

Stantec

STRATHCONA COUNTY

YELLOWHEAD NORTH ARTERIAL ROAD FUNCTIONAL DESIGN STUDY

Appendix F - Cost Estimates

Cost Estimate Summary

Stage	Cost	
RR 231 - south of Twp Rd 534 - East Half	\$ 7,600,000.00	
Twp Rd 534 - South Half	\$ 23,700,000.00	
RR 232 - East Half	\$ 10,100,000.00	
RR 231 - north of Twp Rd 534 - East Half	\$ 15,800,000.00	
RR 231 - south of Twp Rd 534 - West Half	\$ 10,500,000.00	
Twp Rd 534 - North Half	\$ 14,400,000.00	
RR 231 - north of Twp Rd 534 - West Half	\$ 9,700,000.00	
RR 231 - south of Twp Rd 534 - 6 Lanes	\$ 3,900,000.00	
Twp Rd 534 - 6 lanes	\$ 10,800,000.00	
RR 231 - north of Twp Rd 534 - 6 Lanes	\$ 6,900,000.00	
RR 232 CN Grade Separation	\$ 19,500,000.00	
RR 231 CN Grade Separation	\$ 16,700,000.00	
Twp Rd 534 - CP Grade Separation	\$ 16,900,000.00	
RR 232 - CP Grade Separation	\$ -	Not warranted
Total	\$ 166,500,000.00	

**RR232 - Turbo Drive to Twp Rd 534 (2200 m)
Stage 2 - East Half (2 lanes plus urbanizing of west half)**

Item	Unit	Unit Price	Quantity	Total
Clearing	ha.	\$ 16,000.00	-	\$ -
Curb Removals	m	\$ 80.00	-	\$ -
Topsoil Stripping	cu.m.	\$ 3.20	5,000	\$ 16,000.00
Common Excavation	cu.m.	\$ 4.80	10,000	\$ 48,000.00
Borrow Excavation	cu.m.	\$ 16.00	45,000	\$ 720,000.00
Waste Excavation	cu.m.	\$ 12.00	10,000	\$ 120,000.00
Storm Sewer (525mm dia)	m	\$ 400.00	2,500	\$ 1,000,000.00
Manholes	ea	\$ 4,800.00	30	\$ 144,000.00
Catchbasins	ea	\$ 3,600.00	120	\$ 432,000.00
Catchbasin Leads (300 mm dia)	ea	\$ 240.00	600	\$ 144,000.00
Subgrade Preparation and Cement Stabilization	sq.m.	\$ 8.00	32,000	\$ 256,000.00
Curb and Gutter	m	\$ 80.00	10,000	\$ 800,000.00
Pavement Structure (200mm ACP over 350mm GBC)	sq.m.	\$ 100.00	25,000	\$ 2,500,000.00
Bike Path (75mm ACP over 150 mm GBC)	sq.m.	\$ 65.00	-	\$ -
Street Lighting	ea	\$ 4,000.00	120	\$ 480,000.00
Traffic Signals	ea	\$ 160,000.00	1	\$ 160,000.00
Landscaping	sq.m.	\$ 1.60	50,000	\$ 80,000.00
Pavement Markings and Signage	m	\$ 20.00	2,500	\$ 50,000.00
Pipeline Protection	L.S.		-	\$ -
Utility Relocates	L.S.		-	\$ -
At-Grade Railway Crossing	ea.	\$ 400,000.00	2	\$ 800,000.00
Overpass/Creek Crossing Structure				\$ -
a)Superstructure	sq.m.	\$ 2,500.00	-	\$ -
b)Substructure	sq.m.	\$ 2,000.00	-	\$ -
c)MSE Wall	sq.m.	\$ 900.00	-	\$ -
Retaining Walls	sq.m.	\$ 900.00	-	\$ -
Subtotal				\$ 7,750,000.00
Property Acquisition	ha.			\$ -
Engineering (10%)				\$ 775,000.00
Contingency (20%)				\$ 1,550,000.00
Total				\$ 10,075,000.00

RR232 - CN Grade Separation (1200 m long by 4 lanes wide)

