

14 September 2018

Victorian Planning Authority
Attn: Ben Hawkins
Level 25, 35 Collins Street
Melbourne VIC 3000

Dear Ben,

**RE: SUBMISSION TO AMENDMENT GC102
DONNYBROOK WOODSTOCK ICP – EXHIBITION VERSION AUGUST 2018
PEPPERCORN HILL ESTATE**

We refer to the above matter and confirm that DFC (Woodstock) Pty Ltd is a related entity of Dennis Family Corporation (DFC) and is in a development agreement with the owners of the following properties:

- 1145 Donnybrook Road, Donnybrook;
- 1305 Donnybrook Road, Donnybrook; and,
- 1181 Merriang Road, Woodstock.

DFC (Woodstock) Pty Ltd is the project manager for the subdivision and development of the entirety of the three above properties, collectively known as Peppercorn Hill Estate. We confirm that DFC (Woodstock) Pty Ltd is authorised to make this submission on behalf of both DFC and the landowners¹.

Our submission to exhibition of Amendment GC102 is summarised in this letter and is expanded upon by the accompanying attachments:

- Peppercorn Hill ICP Estimates prepared by DPM Consulting Group (September 2018);
- Peppercorn Hill ICP Drawings prepared by DPM Consulting Group (September 2018);
- Functional Layout Plans prepared by Traffix Group;
- Opinion of Probable Cost and Layout Option - SR-03 & SR-05 prepared by Spiire (June 2018);
- Comparative Analysis: Opinion of Probable Cost – SR-03 & SR-05 prepared by Spiire (September 2018).

Our substantive submissions in relation to the Peppercorn Hill development are outlined as follows (refer overleaf):

¹ Refer to DFC Development Agreements previously circulated to the VPA for confirmation.



Project Items

Item: RD-05 – Koukoura Drive

Description: Construction of a secondary arterial road (2 lane carriageway), excluding intersections (interim treatment)

Cost apportioned to ICP: \$3,838,544

DFC Comments

- i. RD-05 Koukoura Drive, is a future secondary arterial road that will extend north-south from Donnybrook Road to Gunns Gully Road. The interim road cross section is funded by the ICP and is proposed to be delivered as a works-in-kind (WIK) item by DFC (Woodstock) Pty Ltd. Construction of Koukoura Drive will commence within 1145 Donnybrook Road, during the initial phase of the Peppercorn Hill development.
- ii. We hold concerns that the concept drawing and cost sheet contained within the August 2018 exhibition version of the ICP (the ICP), and used as the basis of the RD-05 benchmark costing, is inconsistent with the requirements of the Donnybrook-Woodstock Precinct Structure Plan (the PSP) and the design prepared by Traffix Group and DPM Consulting on behalf of DFC (Woodstock) Pty Ltd. The following discrepancies are highlighted:
 - a. The benchmark plan produced by Cardno (Dwg. No. V170524-CI-DWG-2002) includes a 9.0 metre carriageway measured between face of kerb, with 7.0 metre traffic lanes and 1.0 metre shoulders each side. A 2.0 metre wide shared path is included on both sides.
 - b. The 'Secondary Arterial – Interim Option 2' cross section contained within the PSP and the enclosed design (referred to Dwg. No. G18040D-5/10) both include two 3.5 metre wide carriageways with a central median.
 - c. The enclosed design includes the ultimate kerb and channel along the outer edges of the carriageway, interim medians along the inner edge and 2.0 metre wide shoulders. Unlike the benchmark plan, the proposed design includes 3.0 metre shared path/bike lane on both sides (refer to enclosed Drawing No. G18040P-10).
- iii. We note that Condition 4 v) of Planning Permit 717349 requires the interim Koukoura Drive to consist of the outer two lanes only (as per the PSP and proposed design). This requirement does not reflect the design costed within the ICP.
- iv. The One Mile Grid interim intersections plans contained within the ICP do not specify a definitive limit of works. It is therefore unclear if works to transition back to a single carriageway are included as works-in-kind credit. The enclosed design eliminates the need for transition works and potential throw-away costs.
- v. We note that the undefined limit of works has likely had a flow on affect to adjacent items, influencing the benchmarked costs of IN-04, IN-07, IN-11, IN-12 and IN-15.
- vi. Given the discrepancies described above and the undefined limit of works, it is clear that the benchmark costs utilised by the VPA do not accurately reflect the expected construction costs. As summarised on Pages 1 & 3-5 of the enclosed Estimates prepared by DPM Consulting, the delivery of the three nominated sections of Koukoura Drive are expected to cost \$7,678,309, well above the allowance provided within the ICP.
- vii. We submit that the ICP is required to be modified, including preparation of revised concept plans and a cost sheet that accurately reflects the expected cost to deliver item RD-05. It

is suggested that the enclosed costings and concept plans be used as the basis of this revision.

Item: RD-02 – Gunns Gully Road

Description: Construction of a primary arterial road (2 lane carriageway), excluding intersections (interim treatment)

Cost apportioned to ICP: \$8,538,250

DFC Comments

- i. RD-02 Gunns Gully Road, is a future primary arterial road that will extend east-west from the eastern edge of Sydney-Melbourne Railway overpass to the E6 / OMR reservation. A 41 metre wide interim cross section is funded by this ICP and is proposed to be delivered as a WIK item by DFC (Woodstock) Pty Ltd. Gunns Gully Road is expected to be constructed during the latter phases of the Peppercorn Hill development.
- ii. Approximately 1,028 linear meters of RD-02 will be found within or adjacent to the subject site, extending from the APA Gas Easement to the E6 / OMR reservation.
- iii. As detailed at Pages 1-2 of the enclosed Estimates, DPM Consulting estimates a project cost of \$5,278,050 (\$5,139 \$/lm) for the extent of RD-02 within or adjacent to the subject site. This figure varies significantly from the ICP figure, which allows \$8,538,250 for the entirety of RD-02.
- iv. As detailed previously, we hold concerns that the ICP does not specifically define the limit of works attributable to this item. Further we note that Table 5 of the ICP provides a project item cost per hectare (NDHA) of \$8,267, which does not appear to correlate with the expected length of RD-02, the applicable cost sheet within the ICP (only 800 metres appears to be costed) or the linear rate determined by DPM Consulting.
- v. We suggest that the ICP is updated to include a defined scope/limit of works, with the enclosed estimates and concept plans used as the basis to prepare an updated project costing (as required).

Items: IN-04, IN-07, IN-11, IN-12 & IN-15

Description: Intersection projects – Various (interim)

Cost apportioned to ICP: Various

DFC Comments

- i. The ICP nominates five (5) intersections within Peppercorn Hill estate. Each intersection is proposed to be delivered by DFC (Woodstock) Pty Ltd as WIK (subject to project/funds apportionment).
- ii. The interim intersection plans within the ICP (as prepared by One Mile Grid) do not identify a definitive limit of works. As detailed within this submission, this omission has led to a number of uncertainties concerning costing allocation.
- iii. A number of inconsistencies are apparent when comparing the ICP interim intersection plans and the enclosed drawings prepared on behalf of DFC (which have been subject to preliminary assessment by both Council and VicRoads). Summarised as follows:
 - a. All ICP plans appear to show shared paths only, whilst the requirements of the PSP differ between a combination of shared paths, footpaths and bike lanes.
 - b. Many of the interim intersection plans within the ICP (i.e. IN-04, IN-12 and IN-15) have been designed based on a 60 km/h speed limit, rather than the 80 km/h limit requested of DFC by VicRoads.

- c. We note that the benchmark costings do not allow for the potential relocation of services, as is expected to be required along Donnybrook Road and Merriang Road (i.e. IN-04 & IN-12). The ICP costings should be updated to provide an additional line item, as appropriate.
- d. **IN-04 (Donnybrook Road and Koukoura Drive)**
 - i. IN-04 allows for the land acquisition on the south side of Donnybrook Road and construction of a signalised four-way intersection (costs 25% apportioned to the Shenstone Park PSP). It is unlikely that land acquisition will take place in the foreseeable future and the proposed concept plans (refer Dwg. No. G18040D-12/22) make no allowance for the extent of works which are shown in the ICP.
 - ii. The interim ICP linework shows a shoulder rather than a permanent kerb and channel on the outer sides of Koukoura Drive, north of all intersections (due to the ICP's inclusion of a single carriageway).
 - iii. The proposed plans do not propose kerb along the entire length of Donnybrook Road, only left-hand turning lanes.
- e. **IN-07 (Koukoura Drive and Hayes Hill Boulevard)**
 - i. The ICP interim plan and the benchmark example is generally consistent with the proposal, noting that Koukoura Drive is proposed to include a dual carriageway (refer to Traffic Group Dwg. No. G18040D-24).
- f. **IN-11 – Koukoura Drive and Cameron Street**
 - i. The ICP (and interim plans) designated Cameron Street as an arterial road, whilst the PSP nominates this road as a Boulevard Connector Street west of Koukoura and a Connector Street east of Koukoura. This is an error which requires correction.
 - ii. Given the above, the ICP cost sheet and cross section attributable to IN-11 (and Cameron Street more generally) is inconsistent with the PSP and the proposed concept drawings (refer Dwg. No. G18040D-06).
 - iii. The ICP does not include a benchmark example for an arterial/connector intersection (i.e. east leg of Cameron Street & Koukoura Drive intersection).
- g. **IN-12 – Cameron Street and Merriang Road**
 - i. The ICP interim plan is inconsistent with the proposal due to disparities between the adopted design speed (refer Dwg. No. G18040-K-02).
 - ii. We note that the ICP does not include any benchmark examples considered comparable to this intersection type.
- h. **IN-15 – Koukoura Drive and Gunns Gully Road**
 - i. The ICP interim plan is inconsistent with the proposal due to disparities between the adopted design speed and chosen design detail (refer Dwg. No. G18040D-02).
 - ii. It is noted that the northern leg is an arterial/connector intersection with no comparable benchmark example.

Item: BR-03: Hayes Hill Boulevard & BR-04: Cameron Street

Description: Construct Growling Grass Frog habitat suitable culvert/bridge crossing of Darebin Creek – 2 lane culvert crossing (ultimate)

Cost apportioned to ICP: \$795,000 (each)

DFC Comment

- i. The PSP requires the construction of two “Growling Grass Frog Friendly” culvert bridge crossings to be constructed across Darebin Creek, one found at Hayes Hill Boulevard and the second at Cameron Street. Project items BR-03 and BR-04 are proposed to be delivered by DFC (Woodstock) Pty Ltd as WIK, subject to adequate funding allocation within the final ICP.
- ii. Subject to the consent and approval of Council, DELWP and Melbourne Water, at this point in time DFC propose the construction of two Bebo style arch crossing structures. Consultation with Melbourne Water and DELWP has found that this crossing treatment is preferred as it leaves a large extent of the waterway base untouched, provides a greater opening for the passage of water (thus reducing the risk of blockage) and offers greater movement opportunities for Growling Grass Frogs (GGF) to pass through the BCS corridor (refer to concept designs prepared by DPM Consulting, Dwg. No. 1941/M/GC1 & 1941/M/GH1). We note that an alternative GGF friendly culvert design is in the process of being prepared and may be lodged with the VPA under separate cover.
- iii. The ICP includes a box culvert concept drawing (Dwg. No. V170524-CI-DG2039) which has been costed for the purposes of BR-03 and BR-04. This concept plan is highly inconsistent with the requirements of the PSP and the expectations of Council and relevant stakeholders.
- iv. The ICP has grossly underestimated the cost to deliver a GGF suitable culvert/bridge crossing which meets the requirements of relevant stakeholders and ultimately would be approved for construction.
- v. As detailed by the analysis prepared at Pages 12-15 of the enclosed Estimates, DPM Consulting has estimated a project cost of \$2,498,609 to deliver BR-03 and \$2,336,748 to deliver BR-04 (i.e. GGF Bebo arch crossings, GGF culvert crossings have been found to be marginally cheaper). The detailed estimates have been found to exceed the benchmark costing by at least \$1,541,748 per item.
- vi. We note that items BR-03 and BR-04 were originally included as supplementary items within the ‘Interim ICP’ released in July 2018 and as such were thought to be subject to individual detailed costings. It is clear the benchmark costings contained within the ICP are manifestly unsuitable and revised costings (in accordance with the enclosed concept plans and estimates) are required to be included within a revised ICP.

Item: SR-03 – Darebin Creek Sports Reserve

Description: Construction of sports fields (Soccer) and construction of multi-purpose pavilion (located near LTC-4)

Cost apportioned to ICP: \$12,057,000

DFC Comment

- i. SR-03 is an 8-hectare sports reserve found to the east of Darebin Creek and north of Hayes Hill Boulevard. The PSP nominates the construction of three (3) soccer pitches, a community garden and a multi-purpose pavilion (with 6 change rooms and a 60m² community meeting space) within this reserve. At this point in time SR-03 is *not* anticipated

to be delivered by DFC (Woodstock) Pty Ltd as a WIK item due concerns regarding funding allocation and cost risk.

- ii. Spiire have prepared an Opinion of Probable Costs (OPC) and Layout Plan (June 2018) of SR-03 based on the parameters outlined by the PSP. This analysis has found that the expected delivery cost far exceeds the funding allocation within the exhibited ICP.
- iii. A second costing (September 2018) has been prepared by Spiire to provide a like for like comparison against the benchmarked cost and allowances contained within the ICP (as per cost sheets 40 & 43). The benchmarked costs have generally found to be under estimated due to omission of a number of items and adoption of rates lower than industry standards. Refer to the enclosed OPC and highlighted items contained within for further information.
- iv. We suggest that the benchmark figures contained within the ICP are updated to generally reflect the scope and rates outlined by Spiire.

Item: SR-05 – Koukoura Drive Sports Reserve

Description: Construction of sports fields (Tennis, Netball and Lawn Bowls) and construction of multi-purpose pavilion (located near LTC-1)

Cost apportioned to ICP: \$12,069,990

DFC Comment

- i. SR-05 is an 8.01 hectare sports reserve found to the east of Koukoura Drive Creek and north of LTC-1. The PSP nominates the construction of two (2) lawn bowls pitches, six (6) tennis courts, a community garden, a play skate facility, eight (8) netball courts with a pavilion and a six (6) court indoor recreation centre within this reserve. At this point in time SR-05 *is not* anticipated to be delivered by DFC (Woodstock) Pty Ltd as a WIK item due concerns regarding funding allocation and cost risk.
- ii. As above, Spiire have prepared two sets of costings which provide an analysis of the (aspirational perhaps) requirements of the PSP and the allowances made by the exhibited ICP. A copy of these costings as they relate to SR-05 are enclosed.
- iii. The OPC's prepared by Spiire have found that there is a substantial discrepancy between the ICP allowance and expected delivery costs, indicating that the full requirements of the PSP will not be able to be delivered as intended.
- iv. We suggest that the benchmark figures contained within the ICP are updated to generally reflect the allowances and rates outlined by Spiire.

In summary, we are of the view that a number of matters require further clarification, while additional work is required to prepare revised benchmark costings which reflect the project items to be delivered as part of Peppercorn Hill estate and the wider precinct.

We note that is our intention to undertake further detailed design work in respect to many of the infrastructure items discussed within this submission. As such, should the Minister appoint a Panel we reserve the right to make a further submission on the matters included herein, and any other matter relevant to proposed Amendment GC102.

Further to prior correspondence, we confirm our view that the land commonly described as Hayes Hill Reserve should be included within the public land provision of the final ICP. Acknowledging the terms of reference of GC102, it is our intention to continue to pursue this matter separately and look forward to ongoing discussions with the VPA and the City of Whittlesea.

Peppercorn Hill ICP Estimates

PRELIMINARY ESTIMATE OF DEVELOPMENT COSTS | DONNYBROOK/WOODSTOCK ICP

SUMMARY SHEET ROAD, INTERSECTION AND PEDESTRIAN CROSSING INFRASTRUCTURE

DATE: 14.09.18

DPM REF: 1941/M/A(iv)

VER 1.2

SCHEDULE 1: ROAD, INTERSECTION AND PEDESTRIAN CROSSING INFRASTRUCTURE

ITEM	DESCRIPTION	RD-02	RD-05-i	RD-05-ii	RD-05-iii	RD-05 (Tot)	IN-04	IN-07	IN-11	IN-15	IN-12	PED-03	TOTAL
A	Project and Program Management	\$ 194,035	\$ 148,909	\$ 65,433	\$ 67,965	\$ 282,307	\$ 134,444	\$ 122,091	\$ 132,224	\$ 103,372	\$ 45,502	\$ 2,488	\$ 1,104,734
B	Design and Investigation	\$ 485,088	\$ 372,273	\$ 163,583	\$ 163,583	\$ 699,438	\$ 336,110	\$ 305,226	\$ 330,560	\$ 258,430	\$ 113,754	\$ 10,118	\$ 2,753,074
C	Authority Fees	\$ 136,123	\$ 106,791	\$ 47,531	\$ 49,177	\$ 203,500	\$ 119,277	\$ 108,777	\$ 117,390	\$ 92,866	\$ 43,676	\$ 7,050	\$ 896,036
D	Construction	\$ 3,880,700	\$ 2,978,180	\$ 1,308,661	\$ 1,359,303	\$ 5,646,143	\$ 2,688,882	\$ 2,441,811	\$ 2,644,477	\$ 2,067,437	\$ 910,035	\$ 165,875	\$ 22,210,802
	TOTAL A - D	\$ 4,695,945	\$ 3,606,152	\$ 1,585,208	\$ 1,640,028	\$ 6,831,388	\$ 3,278,713	\$ 2,977,905	\$ 3,224,650	\$ 2,522,105	\$ 1,112,967	\$ 185,531	\$ 26,964,647
E	CONTINGENCY	\$ 582,105	\$ 446,727	\$ 196,299	\$ 203,895	\$ 846,921	\$ 403,332	\$ 366,272	\$ 396,671	\$ 310,116	\$ 136,505	\$ 16,588	\$ 3,323,327
F	PROJECT BUDGET												
	Total Estimate	\$ 5,278,050	\$ 4,052,879	\$ 1,781,507	\$ 1,843,923	\$ 7,678,309	\$ 3,682,046	\$ 3,344,177	\$ 3,621,322	\$ 2,832,220	\$ 1,249,473	\$ 202,119	\$ 30,287,974

SCHEDULE 2: CREEK CROSSING INFRASTRUCTURE (GGF BEBO ARCHES)

ITEM	DESCRIPTION	BR-03A	BR-04A	TOTAL
A	Project Management @ 5%	\$ 91,341	\$ 85,412	\$ 176,753
B	Design and Investigation @ 8 %	\$ 242,054	\$ 226,341.80	\$ 468,395
C	Authority Fees @ 3.25 %	\$ 64,372	\$ 60,518	\$ 124,889
D	Construction (inc. 15% contingency)	\$ 1,826,820	\$ 1,708,240	\$ 3,535,060
E	15% Contingency	\$ 274,023	\$ 256,236	
	PROJECT BUDGET (A-D)			
	Total Estimate	\$ 2,498,609	\$ 2,336,748	\$ 4,835,357

SCHEDULE 3: CREEK CROSSING INFRASTRUCTURE (GGF CULVERTS)

ITEM	DESCRIPTION	BR-03C	BR-04C	TOTAL
A	Project Management @ 5%	\$ 89,420	\$ 77,631	\$ 167,051
B	Design and Investigation @ 8 %	\$ 236,962	\$ 205,722	\$ 442,684
C	Authority Fees @ 3.25 %	\$ 63,123	\$ 55,460	\$ 118,583
D	Construction (inc. 15% contingency)	\$ 1,788,394	\$ 1,552,618	\$ 3,341,012
E	15% Contingency	\$ 268,259	\$ 232,893	
	PROJECT BUDGET (A-D)			
	Total Estimate	\$ 2,446,158	\$ 2,124,323	\$ 4,570,482

NOTES

- 1 All construction rates adopted are based on preecedent tender rates typical of the Donnybrook/Woodstock Area.
- 2 Earthworks are based on approximate calculations as no level design is available
- 3 Cost does not include southern leg of intersection IN-04 (Koukoura Drive/Donnybrook Rd)
- 4 Soft spot rectification - Taken as 20% of sub-base pavement
- 5 Rock excavation - Assume 50% of sub-base pavement
- 6 Pavement - Assume deep lift asphalt pavement
- 7 Subsoil drains - Assume same as kerb and channel
- 8 Drainage - Assume 375 to 525 DIA RCP pipes
- 9 Side entry & junction pits - Based on 40-60 m intervals
- 10 Light pole - Based on 80m intervals
- 11 No allowance for electircal kioks
- 12 Landscaping costs based on figures provided by Spiire (23.04.18)
- 13 Pedestrian Signals derived from the Wyndham North DCP.
- 14 No service relocations have been allowed for
- 15 Creek crossing costs exclude lanscaping costs



PRELIMINARY ESTIMATE OF DEVELOPMENT COSTS | DONNYBROOK/WOODSTOCK ICP

WORKS Gunns Gully Road from APA Gas Easement to OMR		Length:	1,027	lm	DATE: 18.06.18	
ICP REF RD-02		Area:	14,079	sq.m	DPM REF: 1941/M/A(iv)	
PLANS G18040-01-D (Traffix Group)			1.408	ha	VER 1.0	
ITEM	DESCRIPTION	QUANTITY	UNIT	RATE	AMOUNT	SUBTOTAL
A	Project and Program Management (%)					\$ 194,035
	Project Management		3.00%		\$ 116,421	
	Project scoping, planning, scheduling, monitoring, reporting and commissioning					
	Management of preconstruction activities, development of tender documents and management of contracts					
	Managing external interfaces, including community liaison, environmental issues, traffic issues etc.					
	Records management					
	Program Administration		2.00%		\$ 77,614	
B	Design and Investigation (%)					\$ 485,088
	Traffic Investigations & Functional Design		0.85%		\$ 32,986	
	Cadastral and Engineering Survey		1.20%		\$ 46,568	
	Geotechnical investigations Pavement Investigations and Design		1.20%		\$ 46,568	
	Environmental Investigations				\$ 0	
	Landscape Design		1.00%		\$ 38,807	
	Electrical & Public Lighting Design		1.50%		\$ 58,211	
	Civil Preliminary and Final Design		4.25%		\$ 164,930	
	Construction Management & Superintendency		2.50%		\$ 97,018	
C	Authority Fees					\$ 136,123
	Whittlesea City Council Checking & Supervision		3.25%		\$ 126,123	
	VicRoads Plan Checking		NA		\$ 0	
	Ausnet Public lighting and electrical design checking (<i>assumes 2 stages either side of Koukoura Dr</i>)	2	Item	\$ 5,000	\$ 10,000	
D	Construction					\$ 3,880,700
1	PRELIMINARIES					\$ 167,500
1.1	Site establishment (e.g. Site facilities, security fencing, storage sheds etc.)	1	Item	\$ 75,000	\$ 75,000	
1.2	Site management & supervision including QA	25	wks	\$ 2,500	\$ 62,500	
1.3	Traffic Management	1	Item	\$ 30,000	\$ 30,000	
2	DEMOLITION					\$ 23,766
2.1	Trees	3	No	\$ 1500	\$ 4,500	
2.2	Strip asphalt from existing pavement	0	m²	\$ 5	\$ 0	
2.3	Removal of existing fencing	1,027	Lm	\$ 18	\$ 18,486	
2.4	Break out & remove "No Road" sign & concrete edge strip.	2	Item	\$ 390	\$ 780	
3	EARTHWORKS (VERTICAL ALIGNMENT NOT AVAILABLE)					\$ 568,000
3.1	Stripping topsoil (150mm) (included in excavation below)		m²	\$ 6	\$ 0	
3.2	Excavation and removal	9,100	m³	\$ 30	\$ 273,000	
3.3	Filling	0	m³	\$ 15	\$ 0	
3.5	Import Fill material	5,000	m³	\$ 45	\$ 225,000	
3.6	Soft spot rectification/Unsuitable Subgrade (NDCR)	1,000	m³	\$ 70	\$ 70,000	
4	PAVEMENT					\$ 1,560,795
4.1	Deep lift asphalt 175 mm (Type H class 320 upper layer 40 mm deep and Type SI lower layer 135 mm deep)	10,900	m²	\$ 85	\$ 926,500	
4.2	Sub Base 150 mm (Size 20 mm 3% CTCR)	15,260	m²	\$ 25	\$ 381,500	
4.3	Lower Sub Base 150 mm (Class 4 Size 20 mm CR)	15,260	m²	\$ 10	\$ 152,600	
4.5	Shoulder - full depth pavement	691	m²	\$ 145	\$ 100,195	
4.6	Rock excavation & sub-surface remediation 150mm (included in 3.6 above)	0.00	m²	\$ 70	\$ 0	
5	DRAINAGE					\$ 493,260
5.1	Subsoil drains 100mm dia - screenings	1787	Lm	\$ 30	\$ 53,610	
5.2	Subsoil drains 100mm dia - no fines conc	0	Lm	\$ 45	\$ 0	
5.3	375 RCP (Class 3 Pipe Class 2 CR) @ 0-1.5 m deep	120	Lm	\$ 200	\$ 24,000	
5.4	450 RCP (Class 3 Pipe Class 2 CR) @ 0-1.5 m deep	612	Lm	\$ 275	\$ 168,300	
5.5	525 RCP (Class 3 Pipe Class 2 CR) @ 0-1.5 m deep	462	Lm	\$ 350	\$ 161,700	
5.6	Grated side entry pits as per EDCM 603 @ 0-1.5 m deep	25	No	\$ 2,500	\$ 62,500	
5.7	Junction pits (600 X 900) as per EDCM 605 @ 0-1.5 m deep	10	No	\$ 2,000	\$ 20,000	
5.8	Drainage Density Tests	30	No	\$ 105	\$ 3,150	
5.8	Allowance to modify drainage to ultimate location	0	item	\$ 50,000	\$ 0	
6	CONCRETE WORKS					\$ 144,989
6.1	Kerb &channel - SM1 300	0	Lm	\$ 32	\$ 0	
6.2	Kerb &channel - SM2 600	1766	Lm	\$ 40	\$ 70,640	
6.3	Kerb &channel - SM3 600	159	Lm	\$ 40	\$ 6,360	
6.4	Edge Strip (200 mm)	21	Lm	\$ 34	\$ 714	
6.5	Bike Paths (3.0m wide,125 mm, residential, as per EDC 401) - <i>Bike Path is on-road</i>	0	Lm	\$ 135	\$ 0	
6.6	Footpaths (1.5m wide,125 mm, residential, as per EDC 401)	1,035	Lm	\$ 65	\$ 67,275	
6.7	Laybacks and tactile pavers	0	m²	\$ 850	\$ 0	
6.8	10m concrete maintenance area end of all islands	0	m²	\$ 85	\$ 0	
6.9	Additional Shared Paths	0	Lm	\$ 130	\$ 0	
7	TRAFFIC SIGNAL WORKS		NA		\$ -	\$ -
8	SIGNAL MAINTENANCE (10 YEARS) by Road Authority		NA		\$ -	\$ -
9	ELECTRICAL, PUBILC LIGHTING & TELECOMMUNICATIONS					\$ 393,710
9.1	Light pole (1-way) and luminous lights		No	\$ 8,000	\$ 0	
9.2	Light pole (2-way) and luminous lights to accord with ultimate carriage way	15	No	\$ 13,000	\$ 195,000	
9.3	JUP lighting single		No	\$ 4,000	\$ 0	
9.4	JUP lighting dual		No	\$ 5,000	\$ 0	
9.5	Trenching and backfilling for cabling including pole excavation	3200	Lm	\$ 26	\$ 83,200	
9.6	Cabling and PVC conduits (63, 100 & 150 mm dia) for median lighting	2200	Lm	\$ 25	\$ 53,900	
9.7	Service pit installation	25	Item	\$ 240	\$ 6,000	
9.8	Electrical connection	2	Item	\$ 15,000	\$ 30,000	
9.9	Excavation of Telecom conduit trenches (Comms provider to supply cable)	985	lm	\$ 26	\$ 25,610	
10	LANDSCAPING WORKS					\$ 437,580
10.1	Landscape Treatment including trees, planting and lawn installation.	845	lm	\$ 450.00	\$ 380,250	
10.2	Vehicle exclusion Fencing	637	No	\$ 90.00	\$ 57,330	
10.3	Landscape maintenance (including watering of all trees to maintain healthy establishment)	9%	rate		\$ 39,382	
11	SIGNAGE	1	item	\$ 15,000	\$ 15,000	\$ 15,000
12	LINEMARKING	1	item	\$ 40,000	\$ 40,000	\$ 40,000
13	SERVICE RELOCATION					\$ 0
13.1	NA		Item			
14	ENVIRONMENTAL CONTROLS (To comply with EPA guidelines for Major Construction Sites & EPA Publication 960)	1	item	\$ 35,000	\$ 35,000	\$ 35,000
15	MISCELLANEOUS					\$ 1,100
15.1	Existing Road outside of new road pavements	NA				
#	Strip asphalt		m²	\$ 5	\$ -	
#	Recycle FCR to stockpile		m³	\$ 10	\$ -	
#	backfill with structural fill		m³	\$ 12	\$ -	
15.2	PSMs	2	item	\$ 550	\$ 1,100	
16	PROVISIONAL SUM - DAYWORK		item		\$ -	\$ -
	TOTAL A + B + C + D					\$ 4,695,945
E	Contingency					
	Contingency (15% of C)				15%	\$ 582,105
F	PROJECT BUDGET					
	Total Estimate					\$ 5,278,050
	Total Estimate per linear metre (\$/lm)					\$ 5,139



PRELIMINARY ESTIMATE OF DEVELOPMENT COSTS | DONNYBROOK/WOODSTOCK ICP

WORKS Koukoura Drive Between Donnybrook Road and Hayes Hill Blvd		Length: 622 lm	DATE: 17.05.18			
ICP REF RD-05-i		Area: 21,100 sq.m	DPM REF: 1941/M/A(iv)			
PLANS G18040-01-D (Traffix Group)		2.110 ha	VER 1.1			
ITEM	DESCRIPTION	QUANTITY	UNIT	RATE	AMOUNT	SUBTOTAL
A	Project and Program Management (%)					\$ 148,909
	Project Management		3.00%		\$ 89,345	
	Project scoping, planning, scheduling, monitoring, reporting and commissioning					
	Management of preconstruction activities, development of tender documents and management of contracts					
	Managing external interfaces, including community liaison, environmental issues, traffic issues etc					
	Records management					
	Program Administration		2.00%		\$ 59,564	
B	Design and Investigation (%)					\$ 372,273
	Traffic Investigations & Fucntional Design		0.85%		\$ 25,315	
	Cadastral and Engineering Survey		1.20%		\$ 35,738	
	Geotechnical investigations Pavement Investigations and Design		1.20%		\$ 35,738	
	Environmental Investigations				\$ 0	
	Landscape Design		1.00%		\$ 29,782	
	Electrical & Public Lighting Design		1.50%		\$ 44,673	
	Civil Preliminary and Final Design		4.25%		\$ 126,573	
	Construction Management & Superintendency		2.50%		\$ 74,455	
C	Authority Fees					\$ 106,791
	Whittlesea City Council Checking & Supervision		3.25%		\$ 96,791	
	VicRoads Plan Checking		NA		\$ 0	
	Ausnet Public lighting and electrical design checking (assumes 2 stages)	2	Item	\$ 5,000	\$ 10,000	
D	Construction					\$ 2,978,180
1	PRELIMINARIES					\$ 155,000
1.1	Site establishment (e.g. Site facilities, security fencing, storage sheds etc.)	1	Item	\$ 75,000	\$ 75,000	
1.2	Site management & supervision including QA	20	wks	\$ 2,500	\$ 50,000	
1.3	Traffic Management	1	Item	\$ 30,000	\$ 30,000	
2	DEMOLITION					\$ 6,360
2.1	Trees	2	No	\$ 1500	\$ 3,000	
2.2	Strip asphalt from existing pavement	0	m²	\$ 5	\$ 0	
2.3	Removal of existing fencing	165	Lm	\$ 18	\$ 2,970	
2.4	Break out & remove "No Road" sign & concrete edge strip.	1	Item	\$ 390	\$ 390	
3	EARTHWORKS (VERTICAL ALIGNMENT NOT AVAILABLE)					\$ 877,000
3.1	Stripping topsoil (150mm) (included in excavation below)		m²	\$ 6	\$ 0	
3.2	Excavation and removal	19,400	m³	\$ 30	\$ 582,000	
3.3	Filling	0	m³	\$ 15	\$ 0	
3.5	Import Fill material	5,000	m³	\$ 45	\$ 225,000	
3.6	Soft spot rectification/Unsuitable Subgrade (NDCR)	1,000	m³	\$ 70	\$ 70,000	
4	PAVEMENT					\$ 688,150
4.1	Deep lift asphalt 175 mm (Type H class 320 upper layer 40 mm deep and Type SI lower layer 135 mm deep)	5,160	m²	\$ 85	\$ 438,600	
4.2	Sub Base 150 mm (Size 20 mm 3% CTCR)	7,130	m²	\$ 25	\$ 178,250	
4.3	Lower Sub Base 150 mm (Class 4 Size 20 mm CR)	7,130	m²	\$ 10	\$ 71,300	
4.5	Shoulder - full depth pavement	0	m²	\$ 145	\$ 0	
4.6	Rock excavation & sub-surface remediation 150mm (included in 3.6 above)	0.00	m²	\$ 70	\$ 0	
5	DRAINAGE					\$ 182,560
5.1	Subsoil drains 100mm dia - screenings	3051	Lm	\$ 30	\$ 91,530	
5.2	Subsoil drains 100mm dia - no fines conc	0	Lm	\$ 45	\$ 0	
5.3	375 RCP (Class 3 Pipe Class 2 CR) @ 0-1.5 m deep	154	Lm	\$ 170	\$ 26,180	
5.4	450 RCP (Class 3 Pipe Class 2 CR) @ 0-1.5 m deep	22	Lm	\$ 275	\$ 6,050	
5.5	525 RCP (Class 3 Pipe Class 2 CR) @ 0-1.5 m deep	22	Lm	\$ 350	\$ 7,700	
5.6	Grated side entry pits as per EDCM 603 @ 0-1.5 m deep	18	No	\$ 2,500	\$ 45,000	
5.7	Junction pits (600 X 900) as per EDCM 605 @ 0-1.5 m deep	2	No	\$ 2,000	\$ 4,000	
5.8	Drainage Densisty Tests	20	No	\$ 105	\$ 2,100	
5.8	Allowance to modify drainage to ultimate location	0	item	\$ 50,000	\$ 0	
6	CONCRETE WORKS					\$ 361,918
6.1	Kerb &channel - SM1 300	0	Lm	\$ 32	\$ 0	
6.2	Kerb &channel - SM2 600	1520	Lm	\$ 35	\$ 53,200	
6.3	Kerb &channel - SM3 600	1524	Lm	\$ 35	\$ 53,340	
6.4	Edge Strip (200 mm)	7	Lm	\$ 34	\$ 238	
6.4	Bike Paths (3.0m wide,125 mm, residential, as per EDC 401)	1,524	Lm	\$ 135	\$ 205,740	
6.5	Footpaths (1.5m wide,125 mm, residential, as per EDC 401)	760	Lm	\$ 65	\$ 49,400	
6.6	Laybacks and tactile pavers	0	m²	\$ 850	\$ 0	
6.7	10m concrete maintenance area end of all islands	0	m²	\$ 85	\$ 0	
6.8	Additional Shared Paths	0	Lm	\$ 130	\$ 0	
7	TRAFFIC SIGNAL WORKS		NA		\$ -	-
8	SIGNAL MAINTENANCE (10 YEARS) by Road Authority		NA		\$ -	-
9	ELECTRICAL, PUBILC LIGHTING & TELECOMMUNICATIONS					\$ 262,072
9.1	Light pole (1-way) and luminous lights		No	\$ 8,000	\$ 0	
9.2	Light pole (2-way) and luminous lights to accord with ultimate carraigeway	10	No	\$ 13,000	\$ 130,000	
9.3	JUP lighting single		No	\$ 4,000	\$ 0	
9.4	JUP lighting dual		No	\$ 5,000	\$ 0	
9.5	Trenching and backfilling for cabling including pole excavation	1520	Lm	\$ 26	\$ 39,520	
9.6	Cabling and PVC conduits (63, 100 & 150 mm dia) for median lighting	2200	Lm	\$ 25	\$ 53,900	
9.7	Service pit installation	16	Item	\$ 240	\$ 3,840	
9.8	Electrical connection	1	Item	\$ 15,000	\$ 15,000	
9.9	Excavation of Telecom conduit trenches (Comms provider to supply cable)	762	lm	\$ 26	\$ 19,812	
10	LANDSCAPING WORKS					\$ 369,570
10.1	Landscape Treatment including trees, planting and lawn installation.	762	lm	\$ 350.00	\$ 266,700	
10.2	Vehicle exclusion Fencing	1143	No	\$ 90.00	\$ 102,870	
10.3	Landscape maintenance (including watering of all trees to maintain healthy establishment)	9%	rate		\$ 33,261	
11	SIGNAGE	1	item	\$ 10,000	\$ 10,000	\$ 10,000
12	LINEMARKING	1	item	\$ 30,000	\$ 30,000	\$ 30,000
13	SERVICE RELOCATION					\$ 0
13.1	NA		Item			
14	ENVIRONMENTAL CONTROLS (To comply with EPA guidelines for Major Construction Sites & EPA Publication 960)	1	item	\$ 35,000	\$ 35,000	\$ 35,000
15	MISCELLANEOUS					\$ 550
15.1	Exisiting Road outside of new road pavements	NA				
#	Strip asphalt		m²	\$ 5	\$ -	
#	Recycle FCR to stockpile		m³	\$ 10	\$ -	
#	backfill with structural fill		m³	\$ 12	\$ -	
15.2	PSMs	1	item	\$ 550	\$ 550	
16	PROVISIONAL SUM - DAYWORK		item		\$ -	-
	TOTAL A + B + C + D					\$ 3,606,152
E	Contingency					
	Contingency (15% of C)				15%	\$ 446,727
F	PROJECT BUDGET					
	Total Estimate					\$ 4,052,879
	Total Estimate per linear metre (\$/lm)					\$ 6,516



