
Total Annual Costs					\$22,920
Benefit / Cost					
Annual Benefit	Annual cost			Benefit / Cost Ratio	
\$333,865	\$22,920			14.5	
List CMF(s) Used in the field below and its associated countermeasure(s)					
CMF 9125 : RRFB with advanced yield or stop markings and signs. CMF 441 : Intersection Illumination					

Phoenix RRFB Pedestrian crosswalk and Lighting Improvements RSP App V1_2019																							
Incident ID	Incident Date & Time	Incident On Road	Incident Crossing Feature	Incident Offset	Incident Injury Severity Description	Incident First Harmful Description	Incident Collision Manner Desc	Incident Light Condition Desc	Incident Weather Desc	Incident Intersection Type Desc	Incident Junction Relation Desc	Incident Traffic Way Type Desc	Unit Travel Direction Desc	Unit Action Desc	Unit Road Condition Desc1	Unit Surface Condition Desc1	Unit Env Condition Desc1	Unit Defect Desc1	Unit Number	Unit Event Sequence Desc1	Person Type Desc	Person Safety Device Desc	Person Violation Desc1
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	25	26	27
2985040	5/5/2015 12:00:00 AM	Hatcher Rd	13th Av	23	2-Possible	Motor Vehicle	Rear End	Light	Clear	T-Intersection	Intersection Within Non-Controlled	Two-Way NOT Divided (no median)	4 - WEST	Going Straight Ahead	No Contributing Circumstances	DRY	NO_CONTRIBUTING_CIRCUMSTANCES	NO_CONTRIBUTING_CIRCUMSTANCES	1	No Data	Driver	Shoulder Lap Belt	Speed Too Fast
3070547	4/3/2016 12:00:00 AM	Hatcher Rd	13th Av	20	3-Minor	Pedestrian	Pedestrian	Dark	Clear	T-Intersection	Intersection Within Non-Controlled	Two-Way NOT Divided (no median)	4 - WEST	Going Straight Ahead	UNKNOWN	DRY	UNKNOWN	UNKNOWN	1	PEDESTRIAN	Driver	Shoulder Lap Belt	Failed to Yield
3137281	10/2/2016 12:00:00 AM	Hatcher Rd	13th Av	-20	4-Serious	Pedestrian	Pedestrian	Dark	Clear	Not Reported	Not Junction Related	Two-Way NOT Divided (continuous left turn lane)	3 - EAST	Going Straight Ahead	No Contributing Circumstances	DRY	NO_CONTRIBUTING_CIRCUMSTANCES	NO_CONTRIBUTING_CIRCUMSTANCES	1	PEDESTRIAN	Driver	Shoulder Lap Belt	None
3236265	5/30/2017 12:00:00 AM	Hatcher Rd	13th Av	40	2-Possible	Motor Vehicle	Rear End	Light	Clear	Not Reported	Not Junction Related	Two-Way Divided (unprotected median)	4 - WEST	Going Straight Ahead	No Contributing Circumstances	DRY	NO_CONTRIBUTING_CIRCUMSTANCES	NO_CONTRIBUTING_CIRCUMSTANCES	1	MOTOR_VEHICLE_IN_TRANSPORT	Driver	Shoulder Lap Belt	Speed Too Fast
3317841	12/14/2017 12:00:00 AM	13th Av	Hatcher Rd	78	3-Minor	Pedestrian	Pedestrian	Dark	Clear	Not Reported	Not Junction Related	Two-Way NOT Divided (no median)	2 - SOUTH	Going Straight Ahead	UNKNOWN	DRY	UNKNOWN	UNKNOWN	1	PEDESTRIAN	Driver	Unknown	Other
3429972	10/19/2018 12:00:00 AM	Hatcher Rd	12th Av	-300	3-Minor	Pedestrian	Pedestrian	Dark	Clear	Not Reported	Not Junction Related	Two-Way NOT Divided (no median)	4 - West	Going Straight Ahead	Unknown	Dry	Unknown	Unknown	1	Pedestrian	Driver	NA	None

