

Appendix 7

Widened Existing Carriageway

- Scope
- Estimate
- Program
- RMS Drawings



Widened Existing Carriageway

Scope

The widened existing carriageway through town option is to provide a new four-lane carriageway generally in the same position as the existing highway in the town centre.

- The southern limit is assumed to be just north of the intersection of Johnson Road and the Pacific Highway. The intersection is to remain in the current configuration and operate for the Pacific Highway all current turning movements retained i.e. no intersection improvements.
- A one-way service road between Johnson Road and the Wyong River together with an upgrade to South Tacoma Road up to a position just under the existing Rail Bridge. A new intersection with South Tacoma Road and McPherson Road.
- New Bridge over the Wyong River for northbound traffic.
- Refurbish the existing road bridge over the Wyong River consistent with the expected life of the upgraded highway, 20 years.
- Upgrade River Road intersection with local street adjustments.
- New dual carriageway Pacific Highway from Johnson Road to 100m south of Cutler Drive, upgraded intersections at Church Street, Anzac Avenue, North Road.
- New traffic signals at Church Street, Rose Street, Anzac Avenue and North Road intersections.
- New left in, left out intersections at South Tacoma Road, River Road, Alison Road.
- Bridge extension over the new bus-way at Rose Street.
- Retaining walls as required.
- Shared path cycle-ways from Johnson Road (south) to Cutler Drive (north).
- All highway pavements to be new heavy duty bound base with deep asphalt overlay.
- Urban standard throughout entire length of works, i.e. to include street lighting, kerb and gutter drainage, shared pedestrian cycle-way path, property access, landscaping and parking.
- Removal of the Station Masters Cottage and Warner Shops complex.
- The northern limit is 100m south of Cutler Drive.

Project: Through Town & Bypass Options - Pacific Highway Wyong

Option: Widen Existing Carriageway

Detail: Project Summary



No	ltem	Estimate (Exc	Co	ontingency	Estimate (Inc	% of Total
		Contingency)	%	Amount	Contingency)	Estimate
1	Project Development					
1.1	Route / Concept / EIS	\$2,540,000	40%	\$1,016,000	\$3,556,000	
1.2	Project Management Services	\$541,800	30%	\$162,540	\$704,340	
1.3	Client Representation	\$49,536	10%	\$4,954	\$54,490	
	Sub total	\$3,131,336	38%	\$1,183,494	\$4,314,830	3.1%
2	Investigation and Design					
2.1	Investigation and Design	\$4,187,500	50%	\$2,093,750	\$6,281,250	
2.2	Project Management Services	\$581,245	30%	\$174,374	\$755,619	
2.3	Client Representation	\$24,941	10%	\$2,494	\$27,435	
	21441	A / TOO OOO	4=0/	40.000.040	A= 004 000	= 40/
	Sub total	\$4,793,686	47%	\$2,270,618	\$7,064,303	5.1%
•	Dunnanty Associations					
3	Property Acquisitions					
2.1	Droporty Agguioitions	¢7 542 500	55%	£4 140 27E	£11 600 97E	
3.1	Property Acquisitions Professional Services for Property	\$7,542,500 \$113,138	30%	\$4,148,375 \$33,941	\$11,690,875 \$147,079	
	Project Management Services				·	
3.3	, ,	\$153,400	30% 10%	\$46,020	\$199,420 \$40.612	
3.4	Client Representation	\$36,920	10%	\$3,692	\$ 4 0,612	
	Sub total	\$7,845,958	54%	\$4,232,028	\$12,077,986	8.7%
	Sub total	Ψ1,043,330	J4 /0	ψ 4 ,232,020	Ψ12,077,300	0.7 /6
4	Public Utility Adjustments					
	T using Guilly Augustinonia					
4.1	Public Utility Adjustments	\$11,500,000	100%	\$11,500,000	\$23,000,000	
4.2	Project Management Services	\$442,000	30%	\$132,600	\$574,600	
4.3	Client Representation	\$33,280	10%	\$3,328	\$36,608	
0	Charles tropicos mattern	400,200	1070	ψο,σ2σ	400,000	
	Sub total	\$11,975,280	97%	\$11,635,928	\$23,611,208	17.1%
	3 13.1	¥ 1 1,01 0,=00	0.70	, , , , , , , , , , , , , , , , , , ,	+,,	11111
5	Construction of Works					
5.1	Infrastructure	\$68,000,000	22%	\$14,960,000	\$82,960,000	
5.2	Project Management Services	\$5,506,750	30%	\$1,652,025	\$7,158,775	
5.3	Client Representation	\$177,600	10%	\$17,760	\$195,360	
		•				
	Sub total	\$73,684,350	23%	\$16,629,785	\$90,314,135	65.4%
6	Handover					
6.1	Handover	\$360,000	50%	\$180,000	\$540,000	
6.2	Project Management Services	\$92,300	30%	\$27,690	\$119,990	
6.3	Client Representation	\$9,230	10%	\$923	\$10,153	
	Sub total	\$461,530	45%	\$208,613	\$670,143	0.5%
	TOTAL	\$101,892,139	35%	\$36,160,465	\$138,052,605	100%

No	ltem	Estimate (Exc Contingency)	Estimate (Contingency)	Estimate Tota
	Total Project Management Allowand	ces		
i	Project Management	\$7,317,495	\$2,195,249	\$9,512,744
ii	Client Presentation	\$331,507	\$33,151	\$364,657
	Reality Checks	Cost / km (\$m)	Length of Road (km)	
iii	Project Cost per kilometer	\$67.02	2.06	
iv	Project Cost per lane kilometer	\$16.75	8.24	

Project: Through Town & Bypass Options - Pacific Highway Wyong

Option: Widen Existing Carriageway

Detail: **Project Development**



ITEM	DESCRIPTION	UNIT		RATE		TOTAL	COMMENTS
1.1	Route / Concept / EIS						Estimated Duration - 12 months
	iteute / concept / ne						
1.1.1	Concept Design						
	Integrated Design Consultant - Concept Road, Bridge, Drainage, Pavement, Lighting, Landscape etc	ltem	\$	700,000	\$	700,000	
1.1.2	Preliminary Geotech						
	Investigation and reporting, test pits, boreholes, ground model, soil testing etc	item	\$	300,000	\$	300,000	
	Ground support model	item	\$	20,000	\$	20,000	
1.1.3	Traffic Modelling						
1.1.5	Traffic model for concept design solutions	item	\$	75,000	\$	75,000	
	Traine model for concept design coldiens	itom	Ψ	73,000	Ψ	73,000	
1.1.4	Community Liaision						
	lincluded within project management services	item	\$	-	\$	ū	
1.1.5	Environmental Investigations EIS						
	EIS REF	litem	\$	1,000,000	\$	1,000,000	
	Water quality testing	item	\$	10,000	\$	10,000	
1.1.6	Survey						
1.1.0	Ground survey model	item	\$	200,000	\$	200,000	
1.1.7	Specialist Sub Consultants		1_				
	Urban Design	item	\$	60,000		60,000	
	Noise	item	\$	100,000		100,000	
	Hydrolgy	item	\$	25,000 50,000	\$	25,000 50,000	
	Archaeology	item	Þ	50,000	Þ	50,000	
	Total Item 1.1				\$	2,540,000	

