

Agency:	Glendale		Title of Project:	Northern Parkway Cable Barrier (1)	
Date:	11/07/19				
Contact Name and Title:		Phone:	E-Mail:		
Debbie Albert, City Traffic Engineer		623-930-2939	dalbert@glendaleaz.com		
Roadway Safety Program (RSP) Project Scope					
1.	Describe your safety improvement project in detail: (50 words or less)				
1a.	Installation of cable barrier between the eastbound and westbound mainline of Northern Parkway in Glendale. Additional installation of wrong-way signing and marking and drainage improvements.				
2.	Describe the project location, include pertinent demographic and land development information:				
2a.	The cable barrier will extend from Sarival Road to 143rd Avenue along Northern Parkway.				
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	Based on Design Concept Report by Maricopa Department of Transportation.				
5.	Was this project identified as a recommendation in a study? If so, what kind? (check all that apply)				
5a	<input type="checkbox"/> RSA <input type="checkbox"/> PA <input type="checkbox"/> SRTS Study <input type="checkbox"/> LASS Study <input checked="" 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 installing cable barrier is to reduce the severity and frequency of median crossover collisions. The Crash Modification Factor used in this application is based on CMF ID: 5448 (3-star). The study concluded that the rate of serious injury was reduced by 58%, while the rate of serious injury collisions was reduced by 52%. Therefore, cable median barrier is proposed to help mitigate these injuries as ADT continues to grow on Northern Parkway. Coordination with other municipalities and organizations will be conducted to implement cable barrier along Northern Parkway systemically.				
8.	Is Public outreach required for your project? If "yes" Provide what was done, the date(s) and outcomes. (Attach documentation if applicable)				
8a	Yes; public outreach will be conducted prior to the start of the project.				
9.	What safety related public education will your agency be providing before placing the safety improvement in service, if applicable?				
9a	Public outreach will be conducted prior to the start of the 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%	19.10%	4.10%	8.97%	16.90%
11.	Avg Daily Traffic (ADT) Volume:	20,300	Year Collected:	2018	
12.	Total Crash Frequency:	10	Crash Rate (MVM or MEV):	0.3	
13.	What is the posted speed limit?	55 mph	Benefit/Cost:	0	

PROJECT COST ESTIMATE WORKSHEET

(Cost Estimates Are Required Regardless of Programming)

DESIGN	REQUESTED PROGRAMMING <small>(Complete if Item will be programmed in the MAG TIP)</small>	Location Description	Northern Parkway between Sarival Avenue and Dysart Avenue			
		Work Description	Median cable barrier			
		Funding Source	Local			
		Preferred Year to Program Work	2019			
	COST ESTIMATE FOR DESIGN		UNITS	QUANTITY	UNIT COST	TOTAL
	PRELIMINARY ENGINEERING (15% plans) (Required for Budget)	Topographic Survey	LS	1	19,628.00	\$ 19,628.00
		Design Concept Report (DCR)	LS	1	32,714.00	\$ 32,714.00
		Federal Project Environmental Determination	LS	1		\$ -
		HAZMAT Assessment	LS	1		\$ -
		SUBTOTAL – PRELIMINARY ENGINEERING COSTS				\$ 52,342.00
	FINAL DESIGN (30, 60, 95, 100% plans) (Required for Budget)	Plans, Specifications, Cost Estimates, Bidding	LS	1	65,427.00	\$ 65,427.00
		Geotechnical Report	LS	1		\$ -
		Drainage Report	LS	1		\$ -
		SWPPP	LS	1		\$ -
		SUBTOTAL – FINAL DESIGN COSTS				\$ 65,427.00
TOTAL PRELIMINARY ENGINEERING AND DESIGN COST AVAILABLE FOR PROGRAMMING					\$ 117,769.00	
CONSTRUCTION	REQUESTED PROGRAMMING <small>(Complete only if Construction will be programmed in the MAG TIP)</small>	Location Description	Northern Parkway between Sarival Avenue and Dysart Avenue			
		Work Description	Median cable barrier			
		Funding Source	RSP			
		Preferred Year to Program Work	2020			
	COST ESTIMATE FOR CONSTRUCTION		UNITS	QUANTITY	UNIT COST	TOTAL
	CONSTRUCTION (Required for Budget)	Cable Barrier	LS	1	495,276.69	\$ 495,276.69
		Traffic Signage and Markings	LS	1	33,967.97	\$ 33,967.97
		Drainage Catch basins and Scuppers	LS	1	125,025.60	\$ 125,025.60
		SUBTOTAL - CONSTRUCTION COST				\$ 654,270.26
	MOBILIZATION AND ADMINISTRATION COSTS	CONTRACTOR MOBILIZATION (Typically 8% of construction cost)			8%	\$ 52,341.62
		TRAFFIC CONTROL (0-8% of construction cost)			5%	\$ 32,713.51
		CONSTRUCTION CONTINGENCIES (Typically 5% of construction cost)			5%	\$ 32,713.51
		CONSTRUCTION ADMINISTRATION (Averaging 18% of construction cost)			15%	\$ 98,140.54
	SUBTOTAL – MOBILIZATION & ADMINISTRATION COSTS					\$ 215,909.19
	TOTAL UTILITIES, CONSTRUCTION AND MOBILIZATION FOR PROGRAMMING					\$ 870,179.45
TOTAL COST ESTIMATE					\$ 987,948	

