

Appendix F – Detailed Cost Estimates

COVINGTON PLATFORM AND PLATFORM TRACK ESTIMATE

WSDOT DMU Study - Auburn to Maple Valley 5% Cost Estimate
SUMMARY OF COST ESTIMATE

TOTAL CONSTRUCTION ITEMS			\$	6,340,851	\$	6,400,000
SALES TAX			\$	503,581	\$	600,000
TOTAL RIGHT OF WAY COSTS			\$	-	\$	-
PROGRAM MANAGEMENT AND ENGINEERING			\$	1,077,945	\$	1,100,000
TOTAL MAJOR UTILITY RELOCATION COSTS			\$	216,000	\$	300,000
TOTAL PROJECT COSTS (without Contingency)			\$	8,138,376	\$	8,400,000
	Contingency	30%	\$	2,441,513		
TOTAL PROJECT COSTS			\$	10,579,889		ROUNDED \$ 10,600,000

	Quantity	Units	Unit Cost	Item Cost	Section Cost
ROADWAY/STRUCTURE ITEMS					
Preparation					
Grading, New Track	4000	CY	\$ 26	\$ 104,000	
Subtotal Preparation					\$ 104,000
Railroad Track Rehabilitation and Construction					
Construct Covington Station Track					
Construct 141 lb. CWR, Conc. Tie Track	1000	TF	\$ 340	\$ 340,000	
Install No. 20 Turnout	2	EA	\$ 350,000	\$ 700,000	
Subtotal Railroad Track					\$ 1,040,000
Station Items					
Covington Platform, 300 ft. long	1	EA	\$ 1,800,000	\$ 1,800,000	
Parking Lot	42,600	SY	\$ 50	\$ 2,130,000	
Subtotal Station Items					\$ 3,930,000
Traffic Items					
Traffic Control/Staging (% Earthwork, Paving, Structures excl. Liquefaction, Specialty excl. Env. Mit.)	10%	of	\$ 104,000	\$ 10,400	
Pavement Markings at Crossings	0	LS	\$ 200,000	\$ -	
Roadway/ Facility Signing	0	LS	\$ 1,000,000	\$ -	
Railroad Crossing Signal and ITS System	0	EA	\$ 400,000	\$ -	
Subtotal Traffic Items					\$ 10,400
Minor Items					
Minor Items (% of Sections 1-6, excl. Liq. Mit., excl. Env. Mit.)	15%	of	\$ 4,044,400	\$ 606,660	
Subtotal Minor Items					\$ 606,660
Mobilization					
Mobilization (% of Sections 1-7)	10%	of	\$ 4,651,060	\$ 465,106	
Subtotal Mobilization					\$ 465,106
Other					
Differing Site Conditions % of Section 1 thru 8	0.0%	of	\$ 6,156,166	\$ -	
General bonds and Insurance (Section 1-9)	3.0%	of	\$ 6,156,166	\$ 184,685	
Warranty		LS	\$ -	\$ -	
Financing		LS	\$ -	\$ -	
Subtotal Differing Site Conditions					\$ 184,685
Sales Tax					
Sales Tax (% of Sections 1 thru 10 less BNSF Force Account Work)	9.5%	of	\$ 5,300,851	\$ 503,581	
Subtotal Sales Tax					\$ 503,581
Project Management / Engineering					
Preliminary Engineering	5%	of	\$ 6,340,851	\$ 317,043	
Constr Engr and Insp % of Sections 1 thru 10	10%	of	\$ 6,340,851	\$ 634,085	
Program Management % of Sections 1 thru 10	2%	of	\$ 6,340,851	\$ 126,817	
Subtotal Section Project Management					\$ 1,077,945
Major Utility Relocates					
Utility - Public	1	LS	\$ 200,000	\$ 200,000	
Utility - Fiber Optics	-	LS	\$ -	\$ -	
Utility Engineering (8% of Major Utility Relocates)	8%	of	\$ 200,000	\$ 16,000	
Subtotal Major Utility Relocations					\$ 216,000

WSDOT DMU Study - Auburn to Maple Valley 5% Cost Estimate
SUMMARY OF COST ESTIMATE

TOTAL CONSTRUCTION ITEMS			\$	92,474,569	\$	92,500,000
SALES TAX			\$	5,658,804	\$	5,700,000
TOTAL RIGHT OF WAY COSTS			\$	1,725,000	\$	1,800,000
PROGRAM MANAGEMENT AND ENGINEERING			\$	15,727,477	\$	15,800,000
TOTAL MAJOR UTILITY RELOCATION COSTS			\$	2,951,000	\$	3,000,000
TOTAL PROJECT COSTS (without Contingency)			\$	118,536,850	\$	118,800,000
	Contingency	30%	\$	35,561,055		
TOTAL PROJECT COSTS			\$	154,097,905		ROUNDED \$ 154,400,000

	Quantity	Units	Unit Cost	Item Cost	Section Cost
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ROADWAY/STRUCTURE ITEMS

Preparation					
Track Rehabilitation Estimate				\$	-
Signal, Communication and PTC Estimate				\$	-
Auburn Siding, Platform and Platform Track Estimate				\$	1,250,000
Covington Platform and Platform Track Estimate				\$	104,000
Covington Siding Estimate				\$	654,420
City of Maple Valley Platform and Platform Track Estimate				\$	208,000
Ravensdale Operations and Maintenance Facility Estimate				\$	104,000
Subtotal Preparation				\$	2,320,420

Railroad Track Rehabilitation and Construction					
Track Rehabilitation Estimate				\$	16,582,014
Signal, Communication and PTC Estimate				\$	-
Auburn Siding, Platform and Platform Track Estimate				\$	6,368,799
Covington Platform and Platform Track Estimate				\$	1,040,000
Covington Siding Estimate				\$	2,147,020
City of Maple Valley Platform and Platform Track Estimate				\$	1,030,000
Ravensdale Operations and Maintenance Facility Estimate				\$	898,000
Subtotal Railroad Track				\$	28,065,833

Signal, Communications and PTC					
Track Rehabilitation Estimate				\$	-
Signal, Communication and PTC Estimate				\$	7,029,400
Auburn Siding, Platform and Platform Track Estimate				\$	-
Covington Platform and Platform Track Estimate				\$	-
Covington Siding Estimate				\$	-
City of Maple Valley Platform and Platform Track Estimate				\$	-
Ravensdale Operations and Maintenance Facility Estimate				\$	-
Subtotal Train Control Items				\$	7,029,400

	Quantity	Units	Unit Cost	Item Cost	Section Cost
Station Items					
Track Rehabilitation Estimate					
Signal, Communication and PTC Estimate					
Auburn Siding, Platform and Platform Track Estimate				\$	1,830,000
Covington Platform and Platform Track Estimate				\$	3,930,000
Covington Siding Estimate				\$	-
City of Maple Valley Platform and Platform Track Estimate				\$	4,300,000
Ravensdale Operations and Maintenance Facility Estimate				\$	3,387,500
Subtotal Station Items				\$	13,447,500
Structures					
Track Rehabilitation Estimate				\$	-
Signal, Communication and PTC Estimate				\$	-
Auburn Siding, Platform and Platform Track Estimate				\$	23,300,000
Covington Platform and Platform Track Estimate				\$	-
Covington Siding Estimate				\$	-
City of Maple Valley Platform and Platform Track Estimate				\$	-
Ravensdale Operations and Maintenance Facility Estimate				\$	-
Subtotal Structures				\$	23,300,000
Traffic Items					
Track Rehabilitation Estimate				\$	-
Signal, Communication and PTC Estimate				\$	-
Auburn Siding, Platform and Platform Track Estimate				\$	3,655,000
Covington Platform and Platform Track Estimate				\$	10,400
Covington Siding Estimate				\$	465,442
City of Maple Valley Platform and Platform Track Estimate				\$	20,800
Ravensdale Operations and Maintenance Facility Estimate				\$	10,400
Subtotal Traffic Items				\$	4,162,042
Minor Items					
Track Rehabilitation Estimate				\$	-
Signal, Communication and PTC Estimate				\$	-
Auburn Siding, Platform and Platform Track Estimate				\$	4,505,250
Covington Platform and Platform Track Estimate				\$	606,660
Covington Siding Estimate				\$	167,979
City of Maple Valley Platform and Platform Track Estimate				\$	679,320
Ravensdale Operations and Maintenance Facility Estimate				\$	525,285
Subtotal Minor Items				\$	6,484,494
Mobilization					
Track Rehabilitation Estimate				\$	-
Signal, Communication and PTC Estimate				\$	-
Auburn Siding, Platform and Platform Track Estimate				\$	3,454,025
Covington Platform and Platform Track Estimate				\$	465,106
Covington Siding Estimate				\$	128,784
City of Maple Valley Platform and Platform Track Estimate				\$	520,812
Ravensdale Operations and Maintenance Facility Estimate				\$	402,719
Subtotal Mobilization				\$	4,971,446
Other					
Track Rehabilitation Estimate				\$	497,460
Signal, Communication and PTC Estimate				\$	210,882
Auburn Siding, Platform and Platform Track Estimate				\$	1,330,892
Covington Platform and Platform Track Estimate				\$	184,685
Covington Siding Estimate				\$	106,909
City of Maple Valley Platform and Platform Track Estimate				\$	202,768
Ravensdale Operations and Maintenance Facility Estimate				\$	159,837
Subtotal Differing Site Conditions				\$	2,693,434
Sales Tax					
Track Rehabilitation Estimate				\$	47,259
Signal, Communication and PTC Estimate				\$	20,034
Auburn Siding, Platform and Platform Track Estimate				\$	3,735,891
Covington Platform and Platform Track Estimate				\$	503,581
Covington Siding Estimate				\$	348,703
City of Maple Valley Platform and Platform Track Estimate				\$	563,511
Ravensdale Operations and Maintenance Facility Estimate				\$	439,825
Subtotal Sales Tax				\$	5,658,804
Project Management / Engineering					
Track Rehabilitation Estimate				\$	2,903,511
Signal, Communication and PTC Estimate				\$	1,230,848
Auburn Siding, Platform and Platform Track Estimate				\$	7,767,974
Covington Platform and Platform Track Estimate				\$	1,077,945
Covington Siding Estimate				\$	623,994
City of Maple Valley Platform and Platform Track Estimate				\$	1,183,489
Ravensdale Operations and Maintenance Facility Estimate				\$	939,716
Subtotal Section Project Management				\$	15,727,477

