

A-5: Roadway Improvement Cost Estimates



ROADWAY COST ESTIMATE ASSUMPTIONS

1. Clear and grub is based on an assumed cost of \$10 per linear foot.
2. Modify existing utilities is an allowance for relocation of existing facilities other than sewer, water and dry utilities which are assumed to be paid for by the respective utility companies. It includes allowance for raising manhole to grade, removing inlets and pipes, relocation of drain inlets and other misc. costs.
3. Roadway excavation is assumed to be 24", depth of the AC (6") and AB (18"), and covers only the roadway widening.
4. Class 2 AB is assumed to be 18" deep below the roadway. AB below sidewalk is assumed to be a part of the 25 percent contingency.
5. Asphalt concrete is assumed to be 6" thick within the roadway widening areas. Misc. AC for driveway & parking lot conforms is covered within the 25% contingency.
6. AC overlay is assumed to 2.5" thick over the existing roadway limits only.
7. Storm drain facilities cover new drain facilities within the roadway. This scope assumes relocation of existing inlets to the widened roadway and extension of storm drain pipes. Inlets are generally spaced at 500 foot intervals. Cost of 2 inlets and 20 lf of 18" pipe is \$7,500 for an average of \$1,500 per 100 lf of roadway. An additional cost of \$1,000 per 100 lf was added to cover new storm drain trunk line within Auburn Blvd. where it is not currently (June 2004) existing.
8. Bus turn outs were assumed to be standard "84' roadway" types for the intersections, and mid-block types for other locations.
9. Curb & gutter, and median curb are assumed the length of the project.
10. Curbs have been assumed at the right of way lines adjacent to the back of walk or planter strip for the length of the project.
11. Sidewalks are assumed to be 5 feet or 6 feet wide depending on the right of way section. See individual estimates.
12. Parkway landscape strips are assumed to be 6 feet wide. See typical sections. Costs for landscape, \$8.00 per square foot, and for irrigation \$4.00 per square foot, are all inclusive for these improvements.
13. Signing and striping costs are minor and have been assumed to be \$4.00 per foot
14. Right of way acquisition is based on the proposed right of way widths (88, 94, or 100') minus the existing right of way of 80 feet. For example, an 88 foot right of way requires an 8 foot strip of acquisition. The cost per square foot has been estimated at \$15.00 per square foot.
15. Standard cobra head street lighting are assumed to average 110 foot spacing (staggered spacing of 220'), \$3,500 per light, for an average cost of \$35/LF.
16. Architectural lighting fixtures are assumed to average 80 foot spacing, both sides of the street, at an average cost of \$5,000 per light, for an average of \$125 per LF.
17. Underground utility costs are taken from a March 2001 Undergrounding Report prepared for the City of Citrus Heights by Phillips Enterprises. The total cost for the undergrounding within that report is \$3,373,200. This cost has been broken down to \$350/lf.
18. Site furnishings (benches, trash cans) are assumed to occur at all bus turnouts, for a total of 18. All current bus stops or turnouts are assumed to be upgraded to full bus turnouts.
19. Traffic signal modification are assumed at each of the 5 existing signals at a cost of \$75,000.
20. Enhanced crosswalks and tree grates are assumed at the 3 major intersections, Antelope Road, intersection at Rusch Park Village Center, and intersection at Gateway Commercial Center. Enhanced crosswalks are assumed to be \$12.00 per LF and 12 tree grates per intersection are assumed.
21. On-site parking lot reconstruction due to the right of way acquisition will be required for most of the adjacent commercial businesses. The costs have been assumed on a linear foot of property frontage basis. The costs are based on limited data available from the Sylvan Corners project. An approximate cost of \$250 per linear foot has been used for budgeting purposes.

