

Appendix G
Roadway Cost Estimate for Final Alternative

| Item Description | Express Lanes | | | | | General Purpose Lanes | | | | | | |
|---|---------------|------|------------|---------------------|----------------------|-----------------------|-----------|------|------------|----------------------|----------------------|---|
| | Quantity | Unit | Unit Price | Cost | Cost Extension | Remarks | Quantity | Unit | Unit Price | Cost | Cost Extension | Remarks |
| Quantifiable Items | | | | | | | | | | | | |
| Bridge Rail Type 10 | | LF | \$75 | \$0 | | | | LF | \$75 | \$0 | | |
| Concrete Median Cover | | SF | \$8 | \$0 | | | | SF | \$8 | \$0 | | |
| Concrete Pavement (13") | | SY | \$38 | \$0 | | | | SY | \$38 | \$0 | | 13" PCC w/ 6" ABC assumed for mainline and ramps |
| Asphalt Pavement (14") | | TON | \$48 | \$0 | | | 569,600 | TON | \$48 | \$27,340,800 | | 14" full depth pavement |
| Curb and Gutter (Type 2) | | LF | \$12 | \$0 | | | 10,200 | LF | \$12 | \$122,400 | | |
| Earthwork | | CY | \$6 | \$0 | | | 1,050,000 | CY | \$6 | \$6,300,000 | | From Geopak w/ modifications |
| Vane Grate Inlet | 600 | EA | \$3,250 | \$1,950,000 | | | 200 | EA | \$3,250 | \$650,000 | | Split 75% EL and 25% GPL |
| Reinforced Concrete Pipe (average 24 inch) | 51,000 | LF | \$40 | \$2,040,000 | | | 17,000 | LF | \$40 | \$680,000 | | Split 75% EL and 25% GPL |
| Guardrail Type 3 | | LF | \$12 | \$0 | | | 10,000 | LF | \$12 | \$120,000 | | Assume approximately 2 miles |
| Guardrail End Sections (SRT) | | EA | \$1,500 | \$0 | | | 25 | EA | \$1,500 | \$37,500 | | |
| Impact Attenuators | 10 | EA | \$30,000 | \$300,000 | | | | EA | \$30,000 | \$0 | | |
| Guardrail Type 7 | 81,500 | LF | \$37 | \$3,015,500 | | | 93,125 | LF | \$37 | \$3,445,625 | | Center barrier is GPL cost - 2 divider barriers are EL cost |
| Retaining Walls | | SF | \$50 | \$0 | | | 187,800 | SF | \$50 | \$9,390,000 | | Concrete Barrier on top or at base included in Guardrail Type 7 |
| Shared Use Path | | SY | \$25 | \$0 | \$7,305,500 | | 33,500 | SY | \$25 | \$837,500 | \$48,923,825 | Cost per mile |
| | | | | | \$622,274 | | | | | | \$4,167,276 | Cost per foot |
| | | | | | \$118 | | | | | | \$789 | |
| Interchange Locations | | | | | | | | | | | | |
| Kipling | | | | | | No work required | | | | | | |
| Wadsworth | | | | | | | | | | | | |
| Widen Existing Structure | | SF | \$80 | \$0 | | | 10,880 | SF | \$80 | \$870,400 | | Widen to middle |
| Concrete Pavement - GPL ramps | | SY | \$38 | \$0 | | | 11,400 | SY | \$38 | \$433,200 | | only east side ramps |
| Earthwork | | CY | \$6 | \$0 | \$ - | | 20,000 | CY | \$6 | \$120,000 | \$ 1,423,600.00 | only east side ramps |
| South Platte River | | | | | | | | | | | | |
| Remove Existing Structure | | SF | \$15 | \$0 | | | 13,708 | SF | \$15 | \$205,620 | | |