	Quantity	Units	Unit Cost	Item Cost	Section Cost
Right of Way					
Track Rehabilitation Estimate				\$	-
Signal, Communication and PTC Estimate				\$	-
Auburn Siding, Platform and Platform Track Estimate				\$	1,525,000
Covington Platform and Platform Track Estimate				\$	-
Covington Siding Estimate				\$	-
City of Maple Valley Platform and Platform Track Estimate				\$	-
Ravensdale Operations and Maintenance Facility Estimate				\$	200,000
Subtotal Right of Way				\$	1,725,000
Major Utility Relocates					
Track Rehabilitation Estimate				\$	-
Signal, Communication and PTC Estimate				\$	-
Auburn Siding, Platform and Platform Track Estimate				\$	1,540,000
Covington Platform and Platform Track Estimate				\$	216,000
Covington Siding Estimate				\$	800,000
City of Maple Valley Platform and Platform Track Estimate				\$	125,000
Ravensdale Operations and Maintenance Facility Estimate				\$	270,000
Subtotal Major Utility Relocations				\$	2,951,000

TRACK REHABILITATION ESTIMATE

WSDOT DMU Study - Auburn to Maple Valley 5% Cost Estimate
SUMMARY OF COST ESTIMATE

TOTAL CONSTRUCTION ITEMS			\$	17,079,475	\$	17,100,000
SALES TAX			\$	47,259	\$	100,000
TOTAL RIGHT OF WAY COSTS			\$	-	\$	-
PROGRAM MANAGEMENT AND ENGINEERING			\$	2,903,511	\$	3,000,000
TOTAL MAJOR UTILITY RELOCATION COSTS			\$	-	\$	-
TOTAL PROJECT COSTS (without Contingency)			\$	20,030,244	\$	20,200,000
	Contingency	30%	\$	6,009,073		ROUNDED
TOTAL PROJECT COSTS			\$	26,039,317	\$	26,100,000

	Quantity	Units	Unit Cost	Item Cost	Section Cost
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ROADWAY/STRUCTURE ITEMS

Railroad Track Rehabilitation and Construction					
<i>Rehabilitate Existing Mainline, Auburn to Ravensdale</i>					
Relay Rail	60086	TF	\$ 224	\$	13,459,264
Install Ties, 30%	14058	EA	\$ 90	\$	1,259,597
Track Surface and Lining including ballast	74976	TF	\$ 25	\$	1,863,154
Subtotal Railroad Track					\$ 16,582,014

Minor Items					
Minor Items (% of Sections 1-6, excl. Liq. Mit., excl. Env. Mit.)	15%	of	\$		-
Subtotal Minor Items					\$ -

Mobilization					
Mobilization (% of Sections 1-7)	10%	of	\$	-	\$ -
Subtotal Mobilization					\$ -

Other					
Differing Site Conditions % of Section 1 thru 8	0.0%	of	\$ 16,582,014	\$	-
General bonds and Insurance (Section 1-9)	3.0%	of	\$ 16,582,014	\$	497,460
Warranty		LS		\$	-
Financing		LS		\$	-
Subtotal Differing Site Conditions					\$ 497,460

Sales Tax					
Sales Tax (% of Sections 1 thru 10 less BNSF Force Account Work)	9.5%	of	\$ 497,460	\$	47,259
Subtotal Sales Tax					\$ 47,259

Project Management / Engineering					
Preliminary Engineering	5%	of	\$ 17,079,475	\$	853,974
Constr Engr and Insp % of Sections 1 thru 10	10%	of	\$ 17,079,475	\$	1,707,947
Program Management % of Sections 1 thru 10	2%	of	\$ 17,079,475	\$	341,589
Subtotal Section Project Management					\$ 2,903,511

Notes:

1. This estimate is based upon replacing only existing jointed rail with BNSF Std. 141#
2. BNSF construction costs are the basis for the track construction items
3. Tie replacement estimates are based upon short spot checks. No physical count of defective ties was made
4. All track that is planned for relay or tie replacement is planned for track surface and lining.

SIGNAL, COMMUNICATIONS and PTC ESTIMATE

**WSDOT DMU Study - Auburn to Maple Valley 5% Cost Estimate
SUMMARY OF COST ESTIMATE**

TOTAL CONSTRUCTION ITEMS				\$	7,240,282	\$	7,300,000
SALES TAX				\$	20,034	\$	100,000
TOTAL RIGHT OF WAY COSTS				\$	-	\$	-
PROGRAM MANAGEMENT AND ENGINEERING				\$	1,230,848	\$	1,300,000
TOTAL MAJOR UTILITY RELOCATION COSTS				\$	-	\$	-
TOTAL PROJECT COSTS (without Contingency)				\$	8,491,164	\$	8,700,000
	Contingency	30%		\$	2,547,349		
TOTAL PROJECT COSTS				\$	11,038,513		ROUNDED \$ 11,100,000

	Quantity	Units	Unit Cost	Item Cost	Section Cost
Signal, Communications and PTC					
Signal, CTC and PTC overlay, Auburn to West Kanaskat	1	LS	\$ 7,029,400	\$ 7,029,400	
Subtotal Train Control Items					\$ 7,029,400
Minor Items					
Minor Items (% of Sections 1-6, excl. Liq. Mit., excl. Env. Mit.)	15%	of	\$ -	\$ -	
Subtotal Minor Items					\$ -
Mobilization					
Mobilization (% of Sections 1-7)	10%	of	\$ -	\$ -	
Subtotal Mobilization					\$ -
Other					
Differing Site Conditions % of Section 1 thru 8	0.0%	of	\$ 7,029,400	\$ -	
General bonds and Insurance (Section 1-9)	3.0%	of	\$ 7,029,400	\$ 210,882	
Warranty		LS		\$ -	
Financing		LS		\$ -	
Subtotal Differing Site Conditions					\$ 210,882
Sales Tax					
Sales Tax (% of Sections 1 thru 10 less BNSF Force Account Work)	9.5%	of	\$ 210,882	\$ 20,034	
Subtotal Sales Tax					\$ 20,034
Project Management / Engineering					
Preliminary Engineering	5%	of	\$ 7,240,282	\$ 362,014	
Constr Engr and Insp % of Sections 1 thru 10	10%	of	\$ 7,240,282	\$ 724,028	
Program Management % of Sections 1 thru 10	2%	of	\$ 7,240,282	\$ 144,806	
Subtotal Section Project Management					\$ 1,230,848

Appendix F-1
WSDOT DMU-Auburn to Maple Valley 5% Cost Estimate
AUBURN SIDING, PLATFORM AND PLATFORM TRACK ESTIMATE

WSDOT DMU Study - Auburn to Maple Valley 5% Cost Estimate
SUMMARY OF COST ESTIMATE

TOTAL CONSTRUCTION ITEMS			\$	45,693,966	\$	45,700,000
SALES TAX (less BNSF Force Account Work)			\$	3,735,891	\$	3,800,000
TOTAL RIGHT OF WAY COSTS			\$	1,525,000	\$	1,600,000
PROGRAM MANAGEMENT AND ENGINEERING			\$	7,767,974	\$	7,800,000
TOTAL MAJOR UTILITY RELOCATION COSTS			\$	1,540,000	\$	1,600,000
TOTAL PROJECT COSTS (without Contingency)			\$	60,262,831	\$	60,500,000
	Contingency	30%	\$	18,078,849		
TOTAL PROJECT COSTS			\$	78,341,680	\$	78,400,000

	Quantity	Units	Unit Cost	Item Cost	Section Cost
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ROADWAY/STRUCTURE ITEMS

Preparation

Demolition of Existing Grade Separation - Bridge	2	EA	\$ 100,000	\$ 200,000	
Demolition of Existing Grade Separation - Walls	2	EA	\$ 50,000	\$ 100,000	
Building Demolition - Residential	2	EA	\$ 20,000	\$ 40,000	
Grading, New Track Siding	16000	CY	\$ 26	\$ 416,000	
Grading, New Track Station	19000	CY	\$ 26	\$ 494,000	
Subtotal Preparation					\$ 1,250,000

