

PRELIMINARY OPTION A

OPTION LENGTH =	<u>2.255</u>	Km
BRIDGE LENGTH =	<u>0.509</u>	Km
VIADUCT LENGTH =	<u>0.119</u>	Km
ROAD LENGTH =	<u>1.597</u>	Km
FLYOVER LENGTH =	<u>0</u>	Km
RAIL OVERPASS LENGTH =	<u>0.03</u>	Km

No.	Section	Estimate (including contingency) (\$Millions) (\$2011)
1	Project Development	\$ 3
2	Investigation and Design	\$ 5
3	Property Acquisition	\$ 24
4	Public Utility Adjustments	\$ 1
5	Construction	
5.1	Roadworks	\$ 38
5.2	Bridge over Clarence River	\$ 65
5.3	Floodplain Viaduct	\$ 11
5.4	Rail Overpass	\$ 4
5.5	Flood Mitigation	\$ 1
5.6	Project Management and Insurance	\$ 5
	Sub total	\$ 124
6	Handover	\$ 1
	TOTAL	\$ 158

Note:

Incrementally launched superstructure assumed for bridge over Clarence River

PRELIMINARY OPTION B

OPTION LENGTH =	<u>2.349</u>	Km
BRIDGE LENGTH =	<u>0.545</u>	Km
VIADUCT LENGTH =	<u>0.354</u>	Km
ROAD LENGTH =	<u>1.42</u>	Km
FLYOVER LENGTH =	<u>0</u>	Km
RAIL OVERPASS LENGTH =	<u>0.03</u>	Km

No.	Section	Estimate (including contingency) (\$Millions) (\$2011)
1	Project Development	\$ 3
2	Investigation and Design	\$ 6
3	Property Acquisition	\$ 21
4	Public Utility Adjustments	\$ 1
5	Construction	
5.1	Roadworks	\$ 37
5.2	Bridge over Clarence River	\$ 69
5.3	Floodplain Viaduct	\$ 34
5.4	Rail Overpass	\$ 4
5.5	Flood Mitigation	\$ 1
5.6	Project Management and Insurance	\$ 6
	Sub total	\$ 151
6	Handover	\$ 1
	TOTAL	\$ 184

Note:

Incrementally launched superstructure on refined alignment assumed for bridge over Clarence River

PRELIMINARY OPTION C

OPTION LENGTH =	<u>4.361</u>	Km
BRIDGE LENGTH =	<u>0.4</u>	Km
VIADUCT LENGTH =	<u>0.226</u>	Km
ROAD LENGTH =	<u>3.705</u>	Km
FLYOVER LENGTH =	<u>0</u>	Km
RAIL OVERPASS LENGTH =	<u>0.03</u>	Km

No.	Section	Estimate (including contingency) (\$Millions) (\$2011)
1	Project Development	\$ 4
2	Investigation and Design	\$ 7
3	Property Acquisition	\$ 24
4	Public Utility Adjustments	\$ 2
5	Construction	
5.1	Roadworks	\$ 85
5.2	Bridge over Clarence River	\$ 51
5.3	Floodplain Viaduct	\$ 22
5.4	Rail Overpass	\$ 4
5.5	Flood Mitigation	\$ 1
5.6	Project Management and Insurance	\$ 6
	Sub total	\$ 168
6	Handover	\$ 2
	TOTAL	\$ 206

Note:

Incrementally launched superstructure assumed for bridge over Clarence River

PRELIMINARY OPTION D

OPTION LENGTH =	<u>4.24</u>	Km
BRIDGE LENGTH =	<u>0.4</u>	Km
VIADUCT LENGTH =	<u>0.5</u>	Km
ROAD LENGTH =	<u>3.34</u>	Km
FLYOVER LENGTH =	<u>0</u>	Km
RAIL OVERPASS LENGTH =	<u>0</u>	Km

No.	Section	Estimate (including contingency) (\$Millions) (\$2011)
1	Project Development	\$ 4
2	Investigation and Design	\$ 7
3	Property Acquisition	\$ 38
4	Public Utility Adjustments	\$ 2
5	Construction	
5.1	Roadworks	\$ 80
5.2	Bridge over Clarence River	\$ 51
5.3	Floodplain Viaduct	\$ 48
5.4	Rail Overpass	\$ -
5.5	Flood Mitigation	\$ 1
5.6	Project Management and Insurance	\$ 7
	Sub total	\$ 186
6	Handover	\$ 2
	TOTAL	\$ 239

Note:

Incrementally launched superstructure assumed for bridge over Clarence River

PRELIMINARY OPTION E

OPTION LENGTH =	<u>1.637</u>	Km
BRIDGE LENGTH =	<u>0.624</u>	Km
VIADUCT LENGTH =	<u>0</u>	Km
ROAD LENGTH =	<u>0.983</u>	Km
FLYOVER LENGTH =	<u>0</u>	Km
RAIL OVERPASS LENGTH =	<u>0.03</u>	Km

No.	Section	Estimate (including contingency) (\$Millions) (\$2011)
1	Project Development	\$ 3
2	Investigation and Design	\$ 5
3	Property Acquisition	\$ 1
4	Public Utility Adjustments	\$ 1
5	Construction	
5.1	Roadworks	\$ 28
5.2	Bridge over Clarence River	\$ 79
5.3	Floodplain Viaduct	\$ -
5.4	Rail Overpass	\$ 4
5.5	Flood Mitigation	\$ 1
5.6	Project Management and Insurance	\$ 4
	Sub total	\$ 116
6	Handover	\$ 1
	TOTAL	\$ 127

Note:

