

Appendix E

Cost Estimates

PARSONS

CONSTRUCTION COST ESTIMATE

Project #: 603063

Contract #:

Subject: Fallowfield Grade Separation Cost Estimate - Class D

Location: Fallowfield Road at Mile 3.9 Smiths Falls Subdivision

Made By: GAH

Date: 27-Mar-17

Checked By: MDK

#	Description	Unit	Estimated Quantity	Unit Price	Total	Spec Code / Reference
1.0	Road Works					
1.1	Removals: Medians	m ²	4935	31.41	155,008.35	L040.13
1.2	Removals: Earth Excavation	m ³	24550	21.36	524,388.00	L120.02
1.3	Granular 'A'	t	10969	30.00	329,070.00	L210.01
1.4	Granular 'B' Type II	t	36564	19.58	715,923.12	L210.03
1.5	Line Painting + Signs	LS	1	25,000.00	25,000.00	L230.01
1.6	Embankment Cover	t	28941	14.00	405,174.00	
1.7	Lightweight Fill	m ³	135117	150.00	20,267,550.00	N300.01
1.8	Bedrock Grouting	m ³	0	4,387.00	-	D240.01
1.9	Concrete Sidewalks, Boulevards, Islands, medians	m ²	4935	30.71	151,553.85	L230.01
1.10	Multi Use Pathways	m	300	173.87	52,161.00	L230.02
1.11	Concrete Barrier Curb	m	0	66.87	-	L260.01
1.12	Performance Graded Superpave (150mm depth)	t	11209	154.36	1,730,221.24	L380.11
2.0	Landscape				-	
2.1	Topsoil	m ³	2362	48.44	114,415.28	T020.03
2.2	Sod	m ²	23615	10.49	247,721.35	T030.05
2.3	Miscellaneous landscaping	LS	1	60,000.00	60,000.00	estimate
2.4	Noise wall	m	660	1,000.00	660,000.00	estimate
3.0	Structures				-	
3.1	Overpass with two spans	m ²	3450	8,000.00	27,600,000.00	estimate
3.2	Retaining wall	m ²	1061	1,200.00	1,272,600.00	estimate
4.0	Rail Costs				-	
4.1	Rail diversion	LS	0	-	-	Greenbank
4.2	Rail reinstatement	LS	0	-	-	Greenbank
4.3	Temporary at grade crossing system	LS	0	-	-	estimate
4.4	Flagging costs	LS	1	900,000.00	900,000.00	VIA Estimate
4.5	Protection of VIA fibre plant	LS	0	400,000.00	-	estimate
5.0	Storm, Sanitary, Watermain				-	
5.1	Storm sewers (varies)	m	725	603.00	437,175.00	varies
5.2	Watermain (762mm relocation and protection)	m	1200	1,381.51	1,657,812.00	G050.03
5.3	Sanitary (Various sizes)	m	0	603.00	-	varies
5.4	Remove and replace culverts	m	100	644.12	64,412.00	N380.031
5.5	Storm ponds	LS	0	500,000.00	-	Greenbank
5.6	Pump station	LS	0	2,000,000.00	-	Greenbank

#	Description	Unit	Estimated Quantity	Unit Price	Total	Spec Code / Reference
5.7	Dewatering	LS	1	50,000.00	50,000.00	estimate
6.0	Guiderail and Fence				-	
6.1	Steel beam guide rail	m	600	121.07	72,642.00	R030.02
6.2	Chain link fence 1.5m	m	1114	86.91	96,817.74	Q020.02
7.0	Utilities				-	
7.1	Adjustments	LS	1	50,000.00	50,000.00	estimate
7.2	Hydro pole relocations	ea	20	25,000.00	500,000.00	estimate
8.0	Temporary Detour				-	
8.1	Earth Excavation	m ³	0	21.36	-	L120.02
8.2	Granular 'A'	t	0	30.00	-	L210.01
8.3	Granular 'B' Type II	t	0	19.58	-	L210.03
8.4	Performance Graded Superpave (150mm depth)	t	0	154.36	-	L380.11
8.5	Traffic Management	LS	1	100,000.00	100,000.00	estimate
8.6	Reinstatement	LS	1	250,000.00	250,000.00	estimate
9.0	Street lighting and Signals				-	
9.1	Street Lighting	LS	1	350,000.00	350,000.00	estimate
9.2	Traffic Plant	LS	2	250,000.00	500,000.00	estimate
9.3	Temporary Traffic Signals	LS	2	250,000.00	500,000.00	estimate
Subtotal Construction					59,839,644.93	
10.0	Soft Costs (property, design, CA, contingency)	LS	1	66,943,609.42	66,943,609.42	Class D