Railroad Track Rehabilitation and Construction

Extended Auburn Siding

Remove Existing Siding	2600	TF	\$ 15	\$ 38,839	
Remove Existing Turnouts	1	EA	\$ 10,360	\$ 10,360	
Grading/Compaction Existing Track	5000	CY	\$ 16	\$ 79,400	
Construct 141 lb. CWR, Conc. Tie Track	10880	TF	\$ 340	\$ 3,699,200	
Install No. 20 Turnout	1	EA	\$ 350,000	\$ 350,000	
Construct RR Bridge, MP 101.18	150	TF	\$ 9,100	\$ 1,365,000	

Construct Auburn Station Track

Construct 141 lb. CWR, Conc. Tie Track	1400	TF	\$ 340	\$ 476,000	
Install No. 20 Turnout	1	EA	\$ 350,000	\$ 350,000	

Subtotal Railroad Track

\$ 6,368,799

Station Items

Auburn Platform, 300 ft. long	1	EA	\$ 1,800,000	\$ 1,800,000	
Parking Lot	600	SY	\$ 50	\$ 30,000	
Subtotal Station Items					\$ 1,830,000

Structures

Widen RR Bridge - A Street	1	LS	\$ 1,500,000	\$ 1,500,000	
Replace RR Bridge and Construct New Bridge - Auburn Way S	1	LS	\$ 3,000,000	\$ 3,000,000	
Replace RR Bridge and Construct New Bridge - F Street	1	LS	\$ 1,800,000	\$ 1,800,000	
Roadway Crossing - M Street	1	LS	\$ 1,000,000	\$ 1,000,000	
Grade Separate SE Auburn/BlackDiamond Rd	1	LS	\$ 16,000,000	\$ 16,000,000	

Subtotal Structures

\$ 23,300,000

Traffic Items

Traffic Control/Staging (% Earthwork, Paving, Structures excl. Liquifaction, Specialty excl. Env. Mit.)	10%	of	\$ 24,550,000	\$ 2,455,000	
Pavement Markings at Crossings	1	LS	\$ 200,000	\$ 200,000	
Roadway/ Facility Signing	1	LS	\$ 1,000,000	\$ 1,000,000	

Subtotal Traffic Items

\$ 3,655,000

Minor Items

Minor Items (% of Sections 1-6, excl. Liq. Mit., excl. Env. Mit.)	15%	of	\$ 30,035,000	\$ 4,505,250	
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Subtotal Minor Items

\$ 4,505,250

Mobilization

Mobilization (% of Sections 1-7)	10%	of	\$ 34,540,250	\$ 3,454,025	
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Subtotal Mobilization

\$ 3,454,025

Appendix F-1
WSDOT DMU-Auburn to Maple Valley 5% Cost Estimate
AUBURN SIDING, PLATFORM AND PLATFORM TRACK ESTIMATE

	Quantity	Units	Unit Cost	Item Cost	Section Cost
Other					
Differing Site Conditions % of Section 1 thru 8	0.0%	of	\$ 44,363,074	\$ -	
General bonds and Insurance (Section 1-9)	3.0%	of	\$ 44,363,074	\$ 1,330,892	
Warranty		LS		\$ -	
Financing		LS		\$ -	
Subtotal Differing Site Conditions					\$ 1,330,892
Sales Tax					
Sales Tax (% of Sections 1 thru 10 less BNSF Force Account Work)	9.5%	of	\$ 39,325,167	\$ 3,735,891	
Subtotal Sales Tax					\$ 3,735,891
Project Management / Engineering					
Preliminary Engineering	5%	of	\$ 45,693,966	\$ 2,284,698	
Constr Engr and Insp % of Sections 1 thru 10	10%	of	\$ 45,693,966	\$ 4,569,397	
Program Management % of Sections 1 thru 10	2%	of	\$ 45,693,966	\$ 913,879	
Subtotal Section Project Management					\$ 7,767,974
Right of Way					
Acquisition of Residential (Based on 2010 Taxable Value)	1	LS	\$ 300,000	\$ 300,000	
Acquisition of Commercial (Based on 2010 Taxable Value)	1	LS	\$ 1,225,000	\$ 1,225,000	
ROW for Retention/Detention Facilities	-	SF	\$ -	\$ -	
Permanent Easements	-	SF	\$ -	\$ -	
Temporary Construction Easement	-	SF	\$ -	\$ -	
Change in Access	-	LS	\$ -	\$ -	
Labor for Right of Way Services	-	LS	\$ -	\$ -	
Subtotal Right of Way					\$ 1,525,000
Major Utility Relocates					
Utility - Public	1	LS	\$ 500,000	\$ 500,000	
Utility - Fiber Optics	1	LS	\$ 1,000,000	\$ 1,000,000	
Utility Engineering (8% of Major Utility Relocates)	8%	of	\$ 500,000	\$ 40,000	
Subtotal Major Utility Relocations					\$ 1,540,000

COVINGTON SIDING ESTIMATE

WSDOT DMU Study - Auburn to Maple Valley 5% Cost Estimate
SUMMARY OF COST ESTIMATE

TOTAL CONSTRUCTION ITEMS			\$	3,670,555	\$	3,700,000
SALES TAX			\$	348,703	\$	400,000
TOTAL RIGHT OF WAY COSTS			\$	-	\$	-
PROGRAM MANAGEMENT AND ENGINEERING			\$	623,994	\$	700,000
TOTAL MAJOR UTILITY RELOCATION COSTS			\$	800,000	\$	800,000
TOTAL PROJECT COSTS (without Contingency)			\$	5,443,252	\$	5,600,000
	Contingency	30%	\$	1,632,976		
TOTAL PROJECT COSTS			\$	7,076,228	\$	7,100,000

	Quantity	Units	Unit Cost	Item Cost	Section Cost
ROADWAY/STRUCTURE ITEMS					
Preparation					
Grading, New Track	25170	CY	\$ 26	\$ 654,420	
Subtotal Preparation					\$ 654,420
Railroad Track Rehabilitation and Construction					
<i>Extend Covington Freight Siding to min 8,000 ft. clear</i>					
Remove Existing Turnouts	2	EA	\$ 10,360	\$ 20,720	
Construct 141 lb. CWR, Conc. Tie Track	4195	TF	\$ 340	\$ 1,426,300	
Install No. 20 Turnout	2	EA	\$ 350,000	\$ 700,000	
Subtotal Railroad Track					\$ 2,147,020
Traffic Items					
Traffic Control/Staging (% Earthwork, Paving, Structures excl. Liquifaction, Specialty excl. Env. Mit.)	10%	of	\$ 654,420	\$ 65,442	
Pavement Markings at Crossings		LS	\$ 200,000	\$ -	
Roadway/ Facility Signing		LS	\$ 1,000,000	\$ -	
Railroad Crossing Signal and ITS System	1	EA	\$ 400,000	\$ 400,000	
Subtotal Traffic Items					\$ 465,442
Minor Items					
Minor Items (% of Sections 1-6, excl. Liq. Mit., excl. Env. Mit.)	15%	of	\$ 1,119,862	\$ 167,979	
Subtotal Minor Items					\$ 167,979
Mobilization					
Mobilization (% of Sections 1-7)	10%	of	\$ 1,287,841	\$ 128,784	
Subtotal Mobilization					\$ 128,784
Other					
Differing Site Conditions % of Section 1 thru 8	0.0%	of	\$ 3,563,645	\$ -	
General bonds and Insurance (Section 1-9)	3.0%	of	\$ 3,563,645	\$ 106,909	
Warranty		LS	\$ -	\$ -	
Financing		LS	\$ -	\$ -	
Subtotal Differing Site Conditions					\$ 106,909
Sales Tax					
Sales Tax (% of Sections 1 thru 10 less BNSF Force Account Work)	9.5%	of	\$ 3,670,555	\$ 348,703	
Subtotal Sales Tax					\$ 348,703
Project Management / Engineering					
Preliminary Engineering	5%	of	\$ 3,670,555	\$ 183,528	
Constr Engr and Insp % of Sections 1 thru 10	10%	of	\$ 3,670,555	\$ 367,055	
Program Management % of Sections 1 thru 10	2%	of	\$ 3,670,555	\$ 73,411	
Subtotal Section Project Management					\$ 623,994
Major Utility Relocates					
Utility - Public	-	LS	\$ -	\$ -	
Utility - Fiber Optics	1	LS	\$ 800,000	\$ 800,000	
Utility Engineering (8% of Major Utility Relocates)	8%	of	\$ -	\$ -	
Subtotal Major Utility Relocations					\$ 800,000

CITY OF MAPLE VALLEY PLATFORM AND PLATFORM TRACK ESTIMATE

WSDOT DMU Study - Auburn to Maple Valley 5% Cost Estimate
SUMMARY OF COST ESTIMATE

