

I-244 / Arkansas River Multi-Modal Bridge

Preliminary Engineering	\$240,000
Conceptual Engineering Studies and Report	
Functional Plans	
LRT Track and Bridge Design Criteria Report	

Environmental Studies & NEPA Documentation	\$50,000
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Final Engineering	\$3,855,000
Survey	
Hydraulics	
Geotechnical Investigations	
Construction Plans for R/W Submission	
Final Design	
Final PS&E	

Acquisition of Additional R/W	\$250,000
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Construction	\$120,354,000
South Bound Bridge	\$68,318,000
North Bound Bridge	\$41,434,000
Track Work & Bicycle/Pedestrian Improvements	\$10,602,000

Construction Management	\$7,221,000
South Bound Bridge	\$4,099,000
North Bound Bridge	\$2,486,000
Track Work & Bicycle/Pedestrian Improvements	\$636,000

Total Project Cost	\$131,970,000
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**I-244/Arkansas River Multimodal Bridge
Construction Cost Estimate - Functional Plan Stage**

Phase 1 - Southbound Construction Summary

Construction Cost

Grading	\$1,079,600
Drainage	\$635,000
Base and Surfacing	\$1,278,000
Bridge (Total)	\$46,627,800
Roadway Structures	\$38,758,800
Transit Rail Structures	\$5,724,200
Bicycle / Pedestrian Bridge	\$2,144,800
Retaining Walls	\$1,997,000
Roadside Safety	\$485,800
Signing and Striping	\$231,340
Miscellaneous	\$1,886,200
SUBTOTAL PHASE 1	\$54,220,740
MOBILIZATION (5%)	\$2,711,100
CONTINGENCY (20%)	\$11,386,400
TOTAL PHASE 1	\$68,318,240

**I-244/Arkansas River Multimodal Bridge
Construction Cost Estimate - Functional Plan Stage**

Phase 1 - Southbound Construction (Roadway Only)		Unit	Unit Price	# Units	Construction Cost
Southbound Main Lanes					
	Excavation	CY	\$8.00	44000	\$352,000
	Embankment	CY	\$10.00	19000	\$190,000
Grading					\$542,000
	Inlets	EA	\$5,000.00	20	\$100,000
	Storm Sewer	LF	\$100.00	2000	\$200,000
	Culverts	LF	\$100.00	1000	\$100,000
Drainage					\$400,000
	Base and Surfacing	LANE-MILE	\$900,000.00	0.92	\$828,000
Base and Surfacing					\$828,000
	Slopedwall (4")	SY	\$40.00	2000	\$80,000
	Retaining Walls (MSE)	SF	\$75.00	8000	\$600,000
Retaining Walls					\$680,000
	Guardrail	LF	\$25.00	1200	\$30,000
	End Terminals	EA	\$2,000.00	4	\$8,000
	Bridge End Sections	EA	\$3,000.00	4	\$12,000
	Barrier w/ Coping	LF	\$160.00	1130	\$180,800
	Median Barrier	LF	\$130.00	350	\$45,500
Roadside Safety					\$276,300
	Overhead Signing	EA	\$60,000.00	1	\$60,000
	Cantilever Signing	EA	\$30,000.00	3	\$90,000
	Panel Signing	EA	\$5,000.00	6	\$30,000
	Sheet Signing	SF	\$15.00	120	\$1,800
	Pavement Markings	LF	\$0.60	48000	\$28,800
Signing and Striping					\$210,600
	Additional MOT	LS	\$1.00	100000	\$100,000
	Message Signs	SD	\$60.00	6000	\$360,000
	Traffic Surveillance	HOUR	\$60.00	4000	\$240,000
	Traffic Sensors	SD	\$30.00	6000	\$180,000
	Temp Signing	LS	\$1.00	250000	\$250,000
	Temp Striping	LF	\$0.50	35100	\$17,550
	Precast Concrete Barrier	LF	\$25.00	2000	\$50,000
	Relocate Concrete Barrier	LF	\$8.00	6000	\$48,000
	Erosion Control	LS	\$1.00	20000	\$20,000
	Survey Control	LS	\$1.00	20000	\$20,000
	Removal of Concrete Paving Lanes	SY	\$10.00	6500	\$65,000
	Modification of Pedestrian Landing	LS	\$50,000.00	1	\$50,000
	Removal of Slope Paving	SY	\$6.00	4300	\$25,800
	Light Poles	EA	\$5,000.00	20	\$100,000
Miscellaneous					\$1,526,350
Southbound Main Lanes					\$4,463,250

