Infrastructure Costings

PMP Printing Precinct Strategic Site

Cardno Project Reference: V170605



Prepared for Victorian Planning Authority

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Functional layouts provided for all civil components are for information only and shall not be used for space proofing / boundary extents. The final arrangement of all civil components is subject to detailed design by qualified people or organisations, after appropriate due diligence investigations relevant to specific sites and project scope.



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1 Introduction

The PMP Printing precinct located on the corner of Carinish Road and Browns Road in Clayton has witnessed a large decrease in manufacturing over the recent decades. The Victorian Planning Authority (VPA), in consultation with Monash City Council are in the process of preparing concepts to guide the renewal of the site. Through this process the industrial land zone will be configured to be largely suitable for residential purposes with a mix of businesses.

Cardno has been engaged to provide high level costings advice over 6 key locations where improvements to transport infrastructure has been proposed. The following sections of the report outline the key assumptions adopted and the results of the costings exercise.

2 Assumptions and Results

The costing exercise was conducted based on the scope and quantities derived from the concept designs prepared by Cardno for the PSP. Due to the project scopes being relatively minor and isolated from each other, the majority of Benchmark rates were deemed not suitable. Benchmark P90 signal rates have however been recommended for the Browns Road/ Carinish Road signalisation project. Additionally, a percentage-based approach for the calculation of delivery costs has not been used where overall project costs are minor. For such projects the delivery estimates have been provided in the form of itemised costs.

2.1 Kionga Street/ Moriah Street Road Humps

- > 12(No.) Watt Profile road humps are proposed along Kionga Street and Moriah Street (6 humps per street drawing reference V170605-TR-SK-0017/18);
- > Size 10. Type N asphalt has been adopted for the road hump;
- > Profiling the existing pavement to a depth of 15mm has been adopted to provide a key in joint;
- > Project estimated cost for the construction of 12(No.) Watt Profiles is \$82,085 (including delivery, excluding GST).

2.2 Browns Road Pedestrian Operated Signals

- Infrastructure upgrade involves providing pedestrian operated signals on Browns Road and minor linemarking changes on Francis Street (drawing reference V170605-TR-SK-0019);
- > Minor changes to the existing kerb layout and adjacent pits have been accommodated within the works;
- > Project estimated cost is \$286,723 (including delivery, excluding GST).

2.3 Browns Road – Flat top Road Hump

- > Infrastructure upgrade involves providing a speed hump on Browns Road (drawing reference V170605-TR-SK-0023);
- > Size 10, Type N asphalt has been adopted for the road hump;
- > Project estimated cost is \$18,546 (including delivery, excluding GST).

2.4 Centre Road/ Carinish Road Linemarking upgrades

- > Infrastructure upgrade involves providing new linemarking and minor changes to the kerb alignment (drawing reference V170605-TR-SK-0015);
- > Existing Electricity pole at the corner of Rayhur Street and Centre Road assumed to be required to be relocated

> Project estimated cost is \$55,485 (including delivery, excluding GST).

2.5 Browns Road/ Carinish Road Signalised intersection

- > Signalisation of T-intersection and providing suitable linemarking has been proposed (drawing reference V170605-TR-SK-0020);
- > Demolition of existing central island median, relocation of existing electricity pole and reconfiguration of kerb alignments have been captured within the works;
- > Benchmark project rates have been used to inform intersection traffic signal costs;
- > Project estimated cost is \$660,303 (including delivery, excluding GST).

