

## APPENDIX B: CROSS-SECTION COST ESTIMATES

**Table B-1: New 80' Construction**

ITEM	COST	UNIT	QUANTITY	\$ PER LINEAR FOOT
Clearing and Grubbing	\$1,036.00	Acres	(82' x 1')/ 43,560	1.95
Excavation (Roadway)	\$0.16	Ft <sup>3</sup>	(82' x (3" + 8" + 6")/12 x 1') = 45.33	18.41
Subgrade Finishing	\$0.09	Ft <sup>2</sup>	(82' x 1') = 32	7.62
Untreated Base Course (10" thick)	\$0.60	Ft <sup>3</sup>	(58' x 10"/12 x 1') = 21.33	28.94
Bituminous Surface Course (6" thick)	\$3.25	Ft <sup>3</sup>	(58' x 6"/12 x 1') = 8	94.34
Pavement Marking Paint	\$1.31	Ft	1 Lines x 1' = 1	1.31
Curb and Gutter, Type B1	\$8.22	Ft	2 x 1' = 2	16.44
4' Concrete Sidewalk, 4" Thick	\$1.90	Ft <sup>2</sup>	(4' x 2 x 4"/12) = 2.67	5.08
Untreated Base Course for Sidewalk	\$0.60	Ft <sup>3</sup>	(2(4 + 1)' x 4"/12 x 1') = 3.33	2.00
Fire Hydrant	\$2,500.00	Each	1/500' = .002	5.00
Traffic Signal	\$60,000.00	Each	3 per mile	34.09
Landscaping & Grading	\$0.56	Ft <sup>2</sup>	2- 9' x 1' = 18	10.03
Right of Way Acquisition	\$100,000.00	Acres	(80' x 1')/43560 = .001	183.65
			Subtotal	408.87
New and Reconstructed Lighting	calculated @ 1.5% of subtotal			6.13
Signs (New)	calculated @ 1.5% of subtotal			6.13
Drainage (Inc. Structures)	calculated @ 20% of subtotal			81.77
Environmental & Design	calculated @ 15% of subtotal			61.33
			Subtotal	564.23
Mobilization and Temp. Traffic Control	calculated @ 15% of subtotal			84.64
Contingency	calculated @ 20% of subtotal			112.85
			Subtotal	761.73
Contingency for Price Increases	calculated @ 10% of subtotal			76.17
<b>Cost per Linear Foot</b>				<b>837.91</b>
<b>Total Cost per Mile</b>				<b>\$4,400,000</b>

**Table B-2: New 99' Construction**

ITEM	COST	UNIT	QUANTITY	\$ PER LINEAR FOOT
Clearing and Grubbing	\$1,036.00	Acres	$(101' \times 1') / 43,560$	2.40
Excavation (Roadway)	\$0.16	Ft <sup>3</sup>	$(101' \times (3'' + 8'' + 6'')) / 12 \times 1' = 45.33$	22.68
Subgrade Finishing	\$0.09	Ft <sup>2</sup>	$(101' \times 1') = 32$	9.38
Untreated Base Course (10" thick)	\$0.60	Ft <sup>3</sup>	$(77' \times 10'' / 12 \times 1') = 21.33$	38.42
Bituminous Surface Course (6" thick)	\$3.25	Ft <sup>3</sup>	$(77' \times 6'' / 12 \times 1') = 8$	125.25
Pavement Marking Paint	\$1.31	Ft	1 Lines x 1' = 1	1.31
Curb and Gutter, Type B1	\$8.22	Ft	2 x 1' = 2 L.F.	16.44
4' Concrete Sidewalk, 4" Thick	\$1.90	Ft <sup>2</sup>	$(4' \times 2 \times 4'' / 12) = 2.67$	5.08
Untreated Base Course for Sidewalk	\$0.60	Ft <sup>3</sup>	$(2(4 + 1)' \times 4'' / 12 \times 1') = 3.33$	2.00
Fire Hydrant	\$2,500.00	Each	$1/500' = .002$	5.00
Traffic Signal	\$60,000.00	Each	2 per mile	22.73
Landscaping & Grading	\$0.56	Ft <sup>2</sup>	2- 9' x 1' = 18	10.03
Right of Way Acquisition	\$100,000.00	Acres	$(99' \times 1') / 43560 = .001$	227.27
			Subtotal	488.00
New and Reconstructed Lighting	calculated @ 1.5% of subtotal			7.32
Signs (New)	calculated @ 1.5% of subtotal			7.32
Drainage (Inc. Structures)	calculated @ 20% of subtotal			97.60
Environmental & Design	calculated @ 15% of subtotal			73.20
			Subtotal	673.44
Mobilization and Temp. Traffic Control	calculated @ 15% of subtotal			101.02
Contingency	calculated @ 20% of subtotal			134.69
			Subtotal	909.14
Contingency for Price Increases	calculated @ 10% of subtotal			90.91
<b>Cost per Linear Foot</b>				<b>1,000.06</b>
<b>Total Cost Per Mile</b>				<b>\$5,300,000</b>