**I-244/Arkansas River Multimodal Bridge
Construction Cost Estimate - Functional Plan Stage**

Phase 1 - Southbound Construction (Roadway Only)	Unit	Unit Price	# Units	Construction Cost
7th Street Entrance Ramp				
Excavation	CY	\$8.00	16000	\$128,000
Embankment	CY	\$10.00	0	\$0
Grading				\$128,000
Inlets	EA	\$5,000.00	1	\$5,000
Storm Sewer	LF	\$100.00	50	\$5,000
Culverts	LF	\$100.00	50	\$5,000
Drainage				\$15,000
Base and Surfacing	LANE-MILE	\$900,000.00	0	\$0
Base and Surfacing				\$0
Slopedwall (4")	SY	\$40.00	1000	\$40,000
Retaining Walls (MSE)	SF	\$75.00	17000	\$1,275,000
Retaining Walls				\$1,315,000
Guardrail	LF	\$25.00	0	\$0
End Terminals	EA	\$2,000.00	0	\$0
Bridge End Sections	EA	\$3,000.00	0	\$0
Barrier w/ Coping	LF	\$160.00	0	\$0
Median Barrier	LF	\$130.00	0	\$0
Roadside Safety				\$0
Overhead Signing	EA	\$60,000.00	0	\$0
Cantilever Signing	EA	\$30,000.00	0	\$0
Panel Signing	EA	\$5,000.00	0	\$0
Sheet Signing	SF	\$15.00	60	\$900
Pavement Markings	LF	\$0.60	400	\$240
Signing and Striping				\$1,140
Additional MOT	LS	\$25,000.00	1	\$25,000
Message Signs	SD	\$60.00	0	\$0
Traffic Surveillance	HOUR	\$60.00	0	\$0
Traffic Sensors	SD	\$30.00	0	\$0
Temp Signing	LS	\$1.00	0	\$0
Temp Striping	LF	\$0.50	0	\$0
Precast Concrete Barrier	LF	\$25.00	0	\$0
Relocate Concrete Barrier	LF	\$8.00	0	\$0
Erosion Control	LS	\$15,000.00	1	\$15,000
Survey Control	LS	\$1.00	0	\$0
Removal of Concrete Paving Lanes	SY	\$10.00	60	\$600
Removal of Slope Paving	SY	\$5.00	3600	\$18,000
Light Poles	EA	\$5,000.00	2	\$10,000
Miscellaneous				\$68,600
7th Street Entrance Ramp				\$1,527,740

**I-244/Arkansas River Multimodal Bridge
Construction Cost Estimate - Functional Plan Stage**

Phase 1 - Southbound Construction (Roadway Only)	Unit	Unit Price	# Units	Construction Cost
East - South Entrance Ramp				
Excavation	CY	\$8.00	41000	\$328,000
Embankment	CY	\$10.00	3000	\$30,000
Grading				\$358,000
Inlets	EA	\$5,000.00	5	\$25,000
Storm Sewer	LF	\$100.00	600	\$60,000
Culverts	LF	\$100.00	300	\$30,000
Drainage				\$115,000
Base and Surfacing	LANE-MILE	\$900,000.00	0.1	\$90,000
Base and Surfacing				\$90,000
Slopedwall (4")	SY	\$40.00	0	\$0
Retaining Walls (MSE)	SF	\$75.00	0	\$0
Retaining Walls				\$0
Guardrail	LF	\$25.00	600	\$15,000
End Terminals	EA	\$2,000.00	2	\$4,000
Bridge End Sections	EA	\$3,000.00	2	\$6,000
Barrier w/ Coping	LF	\$160.00	600	\$96,000
Median Barrier	LF	\$130.00	0	\$0
Roadside Safety				\$121,000
Overhead Signing	EA	\$60,000.00	0	\$0
Cantilever Signing	EA	\$30,000.00	0	\$0
Panel Signing	EA	\$5,000.00	0	\$0
Sheet Signing	SF	\$15.00	400	\$6,000
Pavement Markings	LF	\$0.60	3000	\$1,800
Signing and Striping				\$7,800
Additional MOT	LS	\$20,000.00	1	\$20,000
Message Signs	SD	\$60.00	0	\$0
Traffic Surveillance	HOUR	\$60.00	0	\$0
Traffic Sensors	SD	\$30.00	0	\$0
Temp Signing	LS	\$1.00	0	\$0
Temp Striping	LF	\$0.50	0	\$0
Precast Concrete Barrier	LF	\$25.00	0	\$0
Relocate Concrete Barrier	LF	\$8.00	0	\$0
Erosion Control	LS	\$8,000.00	1	\$8,000
Survey Control	LS	\$1.00	0	\$0
Removal of Concrete Paving Lanes	SY	\$10.00	800	\$8,000
Removal of Slope Paving	SY	\$5.00	5300	\$26,500
Light Poles	EA	\$5,000.00	2	\$10,000
Miscellaneous				\$72,500
East - South Entrance Ramp				\$764,300