PMP Printing Precinct Strategic Site

APPENDIX



REFERENCE MATERIAL





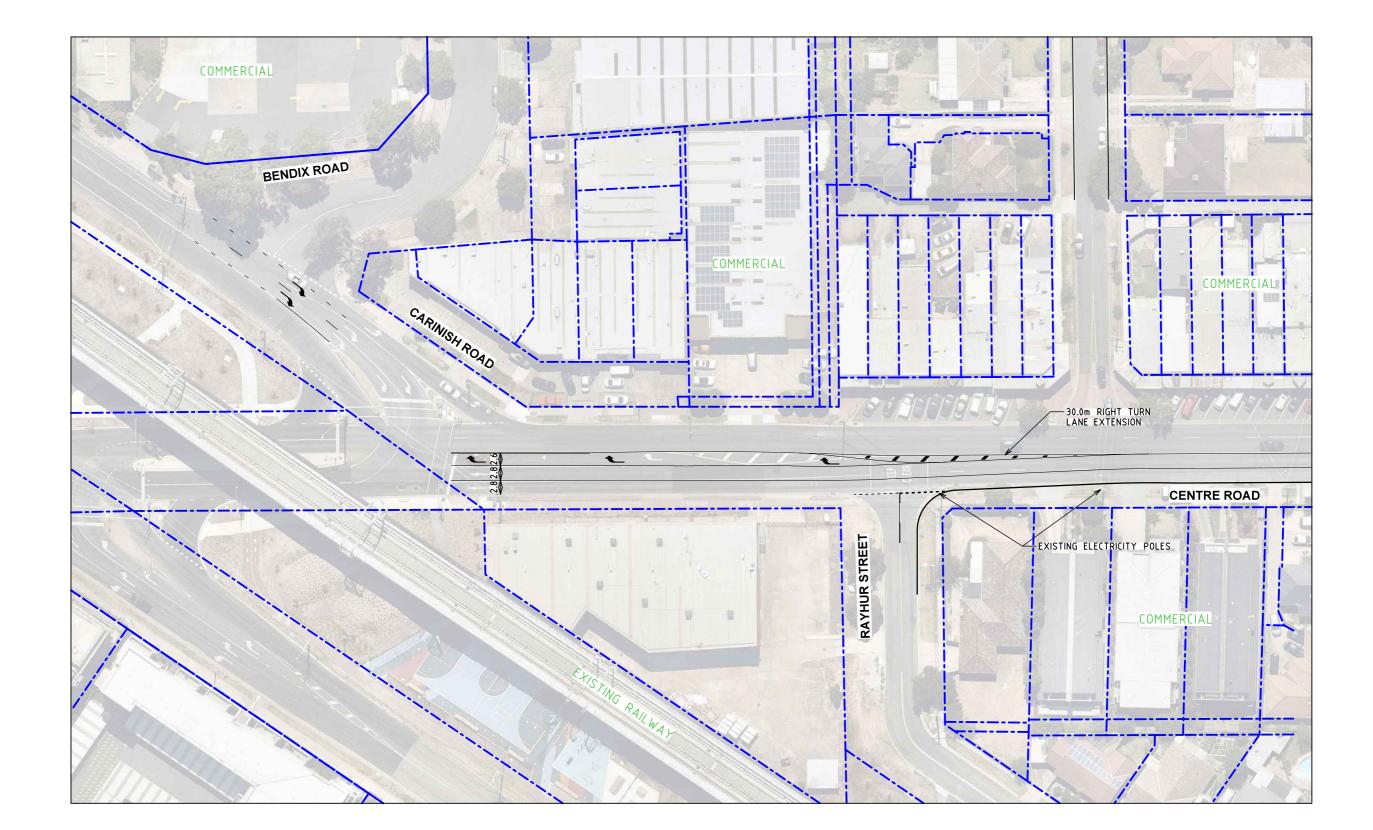