TOTAL CONSTRUCTION ITEMS			\$	6,961,700	\$	7,000,000
SALES TAX			\$	563,511	\$	600,000
TOTAL RIGHT OF WAY COSTS			\$	-	\$	-
PROGRAM MANAGEMENT AND ENGINEERING			\$	1,183,489	\$	1,200,000
TOTAL MAJOR UTILITY RELOCATION COSTS			\$	125,000	\$	200,000
TOTAL PROJECT COSTS (without Contingency)			\$	8,833,700	\$	9,000,000
	Contingency	30%	\$	2,650,110		
TOTAL PROJECT COSTS			\$	11,483,810		ROUNDED \$ 11,500,000

	Quantity	Units	Unit Cost	Item Cost	Section Cost
ROADWAY/STRUCTURE ITEMS					
Preparation					
Grading, New Track	8000	CY	\$ 26	\$ 208,000	
Subtotal Preparation					\$ 208,000
Railroad Track Rehabilitation and Construction					
<i>Construct Maple Valley City Siding & Platform Track</i>					
Construct 141 lb. CWR, Conc. Tie Track	2000	TF	\$ 340	\$ 680,000	
Install No. 20 Turnout	1	EA	\$ 350,000	\$ 350,000	
Subtotal Railroad Track					\$ 1,030,000
Station Items					
City of Maple Valley Platform-300' long	1	EA	\$ 1,800,000	\$ 1,800,000	
Parking Lot	30,000	SY	\$ 50	\$ 1,500,000	
Site Work and Retaining Walls at Station area	1	LS	\$ 1,000,000	\$ 1,000,000	
Subtotal Station Items					\$ 4,300,000
Traffic Items					
Traffic Control/Staging (% Earthwork, Paving, Structures excl. Liquefaction, Specialty excl. Env. Mit.)	10%	of	\$ 208,000	\$ 20,800	
Pavement Markings at Crossings		LS	\$ 200,000	\$ -	
Roadway/ Facility Signing		LS	\$ 1,000,000	\$ -	
Railroad Crossing Signal and ITS System		EA	\$ 400,000	\$ -	
Subtotal Traffic Items					\$ 20,800
Minor Items					
Minor Items (% of Sections 1-6, excl. Liq. Mit., excl. Env. Mit.)	15%	of	\$ 4,528,800	\$ 679,320	
Subtotal Minor Items					\$ 679,320
Mobilization					
Mobilization (% of Sections 1-7)	10%	of	\$ 5,208,120	\$ 520,812	
Subtotal Mobilization					\$ 520,812
Other					
Differing Site Conditions % of Section 1 thru 8	0.0%	of	\$ 6,758,932	\$ -	
General bonds and Insurance (Section 1-9)	3.0%	of	\$ 6,758,932	\$ 202,768	
Warranty		LS	\$ -	\$ -	
Financing		LS	\$ -	\$ -	
Subtotal Differing Site Conditions					\$ 202,768
Sales Tax					
Sales Tax (% of Sections 1 thru 10 less BNSF Force Account Work)	9.5%	of	\$ 5,931,700	\$ 563,511	
Subtotal Sales Tax					\$ 563,511
Project Management / Engineering					
Preliminary Engineering	5%	of	\$ 6,961,700	\$ 348,085	
Constr Engr and Insp % of Sections 1 thru 10	10%	of	\$ 6,961,700	\$ 696,170	
Program Management % of Sections 1 thru 10	2%	of	\$ 6,961,700	\$ 139,234	
Subtotal Section Project Management					\$ 1,183,489
Major Utility Relocates					
Utility - Public	-	LS	\$ 500,000	\$ -	
Utility - Fiber Optics	0.25	MI	\$ 500,000	\$ 125,000	
Utility Engineering (8% of Major Utility Relocates)	8%	of	\$ -	\$ -	
Subtotal Major Utility Relocations					\$ 125,000

RAVENSDALE OPERATIONS AND MAINTENANCE FACILITY ESTIMATE

WSDOT DMU Study - Auburn to Maple Valley 5% Cost Estimate
SUMMARY OF COST ESTIMATE

TOTAL CONSTRUCTION ITEMS			\$	5,487,741	\$	5,500,000
SALES TAX			\$	439,825	\$	500,000
TOTAL RIGHT OF WAY COSTS			\$	200,000	\$	200,000
PROGRAM MANAGEMENT AND ENGINEERING			\$	939,716	\$	1,000,000
TOTAL MAJOR UTILITY RELOCATION COSTS			\$	270,000	\$	300,000
TOTAL PROJECT COSTS (without Contingency)			\$	7,337,282	\$	7,500,000
	Contingency	30%	\$	2,201,185		
TOTAL PROJECT COSTS			\$	9,538,467		ROUNDED \$ 9,600,000

	Quantity	Units	Unit Cost	Item Cost	Section Cost
ROADWAY/STRUCTURE ITEMS					
Preparation					
Grading, New Track	4000	CY	\$ 26	\$ 104,000	
Subtotal Preparation					\$ 104,000
Railroad Track Rehabilitation and Construction					
Construct Ravensdale OMF Tracks					
Construct 141 lb. CWR, Conc. Tie Track	1200	TF	\$ 340	\$ 408,000	
Install No. 11 Turnout	2	EA	\$ 245,000	\$ 490,000	
Subtotal Railroad Track					\$ 898,000
Operations and Maintenance Facility Items					
Office/Crew Change Building	1,500	SF	\$ 325	\$ 487,500	
Open sided steel frame repair shed	11,250	SF	\$ 200	\$ 2,250,000	
Inspection pit, drip pans, and oil/water separator	1	LS	\$ 500,000	\$ 500,000	
Parking Lot	3,000	SY	\$ 50	\$ 150,000	
Security Fencing	1,600	LF	\$ 25	\$ 40,000	
Subtotal Station Items					\$ 3,387,500
Traffic Items					
Traffic Control/Staging (% Earthwork, Paving, Structures excl. Liqification, Specialty excl. Env. Mit.)	10%	of	\$ 104,000	\$ 10,400	
Pavement Markings at Crossings	0	LS	\$ 200,000	\$ -	
Roadway/ Facility Signing	0	LS	\$ 1,000,000	\$ -	
Railroad Crossing Signal and ITS System	0	EA	\$ 400,000	\$ -	
Subtotal Traffic Items					\$ 10,400
Minor Items					
Minor Items (% of Sections 1-6, excl. Liq. Mit., excl. Env. Mit.)	15%	of	\$ 3,501,900	\$ 525,285	
Subtotal Minor Items					\$ 525,285
Mobilization					
Mobilization (% of Sections 1-7)	10%	of	\$ 4,027,185	\$ 402,719	
Subtotal Mobilization					\$ 402,719
Other					
Differing Site Conditions % of Section 1 thru 8	0.0%	of	\$ 5,367,904	\$ -	
General bonds and Insurance (Section 1-9)	3.0%	of	\$ 5,327,904	\$ 159,837	
Warranty		LS	\$ -	\$ -	
Financing		LS	\$ -	\$ -	
Subtotal Differing Site Conditions					\$ 159,837
Sales Tax					
Sales Tax (% of Sections 1 thru 10 less BNSF Force Account Work)	9.5%	of	\$ 4,629,741	\$ 439,825	
Subtotal Sales Tax					\$ 439,825
Project Management / Engineering					
Preliminary Engineering	5%	of	\$ 5,527,741	\$ 276,387	
Constr Engr and Insp % of Sections 1 thru 10	10%	of	\$ 5,527,741	\$ 552,774	
Program Management % of Sections 1 thru 10	2%	of	\$ 5,527,741	\$ 110,555	
Subtotal Section Project Management					\$ 939,716
Right of Way					
Acquisition of Residential (Based on 2010 Taxable Value)	-	LS	\$ -	\$ -	
Acquisition of Commercial (Based on 2010 Taxable Value)	1	LS	\$ 200,000	\$ 200,000	
ROW for Retention/Detention Facilities	-	SF	\$ -	\$ -	
Permanent Easements	-	SF	\$ -	\$ -	
Temporary Construction Easement	-	SF	\$ -	\$ -	
Change in Access	-	LS	\$ -	\$ -	
Labor for Right of Way Services	-	LS	\$ -	\$ -	
Subtotal Right of Way					\$ 200,000
Major Utility Relocates					
Utility - Public	1	LS	\$ 250,000	\$ 250,000	
Utility - Fiber Optics	-	LS	\$ 1,000,000	\$ -	
Utility Engineering (8% of Major Utility Relocates)	8%	of	\$ 250,000	\$ 20,000	
Subtotal Major Utility Relocations					\$ 270,000

Rail Relay Limits

M.P. From	M.P. To	Miles	TF
85.2	85.6	0.4	2,112
86.1	92.4	6.3	33,264
93.2	93.8	0.6	3,168
94.5	95.7	1.2	6,336
96.1	98.5	2.4	12,672
99.4	100.3	0.9	4,752
101.3	102.7	1.4	7,392
Total		13.2	69,696

WSDOT DMU Study - Auburn to Maple Valley 5% Cost Estimate
SUMMARY OF COST ESTIMATE