Notes / Assumptions

ITEM	DESCRIPTION	UTILISATION	WEEKS	RATE	TOTAL	COMMENTS
<u>1.2</u>	Project Management Services					Estimated Duration - 12 months
	Project manager	100%	77	\$ 5,100 \$ 2,000	\$ 394,740	
	Clercial assistant Assisting Engineer	20% 50%	77 77	\$ 2,000 \$ 3,000	\$ 30,960 \$ 116,100	
	Total Item 1.2				\$ 541,800	

Notes / Assumptions All rates are weekly

ITEM	DESCRIPTION	UTILISATION	WEEKS	RATE		TOTAL	COMMENTS
1.3	Client Representation						Estimated Duration - 12 months
	Project manager	10%	77	\$	5,100	\$ 39,474	
	Clercial assistant	5%	77	\$	2,000	\$ 7,740	
	Assisting Engineer	1%	77	\$	3,000	\$ 2,322	
	Total Item 1.3					\$ 49,536	
						-	

TOTAL ITEM	\$ 3,131,336

Project: Through Town & Bypass Options - Pacific Highway Wyong

Option: Widen Existing Carriageway Detail: Investigation and Design



ITEM	DESCRIPTION	UNIT	RATE	TOTAL	COMMENTS
<u>2.1</u>	Investigation and Design				Estimated Duration - 9 months
2.1.1	Investigation & Design				
	Integrated Design Consultant - Road, Bridge, Staging, Drainage, Pavement, Lighting, Landscape, Line Marking, Signage, Traffic Signals, Property Adjustments, Services / Utilities, Roadside Furniture, ITS etc	item	\$ 3,375,000	\$ 3,375,000	
2.1.2	Detailed Geotechnical Design				
	Investigation and reporting, test pits, boreholes, ground model, soil testing etc	item	\$ 225,000	\$ 225,000	
2.1.3	Survey				
2.1.3	Ground survey model	item	\$ 187,500	\$ 187,500	
2.1.4	Independent Design Verification				
2.1.7	Independent Design Vermeation	item	\$ -	\$ -	
2.1.5	Specialist Consultants				
	Urban Design	item	\$ 100,000	\$ 100,000	
	Noise	item	\$ 100,000		
	Hydrolgy	item	\$ 100,000		
	Miscelleous Consultants: Allowance	item	\$ 100,000	\$ 100,000	Commerical advice, communit consultatiom, community advice etc
	Tatalitan 0.4				aulyce etc
	Total Item 2.1			\$ 4,187,500	

ITEM	DESCRIPTION	UTILISATION	WEEKS	RATE	TOTAL	COMMENTS
2.2	Project Management Services					Estimated Duration - 9 months
	Project manager	100%	39	\$ 5,100	\$ 198,747	
	Clercial assistant	20%	39	\$ 2,000	\$ 15,588	
	Assisting Engineer	100%	39	\$ 3,000	\$ 116,910	
	Tender Documentation	item	1	\$ 250,000	\$ 250,000.00	
	Total Item 2.2				\$ 581,245	

Notes / Assumptions All rates are weekly

ITEM	DESCRIPTION	UTILISATION	WEEKS	RATE	TOTAL	COMMENTS
2.3	Client Representation					Estimated Duration - 9 months
	Project manager Clercial assistant	10% 5%	39 39	\$ 5,100 \$ 2,000		
	Assisting Engineer	1%	39	\$ 3,000		
	Total Item 2.3				\$ 24,941	

TOTAL ITEM	\$ 4,793,686

Project: Through Town & Bypass Options - Pacific Highway Wyong

Widen Existing Carriageway Option: Detail: **Property Acquisitions**



ITEM	DESCRIPTION	UNIT	QTY	RATE	TOTAL	COMMENTS
<u>3.1</u>	Property Acquisitions					Estimated Duration - 2 years
	Commerical Property	sq.m	1,850	\$ 2,800	\$ 5,180,000	Refer to property acquisition
	Railcorp Land	sq.m	6,300	\$ 375	\$ 2,362,500	quantification
	Council Land	sq.m	20,100	\$ -	\$ -	
	Total Item 3.1				\$ 7,542,500	

Notes / Assumptions

ITEM	DESCRIPTION		TAL VALUE PROPERTY	% FEE	Total		Total		COMMENTS
2.2	Professional Services for Property						Estimated Duration - 2 years		
<u>3.2</u>	Professional Services for Property	-					Estilitated Duration - 2 years		
	Property Consultant & Valuation Expert	\$	7,542,500	1.00%	\$	75,425			
	Legal Advice	\$	7,542,500	0.50%	\$	37,713			
	Total Item 3.2				\$	113,138			

Notes / Assumptions

ITEM	DESCRIPTION	UTILISATION	WEEKS	RATE	TOTAL	COMMENTS
3.3	Project Management Services					Estimated Duration - 2 years
						-
	Project manager	25%	104	\$ 5,100	\$ 132,600	
	Clercial assistant	10%	104	\$ 2,000	\$ 20,800	
	Total Item 3.3				\$ 153,400	

Notes / Assumptions All rates are weekly

ITEM	DESCRIPTION	UTILISATION	WEEKS	RATE	TOTAL	COMMENTS
<u>3.4</u>	Client Representation					Estimated Duration - 2 years
	Project manager	5%	104	\$ 5,100	\$ 26,520	
	Clercial assistant	5%	104	\$ 2,000	\$ 10,400	
	Total Item 3.4				\$ 36,920	

TOTAL ITEM	\$ 7,845,958

Project: Through Town & Bypass Options - Pacific Highway Wyong

Widen Existing Carriageway Option: Detail: **Public Utility Adjustments**



ITEM	DESCRIPTION	UNIT	TOTAL	COMMENTS
<u>4.1</u>	Adjust Utilities			Estimated Duration - 12 months
	Water Utilities			
	Relocation of services - Water	item	\$ 1,750,000	Refer to public utility quantification spreadsheet
	Relocation of services - Sewer	item	\$ 1,250,000	Refer to public utility quantification spreadsheet
	Telecommunications			
	Relocation of services	item	\$ 1,500,000	Refer to public utility quantification spreadsheet
	Power / Electrical Utilities HV & LV			
	Relocation of services	item	\$ 5,000,000	Refer to public utility quantification spreadsheet
	Gas Utilities HP & LP			
	Relocation of services	item	\$ 2,000,000	Refer to public utility quantification spreadsheet
	Total Item 4.1		\$ 11,500,000	