**I-244/Arkansas River Multimodal Bridge
Construction Cost Estimate - Functional Plan Stage**

Phase 1 - Southbound Construction (Roadway Only)	Unit	Unit Price	# Units	Construction Cost
17th Street Exit Ramp				
Excavation	CY	\$8.00	500	\$4,000
Embankment	CY	\$10.00	200	\$2,000
Grading				\$6,000
Inlets	EA	\$5,000.00	2	\$10,000
Storm Sewer	LF	\$100.00	100	\$10,000
Culverts	LF	\$100.00	100	\$10,000
Drainage				\$30,000
Base and Surfacing	LANE-MILE	\$900,000.00	0.12	\$108,000
Base and Surfacing				\$108,000
Slopedwall (4")	SY	\$40.00	50	\$2,000
Retaining Walls (MSE)	SF	\$75.00	0	\$0
Retaining Walls				\$2,000
Guardrail	LF	\$25.00	500	\$12,500
End Terminals	EA	\$2,000.00	2	\$4,000
Bridge End Sections	EA	\$3,000.00	2	\$6,000
Barrier w/ Coping	LF	\$160.00	0	\$0
Median Barrier	LF	\$130.00	0	\$0
Roadside Safety				\$22,500
Overhead Signing	EA	\$60,000.00	0	\$0
Cantilever Signing	EA	\$30,000.00	0	\$0
Panel Signing	EA	\$5,000.00	2	\$10,000
Sheet Signing	SF	\$15.00	0	\$0
Pavement Markings	LF	\$0.60	0	\$0
Signing and Striping				\$10,000
Additional MOT	LS	\$1.00	0	\$0
Message Signs	SD	\$60.00	0	\$0
Traffic Surveillance	HOUR	\$60.00	0	\$0
Traffic Sensors	SD	\$30.00	0	\$0
Temp Signing	LS	\$1.00	0	\$0
Temp Striping	LF	\$0.50	0	\$0
Precast Concrete Barrier	LF	\$25.00	0	\$0
Relocate Concrete Barrier	LF	\$8.00	0	\$0
Erosion Control	LS	\$2,000.00	1	\$2,000
Survey Control	LS	\$1.00	0	\$0
Removal of Concrete Paving Lanes	SY	\$10.00	700	\$7,000
Removal of Slope Paving	SY	\$5.00	0	\$0
Light Poles	EA	\$5,000.00	3	\$15,000
Miscellaneous				\$24,000
17th Street Exit Ramp				\$202,500

**I-244/Arkansas River Multimodal Bridge
Construction Cost Estimate - Functional Plan Stage**

Phase 1 - Southbound Construction (Roadway Only)	Unit	Unit Price	# Units	Construction Cost
Temporary Crossover 1				
Excavation	CY	\$8.00	200	\$1,600
Embankment	CY	\$10.00	0	\$0
Grading				\$1,600
Inlets	EA	\$5,000.00	2	\$10,000
Storm Sewer	LF	\$100.00	100	\$10,000
Culverts	LF	\$100.00	100	\$10,000
Drainage				\$30,000
Base and Surfacing	LANE-MILE	\$900,000.00	0.1	\$90,000
Base and Surfacing				\$90,000
Slopedwall (4")	SY	\$40.00	0	\$0
Retaining Walls (MSE)	SF	\$75.00	0	\$0
Retaining Walls				\$0
Guardrail	LF	\$25.00		\$0
End Terminals	EA	\$2,000.00	1	\$2,000
Bridge End Sections	EA	\$3,000.00		\$0
Barrier w/ Coping	LF	\$160.00		\$0
Median Barrier	LF	\$130.00	425	\$55,250
Roadside Safety				\$57,250
Overhead Signing	EA	\$40,000.00	0	\$0
Cantilever Signing	EA	\$10,000.00	0	\$0
Panel Signing	EA	\$1,000.00	0	\$0
Sheet Signing	SF	\$15.00	60	\$900
Pavement Markings	LF	\$0.60	0	\$0
Signing and Striping				\$900
Additional MOT	LS	\$1.00	25000	\$25,000
Message Signs	SD	\$60.00	0	\$0
Traffic Surveillance	HOUR	\$60.00	0	\$0
Traffic Sensors	SD	\$30.00	0	\$0
Temp Signing	LS	\$1.00	20000	\$20,000
Temp Striping	LF	\$0.50	1700	\$850
Precast Concrete Barrier	LF	\$25.00	425	\$10,625
Relocate Concrete Barrier	LF	\$8.00	425	\$3,400
Erosion Control	LS	\$2,500.00	1	\$2,500
Survey Control	LS	\$1.00	0	\$0
Removal of Median Barrier	SY	\$15.00	425	\$6,375
Removal of Slope Paving	SY	\$5.00	0	\$0
Light Poles	EA	\$5,000.00	2	\$10,000
Miscellaneous				\$78,750
Temporary Crossover 1				\$258,500