TOTAL CONSTRUCTION ITEMS			\$	80,835,140	\$	80,900,000
SALES TAX			\$	7,730,068	\$	7,800,000
TOTAL RIGHT OF WAY COSTS			\$	1,725,000	\$	1,800,000
PROGRAM MANAGEMENT AND ENGINEERING			\$	13,832,754	\$	13,900,000
TOTAL MAJOR UTILITY RELOCATION COSTS			\$	2,951,000	\$	3,000,000
TOTAL PROJECT COSTS (without Contingency)			\$	107,073,962	\$	107,400,000
	Contingency	30%	\$	32,122,188		
TOTAL PROJECT COSTS			\$	139,196,150		ROUNDED \$ 139,500,000

	Quantity	Units	Unit Cost	Item Cost	Section Cost
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ROADWAY/STRUCTURE ITEMS

Preparation					
Track Rehabilitation Estimate				\$	-
Signal, Communication and PTC Estimate				\$	-
Auburn Siding, Platform and Platform Track Estimate				\$	756,000
Covington Platform and Platform Track Estimate				\$	104,000
Covington Siding Estimate				\$	654,420
City of Maple Valley Platform and Platform Track Estimate				\$	208,000
Ravensdale Operations and Maintenance Facility Estimate				\$	104,000
Subtotal Preparation				\$	1,826,420

Railroad Track Rehabilitation and Construction					
Track Rehabilitation Estimate				\$	11,844,296
Signal, Communication and PTC Estimate				\$	-
Auburn Siding, Platform and Platform Track Estimate				\$	4,585,862
Covington Platform and Platform Track Estimate				\$	744,000
Covington Siding Estimate				\$	1,538,380
City of Maple Valley Platform and Platform Track Estimate				\$	738,000
Ravensdale Operations and Maintenance Facility Estimate				\$	534,000
Subtotal Railroad Track				\$	19,984,538

Signal, Communications and PTC					
Track Rehabilitation Estimate				\$	-
Signal, Communication and PTC Estimate				\$	5,021,000
Auburn Siding, Platform and Platform Track Estimate				\$	-
Covington Platform and Platform Track Estimate				\$	-
Covington Siding Estimate				\$	-
City of Maple Valley Platform and Platform Track Estimate				\$	-
Ravensdale Operations and Maintenance Facility Estimate				\$	-
Subtotal Train Control Items				\$	5,021,000

Station Items					
Track Rehabilitation Estimate				\$	-
Signal, Communication and PTC Estimate				\$	-
Auburn Siding, Platform and Platform Track Estimate				\$	1,630,000
Covington Platform and Platform Track Estimate				\$	3,400,000
Covington Siding Estimate				\$	-
City of Maple Valley Platform and Platform Track Estimate				\$	4,400,000
Ravensdale Operations and Maintenance Facility Estimate				\$	2,667,500
Subtotal Station Items				\$	12,097,500

Structures					
Track Rehabilitation Estimate				\$	-
Signal, Communication and PTC Estimate				\$	-
Auburn Siding, Platform and Platform Track Estimate				\$	23,300,000
Covington Platform and Platform Track Estimate				\$	-
Covington Siding Estimate				\$	-
City of Maple Valley Platform and Platform Track Estimate				\$	-
Ravensdale Operations and Maintenance Facility Estimate				\$	-
Subtotal Structures				\$	23,300,000

Appendix F-2
WSDOT DMU - Auburn to Maple Valley 5% Cost Estimate

	Quantity	Units	Unit Cost	Item Cost	Section Cost
Traffic Items					
Track Rehabilitation Estimate				\$	-
Signal, Communication and PTC Estimate				\$	-
Auburn Siding, Platform and Platform Track Estimate				\$	3,605,600
Covington Platform and Platform Track Estimate				\$	10,400
Covington Siding Estimate				\$	465,442
City of Maple Valley Platform and Platform Track Estimate				\$	20,800
Ravensdale Operations and Maintenance Facility Estimate				\$	10,400
Subtotal Traffic Items				\$	4,112,642
Minor Items					
Track Rehabilitation Estimate				\$	-
Signal, Communication and PTC Estimate				\$	-
Auburn Siding, Platform and Platform Track Estimate				\$	4,393,740
Covington Platform and Platform Track Estimate				\$	527,160
Covington Siding Estimate				\$	167,979
City of Maple Valley Platform and Platform Track Estimate				\$	694,320
Ravensdale Operations and Maintenance Facility Estimate				\$	417,285
Subtotal Minor Items				\$	6,200,484
Mobilization					
Track Rehabilitation Estimate				\$	-
Signal, Communication and PTC Estimate				\$	-
Auburn Siding, Platform and Platform Track Estimate				\$	3,368,534
Covington Platform and Platform Track Estimate				\$	404,156
Covington Siding Estimate				\$	128,784
City of Maple Valley Platform and Platform Track Estimate				\$	532,312
Ravensdale Operations and Maintenance Facility Estimate				\$	319,919
Subtotal Mobilization				\$	4,753,705
Other					
Track Rehabilitation Estimate				\$	390,862
Signal, Communication and PTC Estimate				\$	150,630
Auburn Siding, Platform and Platform Track Estimate				\$	1,249,192
Covington Platform and Platform Track Estimate				\$	155,691
Covington Siding Estimate				\$	88,650
City of Maple Valley Platform and Platform Track Estimate				\$	197,803
Ravensdale Operations and Maintenance Facility Estimate				\$	121,593
Subtotal Differing Site Conditions				\$	2,354,422
Sales Tax					
Track Rehabilitation Estimate				\$	1,274,861
Signal, Communication and PTC Estimate				\$	491,305
Auburn Siding, Platform and Platform Track Estimate				\$	4,121,378
Covington Platform and Platform Track Estimate				\$	507,814
Covington Siding Estimate				\$	289,147
City of Maple Valley Platform and Platform Track Estimate				\$	645,167
Ravensdale Operations and Maintenance Facility Estimate				\$	400,396
Subtotal Sales Tax				\$	7,730,068
Project Management / Engineering					
Track Rehabilitation Estimate				\$	2,281,330
Signal, Communication and PTC Estimate				\$	879,177
Auburn Siding, Platform and Platform Track Estimate				\$	7,375,098
Covington Platform and Platform Track Estimate				\$	908,719
Covington Siding Estimate				\$	517,421
City of Maple Valley Platform and Platform Track Estimate				\$	1,154,510
Ravensdale Operations and Maintenance Facility Estimate				\$	716,498
Subtotal Section Project Management				\$	13,832,754
Right of Way					
Track Rehabilitation Estimate				\$	-
Signal, Communication and PTC Estimate				\$	-
Auburn Siding, Platform and Platform Track Estimate				\$	1,525,000
Covington Platform and Platform Track Estimate				\$	-
Covington Siding Estimate				\$	-
City of Maple Valley Platform and Platform Track Estimate				\$	-
Ravensdale Operations and Maintenance Facility Estimate				\$	200,000
Subtotal Right of Way				\$	1,725,000
Major Utility Relocates					
Track Rehabilitation Estimate				\$	-
Signal, Communication and PTC Estimate				\$	-
Auburn Siding, Platform and Platform Track Estimate				\$	1,540,000
Covington Platform and Platform Track Estimate				\$	216,000
Covington Siding Estimate				\$	800,000
City of Maple Valley Platform and Platform Track Estimate				\$	125,000
Ravensdale Operations and Maintenance Facility Estimate				\$	270,000
Subtotal Major Utility Relocations				\$	2,951,000

TRACK REHABILITATION ESTIMATE - CONTRACTOR COST BASIS

WSDOT DMU Study - Auburn to Maple Valley 5% Cost Estimate
SUMMARY OF COST ESTIMATE

TOTAL CONSTRUCTION ITEMS			\$	13,419,587	\$	13,500,000
SALES TAX			\$	1,274,861	\$	1,300,000
TOTAL RIGHT OF WAY COSTS			\$	-	\$	-
PROGRAM MANAGEMENT AND ENGINEERING			\$	2,281,330	\$	2,300,000
TOTAL MAJOR UTILITY RELOCATION COSTS			\$	-	\$	-
TOTAL PROJECT COSTS (without Contingency)			\$	16,975,778	\$	17,100,000
	Contingency	30%	\$	5,092,733		
TOTAL PROJECT COSTS			\$	22,068,511	\$	22,100,000

	Quantity	Units	Unit Cost	Item Cost	Section Cost
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ROADWAY/STRUCTURE ITEMS

Railroad Track Rehabilitation and Construction					
<i>Rehabilitate Existing Mainline, Auburn to Ravensdale</i>					
Relay Rail	60086	TF	\$ 160	\$ 9,613,760	
Install Ties, 30%	14058	EA	\$ 64	\$ 899,712	
Track Surace and Lining including ballast	74976	TF	\$ 18	\$ 1,330,824	
Subtotal Railroad Track					\$ 11,844,296

Minor Items					
Minor Items (% of Sections 1-6, excl. Liq. Mit., excl. Env. Mit.)	15%	of	\$	-	
Subtotal Minor Items					\$ -

Mobilization					
Mobilization (% of Sections 1-7)	10%	of	\$ 11,844,296	\$ 1,184,430	
Subtotal Mobilization					\$ 1,184,430