Incrementally launched superstructure assumed for bridge over Clarence River

PRELIMINARY OPTION F

OPTION LENGTH =	<u>1.622</u>	Km
BRIDGE LENGTH =	<u>0.727</u>	Km
VIADUCT LENGTH =	<u>0</u>	Km
ROAD LENGTH =	<u>0.865</u>	Km
FLYOVER LENGTH =	<u>0</u>	Km
RAIL OVERPASS LENGTH =	<u>0.03</u>	Km

No.	Section	Estimate (including contingency) (\$Millions) (\$2011)
1	Project Development	\$ 3
2	Investigation and Design	\$ 5
3	Property Acquisition	\$ 0
4	Public Utility Adjustments	\$ 1
5	Construction	
5.1	Roadworks	\$ 25
5.2	Bridge over Clarence River	\$ 92
5.3	Floodplain Viaduct	\$ -
5.4	Rail Overpass	\$ 4
5.5	Flood Mitigation	\$ 1
5.6	Project Management and Insurance	\$ 5
	Sub total	\$ 127
6	Handover	\$ 1
	TOTAL	\$ 138

Note:

Incrementally launched superstructure assumed for bridge over Clarence River

PRELIMINARY OPTION G

OPTION LENGTH =	<u>2.822</u>	Km
BRIDGE LENGTH =	<u>0.48</u>	Km
VIADUCT LENGTH =	<u>0.25</u>	Km
ROAD LENGTH =	<u>2.062</u>	Km
FLYOVER LENGTH =	<u>0</u>	Km
RAIL OVERPASS LENGTH =	<u>0.03</u>	Km

No.	Section	Estimate (including contingency) (\$Millions) (\$2011)
1	Project Development	\$ 3
2	Investigation and Design	\$ 6
3	Property Acquisition	\$ 19
4	Public Utility Adjustments	\$ 1
5	Construction	
5.1	Roadworks	\$ 52
5.2	Bridge over Clarence River	\$ 61
5.3	Floodplain Viaduct	\$ 24
5.4	Rail Overpass	\$ 4
5.5	Flood Mitigation	\$ 1
5.6	Project Management and Insurance	\$ 5
	Sub total	\$ 147
6	Handover	\$ 1
	TOTAL	\$ 178

Note:

Incrementally launched superstructure on refined alignment assumed for bridge over Clarence River

PRELIMINARY OPTION H

OPTION LENGTH =	<u>3.334</u>	Km
BRIDGE LENGTH =	<u>0.415</u>	Km
VIADUCT LENGTH =	<u>0.43</u>	Km
ROAD LENGTH =	<u>2.459</u>	Km
FLYOVER LENGTH =	<u>0</u>	Km
RAIL OVERPASS LENGTH =	<u>0.03</u>	Km

No.	Section	Estimate (including contingency) (\$Millions) (\$2011)
1	Project Development	\$ 3
2	Investigation and Design	\$ 6
3	Property Acquisition	\$ 12
4	Public Utility Adjustments	\$ 2
5	Construction	
5.1	Roadworks	\$ 56
5.2	Bridge over Clarence River	\$ 53
5.3	Floodplain Viaduct	\$ 41
5.4	Rail Overpass	\$ 4
5.5	Flood Mitigation	\$ 1
5.6	Project Management and Insurance	\$ 6
	Sub total	\$ 160
6	Handover	\$ 2
	TOTAL	\$ 185

Note:

Incrementally launched superstructure assumed for bridge over Clarence River

PRELIMINARY OPTION I

OPTION LENGTH =	<u>2.002</u>	Km
BRIDGE LENGTH =	<u>0.412</u>	Km
VIADUCT LENGTH =	<u>0.613</u>	Km
ROAD LENGTH =	<u>0.977</u>	Km
FLYOVER LENGTH =	<u>0</u>	Km
RAIL OVERPASS LENGTH =	<u>0</u>	Km

No.	Section	Estimate (including contingency) (\$Millions) (\$2011)
1	Project Development	\$ 3
2	Investigation and Design	\$ 6
3	Property Acquisition	\$ 36
4	Public Utility Adjustments	\$ 1
5	Construction	
5.1	Roadworks	\$ 32
5.2	Bridge over Clarence River	\$ 52
5.3	Floodplain Viaduct	\$ 58
5.4	Rail Overpass	\$ -
5.5	Flood Mitigation	\$ 1
5.6	Project Management and Insurance	\$ 6
	Sub total	\$ 150
6	Handover	\$ 1
	TOTAL	\$ 197

Note:

Incrementally launched superstructure assumed for bridge over Clarence River

PRELIMINARY OPTION J

OPTION LENGTH =	<u>3.622</u>	Km
BRIDGE LENGTH =	<u>0.405</u>	Km
VIADUCT LENGTH =	<u>0.59</u>	Km
ROAD LENGTH =	<u>2.627</u>	Km
FLYOVER LENGTH =	<u>0</u>	Km
RAIL OVERPASS LENGTH =	<u>0</u>	Km

No.	Section	Estimate (including contingency) (\$Millions) (\$2011)
1	Project Development	\$ 4
2	Investigation and Design	\$ 7
3	Property Acquisition	\$ 1
4	Public Utility Adjustments	\$ 2
5	Construction	
5.1	Roadworks	\$ 69
5.2	Bridge over Clarence River	\$ 51
5.3	Floodplain Viaduct	\$ 56
5.4	Rail Overpass	\$ -
5.5	Flood Mitigation	\$ 1
5.6	Project Management and Insurance	\$ 7
	Sub total	\$ 185
6	Handover	\$ 2
	TOTAL	\$ 201

Note:

Incrementally launched superstructure assumed for bridge over Clarence River

PRELIMINARY OPTION K

OPTION LENGTH =	<u>4.215</u>	Km
BRIDGE LENGTH =	<u>0.45</u>	Km
VIADUCT LENGTH =	<u>0.805</u>	Km
ROAD LENGTH =	<u>2.96</u>	Km
FLYOVER LENGTH =	<u>0</u>	Km
RAIL OVERPASS LENGTH =	<u>0</u>	Km

