

		ACTION	DATE
TO	1. SENIOR ENGINEER, CONTROLLER APPLICATIONS		
	2. STEVE BELZ, PROGRAM DELIVERY		
FROM	ANNA EVANGELISTA	DATE	21/10/20
SITE	MYERS WILLS STREET / ARTHUR STREET	SITE NO.	6283
REGION	METRO NORTH WEST	MUNICIPALITY	GREATER BENDIGO

## GENERAL

Works Program Job?	Yes	Project Number	DK564C
Classification	SIMPLE	Works Order Number	4A007272

## EXISTING CONTROLLER DETAILS

Type	PSC 2003	Software Version & Release	V5R78	Lanterns	LED
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## CONTROLLER APPLICATIONS

Target Date for Draft Opsheet	27/10/20
Target Date for completion of Program	10/11/20

Prepare Interlocking	
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Update Graphics, Site Notes	Yes
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Description of changes	Timesetting changes for CBD 40 km/h zone, changes to P2, addition of XSF3 and XSF4
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## PERSONALITY CHECKSUMS

	Hex	Octal
<b>Total</b>	5F	137
<b>Times</b>	37	67
<b>Pers</b>	68	150
<b>Dispatched</b>	26/11/20	

<input type="checkbox"/>	Site ID Revision updated to	
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## PROGRAM DELIVERY - SIGNAL INSTALLATION

<input type="checkbox"/>	Changes to signal hardware	<input type="checkbox"/>	Changes to interlocking
<input type="checkbox"/>	Additional detectors	<input type="checkbox"/>	Changes to existing detector numbering
<input checked="" type="checkbox"/>	Upgrade controller software to	V5 R82	
<input type="checkbox"/>	Other changes		
<input checked="" type="checkbox"/>	Place new operation specification in controller		

## PRIOR NOTICE

A job must be entered into RAI Action database before this PROM change will be allowed.

<input checked="" type="checkbox"/>	SCATS data changes - notify	ANNA EVANGELISTA	Ext	1259
	OR	DARREN VAUGHAN	Ext	1210
before 3:00pm on the day before switch on.				

**SCATS Data Changes - Slot data, delete RAM data**

## TRAFFIC MANAGEMENT CENTRE

<input type="checkbox"/>	Checksum update only
<input type="checkbox"/>	Changes to trim or manual intervention features required
<input checked="" type="checkbox"/>	Please notify ANNA EVANGELISTA (x1259) on job completion.