Notes
Please see spreadsheet 'Services' for further breakdown

ITEM	DESCRIPTION	UTILISATION	WEEKS		RATE		RATE TOTAL		TOTAL	COMMENTS
4.2	Project Management Services							Estimated Duration - 12 months		
	Project manager Assisting Engineer	100% 100%	52 52	\$	5,100 3,000	\$	265,200 156,000			
	Clercial assistant	20%	52	\$	2,000	\$	20,800			
	Total Item 4.2					\$	442,000			

Notes / Assumptions rates are weekly

ITEM	DESCRIPTION	UTILISATION	WEEKS		RATE		RATE TOTAL		TOTAL	COMMENTS
4.3	Client Representation							Estimated Duration - 12 months		
	Project manager Clercial assistant	10% 5%	52 52	\$	5,100 2,000	\$	26,520 5,200			
	Assisting Engineer	1%	52	\$	3,000	\$	1,560			
	Total Item 4.3					\$	33,280			

TOTAL ITEM	\$ 11,975,280

Through Town & Bypass Options - Pacific Highway Wyong Project:

Option: Widen Existing Carriageway Detail: **Construction of Works**



ITEM	DESCRIPTION	тс	DTAL	COMMENTS
<u>5.1</u>	<u>Infrastructure</u>			Estimated Duration - 3 years
	Direct Works Costs		45,300,000	
	Overhead Costs Contractors Margin	\$	13,900,000 8,800,000	
	Total Item 5.1	s	68,000,000	
		ą.	66,000,000	

ITEM	DESCRIPTION	UNIT		RATE		RATE TOTAL		TOTAL	COMMENTS
<u>5.2 (a)</u>	Project Management Services - Support Services	rices					Estimated Duration - 3 years		
	Design Support Urban Design	item item	\$	168,750 100,000		168,750 100,000			
	Geotechnical Design Support Services	item	\$	50,000	\$	50,000			
	Quality & Safety Audit Services Community Consultation	item item	\$	25,000 150,000		25,000 150,000			
	Traffic Management Support	item	\$	25,000		25,000			
	Legal Services Reports, Conditions of Approval etc	item item	\$	200,000 50,000	_	200,000 50.000			
	Community Liaison Representative	item	\$	50,000	\$	50,000			
	Survey Commercial Advisor	item item	\$	20,000		20,000 100,000			
	Insurance - PA	Item	\$	680,000.00	\$	680,000			
	Total Item 5.2 (a)				\$	1,618,750			

ITEM	DESCRIPTION		NO	WEEKS	RATE	TOTAL	COMMENTS
<u>5.2 (b)</u>	Project Management Services - Staff						Estimated Duration - 3 years
	PM Staff: Management						
	Project Manager	100%	1	160	\$ 5,100	\$ 816,000	
	Project Engineers	100%	2	160	\$ 3,750	\$ 1,200,000	
	Surveillance Officers	100%	2	160	\$ 3,600	\$ 1,152,000	
	Health & Safety Advisor	50%	1	160	\$ 3,000	\$ 240,000	
	Quality Advisor	50%	1	160	\$ 3,000	\$ 240,000	
	Environmental Advisor	50%	1	160	\$ 3,000	\$ 240,000	
	Total Item 5.2 (b)					\$ 3,888,000	
	Total Item 5.2 (a) & (b)					\$ 5,506,750	

Notes / Assumptions All rates are weekly

ITEM	DESCRIPTION	UTILISATION	WEEKS	RATE	TOTAL	COMMENTS
<u>5.3</u>	Client Representation					Estimated Duration - 3 years
	Senior Management Review Client Manager	10% 10%	160 160	\$ 4,000 \$ 5,100	\$ 64,000 \$ 81.600	
	Clercial assistant	10%	160	\$ 2,000	\$ 32,000	
	Total Item 5.3				\$ 177,600	

TOTAL ITEM	\$ 73,684,350

Roads & Maritime Services Client:

Project: Through Town & Bypass Options - Pacific Highway Wyong

Option: Widen Existing Carriageway

Detail: Handover



ITEM	DESCRIPTION	UNIT	QTY	RATE	TOTAL	COMMENTS
<u>6.1</u>	<u>Handover</u>					Estimated Duration - 6 Months
	Final Reporting Legal	item item	1	\$ 100,000 \$ 100,000	\$ 100,000 \$ 100,000	
	Claims Response Noise Survey	item item	1	\$ 100,000 \$ 20,000	\$ 100,000 \$ 20,000	
	Traffic Vertification Environmental Monitors	item item	1	\$ 20,000 \$ 20,000	\$ 20,000 \$ 20,000	
	Total Item 6.1			7 = 23,000	\$ 360,000	

Notes / Assumptions

ITEM	DESCRIPTION	UTILISATION	WEEKS	RATE	TOTAL	COMMENTS
6.2	Project Management Services					Estimated Duration - 6 months
	Project manager	50%	26	\$ 5,100	\$ 66,300	
	Clercial assistant	50%	26	\$ 2,000	\$ 26,000	
	Total Item 6.2				\$ 92,300	

Notes / Assumptions All rates are weekly

ITEM	DESCRIPTION	UTILISATION	WEEKS	RATE	TOTAL	COMMENTS
<u>6.3</u>	Client Representation					Estimated Duration - 6 months
	Project manager	5%	26	\$ 5,100	\$ 6,630	
	Clercial assistant	5%	26	\$ 2,000	\$ 2,600	
	Total Item 6.3				\$ 9,230	

	\$ 461.530
TOTAL ITEM	\$ 461.530

Project: Through Town & Bypass Options - Pacific Highway Wyong

Option: Widen Existing Carriageway

Detail: Property Acquisitions Quantification



ITEM	DESCRIPTION	NO	FLOOR AREA	PROPERTY AREA	COMMENTS
<u>1</u>	Property Acquisition				
1.1	Commerical Property	1	180	800	Station Masters Cottage
		1	670	1050	Railway Sq shops (Corner of Church St)
	Total	2	850	1850	Property Area brought forward to summary
					Property Area brought forward to summary

ITEM	DESCRIPTION	LAND AREA	LAND OWNER	COMMENTS
<u>2</u>	Land Acquistion			
2.1	Wyong River Bridge to Church St	6,300	Railcorp	Along Railway lane before station masters cottage
2.2	Church St to Rose St	3,250	Council	Section 1 within train station car park
		6,100	Council	Section 2 within train station car park
2.3	Rose St to Anzac St	3,700	Council	Rose St to Anzac St along railway line
2.4	Anzac St to North Road	2,600	Council	Along Railway lane
		650	Council	Anzac St intersection allowances
2.5	North Road to End	3,800	Council	Along railway track
	Total	26,400		
	Council Owned Land	20,100		
	Rail Corp Owned Land	6,300		