No.	Section	Estimate (including contingency) (\$Millions) (\$2011)
1	Project Development	\$ 5
2	Investigation and Design	\$ 9
3	Property Acquisition	\$ 1
4	Public Utility Adjustments	\$ 2
5	Construction	
5.1	Roadworks	\$ 92
5.2	Bridge over Clarence River	\$ 57
5.3	Floodplain Viaduct	\$ 77
5.4	Rail Overpass	\$ -
5.5	Flood Mitigation	\$ 1
5.6	Project Management and Insurance	\$ 9
	Sub total	\$ 236
6	Handover	\$ 2
	TOTAL	\$ 256

Note:

Incrementally launched superstructure assumed for bridge over Clarence River

PRELIMINARY OPTION L

OPTION LENGTH =	4.008	Km
BRIDGE LENGTH =	0.62	Km
VIADUCT LENGTH =	1.09	Km
ROAD LENGTH =	2.298	Km
FLYOVER LENGTH =	0	Km
RAIL OVERPASS LENGTH =	0	Km

No.	Section	Estimate (including contingency) (\$Millions) (\$2011)
1	Project Development	\$ 6
2	Investigation and Design	\$ 10
3	Property Acquisition	\$ 1
4	Public Utility Adjustments	\$ 3
5	Construction	
5.1	Roadworks	\$ 64
5.2	Bridge over Clarence River	\$ 79
5.3	Floodplain Viaduct	\$ 104
5.4	Rail Overpass	\$ -
5.5	Flood Mitigation	\$ 1
5.6	Project Management and Insurance	\$ 10
	Sub total	\$ 257
6	Handover	\$ 3
	TOTAL	\$ 279

Note:

Incrementally launched superstructure assumed for bridge over Clarence River

PRELIMINARY OPTION M

OPTION LENGTH =	<u>5.666</u>	Km
BRIDGE LENGTH =	<u>0.867</u>	Km
VIADUCT LENGTH =	<u>1.313</u>	Km
ROAD LENGTH =	<u>3.486</u>	Km
FLYOVER LENGTH =	<u>0</u>	Km
RAIL OVERPASS LENGTH =	<u>0</u>	Km

No.	Section	Estimate (including contingency) (\$Millions) (\$2011)
1	Project Development	\$ 8
2	Investigation and Design	\$ 14
3	Property Acquisition	\$ 3
4	Public Utility Adjustments	\$ 3
5	Construction	
5.1	Roadworks	\$ 98
5.2	Bridge over Clarence River	\$ 110
5.3	Floodplain Viaduct	\$ 125
5.4	Rail Overpass	\$ -
5.5	Flood Mitigation	\$ 1
5.6	Project Management and Insurance	\$ 13
	Sub total	\$ 346
6	Handover	\$ 3
	TOTAL	\$ 378

Note:

Incrementally launched superstructure on refined alignment assumed for bridge over Clarence River

COMMUNITY SUGGESTION 1

OPTION LENGTH =	<u>2.54</u>	Km
BRIDGE LENGTH =	<u>1.053</u>	Km
VIADUCT LENGTH =	<u>0.807</u>	Km
ROAD LENGTH =	<u>0.65</u>	Km
FLYOVER LENGTH =	<u>0</u>	Km
RAIL OVERPASS LENGTH =	<u>0.03</u>	Km

No.	Section	Estimate (including contingency) (\$Millions) (\$2011)
1	Project Development	\$ 6
2	Investigation and Design	\$ 10
3	Property Acquisition	\$ 3
4	Public Utility Adjustments	\$ 3
5	Construction	
5.1	Roadworks	\$ 33
5.2	Bridge over Clarence River	\$ 134
5.3	Floodplain Viaduct	\$ 77
5.4	Rail Overpass	\$ 4
5.5	Flood Mitigation	\$ 1
5.6	Project Management and Insurance	\$ 10
	Sub total	\$ 258
6	Handover	\$ 3
	TOTAL	\$ 283

Note:

Incrementally launched superstructure assumed for bridge over Clarence River

COMMUNITY SUGGESTION 2

OPTION LENGTH =	<u>3.371</u>	Km
BRIDGE LENGTH =	<u>1.827</u>	Km
VIADUCT LENGTH =	<u>0.444</u>	Km
ROAD LENGTH =	<u>1.07</u>	Km
FLYOVER LENGTH =	<u>0</u>	Km
RAIL OVERPASS LENGTH =	<u>0.03</u>	Km

No.	Section	Estimate (including contingency) (\$Millions) (\$2011)
1	Project Development	\$ 10
2	Investigation and Design	\$ 18
3	Property Acquisition	\$ 12
4	Public Utility Adjustments	\$ 5
5	Construction	
5.1	Roadworks	\$ 48
5.2	Bridge over Clarence River	\$ 348
5.3	Floodplain Viaduct	\$ 42
5.4	Rail Overpass	\$ 4
5.5	Flood Mitigation	\$ 1
5.6	Project Management and Insurance	\$ 17
	Sub total	\$ 460
6	Handover	\$ 5
	TOTAL	\$ 509

Note:

Bridge alignment not suitable for incrementally launched superstructure

COMMUNITY SUGGESTION 3

OPTION LENGTH =	<u>1.68</u>	Km
BRIDGE LENGTH =	<u>0.77</u>	Km
VIADUCT LENGTH =	<u>0</u>	Km
ROAD LENGTH =	<u>0.88</u>	Km
FLYOVER LENGTH =	<u>0</u>	Km
RAIL OVERPASS LENGTH =	<u>0.03</u>	Km