Item	Unit	Unit Price	Quantity	Total
Clearing	ha.	\$ 16,000.00	-	\$ -
Curb Removals	m	\$ 80.00	4,800	\$ 384,000.00
Pavement Structure Removals	cu.m.	\$ 3.20	17,000	\$ 54,400.00
Common Excavation	cu.m.	\$ 4.80	-	\$ -
Borrow Excavation	cu.m.	\$ 16.00	300,000	\$ 4,800,000.00
Waste Excavation	cu.m.	\$ 12.00	-	\$ -
Storm Sewer (525mm dia)	m	\$ 400.00	-	\$ -
Manholes	ea	\$ 4,800.00	12	\$ 57,600.00
Catchbasins	ea	\$ 3,600.00	48	\$ 172,800.00
Catchbasin Leads (300 mm dia)	ea	\$ 240.00	240	\$ 57,600.00
Subgrade Preparation and Cement Stabilization	sq.m.	\$ 8.00	23,000	\$ 184,000.00
Curb and Gutter	m	\$ 80.00	4,800	\$ 384,000.00
Pavement Structure (200mm ACP over 350mm GBC)	sq.m.	\$ 100.00	20,000	\$ 2,000,000.00
Bike Path (75mm ACP over 150 mm GBC)	sq.m.	\$ 65.00	1,200	\$ 78,000.00
Street Lighting	ea	\$ 4,000.00	56	\$ 224,000.00
Traffic Signals	ea	\$ 160,000.00	-	\$ -
Landscaping	sq.m.	\$ 1.60	25,000	\$ 40,000.00
Guardrail	m	\$ 80.00	1,600	\$ 128,000.00
Pavement Markings and Signage	m	\$ 20.00	1,200	\$ 24,000.00
Pipeline Protection	L.S.		-	\$ -
Utility Relocates	L.S.		-	\$ -
At-Grade Railway Crossing	ea.	\$ 400,000.00	-	\$ -
Overpass Structure (29m by 32m)				\$ -
a)Superstructure	sq.m.	\$ 2,500.00	1,030	\$ 2,575,000.00
b)Substructure	sq.m.	\$ 2,000.00	1,030	\$ 2,060,000.00
c)MSE Wall	sq.m.	\$ 900.00	720	\$ 648,000.00
Retaining Walls	sq.m.	\$ 900.00	1,200	\$ 1,080,000.00
Subtotal				\$ 14,951,400.00
Property Acquisition	ha.			\$ -
Engineering (10%)				\$ 1,495,140.00
Contingency (20%)				\$ 2,990,280.00
Total				\$ 19,436,820.00

**RR231 - North of Hwy 16 to south of new Twp Rd 534 (1500 m)
Stage 1 - East Half (2 lanes with bike path)**

Item	Unit	Unit Price	Quantity	Total
Clearing	ha.	\$ 16,000.00	2.6	\$ 41,600.00
Curb Removals	m	\$ 80.00	-	\$ -
Topsoil Stripping	cu.m.	\$ 3.20	40,000	\$ 128,000.00
Common Excavation	cu.m.	\$ 4.80	25,000	\$ 120,000.00
Borrow Excavation	cu.m.	\$ 16.00	25,000	\$ 400,000.00
Waste Excavation	cu.m.	\$ 12.00	25,000	\$ 300,000.00
Storm Sewer (525mm dia)	m	\$ 400.00	1,500	\$ 600,000.00
Manholes	ea	\$ 4,800.00	16	\$ 76,800.00
Catchbasins	ea	\$ 3,600.00	16	\$ 57,600.00
Catchbasin Leads (300 mm dia)	ea	\$ 240.00	200	\$ 48,000.00
Subgrade Preparation and Cement Stabilization	sq.m.	\$ 8.00	16,000	\$ 128,000.00
Curb and Gutter	m	\$ 80.00	1,500	\$ 120,000.00
Pavement Structure (200mm ACP over 350mm GBC)	sq.m.	\$ 100.00	14,000	\$ 1,400,000.00
Bike Path (75mm ACP over 150 mm GBC)	sq.m.	\$ 65.00	4,500	\$ 292,500.00
Street Lighting	ea	\$ 4,000.00	35	\$ 140,000.00
Traffic Signals	ea	\$ 160,000.00	-	\$ -
Landscaping	sq.m.	\$ 1.60	40,000	\$ 64,000.00
Pavement Markings and Signage	m	\$ 20.00	1,500	\$ 30,000.00
Pipeline Protection	L.S.		-	\$ 500,000.00
Utility Relocates	L.S.	\$ 1,000,000.00	1	\$ 1,000,000.00
At-Grade Railway Crossing	ea.	\$ 400,000.00	1	\$ 400,000.00
Overpass/Creek Crossing Structure				\$ -
a)Superstructure	sq.m.	\$ 2,500.00	-	\$ -
b)Substructure	sq.m.	\$ 2,000.00	-	\$ -
c)MSE Wall	sq.m.	\$ 900.00	-	\$ -
Retaining Walls	sq.m.	\$ 900.00	-	\$ -
Subtotal				\$ 5,846,500.00
Property Acquisition	ha.			\$ -
Engineering (10%)				\$ 584,650.00
Contingency (20%)				\$ 1,169,300.00
Total				\$ 7,600,450.00