DISTRICT	LENGTH	R/W WIDTH	MEDIAN (Y/N)	COST/LF	ROADWAY COST	COST/LF LIGHTING	LIGHTING COSTS	COST/LF UG UTILITIES	UG UTILITY COSTS	TRAFFIC SIGNAL MODS	COST/EA	TRAFFIC SIGNAL COSTS	BUS TURNOUTS	COST/EA	TRASH	BENCHES	COST TRASH & BENCHES/EA	TRASH, BENCH & BUS TURNOUT COSTS	ENHANCED CROSS WALKS	COST/EA	ENHANCED CROSS WALKS TOTALS	TREE GRATES	COST/EA	TREE GRATE COSTS	ON-SITE PARKING LOTS (LF)	COST/LF	ON-SITE PARKING LOT TOTALS	TOTAL COSTS	
Sylvan Corners/Village Square 610 LF																													
	230	88	N	\$750.00	\$172,500	\$35	\$8,050	\$350	\$80,500	0	\$0	\$0	0	\$0	0	0	\$0	\$0			0			0	230	\$250	\$57,500	\$318,550	
	380	88	Y	\$910.00	\$345,800	\$35	\$13,300	\$350	\$133,000	0	\$0	\$0	2	\$7,600	2	2	\$2,400	\$20,000			0			0	380	\$250	\$95,000	\$607,100	
SUBTOTAL					\$518,300		\$21,350		\$213,500			\$0						\$20,000			\$0			\$0			\$152,500	\$925,650	
Lincoln 40 - 3330 LF																													
	1040	88	Y	\$910.00	\$946,400	\$35	\$36,400	\$350	\$364,000	0	\$0	\$0	2	\$7,600	2	2	\$2,400	\$20,000			0			0	900	\$250	\$225,000	\$1,591,800	
	1250	94	Y	\$1,110.00	\$1,387,500	\$35	\$43,750	\$350	\$437,500	1	\$75,000	\$75,000	1	\$11,200	1	1	\$2,400	\$13,600	1	\$40,000	\$40,000	1	\$21,600	\$21,600	2250	\$250	\$562,500	\$2,581,450	
	240	94	N	\$960.00	\$230,400	\$35	\$8,400	\$350	\$84,000	0	\$0	\$0	3	\$7,600	3	3	\$2,400	\$30,000			0			0	1400	\$250	\$350,000	\$702,800	
	800	100	Y	\$1,300.00	\$1,040,000	\$125	\$100,000	\$350	\$280,000	1	\$75,000	\$75,000	1	\$11,200	1	1	\$2,400	\$13,600			0			0	440	\$250	\$110,000	\$1,618,600	
SUBTOTAL					\$3,604,300		\$188,550		\$1,165,500			\$150,000						\$77,200			\$40,000			\$21,600			\$1,247,500	\$6,494,650	
Rusch Park Village - 3150 LF																													
	700	94	Y	\$1,110.00	\$777,000	\$35	\$24,500	\$350	\$245,000	0	\$0	\$0	1	\$7,600	1	1	\$2,400	\$10,000			0			0	1000	\$250	\$250,000	\$1,306,500	
	1900	100	Y	\$1,300.00	\$2,470,000	\$125	\$237,500	\$350	\$665,000	1	\$75,000	\$75,000	4	\$7,600	4	4	\$2,400	\$40,000	1	\$40,000	40000	1	\$21,600	\$21,600	3400	\$250	\$850,000	\$4,399,100	
	550	94	Y	\$1,110.00	\$610,500	\$35	\$19,250	\$350	\$192,500	1	\$75,000	\$75,000	0	\$11,200	0	0	\$2,400	\$0			0			0	900	\$250	\$225,000	\$1,122,250	
SUBTOTAL					\$3,857,500		\$281,250		\$1,102,500			\$150,000						\$50,000			\$40,000			\$21,600			\$1,325,000	\$6,827,850	
Gateway District - 2520 LF																													
	920	88	Y	\$910.00	\$837,200	\$35	\$32,200	\$350	\$322,000	1	\$75,000	\$75,000	0	\$0	0	0	\$0	\$0			0			0	800	\$250	\$200,000	\$1,466,400	
	1600	100	Y	\$1,300.00	\$2,080,000	\$125	\$200,000.00	\$350	\$560,000	1	\$75,000	\$75,000	4	\$7,600	4	4	\$2,400	\$40,000	1	\$40,000	\$40,000	1	\$21,600	\$21,600	2800	\$250	\$700,000	\$3,716,600	
SUBTOTAL					\$2,917,200		\$232,200		\$882,000			\$150,000						\$40,000			\$40,000			\$21,600			\$900,000	\$5,183,000	
TOTAL	9610				\$10,897,300		\$723,350		\$3,363,500			\$450,000						\$187,200			\$120,000			\$64,800			\$3,625,000	\$19,431,150	
Future Roadway Improvements	FULL PROPERTY ACQUISITION	PARTIAL PROPERTY ACQUISITION	ROADWAY EXCAVATION	AGGREGATE BASE	ASPHALT CONCRETE	CURB & GUTTER	SIDEWALK																						
Linden Ave. Re-Alignment	\$745,926	\$51,219	\$71,610	\$92,100	\$72,520	\$24,913	\$24,913	\$1,083,200																					
Walnut Drive Re-Alignment	\$583,358	\$52,553	\$59,990	\$77,160	\$60,760	\$21,955	\$21,955	\$877,731																					
SUBTOTAL	\$1,329,284	\$103,772	\$131,600	\$169,260	\$133,280	\$46,868	\$46,868																						
							TOTAL:	\$1,960,931																					