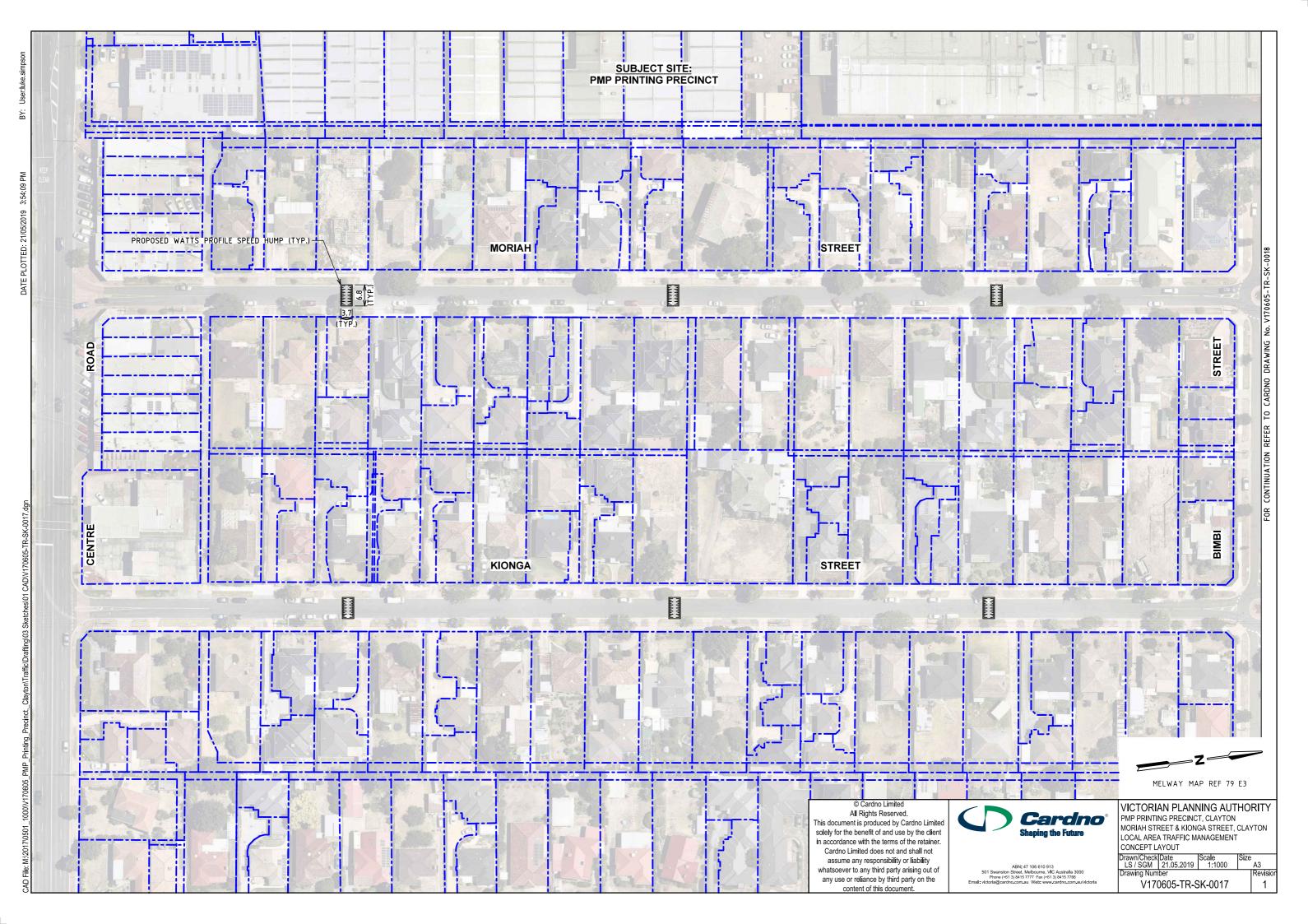


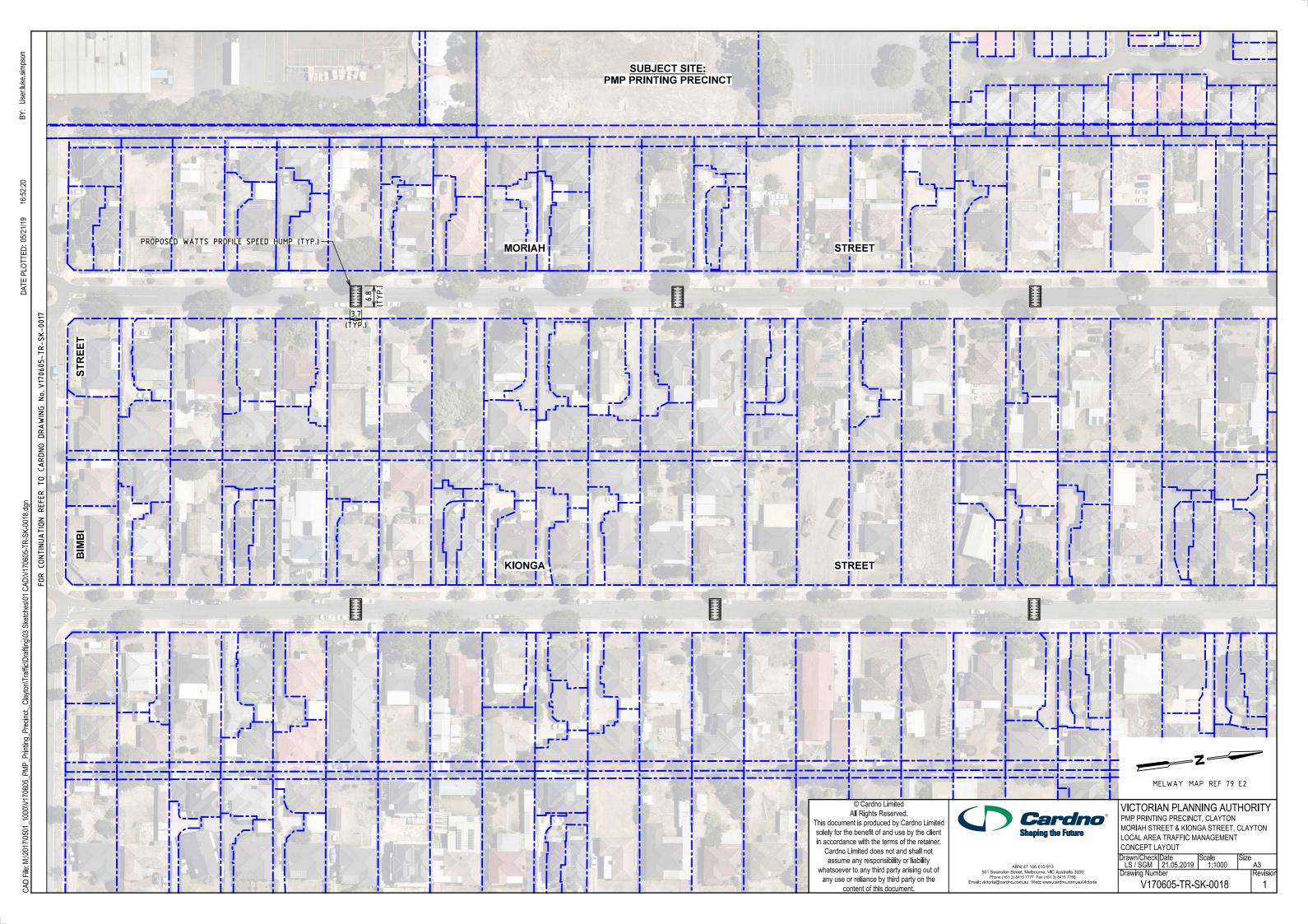
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