RR231 - North of Hwy 16 to Twp Rd 534 (2200 m)
Stage 2 - West Half (2 lanes plus service road)

Item	Unit	Unit Price	Quantity	Total
Clearing	ha.	\$ 16,000.00	5.0	\$ 80,000.00
Curb Removals	m	\$ 80.00	-	\$ -
Topsoil Stripping	cu.m.	\$ 3.20	40,000	\$ 128,000.00
Common Excavation	cu.m.	\$ 4.80	40,000	\$ 192,000.00
Borrow Excavation	cu.m.	\$ 16.00	40,000	\$ 640,000.00
Waste Excavation	cu.m.	\$ 12.00	10,000	\$ 120,000.00
Storm Sewer (525mm dia)	m	\$ 400.00	-	\$ -
Manholes	ea	\$ 4,800.00	-	\$ -
Catchbasins	ea	\$ 3,600.00	80	\$ 288,000.00
Catchbasin Leads (300 mm dia)	ea	\$ 240.00	700	\$ 168,000.00
Subgrade Preparation and Cement Stabilization	sq.m.	\$ 8.00	44,000	\$ 352,000.00
Curb and Gutter	m	\$ 80.00	10,000	\$ 800,000.00
Pavement Structure (200mm ACP over 350mm GBC)	sq.m.	\$ 100.00	40,000	\$ 4,000,000.00
Bike Path (75mm ACP over 150 mm GBC)	sq.m.	\$ 65.00	-	\$ -
Street Lighting	ea	\$ 4,000.00	125	\$ 500,000.00
Traffic Signals	ea	\$ 160,000.00	2	\$ 320,000.00
Landscaping	sq.m.	\$ 1.60	65,000	\$ 104,000.00
Pavement Markings and Signage	m	\$ 20.00	3,700	\$ 74,000.00
Pipeline Protection	L.S.		-	\$ -
Utility Relocates	L.S.		-	\$ -
At-Grade Railway Crossing	ea.	\$ 400,000.00	1	\$ 400,000.00
Overpass/Creek Crossing Structure				\$ -
a)Superstructure	sq.m.	\$ 2,500.00	-	\$ -
b)Substructure	sq.m.	\$ 2,000.00	-	\$ -
c)MSE Wall	sq.m.	\$ 900.00	-	\$ -
Retaining Walls	sq.m.	\$ 900.00	-	\$ -
Subtotal				\$ 8,166,000.00
Property Acquisition	ha.			\$ -
Engineering (10%)				\$ 816,600.00
Contingency (20%)				\$ 1,633,200.00
Total				\$ 10,615,800.00

**RR231 - North of Hwy 16 to Twp Rd 534 (2200 m)
Stage 3 - Widen to 6 lanes**

Item	Unit	Unit Price	Quantity	Total
Clearing	ha.	\$ 16,000.00		\$ -
Curb Removals	m	\$ 80.00	4,400	\$ 352,000.00
Topsoil Stripping	cu.m.	\$ 3.20	4,400	\$ 14,080.00
Common Excavation	cu.m.	\$ 4.80	6,000	\$ 28,800.00
Borrow Excavation	cu.m.	\$ 16.00		\$ -
Waste Excavation	cu.m.	\$ 12.00		\$ -
Storm Sewer (525mm dia)	m	\$ 400.00		\$ -
Manholes	ea	\$ 4,800.00		\$ -
Catchbasins	ea	\$ 3,600.00	48	\$ 172,800.00
Catchbasin Leads (300 mm dia)	ea	\$ 240.00		\$ -
Subgrade Preparation and Cement Stabilization	sq.m.	\$ 8.00	19,000	\$ 152,000.00
Curb and Gutter	m	\$ 80.00	4,400	\$ 352,000.00
Pavement Structure (200mm ACP over 350mm GBC)	sq.m.	\$ 100.00	16,500	\$ 1,650,000.00
Bike Path (75mm ACP over 150 mm GBC)	sq.m.	\$ 65.00		\$ -
Street Lighting	ea	\$ 4,000.00		\$ -
Traffic Signals	ea	\$ 160,000.00		\$ -
Landscaping	sq.m.	\$ 1.60	20,000	\$ 32,000.00
Pavement Markings and Signage	m	\$ 20.00	2,200	\$ 44,000.00
Pipeline Protection	L.S.			\$ -
Utility Relocates	L.S.			\$ -
At-Grade Railway Crossing	ea.	\$ 400,000.00	0.5	\$ 200,000.00
Overpass/Creek Crossing Structure				\$ -
a)Superstructure	sq.m.	\$ 2,500.00	-	\$ -
b)Substructure	sq.m.	\$ 2,000.00	-	\$ -
c)MSE Wall	sq.m.	\$ 900.00	-	\$ -
Retaining Walls	sq.m.	\$ 900.00	-	\$ -
Subtotal				\$ 2,997,680.00
Property Acquisition	ha.			\$ -
Engineering (10%)				\$ 299,768.00
Contingency (20%)				\$ 599,536.00
Total				\$ 3,896,984.00