| Bridge | | SF | \$80 | \$0 | \$ - | | 38,100 | SF | \$80 | \$3,048,000 | \$ 3,253,620.00 | Replace |
| Bowen Farm Road | | | | | | | | | | | | |
| Widen Existing Structure | | SF | \$80 | \$0 | \$ - | | 17,435 | SF | \$80 | \$1,394,800 | \$ 1,394,800.00 | Widen to middle and outside |
| Lucent | | | | | | | | | | | | |
| Concrete Pavement - GPL ramps | | SY | \$38 | \$0 | | | 13,860 | SY | \$38 | \$526,680 | | |
| Earthwork | | CY | \$6 | \$0 | \$ - | | 18,000 | CY | \$6 | \$108,000 | \$ 634,680.00 | |
| Broadway | | | | | | | | | | | | |
| Remove Existing Structure | | SF | \$15 | \$0 | | | 18,462 | SF | \$15 | \$276,930 | | |
| Bridge | | SF | \$80 | \$0 | | | 37,350 | SF | \$80 | \$2,988,000 | | Replace |
| Concrete Pavement - GPL ramps | | SY | \$38 | \$0 | | | 21,420 | SY | \$38 | \$813,960 | | |
| Earthwork | | CY | \$6 | \$0 | \$ - | | 36,000 | CY | \$6 | \$216,000 | \$ 4,294,890.00 | |
| University | | | | | | | | | | | | |
| Remove Existing Structure | | SF | \$15 | \$0 | | | 18,054 | SF | \$15 | \$270,810 | | |
| Bridge | | SF | \$80 | \$0 | | | 37,928 | SF | \$80 | \$3,034,240 | | Replace |
| Concrete Pavement - GPL ramps | | SY | \$38 | \$0 | | | 20,250 | SY | \$38 | \$769,500 | | |
| Earthwork | | CY | \$6 | \$0 | \$ - | | 31,500 | CY | \$6 | \$189,000 | \$ 4,263,550.00 | |
| Colorado | | | | | | | | | | | | |
| Remove Existing Structure | 15,851 | SF | \$15 | \$237,765 | | | | SF | \$15 | \$0 | | |
| Bridge | 37,928 | SF | \$120 | \$4,551,360 | | Replace | | SF | \$80 | \$0 | | |
| Concrete Pavement - EL ramps and mainline | 20,072 | SY | \$38 | \$762,736 | | | | SF | \$38 | \$0 | | |
| Retaining Walls | 22,295 | SF | \$50 | \$1,114,750 | \$ 6,666,611.00 | | | SF | \$50 | \$0 | \$ - | |
| Big Dry Creek | | | | | | | | | | | | |
| Widen Existing Structure | | SF | \$80 | \$0 | \$ - | | 13,023 | SF | \$80 | \$1,041,840 | \$ 1,041,840.00 | Widen to middle and outside |
| Quebec | | | | | | | | | | | | |
| Concrete Pavement - GPL ramps | | SY | \$38 | \$0 | | | 24,480 | SY | \$38 | \$930,240 | | |
| Earthwork | | CY | \$6 | \$0 | \$ - | | 36,000 | CY | \$6 | \$216,000 | \$ 1,146,240.00 | |
| Noise Barrier | 30,000 | SF | \$35 | \$1,050,000 | \$1,050,000 | | 30,000 | SF | \$35 | \$1,050,000 | \$1,050,000 | Needs more in depth review |
| Interchange/Intersection Improvements | | | | | | | | | | | | |
| Kipling | | LS | | \$ - | | | | LS | | \$ - | | |
| Wadsworth | | LS | | \$ - | | | | LS | | \$ - | | |
| Platte Canyon | | LS | | \$ - | | | 1 | LS | | \$ 250,000.00 | | |
| Santa Fe | | LS | | \$ - | | | | LS | | \$ - | | |
| Lucent | | LS | | \$ - | | | | LS | | \$ - | | |
| Broadway | | LS | | \$ - | | | | LS | | \$ - | | |
| University | | LS | | \$ - | | | | LS | | \$ - | | |