TOTAL ESTIMATED PROJECT COST (EXCL. HST) 126,783,254.35
HST @ 1.76% 2,231,385.28
TOTAL WITH TAX 129,014,639.63
FURTHER RISK CONTINGENCY 985,360.37
GRAND TOTAL 130,000,000.00

PARSONS

CONSTRUCTION COST ESTIMATE

Project #: 603063

Contract #:

Subject: Jockvale Grade Separation Cost Estimate - Class D

Location: Jockvale Road at Mile 5.7 Smith Falls Subdivision

Made By: GAH

Date: 27-Mar-17

Checked By: MDK

#	Description	Unit	Estimated Quantity	Unit Price	Total	Spec Code / Reference
1.0	Road Works					
1.1	Removals: Medians	m2	0	31.41	-	L040.13
1.2	Removals: Earth Excavation	m ³	74800	21.36	1,597,728.00	L120.02
1.4	Granular 'A'	t	3458	30.00	103,740.00	L210.01
1.5	Granular 'B' Type II	t	10417	19.58	203,964.86	L210.03
1.6	Line Painting + Signs	LS	1	10,000.00	10,000.00	L230.01
1.7	Embankment Cover	t	0	14.00	-	
1.8	Lightweight Fill	m ³	0	150.00	-	N300.01
1.9	Bedrock Grouting	m ³	4125	4,387.00	18,096,375.00	D240.01
1.10	Concrete Sidewalks, Boulevards, Islands, medians	m ²	400	30.71	12,284.00	L230.01
1.11	Concrete Barrier Curb	m	100	66.87	6,687.00	L260.01
1.12	Performance Graded Superpave (150mm depth)	t	2970	154.36	458,449.20	L380.11
1.13	Multi Use Pathways	m	1260	173.87	219,076.20	L010.08
2.0	Landscape				-	
2.1	Topsoil	m ³	989	48.44	47,907.16	T020.03
2.2	Sod	m ²	9890	10.49	103,746.10	T030.05
2.3	Miscellaneous landscaping	LS	1	60,000.00	60,000.00	estimate
2.4	Noise wall	m	250	1,000.00	250,000.00	Greenbank
3.0	Structures				-	
3.1	Rail bridge	m ²	183	9,000.00	1,647,000.00	estimate
3.2	Pedestrian bridge	m ²	120	7,500.00	900,000.00	estimate
3.3	Retaining wall	m ²	2238	1,200.00	2,685,600.00	estimate
4.0	Rail Costs				-	
4.1	Rail diversion	LS	1	1,900,000.00	1,900,000.00	Greenbank
4.2	Rail reinstatement	LS	1	300,000.00	300,000.00	Greenbank
4.3	Temporary at grade crossing system	LS	1	400,000.00	400,000.00	estimate
4.4	Flagging costs	LS	1	900,000.00	900,000.00	estimate
4.5	Protection of VIA fibre plant	LS	1	400,000.00	400,000.00	estimate
5.0	Storm, Sanitary, Watermain				-	
5.1	Storm sewers	m	329	603.00	198,387.00	estimate
5.2	Watermain (750mm)	m	0	1,381.51	-	
5.3	Sanitary	m	0	603.00	-	
5.4	Remove and replace culverts	m	0	644.12	-	N380.031
5.5	Storm ponds	LS	1	500,000.00	500,000.00	Greenbank