No.	Section	Estimate (including contingency) (\$Millions) (\$2011)
1	Project Development	\$ 4
2	Investigation and Design	\$ 7
3	Property Acquisition	\$ 5
4	Public Utility Adjustments	\$ 2
5	Construction	
5.1	Roadworks	\$ 30
5.2	Bridge over Clarence River	\$ 147
5.3	Floodplain Viaduct	\$ -
5.4	Rail Overpass	\$ 4
5.5	Flood Mitigation	\$ 1
5.6	Project Management and Insurance	\$ 7
	Sub total	\$ 188
6	Handover	\$ 2
	TOTAL	\$ 208

Note:

Bridge alignment not suitable for incrementally launched superstructure

COMMUNITY SUGGESTION 4

OPTION LENGTH =	<u>2.087</u>	Km
BRIDGE LENGTH =	<u>1.044</u>	Km
VIADUCT LENGTH =	<u>0</u>	Km
ROAD LENGTH =	<u>1.013</u>	Km
FLYOVER LENGTH =	<u>0</u>	Km
RAIL OVERPASS LENGTH =	<u>0.03</u>	Km

No.	Section	Estimate (including contingency) (\$Millions) (\$2011)
1	Project Development	\$ 5
2	Investigation and Design	\$ 10
3	Property Acquisition	\$ 2
4	Public Utility Adjustments	\$ 2
5	Construction	
5.1	Roadworks	\$ 36
5.2	Bridge over Clarence River	\$ 199
5.3	Floodplain Viaduct	\$ -
5.4	Rail Overpass	\$ 4
5.5	Flood Mitigation	\$ 1
5.6	Project Management and Insurance	\$ 9
	Sub total	\$ 249
6	Handover	\$ 2
	TOTAL	\$ 271

Note:

Bridge alignment not suitable for incrementally launched superstructure

COMMUNITY SUGGESTION 5

OPTION LENGTH =	<u>3.187</u>	Km
BRIDGE LENGTH =	<u>0.537</u>	Km
VIADUCT LENGTH =	<u>0.1</u>	Km
ROAD LENGTH =	<u>2.52</u>	Km
FLYOVER LENGTH =	<u>0</u>	Km
RAIL OVERPASS LENGTH =	<u>0.03</u>	Km

No.	Section	Estimate (including contingency) (\$Millions) (\$2011)
1	Project Development	\$ 3
2	Investigation and Design	\$ 6
3	Property Acquisition	\$ 18
4	Public Utility Adjustments	\$ 2
5	Construction	
5.1	Roadworks	\$ 64
5.2	Bridge over Clarence River	\$ 68
5.3	Floodplain Viaduct	\$ 10
5.4	Rail Overpass	\$ 4
5.5	Flood Mitigation	\$ 1
5.6	Project Management and Insurance	\$ 6
	Sub total	\$ 152
6	Handover	\$ 2
	TOTAL	\$ 183

Note:

Incrementally launched superstructure on refined alignment assumed for bridge over Clarence River

COMMUNITY SUGGESTION 6

OPTION LENGTH =	<u>2.695</u>	Km
BRIDGE LENGTH =	<u>0.406</u>	Km
VIADUCT LENGTH =	<u>0.136</u>	Km
ROAD LENGTH =	<u>2.083</u>	Km
FLYOVER LENGTH =	<u>0</u>	Km
RAIL OVERPASS LENGTH =	<u>0.07</u>	Km

No.	Section	Estimate (including contingency) (\$Millions) (\$2011)
1	Project Development	\$ 3
2	Investigation and Design	\$ 5
3	Property Acquisition	\$ 36
4	Public Utility Adjustments	\$ 1
5	Construction	
5.1	Roadworks	\$ 51
5.2	Bridge over Clarence River	\$ 52
5.3	Floodplain Viaduct	\$ 13
5.4	Rail Overpass	\$ 9
5.5	Flood Mitigation	\$ 1
5.6	Project Management and Insurance	\$ 5
	Sub total	\$ 130
6	Handover	\$ 1
	TOTAL	\$ 177

Note:

Incrementally launched superstructure on refined alignment assumed for bridge over Clarence River

COMMUNITY SUGGESTION 7

OPTION LENGTH =	<u>2.675</u>	Km
BRIDGE LENGTH =	<u>0.638</u>	Km
VIADUCT LENGTH =	<u>0.478</u>	Km
ROAD LENGTH =	<u>1.529</u>	Km
FLYOVER LENGTH =	<u>0</u>	Km
RAIL OVERPASS LENGTH =	<u>0.03</u>	Km

No.	Section	Estimate (including contingency) (\$Millions) (\$2011)
1	Project Development	\$ 4
2	Investigation and Design	\$ 7
3	Property Acquisition	\$ 20
4	Public Utility Adjustments	\$ 2
5	Construction	
5.1	Roadworks	\$ 46
5.2	Bridge over Clarence River	\$ 81
5.3	Floodplain Viaduct	\$ 45
5.4	Rail Overpass	\$ 4
5.5	Flood Mitigation	\$ 1
5.6	Project Management and Insurance	\$ 7
	Sub total	\$ 184
6	Handover	\$ 2
	TOTAL	\$ 219

Note:

Incrementally launched superstructure on refined alignment assumed for bridge over Clarence River

COMMUNITY SUGGESTION 8

OPTION LENGTH =	<u>2.649</u>	Km
BRIDGE LENGTH =	<u>0.563</u>	Km
VIADUCT LENGTH =	<u>0.119</u>	Km
ROAD LENGTH =	<u>1.837</u>	Km
FLYOVER LENGTH =	<u>0</u>	Km
RAIL OVERPASS LENGTH =	<u>0.13</u>	Km