Budget and Signature Page

Please describe the agency programming of this project in the agency's CIP	Construction funds are identified in the City's Grant Reimbursement CIP account.
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Phase	Location Description	Work Description	Year to be Programmed	Funding Source	Amount
Design	Northern Parkway between Sarival Avenue and Dysart Avenue	Median cable barrier	2019	Local	\$ 117,769
Construction	Northern Parkway between Sarival Avenue and Dysart Avenue	Median cable barrier	2020	RSP	\$ 870,179
Total Cost					\$ 987,948

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: Trevor Ebersole

Title: Director of Transportation

Date: 11-06-2019

RSP Application Benefit-Cost Tabulation Sheet

Agency:	Glendale	Title of Project:	Northern Parkway Cable Barrier (1)
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Annual Benefit Tabulation

Severity	Annual Average	Estimated CRF* Reduction	Total Reduction	Unit Cost	Annual Benefit
Fatal	0.00	53%	0.00	\$9,515,371	\$0
Incapacitating Injury	0.00	53%	0.00	\$550,499	\$0
Non-Incapacitating	0.00	53%	0.00	\$149,132	\$0
Possible Injury	0.40	53%	0.21	\$103,145	\$21,867
Total Annual Benefits					\$21,867

Costs

Total Project Cost	\$987,948
Project Life (years)	1
Interest Rate (%)	8%
Capital Recovery Factor	1.0800
Annual Construction Cost	\$1,066,984
Annual Maintenance Cost	\$11,000.00
Total Annual Costs	\$1,077,984

Benefit / Cost		
Annual Benefit	Annual cost	Benefit / Cost Ratio
\$21,867	\$1,077,984	0.0

List CMF(s) Used in the field below and its associated countermeasure(s)

CMF ID: 5448 (3-star); CMF is 0.47; Countermeasures: Install cable median barrier; Reference: Olson et al. 2013

Glendale				Northern Parkway Cable Barrier (1)				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	Unit Event Sequence Desc2	Unit Event Sequence Desc3	Person Type Desc	Person Safety Device Desc	Person Violation Desc1	Person Physical Desc0	Person Physical Desc1	Person Physical Desc2	Person Physical Desc3	Person Physical Desc4	Person Physical Desc5	Person Physical Desc6	Person Physical Desc7	Person Physical Desc8	Person Physical Desc9
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	25	26	27	28	29	30	31	32	33	34	35	36	
3132564	9/27/2016 2:26:00 AM	No Data	Reems Rd	0.25	Possible Injury	Overturn Rollover	Single Vehicle	Dark Lighted	Clear	-	Not Junction Related	Two-Way Not Divided	East	GOING STRAIGHT_AHEAD	NO CONTRIBUTING_CIRCUMSTANCES	Dry	NO CONTRIBUTING_CIRCUMSTANCES	NO CONTRIBUTING_CIRCUMSTANCES	1	RAN_OFF_ROAD_LEFT	RAN_OFF_ROAD_RIGHT	OVERTURN_ROLLOVER	Driver	Shoulder And Lap Belt	FAILED_TO_KEEP_IN_PROPER_LANE	NO_APPARENT_INFLUENCE	NO_APPARENT_INFLUENCE	NO_APPARENT_INFLUENCE	FELL_ASLEEP_FATIGUED	NO_APPARENT_INFLUENCE	NO_APPARENT_INFLUENCE	NO_APPARENT_INFLUENCE	NO_APPARENT_INFLUENCE	NO_APPARENT_INFLUENCE	NO_APPARENT_INFLUENCE
3148650	11/5/2016 2:29:00 PM	Sarival Ave	<Null>	0	Possible Injury	Motor Vehicle in Transport	Left Turn	Daylight	Clear	Four-Way Intersection	Intersection Non-Interchange	Two-Way Divided Positive Median Barrier	East	MAKING LEFT_TURN	NO CONTRIBUTING_CIRCUMSTANCES	Dry	NO CONTRIBUTING_CIRCUMSTANCES	NO CONTRIBUTING_CIRCUMSTANCES	1	MOTOR_VEHICLE_IN_TRANSPORT			Driver	Shoulder And Lap Belt	MADE_IMPROPER_TURN	NO_APPARENT_INFLUENCE									



