Walnut Avenue			
Improvements	Construction		
	Expected construction 2021-	2022	
		traffic signals to improve crossing safety	
Do Intervention	Units	Emissions Factor Unit	Sources and notes
Material Quantities Estimate			
Construction Fuel Use Diesel		0.0027 tCO2e/L_	MfE 2020
Diesei	L		
Construction Materials		2 8	
Concrete	179 tonnes	0.11 tCO2e/tonne	AECOM derived factor (See assumptions below)
Steel	67 tonnes	2.85 tCO2e/tonne	MfE 2020
Road Surface			
Crushed rock or recycled material	- tonnes	0.0032 tCO2e/tonne	IS Calculator NZ v2.0
Gravel	10,531 tonnes	0.0182 tCO2e/tonne	IS Calculator NZ v2.0
Bitumen	- tonnes	0,8966 tCO2e/tonne	IS Calculator NZ v2.0
Asphalt	5,607 tonnes	tCO2e/tonne	IS Calculator NZ v2.0
Project Breakdown Total	706 tonnes of CO2e		
Calculated Emissions		XIN' MI	
Best estimate of calculated emissions	706 tonnes of CO2e	- 20 XP	

Assumptions

Emissions for construction have been calculated from data provided wwaka Kotahi for this project. When possible assumptions have been made in a consistent manner to ensure comparability Refer to construction schedule worksheet for indicative schedule of quantities of concrete, steel, aggregates, gravels and fuels used during construction. Based on previous research for Waka Kotahi, only emissions from the largest emission sources from construction of infrastructure projects have been estimated (concrete, steel, aggregates,

asphalt, and on-site fuel use).

Materials and works related to bridge abutments have been included where relevant.

Fuel used in the construction is assumed to be 2 litres of diesel for every m3 of earth works (AECOM derived fuel-use ratio).

The following were not included in the estimate: fuel used in quarking activity; emissions from the transportation of construction materials to/from site.

Emission factors are sourced from MfE's 2020 Guide (see link below) where appropriate, or from the ISCA-IS Calculator v2.0.

https://environment.govt.nz/publications/measuring-emissions-detailed-guide-2020/

The ISCA-IS Calculator v2.0 is available for ISCA members at https://www.isca.org.au/Tools-and-Resources

The emission factor for concrete is based on MfE 2020 and ISCA guidance and is based on a standard concrete mix.

Source Schedule of quantities as provided in RFT, prepared by Beca, March 2020. Supplied by WK.

Source	Schedule of quantities as provided in RFT, pr	repared	by Beca,	March 2020. Sup	oplied by WK.				
Schedule								Material Unit	L
Code	Description	Quantity		C ncrete t r m3	Steel t r m3	Asphalt t r m3	Aggregates t r m3	Fuel I r kg	Assumpti ns/ N tes
1 2	Environmental Comp iance Earthworks	1	LS						
3 4	Ground Improvements Drainage	1	LS LS	1					
5 6	Pavement and Surfacing Bridges	1	LS LS						
7 8	Retaining Walls Traffic Services	1	LS LS	1					
9 10	Service Relocations	1	LS	1					
11 12	Traffic Management and Temporary Works Preliminary and General	1	LS	-					
13	Extraordinary Construction Costs Dayworks	1	LS	-					
15	Tender Total								
	On site Overheads								
	On-Site Overheads and Prof t are to be included within the rates for Preliminaries & General		Note	-					
	Off site Overheads and Profit								
	Off-Site Overheads and Profit are to be included within the rates of the Schedule of Prices		Note	_					
1.00	ENVIRONMENTAL COMPLIANCE								
1.01	Prepare the Contractors Env ronmental Management Plan (CEMP) & Erosion and Sediment Control Plan Update, implement and mantain the Contractor's Environmental	1	LS						
	Management Plan (CEMP) & Erosion and Sediment Control Plan								
1.02	and Controls including all temporary works and removal on completion	1	LS						
	TOTAL ENVIRONMENTAL COMPLIANCE								
2.00	EARTHWORKS Site Clearance General site clearance including bushes, undergrowth, fences								
	General site clearance including bushes, undergrowth, tences including foundations, rubbish, debris etc to waste off site -								
2.01	approximately 22 500m2	1	LS	4					
2.02	Remove trees. Including; stumps and root ball and dispose off site <u>Demolition</u>	46	no	4				1	
2.03	Break out and dispose off s te Existing traffic islands. Including; concrete apron / infill	1	LS	1			-	1	
2.03	Existing fotpath Existing kerbs	1	LS	1				h`-	
2.05 2.06 2.07	Existing concrete ral stop Existing gates and take to assigned lay down area	1	LS	1					
2.07	Existing type C uminaire. Including; all disconnections, terminations etc.	1	LS	1					•
2.08	erc. Existing type W column. Including; foundation, cabling and disconnections	1	LS	1				2	
2.09			LS	1				< X ~	
2.11	Large sign. Including; posts, foundations and power disconnections Existing traffic signs. Including foundation Sign 1 (ADS Southbound)	1	LS	1					
2.12 2.13	Sign 2 (ADS Northbound)	1	LS					•	
2.14	Existing gravel rail stop mound as per drawing 3337200-CE-015 Rev 0 Remove and dispose of fence off site	1	LS LS	4					
2.15	Remove existing line markings	1	LS						
	Earthworks			-					Assume separate to previous earthworks. Earthworks
2.17	Strip topsoil and stockpile on site average depth 200mm Strip topsoil to waste off-site, allow to load, cart and dispose off-site	290	m3	-				580 I	@ 2I diesel at per m3 moved
2.18	to a managed landfill licensed to accept the typical contaminants as identified in the Detailed Site Investigation	50	m3			$(\land \land)$		100 I	Assume separate to previous earthworks. Earthworks @ 2I diesel at per m3 moved
									Assuming density of aggregate of 1800kg/m3 (CI AECOM)
2.19	Imported GAP65 Allow cut to waste off-site, a low to load, cart and dispose off-site to	25	m3	-			45 t		Assuming dens ty of aggregate of 1800kg/m3 (CI
2.20	approved landfill icensed to accept the typical contaminant levels as identified in the Detailed Site Investigation	2,093	m3			C_{α}	3767.4 t		AECOM)
	Allow to undercut soft or unsuitable material to waste off-site, a low								
	to load, cart and dispose off-site to a managed landfill licensed to accept the typical contaminant levels as ident fied in the Detailed				\sim \sim				Assuming dens ty of aggregate of 1800kg/m3 (CI AECOM)
2.21	Site Investigation, and f II with GASP65 - Provisional Item Imported topsoil	130	m3				234 t		
									Assuming dens ty of aggregate of 1800kg/m3 (CI AECOM)
2.22	Allow to up ift from stockpile and re-spread topsoil	285	m3				513 t		Assuming dens ty of aggregate of 1800kg/m3 (CI
2.23	Extra over for imported topsoil if required - Provisional Item	50	m3_	\land · .			90 t		AECOM)
2.20	Allow to supply materials and construct garden beds as per specifications and drawings. Includes; prepare subsol, topsoil and	00					001		Assume 100mm thick. Earthworks @ 2i diesel at per m3 moved.
2.24	timber battens	215	m2		N .			43 I	
3.00	GROUND IMPROVEMENTS				T				
4.00	DRAINAGE								
4.01	Abandon L Abandon stormwater pipes. Allow to plug each end with concrete extending over a minimum of 1m.		no	\sim					Excluded as likely to immaterial based on previous research for Waka Kotahi.
									Excluded as likely to immaterial based on previous
4.02	Remove existing manhole and extend pipe on grade to new manhole Remove soakpit cover and vertical pipe. Remove soakpt ou ers up to 1m below ground level. Backfill with AP65 to und side f		no	1					research for Waka Kotahi. Excluded as likely to immaterial based on previous
4.03	up to 1m below ground level. Backfill with AP65 to und side 1 pavement level Remove existing sumps and abandon stormwater pipe in	1	no	-					excluded as likely to immaterial based on previous research for Waka Kotahi.
4.04	accordance with drawings and specifications		LS	4					Excluded as likely to immaterial based on previous
4.05	Remove sump and sump lead. Backfi I and make good surfacing	7	no	4					research for Waka Kotahi.
4.06	Remove existing slot drain	1	LS	4					Excluded as likely to immaterial based on previous research for Waka Kotahi.
	Storm Water Drainage Supply and install RCRRJ Class 4 storm-water pipe 300mm d a			1					Estimate provided by AECOM quantity surveyor
4.07	Between 0.0m - 1.5m deep	130	m	24.7 t	4.94 t				Estimate provided by AECOM quantity surveyor 19/07/21
	Supply and install RCRRJ Class 4 storm-water pipe 225 m dia.			1					Estimate provided by AECOM quantity surveyor
4.08	Between 0.0m - 1.5m deep Works to existing Stormwater Supply and install RCRRJ Class 4 storm-water pipe; 150mm d a	3	m	0.42 t	0.114 t				19/07/21
	including direct connection to existing stormwitter as CCC CSS								Estimate provided by AECOM quantity surveyor
4.09	SD361 drawings and specifical ons	5	m	0.5 t	0.19 t				19/07/21
	Supply and install 1050 di . manhole an base			1					Estimate provided by AECOM quantity surveyor
4.10	0.0m - 1.5m Supply and install 1050 dia. matchole and base complete with	4	no	8.5 t	0.152 t				19/07/21
	hinged debris screen and manhole filter bag		-	1					Excluded as likely to immaterial based on previous
4.11	0.0m - 1.5m Works to Existing Lids, Covers, Grates etc.	2	no	1					research for Waka Kotahi.
	Allow to raise existing manhole lids to tie into new levels			1					Excluded as likely to immaterial based on previous
4.12	0 to 100mm	1	no	-					research for Waka Kotahi. Excluded as likely to immaterial based on previous
4.13	250 to 350mm	1	no	4					research for Waka Kotahi. Excluded as likely to immaterial based on previous
4.14	500 to 600mm Allow to lower existing manhole lids to tie into new levels	1	no	4					research for Waka Kotahi.
4.15	0 to 100mm	2	no	1					Excluded as likely to immaterial based on previous research for Waka Kotahi.
4.16	Allow to adjust catch pit grate level to new kerb level	2	no]					Excluded as likely to immaterial based on previous research for Waka Kotahi.
4.17	Allow to adjust fire hydrant / valve pit lid level to tie into new carriageway	7	no	1					Excluded as likely to immaterial based on previous research for Waka Kotahi.
4.17	Replace top two DN900 manhole risers and reinstate existing manhole frame and lid.	1	LS	1					Excluded as likely to immaterial based on previous research for Waka Kotahi.
	Supply and install single sump catch pit complete as drawing			1					
	Supply and install single sump carch pricomplete as drawing. 3337200-CE-038 Rev 0		_	4.00 /	0.73 f				Estimate provided by AECOM quantity surveyor
4.19	0 0m - 1 5m	8	no	4.08 t	0.72 t				Estimate provided by AECOM quantity surveyor 19/07/21
	and base including cast iron frame and grate and 150mm thick. concrete mowing strip								Estimate provided by AECOM supplier
4.20	0.0m - 1.5m Beleastion of original cump on drawing 2227200 CE 020 and	3	no	1.53 t	0.27 t				Estimate provided by AECOM quantity surveyor 19/07/21 Evolution on likely to immetation based on provide
4.21	Relocation of existing sump as drawing 3337200-CE-039 and specifications	1	LS						Excluded as likely to immaterial based on previous research for Waka Kotahi.
4.22	Supply and install subsoil rodding eye and cover	7	no]					Excluded as likely to immaterial based on previous research for Waka Kotahi.
		_							

Source Schedule of quantities as provided in RFT, prepared by Beca, March 2020. Supplied by WK.