## DATE PROM INSTALLED

SITE NAME **MYERS WILLS STREET / ARTHUR STREET**

SITE NO. **6283**

MUNICIPALITY GREATER BENDIGO DESIGNED BY ANNA EVANGELISTA

DATE 21/10/20

PLAN NO. 532926A

DESIGN CHECKED *[Signature]*

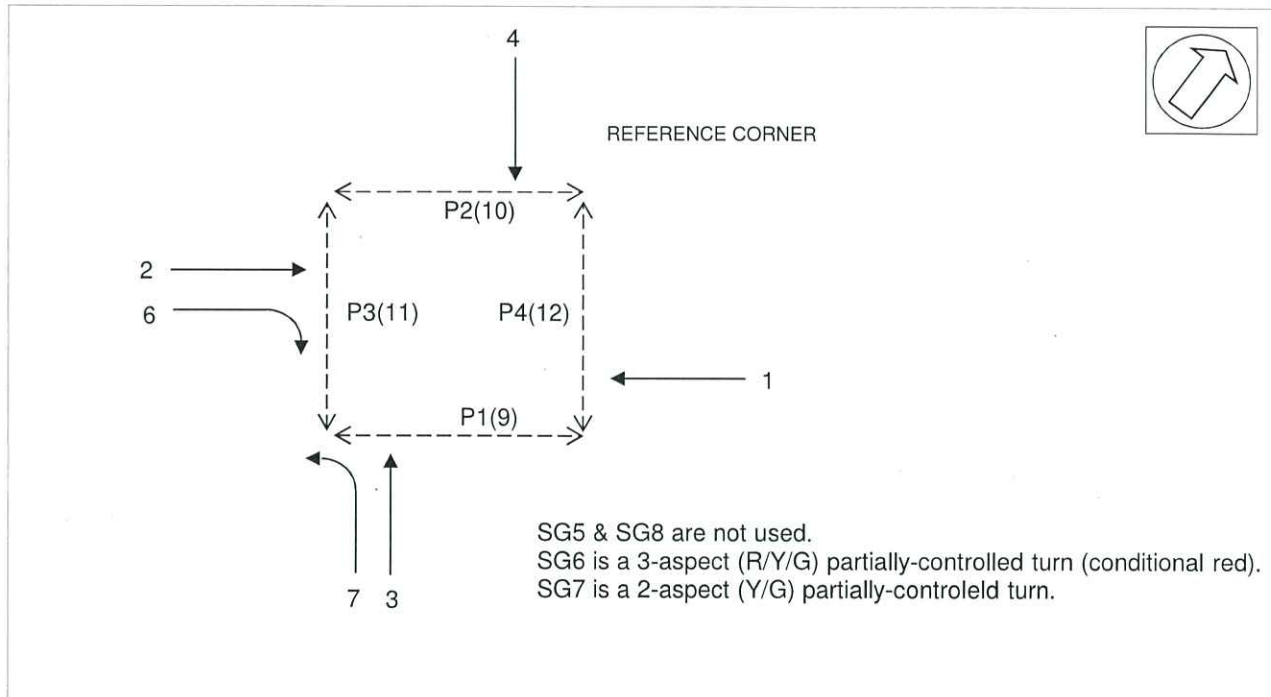
DATE 16/11/20

CONTROLLER TYPE PSC 2003

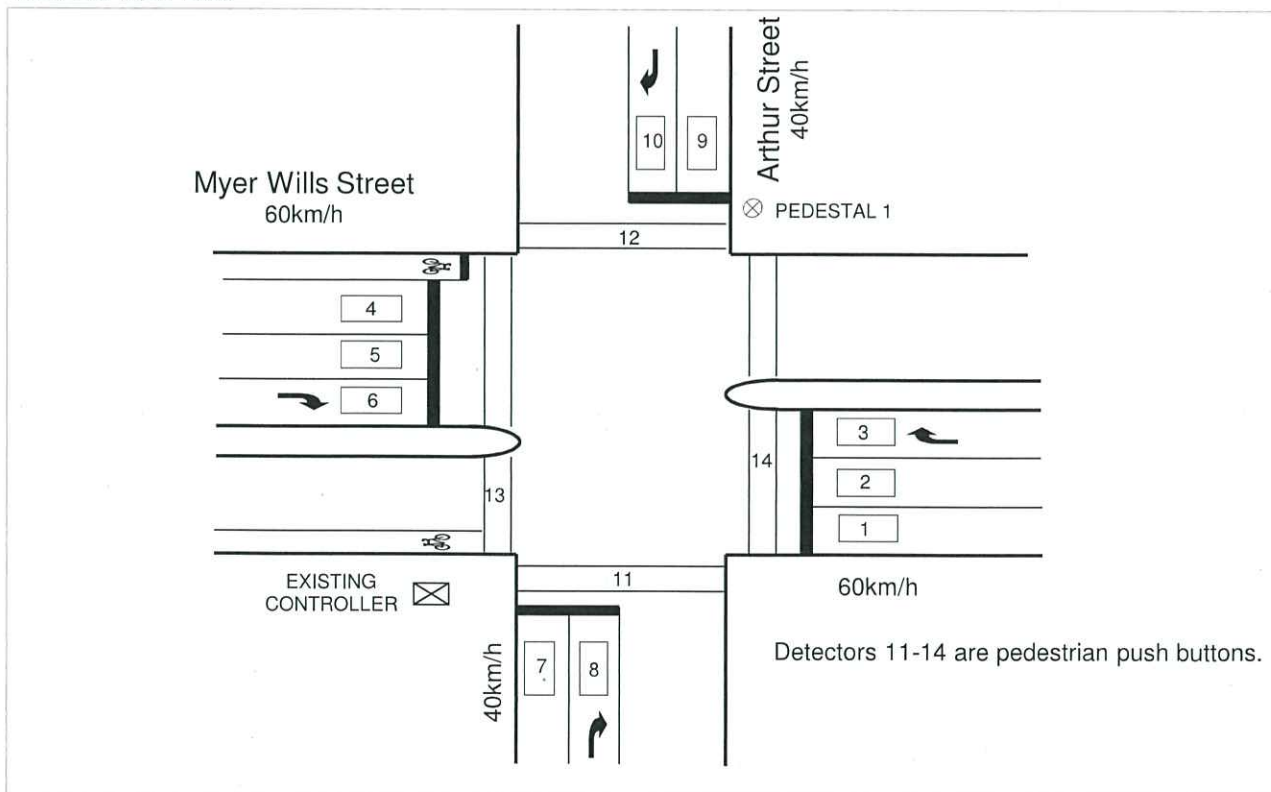
PROM CHECKED *[Signature]*

DATE 26/11/20

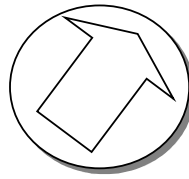
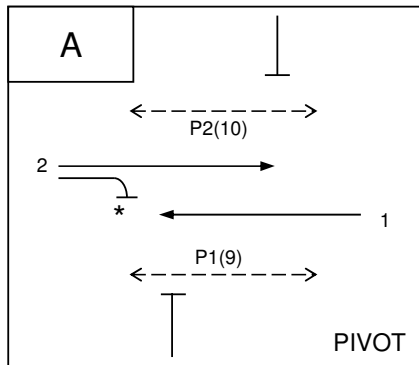
## GROUP ALLOCATION



## DETECTOR MAP



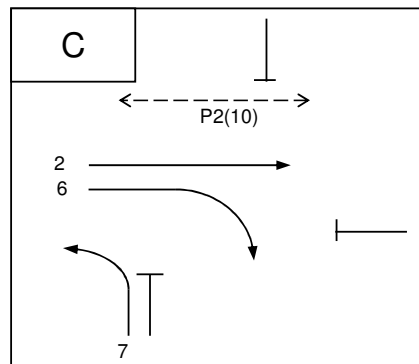
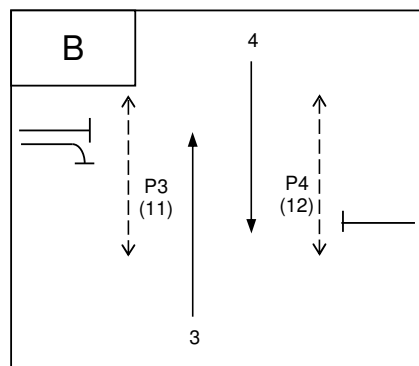
# PHASING DIAGRAM



**Refer General Notes**

\* Refer to Special Notes on page 4/1.

PHASE	PROHIBITED PHASE CHANGES TO	REVERSION ON MAXIMUM	MAXIMUM V.I.G ON REVERSION
A	C		



V.A. SEQUENCE ABC

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## DETECTOR FUNCTIONS

DETECTOR No.	Internal / External	Input Number	CALL PHASE	LOCKING CALL	NON-LOCKING CALL	SET VIG ON PHASE	EXTEND PHASE	SPECIAL FUNCTION			DETECTOR ALARMS						
								Detector Type	Description	Refer Special Notes	DA Category	Disable	DA on S/C only	Fault Simulation			
														Call & Extend	Call Only	Ignore Alarm	Refer Special Notes
1	I	1	A	✓			A				0			✓			
2	I	2	A	✓			A				0			✓			
3	I	3	A	✓			A				0		✓	✓			
4	I	4	A	✓			A				0			✓			
5	I	5	A	✓			A				0			✓			
6	I	6	AC	A	C		AC				0		✓	✓			
7	I	7	B	✓			B				0		✓	✓			
8	I	8	B	✓			B				0		✓	✓			
9	I	9	B	✓			B				0		✓	✓			
10	I	10	B	✓			B				0		✓	✓			
11	E	1	A		✓			P1		✓	6		✓				
12	E	2	A		✓			P2		✓	6		✓				
13	E	3	B		✓			P3		✓	6		✓				
14	E	4	B		✓			P4		✓	6		✓				
15																	
16																	
17																	
18																	
19																	
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26																	
27																	
28																	
29																	
30																	
31																	
32																	