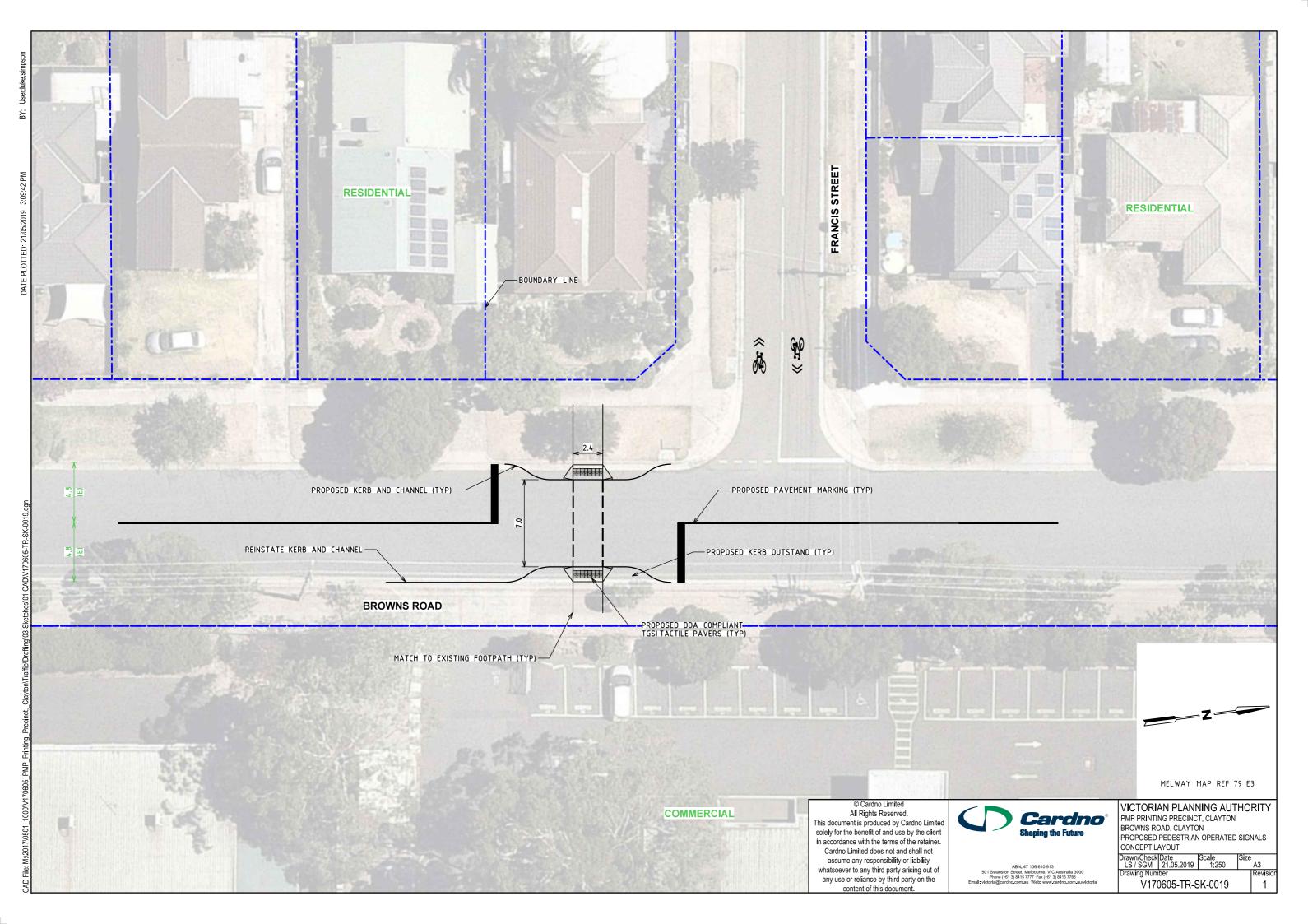
VICTORIA PLANNING AUTHORITY
PMP PRINTING PRECINCT, CLAYTON
CARNISH ROAD AND PRECINCT, CLAYTON
CONCEPT LAYOUT PLAN

