

SCIENCE CITY URBAN INFRASTRUCTURE - PHASE II  
Application for US DOT TIGER VI Discretionary Grant Funds  
Sources and Uses of Project Funds  
Friday, April 25, 2014

Uses of Funds (Components, Locations and Characteristics)		Sources of Funds			Totals	
		Federal	Non-Federal Match			
#	Component	Tiger VI Grant Funds	PRSTRT	PRIFA	Total Funds	As %
1	Bid Process for Construction Project	\$ 15,000.00	\$ -	\$ 10,000.00	\$ 25,000.00	0.09%
2	Architects/Engineers Supervision during Construction	\$ 270,000.00	\$ 180,000.00	\$ -	\$ 450,000.00	1.61%
3	Construction Management and Grant Administration	\$ 240,000.00	\$ 70,000.00	\$ 90,000.00	\$ 400,000.00	1.43%
4	Inspection Services during Construction	\$ 648,000.00	\$ 432,000.00	\$ -	\$ 1,080,000.00	3.86%
5	Insurances	\$ 330,000.00	\$ 220,000.00	\$ -	\$ 550,000.00	1.96%
6	Project's Construction Cost	\$ 13,275,000.00	\$ 8,850,000.00	\$ -	\$ 22,125,000.00	79.02%
7	Contingency	\$ 2,022,000.00	\$ 1,348,000.00	\$ -	\$ 3,370,000.00	12.04%
Total		\$ 16,800,000.00	\$ 11,100,000.00	\$ 100,000.00	\$ 28,000,000.00	100.00%
As %		60.00%	39.64%	0.36%	100.00%	
			\$ 11,200,000.00			
		Non Federal Match		40.00%		

**SCIENCE CITY - URBAN INFRASTRUCTURE PHASE II**

**PROJECT DETAILED COST**

**April-14**

ITEM #	DESCRIPTION	Quantity	Unit	Unit Price	Total Amount
<b>1</b>	<b><u>BID PROCESS</u></b>				
1.1	Bid Procurement Specialist (AFI In-Kind)	200	Hrs	\$ 25.00	\$ 5,000.00
1.2	Bid Procurement Specialist (AFI In-Kind)	200	Hrs	\$ 25.00	\$ 5,000.00
1.3	Bid Evaluation Committee	80	Hrs	\$ 35.00	\$ 2,800.00
1.4	Bid Evaluation Committee	80	Hrs	\$ 35.00	\$ 2,800.00
1.5	Bid Evaluation Committee	80	Hrs	\$ 35.00	\$ 2,800.00
1.6	Bid Document Preparation	1	Ls	\$ 5,000.00	\$ 5,000.00
1.7	Bid Process Final Notification	64	Hrs	\$ 25.00	\$ 1,600.00
	<b>Total Bid Process</b>				<b>\$ 25,000.00</b>
<b>2</b>	<b><u>A&amp;E SUPERVISION</u></b>				
2.1	A&E Firm Supervision	36	Month	\$ 12,500.00	\$ 450,000.00
	<b>Total A&amp;E Supervision</b>				<b>\$ 450,000.00</b>
<b>3</b>	<b><u>CONSTRUCTION MANAGEMENT &amp; GRANT ADMINISTRATION</u></b>				
3.1	AFI Management (In-Kind)	36	Month	\$ 2,500.00	\$ 90,000.00
3.2	Construction Management Firm	40	Month	\$ 7,750.00	\$ 310,000.00
	<b>Total CM &amp; Grant Adm.</b>				<b>\$ 400,000.00</b>
<b>4</b>	<b><u>INSPECTION</u></b>				
4.1	Inspection Firm	36	Month	\$ 30,000.00	\$ 1,080,000.00
	<b>Total Inspection</b>				<b>\$ 1,080,000.00</b>
<b>5</b>	<b><u>INSURANCE</u></b>				
5.1	OCIP Insurance	1	Ls	\$ 550,000.00	\$ 550,000.00
	<b>Total Insurance</b>				<b>\$ 550,000.00</b>