PRELIMINARY ESTIMATE OF DEVELOPMENT COSTS | DONNYBROOK/WOODSTOCK ICP

WORKS Koukoura Drive Between Hayes Hill Blvd and Cameron Street		Length:	248	lm	DATE: 17.05.18	
ICP REF RD-05-ii		Area:	8,559	sq.m	DPM REF: 1941/M/A(iv)	
PLANS G18040-01-D (Traffix Group)			0.856	ha	VER 1.1	
ITEM	DESCRIPTION	QUANTITY	UNIT	RATE	AMOUNT	SUBTOTAL
A	Project and Program Management (%)					\$ 65,433
	Project Management		3.00%		\$ 39,260	
	Project scoping, planning, scheduling, monitoring, reporting and commissioning					
	Management of preconstruction activities, development of tender documents and management of contracts					
	Managing external interfaces, including community liaison, environmental issues, traffic issues etc					
	Records management					
	Program Administration		2.00%		\$ 26,173	
B	Design and Investigation (%)					\$ 163,583
	Traffic Investigations & Fucntional Design		0.85%		\$ 11,124	
	Cadastral and Engineering Survey		1.20%		\$ 15,704	
	Geotechnical investigations Pavement Investigations and Design		1.20%		\$ 15,704	
	Environmental Investigations				\$ 0	
	Landscape Design		1.00%		\$ 13,087	
	Electrical & Public Lighting Design		1.50%		\$ 19,630	
	Civil Preliminary and Final Design		4.25%		\$ 55,618	
	Construction Management & Superintendency		2.50%		\$ 32,717	
C	Authority Fees					\$ 47,531
	Whittlesea City Council Checking & Supervision		3.25%		\$ 42,531	
	VicRoads Plan Checking		NA		\$ 0	
	Ausnet Public lighting and electrical design checking (assumes 1 stage)	1	Item	\$ 5,000	\$ 5,000	
D	Construction					\$ 1,308,661
1	PRELIMINARIES					\$ 80,000
1.1	Site establishment (e.g. Site facilities, security fencing, storage sheds etc.)	1	Item	\$ 35,000	\$ 35,000	
1.2	Site management & supervision including QA	10	wks	\$ 2,500	\$ 25,000	
1.3	Traffic Management	1	Item	\$ 20,000	\$ 20,000	
2	DEMOLITION					\$ 390
2.1	Trees	0	No	\$ 1500	\$ 0	
2.2	Strip asphalt from existing pavement	0	m²	\$ 5	\$ 0	
2.3	Removal of existing fencing	0	Lm	\$ 18	\$ 0	
2.4	Break out & remove "No Road" sign & concrete edge strip.	1	Item	\$ 390	\$ 390	
3	EARTHWORKS (VERTICAL ALIGNMENT <u>NOT</u> AVAILABLE)					\$ 276,500
3.1	Stripping topsoil (150mm) (included in excavation below)		m²	\$ 6	\$ 0	
3.2	Excavation and removal	6,200	m³	\$ 30	\$ 186,000	
3.3	Filling	0	m³	\$ 15	\$ 0	
3.5	Import Fill material	1,000	m³	\$ 45	\$ 45,000	
3.6	Soft spot rectification/Unsuitable Subgrade (NDCR)	650	m³	\$ 70	\$ 45,500	
4	PAVEMENT					\$ 283,200
4.1	Deep lift asphalt 175 mm (Type H class 320 upper layer 40 mm deep and Type SI lower layer 135 mm deep)	1,996	m²	\$ 85	\$ 169,660	
4.2	Sub Base 150 mm (Size 20 mm 3% CTCR)	3,244	m²	\$ 25	\$ 81,100	
4.3	Lower Sub Base 150 mm (Class 4 Size 20 mm CR)	3,244	m²	\$ 10	\$ 32,440	
4.5	Shoulder - full depth pavement	0	m²	\$ 145	\$ 0	
4.6	Rock excavation & sub-surface remediation 150mm (included in 3.6 above)	0.00	m²	\$ 70	\$ 0	
5	DRAINAGE					\$ 125,900
5.1	Subsoil drains 100mm dia - screenings	1385	Lm	\$ 30	\$ 41,550	
5.2	Subsoil drains 100mm dia - no fines conc	0	Lm	\$ 45	\$ 0	
5.3	375 RCP (Class 3 Pipe Class 2 CR) @ 0-1.5 m deep	140	Lm	\$ 170	\$ 23,800	
5.4	450 RCP (Class 3 Pipe Class 2 CR) @ 0-1.5 m deep	22	Lm	\$ 275	\$ 6,050	
5.5	525 RCP (Class 3 Pipe Class 2 CR) @ 0-1.5 m deep	25	Lm	\$ 350	\$ 8,750	
5.6	Grated side entry pits as per EDCM 603 @ 0-1.5 m deep	15	No	\$ 2,500	\$ 37,500	
5.7	Junction pits (600 X 900) as per EDCM 605 @ 0-1.5 m deep	2	No	\$ 2,000	\$ 4,000	
5.8	Drainage Densisty Tests	10	No	\$ 105	\$ 1,050	
5.9	Adjust & connect to existing pits	2	No	\$ 1,600	\$ 3,200	
5.10	Allowance to modify drainage to ultimate location	0	item	\$ 50,000	\$ 0	
6	CONCRETE WORKS					\$ 163,708
6.1	Kerb &channel - SM1 300	0	Lm	\$ 32	\$ 0	
6.2	Kerb &channel - SM2 600	689	Lm	\$ 35	\$ 24,115	
6.3	Kerb &channel - SM3 600	689	Lm	\$ 35	\$ 24,115	
6.4	Edge Strip (200 mm)	7	Lm	\$ 34	\$ 238	
6.4	Bike Paths (3.0m wide,125 mm, residential, as per EDC 401)	688	Lm	\$ 135	\$ 92,880	
6.5	Footpaths (1.5m wide,125 mm, residential, as per EDC 401)	344	Lm	\$ 65	\$ 22,360	
6.6	Laybacks and tactile pavers	0	m²	\$ 850	\$ 0	
6.7	10m concrete maintenance area end of all islands	0	m²	\$ 85	\$ 0	
6.8	Additional Shared Paths	0	Lm	\$ 130	\$ 0	
7	TRAFFIC SIGNAL WORKS		NA		\$ -	\$ -
8	SIGNAL MAINTENANCE (10 YEARS) by Road Authority		NA		\$ -	\$ -
9	ELECTRICAL, PUBILC LIGHTING & TELECOMMUNICATIONS					\$ 133,720
9.1	Light pole (1-way) and luminous lights		No	\$ 8,000	\$ 0	
9.2	Light pole (2-way) and luminous lights to accord with ultimate carraiageway	5	No	\$ 13,000	\$ 65,000	
9.3	JUP lighting single		No	\$ 4,000	\$ 0	
9.4	JUP lighting dual		No	\$ 5,000	\$ 0	
9.5	Trenching and backfilling for cabling including pole excavation	700	Lm	\$ 26	\$ 18,200	
9.6	Cabling and PVC conduits (63, 100 & 150 mm dia) for median lighting	1000	Lm	\$ 25	\$ 24,500	
9.7	Service pit installation	8	Item	\$ 240	\$ 1,920	
9.8	Electrical connection	1	Item	\$ 15,000	\$ 15,000	
9.9	Excavation of Telecom conduit trenches (Comms provider to supply cable)	350	lm	\$ 26	\$ 9,100	
10	LANDSCAPING WORKS					\$ 189,693
10.1	Landscape Treatment including trees, planting and lawn installation.	345	lm	\$ 350.00	\$ 120,750	
10.2	Vehicle exclusion Fencing	592	No	\$ 90.00	\$ 53,280	
10.3	Landscape maintenance (including watering of all trees to maintain healthy establishment)	9%	rate		\$ 15,663	
11	SIGNAGE	1	item	\$ 10,000	\$ 10,000	\$ 10,000
12	LINEMARKING	1	item	\$ 30,000	\$ 30,000	\$ 30,000
13	SERVICE RELOCATION					\$ 0
13.1	NA		Item			
14	ENVIRONMENTAL CONTROLS (To comply with EPA guidelines for Major Construction Sites & EPA Publication 960)	1	item	\$ 15,000	\$ 15,000	\$ 15,000
15	MISCELLANEOUS					\$ 550
15.1	Exisiting Road outside of new road pavements	NA				
#	Strip asphalt		m²	\$ 5	\$ -	
#	Recycle FCR to stockpile		m³	\$ 10	\$ -	
#	backfill with structural fill		m³	\$ 12	\$ -	
15.2	PSMs	1	item	\$ 550	\$ 550	
16	PROVISIONAL SUM - DAYWORK		item		\$ -	\$ -
	TOTAL A + B + C + D					\$ 1,585,208
E	Contingency					
	Contingency (15% of C)				15%	\$ 196,299
F	PROJECT BUDGET					
	Total Estimate					\$ 1,781,507
	Total Estimate per linear metre (\$/lm)					\$ 7,183



PRELIMINARY ESTIMATE OF DEVELOPMENT COSTS | DONNYBROOK/WOODSTOCK ICP

WORKS Koukoura Drive Between Cameron Street & Gunns Gully Road			Length: 349 lm		DATE: 17.05.18	
ICP REF RD-05-iii			Area: 11,956 sq.m		DPM REF: 1941/M/A(iv)	
PLANS G18040-01-D (Traffix Group)			1.196 ha		VER 1.1	
ITEM	DESCRIPTION	QUANTITY	UNIT	RATE	AMOUNT	SUBTOTAL
A	Project and Program Management (%)					\$ 67,965
	Project Management		3.00%		\$ 40,779	
	Project scoping, planning, scheduling, monitoring, reporting and commissioning					
	Management of preconstruction activities, development of tender documents and management of contracts					
	Managing external interfaces, including community liaison, environmental issues, traffic issues etc					
	Records management					
	Program Administration		2.00%		\$ 27,186	
B	Design and Investigation (%)					\$ 169,913
	Traffic Investigations & Fucntional Design		0.85%		\$ 11,554	
	Cadastral and Engineering Survey		1.20%		\$ 16,312	
	Geotechnical investigations Pavement Investigations and Design		1.20%		\$ 16,312	
	Environmental Investigations				\$ 0	
	Landscape Design		1.00%		\$ 13,593	
	Electrical & Public Lighting Design		1.50%		\$ 20,390	
	Civil Preliminary and Final Design		4.25%		\$ 57,770	
	Construction Management & Superintendency		2.50%		\$ 33,983	
C	Authority Fees					\$ 49,177
	Whittlesea City Council Checking & Supervision		3.25%		\$ 44,177	
	VicRoads Plan Checking		NA		\$ 0	
	Ausnet Public lighting and electrical design checking (assumes 1 stage)	1	Item	\$ 5,000	\$ 5,000	
D	Construction					\$ 1,359,303
1	PRELIMINARIES					\$ 80,000
1.1	Site establishment (e.g. Site facilities, security fencing, storage sheds etc.)	1	Item	\$ 35,000	\$ 35,000	
1.2	Site management & supervision including QA	10	wks	\$ 2,500	\$ 25,000	
1.3	Traffic Management	1	Item	\$ 20,000	\$ 20,000	
2	DEMOLITION					\$ 2,790
2.1	Trees	1	No	\$ 1500	\$ 1,500	
2.2	Strip asphalt from existing pavement	0	m²	\$ 5	\$ 0	
2.3	Removal of existing fencing	50	Lm	\$ 18	\$ 900	
2.4	Break out & remove "No Road" sign & concrete edge strip.	1	Item	\$ 390	\$ 390	
3	EARTHWORKS (VERTICAL ALIGNMENT <u>NOT</u> AVAILABLE)					\$ 313,200
3.1	Stripping topsoil (150mm) (included in excavation below)		m²	\$ 6	\$ 0	
3.2	Excavation and removal	7,400	m³	\$ 30	\$ 222,000	
3.3	Filling	0	m³	\$ 15	\$ 0	
3.5	Import Fill material	1,000	m³	\$ 45	\$ 45,000	
3.6	Soft spot rectification/Unsuitable Subgrade (NDCR)	660	m³	\$ 70	\$ 46,200	
4	PAVEMENT					\$ 286,050
4.1	Deep lift asphalt 175 mm (Type H class 320 upper layer 40 mm deep and Type SI lower layer 135 mm deep)	2,018	m²	\$ 85	\$ 171,530	
4.2	Sub Base 150 mm (Size 20 mm 3% CTCR)	3,272	m²	\$ 25	\$ 81,800	
4.3	Lower Sub Base 150 mm (Class 4 Size 20 mm CR)	3,272	m²	\$ 10	\$ 32,720	
4.5	Shoulder - full depth pavement	0	m²	\$ 145	\$ 0	
4.6	Rock excavation & sub-surface remediation 150mm (included in 3.6 above)	0.00	m²	\$ 70	\$ 0	
5	DRAINAGE					\$ 126,320
5.1	Subsoil drains 100mm dia - screenings	1399	Lm	\$ 30	\$ 41,970	
5.2	Subsoil drains 100mm dia - no fines conc	0	Lm	\$ 45	\$ 0	
5.3	375 RCP (Class 3 Pipe Class 2 CR) @ 0-1.5 m deep	140	Lm	\$ 170	\$ 23,800	
5.4	450 RCP (Class 3 Pipe Class 2 CR) @ 0-1.5 m deep	22	Lm	\$ 275	\$ 6,050	
5.5	525 RCP (Class 3 Pipe Class 2 CR) @ 0-1.5 m deep	25	Lm	\$ 350	\$ 8,750	
5.6	Grated side entry pits as per EDCM 603 @ 0-1.5 m deep	15	No	\$ 2,500	\$ 37,500	
5.7	Junction pits (600 X 900) as per EDCM 605 @ 0-1.5 m deep	2	No	\$ 2,000	\$ 4,000	
5.8	Drainage Densisty Tests	10	No	\$ 105	\$ 1,050	
5.9	Adjust & connect to existing pits	2	No	\$ 1,600	\$ 3,200	
5.10	Allowance to modify drainage to ultimate location	0	item	\$ 50,000	\$ 0	
6	CONCRETE WORKS					\$ 165,538
6.1	Kerb & channel - SM1 300	0	Lm	\$ 32	\$ 0	
6.2	Kerb & channel - SM2 600	696	Lm	\$ 35	\$ 24,360	
6.3	Kerb & channel - SM3 600	696	Lm	\$ 35	\$ 24,360	
6.4	Edge Strip (200 mm)	7	Lm	\$ 34	\$ 238	
6.4	Bike Paths (3.0m wide,125 mm, residential, as per EDC 401)	696	Lm	\$ 135	\$ 93,960	
6.5	Footpaths (1.5m wide,125 mm, residential, as per EDC 401)	348	Lm	\$ 65	\$ 22,620	
6.6	Laybacks and tactile pavers	0	m²	\$ 850	\$ 0	
6.7	10m concrete maintenance area end of all islands	0	m²	\$ 85	\$ 0	
6.8	Additional Shared Paths	0	Lm	\$ 130	\$ 0	
7	TRAFFIC SIGNAL WORKS		NA		\$ -	\$ -
8	SIGNAL MAINTENANCE (10 YEARS) by Road Authority		NA		\$ -	\$ -
9	ELECTRICAL, PUBILC LIGHTING & TELECOMMUNICATIONS					\$ 133,720
9.1	Light pole (1-way) and luminous lights		No	\$ 8,000	\$ 0	
9.2	Light pole (2-way) and luminous lights to accord with ultimate carraigeway	5	No	\$ 13,000	\$ 65,000	
9.3	JUP lighting single		No	\$ 4,000	\$ 0	
9.4	JUP lighting dual		No	\$ 5,000	\$ 0	
9.5	Trenching and backfilling for cabling including pole excavation	700	Lm	\$ 26	\$ 18,200	
9.6	Cabling and PVC conduits (63, 100 & 150 mm dia) for median lighting	1000	Lm	\$ 25	\$ 24,500	
9.7	Service pit installation	8	Item	\$ 240	\$ 1,920	
9.8	Electrical connection	1	Item	\$ 15,000	\$ 15,000	
9.9	Excavation of Telecom conduit trenches (Comms provider to supply cable)	350	lm	\$ 26	\$ 9,100	
10	LANDSCAPING WORKS					\$ 196,135
10.1	Landscape Treatment including trees, planting and lawn installation.	348	lm	\$ 350.00	\$ 121,800	
10.2	Vehicle exclusion Fencing	646	No	\$ 90.00	\$ 58,140	
10.3	Landscape maintenance (including watering of all trees to maintain healthy establishment)	9%	rate		\$ 16,195	
11	SIGNAGE	1	item	\$ 10,000	\$ 10,000	\$ 10,000
12	LINEMARKING	1	item	\$ 30,000	\$ 30,000	\$ 30,000
13	SERVICE RELOCATION					\$ 0
13.1	NA		Item			
14	ENVIRONMENTAL CONTROLS (To comply with EPA guidelines for Major Construction Sites & EPA Publication 960)	1	item	\$ 15,000	\$ 15,000	\$ 15,000
15	MISCELLANEOUS					\$ 550
15.1	Exisiting Road outside of new road pavements	NA				
#	Strip asphalt		m²	\$ 5	\$ -	
#	Recycle FCR to stockpile		m³	\$ 10	\$ -	
#	backfill with structural fill		m³	\$ 12	\$ -	
15.2	PSMs	1	item	\$ 550	\$ 550	
16	PROVISIONAL SUM - DAYWORK		item		\$ -	\$ -
	TOTAL A + B + C + D					\$ 1,646,358
E	Contingency					
	Contingency (15% of C)				15%	\$ 203,895
F	PROJECT BUDGET					
	Total Estimate					\$ 1,850,253
	Total Estimate per linear metre (\$/lm)					\$ 5,302



WORKS Donnybrook Road and Koukoura Drive Intersection (3 way signalised) ICP REF IN-04 PLANS G18040-01-D (Traffix Group)						DATE: 23.07.18 DPM REF: 1941/M/A(iv) VER 1.2
		Area:	8,349 sq.m 0.835 ha			
ITEM	DESCRIPTION	QUANTITY	UNIT	RATE	AMOUNT	SUBTOTAL
A	Project and Program Management (%)					\$ 134,444
	Project Management		3.00%		\$ 80,666	
	Project scoping, planning, scheduling, monitoring, reporting and commissioning					
	Management of preconstruction activities, development of tender documents and management of contracts					
	Managing external interfaces, including community liaison, environmental issues, traffic issues etc					
	Records management					
	Program Administration		2.00%		\$ 53,778	
B	Design and Investigation (%)					\$ 336,110
	Traffic Investigations & Fucntional Design		0.85%		\$ 22,855	
	Cadastral and Engineering Survey		1.20%		\$ 32,267	
	Geotechnical investigations Pavement Investigations and Design		1.20%		\$ 32,267	
	Environmental Investigations				\$ 0	
	Landscape Design		1.00%		\$ 26,889	
	Electrical & Public Lighting Design		1.50%		\$ 40,333	
	Civil Preliminary and Final Design		4.25%		\$ 114,277	
	Construction Management & Superintendency		2.50%		\$ 67,222	
C	Authority Fees					\$ 119,277
	Whittlesea City Council Checking & Supervision		3.25%		\$ 87,389	
	VicRoads Plan Checking		1.00%		\$ 26,889	
	Ausnet Public lighting and electrical design checking (assumes 1 stage)	1	Item	\$ 5,000	\$ 5,000	
D	Construction					\$ 2,688,882
1	PRELIMINARIES					\$ 310,000
1.1	Site establishment (e.g. Site facilities, security fencing, storage sheds etc.)	1	Item	\$ 35,000	\$ 35,000	
1.2	Site management & supervision including QA	10	wks	\$ 2,500	\$ 25,000	
1.3	Traffic Management	1	Item	\$ 250,000	\$ 250,000	
2	DEMOLITION					\$ 2,790
2.1	Trees	1	No	\$ 1500	\$ 1,500	
2.2	Strip asphalt from existing pavement	0	m²	\$ 5	\$ 0	
2.3	Removal of existing fencing	50	Lm	\$ 18	\$ 900	
2.4	Break out & remove "No Road" sign & concrete edge strip.	1	Item	\$ 390	\$ 390	
3	EARTHWORKS (VERTICAL ALIGNMENT NOT AVAILABLE)					\$ 313,200
3.1	Stripping topsoil (150mm) (included in excavation below)		m²	\$ 6	\$ 0	
3.2	Excavation and removal	7,400	m³	\$ 30	\$ 222,000	
3.3	Filling	0	m³	\$ 15	\$ 0	
3.5	Import Fill material	1,000	m³	\$ 45	\$ 45,000	
3.6	Soft spot rectification/Unsuitable Subgrade (NDCR)	660	m³	\$ 70	\$ 46,200	
4	PAVEMENT					\$ 929,325
4.1	Deep lift asphalt 175 mm (Type H class 320 upper layer 40 mm deep and Type SI lower layer 135 mm deep)	6,835	m²	\$ 95	\$ 649,325	
4.2	Sub Base 150 mm (Size 20 mm 3% CTCR)	8,000	m²	\$ 25	\$ 200,000	
4.3	Lower Sub Base 150 mm (Class 4 Size 20 mm CR)	8,000	m²	\$ 10	\$ 80,000	
4.5	Shoulder - full depth pavement	0	m²	\$ 145	\$ 0	
4.6	Rock excavation & sub-surface remediation 150mm (included in 3.6 above)	0.00	m²	\$ 70	\$ 0	
5	DRAINAGE					\$ 130,520
5.1	Subsoil drains 100mm dia - screenings	1399	Lm	\$ 30	\$ 41,970	
5.2	Subsoil drains 100mm dia - no fines conc	0	Lm	\$ 45	\$ 0	
5.3	375 RCP (Class 3 Pipe Class 2 CR) @ 0-1.5 m deep	140	Lm	\$ 200	\$ 28,000	
5.4	450 RCP (Class 3 Pipe Class 2 CR) @ 0-1.5 m deep	22	Lm	\$ 275	\$ 6,050	
5.5	525 RCP (Class 3 Pipe Class 2 CR) @ 0-1.5 m deep	25	Lm	\$ 350	\$ 8,750	
5.6	Grated side entry pits as per EDCM 603 @ 0-1.5 m deep	15	No	\$ 2,500	\$ 37,500	
5.7	Junction pits (600 X 900) as per EDCM 605 @ 0-1.5 m deep	2	No	\$ 2,000	\$ 4,000	
5.8	Drainage Densisty Tests	10	No	\$ 105	\$ 1,050	
5.9	Adjust & connect to existing pits	2	No	\$ 1,600	\$ 3,200	
5.10	Allowance to modify drainage to ultimate location	0	item	\$ 50,000	\$ 0	
6	CONCRETE WORKS					\$ 199,642
6.1	Kerb &channel - SM1 300	0	Lm	\$ 32	\$ 0	
6.2	Kerb &channel - SM2 600	696	Lm	\$ 40	\$ 27,840	
6.3	Kerb &channel - SM3 600	696	Lm	\$ 40	\$ 27,840	
6.4	Edge Strip (200 mm)	7	Lm	\$ 34	\$ 238	
6.5	Bike Paths (3.0m wide,125 mm, residential, as per EDC 401)	696	Lm	\$ 165	\$ 114,840	
6.6	Footpaths (1.5m wide,125 mm, residential, as per EDC 401)	348	Lm	\$ 83	\$ 28,884	
6.7	Laybacks and tactile pavers	0	m²	\$ 850	\$ 0	
6.8	10m concrete maintenance area end of all islands	0	m²	\$ 85	\$ 0	
6.9	Additional Shared Paths	0	Lm	\$ 130	\$ 0	
7	TRAFFIC SIGNAL WORKS	1	item	\$ 300,000	\$ 300,000	\$ 300,000
8	SIGNAL MAINTENANCE (10 YEARS) by Road Authority	1	item	\$ 100,000	\$ 100,000	\$ 100,000
9	ELECTRICAL, PUBILC LIGHTING & TELECOMMUNICATIONS					\$ 133,720
9.1	Light pole (1-way) and luminous lights		No	\$ 8,000	\$ 0	
9.2	Light pole (2-way) and luminous lights to accord with ultimate carraiaateway	5	No	\$ 13,000	\$ 65,000	
9.3	JUP lighting single		No	\$ 4,000	\$ 0	
9.4	JUP lighting dual		No	\$ 5,000	\$ 0	
9.5	Trenching and backfilling for cabling including pole excavation	700	Lm	\$ 26	\$ 18,200	
9.6	Cabling and PVC conduits (63, 100 & 150 mm dia) for median lighting	1000	Lm	\$ 25	\$ 24,500	
9.7	Service pit installation for Traffic Signals	8	Item	\$ 240	\$ 1,920	
9.8	Electrical connection	1	Item	\$ 15,000	\$ 15,000	
9.9	Excavation of Telecom conduit trenches (Comms provider to supply cable)	350	lm	\$ 26	\$ 9,100	
10	LANDSCAPING WORKS					\$ 196,135
10.1	Landscape Treatment including trees, planting and lawn installation.	348	lm	\$ 350.00	\$ 121,800	
10.2	Vehicle exclusion Fencing	646	No	\$ 90.00	\$ 58,140	
10.3	Landscape maintenance (including watering of all trees to maintain healthy establishment)	9%	rate		\$ 16,195	
11	SIGNAGE	1	item	\$ 18,000	\$ 18,000	\$ 18,000
12	LINEMARKING & DIRECTIONAL TACTILES	1	item	\$ 40,000	\$ 40,000	\$ 40,000
13	SERVICE RELOCATION					\$ 0
13.1	NA		Item			
14	ENVIRONMENTAL CONTROLS (To comply with EPA guidelines for Major Construction Sites & EPA Publication 960)	1	item	\$ 15,000	\$ 15,000	\$ 15,000
15	MISCELLANEOUS					\$ 550
15.1	Exisiting Road outside of new road pavements	NA				
15.1.1	Strip asphalt		m²	\$ 5	\$ -	
15.1.2	Recycle FCR to stockpile		m³	\$ 10	\$ -	
15.1.3	backfill with structural fill		m³	\$ 12	\$ -	
15.2	PSMs	1	item	\$ 550	\$ 550	
16	PROVISIONAL SUM - DAYWORK		item		\$ -	\$ -
	TOTAL A + B + C + D					\$ 3,278,713
E	Contingency					
	Contingency (15% of C)				15%	\$ 403,332
F	PROJECT BUDGET					
	Total Estimate					\$ 3,682,046



WORKS Koukoura Drive and Hayes Hill Blvd Intersection (4 way signalised)					DATE: 17.05.18	
ICP REF IN-07		Area: 20,170 sq.m		DPM REF: 1941/M/A(iv)		
PLANS G18040-01-D (Traffix Group)		2.017 ha		VER 1.1		
ITEM	DESCRIPTION	QUANTITY	UNIT	RATE	AMOUNT	SUBTOTAL
A	Project and Program Management (%)					\$ 122,091
	Project Management		3.00%		\$ 73,254	
	Project scoping, planning, scheduling, monitoring, reporting and commissioning					
	Management of preconstruction activities, development of tender documents and management of contracts					
	Managing external interfaces, including community liaison, environmental issues, traffic issues etc					
	Records management					
	Program Administration		2.00%		\$ 48,836	
B	Design and Investigation (%)					\$ 305,226
	Traffic Investigations & Fucntional Design		0.85%		\$ 20,755	
	Cadastral and Engineering Survey		1.20%		\$ 29,302	
	Geotechnical investigations Pavement Investigations and Design		1.20%		\$ 29,302	
	Environmental Investigations				\$ 0	
	Landscape Design		1.00%		\$ 24,418	
	Electrical & Public Lighting Design		1.50%		\$ 36,627	
	Civil Preliminary and Final Design		4.25%		\$ 103,777	
	Construction Management & Superintendency		2.50%		\$ 61,045	
C	Authority Fees					\$ 108,777
	Whittlesea City Council Checking & Supervision		3.25%		\$ 79,359	
	VicRoads Plan Checking		1.00%		\$ 24,418	
	Ausnet Public lighting and electrical design checking (assumes 1 stage)	1	Item	\$ 5,000	\$ 5,000	
D	Construction					\$ 2,441,811
1	PRELIMINARIES					\$ 115,000
1.1	Site establishment (e.g. Site facilities, security fencing, storage sheds etc.)	1	Item	\$ 35,000	\$ 35,000	
1.2	Site management & supervision including QA	24	wks	\$ 2,500	\$ 60,000	
1.3	Traffic Management	1	Item	\$ 20,000	\$ 20,000	
2	DEMOLITION					\$ 2,790
2.1	Trees	1	No	\$ 1500	\$ 1,500	
2.2	Strip asphalt from existing pavement	0	m²	\$ 5	\$ 0	
2.3	Removal of existing fencing	50	Lm	\$ 18	\$ 900	
2.4	Break out & remove "No Road" sign & concrete edge strip.	1	Item	\$ 390	\$ 390	
3	EARTHWORKS (VERTICAL ALIGNMENT <u>NOT</u> AVAILABLE)					\$ 450,000
3.1	Stripping topsoil (150mm) (included in excavation below)		m²	\$ 6	\$ 0	
3.2	Excavation and removal	10,000	m³	\$ 30	\$ 300,000	
3.3	Filling	0	m³	\$ 15	\$ 0	
3.5	Import Fill material	1,000	m³	\$ 45	\$ 45,000	
3.6	Soft spot rectification/Unsuitable Subgrade (NDCR)	1,500	m³	\$ 70	\$ 105,000	
4	PAVEMENT					\$ 724,675
4.1	Deep lift asphalt 175 mm (Type H class 320 upper layer 40 mm deep and Type SI lower layer 135 mm deep)	5,495	m²	\$ 85	\$ 467,075	
4.2	Sub Base 150 mm (Size 20 mm 3% CTCR)	7,360	m²	\$ 25	\$ 184,000	
4.3	Lower Sub Base 150 mm (Class 4 Size 20 mm CR)	7,360	m²	\$ 10	\$ 73,600	
4.5	Shoulder - full depth pavement	0	m²	\$ 145	\$ 0	
4.6	Rock excavation & sub-surface remediation 150mm (included in 3.6 above)	0.00	m²	\$ 70	\$ 0	
5	DRAINAGE					\$ 183,760
5.1	Subsoil drains 100mm dia - screenings	1102	Lm	\$ 30	\$ 33,060	
5.2	Subsoil drains 100mm dia - no fines conc	0	Lm	\$ 45	\$ 0	
5.3	375 RCP (Class 3 Pipe Class 2 CR) @ 0-1.5 m deep	410	Lm	\$ 170	\$ 69,700	
5.4	450 RCP (Class 3 Pipe Class 2 CR) @ 0-1.5 m deep	70	Lm	\$ 275	\$ 19,250	
5.5	525 RCP (Class 3 Pipe Class 2 CR) @ 0-1.5 m deep	0	Lm	\$ 350	\$ 0	
5.6	Grated side entry pits as per EDCM 603 @ 0-1.5 m deep	15	No	\$ 2,500	\$ 37,500	
5.7	Junction pits (600 X 900) as per EDCM 605 @ 0-1.5 m deep	10	No	\$ 2,000	\$ 20,000	
5.8	Drainage Densisty Tests	10	No	\$ 105	\$ 1,050	
5.9	Adjust & connect to existing pits	2	No	\$ 1,600	\$ 3,200	
5.10	Allowance to modify drainage to ultimate location	0	item	\$ 50,000	\$ 0	
6	CONCRETE WORKS					\$ 154,517
6.1	Kerb &channel - SM1 300	288	Lm	\$ 32	\$ 9,216	
6.2	Kerb &channel - SM2 600	780	Lm	\$ 35	\$ 27,300	
6.3	Kerb &channel - SM3 600	0	Lm	\$ 35	\$ 0	
6.4	Edge Strip (200 mm)	34	Lm	\$ 34	\$ 1,156	
6.5	Bike Paths (3.0m wide,125 mm, residential, as per EDC 401)	635	Lm	\$ 135	\$ 85,725	
6.6	Footpaths (1.5m wide,125 mm, residential, as per EDC 401)	348	Lm	\$ 65	\$ 22,620	
6.7	Laybacks and tactile pavers	10	m²	\$ 850	\$ 8,500	
6.8	10m concrete maintenance area end of all islands	0	m²	\$ 85	\$ 0	
6.9	Additional Shared Paths	0	Lm	\$ 130	\$ 0	
7	TRAFFIC SIGNAL WORKS	1	item	\$ 300,000	\$ 300,000	\$ 300,000
8	SIGNAL MAINTENANCE (10 YEARS) by Road Authority	1	item	\$ 100,000	\$ 100,000	\$ 100,000
9	ELECTRICAL, PUBILC LIGHTING & TELECOMMUNICATIONS					\$ 147,575
9.1	Light pole (1-way) and luminous lights		No	\$ 8,000	\$ 0	
9.2	Light pole (2-way) and luminous lights to accord with ultimate carraigeway	4	No	\$ 13,000	\$ 52,000	
9.3	JUP lighting single		No	\$ 4,000	\$ 0	
9.4	JUP lighting dual		No	\$ 5,000	\$ 0	
9.5	Trenching and backfilling for cabling including pole excavation	1015	Lm	\$ 26	\$ 26,390	
9.6	Cabling and PVC conduits (63, 100 & 150 mm dia) for median lighting	1590	Lm	\$ 25	\$ 38,955	
9.7	Service pit installation for Traffic Signals	12	Item	\$ 240	\$ 2,880	
9.8	Electrical connection	1	Item	\$ 15,000	\$ 15,000	
9.9	Excavation of Telecom conduit trenches (Comms provider to supply cable)	475	lm	\$ 26	\$ 12,350	
10	LANDSCAPING WORKS					\$ 197,944
10.1	Landscape Treatment including trees, planting and lawn installation.	380	lm	\$ 350.00	\$ 133,000	
10.2	Vehicle exclusion Fencing	540	No	\$ 90.00	\$ 48,600	
10.3	Landscape maintenance (including watering of all trees to maintain healthy establishment)	9%	rate		\$ 16,344	
11	SIGNAGE	1	item	\$ 10,000	\$ 10,000	\$ 10,000
12	LINEMARKING & DIRECTIONAL TACTILES	1	item	\$ 40,000	\$ 40,000	\$ 40,000
13	SERVICE RELOCATION					\$ 0
13.1	NA		Item			
14	ENVIRONMENTAL CONTROLS (To comply with EPA guidelines for Major Construction Sites & EPA Publication 960)	1	item	\$ 15,000	\$ 15,000	\$ 15,000
15	MISCELLANEOUS					\$ 550
15.1	Exisiting Road outside of new road pavements	NA				
#	Strip asphalt		m²	\$ 5	\$ -	
#	Recycle FCR to stockpile		m³	\$ 10	\$ -	
#	backfill with structural fill		m³	\$ 12	\$ -	
15.2	PSMs	1	item	\$ 550	\$ 550	
16	PROVISIONAL SUM - DAYWORK		item		\$ -	\$ -
	TOTAL A + B + C + D					\$ 2,977,905
E	Contingency					
	Contingency (15% of C)				15%	\$ 366,272
F	PROJECT BUDGET					
	Total Estimate					\$ 3,344,177