Scheduck of Pfices United	Makadal	
Non-	Material Unit	
Beyong SERTING NO. Beyong	B Fuel Irko	Assumpti ns/ N tes
1.3.2 0.000 mm 0.00 mm <th< td=""><td></td><td>Aggregate element included only. Estimate provided</td></th<>		Aggregate element included only. Estimate provided
14.2		by AECOM quantity surveyor 19/07/21 Aggregate element included only. Estimate provided
10.1 Charles Billings Control (1992) All Co		by AECOM quantity surveyor 19/07/21 Estimate provided by AECOM quantity surveyor
12.00 1.0000 1.000 1.000 1.000 1.0000 1.000 1.000 1.000		19/07/21
4.20 00.0 0.0 0.0 0.0 100 00.0 0.0 0.0 0.0 101 0.00 0.0 0.0 0.0 0.0 101 0.00 0.0 0.0 0.0 0.0 0.0 102 0.00 0.00 0.0 0.0 0.0 0.0 0.0 102 0.00 0.00 0.0		Estimate provided by AECOM quantity surveyor 19/07/21
4.10 Booleanse Boo		Excluded as likely to immaterial based on previous e ar h f W ka Kot hi
12100000000000000000000000000000000000		19/07/21
Image: Second data was a plank who holds, we are a plank wholds, we are a plank who holds, we holds, we have a plank who hold		
4.4		
etc. etc. <td< td=""><td></td><td>Excluded as likely to immaterial based on previous</td></td<>		Excluded as likely to immaterial based on previous
4.40 Dist 1: Dis 3, Bindly Dist 1: Dis 3, Bindly Dist 1: Dist 3, Bindly Dis		research for Waka Kotahi.
Mark Soles Bit Handley 2013 (2012) SERVEY 2004 Mark Soles Bit Handley 2014 (2012) SERVEY 2014 Mark Soles Bit Handley 2014 (2014) SERVEY 2014 (2014) SERVEY 2014 Mark Soles Bit Handley 2014 (2014) SERVEY 2014 (2014) SERVEY 2014 Mark Soles Bit Handley 2014 (2014) SERVEY 2014 (2014) SERVEY 2014		Excluded as likely to immaterial based on previous research for Waka Kotahi.
1 1		
12) Bars, 5 dam para grad with on fee, one-warm possible 0 n 42) Bars, 5 dam para grad with on fee, one-warm possible 0 n 42) Bars, 5 dam para grad with one fee, one-warm possible 0 n 42) Bars, 5 dam para grad with one fee, one-warm possible 0 n 42) Bars, 5 dam para grad with one fee, one-warm possible 0 n 42) Bars, 5 dam para grad with one fee, one-warm possible 0 n 42) Bars, 5 dam para grad with one fee, one-warm possible 0 n 43) Bars, 5 dam para grad with one fee, one-warm possible 0 n 54) Bars, 5 dam para grad with one fee, one-warm possible 0 0 0 54) Bars, 6 dam para grad with one warm possible 0 0 0 0 54) Bars, 6 dam para grad with one warm possible 0 <td></td> <td></td>		
Lat. Description 1 n 4.33 Order Late Calculation with TNE (F7 Fination 15 n 4.33 Order Late Calculation 200 100		Excluded as likely to immaterial based on previous
413 7.1 10000 1000 1000		research for Waka Kotahi.
413 75 500 model address 20 n3 510 PARTERING TO BARANEL 1 1 510 PARTERING TO BARANEL 1 1 510 PARTERING TO BARANEL 3.00 n3 613 Store of forming parents to 20mm 3.00 n3 614 Store of forming parents to 20mm 3.00 n3 615 Store of forming parents to 20mm 3.00 n3 616 Store of forming parents to 20mm 3.00 n3 617 Store of forming parents to 20mm 3.00 n3 618 Store of forming parents to 20mm 3.00 n3 619 Store of forming parents to 20mm 3.00 n2 610 Store of forming parents to 20mm 3.00 n2 611 Store of forming parents to 20mm 3.00 n2 612 Store of forming parents to 20mm 3.00 n2 613 Store of forming parents to 20mm 1.00 n2 614 Store of forming parents to 20mm 1.00 n2 615 Store of forming parents to 20mm 1.00 <td></td> <td>Excluded as likely to immaterial based opprevious research for Waka Kotahi.</td>		Excluded as likely to immaterial based opprevious research for Waka Kotahi.
1.90 Part Mark Answer 1		Assume crushed rock. Rip Rap 1602kg/m3
Sub Extra train 100		
Joint of Personal 1s Joint of adding personal 1s 200m Joint of adding personal 1s 200mm Joint of adding personal 1s 200mm<		
8100 Stapp and place place plane plane plane 3 300 no. 9101 Stapp and place plane plane plane 3 900 no. 9101 Stapp and place plane plane 3 900 no. 9101 Stapp and place plane plane 3 900 no. 9101 Stapp and place plane plane 3 900 no. 9101 Stapp and place plane plane 3 900 no. 9101 Stapp and place plane plane 3 900 no. 9101 Stapp and place plane plane 1 900 no. 9101 Stapp and place plane plane 1 900 no. 911 Stapp and place plane plane 1 900 no. 913 Stapp and place plane plane 1 900 no. 914 Stapp and place plane plane 1 900 no. 915 Stapp and place plane plane 1 900 no. 915 Stapp and place plane plane 1 900 no. 915 Stapp and place plane plane 1 900 no. 914 Stapp and place plane plane 1 900 no. 915 Stapp and place plane		Assuming dens ty of ggregate of 1800kg/m3 (CI
â. Suppl and place point of the paid 3000 m2 matrix 3000 m2 matrix 3000 m2 matrix		AECOM)
5.44 Skept and jusce Storm SMA 19 waving costs (PSV98). 3.56 no. 5.36 Skept and jusce Storm SMA 19 waving costs (PSV98). 3.56 no. 5.36 Skept and jusce Storm SMA 19 waving costs (PSV98). 3.270 no. 5.37 Skept and place Storm SMA 19 basecutes 1-15 vorm (SS - no.) 3.270 no. 5.30 Skept and place Storm SMA 19 basecutes 1-15 vorm (SS - no.) 3.270 no. 5.30 Skept and place Storm MT AMA 40 basecutes 1-16 vorm (SA - no.) 3.270 no. 5.31 Skept and place Storm MT AMA 19 basecutes 1-16 vorm (SA - no.) 1.455 no. 5.31 Skept and place Storm MT AMA 40 basecutes 1-16 vorm (SA - no.) 1.455 no. 5.31 Skept and place Storm AG (SA and place Storm (SA - no.) 1.455 no. 5.31 Skept and place Storm AG (SA and place Storm (SA - no.) 1.455 no. 5.33 Skept and place Storm AG (SA and place Storm (SA - no.) 1.455 no. 5.34 Skept and place Storm AG (SA and place Storm (SA - no.) 1.455 no. 5.34 Skept and place Storm AG (SA and place Storm (SA - no.) 1.455 <	1	Assumin 0.1m deep and 1.5t/m3
- Overlag Prevente 12		1.5t/m3
6.50 Alow on the distribution of 2.84mm 3.270 n.2 6.00 Segle and places 100 x174.44 A420 balaccourse 1.5% commer 3.270 n.2 6.00 Segle and places 100 x174.44 A420 balaccourse 1.5% commer 3.270 n.2 6.00 Segle and place 100 x174.44 A420 balaccourse 1.5% commer 3.270 n.2 5.01 Segle and place 2000m 1572.44 A4 A420 balaccourse 240 n.2 5.11 Segle and place 2000m 1572.44 A4 A420 balaccourse 240 n.2 5.11 Segle and place 2000m 1572.44 A4 A420 balaccourse 240 n.2 5.12 Segle and place 2000m 1572.44 A4 A420 balaccourse 240 n.2 5.13 Segle and place 2000m 1572.44 A4 A420 balaccourse 1420 n.2 5.14 return and place 100 xmm 2000m 1672.44 A4 A420 balaccourse 172 n.2 5.15 Segle and place 2000m 172.44 A4 A420 balaccourse 172 n.2 5.16 Segle and place 2000m 172.44 A4 A420 balaccourse 172 n.2 5.16 Segle and place 2000m 172.44 A4 A420 balaccourse 172 n.2 5.20 Segle and place 2000m 172.44 A4 A420 balaccourse 172 n.2 5.21<		1. t/m3
4.37 Stepp and place and place and place after out 3.270 n.2 5.08 restored place out 1.270 n.2 5.09 Advent or sub-sprace properation and tensing 1.420 n.2 5.01 Stepp and ineal agond and genomia in base of accountion 1.420 n.2 5.11 Stepp and ineal agond and genomia in base of accountion 1.420 n.2 5.13 Stepp and place of all outset of accountion 1.420 n.2 5.14 Stepp and place of all outset of accountion 1.420 n.2 5.15 Stepp and place of all outset of accountion 1.420 n.2 5.16 Stepp and place of all outset of accountion 1.427 n.2 6.15 Advent or sub-grade properation and testing 1.275 n.2 6.16 Stepp and place of Borne ACC as aphat concrume 1.275 n.2 6.17 Stepp and place of Borne ACC as aphat concrume 1.275 n.2 6.21 Advent or sub-grade properation and testing 1.275 n.2 6.22 Stepp and place of Borne ACC as aphat concrume 1.400 n.2 6.22 Stepp and place of Borne ACC as aphat concrume	O	
6.69 Skipping and places Marmin SMA. 10 weaking counsel, (PSVR0), 6.69 3.270 no. 6.69 Kalan Ible kock all in received in a specific and application and teating in a specific and applicateapplication and teating in a specific application an		A uming 0.1m deep and 1.5t/m3 ssuming 0.1m deep and 1.5t/m3
Widening Percenter		1.5t/m3
5.10 Supply and install georgid and georetical in base of excavation 1.400 no. 5.11 Supply and place 20mm NCTA M4 AP40 basecourse 200 n3. 5.13 Supply and place 20mm NCTA M4 AP40 basecourse 1.400 no. 5.14 Supply and place 20mm NCTA M4 AP40 basecourse 1.400 no. 5.14 Supply and place 20mm NCTA M4 AP40 basecourse 1.275 no. 5.15 Allow for sub-grade repearation and electing 1.275 no. 5.16 Supply and place 20mm NAP5 sub-base 7.75 no. 5.17 Supply and place 20mm NAP5 sub-base 7.77 no. 5.21 Allow to mill assing generate 12.00m 1.400 no. 5.22 Supply and place 20mm NAP5 sub-base 1.77 supply and place 20mm NAP5 sub-base 7.77 5.22 Supply and place 20mm NAP5 sub-base 1.400 no. 1.400 no. 5.22 Supply and place 20mm NAP5 sub-base 1.400 no. 1.400 no. 5.22 Supply and place 20mm NAP5 sub-base 1.400 no. 1.400 no.		1.5t/m3 Assume separate to previous earthworks. Earthworks