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## APPROACH DEFINITIONS

### PHASE APPROACHES

Approach No	EXTENDING DETECTORS	APPROACH TIMER AND TIMESETTING DEFINITION*	SIGNAL GROUP	APPROACH EXPIRY (EXPAP)	Refer Special Notes
1	1,2	A11	1		
2	3	A22	1		
3	4,5	A33	2		
4	6	A44,C11	2,6		
5	7	B11	3		
6	8	B22	3		
7	9	B33	4		
8	10	B44	4		
9					
10					
11					
12					
13					
14					
15					
16					

\* There are 8 approach timers and 4 approach timesettings available per phase:

- Where there are 4 or fewer approaches per phase, allocate one timesetting to each timer.

For example: A11. A22, A33, B11, C11.

- Where there are more than 4 approaches per phase, two or more timers must have the same timesetting.

For example: A11. A21, A32, A43, A54, B11.

### SPECIAL APPROACHES

Approach No	EXTENDING DETECTORS	APPROACH TIMESETTING	SIGNAL GROUP	DESCRIPTION	Refer Special Notes
1					
2					
3					
4					

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## GENERAL NOTES

### **SUMMARY OF XSF FLAGS**

(Communications Operation of XSF flags is required)

- XSF3 – Auto introduction of P3 with SG3 in BØ (Master and Flexi).  
XSF4 – Auto introduction of P4 with SG4 in BØ (Master and Flexi).

### **GENERAL OPERATION**

1. If in AØ clear demands for CØ.

### **SIGNAL GROUP OPERATION**

#### **Signal Group 6**

1. SG6 operates green-yellow-red in CØ.
2. SG6 goes red with SG2 in AØ, and remains red through BØ.
3. SG6 closes down at the end of CØ green, remains red through AØ late start, then goes 'blank' at the start of AØ minimum green.

When P1 is demanded.

4. If going BØ→AØ, with a demand for P1, hold SG6 red for the duration of Timer 1 (Special Purpose Timesetting No.9). Timer 1 starts timing at the start of P1 walk. When Timer 1 expires SG6 red is switched off.
5. If going CØ→AØ, with a demand for P1, SG6 goes red at the start of CØ all red period and is held red for the duration of Timer 1 (Special Purpose Timesetting No.9). Timer 1 starts timing at the start of P1 Walk. When Timer 1 expires SG6 red is switched off.
6. AØ ECO is used to guarantee SG6 minimum blank period. Timer 2 (Special Purpose Timesetting No.10) starts timing at the start of SG6 blank period. When Timer 2 expires, expire AØ ECO.

#### **Signal Group 7**

1. Late start SG7 in CØ.

### **PEDESTRIAN GROUP OPERATION**

#### **Pedestrian 1**

P1 calls AØ.  
P1 calls BØ if the controller is resting in AØ.  
P1 can introduce at the start of AØ.  
P1 is permanently demanded when Z- (Master & Flexi) is set.  
In Flexi, P1 is terminated in AØ by Q+ (Q+ is set 6 steps before the call pulse for BØ).

#### **Pedestrian 2**

P2 calls AØ.  
P2 is hidden in CØ.  
P2 can introduce at anytime in CØ and at the start of AØ and can overlap CØ→AØ.  
P1 is permanently demanded when Z- (Master & Flexi) is set.  
In Flexi, P2 is terminated in AØ by Q+ (Q+ is set 6 steps before the call pulse for BØ).

**Pedestrian 3**

P3 calls BØ.

P3 can introduce at the start of BØ.

When XSF3 (Master and Flexi) is set, auto introduce P3 with SG3 in BØ.

**Pedestrian 4**

P4 calls BØ.