No.	Section	Estimate (including contingency) (\$Millions) (\$2011)
1	Project Development	\$ 3
2	Investigation and Design	\$ 6
3	Property Acquisition	\$ 4
4	Public Utility Adjustments	\$ 2
5	Construction	
5.1	Roadworks	\$ 51
5.2	Bridge over Clarence River	\$ 71
5.3	Floodplain Viaduct	\$ 11
5.4	Rail Overpass	\$ 17
5.5	Flood Mitigation	\$ 1
5.6	Project Management and Insurance	\$ 6
	Sub total	\$ 157
6	Handover	\$ 2
	TOTAL	\$ 174

Note:

Incrementally launched superstructure on refined alignment assumed for bridge over Clarence River

COMMUNITY SUGGESTION 9

OPTION LENGTH =	<u>4.619</u>	Km
BRIDGE LENGTH =	<u>0.506</u>	Km
VIADUCT LENGTH =	<u>0.723</u>	Km
ROAD LENGTH =	<u>3.36</u>	Km
FLYOVER LENGTH =	<u>0</u>	Km
RAIL OVERPASS LENGTH =	<u>0.03</u>	Km

No.	Section	Estimate (including contingency) (\$Millions) (\$2011)
1	Project Development	\$ 5
2	Investigation and Design	\$ 9
3	Property Acquisition	\$ 4
4	Public Utility Adjustments	\$ 2
5	Construction	
5.1	Roadworks	\$ 80
5.2	Bridge over Clarence River	\$ 64
5.3	Floodplain Viaduct	\$ 69
5.4	Rail Overpass	\$ 4
5.5	Flood Mitigation	\$ 1
5.6	Project Management and Insurance	\$ 8
	Sub total	\$ 226
6	Handover	\$ 2
	TOTAL	\$ 249

Note:

Incrementally launched superstructure on refined alignment assumed for bridge over Clarence River

COMMUNITY SUGGESTION 10

OPTION LENGTH =	<u>4.362</u>	Km
BRIDGE LENGTH =	<u>0.414</u>	Km
VIADUCT LENGTH =	<u>0.897</u>	Km
ROAD LENGTH =	<u>3.051</u>	Km
FLYOVER LENGTH =	<u>0</u>	Km
RAIL OVERPASS LENGTH =	<u>0</u>	Km

No.	Section	Estimate (including contingency) (\$Millions) (\$2011)
1	Project Development	\$ 5
2	Investigation and Design	\$ 9
3	Property Acquisition	\$ 2
4	Public Utility Adjustments	\$ 2
5	Construction	
5.1	Roadworks	\$ 78
5.2	Bridge over Clarence River	\$ 53
5.3	Floodplain Viaduct	\$ 85
5.4	Rail Overpass	\$ -
5.5	Flood Mitigation	\$ 1
5.6	Project Management and Insurance	\$ 8
	Sub total	\$ 225
6	Handover	\$ 2
	TOTAL	\$ 246

Note:

Incrementally launched superstructure assumed for bridge over Clarence River

COMMUNITY SUGGESTION 11

OPTION LENGTH =	<u>4.172</u>	Km
BRIDGE LENGTH =	<u>0.378</u>	Km
VIADUCT LENGTH =	<u>0.774</u>	Km
ROAD LENGTH =	<u>3.02</u>	Km
FLYOVER LENGTH =	<u>0</u>	Km
RAIL OVERPASS LENGTH =	<u>0</u>	Km

No.	Section	Estimate (including contingency) (\$Millions) (\$2011)
1	Project Development	\$ 5
2	Investigation and Design	\$ 8
3	Property Acquisition	\$ 1
4	Public Utility Adjustments	\$ 2
5	Construction	
5.1	Roadworks	\$ 77
5.2	Bridge over Clarence River	\$ 48
5.3	Floodplain Viaduct	\$ 74
5.4	Rail Overpass	\$ -
5.5	Flood Mitigation	\$ 1
5.6	Project Management and Insurance	\$ 8
	Sub total	\$ 207
6	Handover	\$ 2
	TOTAL	\$ 226

Note:

Incrementally launched superstructure assumed for bridge over Clarence River

COMMUNITY SUGGESTION 12

OPTION LENGTH =	<u>5.56</u>	Km
BRIDGE LENGTH =	<u>0.446</u>	Km
VIADUCT LENGTH =	<u>1.514</u>	Km
ROAD LENGTH =	<u>3.6</u>	Km
FLYOVER LENGTH =	<u>0</u>	Km
RAIL OVERPASS LENGTH =	<u>0</u>	Km

No.	Section	Estimate (including contingency) (\$Millions) (\$2011)
1	Project Development	\$ 7
2	Investigation and Design	\$ 13
3	Property Acquisition	\$ 1
4	Public Utility Adjustments	\$ 3
5	Construction	
5.1	Roadworks	\$ 109
5.2	Bridge over Clarence River	\$ 57
5.3	Floodplain Viaduct	\$ 144
5.4	Rail Overpass	\$ -
5.5	Flood Mitigation	\$ 1
5.6	Project Management and Insurance	\$ 12
	Sub total	\$ 323
6	Handover	\$ 3
	TOTAL	\$ 351

Note:

Incrementally launched superstructure assumed for bridge over Clarence River

COMMUNITY SUGGESTION 13

OPTION LENGTH =	<u>6.443</u>	Km
BRIDGE LENGTH =	<u>1.201</u>	Km
VIADUCT LENGTH =	<u>1.52</u>	Km
ROAD LENGTH =	<u>3.722</u>	Km
FLYOVER LENGTH =	<u>0</u>	Km
RAIL OVERPASS LENGTH =	<u>0</u>	Km