**I-244/Arkansas River Multimodal Bridge
Construction Cost Estimate - Functional Plan Stage**

Phase 1 - Southbound Construction (Roadway Only)	Unit	Unit Price	# Units	Construction Cost
Temporary Crossover 2				
Excavation	CY	\$8.00	3000	\$24,000
Embankment	CY	\$10.00	2000	\$20,000
Grading				\$44,000
Inlets	EA	\$5,000.00	1	\$5,000
Storm Sewer	LF	\$100.00	100	\$10,000
Culverts	LF	\$100.00	300	\$30,000
Drainage				\$45,000
Surfacing	TON	\$90.00	1800	\$162,000
Base and Surfacing				\$162,000
Slopedwall (4")	SY	\$40.00	0	\$0
Retaining Walls (MSE)	SF	\$75.00	0	\$0
Retaining Walls				\$0
Guardrail	LF	\$25.00	350	\$8,750
End Terminals	EA	\$2,000.00		\$0
Bridge End Sections	EA	\$3,000.00		\$0
Barrier w/ Coping	LF	\$160.00		\$0
Median Barrier	LF	\$130.00		\$0
Roadside Safety				\$8,750
Overhead Signing	EA	\$40,000.00	0	\$0
Cantilever Signing	EA		0	\$0
Panel Signing	EA		0	\$0
Sheet Signing	SF	\$15.00	60	\$900
Pavement Markings	LF	\$0.60	0	\$0
Signing and Striping				\$900
Additional MOT	LS	\$1.00	25000	\$25,000
Message Signs	SD	\$6,000.00	1	\$6,000
Traffic Surveillance	HOUR	\$4,000.00	0	\$0
Traffic Sensors	SD	\$6,000.00	0	\$0
Temp Signing	LS	\$1.00	0	\$0
Temp Striping	LF	\$0.50	3800	\$1,900
Precast Concrete Barrier	LF	\$25.00	1900	\$47,500
Relocate Concrete Barrier	LF	\$8.00	1900	\$15,200
Erosion Control	LS	\$14,000.00	1	\$14,000
Survey Control	LS	\$1.00	5000	\$5,000
Removal of Guardrail	LF	\$4.00	350	\$1,400
Miscellaneous				\$116,000
Temporary Crossover 2				\$376,650

**I-244/Arkansas River Multimodal Bridge
Construction Cost Estimate - Functional Plan Stage**

Phase 1 - Southbound Bridge Summary

Southbound Bridge

	Unit	Unit Price	# Units	Construction Cost
Class AA Concrete	CY	\$600.00	9250	\$5,550,000
Epoxy Coated Reinf. Steel (Grade 60)	LB	\$1.10	2681220	\$2,949,342
Structural Steel	LB	\$2.25	1655000	\$3,723,750
Parapet Rail	LF	\$90.00	10180	\$916,200
Water Repellent Treatment	SY	\$4.00	13290	\$53,160
PS Beams Type III	LF	\$225.00	24820	\$5,584,500
PS Beams Type IV	LF	\$275.00	8030	\$2,208,250
Class A Concrete	CY	\$600.00	5675	\$3,405,000
Reinforcing Steel (Grade 60)	LB	\$1.00	850920	\$850,920
Drilled Shafts 60" Diameter	LF	\$1,000.00	3850	\$3,850,000
Drilled Shafts 72" Diameter	LF	\$1,200.00	600	\$720,000
Drilled Shafts 84" Diameter	LF	\$1,400.00	2950	\$4,130,000
Steel Piling (HP 10x42)	LF	\$75.00	2900	\$217,500
Approach Slabs	SY	\$200.00	640	\$128,000
Sealed Expansion Joint	LF	\$150.00	2582	\$387,300
Fixed Bearing Assembly	EA	\$1,200.00	452	\$542,400
Expansion Bearing Assembly	EA	\$1,200.00	452	\$542,400
Bridge Removal	LS	\$3,000,000.00	1	\$3,000,000

Southbound Bridge

\$38,758,800

Transit Rail Structures

Class AA Concrete	CY	\$750.00	1940	\$1,455,000
Epoxy Coated Reinf. Steel (Grade 60)	LB	\$1.10	561420	\$617,562
PS Beams Type IV	LF	\$275.00	8440	\$2,321,000
Class A Concrete	CY	\$750.00	250	\$187,500
Reinforcing Steel (Grade 60)	LB	\$1.00	37500	\$37,500
Steel Piling (HP 10x42)	LF	\$75.00	1800	\$135,000
Approach Slabs	SY	\$200.00	190	\$38,000
Sealed Expansion Joint	LF	\$150.00	640	\$96,000
Fixed Bearing Assembly	EA	\$1,200.00	114	\$136,800
Expansion Bearing Assembly	EA	\$1,200.00	114	\$136,800
Handrail	LF	\$100.00	5630	\$563,000