Project: Through Town & Bypass Options - Pacific Highway Wyong

Option: Widen Existing Carriageway

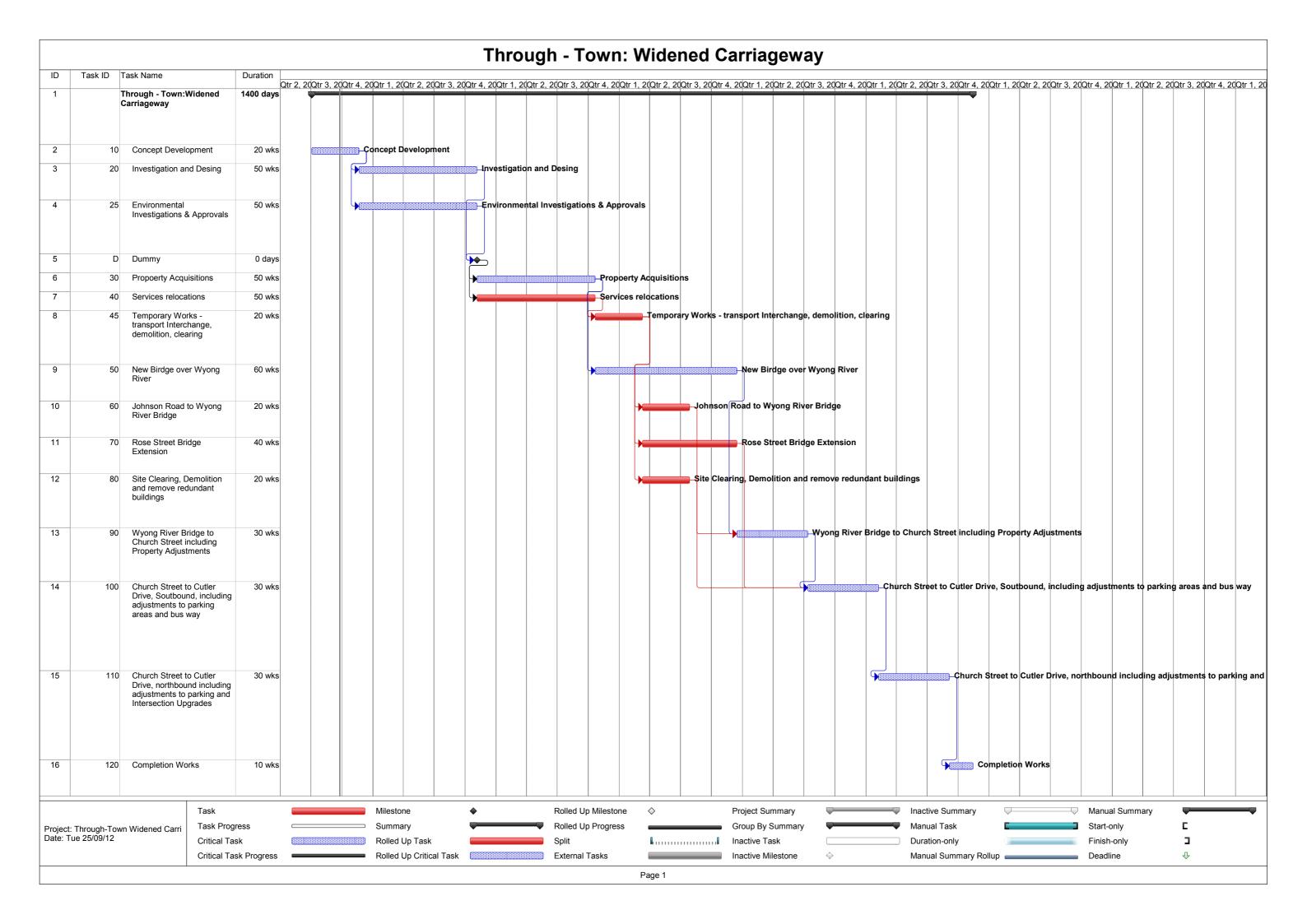
Detail: Public Utility Adjustments Quantification



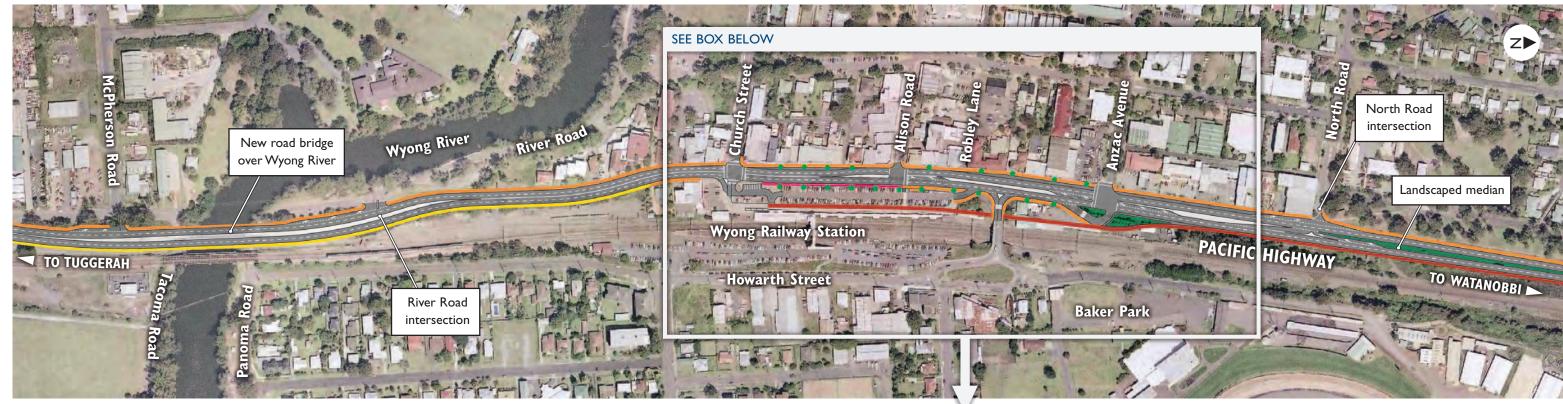
ITEM	DESCRIPTION	UNIT	TOTAL	CONTINGENCY %	CONTINGENCY TOTAL	TOTAL VALUE
1	Power					
	Miscellanous Power Adjustments - Iv	item	\$5,000,000	100%	\$5,000,000	\$10,000,000
	Power Adjustments - hv	item	\$0	100%	\$0	\$0
	Notes:					
	Local power supply includes 415kv & 33kv adjustments including t	emporary power	supply			
	including transformers, pits, temporary power, temporary generato	rs etc				
	New infrastructure work allowed for within direct works estimate					
2	Sewer					
	Assumed 2no rising main at 150mm each to be adjusted	item	\$1,250,000	100%	\$1,250,000	\$2,500,000
	Gravity pit adjustments have been allowed within the direct works					
3	Water					
	Protection & Relocation of Water Utilities	item	\$1,750,000	100%	\$1,750,000	\$3,500,000
4	Telecommunications					
	Local Adjustments	item	\$1,500,000	100%	\$1,500,000	\$3,000,000
5	Gas					
	Protection & Relocation of Gas Utilities	item	\$2,000,000	100%	\$2,000,000	\$4,000,000
	Total Public Utility Adjustment		\$11,500,000	100%	\$11,500,000	\$23,000,000