RR231 - CN Grade Separation (900 m long by 6 lanes wide)

Item	Unit	Unit Price	Quantity	Total
Clearing	ha.	\$ 16,000.00	-	\$ -
Curb Removals	m	\$ 80.00	3,600	\$ 288,000.00
Pavement Structure Removals	cu.m.	\$ 3.20	13,000	\$ 41,600.00
Common Excavation	cu.m.	\$ 4.80	-	\$ -
Borrow Excavation	cu.m.	\$ 16.00	240,000	\$ 3,840,000.00
Waste Excavation	cu.m.	\$ 12.00	-	\$ -
Storm Sewer (525mm dia)	m	\$ 400.00	-	\$ -
Manholes	ea	\$ 4,800.00	10	\$ 48,000.00
Catchbasins	ea	\$ 3,600.00	40	\$ 144,000.00
Catchbasin Leads (300 mm dia)	ea	\$ 240.00	400	\$ 96,000.00
Subgrade Preparation and Cement Stabilization	sq.m.	\$ 8.00	24,000	\$ 192,000.00
Curb and Gutter	m	\$ 80.00	3,600	\$ 288,000.00
Pavement Structure (200mm ACP over 350mm GBC)	sq.m.	\$ 100.00	22,000	\$ 2,200,000.00
Bike Path (75mm ACP over 150 mm GBC)	sq.m.	\$ 65.00	900	\$ 58,500.00
Street Lighting	ea	\$ 4,000.00	40	\$ 160,000.00
Traffic Signals	ea	\$ 160,000.00	-	\$ -
Landscaping	sq.m.	\$ 1.60	18,000	\$ 28,800.00
Guardrail	m	\$ 80.00	1,600	\$ 128,000.00
Pavement Markings and Signage	m	\$ 20.00	900	\$ 18,000.00
Pipeline Protection	L.S.		-	\$ -
Utility Relocates	L.S.		-	\$ -
At-Grade Railway Crossing	ea.	\$ 400,000.00	-	\$ -
Overpass/Creek Crossing Structure (36m by 36m)				\$ -
a)Superstructure	sq.m.	\$ 2,500.00	1,030	\$ 2,575,000.00
b)Substructure	sq.m.	\$ 2,000.00	1,030	\$ 2,060,000.00
c)MSE Wall	sq.m.	\$ 900.00	720	\$ 648,000.00
Retaining Walls	sq.m.	\$ 900.00	-	\$ -
Subtotal				\$ 12,813,900.00
Property Acquisition	ha.			\$ -
Engineering (10%)				\$ 1,281,390.00
Contingency (20%)				\$ 2,562,780.00
Total				\$ 16,658,070.00