5.11 Specify and place 200m NZTA M4 APQ basecure 200 m3 5.12 Specify and place 200m NZTA M4 APQ basecure 1.400 m2 5.13 Specify and place 200m NZTA M4 APQ basecure 1.400 m2 5.14 back of the science and place 200m NZTA M4 APQ basecure 1.275 m2 5.15 Allow for science 200m APQS sub-base 3.75 m3 5.16 science 100m NZTA M4 APQ basecure + 15% corms 3.75 m3 5.16 science 100m NZTA M4 APQ basecure + 15% corms 3.75 m3 5.16 science 100m NZTA M4 APQ basecure + 15% corms 3.75 m3 5.20 Above for science 120 form 1.000 m2 5.21 Above form in existing powerent to 200m 1.000 m2 5.22 Sciency and place 100m ACM APQ basecure + 1.5% 3.25 9.00 5.22 Sciency and place 100m ACM APQ basecure + 1.5% 3.25 9.00 5.22 Sciency and place 100m ACM APQ basecure + 1.5% 3.25 9.00 5.22 Above for science 1200m 1.000 m2 5.24	57 1	Assume separate to previous earthworks. Earthworks @ 2I diesel at per m3 moved Exclude as polymer (plastic), likely to be immaterial
1.1 Supply and place agends 3 rdip seal 14.00 n.2 1.1 Supply and place agends 10 agends 10 rdip seal 14.00 n.2 1.1 Supply and place 20mm (1997) (199		based on previous research for Waka Kotahi
8.15 Supply and plant agends 3 only easi 14.00 n.2 6.18 Hough plant 200mm (PSV60) 14.00 n.2 6.14 Hough plant 200mm (PSV60) 14.00 n.2 6.15 Supply and plant 200mm (PSV60) 14.00 n.2 6.16 Supply and plant 200mm (PSV60) 1275 n.2 5.16 Supply and plant 200mm (String String St		Assuming dens ty of aggregate of 1800kg/m3 (CI AECOM)
6.13 Supply and place 300mm AC20 asphal recorded 1.430 n.2 6.14 Holdening Exposures in Provement 20 1.430 n.2 6.15 Allow for sub-grade presention and testing 1.275 n.2 6.16 Supply and place 300m AP65 sub-base 3.75 n.3 6.16 Supply and place 300m AP65 sub-base 3.75 n.3 6.16 Supply and place 300m AP65 sub-base 3.75 n.3 6.17 Supply and place 300m AP65 sub-base 3.75 n.3 6.20 Supply and place 300m AP65 sub-base 3.76 3.20 6.22 Supply and place 300m AP65 sub-base 1.600 n.2 6.22 Supply and place 300m AP65 sub-base 3.26 1.400 n.2 6.22 Supply and place 300m AP65 sub-base 3.26 1.400 n.2 6.22 Supply and place 300m AP65 sub-base 3.26 1.400 n.2 6.24 Abor to mil subing powerent to 2.00mm 1.400 n.2 1.435 1.435 5.24 Abor to mil subing powerent to 2.00mm 1.400 n.2 1.435 1.435 1.435 1.435 1.435		Assuming 0.1m deep and 1.5t/m3
1.4 Producting Barvement Parameter Parameter 1 1.5.15 Allow for sub-gradue propagation and desting 1.275 n.2 5.16 Supply and place toppagation and desting 1.275 n.2 n.3 5.18 Supply and place toppagation 2.360 1.275 n.2 5.19 gat 3 city stage 2.371 2.372 n.2 5.20 start strategrad 1.275 n.2		1.5t/m3
5.15 Allow for sub-grade preparation and testing 1.275 m2 5.16 Supply and install georgiti and geotextile in base of accountion 1.275 m2 5.17 Supply and place 295mm AP65 sub-base 375 m3 3.18 Supply and place 295mm AP65 sub-base 375 m3 3.10 as include 1.275 m2 3.20 as include 1.275 m2 3.20 as include 1.275 m2 3.20 as include 1.275 m2 9.21 Adow to mill existing parenterit to 210mm 1.420 m2 9.20 as include 1.275 m2 20 9.21 Adow to mill existing parenterit to 210mm 1.400 m2 9.22 Supply and place Somm AP65 sub-base 33 100 100 9.22 Supply and place Somm AP65 sub-base 35 0 125 9.22 Supply and place Somm AP65 sub-base 35 0 126 9.22 Supply and place Somm AP65 sub-base 35 0 126 38 100 100 100 100 100		1.5t/m3
5.16 Supply and initial geograf and geotestie in base of escavation 1,275 m2 5.17 Supply and place 236m AP65 sub-base 376 m3 5.18 Stapply and place 120 MZTA M4 AP40 basecourse 1.5% comment 246 m0 5.20 Stapply and place 120 MZTA M4 AP40 basecourse 1.5% comment 1275 m2 5.20 Stapply and place 120 MZTA M4 AP40 basecourse 1.5% comment 1275 m2 5.21 Allow to mill osting parement to 210mm 1,400 m2 5.22 Stapply and place 10mA AP65 sub-base 1400 m2 5.23 Allow to mill osting parement to 210mm 1,400 m2 5.24 Allow to mill osting parement to 210mm 1,400 m2 5.25 Allow to mill osting parement to 210mm 1200 m2 5.26 Allow to mill osting parement to 210mm 2200 m2 5.27 Stapply and place 10mm Cit MA 4P44 basecourse 4200 m2 5.28 Allow to raid-grade preparation and testing 640 m2 5.29 Allow to raid-grade preparation and testing 640 m2	510 I	Assume separate to previous earthworks. Earthworks @ 2I diesel at per m3 moved
5.17 Supply and place 295mm AP65 sub-base 375 md 5.18 Supply and place 295mm AP65 sub-base 12/5 md 5.20 au required 12/5 md 12/5 5.20 au required 12/5 md 12/5 5.21 Allow to mill obsting parents to 210mm 1400 md 5.22 Supply and place 30m SNB 10 pass 1400 md 5.23 Allow to mill obsting parents to 210mm 1400 md 5.24 Inclusing packed strain to 120mm 1400 md 5.25 Allow to mill obsting pacement to 220mm 190 nd 5.26 Allow to mill obsting pacement to 220mm 190 nd 5.27 Supply and place 200m NZTA M44 AP44 basecourse 15 nd 5.28 Allow to sub-grade progenition and testing 220 nd nd 5.28 Allow to sub-grade progenition and testing 240 nd nd 5.24 Inclusing ack cout arequired 240 nd nd 5.28 Allow ton sub-grade p	510 1	Exclude as polymer (plastic), likely to be immaterial
5.18 Supply and place 100 NZTA M4 AP40 basecourse + 1.5% comment 245 m3 5.20 as retariant 1.275 m2 5.21 Allow to mill existing parement to 210mm 1.275 m2 5.22 Supply and place optimum SAX 100 month of 200 mm (CPSV50). 1.400 m2 5.23 Supply and place optimum SAX 100 month of 200 mm (CPSV50). 1.400 m2 5.24 returning the cost as required 1.400 m2 5.24 returning the cost as required 1.400 m2 5.25 Allow to mill existing parement to 220mm 1.400 m2 5.26 returning the cost as required 1.400 m2 5.27 Supply and place optimum Cost mediating bareners to 220mm 2.400 m2 5.28 returning the required 1.400 m2 5.29 Allow for sub-grade properties to 200mm 2.250 m2 5.29 Allow for sub-grade properties to 200mm 1.400 m2 5.29 Allow for sub-grade properties to 200mm 1.400 m2 5.29 Modering Pavement 2.20		based on previous research for Waka Kotahi Assuming dens ty of aggregate of 1800kg/m3 (CI
6.19 g ad 3 chp sed 1.275 m2 5.20 as required 1.275 m2 5.21 East Street/Valued Avenue 1.275 m2 5.21 Allow to mill existing pavements 3a 1.000 m2 5.22 Supply and place grades 3 chp sed 1.400 m2 3.38 1.400 5.22 Supply and place grades 3 chp sed 1.400 m2 3.38 1.400 5.24 Allow to mill existing pavement 4 1.000 m2 3.38 1.400 5.24 Andwight place coards a chp sed 1.910 2 1.005 1.005 5.25 Supply and place grades chp sed 1.200 m2 1.005 1.005 5.26 Anlow to mill existing pavement 4a 1.910 2 1.005 1.005 1.005 5.28 Supply and place grades a chp sed 2.200 m2 1.005 <td< td=""><td></td><td>AECOM)</td></td<>		AECOM)
6.19 g ad 3 chp sed 1.275 m2 5.20 as required 1.275 m2 5.21 East Street/Valued Avenue 1.275 m2 5.21 Allow to mill existing pavements 3a 1.000 m2 5.22 Supply and place grades 3 chp sed 1.400 m2 3.38 1.400 5.22 Supply and place grades 3 chp sed 1.400 m2 3.38 1.400 5.24 Allow to mill existing pavement 4 1.000 m2 3.38 1.400 5.24 Andwight place coards a chp sed 1.910 2 1.005 1.005 5.25 Supply and place grades chp sed 1.200 m2 1.005 1.005 5.26 Anlow to mill existing pavement 4a 1.910 2 1.005 1.005 1.005 5.28 Supply and place grades a chp sed 2.200 m2 1.005 <td< td=""><td></td><td>Assuming 0.1m deep and 1.5t/m3</td></td<>		Assuming 0.1m deep and 1.5t/m3
East Street / Wahrd Avenue		Assuming 0.1m deep and 1.5t/m3 1.5t/m3
5.21 Allow to mill existing parement to 210mm 1.400 m2 5.22 Supply and place grades 3 c/hp seal 1.400 m2 5.23 Supply and place grades 3 c/hp seal 1.400 m2 5.24 rhoking task cost as required 1.400 m2 6.25 Supply and place grades 3 c/hp seal 1.400 m2 7 0.004 rpt / Parement 4a m2 m2 5.25 Allow to mill existing parement to 220mm 1.900 2 5.26 Supply and place 50mm SMA 10 waring course (PSV60). 2.80 m2 5.28 Supply and place 50mm SMA 10 waring course (PSV60). 4.80 m2 5.29 Allow for sub-grade preparation and testing 64 m2 5.31 Supply and place 200mm NZTA M4 AP40 basecourse 1.5 m3 5.32 Supply and place grades 3 c/hp seal 64 m2 5.33 Supply and place grades 3 c/hp seal 64 m2 5.34 Nachring tack coats as required 1.640 m2 5.33 Supply and place grades 3 c/hp seal 65 m2 5.34 Nachring tack coats as required 1.62 m2 5.35 Supply and place grades 3 c/hp seal 55 m3 5.36 Supply and pla		1.50115
