Class C Road Cost Estimate

Project	West Merrit Active Transportation Path Phase 1
Project Number	0521.0209.02
Client	City of Merritt
Date	2020-09-28
Completed By	Brent McMurtry
Reviewed By	Matt Sallee

ESTIMATE NOTES, ASSUMPTIONS AND LIMITATIONS
Estimate Description

The following estimate is for the West Merritt Active Transportaion Path Phase 1. This preliminary estimate is a 'Class C' type estimate which uses simplified methods of estimate preparation based on a number of assumptions and limitations provided below.

Cost items, quantities and unit prices in the estimates are based on historical cost data from recent tenders for similar projects and general assumptions and are provided to assist with long-term planning. This preliminary estimate uses 2020 unit rates in CDN dollars. Detailed project investigations, studies and designs are required for the project prior to implementation.

Site Preparation
We have assumed that the project alignment is accessible without significant cost or effort by the contractor. Site Preparation is assumed to include Stripping (200mm), Localized Compaction and minor grading. A geotechnical investigation maybe required to confirm these general assumptions.
Where the proposed design is in close proximity to existing hydrants, power poles and street lights, the design has been changed to minimize relocation by shifting sidewalk around these items.

Drainage and Utilities
We have assumed that drainage would be expected to be enclosed on one side (sidewalk side). Drainage Infrastructure (catch basins) is provided at interval spacing of 40m for cost estimating purposes only. New storm water mains have been included for sections of the corridor where no stormwater infrastructure exists. Detailed calucaltions will need to be conducted during the detailed design phase for these roadways.

Estimate does not include:
Environmental mitigation and/or remediation, municipal and utility type charges, legal and topographic surveys, construction traffic control, mobilization/demobilization costs, GST/PST, permit charges, sub-consultant design & reporting, inspection and certification fees (electrical, geotechnical, environmental, landscape architect) as well as any legal fees.

Contingency does not include:
Engineering design, tender, administration, inspection and certification. These costs can be included separately.

		Segement	Estimated Construction Costs (including 40% contingency)	Engineering Costs (15%)
		Main Street (Canford to Coldwater)	$ 110,000	$ 16,500.00
		Main Street (Coldwater to Quilchena)	$ 120,000	$ 18,000.00
		Quilchena Avenue	$ 800,000	$ 120,000.00
	Option 1	Quilchena Linear Park MUP	$ 140,000	$ 21,000.00
		Cleasby Street	$ 669,170	$ 100,375.50
		Option 1 Totals	**$ 1,839,170**	**$ 275,875.50**
Option 2				
		All segments in Option 1 plus:		
		Coldwater (Cleasby to Chapman)	$ 70,000	$ 10,500.00
		Coldwater (Chapman to Voght)	$ 320,000	$ 48,000.00
		Voght (Coldwater to Priest)	$ 160,000	$ 24,000.00
		Voght (Priest to Coldwater River Path)	$ 60,000	$ 9,000.00
		Coldwater River Multi-Use Path	$ 140,000	$ 21,000.00
		Quilchena Avenue (West of Main Street)	$ 20,000	$ 3,000.00
		Option 2 Total	**$ 2,609,170**	**$ 391,375.50**
		Merritt MUP Amenities	$ 371,000	$ 55,650.00
		Option 2 (including amenities)	**$ 2,980,170**	**$ 447,026**

Improvement Main Street (Canford to Coldwater)
Roadway Length (m) 90

Description of Work	Unit of Measure	Unit Price	Quantity	Extended Amount
Sawcutting	m	$ 10	1	$ 10
Ex Asphalt Roadway Removal (Including Gravels)	m2	$ 30	0.15	$ 5
Ex Asphalt Sidewalk Removal (Including Gravels)	m2	$ 30	1.5	$ 45
Site Preparation (localized compaction)	m2	$ 15	6	$ 90
Extruded Curb	m	$ 200	1	$ 200
Localized Pavement Structure (0.15m Wide)	m	$ 20	1	$ 20
Urban Drainage (CBs & Leads)	m	$ 125	1	$ 125
Sod	m2	$ 15	3	$ 45
Trees	m	$ 100	1	$ 100
Asphalt Multiuse Path/Bike Path	m2	$ 60	3	$ 180
Pavement Markings (MUP)	m	$ 10	1	$ 10
Signs	m	$ 10	2	$ 20
SUBTOTAL COST ESTIMATE				**$ 850**
Contingency	40%			340
COST ESTIMATE PER METRE				**$ 1,190**
TOTAL CONSTRUCTION COST ESTIMATE				**$ 110,000**
Design Engineering Costs	15%			16,500