| Colorado | | LS | | \$ - | | | | LS | | \$ - | | |
| Quebec | | LS | | \$ - | | | | LS | | \$ - | | |
| Yosemite | | LS | | \$ - | \$0 | | | LS | | \$ - | \$250,000 | |
| Subtotal Corridor Core Items | | | | | \$15,022,111 | | | | | | \$67,677,045 | |
| Miscellaneous Items as Percentages | | | | | | | | | | | | |
| Removals, Resets & Adjustments | | | | | \$751,106 | | | | 5% | | \$3,383,852 | |
| Subtract removal of existing concrete pavement | | SY | \$2 | \$0 | \$0 | | -360,700 | SY | \$2 | (\$721,400) | (\$721,400) | |
| Add joint reinforcement | | LS | | | | | 1 | LS | | \$250,000 | \$250,000 | |
| Drainage | | | 2% | | \$300,442 | | | | 2% | | \$1,353,541 | |
| Landscape | | | 3% | | \$450,663 | | | | 3% | | \$2,030,311 | |
| Signing, Striping, Signals, Lighting | | | 10% | | \$1,502,211 | | | | 10% | | \$6,767,705 | |
| Traffic Control | | | 15% | | \$2,253,317 | | | | 15% | | \$10,151,557 | |
| Mobilization & Misc. | | | 10% | | \$1,502,211 | | | | 10% | | \$6,767,705 | |
| Total | | | 45% | | \$6,759,950 | | | | 45% | | \$29,983,270 | |
| Subtotal Corridor Miscellaneous Items | | | | | \$21,782,061 | | | | | | \$97,660,315 | |
| Contingencies | | | 20% | | \$4,400,000 | | | | 20% | | \$19,500,000 | |
| Utilities | | | 5% | | \$1,100,000 | | | | 5% | | \$4,900,000 | |
| Force Account Items | | | 10% | | \$2,200,000 | | | | 10% | | \$9,800,000 | |
| C-470 CORRIDOR (KIPLING TO QUEBEC) CONSTRUCTION COST | | | | | \$29,500,000 | | | | | | \$131,900,000 | |
| TOTAL CORRIDOR PROJECT COST | | | | | | | | | | | | |
| Construction Cost | | | | \$29,500,000 | | | | | | \$131,900,000 | | |
| Right of Way Acquisition | | | | \$1,415,700 | | | | | | \$4,247,100 | | 20 acres - 5 EL (Colorado & Quebec) and 15 GPL at \$6.50/SF |
| Preliminary Engineering - 10% of Construction | | | | \$2,950,000 | | | | | | \$13,190,000 | | |
| Construction Engineering - 15% of Construction | | | | \$4,425,000 | | | | | | \$19,785,000 | | |
| TOTAL CORRIDOR PROJECT COST | | | | \$38,290,700 | | | | | | \$169,122,100 | | |
| ITS EQUIPMENT / TOLLING INFRASTRUCTURE | | | | | | | | | | | \$10,240,000 | |
| QUEBEC DIRECT ACCESS RAMP CONSTRUCTION COST | | | | | | | | | | | \$16,000,000 | |
| I-25 INTERCHANGE (QUEBEC TO I-25) CONSTRUCTION COST (from Hartwig) | | | | | | | | | | | \$33,843,152 | |
| SUBTOTALS: | | | | | \$98,373,852 | | | | | | \$198,501,876 | |
| TOTAL EL/GPL CORRIDOR ROADWAY CONSTRUCTION COST (2003 Dollars) | | | | | \$296,875,728 | | | | | | | |
| TOTAL EL/GPL CORRIDOR ROADWAY CONSTRUCTION COST (2006 Dollars) | | | | | \$324,404,124 | | | | | | | |
| TOTAL TOLL EQUIPMENT CAPITAL COST (2006 Dollars) | | | | | \$10,863,616 | | | | | | | |
| TOTAL EL/GPL CORRIDOR CONSTRUCTION COST (2006 Dollars) | | | | | \$335,267,740 | | | | | | | |