#	Description	Unit	Estimated Quantity	Unit Price	Total	Spec Code / Reference
5.6	Pump station	LS	1	2,000,000.00	2,000,000.00	Greenbank
5.7	Dewatering	LS	1	500,000.00	500,000.00	estimate
6.0	Guiderail and Fence				-	
6.1	Steel beam guide rail	m	0	121.07	-	R030.02
6.2	Chain link fence 1.5m	m	600	86.91	52,146.00	Q020.02
7.0	Utilities				-	
7.1	Adjustments	LS	1	50,000.00	50,000.00	estimate
7.2	Hydro pole relocations	ea	11	25,000.00	275,000.00	estimate
8.0	Temporary Detour				-	
8.1	Earth Excavation	m ³	5891	21.36	125,831.76	L120.02
8.2	Granular 'A'	t	2287	30.00	68,610.00	L210.01
8.3	Granular 'B' Type II	t	8732	19.58	170,972.56	L210.03
8.4	Performance Graded Superpave (150mm depth)	t	2495	154.36	385,128.20	L380.11
8.5	Traffic Management	LS	1	50,000.00	50,000.00	estimate
8.6	Reinstatement	LS	1	250,000.00	250,000.00	estimate
9.0	Street lighting and Signals				-	
9.1	Street Lighting	LS	1	350,000.00	350,000.00	estimate
9.2	Traffic Plant - Pedestrian crossings	LS	1	250,000.00	250,000.00	estimate
9.3	Temporary Traffic Signals	LS	0	250,000.00	-	estimate
Subtotal Construction					35,528,633.04	
10.0	Soft Costs (Property, Design, CA, Contingency)	Class D	1	39,781,496.34	39,781,496.34	

TOTAL ESTIMATED PROJECT COST (EXCL. HST) 75,310,129.38
HST @1.76% 1,325,458.28
TOTAL WITH TAX 76,635,587.66
FURTHER RISK CONTINGENCY 3,364,412.34
GRAND TOTAL 80,000,000.00

PARSONS

CONSTRUCTION COST ESTIMATE

Project #: 603063

Contract #:

Subject: Merivale Grade Separation Cost Estimate - Class D

Location: Merivale Road at Mile 1.6 Smith Falls Subdivision

Made By: GAH

Date: 27-Mar-17

Checked By: MDK

#	Description	Unit	Estimated Quantity	Unit Price	Total	Spec Code / Reference
1.0	Road Works					
1.1	Removals: Medians	m ²	0	31.41	-	L040.13
1.2	Removals: Earth Excavation	m ³	37385	21.36	798,543.60	L120.02
1.3	Granular 'A'	t	3493	30.00	104,790.00	L210.01
1.4	Granular 'B' Type II	t	11642	19.58	227,950.36	L210.03
1.5	Line Painting + Signs	LS	1	25,000.00	25,000.00	L230.01
1.6	Embankment Cover	t	0	14.00	-	
1.7	Lightweight Fill	m ³	0	150.00	-	N300.01
1.8	Bedrock grouting	m ³	3284	4,387.00	14,406,908.00	D240.01
1.9	Concrete Sidewalks, Boulevards, Islands, medians	m ²	950	30.71	29,174.50	L230.01
1.10	Multi Use Pathways	m	300	173.87	52,161.00	L230.02
1.11	Concrete Barrier Curb	m	2000	66.87	133,740.00	L260.01
1.12	Performance Graded Superpave (150mm depth)	t	3493	154.36	539,179.48	L380.11
2.0	Landscape				-	
2.1	Topsoil	m ³	1137	48.44	55,076.28	T020.03
2.2	Sod	m ²	11369	10.49	119,260.81	T030.05
2.3	Miscellaneous landscaping	LS	1	60,000.00	60,000.00	estimate
2.4	Noise wall	m	0	1,000.00	-	estimate
3.0	Structures				-	
3.1	Rail bridge	m ²	128	9,000.00	1,152,900.00	estimate
3.2	Retaining wall	m ²	2520	1,200.00	3,024,000.00	estimate
4.0	Rail Costs				-	
4.1	Rail diversion	LS	1	1,900,000.00	1,900,000.00	Greenbank
4.2	Rail reinstatement	LS	1	300,000.00	300,000.00	Greenbank
4.3	Temporary at grade crossing system	LS	1	400,000.00	400,000.00	estimate
4.4	Flagging costs	LS	1	900,000.00	900,000.00	estimate
4.5	Relocation and protection of VIA fibre plant	LS	1	400,000.00	400,000.00	estimate
5.0	Storm, Sanitary, Watermain				-	
5.1	Storm sewers (various)	m	579	461.00	266,919.00	various
5.2	Watermain (406mm)	m	576	1,711.33	985,726.08	G050.01
5.3	Sanitary (various)	m	855	557.00	476,235.00	various
5.4	Remove and replace culverts	m	30	644.12	19,323.60	N380.031
5.5	Storm ponds	LS	0	500,000.00	-	Greenbank
5.6	Pump station	LS	1	2,000,000.00	2,000,000.00	Greenbank