Improvement Main Street (Coldwater to Quilchena)
Roadway Length (m) 65

Description of Work	Unit of Measure	Unit Price	Quantity	Extended Amount
Sawcutting	m	$ 10	1	$ 10
Ex Asphalt Roadway Removal (Including Gravels)	m2	$ 30	0.15	$ 5
Site Preparation (localized compaction)	m2	$ 15	6	$ 90
Extruded Curb	m	$ 200	1	$ 200
Localized Pavement Structure (0.15m Wide)	m	$ 20	1	$ 20
New Urban Drainage (Storm main, CBs, & Leads)	m	$ 600	1	$ 600
Sod	m2	$ 15	3	$ 45
Trees	m	$ 100	1	$ 100
Asphalt Multiuse Path/Bike Path	m2	$ 60	3	$ 180
Pavement Markings (MUP)	m	$ 10	1	$ 10
Signs	m	$ 10	2	$ 20
SUBTOTAL COST ESTIMATE				**$ 1,280**
Contingency	40%			512
COST ESTIMATE PER METRE				**$ 1,800**
TOTAL CONSTRUCTION COST ESTIMATE				**$ 120,000**
Design Engineering Costs	15%			18,000

Improvement Quilchena Avenue
Roadway Length (m) 315

Description of Work	Unit of Measure	Unit Price	Quantity	Extended Amount
Sawcutting	m	$ 10	1	$ 10
Ex Asphalt Roadway Removal (Including Gravels)	m2	$ 30	0.15	$ 5
Stripping (200mm)	m2	$ 30	6	$ 180
Site Preparation (localized compaction)	m2	$ 15	8	$ 120
Extruded Curb	m	$ 200	1	$ 200
New Urban Drainage (Storm main, CBs, & Leads)	m	$ 600	1	$ 600
Sod	m2	$ 15	5	$ 75
Full Pavement Structure	m2	$ 120	3	$ 300
Trees	m	$ 100	1	$ 100
Asphalt Multiuse Path/Bike Path	m2	$ 60	3	$ 180
Pavement Markings (MUP)	m	$ 10	1	$ 10
Signs	m	$ 10	2	$ 20
SUBTOTAL COST ESTIMATE				**$ 1,800**
Contingency	40%			720
COST ESTIMATE PER METRE				**$ 2,520**
TOTAL CONSTRUCTION COST ESTIMATE				**$ 800,000**
Design Engineering Costs	15%			120,000

Improvement Quilchena Linear Park MUP
Roadway Length (m) 160

Description of Work	Unit of Measure	Unit Price	Quantity	Extended Amount
Excavation (Cut)	m3	$ 25	0.5	$ 13
Stripping (200mm)	m2	$ 30	3	$ 90
Site Preparation (localized compaction)	m2	$ 15	3	$ 45
Pavement Markings (MUP)	m	$ 10	1	$ 10
Drainage Swale	m	$ 50	1	$ 50
Trees	m	$ 100	2	$ 200
Asphalt Multiuse Path/Bike Path	m2	$ 60	3	$ 180
SUBTOTAL COST ESTIMATE				**$ 588**
Contingency	40%			235
COST ESTIMATE PER METRE				**$ 830**
TOTAL CONSTRUCTION COST ESTIMATE				**$ 140,000**
Design Engineering Costs	15%			21,000