P4 can introduce at the start of BØ.

When XSF4 (Master and Flexi) is set, auto introduce P4 with SG4 in BØ.

**DETECTOR OPERATION****General**

Clear vehicle demands during associated phase green and yellow.

## CONTROLLER TIMESETTINGS - 1

### PHASE TIMESETTINGS

Front Panel Command: Phase No.Timesetting No (e.g. 3.2 accesses C phase late start)

DESCRIPTION	Timesetting No	PHASE						
		A (1)	B (2)	C (3)	D (4)	E (5)	F (6)	G (7)
RED / YELLOW	1	-	-	-	-	-	-	-
LATE START	2	2		2				
MINIMUM GREEN	3	10	8	6				
INCREMENT	4							
MAXIMUM INITIAL GREEN*	5							
MAXIMUM EXTENSION GREEN	6	35	20	10				
EARLY CUT OFF	7	4.0						
YELLOW	8	4.0	3.0	3.0				
ALL RED	9	2.0	3.0	2.5				
SPECIAL ALL RED	10							
GAP 1	11	2.5	2.5	2.5				
GAP 2	12	2.5	2.5					
GAP 3	13	2.5	2.5					
GAP 4	14	2.5	2.5					
HEADWAY 1	15	0.6	1.2	1.2				
HEADWAY 2	16	1.2	1.2					
HEADWAY 3	17	0.6	1.2					
HEADWAY 4	18	1.2	1.2					
WASTE 1	19	7	7	7				
WASTE 2	20	7	7					
WASTE 3	21	7	7					
WASTE 4	22	7	7					

\* Maximum Initial Green = Minimum Green + V.I.G.

### PEDESTRIAN TIMESETTINGS

Front Panel Command: Pedestrian No.Timesetting No (e.g. 18.2 accesses P2 walk)

DESCRIPTION	Timesetting No	PEDESTRIAN							
		P1 (17)	P2 (18)	P3 (19)	P4 (20)	P5 (21)	P6 (22)	P7 (23)	P8 (24)
DELAY	1	-	-	-	-	-	-	-	-
WALK*	2	8.0	8.0	13.0	14.0				
CLEARANCE 1	3	11.0	9.0	7.0	7.0				
CLEARANCE 2	4								

\* Minimum walk time - used in Isolated and Flexilink operation

For walk times in Masterlink operation, refer to slot data.

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**CONTROLLER TIMESETTINGS - 2****SPECIAL MOVEMENT TIMESETTINGS**

Front Panel Command: B.Timesetting No (e.g. B.5 accesses Special Movement Timesetting No 5)

Timesetting No	Timesetting (Range: 0-5)	FUNCTION
1		
2		
3		
4		
5		
6		
7		
8		

**SPECIAL PURPOSE TIMESETTINGS**

Front Panel Command: B.Timesetting No (e.g. B.19 accesses Special Movement Timesetting No 19)

Timesetting No	Timesetting (Range: 0-200)	FUNCTION
9	8	Timer 1: Duration for holding SG6 red in AØ with P1 demand
10	4	Timer 2: Minimum Blank period for SG6
11		
12		
13		
14		
15		
16		
17		
18	0	LIMIT GREEN WATCHDOG TIMER
19	0	SPECIAL FACILITY CONTROLS ALARM TIMER
20	10	ALL RED START UP INTERVAL
21		
22		
23		
24		
25		
26		
27		
28		
29		
30		
31		
32		
33		
34		
35		
36		
37		
38		
39		
40		

## CONTROLLER TIMESETTINGS - 3

### PRESENCE TIMESETTINGS

Front Panel Command: D.Detector No (e.g. D.7 accesses presence time for detector 7)

DETECTOR No	TIMESETTING (Range: 0-10)
1	
2	
3	
4	
5	
6	3.0
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	

NOTE: Set presence time to zero if the detector is not a presence detector

### DAILY EVENT TIMESETTINGS

FUNCTION	TIMESETTING
Daily start time (Hours)	
Daily start time (Minutes)	
Daily finish time (Hours)	
Daily finish time (Minutes)	

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**FLEXILINK OPERATION****PHASE SEQUENCES**

No	PHASE SEQUENCE
1 (No Y+)	ABC
2 (Y+)	

**NOTES:**

1. All phases must be specified in the phase sequence
2. Only specify phase sequence 2 if it is different from phase sequence 1.