Transit Rail Structures

\$5,724,200

**I-244/Arkansas River Multimodal Bridge
Construction Cost Estimate - Functional Plan Stage**

Bicycle / Pedestrian Structure

Class AA Concrete	CY	\$600.00	781	\$468,600
Epoxy Coated Reinf. Steel (Grade 60)	LB	\$1.10	226530	\$249,183
PS Beams Type III	LF	\$275.00	2812	\$773,300
Class A Concrete	CY	\$600.00	70	\$42,000
Reinforcing Steel (Grade 60)	LB	\$1.00	10500	\$10,500
Steel Piling (HP 10x42)	LF	\$75.00	600	\$45,000
Sealed Expansion Joint	LF	\$150.00	190	\$28,500
Fixed Bearing Assembly	EA	\$1,200.00	38	\$45,600
Expansion Bearing Assembly	EA	\$1,200.00	38	\$45,600
Water Repellent Treatment	SY	\$4.00	3670	\$14,680
Handrail	LF	\$300.00	1406	\$421,800

Bicycle / Pedestrian Structure

\$2,144,800

**I-244/Arkansas River Multimodal Bridge
Construction Cost Estimate - Functional Plan Stage**

Phase 2 - Northbound Construction Summary

Construction Cost

Grading	\$81,600
Drainage	\$410,100
Base and Surfacing	\$736,200
Bridge	\$28,628,800
Retaining Walls	\$733,000
Roadside Safety	\$355,150
Signing and Striping	\$155,280
Miscellaneous	\$1,782,750
SUBTOTAL PHASE 2	\$32,882,880
MOBILIZATION (5%)	\$1,644,200
CONTINGENCY (20%)	\$6,905,500
TOTAL PHASE 2	\$41,432,580

**I-244/Arkansas River Multimodal Bridge
Construction Cost Estimate - Functional Plan Stage**

Phase 2 - Northbound Construction (Roadway Only)	Unit	Unit Price	# Units	Construction Cost
Northbound Main Lanes				
Excavation	CY	\$8.00	2000	\$16,000
Embankment	CY	\$10.00	2000	\$20,000
Grading				\$36,000
Inlets	EA	\$5,000.00	15	\$75,000
Storm Sewer	LF	\$100.00	1200	\$120,000
Culverts	LF	\$100.00	1200	\$120,000
Drainage				\$315,000
Base and Surfacing	LANE-MILE	\$900,000.00	0.6	\$540,000
Base and Surfacing				\$540,000
Slopedwall (4")	SY	\$40.00	600	\$24,000
Retaining Walls (MSE)	SF	\$75.00	8000	\$600,000
Retaining Walls				\$624,000
Guardrail	LF	\$25.00	400	\$10,000
End Terminals	EA	\$2,000.00	2	\$4,000
Bridge End Sections	EA	\$3,000.00	2	\$6,000
Barrier w/ Coping	LF	\$160.00	500	\$80,000
Median Barrier	LF	\$130.00	400	\$52,000
Roadside Safety				\$152,000
Overhead Signing	EA	\$60,000.00	2	\$120,000
Cantilever Signing	EA	\$30,000.00	0	\$0
Panel Signing	EA	\$5,000.00	6	\$30,000
Sheet Signing	SF	\$15.00	0	\$0
Pavement Markings	LF	\$0.60	0	\$0
Signing and Striping				\$150,000
Additional MOT	LS	\$1.00	100000	\$100,000
Message Signs	SD	\$60.00	6000	\$360,000
Traffic Surveillance	HOUR	\$60.00	4000	\$240,000
Traffic Sensors	SD	\$30.00	6000	\$180,000
Temp Signing	LS	\$1.00	250000	\$250,000
Temp Striping	LF	\$0.50	27000	\$13,500
Precast Concrete Barrier	LF	\$25.00	6000	\$150,000
Relocate Concrete Barrier	LF	\$8.00	6000	\$48,000
Erosion Control	LS	\$35,000.00	1	\$35,000
Survey Control	LS	\$40,000.00	1	\$40,000
Removal of Concrete Paving Lanes	SY	\$10.00	6200	\$62,000
Removal of Slope Paving	SY	\$6.00	1000	\$6,000
Light Poles	EA	\$5,000.00	20	\$100,000
Miscellaneous				\$1,584,500
Northbound Main Lanes				\$3,401,500