No.	Section	Estimate (including contingency) (\$Millions) (\$2011)
1	Project Development	\$ 9
2	Investigation and Design	\$ 16
3	Property Acquisition	\$ 3
4	Public Utility Adjustments	\$ 4
5	Construction	
5.1	Roadworks	\$ 98
5.2	Bridge over Clarence River	\$ 152
5.3	Floodplain Viaduct	\$ 145
5.4	Rail Overpass	\$ -
5.5	Flood Mitigation	\$ 1
5.6	Project Management and Insurance	\$ 15
	Sub total	\$ 411
6	Handover	\$ 4
	TOTAL	\$ 448

Note:

Incrementally launched superstructure on refined alignment assumed for bridge over Clarence River

COMMUNITY SUGGESTION 14

OPTION LENGTH =	<u>5.835</u>	Km
BRIDGE LENGTH =	<u>0.871</u>	Km
VIADUCT LENGTH =	<u>1.262</u>	Km
ROAD LENGTH =	<u>3.702</u>	Km
FLYOVER LENGTH =	<u>0</u>	Km
RAIL OVERPASS LENGTH =	<u>0</u>	Km

No.	Section	Estimate (including contingency) (\$Millions) (\$2011)
1	Project Development	\$ 8
2	Investigation and Design	\$ 14
3	Property Acquisition	\$ 1
4	Public Utility Adjustments	\$ 3
5	Construction	
5.1	Roadworks	\$ 100
5.2	Bridge over Clarence River	\$ 111
5.3	Floodplain Viaduct	\$ 120
5.4	Rail Overpass	\$ -
5.5	Flood Mitigation	\$ 1
5.6	Project Management and Insurance	\$ 13
	Sub total	\$ 344
6	Handover	\$ 3
	TOTAL	\$ 373

Note:

Incrementally launched superstructure on refined alignment assumed for bridge over Clarence River

COMMUNITY SUGGESTION 15

OPTION LENGTH =	<u>6.944</u>	Km
BRIDGE LENGTH =	<u>0.732</u>	Km
VIADUCT LENGTH =	<u>1.25</u>	Km
ROAD LENGTH =	<u>4.962</u>	Km
FLYOVER LENGTH =	<u>0</u>	Km
RAIL OVERPASS LENGTH =	<u>0</u>	Km

No.	Section	Estimate (including contingency) (\$Millions) (\$2011)
1	Project Development	\$ 7
2	Investigation and Design	\$ 13
3	Property Acquisition	\$ 3
4	Public Utility Adjustments	\$ 3
5	Construction	
5.1	Roadworks	\$ 112
5.2	Bridge over Clarence River	\$ 93
5.3	Floodplain Viaduct	\$ 119
5.4	Rail Overpass	\$ -
5.5	Flood Mitigation	\$ 1
5.6	Project Management and Insurance	\$ 13
	Sub total	\$ 337
6	Handover	\$ 3
	TOTAL	\$ 368

Note:

Incrementally launched superstructure assumed for bridge over Clarence River

COMMUNITY SUGGESTION 16

OPTION LENGTH =	<u>7.105</u>	Km
BRIDGE LENGTH =	<u>1.1</u>	Km
VIADUCT LENGTH =	<u>1.28</u>	Km
ROAD LENGTH =	<u>4.725</u>	Km
FLYOVER LENGTH =	<u>0</u>	Km
RAIL OVERPASS LENGTH =	<u>0</u>	Km

No.	Section	Estimate (including contingency) (\$Millions) (\$2011)
1	Project Development	\$ 8
2	Investigation and Design	\$ 15
3	Property Acquisition	\$ 4
4	Public Utility Adjustments	\$ 4
5	Construction	
5.1	Roadworks	\$ 113
5.2	Bridge over Clarence River	\$ 140
5.3	Floodplain Viaduct	\$ 122
5.4	Rail Overpass	\$ -
5.5	Flood Mitigation	\$ 1
5.6	Project Management and Insurance	\$ 14
	Sub total	\$ 389
6	Handover	\$ 4
	TOTAL	\$ 425

Note:

Incrementally launched superstructure on refined alignment assumed for bridge over Clarence River

COMMUNITY SUGGESTION 17

OPTION LENGTH =	<u>6.057</u>	Km
BRIDGE LENGTH =	<u>0.908</u>	Km
VIADUCT LENGTH =	<u>1.485</u>	Km
ROAD LENGTH =	<u>3.664</u>	Km
FLYOVER LENGTH =	<u>0</u>	Km
RAIL OVERPASS LENGTH =	<u>0</u>	Km

No.	Section	Estimate (including contingency) (\$Millions) (\$2011)
1	Project Development	\$ 8
2	Investigation and Design	\$ 15
3	Property Acquisition	\$ 3
4	Public Utility Adjustments	\$ 4
5	Construction	
5.1	Roadworks	\$ 94
5.2	Bridge over Clarence River	\$ 115
5.3	Floodplain Viaduct	\$ 141
5.4	Rail Overpass	\$ -
5.5	Flood Mitigation	\$ 1
5.6	Project Management and Insurance	\$ 14
	Sub total	\$ 365
6	Handover	\$ 4
	TOTAL	\$ 397

Note:

Incrementally launched superstructure on refined alignment assumed for bridge over Clarence River

COMMUNITY SUGGESTION 18

OPTION LENGTH =	5.805	Km
BRIDGE LENGTH =	0.936	Km
VIADUCT LENGTH =	1.331	Km
ROAD LENGTH =	3.538	Km
FLYOVER LENGTH =	0	Km
RAIL OVERPASS LENGTH =	0	Km