88' ROW WITH 2-WAY LEFT TURN LANE (100LF SEGMENT)

Item No.	Item Description	Estimated Quantity	Unit	Unit Price	Total Amount (\$)
1	Clear and Grub	100	LF	\$10.00	\$1,000.00
2	Modify Existing Utilities	1	LS	\$6,000.00	\$6,000.00
3	Roadway Excavation (24")	119	CY	\$35.00	\$4,148.15
4	Class 2 Aggregate Base (18")	89	CY	\$60.00	\$5,333.33
5	AC Overlay (0.2')	84	TON	\$70.00	\$5,880.00
6	Asphalt Concrete, Type A (6")	38	TON	\$65.00	\$2,437.50
7	Storm Drain Facilities	1	LS	\$2,500.00	\$2,500.00
8	Curb And Gutter	200	LF	\$25.00	\$5,000.00
9	Curb at ROW	200	LF	\$15.00	\$3,000.00
10	Median Curb	0	LF	\$10.00	\$0.00
11	5' Sidewalk / Driveway	1,000	SF	\$5.00	\$5,000.00
12	Parkway Landscaping - 6' one side only	600	SF	\$8.00	\$4,800.00
13	Parkway Irrigation - 6' one side only	600	SF	\$4.00	\$2,400.00
14	Signing and Striping	1	LS	\$400.00	\$400.00
15	Right of Way Acquisition - 8'	800	SF	\$15.00	\$12,000.00

SUBTOTAL CONSTRUCTION COSTS	\$59,898.98
CONSTRUCTION CONTINGENCY (25%)	<u>\$14,974.75</u>
ESTIMATED CONSTRUCTION COSTS TOTAL	<u>\$74,873.73</u>

APPROXIMATE COST PER LINEAR FOOT **\$748.74**

USE **\$750.00**

Optional Costs

Optional Items	Unit Cost	Cost per 100 LF	Cost/LF
Std. Cobra Head Lighting		\$3500/100LF	\$35
Architectural Decorative Lighting		\$12,500/100LF	\$125
Underground Overhead Utilities		\$35,000/100LF	\$350
Site Furnishing - Trash Receptacle	\$400 each		
Site Furnishing - Benches	\$2000 each		
Bus Turn-Out @ Intersection	\$11200 each		
Bus Turn-Out @ Mid-Block	\$7600 each		

94' ROW WITH 2-WAY LEFT TURN LANE (100LF SEGMENT)

Item No.	Item Description	Estimated Quantity	Unit	Unit Price	Total Amount (\$)
1	Clear and Grub	100	LF	\$10.00	\$1,000.00
2	Modify Existing Utilities	1	LS	\$6,000.00	\$6,000.00
3	Roadway Excavation (24")	119	CY	\$35.00	\$4,148.15
4	Class 2 Aggregate Base (18")	89	CY	\$60.00	\$5,333.33
5	AC Overlay (0.2')	84	TON	\$70.00	\$5,880.00
6	Asphalt Concrete, Type A (6")	38	TON	\$65.00	\$2,437.50
7	Storm Drain Facilities	1	LS	\$2,500.00	\$2,500.00
8	Curb And Gutter	200	LF	\$25.00	\$5,000.00
9	Curb at ROW	200	LF	\$15.00	\$3,000.00
10	Median Curb	0	LF	\$10.00	\$0.00
11	5' Sidewalk / Driveway	1,000	SF	\$5.00	\$5,000.00
12	Parkway Landscaping - 6' each side	1,200	SF	\$8.00	\$9,600.00
13	Parkway Irrigation - 6' each side	1,200	SF	\$4.00	\$4,800.00
14	Signing and Striping	1	LS	\$400.00	\$400.00
15	Right of Way Acquisition - 14'	1,400	SF	\$15.00	\$21,000.00