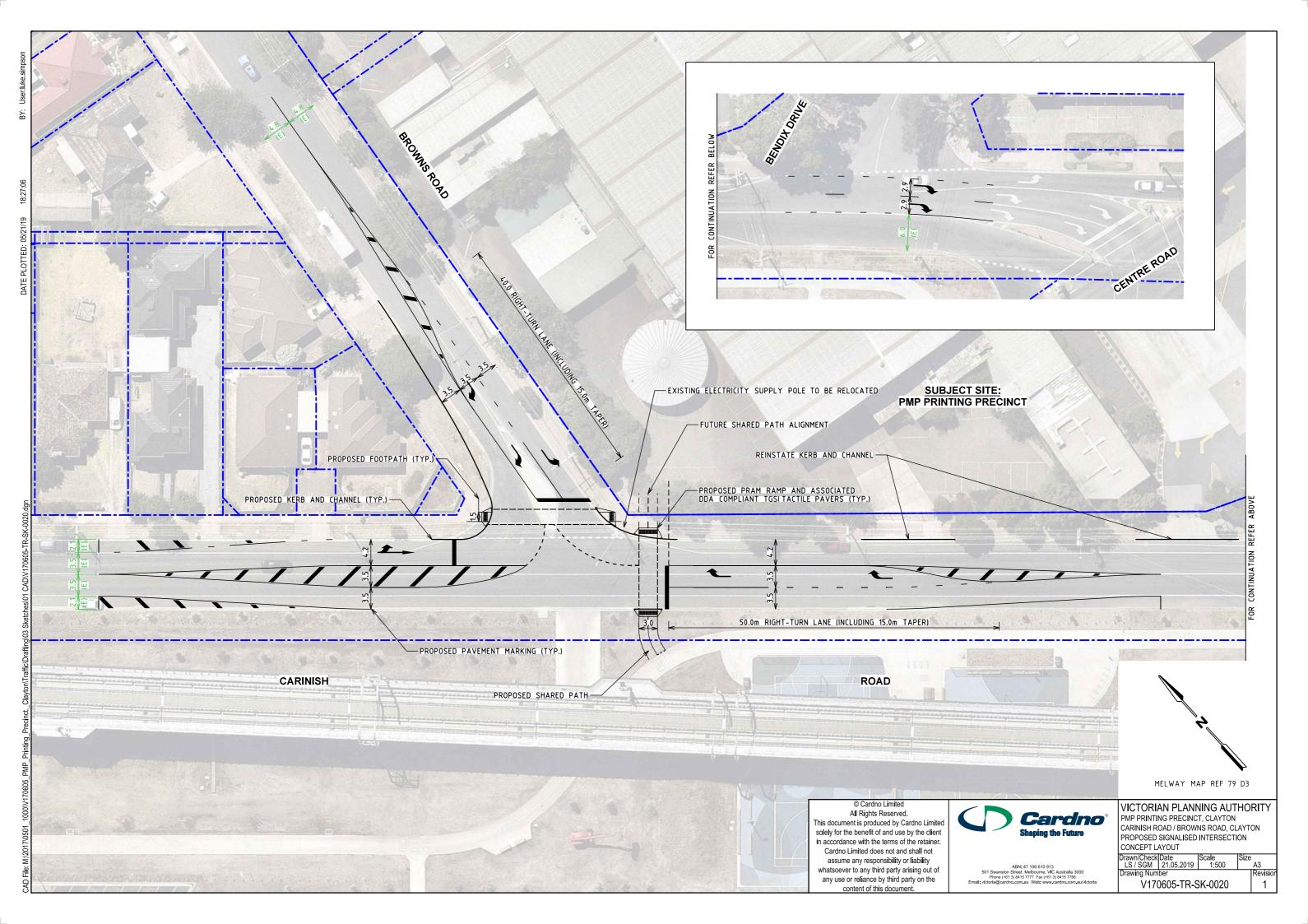
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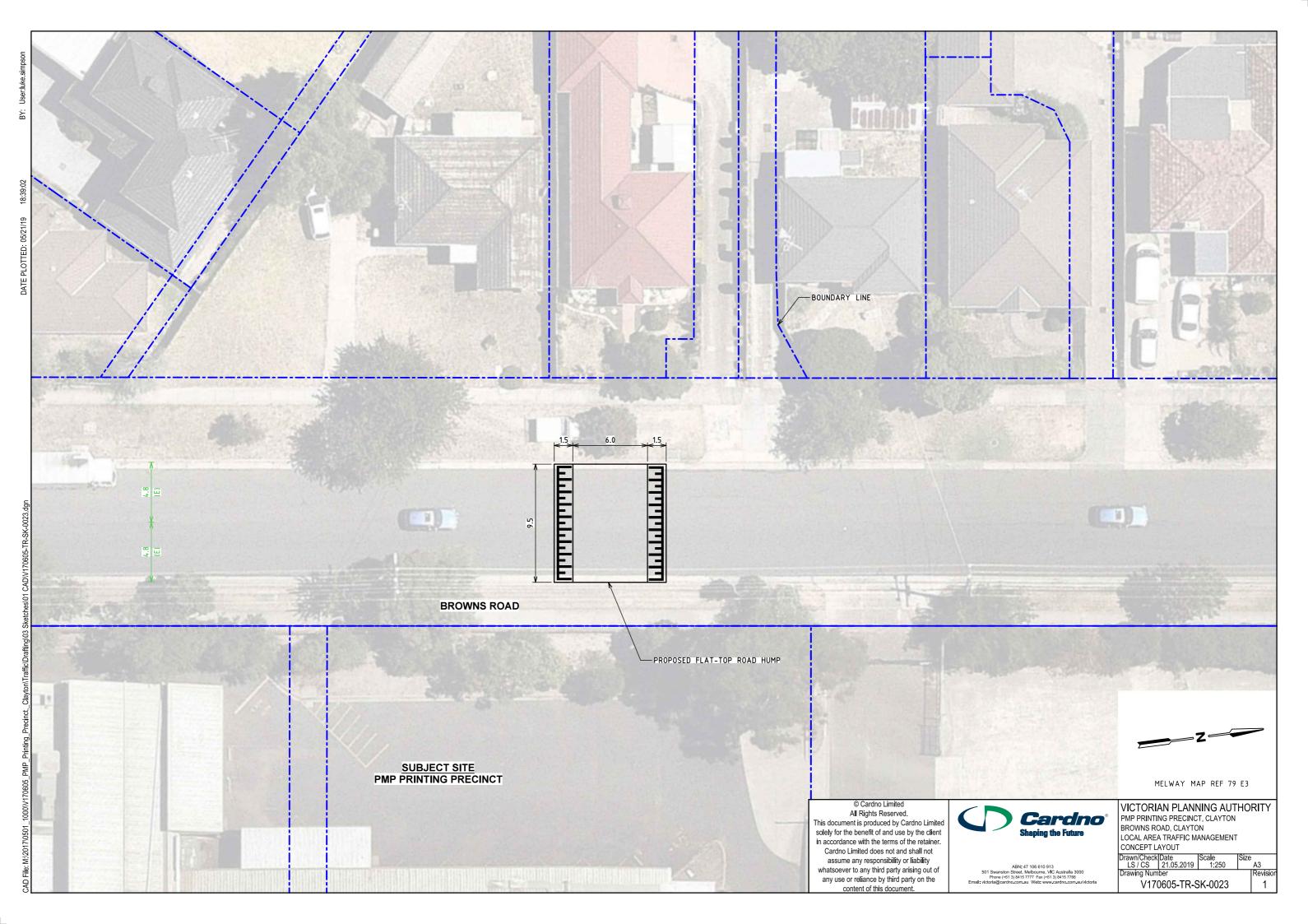