Line Ite	em Description	Quantity	Unit		Labour		Material		Plant	S	ubcontract		Rate		Total
1															
2	WYONG BYPASS - Widened Existing Carrigeway - From Nth of														
	Johnson Road to 100m South Of Cutler Drive.														
3	Estimate - July12 - T Rajeswaran														
4 ITEN	EM														
5															
6	1 GENERAL														
7 1	1.1 Property Adjustments	10	each							\$	100,000	\$	10,000	\$	100,000
8 1	1.2 Provision for temp bus interchange and pedestrial access	1	each	\$	8,547	\$	354,560	\$	4,440			\$	367,547	\$	367,547
9 1	1.3 Dilapidation survey & report.	300	each							\$	172,800	\$	576	\$	172,800
10															
11	EE formula - =sum(7:10) General			\$	8,547	\$	354,560	\$	4,440	\$	272,800		·	\$	640,347
12															
13	2 TRAFFIC CONTROL														
14 2	2.1 Traffic Control	1	Item	\$	132,144	\$	48,548	\$	583,482	\$	1,159,469	\$	1,923,642	\$	1,923,642
15	EE formula - = sum(13:14) Traffic Control	,		\$	132,144	\$	48,548	\$	583,482	\$	1,159,469		,	\$	1,923,642
16							·								
17	3 ENVIRONMENTAL														
18	3.1 Sedimentataion control	1	Item	\$	54,036	\$	16,278	\$	31,251			\$	101,565	\$	101,565
	3.2 Monitoring		item	'	, , , , , , , , , , , , , , , , , , , ,	•	,		,	\$	93,659	Ś	93,659		93,659
20	EE formula - =sum(18:19) Environmental	,		Ś	54,036	Ś	16,278	Ś	31,251		93,659		,	\$	195,224
21				-	- 1,000	*		•	,	•	,			*	
22	DEmolition														
	4.1 Demolition - Johnson RD to Cutler Dr	1	Item	Ś	88,000	\$	800	\$	287,470	\$	132,000	\$	508,270	\$	508,270
	4.2 Station Masters building & Warner shops		item	\$	58,000	\$	3,000		136,419	_	31,800		,	_	229,219
	4.2 Rail Corp maintenanace yard		item	\$	47,000	•	2,400	_	109,135		31,000		189,535	_	189,535
26	EE formula - =sum(23:25) Demolition	_		\$	193,000		6,200		533,024		194,800	-		\$	927,024
27					_55,555	•	0,200	Τ.	555,62	_				7	5_7,6_1
28	5 Earthworks														
29	Earthworks - Johnson road to Cutler Dr.	1 940	Item	\$	628,817	\$	1,279,291	\$	3,066,399	\$	903,926	\$	3,030	\$	5,878,433
	5.1 From Johnson Rd To Cutler Drive - Clear & grub, strip top soil,	•		\$	628,817		1,279,291		3,066,399		903,926		3,030		5,878,433
30 .	excavation, cut/fill, select, drainage blanket, unsuitable etc. Lgth is ch	1,5 10	icciii	Ψ	020,017	~	1,2,3,231	~	3,000,333	7	303,320	Ψ.	3,030	Ψ	3,070,133
	to chainage and excludes brdge deck.														
31	EE formula - =sum(30) Earthworks			\$	628,817	¢	1,279,291	¢	3,066,399	¢	903,926			\$	5,878,433
32	LE TOTTIGIA Sulfi(30) Earthworks	1			020,017		1,273,231	Ą	3,000,333	7	303,320			Ą	3,070,433
33	6 DRAINAGE														
	6.1 SWD including pipes, pits, open drain, GPT etc.	5,800	m	\$	382,325	¢	1,077,380	ς.	491,120	Ġ	972,002	ć	504	Ġ	2,922,828
	6.2 Kerb & Gutter - SA, SF & SO types	11,140	+	\$	31,792	_	282,351		72,325	•	225,400	•		\$	611,868
36	EE formula - = sum(33:35) Drainage	11,140	1	\$	414,117		1,359,731		563,445		1,197,402	Ţ	33	\$	3,534,696
37	LL Ioimaiasum(55.55) Dramage	1		ب ا	414,117	,	1,333,731	Ą	303,443	٠	1,137,402			Ą	3,334,030
38	7 PAVEMENTS														
	7.1 Local Roads	1	m2												
	7.1 Local Rodus 7.2 Pavement - Johnson Rd to Cutler Dr	57,758		\$	355,044	\$	1,509,217	ċ	845,456	ċ	4,150,759	ċ	119	\$	6,860,475
40	EE formula - =sum(39:40) Pavements	37,758	IIIIZ	\$	355,044 355,044		1,509,217		845,456		4,150,759 4,150,759	Ş	119	\$	6,860,475
	EE IOITIGIASum(59:40) Pavements	1	1	>	333,044	Ş	1,505,21/	Þ	843,456	Þ	4,150,759		ı	ş	0,000,4/5
42	8 BRIDGES & STRUCTURES														
43															
44	Structures 8.1 Patricing Malla Plantinfill & Congreto Patricing well	2.000		\$	700.450	_	1.705.054	4	200 502	Ś	1 710 057	4	1.150	\$	4 (11 0(1
45 8	8.1 Retaining Walls - Block infill & Concrete Retaining wall.	3,988	m2	\	768,158	\$	1,765,054	\$	368,592	\	1,710,057	\$	1,156	>	4,611,861