Other					
Differing Site Conditions % of Section 1 thru 8	0.0%	of	\$ 13,028,726	\$ -	
General bonds and Insurance (Section 1-9)	3.0%	of	\$ 13,028,726	\$ 390,862	
Warranty		LS		\$ -	
Financing		LS		\$ -	
Subtotal Differing Site Conditions					\$ 390,862

Sales Tax					
Sales Tax (% of Sections 1 thru 10 less BNSF Force Account Work)	9.5%	of	\$ 13,419,587	\$ 1,274,861	
Subtotal Sales Tax					\$ 1,274,861

Project Management / Engineering					
Preliminary Engineering	5%	of	\$ 13,419,587	\$ 670,979	
Constr Engr and Insp % of Sections 1 thru 10	10%	of	\$ 13,419,587	\$ 1,341,959	
Program Management % of Sections 1 thru 10	2%	of	\$ 13,419,587	\$ 268,392	
Subtotal Section Project Management					\$ 2,281,330

SIGNAL, COMMUNICATIONS and PTC ESTIMATE - CONTRACTOR COST BASIS

**WSDOT DMU Study - Auburn to Maple Valley 5% Cost Estimate
SUMMARY OF COST ESTIMATE**

TOTAL CONSTRUCTION ITEMS			\$	5,171,630	\$	5,200,000
SALES TAX			\$	491,305	\$	500,000
TOTAL RIGHT OF WAY COSTS			\$	-	\$	-
PROGRAM MANAGEMENT AND ENGINEERING			\$	879,177	\$	900,000
TOTAL MAJOR UTILITY RELOCATION COSTS			\$	-	\$	-
TOTAL PROJECT COSTS (without Contingency)			\$	6,542,112	\$	6,600,000
	Contingency	30%	\$	1,962,634		
TOTAL PROJECT COSTS			\$	8,504,746		ROUNDED \$ 8,600,000

	Quantity	Units	Unit Cost	Item Cost	Section Cost
ROADWAY/STRUCTURE ITEMS					
Signal, Communications and PTC					
Signal, CTC and PTC overlay, Auburn to West Kanaskat	1	LS	\$ 5,021,000	\$ 5,021,000	
Subtotal Train Control Items					\$ 5,021,000
Traffic Items					
Traffic Control/Staging (% Earthwork, Paving, Structures excl. Liquefaction, Specialty excl. Env. Mit.)	10%	of	\$ -	\$ -	
Pavement Markings at Crossings		LS	\$ 200,000	\$ -	
Roadway/ Facility Signing		LS	\$ 1,000,000	\$ -	
Railroad Crossing Signal and ITS System		EA	\$ 400,000	\$ -	
Subtotal Traffic Items					\$ -
Minor Items					
Minor Items (% of Sections 1-6, excl. Liq. Mit., excl. Env. Mit.)	15%	of	\$ -	\$ -	
Subtotal Minor Items					\$ -
Mobilization					
Mobilization (% of Sections 1-7)	10%	of	\$ -	\$ -	
Subtotal Mobilization					\$ -
Other					
Differing Site Conditions % of Section 1 thru 8	0.0%	of	\$ 5,021,000	\$ -	
General bonds and Insurance (Section 1-9)	3.0%	of	\$ 5,021,000	\$ 150,630	
Warranty		LS	\$ -	\$ -	
Financing		LS	\$ -	\$ -	
Subtotal Differing Site Conditions					\$ 150,630
Sales Tax					
Sales Tax (% of Sections 1 thru 10 less BNSF Force Account Work)	9.5%	of	\$ 5,171,630	\$ 491,305	
Subtotal Sales Tax					\$ 491,305
Project Management / Engineering					
Preliminary Engineering	5%	of	\$ 5,171,630	\$ 258,582	
Constr Engr and Insp % of Sections 1 thru 10	10%	of	\$ 5,171,630	\$ 517,163	
Program Management % of Sections 1 thru 10	2%	of	\$ 5,171,630	\$ 103,433	
Subtotal Section Project Management					\$ 879,177

AUBURN SIDING, PLATFORM and PLATFORM TRACK ESTIMATE -
CONTRACTOR COST BASIS

WSDOT DMU Study - Auburn to Maple Valley 5% Cost Estimate

SUMMARY OF COST ESTIMATE

TOTAL CONSTRUCTION ITEMS			\$	42,888,928	\$	42,900,000
SALES TAX (less BNSF Force Account Work)			\$	4,121,378	\$	4,200,000
TOTAL RIGHT OF WAY COSTS			\$	1,525,000	\$	1,600,000
PROGRAM MANAGEMENT AND ENGINEERING			\$	7,375,098	\$	7,400,000
TOTAL MAJOR UTILITY RELOCATION COSTS			\$	1,540,000	\$	1,600,000
TOTAL PROJECT COSTS (without Contingency)			\$	57,450,404	\$	57,700,000
	Contingency	30%	\$	17,235,121		ROUNDED
TOTAL PROJECT COSTS			\$	74,685,525	\$	74,700,000

	Quantity	Units	Unit Cost	Item Cost	Section Cost
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ROADWAY/STRUCTURE ITEMS

Preparation

Demolition of Existing Grade Separation - Bridge	2	EA	\$ 100,000	\$ 200,000	
Demolition of Existing Grade Separation - Walls	2	EA	\$ 50,000	\$ 100,000	
Building Demolition - Residential	2	EA	\$ 20,000	\$ 40,000	
Grading, New Track Siding	16000	CY	\$ 26	\$ 416,000	
Grading, New Track Station	19000	CY	\$ 26	\$ 494,000	
Subtotal Preparation					\$ 756,000

Railroad Track Rehabilitation and Construction

Extended Auburn Siding

Remove Existing Siding	2600	TF	\$ 11	\$ 27,742	
Remove Existing Turnouts	1	EA	\$ 7,400	\$ 7,400	
Grading/Compaction Existing Track	5000	CY	\$ 16	\$ 79,400	
Construct 141 lb. CWR, Conc. Tie Track	10880	TF	\$ 244	\$ 2,654,720	
Install No. 20 Turnout	1	EA	\$ 250,000	\$ 250,000	
Construct RR Bridge, MP 101.18	150	TF	\$ 6,500	\$ 975,000	

Construct Auburn Station Track

Construct 141lb. CWR, Conc. Tie Track	1400	TF	\$ 244	\$ 341,600	
Install No. 20 Turnout	1	EA	\$ 250,000	\$ 250,000	
Subtotal Railroad Track					\$ 4,585,862

Station Items

Auburn Platform, 300 ft. long	1	EACH	\$ 1,600,000	\$ 1,600,000	
Parking Lot	600	SY	\$ 50	\$ 30,000	
Subtotal Station Items					\$ 1,630,000

Structures

Widen RR Bridge - A Street	1	LS	\$ 1,500,000	\$ 1,500,000	
Replace RR Bridge and Construct New Bridge - Auburn Way S	1	LS	\$ 3,000,000	\$ 3,000,000	
Replace RR Bridge and Construct New Bridge - F Street	1	LS	\$ 1,800,000	\$ 1,800,000	
Roadway Crossing - M Street	1	LS	\$ 1,000,000	\$ 1,000,000	
Grade Separate SE Auburn/BlackDiamond Rd	1	LS	\$ 16,000,000	\$ 16,000,000	
Subtotal Structures					\$ 23,300,000

Traffic Items

Traffic Control/Staging (% Earthwork, Paving, Structures excl. Liquefaction, Specialty excl. Env. Mit.)	10%	of	\$ 24,056,000	\$ 2,405,600	
Pavement Markings at Crossings	1	LS	\$ 200,000	\$ 200,000	
Roadway/ Facility Signing	1	LS	\$ 1,000,000	\$ 1,000,000	
Railroad Crossing Signal and ITS System	0	EA	\$ 400,000	\$ -	
Subtotal Traffic Items					\$ 3,605,600

Minor Items

Minor Items (% of Sections 1-6, excl. Liq. Mit., excl. Env. Mit.)	15%	of	\$ 29,291,600	\$ 4,393,740	
Subtotal Minor Items					\$ 4,393,740

Mobilization

Mobilization (% of Sections 1-7)	10%	of	\$ 33,685,340	\$ 3,368,534	
Subtotal Mobilization					\$ 3,368,534

Other

Differing Site Conditions % of Section 1 thru 8	0.0%	of	\$ 42,133,736	\$ -	
General bonds and Insurance (Section 1-9)	3.0%	of	\$ 41,639,736	\$ 1,249,192	
Warranty		LS	\$ -	\$ -	
Financing		LS	\$ -	\$ -	
Subtotal Differing Site Conditions					\$ 1,249,192

Sales Tax

Sales Tax (% of Sections 1 thru 10 less BNSF Force Account Work)	9.5%	of	\$ 43,382,928	\$ 4,121,378	
Subtotal Sales Tax					\$ 4,121,378

Project Management / Engineering

Preliminary Engineering	5%	of	\$ 43,382,928	\$ 2,169,146	
Constr Engr and Insp % of Sections 1 thru 10	10%	of	\$ 43,382,928	\$ 4,338,293	
Program Management % of Sections 1 thru 10	2%	of	\$ 43,382,928	\$ 867,659	
Subtotal Section Project Management					\$ 7,375,098