SUBTOTAL CONSTRUCTION COSTS	\$76,098.98
CONSTRUCTION CONTINGENCY (25%)	<u>\$19,024.75</u>
ESTIMATED CONSTRUCTION COSTS TOTAL	<u>\$95,123.73</u>

APPROXIMATE COST PER LINEAR FOOT **\$951.24**

USE **\$960.00**

Optional Costs

Optional Items	Unit Cost	Cost per 100 LF	Cost/LF
Std. Cobra Head Lighting		\$3500/100LF	\$35
Architectural Decorative Lighting		\$12,500/100LF	\$125
Underground Overhead Utilities		\$35,000/100LF	\$350
Site Furnishing - Trash Receptacle	\$400 each		
Site Furnishing - Benches	\$2000 each		
Bus Turn-Out @ Intersection	\$11200 each		
Bus Turn-Out @ Mid-Block	\$7600 each		

88' ROW WITH RAISED LANDSCAPED 12' MEDIAN (100LF SEGMENT)

Item No.	Item Description	Estimated Quantity	Unit	Unit Price	Total Amount (\$)
1	Clear & Grub	100	LF	\$10.00	\$1,000.00
2	Modify Existing Utilities	1	LS	\$6,000.00	\$6,000.00
3	Roadway Excavation (24")	89	CY	\$35.00	\$3,111.11
4	Class 2 Aggregate Base (18")	67	CY	\$60.00	\$4,000.00
5	AC Overlay (0.2')	68	TON	\$70.00	\$4,725.00
6	Asphalt Concrete, Type A (6")	45	TON	\$70.00	\$3,150.00
7	Storm Drain Facilities	1	LS	\$2,500.00	\$2,500.00
8	Curb And Gutter	200	LF	\$25.00	\$5,000.00
9	Curb at ROW	200	LF	\$15.00	\$3,000.00
10	Median Curb	200	LF	\$10.00	\$2,000.00
11	5' Sidewalk / Driveway	1,000	SF	\$5.00	\$5,000.00
12	Median Landscaping (11')	1,100	SF	\$8.00	\$8,800.00
13	Median Irrigation	1,100	SF	\$4.00	\$4,400.00
14	Parkway Landscaping - 6' one side only	600	SF	\$8.00	\$4,800.00
15	Parkway Irrigation - 6' one side only	600	SF	\$4.00	\$2,400.00
16	Signing and Striping	1	LS	\$400.00	\$400.00
17	Right of Way Acquisition - 8'	800	SF	\$15.00	\$12,000.00

SUBTOTAL CONSTRUCTION COSTS	\$72,286.11
CONSTRUCTION CONTINGENCY (25%)	<u>\$18,071.53</u>
ESTIMATED CONSTRUCTION COSTS TOTAL	<u>\$90,357.64</u>

APPROXIMATE COST PER LINEAR FOOT	\$903.58
USE	\$910.00

Optional Costs			
Optional Items	Unit Cost	Cost per 100 LF	Cost/LF
Std. Cobra Head Lighting		\$3500/100LF	\$35
Architectural Decorative Lighting		\$12,500/100LF	\$125
Underground Overhead Utilities		\$35,000/100LF	\$350
Site Furnishing - Trash Receptacle	\$400 each		
Site Furnishing - Benches	\$2000 each		
Bus Turn-Out @ Intersection	\$11200 each		
Bus Turn-Out @ Mid-Block	\$7600 each		