PRELIMINARY ESTIMATE OF DEVELOPMENT COSTS | DONNYBROOK/WOODSTOCK ICP

WORKS Koukoura Drive and Cameron Street Intersection (4 way signalised)		Length: -		lm	DATE: 17.05.18	
ICP REF IN-11		Area: 19,928		sq.m	DPM REF: 1941/M/A(iv)	
PLANS G18040-01-D (Traffic Group)		-		ha	VER 1.1	
ITEM	DESCRIPTION	QUANTITY	UNIT	RATE	AMOUNT	SUBTOTAL
A	Project and Program Management (%)					\$ 132,224
	Project Management		3.00%		\$ 79,334	
	Project scoping, planning, scheduling, monitoring, reporting and commissioning					
	Management of preconstruction activities, development of tender documents and management of contracts					
	Managing external interfaces, including community liaison, environmental issues, traffic issues etc					
	Records management					
	Program Administration		2.00%		\$ 52,890	
B	Design and Investigation (%)					\$ 330,560
	Traffic Investigations & Fucntional Design		0.85%		\$ 22,478	
	Cadastral and Engineering Survey		1.20%		\$ 31,734	
	Geotechnical investigations Pavement Investigations and Design		1.20%		\$ 31,734	
	Environmental Investigations				\$ 0	
	Landscape Design		1.00%		\$ 26,445	
	Electrical & Public Lighting Design		1.50%		\$ 39,667	
	Civil Preliminary and Final Design		4.25%		\$ 112,390	
	Construction Management & Superintendency		2.50%		\$ 66,112	
C	Authority Fees					\$ 117,390
	Whittlesea City Council Checking & Supervision		3.25%		\$ 85,945	
	VicRoads Plan Checking		1.00%		\$ 26,445	
	Ausnet Public lighting and electrical design checking (assumes 1 stage)	1	Item	\$ 5,000	\$ 5,000	
D	Construction					\$ 2,644,477
1	PRELIMINARIES					\$ 80,000
1.1	Site establishment (e.g. Site facilities, security fencing, storage sheds etc.)	1	Item	\$ 35,000	\$ 35,000	
1.2	Site management & supervision including QA	10	wks	\$ 2,500	\$ 25,000	
1.3	Traffic Management	1	Item	\$ 20,000	\$ 20,000	
2	DEMOLITION					\$ 2,790
2.1	Trees	1	No	\$ 1500	\$ 1,500	
2.2	Strip asphalt from existing pavement	0	m²	\$ 5	\$ 0	
2.3	Removal of existing fencing	50	Lm	\$ 18	\$ 900	
2.4	Break out & remove "No Road" sign & concrete edge strip.	1	Item	\$ 390	\$ 390	
3	EARTHWORKS (VERTICAL ALIGNMENT NOT AVAILABLE)					\$ 501,000
3.1	Stripping topsoil (150mm) (included in excavation below)		m²	\$ 6	\$ 0	
3.2	Excavation and removal	11,000	m³	\$ 30	\$ 330,000	
3.3	Filling	0	m³	\$ 15	\$ 0	
3.5	Import Fill material	1,000	m³	\$ 45	\$ 45,000	
3.6	Soft spot rectification/Unsuitable Subgrade (NDCR)	1,800	m³	\$ 70	\$ 126,000	
4	PAVEMENT					\$ 850,455
4.1	Deep lift asphalt 175 mm (Type H class 320 upper layer 40 mm deep and Type SI lower layer 135 mm deep)	6,395	m²	\$ 85	\$ 543,575	
4.2	Sub Base 150 mm (Size 20 mm 3% CTCR)	8,768	m²	\$ 25	\$ 219,200	
4.3	Lower Sub Base 150 mm (Class 4 Size 20 mm CR)	8,768	m²	\$ 10	\$ 87,680	
4.5	Shoulder - full depth pavement	0	m²	\$ 145	\$ 0	
4.6	Rock excavation & sub-surface remediation 150mm (included in 3.6 above)	0.00	m²	\$ 70	\$ 0	
5	DRAINAGE					\$ 205,935
5.1	Subsoil drains 100mm dia - screenings	928	Lm	\$ 30	\$ 27,840	
5.2	Subsoil drains 100mm dia - no fines conc	0	Lm	\$ 45	\$ 0	
5.3	375 RCP (Class 3 Pipe Class 2 CR) @ 0-1.5 m deep	366	Lm	\$ 170	\$ 62,220	
5.4	450 RCP (Class 3 Pipe Class 2 CR) @ 0-1.5 m deep	245	Lm	\$ 275	\$ 67,375	
5.5	525 RCP (Class 3 Pipe Class 2 CR) @ 0-1.5 m deep	25	Lm	\$ 350	\$ 8,750	
5.6	Grated side entry pits as per EDCM 603 @ 0-1.5 m deep	7	No	\$ 2,500	\$ 17,500	
5.7	Junction pits (600 X 900) as per EDCM 605 @ 0-1.5 m deep	9	No	\$ 2,000	\$ 18,000	
5.8	Drainage Densisty Tests	10	No	\$ 105	\$ 1,050	
5.9	Adjust & connect to existing pits	2	No	\$ 1,600	\$ 3,200	
5.10	Allowance to modify drainage to ultimate location	0	item	\$ 50,000	\$ 0	
6	CONCRETE WORKS					\$ 185,234
6.1	Kerb &channel - SM1 300	34	Lm	\$ 32	\$ 1,088	
6.2	Kerb &channel - SM2 600	860	Lm	\$ 35	\$ 30,100	
6.3	Kerb &channel - SM3 600	0	Lm	\$ 35	\$ 0	
6.4	Edge Strip (200 mm)	34	Lm	\$ 34	\$ 1,156	
6.5	Bike Paths (3.0m wide,125 mm, residential, as per EDC 401)	902	Lm	\$ 135	\$ 121,770	
6.6	Footpaths (1.5m wide,125 mm, residential, as per EDC 401)	348	Lm	\$ 65	\$ 22,620	
6.7	Laybacks and tactile pavers	10	m²	\$ 850	\$ 8,500	
6.8	10m concrete maintenance area end of all islands	0	m²	\$ 85	\$ 0	
6.9	Additional Shared Paths	0	Lm	\$ 130	\$ 0	
7	TRAFFIC SIGNAL WORKS	1	item	\$ 300,000	\$ 300,000	\$ 300,000
8	SIGNAL MAINTENANCE (10 YEARS) by Road Authority	1	item	\$ 100,000	\$ 100,000	\$ 100,000
9	ELECTRICAL, PUBILC LIGHTING & TELECOMMUNICATIONS					\$ 159,668
9.1	Light pole (1-way) and luminous lights		No	\$ 8,000	\$ 0	
9.2	Light pole (2-way) and luminous lights to accord with ultimate carraigeway	5	No	\$ 13,000	\$ 65,000	
9.3	JUP lighting single		No	\$ 4,000	\$ 0	
9.4	JUP lighting dual		No	\$ 5,000	\$ 0	
9.5	Trenching and backfilling for cabling including pole excavation	1025	Lm	\$ 26	\$ 26,650	
9.6	Cabling and PVC conduits (63, 100 & 150 mm dia) for median lighting	1675	Lm	\$ 25	\$ 41,038	
9.7	Service pit installation for Traffic Signals	12	Item	\$ 240	\$ 2,880	
9.8	Electrical connection	1	Item	\$ 15,000	\$ 15,000	
9.9	Excavation of Telecom conduit trenches (Comms provider to supply cable)	350	lm	\$ 26	\$ 9,100	
10	LANDSCAPING WORKS					\$ 185,845
10.1	Landscape Treatment including trees, planting and lawn installation.	410	lm	\$ 350.00	\$ 143,500	
10.2	Vehicle exclusion Fencing	300	No	\$ 90.00	\$ 27,000	
10.3	Landscape maintenance (including watering of all trees to maintain healthy establishment)	9%	rate		\$ 15,345	
11	SIGNAGE	1	item	\$ 18,000	\$ 18,000	\$ 18,000
12	LINEMARKING & DIRECTIONAL TACTILES	1	item	\$ 40,000	\$ 40,000	\$ 40,000
13	SERVICE RELOCATION					\$ 0
13.1	NA		Item			
14	ENVIRONMENTAL CONTROLS (To comply with EPA guidelines for Major Construction Sites & EPA Publication 960)	1	item	\$ 15,000	\$ 15,000	\$ 15,000
15	MISCELLANEOUS					\$ 550
15.1	Exisiting Road outside of new road pavements	NA				
#	Strip asphalt		m²	\$ 5	\$ -	
#	Recycle FCR to stockpile		m³	\$ 10	\$ -	
#	backfill with structural fill		m³	\$ 12	\$ -	
15.2	PSMs	1	item	\$ 550	\$ 550	
16	PROVISIONAL SUM - DAYWORK		item		\$ -	\$ -
	TOTAL A + B + C + D					\$ 3,224,650
E	Contingency					
	Contingency (15% of C)				15%	\$ 396,671
F	PROJECT BUDGET					
	Total Estimate					\$ 3,621,322



PRELIMINARY ESTIMATE OF DEVELOPMENT COSTS | DONNYBROOK/WOODSTOCK ICP

WORKS Koukoura Drive and Gunns Gully Intersection (4 way signalised)					DATE: 17.05.18	
ICP REF IN-15					DPM REF: 1941/M/A(iv)	
PLANS G18040-01-D (Traffix Group)					VER 1.1	
		Area:	21,696 sq.m			
			2.170 ha			
ITEM	DESCRIPTION	QUANTITY	UNIT	RATE	AMOUNT	SUBTOTAL
A	Project and Program Management (%)					\$ 103,372
	Project Management		3.00%		\$ 62,023	
	Project scoping, planning, scheduling, monitoring, reporting and commissioning					
	Management of preconstruction activities, development of tender documents and management of contracts					
	Managing external interfaces, including community liaison, environmental issues, traffic issues etc					
	Records management					
	Program Administration		2.00%		\$ 41,349	
B	Design and Investigation (%)					\$ 258,430
	Traffic Investigations & Fucntional Design		0.85%		\$ 17,573	
	Cadastral and Engineering Survey		1.20%		\$ 24,809	
	Geotechnical investigations Pavement Investigations and Design		1.20%		\$ 24,809	
	Environmental Investigations				\$ 0	
	Landscape Design		1.00%		\$ 20,674	
	Electrical & Public Lighting Design		1.50%		\$ 31,012	
	Civil Preliminary and Final Design		4.25%		\$ 87,866	
	Construction Management & Superintendency		2.50%		\$ 51,686	
C	Authority Fees					\$ 92,866
	Whittlesea City Council Checking & Supervision		3.25%		\$ 67,192	
	VicRoads Plan Checking		1.00%		\$ 20,674	
	Ausnet Public lighting and electrical design checking (assumes 1 stage)	1	Item	\$ 5,000	\$ 5,000	
D	Construction					\$ 2,067,437
1	PRELIMINARIES					\$ 80,000
1.1	Site establishment (e.g. Site facilities, security fencing, storage sheds etc.)	1	Item	\$ 35,000	\$ 35,000	
1.2	Site management & supervision including QA	10	wks	\$ 2,500	\$ 25,000	
1.3	Traffic Management	1	Item	\$ 20,000	\$ 20,000	
2	DEMOLITION					\$ 4,290
2.1	Trees	2	No	\$ 1500	\$ 3,000	
2.2	Strip asphalt from existing pavement	0	m²	\$ 5	\$ 0	
2.3	Removal of existing fencing	50	Lm	\$ 18	\$ 900	
2.4	Break out & remove "No Road" sign & concrete edge strip.	1	Item	\$ 390	\$ 390	
3	EARTHWORKS (VERTICAL ALIGNMENT <u>NOT</u> AVAILABLE)					\$ 339,000
3.1	Stripping topsoil (150mm) (included in excavation below)		m²	\$ 6	\$ 0	
3.2	Excavation and removal	7,350	m³	\$ 30	\$ 220,500	
3.3	Filling	0	m³	\$ 15	\$ 0	
3.5	Import Fill material	1,000	m³	\$ 45	\$ 45,000	
3.6	Soft spot rectification/Unsuitable Subgrade (NDCR)	1,050	m³	\$ 70	\$ 73,500	
4	PAVEMENT					\$ 534,280
4.1	Deep lift asphalt 175 mm (Type H class 320 upper layer 40 mm deep and Type SI lower layer 135 mm deep)	4,105	m²	\$ 85	\$ 348,925	
4.2	Sub Base 150 mm (Size 20 mm 3% CTCR)	5,295	m²	\$ 25	\$ 132,375	
4.3	Lower Sub Base 150 mm (Class 4 Size 20 mm CR)	5,298	m²	\$ 10	\$ 52,980	
4.5	Shoulder - full depth pavement	0	m²	\$ 145	\$ 0	
4.6	Rock excavation & sub-surface remediation 150mm (included in 3.6 above)	0.00	m²	\$ 70	\$ 0	
5	DRAINAGE					\$ 101,630
5.1	Subsoil drains 100mm dia - screenings	576	Lm	\$ 30	\$ 17,280	
5.2	Subsoil drains 100mm dia - no fines conc	0	Lm	\$ 45	\$ 0	
5.3	375 RCP (Class 3 Pipe Class 2 CR) @ 0-1.5 m deep	140	Lm	\$ 170	\$ 23,800	
5.4	450 RCP (Class 3 Pipe Class 2 CR) @ 0-1.5 m deep	22	Lm	\$ 275	\$ 6,050	
5.5	525 RCP (Class 3 Pipe Class 2 CR) @ 0-1.5 m deep	25	Lm	\$ 350	\$ 8,750	
5.6	Grated side entry pits as per EDCM 603 @ 0-1.5 m deep	15	No	\$ 2,500	\$ 37,500	
5.7	Junction pits (600 X 900) as per EDCM 605 @ 0-1.5 m deep	2	No	\$ 2,000	\$ 4,000	
5.8	Drainage Densisty Tests	10	No	\$ 105	\$ 1,050	
5.9	Adjust & connect to existing pits	2	No	\$ 1,600	\$ 3,200	
5.10	Allowance to modify drainage to ultimate location	0	item	\$ 50,000	\$ 0	
6	CONCRETE WORKS					\$ 173,770
6.1	Kerb &channel - SM1 300	105	Lm	\$ 32	\$ 3,360	
6.2	Kerb &channel - SM2 600	935	Lm	\$ 35	\$ 32,725	
6.3	Kerb &channel - SM3 600	603	Lm	\$ 35	\$ 21,105	
6.4	Edge Strip (200 mm)	0	Lm	\$ 34	\$ 0	
6.5	Bike Paths (3.0m wide,125 mm, residential, as per EDC 401)	696	Lm	\$ 135	\$ 93,960	
6.6	Footpaths (1.5m wide,125 mm, residential, as per EDC 401)	348	Lm	\$ 65	\$ 22,620	
6.7	Laybacks and tactile pavers	0	m²	\$ 850	\$ 0	
6.8	10m concrete maintenance area end of all islands	0	m²	\$ 85	\$ 0	
6.9	Additional Shared Paths	0	Lm	\$ 130	\$ 0	
7	TRAFFIC SIGNAL WORKS	1	item	\$ 300,000	\$ 300,000	\$ 300,000
8	SIGNAL MAINTENANCE (10 YEARS) by Road Authority	1	item	\$ 100,000	\$ 100,000	\$ 100,000
9	ELECTRICAL, PUBILC LIGHTING & TELECOMMUNICATIONS					\$ 133,380
9.1	Light pole (1-way) and luminous lights		No	\$ 8,000	\$ 0	
9.2	Light pole (2-way) and luminous lights to accord with ultimate carraiaeway	5	No	\$ 13,000	\$ 65,000	
9.3	JUP lighting single		No	\$ 4,000	\$ 0	
9.4	JUP lighting dual		No	\$ 5,000	\$ 0	
9.5	Trenching and backfilling for cabling including pole excavation	822	Lm	\$ 26	\$ 21,372	
9.6	Cabling and PVC conduits (63, 100 & 150 mm dia) for median lighting	735	Lm	\$ 25	\$ 18,008	
9.7	Service pit installation for Traffic Signals	15	Item	\$ 240	\$ 3,600	
9.8	Electrical connection	1	Item	\$ 15,000	\$ 15,000	
9.9	Excavation of Telecom conduit trenches (Comms provider to supply cable)	400	lm	\$ 26	\$ 10,400	
10	LANDSCAPING WORKS					\$ 227,538
10.1	Landscape Treatment including trees, planting and lawn installation.	425	lm	\$ 380.00	\$ 161,500	
10.2	Vehicle exclusion Fencing	525	No	\$ 90.00	\$ 47,250	
10.3	Landscape maintenance (including watering of all trees to maintain healthy establishment)	9%	rate		\$ 18,788	
11	SIGNAGE	1	item	\$ 18,000	\$ 18,000	\$ 18,000
12	LINEMARKING & DIRECTIONAL TACTILES	1	item	\$ 40,000	\$ 40,000	\$ 40,000
13	SERVICE RELOCATION					\$ 0
13.1	NA		Item			
14	ENVIRONMENTAL CONTROLS (To comply with EPA guidelines for Major Construction Sites & EPA Publication 960)	1	item	\$ 15,000	\$ 15,000	\$ 15,000
15	MISCELLANEOUS					\$ 550
15.1	Exisiting Road outside of new road pavements	NA				
#	Strip asphalt		m²	\$ 5	\$ -	
#	Recycle FCR to stockpile		m³	\$ 10	\$ -	
#	backfill with structural fill		m³	\$ 12	\$ -	
15.2	PSMs	1	item	\$ 550	\$ 550	
16	PROVISIONAL SUM - DAYWORK		item		\$ -	\$ -
	TOTAL A + B + C + D					\$ 2,522,105
E	Contingency					
	Contingency (15% of C)				15%	\$ 310,116
F	PROJECT BUDGET					
	Total Estimate					\$ 2,832,220



PRELIMINARY ESTIMATE OF DEVELOPMENT COSTS | DONNYBROOK/WOODSTOCK ICP

WORKS Merriange Road and Cameron Street Intersection (3 way un-signalised)					DATE: 17.05.18	
ICP REF IN-12					DPM REF: 1941/M/A(iv)	
PLANS G18040-01-D (Traffix Group)					VER 1.0	
		Area:	3,393 sq.m			
			0.339 ha			
ITEM	DESCRIPTION	QUANTITY	UNIT	RATE	AMOUNT	SUBTOTAL
A	Project and Program Management (%)					\$ 45,502
	Project Management		3.00%		\$ 27,301	
	Project scoping, planning, scheduling, monitoring, reporting and commissioning					
	Management of preconstruction activities, development of tender documents and management of contracts					
	Managing external interfaces, including community liaison, environmental issues, traffic issues etc					
	Records management					
	Program Administration		2.00%		\$ 18,201	
B	Design and Investigation (%)					\$ 113,754
	Traffic Investigations & Fucntional Design		0.85%		\$ 7,735	
	Cadastral and Engineering Survey		1.20%		\$ 10,920	
	Geotechnical investigations Pavement Investigations and Design		1.20%		\$ 10,920	
	Environmental Investigations				\$ 0	
	Landscape Design		1.00%		\$ 9,100	
	Electrical & Public Lighting Design		1.50%		\$ 13,651	
	Civil Preliminary and Final Design		4.25%		\$ 38,676	
	Construction Management & Superintendency		2.50%		\$ 22,751	
C	Authority Fees					\$ 43,676
	Whittlesea City Council Checking & Supervision		3.25%		\$ 29,576	
	VicRoads Plan Checking		1.00%		\$ 9,100	
	Ausnet Public lighting and electrical design checking (assumes 1 stage)	1	Item	\$ 5,000	\$ 5,000	
D	Construction					\$ 910,035
1	PRELIMINARIES					\$ 110,000
1.1	Site establishment (e.g. Site facilities, security fencing, storage sheds etc.)	1	Item	\$ 35,000	\$ 35,000	
1.2	Site management & supervision including QA	10	wks	\$ 2,500	\$ 25,000	
1.3	Traffic Management	1	Item	\$ 50,000	\$ 50,000	
2	DEMOLITION					\$ 7,090
2.1	Trees	3	No	\$ 1500	\$ 4,500	
2.2	Strip asphalt from existing pavement	80	m²	\$ 5	\$ 400	
2.3	Removal of existing fencing	100	Lm	\$ 18	\$ 1,800	
2.4	Break out & remove "No Road" sign & concrete edge strip.	1	Item	\$ 390	\$ 390	
3	EARTHWORKS (VERTICAL ALIGNMENT <u>NOT</u> AVAILABLE)					\$ 100,000
3.1	Stripping topsoil (150mm) (included in excavation below)		m²	\$ 6	\$ 0	
3.2	Excavation and removal	2,000	m³	\$ 30	\$ 60,000	
3.3	Filling	0	m³	\$ 15	\$ 0	
3.5	Import Fill material	500	m³	\$ 45	\$ 22,500	
3.6	Soft spot rectification/Unsuitable Subgrade (NDCR)	250	m³	\$ 70	\$ 17,500	
4	PAVEMENT					\$ 286,625
4.1	Deep lift asphalt 175 mm (Type H class 320 upper layer 40 mm deep and Type SI lower layer 135 mm deep)	2,075	m²	\$ 85	\$ 176,375	
4.2	Sub Base 150 mm (Size 20 mm 3% CTCR)	3,150	m²	\$ 25	\$ 78,750	
4.3	Lower Sub Base 150 mm (Class 4 Size 20 mm CR)	3,150	m²	\$ 10	\$ 31,500	
4.5	Shoulder - full depth pavement	0	m²	\$ 145	\$ 0	
4.6	Rock excavation & sub-surface remediation 150mm (included in 3.6 above)	0.00	m²	\$ 70	\$ 0	
5	DRAINAGE					\$ 68,765
5.1	Subsoil drains 100mm dia - screenings	473	Lm	\$ 30	\$ 14,190	
5.2	Subsoil drains 100mm dia - no fines conc	0	Lm	\$ 45	\$ 0	
5.3	375 RCP (Class 3 Pipe Class 2 CR) @ 0-1.5 m deep	205	Lm	\$ 170	\$ 34,850	
5.4	450 RCP (Class 3 Pipe Class 2 CR) @ 0-1.5 m deep	0	Lm	\$ 275	\$ 0	
5.5	525 RCP (Class 3 Pipe Class 2 CR) @ 0-1.5 m deep	0	Lm	\$ 350	\$ 0	
5.6	Grated side entry pits as per EDCM 603 @ 0-1.5 m deep	4	No	\$ 2,500	\$ 10,000	
5.7	Junction pits (600 X 900) as per EDCM 605 @ 0-1.5 m deep	3	No	\$ 2,000	\$ 6,000	
5.8	Drainage Densisty Tests	5	No	\$ 105	\$ 525	
5.9	Adjust & connect to existing pits	2	No	\$ 1,600	\$ 3,200	
5.10	Allowance to modify drainage to ultimate location	0	item	\$ 50,000	\$ 0	
6	CONCRETE WORKS					\$ 46,401
6.1	Kerb & channel - SM1 300	118	Lm	\$ 32	\$ 3,776	
6.2	Kerb & channel - SM2 600	348	Lm	\$ 35	\$ 12,180	
6.3	Kerb & channel - SM3 600	7	Lm	\$ 35	\$ 245	
6.4	Edge Strip (200 mm)	0	Lm	\$ 34	\$ 0	
6.5	Bike Paths (3.0m wide,125 mm, residential, as per EDC 401)	151	Lm	\$ 135	\$ 20,385	
6.6	Footpaths (1.5m wide,125 mm, residential, as per EDC 401) <i>Southern footpath to be constructed in ultimate</i>	151	Lm	\$ 65	\$ 9,815	
6.7	Laybacks and tactile pavers	0	m²	\$ 850	\$ 0	
6.8	10m concrete maintenance area end of all islands	0	m²	\$ 85	\$ 0	
6.9	Additional Shared Paths	0	Lm	\$ 130	\$ 0	
7	TRAFFIC SIGNAL WORKS	0	item	\$ 300,000	\$ 0	\$ 0
8	SIGNAL MAINTENANCE (10 YEARS) by Road Authority	0	item	\$ 100,000	\$ 0	\$ 0
9	ELECTRICAL, PUBILC LIGHTING & TELECOMMUNICATIONS					\$ 79,325
9.1	Light pole (1-way) and luminous lights	5	No	\$ 8,000	\$ 40,000	
9.2	Light pole (2-way) and luminous lights to accord with ultimate carraigeway		No	\$ 13,000	\$ 0	
9.3	JUP lighting single		No	\$ 4,000	\$ 0	
9.4	JUP lighting dual		No	\$ 5,000	\$ 0	
9.5	Trenching and backfilling for cabling including pole excavation	350	Lm	\$ 26	\$ 9,100	
9.6	Cabling and PVC conduits (63, 100 & 150 mm dia) for median lighting	250	Lm	\$ 25	\$ 6,125	
9.7	Service pit installation for Traffic Signals	0	Item	\$ 240	\$ 0	
9.8	Electrical connection for lighting	1	Item	\$ 15,000	\$ 15,000	
9.9	Excavation of Telecom conduit trenches (Comms provider to supply cable)	350	lm	\$ 26	\$ 9,100	
10	LANDSCAPING WORKS					\$ 156,279
10.1	Landscape Treatment including trees, planting and lawn installation.	331	lm	\$ 335.00	\$ 110,885	
10.2	Vehicle exclusion Fencing	361	No	\$ 90.00	\$ 32,490	
10.3	Landscape maintenance (including watering of all trees to maintain healthy establishment)	9%	rate		\$ 12,904	
11	SIGNAGE	1	item	\$ 10,000	\$ 10,000	\$ 10,000
12	LINEMARKING & DIRECTIONAL TACTILES	1	item	\$ 30,000	\$ 30,000	\$ 30,000
13	SERVICE RELOCATION					\$ 0
13.1	NA		Item			
14	ENVIRONMENTAL CONTROLS (To comply with EPA guidelines for Major Construction Sites & EPA Publication 960)	1	item	\$ 15,000	\$ 15,000	\$ 15,000
15	MISCELLANEOUS					\$ 550
15.1	Exisiting Road outside of new road pavements	NA				
#	Strip asphalt		m²	\$ 5	\$ -	
#	Recycle FCR to stockpile		m³	\$ 10	\$ -	
#	backfill with structural fill		m³	\$ 12	\$ -	
15.2	PSMs	1	item	\$ 550	\$ 550	
16	PROVISIONAL SUM - DAYWORK		item		\$ -	\$ -
	TOTAL A + B + C + D					\$ 1,112,967
E	Contingency					
	Contingency (15% of C)				15%	\$ 136,505
F	PROJECT BUDGET					
	Total Estimate					\$ 1,249,473



WORKS Signalised Pedestrian of Donnybrook Road proximate to APA gas easement					DATE: 17.05.18	
ICP REF PED-03					DPM REF: 1941/M/A(iv)	
PLANS Unavailable					VER 1.0	
ITEM	DESCRIPTION	QUANTITY	UNIT	RATE	AMOUNT	SUBTOTAL
A	Project and Program Management (%)					\$ 2,488
	Project Management		1.00%		\$ 1,659	
	Project scoping, planning, scheduling, monitoring, reporting and commissioning					
	Management of preconstruction activities, development of tender documents and management of contracts					
	Managing external interfaces, including community liaison, environmental issues, traffic issues etc					
	Records management					
	Program Administration		0.50%		\$ 829	
B	Design and Investigation (%)					\$ 10,118
	Traffic Investigations & Fucntional Design		1.00%		\$ 1,659	
	Cadastral and Engineering Survey		0.50%		\$ 829	
	Geotechnical investigations Pavement Investigations and Design		0.00%		\$ 0	
	Environmental Investigations				\$ 0	
	Landscape Design		0.00%		\$ 0	
	Electrical & Public Lighting Design		0.85%		\$ 1,410	
	Civil Preliminary and Final Design		2.25%		\$ 3,732	
	Construction Management & Superintendency		1.50%		\$ 2,488	
C	Authority Fees					\$ 7,050
	Whittlesea City Council Checking & Supervision		3.25%		\$ 5,391	
	VicRoads Plan Checking		1.00%		\$ 1,659	
D	Construction					\$ 165,875
1	PRELIMINARIES					\$ 15,000
1.1	Site establishment (e.g. Site facilities, security fencing, storage sheds etc.)	1	Item	\$ 5,000	\$ 5,000	
1.2	Site management & supervision including QA	0	wks	\$ 0	\$ 0	
1.3	Traffic Management	1	Item	\$ 10,000	\$ 10,000	
2	DEMOLITION					\$ 270
2.1	Trees	0	No	\$ 1500	\$ 0	
2.2	Strip asphalt from existing pavement	0	m²	\$ 5	\$ 0	
2.3	Removal of existing fencing	15	Lm	\$ 18	\$ 270	
2.4	Break out & remove "No Road" sign & concrete edge strip.	0	Item	\$ 390	\$ 0	
3	CIVIL WORKS (EARTHWORKS, CONCRETE AND DRAINAGE)					\$ 3,705
3.1	Excavation and removal (nominal amount)	100	m³	\$ 30	\$ 3,000	
3.2	Subsoil drains 100mm dia - screenings	20	Lm	\$ 30	\$ 600	
3.3	Drainage Densisty Tests	1	No	\$ 105	\$ 105	
3.4	Concrete Footpath	30	sq m	\$ 48	\$ 1,440	
3.5	Construct Kerb Ramp & Install TGSI	4	each	\$ 1,500	\$ 6,000	
3.6	Supply and Install stick down TGSI	5	m²	\$ 350	\$ 1,750	
3.7	Pedestrian Lines 150mm wide	20	m	\$ 15	\$ 300	
3.8	Stop Bars 600mm wide	14	m	\$ 65	\$ 910	
3.9	Removal of linemarking - with grit blasting	4	m²	\$ 60	\$ 240	
3.10	Pavement Overlay	150	m²	\$ 30	\$ 4,500	
4	SIGNAL MAINTENANCE (10 YEARS) by Road Authority (incl. Prom & controller)	1	item	\$ 25,000	\$ 25,000	\$ 25,000
5	PUBLIC LIGHTING, SIGNAGE AND SIGNAL HARDWARE					\$ 116,900
5.1	New Signal Pedestal - 2B	6	each	\$ 3,500	\$ 21,000	
5.2	New Signal Pedestal Mastarm or JUP	2	each	\$ 5,000	\$ 10,000	
5.3	New Pedestal Foundation - 0.7m base	6	each	\$ 1,500	\$ 9,000	
5.4	New Pedestal Foundation - 3.0m base	2	each	\$ 4,000	\$ 8,000	
5.5	Lanterns - 3 aspect (LED)	8	each	\$ 1,100	\$ 8,800	
5.6	Lanterns - Pedestrian (LED)	4	each	\$ 800	\$ 3,200	
5.7	Audio Tactiles - Variable	4	each	\$ 1,500	\$ 6,000	
5.8	Conduit Pit (standard)	5	each	\$ 1,600	\$ 8,000	
5.9	Conduit - Open trench through footpath/paved area, supply & Install 2/100mm Underground Conduit, Backfill &	10	m	\$ 400	\$ 4,000	
5.10	Conduit - Open trench through grassed/unpaved area, supply & Install 2/100mm Underground Conduit, Backfill &	10	m	\$ 350	\$ 3,500	
5.11	Conduit - Bore under road, supply & Install 2/100mm Underground Conduit, Backfill & Reinstate	14	m	\$ 450	\$ 6,300	
5.12	Conduit - Open trench through footpath/paved area, supply & Install 1/50mm Underground Conduit, Backfill & Reinstate	20	m	\$ 250	\$ 5,000	
5.13	13 Core Cable	150	m	\$ 30	\$ 4,500	
5.14	Pillar Mounted Point of Supply	1	each	\$ 3,000	\$ 3,000	
5.15	Concrete stand for new traffic controller	1	each	\$ 2,800	\$ 2,800	
5.16	Brackets - Single	2	each	\$ 900	\$ 1,800	
5.17	Lamps (globes) - 150W	2	each	\$ 700	\$ 1,400	
5.18	Cable (supply and install)	40	m	\$ 30	\$ 1,200	
5.19	Conduit - Open trench through grassed/unpaved area, supply & Install 1/50mm Underground Conduit, Backfill &	20	m	\$ 200	\$ 4,000	
5.20	Electrical Pit (standard)	3	each	\$ 1,800	\$ 5,400	
6	ENVIRONMENTAL CONTROLS (To comply with EPA guidelines for Major Construction Sites & EPA Publication 960)	1	item	\$ 5,000	\$ 5,000	\$ 5,000
7	PROVISIONAL SUM - DAYWORK		item		\$ -	\$ -
	TOTAL A + B + C + D					\$ 185,531
E	Contingency					
	Contingency (10% of C)				10%	\$ 16,588
F	PROJECT BUDGET					
	Total Estimate					\$ 202,119

NOTES:
The above costs have been derived from the Wyndham North DCP.