PMP Printing Precinct Strategic Site

APPENDIX

B

DETAILED COST SHEETS



PRELIMINARY ESTIMATE OF DEVELOPMENT COSTS V170605
PMP PRINTING PRECINCT, CLAYTON
KIONGA STREET/ MORIAH STREET
ESTIMATE FOR PROJECT IMPLEMENTATION COSTS DETAIL
12(No.) WATT PROFILE SPEED HUMPS - ITEM 2.1

ITEM	DESCRIPTION OF WORK	QUANTITY	UNIT	RATE	AMOUNT	SUBTOTAL
Α	ROADWORKS					\$ 47,900
1.1	Profile ex. Asphalt to provide a key in joint	1	item	\$ 8,000.00	\$ 8,000.00	
1.2	Construct Hump (Asphalt Size 10 Type N)	1	item	\$ 18,000.00	\$ 18,000.00	
1.3	Linemarking	1	item	\$ 9,000.00	\$ 9,000.00	
1.4	Signs	24	No.	\$ 350.00	\$ 8,400.00	
1.5	Asphalt disposal fee (incl Transport)	1	item	\$ 4,500.00	\$ 4,500.00	
В	DELIVERY					\$ 34,185
2.1	Council Fees	1	item	\$ 1,500.00	\$ 1,500.00	
2.2	Traffic Management	1	item	\$ 11,000.00	\$ 11,000.00	
2.3	Environmental Management	1	item	\$ 1,500.00	\$ 1,500.00	
2.4	Surveying and Design	1	item	\$ 2,000.00	\$ 2,000.00	
2.5	Supervision and Project Management	1	item	\$ 6,000.00	\$ 6,000.00	
2.6	Site establishment	1	item	\$ 5,000.00	\$ 5,000.00	
2.7	Contingency	1	%	15.00%	\$ 7,185.00	