Line Item	Description	Quantity	Unit		Labour		Material		Plant	9	Subcontract		Rate		Total
1	·	•													
2	WYONG BYPASS - Widened Existing Carrigeway - From Nth of														
	Johnson Road to 100m South Of Cutler Drive.														
3	Estimate - July12 - T Rajeswaran														
46															
47	Bridge Structures														
48	Bridge No 1 - Wyong River	1,440	item	\$	72,475	\$	186,414	\$	80,678	\$	7,266,201	\$	5,282	\$	7,605,768
49 8.1/a	Prepare bridge corridor including Earth embankment on approaches.	1		\$	20,834	\$	41,636	\$	53,183	\$	6,762	\$	122,415	\$	122,415
50 8.1/b	Bridge across Wyong river including pedestrian walkway.	1,440	m2	\$	1,188	\$	108,000	\$	8,022	\$	6,950,484	\$	4,908	\$	7,067,694
51 8.1/c	Reinforced Earth wall including parapets	320	m2	\$	50,453	\$	36,778	\$	19,473	\$	308,955	\$	1,299	\$	415,659
52															
53 8.3	Bridge 2 - Extend Rose street bridge over new underpass	360	m2	\$	17,848	\$	20,140	\$	140,991	\$	2,776,355	\$	8,209	\$	2,955,333
54	bridge	360	m2			\$	11,000		,	\$	2,495,678		6,963	\$	2,506,678
55	Earthworks under bridge	4,800	m3	\$	17,600	\$	1,640	\$	140,856	\$	236,160	\$	83		396,256
56	F Type barrier & crash cousion etc	30		\$		Ś	7,500		135	Ś	44,518		1,747		52,400
57	The second secon			'		<u> </u>	,	Ė		•	,	·	,	'	, , , ,
	Refurbish existing brdge over Wyong River.	1,080	m2							\$	1,944,000	Ś	1,800	\$	1,944,000
59	EE formula - =sum(45:58) Bridge & structures	_,		Ś	858,481	Ś	1,971,608	Ś	590,261	-	13,696,613	-		Ś	17,116,962
60				1	550,102	*	_,0:=,0:0	1	000,202	1	,			1	
61 9	MISCELLANEOUS														
62 9.1a	Lighting - Johnson Rd To Cutler Dr	120	no							\$	1,830,400	\$	15,253	\$	1,830,400
63 9.2	Traffic Lights - Church st, Roase st, Anzac Ave & Nth Rd	4	no							\$	1,152,000	Ś	288,000	Ś	1,152,000
	Signs	116	no							\$	147,450		1,271		147,450
65 9.4	Topsoil and Turf	7.640	m2	Ś	5,777	Ś	40,755	\$	14,294	\$	70,560	Ś	17		131,386
	Concrete Medians	4,200	m2	Ś	88,350	\$	177,700	•	16,338	\$	161,326		106	Ś	443,713
	Concrete path 9blue grayDriveways	15.160	m2	Ś	232,271	Ś	585,828		58,972	Ś	452,367		88	Ś	1,329,439
	Hand rails & Ped fencing	1,130	m		•		•			\$	529,000		468	\$	529,000
69 9.9		1	m2								•				•
70 9.1	Urban Design big no	1	item												
	Guardrail / Wire rope	1,430	m							Ś	150,900	Ś	106	Ś	150,900
72	F Type barrier	600		\$	4,950	\$	150,000	\$	2,695	\$	10,350		280	•	167,995
73 9.12	Landscape - Remove & relocate palm trees, and general landscape	1	Item	\$	67,692	\$	31,485	\$	173,988	\$	2,053,308	\$	2,326,472	\$	2,326,472
74	EE formula - =sum(62:73) Miscellaneous			\$	399,040	\$	985,767	\$	266,286	\$	6,557,660			\$	8,208,754
75															
76	EE formula - =sum(4:73)			\$	3,043,226	\$	7,531,200	\$	6,484,043	\$	28,227,088			\$	45,285,558
77															
78															
	- 16 89			_		_		_		_				_	
	Total for all items			Ş	3,043,226	\$	7,531,200	\$	6,484,043	Ş	28,227,088			Ş	45,285,558

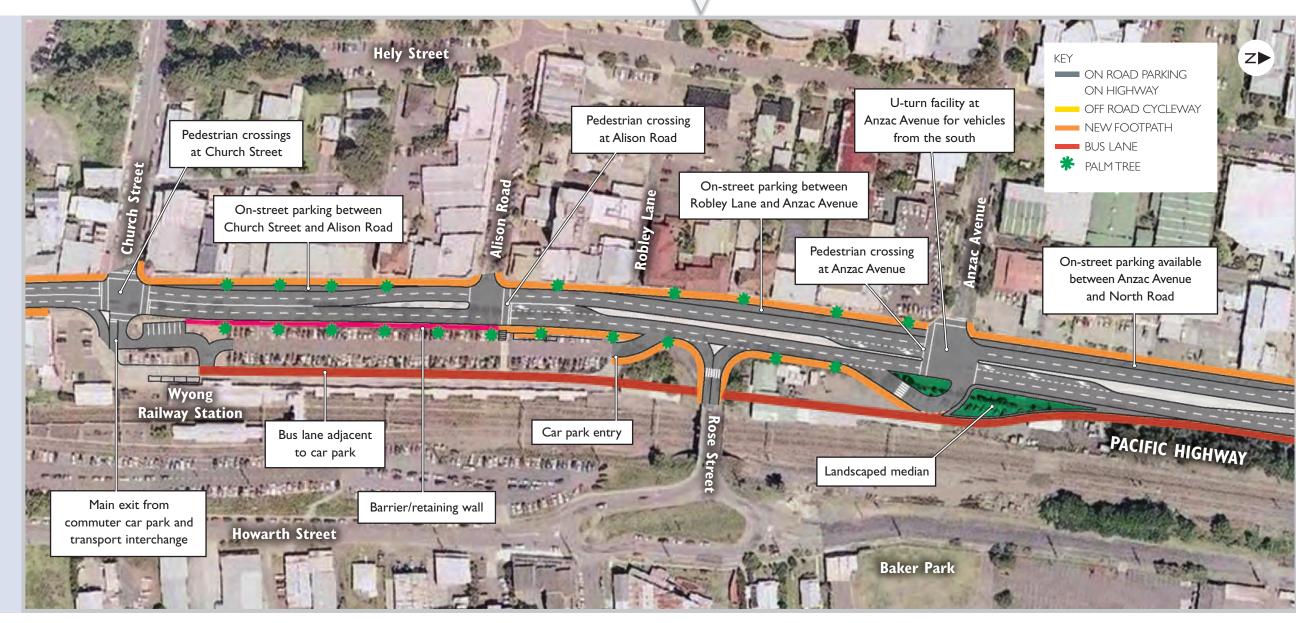


Pacific Highway, Wyong Preferred option – widen existing carriageway



The preferred option alignment would:

- Allow two through lanes in each direction.
- Retain business and retail exposure to passing traffic.
- Retain parking in the town centre generally on the western side of the highway between Church Street and North Road.
- Remove parking on the eastern side of the Pacific Highway.
- Retain the transport interchange in its current configuration with the loss of some parking in the commuter car park (which would need to be replaced with more parking on the eastern side of the railway station).
- Provide convenient pedestrian crossings across the Pacific Highway between Church Street and Anzac Avenue.
- Allow Church Street and Anzac Avenue traffic to circulate into and out of the township.
- Integrate the existing palm trees into the future town centre design.
- Incorporate the Wyong heritage theme into the the future town centre design.





Appendix 8

Split-Level Carriageway

- Scope
- Estimate
- Program
- RMS Drawings



Split Level Carriageway

Scope

The split-level carriageway is the northbound carriageway retained on the existing highway alignment and the southbound carriageway constructed at a lower level through the existing commuter car park.