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ITEM #	DESCRIPTION	Quantity	Unit	Unit Price	Total Amount
<b>6</b>	<b><u>CONSTRUCTION COST</u></b>				
<b>I</b>	<b><u>Earthwork</u></b>				
1	Clearing and Grubbing	15	Cdas	4,000	\$ 60,000
2	Unclassified Excavation	28,059	CuM	12.00	\$ 336,708
3	Removal of Unsuitable Material	20,000	CuM	22.00	\$ 440,000
4	Borrow Class "A"	50,490	CuM	18.00	\$ 908,820
	<b>Total Earthwork</b>				<b>\$ 1,745,528</b>
<b>II</b>	<b><u>Soil Erosion and Water Pollution Control</u></b>				
5	Construction Entrance / Exit	2	Each	3,500	\$ 7,000
6	Straw Bales	790	Each	15	\$ 11,850
7	Silt Fence	300	LnM	12	\$ 3,600
	<b>Total Soil Erosion and Water Pollution Control</b>				<b>\$ 22,450</b>
<b>III</b>	<b><u>Roadway</u></b>				
8	Mobilization(2%)	1	Ls	439,600	\$ 439,600
9	Sub-base Course	9,151	CuM	18	\$ 164,718
10	Aggregate Base Course	2,290	CuM	31	\$ 70,990
11	Lean Concrete Base (0.40m)	150	SqM	65	\$ 9,750
12	Portland Cement Concrete Sidewalk	6,940	SqM	35	\$ 242,900
13	Concrete Curb, Type "D"	9,112	LnM	51	\$ 464,712
14	Concrete Curb, Type "F"	925	LnM	65	\$ 60,125
15	Seeding (With Mulch)	60	Units	80	\$ 4,800
16	Construction Signs	60	SqM	190	\$ 11,400
17	Drums	250	Each	90	\$ 22,500
18	Temporary Pavement Marking	250	LnM	3	\$ 625
19	Temporary Concrete Barrier	210	LnM	85	\$ 17,850

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ITEM #	DESCRIPTION	Quantity	Unit	Unit Price	Total Amount
20	Furnishing & Placing Loamy Topsoil	600	CuM	9	\$ 5,400
21	Right of Way Marker	45	Each	100	\$ 4,500
22	Chain Link Fence, Type "A"	220	LnM	90	\$ 19,800
23	Temporary Chain Link Fence	160	LnM	75	\$ 12,000
24	Jute Mesh	250	SqM	4	\$ 1,000
25	Type "C" CPW	42	SqM	40	\$ 1,680
26	Bed Course Material	7	CuM	40	\$ 280
27	Project ID Signs	6	Each	3,000	\$ 18,000
28	Field Office & Laboratory	25	Mths	5,300	\$ 132,500
	<b>Total Roadway</b>				<b>\$ 1,705,130</b>
<b>IV</b>	<b><u>Asphalt Pavements</u></b>				
29	Hot Plant-Mix Bituminous Pavement mix S-1	1,952	Tons	120	\$ 234,240
30	Hot Plant-Mix Bituminous Pavement mix B-1	5,856	Tons	120	\$ 702,720
31	Hot Plant-Mix Bituminous Pavement mix L-2	142	Tons	115	\$ 16,330
32	Cold Milling of Bituminous Concrete Pavement	2,205	CuM	130	\$ 286,650
	<b>Total Asphalt Pavements</b>				<b>\$ 1,239,940</b>
<b>V</b>	<b><u>Drainage System</u></b>				
33	Type "A" Manhole	8	Each	7,500	\$ 60,000
34	Type "4" Inlet	67	Each	3,100	\$ 207,700
35	Type "4A" Inlet	43	Each	4,500	\$ 193,500
36	Type "2" Inlet	1	Each	2,520	\$ 2,520
37	Type "1" Modified Inlet	44	Each	3,000	\$ 132,000
38	18 inch Reinforced Concrete Pipe, Class III	1,140	LnM	100	\$ 114,000
39	24 inch Reinforced Concrete Pipe, Class III	325	LnM	165	\$ 53,625
40	30 inch Reinforced Concrete Pipe, Class III	130	LnM	230	\$ 29,900