**I-244/Arkansas River Multimodal Bridge
Construction Cost Estimate - Functional Plan Stage**

Phase 2 - Northbound Construction (Roadway Only)	Unit	Unit Price	# Units	Construction Cost
17th Street Entrance Ramp				
Excavation	CY	\$8.00	3000	\$24,000
Embankment	CY	\$10.00	200	\$2,000
Grading				\$26,000
Inlets	EA	\$5,000.00	1	\$5,000
Storm Sewer	LF	\$100.00	100	\$10,000
Culverts	LF	\$100.00	100	\$10,000
Drainage				\$25,000
Base and Surfacing	LANE-MILE	\$900,000.00	0.1	\$90,000
Base and Surfacing				\$90,000
Slopedwall (4")	SY	\$40.00	100	\$4,000
Retaining Walls (MSE)	SF	\$75.00	1400	\$105,000
Retaining Walls				\$109,000
Guardrail	LF	\$25.00	200	\$5,000
End Terminals	EA	\$2,000.00	2	\$4,000
Bridge End Sections	EA	\$3,000.00	2	\$6,000
Barrier w/ Coping	LF	\$160.00	300	\$48,000
Median Barrier	LF	\$130.00	0	\$0
Roadside Safety				\$63,000
Overhead Signing	EA	\$60,000.00	0	\$0
Cantilever Signing	EA	\$30,000.00	0	\$0
Panel Signing	EA	\$5,000.00	0	\$0
Sheet Signing	SF	\$15.00	60	\$900
Pavement Markings	LF	\$0.60	2000	\$1,200
Signing and Striping				\$2,100
Additional MOT	LS	\$20,000.00	1	\$20,000
Message Signs	SD	\$60.00	0	\$0
Traffic Surveillance	HOUR	\$60.00	0	\$0
Traffic Sensors	SD	\$30.00	0	\$0
Temp Signing	LS	\$1.00	0	\$0
Temp Striping	LF	\$0.50	0	\$0
Precast Concrete Barrier	LF	\$25.00	0	\$0
Relocate Concrete Barrier	LF	\$8.00	0	\$0
Erosion Control	LS	\$4,000.00	1	\$4,000
Survey Control	LS	\$4,000.00	1	\$4,000
Removal of Concrete Paving Lanes	SY	\$10.00	900	\$9,000
Removal of Slope Paving	SY	\$5.00	0	\$0
Light Poles	EA	\$5,000.00	2	\$10,000
Miscellaneous				\$47,000
17th Street Entrance Ramp				\$362,100

**I-244/Arkansas River Multimodal Bridge
Construction Cost Estimate - Functional Plan Stage**

Phase 2 - Northbound Construction (Roadway Only)	Unit	Unit Price	# Units	Construction Cost
South - East Exit Ramp				
Excavation	CY	\$8.00	1000	\$8,000
Embankment	CY	\$10.00	1000	\$10,000
Grading				\$18,000
Inlets	EA	\$5,000.00	1	\$5,000
Storm Sewer	LF	\$100.00	100	\$10,000
Culverts	LF	\$100.00	100	\$10,000
Drainage				\$25,000
Base and Surfacing	LANE-MILE	\$900,000.00	0.1	\$90,000
Base and Surfacing				\$90,000
Slopedwall (4")	SY	\$40.00	0	\$0
Retaining Walls (MSE)	SF	\$75.00	0	\$0
Retaining Walls				\$0
Guardrail	LF	\$25.00	1000	\$25,000
End Terminals	EA	\$2,000.00	2	\$4,000
Bridge End Sections	EA	\$3,000.00	2	\$6,000
Barrier w/ Coping	LF	\$160.00	0	\$0
Median Barrier	LF	\$130.00	0	\$0
Roadside Safety				\$35,000
Overhead Signing	EA	\$60,000.00	0	\$0
Cantilever Signing	EA	\$30,000.00	0	\$0
Panel Signing	EA	\$5,000.00	0	\$0
Sheet Signing	SF	\$15.00	60	\$900
Pavement Markings	LF	\$0.60	800	\$480
Signing and Striping				\$1,380
Additional MOT	LS	\$10,000.00	1	\$10,000
Message Signs	SD	\$60.00	0	\$0
Traffic Surveillance	HOUR	\$60.00	0	\$0
Traffic Sensors	SD	\$30.00	0	\$0
Temp Signing	LS	\$1.00	0	\$0
Temp Striping	LF	\$0.50	0	\$0
Precast Concrete Barrier	LF	\$25.00	0	\$0
Relocate Concrete Barrier	LF	\$8.00	0	\$0
Erosion Control	LS	\$2,000.00	1	\$2,000
Survey Control	LS	\$2,000.00	1	\$2,000
Removal of Concrete Paving Lanes	SY	\$10.00	1200	\$12,000
Removal of Slope Paving	SY	\$5.00	0	\$0
Light Poles	EA	\$5,000.00	2	\$10,000
Miscellaneous				\$36,000
South - East Exit Ramp				\$205,380