PRELIMINARY ESTIMATE OF DEVELOPMENT COSTS | DONNYBROOK/WOODSTOCK ICP

WORKS		Hayes Hill Boulevard GGF Friendly Bebo Arch crossing		Length:	28	lm	DATE: 18.06.18	
ICP REF		BR-03A		Area:	-	sq.m	DPM REF: 1941/M/A(iv)	
PLANS		DPM 1941/M/GH1 18.12.15			-	ha	VER 1.0	
ITEM	DESCRIPTION			QUANTITY	UNIT	RATE	AMOUNT	SUBTOTAL
A	Project and Program Management (%)							\$ 91,341
	Project Management				3.00%		\$ 54,805	
	Project scoping, planning, scheduling, monitoring, reporting and commissioning							
	Management of preconstruction activities, development of tender documents and management of contracts							
	Managing external interfaces, including community liaison, environmental issues, traffic issues etc.							
	Records management							
	Program Administration				2.00%		\$ 36,536	
B	Design and Investigation (%)							\$ 242,054
	Traffic Investigations & Functional Design				0.85%		\$ 15,528	
	Cadastral and Engineering Survey				1.20%		\$ 21,922	
	Geotechnical investigations and footing design				1.20%		\$ 21,922	
	Structural Design				0.75%		\$ 13,701	
	Environmental Investigations				1.00%		\$ 18,268	
	Landscape Design				1.00%		\$ 18,268	
	Electrical & Public Lighting Design				0.50%		\$ 9,134	
	Civil Preliminary and Final Design				4.25%		\$ 77,640	
	Construction Management & Superintendency				2.50%		\$ 45,671	
C	Authority Fees							\$ 64,372
	Whittlesea City Council Checking & Supervision				3.25%		\$ 59,372	
	VicRoads Plan Checking				NA		\$ 0	
	Ausnet Public lighting and electrical design checking			1	Item	\$ 5,000	\$ 5,000	
D	Construction							\$ 1,826,820
1	PRELIMINARIES							\$ 110,000
1.1	Site establishment (e.g. Site facilities, security fencing, storage sheds etc.)			1	Item	\$ 30,000	\$ 30,000	
1.2	Site management & supervision including QA			15	wks	\$ 1,000	\$ 15,000	
1.3	Creek Diversion Works including set up of bypass lines, pump systems and bund walls			1	Item	\$ 50,000	\$ 50,000	
1.4	Traffic Managemnet (assumes no development on one side of the creek)			1	Item	\$ 15,000	\$ 15,000	
2	DEMOLITION							\$ 390
2.1	Trees			0	No	\$ 1500	\$ 0	
2.2	Strip asphalt from existing pavement			0	m²	\$ 5	\$ 0	
2.3	Removal of existing fencing			0	Lm	\$ 18	\$ 0	
2.4	Break out & remove "No Road" sign & concrete edge strip.			1	Item	\$ 390	\$ 390	
3	EARTHWORKS (VERTICAL ALIGNMENT NOT AVAILABLE)							\$ 238,500
3.1	Stripping topsoil (150mm) (included in excavation below)			0	m²	\$ 6	\$ 0	
3.2	Excavation and removal for GGF pools and submerged bebo arch footings			2,200	m³	\$ 30	\$ 66,000	
3.3	Filling			2,500	m³	\$ 15	\$ 37,500	
3.5	Import and compact Engineered backfill material up to road boxing			3,000	m³	\$ 45	\$ 135,000	
3.6	Soft spot rectification/Unsuitable Subgrade (NDCR)			0	m³	\$ 70	\$ 0	
4	PAVEMENT							\$ 154,100
4.1	Deep lift asphalt 175 mm (Type H class 320 upper layer 40 mm deep and Type SI lower layer 135 mm deep)			1,150	m²	\$ 85	\$ 97,750	
4.2	Sub Base 150 mm (Size 20 mm 3% CTCR)			1,610	m²	\$ 25	\$ 40,250	
4.3	Lower Sub Base 150 mm (Class 4 Size 20 mm CR)			1,610	m²	\$ 10	\$ 16,100	
4.5	Shoulder - full depth pavement			0	m²	\$ 145	\$ 0	
4.6	Rock excavation & sub-surface remediation 150mm (included in 3.6 above)			0	m²	\$ 70	\$ 0	
5	DRAINAGE							\$ 28,710
5.1	Subsoil drains 100mm dia - screenings into bebo			210	Lm	\$ 30	\$ 6,300	
5.2	Subsoil drains 100mm dia - no fines conc			0	Lm	\$ 45	\$ 0	
5.3	375 RCP (Class 3 Pipe Class 2 CR) @ 0-1.5 m deep			10	Lm	\$ 170	\$ 1,700	
5.4	450 RCP (Class 3 Pipe Class 2 CR) @ 0-1.5 m deep			0	Lm	\$ 275	\$ 0	
5.5	525 RCP (Class 3 Pipe Class 2 CR) @ 0-1.5 m deep			0	Lm	\$ 350	\$ 0	
5.6	Grated side entry pits as per EDCM 603 @ 0-1.5 m deep			5	No	\$ 2,500	\$ 12,500	
5.7	Junction pits (600 X 900) as per EDCM 605 @ 0-1.5 m deep			4	No	\$ 2,000	\$ 8,000	
5.8	Drainage Density Tests			2	No	\$ 105	\$ 210	
5.8	Allowance to modify drainage to ultimate location			0	item	\$ 50,000	\$ 0	
6	CONCRETE WORKS							\$ 33,840
6.1	Kerb &channel - SM1 300			0	Lm	\$ 32	\$ 0	
6.2	Kerb &channel - SM2 600			200	Lm	\$ 35	\$ 7,000	
6.3	Kerb &channel - SM3 600			0	Lm	\$ 35	\$ 0	
6.4	Edge Strip (200 mm)			10	Lm	\$ 34	\$ 340	
6.5	Bike Paths (3.0m wide,125 mm, residential, as per EDC 401) - Bike Path is on-road			100	Lm	\$ 135	\$ 13,500	
6.6	Footpaths (1.5m wide,125 mm, residential, as per EDC 401)			200	Lm	\$ 65	\$ 13,000	
6.7	Laybacks and tactile pavers			0	m²	\$ 850	\$ 0	
6.8	10m concrete maintenance area end of all islands			0	m²	\$ 85	\$ 0	
6.9	Additional Shared Paths			0	Lm	\$ 130	\$ 0	
7	SUPPLY AND INSTALL BEBO ARCHES						\$ -	\$ 1,027,900
7.1	Supply Humes Bebo Arch 6210s (11 X 2.5 m wide units); 1 unit = 11.9 t			133	t	\$ 1000	\$ 133,000	
7.2	Supply Humes Bebo Arch 6210s (11 X 2.5 m wide units) 1 unit = 11.9 t			133	t	\$ 1000	\$ 133,000	
7.3	Supply Humes Bebo Arch 12300s (16 X 1.8 m wide units) 1 unit = 16.8 t			268	t	\$ 1000	\$ 268,000	
7.4	Installation margin of items 7.1-7.3				60%		\$ 320,400	
7.5	In-situe strip footings			100	cub.m	\$ 400	\$ 40,000	
7.6	Supply & Install Pre-cast plain concrete spandrel wall for 6210s (4 Units) 1 unit = 8.2 t			33	t	\$ 1250	\$ 41,000	
7.7	Supply & Install Pre-cast plain concrete spandrel wall for 12300s (2 Units) 1 unit = 17.2 t			34	t	\$ 1250	\$ 43,000	
7.8	Rock beaching at ends of crossing			450	cub.m	\$ 110	\$ 49,500	
8	ELECTRICAL, PUBILC LIGHTING & TELECOMMUNICATIONS							\$ 47,830
8.1	Light pole (1-way) and luminous lights			0	No	\$ 8,000	\$ 0	
8.2	Light pole (2-way) and luminous lights to accord with ultimate carriage way median			2	No	\$ 13,000	\$ 26,000	
8.3	JUP lighting single			0	No	\$ 4,000	\$ 0	
8.4	JUP lighting dual			0	No	\$ 5,000	\$ 0	
8.5	Trenching and backfilling for cabling including pole excavation			50	Lm	\$ 26	\$ 1,300	
8.6	Cabling and PVC conduits (63, 100 & 150 mm dia) for lighting			100	Lm	\$ 25	\$ 2,450	
8.7	Service pit installation			2	Item	\$ 240	\$ 480	
8.8	Electrical connection			1	Item	\$ 15,000	\$ 15,000	
8.9	Excavation of Telecom conduit trenches (Comms provider to supply cable)			100	lm	\$ 26	\$ 2,600	
9	LANDSCAPING WORKS							\$ 45,000
9.1	Landscape Treatment including trees, planting and lawn installation.			100	lm	\$ 450.00	\$ 45,000	
9.2	Vehicle exclusion Fencing			0	No	\$ 90.00	\$ 0	
9.3	Landscape maintenance (including watering of all trees to maintain healthy establishment)			9%	rate		\$ 4,050	
10	SIGNAGE			1	item	\$ 1,000	\$ 1,000	\$ 1,000
11	LINEMARKING			1	item	\$ 5,000	\$ 5,000	\$ 5,000
12	SERVICE RELOCATION							\$ 0
12.1	NA				Item			
13	ENVIRONMENTAL CONTROLS (To comply with EPA guidelines for Major Construction Sites & EPA Publication 960)			1	item	\$ 60,000	\$ 60,000	\$ 60,000
14	MISCELLANEOUS							\$ 74,550
14.1	Existing Road outside of new road pavements			NA				
14.1.	Strip asphalt				m²	\$ 5	\$ -	
14.1.	Recycle FCR to stockpile				m³	\$ 10	\$ -	
14.1.	backfill with structural fill				m³	\$ 12	\$ -	
14.2	PSMs			1	Item	\$ 550	\$ 550	
14.3	Installation and supply of crash fencing			200	lm	\$ 200	\$ 40,000	
14.4	Crash Fencing Transition and anchor points			4	Item	\$ 8500	\$ 34,000	
16	PROVISIONAL SUM - DAYWORK				Item		\$ -	\$ -
	TOTAL A + B + C + D							\$ 2,224,586
E	Contingency							
	Contingency (15% of C)						15%	\$ 274,023
F	PROJECT BUDGET							
	Total Estimate							\$ 2,498,609
	Total Estimate per linear metre (\$/lm)							\$ 89,236



PRELIMINARY ESTIMATE OF DEVELOPMENT COSTS DONNYBROOK/WOODSTOCK ICP						
WORKS Hayes Hill Boulevard GGF Friendly Culvert Crossing (100m Width Creek Reserve)			Length:	28	lm	DATE: 12.09.2018
ICP REF BR-03C			Area:	-	sq.m	DPM REF: 1941/M/A(iv)
PLANS DPM 1941/M/GH1 18.12.15				-	ha	VER 1.0
ITEM	DESCRIPTION	QUANTITY	UNIT	RATE	AMOUNT	SUBTOTAL
A	Project and Program Management (%)					\$ 89,420
	Project Management		3.00%		\$ 53,652	
	Project scoping, planning, scheduling, monitoring, reporting and commissioning					
	Management of preconstruction activities, development of tender documents and management of contracts					
	Managing external interfaces, including community liaison, environmental issues, traffic issues etc.					
	Records management					
	Program Administration		2.00%		\$ 35,768	
B	Design and Investigation (%)					\$ 236,962
	Traffic Investigations & Functional Design		0.85%		\$ 15,201	
	Cadastral and Engineering Survey		1.20%		\$ 21,461	
	Geotechnical Investigations and footing design		1.20%		\$ 21,461	
	Structural Design		0.75%		\$ 13,413	
	Environmental Investigations		1.00%		\$ 17,884	
	Landscape Design		1.00%		\$ 17,884	
	Electrical & Public Lighting Design		0.50%		\$ 8,942	
	Civil Preliminary and Final Design		4.25%		\$ 76,007	
	Construction Management & Superintendency		2.50%		\$ 44,710	
C	Authority Fees					\$ 63,123
	Whittlesea City Council Checking & Supervision		3.25%		\$ 58,123	
	VicRoads Plan Checking		NA		\$ 0	
	Ausnet Public lighting and electrical design checking	1	Item	\$ 5,000	\$ 5,000	
D	Construction					\$ 1,788,394
1	PRELIMINARIES					\$ 110,000
1.1	Site establishment (e.g. Site facilities, security fencing, storage sheds etc.)	1	Item	\$ 30,000	\$ 30,000	
1.2	Site management & supervision including QA	15	wks	\$ 1,000	\$ 15,000	
1.3	Creek Diversion Works including set up of bypass lines, pump systems and bund walls	1	Item	\$ 50,000	\$ 50,000	
1.4	Traffic Managemnet (<i>assumes no development on one side of the creek</i>)	1	Item	\$ 15,000	\$ 15,000	
2	DEMOLITION					\$ 390
2.1	Trees	0	No	\$ 1500	\$ 0	
2.2	Strip asphalt from existing pavement	0	m²	\$ 5	\$ 0	
2.3	Removal of existing fencing	0	Lm	\$ 18	\$ 0	
2.4	Break out & remove "No Road" sign & concrete edge strip.	1	Item	\$ 390	\$ 390	
3	EARTHWORKS (VERTICAL ALIGNMENT NOT AVAILABLE)					\$ 241,250
3.1	Stripping topsoil (150mm) (included in excavation below)	0	m²	\$ 6	\$ 0	
3.2	Excavation	1,500	m³	\$ 30	\$ 45,000	
3.3	Filling	3,000	m³	\$ 15	\$ 45,000	
3.4	Import and compact Engineered backfill material up to road boxing	2,750	m³	\$ 55	\$ 151,250	
3.5	Soft spot rectification/Unsuitable Subgrade (NDCR)	0	m³	\$ 70	\$ 0	
4	PAVEMENT					\$ 130,200
4.1	Deep lift asphalt 175 mm (Type H class 320 upper layer 40 mm deep and Type SI lower layer 135 mm deep)	970	m²	\$ 85	\$ 82,450	
4.2	Sub Base 150 mm (Size 20 mm 3% CTCR)	1,330	m²	\$ 25	\$ 33,250	
4.3	Lower Sub Base 150 mm (Class 4 Size 20 mm CR)	1,450	m²	\$ 10	\$ 14,500	
4.5	Shoulder - full depth pavement	0	m²	\$ 145	\$ 0	
4.6	Rock excavation & sub-surface remediation 150mm (included in 3.6 above)	0	m²	\$ 70	\$ 0	
5	DRAINAGE					\$ 30,759
5.1	Subsoil drains 100mm dia - screenings	210	Lm	\$ 30	\$ 6,300	
5.2	Subsoil drains 100mm dia - no fines conc	0	Lm	\$ 45	\$ 0	
5.3	300 RCP (Class 3 Pipe Class 2 CR) @ 0-1.5 m deep	30	Lm	\$ 186	\$ 5,576	
5.4	375 RCP (Class 2 Pipe Class 3 CR) @ 0-1.5 m deep	40	Lm	\$ 203	\$ 8,100	
5.5	450 RCP (Class 2 Pipe Class 3 CR) @ 1.5-2.5 m deep	0	Lm	\$ 355	\$ 0	
5.6	525 RCP (Class 2 Pipe Class 3 CR) @ 1.5-2.5 m deep	0	Lm	\$ 350	\$ 0	
5.7	Grated side entry pits as per EDCM 603 @ 0-1.5 m deep	4	No	\$ 2,643	\$ 10,574	
5.8	Junction pits (600 X 900) as per EDCM 605 @ 0-1.5 m deep	0	No	\$ 2,000	\$ 0	
5.9	Drainage Density Tests	2	No	\$ 105	\$ 210	
6	CONCRETE WORKS					\$ 33,840
6.1	Kerb & channel - SM1 300	0	Lm	\$ 32	\$ 0	
6.2	Kerb & channel - SM2 600	200	Lm	\$ 35	\$ 7,000	
6.3	Kerb & channel - SM3 600	0	Lm	\$ 35	\$ 0	
6.4	Edge Strip (200 mm)	10	Lm	\$ 34	\$ 340	
6.5	Bike Paths (3.0m wide,125 mm, residential, as per EDC 401) - <i>Bike Path is on-road</i>	100	Lm	\$ 135	\$ 13,500	
6.6	Footpaths (1.5m wide,125 mm, residential, as per EDC 401)	200	Lm	\$ 65	\$ 13,000	
6.7	Laybacks and tactile pavers	0	m²	\$ 850	\$ 0	
6.8	10m concrete maintenance area end of all islands	0	m²	\$ 85	\$ 0	
6.9	Additional Shared Paths	0	Lm	\$ 130	\$ 0	
7	SUPPLY AND INSTALL BOX CULVERTS				\$ -	\$ 847,844
7.1	Supply & Install Rocla Culverts (3 No. Rows - 28m X 2700mm wide X 900 high Crown Units);	84	Lm	\$ 1801	\$ 151,259	
7.2	Reinforced Concrete Wingwall & Upstand Headwall incl Footings (Assume 250mm thick as per Structural Drawings)	117	m²	\$ 800	\$ 93,600	
7.3	Reinforced Concrete Culvert Base Slab & Apron (Assume 300mm thick as per Structural Drawings)	571	m²	\$ 300	\$ 171,300	
7.4	Rock beaching at ends of crossing	225	m²	\$ 142	\$ 31,950	
7.5	Supply & Install Rocla Culverts (2 No. X 1 No. Row - 34m X 1500mm wide X 600 high Crown Units) - Terrestrial Culverts	68	Lm	\$ 1139	\$ 77,435	
7.6	Reinforced Concrete Wingwall & Upstand Headwall incl Footings (Assume 250mm thick as per Structural Drawings)	129	m²	\$ 800	\$ 103,200	
7.7	Reinforced Concrete Culvert Base Slab & Apron (Assume 300mm thick as per Structural Drawings)	550	m²	\$ 300	\$ 165,000	
7.8	Rock beaching at ends of crossing	150	m²	\$ 142	\$ 21,300	
7.9	Supply & Installd Fencing	164	Lm	\$ 200	\$ 32,800	
8	ELECTRICAL, PUBILC LIGHTING & TELECOMMUNICATIONS					\$ 42,561
8.1	Light pole (1-way) and luminous lights (Incl Cableing)	3	No	\$ 6,000	\$ 18,000	
8.2	Light pole (2-way) and luminous lights to accord with ultimate carriage way	0	No	\$ 13,000	\$ 0	
8.3	JUP lighting single	0	No	\$ 4,000	\$ 0	
8.4	Joint Trenching and backfilling for Electrical & Telecommunications cabling & conduits.	105	Lm	\$ 29	\$ 3,008	
8.5	Trenching and backfilling for Electrical cabling & conduits including pole excavation	20	Lm	\$ 27	\$ 549	
8.6	Extra Over for PVC conduits (63, 100 & 150 mm dia)	125	Lm	\$ 39	\$ 4,838	
8.7	Service pit installation	4	Item	\$ 292	\$ 1,166	
8.8	Electrical connection	1	Item	\$ 15,000	\$ 15,000	
8.9	Excavation of Telecom conduit trenches (Comms provider to supply cable) - Assume Joint Trench	105	lm	\$ 0	\$ 0	
9	LANDSCAPING WORKS					\$ 45,000
9.1	Landscape Treatment including trees, planting and lawn installation.	100	lm	\$ 450.00	\$ 45,000	
9.2	Vehicle exclusion Fencing	0	No	\$ 90.00	\$ 0	
9.3	Landscape maintenance (including watering of all trees to maintain healthy establishment)	9%	rate		\$ 4,050	
10	SIGNAGE	1	item	\$ 1,000	\$ 1,000	\$ 1,000
11	LINEMARKING	1	item	\$ 5,000	\$ 5,000	\$ 5,000
12	SERVICE RELOCATION					\$ 0
12.1	NA		Item			
13	ENVIRONMENTAL CONTROLS (To comply with EPA guidelines for Major Construction Sites & EPA Publication 960)	1	item	\$ 60,000	\$ 60,000	\$ 60,000
14	MISCELLANEOUS					\$ 240,550
14.1	Existing Road outside of new road pavements	NA				
14.1.	Strip asphalt		m²	\$ 5	\$ -	
14.1.	Recycle FCR to stockpile		m³	\$ 10	\$ -	
14.1.	backfill with structural fill		m³	\$ 12	\$ -	
14.2	PSMs	1	Item	\$ 550	\$ 550	
14.3	Installation and supply of crash fencing	200	lm	\$ 1200	\$ 240,000	
14.4	Crash Fencing Transition and anchor points (4 No.)	INCL ABOVE	Item	\$ 8500		
16	PROVISIONAL SUM - DAYWORK		Item		\$ -	\$ -
	TOTAL A + B + C + D					\$ 2,177,899
E	Contingency					
	Contingency (15% of C)				15%	\$ 268,259
F	PROJECT BUDGET					
	Total Estimate					\$ 2,446,158
	Total Estimate per linear metre (\$/lm)					\$ 87,363



PRELIMINARY ESTIMATE OF DEVELOPMENT COSTS | DONNYBROOK/WOODSTOCK ICP

WORKS Cameron Street GGF Friendly Bebo Arch crossing		Length: 25 lm		DATE: 18.06.18		
ICP REF BR-04A		Area: - sq.m		DPM REF: 1941/M/A(iv)		
PLANS DPM 1941/M/GC1 18.12.15		-		VER 1.0		
ITEM	DESCRIPTION	QUANTITY	UNIT	RATE	AMOUNT	SUBTOTAL
A	Project and Program Management (%)					\$ 85,412
	Project Management		3.00%		\$ 51,247	
	Project scoping, planning, scheduling, monitoring, reporting and commissioning					
	Management of preconstruction activities, development of tender documents and management of contracts					
	Managing external interfaces, including community liaison, environmental issues, traffic issues etc.					
	Records management					
	Program Administration		2.00%		\$ 34,165	
B	Design and Investigation (%)					\$ 226,342
	Traffic Investigations & Functional Design		0.85%		\$ 14,520	
	Cadastral and Engineering Survey		1.20%		\$ 20,499	
	Geotechnical investigations and footing design		1.20%		\$ 20,499	
	Structural Design		0.75%		\$ 12,812	
	Environmental Investigations		1.00%		\$ 17,082	
	Landscape Design		1.00%		\$ 17,082	
	Electrical & Public Lighting Design		0.50%		\$ 8,541	
	Civil Preliminary and Final Design		4.25%		\$ 72,600	
	Construction Management & Superintendency		2.50%		\$ 42,706	
C	Authority Fees					\$ 60,518
	Whittlesea City Council Checking & Supervision		3.25%		\$ 55,518	
	VicRoads Plan Checking		NA		\$ 0	
	Ausnet Public lighting and electrical design checking	1	Item	\$ 5,000	\$ 5,000	
D	Construction					\$ 1,708,240
1	PRELIMINARIES					\$ 110,000
1.1	Site establishment (e.g. Site facilities, security fencing, storage sheds etc.)	1	Item	\$ 30,000	\$ 30,000	
1.2	Site management & supervision including QA	15	wks	\$ 1,000	\$ 15,000	
1.3	Creek Diversion Works including set up of bypass lines, pump systems and bund walls	1	Item	\$ 50,000	\$ 50,000	
1.4	Traffic Managemnet (assumes no development on one side of the creek)	1	Item	\$ 15,000	\$ 15,000	
2	DEMOLITION					\$ 3,390
2.1	Trees	2	No	\$ 1500	\$ 3,000	
2.2	Strip asphalt from existing pavement	0	m²	\$ 5	\$ 0	
2.3	Removal of existing fencing	0	Lm	\$ 18	\$ 0	
2.4	Break out & remove "No Road" sign & concrete edge strip.	1	Item	\$ 390	\$ 390	
3	EARTHWORKS (VERTICAL ALIGNMENT NOT AVAILABLE)					\$ 217,500
3.1	Stripping topsoil (150mm) (included in excavation below)	0	m²	\$ 6	\$ 0	
3.2	Excavation and removal for GGF pools and submerged bebo arch footings	2,000	m³	\$ 30	\$ 60,000	
3.3	Filling	1,500	m³	\$ 15	\$ 22,500	
3.5	Import and compact Engineered backfill material up to road boxing	3,000	m³	\$ 45	\$ 135,000	
3.6	Soft spot rectification/Unsuitable Subgrade (NDCR)	0	m³	\$ 70	\$ 0	
4	PAVEMENT					\$ 160,800
4.1	Deep lift asphalt 175 mm (Type H class 320 upper layer 40 mm deep and Type SI lower layer 135 mm deep)	1,200	m²	\$ 85	\$ 102,000	
4.2	Sub Base 150 mm (Size 20 mm 3% CTCR)	1,680	m²	\$ 25	\$ 42,000	
4.3	Lower Sub Base 150 mm (Class 4 Size 20 mm CR)	1,680	m²	\$ 10	\$ 16,800	
4.5	Shoulder - full depth pavement	0	m²	\$ 145	\$ 0	
4.6	Rock excavation & sub-surface remediation 150mm (included in 3.6 above)	0	m²	\$ 70	\$ 0	
5	DRAINAGE					\$ 28,710
5.1	Subsoil drains 100mm dia - screenings into bebo	210	Lm	\$ 30	\$ 6,300	
5.2	Subsoil drains 100mm dia - no fines conc	0	Lm	\$ 45	\$ 0	
5.3	375 RCP (Class 3 Pipe Class 2 CR) @ 0-1.5 m deep	10	Lm	\$ 170	\$ 1,700	
5.4	450 RCP (Class 3 Pipe Class 2 CR) @ 0-1.5 m deep	0	Lm	\$ 275	\$ 0	
5.5	525 RCP (Class 3 Pipe Class 2 CR) @ 0-1.5 m deep	0	Lm	\$ 350	\$ 0	
5.6	Grated side entry pits as per EDCM 603 @ 0-1.5 m deep	5	No	\$ 2,500	\$ 12,500	
5.7	Junction pits (600 X 900) as per EDCM 605 @ 0-1.5 m deep	4	No	\$ 2,000	\$ 8,000	
5.8	Drainage Density Tests	2	No	\$ 105	\$ 210	
5.8	Allowance to modify drainage to ultimate location	0	item	\$ 50,000	\$ 0	
6	CONCRETE WORKS					\$ 33,840
6.1	Kerb &channel - SM1 300	0	Lm	\$ 32	\$ 0	
6.2	Kerb &channel - SM2 600	200	Lm	\$ 35	\$ 7,000	
6.3	Kerb &channel - SM3 600	0	Lm	\$ 35	\$ 0	
6.4	Edge Strip (200 mm)	10	Lm	\$ 34	\$ 340	
6.5	Bike Paths (3.0m wide,125 mm, residential, as per EDC 401) - Bike Path is on-road	100	Lm	\$ 135	\$ 13,500	
6.6	Footpaths (1.5m wide,125 mm, residential, as per EDC 401)	200	Lm	\$ 65	\$ 13,000	
6.7	Laybacks and tactile pavers	0	m²	\$ 850	\$ 0	
6.8	10m concrete maintenance area end of all islands	0	m²	\$ 85	\$ 0	
6.9	Additional Shared Paths	0	Lm	\$ 130	\$ 0	
7	SUPPLY AND INSTALL BEBO ARCHES				\$ -	\$ 930,620
7.1	Supply Humes Bebo Arch 6210s (10 X 2.5 m wide units); 1 unit = 11.9 t	119	t	\$ 1000	\$ 119,000	
7.2	Supply Humes Bebo Arch 6210s (10 X 2.5 m wide units) 1 unit = 11.9 t	119	t	\$ 1000	\$ 119,000	
7.3	Supply Humes Bebo Arch 12300s (14 X 1.8 m wide units) 1 unit = 16.8 t	235	t	\$ 1000	\$ 235,200	
7.4	Installation margin of items 7.1-7.3		60%		\$ 283,920	
7.5	In-situe strip footings	100	cub.m	\$ 400	\$ 40,000	
7.6	Supply & Install Pre-cast plain concrete spandrel wall for 6210s (4 Units) 1 unit = 8.2 t	33	t	\$ 1250	\$ 41,000	
7.7	Supply & Install Pre-cast plain concrete spandrel wall for 12300s (2 Units) 1 unit = 17.2 t	34	t	\$ 1250	\$ 43,000	
7.8	Rock beaching at ends of crossing	450	cub.m	\$ 110	\$ 49,500	
8	ELECTRICAL, PUBILC LIGHTING & TELECOMMUNICATIONS					\$ 37,830
8.1	Light pole (1-way) and luminous lights	2	No	\$ 8,000	\$ 16,000	
8.2	Light pole (2-way) and luminous lights to accord with ultimate carriage way	0	No	\$ 13,000	\$ 0	
8.3	JUP lighting single	0	No	\$ 4,000	\$ 0	
8.4	JUP lighting dual	0	No	\$ 5,000	\$ 0	
8.5	Trenching and backfilling for cabling including pole excavation	50	Lm	\$ 26	\$ 1,300	
8.6	Cabling and PVC conduits (63, 100 & 150 mm dia) for lighting	100	Lm	\$ 25	\$ 2,450	
8.7	Service pit installation	2	Item	\$ 240	\$ 480	
8.8	Electrical connection	1	Item	\$ 15,000	\$ 15,000	
8.9	Excavation of Telecom conduit trenches (Comms provider to supply cable)	100	lm	\$ 26	\$ 2,600	
9	LANDSCAPING WORKS					\$ 45,000
9.1	Landscape Treatment including trees, planting and lawn installation.	100	lm	\$ 450.00	\$ 45,000	
9.2	Vehicle exclusion Fencing	0	No	\$ 90.00	\$ 0	
9.3	Landscape maintenance (including watering of all trees to maintain healthy establishment)	9%	rate		\$ 4,050	
10	SIGNAGE	1	item	\$ 1,000	\$ 1,000	\$ 1,000
11	LINEMARKING	1	item	\$ 5,000	\$ 5,000	\$ 5,000
12	SERVICE RELOCATION					\$ 0
12.1	NA		Item			
13	ENVIRONMENTAL CONTROLS (To comply with EPA guidelines for Major Construction Sites & EPA Publication 960)	1	item	\$ 60,000	\$ 60,000	\$ 60,000
14	MISCELLANEOUS					\$ 74,550
14.1	Existing Road outside of new road pavements	NA				
14.1.	Strip asphalt		m²	\$ 5	\$ -	-
14.1.	Recycle FCR to stockpile		m³	\$ 10	\$ -	-
14.1.	backfill with structural fill		m³	\$ 12	\$ -	-
14.2	PSMs	1	Item	\$ 550	\$ 550	
14.3	Installation and supply of crash fencing	200	lm	\$ 200	\$ 40,000	
14.4	Crash Fencing Transition and anchor points	4	Item	\$ 8500	\$ 34,000	
16	PROVISIONAL SUM - DAYWORK		Item		\$ -	\$ -
	TOTAL A + B + C + D					\$ 2,080,512
E	Contingency					
	Contingency (15% of C)				15%	\$ 256,236
F	PROJECT BUDGET					
	Total Estimate					\$ 2,336,748
	Total Estimate per linear metre (\$/lm)					\$ 93,470