**RR231 - North of Twp Rd 534 (1800 m and 300m local access)
Stage 1 - East Half (2 lanes with bike path)**

Item	Unit	Unit Price	Quantity	Total
Clearing	ha.	\$ 16,000.00	10.3	\$ 164,800.00
Curb Removals	m	\$ 80.00	-	\$ -
Topsoil Stripping	cu.m.	\$ 3.20	50,000	\$ 160,000.00
Common Excavation	cu.m.	\$ 4.80	40,000	\$ 192,000.00
Borrow Excavation	cu.m.	\$ 16.00	50,000	\$ 800,000.00
Waste Excavation	cu.m.	\$ 12.00	10,000	\$ 120,000.00
Storm Sewer (525mm dia)	m	\$ 400.00	2,100	\$ 840,000.00
Manholes	ea	\$ 4,800.00	23	\$ 110,400.00
Catchbasins	ea	\$ 3,600.00	26	\$ 93,600.00
Catchbasin Leads (300 mm dia)	ea	\$ 240.00	350	\$ 84,000.00
Subgrade Preparation and Cement Stabilization	sq.m.	\$ 8.00	18,000	\$ 144,000.00
Curb and Gutter	m	\$ 80.00	2,400	\$ 192,000.00
Pavement Structure (200mm ACP over 350mm GBC)	sq.m.	\$ 100.00	16,500	\$ 1,650,000.00
Bike Path (75mm ACP over 150 mm GBC)	sq.m.	\$ 65.00	5,400	\$ 351,000.00
Street Lighting	ea	\$ 4,000.00	50	\$ 200,000.00
Traffic Signals	ea	\$ 160,000.00	1	\$ 160,000.00
Landscaping	sq.m.	\$ 1.60	80,000	\$ 128,000.00
Pavement Markings and Signage	m	\$ 20.00	2,100	\$ 42,000.00
Pipeline Protection	L.S.		-	\$ -
Utility Relocates	L.S.		-	\$ -
At-Grade Railway Crossing	ea.	\$ 400,000.00	-	\$ -
Creek Crossing Structure (15m by 84m)				
a)Superstructure	sq.m.	\$ 2,500.00	1,275	\$ 3,187,500.00
b)Substructure	sq.m.	\$ 2,000.00	1,275	\$ 2,550,000.00
c)MSE Wall	sq.m.	\$ 900.00	1,070	\$ 963,000.00
Retaining Walls	sq.m.	\$ 900.00	-	\$ -
Subtotal				\$ 12,132,300.00
Property Acquisition	ha.		10.3	\$ -
Engineering (10%)				\$ 1,213,230.00
Contingency (20%)				\$ 2,426,460.00
Total				\$ 15,771,990.00

**RR231 - North of Twp Rd 534 (1800 m)
Stage 2 - West Half (2 lanes)**

Item	Unit	Unit Price	Quantity	Total
Clearing	ha.	\$ 16,000.00	-	\$ -
Curb Removals	m	\$ 80.00	-	\$ -
Topsoil Stripping	cu.m.	\$ 3.20	4,000	\$ 12,800.00
Common Excavation	cu.m.	\$ 4.80	10,000	\$ 48,000.00
Borrow Excavation	cu.m.	\$ 16.00	-	\$ -
Waste Excavation	cu.m.	\$ 12.00	-	\$ -
Storm Sewer (525mm dia)	m	\$ 400.00	-	\$ -
Manholes	ea	\$ 4,800.00	-	\$ -
Catchbasins	ea	\$ 3,600.00	60	\$ 216,000.00
Catchbasin Leads (300 mm dia)	ea	\$ 240.00	300	\$ 72,000.00
Subgrade Preparation and Cement Stabilization	sq.m.	\$ 8.00	17,000	\$ 136,000.00
Curb and Gutter	m	\$ 80.00	5,400	\$ 432,000.00
Pavement Structure (200mm ACP over 350mm GBC)	sq.m.	\$ 100.00	13,500	\$ 1,350,000.00
Bike Path (75mm ACP over 150 mm GBC)	sq.m.	\$ 65.00	-	\$ -
Street Lighting	ea	\$ 4,000.00	42	\$ 168,000.00
Traffic Signals	ea	\$ 160,000.00	-	\$ -
Landscaping	sq.m.	\$ 1.60	25,000	\$ 40,000.00
Pavement Markings and Signage	m	\$ 20.00	1,800	\$ 36,000.00
Pipeline Protection	L.S.		-	\$ -
Utility Relocates	L.S.		-	\$ -
At-Grade Railway Crossing	ea.	\$ 400,000.00	-	\$ -
Creek Crossing Structure (11m by 84m)				
a)Superstructure	sq.m.	\$ 2,500.00	878	\$ 2,195,000.00
b)Substructure	sq.m.	\$ 2,000.00	878	\$ 1,756,000.00
c)MSE Wall	sq.m.	\$ 900.00	1,070	\$ 963,000.00
Retaining Walls	sq.m.	\$ 900.00	-	\$ -
Subtotal				\$ 7,424,800.00
Property Acquisition	ha.		-	\$ -
Engineering (10%)				\$ 742,480.00
Contingency (20%)				\$ 1,484,960.00
Total				\$ 9,652,240.00