**I-244/Arkansas River Multimodal Bridge
Construction Cost Estimate - Functional Plan Stage**

Phase 2 - Northbound Construction (Roadway Only)	Unit	Unit Price	# Units	Construction Cost
Temporary Crossover 3				
Excavation	CY	\$8.00	200	\$1,600
Embankment	CY	\$10.00	0	\$0
Grading				\$1,600
Inlets	EA	\$5,000.00	0	\$0
Storm Sewer	LF	\$100.00	0	\$0
Culverts	LF	\$100.00	1	\$100
Drainage				\$100
Surfacing	TON	\$90.00	180	\$16,200
Base and Surfacing				\$16,200
Slopedwall (4")	SY	\$40.00	0	\$0
Retaining Walls (MSE)	SF	\$75.00	0	\$0
Retaining Walls				\$0
Guardrail	LF	\$25.00	0	\$0
End Terminals	EA	\$2,000.00	2	\$4,000
Bridge End Sections	EA	\$3,000.00	0	\$0
Barrier w/ Coping	LF	\$160.00	0	\$0
Median Barrier	LF	\$130.00	400	\$52,000
Roadside Safety				\$56,000
Overhead Signing	EA	\$40,000.00	0	\$0
Cantilever Signing	EA	\$10,000.00	0	\$0
Panel Signing	EA	\$1,000.00	0	\$0
Sheet Signing	SF	\$15.00	60	\$900
Pavement Markings	LF	\$0.60	0	\$0
Signing and Striping				\$900
Additional MOT	LS	\$10,000.00	0	\$0
Message Signs	SD	\$60.00	0	\$0
Traffic Surveillance	HOUR	\$60.00	0	\$0
Traffic Sensors	SD	\$30.00	0	\$0
Temp Signing	LS	\$10,000.00	0	\$0
Temp Striping	LF	\$0.50	2000	\$1,000
Precast Concrete Barrier	LF	\$25.00	940	\$23,500
Relocate Concrete Barrier	LF	\$8.00	425	\$3,400
Erosion Control	LS	\$2,000.00	1	\$2,000
Survey Control	LS	\$5,000.00	1	\$5,000
Removal of Median Barrier	SY	\$15.00	400	\$6,000
Removal of Slope Paving	SY	\$5.00	0	\$0
Light Poles	EA	\$5,000.00	0	\$0
Miscellaneous				\$40,900
Temporary Crossover 3				\$115,700

**I-244/Arkansas River Multimodal Bridge
Construction Cost Estimate - Functional Plan Stage**

Phase 2 - Northbound Construction (Roadway Only)	Unit	Unit Price	# Units	Construction Cost
Temporary Crossover 4				\$1,000
Excavation	CY	\$8.00	0	\$0
Embankment	CY	\$10.00	0	\$0
Grading				\$0
Inlets	EA	\$5,000.00	1	\$5,000
Storm Sewer	LF	\$100.00	100	\$10,000
Culverts	LF	\$100.00	300	\$30,000
Drainage				\$45,000
Surfacing	TON	\$90.00	0	\$0
Base and Surfacing				\$0
Slopedwall (4")	SY	\$40.00	0	\$0
Retaining Walls (MSE)	SF	\$75.00	0	\$0
Retaining Walls				\$0
Guardrail	LF	\$25.00	350	\$8,750
End Terminals	EA	\$2,000.00	2	\$4,000
Bridge End Sections	EA	\$3,000.00	0	\$0
Barrier w/ Coping	LF	\$160.00	0	\$0
Median Barrier	LF	\$130.00	280	\$36,400
Roadside Safety				\$49,150
Overhead Signing	EA	\$40,000.00	0	\$0
Cantilever Signing	EA		0	\$0
Panel Signing	EA		0	\$0
Sheet Signing	SF	\$15.00	60	\$900
Pavement Markings	LF	\$0.60	0	\$0
Signing and Striping				\$900
Additional MOT	LS	\$1.00	25000	\$25,000
Message Signs	SD	\$6,000.00	1	\$6,000
Traffic Surveillance	HOUR	\$4,000.00	0	\$0
Traffic Sensors	SD	\$6,000.00	0	\$0
Temp Signing	LS	\$10,000.00	1	\$10,000
Temp Striping	LF	\$0.50	1900	\$950
Precast Concrete Barrier	LF	\$25.00	800	\$20,000
Relocate Concrete Barrier	LF	\$8.00	800	\$6,400
Erosion Control	LS	\$2,000.00	1	\$2,000
Survey Control	LS	\$2,000.00	1	\$2,000
Removal of Median Barrier	LF	\$4.00	500	\$2,000
Miscellaneous				\$74,350
Temporary Crossover 4				\$169,400