5.22 Supply and place grietal 3 clip seal 1.400 m2 5.23 Supply and place 160mm AC20 asphal concrete 1.400 m2 5.24 fricking lack coals required 1.400 m2 5.25 Supply and place 50mm AC20 asphal concrete 1.400 m2 5.26 fricking lack coals required 1.400 m2 5.25 Supply and place 170mm NL1 M4 AP40 basecourse + 1.5% 325 m8 5.26 Concernet 3.300 fill 1.400 m2 5.27 Supply and place 50mm SMA 10 waaring course (PSV56). 2.230 m2 5.28 Including lack coals required 1.400 m2 5.29 Allow for sub-grade preparation and testing 6.4 m2 5.30 Supply and place 200mm NZT M 44 AP40 basecourse 1.5 n3 5.31 Supply and place 160mm AC20 asphal concrete 6.4 m2 5.33 Supply and place 200mm NZT M44 AP40 basecourse 1.5 n3 5.34 Including lack coal as required 6.4 m2 5.33 Supply and place 50mm SMA 10 waaring course (PSV50). 6.4 m2 5.34		Assuming dens ty of aggregate of 1800kg/m3 (CI
5.24 Including tack coat as required 1.400 m2 105 t 5.25 Allow to mill existing pavement to 220mm 1.910 22 32.5 m3 5.26 Supply and place grands 3 this seal 2.25 m3 33.4.5 t 33.4.5 t 5.27 Supply and place grands 3 this seal 2.230 m2 33.4.5 t 33.4.5 t 5.28 Allow for sub-grade preparation and testing 84 m2 143.25 t 143.25 t 5.29 Allow for sub-grade preparation and testing 64 m2 15.33 5.94 th 143.25 t 5.31 Supply and place grands 3 thip seal 64 m2 6.6 t 15.38 t 143.25 t 5.33 Supply and place grands 3 thip seal 64 m2 6.5 t 15.38 t 15.38 t 5.34 Supply and place grands a thip seal 6.2 th m2 15.38 t 13.58 t 13.58 t		AECOM) Assuming 0.1m deep and 1.5t/m3
5.24 Including tack coat as required 1.400 m2 105 t 5.25 Allow to mill existing pavement to 220mm 1.910 22 32.5 m3 5.26 Supply and place grands 3 this seal 2.25 m3 33.4.5 t 33.4.5 t 5.27 Supply and place grands 3 this seal 2.230 m2 33.4.5 t 33.4.5 t 5.28 Allow for sub-grade preparation and testing 84 m2 143.25 t 143.25 t 5.29 Allow for sub-grade preparation and testing 64 m2 15.33 5.94 th 143.25 t 5.31 Supply and place grands 3 thip seal 64 m2 6.6 t 15.38 t 143.25 t 5.33 Supply and place grands 3 thip seal 64 m2 6.5 t 15.38 t 15.38 t 5.34 Supply and place grands a thip seal 6.2 th m2 15.38 t 13.58 t 13.58 t		1.5t/m3
5.25 Allow to mill existing pavement to 220mm 1910 2 756.36 t 5.26 content 2200 n2 133.45 t 33.45 t 5.27 Supply and place 30mm SMM 10 waining course (PSV56), 4400 m2 33.45 t 143.25 t 143.25 t 5.28 Midening Pavement Pavement 3b 4400 m2 143.25 t 5.41 5.41 5.41 5.41 5.41 5.41 5.41 5.41 5.41 5.41 5.41 5.41 5.41 5.41 5.41 5.41 5.41 5.41 142.51 142.51 142.51 143.51 143.51 153.6		1.5t/m3
Supply and place 170mm X21A M4 AP40 basecourse + 1.5% 325 ng 5.26 cement 325 ng 5.27 Supply and place Simm SMA 10 watring course (PSV56), 2230 m2 5.28 Supply and place Simm SMA 10 watring course (PSV56), 4410 m2 5.29 Allow for sub-grade preparation and testing 64 m2 5.30 Supply and place grade 3 chip seal 64 m2 5.31 Supply and place grade 3 chip seal 64 m2 5.32 Supply and place grade 3 chip seal 64 m2 5.33 Supply and place grade 3 chip seal 64 m2 5.34 trouburg table carged 3 chip seal 64 m2 5.33 Supply and place grade 3 chip seal 64 m2 5.34 trouburg table carged 3 chip seal 62 m2 5.35 Allow for sub-grade preparation and testing 230 m2 5.36 Supply and place grade 3 chip seal 55 m3 5.37 Supply and place sortim SMA 10 watring course (PSV56), 64 m2		Assuming dens ty of aggregate of 1800kg/m3 (CI AECOM)
5.27 Supply and place grade 3 chip seal 2.200 m2 33.4.5 t 5.28 including lack coat as required 1.440 m2 1.440 m2 6.29 Allow for sub-grade preparation and testing 6.4 m2 1.432.5 t 1.432.5 t 5.20 Allow for sub-grade preparation and testing 6.4 m2 1.432.5 t 1.432.5 t 5.30 Supply and place grade 3 chip seal 6.4 m2 1.432.5 t 1.432.5 t 5.31 Supply and place grade 3 chip seal 6.4 m2 1.5.3 t		1.5t/m3
5.28 Including tack cost as required 1440 m2 6 Widening Revenent Revenent 3b 1432 14325 t 5.29 Allow for sub-grade preparation and testing 64 m2 5.30 Supply and place geogrid and geotextile in base of excavation 64 m2 5.31 Supply and place geogrid and geotextile in base of excavation 64 m2 5.31 Supply and place geogrid and geotextile in base of excavation 64 m2 5.33 Supply and place symmet 3b 64 m2 5.33 Supply and place symmet 3b 64 m2 5.34 Including Revenent Pervenent 4b 64 m2 5.35 Supply and place geogrid and geotextile in base of excavation 230 m2 5.36 Supply and place geogrid and geotextile in base of excavation 230 m2 5.37 Supply and place geogrid and geotextile in base of excavation 230 m2 5.37 Supply and place geogrid and geotextile in base of excavation 230 m2 5.38 Supply and place geogrid and geotextile commodextile (NN conin we concrete) (NN 28),		Assuming 0.1m deep and 1.5t/m3
5.29 Allow for sub-grade preparation and testing 64 m2 5.30 Supply and place geogrid and geotextile in base of excavation 64 m2 5.31 Supply and place 200mm NZTA M4 AP40 basecourse 15 m3 5.32 Supply and place 200mm NZTA M4 AP40 basecourse 15 m3 5.33 Supply and place 200mm NZTA M4 AP40 basecourse 15 m3 5.34 bupply and place 30mm NZTA M4 AP40 basecourse 64 m2 5.34 bupply and place 30mm NZTA M4 AP40 basecourse 64 m2 5.34 bupply and place apply and place 30mm AP6 sub-base 64 m2 5.35 Allow for sub-grade preparation and testing 230 m2 5.36 Supply and place apply and place appendix and etesting 230 m2 5.37 Supply and place appendix and course (PSV58), 64 m3 5.38 Supply and place appendix and etesting 230 m2 5.37 Supply and place appendix and course (PSV58), m3 m3 5.38 Supply and place appendix and course (PSV58), m3 m3 5.41 Stoppi and place appoint aplace appendix aplace appendix appendix		1.5t/m3
5.30 Supply and place geogrid and geotextile in base of excavation 64 m2 5.31 Supply and place 200mm NZTA M4 AP40 basecourse 15 m3 5.32 Supply and place 200mm NZTA M4 AP40 basecourse 15 m3 5.32 Supply and place form AZO sephal concrete 64 m2 5.33 Supply and place form AZO sephal concrete 64 m2 5.34 Inturbuing tack coate required 64 m2 5.34 Inturbuing tack coate required 64 m2 5.35 Allow for sub-grade preparation and testing 220 m2 5.37 Supply and place geogrid and geotextile in base of excavalion 220 m2 5.37 Supply and place gooding and geotextile in base of excavalion 220 m2 5.37 Supply and place gooding and geotextile in base of excavalion 220 m2 5.38 Supply and place gooding AP40 basecourse + 5% comment 35 m3 5.38 Supply and place gooding AP40 basecourse + 5% comment 35 m3 5.41 as drawing and spocilicationor 120 m2 </td <td></td> <td>Assumed 0.2m depth. Earthworks @ 2I diesel at per</td>		Assumed 0.2m depth. Earthworks @ 2I diesel at per
5.31 Supply and place 200mm NZTA M/4 AP40 basecourse 15 n3 5.32 Supply and place 100mm AZ0 suphat concrete 64 nm 5.33 Supply and place 100mm AZ0 suphat concrete 64 nm 5.34 functioning tack coase required 64 m2 5.34 functioning tack coase required 64 m2 5.35 Allow for sub-grade preparation and testing 230 m2 5.36 Supply and place 200mm APG5 sub-base 55 m3 5.37 Supply and place 170 NZTA M/4 AP40 basecourse (PSV56). 64 m2 5.36 Supply and place 200mm APG5 sub-base 55 m3 5.37 Supply and place 70mm ZMTA M/4 AP40 basecourse (PSV56). 64 m2 5.38 Supply and place 70mm ZMTA M/4 AP40 basecourse (PSV56). m3 52.5 t 34.5 t 5.38 Supply and place 70mm ZMTA M/4 AP40 basecourse (PSV56). m3 m3 52.5 t 5.41 as drawing and specificationse 220 m2 m2 5.41 as drawing and specificationse 200 m	25.6 1	m3 moved Exclude as polymer (plastic), likely to be immaterial