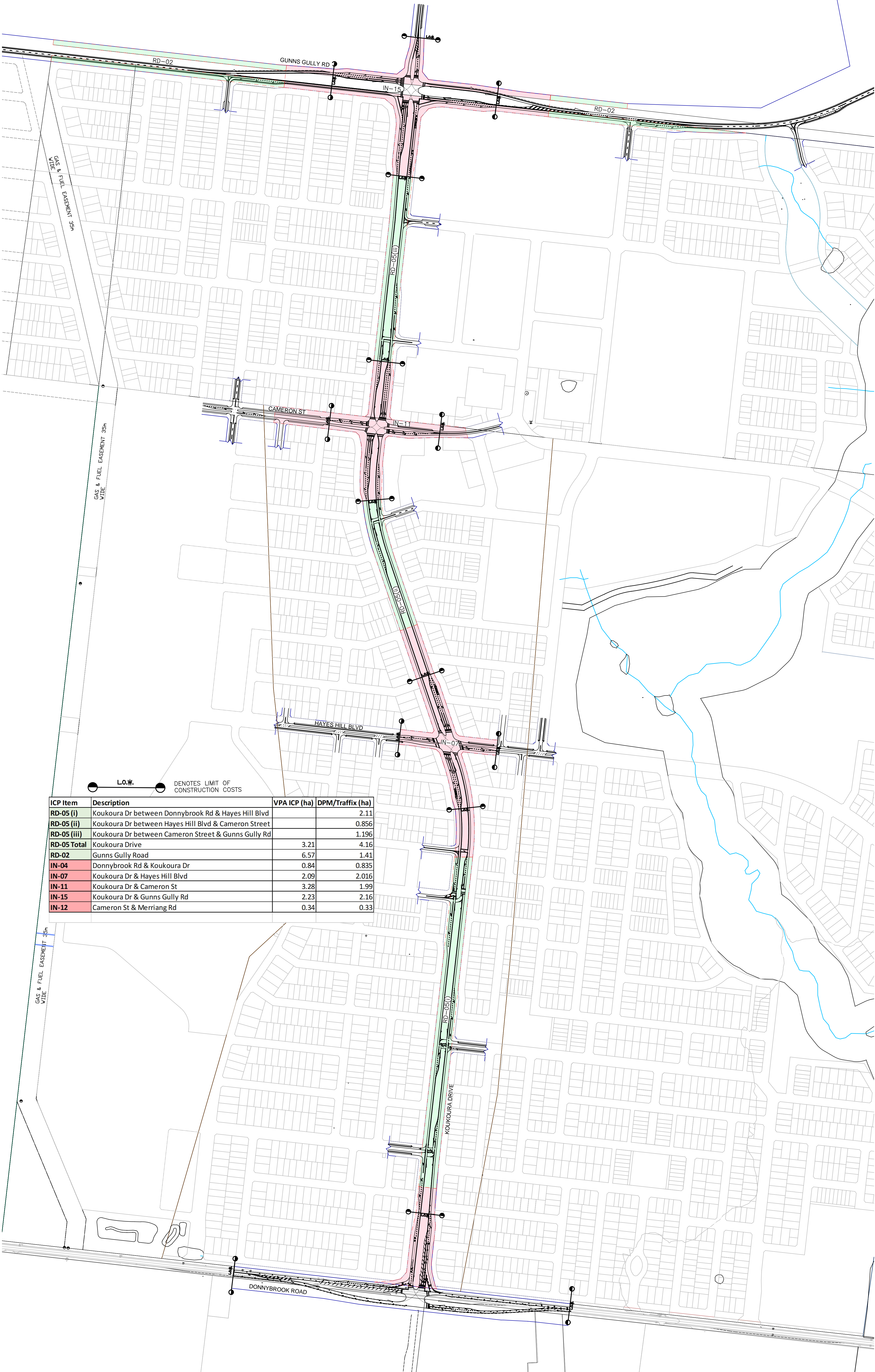


PRELIMINARY ESTIMATE OF DEVELOPMENT COSTS DONNYBROOK/WOODSTOCK ICP						
WORKS Cameron Street GGF Friendly Culvert Crossing (100m Width Creek Reserve)			Length:	25	lm	DATE: 12.09.2018
ICP REF BR-04C			Area:	-	sq.m	DPM REF: 1941/M/A(iv)
PLANS DPM 1941/M/GC1 18.12.15				-	ha	VER 1.0
ITEM	DESCRIPTION	QUANTITY	UNIT	RATE	AMOUNT	SUBTOTAL
A	Project and Program Management (%)					\$ 77,631
	Project Management		3.00%		\$ 46,579	
	Project scoping, planning, scheduling, monitoring, reporting and commissioning					
	Management of preconstruction activities, development of tender documents and management of contracts					
	Managing external interfaces, including community liaison, environmental issues, traffic issues etc.					
	Records management					
	Program Administration		2.00%		\$ 31,052	
B	Design and Investigation (%)					\$ 205,722
	Traffic Investigations & Functional Design		0.85%		\$ 13,197	
	Cadastral and Engineering Survey		1.20%		\$ 18,631	
	Geotechnical Investigations and footing design		1.20%		\$ 18,631	
	Structural Design		0.75%		\$ 11,645	
	Environmental Investigations		1.00%		\$ 15,526	
	Landscape Design		1.00%		\$ 15,526	
	Electrical & Public Lighting Design		0.50%		\$ 7,763	
	Civil Preliminary and Final Design		4.25%		\$ 65,986	
	Construction Management & Superintendency		2.50%		\$ 38,815	
C	Authority Fees					\$ 55,460
	Whittlesea City Council Checking & Supervision		3.25%		\$ 50,460	
	VicRoads Plan Checking		NA		\$ 0	
	Ausnet Public lighting and electrical design checking	1	Item	\$ 5,000	\$ 5,000	
D	Construction					\$ 1,552,618
1	PRELIMINARIES					\$ 95,000
1.1	Site establishment (e.g. Site facilities, security fencing, storage sheds etc.)	1	Item	\$ 30,000	\$ 30,000	
1.2	Site management & supervision including QA	15	wks	\$ 1,000	\$ 15,000	
1.3	Creek Diversion Works including set up of bypass lines, pump systems and bund walls	1	Item	\$ 50,000	\$ 50,000	
1.4	Traffic Management (<i>assumes no development on one side of the creek</i>)		NA		\$ 0	
2	DEMOLITION					\$ 3,390
2.1	Trees	2	No	\$ 1500	\$ 3,000	
2.2	Strip asphalt from existing pavement	0	m²	\$ 5	\$ 0	
2.3	Removal of existing fencing	0	Lm	\$ 18	\$ 0	
2.4	Break out & remove "No Road" sign & concrete edge strip.	1	Item	\$ 390	\$ 390	
3	EARTHWORKS (VERTICAL ALIGNMENT NOT AVAILABLE)					\$ 245,500
3.1	Stripping topsoil (150mm) (included in excavation below)	0	m²	\$ 6	\$ 0	
3.2	Excavation	1,000	m³	\$ 30	\$ 30,000	
3.3	Filling	3,000	m³	\$ 15	\$ 45,000	
3.4	Import and compact Engineered backfill material up to road boxing	3,100	m³	\$ 55	\$ 170,500	
3.5	Soft spot rectification/Unsuitable Subgrade (NDCR)	0	m³	\$ 70	\$ 0	
4	PAVEMENT					\$ 130,200
4.1	Deep lift asphalt 175 mm (Type H class 320 upper layer 40 mm deep and Type SI lower layer 135 mm deep)	1,030	m²	\$ 85	\$ 87,550	
4.2	Sub Base 150 mm (Size 20 mm 3% CTCR)	1,210	m²	\$ 25	\$ 30,250	
4.3	Lower Sub Base 150 mm (Class 4 Size 20 mm CR)	1,240	m²	\$ 10	\$ 12,400	
4.5	Shoulder - full depth pavement	0	m²	\$ 145	\$ 0	
4.6	Rock excavation & sub-surface remediation 150mm (included in 3.6 above)	0	m²	\$ 70	\$ 0	
5	DRAINAGE					\$ 29,644
5.1	Subsoil drains 100mm dia - screenings	210	Lm	\$ 30	\$ 6,300	
5.2	Subsoil drains 100mm dia - no fines conc	0	Lm	\$ 45	\$ 0	
5.3	300 RCP (Class 3 Pipe Class 2 CR) @ 0-1.5 m deep (Cross Drain at limit of works)	24	Lm	\$ 186	\$ 4,460	
5.4	375 RCP (Class 3 Pipe Class 2 CR) @ 0-1.5 m deep	40	Lm	\$ 203	\$ 8,100	
5.5	450 RCP (Class 3 Pipe Class 2 CR) @ 1.5-2.5 m deep	0	Lm	\$ 355	\$ 0	
5.6	525 RCP (Class 3 Pipe Class 2 CR) @ 1.5-2.5 m deep	0	Lm	\$ 350	\$ 0	
5.7	Grated side entry pits as per EDCM 603 @ 0-1.5 m deep	4	No	\$ 2,643	\$ 10,574	
5.8	Junction pits (600 X 900) as per EDCM 605 @ 0-1.5 m deep	0	No	\$ 2,000	\$ 0	
5.9	Drainage Density Tests	2	No	\$ 105	\$ 210	
6	CONCRETE WORKS					\$ 33,840
6.1	Kerb & channel - SM1 300	0	Lm	\$ 32	\$ 0	
6.2	Kerb & channel - B2	200	Lm	\$ 35	\$ 7,000	
6.3	Kerb & channel - SM2 600	0	Lm	\$ 35	\$ 0	
6.4	Edge Strip (200 mm)	10	Lm	\$ 34	\$ 340	
6.5	Bike Paths (3.0m wide,125 mm, residential, as per EDC 401) - <i>Bike Path is on-road</i>	100	Lm	\$ 135	\$ 13,500	
6.6	Footpaths (1.5m wide,125 mm, residential, as per EDC 401)	200	Lm	\$ 65	\$ 13,000	
6.7	Laybacks and tactile pavers	0	m²	\$ 850	\$ 0	
6.8	10m concrete maintenance area end of all islands	0	m²	\$ 85	\$ 0	
6.9	Additional Shared Paths	0	Lm	\$ 130	\$ 0	
7	SUPPLY AND INSTALL BOX CULVERTS				\$ -	\$ 620,933
7.1	Supply & Install Rocla Culverts (2 No. Rows - 34m X 1500mm wide X 1200 high Crown Units);	50	Lm	\$ 1346	\$ 67,278	
7.2	Reinforced Concrete Wingwall & Upstand Headwall incl Footings (Assume 250mm thick as per Structural Drawings)	87	m²	\$ 800	\$ 69,600	
7.3	Reinforced Concrete Culvert Base Slab & Apron (Assume 300mm thick as per Structural Drawings)	320	m²	\$ 300	\$ 96,000	
7.4	Rock beaching at ends of crossing	110	m²	\$ 142	\$ 15,620	
7.5	Supply & Install Rocla Culverts (2 No. X 1 No. Row - 34m X 1500mm wide X 600 high Crown Units) - Terrestrial Culverts	68	Lm	\$ 1139	\$ 77,435	
7.6	Reinforced Concrete Wingwall & Upstand Headwall incl Footings (Assume 250mm thick as per Structural Drawings)	114	m²	\$ 800	\$ 91,200	
7.7	Reinforced Concrete Culvert Base Slab & Apron (Assume 300mm thick as per Structural Drawings)	505	m²	\$ 300	\$ 151,500	
7.8	Rock beaching at ends of crossing	150	m²	\$ 142	\$ 21,300	
7.9	Supply & Install Fencing	155	Lm	\$ 200	\$ 31,000	
8	ELECTRICAL, PUBILC LIGHTING & TELECOMMUNICATIONS					\$ 42,561
8.1	Light pole (1-way) and luminous lights (Incl Cableing)	3	No	\$ 6,000	\$ 18,000	
8.2	Light pole (2-way) and luminous lights to accord with ultimate carriage way	0	No	\$ 13,000	\$ 0	
8.3	JUP lighting single	0	No	\$ 4,000	\$ 0	
8.4	Joint Trenching and backfilling for Electrical & Telecommunications cabling & conduits.	105	Lm	\$ 29	\$ 3,008	
8.5	Trenching and backfilling for Electrical cabling & conduits including pole excavation	20	Lm	\$ 27	\$ 549	
8.6	Extra Over for PVC conduits (63, 100 & 150 mm dia)	125	Lm	\$ 39	\$ 4,838	
8.7	Service pit installation	4	Item	\$ 292	\$ 1,166	
8.8	Electrical connection	1	Item	\$ 15,000	\$ 15,000	
8.9	Excavation of Telecom conduit trenches (Comms provider to supply cable) - Assume Joint Trench	105	lm	\$ 0	\$ 0	
9	LANDSCAPING WORKS					\$ 45,000
9.1	Landscape Treatment including trees, planting and lawn installation.	100	lm	\$ 450.00	\$ 45,000	
9.2	Vehicle exclusion Fencing	0	No	\$ 90.00	\$ 0	
9.3	Landscape maintenance (including watering of all trees to maintain healthy establishment)	9%	rate		\$ 4,050	
10	SIGNAGE	1	item	\$ 1,000	\$ 1,000	\$ 1,000
11	LINEMARKING	1	item	\$ 5,000	\$ 5,000	\$ 5,000
12	SERVICE RELOCATION					\$ 0
12.1	NA		Item			
13	ENVIRONMENTAL CONTROLS (To comply with EPA guidelines for Major Construction Sites & EPA Publication 960)	1	item	\$ 60,000	\$ 60,000	\$ 60,000
14	MISCELLANEOUS					\$ 240,550
14.1	Existing Road outside of new road pavements	NA				
14.1.	Strip asphalt		m²	\$ 5	\$ -	
14.1.	Recycle FCR to stockpile		m³	\$ 10	\$ -	
14.1.	backfill with structural fill		m³	\$ 12	\$ -	
14.2	PSMs	1	Item	\$ 550	\$ 550	
14.3	Installation and supply of crash fencing	200	lm	\$ 1200	\$ 240,000	
14.4	Crash Fencing Transition and anchor points (4 No.)	INCL ABOVE	No.	\$ 8500		
16	PROVISIONAL SUM - DAYWORK		Item		\$ -	\$ -
	TOTAL A + B + C + D					\$ 1,891,431
E	Contingency					
	Contingency (15% of C)				15%	\$ 232,893
F	PROJECT BUDGET					
	Total Estimate					\$ 2,124,323
	Total Estimate per linear metre (\$/lm)					\$ 84,973



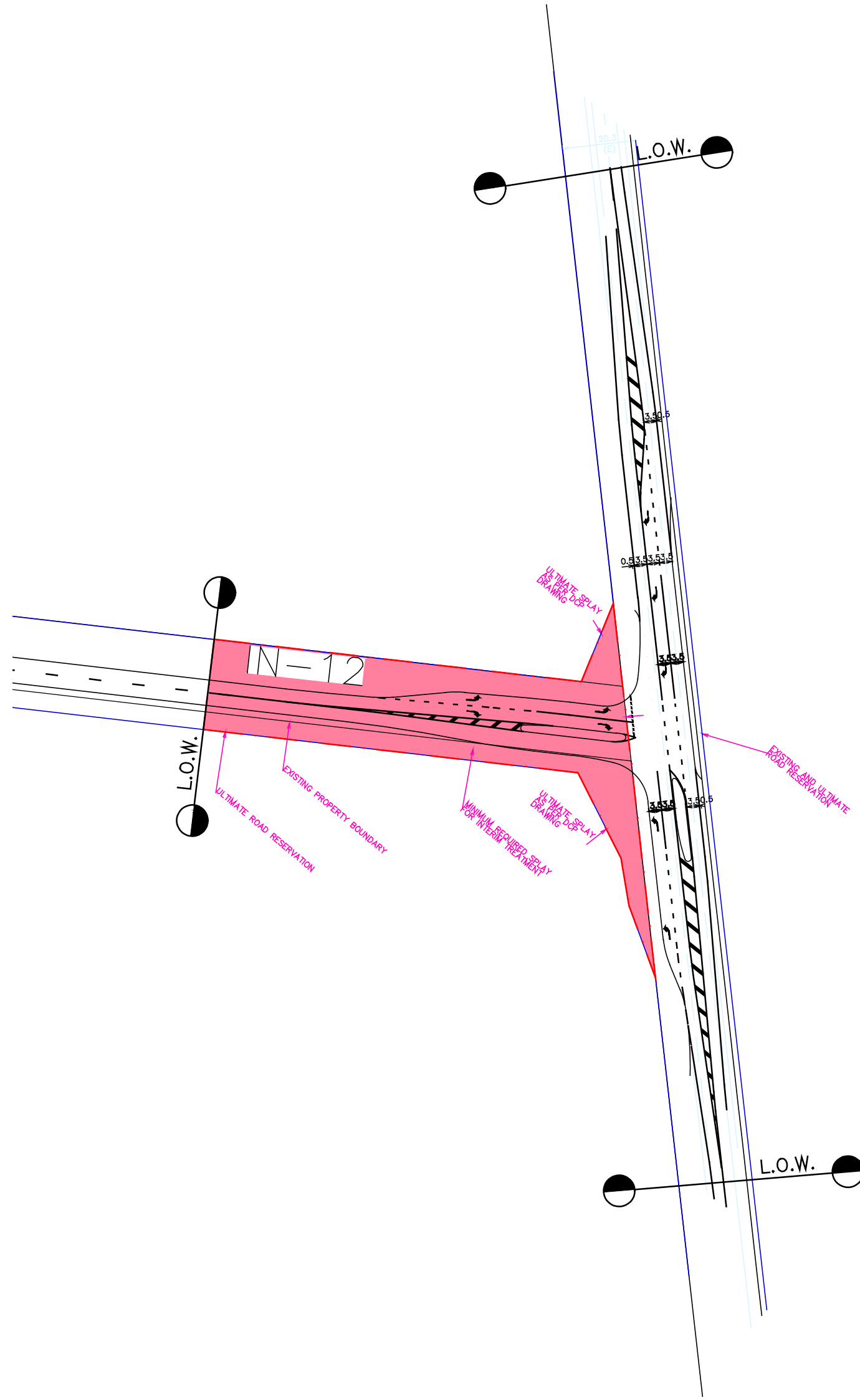


Peppercorn Hill ICP Drawings



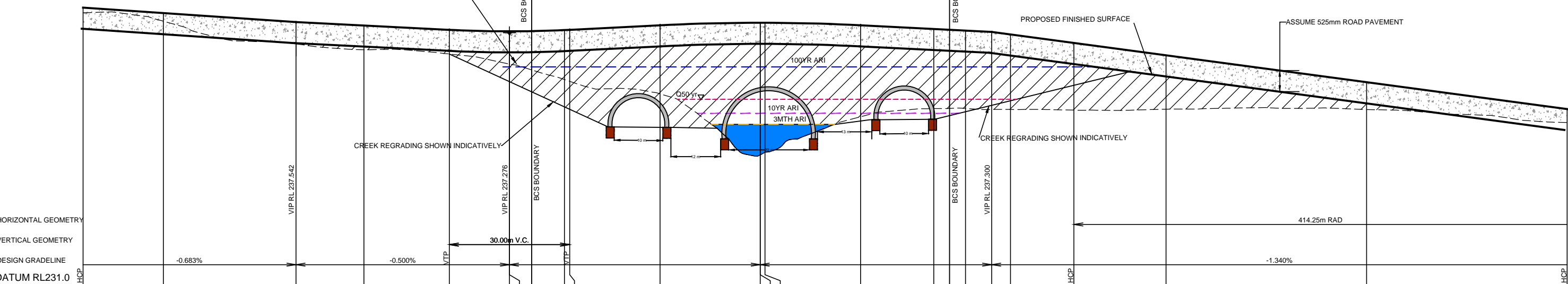
● L.O.W. ● DENOTES LIMIT OF CONSTRUCTION COSTS

ICP Item	Description	VPA ICP (ha)	DPM/Traffic (ha)
RD-05 (i)	Koukoura Dr between Donnybrook Rd & Hayes Hill Blvd		2.11
RD-05 (ii)	Koukoura Dr between Hayes Hill Blvd & Cameron Street		0.856
RD-05 (iii)	Koukoura Dr between Cameron Street & Gunns Gully Rd		1.196
RD-05 Total	Koukoura Drive	3.21	4.16
RD-02	Gunns Gully Road	6.57	1.41
IN-04	Donnybrook Rd & Koukoura Dr	0.84	0.835
IN-07	Koukoura Dr & Hayes Hill Blvd	2.09	2.016
IN-11	Koukoura Dr & Cameron St	3.28	1.99
IN-15	Koukoura Dr & Gunns Gully Rd	2.23	2.16
IN-12	Cameron St & Merriang Rd	0.34	0.33

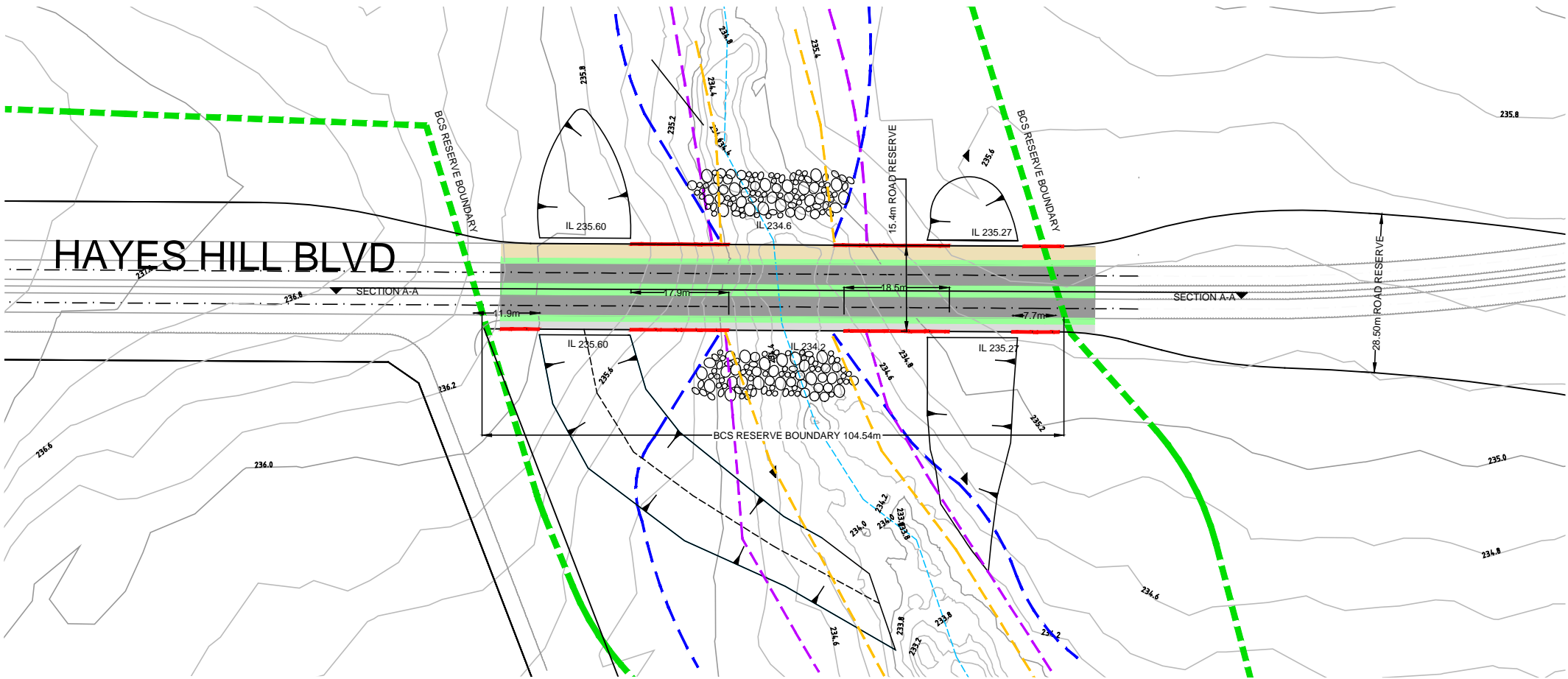


CROSS SECTION HAYES HILL BLVD SECTION A-A

Horizontal scale 1:500
Vertical scale 1:50



HORIZONTAL GEOMETRY											
VERTICAL GEOMETRY											
DESIGN GRADELINE											
DATUM RL231.0											
DESIGN CENTRELINE	237.904	237.768	237.542	237.457	237.351	237.313	237.313	237.344	237.526	237.463	237.372
EXISTING SURFACE	237.775	237.566	237.000	236.854	236.748	236.496	236.496	236.111	234.239	235.755	235.387
CHAINAGE	80.000	100.000	133.071	150.000	171.299	186.299	186.299	200.000	248.830	273.830	292.063



REF.	REVISION	DATE	APPD.
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			

DRAFT (FOR DISCUSSION ONLY)
NOT TO BE REPLICATED

DPM
CONSULTING CIVIL ENGINEERS & PROJECT MANAGERS
A.C.N. 006 550 803
22 Business Park Drive Notting Hill 3168
T: (03) 9538 5000 | F: (03) 9538 5050 |
E: consulting@dpmvic.com.au | W: www.dpmvic.com.au

DRAWN:
DESIGNED:
CHECKED:
AUTHORISED:
DATE:

MUNICIPALITY: WHITTLESEA CITY COUNCIL
PROJECT: CONCEPT GGF BEBO DESIGN
CONCEPT PLAN
DETAILS: HAYES HILL BLVD - DAREBIN CREEK ROAD CROSSING

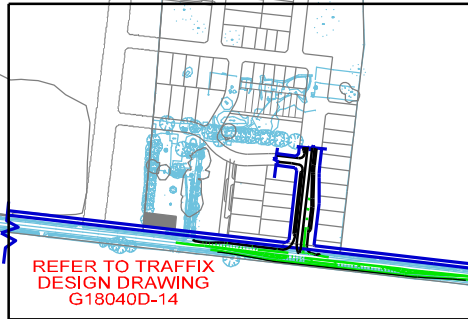
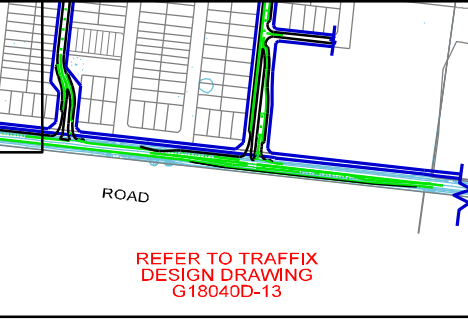
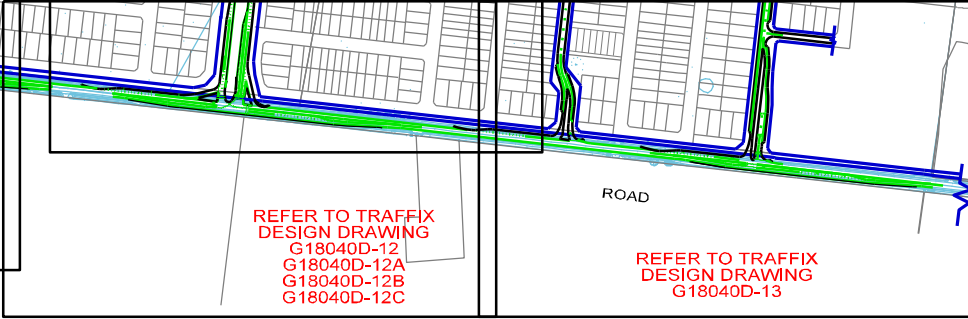
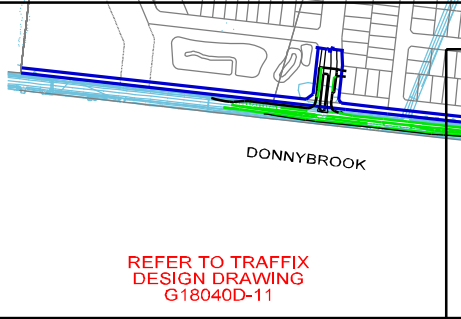
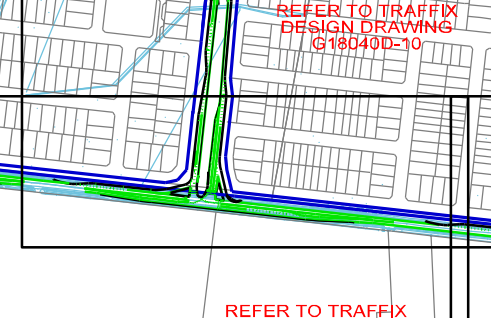
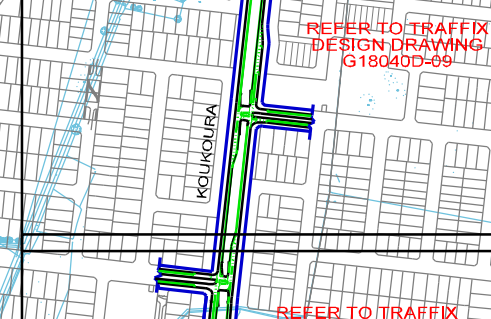
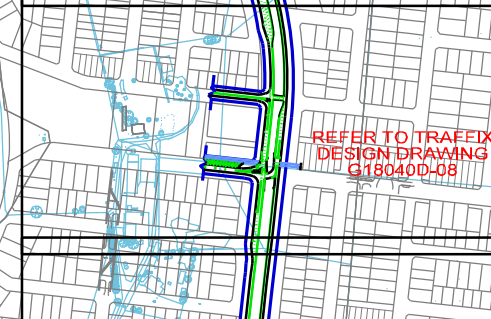
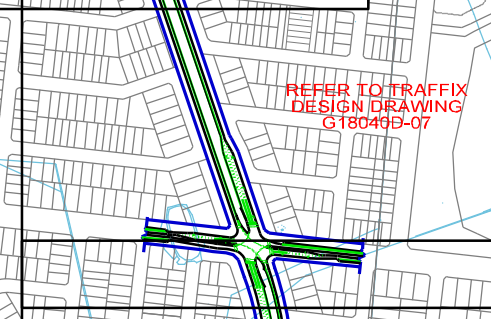
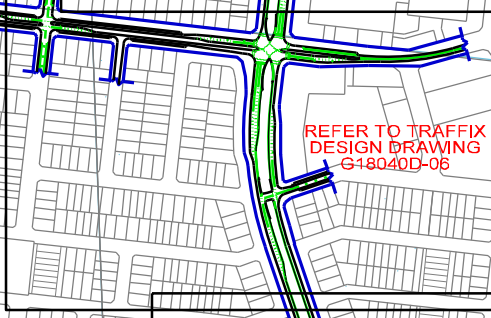
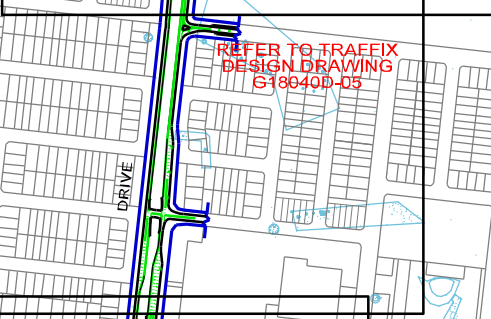
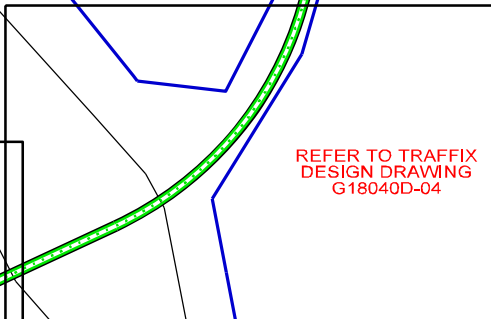
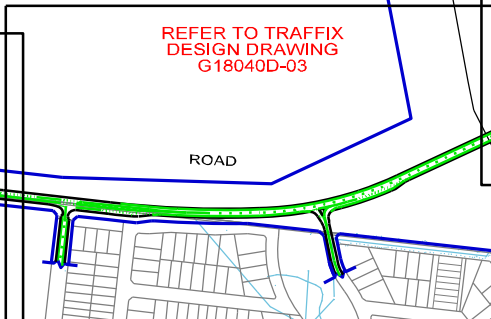
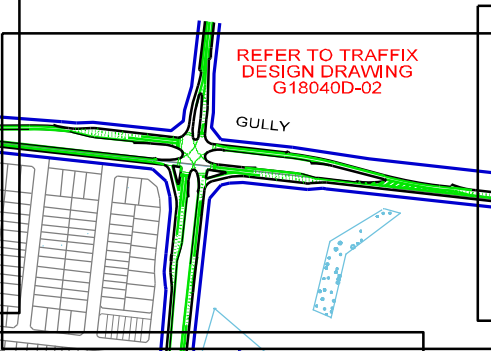
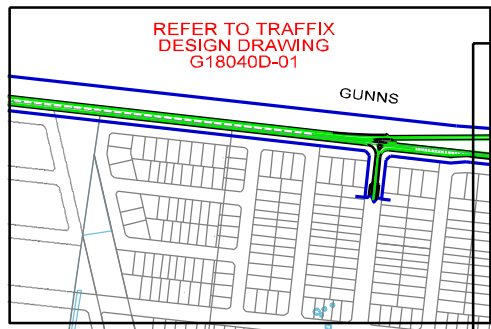
SCALE
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SHEET 1 OF
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1941/M/GH1

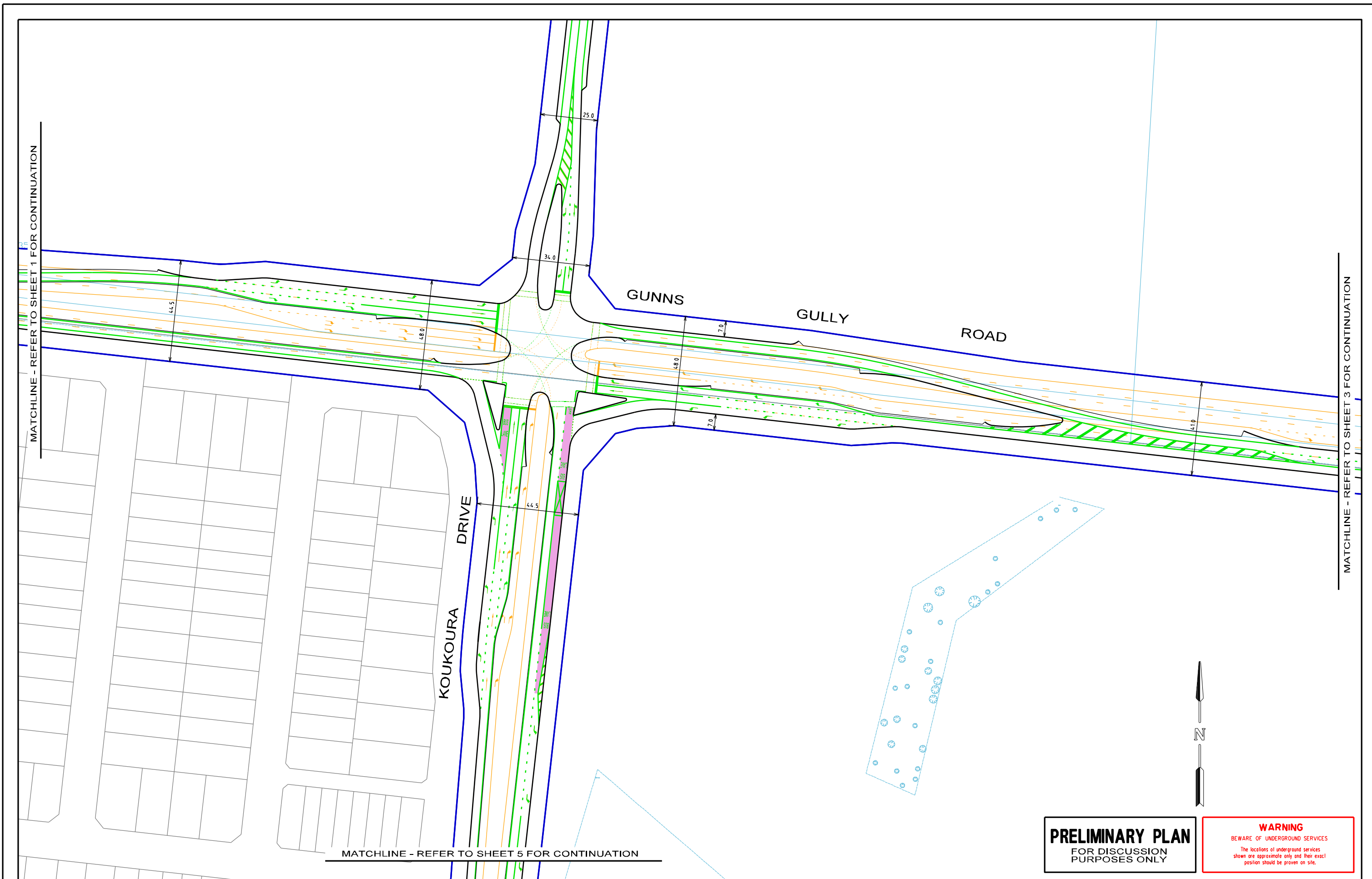
COMPARISON OF DPM ESTIMATES VS. ICP

DATE: 14.09.18 | VER. 1.1 | J.MATHIOS

Item:	DPM (June 2018)	ICP (August 2018)	% Diff. to DPM	Notes
RD-02*	\$ 5,278,050	\$ 8,538,250	N/A	DPM costs for RD-02 only reflects the section of Gunns Gully Road abutting Peppercorn Hill. The ICP cost covers the entire alignment of Gunns Gully Road to the railway line.
RD-05	\$ 7,678,309	\$ 3,838,544	-46.52%	
IN-04	\$ 3,682,046	\$ 5,823,000	22.81%	25% of IN-04 has been apportioned to the Shenstone PSP
IN-07	\$ 3,344,177	\$ 4,384,260	32.92%	
IN-11	\$ 3,621,322	\$ 5,146,000	43.07%	
IN-15	\$ 2,832,220	\$ 5,573,000	104.04%	
IN-12	\$ 1,249,473	\$ 3,479,000	178.44%	
PED-03	\$ 202,119	\$ 276,614	36.86%	50% of the pedestrian crossing has been apportioned to the Shenstone PSP
BR-03	\$ 2,498,609	\$ 795,000	-86.63%	BR-03 & BR-04 seem grossly over estimated in the ICP, further clarification is required from the ICP regarding these figures
BR-04	\$ 2,336,748	\$ 795,000	-85.71%	
TOTAL	\$ 27,445,021	\$ 28,457,004	3.69%	Total amount excludes RD-02 as this is not a direct comparison.