No.	Section	Estimate (including contingency) (\$Millions) (\$2011)
1	Project Development	\$ 8
2	Investigation and Design	\$ 14
3	Property Acquisition	\$ 5
4	Public Utility Adjustments	\$ 4
5	Construction	
5.1	Roadworks	\$ 99
5.2	Bridge over Clarence River	\$ 119
5.3	Floodplain Viaduct	\$ 127
5.4	Rail Overpass	\$ -
5.5	Flood Mitigation	\$ 1
5.6	Project Management and Insurance	\$ 13
	Sub total	\$ 358
6	Handover	\$ 4
	TOTAL	\$ 392

Note:

Incrementally launched superstructure on refined alignment assumed for bridge over Clarence River

COMMUNITY SUGGESTION 19

OPTION LENGTH =	<u>6.925</u>	Km
BRIDGE LENGTH =	<u>0.99</u>	Km
VIADUCT LENGTH =	<u>1.26</u>	Km
ROAD LENGTH =	<u>4.675</u>	Km
FLYOVER LENGTH =	<u>0</u>	Km
RAIL OVERPASS LENGTH =	<u>0</u>	Km

No.	Section	Estimate (including contingency) (\$Millions) (\$2011)
1	Project Development	\$ 8
2	Investigation and Design	\$ 15
3	Property Acquisition	\$ 10
4	Public Utility Adjustments	\$ 4
5	Construction	
5.1	Roadworks	\$ 110
5.2	Bridge over Clarence River	\$ 126
5.3	Floodplain Viaduct	\$ 120
5.4	Rail Overpass	\$ -
5.5	Flood Mitigation	\$ 1
5.6	Project Management and Insurance	\$ 14
	Sub total	\$ 371
6	Handover	\$ 4
	TOTAL	\$ 411

Note:

Incrementally launched superstructure on refined alignment assumed for bridge over Clarence River

COMMUNITY SUGGESTION 20

OPTION LENGTH =	<u>6.729</u>	Km
BRIDGE LENGTH =	<u>0.988</u>	Km
VIADUCT LENGTH =	<u>1.423</u>	Km
ROAD LENGTH =	<u>4.318</u>	Km
FLYOVER LENGTH =	<u>0</u>	Km
RAIL OVERPASS LENGTH =	<u>0</u>	Km

No.	Section	Estimate (including contingency) (\$Millions) (\$2011)
1	Project Development	\$ 9
2	Investigation and Design	\$ 16
3	Property Acquisition	\$ 2
4	Public Utility Adjustments	\$ 4
5	Construction	
5.1	Roadworks	\$ 115
5.2	Bridge over Clarence River	\$ 125
5.3	Floodplain Viaduct	\$ 135
5.4	Rail Overpass	\$ -
5.5	Flood Mitigation	\$ 1
5.6	Project Management and Insurance	\$ 15
	Sub total	\$ 392
6	Handover	\$ 4
	TOTAL	\$ 426

Note:

Incrementally launched superstructure assumed for bridge over Clarence River

COMMUNITY SUGGESTION 21

OPTION LENGTH =	<u>7.115</u>	Km
BRIDGE LENGTH =	<u>1.103</u>	Km
VIADUCT LENGTH =	<u>1.71</u>	Km
ROAD LENGTH =	<u>4.302</u>	Km
FLYOVER LENGTH =	<u>0</u>	Km
RAIL OVERPASS LENGTH =	<u>0</u>	Km

No.	Section	Estimate (including contingency) (\$Millions) (\$2011)
1	Project Development	\$ 10
2	Investigation and Design	\$ 17
3	Property Acquisition	\$ 2
4	Public Utility Adjustments	\$ 4
5	Construction	
5.1	Roadworks	\$ 117
5.2	Bridge over Clarence River	\$ 140
5.3	Floodplain Viaduct	\$ 163
5.4	Rail Overpass	\$ -
5.5	Flood Mitigation	\$ 1
5.6	Project Management and Insurance	\$ 16
	Sub total	\$ 437
6	Handover	\$ 4
	TOTAL	\$ 475

Note:

Incrementally launched superstructure on refined alignment assumed for bridge over Clarence River

COMMUNITY SUGGESTION 22

OPTION LENGTH =	6.913	Km
BRIDGE LENGTH =	1.04	Km
VIADUCT LENGTH =	1.615	Km
ROAD LENGTH =	4.258	Km
FLYOVER LENGTH =	0	Km
RAIL OVERPASS LENGTH =	0	Km

No.	Section	Estimate (including contingency) (\$Millions) (\$2011)
1	Project Development	\$ 9
2	Investigation and Design	\$ 16
3	Property Acquisition	\$ 6
4	Public Utility Adjustments	\$ 4
5	Construction	
5.1	Roadworks	\$ 105
5.2	Bridge over Clarence River	\$ 132
5.3	Floodplain Viaduct	\$ 154
5.4	Rail Overpass	\$ -
5.5	Flood Mitigation	\$ 1
5.6	Project Management and Insurance	\$ 15
	Sub total	\$ 407
6	Handover	\$ 4
	TOTAL	\$ 446

Note:

Incrementally launched superstructure assumed for bridge over Clarence River

COMMUNITY SUGGESTION 23

OPTION LENGTH =	6.138	Km
BRIDGE LENGTH =	0.75	Km
VIADUCT LENGTH =	1.845	Km
ROAD LENGTH =	3.543	Km
FLYOVER LENGTH =	0	Km
RAIL OVERPASS LENGTH =	0	Km

No.	Section	Estimate (including contingency) (\$Millions) (\$2011)
1	Project Development	\$ 8
2	Investigation and Design	\$ 15
3	Property Acquisition	\$ 6
4	Public Utility Adjustments	\$ 4
5	Construction	
5.1	Roadworks	\$ 94
5.2	Bridge over Clarence River	\$ 95
5.3	Floodplain Viaduct	\$ 176
5.4	Rail Overpass	\$ -
5.5	Flood Mitigation	\$ 1
5.6	Project Management and Insurance	\$ 14
	Sub total	\$ 379
6	Handover	\$ 4
	TOTAL	\$ 417