5.32 Supply and place grade 3 chips seal 64 m 5.33 Supply and place 3 form XAX 10 weating course (PSV56). 64 m2 5.34 functioning tack coast a required 64 m2 5.35 Allow for sub-grade preparation and testing 230 m2 5.36 Supply and place gregorid and geotextile in base of excavalion 230 m2 5.36 Supply and place 20mm XPGS sub-base 55 m3 5.37 Supply and place 170 NZTA M4 AP40 basecourse + 0.5% coment 35 m3 5.38 Supply and place 30mm SMA 10 weating course (PSV56), m2 34.5 ti 5.39 Supply and place 170 NZTA M4 AP40 basecourse + 0.5% coment 35 m3 5.39 Supply and place 30mm SMA 10 weating course (PSV56), m2 34.5 ti 5.41 as drawing and specifications 120 m2 5.42 Allow to saw cuit and turn existing sevements 200 m 5.42 Allow to saw cuit and turn existing sevements 200 m 5.42 Allow to saw cuit and turn existing sevements 200 m 5.43 as drawing an sopecintacions 200		based on previous research for Waka Kotahi Assuming dens ty of aggregate of 1800kg/m3 (CI
5.33 Supply and place form SMA 10 wearing course (PSV56). 64 m2 5.34 including tack coat as required 64 m2 Widening Assement Pavement 4b 48 t 5.35 Supply and place geogrid and geotestile in base of excavation 230 m2 5.35 Supply and place geogrid and geotestile in base of excavation 230 m2 5.36 Supply and place 290mm AP65 sub-base 55 m3 5.37 Supply and place 170 NZTA M4 AP40 basecourse + 15% commont 35 m3 5.38 Supply and place 170 NZTA M4 AP40 basecourse + 15% commont 230 m2 5.39 Supply and place arguing course (PSV36), 230 m2 5.40 Polyma place to reprise a required to which consisting course (PSV36), 230 m2 5.41 as drawings and specifications 200 m 5.42 Allow to sar out and up in revising revenents 200 m 5.43 Allow to sar out and up in revising revenents 200 m 5.43 Crack bandage to interface of m- w and existing pavements 200 m 6.41 Crack bandage to interface of m- w and existing pavements 200 m		AECOM) Assuming 0.1m deep and 1.5t/m3
5.34 including tack coat as required 64 m2 5.35 including tack coat as required 64 m2 5.36 Supply and place geogrid and geotextile in base of excavation 230 m2 5.37 Supply and place 290mm AP65 sub-base 55 m3 5.38 Supply and place 290mm AP65 sub-base 55 m3 5.38 Supply and place 170 NZTA M4 AP40 basecourse + 15% commant 35 m3 5.38 Supply and place 30mm SMA 10 wearing cours (P8VS), 230 m2 5.40 including tack coat as required Creak bandage to interface of m w and existing pavements 200 m 5.41 Allow to sar underface of m w and existing pavements 200 m 45 t		1.5t/m3
5.35 Allow for sub-grade preparation and testing 230 m2 5.36 Supply and place geogrid and geotextile in base of excavation 230 m2 5.37 Supply and place 290mm AP65 sub-base 55 m3 5.38 Supply and place 170 NZTA M4 AP40 basecourse + 5% comment 35 m3 5.38 Supply and place 300mm SMA 10 wearing course (MSVB), 230 m2 5.41 as drawings and specifications 230 m2 5.41 as drawings and specifications 120 m2 5.42 Crack bandage to interface of mv and existing pavements 200 m 5.43 Crack bandage to interface of mv and existing pavements 200 m 5.43 Crack bandage to interface of mv and existing pavements 200 m		1.5t/m3
5.36 Supply and place geogrid and geotextile in base of excavation 2.30 m2 5.37 Supply and place 290mm AP65 sub-base 55 m3 5.38 Supply and place 170 NZTA M4 AP40 basecourse + .5% comment 35 m3 5.38 Supply and place 070 NZTA M4 AP40 basecourse + .5% comment 35 m3 5.39 Supply and place 50mm SMA 10 wearing cours (PRV3B), 230 m2 5.41 as forming tack coat as required 230 m2 5.41 as forming tack coat as required 120 m2 5.42 Allow to saw cut and turn revising swements 200 m 5.42 Crack bandage to interface of mw and existing pavements 200 m 5.43 Crack bandage to interface of some softm SMA 10 wearing course 200 m		Assumed 0.2m depth. Earthworks @ 2l diesel at per m3 moved
5.37 Supply and place 290mm AP65 sub-base 55 m3 5.38 Supply and place 170 NZTA M4 AP40 basecourse + 15% comment 35 m3 5.38 Supply and place 070 NZTA M4 AP40 basecourse + 15% comment 35 m3 5.39 Supply and place 070 NZTA M4 AP40 basecourse + 15% comment 35 m3 5.39 Supply and place 50mm SMA 10 wearing course (PSV38), 230 m2 5.40 as forming and optic foresting 120 m2 5.41 as forming and optic foresting 120 m2 5.42 Allow to saw cut and turk meeting sevenents 200 m 5.42 Crack bandage to interface of mw and existing pavements 200 m 5.43 Crack bandage to interface of mw and existing pavements 200 m 5.44 as our cut and turk meeting pavements 200 m 5.43 Grack bandage to interface of mw and existing pavements 200 m 6.44 Otherse max 200 m	92 I	Exclude as polymer (plastic), likely to be immaterial
5.38 Supply and place 170 NZTA M4 AP40 basecourse + .5% comment 35 m3 5.39 Supply and place grade 3 chips seal 230 m2 5.40 including tack coat as required 230 m2 6.41 as drawings and specifications 120 m2 5.42 Allow to form ew concrete commercial vehicle crossing complete, 120 m2 5.42 Allow to saw cut and turn existing swements 200 m 5.43 Crack bandage to interface or m/w and existing pavements 200 m 5.44 as cut and turn existing swements 200 m 5.42 Allow to saw cut and turn existing swements 200 m 5.43 crack bandage to interface of m/w and existing pavements 200 m		based on previous research for Waka Kotahi Assuming dens ty of aggregate of 1800kg/m3 (Cl
5.39 Supply and place grade 3 chip seal 230 m2 Supply and place Somm SMA 10 wearing cours PSV(3), 34.5 t 5.40 including tack coat as required 230 m2 Concrete Commercial Vehicle Crossing 120 m2 Allow to form new concrete commercial vehicle consigning complete, 120 m2 5.41 as operitied as the spressing complete, 120 5.42 Allow to saw cut and turn existing wements 200 m 5.43 as out and turn existing wements 200 m 5.44 as out and turn existing avements 200 m		AECOM)
Supply and place 50mm SMA 10 wearing cours (IRSVB), 230 m2 5.40 including tack coars a required 230 m2 Allow to form new concrete compressing complete, 120 m2 5.41 as drawings and specifications 120 m2 5.42 Allow to saw cutting m2 45 t 5.43 Crack bandage to interface of n w and existing pavements 200 m 5.43 Crack bandage to interface of n w and existing pavements 200 m		1.5t/m3 Assuming 0.1m deep and 1.5t/m3
Concrete Commercial Vehicle Crossing Image: Commercial Vehicle Crossing complete, 5.41 as drawings and specifications 120 5.42 Saw cutting 120 5.43 Crack bandage to interface of n wand existing pavements 200 5.43 Crack bandage to interface of n wand existing pavements 200 Cheres Crack bandage to interface of n wand existing pavements 200		1.5t/m3
5.41 as drawings and specifications 120 m2 45 t 5.42 Allow to saw cut and unin existing avements 200 m 5.43 Crack bandage to interface of n w and existing pavements 200 m 0.theres 0.theres 0.theres 0.theres		
5.42 Allow to saw cut and turin existing avements 200 m 5.43 Crack bandage to interface of n w and existing pavements 200 m Others Dithers 0 m		Assuming 0.15m depth at 2.5t/m3
5.43 Crack bandage to interface of n w and existing pavements 200 m Chers Extra over for supply and p ace 50mm SMA 10 wearing course 2072 m2		Likely to be immaterial based on previous research for
Others Characterization Control Contro		Waka Kotahi Likely to be immaterial based on previous research for
Extra over for supply and p ace 50mm SMA 10 wear ng course 2,075 m2		Waka Kotahi
5.44 where higher PSV is required (from PSV56 to PSV70) 2,975 m2 223.125 t		1.5t/m3
TOTAL PAVEMENT AND SURFACING		
6.00 BRIDGES		
7:00 RETAINING WALLS		
8.00 TRAFFIC SERVICES Read-mark ros in accordance with NZTA Manual of Traffic Sinos		
Road markings in accordance with NZTA Manual of Traffic Signs and Markings Part II - Markings and TPC Manual Note		
Temporar Road Markings With reflectorized line maring		
8.01 Border line; 100mm wide 1.815 m		Likely to be immaterial based on previous research for Waka Kotahi
		Likely to be immaterial based on previous research for
		Waka Kotahi Likely to be immaterial based on previous research for
8.03 Centre line 100mm wide 3m stripe 7m gap 680 m		Waka Kotahi Likely to be immaterial based on previous research for
8.04 Continuity line; 100mm wide, 1m stripe, 3m gap 95 m		Waka Kotahi Likely to be immaterial based on previous research for
8.05 Crossing line 100mm wide 295 m		Waka Kotahi Likely to be immaterial based on previous research for
8.06 Edgeline; 100mm wide 870 m		Waka Kotahi
8.07 Limit line; 300 wide 110 m		Likely to be immaterial based on previous research for Waka Kotahi
8.08 Median bar 600 wide 300 m		
		Likely to be immaterial based on previous research for Waka Kotahi Likely to be immaterial based on previous research for