- The southern limit is assumed to be just north of the intersection of Johnson Road and the Pacific Highway. The intersection is to remain as is in the current configuration and operate for the Pacific Highway as two-lane two-way with all current turning movements retained i.e. no intersection improvements.
- A one-way service road between Johnson Road and the Wyong River together with an upgrade to South Tacoma Road up to a position just under the existing Rail Bridge. A new intersection with South Tacoma Road and McPherson Road.
- New Bridge over the Wyong River for northbound traffic.
- Refurbish the existing road bridge over the Wyong River consistent with the expected life of the upgraded highway, 40 years.
- Upgrade River Road, local adjustments.
- New dual carriageway Pacific Highway from Johnson Road to approximately 100 m south of Cutler Drive.
- Rose Street Bridge extended over the new southbound carriageway and bus-way.
- Construction of reinforced concrete box section to accommodate new northbound and southbound carriageways adjacent to existing Pacific highway approximately 100 m long.
- For consistency the intersection details at North Road are assumed to be the same as the 'preferred through town' central corridor option i.e. seagull intersection.
- Shared pedestrian cycle-way path full length.
- Urban standard throughout entire length of works, i.e. to include street lighting, kerb and gutter drainage, shared pedestrian cycle-way path, property access, landscaping and parking.
- The northern limit is 100 m south of Cutler Drive.

Client: Client: Roads & Maritime Services

Project: Independent Evalation of Wyong Bypass Options

Option: Split Level Carriageway
Detail: Project Summary



No	Item	Estimate (Exc	Co	ontingency	Estimate (Inc	% of Tota
		Contingency)	%	Amount	Contingency)	Estimate
1	Project Development					
1.1	Route / Concept / EIS	\$2,540,000	40%	\$1,016,000	\$3.556.000	
1.2	Project Management Services	\$541,800	30%	\$162,540	\$704,340	
1.3	Client Representation	\$49,536	10%	\$4,954	\$54,490	
	Sub total	\$3,131,336	38%	\$1,183,494	\$4,314,830	3.0%
2	Investigation and Design					
	investigation and Design					
2.1	Investigation and Design	\$4,187,500	50%	\$2,093,750	\$6,281,250	
2.2	Project Management Services	\$581,245	30%	\$174,374	\$755,619	
2.3	Client Representation	\$24,941	10%	\$2,494	\$27,435	
	Cub total	£4.702.606	470/	£2 270 649	\$7.004.202	4.00/
	Sub total	\$4,793,686	47%	\$2,270,618	\$7,064,303	4.9%
3	Property Acquisitions					
		4				
3.1	Property Acquisitions	\$7,542,500	55%	\$4,148,375	\$11,690,875	
3.2	Professional Services for Property Project Management Services	\$113,138 \$153,400	30% 30%	\$33,941 \$46,020	\$147,079 \$199,420	
3.4	Client Representation	\$36,920	10%	\$3,692	\$40,612	
		400,020		70,000	* ***,***=	
	Sub total	\$7,845,958	54%	\$4,232,028	\$12,077,986	8.4%
4	Dublic Hallian Adinatus anto					
4	Public Utility Adjustments					
4.1	Public Utility Adjustments	\$11,500,000	100%	\$11,500,000	\$23,000,000	
4.2	Project Management Services	\$442,000	30%	\$132,600	\$574,600	
4.3	Client Representation	\$33,280	10%	\$3,328	\$36,608	
				• • • • • • • • •	•	
	Sub total	\$11,975,280	97%	\$11,635,928	\$23,611,208	16.5%
5	Construction of Works					
5.1	Infrastructure	\$68,020,000	28%	\$19,045,600.00	\$87,065,600	
5.2	Project Management Services	\$6,114,450	30%	\$1,834,335	\$7,948,785	
5.3	Client Representation	\$205,350	10%	\$20,535	\$225,885	
	Sub total	\$74,339,800	28%	\$20,900,470	\$95,240,270	66.6%
6	Handover					
6.1	Handover	\$360,000	50%	\$180,000	\$540,000	
6.2	Project Management Services	\$92,300	30%	\$27,690	\$119,990	
6.3	Client Representation	\$9,230	10%	\$923	\$10,153	
	Sub total	\$461,530	45%	\$208,613	\$670,143	0.5%
	TOTAL	\$102,547,589	39%	\$40,431,150	\$142,978,740	100%
	IUIAL	\$102,347,369	39%	Ψ40,431,130	J142,3/0,/4U	100%

No	ltem	Estimate (Exc Contingency)	Estimate (Contingency)	Estimate Total
	Total Project Management Allowan	ces		
i	Project Management	\$7,925,195	\$2,377,559	\$10,302,754
ii	Client Presentation	\$359,257	\$35,926	\$395,182
	Reality Checks	Cost / km (\$m)	Length of Road (km)	
iii	Project Cost per kilometer	\$69.41	2.06	
iv	Project Cost per lane kilometer	\$17.35	8.24	

Line	Item	Description	Quantity	Unit		Labour		Material		Plant	9	Subcontract		Rate		Total
1																
2		WYONG BYPASS - Split Lvl Carriageway - From Nth of Johnson Road														
		to 100m South Of Cutler Drive.														
3		Estimate - July12 - T Rajeswaran														
	ITEM	Estimate suly 12 - Hajeswardh														
5	IILIVI															
6	1	GENERAL														
7		Property Adjustments	15	ooch							Ś	150,000	Ś	10,000	Ś	150,000
				each	_	0.547	_	254.560	_	4 4 4 4 0	Ş	150,000	_			
8		Provision for temp bus interchange.	1	each	\$	8,547	\$	354,560	\$	4,440	_	24.550	\$	367,547	\$	367,547
9	1.3	Dilapidation survey & report.	60	each							\$	34,560	\$	576	\$	34,560
10											_				_	
11		EE formula - =sum(7:9) General			\$	8,547	Ş	354,560	Ş	4,440	Ş	184,560			\$	552,107
12																
13		TRAFFIC CONTROL														
14	2.1	Traffic Control	1	Item	\$	131,661	\$	35,037	\$	608,981	\$	1,291,360	\$	2,067,039	\$	2,067,039
15		EE formula - =sum(13:14) Traffic Control			\$	131,661	\$	35,037	\$	608,981	\$	1,291,360			\$	2,067,039
16																
17	3	ENVIRONMENTAL														
18	3.1	Sedimentataion control	1	Item	\$	61,920	\$	17,275	\$	34,490			\$	113,685	\$	113,685
19	3.2	Monitoring	1	item							\$	109,868	\$	109,868	\$	109,868
20		EE formula - =sum(18:19) Environmental			Ś	61,920	Ś	17,275	Ś	34,490	\$	109,868			\$	223,553
21		·			i -	. ,.		,			·					.,
22		DEmolition														
23	4 1	Demolition - Johnson RD to Cutler Dr	1	Item	\$	88,000	\$	800	\$	287,470	Ś	132,000	Ś	508,270	\$	508,270
24		Station Masters building & Warner shops		item	\$	55,300		3,000	_	136,419	_	31,800		226,519	_	226,519
25		Rail Corp maintenanace yard		item	\$	47.000		2,400		109,135	•	31,000		189,535		189,535
26	4.2	EE formula - =sum(23:25) Demolition		itteiii	\$	190,300		6,200		533,024		194,800	7	105,555	\$	924,324
27		EL Iornidiasam(23.23) Demontion			٦	130,300	٦	0,200	Ą	333,024	ر ا	134,800			ب ا	324,324
28		Earthworks														
	5		4.070			607.057		4 225 750	4	2 402 754		4.025.440	_	2.420		C 4 C 4 D 7 C
29		Earthworks - Johnson road to Cutler Dr.	1,970		\$	607,957		1,325,750	\$	3,192,751		1,035,418		3,128		6,161,876
30	5.1	From Johnson Rd To Cutler Drive - Clear & grub, strip top soil,	1,970	item	\$	607,957	\$	1,325,750	\$	3,192,751	\$	1,035,418	\$	3,128	\$	6,161,876
		excavation, cut/fill, select, drainage blanket, unsuitable etc. Lgth is ch														
		to chainage and excludes brdge deck.														
31		EE formula - =sum(30) Earthworks		1	\$	607,957	Ş	1,325,750	Ş	3,192,751	Ş	1,035,418			\$	6,161,876
32																
33		DRAINAGE														
34		SWD including pipes, pits, open drain, GPT etc.	6,200	m	\$	414,385	\$	1,191,194	\$	535,118	•	1,038,010		513		3,178,707
35	6.2	Kerb & Gutter - SA, SF & SO types	10,540	m	\$	32,386	\$	286,282	\$	75,333	\$	215,400	\$	58	\$	609,401
36		EE formula - =sum(34:35) Drainage			\$	446,771	\$	1,477,476	\$	610,451	\$	1,253,410			\$	3,788,108
37																
38	7	PAVEMENTS														
39	7.1	Local Roads	1	m2												
40	7.2	Pavement - Johnson Rd to Cutler Dr	63,700	m2	\$	398,652	\$	1,664,376	\$	956,698	\$	4,586,668	\$	119	\$	7,606,394
41		EE formula - =sum(39:40) Pavements	,		\$	398,652		1,664,376		956,698		4,586,668	' '		\$	7,606,394
42		(11.1)						, ,		,	ļ .	, ,				, ,
43	Q	BRIDGES & STRUCTURES														
44		Structures														
45	0.1	Retaining Walls - Block infill & Concrete Retaining wall.	630	2	Ś	106 255	۲,	227.100	٠,	102.205	Ś	107.022	_	1 100	Ś	734,719
45	8.1	Ketaining walls - Block Intill & Concrete Ketaining wall.	630	mz	>	196,255	\	327,166	>	103,365	\	107,932	\	1,166	\	/34