**RR231 - North of Twp Rd 534 (1800 m)
Stage 3 - Widen to 6 lanes**

Item	Unit	Unit Price	Quantity	Total
Clearing	ha.	\$ 16,000.00	-	\$ -
Curb Removals	m	\$ 80.00	3,600	\$ 288,000.00
Topsoil Stripping	cu.m.	\$ 3.20	4,000	\$ 12,800.00
Common Excavation	cu.m.	\$ 4.80	5,000	\$ 24,000.00
Borrow Excavation	cu.m.	\$ 16.00	-	\$ -
Waste Excavation	cu.m.	\$ 12.00	-	\$ -
Storm Sewer (525mm dia)	m	\$ 400.00	-	\$ -
Manholes	ea	\$ 4,800.00	-	\$ -
Catchbasins	ea	\$ 3,600.00	40	\$ 144,000.00
Catchbasin Leads (300 mm dia)	ea	\$ 240.00	-	\$ -
Subgrade Preparation and Cement Stabilization	sq.m.	\$ 8.00	15,000	\$ 120,000.00
Curb and Gutter	m	\$ 80.00	3,600	\$ 288,000.00
Pavement Structure (200mm ACP over 350mm GBC)	sq.m.	\$ 100.00	13,500	\$ 1,350,000.00
Bike Path (75mm ACP over 150 mm GBC)	sq.m.	\$ 65.00	-	\$ -
Street Lighting	ea	\$ 4,000.00	-	\$ -
Traffic Signals	ea	\$ 160,000.00	-	\$ -
Landscaping	sq.m.	\$ 1.60	15,000	\$ 24,000.00
Pavement Markings and Signage	m	\$ 20.00	1,800	\$ 36,000.00
Pipeline Protection	L.S.		-	\$ -
Utility Relocates	L.S.		-	\$ -
At-Grade Railway Crossing	ea.	\$ 400,000.00	-	\$ -
Creek Crossing Structure (11m by 84m)				
a)Superstructure	sq.m.	\$ 2,500.00	504	\$ 1,260,000.00
b)Substructure	sq.m.	\$ 2,000.00	504	\$ 1,008,000.00
c)MSE Wall	sq.m.	\$ 900.00	800	\$ 720,000.00
Retaining Walls	sq.m.	\$ 900.00	-	\$ -
Subtotal				\$ 5,274,800.00
Property Acquisition	ha.		-	\$ -
Engineering (10%)				\$ 527,480.00
Contingency (20%)				\$ 1,054,960.00
Total				\$ 6,857,240.00

Twp Rd 534 - RR232 to East of Hwy 21

Stage 1 - South Half (4700 m) with bike path plus RR231 Connection (700 m) and local access

Item	Unit	Unit Price	Quantity	Total
Clearing	ha.	\$ 16,000.00	29.2	\$ 467,200.00
Curb Removals	m	\$ 80.00	-	\$ -
Topsoil Stripping	cu.m.	\$ 3.20	150,000	\$ 480,000.00
Common Excavation	cu.m.	\$ 4.80	120,000	\$ 576,000.00
Borrow Excavation	cu.m.	\$ 16.00	50,000	\$ 800,000.00
Waste Excavation	cu.m.	\$ 12.00	20,000	\$ 240,000.00
Storm Sewer (525mm dia)	m	\$ 400.00	5,700	\$ 2,280,000.00
Manholes	ea	\$ 4,800.00	63	\$ 302,400.00
Catchbasins	ea	\$ 3,600.00	66	\$ 237,600.00
Catchbasin Leads (300 mm dia)	ea	\$ 240.00	930	\$ 223,200.00
Subgrade Preparation and Cement Stabilization	sq.m.	\$ 8.00	58,000	\$ 464,000.00
Curb and Gutter	m	\$ 80.00	6,000	\$ 480,000.00
Pavement Structure (200mm ACP over 350mm GBC)	sq.m.	\$ 100.00	48,000	\$ 4,800,000.00
Bike Path (75mm ACP over 150 mm GBC)	sq.m.	\$ 65.00	16,000	\$ 1,040,000.00
Street Lighting	ea	\$ 4,000.00	130	\$ 520,000.00
Traffic Signals	ea	\$ 160,000.00	2	\$ 320,000.00
Landscaping	sq.m.	\$ 1.60	240,000	\$ 384,000.00
Pavement Markings and Signage	m	\$ 20.00	5,700	\$ 114,000.00
Pipeline Protection	L.S.			\$ 500,000.00
Utility Relocates	L.S.	\$ 1,000,000.00	0.5	\$ 500,000.00
At-Grade Railway Crossing	ea.	\$ 400,000.00	1	\$ 400,000.00
Overpass/Creek Crossing Structure (15m by 44m)				\$ -
a)Superstructure	sq.m.	\$ 2,500.00	662	\$ 1,655,000.00
b)Substructure	sq.m.	\$ 2,000.00	662	\$ 1,324,000.00
c)MSE Wall	sq.m.	\$ 900.00	130	\$ 117,000.00
Retaining Walls	sq.m.	\$ 900.00		\$ -
Subtotal				\$ 18,224,400.00
Property Acquisition	ha.		29.2	\$ -
Engineering (10%)				\$ 1,822,440.00
Contingency (20%)				\$ 3,644,880.00
Total				\$ 23,691,720.00