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**April-14**

ITEM #	DESCRIPTION	Quantity	Unit	Unit Price	Total Amount
41	Trench Excavation, Unclassified	5,274	CuM	18	\$ 94,932
42	Type "B" Headwall	4	Each	1,125	\$ 4,500
43	Existing Inlets to be Removed	36	Each	1,000	\$ 36,000
44	Conversion of Inlets/Manholes	2	Each	2,300	\$ 4,600
	<b>Total Drainage System</b>				<b>\$ 933,277</b>
<b>VI</b>	<b><u>Traffic Signing &amp; Pavement Marking</u></b>				
45	Thermoplastic Pavement Marking - White	8,592	LnM	4.25	\$ 36,516
46	Thermoplastic Pavement Marking - Yellow	2,592	LnM	4.25	\$ 11,016
47	Thermoplastic Pavement Marking - Symbols & Letters	24	Each	90.00	\$ 2,160
48	Painting Concrete Curb	538	LnM	15	\$ 8,070
49	Reflective Raised Pavement Markers	418	Each	4.00	\$ 1,672
50	Traffic Sign Assembly Codes	56	Each	750	\$ 42,000
	<b>Total Traffic Signing &amp; Pavement Marking</b>				<b>\$ 101,434</b>
<b>VII</b>	<b><u>Traffic Signal System</u></b>				
51	Master/Local Traffic Signal Controller Assembly	2	Each	12000.00	\$ 24,000
52	Standard Traffic Signal Head Type 3-S-V Mast Arm Mounted With LED Configuration	14	Each	860.00	\$ 12,040
53	Standard Traffic Signal Head Type 3-L-V Mast Arm Mounted With LED Configuration	2	Each	785	\$ 1,570
54	Standard Traffic Signal Head Type 3-R-V Mast Arm Mounted With LED Configuration	1	Each	900	\$ 900
55	Pedestrian Push Button Detector	12	Each	655	\$ 7,860
56	Pedestrian Signal Head Type P-18-16 Countdown LED Configuration	12	Each	1,030	\$ 12,360
57	Video Detection System Program, Software & Hardware	1	Each	12,000	\$ 12,000
58	Pedestrian Signal Post 8 feet	3	Each	1,380	\$ 4,140
59	Traffic Signal Support - Single Mast Arm Type 20', Steel Galvanized	4	Each	6,280	\$ 25,120

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ITEM #	DESCRIPTION	Quantity	Unit	Unit Price	Total Amount
60	Traffic Signal Support - Single Mast Arm Type 30', Steel Galvanized	1	Each	7,020	\$ 7,020
61	Traffic Signal Support - Single Mast Arm Type 40', Steel Galvanized	2	Each	7,685	\$ 15,370
62	PVC Conduit 4" Diameter	1,090	LnM	35	\$ 38,150
63	PVC Conduit 2" Diameter	720	LnM	30	\$ 21,600
64	Concrete Pull Box 30" x 30"	16	Each	915	\$ 14,640
65	Electrical Conductor No. 14 RHH AWG. 3c Stranded For Push Buttons	460	LnM	5	\$ 2,300
66	Electrical Conductor No. 14 RHH AWG. 4c For Pedestrian Signal Heads Type P-18-16	480	LnM	5	\$ 2,400
67	Electrical Conductor No. 14 RHH AWG. 5c For Traffic Signals	930	LnM	5	\$ 4,650
68	Wireless Video Detection & Communication System	1	Ls	8,760	\$ 8,760
69	Maintenance of Existing Traffic Signal System	1	Ls	25,000	\$ 25,000
70	Video Detection Camera	7	Each	3,000	\$ 21,000
71	Cammera Support Pole For Mounting Brackets	7	Each	500	\$ 3,500
72	Video image Processor	7	Each	250	\$ 1,750
73	Surge Suppressor For video detection Cameras	7	Each	300	\$ 2,100
74	Coaxial and Power Cable	410	LnM	5	\$ 2,050
75	Fiber Optic Cable Single Mode 24 Strands	280	LnM	10	\$ 2,800
76	Multi-Guard Type PVL Conduit for Fiber Optic Cable 24 Strands	300	LnM	12	\$ 3,600
77	Inverter/Charger/Controller	2	Each	1,200	\$ 2,400
78	Battery	17	Each	350	\$ 5,950
79	Transfer Relay	2	Each	500	\$ 1,000
80	Manual By Pass Switch	2	Each	750	\$ 1,500
81	TSBBS Cabinet	2	LnM	1,250	\$ 2,500
	<b>Total Traffic Signal System</b>				<b>\$ 290,030</b>
<b>VIII</b>	<b><u>PRASA Utilities - Water</u></b>				

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ITEM #	DESCRIPTION	Quantity	Unit	Unit Price	Total Amount
82	Fire Hydrant (PR Type)	9	Each	800	\$ 7,200
83	6" Gate Valve	20	Each	550	\$ 11,000
84	8" Gate Valve	1	Each	900	\$ 900
85	10" Gate Valve	5	Each	1,000	\$ 5,000
86	12" Gate Valve	4	Each	1,100	\$ 4,400
87	6" Dia. D.I.P. Class 350	208	LnM	75	\$ 15,600
88	8" Dia. D.I.P. Class 350	517	LnM	100	\$ 51,700
89	10" Dia. D.I.P. Class 350	552	LnM	120	\$ 66,240
90	12" Dia. D.I.P. Class 350	250	LnM	150	\$ 37,500
91	Trench Excavation (For PRASA), Unclassified	3,210	CuM	18	\$ 57,780
	<b>Total PRASA Utilities - Water</b>				<b>\$ 257,320</b>
<b>IX</b>	<b><u>PRASA Utilities - Sanitary Sewer</u></b>				
92	PRASA Manhole Type "A"	23	Each	2,250	\$ 51,750
93	8" Dia. PVC SDR-35 Pipe	1,062	LnM	60	\$ 63,720