PRELIMINARY PLAN
FOR DISCUSSION
PURPOSES ONLY

WARNING
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The locations of underground services
shown are approximate only and their exact
position should be proven on site.

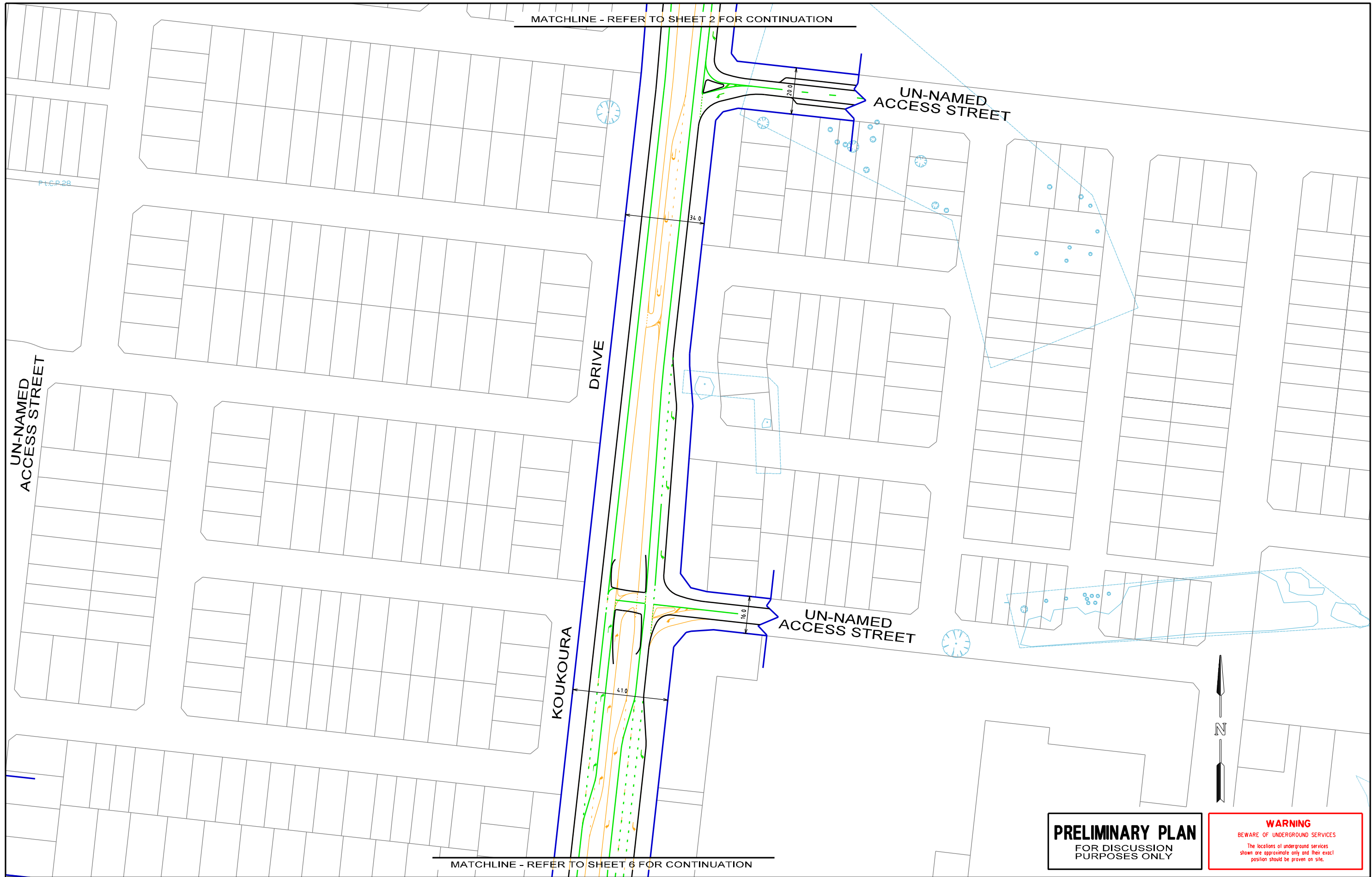
REVISION	REVISION NOTES	REVISION DATE
B	UPDATED KOUKOURA DRIVE CROSS-SECTION AND NORTHERN LEG ADDED	17 DEC 2015
C	UPDATED SUB-DIVISION LAYOUT	15 SEP 2016
D	UPDATED SUB-DIVISION LAYOUT & GUNNS GULLY REALIGNED ONTO ULTIMATE SOUTHERN CARRIAGEWAY	25 OCT 2016
E	UPDATED SUB-DIVISION LAYOUT & SELECTED INTERSECTIONS REMOVED	31 JAN 2017
F	UPDATED MASTERPLAN AND P.O.S ADDED	08 MAR 2017


GENERAL NOTES
1. BASE INFORMATION FROM SUPPLIED FILES 1607s02.DWG & 3205840.DWG.
2. ALL DIMENSIONS ARE SHOWN TO CENTRE OF LINEMARKING/EDGE OF BITUMEN UNLESS SPECIFIED OTHERWISE.
3. GUNNS GULLY ROAD (SPEED ZONE 80km/h) & KOUKOURA DRIVE (SPEED ZONE 60km/h).
— ULTIMATE LAYOUT

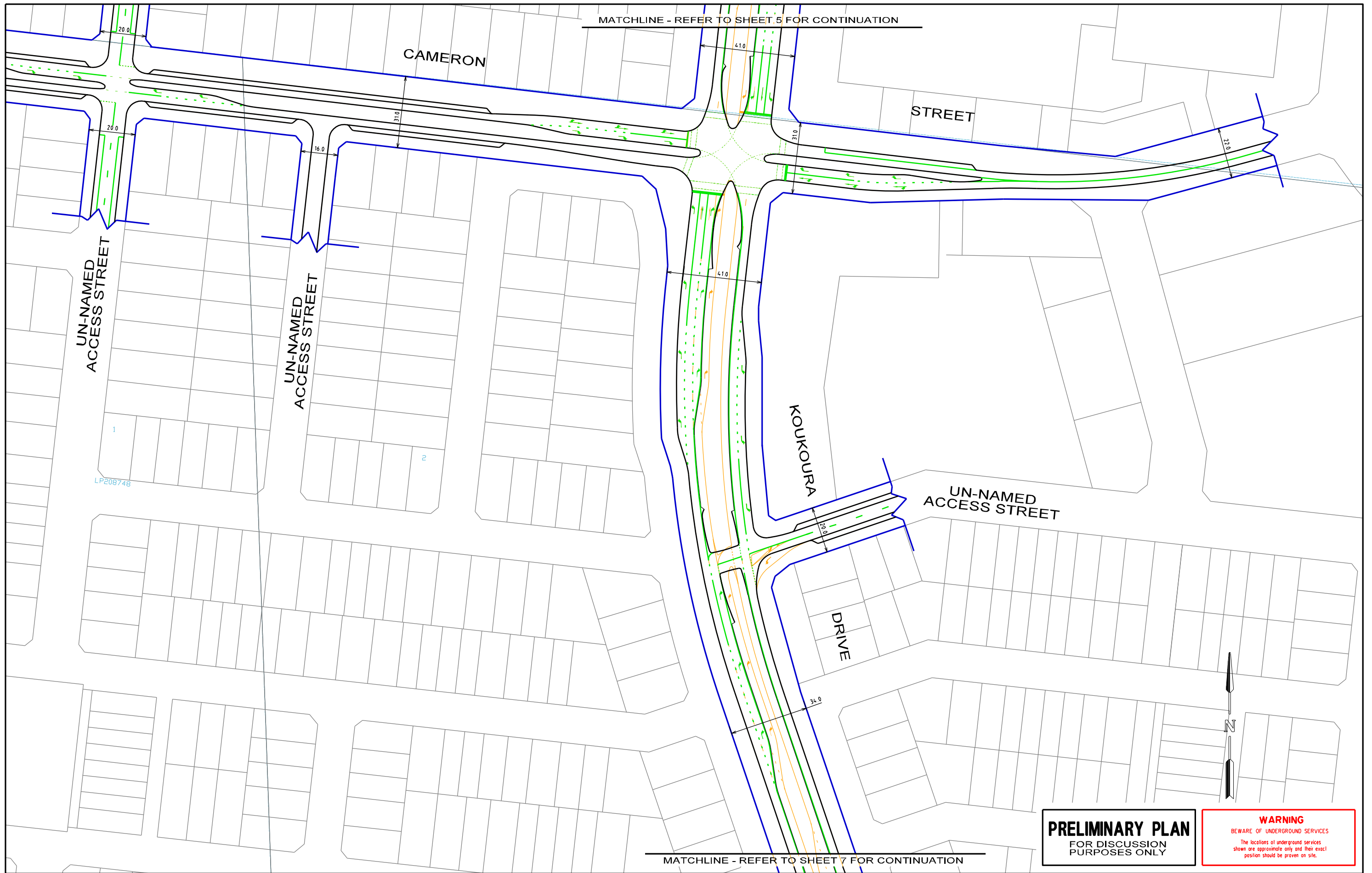
DESIGNED G. RAKITA 10 JUNE 2015
CHECKED/APPROVED R. McNEIL 10 JUNE 2015
FILE NAME G18040-01-D-Interim.dgn


TraffixDesign
Traffic Engineering Design and Survey
Suite 8/431 Burke Road TEL : (03) 9822-2888
GLEN IRIS, VICTORIA 3146 FAX : (03) 9822-7444
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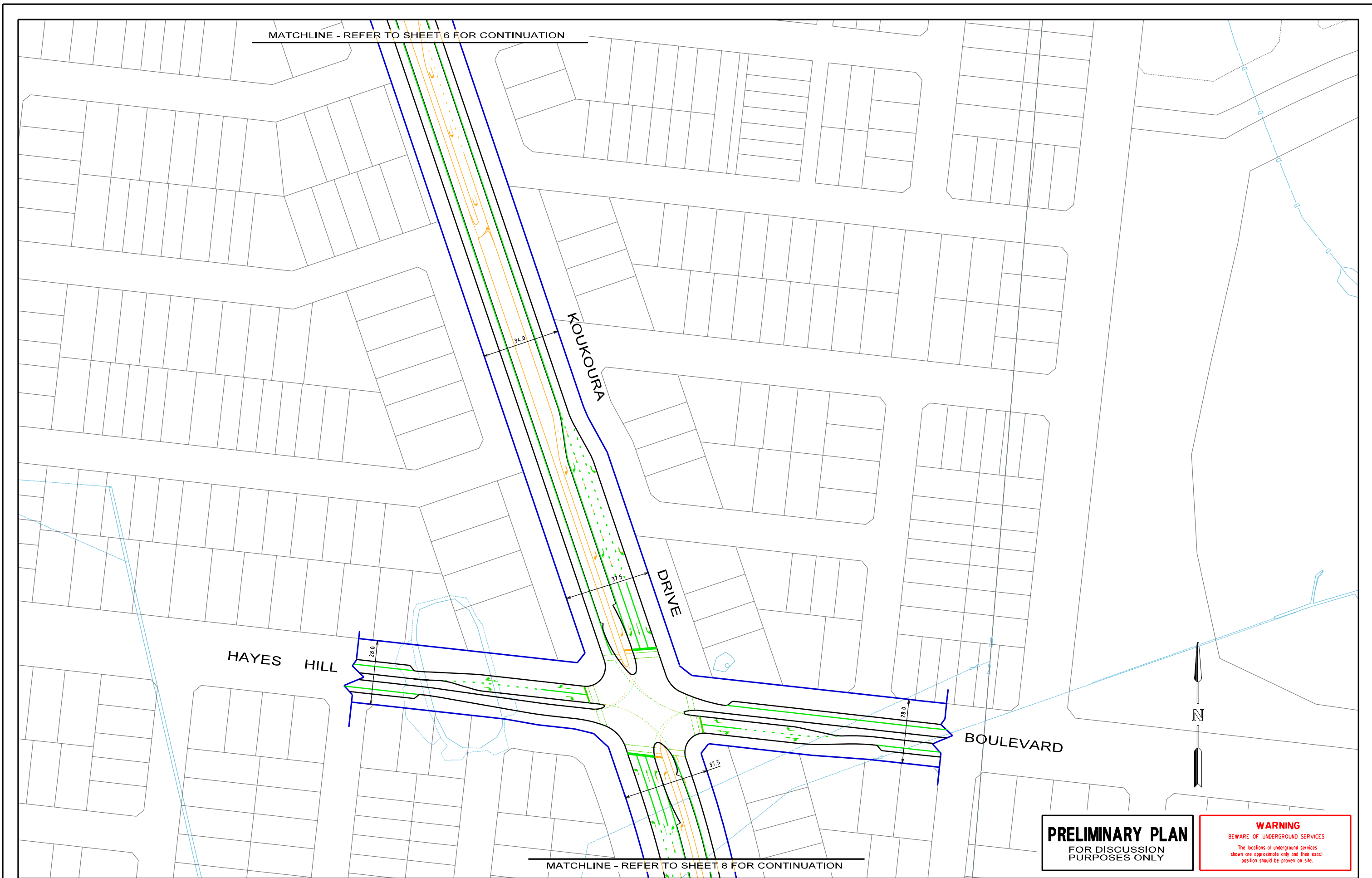
GUNNS GULLY ROAD / KOUKOURA DRIVE PEPPERCORN HILL ESTATE WHITTLESEA CITY FUNCTIONAL LAYOUT PLAN - INTERIM		
SCALE 0 15 30	SHEET No. 2 of 14	DWG No. G18040D-02




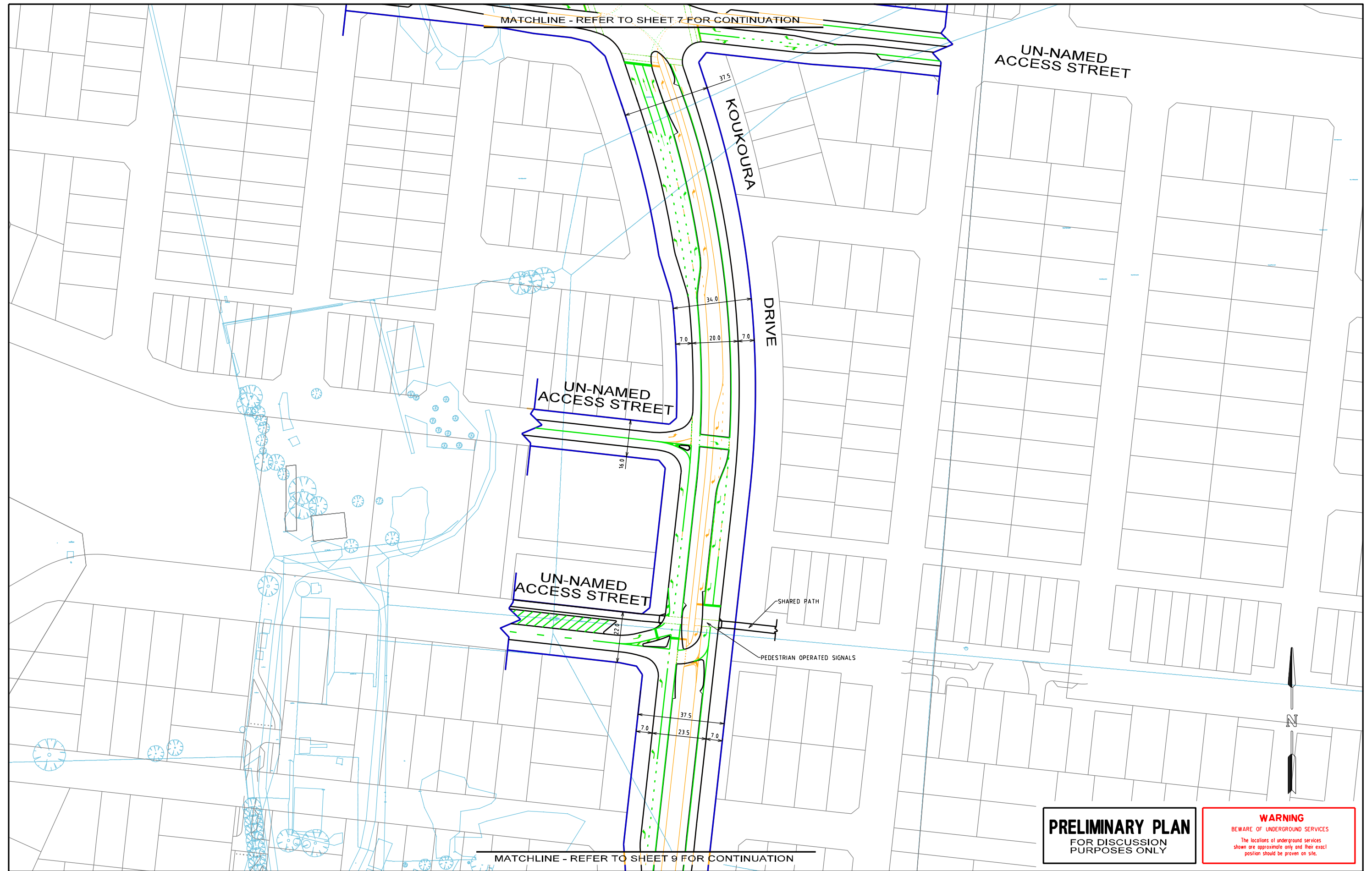
REVISION		REVISION NOTES	REVISION DATE	GENERAL NOTES 1. BASE INFORMATION FROM SUPPLIED FILES 1607502.DWG & 3205840.DWG 2. ALL DIMENSIONS ARE SHOWN TO CENTRE OF LINEMARKING/EDGE OF BITUMEN UNLESS SPECIFIED OTHERWISE. 3. GUNNS GULLY ROAD (SPEED ZONE 80km/h) & KOUKOURA DRIVE (SPEED ZONE 60km/h). — ULTIMATE LAYOUT	DESIGNED	 Traffic Engineering Design and Survey <small>Suite 8/431 Burke Road TEL : (03) 9822-2888 GLEN IRIS, VICTORIA 3146 FAX : (03) 9822-7444 www.traffixgroup.com.au</small>	KOUKOURA DRIVE PEPPERCORN HILL ESTATE WHITTLESEA CITY FUNCTIONAL LAYOUT PLAN - INTERIM		
B	UPDATED SITE LAYOUT	17 DEC 2015	G. RAKITA 10 JUNE 2015		SCALE 0 15 30 SHEET No. 5 of 14 DWG No. G18040D-05				
C	UPDATED SUB-DIVISION LAYOUT	15 SEP 2016	CHECKED/APPROVED						
D	UPDATED SUB-DIVISION LAYOUT	25 OCT 2016	R. McNEIL 10 JUNE 2015						
E	UPDATED SUB-DIVISION LAYOUT & SELECTED INTERSECTIONS REMOVED	31 JAN 2017	FILE NAME						
F	UPDATED MASTERPLAN AND P.O.S. ADDED	08 MAR 2017	G18040-01-D-Interim.dgn						



REVISION		REVISION NOTES	REVISION DATE	GENERAL NOTES 1. BASE INFORMATION FROM SUPPLIED FILES 1607s02.DWG & 3205840.DWG 2. ALL DIMENSIONS ARE SHOWN TO CENTRE OF LINEMARKING/EDGE OF BITUMEN UNLESS SPECIFIED OTHERWISE. 3. GUNNS GULLY ROAD (SPEED ZONE 80km/h) & KOUKOURA DRIVE (SPEED ZONE 60km/h). — ULTIMATE LAYOUT	DESIGNED	 Traffic Engineering Design and Survey Suite 8/431 Burke Road TEL : (03) 9822-2888 OLEN IRIS, VICTORIA 3146 FAX : (03) 9822-7444 www.traffixgroup.com.au	KOUKOURA DRIVE PEPPERCORN HILL ESTATE WHITTLESEA CITY FUNCTIONAL LAYOUT PLAN - INTERIM				
B	UPDATED	SITE LAYOUT	17 DEC 2015		G RAKITA 10 JUNE 2015		CHECKED/APPROVED R McNEIL 10 JUNE 2015	FILE NAME G18040-01-D-Interim.dgn	SCALE 0 15 30	SHEET No. 6 of 14	DWG No. G18040D-06
C	UPDATED	SUB-DIVISION LAYOUT	15 SEP 2016								
D	UPDATED	SUB-DIVISION LAYOUT	25 OCT 2016								
E	UPDATED	SUB-DIVISION LAYOUT & SELECTED INTERSECTIONS REMOVED	31 JAN 2017								
F	UPDATED	MASTERPLAN AND P.O.S ADDED	08 MAR 2017								




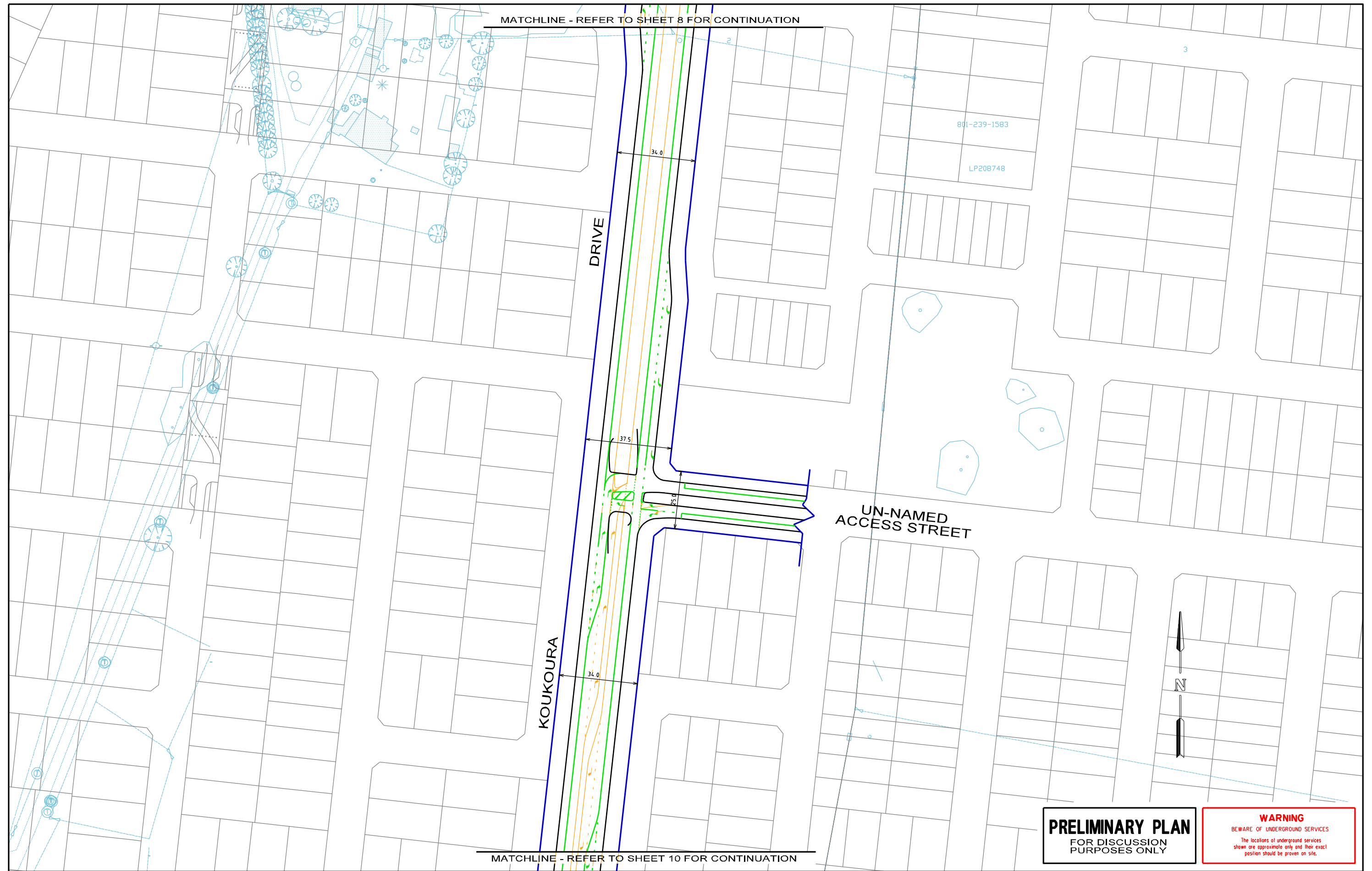
REVISION		REVISION NOTES	REVISION DATE	GENERAL NOTES 1. BASE INFORMATION FROM SUPPLIED FILES 1607s02.DWG & 3205840.DWG. 2. ALL DIMENSIONS ARE SHOWN TO CENTRE OF LINEMARKING/EDGE OF BITUMEN UNLESS SPECIFIED OTHERWISE. 3. GUNNS GULLY ROAD (SPEED ZONE 80km/h) & KOUKOURA DRIVE (SPEED ZONE 60km/h). — ULTIMATE LAYOUT	DESIGNED		 Traffic Engineering Design and Survey Suite 8/431 Burke Road GLEN IRIS, VICTORIA 3146 TEL : (03) 9822-2888 FAX : (03) 9822-7444 www.traffixgroup.com.au	<div>KOUKOURA DRIVE PEPPERCORN HILL ESTATE WHITTLESEA CITY</div> <div>FUNCTIONAL LAYOUT PLAN - INTERIM</div> <div>SCALE 0 15 30</div> <div>SHEET No. 7 of 14</div> <div>DWG No. G18040D-07</div>		
B	UPDATED SITE LAYOUT		17 DEC 2015		G. RAKITA 10 JUNE 2015					
C	UPDATED SUB-DIVISION LAYOUT		15 SEP 2016		CHECKED/APPROVED					
D	UPDATED SUB-DIVISION LAYOUT		25 OCT 2016		R. McNEIL 10 JUNE 2015					
E	UPDATED SUB-DIVISION LAYOUT & SELECTED INTERSECTIONS REMOVED		31 JAN 2017		FILE NAME					
F	UPDATED MASTERPLAN AND P.O.S ADDED		08 MAR 2017		G18040-01-D-Interim.dgn					




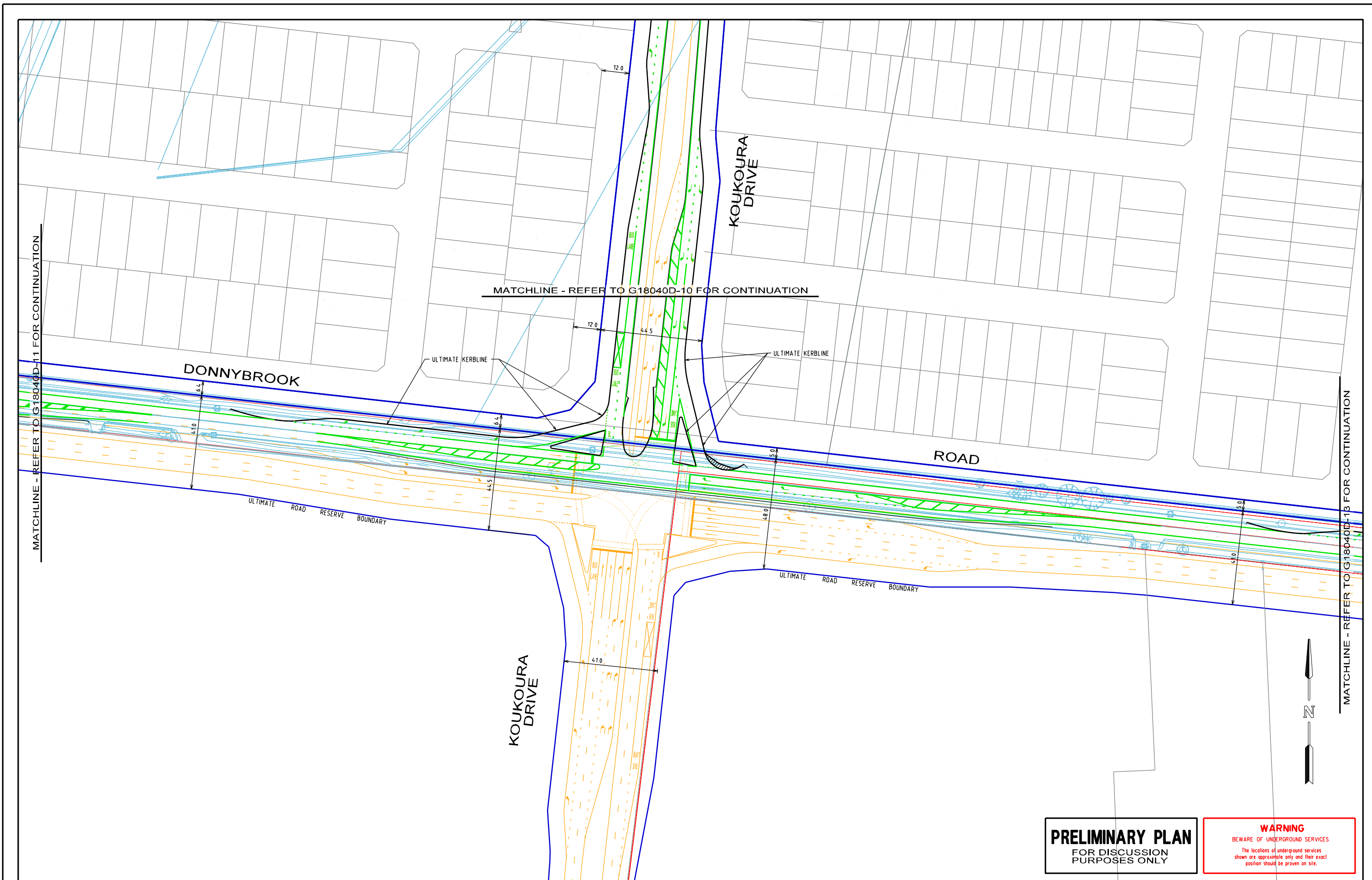
PRELIMINARY PLAN
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position should be proven on site.

REVISION	REVISION NOTES	REVISION DATE	GENERAL NOTES	DESIGNED	 Traffic Engineering Design and Survey Suite 8/431 Burke Road TEL : (03) 9822-2888 GLEN IRIS, VICTORIA 3146 FAX : (03) 9822-7444 www.traffixgroup.com.au	KOUKOURA DRIVE PEPPERCORN HILL ESTATE WHITTLESEA CITY FUNCTIONAL LAYOUT PLAN - INTERIM SCALE 0 15 30 SHEET No. 8 of 14 DWG No. G18040D-08	
C	UPDATED SUB-DIVISION LAYOUT	07 SEP 2016	1. BASE INFORMATION FROM SUPPLIED FILES 1607s02.DWG & 3205840.DWG 2. ALL DIMENSIONS ARE SHOWN TO CENTRE OF LINEMARKING/EDGE OF BITUMEN UNLESS SPECIFIED OTHERWISE. 3. GUNNS GULLY ROAD (SPEED ZONE 80km/h) & KOUKOURA DRIVE (SPEED ZONE 60km/h). — ULTIMATE LAYOUT	G. RAKITA 10 JUNE 2015			
D	UPDATED SUB-DIVISION LAYOUT	25 OCT 2016		CHECKED/APPROVED			
E	UPDATED SUB-DIVISION LAYOUT & SELECTED INTERSECTIONS REMOVED	31 JAN 2017		R. McNEIL 10 JUNE 2015			
F	UPDATED MASTERPLAN AND P.O.S ADDED	08 MAR 2017		FILE NAME			
G	TURN LANES AT P.O.S EXTENDED	01 MAY 2017		G18040-01-D-Interim.dgn			



REVISION		REVISION NOTES		REVISION DATE		GENERAL NOTES		DESIGNED		<div><p>Traffic Engineering Design and Survey</p><p>Suite 8/431 Burke Road TEL : (03) 9822-2888 GLEN IRIS, VICTORIA 3146 FAX : (03) 9822-7444 www.traffixgroup.com.au</p></div>		KOUKOURA DRIVE PEPPERCORN HILL ESTATE WHITTLESEA CITY FUNCTIONAL LAYOUT PLAN - INTERIM				
B	UPDATED SITE LAYOUT		17 DEC 2015		1. BASE INFORMATION FROM SUPPLIED FILES 1607502.DWG & 3205840.DWG. 2. ALL DIMENSIONS ARE SHOWN TO CENTRE OF LINEMARKING/EDGE OF BITUMEN UNLESS SPECIFIED OTHERWISE. 3. GUNNS GULLY ROAD (SPEED ZONE 80km/h) & KOUKOURA DRIVE (SPEED ZONE 60km/h).		G. RAKITA 10 JUNE 2015		SCALE 0 15 30			SHEET No. 9 of 14		DWG No. G18040D-09		
C	UPDATED SUB-DIVISION LAYOUT		07 SEP 2016				R. McNEIL 10 JUNE 2015									
D	UPDATED SUB-DIVISION LAYOUT		25 OCT 2016													
E	UPDATED SUB-DIVISION LAYOUT & SELECTED INTERSECTIONS REMOVED		31 JAN 2017													
F	UPDATED MASTERPLAN AND P.O.S ADDED		08 MAR 2017		— ULTIMATE LAYOUT				FILE NAME G18040-01-D-Interim.dgn							



PRELIMINARY PLAN
FOR DISCUSSION
PURPOSES ONLY

WARNING
BEWARE OF UNDERGROUND SERVICES
The locations of underground services
shown are approximate only and their exact
position should be proven on site.