Source Schedule of quantities as provided in RFT, prepared by Beca, March 2020. Supplied by WK.

Schedule c	Df Prices Description	Quantity	Qty	Material Unit Mater C ncrete t r m3 Steel		Material Unit Asphalt t r m3		Material Unit Fuel Irko	
8.09	No stopping; 100mm wide, 1m stripe, 2m gap	1,415	m						Likely to be immaterial based on previous research Waka Kotahi
8.10	100mm wide ye low border and cross hatching to level crossing	190	m2						Likely to be immaterial based on previous research Waka Kotahi Likely to be immaterial based on previous research
	Permanent Road Markings								Waka Kotahi Likely to be immaterial based on previous research
	White reflectorised line marking								Waka Kotahi Likely to be immaterial based on previous research
8.11	Border line 100mm wide	1 815	m						Waka Kotahi
8.12	Centre line; 100mm wide	320	m						Likely to be immaterial based on previous research Waka Kotahi
8.13	Centre line; 100mm wide, continuous line; 3m stripe, 7m gap	680	m						Likely to be immaterial based on previous research Waka Kotahi
8.14	Continuity line 100mm wide 1m stripe 3m gap	95	m						Likely to be immaterial based on previous research Waka Kotahi
8.15	Crossing line; 100mm wide	295	m						Likely to be immaterial based on previous research Waka Kotahi
8.16	Edgeline 100mm wide	870	m						Likely to be immaterial based on previous research Waka Kotahi
8.17	Limit line 300 wide	110	m						Likely to be immaterial based on previous research Waka Kotahi
8.18	Median bar; 600 wide	300	m						Likely to be immaterial based on previous research Waka Kotahi
	Yellow reflectorised line marking								Likely to be immaterial based on previous research Waka Kotahi
8.19	No stopping; 100mm wide, 1m stripe, 2m gap	1,415	m						Likely to be immaterial based on previous research Waka Kotahi
8.20	100mm wide ye low border and cross hatching to level crossing	190	m2						Likely to be immaterial based on previous research Waka Kotahi
	Green pavement marking								Likely to be immaterial based on previous research Waka Kotahi
8.21	Cycleway Surface Marking	1,065	m2						Likely to be immaterial based on pre-ou-research Waka Kotahi
	Symbols Lettering etc								Likely to be immaterial based o pre ious research Waka Kotahi
8.22	Cycle lane symbol	65	no						Likely to be immaterial based on previous research Waka Kotahi
8.23	Directional arrow; combined	10	no						Likely to be immaterial based on previous research Waka Kotabi
8.24	Directional arrow; left turn	10	no						Likely to be im ate ial b sed on previous research Waka Kotah
8.25	Directional arrow, terr turn Directional arrow right turn	23	no						Likely to be in terial based on previous research Waka Kotahi
8.26	Directional arrow: straight	13	no				-	1	Likely to b im aterial based on previous research Waka Kotahi
8.27	Fire hydrant	7	no					h` •	Like to be immaterial based on previous research
8.28	Lettering "X RAIL"	4	no						Likely to be immaterial based on previous research W ka Kotahi
8.29	RRPM's	141	no						Likely to be immaterial based on previous research Waka Kotahi
8.30	Kerb top markers yellow monodirectional	96	no						Likely to be immaterial based on previous research Waka Kotahi
0.00	Road signs, gantries	30	10					KX ⁻	Waka Kotahi Likely to be immaterial based on previous research Waka Kotahi
	Supply and installation of new signs inclusive of foundations all in accordance with drawings and specifications	-							Waka Kotahi Likely to be immaterial based on previous research Waka Kotahi
8.31	Sign 1 (ADS South bound)	1	no			~			Waka Kotani Likely to be immaterial based on previous research Waka Kotahi
8.32	Sign 2 (ADS North bound)	1	no						Likely to be immaterial based on previous research Waka Kotahi
8.33	3a (re-use existing Christchurch to the right)	1	no						Likely to be immaterial based on previous research Waka Kotahi
8.34	4b (re-use existing Allenton to the right)	1	no			\mathbf{X}			Likely to be immaterial based on previous research
8.35	5a (re-use existing Timaru to the left)	1	no						Likely to be immaterial based on previous research Waka Kotahi
	5b (re-use existing Timaru to the right)	1	no						Likely to be immaterial based on previous research Waka Kotahi
	6b (re-use existing Town Centre to the Right)	1	no			- XX			Likely to be immaterial based on previous research Waka Kotahi
8.38	PW-3	7	no						Likely to be immaterial based on previous research Waka Kotahi
8.39	PW-43.3	2	no			\mathcal{S}			Likely to be immaterial based on previous research Waka Kotahi
8.40	RG-7	1	no						Likely to be immaterial based on previous research Waka Kotahi
8.41	RG-12	1	no						Likely to be immaterial based on previous research Waka Kotahi
8.42	600 dia arrow disc sign. RG-17	14	no						Likely to be immaterial based on previous research Waka Kotahi
8.43	Sign 7	14	no						Likely to be immaterial based on previous research Waka Kotahi
8.44	Sign WXL1	2	no	$\langle \rangle$	\sim				Likely to be immaterial based on previous research Waka Kotahi
8.45	Sign WXR1	2							Likely to be immaterial based on previous research Waka Kotahi
8.46	Sign WX1-L	2	Č	$\mathbf{y} = \mathbf{y}$					Likely to be immaterial based on previous research Waka Kotahi
8.40	Sign WX1-E	2	0						Likely to be immaterial based on previous research
8.47	Supply and installation of new signs fixed to fence / gate all in								Likely to be immaterial based on previous research Waka Kotahi
8.48	accordance with drawings and specifications 600 x 600mm "LOOK FOR TRAINS" sign. WX8 (a)		no						Likely to be immaterial based on previous research Waka Kotahi
8.49	600 x 600mm "EMERGENCY EXIT PLEASE PUSH GATE" sig.	8	•	N					Likely to be immaterial based on previous research Waka Kotahi
	600 x 600mm *EMERGENCY EXIT* sign. Directional Emergency		no						Likely to be immaterial based on previous research Waka Kotahi
8.50	Exit (left) (d) 600 x 600mm EMERGENCY EXIT sign. Directional merge cy Exit (right) (e)	2	no						Waka Kotani Likely to be immaterial based on previous research Waka Kotahi
8.51	Exit (right) (e) 600 dia "NO ENTRY" disc sign. RG-9 (c)		no						Waka Kotani Likely to be immaterial based on previous research Waka Kotahi
8.52		- 4	no						Waka Kotahi Likely to be immaterial based on previous research Waka Kotahi
	Traffic signals Supply and installation of new traffic signals in accordance with drawings and specifications								Waka Kotahi Likely to be immaterial based on previous research Waka Kotahi
8.53	200mm 6 Aspect Lantern with closed visor	16	no						Waka Kotani Likely to be immaterial based on previous research Waka Kotahi
8.53	200mm 6 Aspect Lantern with closed visor	10	no						Likely to be immaterial based on previous research Waka Kotahi
8.55	300mm 6 Aspect Lantern with closed visor	2	no						Waka Kotahi Likely to be immaterial based on previous research Waka Kotahi
8.56	300mm 6 Aspect Lantern with closed visor 300mm 6 Aspect Lantern with open viso	2	no						Likely to be immaterial based on previous research Waka Kotahi
8.57	Pedestrian Lantern	12	no						Likely to be immaterial based on previous research Waka Kotahi
8.58	Pedestrian push button	12	no						Likely to be immaterial based on previous research Waka Kotahi
0.00	SCATS Connection	12	10						Likely to be immaterial based on previous research Waka Kotahi
	Allow for nstar at on of E-PROM Data, testing and connect on to the SCATS system to Traffic Open tions Centre (WTOC) (Including		1						Waka Kotani Likely to be immaterial based on previous research
	Sort S ayatem to manic Oper units Centre (WTOC) (Including	1	LS						Waka Kotahi
8.59	connection with adjacent intersection)		no						Likely to be immaterial based on previous research Waka Kotahi Likely to be immaterial based on previous research
8.59 8.60	Supply and install CCTV cameras	2							Lensey to be immaterial based on previous research
	Supply and install CCTV cameras Supply and install Fibre connection with comms (including connection with adjacent intersection and level crossing)	2	LS						Waka Kotahi Likelu to be immaterial based on previous research
8.60	Supply and install CCTV cameras Supply and install Fibre connection with comms (including	2 1 1							Likely to be immaterial based on previous research Waka Kotahi
8.60 8.61	Supply and install CCTV cameras Supply and install Fibre connection with comms (including connection with adjacent intersection and level crossing) Allowance for spare ethernet cable to CCTV and communication devices Poles	2 1 1	LS						Likely to be immaterial based on previous research Waka Kotahi Likely to be immaterial based on previous research Waka Kotahi
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8.60 8.61 8.62 8.63 8.63 8.64	Supply and install CCTV cameras Supply and install Fibre connection with comms (including connection with adjacent intersection and level crossing) Allowance for spare ethernet cable to CCTV and communication devices Poles Supply and install poles including retention socket connections supply and install pole - Type 1. Including foundation Supply and install pole - Type 7. Including foundation Supply and install pole - Type 8. Including foundation Ducting Supply and install pole - Type 8. Including foundation Supply and install pole - Type 8. Including foundation	5	LS LS no no						Likely to be immaterial based on previous research Waka Kotahi Likely to be immaterial based on previous research Waka Kotahi Likely to be immaterial based on previous research Waka Kotahi Likely to be immaterial based on previous research Ukely to be immaterial based on previous research Waka Kotahi Likely to be immaterial based on previous research Waka Kotahi
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Source Schedule of quantities as provided in RFT, prepared by Beca, March 2020. Supplied by WK.