**LOOK AHEADS & RELEASES**

PHASE SEQUENCE 1		
PHASE	LOOK AHEAD*	RELEASE
A	No	R-
B	No	R+
C	Yes (to A)	Q-
D		
E		
F		
G		

PHASE SEQUENCE 2		
PHASE	LOOK AHEAD*	RELEASE
A		
B		
C		
D		
E		
F		
G		

\* Specify the phases to which look ahead is permitted, e.g. Yes (to E, F, G, A)

**INHIBIT PHASES**

The following phases can be inhibited in flexilink by setting the call pulse one step before the call pulse of the next phase in sequence

**C****PULSE STEP LENGTH**

☐ One Second ☒ Two Second

**MASTERLINK & FLEXILINK SPECIAL FLAGS**

FLAG	FUNCTION
Y- Flexi	The site will operate in flexilink mode if the signal is continuously sent (C) or is used as an offset (e.g. 25)
Y- Master	
Y+ Flexi	
Z- Flexi	Places a permanent demand for P1 & P2
Z- Master	
Z+ Flexi	
Z+ Master	
R- Flexi	AØ RELEASE PULSE
R+ Flexi	BØ RELEASE PULSE
Q- Flexi	CØ RELEASE PULSE
Q+ Flexi	Terminate P1 & P2 (Q+ is set 6 steps before the call pulse for BØ)

## SCATS INTERSECTION DATA

The data shown on this page is typical data that can be used for testing controller operations.  
This data is not necessarily applicable when the site is switched on in the field.

### TYPICAL SLOT DATA

SLOT <i>n</i> =	3 , 4 , 4		
(phases) (split plans) (walks)			
INT =	6283		
VC =	5		
CS =			
COM =	NET		
PK =	!		
S# =			
LM =			
RMN =	0		
DCL =	0		
AT =	6		
BT =	6		
CT =	6		
DT =			
ET =			
FT =			
GT =			
W1 =	0	W1 T =	17
W2 =	0	W2 T =	15
W3 =	13	W3 T =	13
W4 =	14	W4 T =	13
W5 =		W5 T =	
W6 =		W6 T =	
W7 =		W7 T =	
W8 =		W8 T =	
PP1 =	0,0A		
PP2 =	0,0A		
PP3 =	0,0A		
PP4 =	0,0A		

### TYPICAL SPLIT PLAN DATA

PHASE SEQUENCE 1		PHASE SEQUENCE 2		PHASE SEQUENCE 3	
A =	0PDB	A =		A =	
B =	30C	B =		B =	
C =	10TGA	C =		C =	

### TYPICAL VARIATION PARAMETERS

VP1 =		VP22 =		VP43 =	
VP2 =		VP23 =		VP44 =	
VP3 =		VP24 =		VP45 =	
VP4 =		VP25 =		VP46 =	
VP5 =		VP26 =		VP47 =	
VP6 =		VP27 =		VP48 =	
VP7 =		VP28 =		VP49 =	
VP8 =		VP29 =		VP50 =	
VP9 =		VP30 =		VP51 =	
VP10 =		VP31 =		VP52 =	
VP11 =		VP32 =		VP53 =	
VP12 =		VP33 =		VP54 =	
VP13 =		VP34 =		VP55 =	
VP14 =		VP35 =		VP56 =	
VP15 =		VP36 =		VP57 =	
VP16 =		VP37 =		VP58 =	
VP17 =		VP38 =		VP59 =	
VP18 =		VP39 =		VP60 =	
VP19 =		VP40 =		VP61 =	
VP20 =		VP41 =		VP62 =	
VP21 =		VP42 =			

## GROUP CONFLICT TABLE

[illegible]

CHECKED: *Paul Quan* DATE: 5/09/06

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DATE 21/10/20