



# Computations

Project: <u>Intervale Road Bike/Ped</u>	Project #: <u>57998.00</u>
Location: <u>Burlington, VT</u>	Sheet: _____
Calculated by: <u>ELQ</u>	Date: <u>4/11/18</u>
Checked by: _____	Date: _____
Title: <u>Conceptual Cost Estimate Calculations</u>	

## Conceptual Cost Estimates: Unit Costs

### Estimated 10-ft Shared Use Path Costs (Bituminous Concrete)

	Total Cost	Basic Cost	Cost Unit
10' Shared Use Path Uncurbed	\$197	\$69	Feet

\* Source: Report on Shared-Use Path and Sidewalk Unit Costs. VTrans Bicycle and Pedestrian Program. August 2014)

Unit Cost: \$197 per foot

### Estimated 10-ft Shared Use Path Costs (Bituminous Concrete)

	Total Cost	Basic Cost	Cost Unit
10' Shared Use Path Curbed	\$247	\$119	Feet

\* Source: Report on Shared-Use Path and Sidewalk Unit Costs. VTrans Bicycle and Pedestrian Program. August 2014)

Unit Cost: \$247 per foot

### Estimated 10-ft Shared Use Path Costs (Aggregate Material)

	Total Cost	Basic Cost	Cost Unit
10' Unpaved Shared Use Path	\$169	\$59	Feet

\* Source: Report on Shared-Use Path and Sidewalk Unit Costs. VTrans Bicycle and Pedestrian Program. August 2014)

Unit Cost: \$169 per foot

### Estimated Striped Crosswalk Cost

	Est. Cost	Cost Unit
Striped Crosswalk	\$340	Each

\* Source: Pedestrian and Bicycle Information Center Coss for Pedestrian and Bicyclist Infrastructure Improvements

Unit Cost: \$340 each



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## Conceptual Cost Estimates: Unit Costs

### Estimated Railroad Crossing Reconstruction Cost

	Est. Cost	Cost Unit
Railroad Crossing	\$70,000	Each

\* Source: VTrans Bid History

Unit Cost: \$70,000 Each

### Estimated Roadway Reconstruction Cost

	Est. Cost	Cost Unit
Roadway Reconstruction (Mill an	\$65	Feet

\* Source: Research of previous projects

Unit Cost: \$65 per foot

### Roadway Widening

	Est. Cost	Cost Unit
Pavement Widening	\$28	Feet

\* Source: Report on Shared-Use Path and Sidewalk Unit Costs. VTrans Bicycle and Pedestrian Program. August 2014)

Unit Cost: \$28 per foot per 4 foot width

### Landscaping

	Est. Cost	Cost Unit
Landscaping (lights, plantings etc	\$200	Feet

\* Source: Research of previous projects

Unit Cost: \$200 per foot



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## Conceptual Cost Estimates

### Alternative 1 - Widened Shoulder and Pavement Markings

Design Element	Unit Cost	Quantity	Total Cost
Pavement Widening	\$28	1500	\$42,614
Striped Crosswalk	\$340	2	\$680
<b>SUBTOTAL</b>			\$43,294
25% Contingency			\$10,823
15% Mobilization and Traffic Control			\$6,494
15% Engineering and Design			\$6,494
10% Resident Engineer			\$4,329
		<b>SUBTOTAL</b>	\$71,435
		Rounding	\$8,566
		<b>TOTAL</b>	<b>\$80,000</b>

### Alternative 2 - Shared Use Path Striped Buffer

Design Element	Unit Cost	Quantity	Total Cost
10' Shared Use Path Uncurbed	\$197	1500	\$295,500
Roadway Reconstruction (Mill and Fill)	\$65	1500	\$97,500
Railroad Crossing	\$70,000	1	\$70,000
Striped Crosswalk	\$340	2	\$680
<b>SUBTOTAL</b>			\$463,680
25% Contingency			\$115,920
15% Mobilization and Traffic Control			\$69,552
15% Engineering and Design			\$69,552
10% Resident Engineer			\$46,368
		<b>SUBTOTAL</b>	\$765,072
		Rounding	\$4,928
		<b>TOTAL</b>	<b>\$770,000</b>



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## Conceptual Cost Estimates

### Alternative 3 - Shared Use Path with Curbed Buffer and Bike Lane

Design Element	Unit Cost	Quantity	Total Cost
10' Shared Use Path Curbed	\$247	1500	\$370,500
Roadway Reconstruction (Mill and Fill)	\$66	1500	\$99,450
Railroad Crossing	\$70,000	1	\$70,000
Striped Crosswalk	\$340	2	\$680
Landscaping (lights, plantings etc.)	\$200	1000	\$200,000
<b>SUBTOTAL</b>			<b>\$740,630</b>
25% Contingency			\$185,158
15% Mobilization and Traffic Control			\$111,095
15% Engineering and Design			\$111,095
10% Resident Engineer			\$74,063
		<b>SUBTOTAL</b>	<b>\$1,222,040</b>
		Rounding	\$7,961
		<b>TOTAL</b>	<b>\$1,230,000</b>