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ITEM #	DESCRIPTION	Quantity	Unit	Unit Price	Total Amount
94	Trench Excavation (For PRASA), Unclassified	2,336	CuM	18	\$ 42,048
	<b>Total PRASA Utilities - Sanitary Sewer</b>				<b>\$ 157,518</b>
<b>X</b>	<b><u>PREPA Utilities</u></b>				
95	PREPA Utilities	1	LS	2,200,000	\$ 2,200,000
	<b>Total PREPA Utilities</b>				<b>\$ 2,200,000</b>
<b>XI</b>	<b><u>Lighting System</u></b>				
96	Type-N2 40', Aluminum Pole, Non- breakaway with 4'-0" Bracket and 200w, 240 TypeIII Cutoff Luminaire	10	Each	3,040	\$ 30,400
97	Junction Box Per PRHA Standards Dwg LS- 6 (Type F, 30" x 18" x 24")	282	Each	150	\$ 42,300
98	Conductor Cable #2 AWG Copper Stranded XLP, 90° C	57,774	LnM	5	\$ 288,870
99	Conductor Cable #6 AWG Copper Stranded XLP, 90° C	6,418	LnM	3	\$ 19,254
100	2" DB-120 PVC Conduit Concrete Encased	3,525	LnM	35	\$ 123,375
101	2" DB-120 PVC Conduit Sand Encased	17,044	LnM	18	\$ 306,792
102	1-1/4" PVC Coated RGC	972	LnM	50	\$ 48,600
103	New 37.5 kva Substation	3	LnM	8,250	\$ 24,750
104	Novara SAL 150w 20ft High Pole with 4ft Double Arm	3	Each	10,250	\$ 30,750
105	Novara SAL 73w 20ft High Pole with 4ft Single Arm at Roadway Side & a 150w 15ft High Short Arm at Pedestrian Side	248	Each	8,250	\$ 2,046,000
106	Novara 150w at Bridge BR-3	24	Each	8,250	\$ 198,000
107	58w Leccor Light Fixture in Combination with Novara SAL Arm Bridge Mounted	24	Each	2,250	\$ 54,000
	<b>Total Lighting System</b>				<b>\$ 3,213,091</b>
<b>XII</b>	<b><u>Telecommunication Utilities</u></b>				
108	Telephone Manholes (4'x4.5'x7')	16	Each	2,600	\$ 41,600
109	4" SCH-40 PVC Conduit Concrete Encased (Tel.)	17,280	LnM	30	\$ 518,400
110	CTV Handholes (30"x48")	18	Each	565	\$ 10,170



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ITEM #	DESCRIPTION	Quantity	Unit	Unit Price	Total Amount
111	2" SCH-40 PVC Conduit Concrete Encased (CATV)	4,860	LnM	35	\$ 170,100
	<b>Total Telecommunication Utilities</b>				<b>\$ 740,270</b>
<b>XIII</b>	<b><u>Retaining Wall - RW5</u></b>				
112	Class III (Gen. Use)	192	CuM	450	\$ 86,400
113	Reinforcing Steel (GR 60)	36,438	Lbs	1.25	\$ 45,547
114	Drainage Geocomposite	162	SqM	25	\$ 4,050
115	Unclassified Excavation for Structures	1,014	CuM	11	\$ 11,154
116	Foundation Fill	152	CuM	20	\$ 3,040
117	6" dia. Perforated Pipe Underdrain	73	LnM	30	\$ 2,190
118	Sheating	13	CuM	45	\$ 585
119	Select Borrow Embankment	443	CuM	20	\$ 8,860
	<b>Total Retaining Wall - RW5</b>				<b>\$ 161,826</b>
<b>XIV</b>	<b><u>Bridge BR-3</u></b>				
120	Class V (Bridge Deck)	542	CuM	750	\$ 406,500
121	Class IV (Gen Use)	223	CuM	600	\$ 133,800
122	Class V (Gen Use)	1,873	CuM	600	\$ 1,123,800
123	Structural Steel (GR 50 & 70)	#####	Lbs	1.25	\$ 1,345,215
124	Reinforcing Steel (GR 60)	730,616	Lbs	1.25	\$ 913,270
125	Unclassified Excavation for Structures	3,476	CuM	11	\$ 38,236
126	Foundation Fill	334	CuM	20	\$ 6,680
127	Sheating	23	CuM	45	\$ 1,035
128	Traffic Railing	138	LnM	150	\$ 20,700
129	Safety Fence (Jakob Webnet)	180	LnM	2,000	\$ 360,000
130	Pedestrian Railing	180	LnM	115	\$ 20,700
131	Name Plate	1	Each	1,000	\$ 1,000