**I-244/Arkansas River Multimodal Bridge
Construction Cost Estimate - Functional Plan Stage**

Phase 2 - Northbound Bridge Summary
Northbound Bridge

	Unit	Unit Price	# Units	Construction Cost
Class AA Concrete	CY	\$600.00	7500	\$4,500,000
Epoxy Coated Reinf. Steel (Grade 60)	LB	\$1.10	2174600	\$2,392,060
Structural Steel	LB	\$2.25	613000	\$1,379,250
Parapet Rail	LF	\$90.00	6910	\$621,900
Water Repellent Treatment	SY	\$4.00	9020	\$36,080
PS Beams Type III	LF	\$225.00	14340	\$3,226,500
PS Beams Type IV	LF	\$275.00	13190	\$3,627,250
Class A Concrete	CY	\$600.00	3350	\$2,010,000
Reinforcing Steel (Grade 60)	LB	\$1.00	501970	\$501,970
Drilled Shafts 60" Diameter	LF	\$1,000.00	2550	\$2,550,000
Drilled Shafts 72" Diameter	LF	\$1,200.00	2950	\$3,540,000
Drilled Shafts 84" Diameter	LF	\$1,400.00	0	\$0
Steel Piling (HP 10x42)	LF	\$75.00	2700	\$202,500
Approach Slabs	SY	\$200.00	664	\$132,800
Sealed Expansion Joint	LF	\$150.00	2043	\$306,450
Fixed Bearing Assembly	EA	\$1,200.00	355	\$426,000
Expansion Bearing Assembly	EA	\$1,200.00	355	\$426,000
Bridge Removal	LS	\$2,750,000.00	1	\$2,750,000
Northbound Bridge				\$28,628,800

**I-244/Arkansas River Multimodal Bridge
Construction Cost Estimate - Functional Plan Stage**

Phase 3 - Trackwork	Unit	Unit Price	# Units	Construction Cost	
Track A (Commuter Rail)					
Grading	Embankment	CY	\$15.00	5000	\$75,000
					\$75,000
	Inlets	EA	\$5,000.00	5	\$25,000
	Storm Sewer	LF	\$100.00	400	\$40,000
	Culverts	LF	\$100.00	400	\$40,000
Drainage					\$105,000
	Retaining Walls (MSE)	SF	\$75.00	6000	\$450,000
Retaining Walls					\$450,000
	Erosion Control	LS	\$20,000.00	1	\$20,000
	Survey Control	LS	\$20,000.00	1	\$20,000
	Removal of Pedestrian Landing	LS	\$100,000.00	1	\$100,000
Miscellaneous					\$140,000
	Subballast	CY	\$60.00	1700	\$102,000
	Ballasted Track	TF	\$235.00	1200	\$282,000
	Ballasted Track with Restraining Rail	TF	\$275.00	500	\$137,500
	Direct Fixation Track (Bridge)	TF	\$450.00	1400	\$630,000
	Traction Power System	TF	\$230.00	3100	\$713,000
	Communications	TF	\$100.00	3100	\$310,000
	Signals	TF	\$200.00	3100	\$620,000
Trackwork					\$2,794,500
Track A (Commuter Rail)					\$3,564,500

**I-244/Arkansas River Multimodal Bridge
Construction Cost Estimate - Functional Plan Stage**

Track B (High Speed Rail)

	Unclassified Excavation	CY	\$8.00	3200	\$25,600
	Embankment	CY	\$15.00	15000	\$225,000
Grading					\$25,600
	Inlets	EA	\$5,000.00	5	\$25,000
	Storm Sewer	LF	\$100.00	400	\$40,000
	Culverts	LF	\$100.00	400	\$40,000
Drainage					\$105,000
	Retaining Walls (MSE)	SF	\$75.00	8500	\$637,500
Retaining Walls					\$637,500
	Erosion Control	LS	\$20,000.00	1	\$20,000
	Survey Control	LS	\$20,000.00	1	\$20,000
Miscellaneous					\$40,000
	Subballast	CY	\$60.00	2200	\$132,000
	Ballasted Track	TF	\$270.00	2200	\$594,000
	Direct Fixation Track (Bridge)	TF	\$465.00	1400	\$651,000
	Communications	TF	\$100.00	3600	\$360,000
	Signals	TF	\$200.00	3600	\$720,000
Trackwork					\$2,457,000

Track B (High Speed Rail)

\$3,265,100

Bicycle / Pedestrian Trail Modification

	Prefabricated Truss Span	SF	\$150.00	750	\$112,500.00
	ADA Ramp	LF	\$1,000.00	160	\$160,000.00
	Elevated Trail	LF	\$1,000.00	100	\$100,000.00
	At Grade Trail	LF	\$350.00	1400	\$490,000.00
	Demolition of Existing	LS	\$75,000.00	1	\$75,000.00

Bicycle / Pedestrian Trail Modification

\$937,500

SUBTOTAL PHASE 3 \$7,767,100

MOBILIZATION (5%) \$388,400

CONTINGENCY (30%) \$2,446,700

TOTAL PHASE 3

\$10,602,200