#	Description	Unit	Estimated Quantity	Unit Price	Total	Spec Code / Reference
5.7	Dewatering	LS	1	500,000.00	500,000.00	estimate
6.0	Guiderail and Fence				-	
6.1	Steel beam guide rail	m	0	121.07	-	R030.02
6.2	Chain link fence 1.5m	m	1000	86.91	86,910.00	Q020.02
7.0	Utilities				-	
7.1	Adjustments	LS	1	50,000.00	50,000.00	estimate
7.2	Hydro pole relocations	ea	22	25,000.00	550,000.00	estimate
8.0	Temporary Detour				-	
8.1	Removals: Earth Excavation	m ³	7325	21.36	156,462.00	L120.02
8.2	Granular 'A'	t	2844	30.00	85,320.00	L210.01
8.3	Granular 'B' Type II	t	10859	19.58	212,619.22	L210.03
8.4	Performance Graded Superpave (150mm depth)	t	3102	154.36	478,824.72	L380.11
8.5	Traffic Management	LS	1	50,000.00	50,000.00	estimate
8.6	Reinstatement	LS	1	300,000.00	300,000.00	estimate
9.0	Street lighting and Signals				-	
9.1	Street Lighting	LS	1	500,000.00	500,000.00	estimate
9.2	Traffic Plant	LS	1	250,000.00	250,000.00	estimate
Subtotal Construction					31,597,023.65	
10.0	Soft Costs (Property, Design, CA, Contingecny)	Class D	1	37,836,726.02	37,836,726.02	Class D

TOTAL ESTIMATED PROJECT COST (EXCL. HST)	69,433,749.67
HST @ 1.76%	1,222,033.99
TOTAL WITH TAX	70,655,783.66
FURTHER RISK CONTINGENCY	4,344,216.34
GRAND TOTAL	75,000,000.00

PARSONS

CONSTRUCTION COST ESTIMATE

Project #: 603063

Contract #:

Subject: Woodroffe and Transitway grade Separation Cost Estimate - Class D

Location: Woodroffe Avenue and Transitway at Mile 3.3 Smith Falls Subdivision

Made By: GAH

Date: 27-Mar-17

Checked By: MDK

#	Description	Unit	Estimated Quantity	Unit Price	Total	Spec Code / Reference
1.0	Road Works					
1.1	Removals: Medians	m ²	3405	31.41	106,951.05	L040.13
1.2	Removals: Earth Excavation	m ³	20320	21.36	434,035.20	L120.02
1.3	Granular 'A'	t	9467	30.00	284,010.00	L210.01
1.4	Granular 'B' Type II	t	28926	19.58	566,371.08	L210.03
1.5	Line Painting + Signs	LS	1	25,000.00	25,000.00	L230.01
1.6	Embankment Cover	t	23344	14.00	326,816.00	
1.7	Lightweight Fill	m ³	171067	150.00	25,660,050.00	N300.01
1.8	Bedrock Grouting	m ³	0	4,387.00	-	D240.01
1.9	Concrete Sidewalks, Boulevards, Islands, medians	m ²	3405	30.71	104,567.55	L230.01
1.10	Multi Use Pathways	m	500	173.87	86,935.00	L230.02
1.11	Concrete Barrier Curb	m	0	66.87	-	L260.01
1.12	Performance Graded Superpave (150mm depth)	t	12623	154.36	1,948,486.28	L380.11
2.0	Landscape				-	
2.1	Topsoil	m ³	4182	48.44	202,576.08	T020.03
2.2	Sod	m ²	22886	10.49	240,074.14	T030.05
2.3	Miscellaneous Landscaping	LS	1	60,000.00	60,000.00	estimate
2.4	Noise Wall	m	0	1,000.00	-	Greenbank
3.0	Structures				-	
3.1	Woodroffe Overpass	m ²	1350	8,000.00	10,800,000.00	estimate
3.2	Transitway Overpass	m ²	756	8,000.00	6,048,000.00	estimate
3.3	Wildlife crossing	m	123	4,153.33	510,859.59	E260.08
3.4	Box Culverts	m	80	4,153.33	332,266.40	E260.08
3.5	Retaining wall	m ²	0	1,200.00	-	estimate
4.0	Rail Costs				-	
4.1	Rail diversion	LS	0	-	-	Greenbank
4.2	Rail reinstatement	LS	0	-	-	Greenbank
4.3	Temporary at grade crossing system	LS	2	400,000.00	800,000.00	estimate
4.4	Flagging costs	LS	1	900,000.00	900,000.00	estimate
4.5	Relocation and protection of VIA fibre plant	LS	0	400,000.00	-	estimate
4.6	Rail Modifications (Due to split track)	LS	1	500,000.00	500,000.00	estimate
5.0	Storm, Sanitary, Watermain				-	
5.1	Storm sewers	m	0	603.00	-	varies
5.2	Watermain (1220mm)	m	1260	3,720.00	4,687,200.00	G050.06

#	Description	Unit	Estimated Quantity	Unit Price	Total	Spec Code / Reference
5.3	Sanitary	m	0	603.00	-	varies
5.4	Remove and replace culverts	m	100	644.12	64,412.00	N380.031
5.5	Storm ponds	LS	0	500,000.00	-	Greenbank
5.6	Pump station	LS	0	2,000,000.00	-	Greenbank
5.7	Dewatering	LS	1	50,000.00	50,000.00	estimate
6.0	Guiderail and Fence				-	
6.1	Steel beam guide rail	m	2835	121.07	343,233.45	R030.02
6.2	Chain link fence 1.5m	m	565	86.91	49,104.15	Q020.02
7.0	Utilities				-	
7.1	Adjustments	LS	1	50,000.00	50,000.00	estimate
7.2	Hydro pole relocations	ea	27	25,000.00	675,000.00	estimate
8.0	Temporary Detour				-	
8.1	Earth Excavation	m ³	29835	21.36	637,275.60	L120.02
8.2	Granular 'A'	t	12505	30.00	375,150.00	L210.01
8.3	Granular 'B' Type II	t	47748	19.58	934,905.84	L210.03
8.4	Performance Graded Superpave (150mm depth)	t	13642	154.36	2,105,779.12	L380.11
8.5	Traffic Management	LS	1	30,000.00	30,000.00	estimate
8.6	Reinstatement	LS	1	1,000,000.00	1,000,000.00	estimate
9.0	Street lighting and Signals				-	
9.1	Street Lighting	LS	1	530,000.00	530,000.00	estimate
9.2	Traffic Plant	LS	1	100,000.00	100,000.00	estimate
	Subtotal Construction				61,569,058.53	
10.0	Soft Costs (Property, Design, CA, Contingency)	Class D	1	78,648,823.16	78,648,823.16	Class D
	TOTAL ESTIMATED PROJECT COST (EXCL. HST)				140,217,881.69	
	HST @ 1.76%				2,467,834.72	
	TOTAL WITH TAX				142,685,716.41	
	FURTHER RISK CONTINGENCY				2,314,283.59	
	GRAND TOTAL				145,000,000.00	