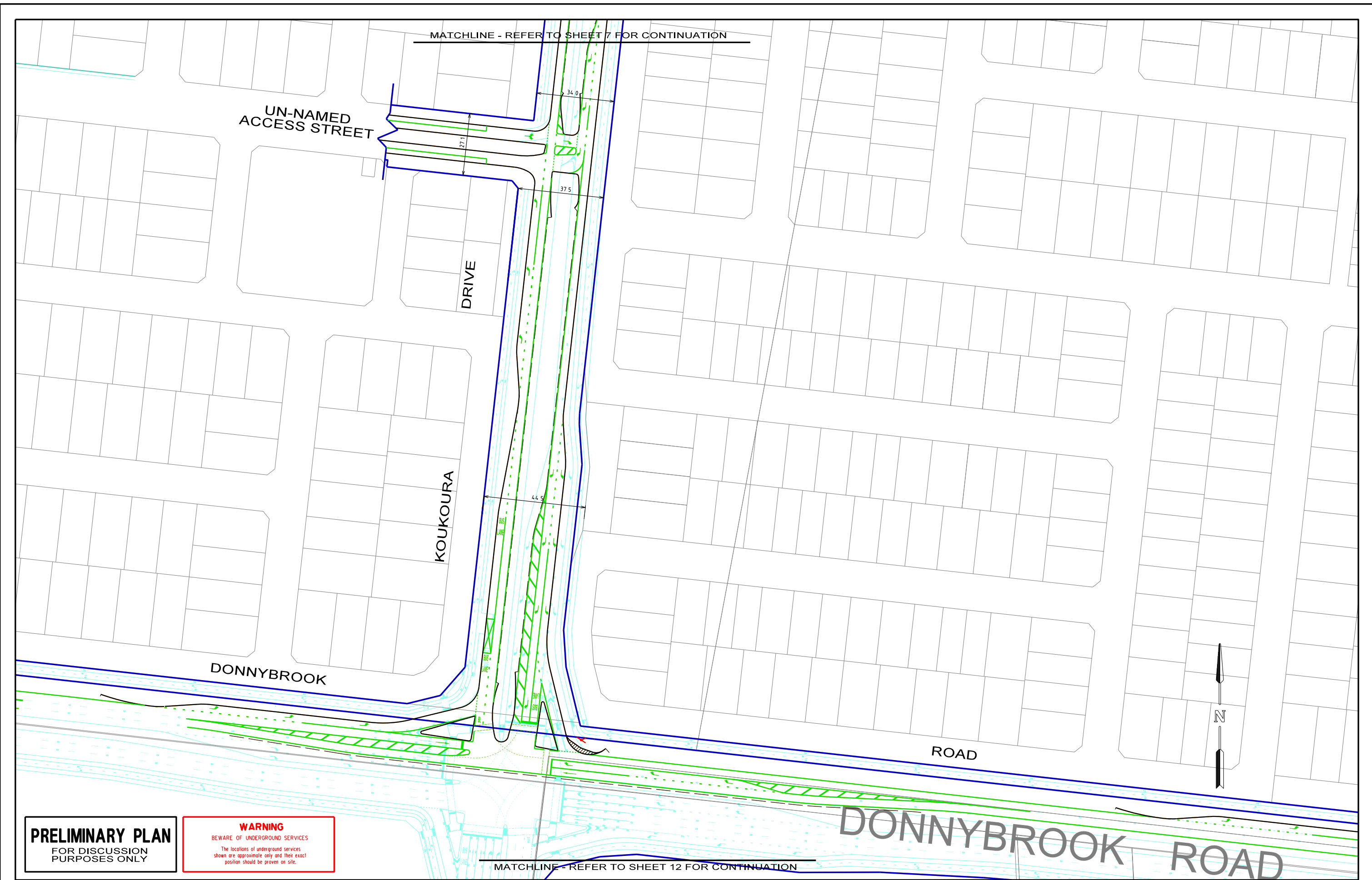
REVISION	REVISION NOTES	REVISION DATE
F	UPDATED SUB-DIVISION LAYOUT	07 SEP 2016
G	UPDATED SUB-DIVISION LAYOUT	25 OCT 2016
H	UPDATED SUB-DIVISION LAYOUT	07 FEB 2017
I	UPDATED MASTERPLAN AND P.O.S ADDED	08 MAR 2017
J	UPDATED MASTERPLAN AND ULTIMATE LAYOUT - PLAN RE-ISSUED	07 AUG 2017

GENERAL NOTES
1. BASE INFORMATION FROM SUPPLIED FILES 1607s02.DWG & 3205840.DWG.
2. ALL DIMENSIONS ARE SHOWN TO CENTRE OF LINEMARKING/EDGE OF BITUMEN UNLESS SPECIFIED OTHERWISE.
3. DONNYBROOK ROAD (SPEED ZONE 80km/h) & KOUKOURA DRIVE (SPEED ZONE 60km/h).
— ULTIMATE ROAD LAYOUT

DESIGNED	G. RAKITA 29 APRIL 2015
CHECKED/APPROVED	R. McNEIL 29 APRIL 2015
FILE NAME	G18040-01-D-Interim.dgn

TraffixDesign
Traffic Engineering Design and Survey
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DONNYBROOK ROAD / KOUKOURA DRIVE PEPPERCORN HILL ESTATE WHITTLESEA CITY FUNCTIONAL LAYOUT PLAN - INTERIM	
SCALE 0 15 30	SHEET No. 12 of 14 DWG No. G18040D-12

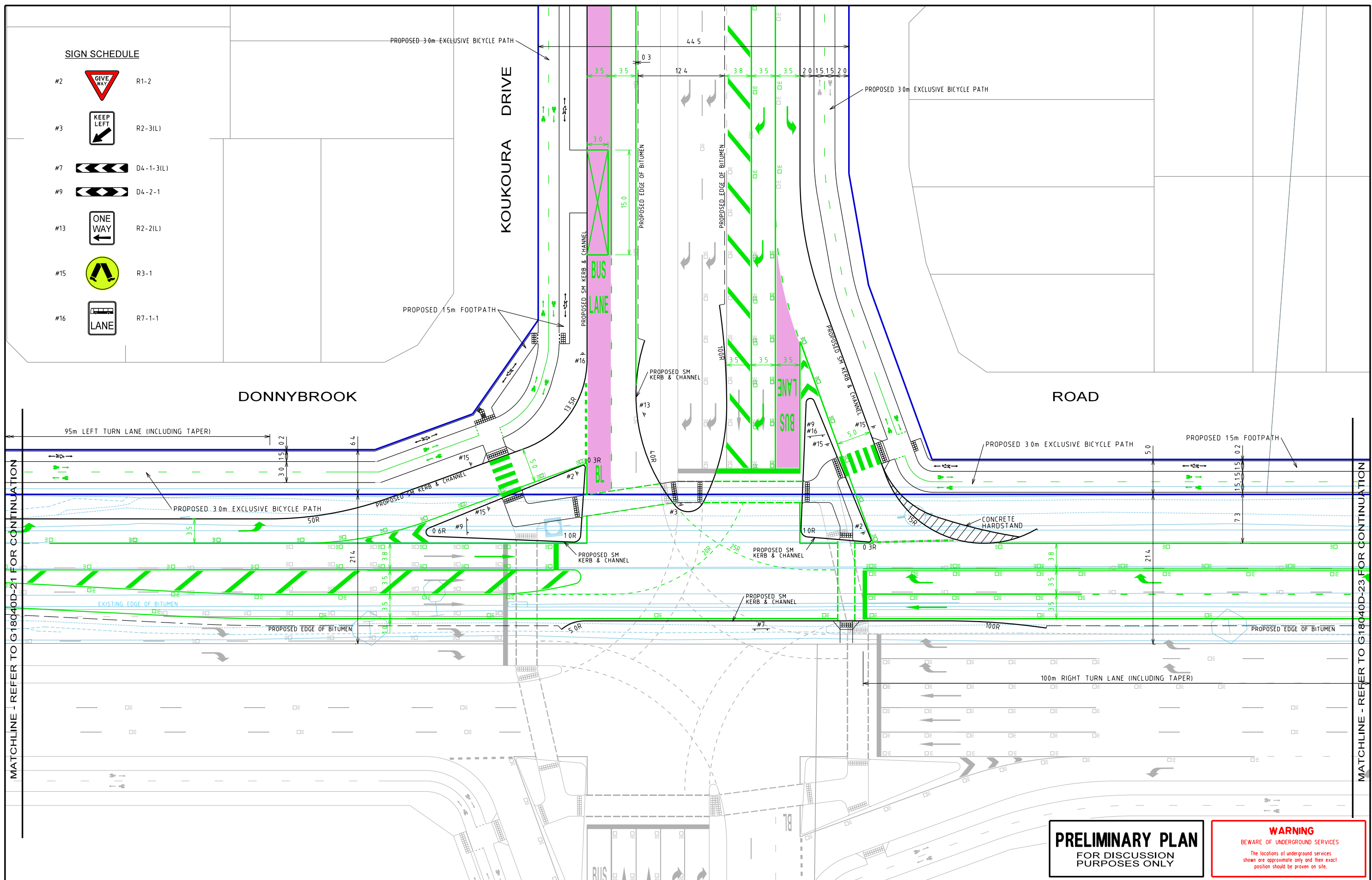


PRELIMINARY PLAN
FOR DISCUSSION
PURPOSES ONLY

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MATCHLINE - REFER TO SHEET 12 FOR CONTINUATION

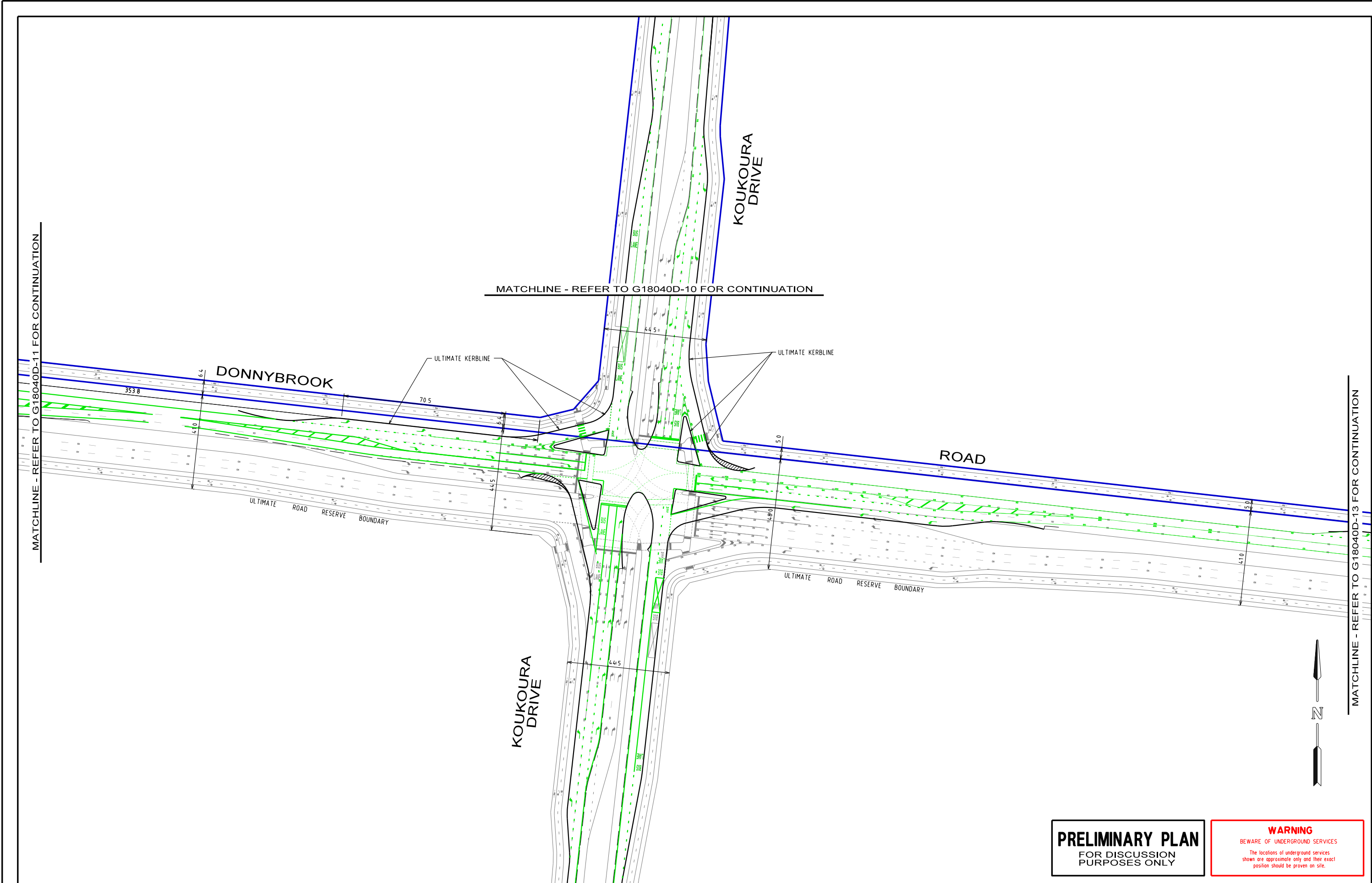
REVISION	REVISION NOTES	REVISION DATE	GENERAL NOTES	DESIGNED	 Traffic Engineering Design and Survey Suite 8/431 Burke Road TEL : (03) 9822-2888 GLEN IRIS, VICTORIA 3146 FAX : (03) 9822-7444 www.traffixgroup.com.au	KOUKOURA DRIVE PEPPERCORN HILL ESTATE WHITTLESEA CITY FUNCTIONAL LAYOUT PLAN - PRE-INTERIM
			1 BASE INFORMATION FROM SUPPLIED FILES 1607502.DWG & 3205840.DWG	S O'KEEFE 07 JUN 2018		
			2 ALL DIMENSIONS ARE SHOWN TO CENTRE OF LINEMARKING/EDGE OF BITUMEN UNLESS SPECIFIED OTHERWISE	CHECKED/APPROVED N WOOLCOCK 07 JUN 2018		
			3 GUNNS GULLY ROAD (SPEED ZONE 80km/h) & KOUKOURA DRIVE (SPEED ZONE 60km/h)	FILE NAME G18040-01-P.dgn		
			— INTERIM LAYOUT — ULTIMATE LAYOUT			
						SCALE 0 15 30
						SHEET No. 10 of 14
						DWG No. G18040P-10



PRELIMINARY PLAN
FOR DISCUSSION
PURPOSES ONLY

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ISSUE	ISSUE DESCRIPTION	ISSUE DATE	GENERAL NOTES	DESIGNED	 Traffic Engineers and Transport Planners Suite 8/431 Burke Road TEL : (03) 9822-2888 GLEN IRIS VICTORIA 3146 FAX: (03) 9822-7444 www.traffixgroup.com.au	DONNYBROOK ROAD / KOUKOURA DRIVE PEPPERCORN HILL ESTATE WHITTLESEA CITY FUNCTIONAL LAYOUT PLAN - INTERIM SCALE 0 2.5 5 7.5 10 SHEET No. 2 of 3 DWG No. G18040D-22
A	FOOTPATH AND OFF-ROAD BICYCLE PATH ON DONNYBROOK ROAD MODIFIED	04 APRIL 2018	1 BASE INFORMATION FROM SUPPLIED FILES 1607502.DWG & 3205840.DWG 2 ALL DIMENSIONS ARE SHOWN TO CENTRE OF LINEMARKING/EDGE OF BITUMEN UNLESS SPECIFIED OTHERWISE 3 DONNYBROOK ROAD (SPEED ZONE 80km/h) & KOUKOURA DRIVE (SPEED ZONE 60km/h) 4 PROPOSED SIGNAGE FOR OFF-ROAD SHARED AND BICYCLE PATHS NOT SHOWN	G RAKITA 25 OCT 2017		
				CHECKED/APPROVED N WOOLCOCK 25 OCT 2017		
				FILE NAME G18040-01-D-Interim.dgn		
			— ULTIMATE ROAD LAYOUT			



PRELIMINARY PLAN
FOR DISCUSSION
PURPOSES ONLY

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REVISION	REVISION NOTES	REVISION DATE
G	UPDATED SUB-DIVISION LAYOUT	25 OCT. 2016
H	UPDATED SUB-DIVISION LAYOUT	07 FEB 2017
I	UPDATED MASTERPLAN AND P.O.S. ADDED	08 MAR 2017
J	UPDATED MASTERPLAN AND ULTIMATE LAYOUT - PLAN RE-ISSUED	07 AUG 2017
K	FUTURE FOURTH LEG OF INTERSECTION SHOWN	14 AUG 2018







GENERAL NOTES
1 BASE INFORMATION FROM SUPPLIED FILES 1607s02.DWG & 3205840.DWG
2 ALL DIMENSIONS ARE SHOWN TO CENTRE OF LINEMARKING/EDGE OF BITUMEN UNLESS SPECIFIED OTHERWISE
3 DONNYBROOK ROAD (SPEED ZONE 80km/h) & KOUKOURA DRIVE (SPEED ZONE 60km/h)
— ULTIMATE ROAD LAYOUT

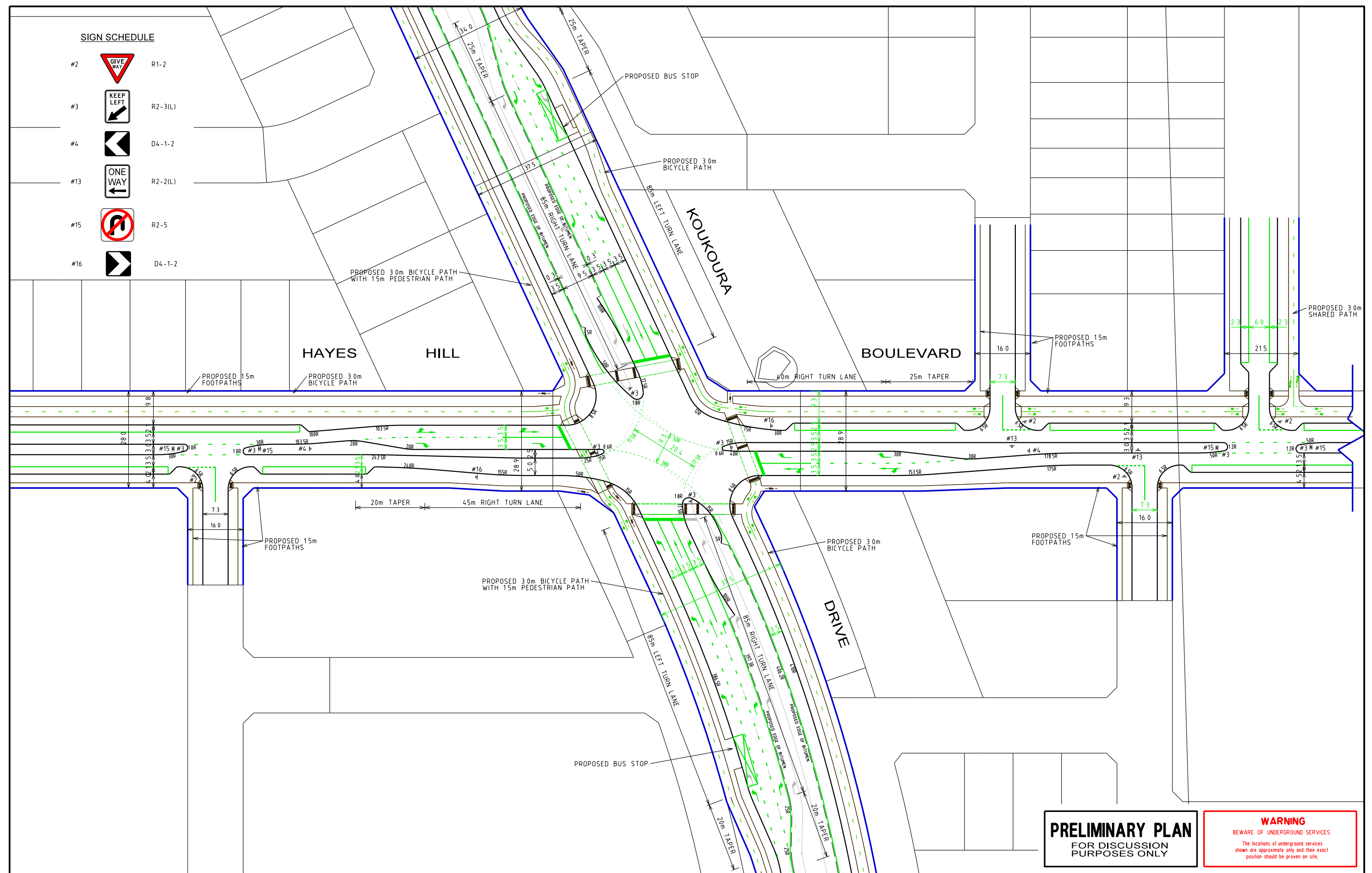
DESIGNED	G RAKITA 29 APRIL 2015
CHECKED/APPROVED	R McNEIL 29 APRIL 2015
FILE NAME	G18040-01-D-Interim.dgn

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GLEN IRIS, VICTORIA 3146 FAX : (03) 9822-7444
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DONNYBROOK ROAD / KOUKOURA DRIVE PEPPERCORN HILL ESTATE WHITTLESEA CITY FUNCTIONAL LAYOUT PLAN - INTERIM		
SCALE 0 15 30	SHEET No. 12 of 14	DWG No. G18040D-12

SIGN SCHEDULE

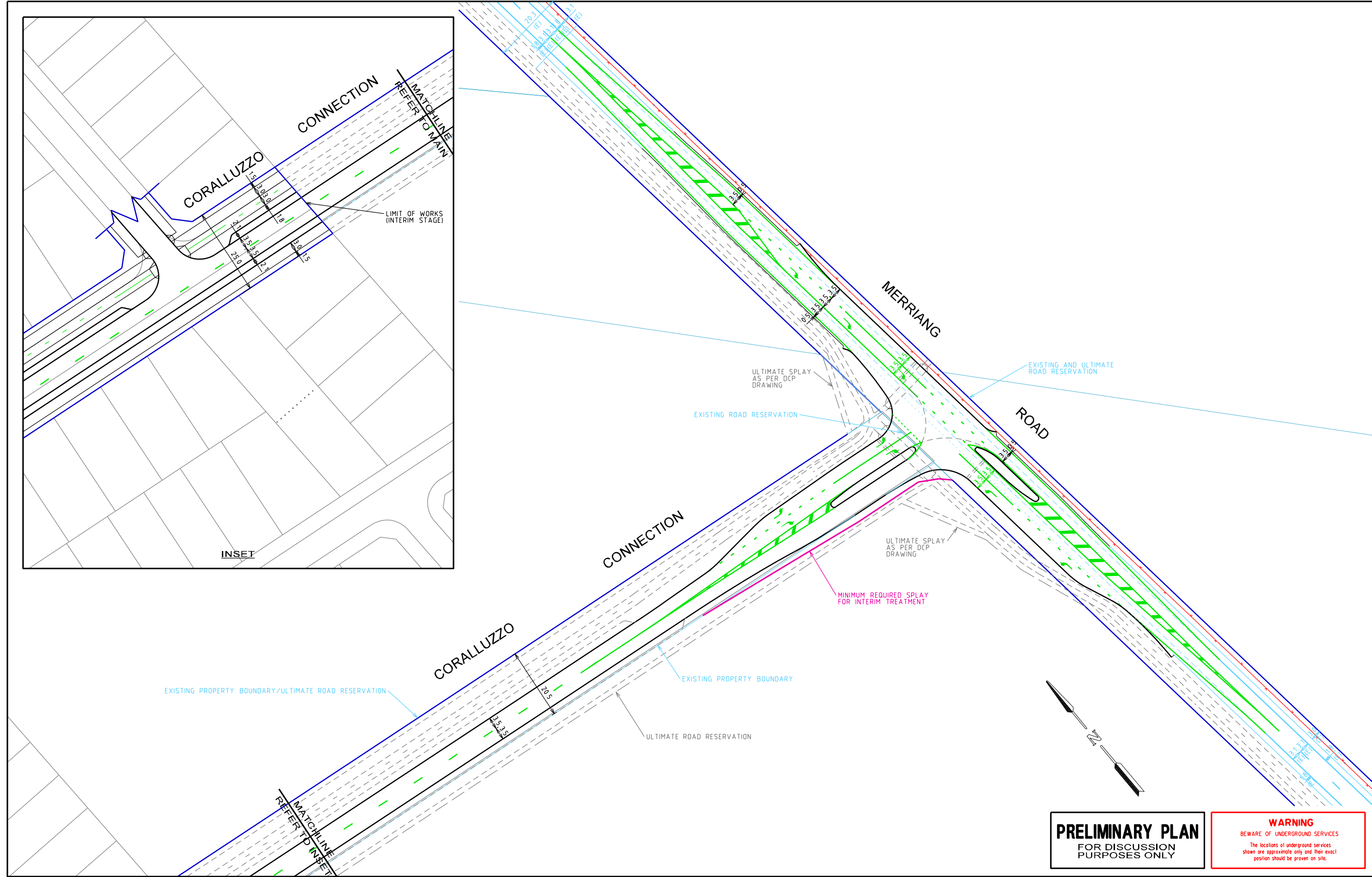
#2		R1-2
#3		R2-3(L)
#4		D4-1-2
#13		R2-2(L)
#15		R2-5
#16		D4-1-2



PRELIMINARY PLAN
FOR DISCUSSION
PURPOSES ONLY

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ISSUE	ISSUE DESCRIPTION	ISSUE DATE	GENERAL NOTES	DESIGNED	Checked/Approved	FILE NAME	Scale	SHEET No.	DWG No.
			1 BASE INFORMATION FROM SUPPLIED FILES 1607s02.DWG & 3205840.DWG	G RAKITA 08 DEC 2017	N WOOLCOCK 08 DEC 2017	G18040-01-D-Interim.dgn	0 2.5 5 7.5 10		G18040D-24
			2 ALL DIMENSIONS ARE SHOWN TO CENTRE OF LINEMARKING/EDGE OF BITUMEN UNLESS SPECIFIED OTHERWISE						
			3 PROPOSED SPEED ZONES - KOUKOURA DRIVE (SPEED ZONE 60km/h)						
			- HAYES HILL BOULEVARD (SPEED ZONE 50km/h)						
			4 PROPOSED SIGNAGE FOR OFF-ROAD SHARED AND BICYCLE PATHS NOT SHOWN						
			— ULTIMATE ROAD LAYOUT						



PRELIMINARY PLAN
FOR DISCUSSION
PURPOSES ONLY

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ISSUE	ISSUE DESCRIPTION	ISSUE DATE

GENERAL NOTES
1. BASE INFORMATION FROM ARCHITECTS DRAWING (CONCEPT MASTER PLANDWG) / VICMAP DATA & AERIAL PHOTOGRAPH (SOURCE: NEARMAP 30 DEC 2015).
2. ALL DIMENSIONS ARE TO FACE OF KERB & CHANNEL.
3. MAIN ROAD - MERRIANG ROAD (SPEED ZONE 60km/h).
4. ALL PROPOSED FOOTPATHS AND PRAM CROSSINGS ARE TO BE CONSTRUCTED WITH TACTILE GROUND SURFACE INDICATORS TO DDA COMPLIANCE GUIDELINES REFER TO AS 1428.4.2009.

DESIGNED	G. RAKITA 28 NOV 2016
CHECKED/APPROVED	N. WOOLCOCK 28 NOV 2016
FILE NAME	G18040-K-00.dgn



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MERRIANG ROAD / CORALLUZZO CONNECTION PROPOSED DEVELOPMENT			
WHITTLESEA CITY			
FUNCTIONAL LAYOUT PLAN - INTERIM UNSIGNALISED			
SCALE	0 5 10 15 20	SHEET No.	DWG No. G18040-K-02

Opinion of Probable Costs for Peppercorn Hill SR03 Active Open Space



SR03 Active Open Space
Landscape Works

20/06/18
Rev C - Preliminary

Schedule of works

The following landscape quantities have been prepared to:
Aid developer discussion's with Council.
Note: Rates exclude gst.

Item	Description	Unit	Qty	Rate	Amount	Summary Amount
Preliminaries						
1 General Conditions						\$ 100,000.00
a	To include securing the entire extended site at all times, temporary fencing with gate access, setting out of works, liaison with Superintendent, preparation of site specific OH&S Plan and Environmental Management Plan, provision of contract insurances and all other costs necessary for the completion of the works that in the Contractors opinion are not included in this schedule.	allow	1	\$100,000.00	\$ 100,000.00	
2 Civil - Earthworks, Drainage & Carpark						\$ 1,500,000.00
a	Bulk earthworks by Civil Contractor, Including Prelim site & earthworks, Drainage, Incidental Works, Service Couduits, Provisional items, Servicing trenching, underground telstra/gas, & Fill/Topsoil.		1	\$ 500,000.00	\$ 500,000.00	
a	Road pavement, assumes approx. 200 car spaces		1	\$ 1,000,000.00	\$ 1,000,000.00	
3 Civil - Stormwater Harvesting						\$500,000.00
a	Supply and install 2 x 350KL water tanks and connections to stormwater asset as specified	item	1	\$ 500,000.00	\$500,000.00	
Preliminaries Subtotal:						\$ 2,100,000.00
ICP Items						
4 Sports Fields						\$ 5,030,000.00
a	Allowance for FIFA standard soccer fields (130m x 100m). Includes irrigation, goals.	item	3	\$ 1,560,000.00	\$ 4,680,000.00	
b	Supply and install pitch lighting and electric mains	item	1	\$ 350,000.00	\$ 350,000.00	
5 Community Garden						\$ 500,000.00
a	Supply and install community garden, approx. 2500m2. Excludes management costs.	allow	1	\$ 500,000.00	\$ 500,000.00	
ICP Items Subtotal:						\$ 5,530,000.00
Landscape Items						
6 Ancillary landscape costs						\$ 2,940,000.00
a	Allowance for informal landscape works - assume 20% hardscape, 80% softscape	m2	29400	\$ 100.00	\$2,940,000.00	
Landscape Items Subtotal:						\$ 2,940,000.00

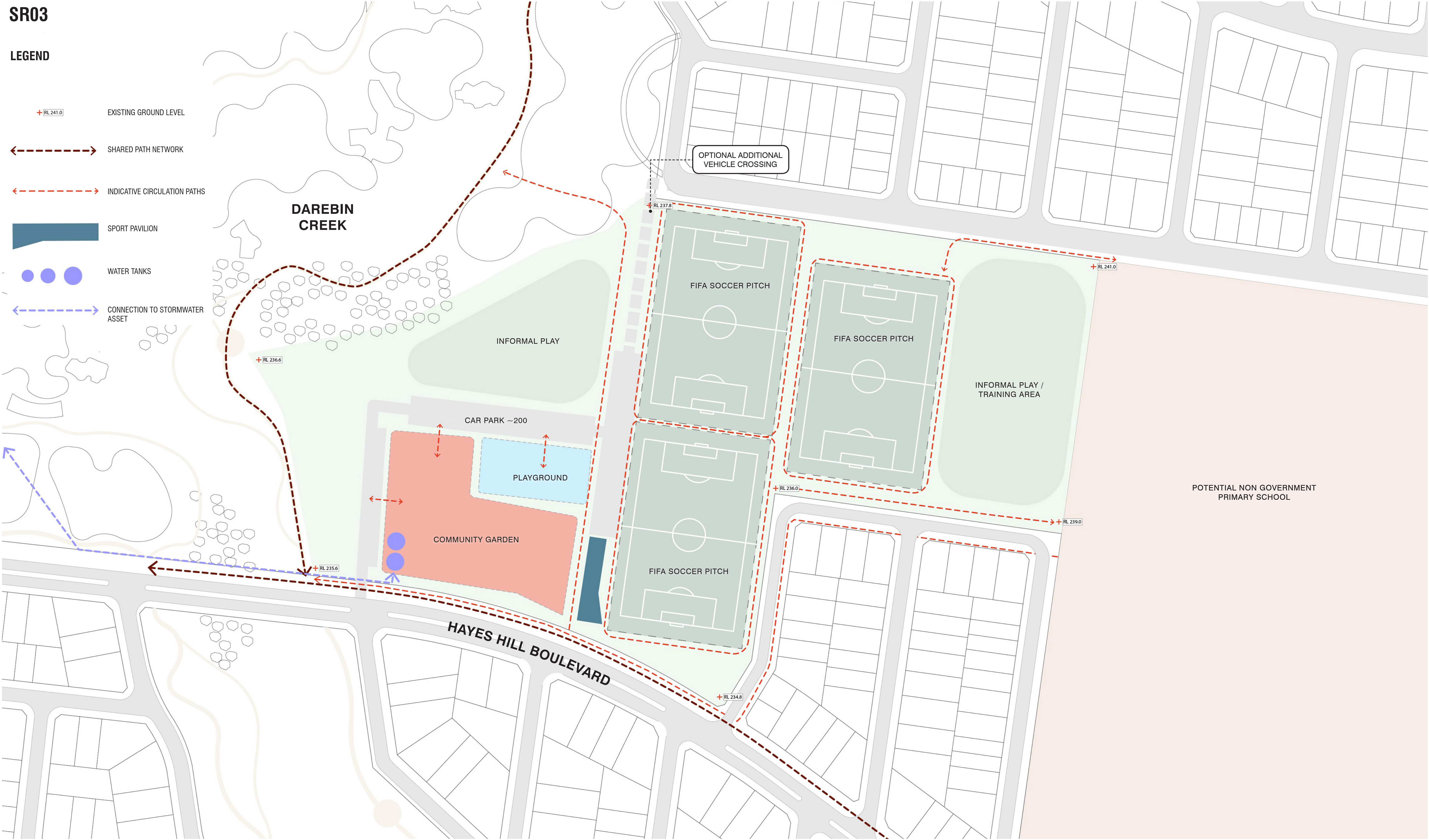
Item	Description	Unit	Qty	Rate	Amount	Summary Amount
Maintenance						
7 Establishment and Maintenance Period						\$ 368,000.00
a	Undertake establishment maintenance of all landscape areas. Maintenance includes watering of all grass and garden beds as required to ensure healthy establishment in accordance with the Specification.	weeks	13	\$ 5,000.00	\$ 65,000.00	
b	Undertake extended maintenance of all landscape areas. Maintenance includes watering of all grass and garden beds as required to ensure healthy establishment in accordance with the Specification. Excludes sports oval and maintenance (expected to be taken over by Council).	weeks	101	\$ 3,000.00	\$ 303,000.00	
Establishment and Maintenance Period Subtotal:						\$ 368,000.00
Sub-total landscape works (excluding GST)						\$ 10,938,000.00
Allow 10% Contingency [at concept stage]						\$ 1,093,800.00
Total Landscape Works (excluding GST)						\$ 12,031,800.00
Additional Required Items						
8 Pavilion						\$3,000,000.00
a	Supply and install pavilion with 6 change rooms and 60m2 community meeting space	allow	1	\$ 3,000,000.00	\$3,000,000.00	
Additional Required Items Subtotal:						\$3,000,000.00
Fees						
9 Consultant fees						\$1,803,180.00
a	Landscape architectural design fees. Includes concept and functional design, detailed design and documentation, tender administration and 13 weeks maintenance. 10% of works. Includes project management fee.	allow	1	\$ 1,503,180.00	\$1,503,180.00	
b	Architectural design fees (pavilion). Includes concept and functional design, detailed design and documentation, tender administration and contract administration. 10% of architectural works cost.	allow	1	\$ 300,000.00	\$300,000.00	
10 Subconsultant fees						\$100,000.00
a	Sub-consultant fees including electrical, agronomy and geotech for landscape works	allow	1	\$ 50,000.00	\$50,000.00	
b	Sub-consultant fees including electrical & structural for architectural works	allow	1	\$ 50,000.00	\$50,000.00	
11 Application fees						\$50,000.00
a	Application and authority fees	allow	1	\$ 50,000.00	\$50,000.00	
Fees Subtotal:						\$1,953,180.00
Total Active Open Space Works (excluding GST)						\$ 16,984,980.00
Exclusions & Assumptions:						
	Estimates are based on current overall costs of works of a similar scale in a nearby Council.					
	Estimates are indicative only.					
	Excludes cultural heritage advice and supervision					

ACTIVE OPEN SPACE

SR03

LEGEND

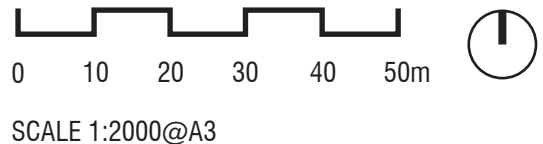
- EXISTING GROUND LEVEL
- SHARED PATH NETWORK
- INDICATIVE CIRCULATION PATHS
- SPORT PAVILION
- WATER TANKS
- CONNECTION TO STORMWATER ASSET



OPTION 02
2 X 350KL WATER TANKS

DRG NO. SR03 LC02	REV B	DATE 20/06/2018	DES/DOC KM/AC	AUTH AC
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spiire



Opinion of Probable Costs for Peppercorn Hill SR05 Active Open Space

SR05 Active Open Space
Landscape Works

20/06/18
Rev C - Preliminary

Schedule of works

The following landscape quantities have been prepared to:
Aid developer discussion's with Council.