Right of Way

Acquisition of Residential (Based on 2010 Taxable Value)	1	LS	\$ 300,000	\$ 300,000	
Acquisition of Commercial (Based on 2010 Taxable Value)	1	LS	\$ 1,225,000	\$ 1,225,000	
ROW for Retention/Detention Facilities	-	SF	\$ -	\$ -	
Permanent Easements	-	SF	\$ -	\$ -	
Temporary Construction Easement	-	SF	\$ -	\$ -	
Change in Access	-	LS	\$ -	\$ -	
Labor for Right of Way Services	-	LS	\$ -	\$ -	
Subtotal Right of Way					\$ 1,525,000

Major Utility Relocates

Utility - Public	1	LS	\$ 500,000	\$ 500,000	
Utility - Fiber Optics	1	LS	\$ 1,000,000	\$ 1,000,000	
Utility Engineering (8% of Major Utility Relocates)	8%	of	\$ 500,000	\$ 40,000	
Subtotal Major Utility Relocations					\$ 1,540,000

COVINGTON PLATFORM and PLATFORM TRACK ESTIMATE -
CONTRACTOR COST BASIS

WSDOT DMU Study - Auburn to Maple Valley 5% Cost Estimate
SUMMARY OF COST ESTIMATE

TOTAL CONSTRUCTION ITEMS			\$	5,345,407	\$	5,400,000
SALES TAX			\$	507,814	\$	600,000
TOTAL RIGHT OF WAY COSTS			\$	-	\$	-
PROGRAM MANAGEMENT AND ENGINEERING			\$	908,719	\$	1,000,000
TOTAL MAJOR UTILITY RELOCATION COSTS			\$	216,000	\$	300,000
TOTAL PROJECT COSTS (without Contingency)			\$	6,977,940	\$	7,300,000
	Contingency	30%	\$	2,093,382		ROUNDED
TOTAL PROJECT COSTS			\$	9,071,322	\$	9,100,000

	Quantity	Units	Unit Cost	Item Cost	Section Cost
ROADWAY/STRUCTURE ITEMS					
Preparation					
Grading, New Track	4000	CY	\$ 26	\$ 104,000	
Subtotal Preparation					\$ 104,000
Railroad Track Rehabilitation and Construction					
Construct Covington DMU Siding & Station Track					
Construct 141 lb. CWR, Conc. Tie Track	1000	TF	\$ 244	\$ 244,000	
Install No. 20 Turnout	2	EA	\$ 250,000	\$ 500,000	
Subtotal Railroad Track					\$ 744,000
Station Items					
Covington Platform, 300 ft. long	1	EA	\$ 1,600,000	\$ 1,600,000	
Parking Lot	36,000	SY	\$ 50	\$ 1,800,000	
Subtotal Station Items					\$ 3,400,000
Traffic Items					
Traffic Control/Staging (% Earthwork, Paving, Structures excl. Liquefaction, Specialty excl. Env. Mit.)	10%	of	\$ 104,000	\$ 10,400	
Pavement Markings at Crossings	0	LS	\$ 200,000	\$ -	
Roadway/ Facility Signing	0	LS	\$ 1,000,000	\$ -	
Railroad Crossing Signal and ITS System	0	EA	\$ 400,000	\$ -	
Subtotal Traffic Items					\$ 10,400
Minor Items					
Minor Items (% of Sections 1-6, excl. Liq. Mit., excl. Env. Mit.)	15%	of	\$ 3,514,400	\$ 527,160	
Subtotal Minor Items					\$ 527,160
Mobilization					
Mobilization (% of Sections 1-7)	10%	of	\$ 4,041,560	\$ 404,156	
Subtotal Mobilization					\$ 404,156
Other					
Differing Site Conditions % of Section 1 thru 8	0.0%	of	\$ 5,189,716	\$ -	
General bonds and Insurance (Section 1-9)	3.0%	of	\$ 5,189,716	\$ 155,691	
Warranty		LS	\$ -	\$ -	
Financing		LS	\$ -	\$ -	
Subtotal Differing Site Conditions					\$ 155,691
Sales Tax					
Sales Tax (% of Sections 1 thru 10 less BNSF Force Account Work)	9.5%	of	\$ 5,345,407	\$ 507,814	
Subtotal Sales Tax					\$ 507,814
Project Management / Engineering					
Preliminary Engineering	5%	of	\$ 5,345,407	\$ 267,270	
Constr Engr and Insp % of Sections 1 thru 10	10%	of	\$ 5,345,407	\$ 534,541	
Program Management % of Sections 1 thru 10	2%	of	\$ 5,345,407	\$ 106,908	
Subtotal Section Project Management					\$ 908,719
Right of Way					
Subtotal Right of Way					\$ -
Major Utility Relocates					
Utility - Public	1	LS	\$ 200,000	\$ 200,000	
Utility - Fiber Optics	-	LS	\$ -	\$ -	
Utility Engineering (8% of Major Utility Relocates)	8%	of	\$ 200,000	\$ 16,000	
Subtotal Major Utility Relocations					\$ 216,000

COVINGTON SIDING ESTIMATE - CONTRACTOR COST BASIS

WSDOT DMU Study - Auburn to Maple Valley 5% Cost Estimate
SUMMARY OF COST ESTIMATE

TOTAL CONSTRUCTION ITEMS			\$	3,043,656	\$	3,100,000
SALES TAX			\$	289,147	\$	300,000
TOTAL RIGHT OF WAY COSTS			\$	-	\$	-
PROGRAM MANAGEMENT AND ENGINEERING			\$	517,421	\$	600,000
TOTAL MAJOR UTILITY RELOCATION COSTS			\$	800,000	\$	800,000
TOTAL PROJECT COSTS (without Contingency)			\$	4,650,224	\$	4,800,000
	Contingency	30%	\$	1,395,067		ROUNDED
TOTAL PROJECT COSTS			\$	6,045,291	\$	6,100,000

	Quantity	Units	Unit Cost	Item Cost	Section Cost
ROADWAY/STRUCTURE ITEMS					
Preparation					
Grading, New Track	25170	CY	\$ 26	\$ 654,420	
Subtotal Preparation					\$ 654,420
Railroad Track Rehabilitation and Construction					
<i>Extend Covington Freight Siding to min 8,000 ft. clear</i>					
Remove Existing Turnouts	2	EA	\$ 7,400	\$ 14,800	
Construct 141 lb. CWR, Conc. Tie Track	4195	TF	\$ 244	\$ 1,023,580	
Install No. 20 Turnout	2	EA	\$ 250,000	\$ 500,000	
Subtotal Railroad Track					\$ 1,538,380
Traffic Items					
Traffic Control/Staging (% Earthwork, Paving, Structures excl. Liquefaction, Specialty excl. Env. Mit.)	10%	of	\$ 654,420	\$ 65,442	
Pavement Markings at Crossings		LS	\$ 200,000	\$ -	
Roadway/ Facility Signing		LS	\$ 1,000,000	\$ -	
Railroad Crossing Signal and ITS System	1	EA	\$ 400,000	\$ 400,000	
Subtotal Traffic Items					\$ 465,442
Minor Items					
Minor Items (% of Sections 1-6, excl. Liq. Mit., excl. Env. Mit.)	15%	of	\$ 1,119,862	\$ 167,979	
Subtotal Minor Items					\$ 167,979
Mobilization					
Mobilization (% of Sections 1-7)	10%	of	\$ 1,287,841	\$ 128,784	
Subtotal Mobilization					\$ 128,784
Other					
Differing Site Conditions % of Section 1 thru 8	0.0%	of	\$ 2,955,005	\$ -	
General bonds and Insurance (Section 1-9)	3.0%	of	\$ 2,955,005	\$ 88,650	
Warranty		LS	\$ -	\$ -	
Financing		LS	\$ -	\$ -	
Subtotal Differing Site Conditions					\$ 88,650
Sales Tax					
Sales Tax (% of Sections 1 thru 10 less BNSF Force Account Work)	9.5%	of	\$ 3,043,656	\$ 289,147	
Subtotal Sales Tax					\$ 289,147
Project Management / Engineering					
Preliminary Engineering	5%	of	\$ 3,043,656	\$ 152,183	
Constr Engr and Insp % of Sections 1 thru 10	10%	of	\$ 3,043,656	\$ 304,366	
Program Management % of Sections 1 thru 10	2%	of	\$ 3,043,656	\$ 60,873	
Subtotal Section Project Management					\$ 517,421
Right of Way					
Subtotal Right of Way					\$ -
Major Utility Relocates					
Utility - Public	-	LS	\$ -	\$ -	
Utility - Fiber Optics	1	LS	\$ 800,000	\$ 800,000	
Utility Engineering (8% of Major Utility Relocates)	8%	of	\$ -	\$ -	
Subtotal Major Utility Relocations					\$ 800,000

CITY OF MAPLE VALLEY PLATFORM AND PLATFORM TRACK ESTIMATE -
CONTRACTOR COST BASIS

WSDOT DMU Study - Auburn to Maple Valley 5% Cost Estimate
SUMMARY OF COST ESTIMATE