94' ROW WITH RAISED LANDSCAPED 12' MEDIAN (100LF SEGMENT)					
Item No.	Item Description	Estimated Quantity	Unit	Unit Price	Total Amount (\$)
1	Clear & Grub	100	LF	\$10.00	\$1,000.00
2	Modify Existing Utilities	1	LS	\$6,000.00	\$6,000.00
3	Roadway Excavation (24")	89	CY	\$35.00	\$3,111.11
4	Class 2 Aggregate Base (18")	67	CY	\$60.00	\$4,000.00
5	AC Overlay (0.2')	68	TON	\$70.00	\$4,725.00
6	Asphalt Concrete Type A (6")	45	TON	\$70.00	\$3,150.00
7	Storm Drain Facilities	1	LS	\$2,500.00	\$2,500.00
8	Curb And Gutter	200	LF	\$25.00	\$5,000.00
9	Curb at ROW	200	LF	\$15.00	\$3,000.00
10	Median Curb	200	LF	\$10.00	\$2,000.00
11	5' Sidewalk / Driveway	1,000	SF	\$5.00	\$5,000.00
12	Median Landscaping - 11'	1,100	SF	\$8.00	\$8,800.00
13	Median Irrigation - 11'	1,100	SF	\$4.00	\$4,400.00
14	Parkway Landscaping - 6' each side	1,200	SF	\$8.00	\$9,600.00
15	Parkway Irrigation - 6' each side	1,200	SF	\$4.00	\$4,800.00
16	Signing and Striping	1	LS	\$400.00	\$400.00
17	Right of Way Acquisition - 14'	1,400	SF	\$15.00	\$21,000.00

SUBTOTAL CONSTRUCTION COSTS	\$88,486.11
CONSTRUCTION CONTINGENCY (25%)	\$22,121.53
ESTIMATED CONSTRUCTION COSTS TOTAL	<u>\$110,607.64</u>

APPROXIMATE COST PER LINEAR FOOT	\$1,106.08
USE	\$1,110.00

Optional Costs			
Optional Items	Unit Cost	Cost per 100 LF	Cost/LF
Std. Cobra Head Lighting		\$3500/100LF	\$35
Architectural Decorative Lighting		\$12,500/100LF	\$125
Underground Overhead Utilities		\$35,000/100LF	\$350
Site Furnishing - Trash Receptacle	\$400 each		
Site Furnishing - Benches	\$2000 each		
Bus Turn-Out @ Intersection	\$11200 each		
Bus Turn-Out @ Mid-Block	\$7600 each		

100' ROW WITH RAISED LANDSCAPED 16' MEDIAN (100LF SEGMENT)

Item No.	Item Description	Estimated Quantity	Unit	Unit Price	Total Amount (\$)
1	Clear & Grub	100	LF	\$10.00	\$1,000.00
2	Modify Existing Utilities	1	LS	\$6,000.00	\$6,000.00
3	Roadway Excavation (24")	89	CY	\$35.00	\$3,111.11
4	Class 2 Aggregate Base (18")	67	CY	\$60.00	\$4,000.00
5	AC Overlay (0.2')	74	TON	\$70.00	\$5,145.00
6	Asphalt Concrete Type A (6")	45	TON	\$70.00	\$3,150.00
7	Storm Drain Facilities	1	LS	\$2,500.00	\$2,500.00
8	Curb And Gutter	200	LF	\$25.00	\$5,000.00
9	Curb at ROW	200	LF	\$15.00	\$3,000.00
10	Median Curb	200	LF	\$10.00	\$2,000.00
11	6' Sidewalk / Driveway	1,200	SF	\$5.00	\$6,000.00
12	Median Landscaping - 15'	1,500	SF	\$8.00	\$12,000.00
13	Median Irrigation - 15'	1,500	SF	\$4.00	\$6,000.00
14	Parkway Landscaping - 6' each side	1,200	SF	\$8.00	\$9,600.00
15	Parkway Irrigation - 6' each side	1,200	SF	\$4.00	\$4,800.00
16	Signing and Striping	1	LS	\$400.00	\$400.00
17	Right of Way Acquisition - 20'	2,000	SF	\$15.00	\$30,000.00

SUBTOTAL CONSTRUCTION COSTS	\$103,706.11
CONSTRUCTION CONTINGENCY (25%)	<u>\$25,926.53</u>
ESTIMATED CONSTRUCTION COSTS TOTAL	<u>\$129,632.64</u>

APPROXIMATE COST PER LINEAR FOOT	\$1,296.33
USE	\$1,300.00

Optional Costs			
Optional Items	Unit Cost	Cost per 100 LF	Cost/LF
Std. Cobra Head Lighting		\$3500/100LF	\$35
Architectural Decorative Lighting		\$12,500/100LF	\$125
Underground Overhead Utilities		\$35,000/100LF	\$350
Site Furnishing - Trash Receptacle	\$400 each		
Site Furnishing - Benches	\$2000 each		
Bus Turn-Out @ Intersection	\$11200 each		
Bus Turn-Out @ Mid-Block	\$7600 each		