С	PROJECT BUDGET			
	Total Estimate			\$ 82,085

PRELIMINARY ESTIMATE OF DEVELOPMENT COSTS V170605
PMP PRINTING PRECINCT, CLAYTON
BROWNS RD-FRANCIS ST POS
ESTIMATE FOR PROJECT IMPLEMENTATION COSTS DETAIL
PEDESTRIAN OPERATED SIGNALS - ITEM 2.2

ITEM	DESCRIPTION OF WORK	QUANTITY	UNIT	RATE	AMOUNT	SU	BTOTAL
Α	ROADWORKS					\$	188,000
1.1	Supply and installation of pedestrian signals	1	item	\$ 100,000.00	\$ 100,000.00		
1.2	Signal maintenance	1	item	\$ 65,000.00	\$ 65,000.00		
1.3	Reinstate pavement strip	1	item	\$ 5,000.00	\$ 5,000.00		
1.4	Modify existing Drainage pit	1	item	\$ 3,000.00	\$ 3,000.00		
1.5	Drainage pipe	1	item	\$ 15,000.00	\$ 15,000.00		
В	CONCRETE WORKS					\$	7,990
2.1	Pedestrian footpaths	24	m²	\$ 73.00	\$ 1,752.00		
2.2	Reconstruct kerb	37	m	\$ 74.00	\$ 2,738.00		
2.3	Remove existing kerb	1	item	\$ 1,800.00	\$ 1,800.00		
2.4	Laybacks and tactile pavers	2	No	\$ 850.00	\$ 1,700.00		
С	DELINEATION					\$	7,000
3.1	Signing	1	item	\$ 5,000.00	\$ 5,000.00		
3.2	Linemarking	1	item	\$ 2,000.00	\$ 2,000.00		
D	DELIVERY					\$	83,733
4.1	Council Fees	1	%	3.25%	\$ 6,597.18		
4.2	VicRoads Fees	1	%	1.00%	\$ 2,029.90		
4.3	Traffic Management	1	%	5.00%	\$ 10,149.50		
4.4	Environmental Management	1	%	0.50%	\$ 1,014.95		
4.5	Surveying and Design	1	%	5.00%	\$ 10,149.50		
4.6	Supervision and Project Management	1	%	9.00%	\$ 18,269.10		
4.7	Site establishment	1	%	2.50%	\$ 5,074.75		
4.8	Contingency	1	%	15.00%	\$ 30,448.50		
E	PROJECT BUDGET						
	Total Estimate					\$	286,723

PRELIMINARY ESTIMATE OF DEVELOPMENT COSTS V170605
PMP PRINTING PRECINCT, CLAYTON
BROWNS ROAD - ROAD HUMP
ESTIMATE FOR PROJECT IMPLEMENTATION COSTS DETAIL
1(No.) ROAD HUMP - ITEM 2.3

ITEM	DESCRIPTION OF WORK	QUANTITY	UNIT	RATE	AMOUNT	SUE	STOTAL
Α	ROADWORKS					\$	10,040
1.1	Profile ex. Asphalt to provide a key in joint	1	item	\$ 3,000.00	\$ 3,000.00		
1.2	Construct Hump (Asphalt Size 10 Type N)	1	item	\$ 3,200.00	\$ 3,200.00		
1.3	Linemarking	1	item	\$ 1,800.00	\$ 1,800.00		
1.4	Signs	2	No.	\$ 270.00	\$ 540.00		
1.5	Asphalt disposal fee (incl Transport)	1	item	\$ 1,500.00	\$ 1,500.00		
В	DELIVERY					\$	8,506
2.1	Council Fees	1	item	\$ 500.00	\$ 500.00		
2.2	VicRoads Fees	1	%	0.00%	\$ -		
2.3	Traffic Management	1	item	\$ 2,000.00	\$ 2,000.00		
2.4	Environmental Management	1	item	\$ 500.00	\$ 500.00		
2.5	Surveying and Design	1	item	\$ 1,000.00	\$ 1,000.00		
2.6	Supervision and Project Management	1	item	\$ 1,000.00	\$ 1,000.00		
2.7	Site establishment	1	item	\$ 2,000.00	\$ 2,000.00		
2.8	Contingency	1	%	15.00%	\$ 1,506.00		
С	PROJECT BUDGET						
	Total Estimate					\$	18,546