Bander Prof. Description Description <th>Source</th> <th>Schedule of quantities as provided in RFT, pr</th> <th>epared by</th> <th>Beca,</th> <th>March 2020. Sup</th> <th>oplied by WK.</th> <th></th> <th></th> <th></th> <th></th>	Source	Schedule of quantities as provided in RFT, pr	epared by	Beca,	March 2020. Sup	oplied by WK.				
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Answerstendensen 1 Answerstendensen 2 Answerstendensen <th>Code</th> <th></th> <th>Quantity</th> <th>QLY</th> <th>C Increte I C I IIIS</th> <th></th> <th>Asphalt t T HIS</th> <th>Aggregates It This</th> <th>ruei i rkg</th> <th>Likely to be immaterial based on previous research for</th>	Code		Quantity	QLY	C Increte I C I IIIS		Asphalt t T HIS	Aggregates It This	ruei i rkg	Likely to be immaterial based on previous research for
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Res Province of the control of	0.72		5	no						Likely to be immaterial based on previous research for
And Advancement	0.70	Supply and install 20 group Aldridge ATSC4 ELV Traffic Signal								Likely to be immaterial based on previous research for
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Actional for any office intervention of a part of a p	0.74			LO						Likely to be immaterial based on previous research for
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manufactor<	0.75			LO						Likely to be immaterial based on previous research for
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1000 1000 <td< th=""><th>-</th><th>outreach 10m mounting height 3m outreach.</th><th></th><th></th><th>-</th><th></th><th></th><th></th><th></th><th>No data available. Estimate provided by A COM quantity surveyor</th></td<>	-	outreach 10m mounting height 3m outreach.			-					No data available. Estimate provided by A COM quantity surveyor
NameNa	8.79	Column Type Z Energy absorbing octagonal sectional steel column with m tred	23	no	-	17.25 t				
10.1 Controls Con					-					Estimate provided y AECOM quantity surveyor
 Hardener in the second secon	8.80	Column Type V Supply and install Juma / JUSP octagonal sectional column with	5	no	-	3.75 t			1	
140 Controps 4 0 141 Controps 4 0 142 Controps 4 0 143 Controps 4 0		mitred outreach 10m mounting height 3m outreach including all]					
Answer Answer Answer Answer	8.81		8	no]				h' •	W k otahi
NameSame hardSame hardS]					Likely to be immaterial based on previous research for W ka Kotahi
 a club i constant or candid a	8.82		11	no]					Likely to be immaterial based on previous research for Waka Kotahi
interm interm interm interm interm]				くと	Likely to be immaterial based on previous research for Waka Kotahi
Bits Bits <th< th=""><th>8.83</th><th>Туре А</th><th>3</th><th>no</th><th></th><th></th><th></th><th></th><th>K N</th><th>Waka Kotahi</th></th<>	8.83	Туре А	3	no					K N	Waka Kotahi
14.0 10.00000000000000000000000000000000000]					Likely to be immaterial based on previous research for Waka Kotahi
16.8 Control 10 Contro 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 <t< th=""><th>8.84</th><th>LED LUMINAIRE</th><th>17</th><th>no</th><th>]</th><th></th><th>1</th><th>K ()</th><th></th><th>Waka Kotahi</th></t<>	8.84	LED LUMINAIRE	17	no]		1	K ()		Waka Kotahi
	8.85	LED LUMINAIRE	12	no			- <i>/</i> .X			Waka Kotahi
International internate international international international internation	8.86	4000K LED LUMINAIRE	4	no						Waka Kotahi
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14 14 14 16 1 16 20 4000000000000000000000000000000000000	9.00	Main Contractor to allow for trenching / earthworks (assume 30m,								
Build Schools	9.01	. To include for attendance during works, traffic management.	1	LS			S			
etch etch<	9.02	relocation. Liaise with Chorus to execute. (item 9.03)	10	m					40 I	
404 404 <th>9.03</th> <th>trench-</th> <th>-</th> <th>LS</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th>	9.03	trench-	-	LS						
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48.41 Social A Alexa Social A Socia A Social A Social A	9.04	trench.		Note						Assume for white for does to set. Eastheader @ 01
8.8.2 Second meansample of the second sample second sample of the second sample of the second s	9.04.1	Section A	12	m	\land ` .				24 1	diesel at per m3 moved
8.0.3 Science	9.04.2	Section B	115	m		$\mathbf{>}$			460 I	diesel at per m3 moved
884 8 8 8 0.8 1 0	9.04.3	Section C	18			N			72	diesel at per m3 moved
1 Tuch n 2 n <th></th> <th>Se ti D, E</th> <th>60</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th>ie el at p r m3 moved</th>		Se ti D, E	60							ie el at p r m3 moved
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Super of yet of motions 1 0 Super of yet of motions 1 0 Bits Rescalar of unknown existing survices no consolible of the file 0 Bits Rescalar of unknown existing survices no consolible of the file 0 Bits Rescalar of unknown existing survices no consolible of the file 0 Bits Rescalar of unknown existing survices no consolible of the file 0 Bits Rescalar of unknown existing survices no consolible of the file 0 Bits Rescalar of unknown existing survices no consolible of the file 0 Bits Rescalar of the file No.4		Trench as per EA Networks drawings WU1058a Sheet 5 Detail 🥖	13		ω					Assume 1m wide, 1m deep trench. Earthworks @ 2l
Rescate of Service NA 900 Score field and controls (-Description and controls (-Descriptio		Scope not yet def ned between EA Networks and design	1		N				2140 1	
Bits Decumendant (Res. electrical and commit) Product (Res. electrical and commit) <th< th=""><th></th><th>Relocation of Services</th><th></th><th></th><th>-</th><th></th><th></th><th></th><th></th><th></th></th<>		Relocation of Services			-					
Lastic str. based activities. Second-activities of calculated out: Inter- interve 0.7 How con- ency accorded probe. By Engineer's interaction or of the probe of p	9.06	Documentation (Gas, electrical and comms) - Provisional um		PS	-					N/A
Bit Vice Provestigning - Facility protect - factory marine ground or provide part of using provide of outsing services of the provide part of using provide of outsing services of the provide part of using provide of outsing services of the provide part of using provide of outsing services of the provide part of using part of using provide part of us		Liaise with service providers to execute identification / stand over / direct service provision.		Note]					
Ausball (hyder accession for a construction of the construction	9.07	Service investigation - locate, protect, survey and record existing		LS]					N/A
908 P obtional Sum 1 PS 009 existed producting structing of producting		limited to record / survey physical location of existing service at								
abs abs <th>9.08</th> <th>P ovisional Sum</th> <th>1</th> <th>PS</th> <th>_</th> <th></th> <th></th> <th></th> <th></th> <th>N/A</th>	9.08	P ovisional Sum	1	PS	_					N/A
9.0 service clashes - Provisional Sum 1 PS 100 LAUSE CAPNIG - - 100 Trais steading - - 100 Consest Secting - - 100 Asphalf Postparts - - 100 Stopply and instal total gaves - - 100 Target gamange and inclusters - - 100 Target gamange and inclus		stand over, identification and direct costs of un own s rvices /								
10.00 LANDSCAPING Image: Contrast of a product or vocation, mulch Image: Contrast of a product product of a product of a produ	9.09	service clashes - Provisional Sum	1	PS						N/A
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Fencing 100 <		Grassing, hydro seeding, plating, revegetation, mulch Grass seeding	2,440	m2	1					N/A
10.02 280 Rev 0 275 m Asphilf Socipatis - 10.03 7 CCC 1 bils AP20 T NZ M 4 AP20 80 m3 10.04 NZTA M/10 C/T 74 dep3 70 m2 10.05 Supply and Instal 150 x 25mm H4 timber edge batten with 50 x 50 x 200 m 1.50m 3 10.05 Supply and Instal 150 x 25mm H4 timber edge batten with 50 x 50 x 200 m 1.50m 3 10.06 Goodm H4 timber edge batten with 50 x 50 x 200 m NA 10.07 Supply and Instal 150 x 25mm H4 timber edge batten with 50 x 50 x 200 m NA 10.08 Concrete Infill (Diands) 40 mo 6 t 10.08 Concrete Infill (Diands) 40 mo NA 10.08 Concrete Infill (Diands) 10 LS MA 11.00 TRAFFIC MANAGEMENT AND TEMPORARY WORKS - - 11.00 TRAFFIC MANAGEMENT AND TEMPORARY WORKS - - 11.00 TOTAL TRAFFIC MANAGEMENT AND TEMPORARY WORKS - -<		Fencing Supply and install 1.2m gh galvan d chain-link fence on grade			-					
Asphat Footparks CCC t bils AP2 0 TNZ M 4 AP2 0 m 10.03 NZTA M/10 DG7 740 m2 10.04 NZTA M/10 DG7 740 m2 10.05 Grappi and Instal 150 / 25mm H4 timber edge bation with 50 x 50 x 20 n 10.05 Grappi and Instal 150 / 25mm H4 timber edge bation with 50 x 50 x 20 n 10.06 Fram crissings 220 n 0 10.07 Supply and Instal Padestrian Islands. Including: kerb, nosing and - - 10.06 concrete Initii (Drawing: 33720-CE-236) 550 m2 11.00 FRAFFIC MANAGEMENT AND TEMPORARY WORKS - - 11.00 FRAFFIC MANAGEMENT AND TEMPORARY WORKS - - 11.01 Fragenc Ontractor's temporary and tractal mediant media	10.02	280 Rev 0	275	m]	20.625 t				Estimate provided by AECOM quantity surveyor 19/07/21
Supply and install 150 x 25mm H4 timber edge batten with 50 x 50 x m 10.05 Goodm H4 timber edge batten with 50 x 50 x m 10.06 Pram crossings 12 no 10.07 Supply and install actile paves 40 m2 10.07 Supply and install Polestrian Islands. Including: keth, nosing and concrete Infill (Drawings 337200-CE-236) 50 m2 10.08 concrete Infill (Drawings 337200-CE-236) 550 m2 11.00 TRAFFIC MANAGEMENT AND TEMPORARY WORKS M N/A 11.00 TRAFFIC MANAGEMENT AND TEMPORARY WORKS M N/A 11.00 TRAFFIC MANAGEMENT AND TEMPORARY WORKS M N/A 11.02 contract infill (Drawings and temoval on the cluding temporary works and temoval on the LIS N/A 11.02 contract infill mode temporary works and temoval on the cluding temporary works and temoval on the LIS N/A 12.00 Store dimensity design 1 LS 12.01 Store dimensity design 1 LS 12.02 Store dimensity design 1 LS 12.02 Store dimensity design	10.03	Asphalt Footpaths 7 CCC t billis AP20 r TNZ M 4 AP20		m3	1					1.5t/m3
10.05 600mm H4 limber pags at the centres 250 m 10.06 Privan crossings 12 no. 10.07 Supply and install facile pavers 40 m2 10.08 Privan crossings 12 no. Supply and install Predesting Islands. Including: kebr, nosing and mass MA 10.08 cororeat infil (privings 3357200-CE-236) mass MA 11.00 FrageFile MANAGEMENT AND TEMPORARY WORKS mass MA 11.01 Prepare Contractor's Temporary Traffic Management Plain 1 LS 11.02 Correlation M1 Corrison Stemporary Works and removal on 1 LS 11.02 Prepare Contractor's Temporary Works and removal on 1 LS 11.02 correlation (Contractor's Temporary Works and removal on 1 LS 12.02 correlation (Contractor's Temporary Works and removal on 1 LS 12.02 preliminant Contractor's Temporary Works and removal on 1 LS 12.02 preliminant Contractor's Temporary Market and Contractor's Temporary Market and Contractor's Temporary Market and Contractor's Temporary Market and		Supply and install 150 x 25mm H4 timber edge batten with 50 x 50 x			1		1110 t			
10.07 Supply and install facility pavers 40 m2 6 t 11.01 Supply and install Pedestrian Islands. Including: keth, nosing and occrete hift (Drawings 3337200-C-236) 50 m2 11.00 concrete hift (Drawings 3337200-C-236) 50 m2 11.01 Propries Contractor's Improvancy Traffic Management Plan 1 LS 11.01 Propries Contractor's Improvancy Traffic Management Plan 1 LS management plan including temporary works and removal on 11.02 1 LS TOTAL TRAFFIC MANAGEMENT AND TEMPORARY WORKS	10.06	600mm H4 timber pegs at 1m centres Pram crossings	12	no	1					N/A
10.08 Concrete Inill (Drawings 33720/CE-236) 550 m2 TOTAL LANDSCAPING Imagement Plan	10.07		40	m2	6 t					Assuming 0.15m depth at 2.5t/m3
TRAFFIC MANAGEMENT AND TEMPORARY WORKS Imagement Plan Imagement Plan<	10.08	concrete infill (Drawings 3337200-CE-236)	550	m2						N/A
11.01 Prepare Contractor's Temporary Traffic Management Plan 1 LS management plan including temporary works and removal on 1 LS 11.02 completion 1 LS 12.00 PRELIMINARY AND GENERAL - 12.01 Exercise - 12.02 Ise etablishment 1 LS 12.03 Bite etablishment 1 LS 12.04 Exercise 1 LS 12.05 Project Signboards 1 LS 12.06 Project Signboards 1 LS 12.07 Specification 1 LS 12.08 Singhoards 1 LS 12.04 Health and Safety 1 LS 12.05 Project Signboards 1 LS 12.06 Project Signboards 1 LS 12.06 Project Signboards 1 LS 12.06 Project Signboards 1 LS 12.07 Specification 1 LS 12.08 Statements and RAM data 1 LS 12.09 Statements and RAM data 1 LS 12.00 Statements and RAM data LS										
management plan including temporary works and removal on I LS TOTAL TRAFFIC MANAGEMENT AND TEMPORARY WORKS I IVA TOTAL TRAFFIC MANAGEMENT AND TEMPORARY WORKS IVA 12.00 PRELIMINARY AND GENERAL IVA Survey, IVA 12.01 Survey, IVA 12.02 Site establishment 1 12.02 Site establishment 1 12.03 General/Section/ Clean up 1 12.04 General/Section/ Clean up 1 12.05 Project Signboards 1 12.06 Project Signboards 1 12.07 Specification 1 12.08 Istements and Safety 1 12.09 Asbuild remains, Operation, Maintenance manuals, Producer 1 12.09 Asbuild remains, Adm data 1		Prepare Contractor's Temporary Traffic Management Plan	1	LS						N/A
TOTAL TRAFFIC MANAGEMENT AND TEMPORARY WORKS Image: Constraint of the second seco		management plan including temporary works and removal on								
Survey Survey NA 12.01 Survey, set out & verify design 1 LS Fixed costs - - NA 12.02 Site establishment 1 LS 12.03 Site establishment 1 LS 12.04 Contract Insurances 1 LS 12.05 Project Signbards 1 LS 12.06 Health and Safety 1 LS 12.08 Statements and RAMM data NA	11.02	completion TOTAL TRAFFIC MANAGEMENT AND TEMPORARY WORKS	1	LS	1					N/A
12.01 Survey, set out & verify design 1 LS Fibred costs	12.00									N/4
12.02 Site establishment 1 LS 12.03 Site demobilisation / Clean up 1 LS 12.04 Contract Insurances 1 LS 12.05 Project Signboards 1 LS 12.06 Health and Safety 1 LS 12.06 Istements and RAMM data 1 LS	12.01	Survey, set out & verify design	1	LS	1					N/A
12.05 Project Signbards 1 LS 12.06 Pr g m 1 LS 12.07 Specification 1 LS 12.08 Health and Safety 1 LS 12.09 Health and Safety 1 LS As-build Trawings, Operation, Maintenance manuals, Producer 1 LS 12.09 Health and Safety 1 LS		Site establishment	1	LS	1					N/A
12.07 Specification 1 LS 12.08 Health and Safety 1 LS As-built drawings, Operation, Maintenance manuals, Producer 1 LS 12.09 Statements and RAMM data 1 LS	12.04	Contract Insurances	1							N/A
12.08 Health and Safety 1 LS As-built drawings, Operation, Maintenance manuals, Producer 1 LS 12.09 Statements and RAMM data 1 LS	12.06	Prg m			1					N/A
12.09 Statements and RAMM data 1 LS N/A	12.07	Health and Safety	1		1					
12.10 privincial companyice and Resont I LS	12.09	Statements and RAMM data	1		-					N/A
	12.10	Anwi-Kail Compliance and ItalS00	1	LS	L	1		1	I	IN M