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ITEM #	DESCRIPTION	Quantity	Unit	Unit Price	Total Amount
132	Bridge Approach Embankment Material	3,000	CuM	14	\$ 42,000
133	Drainage Geocomposite	688	SqM	25	\$ 17,200
134	6" dia. Perforated Pipe Underdrain	130	LnM	30	\$ 3,900
	<b>Total Bridge BR-3</b>				<b>\$ 4,434,036</b>
<b>XV</b>	<b><u>Urban Element &amp; Landscaping</u></b>				
<b>A</b>	<b><u>Precast Planks</u></b>				
135	Concrete Footing & Anchor Plates	2,400	CuM	650.00	\$ 1,560,000
136	Precast Planks	900	CuM	650.00	\$ 585,000
	<b>Partial Total Precast Planks</b>				<b>\$ 2,145,000</b>
<b>B</b>	<b><u>Streetscape Elements</u></b>				
137	Bus Shelter	3	Ea.	16,000.00	\$ 48,000
138	Bike Racks	255	Ea.	400.00	\$ 102,000
139	Carstop	44	Ea.	300.00	\$ 13,200
140	Bollard	167	Ea.	650.00	\$ 108,550
141	Trash Receptacle	15	Ea.	950.00	\$ 14,250
142	Bench	54	Ea.	1,200.00	\$ 64,800
143	Entrance Graphics	2	Ea.	3,000.00	\$ 6,000
144	Tactile Tiles	240	LnM	250.00	\$ 60,000
	<b>Partial Total Streetscape Elements</b>				<b>\$ 416,800</b>

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ITEM #	DESCRIPTION	Quantity	Unit	Unit Price	Total Amount
<b>C</b>	<b><u>Hardsurfaces</u></b>				
145	Porous Concrete	800	CuYd	650.00	\$ 520,000
146	Porous Concrete - Metal Joint	680	LnM	130.00	\$ 88,400
147	Exposed Agregate Paver	73	Ea.	200.00	\$ 14,600
148	Exposed Agregate Curb	2,400	LnM	50.00	\$ 120,000
	<b>Partial Total Hardsurfaces</b>				<b>\$ 743,000</b>
<b>D</b>	<b><u>Landscape &amp; Planting</u></b>				
149	Structural Soil	8,170	CuYd	75.00	\$ 612,750
150	<i>Samanea saman</i>	56	Ea.	850.00	\$ 47,600
151	<i>Pterocarpus indicus</i>	9	Ea.	550.00	\$ 4,950
152	General Trees	75	Ea.	550.00	\$ 41,250
153	Shrubs	245	Ea.	400.00	\$ 98,000
154	<i>Royal Palms</i>	120	Ea.	600.00	\$ 72,000
155	Corozo Palms	135	Ea.	550.00	\$ 74,250
156	Small Palms	276	Ea.	450.00	\$ 124,200
157	General Palms	60	Ea.	450.00	\$ 27,000
158	<i>Agave lurida</i>	392	Ea.	45.00	\$ 17,640
159	<i>Agave desmettiana</i>	728	Ea.	45.00	\$ 32,760
160	<i>Ficus pumila</i>	160	Ea	20.00	\$ 3,200
161	Plant Scuppers at RW10	44	Ea	2,000.00	\$ 88,000
162	Crushed Stone Mulch	635	Cu Y	450.00	\$ 285,750

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ITEM #	DESCRIPTION	Quantity	Unit	Unit Price	Total Amount
163	Top Soil	3,560	Cu Y	25.00	\$ 89,000
	<b>Partial Total Landscape</b>				<b>\$ 1,618,350</b>
	<b>Total Urban Element &amp; Landscaping</b>				<b>\$ 4,923,150</b>
<b>GRAND - TOTAL CONSTRUCTION</b>		<b>\$ 22,125,000</b>			
<b>7</b>	<b><u>CONTINGENCY</u></b>				
7.1	Construction Contingency (10%)	1	Ls	\$ 2,212,500	\$ 2,212,500
7.2	Other Contingencies (4.13%)	1	Ls	\$ 1,157,500	\$ 1,157,500
	<b>Total Contingency</b>				<b>\$3,370,000</b>