Note:

Incrementally launched superstructure on refined alignment assumed for bridge over Clarence River

COMMUNITY SUGGESTION 24

OPTION LENGTH =	<u>6.887</u>	Km
BRIDGE LENGTH =	<u>0.829</u>	Km
VIADUCT LENGTH =	<u>2.5</u>	Km
ROAD LENGTH =	<u>3.558</u>	Km
FLYOVER LENGTH =	<u>0</u>	Km
RAIL OVERPASS LENGTH =	<u>0</u>	Km

No.	Section	Estimate (including contingency) (\$Millions) (\$2011)
1	Project Development	\$ 10
2	Investigation and Design	\$ 18
3	Property Acquisition	\$ 4
4	Public Utility Adjustments	\$ 5
5	Construction	
5.1	Roadworks	\$ 100
5.2	Bridge over Clarence River	\$ 105
5.3	Floodplain Viaduct	\$ 238
5.4	Rail Overpass	\$ -
5.5	Flood Mitigation	\$ 1
5.6	Project Management and Insurance	\$ 17
	Sub total	\$ 461
6	Handover	\$ 5
	TOTAL	\$ 503

Note:

Incrementally launched superstructure on refined alignment assumed for bridge over Clarence River

COMMUNITY SUGGESTION 25

OPTION LENGTH =	<u>6.402</u>	Km
BRIDGE LENGTH =	<u>0.722</u>	Km
VIADUCT LENGTH =	<u>2.089</u>	Km
ROAD LENGTH =	<u>3.591</u>	Km
FLYOVER LENGTH =	<u>0</u>	Km
RAIL OVERPASS LENGTH =	<u>0</u>	Km

No.	Section	Estimate (including contingency) (\$Millions) (\$2011)
1	Project Development	\$ 9
2	Investigation and Design	\$ 16
3	Property Acquisition	\$ 4
4	Public Utility Adjustments	\$ 4
5	Construction	
5.1	Roadworks	\$ 96
5.2	Bridge over Clarence River	\$ 92
5.3	Floodplain Viaduct	\$ 199
5.4	Rail Overpass	\$ -
5.5	Flood Mitigation	\$ 1
5.6	Project Management and Insurance	\$ 15
	Sub total	\$ 403
6	Handover	\$ 4
	TOTAL	\$ 439

Note:

Incrementally launched superstructure assumed for bridge over Clarence River

COMMUNITY SUGGESTION 26

OPTION LENGTH =	<u>6.842</u>	Km
BRIDGE LENGTH =	<u>0.591</u>	Km
VIADUCT LENGTH =	<u>2.186</u>	Km
ROAD LENGTH =	<u>4.065</u>	Km
FLYOVER LENGTH =	<u>0</u>	Km
RAIL OVERPASS LENGTH =	<u>0</u>	Km

No.	Section	Estimate (including contingency) (\$Millions) (\$2011)
1	Project Development	\$ 9
2	Investigation and Design	\$ 16
3	Property Acquisition	\$ 4
4	Public Utility Adjustments	\$ 4
5	Construction	
5.1	Roadworks	\$ 105
5.2	Bridge over Clarence River	\$ 75
5.3	Floodplain Viaduct	\$ 208
5.4	Rail Overpass	\$ -
5.5	Flood Mitigation	\$ 1
5.6	Project Management and Insurance	\$ 15
	Sub total	\$ 403
6	Handover	\$ 4
	TOTAL	\$ 440

Note:

Incrementally launched superstructure on refined alignment assumed for bridge over Clarence River

COMMUNITY SUGGESTION 27

OPTION LENGTH =	6.788	Km
BRIDGE LENGTH =	0.821	Km
VIADUCT LENGTH =	1.917	Km
ROAD LENGTH =	4.05	Km
FLYOVER LENGTH =	0	Km
RAIL OVERPASS LENGTH =	0	Km

No.	Section	Estimate (including contingency) (\$Millions) (\$2011)
1	Project Development	\$ 9
2	Investigation and Design	\$ 16
3	Property Acquisition	\$ 2
4	Public Utility Adjustments	\$ 4
5	Construction	
5.1	Roadworks	\$ 104
5.2	Bridge over Clarence River	\$ 104
5.3	Floodplain Viaduct	\$ 182
5.4	Rail Overpass	\$ -
5.5	Flood Mitigation	\$ 1
5.6	Project Management and Insurance	\$ 15
	Sub total	\$ 407
6	Handover	\$ 4
	TOTAL	\$ 442

Note:

Incrementally launched superstructure assumed for bridge over Clarence River

COMMUNITY SUGGESTION 28

OPTION LENGTH =	<u>1.68</u>	Km
BRIDGE LENGTH =	<u>0.676</u>	Km
VIADUCT LENGTH =	<u>0</u>	Km
ROAD LENGTH =	<u>0.974</u>	Km
FLYOVER LENGTH =	<u>0</u>	Km
RAIL OVERPASS LENGTH =	<u>0.03</u>	Km

No.	Section	Estimate (including contingency) (\$Millions) (\$2011)
1	Project Development	\$ 4
2	Investigation and Design	\$ 7
3	Property Acquisition	\$ 5
4	Public Utility Adjustments	\$ 2
5	Construction	
5.1	Roadworks	\$ 26
5.2	Bridge over Clarence River	\$ 129
5.3	Floodplain Viaduct	\$ -
5.4	Rail Overpass	\$ 4
5.5	Flood Mitigation	\$ 1
5.6	Project Management and Insurance	\$ 6
	Sub total	\$ 166
6	Handover	\$ 2
	TOTAL	\$ 184

Note:

Bridge alignment not suitable for incrementally launched superstructure