Note: Rates exclude gst.



Item	Description	Unit	Qty	Rate	Amount	Summary Amount
Preliminaries						
1 General Conditions						\$ 100,000.00
a	To include securing the entire extended site at all times, temporary fencing with gate access, setting out of works, liaison with Superintendent, preparation of site specific OH&S Plan and Environmental Management Plan, provision of contract insurances and all other costs necessary for the completion of the works that in the Contractors opinion are not included in this schedule.	allow	1	\$100,000.00	\$ 100,000.00	
2 Civil - Earthworks and Drainage - See Schedule 2						\$ 2,100,000.00
a	Bulk earthworks by Civil Contractor, Including Prelim site & earthworks, Drainage, Incidental Works, Service Couduits, Provisional items, Servicing trenching, underground telstra/gas, & Fill/Topsoil.		1	\$ 500,000.00	\$ 500,000.00	
b	Road pavement, assumes approx. 320 car spaces		1	\$1,600,000.00	\$ 1,600,000.00	
Preliminaries Subtotal:						\$ 2,200,000.00
ICP Items						
3 Sports Fields						\$ 1,272,000.00
a	Allowance for 8 x outdoor netball courts including fencing, lighting and surfacing	item	1	\$ 660,000.00	\$ 660,000.00	
b	Allowance for 6 x outdoor tennis courts including fencing, lighting and surfacing	item	1	\$ 420,000.00	\$ 420,000.00	
c	Allowance for 2 x lawn bowls fields including fencing, lighting and surfacing	item	1	\$ 192,000.00	\$ 192,000.00	
d	Allowance for potential future junior AFL oval, including fencing, lighting and surfacing	item	1	\$ 3,060,000.00	\$ 3,060,000.00	
4 Community Garden						\$ 500,000.00
a	Supply and install community garden, approx. 2500m2. Excludes management costs.	allow	1	\$ 500,000.00	\$ 500,000.00	
5 Skate Park						\$ 500,000.00
a	Supply and install skate park, approx. 2000m2	allow	1	\$ 500,000.00	\$ 500,000.00	
ICP Items Subtotal:						\$ 5,944,000.00
Landscape Items						
6 Ancillary landscape costs						\$ 2,240,000.00
a	Allowance for informal landscape works - assume 20% hardscape, 80% softscape	m2	22400	\$ 100.00	\$2,240,000.00	
Landscape Items Subtotal:						\$ 2,240,000.00

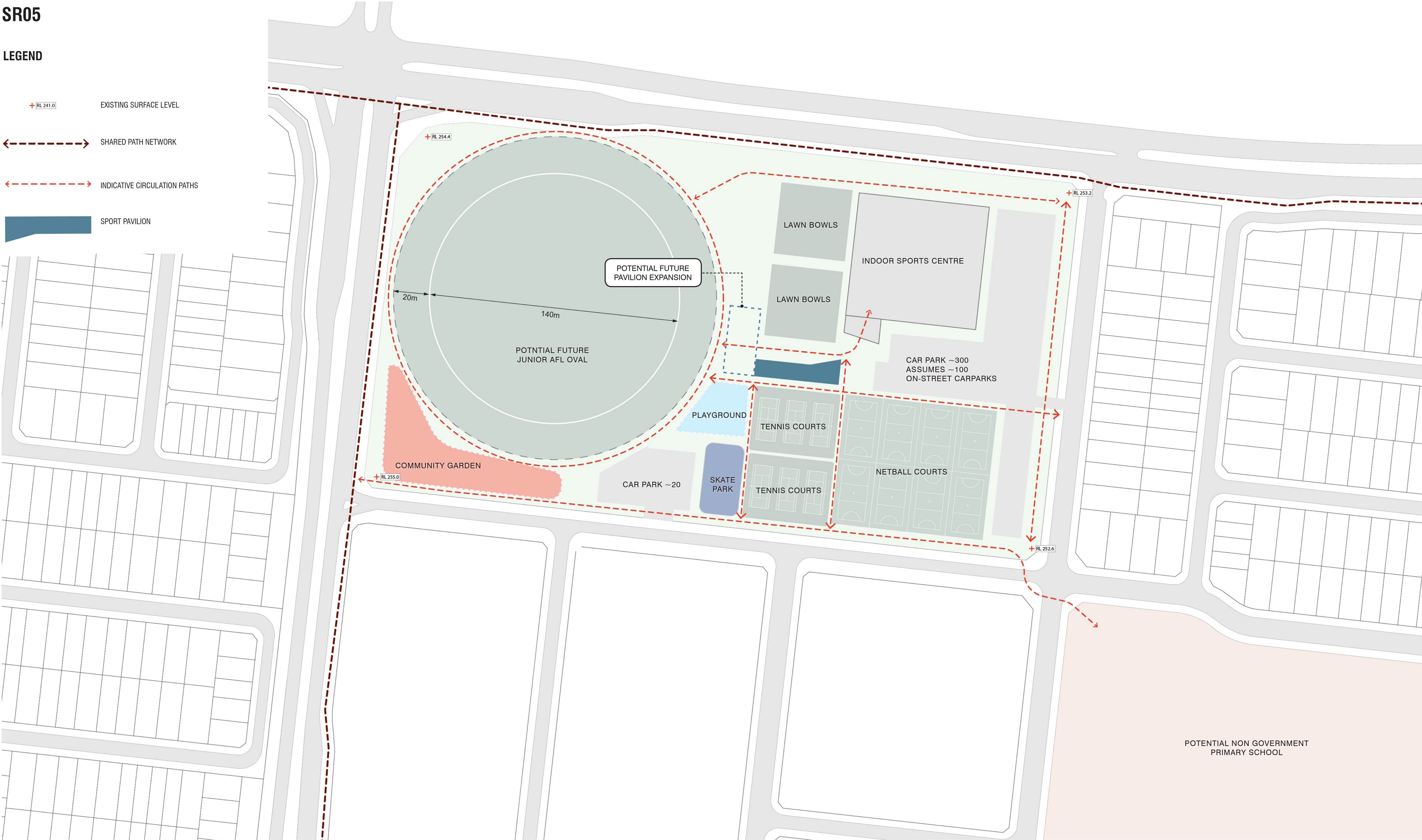
Item	Description	Unit	Qty	Rate	Amount	Summary Amount
Maintenance						
7 Establishment and Maintenance Period						\$ 823,000.00
a	Undertake establishment maintenance of all landscape areas. Maintenance includes watering of all grass and garden beds as required to ensure healthy establishment in accordance with the Specification.	weeks	104	\$ 5,000.00	\$ 520,000.00	
b	Undertake extended maintenance of all landscape areas. Maintenance includes watering of all grass and garden beds as required to ensure healthy establishment in accordance with the Specification. Excludes sports oval and maintenance (expected to be taken over by Council).	weeks	101	\$ 3,000.00	\$ 303,000.00	
Establishment and Maintenance Period Subtotal:						\$ 823,000.00
Sub-total landscape works (excluding GST)						\$ 11,207,000.00
Allow 10% Contingency [at concept stage]						\$ 1,120,700.00
Total Landscape Works (excluding GST)						\$ 12,327,700.00
Additional Required Items						
8 Pavilion						\$3,000,000.00
a	Supply and install pavilion to service outdoor netball and outdoor tennis courts	allow	1	\$ 3,000,000.00	\$3,000,000.00	
9 Indoor Sports Facility						\$5,000,000.00
a	Supply and install indoor sports facility including min. 8 x netball courts, 6 x tennis courts and a small meeting space. Approx. 5000m2	allow	1	\$ 5,000,000.00	\$5,000,000.00	
Additional Required Items Subtotal:						\$8,000,000.00
Fees						
10 Consultant fees						\$2,832,770.00
a	Landscape architectural design fees. Includes concept and functional design, detailed design and documentation, tender administration and 13 weeks maintenance. 10% of works. Includes project management fee.	allow	1	\$ 2,032,770.00	\$2,032,770.00	
b	Architectural design fees (pavilion). Includes concept and functional design, detailed design and documentation, tender administration and contract administration. 10% of architectural works cost.	allow	1	\$ 800,000.00	\$800,000.00	
11 Sunconsultant fees						\$100,000.00
a	Sub-consultant fees including electrical, agronomy and geotech for landscape works	allow	1	\$ 50,000.00	\$50,000.00	
b	Sub-consultant fees including electrical & structural for architectural works	allow	1	\$ 50,000.00	\$50,000.00	
12 Application fees						\$50,000.00
a	Application and authority fees	allow	1	\$ 50,000.00	\$50,000.00	
Fees Subtotal:						\$2,982,770.00
Total Active Open Space Works (excluding GST)						\$ 23,310,470.00
Exclusions:						
	These estimates are based on current overall costs of works of a similar scale in a nearby Council.					
	Estimates are indicative only.					
	Excludes cultural heritage advice and supervision					

ACTIVE OPEN SPACE

SR05

LEGEND

- EXISTING SURFACE LEVEL
- SHARED PATH NETWORK
- INDICATIVE CIRCULATION PATHS
- SPORT PAVILION



WORK IN PROGRESS

LAYOUT PLAN
OPTION 03

DRG NO. SR05 LC01	REV B	DATE 20/06/2018	DES/DOC KM/AC	AUTH AC
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spiire

0 10 20 30 40 50m
SCALE 1:2000@A3

All works (outside of Pavilion)						
Items	Qty	Unit	Rate (P90)	Amount (P90)	Spiire Rate	Spiire Amount
PLAYING FIELDS						
Soccer Field	3	No	\$ 585,759.19	\$ 1,757,277.56	\$ 585,759.19	\$ 1,757,277.56
LIGHTING						
Lighting Soccer	3	No	\$ 68,026.78	\$ 204,080.33	\$ 150,000.00	\$ 450,000.00
LANDSCAPING						
Landscaping Level A	35000	m2	\$ 30.16	\$ 1,055,484.66	\$ 42.00	\$ 1,470,000.00
CAR PARKING						
Pavement	5180	m2	\$ 100.00	\$ 518,000.00	\$ 100.00	\$ 518,000.00
Kerb & Channel	5180	m2	\$ 57.18	\$ 296,192.40	\$ 57.18	\$ 296,192.40
Drainage Pipes	550	lm	\$ 177.42	\$ 97,581.00	\$ 177.42	\$ 97,581.00
Drainage Pits	21	No	\$ 2,522.00	\$ 52,962.00	\$ 2,522.00	\$ 52,962.00
Line marking / Signage	5180	m2/pavement	\$ 2.80	\$ 14,504.00	\$ 2.80	\$ 14,504.00
SITE WORKS						
Footpaths and paved areas	3000	m2	\$ 68.00	\$ 204,000.00	150	\$ 450,000.00
SERVICES						
Stormwater Drainage	1	Item	\$ 184,000.00	\$ 184,000.00	\$ 184,000.00	\$ 184,000.00
Sewer	1	Item	\$ 11,500.00	\$ 11,500.00	\$ 11,500.00	\$ 11,500.00
Water	1	Item	\$ 57,500.00	\$ 57,500.00	\$ 57,500.00	\$ 57,500.00
Water Tanks	2	Item	NA		\$ 250,000.00	\$ 500,000.00
Gas	1	Item	\$ 11,500.00	\$ 11,500.00	\$ 11,500.00	\$ 11,500.00
Light & power	1	Item	\$ 34,500.00	\$ 34,500.00	\$ 34,500.00	\$ 34,500.00
Communication	1	Item	\$ 149,500.00	\$ 149,500.00	\$ 149,500.00	\$ 149,500.00
Fire	1	Item	\$ 34,500.00	\$ 34,500.00	\$ 34,500.00	\$ 34,500.00
MISCELLANEOUS						
Gates (2 per pitch)	6	Item	\$ 600.00	\$ 3,600.00	\$ 600.00	\$ 3,600.00
Works maintenance - 1 year	0	Item	\$ -	\$ -	\$ -	\$ -
Interchange shelter (2 per pitch)	6	Item	\$ 11,600.00	\$ 69,600.00	\$ 11,600.00	\$ 69,600.00
Fencing (3 pitches)	1050	lm	\$ 111.00	\$ 116,550.00	\$ 250.00	\$ 262,500.00
Signage	21	No	\$ 367.80	\$ 7,723.80	\$ 367.80	\$ 7,723.80
Landscape maintenance - 1 year/ 2 summers	1	Item	\$ -	\$ -	\$ 104,760.00	\$ 104,760.00
OTHERS						
Access Road	1980	m2	\$ 162.00	\$ 320,760.00	\$ 162.00	\$ 320,760.00
Playground	1	Item	\$ 840,000.00	\$ 840,000.00	\$ 840,000.00	\$ 840,000.00
Community Garden	1	Item	NA	\$ -	\$ 500,000.00	\$ 500,000.00
Sports Field Irrigation System	18000	m2	\$ 5.88	\$ 105,840.00	\$ 6.00	\$ 108,000.00
Basic Landscaping including top soil-seeding		m2	\$ 39.00	\$ -	\$ -	\$ -
Tree Planting	436.5	No	\$ 312.00	\$ 136,188.00	\$ 550.00	\$ 240,075.00
DELIVERY						
Council Fees	1%	%	3.25	\$ 204,208.6721	3.25	\$ 277,762.4122
VicRoads Fees	1%	%	0.00	\$ -	0.00	\$ -
Traffic Management	1%	%	2.00	\$ 125,666.8751	2.00	\$ 170,930.7152
Environmental Management	1%	%	0.50	\$ 31,416.7188	0.50	\$ 42,732.6788
Survey/Design	1%	%	5.00	\$ 314,167.1878	5.00	\$ 427,326.7880
Supervision and Project Management	1%	%	9.00	\$ 565,500.9380	9.00	\$ 769,188.2184
Site Establishment	1%	%	2.50	\$ 157,083.5939	2.50	\$ 213,663.3940
Contingency	1%	%	15.00	\$ 942,501.5634	15.00	\$ 1,281,980.3640
TOTALS					TOTALS	
Excluding Delivery				\$ 6,283,343.76		\$ 8,546,535.76
Including Delivery				\$ 8,623,889.30		\$ 11,730,120.33
Building and Site works- Pavilion						
Items	Qty	Unit	Rate (P90)	Amount (P90)	Spiire Rate	Spiire Amount
Building						
Change rooms with Toilets and Showers X 6	420	m2	\$ 2,329.67	\$ 978,460.00	\$ 2,870.00	\$ 1,205,400.00
Umpire Change Rooms with Toilets	40	m2	\$ 2,437.44	\$ 97,497.78	\$ 2,870.00	\$ 114,800.00
Storage Rooms	80	m2	\$ 2,274.11	\$ 181,928.89	\$ 2,274.11	\$ 181,928.89
Multipurpose Room/Social Room	100	m2	\$ 2,287.22	\$ 228,722.22	\$ 2,287.22	\$ 228,722.22
Office/First Aid room	20	m2	\$ 2,287.22	\$ 45,744.44	\$ 2,287.22	\$ 45,744.44
Canteen and Kitchen	30	m2	\$ 2,432.56	\$ 72,976.67	\$ 2,840.00	\$ 85,200.00
Public Toilet	40	m2	\$ 2,437.44	\$ 97,497.78	\$ 3,360.00	\$ 134,400.00
Canopy & Verandas						
Canopy & Verandas	200	m2	\$ 750.00	\$ 150,000.00	\$ 750.00	\$ 150,000.00
Site Works						
Concrete Paths	0	m2	\$ -	\$ -	\$ -	\$ -
Lighting	0	m2	\$ -	\$ -	\$ -	\$ -
Gates/entrances	0	m2	\$ -	\$ -	\$ -	\$ -
Other-miscellaneous	0	m2	\$ -	\$ -	\$ -	\$ -
Miscellaneous						
Building maintenance 1 year	0		\$ -	\$ -	\$ -	\$ -
Landscape maintenance 1 year/2 summers	0		\$ -	\$ -	\$ -	\$ -
Other-miscellaneous	0		\$ -	\$ -	\$ -	\$ -
Services						
Stormwater	1%	%	3.30	\$ 61,143.3167	3.30	\$ 70,824.4533
Sewer	1%	%	2.03	\$ 61,143.3167	2.03	\$ 43,460.4600
Water	1%	%	1.98	\$ 36,593.3486	1.98	\$ 42,387.3622
Gas	1%	%	0.88	\$ 16,304.8844	0.88	\$ 18,886.5209
Fire Protection	1%	%	0.66	\$ 12,228.6633	0.66	\$ 14,164.8907
Light and Power	1%	%	2.38	\$ 44,004.6597	2.38	\$ 50,972.1444

Communication	1%	%	0.50	\$ 9,264.1389	0.50	\$ 10,730.9778
DELIVERY						
Council Fees	1%	%	3.25	\$ 60,216.9028	3.25	\$ 69,751.3555
VicRoads Fees	1%	%	1.00	\$ 18,528.2778	1.00	\$ 21,461.9556
Traffic Management	1%	%	2.00	\$ 37,056.5555	2.00	\$ 21,461.9556
Environmental Management	1%	%	0.50	\$ 9,264.1389	0.50	\$ 10,730.9778
Survey/Design	1%	%	5.00	\$ 92,641.3889	5.00	\$ 107,309.7778
Supervision and Project Management	1%	%	9.00	\$ 166,754.5000	9.00	\$ 193,157.6000
Site Establishment	1%	%	2.50	\$ 46,320.6944	2.50	\$ 53,654.8889
Contingency	1%	%	15.00	\$ 277,924.1666	15.00	\$ 321,929.3333
TOTALS					TOTALS	
Excluding Delivery & Services				\$ 1,852,827.78		\$ 2,146,195.56
Including Delivery & Services				\$ 2,802,216.73		\$ 3,197,080.21

Combined totals including Delivery & Services	\$ 11,426,106.04		\$ 14,927,200.54
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Exclusions
Maintenance- to be confirmed by council extent of maintenance
Internal fitouts- kitchen etc.
Note that P90 totals do not include items outside of the original VPA allocations. i.e. orange highlighted areas (community gardens etc.)
Final sizing and preferences to be finalised by council

All works (outside of Pavilion & Stadium)						
Items	Qty	Unit	Rate (P90)	Amount (P90)	Spiire Rate	Spiire Amount
PLAYING FIELDS						
Football Field	1	No	\$ 907,601.25	\$ 907,601.25	\$ 1,100,000.00	\$ 1,100,000.00
Cricket Pitch	1	No	\$ 21,952.11	\$ 21,952.11	\$ 21,952.11	\$ 21,952.11
Netball Court	8	No	\$ 51,675.20	\$ 413,401.62	\$ 51,675.20	\$ 413,401.62
Tennis Court	6	No	\$ 64,055.58	\$ 384,333.48	\$ 75,000.00	\$ 450,000.00
Lawn Bowls	2	No		\$ -	\$ 200,000.00	\$ 400,000.00
LIGHTING						
Lighting Netball Court	8	No	\$ 23,000.00	\$ 184,000.00	\$ 32,500.00	\$ 260,000.00
Lighting Tennis	6	No	\$ 18,112.50	\$ 108,675.00	\$ 26,500.00	\$ 159,000.00
Lighting Football	1	No	\$ 119,811.86	\$ 119,811.86	\$ 500,000.00	\$ 500,000.00
Lawn Bowls	2	No	\$ -	\$ -	\$ 75,000.00	\$ 150,000.00
LANDSCAPING						
Landscaping Level A	45500	m2	\$ 30.16	\$ 1,372,130.06	\$ 42.00	\$ 1,911,000.00
CAR PARKING						
Pavement	7500	m2	\$ 100.00	\$ 750,000.00	\$ 100.00	\$ 750,000.00
Kerb & Channel	7500	m2	\$ 57.18	\$ 428,850.00	\$ 57.18	\$ 428,850.00
Drainage Pipes	750	lm	\$ 177.42	\$ 133,065.00	\$ 177.42	\$ 133,065.00
Drainage Pits	28	No	\$ 2,522.00	\$ 70,616.00	\$ 2,522.00	\$ 70,616.00
Linemarking / Signage	7500	m2/pavement	\$ 2.80	\$ 21,000.00	\$ 2.80	\$ 21,000.00
SITE WORKS						
Footpaths and paved areas	4000	m2	\$ 68.00	\$ 272,000.00	\$ 150.00	\$ 600,000.00
SERVICES						
Stormwater Drainage	1	Item	\$ 184,000.00	\$ 184,000.00	\$ 184,000.00	\$ 184,000.00
Sewer	1	Item	\$ 11,500.00	\$ 11,500.00	\$ 11,500.00	\$ 11,500.00
Water	1	Item	\$ 57,500.00	\$ 57,500.00	\$ 57,500.00	\$ 57,500.00
Water Tanks	1	Item	NA		\$ 250,000.00	\$ 250,000.00
Gas	1	Item	\$ 11,500.00	\$ 11,500.00	\$ 11,500.00	\$ 11,500.00
Light & power	1	Item	\$ 34,500.00	\$ 34,500.00	\$ 34,500.00	\$ 34,500.00
Communication	1	Item	\$ 149,500.00	\$ 149,500.00	\$ 149,500.00	\$ 149,500.00
Fire	1	Item	\$ 34,500.00	\$ 34,500.00	\$ 34,500.00	\$ 34,500.00
MISCELLANEOUS						
Gates	12	Item	\$ 600.00	\$ 7,200.00	\$ 600.00	\$ 7,200.00
Works maintenance - 1 year		Item	\$ -	\$ -	\$ -	\$ -
Interchange shelter (4 per oval)	4	Item	\$ 11,600.00	\$ 46,400.00	\$ 11,600.00	\$ 46,400.00
Fencing	1270	lm	\$ 111.00	\$ 140,970.00	\$ 250.00	\$ 317,500.00
Signage	50	No	\$ 367.80	\$ 18,390.00	\$ 367.80	\$ 18,390.00
Landscape maintenance - 1 year/ 2 summers		Item	\$ -	\$ -	\$ 94,680.00	\$ -
OTHERS						
Access Road	1980	m2	\$ 162.00	\$ 320,760.00	\$ 162.00	\$ 320,760.00
Playground	1	Item	\$ 840,000.00	\$ 840,000.00	\$ 840,000.00	\$ 840,000.00
Community Garden	1	Item	NA	\$ -	\$ 500,000.00	\$ 500,000.00
Skate Park	1	Item	NA	\$ -	\$ 500,000.00	\$ 500,000.00
Sports Field Irrigation System	20106	m2	\$ 5.88	\$ 118,223.28	\$ 6.00	\$ 120,636.00
Basic Landscaping including top soil-seeding		m2	\$ 39.00	\$ -	\$ -	\$ -
Tree Planting	394.5	No	\$ 312.00	\$ 123,084.00	\$ 550.00	\$ 216,975.00
DELIVERY						
Council Fees	1%	%	3.25	\$ 236,777.5691	3.25	\$ 357,166.7364
VicRoads Fees	1%	%	0.00	\$ -	0.00	\$ -
Traffic Management	1%	%	2.00	\$ 145,709.2733	2.00	\$ 219,794.9147
Environmental Management	1%	%	0.50	\$ 36,427.3183	0.50	\$ 54,948.7287
Survey/Design	1%	%	5.00	\$ 364,273.1832	5.00	\$ 549,487.2867
Supervision and Project Management	1%	%	9.00	\$ 655,691.7298	9.00	\$ 989,077.1161
Site Establishment	1%	%	2.50	\$ 182,136.5916	2.50	\$ 274,743.6434
Contingency	1%	%	15.00	\$ 1,092,819.5497	15.00	\$ 1,648,461.8602
TOTAL					TOTAL	
Excluding Delivery				\$ 7,285,463.66		\$ 10,989,745.73
Including Delivery				\$ 9,999,298.88		\$ 15,083,426.02
Building and Site works- Pavilion						
Items	Qty	Unit	Rate (P90)	Amount (P90)	Spiire Rate	Spiire Amount
Building						
Change rooms with Toilets and Showers X 4	160	m2	\$ 2,329.67	\$ 372,746.67	\$ 2,870.00	\$ 459,200.00
Umpire Change Rooms with Toilets	15	m2	\$ 2,437.44	\$ 36,561.67	\$ 2,870.00	\$ 43,050.00
Storage Rooms	80	m2	\$ 2,274.11	\$ 181,928.89	\$ 2,274.11	\$ 181,928.89
Multipurpose Room/Social Room	100	m2	\$ 2,287.22	\$ 228,722.22	\$ 2,287.22	\$ 228,722.22
Office/First Aid room	20	m2	\$ 2,287.22	\$ 45,744.44	\$ 2,287.22	\$ 45,744.44
Canteen and Kitchen	30	m2	\$ 2,432.56	\$ 72,976.67	\$ 2,840.00	\$ 85,200.00
Public Toilet	40	m2	\$ 2,437.44	\$ 97,497.78	\$ 3,360.00	\$ 134,400.00
Canopy & Verandas						
Canopy & Verandas	155	m2	\$ 750.00	\$ 116,250.00	\$ 750.00	\$ 116,250.00
Site Works						
Concrete Paths	0	m2	\$ -	\$ -	\$ -	\$ -
Lighting	0	m2	\$ -	\$ -	\$ -	\$ -
Gates/entrances	0	m2	\$ -	\$ -	\$ -	\$ -
Other-miscellaneous	0	m2	\$ -	\$ -	\$ -	\$ -
Miscellaneous						
Building maintenance 1 year	0		\$ -	\$ -	\$ -	\$ -

Landscape maintenance 1 year/2 summers	0		\$ -	\$ -	\$ -	\$ -
Other-miscellaneous	0		\$ -	\$ -	\$ -	\$ -
Services						
Stormwater	1%	%	3.30	\$ 38,030.13	3.30	\$ 42,718.3533
Sewer	1%	%	2.03	\$ 23,336.67	2.03	\$ 26,213.5350
Water	1%	%	1.98	\$ 22,760.46	1.98	\$ 25,566.2872
Gas	1%	%	0.88	\$ 10,141.37	0.88	\$ 11,391.5609
Fire Protection	1%	%	0.66	\$ 7,606.03	0.66	\$ 8,543.6707
Light and Power	1%	%	2.38	\$ 27,370.17	2.38	\$ 30,744.2694
Communication	1%	%	0.50	\$ 5,762.14	0.50	\$ 6,472.4778
DELIVERY						
Council Fees	1%	%	3.25	\$ 37,453.92	3.25	\$ 42,071.1055
VicRoads Fees	1%	%	1.00	\$ 11,524.28	1.00	\$ 12,944.9556
Traffic Management	1%	%	2.00	\$ 23,048.57	2.00	\$ 25,889.9111
Environmental Management	1%	%	0.50	\$ 5,762.14	0.50	\$ 6,472.4778
Survey/Design	1%	%	5.00	\$ 57,621.42	5.00	\$ 64,724.7778
Supervision and Project Management	1%	%	9.00	\$ 103,718.55	9.00	\$ 116,504.6000
Site Establishment	1%	%	2.50	\$ 28,810.71	2.50	\$ 32,362.3889
Contingency	1%	%	15.00	\$ 172,864.25	15.00	\$ 194,174.3333
TOTALS					TOTALS	
Excluding Delivery & Services				\$ 1,152,428.33		\$ 1,294,495.56
Including Delivery & Services				\$ 1,728,239.15		\$ 1,941,290.26
Building and Site works- Indoor Stadium						
Items	Qty	Unit	Rate (P90)	Amount (P90)	Spiire Rate	Spiire Amount
Building						
Change rooms with Toilets and Showers X 8		m2		\$ -		\$ -
Umpire Change Rooms with Toilets		m2		\$ -		\$ -
Storage Rooms		m2		\$ -		\$ -
Multipurpose Room/Social Room		m2		\$ -		\$ -
Office/First Aid room		m2		\$ -		\$ -
Canteen and Kitchen		m2		\$ -		\$ -
Public Toilet		m2		\$ -		\$ -
Indoor Netball Courts (8x)	5200	m2		\$ -	\$ 1,800.00	\$ 9,360,000.00
Indoor Tennis Courts (6x)	1560	m2		\$ -	\$ 1,800.00	\$ 2,808,000.00
Amenities/Change Room (8x)	560	m2		\$ -	\$ 2,870.00	\$ 1,607,200.00
Store Rooms	60	m2		\$ -	\$ 2,260.00	\$ 135,600.00
Staff Area/offices	40	m2		\$ -	\$ 2,520.00	\$ 100,800.00
Foyer/entry	120	m2		\$ -	\$ 2,380.00	\$ 285,600.00
Canteen and Kitchen	60	m2		\$ -	\$ 2,850.00	\$ 171,000.00
		m2		\$ -		\$ -
		m2		\$ -		\$ -
		m2		\$ -		\$ -
Canopy & Verandas						
Canopy & Verandas	0	m2		\$ -		\$ -
Site Works						
Concrete Paths	0	m2		\$ -	\$ -	\$ -
Lighting	0	m2		\$ -	\$ -	\$ -
Gates/entrances	0	m2		\$ -	\$ -	\$ -
Other-miscellaneous	0	m2		\$ -	\$ -	\$ -
Miscellaneous						
Building maintenance 1 year	0			\$ -	\$ -	\$ -
Landscape maintenance 1 year/2 summers	0			\$ -	\$ -	\$ -
Other-miscellaneous	0			\$ -	\$ -	\$ -
Services						
Stormwater	1%	%		\$ -	3.30	\$ 477,450.6000
Sewer	1%	%		\$ -	2.03	\$ 292,981.0500
Water	1%	%		\$ -	1.98	\$ 285,746.9500
Gas	1%	%		\$ -	0.88	\$ 127,320.1600
Fire Protection	1%	%		\$ -	0.66	\$ 95,490.1200
Light and Power	1%	%		\$ -	2.38	\$ 343,619.7500
Communication	1%	%		\$ -	0.50	\$ 72,341.0000
DELIVERY						
Council Fees	1%	%		\$ -	3.25	\$ 470,216.5000
VicRoads Fees	1%	%		\$ -	1.00	\$ 144,682.0000
Traffic Management	1%	%		\$ -	2.00	\$ 289,364.0000
Environmental Management	1%	%		\$ -	0.50	\$ 72,341.0000
Survey/Design	1%	%		\$ -	5.00	\$ 723,410.0000
Supervision and Project Management	1%	%		\$ -	9.00	\$ 1,302,138.0000
Site Establishment	1%	%		\$ -	2.50	\$ 361,705.0000
Contingency	1%	%		\$ -	15.00	\$ 2,170,230.0000
TOTALS					TOTALS	
Excluding Delivery & Services				\$ -		\$ 14,468,200.00
Including Delivery & Services				\$ -		\$ 21,697,236.13

Combined totals including Delivery & Services	\$ 11,727,538.03		\$ 38,721,952.41
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Exclusions

Maintenance- to be confirmed by council extent of maintenance

Internal fitouts- kitchen etc.

Note that P90 totals do not include items outside of the original VPA allocations. i.e. orange highlighted areas (community gardens etc.)

Final sizing and preferences to be finalised by council

Indoor Sports Centre- subject to size and council expectations