Improvement Cleasby Street
Roadway Length (m) 110

Note: Interim MUP is a possible option

Description of Work	Unit of Measure	Unit Price	Quantity	Extended Amount
Excavation (Cut)	m3	$ 25	1	$ 25
Stripping (200mm)	m2	$ 30	20	$ 600
Site Preparation (localized compaction)	m2	$ 15	20	$ 300
Subgrade Fill and Compaction	m3	$ 40	5	$ 200
Extruded Curb	m	$ 200	2	$ 400
Full Pavement Structure	m2	$ 120	11	$ 1,320
New Urban Drainage (Storm main, CBs, & Leads)	m	$ 600	1	$ 600
Sod	m2	$ 15	4.5	$ 68
Trees	m	$ 100	1	$ 100
Asphalt Multiuse Path/Bike Path	m2	$ 60	3	$ 180
Pavement Markings (MUP)	m	$ 10	1	$ 10
1.5m Sidewalk (100mm)	m	$ 205	1	$ 205
Signs	m	$ 10	2	$ 20
SUBTOTAL COST PER METRE ESTIMATE				**$ 4,008**
New Street Light	ea	$ 10,000	2	$ 20,000
SUBTOTAL COST ESTIMATE				**$ 460,830**
Contingency	40%			184,332
TOTAL CONSTRUCTION COST ESTIMATE				**$ 669,170**
Design Engineering Costs	15%			100,376

Improvement Coldwater (Cleasby to Chapman)
Roadway Length (m) 140

Description of Work	Unit of Measure	Unit Price	Quantity	Extended Amount
Pavement Marking Removal	m	$ 25	2	$ 50
Pavement Markings (Roadway)	m	$ 50	3	$ 150
Pavement Markings (MUP)	m	$ 10	1	$ 10
Flexible Delineator Posts	ea.	$ 75	0.3	$ 25
Low Profile Precast Curb	m	$ 75	1	$ 75
Signs	m	$ 10	2	$ 20
SUBTOTAL COST ESTIMATE				**$ 330**
Contingency	40%			132
COST ESTIMATE PER METRE				**$ 470**
TOTAL CONSTRUCTION COST ESTIMATE				**$ 70,000**
Design Engineering Costs	15%			10,500

Improvement Coldwater (Chapman to Voght)
Roadway Length (m) 275

Description of Work	Unit of Measure	Unit Price	Quantity	Extended Amount
Sawcutting	m	$ 10	1	$ 10
Ex Asphalt Roadway Removal (Including Gravels)	m2	$ 30	0.15	$ 5
Stripping (200mm)	m2	$ 30	4	$ 120
Site Preparation (localized compaction)	m2	$ 15	4	$ 60
Extruded Curb	m	$ 200	1	$ 200
Full Pavement Structure	m2	$ 120	0.15	$ 18
Urban Drainage (CBs & Leads)	m	$ 125	1	$ 125
Asphalt Multiuse Path/Bike Path	m2	$ 60	3	$ 180
Pavement Marking Removal	m	$ 25	1	$ 25
Pavement Markings (Roadway)	m	$ 50	1	$ 50
Pavement Markings (MUP)	m	$ 10	1	$ 10
Signs	m	$ 10	1	$ 10
SUBTOTAL COST ESTIMATE				**$ 803**
Contingency	40%			321
COST ESTIMATE PER METRE				**$ 1,130**
TOTAL CONSTRUCTION COST ESTIMATE				**$ 320,000**
Design Engineering Costs	15%			48,000

Improvement Voght (Coldwater to Priest)
Roadway Length (m) 280

Description of Work	Unit of Measure	Unit Price	Quantity	Extended Amount
Pavement Marking Removal	m	$ 25	1	$ 25
Pavement Markings (Roadway)	m	$ 50	3	$ 150
Pavement Markings (MUP)	m	$ 10	1	$ 10
Flexible Delineator Posts	ea.	$ 75	0.3	$ 25
Low Profile Precast Curb	m	$ 75	1	$ 75
Signs	m	$ 10	2	$ 20
SUBTOTAL COST ESTIMATE PER METRE				**$ 305**
Floating Bus Stop	ea.	$ 25,000	1	$ 25,000
SUBTOTAL COST ESTIMATE				**$ 110,400**
Contingency	40%			44,160
TOTAL CONSTRUCTION COST ESTIMATE				**$ 160,000**
Design Engineering Costs	15%			24,000