**Table B-3: Widen Local to Collector**

ITEM	COST	UNIT	QUANTITY	\$ PER LINEAR FOOT
Clearing and Grubbing	\$1,036.00	Acres	$((82-36)' \times 1') / 43,560$	1.09
Excavation (Roadway)	\$0.16	Ft <sup>3</sup>	$((82-36)' \times (3'' + 8'' + 6'') / 12 \times 1') = 45.33$	10.33
Subgrade Finishing	\$0.09	Ft <sup>2</sup>	$((82-36)' \times 1') = 32$	4.27
Untreated Base Course (10" thick)	\$0.60	Ft <sup>3</sup>	$((58-36)' \times 10'' / 12 \times 1') = 21.33$	10.98
Bituminous Surface Course (6" thick)	\$3.25	Ft <sup>3</sup>	$(58' \times 6'' / 12 \times 1') = 8$	94.34
Pavement Marking Paint	\$1.31	Ft	1 Lines x 1' = 1	1.31
Curb and Gutter, Type B1	\$8.22	Ft	2 x 1' = 2	16.44
4' Concrete Sidewalk, 4" Thick	\$1.90	Ft <sup>2</sup>	$(4' \times 2 \times 4'' / 12) = 2.67$	5.08
Untreated Base Course for Sidewalk	\$0.60	Ft <sup>3</sup>	$(2(4 + 1)' \times 4'' / 12 \times 1') = 3.33$	2.00
Fire Hydrant	\$2,500.00	Each	1/500' = .002	5.00
Traffic Signal	\$60,000.00	Each	3 per mile	34.09
Landscaping & Grading	\$0.56	Ft <sup>2</sup>	2- 9' x 1' = 18	10.03
Right of Way Acquisition	\$100,000.00	Acres	$((80-60)' \times 1') / 43560 = .001$	45.91
			Subtotal	240.89
New and Reconstructed Lighting	calculated @ 1.5% of subtotal			3.61
Signs (New)	calculated @ 1.5% of subtotal			3.61
Drainage (Inc. Structures)	calculated @ 20% of subtotal			48.18
Environmental & Design	Calculated @ 15% of subtotal			36.13
			Subtotal	332.42
Mobilization and Temp. Traffic Control	calculated @ 15% of subtotal			49.86
Contingency	calculated @ 20% of subtotal			66.48
			Subtotal	448.77
Contingency for Price Increases	calculated @ 10% of subtotal			44.88
<b>Cost per Linear Foot</b>				<b>493.65</b>
<b>Total Cost Per Mile</b>				<b>\$2,600,000</b>

**Table B-4: Widen Local to Minor Arterial**

ITEM	COST	UNIT	QUANTITY	\$ PER LINEAR FOOT
Clearing and Grubbing	\$1,036.00	Acres	$((101-36)' \times 1') / 43,560$	1.55
Excavation (Roadway)	\$0.16	Ft <sup>3</sup>	$((101-36)' \times (3'' + 8'' + 6'') / 12 \times 1') = 45.33$	14.59
Subgrade Finishing	\$0.09	Ft <sup>2</sup>	$((101-36)' \times 1') = 32$	6.04
Untreated Base Course (10" thick)	\$0.60	Ft <sup>3</sup>	$((77-36)' \times 10'' / 12 \times 1') = 21.33$	20.46
Bituminous Surface Course (6" thick)	\$3.25	Ft <sup>3</sup>	$(77' \times 6'' / 12 \times 1') = 8$	125.25
Pavement Marking Paint	\$1.31	Ft	1 Lines x 1' = 1	1.31
Curb and Gutter, Type B1	\$8.22	Ft	2 x 1' = 2	16.44
4' Concrete Sidewalk, 4" Thick	\$1.90	Ft <sup>2</sup>	$(4' \times 2 \times 4'' / 12) = 2.67$	5.08
Untreated Base Course for Sidewalk	\$0.60	Ft <sup>3</sup>	$(2(4 + 1)' \times 4'' / 12 \times 1') = 3.33$	2.00
Fire Hydrant	\$2,500.00	Each	1/500' = .002	5.00
Traffic Signal	\$60,000.00	Each	2 per mile	22.73
Landscaping & Grading	\$0.56	Ft <sup>2</sup>	2- 9' x 1' = 18	10.03
Right of Way Acquisition	\$100,000.00	Acres	$((99-60)' \times 1') / 43560 = .001$	89.53
			Subtotal	320.01
New and Reconstructed Lighting	calculated @ 1.5% of subtotal			4.80
Signs (New)	calculated @ 1.5% of subtotal			4.80
Drainage (Inc. Structures)	calculated @ 20% of subtotal			64.00
Environmental & Design	calculated @ 15% of subtotal			48.00
			Subtotal	441.61
Mobilization and Temp. Traffic Control	calculated @ 15% of subtotal			66.24
Contingency	calculated @ 20% of subtotal			88.32
			Subtotal	596.18
Contingency for Price Increases	calculated @ 10% of subtotal			59.62
<b>Cost per Linear Foot</b>				<b>655.80</b>
<b>Total Cost Per Mile</b>				<b>\$3,500,000</b>