

Rank	Problem Statement No.	Problem Statement Topic	Est. Price	TOTAL	Cumulative Total
1	2019-39-LSRB	Design and testing of a Thrie-Beam System at fixed object	200,000	121	200,000
2	2019-13-LSRB	Design and Testing of a MASH TL-3 Thrie-Beam for Roadside and Median applications	300,000	112	500,000
3	2019-20-LSRB	Length Of Need for Unanchored Guardrail	130,000	106	630,000
4	2019-23-BR	Evaluating TL-3 thrie beam retrofit option	225,000	101	855,000
5	N/A	Continuing Guardrail Flare Project from FFY2019 - decision by majority at the 2019 annual meeting	45,000	N/A	900,000
6	N/A	TTI admin (30,000) and member travel (70,000). To cover these items through FFY2020.	100,000	N/A	1,000,000
7	2019-03-BD	Steel and wood dual sign support on slipbase	100,000	94	1,100,000
8	2019-02-BD	Luminaire post acceptable size and weight investigation to establish performance limits	120,000	89	1,220,000
9	2019-09-LCB	Guardrail to Portable Concrete Barrier Transition	172,000	86	1,392,000
10	2019-06-LCB	MASH TL-4 Full-Scale Crash Testing of Free-standing Precast Concrete Barriers	245,000	81	1,637,000

Estimated budget

11	2019-19-LSRB	MASH TL-3 Thrie-Beam transition from 31" W-Beam guardrail to CIP F-shape and Single Slope Barrier	140,000	80	1,777,000
12	2019-01-BD	Need to continue using wood post supports	240,000	70	2,017,000
13	2019-10-LCB	Portable Concrete Barrier to Cast-In-Place Concrete Barrier Transition	15,000	67	2,032,000
14	2019-40-LSRB	Steel and Wood Post in Asphalt Mow Strip	251,000	62	2,283,000
15	2019-17-LSRB	BIB Terminal Variations in Foreslope/Backslope/Ditch configurations	90,000	61	2,373,000
16	2019-29-WZ	Portable sign supports for aluminum signs with variation on mounting height	115,000	61	2,488,000
17	2019-32-WZ	Effect of commonly used accessories such as Lights, sensors, sandbag ballast, and solar panels on crashworthiness of work zone category 1 and	70,000	60	2,558,000
18	2019-04-BD	Pedestrian Signals and Detectors Assemblies	120,000	58	2,678,000
19	2019-12-LCB	Permanent Concrete Low-Profile Barrier	180,000	53	2,858,000
20	2019-41-WZ	Review of Work Zone Trailer crashes	-	49	2,858,000
21	2019-11-LCB	Transition from W-Beam Guardrail to Concrete Barrier	130,000	46	2,988,000
22	2019-05-BD	Enhanced Highway Signing Assemblies	150,000	43	3,138,000

23	2019-18-LSRB	31" MGS system with variation in curb height and offset for MASH TL-2 application	143,000	39	3,281,000
	2019-08-LCB	Investigation and Testing of the Shallowest Embedment or Footing Required for a Cast-In-Place Concrete Median Barrier at MASH TL-5 Conditions	170,000	0	
	2019-35-LCB	Vehicle Loads on Soundwall	90,000	0	
	2019-28-WZ	Testing category 2 signs and barricades and ballast guidelines	105,000	0	
	2019-26-WZ	Testing type 3 barricades with aluminum panel and mounted sign on top	175,000	0	
	2019-33-WZ	Generic global "warning" sign size design	115,000	0	
	2019-30-WZ	Testing of ITS system for smart work zones	110,000	0	
	2019-22-BR	MASH TL-5 investigation fo the TBTA rail system when mounted on traditional concrete deck	40,000	0	
	2019-24-BR	TL-4 bridge rail system for shared used facilities	250,000	0	
	2019-15-LSRB	MASH TL-3 Testing of 31" Rectangular wood post W-Beam guardrail in concrete mow-strips	60,000	0	
	2019-34-BR	Resistance of Bolt-through anchor to Repeated Impact Loading	230,000	0	

	2019-38-BD	MASH compliance Galvanized Steel "Goal Post" Type pipe post sign supports	200,000	0	
	2019-31-WZ	Generic sign cover for variable signs	105,000	0	