**Twp Rd 534 - RR232 to East of Hwy 21
Stage 2 - North Half (2 lanes)**

Item	Unit	Unit Price	Quantity	Total
Clearing	ha.	\$ 16,000.00	-	\$ -
Curb Removals	m	\$ 80.00	-	\$ -
Topsoil Stripping	cu.m.	\$ 3.20	10,000	\$ 32,000.00
Common Excavation	cu.m.	\$ 4.80	25,000	\$ 120,000.00
Borrow Excavation	cu.m.	\$ 16.00	-	\$ -
Waste Excavation	cu.m.	\$ 12.00	-	\$ -
Storm Sewer (525mm dia)	m	\$ 400.00	-	\$ -
Manholes	ea	\$ 4,800.00	-	\$ -
Catchbasins	ea	\$ 3,600.00	162	\$ 583,200.00
Catchbasin Leads (300 mm dia)	ea	\$ 240.00	900	\$ 216,000.00
Subgrade Preparation and Cement Stabilization	sq.m.	\$ 8.00	55,000	\$ 440,000.00
Curb and Gutter	m	\$ 80.00	17,000	\$ 1,360,000.00
Pavement Structure (200mm ACP over 350mm GBC)	sq.m.	\$ 100.00	45,000	\$ 4,500,000.00
Bike Path (75mm ACP over 150 mm GBC)	sq.m.	\$ 65.00	-	\$ -
Street Lighting	ea	\$ 4,000.00	125	\$ 500,000.00
Traffic Signals	ea	\$ 160,000.00	3	\$ 480,000.00
Landscaping	sq.m.	\$ 1.60	80,000	\$ 128,000.00
Pavement Markings and Signage	m	\$ 20.00	5,400	\$ 108,000.00
Pipeline Protection	L.S.		-	\$ -
Utility Relocates	L.S.		-	\$ -
At-Grade Railway Crossing	ea.	\$ 400,000.00	1	\$ 400,000.00
Overpass/Creek Crossing Structure (10m by 44m)				
a)Superstructure	sq.m.	\$ 2,500.00	456	\$ 1,140,000.00
b)Substructure	sq.m.	\$ 2,000.00	456	\$ 912,000.00
c)MSE Wall	sq.m.	\$ 900.00	110	\$ 99,000.00
Retaining Walls	sq.m.	\$ 900.00	-	\$ -
Subtotal				\$ 11,018,200.00
Property Acquisition	ha.			\$ -
Engineering (10%)				\$ 1,101,820.00
Contingency (20%)				\$ 2,203,640.00
Total				\$ 14,323,660.00