PRELIMINARY ESTIMATE OF DEVELOPMENT COSTS V170605
PMP PRINTING PRECINCT, CLAYTON
CENTRE ROAD - CARINISH ROAD
ESTIMATE FOR PROJECT IMPLEMENTATION COSTS DETAIL
LINEMARKING AND ROADWORKS - ITEM 2.4

ITEM	DESCRIPTION OF WORK	QUANTITY	UNIT	RATE	AMOUNT	SUBTOTAL
Α	ROADWORKS					\$ 32,744
1.1	Linemarking	1	item	\$ 3,000	\$ 3,000	
1.2	Relay kerb	32	m	\$ 74.00	\$ 2,368	
1.3	Install new Sub surface drainage	32	m	\$ 43.00	\$ 1,376	
1.4	Remove existing kerb	1	Item	\$ 1,200.00	\$ 1,200	
1.5	New pavement (390mm depth)	40	m²	\$ 270	\$ 10,800	
1.6	Relocate power pole	1	Item	\$ 11,000	\$ 11,000	
1.6	Relocate SEP	1	Item	\$ 3,000	\$ 3,000	
В	DELIVERY					\$ 22,741
2.1	Council Fees	1	%	3.25%	\$ 1,064.18	
2.2	VicRoads Fees	1	%	0.00%	\$ -	
2.3	Traffic Management	1	Item	\$ 7,500.00	\$ 7,500.00	
2.4	Environmental Management	1	Item	\$ 500.00	\$ 500.00	
2.5	Surveying and Design	1	Item	\$ 5,000.00	\$ 5,000.00	
2.6	Supervision and Project Management	1	%	9.00%	\$ 2,946.96	
2.7	Site establishment	1	%	2.50%	\$ 818.60	
2.8	Contingency	1	%	15.00%	\$ 4,911.60	
С	PROJECT BUDGET					
	Total Estimate					\$ 55,485

PRELIMINARY ESTIMATE OF DEVELOPMENT COSTS V170605
PMP PRINTING PRECINCT, CLAYTON
BROWNS RD CARINISH SIGNALS
ESTIMATE FOR PROJECT IMPLEMENTATION COSTS DETAIL
SIGNALISED INTERSECTION - ITEM 2.5

ITEM	DESCRIPTION OF WORK	QUANTITY	UNIT	RATE	AMOUNT	SU	IBTOTAL
Α	ROADWORKS					\$	438,000
1.1	Traffic signals (all inclusive)	1	item	\$ 386,400.00	\$ 386,400.00		
1.2	New pavement	80	m²	\$ 270.00	\$ 21,600.00		
1.3	Relocate power pole	1	item	\$ 11,000.00	\$ 11,000.00		
1.4	Pavement Strip for kerb	1	item	\$ 2,000.00	\$ 2,000.00		
1.5	Remove pavement surface intersection leg	1	item	\$ 7,000.00	\$ 7,000.00		
1.6	Pavement resheet intersection leg	1	item	\$ 10,000.00	\$ 10,000.00		
В	CONCRETE & ROAD WORKS					\$	13,071
2.1	Pedestrian footpaths	27	m²	\$ 73.00	\$ 1,971.00		
2.2	Reconstruct kerb	100	m	\$ 74.00	\$ 7,400.00		
2.3	Remove existing kerb	1	item	\$ 1,200.00	\$ 1,200.00		
2.4	Remove existing median	1	item	\$ 2,500.00	\$ 2,500.00		
С	DELINEATION					\$	16,400
3.1	Signing	1	item	\$ 5,000.00	\$ 5,000.00		
3.2	Linemarking	1	item	\$ 8,000.00	\$ 8,000.00		
3.4	Laybacks and tactile pavers	4	No	\$ 850.00	\$ 3,400.00		
С	DELIVERY					\$	192,832
4.1	Council Fees	1	%	3.25%	\$ 15,192.81		
4.2	VicRoads Fees	1	%	1.00%	\$ 4,674.71		
4.3	Traffic Management	1	%	5.00%	\$ 23,373.55		
4.4	Environmental Management	1	%	0.50%	\$ 2,337.36		
4.5	Surveying and Design	1	%	5.00%	\$ 23,373.55		
4.6	Supervision and Project Management	1	%	9.00%	\$ 42,072.39		
4.7	Site establishment	1	%	2.50%	\$ 11,686.78		
4.8	Contingency	1	%	15.00%	\$ 70,120.65		
F	PROJECT BUDGET						
	Total Estimate					\$	660,303