TOTAL CONSTRUCTION ITEMS			\$	6,791,235	\$	6,800,000
SALES TAX			\$	645,167	\$	700,000
TOTAL RIGHT OF WAY COSTS			\$	-	\$	-
PROGRAM MANAGEMENT AND ENGINEERING			\$	1,154,510	\$	1,200,000
TOTAL MAJOR UTILITY RELOCATION COSTS			\$	125,000	\$	200,000
TOTAL PROJECT COSTS (without Contingency)			\$	8,715,912	\$	8,900,000
	Contingency	30%	\$	2,614,774		ROUNDED
TOTAL PROJECT COSTS			\$	11,330,686	\$	11,400,000

	Quantity	Units	Unit Cost	Item Cost	Section Cost
ROADWAY/STRUCTURE ITEMS					
Preparation					
Grading, New Track	8000	CY	\$ 26	\$ 208,000	
Demolition of Existing Grade Separation - Bridge		Each	\$ 100,000	\$ -	
Demolition of Existing Grade Separation - Walls		Each	\$ 50,000	\$ -	
Subtotal Preparation					\$ 208,000
Railroad Track Rehabilitation and Construction					
<i>Construct Maple Valley City Siding</i>					
Construct 141 lb. CWR, Conc. Tie Track	2000	TF	\$ 244	\$ 488,000	
Install No. 20 Turnout	1	EA	\$ 250,000	\$ 250,000	
Subtotal Railroad Track					\$ 738,000
Station Items					
City of Maple Valley Platform-300 ft. long	1	EACH	\$ 1,600,000	\$ 1,600,000	
Parking Lot	36,000	SY	\$ 50	\$ 1,800,000	
Site Work and Retaining Walls at Station area	1	LS	\$ 1,000,000	\$ 1,000,000	
Subtotal Station Items					\$ 4,400,000
Traffic Items					
Traffic Control/Staging (% Earthwork, Paving, Structures excl. Liquifaction, Specialty excl. Env. Mit.)	10%	of	\$ 208,000	\$ 20,800	
Pavement Markings at Crossings		LS	\$ 200,000	\$ -	
Roadway/ Facility Signing		LS	\$ 1,000,000	\$ -	
Railroad Crossing Signal and ITS System		Each	\$ 400,000	\$ -	
Subtotal Traffic Items					\$ 20,800
Minor Items					
Minor Items (% of Sections 1-6, excl. Liq. Mit., excl. Env. Mit.)	15%	of	\$ 4,628,800	\$ 694,320	
Subtotal Minor Items					\$ 694,320
Mobilization					
Mobilization (% of Sections 1-7)	10%	of	\$ 5,323,120	\$ 532,312	
Subtotal Mobilization					\$ 532,312
Other					
Differing Site Conditions % of Section 1 thru 8	0.0%	of	\$ 6,593,432	\$ -	
General bonds and Insurance (Section 1-9)	3.0%	of	\$ 6,593,432	\$ 197,803	
Warranty		LS	\$ -	\$ -	
Financing		LS	\$ -	\$ -	
Subtotal Differing Site Conditions					\$ 197,803
Sales Tax					
Sales Tax (% of Sections 1 thru 10 less BNSF Force Account Work)	9.5%	of	\$ 6,791,235	\$ 645,167	
Subtotal Sales Tax					\$ 645,167
Project Management / Engineering					
Preliminary Engineering	5%	of	\$ 6,791,235	\$ 339,562	
Constr Engr and Insp % of Sections 1 thru 10	10%	of	\$ 6,791,235	\$ 679,123	
Program Management % of Sections 1 thru 10	2%	of	\$ 6,791,235	\$ 135,825	
Subtotal Section Project Management					\$ 1,154,510
Major Utility Relocates					
Utility - Public	-	LS	\$ 500,000	\$ -	
Utility - Fiber Optics	0	LS	\$ 500,000	\$ 125,000	
Utility Engineering (8% of Major Utility Relocates)	8%	of	\$ -	\$ -	
Subtotal Major Utility Relocations					\$ 125,000

RAVENSDALE OPERATIONS AND MAINTENANCE FACILITY ESTIMATE -
CONTRACTOR COST BASIS

WSDOT DMU Study - Auburn to Maple Valley 5% Cost Estimate
SUMMARY OF COST ESTIMATE

TOTAL CONSTRUCTION ITEMS			\$	4,174,697	\$	4,200,000
SALES TAX			\$	400,396	\$	500,000
TOTAL RIGHT OF WAY COSTS			\$	200,000	\$	200,000
PROGRAM MANAGEMENT AND ENGINEERING			\$	716,498	\$	800,000
TOTAL MAJOR UTILITY RELOCATION COSTS			\$	270,000	\$	300,000
TOTAL PROJECT COSTS (without Contingency)			\$	5,761,591	\$	6,000,000
	Contingency	30%	\$	1,728,477		ROUNDED
TOTAL PROJECT COSTS			\$	7,490,068	\$	7,500,000

	Quantity	Units	Unit Cost	Item Cost	Section Cost
ROADWAY/STRUCTURE ITEMS					
Preparation					
Grading, New Track	4000	CY	\$ 26	\$ 104,000	
Subtotal Preparation					\$ 104,000
Railroad Track Rehabilitation and Construction					
<i>Construct Maple Valley City Siding & Station Track, Conn. To Ravensdale</i>					
				\$ -	
Construct 141 lb. CWR, Conc. Tie Track	1000	TF	\$ 244	\$ 244,000	
Install No. 11 Turnout	2	EA	\$ 145,000	\$ 290,000	
Subtotal Railroad Track					\$ 534,000
Operations and Maintenance Facility Items					
Office/Crew Change Building	1,500	SF	\$ 325	\$ 487,500	
Open sided steel frame repair shed	7,650	SF	\$ 200	\$ 1,530,000	
Inspection pit, drip pans, and oil/water separator	1	LS	\$ 500,000	\$ 500,000	
Parking Lot	3,000	SY	\$ 50	\$ 150,000	
Security Fence	1,600	LF	\$ 25	\$ 40,000	
Subtotal Station Items					\$ 2,667,500
Traffic Items					
Traffic Control/Staging (% Earthwork, Paving, Structures excl. Liquefaction, Specialty excl. Env. Mit.)	10%	of	\$ 104,000	\$ 10,400	
Pavement Markings at Crossings	0	LS	\$ 200,000	\$ -	
Roadway/ Facility Signing	0	LS	\$ 1,000,000	\$ -	
Railroad Crossing Signal and ITS System	0	Each	\$ 400,000	\$ -	
Subtotal Traffic Items					\$ 10,400
Minor Items					
Minor Items (% of Sections 1-6, excl. Liq. Mit., excl. Env. Mit.)	15%	of	\$ 2,781,900	\$ 417,285	
Subtotal Minor Items					\$ 417,285
Mobilization					
Mobilization (% of Sections 1-7)	10%	of	\$ 3,199,185	\$ 319,919	
Subtotal Mobilization					\$ 319,919
Other					
Differing Site Conditions % of Section 1 thru 8	0.0%	of	\$ 4,093,104	\$ -	
General bonds and Insurance (Section 1-9)	3.0%	of	\$ 4,053,104	\$ 121,593	
Warranty		LS	\$ -	\$ -	
Financing		LS	\$ -	\$ -	
Subtotal Differing Site Conditions					\$ 121,593
Sales Tax					
Sales Tax (% of Sections 1 thru 10 less BNSF Force Account Work)	9.5%	of	\$ 4,214,697	\$ 400,396	
Subtotal Sales Tax					\$ 400,396
Project Management / Engineering					
Preliminary Engineering	5%	of	\$ 4,214,697	\$ 210,735	
Constr Engr and Insp % of Sections 1 thru 10	10%	of	\$ 4,214,697	\$ 421,470	
Program Management % of Sections 1 thru 10	2%	of	\$ 4,214,697	\$ 84,294	
Subtotal Section Project Management					\$ 716,498
Right of Way					
Acquisition of Residential (Based on 2010 Taxable Value)	-	LS	\$ -	\$ -	
Acquisition of Commercial (Based on 2010 Taxable Value)	2	AC	\$ 100,000	\$ 200,000	
ROW for Retention/Detention Facilities	-	SF	\$ -	\$ -	
Permanent Easements	-	SF	\$ -	\$ -	
Temporary Construction Easement	-	SF	\$ -	\$ -	
Change in Access	-	LS	\$ -	\$ -	
Labor for Right of Way Services	-	LS	\$ -	\$ -	
Subtotal Right of Way					\$ 200,000
Major Utility Relocates					
Utility - Public	1	LS	\$ 250,000	\$ 250,000	
Utility - Fiber Optics	-	LS	\$ 1,000,000	\$ -	
Utility Engineering (8% of Major Utility Relocates)	8%	of	\$ 250,000	\$ 20,000	
Subtotal Major Utility Relocations					\$ 270,000

Rail Relay Limits

M.P. From	M.P. To	Miles	TF
85.2	85.6	0.4	2,112
86.1	92.4	6.3	33,264
93.2	93.8	0.6	3,168
94.5	95.7	1.2	6,336
96.1	98.5	2.4	12,672
99.4	100.3	0.9	4,752
101.3	102.7	1.4	7,392
Total		13.2	69,696