Line	Item	Description	Quantity	Unit		Labour		Material		Plant	9	Subcontract		Rate		Total
46		·														
47		Bridge Structures														
48		Bridge No 1 - Wyong River	1,440	item	\$	72,475	\$	186,414	\$	80,678	\$	7,266,201	\$	5,282	\$	7,605,767
49		Prepare bridge corridor including Earth embankment on approaches.	1		\$	20,834	\$	41,636		53,183	\$	6,762		122,415		122,415
	•					ŕ		•		•		· ·		·		•
50	8.1/b	Bridge across rail crossing including pedestrian walkway.	1,440	m2	\$	1,188	\$	108,000	\$	8,022	\$	6,950,484	\$	4,908	\$	7,067,694
51	8.1/c	Reinforced Earth wall including parapets	320	m2	\$	50,453	\$	36,778	\$	19,473	\$	308,955	\$	1,299	\$	415,659
52																
53	8.2	Bridge 2 - Extend Rose street bridge over new underpass	360	m2	\$	17,848	\$	20,140	\$	140,991	\$	2,776,355	\$	8,209	\$	2,955,333
54	8.2a	bridge	360	m2			\$	11,000			\$	2,495,678	\$	6,963	\$	2,506,678
55	8.2b	Earthworks under bridge	4,800	m3	\$	17,600	\$	1,640	\$	140,856	\$	236,160		83	\$	396,256
56		F Type barrier & crash cousion etc	30	m	\$	248	\$	7,500	\$	135	\$	44,518		1,747	\$	52,400
57								·								
58	8.3	Bridge No 3 - Box segment underpass	240	m2	\$	236,155	\$	417,761	\$	68,894	\$	269,538	\$	4,135	\$	992,347
59		Earthworks under bridge	1,386	m3	\$	3,657		1,092		35,585	\$	67,602		78		107,937
60		Sheet piling to excavation	1,760	m2		ŕ		•		·	\$	101,280		58	\$	101,280
61		Structure - Base, walls, columns & roof slab.	240	m2	\$	231,837	Ś	396,669	Ś	32,950	Ś	57,275		2,995	Ś	718,731
62		F Type barrier & crash coushion etc	500	m	\$	660		20,000		359	Ś	43,380		129		64,399
63		"					i .	,				,	i .			,
64	8.4	Refurbish existing brdge over Wyong River.	1,080	m2							\$	1,944,000	\$	1,800	\$	1,944,000
65		EE formula - =sum(45:64) Bridge & structures			\$	522,732	\$	951,482	\$	393,927	\$	12,364,026			\$	14,232,167
66		, ,			i .		·	, ,	i .		•	, ,				, . , .
67	9	MISCELLANEOUS														
68	9.1a	Lighting - Johnson Rd To Cutler Dr	130	no							\$	2,054,200	\$	15,802	\$	2,054,200
		Allowance to remove existing street light / telegraph poles and	1	no							\$	500,000	\$	500,000	\$	500,000
		decommission supply.										•	i i	•	·	,
70	9.2	Traffic Lights - Church st, Allison st, Anzac Ave & Nth Rd	4	no							\$	1,152,000	\$	288,000	\$	1,152,000
71		Signs - All types	207	no							\$	171,500	\$	829	\$	171,500
72		Topsoil and Turf	6,020	m2	\$	6,057	\$	42,893	\$	14,804	\$	74,160		23	\$	137,913
73	9.5	Concrete Medians	4,410		\$	91,042	\$	186,528		17,155	\$	167,592	\$	105	\$	462,317
74		Concrete path	11,165	m2	\$	171,063	\$	432,683	\$	43,432	\$	333,158		88	\$	980,335
75		Hand rails & Ped fencing	1,130			-					\$	529,000	\$	468	\$	529,000
76	9.9		1	m2												
77	9.1	Urban Design big no	1	item												
78	9.11	Guardrail / Wire rope	1,130	m							\$	150,900	\$	134	\$	150,900
79		F Type barrier	600	m	\$	4,950	\$	150,000	\$	2,695	\$	10,350		280	\$	167,995
80	9.12	Landscape - Remove & relocate palm trees, and general landscape	1	Item	\$	67,692	\$	31,485	\$	173,988	\$	2,053,308	\$	2,326,472	\$	2,326,472
81		EE formula - =sum(68:80) Miscellaneous			\$	340,804	\$	843,587	\$	252,073	\$	7,196,168			\$	8,632,631
82															L	
83		EE formula - =sum(4:80)			\$	2,709,343	\$	6,675,744	\$	6,586,835	\$	28,216,278			\$	44,188,200
84																
85																
		Total for all items			\$	2,709,343	\$	6,675,744	\$	6,586,835	\$	28,216,278			\$	44,188,200