Improvement Voght (Priest to Coldwater River Path)
Roadway Length (m) 130

Description of Work	Unit of Measure	Unit Price	Quantity	Extended Amount
Pavement Markings (MUP)	m	$ 10	1	$ 10
Stripping (200mm)	m2	$ 30	3	$ 90
Site Preparation (localized compaction)	m2	$ 15	3	$ 45
Asphalt Multiuse Path/Bike Path	m2	$ 60	3	$ 180
SUBTOTAL COST ESTIMATE				**$ 325**
Contingency	40%			130
COST ESTIMATE PER METRE				**$ 460**
TOTAL CONSTRUCTION COST ESTIMATE				**$ 60,000**
Design Engineering Costs	15%			9,000

Improvement Merritt MUP Amenities

Description of Work	Unit of Measure	Unit Price	Quantity	Extended Amount
Futsol Court (15m by 28m)	ea.	$ 50,000	1	$ 50,000
Community Garden Plot	ea.	$ 1,000	15.0	$ 15,000
Outdoor Fitness Park Equipment	ea.	$ 10,000	7.0	$ 70,000
Fully Serviced Washroom	ea.	$ 130,000	1	$ 130,000
SUBTOTAL COST ESTIMATE				**$ 265,000**
Contingency	40%			106,000
TOTAL CONSTRUCTION COST ESTIMATE				**$ 371,000**
Design Engineering Costs	15%			55,650

Improvement Coldwater River Multi-Use Path
Roadway Length (m) 325

Description of Work	Unit of Measure	Unit Price	Quantity	Extended Amount
Pavement Markings (MUP)	m	$ 10	1	$ 10
Ex Asphalt Roadway Removal (Including Gravels)	m2	$ 30	2.5	$ 75
Site Preparation (localized compaction)	m2	$ 15	2.5	$ 38
Asphalt Multiuse Path/Bike Path	m2	$ 60	2.5	$ 150
SUBTOTAL COST PER METRE ESTIMATE				**$ 273**
Environmental Approvals for Working near the Cold Water R	ea.	$ 7,500	1	$ 7,500
SUBTOTAL COST ESTIMATE				**$ 96,070**
Contingency	40%			38,428
TOTAL CONSTRUCTION COST ESTIMATE				**$ 140,000**
Design Engineering Costs	15%			21,000

Improvement Quilchena Avenue (West of Main Street)
Roadway Length (m) 265

Description of Work	Unit of Measure	Unit Price	Quantity	Extended Amount
Pavement Markings (Greenway)	m	$ 20	1	$ 20
Signs	m	$ 10	3	$ 30
SUBTOTAL COST ESTIMATE				**$ 50**
Contingency	40%			20
COST ESTIMATE PER METRE				**$ 70**
TOTAL CONSTRUCTION COST ESTIMATE				**$ 20,000**
Design Engineering Costs	15%			3,000

Improvement Coldwater (Cleasby to Chapman) with Planters
Roadway Length (m) 140

Description of Work	Unit of Measure	Unit Price	Quantity	Extended Amount
Pavement Marking Removal	m	$ 25	2	$ 50
Pavement Markings (Roadway)	m	$ 50	3	$ 150
Pavement Markings (MUP)	m	$ 10	1	$ 10
Self Watering Planter	m	$ 400	1.0	$ 400
Signs	m	$ 10	2	$ 20
SUBTOTAL COST ESTIMATE				**$ 630**
Contingency	40%			252
COST ESTIMATE PER METRE				**$ 890**
TOTAL CONSTRUCTION COST ESTIMATE				**$ 130,000**
Design Engineering Costs	15%			19,500

Voght (Coldwater to Priest) with Planters
Improvement 280
Roadway Length (m)

Description of Work	Unit of Measure	Unit Price	Quantity	Extended Amount
Pavement Marking Removal	m	$ 25	1	$ 25
Pavement Markings (Roadway)	m	$ 50	3	$ 150
Pavement Markings (MUP)	m	$ 10	1	$ 10
Self Watering Planter	m	$ 400	1.0	$ 400
Signs	m	$ 10	2	$ 20
SUBTOTAL COST ESTIMATE PER METRE				**$ 605**
Floating Bus Stop	ea.	$ 15,000	1	$ 15,000
SUBTOTAL COST ESTIMATE				**$ 184,400**
Contingency	40%			73,760
TOTAL CONSTRUCTION COST ESTIMATE				**$ 260,000**
Design Engineering Costs	15%			39,000