Source Schedule of quantities as provided in RFT, prepared by Beca, March 2020. Supplied by WK.

	ochedule of quantities as provided in RT 1, pr		500,	_		Matorial Link	Material 11-15	Matorial Link	1
Schedule Code	DESCRIPTION	Quantity	Qty	Material Unit C ncrete t r m3			Material Unit Aggregates t r m3	Material Unit Fuel I r ko	Assumpti ns/ N tes
12.11	Description Network Maintenance	1	LS LS			Asphare re r m5	Auguegates t / IIIS		N/A
	Reporting Allow for any items not included above that the contractor deems	1		1					N/A
12.13	necessary to complete the works	1	LS						N/A
	TOTAL PRELIMINARY AND GENERAL			1					N/A N/A
13.00	EXTRAORDINARY CONSTRUCTION COSTS								N/A N/A
	KiwiRail Works Cut yard track rail and remove to assigned rail lay down area								N/A
	including all items down to sub-base level; a I works in accordance w th drawing 3337200-CE-015, specifications and KiwiRail								
13.01	requirements Demolition of existing KiwiRail Depot Building including al slabs and	1	LS						N/A
	foundations, termination of services and disposal off s te -								
13.02	anorovimately 245m2	1	LS						N/A N/A
	New KiwiRail Depot Building New KiwiRail Depot Building - 30m by 8.4m in accordance with								
13.03	Drawing CE-291 and scope of works as per Schedule 5 1.8m high galvanised chainlink fence including appropriate stays	1	PS						N/A Estimate provided by AECOM quantity surveyor
13.04	and posts founded in concrete footings Veh c e gates - up ift ex sting KiwiRail depot compound gates, store	208	m	-	15.6 t				19/07/21
	and reinstall including mounting to new gate posts (Drawing CE-								
13.05	291)	2	no						N/A
13.06	Pedestrian gate - supply and install new 1.2m wide chain ink gate	1	no	-					N/A
	Temporary Depot Works								
	room in accordance with Drawing CE-291 and scope of temporary works as per Schedule 5 until receipt of the Code of Compliance for								
	the new permanent depot including relocation from old depot into								
	the temporary depot and from temporary depot to the new permanent depot and including provision (and later disconnection)	1	LS						
	of all necessary temporary services such as power, waste water,		1						
13.07	water, data, etc. until receipt of Code of Compliance for the new permanent depot.								N/A
	TOTAL EXTRAORDINARY CONSTRUCTION COSTS								
14.00	DAYWORKS								
	All items in this section are PROVISIONAL		Note						
14.01	Labour Skilled (e.g. Labourer or Concrete worker)	200	hr	1					N/A
14.02 14.03	Drain layer Leading hand	200 200	hr hr	1					N/A NA
14.04 14.05	Working foreman Traffic management crew	200 200	hr	1				h ' -	N/A
14.06	Mobile closure	20	day	1					N/A
14.07 14.08	Semi-static closure Lane closure	20 20	day day	1					N A
14.09	Shoulder closure VMS	20 20 20	day	1					N/A
14.10	Pan Priioalte)	20	day						IN/A
	latest edition of the Civil Contractors New Zealand Plant Hire Rates (The Blue Book) and calculate the total amount into the tender							K N –	
14.12	amount (e.g. \$10 000 x 90% - \$9 000 total).	20 000	%						N/A
	Note that Blue Book rates are inclusive of the cost of fuel maintenance repairs machine operator on-site Overheads and Off-					~		•	
	site Overheads and Profit		Note	-					N/A
14.13	Working Day Rate Rate per working day (PROVISIONAL)	20	day						N/A
	Valuation of Variations from Net Costs Allow the Provisional Sum for Variations to be valued from Net								
14.14	Costs % for On-s te Overheads appl cable to Variations to be valued from	1	PS						N/A
14.15	New Costs (Provisional Item)	200,000	%						N/A
14.16	% for Off-site Overheads applicable to Variations to be valued from New Costs (Provisional Item) TOTAL DAYWORKS	200 000	%			$(\land \land)$			N/A
	TOTAL DAYWORKS	Tots		170 +	ET	6 587	10.531	5.607	-
	CE MAN			NAT	ANIT				
	$\langle \cdot \rangle$								