Twp Rd 534 - RR232 to East of Hwy 21
Stage 3 - Widen to 6 lanes

Item	Unit	Unit Price	Quantity	Total
Clearing	ha.	\$ 16,000.00		\$ -
Curb Removals	m	\$ 80.00	10,800	\$ 864,000.00
Topsoil Stripping	cu.m.	\$ 3.20	10,000	\$ 32,000.00
Common Excavation	cu.m.	\$ 4.80	15,000	\$ 72,000.00
Borrow Excavation	cu.m.	\$ 16.00	-	\$ -
Waste Excavation	cu.m.	\$ 12.00	-	\$ -
Storm Sewer (525mm dia)	m	\$ 400.00	-	\$ -
Manholes	ea	\$ 4,800.00	-	\$ -
Catchbasins	ea	\$ 3,600.00	104	\$ 374,400.00
Catchbasin Leads (300 mm dia)	ea	\$ 240.00	-	\$ -
Subgrade Preparation and Cement Stabilization	sq.m.	\$ 8.00	50,000	\$ 400,000.00
Curb and Gutter	m	\$ 80.00	10,800	\$ 864,000.00
Pavement Structure (200mm ACP over 350mm GBC)	sq.m.	\$ 100.00	40,000	\$ 4,000,000.00
Bike Path (75mm ACP over 150 mm GBC)	sq.m.	\$ 65.00	-	\$ -
Street Lighting	ea	\$ 4,000.00	-	\$ -
Traffic Signals	ea	\$ 160,000.00	-	\$ -
Landscaping	sq.m.	\$ 1.60	50,000	\$ 80,000.00
Pavement Markings and Signage	m	\$ 20.00	5,400	\$ 108,000.00
Pipeline Protection	L.S.		-	\$ -
Utility Relocates	L.S.		-	\$ -
At-Grade Railway Crossing	ea.	\$ 400,000.00	0.5	\$ 200,000.00
Creek Crossing Structure (11m by 44m)				
a)Superstructure	sq.m.	\$ 2,500.00	263	\$ 657,500.00
b)Substructure	sq.m.	\$ 2,000.00	263	\$ 526,000.00
c)MSE Wall	sq.m.	\$ 900.00	90	\$ 81,000.00
Retaining Walls	sq.m.	\$ 900.00	-	\$ -
Subtotal				\$ 8,258,900.00
Property Acquisition	ha.			\$ -
Engineering (10%)				\$ 825,890.00
Contingency (20%)				\$ 1,651,780.00
Total				\$ 10,736,570.00

Twp Rd 534 - CP Grade Separation (900 m long by 6 lanes wide)

Item	Unit	Unit Price	Quantity	Total
Clearing	ha.	\$ 16,000.00	-	\$ -
Curb Removals	m	\$ 80.00	3,600	\$ 288,000.00
Pavement Structure Removals	cu.m.	\$ 3.20	13,000	\$ 41,600.00
Common Excavation	cu.m.	\$ 4.80	-	\$ -
Borrow Excavation	cu.m.	\$ 16.00	240,000	\$ 3,840,000.00
Waste Excavation	cu.m.	\$ 12.00	-	\$ -
Storm Sewer (525mm dia)	m	\$ 400.00	-	\$ -
Manholes	ea	\$ 4,800.00	10	\$ 48,000.00
Catchbasins	ea	\$ 3,600.00	40	\$ 144,000.00
Catchbasin Leads (300 mm dia)	ea	\$ 240.00	400	\$ 96,000.00
Subgrade Preparation and Cement Stabilization	sq.m.	\$ 8.00	24,000	\$ 192,000.00
Curb and Gutter	m	\$ 80.00	3,600	\$ 288,000.00
Pavement Structure (200mm ACP over 350mm GBC)	sq.m.	\$ 100.00	22,000	\$ 2,200,000.00
Bike Path (75mm ACP over 150 mm GBC)	sq.m.	\$ 65.00	900	\$ 58,500.00
Street Lighting	ea	\$ 4,000.00	40	\$ 160,000.00
Traffic Signals	ea	\$ 160,000.00	-	\$ -
Landscaping	sq.m.	\$ 1.60	18,000	\$ 28,800.00
Guardrail	sq.m.	\$ 80.00	1,600	\$ 128,000.00
Pavement Markings and Signage	m	\$ 20.00	900	\$ 18,000.00
Pipeline Protection	L.S.		-	\$ -
Utility Relocates	L.S.		-	\$ -
At-Grade Railway Crossing	ea.	\$ 400,000.00	-	\$ -
Overpass Structure (36m by 38m)	sq.m.			
a)Superstructure	sq.m.	\$ 2,500.00	1,080	\$ 2,700,000.00
b)Substructure	sq.m.	\$ 2,000.00	1,080	\$ 2,160,000.00
c)MSE Wall	sq.m.	\$ 900.00	660	\$ 594,000.00
Retaining Walls	sq.m.	\$ 900.00	-	\$ -
Subtotal				\$ 12,984,900.00
Property Acquisition	ha.			\$ -
Engineering (10%)				\$ 1,298,490.00
Contingency (20%)				\$ 2,596,980.00
Total				\$ 16,880,370.00